



Solar-Geophysical Data prompt reports

Data for March and April 2002

Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

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NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE,
DATA, AND INFORMATION SERVICE

NATIONAL GEOPHYSICAL
DATA CENTER

BOULDER,
COLORADO



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MAY 2002 NUMBER 693 - Part I

Solar-Geophysical Data prompt reports

Data for March and April 2002

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NATIONAL GEOPHYSICAL DATA CENTER

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SOLAR-GEOPHYSICAL DATA

Number 693

(Issued in Two Parts)

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*****NEW DATA*****

SOLAR CORONAL MASS EJECTIONS (CMEs) from SOHO/LASCO

-- COMING ATTRACTIONS --

- **ACE SOLAR WIND, INTERPLANETARY MAGNETIC FIELD AND PARTICLES
MONTHLY PLOTS**
- **NOAA SOLAR UV DAILY DATA (MGII CORE-TO-WING INDEX)**

DETAILED INDEX OF OBSERVATIONS PUBLISHED IN SOLAR-GEOPHYSICAL DATA

CODE	KIND OF OBSERVATION	SEP 01	OCT	NOV	DEC	JAN 02	FEB	MAR	APR
SOLAR AND INTERPLANETARY									
A.	SUNSPOT DRAWINGS	687A 58	688A 54	689A 56	690A 54	691A 50	692A 50	693A 50	
A.2aa	International Provisional Sunspot Numbers	686A 27	687A 28	688A 26	689A 29	690A 30	691A 27	692A 28	693A 27
A.2c	American Sunspot Numbers	686A 27	687A 28	688A 26	689A 29	690A 30	691A 27	692A 28	693A 27
A.3a	Mt. Wilson Magnetograms	687A 58	688A 54	689A 56	690A 54	691A 50	692A 50	693A 50	
A.3b	Sunspot Mag Class and Regions	687A105	688A102	689A103	690A 98	691A 90	692A 86	693A 91	
A.3c	Kitt Peak Magnetograms	687A 58	688A 54	689A 56	690A 54	691A 50	692A 50	693A 50	
A.3d	Mean Solar Magnetic Field (Stanford)	686A 49	687A 45	688A 45	689A 45	690A 43	691A 41	692A 39	693A 41
A.3e	Stanford Magnetograms	687A 58	688A 54	689A 56	690A 54	691A 50	692A 50	693A 50	
A.4	H-alpha Filtergrams	687A 58	688A 54	689A 56	690A 54	691A 50	692A 50	693A 50	
A.5d	Photometric Ca II Faculae (San Fernando)	Jan 92-Dec 96 in 631B 22; 1997-1998 in 663B 66							
A.6c	Stanford Solar Mag Field Synoptic Maps	687A 48	688A 48		689A 50	690A 48	691A 44	692A 44	
A.6d	Kitt Peak Solar Mag Field Synoptic Maps	687A 56							
A.6f	Active Prominences and Filaments	691B 74	692B 56	693B 59					
A.6g	Sac Peak Coronal Line Synoptic Maps	687A 52	688A 50	689A 56	690A 50	691A 46	692A 46	693A 46	
A.6h	Photometric White Light (San Fernando)	Jul-Dec 96 630B 32; 1997-1998 in 663B 51							
A.7h	Coronal Line Emission (Sac Peak)	687A 58	688A 54	689A 56	690A 54	691A 50	692A 50	693A 50	
A.7j	Coronal Hole Daily Maps (NSO/KP)	687A 96	688A 93	689A 94	690A 89	691A 81	692A 78	693A 81	
A.7k	Coronal Index (Slovak Academy)	1939-1996 in 644B 28							
A.8aa	2800 MHz- Solar Flux (Penticton)	686A 27	687A 28	688A 26	689A 29	690A 30	691A 27	692A 28	693A 27
A.8ac	2800 MHz- Adj. Solar Flux (Penticton)	686A 27	687A 28	688A 26	689A 29	690A 30	691A 27	692A 28	693A 27
A.8g	Adjusted Daily Solar Fluxes (Learmonth)	686A 27	687A 28	688A 26	689A 29	690A 30	691A 27	692A 28	693A 27
A.10g	Nancay Radioheliograph - 164&327 MHz	687A171	688A159	689A144	690A145	691A130	692A137	693A137	
A.10h	Nobeyama Radioheliograph Maps - 17 GHz	687A100	688A 96	689A 98	690A 92	691A 84	692A 81	693A 85	
A.11g	Solar X-ray GOES (graphs/event table)	691B 65	692B 46	693B 50					
A.11k	Solar UV NOAA-9	May 86-Dec 88 in 566B 84							
A.11l	Solar UV NIMBUS7	Nov 78-Oct 84 in 542B 82							
A.11m	Solar UV SOLSTICE (UARS)	Oct 91-Sep 94 in 607B 46							
A.11n	Solar YOHKOH Soft X-ray Images	687A 88	688A 85	689A 86	690A 85				
A.11o	Solar UV SUSIM (UARS)	Oct 91-Jan 97 in 629B 30							
A.12g	Solar Particles (GOES-7)	686A 4	687A 4	688A 4	689A 4	690A 4	691A 4	692A 4	693A 4
A.12h	Interplanetary Particles (SAMPEX)	Jul 95-Dec 96 in 632B 22; Jan-Dec 97 in 647B 33							
A.13e	Solar Plasma (IMP-8)	691B 75	692B 58						
A.16c	ERBS, NOAA-9 & -10 Solar Irradiance	ERBS Oct 84-Jun 00 in 671B 36							
A.16d	UARS Solar Irradiance	Oct 91-May 2001 684B 26 - Complete Mission							
A.16e	VIRGO/SOHO Solar Irradiance	Jan 96-Sep 00 in 678B 46							
A.17c	Inferred Interplanetary Mag Field	1984-1988 data in 542A168; 1989-Jan 94 in 611A118							
A.17	IMP-8 Interplanetary Mag Field								
SOLAR FLARE-ASSOCIATED EVENTS									
C.1a	H-alpha Flares	686A 30	687A 31	688A 29	689A 32	690A 33	691A 30	692A 31	693A 30
C.1ba	H-alpha Flare Groups	691B 4	692B 4	693B 4					
C.1d	Flare Patrol Observations	691B 26	692B 18	693B 21					
C.1h	H-alpha Flare Index (ImpxDur)	Jan 76-Dec 85 in 639B 26; Jan 86-Oct 96 in 635B 24; Jan 96-Dec 98 in 665B 63							
C.3	Radio Bursts Fixed Frequency	691B 28	692B 20	693B 23					
C.3	Radio Bursts Fixed Frequency Selected	686A 43	687A 41	688A 40	689A 43	690A 42	691A 38	692A 37	693A 38
C.4	Radio Bursts Spectral	687A143	688A134	689A126	690A128	691A118	692A116	693A115	
C.6	Sudden Ionospheric Disturbances	687A140	688A131	689A123	690A125	691A116	692A114	693A112	
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D.1a	Geomagnetic Indices	687A182	688A166	689A151	690A155	691A139	692A147	693A148	
D.1ba	27-day Chart of Kp Indices	687A184	688A168	689A153	690A157	691A141	692A149	693A150	
D.1cb	Monthly Mean aa Indices	687A185	688A169	689A154	690A159	691A142	692A150	693A151	
D.1d	Principal Magnetic Storms	687A190	688A174	689A159	690A166	691A147	692A155	693A156	
D.1f	Sudden Commencements/Flare Effects	687A191	688A175	689A160	690A167	691A148	692A156	693A157	
D.1g	Equatorial Indices Dst	687A187	688A171	689A156	690A163	691A144	692A152	693A153	
D.1l	Polar Cap (PC) Index	687A188	688A172	689A157	690A164	691A145	692A153	693A154	
COSMIC RAYS									
F.1b	Cosmic Ray Neutron Cts (Climax)	687A174	688A161	689A146	690A147	691A131	692A139	693A140	
F.1h	Cosmic Ray Neutron Cts (Thule)	687A174	688A161	689A146	690A147	691A131	692A139	693A140	
F.1i	Cosmic Ray Neutron Cts (Kiel)	687A174	688A161	689A146	690A147	691A131	692A139	693A140	
F.1n	Cosmic Ray Neutron Cts (Beijing)	687A174	688A161	689A146	690A147	691A131	692A139	693A140	
F.1m	Cosmic Ray Neutron Cts (Haleakala)	687A174	688A161	689A146	690A147	691A131	692A139	693A140	
F.1o	Cosmic Ray Neutron Cts (Moscow)	687A174	688A161	689A146	690A147	691A131	692A139	693A140	
F.1p	Cosmic Ray Neutron Cts (Calgary)	687A174	688A161	689A146	690A147	691A131	692A139	693A140	
F.1r	Cosmic Ray Neutron Cts (Goose Bay)								
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H.60	ISES Alert Periods	686A 19	687A 20	688A 19	689A 20	690A 20	691A 18	692A 20	693A 19

The entry "687A 58" under Sep 01, for example, means that the sunspot drawings for Sep 01 appear in SOLAR-GEOPHYSICAL DATA No. 687, Part I, and that they begin on page 58. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

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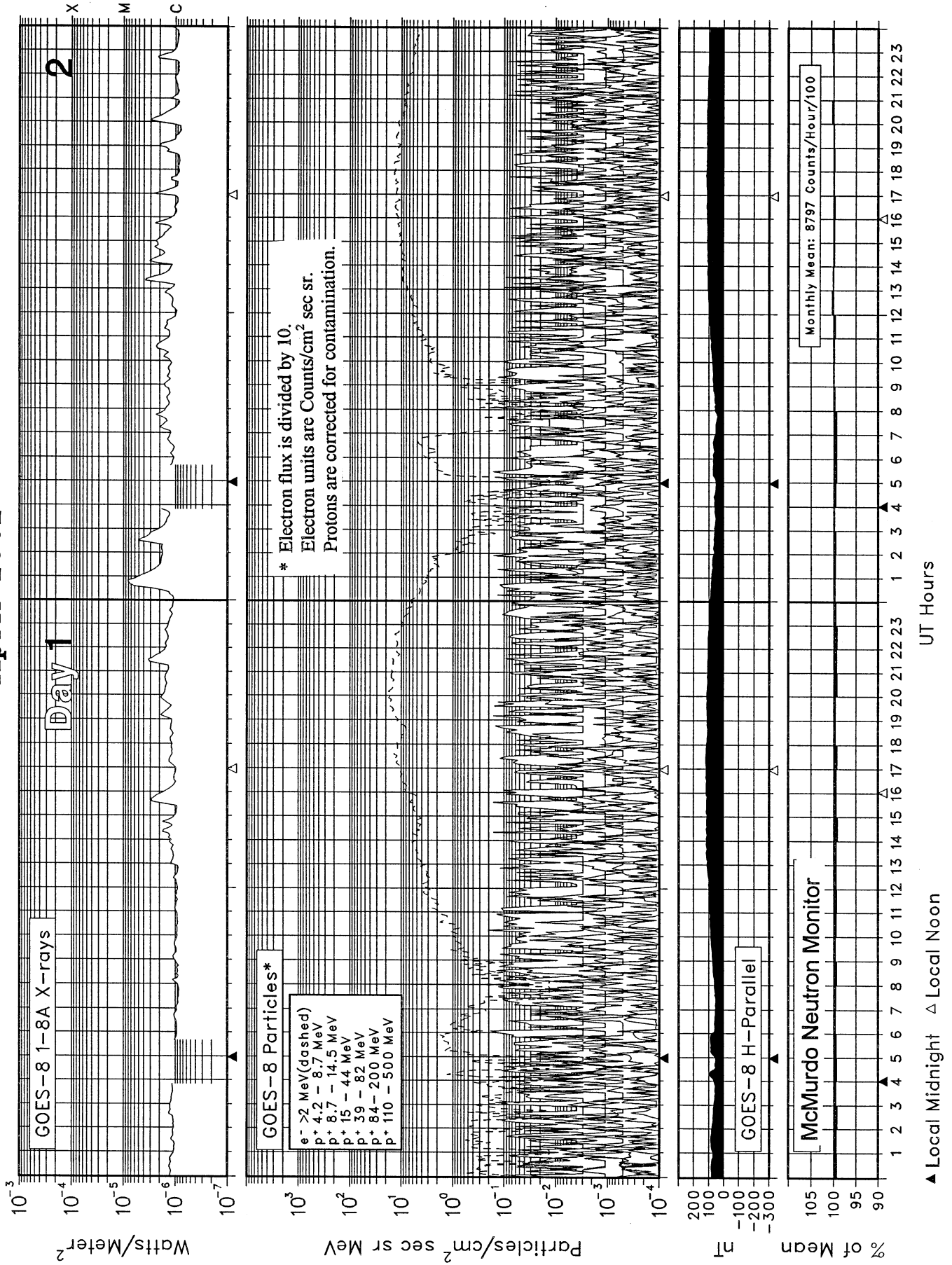
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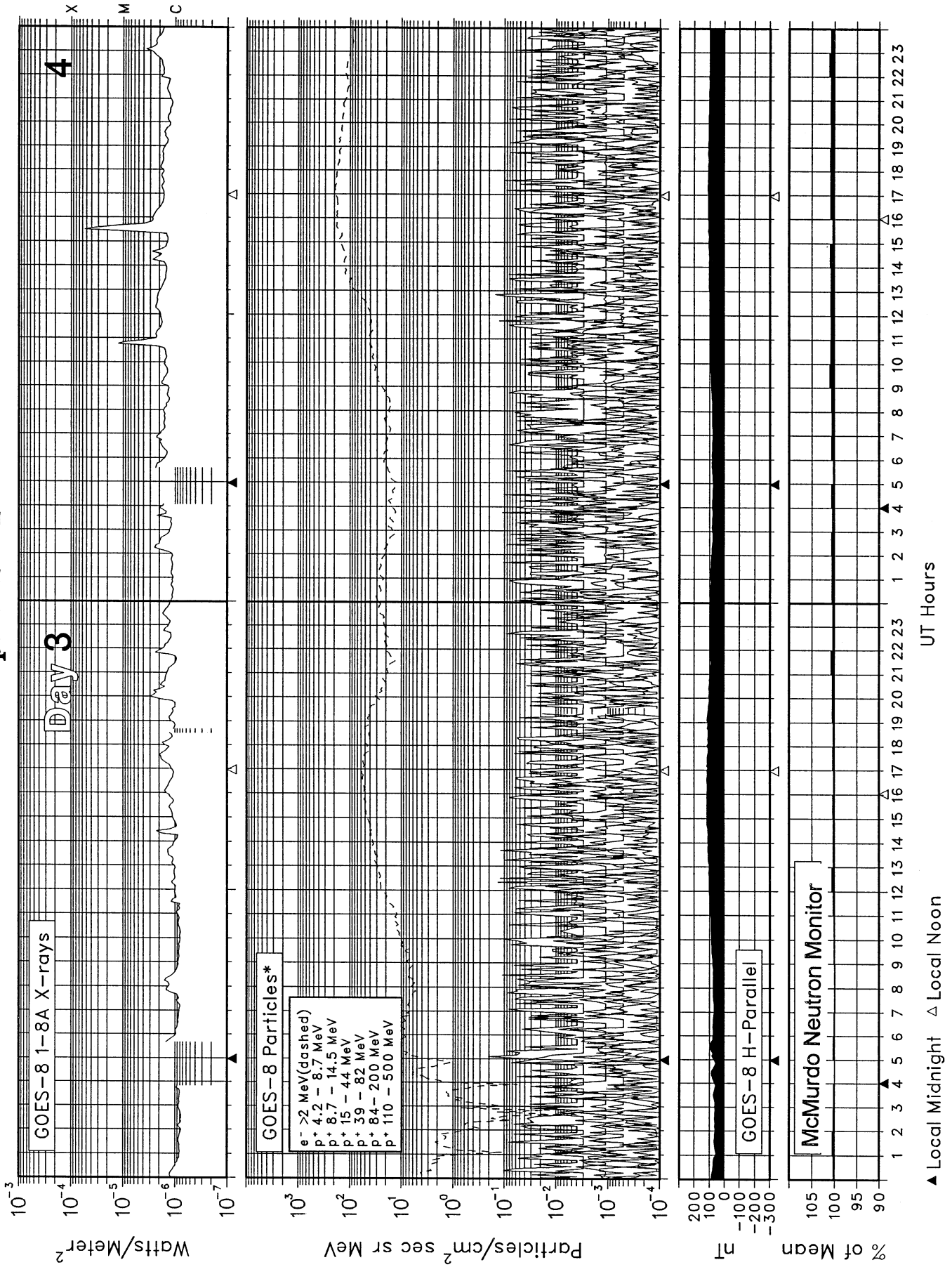
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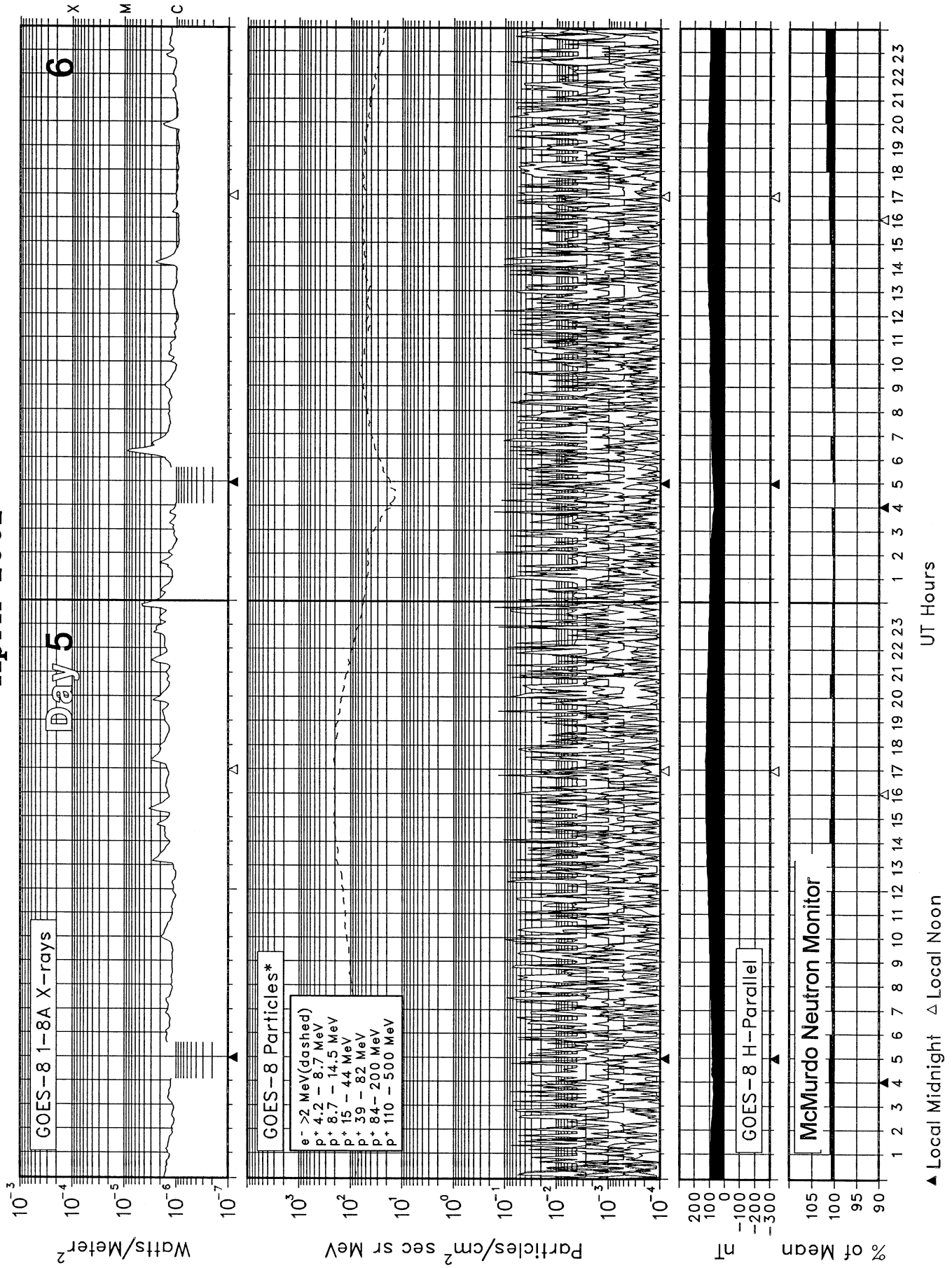


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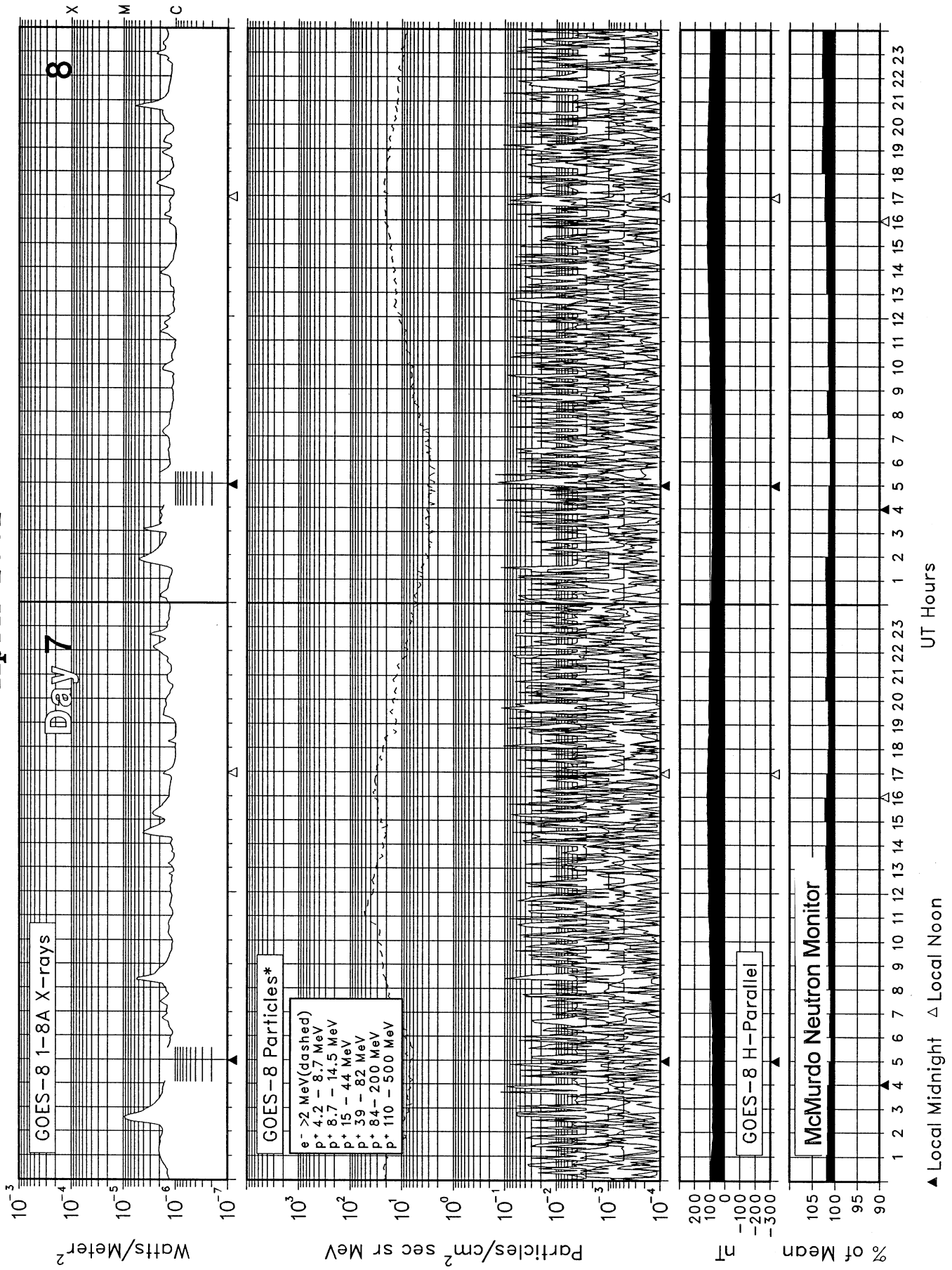


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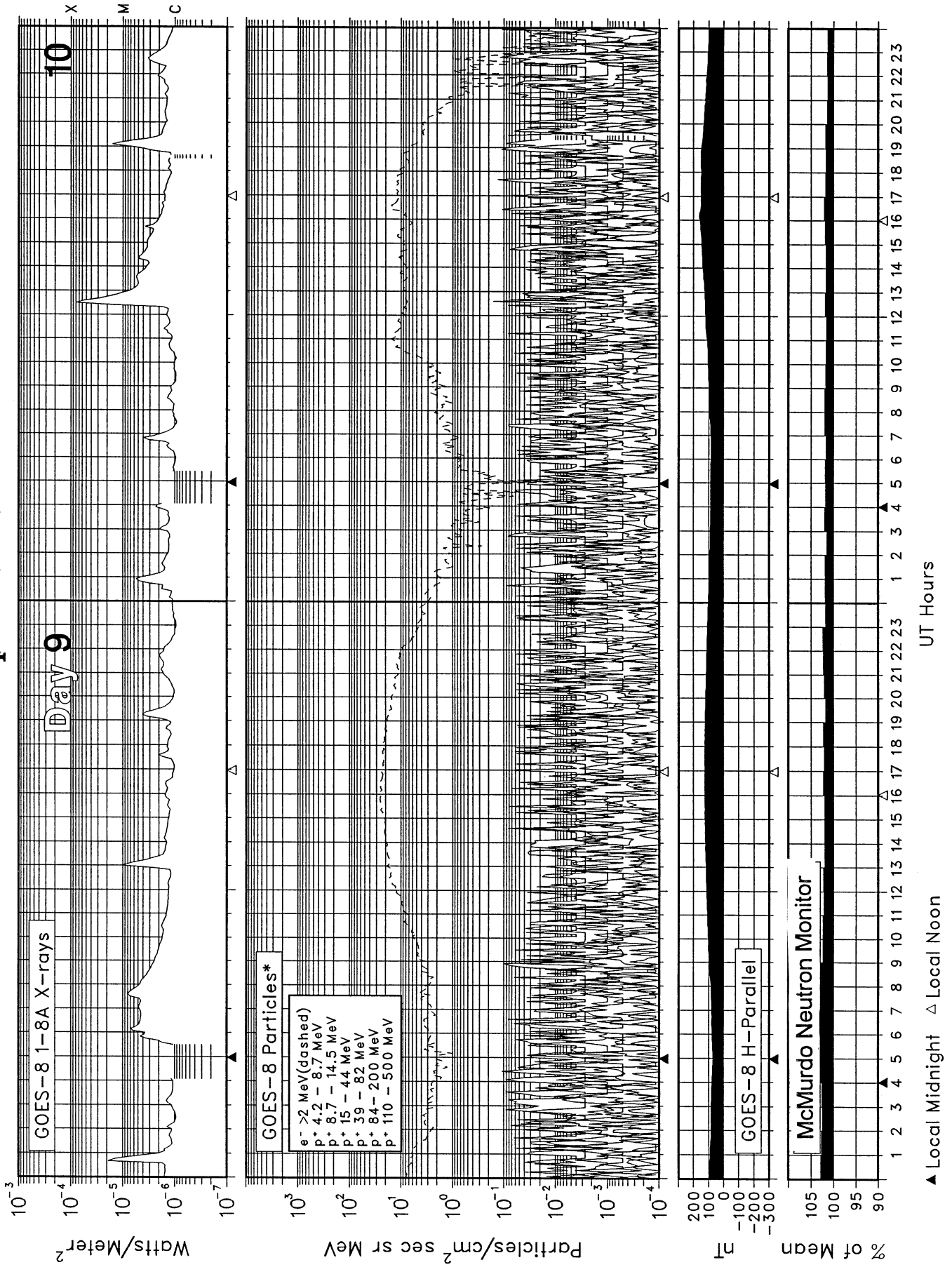


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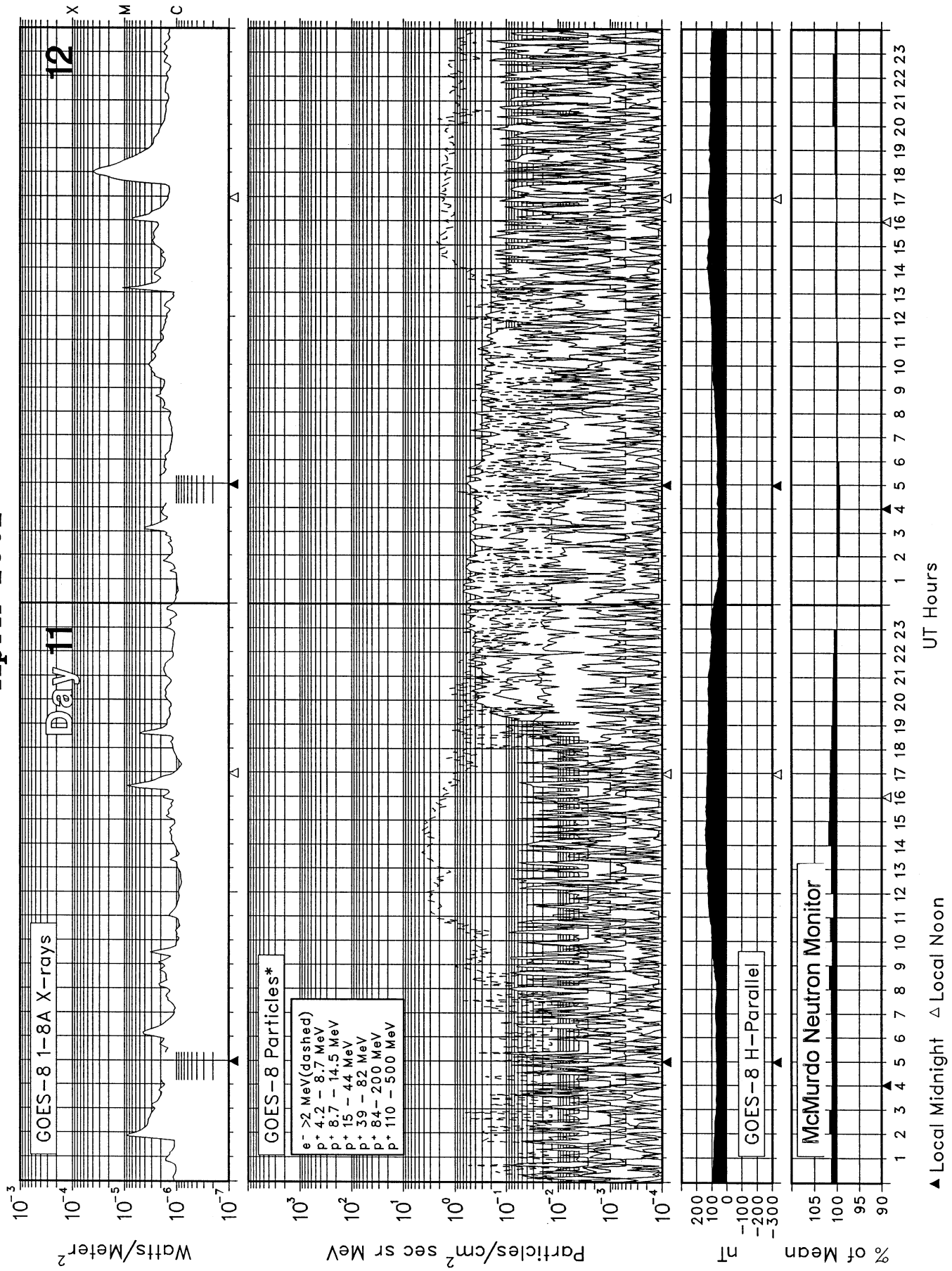


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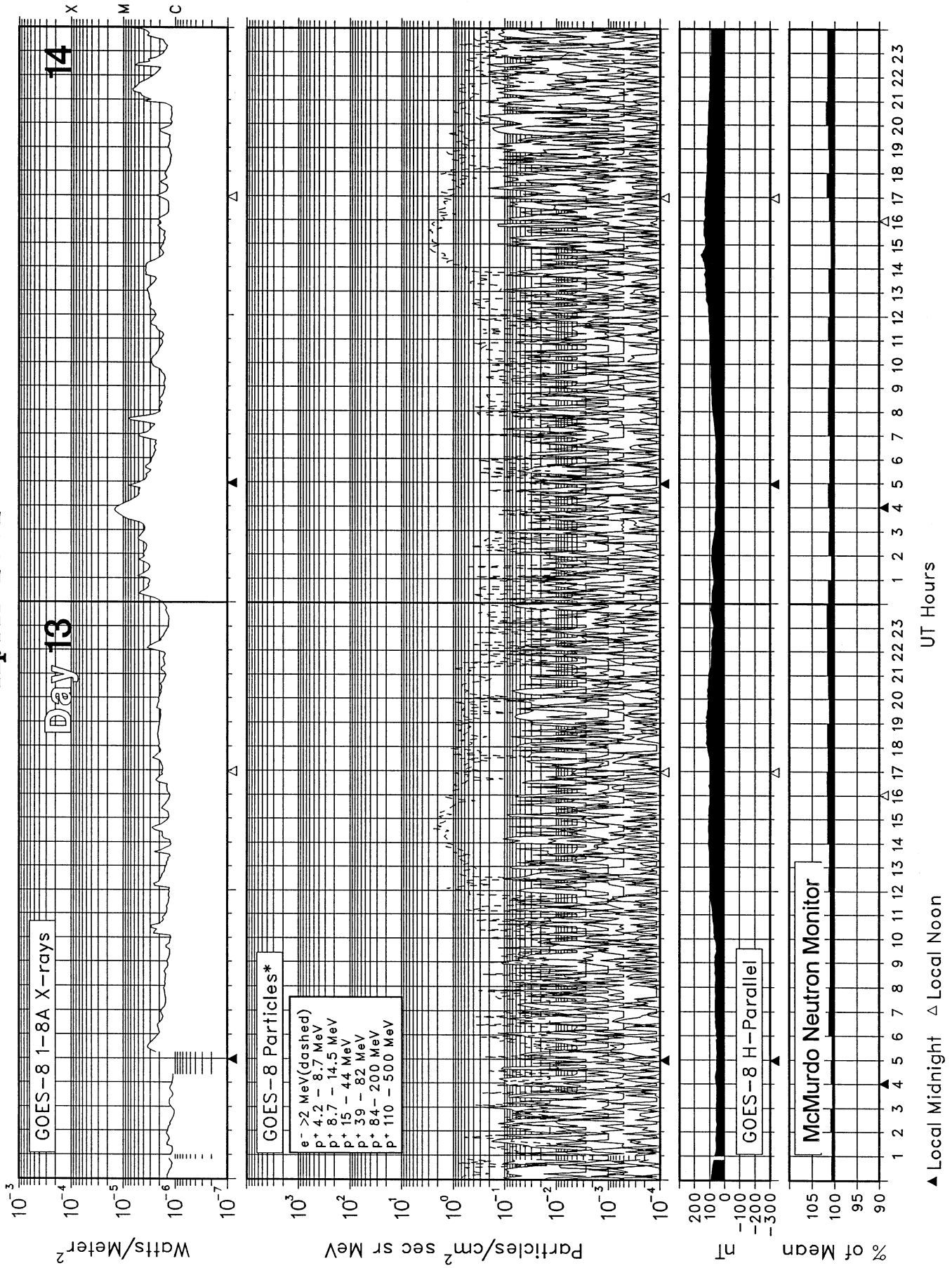


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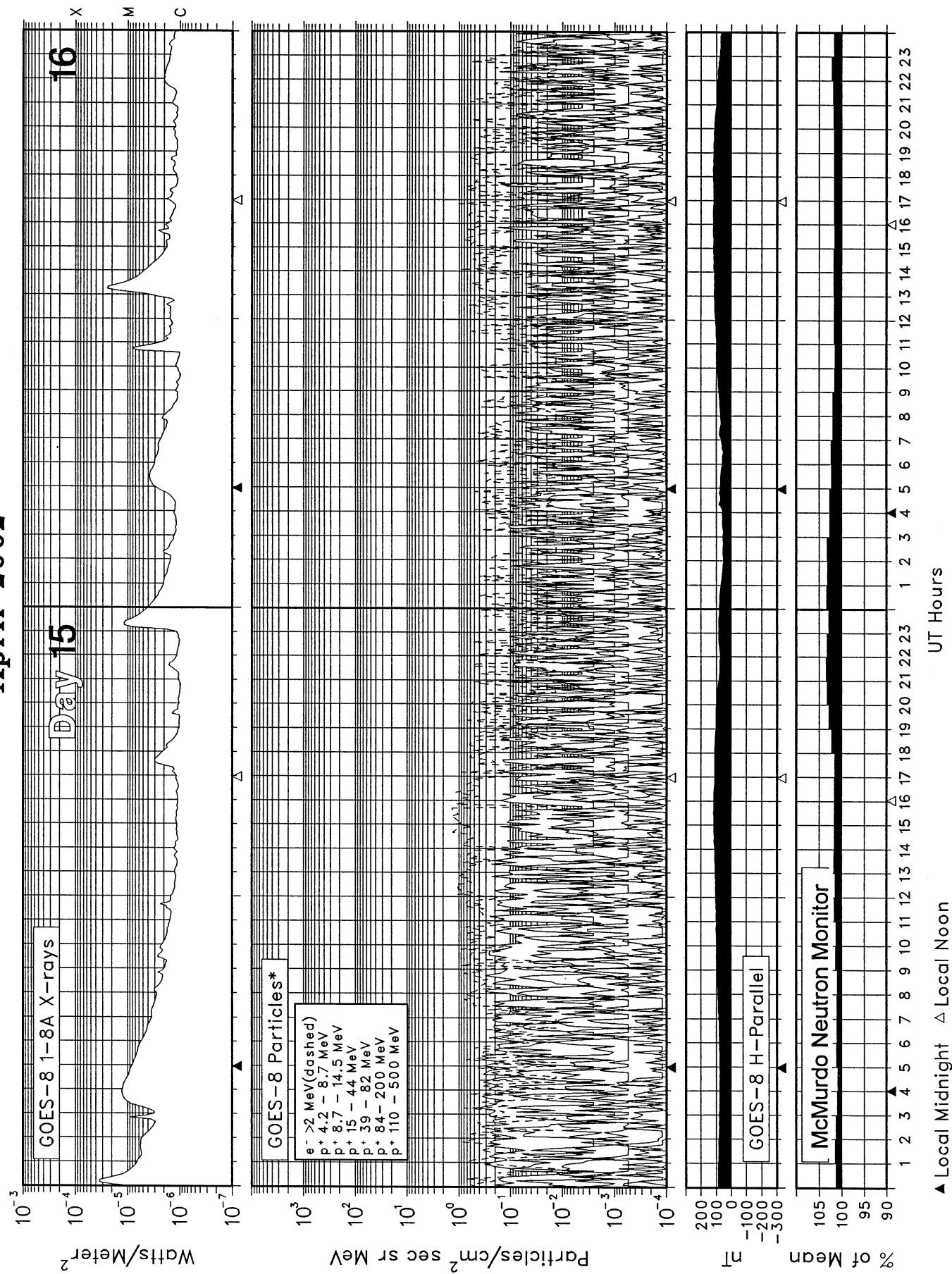


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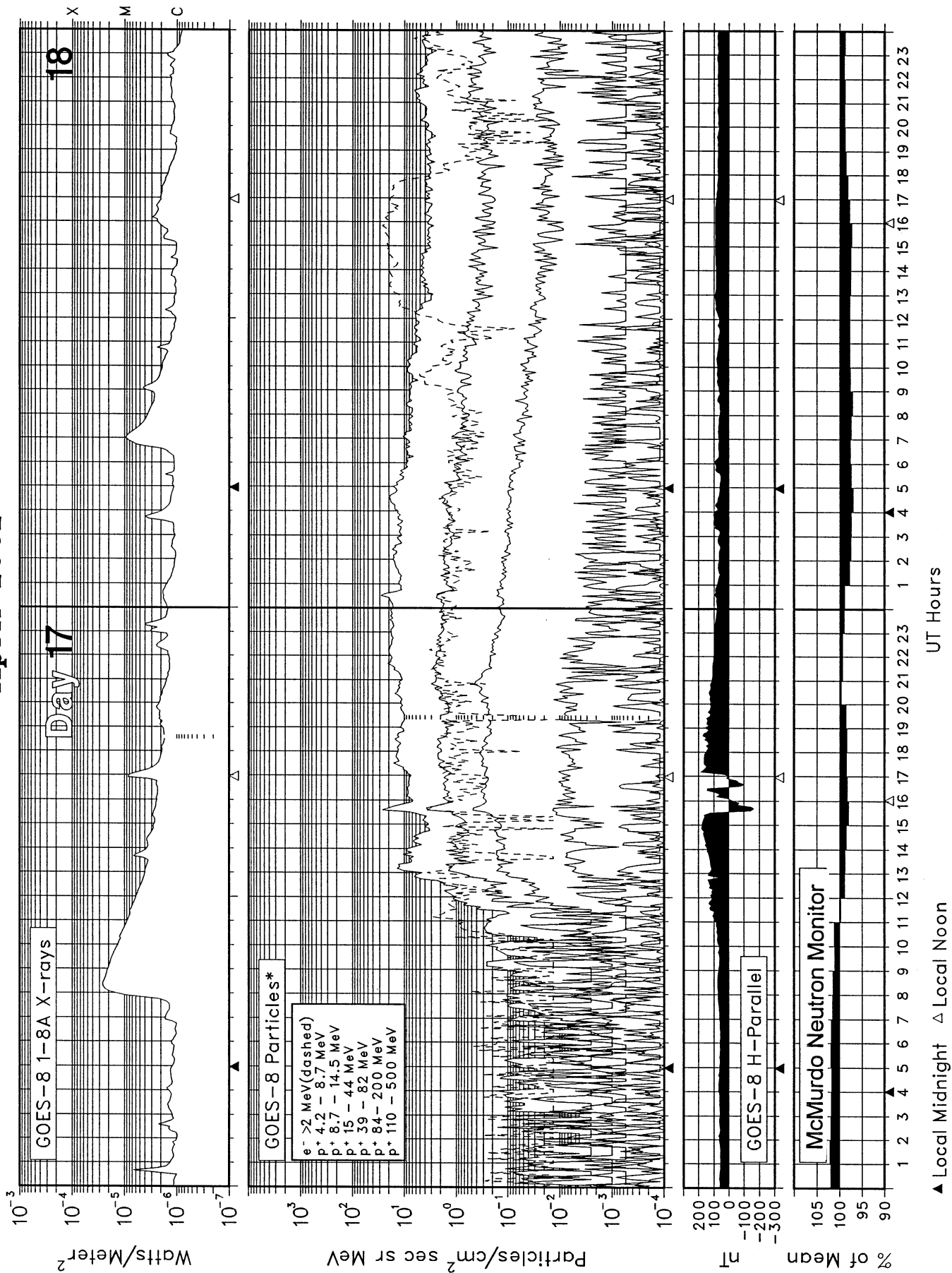
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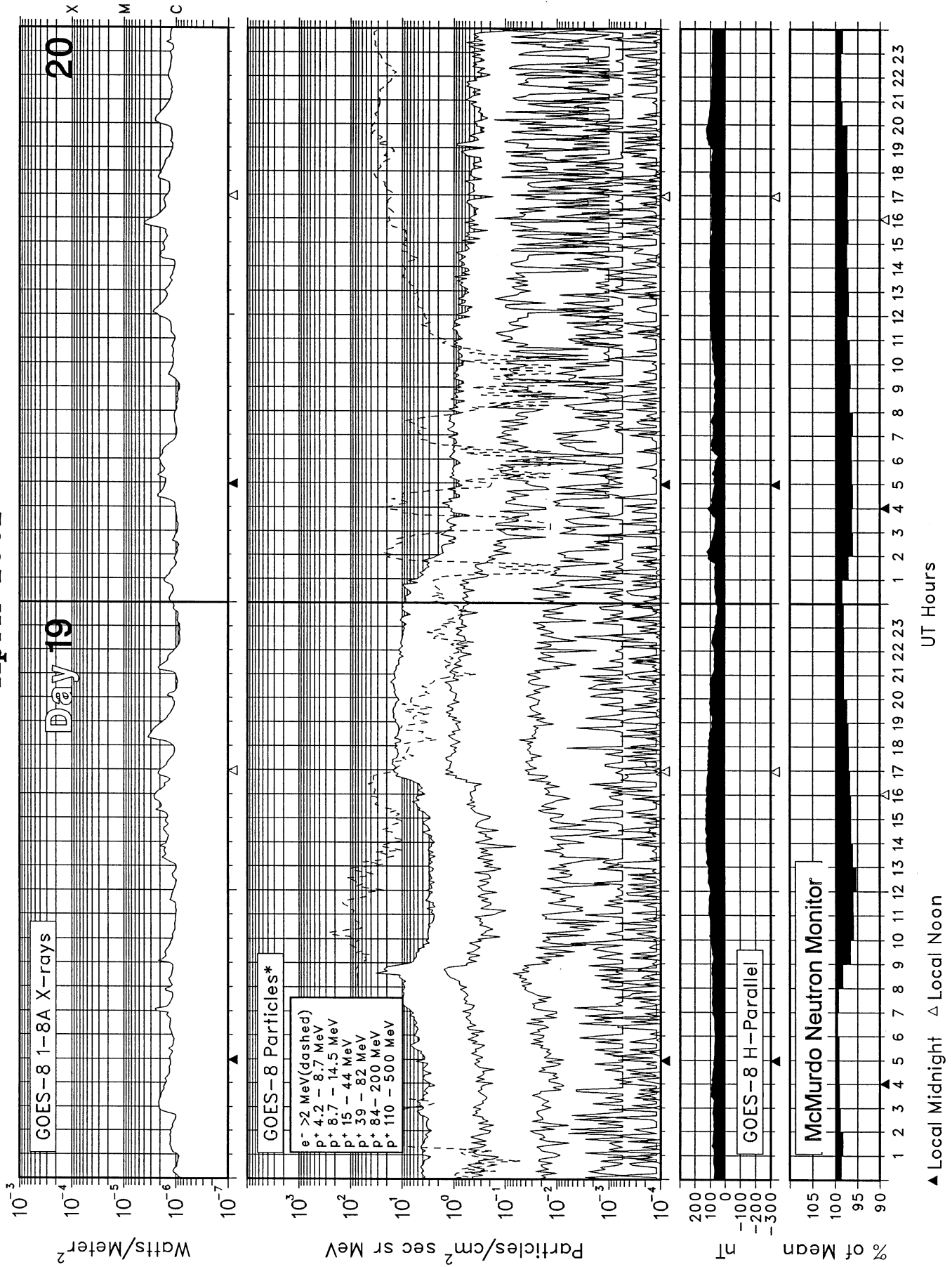
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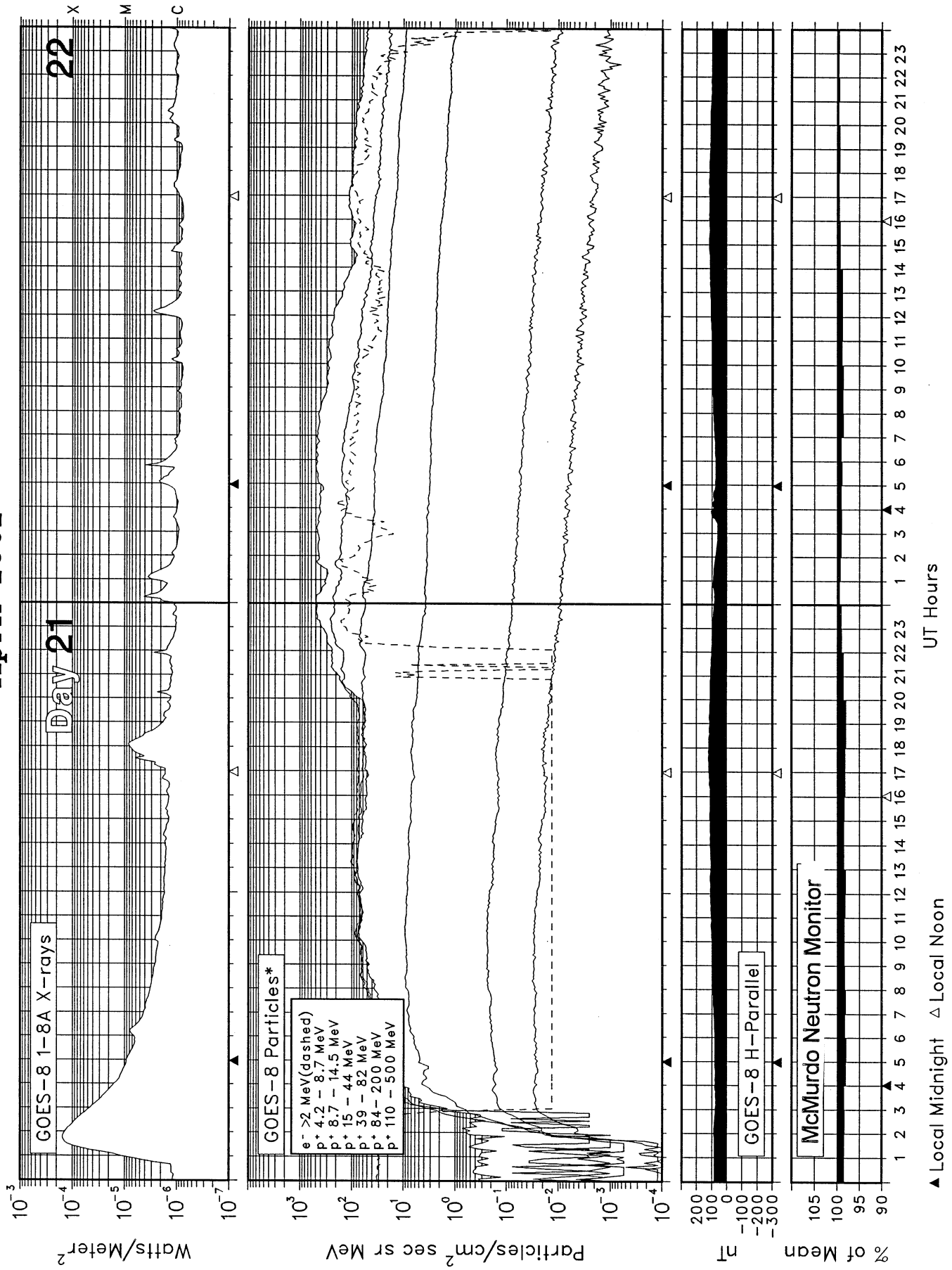
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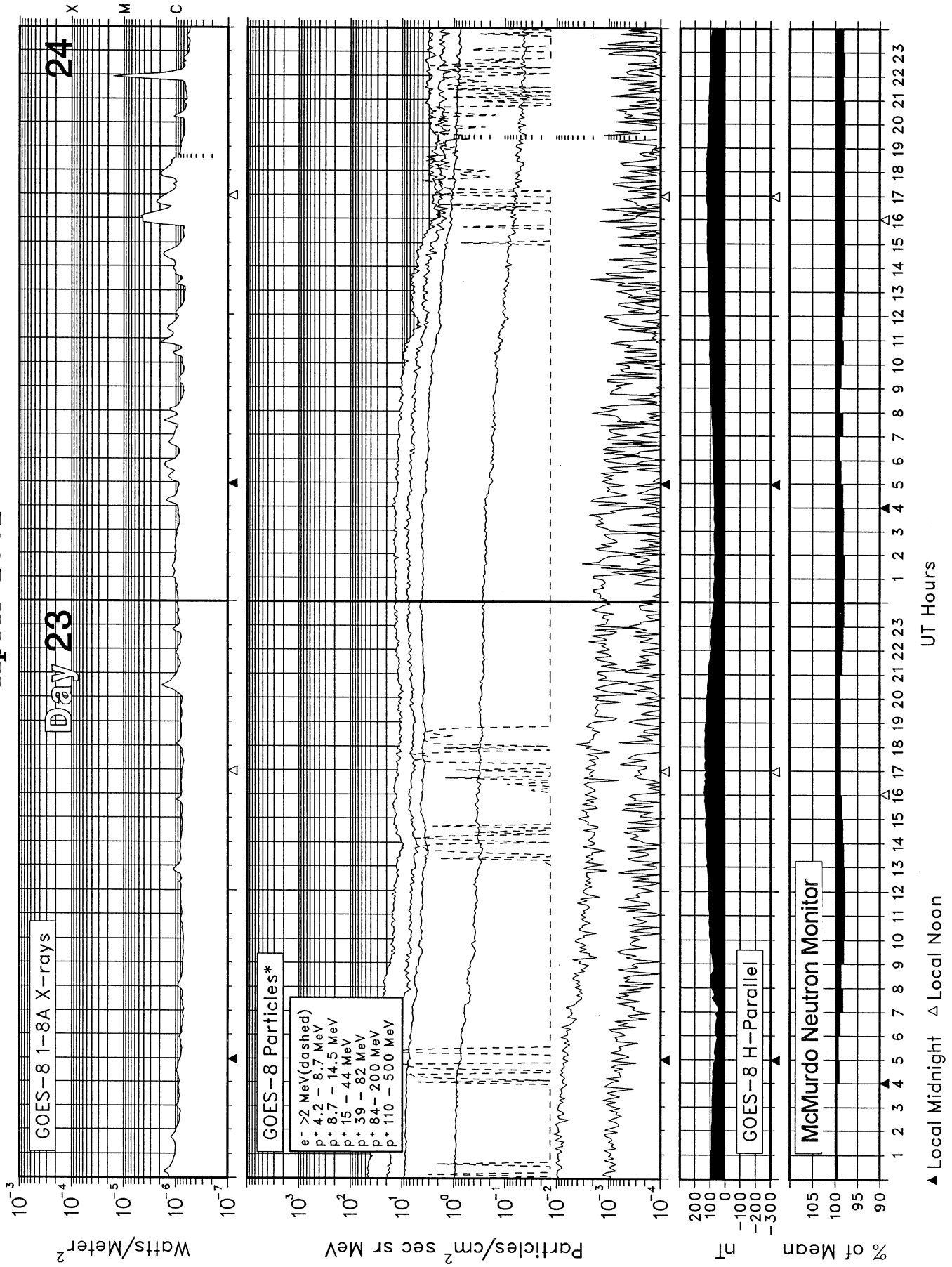
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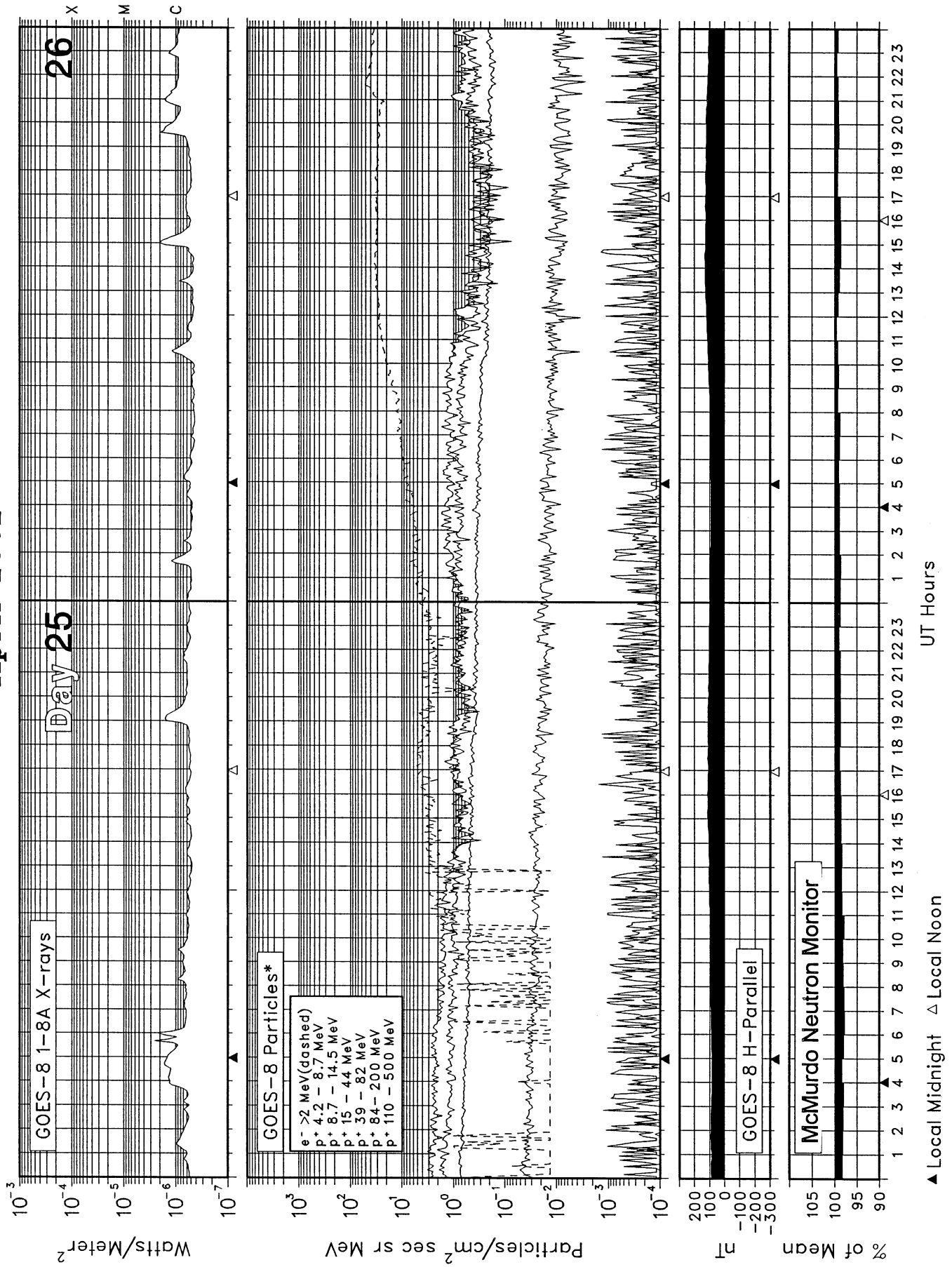
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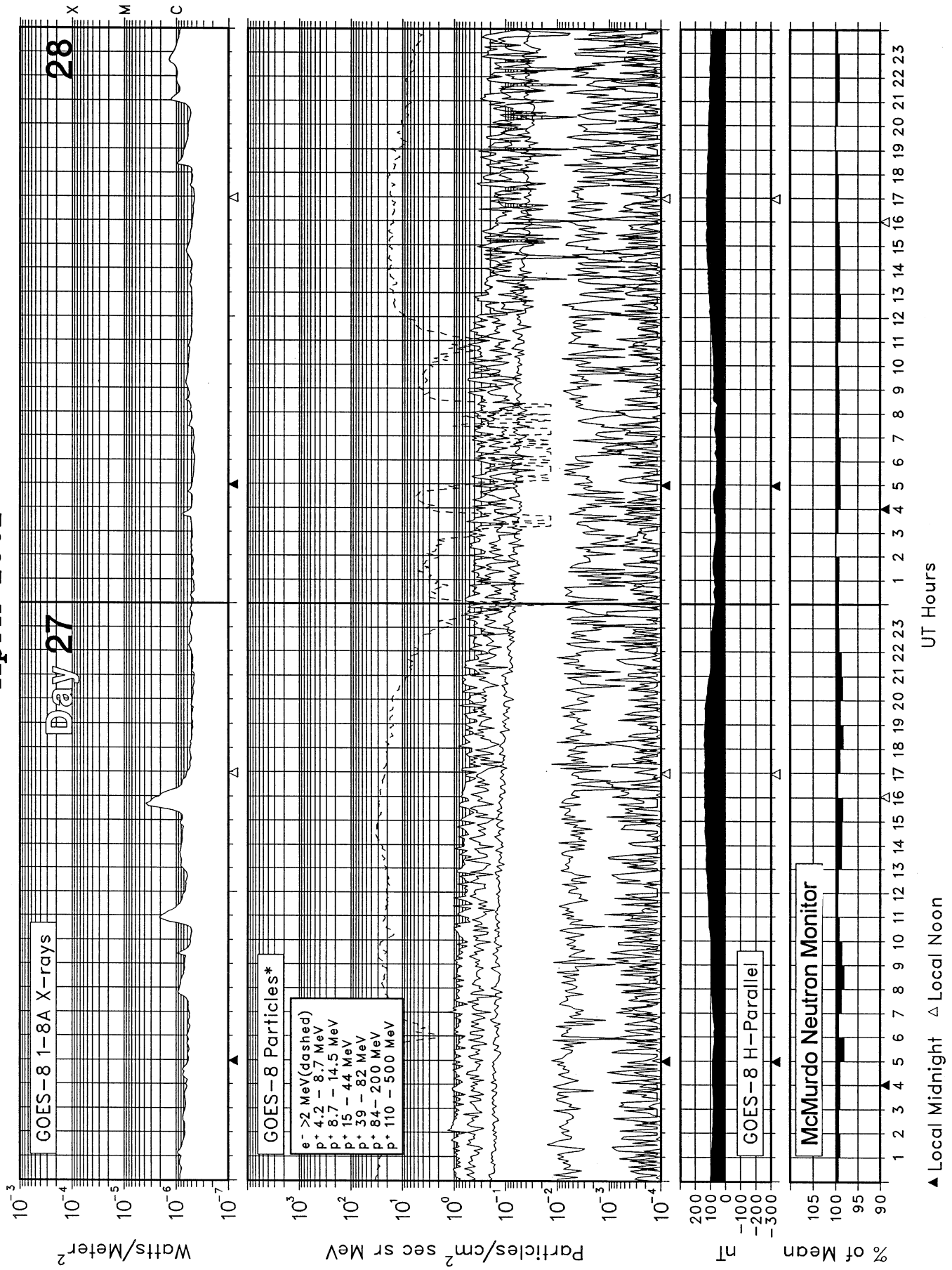
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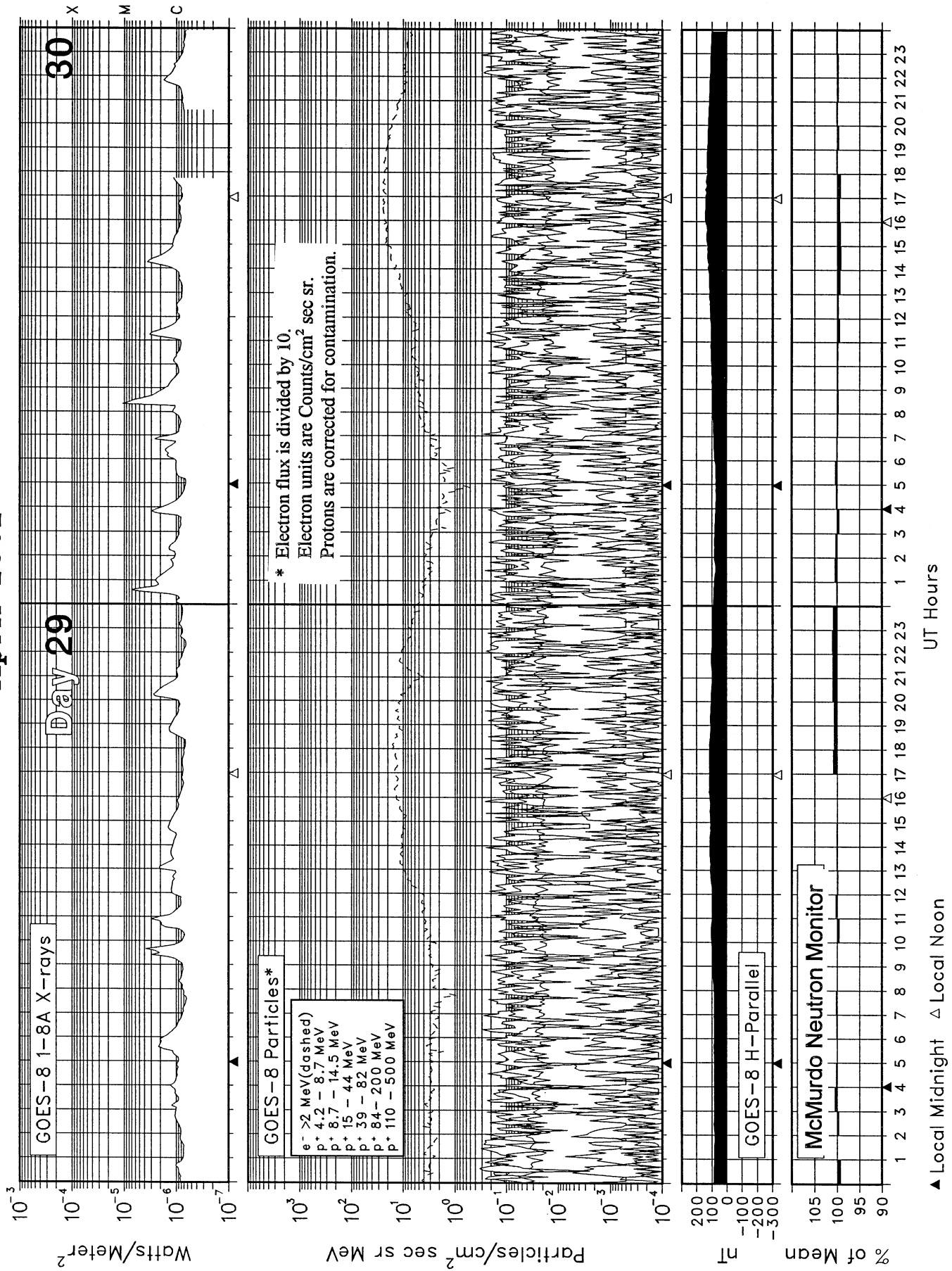
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April 2002



SOLAR-TERRESTRIAL ENVIRONMENT

April 2002



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

APRIL 2002

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
091	01	31	133	204	14	9876	S14	W82	0	0	0	01	Q	SOL: Eruptive MAG: Active PRO: Quiet
						9878	N08	W68	0	0	0	01	Q	
						9884	S19	W11	0	0	0	01	Q	
						9885	N10	E14	5	1	0	01	E	
						9886	N11	E30	1	0	0	01	Q	
						9887	N01	E37	0	0	0	01	Q	
						9888	S13	E46	0	0	0	01	Q	
						9889	S20	E48	0	0	0	01	Q	
092	02	01	189	207	13	9876	S18	W92	0	0	0	02	Q	SOL: Eruptive MAG: Active PRO: Quiet
						9878	N08	W82	0	0	0	02	Q	
						9884	S19	W25	0	0	0	02	Q	
						9885	N11	E01	2	0	0	02	E	
						9886	N11	E16	1	0	0	02	E	
						9887	N01	E24	6	0	0	02	E	
						9888	S13	E32	0	0	0	02	Q	
						9889	S20	E30	0	0	0	02	Q	
093	03	02	262	206	12	9884	S18	W39	0	0	0	03	Q	SOL: Active MAG: Active PRO: Quiet
						9885	N13	W14	0	0	0	03	E	
						9886	N12	E02	0	0	0	03	E	
						9887	N02	E11	9	0	0	03	E	
						9888	S12	E19	0	0	0	03	Q	
						9889	S19	E18	0	0	0	03	Q	
						9890	S15	W49	0	0	0	03	Q	
						9891	S08	W08	0	0	0	03	Q	
9892	N05	E63	0	0	0	03	Q							
094	04	03	162	209	12	9884	S17	W53	0	0	0	04	Q	SOL: Active MAG: Quiet PRO: Quiet
						9885	N13	W26	0	0	0	04	E	
						9886	N12	W10	0	0	0	04	Q	
						9887	N02	W02	1	0	0	04	E	
						9888	S13	E07	1	0	0	04	Q	
						9889	S19	E05	0	0	0	04	Q	
						9891	S08	W22	0	0	0	04	Q	
						9892	N04	E49	0	0	0	04	Q	
9893	N18	E78	0	0	0	04	Q							
095	05	04	176	216	6	9884	S17	W67	0	0	0	05	Q	SOL: Active MAG: Quiet PRO: Quiet
						9885	N13	W39	1	0	0	05	E	
						9886	N13	W24	0	0	0	05	Q	
						9887	N02	W16	0	0	0	05	E	
						9888	S12	W06	1	0	0	05	Q	
						9889	S20	W06	0	0	0	05	Q	
						9892	N09	E34	0	0	0	05	Q	
						9893	N18	E64	4	0	0	05	E	
096	06	05	200	217	3	9884	S17	W77	0	0	0	06	Q	SOL: Active MAG: Quiet PRO: Quiet
						9885	N13	W51	5	0	0	06	E	
						9886	N14	W38	1	0	0	06	Q	
						9887	N03	W29	1	0	0	06	E	
						9888	S12	W19	1	0	0	06	E	
						9892	N05	E20	0	0	0	06	Q	
						9893	N19	E53	2	0	0	06	E	
						9894	N14	W09	0	0	0	06	Q	
9895	N06	E58	0	0	0	06	Q							
9896	S11	E74	0	0	0	06	E							
097	07	06	234	206	4	9884	S17	W90	0	0	0	07	Q	SOL: Active MAG: Quiet PRO: Quiet
						9885	N13	W64	1	0	0	07	E	
						9886	N14	W51	0	0	0	07	Q	
						9887	N03	W42	1	0	0	07	E	
						9888	S12	W32	0	0	0	07	Q	
						9892	N05	E07	0	0	0	07	Q	
						9893	N19	E40	5	0	0	07	E	
						9894	N14	W22	0	0	0	07	Q	
9895	N06	E45	0	0	0	07	Q							

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Apr 02

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

APRIL 2002

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
						9896	S11	E61	0	0	0	07	Q	
						9897	S01	W02	0	0	0	07	Q	
						9898	S19	E66	0	0	0	07	Q	
						9899	N18	E72	0	0	0	07	Q	
098	08	07	227	208	8	9885	N13	W80	0	0	0	08	Q	SOL: Active
						9886	N14	W67	0	0	0	08	Q	MAG: Quiet
						9887	N02	W56	0	0	0	08	E	PRO: Quiet
						9888	S11	W45	0	0	0	08	Q	
						9892	N05	W06	0	0	0	08	Q	
						9893	N18	E27	4	0	0	08	E	
						9896	S11	E47	0	0	0	08	Q	
						9897	S02	W17	0	0	0	08	Q	
						9898	S18	E53	1	0	0	08	Q	
						9899	N18	E59	0	0	0	08	Q	
						9900	S29	E07	0	0	0	08	Q	
						9901	N20	E37	2	0	0	08	Q	
						9902	N11	E75	0	0	0	08	Q	
099	09	08	245	206	2	9885	N13	W90	0	0	0	09	Q	SOL: Active
						9886	N14	W80	0	0	0	09	Q	MAG: Quiet
						9887	N02	W69	1	0	0	09	E	PRO: Quiet
						9888	S12	W59	1	0	0	09	Q	
						9892	N05	W19	0	0	0	09	Q	
						9893	N18	E13	0	0	0	09	E	
						9896	S11	E34	0	0	0	09	Q	
						9897	S02	W30	0	0	0	09	Q	
						9898	S19	E40	2	0	0	09	Q	
						9899	N18	E46	4	0	0	09	E	
						9900	S29	W06	0	0	0	09	Q	
						9901	N19	E24	3	0	0	09	E	
						9902	N13	E64	0	0	0	09	Q	
						9903	N19	E74	0	0	0	09	Q	
100	10	09	212	205	2	9887	N04	W82	0	0	0	10	E	SOL: Active
						9888	S11	W72	0	0	0	10	Q	MAG: Quiet
						9893	N19	W00	0	0	0	10	E	PRO: Quiet
						9896	S11	E21	0	0	0	10	Q	
						9897	S02	W43	0	0	0	10	Q	
						9898	S19	E25	0	0	0	10	Q	
						9899	N18	E33	2	1	0	10	E	
						9900	S29	W19	0	0	0	10	Q	
						9901	N19	E11	0	0	0	10	E	
						9902	N13	E54	0	0	0	10	Q	
						9903	N19	E61	1	0	0	10	Q	
						9904	S16	W07	0	0	0	10	E	
101	11	10	220	194	6	9887	N03	W93	0	0	0	11	E	SOL: Active
						9888	S13	W86	0	0	0	11	Q	MAG: Quiet
						9893	N19	W14	4	1	0	11	E	PRO: Quiet
						9896	S11	E08	0	0	0	11	Q	
						9897	S02	W59	0	0	0	11	Q	
						9898	S19	E12	0	0	0	11	Q	
						9899	N18	E22	6	1	0	11	E	
						9900	S28	W32	2	0	0	11	E	
						9901	N20	W02	2	0	0	11	E	
						9902	N13	E43	0	0	0	11	Q	
						9903	N19	E47	1	0	0	11	Q	
						9904	S16	W21	1	0	0	11	E	
						9905	S17	E04	0	0	0	11	Q	
102	12	11	235	197	9	9893	N19	W27	3	0	0	12	E	SOL: Active
						9896	S11	W07	0	0	0	12	Q	MAG: Quiet
						9897	S02	W74	0	0	0	12	Q	PRO: Quiet
						9898	S18	W02	1	0	0	12	Q	
						9899	N18	E09	1	0	0	12	E	
						9900	S28	W45	2	0	0	12	Q	

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)	
							Lat	Lon	Opt	M	X				
						9901	N21	W14	1	0	0	12	E		
						9902	N13	E31	1	0	0	12	Q		
						9903	N19	E34	1	0	0	12	Q		
						9904	S16	W36	1	0	0	12	Q		
						9905	S15	W13	0	0	0	12	Q		
						9906	S16	E40	0	0	0	12	Q		
						9907	S04	E74	0	0	0	12	Q		
103	13	12	263	212	16	9893	N20	W39	5	0	0	13	E	SOL: Active	
						9896	S11	W19	0	0	0	13	Q	MAG: Quiet	
						9899	N17	W04	1	0	0	13	Q	PRO: Quiet	
						9900	S28	W57	0	0	0	13	Q		
						9901	N21	W26	1	1	0	13	E		
						9902	N14	E19	0	0	0	13	Q		
						9903	N18	E19	0	0	0	13	Q		
						9904	S15	W49	0	0	0	13	Q		
						9905	S15	W25	0	0	0	13	Q		
						9906	S16	E26	2	0	0	13	E		
						9907	S05	E61	3	0	0	13	E		
						9908	N05	W25	0	0	0	13	Q		
104	14	13	257	226	12	9893	N18	W53	2	0	0	14	E	SOL: Active	
						9896	S10	W33	0	0	0	14	Q	MAG: Quiet	
						9899	N18	W19	0	0	0	14	Q	PRO: Quiet	
						9900	S29	W68	1	0	0	14	Q		
						9901	N20	W39	1	0	0	14	E		
						9902	N13	E03	0	0	0	14	Q		
						9904	S14	W56	0	0	0	14	Q		
						9905	S15	W41	0	0	0	14	Q		
						9906	S15	E13	2	0	0	14	E		
						9907	S04	E46	2	0	0	14	Q		
						9908	N04	W40	0	0	0	14	Q		
105	15	14	236	210	11	9893	N20	W67	12	1	0	15	A	SOL: Active	
						9896	S09	W46	0	0	0	15	A	MAG: Quiet	
						9899	N19	W32	0	0	0	15	A	PRO: Quiet	
						9900	S28	W81	0	0	0	15	A		
						9901	N22	W56	2	0	0	15	A		
						9902	N13	W11	0	0	0	15	A		
						9903	N15	W02	0	0	0	15	A		
						9905	S14	W55	0	0	0	15	A		
						9906	S15	W02	4	0	0	15	A		
						9907	S04	E33	7	0	0	15	A		
						9908	N05	W54	0	0	0	15	A		
						9909	N06	E70	0	0	0	15	A		
106	16	15	243	203	6	9893	N19	W81	1	0	0	16	A	SOL: Active	
						9896	S09	W60	0	0	0	16	A	MAG: Quiet	
						9899	N19	W44	0	0	0	16	A	PRO: Quiet	
						9901	N21	W70	3	0	0	16	A		
						9902	N12	W28	0	0	0	16	A		
						9903	N16	W13	0	0	0	16	A		
						9905	S14	W69	1	0	0	16	A		
						9906	S15	W14	1	1	0	16	A		
						9907	S04	E21	0	0	0	16	A		
						9908	N05	W70	0	0	0	16	A		
						9909	N11	E56	1	0	0	16	A		
						9910	S21	E50	0	0	0	16	A		
107	17	16	172	196	7	9896	S10	W74	1	0	0	17	Q	SOL: Active	
						9899	N18	W58	0	0	0	17	Q	MAG: Active	
						9901	N21	W86	0	0	0	17	E	PRO: Quiet	
						9902	N12	W42	0	0	0	17	Q		
						9903	N17	W25	0	0	0	17	Q		
						9905	S15	W83	0	0	0	17	Q		
						9906	S15	W28	2	0	0	17	E		
						9907	S03	E07	0	0	0	17	E		

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
						9909	N11	E42	0	0	0	17	Q	
						9910	S20	E37	0	0	0	17	Q	
108	18	17	137	194	31	9896	S10	W85	0	0	0	18	Q	SOL: Active
						9899	N19	W71	0	0	0	18	Q	MAG: Active
						9902	N12	W55	0	0	0	18	Q	PRO: IP
						9906	S14	W41	2	1	0	18	E	
						9907	S03	W07	0	0	0	18	Q	
						9909	N08	E28	1	0	0	18	Q	
						9910	S20	E22	0	0	0	18	Q	
109	19	18	160	188	45	9899	N19	W86	0	0	0	19	Q	SOL: Active
						9902	N12	W70	0	0	0	19	Q	MAG: Minor
						9906	S14	W55	2	0	0	19	E	PRO: Warning
						9907	S02	W22	1	0	0	19	Q	
						9909	N08	E15	1	0	0	19	Q	
						9910	S20	E07	0	0	0	19	Q	
						9911	S13	E23	0	0	0	19	Q	
						9912	N11	E28	0	0	0	19	Q	
110	20	19	182	180	37	9902	N12	W84	0	0	0	20	Q	SOL: Active
						9906	S14	W66	9	0	0	20	E	MAG: Minor
						9907	S03	W32	0	0	0	20	Q	PRO: Warning
						9909	N07	E02	0	0	0	20	Q	
						9910	S20	W06	0	0	0	20	Q	
						9911	S13	E11	0	0	0	20	Q	
						9912	N09	E15	0	0	0	20	Q	
						9913	S15	E23	0	0	0	20	Q	
						9914	N04	E72	0	0	0	20	Q	
111	21	20	185	177	41	9906	S14	W79	1	0	0	21	E	SOL: Eruptive
						9907	S03	W48	0	0	0	21	Q	MAG: Active
						9909	N07	W10	0	0	0	21	Q	PRO: Quiet
						9910	S20	W18	0	0	0	21	Q	
						9911	S13	W04	0	0	0	21	Q	
						9912	N10	E02	2	0	0	21	E	
						9913	S16	E10	0	0	0	21	Q	
						9914	N05	E59	0	0	0	21	Q	
112	22	21	160	173	8	9906	S14	W90	1	0	1	22	E	SOL: Eruptive
						9907	S03	W63	0	0	0	22	Q	MAG: Active
						9909	N07	W24	0	0	0	22	Q	PRO: IP
						9910	S20	W33	0	0	0	22	Q	
						9912	N10	W12	2	0	0	22	E	
						9913	S17	W02	0	0	0	22	Q	
						9914	N04	E44	0	0	0	22	Q	
						9915	N11	E54	0	0	0	22	Q	
						9916	S17	E71	0	0	0	22	Q	
113	23	22	155	170	13	9909	N08	W37	0	0	0	23	Q	SOL: Eruptive
						9910	S21	W47	0	0	0	23	Q	MAG: Active
						9912	N10	W25	1	0	0	23	E	PRO: IP
						9913	S15	W19	0	0	0	23	Q	
						9914	N04	E31	2	0	0	23	Q	
						9915	N12	E42	1	0	0	23	Q	
						9916	S17	E60	1	0	0	23	Q	
						9917	S30	E45	0	0	0	23	Q	
						9918	N06	E00	0	0	0	23	Q	
						9919	N11	E80	0	0	0	23	Q	
114	24	23	180	175	18	9909	N08	W50	0	0	0	24	Q	SOL: Eruptive
						9910	S19	W62	0	0	0	24	Q	MAG: Active
						9912	N11	W38	0	0	0	24	E	PRO: IP
						9913	S15	W31	0	0	0	24	Q	
						9914	N04	E18	1	0	0	24	Q	
						9915	N11	E28	1	0	0	24	Q	
						9916	S18	E47	1	0	0	24	Q	

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
						9919	N10	E66	0	0	0	24	Q	
						9920	S23	W03	0	0	0	24	Q	
						9921	N12	E41	0	0	0	24	Q	
						9922	N19	E56	0	0	0	24	Q	
115	25	24	256	177	7	9909	N07	W64	0	0	0	25	Q	SOL: Eruptive
						9910	S21	W74	0	0	0	25	Q	MAG: Quiet
						9912	N09	W52	3	1	0	25	E	PRO: IP
						9913	S16	W44	6	0	0	25	Q	
						9914	N04	E04	0	0	0	25	Q	
						9915	N12	E14	1	0	0	25	Q	
						9916	S18	E32	1	0	0	25	Q	
						9919	N12	E57	0	0	0	25	Q	
						9920	S23	W15	1	0	0	25	Q	
						9922	N21	E40	0	0	0	25	Q	
						9923	S03	W31	0	0	0	25	Q	
						9924	S17	W07	0	0	0	25	E	
						9925	S14	W21	0	0	0	25	Q	
116	26	25	208	167	3	9909	N08	W76	0	0	0	26	Q	SOL: Eruptive
						9910	S21	W86	0	0	0	26	Q	MAG: Quiet
						9912	N11	W65	2	0	0	26	Q	PRO: Quiet
						9913	S14	W58	0	0	0	26	Q	
						9914	N04	W10	0	0	0	26	Q	
						9915	N12	E01	0	0	0	26	Q	
						9916	S17	E20	0	0	0	26	Q	
						9919	N12	E46	0	0	0	26	Q	
						9920	S24	W28	0	0	0	26	Q	
						9922	N23	E25	0	0	0	26	Q	
						9923	S03	W47	0	0	0	26	Q	
						9924	S15	W20	1	0	0	26	Q	
						9925	S14	W36	0	0	0	26	Q	
117	27	26	160	163	3	9912	N11	W78	0	0	0	27	Q	SOL: Eruptive
						9913	S15	W72	0	0	0	27	Q	MAG: Active
						9914	N04	W25	1	0	0	27	Q	PRO: Quiet
						9915	N11	W12	0	0	0	27	Q	
						9916	S18	E07	0	0	0	27	Q	
						9919	N12	E33	0	0	0	27	Q	
						9922	N22	E13	0	0	0	27	Q	
						9923	S03	W60	0	0	0	27	Q	
						9924	S16	W36	0	0	0	27	Q	
						9925	S14	W49	0	0	0	27	Q	
118	28	27	173	157	9	9912	N11	W90	0	0	0	28	Q	SOL: Eruptive
						9914	N05	W38	0	0	0	28	Q	MAG: Active
						9915	N11	W26	0	0	0	28	Q	PRO: Quiet
						9916	S18	W06	0	0	0	28	Q	
						9919	N12	E14	2	0	0	28	Q	
						9920	S20	W52	0	0	0	28	Q	
						9921	N13	W13	0	0	0	28	Q	
						9922	N22	E04	0	0	0	28	Q	
						9923	S03	W72	0	0	0	28	Q	
						9924	S15	W51	0	0	0	28	Q	
						9925	S14	W65	0	0	0	28	Q	
						9926	N12	E26	0	0	0	28	Q	
119	29	28	121	147	17	9914	N05	W51	0	0	0	29	Q	SOL: Eruptive
						9915	N12	W40	1	0	0	29	Q	MAG: Active
						9916	S18	W19	0	0	0	29	Q	PRO: Quiet
						9919	N14	E01	0	0	0	29	Q	
						9921	N14	W27	0	0	0	29	Q	
						9922	N22	W13	0	0	0	29	Q	
						9926	N13	E11	0	0	0	29	Q	
120	30	29	124	153	7	9914	N06	W64	0	0	0	30	Q	SOL: Eruptive
						9915	N12	W53	2	0	0	30	Q	MAG: Quiet

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
						9916	S15	W30	0	0	0	30	Q	PRO: Quiet
						9919	N15	W13	1	0	0	30	Q	
						9921	N14	W41	0	0	0	30	Q	
						9922	N22	W24	0	0	0	30	Q	
						9926	N14	W01	0	0	0	30	Q	
						9927	S28	E68	0	0	0	30	Q	
						9928	N18	E75	0	0	0	30	Q	

(1) Region Forecast and Flare (SOL) Advice

Q = Quiet (<50% probability of C-class flares)
 E = Eruptive (C-class flares expected, probability >=50%)
 A = Active (M-class flares expected, probability >=50%)
 M = Major (X-class flares expected, probability >=50%)
 P = Proton (Proton flares expected, probability >=50%)
 W = Warning (activity levels are expected to increase, but no numerical forecast given)
 / = No forecast available

Magnetic (MAG) Geoadvice

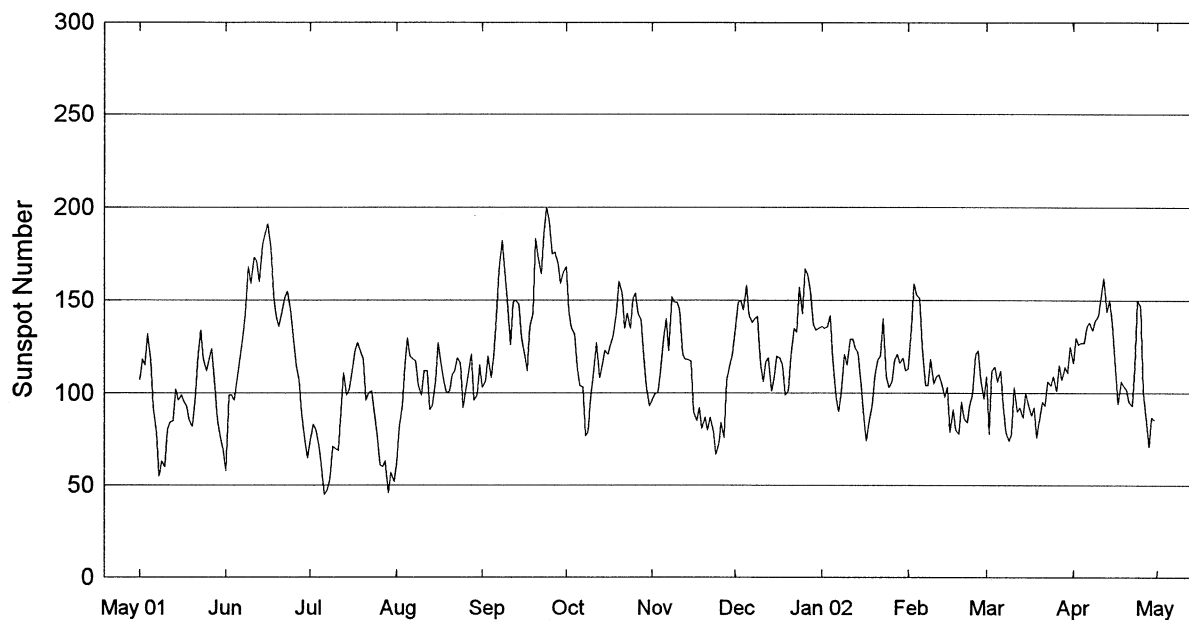
'Quiet'
 'Active' conditions expected (A>=20 or K=4)
 'Minor' storm expected (A>=30 or K=5)
 'Major' storm expected (A>=50 or K>=6)
 'Severe' storm expected (A>=100 or K>=7)
 'IP' magstorm in progress (A>=30 or K>=4)
 'Warning' (activity levels are expected to increase, but no numerical forecast given)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

Proton (PRO) Geoadvice

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

STRATWARM ALERTS - NONE

International Relative Sunspot Numbers May 2001 - Apr 2002

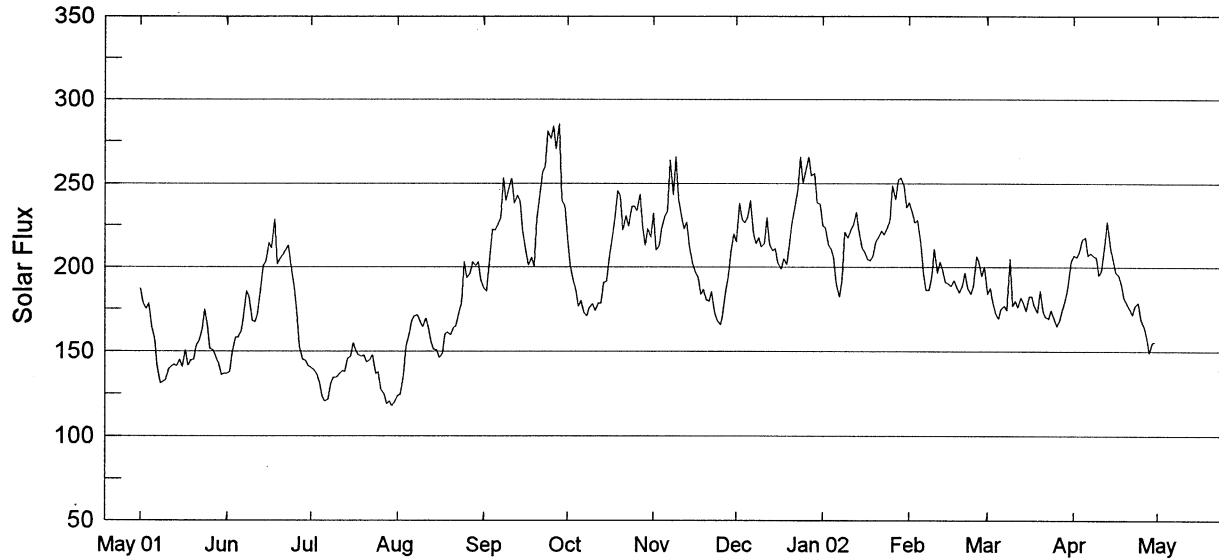


Day	May 01	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 02*	Feb*	Mar*	Apr*
1	107	58	74	62	103	168	96	133	136	113	109	116
2	118	99	83	81	106	144	100	149	135	135	78	130
3	115	99	80	93	120	135	100	150	136	159	112	126
4	132	96	71	115	108	132	111	145	142	153	114	127
5	118	106	62	130	120	114	130	158	118	151	106	127
6	92	119	45	120	141	104	140	142	98	125	112	136
7	79	129	47	118	166	103	123	138	90	104	93	138
8	55	142	54	117	182	77	152	140	100	104	79	134
9	63	168	71	104	166	79	149	141	121	118	74	139
10	60	159	70	99	150	98	149	115	115	105	78	142
11	80	173	69	112	126	113	145	106	129	109	103	152
12	84	171	90	112	149	127	121	117	129	110	90	162
13	85	160	111	91	150	108	118	119	124	104	92	144
14	102	180	99	93	148	115	118	101	122	98	87	150
15	96	186	102	106	130	123	117	108	104	103	100	138
16	99	191	113	127	121	121	90	120	87	79	94	113
17	95	178	123	117	112	126	85	119	74	91	88	94
18	93	153	127	106	136	131	92	115	86	80	92	106
19	85	141	122	100	143	143	81	99	93	78	76	104
20	82	136	118	101	183	160	87	101	109	95	85	102
21	95	144	96	110	173	154	80	120	118	86	95	95
22	121	151	100	112	164	135	87	135	120	84	93	93
23	134	155	101	119	186	143	80	133	140	94	106	114
24	118	145	90	116	200	135	67	157	109	99	104	150
25	112	131	79	92	193	151	73	143	103	121	109	147
26	118	114	61	101	175	154	84	167	106	123	101	101
27	124	107	60	112	176	143	76	164	118	107	115	88
28	103	89	63	121	170	139	107	156	121	97	107	71
29	85	74	46	96	159	120	115	137	116		114	87
30	75	65	57	99	165	103	121	134	119		111	85
31	69		52	115		93		135	112		125	
Mean	96.6	134.0	81.8	106.4	150.7	125.5	106.5	132.2	113.9	108.0	98.1	120.4

* = Provisional.

Penticton 2800 MHz (10.7cm) Solar Flux May 2001 - Apr 2002

Adjusted to 1 AU



Day	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 02	Feb	Mar	Apr
1	187.4~	136.8	119.0	123.8	187.4	216.9	232.0	215.1	224.5	238.5	184.3	206.7
2	179.0	137.8	120.5	124.3	185.7	201.1	210.1	238.1	223.5	233.7	187.6	205.9
3	175.1	149.5	118.0	135.5	202.1	191.8	212.5	228.3	213.0	226.3	179.6	209.4
4	178.6	158.3	120.3	152.7	222.1	186.5	223.5	226.6	211.0	228.1	172.0	216.3
5	163.5	158.0	135.6	160.5	221.8	176.8	230.6	230.1	205.2	214.5	169.4	217.6
6	157.8	162.4	120.3	168.3	225.6	180.2	233.2	239.5	190.1	196.9	175.0	206.7
7	140.9	169.8	121.8	171.0	229.5	172.4	263.9	219.3	182.4	186.6	177.0	208.4
8	131.1	185.7	130.5	171.5	253.1	170.8	243.1	213.9	192.6	186.4	174.2	206.8
9	131.9	182.4	134.4	167.8	239.5	175.9	265.6	217.5	220.9	194.1	204.8x	205.8
10	133.0	168.0	134.3	164.7	247.8	178.1	241.0	212.3	217.3	210.9	176.9	195.1
11	139.4	167.4	136.3	169.5	252.9	174.1	229.3	213.9	221.4	196.6	180.0	198.3
12	141.0	171.6	138.3	164.0	238.1	178.5	222.6	229.4	225.7	203.1	176.2	213.0
13	141.9	187.1	137.7	155.5	242.6	178.6	226.8	213.4	232.9	198.5	182.1	227.3
14	141.2	200.9	145.4	151.1	239.3	190.8	212.6	209.9#	221.6	191.3	178.6	211.6
15	145.2	203.2	146.8	150.5	221.7	191.7	202.4	211.0	211.2	190.3	174.0	204.7
16	140.9	214.3	154.7	146.2	209.3	205.8	197.6	202.5	209.1	188.9	182.7	197.2
17	150.8	211.2	150.4	148.4	201.1	215.8	194.0	199.0	205.0	192.0	182.7	195.0
18	141.5	228.5	147.7	159.9	205.7	226.9	183.8	205.0	203.8	188.4	176.5	189.8
19	144.6	201.7	146.9	161.3	200.6	245.6	186.8	201.6	206.9	185.1	173.3	181.4
20	144.9	205.0	147.2	159.8	228.7	242.5	180.6	214.0	215.2	189.1	186.3	179.0
21	153.8	206.9	143.5	163.9	240.5	222.0	179.7	226.7	217.5	196.7	172.8	175.1
22	155.8	210.3	144.9	165.2	257.0	230.4	185.3#	234.9	221.5	187.9	170.4	171.7
23	162.8	213.0	147.8	173.4	260.2	224.1	172.9	246.3	219.4	184.2	169.4	177.2
24	174.7	201.3	136.7	178.7	281.0	236.0	168.6	265.5	223.6	188.9	174.3	178.9
25	166.1	188.4	137.5	203.2	276.6	236.1	165.6	250.3	227.6	206.4	169.1	169.3
26	151.3	173.5	127.2	193.8	284.0	233.6	170.3	259.0	248.7	203.5	164.9	164.7
27	150.8	152.8	125.1	195.9	270.6	243.4	185.3	265.6	240.5	194.9	168.4	159.0
28	146.9	144.9	119.0	203.1	285.5	224.2	193.1	254.6#	252.0	200.4	175.6	149.2
29	142.3	144.6	120.5	200.9	240.2	212.8	210.5	255.7	253.2		180.8	155.2
30	136.0	141.2	118.0	203.0	236.3	222.7	219.6	238.5	248.8		188.2	155.6
31	136.6		120.3	192.2		217.8		237.5	235.5		204.0	
Mean	152.0	179.2	135.6	167.1	236.2	206.6	208.1	228.2	220.1	200.1	178.4	191.1

NOTE: # 1800UT reading - burst in progress (IP) at 2000UT; x Burst IP at 2000UT.

~ 1700UT reading - burst IP at 2000UT; * 2300UT reading - burst IP at 2000UT.

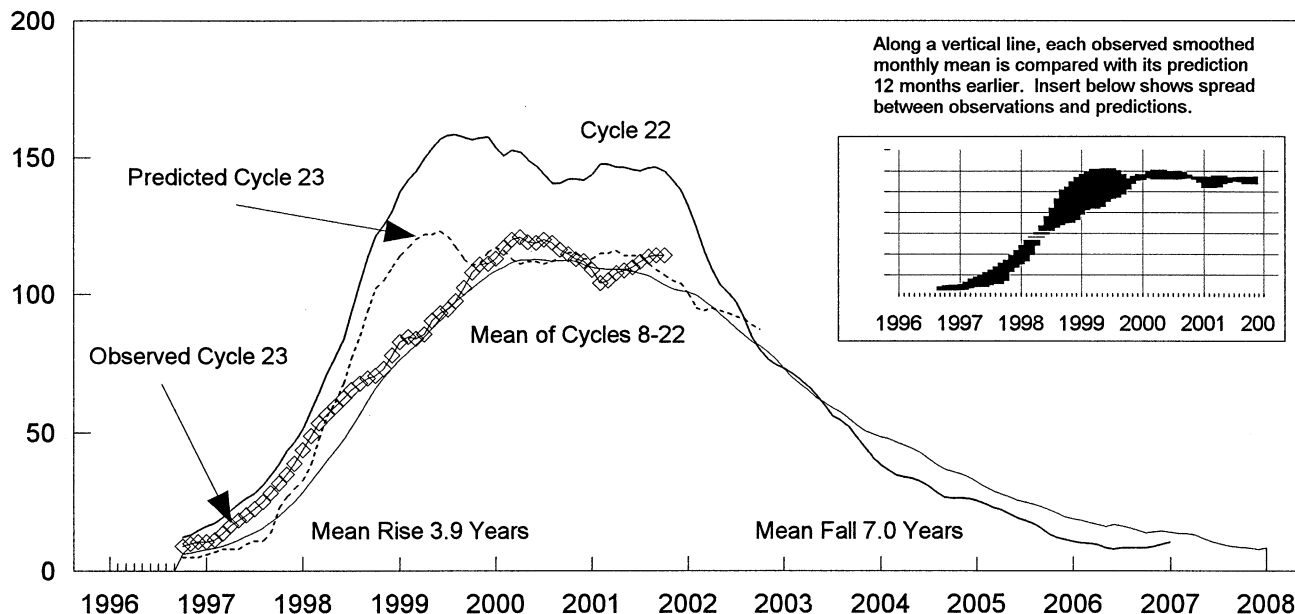
DAILY SOLAR INDICES
April 2002

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Apr 02

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers		Obs Flux Penticton (2800)	Solar Flux Adjusted to 1 Astronomical Unit								
			Int	Amer		SGMR (15400)	SGMR (8800)	SGMR (4995)	Pentic (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
1	91	18	116	130	207.0	560	360	252	206.7	189	135	56	41	25
2	92	19	130	124	206.0	569	336	251	205.9	196	136	70	46	20
3	93	20	126	128	209.4	558	345	260	209.4	190	135	63	48	21
4	94	21	127	117	216.2	574	348	253	216.3	202	137	64	45	21
5	95	22	127	130	217.4	587	367	274	217.6	205	141	68	43	21
6	96	23	136	140	206.3	574	357	256	206.7	203	138	59	39	21
7	97	24	138	147	207.9	591	350	254	208.4	199	145	73	44	20
8	98	25	134	149	206.2	581	351	253	206.8	199	151	65	42	20
9	99	26	139	152	205.0	574	361	257	205.8	198	146	66	43	23
10	100	27	142	152	194.3	578	353	246	195.1	182	144	65	42	18
11	101	1	152	163	197.4	578	353	252	198.3	187	138	67	41	23
12	102	2	162	162	211.9	587	363	282	213.0	202	147	66	41	20
13	103	3	144	159	226.0	574	375	306	227.3	210	150	67	41	21
14	104	4	150	152	210.3	577	375	275	211.6	202	149	70	52	74
15	105	5	138	139	203.3	541	370	270	204.7	193	146	63	47	21
16	106	6	113	117	195.7	565	352	253	197.2	182	143	66	52	--
17	107	7	94	106	193.5	564	351	251	195.0	191	147	63	42	30
18	108	8	106	116	188.2	565	329	238	189.8	181	136	66	50	30
19	109	9	104	111	179.7	551	334	234	181.4	172	130	65	46	28
20	110	10	102	104	177.3	557	339	234	179.0	169	131	62	42	21
21	111	11	95	99	173.4	563	324	224	175.1	158	125	59	39	18
22	112	12	93	102	169.9	500	323	211	171.7	157	118	57	42	21
23	113	13	114	125	175.3	548	335	220	177.2	172	123	--	--	--
24	114	14	150	162	176.9	566	325	224	178.9	168	126	--	--	--
25	115	15	147	146	167.3	548	315	208	169.3	161	119	--	--	--
26	116	16	101	110	162.6	557	318	207	164.7	153	117	--	--	--
27	117	17	88	88	156.9	562	320	212	159.0	159	118	--	--	--
28	118	18	71	77	147.1	512	303	195	149.2	143	112	53	43	28
29	119	19	87	79	153.0	539	330	203	155.2	149	112	--	--	--
30	120	20	85	89	153.4	555	312	199	155.6	147	110	56	52	39
MEAN			120.4	125.8	189.8	561	342	241	191.1	180	133	63	44	34

The International and American sunspot numbers shown above are preliminary values.
NOTE: Radio flux values are from Sagamore Hill, Massachusetts, USA.

Cycle 23 Smoothed Sunspot Numbers: Observed and Predicted



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

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1994	37	35	34	34	33	31	29	27	27	27	26	26	31
1995	24	23	22	21	19	18	17	15	13	12	11	11	17
1996	10	10	10	9	8*	9	8	8	8	9**	10	10	8
1997	11	11	14	17	18	20	23	25	28	32	35	39	23
1998	44	49	53	57	59	63	65	68	69	71	73	78	62
1999	83	85	84	85	90	93	94	98	102	108	111	111	95
2000	113	117	120	121+	119	119	120	119	116	115	113	112	107
2001	109	104	105	108	109	110	112	114	114	114	113	112	110
											(3)	(7)	(1)
2002	110	109	106	104	101	98	96	93	90	87	85	81	97
	(11)	(14)	(16)	(18)	(19)	(19)	(19)	(19)	(20)	(21)	(20)	(17)	(18)

 Solar Cycle 22
 Solar Cycle 23
 Min, Max, and Predi

* May 1996 marks Cycle 22's mathematical minimum. ** October 1996 marks the consensus minimum

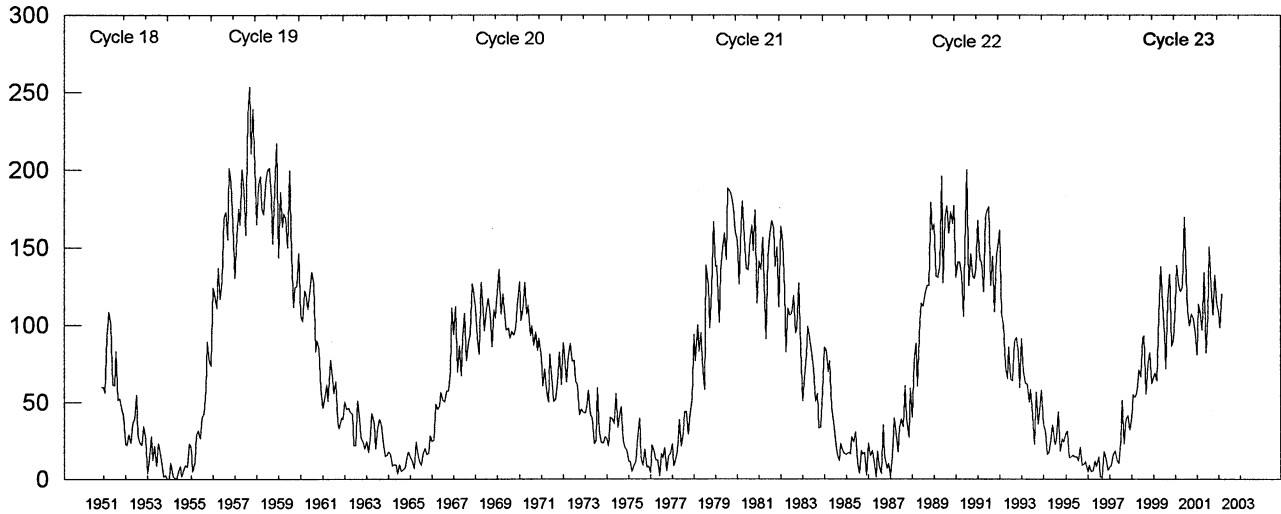
+ April 2000 marks Cycle 23 maximum.

Observed and Predicted Numbers. For the end of Cycle 22, and the rise and decline of Cycle 23, the table above lists observed smoothed sunspot numbers up to the one that includes the most recent monthly mean. We based these smoothed values on final monthly means through Dec 2001 and on provisional numbers thereafter. Table entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the Jul 1987 supplement to *Solar-Geophysical Data*.) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval. Subtracting the number from the predicted value generates the lower limit. Consider, for example, the November 2002 prediction. There exists a 90% chance that in October 2002, the actual smoothed number will fall somewhere between 66 and 108.

Points to Ponder. The McNish-Lincoln prediction method generates useful estimates of smoothed, monthly mean sunspot numbers for no more than 12 months ahead. Beyond 12 months, the predictions regress toward the mean of all 15 cycles of observations used in the computation. Moreover, the method remains very sensitive to the date defining the onset of the current cycle, that is, to the date of the most recent sunspot minimum. The new cycle predictions tabulated above are based on the consensus minimum value of 8.8 that occurred in October 1996.

Note: Please visit <http://www.sec.noaa.gov> for solar minimum and Cycle 23 discussions.

Mean Monthly Sunspot Numbers Jan 1951 - Apr 2002



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8	69.4
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3	31.5
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5	13.9
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6	4.4 m
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9	38.0
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1	141.7
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4	190.2 M
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6	184.8
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0	159.0
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6	122.3
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.8	63.6	37.7	32.6	39.9	53.9
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2	37.6
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9	27.9
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1	10.2 m
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0	15.1
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4	47.0
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4	93.8
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8	105.9 M
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9	105.5
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5	104.5
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2	66.6
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3	68.9
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3	38.0
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5	34.5
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8	15.5
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3	12.6 m
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.2	27.5
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.7	92.5
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.3	155.4 M
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.4	154.6
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.1	140.4
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.0	115.9
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.4	66.6
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7	12.0	22.8	18.7	45.9
1985	16.5	15.9	17.2	16.2	27.5	24.2	30.7	11.1	3.9	18.6	16.2	17.3	17.9
1986	2.5	23.2	15.1	18.5	13.7	1.1	18.1	7.4	3.8	35.4	15.2	6.8	13.4 m
1987	10.4	2.4	14.7	39.6	33.0	17.4	33.0	38.7	33.9	60.6	39.9	27.1	29.4
1988	59.0	40.0	76.2	88.0	60.1	101.8	113.8	111.6	120.1	125.1	125.1	179.2	100.2
1989	161.3	165.1	131.4	130.6	138.5	196.2	126.9	168.9	176.7	159.4	173.0	165.5	157.6 M
1990	177.3	130.5	140.3	140.3	132.2	105.4	149.4	200.3	125.2	145.5	131.4	129.7	142.6
1991	136.9	167.5	141.9	140.0	121.3	169.7	173.7	176.3	125.3	144.1	108.2	144.4	145.7
1992	150.0	161.1	106.7	99.8	73.8	65.2	85.7	64.5	63.9	88.7	91.8	82.6	94.3
1993	59.3	91.0	69.8	62.2	61.3	49.8	57.9	42.2	22.4	56.4	35.6	48.9	54.6
1994	57.8	35.5	31.7	16.1	17.8	28.0	35.1	22.5	25.7	44.0	18.0	26.2	29.9
1995	24.2	29.9	31.1	14.0	14.5	15.6	14.5	14.3	11.8	21.1	9.0	10.0	17.5
1996	11.5	4.4	9.2	4.8	5.5	11.8	8.2	14.4	1.6	0.9	17.9	13.3	8.6 m
1997	5.7	7.6	8.7	15.5	18.5	12.7	10.4	24.4	51.3	22.8	39.0	41.2	21.5
1998	31.9	40.3	54.8	53.4	56.3	70.7	66.6	92.2	92.9	55.5	74.0	81.9	64.3
1999	62.0	66.3	68.8	63.7	106.4	137.7	113.5	93.7	71.5	116.7	133.2	84.6	93.2
2000	90.1	112.9	138.5	125.5	121.6	124.9	170.1	130.5	109.7	99.4	106.8	104.4	119.6 M
2001	95.6	80.6	113.5	107.7	96.6	134.0	81.8	106.4	150.7	125.5	106.5	132.2	111.0
2002	113.9	108.0	98.1	120.4									110.1

Values are preliminary after Dec 01. For the yearly means, each 'M' marks a sunspot cycle maximum and each 'm' a minimum.

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Apr 02

H α SOLAR FLARES

APRIL 2002

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF		CMP Mo	Dur Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
							Region	Class								Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
LEAR	01	0237	0239	0242	N14	E16	9885	04	2.3	5	SF		3	E		14		F	
LEAR		0810	0810	0814	N00	E32	9887	04	3.7	4	SF		3	E		15		F	
SVTO		0810	0810	0814	N00	E31	9887	04	3.6	4	SF		3	E		15		F	
GOES		1300	1303	1307						7		C 1.3						5.1E-04	
SVTO		1313	1314	1317	N01	E29	9887	04	3.7	4	SF		3	E		14		F	
SVTO		1359	1408	1413	N01	E29	9887	04	3.7	14	SF		3	E		22		F	
RAMY		1407	1408	1412	N00	E29	9887	04	3.7	5	SF		3	E		17		F	
SVTO		1420	1424	1433	S01	E28	9887	04	3.7	13	SF		3	E		15		F	
GOES		1441	1446	1450	N11	E08	9885			9	SF	C 1.9						8.4E-04	
RAMY		1444	1445	1454	N11	E08	9885	04	2.2	10	SF		3	E		44		FH	
SVTO		1444	1445	1454	N11	E07	9885	04	2.1	10	SF		3	E		43		FH	
GOES		1529	1539	1557	N10	E21	9886			28	SF	C 3.0						4.0E-03	
SVTO		1531	1533	1552	N11	E20	9886	04	3.1	21	SF		3	E		38		F	
RAMY		1532	1534	1547	N10	E21	9886	04	3.2	15	SF		3	E		30		F	
RAMY		1713	1713	1718	S01	E28	9887	04	3.8	5	SF		3	E		14		F	
RAMY		1720	1722	1730	S01	E28	9887	04	3.8	10	SF		3	E		12		F	
GOES		1905	1912	1920						15		C 1.9						1.6E-03	
GOES		2119	2130	2143						24		C 3.3						3.9E-03	
GOES	02	0030	0050	0057						27		C 9.4						1.1E-02	
GOES		0224	0232	0242						18		C 5.3						4.4E-03	
LEAR		0352	0355	0358	N03	E20	9887	04	3.6	6	SF		2	E		19		F	
LEAR		0402	0406	0413	N03	E21	9887	04	3.7	11	SF		2	E		28		F	
GOES		0431	0434	0439						8		C 6.0						2.0E-03	
GOES		0742	0746	0751						9		C 2.4						1.2E-03	
GOES		1026	1038	1049	N01	E19	9887			23	SF	C 2.2						2.9E-03	
SVTO		1032	1036	1049	N01	E19	9887	04	3.8	17	SF		3	E		28		F	
GOES		1315	1322	1333	S01	E19	9887			18	SF	C 4.0						3.3E-03	
SVTO		1317	1321	1345	S01	E19	9887	04	4.0	28	SF		3	E		75		F	
RAMY		1318	1322	1346	S01	E18	9887	04	3.9	28	SF		3	E		59		FH	
GOES		1404	1409	1422	N02	E17	9887			18	SF	C 3.3						2.9E-03	
RAMY		1407	1407	1425	N01	E16	9887	04	3.8	18	SF		3	E		35		F	
SVTO		1407	1407	1428	N02	E17	9887	04	3.8	21	SF		3	E		45		F	
GOES		1438	1445	1452	N02	E17	9887			14	SF	C 2.6						1.9E-03	
SVTO		1444	1444	1450	N02	E17	9887	04	3.9	6	SF		3	E		17		F	
GOES		1541	1546	1552	N01	E16	9887			11	SF	C 2.5						1.4E-03	
SVTO		1544	1545	1549	N02	E16	9887	04	3.8	5	SF		3	E		18		F	
RAMY		1544	1545	1552	N01	E16	9887	04	3.8	8	SF		3	E		23		H	
GOES		1626	1628	1631	N01	E16	9887			5	SF	C 1.1						3.2E-04	
RAMY		1629	1630	1632	N01	E16	9887	04	3.9	3	SF		3	E		23		F	
GOES		1656	1701	1706	N01	E15	9887			10	SF	C 2.8						1.2E-03	
RAMY		1659	1701	1710	N01	E15	9887	04	3.8	11	SF		3	E		58		F	
GOES		1734	1738	1743						9		C 1.3						6.5E-04	
GOES		1844	1847	1850						6		C 1.7						5.2E-04	
GOES		1900	1904	1907						7		C 2.2						8.7E-04	
GOES		1955	2007	2018						23		C 3.1						3.1E-03	
GOES		2059	2102	2104						5		C 1.4						3.6E-04	
GOES		2237	2243	2252						15		C 2.3						1.7E-03	
GOES	03	0530	0534	0542	N01	E10	9887			12	SF	C 1.8						1.2E-03	
LEAR		0531	0533	0542	N01	E10	9887	04	4.0	11	SF		3	E		48		F	
GOES		1129	1133	1138	S11	E10	9888			9	SF	C 1.3						6.2E-04	
RAMY		1133	1134	1137	S11	E10	9888	04	4.2	4	SF		3	E		17		F	
GOES		1418	1424	1429						11		C 2.8						1.3E-03	
GOES		1955	2000	2011						16		C 3.2						2.4E-03	
GOES		2147	2152	2201						14		C 2.4						1.7E-03	
GOES	04	0333	0336	0339	N18	E77	9893			6	SF	C 2.8						7.3E-04	
LEAR		0336	0337	0344	N18	E77	9893	04	10.0	8	SF		3	E		37		H	
LEAR		0345	0350	0353	N18	E77	9893	04	10.0	8	SF		3	E		17		F	
GOES		0423	0441	0457			9893			34		C 9.8						1.5E-02	
LEAR		0427	0430	0442	N18	E77	9893	04	10.0	15	SF		3	E		43		F	
GOES		0651	0654	0656	S10	W02	9888			5	SF	C 3.0						7.8E-04	
LEAR		0652	0655	0702	S10	W02	9888	04	4.1	10	SF		3	E		67		F	
GOES		1041	1048	1054						13		M 1.4						7.0E-03	
GOES		1413	1418	1423						10		C 3.0						1.5E-03	
GOES		1433	1436	1440	N14	W25	9885			7	SF	C 3.0						1.1E-03	
RAMY		1435	1437	1447	N14	W25	9885	04	2.7	12	SF		3	E		95		F	

H α SOLAR FLARES

APRIL 2002

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF		Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement		Remarks
							Region	Mo Day						Time (UT)	Apparent (10-6 Disk)		Corr (Sq Deg)
GOES	04	1524	1532	1538					14		M 6.1					2.7E-02
GOES		2153	2158	2203	N18	E69	9893		10	SF	C 2.0					1.0E-03
HOLL		2156	2158	2200	N18	E69	9893	04	10.2	4	SF	3	E	19		
HOLL		2252	2255	2303	N08	E75		04	10.6	11	SF	3	E	37		
GOES		2302	2306	2308	N08	E73			6	SF	C 4.0					1.3E-03
HOLL		2304	2305	2308	N08	E73		04	10.4	4	SF	3	E	26		
GOES	05	0413	0418	0434	N14	W40	9885		21	SF	C 1.6					1.9E-03
LEAR		0414	0418	0425	N14	W40	9885	04	2.1	11	SF	3	E	44		F
GOES		0453	0457	0458					5		C 1.9					4.9E-04
GOES		1307	1313	1329					22		C 3.0					3.1E-03
GOES		1439	1443	1448	N00	W24	9887		9	SF	C 2.5					1.2E-03
HOLL		1443	1447	1454	N00	W24	9887	04	3.8	11	SF	3	E	26		
HOLL		1447	1451	1455	N14	W36	9885	04	2.9	8	SF	3	E	22		F
GOES		1513	1521	1531	N18	E60	9893		18	SF	C 3.4					2.9E-03
HOLL		1518	1518	1543	N18	E60	9893	04	10.2	25	SF	3	E	26		
RAMY		1519	1519	1524	N17	E59	9893	04	10.1	5	SF	3	E	16		
GOES		1716	1723	1733	N15	W36	9886		17	SF	C 3.0					2.8E-03
RAMY		1718	1720	1723	N15	W36	9886	04	3.0	5	SF	3	E	21		F
RAMY		1755	1800	1807	S14	W17	9888	04	4.5	12	SF	3	E	17		F
GOES		1947	1952	1959	N13	W38	9885		12	SF	C 2.9					1.8E-03
HOLL		1949	1951	2012	N13	W38	9885	04	2.9	23	SF	3	E	83		F
HOLL		1953	1953	2005	N18	E58	9893	04	10.2	12	SF	3	E	10		F
HOLL		2017	2018	2021	N13	W38	9885	04	3.0	4	SF	3	E	13		
GOES		2124	2133	2139					15		C 2.9					2.3E-03
GOES		2239	2243	2246	N13	W39	9885		7	SF	C 3.0					1.1E-03
HOLL		2242	2242	2249	N13	W39	9885	04	3.0	7	SF	3	E	39		
GOES		2251	2253	2257					6		C 2.8					9.0E-04
GOES		2341	2350	2358					17		C 4.9					3.9E-03
GOES	06	0133	0138	0143	S17	E48			10	SF	C 2.1					1.2E-03
LEAR		0139E	0139U	0146	S17	E48		04	9.7	7D	SF	2	E	16		
LEAR		0312	0318	0329	N18	E55	9893	04	10.3	17	SF	2	E	24		F
GOES		0341	0344	0346					5		C 1.6					4.3E-04
LEAR		0603	0610	0642	N18	E52	9893	04	10.2	39	SF	4	E	58		F
GOES		0604	0619	0625	S20	E85	9893		21	1F	C 9.5					7.5E-03
LEAR		0612	0616	0652	S20	E85		04	12.7	40	1F	4	E	114		FE
SVTO		0614	0618	0631	S20	E74		04	11.9	17	SF	3	E	17		
GOES		0957	1000	1006					9		C 1.3					6.5E-04
GOES		1403	1410	1418	N01	W36	9887		15	SF	C 2.6					1.9E-03
HOLL		1406	1406	1410	N01	W36	9887	04	3.9	4	SF	3	E	36		F
SVTO		1407	1407	1411	N00	W37	9887	04	3.8	4	SF	3	E	26		
GOES		1613	1617	1621	N18	E46	9893		8	SF	C 1.2					5.5E-04
HOLL		1614	1616	1624	N18	E46	9893	04	10.2	10	SF	3	E	13		F
GOES		1945	1955	2000	N17	E45	9893		15	SF	C 2.0					1.5E-03
HOLL		1947	1947	2004D	N17	E45	9893	04	10.2	17D	SF	3	E	22		
RAMY		1955	1956	1959	N15	W64	9885	04	2.0	4	SF	3	E	33		
GOES	07	0032	0121	0153					81		C 2.0					9.2E-03
GOES		0220	0236	0246	N19	E79	9899		26	1F	C 9.6					1.2E-02
LEAR		0225	0228	0244	N19	E79	9899	04	13.1	19	1F	3	E	121		
LEAR		0231	0243	0308	N15	E32	9893	04	9.5	37	SF	3	E	82		
GOES		0443	0449	0459	N18	E41	9893		16	SF	C 1.7					1.6E-03
LEAR		0444	0444	0455	N18	E41	9893	04	10.3	11	SF	3	E	13		H
GOES		0519	0523	0526	N18	E37	9893		7	SF	C 2.7					9.4E-04
LEAR		0521	0522	0527	N18	E37	9893	04	10.0	6	SF	3	E	43		F
GOES		0814	0824	0830	N17	E34	9893		16	SF	C 6.0					4.3E-03
LEAR		0816	0826	0842	N18	E32	9893	04	9.8	26	SF	2	E	52		F
SVTO		0818	0821	0833	N17	E34	9893	04	9.9	15	SF	3	E	53		F
GOES		1242	1245	1247					5		C 1.7					4.1E-04
GOES		1417	1429	1442	S18	E54	9898		25	SF	C 4.4					4.8E-03
SVTO		1421E	1424	1438	S20	E56	9898	04	11.9	17D	SF	3	E	21		F
HOLL		1428	1429	1440	S18	E54	9898	04	11.7	12	SF	3	E	49		F
GOES		1507	1517	1525	N20	E41			18	SF	C 2.8					2.7E-03
HOLL		1509	1511	1528	N20	E41		04	10.8	19	SF	3	E	21		
SVTO		1522	1522	1528	N18	E42		04	10.8	6	SF	3	E	10		
GOES		1653	1659	1705					12		C 1.8					1.1E-03
GOES		1813	1817	1820					7		C 1.5					5.5E-04

H α SOLAR FLARES

APRIL 2002

Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/USAF			Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks	
					Lat	CMD	Region						Mo	Day	Time (UT)		Apparent (10-6 Disk)	Corr (Sq Deg)
GOES	07	1917	1923	1947				30								2.9E-03	
GOES		2151	2210	2219				28								3.7E-03	
GOES		2238	2243	2247				9								1.6E-03	
GOES	08	0011	0019	0031	N19	E61	9899									2.1E-03	
GOES		0133	0150	0202	N20	E35	9901									6.6E-03	
GOES		0258	0304	0310	N20	E56	9899									2.5E-03	
LEAR		0300	0304	0320	N20	E56	9899	04	12.4		20	SF		3	E	92	FE
LEAR		0329	0331	0334	N19	E34	9901	04	10.7		5	SF				19	F
GOES		0346	0349	0355	N20	E33	9901				9	SF	C 2.1				1.1E-03
LEAR		0346	0350	0405	N20	E33	9901	04	10.7		19	SF		3	E	23	F
GOES		0521	0526	0536	S20	E49	9898				15	SF	C 2.0				1.6E-03
LEAR		0523	0523	0534	S20	E49	9898	04	12.0		11	SF				22	
GOES		0942	0951	1004							22		C 1.8				2.2E-03
GOES		1118	1123	1127	N18	E54	9899				9	SF	C 2.1				1.0E-03
SVTO		1120	1122	1130	N18	E54	9899	04	12.6		10	SF				15	F
GOES		1140	1144	1148							8		C 1.7				7.9E-04
GOES		1200	1202	1204	N02	W63	9887				4	SF	C 1.5				3.4E-04
SVTO		1202	1203	1207	N02	W63	9887	04	3.8		5	SF				16	
GOES		1341	1349	1354	S14	W53	9888				13	SF	C 2.1				1.4E-03
RAMY		1344	1345	1357	S12	W56	9888	04	4.3		13	SF				13	
HOLL		1344	1347	1401	S14	W53	9888	04	4.6		17	SF				16	F
GOES		1723	1734	1743	S18	E41	9898				20	SF	C 2.3				2.5E-03
HOLL		1724	1727	1735	S18	E41	9898	04	11.8		11	SF				31	UF
GOES		2039	2046	2052	N21	E49	9899				13	SF	C 6.1				3.6E-03
HOLL		2041	2044	2103	N21	E49	9899	04	12.6		22	SF				90	F
GOES		2253	2259	2303							10		C 2.4				1.3E-03
HOLL		2320	2323	2331	N20	E46	9899	04	12.5		11	SF				17	
GOES	09	0038	0042	0050	N19	E46	9899				12	2B	M 2.1				1.1E-02
LEAR		0039	0040	0104	N19	E46	9899	04	12.5		25	2B				341	FH
HOLL		0041	0044U	0105D	N19	E45	9899	04	12.5		24D	1F				167	
GOES		0533	0736	0811	N20	E50	9899				158	1F	C 7.9				4.7E-02
LEAR		0536	0548	0624	N20	E50	9899	04	13.0		48	1F				179	FH
LEAR		0602	0607	0620	N17	E70	9903	04	14.6		18	1F				205	F
GOES		1254	1302	1310							16		M 1.1				6.6E-03
GOES		1730	1735	1739	S16	W04					9	SF	C 2.2				1.1E-03
HOLL		1731	1734	1742	S16	W04		04	9.4		11	SF				14	F
HOLL		1906	1921	1939	S15	W05	9904	04	9.4		33	SF				36	F
GOES		1908	1916	1925	S15	W05					17	SF	C 4.1				3.7E-03
GOES		2041	2147	2215							94		C 2.1				9.2E-03
GOES	10	0027	0059	0105	N19	E33	9899				38	SF	C 5.6				7.2E-03
LEAR		0044	0059	0117	N19	E33	9899	04	12.5		33	SF				70	F
LEAR		0300	0302	0308	S30	W21	9900	04	8.5		8	SF				13	F
GOES		0351	0355	0406	N21	E39	9899				15	SF	C 2.4				1.9E-03
LEAR		0353	0355	0414	N21	E39	9899	04	13.1		21	SF				53	F
LEAR		0418	0426	0440	N20	E31	9899	04	12.5		22	SF				76	FH
GOES		0420	0426	0430							10		C 3.0				1.5E-03
GOES		0641	0650	0656	N20	E31	9899				15	1F	C 4.3				2.8E-03
LEAR		0642	0649	0708	N20	E31	9899	04	12.6		26	1F				126	FH
LEAR		0743	0744	0749	N18	E63	9903	04	15.1		6	SF				45	FH
RAMY		1114	1117	1135	N18	E26	9899	04	12.4		21	SF				39	F
SVTO		1116	1117	1125	N16	E27	9899	04	12.5		9	SF				16	
RAMY		1124	1124	1131	N18	W10	9893	04	9.7		7	SF				57	
GOES		1223	1231	1240	N15	W14	9893				17	1N	M 8.2				4.9E-02
RAMY		1229	1230	1233	N19	E04	9901	04	10.8		4	SF				19	
HOLL		1331	1335	1414	N20	E03	9901	04	10.8		43	SF				55	F
GOES		1417	1423	1436							19		C 5.0				5.2E-03
GOES		1538	1541	1544	N19	W11	9893				6	SF	C 4.2				1.3E-03
HOLL		1540	1541	1544	N19	W11	9893	04	9.8		4	SF				33	F
RAMY		1639	1640	1643	N21	W05	9893	04	10.3		4	SF				15	
GOES		1848	1907	1915			9899				27		M 1.6				1.3E-02
HOLL		1851	1858	1915	S16	W20	9904	04	9.3		24	SF				22	F
HOLL		1902	1904	1933	N17	E23	9899	04	12.5		31	1N				172	FH
GOES		2225	2242	2255	S29	W29	9900				30	SF	C 3.2				4.9E-03
HOLL		2228E	2242U	2259D	S29	W29	9900	04	8.7		31D	SF				16	F
LEAR	11	0047	0047	0053	N20	E27	9899	04	13.1		6	SF				11	F

H α SOLAR FLARES

APRIL 2002

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF		Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
							Region	Mo Day						Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
GOES	11	0144	0153	0204	N20	W10	9893		20	1N	C	9.9				7.7E-03	
LEAR		0147	0153	0211	N20	W10	9893	04	10.3	24	1N		2	E	117	ZU	
LEAR		0153	0154	0203	N16	E45	9902	04	14.5	10	SF		2	E	16	F	
LEAR		0157	0158	0201	N18	E47	9903	04	14.7	4	SF		2	E	15		
LEAR		0307	0310U	0314	S19	E09	9898	04	11.8	7	SF		2	E	20	F	
LEAR		0346	0346	0354	N21	W17	9893	04	9.8	8	SF		2	E	14	F	
LEAR		0347	0347	0352	N21	W03	9901	04	10.9	5	SF		2	E	14		
LEAR		0406	0406	0411	S28	W32	9900	04	8.7	5	SF		2	E	19	F	
GOES		0559	0610	0620	S29	W31	9900			21	SF	C	4.4			4.7E-03	
LEAR		0601	0606	0641	S29	W31	9900	04	8.8	40	SF		2	E	77	F	
GOES		0901	0905	0911						10		C	2.3			1.3E-03	
GOES		0924	0930	0936						12		C	3.4			1.9E-03	
GOES		1553	1558	1605						12		C	2.0			1.2E-03	
GOES		1616	1626	1633	S15	W33	9904			17	1F	C	9.2			6.1E-03	
HOLL		1619	1624U		S15	W33	9904	04	9.2	461	1F			E	123		
RAMY		1619	1625	1705	S15	W33	9904	04	9.2	46	1F		3	E	161	UF	
GOES		1833	1838	1843						10		C	7.2			2.8E-03	
GOES		2257	2300	2306	N18	W28	9893			9	SF	C	1.6			8.1E-04	
HOLL		2259	2300	2307	N18	W28	9893	04	9.8	8	SF		3	E	24	F	
GOES	12	0117	0120	0123						6		C	1.5			4.5E-04	
GOES		0142	0146	0153	S12	E36	9906			11	SF	C	1.8			1.1E-03	
LEAR		0146	0147	0153	S12	E36	9906	04	14.8	7	SF		3	E	14	FH	
GOES		0250	0253	0256						6		C	1.9			6.0E-04	
GOES		0304	0309	0314	S03	E76	9907			10	SF	C	5.0			2.4E-03	
LEAR		0306	0307	0317	S03	E76	9907	04	17.8	11	SF		2	E	25	F	
GOES		0448	0512	0519	N16	E05	9899			31	SF	C	3.4			5.3E-03	
LEAR		0450	0455	0514	N16	E05	9899	04	12.6	24	SF		3	E	58	F	
LEAR		0510	0513	0515	S04	E80	9907	04	18.2	5	SF		3	E	29		
GOES		0839	0842	0844	S15	E33	9906			5	SF	C	3.0			7.3E-04	
LEAR		0842	0842	0846	S15	E33	9906	04	14.9	4	SF		2	E	30		
GOES		1305	1310	1314						9		M	1.4			4.2E-03	
HOLL		1409	1436	1453	N18	W31	9893	04	10.2	44	SF		3	E	17		
HOLL		1454	1457	1514	N18	W31	9893	04	10.3	20	SF		3	E	10		
RAMY		1510	1514	1518	N12	E23		04	14.4	8	SF		3	E	66		
RAMY		1512	1515	1517	N19	W34	9893	04	10.0	5	SF		3	E	22		
HOLL		1515	1516	1527	N19	W30	9893	04	10.3	12	SF		3	E	21		
HOLL		1528	1531	1535	N18	W31	9893	04	10.3	7	SF		3	E	18		
GOES		1557	1603	1612	S04	E66	9907			15	SF	C	7.7			5.5E-03	
RAMY		1600	1601	1609	S04	E66	9907	04	17.6	9	SF		3	E	57	F	
GOES		1731	1802	1817	N21	W26	9901			46	1F	M	4.0			6.3E-02	
HOLL		1737	1756	1850	N21	W26	9901	04	10.7	73	1F		3	E	106	UF	
GOES	13	0506	0530	0556						50		C	3.3			7.3E-03	
GOES		1008	1013	1020						12		C	3.2			1.7E-03	
GOES		1026	1030	1032	S28	W64	9900			6	SF	C	3.6			1.1E-03	
RAMY		1031E	1031U	1043	S28	W64	9900	04	8.4	12D	SF		3	E	55		
RAMY		1148	1149	1158	N20	W43	9893	04	10.2	10	SF		3	E	20		
GOES		1208	1213	1220	S03	E57	9907			12	SF	C	3.1			1.7E-03	
RAMY		1212	1213	1222	S03	E57	9907	04	17.8	10	SF		3	E	41	F	
GOES		1331	1337	1342						11		C	2.6			1.4E-03	
HOLL		1437	1438	1443	N18	W55	9893	04	9.4	6	SF		3	E	34		
RAMY		1438	1440	1443	N22	W58	9893	04	9.1	5	SF		3	E	37		
GOES		1515	1525	1533	S15	E16	9906			18	SF	C	1.9			1.7E-03	
RAMY		1522	1523	1538	S15	E16		04	14.8	16	SF		3	E	22	F	
HOLL		1522	1524	1536	S16	E18	9906	04	15.0	14	SF		3	E	20	F	
GOES		1629	1638	1649	S03	E55	9907			20	SF	C	2.3			2.6E-03	
RAMY		1633	1633	1646	S03	E55	9907	04	17.8	13	SF		3	E	10	F	
GOES		1706	1731	1741	N19	W38	9901			35	SF	C	2.9			4.3E-03	
RAMY		1728	1729	1739	N19	W38	9901	04	10.8	11	SF		3	E	23	F	
HOLL		1731	1735	1738	N18	W39	9901	04	10.8	7	SF		3	E	14	F	
RAMY		2034	2035	2044	S16	E14	9906	04	14.9	10	SF		3	E	19	F	
GOES		2159	2206	2218						19		C	3.4			3.4E-03	
GOES	14	0102	0107	0112	S04	E45	9907			10	SF	C	5.5			2.9E-03	
LEAR		0105	0105	0112	S04	E45	9907	04	17.4	7	SF		3	E	21		
LEAR		0144	0146	0154	N19	W54	9893	04	9.9	10	SF		3	E	43		
LEAR		0227	0230	0302	N19	W54	9893	04	10.0	35	SF		3	E	31		

H α SOLAR FLARES

APRIL 2002

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)	
LEAR	14	0303	0342	0514	N22	W45	9893	04	10.7	131	1F		3	E		136		F
GOES		0321	0351	0409	N22	W45	9893			48	1F M	1.4						3.2E-02
LEAR		0324	0325	0345	S04	E47	9907	04	17.6	21	SF		3	E		36		E
LEAR		0402	0403	0440	N21	W42	9901	04	10.9	38	SF		3	E		16		
GOES		0448	0452	0456	S04	E42	9907			8	SN C	8.6						3.4E-03
LEAR		0450	0451	0506	S04	E42	9907	04	17.3	16	SN		3	E		66		FE
LEAR		0451	0451	0457	S14	E08	9906	04	14.8	6	SF		3	E		18		F
LEAR		0519	0520	0525	S15	E09	9906	04	14.9	6	SF		3	E		27		F
LEAR		0537	0537	0546	S03	E45	9907	04	17.6	9	SF		3	E		38		FE
LEAR		0641	0641	0644	N19	W43	9901	04	11.0	3	SF		3	E		16		
GOES		0650	0701	0706	S04	E41	9907			16	SF C	5.3						4.4E-03
LEAR		0652	0653	0703	S17	E10	9906	04	15.0	11	SF		3	E		18		F
LEAR		0658	0701	0712	S04	E41	9907	04	17.3	14	SF		3	E		84		F
GOES		0728	0739	0744	N19	W57	9893			16	SF C	9.6						5.7E-03
LEAR		0736	0738	0746	N19	W57	9893	04	10.0	10	SF		3	E		53		F
SVTO		1215	1217U	1226D	N23	W56	9893	04	10.2	11D	SF		3	E		34		
RAMY		1253	1253	1259	S17	E08	9906	04	15.1	6	SF		3	E		31		F
GOES		1337	1350	1415	S16	E04	9906			38	SF C	3.8						8.1E-03
HOLL		1339	1340	1357	S15	E05	9906	04	14.9	18	SF		3	E		16		F
RAMY		1340	1340	1404	S16	E04	9906	04	14.9	24	SF		3	E		23		F
SVTO		1345	1351	1358	N23	W56	9893	04	10.2	13	SF		3	E		49		F
HOLL		1346	1350	1358	N20	W57	9893	04	10.2	12	SF		3	E		20		F
RAMY		1349	1351	1355	N21	W57	9893	04	10.2	6	SF		3	E		16		F
HOLL		1358	1359	1403	S14	E03	9906	04	14.8	5	SF		3	E		13		F
SVTO		1359	1404	1408	S04	E37	9907	04	17.3	9	SF		3	E		28		F
HOLL		1403	1404	1406	S04	E38	9907	04	17.4	3	SF		3	E		17		F
RAMY		1403	1404	1407	S07	E46	9907	04	18.0	4	SF		3	E		13		
SVTO		1545E	1546U	1552D	N22	W58	9893	04	10.2	7D	SF		3	E		29		H
RAMY		1545	1546	1555	N22	W59	9893	04	10.1	10	SF		3	E		54		H
HOLL		1628	1629	1632	S15	W73		04	9.1	4	SF		3	E		21		
HOLL		1728	1738	1743	N20	W59	9893	04	10.2	15	SF		3	E		18		
GOES		1936	1945	1950						14		C 2.0						1.6E-03
GOES		2051	2056	2103	S03	E35	9907			12	SF C	4.4						2.2E-03
HOLL		2054	2056	2103	S03	E35	9907	04	17.5	9	SF		3	E		74		F
RAMY		2058	2058	2103	S04	E36	9907	04	17.6	5	SF		3	E		22		
HOLL		2104	2110	2146	N19	W62	9893	04	10.1	42	SF		3	E		23		F
GOES		2104	2125	2143	N19	W62	9893			39	SF C	7.3						1.3E-02
HOLL		2120	2140	2144	N20	W58	9901	04	10.4	24	SF		3	E		45		
RAMY		2124	2132	2141	N21	W56	9893	04	10.6	17	SF		3	E		16		F
GOES		2222	2229	2233	N18	W74	9893			11	SF C	7.2						3.4E-03
HOLL		2225	2228	2232	N18	W74	9893	04	9.3	7	SF		3	E		53		HS
HOLL		2235	2237	2252	N20	W64	9893	04	10.0	17	1F		3	E		118		FH
GOES		2334	2414	2425	N19	W60	9893			51	SF M	3.7						4.3E-02
HOLL		2337	2420	2449	N19	W60	9893	04	10.4	72	SF		3	E		97		F
HOLL		2340	2413	2449	N21	W55	9901	04	10.8	69	SF		3	E		96		F
LEAR	15	0004	0011	0045	N22	W58	9901	04	10.5	41	SF		3	E		60		F
LEAR		0009	0016	0042	N19	W66	9893	04	10.0	33	SF		3	E		27		F
GOES		0246	0251	0255	N19	W79	9893			9	SF C	9.8						3.8E-03
LEAR		0249	0253	0259	N19	W79	9893	04	9.1	10	SF		3	E		45		
GOES		0305	0355	0506	S15	W01	9906			121	SF M	1.2						7.1E-02
LEAR		0307	0325	0515	S15	W01	9906	04	15.0	128	SF		3	E		83		ZF
LEAR		0634	0638	0645	N10	E68	9909	04	20.4	11	SF		3	E		54		
SVTO		0718	0718	0729	N24	W67	9893	04	10.1	11	SF		3	E		23		
GOES		0849	0852	0854						5		C 3.0						7.9E-04
SVTO		0952	0953	0955	N21	W59	9901	04	10.9	3	SF		3	E		36		
GOES		1139	1142	1144	N27	W71	9901			5	SF C	3.0						7.0E-04
SVTO		1142	1142	1145	N27	W71	9901	04	9.9	3	SF		3	E		47		
GOES		1722	1736	1801	S16	W60	9905			39	SF C	3.1						5.9E-03
HOLL		1733	1747	1755	S16	W60	9905	04	11.2	22	SF		3	E		15		FS
GOES		1935	1939	1941						6		C 1.6						5.2E-04
GOES		2305	2324	2341			9901			36		M 1.2						1.9E-02
GOES	16	0215	0219	0223			9904			8		C 2.5						1.0E-03
GOES		0424	0533	0655						151		C 3.8						2.5E-02
LEAR		0626	0626	0630	N24	W88	9893	04	9.5	4	SF		2	E		29		H
GOES		1037	1044	1054	S14	W77	9904			17	SF C	9.3						6.2E-03
SVTO		1041	1047	1051	S14	W77	9904	04	10.6	10	SF		3	E		15		F

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APRIL 2002

Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/		Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement			Remarks
					Lat	CMD						Region	Mo	Day		Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)
GOES	16	1253	1319	1330		9893	37		M 2.5						2.9E-02
SVTO		1308	1309	1327	S14	W24 9906	04 14.7	19	SF	3	E		41		F
SVTO		1310	1320	1332	N23	W88 9893	04 9.8	22	SF	3	E		43		
HOLL		1323	1323	1328	N19	W67 9901	04 11.4	5	SF	3	E		22		
SVTO		1513	1513	1518	S15	W21 9906	04 15.0	5	SF	3	E		12		
GOES		1535	1540	1544				9				C 2.9			1.3E-03
SVTO		1556	1556	1601	S08	W68 9896	04 11.6	5	SF	3	E		19		
HOLL		1844	1845	1848	S14	W27 9906	04 14.7	4	SF	3	E		13		
GOES	17	0035	0040	0043	S13	W83 9905		8	SF			C 9.9			2.6E-03
HOLL		0038	0038	0046	S14	W79 9905	04 11.0	8	SF	3	E		57		FH
LEAR		0038	0039	0044	S13	W83 9905	04 10.8	6	SF	3	E		32		F
LEAR		0226	0235	0238	S13	W84 9905	04 10.8	12	SF	3	E		32		
GOES		0232	0237	0241	S13	W84 9905		9	SF			C 2.3			1.1E-03
SVTO		0536	0537	0541	S13	W90 9905	04 10.4	5	SF	3	E		32		
SVTO		0622	0623	0628	S13	W90 9905	04 10.5	6	SF	3	E		73		
GOES		0652	0655	0658	S13	W90 9905		6	SF			C 1.8			5.6E-04
SVTO		0657	0657	0703	S13	W90 9905	04 10.5	6	SF	3	E		30		
GOES		0746	0824	0957	S14	W34 9906		131	2N			M 2.6			1.5E-01
SVTO		0750	0815	1141D	S14	W34 9906	04 14.7	231D	2N	3	E		253		ZFT
LEAR		0758E	0816	0906D	S13	W37 9906	04 14.5	68D	2N	1	E		352		ZF
RAMY		1135	1135	1147	S14	W31 9906	04 15.1	12	SF	3	E		16		
RAMY		1200	1201	1206	S14	W87 9905	04 10.9	6	SF	3	E		42		
RAMY		1258	1258	1302	S13	W91 9905	04 10.7	4	SF	3	E		19		
GOES		1337	1342	1348	S17	W83 9905		11	SF			C 6.9			4.0E-03
HOLL		1338	1342	1347	S17	W83 9905	04 11.3	9	SF	3	E		23		
HOLL		1344	1348	1351	S14	W37 9905	04 14.8	7	SF	3	E		12		F
HOLL		1420	1426	1430	N07	E39 9909	04 20.5	10	SF	3	E		21		F
RAMY		1420	1427	1431	N06	E31 9905	04 19.9	11	SF	3	E		16		
GOES		1650	1658	1708				18				C 9.8			7.3E-03
GOES		2259	2304	2307				8				C 4.4			1.5E-03
GOES		2311	2319	2324				13				C 4.4			2.8E-03
GOES	18	0335	0346	0354				19				C 4.0			3.6E-03
GOES		0527	0530	0533				6				C 1.8			5.6E-04
GOES		0636	0702	0729				53				C 9.4			2.2E-02
SVTO		0905	0911	0929	S13	W46 9906	04 14.9	24	SF	2	E		25		
GOES		1044	1048	1051				7				C 2.6			9.7E-04
GOES		1430	1433	1435	S04	W16 9907		5	SF			C 1.5			4.0E-04
SVTO		1432	1432	1436	S04	W16 9907	04 17.4	4	SF	3	E		22		H
HOLL		1432	1433	1438	S05	W21 9907	04 17.0	6	SF	3	E		36		
RAMY		1432	1433	1438	S04	W21 9907	04 17.0	6	SF	3	E		33		
GOES		1512	1612	1657		9905		105				C 3.0			1.3E-02
SVTO		1610	1612	1627	N06	E22 9909	04 20.3	17	SF	3	E		29		
SVTO		1638	1638U	1648	S12	W52 9906	04 14.8	10	SF	3	E		19		F
HOLL		1642	1642	1647	S14	W51 9906	04 14.8	5	SF	3	E		14		
GOES	19	0646	0649	0652	S15	W57 9906		6	SF			C 1.7			5.5E-04
SVTO		0648	0650U	0654D	S15	W57 9906	04 15.0	6D	SF	3	E		12		H
GOES		0658	0704	0707				9				C 3.3			1.3E-03
GOES		0750	0754	0757	S16	W54 9906		7	SF			C 2.0			7.0E-04
LEAR		0754	0754	0755	S16	W54 9906	04 15.2	1	SF	2	E		11		F
GOES		0901	0905	0913				12				C 2.3			1.3E-03
SVTO		1323	1323	1330	S12	W67 9906	04 14.5	7	SF	3	E		23		F
SVTO		1339	1342	1413	S17	W60 9906	04 15.0	34	SF	3	E		39		F
HOLL		1350	1351	1400	S14	W62 9906	04 14.9	10	SF	3	E		30		F
SVTO		1421	1432	1440	S17	W59 9906	04 15.1	19	SF	3	E		21		F
HOLL		1431	1433	1436	S17	W59 9906	04 15.1	5	SF	3	E		14		
SVTO		1449	1454	1501	S16	W61 9906	04 15.0	12	SF	3	E		17		F
HOLL		1453	1453	1501	S17	W60 9906	04 15.1	8	SF	3	E		13		
SVTO		1513	1521	1532	S17	W60 9906	04 15.1	19	SF	3	E		18		F
GOES		1516	1521	1527	S16	W59 9906		11	SF			C 2.5			1.4E-03
HOLL		1519	1520	1525	S16	W59 9906	04 15.2	6	SF	3	E		12		
SVTO		1544	1547	1634	S16	W71 9906	04 14.3	50	SF	3	E		26		F
GOES		1814	1822	1846	S16	W57 9906		32	SF			C 3.4			5.6E-03
HOLL		1829	1830	1834	S16	W57 9906	04 15.4	5	SF	3	E		12		
GOES		2005	2008	2012				7				C 1.6			6.3E-04
GOES		2107	2116	2130				23				C 2.2			2.6E-03

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APRIL 2002

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
														Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
GOES	20	0045	0055	0110					25				C 1.7				2.3E-03
GOES		0417	0428	0446					29				C 2.4				3.3E-03
GOES		0513	0519	0525					12				C 2.3				1.5E-03
GOES		0908	0932	0956					48				C 1.3				3.3E-03
GOES		1141	1209	1225					44				C 2.7				5.4E-03
SVTO		1330	1330	1338	S11	W74	9906	04	15.0	8	SF	3	E			29	H
GOES		1419	1426	1450					31				C 2.1				3.4E-03
HOLL		1454E	1457U	1506D	N09	E07	9912	04	21.1	12D	SF	3	E			16	F
GOES		1538	1548	1601	N09	E06	9912		23		SF	C 4.1					4.8E-03
HOLL		1539E	1551U	1609D	N09	E06	9912	04	21.1	30D	SF	3	E			31	F
SVTO		1547	1553U	1555D	N09	E05	9912	04	21.0	8D	SF	3	E			26	F
GOES		1734	1748	1810					36				C 2.2				4.1E-03
GOES		1944	2014	2035					51				C 2.5				6.0E-03
GOES		2323	2326	2328					5				C 1.9				4.5E-04
GOES	21	0043	0151	0238	S14	W84	9906		115		1F	X 1.5					6.0E-01
LEAR		0059	0131	0251	S14	W84	9906	04	14.7	112	1F		2	E		121	YF
LEAR		0326	0332	0350	N10	W01	9912	04	21.1	24	SF		2	E		50	F
LEAR		0607	0612	0625	N10	W02	9912	04	21.1	18	SF		2	E		16	F
GOES		1725	1730	1733					8				C 7.9				2.7E-03
GOES		1737	1806	1824					47				C 8.3				1.9E-02
GOES		2011	2016	2018					7				C 2.9				9.0E-04
GOES		2151	2156	2158					7				C 3.4				1.0E-03
GOES	22	0003	0019	0021			9906		18				C 7.7				3.0E-03
LEAR		0050	0050	0104	N11	E54	9915	04	26.1	14	SF		3	E		10	F
GOES		0056	0107	0120	N11	E54	9915		24		SF	C 3.5					4.3E-03
GOES		0448	0506	0520					32				C 2.1				3.3E-03
GOES		0543	0547	0550	S17	E67	9916		7		SF	C 5.5					1.4E-03
SVTO		0545	0546	0557	S17	E67	9916	04	27.3	12	SF		3	E		33	
GOES		1004	1010	1015	N03	E39	9914		11		SF	C 1.3					7.6E-04
SVTO		1007	1008	1014	N03	E39	9914	04	25.3	7	SF		3	E		13	
GOES		1154	1210	1220	N12	W19	9912		26		SF	C 2.8					3.0E-03
SVTO		1204	1207	1216	N12	W19	9912	04	21.1	12	SF		3	E		14	
GOES		1437	1441	1453	N03	E37	9914		16		SF	C 1.4					1.1E-03
SVTO		1440	1441	1451	N03	E37	9914	04	25.4	11	SF		3	E		35	F
HOLL		1440	1442	1447	N04	E37	9914	04	25.4	7	SF		3	E		26	F
GOES		2358	2401	2405	N04	E32	9914		7		SF	C 1.6					5.8E-04
LEAR	23	0001	0001	0005	N03	E33	9914	04	25.5	4	SF		3	E		15	F
HOLL		0001E	0003U	0024D	N04	E32	9914	04	25.4	23D	SF		3	E		25	
SVTO		1246	1249	1259	S14	E52	9916	04	27.5	13	SF		3	E		26	F
RAMY		1248	1250	1259	S18	E52		04	27.5	11	SF		3	E		30	F
GOES		1541	1546	1549	N12	E28	9915		8		SF	C 1.1					4.5E-04
SVTO		1545	1545	1548	N12	E28	9915	04	25.8	3	SF		3	E		33	F
GOES		2005	2030	2041					36				C 1.8				2.6E-03
GOES		2245	2250	2255					10				C 1.2				6.6E-04
GOES	24	0409	0415	0424					15				C 1.5				1.3E-03
GOES		0505	0517	0525					20				C 1.4				1.6E-03
GOES		0535	0548	0555	S15	W34	9913		20		SF	C 1.7					1.9E-03
LEAR		0537	0539	0555	S15	W34	9913	04	21.7	18	SF		4	E		42	FH
SVTO		0539	0549	0559	S14	W34	9913	04	21.7	20	SF		3	E		38	H
GOES		0625	0642	0657	S16	W34	9913		32		SF	C 1.4					2.2E-03
SVTO		0635	0641	0653	S14	W35	9913	04	21.6	18	SF		3	E		32	
LEAR		0638	0641	0646	S16	W34	9913	04	21.7	8	SF		4	E		19	FH
SVTO		0709	0709	0714	S15	W33	9913	04	21.8	5	SF		3	E		10	
GOES		0730	0735	0744	S18	E03			14		SF	C 1.7					1.2E-03
SVTO		0732	0735	0744	S18	E03		04	24.5	12	SF		3	E		18	FH
GOES		0756	0805	0809					13				C 1.4				9.4E-04
GOES		1013	1025	1030	S17	E00			17		SF	C 1.2					9.6E-04
SVTO		1023	1029	1034	S17	E00		04	24.4	11	SF		3	E		12	
SVTO		1046	1050	1119	S15	W37	9913	04	21.6	33	SF		3	E		57	FH
GOES		1046	1053	1100	S15	W37	9913		14		SF	C 2.0					1.4E-03
SVTO		1121	1122	1129	N12	E17	9915	04	25.7	8	SF		3	E		14	
SVTO		1125	1125	1132	N13	W47	9912	04	20.9	7	SF		3	E		29	
SVTO		1126	1130	1137	S23	W09	9920	04	23.8	11	SF		3	E		12	
GOES		1312	1316	1326	S18	E01			14		SF	C 1.0					7.3E-04

H α SOLAR FLARES

APRIL 2002

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)	
SVTO	24	1315	1317	1328	S18	E01		04	24.6	13	SF		3	E		11		
SVTO		1335	1342	1354	S18	E00		04	24.6	19	SF		3	E		19		
HOLL		1341	1342	1349	S19	E00		04	24.6	8	SF		3	E		14		F
SVTO		1348	1354	1409	S14	W39	9913	04	21.6	21	SF		3	E		24		
HOLL		1354	1354	1404	S15	W38	9913	04	21.7	10	SF		3	E		12		FH
SVTO		1412	1423	1457	S14	W40	9913	04	21.6	45	SF		3	E		49		
GOES		1420	1434	1441	S14	W40	9913			21	SF	C 1.7						2.0E-03
GOES		1544	1605	1616	N09	W47	9912			32	1N	C 4.8						7.3E-03
HOLL		1547	1552	1624	N10	W47	9912	04	21.1	37	SF		3	E		63		F
SVTO		1547	1552	1633	N09	W47	9912	04	21.1	46	1N		3	E		162		
GOES		1632	1641	1657	S14	E40	9916			25	SF	C 2.3						3.0E-03
HOLL		1634	1637	1649	S14	E40	9916	04	27.7	15	SF		3	E		48		FH
GOES		1743	1754	1805						22		C 1.9						2.3E-03
GOES		2013	2018	2022						9		C 1.2						5.5E-04
GOES		2146	2156	2201	N09	W49	9912			15	1F	M 1.7						7.1E-03
HOLL		2149	2156	2206D	N09	W49	9912	04	21.2	17D	1F		3	E		101		
GOES	25	0536	0540	0545	N10	W56	9912			9	SF	C 2.8						1.0E-03
LEAR		0541	0546	0551	N10	W56	9912	04	21.0	10	SF		2	E		16		F
GOES		0554	0602	0605			9912			11		C 2.5						1.2E-03
LEAR		0555	0557	0600	S19	W08	9924	04	24.6	5	SF		2	E		16		
LEAR		0601	0606	0612	N10	W56	9912	04	21.0	11	SF		2	E		21		F
GOES		1855	1905	1924						29		C 1.6						2.4E-03
GOES	26	0133	0141	0150						17		C 1.2						1.1E-03
GOES		0958	1029	1044						46		C 1.2						2.1E-03
GOES		1322	1326	1330	N05	W18	9914			8	SF	B 9.0						3.8E-04
SVTO		1324	1326	1333	N04	W19	9914	04	25.1	9	SF		3	E		25		
HOLL		1325	1327	1335	N05	W18	9914	04	25.2	10	SF		3	E		24		
GOES		1452	1504	1516						24		C 2.0						2.3E-03
GOES		1931	1937	1954						23		C 2.1						2.2E-03
GOES		2043	2101	2119						36		C 1.6						2.9E-03
GOES		2247	2256	2314						27		C 1.3						1.9E-03
GOES	27	0923	0927	0930						7		C 1.1						3.7E-04
GOES		1040	1056	1112	N13	E23	9919			32	SF	C 2.1						3.1E-03
SVTO		1053	1053	1057	N13	E23	9919	04	29.2	4	SF		3	E		15		
SVTO		1058	1058	1102	N12	E23	9919	04	29.2	4	SF		3	E		15		
GOES		1529	1540	1557	N16	E22	9919			28	SF	C 4.0						5.1E-03
HOLL		1529	1548	1629	N16	E22	9919	04	29.3	60	SF		3	E		89		F
GOES	28	1817	1823	1841	S15	W57	9924			24	SF	C 1.0						1.2E-03
HOLL		1820	1822	1853D	S15	W57	9924	04	24.4	33D	SF		3	E		32		
GOES		2054	2103	2113	N15	W39	9915			19	SF	C 1.2						1.3E-03
HOLL		2058	2101	2109	N15	W39	9915	04	25.9	11	SF		3	E		23		F
GOES		2231	2241	2256						25		C 1.3						1.9E-03
LEAR	29	0311	0311	0316	N14	W03	9919	04	28.9	5	SF		3	E		13		
LEAR		0339	0339	0342	N10	W43	9915	04	25.9	3	SF		3	E		13		
GOES		0530	0537	0602						32		C 2.2						3.9E-03
GOES		0922	0928	0931						9		C 3.4						1.4E-03
GOES		0935	0940	0944						9		C 4.8						1.8E-03
GOES		1032	1058	1101						29		C 4.1						3.6E-03
GOES		1257	1303	1315						18		C 2.2						2.0E-03
GOES		2005	2015	2037	N10	W49	9915			32	SF	C 2.7						4.3E-03
HOLL		2010	2012	2013	N10	W49	9915	04	26.1	3	SF		3	E		14		
GOES	30	0026	0036	0042						16		C 7.8						4.6E-03
LEAR		0049	0104	0128	N14	W11	9919	04	29.2	39	2F		3	E		416		F
GOES		0342	0350	0401						19		C 3.1						2.7E-03
GOES		0647	0653	0658	N15	W19	9919			11	SF	C 3.2						1.5E-03
LEAR		0650	0653	0703	N15	W19	9919	04	28.8	13	SF		3	E		66		
SVTO		0650E	0654U	0706D	N16	W19	9919	04	28.8	16D	SF		3	E		41		F
GOES		0817	0822	0827						10		M 1.3						4.9E-03
GOES		1106	1118	1129	N11	W71	9914			23	SF	C 3.2						3.4E-03
SVTO		1112	1118	1135	N11	W71	9914	04	25.1	23	SF		3	E		18		F
GOES		1410	1418	1427						17		C 3.7						3.1E-03
HOLL		1951	1951	2001	N15	W51	9921	04	27.0	10	SF		3	E		24		

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

APRIL 2002

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m ² Hz)	Mean		
02	8800	LEAR	8 S	0433.0	0433.0	1.0	110.0			QL=4 ST=2 TYP=3
03	2695	SGMR	8 S	1422.0	1422.0	U	21.0			QL=4 ST=2 TYP=3
04	2695	LEAR	8 S	0651.0	0652.0	2.0	16.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1044.0	1045.0	1.0	51.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1434.0	1434.0	U	40.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1529.0	1530.0	1.0	86.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1529.0	1530.0	1.0	58.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1529.0	1530.0	1.0	84.0			QL=4 ST=2 TYP=3
08	2695	LEAR	8 S	0300.0	0301.0	2.0	17.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0300.0	0301.0	2.0	40.0			QL=4 ST=2 TYP=3
09	2695	LEAR	8 S	0039.0	0040.0	2.0	260.0			QL=4 ST=3 TYP=3
	8800	LEAR	4 S/F	0039.0	0040.0	1.0	1200.0			QL=4 ST=1 TYP=3
	2695	PALE	8 S	0039.0	0039.0	2.0	230.0			QL=4 ST=3 TYP=3
	8800	PALE	4 S/F	0039.0	0040.0	3.0	1000.0			QL=4 ST=3 TYP=3
	8800	LEAR	8 S	0045.0	0045.0	1.0	32.0			QL=4 ST=3 TYP=3
	2695	SGMR	4 S/F	1259.0	1301.0	4.0	190.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1259.0	1301.0	6.0	270.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	1259.0	1301.0	6.0	200.0			QL=4 ST=2 TYP=3
	2695	SVTO	4 S/F	1259.0	1301.0	5.0	160.0			QL=4 ST=2 TYP=3
10	2695	LEAR	8 S	0048.0	0050.0	2.0	110.0			QL=4 ST=2 TYP=3
	8800	SGMR	48 C	1226.0	1228.0	17.0	1200.0			QL=4 ST=2 TYP=8
	2695	SGMR	48 C	1226.0	1228.0	17.0	530.0			QL=4 ST=2 TYP=8
	8800	SVTO	49 GB	1226.0	1228.0	12.0	1100.0			QL=4 ST=2 TYP=6
	2695	SVTO	48 C	1226.0	1228.0	10.0	510.0			QL=4 ST=3 TYP=8
	2695	SVTO	49 GB	1227.0	1228.0	9.0	510.0			QL=4 ST=2 TYP=6
	2695	SGMR	48 C	1901.0	1903.0	14.0	490.0			QL=4 ST=2 TYP=8
	8800	SGMR	4 S/F	1902.0	1904.0	13.0	320.0			QL=4 ST=2 TYP=3
11	8800	LEAR	8 S	0148.0	0149.0	2.0	120.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0148.0	0149.0	2.0	66.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	0148.0	0149.0	2.0	68.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	0148.0	0149.0	2.0	130.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	0305.0	0306.0	1.0	52.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0306.0	0306.0	U	52.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1619.0	1620.0	2.0	95.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1619.0	1620.0	2.0	87.0			QL=4 ST=2 TYP=3
	12	2695	LEAR	4 S/F	0451.0	0453.0	5.0	120.0			QL=4 ST=2 TYP=3
2695		SVTO	4 S/F	0453.0E	0454.0U	5.0D	120.0			QL=4 ST=2 TYP=3
8800		SGMR	48 C	1308.0	1308.0	4.0	150.0			QL=4 ST=2 TYP=8
2695		SGMR	48 C	1308.0	1309.0	4.0	81.0			QL=4 ST=2 TYP=8
2695		SVTO	8 S	1308.0	1309.0	2.0	68.0			QL=4 ST=2 TYP=3
8800		SVTO	8 S	1308.0	1309.0	2.0	110.0			QL=4 ST=2 TYP=3
8800		SGMR	4 S/F	1559.0	1600.0	3.0	75.0			QL=4 ST=2 TYP=3
2695		SGMR	8 S	1600.0	1600.0	2.0	23.0			QL=4 ST=2 TYP=3
8800		SGMR	48 C	1741.0	1756.0	41.0	94.0			QL=4 ST=2 TYP=8
8800		PALE	48 C	1746.0	1747.0	1.0	65.0			QL=4 ST=2 TYP=8
2695		SGMR	48 C	1752.0	1756.0	5.0	58.0			QL=4 ST=2 TYP=8
14	8800	LEAR	8 S	0324.0	0324.0	1.0	36.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0450.0	0451.0	1.0	59.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0450.0	0451.0	1.0	43.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0450.0	0451.0	2.0	65.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0651.0	0652.0	1.0	110.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0652.0	0652.0	U	100.0			QL=4 ST=3 TYP=3
15	8800	PALE	48 C	0000.0	0006.0	26.0	210.0			QL=4 ST=2 TYP=8
	8800	LEAR	48 C	0001.0	0006.0	10.0	160.0			QL=4 ST=2 TYP=8
	2695	LEAR	8 S	0010.0	0010.0	1.0	59.0			QL=4 ST=2 TYP=3
	2695	PALE	46 C	0010.0	0010.0	1.0	43.0			QL=4 ST=2 TYP=8
	2695	PALE	46 C	0313.0	0314.0	4.0	43.0			QL=4 ST=2 TYP=8
	2695	LEAR	46 C	0314.0	0314.0	2.0	37.0			QL=4 ST=2 TYP=8
	2695	SGMR	4 S/F	1741.0	1743.0	4.0	34.0			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

39
Apr 02

APRIL 2002

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m ² Hz)	Mean		
15	8800	PALE	8 S	2310.0	2311.0	2.0	100.0			QL=4 ST=2 TYP=3
		2695	46 C	2311.0	2311.0	U	31.0			QL=4 ST=2 TYP=8
16	8800	SVTO	8 S	1041.0	1043.0	2.0	61.0			QL=4 ST=2 TYP=3
		SGMR	8 S	1043.0	1043.0	U	41.0			QL=4 ST=2 TYP=3
	2695	SGMR	48 C	1306.0	1311.0	17.0	110.0			QL=4 ST=2 TYP=8
		SGMR	46 C	1310.0	1311.0	1.0	30.0			QL=4 ST=1 TYP=8
	2695	SGMR	46 C	1315.0	1319.0	8.0	21.0			QL=4 ST=2 TYP=8
17	2695	LEAR	48 C	0746.0	0857.0	974.0	4100.0			QL=4 ST=1 TYP=8
		LEAR	48 C	0746.0	0857.0	974.0	2300.0			QL=4 ST=1 TYP=8
	8800	LEAR	48 C	0747.0	0845.0	126.0	4100.0			QL=4 ST=2 TYP=8
		LEAR	48 C	0748.0	0845.0	125.0	2300.0			QL=4 ST=2 TYP=8
	8800	SVTO	48 C	0753.0	0857.0	139.0	2400.0			QL=4 ST=2 TYP=8
		SVTO	48 C	0753.0	0857.0	172.0	3000.0			QL=4 ST=2 TYP=8
	2695	SGMR	48 C	1008.0E	1016.0U	66.0D	230.0			QL=4 ST=2 TYP=8
		SGMR	48 C	1032.0E	1033.0U	28.0D	62.0			QL=4 ST=2 TYP=8
19	8800	SVTO	8 S	0700.0	0700.0	U	55.0			QL=4 ST=2 TYP=3
21	8800	PALE	48 C	0058.0	0123.0	140.0	2800.0			QL=4 ST=2 TYP=8
		PALE	48 C	0058.0	0227.0	150.0	1800.0			QL=4 ST=2 TYP=8
	2695	PALE	8 S	1727.0	1728.0	1.0	52.0			QL=4 ST=2 TYP=3
		SGMR	8 S	1727.0	1728.0	2.0	25.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1727.0	1728.0	2.0	60.0			QL=4 ST=2 TYP=3
22	2695	LEAR	8 S	0544.0	0544.0	1.0	82.0			QL=4 ST=2 TYP=3
		SVTO	8 S	0544.0	0545.0	2.0	86.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	1204.0	1205.0	3.0	430.0			QL=4 ST=2 TYP=3
		SGMR	8 S	1205.0	1206.0	1.0	31.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1205.0	1206.0	5.0	390.0			QL=4 ST=2 TYP=3
25	8800	LEAR	8 S	0555.0	0556.0	1.0	40.0			QL=4 ST=2 TYP=3

Reports are received routinely from the following observatories:

LEAR = Learmonth

PALE = Palehua

SGMR = Sagamore Hill

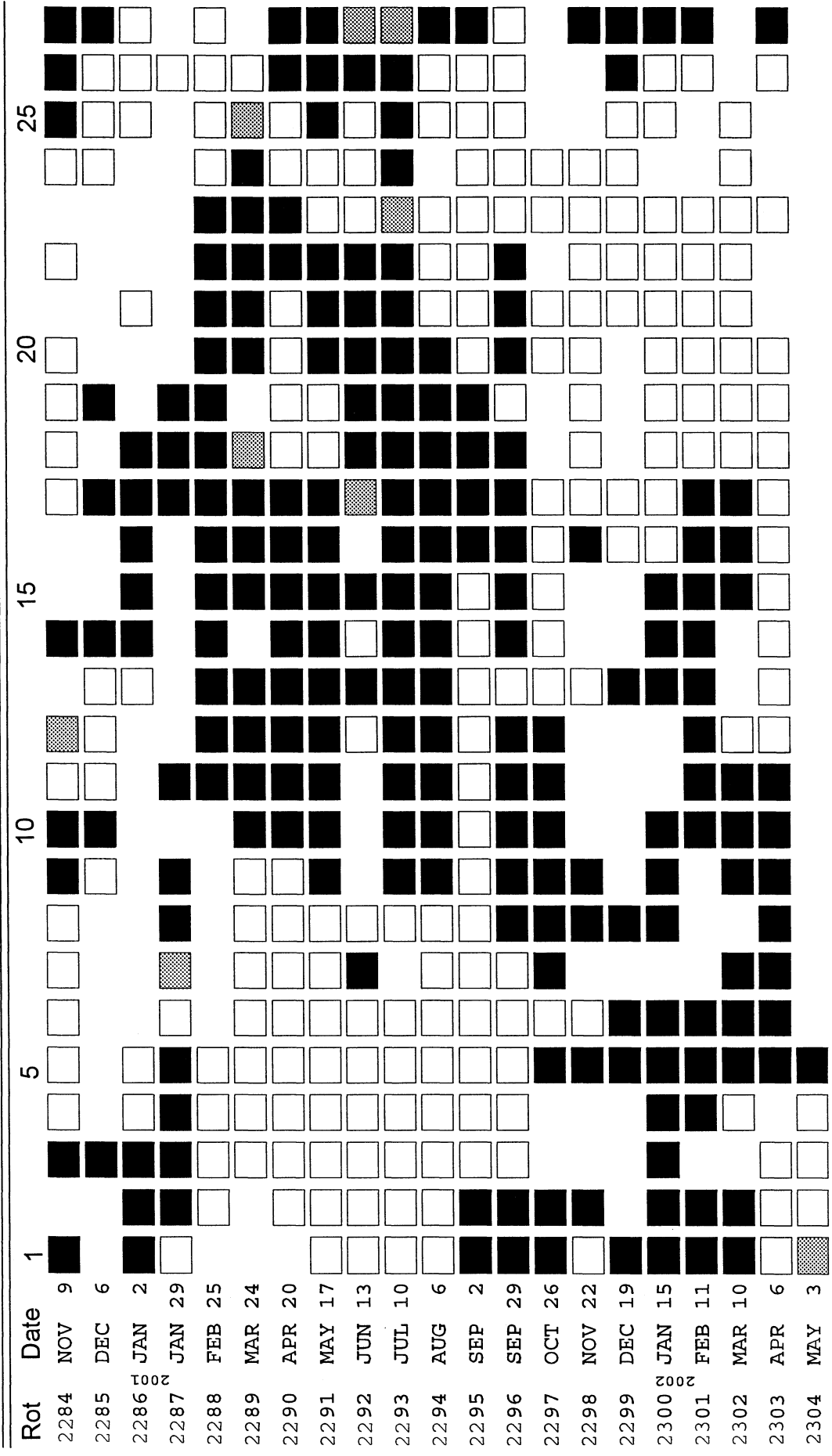
SVTO = San Vito

Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 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; Penticton, Canada 2800 MHz; and Hiraiso, Japan 500 and 200 MHz.

STANFORD MEAN SOLAR MAGNETIC FIELD

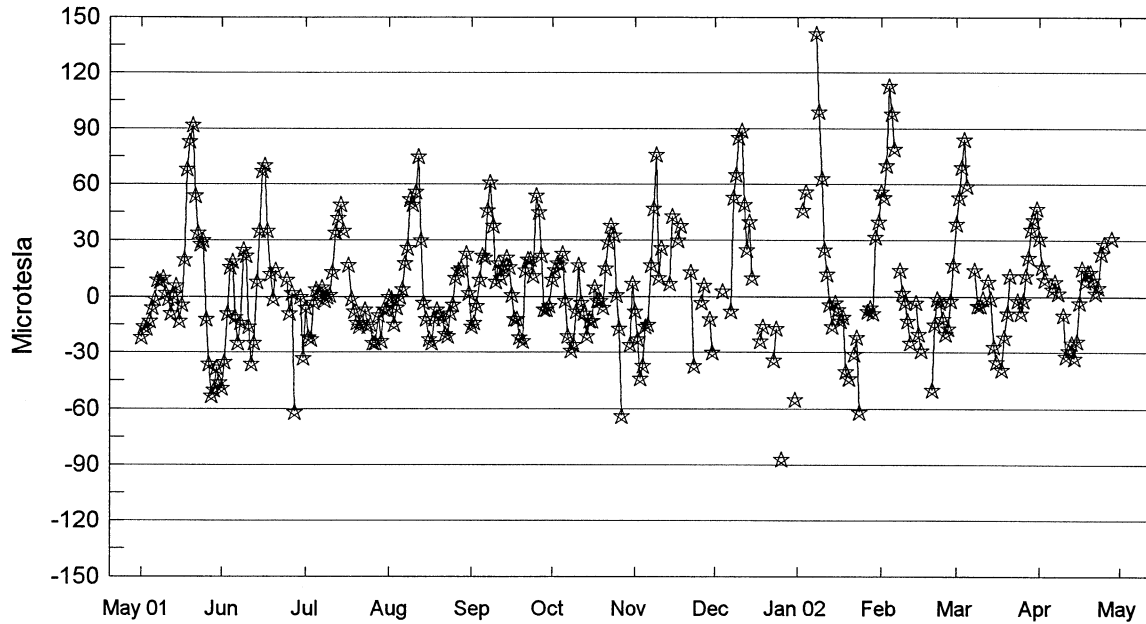


Mean Solar Magnetic Field Polarity:
 □ = field > 2 microT; ▨ = -2 microT ≤ field ≤ 2 microT
 ■ = field < -2 microT; No box = no data available

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

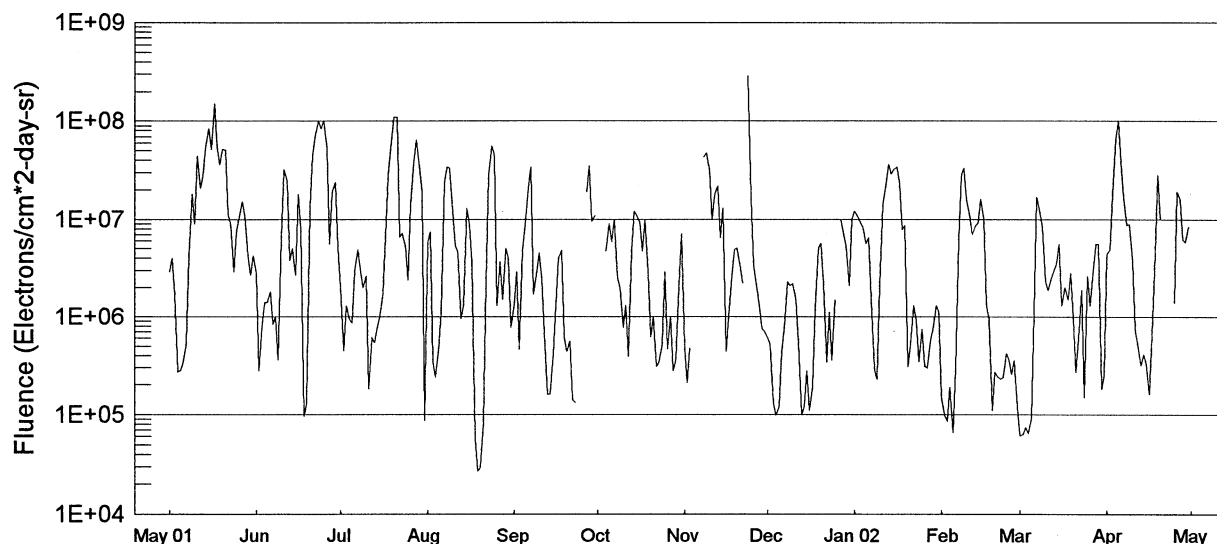
Stanford Mean Solar Magnetic Field (Microtesla) "Sun-As-A-Star"

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Apr 02



Day	May 01	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 02	Feb	Mar	Apr
1	-22	-35	-6	0	-16	9	-8	---	---	56	39	31
2	-16	-9	-22	-1	-14	14	-23	---	---	53	53	16
3	-17	16	-23	-15	-5	18	-44	---	46	70	69	9
4	-13	19	-3	-6	9	17	-37	3	56	113	84	---
5	-6	-11	4	0	22	23	-16	---	---	98	59	---
6	-1	-25	2	4	21	-2	-15	---	---	79	---	4
7	9	-14	5	18	46	-21	17	-8	---	---	---	8
8	8	25	-2	26	61	-29	47	53	141	14	14	2
9	10	22	0	52	38	-26	76	65	99	2	-5	---
10	2	-16	1	49	8	-8	10	85	63	-3	-5	-10
11	-1	-36	13	56	18	17	26	89	25	-13	-1	-32
12	-9	-25	34	75	10	-3	---	49	12	-25	---	-29
13	1	8	42	30	15	-9	---	25	-4	---	8	-25
14	6	35	49	-3	21	-21	7	40	-16	-3	-1	-33
15	-13	67	35	-12	16	-13	43	10	-3	-20	-27	-24
16	-4	70	---	-23	1	-13	---	---	-7	-29	-35	-3
17	20	35	17	-25	-12	5	30	---	-13	---	---	15
18	68	12	-1	-12	-12	-2	38	-24	-11	---	-39	8
19	83	-1	-8	-7	-22	-2	---	-16	-40	---	-22	13
20	92	14	-14	-10	-24	-6	---	---	-44	-50	-9	13
21	54	---	-16	-12	14	15	---	---	---	-15	11	9
22	34	---	-14	-20	20	29	13	---	-31	-1	---	2
23	28	---	-7	-21	20	38	-37	-34	-22	-3	---	5
24	30	9	-16	-9	11	33	---	-17	-62	-12	-2	23
25	-12	-9	-15	-4	54	1	---	---	---	-20	-9	28
26	-36	2	-25	10	45	-17	-3	-87	---	-17	-2	---
27	-53	-62	-25	14	22	-64	6	---	-8	-2	11	---
28	-50	---	-10	15	-7	---	---	---	-6	17	21	31
29	-38	0	-24	---	-7	---	-12	---	-9	---	36	---
30	-46	-33	-7	23	-5	-26	-30	---	32	---	41	---
31	-49	---	-7	2	---	7	---	-55	40	---	47	---

GOES Daily Electron Fluence May 2001 - Apr 2002



Day	May 01	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 02	Feb	Mar	Apr
1	2.9E+06	2.8E+06	2.0E+06	5.9E+06	1.3E+06	-999	4.8E+05	6.1E+05	1.2E+07	1.5E+05	6.1E+04	4.4E+06
2	4.0E+06	2.8E+05	4.5E+05	7.4E+06	2.9E+06	-999	2.1E+05	5.2E+05	1.1E+07	9.8E+04	6.3E+04	4.9E+06
3	1.7E+06	8.1E+05	1.3E+06	3.5E+05	4.6E+05	-999	4.8E+05	1.3E+05	9.3E+06	8.6E+04	7.4E+04	1.8E+07
4	2.7E+05	1.4E+06	9.3E+05	2.4E+05	4.8E+06	4.7E+06	-999	9.9E+04	8.3E+06	1.9E+05	6.5E+04	6.7E+07
5	2.8E+05	1.4E+06	8.6E+05	4.5E+05	8.6E+06	9.0E+06	-999	1.2E+05	5.7E+06	6.6E+04	9.2E+04	1.0E+08
6	3.3E+05	1.8E+06	3.0E+06	1.1E+06	2.1E+07	5.9E+06	-999	4.4E+05	6.5E+06	2.9E+05	1.1E+06	3.9E+07
7	5.3E+05	8.4E+05	4.9E+06	2.4E+07	3.4E+07	1.0E+07	-999	7.6E+05	1.5E+06	6.2E+06	1.7E+07	1.7E+07
8	4.2E+06	1.0E+06	3.0E+06	3.4E+07	1.7E+06	2.5E+06	4.3E+07	2.3E+06	2.9E+05	2.8E+07	1.2E+07	8.7E+06
9	1.8E+07	3.6E+05	2.0E+06	3.3E+07	2.8E+06	2.0E+06	4.7E+07	2.1E+06	2.3E+05	3.3E+07	8.3E+06	8.9E+06
10	9.0E+06	6.5E+06	2.6E+06	1.2E+07	4.5E+06	7.7E+05	3.2E+07	2.2E+06	2.1E+06	1.6E+07	2.3E+06	3.8E+06
11	4.4E+07	3.2E+07	1.8E+05	5.4E+06	2.5E+06	1.3E+06	1.0E+07	1.5E+06	1.4E+07	1.1E+07	1.9E+06	7.4E+05
12	2.1E+07	2.5E+07	6.1E+05	4.6E+06	6.9E+05	3.9E+05	1.8E+07	5.4E+05	2.1E+07	7.0E+06	2.4E+06	5.1E+05
13	2.8E+07	3.8E+06	5.4E+05	9.6E+05	1.6E+05	4.7E+06	2.2E+07	1.0E+05	3.6E+07	8.6E+06	3.0E+06	3.2E+05
14	5.5E+07	5.0E+06	7.5E+05	1.3E+06	1.6E+05	1.2E+07	6.5E+06	1.2E+05	2.9E+07	9.1E+06	3.5E+06	4.1E+05
15	8.4E+07	2.7E+06	1.0E+06	1.3E+07	4.1E+05	1.1E+07	1.3E+07	2.8E+05	3.2E+07	1.6E+07	5.6E+06	3.3E+05
16	5.2E+07	1.8E+07	1.7E+06	9.0E+06	1.3E+06	9.2E+06	4.4E+05	1.1E+05	3.4E+07	1.0E+07	1.3E+06	1.6E+05
17	1.5E+08	7.9E+06	6.6E+06	3.6E+06	4.0E+06	4.7E+06	1.0E+06	1.9E+05	2.3E+07	1.3E+06	2.0E+06	6.5E+05
18	5.4E+07	9.5E+04	2.8E+07	5.9E+04	4.8E+06	1.0E+07	2.6E+06	1.2E+06	7.8E+06	9.5E+05	1.5E+06	4.4E+06
19	3.6E+07	1.3E+05	6.2E+07	2.7E+04	6.3E+05	2.8E+06	4.9E+06	5.1E+06	8.5E+06	1.1E+05	2.8E+06	2.8E+07
20	5.2E+07	1.3E+07	1.1E+08	2.9E+04	4.4E+05	6.2E+05	5.0E+06	5.7E+06	3.1E+05	2.7E+05	9.7E+05	9.9E+06
21	5.1E+07	4.5E+07	1.1E+08	8.0E+04	5.6E+05	1.0E+06	3.3E+06	2.2E+06	5.3E+05	2.4E+05	2.7E+05	-999
22	1.1E+07	7.2E+07	6.6E+06	2.2E+06	1.4E+05	3.1E+05	2.2E+06	3.4E+05	1.3E+06	2.3E+05	7.3E+05	-999
23	9.1E+06	1.0E+08	7.2E+06	2.8E+07	1.3E+05	3.5E+05	-999	1.1E+06	9.1E+05	2.4E+05	1.9E+06	-999
24	2.9E+06	8.4E+07	5.3E+06	5.6E+07	-999	5.2E+05	2.9E+08	3.6E+05	3.5E+05	4.2E+05	1.5E+05	-999
25	7.5E+06	1.0E+08	2.4E+06	4.5E+07	-999	2.9E+06	1.7E+07	1.5E+06	7.4E+05	3.6E+05	2.6E+06	1.4E+06
26	1.1E+07	5.4E+07	1.4E+07	1.3E+06	-999	4.7E+05	3.4E+06	-999	3.1E+05	2.6E+05	1.3E+06	1.9E+07
27	1.5E+07	5.6E+06	3.9E+07	3.7E+06	1.9E+07	1.0E+06	2.0E+06	9.9E+06	3.0E+05	3.6E+05	3.0E+06	1.6E+07
28	1.1E+07	1.9E+07	6.5E+07	1.5E+06	3.5E+07	2.8E+05	1.3E+06	7.2E+06	5.7E+05	1.2E+05	5.6E+06	6.2E+06
29	4.2E+06	2.4E+07	3.4E+07	5.0E+06	9.5E+06	3.6E+05	7.6E+05	5.3E+06	7.5E+05		5.6E+06	5.8E+06
30	2.7E+06	5.2E+06	1.9E+07	4.0E+06	1.1E+07	2.1E+06	6.9E+05	2.1E+06	1.3E+06		1.8E+05	8.4E+06
31	4.3E+06		8.7E+04	7.8E+05		7.1E+06		1.0E+07	1.1E+06		2.5E+05	

NOTE: The electron detector responds significantly to protons above 32 MeV; therefore, electron data are contaminated when a proton event is in progress. These days are indicated with '-999' in the table and are not plotted. '-' indicates data not available.

NOTE: GOES9 data began April, 1996 and ended on 26 July, 1998. GOES8 is primary satellite as of 27 July, 1998.

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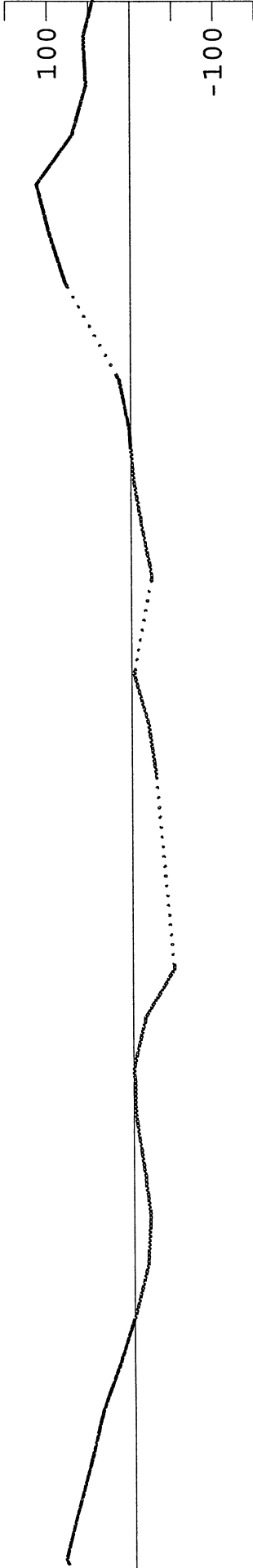
DATA FOR MARCH 2002

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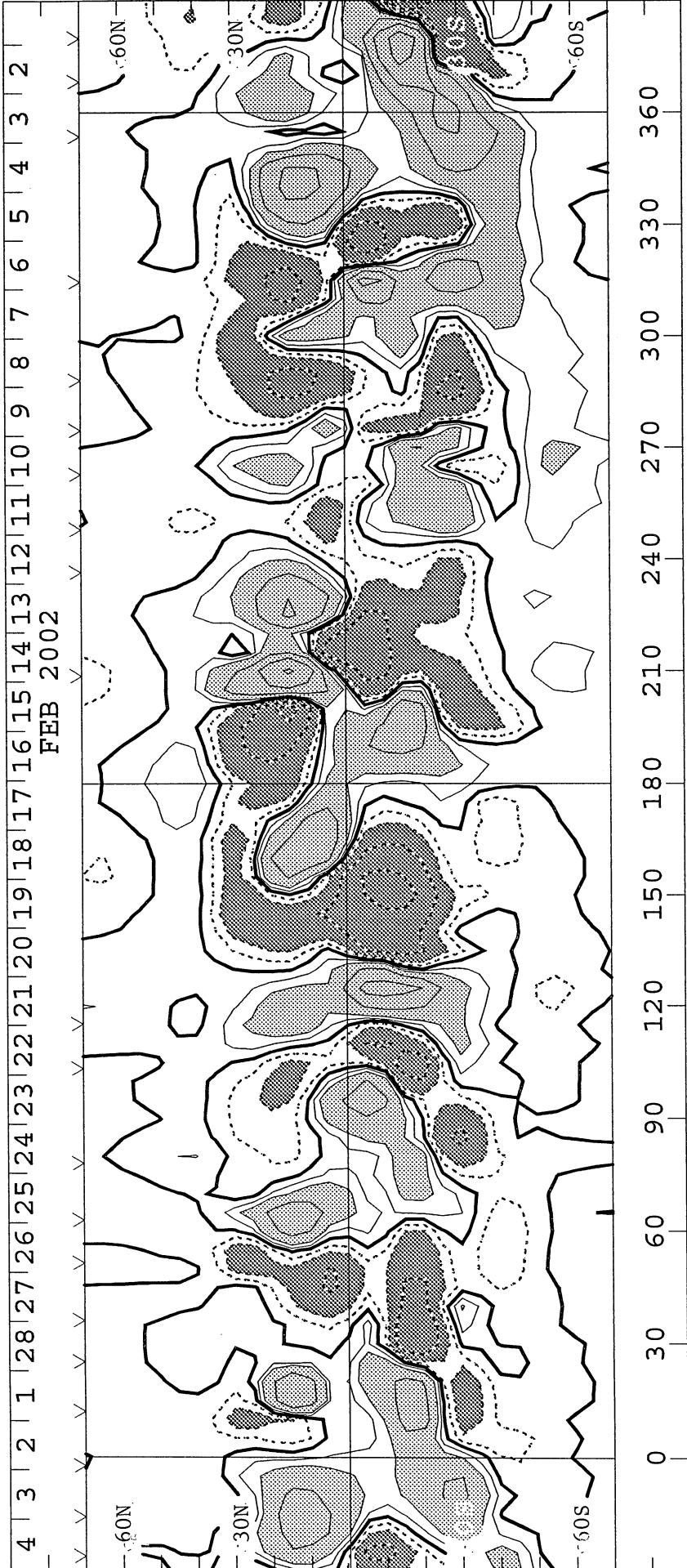
SOLAR MAGNETIC FIELD SYNOPSIS CHART
CARRINGTON ROTATION NUMBER 1986
(3 February to 2 March 2002)

WILCOX SOLAR OBSERVATORY

Mean Field



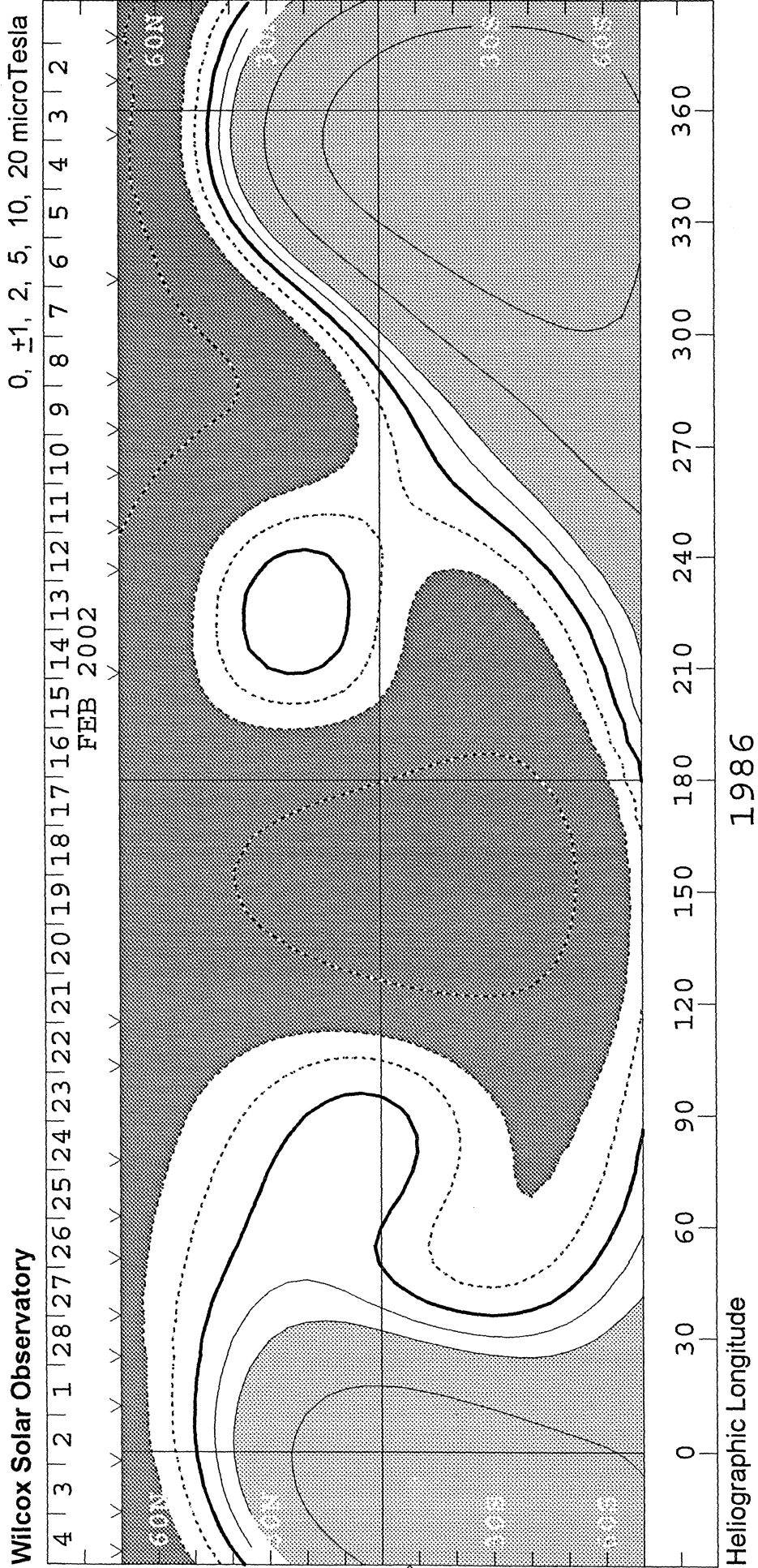
WSO - Photospheric Magnetic Field 0, +100, 200, 500, 1000, 2000 MicroTesla



1986

Heliographic Longitude

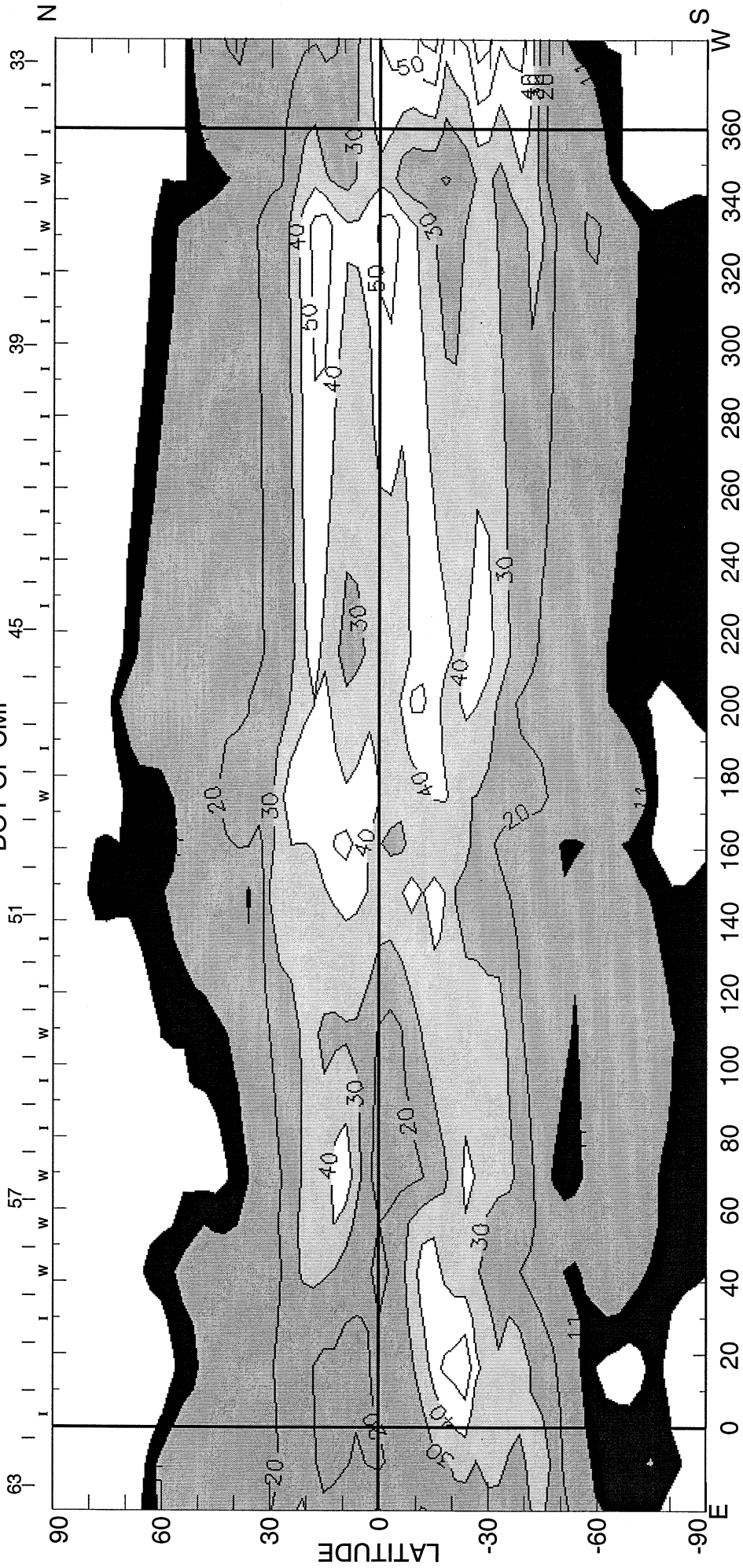
SOLAR MAGNETIC FIELD SYNOPSIS CHART
SOURCE SURFACE FIELD
CARRINGTON ROTATION NUMBER 1986
(3 February to 2 March 2002)



Wilcox Solar Observatory

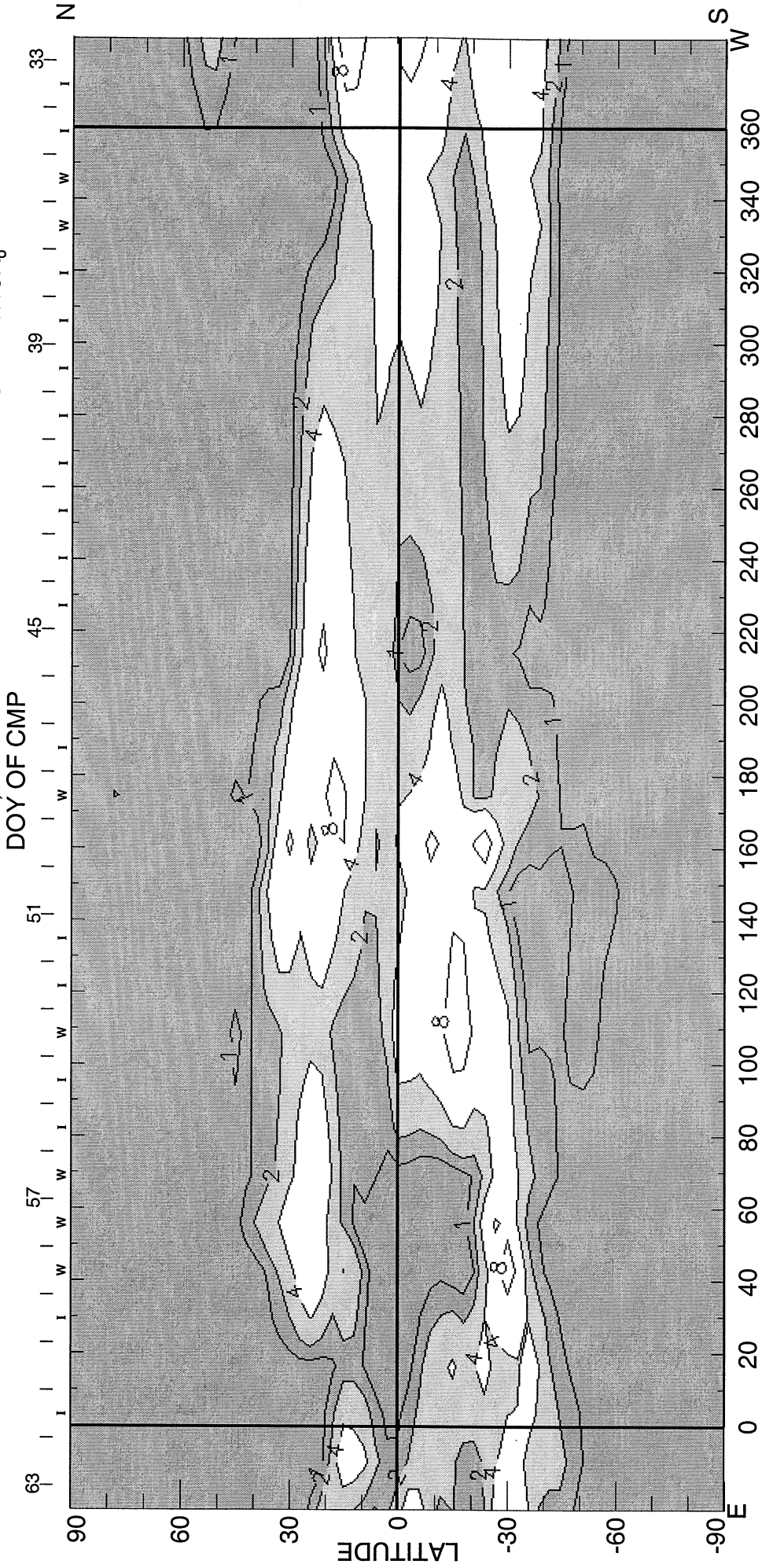
1986

CARRINGTON ROTATION NUMBER 1986 ; NSO/SACRAMENTO PEAK FE XIV @ R = 1.15R_o
DOY OF CMP



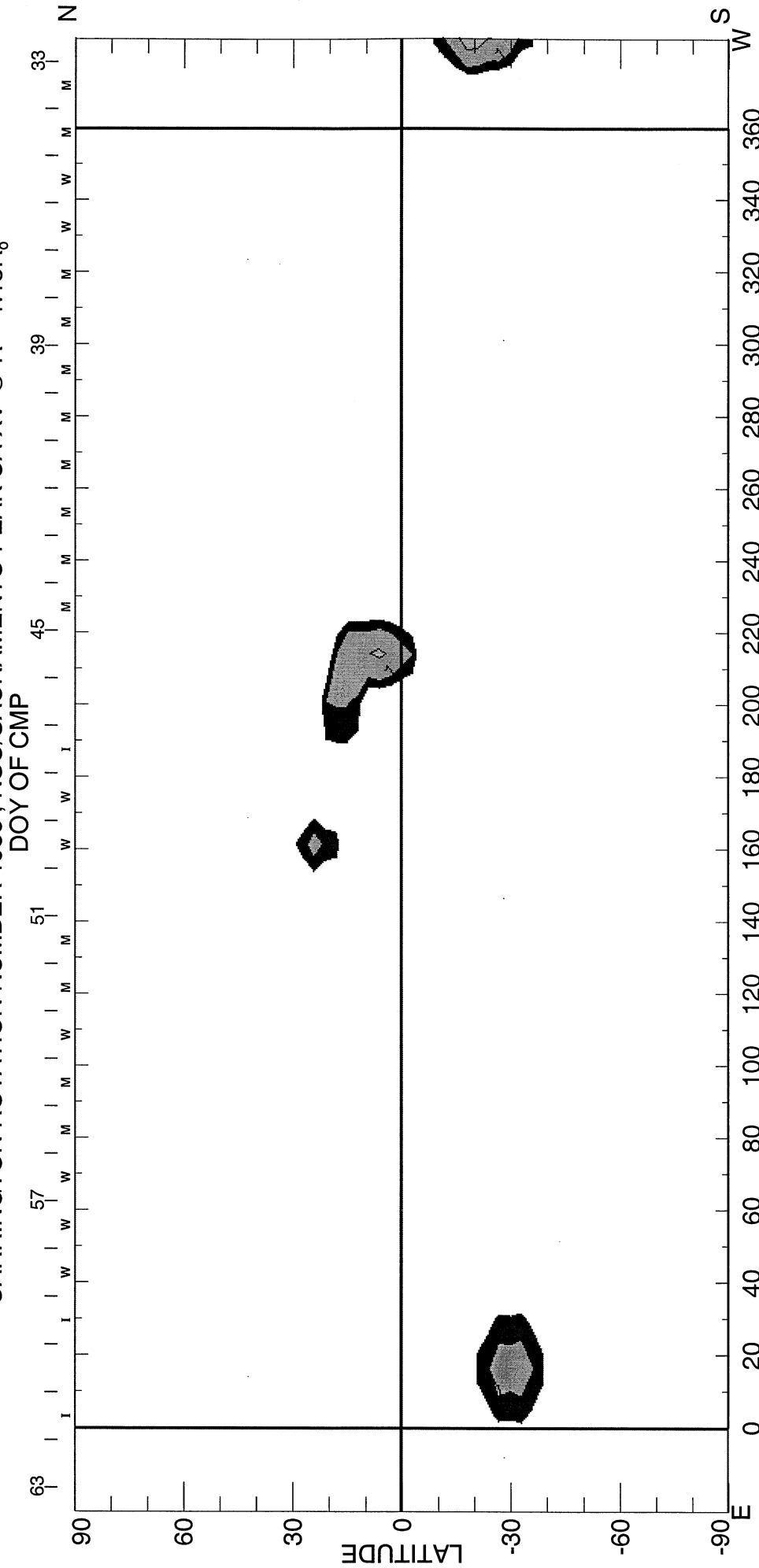
HELIOGRAPHIC LONGITUDE
LIMB CONTOURS: 8, 11, 20, 30, 40, 50, 60, 80, 100, 120, 140 MILLIONTHS OF I_o
<I> = 19.37μ
CORONAL HOLES ARE SHOWN AS WHITE BORDERED BY BLACK

CARRINGTON ROTATION NUMBER 1986 ; NSO/SACRAMENTO PEAK FEX @ R = 1.15R_o



HELIOGRAPHIC LONGITUDE
2002 E+W LIMB CONTOURS: 1, 2, 4, 8, 12, 16, 32, 48 MILLIONTHS OF I_o
$\langle I \rangle = 1.64 \mu$

CARRINGTON ROTATION NUMBER 1986 ; NSO/SACRAMENTO PEAK CA XV @ $R = 1.15R_0$



HELIOGRAPHIC LONGITUDE
2002 E+W LIMB CONTOURS: YELMIN, 1, 2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20 MILLIONTHS OF I_0
(30-May-02)

SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION NUMBER 1986
(3 February to 2 March 2002)

National Solar Observatory/Kitt Peak

Dates of Observation

PHOTOGRAPHIC DATA UNAVAILABLE AT TIME OF PUBLICATION.

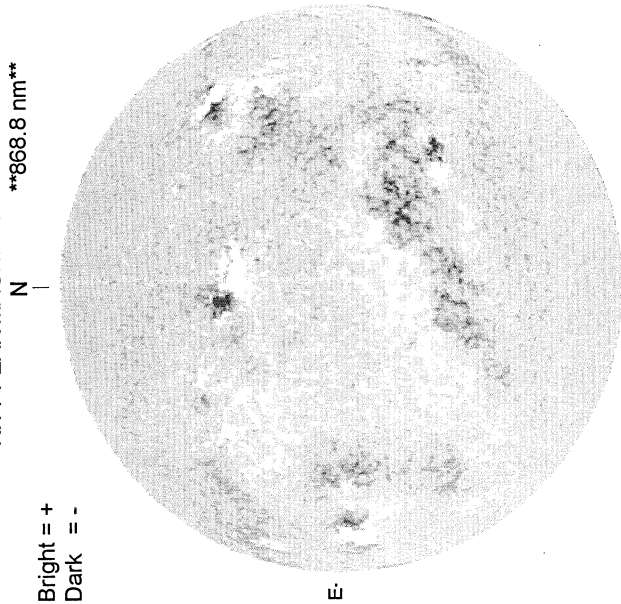
Heliographic Longitude

MARCH 1, 2002 (P = -21.49, Bo = -7.22, Lo = 22.79)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



1640 UT

STANFORD MAGNETOGRAM

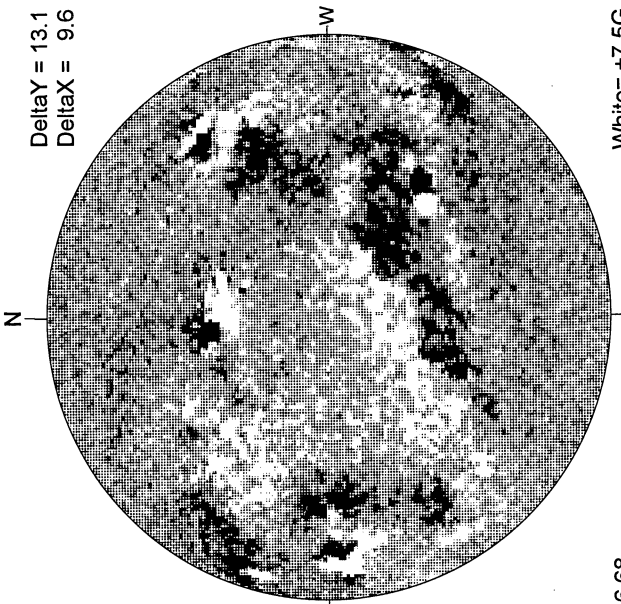
Solid = +
Dashed = -



1929 UT

MT. WILSON MAGNETOGRAM

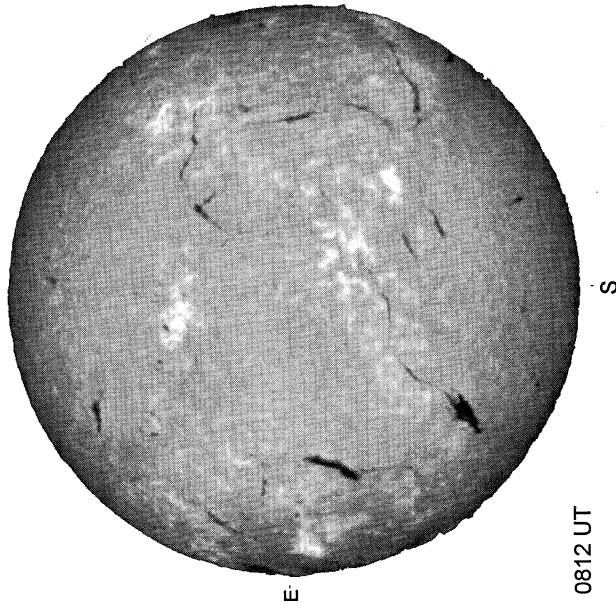
DeltaY = 13.1
DeltaX = 9.6



16.68 -
17.64 UT

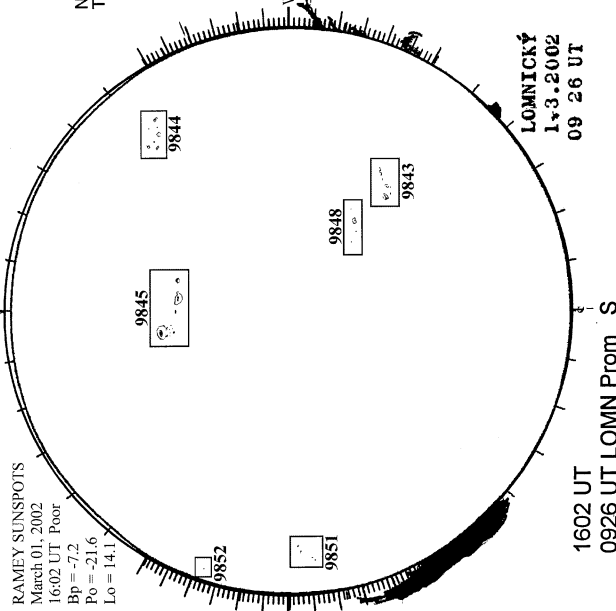
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



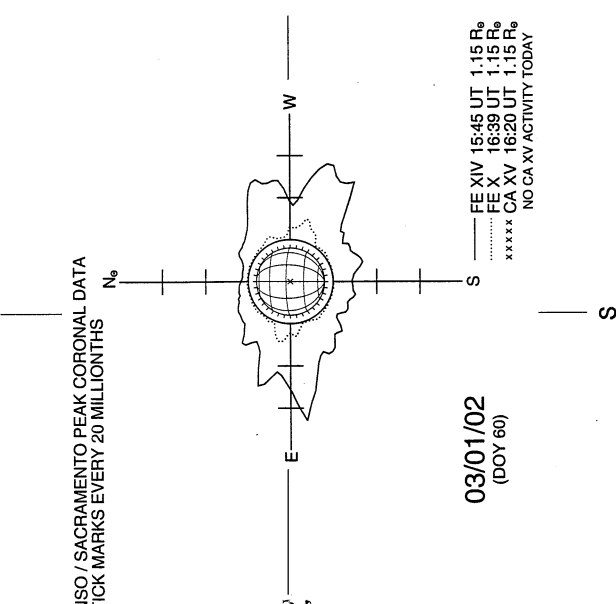
0812 UT

RAMEY SUNSPOT



1602 UT
0926 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----

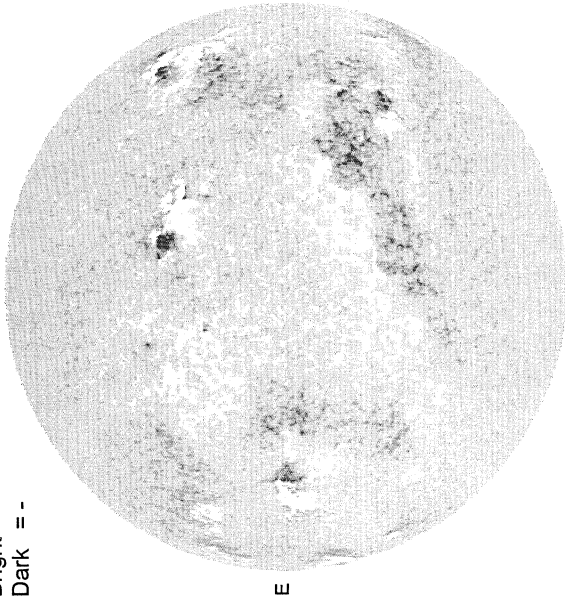


03/01/02
(DOY 60)

MARCH 2, 2002 (P = -21.74, Bo = -7.23, Lo = 9.62)

KITT PEAK MAGNETOGRAM
868.8 nm

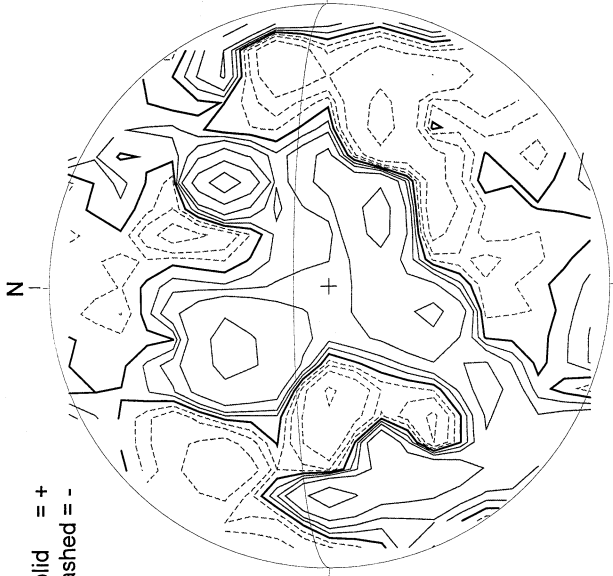
Bright = +
Dark = -



1614 UT

STANFORD MAGNETOGRAM

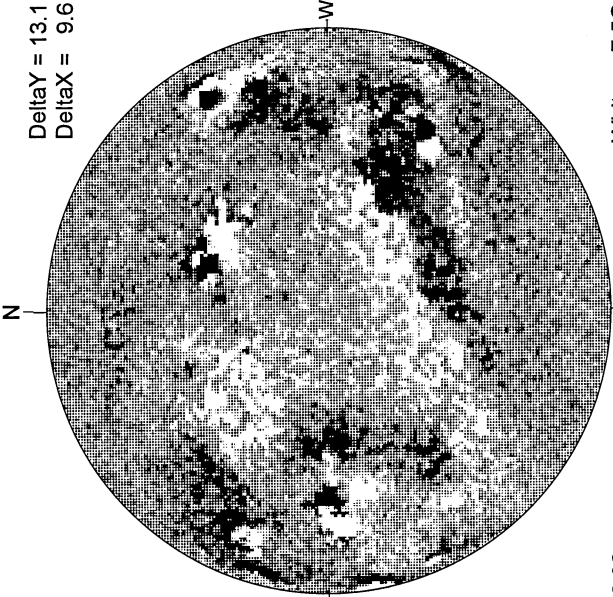
Solid = +
Dashed = -



2158 UT

MT. WILSON MAGNETOGRAM

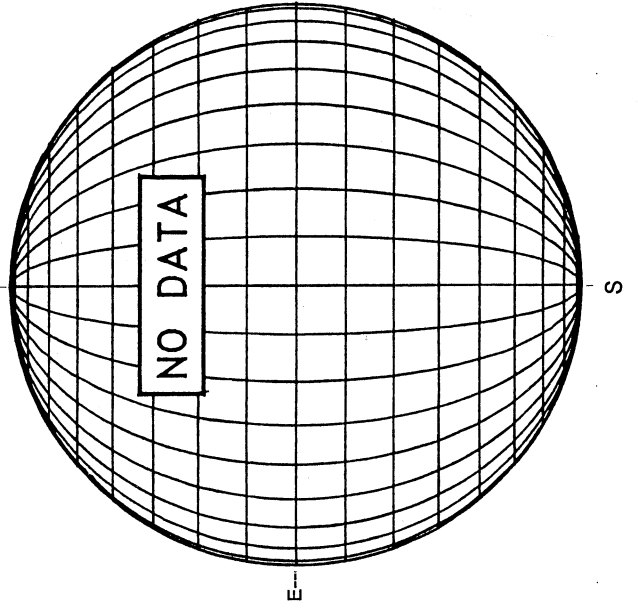
Delta Y = 13.1
Delta X = 9.6



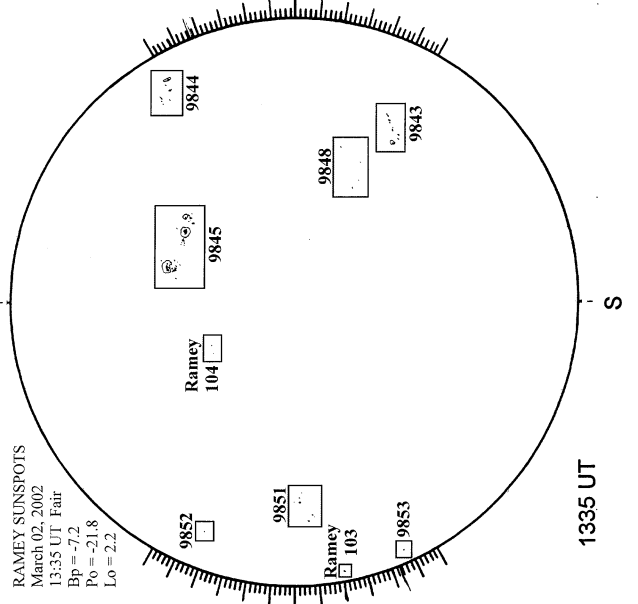
16.98 -
17.95 UT

White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

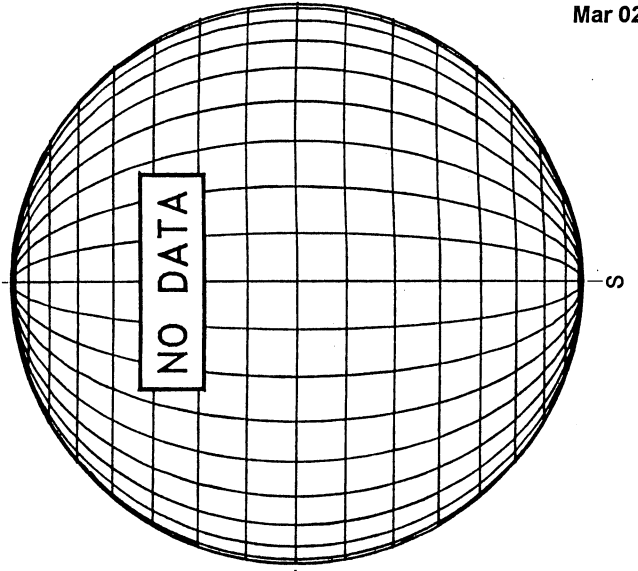


RAMEY SUNSPOT



1335 UT

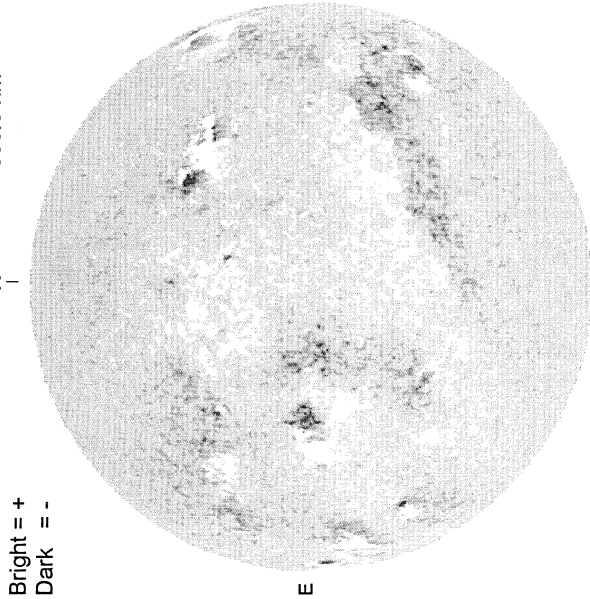
LOMNICKY PEAK CORONA (1.04 Radii)----



MARCH 3, 2002 (P= -21.98, Bo = -7.24, Lo = 356.45)

52
Mar 02

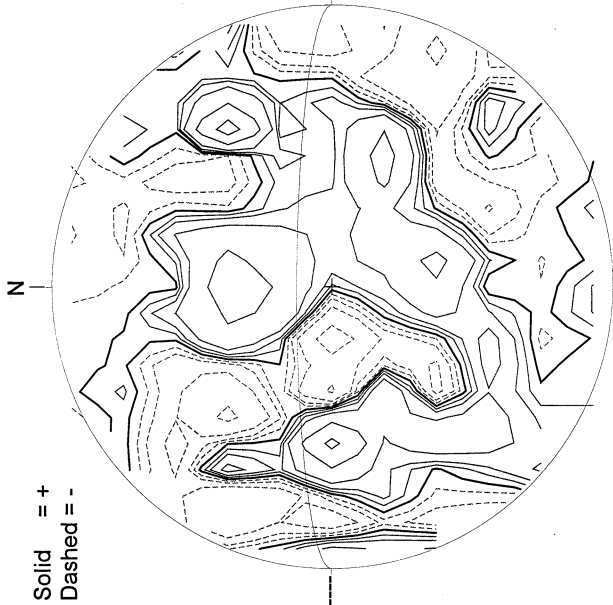
KITT PEAK MAGNETOGRAM
868.8 nm



Bright = +
Dark = -

1738 UT

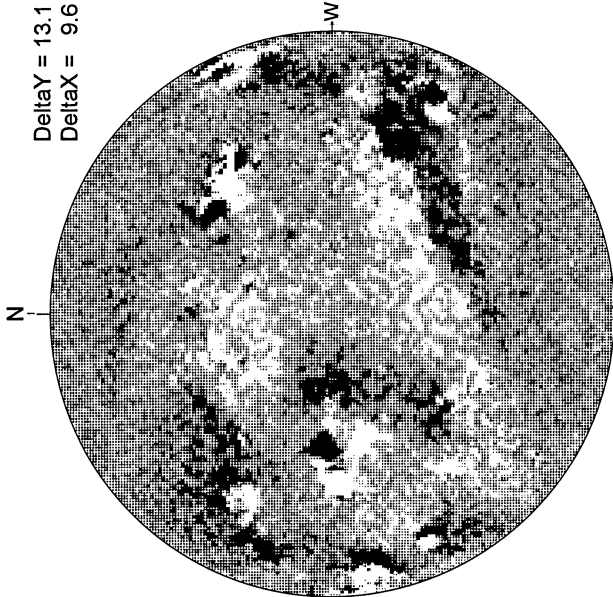
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

2242 UT

MT. WILSON MAGNETOGRAM

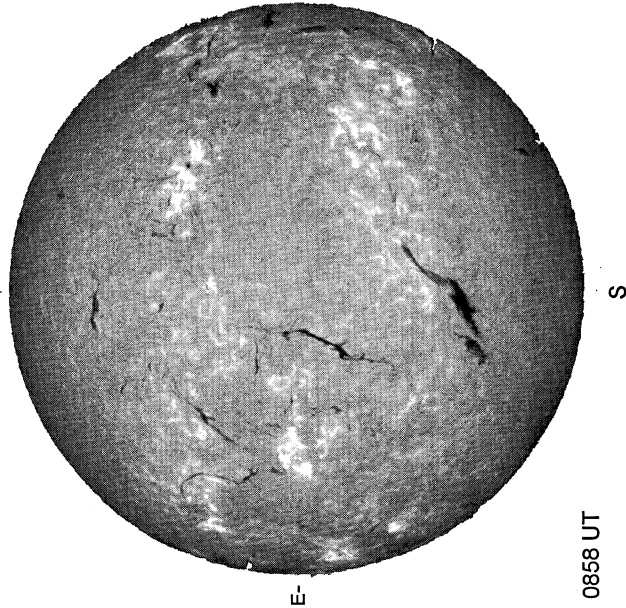


DeltaY = 13.1
DeltaX = 9.6

17.10 -
18.06 UT

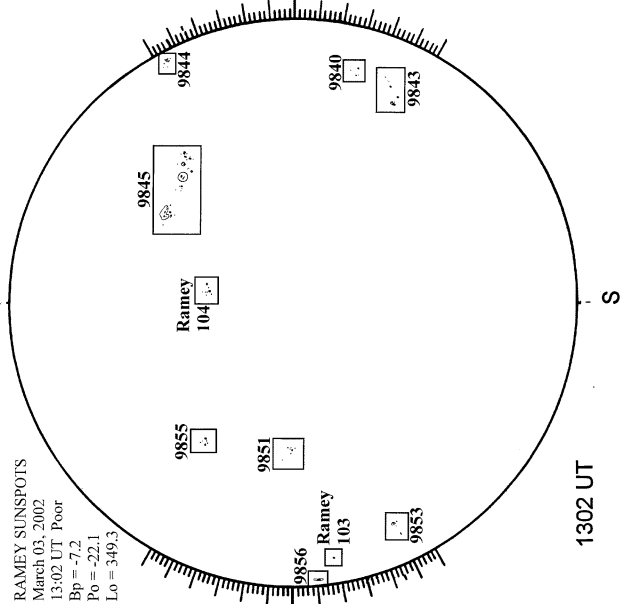
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



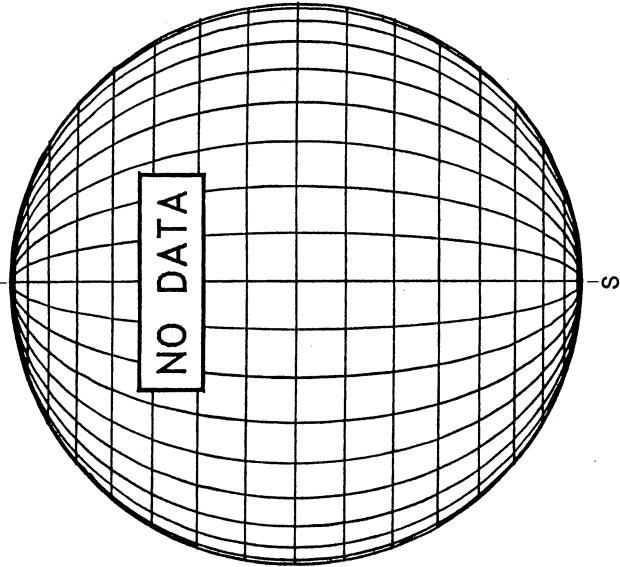
0858 UT

RAMEY SUNSPOT



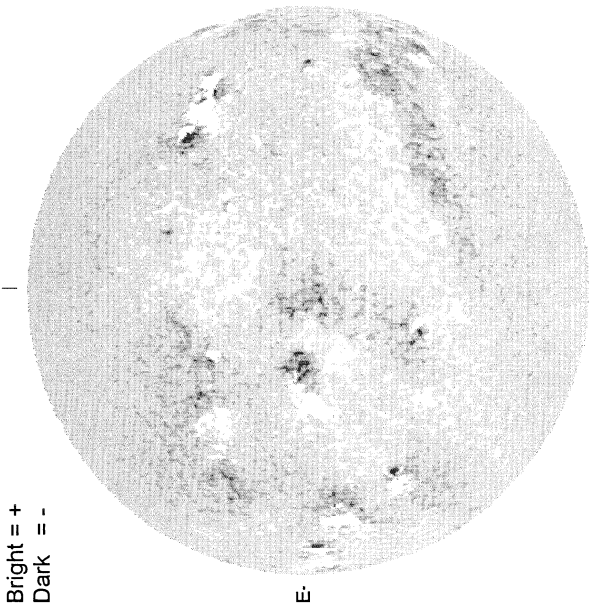
1302 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



MARCH 4, 2002 (P= -22.22, Bo = -7.24, Lo = 343.27)

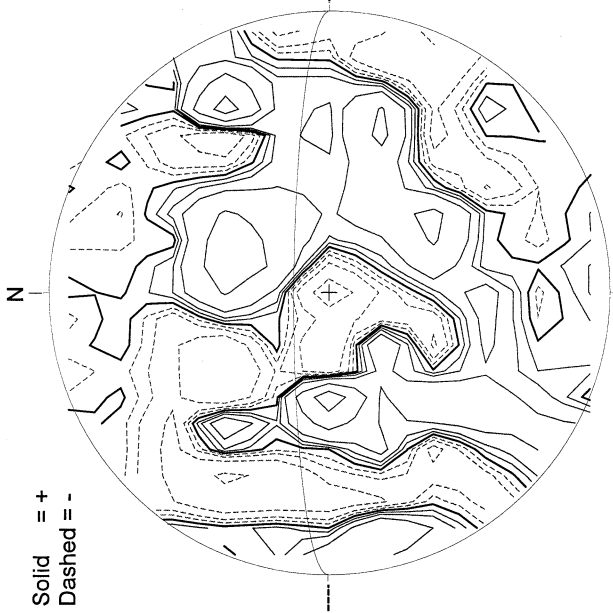
KITT PEAK MAGNETOGRAM
868.8 nm



Bright = +
Dark = -

1514 UT

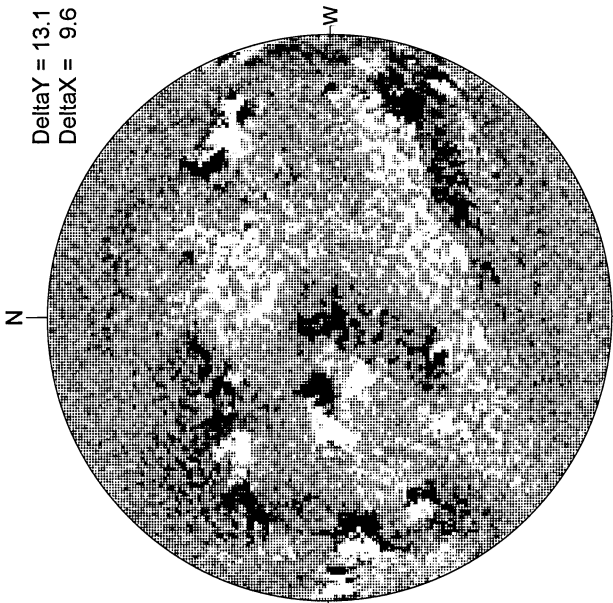
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

1747 UT

MT. WILSON MAGNETOGRAM

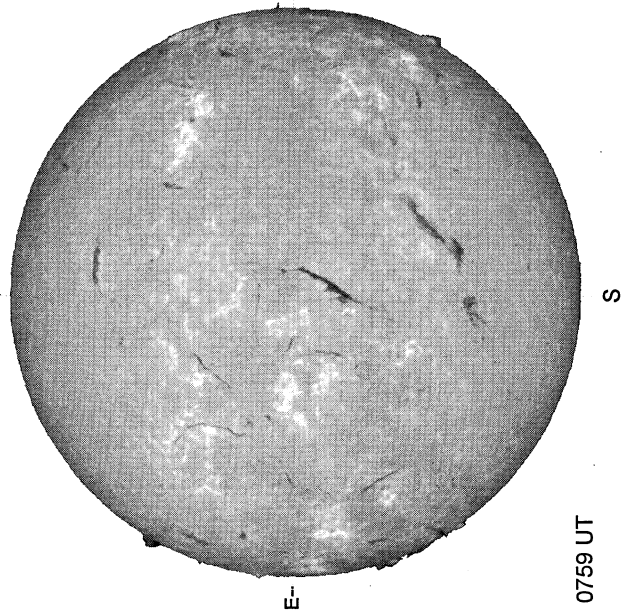


DeltaY = 13.1
DeltaX = 9.6

17.32 -
18.28 UT

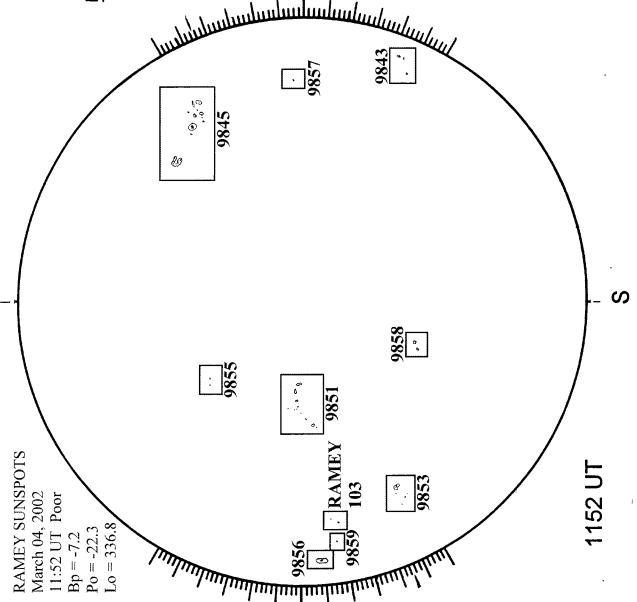
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



0759 UT

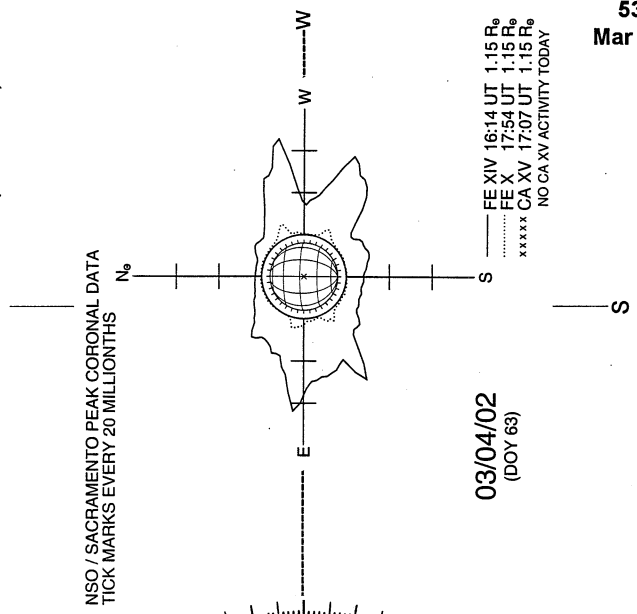
RAMEY SUNSPOT



RAMEY SUNSPOTS
March 04, 2002
11:52 UT Poor
Bp = -7.2
Po = -22.3
Lo = 336.8

1152 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



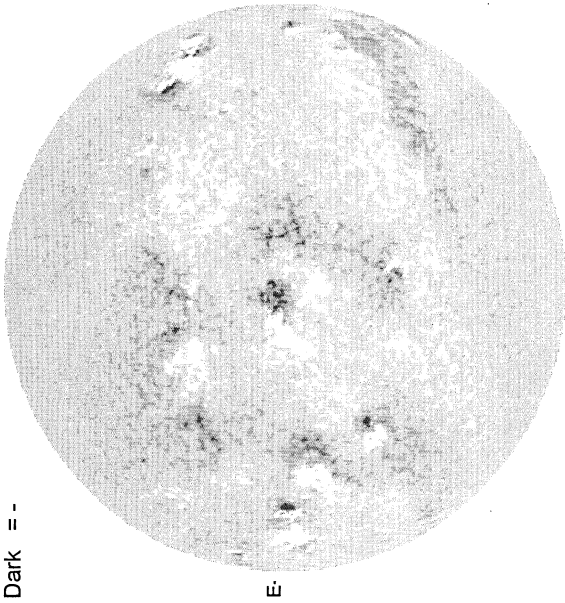
03/04/02
(DOY 63)

MARCH 5, 2002 (P= -22.45, Bo = -7.25, Lo = 330.10)

KITT PEAK MAGNETOGRAM

868.8 nm

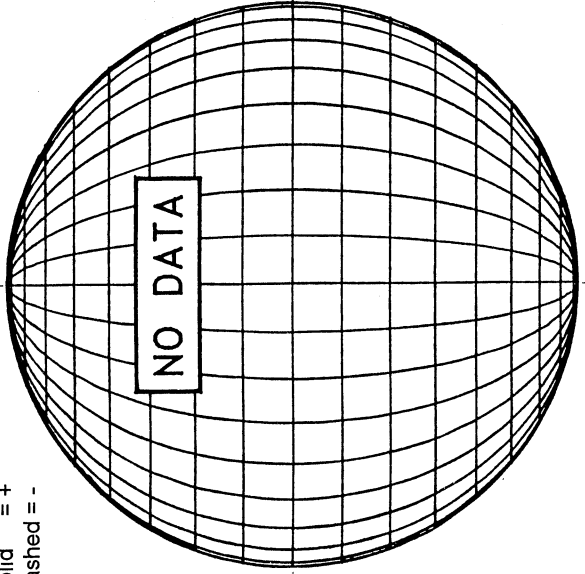
Bright = +
Dark = -



1549 UT

STANFORD MAGNETOGRAM

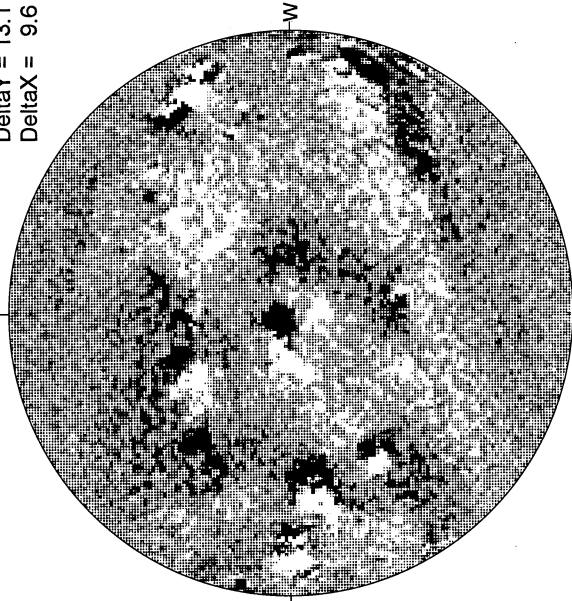
Solid = +
Dashed = -



16.92 -
17.88 UT

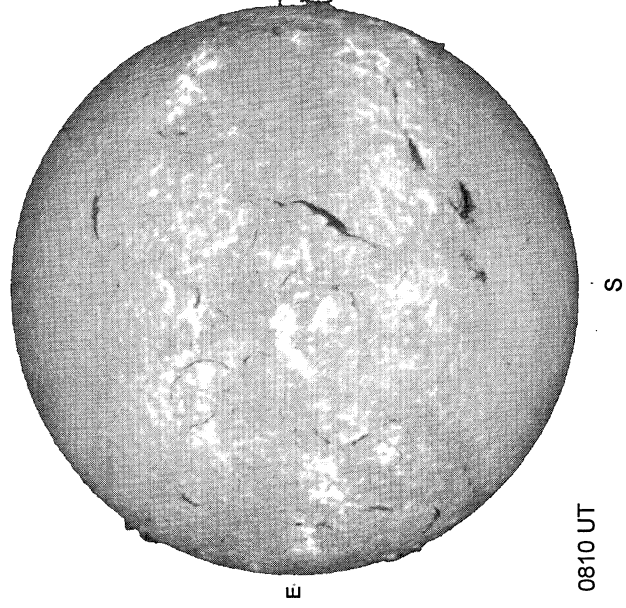
MT. WILSON MAGNETOGRAM

DeltaY = 13.1
DeltaX = 9.6



White = +7.5G
Black = -7.5G

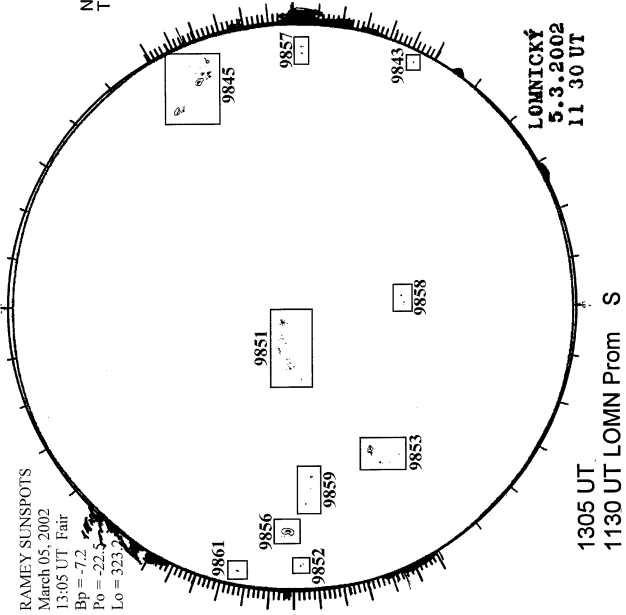
MEUDON H-ALPHA



0810 UT

RAMEY SUNSPOT

RAMEY SUNSPOTS
March 05, 2002
13:05 UT Fair
Bp = -7.2
Po = -22.3
Lo = 323.7

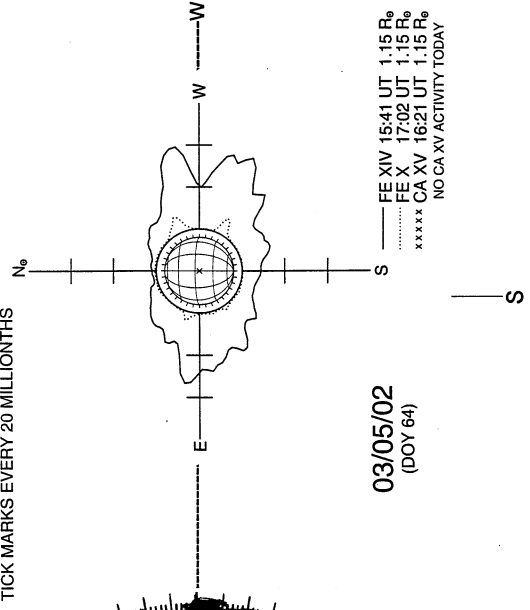


1305 UT
1130 UT LOMN Prom S

LOMNICKY
5.3.2002
11 30 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 20 MILLIONTHS



03/05/02
(DOY 64)

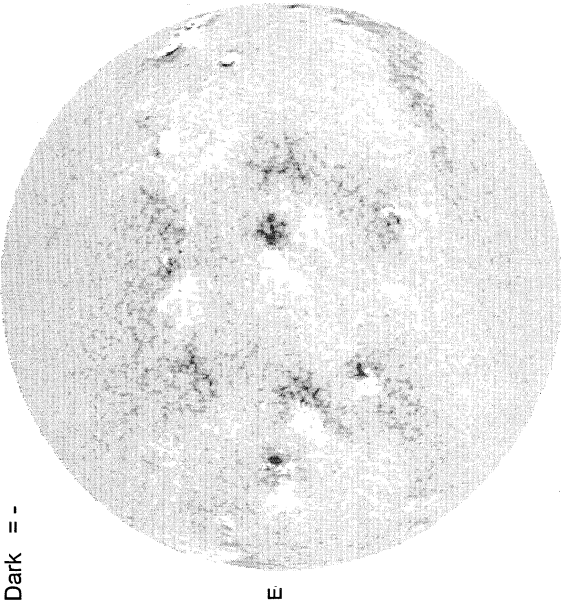
FE XIV 15:41 UT 1.15 R_o
FE X 17:02 UT 1.15 R_o
xxxxx CA XV 16:21 UT 1.15 R_o
NO CA XV ACTIVITY TODAY

MARCH 6, 2002 (P = -22.68, Bo = -7.25, Lo = 316.92)

KITT PEAK MAGNETOGRAM

868.8 nm

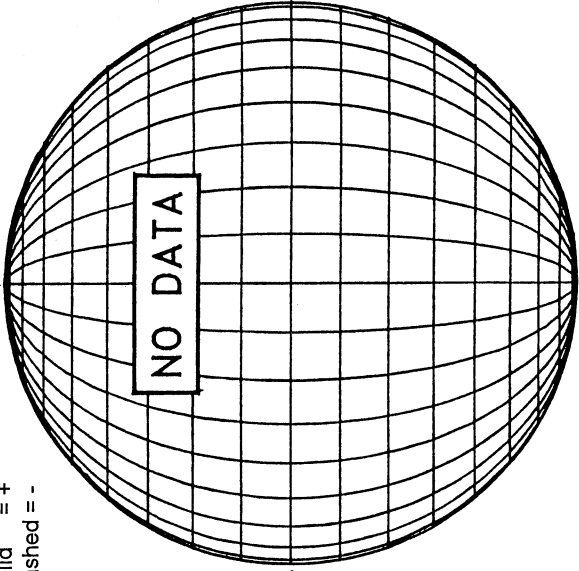
Bright = +
Dark = -



1540 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -



16.70 -
17.12 UT

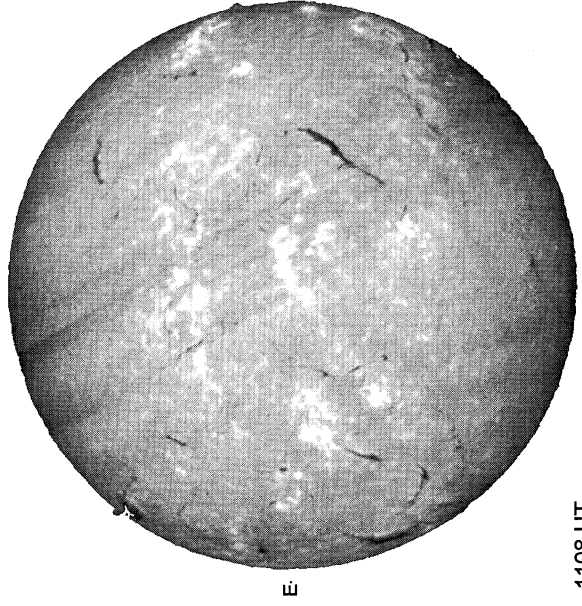
MT. WILSON MAGNETOGRAM

DeltaY = 19.9
DeltaX = 12.9



White = +7.5G
Black = -7.5G

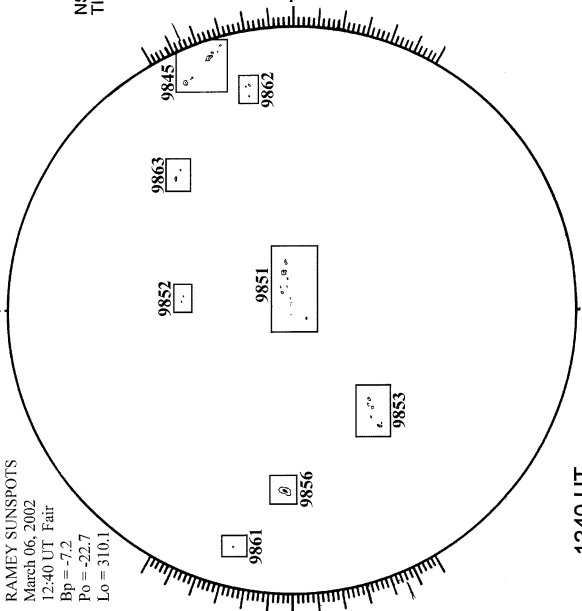
MEUDON H-ALPHA



1108 UT

RAMEY SUNSPOT

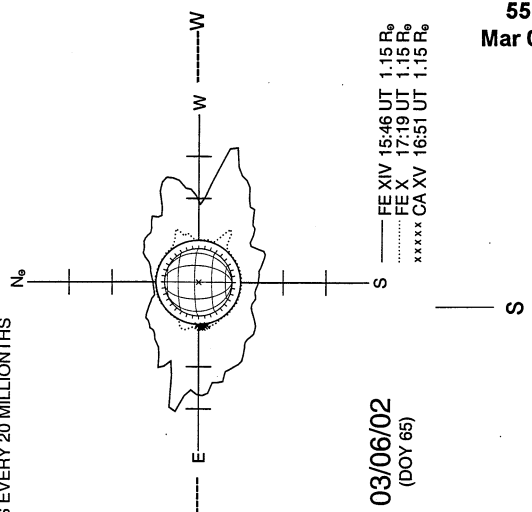
RAMEY SUNSPOTS
March 06, 2002
12:40 UT Fair
Bp = -7.2
Po = -22.7
Lo = 310.1



1240 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 20 MILLIONTHS



03/06/02
(DOY 65)

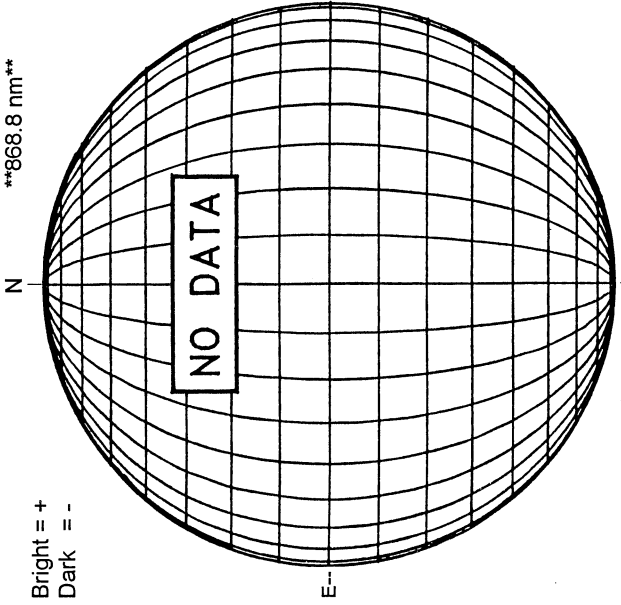
----- FE XIV 15:46 UT 1.15 R_o
..... FE X 17:19 UT 1.15 R_o
xxxxxx CA XV 16:51 UT 1.15 R_o

MARCH 7, 2002 (P = -22.89, Bo = -7.25, Lo = 303.75)

KITT PEAK MAGNETOGRAM

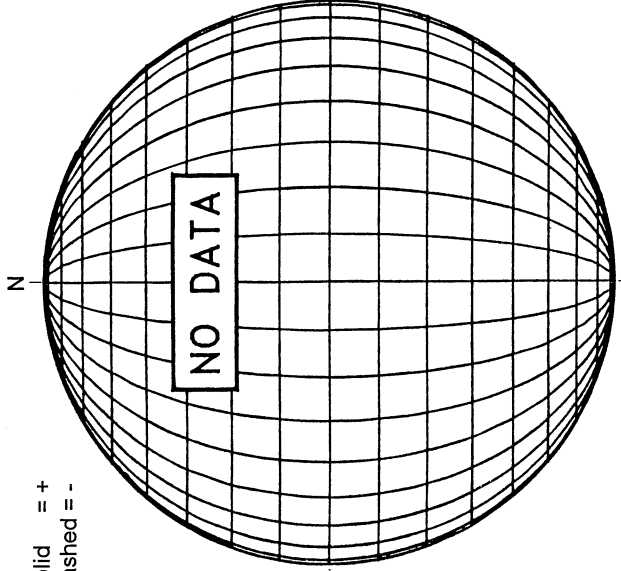
868.8 nm

Bright = +
Dark = -



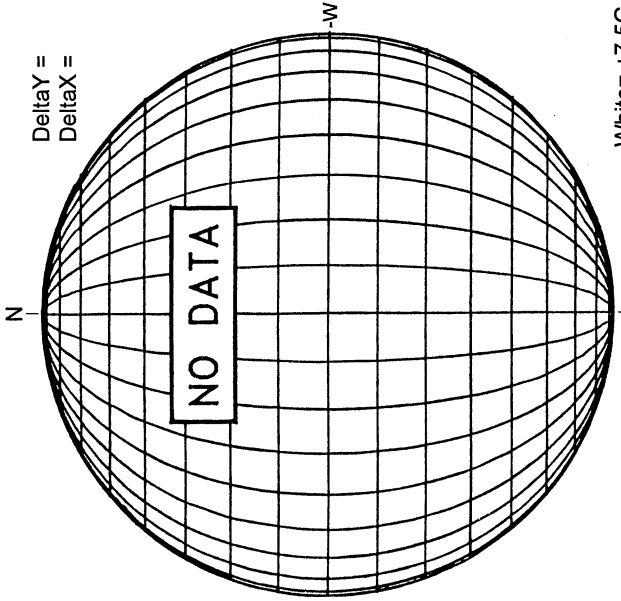
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



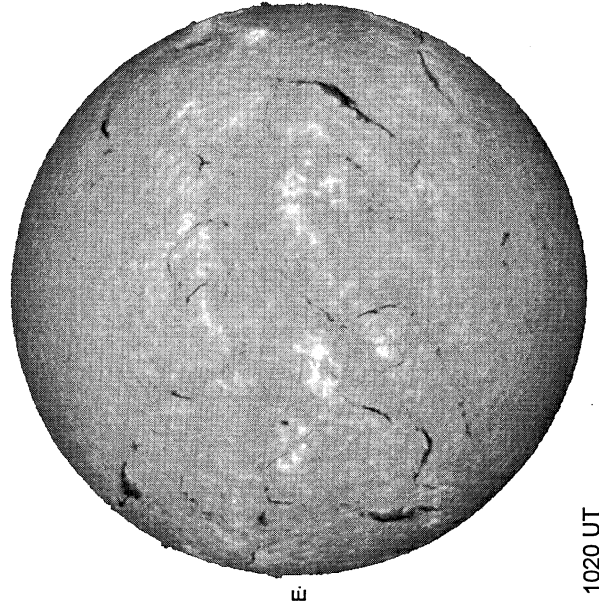
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



White = +7.5G
Black = -7.5G

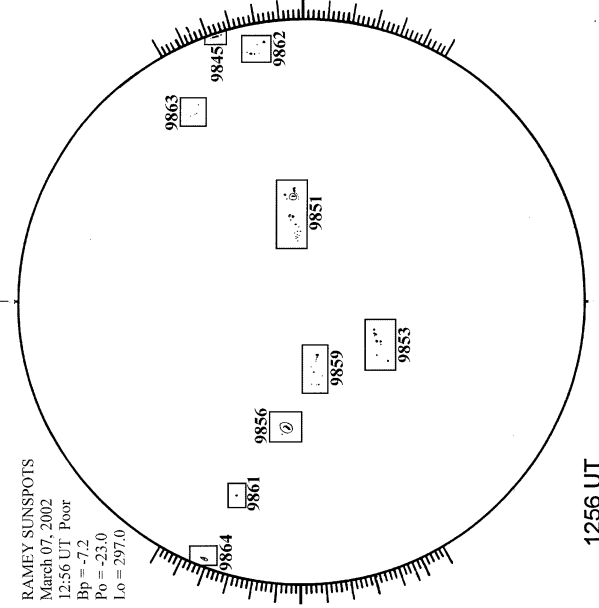
MEUDON H-ALPHA



1020 UT

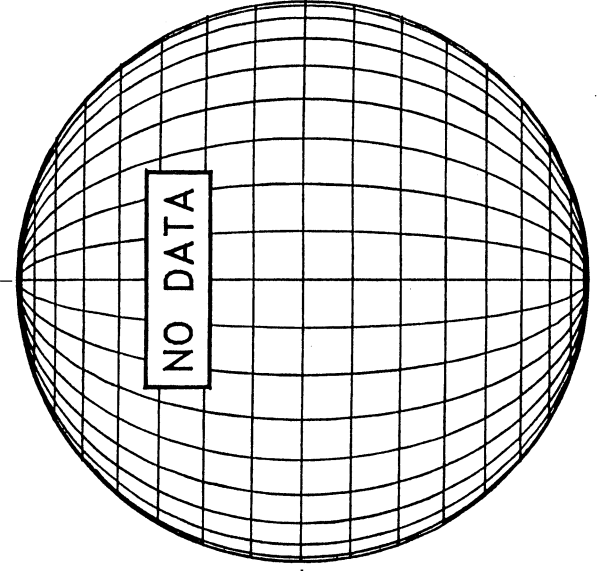
RAMEY SUNSPOTS

RAMEY SUNSPOTS
March 07, 2002
12:56 UT Poor
Bp = -7.2
Po = -23.0
Lo = 297.0



1256 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

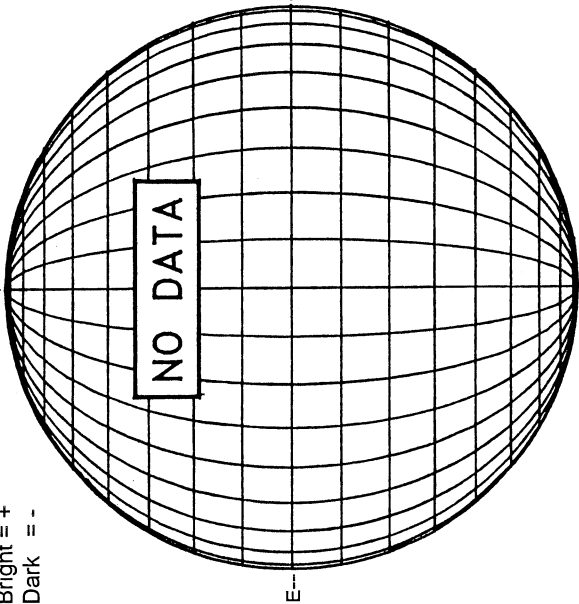


MARCH 8, 2002 (P = -23.11, Bo = -7.25, Lo = 290.57)

KITT PEAK MAGNETOGRAM

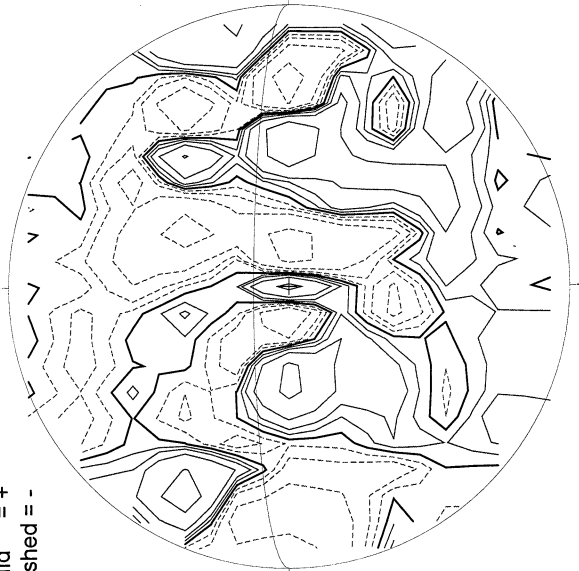
868.8 nm

Bright = +
Dark = -



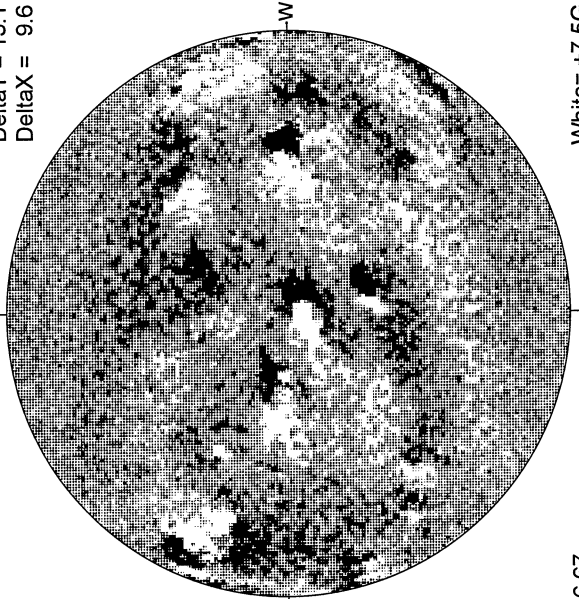
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

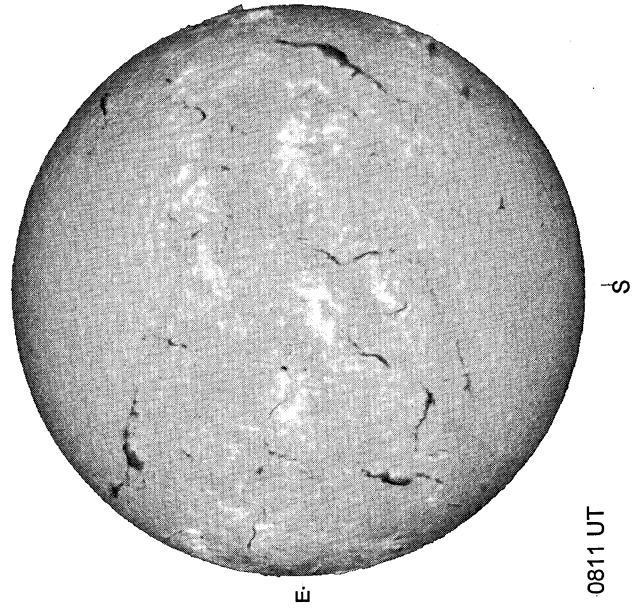
DeltaY = 13.1
DeltaX = 9.6



16.67 -
17.63 UT

White = +7.5G
Black = -7.5G

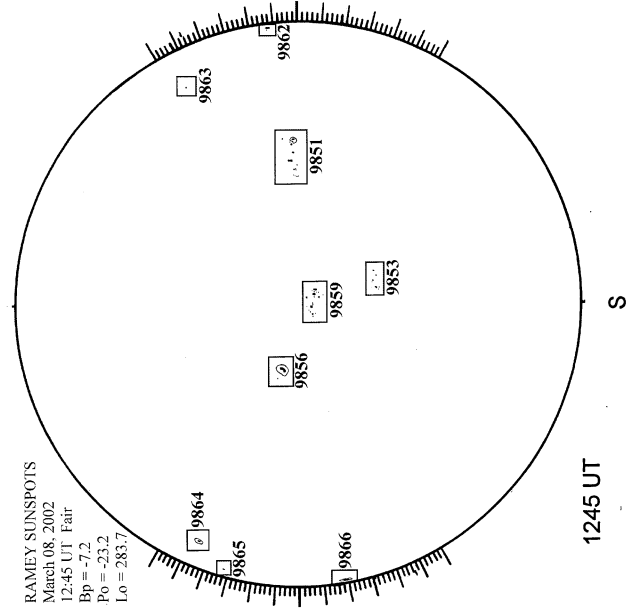
MEUDON H-ALPHA



0811 UT

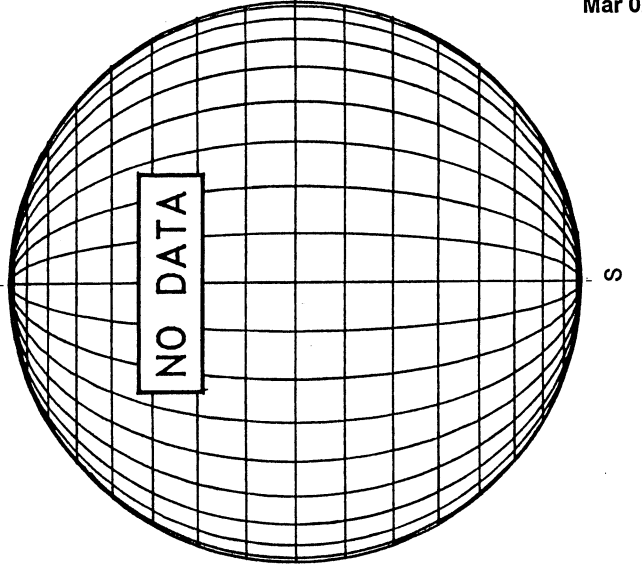
RAMEY SUNSPOTS

RAMEY SUNSPOTS
March 08, 2002
12:45 UT Fair
Bp = -7.2
Po = -23.2
Lo = 283.7



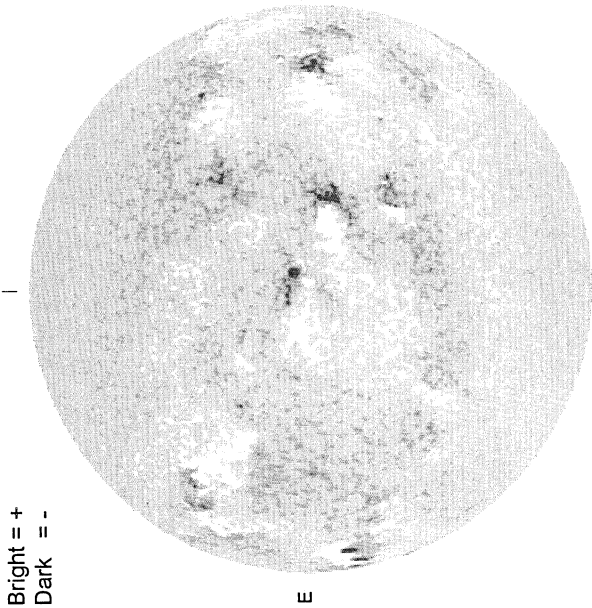
1245 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



MARCH 9, 2002 (P= -23.31, Bo = -7.25, Lo = 277.40)

KITT PEAK MAGNETOGRAM
**868.8 nm

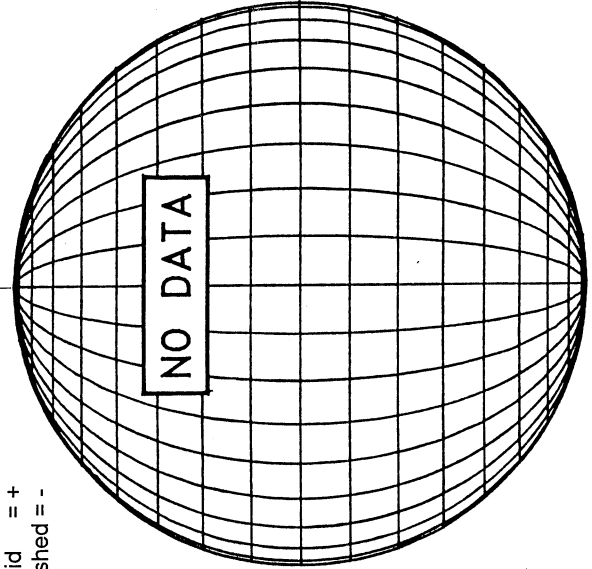


Bright = +
Dark = -

E

1825 UT

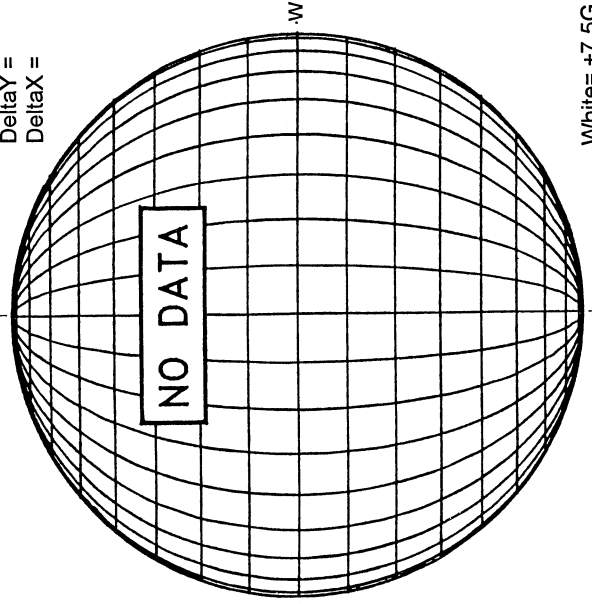
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

NO DATA

MT. WILSON MAGNETOGRAM

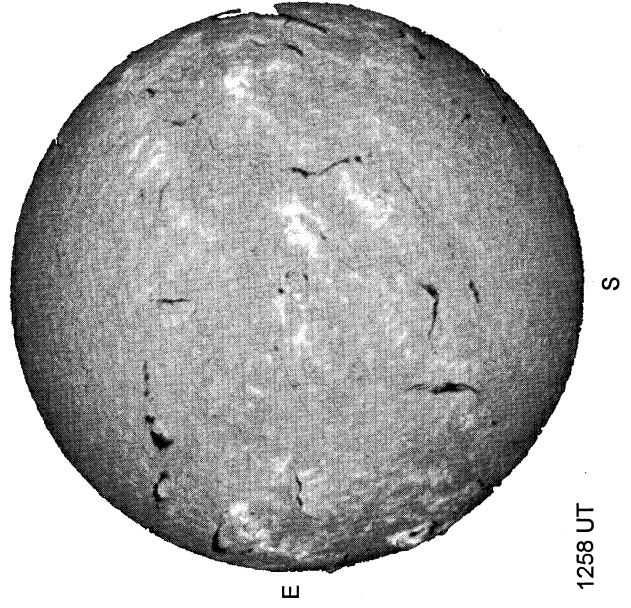


Delta Y =
Delta X =

NO DATA

White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

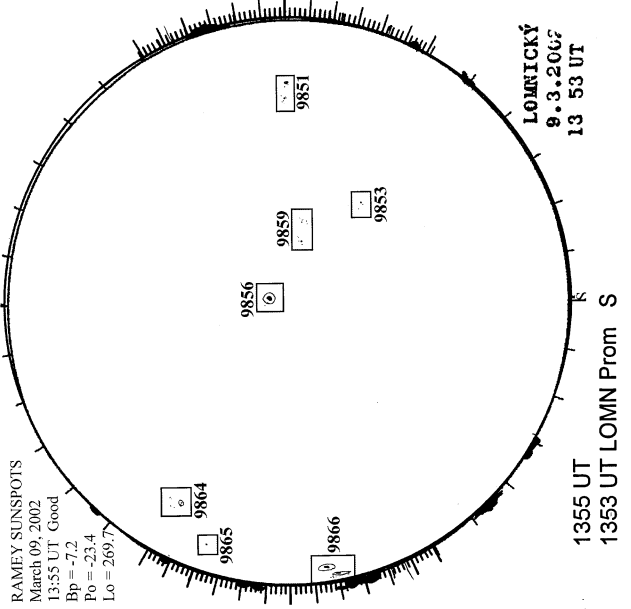


E

1258 UT

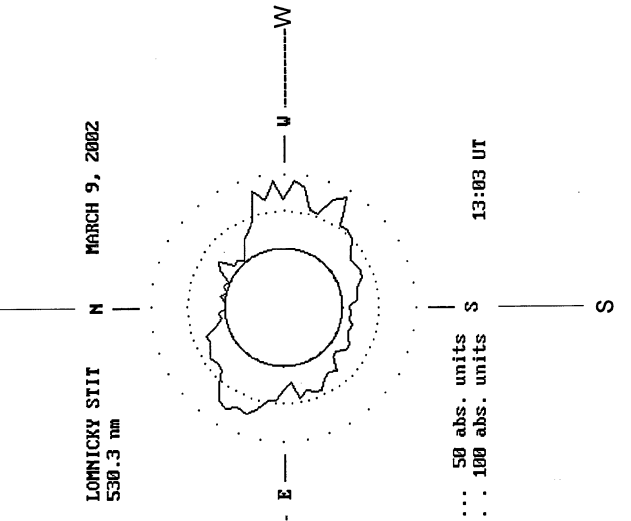
RAMEY SUNSPOTS

March 09, 2002
13:55 UT Good
Bp = -7.2
Po = -23.4
Lo = 269.7



1355 UT
1353 UT LOMNI Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



... 50 abs. units
... 100 abs. units

13:03 UT

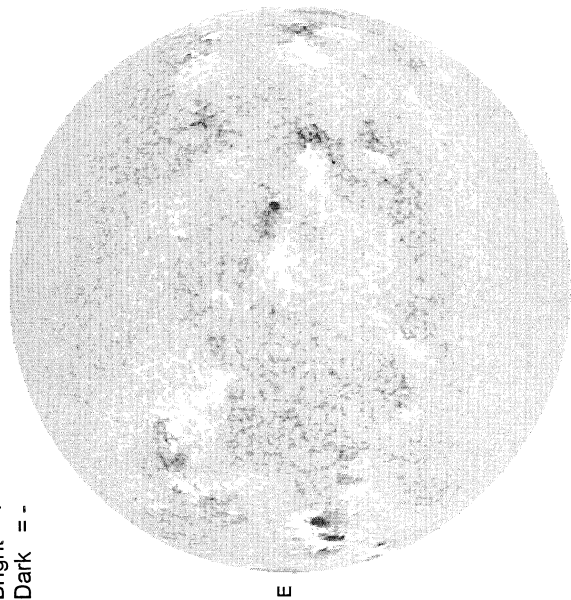
LOMNICKÝ
9.3.2002
13 53 UT

MARCH 10, 2002 (P = -23.51, Bo = -7.24 Lo = 264.22)

KITT PEAK MAGNETOGRAM

868.8 nm

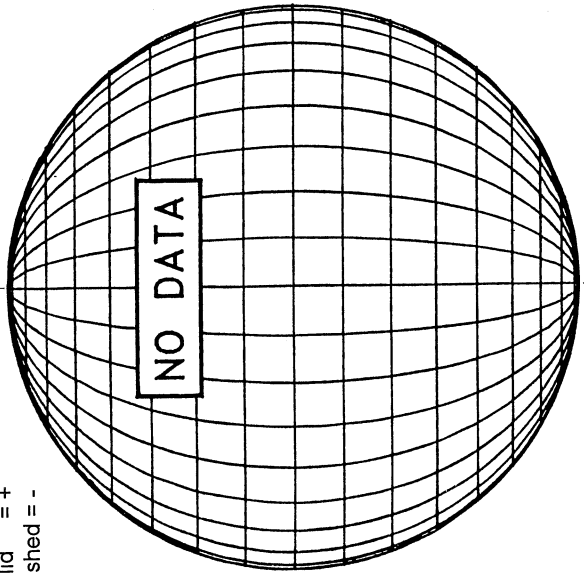
Bright = +
Dark = -



1909 UT

STANFORD MAGNETOGRAM

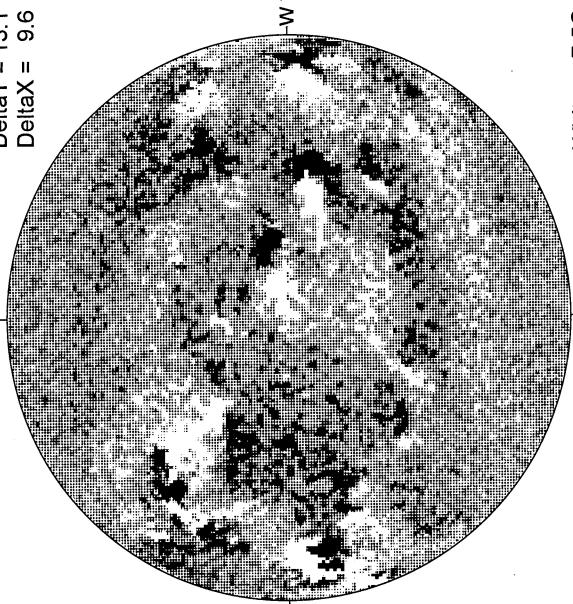
Solid = +
Dashed = -



20.55 -
21.51 UT

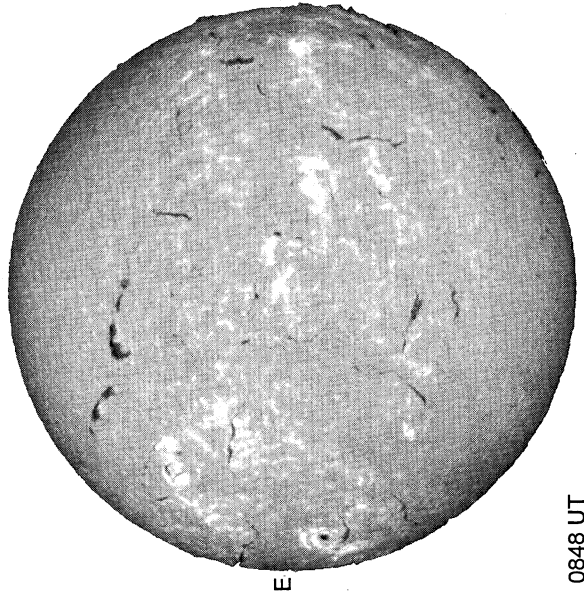
MT. WILSON MAGNETOGRAM

DeltaY = 13.1
DeltaX = 9.6



White = +7.5G
Black = -7.5G

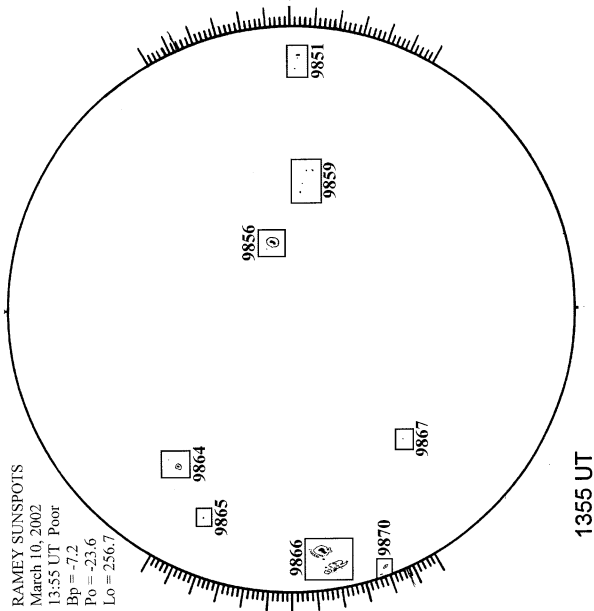
MEUDON H-ALPHA



0848 UT

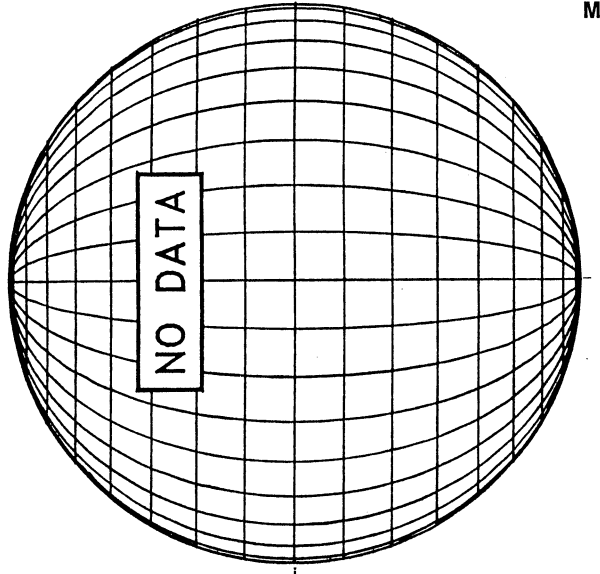
RAMEY SUNSPOTS

RAMEY SUNSPOTS
March 10, 2002
13:55 UT Poor
Bp = -7.2
Po = -23.6
Lo = 256.7



1355 UT

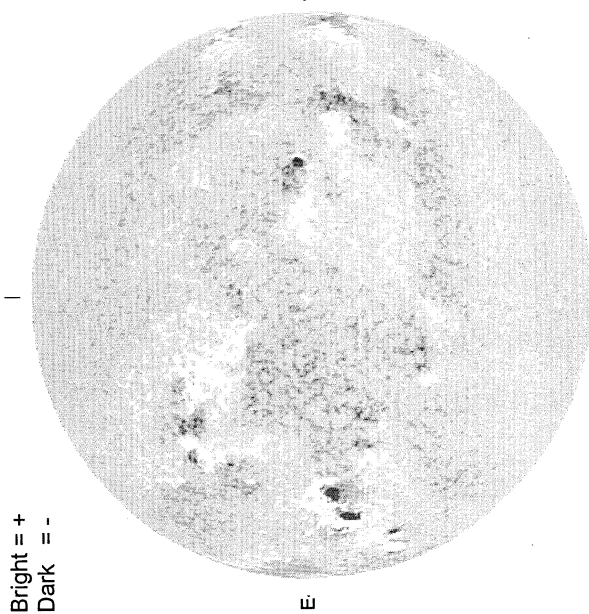
SACRAMENTO PEAK CORONA (1.15 Radii)----



60
Mar 02

MARCH 11, 2002 (P= -23.70, Bo = -7.23, Lo = 251.04)

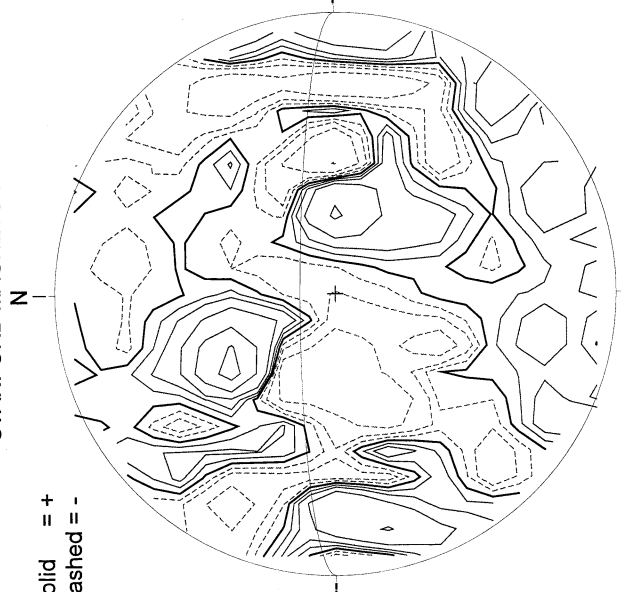
KITT PEAK MAGNETOGRAM
868.8 nm



Bright = +
Dark = -

1541 UT

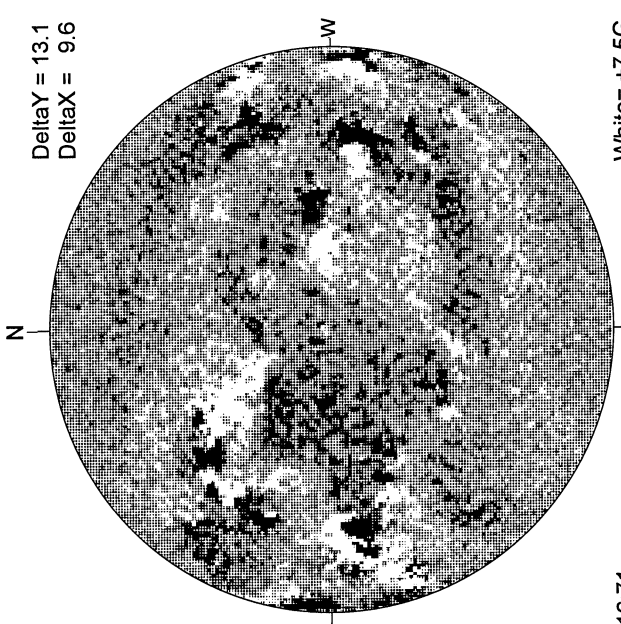
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

1916 UT

MT. WILSON MAGNETOGRAM

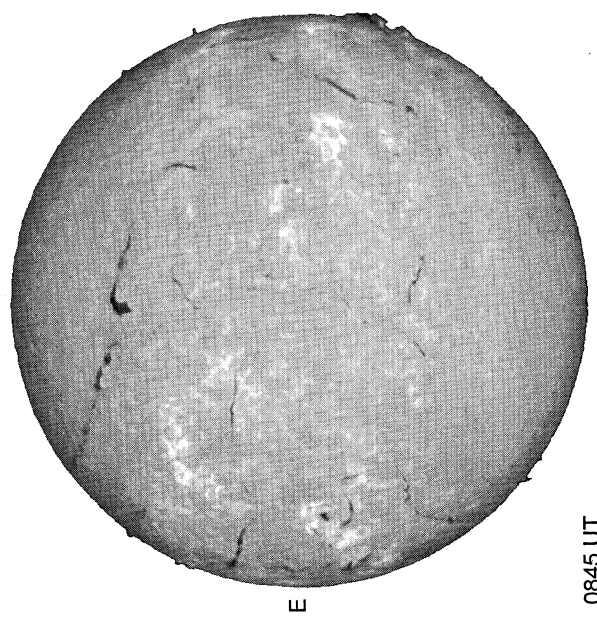


DeltaY = 13.1
DeltaX = 9.6

White = +7.5G
Black = -7.5G

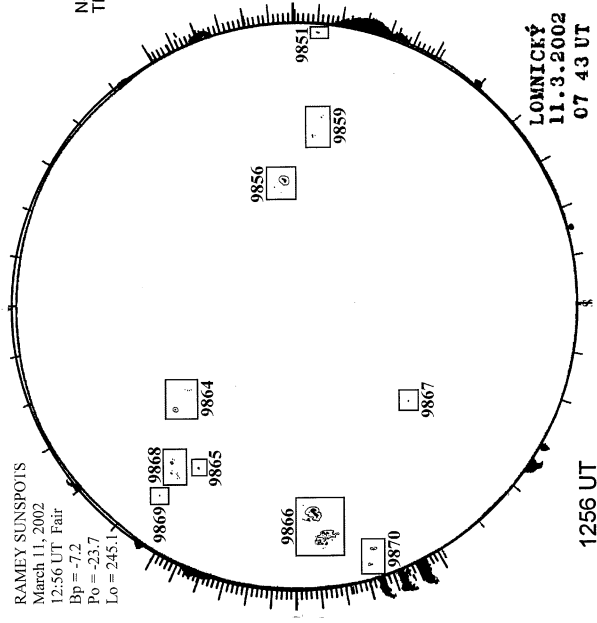
16.71 -
17.67 UT

MEUDON H-ALPHA



0845 UT

RAMEY SUNSPOTS

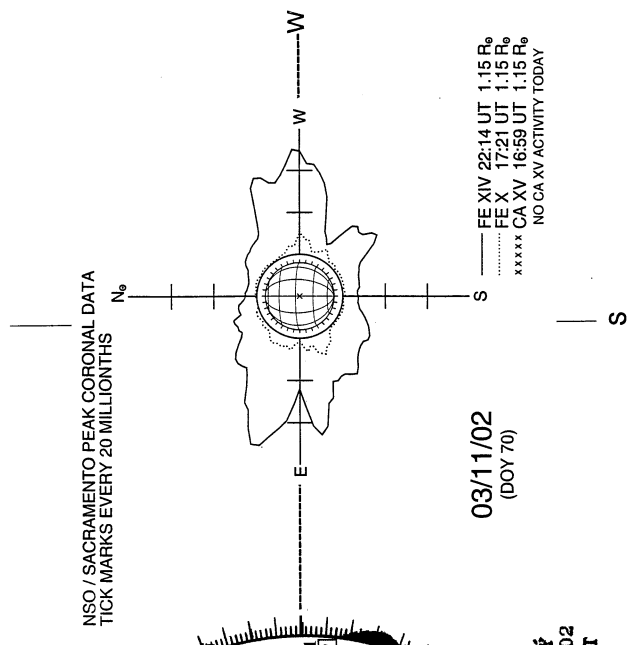


RAMEY SUNSPOTS
March 11, 2002
12:56 UT Fair
Bp = -7.2
Po = -23.7
Lo = 245.1

1256 UT
0743 UT LOMN Prom S

LOMNICKY
11.3.2002
07 43 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 20 MILLIONTHS

03/11/02
(DOY 70)

— FE XIV 22:14 UT 1.15 R_☉
..... FE X 17:21 UT 1.15 R_☉
..... CA XV 16:59 UT 1.15 R_☉
***** NO CA XV ACTIVITY TODAY

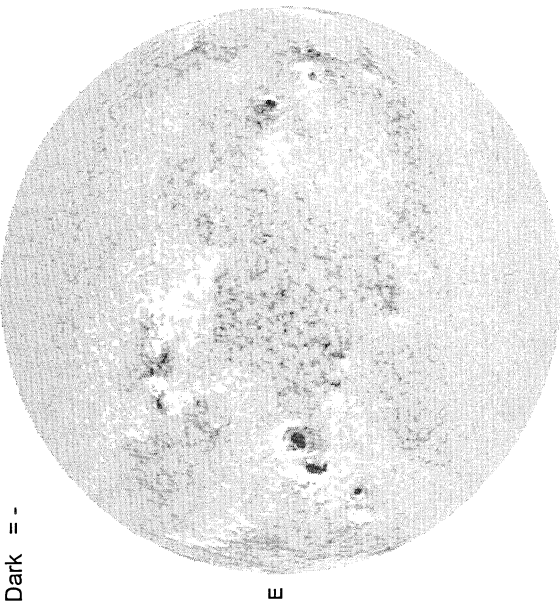
MARCH 12, 2002 (P= -23.89, Bo = -7.22 Lo = 237.87)

KITT PEAK MAGNETOGRAM

868.8 nm

N

Bright = +
Dark = -

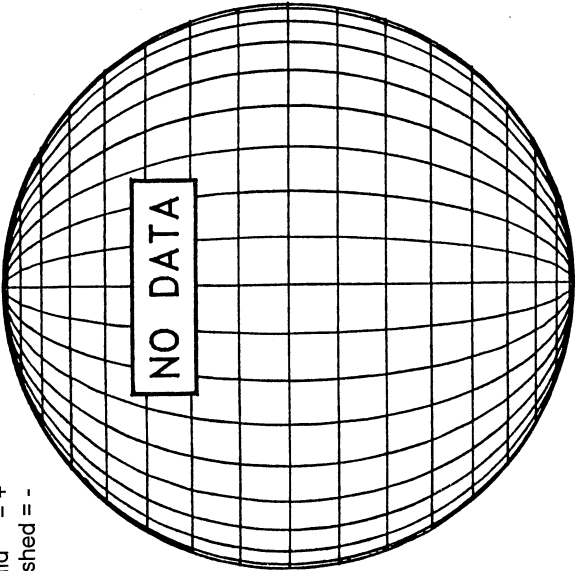


1535 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

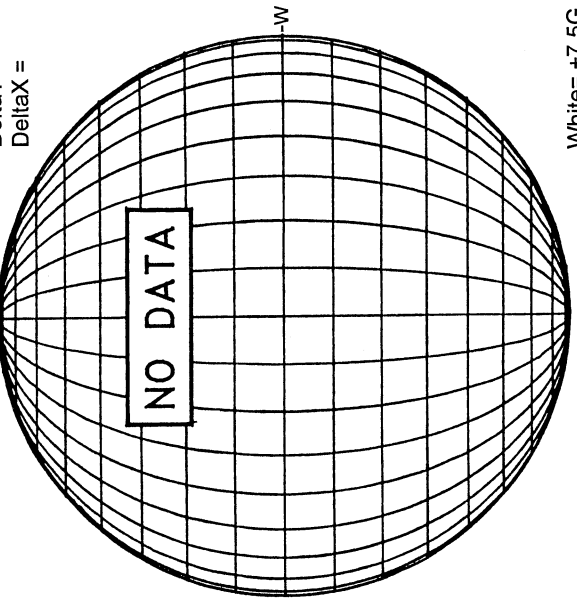
N



MT. WILSON MAGNETOGRAM

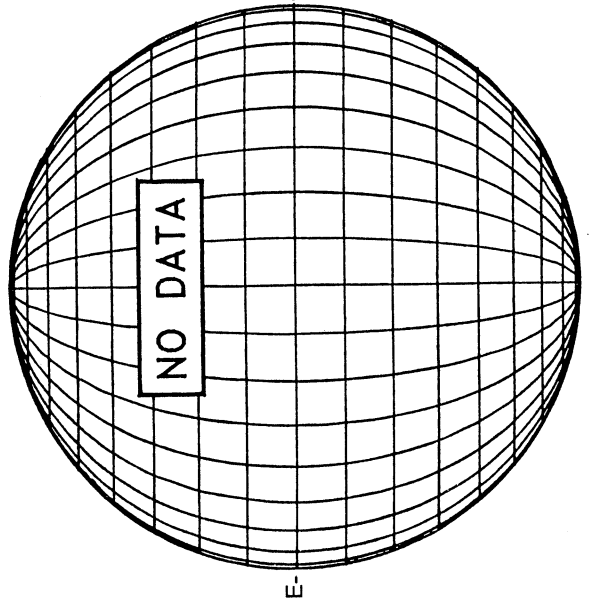
Delta Y =
Delta X =

N



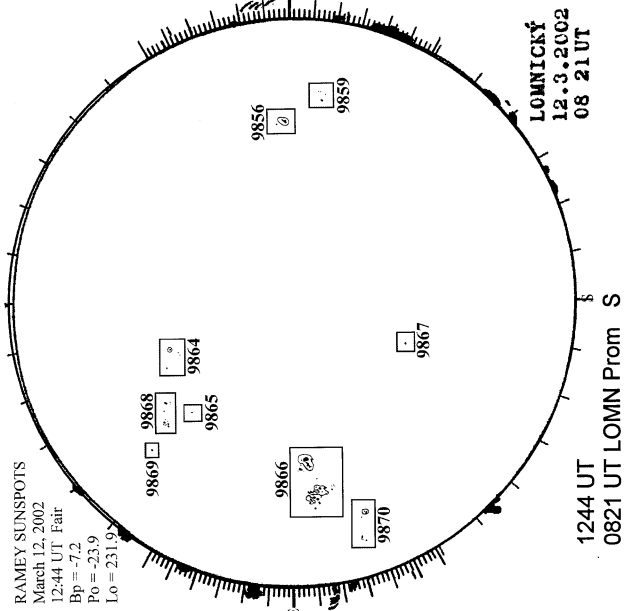
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



RAMEY SUNSPOTS

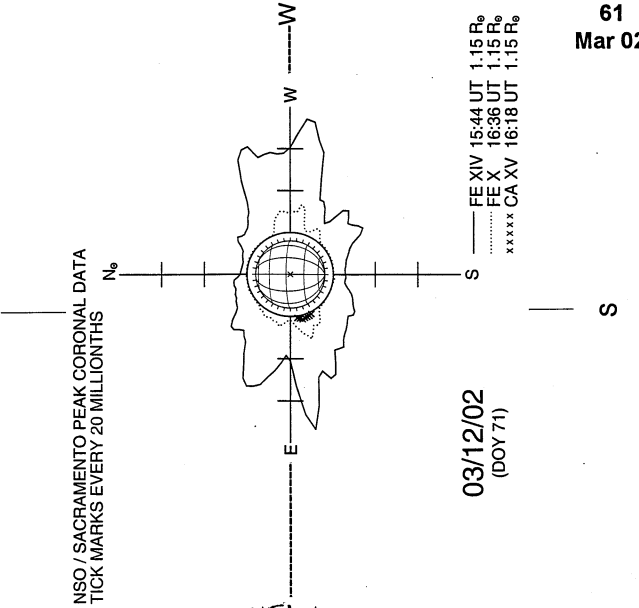
RAMEY SUNSPOTS
March 12, 2002
12:44 UT Fair
Bp = -7.2
Po = -23.9
Lo = 231.9



1244 UT
0821 UT LOMN Prom S

LOMNICKÝ
12.3.2002
08 21 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 20 MILLIONTHS

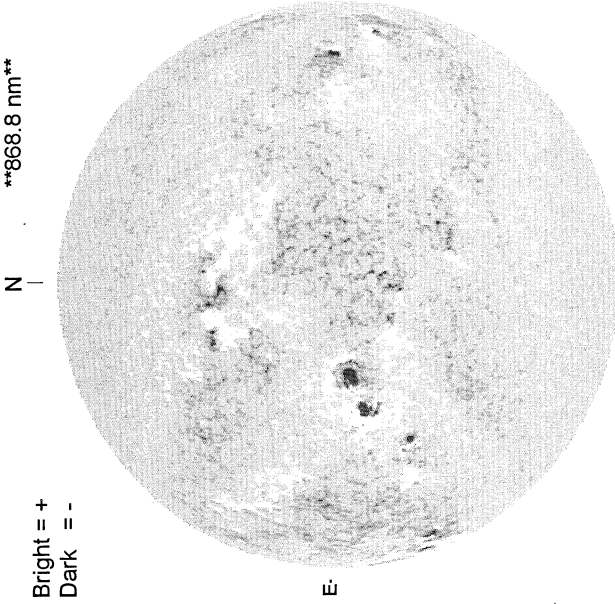
03/12/02
(DOY 71)

— FE XIV 15:44 UT 1.15 R_o
..... FE X 16:36 UT 1.15 R_o
xxxxx CA XV 16:18 UT 1.15 R_o

MARCH 13, 2002 (P = -24.07, Bo = -7.21, Lo = 224.69)

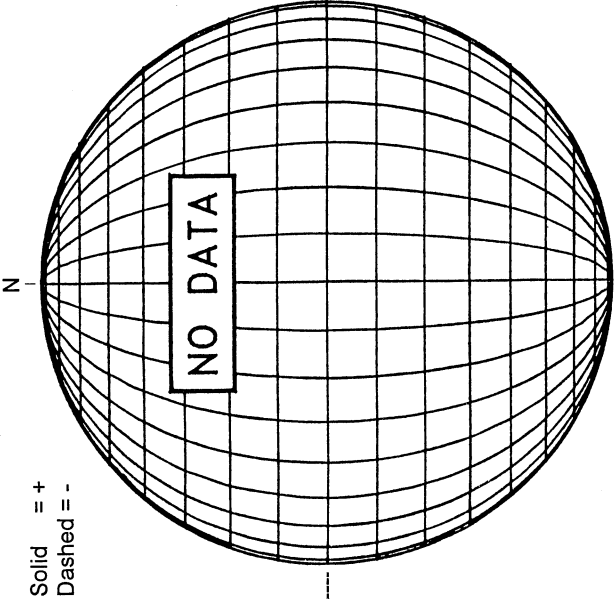
62
Mar 02

KITT PEAK MAGNETOGRAM
868.8 nm

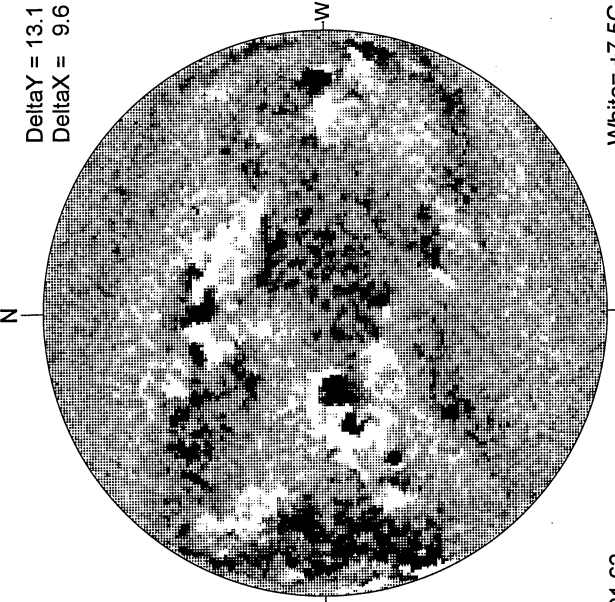


1536 UT

STANFORD MAGNETOGRAM



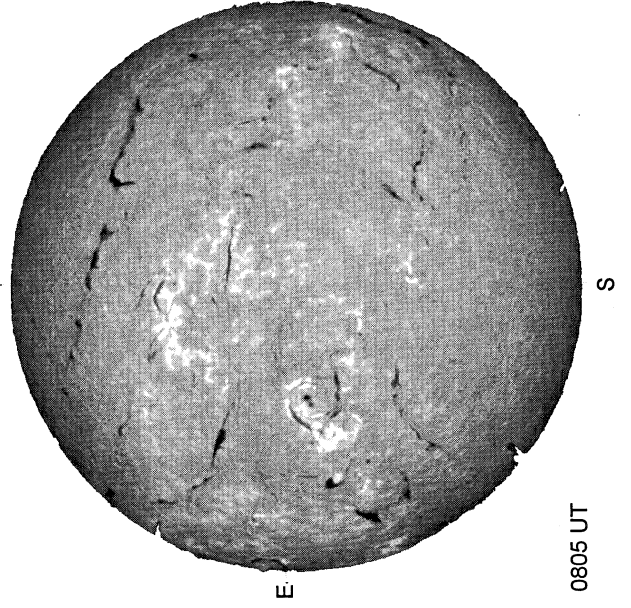
MT. WILSON MAGNETOGRAM



21.62 -
22.57 UT

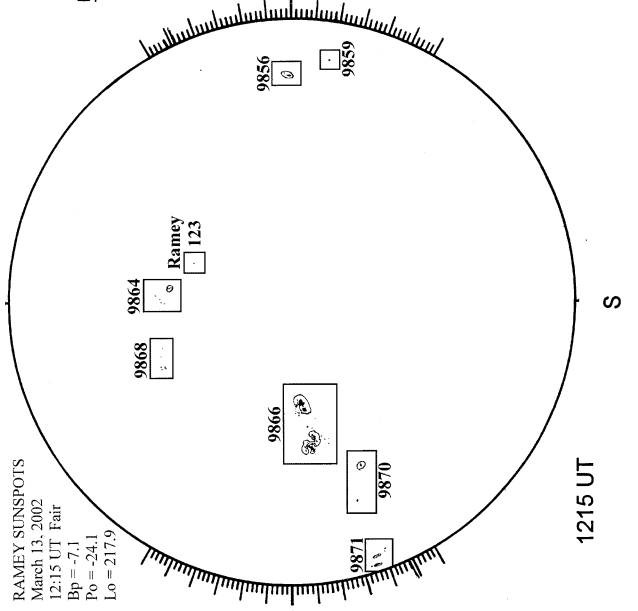
DeltaY = 13.1
DeltaX = 9.6

MEUDON H-ALPHA



0805 UT

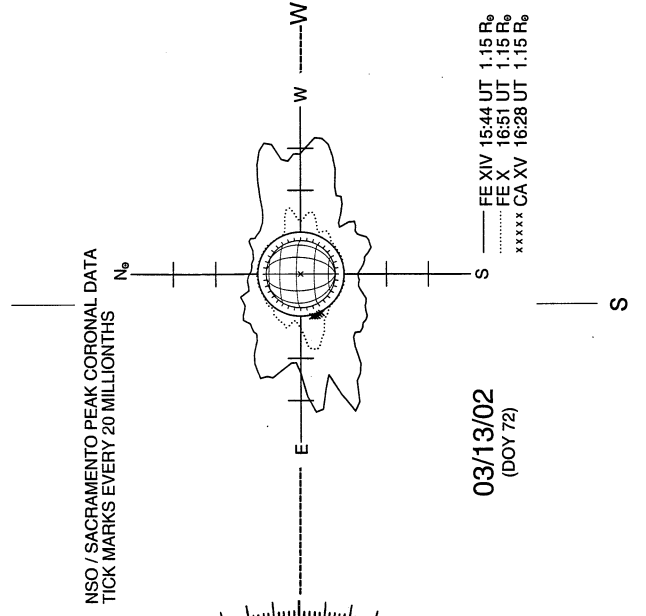
RAMEY SUNSPOT



RAMEY SUNSPOTS
March 13, 2002
12:15 UT Fair
Bp = -7.1
Po = -24.1
Lo = 217.9

1215 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

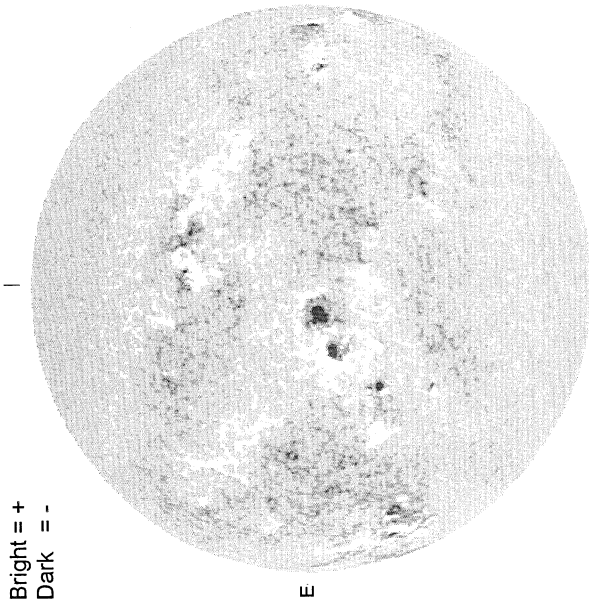


03/13/02
(DOY 72)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 20 MILLIONTHS

MARCH 14, 2002 (P = -24.24, Bo = -7.19, Lo = 211.51)

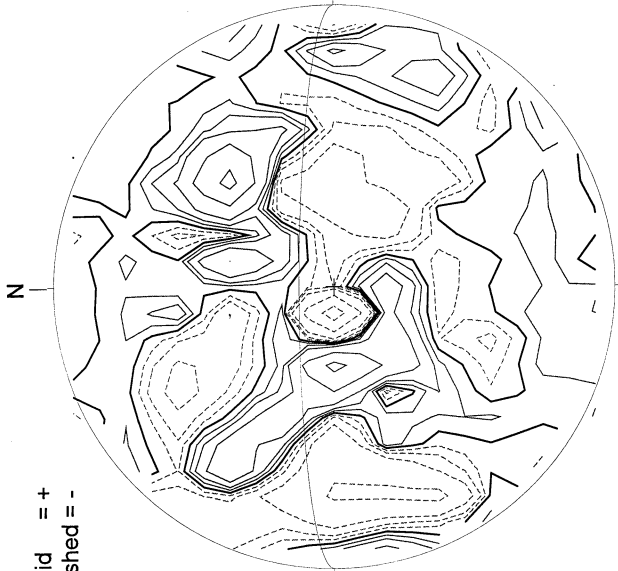
KITT PEAK MAGNETOGRAM
868.8 nm



Bright = +
Dark = -

1708 UT

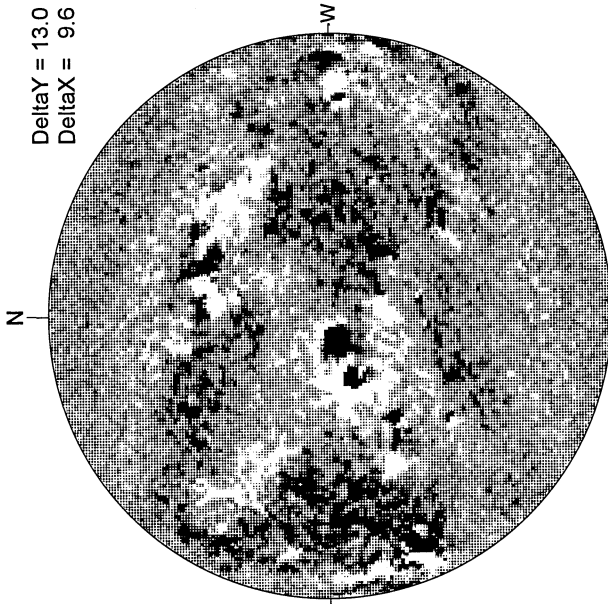
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

1803 UT

MT. WILSON MAGNETOGRAM

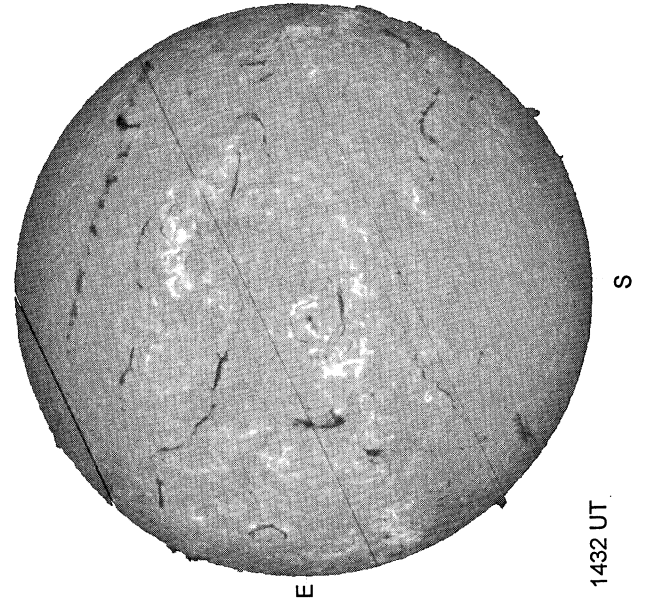


Delta Y = 13.0
Delta X = 9.6

White = +7.5G
Black = -7.5G

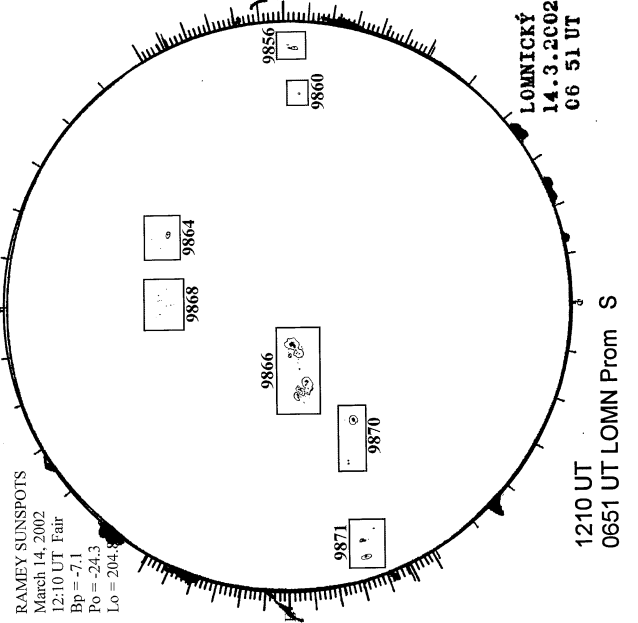
17.23 -
18.19 UT

MEUDON H-ALPHA

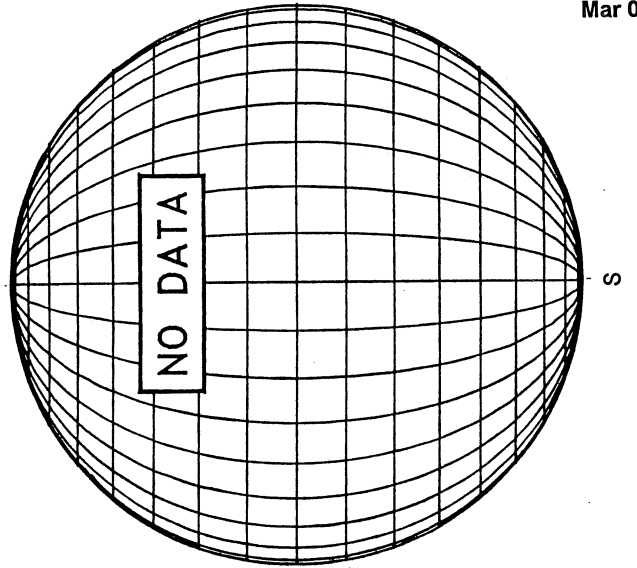


1432 UT

RAMEY SUNSPOT



LOMNICKY PEAK CORONA (1.04 Radii)----

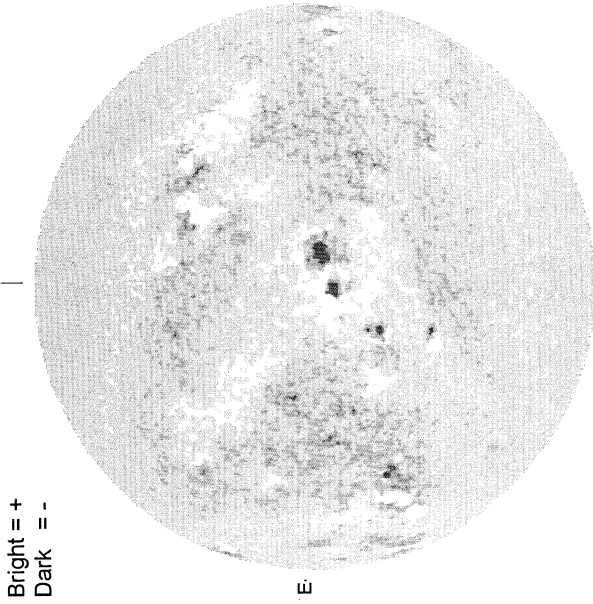


MARCH 15, 2002 (P = -24.40, Bo = -7.17, Lo = 198.33)

64
Mar 02

KITT PEAK MAGNETOGRAM

868.8 nm

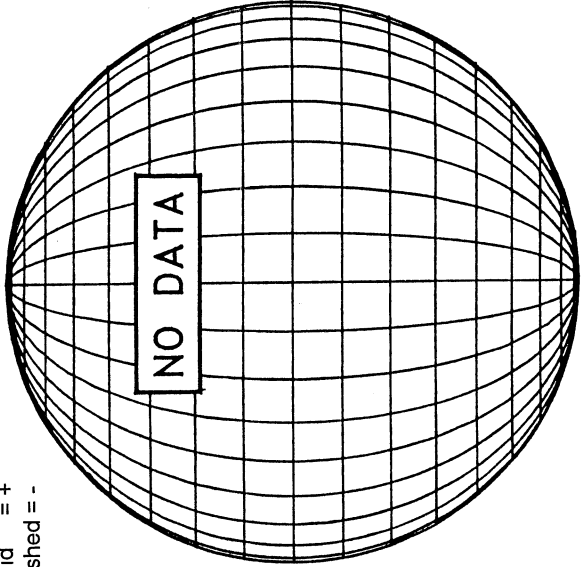


Bright = +
Dark = -

1544 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

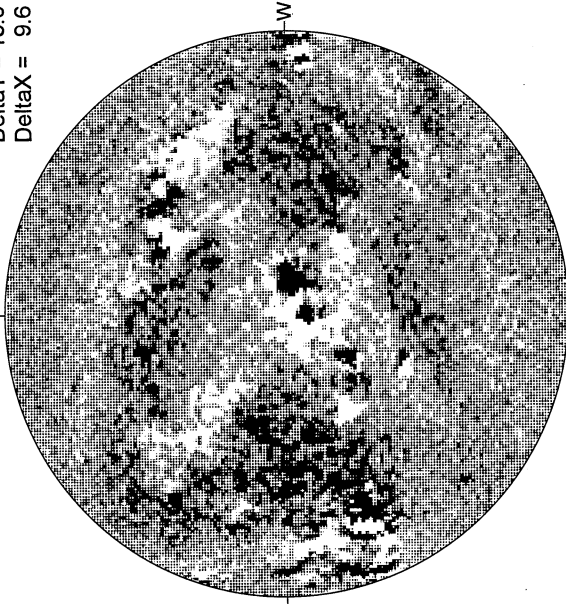


NO DATA

16.99 -
17.95 UT

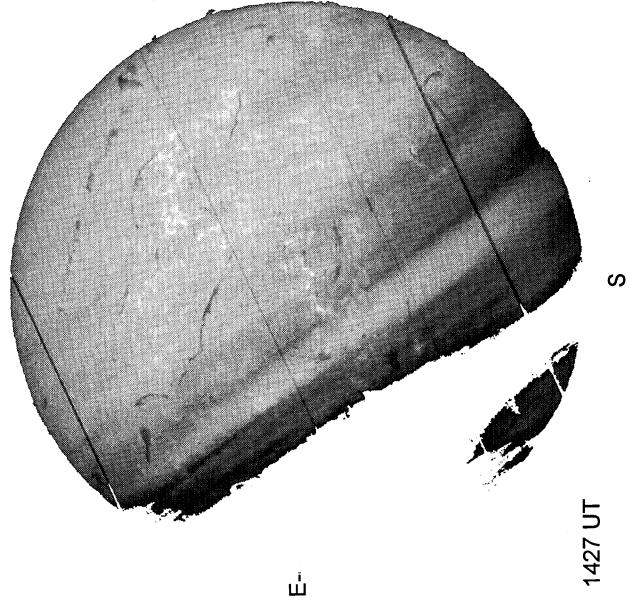
MT. WILSON MAGNETOGRAM

Delta Y = 13.0
Delta X = 9.6



White = +7.5G
Black = -7.5G

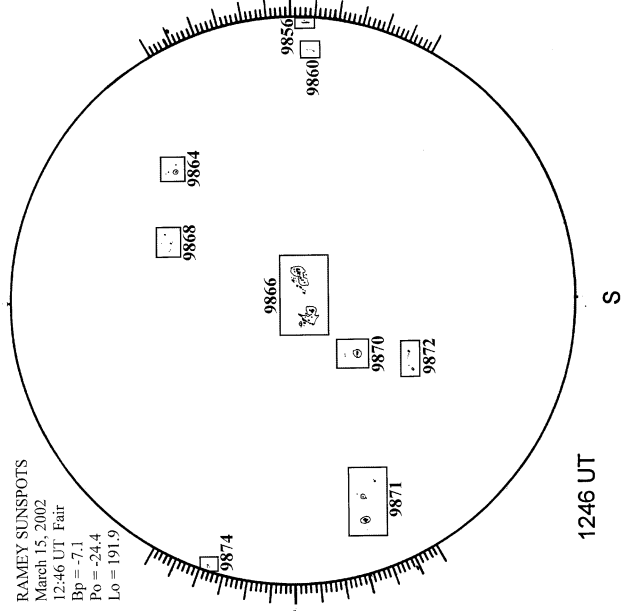
MEUDON H-ALPHA



1427 UT

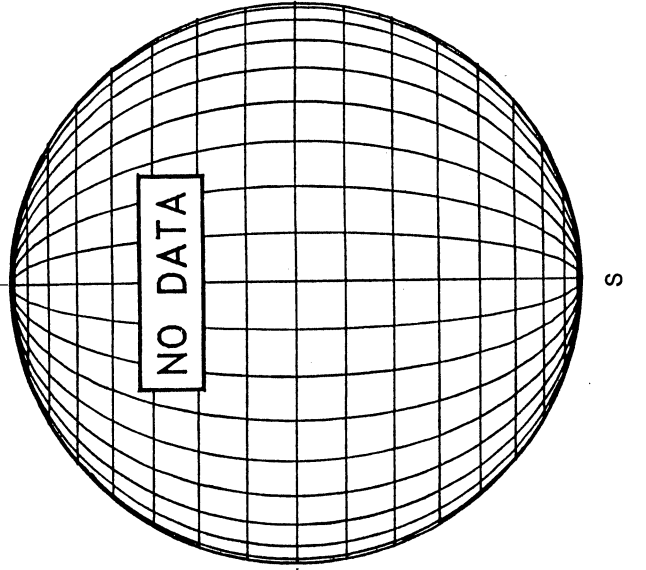
RAMEY SUNSPOT

RAMEY SUNSPOTS
March 15, 2002
12:46 UT Fair
Bp = -7.1
Po = -24.4
Lo = 191.9



1246 UT

LOMNICKY PEAK CORONA (1.04 Radii)----



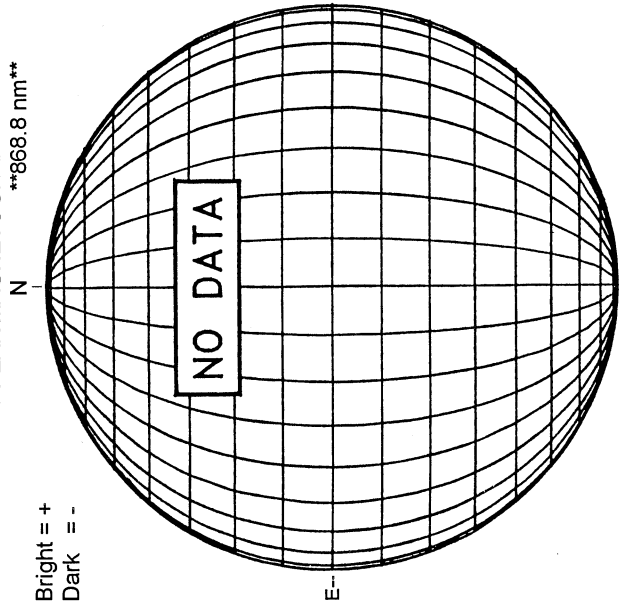
NO DATA

MARCH 16, 2002 (P= -24.56, Bo = -7.15, Lo = 185.15)

KITT PEAK MAGNETOGRAM

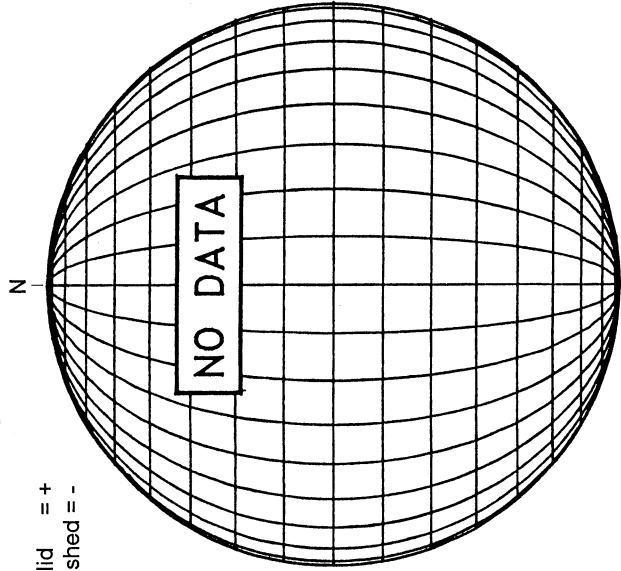
868.8 nm

Bright = +
Dark = -



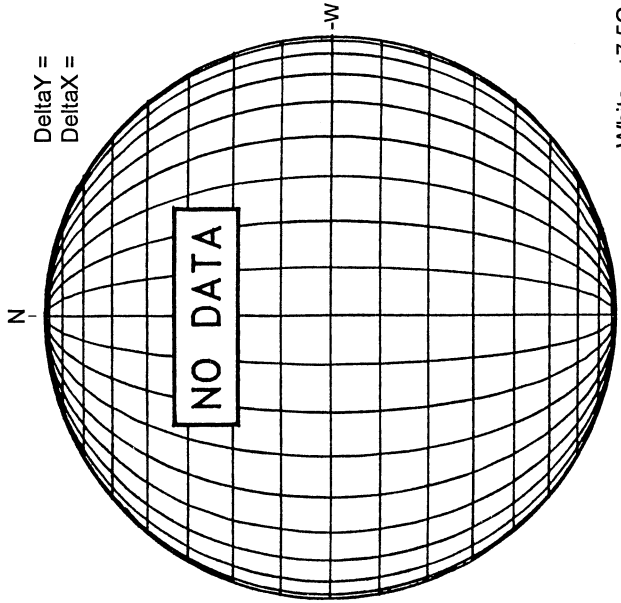
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



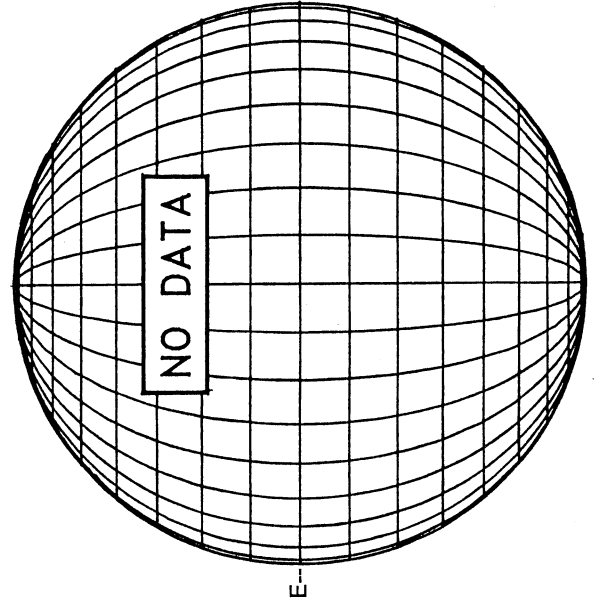
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



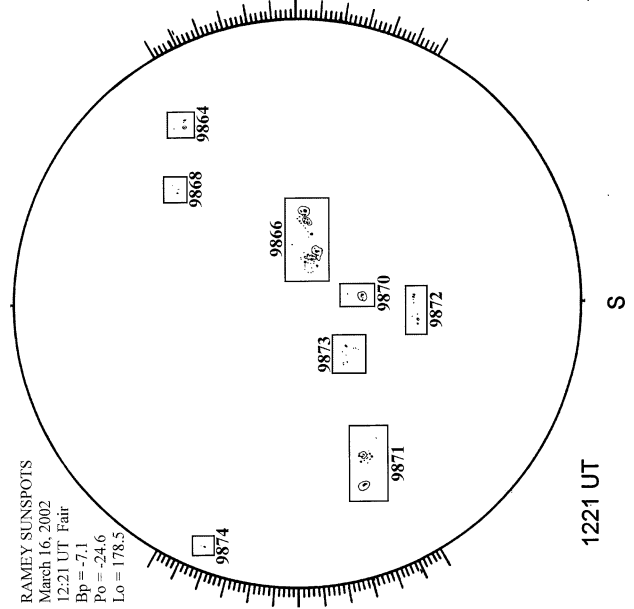
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

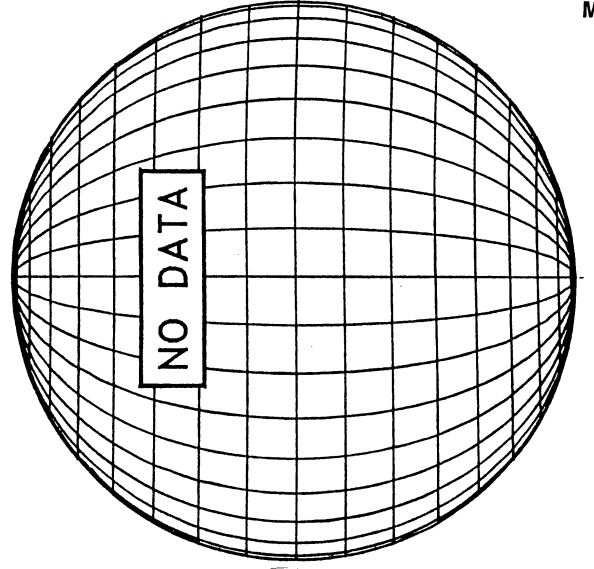


RAMEY SUNSPOT

RAMEY SUNSPOTS
March 16, 2002
12:21 UT Fair
Bp = -7.1
Po = -24.6
Lo = 178.5



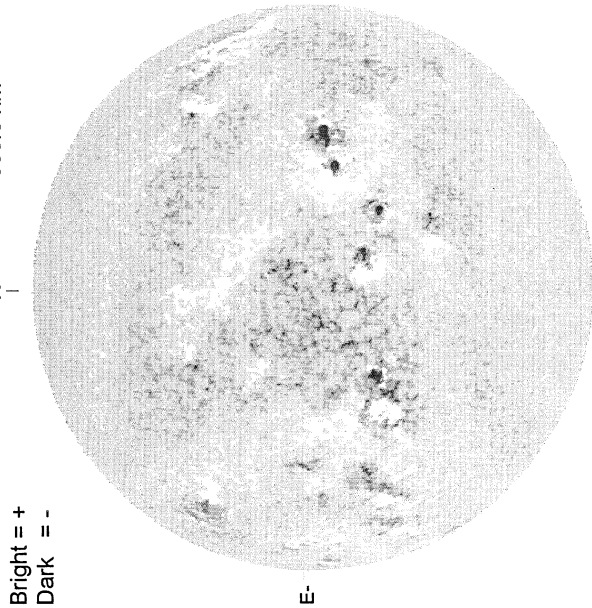
LOMNICKY PEAK CORONA (1.04 Radii)----



MARCH 17, 2002 (P= -24.71, Bo = -7.13, Lo = 171.97)

66
Mar 02

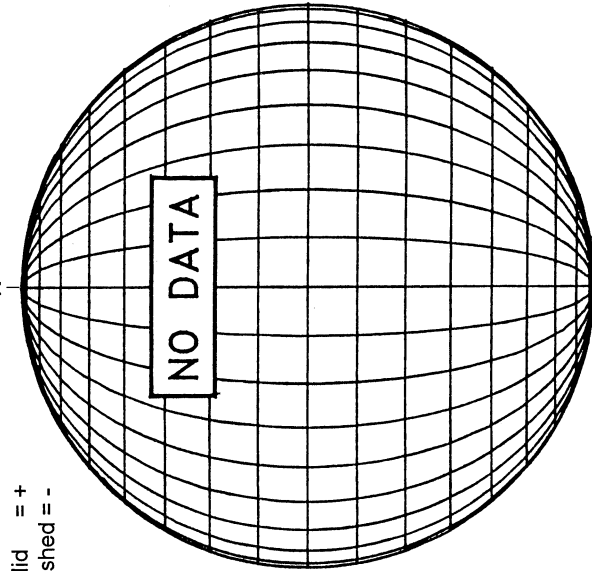
KITT PEAK MAGNETOGRAM
868.8 nm



Bright = +
Dark = -

1552 UT

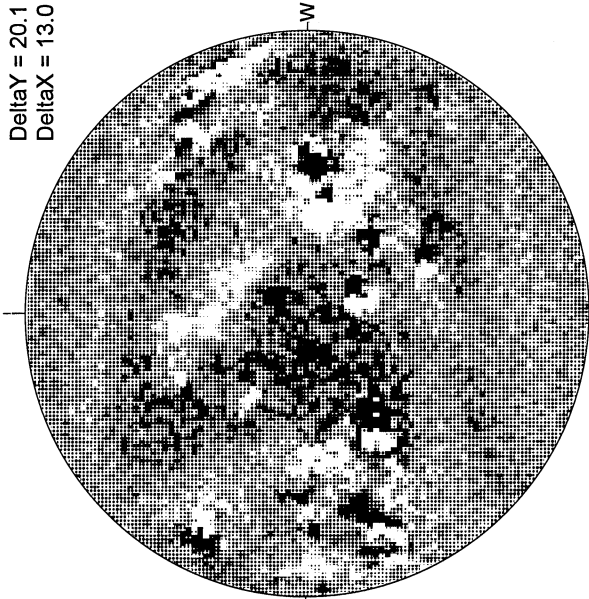
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

15.75 UT
16.16 UT

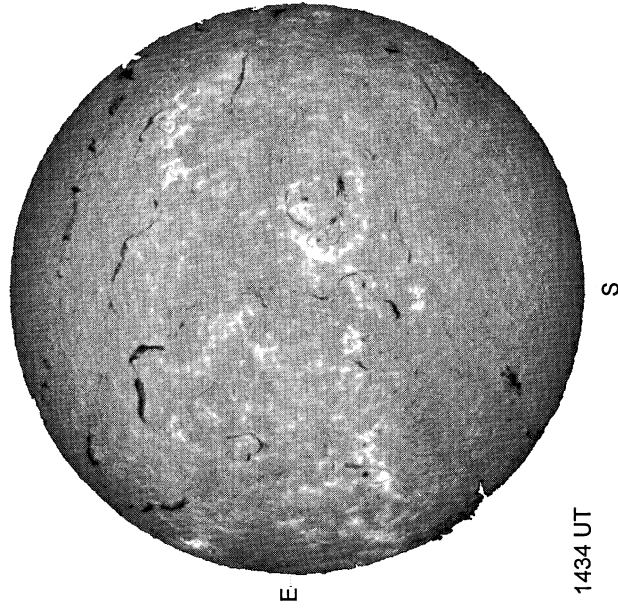
MT. WILSON MAGNETOGRAM



DeltaY = 20.1
DeltaX = 13.0

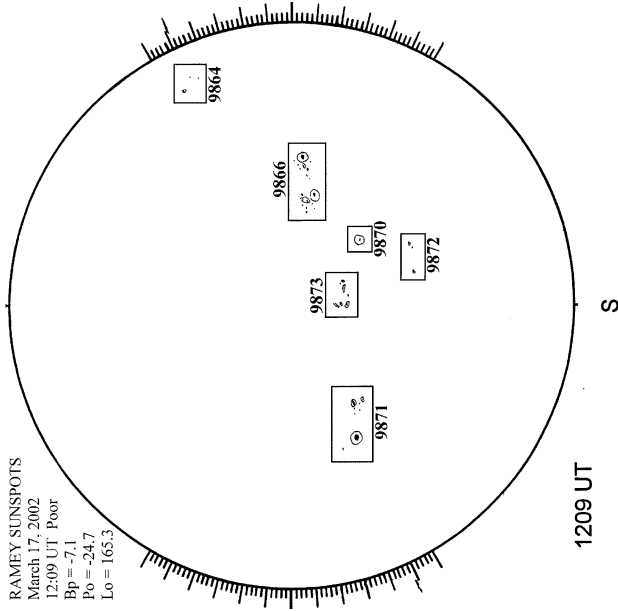
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



1434 UT

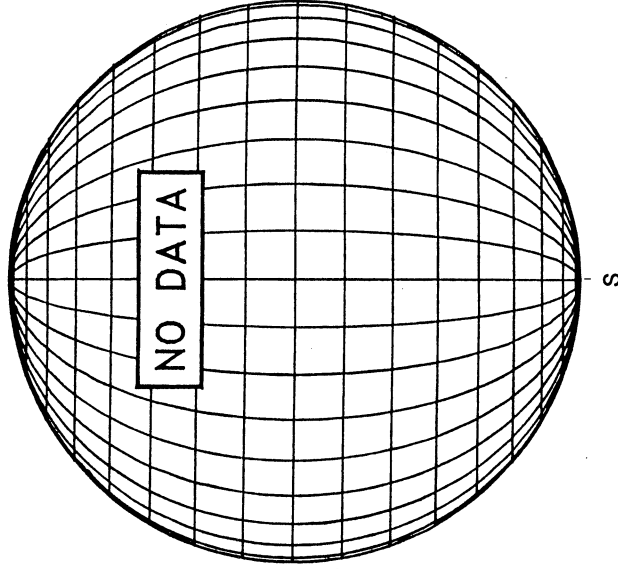
RAMEY SUNSPOT



RAMEY SUNSPOTS
March 17, 2002
12:09 UT Poor
Bp = -7.1
Po = -24.7
Lo = 165.3

1209 UT

LOMNICKY PEAK CORONA (1.04 Radii)----

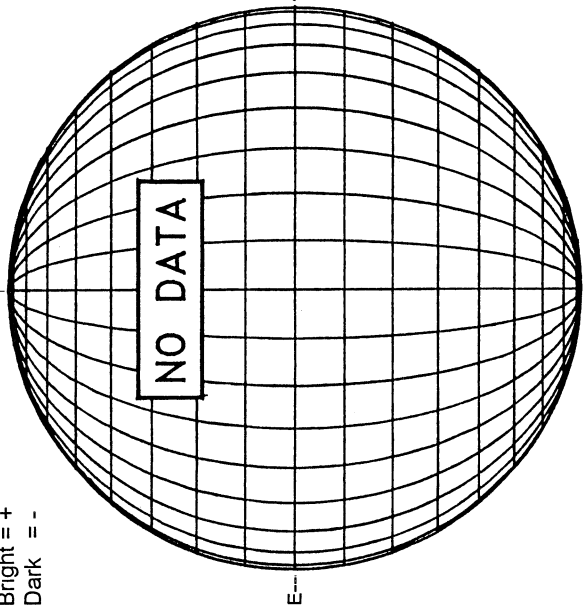


MARCH 18, 2002 (P = -24.86, Bo = -7.11, Lo = 158.79)

KITT PEAK MAGNETOGRAM

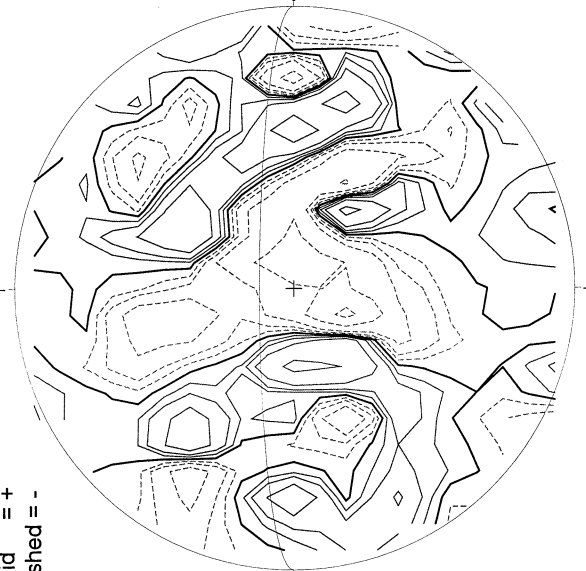
868.8 nm

Bright = +
Dark = -



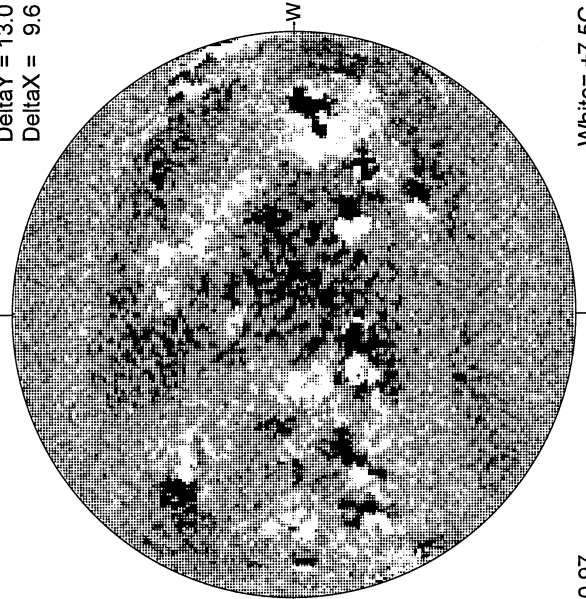
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

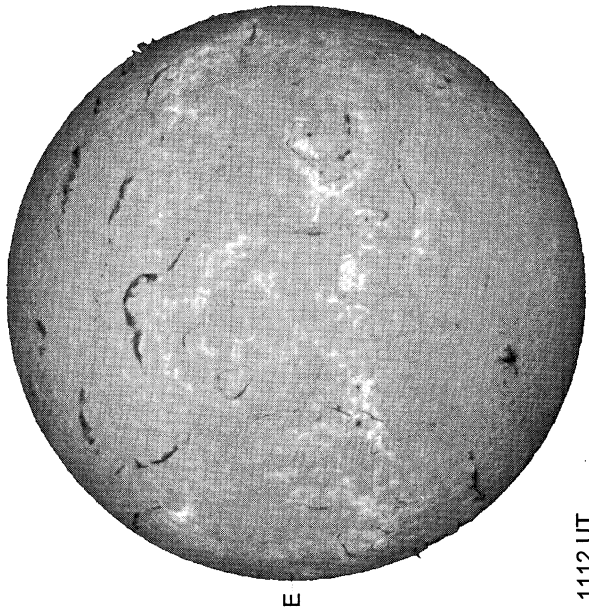
DeltaY = 13.0
DeltaX = 9.6



20.97 -
21.93 UT

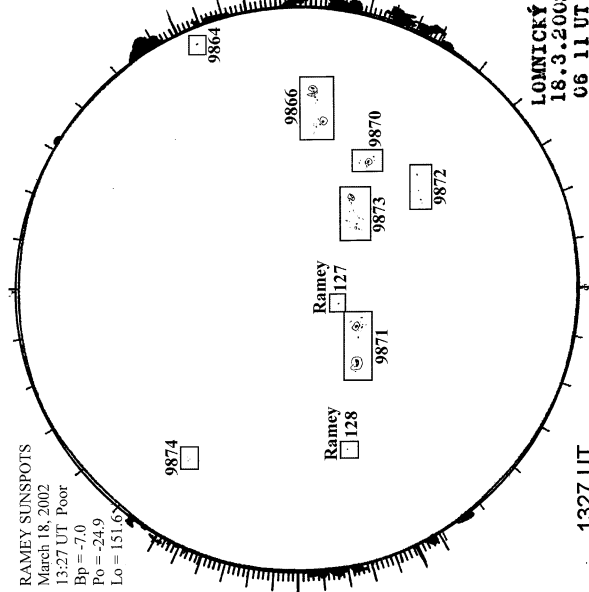
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



1112 UT

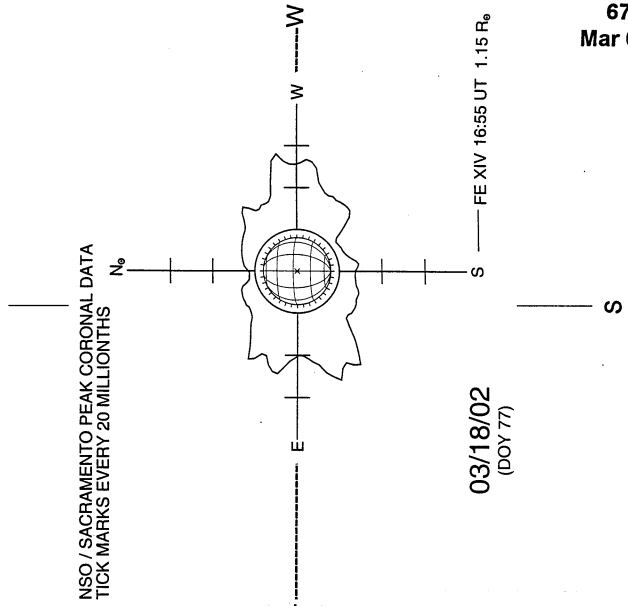
RAMEY SUNSPOT



1327 UT
0611 UT LOMN Prom S

RAMEY SUNSPOTS
March 18, 2002
13:27 UT, Poor
Bp = -7.0
Po = -24.9
Lo = 151.6

SACRAMENTO PEAK CORONA (1.15 Radii)----



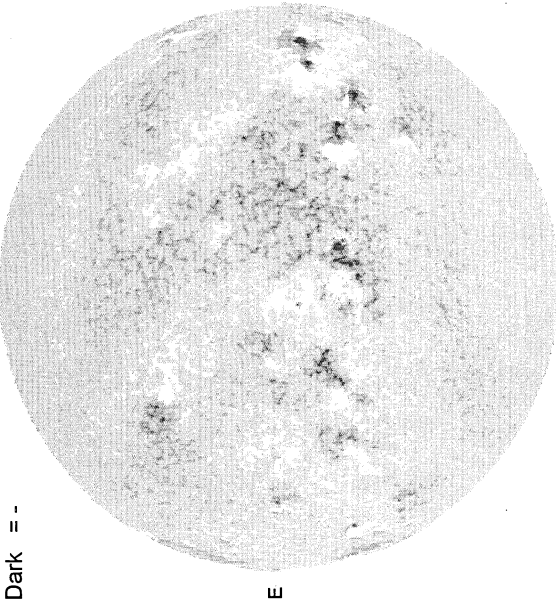
67
Mar 02

MARCH 19, 2002 (P= -25.00, Bo = -7.08, Lo = 145.61)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



1811 UT

STANFORD MAGNETOGRAM

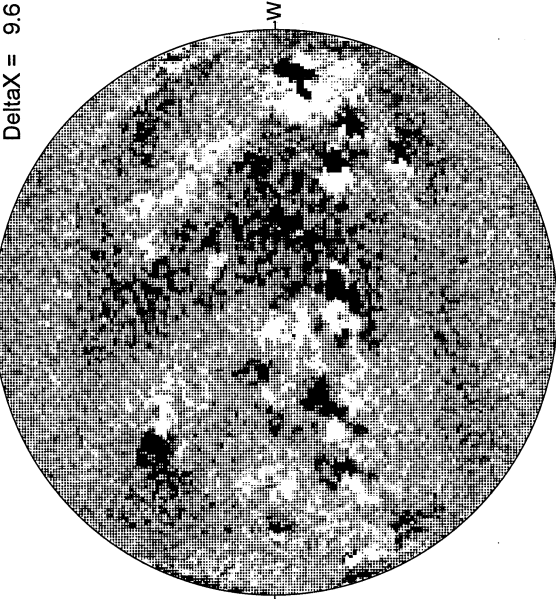
Solid = +
Dashed = -



2157 UT

MT. WILSON MAGNETOGRAM

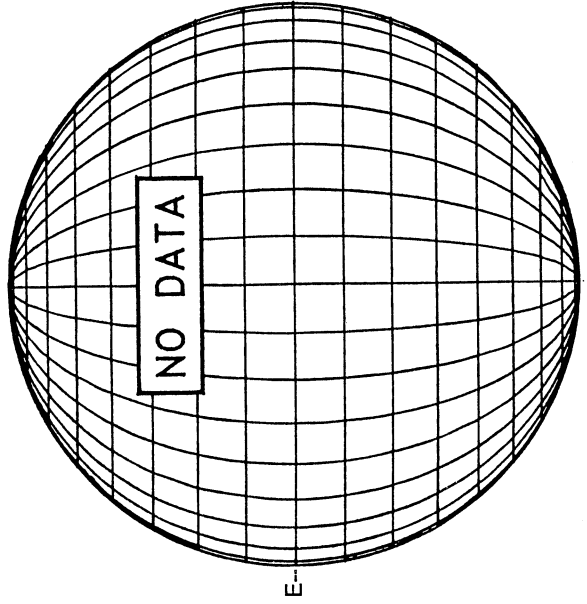
DeltaY = 13.0
DeltaX = 9.6



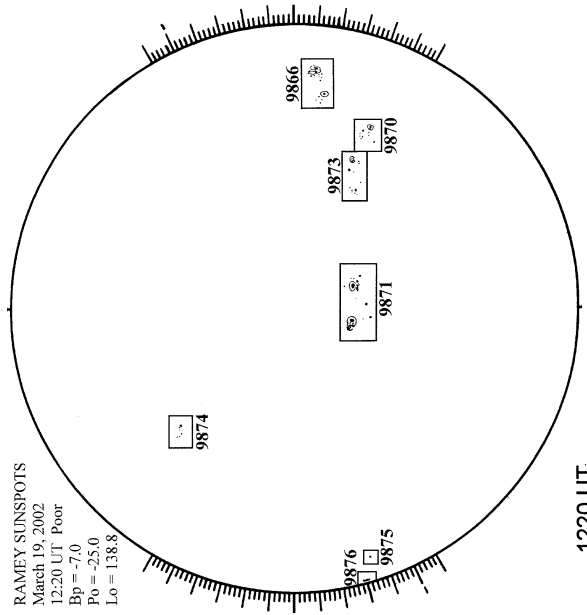
16.82 -
17.78 UT

White = +7.5G
Black = -7.5G

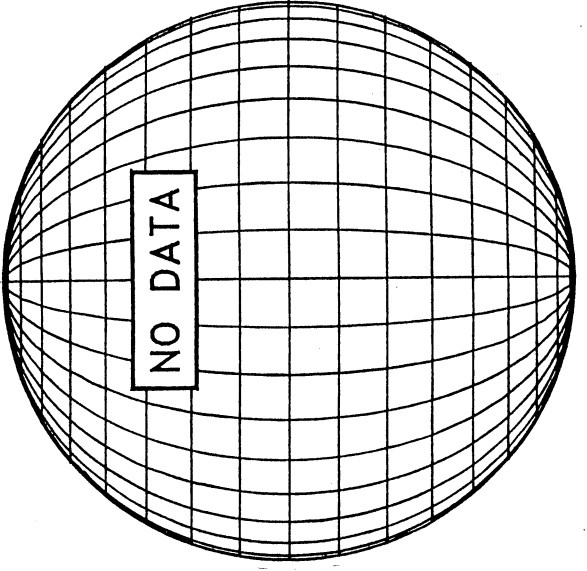
MEUDON H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)----



RAMEY SUNSPOTS
March 19, 2002
12:20 UT Poor
Bp = -7.0
Po = -25.0
Lo = 138.8

E

S

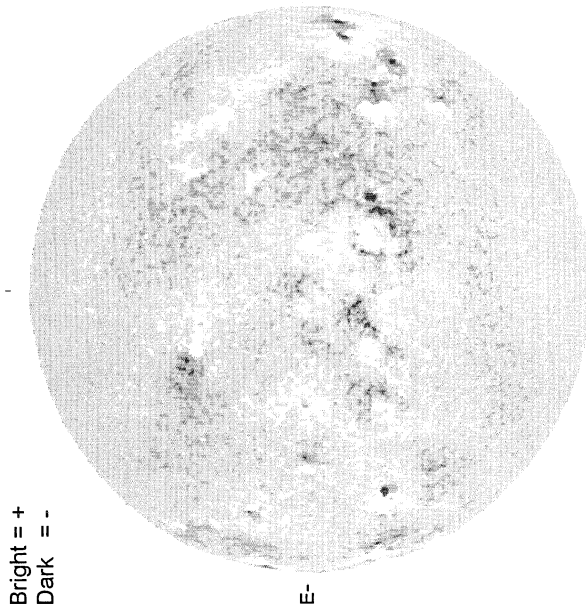
S

S

S

MARCH 20, 2002 (P = -25.13, Bo = -7.05, Lo = 132.42)

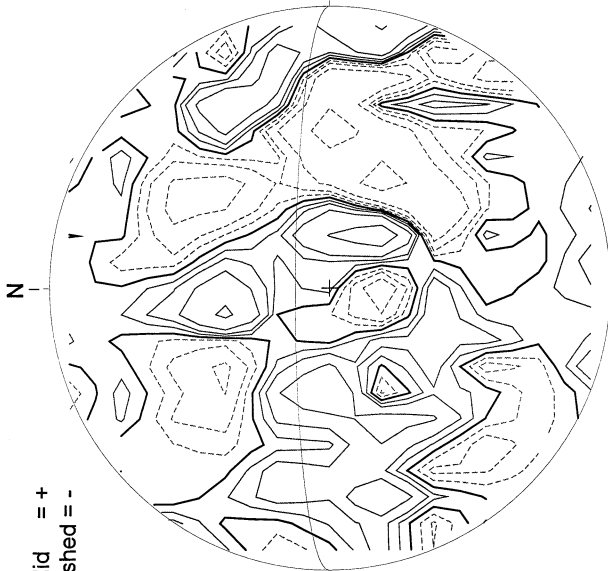
KITT PEAK MAGNETOGRAM
868.8 nm



Bright = +
Dark = -

1542 UT

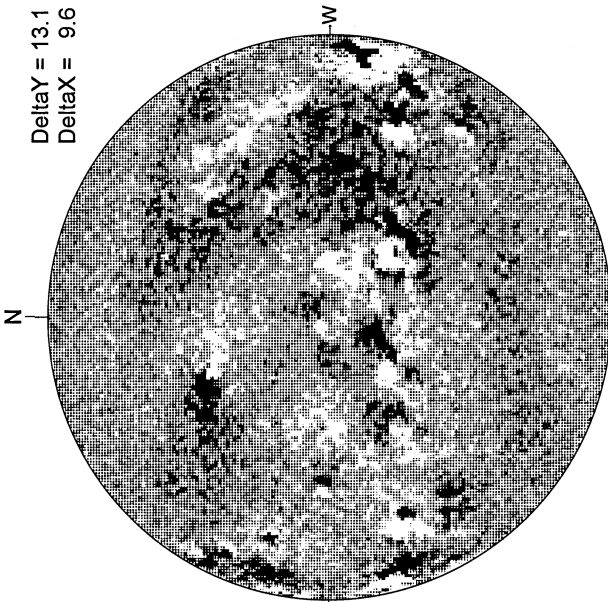
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

2112 UT

MT. WILSON MAGNETOGRAM

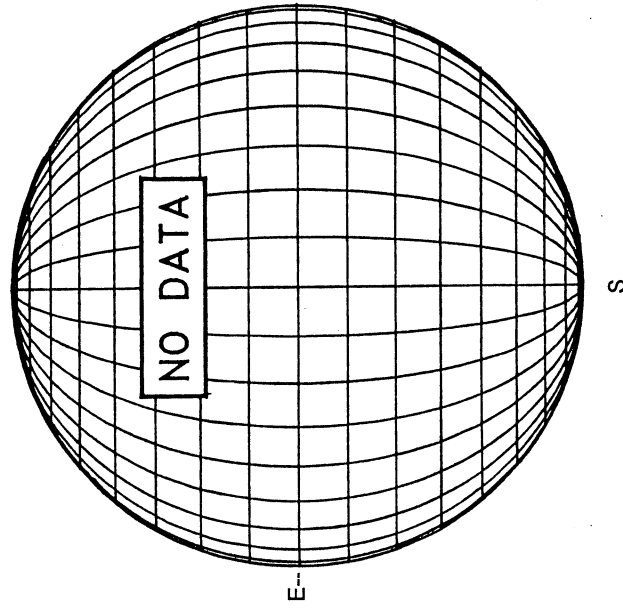


DeltaY = 13.1
DeltaX = 9.6

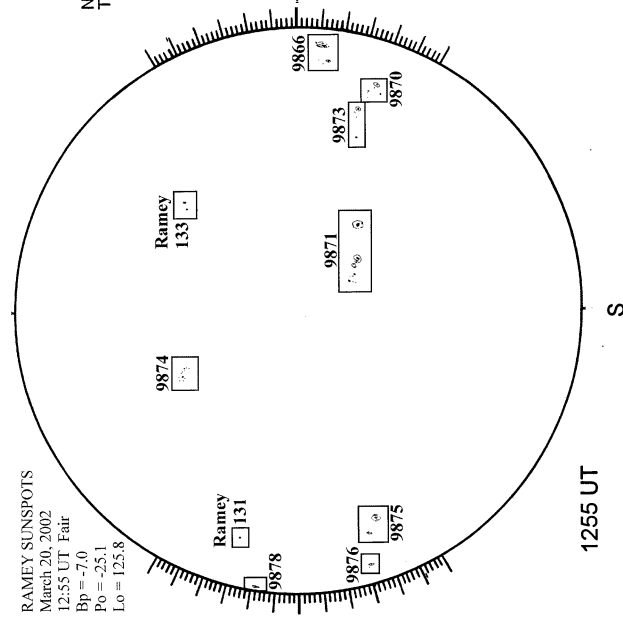
18.79 -
19.74 UT

White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



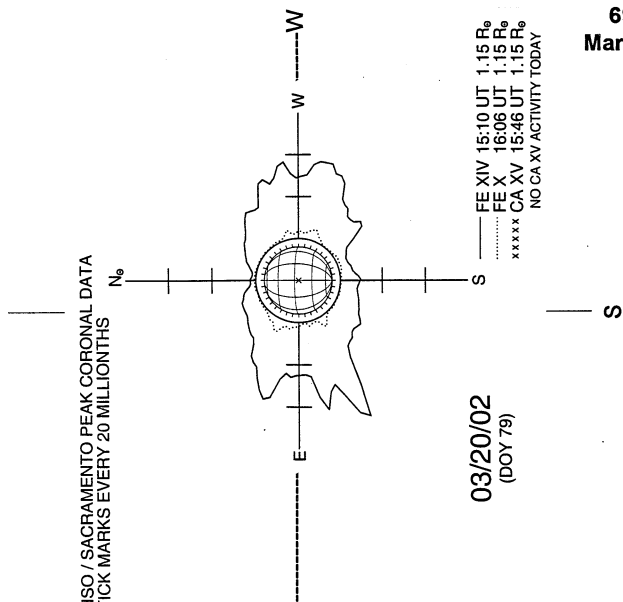
RAMEY SUNSPOTS



RAMEY SUNSPOTS
March 20, 2002
12:55 UT Fair
Bp = -7.0
Po = -25.1
Lo = 125.8

1255 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



03/20/02
(DOY 79)

S

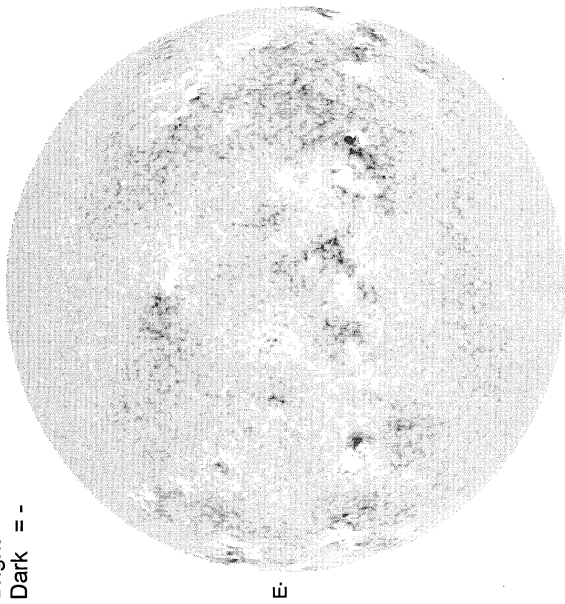
S

70
Mar 02

KITT PEAK MAGNETOGRAM

868.8 nm

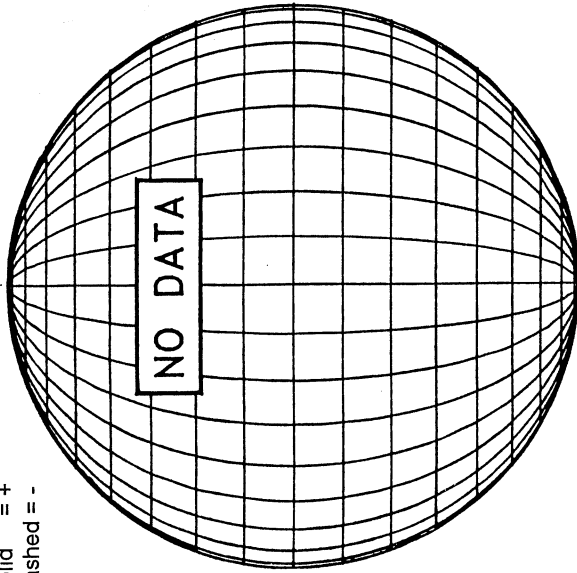
Bright = +
Dark = -



1548 UT

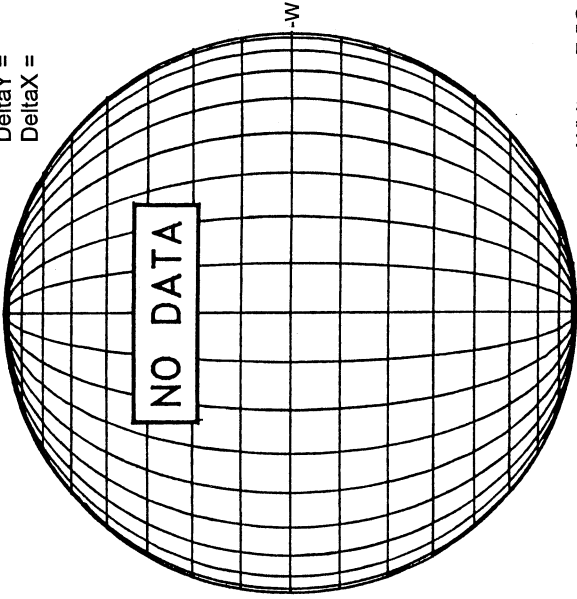
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

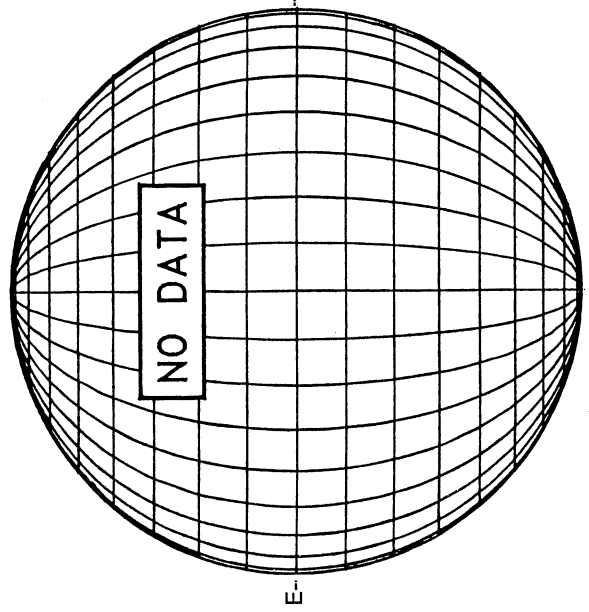
Delta Y =
Delta X =



White = +7.5G
Black = -7.5G

MARCH 21, 2002 (P = -25.25, Bo = -7.02, Lo = 119.24)

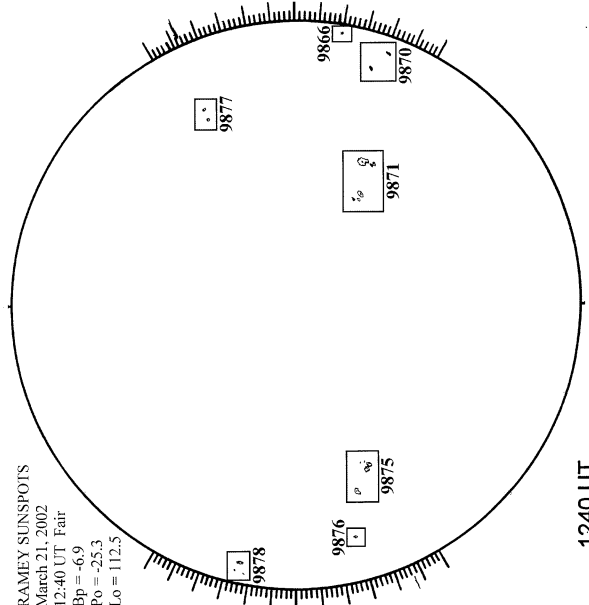
MEUDON H-ALPHA



S

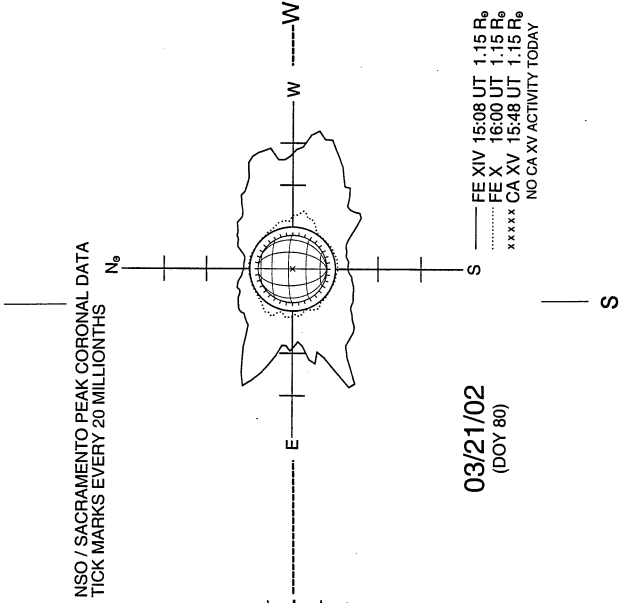
RAMEY SUNSPOT

RAMEY SUNSPOTS
March 21, 2002
12:40 UT Fair
Bp = -6.9
Po = -25.3
Lo = 112.5



1240 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

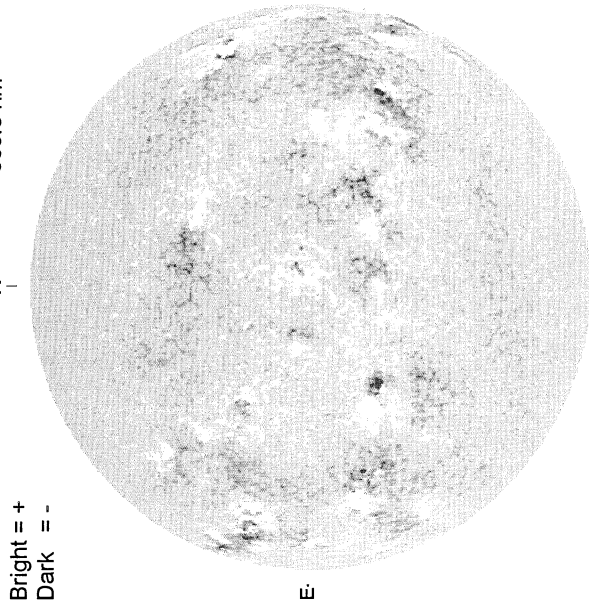


03/21/02
(DOY 80)

FE XIV 15:08 UT 1.15 R_o
FE X 16:00 UT 1.15 R_o
CA XV 15:48 UT 1.15 R_o
NO CA XV ACTIVITY TODAY

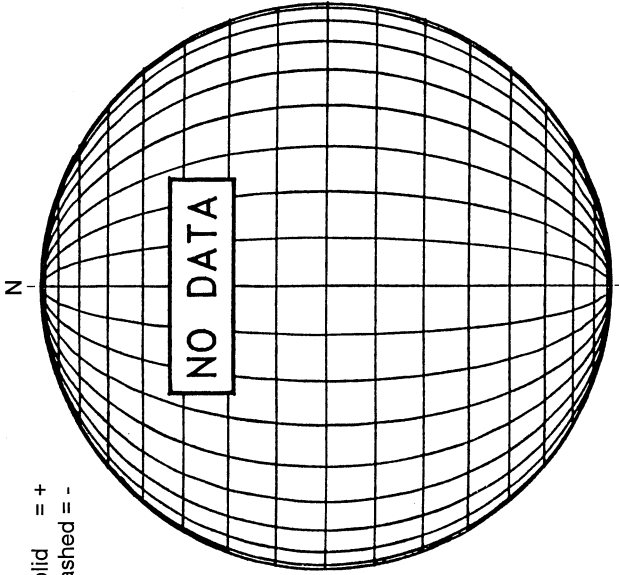
MARCH 22, 2002 (P = -25.37, Bo = -6.99, Lo = 106.05)

KITT PEAK MAGNETOGRAM
868.8 nm

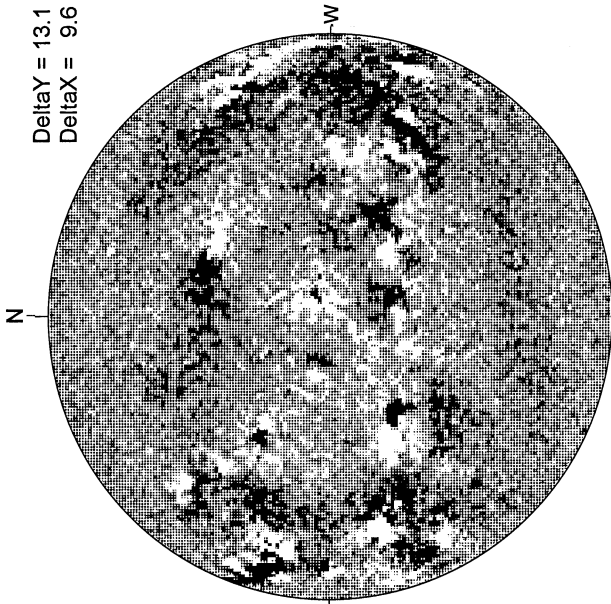


Solid = +
Dashed = -

STANFORD MAGNETOGRAM



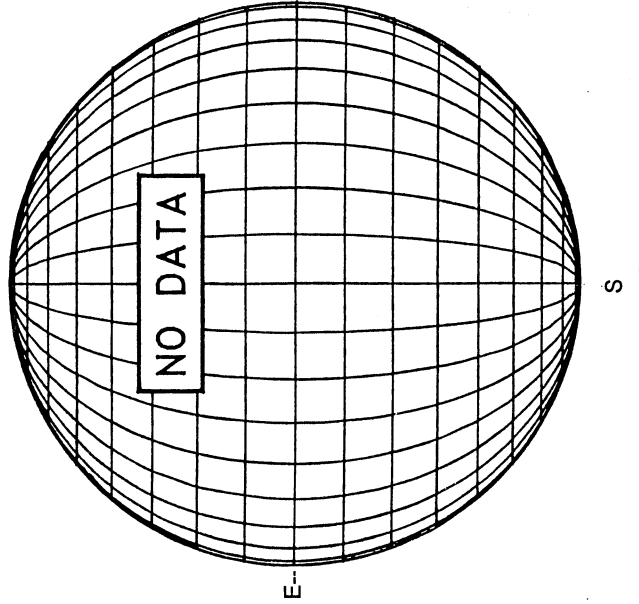
MT. WILSON MAGNETOGRAM



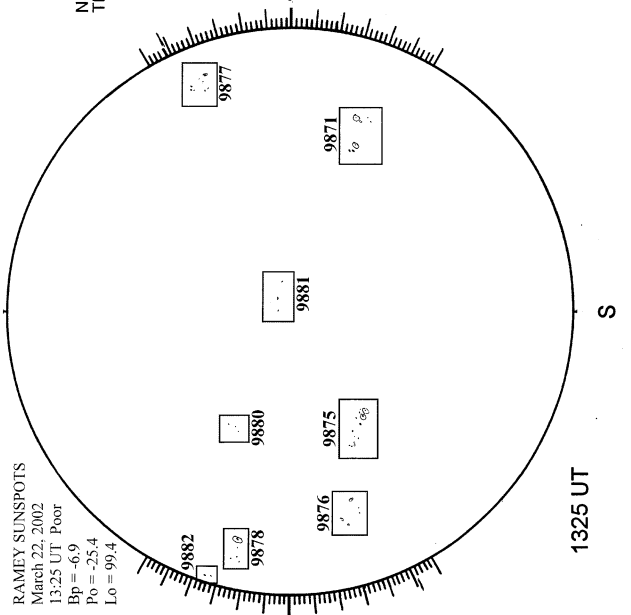
17.16 -
18.12 UT

1552 UT

MEUDON H-ALPHA



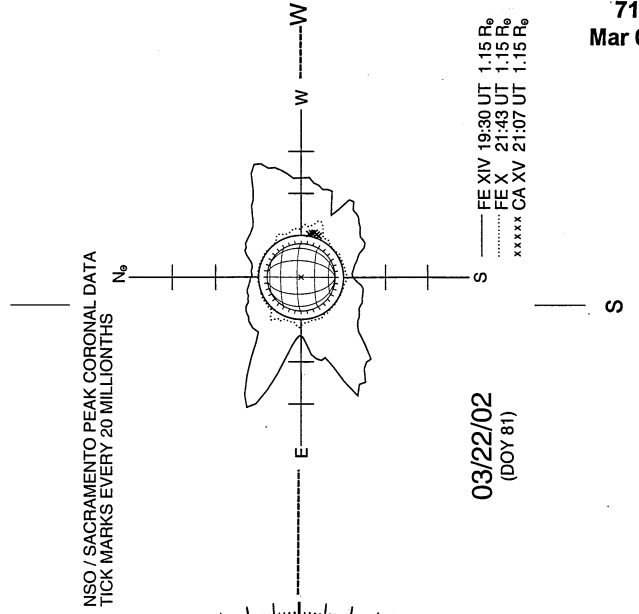
RAMEY SUNSPOT



RAMEY SUNSPOTS
March 22, 2002
13:25 UT Poor
Bp = -6.9
P0 = 25.4
Lo = 99.4

1325 UT

SACRAMENTO PEAK CORONA (1.15 Radii)---



NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 20 MILLIONTHS

03/22/02
(DOY 81)

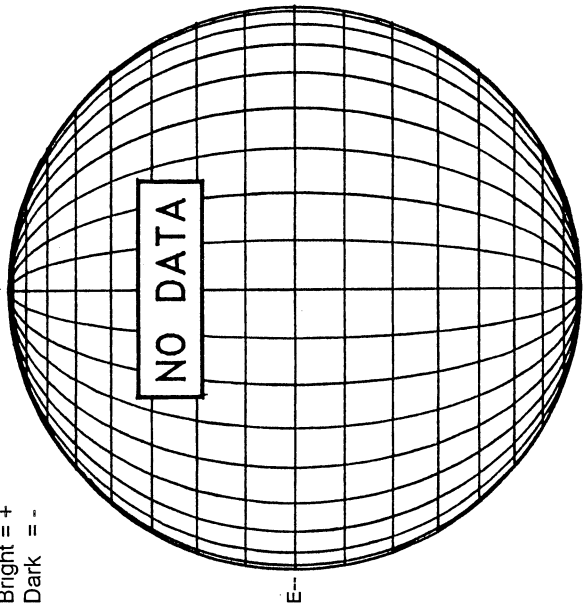
--- FE XIV 19:30 UT 1.15 R₀
..... FE X 21:48 UT 1.15 R₀
xxxxx CA XV 21:07 UT 1.15 R₀

MARCH 23, 2002 (P = -25.48, Bo = -6.96, Lo = 92.87)

KITT PEAK MAGNETOGRAM

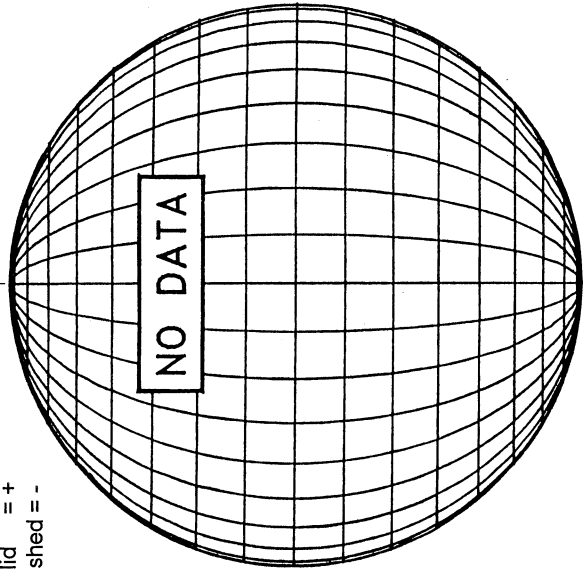
868.8 nm

Bright = +
Dark = -



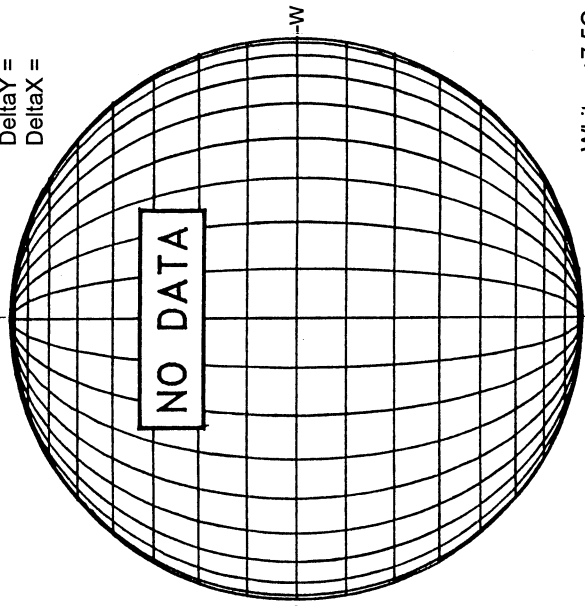
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



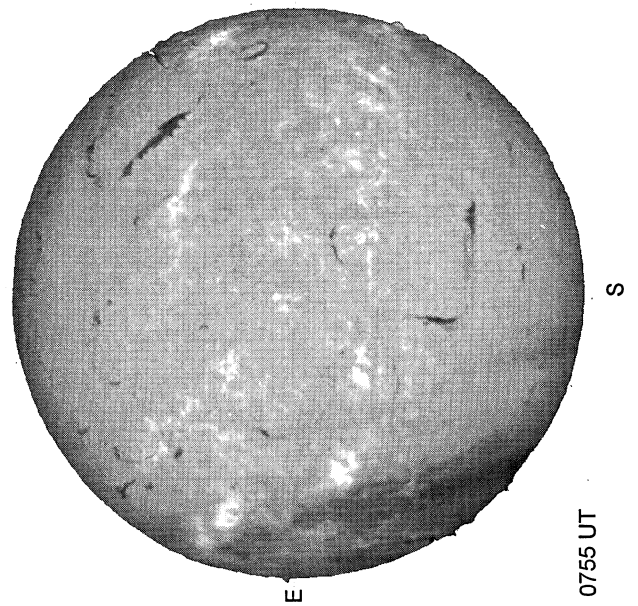
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



White = +7.5G
Black = -7.5G

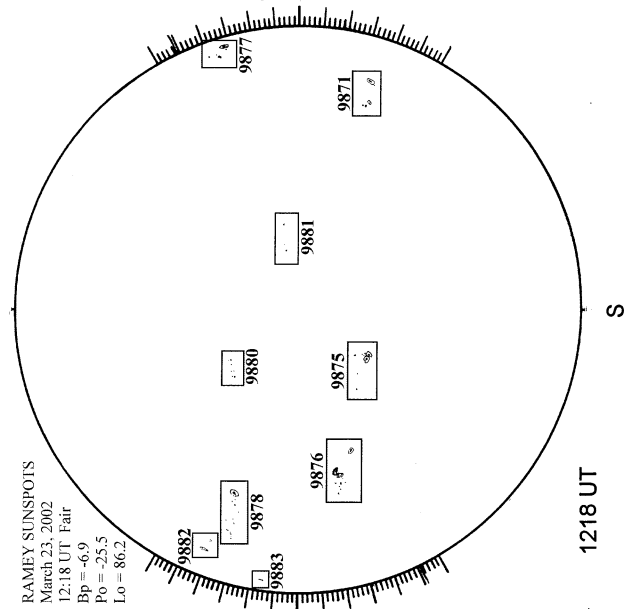
MEUDON H-ALPHA



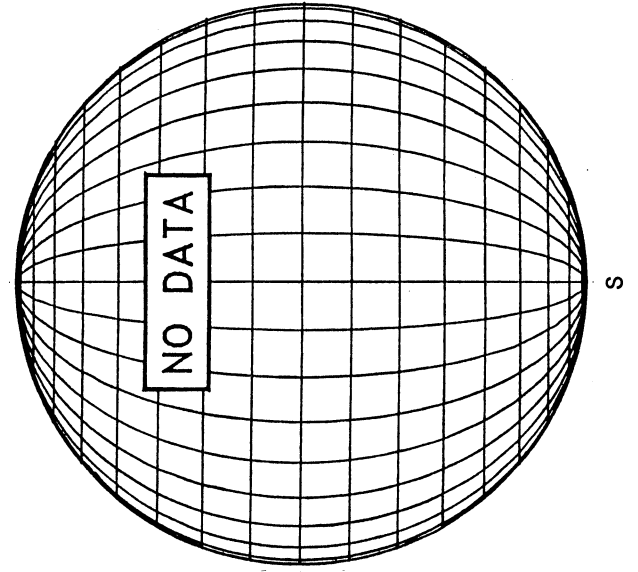
0755 UT

RAMEY SUNSPOT

RAMEY SUNSPOTS
March 23, 2002
12:18 UT Fair
Bp = 6.9
Po = 25.5
Lo = 86.2



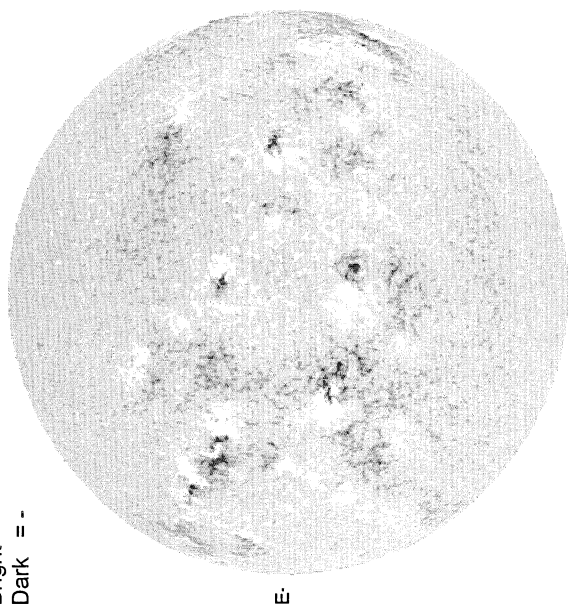
SACRAMENTO PEAK CORONA (1.15 Radii)----



MARCH 24, 2002 (P= -25.59, Bo = -6.92, Lo = 79.68)

KITT PEAK MAGNETOGRAM
868.8 nm

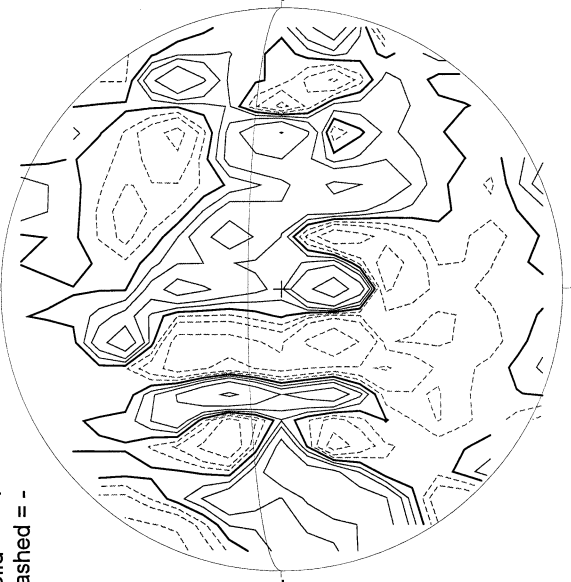
Bright = +
Dark = -



1545 UT

STANFORD MAGNETOGRAM

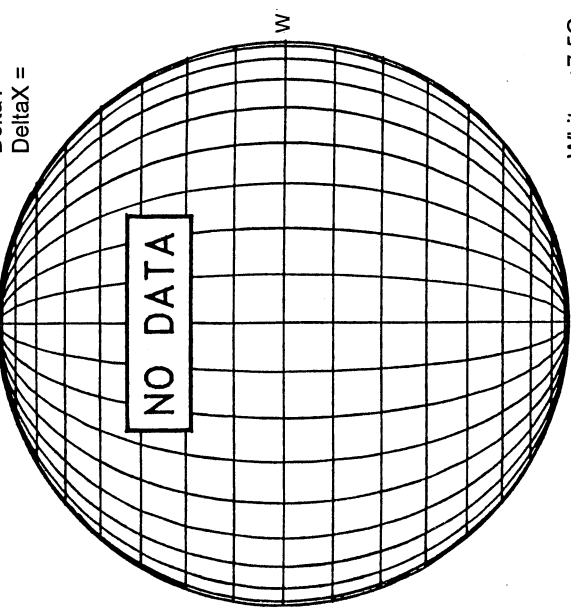
Solid = +
Dashed = -



2332 UT

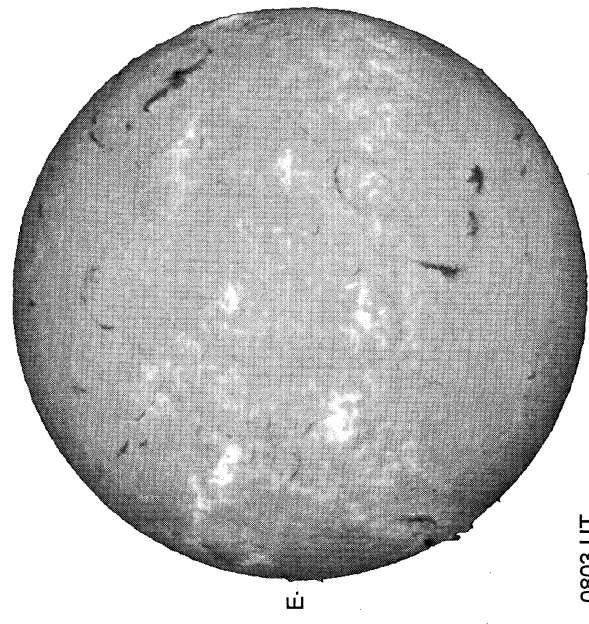
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



White = +7.5G
Black = -7.5G

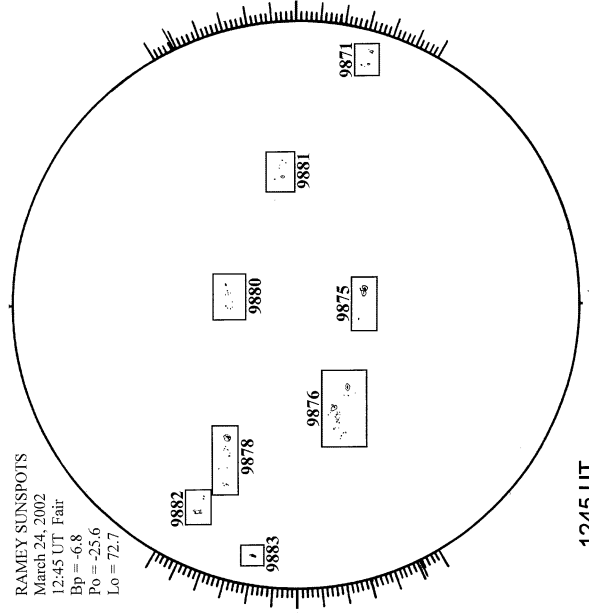
MEUDON H-ALPHA



0803 UT

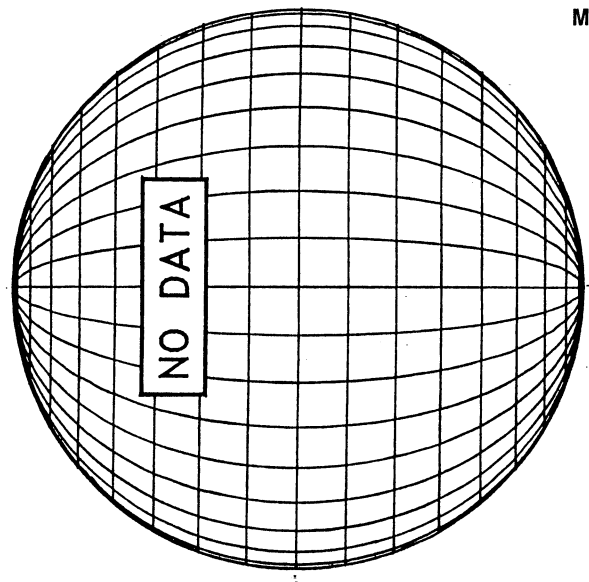
RAMEY SUNSPOTS

RAMEY SUNSPOTS
March 24, 2002
12:45 UT Fair
Bp = -6.8
Po = -25.6
Lo = 72.7



1245 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



73
Mar 02

MARCH 25, 2002 (P= -25.68, Bo = -6.88, Lo = 66.50)

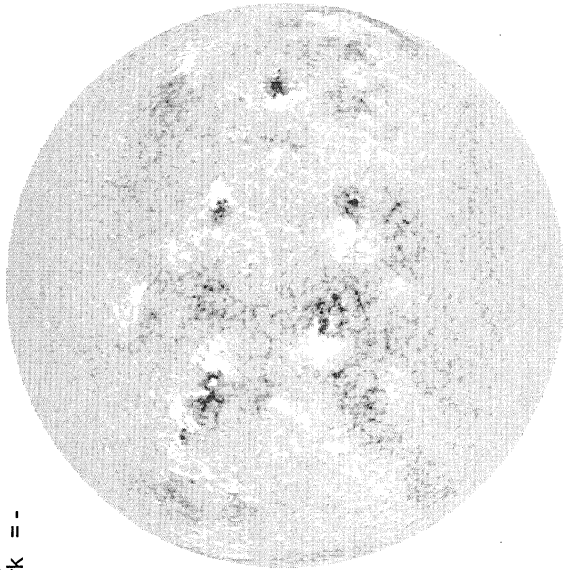
74
Mar 02

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -

N



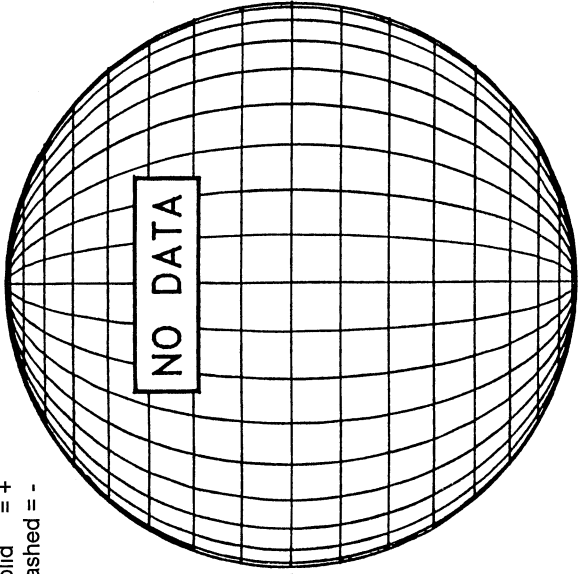
E

1537 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

N



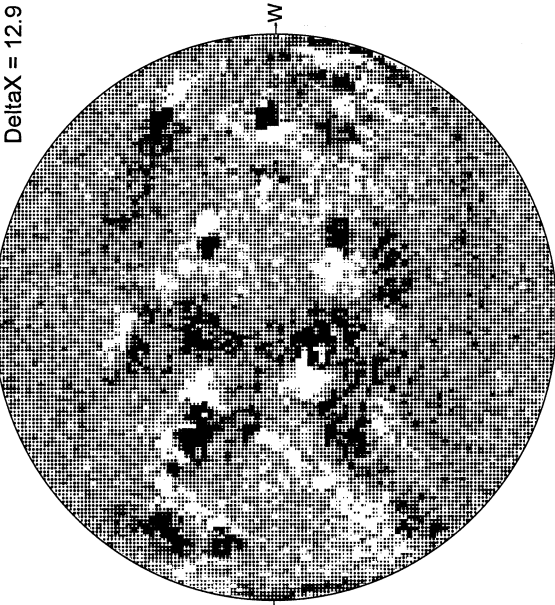
NO DATA

16.41 -
16.83 UT

MT. WILSON MAGNETOGRAM

DeltaY = 20.1
DeltaX = 12.9

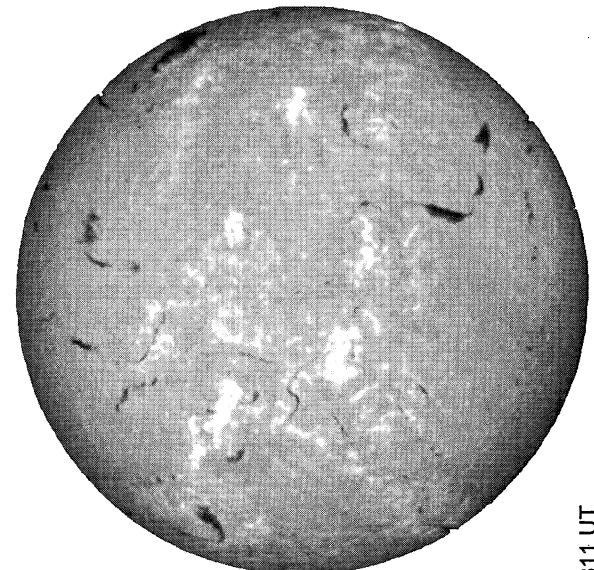
N



W

White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

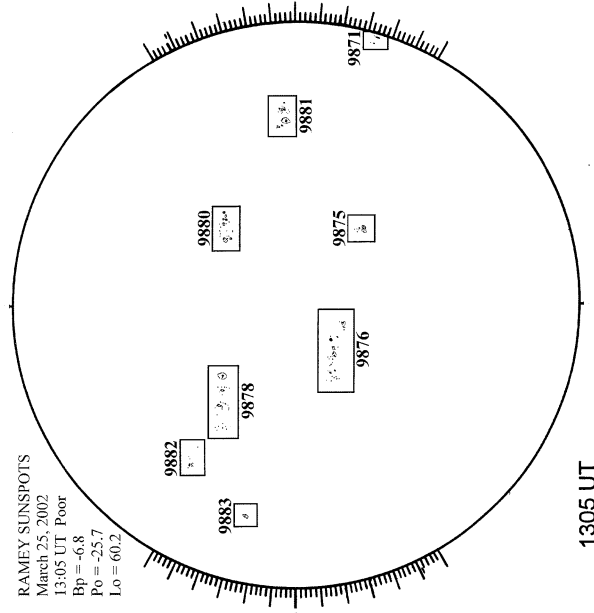


E

0811 UT

RAMEY SUNSPOTS

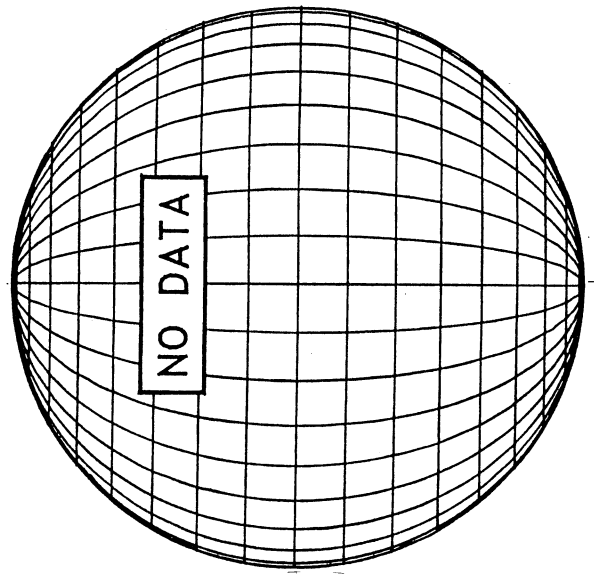
MARCH 25, 2002
13:05 UT Poor
Bp = -6.8
Po = -25.7
Lo = 60.2



1305 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



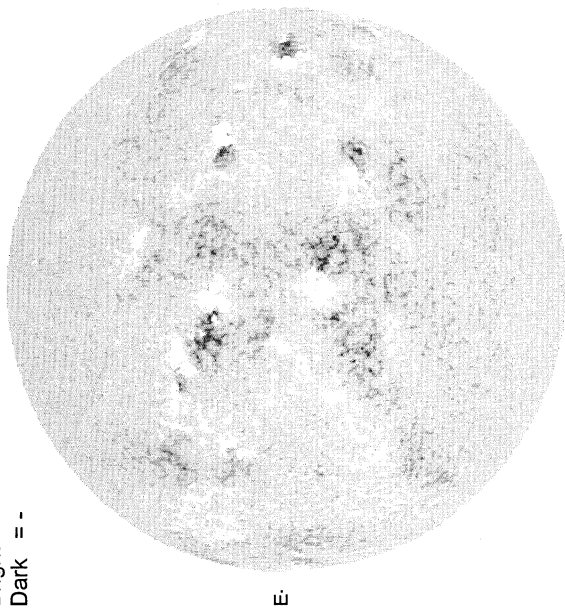
NO DATA

S

MARCH 26, 2002 (P= -25.77, Bo = -6.84, Lo = 53.31)

KITT PEAK MAGNETOGRAM
868.8 nm

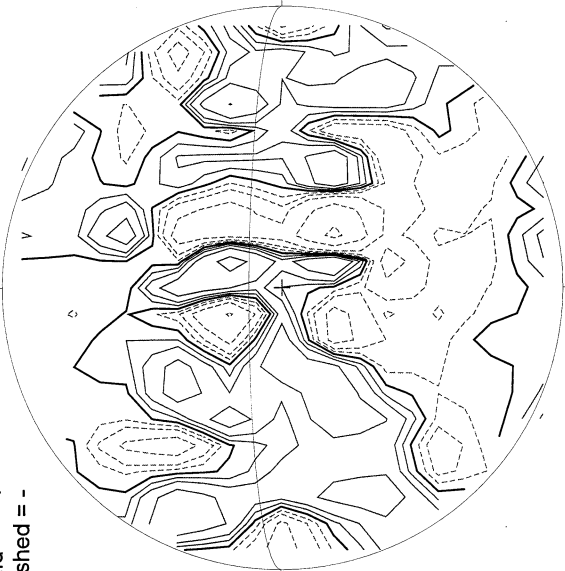
Bright = +
Dark = -



1544 UT

STANFORD MAGNETOGRAM

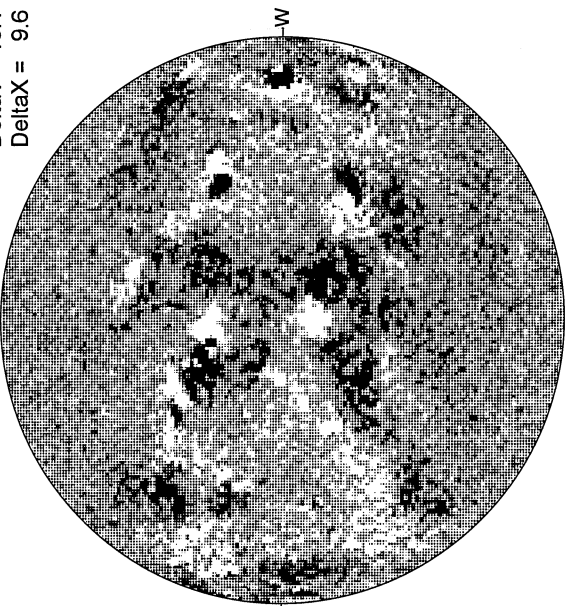
Solid = +
Dashed = -



2201 UT

MT. WILSON MAGNETOGRAM

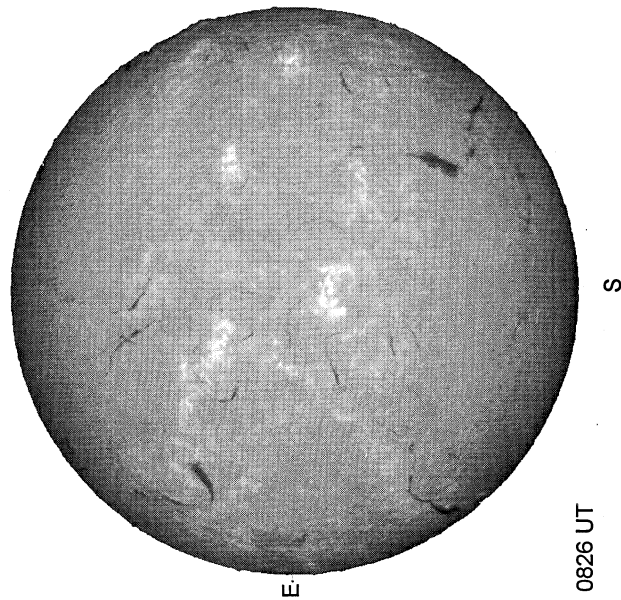
DeltaY = 13.1
DeltaX = 9.6



16.77 -
17.72 UT

White = +7.5G
Black = -7.5G

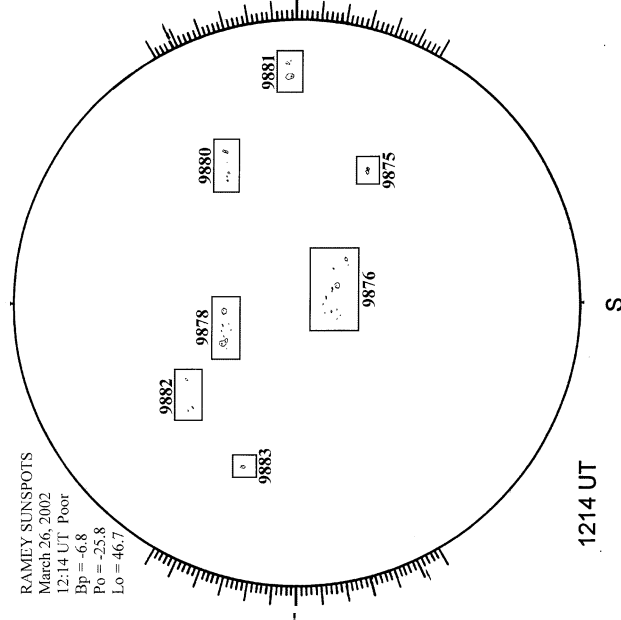
MEUDON H-ALPHA



0826 UT

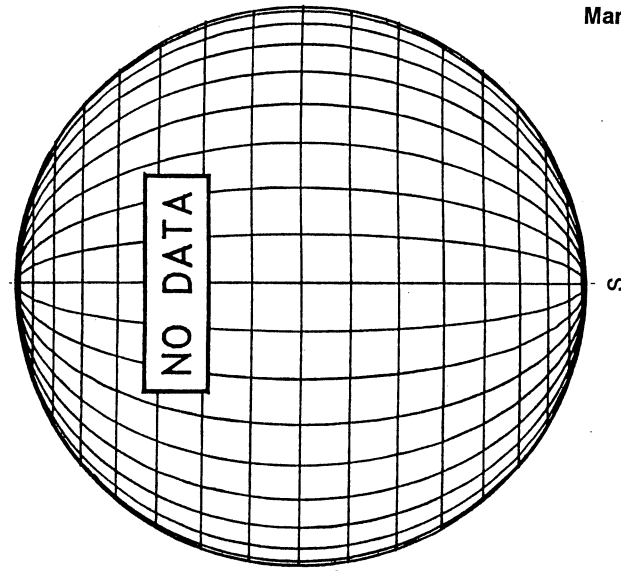
RAMEY SUNSPOT

RAMEY SUNSPOTS
March 26, 2002
12:14 UT Poor
Bp = -6.8
Po = 25.8
Lo = 46.7



1214 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

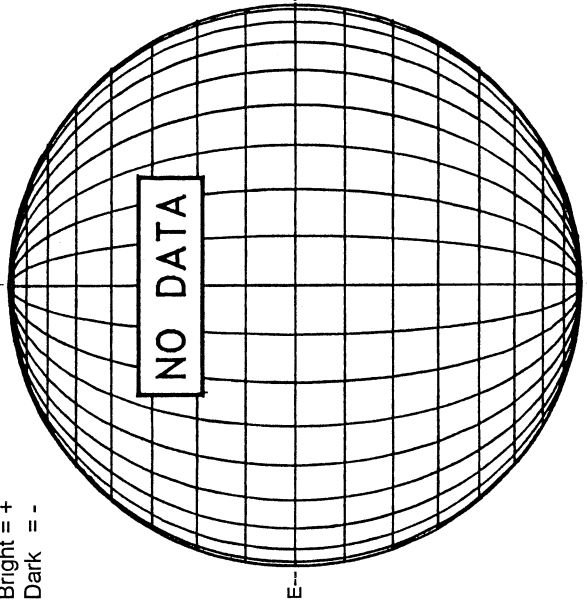


MARCH 27, 2002 (P= -25.85, Bo = -6.80, Lo = 40.12)

76
Mar 02

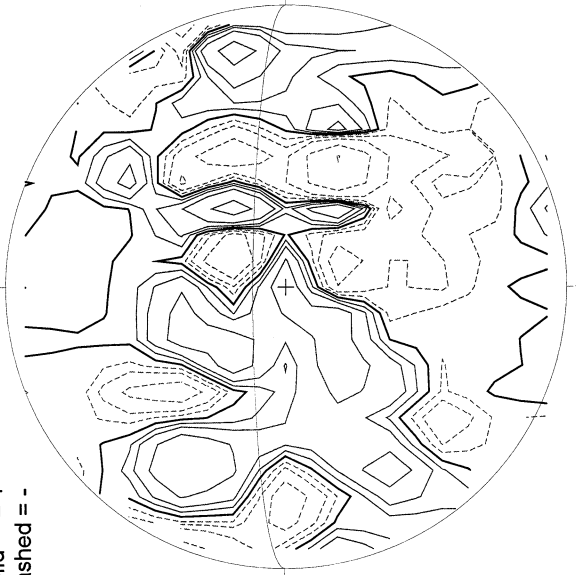
KITT PEAK MAGNETOGRAM
868.8 nm

Bright = +
Dark = -



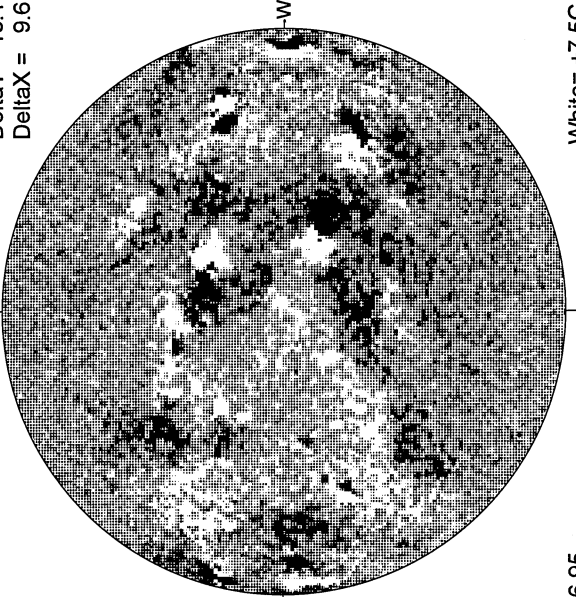
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

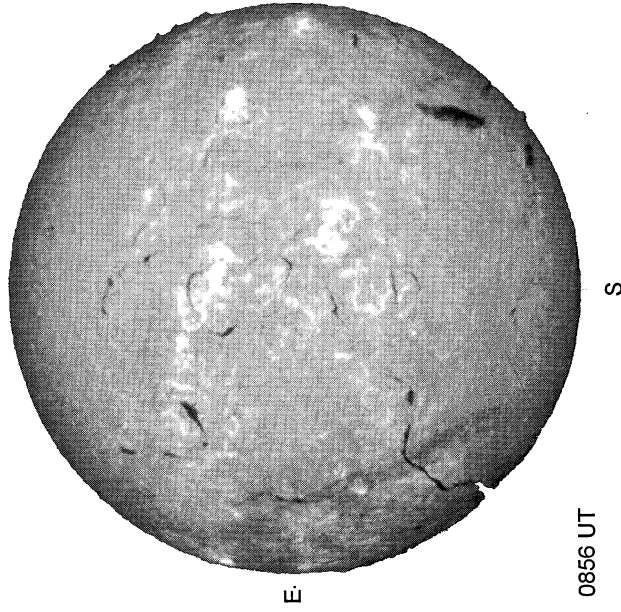
DeltaY = 13.1
DeltaX = 9.6



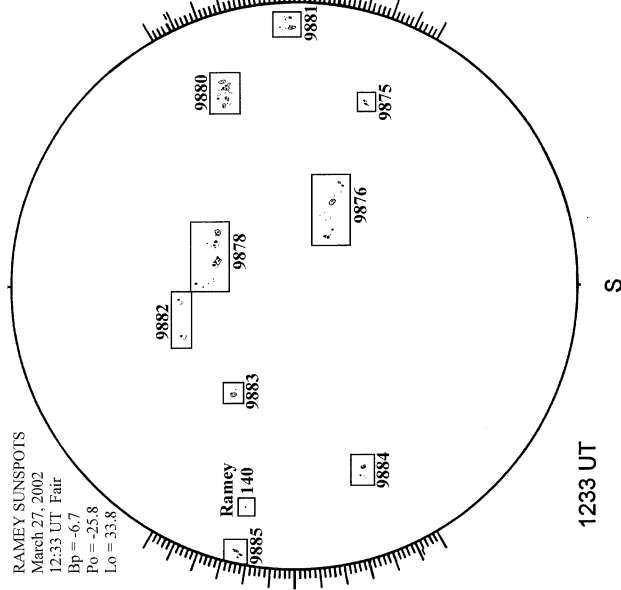
16.95 -
17.91 UT

White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

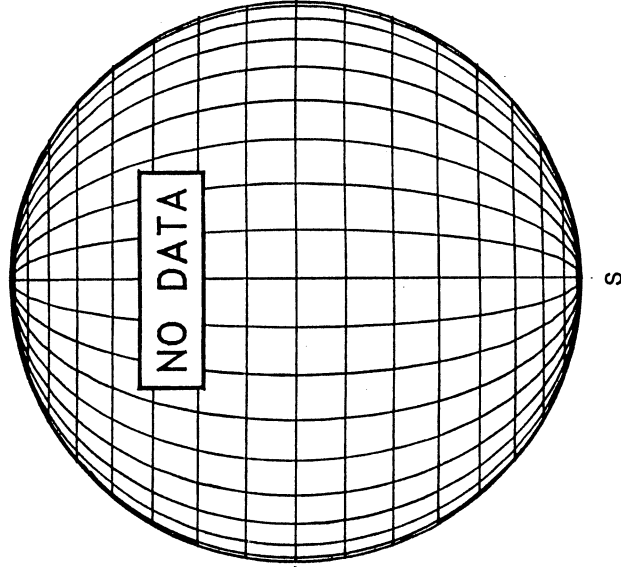


RAMEY SUNSPOT



RAMEY SUNSPOTS
March 27, 2002
12:33 UT Fair
Bp = -6.7
Po = -25.8
Lo = 33.8

LOMNICKY PEAK CORONA (1.04 Radii)----

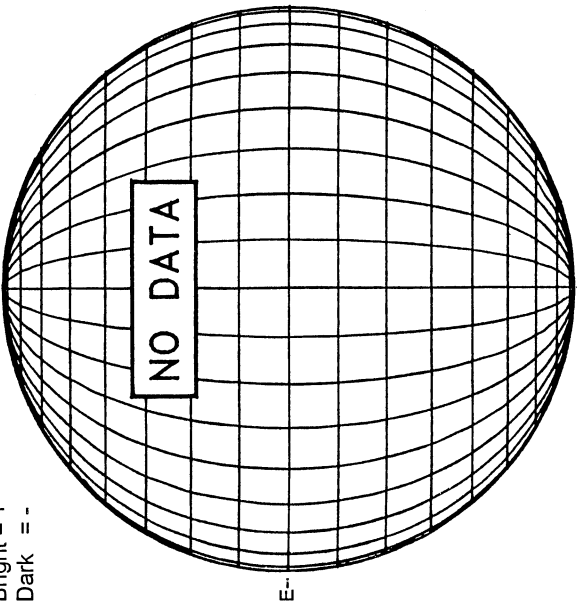


MARCH 28, 2002 (P= -25.93, Bo = -6.75, Lo = 26.93)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



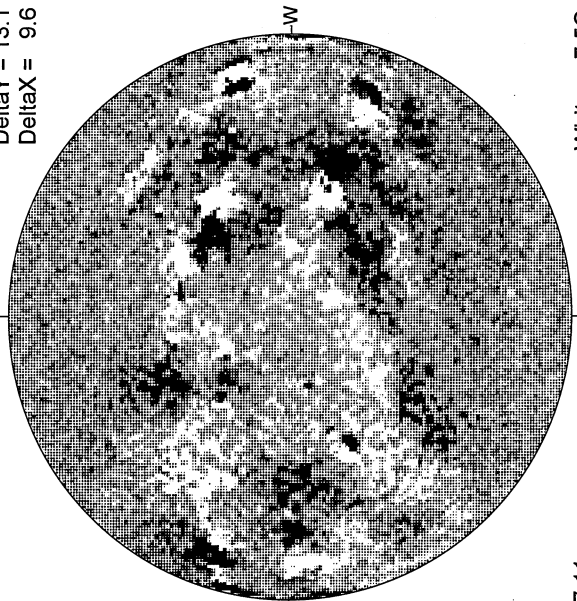
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

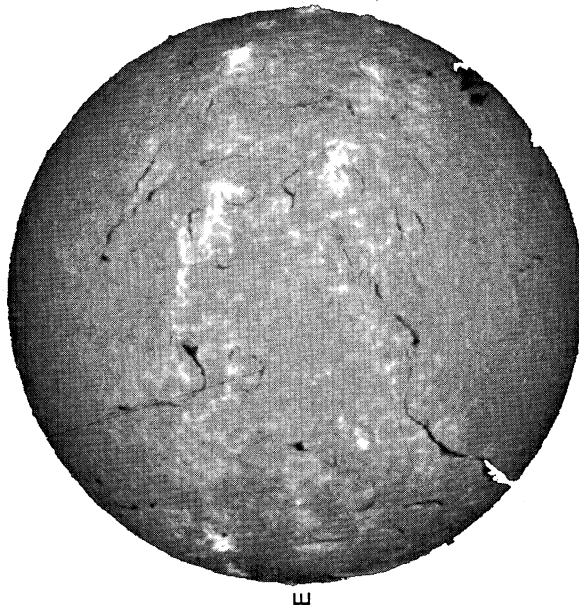
DeltaY = 13.1
DeltaX = 9.6



17.11 -
18.07 UT

White = +7.5G
Black = -7.5G

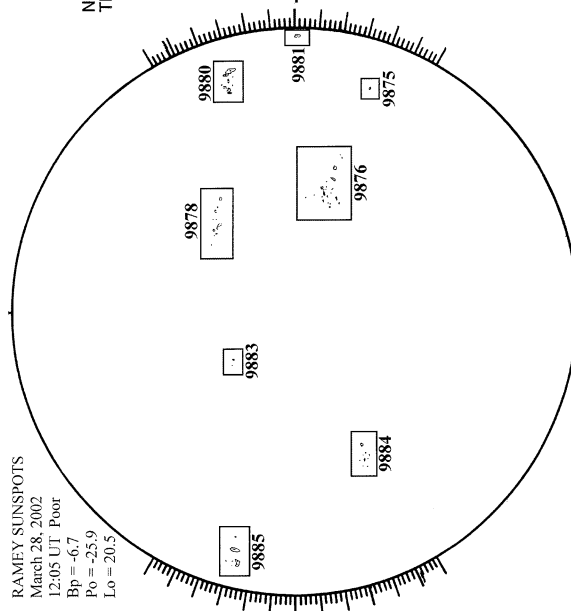
MEUDON H-ALPHA



1205 UT

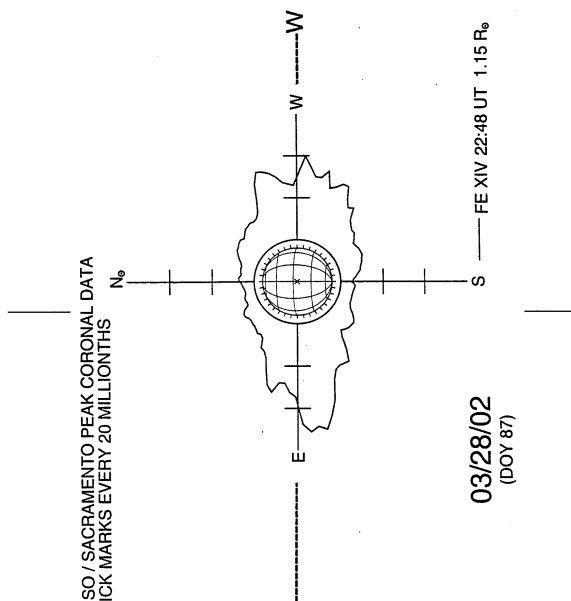
RAMEY SUNSPOTS

RAMEY SUNSPOTS
March 28, 2002
12:05 UT Poor
Bp = -6.7
Po = -25.9
Lo = 20.5



1205 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



03/28/02
(DOY 87)

FE XIV 22:48 UT 1.15 R_o

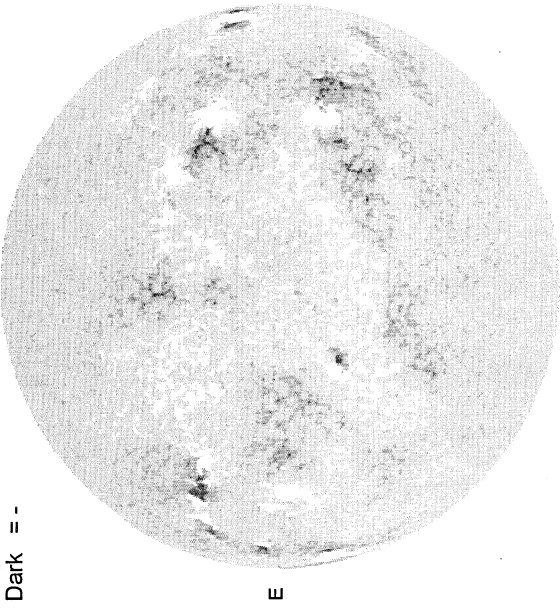
MARCH 29, 2002 (P= -26.00 Bo = -6.71, Lo = 13.74)

78
Mar 02

KITT PEAK MAGNETOGRAM

868.8 nm

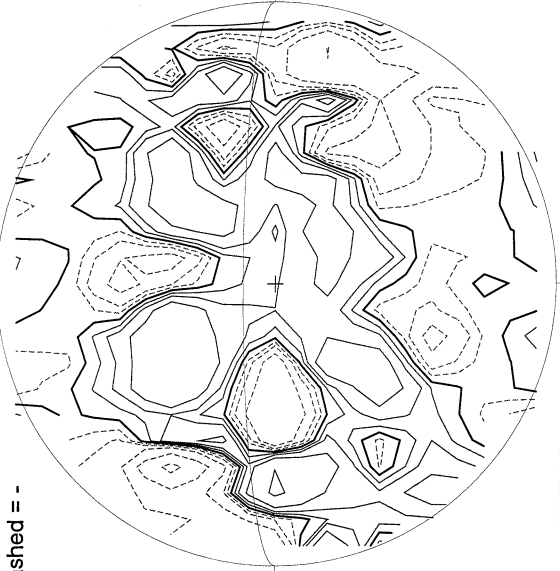
Bright = +
Dark = -



1520 UT

STANFORD MAGNETOGRAM

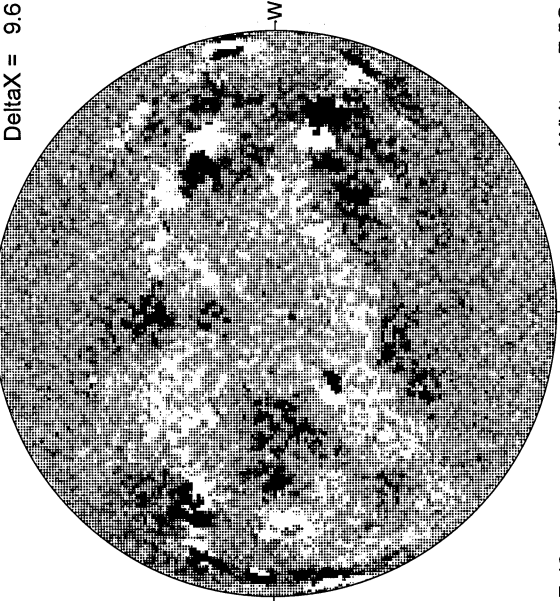
Solid = +
Dashed = -



MAR 30
0001 UT

MT. WILSON MAGNETOGRAM

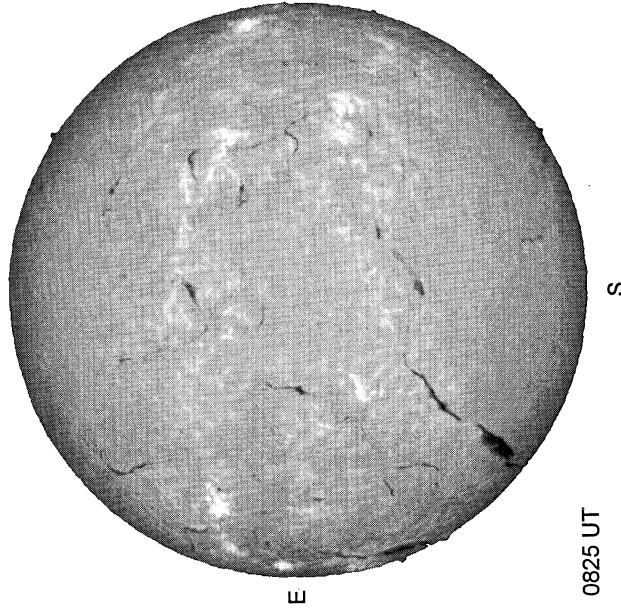
Delta Y = 13.1
Delta X = 9.6



17.46 -
18.41 UT

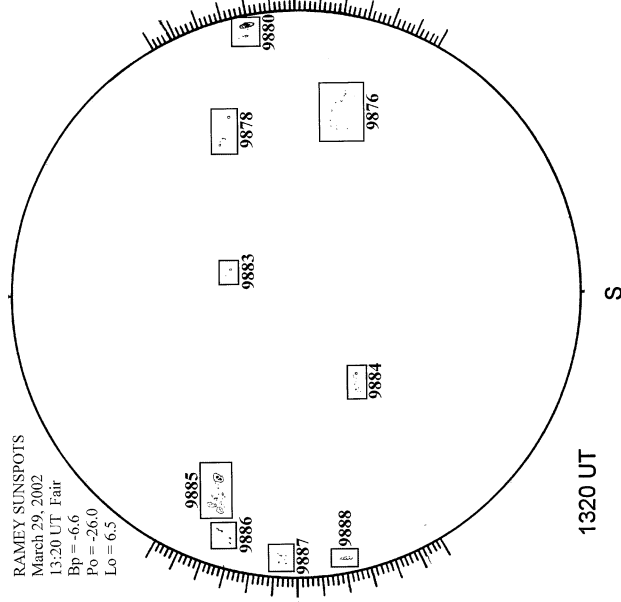
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



0825 UT

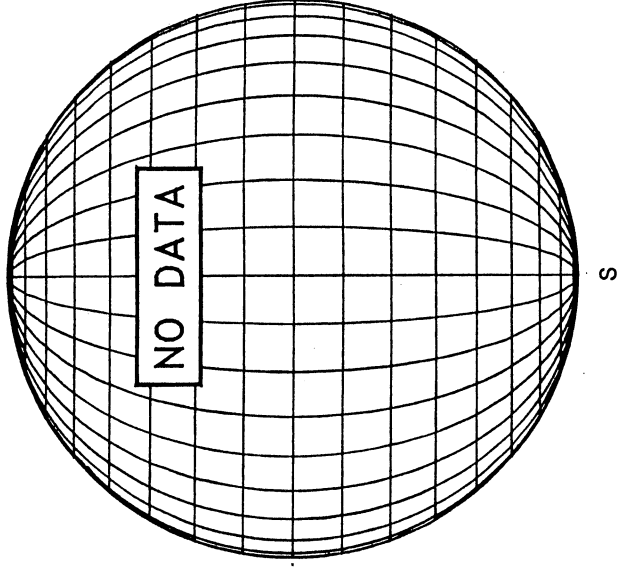
RAMEY SUNSPOTS



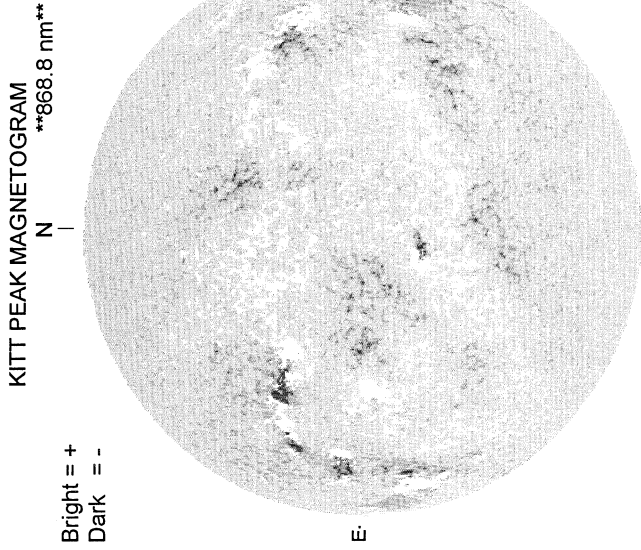
1320 UT

RAMEY SUNSPOTS
March 29, 2002
13:20 UT Fair
Bp = -6.6
Po = -26.0
Lo = 6.5

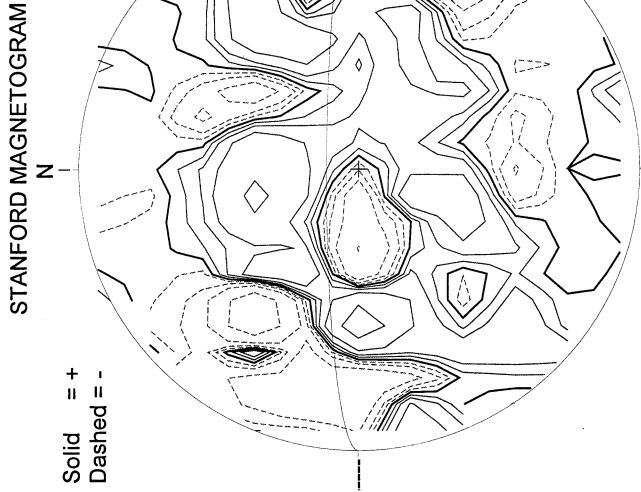
SACRAMENTO PEAK CORONA (1.15 Radii)----



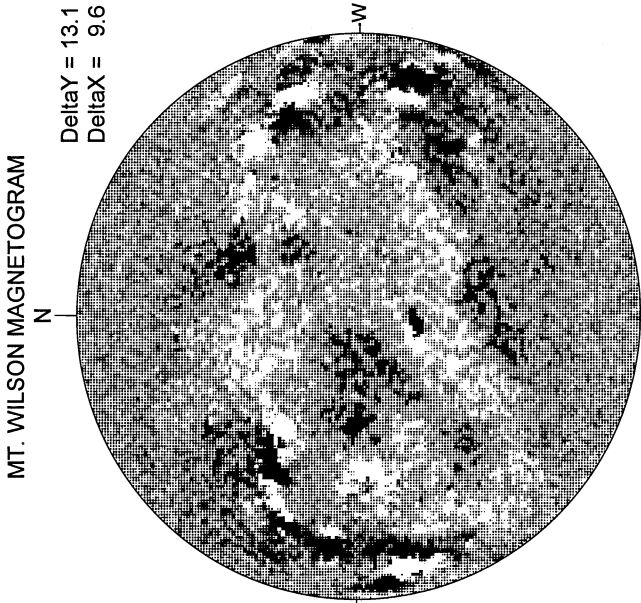
MARCH 30, 2002 (P = -26.06, Bo = -6.66, Lo = 0.55)



1512 UT



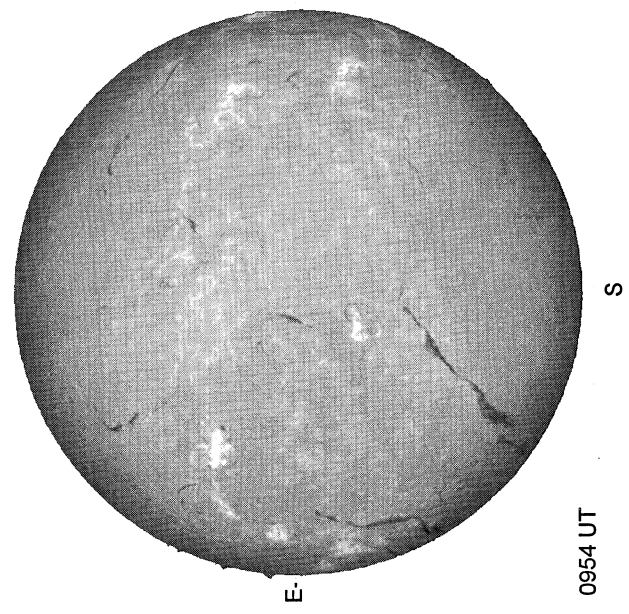
2211 UT



18:31 -
19:26 UT

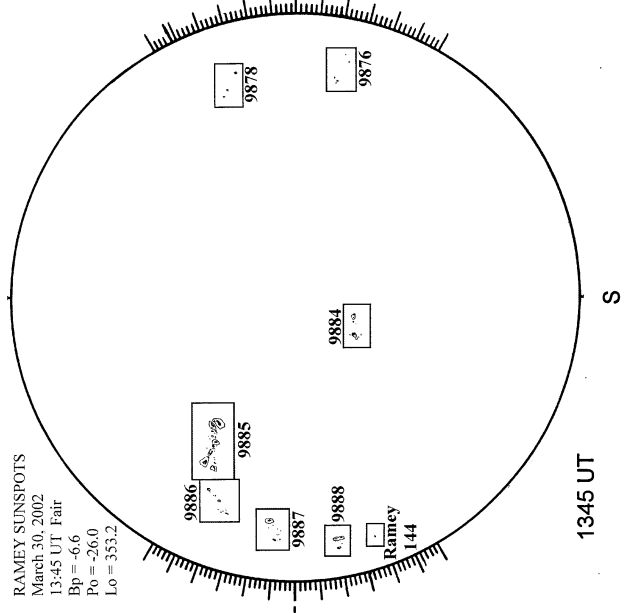
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



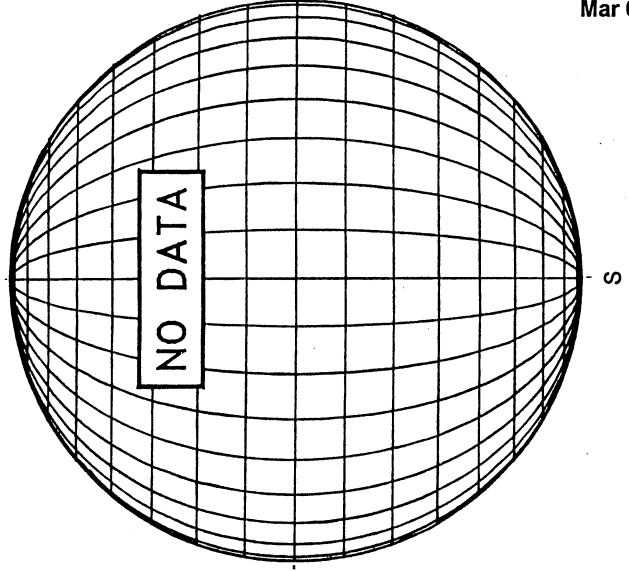
0954 UT

RAMEY SUNSPOT



1345 UT

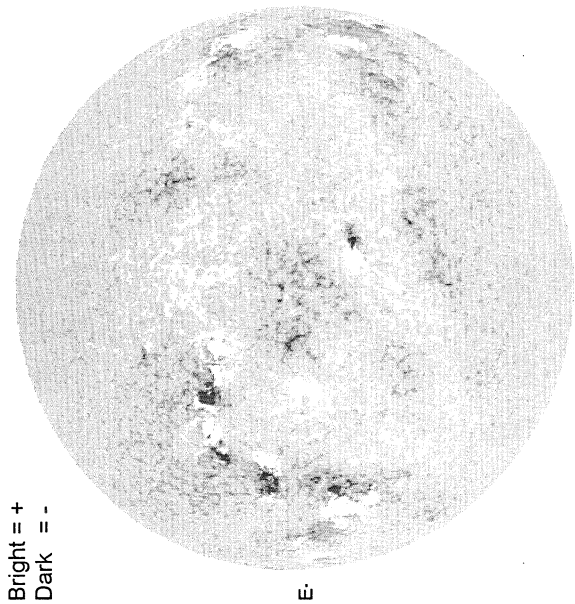
LOMNICKY PEAK CORONA (1.04 Radii)----



80
Mar 02

MARCH 31, 2002 (P = -26.11, Bo = -6.61, Lo = 347.36)

KITT PEAK MAGNETOGRAM
868.8 nm

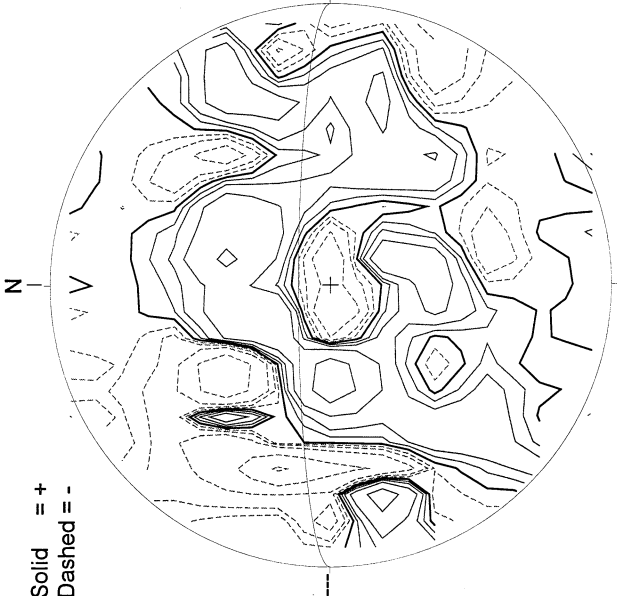


Bright = +
Dark = -

E

1433 UT

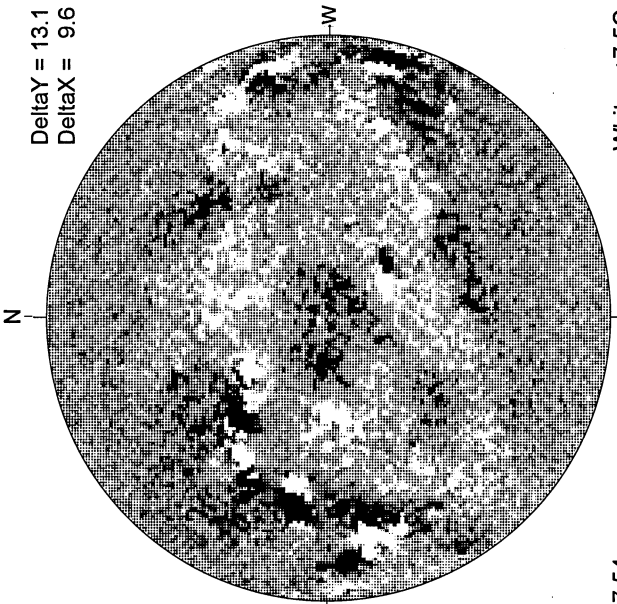
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

2058 UT

MT. WILSON MAGNETOGRAM

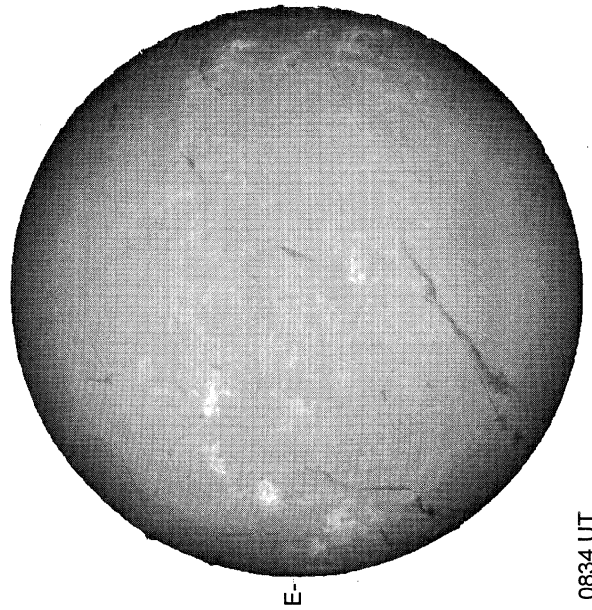


DeltaY = 13.1
DeltaX = 9.6

17.54 -
18.49 UT

White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

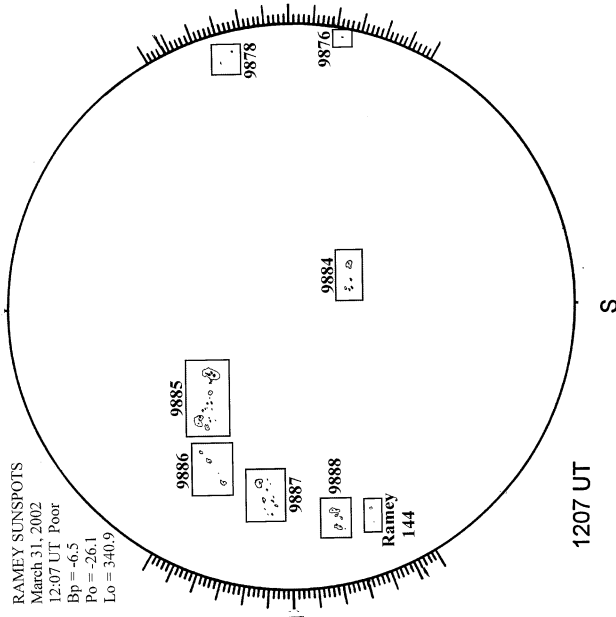


E

0834 UT

S

RAMEY SUNSPOT

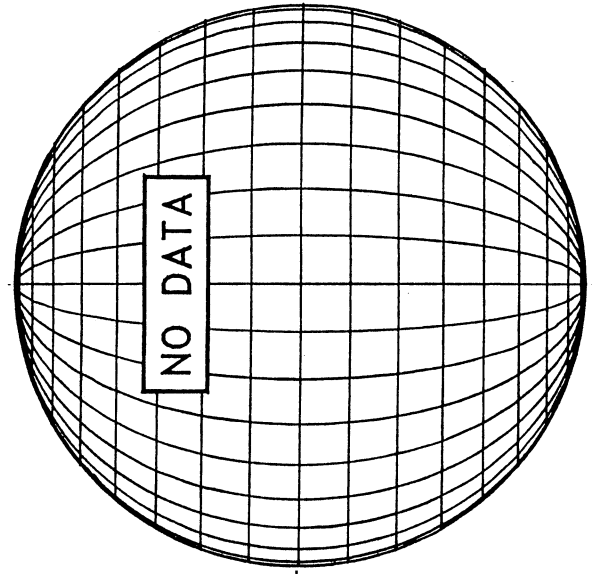


RAMEY SUNSPOTS
March 31, 2002
12:07 UT Poor
Bp = -6.5
Po = -26.1
Lo = 340.9

1207 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)---

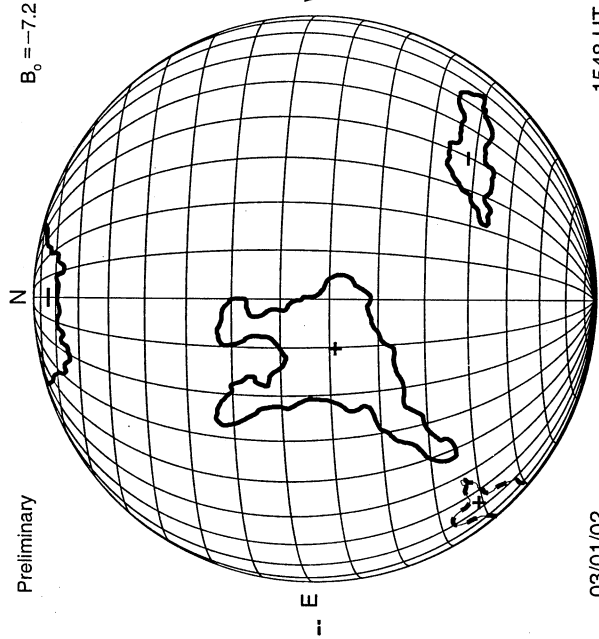


NO DATA

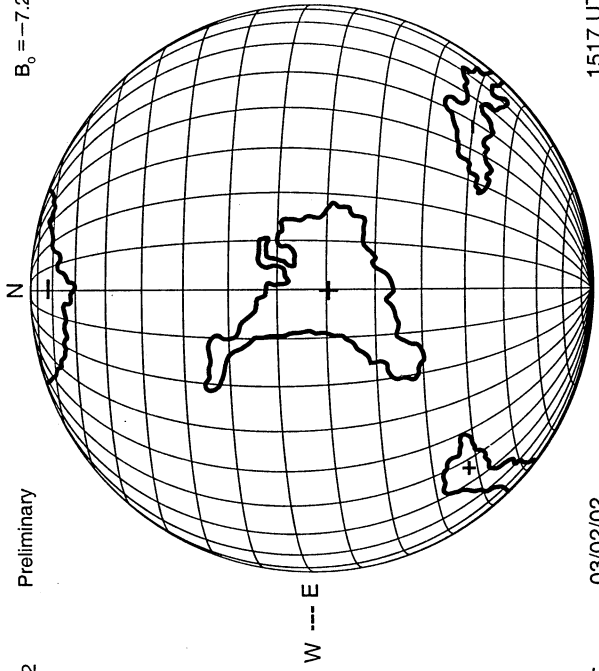
S

KITT PEAK CORONAL HOLE MAPS HE I 1083 nm March 2002

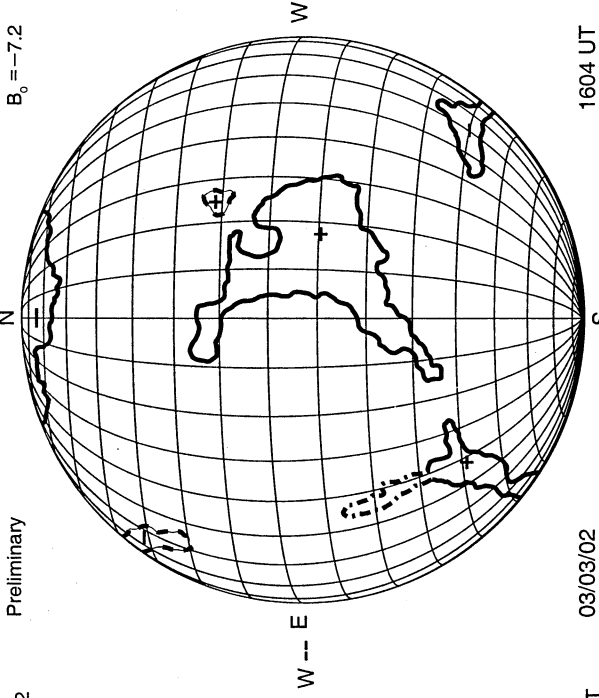
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



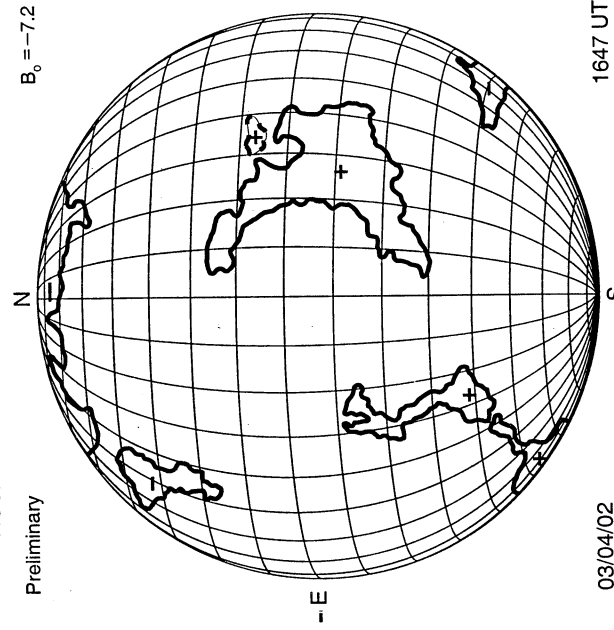
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



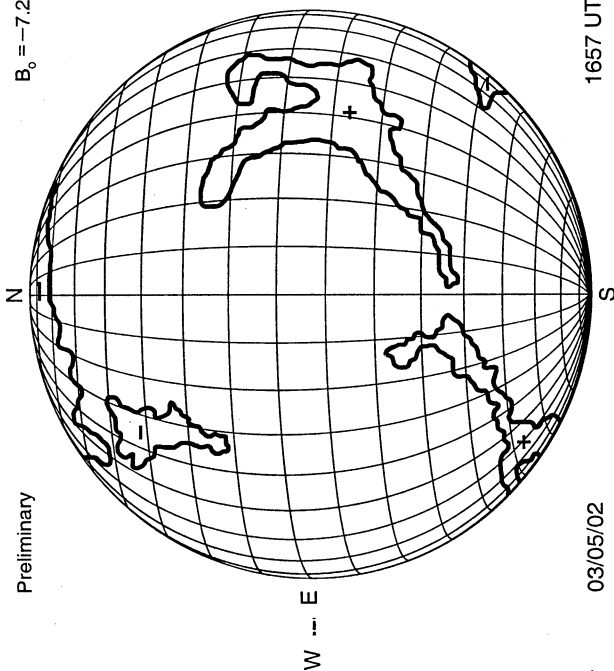
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



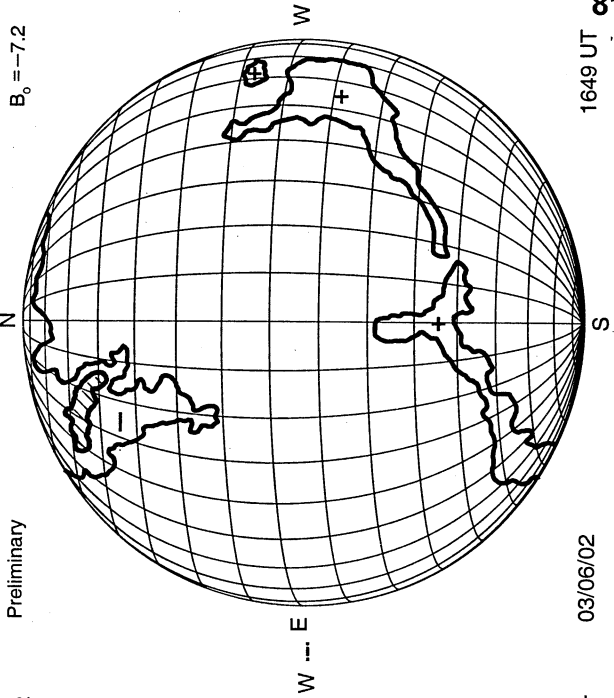
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



NSO/KP CORONAL HOLE MAP: HE I 1083 nm

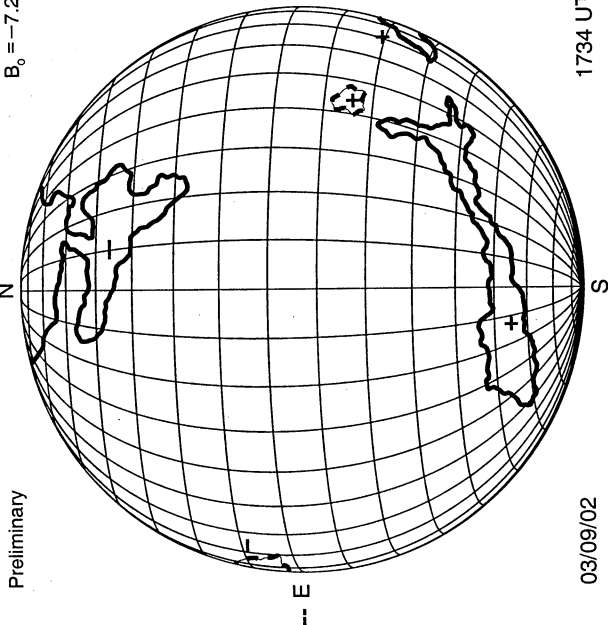


NSO/KP CORONAL HOLE MAP: HE I 1083 nm

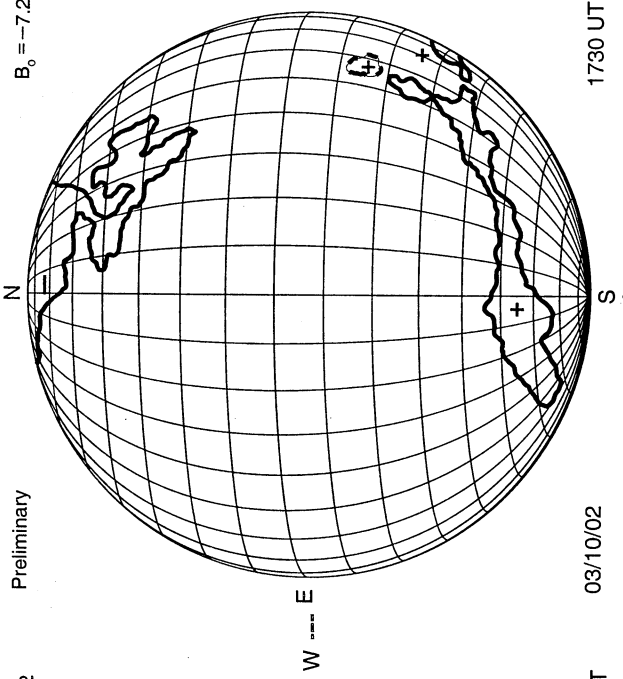


**KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
March 2002**

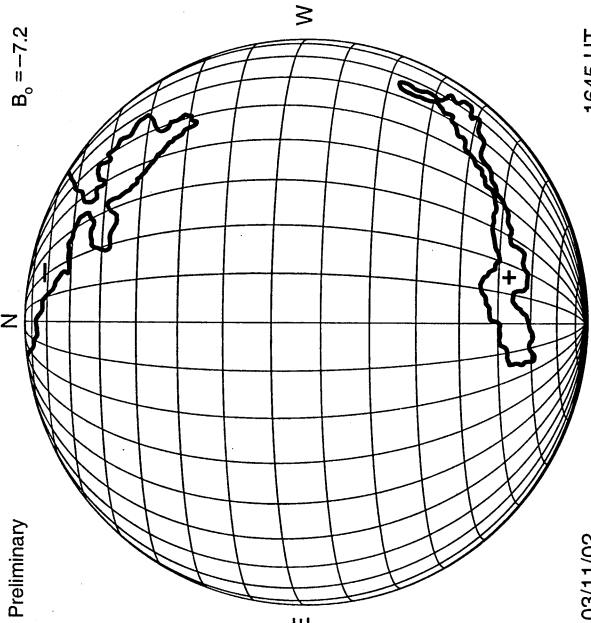
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



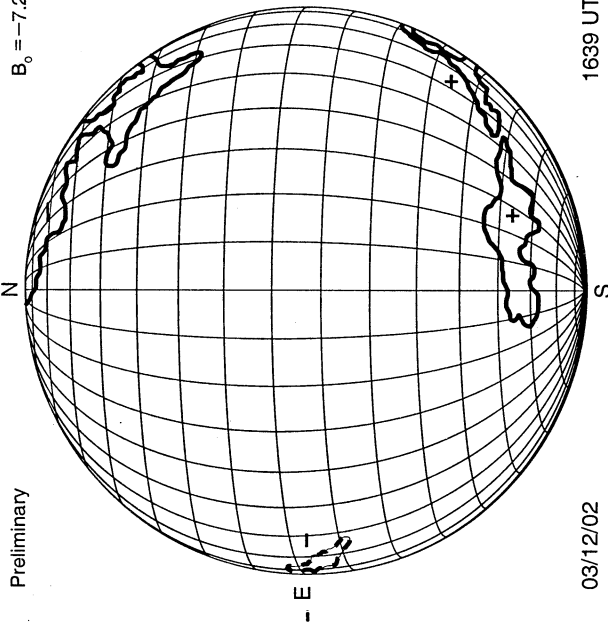
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



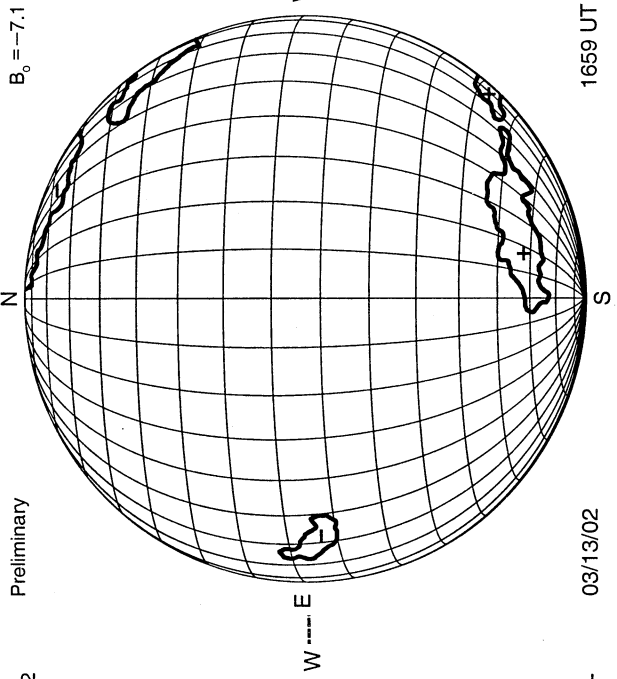
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



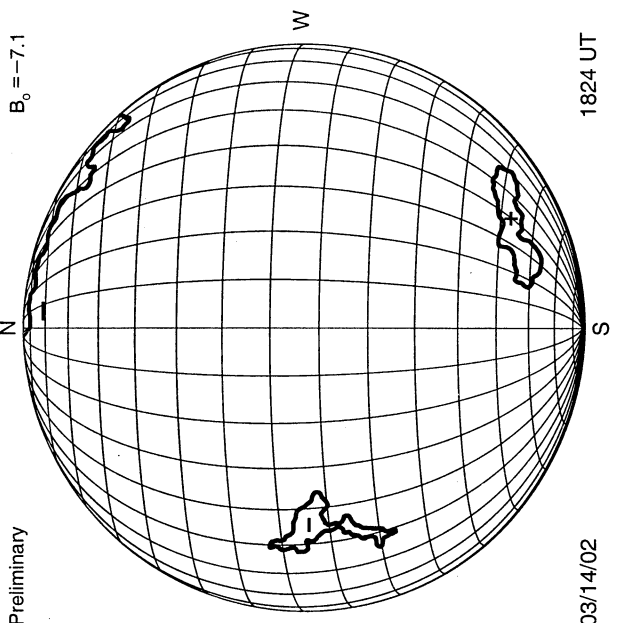
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



NSO/KP CORONAL HOLE MAP: HE I 1083 nm

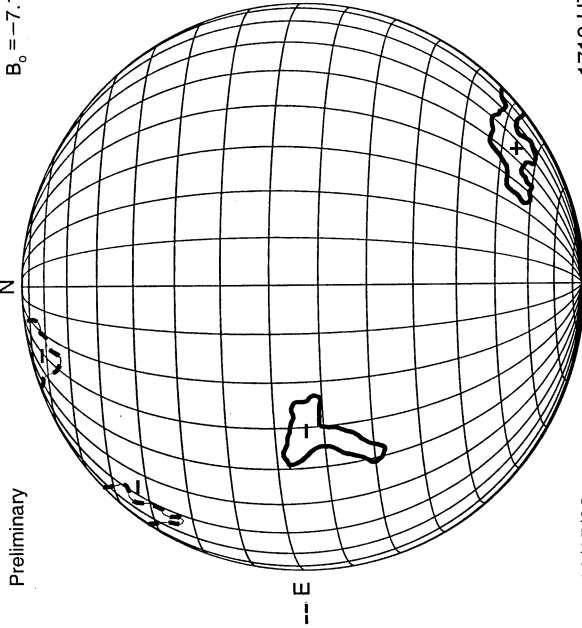


NSO/KP CORONAL HOLE MAP: HE I 1083 nm

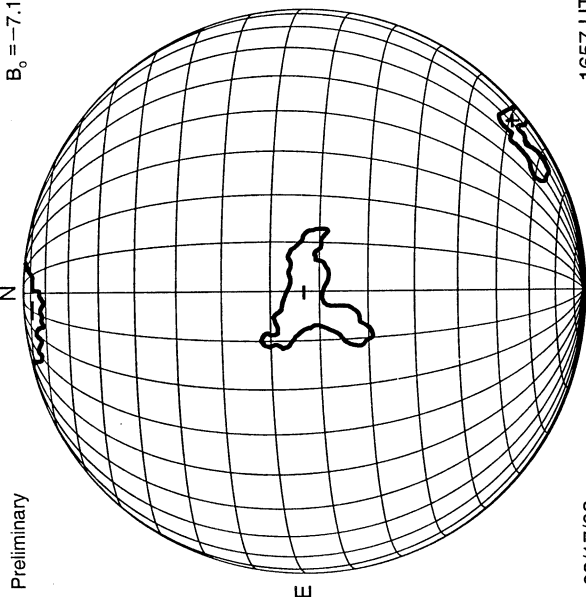


KITT PEAK CORONAL HOLE MAPS HE I 1083 nm March 2002

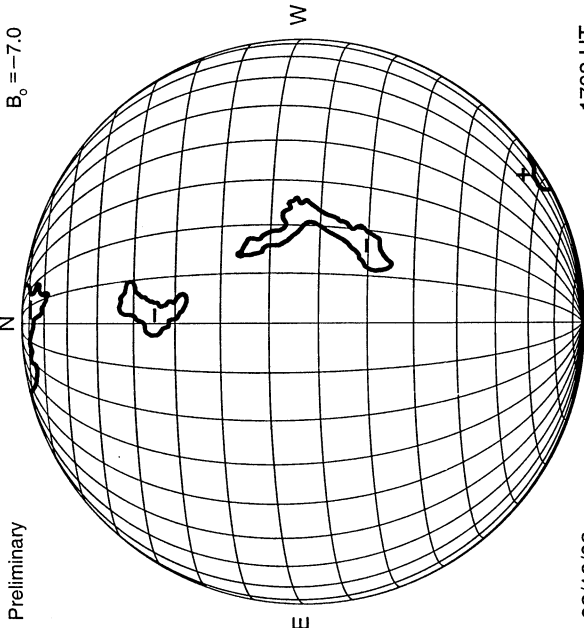
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



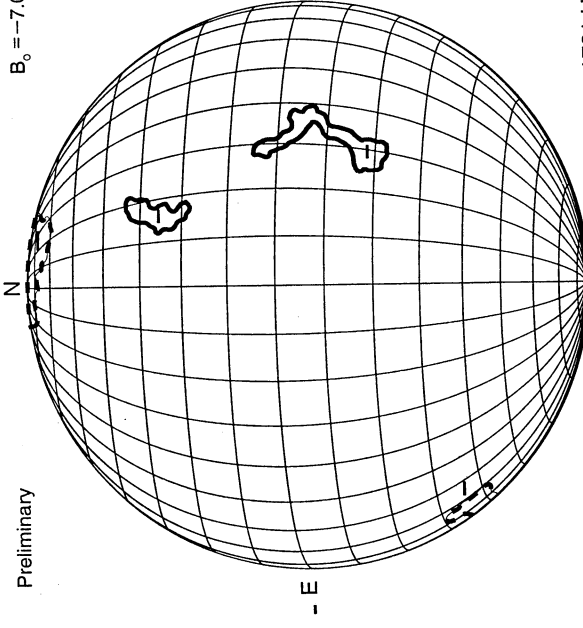
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



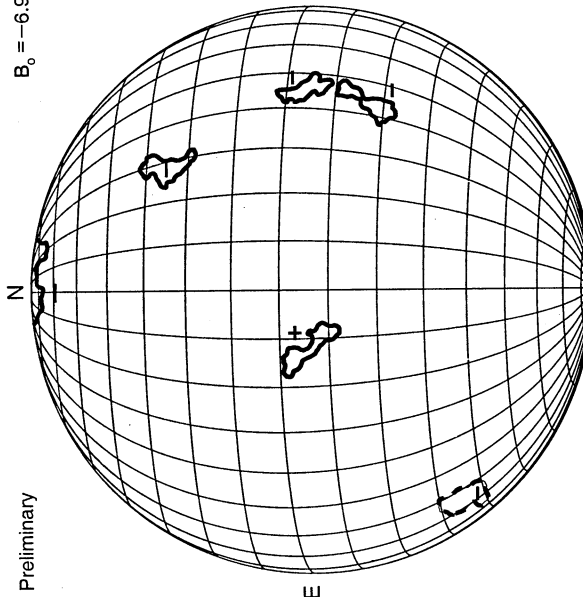
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



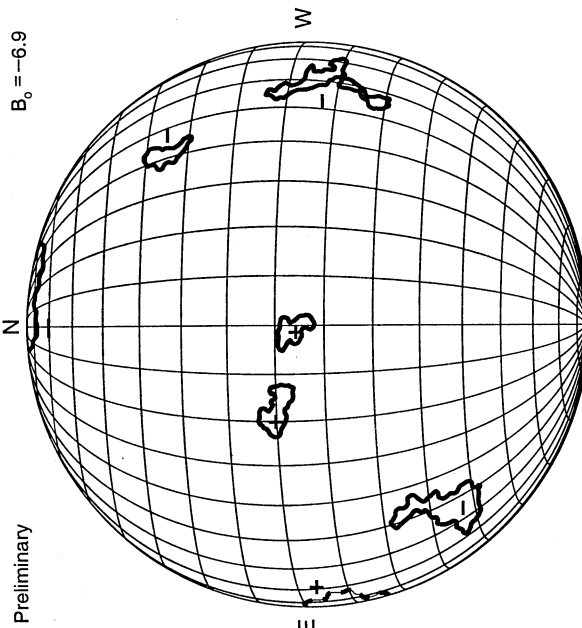
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



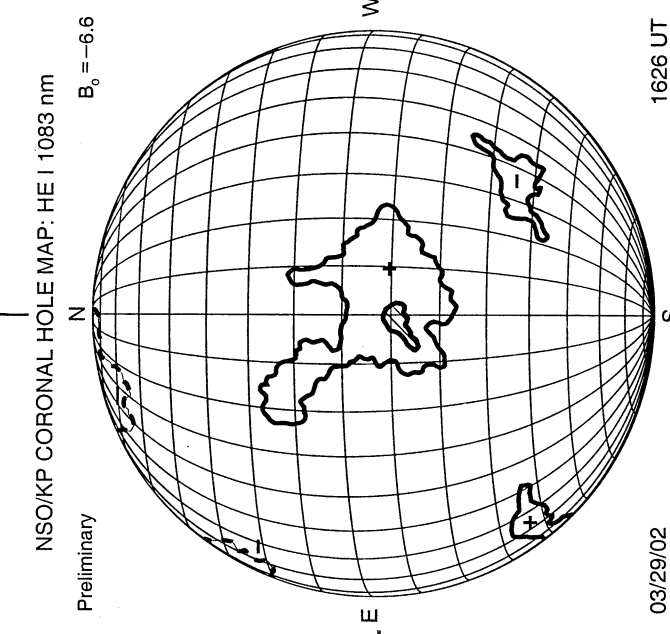
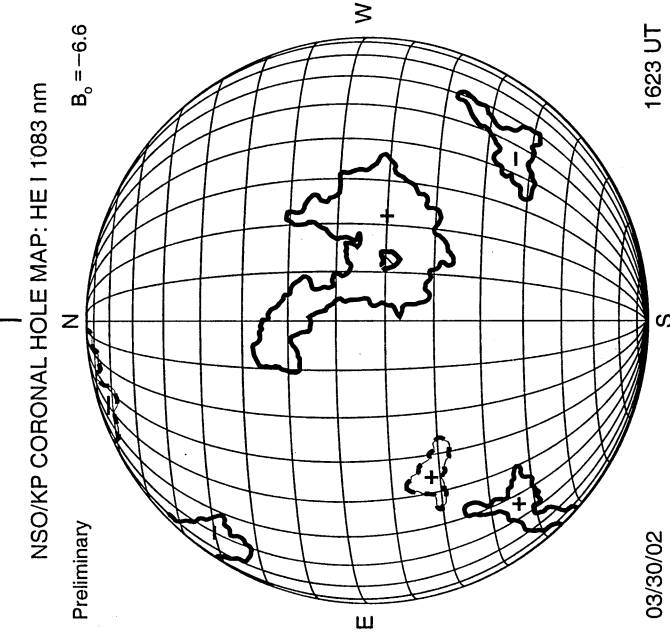
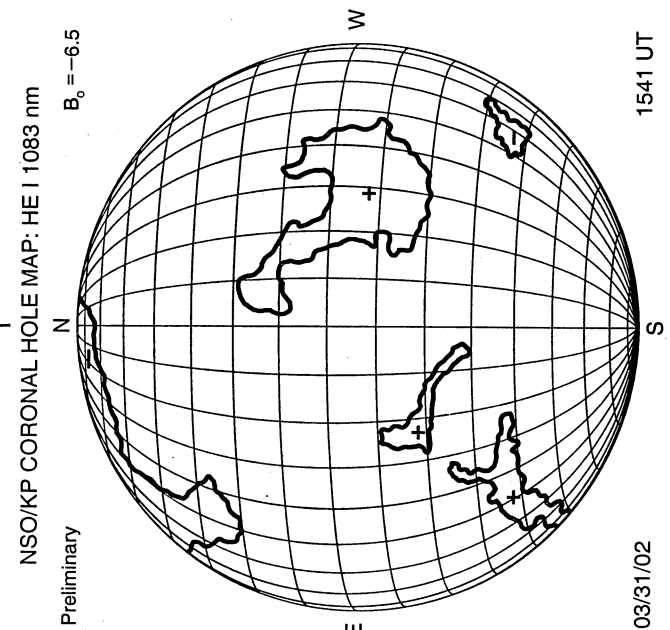
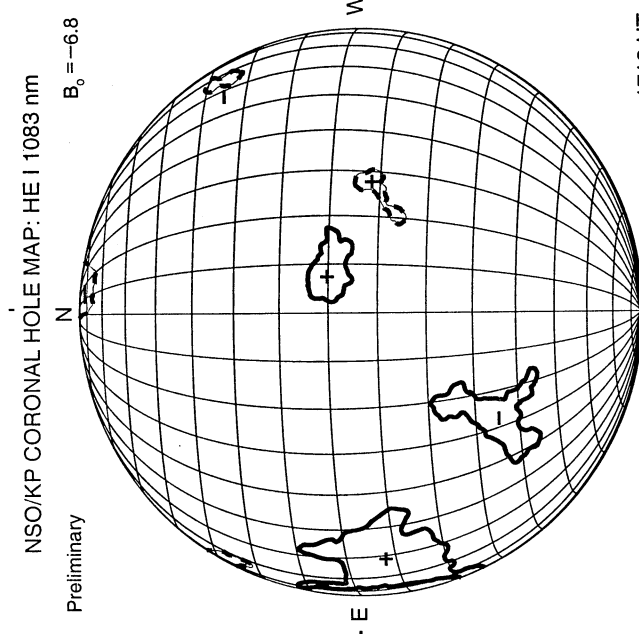
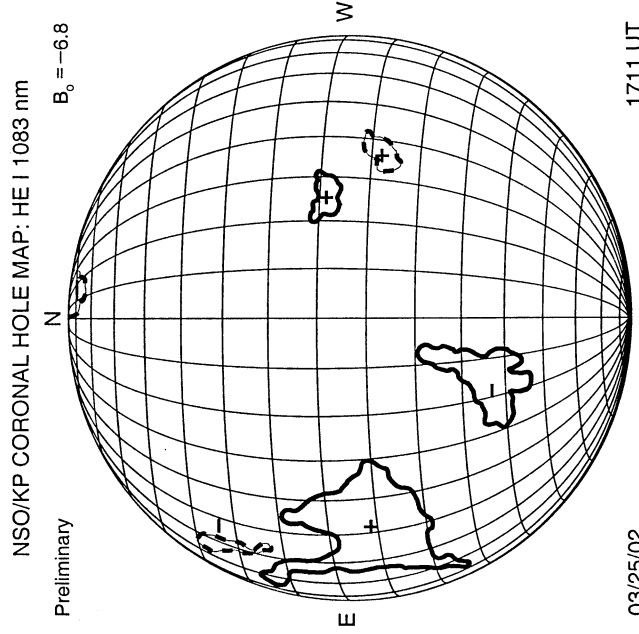
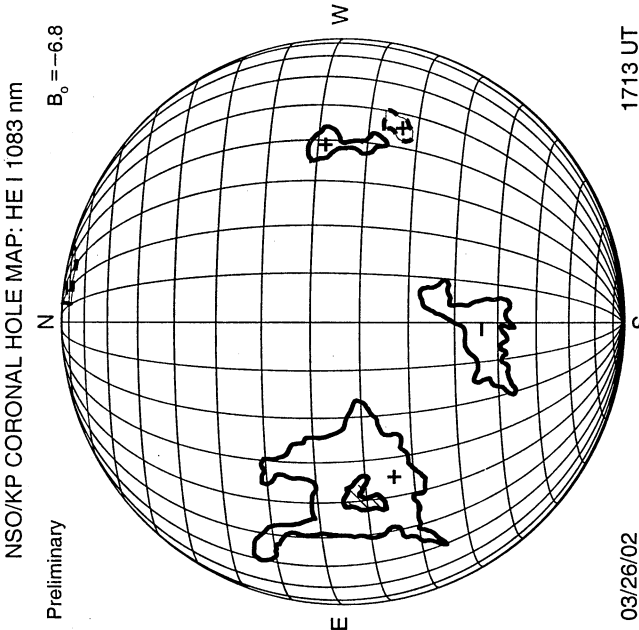
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



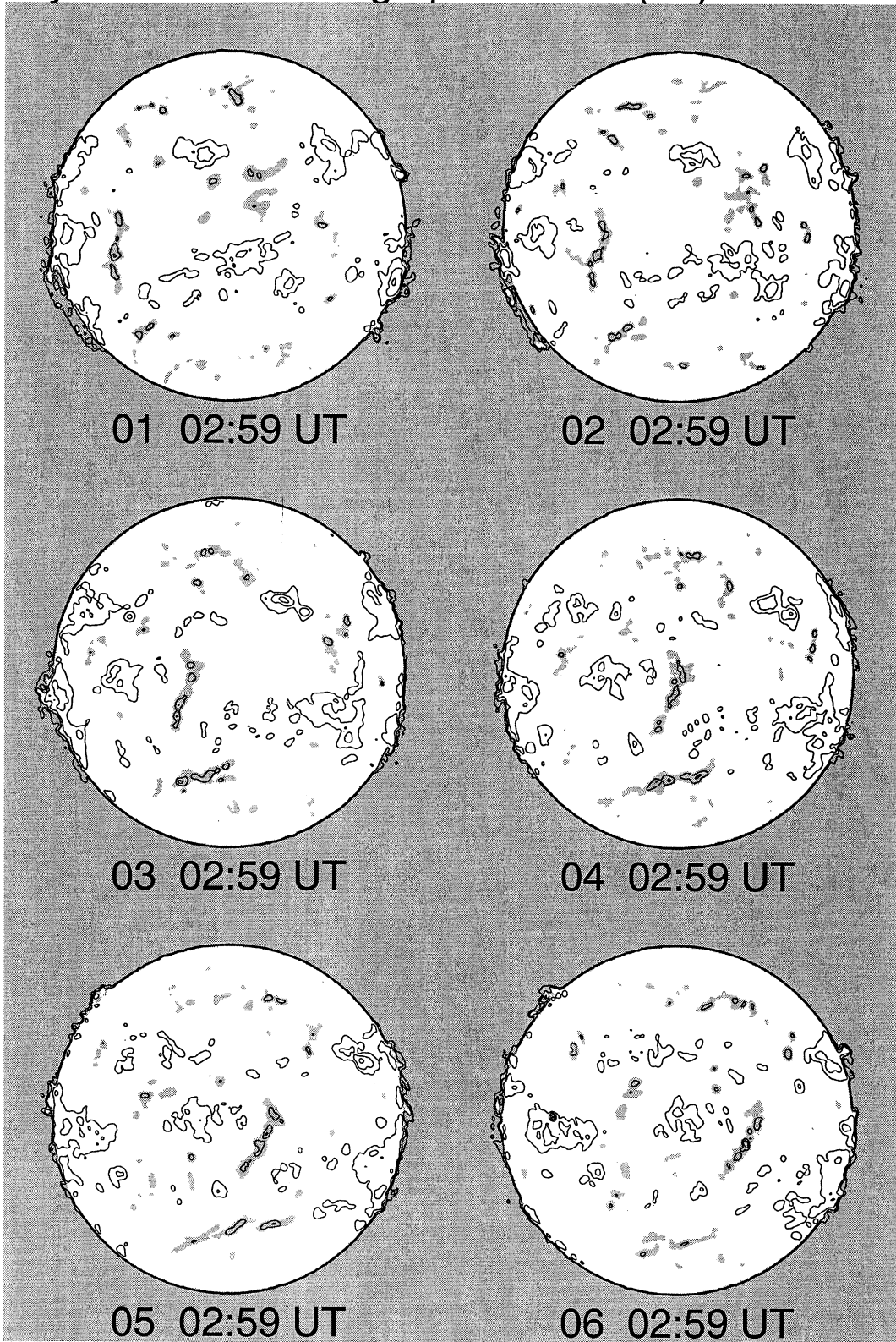
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
March 2002

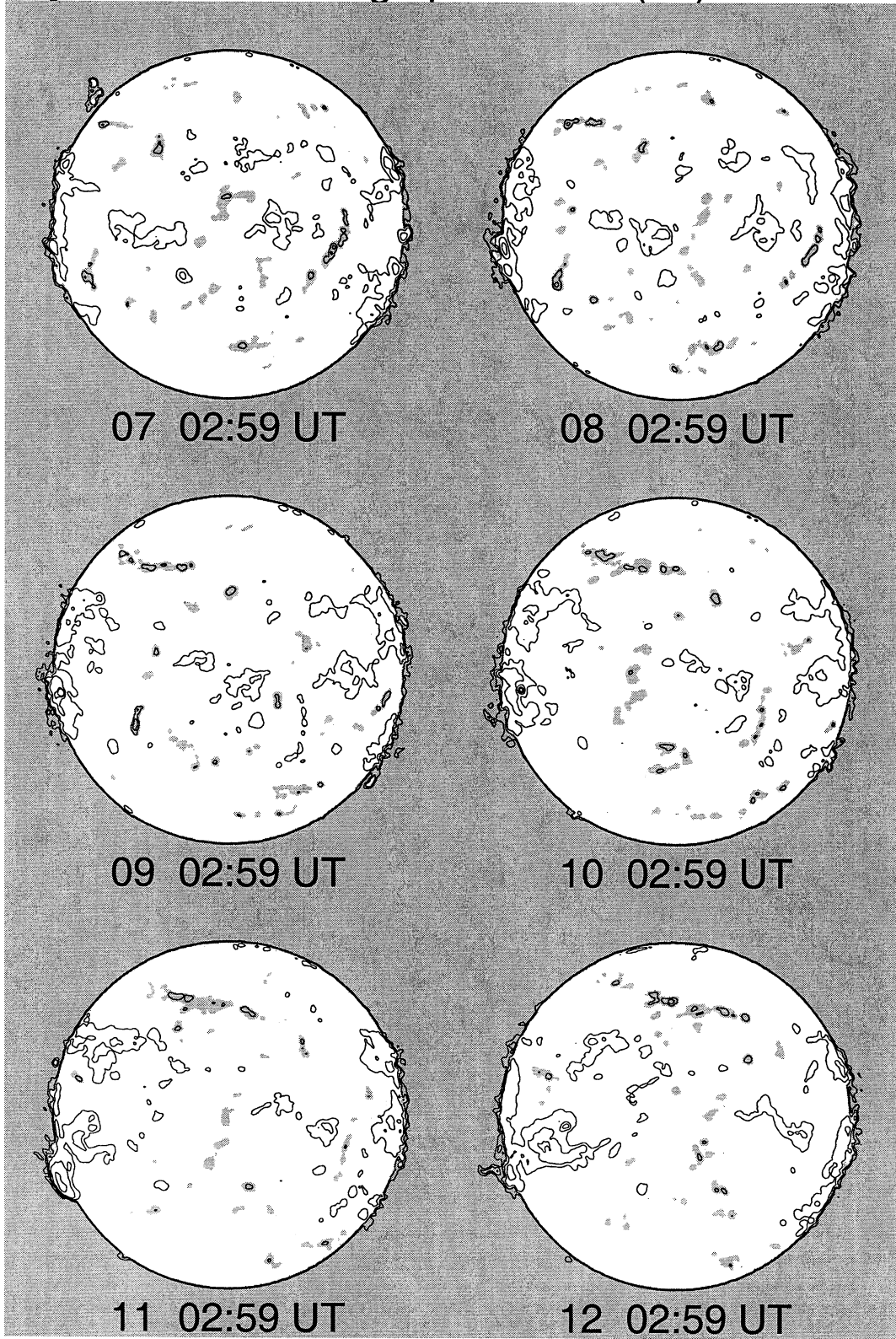


Nobeyama Radio Heliograph 17 GHz (Tb) 2002 March



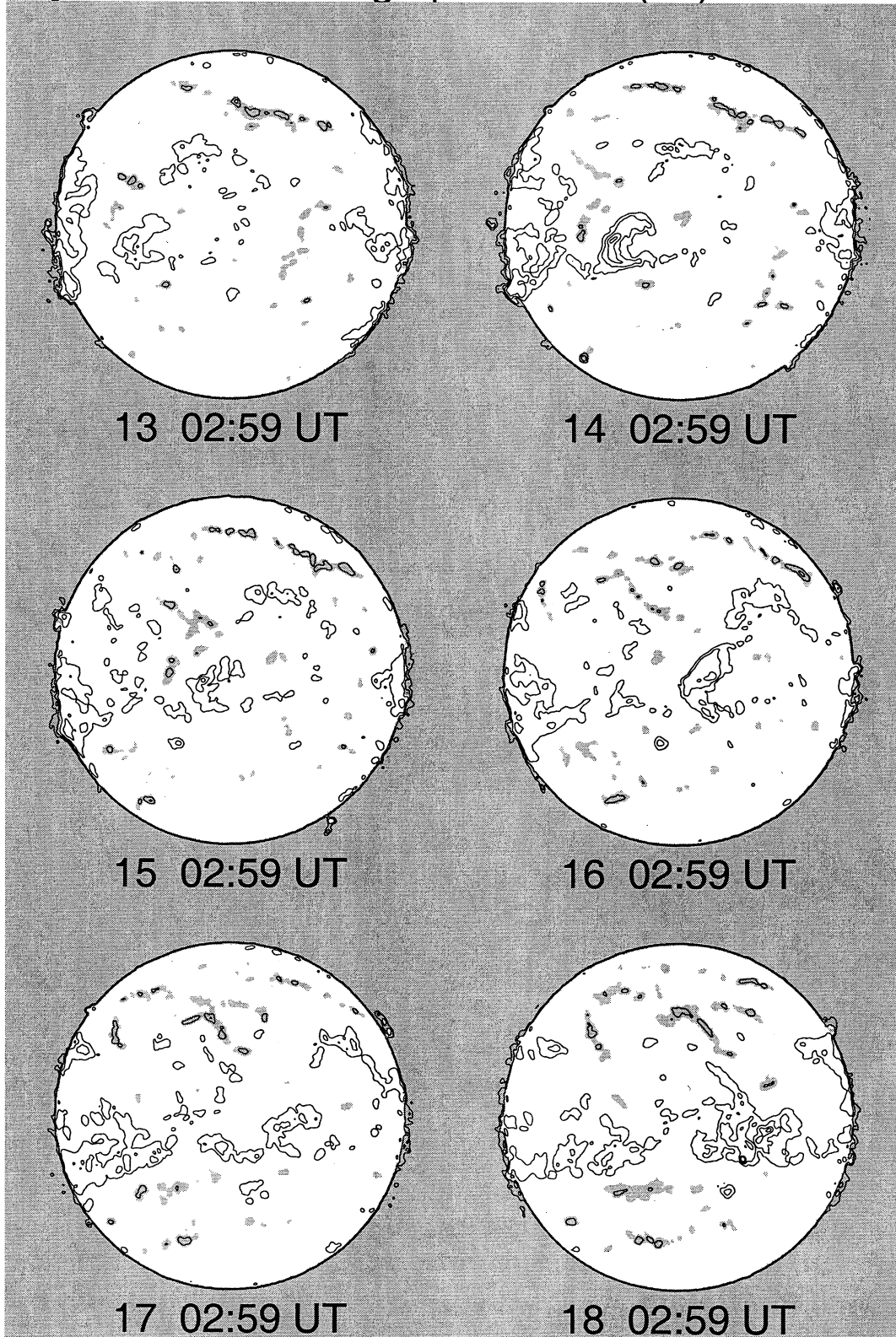
Contour Levels $T_b = [5, 8, 12, 20, 50, 100] \times 10^3 \text{ K}$
Grey level $T_b \leq 9,500 \text{ K}$

Nobeyama Radio Heliograph 17 GHz (Tb) 2002 March



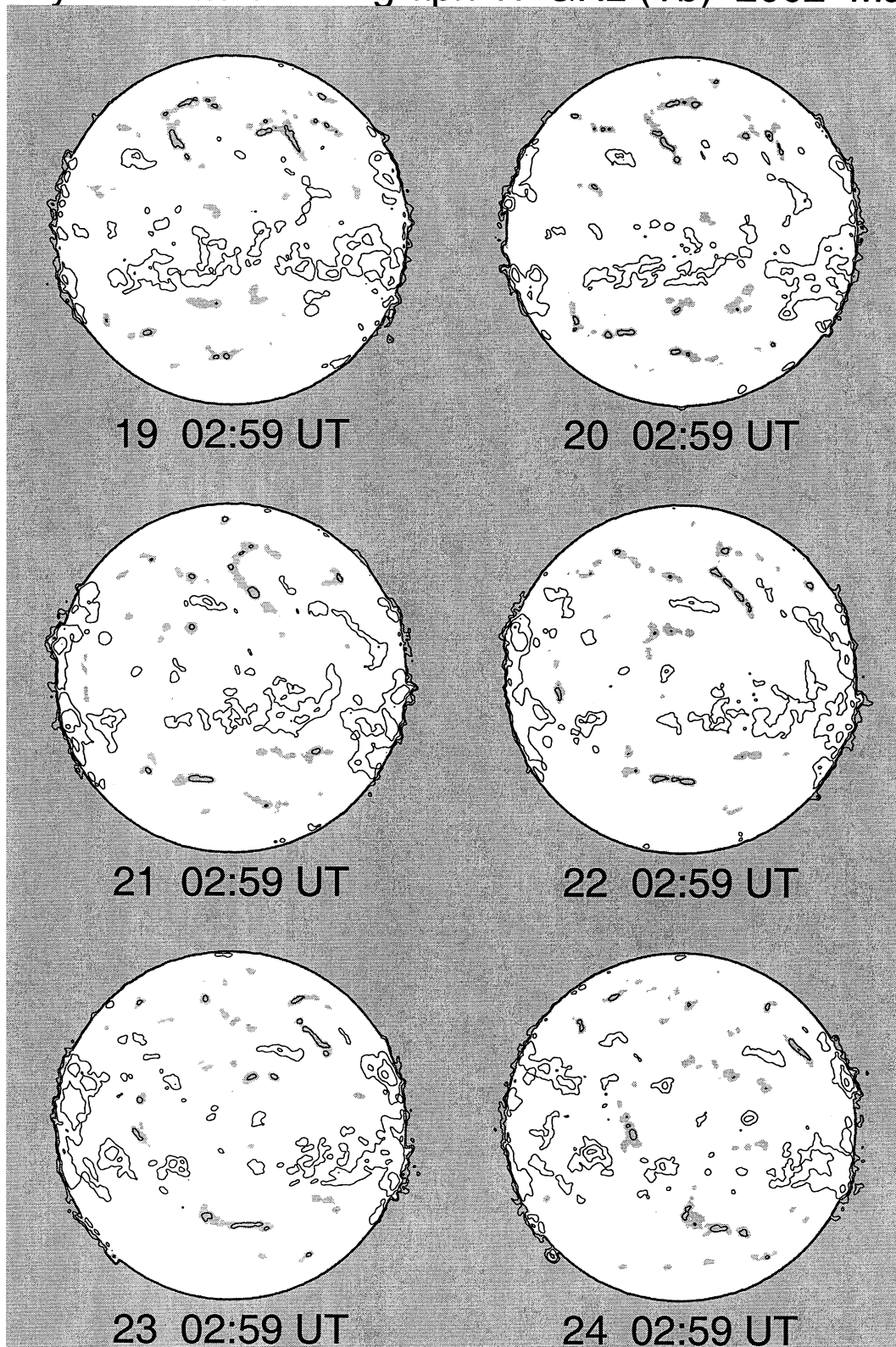
Contour Levels $T_b = [5, 8, 12, 20, 50, 100] \times 10^3$ K
Grey level $T_b \leq 9,500$ K.

Nobeyama Radio Heliograph 17 GHz (Tb) 2002 March



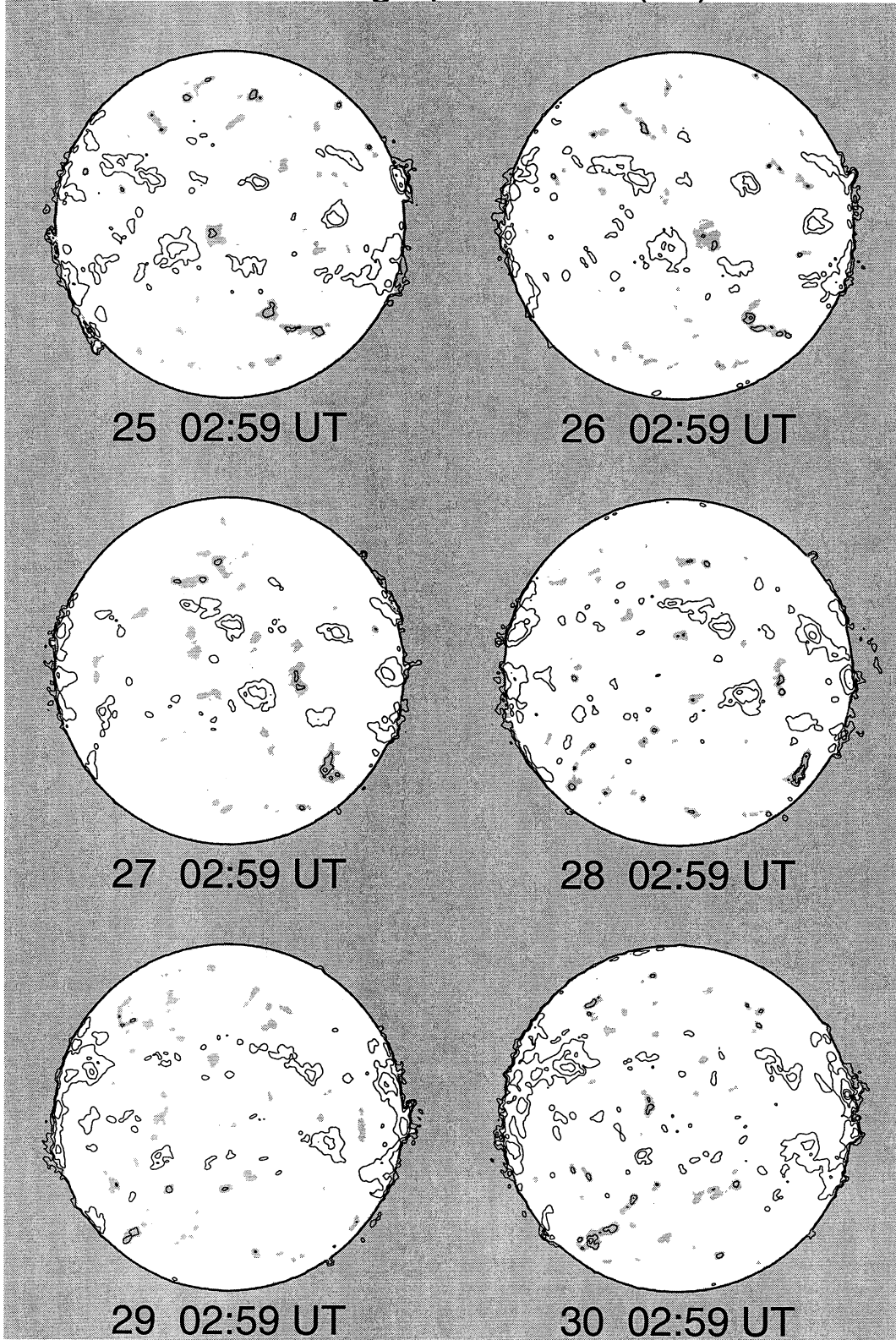
Contour Levels $T_b = [5, 8, 12, 20, 50, 100] \times 10^3$ K
Grey level $T_b \leq 9,500$ K

Nobeyama Radio Heliograph 17 GHz (Tb) 2002 March



Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

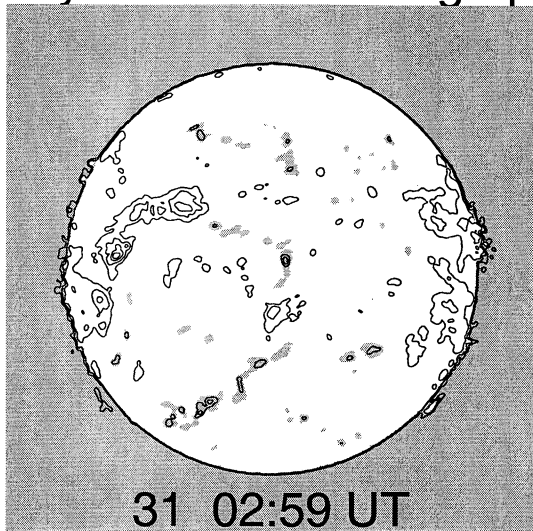
Nobeyama Radio Heliograph 17 GHz (Tb) 2002 March



Contour Levels $T_b=[5,8,12,20,50,100] \times 10^3$ K
Grey level $T_b \leq 9,500$ K

90
Mar 02

Nobeyama Radio Heliograph 17 GHz (Tb) 2002 March



Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

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

91
Mar 02

MARCH 2002

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
9845		RAMY	02 23	1212	N15 E76	03 1.3		A	HSX	30	1	3	3
9845		HOLL	02 23	1545	N15 E76	03 1.4		A	HAX	120	2	2	3
9845	31045	MWIL	02 23	1600	N15 E75	03 1.3	4	(AP)					
9845		LEAR	02 24	0022	N18 E69	03 1.3		A	HAX	60	2	1	3
9845		VORO	02 24	0115	N15 E71	03 1.4			HAX	208	1		3
9845		SVTO	02 24	0815	N13 E66	03 1.3		A	HSX	50	1	1	3
9845		TACH	02 24	0850	N15 E62	03 1.1			AR	4	3	2	2
9845		HOLL	02 24	1535	N14 E62	03 1.3		A	HAX	90	2	2	3
9845	31045	MWIL	02 24	1600	N15 E61	03 1.3	4	(AP)					
9845		RAMY	02 24	1720	N13 E61	03 1.3		A	HSX	50	1	2	2
9845		LEAR	02 25	0010	N17 E59	03 1.5		B	CAO	70	2	6	4
9845		VORO	02 25	0153	N16 E57	03 1.4			HAX	43	1		1
9845		TACH	02 25	0529	N16 E52	03 1.2			CSO	57	2	6	3
9845		SVTO	02 25	0900	N16 E54	03 1.5		B	DAO	80	5	9	3
9845		RAMY	02 25	1300	N18 E53	03 1.6		B	DSO	50	7	8	2
9845		HOLL	02 25	1525	N17 E53	03 1.7		B	DAO	100	4	7	3
9845	31045	MWIL	02 25	1530	N17 E52	03 1.6	5	(BP)					
9845		VORO	02 25	2354	N17 E47	03 1.6			DSI	185	7	7	2
9845		LEAR	02 26	0310	N17 E45	03 1.5		B	DAO	120	7	9	3
9845		SVTO	02 26	0755	N18 E43	03 1.6		B	DAO	100	11	10	3
9845		KAND	02 26	0820	N16 E44	03 1.7			DSI		6	10	3
9845		RAMY	02 26	1450	N18 E40	03 1.7		B	DAO	130	14	9	2
9845		HOLL	02 26	1530	N16 E38	03 1.5		B	DSI	210	15	10	2
9845	31045	MWIL	02 26	1600	N17 E38	03 1.5	5	(B)					
9845	31049	MWIL	02 26	1600	N17 E46	03 2.2	3	(AP)					
9845		VORO	02 26	2338	N17 E35	03 1.6			DAI	220	9	9	3
9845		SVTO	02 27	0814	N17 E29	03 1.5		B	EAI	200	12	11	2
9845		KAND	02 27	1155	N17 E28	03 1.6			DAO		11	10	1
9845		RAMY	02 27	1230	N18 E26	03 1.5		B	DAI	120	26	10	4
9845	31045	MWIL	02 27	1800	N16 E18	03 1.1	5	AP					
9845	31051	MWIL	02 27	1800	N17 E26	03 1.7	4	B					
9845		HOLL	02 27	1820	N16 E25	03 1.7		B	EAI	200	23	13	2
9845		VORO	02 27	2347	N17 E21	03 1.6			DAI	289	27	10	3
9845		LEAR	02 28	0120	N18 E19	03 1.5		B	EAO	290	32	12	2
9845		TACH	02 28	0511	N16 E13	03 1.2			CAI	225	9	10	2
9845		SVTO	02 28	0750	N18 E16	03 1.5		B	EAI	300	14	13	3
9845		KAND	02 28	1350	N16 E14	03 1.6			EAO		11	12	3
9845		RAMY	02 28	1505	N18 E12	03 1.5		BG	EAI	390	34	13	2
9845	31045	MWIL	02 28	1600	N16 E06	03 1.1	4	(AP)					
9845	31051	MWIL	02 28	1600	N17 E15	03 1.8	5	(B)					
9845		VORO	02 28	2337	N18 E08	03 1.6			DAI	494	43	11	3
9845		LEAR	03 01	0400	N17 E06	03 1.6		B	EAI	350	23	13	2
9845		TACH	03 01	0619	N16 E02	03 1.4			DAI	350	9	10	2
9845		KAND	03 01	0845	N18 E04	03 1.7			EAI		22	13	5
9845		HOLL	03 01	1530	N16 W01	03 1.6		B	EKI	380	25	12	2
9845	31045	MWIL	03 01	1600	N16 W07	03 1.1	4	(AP)					
9845	31051	MWIL	03 01	1600	N17 E02	03 1.8	5	(B)					
9845		RAMY	03 01	1602	N17 E01	03 1.7		BG	ESO	430	12	13	2
9845		VORO	03 01	2313	N17 W06	03 1.5			DAI	602	10	10	2
9845		LEAR	03 02	0030	N17 W08	03 1.4		B	EKO	390	20	15	3
9845		KAND	03 02	0800	N18 W10	03 1.6			ESO		10	13	3
9845		SVTO	03 02	0915	N18 W11	03 1.5		B	FKI	390	17	16	2
9845		RAMY	03 02	1325	N18 W13	03 1.6		BG	EAI	310	31	13	4
9845	31051	MWIL	03 02	1530	N17 W13	03 1.6	5	(BG)					
9845		HOLL	03 02	1600	N19 W13	03 1.7		BG	EKI	320	21	13	2
9845		VORO	03 03	0105	N18 W18	03 1.7			DAI	678	20	8	2
9845		KAND	03 03	0835	N16 W22	03 1.7			EAO		21	15	3
9845		RAMY	03 03	1302	N18 W27	03 1.5		BG	FAI	380	31	17	2
9845	31051	MWIL	03 03	1530	N17 W28	03 1.5	5	(BG)					
9845		HOLL	03 03	1535	N18 W29	03 1.4		BG	FAC	390	22	16	3
9845		VORO	03 03	2305	N18 W34	03 1.4			DAI	735	19	16	2
9845		LEAR	03 04	0015	N17 W34	03 1.4		BG	FKI	570	32	17	4
9845		TACH	03 04	0554	N15 W36	03 1.5			EAI	776	16	14	3
9845		KAND	03 04	1150	N18 W40	03 1.4			FKO		14	18	2
9845		RAMY	03 04	1152	N18 W40	03 1.4		BG	FAO	360	17	17	2
9845		HOLL	03 04	1530	N16 W42	03 1.5		BG	FAI	420	23	20	2
9845	31051	MWIL	03 04	1530	N17 W42	03 1.4	5	(BG)					
9845		LEAR	03 05	0010	N17 W47	03 1.4		BG	FKI	470	21	22	4
9845		VORO	03 05	0425	N18 W47	03 1.6			DAI	778	13	13	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9845		TACH	03 05 0529	N17	W49	03	1.5		FAI	301	10	17	3
9845		KAND	03 05 0730	N19	W49	03	1.6		EAO		8	13	4
9845		SVTO	03 05 0839	N19	W52	03	1.4		FAI	480	13	18	3
9845		RAMY	03 05 1305	N17	W56	03	1.3		BG FAI	350	24	20	3
9845		HOLL	03 05 1445	N17	W53	03	1.6		BG FAI	420	18	20	3
9845	31051	MWIL	03 05 1530	N17	W56	03	1.4	4	(BG)				
9845		LEAR	03 06 0015	N17	W60	03	1.4		BG FAI	330	10	18	2
9845		KAND	03 06 0915	N17	W63	03	1.6		FAO		13	25	3
9845		RAMY	03 06 1240	N17	W67	03	1.4		BG FSO	260	10	19	3
9845		HOLL	03 06 1450	N18	W68	03	1.4		BG FAI	280	10	20	3
9845	31051	MWIL	03 06 1530	N17	W68	03	1.5	4	(B)				
9845		VORO	03 06 2252	N19	W70	03	1.6		DAI	604	8	11	2
9845		LEAR	03 07 0725	N17	W71	03	1.9		BG EAI	130	9	13	1
9845		KAND	03 07 0755	N18	W75	03	1.6		CAO		9	16	2
9845		RAMY	03 07 1256	N16	W74	03	1.9		B DSO	50	3	8	2
9862		LEAR	03 06 0015	N06	W44	03	2.7		B CSO	20	4	3	2
9862		KAND	03 06 0915	N05	W49	03	2.7		BXO		3	3	3
9862		RAMY	03 06 1240	N05	W52	03	2.6		B DSO	30	3	4	3
9862		HOLL	03 06 1450	N07	W53	03	2.6		B CAO	30	9	6	3
9862	31069	MWIL	03 06 1530	N07	W54	03	2.6	4	(B)				
9862		VORO	03 06 2252	N06	W60	03	2.5		AXX	56	5		2
9862		LEAR	03 07 0725	N05	W61	03	2.7		B CSO	50	5	5	1
9862		KAND	03 07 0755	N07	W63	03	2.6		DAO		4	5	2
9862		RAMY	03 07 1256	N06	W65	03	2.7		B DSO	50	6	7	2
9862		VORO	03 08 0034	N08	W69	03	2.8		HAX	25	1		2
9862		LEAR	03 08 0110	N05	W70	03	2.8		B DSO	50	5	7	2
9862		TACH	03 08 0628	N06	W77	03	2.5		HSX	30	1	3	3
9862		KAND	03 08 0855	N05	W80	03	2.4		HS		1	2	3
9862		RAMY	03 08 1245	N05	W80	03	2.5		B CSO	30	2	2	3
9849		RAMY	02 25 1300	N23	E74	03	3.2		A HRX	10	1	1	2
9849		HOLL	02 25 1525	N23	E74	03	3.3		A AXX		1		3
9849	31047	MWIL	02 25 1530	N22	E72	03	3.2	2	(AP)				
9849		VORO	02 25 2357	N22	E69	03	3.3		AXX	8	1		3
9849		LEAR	02 26 0310	N23	E69	03	3.4		B BXO	10	2	9	3
9849		SVTO	02 26 0755	N23	E67	03	3.5		B CRO	40	3	6	3
9849		KAND	02 26 0820	N22	E66	03	3.4		AXX		1		3
9849		RAMY	02 26 1450	N23	E60	03	3.2		A AXX		1		2
9849	31047	MWIL	02 26 1600	N22	E60	03	3.3	3	(AP)				
9854		RAMY	03 02 1325	N10	E09	03	3.2		B BXO		2	3	4
9854	31058	MWIL	03 02 1530	N10	E09	03	3.3	3	(BG)				
9854		KAND	03 03 0835	N10	E00	03	3.3		CAO		6	4	3
9854		RAMY	03 03 1302	N11	W03	03	3.3		B CSO	30	8	3	2
9854	31058	MWIL	03 03 1530	N11	W05	03	3.3	4	(B)				
9854		HOLL	03 03 1535	N11	W05	03	3.3		B CSO	20	8	3	3
9854		LEAR	03 04 0015	N10	W11	03	3.2		B CRO	30	5	3	4
9863		HOLL	03 03 1535	N18	E08	03	4.2		A AXX	10	6	2	3
9863		LEAR	03 05 0010	N18	W09	03	4.3		A AXX		2	1	4
9863		KAND	03 05 0730	N19	W12	03	4.4		AX		1		4
9863		SVTO	03 05 0839	N19	W13	03	4.4		A AXX		1		3
9863		KAND	03 06 0915	N19	W26	03	4.4		BXO		3	3	3
9863		RAMY	03 06 1240	N18	W31	03	4.2		B DSO	30	2	3	3
9863		HOLL	03 06 1450	N18	W33	03	4.1		B BXO	20	7	4	3
9863	31070	MWIL	03 06 1530	N19	W32	03	4.2	4	(AP)				
9863		KAND	03 07 0755	N17	W41	03	4.2		AX		1		2
9863		RAMY	03 07 1256	N18	W46	03	4.0		B BXO	10	5	4	2
9863		RAMY	03 08 1245	N19	W56	03	4.2		A AXX	10	1	1	3
9863A	31052	MWIL	02 28 1600	S07	E56	03	4.9	3	(AP)				
9863A		VORO	02 28 2337	S07	E52	03	4.9		AXX	9	2		3
9858		LEAR	03 04 0015	S29	E18	03	5.4		A HAX	20	3	1	4
9858		TACH	03 04 0554	S28	E10	03	5.0		AR	7	3	1	3
9858		KAND	03 04 1150	S29	E11	03	5.3		DSO		2	2	2
9858		RAMY	03 04 1152	S31	E11	03	5.4		B DSO	30	2	3	2
9858		HOLL	03 04 1530	S30	E09	03	5.3		B DAO	60	4	2	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9858	31066	MWIL	03 04 1530	S30 E09	03 5.3	4	(B)					
9858		LEAR	03 05 0010	S30 E05	03 5.4		B	DSO	30	4	3	4
9858		TACH	03 05 0529	S26 E01	03 5.3			BXO	25	2	2	3
9858		KAND	03 05 0730	S29 E01	03 5.4			BXO		3	3	4
9858		SVTO	03 05 0839	S30 W01	03 5.3		B	DSO	30	3	3	3
9858		RAMY	03 05 1305	S29 W01	03 5.5		B	DSO		3	3	3
9858		HOLL	03 05 1445	S30 W03	03 5.4		B	BXO	20	3	3	3
9858	31066	MWIL	03 05 1530	S30 W04	03 5.3	4	(B)					
9858		LEAR	03 06 0015	S30 W08	03 5.4		B	DSO	20	3	3	2
9858		KAND	03 06 0915	S29 W13	03 5.4			AX		1		3
9858		HOLL	03 06 1450	S29 W17	03 5.3		A	AXX	10	1	1	3
9858	31066	MWIL	03 06 1530	S30 W17	03 5.3	4	(AF)					
9855		VORO	03 03 0105	N13 E36	03 5.8			BXO	36	4	1	2
9855		KAND	03 03 0835	N12 E33	03 5.8			CRO		5	4	3
9855		RAMY	03 03 1302	N12 E30	03 5.8		B	DSO	20	6	3	2
9855	31062	MWIL	03 03 1530	N13 E27	03 5.7	4	(BF)					
9855		HOLL	03 03 1535	N12 E29	03 5.8		B	CAO	20	7	2	3
9855		VORO	03 03 2305	N13 E24	03 5.8			BXO	76	9	1	2
9855		LEAR	03 04 0015	N13 E23	03 5.7		B	CAO	40	5	4	4
9855		TACH	03 04 0554	N11 E15	03 5.4			AR	26	3	2	3
9855		RAMY	03 04 1152	N12 E17	03 5.8		A	AXX	10	2	2	2
9855	31062	MWIL	03 04 1530	N13 E13	03 5.6	3	(B)					
9855	31077	MWIL	03 10 1545	N14 W64	03 5.8	3	(B)					
9855		LEAR	03 11 0021	N08 W77	03 5.2		A	AXX	20	1		2
9851		RAMY	02 28 1505	S07 E74	03 6.2		B	CSO	30	2	4	2
9851	31053	MWIL	02 28 1600	S07 E75	03 6.3	3	(BP)					
9851		VORO	02 28 2337	S07 E70	03 6.2			BXO	23	4	3	3
9851		LEAR	03 01 0400	S06 E66	03 6.1		B	DSO	50	5	5	2
9851		TACH	03 01 0619	S05 E62	03 5.9			BRO	7	3	4	2
9851		KAND	03 01 0845	S06 E64	03 6.1			BXO		4	6	5
9851		HOLL	03 01 1530	S08 E60	03 6.1		B	CAO	40	6	5	2
9851	31053	MWIL	03 01 1600	S07 E59	03 6.1	4	(B)					
9851		RAMY	03 01 1602	S07 E60	03 6.2		B	DSO	60	4	7	2
9851		VORO	03 01 2313	S07 E55	03 6.1			BXO	14	5	3	2
9851		LEAR	03 02 0030	S06 E54	03 6.1		B	DSO	50	10	8	3
9851		KAND	03 02 0800	S07 E51	03 6.1			BXO		3	4	3
9851		SVTO	03 02 0915	S04 E48	03 6.0		B	DSO	60	10	12	2
9851		RAMY	03 02 1325	S06 E47	03 6.1		B	DSO	30	7	9	4
9851	31053	MWIL	03 02 1530	S06 E47	03 6.2	4	(B)					
9851		HOLL	03 02 1600	S04 E43	03 5.9		B	DAO	50	7	4	2
9851		VORO	03 03 0105	S06 E38	03 5.9			BXO	41	6	5	2
9851		KAND	03 03 0835	S06 E39	03 6.3			BXO		14	12	3
9851		RAMY	03 03 1302	S05 E33	03 6.0		B	CSO	10	7	4	2
9851	31053	MWIL	03 03 1530	S06 E35	03 6.3	4	(B)					
9851		HOLL	03 03 1535	S05 E30	03 5.9		B	CAO	40	7	3	3
9851		HOLL	03 03 1535	S07 E38	03 6.5		B	BXO	10	8	3	3
9851		VORO	03 03 2305	S04 E27	03 6.0			BXO	82	10	4	2
9851		LEAR	03 04 0015	S05 E29	03 6.2		B	CSO	70	14	9	4
9851		TACH	03 04 0554	S07 E21	03 5.8			BRI	46	8	9	3
9851		KAND	03 04 1150	S06 E23	03 6.2			CSO		8	10	2
9851		RAMY	03 04 1152	S08 E22	03 6.1		B	DAO	60	12	10	2
9851	31053	MWIL	03 04 1530	S06 E20	03 6.1	4	(B)					
9851		HOLL	03 04 1530	S07 E20	03 6.1		B	DAI	70	14	10	2
9851		LEAR	03 05 0010	S05 E15	03 6.1		B	DAI	70	20	10	4
9851		VORO	03 05 0425	S07 E13	03 6.1			BXO	83	9	9	2
9851		TACH	03 05 0529	S04 E06	03 5.7			BRI	65	6	8	3
9851		KAND	03 05 0730	S05 E12	03 6.2			CAI		12	10	4
9851		SVTO	03 05 0839	S07 E11	03 6.2		B	ESI	70	16	11	3
9851		RAMY	03 05 1305	S06 E09	03 6.2		B	EAI	50	26	13	3
9851		HOLL	03 05 1445	S06 E07	03 6.1		B	DAI	110	13	10	3
9851	31053	MWIL	03 05 1530	S05 E07	03 6.2	4	(BF)					
9851		LEAR	03 06 0015	S07 E03	03 6.2		B	ESI	90	24	13	2
9851		KAND	03 06 0915	S06 W02	03 6.2			EAO		17	12	2
9851		RAMY	03 06 1240	S03 W04	03 6.2		B	EAO	90	12	13	3
9851		HOLL	03 06 1450	S04 W06	03 6.2		B	EAI	140	28	12	3
9851	31053	MWIL	03 06 1530	S05 W07	03 6.1	4	(B)					
9851		VORO	03 06 2252	S05 W13	03 6.0			DSI	401	25	6	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Mo	Day	Observation Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9851		LEAR	03	07	0725	S05	W15	03	6.2		B	EAI	120	22	15	1
9851		KAND	03	07	0755	S05	W16	03	6.1			ESO		21	12	2
9851		RAMY	03	07	1256	S04	W18	03	6.2		B	ESI	140	26	12	2
9851		VORO	03	08	0034	S05	W26	03	6.1			DSI	220	15	5	2
9851		LEAR	03	08	0110	S05	W25	03	6.2		B	ESI	100	11	12	2
9851		TACH	03	08	0628	S04	W26	03	6.3			CAI	140	5	8	3
9851		KAND	03	08	0855	S05	W30	03	6.1			CSO		9	9	3
9851		RAMY	03	08	1245	S04	W31	03	6.2		B	DAO	100	15	10	3
9851		HOLL	03	08	1600	S06	W35	03	6.0		B	CAO	80	12	9	2
9851	31053	MWIL	03	08	1830	S05	W36	03	6.1	5	(B)					
9851		VORO	03	08	2351	S06	W39	03	6.1			DSI	223	14	7	2
9851		LEAR	03	09	0115	S06	W38	03	6.2		B	DAO	100	15	10	2
9851		TACH	03	09	0437	S04	W39	03	6.3			CAO	66	4	6	3
9851		KAND	03	09	0730	S05	W45	03	5.9			DSO		4	6	3
9851		SVTO	03	09	1045	S04	W47	03	5.9		B	DSO	40	5	6	2
9851		RAMY	03	09	1355	S04	W48	03	6.0		B	DSO	30	10	7	4
9851		HOLL	03	09	1508	S04	W49	03	6.0		B	DAO	70	5	8	3
9851	31053	MWIL	03	09	1545	S05	W49	03	6.0	4	(B)					
9851		VORO	03	09	2245	S06	W54	03	5.9			DSI	161	6	5	2
9851		LEAR	03	10	0015	S09	W54	03	5.9		B	DAO	80	5	8	4
9851		TACH	03	10	0540	S05	W56	03	6.0			CSO	35	2	7	3
9851		RAMY	03	10	1355	S04	W63	03	5.9		B	DSO	20	3	7	2
9851	31053	MWIL	03	10	1545	S05	W65	03	5.8	4	(B)					
9851		HOLL	03	10	1600	S04	W64	03	5.9		B	CAO	60	2	6	2
9851		LEAR	03	11	0021	S02	W71	03	5.7		A	HSX	70	1	1	2
9851		RAMY	03	11	1256	S06	W79	03	5.6		A	HSX	30	1	2	3
9851		HOLL	03	11	1500	S04	W79	03	5.7		A	AXX	10	1	1	2
9851	31053	MWIL	03	11	1530	S06	W80	03	5.6	4	(AP)					
9852A		VORO	03	05	0425	N07	E18	03	6.5			BXO	29	4	2	2
9852B		LEAR	03	06	0015	N17	E04	03	6.3		B	CSO	20	5	3	2
9852B		KAND	03	06	0915	N15	E01	03	6.5			AX		2	1	3
9852B		RAMY	03	06	1240	N16	W03	03	6.3		A	AXX	10	2	2	3
9852B		HOLL	03	06	1450	N17	W04	03	6.3		A	AXX	10	3	2	3
9852B	31071	MWIL	03	06	1530	N17	W03	03	6.4	4	(AF)					
9852	31054	MWIL	02	28	1600	N15	E85	03	7.1	3	AP					
9852		VORO	02	28	2337	N16	E78	03	6.9			AXX	9	1		3
9852		KAND	03	01	0845	N16	E74	03	7.0			AX		1		5
9852		HOLL	03	01	1530	N15	E69	03	6.9		A	AXX		1	1	2
9852		RAMY	03	01	1602	N16	E70	03	7.0		A	AXX	10	1		2
9852		VORO	03	01	2313	N15	E71	03	7.3			AXX	5	1		2
9852		LEAR	03	02	0030	N17	E63	03	6.8		A	AXX		1		3
9852		SVTO	03	02	0915	N16	E58	03	6.8		A	AXX	10	1		2
9852		RAMY	03	02	1325	N15	E57	03	6.9		A	AXX		1		4
9852	31060	MWIL	03	02	1530	N13	E59	03	7.1	3	(AP)					
9852	31059	MWIL	03	02	1530	N16	E55	03	6.8	3	(AP)					
9852		HOLL	03	02	1600	N12	E59	03	7.1		A	AXX		1	1	2
9853		RAMY	03	02	1325	S25	E76	03	8.4		A	HRX	10	1	1	4
9853	31061	MWIL	03	02	1530	S24	E74	03	8.4	3	(AP)					
9853		HOLL	03	02	1600	S23	E70	03	8.1		A	HSX	10	1	1	2
9853		RAMY	03	03	1302	S25	E61	03	8.3		B	CAO	30	5	6	2
9853	31061	MWIL	03	03	1530	S23	E57	03	8.0	4	(AP)					
9853		HOLL	03	03	1535	S22	E58	03	8.1		A	HAX	60	3	2	3
9853		LEAR	03	04	0015	S22	E54	03	8.2		B	CAO	70	8	7	4
9853		VORO	03	04	0105	S23	E54	03	8.2			HAX	97	1		2
9853		TACH	03	04	0554	S22	E45	03	7.7			HA	103	2	2	3
9853		KAND	03	04	1150	S23	E46	03	8.0			HS		2	2	2
9853		RAMY	03	04	1152	S25	E49	03	8.3		B	DAO	90	5	8	2
9853	31061	MWIL	03	04	1530	S23	E45	03	8.1	5	(B)					
9853		HOLL	03	04	1530	S23	E46	03	8.2		B	DAO	90	8	7	2
9853		LEAR	03	05	0010	S23	E42	03	8.2		B	DAO	90	13	8	4
9853		VORO	03	05	0425	S23	E38	03	8.1			HAX	104	1		2
9853		TACH	03	05	0529	S21	E35	03	7.9			CAO	85	6	5	3
9853		KAND	03	05	0730	S23	E37	03	8.2			CSO		5	5	4
9853		SVTO	03	05	0839	S25	E37	03	8.2		B	DAO	70	9	6	3
9853		RAMY	03	05	1305	S25	E36	03	8.3		B	DSO	70	10	6	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9853		HOLL	03 05 1445	S24	E33	03 8.2		B	DAO	80	5	6	3
9853	31061	MWIL	03 05 1530	S23	E33	03 8.2	5	(BP)					
9853		LEAR	03 06 0015	S23	E30	03 8.3		B	DAO	80	11	7	2
9853		KAND	03 06 0915	S23	E25	03 8.3			CAO		13	8	3
9853		RAMY	03 06 1240	S23	E24	03 8.4		B	DSO	70	6	7	3
9853		HOLL	03 06 1450	S23	E22	03 8.3		B	DAO	60	14	8	3
9853	31061	MWIL	03 06 1530	S23	E21	03 8.3	4	(B)					
9853		VORO	03 06 2252	S24	E18	03 8.3			BXO	217	17	7	2
9853		LEAR	03 07 0725	S23	E13	03 8.3		B	DAO	100	10	7	1
9853		KAND	03 07 0755	S23	E12	03 8.2			CRO		8	7	2
9853		RAMY	03 07 1256	S22	E09	03 8.2		B	DAO	50	9	7	2
9853		VORO	03 08 0034	S23	E02	03 8.2			BXO	93	7	3	2
9853		LEAR	03 08 0110	S23	E03	03 8.3		B	DAO	50	10	7	2
9853		TACH	03 08 0628	S19	W02	03 8.1			BRO	9	3	4	3
9853		KAND	03 08 0855	S22	W02	03 8.2			BXO		4	4	3
9853		RAMY	03 08 1245	S22	W05	03 8.1		B	DSO	20	8	6	3
9853		HOLL	03 08 1600	S22	W07	03 8.1		B	CSO	20	6	8	2
9853	31061	MWIL	03 08 1830	S23	W07	03 8.2	4	(BP)					
9853		VORO	03 08 2351	S23	W12	03 8.1			BXO	26	3	5	2
9853		LEAR	03 09 0115	S23	W12	03 8.1		B	CAO	30	5	5	2
9853		TACH	03 09 0437	S20	W16	03 8.0			AXX	5	1	1	3
9853		KAND	03 09 0730	S22	W18	03 7.9			AX		1		3
9853		SVTO	03 09 1045	S22	W19	03 8.0		B	CRO	10	2	2	2
9853		RAMY	03 09 1355	S21	W22	03 7.9		B	CSO	10	3	3	4
9853		HOLL	03 09 1508	S21	W22	03 7.9		B	CSO	30	3	5	3
9853	31061	MWIL	03 09 1545	S22	W22	03 8.0	4	(B)					
9853		VORO	03 09 2245	S22	W26	03 7.9			BXO	27	4	2	2
9853		LEAR	03 10 0015	S24	W26	03 8.0		B	CRO	20	2	3	4
9859		RAMY	03 02 1325	S11	E77	03 8.3		A	HRX	10	1	1	4
9859		KAND	03 03 0835	S09	E70	03 8.6			AX		3	1	3
9859		RAMY	03 03 1302	S11	E66	03 8.5		A	AXX		1	1	2
9859	31063	MWIL	03 03 1530	S09	E65	03 8.5	3	(AP)					
9859		LEAR	03 04 0015	S08	E61	03 8.6		B	BXO	30	4	4	4
9859		VORO	03 04 0105	S10	E61	03 8.6			BXO	31	3	3	2
9859		TACH	03 04 0554	S10	E60	03 8.7			AXX	5	1	1	3
9859		KAND	03 04 1150	S10	E54	03 8.5			AX		1		2
9859		RAMY	03 04 1152	S10	E60	03 9.0		A	HSX	10	1		2
9859		RAMY	03 04 1152	S11	E52	03 8.4		B	CSO	20	2	2	2
9859	31063	MWIL	03 04 1530	S09	E53	03 8.6	4	(B)					
9859		HOLL	03 04 1530	S12	E50	03 8.4		A	HSX	30	1	1	2
9859		LEAR	03 05 0010	S08	E48	03 8.6		B	DSO	30	3	8	4
9859		VORO	03 05 0425	S09	E46	03 8.6			BXO	38	4	7	2
9859		TACH	03 05 0529	S07	E42	03 8.4			BXO	3	2	7	3
9859		KAND	03 05 0730	S09	E45	03 8.7			BXO		3	9	4
9859		SVTO	03 05 0839	S13	E45	03 8.7		B	BXO	30	4	9	3
9859		RAMY	03 05 1305	S08	E42	03 8.7		B	CSO	20	3	8	3
9859		HOLL	03 05 1445	S10	E40	03 8.6		B	CRO	30	5	7	3
9859	31063	MWIL	03 05 1530	S10	E37	03 8.4	4	(AP)					
9859		LEAR	03 06 0015	S10	E35	03 8.6		B	DSO	30	9	8	2
9859		VORO	03 06 2252	S11	E21	03 8.5			AXX	13	2		2
9859		LEAR	03 07 0725	S10	E15	03 8.4		B	DAO	30	5	3	1
9859		KAND	03 07 0755	S10	E15	03 8.4			AX		3	2	2
9859		RAMY	03 07 1256	S09	E14	03 8.6		B	CSO	30	10	7	2
9859		VORO	03 08 0034	S10	E07	03 8.5			DSO	99	15	5	2
9859		LEAR	03 08 0110	S10	E08	03 8.6		B	CSO	50	11	11	2
9859		TACH	03 08 0628	S08	E02	03 8.4			BXI	40	3	4	3
9859		KAND	03 08 0855	S11	E01	03 8.4			BXO		10	5	3
9859		RAMY	03 08 1245	S10	E00	03 8.5		B	DSO	60	20	7	3
9859		HOLL	03 08 1600	S11	W04	03 8.4		B	DSI	80	15	7	2
9859	31073	MWIL	03 08 1830	S10	W04	03 8.5	4	(B)					
9859		VORO	03 08 2351	S11	W07	03 8.5			BXO	82	14	5	2
9859		LEAR	03 09 0115	S11	W07	03 8.5		B	CSO	50	10	6	2
9859		TACH	03 09 0437	S09	W09	03 8.5			BRI	12	7	3	3
9859		KAND	03 09 0730	S10	W11	03 8.5			BXO		7	5	3
9859		SVTO	03 09 1045	S10	W13	03 8.5		B	DSO	30	8	7	2
9859		RAMY	03 09 1355	S10	W15	03 8.4		B	DSO	10	11	6	4
9859		HOLL	03 09 1508	S10	W16	03 8.4		B	DAO	50	6	6	3
9859	31073	MWIL	03 09 1545	S10	W16	03 8.4	4	(B)					

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9859		VORO	03 09 2245	S11 W19	03 8.5			BXO	28	7	5	2
9859		LEAR	03 10 0015	S12 W20	03 8.5		B	CRO	30	10	6	4
9859		RAMY	03 10 1355	S09 W28	03 8.5		B	DSO	10	4	6	2
9859	31073	MWIL	03 10 1545	S10 W30	03 8.4	4	(BP)					
9859	31078	MWIL	03 10 1545	S15 W25	03 8.8	4	(AP)					
9859		HOLL	03 10 1600	S10 W28	03 8.6		B	CSO	40	4	7	2
9859		LEAR	03 11 0021	S14 W35	03 8.4		B	CRO	20	3	6	2
9859		RAMY	03 11 1256	S10 W40	03 8.5		B	DSO	20	5	6	3
9859		HOLL	03 11 1500	S08 W42	03 8.5		B	BXO	10	4	7	2
9859	31073	MWIL	03 11 1530	S09 W42	03 8.5	4	(B)					
9859		LEAR	03 12 0022	S10 W45	03 8.6		B	CRO	20	3	10	3
9859		VORO	03 12 0045	S11 W43	03 8.8			HAX	67	5		2
9859		SVTO	03 12 1035	S12 W46	03 9.0		A	HSX	10	1	1	3
9859		RAMY	03 12 1244	S11 W48	03 8.9		B	CSO	20	4	3	3
9859		HOLL	03 12 1500	S11 W47	03 9.1		A	AXX		1		3
9859	31073	MWIL	03 12 1530	S11 W48	03 9.0	4	(AF)					
9859		LEAR	03 13 0005	S11 W54	03 8.9		A	HSX	20	1	1	4
9859		TACH	03 13 0532	S11 W56	03 9.0			AXX	10	1	1	3
9859		SVTO	03 13 0615	S11 W58	03 8.9		A	HRX	10	2	2	3
9859		RAMY	03 13 1215	S11 W61	03 8.9		A	HSX	10	1	1	3
9859		HOLL	03 13 1545	S11 W61	03 9.1		A	AXX		1	1	3
9859	31073	MWIL	03 13 1730	S12 W63	03 9.0	4	(AF)					
9859		LEAR	03 14 0015	S11 W66	03 9.0		A	AXX	10	2	1	4
9856		KAND	03 03 0835	S05 E86	03 9.8			HS		1	2	3
9856		RAMY	03 03 1302	S06 E80	03 9.5		A	HSX	100	1	2	2
9856	31064	MWIL	03 03 1530	S05 E78	03 9.5	4	(AP)					
9856		HOLL	03 03 1535	S08 E78	03 9.5		A	HAX	120	1	2	3
9856		LEAR	03 04 0015	S04 E71	03 9.3		B	CSO	240	3	8	4
9856		VORO	03 04 0105	S05 E75	03 9.6			HKX	432	1		2
9856		TACH	03 04 0554	S04 E68	03 9.3			HSX	160	1	3	3
9856		KAND	03 04 1150	S05 E69	03 9.6			HS		1	2	2
9856		RAMY	03 04 1152	S07 E73	03 10.0		B	CSO	240	2	14	2
9856	31064	MWIL	03 04 1530	S05 E65	03 9.5	5	(AP)					
9856		HOLL	03 04 1530	S06 E65	03 9.5		A	HAX	170	1	3	2
9856		LEAR	03 05 0010	S05 E65	03 9.9		B	CAO	220	6	16	4
9856		VORO	03 05 0425	S05 E58	03 9.5			HKX	266	1		2
9856		TACH	03 05 0529	S02 E54	03 9.3			HSX	180	1	2	3
9856		KAND	03 05 0730	S05 E58	03 9.6			HS		1	2	4
9856		SVTO	03 05 0839	S07 E53	03 9.3		B	CAO	170	5	17	3
9856		HOLL	03 05 1445	S05 E52	03 9.5		B	CKO	140	3	2	3
9856	31064	MWIL	03 05 1530	S05 E52	03 9.5	5	(AP)					
9856		LEAR	03 06 0015	S04 E46	03 9.4		A	HKX	220	1	3	2
9856		KAND	03 06 0915	S04 E43	03 9.6			HS		1	3	3
9856		RAMY	03 06 1240	S03 E40	03 9.5		A	HSX	150	1	2	3
9856		HOLL	03 06 1450	S04 E39	03 9.5		A	HKX	200	1	3	3
9856	31064	MWIL	03 06 1530	S04 E38	03 9.5	5	(AP)					
9856		VORO	03 06 2252	S04 E35	03 9.6			HKX	379	1		2
9856		LEAR	03 07 0725	S03 E30	03 9.5		A	HKX	170	5	5	1
9856		KAND	03 07 0755	S04 E30	03 9.6			HS		1	2	2
9856		RAMY	03 07 1256	S03 E27	03 9.5		B	CSO	220	2	3	2
9856		VORO	03 08 0034	S04 E21	03 9.6			HKX	270	1		2
9856		LEAR	03 08 0110	S03 E20	03 9.5		B	CSO	120	3	5	2
9856		TACH	03 08 0628	S02 E15	03 9.4			HSX	200	1	2	3
9856		KAND	03 08 0855	S03 E15	03 9.5			HS		1	3	3
9856		RAMY	03 08 1245	S03 E14	03 9.6		B	CAO	160	2	3	3
9856		HOLL	03 08 1600	S05 E11	03 9.5		A	HSX	150	1	3	2
9856	31064	MWIL	03 08 1830	S04 E10	03 9.5	5	(AP)					
9856		VORO	03 08 2351	S04 E07	03 9.5			HKX	333	1		2
9856		LEAR	03 09 0115	S04 E06	03 9.5		B	CSO	110	3	2	2
9856		TACH	03 09 0437	S02 E03	03 9.4			HSX	300	1	2	3
9856		KAND	03 09 0730	S04 E03	03 9.5			HA		1	2	3
9856		SVTO	03 09 1045	S03 E01	03 9.5		A	HSX	200	1	3	2
9856		RAMY	03 09 1355	S03 W01	03 9.5		B	CSO	200	2	3	4
9856		HOLL	03 09 1508	S03 W02	03 9.5		A	HSX	100	2	2	3
9856	31064	MWIL	03 09 1545	S03 W02	03 9.5	5	(AP)					
9856		VORO	03 09 2245	S04 W05	03 9.6			HKX	335	1		2
9856		LEAR	03 10 0015	S03 W05	03 9.6		B	CSO	160	6	7	4
9856		TACH	03 10 0540	S04 W10	03 9.5			HSX	200	1	2	3

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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)
9856		RAMY	03	10	1355	S03	W13	03	9.6	B	CSO	170	2	3	2
9856	31064	MWIL	03	10	1545	S03	W15	03	9.5	5	(AP)				
9856		HOLL	03	10	1600	S04	W15	03	9.5	A	HSX	100	2	2	2
9856		LEAR	03	11	0021	S06	W19	03	9.6	A	HAX	130	2	3	2
9856		RAMY	03	11	1256	S03	W26	03	9.6	B	CSO	170	2	3	3
9856		HOLL	03	11	1500	S03	W28	03	9.5	A	HSX	170	1	2	2
9856	31064	MWIL	03	11	1530	S03	W28	03	9.5	5	(AP)				
9856		LEAR	03	12	0022	S03	W33	03	9.5	A	HSX	160	1	3	3
9856		VORO	03	12	0045	S04	W33	03	9.6		HKX	231	1		2
9856		SVTO	03	12	1035	S04	W38	03	9.6	A	HSX	180	1	3	3
9856		RAMY	03	12	1244	S03	W39	03	9.6	B	CSO	130	2	3	3
9856		HOLL	03	12	1500	S03	W42	03	9.5	A	HAX	130	2	2	3
9856	31064	MWIL	03	12	1530	S03	W41	03	9.6	5	(AP)				
9856		VORO	03	12	2315	S04	W46	03	9.5		HKX	234	1		2
9856		LEAR	03	13	0005	S03	W45	03	9.6	A	HAX	140	2	3	4
9856		TACH	03	13	0532	S03	W48	03	9.6		HSX	110	1	2	3
9856		SVTO	03	13	0615	S03	W50	03	9.5	A	HSX	150	2	2	3
9856		RAMY	03	13	1215	S03	W54	03	9.5	A	HSX	210	2	2	3
9856		HOLL	03	13	1545	S04	W55	03	9.5	A	HAX	100	3	2	3
9856	31064	MWIL	03	13	1730	S04	W56	03	9.5	4	(AP)				
9856		LEAR	03	14	0015	S03	W58	03	9.7	A	HAX	120	3	3	4
9856		VORO	03	14	0051	S04	W60	03	9.5		HKX	229	1		2
9856		VORO	03	14	0051	S05	W53	03	10.1		AXX	46	6		2
9856		TACH	03	14	0650	S04	W61	03	9.7		HSX	60	1	3	2
9856		SVTO	03	14	1035	S03	W66	03	9.5	A	HAX	110	1	2	2
9856		RAMY	03	14	1210	S04	W66	03	9.6	B	DAO	80	3	3	3
9856		HOLL	03	14	1545	S04	W68	03	9.6	A	HAX	100	3	2	4
9856		VORO	03	14	2315	S04	W72	03	9.6		HAX	116	1		2
9856		LEAR	03	15	0010	S03	W70	03	9.8	A	HAX	110	1	2	2
9856		TACH	03	15	0502	S03	W75	03	9.6		HSX	80	1	2	3
9856		KAND	03	15	0905	S04	W77	03	9.6		HS		1	2	5
9856		RAMY	03	15	1246	S04	W80	03	9.5	B	CSO	50	2	6	3
9856		SVTO	03	15	1300	S06	W80	03	9.5	A	HAX	30	1	1	2
9856		HOLL	03	15	1457	S03	W80	03	9.6	A	AXX	20	1	1	2
9856	31064	MWIL	03	15	1600	S04	W80	03	9.7	3	AP				
9860		KAND	03	05	0730	S06	E73	03	10.8		AX		2	2	4
9860		RAMY	03	05	1305	S04	E67	03	10.5	A	HSX	20	2	2	3
9860		HOLL	03	05	1445	S07	E66	03	10.5	A	AXX	20	2	1	3
9860	31067	MWIL	03	05	1530	S06	E66	03	10.6	4	(AF)				
9860		LEAR	03	06	0015	S06	E60	03	10.5	A	AXX	10	3	2	2
9860		HOLL	03	06	1450	S06	E49	03	10.3	A	AXX	10	2	1	3
9860	31072	MWIL	03	06	1530	S06	E49	03	10.3	4	(AF)				
9860		SVTO	03	14	1035	S06	W48	03	10.8	A	HRX	10	1	1	2
9860		RAMY	03	14	1210	S07	W49	03	10.8	A	HSX	10	1	1	3
9860		HOLL	03	14	1545	S05	W51	03	10.8	A	AXX		1	1	4
9860		LEAR	03	15	0010	S06	W54	03	11.0	B	DAO	30	2	3	2
9860		TACH	03	15	0502	S07	W56	03	11.0		AXX	20	1	1	3
9860		KAND	03	15	0905	S07	W60	03	10.9		AX		2	1	5
9860		RAMY	03	15	1246	S07	W63	03	10.8	B	CSO	20	5	2	3
9860	31085	MWIL	03	15	1600	S07	W62	03	11.0	3	(B)				
9861		SVTO	03	05	0839	N06	E76	03	11.0	A	AXX		1		3
9861		RAMY	03	05	1305	N10	E72	03	10.9	A	HRX	20	1	1	3
9861		HOLL	03	05	1445	N07	E70	03	10.8	A	HSX	30	1	1	3
9861	31068	MWIL	03	05	1530	N07	E69	03	10.8	4	(AP)				
9861		LEAR	03	06	0015	N08	E64	03	10.8	A	HSX	20	1	1	2
9861		KAND	03	06	0915	N07	E62	03	11.0		AX		1		3
9861		RAMY	03	06	1240	N08	E58	03	10.9	A	HSX	10	1	1	3
9861		HOLL	03	06	1450	N07	E57	03	10.9	A	AXX	10	1	1	3
9861	31068	MWIL	03	06	1530	N07	E56	03	10.8	4	(AP)				
9861		LEAR	03	07	0725	N09	E49	03	11.0	A	AXX	10	1	1	1
9861		KAND	03	07	0755	N08	E47	03	10.8		AX		1		2
9861		RAMY	03	07	1256	N09	E44	03	10.8	A	HSX		1	1	2
9861C		VORO	03	06	2252	N05	E62	03	11.6		AXX	13	1		2
9861C		VORO	03	08	0034	S00	E50	03	11.7		DSO	78	4	3	2
9861D	31086	MWIL	03	15	1600	S27	W46	03	12.1	2	(AF)				

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MARCH 2002

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
9861A		HOLL	03 14 1545	S12	W28	03 12.5		A	HAX	20	1	1	4
9861A		LEAR	03 15 0010	S13	W33	03 12.5		A	AXX		1		2
9861B		KAND	03 07 0755	N11	E71	03 12.7			AX		2	1	2
9864		LEAR	03 07 0725	N18	E78	03 13.2		A	AAX	30	1	2	1
9864		KAND	03 07 0755	N19	E80	03 13.4			HS		2	2	2
9864		RAMY	03 07 1256	N18	E75	03 13.2		A	HSX	60	1	3	2
9864		VORO	03 08 0034	N19	E70	03 13.4			HAX	207	1		2
9864		LEAR	03 08 0110	N19	E67	03 13.2		A	HSX	50	1	2	2
9864		TACH	03 08 0628	N20	E63	03 13.1			HSX	110	1	3	3
9864		KAND	03 08 0855	N18	E67	03 13.5			HS		1	2	3
9864		RAMY	03 08 1245	N18	E61	03 13.2		A	HSX	90	1	3	3
9864		HOLL	03 08 1600	N17	E62	03 13.4		A	HAX	80	1	2	2
9864	31074	MWIL	03 08 1830	N18	E59	03 13.3	4	(AP)					
9864		VORO	03 08 2351	N18	E56	03 13.2			HKX	199	4		2
9864		LEAR	03 09 0115	N20	E55	03 13.2		B	CAO	70	4	3	2
9864		TACH	03 09 0437	N19	E50	03 13.0			HA	101	2	2	3
9864		KAND	03 09 0730	N17	E54	03 13.4			CAO		3	3	3
9864		SVTO	03 09 1045	N18	E50	03 13.2		B	CSO	70	3	4	2
9864		RAMY	03 09 1355	N19	E48	03 13.2		B	DSO	70	7	3	4
9864		HOLL	03 09 1508	N18	E48	03 13.3		B	CSO	80	6	5	3
9864	31074	MWIL	03 09 1545	N19	E47	03 13.2	5	(BP)					
9864		VORO	03 09 2245	N18	E44	03 13.3			HKX	127	4		2
9864		LEAR	03 10 0015	N22	E39	03 13.0		B	CAO	140	8	5	4
9864		TACH	03 10 0540	N19	E36	03 13.0			CSO	58	2	3	3
9864		RAMY	03 10 1355	N19	E38	03 13.5		B	CSO	50	2	6	2
9864	31074	MWIL	03 10 1545	N19	E34	03 13.2	5	(BP)					
9864		HOLL	03 10 1600	N18	E36	03 13.4		B	CAO	40	5	5	2
9864		LEAR	03 11 0021	N22	E27	03 13.1		B	CSO	70	4	4	2
9864		RAMY	03 11 1256	N18	E20	03 13.1		B	CSO	50	5	6	3
9864		HOLL	03 11 1500	N17	E18	03 13.0		B	CSO	40	4	6	2
9864	31074	MWIL	03 11 1530	N18	E21	03 13.2	4	(AP)					
9864		LEAR	03 12 0022	N18	E15	03 13.1		B	DSO	50	2	7	3
9864		VORO	03 12 0045	N18	E17	03 13.3			HAX	95	4		2
9864		SVTO	03 12 1035	N18	E13	03 13.4		B	DSO	30	3	6	3
9864		RAMY	03 12 1244	N19	E11	03 13.4		B	CSO	30	4	5	3
9864		HOLL	03 12 1500	N18	E08	03 13.2		A	HSX	40	2	2	3
9864	31074	MWIL	03 12 1530	N18	E08	03 13.2	5	(AP)					
9864		VORO	03 12 2315	N18	E05	03 13.3			HAX	77	1		2
9864		LEAR	03 13 0005	N16	E01	03 13.1		B	CSO	70	5	7	4
9864		TACH	03 13 0532	N18	W01	03 13.1			HSX	55	1	1	3
9864		SVTO	03 13 0615	N19	E01	03 13.3		A	HSX	60	2	3	3
9864		RAMY	03 13 1215	N14	W08	03 12.9		A	AXX		1		3
9864		RAMY	03 13 1215	N21	W01	03 13.4		B	CSO	70	7	2	3
9864		HOLL	03 13 1545	N19	W03	03 13.4		B	CSO	20	6	7	3
9864	31074	MWIL	03 13 1730	N20	W05	03 13.3	5	(BP)					
9864		LEAR	03 14 0015	N17	W11	03 13.2		B	CSO	60	7	8	4
9864		VORO	03 14 0051	N19	W09	03 13.3			HAX	71	1		2
9864		TACH	03 14 0650	N17	W13	03 13.3			HSX	45	1	1	2
9864		SVTO	03 14 1035	N18	W14	03 13.4		A	HSX	40	1	2	2
9864		RAMY	03 14 1210	N20	W15	03 13.3		B	CSO	50	4	4	3
9864		HOLL	03 14 1545	N19	W12	03 13.7		B	CSO	40	3	7	4
9864		VORO	03 14 2315	N18	W21	03 13.4			HAX	53	1		2
9864		LEAR	03 15 0010	N16	W23	03 13.3		B	CAO	50	2	7	2
9864		TACH	03 15 0502	N16	W23	03 13.5			HSX	100	1	1	3
9864		KAND	03 15 0905	N18	W27	03 13.3			CSO		4	4	5
9864		RAMY	03 15 1246	N19	W29	03 13.3		B	CSO	30	4	3	3
9864		SVTO	03 15 1300	N19	W30	03 13.2		B	CSO	60	4	3	2
9864		HOLL	03 15 1457	N19	W29	03 13.4		A	HSX	30	1	1	2
9864	31074	MWIL	03 15 1600	N19	W30	03 13.4	5	(BP)					
9864		VORO	03 16 0032	N18	W35	03 13.3			HRX	82	4		2
9864		LEAR	03 16 0106	N19	W35	03 13.4		B	CSO	50	3	3	2
9864		KAND	03 16 0805	N18	W39	03 13.4			CSO		3	3	3
9864		RAMY	03 16 1221	N19	W42	03 13.3		B	DSO	30	4	4	3
9864		SVTO	03 16 1326	N19	W43	03 13.3		B	DAO	50	3	4	2
9864		HOLL	03 16 1525	N20	W43	03 13.3		B	DSO	60	3	4	3
9864	31074	MWIL	03 16 1600	N18	W43	03 13.4	5	(BP)					
9864		VORO	03 16 2304	N19	W48	03 13.3			HRX	58	2		2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9864		LEAR	03 17 0201	N19	W49	03 13.3		B	CAO	40	2	2	1
9864		RAMY	03 17 1209	N17	W56	03 13.2		B	CSO	40	3	7	2
9864		SVTO	03 17 1340	N15	W60	03 13.0		B	DAO	60	3	7	2
9864		HOLL	03 17 1735	N19	W57	03 13.4		A	HSX	40	1	2	2
9864		LEAR	03 18 0058	N19	W61	03 13.4		A	HSX	30	1	2	1
9864		KAND	03 18 0945	N19	W66	03 13.4			AX		1	1	4
9864		SVTO	03 18 1200	N18	W64	03 13.6		A	HSX	20	1	2	3
9864		RAMY	03 18 1327	N18	W68	03 13.4		A	HSX	20	1	1	2
9864		HOLL	03 18 1455	N19	W69	03 13.3		A	HSX	30	1	1	3
9864		LEAR	03 19 0040	N18	W72	03 13.5		A	HSX	20	1	2	3
9867		RAMY	03 10 1355	S29	E32	03 13.1		A	AXX	10	1	1	2
9867	31079	MWIL	03 10 1545	S30	E32	03 13.2	4	(B)					
9867		LEAR	03 11 0021	S27	E32	03 13.5		A	AXX	20	1		2
9867		RAMY	03 11 1256	S30	E22	03 13.3		A	AXX		1	1	3
9867		HOLL	03 11 1500	S31	E17	03 13.0		B	BXO	10	3	8	2
9867	31079	MWIL	03 11 1530	S30	E21	03 13.3	4	(B)					
9867		SVTO	03 12 1035	S32	E11	03 13.3		A	AXX		1		3
9867		RAMY	03 12 1244	S30	E09	03 13.2		A	AXX		1	1	3
9867		HOLL	03 12 1500	S31	E08	03 13.2		A	AXX	10	1	1	3
9867	31079	MWIL	03 12 1530	S31	E08	03 13.3	4	(AF)					
9867A	31083	MWIL	03 12 1530	S20	E16	03 13.9	4	(B)					
9865		RAMY	03 08 1245	N14	E77	03 14.3		A	HSX	10	1	1	3
9865		HOLL	03 08 1600	N13	E76	03 14.4		A	AXX	10	2	1	2
9865	31075	MWIL	03 08 1830	N16	E75	03 14.4	2	AP					
9865		LEAR	03 09 0115	N16	E68	03 14.2		A	AXX	10	1	1	2
9865		TACH	03 09 0437	N16	E67	03 14.3			AXX	5	1	1	3
9865		KAND	03 09 0730	N13	E64	03 14.1			AX		1		3
9865		SVTO	03 09 1045	N13	E65	03 14.3		A	AXX		1		2
9865		RAMY	03 09 1355	N14	E63	03 14.3		A	HSX	10	1	1	4
9865		HOLL	03 09 1508	N13	E62	03 14.3		A	AXX	10	1	1	3
9865	31075	MWIL	03 09 1545	N15	E61	03 14.3	4	(AP)					
9865		LEAR	03 10 0015	N18	E54	03 14.1		A	HRX	20	1	1	4
9865		TACH	03 10 0540	N14	E49	03 13.9			AXX	10	1	1	3
9865		RAMY	03 10 1355	N14	E49	03 14.3		A	HRX	10	1	1	2
9865	31075	MWIL	03 10 1545	N14	E47	03 14.2	4	(AP)					
9865		HOLL	03 10 1600	N12	E50	03 14.4		A	AXX	10	1	1	2
9865		LEAR	03 11 0021	N12	E41	03 14.1		B	CRO	40	5	6	2
9865		RAMY	03 11 1256	N14	E36	03 14.2		A	HSX	10	1	1	3
9865		HOLL	03 11 1500	N13	E36	03 14.3		A	AXX	10	1	1	2
9865	31075	MWIL	03 11 1530	N14	E35	03 14.3	4	(AP)					
9865		LEAR	03 12 0022	N13	E31	03 14.3		A	AXX		1		3
9865		LEAR	03 12 0022	N16	E32	03 14.4		B	DSO	40	5	7	3
9865		SVTO	03 12 1035	N14	E25	03 14.3		A	AXX		1		3
9865		RAMY	03 12 1244	N14	E23	03 14.3		A	AXX		1	1	3
9865		LEAR	03 13 0005	N13	E15	03 14.1		A	AXX		1		4
9868		VORO	03 08 2351	N14	E73	03 14.5			AXX	28	1		2
9868		VORO	03 09 2245	N14	E58	03 14.3			AXX	17	1		2
9868		RAMY	03 11 1256	N20	E38	03 14.4		B	DAO	50	13	6	3
9868		HOLL	03 11 1500	N18	E37	03 14.4		B	DAO	80	9	5	2
9868	31081	MWIL	03 11 1530	N20	E37	03 14.5	5	(B)					
9868		LEAR	03 12 0022	N18	E33	03 14.5		B	DSO	40	6	7	3
9868		VORO	03 12 0045	N19	E32	03 14.5			HAX	93	9	5	2
9868		SVTO	03 12 1035	N19	E26	03 14.4		B	DSO	30	8	6	3
9868		RAMY	03 12 1244	N20	E25	03 14.4		B	DSO	40	12	6	3
9868		HOLL	03 12 1500	N19	E24	03 14.4		B	DSO	60	7	7	3
9868	31081	MWIL	03 12 1530	N20	E24	03 14.5	4	(B)					
9868		VORO	03 12 2315	N19	E19	03 14.4			BXO	64	8	5	2
9868		LEAR	03 13 0005	N19	E19	03 14.4		B	DRO	20	9	7	4
9868		TACH	03 13 0532	N20	E15	03 14.4			AR	11	2	1	3
9868		RAMY	03 13 1215	N20	E12	03 14.4		B	CSO	10	6	5	3
9868		HOLL	03 13 1545	N18	E13	03 14.6		B	CSO	20	4	5	3
9868	31081	MWIL	03 13 1730	N20	E12	03 14.6	3	(AF)					
9868		LEAR	03 14 0015	N19	E07	03 14.5		B	CRO	20	13	6	4
9868		VORO	03 14 0051	N19	E06	03 14.5			DSO	48	5	4	2
9868		RAMY	03 14 1210	N19	W02	03 14.3		B	DSO	10	11	6	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9868		HOLL	03 14 1545	N18	W02	03 14.5		B	CSO	20	9	7	4
9868		VORO	03 14 2315	N20	W05	03 14.6			BXO	36	5	4	2
9868		LEAR	03 15 0010	N19	W05	03 14.6		B	CRO	10	3	4	2
9868		TACH	03 15 0502	N17	W09	03 14.5			BRO	9	3	4	3
9868		RAMY	03 15 1246	N20	W13	03 14.5		B	DSO	20	6	4	3
9868	31081	HOLL	03 15 1457	N20	W14	03 14.5		B	CSO	40	3	4	2
9868		MWIL	03 15 1600	N19	W15	03 14.5	4	(BG)					
9868		VORO	03 16 0032	N18	W19	03 14.6			HAX	20	5		2
9868		LEAR	03 16 0106	N19	W19	03 14.6		B	CRO	20	3	2	2
9868		RAMY	03 16 1221	N20	W26	03 14.5		B	CSO	10	4	3	3
9869		RAMY	03 11 1256	N25	E47	03 15.2		A	AXX		1	1	3
9869		HOLL	03 11 1500	N23	E47	03 15.2		A	AXX	10	1	1	2
9869	31082	MWIL	03 11 1530	N24	E46	03 15.2	4	(AP)					
9869		LEAR	03 12 0022	N23	E41	03 15.2		A	AXX		1		3
9869		SVTO	03 12 1035	N24	E35	03 15.1		A	AXX		1		3
9869		RAMY	03 12 1244	N25	E34	03 15.2		A	HSX	10	1	1	3
9869		HOLL	03 12 1500	N23	E34	03 15.2		A	AXX	10	1	1	3
9869	31082	MWIL	03 12 1530	N24	E33	03 15.2	3	(AP)					
9869		LEAR	03 13 0005	N23	E29	03 15.2		A	AXX	10	1	1	4
9869		SVTO	03 13 0615	N19	E19	03 14.7		A	HSX	20	4	2	3
9869		LEAR	03 14 0015	N25	E16	03 15.2		A	AXX		1		4
9869		SVTO	03 14 1035	N18	E02	03 14.6		B	BXO	20	7	5	2
9869		SVTO	03 15 1300	N19	W14	03 14.5		B	CRO	20	3	4	2
9866		RAMY	03 08 1245	S09	E85	03 14.9		A	HSX	120	1	6	3
9866		HOLL	03 08 1600	S11	E84	03 15.0		A	HAX	120	1	2	2
9866	31076	MWIL	03 08 1830	S09	E84	03 15.1	4	AP					
9866		VORO	03 08 2351	S10	E82	03 15.1			HAX	578	1		2
9866		LEAR	03 09 0115	S08	E77	03 14.8		A	HKX	180	1	3	2
9866		TACH	03 09 0437	S08	E78	03 15.0			HSX	200	1	4	3
9866		KAND	03 09 0730	S10	E80	03 15.3			DAO		2	10	3
9866		SVTO	03 09 1045	S12	E80	03 15.5		B	EKO	660	3	15	2
9866		RAMY	03 09 1355	S10	E78	03 15.4		B	FKO	780	8	17	4
9866		HOLL	03 09 1508	S11	E76	03 15.3		B	EKO	450	10	14	3
9866	31076	MWIL	03 09 1545	S09	E77	03 15.4	5	(B)					
9866		VORO	03 09 2245	S10	E74	03 15.5			DSI	1288	6	8	2
9866		LEAR	03 10 0015	S06	E72	03 15.4		BG	EKI	970	17	13	4
9866		TACH	03 10 0540	S09	E66	03 15.2			DSI	682	5	10	3
9866		RAMY	03 10 1355	S10	E67	03 15.6		BG	EKI	1020	27	14	2
9866	31076	MWIL	03 10 1545	S10	E63	03 15.4	5	(D)					
9866		HOLL	03 10 1600	S12	E66	03 15.6		BG	FKI	380	13	16	2
9866		LEAR	03 11 0021	S04	E58	03 15.3		BG	EKI	880	20	15	2
9866		RAMY	03 11 1256	S09	E53	03 15.5		BG	EKI	860	31	14	3
9866		HOLL	03 11 1500	S12	E52	03 15.5		BG	FKC	880	15	16	2
9866	31076	MWIL	03 11 1530	S10	E51	03 15.5	5	(D)					
9866		LEAR	03 12 0022	S11	E45	03 15.4		BGD	EKI	980	28	15	3
9866		VORO	03 12 0045	S09	E46	03 15.5			DSI	1505	23	10	2
9866		SVTO	03 12 1035	S10	E44	03 15.7		BD	FKI	1240	28	17	3
9866		RAMY	03 12 1244	S09	E39	03 15.4		BG	EKI	780	30	15	3
9866		HOLL	03 12 1500	S11	E39	03 15.5		BG	EKC	610	21	15	3
9866	31076	MWIL	03 12 1530	S10	E38	03 15.5	5	(D)					
9866		VORO	03 12 2315	S09	E34	03 15.5			DSI	1047	25	11	2
9866		LEAR	03 13 0005	S12	E33	03 15.5		BGD	FKI	840	34	16	4
9866		TACH	03 13 0532	S08	E26	03 15.2			DAI	1122	10	8	3
9866		SVTO	03 13 0615	S11	E29	03 15.4		BD	EKI	740	36	15	3
9866		RAMY	03 13 1215	S10	E26	03 15.5		BG	EKI	810	40	14	3
9866		HOLL	03 13 1545	S10	E22	03 15.3		BGD	EKI	880	41	13	3
9866	31076	MWIL	03 13 1730	S10	E24	03 15.5	5	(D)					
9866		LEAR	03 14 0015	S10	E20	03 15.5		BGD	EKI	850	39	14	4
9866		VORO	03 14 0051	S09	E20	03 15.5			DSI	841	21	11	2
9866		TACH	03 14 0650	S06	E14	03 15.3			EAI	625	7	8	2
9866		SVTO	03 14 1035	S09	E13	03 15.4		BD	EKI	750	17	14	2
9866		RAMY	03 14 1210	S09	E13	03 15.5		BG	EKI	740	33	14	3
9866		HOLL	03 14 1545	S10	E11	03 15.5		BGD	EKC	880	45	14	4
9866		VORO	03 14 2315	S10	E06	03 15.4			DSI	734	18	8	2
9866		LEAR	03 15 0010	S10	E06	03 15.4		BGD	EKI	920	25	13	2
9866		TACH	03 15 0502	S09	E02	03 15.3			DAI	978	17	8	3
9866		KAND	03 15 0905	S09	E01	03 15.4			EKO		23	12	5

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9866		RAMY	03 15 1246	S09	W01	03 15.4		BG	EKI	720	33	13	3
9866		SVTO	03 15 1300	S09	W01	03 15.5		BD	EKI	560	19	13	2
9866		HOLL	03 15 1457	S08	W01	03 15.5		BGD	EKC	550	25	14	2
9866		VORO	03 16 0032	S10	W09	03 15.3			DSI	768	18	9	2
9866		LEAR	03 16 0106	S09	W07	03 15.5		BGD	EKI	610	40	12	2
9866		KAND	03 16 0805	S10	W11	03 15.5			EKO		31	13	3
9866		RAMY	03 16 1221	S09	W13	03 15.5		BGD	EKI	550	43	15	3
9866		SVTO	03 16 1326	S09	W14	03 15.5		BD	EAI	390	21	14	2
9866		HOLL	03 16 1525	S08	W15	03 15.5		BGD	FKC	570	33	16	3
9866	31076	MWIL	03 16 1600	S09	W15	03 15.5	5	(D)					
9866		VORO	03 16 2304	S10	W22	03 15.3			DSI	562	16	9	2
9866		LEAR	03 17 0201	S09	W21	03 15.5		BGD	ESI	510	29	13	1
9866		RAMY	03 17 1209	S10	W26	03 15.5		BGD	ESI	530	19	15	2
9866		SVTO	03 17 1340	S09	W28	03 15.5		BD	EAI	520	32	15	2
9866		HOLL	03 17 1735	S08	W30	03 15.5		BGD	EAC	350	18	13	2
9866		LEAR	03 18 0058	S08	W35	03 15.4		BGD	EAI	400	12	12	1
9866		KAND	03 18 0945	S09	W40	03 15.4			EAO		8	13	4
9866		SVTO	03 18 1200	S10	W40	03 15.5		BD	EAO	260	14	13	3
9866		RAMY	03 18 1327	S09	W41	03 15.5		BGD	EAI	270	17	13	2
9866		HOLL	03 18 1455	S08	W43	03 15.4		BGD	EAC	310	19	13	3
9866		LEAR	03 19 0040	S09	W47	03 15.5		BGD	EAI	290	12	12	3
9866		TACH	03 19 0529	S08	W47	03 15.7			DAO	383	5	8	3
9866		SVTO	03 19 0621	S10	W50	03 15.5		BG	EAO	350	6	13	2
9866		KAND	03 19 0820	S08	W51	03 15.5			EAO		6	11	4
9866	31076	RAMY	03 19 1220	S10	W53	03 15.5		BG	EAI	230	15	13	2
9866		MWIL	03 19 1600	S09	W56	03 15.5	5	(BP)					
9866		HOLL	03 19 1722	S07	W57	03 15.4		BGD	EAC	310	8	12	2
9866		VORO	03 19 2332	S09	W60	03 15.5			DAI	854	9	9	2
9866		LEAR	03 20 0120	S08	W60	03 15.5		BG	DAI	280	6	10	1
9866		RAMY	03 20 1255	S08	W67	03 15.5		BG	EAO	240	7	13	3
9866		HOLL	03 20 1444	S08	W69	03 15.4		BG	EAO	290	3	13	3
9866	31076	MWIL	03 20 1600	S09	W68	03 15.6	4	(AP)					
9866		LEAR	03 21 0005	S09	W70	03 15.7		BG	EAO	230	5	11	1
9866		SVTO	03 21 0632	S08	W78	03 15.4		BG	ESO	150	2	15	3
9866		KAND	03 21 1210	S08	W74	03 15.9			DSO		2	10	3
9866		HOLL	03 21 1405	S10	W78	03 15.7		A	HAX	600	1	2	4
9866	31076	MWIL	03 21 1630	S10	W78	03 15.8	2	AP					
9866		LEAR	03 22 0039	S10	W85	03 15.6		A	HSX	70	1	2	1
9870		RAMY	03 10 1355	S20	E81	03 16.8		B	DSO	70	2	8	2
9870	31080	MWIL	03 10 1545	S19	E79	03 16.7	4	(B)					
9870		HOLL	03 10 1600	S22	E80	03 16.8		A	AXX	10	1	1	2
9870		LEAR	03 11 0021	S23	E76	03 16.9		B	DSO	150	2	8	2
9870		RAMY	03 11 1256	S18	E67	03 16.6		B	DSO	80	5	7	3
9870		HOLL	03 11 1500	S20	E67	03 16.7		B	DAO	170	2	8	2
9870	31080	MWIL	03 11 1530	S19	E67	03 16.7	4	(B)					
9870		LEAR	03 12 0022	S20	E64	03 16.9		B	ESO	120	5	12	3
9870		VORO	03 12 0045	S20	E59	03 16.5			HAX	167	1		2
9870		SVTO	03 12 1035	S17	E58	03 16.8		B	ESO	130	5	13	3
9870		RAMY	03 12 1244	S18	E55	03 16.7		B	ESO	100	7	12	3
9870		HOLL	03 12 1500	S19	E56	03 16.9		B	EAO	120	5	14	3
9870	31080	MWIL	03 12 1530	S19	E55	03 16.8	5	(B)					
9870		VORO	03 12 2315	S20	E46	03 16.5			HAX	123	1		2
9870		LEAR	03 13 0005	S20	E49	03 16.7		B	EAO	130	6	13	4
9870		TACH	03 13 0532	S16	E43	03 16.5			CSO	105	2	9	3
9870		SVTO	03 13 0615	S20	E45	03 16.7		B	ESO	110	3	11	3
9870		RAMY	03 13 1215	S19	E43	03 16.8		B	ESO	120	2	12	3
9870		HOLL	03 13 1545	S20	E42	03 16.9		B	EAO	130	3	11	3
9870	31080	MWIL	03 13 1730	S19	E40	03 16.8	5	(B)					
9870		LEAR	03 14 0015	S20	E37	03 16.8		B	EAO	120	6	13	4
9870		VORO	03 14 0051	S20	E32	03 16.5			HAX	175	1		2
9870		TACH	03 14 0650	S15	E30	03 16.5			CSO	75	2	9	2
9870		SVTO	03 14 1035	S21	E31	03 16.8		B	EAO	110	2	2	2
9870		RAMY	03 14 1210	S19	E32	03 16.9		B	EAO	130	4	12	3
9870		HOLL	03 14 1545	S19	E28	03 16.8		B	CSO	110	8	11	4
9870		VORO	03 14 2315	S20	E20	03 16.5			HKX	178	1		2
9870		LEAR	03 15 0010	S19	E18	03 16.4		B	DSO	120	3	3	2
9870		TACH	03 15 0502	S18	E13	03 16.2			CSO	185	2	1	3
9870		KAND	03 15 0905	S21	E14	03 16.4			CAO		4	2	5

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

MARCH 2002

NOAA/ USAF Group	Mt Wilson Group	Sta	Mo	Day	Observation Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9870		RAMY	03	15	1246	S19	E12	03	16.4		B	CSO	80	4	3	3
9870		SVTO	03	15	1300	S20	E12	03	16.4		A	HSX	100	1	2	2
9870		HOLL	03	15	1457	S20	E10	03	16.4		A	HSX	60	1	2	2
9870	31080	MWIL	03	15	1600	S19	E15	03	16.8	5	(BP)					
9870		VORO	03	16	0032	S21	E05	03	16.4			HKX	185	1		2
9870		LEAR	03	16	0106	S18	E05	03	16.4		A	HSX	120	4	3	2
9870		KAND	03	16	0805	S21	E01	03	16.4			HA		3	2	3
9870		RAMY	03	16	1221	S19	W01	03	16.4		B	CSO	110	4	3	3
9870		SVTO	03	16	1326	S21	W02	03	16.4		A	HSX	80	1	2	2
9870		HOLL	03	16	1525	S20	W04	03	16.3		A	HSX	80	2	2	3
9870	31080	MWIL	03	16	1600	S20	W04	03	16.4	5	(AP)					
9870		VORO	03	16	2304	S20	W08	03	16.3			HKX	171	1		2
9870		LEAR	03	17	0201	S20	W09	03	16.4		A	HSX	100	1	3	1
9870		RAMY	03	17	1209	S21	W14	03	16.4		A	HAX	140	1	2	2
9870		SVTO	03	17	1340	S21	W15	03	16.4		A	HAX	100	1	2	2
9870		HOLL	03	17	1735	S20	W18	03	16.3		B	CAO	110	6	3	2
9870		LEAR	03	18	0058	S20	W23	03	16.3		B	CAO	90	6	5	1
9870		KAND	03	18	0945	S21	W26	03	16.4			CSO		4	2	4
9870		SVTO	03	18	1200	S21	W28	03	16.3		B	CSO	80	9	4	3
9870		RAMY	03	18	1327	S20	W29	03	16.3		B	DAO	80	6	3	2
9870		HOLL	03	18	1455	S20	W31	03	16.2		B	CAO	110	17	5	3
9870		LEAR	03	19	0040	S20	W35	03	16.3		B	CAO	80	8	4	3
9870		SVTO	03	19	0621	S21	W38	03	16.3		B	CSO	60	5	4	2
9870		KAND	03	19	0820	S20	W38	03	16.4			CAO		4	3	4
9870		RAMY	03	19	1220	S20	W41	03	16.4		B	DSO	60	9	6	2
9870	31080	MWIL	03	19	1600	S21	W44	03	16.3	4	(AP)					
9870		HOLL	03	19	1722	S18	W45	03	16.3		B	CAO	100	8	5	2
9870		VORO	03	19	2332	S21	W50	03	16.1			HKX	235	5		2
9870		LEAR	03	20	0120	S19	W48	03	16.4		B	CAO	90	6	4	1
9870		RAMY	03	20	1255	S20	W55	03	16.3		B	DSO	60	8	7	3
9870		HOLL	03	20	1444	S22	W57	03	16.2		B	CSO	90	5	5	3
9870	31080	MWIL	03	20	1600	S21	W58	03	16.2	4	(AP)					
9870		LEAR	03	21	0005	S22	W64	03	16.1		B	CAO	70	2	5	1
9870		SVTO	03	21	0632	S21	W68	03	16.0		A	HSX	40	1	2	3
9870		KAND	03	21	1210	S19	W71	03	16.1			HA		1	1	3
9870		HOLL	03	21	1405	S21	W72	03	16.1		B	CAO	50	4	1	4
9870	31080	MWIL	03	21	1630	S21	W72	03	16.2	4	(AP)					
9870		LEAR	03	22	0039	S20	W78	03	16.1		A	HSX	90	1	2	1
9870		KAND	03	22	0800	S19	W80	03	16.2			AX		1		3
9872		HOLL	03	14	1545	S31	E25	03	16.6		A	AXX	10	2	2	4
9872		KAND	03	15	0905	S32	E16	03	16.6			BXO		7	4	5
9872		RAMY	03	15	1246	S31	E15	03	16.7		B	DSO	20	6	6	3
9872		SVTO	03	15	1300	S31	E15	03	16.7		B	DAO	40	7	5	2
9872		HOLL	03	15	1457	S31	E14	03	16.7		B	CAO	30	6	6	2
9872	31087	MWIL	03	15	1600	S31	E13	03	16.7	4	(B)					
9872		VORO	03	16	0032	S33	E05	03	16.4			HRX	61	5		2
9872		LEAR	03	16	0106	S31	E08	03	16.7		B	DSO	70	10	6	2
9872		KAND	03	16	0805	S33	E05	03	16.7			CAO		10	9	3
9872		RAMY	03	16	1221	S31	E01	03	16.6		B	DSO	30	8	7	3
9872		SVTO	03	16	1326	S31	E01	03	16.6		B	DSO	40	6	7	2
9872		HOLL	03	16	1525	S31	W01	03	16.6		B	CSO	40	6	6	3
9872	31087	MWIL	03	16	1600	S31	W00	03	16.7	4	(B)					
9872		VORO	03	16	2304	S32	W05	03	16.6			BXO	36	5	7	2
9872		LEAR	03	17	0201	S32	W07	03	16.5		B	DSO	50	4	7	1
9872		RAMY	03	17	1209	S32	W12	03	16.5		B	DSO	20	3	8	2
9872		SVTO	03	17	1340	S33	W13	03	16.5		B	DSO	30	4	8	2
9872		HOLL	03	17	1735	S32	W15	03	16.5		B	DSO	30	5	7	2
9872		LEAR	03	18	0058	S32	W18	03	16.6		B	DSO	20	5	8	1
9872		KAND	03	18	0945	S32	W22	03	16.7			BXO		5	7	4
9872		SVTO	03	18	1200	S32	W24	03	16.6		B	DSO	50	6	8	3
9872		RAMY	03	18	1327	S32	W25	03	16.6		B	DSO	10	4	8	2
9872		HOLL	03	18	1455	S32	W27	03	16.5		B	BXO	60	6	7	3
9872		LEAR	03	19	0040	S32	W32	03	16.5		B	DSO	20	2	7	3
9873		VORO	03	12	2315	S19	E56	03	17.2			AXX	50	4		2
9873		VORO	03	14	0051	S19	E42	03	17.2			AXX	22	1		2
9873		LEAR	03	16	0106	S17	E18	03	17.4		B	CRO	20	3	3	2
9873		KAND	03	16	0805	S18	E14	03	17.4			BXO		4	4	3

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

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Mar 02

MARCH 2002

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
9873		RAMY	03 16 1221	S17 E11	03 17.3		B	CSO	20	9	4	3
9873		SVTO	03 16 1326	S16 E11	03 17.4		B	DRO	40	5	4	2
9873		HOLL	03 16 1525	S18 E09	03 17.3		B	CSO	40	9	5	3
9873	31090	MWIL	03 16 1600	S17 E09	03 17.3	4	(B)					
9873		VORO	03 16 2304	S17 E04	03 17.3			BXO	116	10	5	2
9873		LEAR	03 17 0201	S17 E03	03 17.3		B	DAO	100	19	6	1
9873		RAMY	03 17 1209	S18 W03	03 17.3		B	DAI	130	10	7	2
9873		SVTO	03 17 1340	S16 W04	03 17.3		B	DSO	130	21	8	2
9873		HOLL	03 17 1735	S17 W06	03 17.3		B	DAI	130	12	7	2
9873		LEAR	03 18 0058	S18 W10	03 17.3		B	DAO	90	11	8	1
9873		KAND	03 18 0945	S18 W14	03 17.3			DAI		13	8	4
9873		SVTO	03 18 1200	S18 W14	03 17.4		B	CSO	120	29	9	3
9873		RAMY	03 18 1327	S18 W17	03 17.3		B	DAI	70	21	8	2
9873		HOLL	03 18 1455	S17 W18	03 17.2		B	DAI	130	27	8	3
9873		LEAR	03 19 0040	S18 W22	03 17.3		B	DSO	100	17	8	3
9873		TACH	03 19 0529	S16 W28	03 17.1			DAI	152	14	15	3
9873		SVTO	03 19 0621	S18 W27	03 17.2		B	DAO	100	8	9	2
9873		KAND	03 19 0820	S17 W27	03 17.3			DAO		10	8	4
9873		RAMY	03 19 1220	S18 W29	03 17.3		B	DAO	70	13	9	2
9873	31090	MWIL	03 19 1600	S18 W32	03 17.2	4	(B)					
9873		HOLL	03 19 1722	S17 W33	03 17.2		B	CAO	90	8	8	2
9873		VORO	03 19 2332	S18 W36	03 17.2			CAO	198	15	7	2
9873		LEAR	03 20 0120	S18 W36	03 17.3		B	DAO	70	5	9	1
9873		RAMY	03 20 1255	S17 W43	03 17.3		B	DSO	40	5	9	3
9873		HOLL	03 20 1444	S17 W45	03 17.2		B	CAO	60	4	9	3
9873	31090	MWIL	03 20 1600	S17 W45	03 17.2	4	(BP)					
9873		LEAR	03 21 0005	S18 W54	03 16.9		B	CAO	60	3	4	1
9873		SVTO	03 21 0632	S19 W59	03 16.8		B	CSO	40	2	2	3
9873		KAND	03 21 1210	S17 W60	03 16.9			HS		1	1	3
9873		HOLL	03 21 1405	S18 W62	03 16.9		A	HSX	60	1	8	4
9873	31090	MWIL	03 21 1630	S18 W63	03 16.9	4	(AP)					
9873		LEAR	03 22 0039	S17 W68	03 16.8		A	HSX	60	1	1	1
9873		KAND	03 22 0800	S17 W72	03 16.9			AX		1		3
9873	31090	MWIL	03 22 1630	S17 W76	03 16.9	4	(AP)					
9873		HOLL	03 22 1940	S18 W81	03 16.6		A	HAX	60	1	2	2
9873		LEAR	03 23 0100	S17 W81	03 16.9		A	HSX	50	1	2	3
9873A		KAND	03 18 0945	S22 W04	03 18.1			AX		1		4
9873A		SVTO	03 18 1200	S22 W06	03 18.0		A	HSX	20	3	3	3
9873A		HOLL	03 18 1455	S22 W08	03 18.0		A	AXX		1		3
9879		SVTO	03 21 0632	N15 W41	03 18.2		B	CRO	10	2	3	3
9879		KAND	03 21 1210	N14 W43	03 18.2			DAO		2	2	3
9879	31096	MWIL	03 21 1630	N14 W46	03 18.2	4	(B)					
9879		LEAR	03 22 0039	N15 W51	03 18.2		B	DSO	130	6	6	1
9879		KAND	03 22 0800	N14 W54	03 18.2			CAO		7	4	3
9879	31096	MWIL	03 22 1630	N15 W59	03 18.2	4	(B)					
9879		LEAR	03 23 0100	N15 W64	03 18.2		B	DAO	270	11	8	3
9879		VORO	03 23 2311	N13 W77	03 18.1			DAI	425	3	8	3
9879		LEAR	03 24 0025	N14 W76	03 18.3		B	DAO	60	5	9	2
9877		RAMY	03 20 1255	N18 W23	03 18.8		B	CSO	20	2	3	3
9877		HOLL	03 20 1444	N17 W25	03 18.7		B	DSO	40	2	3	3
9877	31093	MWIL	03 20 1600	N17 W25	03 18.8	4	(B)					
9877		LEAR	03 21 0005	N17 W28	03 18.9		B	BXO	20	2	4	1
9877		SVTO	03 21 0632	N17 W34	03 18.7		B	CRO	10	3	4	3
9877		KAND	03 21 1210	N17 W35	03 18.8			BXO		2	3	3
9877		HOLL	03 21 1405	N15 W41	03 18.5		B	CSO	70	4	11	4
9877	31093	MWIL	03 21 1630	N17 W38	03 18.8	4	(B)					
9877		RAMY	03 22 1325	N15 W56	03 18.3		B	DAO	70	8	8	2
9877		HOLL	03 22 1940	N14 W63	03 18.0		B	DAI	260	12	8	2
9877		SVTO	03 23 1125	N15 W71	03 18.1		B	EAO	240	5	13	2
9877		RAMY	03 23 1218	N14 W70	03 18.2		B	DSO	150	7	9	3
9879A		SVTO	03 18 1200	S16 E05	03 18.9		A	HSX	10	1	1	3
9879A		RAMY	03 18 1327	S14 E03	03 18.8		A	AXX		1		2
9879A		HOLL	03 18 1455	S15 E02	03 18.8		A	AXX		1		3
9879B	31088	MWIL	03 15 1600	S22 E42	03 18.9	4	(AF)					

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

MARCH 2002

NOAA/ USAF Group	Mt Wilson Group	Sta	Mo	Day	Observation Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9879B		KAND	03	16	0805	S23	E34	03	18.9			AX		1		3
9879B	31088	MWIL	03	16	1600	S22	E28	03	18.8	3	(AF)					
9871		LEAR	03	13	0005	S22	E80	03	19.1		B	DAO	60	3	3	4
9871		TACH	03	13	0532	S17	E80	03	19.3			HX	22	2	1	3
9871		SVTO	03	13	0615	S22	E79	03	19.3		B	DSO	180	5	10	3
9871		RAMY	03	13	1215	S19	E77	03	19.4		B	EAO	170	6	11	3
9871		HOLL	03	13	1545	S21	E78	03	19.6		B	DAO	240	4	10	3
9871	31084	MWIL	03	13	1730	S20	E72	03	19.2	4	(B)					
9871		LEAR	03	14	0015	S21	E69	03	19.3		B	EAO	240	6	14	4
9871		VORO	03	14	0051	S19	E73	03	19.6			DSO	374	3	8	2
9871		TACH	03	14	0650	S17	E64	03	19.1			DSO	100	3	12	2
9871		SVTO	03	14	1035	S22	E65	03	19.4		B	EAO	220	4	13	2
9871		RAMY	03	14	1210	S19	E63	03	19.3		B	EAO	170	5	11	3
9871		HOLL	03	14	1545	S20	E65	03	19.6		B	EAO	200	9	13	4
9871		VORO	03	14	2315	S19	E60	03	19.5			DSO	395	5	8	2
9871		LEAR	03	15	0010	S21	E57	03	19.4		B	EAO	260	9	15	2
9871		TACH	03	15	0502	S20	E50	03	19.0			DSO	245	3	13	3
9871		KAND	03	15	0905	S20	E54	03	19.5			EAO	3	3	12	5
9871		RAMY	03	15	1246	S19	E49	03	19.3		B	ESO	160	5	13	3
9871		SVTO	03	15	1300	S20	E50	03	19.4		B	ESO	230	4	14	2
9871		HOLL	03	15	1457	S21	E51	03	19.5		B	ESO	160	5	13	2
9871	31084	MWIL	03	15	1600	S19	E50	03	19.5	5	(B)					
9871		VORO	03	16	0032	S19	E45	03	19.4			DSO	358	5	8	2
9871		LEAR	03	16	0106	S20	E44	03	19.4		B	ESO	280	12	13	2
9871		KAND	03	16	0805	S20	E42	03	19.5			ESO	10	15	3	
9871		RAMY	03	16	1221	S20	E36	03	19.3		B	EAO	320	15	13	3
9871		SVTO	03	16	1326	S20	E37	03	19.4		B	ESO	240	12	15	2
9871		HOLL	03	16	1525	S22	E36	03	19.4		B	EHO	280	12	13	3
9871	31084	MWIL	03	16	1600	S19	E37	03	19.5	5	(B)					
9871		VORO	03	16	2353	S19	E33	03	19.5			DSO	491	14	8	2
9871		LEAR	03	17	0201	S20	E31	03	19.4		B	ESO	300	17	11	1
9871		RAMY	03	17	1209	S19	E26	03	19.5		B	ESO	330	8	13	2
9871		SVTO	03	17	1340	S17	E25	03	19.5		B	ESO	340	21	14	2
9871		HOLL	03	17	1735	S18	E24	03	19.6		B	EAI	320	16	13	2
9871		VORO	03	17	2304	S19	E20	03	19.5			DSI	748	16	8	2
9871		LEAR	03	18	0058	S19	E19	03	19.5		B	EAO	300	8	12	1
9871		KAND	03	18	0945	S19	E15	03	19.5			EAO	9	9	11	4
9871		SVTO	03	18	1200	S19	E13	03	19.5		B	ESO	340	17	13	3
9871		RAMY	03	18	1327	S19	E13	03	19.5		B	EKO	320	15	12	2
9871		HOLL	03	18	1455	S20	E10	03	19.4		BG	EAI	340	23	12	3
9871		LEAR	03	19	0040	S19	E07	03	19.6		B	EAO	290	14	12	3
9871		TACH	03	19	0529	S17	E02	03	19.4			DAI	401	6	7	3
9871		SVTO	03	19	0621	S20	E03	03	19.5		BG	EAO	230	11	13	2
9871		KAND	03	19	0820	S19	E01	03	19.4			EAO	15	15	12	4
9871		RAMY	03	19	1220	S19	E00	03	19.5		B	DAI	250	17	10	2
9871	31084	MWIL	03	19	1600	S19	W03	03	19.4	5	(B)					
9871		HOLL	03	19	1722	S20	W04	03	19.4		B	EAI	250	15	11	2
9871		VORO	03	19	2332	S19	W07	03	19.4			DSI	501	10	8	2
9871		LEAR	03	20	0120	S19	W08	03	19.4		B	EAO	180	7	11	1
9871		RAMY	03	20	1255	S19	W12	03	19.6		B	EAI	220	15	14	3
9871		HOLL	03	20	1444	S18	W14	03	19.5		B	EAO	280	15	13	3
9871	31084	MWIL	03	20	1600	S19	W16	03	19.4	5	(BG)					
9871		LEAR	03	21	0005	S19	W20	03	19.5		BG	DAO	240	8	9	1
9871		SVTO	03	21	0632	S19	W24	03	19.4		BG	EAO	260	10	13	3
9871		KAND	03	21	1210	S18	W28	03	19.4			DAO	7	7	9	3
9871		HOLL	03	21	1405	S18	W27	03	19.5		BG	EKO	220	20	13	4
9871	31084	MWIL	03	21	1630	S19	W30	03	19.4	5	(BG)					
9871		LEAR	03	22	0039	S20	W35	03	19.3		BG	EAO	310	10	12	1
9871		KAND	03	22	0800	S18	W38	03	19.4			EAO	8	8	11	3
9871		KAND	03	22	0800	S22	W33	03	19.8			BXO	2	2	2	3
9871		RAMY	03	22	1325	S20	W42	03	19.3		B	DSO	150	7	10	2
9871	31084	MWIL	03	22	1630	S19	W42	03	19.5	5	(BG)					
9871		HOLL	03	22	1940	S17	W45	03	19.4		B	EAI	190	6	11	2
9871		LEAR	03	23	0100	S18	W48	03	19.4		B	DSO	210	5	10	3
9871		SVTO	03	23	1125	S18	W55	03	19.3		B	ESO	120	6	11	2
9871		RAMY	03	23	1218	S19	W54	03	19.4		B	DSO	120	5	10	3
9871		VORO	03	23	2311	S18	W60	03	19.4			DAO	283	6	8	3
9871		LEAR	03	24	0025	S18	W60	03	19.4		B	DAO	140	9	9	2

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

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9871		SVTO	03 24	1010	S18 W66	03 19.4		B	DSO	60	5	9	1
9871		RAMY	03 24	1245	S18 W65	03 19.6		B	DSO	60	5	9	3
9871		HOLL	03 24	1449	S18 W68	03 19.4		B	DAO	110	5	12	2
9871	31084	MWIL	03 24	1630	S18 W68	03 19.5	4	(B)					
9871		LEAR	03 25	0410	S17 W76	03 19.4		B	DAO	80	3	2	2
9871		SVTO	03 25	0834	S18 W80	03 19.3		B	CSO	30	2	13	3
9871		RAMY	03 25	1305	S17 W80	03 19.5		B	DSO	50	5	10	2
9871	31084	MWIL	03 25	1530	S18 W80	03 19.5	2	B					
9871A		RAMY	03 18	1327	S16 E36	03 21.3		A	AXX		1	1	2
9871A		HOLL	03 18	1455	S17 E35	03 21.3		A	AXX	10	2	1	3
9874		RAMY	03 15	1246	N17 E80	03 21.6		B	CSO	20	3	3	3
9874	31089	MWIL	03 15	1600	N16 E79	03 21.6	2	X					
9874		LEAR	03 16	0106	N16 E70	03 21.3		B	BXO	30	2	3	2
9874		RAMY	03 16	1221	N16 E64	03 21.4		B	BXO	30	2	2	3
9874		SVTO	03 16	1326	N16 E63	03 21.3		A	AXX		1		2
9874		HOLL	03 16	1525	N15 E62	03 21.3		A	AXX	10	1	1	3
9874		LEAR	03 17	0201	N15 E55	03 21.2		A	AXX	10	1		1
9874		HOLL	03 17	1735	N16 E51	03 21.6		A	AXX	10	2	1	2
9874		VORO	03 17	2304	N17 E48	03 21.6			AXX	22	2		2
9874		RAMY	03 18	1327	N18 E40	03 21.6		A	AXX		3	1	2
9874		HOLL	03 18	1455	N16 E38	03 21.5		A	AXX	10	2	1	3
9874		LEAR	03 19	0040	N17 E32	03 21.4		B	CSO	20	3	2	3
9874		TACH	03 19	0529	N16 E27	03 21.3			AXX	5	1	1	3
9874		SVTO	03 19	0621	N18 E30	03 21.5		B	CRO	20	2	3	2
9874		RAMY	03 19	1220	N18 E28	03 21.6		B	CSO	10	6	4	2
9874	31089	MWIL	03 19	1600	N17 E24	03 21.5	4	(AP)					
9874		HOLL	03 19	1722	N17 E25	03 21.6		B	CSO	20	3	3	2
9874		VORO	03 19	2332	N17 E23	03 21.7			BXO	50	6	5	2
9874		LEAR	03 20	0120	N18 E19	03 21.5		B	CSO	60	5	4	1
9874		RAMY	03 20	1255	N18 E14	03 21.6		B	CSO	20	11	4	3
9874		HOLL	03 20	1444	N17 E13	03 21.6		B	BXO	20	8	3	3
9874	31089	MWIL	03 20	1600	N17 E12	03 21.6	4	(AP)					
9874		SVTO	03 21	0632	N17 E04	03 21.6		A	AXX	10	3	2	3
9874		HOLL	03 22	1940	N18 W15	03 21.7		A	AXX		1	1	2
9881		KAND	03 22	0800	S05 E02	03 22.5			BXO		3	3	3
9881		RAMY	03 22	1325	S05 W03	03 22.3		B	BXO	20	3	6	2
9881	31097	MWIL	03 22	1630	S04 W04	03 22.4	4	(BP)					
9881		HOLL	03 22	1940	S05 W08	03 22.2		B	CAO	20	3	7	2
9881		LEAR	03 23	0100	S04 W08	03 22.4		B	CAO	30	4	5	3
9881		SVTO	03 23	1125	S04 W13	03 22.5		B	DSO	20	5	7	2
9881		RAMY	03 23	1218	S04 W15	03 22.4		B	BXO	10	3	6	3
9881		VORO	03 23	2311	S04 W20	03 22.5			BXO	54	7	5	3
9881		LEAR	03 24	0025	S04 W21	03 22.4		B	BXO	10	7	5	2
9881		SVTO	03 24	1010	S03 W28	03 22.3		B	DSO	30	5	4	1
9881		RAMY	03 24	1245	S03 W29	03 22.4		B	CSO	20	6	4	3
9881		HOLL	03 24	1449	S03 W30	03 22.4		B	CAO	30	10	5	2
9881	31097	MWIL	03 24	1630	S04 W30	03 22.4	4	(B)					
9881		LEAR	03 25	0410	S03 W37	03 22.4		B	CSO	100	13	6	2
9881		SVTO	03 25	0834	S03 W40	03 22.4		B	DAO	120	11	6	3
9881		RAMY	03 25	1305	S03 W42	03 22.4		B	DAO	160	19	7	2
9881	31097	MWIL	03 25	1530	S03 W43	03 22.4	5	(B)					
9881		LEAR	03 26	0702	S03 W52	03 22.4		B	DSO	260	16	9	3
9881		SVTO	03 26	0900	S03 W55	03 22.3		B	DAO	140	12	9	3
9881		TACH	03 26	1017	S03 W51	03 22.6			DAO	232	5	5	4
9881		RAMY	03 26	1214	S03 W56	03 22.3		B	DSO	130	3	7	2
9881	31097	MWIL	03 26	1530	S03 W57	03 22.4	5	(B)					
9881		VORO	03 26	2245	S03 W62	03 22.3			CRO	111	5	5	3
9881		LEAR	03 27	0535	S04 W65	03 22.4		B	DAO	240	7	7	2
9881		TACH	03 27	0727	S04 W66	03 22.4			CSO	51	2	6	3
9881		SVTO	03 27	1130	S03 W68	03 22.4		B	CSO	100	6	8	2
9881		RAMY	03 27	1233	S02 W69	03 22.4		B	DAO	140	9	10	3
9881	31097	MWIL	03 27	1530	S04 W70	03 22.4	4	(B)					
9881		VORO	03 27	2253	S02 W69	03 22.8			HRX	70	1		3
9881		TACH	03 28	0427	S03 W74	03 22.6			HSX	50	1	3	4
9881		LEAR	03 28	0615	S03 W75	03 22.6		A	HSX	60	1	2	3
9881		SVTO	03 28	0805	S04 W79	03 22.4		A	HSX	60	1	2	2

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SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

MARCH 2002

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
9881		RAMY	03 28	1205	S03 W78	03 22.7		A	HSX	60	1	3	2
9881	31097	MWIL	03 28	1600	S04 W80	03 22.7	2	AF					
9881A		VORO	03 18	2353	S18 E62	03 23.7			CRO	122	5	3	2
9880		RAMY	03 20	1255	N08 E55	03 24.7		A	HSX	10	1	1	3
9880		HOLL	03 20	1444	N08 E53	03 24.6		B	BXO	20	4	3	3
9880	31094	MWIL	03 20	1600	N08 E52	03 24.6	3	(B)					
9880		KAND	03 21	1210	N07 E41	03 24.6			AX		2		3
9880		HOLL	03 21	1405	N08 E40	03 24.6		B	BXO	10	5	4	4
9880	31094	MWIL	03 21	1630	N08 E38	03 24.5	4	(B)					
9880		LEAR	03 22	0039	N08 E32	03 24.4		B	CAO	40	4	4	1
9880		RAMY	03 22	1325	N05 E25	03 24.4		B	BXO	10	3	3	2
9880	31094	MWIL	03 22	1630	N06 E22	03 24.3	3	(AP)					
9880		LEAR	03 23	0100	N06 E20	03 24.5		B	BXO	20	3	4	3
9880		SVTO	03 23	1125	N07 E13	03 24.4		B	CSO	40	6	4	2
9880		RAMY	03 23	1218	N07 E12	03 24.4		B	CRO	10	6	4	3
9880		VORO	03 23	2311	N07 E06	03 24.4			BXO	55	6	4	3
9880		LEAR	03 24	0025	N07 E05	03 24.4		B	BXO	20	9	5	2
9880		SVTO	03 24	1010	N07 W01	03 24.3		B	DSO	40	10	6	1
9880		RAMY	03 24	1245	N07 W02	03 24.4		B	CSO	20	11	6	3
9880		HOLL	03 24	1449	N07 W03	03 24.4		B	DAI	100	11	6	2
9880	31094	MWIL	03 24	1630	N07 W03	03 24.5	4	(B)					
9880		LEAR	03 25	0410	N08 W12	03 24.3		B	CSO	70	13	7	2
9880		SVTO	03 25	0834	N07 W14	03 24.3		B	DAO	90	11	6	3
9880		RAMY	03 25	1305	N08 W17	03 24.3		B	DAI	90	22	7	2
9880	31094	MWIL	03 25	1530	N07 W17	03 24.4	4	(B)					
9880		LEAR	03 26	0702	N08 W26	03 24.3		B	DAO	110	15	7	3
9880		SVTO	03 26	0900	N08 W28	03 24.3		B	DAO	50	12	8	3
9880		TACH	03 26	1017	N07 W27	03 24.4			BRI	37	5	6	3
9880		RAMY	03 26	1214	N08 W30	03 24.3		B	DSO	60	5	7	2
9880	31094	MWIL	03 26	1530	N07 W32	03 24.2	5	(B)					
9880		VORO	03 26	2245	N09 W36	03 24.2			CRO	106	12	8	3
9880		LEAR	03 27	0535	N08 W39	03 24.3		B	DAO	220	17	7	2
9880		TACH	03 27	0727	N07 W40	03 24.3			DAI	165	9	5	3
9880		SVTO	03 27	1130	N08 W44	03 24.2		BG	DAI	210	17	8	2
9880		RAMY	03 27	1233	N09 W44	03 24.2		BG	DAI	230	22	8	3
9880	31094	MWIL	03 27	1530	N08 W45	03 24.3	5	(D)					
9880		VORO	03 27	2253	N08 W50	03 24.2			CAI	298	12	7	3
9880		TACH	03 28	0427	N08 W51	03 24.4			DAI	265	17	7	4
9880		LEAR	03 28	0615	N08 W54	03 24.2		B	EAO	180	13	11	3
9880		SVTO	03 28	0805	N08 W58	03 24.0		B	DAO	220	16	9	2
9880		RAMY	03 28	1205	N10 W56	03 24.3		B	DAO	230	9	9	2
9880	31094	MWIL	03 28	1600	N08 W59	03 24.2	5	(B)					
9880		LEAR	03 29	0318	N08 W64	03 24.3		B	DAO	450	16	10	4
9880		SVTO	03 29	0730	N08 W66	03 24.4		BG	EKO	390	18	12	3
9880		RAMY	03 29	1320	N08 W72	03 24.1		BG	DAO	330	7	10	3
9880	31094	MWIL	03 29	1600	N08 W71	03 24.3	5	(B)					
9880		VORO	03 29	2255	N08 W77	03 24.2			CSI	714	4	9	3
9880		LEAR	03 30	0522	N08 W78	03 24.4		B	DAO	190	5	9	4
9880		SVTO	03 30	0820	N08 W83	03 24.1		B	CAO	30	2	6	3
9880	31094	MWIL	03 30	1600	N07 W82	03 24.5	3	AF					
9875		LEAR	03 19	0040	S18 E75	03 24.7		A	AXX		1		3
9875		RAMY	03 19	1220	S18 E68	03 24.7		A	HSX	10	1	1	2
9875	31091	MWIL	03 19	1600	S19 E66	03 24.7	4	(AP)					
9875		HOLL	03 19	1722	S21 E63	03 24.5		A	HSX	20	1	1	2
9875		LEAR	03 20	0120	S18 E60	03 24.6		B	CAO	60	6	4	1
9875		RAMY	03 20	1255	S19 E54	03 24.6		B	DAO	100	5	7	3
9875		HOLL	03 20	1444	S17 E53	03 24.6		B	DAO	200	6	7	3
9875	31091	MWIL	03 20	1600	S18 E52	03 24.6	5	(BP)					
9875		LEAR	03 21	0005	S19 E46	03 24.5		B	DAO	170	9	9	1
9875		SVTO	03 21	0632	S20 E45	03 24.7		B	DAO	140	4	9	3
9875		KAND	03 21	1210	S19 E41	03 24.6			DSO		6	9	3
9875		HOLL	03 21	1405	S18 E39	03 24.5		B	DSO	140	12	8	4
9875	31091	MWIL	03 21	1630	S19 E38	03 24.6	5	(B)					
9875		LEAR	03 22	0039	S20 E33	03 24.5		B	ESO	160	18	11	1
9875		KAND	03 22	0800	S21 E30	03 24.6			CAI		18	10	3
9875		RAMY	03 22	1325	S20 E26	03 24.5		B	DSI	150	13	10	2

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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)	
9875	31091	MWIL	03	22	1630	S20	E25	03	24.6	5	(BP)					
9875		HOLL	03	22	1940	S19	E25	03	24.7		B	EAI	80	15	12	2
9875		LEAR	03	23	0100	S20	E19	03	24.5		B	DSO	120	15	10	3
9875		SVTO	03	23	1125	S20	E14	03	24.5		B	CSO	60	12	8	2
9875		RAMY	03	23	1218	S20	E14	03	24.6		B	DAI	100	9	9	3
9875		VORO	03	23	2311	S21	E04	03	24.3			DSO	136	4	1	3
9875		LEAR	03	24	0025	S21	E06	03	24.5		B	CAO	90	11	7	2
9875		SVTO	03	24	1010	S20	E01	03	24.5		B	CSO	50	6	7	1
9875		RAMY	03	24	1245	S20	E00	03	24.5		B	DAO	90	4	6	3
9875		HOLL	03	24	1449	S20	W02	03	24.5		B	CAO	90	6	7	2
9875	31091	MWIL	03	24	1630	S21	W04	03	24.4	4	(BP)					
9875		LEAR	03	25	0410	S20	W12	03	24.2		B	DAO	50	3	2	2
9875		SVTO	03	25	0834	S21	W14	03	24.3		B	DAO	50	3	2	3
9875		RAMY	03	25	1305	S20	W16	03	24.3		B	DAO	40	7	3	2
9875	31091	MWIL	03	25	1530	S19	W13	03	24.6	5	(BP)					
9875		LEAR	03	26	0702	S21	W27	03	24.2		A	HAX	90	4	2	3
9875		SVTO	03	26	0900	S21	W28	03	24.2		B	DAO	30	2	2	3
9875		TACH	03	26	1017	S19	W26	03	24.4			AR	75	2	2	3
9875		RAMY	03	26	1214	S20	W30	03	24.2		B	DSO	40	2	3	2
9875	31091	MWIL	03	26	1530	S21	W31	03	24.3	4	(AP)					
9875		VORO	03	26	2245	S21	W36	03	24.2			AXX	27	1		3
9875		LEAR	03	27	0535	S21	W39	03	24.2		A	HSX	50	4	2	2
9875		TACH	03	27	0727	S19	W39	03	24.3			AR	25	2	2	3
9875		SVTO	03	27	1130	S22	W42	03	24.2		B	CSO	30	3	4	2
9875		RAMY	03	27	1233	S20	W43	03	24.2		B	DSO	30	3	3	3
9875	31091	MWIL	03	27	1530	S21	W44	03	24.3	4	(AP)					
9875		VORO	03	27	2253	S21	W49	03	24.2			AXX	32	3		3
9875		TACH	03	28	0427	S20	W50	03	24.4			AXX	5	1	1	4
9875		LEAR	03	28	0615	S21	W52	03	24.3		A	AXX	10	1	1	3
9875		SVTO	03	28	0805	S22	W55	03	24.1		A	HSX	10	2	1	2
9875		RAMY	03	28	1205	S19	W57	03	24.1		A	HSX	10	1	1	2
9875	31091	MWIL	03	28	1600	S21	W58	03	24.2	3	(AP)					
9876		RAMY	03	19	1220	S15	E86	03	26.0		A	HSX	50	1	3	2
9876	31092	MWIL	03	19	1600	S17	E82	03	25.9	3	AP					
9876		HOLL	03	19	1722	S17	E80	03	25.8		A	HSX	30	1	1	2
9876		VORO	03	19	2332	S16	E80	03	26.0			HAX	208	2		2
9876		LEAR	03	20	0120	S16	E75	03	25.7		A	HAX	30	1	1	1
9876		RAMY	03	20	1255	S16	E70	03	25.8		B	CSO	30	2	3	3
9876		HOLL	03	20	1444	S15	E72	03	26.1		B	CAO	70	4	4	3
9876	31092	MWIL	03	20	1600	S16	E69	03	25.9	4	(AP)					
9876		LEAR	03	21	0005	S15	E66	03	26.0		B	CSO	70	3	2	1
9876		SVTO	03	21	0632	S16	E63	03	26.0		B	CSO	40	2	2	3
9876		KAND	03	21	1210	S16	E61	03	26.1			HS	1	1	2	3
9876		HOLL	03	21	1405	S15	E60	03	26.1		B	CAO	50	3	10	4
9876	31092	MWIL	03	21	1630	S16	E59	03	26.2	4	(BP)					
9876		LEAR	03	22	0039	S16	E55	03	26.2		B	DSO	100	3	9	1
9876		KAND	03	22	0800	S17	E54	03	26.4			CSO	9	9	12	3
9876		RAMY	03	22	1325	S17	E49	03	26.3		B	DSO	90	5	8	2
9876	31092	MWIL	03	22	1630	S16	E46	03	26.2	5	(B)					
9876		HOLL	03	22	1940	S14	E46	03	26.3		B	EAO	70	12	12	2
9876		LEAR	03	23	0100	S16	E42	03	26.2		B	ESO	160	19	12	3
9876		SVTO	03	23	1125	S16	E38	03	26.3		B	ESO	150	26	14	2
9876		RAMY	03	23	1218	S15	E36	03	26.2		B	EAI	160	16	11	3
9876		VORO	03	23	2311	S15	E30	03	26.2			EAO	171	10	9	3
9876		LEAR	03	24	0025	S16	E31	03	26.4		BG	EAI	110	24	13	2
9876		SVTO	03	24	1010	S15	E24	03	26.2		B	EAI	200	20	13	1
9876		RAMY	03	24	1245	S15	E24	03	26.3		B	EAI	130	25	13	3
9876		HOLL	03	24	1449	S15	E23	03	26.3		B	EAI	170	19	13	2
9876	31092	MWIL	03	24	1630	S15	E21	03	26.3	4	(BP)					
9876		LEAR	03	25	0410	S15	E15	03	26.3		BGD	EAI	140	21	14	2
9876		SVTO	03	25	0834	S15	E13	03	26.3		B	EAI	130	17	14	3
9876		RAMY	03	25	1305	S15	E11	03	26.4		BG	EAC	120	32	13	2
9876	31092	MWIL	03	25	1530	S15	E09	03	26.3	4	(BP)					
9876		LEAR	03	26	0702	S15	E01	03	26.4		B	EAI	200	27	13	3
9876		SVTO	03	26	0900	S15	W01	03	26.3		B	EAI	100	26	15	3
9876		TACH	03	26	1017	S14	W03	03	26.2			BXI	80	7	9	3
9876		RAMY	03	26	1214	S15	W02	03	26.3		BG	ESO	100	13	14	2
9876	31092	MWIL	03	26	1530	S15	W05	03	26.3	5	(BP)					

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9876		VORO	03 26 2245	S15	W09	03 26.3			DSI	180	10	12	3
9876		LEAR	03 27 0535	S15	W12	03 26.3		B	EAI	160	22	15	2
9876		TACH	03 27 0727	S10	W13	03 26.3			CAI	79	6	9	3
9876		SVTO	03 27 1130	S15	W16	03 26.3		B	EAI	120	18	13	2
9876		RAMY	03 27 1233	S15	W17	03 26.2		B	EAO	120	15	13	3
9876	31092	MWIL	03 27 1530	S15	W17	03 26.3	5	(B)					
9876		VORO	03 27 2253	S15	W22	03 26.3			BXO	112	16	13	3
9876		TACH	03 28 0427	S13	W23	03 26.4			CAI	122	13	10	4
9876		LEAR	03 28 0615	S14	W25	03 26.4		A	ESX	90	21	13	3
9876		SVTO	03 28 0805	S15	W27	03 26.3		B	ESI	110	29	13	2
9876		RAMY	03 28 1205	S13	W27	03 26.5		B	EAI	140	23	12	2
9876	31092	MWIL	03 28 1600	S14	W29	03 26.5	4	(B)					
9876		LEAR	03 29 0318	S15	W37	03 26.3		B	ESO	130	25	13	4
9876		SVTO	03 29 0730	S15	W37	03 26.5		B	CRO	80	22	11	3
9876		RAMY	03 29 1320	S14	W43	03 26.3		B	ESI	30	15	11	3
9876	31092	MWIL	03 29 1600	S13	W43	03 26.4	4	(B)					
9876		VORO	03 29 2255	S14	W47	03 26.4			BXO	111	11	10	3
9876		LEAR	03 30 0522	S13	W50	03 26.4		B	DSO	30	5	9	4
9876		SVTO	03 30 0820	S15	W53	03 26.3		B	CAO	30	4	9	3
9876		RAMY	03 30 1345	S13	W56	03 26.3		B	DSO	40	6	10	3
9876	31092	MWIL	03 30 1600	S13	W56	03 26.4	4	(B)					
9876		VORO	03 30 2245	S13	W62	03 26.3			BXO	62	7	11	3
9876		SVTO	03 31 0612	S14	W72	03 25.8		A	AXX	10	1		3
9876		RAMY	03 31 1207	S13	W78	03 25.6		A	AXX	10	1		2
9876	31092	MWIL	03 31 1500	S13	W80	03 25.6	3	(B)					
9876	31111	MWIL	03 31 1500	S20	W76	03 25.8	3	(AP)					
9876		LEAR	04 01 0026	S18	W80	03 26.0		B	DAO	50	3	2	4
9876A	31100	MWIL	03 26 1530	N17	W03	03 26.4	3	(AF)					
9878		RAMY	03 20 1255	N08	E81	03 26.6		A	HSX	60	1	4	3
9878		HOLL	03 20 1444	N08	E80	03 26.6		A	HSX	60	1	2	3
9878	31095	MWIL	03 20 1600	N08	E80	03 26.7	2	AP					
9878		LEAR	03 21 0005	N09	E76	03 26.7		A	HAX	120	1	2	1
9878		SVTO	03 21 0632	N08	E70	03 26.5		A	HSX	80	1	3	3
9878		KAND	03 21 1210	N07	E72	03 26.9			CSO		2	5	3
9878		HOLL	03 21 1405	N09	E71	03 26.9		B	CAO	120	5	11	4
9878	31095	MWIL	03 21 1630	N09	E68	03 26.8	4	(BP)					
9878		LEAR	03 22 0039	N09	E65	03 26.9		B	DAO	220	6	10	1
9878		KAND	03 22 0800	N06	E61	03 26.9			CAO		14	14	3
9878		RAMY	03 22 1325	N08	E60	03 27.0		B	CSO	160	5	10	2
9878	31095	MWIL	03 22 1630	N08	E56	03 26.9	5	(BP)					
9878		HOLL	03 22 1940	N08	E60	03 27.3		B	FAI	100	14	18	2
9878		LEAR	03 23 0100	N08	E55	03 27.2		B	FAO	180	13	16	3
9878		SVTO	03 23 1125	N09	E48	03 27.1		B	ESI	120	19	15	2
9878		RAMY	03 23 1218	N11	E48	03 27.1		B	FSI	110	16	16	3
9878		VORO	03 23 2311	N09	E41	03 27.0			CSO	301	9	11	3
9878		LEAR	03 24 0025	N05	E44	03 27.3		BG	EAI	90	15	14	2
9878		SVTO	03 24 1010	N09	E36	03 27.1		B	ESO	180	14	13	1
9878		RAMY	03 24 1245	N09	E34	03 27.1		BG	ESI	100	13	13	3
9878		HOLL	03 24 1449	N09	E33	03 27.1		B	CSO	120	20	13	2
9878	31095	MWIL	03 24 1630	N09	E30	03 26.9	5	(BP)					
9878		LEAR	03 25 0410	N08	E25	03 27.0		BG	ESI	160	18	14	2
9878		SVTO	03 25 0834	N08	E23	03 27.1		B	ESO	140	10	14	3
9878		RAMY	03 25 1305	N09	E20	03 27.0		BG	EAI	150	29	14	2
9878	31095	MWIL	03 25 1530	N08	E17	03 26.9	5	(BP)					
9878		LEAR	03 26 0702	N08	E09	03 27.0		BG	ESI	190	25	12	3
9878		SVTO	03 26 0900	N08	E08	03 27.0		BG	EAI	170	31	13	3
9878		TACH	03 26 1017	N08	E05	03 26.8			DSI	170	4	6	3
9878		RAMY	03 26 1214	N08	E06	03 26.9		B	DSO	120	9	8	2
9878	31095	MWIL	03 26 1530	N08	E04	03 26.9	5	(BG)					
9878		VORO	03 26 2245	N09	W01	03 26.9			CSO	120	6	6	3
9878		LEAR	03 27 0535	N08	W06	03 26.8		BGD	DAI	160	20	8	2
9878		TACH	03 27 0727	N11	W02	03 27.1			CSI	69	8	10	3
9878		SVTO	03 27 1130	N10	W06	03 27.0		BGD	EAI	130	19	13	2
9878		RAMY	03 27 1233	N11	W05	03 27.1		BGD	EAI	150	20	12	3
9878	31095	MWIL	03 27 1530	N08	W09	03 27.0	5	(D)					
9878		VORO	03 27 2253	N09	W15	03 26.8			DSO	111	5	6	3
9878		TACH	03 28 0427	N08	W16	03 27.0			CAI	80	9	7	4

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9878		LEAR	03 28	0615	N09 W17	03 27.0		BG	EAO	90	12	10	3
9878		SVTO	03 28	0805	N09 W19	03 26.9		B	DAO	80	11	8	2
9878		RAMY	03 28	1205	N10 W20	03 27.0		BG	ESO	60	1	11	2
9878	31095	MWIL	03 28	1600	N09 W24	03 26.9	5	(BP)					
9878		LEAR	03 29	0318	N09 W28	03 27.0		B	DAO	120	11	10	4
9878		SVTO	03 29	0730	N09 W32	03 26.9		B	DSO	70	10	9	3
9878		RAMY	03 29	1320	N09 W36	03 26.8		B	DSO	40	5	8	3
9878	31095	MWIL	03 29	1600	N09 W37	03 26.9	5	(BP)					
9878		VORO	03 29	2255	N09 W41	03 26.9			BXO	60	5	7	3
9878		LEAR	03 30	0522	N09 W44	03 26.9		B	DAO	100	7	8	4
9878		SVTO	03 30	0820	N08 W47	03 26.8		B	CRO	30	3	7	3
9878		RAMY	03 30	1345	N09 W51	03 26.7		B	DSO	40	3	7	3
9878	31095	MWIL	03 30	1600	N08 W50	03 26.9	4	(BP)					
9878		VORO	03 30	2245	N09 W55	03 26.8			BXO	59	2	5	3
9878		SVTO	03 31	0612	N08 W59	03 26.8		B	BXO	20	2	6	3
9878		RAMY	03 31	1207	N09 W63	03 26.8		B	DSO	30	2	6	2
9878	31095	MWIL	03 31	1500	N09 W64	03 26.8	4	(AP)					
9878		LEAR	04 01	0026	N08 W70	03 26.9		A	HAX	20	2	1	4
9876B	31101	MWIL	03 26	1530	S16 E06	03 27.1	4	(AP)					
9882		RAMY	03 22	1325	N15 E79	03 28.5		B	BXO	30	2	4	2
9882	31098	MWIL	03 22	1630	N16 E72	03 28.1	4	(BF)					
9882		HOLL	03 22	1940	N14 E72	03 28.3		A	HAX	50	2	6	2
9882		LEAR	03 23	0100	N14 E66	03 28.0		B	DAO	160	5	8	3
9882		SVTO	03 23	1125	N14 E62	03 28.2		B	DSO	60	5	8	2
9882		RAMY	03 23	1218	N15 E60	03 28.0		B	DAO	90	7	4	3
9882		VORO	03 23	2311	N16 E55	03 28.1			BXO	52	4	5	3
9882		LEAR	03 24	0025	N18 E51	03 27.9		B	CAO	40	6	7	2
9882		SVTO	03 24	1010	N16 E49	03 28.1		B	DSO	60	5	6	1
9882		RAMY	03 24	1245	N16 E47	03 28.1		B	DAO	100	7	6	3
9882		HOLL	03 24	1449	N16 E46	03 28.1		B	DAO	80	4	6	2
9882	31098	MWIL	03 24	1630	N16 E46	03 28.2	4	(B)					
9882		LEAR	03 25	0410	N17 E36	03 27.9		B	DAO	90	9	7	2
9882		SVTO	03 25	0834	N15 E36	03 28.1		B	CSO	30	2	6	3
9882		RAMY	03 25	1305	N16 E34	03 28.1		B	CAO	40	6	7	2
9882	31098	MWIL	03 25	1530	N16 E33	03 28.1	5	(BF)					
9882		LEAR	03 26	0702	N16 E23	03 28.0		B	CRO	20	3	8	3
9882		SVTO	03 26	0900	N17 E22	03 28.0		B	DSO	30	5	8	3
9882		TACH	03 26	1017	N16 E15	03 27.6			AXX	5	1	1	3
9882		RAMY	03 26	1214	N16 E20	03 28.0		B	DSO	20	3	8	2
9882	31098	MWIL	03 26	1530	N16 E18	03 28.0	4	(BG)					
9882		LEAR	03 27	0535	N16 E10	03 28.0		B	DAO	40	4	7	2
9882		SVTO	03 27	1130	N16 E07	03 28.0		B	DRO	50	10	8	2
9882		RAMY	03 27	1233	N17 E08	03 28.1		B	DSO	30	9	8	3
9882	31098	MWIL	03 27	1530	N15 E03	03 27.9	4	(BG)					
9882		VORO	04 01	0125	N18 W58	03 27.7			HAX	25	1		2
9882A		KAND	03 22	0800	N15 E85	03 28.8			AX		1		3
9882A		TACH	03 27	0727	N10 E16	03 28.5			BRO	16	4	11	3
9882A	31112	MWIL	03 31	1500	N15 W39	03 28.7	3	(AP)					
9883		SVTO	03 23	1125	N06 E79	03 29.4		A	HSX	20	1	2	2
9883		RAMY	03 23	1218	N06 E73	03 29.0		A	HSX	30	1	2	3
9883		VORO	03 23	2311	N05 E72	03 29.3			DSI	144	2	5	2
9883		LEAR	03 24	0025	N05 E70	03 29.2		A	HAX	30	1	1	2
9883		SVTO	03 24	1010	N06 E65	03 29.3		A	HSX	50	1	1	1
9883		RAMY	03 24	1245	N06 E63	03 29.2		A	HSX	40	2	2	3
9883		HOLL	03 24	1449	N07 E63	03 29.3		A	HSX	70	1	2	2
9883	31099	MWIL	03 24	1630	N06 E61	03 29.2	4	(AP)					
9883		LEAR	03 25	0410	N06 E55	03 29.3		A	HSX	50	1	2	2
9883		SVTO	03 25	0834	N06 E52	03 29.2		A	HSX	30	1	2	3
9883		RAMY	03 25	1305	N06 E49	03 29.2		A	HSX	30	1	2	2
9883	31099	MWIL	03 25	1530	N06 E48	03 29.2	5	(AP)					
9883		LEAR	03 26	0702	N06 E39	03 29.2		A	HSX	60	2	1	3
9883		SVTO	03 26	0900	N06 E38	03 29.2		A	HSX	20	1	1	3
9883		TACH	03 26	1017	N07 E34	03 29.0			HSX	80	1	1	3
9883		RAMY	03 26	1214	N05 E36	03 29.2		A	HSX	20	1	1	2
9883	31099	MWIL	03 26	1530	N06 E34	03 29.2	5	(AP)					

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9883		VORO	03 26 2245	N07	E31	03 29.3			HSX	52	1		3
9883		LEAR	03 27 0535	N06	E27	03 29.2		A	HAX	50	2	1	2
9883		SVTO	03 27 1130	N06	E23	03 29.2		A	HSX	20	2	1	2
9883		RAMY	03 27 1233	N06	E23	03 29.2		B	CSO	50	4	3	3
9883	31099	MWIL	03 27 1530	N06	E21	03 29.2	5	(AP)					
9883		VORO	03 27 2253	N06	E17	03 29.2			AXX	20	1		3
9883		TACH	03 28 0427	N06	E11	03 29.0			AXX	10	1	1	4
9883		LEAR	03 28 0615	N06	E13	03 29.2		A	HSX	20	1	1	3
9883		SVTO	03 28 0805	N07	E12	03 29.2		A	HSX	20	1	1	2
9883		RAMY	03 28 1205	N06	E10	03 29.2		B	CSO	10	2	3	2
9883	31099	MWIL	03 28 1600	N06	E07	03 29.2	4	(AP)					
9883		LEAR	03 29 0318	N07	E01	03 29.2		A	HSX	20	3	2	4
9883		SVTO	03 29 0730	N07	W01	03 29.2		A	HSX	40	2	2	3
9883		RAMY	03 29 1320	N07	W05	03 29.2		B	CSO	10	2	3	3
9883	31099	MWIL	03 29 1600	N07	W05	03 29.3	4	(AP)					
9883		LEAR	03 30 0522	N07	W13	03 29.2		A	AXX		1		4
9883	31113	MWIL	03 31 1500	N07	W33	03 29.1	3	(AP)					
9883B	31102	MWIL	03 26 1530	S12	E43	03 29.9	4	(B)					
9883A		TACH	03 27 0727	S16	E43	03 30.6			AXX	30	1	1	3
9883A		TACH	03 27 0727	S17	E41	03 30.4			HSX	45	1	2	3
9883A		TACH	03 28 0427	S17	E33	03 30.7			BXO	11	2	5	4
9883A	31116	MWIL	04 01 1530	S16	W31	03 30.4	4	(B)					
9883A		VORO	04 01 2225	S15	W35	03 30.4			BXO	6	2	3	2
9883A		LEAR	04 02 0328	S14	W38	03 30.4		B	CRO	20	2	3	1
9883A		TACH	04 02 0447	S13	W36	03 30.6			BXO	4	2	3	3
9883A		SVTO	04 02 0710	S15	W40	03 30.4		A	AXX	10	2	3	4
9883A	31116	MWIL	04 02 1530	S14	W43	03 30.5	4	(AF)					
9883A		VORO	04 02 2231	S15	W48	03 30.4			AXX	1	2		3
9883A		KAND	04 03 0805	S14	W53	03 30.4			AX		1		3
9884		VORO	03 26 2245	S18	E51	03 30.8			AXX	42	4		3
9884		LEAR	03 27 0535	S18	E49	03 31.0		B	CAO	50	7	4	2
9884		SVTO	03 27 1130	S18	E46	03 31.0		B	CSO	20	6	4	2
9884		RAMY	03 27 1233	S19	E43	03 30.8		B	DAO	40	5	5	3
9884	31103	MWIL	03 27 1530	S18	E43	03 30.9	5	(BP)					
9884		VORO	03 27 2253	S18	E38	03 30.8			AXX	21	1		3
9884		LEAR	03 28 0615	S19	E34	03 30.8		A	HSX	20	1	1	3
9884		SVTO	03 28 0805	S18	E34	03 30.9		B	CRO	30	3	4	2
9884		RAMY	03 28 1205	S20	E33	03 31.0		B	DSO	40	10	6	2
9884	31103	MWIL	03 28 1600	S19	E30	03 30.9	4	(B)					
9884		LEAR	03 29 0318	S19	E24	03 31.0		B	DSO	90	12	5	4
9884		SVTO	03 29 0730	S19	E23	03 31.1		B	CSO	50	12	6	3
9884		RAMY	03 29 1320	S19	E19	03 31.0		B	DSI	20	14	5	3
9884	31103	MWIL	03 29 1600	S19	E18	03 31.0	4	(B)					
9884		VORO	03 29 2255	S19	E15	03 31.1			BXO	51	6	5	3
9884		LEAR	03 30 0522	S19	E11	03 31.1		B	DAO	70	12	5	4
9884		SVTO	03 30 0820	S19	E11	03 31.2		B	DAO	60	12	6	3
9884		RAMY	03 30 1345	S19	E07	03 31.1		B	DAO	60	9	6	3
9884	31103	MWIL	03 30 1600	S19	E05	03 31.0	4	(B)					
9884		VORO	03 30 2245	S19	E02	03 31.1			DSI	129	6	5	3
9884		SVTO	03 31 0612	S19	W02	03 31.1		B	DAO	110	5	7	3
9884		RAMY	03 31 1207	S18	W06	03 31.0		B	DAO	90	5	6	2
9884	31103	MWIL	03 31 1500	S19	W07	03 31.1	5	(B)					
9884		LEAR	04 01 0026	S19	W13	03 31.0		B	DAO	130	13	7	4
9884		VORO	04 01 0125	S19	W13	03 31.1			CAI	147	3	6	2
9884		TACH	04 01 0527	S15	W16	03 31.0			CSO	108	4	5	3
9884		SVTO	04 01 0700	S19	W16	03 31.1		B	DSO	140	7	7	3
9884		RAMY	04 01 1143	S18	W18	03 31.1		B	DSO	100	4	6	3
9884	31103	MWIL	04 01 1530	S19	W21	03 31.0	5	(B)					
9884		VORO	04 01 2233	S19	W24	03 31.1			CSI	158	17	6	3
9884		LEAR	04 02 0328	S18	W27	03 31.1		B	CAO	80	10	7	1
9884		TACH	04 02 0447	S16	W26	03 31.2			CSO	94	4	4	3
9884		SVTO	04 02 0710	S18	W29	03 31.1		B	CSO	120	20	7	4
9884		RAMY	04 02 1252	S17	W36	03 30.9		B	CSO	80	2	7	2
9884	31103	MWIL	04 02 1530	S18	W34	03 31.0	5	(BP)					
9884		VORO	04 02 2231	S19	W37	03 31.1			CAO	92	5	5	3
9884		LEAR	04 03 0130	S18	W41	03 31.0		A	HSX	30	1	2	3

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

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MARCH 2002

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
9884		KAND	04	03	0805	S19 W45	03 31.0			HA		2	2	3
9884		RAMY	04	03	1215	S16 W48	03 31.0		A	HAX	50	1	2	3
9884	31103	MWIL	04	03	1530	S17 W47	03 31.1	4	(BP)					
9884		HOLL	04	03	1820	S15 W48	03 31.1		B	CAO	50	4	6	4
9884		VORO	04	03	2235	S18 W53	03 31.0			HAX	49	3		3
9884		LEAR	04	04	0025	S17 W51	03 31.1		B	CAO	50	5	5	2
9884		RAMY	04	04	1242	S17 W61	03 31.0		A	HAX	40	1	2	3
9884		HOLL	04	04	1450	S17 W63	03 30.9		A	HSX	30	1	2	4
9884	31103	MWIL	04	04	1600	S17 W60	03 31.1	4	(BP)					
9884		LEAR	04	05	0040	S17 W67	03 31.0		A	HSX	40	1	1	2
9884		RAMY	04	05	1245	S17 W70	03 31.2		B	DSO	20	4	4	3
9884		HOLL	04	05	1504	S17 W71	03 31.2		A	AXX	20	3	2	2
9884	31103	MWIL	04	05	2200	S17 W74	03 31.3	3	(AF)					
9884		LEAR	04	06	0040	S17 W75	03 31.3		B	BXO	30	3	4	4
9884A		RAMY	03	27	1233	N06 E51	03 31.3		A	AXX	10	1	1	3
9884A	31104	MWIL	03	27	1530	N07 E50	03 31.4	4	(AP)					
9884A		SVTO	03	29	0730	N07 E28	03 31.4		A	HSX	10	2	2	3
9884D	31114	MWIL	03	31	1500	S04 E00	03 31.6	3	(AP)					

Stations reporting:

HOLL = Holloman
KAND = Kandilli
LEAR = Learmonth

MWIL = Mt. Wilson
PALE = Palehua

RAMY = Ramey
SVTO = San Vito

TACH = Tashkent
VORO = Voroshilov

SUDDEN IONOSPHERIC DISTURBANCES

MARCH 2002

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	1114	1121	1147	1+	5					2	1111	C3.1	
01	1405	1408	1419	1-	3					3	1404	C1.8	
01	1427	1435	1447	1	1					1	1426	C2.8	9851
01	1529	1532	1541	1-	3					4	1528	C2.0	
01	1622	1631	1700	1+	5		1			5	1623	C5.6	9851
01	1709	1713	1730	1-	3					5	1708	C4.7	
02	0922	0925	0951	1	1					1	0920	C1.6	9844
02	2010	2019	2047	2	1					1	2010	C4.4	9845
03	0859	0902	0919	3	1			1			*		
03	1817	1823	1906	2	3					5	1816	C2.3	
04	0732	0734	0757	2-	1					1	0729	C3.2	
04	2052	2059	2106	1-	1					1	2052	C1.4	
07	0807	0818	0921	2	1					1	0807	C2.5	
07	1340	1356	1427	2-	5		1			3	1338	C2.7	
07	1422	1429	1452	1+	1					1	No flare		
07	1622	1625	1632	1-	1					1	1621	C1.8	
07	1748	1753	1817	1+	3					3	1748	C2.5	
07	2048	2056	2200	3-	3					2	2046	C6.3	
07	2222	2232	2300	2	1					1	2216	C7.8	
07	2300	2318	2402	2+	1					1	*		
08	0903	0906	0932	1	5					4	0902	C4.3	
08	1106	1113	1130	1	1					1	1103	C2.2	
08	1452	1455	1508	1-	5					5	1451	C2.0	
08	1650	1652	1714	1	5					6	1647	C8.6	
08	1753	1758	1822	1+	5					5	1753	C4.4	
09	0907	0911	0925	1-	3					2	0904	C1.8	9866
09	1053	1058	1116	1-	5					2	1050	C2.8	
09	1413	1423	1435	1	5					3	1405	C3.3	9864
09	1430	1437	1505	1	1					1	1432		9866
09	1833	1841	2021	3	5					7	1831	M2.6	9866
09	2145	2212	2326	3	1					1	2144	M1.3	9866
10	0134	0136	0145	1-	1					1	0133	C5.1	
10	0503	0505	0535	1+	1					1	0501	C6.0	9866
10	0941	0945	0959	1-	1					1	0938	C2.0	
10	1000	1004	1049	1-	1					1	0959	C2.2	
10	1100	1108	1133	1	3					2	1057	C2.7	
12	0744	0753	0802	1-	1					1	No flare		
12	0836	0838	0844	3-	5	1		1		3	0831	C5.3	9866
12	1248	1251	1303	1-	1					1	No flare		
12	1307	1319	1407	1-	5		1			2	1310	C2.0	9866
12	1906	1909	1927	1	3					4	1904	C2.2	9866
12	2307	2317	2406	2+	1					1	2301	M1.5	9871
13	1023	1027	1050	1	5					2	1021	C1.6	
13	2207	2211	2255	2	3					2	2203	C7.8	9859
13	2317	2331	2402	2	1					1	2302	M1.0	9871
14	1646	1651	1717	1+	5					7	1644	C4.9	9871
15	0758	0815U	0857	2	1			1			No flare		
15	2219	2247	2512	3+	1					1	2209	M2.2	9866
16	1126	1130	1142	1	1			1			1120	C2.9	9871
16	1218	1227	1315	1	1			1			No flare		
16	1445	1451	1506	1	1					1	1448	C2.3	9864
17	0452	0455	0510	1-	1					1	0452	C3.1	9871
17	0533	0540	0600	1+	1					1	0535	C1.5	
17	1017	1025	1035	3	5	1	2	1		6	1011	M1.3	

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

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MARCH 2002

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			
17	1434	1439	1457	1	5					4	1433	C1.3	9866
17	1533	1539	1617	2	3					2	1533	C1.8	9866
17	1701	1704	1743	2-	3					5	1701	C4.5	9871
17	1926	1930	2030	2+	3					6	1924	M4.0	9871
18	1145	1152	1225	2	5	1	2	1		2	1140	C6.2	9870
18	1911	1920	2001	2+	1					3	1906	C8.9	9871
19	1016	1106	1151	1	3		1			1	1106	M1.0	9866
19	1110	1145	1300	3-	5	1	2	1		2	1106	M1.0	9866
20	2117	2122	2145	1+	1					1	2117	C2.4	
21	0747	0810	0911	2-	3		1			1	0745	C5.9	9866
21	1525	1533	1603	2-	5		1			4	1523	C2.6	
21	2034	2044	2115	2	1					1	2024	C2.0	
22	0611	0622	0734	2	3		1			1	0609	C8.0	
22	0741	0803	0842	1	1		1				No flare		
22	1055	1116	1201	3	5	1	2	1		4	1012	M1.6	
23	1428	1433	1455	1+	5					5	1425	C3.5	9876
23	1912	1918	1957	2	3					4	1905	C2.6	9876
24	1732	1753	1858	2+	3					4	1730	C5.1	9876
24	2037	2040	2055	1	1					1	2032	C4.5	9881
24	2122	2127	2200	2	1					1	2120	C1.8	
25	0630	0635	0716	2-	1					1	0629	C2.8	
25	1037	1045	1111	2+	5	1	2	1		4	1031	C6.0	9878
25	1127	1130	1149	1	1					1	1124	C2.1	
26	0803	0842	0935	1	1		1				*		
26	1511	1520	1552	2-	5		1			3	1512	C3.0	9878
26	1550	1555	1630	2	1					1	No flare		
26	2001	2003	2027	1+	1					2	1958	C2.1	9881
26	2025	2026	2037	1-	1					1	2025	C1.5	9881
27	1301	1305	1315	2-	5	1	2	1		4	1254	C3.0	
27	1345	1352	1457	1	3		1			1	No flare		
27	1611	1633U	1657	1	1		1				No flare		
27	2043	2047	2101U	1-	1					1	2040	C2.0	
28	1138	1144	1246	1	5		1			2	1134	C2.5	
28	1754	1802	1905	2+	3					5	1754	C7.6	
28	2009	2011	2015	1-	1					1	*		
29	0740	0744	0810	1	3		1			1	0738	C2.5	9880
29	0909	0912	0925	1-	1					1	0908	C1.9	
29	1004	1025	1043	1	1		1				No flare		
29	1110	1124	1219	2	1					1	1107	C3.1	9880
29	1149	1152	1204	1-	1					1	1107	C3.1	9880
29	1249	1254	1317	1+	5	1	2	1		7	1239	C6.5	9884
29	1408	1421	1538	1	1		1				1416		9885
29	1718	1727	1738	1	1					1	1715	C2.2	
29	1919	1924	1948	1+	3					4	1917	C3.7	9887
30	0707	0713	0725	2+	5		1	1		3	0702	C9.1	
30	0941	1010	1044	1	1		1				No flare		
30	1157	1205	1232	1+	5		1			4	1155	C5.1	9885
30	1244D	1248	1315	1+	1					1	1245	M3.4	9885
30	1254	1301	1314	3	5	1	2	1		9	1245	M3.4	9885
30	1935	1939	2002	1+	3					2	1936	C4.5	9885
30	2223	2228	2253	1+	1					1	2219	M1.0	

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

MARCH 2002

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			
31	0630	0710	0800	1	1		1				No flare		
31	0803	0848	1036	1	1		1				No flare		
31	1009	1014	1018	1	5					2	1005	C2.9	9885
31	1039	1103	1123	3	5	1	2	1		3	1039	M1.0	9885
31	1233	1259	1412	1	1		1				1232		9885
31	1450	1455	1512	2	5		1	1		6	1449	C5.2	9886

* = no flare patrol.

OBSERVATORIES REPORTING FOR MARCH 2002

Alberta, Canada	SES	Milan, Italy	SES
Bedford, Massachusetts, USA	SES	Nerja, Spain	SES
Bern, Switzerland	SES	New Milford, New York, USA	SES
Brookline, Massachusetts, USA	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Cambridge, England, UK	SES	Parma, Ohio, USA	SES
Edenvale, Rep of S. Africa	SES	Sofia, Bulgaria	SES
High Bridge, New Jersey, USA	SES	Sussex, United Kingdom	SES
Houston, Texas, USA	SES	Torrington, Connecticut, USA	SES
Isola del Gran Sasso, Italy	SES	Upice, Czech Republic	SEA
Marlborough, Massachusetts, USA	SES	Villiersdorp, South Africa	SES

Observations are not necessarily continuous.

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

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MARCH 2002

OBSERVATION Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
						Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
01	0000	0800	CULG	0000.0E	0048.0	I	S	1	120	170	
			LEAR	0116.0	0117.0	III		1	64	180	
	0000	0540	HIRA	0116.5	0117.0	III	B	1	60	240	
			CULG	0117.0	0117.0	III	G	1	60	260	
			CULG	0122.0	0123.0	III	G	1	60	180	
			HIRA	0122.0	0122.5	III	B	1	60	220	
			LEAR	0205.0	0234.0	III	N	1	40	165	
			CULG	0206.0	0226.0	III	N	1	57X	160	
			CULG	0214.0	0217.0	II	SH	1	65	160	ESS 1200
			CULG	0225.0	0226.0	III	G	2	57X	90	
			CULG	0255.0	0329.0	III	S,C	1	57X	100	
			LEAR	0255.0	0324.0	III	N	1	29	159	
			CULG	0421.0	0421.0	III	B	1	57X	90	
			CULG	0426.0	0427.0	III	G	1	57X	90	
			CULG	0528.0	0531.0	III	G	3	57X	400	
			HIRA	0528.0	0531.0	III	G	3	30	380	
			LEAR	0528.0	0531.0	V		2	25	180	
			CULG	0540.0	0544.0	II	FN	1	57X	65	
			CULG	0540.0	0548.0	II	SH	1	75	130	ESS 700
			LEAR	0542.0	0547.0	II		1	36	127	ESS 0742
	0600	0832	HIRA								
	0610	1630	POTS	0610 E	0747 U	I	S,N	1	200U	300	
	0658	1531	ONDR								
	0700	1202	IZMI	0702.0	0708.0	I	N	1	160	250	
			POTS	0821 U	0941 U	I	S,N	1	110U	300	
			IZMI	0908.9	0909.1	III	B	1	95	160	
			IZMI	0912.0U	0936.0	I	N	1	180	270	
	0745	1600	BLEN	0959.7	0959.8	III		1	530	800	
			POTS	1327.6	1328.1	III	G,W	1	110U	170U	
			POTS	1328.1	1328.5	V	B	2	40X	70	
	2000	2400	CULG	2038.0	2040.0	III	G	1	57X	130	
			CULG	2101.0	2102.0	III	G	1	57X	150	
			HOLL	2101.0	2102.0	III		1	25	94	
			PALE	2101.0	0419.0	III		1	25	123	
			CULG	2119.0	2119.0	III	B	1	57X	100	
			HOLL	2119.0	2119.0	III		1	25	86	
	2107	2400	HIRA	2119.0	2119.5	III	B	2	30	140	
			CULG	2148.0	2148.0	III	G	2	57X	280	
			CULG	2247.0	2247.0	III	B	1	57X	110	
			HIRA	2247.0	2247.5	III	B	1	60	110	
			LEAR	2247.0	2252.0	III		1	52	103	
			CULG	2333.0	2336.0	III	G	1	57X	180	
			HIRA	2333.0	2335.5	III	G	2	25X	400	
			LEAR	2333.0	2335.0	III		1	25	175	
02			LEAR	0051.0	0059.0	III		1	38	100	
	0000	0800	CULG	0051.0	0051.0	III	B	1	57X	90	
	0000	0833	HIRA	0051.0	0051.5	III	B	1	25X	100	
			CULG	0059.0	0101.0	III	G	1	57X	90	
			LEAR	0126.0	0131.0	III		1	44	79	
			CULG	0130.0	0131.0	III	G	1	57X	90	
			HIRA	0131.0	0131.5	III	B	1	30	80	
			LEAR	0203.0	0207.0	III		1	25	108	
			HIRA	0203.5	0208.0	III	G	1	25X	120	
			CULG	0204.0	0208.0	III	G	1	57X	90	
			LEAR	0252.0	0255.0	III		1	28	109	
			HIRA	0253.5	0254.0	III	B	1	50	100	
			CULG	0254.0	0254.0	III	B	1	57X	100	
			CULG	0309.0	0311.0	III	G	2	57X	140	
			LEAR	0309.0	0310.0	III		2	25	143	
			HIRA	0309.5	0310.0	III	B	2	30	80	
			CULG	0424.0	0426.0	III	G	1	57X	90	
			LEAR	0424.0	0425.0	III		1	25	68	
			HIRA	0425.0	0425.5	III	B	1	40	70	
	0656	1533	ONDR								
	0745	1600	BLEN								
	0605	1635	POTS	1044.0	1044.2	UNCLF		2	40X	70	
	0706	1200	IZMI	1044.0	1044.1	III	B	2	35	100	
			POTS	1256.0	1257.6	III	G	1	40X	170U	

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

MARCH 2002

OBSERVATION		Sta	EVENT		Int (1-3)	FREQUENCY		Remarks	
Start Day	End Day		Start (UT)	End (UT)		Spectral Class	Event Remarks		Lower (MHz)
02		SVTO	1311.0	1312.0	III		138U	175U	
		POTS	1311.5	1312.1	UNCLF		130	250	
		POTS	1317.4	1317.6	UNCLF		110U	170U	
		HOLL	1421.0	1422.0	III		25	71	
		SVTO	1421.0	1422.0	III		30U	45U	
		POTS	1421.3	1422.3	III	G	40X	170U	
		SVTO	1448.0	1451.0	III		41U	160U	
		SVTO	1453.0	1605.0	CONT		39U	172U	
		HOLL	1521.0	1522.0	III		25	180	
		SGMR	1521.0	1522.0	V		30	65	
		SVTO	1521.0	1522.0	III		30U	178U	
		POTS	1521.7	1522.3	III	G	40X	270	
		POTS	1522.1	1522.5	V		40X	70	
		HOLL	1648.0	1648.0	III		25	84	
		SGMR	1648.0	1649.0	III		30	50	
		HOLL	2001.0	2018.0	III	N	25	180	
		PALE	2001.0	2018.0	III	N	25	180	
	2000 2400	CULG	2002.0	2002.0	III	B	57X	90	
		CULG	2009.0	2018.0	III	GG	57X	180	
		SGMR	2015.0	2016.0	III		30	55	
	2105 2400	HIRA							
		CULG	2140.0	2142.0	III	G	57X	90	
03		HOLL	0020.0	0021.0	III		25	180	
		LEAR	0020.0	0021.0	III		33	163	
	0000 0834	HIRA	0020.5	0021.0	III	B	30	200	
	0000 0800	CULG	0021.0	0021.0	III	B	57X	160	
		CULG	0102.0	0102.0	III	B	57X	90	
		CULG	0141.0	0145.0	III	G	57X	90	
		HIRA	0141.0	0142.0	III	B	60	100	
		CULG	0202.0	0206.0	III	GG	57X	180	
		HIRA	0202.0	0206.5	III	G	25X	200	
		LEAR	0202.0	0206.0	III		25	180	
		CULG	0226.0	0227.0	III	G	57X	180	
		HIRA	0226.0	0227.5	III	G	30	210	
		LEAR	0226.0	0228.0	III		25	176	
		CULG	0349.0	0350.0	III	G	57X	90	
		HIRA	0349.0	0349.5	III	B	30	70	
		HIRA	0512.5	0513.5	III	B	40	220	
		CULG	0513.0	0513.0	III	B	57X	180	
		LEAR	0513.0	0513.0	III		25	120	
		CULG	0536.0	0542.0	III	G	57X	250	
		HIRA	0536.0	0542.0	III	G	40	260	
		LEAR	0536.0	0540.0	III		28	61	
	0654 1535	ONDR							
	0605 1635	POTS	0655.8	0656.8	III	G	40X	270	
		CULG	0656.0	0656.0	III	B	57X	180	
		HIRA	0656.0	0656.5	III	B	40	230	
		LEAR	0656.0	0656.0	III		25	163	
		SVTO	0656.0	0656.0	III		29U	153U	
	0655 1200	IZMI	0656.0	0656.7	III	G, FS	35	250	
		IZMI	0656.1	0656.6	V		45	65	
	0745 1600	BLEN							
		LEAR	0752.0	0758.0	III		35	166	
		POTS	0752.3	0753.8	III	GG	40X	170U	
		HIRA	0752.5	0754.0	III	G	50	180	
		IZMI	0752.7	0753.8	III	GG	50	180	
		CULG	0753.0	0754.0	III	G	57X	170	
		CULG	0758.0	0758.0	III	B	57X	90	
		LEAR	0823.0	0824.0	III		32	127	
		SVTO	0823.0	0824.0	III		37U	83U	
		HIRA	0823.5	0824.0	III	B	50	140	
		POTS	0823.5	0825.0	III	G	40X	250	
		IZMI	0823.6	0825.0	III	GG	40	210	
		IZMI	0828.2	0828.9	III	G	50	90	
		IZMI	0832.6	0832.9	III	G	45	70	
		IZMI	0900.8	0901.0	III	G, HARM	40	90	
		POTS	0929 U	0951 U	I	S, N	40X	300	
		LEAR	0930.0	0931.0	III		51	109	

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OBSERVATION		Sta	EVENT		Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End (UT)		Start (UT)	End (UT)			Spectral Class	Lower (MHz)	
03		SVTO	0930.0	0931.0	III		75U	84U	
		IZMI	0930.2	0931.6	III	G	40	110	
		IZMI	1001.6	1002.0	III	G	230	270X	
		IZMI	1049.9	1050.0	III	B	45	75	
		POTS	1053 U	1110 U	I	S,N	250	300	
		IZMI	1101.0	1112.0U	I	N	230	270X	
		POTS	1207.6	1207.8	III	B	40X	170U	
		POTS	1225.9	1226.4	III	G	40X	150	
		SVTO	1226.0	1226.0	III		30U	83U	
		POTS	1345.2	1346.0	UNCLF		110U	170U	
		HOLL	1828.0	1828.0	III		25	52	
		PALE	1828.0	1839.0	III		25	55	
	2000 2400	CULG							
04		LEAR	0414.0	0416.0	III		25	150	
	0000 0800	CULG	0414.0	0419.0	III	GG	57X	180	
		CULG	0509.0	0509.0	III	G	57X	90	
	0651 1537	ONDR							
	0600 1640	POTS	0727.7	0727.8	UNCLF		60	130	
		CULG	0731.0	0738.0	III	G	60	420	
		POTS	0731.3	0735.4	DCIM	RS	200U	700	
	0655 1200	IZMI	0731.4	0735.4	III	GG	190	270X	
		POTS	0733.1	0733.2	UNCLF		110U	150	
		IZMI	0838.8	0839.8	III	GG	115	270X	
		POTS	0838.8	0839.7	III	G	110U	250	
	0740 1600	BLEN	0851.8	0854.1	III	GG	270	500	
		POTS	0853.2	0854.1	DCIM		250	600	
		POTS	1010.3	1013.8	DCIM		250	450	
		POTS	1059.3	1059.4	DCIM		200U	460	
		IZMI	1059.5	1059.7	III	G	180	270X	
		BLEN	1219.2	1222.3	III	GG	290	540	
		BLEN	1236.0	1236.2	III	U	320	700	
		BLEN	1337.4	1338.5	III	GG	370	530	
		POTS	1406.2	1406.3	DCIM		200U	350	
		HOLL	1750.0	1752.0	III		25	180	
		PALE	1751.0	1751.0	III		25	180	
		SGMR	1751.0	1751.0	V		30	65	
		PALE	1815.0	1816.0	III		25	180	
	2000 2400	CULG	2151.0	2151.0	III	B	57X	140	
		CULG	2211.0	2214.0	III	G	57X	230	
		HOLL	2211.0	2212.0	III		25	87	
		PALE	2211.0	2212.0	III		25	54	
		CULG	2330.0	2330.0	III	B	57X	130	
		HOLL	2330.0	2330.0	III		53	86	
		LEAR	2330.0	2330.0	III		25	103	
05	0000 0800	CULG	0034.0	0034.0	III	B	57X	130	
		LEAR	0246.0	0246.0	III		39	112	
		CULG	0247.0	0247.0	III	B	57X	120	
		LEAR	0357.0	0358.0	III		35	113	
		CULG	0358.0	0358.0	III	G	57X	100	
		LEAR	0519.0	0524.0	III		41	120	
		CULG	0520.0	0524.0	III	G	57X	140	
	0639 0836	HIRA							
	0649 1539	ONDR							
		CULG	0702.0	0704.0	III	G	57X	140	
	0600 1640	POTS	0703.4	0703.7	UNCLF		110U	150	
	0700 1200	IZMI	0703.4	0703.6	III	G	105	155	
		POTS	1337.3	1337.8	DCIM		300	500	
	0740 1600	BLEN	1337.4	1339.3	III	GG	330	520	
		HOLL	2134.0	2134.0	III		25	61	
		HOLL	2314.0	2315.0	III		116	180	
		LEAR	2314.0	2315.0	III		94	180	
		PALE	2314.0	2315.0	III		25	180	
	2101 2400	HIRA	2314.5	2315.0	III	B	100	390	
	2000 2400	CULG	2315.0	2316.0	III	G	100	400	
		HOLL	2334.0	2345.0	III	N	25	180	
		LEAR	2339.0	0004.0	III	N	54	180	
		CULG	2340.0	2341.0	III	G	65	260	

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OBSERVATION			EVENT				FREQUENCY			Remarks
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)	
05			HIRA	2340.0	2340.5	III	B	1	110	230
			CULG	2345.0	2346.0	III	G	1	57X	180
			HIRA	2345.0	2345.5	III	B	1	100	210
06	0000	0800	CULG	0119.0	0119.0	III	B	1	140	180
	0000	0837	HIRA	0119.0	0119.5	III	B	1	120	200
			CULG	0127.0	0127.0	III	B	1	130	180
			HIRA	0127.5	0128.0	III	B	1	120	300
			LEAR	0217.0	0217.0	III		1	124	180
			HIRA	0217.5	0218.0	III	B	1	110	300
			CULG	0218.0	0218.0	III	G	1	130	200
	0647	1541	ONDR							
	0730	1615	BLN	0819.9	0821.1	III	G	1	160	550
	0655	1200	IZMI	0820.1	0820.4	III	G	1	150	270X
	0555	1645	POTS	0820.2	0820.5	DCIM		1	150	400
			POTS	1044.2	1045.6	I	S,N	1	130	170U
			POTS	1115.2	1117.3	I	S,N	1	150	300
			IZMI	1115.4	1117.3	III	GG	1	210	270X
			IZMI	1145.8	1147.0	III	GG	2	30	150
			SVTO	1146.0	1146.0	III		1	25U	83U
			POTS	1155.7	1158.1	III	GG	1	40X	170U
			BLN	1222.1	1222.6	III	GG,S	1	180	380
			POTS	1222.2	1222.7	III	G	1	110U	300
			POTS	1408.3	1412.5	III	G	2	40X	300
			POTS	1452.0	1452.5	UNCLF		1	130X	320
			BLN	1452.1	1452.5	III	G	1	160	450
			POTS	1521.3	1521.7	III	G	1	110U	300
			POTS	1605.9	1607.7	III	G	2	40X	450
			HOLL	1607.0	1607.0	III		1	61	180
			SVTO	1607.0	1607.0	III		1	64	180
			POTS	1609.6	1609.7	UNCLF		1	200U	320
			POTS	1637.7	1637.8	UNCLF		1	240	300
			HOLL	1803.0	1805.0	III		1	25	86
			PALE	1803.0	1806.0	III		1	25	87
			SGMR	1803.0	1806.0	III		1	30	80
			HOLL	1918.0	1919.0	III		1	25	180
			PALE	1919.0	1919.0	III		1	25	180
			SGMR	1919.0	1919.0	III		1	30	55
	2100	2400	HIRA							
	2000	2400	CULG	2340.0	2350.0	III	G	1	130	180
07	0000	0606	HIRA	0033.5	0034.0	III	B	1	80	250
	0000	0800	CULG	0034.0	0035.0	III	G	1	57X	280
			LEAR	0151.0	0152.0	III		1	41	107
			CULG	0152.0	0152.0	III	B	1	57X	180
	0645	1542	ONDR							
	0700	0838	HIRA							
	0555	1645	POTS	0717.9	0718.5	DCIM		1	220	350
	0701	1200	IZMI	0717.9	0718.5	III	G	1	180	270X
	0730	1615	BLN							
			POTS	1351.5	1351.6	III	B	1	120	170U
	2000	2400	CULG	2037.0	2037.0	III	B	1	57X	80
	2059	2400	HIRA							
			CULG	2231.0	2247.0	III	GG	1	57X	90
08	0000	0838	HIRA							
	0000	0800	CULG	0116.0	0116.0	III	B	1	57X	90
	0550	1645	POTS	0550.5	0613.8	I	S	1	200U	360
	0642	1544	ONDR							
	0730	1620	BLN	0830.9	0832.9	I	DC	1	290	430
			POTS	0831.7	0837.2	I	S	1	250	400
	0655	1200	IZMI	0945.1	0945.5	III	B	1	45	190
			HOLL	1652.0	1653.0	III		1	25	87
			SGMR	1652.0	1653.0	III		2	30	53
	2058	2400	HIRA							
	2000	2400	CULG	2119.0	2121.0	III	G	1	57X	140
			CULG	2345.0	2345.0	III	B	1	57X	90
09			SVTO	.0	1627.0	CONT		1	30U	136U

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OBSERVATION			Sta	EVENT		Event Remarks	Int (1-3)	FREQUENCY		Remarks
Day	Start (UT)	End (UT)		Start (UT)	End (UT)			Spectral Class	Lower (MHz)	
09	0000	0839	HIRA							
	0000	0800	CULG	0004.0	0440.0	III	S,C	2	57X	160
			LEAR	0021.0	0436.0	CONT		2	25	121
			SVTO	0605.0	0654.0	III	N	1	36	79
	0655	1222	IZMI	0737.4	0737.8	III	B	1	25X	70
			SVTO	1102.0	1103.0	III		1	60	156
	0550	1650	POTS	1124.8	1127.3	I	S	1	250	320
			POTS	1239.2	1240.0	I	S	1	200U	280
			POTS	1527.7	1527.8	UNCLF		1	40X	70
	0640	1546	ONDR	1532.3	1542.3	DCIM	GG	1	800X	1466
	0730	1620	BLEN	1532.6	1542.6	DCIM	P	1	700	1700
			SVTO	1600.0	1626.0	CONT		1	30U	136U
			SGMR	1601.0	1917.0	CONT		1	30	60
			PALE	1810.0	2005.0	CONT		1	25	140
			HOLL	1829.0	1830.0	III		1	25	180
			HOLL	2157.0	2158.0	III		1	75	180
	2056	2400	HIRA	2157.5	2158.5	III	B	1	80	200
	2000	2400	CULG	2158.0	2158.0	III	G	1	57X	180
			CULG	2210.0	2245.0	I	S,C	1	130	180
			CULG	2219.0	2400.00	III	S,C	1	57X	160
			HOLL	2232.0	2340.0	IV		1	61	170
			LEAR	2239.0	0020.0	CONT		1	25	180
10	0000	0800	CULG	0000.0E	0115.0	III	S,C	1	57X	90
	0000	0840	HIRA	0009.5	0010.5	III	B	1	40	220
			CULG	0010.0	0010.0	III	G	1	57X	180
			LEAR	0033.0	0136.0	III	N	1	25	97
			CULG	0130.0	0130.0	III	B	1	57X	280
			CULG	0135.0	0137.0	III	G	3	57X	450
			HIRA	0135.0	0137.0	III	G	3	25X	450
			LEAR	0135.0	0135.0	III		3	25	180
			PALE	0135.0	0136.0	III		2	25	180
			CULG	0336.0	0337.0	III	G	1	57X	100
			HIRA	0336.0	0337.0	III	G	1	40	140
			LEAR	0336.0	0359.0	III	N	2	25	180
			PALE	0357.0	0358.0	III		1	25	180
			HIRA	0357.5	0359.5	III	G	3	30	500
			CULG	0358.0	0358.0	III	B	3	57X	430
			CULG	0359.0	0402.0	III	G	1	57X	130
			CULG	0503.0	0505.0	III	G	3	57X	600
			HIRA	0503.0	0507.0	III	G	3	30	600
			LEAR	0503.0	0509.0	III		3	25	180
			CULG	0505.0	0510.0	III	G	1	57X	450
			LEAR	0553.0	0554.0	III		1	25	58
			CULG	0650.0	0650.0	III	B	1	57X	110
			HIRA	0650.0	0650.5	III	B	1	50	90
	0550	1650	POTS	0711.2	0711.7	I	S	1	220	280
			POTS	0735.2	0944 U	I	S,N	1	200U	300
	0707	1200	IZMI	0809.4	0809.5	III	G,RS	1	245	270
	0730	1620	BLEN	0945.5	0946.0	III	G,RS	1	660	870
			BLEN	1000.8	1005.9	III	G,C	3	160	4000X
	0637	1548	ONDR	1001.2	1001.5	DCIM	G	1	1048	1752
			LEAR	1005.0	1006.0	III		1	55	172
			SVTO	1005.0	1006.0	III		1	54U	154U
			IZMI	1005.2	1006.4	III	GG,FS	2	35	270X
			POTS	1005.2	1006.1	III	G	2	40X	350
			BLEN	1058.8	1059.9	III	GG,V,C	2	100X	4000X
			IZMI	1058.8	1100.6	III	GG,C	3	25X	170X
			POTS	1058.8	1100.5	III	G	3	40X	600
			POTS	1059.0	1100.1	V	G	3	40X	90U
			SVTO	1059.0	1100.0	III		2	25	180
			ONDR	1102.4	1103.0	DCIM	GG,SP	2	800X	1128
			BLEN	1102.7	1103.3	III	GG,C	2	780	4000X
			SVTO	1159.0	1201.0	III		1	25	141
			IZMI	1159.7	1201.8	III	GG,FS	2	38	170X
			POTS	1200.4	1202.0	III	G	3	40X	700
			POTS	1343.5	1344.1	III	G	1	110U	450
			POTS	1353.6	1353.8	UNCLF		1	40X	170U
			BLEN	1400.2	1400.5	III	G,S	1	200	320

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
10		POTS	1400.2	1400.4	UNCLF		2	130	300	
		POTS	1412.0	1414.1	III	G	1	70	400	
		BLN	1412.1	1413.2	III	GG,C	2	170	620	
		POTS	1427 U	1626 U	I	S,N	1	150	350	
	2055 2400	HIRA								
		HOLL	2152.0	2152.0	III		1	25	40	
	2000 2400	CULG	2242.0	2253.0	III	GG	1	57X	180	
		LEAR	2244.0	0042.0	CONT		1	72	133	
11		LEAR	0139.0	0144.0	III		1	25	123	
		PALE	0139.0	0140.0	III		1	25	63	
	0000 0841	HIRA	0139.5	0140.5	III	B	1	40	110	
	0000 0800	CULG	0140.0	0145.0	III	G	1	57X	160	
		CULG	0612.0	0613.0	III	G	1	57X	180	
		HIRA	0612.0	0612.5	III	B	1	40	150	
		LEAR	0612.0	0612.0	III		2	25	153	
		SVTO	0612.0	0612.0	III		1	25	147	
		CULG	0623.0	0625.0	III	G	2	57X	150	
		HIRA	0623.0	0624.0	III	B	2	30	150	
		LEAR	0623.0	0624.0	III		2	25	141	
		SVTO	0623.0	0624.0	III		2	25	140	
	0545 1655	POTS	0623.4	0623.8	UNCLF		2	40X	70	
	0635 1549	ONDR								
	0730 1620	BLN								
		POTS	0841.6	0912.5	I	S,N	1	200U	320	
		LEAR	0842.0	0842.0	III		1	43	106	
	0700 1200	IZMI	0842.1	0842.8	III	G,U	1	55	100	
		IZMI	0848.0U	1200.0D	I	S	1	60	270X	
		LEAR	0918.0	1027.0	CONT		1	87	180	
		POTS	0918.7	1553 U	I	S,N,DC	2	40X	300	
		IZMI	1003.5	1005.6	III	G,FS	2	50	90	
		IZMI	1006.6	1008.4	III	G,C	2	35	100	
		IZMI	1100.7	1101.8	III	G	2	40	160	
		POTS	1100.7	1103.4	III	G	2	40X	250	
		IZMI	1102.7	1103.4	III	G	2	45	135	
		PALE	1947.0	1954.0	III		1	25	150	
	2000 2400	CULG	2025.0	2027.0	III	G	1	57X	130	
		CULG	2034.0	2222.0	III	N	1	57X	100	
		HOLL	2204.0	2205.0	III		1	25	133	
		PALE	2204.0	2205.0	III		1	25	126	
		CULG	2205.0	2205.0	III	B	3	57X	160	
	2054 2400	HIRA	2205.0	2205.5	III	B	2	25X	120	
		CULG	2209.0	2400.0D	I	S,C	1	130	250	
		LEAR	2240.0	0905.0	CONT		1	37	180	
		CULG	2245.0	2400.0D	III	S,C	1	57X	160	
		HOLL	2258.0	0057.0	CONT		1	35	93	
		CULG	2345.0	2348.0	III	G	1	600	1400	
		PALE	2346.0	0423.0	III		1	25	180	
12		CULG	0000.0E	0500.0	III	S,C	1	57X	180	
	0000 0800	CULG	0000.0E	0607.0	I	S,C	2	57X	180	
		CULG	0016.0	0151.0	IV	FS	2	280	1700	
		CULG	0625.0	0800.0D	III	N	1	57X	160	
	0545 1655	POTS	0652 U	0743 U	I	S,N	1	110U	250	
	0705 1202	IZMI	0708.8U	0742.4	UNCLF		1	45	90	
		IZMI	0722.0	0752.0U	I	N	1	120	250	
		SVTO	0833.0	0834.0	III		1	30U	83U	
		POTS	0833.3	0833.7	DCIM		1	300	500	
	0725 1625	BLN	0833.4	0834.5	III	GG,RS,C	3	310	4000X	
	0000 0842	HIRA	0833.5	0834.0	III	B	1	50	190	
		POTS	0833.8	0836.8	III	G	2	40X	250	
		IZMI	0833.9	0839.4	III	GG	2	25X	175	
		BLN	0838.2	0838.4	III	G	1	310	420	
		IZMI	1011.1	1011.3	III	G	2	180	270X	
		POTS	1011.1	1011.3	III	G	2	110U	300	
		IZMI	1032.3	1032.5	III	B	1	40	90	
		ONDR	1311.4	1317.3	DCIM	G,W	1	1048	2000X	
	0633 1551	ONDR	1311.5	1317.1	DCIM	G	1	2000X	4500X	
		BLN	1312.1	1316.3	III	GG,C	3	430	4000X	

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
12		HOLL	1906.0	1908.0	III		2	25	164	
		PALE	1906.0	1907.0	III		1	25	180	
		SGMR	1906.0	1908.0	III		3	30	80	
		PALE	1907.0	1908.0	III		1	25	180	
		LEAR	2241.0	0845.0	CONT		1	71	180	
	2000 2400	CULG	2306.0	2306.0	III	B	1	550	800	
		CULG	2318.0	2327.0	II	SH	1	57X	160	ESS 1000
		CULG	2319.0	2321.0	II	FN	1	57X	80	
		LEAR	2319.0	2331.0	II		1	68	180	ESS 0884
		PALE	2319.0	2322.0	II		1	102	180	ESS 0549
	2052 2400	HIRA	2319.0	2323.0	II		1	80	160	
13	0000 0800	CULG	0011.0	0032.0	III	N	1	57X	90	
		CULG	0041.0	0042.0	III	G	3	57X	1600	
		HOLL	0041.0	0042.0	III		1	25	180	
		LEAR	0041.0	0042.0	III		3	25	180	
		PALE	0041.0	0042.0	III		1	25	180	
	0000 0843	HIRA	0041.0	0042.0	III	B	3	40	500	
		CULG	0136.0	0520.0	III	N	1	57X	180	
		CULG	0618.0	0627.0	III	G	1	57X	90	
		SVTO	0623.0	0623.0	III		1	46U	74U	
		HIRA	0623.5	0624.0	III	B	1	40	130	
	0545 1655	POTS	0631 U	0823 U	I	S,N,DC	1	110U	320	
		CULG	0658.0	0701.0	III	G	1	57X	170	
	0700 1200	IZMI	0733.6	0733.7	III	B	1	40	90	
		POTS	0733.7	0733.8	UNCLF		1	40X	70	
		IZMI	0813.3	0813.4	III	B	1	120	160	
		POTS	0846.8	0850.3	DCIM		2	250	650	
		POTS	0902.8	1142 U	I	S,N,DC	1	120	320	
		LEAR	0935.0	0936.0	III		1	62	180	
		SVTO	0935.0	0935.0	III		1	75U	150U	
		POTS	0935.5	0936.2	III	G	2	60	170U	
		IZMI	0935.6	0936.2	III	G	2	60	175	
		POTS	1024.2	1024.3	UNCLF		1	40X	60	
		POTS	1034.3	1034.5	III	G	1	40X	160	
		IZMI	1034.4	1034.4	III	G	1	60	170	
		IZMI	1043.7	1043.8	III	G	1	90	180	
		IZMI	1051.2	1051.4	III	B	1	50	90	
		IZMI	1106.0U	1135.0U	I	N	1	200	270X	
		SVTO	1114.0	1116.0	III		3	32U	180U	
		ONDR	1114.5	1115.5	DCIM		2	800X	2000X	
	0631 1553	ONDR	1114.5	1115.5	DCIM		1	2000X	4500X	
		POTS	1114.7	1116.3	III	G	3	40X	600	
		IZMI	1114.8	1115.7	III	GG	2	35	270X	
		IZMI	1114.9	1115.9	V		2	25X	180	
		SGMR	1115.0	1115.0	III		1	30	80	
		POTS	1115.1	1115.9	V		3	40X	70	
		IZMI	1116.1	1116.2	III	G	2	40	155	
		IZMI	1121.5	1121.5	III	B	2	130	190	
		IZMI	1141.5	1141.7	III	B	1	50	75	
		POTS	1227.8	1229.3	III	G	1	40X	140	
		SVTO	1229.0	1229.0	III		1	34U	83U	
		POTS	1255.9	1507 U	I	S,N	2	110U	250	
	1200 1615	BLEN	1342.5	1342.5	III	GG,S,C	2	360	4000X	
		SVTO	1351.0	1351.0	III		1	29U	141U	
		POTS	1351.2	1351.4	III	G	2	40X	300	
		SVTO	1401.0	1406.0	III		1	53U	153U	
		BLEN	1401.1	1401.4	III	G	1	360	500	
		POTS	1401.8	1402.1	III	G	2	60	220	
		POTS	1405.5	1406.4	III	G	2	40X	220	
		BLEN	1429.5	1446.7	III	GG	1	330	500	
		POTS	1431.4	1432.7	DCIM		2	250	550	
		POTS	1552.3	1552.5	DCIM		2	200U	550	
		BLEN	1553.0	1553.6	III	GG,S,C	2	150	4000X	
		HOLL	1553.0	1710.0	III	N	1	44	180	
		SVTO	1553.0	1553.0	III		1	72U	146U	
		POTS	1604.2	1605.7	III	G	2	40X	300	
		BLEN	1604.3	1605.7	III	GG,RS	2	100X	530	
		SVTO	1605.0	1605.0	III		2	46U	161U	

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
13		POTS	1613.9	1614.8	I	S	1	200U	280	
	2010 2300	CULG	2010.0E	2300.0D	III	S,C	1	57X	90	
		LEAR	2241.0	2324.0	CONT		1	39	138	
		HOLL	2324.0	2334.0	II		1	58	160	ESS 0507
		LEAR	2324.0	2334.0	II		2	50	175	ESS 0755
		PALE	2324.0	0000.0	II		1	55	162	ESS 0498
	2051 2400	HIRA	2324.0	2335.0	II		2	60	160	
		LEAR	2334.0	1024.0	IV		1	43	147	
14	0000 0844	HIRA								
	0000 0800	CULG	0000.0E	0206.0	III	S,C	1	57X	90	
		CULG	0142.0	0206.0	IV	FS	1	350	1600	
		CULG	0206.0	0800.0D	III	S,C	1	57X	180	
		SVTO	0544.0	0732.0	IV		1	37	172	
	0540 1700	POTS	0628 U	1553 U	I	S,N,DC	1	110U	300	
	0629 1555	ONDR								
	0640 1640	BLN								
		IZMI	0650.0E	0856.0U	III	N	1	45	90	
	0650 1200	IZMI	0650.0E	1200.0D	I	N	1	110	270	
		IZMI	0917.6	0917.7	III	B	1	45	90	
		IZMI	0956.4	0956.7	III	G	1	45	90	
		IZMI	1010.0	1010.9	III	G	2	25	270X	
		POTS	1010.0	1011.1	III	G	3	40X	400	
		SVTO	1010.0	1010.0	III		1	32U	175U	
		SVTO	1024.0	1026.0	III		1	45	75	
		SVTO	1047.0	1105.0	CONT		1	75	147	
		SVTO	1047.0	1302.0	CONT		1	61U	175U	
		IZMI	1113.3	1113.4	UNCLF	FS	2	55	70	
		POTS	1639.8	1640.2	III	G	2	40X	300	
		HOLL	1640.0	1730.0	III	N	1	25	151	
		SGMR	1643.0	1648.0	III		1	30	60	
	2049 2400	HIRA								
	2010 2400	CULG	2235.0	2238.0	III	G	1	57X	170	
		CULG	2311.0	2311.0	III	B	1	57X	90	
		CULG	2335.0	2335.0	III	B	1	57X	170	
15	0000 0800	CULG								
	0000 0845	HIRA								
	0626 1556	ONDR								
	0640 1640	BLN								
	0540 1700	POTS	0723 U	1557 U	I	S,N,DC	2	110U	300	
	0700 1200	IZMI	0723.0U	1200.0D	I	N	1	110	260	
		SVTO	0900.0	1633.0	CONT		1	25	180	
		LEAR	0903.0	1010.0	CONT		1	70	180	
		IZMI	1143.3	1145.2	I	GG,DC	2	130	145	
		HOLL	1419.0	2100.0	CONT		1	105	180	
		HOLL	1802.0	1802.0	III		1	25	91	
		PALE	1802.0	1802.0	III		1	25	123	
		SGMR	1802.0	1803.0	III		2	30	60	
	2010 2400	CULG	2010.0E	2322.0	I	S	1	120	170	
		CULG	2036.0	2223.0	III	N	1	57X	110	
	2048 2400	HIRA								
		HOLL	2149.0	2149.0	III		1	67	119	
		HOLL	2208.0	0005.0	III	N	1	25	138	
		HOLL	2213.0	0045.0	IV		1	25	180	
		CULG	2218.0	2312.0	IV	FS	1	57X	750	
		PALE	2219.0	0026.0	CONT		1	25	180	
		LEAR	2241.0	1023.0	CONT		1	25	180	
		CULG	2326.0	2400.0D	III	S,C	1	57X	200	
16	0000 0800	CULG	0000.0E	0800.0D	III	S,C	2	57X	200	
		LEAR	0443.0	0443.0	III		2	25	180	
	0000 0846	HIRA	0443.0	0443.5	III	B	1	30	170	
		SVTO	0520.0	1228.0	CONT		1	40U	155U	
	0535 1705	POTS	0620 U	1207 U	I	S,N,DC	2	40X	300	400-800MHz no data
	0701 1200	IZMI	0701.0E	1200.0D	I	S	2	40	250	
		HIRA	0720.0	0720.5	III	B	1	40	110	
		IZMI	0720.0	0721.0	III	G	2	25X	145	
		LEAR	0720.0	0720.0	III		2	25	143	

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
16		SVTO	0720.0	0720.0	III		1	25U	180U	
		IZMI	0728.8	0738.9	III	B	2	120	210	
		IZMI	0847.2	0848.9	III	G	1	40	75	
		IZMI	0858.2	0858.6	III	G	1	40	70	
		IZMI	0908.2	0909.2	III	G	2	30	200	
		POTS	0908.8	0909.2	III	G	2	40X	220	
		ONDR	1121.4	1126.2	DCIM	GG,SP	3	800X	2000X	
0624	1558	ONDR	1121.4	1125.0	DCIM	GG	2	2000X	4500X	
0640	1640	BLN	1121.8	1124.8	III	GG,U,C	3	100X	4000X	
		SGMR	1122.0	1123.0	III		1	30	80	
		SVTO	1122.0	1123.0	III		1	25	180	
		IZMI	1122.2	1123.8	III	GG,C	2	25X	270X	
		POTS	1122.2	1124.6	III	G	3	40X	400X	
		POTS	1122.5	1123.4	V	G	3	40X	90U	
		IZMI	1132.3	1132.9	III	G	1	40	140	
		POTS	1307 U	1608 U	I	S,N,DC	1	110U	280	
		SGMR	1319.0	1319.0	III		2	30	40	
		SVTO	1319.0	1319.0	III		1	32	48	
		POTS	1319.3	1319.5	UNCLF		1	40X	60	
		BLN	1356.6	1357.2	III	G,RS	1	170	310	
		POTS	1422.3	1422.5	UNCLF		1	40X	60	
		BLN	1448.1	1449.3	DCIM	P	2	850	4000X	
		HOLL	1519.0	1826.0	CONT		1	25	87	
		HOLL	1635.0	1636.0	III		1	25	135	
		HOLL	1754.0	1754.0	III		1	25	144	
		PALE	1754.0	1754.0	III		1	25	144	
		SGMR	1754.0	1755.0	III		2	30	53	
		HOLL	2005.0	2345.0	III	N	1	25	180	
2010	2400	CULG	2010.0E	2112.0	III	N	1	57X	150	
		PALE	2012.0	2348.0	III	N	1	25	180	
		SGMR	2012.0	2013.0	III		2	30	43	
		CULG	2121.0	2132.0	III	GG	2	57X	180	
2046	2400	HIRA	2121.5	2125.0	III	G	2	40	320	
		CULG	2159.0	2207.0	III	G	1	57X	180	
		CULG	2232.0	2237.0	III	G	1	57X	130	
		CULG	2250.0	2327.0	III	N	2	57X	180	
		LEAR	2250.0	2318.0	III	N	2	29	178	
		HIRA	2250.5	2254.0	III	G	2	25X	100	
		HIRA	2310.5	2327.0	III	G	2	25X	240	
		LEAR	2320.0	2326.0	III		1	36	135	
17		LEAR	0030.0	0034.0	III		2	25	149	
0000	0800	CULG	0030.0	0032.0	III	G	1	57X	170	
		HOLL	0031.0	0039.0	III		1	25	87	
		PALE	0031.0	0356.0	III		1	25	180	
0000	0847	HIRA	0031.5	0032.0	III	B	2	30	400	
		CULG	0034.0	0034.0	III	B	1	57X	700	
		LEAR	0036.0	0039.0	V		2	25	111	
		CULG	0038.0	0039.0	III	G	2	57X	180	
		HIRA	0038.0	0039.0	III	B	2	30	100	
		LEAR	0101.0	0101.0	III		1	32	63	
		CULG	0130.0	0249.0	III	N	1	57X	140	
		LEAR	0137.0	0140.0	III		1	25	62	
		HIRA	0138.5	0139.0	III	B	1	160	260	
		HIRA	0151.0	0151.5	III	B	1	25X	80	
		LEAR	0151.0	0151.0	III		1	25	94	
		LEAR	0224.0	0226.0	III		1	39	117	
		HIRA	0224.5	0225.0	III	B	1	30	130	
		LEAR	0243.0	0249.0	III		1	36	96	
		LEAR	0333.0	0340.0	III		1	29	147	
		CULG	0334.0	0336.0	III	G	1	57X	160	
		HIRA	0334.0	0336.0	III	G	1	40	130	
		CULG	0340.0	0342.0	III	G	1	57X	130	
		CULG	0346.0	0353.0	III	GG	2	57X	100	
		HIRA	0346.0	0353.0	III	G	1	25X	110	
		LEAR	0346.0	0355.0	III		2	28	180	
		CULG	0355.0	0400.0	III	G	1	57X	230	
		HIRA	0355.0	0357.5	III	G	2	25X	230	
		LEAR	0356.0	0400.0	III		2	25	178	

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OBSERVATION			EVENT				FREQUENCY		Remarks	
Start Day	End Day	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)
17		CULG	0426.0	0428.0	III	G	1	57X	170	
		LEAR	0426.0	0427.0	III		1	28	170	
		HIRA	0426.5	0427.5	III	B	1	25X	170	
		CULG	0454.0	0457.0	III	G	3	57X	300	
		HIRA	0454.5	0500.0	III	G	3	25X	400	
		LEAR	0455.0	0500.0	V		3	25	180	
		CULG	0457.0	0500.0	III	G	1	57X	180	
		CULG	0516.0	0542.0	I	S	1	110	180	
		CULG	0535.0	0548.0	III	GG	2	57X	140	
		HIRA	0535.0	0536.5	III	G	2	30	140	
		LEAR	0535.0	0536.0	III		2	25	140	
		SVTO	0535.0	0536.0	III		1	36U	83U	
		LEAR	0539.0	0632.0	III	N	1	25	180	
		HIRA	0544.0	0545.5	III	G	1	50	90	
		SVTO	0544.0	0545.0	III		1	50U	81U	
0535	1710	POTS	0632.8	0633.1	UNCLF		1	130	170U	400-800MHz no data
		CULG	0633.0	0633.0	III	G	1	57X	160	
0622	1600	ONDR	0724.0	0732.3	DCIM	GG	1	800X	1902	
0640	1640	BLEN	0724.0	0743.5	DCIM	P	2	500	1900	
		LEAR	0731.0	0854.0	III	N	1	34	132	
		SVTO	0731.0	0755.0	III	N	1	38U	134U	
0700	1200	IZMI	0731.5	0735.8	III	G	1	40	210	
		POTS	0731.7	0731.9	III	B	1	40X	170U	
		CULG	0732.0	0751.0	III	N	1	57X	150	
		IZMI	0743.7	0747.5	III	GG	1	45	75	
		IZMI	0750.7	0751.0	III	G	1	90	250	
		POTS	0750.8	0751.0	III	B	1	110U	240	
		IZMI	0843.5	0846.4	III	GG	2	50	235	
		POTS	0843.7	0844.9	III	G	2	40X	240	
		SVTO	0844.0	1036.0	III	N	2	25U	180U	
		IZMI	0852.1	0857.9	III	GG	2	45	140	
		POTS	0854.2	0855.2	III	G	1	40X	140	
		IZMI	0930.6	0931.3	III	G	1	25X	70	
		LEAR	0942.0	0945.0	III		1	38	105	
		IZMI	0942.9	0943.8	III	G	1	40	90	
		LEAR	0956.0	0959.0	III		1	32	180	
		IZMI	0956.5	0958.0	III	GG,C,FS	2	30	270	
		POTS	0956.5	0957.8	III	G	2	40X	360	
		IZMI	1003.1	1003.3	III	B	1	30	55	
		ONDR	1007.5	1022.1	DCIM	GG	1	800X	2000X	
		LEAR	1008.0	1022.0	III	N	1	37	180	
		BLEN	1008.3	1016.5	III	GG,C	3	100X	300	
		BLEN	1008.3	1036.3	DCIM	P	3	300	4000X	
		IZMI	1008.4	1009.4	III	G	2	105	270X	
		POTS	1008.4	1009.8	III	G	2	110U	400X	
		ONDR	1013.0	1025.5	DCIM	GG	2	2000X	4500X	
		IZMI	1013.1	1024.1	III	GG	2	25X	270X	
		POTS	1013.3	1023.5	III	GG	3	40X	350	
		IZMI	1016.6U	1044.0	I	N	1	130	270X	
		POTS	1023 U	1050 U	I	S,N	2	200U	300	
		IZMI	1030.5	1030.7	III	B	1	40	75	
		IZMI	1035.0	1036.2	III	GG,FS	2	30	220	
		POTS	1035.2	1036.3	III	G	2	40X	250	
		IZMI	1039.1	1039.4	III	G	1	125	270X	
		POTS	1039.2	1039.5	III	G	1	40X	300	
		IZMI	1121.0	1127.5	III	GG	2	30	190	
		SVTO	1122.0	1127.0	III		1	32U	164U	
		POTS	1122.8	1125.5	III	GG	3	40X	170U	
		IZMI	1123.4	1124.5	V	G	2	60	170	
		IZMI	1155.3	1157.8	III	GG	2	120	190	
		POTS	1155.3	1157.9	I	S	1	110U	170U	
		SVTO	1156.0	1157.0	III		1	116U	153U	
		SVTO	1224.0	1224.0	III		1	30U	45U	
		BLEN	1224.2	1224.8	III	GG,C	2	400	1050	
		POTS	1224.3	1224.4	UNCLF		1	40X	70	
		POTS	1340.3	1349.3	I	S,N	1	110U	220	
		HOLL	1434.0	1441.0	III		1	25	180	
		SGMR	1434.0	1436.0	III		1	30	80	
		SVTO	1434.0	1436.0	III		2	30	166	

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
17		POTS	1434.4	1435.8	III	G	3	40X	300	
		BLEN	1434.5	1440.5	III	GG,C	2	100X	4000X	
		POTS	1435.5	1436.8	V		3	40X	70	
		POTS	1438.4	1440.1	I	S,N	1	130	300	
		POTS	1441.8	1442.0	III	B	2	110U	170U	
		POTS	1456.6	1500.3	III	GG	2	40X	300	
		SVTO	1459.0	1520.0	III	N	1	31U	140U	
		BLEN	1512.2	1516.1	DCIM	P	2	600	1200	
		HOLL	1515.0	1515.0	III		1	25	51	
		POTS	1515.5	1516.2	UNCLF		2	40X	60	
		BLEN	1536.3	1537.2	DCIM	C	2	2100	4000X	
		POTS	1600.8	1704.0	I	S,N	1	200U	300	
		HOLL	1628.0	1629.0	III		1	25	162	
		SGMR	1628.0	1629.0	III		2	30	60	
		SVTO	1628.0	1629.0	III		1	33U	151U	
		BLEN	1628.5	1628.9	III	GG	1	100X	620	
		POTS	1628.5	1628.8	III	G	2	40X	350	
		HOLL	1703.0	1705.0	III		2	25	180	
		PALE	1703.0	1704.0	III		1	25	180	
		POTS	1703.5	1703.7	III	B	2	40X	320	
		POTS	1703.7	1704.1	V		2	40X	70	
		PALE	1705.0	1705.0	III		1	35	160	
		POTS	1705.5	1705.7	UNCLF		2	40X	70	
		SGMR	1733.0	1736.0	III		2	30	80	
		HOLL	1830.0	1831.0	III		1	25	136	
		PALE	1830.0	1831.0	III		1	25	94	
		HOLL	1847.0	1850.0	V		2	25	180	
		PALE	1847.0	1850.0	III		3	25	180	
		SGMR	1847.0	1850.0	III		3	30	80	
		PALE	1917.0	1917.0	III		1	25	72	
		HOLL	1926.0	1931.0	V		2	25	180	
		PALE	1926.0	2112.0	III	N	3	25	180	
		SGMR	1927.0	1930.0	III		3	30	80	
	2010 2400	CULG	2021.0	2121.0	III	N	1	57X	130	
		HOLL	2107.0	2112.0	III		1	25	157	
		SGMR	2107.0	2112.0	III		2	30	75	
	2045 2400	HIRA	2111.5	2112.5	III	G	2	30	180	
		CULG	2112.0	2112.0	III	G	1	57X	180	
		CULG	2230.0	2230.0	III	G	1	57X	180	
		HIRA	2230.0	2230.5	III	B	1	30	270	
		HOLL	2230.0	2233.0	III		1	25	164	
		PALE	2230.0	2233.0	III		1	25	150	
		CULG	2305.0	2318.0	III	GG	2	57X	180	
		HIRA	2305.0	2320.0	III	G	2	25X	200	
		HOLL	2305.0	0011.0	III	N	1	25	160	
		LEAR	2305.0	0105.0	III	N	2	25	180	
		PALE	2305.0	0425.0	III	N	2	25	180	
		CULG	2335.0	2336.0	III	G	1	57X	90	
		CULG	2353.0	2354.0	III	G	1	57X	100	
		HIRA	2353.0	2354.5	III	G	2	25X	90	
18	0000 0800	CULG	0021.0	0105.0	III	N	1	57X	180	
		CULG	0045.0	0046.0	III	G	2	57X	420	
		HOLL	0045.0	0048.0	III		1	25	180	
	0000 0848	HIRA	0045.0	0049.0	III	G	2	25X	430	
		CULG	0134.0	0139.0	III	GG	2	57X	420	
		HIRA	0134.0	0139.0	III	G	2	25X	500	
		LEAR	0134.0	0138.0	III		1	25	180	
		CULG	0142.0	0147.0	III	G	3	57X	420	
		HIRA	0142.0	0149.0	III	G	3	25X	500	
		LEAR	0142.0	0147.0	III		2	25	180	
		CULG	0155.0	0228.0	III	N	1	57X	180	
		HIRA	0155.0	0156.5	III	B	1	40	320	
		LEAR	0155.0	0156.0	III		1	37	180	
		HIRA	0205.0	0205.5	III	B	1	40	100	
		LEAR	0205.0	0228.0	III		1	49	103	
		CULG	0212.0	0311.0	IV	FS	1	350	1000	
		LEAR	0215.0	0510.0	IV		1	45	180	
		CULG	0231.0	0413.0	III	S,C	1	57X	180	

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
18		LEAR	0338.0	0341.0	III		2	25	180	
		HIRA	0339.5	0341.5	III	G	2	25X	300	
		CULG	0417.0	0423.0	III	G	3	57X	160	
		HIRA	0418.0	0422.0	III	G	3	25X	180	
		LEAR	0418.0	0422.0	III		2	25	180	
		CULG	0429.0	0430.0	III	G	3	57X	180	
		HIRA	0429.0	0430.0	III	B	3	25X	400	
		LEAR	0429.0	0430.0	III		3	25	180	
		LEAR	0454.0	0455.0	III		1	39	103	
		HIRA	0454.5	0455.0	III	B	1	40	100	
		CULG	0517.0	0520.0	III	G	1	57X	140	
		LEAR	0542.0	0542.0	III		1	43	111	
		HIRA	0542.5	0543.0	III	B	1	50	110	
		CULG	0543.0	0800.00	III	N	1	57X	150	
		SVTO	0543.0	0544.0	III		1	28U	34U	
		LEAR	0603.0	0940.0	III	N	1	25	115	
		HIRA	0611.0	0614.5	III	G	1	30	180	
		SVTO	0611.0	0611.0	III		1	29U	150U	
		SVTO	0612.0	0724.0	III	N	2	33U	174U	
0530	1710	POTS	0653.8	0654.6	III	G	1	40X	170U	400-800MHz no data
0650	1200	IZMI	0653.8	0654.6	III	G	2	45	90	
		IZMI	0707.6	0708.6	III	G	1	45	100	
		POTS	0707.6	0707.7	III	B	1	40X	150	
		IZMI	0716.0	0728.7	III	GG	2	25X	270X	
		POTS	0717.5	0724.4	III	GG	3	40X	400X	
		CULG	0719.0	0724.0	III	G	3	57X	180	
		LEAR	0720.0	0723.0	III		2	25	180	
		HIRA	0721.0	0724.0	III	G	3	30	190	
		POTS	0722.4	0724.0	V	G	3	40X	70	
		IZMI	0734.3	0734.5	III	G	1	50	75	
		POTS	0743 U	0756 U	I	S,N	1	200U	270	
		SVTO	0758.0	0841.0	III	N	1	31U	140U	
		IZMI	0758.1	0758.2	III	G	1	50	215	
		POTS	0758.1	0758.3	III	B	1	40X	270	
		IZMI	0801.1	0801.4	III	B	2	40	75	
		POTS	0801.2	0801.4	III	B	1	40X	170U	
		IZMI	0806.2	0811.3	III	GG	2	45	160	
		POTS	0807.7	0812.2	III	GG	2	40X	320	
		IZMI	0811.4	0812.4	III	GG	2	30	240	
		POTS	0828 U	0837 U	I	S,N	1	200U	320	
		IZMI	0835.9	0840.3	III	GG	2	35	155	
		POTS	0837.3	0838.3	III	G	2	40X	170U	
		POTS	0839.1	0840.3	UNCLF		2	40X	70	
		IZMI	0843.3	0844.0	III	G	1	40	75	
		POTS	0912.1	0912.7	UNCLF		1	110U	170U	
		LEAR	0923.0	0927.0	III		2	25	159	
		SVTO	0923.0	0927.0	III		2	29U	130U	
		IZMI	0923.4	0924.6	III	GG	2	25X	270X	
		POTS	0923.4	0924.3	III	G	2	40X	400X	
0625	1640	BLEN	0923.5	0926.3	III	G,S	1	160	1400	
		POTS	0924.3	0927 U	I	S,N	1	200U	280	
		IZMI	0925.8	0927.5	III	GG	2	25X	270X	
		POTS	0926.2	0927.4	III	GG	3	40X	170U	
		IZMI	0929.4	0929.9	III	G	1	45	75	
		SVTO	0939.0	1100.0	III	N	1	33U	75U	
		IZMI	0939.5	0940.0	III	G	2	50	75	
		POTS	0939.5	0939.9	UNCLF		2	40X	70	
		IZMI	1028.0	1038.1	III	N	2	30	270X	
		POTS	1028.1	1031.7	III	G	2	40X	400X	
		POTS	1034.9	1035.4	UNCLF		1	110U	250	
		POTS	1044.9	1045.8	III	GG	3	40X	400X	
		BLEN	1045.0	1045.7	III	GG	2	100X	700	
		IZMI	1045.0	1045.7	III	G	3	25X	270X	
		SVTO	1045.0	1045.0	III		2	29U	154U	
		IZMI	1054.0	1059.2	III	GG	2	25X	140	
		POTS	1054.0	1102.8	III	GG	1	40X	320	
		POTS	1056.1	1056.5	V		1	40X	70	
		IZMI	1100.2	1101.2	III	G	2	30	90	
		IZMI	1102.8	1102.8	UNCLF		2	110	270X	

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Start Day (UT)	End Day (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
18		IZMI	1110.2	1110.3	III	B	1	40	70	
		SVTO	1116.0	1117.0	III		1	36U	84U	
		IZMI	1116.7	1117.5	III	GG	1	30	110	
		POTS	1116.8	1117.9	UNCLF		1	40X	70	
		IZMI	1133.1	1133.3	III	B,U	2	130	175	
		POTS	1133.1	1133.3	UNCLF		1	130	170U	
		IZMI	1134.9	1135.0	CONT		1	40	55	
		POTS	1134.9	1135.1	UNCLF		1	40X	70	
	0620 1602	ONDR	1142.5	1148.2	DCIM	G	1	2000X	4500X	
		BLEN	1144.4	1153.0	III	GG,C	3	170	4000X	
		POTS	1144.4	1145.6	III	G	1	40X	300	
		IZMI	1144.5	1145.2	III	G,RS	2	170	270X	
		POTS	1241.3	1250 U	I	S,N	2	240	350	
		SGMR	1243.0	1246.0	III		2	30	80	
		SVTO	1243.0	1249.0	III		2	28U	180U	
		POTS	1243.3	1249.3	III	GG	3	40X	400X	
		POTS	1306.9	1318.2	III	GG,N	2	40X	400X	
		SVTO	1307.0	1415.0	III	N	1	35U	134U	
		ONDR	1313.4	1314.1	DCIM	GG	2	1030	2000X	
		POTS	1323.2	1324.9	III	GG	1	110U	250	
		POTS	1330 U	1349 U	I	S,N	1	40X	300	
		BLEN	1347.8	1348.6	III	GG	2	620	1600	
		POTS	1414.5	1416.8	III	G	1	40X	170U	
		POTS	1430 U	1640 U	I	S,N	1	200U	400X	
		HOLL	1521.0	1525.0	III		1	25	149	
		HOLL	1543.0	1650.0	III	N	1	25	180	
		SVTO	1545.0	1551.0	III		1	34U	84U	
		SGMR	1546.0	1549.0	III		2	30	50	
		POTS	1546.8	1548.2	III	G	1	40X	170U	
		BLEN	1550.2	1605.2	III	GG,S	2	320	460	
		SGMR	1603.0	1606.0	III		2	30	50	
		POTS	1603.9	1606.0	III	GG	2	40X	300	
		SVTO	1604.0	1606.0	III		1	31U	176U	
		BLEN	1623.2	1624.1	DCIM	S,P	3	320	4000X	
		HOLL	1837.0	1842.0	III		1	25	125	
		SGMR	1839.0	2012.0	III	N	2	30	80	
		HOLL	1904.0	1925.0	III	N	1	25	180	
		PALE	1907.0	2049.0	III	N	1	25	180	
		HOLL	2011.0	2014.0	III		1	25	88	
	2010 2400	CULG	2012.0	2026.0	III	G	1	57X	160	
		CULG	2048.0	2050.0	III	G	1	57X	90	
		CULG	2138.0	2138.0	III	G	1	57X	90	
		CULG	2150.0	2151.0	III	G	1	150	750	
		CULG	2155.0	2210.0	III	GG	1	57X	90	
		CULG	2200.0	2206.0	III	GG	2	57X	450	
		HOLL	2200.0	2326.0	III	N	1	25	180	
	2043 2400	HIRA	2200.5	2206.5	III	G	1	25X	280	
		CULG	2223.0	2231.0	III	G	1	57X	150	
		HIRA	2223.0	2230.0	III	G	1	25X	110	
		CULG	2229.0	2322.0	I	S	1	110	180	
		LEAR	2243.0	0014.0	CONT		1	113	180	
		CULG	2256.0	2257.0	III	G	1	57X	80	
		LEAR	2302.0	2303.0	III		1	35	111	
		HIRA	2302.5	2303.0	III	B	2	25X	110	
		CULG	2303.0	2303.0	III	B	1	57X	140	
		CULG	2358.0	2358.0	III	B	1	57X	450	
19	0000 0800	CULG	0006.0	0009.0	III	G	1	57X	150	
		LEAR	0008.0	0009.0	III		1	35	122	
	0000 0848	HIRA	0008.0	0009.0	III	B	1	30	140	
		CULG	0104.0	0121.0	III	GG	1	57X	150	
		LEAR	0104.0	0118.0	III		1	29	99	
		CULG	0157.0	0202.0	III	G	2	57X	180	
		LEAR	0157.0	0205.0	III		1	25	179	
		HIRA	0158.0	0201.5	III	G	1	25X	230	
		CULG	0204.0	0206.0	III	G	1	57X	140	
		HIRA	0205.0	0205.5	III	B	1	50	200	
		CULG	0233.0	0354.0	III	N	1	57X	90	
		HIRA	0327.0	0327.5	III	B	1	40	70	

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OBSERVATION		Sta	EVENT		Event Remarks	Int (1-3)	FREQUENCY		Remarks	
Start Day (UT)	End (UT)		Start (UT)	End (UT)			Spectral Class	Lower (MHz)		Upper (MHz)
19		LEAR	0403.0	0419.0	III	1	25	180		
		HIRA	0403.5	0407.0	III	G	2	25X	360	
		CULG	0404.0	0407.0	III	G	2	57X	230	
		CULG	0408.0	0440.0	III	N	1	57X	180	
		HIRA	0418.0	0420.0	III	G	1	30	150	
		LEAR	0421.0	0551.0	III	N	1	25	180	
		CULG	0505.0	0507.0	III	G	1	57X	150	
		CULG	0517.0	0521.0	III	GG	1	57X	200	
		HIRA	0517.0	0521.0	III	G	2	30	260	
		SVTO	0517.0	0519.0	III		1	32	174	
		CULG	0550.0	0552.0	III	G	1	57X	120	
0530	1715	POTS	0612 U	1636 U	I	S,N,DC	2	110U	360	400-800MHz no data
0655	1222	IZMI	0655.0E	1222.0D	I	N	2	120	270X	
		SVTO	0705.0	0746.0	III	N	1	28	136	
		LEAR	0724.0	0734.0	III	N	1	32	180	
		IZMI	0724.5	0730.7	III	G	1	45	140	
		CULG	0726.0	0734.0	III	G	1	57X	160	
		HIRA	0726.5	0733.5	III	G	1	40	190	
		IZMI	0732.4	0733.2	III	G,FS	2	40	160	
		POTS	0732.4	0732.7	III	G	1	40X	170U	
		IZMI	0814.7	0818.5	III	GG	1	45	75	
		LEAR	0905.0	1009.0	CONT		1	105	180	
		IZMI	0936.0U	1037.0U	III	N	1	40	90	
		LEAR	0937.0	0942.0	III		1	47U	77U	
		IZMI	1017.0	1017.3	III	B	2	25	95	
		POTS	1017.0	1017.2	III	B	1	40X	140	
		SVTO	1017.0	1041.0	III	N	2	28U	175U	
		POTS	1024.1	1034.5	III	GG	3	40X	360	
		IZMI	1024.3	1027.2	III	GG	2	25X	270X	
0625	1640	BLEN	1024.7	1035.0	III	GG,RS	2	100X	900	
		IZMI	1027.4	1030.0	III	GG	2	25X	270X	
		IZMI	1034.0	1034.5	III	G	2	50	175	
		POTS	1041.3	1041.6	III	B	1	40X	150	
		IZMI	1041.4	1041.6	III	G	2	30	150	
		IZMI	1046.0	1047.9	III	G	1	45	90	
0617	1603	ONDR	1101.4	1154.0	DCIM	GG	1	2000X	4500X	
		ONDR	1106.3	1154.0	DCIM	GG	2	800X	2000X	
		IZMI	1120.6	1128.9	III	N	2	90	270X	
		SVTO	1123.0	1149.0	III	N	1	75	151	
		BLEN	1123.7	1140.0	DCIM	P	3	370	600	
		IZMI	1129.3	1136.9	III	GG	2	60	210	
		IZMI	1142.8	1222.0D	III	N	1	45	90	
		POTS	1148 U	1210 U	UNCLF		1	40X	70	
		ONDR	1154.0	1222.3	DCIM	GG	1	2000X	4500X	
		ONDR	1155.3	1208.5	DCIM	G	1	800X	2000X	
		POTS	1218.0	1221.2	III	GG	3	40X	400X	
		SVTO	1218.0	1221.0	III		2	28U	148U	
		IZMI	1218.1	1219.2	III	GG	2	25X	270X	
		SGMR	1220.0	1221.0	III		3	30	80	
		IZMI	1220.1	1221.2	III	G	2	25X	140	
		HOLL	1455.0	1506.0	III	N	1	25	167	
		SVTO	1455.0	1505.0	III	N	1	25U	180U	
		POTS	1455.7	1503.2	III	GG	2	40X	300	
		SVTO	1536.0	1536.0	III		1	38	63	
		HOLL	1557.0	1605.0	III		1	25	86	
		SVTO	1557.0	1558.0	III		1	40U	83U	
		SGMR	1558.0	1558.0	III		1	35	50	
		SVTO	1605.0	1605.0	III		1	46	82	
		HOLL	1809.0	1809.0	III		1	25	86	
		PALE	1809.0	1809.0	III		1	25	84	
		SGMR	1810.0	1810.0	III		1	30	55	
		HOLL	1939.0	1941.0	III		1	25	118	
		PALE	1940.0	0426.0	III	N	1	25	180	
		PALE	1940.0	2008.0	III	N	1	25	80	
2010	2400	CULG	2022.0	2024.0	III	G	2	57X	130	
		HOLL	2122.0	2125.0	III		1	25	125	
2042	2400	HIRA	2122.0	2123.5	III	G	1	30	110	
		CULG	2133.0	2205.0	I	S	1	110	160	
		SGMR	2143.0	2144.0	III		1	30	53	

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OBSERVATION			EVENT				FREQUENCY			Remarks
Start Day	End Day	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)	Upper (MHz)	
19		PALE	2200.0	0426.0	III	N	1	25	180	
		CULG	2303.0	2304.0	III	G	1	57X	140	
		LEAR	2332.0	2351.0	III	N	1	37	180	
		CULG	2335.0	2351.0	III	N	1	57X	230	
		HIRA	2337.0	2338.0	III	B	1	25X	200	
		HOLL	2337.0	2337.0	III		1	25	88	
20		LEAR	0000.0	0005.0	III		1	25	180	
	0000 0050	HIRA	0000.0	0005.5	III	G	2	25X	500	
	0000 0800	CULG	0000.0	0002.0	III	G	3	57X	180	
		CULG	0005.0	0005.0	III	G	1	57X	300	
		LEAR	0037.0	0037.0	III		1	37	103	
		CULG	0145.0	0145.0	III	B	1	57X	100	
		CULG	0220.0	0800.00	III	S,C	1	57X	180	
		LEAR	0226.0	0919.0	CONT		1	88	180	
		CULG	0253.0	0254.0	III	G	1	110	250	
		CULG	0346.0	0527.0	I	S	1	80	180	
		LEAR	0438.0	0438.0	III		1	25	50	
		LEAR	0451.0	0451.0	III		1	25	75	
	0100 0846	HIRA	0451.5	0452.0	III	B	2	30	70	
	0525 1715	POTS	0551 U	1144 U	I	S,N	2	110U	400X	400-800MHz no data
		LEAR	0551.0	0553.0	III		1	25	131	
		SVTO	0551.0	0553.0	III		1	25	138	
		HIRA	0551.5	0553.5	III	G	1	25X	200	
		SVTO	0612.0	0911.0	CONT		1	25	180	
	0615 1605	ONDR								
		LEAR	0628.0	0629.0	III		1	25	180	
		CULG	0657.0	0657.0	III	B	1	60	400	
		HIRA	0657.0	0657.5	III	B	1	100	500	
		POTS	0657.1	0657.3	DCIM		3	150	400X	
	0700 1200	IZMI	0700.0E	0930.0U	I	S	2	60	250	
		LEAR	0717.0	0838.0	III	N	1	25	180	
		IZMI	0717.2	0719.1	III	G	2	25X	180	
		POTS	0717.6	0718.8	III	G	2	40X	240	
		IZMI	0726.8	0730.0	III	GG	2	40	150	
		POTS	0728.7	0728.9	III	B	1	40X	150	
		HIRA	0742.0	0744.5	II		1	90	120	
		LEAR	0742.0	0745.0	II		1	85	86	ESS 0898
		LEAR	0742.0	0745.0	II		1	85	130	ESS 0898
		IZMI	0742.1	0744.3	I	GG,DC	2	90	150	
		SVTO	0808.0	0808.0	III		1	25	82	
		IZMI	0808.4	0808.9	III	GG	2	30	270X	
		POTS	0808.4	0808.8	III	B	2	40X	300	
		HIRA	0808.5	0809.0	III	B	2	30	80	
		SVTO	0837.0	0838.0	III		1	25	82	
		IZMI	0837.7	0838.2	III	G	2	30	270X	
		POTS	0837.8	0838.1	III	G	2	40X	300	
		HIRA	0838.0	0838.5	III	B	1	30	260	
		IZMI	0908.8	0910.2	III	G	1	145	270X	
		LEAR	0910.0	0916.0	III		1	25	127	
		IZMI	0910.3	0911.3	III	G	2	30	155	
		POTS	0910.6	0911.4	III	G	2	40X	150	
		IZMI	0914.7	0917.6	III	G	2	35	270X	
		POTS	0916.5	0916.9	III	G	2	40X	240	
		IZMI	0935.6	0938.3	III	GG	2	110	270X	
		LEAR	0949.0	0949.0	III		1	25	180	
		IZMI	0949.2	0949.9	III	G,C	2	25X	270X	
		POTS	0949.2	0950.0	III	G	3	40X	320	
		IZMI	0953.2	0953.3	III	B	1	50	75	
		IZMI	1023.5	1024.3	III	G	1	150	270X	
		IZMI	1033.0	1033.5	III	G,C	2	30	150	
		POTS	1033.0	1033.4	III	G	2	40X	150	
		SVTO	1033.0	1033.0	III		1	25	140	
		SVTO	1225.0	1229.0	III		1	33U	180U	
		POTS	1225.7	1230.3	III	GG	3	40X	400X	
	0625 1640	BLEN	1225.7	1229.7	III	GG,C,S	3	100X	2300	
		POTS	1230 U	1329 U	I	S,N	1	110U	280	
		BLEN	1322.9	1323.6	III	G	1	180	300	
		HOLL	1402.0	1412.0	III	N	1	25	157	

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OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
20		SGMR	1402.0	1408.0	III		2	30	80	
		SVTO	1402.0	1408.0	III		2	25	170	
		POTS	1402.2	1408.4	III	GG	3	40X	320	
		BLEN	1406.6	1408.4	III	GG,RS	2	100X	400	
		SVTO	1412.0	1412.0	III		1	25	81	
		HOLL	1447.0	1507.0	III	N	1	25	180	
		SVTO	1447.0	1449.0	III		1	25	150	
		POTS	1447.4	1449.2	UNCLF		2	40X	140	
		SVTO	1500.0	1507.0	III		1	25	82	
		POTS	1500.7	1502.7	III	G	2	40X	150	
		POTS	1506.0	1506.2	III	B	1	40X	150	
		POTS	1518 U	1615 U	I	S,N,DC	2	110U	350	
		SVTO	1542.0	1606.0	III	N	1	25U	83U	
		HOLL	1724.0	1731.0	III		1	25	162	
		PALE	1728.0	1729.0	III		1	25	180	
		SGMR	1728.0	1729.0	III		1	30	60	
		HOLL	1921.0	0100.0	III	N	1	25	162	
	2010 2400	CULG	2010.0E	2350.0	III	S,C	1	57X	180	
		PALE	2050.0	0317.0	III	N	2	25	180	
		HOLL	2110.0	0015.0	CONT		1	66	180	
		CULG	2143.0	2144.0	III	G	1	100	300	
	2040 2400	HIRA	2143.0	2143.5	III	B	2	130	410	
		SGMR	2146.0	2146.0	III		1	30	50	
		CULG	2338.0	2339.0	III	G	2	57X	330	
		HIRA	2338.0	2339.0	III	B	3	25X	400	
		LEAR	2338.0	2338.0	III		2	25	180	
		HOLL	2350.0	0005.0	III	N	1	25	180	
		LEAR	2359.0	0110.0	CONT		1	104	180	
21		LEAR	0003.0	0009.0	III		2	25	180	
	0000 0800	CULG	0003.0	0034.0	III	S,C	1	57X	90	
	0000 0850	HIRA	0005.0	0009.0	III	G	2	25X	280	
		CULG	0006.0	0009.0	III	G	3	57X	280	
		LEAR	0009.0	0803.0	CONT		1	41	180	
		CULG	0040.0	0041.0	III	G	1	57X	520	
		HIRA	0040.0	0041.0	III	B	1	50	230	
		CULG	0045.0	0800.0D	I	S,C	1	60	140	
		CULG	0125.0	0800.0D	III	N	1	57X	250	
		LEAR	0135.0	0135.0	III		2	48	143	
		HIRA	0135.5	0140.0	III	G	3	40	200	
		HIRA	0152.5	0153.5	III	B	1	70	310	
		CULG	0153.0	0153.0	III	G	1	70	290	
	0525 1720	POTS	0547 U	1615 U	I	S,N,DC,C	2	40X	280	400-800MHz no data
		SVTO	0611.0	0805.0	CONT		1	25U	180U	
	0613 1606	ONDR								
	0625 1640	BLEN								
		IZMI	0700.0E	0750.0U	III	N	1	45	150	
	0700 1200	IZMI	0700.0E	1200.0D	I	S	2	90	270X	
		IZMI	0702.1	0703.8	III	G	2	30	150	
		HIRA	0703.0	0703.5	III	B	1	50	100	
		LEAR	0703.0	0703.0	III		1	25	150	
		SVTO	0703.0	0703.0	III		1	25	180	
		LEAR	0728.0	0742.0	III	N	1	25	180	
		SVTO	0728.0	0742.0	III	N	2	25	180	
		IZMI	0728.6	0729.1	III	G	2	40	70	
		IZMI	0737.0	0740.0	III	GG	2	25X	185	
		HIRA	0737.5	0740.0	III	G	1	30	180	
		CULG	0738.0	0740.0	III	G	2	57X	150	
		POTS	0738.8	0739.9	III	G	2	40X	200U	
		IZMI	0740.5	0743.3	III	G	2	25X	75	
		IZMI	0755.2	0755.5	III	G	1	180	215	
		IZMI	0843.1	0843.2	III	G,DP	2	30	65	
		LEAR	0852.0	0939.0	III	N	1	25	109	
		SVTO	0852.0	0852.0	III		1	66U	144U	
		IZMI	0852.4	0852.6	III	B,FS	1	40	75	
		SVTO	0853.0	0852.0	III		1	66U	144U	
		IZMI	0859.0	0859.5	III	G	1	55	75	
		IZMI	0901.4	0901.5	III	G,FS	2	30	75	
		IZMI	0916.9	0917.4	III	G	1	45	75	

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OBSERVATION		Sta	EVENT		Event Remarks	Int (1-3)	FREQUENCY		Remarks	
Start Day (UT)	End (UT)		Start (UT)	End (UT)			Spectral Class	Lower (MHz)		Upper (MHz)
21		IZMI	0926.4	0926.8	III	G	2	30	90	
		IZMI	0928.4	0928.5	III	B	1	45	70	
		IZMI	0939.4	0940.0	III	G,FS	1	40	170	
		IZMI	0953.5	0953.6	III	B	1	30	70	
		LEAR	1006.0	1006.0	III		1	25	180	
		SVTO	1006.0	1007.0	III		1	25	180	
		IZMI	1006.7	1007.2	III	G,FS	2	25X	135	
		POTS	1006.7	1006.9	III	G	3	40X	300	
		POTS	1006.8	1007.2	V		2	40X	70	
		IZMI	1011.7	1013.9	III	G	1	40	55	
		POTS	1019.7	1032.5	III	GG	3	40X	280	
		IZMI	1019.8	1022.5	III	GG	2	25X	270X	
		SVTO	1021.0	1139.0	III	N	1	25	180	
		IZMI	1023.8	1024.9	III	G	2	30	180	
		IZMI	1025.9	1033.4	III	S	2	25X	210	
		IZMI	1107.4	1111.1	III	GG	2	25X	90	
		SVTO	1242.0	1245.0	III		1	28	84	
		HOLL	1431.0	1431.0	III		1	25	167	
		SVTO	1431.0	1431.0	III		1	25	180	
		POTS	1431.1	1431.3	III	B	2	40X	220	
		SGMR	1443.0	1448.0	III		1	30	80	
		HOLL	1452.0	1458.0	III		1	25	180	
		SVTO	1452.0	1458.0	III		1	25	180	
		POTS	1452.8	1453.7	III	G	3	40X	200U	
		POTS	1452.9	1453.9	V		3	40X	90U	
		POTS	1458.3	1458.8	III	G	2	40X	240	
		HOLL	1645.0	1648.0	III		1	25	132	
		HOLL	1841.0	2130.0	CONT		1	96	180	
		HOLL	1842.0	1843.0	III		1	25	127	
2010	2400	CULG	2010.0E	2400.0D	I	S,C	1	100	180	
		CULG	2207.0	2208.0	III	G	1	57X	460	
		HOLL	2207.0	2209.0	III		1	25	180	
		PALE	2207.0	2208.0	III		1	25	67	
2039	2400	HIRA	2207.0	2208.0	III	B	1	25X	500	
		LEAR	2243.0	1018.0	CONT		1	64	180	
		CULG	2255.0	2255.0	III	B	1	57X	90	
		CULG	2320.0	2330.0	III	G	1	57X	120	
		HIRA	2320.0	2320.5	III	B	1	50	110	
		HOLL	2320.0	0030.0	III	N	1	25	110	
22	0000 0800	CULG	0000.0E	0800.0D	I	S,C	1	80	180	
		CULG	0056.0	0056.0	III	B	1	57X	230	
	0000 0851	HIRA	0056.0	0056.5	III	B	1	50	200	
		CULG	0247.0	0247.0	III	B	1	65	150	
		CULG	0526.0	0601.0	III	N	1	57X	140	
		LEAR	0526.0	0527.0	III		1	25	170	
		HIRA	0526.5	0527.5	III	G	1	50	140	
		SVTO	0539.0	0539.0	III		1	81U	86U	
		LEAR	0542.0	0544.0	III		1	25	102	
		HIRA	0544.0	0544.5	III	B	1	40	120	
		LEAR	0600.0	0601.0	III		1	68	160	
0520	1720	POTS	0606 U	1041 U	I	S,N,DC	1	110U	320	
0625	1640	BLEN								
		LEAR	0638.0	0641.0	III		1	25	180	
		HIRA	0638.5	0641.0	III	G	2	40	210	
		CULG	0639.0	0641.0	III	G	2	57X	180	
		SVTO	0639.0	0640.0	III		1	28U	151U	
		POTS	0639.4	0640.6	III	G	3	40X	240	
0650	1200	IZMI	0650.0E	0830.0U	I	N	1	110	170	
		SVTO	0745.0	0746.0	III		1	71U	176U	
		IZMI	0936.6	0936.9	III	B	1	30	90	
		IZMI	1010.7	1013.0	I	GG	1	190	260	
		IZMI	1047.0	1048.1	II	HARM	2	105	210	
		POTS	1047.0	1049.8	II		2	40X	220	
		IZMI	1047.1	1048.1	III	G	2	40	210	
0610	1608	ONDR	1047.5	1114.3	DCIM	G	1	2000X	4500X	
		IZMI	1048.3	1049.9	I	GG	2	130	160	
		IZMI	1048.9	1049.1	III	G,FS	2	120	205	
		POTS	1048.9	1049.1	III	B	2	110U	220	

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OBSERVATION			EVENT				FREQUENCY			Remarks		
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)	
22			POTS	1052.1	1154 U	IV		2	40X	200U		
			IZMI	1104.0U	1200.0D	I	S	1	100	170		
			IZMI	1105.1	1108.3	III	G	1	45	90		
			IZMI	1108.4	1110.6	II		1	55	70		
			IZMI	1111.1	1111.6	III	B	2	50	160		
			POTS	1154 U	1410 U	I	S,N,C	1	110U	300		
			POTS	1253 U	1301 U	UNCLF		2	40X	150		
			SGMR	1253.0	1256.0	III		1	30	80		
			POTS	1307.3	1307.8	III	B	2	40X	150		
		2038 2400		HIRA								
				LEAR	2254.0	1016.0	CONT		1	72	180	
		2010 2400		CULG	2353.0	2354.0	III	G	1	57X	90	
	23	0000 0852		HIRA								
0000 0800			CULG	0229.0	0229.0	III	B	1	57X	90		
			CULG	0330.0	0330.0	III	G	1	57X	90		
			CULG	0456.0	0456.0	III	G	1	57X	90		
0608 1610			ONDR									
0700 1200			IZMI	0700.0E	0840.0U	I	N	1	110	250		
0520 1725			POTS	0703 U	0921 U	I	S,N,DC,DP	1	110U	280		
			IZMI	0742.4	0742.9	III	G	1	180	210		
			IZMI	0908.9	0920.0	I	N	1	110	170		
			IZMI	0913.7	0913.9	III	B	1	40	90		
			IZMI	0923.5	0923.8	III	G	1	220	270X		
			POTS	0923.5	0926.5	DCIM		2	200U	330		
			IZMI	0926.4	0926.5	III	B	1	220	270X		
			POTS	0951.9	0954.6	III	G	2	110U	380		
			IZMI	0953.0	0953.9	III	GG	2	110	270X		
		0615 1645		BLEN	0953.0	0954.6	III	GG	2	200	430	
				IZMI	1014.4	1015.1	I	GG	2	160	180	
				POTS	1243.7	1243.8	UNCLF		1	150	250	
				BLEN	1421.5	1423.5	III	GG,S	2	200	460	
				POTS	1421.5	1421.8	III	G	1	110U	400U	
				POTS	1444.5	1445.3	DCIM		2	260	420	
		2010 2400		CULG								
		2036 2400		HIRA								
			HOLL	2225.0	2230.0	III		1	25	88		
			LEAR	2244.0	2321.0	CONT		1	54U	180U		
			LEAR	2353.0	2353.0	III		1	28	101		
24	0000 0800		CULG	0453.0	0455.0	III	G	1	57X	160		
	0000 0853		HIRA	0453.0	0453.5	III	B	1	60	130		
			CULG	0512.0	0513.0	III	G	1	57X	110		
			HIRA	0512.0	0512.5	III	B	1	30	110		
	0606 1611		ONDR									
	0615 1645		BLEN									
	0650 1200		IZMI	0747.8	0747.9	III	B	1	40	90		
			CULG	0750.0	0750.0	III	G	1	57X	90		
			HIRA	0750.0	0750.5	III	B	1	30	120		
			IZMI	0750.2	0750.4	III	B	1	25X	90		
		0515 1725		POTS	1002.5	1018 U	I	S,N	1	200U	320	
				IZMI	1048.6	1049.3	III	G	2	25X	205	
				POTS	1048.7	1049.3	III	G,W	1	40X	170U	
				POTS	1203.9	1205.0	III	G	1	40X	220	
				SVTO	1204.0	1205.0	III		1	29U	83U	
				POTS	1205.0	1523 U	I	S,N	1	140	320	
				POTS	1241.1	1542.1	III	G	1	40X	170U	
				HOLL	1541.0	1542.0	III		1	25	160	
				SVTO	1541.0	1542.0	III		1	42	151	
				HOLL	1944.0	1945.0	III		1	25	180	
				PALE	1944.0	1945.0	III		1	25	180	
				SGMR	1944.0	1945.0	III		2	30	80	
		2010 2400		CULG								
	2034 2400		HIRA									
			SGMR	2044.0	2045.0	III		2	30	80		
25	0000 0800		CULG	0038.0	0038.0	III	G	1	57X	180		
			CULG	0432.0	0432.0	III	G	1	57X	90		
			LEAR	0522.0	0523.0	III		1	42	101		

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Spectral Observations

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Mar 02

MARCH 2002

OBSERVATION			EVENT				FREQUENCY			Remarks	
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)
25			SVTO	0522.0	0523.0	III		1	47U	65U	
	0000	0854	HIRA	0522.5	0523.0	III	B	1	50	160	
			CULG	0523.0	0524.0	III	G	1	57X	130	
		0515	1730	POTS	0611 U	0613 U	I	S	1	200U	280
				LEAR	0637.0	0637.0	III		1	45	102
				SVTO	0637.0	0637.0	III		1	44U	64U
				HIRA	0637.5	0638.0	III	B	1	50	200
				CULG	0638.0	0638.0	III	B	1	57X	90
				POTS	0653.5	0654.0	III	G	1	110U	300
				CULG	0654.0	0654.0	III	B	1	57X	150
		0604	1613	ONDR	1034.2	1037.3	DCIM	GG	2	2000X	4500X
				ONDR	1034.4	1038.0	DCIM	GG	1	800X	2000X
		0615	1645	BLEN	1034.7	1038.0	III	GG,C	3	400	4000X
				SVTO	1050.0	1050.0	III		1	30	43
		0700	1200	IZMI	1050.2	1050.6	III	B	1	30	90
				POTS	1321.3	1325.9	I	S	2	200U	300
				SVTO	1322.0	1325.0	III		1	110U	180U
				POTS	1322.7	1325.8	III	G	2	110U	300
				POTS	1412.2	1501 U	I	S,N	1	200U	280
				POTS	1516.7	1516.8	III	B,W	1	110U	240
		2033	2400	HIRA							
		2020	2400	CULG	2144.0	2144.0	III	B	1	57X	180
				CULG	2159.0	2159.0	III	B	1	57X	90
				CULG	2205.0	2208.0	III	G	1	57X	170
				LEAR	2245.0	0048.0	CONT		1	25	52
26			SVTO	.0	1645.0	III	N	1	25	180	
			HOLL	0006.0	0006.0	III		1	51	85	
	0000	0800	CULG	0006.0	0008.0	III	G	1	57X	160	
	0000	0855	HIRA	0006.0	0006.5	III	B	1	50	100	
			CULG	0035.0	0035.0	III	B	1	57X	90	
			CULG	0052.0	0052.0	III	B	1	80	160	
			CULG	0105.0	0106.0	III	G	1	57X	120	
		0602	1615	ONDR							
		0650	1200	IZMI	0730.0	0730.4	III	B	1	45	75
		0510	1730	POTS	0841.4	1018 U	I	S,N	1	110U	220
				IZMI	0905.5	0906.3	III	G	1	110	175
				LEAR	0919.0	0919.0	III		1	39	180
				SVTO	0919.0	0919.0	III		1	66	180
				IZMI	0919.2	0919.7	III	G,U	2	40	270X
				POTS	0919.2	0919.4	III	G	3	40X	350
				POTS	0919.3	0919.7	V		2	40X	70
				IZMI	0924.7	0924.9	III	B	1	90	270X
				IZMI	0938.5	0938.6	III	B	1	50	75
				IZMI	0942.2	0942.6	III	B	1	50	75
				IZMI	1115.8	1115.9	III	B	1	40	75
				POTS	1155.0	1155.5	UNCLF		1	110U	170U
				POTS	1209.1	1211.6	III	G	2	40X	170U
				POTS	1209.3	1209.6	V		2	40X	70
				POTS	1248.6	1251.7	III	G	2	40X	170U
				SVTO	1251.0	1251.0	III		1	25	52
				POTS	1321.9	1322.2	III	G,W	1	40X	150
				HOLL	1453.0	1454.0	III		1	103	180
				POTS	1509.0	1529.2	I	S	1	140	370
		0615	1645	BLEN	1509.5	1518.6	DCIM	P	2	160	600
				HOLL	1514.0	1745.0	III	N	1	25	130
				SVTO	1515.0	1523.0	III		1	25	78
				POTS	1548.7	1548.8	III	B	1	110U	240
				SGMR	1606.0	1607.0	III		1	30	80
				POTS	1606.3	1606.8	III	G,U	2	40X	150
				POTS	1618.2	1618.4	III	G	2	110U	170U
				HOLL	1909.0	1910.0	III		1	25	70
				PALE	1909.0	1910.0	III		1	25	63
				SGMR	1909.0	1910.0	III		1	30	80
				PALE	1915.0	2205.0	III	N	1	25	180
				HOLL	2023.0	2025.0	III		1	25	180
			SGMR	2023.0	2025.0	III		3	30	80	
	2020	2400	CULG	2023.0	2025.0	III	G	3	57X	180	
	2031	2400	HIRA								

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

MARCH 2002

OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Start (UT)	End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
26		CULG	2031.0	2032.0	III	G	1	57X	90	
		HOLL	2044.0	2045.0	III		1	25	55	
27	0000 0800	CULG								
	0000 0855	HIRA								
		LEAR	0009.0	0310.0	III	N	1	45	180	
	0559 1616	ONDR								
	0510 1735	POTS	0837.9	0838.1	DCIM		1	200U	300	
	0702 1200	IZMI	0838.0	0838.1	III	B	1	185	270x	
		POTS	1136	1302	I	S,N	2	110U	340	
		SVTO	1242.0	1242.0	III		1	73U	147U	
		POTS	1242.5	1242.7	III	B	2	110U	400	
		SVTO	1254.0	1256.0	V		1	30U	149U	
		POTS	1254.2	1254.7	III	G	2	40X	300	
		POTS	1254.4	1255.6	V		2	40X	70	
		SGMR	1255.0	1255.0	V		1	30U	55U	
	0600 1650	BLEN	1255.9	1258.1	DCIM	P	1	140	900	
		SVTO	1259.0	1302.0	III		1	74U	175U	
		HOLL	1437.0	1442.0	III		1	25	162	
		SVTO	1440.0	1442.0	III		1	29U	60U	
		POTS	1440.7	1442.7	UNCLF		2	40X	150	
		SGMR	1441.0	1443.0	III		2	30	55	
	2020 2400	CULG								
2030 2400	HIRA									
28	0000 0800	CULG								
	0000 0856	HIRA								
	0505 1735	POTS	0536 U	1655 U	I	S,N,C	1	110U	360	400-800MHz no data
	0600 1700	BLEN								
	0700 1200	IZMI	0700.0E	1200.0D	I	S	2	120	270X	
		LEAR	0821.0	0823.0	III		1	25	62	
		SVTO	0821.0	0823.0	III		1	28U	56U	
		IZMI	0821.8	0823.1	III	G,C	2	25 X	70	
		POTS	0822.5	0822.8	UNCLF		2	40X	60	
	0557 1618	ONDR	1137.4	1138.2	DCIM	W	1	2000X	4500X	
		HOLL	1450.0	1450.0	III		1	25	91	
	2020 2400	CULG								
	2028 2400	HIRA								
29	0000 0800	CULG	0045.0	0045.0	III	B	1	57X	180	
		CULG	0500.0	0605.0	I	S	1	110	170	
	0505 1740	POTS	0532 U	1710 U	I	S,N	2	110U	320	400-800MHz no data
	0555 1619	ONDR								
		POTS	0651.9	0653.3	III	G	2	40X	300	
		CULG	0652.0	0653.0	III	G	1	57X	180	
		LEAR	0652.0	0653.0	III		1	30	180	
		SVTO	0652.0	0653.0	III		1	35U	75U	
	0704 1200	IZMI	0704.0E	1200.0D	I	N	1	140	270X	
		SVTO	0802.0	0937.0	III	N	1	25	180	
		LEAR	0833.0	0834.0	III		1	30	180	
	0000 0857	HIRA	0833.5	0834.0	III	B	1	50	200	
		POTS	0833.7	0834.0	III	B	2	40X	320	
		IZMI	0833.8	0834.1	III	G	2	30	180	
		IZMI	0952.0	1034.0	I	S	2	160	270X	
		SVTO	1018.0	1018.0	III		1	33U	41U	
		IZMI	1149.3	1149.5	III	B	1	30	90	
		POTS	1149.3	1149.5	III	B	1	40X	150	
	0600 1700	BLEN	1241.7	1250.7	DCIM	P	1	140	4000X	
		SVTO	1242.0	1258.0	III	N	1	25	180	
		POTS	1242.8	1247.6	III	GG	3	40X	320	
		SGMR	1244.0	1246.0	III		1	30	80	
		POTS	1257.2	1257.4	III	B	2	40X	220	
		PALE	1929.0	1930.0	III		1	25	54	
		HOLL	1930.0	1930.0	III		1	25	84	
		SGMR	1930.0	1930.0	III		1	30	60	
		LEAR	2234.0	0020.0	CONT		1	131	180	
		HOLL	2259.0	2300.0	III		1	25	85	
		HOLL	2259.0	2314.0	III	N	1	25	180	
LEAR		2259.0	2300.0	III		1	32	102		

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

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MARCH 2002

OBSERVATION		Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks	
Start Day (UT)	End (UT)		Start (UT)	End (UT)				Lower (MHz)	Upper (MHz)		
29	2020	2400	CULG	2259.0	2300.0	III	G	1	57X	100	
	2027	2400	HIRA	2259.5	2300.0	III	B	1	40	70	
			CULG	2312.0	2314.0	III	G	1	57X	260	
			HIRA	2312.0	2313.5	III	G	1	100	320	
			LEAR	2312.0	2313.0	III		1	39	180	
			LEAR	2312.0	2313.0	III		1	91	180	
			PALE	2313.0	2314.0	III		1	25	180	
30			LEAR	0114.0	1010.0	CONT		1	103	180	
	0000	0800	CULG	0114.0	0114.0	III	B	1	130	200	
			CULG	0215.0	0218.0	III	G	1	57X	90	
			LEAR	0217.0	0218.0	III		1	25	88	
	0000	0858	HIRA	0217.5	0218.0	III	B	1	40	70	
			CULG	0241.0	0241.0	III	B	1	57X	90	
			LEAR	0247.0	0253.0	III		1	25	180	
			PALE	0247.0	0249.0	III		1	25	87	
			CULG	0248.0	0250.0	III	G	1	57X	200	
			HIRA	0248.0	0249.5	III	G	1	25X	340	
			CULG	0253.0	0253.0	III	B	1	70	100	
			CULG	0410.0	0800.0D	I	S	1	110	170	
	0500	1740	POTS	0548 U	0956 U	I	S,N,DC,C	2	110U	300	400-800MHz no data
			CULG	0552.0	0553.0	III	G	1	57X	130	
			POTS	0552.0	0552.2	III	B	2	40X	250	
	0553	1621	ONDR	0649.3	0650.2	DCIM	GG,SP	2	959	1831	
	0652	1200	IZMI	0652.0E	0935.0U	I	N	2	120	270X	
			CULG	0726.0	0729.0	III	G	1	57X	130	
			LEAR	0726.0	0728.0	III		1	25	75	
			SVTO	0726.0	0728.0	III		1	40U	65U	
			HIRA	0726.5	0729.0	III	G	1	50	200	
			IZMI	0726.5	0728.6	III	G	2	35	80	
			POTS	0726.5	0728.6	III	G,W	1	40X	150	
			IZMI	0904.0	0904.1	III	B	1	45	75	
			ONDR	1157.4	1159.2	DCIM	GG	2	1180	1948	
			ONDR	1256.5	1259.0	DCIM		1	2000X	4500X	
	0600	1700	BLEN	1256.9	1259.1	DCIM	C	2	1600	4000X	
			POTS	1321.5	1403.7	I	S,N	1	200U	280	
			BLEN	1440.2	1442.6	III	GG	2	190	500	
			POTS	1442.2	1442.5	DCIM		1	200U	400X	
		BLEN	1538.3	1540.6	III	GG	2	190	500		
		POTS	1538.3	1540.6	DCIM		2	140	400X		
		ONDR	1548.1	1548.3	DCIM	G	2	800X	912		
		POTS	1648.1	1648.2	DCIM		1	220	320		
		HOLL	1823.0	1824.0	III		1	25	150		
		PALE	1823.0	1823.0	III		1	25	146		
		SGMR	1823.0	1823.0	III		1	30	60		
		HOLL	1930.0	1931.0	III		1	25	160		
2020	2400	CULG	2105.0	2105.0	III	B	1	57X	80		
		CULG	2159.0	2200.0	III	G	1	100	150		
		CULG	2206.0	2207.0	III	G	1	60	90		
		CULG	2235.0	2235.0	III	B	1	57X	170		
		HOLL	2331.0	2332.0	III		1	25	82		
		LEAR	2331.0	2335.0	III		1	25	85		
2025	2400	HIRA	2332.0	2332.5	III	B	1	25X	50		
31			LEAR	0214.0	0215.0	III		1	53	152	
	0000	0800	CULG	0215.0	0215.0	III	G	1	57X	140	
	0000	0859	HIRA	0215.0	0215.5	III	B	1	50	200	
	0455	1745	POTS	0458 E	1656 U	I	S,N	1	200U	360	400-800MHz no data
			CULG	0540.0	0540.0	III	B	1	57X	160	
	0600	0830	BLEN								
			CULG	0631.0	0632.0	III	G	1	57X	180	
	0600	1200	IZMI	0631.1	0631.7	III	G	1	50	210	
			IZMI	0636.9	0637.1	III	G	1	185	270X	
			POTS	0713.8	0714.3	DCIM		2	200U	380	
			IZMI	0714.0	0714.1	III	G	2	180	270X	
			IZMI	1137.0	1200.0D	I	N	1	230	270X	
			POTS	1211.9	1212.2	UNCLF		2	40X	70	
			SVTO	1212.0	1213.0	III		1	25U	50U	
		SVTO	1253.0	1253.0	III		1	25	30		

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

MARCH 2002

OBSERVATION			EVENT				FREQUENCY			Remarks
Start Day (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)	Upper (MHz)	
31		ONDR	1450.3	1500.3	DCIM	GG	2	800X	2000X	
	0551 1622	ONDR	1450.3	1454.1	DCIM	G	1	2000X	4500X	
		HOLL	1627.0	1627.0	III		1	25	88	
		SVTO	1627.0	1627.0	III		1	25	87	
	2024 2400	HIRA								
	2020 2400	CULG	2259.0	2259.0	III	G	1	57X	180	

Event Remarks:

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

Frequency qualifiers:

- | | |
|-------------------------------------|-------------------------|
| X = Extends beyond instrument range | U = Uncertain frequency |
|-------------------------------------|-------------------------|

Remarks:

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

Stations Reporting:

- | | | | |
|-----------------|----------------|----------------------|-----------------|
| CULG = Culgoora | IZMI = Izmiran | LEAR = Learmonth | ONDR = Ondrejov |
| PALE = Palehua | POTS = Potsdam | SGMR = Sagamore Hill | SVTO = San Vito |
| BLEN = Bleien | | | |

NOTE: Beginning June 26, 2001, the Bleien observatory changed to higher frequencies (1-4Ghz).

SOLAR RADIO NOISE STORM AT 164 MHZ

FROM NANÇAY RADIOHELIOGRAPH

MARCH 2002

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES ¹		IMP ²	OBSERVING TIME ³	
	E-W	S-N		START(UT)	END(UT)
01/03/02	+0.33	+0.64	I	8H33 E	13H30
01/03/02	+1.02	-0.74	I	8H33 E	10H19
09/03/02	-1.33	-0.14	I	8H31 E	15H31 D
10/03/02	-1.26	-0.03	I	8H31 E	15H31 D
11/03/02	-0.99	+0.20	I	8H31 E	15H31 D
11/03/02	+0.87	-0.40	III	8H31 E	15H31 D
12/03/02	-0.87	-0.16	I	8H31 E	15H31 D
13/03/02	-0.33	-0.12	III	8H33 E	15H30 D
14/03/02	+0.09	-0.11	III	8H31 E	15H31 D
15/03/02	+0.33	-0.12	III	8H33 E	15H30 D
16/03/02	-0.95	-0.20	II	13H09	15H29 D
16/03/02	+0.29	+0.06	III	8H29 E	15H29 D
17/03/02	-0.31	-0.50	I	13H03	15H29 D
18/03/02	-0.03	-0.23	I	8H29 E	15H29 D
19/03/02*	+0.25	-0.47	II	8H29 E	15H29 D
19/03/02*	+0.91	-0.43	II	8H29 E	10H47
20/03/02	-1.46	+0.25	I	8H28 E	15H28 D
20/03/02	+0.43	-0.17	II	8H28 E	15H28 D
20/03/02	+0.73	-0.16	I	8H 28 E	11H20
21/03/02	+0.62	-0.23	III	8H28 E	15H28 D
22/03/02	+0.99	-0.34	III	8H28 E	15H28 D
23/03/02	+1.30	-0.20	I	8H52 E	13H51
24/03/02	+1.29	+0.42	I	12H19	14H25
26/03/02	+0.64	+0.60	I	8H26 E	11H40
27/03/02	+0.99	+0.54	II	8H38 E	15H27 D
28/03/02	+0.84	+0.31	I	11H10 E	13H48
29/03/02	+1.32	+0.16	II	8H27 E	15H26 D
30/03/02	-0.31	-0.22	I	8H25 E	15H25 D
30/03/02	+1.36	+0.60	I	8H25 D	10H59
30/03/02	+1.49	+0.25	I	8H25 E	15H25 D
31/03/02	-0.06	-0.09	I	8H25 E	15H25 D

¹ POSITIVE E-W AND S-N COORDINATES CORRESPOND TO THE N-W QUADRANT² IMP1: FLUX < 5 SFU IMP2: 5 < FLUX < 20 SFU IMP3: 20 < FLUX < 100 SFU
IMP4: 100 < FLUX < 300 SFU IMP5 > 300 SFU³ E NOISE STORM IN PROGRESS AT THE BEGINNING OF THE NANÇAY OBSERVATIONS
D NOISE STORM IN PROGRESS AT THE END OF THE NANÇAY OBSERVATIONS

**NOISE STORM AT 327 MHZ
FROM NANÇAY RADIOHELIOGRAPH
MARCH 2002**

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES ¹		IMP ²	OBSERVING TIME ³	
	E-W	S-N		START(UT)	END(UT)
03/03/02	+0.39	+0.65	I	8H33 E	15H33 D
04/03/02	-0.76	-0.34	I	8H32 E	15H32 D
04/03/02	+0.64	+0.62	I	8H32 E	15H32 D
05/03/02	+0.91	+0.47	I	8H32 E	15H32 D
09/03/02	-1.19	-0.06	I	8H31 E	15H31 D
09/03/02	+0.20	+0.05	I	8H31 E	15H31 D
10/03/02	-1.07	+0.00	II	8H31 E	15H31 D
10/03/02	+0.48	+0.17	II	8H31 E	15H31 D
10/03/02	+0.54	-0.08	II	8H31 E	15H31 D
11/03/02	-0.99	+0.09	I	8H31 E	15H31 D
11/03/02	-0.79	+0.19	I	8H31 E	15H31 D
11/03/02	+0.82	-0.08	II	8H31 E	15H31 D
12/03/02	-0.85	-0.17	I	8H31 E	15H31 D
12/03/02	-0.59	-0.11	I	8H31 E	15H31 D
13/03/02	-0.64	-0.02	III	8H33 E	15H30 D
13/03/02	-0.25	-0.09	III	8H33 E	15H30 D
14/03/02	-0.36	+0.03	II	8H31 E	15H31 D
14/03/02	+0.03	-0.12	II	8H31 E	15H31 D
15/03/02	-0.05	+0.00	I	8H33 E	15H30 D
15/03/02	+0.23	-0.06	III	8H33 E	15H30 D
16/03/02	-0.79	-0.12	II	8H29 E	15H29 D
17/03/02	-0.67	-0.17	I	10H15	15H29 D
18/03/02	-0.40	-0.14	I	8H29 E	15H29 D
18/03/02	-0.05	-0.22	I	8H29 E	15H29 D
19/03/02*	-0.23	-0.19	I	8H29 E	15H29 D
19/03/02*	+0.23	+0.23	I	8H29 E	15H29 D
19/03/02*	+0.76	-0.39	I	8H29 E	11H00
19/03/02*	+1.04	+0.02	I	8H29 E	15H29 D
20/03/02	+0.09	-0.17	I	8H28 E	15H28 D
20/03/02	+0.47	-0.25	I	8H28 E	15H28 D
20/03/02	+0.71	-0.28	I	8H28 E	15H28 D
21/03/02	+0.63	-0.23	III	8H28 E	15H28 D
22/03/02	-1.04	+0.17	I	8H28 E	15H28 D
22/03/02	+0.95	-0.29	I	8H28 E	15H28 D
23/03/02	-0.74	+0.09	I	8H52 E	15H28 D
23/03/02	+1.16	-0.22	I	8H52 E	12H49
24/03/02	-0.53	+0.17	I	8H27 E	15H27 D
24/03/02	+1.18	+0.47	I	8H27 E	15H27 D
25/03/02	-0.33	+0.22	I	13H27	15H27 D
26/03/02	-0.05	+0.23	I	8H26 E	12H20
26/03/02	+0.23	-0.11	I	8H26 E	15H26 D

27/03/02	+0.84	+0.31	II	8H38 E	15H27 D
28/03/02	+0.95	+0.43	II	11H10 E	15H26 D
28/03/02	+1.10	+0.20	II	11H10 E	15H26 D
29/03/02	+1.18	+0.37	II	8H27 E	15H26 D
29/03/02	+1.27	+0.17	II	8H27 E	15H26 D
30/03/02	-0.70	+0.26	I	8H25 E	15H25 D
30/03/02	-0.54	+0.06	I	8H25 E	15H25 D
30/03/02	-0.12	-0.23	I	12H13	15H25 D
30/03/02	+1.21	+0.42	I	8H25 E	12H00
31/03/02	-0.25	+0.03	I	8H25 E	15H25 D
31/03/02	+0.08	+0.20	II	8H25 E	15H25 D

NO DATA

OTHERS DAYS: NO DETECTABLE NOISE STORM

- For the days marked by an asterisk, intense ionospheric gravity waves are observed during the whole day. Without a more detailed analysis leading to increased uncertainties in the deviation, the positions which are indicated are estimated within 0.2 R.

** Following a large burst

*** Importance not well determined due to the proximity of the very strong other source.

COSMIC RAY INDICES
(Neutron Monitor)

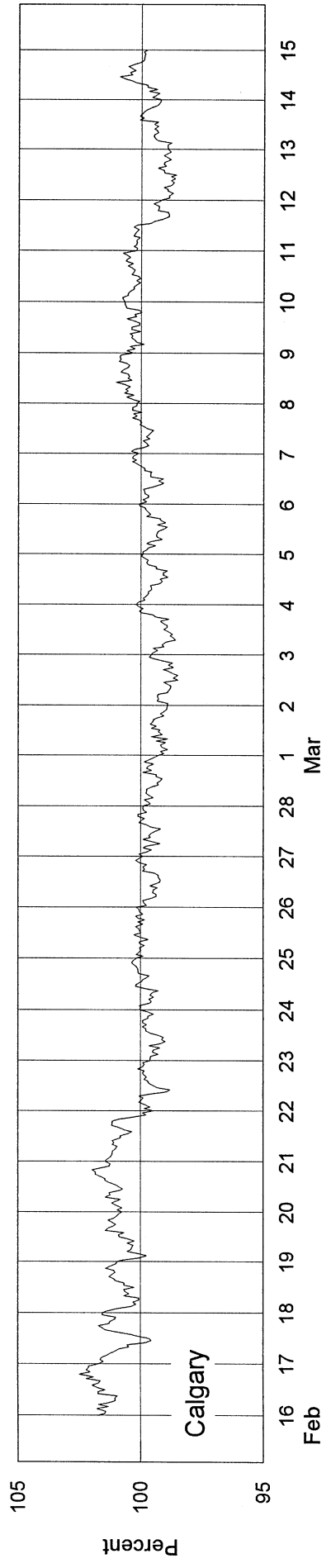
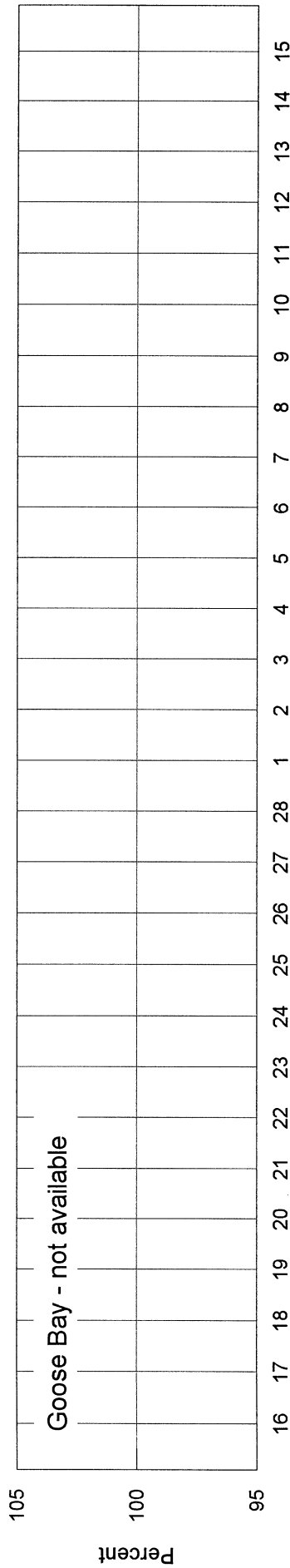
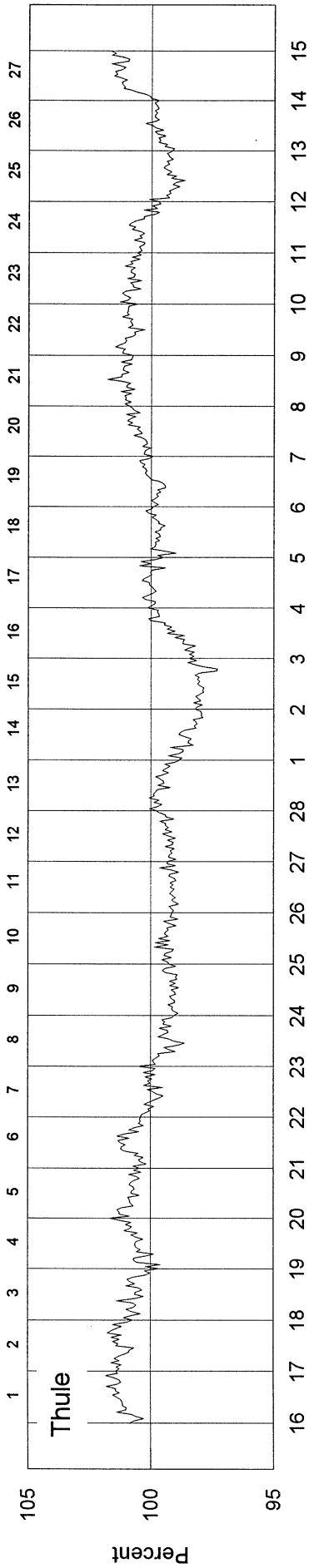
March 2002

Day	THULE Average (cts/h)/100	GOOSE BAY Average (cts/h)/100	CALGARY Average (cts/h)/300	KIEL Average (cts/h)/100	MOSCOW Average (cts/h)/64	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	4003.4	not available	3571.2	5697.6	8553.5	3809.5	1937.3	3467.5
2	3984.0	available	3562.0	5673.4	8515.7	3787.9	1932.2	3463.8
3	4025.7		3572.0	5684.7	8542.4	3794.0	1937.8	3477.8
4	4065.8		3583.2	5687.8	8553.8	3792.8	1929.8	3473.4
5	4053.7		3581.2	5685.5	8532.7	3800.1	1933.2	3468.1
6	4062.0		3591.3	5692.0	8559.0	3814.8	1941.0	3472.1
7	4084.0		3598.7	5707.4	8645.4	3831.1	1943.0	3474.5
8	4106.1		3619.8	5721.7	8668.2	3852.7	1945.5	3479.2
9	4102.0		3610.2	5740.9	8630.6	3830.2	1952.3	3485.7
10	4096.7		3614.2	5754.3	8635.4	3842.7	1955.2	3507.8
11	4078.7		3590.5	5726.3	8603.3	3837.9	1950.2	3505.5
12	4035.2		3560.3	5672.4	8521.8	3783.3	1936.8	3495.1
13	4052.5		3579.5	5701.7	8566.0	3810.2	1937.8	3499.3
14	4104.8		3599.3	5742.7	8618.7	3838.8	1946.0	3503.5
15	4101.0		3594.2	5742.1	8626.8	3826.2	1941.3	3500.0
16	4069.3		3594.2	5692.2	8532.4	3823.9	1940.8	3499.4
17	4074.9		3594.7	5700.7	8562.9	3816.6	1943.1	3492.8
18	4094.0		3590.3	5725.9	8582.3	3809.3	1948.4	3488.0
19	3981.2		3484.2	5563.5	8366.2	3694.5	1930.6	3449.9
20	3929.4		3465.5	5525.2	8309.1	3657.2	1936.5	3446.4
21	3925.8		3434.5	5491.6	8260.4	3631.0	1935.0	3448.8
22	3915.0		3385.8	5485.0	8218.0	3585.9	1934.8	3416.1
23	3910.1		3375.2	5465.4	8205.7	3594.0	1922.3	3405.3
24	3878.6		3362.2	5431.7	8138.7	3596.5	1935.0	3416.6
25	3831.4		3360.0	5444.5	8187.2	3586.5	1928.0	3404.9
26	3914.2		3395.8	5488.0	8275.3	3609.3	1927.9	3415.7
27	3954.5		3462.8	5541.5	8332.6	3657.1	1934.8	3432.8
28	3976.9		3493.3	5554.4	8363.7	3678.3	1940.3	3446.5
29	4009.6		3526.8	5593.6	8417.6	3701.8	1949.2	3458.0
30	3996.4		3507.5	5564.4	8393.5	3701.2	1946.3	3455.2
31	3996.1		3490.3	5575.8	8404.7	3693.8	1935.9	3442.4
Mean	4013.0		3527.4	5628.2	8462.1	3744.7	1939.0	3464.3

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

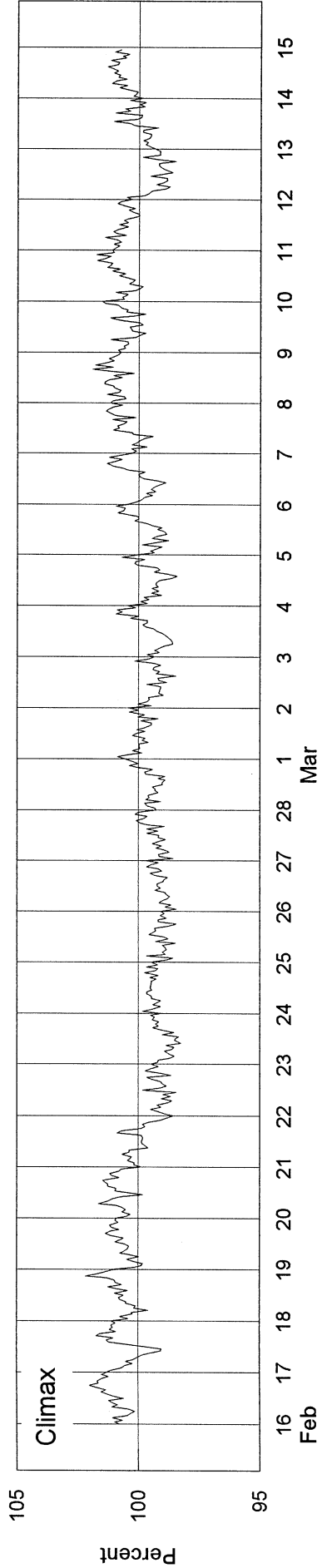
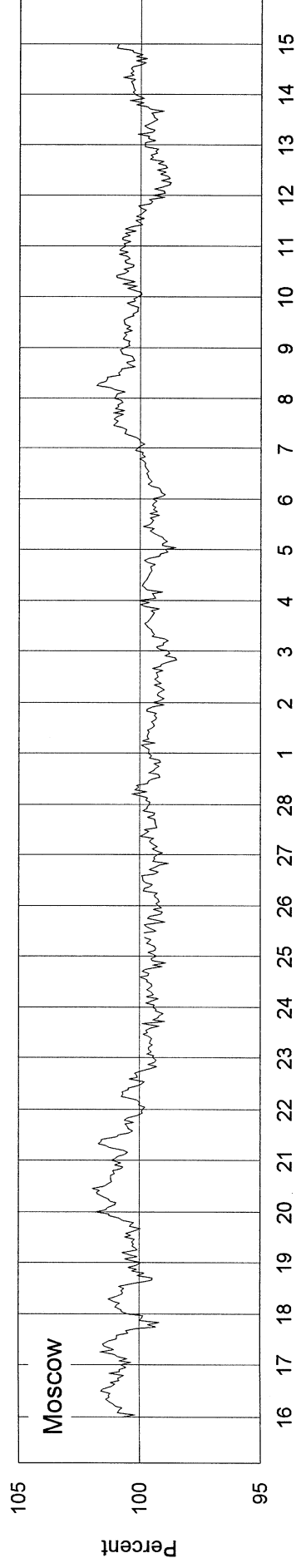
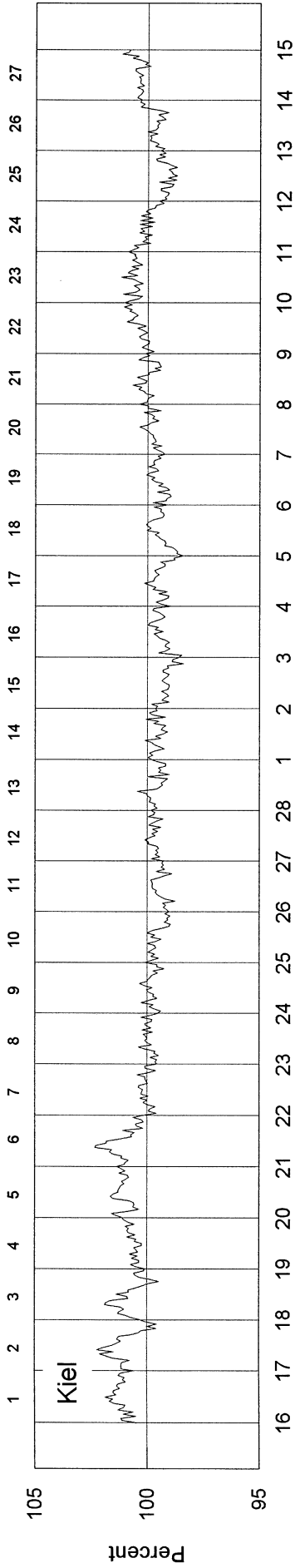
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2301 - Beginning 16 Feb 2002



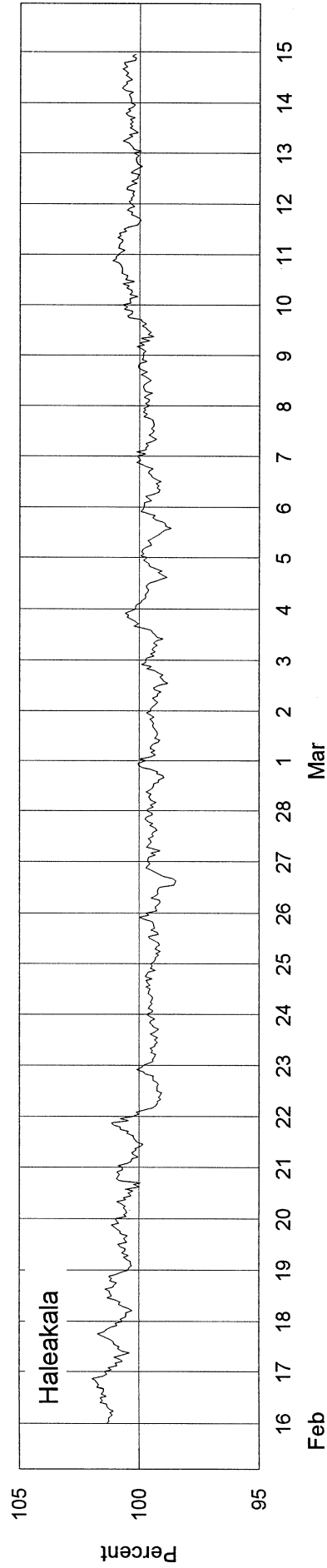
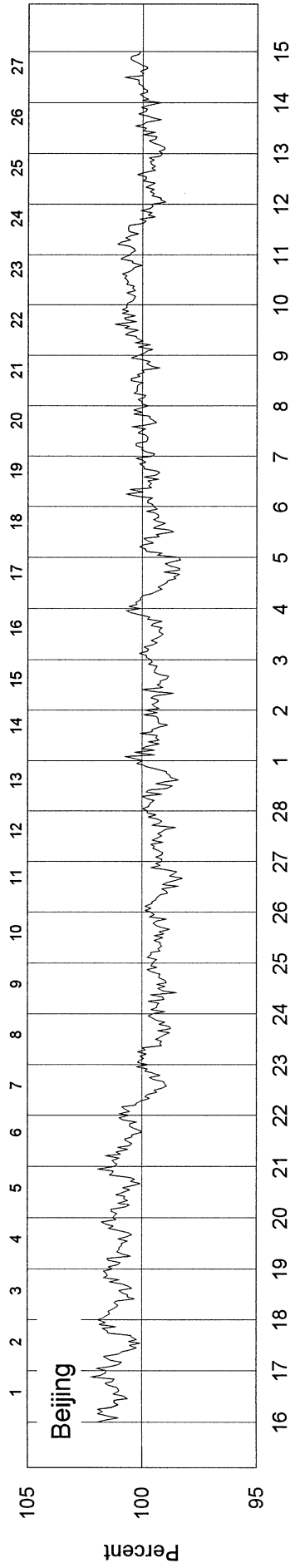
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2301 - Beginning 16 Feb 2002



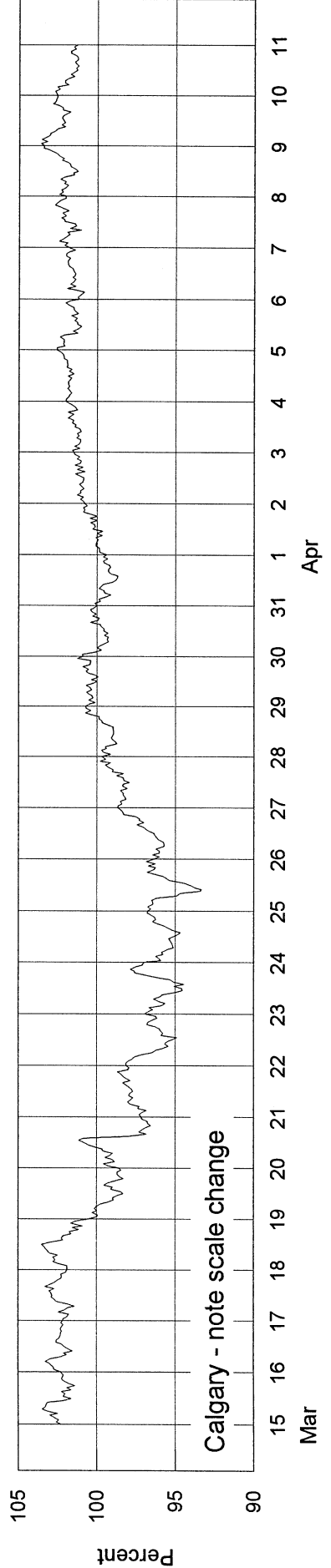
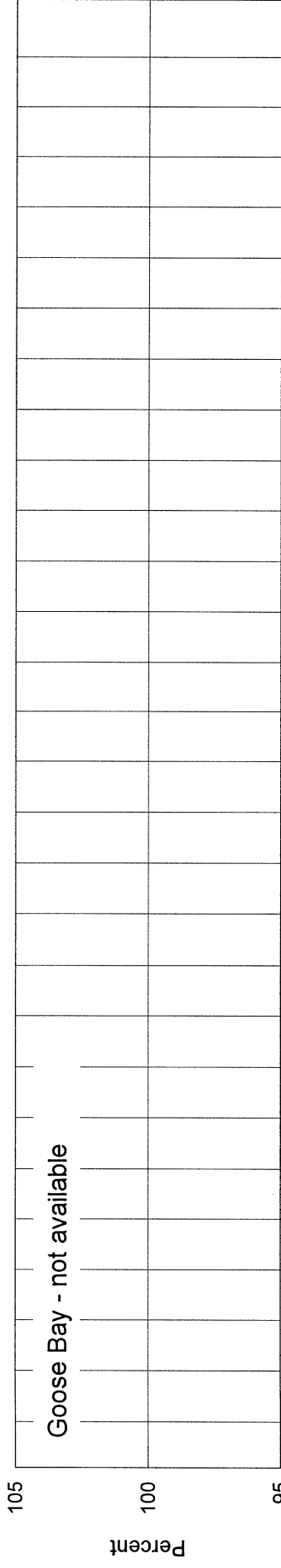
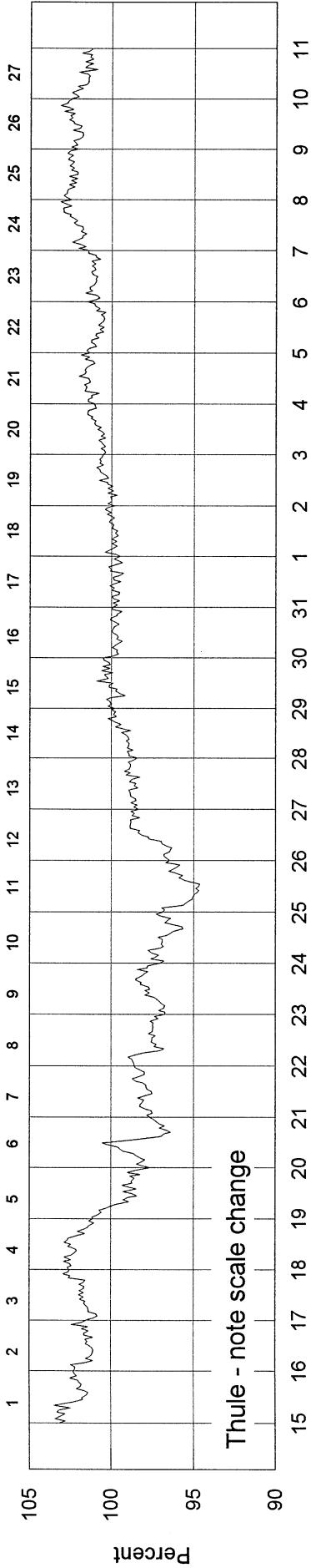
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2301 - Beginning 16 Feb 2002



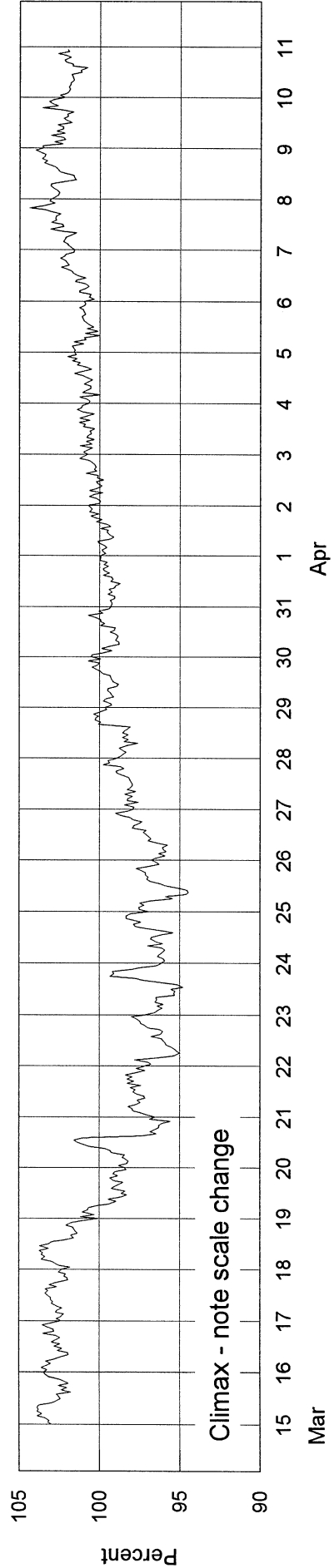
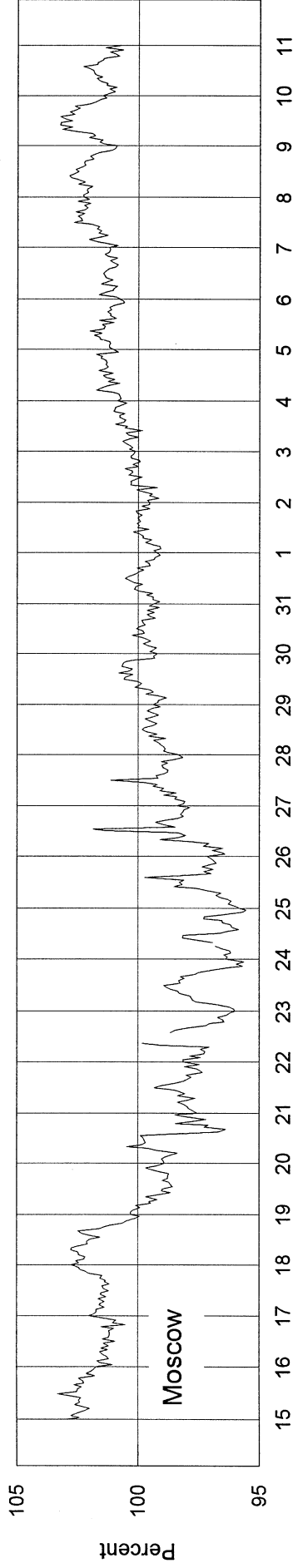
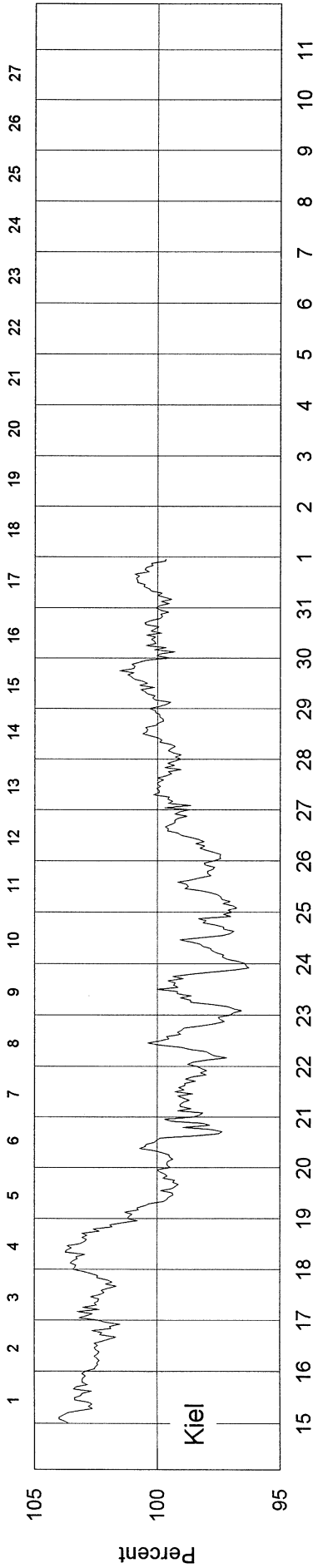
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2302 - Beginning 15 Mar 2002



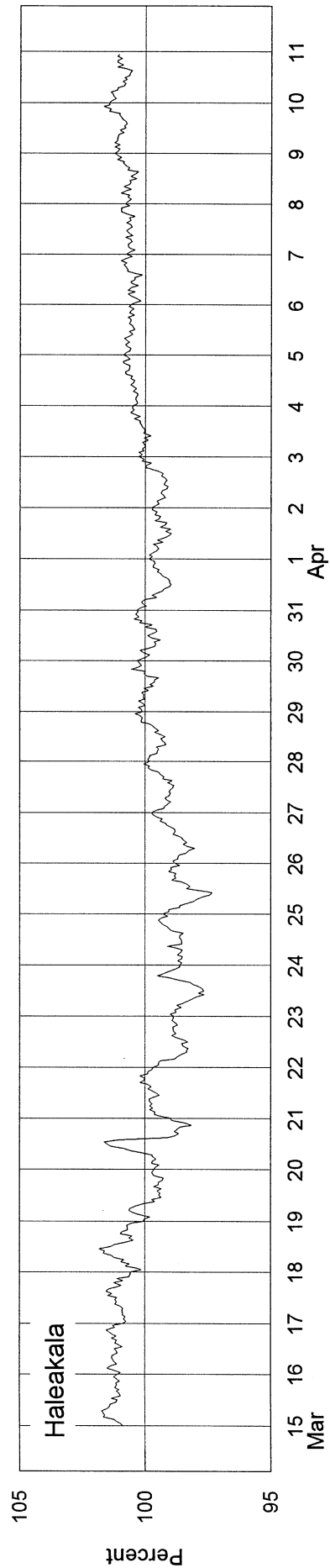
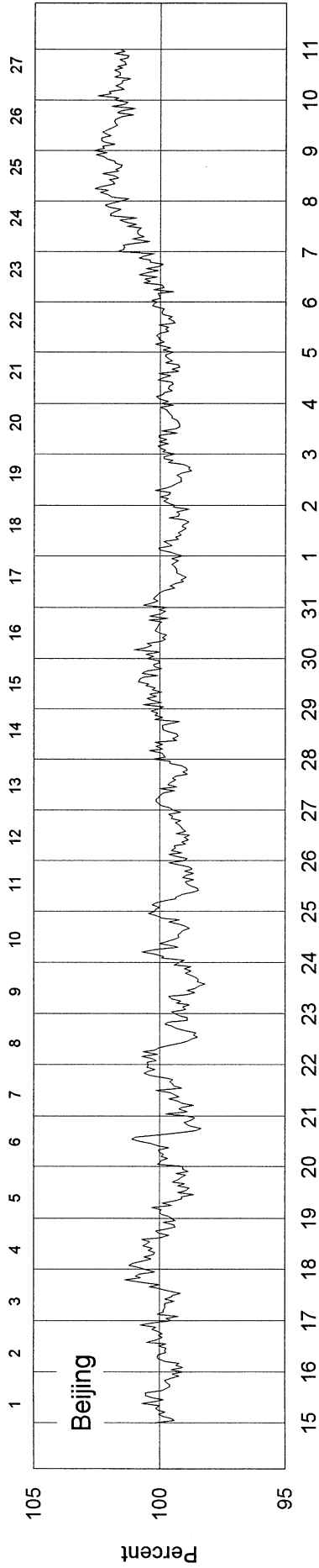
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2302 - Beginning 15 Mar 2002

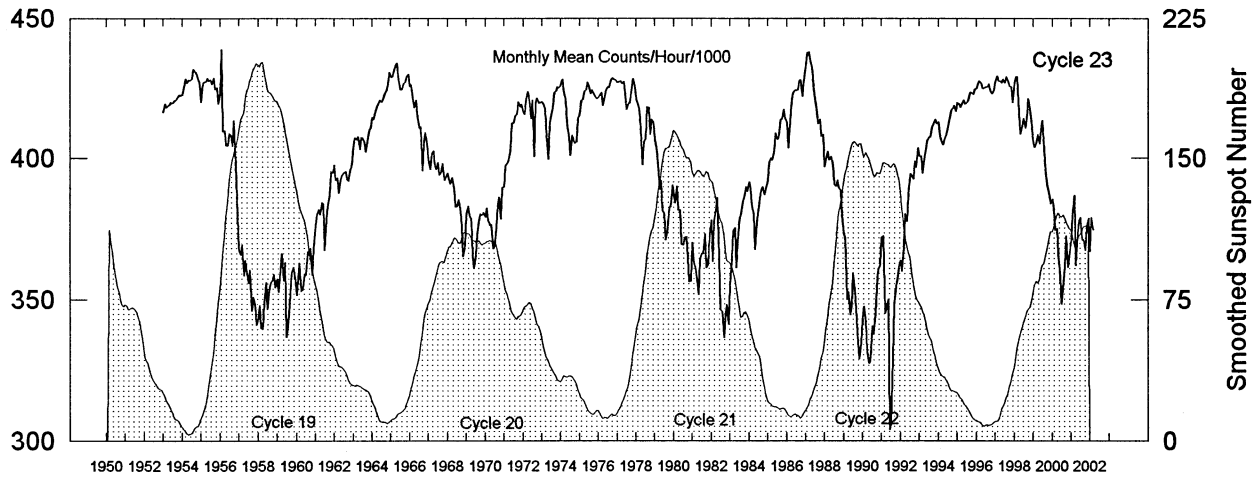


COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2302 - Beginning 15 Mar 2002



Climax Neutron Monitor Pressure-Corrected Values Jan 1953 - Mar 2002



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1953	4165	4193	4182	4188	4190	4200	4197	4205	4208	4216	4225	4226	4200
1954	4225	4247	4285	4269	4280	4277	4284	4318	4308	4303	4286	4269	4279
1955	4200	4267	4272	4273	4287	4278	4279	4263	4286	4245	4252	4193	4258
1956	4234	4388	4097	4097	4049	4045	4088	4083	4044	4134	3980	3799	4087
1957	3677	3660	3695	3585	3640	3603	3557	3606	3458	3509	3484	3410	3574
1958	3435	3479	3400	3396	3490	3560	3467	3537	3561	3564	3589	3542	3502
1959	3573	3526	3606	3664	3567	3633	3367	3420	3484	3597	3615	3587	3553
1960	3516	3573	3631	3532	3534	3589	3587	3670	3670	3682	3586	3681	3604
1961	3761	3801	3819	3800	3843	3838	3675	3784	3834	3870	3955	3950	3828
1962	3977	3922	3931	3878	3927	3940	3950	3954	3924	3919	3963	3971	3938
1963	4049	4073	4065	4077	4033	4075	4072	4060	4024	4066	4094	4111	4067
1964	4144	4139	4168	4181	4198	4208	4202	4213	4232	4240	4254	4307	4207
1965	4294	4290	4314	4335	4340	4288	4247	4246	4267	4271	4294	4300	4291
1966	4258	4262	4211	4180	4207	4146	4108	4112	3956	4055	4091	4053	4137
1967	3991	3960	4014	4025	3974	3960	3985	3939	3955	3980	3922	3933	3970
1968	3946	3925	3909	3932	3895	3830	3830	3853	3817	3761	3652	3685	3836
1969	3801	3831	3798	3782	3656	3609	3652	3730	3781	3803	3798	3807	3754
1970	3792	3824	3781	3765	3765	3679	3684	3755	3832	3862	3786	3895	3785
1971	3898	3975	3981	4003	4032	4124	4124	4152	4156	4200	4184	4192	4085
1972	4162	4157	4209	4237	4215	4141	4207	4005	4198	4214	4198	4198	4178
1973	4200	4193	4173	4075	3997	4119	4150	4180	4235	4240	4255	4253	4173
1974	4261	4283	4237	4207	4121	4077	4009	4083	4061	4054	4058	4140	4133
1975	4155	4206	4210	4239	4244	4271	4262	4231	4243	4231	4218	4213	4227
1976	4216	4223	4236	4188	4218	4244	4254	4253	4283	4287	4285	4280	4247
1977	4268	4272	4274	4267	4272	4231	4175	4193	4197	4245	4284	4260	4245
1978	4213	4198	4173	4107	3976	4058	4068	4183	4180	4085	4139	4128	4126
1979	4071	4034	3983	3888	3920	3814	3806	3710	3745	3829	3829	3905	3878
1980	3873	3842	3900	3819	3817	3697	3692	3719	3723	3647	3564	3564	3738
1981	3703	3623	3616	3561	3518	3643	3663	3662	3732	3613	3624	3726	3640
1982	3780	3634	3778	3819	3860	3650	3463	3456	3364	3444	3482	3413	3595
1983	3550	3643	3744	3753	3613	3700	3789	3798	3845	3860	3897	3881	3756
1984	3915	3896	3830	3806	3677	3773	3813	3865	3891	3897	3871	3890	3844
1985	3919	3985	4002	3995	4026	4088	4066	4075	4139	4139	4174	4141	4062
1986	4128	4036	4098	4199	4232	4242	4243	4244	4277	4280	4221	4277	4206
1987	4331	4376	4378	4346	4323	4254	4216	4170	4123	4139	4080	4084	4235
1988	3970	3997	4024	3995	4005	3981	3906	3899	3923	3893	3886	3798	3940
1989	3731	3717	3500	3527	3446	3478	3594	3535	3467	3347	3291	3349	3499
1990	3432	3476	3424	3317	3275	3283	3406	3377	3450	3540	3608	3620	3434
1991	3719	3725	3451	3470	3501	3041	3062	3293	3482	3550	3570	3628	3458
1992	3639	3600	3684	3803	3776	3876	3945	3939	3928	3989	3966	4036	3848
1993	4011	4007	3947	4003	4028	4061	4075	4076	4113	4122	4138	4122	4059
1994	4130	4079	4058	4048	4076	4085	4117	4140	4173	4179	4187	4168	4120
1995	4198	4194	4180	4199	4208	4193	4198	4209	4235	4236	4228	4246	4210
1996	4249	4266	4276	4269	4252	4250	4254	4256	4264	4243	4231	4242	4254
1997	4273	4293	4278	4274	4268	4281	4268	4290	4278	4260	4255	4199	4268
1998	4270	4290	4291	4160	4087	4116	4142	4107	4141	4212	4175	4133	4177
1999	4056	4040	4057	4083	4050	4106	4133	4031	3953	3899	3870	3840	4010
2000	3855	3822	3748	3752	3656	3583	3485	3562	3617	3725	3615	3651	3673
2001	3713	3812	3869	3622	3734	3779	3791	3713	3713	3675	3761	3787	3747
2002	3670	3790	3745										3735

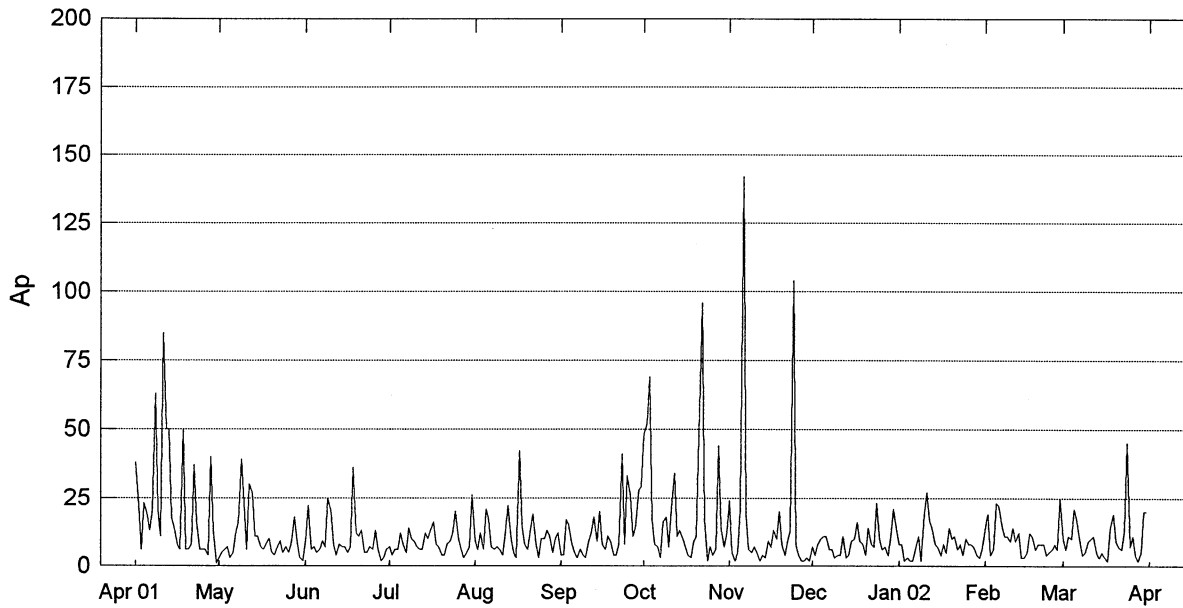
Multiply table entries by 100 to obtain hourly counting rate. Climax, Colorado: N39, W106, Alt=3400 m, Cutoff Rigidity=2.99GV (1980).
 NOTE: Data may differ from previously reported values due to subsequent cleanup of data and slight changes in the averaging algorithm. See <http://astro.uchicago.edu/home/web/pyle/neutron.html> for latest changes. Sunspot numbers are preliminary after September, 2001.

Geomagnetic Activity Indices March 2002

Day	Kp Three-Hourly Indices								Sum	Ap	Cp	Kn 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	5-	3+	2-	1+	2-	1-	1-	0+	14+	10	0.6	5o	2+	2o	2-	1+	1+	1o	1-	20	17	12	23	6		
2	1+	1+	1+	1+	1+	2+	2-	1	12-	6	0.2	1+	2-	2o	1+	1+	2+	2-	1+	12	12	12	12	12	CC	
3	2-	1+	2+	2+	3	2	3	4-	19+	11	0.6	2-	1+	2+	2+	3o	2+	3-	4o	23	26	25	15	36		
4	3	2	2	2-	2	3	3-	3-	19	10	0.6	3-	1+	2o	2o	2o	3o	3+	3-	21	24	20	17	27		
5	D2	4+	4+	3	3+	3	4	3+	3-	28	21	1.1	4-	4o	3-	3o	3o	3+	3+	3o	35	45	43	54	33	
6		2	3+	4-	3	3+	4-	4	2+	25+	17	0.9	2+	3-	3+	3o	3o	4-	4-	3o	31	34	25	26	33	
7		2-	2	2+	3	3	1+	1	3-	17	9	0.5	2-	2-	2+	3-	3o	1+	1o	3o	18	21	19	19	21	
8	Q6	1	1+	2+	2+	1-	0+	0+	0	8+	4	0.1	2-	1+	2o	3-	1o	1-	0+	0+	9	9	9	13	5	CK
9	Q8	0+	0	1-	1+	2	3-	2-	1-	9+	5	0.2	0+	0o	1-	1+	2o	3-	2-	1+	9	12	8	5	15	CK
10		0	1	1	3+	3	1+	1+	3+	14+	9	0.5	0o	1+	1+	3o	4-	2-	1+	3o	19	21	19	14	27	
11		3-	4	2-	2	2	2	1+	18-	10	0.5	2+	3+	2o	2o	3-	2-	2+	2-	18	22	17	24	15		
12		2+	2-	3	3	2+	3-	2+	3-	20	11	0.6	2+	2o	3o	3o	2+	3-	2+	3-	22	24	22	24	22	
13	Q10	2	1-	2	1+	2+	1	1-	0	10	5	0.2	2o	1o	2+	2-	2+	1+	1+	0+	11	12	10	12	11	CK
14	Q3	0+	0+	0+	1-	1	1	1-	0+	5-	3	0.0	1o	0+	1-	1-	1o	1+	0+	0+	5	5	7	7	6	CC
15	Q9	0	0+	1+	1-	0+	1+	2+	3-	9	5	0.2	0o	0+	1+	1o	1-	1o	2o	2+	8	9	12	8	13	CC
16	Q4	1	0+	1-	1	1+	1+	1-	0	6+	3	0.1	1o	1o	1o	1+	2-	1+	1o	0o	7	7	10	9	9	CC
17	Q1	0	0	0	0+	1-	0+	1	1-	3	2	0.0	0o	0o	0o	0+	1-	0+	1o	1o	3	6	5	4	7	CC
18		2	1-	1-	1+	5	3+	3	3	19	14	0.8	1+	1o	1-	2-	5o	3o	3o	3-	25	25	25	10	40	
19	D5*	5	5+	3+	2	1	1	2-	2	21+	19	1.0	5o	5o	4o	3-	2o	2-	2+	2+	42	37	36	61	12	
20		1	0+	0+	0+	3	4+	3-	1+	13+	9	0.5	1o	0+	0o	0o	3-	4-	2+	1+	13	19	14	5	28	
21		2	1+	3-	2-	1+	1+	2+	2-	14+	7	0.3	2-	1o	3-	2+	1+	2-	2+	2o	14	15	12	14	13	C
22		3-	3	2	2	1-	1-	0+	0+	12-	6	0.3	2+	3o	3-	3-	1o	0+	0o	0+	14	13	14	23	4	K
23		0	0	1-	3	4-	4-	3+	4	18+	13	0.8	0o	0o	0+	3o	3o	3o	4-	20	28	22	11	39		
24	D1	5	6	6	5-	4	5	3+	3+	37+	45	1.5	4+	5-	5o	5-	4-	4+	3+	3+	63	57	75	72	60	
25		2+	2	1-	1-	2	3	2	1	14-	7	0.3	2+	2o	1+	1o	2-	3-	2-	1+	13	16	10	10	16	C
26		2+	2+	3-	3+	3	2-	2	3	20+	11	0.7	2+	3-	2+	3+	3-	2-	2o	3o	22	29	19	25	23	
27	Q5	1-	1+	2-	0+	1-	1-	1	1-	7	4	0.1	1-	1+	2-	0+	0+	1-	1o	1o	6	7	7	7	8	CK
28	Q2	0+	1-	0	1-	1	1-	1-	0+	4+	2	0.0	0+	1-	0o	1o	1-	0+	0+	0o	3	4	5	4	4	CK
29	Q7K	0	0	0+	1	1	1	1+	3+	8	5	0.2	0o	0o	0+	0+	1o	1o	2-	3+	8	13	8	4	17	CK
30	D4	2	4	4	3+	4+	3+	3+	3-	27	20	1.0	2+	4+	3+	3o	4-	3o	3+	3-	35	40	39	40	39	
31	D3	2+	4	4	4-	3	3+	4	3	27+	20	1.0	2+	3+	3o	3o	3o	3o	3+	3-	30	48	32	39	41	
Mean										10	0.50									18.7	21.4	19.2		20.2		

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	5-	3-	2o	1+	1+	1+	1+	0o	19	5+	2o	2o	2o	1+	1-	1-	1o	22	184.3	109	94	137	
2	1+	1+	2-	1+	1+	3-	2-	1+	12	2-	2o	2+	1+	2-	2o	2-	2-	13	187.6	78	75	141	
3	2-	1+	2+	2+	3o	2+	3-	4-	22	2o	2-	2o	3-	3-	3-	2+	4o	23	179.6	112	96	132	
4	3-	1+	2-	2-	3-	3+	3o	3-	22	3-	1+	2o	2o	2-	3o	3+	3-	21	172.0	114	100	124	
5	4-	4o	3-	3o	3o	3+	3+	3-	35	4-	4o	3-	3o	3+	3o	3o	3o	36	169.4	106	88	121	
6	2+	3o	3+	3-	3-	4-	4-	3-	30	2+	3-	3+	3o	3o	3+	3+	3o	30	175.0	112	97	127	
7	2-	2-	2+	3o	4-	1+	1o	3o	20	2-	2-	2o	2+	2+	1+	1+	3-	16	177.0	93	89	129	
8	1+	1+	2o	3-	1o	1o	0o	0+	9	2-	1+	2o	2+	1o	0+	0+	1-	9	174.2	79	75	126	
9	0o	0o	1-	2-	2+	3o	2-	1+	10	1-	0o	0+	1+	2-	3-	2-	1o	9	204.8#	74	69	159	
10	0o	1o	1o	3+	4o	2-	1+	3+	21	0o	2-	1+	3-	3o	1+	1+	3o	16	176.9	78	72	129	
11	2+	3+	2-	2o	2+	2o	2o	2-	18	2+	3+	2o	2o	3-	1+	2+	2-	19	180.0	103	83	132	
12	2+	1+	3o	3o	3-	3o	3-	3-	23	2+	3-	3o	3o	2o	2+	2o	3-	21	176.2	90	84	128	
13	2o	1-	2+	1+	2+	1+	1+	0o	10	2o	1o	2o	2o	2+	1+	1o	1-	11	182.1	92	94	135	
14	1o	0o	0+	1-	1o	2-	0+	0o	4	1-	0+	1o	1o	1-	1-	0+	1-	5	178.6	87	86	131	
15	0o	0o	1+	1o	1o	1o	2o	2o	8	0+	1-	1+	1o	0o	1-	2o	3-	9	174.0	100	92	126	
16	1o	0+	1-	1+	2-	2-	1o	0o	7	1+	1+	1+	1+	2-	1o	1-	0o	7	182.7	94	93	135	
17	0o	0o	0o	0o	1-	0+	1+	1o	3	0o	0o	0+	0+	1-	0+	1-	1-	3	182.7	88	90	135	
18	2-	1o	0+	2-	5o	3o	3+	3o	27	1+	1+	1o	2-	5-	3-	3-	3-	24	176.5	92	88	129	
19	4+	5-	3+	3-	1+	1+	2o	2+	31	5+	5+	5-	3-	3-	2o	3-	3-	51	173.3	76	77	125	
20	1+	0+	0o	0o	3-	4o	3-	2-	16	1o	0+	0o	0o	3-	3o	2o	1+	11	186.3	85	93	139	
21	2-	1-	2+	3-	1+	2o	3-	2+	15	1+	1o	3-	2-	1o	2-	2o	2-	13	172.8	95	105	125	
22	2o	3-	3-	2+	1o	1-	0o	0+	13	3-	3+	3-	3-	1o	0o	0o	0+	15	170.4	93	101	122	
23	0o	0o	0+	3-	3o	3+	3o	3+	21	0o	0o	1-	3o	3-	3-	3-	4-	19	169.4	106	112	121	
24	4+	5-	5o	5-	4o	4+	3o	3+	61	4+	5-	5o	5-	4-	4+	3+	3+	64	174.3	104	118	126	
25	2o	2o	1+	1o	2-	3o	2-	1+	14	2+	2-	1o	1o	1+	2o	2-	1+	12	169.1	109	108	121	
26	2+	3-	3-	3o	3-	2-	2+	3o	22	2o	3-	2+	4-	2+	2-	2-	3o	21	164.9	101	106	116	
27	0+	1o	2-	0+	0+	1o	1+	1o	6	1o	2-	2-	0+	1-	0+	1o	1-	6	168.4	115	116	120	
28	0o	0+	0o	1-	1-	0+	1-	0+	3	0+	1o	0o	1o	0+	0o	0o	0o	2	175.6	107	106	128	
29	0o	0o	0+	1-	1+	1+	2-	4-	10	0o	0o	0+	0o	0+	0+	1+	3o	6	180.8	114	116	133	
30	2+	4-	3o	3o	4o	3o	4-	3-	35	2+	5-	3+	3o	3+	3-	3o	3-	35	188.2	111	115	141	
31	2+	3o	3o	3o	3o	3o	4-	3o	30	2+	3+	3+	3+	3o	3o	3+	3-	30	204.0	125	135	158	
Mean									18.7									18.7	178.4	98.1	96.0	130.7	

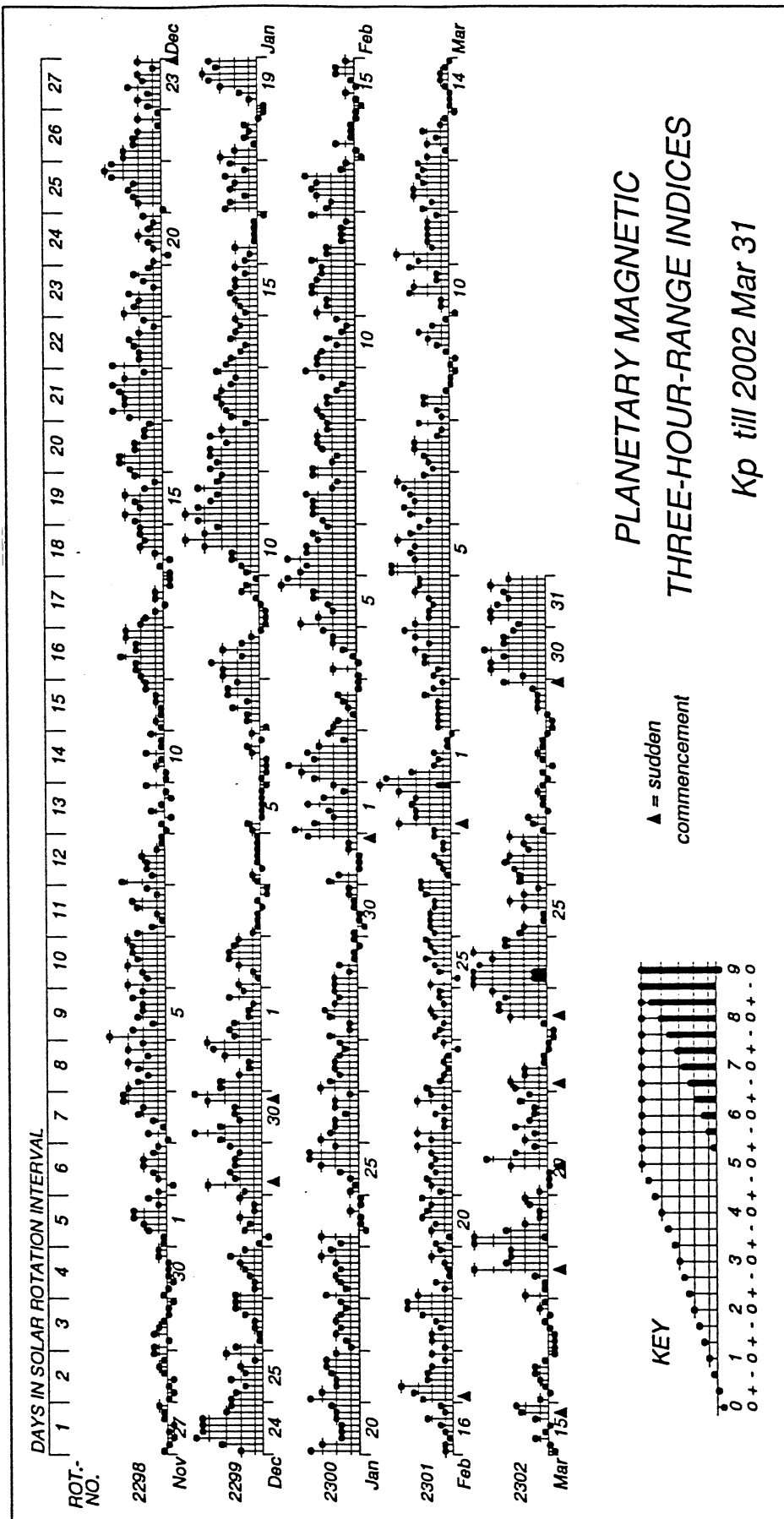
Daily Average Indices Ap Apr 2001 -Mar 2002



Day	Apr 01	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 02	Feb	Mar
1	38	3	9	7	9	4	48	24	7	8	14	10
2	22	5	22	4	6	4	52	5	4	8	19	6
3	6	6	6	6	12	17	69	2	8	2	4	11
4	23	7	7	6	6	15	17	5	10	3	6	10
5	19	3	5	12	21	8	8	21	11	2	23	21
6	13	5	6	8	17	5	7	142	11	2	22	17
7	20	12	9	5	7	3	3	19	6	7	15	9
8	63	16	7	14	6	6	16	6	6	11	11	4
9	20	39	25	10	7	4	18	5	3	2	11	5
10	11	23	20	9	6	3	7	7	4	19	9	9
11	85	6	8	7	4	9	21	5	4	27	14	10
12	50	30	4	6	12	12	34	2	11	17	9	11
13	50	27	8	6	22	18	11	4	3	13	12	5
14	18	11	7	12	10	9	13	3	4	8	3	3
15	13	11	7	10	5	20	10	9	9	7	3	5
16	8	7	5	13	3	8	7	7	10	4	5	3
17	6	6	7	16	42	6	4	13	16	8	12	2
18	50	8	36	8	15	11	3	10	9	5	11	14
19	6	10	12	7	8	9	9	20	8	14	6	19
20	6	5	11	4	6	4	11	8	4	10	8	9
21	8	4	13	4	13	4	57	4	14	11	8	7
22	37	7	5	8	19	8	96	9	8	6	8	6
23	16	9	5	9	8	41	17	13	7	8	4	13
24	6	5	7	12	3	8	2	104	23	4	5	45
25	6	7	6	20	10	33	7	8	9	10	6	7
26	6	5	13	10	10	26	4	4	6	8	8	11
27	4	8	6	6	13	11	6	2	7	8	6	4
28	40	18	2	3	11	14	44	2	4	7	25	2
29	13	9	3	5	5	28	14	3	11	4		5
30	1	3	6	7	10	29	7	2	21	3		20
31		2		26	12		12		15	6		20
Mean	22	10	10	9	11	13	20	16	9	8	10	10

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

GeoForschungsZentrum Potsdam Kp through March 31, 2002

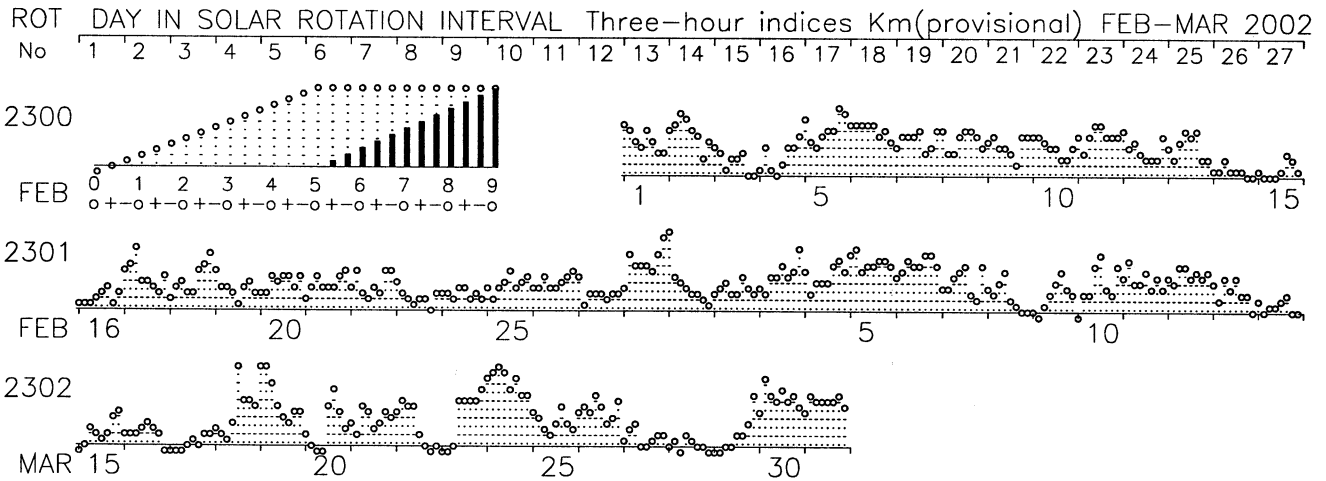


PLANETARY GEOMAGNETIC ACTIVITY

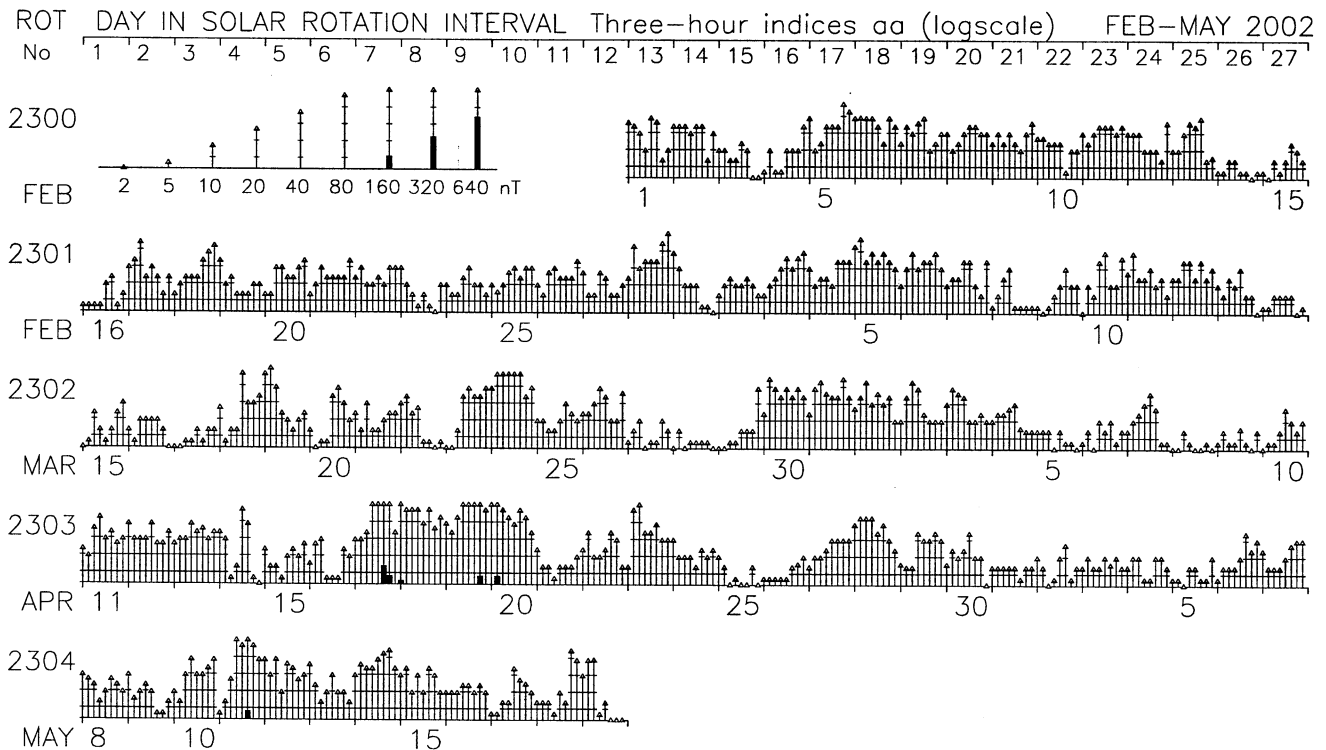
3-HOUR-RANGE INDICES Km AND aa BY 27-DAY SOLAR ROTATION INTERVAL

ISGI PUBLICATION OFFICE – EMail : ISGI.PUBOFF@cetp.ipsl.fr

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



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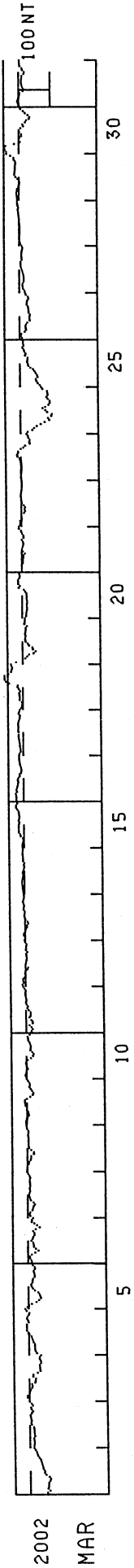


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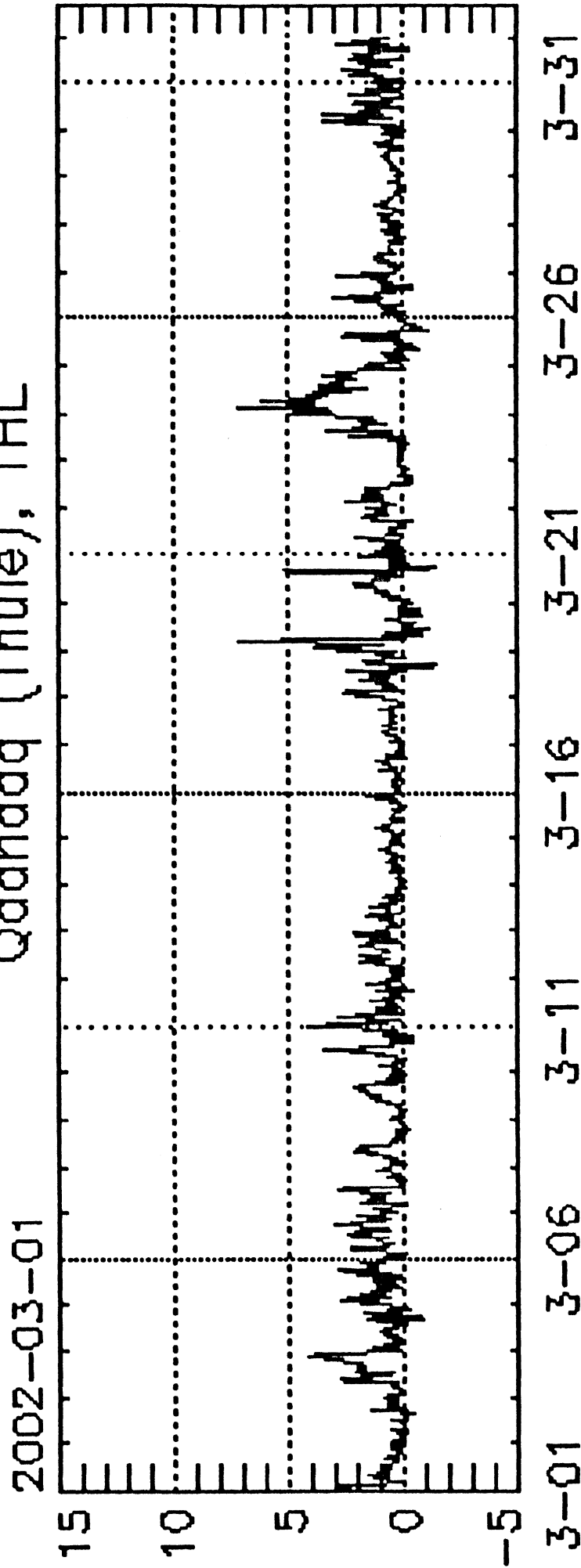
HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

MARCH 2002

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
UNIT=NT																								
U. T.																								
1	-54	-62	-56	-55	-59	-59	-63	-64	-61	-50	-46	-46	-41	-39	-39	-37	-34	-32	-28	-25	-23	-19	-15	-12
2	-12	-14	-13	-13	-12	-12	-13	-14	-14	-14	-11	-6	-4	-6	-4	-4	-2	-6	-10	-5	-4	-9	-6	-1
3	2	7	7	0	-3	-3	-7	-9	-7	-17	-20	-19	-12	-12	-27	-34	-35	-33	-32	-37	-37	-33	-32	-38
4	-24	-19	-17	-17	-17	-17	-13	-11	-10	-7	-1	4	8	8	7	8	2	4	8	5	1	-1	7	11
5	6	-2	-10	-25	-33	-39	-38	-35	-30	-19	-14	-10	-8	-12	-11	-14	-19	-19	-16	-16	-19	-19	-14	-13
6	-11	-9	-6	-6	-12	-23	-33	-25	-18	-18	-16	-10	-14	-16	-21	-20	-15	-25	-28	-28	-20	-12	-12	-15
7	-8	-5	-7	-13	-16	-18	-23	-18	-10	-7	-5	-3	-5	-8	-6	-7	-8	-7	-5	-5	-7	-5	-1	3
8	4	1	0	-4	-6	-9	-11	-12	-20	-20	-12	-6	-4	-4	-4	-4	-3	-3	-2	-3	-4	0	3	3
9	5	5	3	-1	-5	-6	-3	1	2	5	7	8	7	2	-9	-17	-20	-16	-11	-8	-10	-7	-4	1
10	4	5	4	2	-3	-2	1	3	1	-4	-13	-21	-22	-17	-12	-12	-13	-11	-9	-5	-6	-4	-9	-13
11	-16	-21	-15	-9	-20	-21	-15	-9	-13	-13	-13	-8	-3	-5	-2	0	-1	0	1	3	4	2	6	9
12	12	8	10	9	5	2	3	0	-5	-8	0	1	-2	-3	-3	-3	-2	-5	-2	-1	-2	-4	0	4
13	2	1	5	5	2	-2	-5	-5	-9	-7	-1	2	4	0	2	5	5	4	6	7	5	4	4	5
14	6	7	8	8	10	9	9	8	7	6	7	5	3	1	3	2	5	6	6	6	7	7	6	7
15	8	7	6	4	5	11	14	17	19	18	17	17	16	17	15	15	15	17	17	23	26	27	23	23
16	24	25	25	26	23	25	22	21	21	19	20	17	14	14	9	7	7	9	11	14	13	13	15	15
17	13	10	10	11	12	12	13	14	15	15	15	15	17	17	15	17	17	15	13	12	12	15	14	11
18	7	6	4	6	11	12	11	11	13	10	13	18	19	46	57	61	61	61	48	39	36	34	37	39
19	23	2	-7	-13	-21	-34	-41	-33	-31	-21	-16	-10	-8	-7	-9	-8	-9	-10	-9	-14	-6	-7	-7	-7
20	-12	-12	-11	-14	-15	-15	-14	-16	-16	-14	-14	-14	-14	-9	-5	12	8	14	14	14	10	8	9	9
21	1	0	2	0	-4	-4	-4	-6	-6	-10	-3	0	-1	-4	-6	-4	0	-5	-5	-1	2	4	9	10
22	5	5	5	-2	2	2	-7	-12	-9	-11	-8	-1	1	1	1	3	2	1	0	-2	-2	-1	-1	-1
23	1	1	0	-1	-2	-2	-2	-2	-1	3	5	11	13	10	10	2	-7	-13	-29	-26	-28	-25	-22	-18
24	-22	-37	-44	-51	-64	-78	-91	-87	-99	-101	-85	-80	-71	-80	-90	-95	-95	-87	-84	-87	-88	-85	-72	-66
25	-62	-55	-51	-50	-55	-53	-50	-45	-41	-33	-27	-24	-23	-24	-24	-15	-17	-14	-11	-8	-11	-10	-9	-6
26	-8	-3	-5	-15	-19	-21	-18	-20	-24	-32	-30	-30	-33	-29	-28	-29	-27	-23	-22	-25	-28	-27	-21	-18
27	-15	-11	-9	-9	-10	-13	-14	-14	-14	-11	-10	-8	-6	-4	-4	-4	-7	-8	-6	-6	-7	-8	-9	-7
28	-4	-2	-1	1	2	-1	-2	-2	-2	-1	-1	0	0	1	2	4	4	4	5	4	5	6	7	7
29	7	8	10	9	8	7	4	1	-1	1	6	12	16	16	14	13	13	13	11	14	17	18	28	42
30	42	45	47	44	15	-4	1	-2	-7	-8	-1	1	-6	-13	-11	-20	-25	-32	-35	-29	-20	-14	-6	-3
31	-1	4	6	4	-1	-2	-4	-14	-15	-11	-9	-8	-8	-8	-9	-9	-15	-18	-12	-10	-4	-1	-2	-1



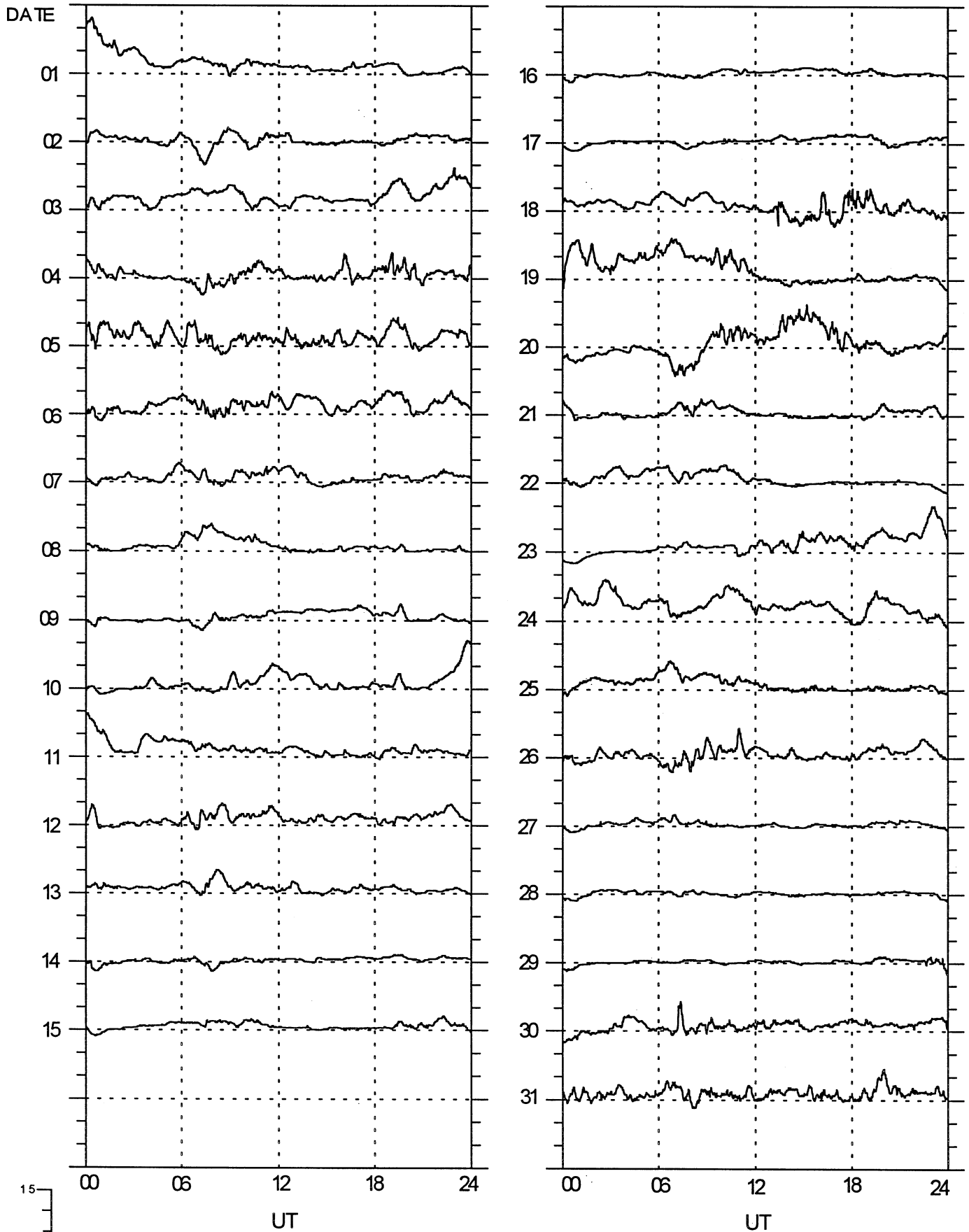
WDC C1 for Geomagnetism, Copenhagen
Polar Cap index
Qaanaq (Thule), THL



Date, mm-dd
Data source: Solar-Terrestrial Physics Division
Danish Meteorological Institute

Vostok

March, 2002



15
0

PRINCIPAL MAGNETIC STORMS

MARCH 2002

Geomag Sta	Lat	Commencement Time		Type	SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges			End Hour		
		Day	(UT)		D (Min)	H (Gamma)	Z (Gamma)		K (Min)	D (Gamma)	H (Gamma)	Z (Gamma)	Day	(UT)
HYB	07.6N	02	0000	..	..	..	..	03(5)	4	5	140	23	04	04
ETT	00.7S	02	0000	..	..	..	..		-	2	214	59	03	24
UJJ	13.6N	04	0700	..	..	..	..		-	5	94	34	06	21
NGP	11.3N	04	0700	..	..	..	..		-	5	109	33	06	21
ABG	09.4N	04	0700	..	..	..	..	05(2) 06(7)	5	5	126	41	06	21
HYB	07.6N	04	0500	..	..	..	..	06(7)	5	4	121	28	06	24
PND	02.0N	04	0700	..	..	..	..		-	3	124	65	06	21
TIR	00.6S	04	0700	..	..	..	..		-	3	198	79	06	21
ETT	00.7S	04	0100	..	..	..	..		-	3	190	68	06	23
HER	33.6S	06	05--	..	..	..	..	06(6)	5	32	74	118	06	24
BJI	28.8N	18	1321	SC	2.5	99	6.5	18(5)	6	13	183	89	19	17
UJJ	13.6N	18	1321	SC	- 1.3	77	- 17		-	6	117	40	19	20
NGP	11.3N	18	1321	SC	0.8	76	- 9		-	6	135	32	19	20
ABG	09.4N	18	1321	SC	- 1.6	66	- 17	18(5)	6	7	119	52	19	20
HYB	07.6N	18	1322	SC	- 1.2	21	0	18(5)	6	5	121	27	20	04
PND	02.0N	18	1321	SC	- 0.5	66	66		-	5	123	122	19	20
TIR	00.6S	18	1321	SC	- 1.0	54	75		-	5	187	146	19	20
ETT	00.7S	18	1323	SC	- 0.5	58	66		-	4	168	114	20	04
HER	33.6S	18	1324	SC	6	54	46	18(5)	5	38	76	138	19	12
HYB	07.6N	20	1327	SC	- 0.2	16	- 2	20(6)	4	7	93	43	22	17
ETT	00.7S	20	1328	SC	- 0.2	13	14		-	4	194	68	22	14
HER	33.6S	20	1328	SC	3	15	13	20(5,6)	3	15	52	62	20	21
BJI	28.8N	23	1137	SC	1.5	30	1	24(1)	5	15	140	47	24	24
UJJ	13.6N	23	1135	SC	- 0.4	21	- 5		-	8	150	31	25	00
NGP	11.3N	23	1135	SC	0.2	19	- 3		-	6	177	24	25	00
ABG	09.4N	23	1135	SC	- 0.4	19	- 6	23(6,8) 24(1,2,5,6,7)	5	5	181	46	25	00
HYB	07.6N	23	1139	SC	- 0.3	21	- 3	24(1,5,6,7)	4	5	176	20	26	23
PND	02.0N	23	1135	SC	- 0.2	21	19		-	4	180	63	25	00
TIR	00.6S	23	1135	SC	- 0.3	27	31		-	4	225	67	25	00
ETT	00.7S	23	1139	SC	0	25	22		-	4	216	66	24	23
HER	33.6S	23	1138	SC	3	26	22	24(2)	5	26	136	129	25	09
GNA	43.0S	23	1133	SC	2.2	24	15	24(6)	6	22	128	119	25	03
CAN	43.6S	23	1133	SC	0.9	30	6	24(3,4,5,6)	5	17	144	63	25	03
ETT	00.7S	25	0100	..	..	..	..		-	2	185	58	26	23
UJJ	13.6N	29	2200	..	..	..	..		-	8	108	50	30	23
NGP	11.3N	29	2200	..	..	..	..		-	9	154	44	30	23
ABG	09.4N	29	2200	..	..	..	..	29(8)	5	8	148	57	30	23
HYB	07.6N	29	2100	..	..	..	..	30(3)	5	6	161	49	31	24
PND	02.0N	29	2200	..	..	..	..		-	6	195	96	30	23
TIR	00.6S	29	2200	..	..	..	..		-	4	290	107	30	23
ETT	00.7S	29	2236	SC	0	20	25		-	4	280	95	31	23
HER	33.6S	29	2239	SC	2	26	23	29(8) 30(3,4)	4	38	101	79	30	22

Stations:

ABG = ALIBAG
AMS = MARTIN DE VIVIES
ANN = ANNAMALAINAGAR
BJI = BEIJING
CAN = CANBERRA
CMO = COLLEGE

CZT = PORT ALFRED
DRV = DUMONT D'URVILLE
ETT = ETAIYAPURAM
GNA = GNANGARA
GUA = GUAM
HER = HERMANUS

HON = HONOLULU
HYB = HYDERABAD
JAI = JAIPUR
KRC = KARACHI
NGP = NAGPUR
PAF = PORT AUX FRANCAIS

PMG = PORT MORESBY
PND = PONDICHERRY
SHL = SHILLONG
SIT = SITKA
TIR = TIRUNELVELI
UJJ = UJJAIN

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

March 2002

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
18	1322	A: NUR VAL* HRB* NAG* SPT* GUI* ETT	11	0430-0530	VAL
		B: SOD* NGK* BDV* EBR* QTA HYB GNA CNB LIV	13	0723-0745	HYB ETT
		C: GCK*	13	1231-1322	GUI
20	1328	A: VAL*	14	0142-0230	MMB KAK KNY
		B: NUR* CLF* NAG* SPT* HYB GNA CNB	17	1017-1029	BDV+
		C: NGK* BDV* ETT	18	1144-1215	NGK BDV
23	1137	A: VAL CLF* HRB* GUI	26	2157-2250	VAL
		B: NUR* NGK* BDV* MMB EBR* SPT* KAK KNY HYB ETT GNA CNB LIV*	31	1950-2055	VAL
		C: GCK*			
29	2237	A: VAL CLF HRB			
		B: BDV EBR SPT GUI ETT LIV*			
		C: NGK NAG GCK* QTA			

REPORTING OBSERVATORIES (up to the 3rd of May 2002):

SOD NUR NGK VAL BDV CLF HRB NAG GCK MMB EBR SPT KAK KNY QTA GUI HYB ETT GNA CNB LIV

Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, but unmistakable; C means very poor, doubtful; and - means no quality figure given. The * means that the SSC, at least in one component, was preceded by a small reversed impulse. SSCs are given only when five or more stations report the event. SFEs include all reports. If an SFE is confirmed by solar or ionospheric events, the name of the station is identified with a plus sign (+).

Note that we have included data of the Antarctic Station LIVINGSTONE (62° 39' 44" S, 60°23' 41" W) -- Luis F.

