U.S. DEPARTMENT OF COMMERCE
Ronald H. Brown, Secretary

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
D. James Baker, Administrator

NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
Robert S. Winokur, Assistant Administrator

MARCH 1994 NUMBER 595 - Part I

Solar-Geophysical Data prompt reports

Data for February 1994, January 1994, and Late Data

International Standard Serial Number: 0038-0911
Library of Congress Catalog Number: 79-640375 //r81

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

Subscription information is on the inside back cover.

SOLAR-GEOPHYSICAL DATA

Number 595

(Issued in Two Parts)

Editor: Helen E. Coffey

Chief: Joe H. Allen
Solar-Terrestrial Physics Division

Staff: Christine D. Hanchett
Edward H. Erwin

Computer Consultants:
Daniel C. Wilkinson
Grigoriy Ushomirskiy

CONTENTS

PART I (PROMPT REPORTS) Page

PART II (COMPREHENSIVE REPORTS) Page

DETAILED INDEX OF OBSERVATIONS PUBLISHED IN SOLAR-GEOPHYSICAL DATA

CODE	KIND OF OBSERVATION	JUL 93	AUG	SEP	OCT	NOV	DEC	JAN 94	FEB
A.	SOLAR AND INTERPLANETARY EVENTS								
A.1	Sunspot Drawings	589A 43	590A 41	591A 45	592A 50	593A 47	594A 49	595A 43	
A.2aa	International Provisional Sunspot Numbers	588A 25	589A 25	590A 23	591A 25	592A 23	593A 26	594A 27	595A 25
A.2c	American Sunspot Numbers	588A 25	589A 25	590A 23	591A 25	592A 23	593A 26	594A 27	595A 25
A.3a	Mt. Wilson Magnetograms	589A 43	590A 41	591A 45	592A 50	593A 47	594A 49	595A 43	
A.3b	Sunspot Mag Class and Regions	589A 90	590A 88	591A 91	592A 98	593A 77	594A 96	595A 90	
A.3c	Kitt Peak Magnetograms	589A 43	590A 41	591A 45	592A 50	593A 47	594A 49	595A 43	
A.3d	Mean Solar Magnetic Field (Stanford)	588A 35	589A 33	590A 31	591A 35	592A 33	593A 37	594A 39	595A 33
A.3e	Stanford Magnetograms	589A 43	590A 41	591A 45	592A 50	593A 47	594A 49	595A 43	
A.4	H-alpha Filtergrams	589A 43	590A 41	591A 45	592A 50	593A 47	594A 49	595A 43	
A.6c	Stanford Solar Mag Field Synoptic Maps	589A 36	590A 34	591A 38	592A 36	593A 40	594A 42	595A 36	
A.6d	Kitt Peak Solar Mag Field Synoptic Maps	589A 42	590A 40	591A 44	592A 48	593A 46	594A 48	595A 42	
A.6e	Mass Ejections (Proxy data) from the Sun	593B 31	594B 25	595B 24					
A.6f	Active Prominences and Filaments	593B 32	594B 26	595B 25					
A.6g	Sac Peak Coronal Line Synoptic Maps	589A 38	590A 36	591A 40	592A 40	593A 42	594A 44	595A 38	
A.7h	Coronal Line Emission (Sac Peak)	589A 43	590A 41	591A 45	592A 50	593A 43	594A 49	595A 43	
A.8aa	2800 MHz- Solar Flux (Penticton)	588A 25	589A 25	590A 23	591A 25	592A 23	593A 26	594A 27	595A 25
A.8ac	2800 MHz- Adj. Solar Flux (Penticton)	588A 25	589A 25	590A 23	591A 25	592A 23	593A 26	594A 27	595A 25
A.8g	Adjusted Daily Solar Fluxes (Learmonth)	588A 25	589A 25	590A 23	591A 25	592A 23	593A 26	594A 27	595A 25
A.10g	Nancay Radioheliograph - 164 MHz	589A114	590A105	591A102	592A115	593A108	594A114	595A116	
A.11g	Solar X-ray GOES (graphs/event table)	593B 22	594B 16	595B 16					
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.11n	Solar YOHKOH Soft X-ray Images	589A 74	590A 72	591A 75	592A 81	593A 77	594A 80	595A 74	
A.12e	Solar Particles (IMP H & J)	Dec 88-Oct 89 in 570B 92							
A.12g	Solar Particles (GOES-7)	588A 4	589A 4	590A 4	591A 4	592A 4	593A 4	594A 4	595A 4
A.12h	Interplanetary Particles (SAMPEX)	Jul-Dec 92 in 595B 36							
A.13e	Solar Plasma (IMP H & J)	Jan 93 in 587B 41							
A.16b	NIMBUS Solar Irradiance	Nov 78-Jun 92 in 577B 56							
A.16c	ERBS, NOAA-9 & -10 Solar Irradiance	1989 in 551B 78; ERBS Oct 84-Jul 93 in 593B 43							
A.17c	Inferred Interplanetary Mag Field	1984-1988 data in 542A168; 1989 in 548A154							
C.	SOLAR FLARE-ASSOCIATED EVENTS								
C.1a	H-alpha Flares	588A 28	589A 28	590A 26	591A 28	592A 26	593A 29	594A 30	595A 28
C.1ba	H-alpha Flare Groups	593B 4	594B 4	595B 4					
C.1d	Flare Patrol Obsevations	588A 32	589A 31	590A 29	591A 33	592A 30	———	———	———
C.1d	Flare Patrol Obsevations	593B 12	594B 10	595B 9					
C.3	Radio Bursts Fixed Frequency	593B 14	594B 12	595B 11					
C.3	Radio Bursts Fixed Frequency Selected	588A 33	589A 32	590A 30	591A 34	592A 31	593A 36	594A 37	595A 31
C.4f	Radio Bursts Spectral (Sagamore Hill)	589A107	590A102	591A 99	592A109	593A103	594A109	595A105	
C.4k	Radio Bursts Spectral (Learmonth)	589A107	590A102	591A 99	592A109	593A103	594A109	595A105	
C.4l	Radio Bursts Spectral (Palehua)	589A107	590A102	591A 99	592A109	593A103	594A109	595A105	
C.4m	Radio Bursts Spectral (Ondrejov)	589A107	590A102		592A109	593A103	594A109	595A105	
C.4n	Radio Bursts Spectral (Potsdam)	589A107				593A103	594A109	595A105	
C.4o	Radio Bursts Spectral (San Vito)	589A107	590A102	591A 99	592A109	593A103	594A109	595A105	
C.4p	Radio Bursts Spectral (IZMIRAN)	589A107	590A102	591A 99	592A109	593A103	594A109	595A105	
C.6	Sudden Ionospheric Disturbances	589A104	590A 99	591A 96	592A106	593A100	594A105	595A101	
D.	GEOMAGNETIC EVENTS								
D.1a	Geomagnetic Indices	589A121	590A112	592A143	592A122	593A115	594A120	595A123	
D.1ba	27-day Chart of Kp Indices	589A123	590A114	591A111	592A124	593A117	594A122	595A125	
D.1cb	Monthly Mean aa Indices	589A124	590A115	592A125	593A118	593A118	594A123	595A126	
D.1d	Principal Magnetic Storms	589A125	590A116	591A113	592A128	593A120	594A125	595A128	
D.1f	Sudden Commencements/Flare Effects	Jul-Oct 92 in 583A140							595A129
D.1g	Equatorial Indices Dst	**Jan-Feb 88 in 590A118**; May-Jul 93 in 592A144							
D.1i	Polar Cap (PC) Index	See UAG	Report	for early	data.	593A119	594A124	595A127	
F.	COSMIC RAYS								
F.1a	Cosmic Ray Neutron Cts (Deep River)	589A115	590A106	591A103	592A120	593A109	594A115	595A117	
F.1b	Cosmic Ray Neutron Cts (Climax)	589A115	590A106	591A103	592A120	593A109	594A115	595A117	
F.1h	Cosmic Ray Neutron Cts (Thule)	589A115	590A106	591A103	592A120	593A109	594A115	595A117	
F.1i	Cosmic Ray Neutron Cts (Kiel)								
F.1j	Cosmic Ray Neutron Cts (Tokyo)	589A115	590A106	591A103	592A120	593A109	594A115	595A117	
F.1n	Cosmic Ray Neutron Cts (Beijing)	589A115	590A106	591A103	592A120	593A109	594A115	595A117	
F.1b	Cosmic Ray Neutron Cts (Haleakala)	592A135	590A106	591A103	592A120	593A109	594A115	595A117	
H.	MISCELLANEOUS								
H.60	IUWDS Alert Periods	588A 20	589A 20	590A 19	591A 20	592A 19	593A 20	594A 20	595A 18

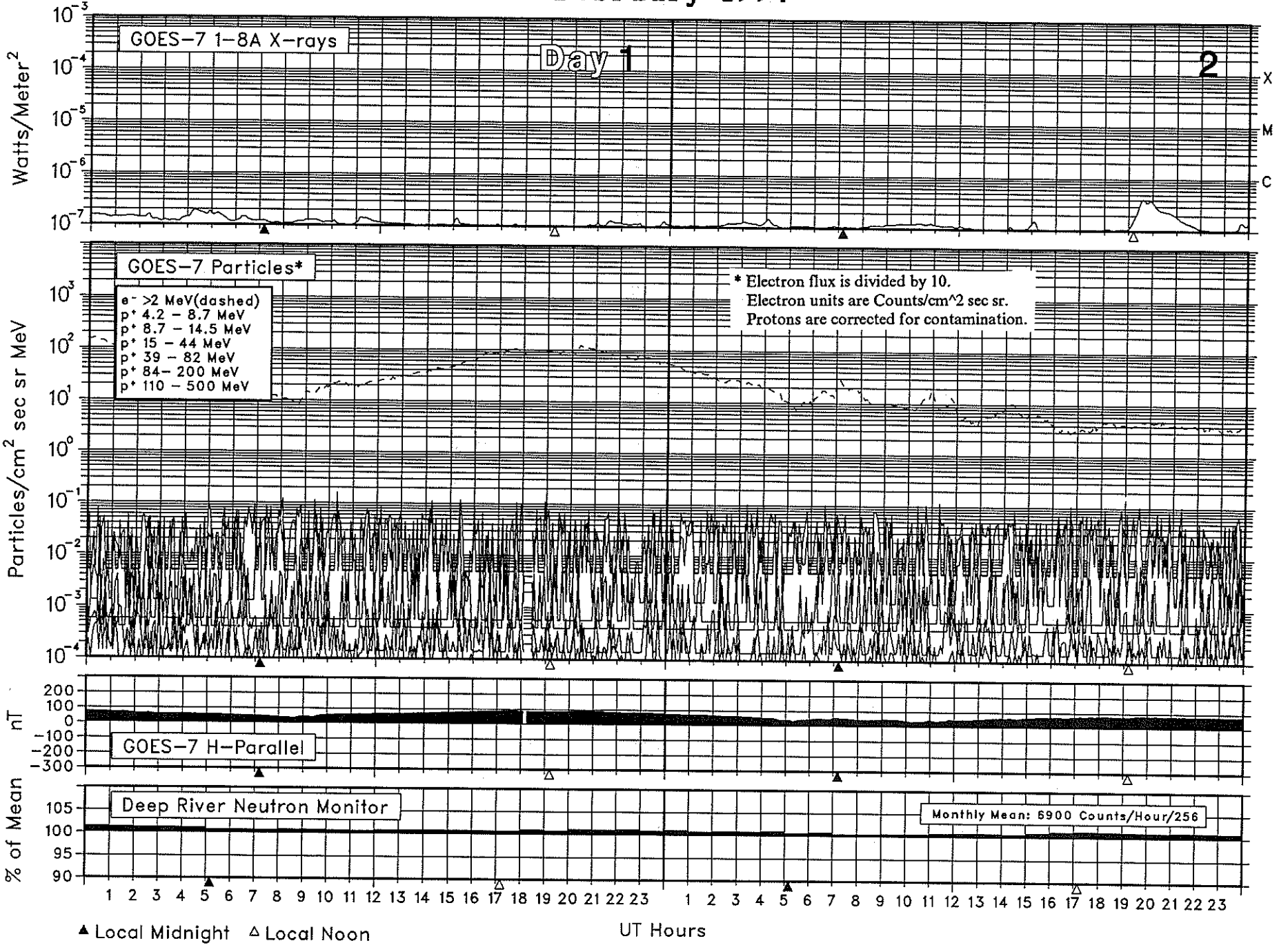
The entry "589A 43" under Jul 1993, for example, means that the sunspot drawings for Jul 1993 appear in SOLAR-GEOPHYSICAL DATA No. 589, Part I, and that they begin on page 43. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

CONTENTS

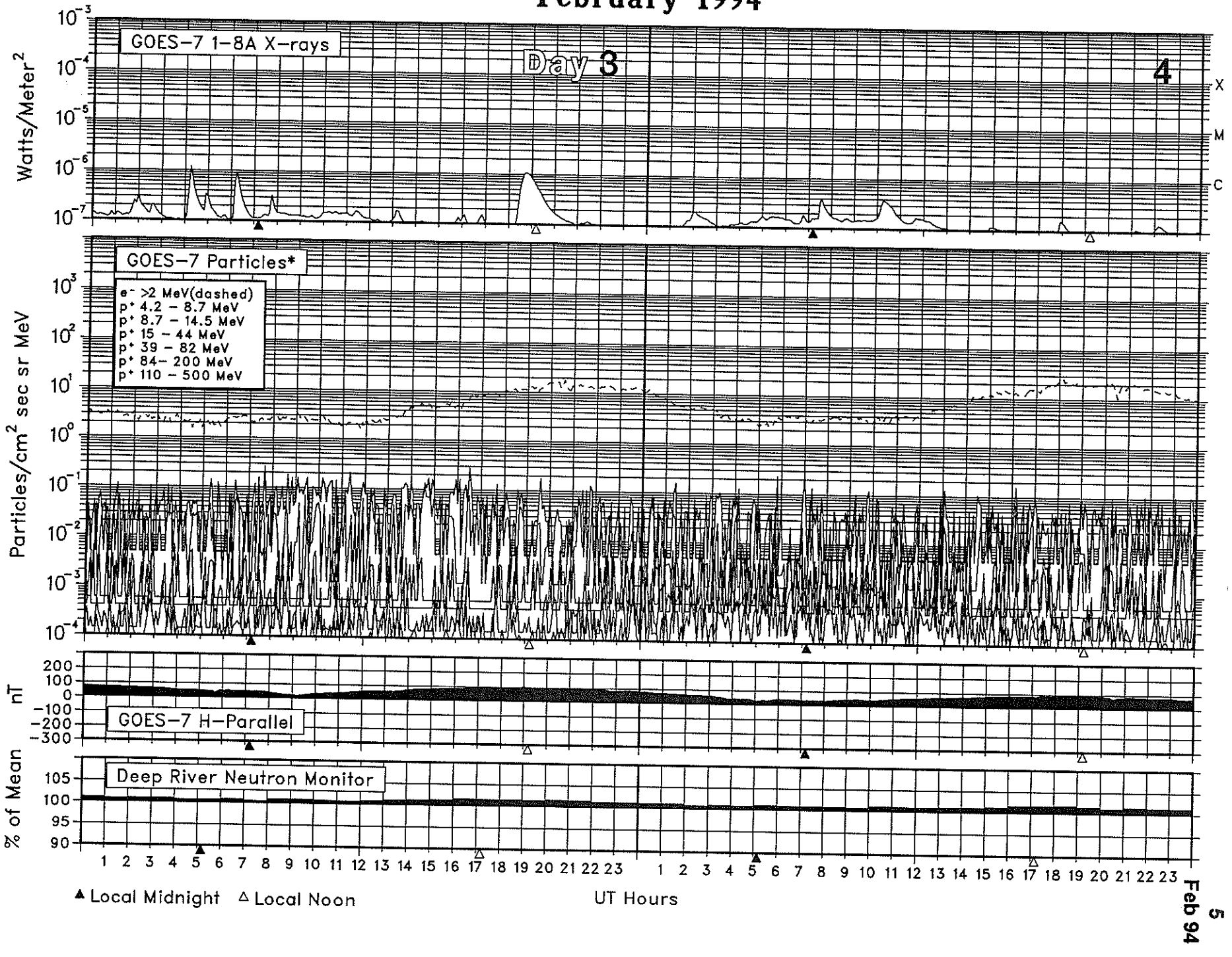
Prompt Reports Number 595 Part I

DATA FOR FEBRUARY 1994

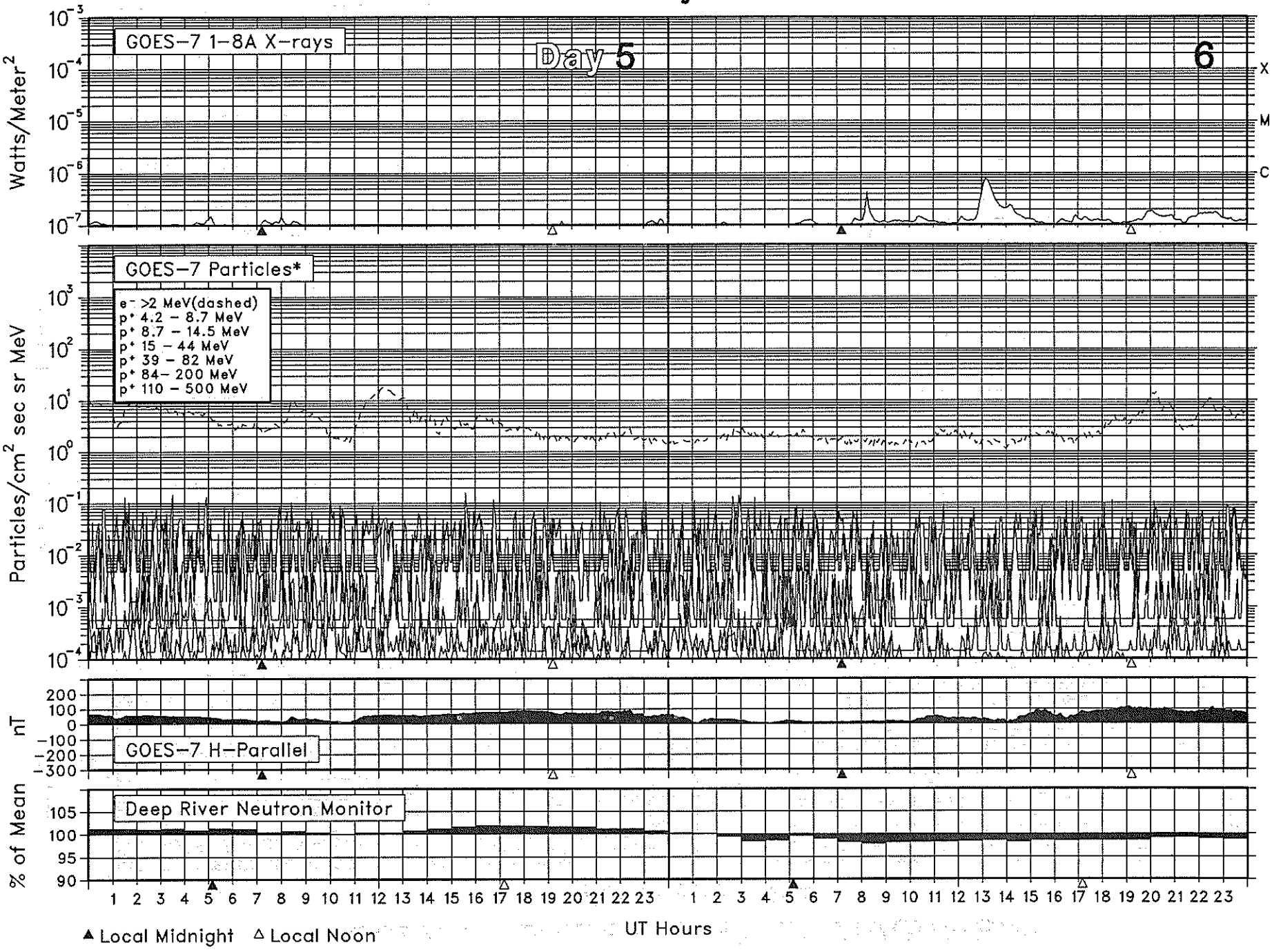
SOLAR-TERRESTRIAL ENVIRONMENT
February 1994



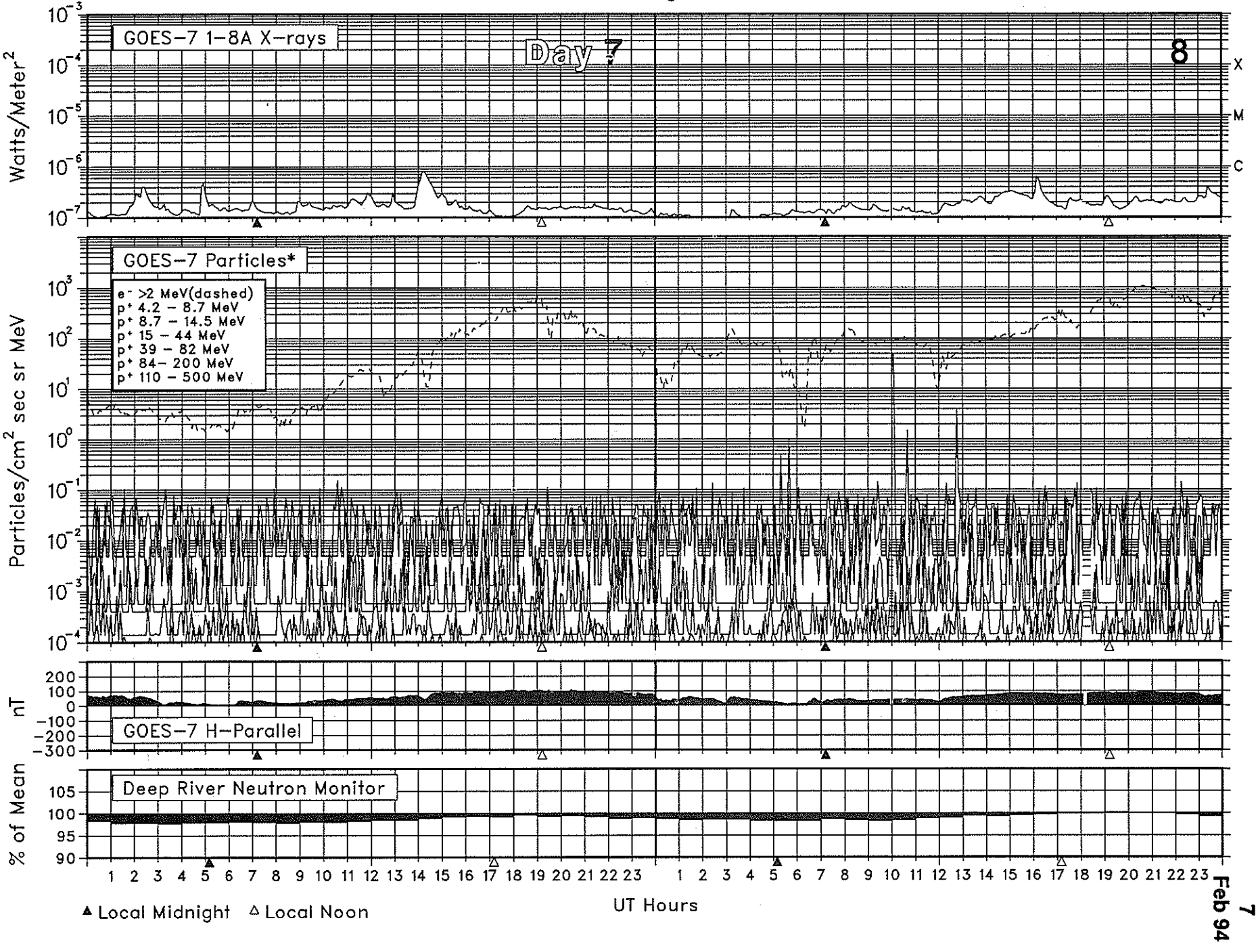
SOLAR-TERRESTRIAL ENVIRONMENT
February 1994



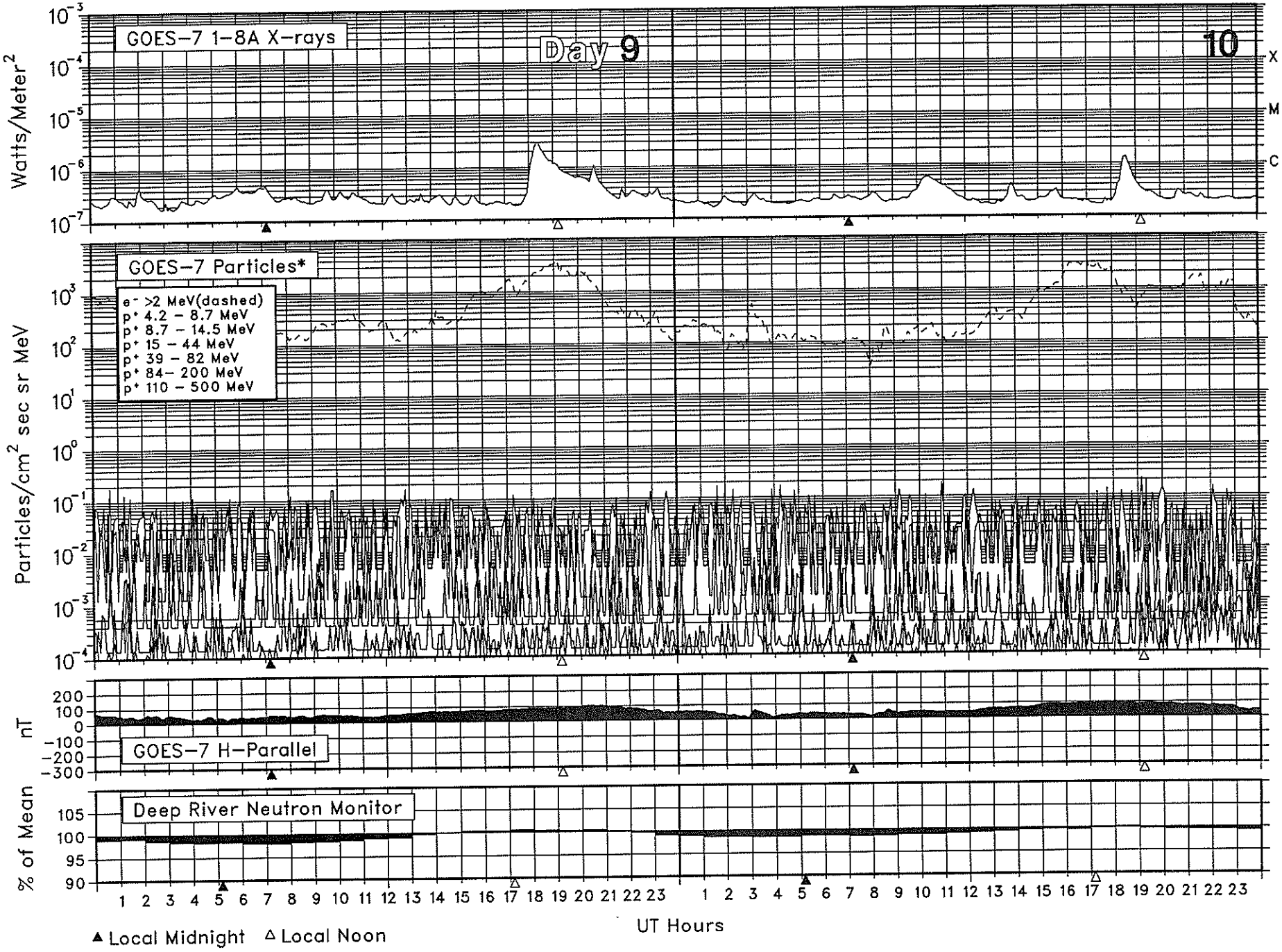
SOLAR-TERRESTRIAL ENVIRONMENT
February 1994



SOLAR-TERRESTRIAL ENVIRONMENT
February 1994

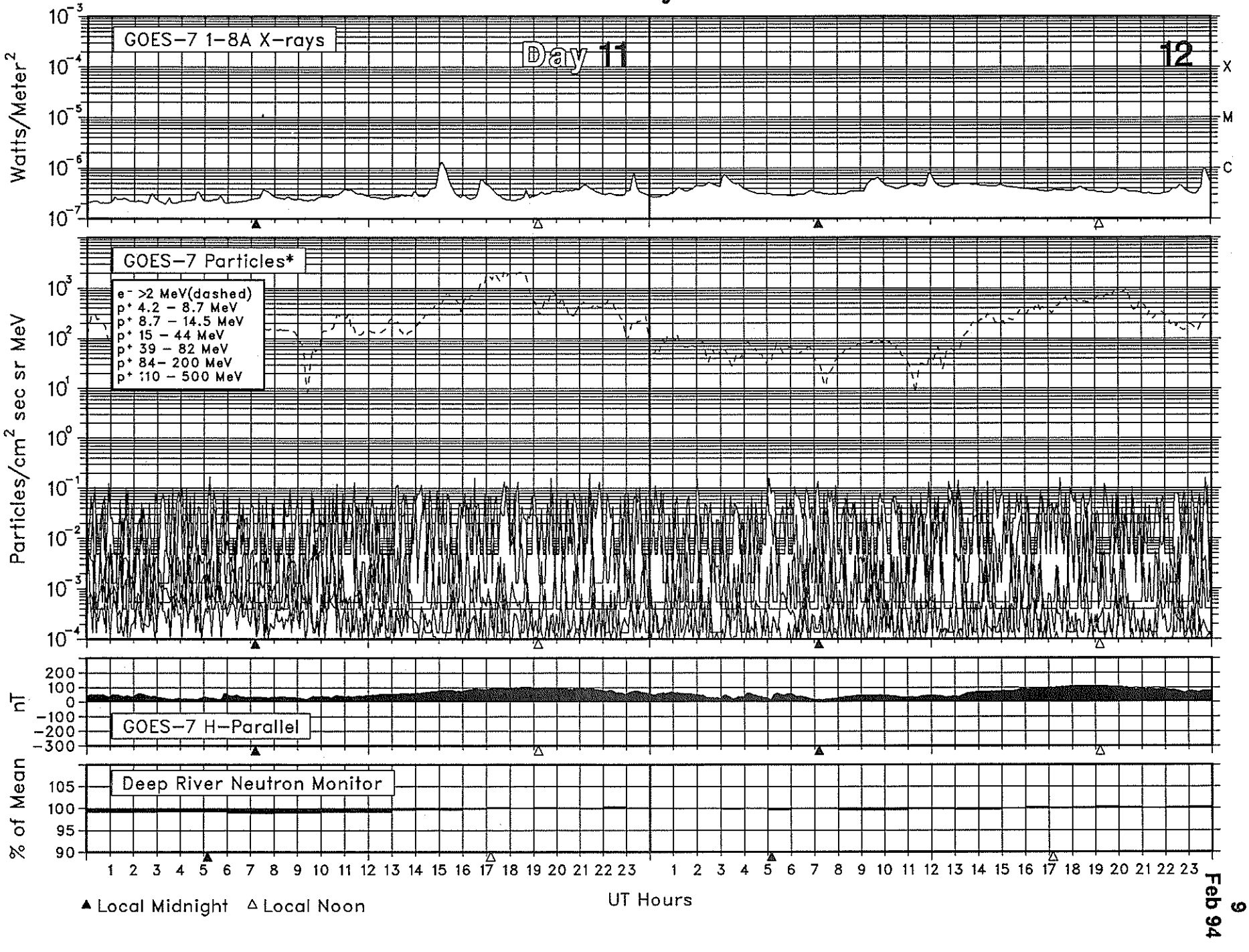


SOLAR-TERRESTRIAL ENVIRONMENT
February 1994



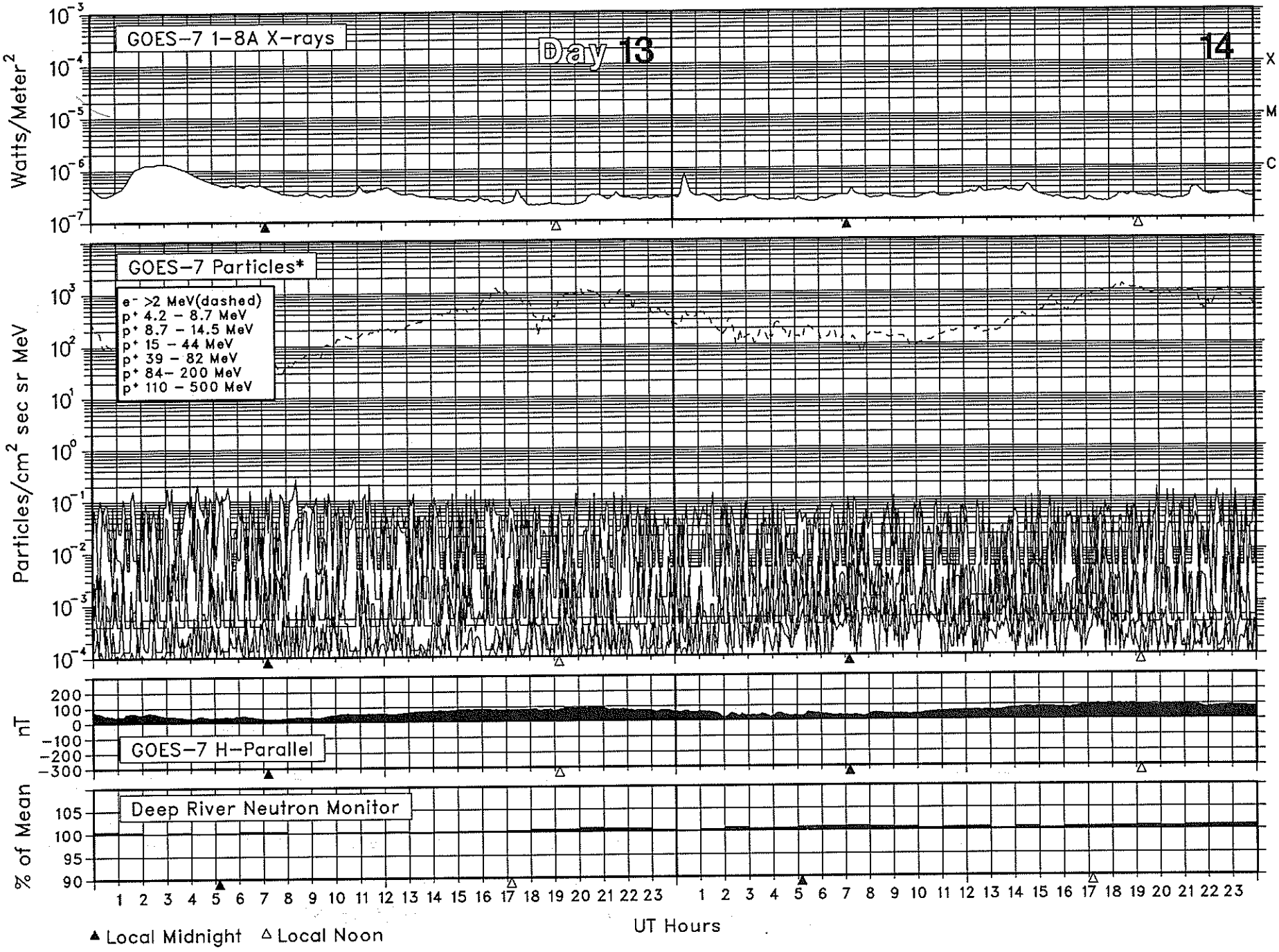
SOLAR-TERRESTRIAL ENVIRONMENT

February 1994

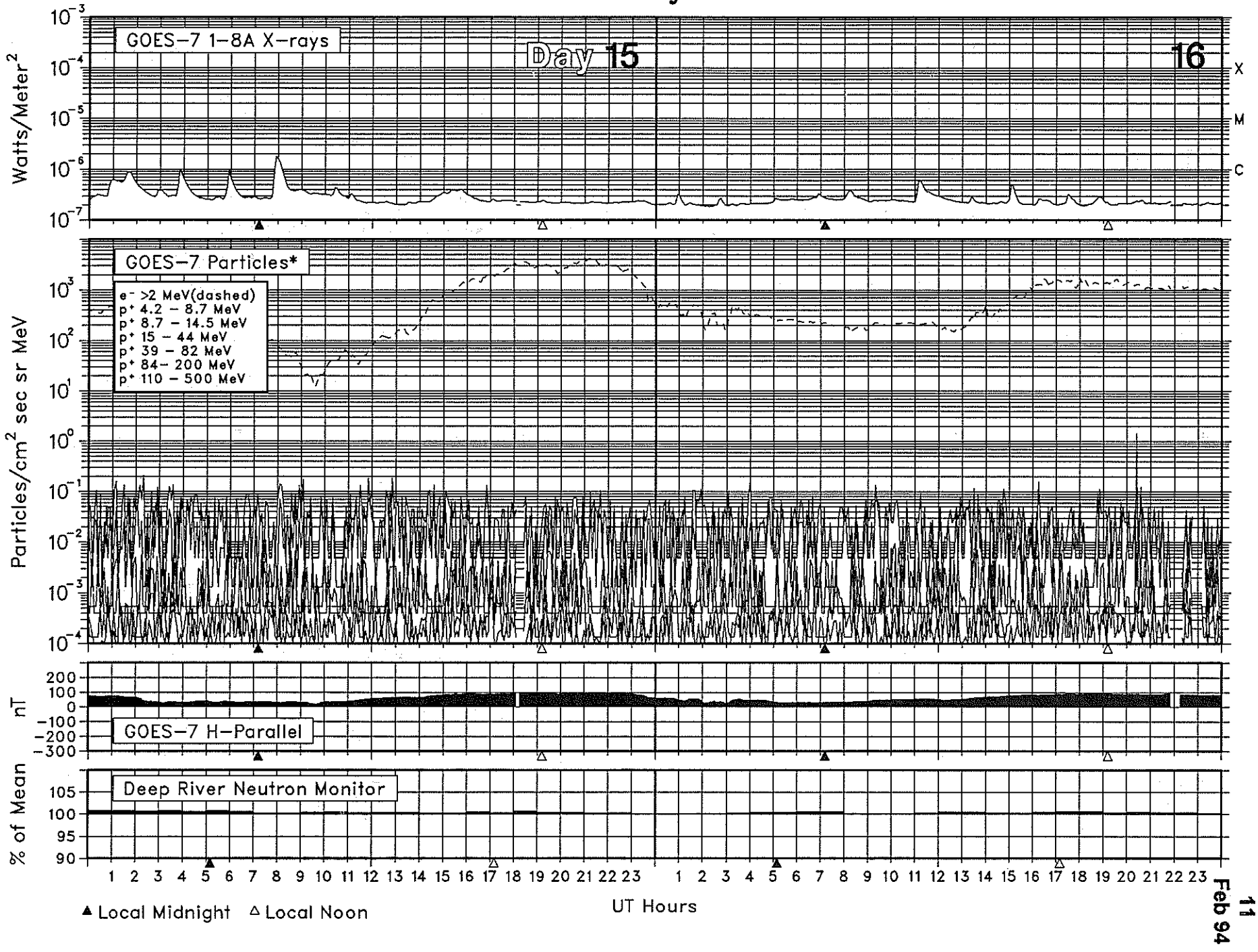


SOLAR-TERRESTRIAL ENVIRONMENT
February 1994

10 Feb 94

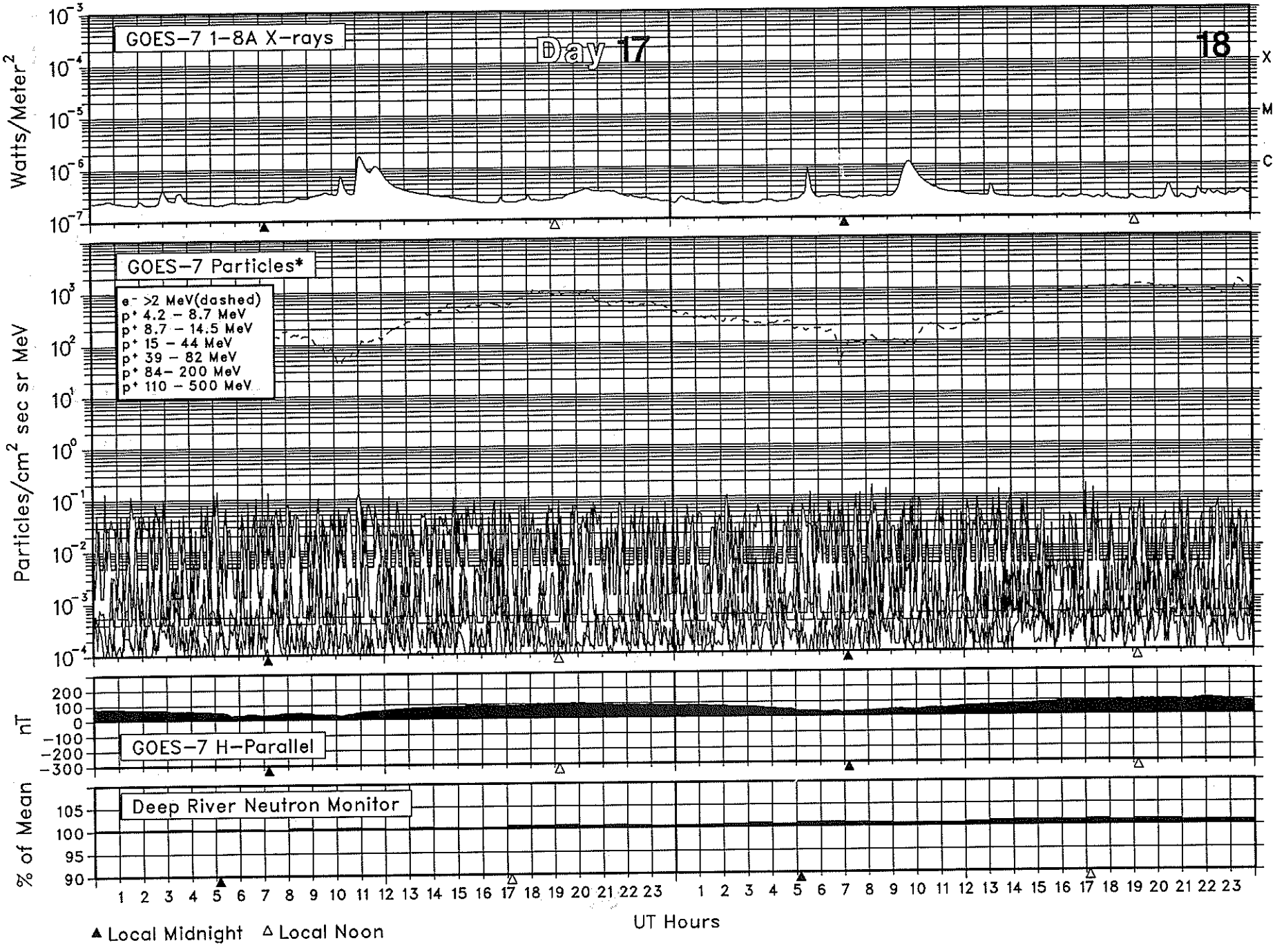


SOLAR-TERRESTRIAL ENVIRONMENT
February 1994

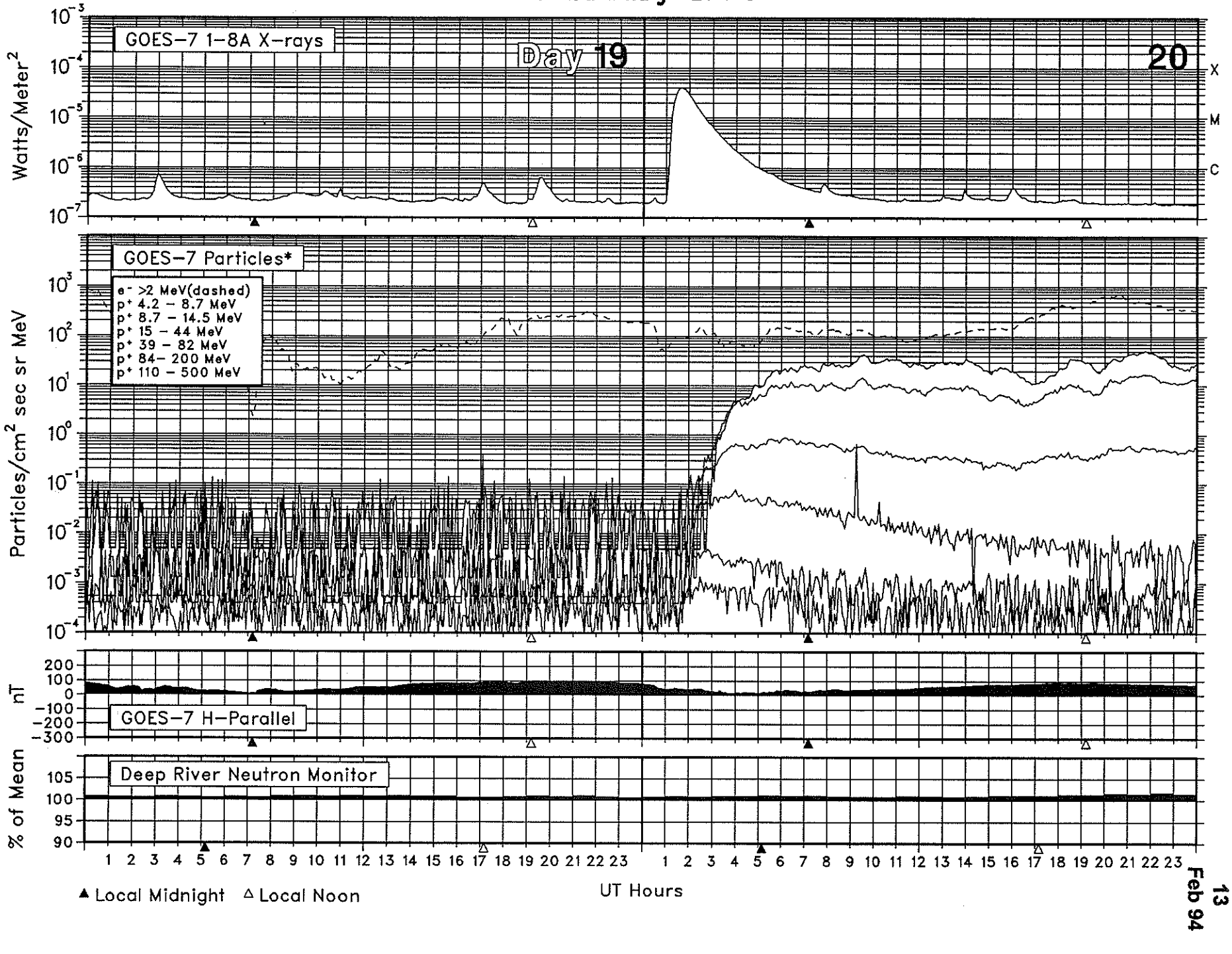


11 Feb 94

SOLAR-TERRESTRIAL ENVIRONMENT
February 1994

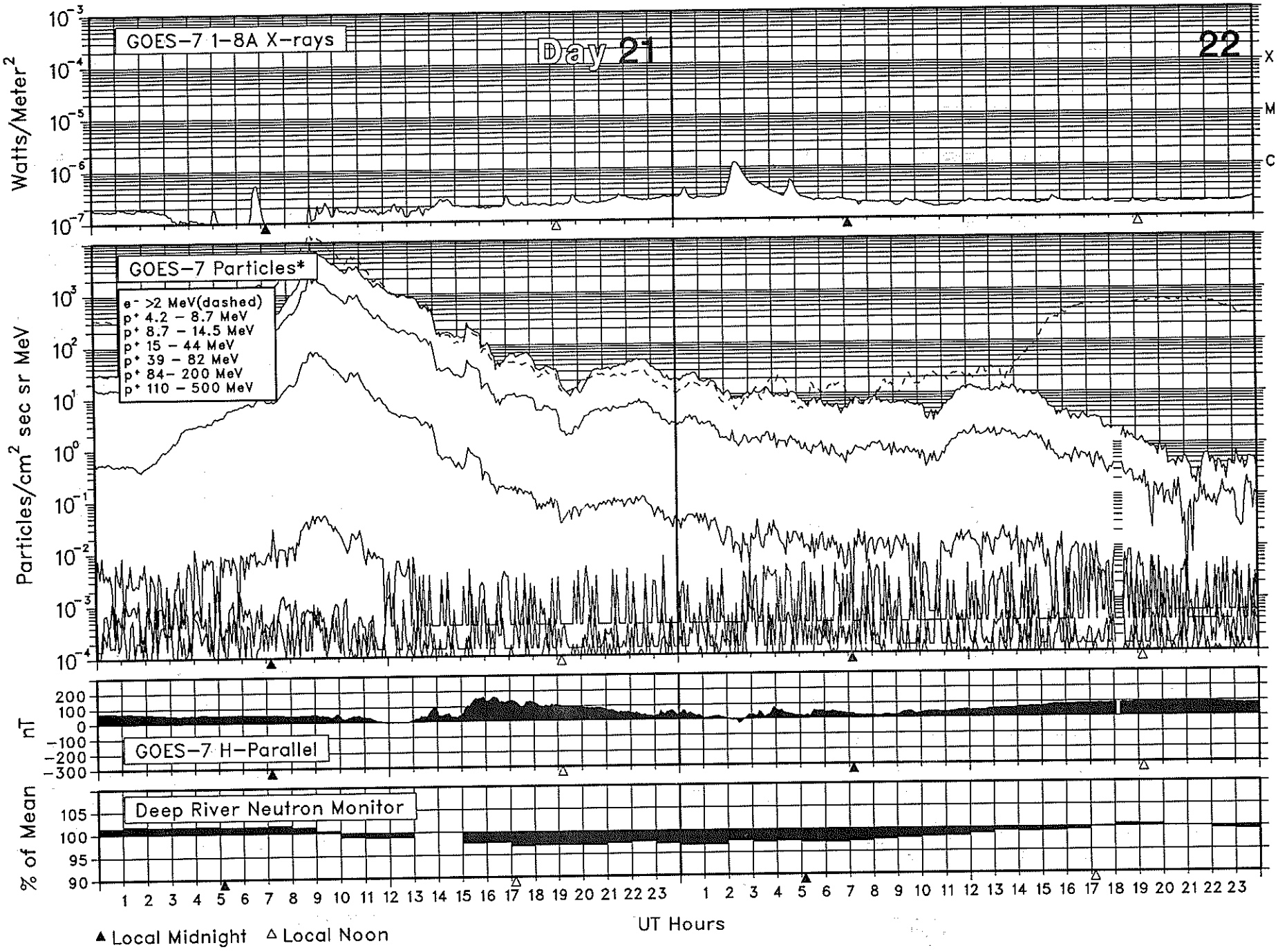


SOLAR-TERRESTRIAL ENVIRONMENT
February 1994

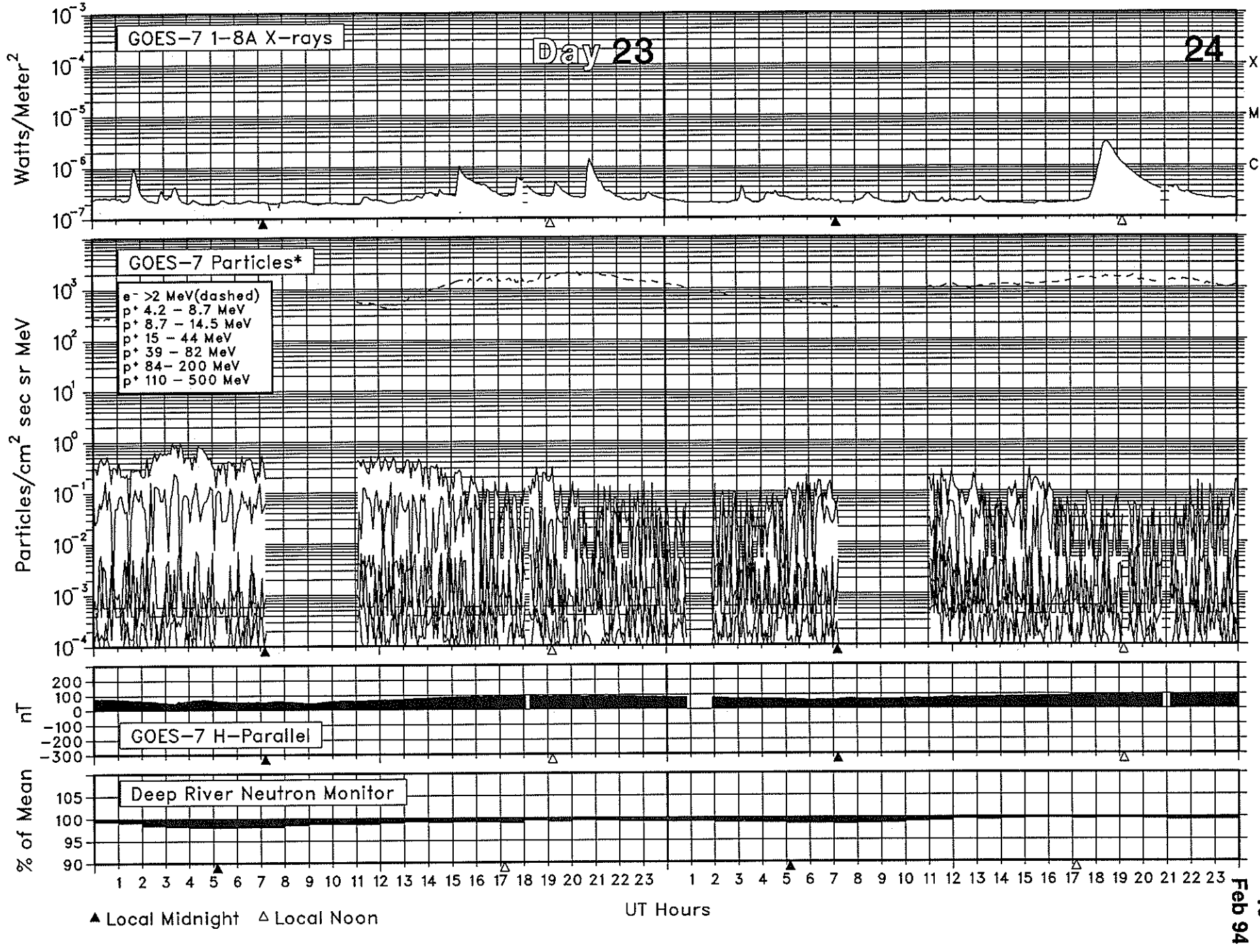


SOLAR-TERRESTRIAL ENVIRONMENT
February 1994

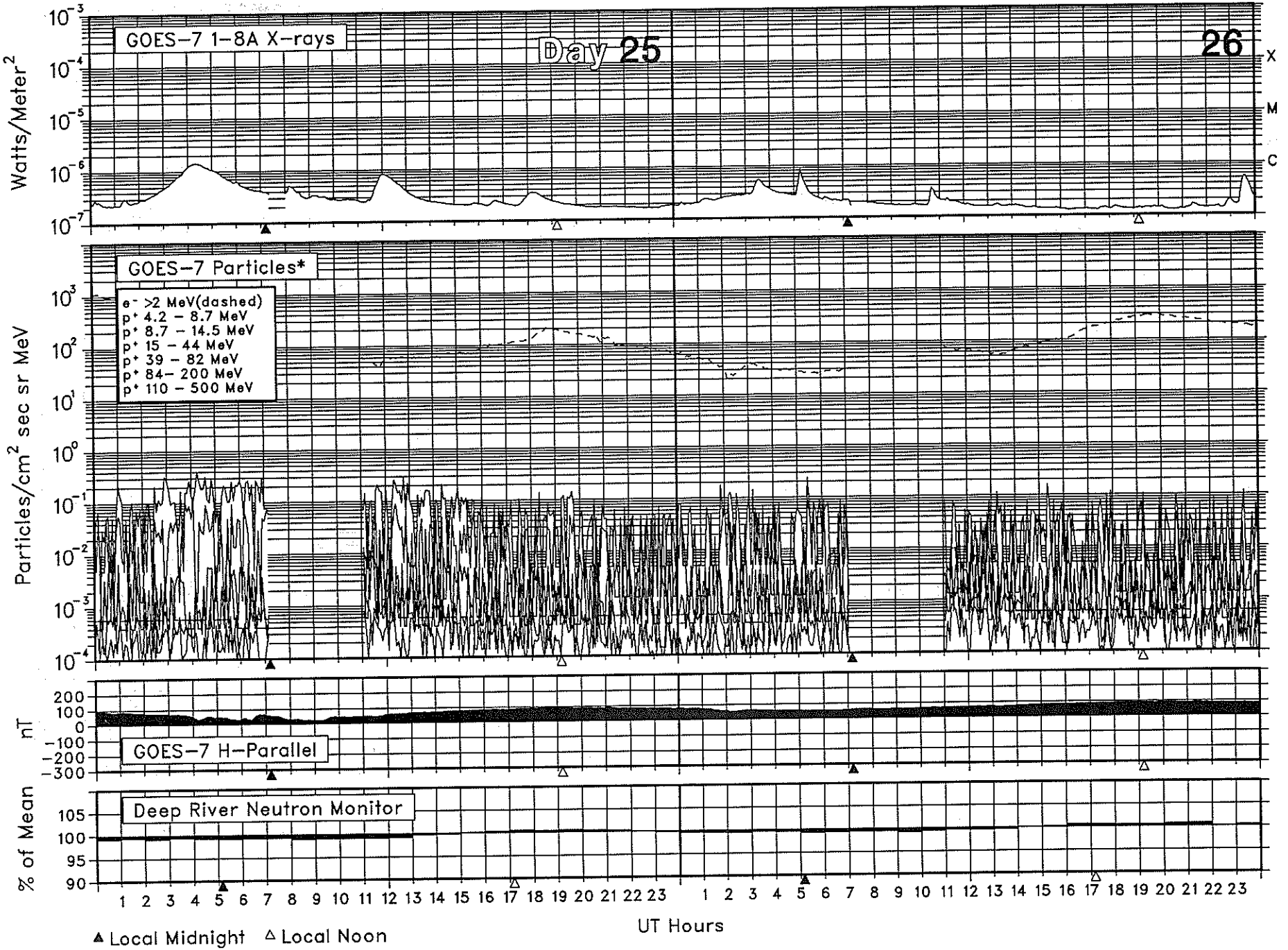
14 Feb 94



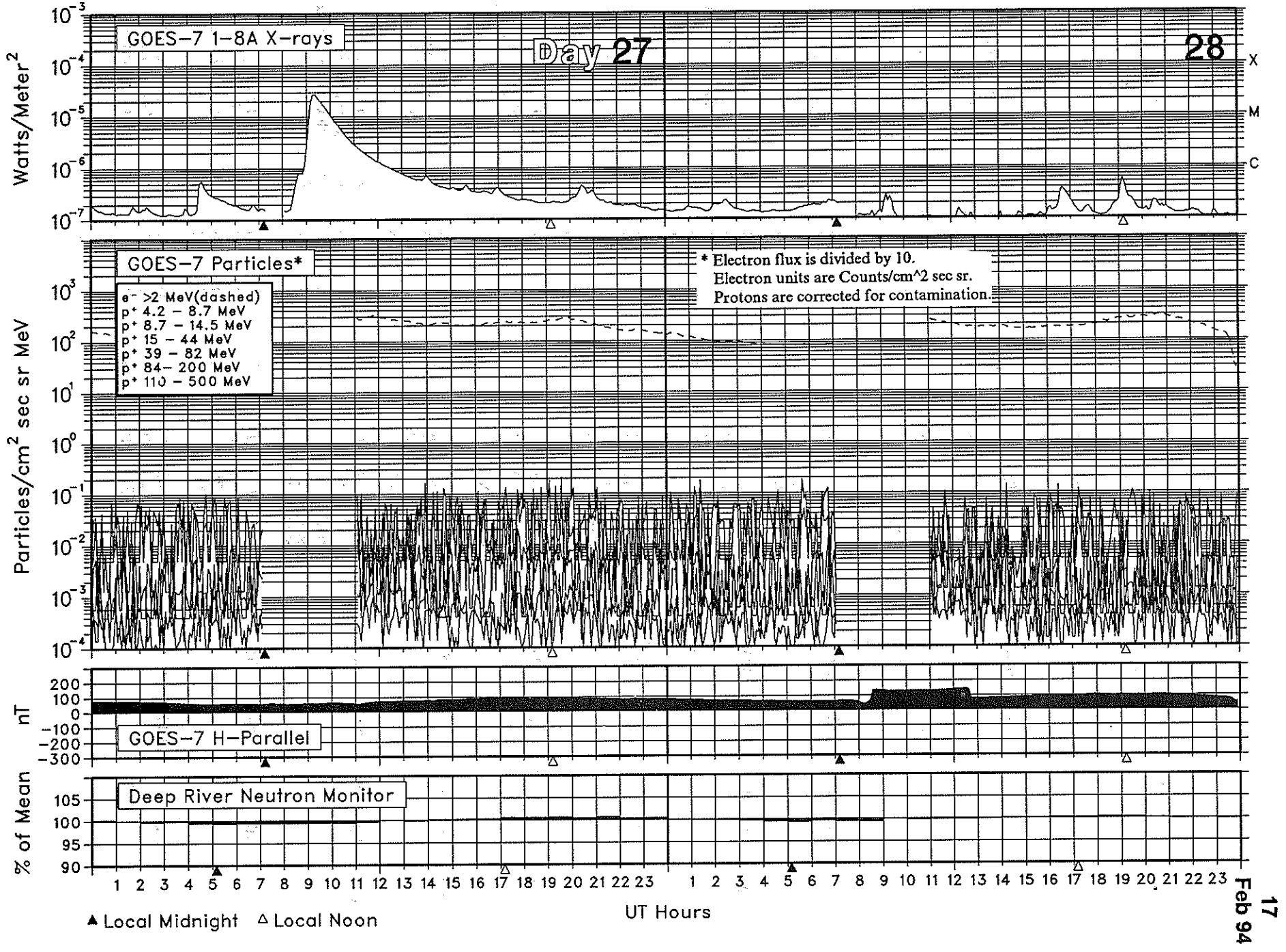
SOLAR-TERRESTRIAL ENVIRONMENT
February 1994



SOLAR-TERRESTRIAL ENVIRONMENT
February 1994



SOLAR-TERRESTRIAL ENVIRONMENT
February 1994



ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — FEBRUARY 1994

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat	Location °Long	Flares Total	Flares M	Flares X	Date of Forecast	Region Forecast [1]	Geoadvice[1]
032	01	31	081	098	5	S13	W71	0	0	0	01	Q	SOL: Quiet
						N10	W55	0	0	0	01	Q	MAG: Quiet
						S17	W04	0	0	0	01	Q	PROTON: Quiet
						N13	W07	0	0	0	01	Q	
						S13	E41	0	0	0	01	Q	
						N04	E53	0	0	0	01	Q	
033	02	01	055	094	6	S14	W85	0	0	0	02	Q	SOL: Quiet
						S17	W18	0	0	0	02	Q	MAG: Quiet
						N11	W23	0	0	0	02	Q	PROTON: Quiet
						N05	E39	0	0	0	02	Q	
034	03	02	052	096	12	S16	W32	0	0	0	03	Q	SOL: Quiet
						N12	W36	0	0	0	03	Q	MAG: Quiet
						N04	E25	0	0	0	03	Q	PROTON: Quiet
						N18	E63	0	0	0	03	Q	
035	04	03	062	098	7	S16	W47	0	0	0	04	Q	SOL: Quiet
						N12	W48	1	0	0	04	Q	MAG: Quiet
						N04	E13	0	0	0	04	Q	PROTON: Quiet
						N18	E51	4	0	0	04	E	
036	05	04	075	095	8	S17	W55	1	0	0	05	Q	SOL: Quiet
						N13	W63	0	0	0	05	Q	MAG: Quiet
						S12	W10	0	0	0	05	Q	PROTON: Quiet
						N04	W02	0	0	0	05	Q	
						N17	E36	0	0	0	05	Q	
037	06	05	076	093	20	N11	W74	0	0	0	06	Q	SOL: Quiet
						S12	W21	0	0	0	06	Q	MAG: Active
						N04	W15	0	0	0	06	Q	PROTON: Quiet
						N19	E23	0	0	0	06	Q	
						S07	E41	0	0	0	06	Q	
038	07	06	071	095	46	S11	W35	3	0	0	07	Q	SOL: Quiet
						N04	W28	0	0	0	07	Q	MAG: Minor
						N18	E12	0	0	0	07	Q	PROTON: Quiet
						S08	E30	0	0	0	07	Q	
039	08	07	072	096	49	S11	W28	2	0	0	08	E	SOL: Quiet
						N04	W24	0	0	0	08	Q	MAG: Minor
						N18	W08	0	0	0	08	Q	PROTON: Quiet
						S08	W04	0	0	0	08	Q	
040	09	08	085	095	50	S13	W63	0	0	0	09	Q	SOL: Eruptive
						N03	W56	0	0	0	09	Q	MAG: Minor
						N18	W15	0	0	0	09	Q	PROTON: Quiet
						S07	W02	0	0	0	09	Q	
						N08	E49	6	0	0	09	E	
041	10	09	064	101	34	S12	W75	1	0	0	10	E	SOL: Eruptive
						N03	W69	0	0	0	10	Q	MAG: Active
						N18	W28	1	0	0	10	Q	PROTON: Quiet
						N08	E35	3	0	0	10	E	
042	11	10	049	094	29	S13	W87	0	0	0	11	E	SOL: Eruptive
						N18	W42	0	0	0	11	Q	MAG: Active
						N09	E22	0	0	0	11	E	PROTON: Quiet

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — FEBRUARY 1994

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat °Long	Flares Total	Flares M	Flares X	Date of Forecast	Region Forecast [1]	Geoadvice[1]
043	12	11	049	093	36	N18 W56	1	0	0	12	E	SOL: Eruptive
						N09 E10	0	0	0	12	Q	MAG: Minor
						N05 E71	0	0	0	12	Q	PROTON: Quiet
044	13	12	053	098	29	N18 W70	0	0	0	13	Q	SOL: Eruptive
						N08 W04	1	0	0	13	E	MAG: Active
						N05 E58	0	0	0	13	Q	PROTON: Quiet
						N07 E74	0	0	0	13	Q	
045	14	13	072	098	24	N16 W83	0	0	0	14	Q	SOL: Eruptive
						N08 W17	0	0	0	14	E	MAG: Active
						N06 E44	0	0	0	14	Q	PROTON: Quiet
						N09 E60	0	0	0	14	Q	
						N11 E75	0	0	0	14	Q	
046	15	14	059	101	23	N09 W29	0	0	0	15	Q	SOL: Quiet
						N05 E32	0	0	0	15	Q	MAG: Active
						N08 E48	0	0	0	15	Q	PROTON: Quiet
						N10 E65	0	0	0	15	Q	
047	16	15	059	104	19	N08 W43	0	0	0	16	Q	SOL: Eruptive
						N06 E19	0	0	0	16	Q	MAG: Active
						N10 E37	2	0	0	16	E	PROTON: Quiet
						N10 E52	1	0	0	16	E	
048	17	16	071	105	14	N08 W55	1	0	0	17	Q	SOL: Eruptive
						N08 E17	0	0	0	17	Q	MAG: Active
						N10 E24	1	0	0	17	Q	PROTON: Quiet
						N10 E38	0	0	0	17	E	
						N03 E28	0	0	0	17	Q	
049	18	17	067	106	8	N06 W66	0	0	0	18	Q	SOL: Eruptive
						N10 E03	0	0	0	18	Q	MAG: Active
						N12 E12	1	0	0	18	Q	PROTON: Quiet
						N13 E26	0	0	0	18	E	
						N07 W49	0	0	0	18	Q	
050	19	18	077	106	5	N10 W82	0	0	0	19	Q	SOL: Eruptive
						N08 W08	0	0	0	19	Q	MAG: Quiet
						N10 W00	0	0	0	19	Q	PROTON: Quiet
						N11 E14	2	0	0	19	E	
						N08 W65	0	0	0	19	Q	
051	20	19	054	108	16	N09 W11	0	0	0	20	Q	SOL: Eruptive
						N11 W00	0	0	0	20	E	MAG: Quiet
						N08 W78	0	0	0	20	Q	PROTON: Quiet
						S14 E24	0	0	0	20	Q	
052	21	20	033	108	14	N11 W14	2	1	0	21	E	SOL: Eruptive
						S14 E09	0	0	0	21	Q	MAG: Quiet
						N08 W78	0	0	0	21	Q	PROTON: In Progress
053	22	21	017	105	42	N10 W28	0	0	0	22	E	SOL: Eruptive
						S14 E09	0	0	0	22	Q	MAG: Magstorm
						N08 W78	0	0	0	22	Q	PROTON: In Progress

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — FEBRUARY 1994

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat °Long	Flares Total	Flares M	Flares X	Date of Forecast	Region Forecast [1]	Geoadvice[1]
054	23	22	068	107	59	N10 W42	0	0	0	23	E	SOL: Eruptive
						S12 E41	0	0	0	23	Q	MAG: Minor
						N09 E50	0	0	0	23	Q	PROTON: No Fcst
						N20 W12	0	0	0	23	Q	
055	24	23	047	107	7	N11 W55	0	0	0	24	Q	SOL: Eruptive
						S12 E28	0	0	0	24	Q	MAG: Active
						N08 E40	0	0	0	24	Q	PROTON: Quiet
056	25	24	058	105	4	N10 W68	0	0	0	25	E	SOL: Eruptive
						S11 E17	0	0	0	25	Q	MAG: Quiet
						N08 E27	0	0	0	25	Q	PROTON: Quiet
						S14 E74	0	0	0	25	Q	
057	26	25	053	097	11	N11 W82	0	0	0	26	E	SOL: Eruptive
						S11 E03	0	0	0	26	Q	MAG: Quiet
						S15 E62	0	0	0	26	Q	PROTON: Quiet
						N02 E25	0	0	0	26	Q	
058	27	26	063	094	3	S11 W13	1	0	0	27	Q	SOL: Eruptive
						S14 E48	0	0	0	27	Q	MAG: Quiet
						N03 E10	0	0	0	27	Q	PROTON: Quiet
						S13 E75	0	0	0	27	Q	
						S14 W05	0	0	0	27	Q	
059	28	27	069	095	6	N11 W73	0	0	0	28	Q	SOL: Eruptive
						S14 E35	0	0	0	28	Q	MAG: Quiet
						N03 W03	0	0	0	28	Q	PROTON: Quiet
						S12 E66	1	0	0	28	E	
						S13 W18	0	0	0	28	Q	

[1] **Region Forecast and Flare Geoadvice**

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, probabiljty >=50%)
P =Proton (Proton flares exptected, probability >=50%)
Warning condition (activity levels expected to increase, but no numeric forecast given)
Nil (end of Alert period)
No forecast

Magnetic Geoadvice

Quiet
Active conditions expected (A>=20 or K=4)
Minor storm expected (A>=30 or K=5)
Major magstorm expected (A>=50 or K>=6)
Severe magstorm expected (A>=100 or K>=7)
Magstorm in progress (A>=30 or K>=4)
Warning condition (activity levels expected to increase, but no numeric forecast given)
Nil (end of Alert period)
No forecast

Proton Geoadvice

Quiet
Proton event expected (10 pfu at >10 MeV)
Major proton event expected (100 pfu at >100 MeV)
Proton event in progress (>10 MeV)
Warning condition (activity levels expected to increase, but no numeric forecast given)
Nil (end of Alert period)
No forecast

STRATWARM ALERTS

02/11/94 03:30:00
GEOALERT WWA042 STRATWARM ALERT/THU/STRATWARM EXISTS.
INTENSE WARMING EXISTS OVER THE EASTERN COAST OF CANADA/U.S.
AND THE NORTHERN ATLANTIC WITH TEMPERATURE INCREASE OF MORE
THAN 30DGSC SINCE ONE WEEK OVER SOUTHERN GREENLAND AND THE
LABRADOR SEA AT 10HPA.WARM AIR SPREADING NORTH-AND
NORTHEASTWARDS.

02/12/94 03:30:00
GEOALERT WWA043 STRATWARM ALERT/FRI/STRATWARM EXISTS.
INTENSE WARMING EXISTS FROM THE LABRADOR SEA ACROSS
SOUTHERN GREENLAND AND THE NORTHATLANTIC TO EUROPE
WITH TEMPERATURE INCREASE AROUND 30DGSC SINCE A WEEK
AT 10HPA OVER NORTHERN SCANDINAVIA. WARM AIR SLIGHTLY
SPREADING NORTH-AND NORTHEASTWARDS.

STRATWARM ALERTS – continued

02/13/94 03:30:00
GEOALERT WWA044 STRATWARM ALERT/SAT/STRATWARM EXISTS.
INTENSE WARMING OVER THE NORTH ATLANTIC,SOUTHERN
GREENLAND AND EUROPE CONTINUES.A STRONG ANTICYCLONE
EXISTS OVER EUROPE,THE CENTRE OF THE POLAR VORTEX
AND COLDEST AIR OVER NORTHERN CANADA AT 10HPA.

02/14/94 03:30:00
GEOALERT WWA045 STRATWARM ALERT/SUN/STRATWARM EXISTS.
INTENSE WARMING AND A STRONG ANTICYCLONE
OVER THE NORTH ATLANTIC AND EUROPE CONTINUES.
WARM AIR SLOWLY SPREADING EASTWARDS.

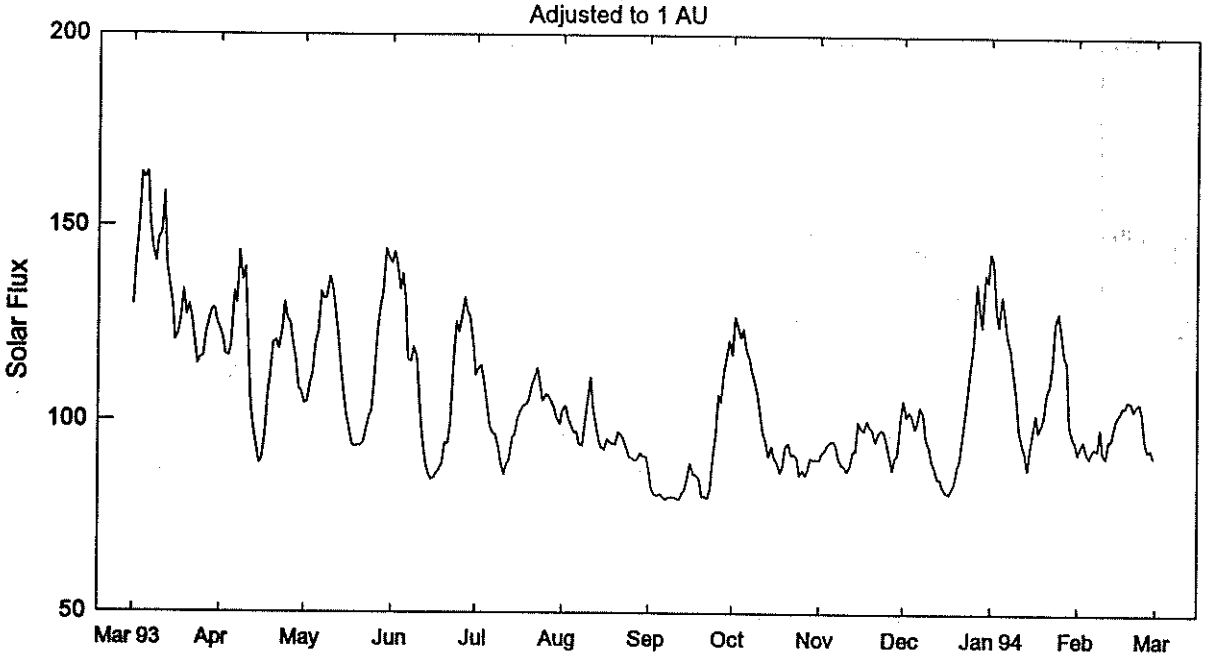
02/15/94 03:30:00
GEOALERT WWA046 STRATWARM ALERT/MON/STRATWARM EXISTS.
INTENSE WARMING AND A STRONG ANTICYCLONE
OVER THE NORTH ATLANTIC AND EUROPE CONTINUES.
WARM AIR SPREADING EASTWARDS.

02/16/94 03:30:00
GEOALERT WWA047 STRATWARM ALERT/TUE/STRATWARM EXISTS.

02/17/94 03:30:00
GEOALERT WWA048 STRATWARM ALERT/WED/STRATWARM EXISTS.
MINOR WARMING OVER THE NORTHERN ATLANTIC AND EUROPE
CONTINUES, WARM AIR SPREADING NORTHEAST- AND EASTWARDS.

Penticton 2800 MHz (10.7cm) Solar Flux
Mar 1993 - Feb 1994

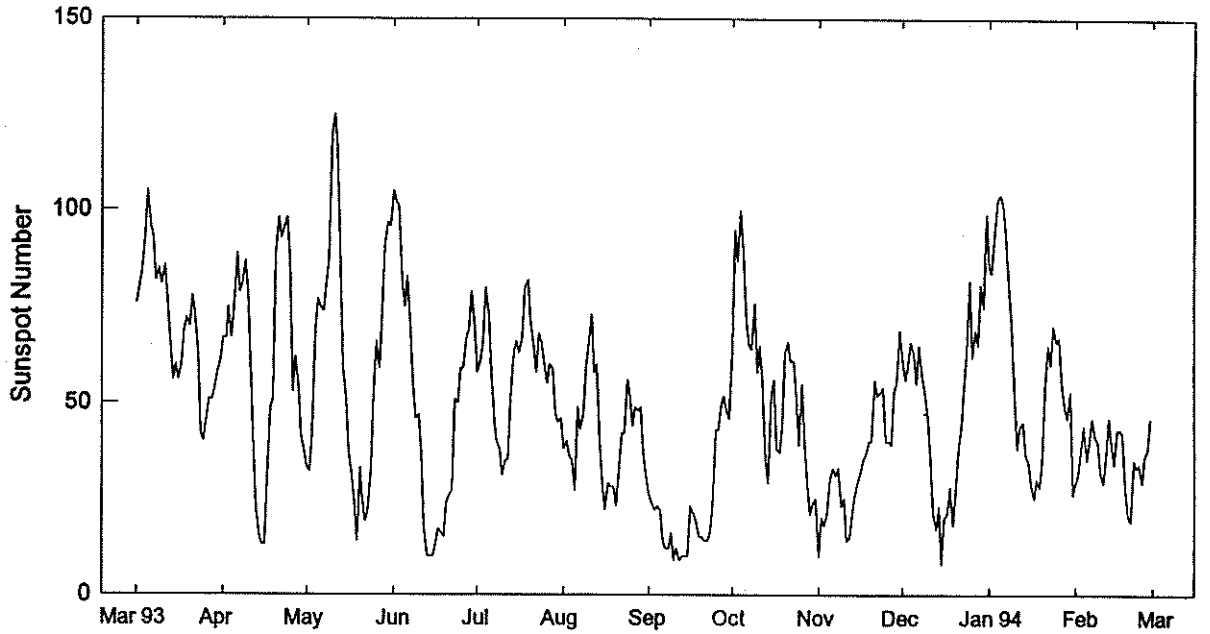
Adjusted to 1 AU



Day	Mar 93	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 94	Feb
1	129.6	123.5	104.2	140.4	111.8	102.8	87.1	117.1	90.0	105.6	143.4	91.7
2	141.0	120.7	104.7	143.4	113.6	103.7	82.6	126.9	91.8	101.3	141.4	93.5
3	148.6	117.0	108.9	140.4	114.2	100.8	80.9	124.8	92.4	102.6	128.7	95.1
4	163.8	116.4	112.4	133.7	110.1	98.9	80.5	121.5	94.1	101.6	124.6	92.7
5	162.5	118.9	120.0	137.7	103.9	97.0	81.0	123.7	94.8	98.3	132.4	90.6
6	164.0	133.1	122.2	131.3	98.4	97.1	80.2	118.0	94.9	99.9	127.7	92.2
7	150.9	130.0	133.0	115.7	96.5	93.8	79.6	116.6	93.5	103.8	122.1	93.3
8	144.3	143.5	131.2	115.2	96.4	93.4	80.2	113.1	90.2	101.9	118.9	92.6
9	140.6	136.0	131.5	118.9	93.2	99.1	80.1	110.1	88.7	95.4	113.1	98.3
10	146.7	139.2	136.8	116.0	89.0	104.5	80.1	107.1	88.2	93.2	106.5	91.8
11	148.0	119.4	134.7	104.9	85.8	111.2	79.8	102.3	87.0	89.7	97.8	90.7
12	158.7	103.7	129.0	96.2	88.7	103.2	79.5	97.3	88.9	88.1	94.6	95.1
13	139.9	97.7	122.4	89.4	89.5	99.2	81.1	94.5	92.2	85.1	91.9	95.4
14	134.2	92.8	114.6	86.4	95.7	94.6	82.6	90.8	92.3	85.1	87.3	98.9
15	129.7	88.8	106.7	84.6	96.3	92.8	85.6	93.5	99.9	82.8	92.6	101.3
16	120.5	90.0	101.1	85.0	100.3	92.4	89.0	90.3	98.2	81.9	97.0	102.3
17	122.4	96.5	98.4	86.1	102.6	95.1	85.9	89.4	97.7	81.1	102.0	103.9
18	126.2	106.6	93.5	87.4	103.7	94.3	86.0	86.7	100.2	82.4	97.5	103.9
19	133.4	111.9	93.1	88.8	104.1	93.9	85.0	88.1	98.7	84.2	99.5	105.6
20	127.0	119.9	93.4	94.1	105.6	93.8	80.3	93.5	98.0	88.1	101.6	105.2
21	129.7	120.5	93.3	94.0	108.9	97.0	80.6	94.2	94.8	89.9	107.3	103.1
22	126.6	118.4	94.1	99.8	111.2	96.2	79.8	91.3	96.8	96.6	109.5	104.4
23	120.1	122.9	97.3	113.1	113.3	94.8	82.0+	91.4	97.9	101.6	114.6	105.1
24	114.4	130.3	100.9	125.4	109.8	92.5	90.0+	90.6	97.5	107.5	125.1	102.9
25	116.0	126.2	102.4	122.6	105.1	90.6	96.5	86.0	94.7	115.2	128.1	94.8
26	116.4	125.0	110.4	126.0	106.8	90.2	106.8	87.4	90.8	120.5	123.9	92.6
27	122.4	119.6	122.7	131.7	106.4	89.4	104.9	86.0	87.3	135.8	116.8	93.0
28	125.8	115.2	129.2	127.8	104.6	90.2	111.7	87.3	90.7	129.2	115.7	90.8
29	128.3	108.1	132.5	126.7	103.5	91.7	116.8	90.5	91.2	124.4	98.9	
30	128.7	107.4	144.1	120.3	100.8	90.7	120.9	90.0	100.8	138.0	96.1	
31	124.9		142.1		99.1	90.6		90.1		136.2	94.7	
Mean	135.0	116.7	114.9	112.8	102.2	96.0	87.9	99.7	93.8	101.5	111.3	97.2

+ = suspect values due to software problems.

International Relative Sunspot Numbers
Mar 1993 - Feb 1994



Day	Mar 93	Apr	May	Jun	Jul	Aug	Sep	Oct*	Nov*	Dec*	Jan 94*	Feb*
1	76	67	33	105	58	38	26	64	10	62	86	29
2	80	67	32	102	61	40	24	95	20	56	84	31
3	84	75	42	101	66	36	22	87	18	60	95	38
4	93	67	69	82	80	35	23	100	21	66	103	44
5	105	75	77	75	73	27	22	90	30	63	104	35
6	96	89	75	83	58	49	14	71	33	55	101	40
7	93	79	74	72	45	43	12	65	31	65	94	46
8	82	81	81	55	40	47	12	64	33	57	81	41
9	85	87	87	46	38	59	16	76	23	53	71	40
10	81	79	120	47	31	65	9	58	25	46	51	32
11	86	56	125	37	35	73	12	65	14	35	38	29
12	77	37	116	18	35	58	9	56	15	21	44	36
13	67	22	85	10	51	60	10	35	21	17	45	46
14	56	15	59	10	63	39	10	29	26	23	36	39
15	60	13	51	10	66	29	10	52	29	8	35	34
16	56	13	37	13	63	22	23	56	32	20	29	43
17	60	34	32	17	67	29	21	38	35	21	25	43
18	69	49	24	16	80	28	19	37	37	28	30	42
19	72	51	14	15	82	28	15	44	40	18	28	28
20	70	89	33	24	71	23	15	63	40	27	35	20
21	78	98	25	26	66	31	14	66	56	37	53	19
22	73	93	19	27	58	42	14	61	52	44	65	35
23	63	96	22	51	68	42	16	61	53	54	60	33
24	42	98	33	50	66	56	23	52	54	63	70	34
25	40	88	53	59	61	53	43	39	40	82	66	29
26	46	53	66	59	55	44	43	55	40	62	67	36
27	51	62	59	67	60	49	49	39	39	69	54	38
28	51	54	74	69	59	48	52	29	53	65	49	46
29	54	41	91	79	47	49	48	21	55	81	46	
30	58	38	97	70	45	37	46	24	69	75	53	
31	61		96		46	30		25		99	26	
Mean	69.8	62.2	61.3	49.8	57.9	42.2	22.4	55.4	34.8	49.4	58.8	35.9

* = Provisional. The provisional yearly mean sunspot number equals 54.6 for 1993.

DAILY SOLAR INDICES

February 1994

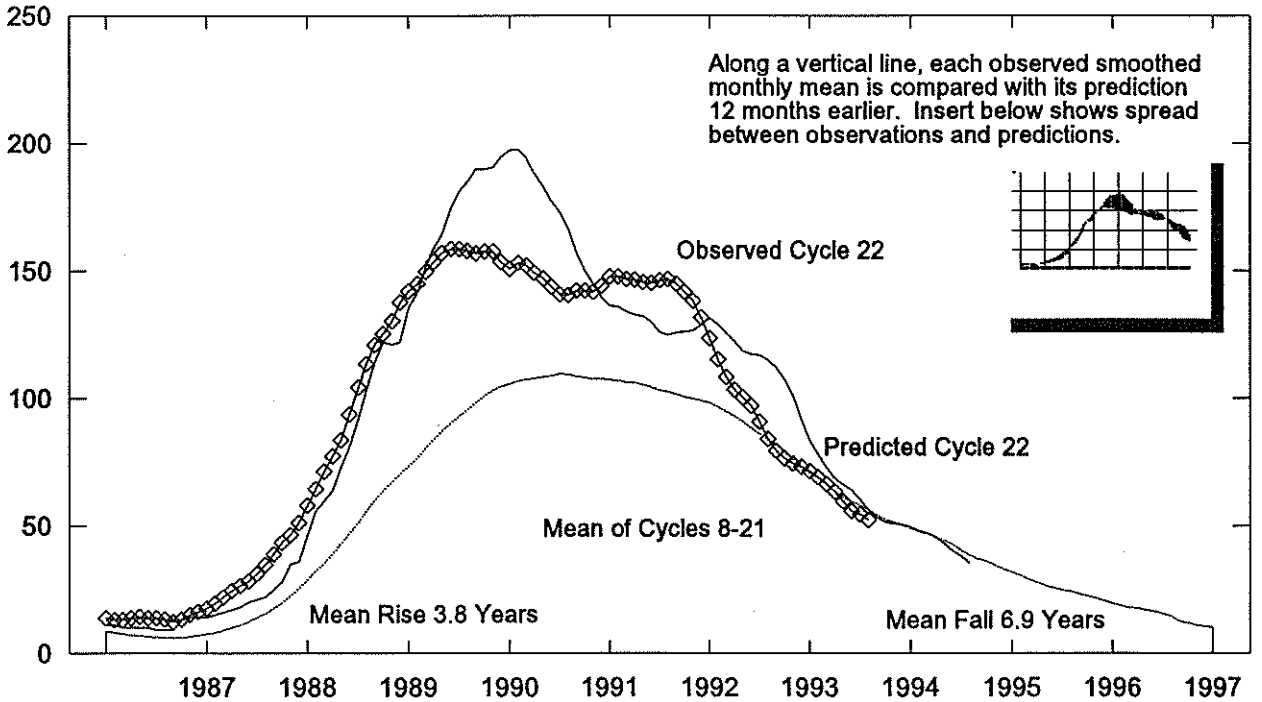
Day	Day of Year	Bartels Cycle Day	Sunspot Numbers Int	Amer	Obs Flux Penticton (2800)	Solar Flux Adjusted to 1 Astronomical Unit — LEAR (15400)	LEAR (8800)	LEAR (4995)	Pentic (2800)	LEAR (2695)	LEAR (1415)	LEAR (610)	LEAR (410)	LEAR (245)
1	32	7	29	33	94.4	531	249	142	91.7	92	65	51	28	11
2	33	8	31	40	96.3	599	253	141	93.5	91	64	51	33	11
3	34	9	38	43	97.9	538	249	139	95.1	89	63	49	28	11
4	35	10	44	48	95.3	543	248	141	92.7	89	62	48	26	10
5	36	11	35	47	93.1	546	245	140	90.6	89	61	48	26	12
6	37	12	40	44	94.8	534	243	137	92.2	86	60	47	27	11
7	38	13	46	49	95.9	532	240	139	93.3	87	60	47	27	12
8	39	14	41	54	95.1	540	231	135	92.6	90	58	46	26	13
9	40	15	40	48	101.0	545	252	143	98.3	91	58	45	26	12
10	41	16	32	38	94.2	544	254	145	91.8	93	59	47	29	13
11	42	17	29	32	93.1	538	225	136	90.7	88	58	44	25	11
12	43	18	36	39	97.6	552	221	134	95.1	89	58	44	30	25
13	44	19	46	49	97.8	519	258	146	95.4	94	63	46	29	--
14	45	20	39	44	101.4	535	246	142	98.9	92	64	47	27	13
15	46	21	34	36	103.8	558	256	148	101.3	99	66	47	26	11
16	47	22	43	41	104.7	527	266	149	102.3	101	68	48	28	13
17	48	23	43	45	106.4	506	238	145	103.9	102	70	51	28	12
18	49	24	42	43	106.3	532	263	149	103.9	101	71	52	28	12
19	50	25	28	33	108.0	541	241	146	105.6	99	72	53	30	13
20	51	26	20	21	107.6	539	220	160	105.2	128	88	53	34	--
21	52	27	19	17	105.4	494	250	147	103.1	101	73	47	24	10
22	53	1	35	40	106.7	--	223	142	104.4	105	73	--	--	--
23	54	2	33	41	107.4	--	--	--	105.1	--	--	--	--	--
24	55	3	34	40	105.0	535	253	147	102.9	101	70	30	16	8
25	56	4	29	37	96.7	531	264	149	94.8	99	70	31	17	15
26	57	5	36	37	94.4	527	253	141	92.6	90	65	28	16	8
27	58	6	38	46	94.8	533	253	138	93.0	87	62	--	--	9
28	59	7	46	47	92.5	517	254	139	90.8	87	62	--	--	9
MEAN			35.9	40.4	99.6	536	246	142	97.2	94	65	45	26	11

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

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

Equipment problems produced any gaps in the Air Weather Service's Learmonth (LEAR) observations.

Cycle 22 Smoothed Sunspot Numbers: Observed and Predicted



Smoothed Sunspot Numbers (Observed and Predicted) for Parts of Solar Cycles 21 and 22

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1987	18	20	22	24	26	28	31	35	39	44	47	51	32
1988	58	65	71	78	84	94	104	114	121	125	130	138	99
1989	142	145	150	154	157	158	158	158	157	157	158	154	154
1990	151	153	152	149	147	144	141	140	142	142	142	144	146
1991	148	148	147	146	146	145	146	147	145	142	138	132	144
1992	124	115	108	103	100	97	91	84	80	76	74	73	94
1993	71	69	67	63	60	56	55	52	50	49	48	46	57
( )									(4)	(7)	(9)	(10)	(8)
1994	45	43	43	41	40	39	37	35	34	33	32	30	38
( )	(11)	(12)	(13)	(14)	(15)	(16)	(18)	(19)	(20)	(21)	(22)	(22)	(17)
1995	29	29	27	26	25	24	23	22	22	21	20	19	24
( )	(22)	(23)	(23)	(23)	(24)	(22)	(22)	(22)	(21)	(20)	(19)	(19)	(22)

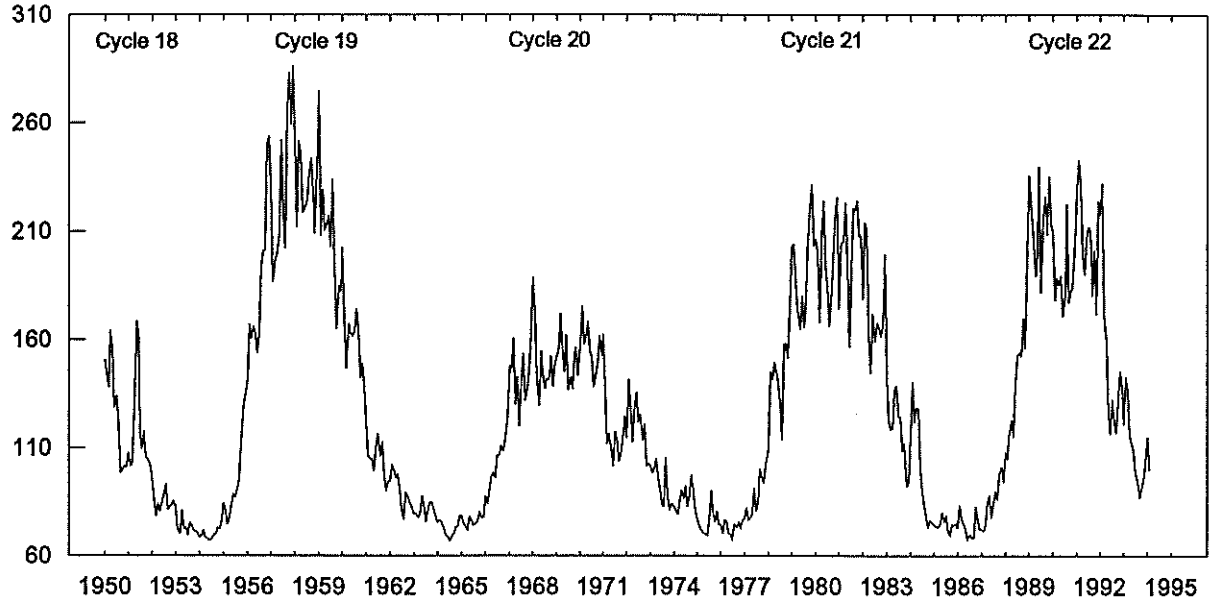
Solar Cycle 22 — Min, Max, and Predictions

September 1986 marks the minimum of Solar Cycle 21 and the onset of Cycle 22, which in turn, reached a maximum in July 1989.

Observed and Predicted Numbers. For the end of Cycle 21, and the rise and decline of Cycle 22, 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 Sep 1993 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 Aug 1994 prediction. There exists a 90% chance that in Aug 1994, the actual smoothed number will fall somewhere between 16 and 54.

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 14 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 minimum value of 12.3 that occurred in Sep 1986.

Monthly Mean 2800 MHz Solar Flux (Observed)
Jan 1950 - Feb 1994



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	150.7	143.3	137.8	164.3	157.1	128.7	134.1	120.9	98.6	99.9	101.9	101.1	128.2
1951	107.9	101.9	102.5	127.1	168.6	161.7	116.3	109.8	117.8	106.0	104.4	102.4	118.9
1952	95.4	86.2	78.5	84.0	80.9	84.8	88.8	93.3	81.5	82.8	83.4	85.7	85.4
1953	83.2	72.8	70.4	81.0	72.5	73.0	69.8	75.5	74.3	71.9	71.4	70.8	73.9
1954	68.7	69.2	71.9	68.7	68.0	67.3	67.7	69.9	70.1	73.2	72.6	75.5	70.2
1955	84.3	82.0	74.8	77.3	82.8	88.8	87.3	90.7	91.1	111.8	130.0	134.6	95.0
1956	141.2	167.2	160.6	165.9	163.4	154.0	162.8	193.8	200.9	201.6	250.4	253.7	184.6
1957	231.2	186.7	197.8	200.0	208.5	252.1	218.0	202.3	267.1	283.1	259.2	286.5	232.7
1958	251.5	212.2	251.5	245.9	218.6	220.5	224.1	237.0	243.5	228.0	209.2	238.2	231.7
1959	274.5	207.9	229.2	210.6	212.7	217.5	203.0	234.2	194.3	165.1	184.8	182.2	209.7
1960	202.6	170.9	146.8	167.6	162.7	161.9	163.9	174.4	164.5	142.3	148.9	138.1	162.0
1961	122.0	106.4	104.8	105.0	99.3	109.9	116.5	106.2	112.7	96.7	90.3	94.8	105.4
1962	94.9	102.2	100.3	96.2	97.9	91.0	80.7	77.3	89.5	87.8	84.9	82.0	90.4
1963	79.5	79.7	77.8	79.5	87.8	83.5	75.9	80.9	85.1	85.1	81.7	78.4	81.2
1964	75.4	76.8	75.9	72.6	69.5	69.0	67.0	69.3	70.2	73.4	73.7	78.8	72.6
1965	78.6	75.2	74.1	72.0	78.2	77.0	74.3	74.8	76.6	80.2	77.7	77.8	76.4
1966	87.9	84.2	90.3	97.2	98.5	96.3	106.7	106.6	110.9	108.6	113.3	124.6	102.1
1967	147.7	147.0	160.6	129.9	143.0	120.2	140.3	153.7	132.1	136.1	145.3	163.0	143.2
1968	189.1	173.2	142.6	129.5	154.9	142.3	137.2	142.2	141.0	152.5	138.5	148.4	149.3
1969	152.7	155.2	172.3	155.5	145.4	162.2	136.6	143.0	137.3	154.0	156.7	143.6	151.2
1970	158.3	175.4	158.4	162.0	168.4	154.9	152.0	138.2	143.2	148.3	162.0	152.8	156.2
1971	162.6	137.8	111.9	116.7	109.9	101.7	117.4	114.1	104.0	107.2	114.0	124.5	118.5
1972	114.8	141.8	128.5	112.9	129.6	135.4	122.0	125.7	113.6	121.1	101.6	102.9	120.8
1973	102.2	98.7	100.4	105.0	97.0	91.2	84.5	82.9	105.6	87.7	81.5	84.2	93.4
1974	83.1	80.9	79.2	86.1	90.6	86.3	92.5	83.0	87.8	97.6	90.3	81.1	86.5
1975	77.5	74.2	72.4	70.7	70.1	69.7	77.2	90.4	79.6	75.7	80.8	74.6	76.1
1976	74.7	70.5	76.7	76.3	70.6	70.6	67.5	74.8	73.1	75.9	72.9	76.7	73.4
1977	77.4	82.3	76.6	77.6	79.6	91.5	81.1	84.3	99.9	96.9	93.7	102.1	86.9
1978	109.6	145.4	141.8	149.4	146.5	142.2	131.1	114.0	157.9	158.2	151.5	175.5	143.6
1979	203.0	204.1	185.8	173.8	165.2	180.3	165.9	172.7	200.2	217.9	231.7	203.5	192.0
1980	206.2	200.0	168.1	207.9	224.0	193.2	184.8	166.2	183.9	204.2	218.1	225.8	198.5
1981	174.6	204.5	205.3	223.2	194.6	156.9	191.9	220.6	219.5	224.3	207.8	207.8	202.6
1982	179.0	214.2	210.5	161.8	144.7	171.9	159.6	167.9	165.3	161.9	167.4	199.4	175.3
1983	142.3	122.6	118.6	118.9	137.1	138.6	125.0	124.4	109.0	112.4	92.5	93.4	119.6
1984	116.1	140.6	122.0	128.7	128.3	100.3	89.3	83.7	78.1	73.5	76.3	75.9	101.1
1985	74.5	73.7	73.3	75.1	80.2	76.1	78.7	71.5	69.5	74.7	74.2	74.8	74.7
1986	73.2	83.6	77.0	75.1	72.6	67.6	70.2	68.4	68.7	83.0	77.1	72.6	74.1
1987	72.5	71.5	74.0	84.9	87.8	77.9	84.2	90.0	86.1	98.1	101.2	94.4	85.3
1988	108.0	105.0	114.9	122.7	115.2	139.4	152.7	154.2	152.5	169.8	156.2	199.8	141.0
1989	235.4	222.4	205.1	189.6	190.1	239.6	181.9	217.1	225.9	208.7	235.1	213.0	213.7
1990	210.1	178.3	188.8	185.3	189.7	170.9	180.7	222.6	177.4	182.0	184.3	204.9	189.6
1991	229.4	243.0	230.0	198.8	190.3	206.8	212.0	210.3	180.6	201.3	172.0	223.9	208.1
1992	217.6	232.1	171.3	158.5	125.4	116.7	132.2	122.1	116.8	130.8	145.2	139.1	150.7
1993	121.0	142.6	136.4	115.9	112.3	109.3	99.0	93.7	87.0	100.3	95.9	104.8	109.7
1994	115.0	99.6											107.3

Hα S O L A R F L A R E S

FEBRUARY 1994

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	01	1505	1508	1512						7		B 1.6						
GOES	02	1912	1935	2012						60		B 4.0						
LEAR	03	0005	0006	0015	N17	E64	7666	02	7.9	10	SF		3	E		18		
LEAR		0159	0200	0210	N18	E62	7666	02	7.8	11	SF	B 3.4	3	E		19		
LEAR		0414	0416	0424	N17	E62	7666	02	7.9	10	SF	C 1.5	3	E		35		
LEAR		0457	0459	0503	N18	E62	7666	02	7.9	6	SF	B 5.0	3	E		29		
GOES		0609	0614	0622						13		C 1.1						
GOES		0742	0746	0749						7		B 3.9						
HOLL		1836	1843	1905	N13	W48	7663	01	31.1	29	SF	C 1.1	3	E		48		
GOES	04	0134	0203	0220						46		B 2.0						
GOES		0644	0646	0649						5		B 1.9						
LEAR		0732	0732	0737	S18	W48	7662	01	31.6	5	SF	B 4.8	3	E		26		F
GOES		1006	1017	1038						32		B 3.8						
GOES		1752	1758	1808						16		B 1.6						
GOES	05	0503	0506	0509						6		B 1.4						
GOES		0759	0802	0804						5		B 1.6						
GOES		1931	1935	1937						6		B 1.5						
GOES		2342	2343	2346						4		B 1.3						
SVTO	06	0742	0747	0755	S10	W24	7664	02	4.5	13	SF		3	E		12		
LEAR		0813	0816	0826	S10	W25	7664	02	4.5	13	SF	B 5.0	3	E		24		F
SVTO		0815	0819	0823	S10	W24	7664	02	4.5	8	SF		3	E		11		F
RAMY		1300	1321	1340	S13	W30	7664	02	4.3	40	SF	B 7.9	4	E		20		F
GOES		1650	1654	1659						9		B 1.6						
GOES	07	0217	0225	0231						14		B 4.3						
LEAR		0452	0453	0456	S12	W39	7664	02	4.3	4	SF	B 6.4	3	E		25		F
GOES		0854	0858	0905						11		B 2.4						
GOES		1251	1257	1259						8		B 3.9						
SVTO		1350	1359	1439	S12	W42	7664	02	4.4	49	SF	B 8.2	3	E		47		
RAMY		1359	1359	1429	S13	W44	7664	02	4.3	30	SF		3	E		34		F
GOES		1404	1414	1427						23		B 8.6						
SVTO	08	0746	0817	0837	N07	E60		02	12.8	51	1F		3	E		101		
SVTO		0957	0959	1007	N07	E59		02	12.8	10	SF		3	E		14		
LEAR		1000	1000	1003	N09	E57		02	12.7	3	SF		3	E		12		
RAMY		1305	1312	1328	N08	E55		02	12.7	23	SF		3	E		15		
RAMY		1603	1628	1633	N08	E54	7668	02	12.7	30	SF	B 7.3	3	E		21		
RAMY		1750	1753	1833	N08	E53	7668	02	12.7	43	SF		3	E		25		
RAMY		1917	1921	1932	N08	E52	7668	02	12.7	15	SF		3	E		22		
GOES		2323	2327	2331						8		B 4.7						
LEAR	09	0137	0144	0215	N09	E50	7668	02	12.8	38	SF	B 3.2	3	E		28		
GOES		0154	0159	0203						9		B 6.5						
LEAR		0307	0307	0309	N09	E49	7668	02	12.8	2	SF	B 2.7	3	E		35		F
LEAR		0559	0602	0613	N09	E48	7668	02	12.8	14	SF		3	E		20		
GOES		1334	1338	1341						7		B 3.8						
RAMY		1806	1806	1844	S12	W71	7664	02	4.4	38	SF	C 3.0	3	E		11		F
HOLL		1807	1808	1816D	S10	W72	7664	02	4.3	9D	SF		3	E		12		F
HOLL		1904	1905	1917	N19	W22	7666	02	8.1	13	SF		3	E		40		UF
RAMY		1904	1911	1919	N18	W23	7666	02	8.0	15	SF		3	E		35		F
GOES		2034	2040	2046						12		C 1.1						
GOES		2149	2152	2156						7		B 4.2						
GOES		2316	2320	2323						7		B 4.6						
GOES	10	1350	1354	1402						12		B 4.6						
GOES		1813	1834	1848						35		C 1.3						
GOES	11	0439	0443	0451						12		B 3.7						
GOES		1356	1359	1401						5		B 4.5						
GOES		1455	1508	1519						24		C 1.3						
GOES		1642	1649	1658						16		B 6.1						
RAMY		1840	1840	1846	N18	W51	7666	02	7.9	6	SF		3	E		10		F
HOLL		1840	1842	1847	N20	W51	7666	02	7.9	7	SF		3	E		19		F

Hα SOLAR FLARES

FEBRUARY 1994

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	11	2315	2320	2325						10		B 9.2						
LEAR	12	2329	2333	2403	N07	W03	7668	02	12.7	34	SF	C 1.0	3	E		38		UF
GOES	13	0051	0244	0429						218		C 1.3						T
GOES	14	0023	0032	0038						15		B 7.9						
GOES		0722	0725	0729						7		B 4.4						
GOES	15	0049	0141	0157						68		B 9.0						
LEAR		0348	0350	0358	N12	E49	7670	02	18.8	10	SF	C 1.0	3	E		40		F
LEAR		0555	0555	0601	N10	E47	7670	02	18.8	6	SF	C 1.1	3	E		11		
LEAR		0751	0752	0820	N09	E63	7671	02	20.0	29	SF	C 1.8	3	E		14		F
GOES	16	0054	0059	0104						10		B 3.6						
GOES		1106	1112	1125						19		B 6.2						
RAMY		1505	1509	1527	N08	E27	7670	02	18.6	22	SF		3	E		42		
HOLL		1507	1508	1515	N07	E25	7670	02	18.5	8	SF	B 5.6	3	E		19		F
HOLL		1911	1912	1915	N10	W51	7668	02	13.0	4	SF		3	E		55		H
LEAR	17	0300	0300	0303	N11	E23	7670	02	18.8	3	SF		3	E		10		
GOES		1016	1023	1029						13		B 8.1						
GOES		1100	1111	1126						26		C 1.7						
LEAR	18	0541	0543	0550	N07	E24	7671	02	20.0	9	SF	C 1.1	3	E		34		F
GOES		0912	0956	1017						65		C 1.1						
RAMY		1319	1319	1323	N08	E21	7671	02	20.1	4	SF	B 5.6	3	E		11		
GOES		2035	2039	2044						9		B 4.3						
GOES		2148	2152	2154						6		B 4.2						
GOES	19	0254	0302	0312						18		B 7.3						
GOES		1050	1055	1059						9		B 4.0						
GOES		1636	1703	1714						38		B 5.1						
GOES		1913	1933	1949						36		B 6.6						
LEAR	20	0138E	0138U	0308D	N09	W02	7671	02	19.9	90D	3B	M 4.0	1	E		707		ZU
GOES		0745	0748	0800						15		B 5.0						
SVTO		1356	1357	1401	N07	W06	7671	02	20.1	5	SF	B 3.9	3	E		14		
RAMY		1558	1600	1608	N12	W26	7670	02	18.7	10	SF	B 4.2	3	E		16		F
GOES	21	0459	0504	0511						12		B 2.5						
GOES		0635	0651	0658						23		B 5.5						
GOES		1704	1707	1711						7		B 3.7						
GOES	22	0224	0237	0251						27		C 1.2						
GOES		0448	0453	0459						11		B 5.8						
GOES	23	0137	0146	0154						17		C 1.0						
GOES		0250	0255	0300						10		B 4.0						
GOES		0324	0332	0337						13		B 4.4						
GOES		1433	1437	1441						8		B 3.9						
GOES		1520	1525	1537						17		C 1.1						
GOES		1746	1753	1811						25		B 7.0						
GOES		1924	1928	1930						6		B 6.4						
GOES		2043	2051	2104						21		C 1.4						
GOES	24	0311	0315	0323						12		B 4.6						
GOES		0756	0836	0903						67		B 2.9						
GOES		1757	1833	1900						63		C 2.9						
HOLL		2111	2117	2121	N12	W66	7670	02	19.9	10	SF		3	E		15		
HOLL	25	0010	0012	0017	N14	W68	7670	02	19.9	7	SF		3	E		22		
GOES		0140	0424	0526						226		C 1.4						T
GOES		1133	1201	1243						70		B 8.1						
GOES	26	0317	0335	0353						36		B 5.5						
GOES		0510	0515	0523						13		B 9.6						
GOES		1036	1042	1051						15		B 3.6						

Hα SOLAR FLARES

FEBRUARY 1994

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	26	2327	2336	2410	S12	W10	7675	02	26.2	43	SF	B 5.5	3	E		65		FH
GOES	27	0354	0358	0401						7		B 1.9						
GOES		0426	0434	0449						23		B 6.1						
GOES		0719	0724	0729						10		B 2.7						
GOES		0825	0920	0951						86		M 2.8						
HOLL		1538	1539	1542	S14	E71	7680	03	5.0	4	SF	B 6.1	3	E		18		
GOES		1648	1657	1706						18		B 4.1						
GOES		2024	2031	2040						16		B 4.5						
GOES	28	0909	0917	0922						13		B 3.2						
GOES		0924	0927	0931						7		B 2.9						
GOES		1401	1405	1409						8		B 1.4						
RAMY		1538	1543	1557	S12	E56	7680	03	4.9	19	SF		3	E		11		
HOLL		1539	1540	1551	S13	E57	7680	03	4.9	12	SF		3	E		13		
GOES		1632	1640	1654						22		B 3.8						
GOES		1841	1912	1919						38		B 6.0						
GOES		1902	1912	1918						16		B 6.0						

"Remarks"

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

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

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

FEBRUARY 1994

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
15	2695	SVTO	20 GRF	0748.0	0753.0	19.0	15.0			QL=4 ST=3 TYP=2
	8800	SVTO	20 GRF	0748.0	0750.0	18.0	16.0			QL=4 ST=3 TYP=2
20	2695	PALE	4 S/F	0105.0	0114.0	85.0	190.0			QL=2 ST=2 TYP=3
	2695	LEAR	4 S/F	0109.0	0114.0	83.0	190.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	0109.0E	0114.0	81.0D	190.0			QL=2 ST=3 TYP=3
	8800	LEAR	20 GRF	0114.0	0147.0	78.0	92.0			QL=4 ST=2 TYP=2
	8800	PALE	4 S/F	0114.0E	0142.0	76.0D	70.0			QL=2 ST=3 TYP=5
27	2695	LEAR	4 S/F	0903.0	0907.0	19.0	120.0			QL=4 ST=2 TYP=3
	2695	SVTO	4 S/F	0904.0	0907.0	16.0	95.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0906.0	0907.0	15.0	55.0			QL=4 ST=2 TYP=3
	8800	SVTO	20 GRF	0906.0	0915.0	15.0	52.0			QL=4 ST=2 TYP=2

Reports are received routinely from the following observatories:
LEAR = Learmonth PALE = Palehua SGMR = Sagamore Hill SVTO = San Vito

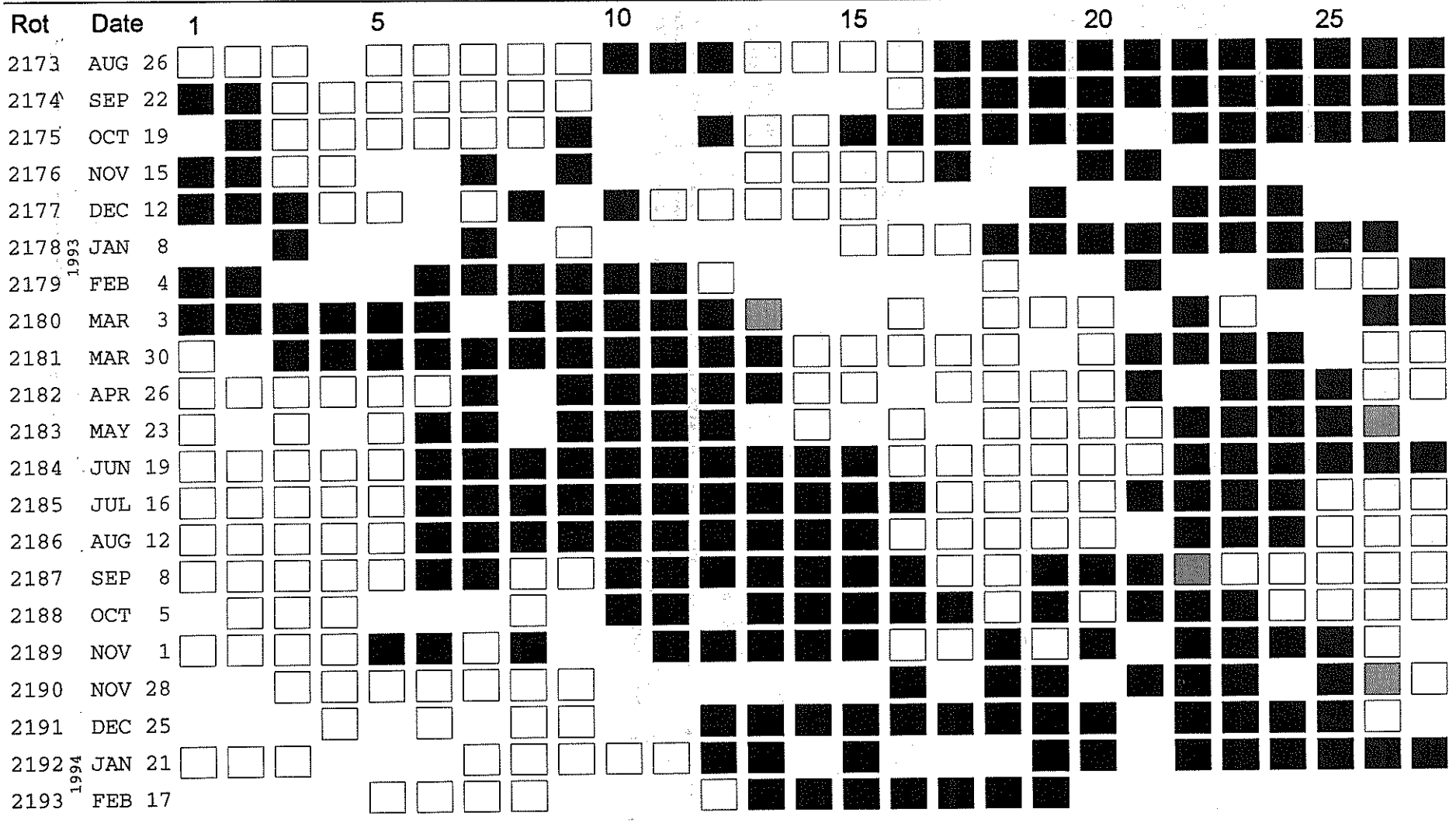
Explanation of Type Code:

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 Precusor	41 Group of Bursts	47 Great Burst
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major

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

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; Hiraiso, Japan 500 and 200 MHz; and Toyokawa, Japan 9400, 3750, 2000 and 1000 MHz.

STANFORD MEAN SOLAR MAGNETIC FIELD

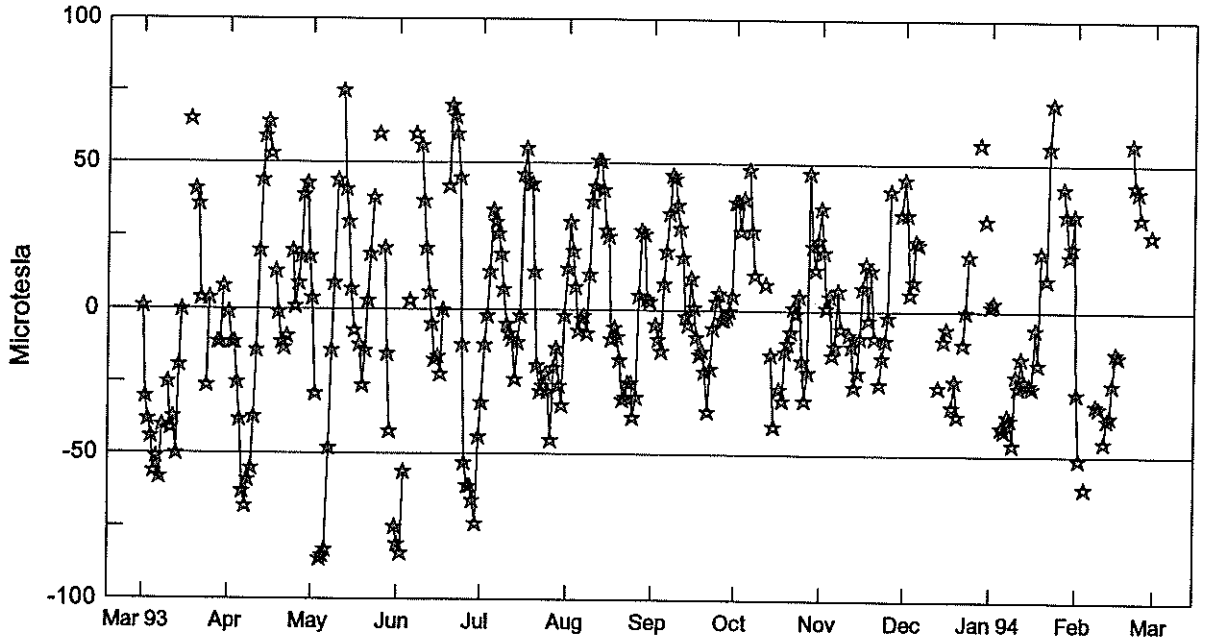


Mean Solar Magnetic Field Polarity: = field > 2 microT; = -2 microT ≤ field ≤ 2 microT

= 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"



Day	Mar 93	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 94	Feb
1	1	-1	4	-81	-32	14	---	37	35	45	2	-28
2	-30	-11	-29	-84	-12	30	-5	37	20	33	3	-51
3	-38	-11	---	-56	-2	20	-10	27	1	6	---	---
4	-44	-25	-86	---	13	8	-14	38	5	10	---	-61
5	-56	-38	-85	3	34	-7	9	---	-15	24	-40	---
6	-51	-63	-83	---	30	-3	20	48	-12	23	-41	---
7	-58	-68	-48	60	26	-2	33	27	7	---	-36	---
8	-40	-59	-14	---	19	-8	46	12	-6	---	-37	-32
9	---	-55	9	56	7	12	45	---	---	---	-46	-33
10	-25	-37	44	37	-5	37	36	---	---	---	-22	---
11	-41	-14	---	21	-8	42	28	---	-8	---	-26	-45
12	-37	20	75	6	-10	51	18	9	-12	---	-16	-37
13	-50	44	41	-5	-24	51	-2	---	-26	-26	-24	-36
14	-19	59	30	-17	-11	41	-5	-15	-21	---	---	-25
15	0	64	7	-16	-2	27	11	-40	-9	-10	-25	-14
16	---	53	-7	-22	46	25	1	---	8	-6	-26	-15
17	---	---	---	0	55	-10	-9	-27	16	---	-6	---
18	65	13	-12	---	43	-6	-15	-31	-3	-33	-18	---
19	---	-1	-26	42	43	-9	-14	-14	14	-24	20	---
20	41	-11	-14	70	13	-17	-21	-11	-9	-36	---	---
21	36	-13	3	66	-19	-31	-35	-7	---	---	11	57
22	4	-9	19	60	-28	-30	-20	1	-25	-11	56	43
23	---	---	38	45	-26	-25	-6	-1	-16	0	71	41
24	-26	20	---	-12	-22	-25	3	5	-10	19	---	32
25	4	1	60	-53	-28	-37	6	-17	-2	---	---	---
26	---	9	---	-61	-45	-30	-3	-31	41	---	---	---
27	---	18	21	-61	-20	5	-3	-21	---	---	42	---
28	-11	39	-15	-66	-13	27	-2	47	---	57	33	26
29	-11	43	-42	-74	-26	26	0	22	---	---	19	
30	8	18	---	-44	-33	4	5	14	33	31	22	
31	---		-75		-2	3		24		---	33	

Note: --- Indicates no data available for the day.

CONTENTS

Prompt Reports Number 595 Part I

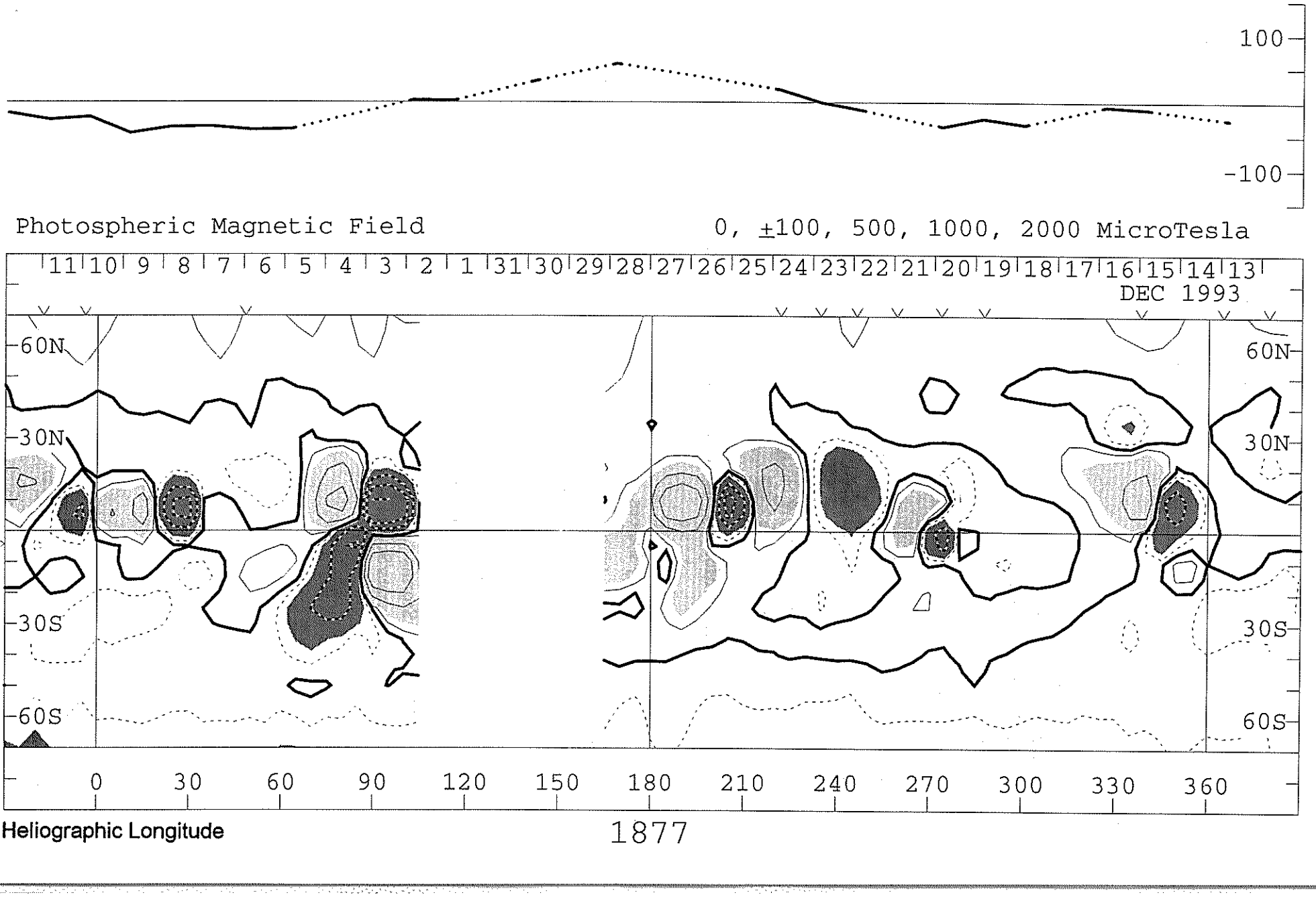
DATA FOR JANUARY 1994

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1877

(14 December 1993 to 10 January 1994)

WILCOX SOLAR OBSERVATORY



SOLAR MAGNETIC FIELD SYNOPTIC CHART

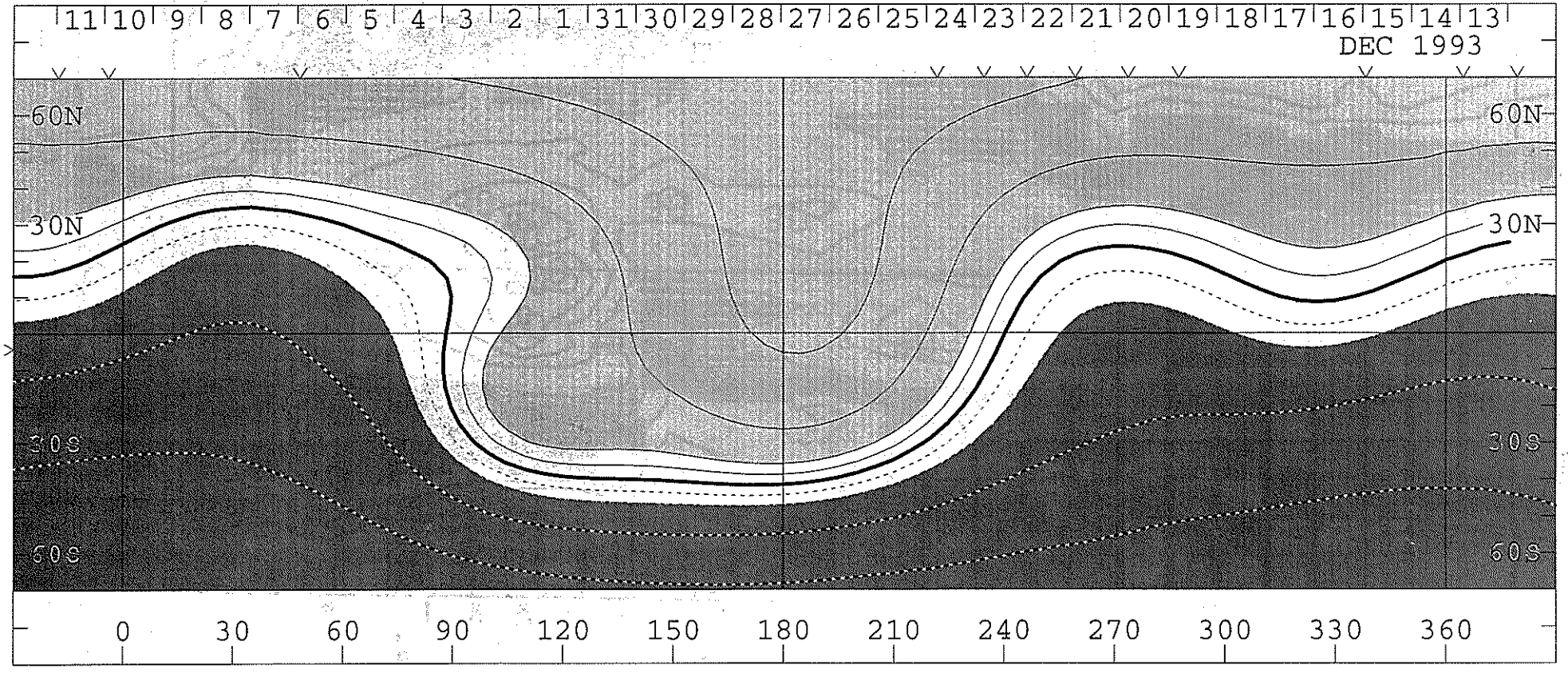
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1877

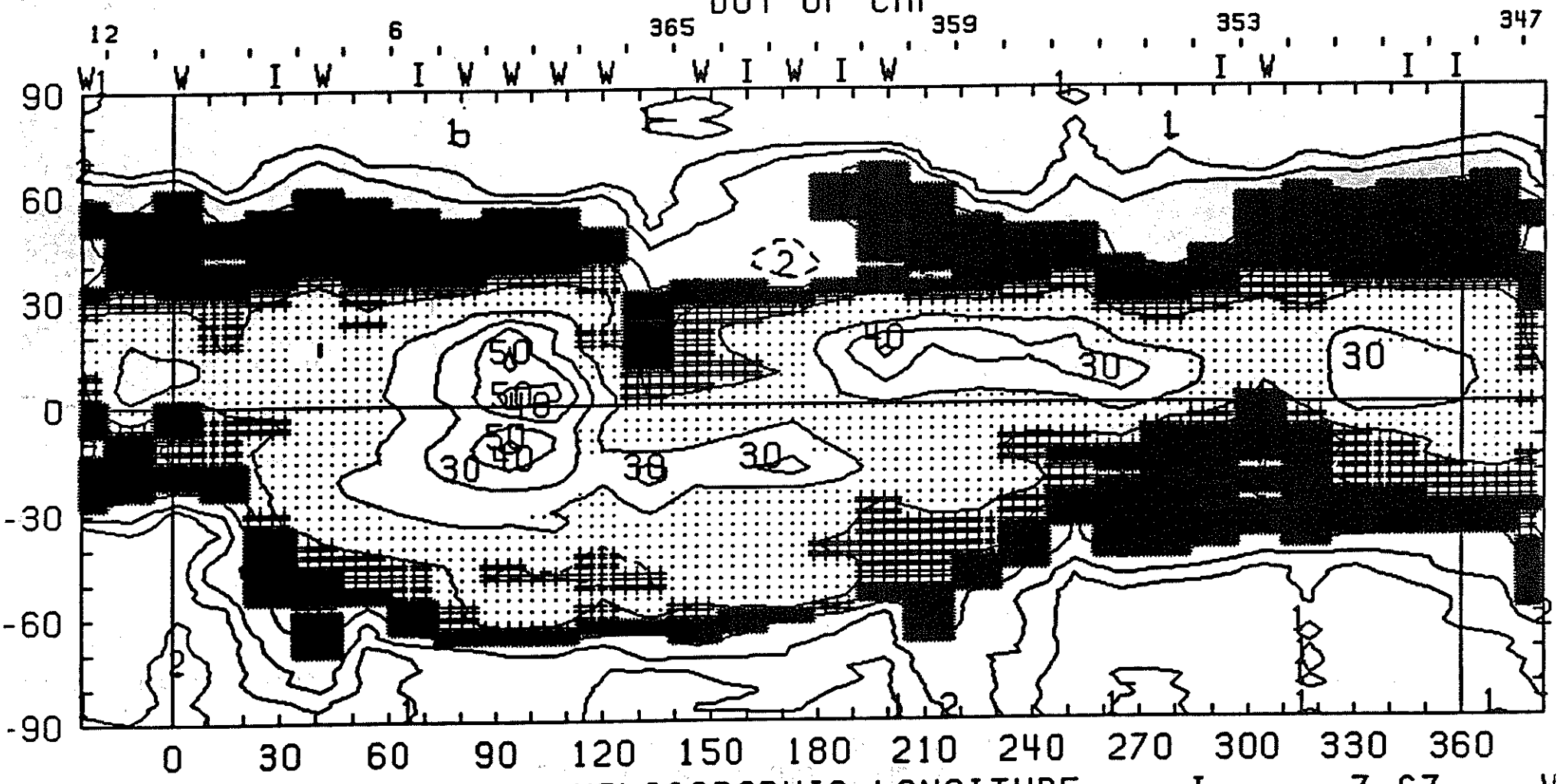
(14 December 1993 to 10 January 1994)

Wilcox Solar Observatory

0, ±1, 2, 5, 10, 20 microTesla



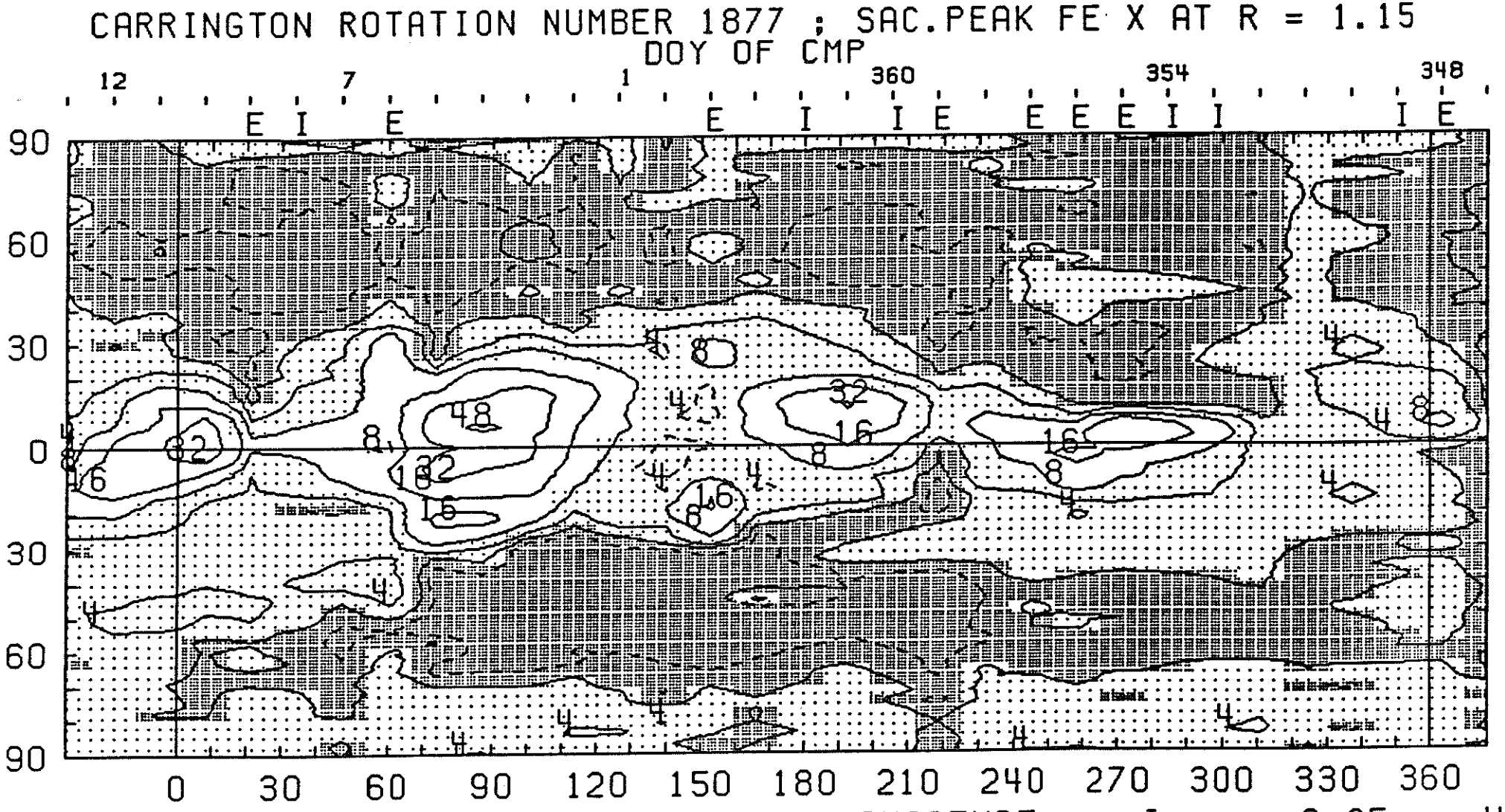
CARRINGTON ROTATION NUMBER 1877 ; SAC.PEAK FE XIV AT R = 1.15



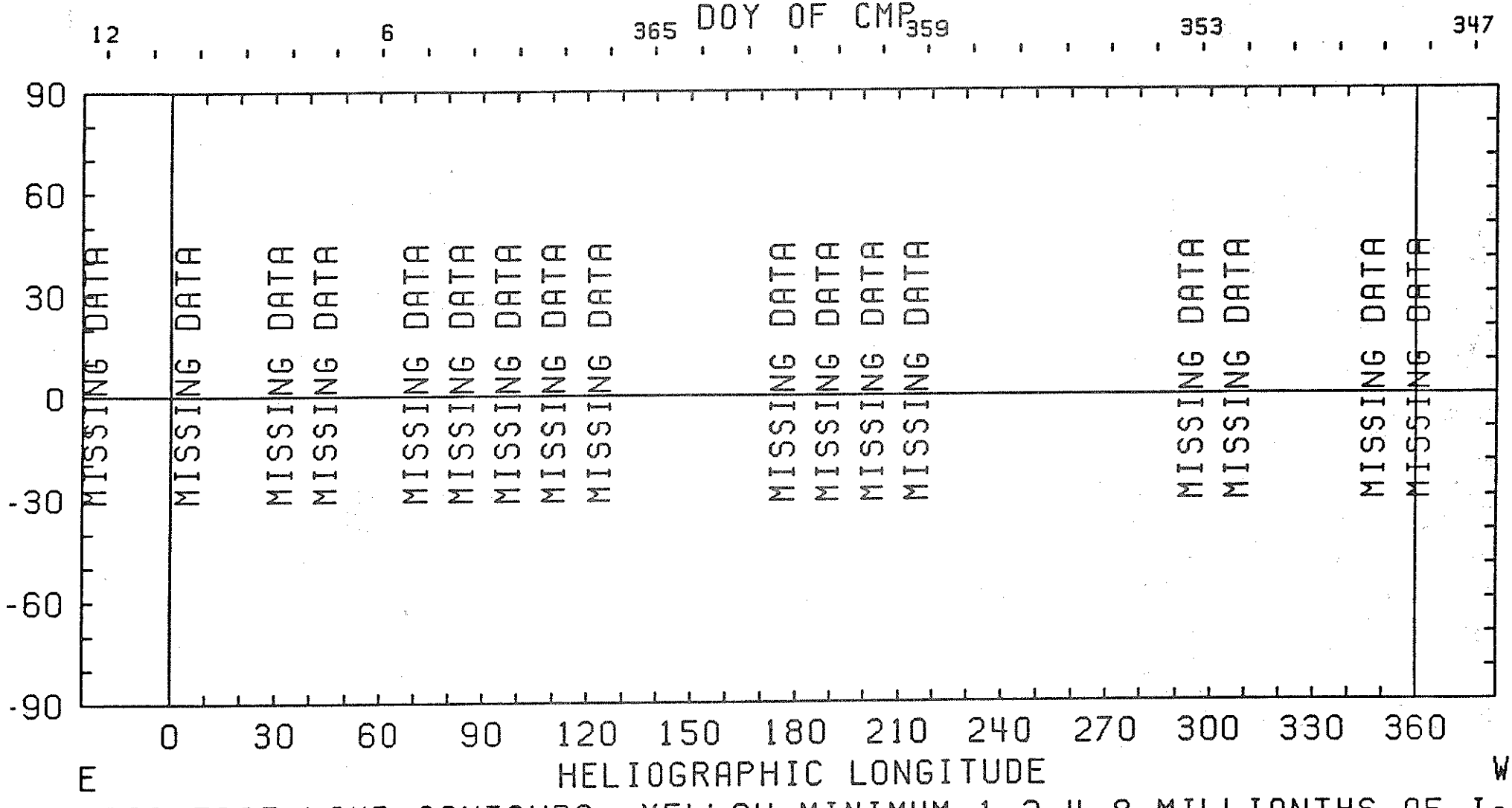
Iave = 7.67μ

1994 E+W LIMB CONTOURS: 1,2,4,7,10,20,30,40,50 MILLIONTHS OF Io

(4-Mar-94) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK

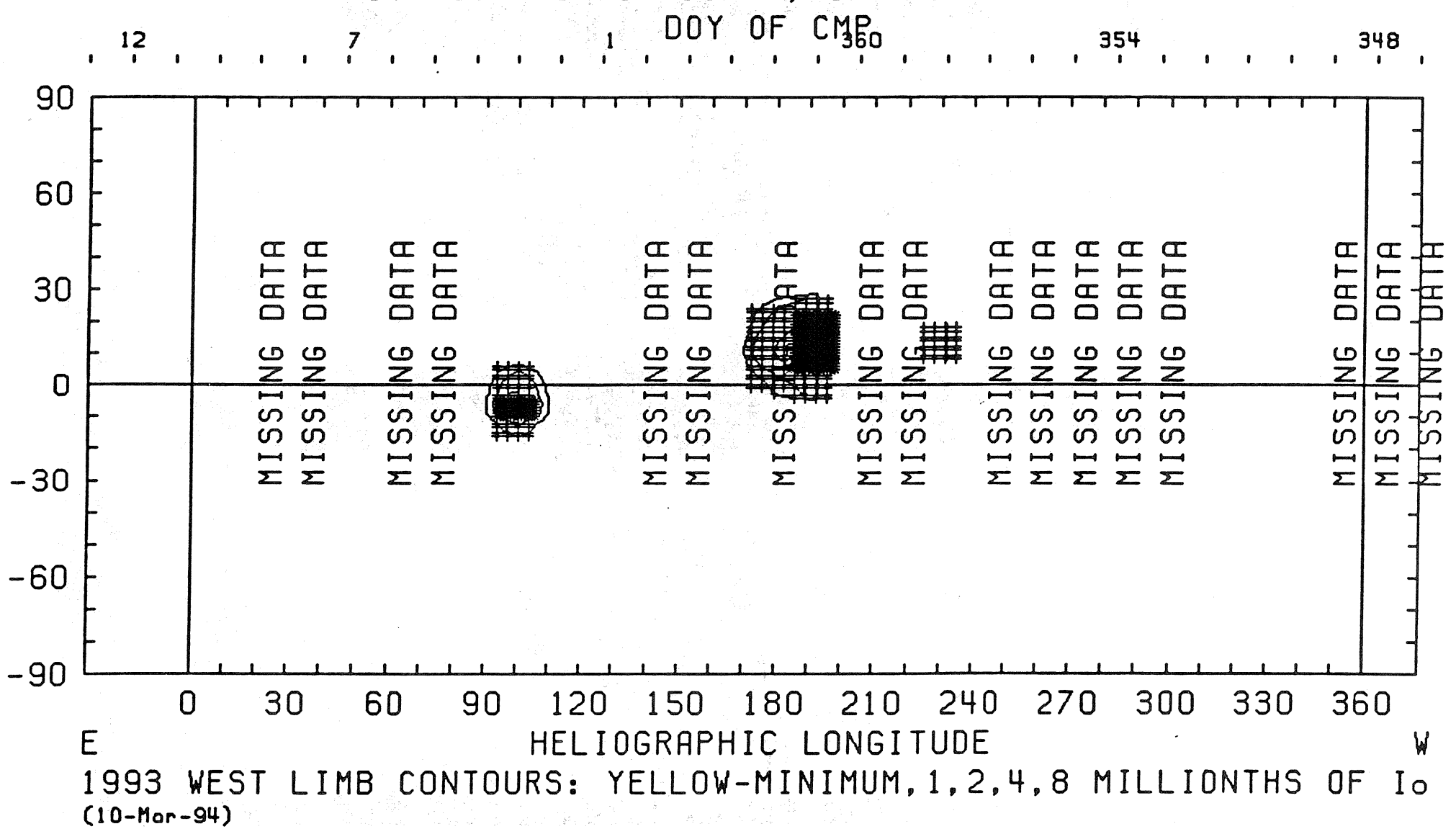

CARRINGTON ROTATION NUMBER 1877 ; SAC.PEAK FE X AT R = 1.15
DOY OF CMP
12
7
1
360
354
348
E I E E I I E E E E I I I E
90
60
30
0
30
60
90
0 30 60 90 120 150 180 210 240 270 300 330 360
E
HELIOGRAPHIC LONGITUDE
Iave = 3.85μ
W
1994 W+E LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF Io
(4-Mar-94)

CARRINGTON ROTATION NUMBER 1877 ; SAC.PEAK CA XV at R = 1.13



1993 EAST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF Io

(4-Mar-94)


CARRINGTON ROTATION NUMBER 1877 ; SAC.PEAK CA XV at R = 1.13
DOY OF CMP
12
7
1
360
354
348
90
60
30
0
-30
-60
-90
MISSING DATA
0
30
60
90
120
150
180
210
240
270
300
330
360
E
HELIOGRAPHIC LONGITUDE
W
1993 WEST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF Io
(10-Mar-94)

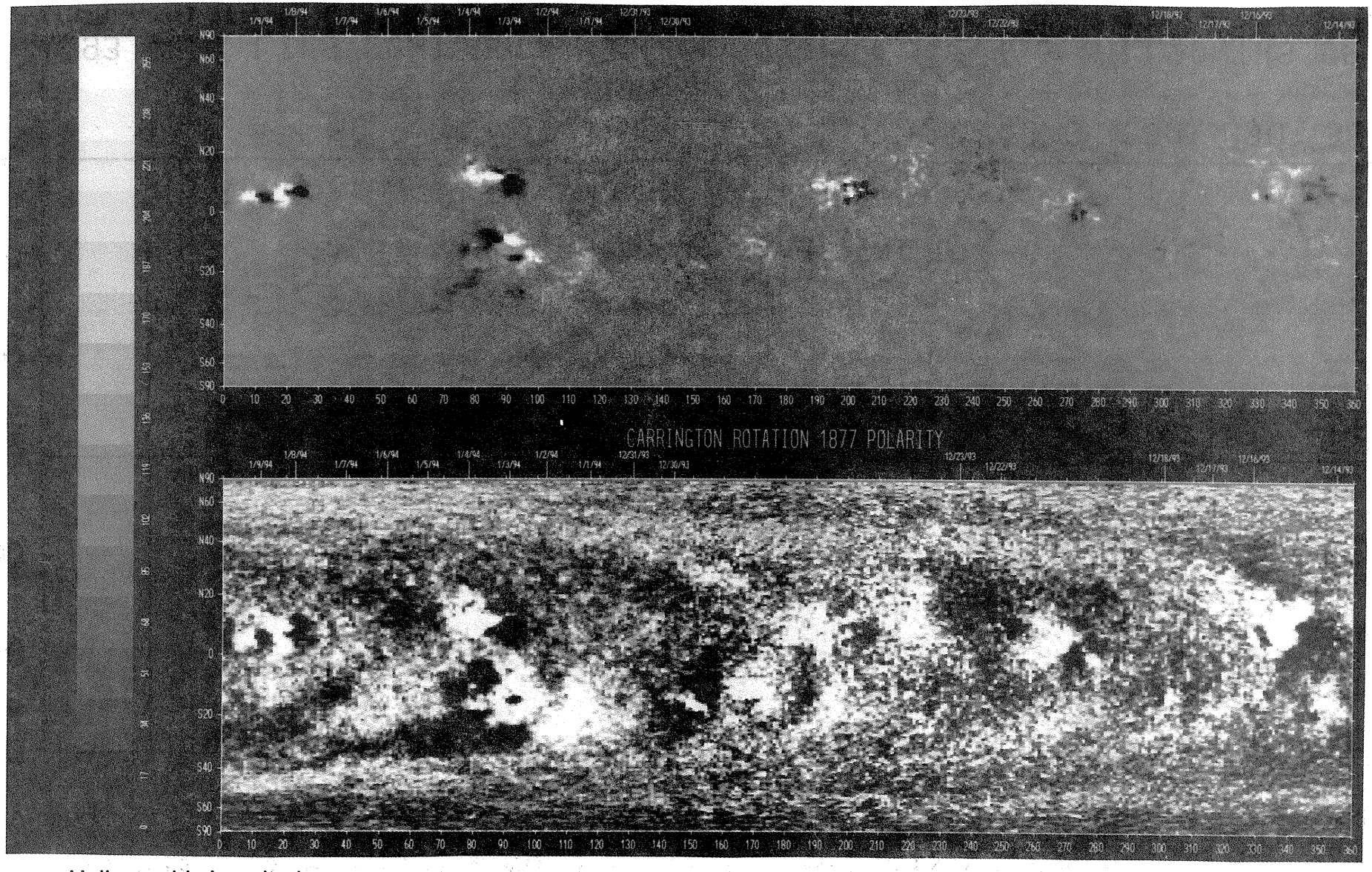
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1877

(14 December 1993 to 10 January 1994)

National Solar Observatory/Kitt Peak

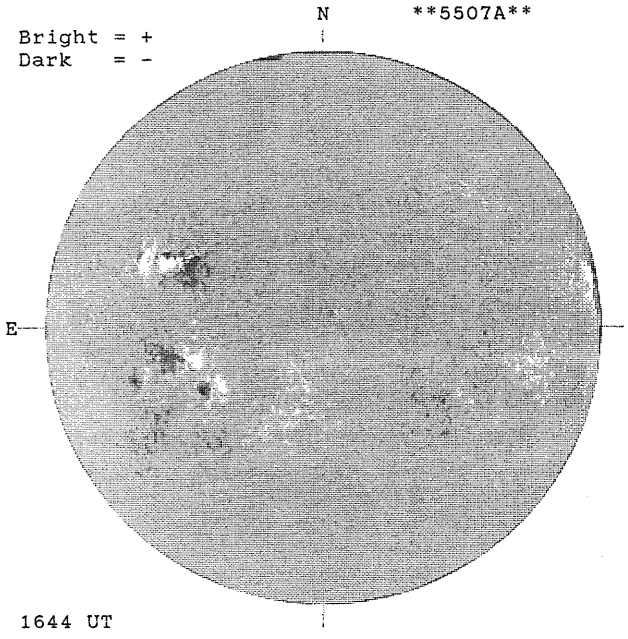
Dates of Observation



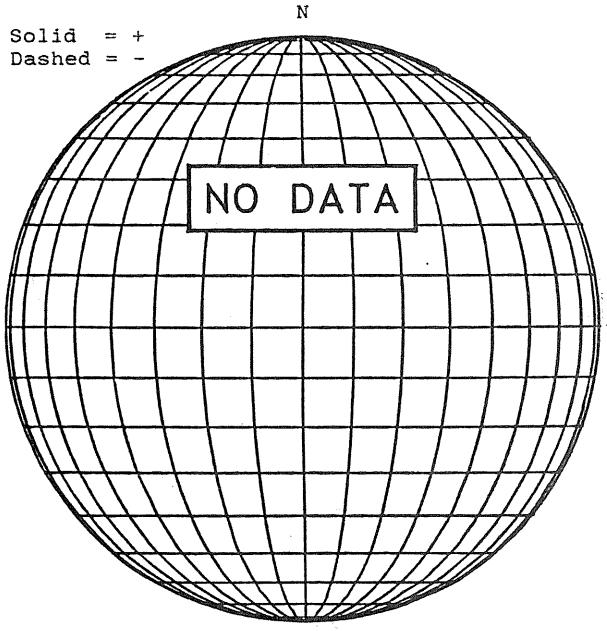
Heliographic Longitude

JANUARY 1, 1994 (P= 2.15, B_o =-3.02, L_o = 126.60)

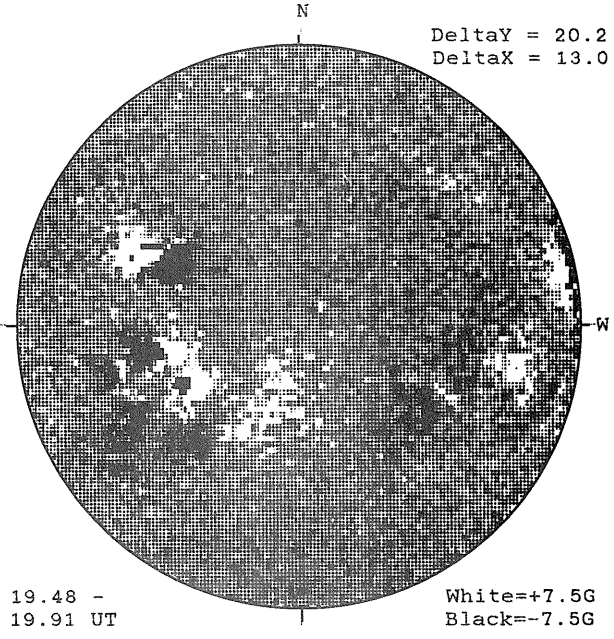
KITT PEAK MAGNETOGRAM



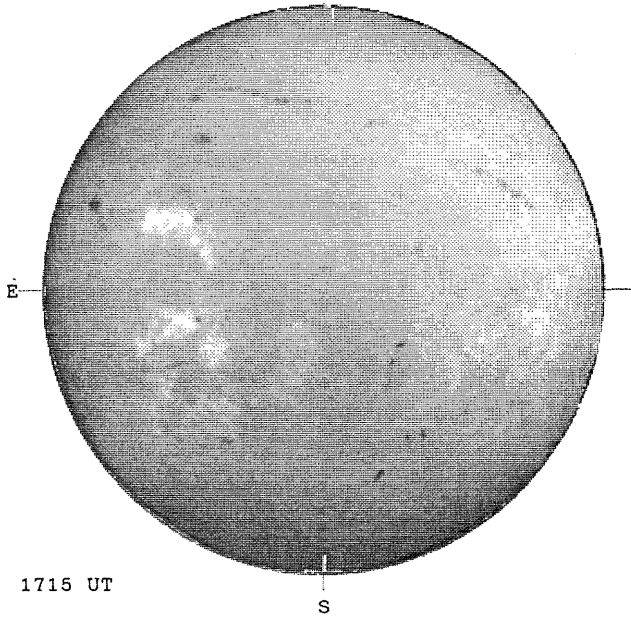
STANFORD MAGNETOGRAM



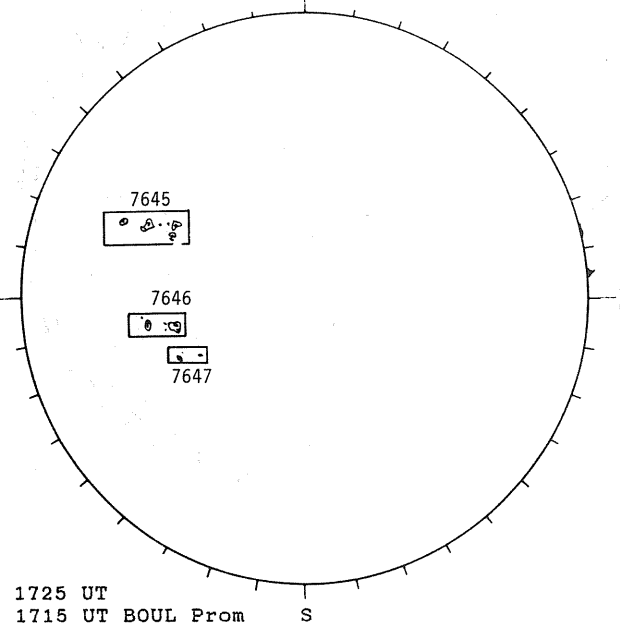
MT. WILSON MAGNETOGRAM



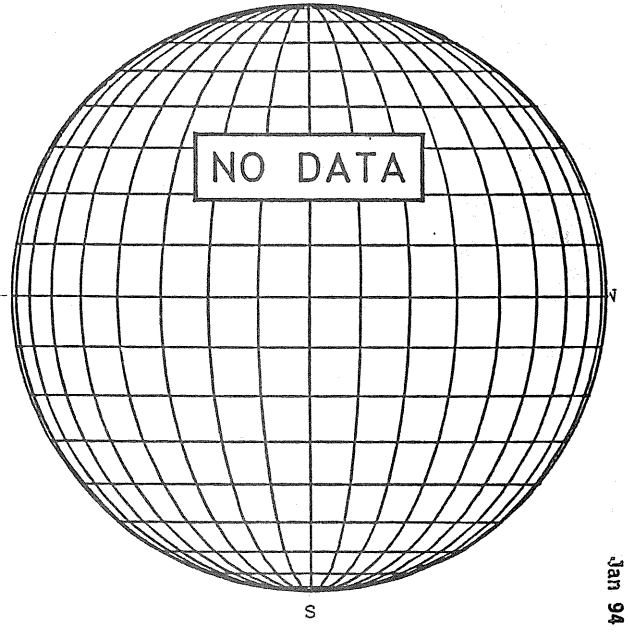
BOULDER H-ALPHA



BOULDER SUNSPOT

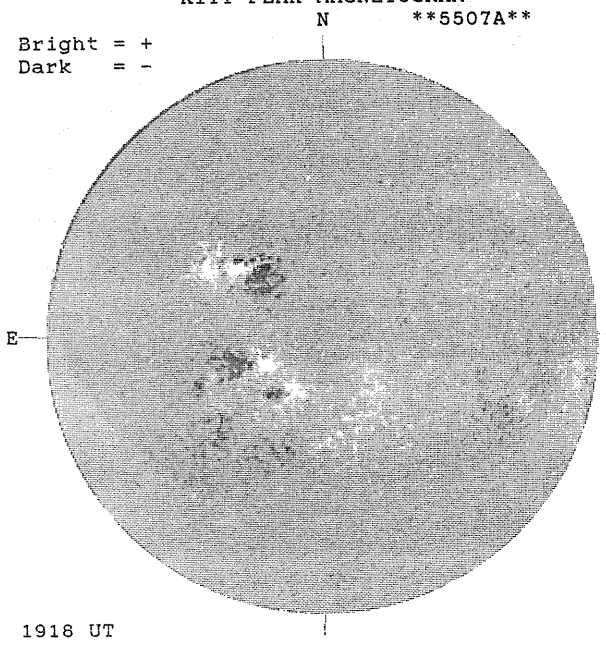


SACRAMENTO PEAK CORONA (1.15 Radii)

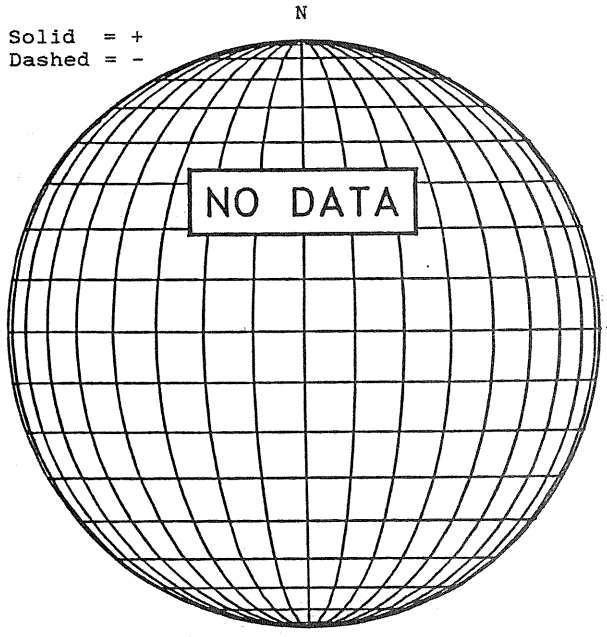


JANUARY 2, 1994 (P= 1.66, B_o =-3.13, L_o = 113.42)

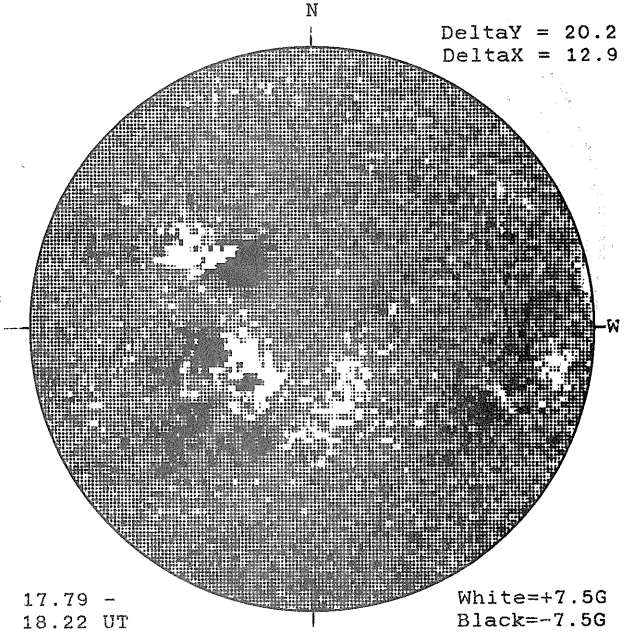
KITT PEAK MAGNETOGRAM



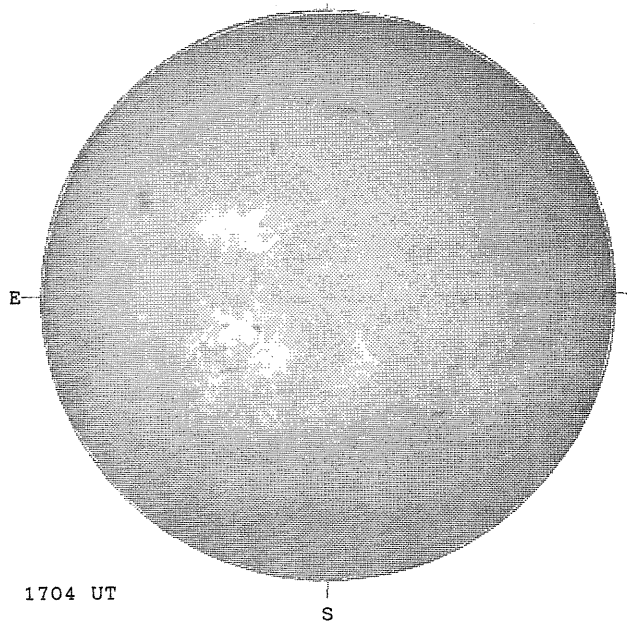
STANFORD MAGNETOGRAM



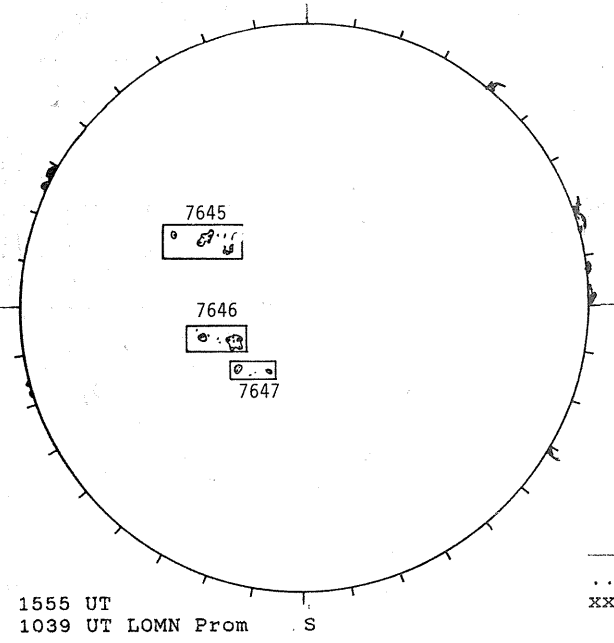
MT. WILSON MAGNETOGRAM



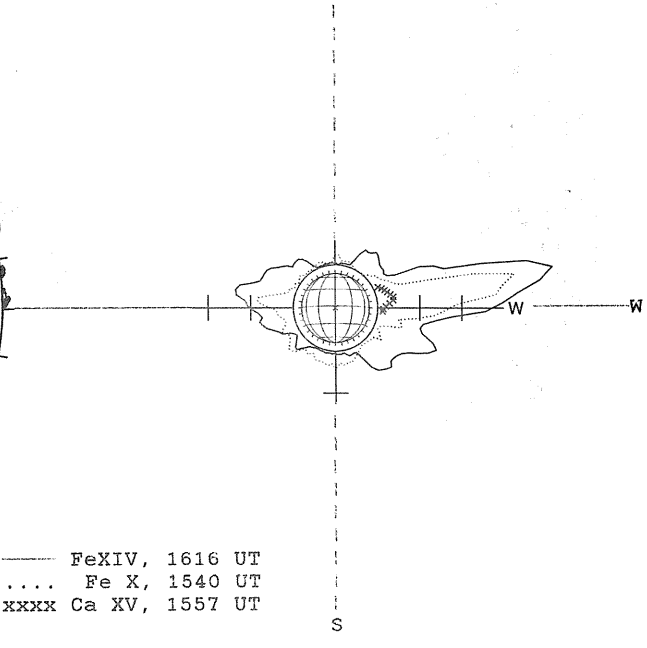
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

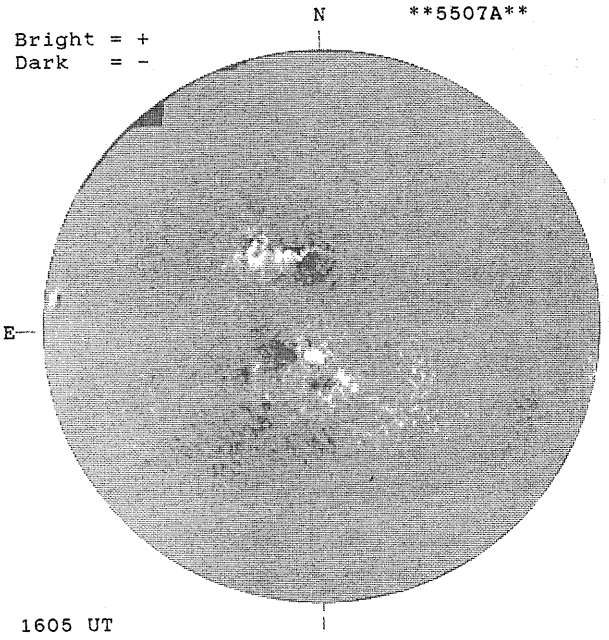


SACRAMENTO PEAK CORONA (1.15 Radii)

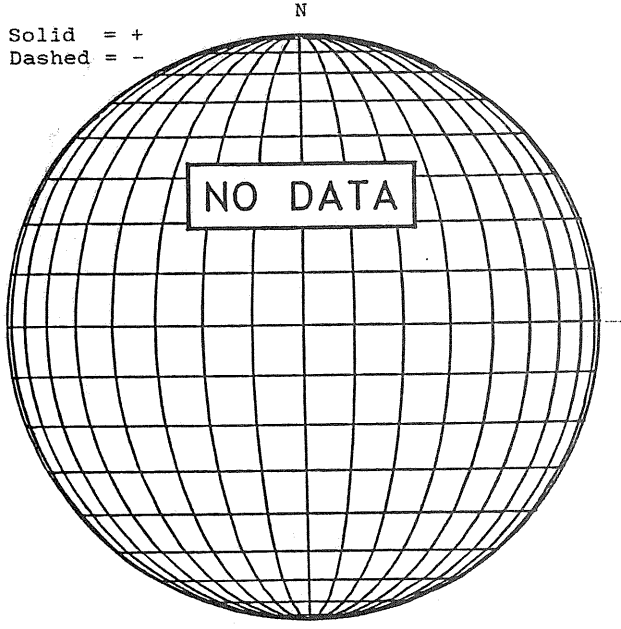


JANUARY 3, 1994 (P= 1.18, B_O =-3.25, L_O = 100.25)

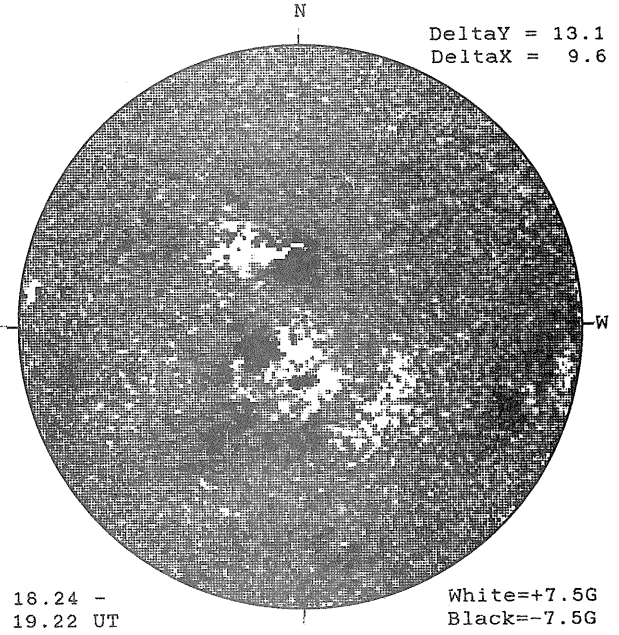
KITT PEAK MAGNETOGRAM



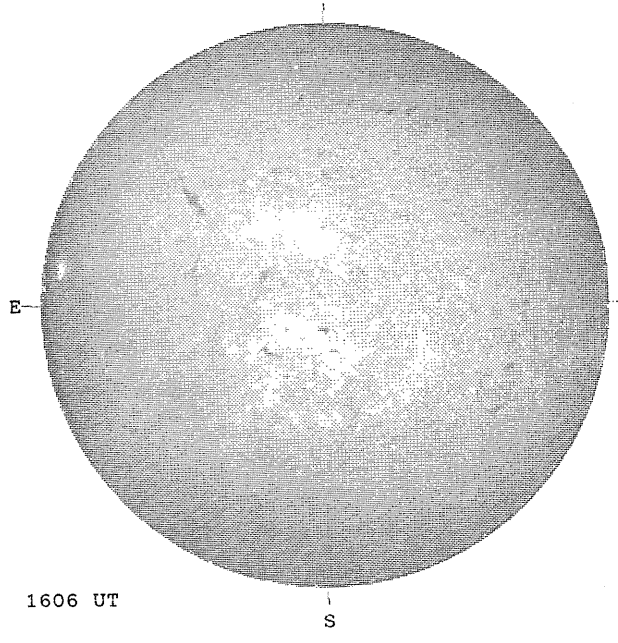
STANFORD MAGNETOGRAM



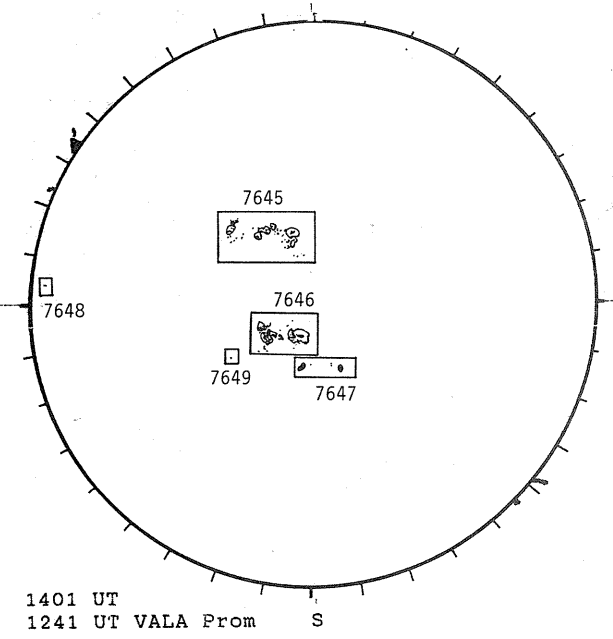
MT. WILSON MAGNETOGRAM



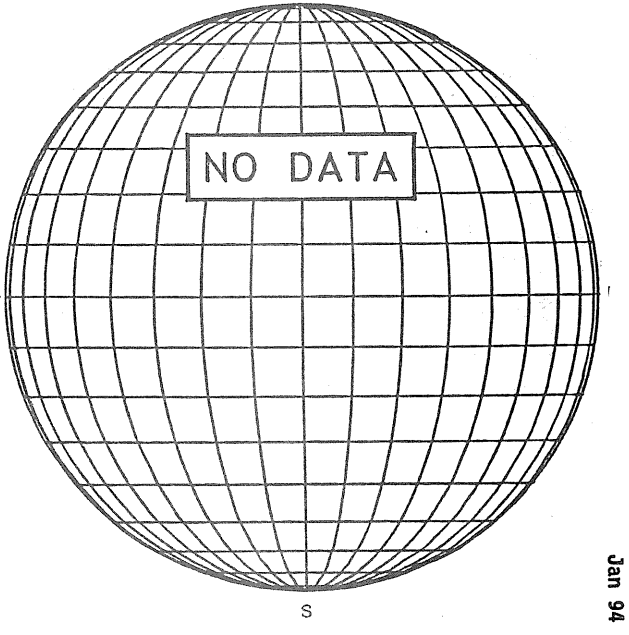
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT

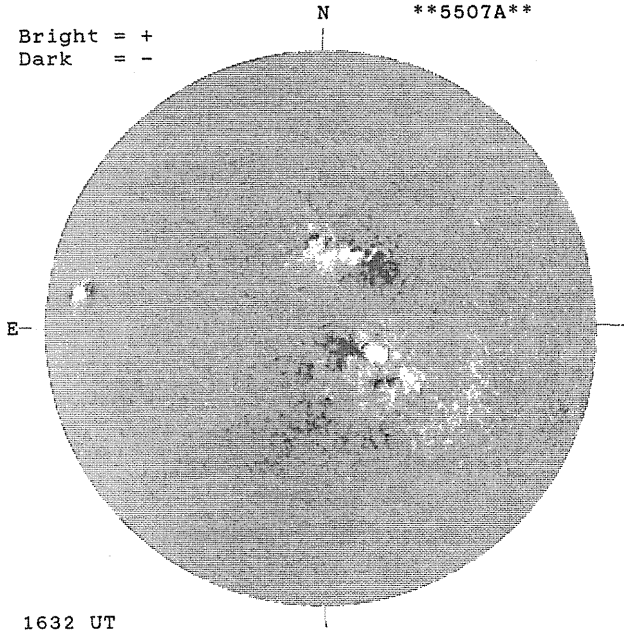


SACRAMENTO PEAK CORONA (1.15 Radii)

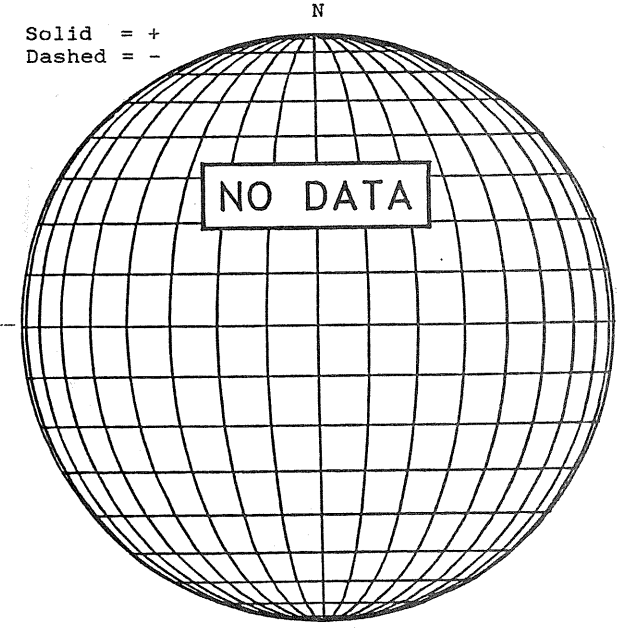


JANUARY 4, 1994 (P= 0.69, B_O =-3.36, L_O = 87.08)

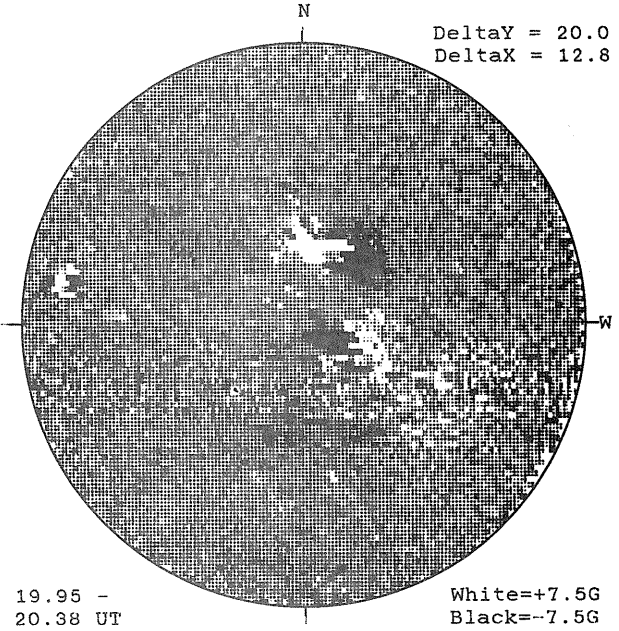
KITT PEAK MAGNETOGRAM



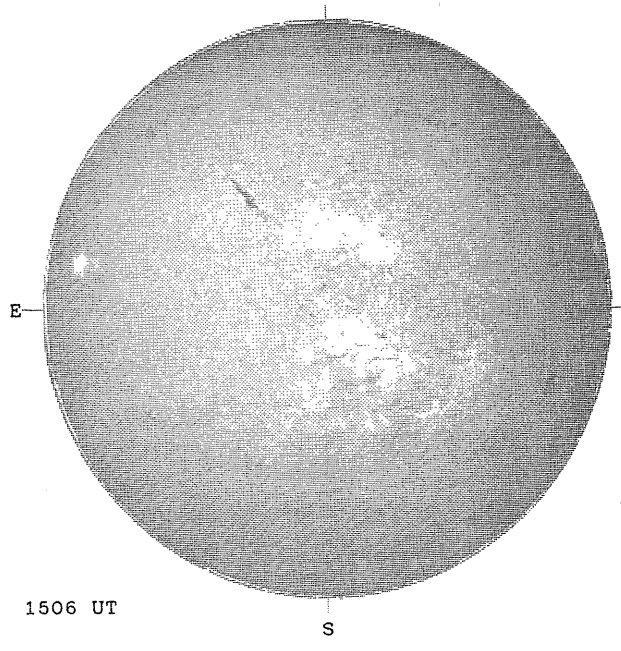
STANFORD MAGNETOGRAM



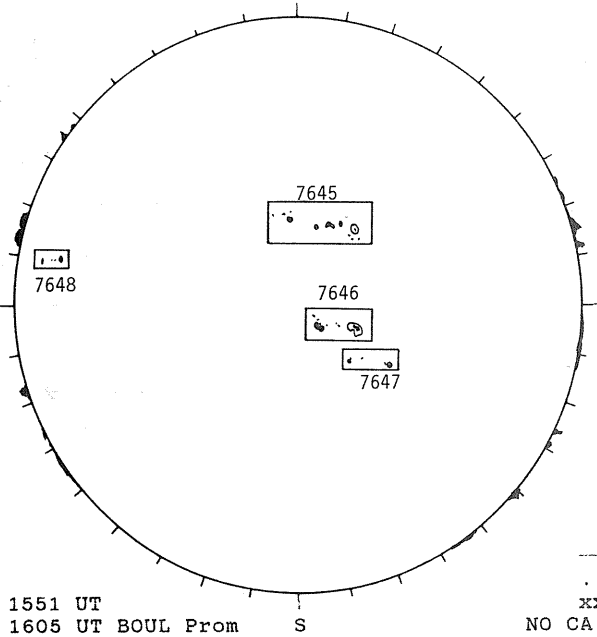
MT. WILSON MAGNETOGRAM



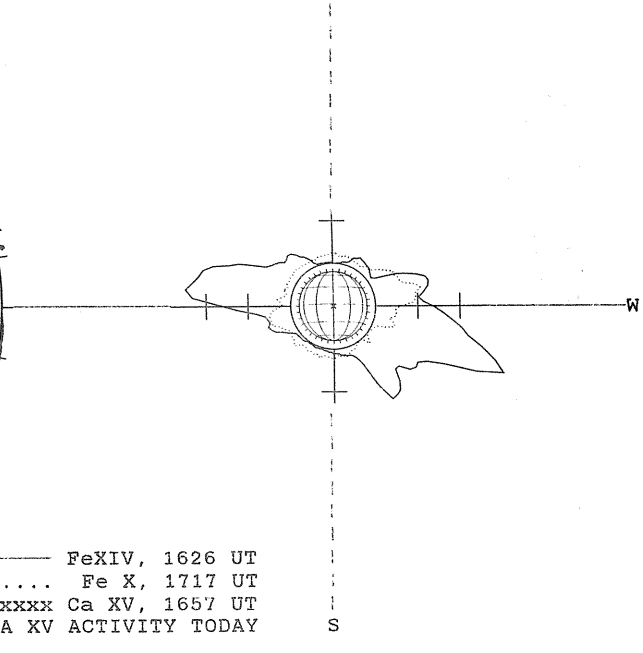
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

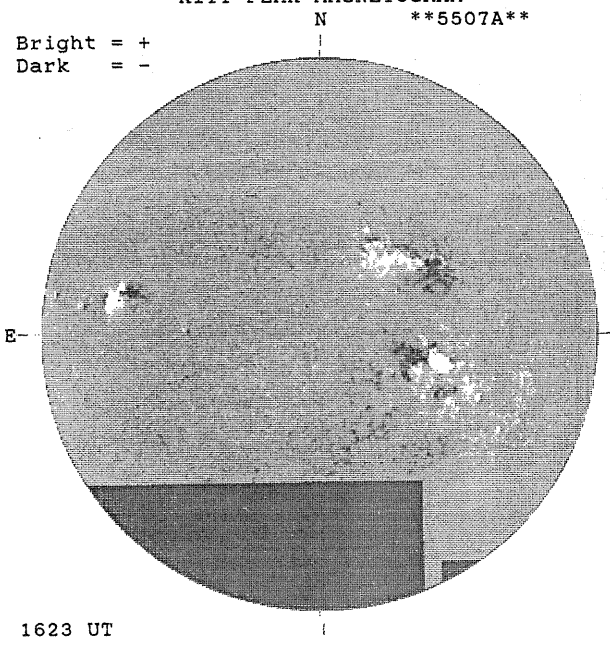


SACRAMENTO PEAK CORONA (1.15 Radii)

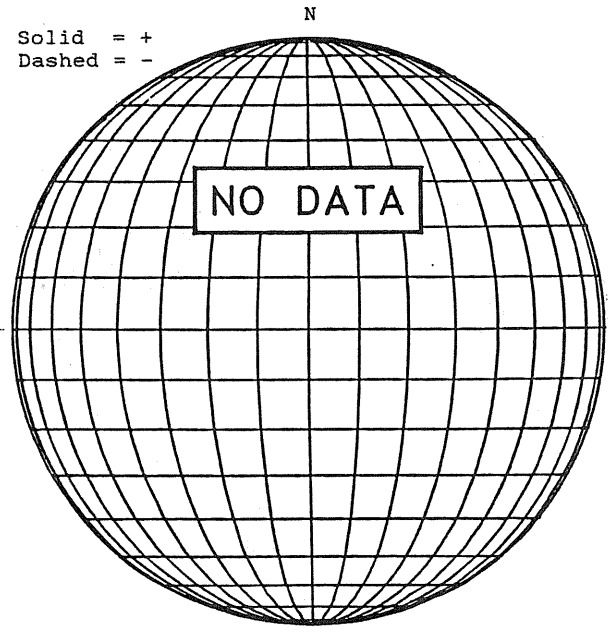


JANUARY 5, 1994 (P= 0.21, B_o =-3.48, L_o = 73.91)

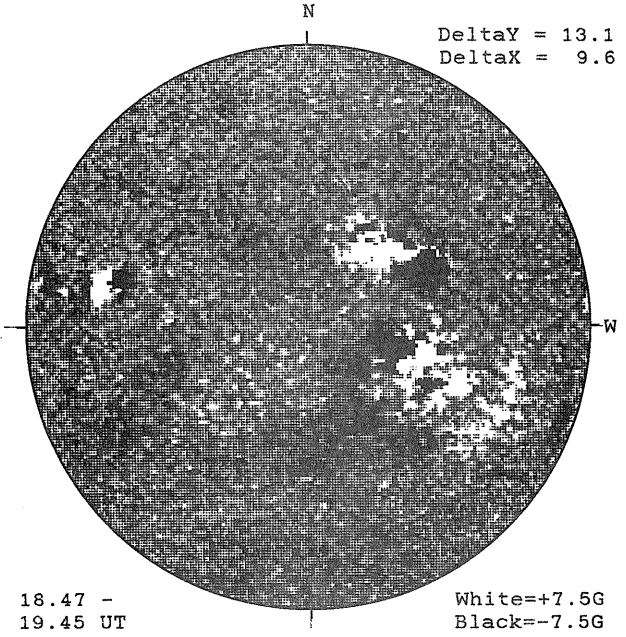
KITT PEAK MAGNETOGRAM



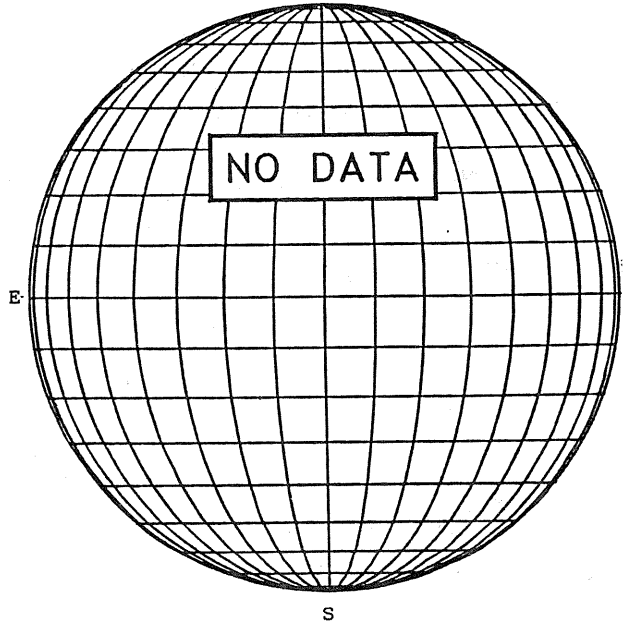
STANFORD MAGNETOGRAM



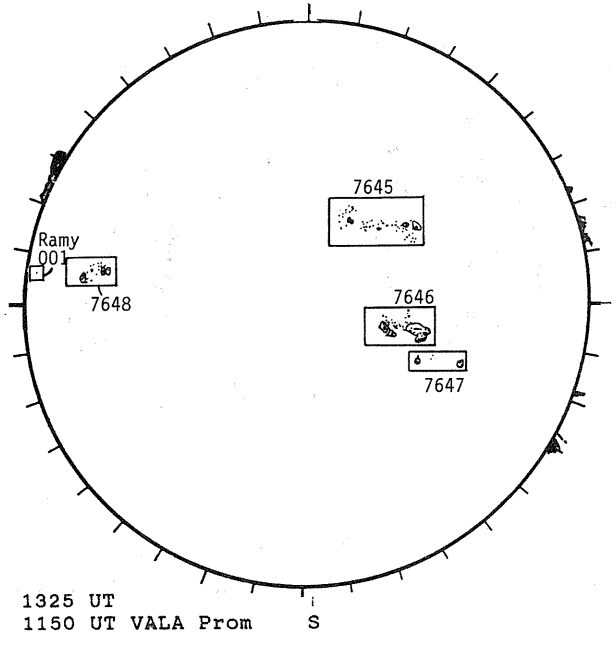
MT. WILSON MAGNETOGRAM



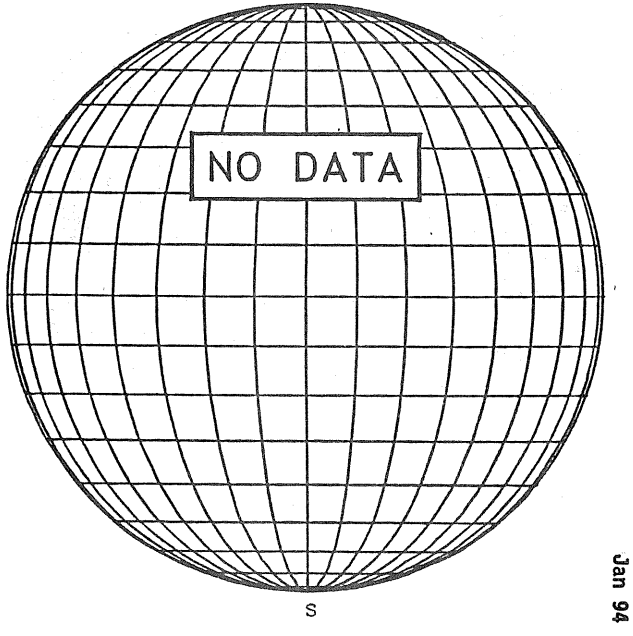
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT

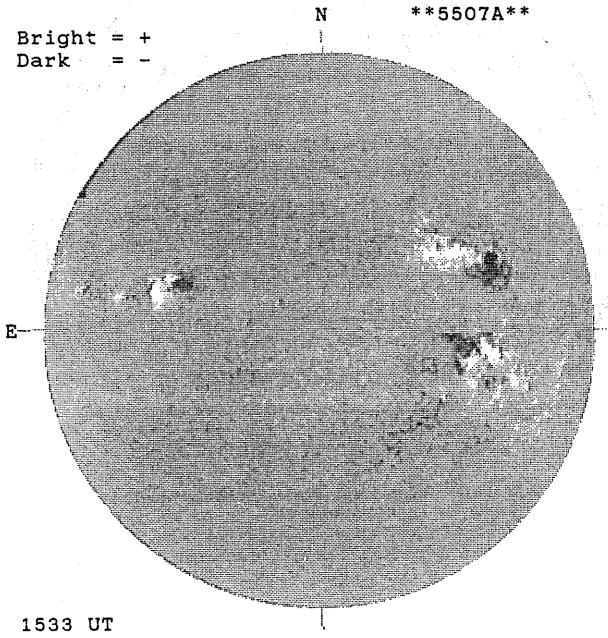


SACRAMENTO PEAK CORONA (1.15 Radii)

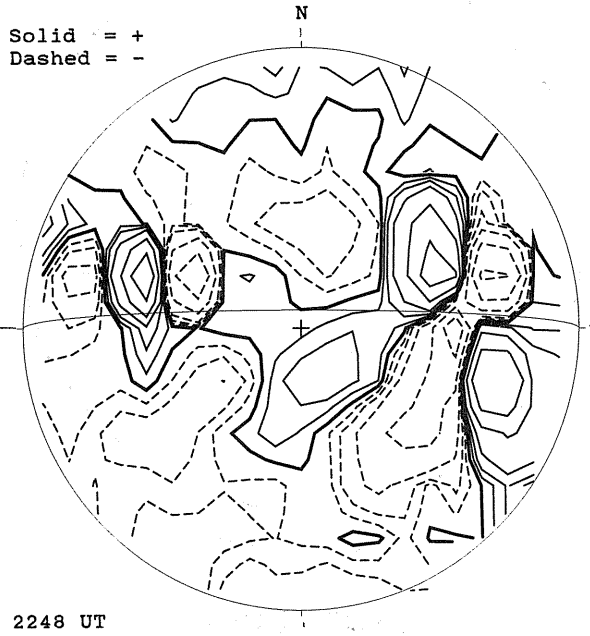


JANUARY 6, 1994 (P= -0.28, B_o =-3.59, L_o = 60.75)

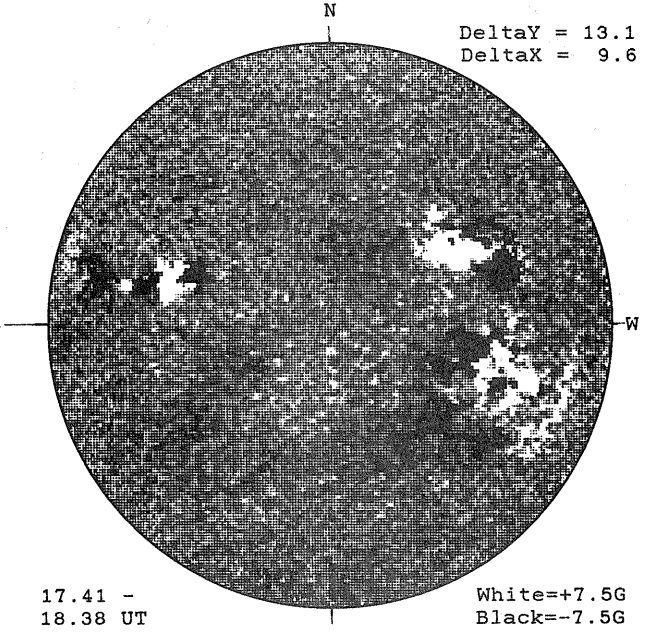
KITT PEAK MAGNETOGRAM



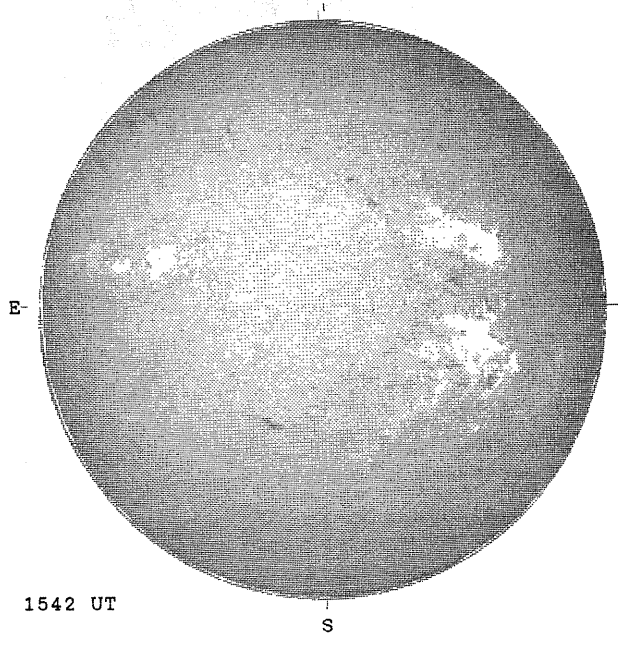
STANFORD MAGNETOGRAM



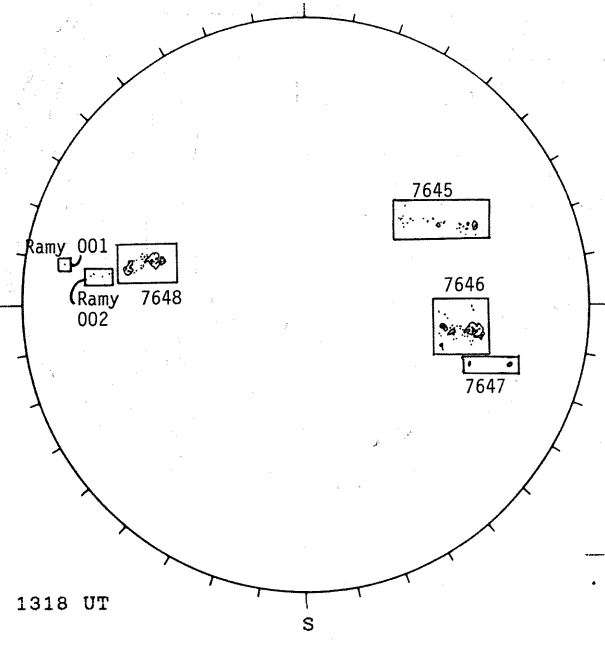
MT. WILSON MAGNETOGRAM



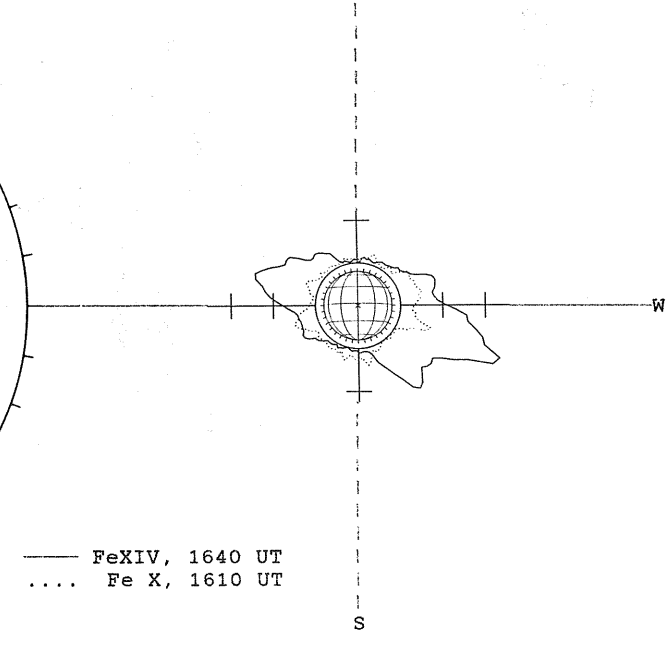
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT

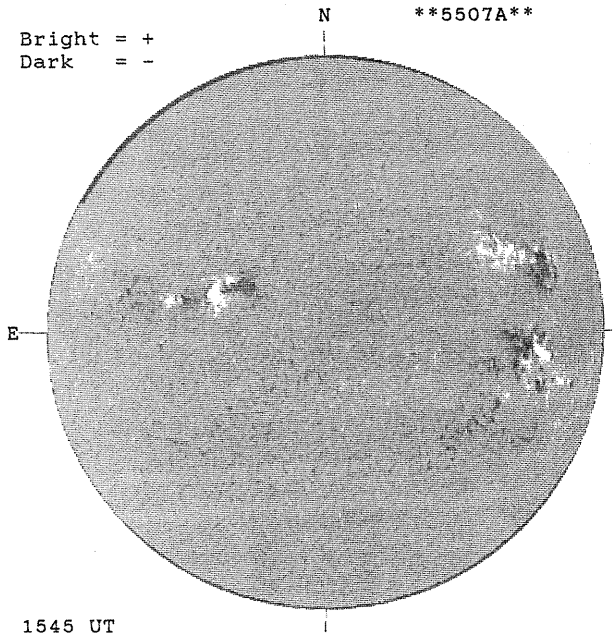


SACRAMENTO PEAK CORONA (1.15 Radii)

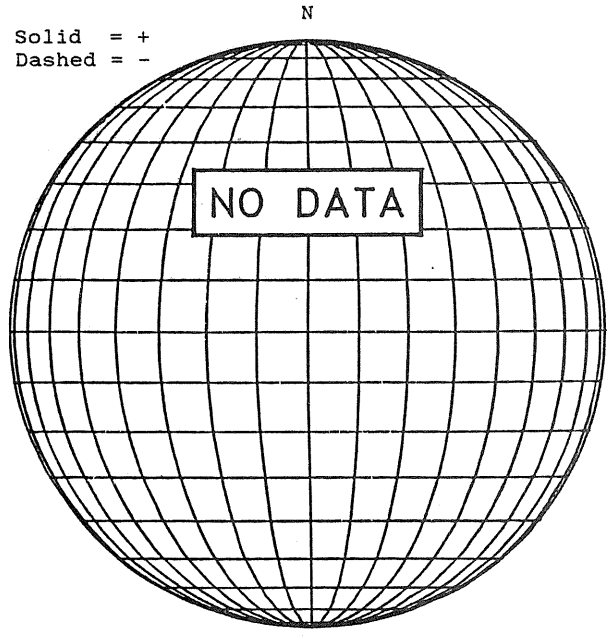


JANUARY 7, 1994 (P= -0.76 B_o =-3.70, L_o = 47.58)

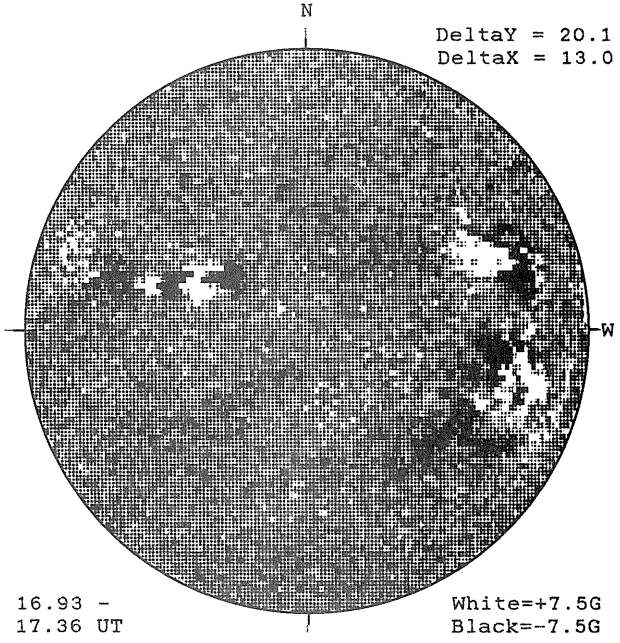
KITT PEAK MAGNETOGRAM



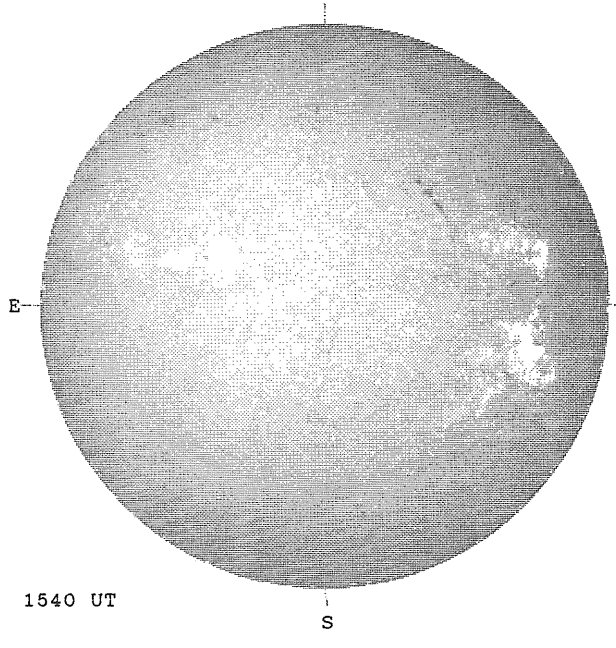
STANFORD MAGNETOGRAM



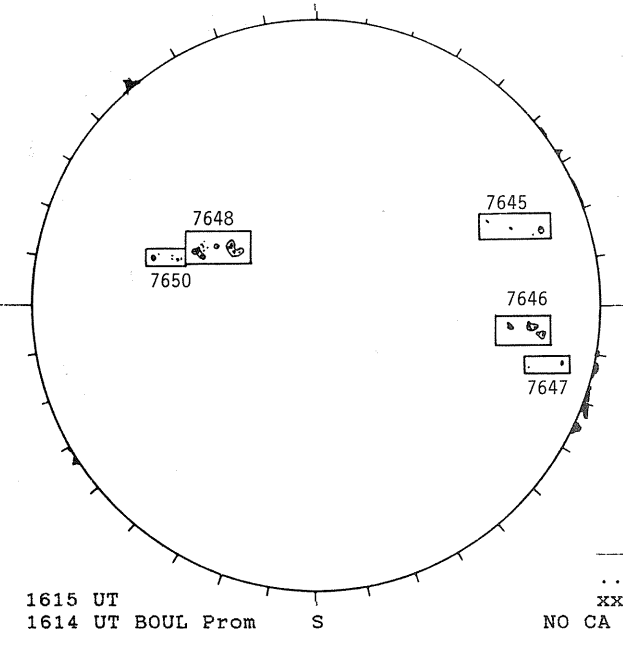
MT. WILSON MAGNETOGRAM



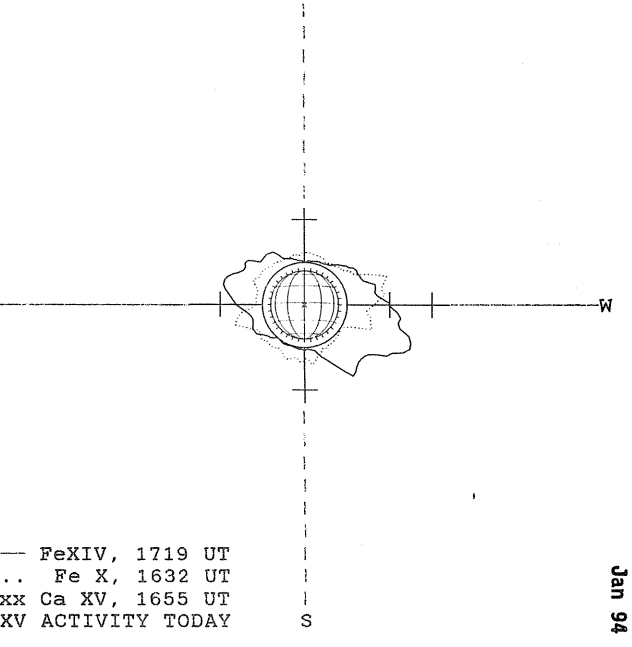
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

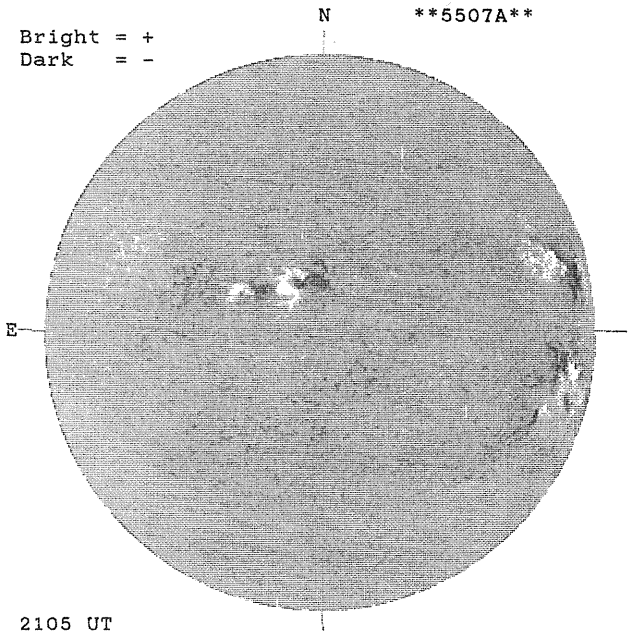


SACRAMENTO PEAK CORONA (1.15 Radii)

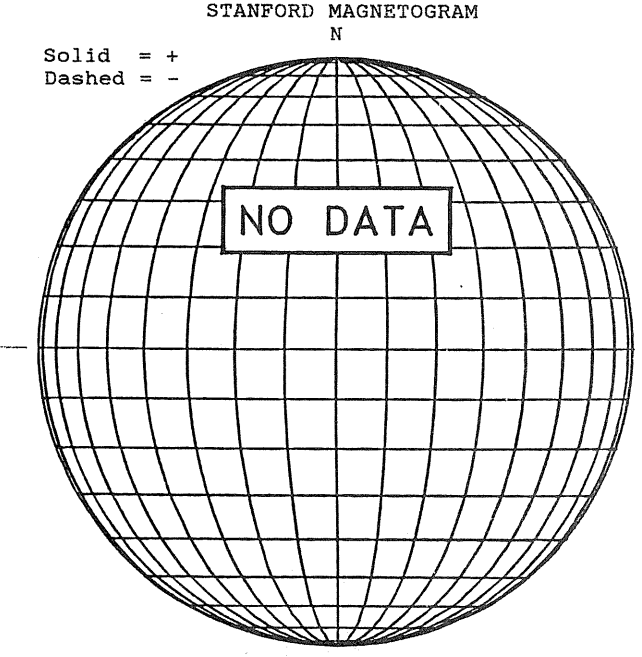


JANUARY 8, 1994 (P= -1.24, B_o =-3.81, L_o = 34.41)

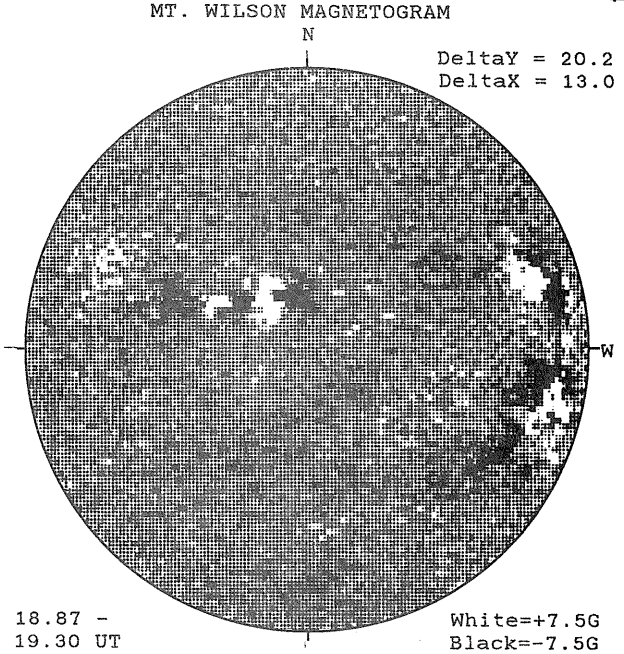
KITT PEAK MAGNETOGRAM



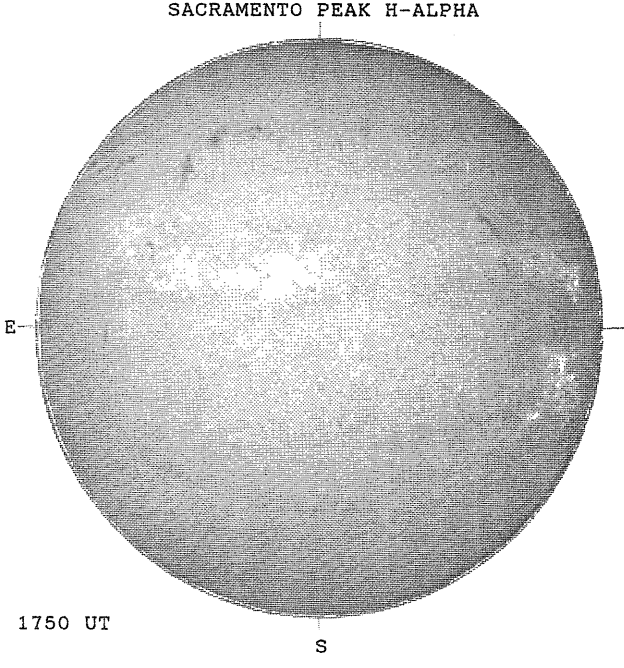
STANFORD MAGNETOGRAM



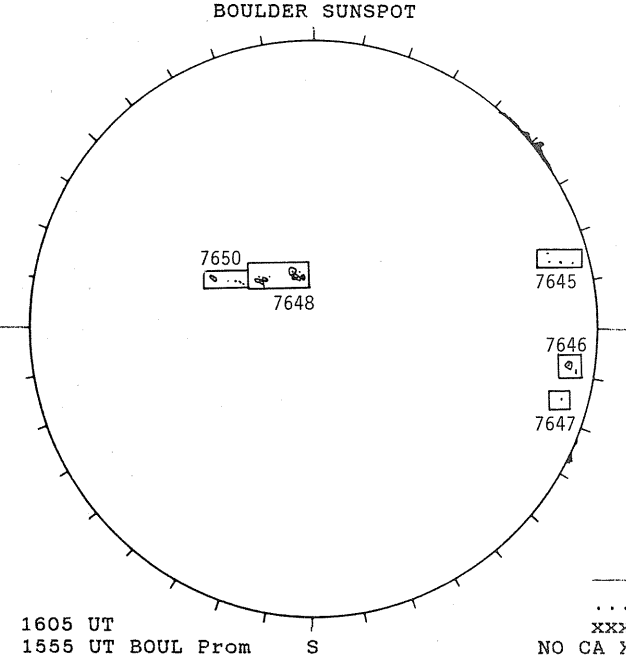
MT. WILSON MAGNETOGRAM



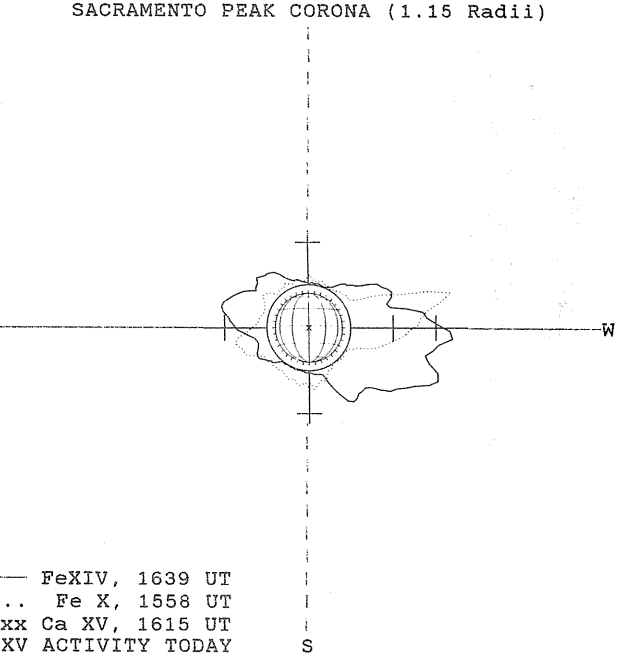
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

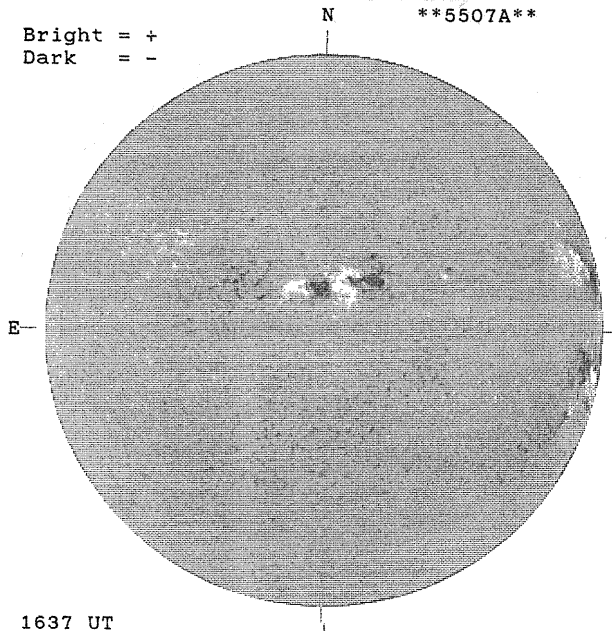


SACRAMENTO PEAK CORONA (1.15 Radii)

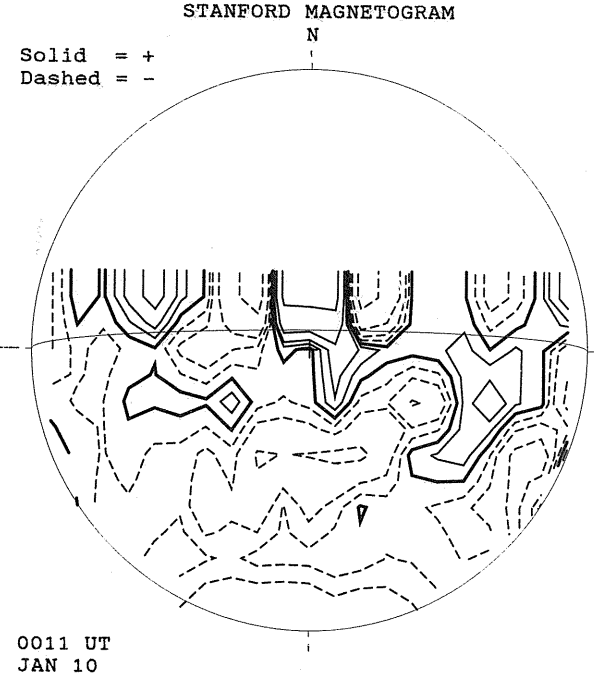


JANUARY 9, 1994 (P= -1.73 B_o =-3.92, L_o = 21.24)

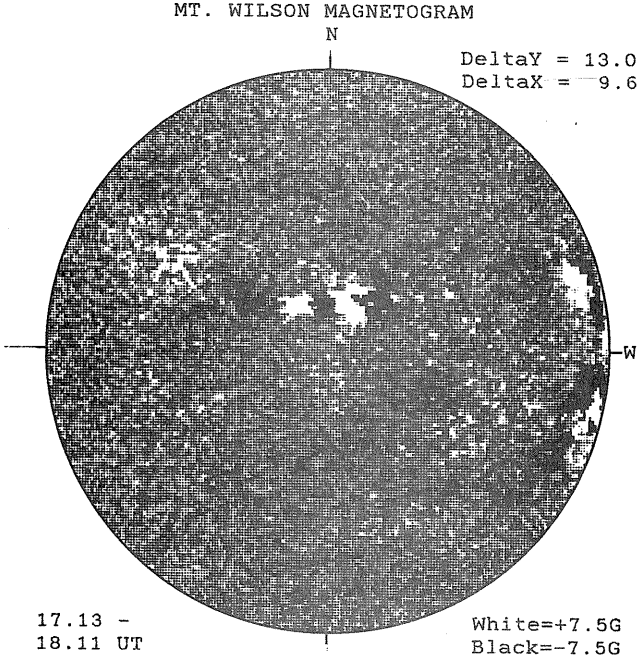
KITT PEAK MAGNETOGRAM



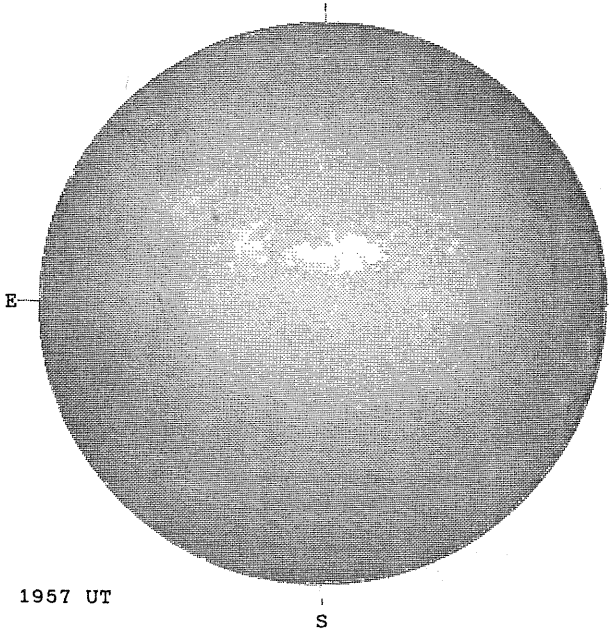
STANFORD MAGNETOGRAM



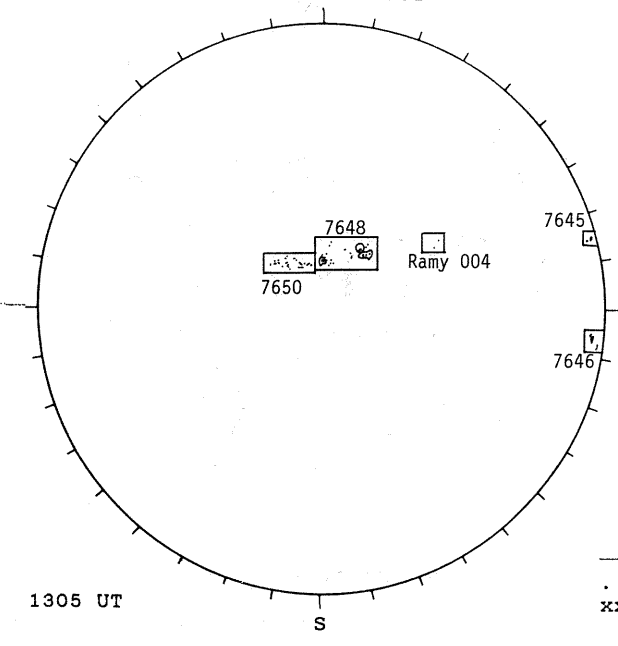
MT. WILSON MAGNETOGRAM



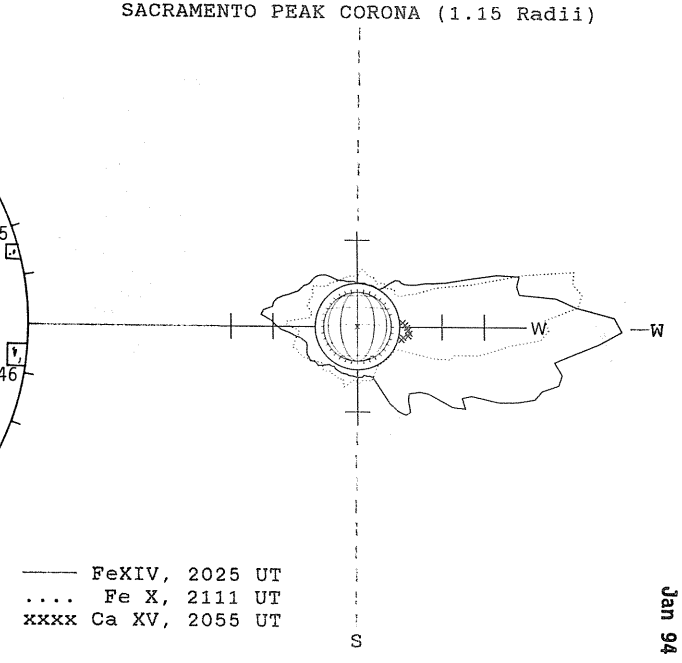
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT

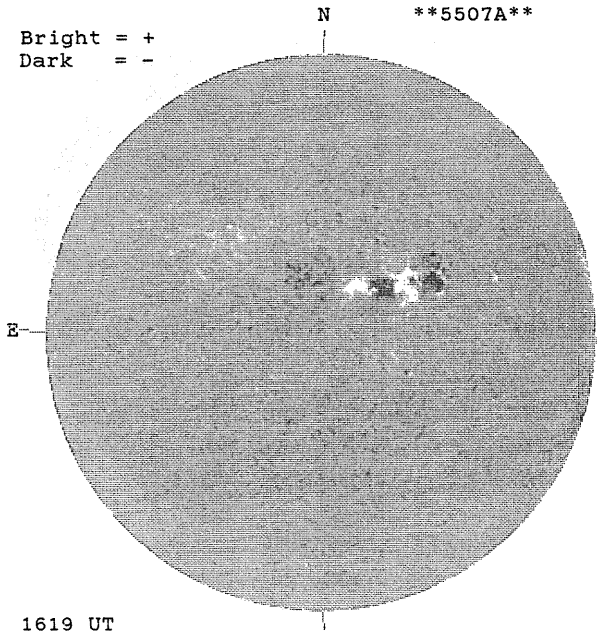


SACRAMENTO PEAK CORONA (1.15 Radii)

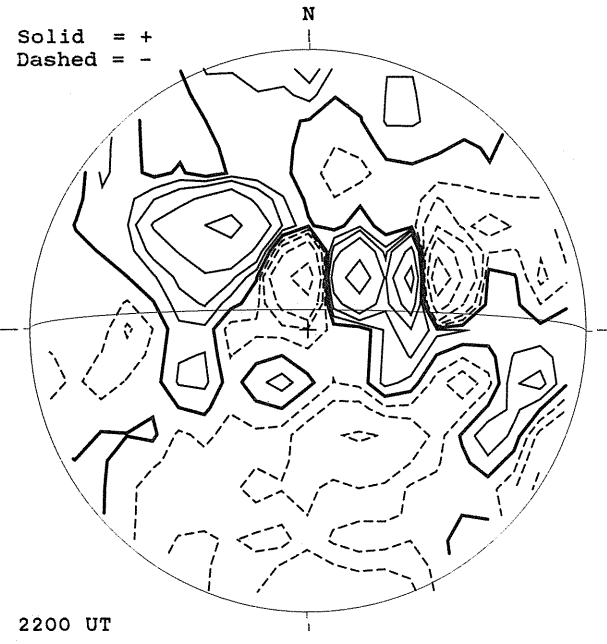


JANUARY 10, 1994 (P= -2.21, B_o =-4.03, L_o = 8.07)

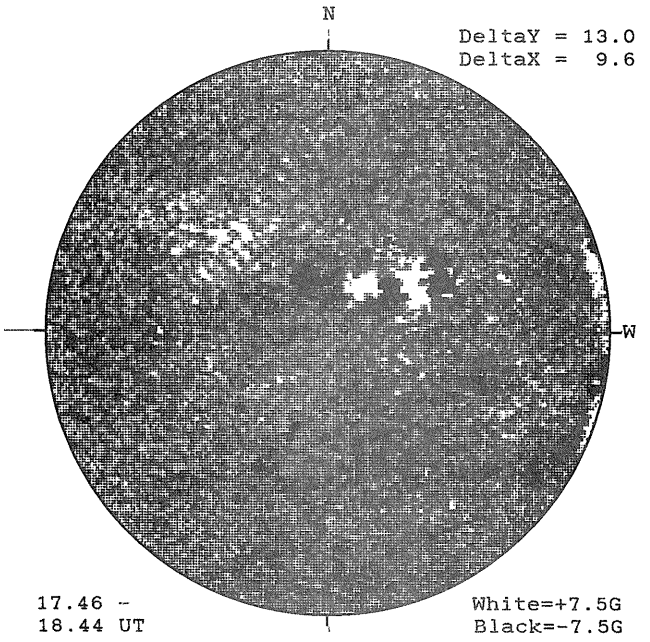
KITT PEAK MAGNETOGRAM



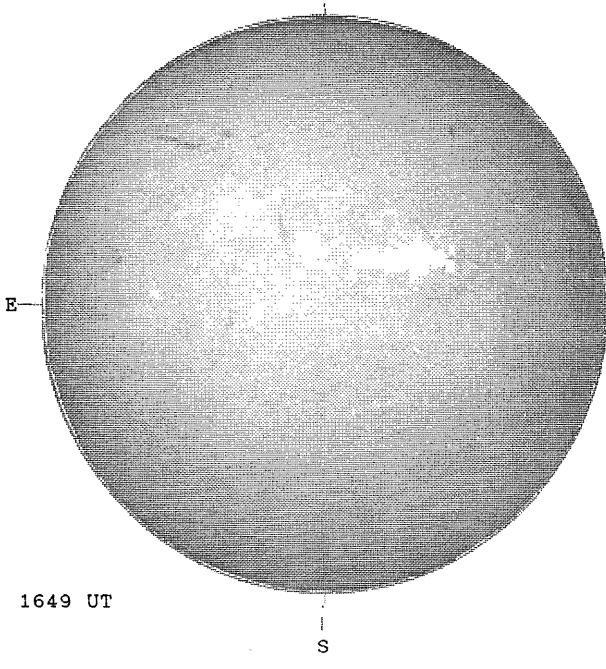
STANFORD MAGNETOGRAM



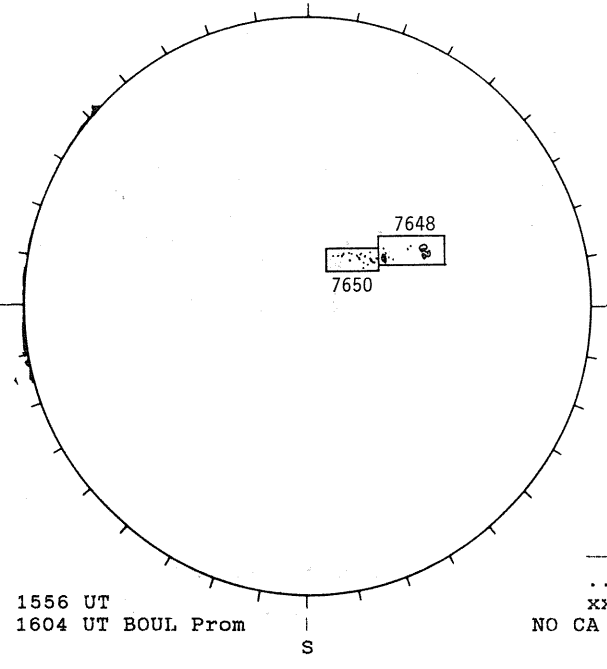
MT. WILSON MAGNETOGRAM



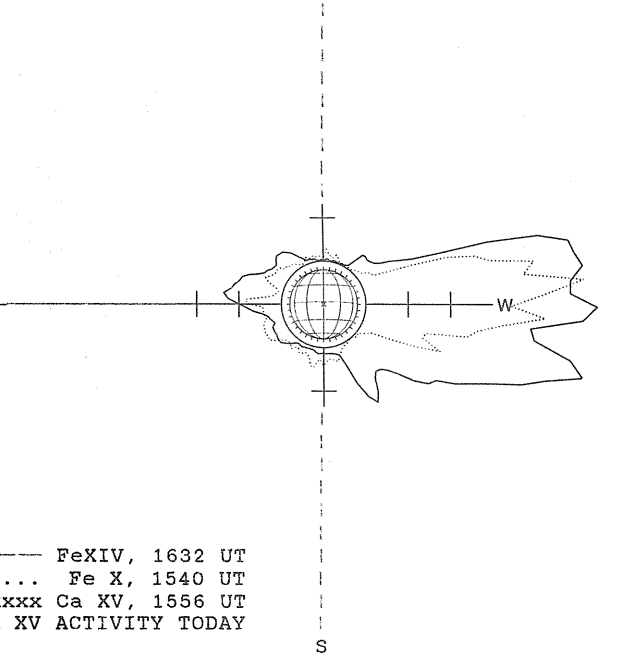
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

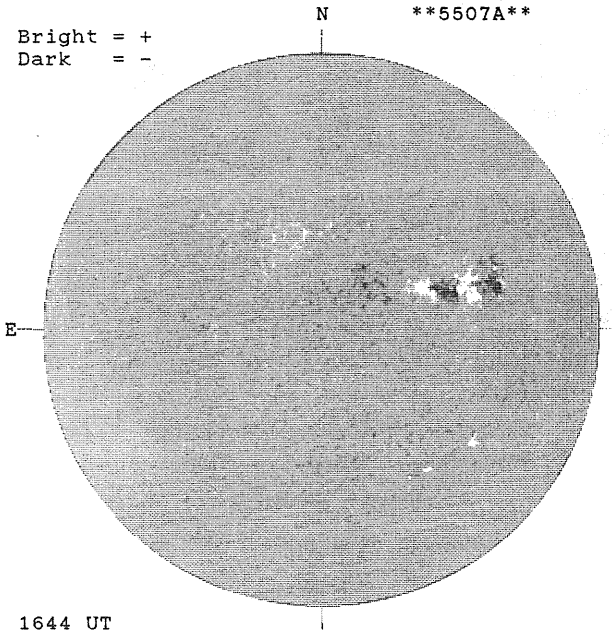


SACRAMENTO PEAK CORONA (1.15 Radii)



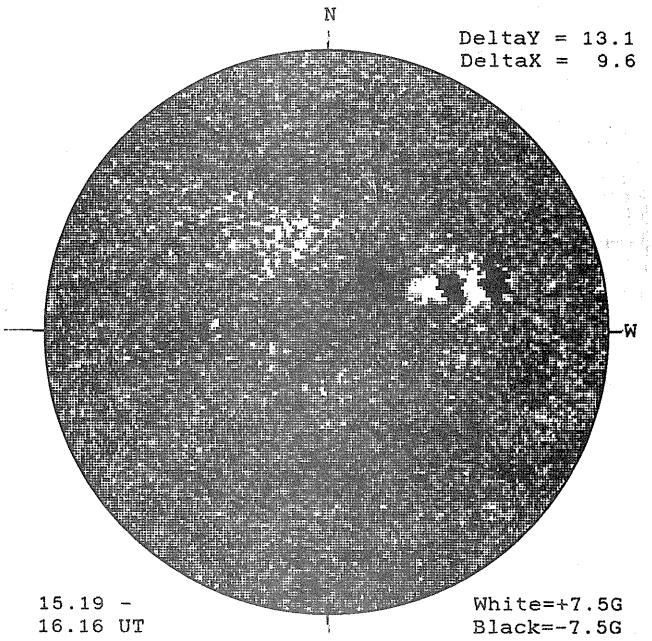
JANUARY 11, 1994 (P= -2.69, B_o =-4.14, L_o = 354.90)

KITT PEAK MAGNETOGRAM

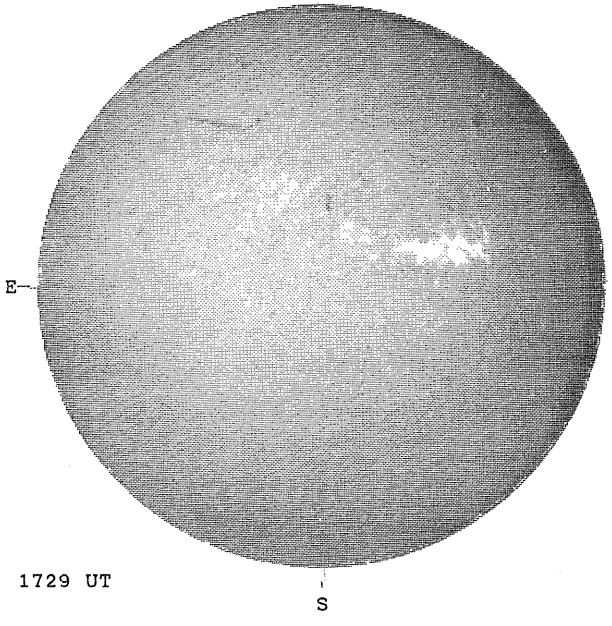


STANFORD MAGNETOGRAM

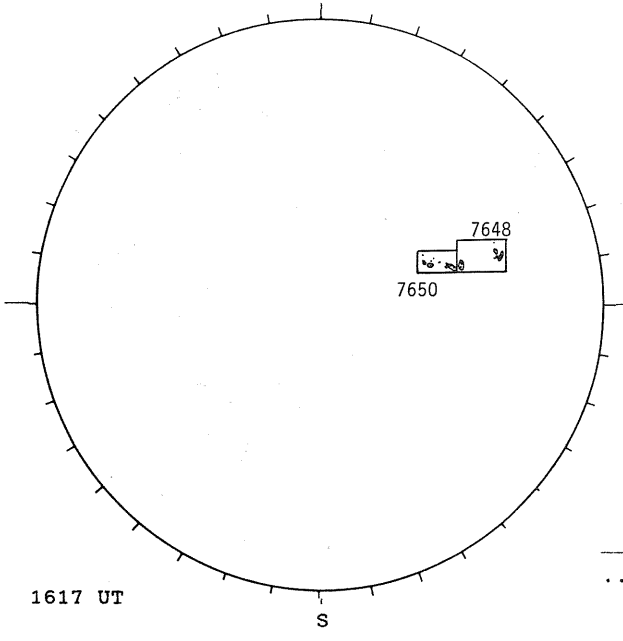
MT. WILSON MAGNETOGRAM



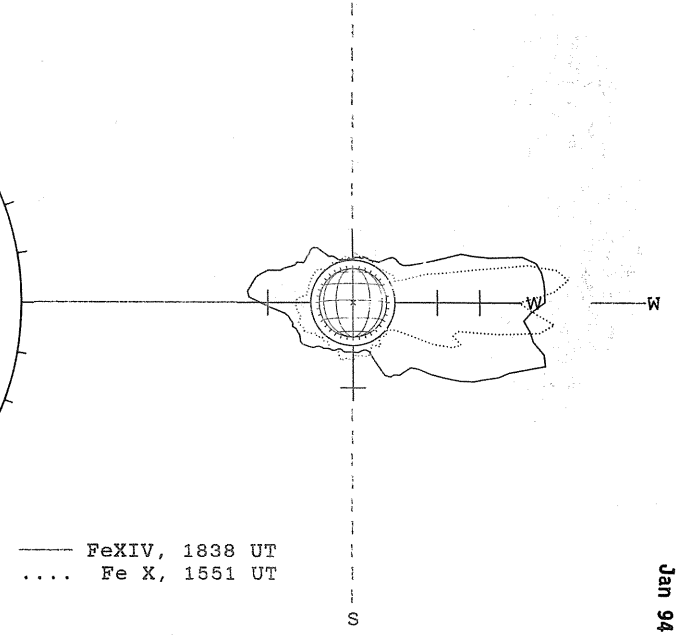
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

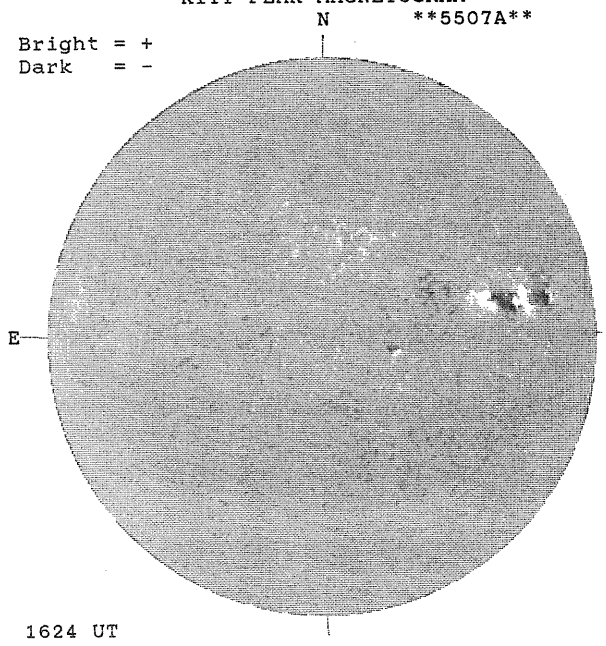


SACRAMENTO PEAK CORONA (1.15 Radii)



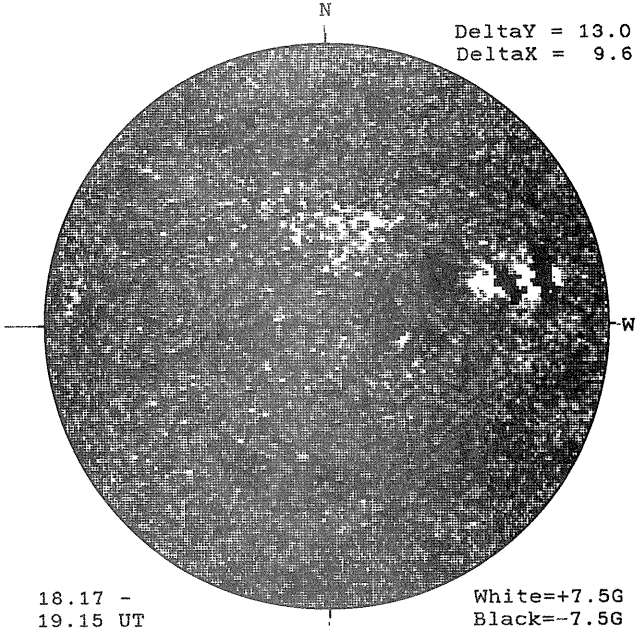
JANUARY 12, 1994 (P= -3.16, B_o =-4.24, L_o = 341.73)

KITT PEAK MAGNETOGRAM

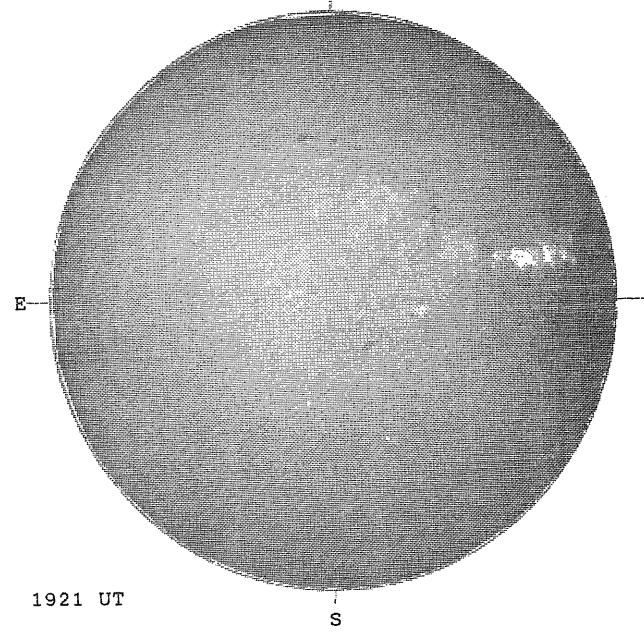


STANFORD MAGNETOGRAM

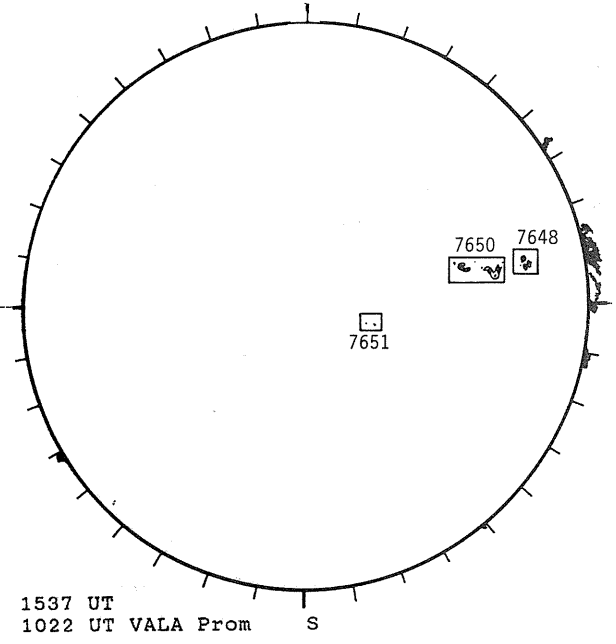
MT. WILSON MAGNETOGRAM



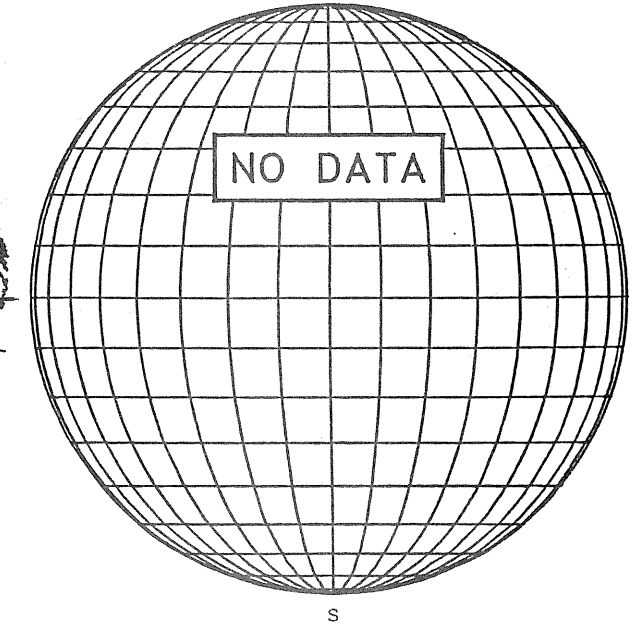
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

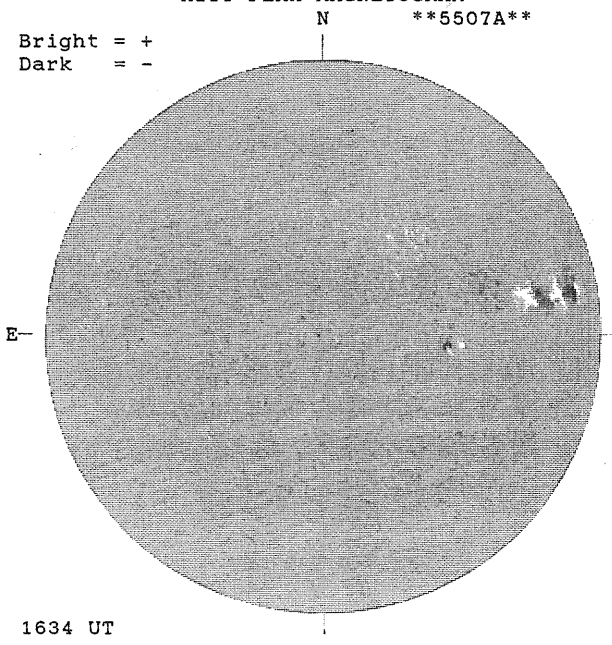


SACRAMENTO PEAK CORONA (1.15 Radii)



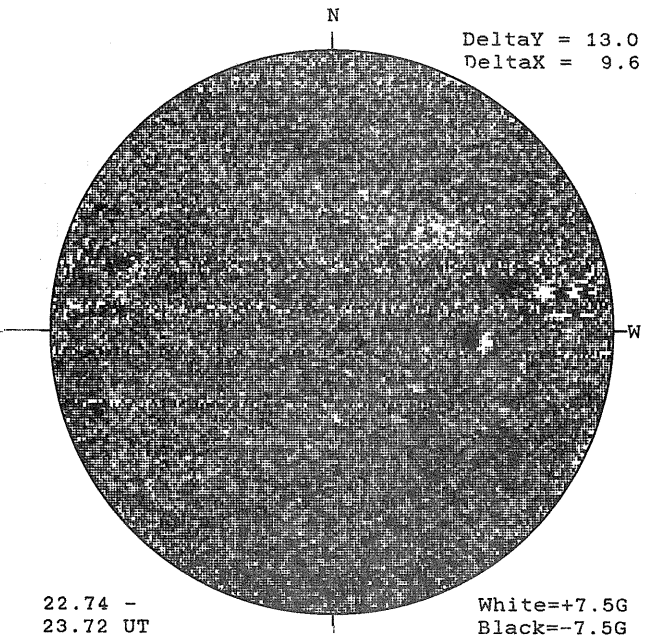
JANUARY 13, 1994 (P= -3.64, B_o =-4.34, L_o = 328.57)

KITT PEAK MAGNETOGRAM

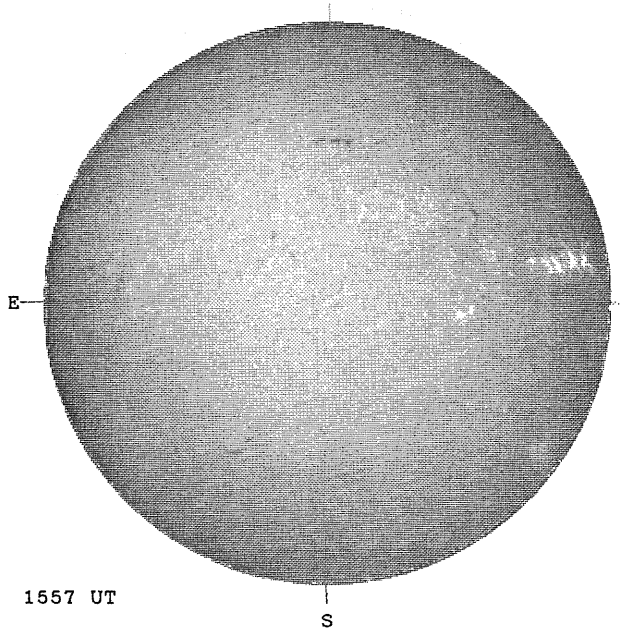


STANFORD MAGNETOGRAM

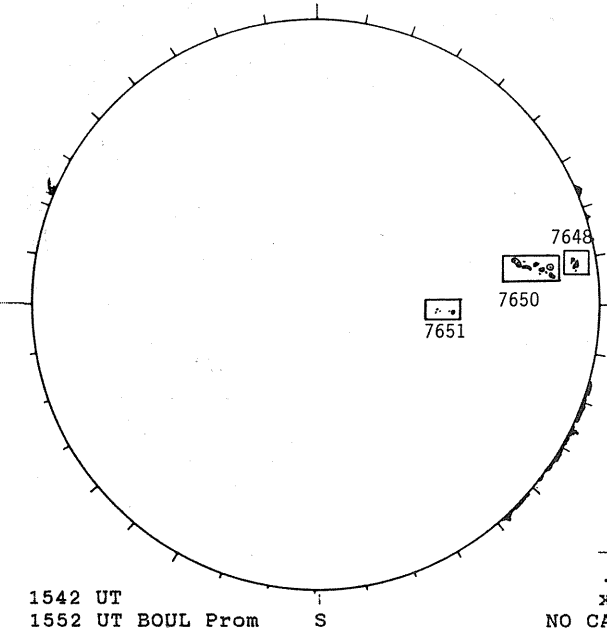
MT. WILSON MAGNETOGRAM



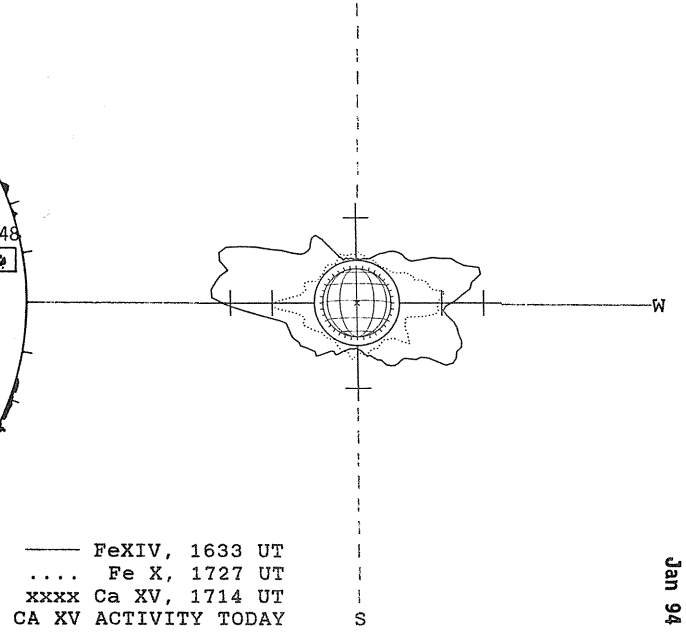
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



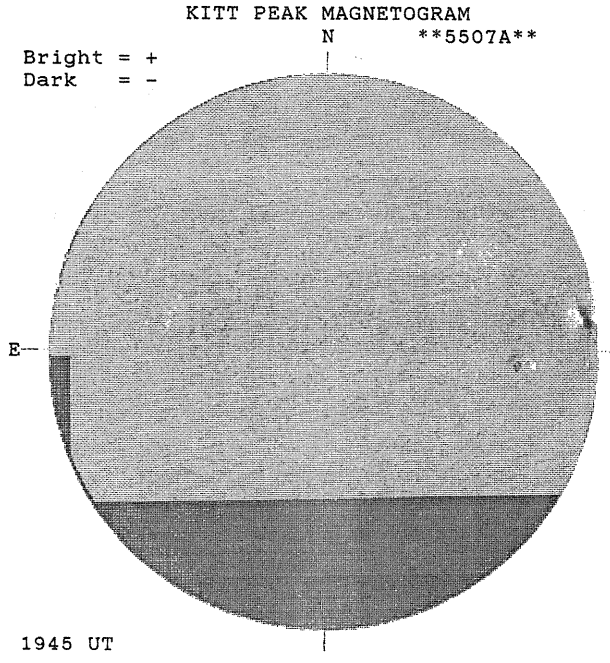
SACRAMENTO PEAK CORONA (1.15 Radii)



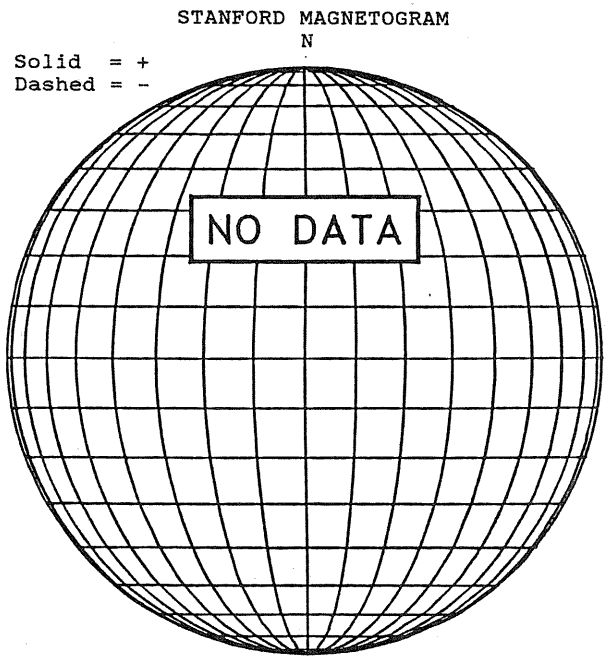
55
Jan 94

JANUARY 14, 1994 (P= -4.11, Bo =-4.45, Lo = 315.40)

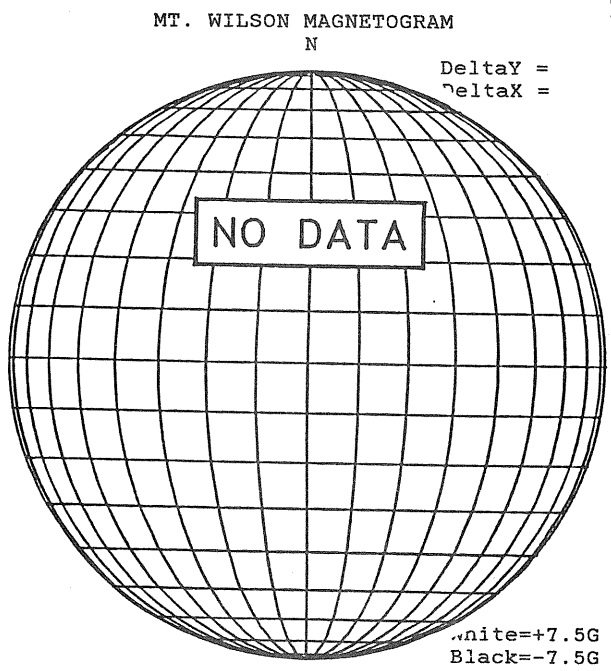
KITT PEAK MAGNETOGRAM



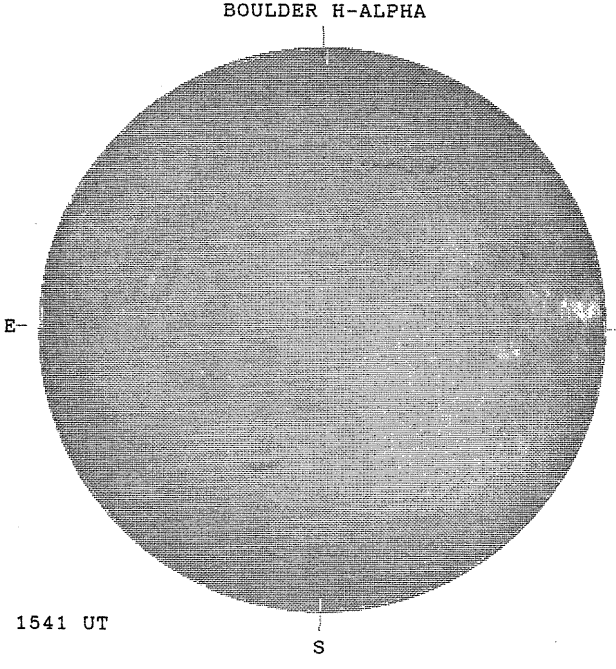
STANFORD MAGNETOGRAM



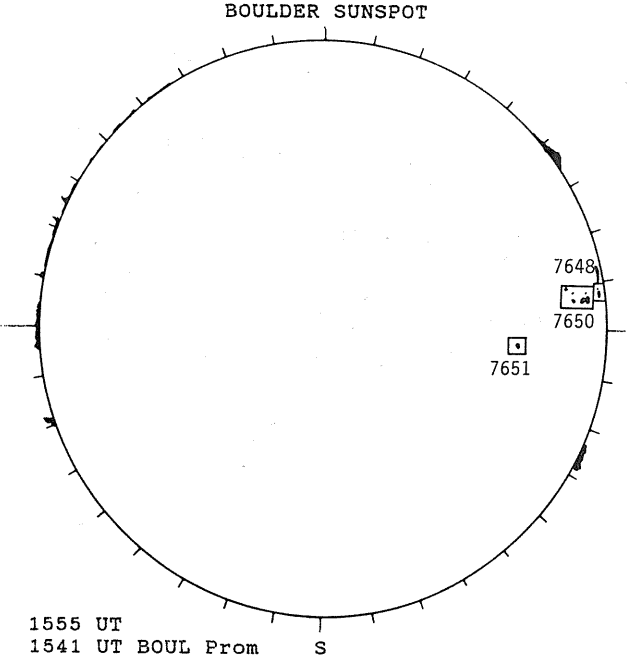
MT. WILSON MAGNETOGRAM



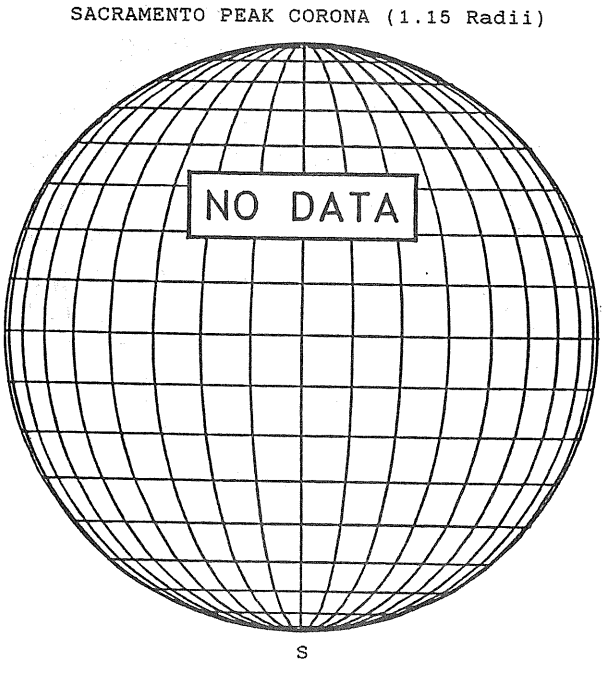
BOULDER H-ALPHA



BOULDER SUNSPOT

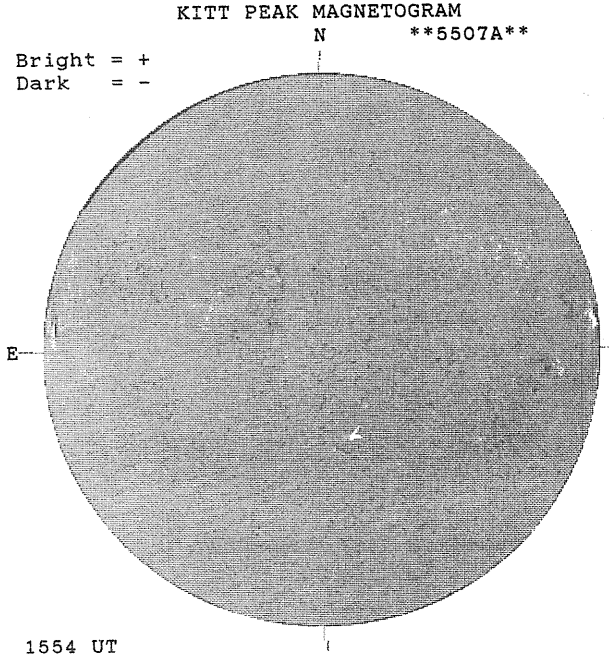


SACRAMENTO PEAK CORONA (1.15 Radii)

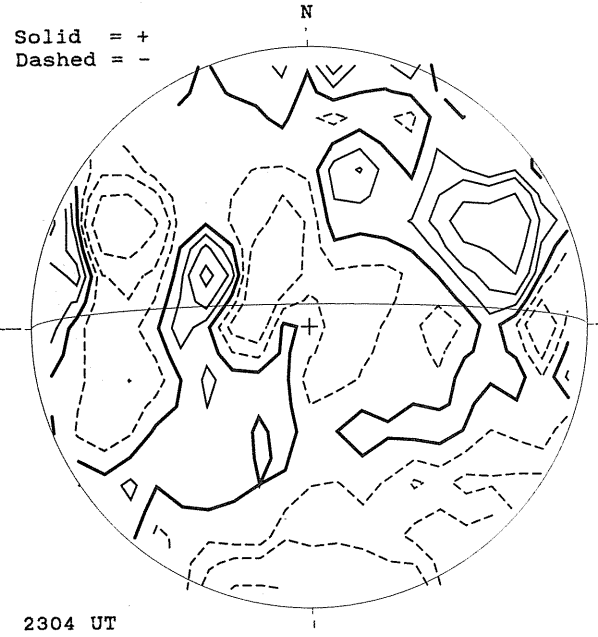


JANUARY 15, 1994 (P= -4.58, B_o =-4.55 L_o = 302.23)

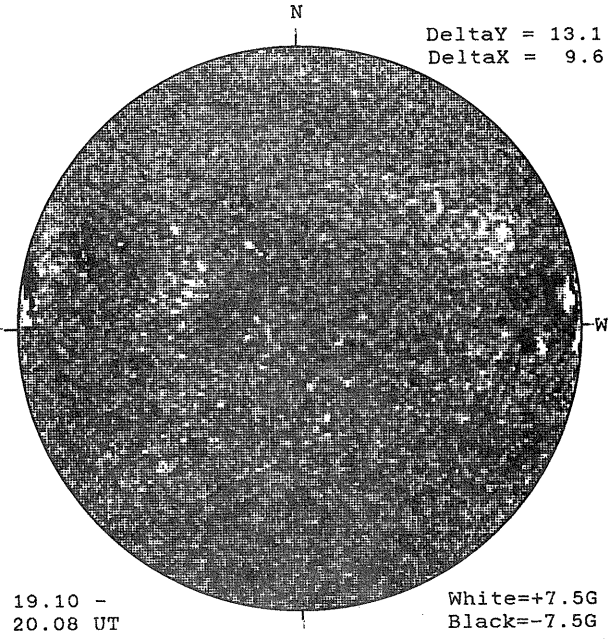
KITT PEAK MAGNETOGRAM



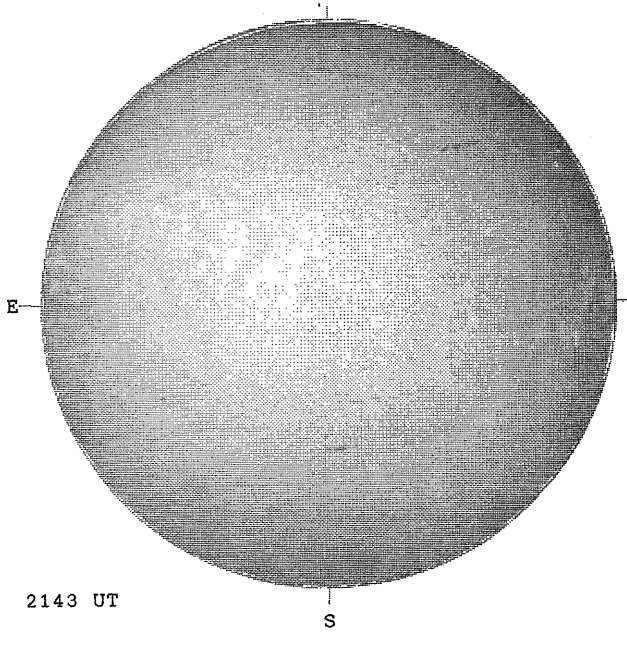
STANFORD MAGNETOGRAM



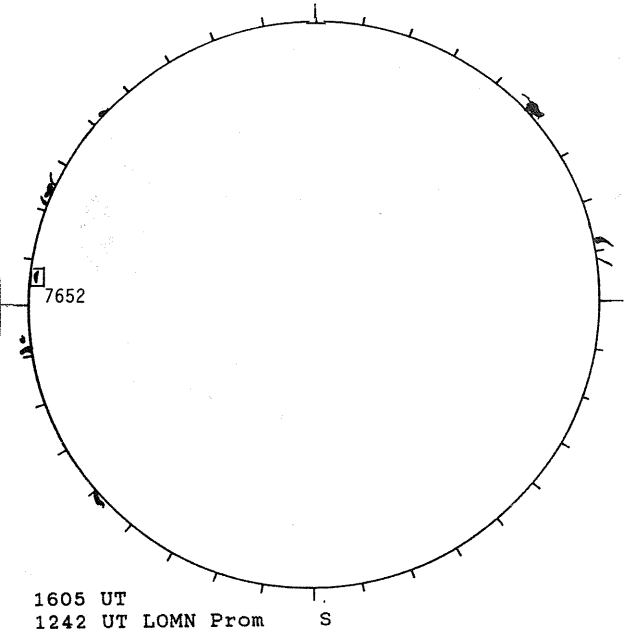
MT. WILSON MAGNETOGRAM



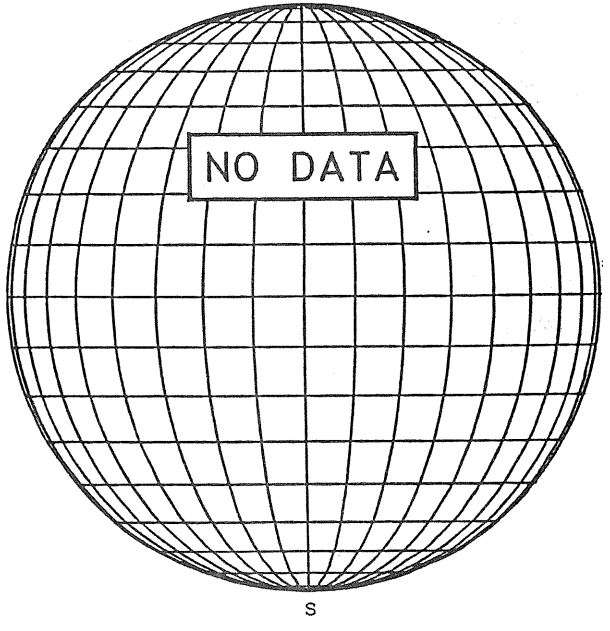
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



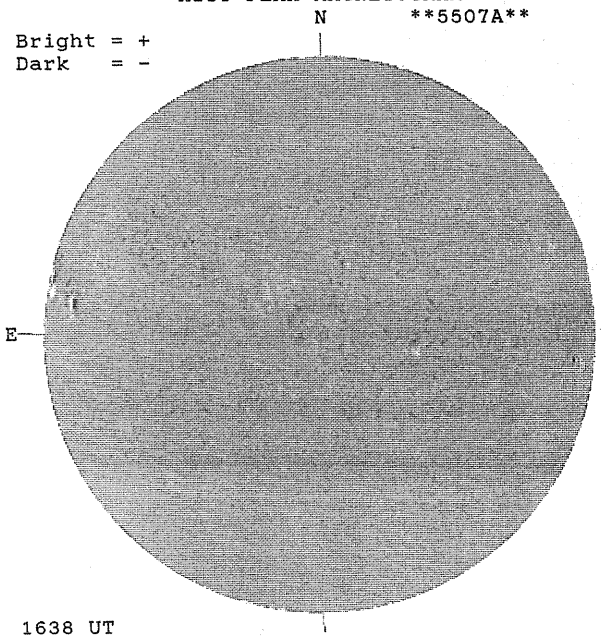
SACRAMENTO PEAK CORONA (1.15 Radii)



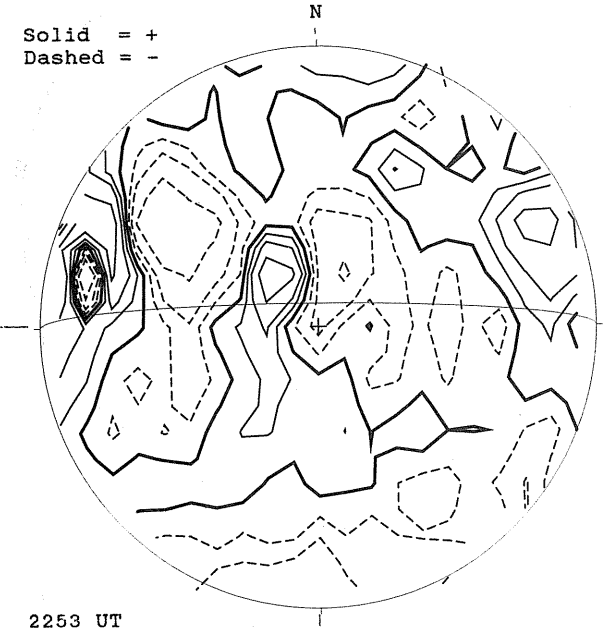
57
Jan 94

JANUARY 16, 1994 (P= -5.05, B_o =-4.65, L_o = 289.06)

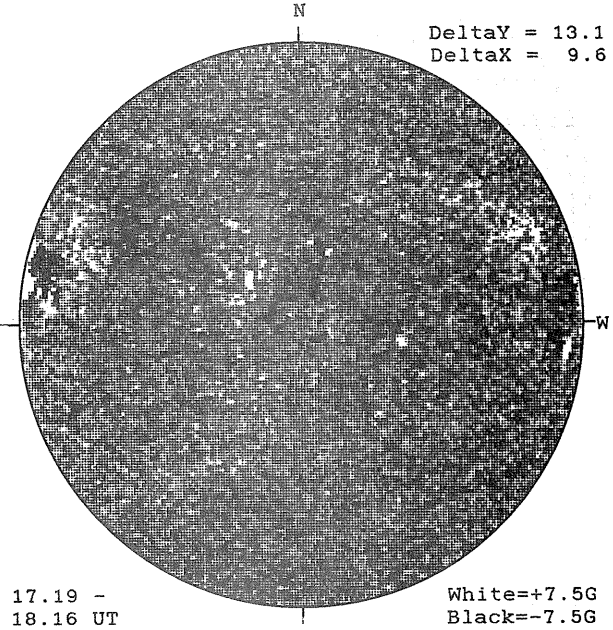
KITT PEAK MAGNETOGRAM



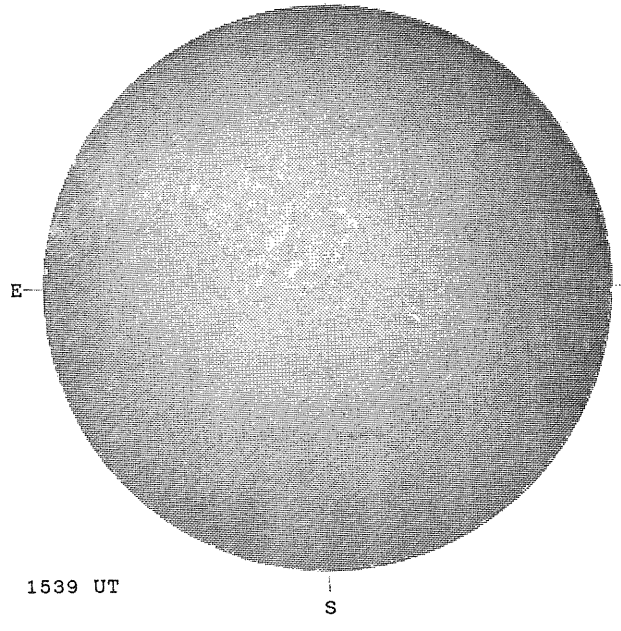
STANFORD MAGNETOGRAM



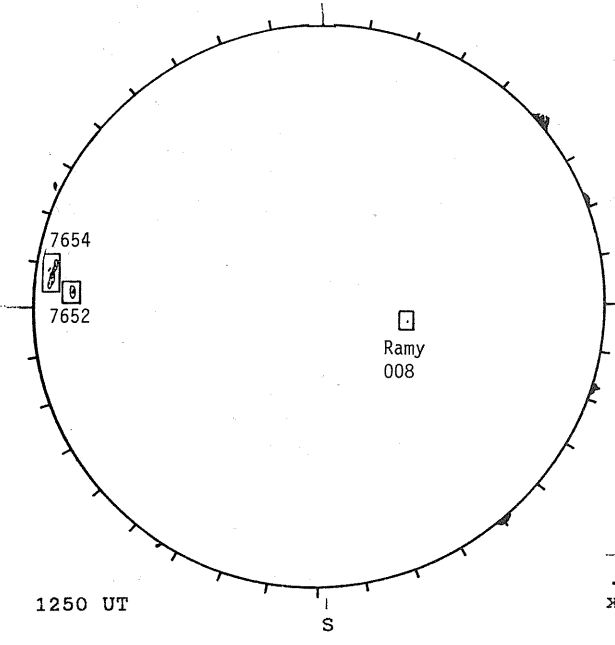
MT. WILSON MAGNETOGRAM



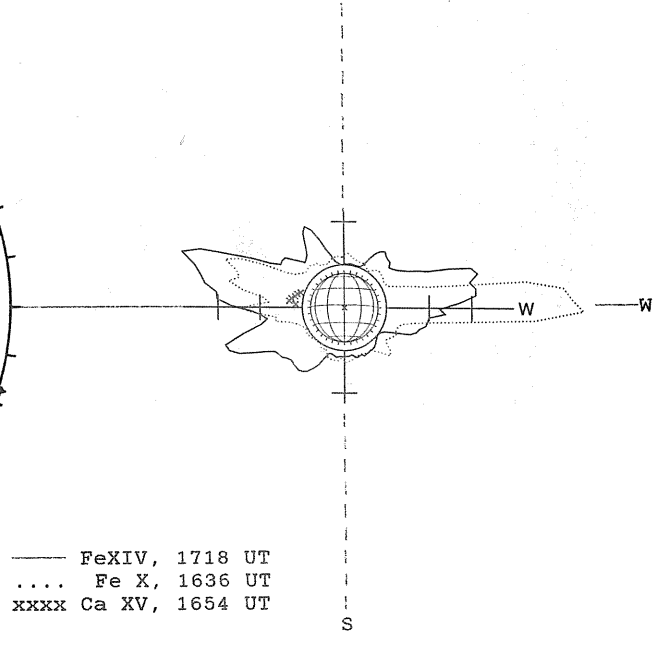
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



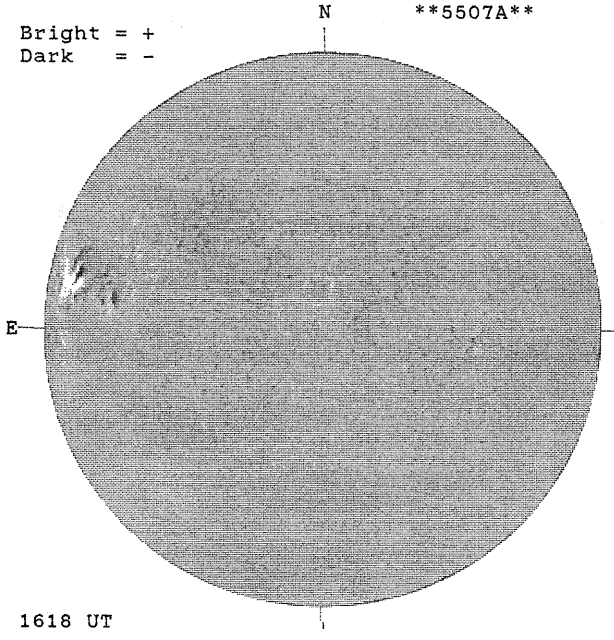
SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1718 UT
.... Fe X, 1636 UT
xxxx Ca XV, 1654 UT

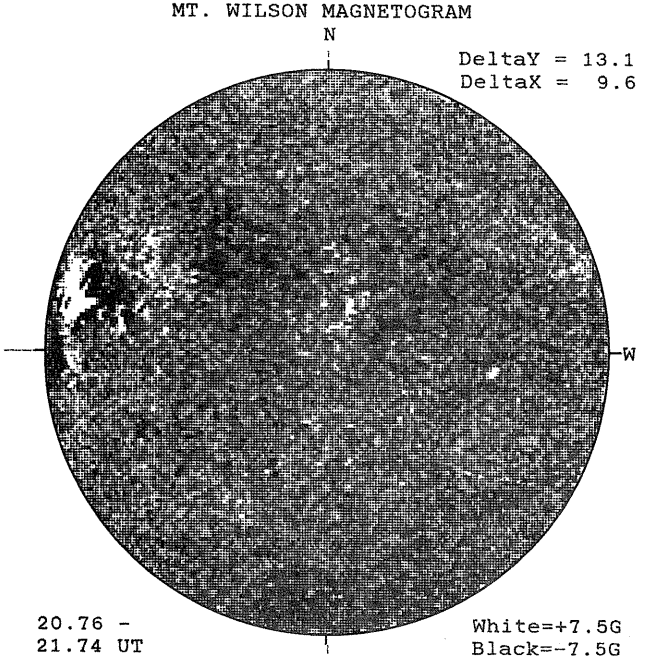
JANUARY 17, 1994 (P= -5.51, B_o =-4.75, L_o = 275.90)

KITT PEAK MAGNETOGRAM

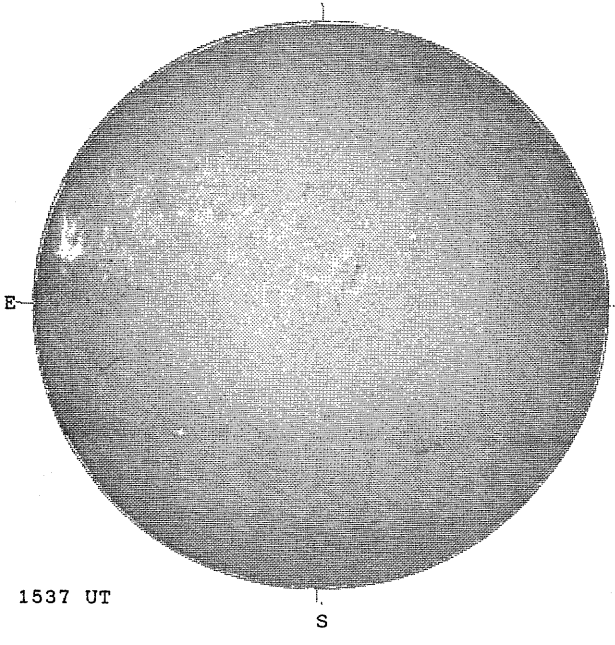


STANFORD MAGNETOGRAM

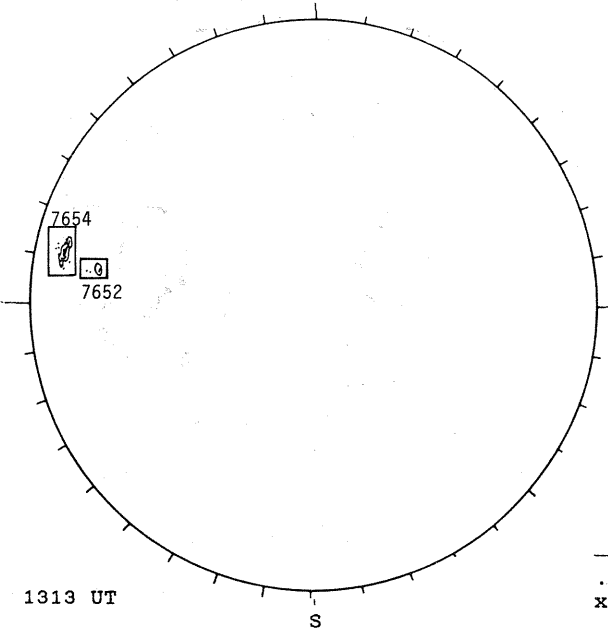
MT. WILSON MAGNETOGRAM



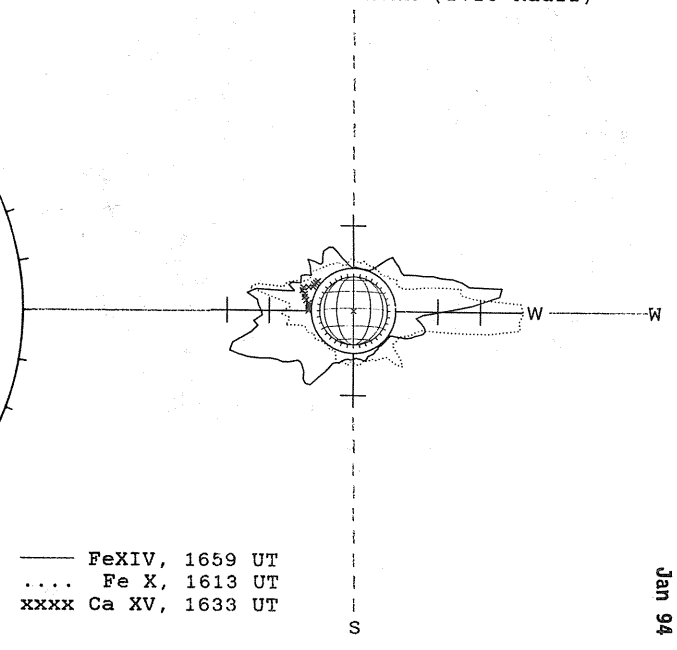
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



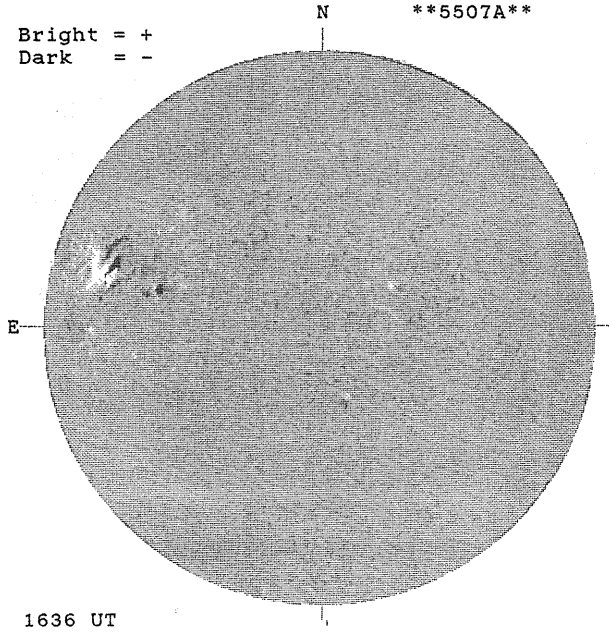
SACRAMENTO PEAK CORONA (1.15 Radii)



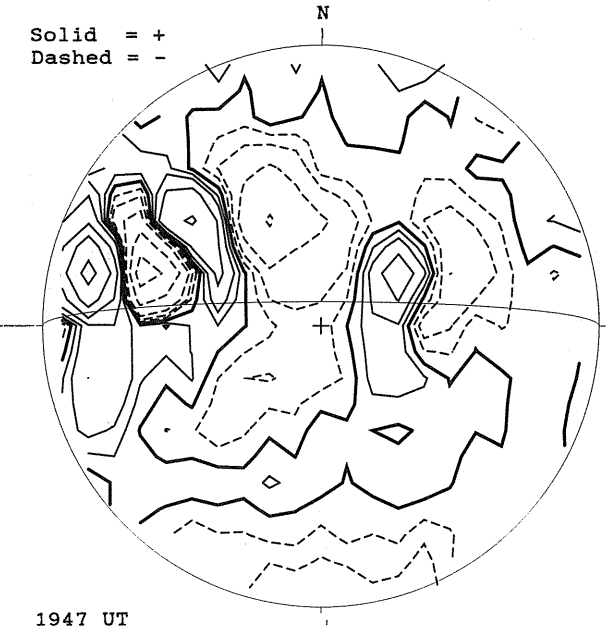
59
Jan 94

JANUARY 18, 1994 (P= -5.98, B_o =-4.84, L_o = 262.73)

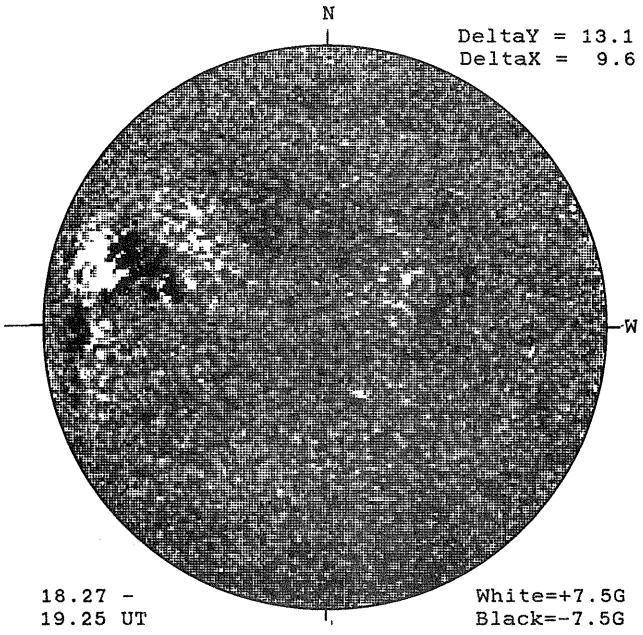
KITT PEAK MAGNETOGRAM



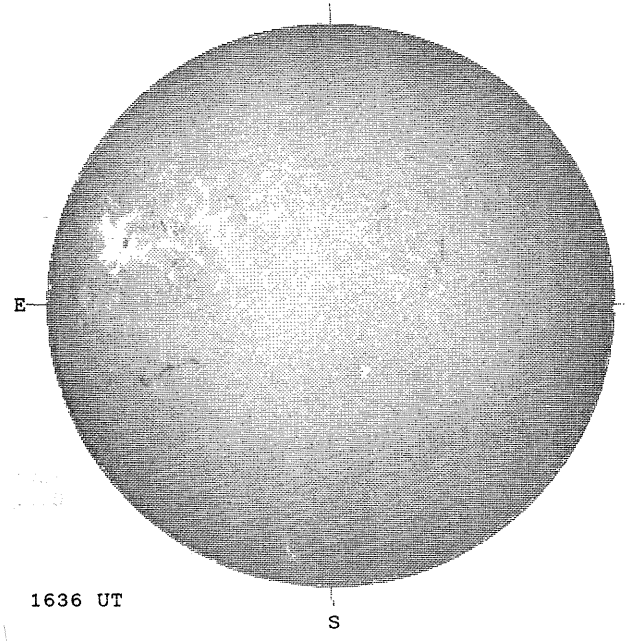
STANFORD MAGNETOGRAM



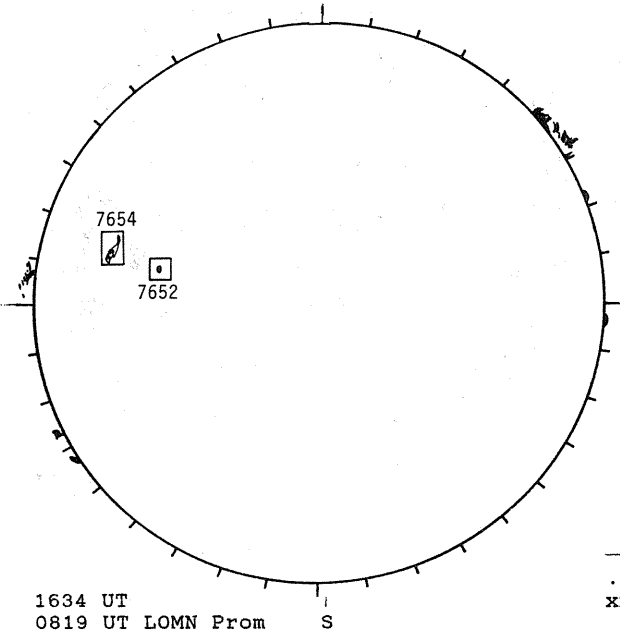
MT. WILSON MAGNETOGRAM



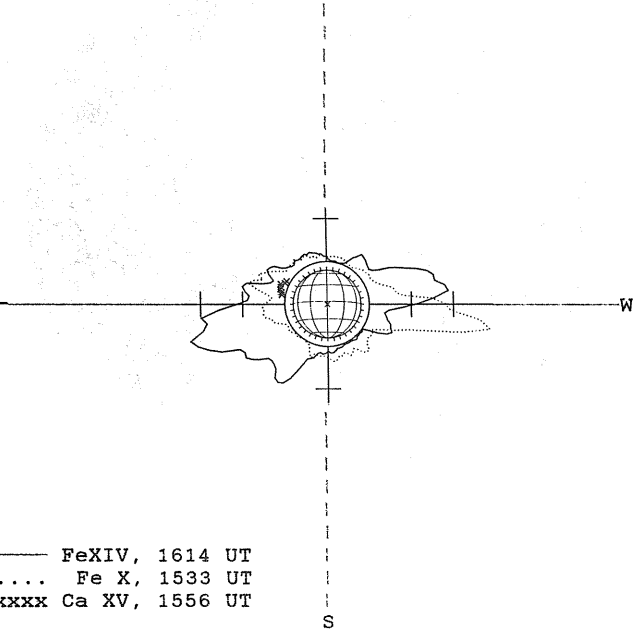
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

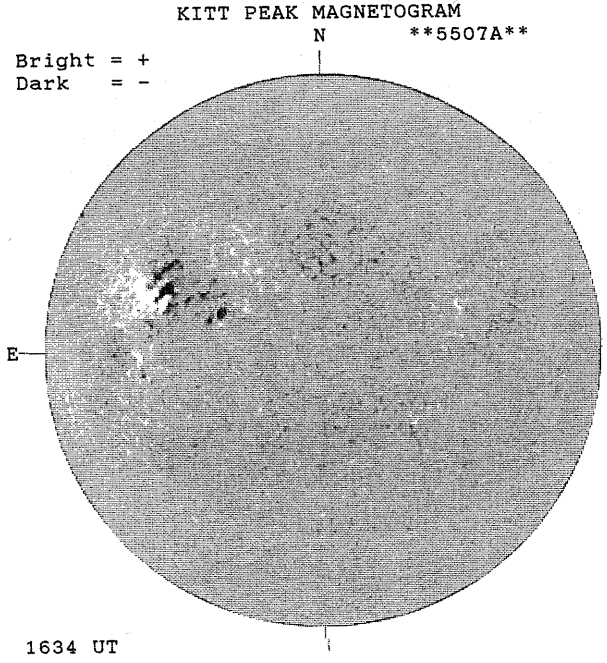


SACRAMENTO PEAK CORONA (1.15 Radii)

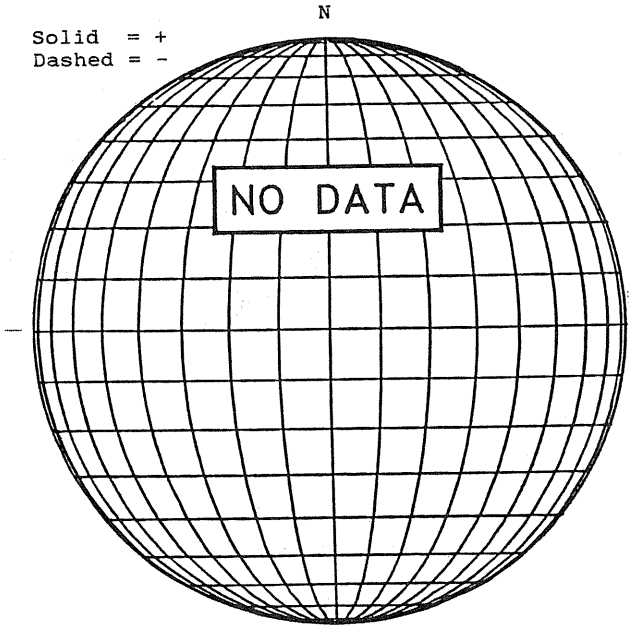


JANUARY 19, 1994 (P= -6.44, B_o =-4.94, L_o = 249.56)

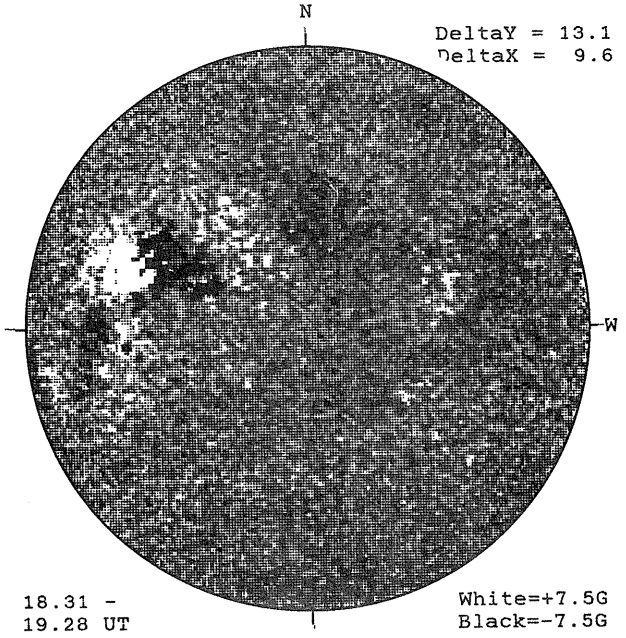
KITT PEAK MAGNETOGRAM



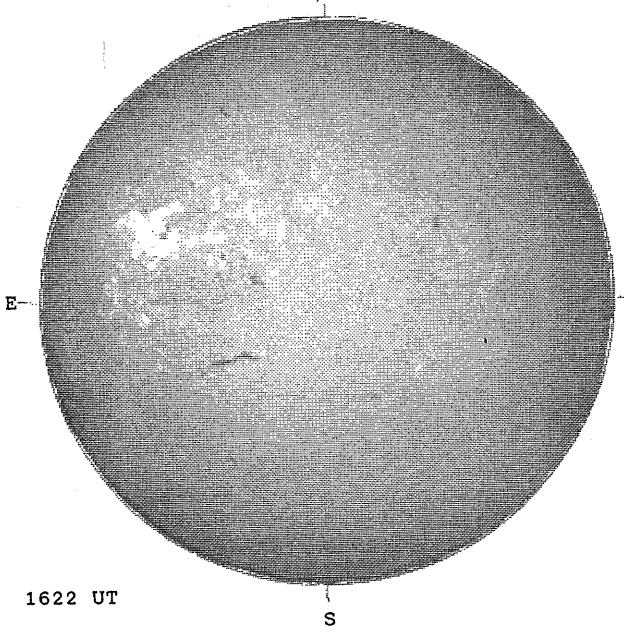
STANFORD MAGNETOGRAM



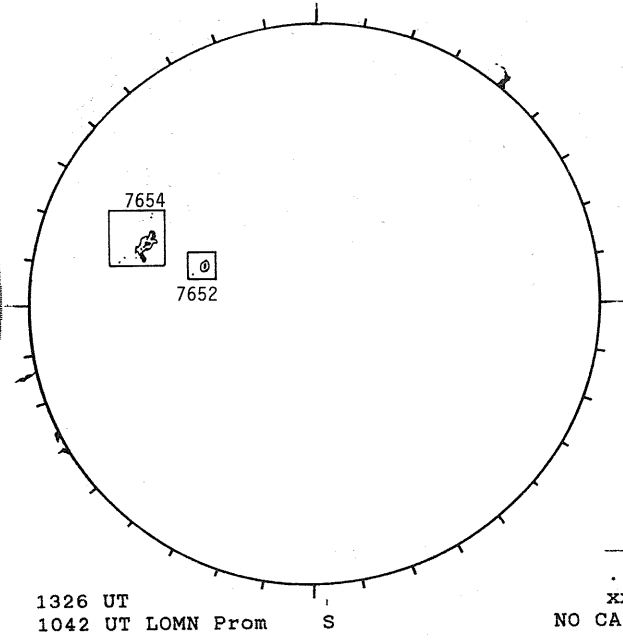
MT. WILSON MAGNETOGRAM



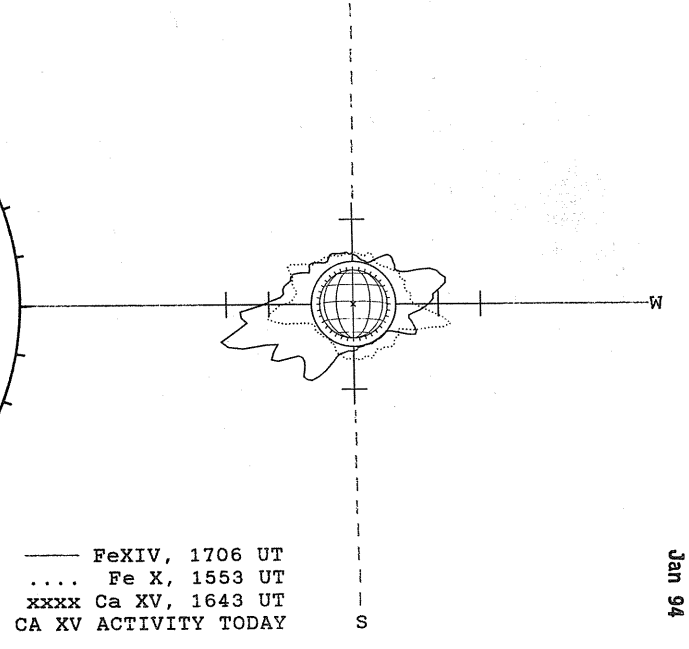
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



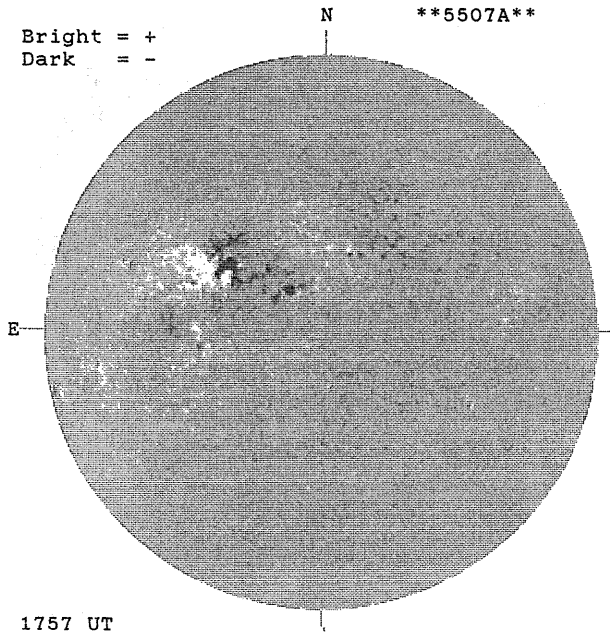
SACRAMENTO PEAK CORONA (1.15 Radii)



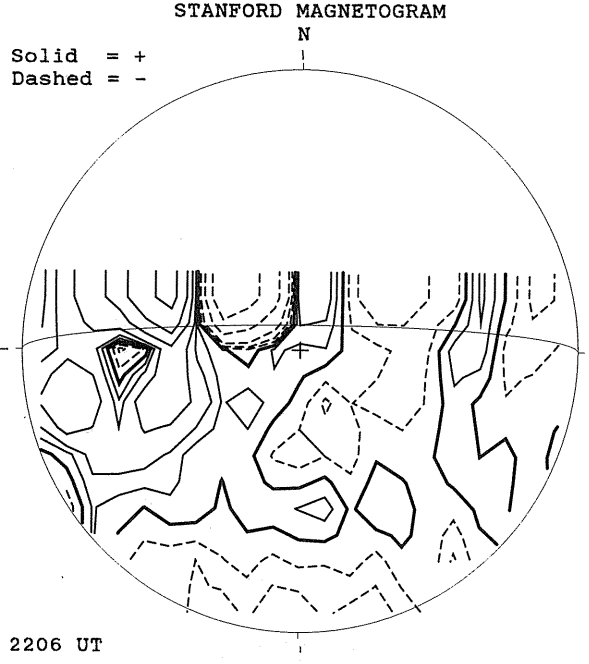
61
Jan 94

JANUARY 20, 1994 (P= -6.90, B_o =-5.03, L_o = 236.40)

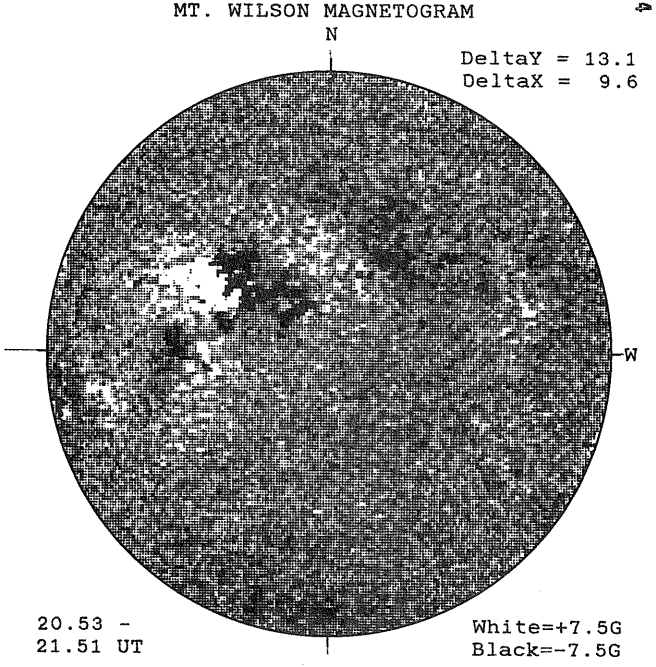
KITT PEAK MAGNETOGRAM



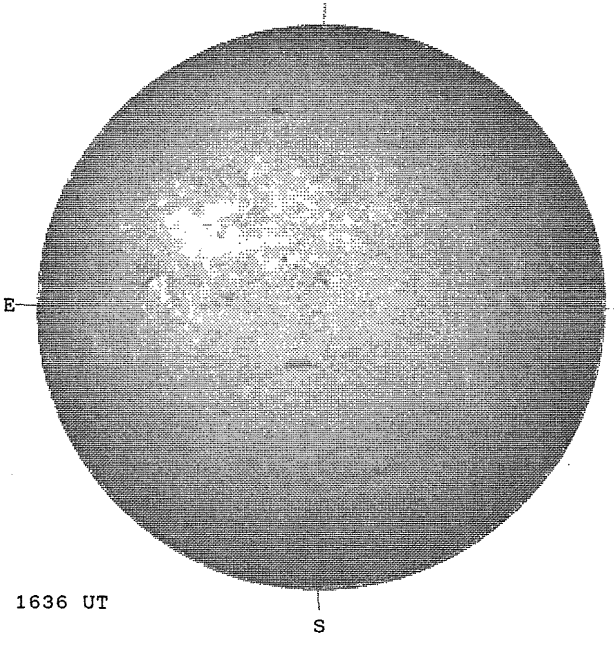
STANFORD MAGNETOGRAM



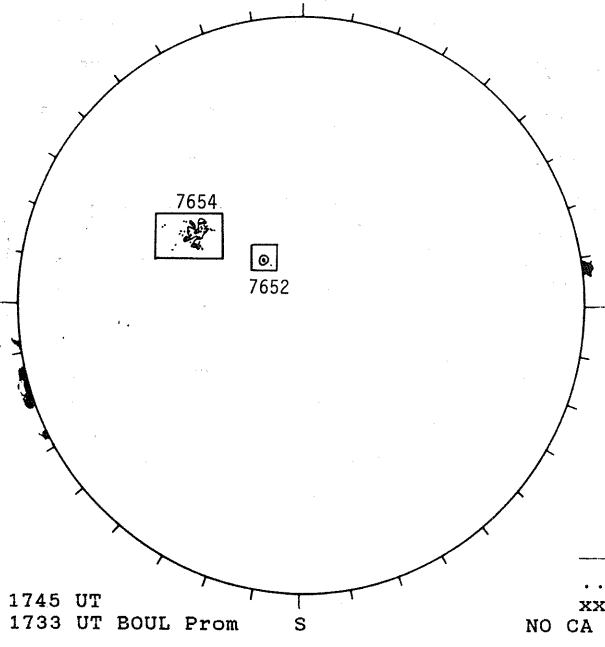
MT. WILSON MAGNETOGRAM



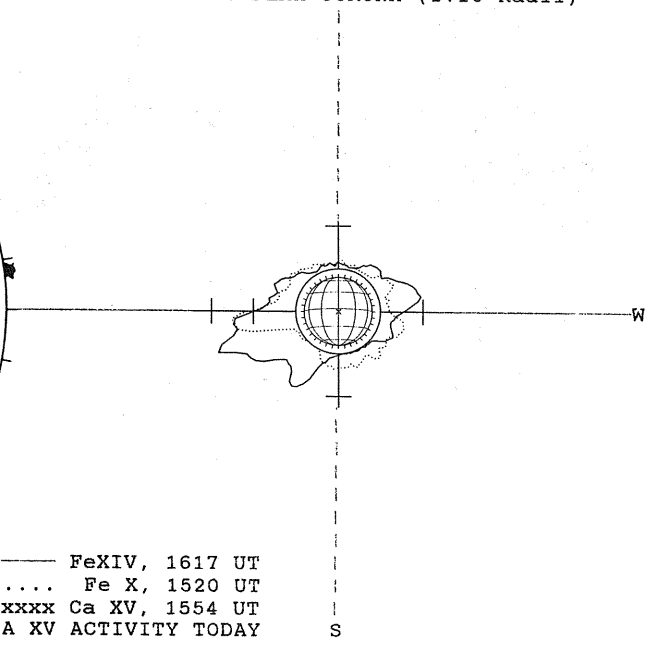
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

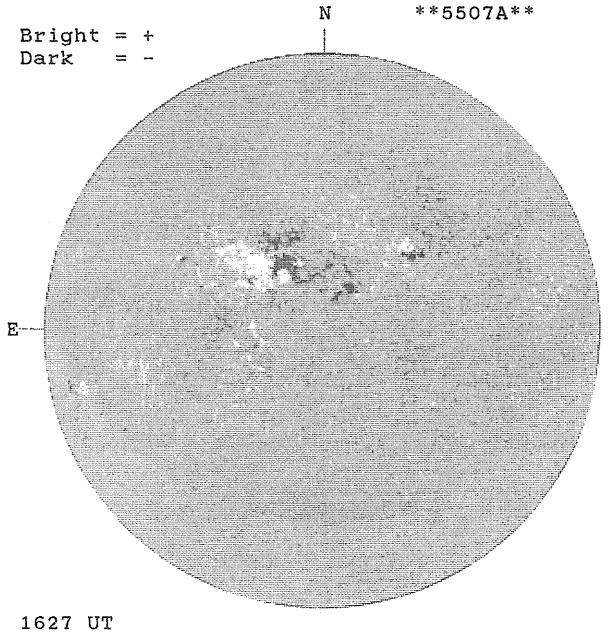


SACRAMENTO PEAK CORONA (1.15 Radii)



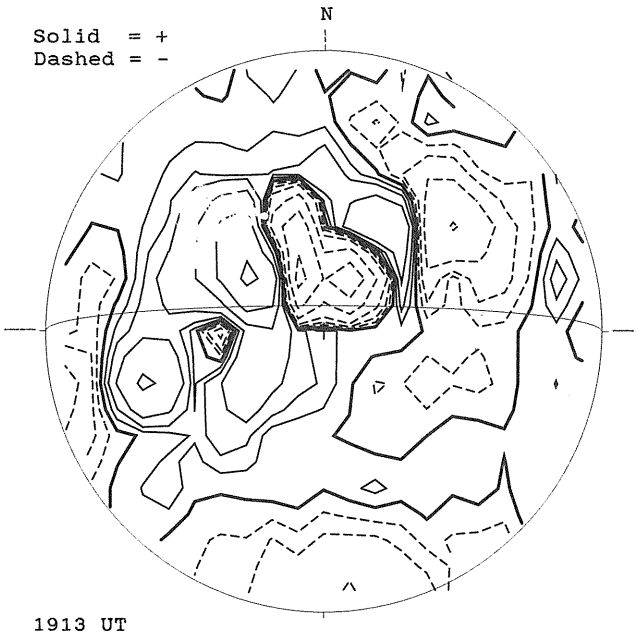
JANUARY 21, 1994 (P= -7.35, B_o =-5.12 L_o = 223.23)

KITT PEAK MAGNETOGRAM



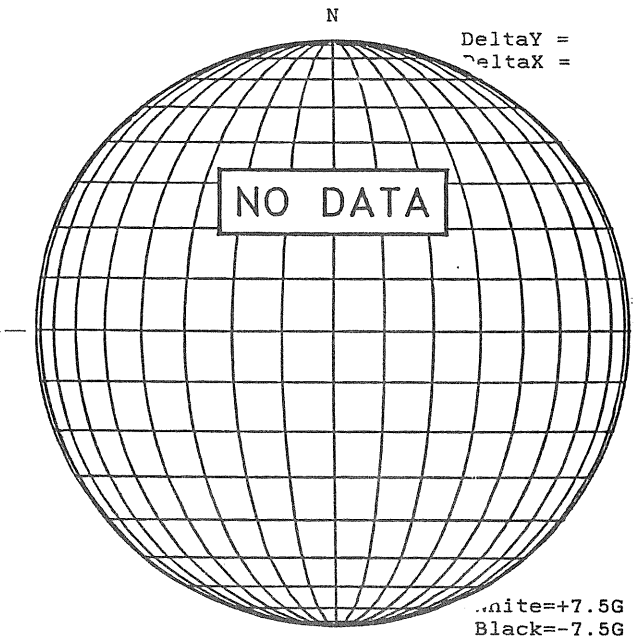
1627 UT

STANFORD MAGNETOGRAM



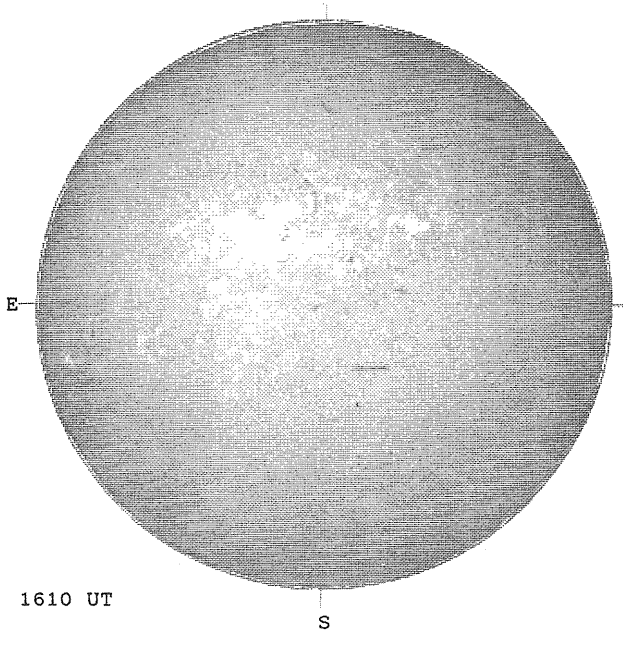
1913 UT

MT. WILSON MAGNETOGRAM



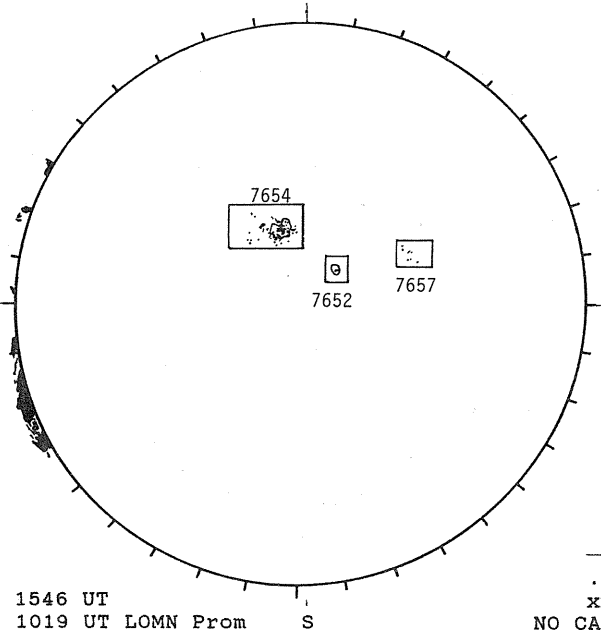
.nite=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



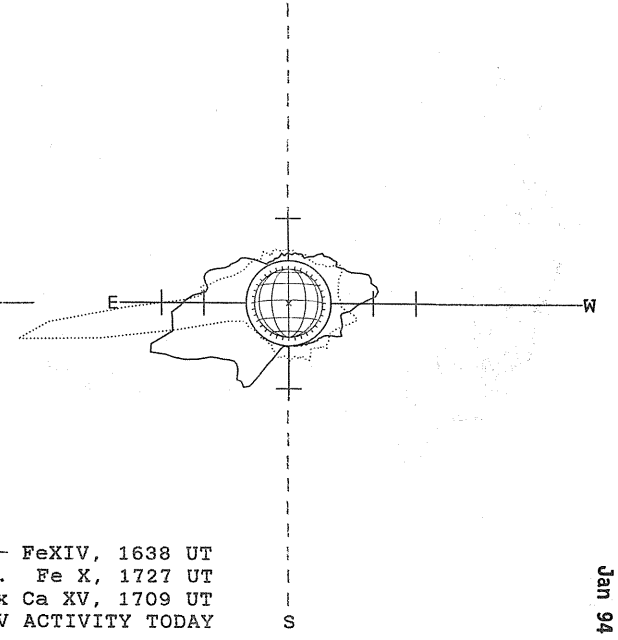
1610 UT

BOULDER SUNSPOT



1546 UT
1019 UT LOMN Prom

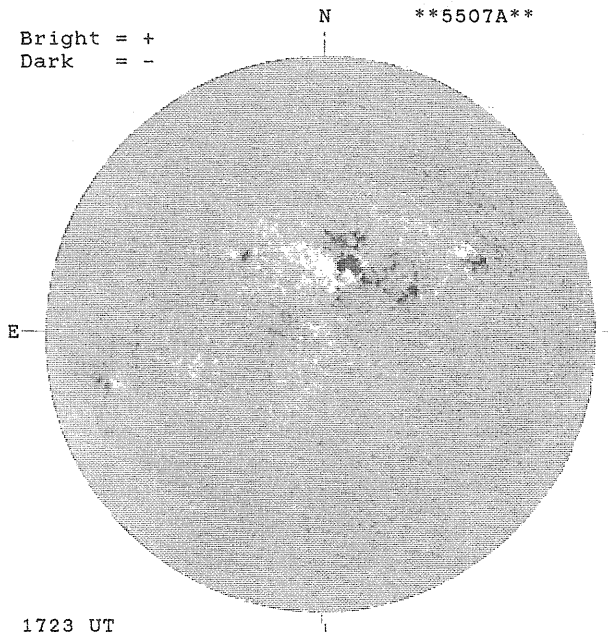
SACRAMENTO PEAK CORONA (1.15 Radii)



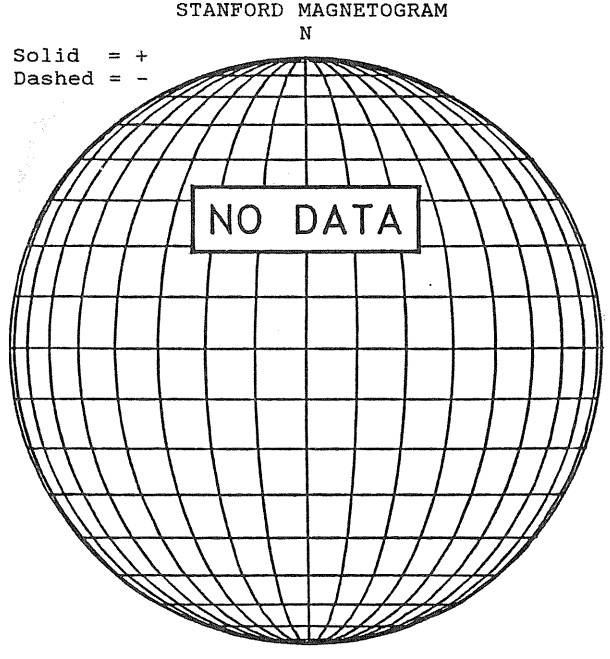
—— FeXIV, 1638 UT
.... Fe X, 1727 UT
xxxx Ca XV, 1709 UT
NO CA XV ACTIVITY TODAY

JANUARY 22, 1994 (P= -7.80, B_o =-5.21, L_o = 210.06)

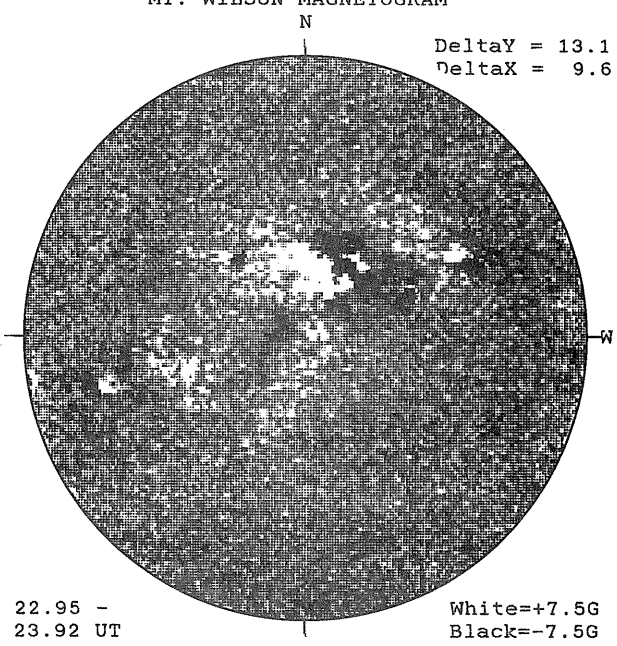
KITT PEAK MAGNETOGRAM



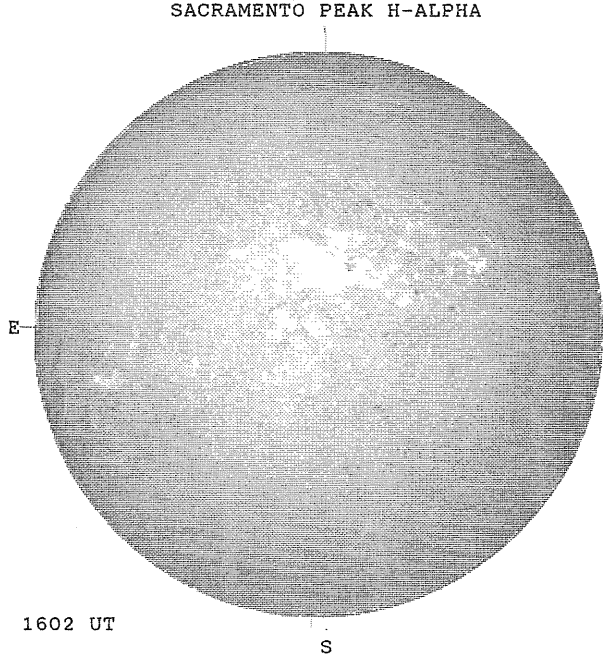
STANFORD MAGNETOGRAM



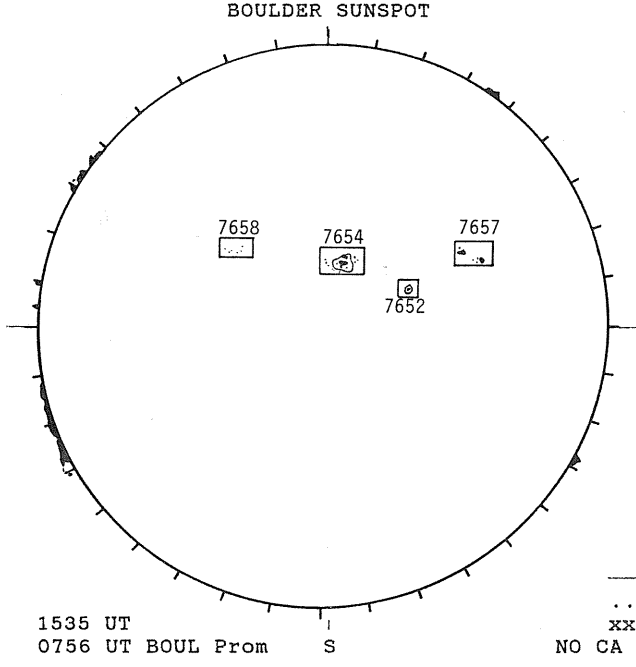
MT. WILSON MAGNETOGRAM



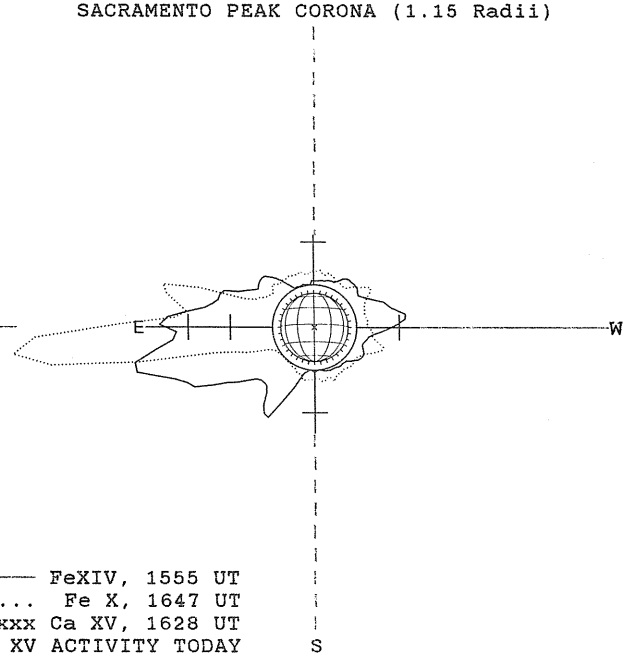
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

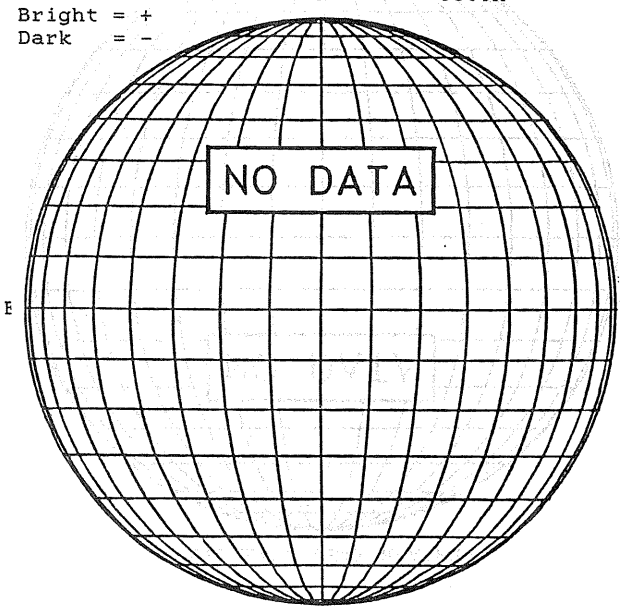


JANUARY 23, 1994 (P= -8.25, B_o =-5.30, L_o = 196.89)

KITT PEAK MAGNETOGRAM

N **5507A**

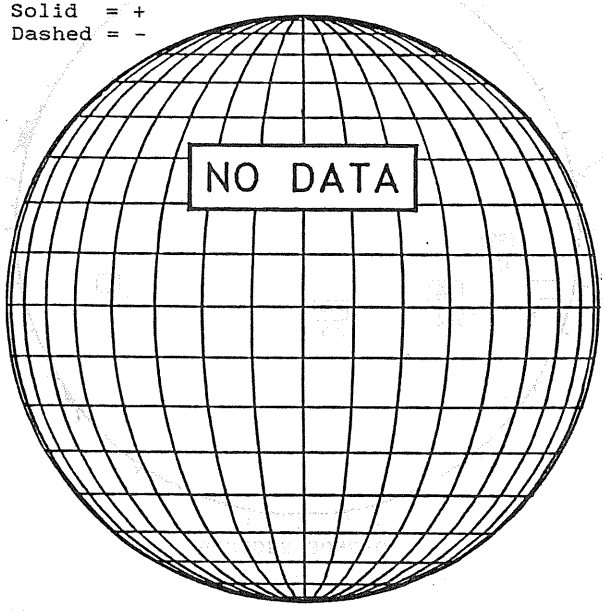
Bright = +
Dark = -



STANFORD MAGNETOGRAM

N

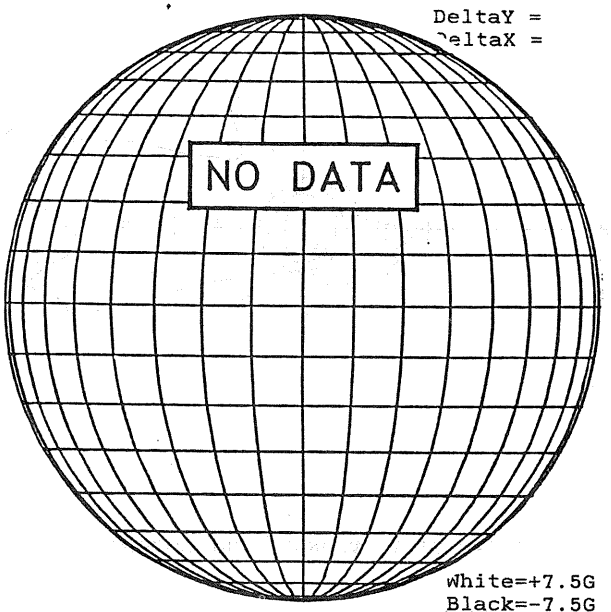
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

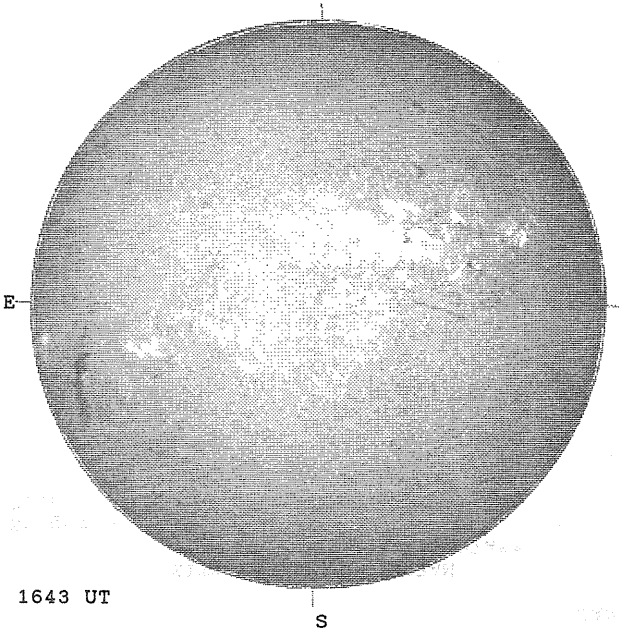
N

DeltaY =
DeltaX =



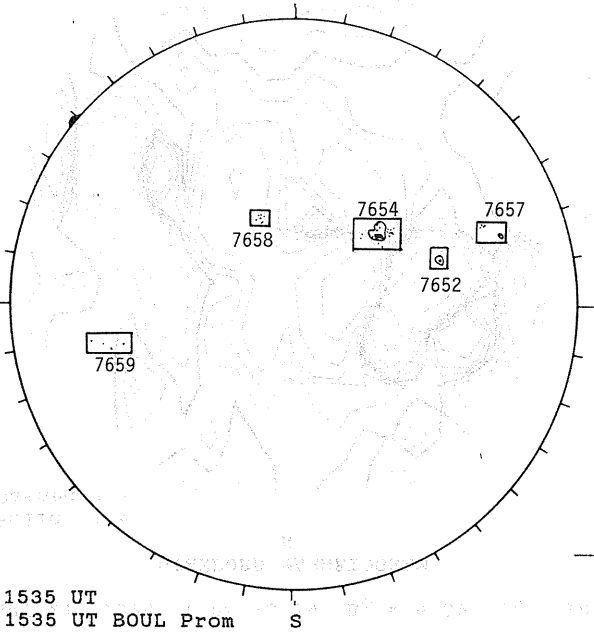
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



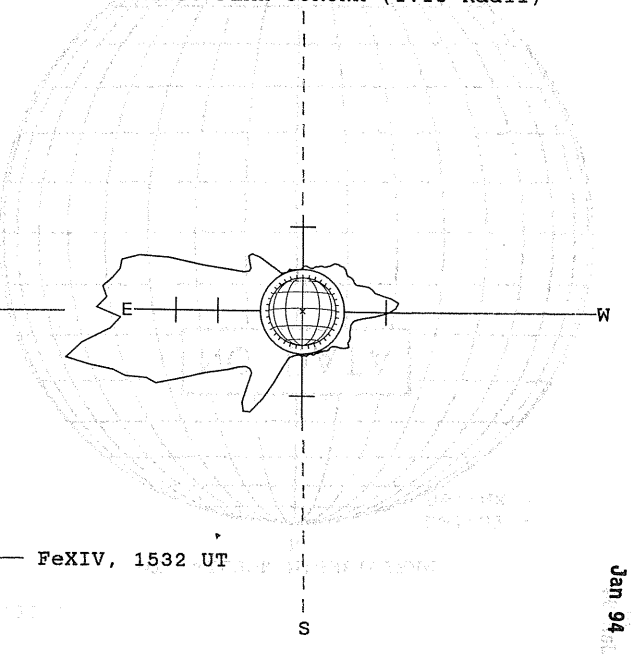
1643 UT

BOULDER SUNSPOT



1535 UT
1535 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

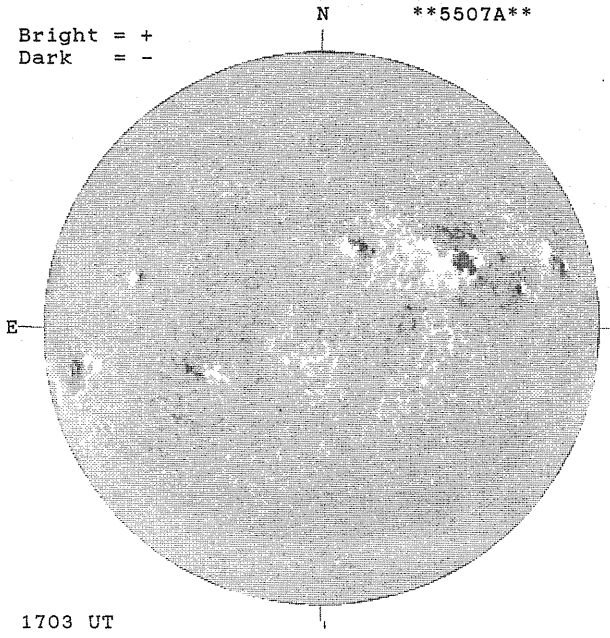


—— FeXIV, 1532 UT

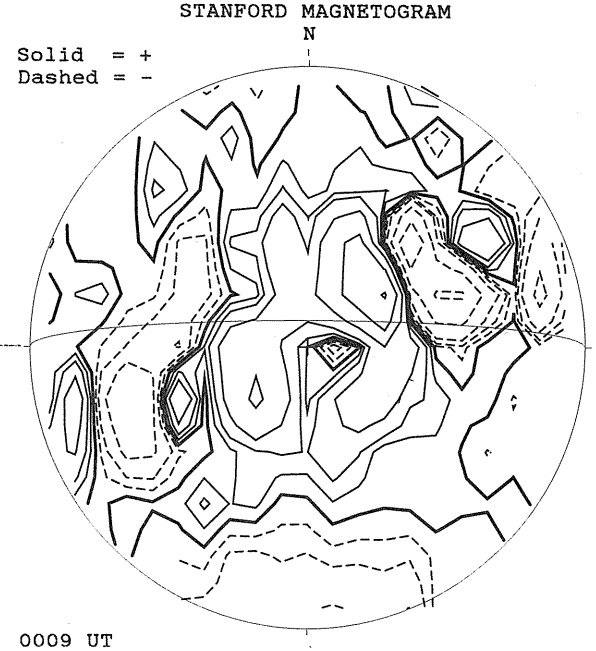
65
Jan 94

JANUARY 24, 1994 (P= -8.69 B_o =-5.39, L_o = 183.73)

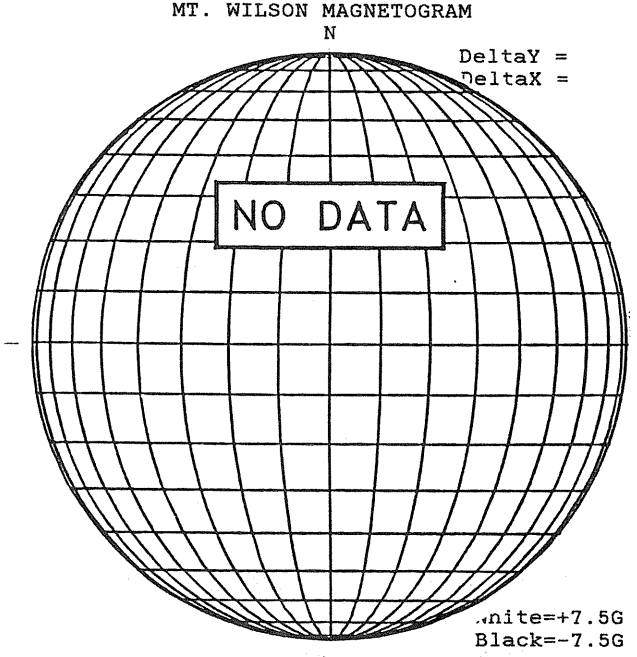
KITT PEAK MAGNETOGRAM



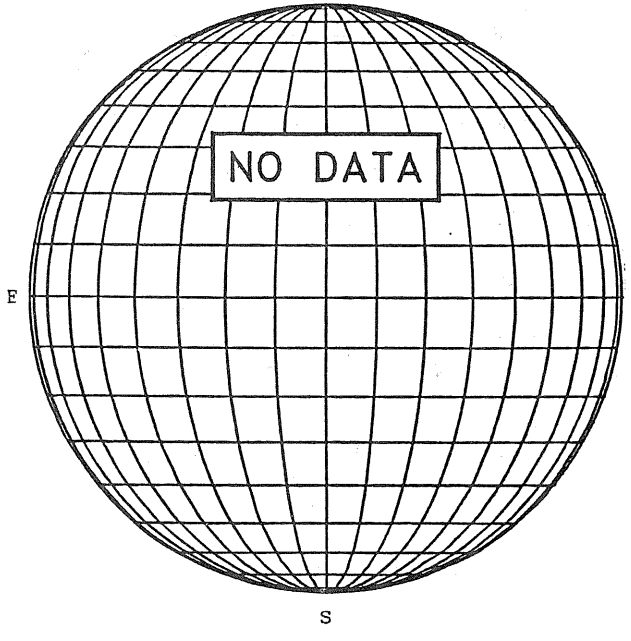
STANFORD MAGNETOGRAM



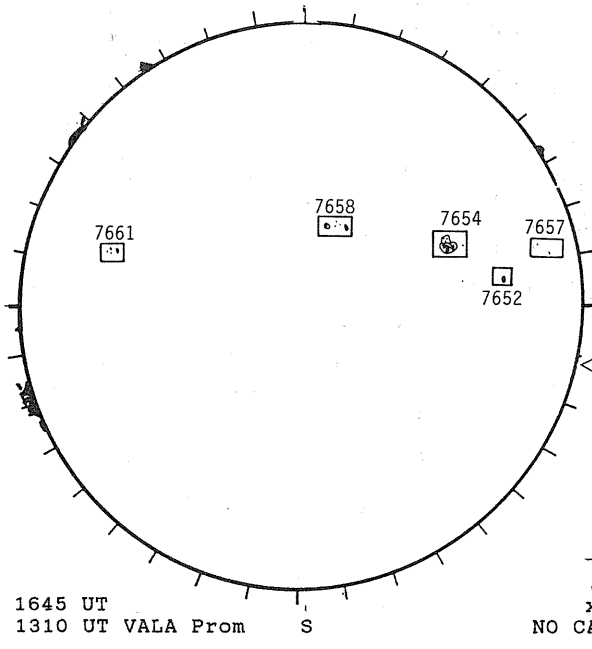
MT. WILSON MAGNETOGRAM



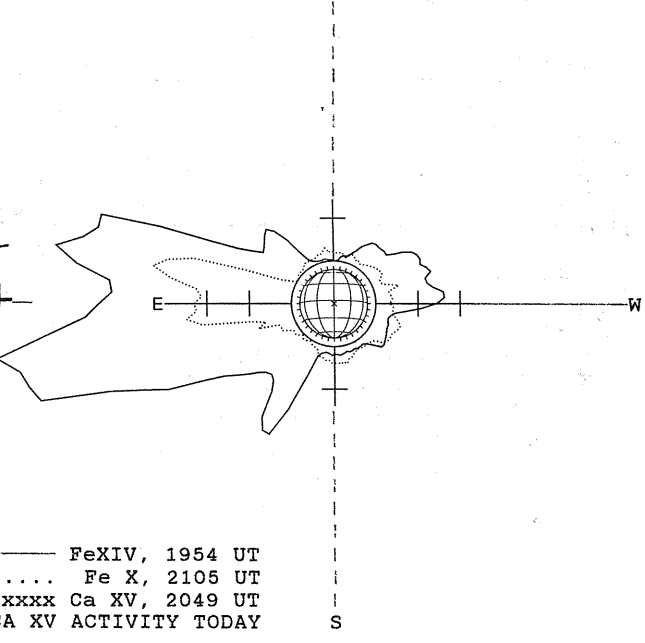
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



JANUARY 25, 1994 (P= -9.13 B_o =-5.47, L_o = 170.56)

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -

NO DATA

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

NO DATA

MT. WILSON MAGNETOGRAM

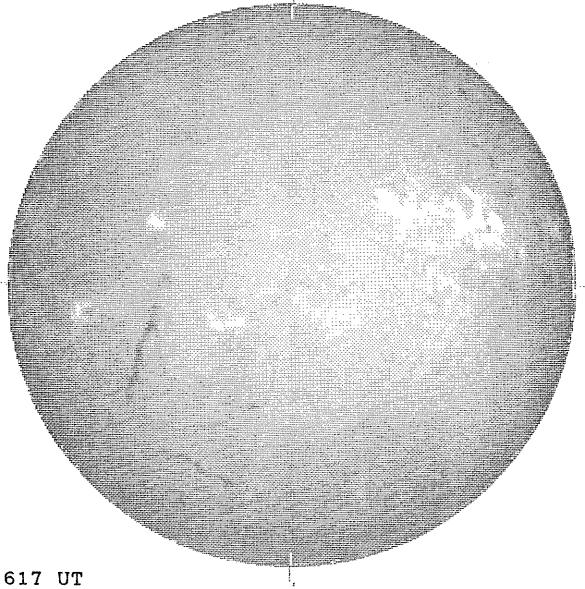
N

DeltaY =
DeltaX =

NO DATA

White=+7.5G
Black=-7.5G

BOULDER H-ALPHA

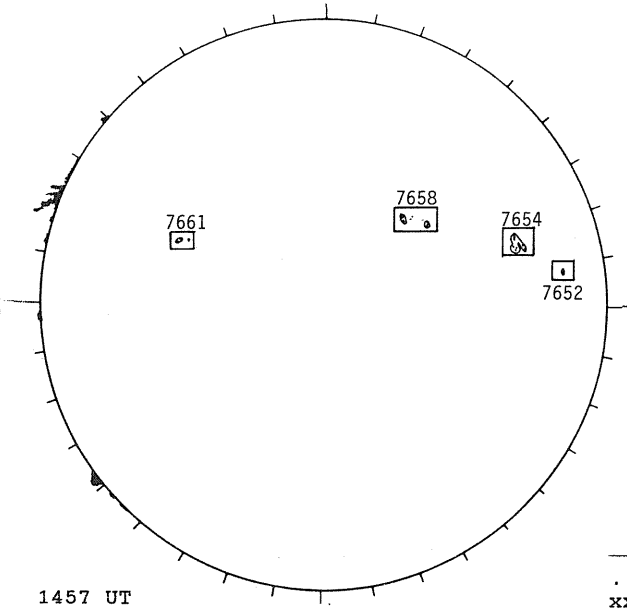


E

1617 UT

S

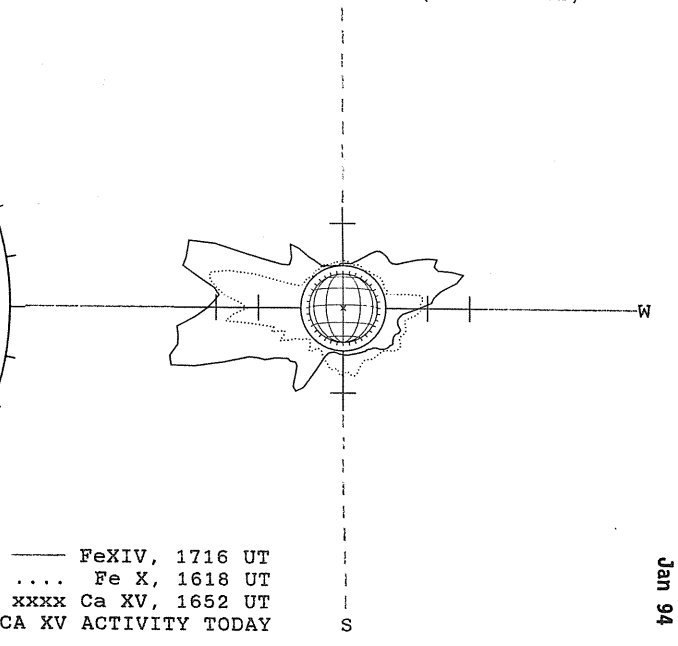
BOULDER SUNSPOT



1457 UT
1617 UT BOUL Prom

S

SACRAMENTO PEAK CORONA (1.15 Radii)



W

S

—— FeXIV, 1716 UT
.... Fe X, 1618 UT
xxxx Ca XV, 1652 UT
NO CA XV ACTIVITY TODAY

67
Jan 94

JANUARY 26, 1994 (P= -9.57, Bo =-5.56, Lo = 157.39)

KITT PEAK MAGNETOGRAM

N **5507A**

Bright = +
Dark = -

E

1740 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

2208 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.0
DeltaX = 9.6

W

17.46 -
18.44 UT

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

NO DATA

S

RAMEY SUNSPOT

7658
7654
7661
7652
7659

1355 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)

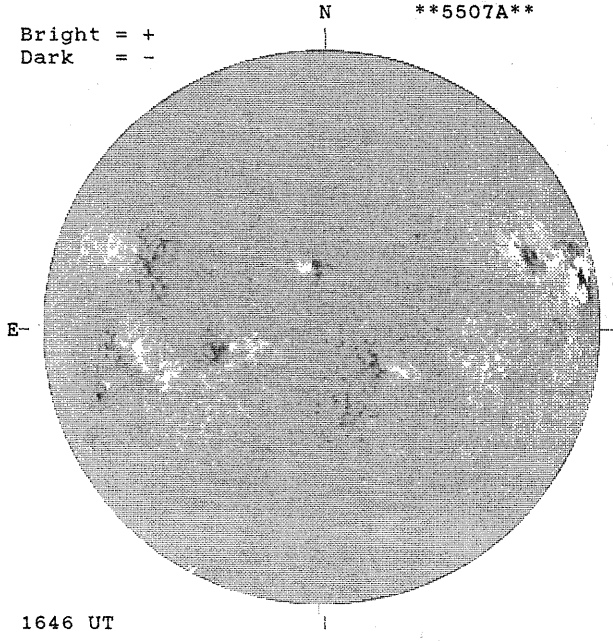
W

—— FeXIV, 1920 UT
.... Fe X, 1823 UT
xxxx Ca XV, 1903 UT
NO CA XV ACTIVITY TODAY

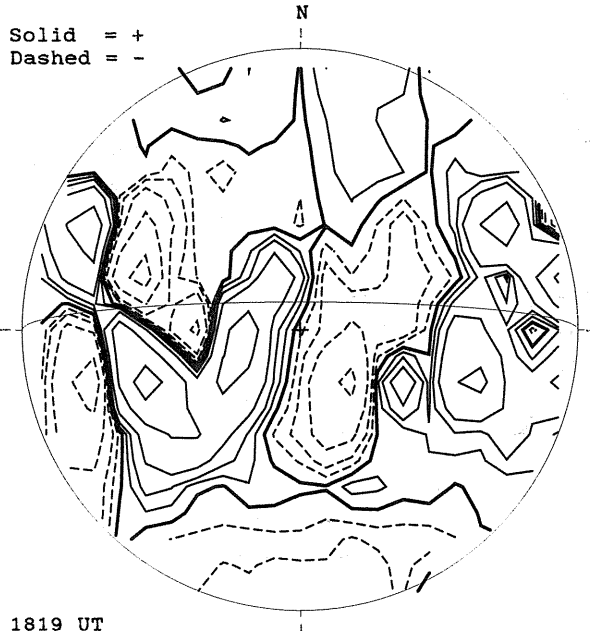
S

JANUARY 27, 1994 (P=-10.00, B_o =-5.64, L_o = 144.23)

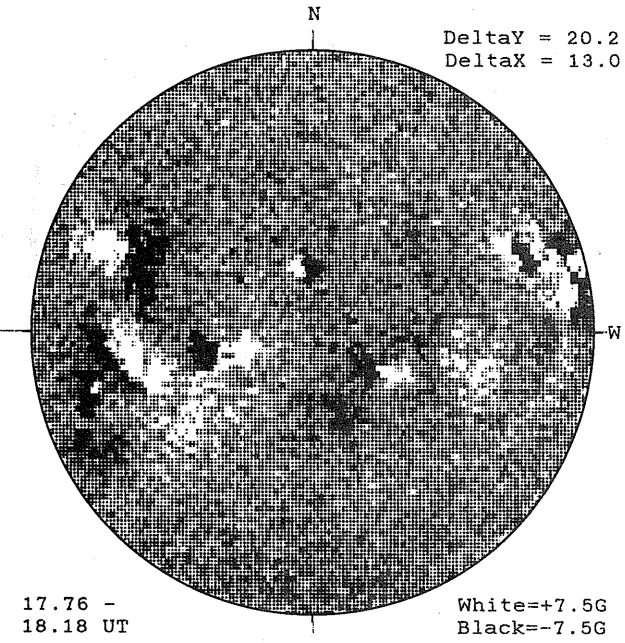
KITT PEAK MAGNETOGRAM



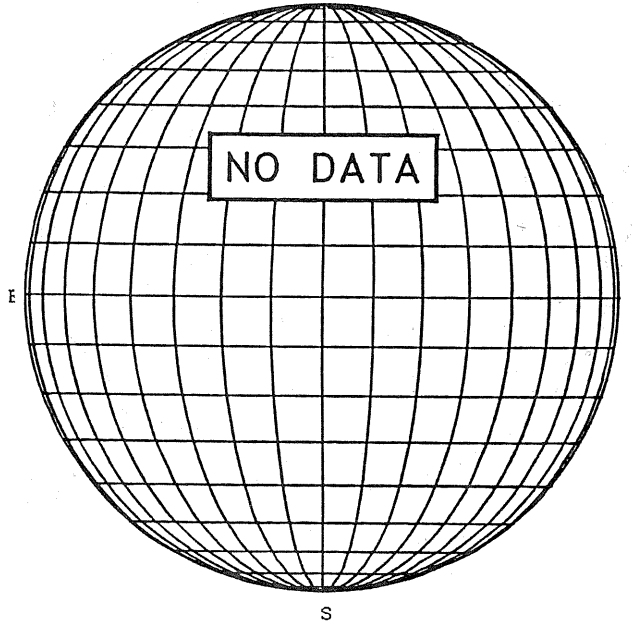
STANFORD MAGNETOGRAM



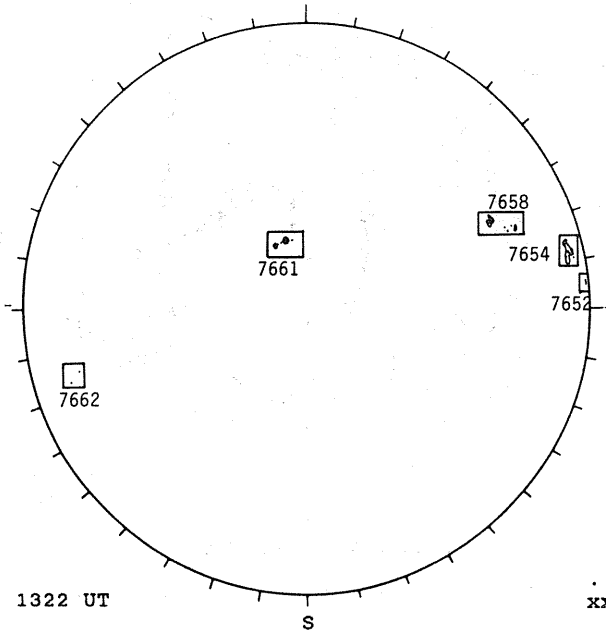
MT. WILSON MAGNETOGRAM



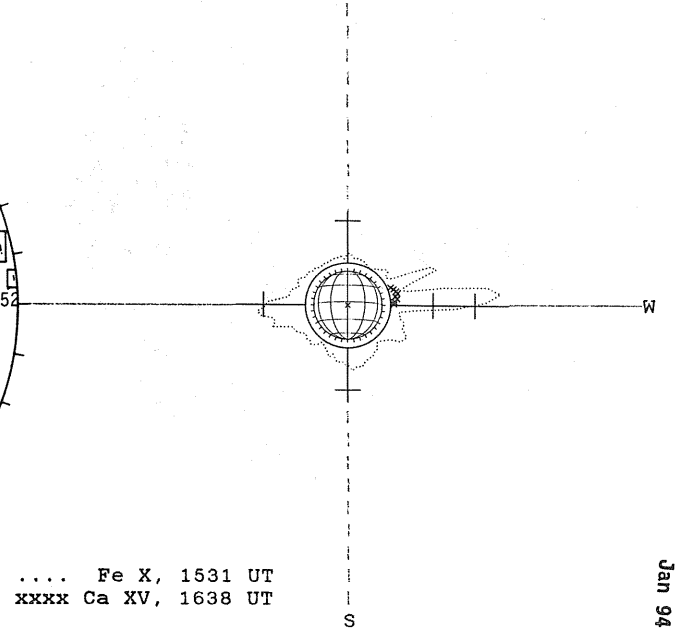
BOULDER H-ALPHA



RAMEY SUNSPOT



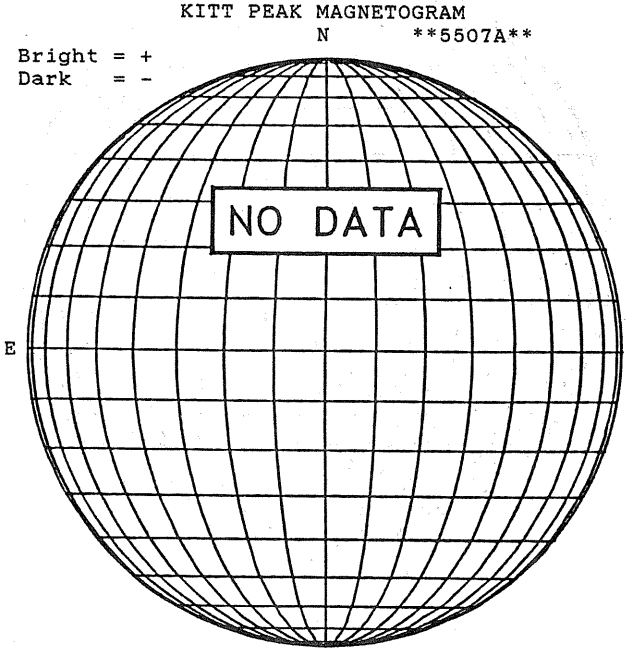
SACRAMENTO PEAK CORONA (1.15 Radii)



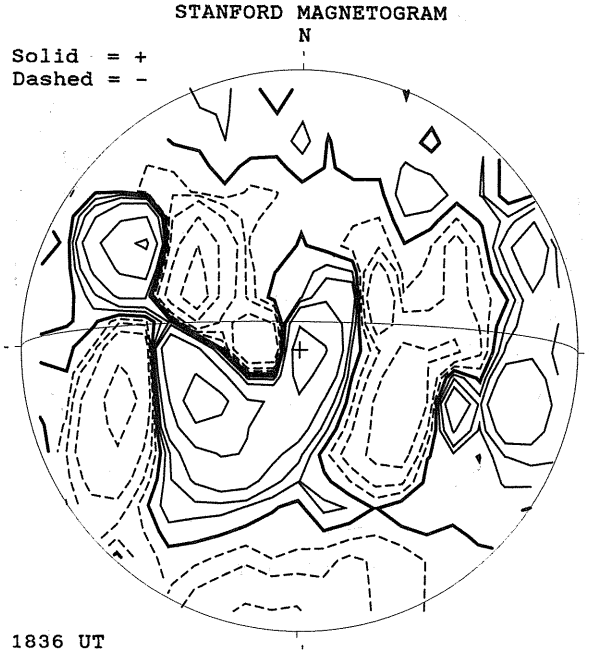
.... Fe X, 1531 UT
xxxx Ca XV, 1638 UT

JANUARY 28, 1994 (P=-10.43 B_o =-5.72, L_o = 131.06)

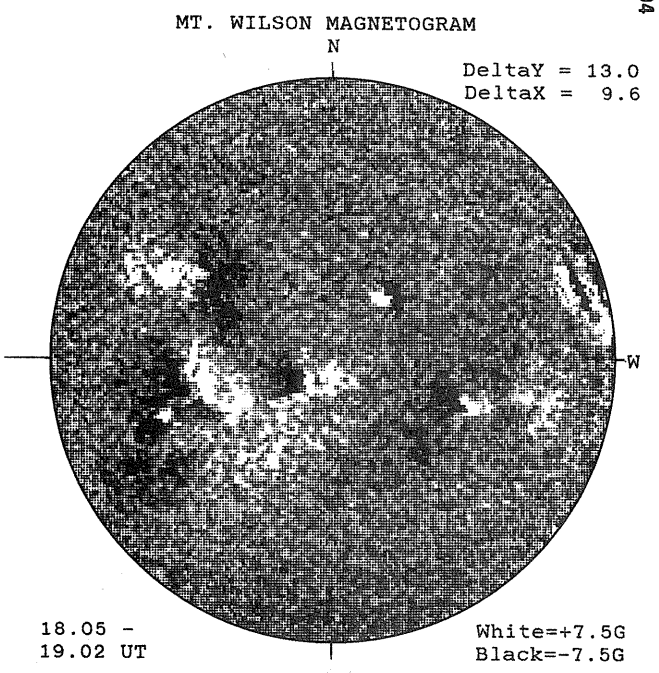
KITT PEAK MAGNETOGRAM



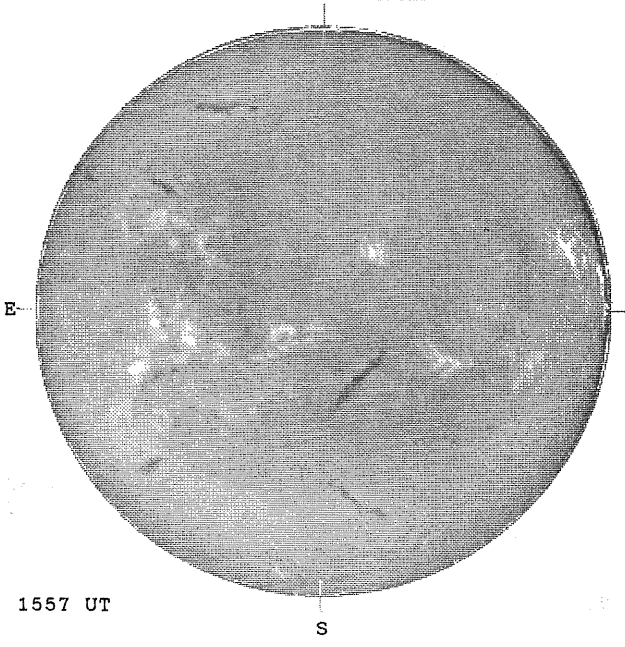
STANFORD MAGNETOGRAM



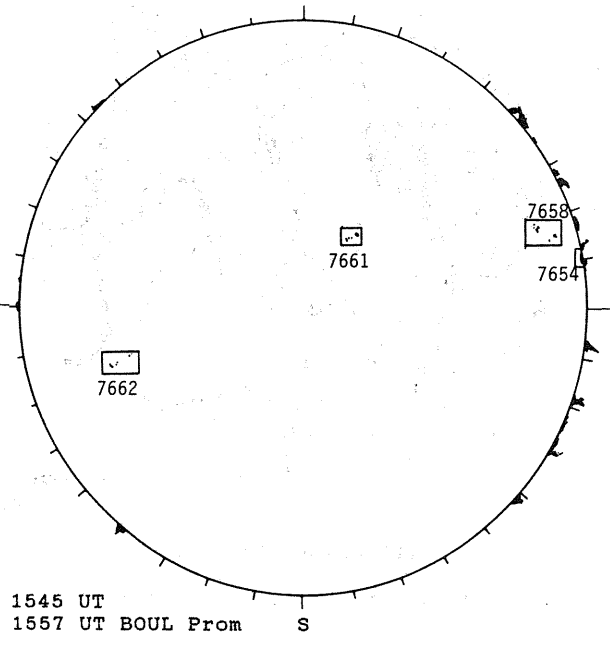
MT. WILSON MAGNETOGRAM



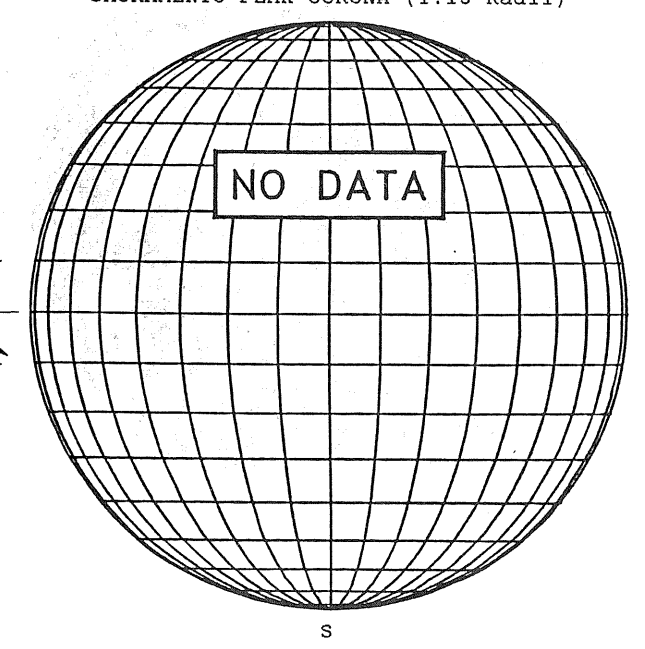
BOULDER H-ALPHA



BOULDER SUNSPOT

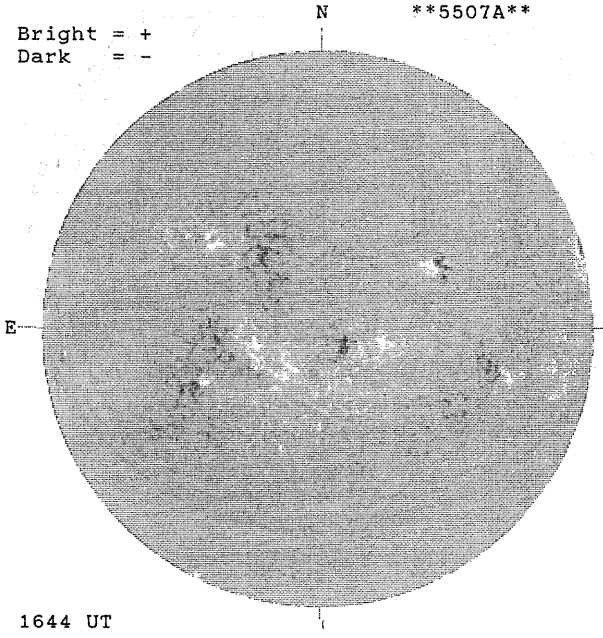


SACRAMENTO PEAK CORONA (1.15 Radii)

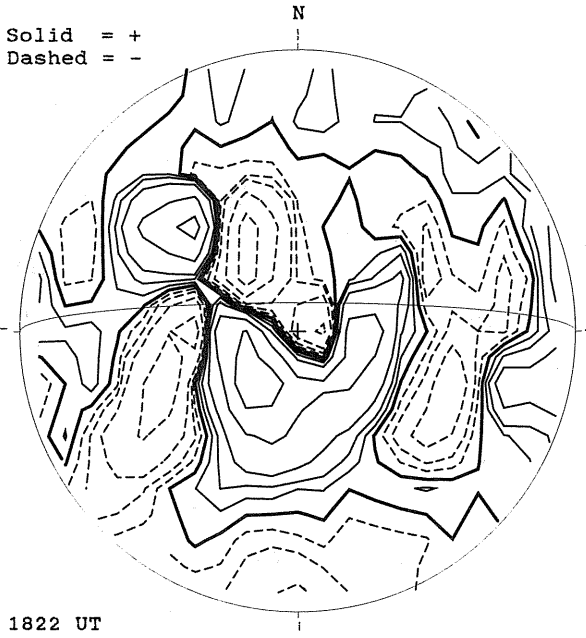


JANUARY 29, 1994 (P=-10.85, B_o =-5.80, L_o = 117.89)

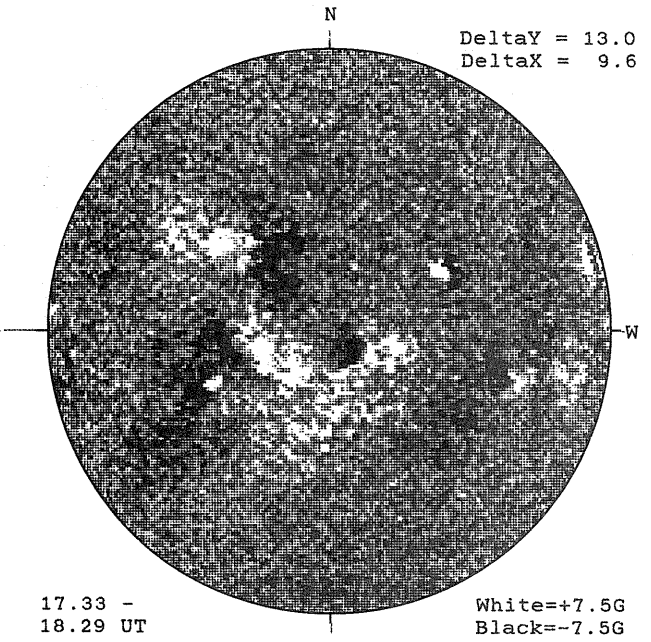
KITT PEAK MAGNETOGRAM



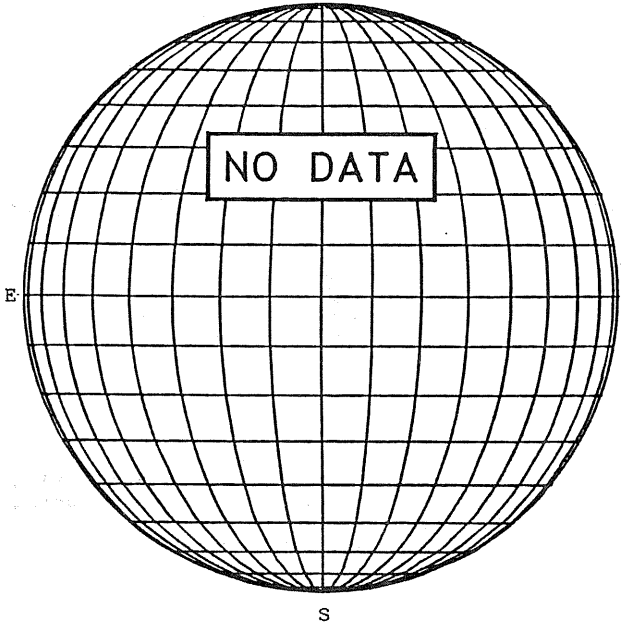
STANFORD MAGNETOGRAM



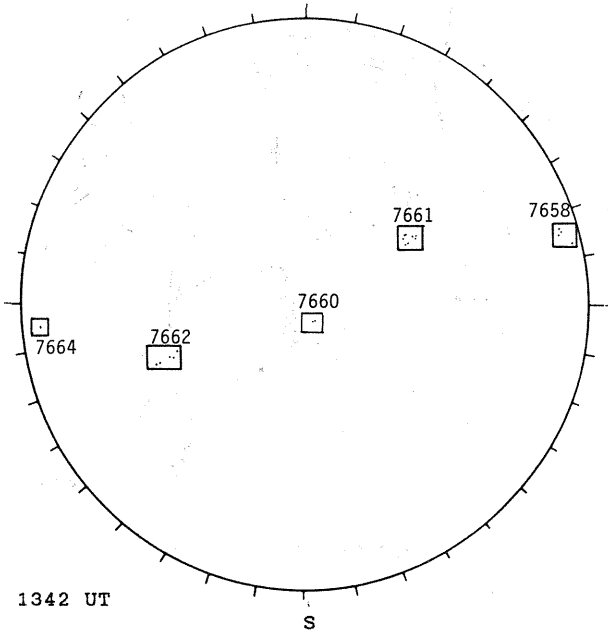
MT. WILSON MAGNETOGRAM



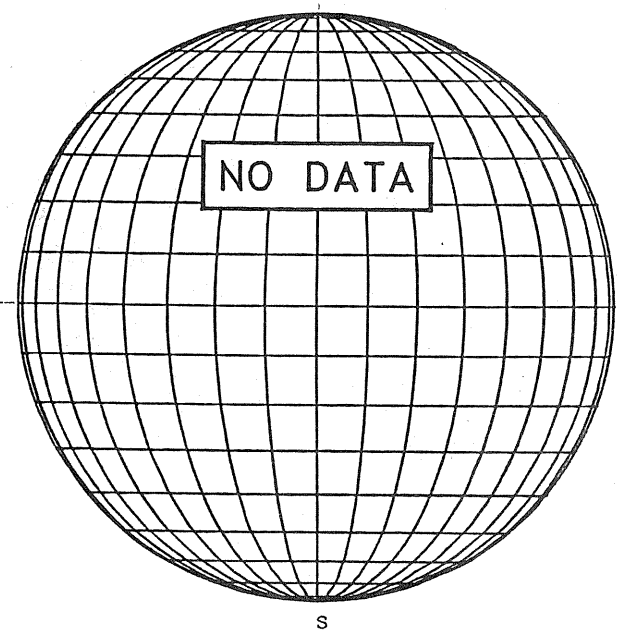
BOULDER H-ALPHA



RAMEY SUNSPOT

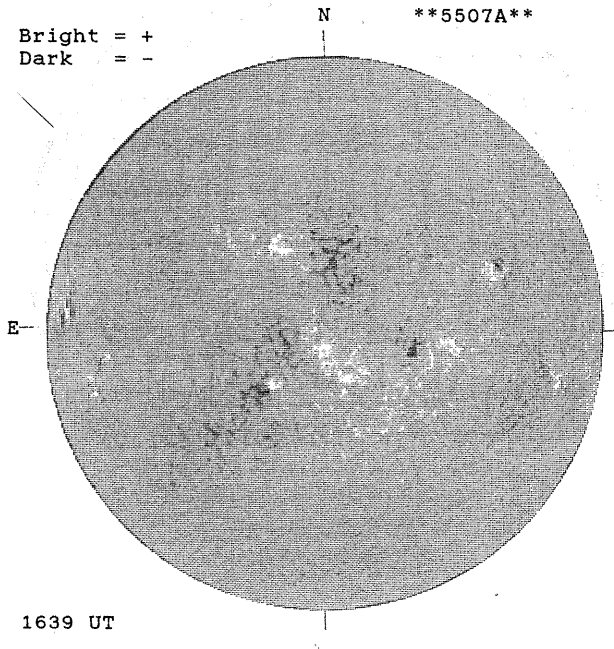


SACRAMENTO PEAK CORONA (1.15 Radii)

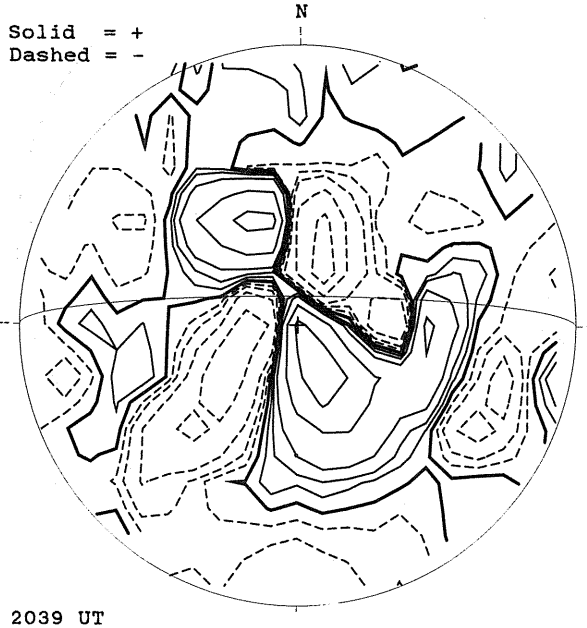


JANUARY 30, 1994 (P=-11.27, B_o =-5.87, L_o = 104.73)

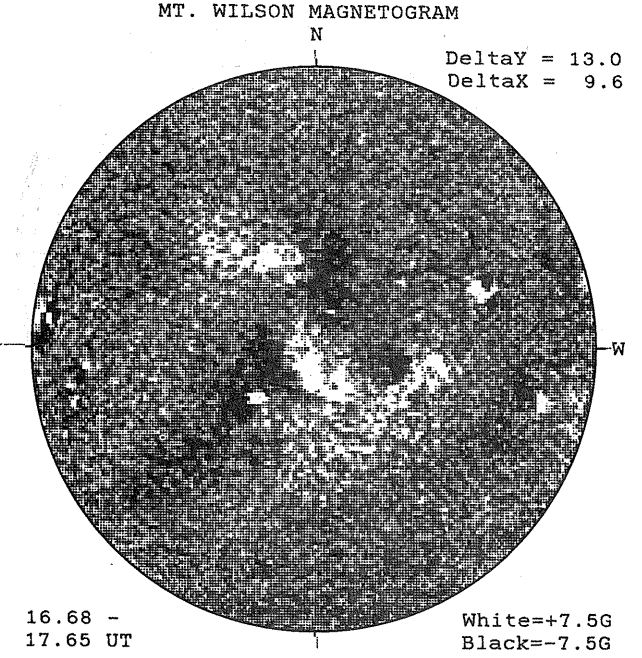
KITT PEAK MAGNETOGRAM



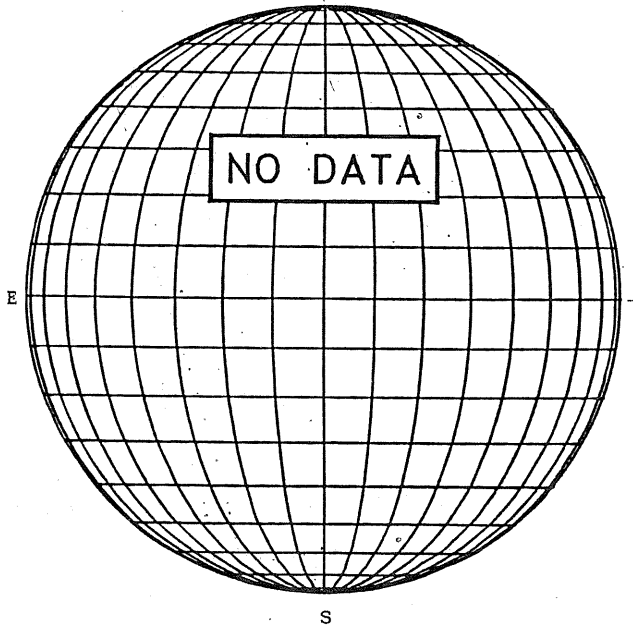
STANFORD MAGNETOGRAM



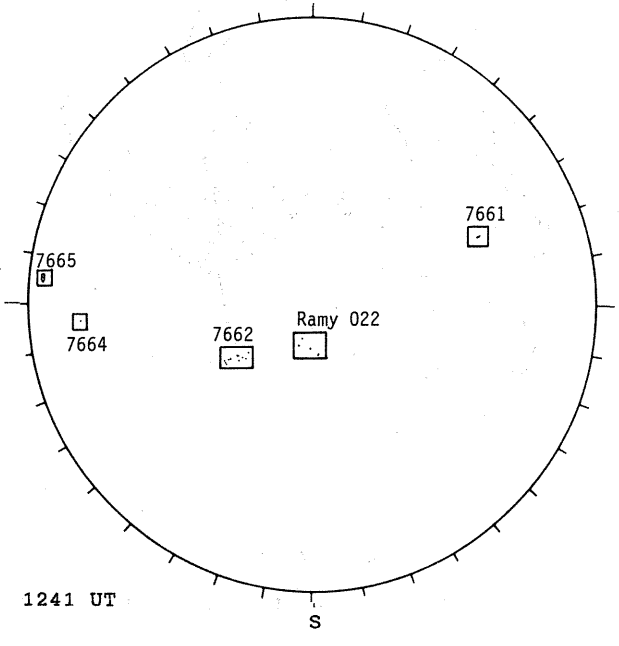
MT. WILSON MAGNETOGRAM



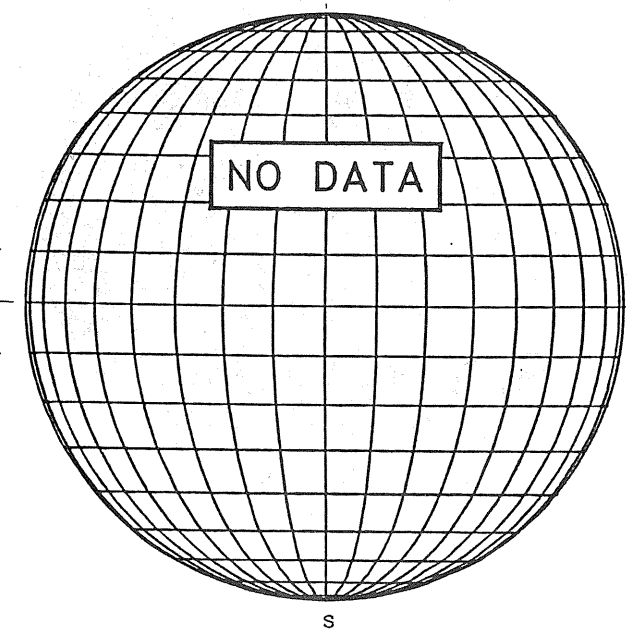
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT

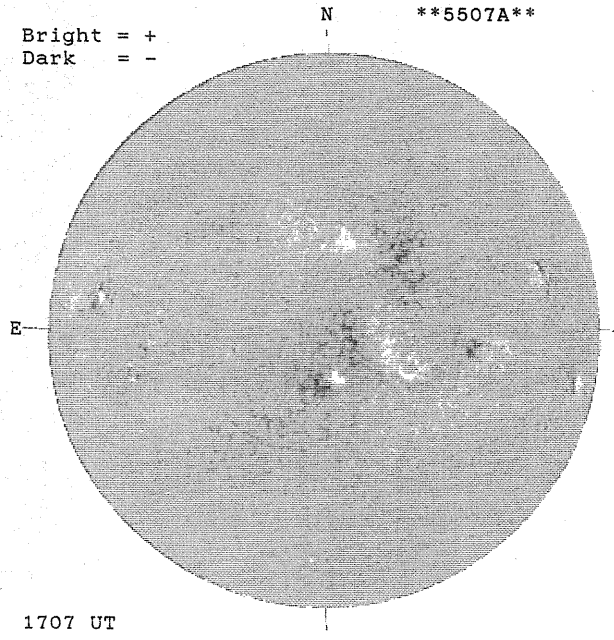


SACRAMENTO PEAK CORONA (1.15 Radii)

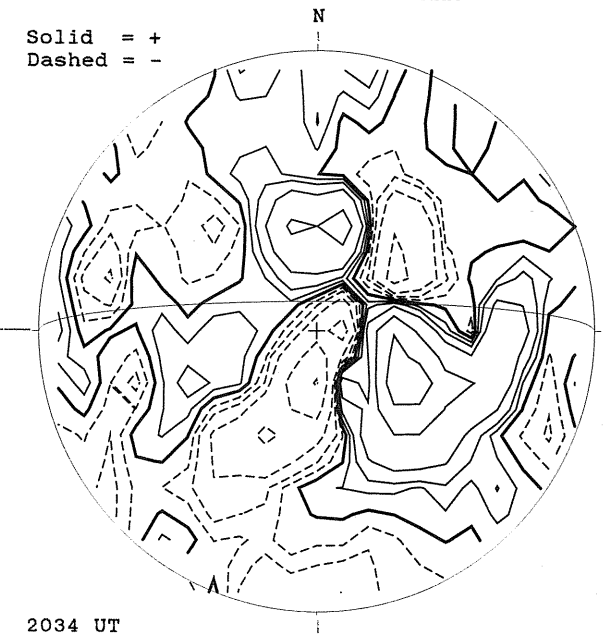


JANUARY 31, 1994 (P=-11.69, B_o =-5.95 L_o = 91.56)

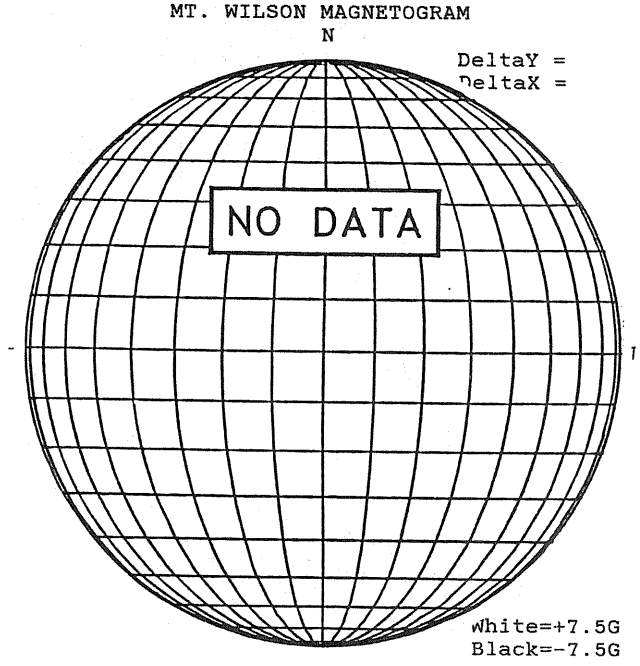
KITT PEAK MAGNETOGRAM



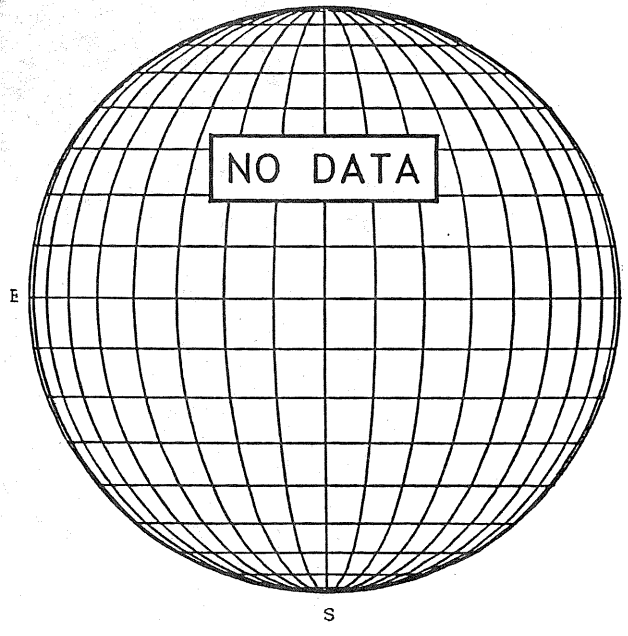
STANFORD MAGNETOGRAM



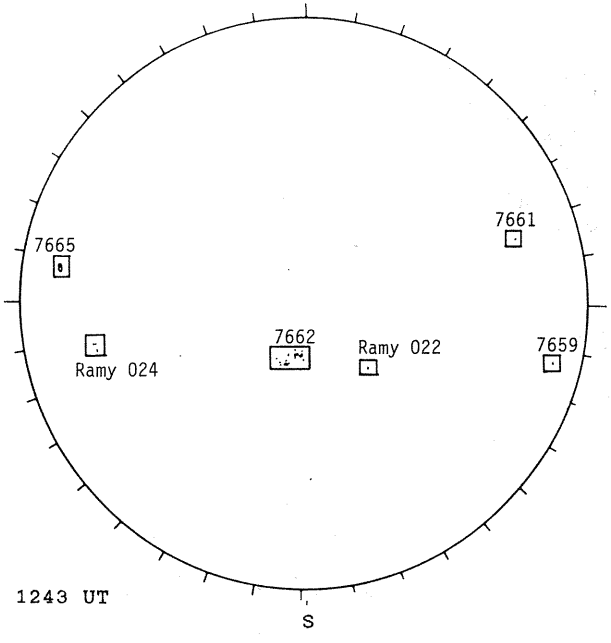
MT. WILSON MAGNETOGRAM



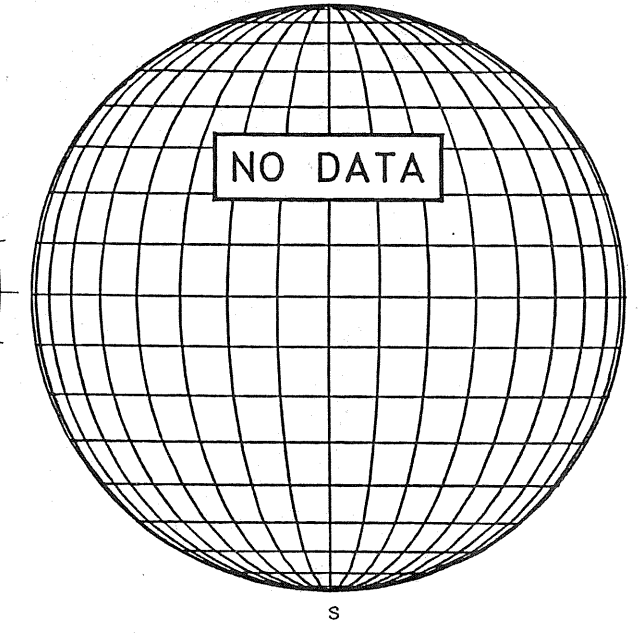
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT

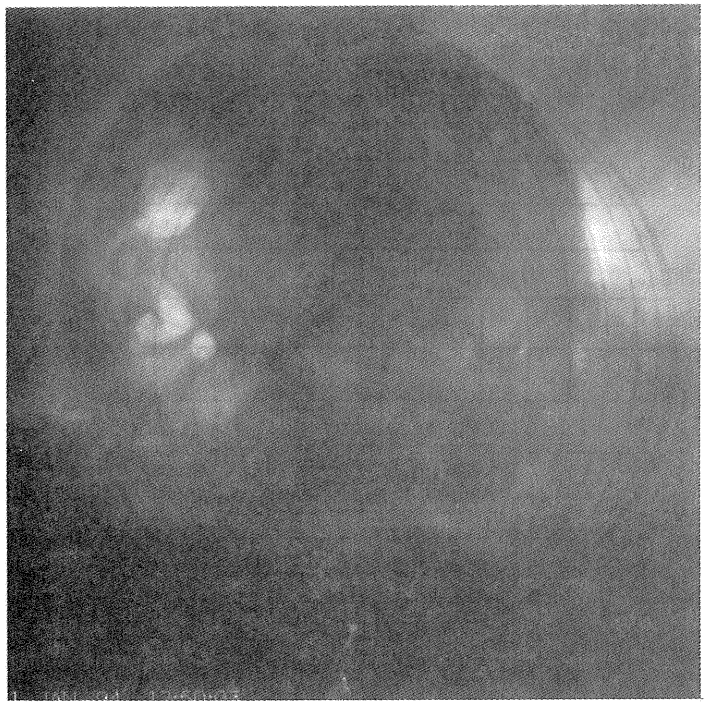


SACRAMENTO PEAK CORONA (1.15 Radii)

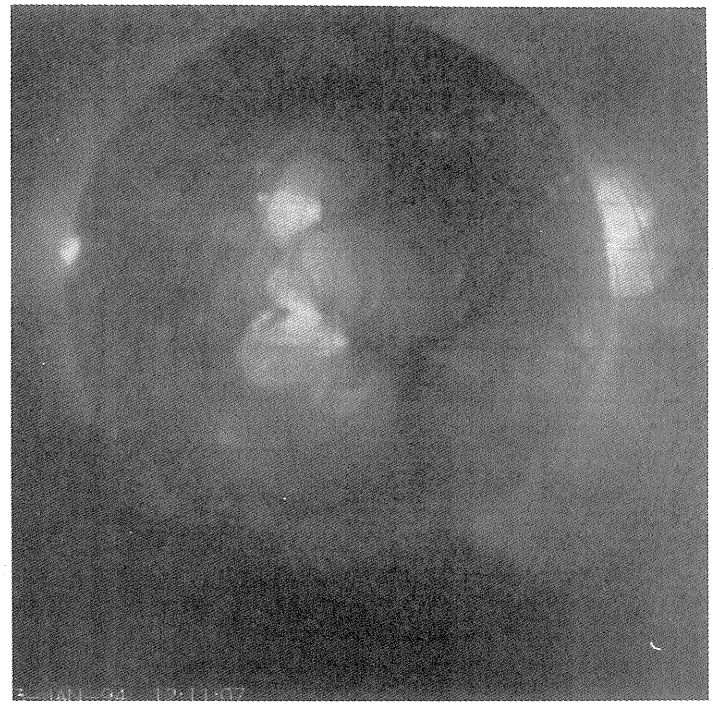


YOHKOH SOFT X-RAY TELESCOPE IMAGES

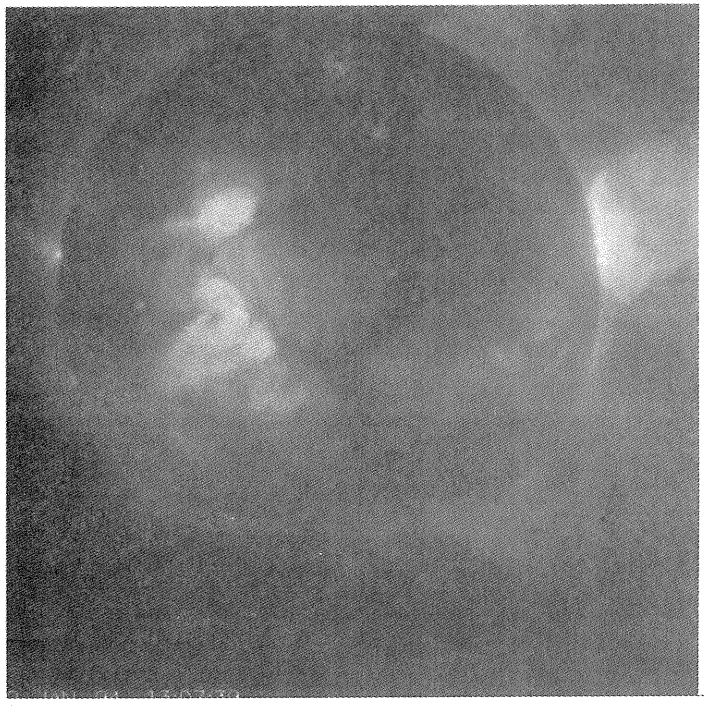
January 1994



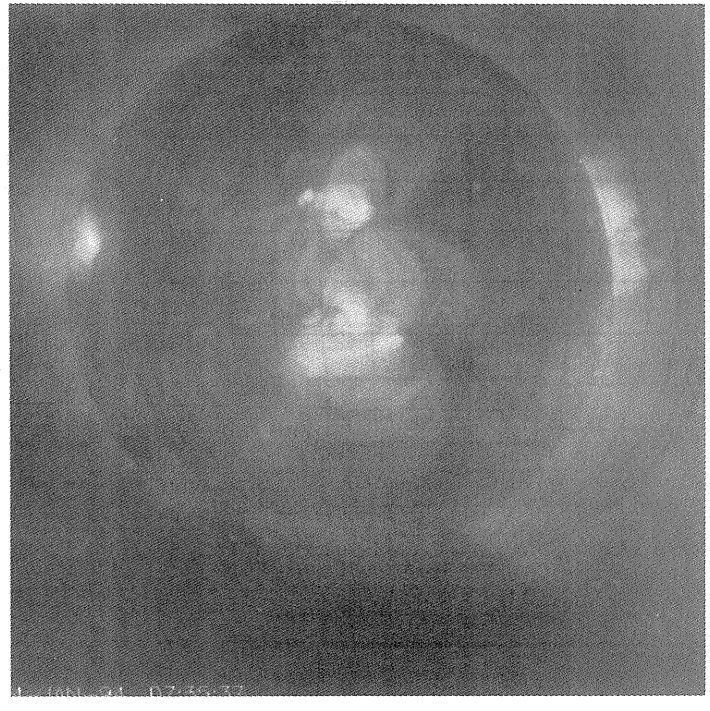
Day 1
12:50:03 UT



Day 3
12:11:07 UT



Day 2
13:07:39 UT

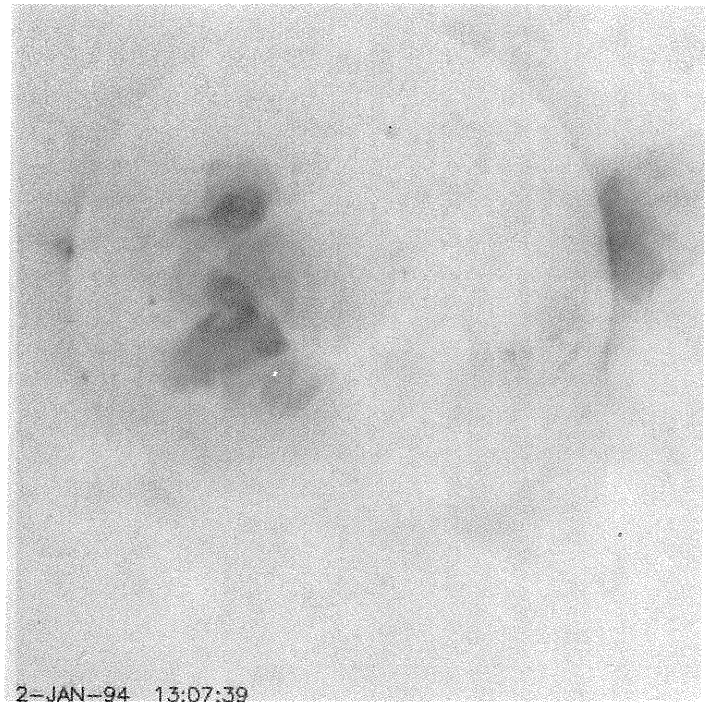


Day 4
07:35:37 UT

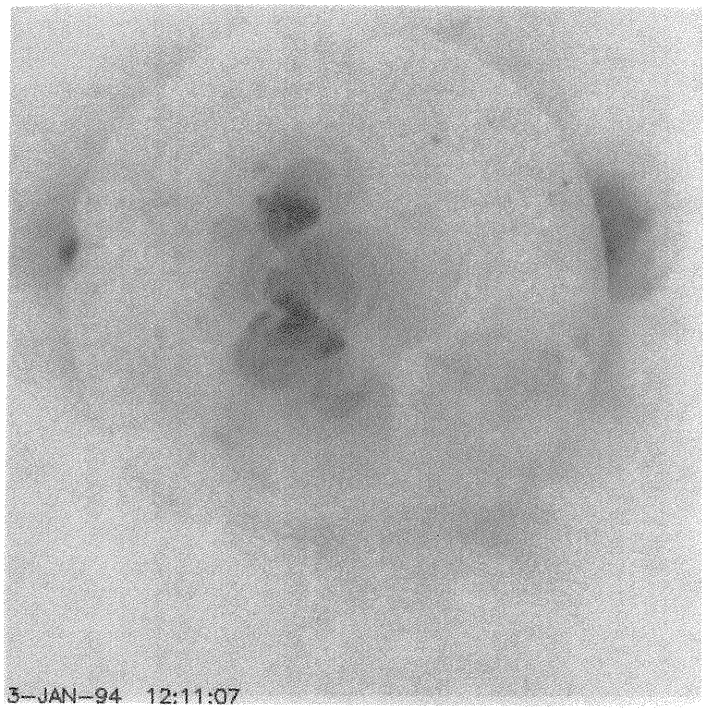
YOHKOH SOFT X-RAY TELESCOPE IMAGES

January 1994

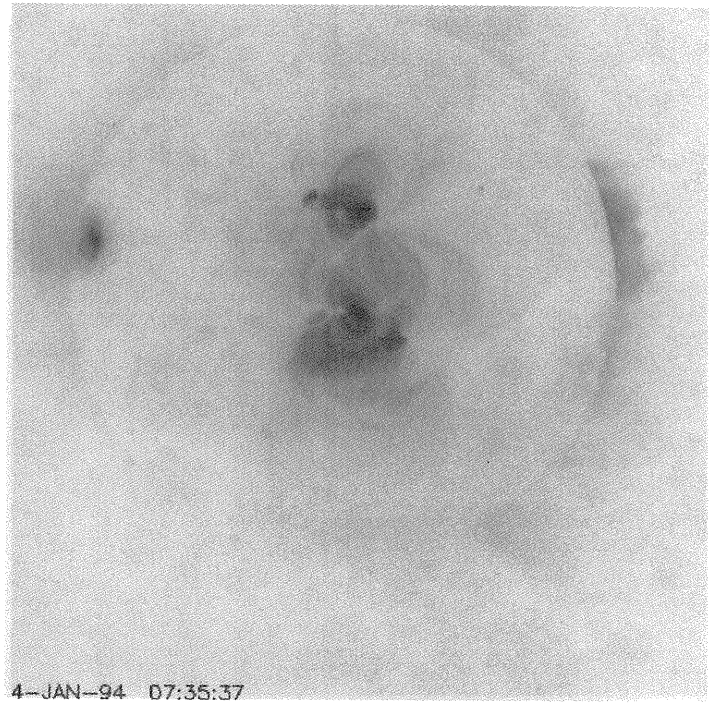
Day 1
12:50:03 UT



Day 2
13:07:39 UT



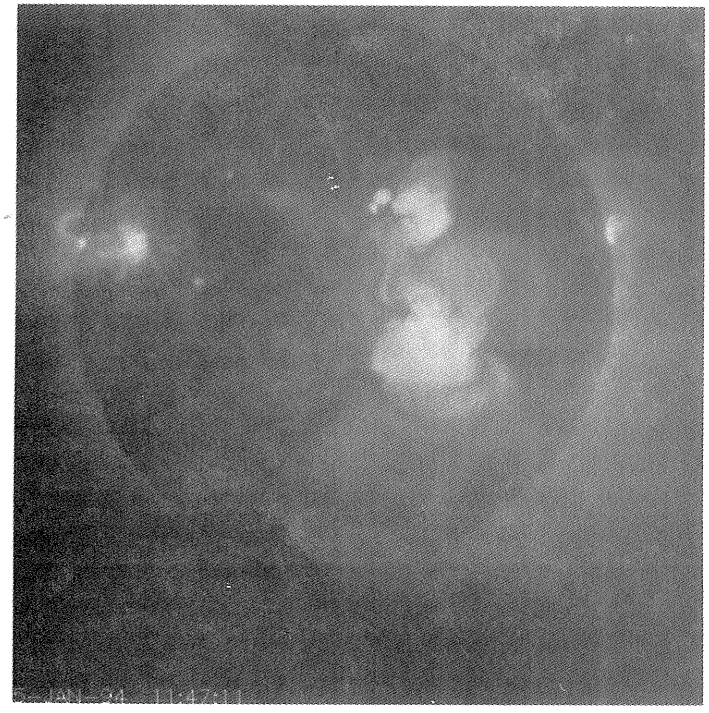
Day 3
12:11:07 UT



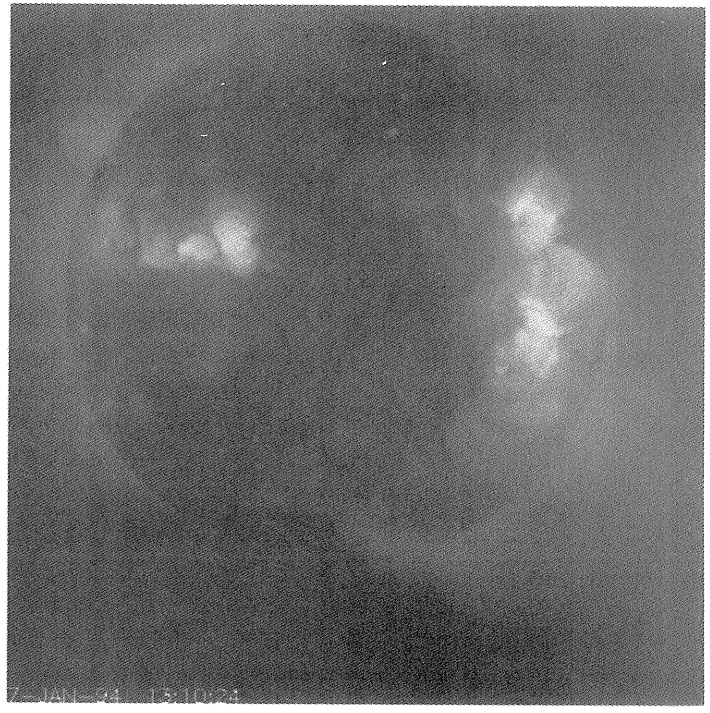
Day 4
07:35:37 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

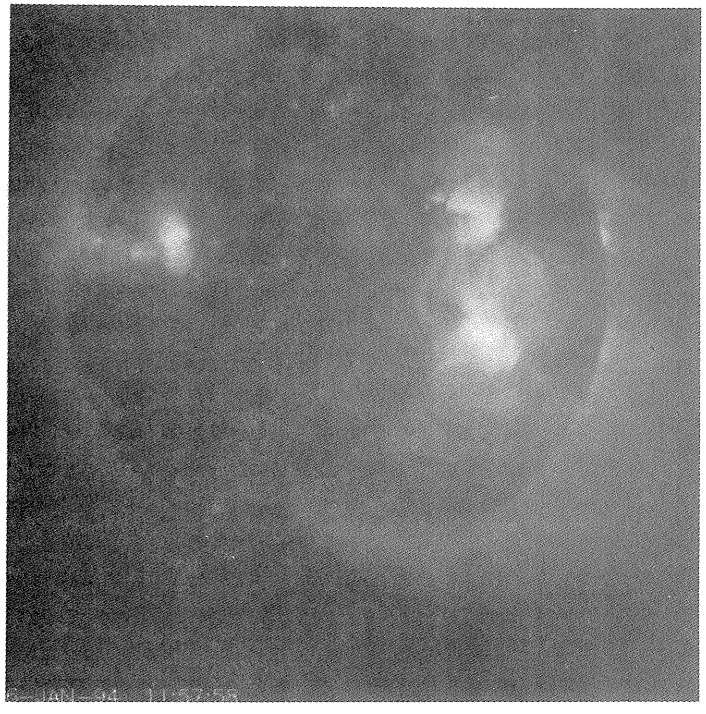
January 1994



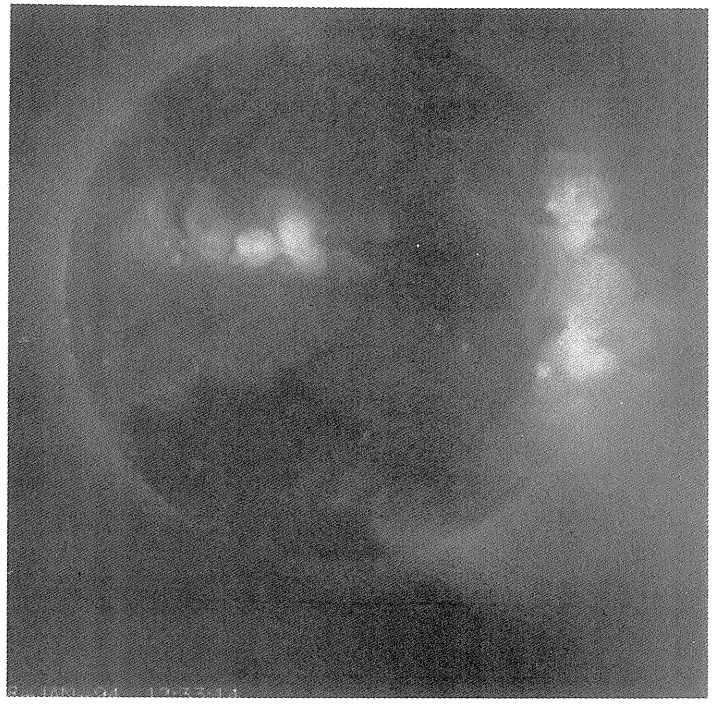
Day 5
11:47:11 UT



Day 7
13:10:24 UT



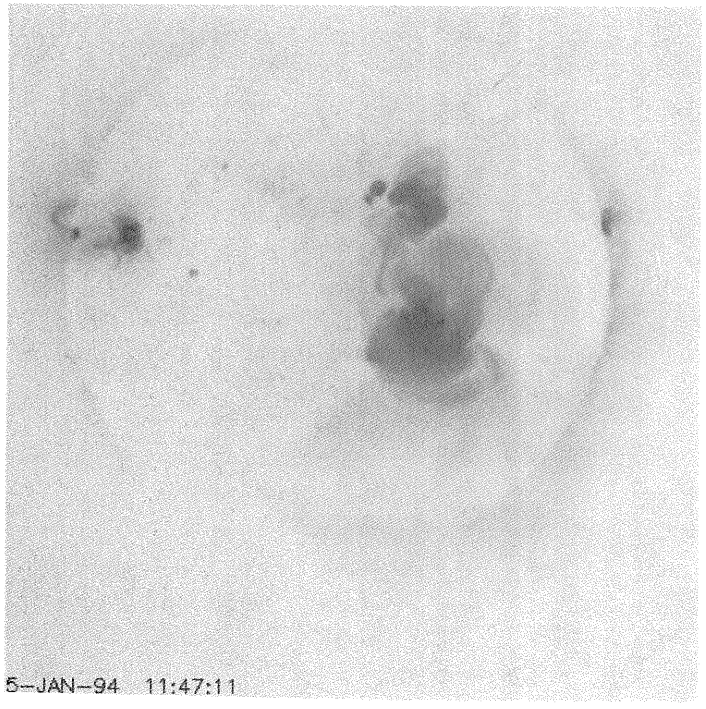
Day 6
11:57:58 UT



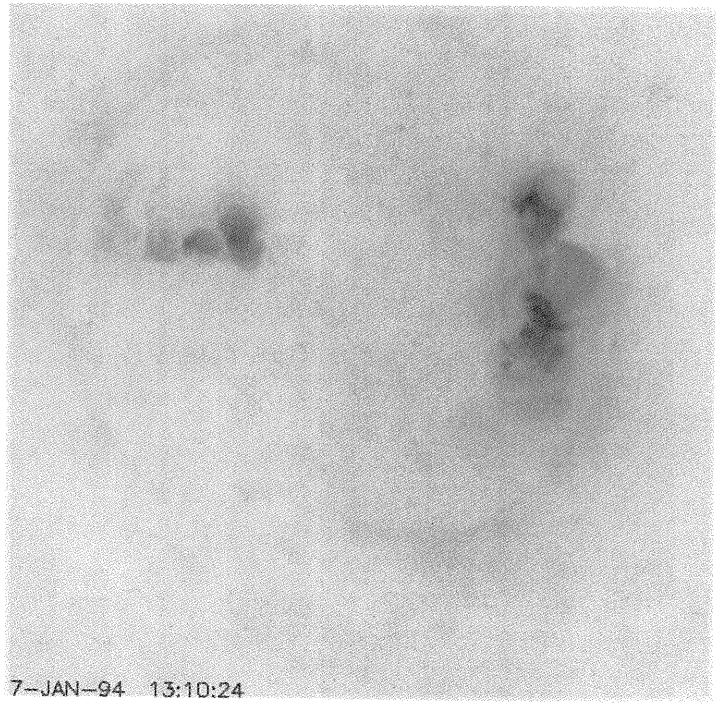
Day 8
12:33:14 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

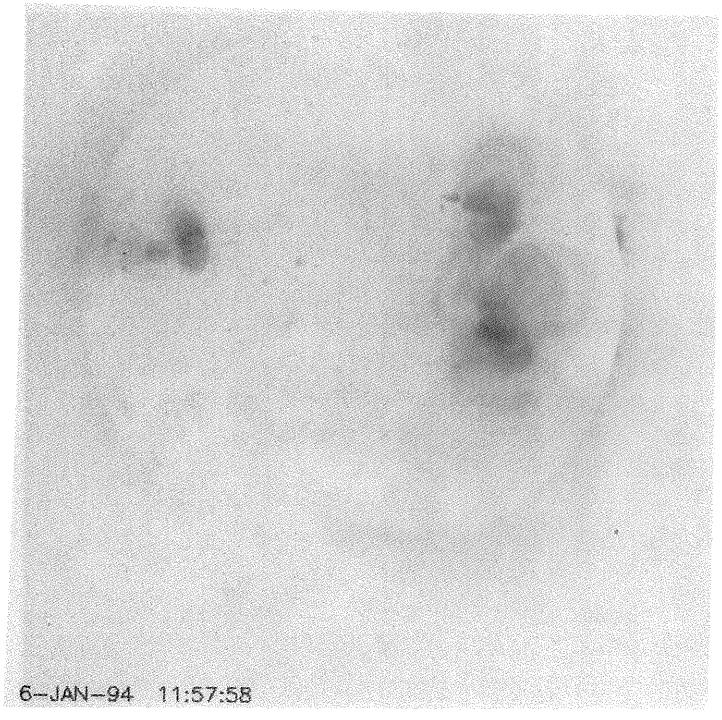
January 1994



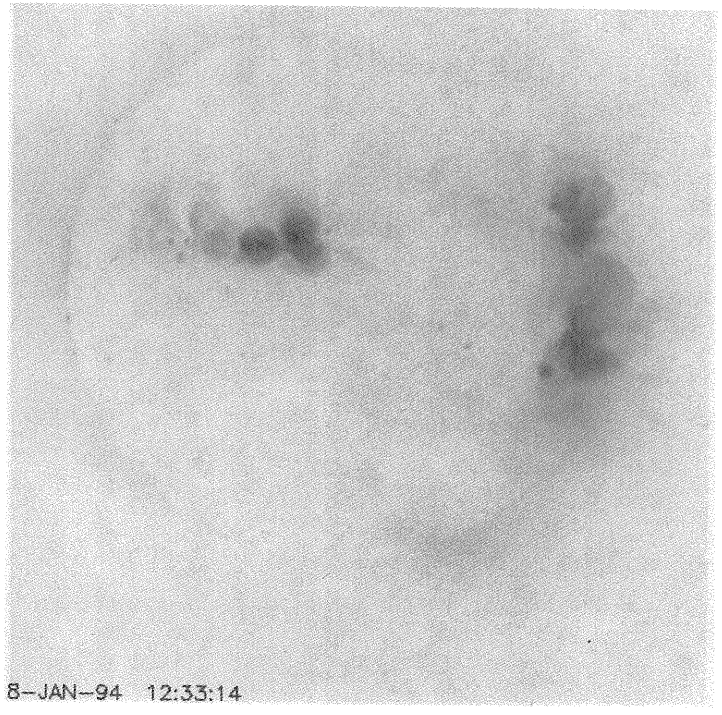
Day 5
11:47:11 UT



Day 7
13:10:24 UT



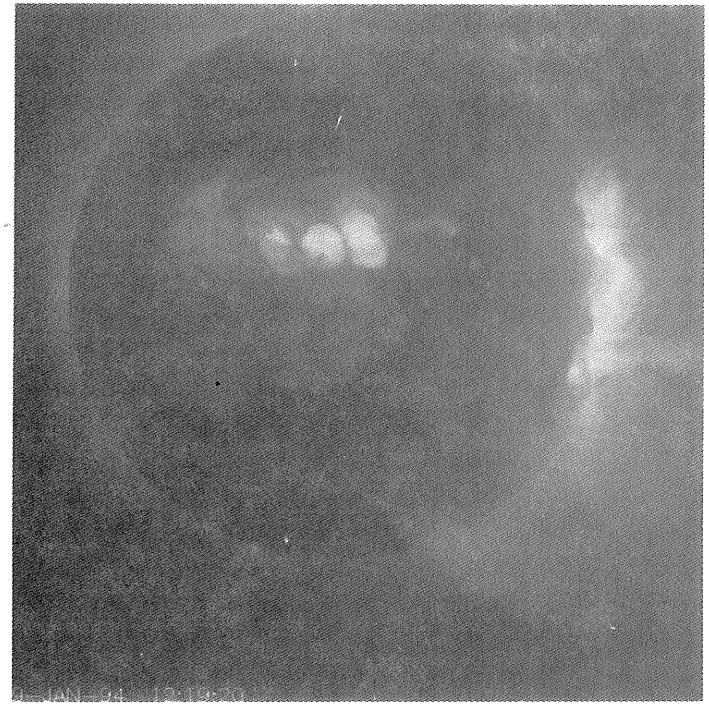
Day 6
11:57:58 UT



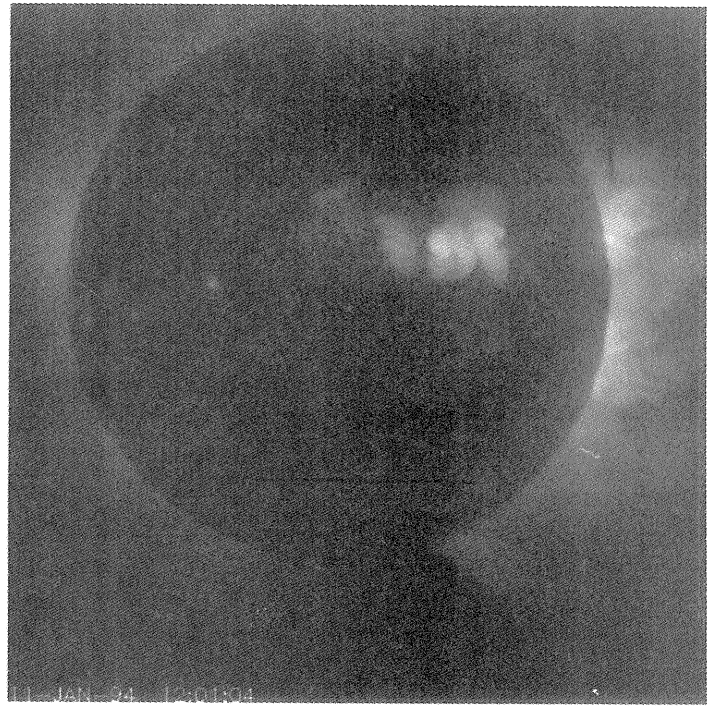
Day 8
12:33:14 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

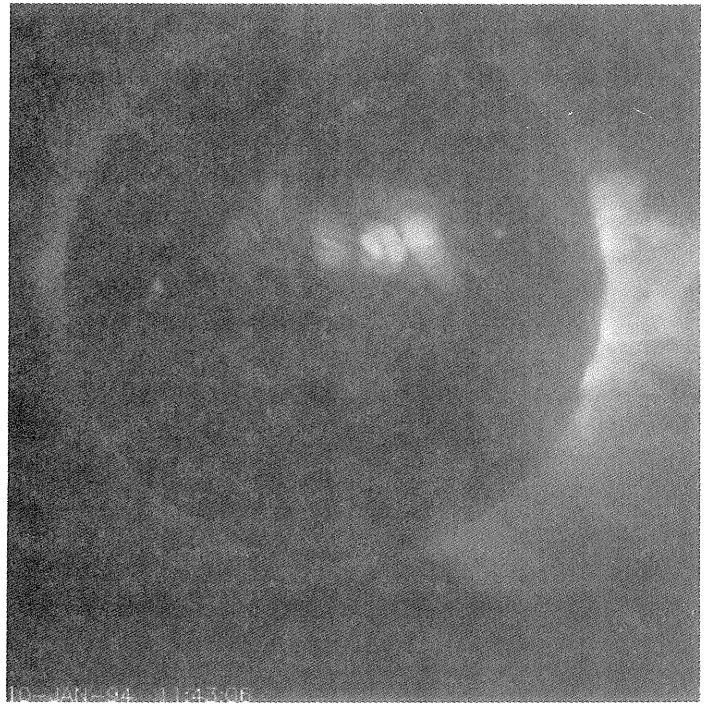
January 1994



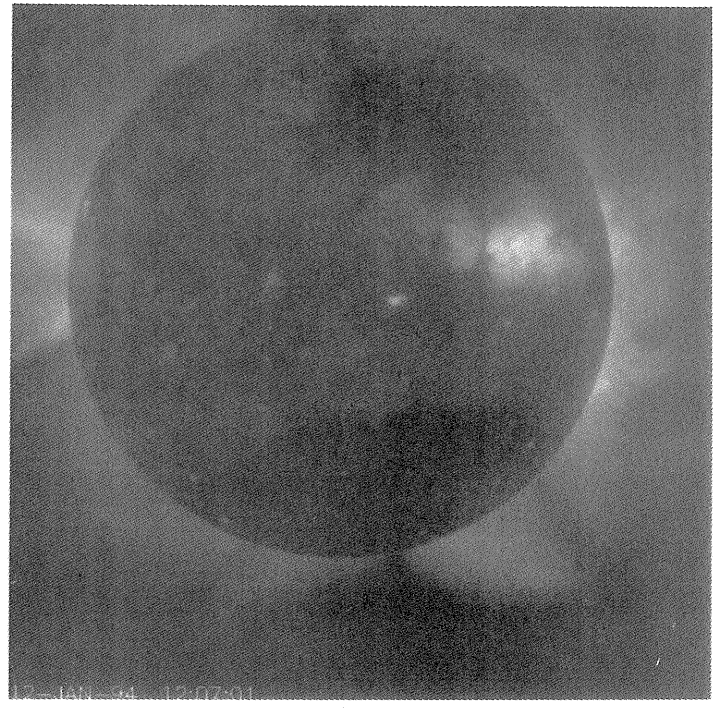
Day 9
12:19:20 UT



Day 11
12:01:04 UT



Day 10
11:43:06 UT



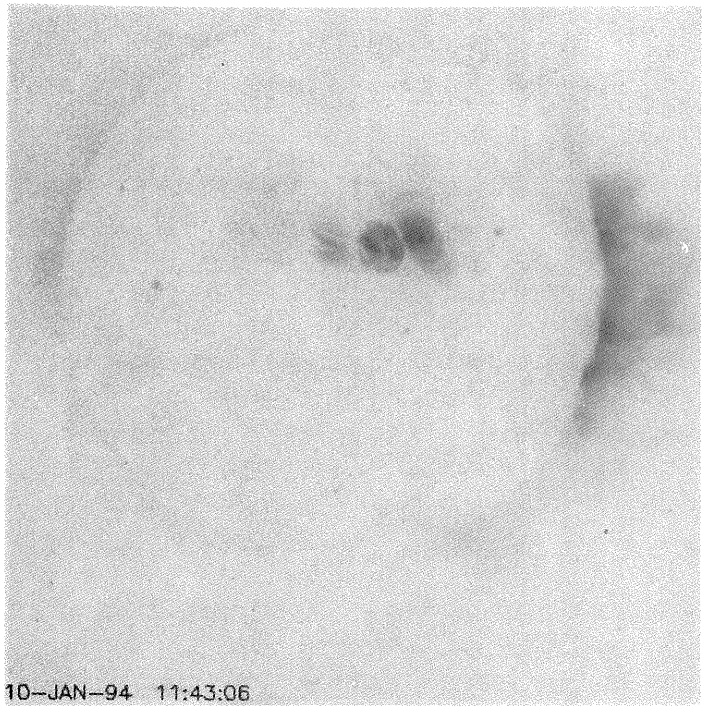
Day 12
12:07:01 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

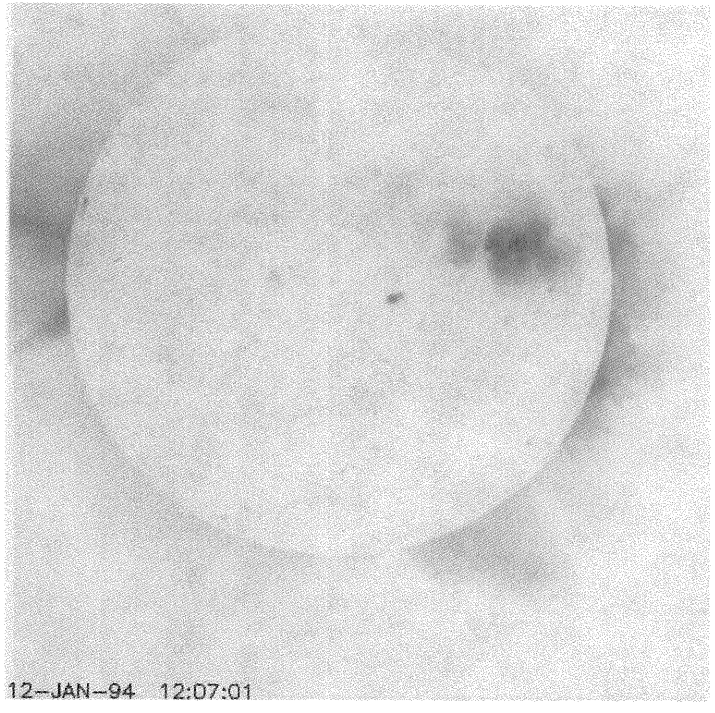
January 1994

Day 9
12:19:20 UT

Day 11
12:01:04 UT



Day 10
11:43:06 UT

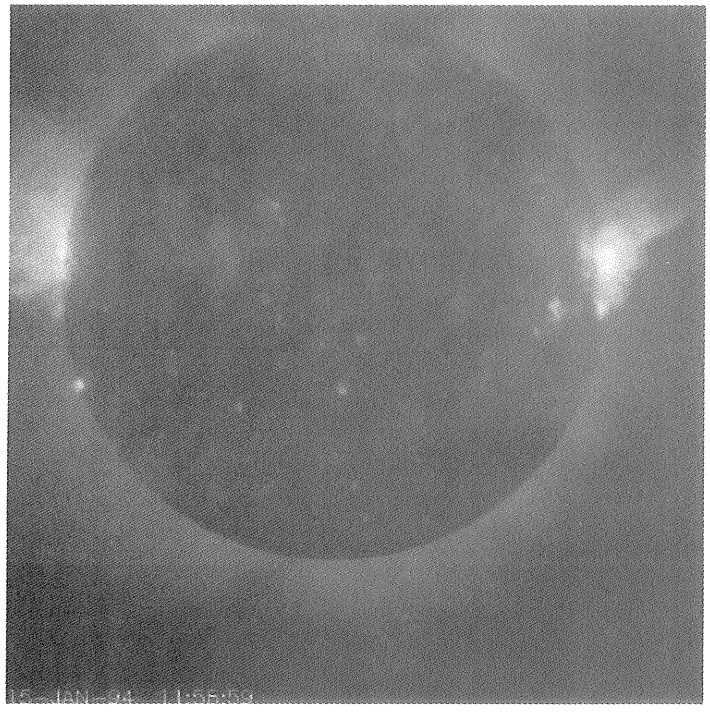


Day 12
12:07:01 UT

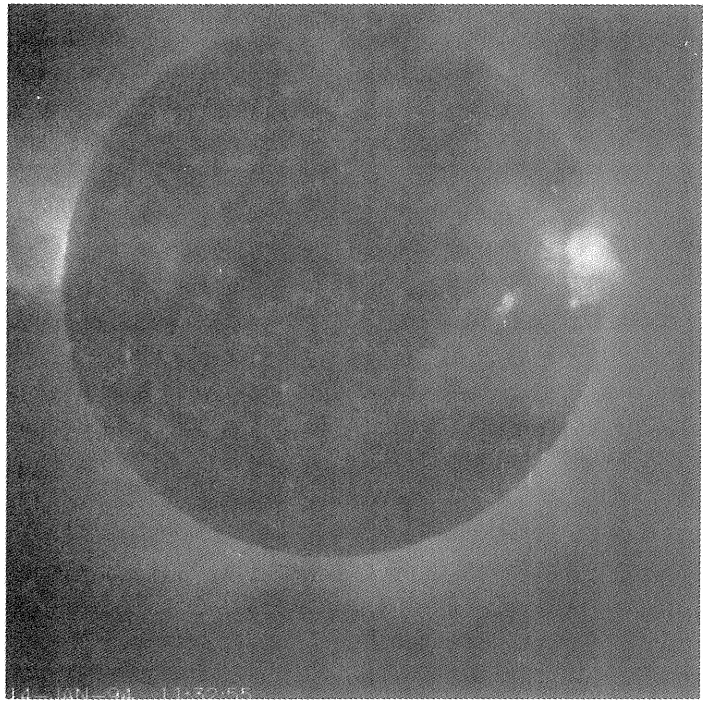
YOHKOH SOFT X-RAY TELESCOPE IMAGES

January 1994

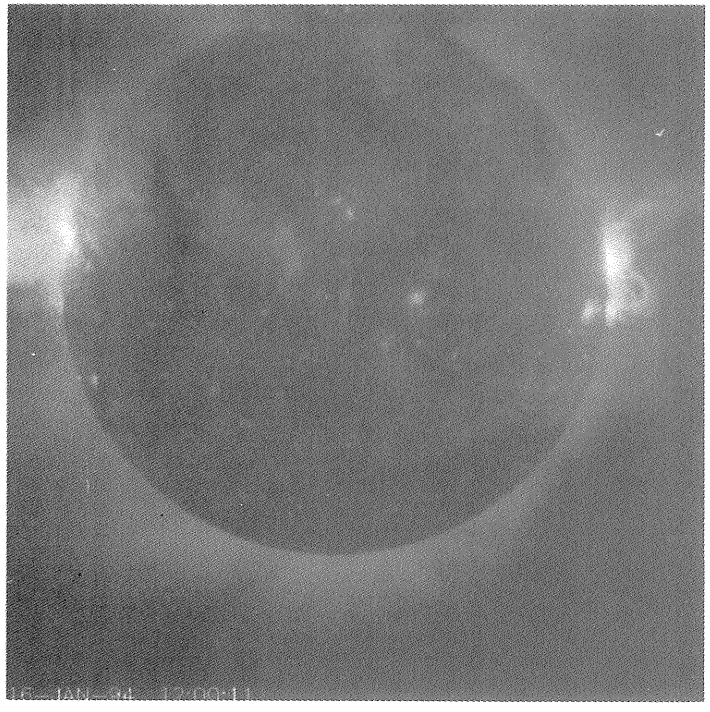
Day 13
18:49:35 UT



Day 15
11:56:59 UT



Day 14
11:32:55 UT

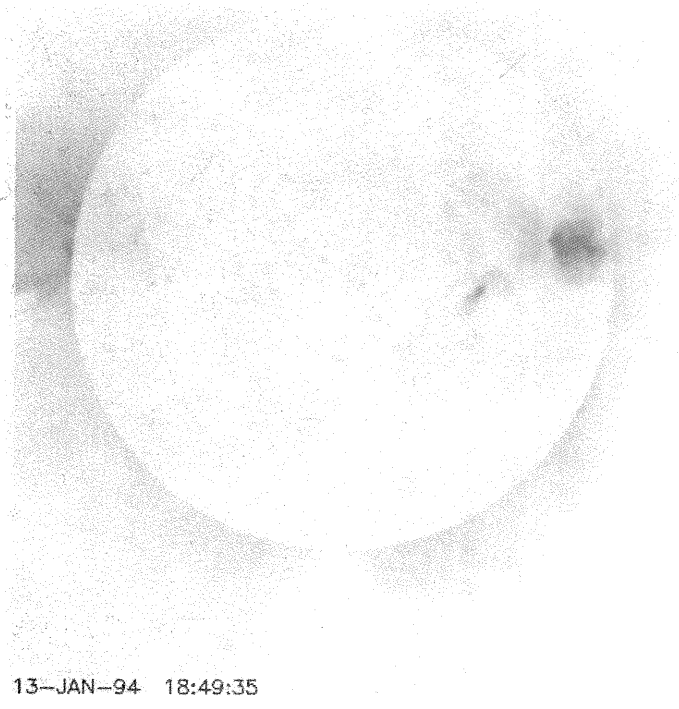


Day 16
12:00:11 UT

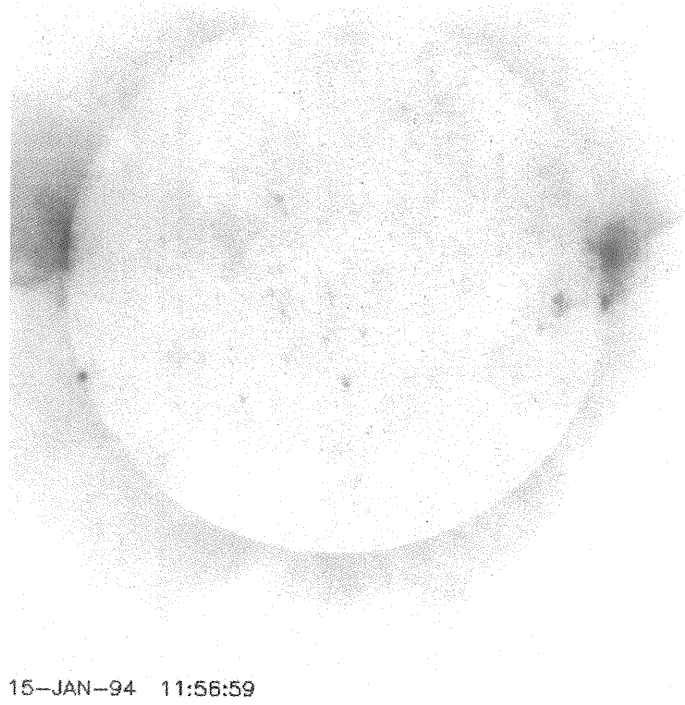
YOHKOH SOFT X-RAY TELESCOPE IMAGES

January 1994

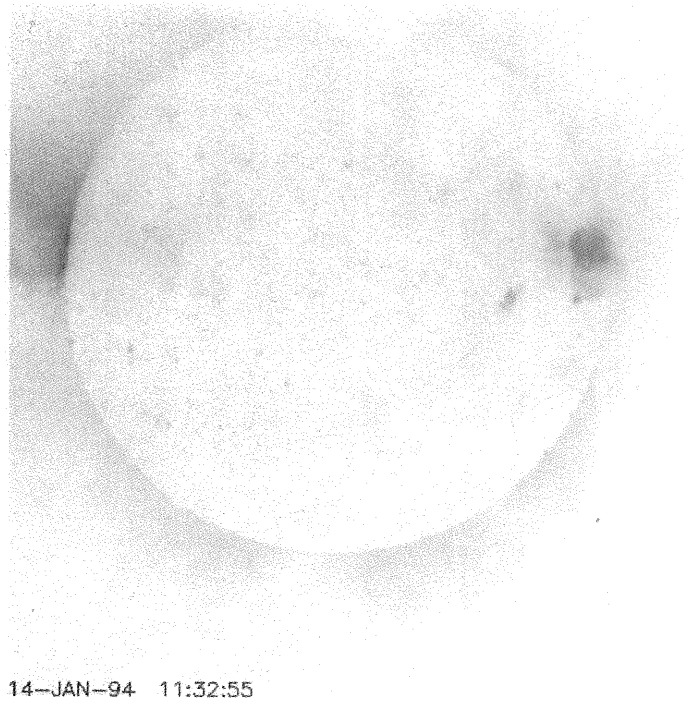
Day 13
18:49:35 UT



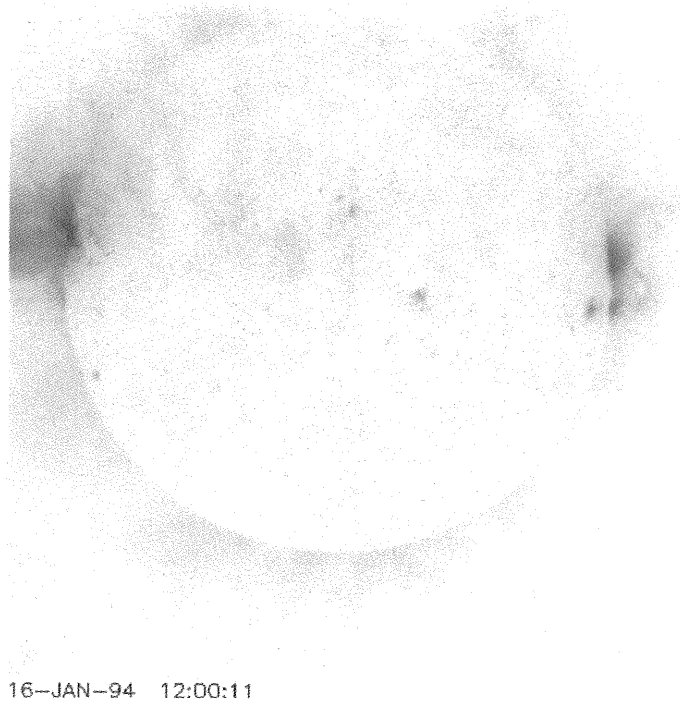
Day 15
11:56:59 UT



Day 14
11:32:55 UT



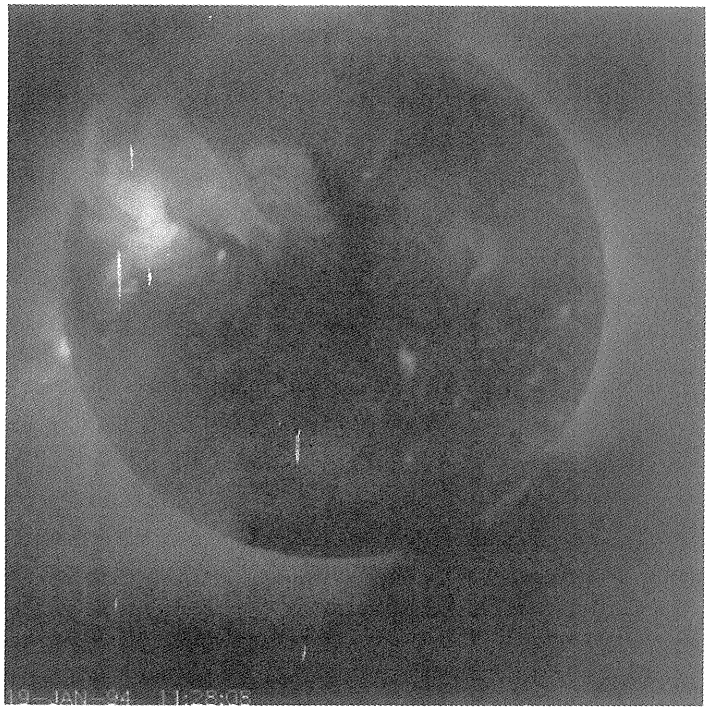
Day 16
12:00:11 UT



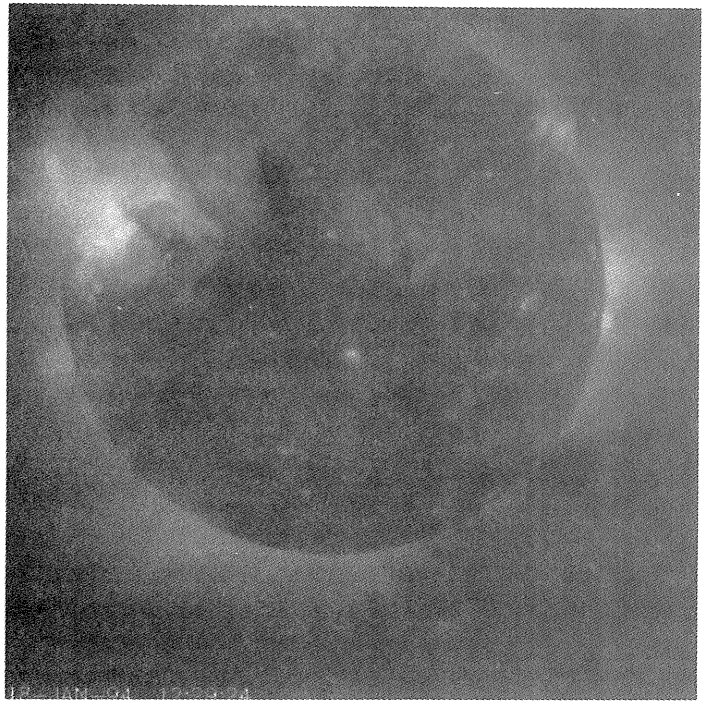
YOHKOH SOFT X-RAY TELESCOPE IMAGES

January 1994

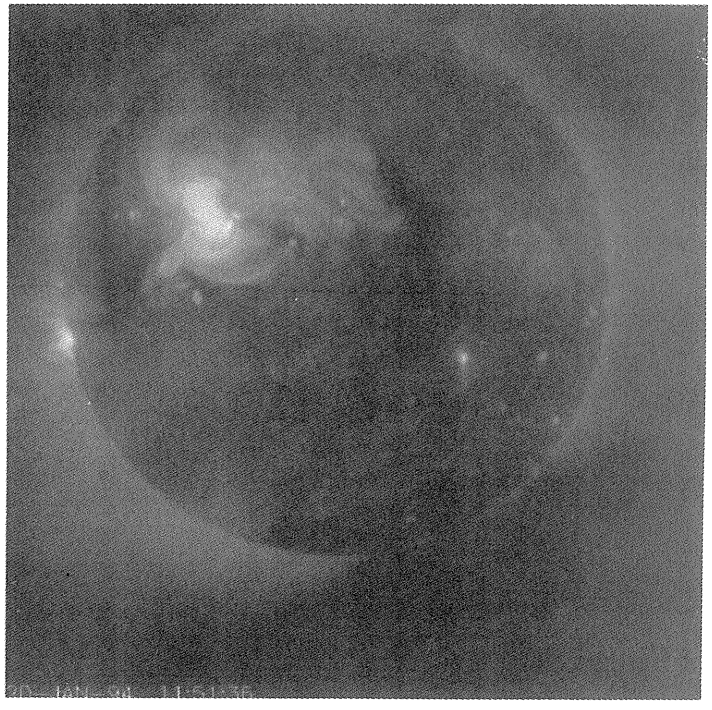
Day 17
10:55:05 UT



Day 19
11:28:08 UT



Day 18
12:29:24 UT



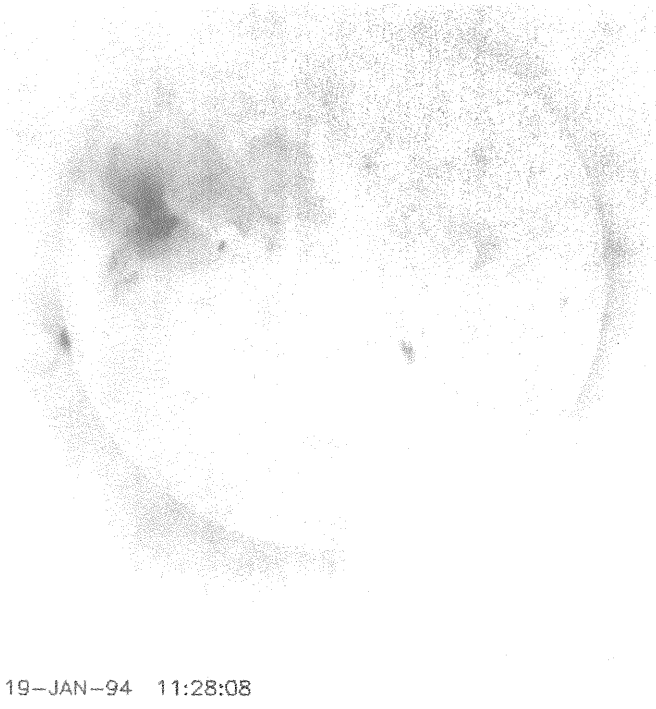
Day 20
11:51:36 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

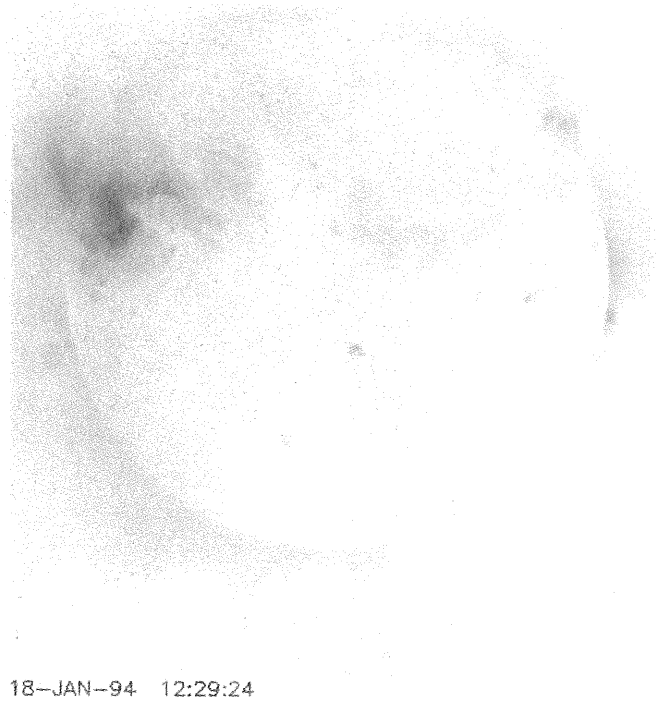
January 1994

Day 17
10:55:05 UT

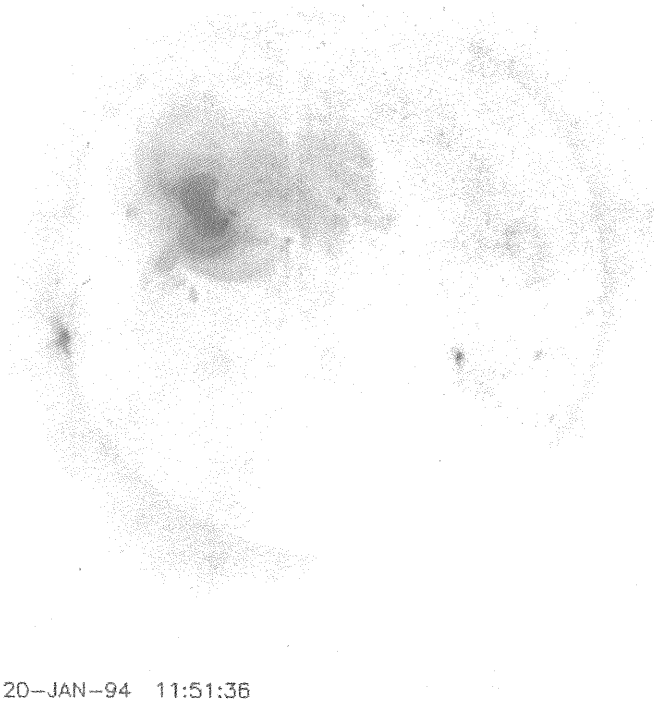
Day 19
11:28:08 UT



Day 18
12:29:24 UT

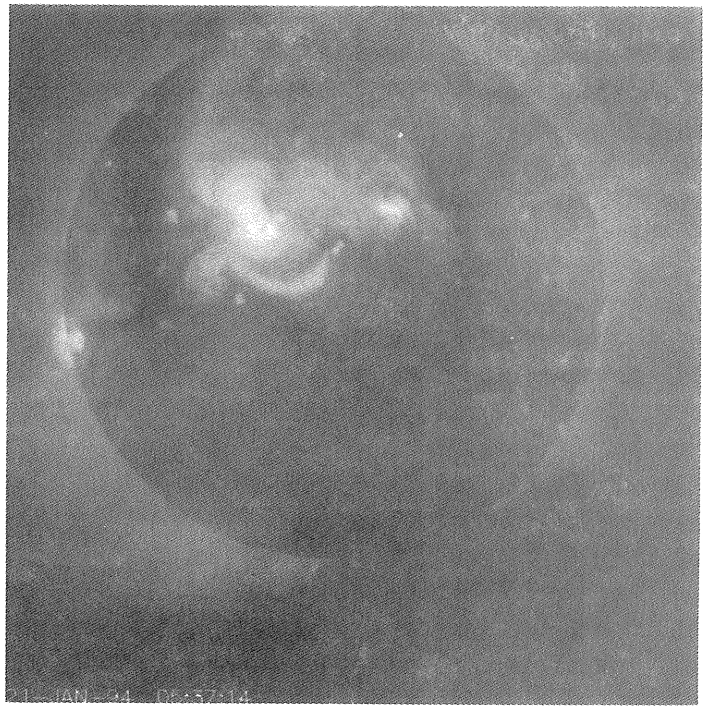


Day 20
11:51:36 UT

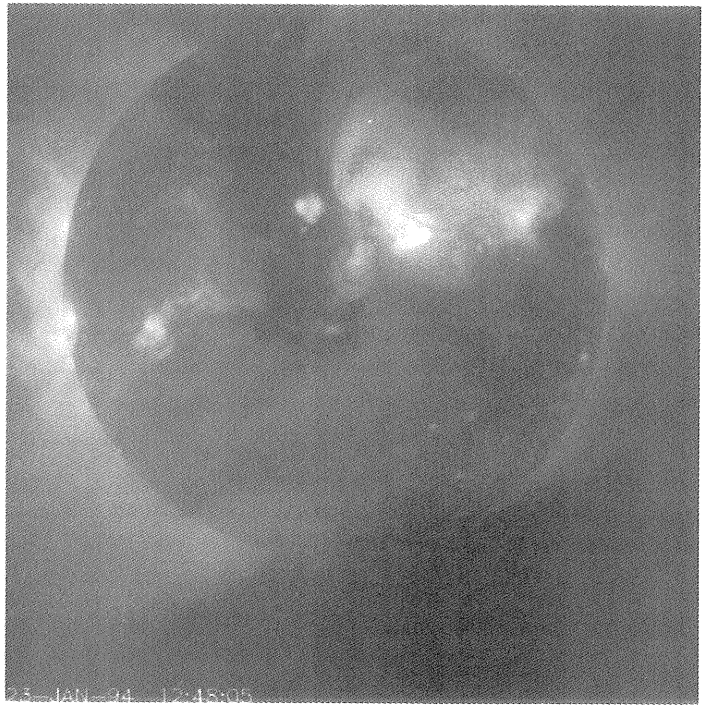


YOHKOH SOFT X-RAY TELESCOPE IMAGES

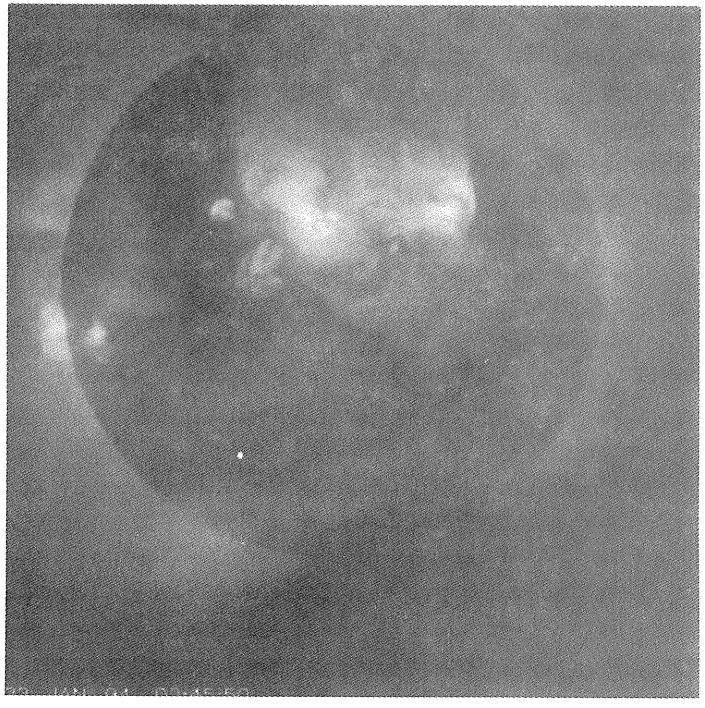
January 1994



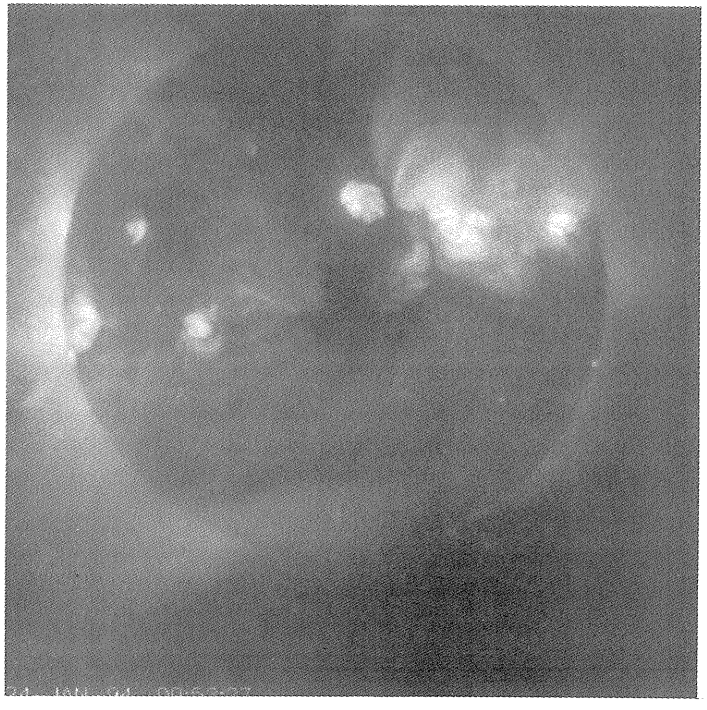
Day 21
05:37:14 UT



Day 23
12:48:05 UT



Day 22
02:45:50 UT

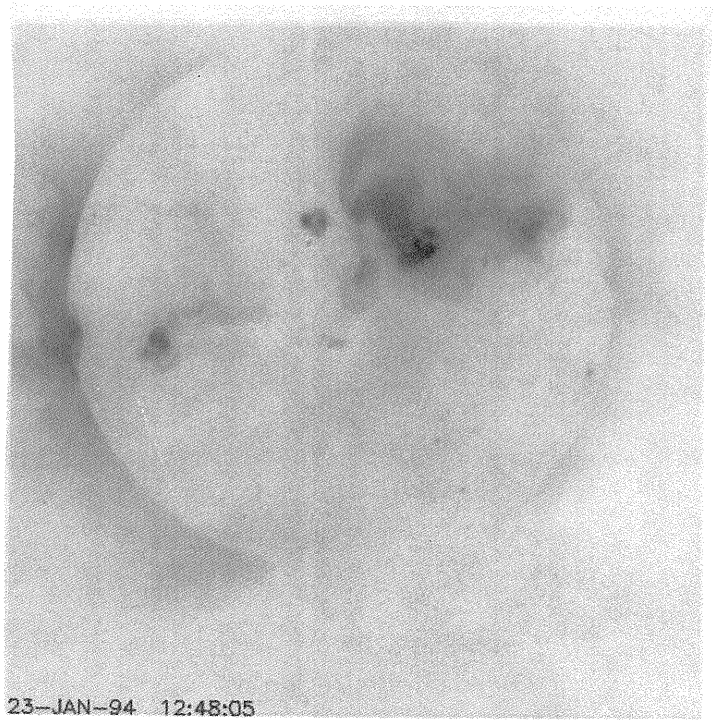


Day 24
09:52:27 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

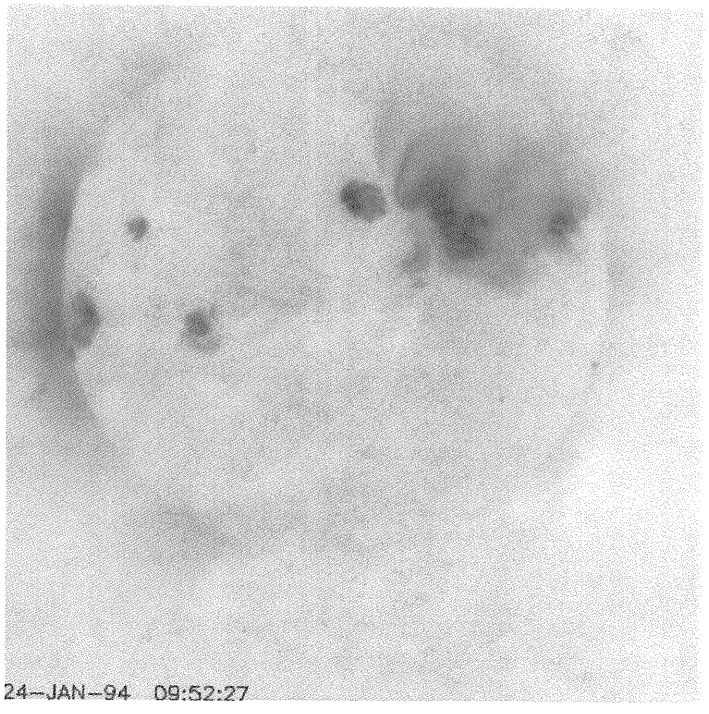
January 1994

Day 21
05:37:14 UT



Day 23
12:48:05 UT

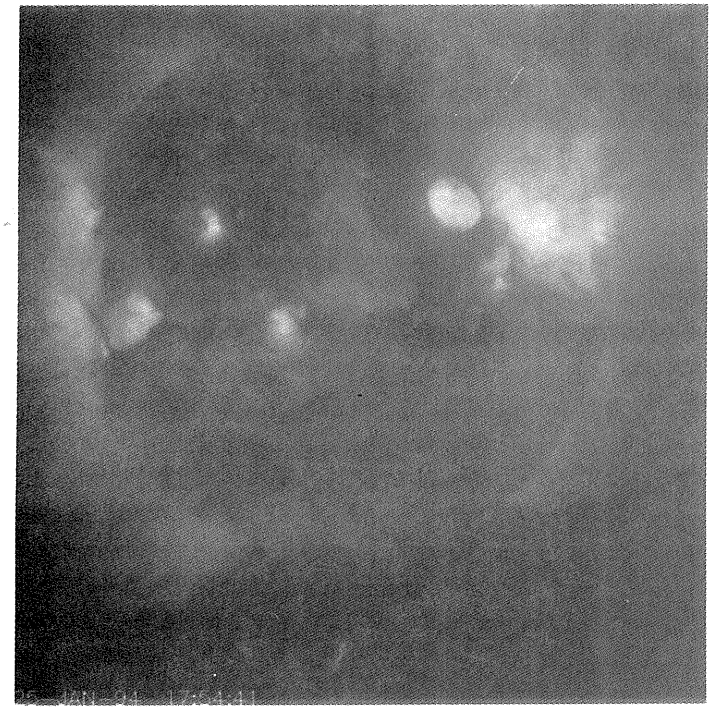
Day 22
02:45:50 UT



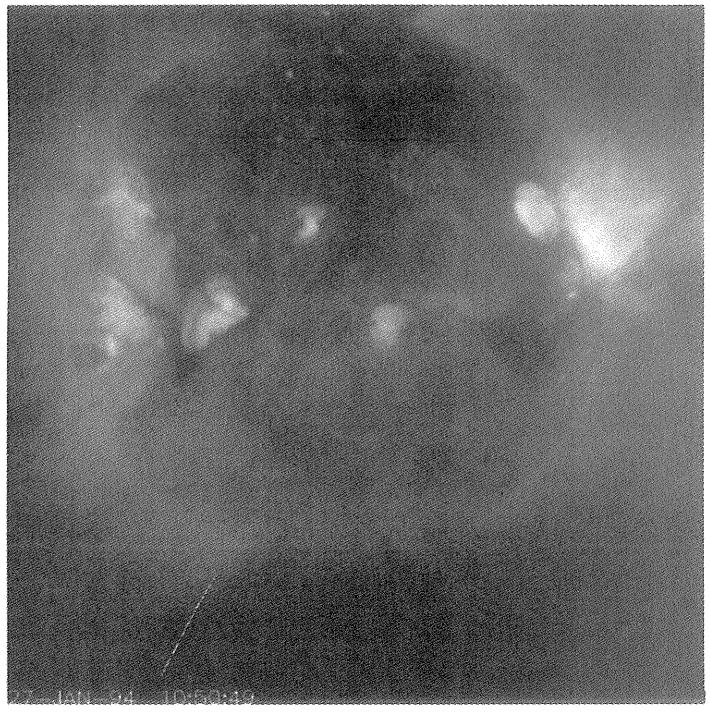
Day 24
09:52:27 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

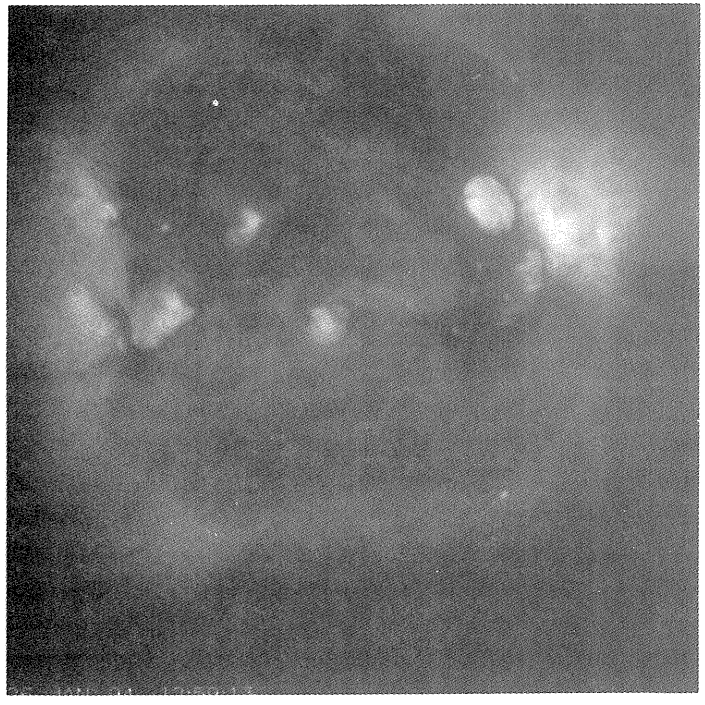
January 1994



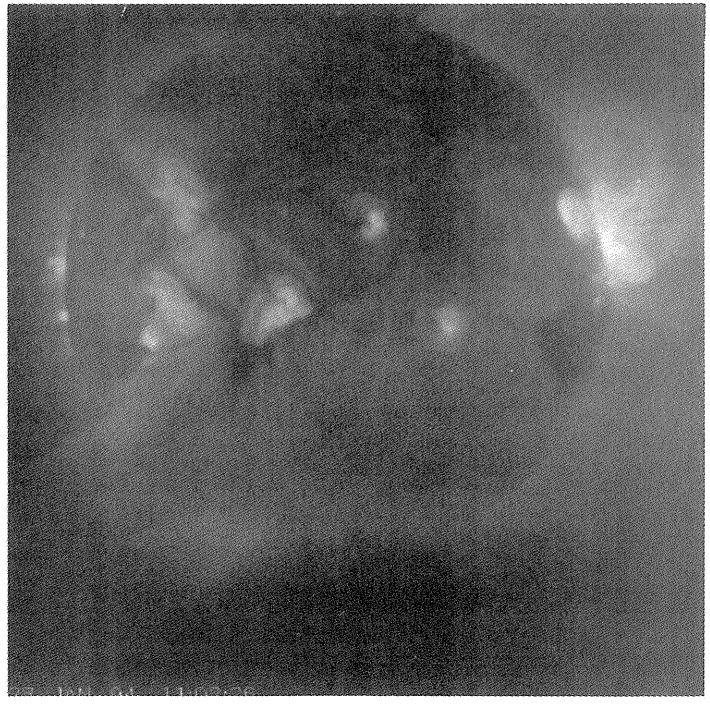
Day 25
17:54:41 UT



Day 27
10:50:49 UT



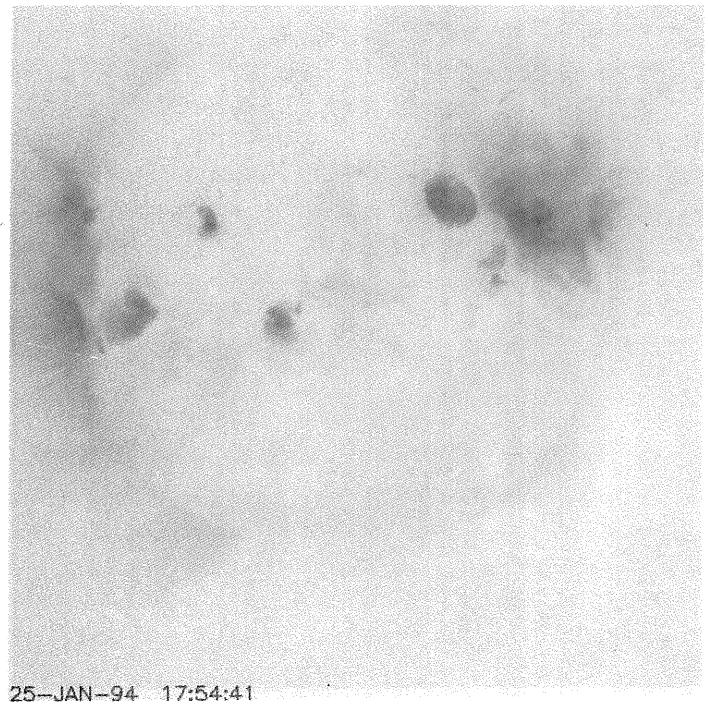
Day 26
12:59:13 UT



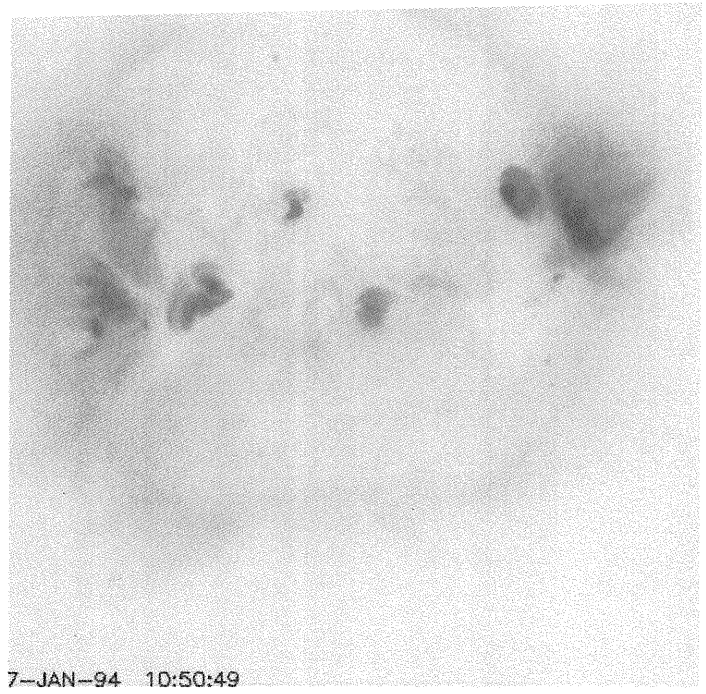
Day 28
11:02:26 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

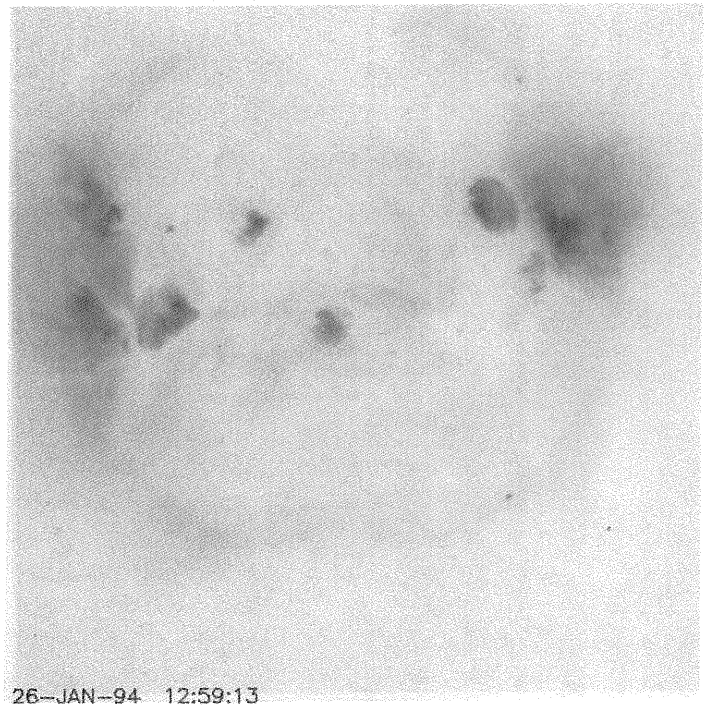
January 1994



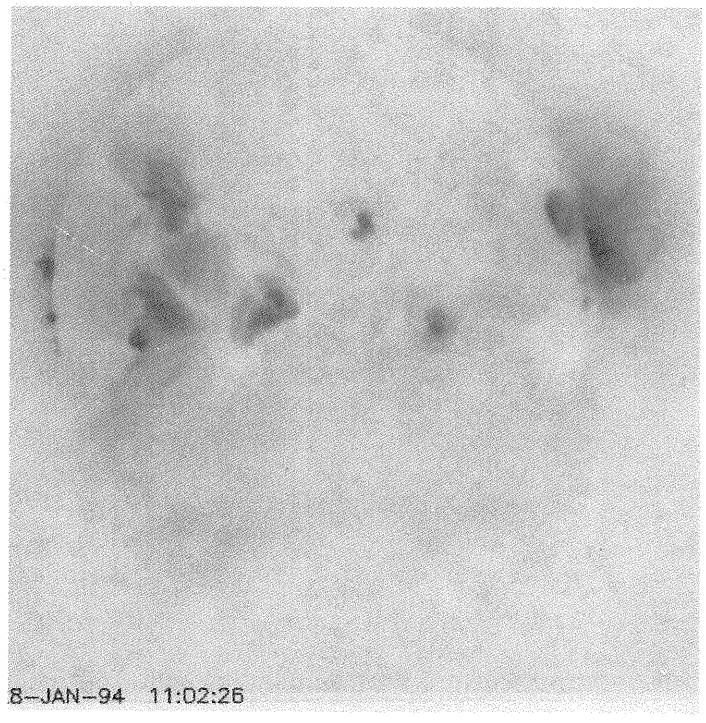
Day 25
17:54:41 UT



Day 27
10:50:49 UT



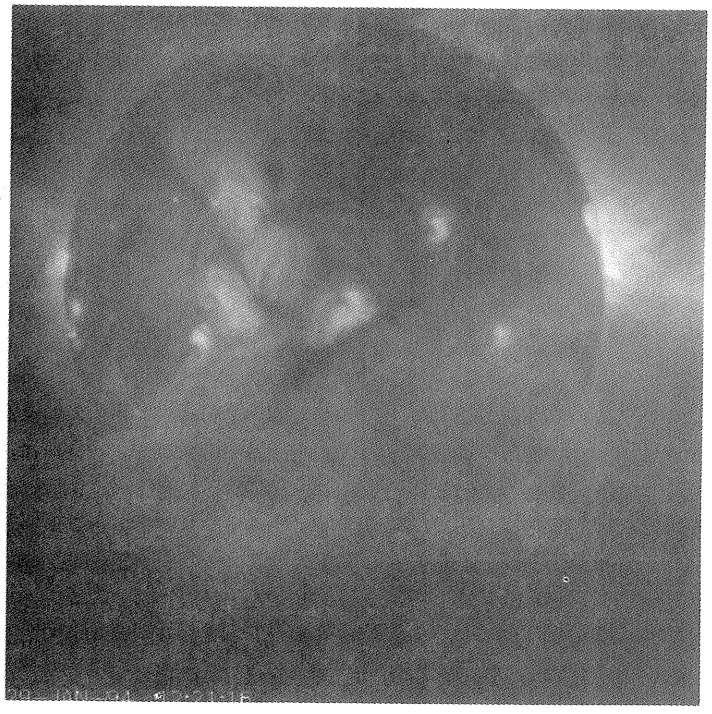
Day 26
12:59:13 UT



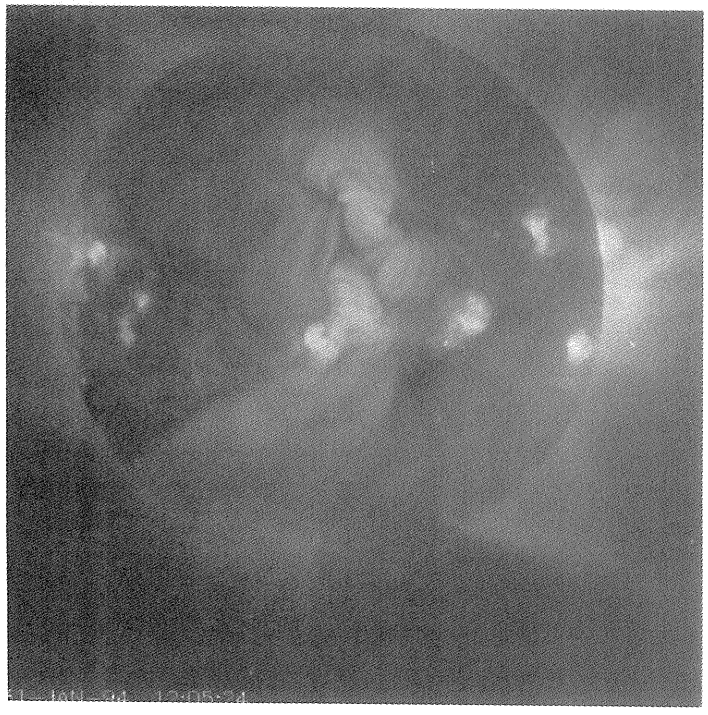
Day 28
11:02:26 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

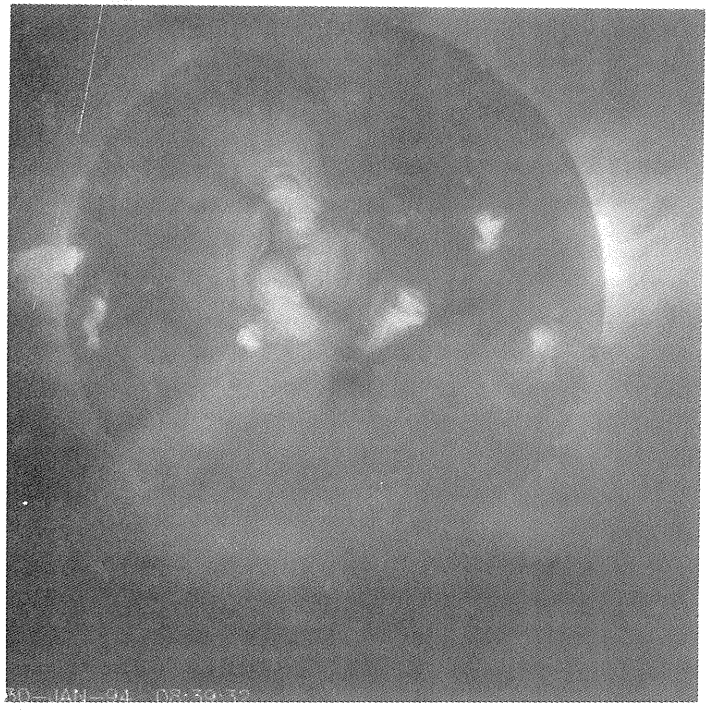
January 1994



Day 29
12:21:16 UT



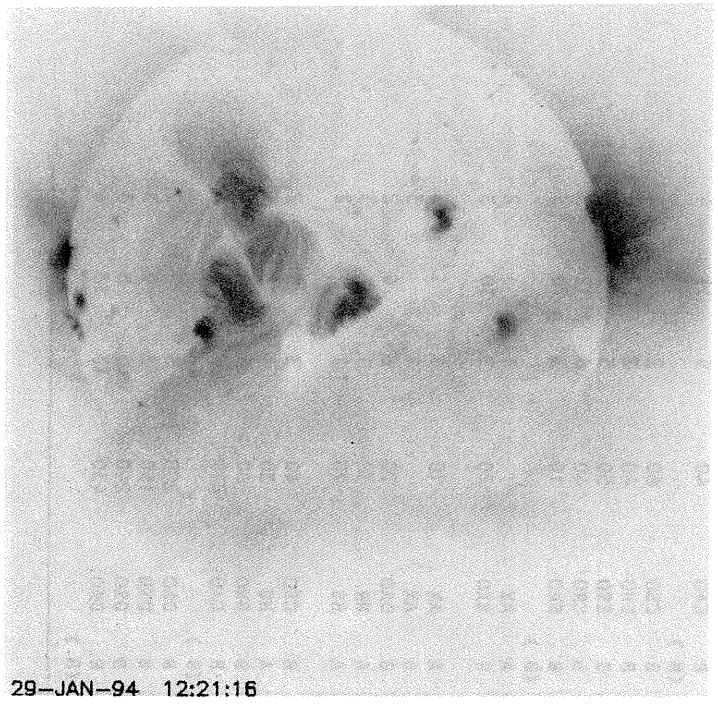
Day 31
12:05:24 UT



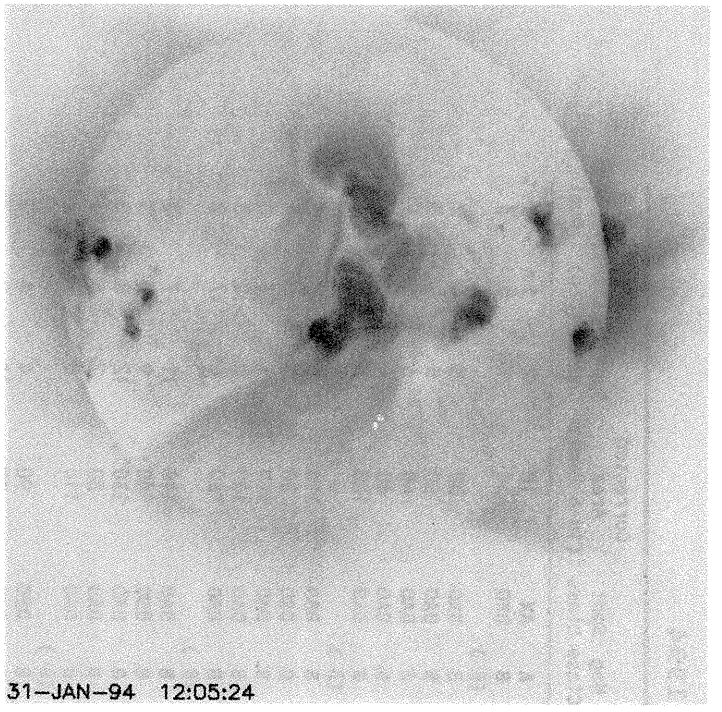
Day 30
08:39:32 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

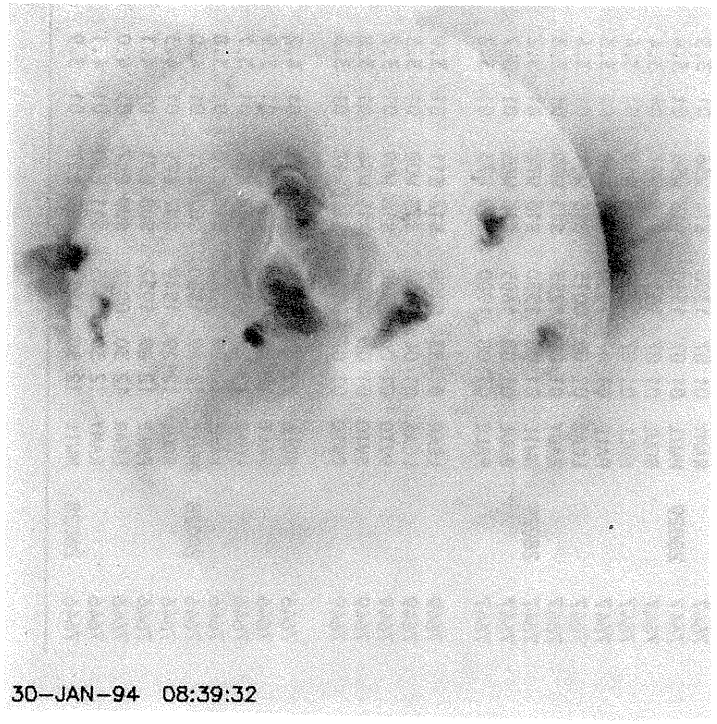
January 1994



Day 29
12:21:16 UT



Day 31
12:05:24 UT



Day 30
08:39:32 UT

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

JANUARY 1994

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
7647		SVTO	12	31	1000	S15	E42	01	3.6		A	AX	10	2	1	3
7647		RAMY	12	31	1322	S16	E39	01	3.5		B	DRO	30	7	3	3
7647	28029	MWIL	12	31	1545	S14	E38	01	3.5	5	(B)					
7647		BOUL	12	31	1604	S14	E38	01	3.5		B	BXO	30	3	4	2
7647		HOLL	12	31	1840	S17	E38	01	3.7		B	DAO	50	6	5	3
7647		PALE	12	31	1930	S17	E38	01	3.7		B	DAO	40	6	4	4
7647		LEAR	01	01	0025	S12	E33	01	3.5		B	CAO	60	4	4	3
7647		RAMY	01	01	1356	S15	E25	01	3.5		B	DAO	100	8	5	2
7647	28029	MWIL	01	01	1600	S16	E25	01	3.6	5	(B)					
7647		HOLL	01	01	1646	S16	E25	01	3.6		B	DSO	110	9	7	3
7647		BOUL	01	01	1725	S15	E24	01	3.5		B	CSO	20	2	6	2
7647		LEAR	01	02	0015	S15	E20	01	3.5		B	DAO	130	11	7	3
7647		RAMY	01	02	1300	S15	E13	01	3.5		B	DAO	100	8	8	3
7647		BOUL	01	02	1555	S15	E11	01	3.5		B	DAO	60	6	7	2
7647	28029	MWIL	01	02	1630	S15	E12	01	3.6	5	(B)					
7647		HOLL	01	02	1725	S16	E06	01	3.2		B	DAO	110	11	7	2
7647		PALE	01	02	1935	S16	E10	01	3.6		B	DSO	160	9	8	3
7647		LEAR	01	03	0100	S15	E06	01	3.5		B	DAO	130	12	8	3
7647		SVTO	01	03	0845	S12	W03	01	3.1		B	DAO	80	7	8	3
7647		RAMY	01	03	1401	S15	W01	01	3.5		B	DAO	110	8	9	4
7647	28029	MWIL	01	03	1545	S15	W02	01	3.5	5	(B)					
7647		HOLL	01	03	1605	S14	W02	01	3.5		B	DSO	90	4	8	3
7647		PALE	01	03	2100	S14	W03	01	3.6		B	DAO	90	11	9	3
7647		LEAR	01	04	0000	S15	W07	01	3.5		B	DAO	100	7	9	3
7647		SVTO	01	04	0900	S16	W16	01	3.2		B	CRO	70	3	3	2
7647		RAMY	01	04	1335	S14	W15	01	3.4		B	DAO	70	11	11	3
7647	28029	MWIL	01	04	1530	S16	W14	01	3.6	5	(B)					
7647		BOUL	01	04	1551	S15	W15	01	3.5		B	DSO	100	5	10	1
7647		HOLL	01	04	1609	S14	W16	01	3.5		B	DSO	100	8	10	3
7647		PALE	01	04	1914	S15	W17	01	3.5		B	ESO	90	12	11	2
7647		LEAR	01	05	0020	S16	W22	01	3.3		B	DSO	80	5	10	3
7647		RAMY	01	05	1325	S15	W28	01	3.4		B	ESO	90	7	11	3
7647	28029	MWIL	01	05	1545	S15	W28	01	3.5	5	(B)					
7647		PALE	01	05	1900	S16	W32	01	3.4		B	ESO	90	3	12	3
7647		HOLL	01	05	2307	S15	W33	01	3.5		B	CSO	40	2	12	1
7647		SVTO	01	06	0900	S15	W45	01	3.0		A	HR	10	1		3
7647		RAMY	01	06	1318	S15	W41	01	3.4		B	EAO	20	2	12	4
7647	28029	MWIL	01	06	1530	S16	W42	01	3.5	4	(B)					
7647		HOLL	01	06	1650	S16	W45	01	3.3		B	CSO	40	3	13	3
7647		PALE	01	06	1940	S17	W45	01	3.4		B	ESO	30	3	11	1
7647		LEAR	01	07	0015	S16	W47	01	3.4		B	ESO	20	3	12	3
7647		SVTO	01	07	0810	S18	W55	01	3.1		B	DSO	50	3	12	2
7647		RAMY	01	07	1308	S14	W56	01	3.3		B	EAO	40	5	11	4
7647	28029	MWIL	01	07	1530	S15	W56	01	3.4	5	(B)					
7647		BOUL	01	07	1615	S14	W57	01	3.4		B	CSO	60	2	12	1
7647		HOLL	01	07	1633	S16	W56	01	3.4		B	EHO	40	2	12	3
7647		PALE	01	07	1950	S15	W60	01	3.3		B	ESO	50	5	13	3
7647		LEAR	01	08	0015	S15	W61	01	3.4		B	CRO	40	6	12	3
7647		RAMY	01	08	1253	S13	W69	01	3.3		B	BXO	10	3	10	3
7647	28029	MWIL	01	08	1530	S15	W72	01	3.2	3	(B)					
7647		BOUL	01	08	1605	S16	W65	01	3.7		A	AX		1		2
7647		PALE	01	08	1900	S19	W73	01	3.2		B	BXO	20	3	10	3
7649		LEAR	01	03	0100	S12	E11	01	3.9		A	AX	10	1	1	3
7649		LEAR	01	04	0000	S13	W02	01	3.8		A	AX		1		3
7649		SVTO	01	04	0900	S16	W09	01	3.7		B	DAO	70	6	4	2
7649		SVTO	01	06	0900	S15	W34	01	3.8		A	HR	10	1		3
7649		SVTO	01	07	0810	S14	W47	01	3.8		A	HS	10	1	1	2
7646		HOLL	12	28	2055	S09	E85	01	4.2		B	CSO	40	3	5	2
7646		PALE	12	28	2200	S10	E80	01	3.9		A	HS	30	1	1	1
7646		LEAR	12	29	0014	S12	E75	01	3.7		B	BXO	60	4	4	4
7646		RAMY	12	29	1249	S10	E70	01	3.8		B	CAO	210	8	6	3
7646	28028	MWIL	12	29	1530	S07	E71	01	4.0	4	(B)					
7646		BOUL	12	29	1549	S07	E75	01	4.3		B	DAO	200	5	10	2
7646		PALE	12	29	1932	S08	E71	01	4.1		B	DSO	150	8	9	3
7646		LEAR	12	30	0022	S09	E67	01	4.0		B	DSO	240	5	8	3
7646		RAMY	12	30	1335	S11	E60	01	4.1		B	DKO	430	13	10	4
7646	28028	MWIL	12	30	1530	S08	E57	01	3.9	5	(B)					

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

JANUARY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7646		BOUL	12	30	1544	S08	E58	01	4.0		B	DAO	240	7	8	1
7646		HOLL	12	30	1812	S09	E59	01	4.2		B	EAO	230	11	11	3
7646		PALE	12	30	1824	S10	E57	01	4.0		B	CKO	220	10	10	3
7646		LEAR	12	31	0035	S09	E54	01	4.1		B	EAO	280	16	11	3
7646		SVTO	12	31	1000	S11	E54	01	4.5		B	EKC	1170	15	10	3
7646		RAMY	12	31	1322	S09	E47	01	4.1		B	DKI	420	30	10	3
7646	28028	MWIL	12	31	1545	S08	E45	01	4.0	5	(B)					
7646		BOUL	12	31	1604	S08	E46	01	4.1		B	DKO	350	14	9	2
7646		HOLL	12	31	1840	S10	E45	01	4.1		B	EKI	350	23	12	3
7646		PALE	12	31	1930	S08	E46	01	4.3		B	DAI	40	17	12	4
7646		LEAR	01	01	0025	S06	E40	01	4.0		B	DKI	390	21	10	3
7646		RAMY	01	01	1356	S08	E32	01	4.0		B	DKO	390	28	10	2
7646	28028	MWIL	01	01	1600	S08	E32	01	4.1	6	(D)					
7646		HOLL	01	01	1646	S09	E32	01	4.1		B	EKI	610	30	11	3
7646		BOUL	01	01	1725	S08	E30	01	4.0		B	DKO	250	6	9	2
7646		LEAR	01	02	0015	S09	E27	01	4.0		B	DKI	630	22	10	3
7646		RAMY	01	02	1300	S08	E20	01	4.0		B	EKI	600	28	11	3
7646		BOUL	01	02	1555	S08	E18	01	4.0		B	DKO	320	11	10	2
7646	28028	MWIL	01	02	1630	S08	E17	01	4.0	5	(D)					
7646		HOLL	01	02	1725	S09	E18	01	4.1		B	DKC	520	19	9	2
7646		LEAR	01	03	0100	S08	E13	01	4.0		B	DKI	660	34	10	3
7646		SVTO	01	03	0845	S08	E09	01	4.0		B	DKI	700	25	10	3
7646		RAMY	01	03	1401	S09	E06	01	4.0		B	DKI	730	40	10	4
7646	28028	MWIL	01	03	1545	S08	E04	01	3.9	5	(BG)					
7646		HOLL	01	03	1605	S08	E05	01	4.0		B	DKI	630	24	10	3
7646		PALE	01	03	2100	S08	E04	01	4.2		B	DKI	580	21	11	3
7646		LEAR	01	04	0000	S08	E01	01	4.1		B	EKI	690	26	10	3
7646		SVTO	01	04	0900	S08	W04	01	4.1		B	EHO	920	14	11	2
7646		RAMY	01	04	1335	S07	W07	01	4.0		B	EKO	610	32	11	3
7646	28028	MWIL	01	04	1530	S08	W07	01	4.1	5	(D)					
7646		BOUL	01	04	1551	S08	W08	01	4.1		B	DKI	370	11	10	1
7646		HOLL	01	04	1609	S08	W08	01	4.1		B	EKI	560	30	11	3
7646		PALE	01	04	1914	S08	W09	01	4.1		B	EKI	630	38	12	2
7646		LEAR	01	05	0020	S08	W14	01	4.0		B	EKI	670	34	14	3
7646		RAMY	01	05	1325	S07	W19	01	4.1		B	EKI	650	54	11	3
7646	28028	MWIL	01	05	1545	S08	W21	01	4.1	6	(D)					
7646		PALE	01	05	1900	S10	W23	01	4.1		BG	EKI	510	47	12	3
7646		HOLL	01	05	2307	S06	W24	01	4.2		BD	EKI	570	17	11	1
7646		SVTO	01	06	0900	S08	W32	01	4.0		BG	EKO	790	12	11	3
7646		RAMY	01	06	1318	S08	W32	01	4.1		B	EKI	490	46	11	4
7646	28028	MWIL	01	06	1530	S10	W34	01	4.1	5	(B)					
7646		HOLL	01	06	1650	S09	W35	01	4.1		BD	EKI	590	32	12	3
7646		PALE	01	06	1940	S10	W35	01	4.2		B	DKI	410	10	10	1
7646		LEAR	01	07	0015	S09	W38	01	4.1		BG	EKI	500	25	11	3
7646		SVTO	01	07	0810	S09	W42	01	4.2		BG	EKO	450	18	12	2
7646		RAMY	01	07	1308	S06	W46	01	4.1		B	EAI	310	30	11	4
7646	28028	MWIL	01	07	1530	S10	W47	01	4.1	5	(B)					
7646		BOUL	01	07	1615	S08	W48	01	4.1		B	EAO	300	5	11	1
7646		HOLL	01	07	1633	S09	W47	01	4.2		B	EKO	410	17	13	3
7646		PALE	01	07	1950	S09	W54	01	3.8		B	DAI	220	16	10	3
7646		LEAR	01	08	0015	S09	W53	01	4.0		BG	EAI	430	15	11	3
7646		RAMY	01	08	1253	S08	W61	01	4.0		B	EAO	210	15	13	3
7646	28028	MWIL	01	08	1530	S10	W65	01	3.8	5	(BP)					
7646		BOUL	01	08	1605	S10	W65	01	3.8		B	CSO	120	2	7	2
7646		HOLL	01	08	1800	S08	W61	01	4.2		BG	EKO	250	7	12	3
7646		PALE	01	08	1900	S08	W62	01	4.1		B	EAO	190	12	12	3
7646		LEAR	01	09	0045	S10	W68	01	3.9		B	DAO	250	4	10	2
7646		RAMY	01	09	1305	S07	W75	01	3.9		B	DAO	100	3	5	3
7646	28028	MWIL	01	09	1530	S09	W78	01	3.8	3	(AP)					
7646		HOLL	01	09	1701	S05	W80	01	3.7		B	DKO	180	3	12	2
7646		PALE	01	09	1915	S10	W78	01	3.9		B	DAO	110	3	8	4
7646		LEAR	01	10	0215	S09	W81	01	4.0		A	HA	60	1	2	3
7645	28027	MWIL	12	28	1530	N12	E83	01	3.9	5	(AP)					
7645		BOUL	12	28	1717	N12	E88	01	4.4		A	HS	50	2	2	2
7645		HOLL	12	28	2055	N10	E85	01	4.2		B	DSI	210	4	6	2
7645		PALE	12	28	2200	N10	E78	01	3.8		B	CSO	80	3	3	1
7645		LEAR	12	29	0014	N09	E78	01	3.9		B	DAO	210	7	4	4
7645		RAMY	12	29	1249	N10	E71	01	3.9		B	DAI	740	10	9	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JANUARY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7645	28027	MWIL	12	29	1530	N12	E72	01	4.1	5	(B)					
7645		BOUL	12	29	1549	N12	E75	01	4.3		B	DKO	420	11	10	2
7645		PALE	12	29	1932	N12	E72	01	4.2		B	EAO	420	18	12	3
7645		LEAR	12	30	0022	N11	E70	01	4.3		B	EAO	530	9	12	3
7645		RAMY	12	30	1335	N10	E61	01	4.1		B	FKO	780	18	16	4
7645	28027	MWIL	12	30	1530	N12	E58	01	4.0	5	(D)					
7645		BOUL	12	30	1544	N12	E60	01	4.2		B	EKO	500	7	15	1
7645		HOLL	12	30	1812	N11	E61	01	4.3		B	EKO	550	19	14	3
7645		PALE	12	30	1824	N10	E57	01	4.0		B	EKO	500	18	14	3
7645		LEAR	12	31	0035	N11	E56	01	4.2		B	EKI	630	18	15	3
7645		SVTO	12	31	1000	N10	E50	01	4.2		BD	DKI	580	15	7	3
7645		RAMY	12	31	1322	N10	E50	01	4.3		BGD	EKI	690	40	14	3
7645	28027	MWIL	12	31	1545	N12	E47	01	4.2	5	(D)					
7645		BOUL	12	31	1604	N12	E48	01	4.3		B	EKO	510	19	15	2
7645		HOLL	12	31	1840	N12	E45	01	4.2		B	EKI	380	31	15	3
7645		PALE	12	31	1930	N11	E45	01	4.2		BG	FKI	1000	28	15	4
7645		LEAR	01	01	0025	N15	E43	01	4.3		BGD	EKI	760	36	15	3
7645		RAMY	01	01	1356	N12	E35	01	4.2		BGD	FKI	720	32	16	2
7645	28027	MWIL	01	01	1600	N12	E33	01	4.1	6	(D)					
7645		HOLL	01	01	1646	N11	E34	01	4.2		BGD	FKI	780	37	16	3
7645		BOUL	01	01	1725	N12	E33	01	4.2		B	EKI	350	8	15	2
7645		LEAR	01	02	0015	N11	E30	01	4.3		BGD	EKI	780	34	15	3
7645		RAMY	01	02	1300	N12	E25	01	4.4		B	FKC	610	38	18	3
7645		BOUL	01	02	1555	N11	E22	01	4.3		B	EKI	360	12	15	2
7645	28027	MWIL	01	02	1630	N13	E19	01	4.1	5	(D)					
7645		HOLL	01	02	1725	N12	E21	01	4.3		BGD	FKI	660	32	16	2
7645		PALE	01	02	1935	N12	E20	01	4.3		BG	FKI	530	39	16	3
7645		LEAR	01	03	0100	N12	E16	01	4.2		BGD	FKI	670	48	16	3
7645		SVTO	01	03	0845	N15	E12	01	4.3		B	FKI	600	25	16	3
7645		RAMY	01	03	1401	N12	E11	01	4.4		B	FKC	670	58	17	4
7645	28027	MWIL	01	03	1545	N13	E07	01	4.2	5	(D)					
7645		HOLL	01	03	1605	N13	E08	01	4.3		BG	FKI	740	34	16	3
7645		PALE	01	03	2100	N12	E07	01	4.4		BG	FKI	440	41	16	3
7645		LEAR	01	04	0000	N13	E04	01	4.3		BG	EAI	490	50	15	3
7645		SVTO	01	04	0900	N12	W01	01	4.3		BG	FKO	1500	36	17	2
7645		RAMY	01	04	1335	N13	W03	01	4.3		BG	FAC	320	70	19	3
7645	28027	MWIL	01	04	1530	N13	W05	01	4.3	5	(D)					
7645		BOUL	01	04	1551	N12	W04	01	4.3		B	ESI	290	10	15	1
7645		HOLL	01	04	1609	N13	W05	01	4.3		BG	FAI	400	34	18	3
7645		PALE	01	04	1914	N13	W06	01	4.3		BG	FAI	270	39	16	2
7645		LEAR	01	05	0020	N13	W08	01	4.4		BG	FAI	400	50	18	3
7645		RAMY	01	05	1325	N13	W16	01	4.3		BG	FSI	330	58	18	3
7645	28027	MWIL	01	05	1545	N12	W17	01	4.4	5	(BG)					
7645		PALE	01	05	1900	N11	W19	01	4.4		B	FSO	150	35	18	3
7645		HOLL	01	05	2307	N15	W21	01	4.4		BG	FSO	190	11	18	1
7645		SVTO	01	06	0900	N12	W27	01	4.3		BG	FHI	420	9	20	3
7645		RAMY	01	06	1318	N12	W28	01	4.4		B	FSI	150	30	19	4
7645	28027	MWIL	01	06	1530	N11	W33	01	4.2	4	(B)					
7645		HOLL	01	06	1650	N13	W31	01	4.4		BG	FSI	130	18	18	3
7645		PALE	01	06	1940	N12	W33	01	4.3		B	EAI	90	7	14	1
7645		LEAR	01	07	0015	N12	W37	01	4.2		BG	FAO	130	9	17	3
7645		SVTO	01	07	0810	N10	W41	01	4.2		BG	ESO	100	11	15	2
7645		RAMY	01	07	1308	N15	W41	01	4.4		B	FAO	120	15	18	4
7645	28027	MWIL	01	07	1530	N12	W45	01	4.2	4	(B)					
7645		BOUL	01	07	1615	N13	W46	01	4.2		B	FSO	80	4	17	1
7645		HOLL	01	07	1633	N13	W45	01	4.3		BG	FAO	80	6	17	3
7645		PALE	01	07	1950	N12	W49	01	4.1		B	FAI	60	8	17	3
7645		LEAR	01	08	0015	N12	W50	01	4.2		B	CAO	70	6	17	3
7645		RAMY	01	08	1253	N14	W56	01	4.3		B	CAO	50	5	18	3
7645	28027	MWIL	01	08	1530	N12	W60	01	4.1	4	(B)					
7645		BOUL	01	08	1605	N12	W62	01	4.0		B	BXO	20	3	12	2
7645		HOLL	01	08	1800	N13	W62	01	4.1		BG	CAO	30	3	11	3
7645		PALE	01	08	1900	N13	W62	01	4.1		B	EAO	20	5	13	3
7645		LEAR	01	09	0045	N11	W66	01	4.1		B	CAO	60	4	13	2
7645		RAMY	01	09	1305	N14	W74	01	3.9		B	CAO	40	2	6	3
7645A	28030	MWIL	01	02	1630	S18	E30	01	5.0	4	(AF)					
7645A		HOLL	01	02	1725	S17	E30	01	5.0		A	AX	10	1	1	2
7645A		RAMY	01	03	1401	S18	E17	01	4.9		A	AX		1		4

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JANUARY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7645A	28030	MWIL	01	03	1545	S18	E17	01	4.9	4	(AF)					
7645A		HOLL	01	03	1605	S17	E16	01	4.9		A	AX	10	1	1	3
7645A	28030	MWIL	01	04	1530	S17	E02	01	4.8	4	(B)					
7645A		HOLL	01	06	1650	S19	W28	01	4.6		B	BXO		3	3	3
7645A		PALE	01	06	1940	S20	W28	01	4.7		A	AX	10	1	1	1
7645A		LEAR	01	07	0015	S18	W30	01	4.7		A	HR	10	1	1	3
7645A	28034	MWIL	01	07	1530	S18	W40	01	4.6	4	(B)					
7645A		HOLL	01	07	1633	S18	W42	01	4.5		A	AX		1		3
7645A		LEAR	01	08	0015	S18	W47	01	4.4		A	AX	10	1		3
7645A		HOLL	01	08	1800	S18	W55	01	4.6		A	AX	10	1	1	3
7645A		PALE	01	08	1900	S19	W53	01	4.7		A	AX	10	2	1	3
7645A		PALE	01	09	1915	S20	W69	01	4.5		A	AX		1		4
7645B		RAMY	01	09	1305	N09	W24	01	7.7		A	AX		2	2	3
7645B		PALE	01	09	1915	N08	W28	01	7.7		A	AX		3	2	4
7648		SVTO	01	03	0845	N07	E74	01	8.9		A	AX		1		3
7648		RAMY	01	03	1401	N04	E74	01	9.1		A	AX	10	2	1	4
7648	28031	MWIL	01	03	1545	N07	E72	01	9.0	5	(B)					
7648		HOLL	01	03	1605	N07	E70	01	8.9		A	HR	30	1	1	3
7648		PALE	01	03	2100	N08	E72	01	9.3		B	DAO	40	2	6	3
7648		LEAR	01	04	0000	N08	E68	01	9.1		B	CSO	100	5	6	3
7648		SVTO	01	04	0900	N05	E65	01	9.2		B	DRO	60	6	8	2
7648		RAMY	01	04	1335	N04	E61	01	9.1		B	DSO	100	12	9	3
7648	28031	MWIL	01	04	1530	N07	E60	01	9.1	5	(B)					
7648		BOUL	01	04	1551	N08	E61	01	9.2		B	DSO	120	3	8	1
7648		HOLL	01	04	1609	N07	E60	01	9.2		B	DSO	80	8	9	3
7648		PALE	01	04	1914	N05	E57	01	9.1		B	DSO	160	9	8	2
7648		LEAR	01	05	0020	N08	E55	01	9.1		B	DSO	90	9	9	3
7648		RAMY	01	05	1325	N04	E48	01	9.1		B	DAO	350	22	9	3
7648	28031	MWIL	01	05	1545	N08	E48	01	9.2	5	(D)					
7648		PALE	01	05	1900	N05	E46	01	9.2		B	DAO	420	17	10	3
7648		HOLL	01	05	2307	N08	E44	01	9.3		B	EAC	360	8	11	1
7648		SVTO	01	06	0900	N04	E40	01	9.4		B	DKO	940	10	16	3
7648		RAMY	01	06	1318	N05	E35	01	9.2		B	DKI	530	32	10	4
7648	28031	MWIL	01	06	1530	N08	E35	01	9.3	4	(B)					
7648		HOLL	01	06	1650	N07	E33	01	9.2		B	EKI	500	29	11	3
7648		PALE	01	06	1940	N07	E32	01	9.2		B	DAI	420	10	10	1
7648		LEAR	01	07	0015	N07	E29	01	9.2		B	EKO	500	24	11	3
7648		SVTO	01	07	0810	N07	E25	01	9.2		B	DAO	600	22	10	2
7648		RAMY	01	07	1308	N06	E25	01	9.4		B	EKI	450	42	11	4
7648	28031	MWIL	01	07	1530	N08	E21	01	9.2	5	(BG)					
7648		BOUL	01	07	1615	N08	E20	01	9.2		B	EKO	390	13	11	1
7648		HOLL	01	07	1633	N06	E21	01	9.3		B	EHI	350	21	11	3
7648		PALE	01	07	1950	N07	E18	01	9.2		B	EKI	390	36	11	3
7648		LEAR	01	08	0015	N06	E15	01	9.1		BG	EKO	420	29	11	3
7648		RAMY	01	08	1253	N05	E08	01	9.1		B	EAO	360	29	12	3
7648	28031	MWIL	01	08	1530	N07	E07	01	9.2	5	(B)					
7648		BOUL	01	08	1605	N06	E07	01	9.2		B	DAO	190	9	10	2
7648		HOLL	01	08	1800	N07	E07	01	9.3		BG	EKI	300	21	12	3
7648		PALE	01	08	1900	N06	E06	01	9.2		B	EAI	330	31	12	3
7648		LEAR	01	09	0045	N07	E03	01	9.2		B	EAO	340	18	12	2
7648		RAMY	01	09	1305	N06	W05	01	9.2		B	EAO	300	24	12	3
7648	28031	MWIL	01	09	1530	N06	W06	01	9.2	5	(B)					
7648		HOLL	01	09	1701	N08	W07	01	9.2		B	DAO	280	12	11	2
7648		PALE	01	09	1915	N07	W07	01	9.3		B	DAO	290	30	12	4
7648		LEAR	01	10	0215	N07	W15	01	9.0		B	DKO	2900	10	6	3
7648		SVTO	01	10	1120	N05	W21	01	8.9		B	DAO	230	14	6	3
7648		RAMY	01	10	1253	N07	W17	01	9.3		B	EAO	360	22	12	4
7648	28031	MWIL	01	10	1545	N07	W25	01	8.8	5	(AP)					
7648		BOUL	01	10	1556	N06	W19	01	9.2		B	DAO	220	13	10	2
7648		LEAR	01	11	0030	N07	W25	01	9.1		B	EAO	210	15	12	3
7648	28031	MWIL	01	11	1530	N07	W38	01	8.8	5	(BF)					
7648		BOUL	01	11	1617	N06	W33	01	9.2		B	ESO	220	6	11	1
7648		HOLL	01	11	1640	N07	W35	01	9.1		B	EKO	270	12	12	3
7648		RAMY	01	11	2002	N06	W36	01	9.1		B	EAO	180	13	12	3
7648		LEAR	01	12	0040	N06	W39	01	9.1		B	EAO	180	8	13	3
7648		RAMY	01	12	1432	N07	W46	01	9.1		B	CAO	100	10	9	4
7648		BOUL	01	12	1537	N07	W52	01	8.7		B	DAO	120	5	3	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JANUARY 1994

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
7648	28031	MWIL	01	12	1600	N08	W51	01	8.8	4	(AP)					
7648		HOLL	01	12	1737	N08	W48	01	9.1		B	ESO	170	11	12	3
7648		LEAR	01	13	0015	N07	W53	01	9.0		B	EAO	160	9	12	3
7648		SVTO	01	13	1012	N06	W62	01	8.8		B	DAO	140	5	5	2
7648		RAMY	01	13	1229	N06	W59	01	9.1		B	CAO	110	7	10	3
7648		BOUL	01	13	1542	N07	W67	01	8.6		B	DAO	160	5	4	2
7648	28031	MWIL	01	13	1545	N08	W67	01	8.6	5	(AP)					
7648		HOLL	01	13	1548	N08	W61	01	9.1		B	CAO	110	8	7	3
7648		LEAR	01	14	0019	N07	W66	01	9.1		B	DAO	130	12	10	3
7648		SVTO	01	14	0855	N07	W72	01	9.0		B	DAO	120	2	3	3
7648		RAMY	01	14	1255	N05	W72	01	9.1		B	ESO	90	4	12	3
7648		BOUL	01	14	1555	N07	W79	01	8.7		B	CSO	70	2	3	1
7648	28031	MWIL	01	14	1600	N08	W80	01	8.7	4	(AP)					
7648		HOLL	01	14	1624	N09	W74	01	9.1		A	HA	110	2	3	2
7648		LEAR	01	15	0008	N06	W78	01	9.2		B	CSO	90	5	8	3
7653		LEAR	01	15	0008	S03	W69	01	9.8		A	AX		2	3	3
7653		RAMY	01	15	1345	S06	W77	01	9.8		B	BXO	10	2	3	3
7653		LEAR	01	16	0022	S04	W82	01	9.9		A	AX		1	1	4
7650	28032	MWIL	01	05	1545	N05	E58	01	10.0	4	(AP)					
7650		PALE	01	05	1900	N04	E58	01	10.1		B	BXO	10	2	3	3
7650		HOLL	01	05	2307	N07	E56	01	10.1		A	AX		1		1
7650		RAMY	01	06	1318	N03	E46	01	10.0		B	BXO	20	5	5	4
7650	28032	MWIL	01	06	1530	N06	E44	01	9.9	3	(B)					
7650		HOLL	01	06	1650	N05	E45	01	10.1		B	BXO	10	3	6	3
7650		PALE	01	06	1940	N05	E43	01	10.0		B	CSO	30	4	5	1
7650		LEAR	01	07	0015	N06	E40	01	10.0		B	CSO	40	5	7	3
7650		SVTO	01	07	0810	N05	E35	01	9.9		B	BXO	30	6	8	2
7650		RAMY	01	07	1308	N02	E33	01	10.0		B	CAO	40	14	8	4
7650	28032	MWIL	01	07	1530	N06	E32	01	10.0	5	(B)					
7650		BOUL	01	07	1615	N06	E32	01	10.1		B	CSO	70	6	7	1
7650		HOLL	01	07	1633	N04	E34	01	10.2		B	DSO	40	8	7	3
7650		PALE	01	07	1950	N06	E30	01	10.1		B	DSO	40	11	7	3
7650		LEAR	01	08	0015	N05	E27	01	10.0		B	CRO	60	9	7	3
7650		RAMY	01	08	1253	N04	E20	01	10.0		B	CAO	50	16	7	3
7650	28032	MWIL	01	08	1530	N05	E19	01	10.1	4	(B)					
7650		BOUL	01	08	1605	N06	E18	01	10.0		B	DSO	50	6	8	2
7650		HOLL	01	08	1800	N06	E17	01	10.0		B	DAI	70	11	8	3
7650		PALE	01	08	1900	N05	E17	01	10.1		B	DAO	50	12	7	3
7650		LEAR	01	09	0045	N05	E13	01	10.0		B	CAO	60	10	10	2
7650		RAMY	01	09	1305	N05	E05	01	9.9		B	DRO	90	30	8	3
7650	28032	MWIL	01	09	1530	N05	E05	01	10.0	4	(B)					
7650		HOLL	01	09	1701	N06	E03	01	9.9		B	DAO	150	11	9	2
7650		PALE	01	09	1915	N05	E05	01	10.2		B	DAO	100	16	10	4
7650		LEAR	01	10	0215	N05	W02	01	9.9		B	DAO	80	13	9	3
7650		SVTO	01	10	1120	N04	W09	01	9.8		B	CSI	380	32	13	3
7650		RAMY	01	10	1253	N06	W07	01	10.0		B	DAI	150	34	9	4
7650	28032	MWIL	01	10	1545	N05	W13	01	9.7	4	(BG)					
7650		BOUL	01	10	1556	N06	W09	01	10.0		B	CSI	70	19	9	2
7650		LEAR	01	11	0030	N05	W14	01	10.0		B	CSO	110	19	8	3
7650	28032	MWIL	01	11	1530	N05	W25	01	9.8	5	(BG)					
7650		BOUL	01	11	1617	N05	W24	01	9.9		B	DSO	180	11	8	1
7650		HOLL	01	11	1640	N05	W25	01	9.8		B	DAI	190	23	9	3
7650		RAMY	01	11	2002	N05	W26	01	9.9		B	DAI	120	28	9	3
7650		LEAR	01	12	0040	N04	W29	01	9.8		B	CSI	100	17	9	3
7650		RAMY	01	12	1432	N06	W37	01	9.8		BD	DKI	190	34	10	4
7650		BOUL	01	12	1537	N05	W37	01	9.9		BD	EAO	340	15	13	3
7650	28032	MWIL	01	12	1600	N05	W38	01	9.8	4	(BG)					
7650		HOLL	01	12	1737	N06	W39	01	9.8		B	EAI	110	24	11	3
7650		LEAR	01	13	0015	N05	W43	01	9.8		BD	DAO	160	12	10	3
7650		SVTO	01	13	1012	N04	W48	01	9.8		B	EAO	190	13	12	2
7650		RAMY	01	13	1229	N05	W49	01	9.8		BD	DAO	180	25	10	3
7650		BOUL	01	13	1542	N05	W52	01	9.8		B	EAO	250	11	12	2
7650	28032	MWIL	01	13	1545	N06	W53	01	9.7	5	(BG)					
7650		HOLL	01	13	1548	N06	W53	01	9.7		BD	EAI	190	24	11	3
7650		LEAR	01	14	0019	N05	W54	01	10.0		B	BXO	70	16	9	3
7650		SVTO	01	14	0855	N05	W60	01	9.9		BD	EAI	320	13	11	3
7650		RAMY	01	14	1255	N04	W62	01	9.9		B	CAO	60	8	9	3

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

JANUARY 1994

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
7650		BOUL	01 14 1555	N05 W65	01 9.8		B	EAO	200	6	12	1
7650	28032	MWIL	01 14 1600	N05 W67	01 9.6	4	(BG)					
7650		HOLL	01 14 1624	N06 W67	01 9.7		B	EAO	130	6	12	2
7650		LEAR	01 15 0008	N05 W68	01 9.9		B	BXO	30	6	8	3
7650		RAMY	01 15 1345	N04 W80	01 9.6		A	HS	30	1	1	3
7650		LEAR	01 16 0022	N06 W80	01 10.0		B	BXO	10	5	7	4
7650A		RAMY	01 05 1325	N05 E71	01 10.9		A	AX		1		3
7650A	28033	MWIL	01 05 1545	N09 E72	01 11.1	4	(AP)					
7650A		PALE	01 05 1900	N07 E70	01 11.0		A	AX	10	1	1	3
7650A		RAMY	01 06 1318	N06 E58	01 10.9		A	AX		1		4
7650A		PALE	01 09 1915	N05 E17	01 11.1		A	AX		3	2	4
7651		RAMY	01 12 1432	S06 W13	01 11.6		B	CRO	10	5	3	4
7651		BOUL	01 12 1537	S06 W14	01 11.6		B	BXO	10	2	2	3
7651	28035	MWIL	01 12 1600	S06 W15	01 11.5	3	(AP)					
7651		HOLL	01 12 1737	S05 W15	01 11.6		B	CRO	10	3	4	3
7651		LEAR	01 13 0015	S06 W21	01 11.4		B	DSO	50	6	3	3
7651		SVTO	01 13 1012	S04 W26	01 11.5		B	DAO	60	4	5	2
7651		RAMY	01 13 1229	S05 W26	01 11.6		B	CAO	40	10	4	3
7651		BOUL	01 13 1542	S05 W27	01 11.6		B	CSO	30	5	4	2
7651	28035	MWIL	01 13 1545	S05 W28	01 11.6	5	(B)					
7651		HOLL	01 13 1548	S05 W29	01 11.5		B	CSO	20	5	5	3
7651		LEAR	01 14 0019	S06 W33	01 11.5		B	CRO	20	4	5	3
7651		SVTO	01 14 0855	S06 W38	01 11.5		B	CSO	60	2	5	3
7651		RAMY	01 14 1255	S06 W41	01 11.5		B	BXO	10	2	5	3
7651		BOUL	01 14 1555	S06 W44	01 11.4		A	HS	10	1	1	1
7651	28035	MWIL	01 14 1600	S05 W43	01 11.4	5	(B)					
7651		HOLL	01 14 1624	S05 W45	01 11.3		A	HR	10	1	1	2
7651		LEAR	01 15 0008	S06 W47	01 11.5		B	CRO	20	2	5	3
7651		RAMY	01 15 1345	S08 W57	01 11.3		A	AX	10	1	1	3
7651	28035	MWIL	01 15 1530	S06 W59	01 11.2	4	(AP)					
7651		HOLL	01 15 1945	S06 W61	01 11.2		A	AX	20	1	1	2
7651		LEAR	01 16 0022	S06 W63	01 11.3		B	BXO	10	2	4	4
7651	28035?	MWIL	01 16 1545	S06 W68	01 11.6	3	(AP)					
7655		LEAR	01 16 0022	S07 W12	01 15.1		A	AX	10	2	1	4
7655		RAMY	01 16 1250	S06 W18	01 15.2		A	AX		1		3
7655		HOLL	01 16 1605	S07 W20	01 15.2		A	AX	10	1	1	4
7655A	28038	MWIL	01 18 1545	S21 W06	01 18.2	4	(AF)					
7655A		RAMY	01 18 1607	S22 W06	01 18.2		A	AX		1		3
7655A		HOLL	01 18 1620	S21 W07	01 18.1		A	AX		1		2
7657	28039	MWIL	01 20 2200	N13 W08	01 20.3	4	(B)					
7657		LEAR	01 21 0308	N12 W12	01 20.2		B	BXO	30	11	5	3
7657		RAMY	01 21 1409	N12 W17	01 20.3		B	CRO	70	8	5	2
7657	28039	MWIL	01 21 1530	N12 W18	01 20.3	4	(B)					
7657		BOUL	01 21 1546	N07 W23	01 19.9		B	DRO	50	7	3	3
7657		HOLL	01 21 1621	N12 W17	01 20.4		B	DRI	40	13	5	4
7657		LEAR	01 22 0025	N11 W24	01 20.2		B	DRO	90	13	6	3
7657		RAMY	01 22 1250	N12 W30	01 20.3		B	DAO	110	16	5	4
7657		BOUL	01 22 1535	N12 W33	01 20.2		B	DAO	50	6	6	3
7657		HOLL	01 22 1643	N13 W33	01 20.2		B	DAO	80	10	7	3
7657	28039	MWIL	01 22 2200	N12 W35	01 20.3	5	(B)					
7657		LEAR	01 23 0015	N11 W38	01 20.1		B	DAO	70	8	10	3
7657		RAMY	01 23 1410	N12 W43	01 20.3		B	DRO	40	14	7	3
7657		BOUL	01 23 1535	N12 W46	01 20.2		B	CRI	30	5	6	3
7657		HOLL	01 23 1715	N15 W45	01 20.3		B	DAO	80	7	7	3
7657		LEAR	01 24 0030	N11 W50	01 20.2		B	CAO	70	4	7	3
7657		SVTO	01 24 0920	N08 W56	01 20.2		B	DRO	50	6	7	2
7657		RAMY	01 24 1247	N11 W57	01 20.2		B	CAO	30	7	7	4
7657		BOUL	01 24 1645	N11 W60	01 20.2		B	BXO	20	2	5	1
7657		HOLL	01 24 2120	N12 W60	01 20.4		B	BXO	10	4	8	3
7657		LEAR	01 25 0023	N10 W63	01 20.3		B	CSO	40	3	8	3
7657		SVTO	01 25 1055	N09 W73	01 20.0		A	AX	10	1		3
7657		RAMY	01 25 1312	N11 W70	01 20.3		B	CSO	60	3	8	4
7657		HOLL	01 25 1805	N12 W78	01 19.9		A	AX	10	2	1	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JANUARY 1994

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
7652		LEAR	01	15	0008	N04	E84	01	21.3		A	HS	90	1	2	3
7652		RAMY	01	15	1345	N05	E78	01	21.4		A	HS	60	1	2	3
7652	28036	MWIL	01	15	1530	N03	E75	01	21.2	5	(AP)					
7652		BOUL	01	15	1605	N05	E77	01	21.4		A	HS	60	1	1	2
7652		HOLL	01	15	1945	N02	E71	01	21.1		A	HH	180	1	3	2
7652		LEAR	01	16	0022	N04	E69	01	21.2		A	HS	110	1	2	4
7652		RAMY	01	16	1250	N02	E62	01	21.2		A	HS	150	1	2	3
7652	28036	MWIL	01	16	1545	N03	E62	01	21.3	5	(AP)					
7652		HOLL	01	16	1605	N03	E63	01	21.4		A	HK	220	1	3	4
7652		LEAR	01	17	0009	N05	E56	01	21.2		A	HS	90	2	2	2
7652		SVTO	01	17	1130	N03	E52	01	21.4		A	HA	160	1	2	1
7652		RAMY	01	17	1313	N03	E51	01	21.4		B	CSO	170	3	4	3
7652		HOLL	01	17	1610	N04	E49	01	21.3		A	HS	150	1	2	3
7652	28036	MWIL	01	17	2000	N04	E46	01	21.3	5	(AP)					
7652		LEAR	01	18	0030	N05	E42	01	21.2		A	HS	100	1	2	3
7652	28036	MWIL	01	18	1545	N03	E36	01	21.3	5	(AP)					
7652		RAMY	01	18	1607	N03	E34	01	21.2		A	HA	100	1	2	3
7652		HOLL	01	18	1620	N03	E34	01	21.2		A	HS	140	1	2	2
7652		BOUL	01	18	1634	N04	E34	01	21.2		A	HS	70	1	1	1
7652		LEAR	01	19	0005	N04	E31	01	21.3		A	HS	110	1	2	4
7652		RAMY	01	19	1326	N03	E24	01	21.3		B	CSO	130	2	4	3
7652		HOLL	01	19	1512	N03	E24	01	21.4		B	CSO	120	3	5	3
7652	28036	MWIL	01	19	1545	N04	E22	01	21.3	6	(AP)					
7652		LEAR	01	20	0445	N04	E14	01	21.2		A	HS	110	1	2	3
7652		RAMY	01	20	1245	N04	E10	01	21.3		A	HS	150	1	2	3
7652		HOLL	01	20	1631	N04	E07	01	21.2		B	CSO	180	2	3	3
7652		BOUL	01	20	1745	N04	E07	01	21.3		B	CSO	100	2	3	3
7652	28036	MWIL	01	20	2200	N04	E05	01	21.3	5	(BF)					
7652		LEAR	01	21	0308	N04	E03	01	21.3		A	HS	110	1	2	3
7652		RAMY	01	21	1409	N04	W03	01	21.4		A	HA	100	1	2	2
7652	28036	MWIL	01	21	1530	N04	W05	01	21.3	5	(AP)					
7652		BOUL	01	21	1546	N03	W07	01	21.1		A	HS	110	1	2	3
7652		HOLL	01	21	1621	N05	W04	01	21.4		A	HS	150	1	2	4
7652		LEAR	01	22	0025	N04	W10	01	21.3		A	HS	90	1	2	3
7652		RAMY	01	22	1250	N04	W17	01	21.3		A	HS	110	1	2	4
7652		BOUL	01	22	1535	N05	W18	01	21.3		A	HS	70	1	2	3
7652		HOLL	01	22	1643	N05	W18	01	21.3		A	HS	100	1	2	3
7652	28036	MWIL	01	22	2200	N04	W22	01	21.3	5	(AP)					
7652		LEAR	01	23	0015	N04	W24	01	21.2		A	HS	100	1	2	3
7652		RAMY	01	23	1410	N04	W30	01	21.3		A	HS	110	1	2	3
7652		BOUL	01	23	1535	N05	W31	01	21.3		A	HS	100	1	2	3
7652		HOLL	01	23	1715	N07	W32	01	21.3		A	HS	120	1	2	3
7652		LEAR	01	24	0030	N02	W38	01	21.2		A	HS	130	1	2	3
7652		SVTO	01	24	0920	N03	W42	01	21.2		A	HS	80	1	2	2
7652		RAMY	01	24	1247	N04	W44	01	21.2		A	HS	90	1	2	4
7652		BOUL	01	24	1645	N04	W45	01	21.3		A	HS	40	1	1	1
7652		HOLL	01	24	2120	N06	W48	01	21.3		A	HS	120	1	2	3
7652		LEAR	01	25	0023	N05	W49	01	21.3		A	HS	90	1	2	3
7652		SVTO	01	25	1055	N03	W56	01	21.3		A	HS	140	1	2	3
7652		RAMY	01	25	1312	N04	W57	01	21.3		A	HS	90	1	2	4
7652		BOUL	01	25	1457	N04	W58	01	21.3		A	HS	50	1	1	1
7652		HOLL	01	25	1805	N05	W60	01	21.3		A	HS	110	1	2	3
7652		LEAR	01	26	0232	N04	W64	01	21.3		A	HS	90	1	2	3
7652		SVTO	01	26	0905	N02	W69	01	21.2		A	HS	120	1	1	3
7652	28036	MWIL	01	26	1645	N05	W71	01	21.4	5	(AP)					
7652		HOLL	01	26	1821	N07	W73	01	21.3		A	HA	120	1	2	2
7652		LEAR	01	27	0715	N03	W84	01	21.0		A	HA	80	3	3	2
7652		SVTO	01	27	0914	N02	W86	01	21.0		A	HS	30	1	2	3
7652		RAMY	01	27	1322	N06	W87	01	21.0		A	HS	30	1	2	3
7654		LEAR	01	16	0022	N08	E79	01	21.9		B	CSO	130	6	2	4
7654		RAMY	01	16	1250	N06	E74	01	22.1		B	DHO	470	8	4	3
7654	28037	MWIL	01	16	1545	N08	E78	01	22.5	5	(D)					
7654		HOLL	01	16	1605	N07	E78	01	22.5		BG	CKI	450	6	8	4
7654		LEAR	01	17	0009	N09	E69	01	22.2		B	DHO	240	8	8	2
7654		SVTO	01	17	1130	N07	E67	01	22.5		B	DKO	530	11	6	1
7654		RAMY	01	17	1313	N08	E64	01	22.3		BD	DKO	680	16	7	3
7654		HOLL	01	17	1610	N08	E63	01	22.4		BG	DKI	550	9	5	3
7654	28037	MWIL	01	17	2000	N08	E59	01	22.2	5	(D)					

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JANUARY 1994

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
7654		LEAR	01	18	0030	N10	E57	01	22.3		BGD	DKO	530	13	7	3
7654	28037	MWIL	01	18	1545	N08	E49	01	22.3	6	(D)					
7654		RAMY	01	18	1607	N08	E48	01	22.3		BD	DKC	560	11	6	3
7654		HOLL	01	18	1620	N07	E48	01	22.3		BD	DKC	600	11	9	2
7654		BOUL	01	18	1634	N09	E47	01	22.2		B	DKC	280	3	4	1
7654		LEAR	01	19	0005	N08	E46	01	22.4		BGD	DKC	560	16	8	4
7654		RAMY	01	19	1326	N07	E41	01	22.6		BD	DKC	610	17	9	3
7654		HOLL	01	19	1512	N08	E37	01	22.4		BD	DKC	550	15	10	3
7654	28037	MWIL	01	19	1545	N08	E36	01	22.3	6	(D)					
7654		LEAR	01	20	0445	N08	E27	01	22.2		BD	DKO	500	13	7	3
7654		RAMY	01	20	1245	N09	E25	01	22.4		BD	EKC	590	41	10	3
7654		HOLL	01	20	1631	N08	E24	01	22.5		BD	EKC	470	34	12	3
7654		BOUL	01	20	1745	N09	E24	01	22.5		B	EKI	550	39	12	3
7654	28037	MWIL	01	20	2200	N08	E19	01	22.3	5	(D)					
7654		LEAR	01	21	0308	N09	E18	01	22.5		BD	DKI	500	41	10	3
7654		RAMY	01	21	1409	N08	E13	01	22.6		BD	DKC	550	33	10	2
7654	28037	MWIL	01	21	1530	N09	E10	01	22.4	5	(D)					
7654		BOUL	01	21	1546	N09	E06	01	22.1		B	DKI	510	61	10	3
7654		HOLL	01	21	1621	N07	E12	01	22.6		BD	EKC	560	34	11	4
7654		LEAR	01	22	0025	N08	E07	01	22.5		BD	DKC	700	35	10	3
7654		RAMY	01	22	1250	N09	W02	01	22.4		BG	CKI	650	44	10	4
7654		BOUL	01	22	1535	N09	W04	01	22.3		B	CKO	470	17	7	3
7654		HOLL	01	22	1643	N09	W03	01	22.5		BGD	DKC	590	30	9	3
7654	28037	MWIL	01	22	2200	N09	W08	01	22.3	5	(D)					
7654		LEAR	01	23	0015	N09	W09	01	22.3		BD	DKI	630	18	10	3
7654		RAMY	01	23	1410	N09	W17	01	22.3		BG	CKI	630	33	7	3
7654		BOUL	01	23	1535	N10	W18	01	22.3		B	CKO	420	20	7	3
7654		HOLL	01	23	1715	N12	W17	01	22.4		BGD	DKI	570	21	7	3
7654		LEAR	01	24	0030	N08	W23	01	22.3		BD	DKI	640	22	9	3
7654		SVTO	01	24	0920	N07	W30	01	22.1		BD	DKO	460	6	7	2
7654		RAMY	01	24	1247	N09	W28	01	22.4		BG	EKI	640	39	11	4
7654		BOUL	01	24	1645	N09	W33	01	22.2		B	CKO	390	8	6	1
7654		HOLL	01	24	2120	N10	W33	01	22.4		BGD	DKC	590	16	11	3
7654		LEAR	01	25	0023	N09	W36	01	22.3		BG	DKO	550	22	9	3
7654		SVTO	01	25	1055	N08	W43	01	22.2		BD	CKO	630	10	7	3
7654		RAMY	01	25	1312	N08	W43	01	22.3		BD	CKO	630	20	8	4
7654		BOUL	01	25	1457	N09	W44	01	22.3		A	HK	470	6	4	1
7654		HOLL	01	25	1805	N10	W47	01	22.2		BG	CKO	720	22	8	3
7654		LEAR	01	26	0232	N08	W50	01	22.3		BD	DKO	600	22	7	3
7654		SVTO	01	26	0905	N08	W57	01	22.1		BD	DKI	790	11	9	3
7654	28037	MWIL	01	26	1645	N09	W57	01	22.4	6	(D)					
7654		HOLL	01	26	1821	N09	W59	01	22.3		BD	DKI	620	7	7	2
7654		LEAR	01	27	0715	N08	W70	01	22.0		BD	DKI	590	6	9	2
7654		SVTO	01	27	0914	N07	W70	01	22.1		BD	DKO	440	7	5	3
7654		RAMY	01	27	1322	N10	W71	01	22.2		BD	DKC	480	6	7	3
7654	28037	MWIL	01	27	1630	N09	W72	01	22.3	5	(D)					
7654		LEAR	01	28	0030	N08	W75	01	22.4		BD	DKI	500	3	7	3
7654		SVTO	01	28	0825	N09	W80	01	22.3		B	CAI	300	4	6	3
7654		RAMY	01	28	1259	N10	W81	01	22.4		BD	DKC	330	3	4	3
7654	28037	MWIL	01	28	1545	N08	W86	01	22.2	4	(X)					
7654		BOUL	01	28	1545	N10	W90	01	21.9		A	HA	150	2	4	3
7654A		RAMY	01	25	1312	S04	W33	01	23.1		A	AX		2	2	4
7658	28040	MWIL	01	21	1530	N12	E32	01	24.0	3	(B)					
7658		LEAR	01	22	0025	N12	E28	01	24.1		A	BX	20	3	4	3
7658		RAMY	01	22	1250	N12	E21	01	24.1		B	BXO	20	5	7	4
7658		BOUL	01	22	1535	N12	E18	01	24.0		B	BXO	10	6	4	3
7658		HOLL	01	22	1643	N11	E18	01	24.0		B	DRO	30	7	4	3
7658	28040	MWIL	01	22	2200	N12	E16	01	24.1	3	(B)					
7658		LEAR	01	23	0015	N12	E13	01	24.0		B	BX	40	9	7	3
7658		RAMY	01	23	1410	N12	E07	01	24.1		B	BXO	10	6	4	3
7658		BOUL	01	23	1535	N13	E06	01	24.1		A	HR	20	7	2	3
7658		HOLL	01	23	1715	N12	E08	01	24.3		B	CRO	30	5	2	3
7658		LEAR	01	24	0030	N12	E01	01	24.1		B	CRO	40	6	4	3
7658		SVTO	01	24	0920	N12	W04	01	24.1		B	DSO	100	4	4	2
7658		RAMY	01	24	1247	N13	W06	01	24.1		B	DSO	100	11	5	4
7658		BOUL	01	24	1645	N12	W07	01	24.2		B	DAO	80	6	5	1
7658		HOLL	01	24	2120	N13	W10	01	24.1		B	DAO	110	16	6	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JANUARY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7658		LEAR	01	25	0023	N13	W12	01	24.1		B	DAO	130	15	7	3
7658		SVTO	01	25	1055	N12	W17	01	24.2		B	DSO	190	6	8	3
7658		RAMY	01	25	1312	N12	W18	01	24.2		B	DAO	270	13	8	4
7658		BOUL	01	25	1457	N12	W19	01	24.2		B	DSO	130	6	6	1
7658		HOLL	01	25	1805	N12	W23	01	24.0		B	EAO	230	19	12	3
7658		LEAR	01	26	0232	N12	W25	01	24.2		B	DSO	160	16	8	3
7658		SVTO	01	26	0905	N11	W32	01	24.0		B	DAO	180	13	13	3
7658	28040	MWIL	01	26	1645	N13	W34	01	24.1	5	(B)					
7658		HOLL	01	26	1821	N13	W34	01	24.2		B	DAO	130	14	8	2
7658		LEAR	01	27	0715	N08	W45	01	23.9		B	DHO	190	4	10	2
7658		SVTO	01	27	0914	N11	W45	01	24.0		B	DRO	120	12	8	3
7658		RAMY	01	27	1322	N13	W46	01	24.1		B	DAO	100	9	8	3
7658	28040	MWIL	01	27	1630	N13	W47	01	24.1	5	(B)					
7658		LEAR	01	28	0030	N08	W53	01	24.0		B	DAO	100	7	10	3
7658		SVTO	01	28	0825	N13	W58	01	24.0		B	DSO	90	6	11	3
7658		RAMY	01	28	1259	N13	W59	01	24.1		B	CSO	90	7	8	3
7658	28040	MWIL	01	28	1545	N12	W60	01	24.1	5	(B)					
7658		BOUL	01	28	1545	N12	W63	01	23.9		B	DAO	90	8	10	3
7658		HOLL	01	28	2005	N13	W65	01	23.9		B	EAO	100	5	12	1
7658		SVTO	01	29	0810	N12	W69	01	24.1		B	DAO	90	4	10	2
7658		RAMY	01	29	1342	N13	W69	01	24.4		B	BXO	20	4	8	2
7658	28040	MWIL	01	29	1545	N13	W73	01	24.1	4	(B)					
7658		HOLL	01	29	1856	N13	W77	01	24.0		B	BXO	30	3	7	4
7658		LEAR	01	30	0050	N12	W77	01	24.2		B	CAO	20	2	3	3
7658		SVTO	01	30	0745	N14	W85	01	23.9		B	CAO	30	1	7	2
7659		RAMY	01	22	1250	S13	E53	01	26.5		B	BXO	10	2	2	4
7659		RAMY	01	23	1410	S13	E42	01	26.7		B	BXO	10	4	5	3
7659		BOUL	01	23	1535	S12	E40	01	26.7		B	BXO	10	4	9	3
7659		HOLL	01	23	1715	S16	E39	01	26.7		B	CRO	20	3	6	3
7659		RAMY	01	24	1247	S12	E32	01	26.9		B	BXO	10	3	6	4
7659		HOLL	01	24	2120	S13	E26	01	26.8		B	BXO	10	3	3	3
7659		LEAR	01	25	0023	S13	E23	01	26.7		A	AX		1	1	3
7659		RAMY	01	25	1312	S12	E17	01	26.8		B	BXO	10	4	6	4
7659		HOLL	01	25	1805	S13	E15	01	26.9		A	AX	10	3	2	3
7659		LEAR	01	26	0232	S12	E11	01	26.9		A	AX		3	2	3
7659		SVTO	01	26	0905	S12	E08	01	27.0		A	HS	10	3	1	3
7659	28041	MWIL	01	26	1645	S13	W00	01	26.7	4	(B)					
7659		HOLL	01	26	1821	S13	E03	01	27.0		A	AX	10	2	1	2
7659	28041	MWIL	01	28	1545	S14	W28	01	26.5	4	(AP)					
7659		RAMY	01	31	1243	S13	W64	01	26.7		A	AX		1		4
7659		HOLL	01	31	1845	S14	W69	01	26.6		B	BXO	20	4	5	3
7659		LEAR	02	01	0145	S13	W73	01	26.7		A	AX	20	3	2	3
7659		SVTO	02	01	0820	S14	W77	01	26.6		B	DAO	90	3	5	3
7659		RAMY	02	01	1334	S15	W80	01	26.6		B	BXO	20	4	3	3
7659		BOUL	02	01	1501	S14	W78	01	26.8		A	AX	10	1		1
7659		HOLL	02	01	1710	S12	W80	01	26.8		B	BXO		2	3	2
7661		SVTO	01	24	0920	N08	E45	01	27.8		B	CRO	30	2	3	2
7661		RAMY	01	24	1247	N08	E43	01	27.7		B	CAO	40	6	4	4
7661		BOUL	01	24	1645	N08	E41	01	27.8		B	CSO	30	4	3	1
7661		HOLL	01	24	2120	N08	E40	01	27.9		B	BXO	20	6	3	3
7661		LEAR	01	25	0023	N07	E37	01	27.8		B	CRO	20	7	4	3
7661		SVTO	01	25	1055	N08	E32	01	27.8		B	DSO	60	4	4	3
7661		RAMY	01	25	1312	N08	E31	01	27.9		B	DAO	60	9	4	4
7661		BOUL	01	25	1457	N08	E29	01	27.8		B	DSO	70	3	3	1
7661		HOLL	01	25	1805	N07	E28	01	27.8		B	CSI	40	11	3	3
7661		LEAR	01	26	0232	N08	E23	01	27.8		B	DAO	110	11	4	3
7661		SVTO	01	26	0905	N08	E19	01	27.8		B	CAO	130	4	3	3
7661	28042	MWIL	01	26	1645	N08	E16	01	27.9	5	(D)					
7661		HOLL	01	26	1821	N07	E15	01	27.9		BD	DKO	110	3	3	2
7661		LEAR	01	27	0715	N08	E05	01	27.7		B	DHO	90	3	4	2
7661		SVTO	01	27	0914	N09	E06	01	27.8		B	DAO	80	6	3	3
7661		RAMY	01	27	1322	N08	E04	01	27.8		B	DAO	50	7	4	3
7661	28042	MWIL	01	27	1630	N08	E03	01	27.9	5	(B)					
7661		LEAR	01	28	0030	N07	W03	01	27.8		B	DAO	90	6	4	3
7661		SVTO	01	28	0825	N06	W07	01	27.8		B	CSO	20	5	4	3
7661		RAMY	01	28	1259	N08	W09	01	27.9		B	DAO	30	6	3	3
7661	28042	MWIL	01	28	1545	N08	W11	01	27.8	4	(B)					

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

JANUARY 1994

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
7661		BOUL	01	28	1545	N09	W11	01	27.8		B	DSO	40	6	3	3
7661		HOLL	01	28	2005	N08	W12	01	27.9		B	DAO	50	5	4	1
7661		SVTO	01	29	0810	N08	W20	01	27.8		B	CSO	10	4	3	2
7661		RAMY	01	29	1342	N08	W22	01	27.9		B	BXO	20	7	3	2
7661	28042	MWIL	01	29	1545	N08	W24	01	27.8	4	(B)					
7661		HOLL	01	29	1856	N09	W26	01	27.8		A	HR	10	2	2	4
7661		LEAR	01	30	0050	N05	W32	01	27.6		B	CAO	40	4	3	3
7661		SVTO	01	30	0745	N09	W34	01	27.8		B	CSO	20	2	1	2
7661		RAMY	01	30	1241	N09	W37	01	27.7		A	AX		2	1	3
7661	28042	MWIL	01	30	1530	N07	W37	01	27.9	4	(B)					
7661		HOLL	01	30	1830	N09	W39	01	27.8		A	AX	10	4	2	2
7661		RAMY	01	31	1243	N10	W49	01	27.8		A	AX		1		4
7661		HOLL	01	31	1845	N10	W52	01	27.9		A	AX		1		3
7660		RAMY	01	23	1410	S08	E75	01	29.2		A	AX		1		3
7660		RAMY	01	25	1312	S09	E48	01	29.1		A	AX		1		4
7660		RAMY	01	29	1342	S09	W03	01	29.3		B	BXO		2		2
7660	28044	MWIL	01	29	1545	S09	W04	01	29.3	4	(AF)					
7660		HOLL	01	29	1856	S09	W06	01	29.3		B	BXO	10	3	2	4
7660A		RAMY	01	30	1241	S15	E01	01	30.6		B	BXO	10	4	4	3
7660A	28047	MWIL	01	30	1530	S14	E02	01	30.8	4	(AP)					
7660A		RAMY	01	31	1243	S18	W14	01	30.5		A	AX		1		4
7663		SVTO	01	29	0810	N12	E27	01	31.4		A	AX		2	1	2
7663		HOLL	01	29	1856	N12	E23	01	31.5		B	BXO	20	1	1	4
7663		HOLL	01	30	1830	N12	E09	01	31.4		A	AX	10	2	1	2
7663		HOLL	01	31	1845	N13	W04	01	31.5		A	AX		1		3
7663		RAMY	02	01	1334	N11	W18	01	31.2		A	AX	10	3	2	3
7663		HOLL	02	01	1710	N12	W18	01	31.3		B	BXO	10	5	4	2
7663		LEAR	02	02	0054	N12	W23	01	31.3		A	HA	10	4	3	3
7663		SVTO	02	02	1010	N12	W28	01	31.3		B	CAO	30	4	4	3
7663		RAMY	02	02	1247	N12	W31	01	31.2		B	DAO	20	6	4	4
7663	28049	MWIL	02	02	1530	N12	W32	01	31.2	4	(B)					
7663		HOLL	02	02	1533	N12	W32	01	31.2		B	CRO	40	5	4	3
7663		LEAR	02	03	0115	N11	W37	01	31.3		B	CSO	30	7	4	3
7663		SVTO	02	03	1005	N12	W40	01	31.4		A	HA	20	2	2	3
7663		RAMY	02	03	1244	N12	W42	01	31.4		B	CRO	40	12	5	4
7663		HOLL	02	03	1616	N13	W44	01	31.3		B	CAO	40	7	6	3
7663		BOUL	02	03	1617	N12	W45	01	31.3		B	DAO	70	6	4	1
7663		LEAR	02	04	0045	N07	W53	01	31.1		B	CAO	60	9	4	3
7663		SVTO	02	04	1000	N12	W55	01	31.3		B	CRO	30	3	5	2
7663		RAMY	02	04	1512	N13	W57	01	31.3		B	BXO	10	3	2	2
7663		HOLL	02	04	1759	N13	W58	01	31.4		A	AX	20	2	1	2
7663		RAMY	02	05	1235	N11	W68	01	31.4		B	BXO	10	2	2	3
7662		SVTO	01	27	0914	S15	E58	01	31.8		A	HS	30	2	1	3
7662		RAMY	01	27	1322	S16	E57	01	31.9		A	AX	10	2	3	3
7662	28043	MWIL	01	27	1630	S16	E54	01	31.8	4	(B)					
7662		LEAR	01	28	0030	S12	E50	01	31.8		B	DAO	70	2	5	3
7662		SVTO	01	28	0825	S17	E45	01	31.8		B	CSO	30	2	6	3
7662		RAMY	01	28	1259	S17	E41	01	31.6		B	BXO	30	6	5	3
7662		BOUL	01	28	1545	S15	E41	01	31.8		B	CAO	30	6	6	3
7662	28043	MWIL	01	28	1545	S16	E42	01	31.8	4	(B)					
7662		HOLL	01	28	2005	S16	E38	01	31.7		B	DSO	40	4	6	1
7662		SVTO	01	29	0810	S16	E33	01	31.8		B	DAO	20	5	6	2
7662		RAMY	01	29	1342	S17	E29	01	31.8		B	BXO	20	5	5	2
7662	28043	MWIL	01	29	1545	S16	E27	01	31.7	4	(B)					
7662		HOLL	01	29	1856	S17	E25	01	31.7		B	BXO	10	7	7	4
7662		LEAR	01	30	0050	S13	E23	01	31.8		B	BX	40	6	7	3
7662		SVTO	01	30	0745	S17	E17	01	31.6		B	DRO	60	10	5	2
7662		RAMY	01	30	1241	S16	E16	01	31.7		B	DAO	30	10	5	3
7662	28043	MWIL	01	30	1530	S16	E14	01	31.7	5	(B)					
7662		HOLL	01	30	1830	S16	E13	01	31.7		B	BXO	30	18	6	2
7662		LEAR	01	31	0050	S17	E08	01	31.6		B	DAO	80	12	6	3
7662		SVTO	01	31	0900	S17	E05	01	31.7		B	DAI	210	11	7	3
7662		RAMY	01	31	1243	S17	E02	01	31.7		B	DAO	60	15	5	4
7662	28043	MWIL	01	31	1545	S17	W00	01	31.6	4	(B)					
7662		HOLL	01	31	1845	S18	W01	01	31.7		B	BXO	30	15	7	3

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

JANUARY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7662		LEAR	02	01	0145	S15	W04	01	31.8		B	BXO	20	12	9	3
7662		SVTO	02	01	0820	S17	W10	01	31.6		B	DAO	80	9	6	3
7662		RAMY	02	01	1334	S18	W11	01	31.7		B	CAO	20	7	5	3
7662		BOUL	02	01	1501	S16	W13	01	31.6		B	BXO	20	3	5	1
7662		HOLL	02	01	1710	S17	W15	01	31.6		B	BXO	20	7	6	2
7662		LEAR	02	02	0054	S16	W18	01	31.7		B	BXO	10	3	7	3
7662		SVTO	02	02	1010	S16	W24	01	31.6		B	CSO	40	3	6	3
7662		RAMY	02	02	1247	S17	W26	01	31.5		B	CRO	10	3	6	4
7662	28043	MWIL	02	02	1530	S17	W27	01	31.6	4	(B)					
7662		HOLL	02	02	1533	S16	W26	01	31.7		B	BXO	10	3	6	3
7662		LEAR	02	03	0115	S17	W36	01	31.3		A	AX	10	2	1	3
7662		SVTO	02	03	1005	S16	W39	01	31.5		A	AX	10	2	2	3
7662		RAMY	02	03	1244	S15	W40	01	31.5		A	AX		1		4
7662		RAMY	02	04	1512	S17	W50	01	31.8		A	AX		1		2
7662		HOLL	02	04	1759	S16	W51	01	31.9		A	AX	10	1	1	2

Stations reporting:

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

JANUARY 1994

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
01	0015	0040	0129	1-	1			1			0016	C2.8	
01	0336E	0348	0438	1-	1			1			0335	C2.4	
01	0551	0601	0634	1-	1			1			0554	C2.0	7640
01	0751	0755	0808	1-	1			1			0750	C1.2	
01	0858	0908	0915	1	3		2				*		
01	0915	0928	0937	1	3		2				*		
01	0941	0948	0959	1	1					1	*		
01	1224	1226	1232	1-	1					2	1223E	C1.5	7645
01	1257	1259	1303	1-	1					1	1254	C1.6	
01	1345	1356	1420	2-	5					2	1341	C1.7	
01	1545	1602	1629	1+	5					5	1540	C2.0	
01	1736	1745	1809	1+	3					3	1735	C4.4	7647
01	1833	1840	1843	1	1					1	No flare		
02	0229	0236	0253	1-	1			1			0229	C1.5	
02	0625	0631	0645	1-	1			1			No flare		
02	0826	0831	0850	1	1					1	0826	C1.0	
02	1405	1407	1416	1-	3					2	1404	C1.1	
02	1509	1511	1517	1-	1					1	1508	B9.2	
02	1930	1952	2015	2	1					1	1913	C1.8	
02	2250	2259	2512	3	3	1		1		1	2251E	M6.5	7645
03	0940	0951	1012	1	1		1				No flare		
03	1038	1052	1105	1	1		1				1035E		
03	2250	2256	2332	2+	1	1					No flare		
04	0306	0316	0339	1-	1			1			0302	C2.4	7645
04	0632	0637	0655	1-	1			1			0630		7645
04	0743	0745	0815	1+	1					1	0743		7645
05	0351	0408	0441	1-	1			1			0350	C1.4	
05	0650	0715	0800	1+	5	1		1		1	0648	M1.0	7647
05	0824	0832	0858D	1-	1			1			0826	C2.8	7645
05	0858E	0906	0921	1-	5		1	1			0901	C1.9	7646
05	1025	1030	1042	1-	5			1		1	1023	C1.5	
05	1321	1323	1345	1-	5					2	1315	C1.8	7648
05	1402	1412	1430	1	5					2	1404	C1.9	7645
05	1427	1431	1445	1	5					2	No flare		
05	1450	1453	1501	1-	1					1	1450		7646
05	1519	1525	1529	1-	5					2	1524	C1.4	
05	1545	1547	1602	1-	3					3	1543	C1.7	7648
05	1555	1605	1605D	1	1					1	No flare		
05	1634	1637	1652	1-	5					3	1633	C1.8	7646
05	1717	1724	1750	1	1					1	1721	C1.7	7646
05	1741	1750	1845	1	5					2	No flare		
05	1759	1801	1811	1-	3					2	1757	C2.8	7646
05	1820	1822	1831	1-	3					2	1822E	C1.3	7646
05	1840	1845	1852	1-	1					1	1840	C1.5	
05	1944	1946	2001	1-	3					2	1945E	C2.4	7646
06	0051	0058	0120	1-	1			1			0050	C1.3	
06	0405	0413	0509	1	3	1		1			0402	C4.9	
06	0611	0624	0712D	1-	1			1			0607	C6.2	
06	0712E	0719	0748D	1-	1			1			No flare		
06	0748E	0805	0857	1-	5			1		1	0758	C4.6	7646
06	0906	0911U	0928	1	1		1				No flare		
06	1007	1010	1030	1	1					1	1008E	C1.4	7646
06	1239	1248	1312	1-	5			1		3	1237	C4.2	7646
06	1432	1443	1501	1-	5			1		5	1431	C2.2	7646
06	1700	1701	1710	1-	1					1	1700	B8.5	7646
07	0037	0046	0113D	1-	5			1		1	0034	C1.5	
07	0115E	0129	0155	1-	1			1			0111	C2.3	7646
07	0220	0232	0347	1+	1			1			0214	C3.9	7646
07	0943	0948	1050	2+	5		2	1		5	0937	M1.3	7646
07	1127	1136	1211	1+	5		1	1		4	1127	C8.0	7646

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

JANUARY 1994

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
07	1228	1246	1313	1-	5			1		3	1234	C2.3	7646
07	1330	1358U	1417	1	1		1				No flare		
07	1440	1451	1512	1-	1			1			No flare		
07	1812	1823	1851	2-	3					3	1815	C2.2	7646
08	0243	0251	0304	1-	1			1			0238	C1.0	
08	0307	0323	0354	1-	1			1			0306	C1.6	7646
08	0757	0805	0826	1	1		1				0800	B9.4	7647
08	0848	0854	0914	1+	3		2				No flare		
08	0856	0912	0940	2	1		1				No flare		
08	0926	0933	0954	1+	3		2				0920	C2.4	
08	0951	1033	1050	1	1		1				0920	C2.4	
08	2236	2243	2300	1	1					1	2236	B7.9	
09	1533	1541	1552	1-	3					2	1531	B6.2	
09	1617	1625	1645	1+	3					3	1617	B8.3	
09	2246	2322	2520	2-	5			1		1	2251	C8.2	7646
10	0323	0335	0353	1+	1					1	0323	B8.1	
11	0411	0421	0456	1-	1			1			0411	C1.8	7648
11	0627	0647	0752	1-	1			1			No flare		
11	0814	0820	0909	1-	1			1			0750	C1.7	
11	1044	1048	1055	1-	1			1			1034	B6.7	
11	1238	1249	1306	1	1		1				*		
11	1328	1342	1415	1	1		1				*		
11	1558	1617	1633	1-	1			1			No flare		
12	1108	1109	1120	1	1		1				*		
12	1400	1411	1420U	1	1					1	1401E		7648
12	1424	1433	1452	1-	1			1			No flare		
13	0336	0339	0347	1-	1					1	0336	B4.4	
13	0751	0800	0825	1-	1			1			*		
13	1815	1823	1832	1-	3					2	1815	B4.0	
14	1049	1052	1110	1-	1			1			1051	B6.2	
14	1340	1350	1415	1	1		1				No flare		
14	1603	1610	1628	1	1					2	1603	C1.6	
15	0112	0117	0129	1-	1			1			0111	B7.9	
15	0412	0430	0500D	1-	1			1			0410	B8.6	
15	0500E	0514	0554	1-	1			1			0458	C1.1	
15	0555	0604	0617	1-	1			1			*		
15	0735	0751	0814D	1-	1			1			0731	C1.5	
15	0814E	0822	0840	1-	5			1		1	0815	C1.5	
15	0928	0931	0943	1-	1			1			0925	C1.9	
15	1431	1435	1441	1-	1					1	1431	C1.0	
15	1612	1613	1624	1-	1					1	1611	C1.0	
15	1805	1809	1823	1-	1					1	1805	B5.9	
16	0101	0112	0132	1-	1			1			0100	C1.1	
16	0651	0711	0826	2	1			1			0647	C8.5	
16	0909	0914	0926	1	1		1				*		
16	2309	2326	2435D	3	5	2		1		3	2309	M6.1	7654
17	0035E	0039	0159D	1-	5			1		2	0033	C1.1	
17	0433	0440	0500	1-	1			1			No flare		
17	0522	0536	0552	1-	1			1			No flare		
17	0600	0614	0636	1-	1			1			0603	C1.6	
17	0719	0722	0746	1+	1					1	0718	B7.8	
17	0914	0922	1030	3-	5	1	1	1		3	0916	C9.3	7654
17	1214	1239	1246	2	1		1				*		
17	1304	1316	1405	1	1		1				1304	C2.3	7654
17	1354	1405	1418	2	1		1				1351		7654
17	1421	1427	1448	2	1		1				No flare		
17	1900	1901	1911	1-	3					3	1901	C1.5	7654
17	2350	2359	2446D	1	3	1		1			2347	C3.7	

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

JANUARY 1994

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	LF-SES	Flare (UT)	X-ray Class	NOAA Region
18	0046E	0104	0112D	1-	1			1			0044	C1.7	
18	0112E	0124	0227	1-	1			1			*		
18	0241	0247	0313	1-	1			1			*		
18	0420	0428	0513	1	1			1			0417	C2.8	
18	0830	0844	0945	2	1		1				No flare		
18	1103	1109	1117	1-	1					1	1103	C1.1	
19	0308	0319	0406	2	3	1		1			0311	C4.0	7654
19	0450E	0456	0535	1-	1			1			0449	C1.0	
19	0622	0625	0634	1-	1					1	0615	B7.5	
19	0826	0828	0836	1-	1					1	0826	B4.7	
19	1146	1152	1215	1-	5			1		3	1141	C2.8	
19	1323	1331	1331	1	5					2	No flare		
19	1334	1355	1442D	1-	5			1		3	1339	C4.2	7654
19	1442E	1446	1504	1-	1			1			*		
19	2335	2346	2418U	2	1					1	2335	C1.0	
20	0237	0245	0305	1-	1			1			0214	B9.7	
20	0816	0905U	1039	2	1		1				No flare		
21	1127	1143	1213	1+	3		3				1140	B4.5	
21	1232	1247	1257	1	1		1				*		
22	0100	0107	0128	1-	1			1			0105	C1.6	7654
22	0836	0854	0914	1	1		1				*		
22	0947	0958	1017	1	1		1				*		
22	1250	1305	1354	1	1		1				No flare		
23	0821	0831	0845	1	3		2				No flare		
23	1257	1304	1336	1	1		1				1250E	C2.9	7654
24	1311	1313	1320	1-	3					3	1311	C1.2	7658
24	1408	1423	1435	1	1					1	No flare		
24	2101	2109	2132	1+	1					1	2101	C1.0	
25	0101	0108	0108D	1-	1			1			0103	C1.8	7654
25	0342	0348	0407	1-	1			1			0343	C1.2	7658
25	1355	1356	1408	1-	1					1	1354	B9.9	7654
25	1422	1423	1432	1-	1					1	1419		7654
25	1443	1446	1457	1-	3					3	1442	C1.1	
25	1602	1604	1615	1-	1					1	1602E	C1.1	7658
25	1640	1642	1655	1-	3					2	1640	C1.4	7654
25	1815	1829	1911	1+	5					11	1812	M1.6	7654
25	2016	2021	2040D	1	1					1	No flare		
25	2041	2044	2102	1	5					7	2042	C3.1	7654
25	2156	2158	2215	1	1					1	2156	B9.2	7654
26	0023	0029	0039	1-	1			1			0019	C1.0	
26	0110	0120	0132D	1-	1			1			0113	C2.5	7654
26	0132E	0141	0153D	3	5	2		1			0133	M1.5	
26	0153E	0205	0300	2+	1			1			0140E	C6.5	7654
26	0540	0549	0608	1-	1			1			0540	C1.4	7654
26	0647	0653	0708	1-	1			1			0638	C1.8	7654
26	0710	0744	0824	2-	1			1			0726	C1.3	
26	1005	1012	1017	1-	1					1	1005	C1.0	
26	1137	1145	1221	1-	5			1		3	1119	C4.6	
26	1354	1359	1430	2	1					1	1352	B5.9	7658
26	1626	1633	1648	1-	5					11	1630	C1.9	
26	1719	1721	1728	1-	3					2	1720	C1.3	7654
26	1852	1852	1903	1-	3					2	1852	C1.5	7654
26	2021	2025	2032	1-	1					1	2020	C1.0	
26	2118	2120	2129	1-	1					1	2119	B8.7	7654
26	2236	2240	2307	1-	5	1		1			2237	C1.6	7654
27	0019	0030	0059	1-	1			1			0019	C1.8	
27	0208	0216	0241	1-	1			1			0211	C1.0	
27	0344	0403	0458D	2-	1			1			0340	C4.6	

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

JANUARY 1994

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
27	0458E	0513	0737	3	3	1		1			0518E	M2.7	7654
27	1346	1353	1413	1	5		1			6	1348	C2.7	7654
27	1417	1423	1437	1	3					3	1416	C1.1	
27	1446	1504	1522	1	1					1	1448	C1.7	
27	1606	1622	1644	1-	5					5	1606	C2.1	7654
27	2000	2004	2019	1-	5					5	2000E	C1.6	7654
27	2103	2107	2122	1-	5					3	2103	C2.1	7654
27	2142	2143	2150	1-	1					1	2140	B7.5	
28	0321	0332	0338D	1-	1			1			0319	C1.6	
28	0338E	0348	0410	1-	1			1			0319	C1.6	
28	0450	0508	0615	1-	1			1			0446	C2.4	
28	0733	0740	0816	1	1		1				No flare		
28	0858	0900	0906	1-	1					1	0856	C1.1	
28	0913	0916	0930	1-	1					1	0912	B7.2	
28	1011	1020	1050	1	1		1				No flare		
28	1122	1131	1145	1	1					1	1122	C1.4	
28	1202	1217U	1255	1	1		1				No flare		
28	1542	1550	1613	1	5					8	No flare		
28	1618	1643	1759	2-	5					8	1625	M1.8	7654
28	1824	1827	1834	1-	3					3	*		
28	1834	1839	1852	1-	3					3	No flare		
28	1847	1852	1916	1	5					6	1847	M1.1	
28	1945	1949	2005	1-	5					2	1947	C4.5	
29	0318	0329	0335D	1-	1			1			0314	M2.4	
29	0335E	0345	0411D	3	3	1		1			0314	M2.4	
29	0411E	0415	0636	3	1			1			0314	M2.4	
29	0722	0742	0827D	1-	5			1		1	0735	C5.0	
29	0827E	0905	0940	2	5		1	1		3	0819	C3.3	
29	1056	1101	1110	1-	1			1			1050	C2.3	
29	1100	1121	1121	1	1		1				1113	M2.4	
29	1123	1130	1226	2-	5	1	3	1		4	1113	M2.4	
29	1300	1309	1339	1-	5		1	1		5	1252	C6.5	
29	1501	1508	1556	2	5					4	1503	C8.8	
29	1506	1513	1616	2-	5		1			3	1503	C8.8	
29	1508	1533	1700	1	1					1	1503	C8.8	
30	0104	0114	0138D	1-	1			1			0102	C3.2	
30	0138E	0140	0213	1-	1			1			No flare		
30	0249	0254	0306	1-	1			1			No flare		
30	1038	1049	1110	1+	3		2				No flare		
30	1242	1249	1327	2	1		1				No flare		
30	1422	1431	1442	3	1					1	No flare		
30	1615	1635	1635D	3	1					1	No flare		
30	1714	1730	1810	3	1					1	No flare		
31	1427	1432	1451	3	1					1	No flare		

* = no flare patrol.

OBSERVATORIES REPORTING FOR JANUARY 1994

Amherst, New Hampshire, USA	SES	Manahawkin, New Jersey, USA	SES
Boksburg, Rep of S. Africa	SES	Maui, Hawaii, USA	SWF
Brazilian Antarctic Station	SPA, SES	McDonough, Georgia, USA	SES
Cambridge, England, UK	SES	Nampa, Idaho, USA	SES
Cranford, New Jersey, USA	SES	Nerja, Spain	SES
Durham, New Hampshire, USA	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Fort Wayne, Indiana, USA	SES	Rimavska Sobota, Slovakia	SEA
Gettysburg, Pennsylvania, USA	SES	Rochester, New Hampshire, USA	SES
Hiraiso, Japan	SWF	Tucson, Arizona, USA	SES
Houston, Texas, USA	SES	Upice, Slovakia	SEA
Hudson, Ohio, USA	SES	Wellington, Ohio, USA	SES
Inubo, Japan	SPA	Windsor Locks, Connecticut, USA	SES
Itapetinga, Brazil	SPA, SES	Ziar nad Hronom, Slovakia	SEA
LaCrescenta, California, USA	SES	Zilina, Slovakia	SEA
Madison, Wisconsin, USA	SES		

Observations are not necessarily continuous.

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

JANUARY 1994

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
01			SVTO				0634.0	0634.0	1				III
	0700	1200	IZMI				0700.0E	1200.0D	1				IN
			IZMI				0701.9	0702.0	1				III
			IZMI				0704.4	0704.5	1				III
			IZMI				0709.8	0709.9	1				III
			IZMI				0730.2	0730.3	1				III
			IZMI				0807.0	1200.0	1				IN
	0836	1320	ONDR										
			IZMI				0842.7	0845.8	2				IIIG
			LEAR				0843.0	0844.0	2				III
			SVTO				0843.0	0844.0	1				III
			LEAR				0845.0	0845.0	1				III
			IZMI				1023.7	1024.5	1				IIIG
			IZMI				1040.5	1040.6	1				III
			PALE				2107.0	2107.0	2				III
02	0700	1200	IZMI				0700.0E	1200.0D	2				IS
	0849	1334	ONDR										
			LEAR				1030.0	1040.0	3				III
			LEAR				2348.0	2348.0	1				III
03			LEAR				0515.0	0515.0	1				III
			LEAR				0600.0	0601.0	1				III
			LEAR				0651.0	0651.0	2				III
	0700	1200	IZMI				0700.0E	1200.0D	2				IS
			IZMI				0731.8	0731.9	2				III
			LEAR				0732.0	0732.0	1				III
	0800	1404	POTS				0800.0E	1404.0U	1				I,S
			POTS				0824.5	0824.7	1				IIIB
			IZMI				0830.1	0830.2	2				III
			POTS				0830.1	0830.2	1				IIIB
			IZMI				0832.1	0832.5	1				IIIG
	0837	1335	ONDR										
			IZMI				0849.7	0852.4	2				IIIGG
			POTS				0850.2	0850.3	2				IIIGG
			IZMI				0853.3	0856.5	2				IIIG,V
			LEAR				0854.0	0856.0	3				III
			SVTO				0854.0	0856.0	2				III
			IZMI				0856.8	0858.5	2				IIIGG
			IZMI				0909.3	0910.4	1				IIIGG
			POTS				0909.4	0910.2	1				IIIG
			LEAR				0927.0	0929.0	3				III
			SVTO				0927.0	0929.0	3				III
			IZMI				0927.1	0928.8	2				IIIGG
			POTS				0927.1	0929.8	2				IIIG
			IZMI				0929.1	0930.1	3				IIIGG
			LEAR				0940.0	0941.0	1				III
			SVTO				0940.0	0941.0	1				III
			POTS				0940.5	0943.6	1				IIIG
			IZMI				0940.6	0943.5	2				IIIGG
			LEAR				0952.0	0952.0	1				III
			SVTO				0952.0	0952.0	1				III
			IZMI				0952.3	0952.6	2				IIIG
			POTS				0952.3	0952.7	2				IIIG
			IZMI				1056.0	1057.1	1				IIIG
			SVTO				1109.0	1111.0	1				III
			POTS				1109.7	1115.4	2				IIIG
			IZMI				1109.8	1111.6	2				IIIG
			IZMI				1114.7	1114.9	1				IIIG
			POTS				1128.2	1128.3	1				RS
			IZMI				1155.8	1157.4	1				IIIG
			POTS				1203.6	1204.0	1				IIIG
			SVTO				1240.0	1247.0	1				III
			POTS				1240.2	1240.3	1				IIIG
			POTS				1243.6	1246.5	1				IIIG
			SVTO				1309.0	1317.0	2				III
			POTS				1309.4	1311.9	2				IIIG
			SGMR				1311.0	1311.0	1				III
			POTS				1317.6	1317.9	2				IIIB

SOLAR RADIO EMISSION
Spectral Observations

JANUARY 1994

Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
03		POTS				1323.8	1339.2	2				IIIGG
		SGMR				1332.0	1341.0	2				III
		SVTO				1334.0	1341.0	2				III
		POTS				1340.2	1341.5	2				IIIG
		POTS				1357.2	1357.4	1				IIIB
		SGMR				1414.0	1414.0	1				III
		SGMR				1710.0	1711.0	1				III
		PALE				1900.0	1910.0	1				III
		SGMR				1900.0	1900.0	1				III
		PALE				2133.0	2137.0	2				V
		PALE				2157.0	2158.0	1				III
		LEAR				2226.0	2226.0	1				III
		LEAR				2238.0	2239.0	2				III
		PALE				2238.0	2239.0	1				III
		LEAR				2317.0	2318.0	2				III
		PALE				2317.0	2318.0	1				III
		LEAR				2326.0	2326.0	1				III
		LEAR				2351.0	2354.0	2				III
04		LEAR				0001.0	0002.0	2				III
		LEAR				0044.0	0344.0	2				S
		PALE				0046.0	0047.0	1				III
		PALE				0101.0	0201.0	2				S
		LEAR				0149.0	0149.0	3				III
		LEAR				0304.0	0309.0	3				III
		LEAR				0429.0	0440.0	2				S
		LEAR				0435.0	0440.0	3				III
		SVTO				0621.0	0621.0	1				III
		LEAR				0624.0	0629.0	3				III
0655	1200	IZMI				0655.0E	1200.0	1				IS
		IZMI				0655.3	0655.9	2				IIIG
		LEAR				0721.0	0721.0	1				III
		IZMI				0721.4	0721.6	2				IIIG
		SVTO				0753.0	0753.0	2				III
		IZMI				0758.8	0759.8	1				IIIG
		LEAR				0759.0	0759.0	1				III
0800	1404	POTS				0800.0E	1404.0U	1				I,S
0834	1337	ONDR				0835.9	0956.8	2				IIIG
		POTS				0902.8	0904.1	1				IIIG
		IZMI				0902.9	0903.0	1				IIIGG
		LEAR				0903.0	0904.0	1				III
		SVTO				0903.0	0918.0	2				S
		LEAR				0917.0	0918.0	2				III
		IZMI				0917.9	0918.3	3				IIIG
		POTS				0917.9	0918.3	2				IIIG
		LEAR				0949.0	0950.0	1				III
		IZMI				0949.2	0950.3	2				IIIG
		POTS				0949.4	0958.2	3				IIIGG
		IZMI				0951.0	0951.3	1				IIIG
		IZMI				0953.0	0953.2	1				IIIG
		IZMI				0954.6	0958.0	3				IIIGG
		LEAR				0955.0	0957.0	3				III
		IZMI				1046.5	1046.9	1				IIIG
		IZMI				1110.0	1110.1	1				III
		POTS				1110.0	1110.1	1				IIIB
		POTS				1206.9	1207.1	1				IIIG
		POTS				1219.1	1219.2	1				IIIB
		POTS				1321.1	1321.4	1				IIIG
		POTS				1331.6	1331.7	1				IIIG
		SGMR				1358.0	1358.0	1				III
		POTS				1358.1	1359.1	1				IIIG
		SGMR				1548.0	1550.0	1				III
		PALE				1840.0	1852.0	1				III
		SGMR				1840.0	1849.0	1				III
		PALE				1921.0	1928.0	2				III
		SGMR				1921.0	1928.0	1				III
		PALE				2044.0	2047.0	1				V
		PALE				2205.0	2226.0	1				S
		LEAR				2331.0	2332.0	2				III

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

JANUARY 1994

Observation Start Day (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
04		PALE				2331.0	2332.0	2				III
05		LEAR				0016.0	0018.0	3				III
		PALE				0016.0	0018.0	2				V
		LEAR				0046.0	0048.0	3				III
		LEAR				0050.0	0257.0	3				S
		PALE				0055.0	0107.0	2				S
		LEAR				0330.0	0332.0	2				III
		LEAR				0420.0	0512.0	2				S
		LEAR				0649.0	0651.0	2				III
	0655 1200	IZMI				0655.0E	1200.0D	1				IS
		LEAR				0710.0	0718.0	2				MWB
		IZMI				0713.0	0722.5	2				IIIGG
		LEAR				0719.0	0720.0	2				III
		LEAR				0723.0	0726.0	3				V
		SVTO				0723.0	0749.0	2				S
		IZMI				0723.3	0726.3	3				IIIGG
		IZMI				0730.0	0731.5	1				IIIG
		IZMI				0739.0	0744.5	2				IIIGG
		IZMI				0749.0	0750.6	2				IIIG,V
		LEAR				0749.0	0750.0	2				III
		LEAR				0800.0	0800.0	1				III
	0800 1404	POTS				0800.0E	1404.0U	1				I,S
		LEAR				0818.0	0824.0	3				III
		IZMI				0818.3	0835.0	2				IIIGG
		POTS				0818.4	0834.7	3				IIIGG
		SVTO				0819.0	0831.0	3				S
		LEAR				0825.0	0834.0	3				III
		POTS				0902.6	0909.5	3				IIIGG
	0835 1339	ONDR	0902.7	0907.9	2	0902.7	0907.9	3				IIIGG,U
		IZMI				0903.3	0906.3	2				IIIGG
		IZMI				0909.4	0909.5	1				III
		LEAR				0914.0	0923.0	2				III
		POTS				0914.4	0914.6	1				IIIB
		SVTO				0922.0	0929.0	2				III
		IZMI				0922.2	0924.4	2				IIIGG
		POTS				0922.4	0923.2	2				IIIG
		POTS				1016.6	1021.0	2				IIIGG
		ONDR	1017.5	1018.0	3	1017.5	1018.0	2				IIIG
		IZMI				1017.6	1017.9	2				IIIG
		IZMI				1019.9	1021.1	1				IIIGG
		POTS	1027.4	1027.6	1							DCIM
		POTS				1048.9	1052.1	1				IIIG
		IZMI				1049.9	1050.0	1				IIIG
		ONDR	1057.0	1109.1	2	1057.0	1109.1	3				IIIGG
		POTS				1057.6	1100.1	1				IIIGG
		IZMI				1106.4	1109.1	2				IIIGG
		POTS				1106.4	1109.3	2				IIIGG
		IZMI				1121.5	1021.8	1				IIIG
		POTS				1121.5	1121.7	1				IIIB
		IZMI				1128.6	1134.6	2				IIIGG
		POTS				1128.9	1131.7	2				IIIGG
		POTS				1134.3	1134.6	1				IIIG
		POTS				1204.0	1207.5	2				IIIG
		SVTO				1205.0	1207.0	1				III
		POTS				1214.2	1214.4	1				IIIG
		POTS				1252.4	1304.1	2				IIIGG
		SVTO				1254.0	1255.0	2				III
		POTS				1304.4	1305.2	2				IIIG
		POTS				1313.3	1320.3	3				IIIGG
		ONDR	1315.0	1315.5	3	1315.0	1315.5	2				IIIG
		POTS				1330.9	1335.3	2				IIIG
		SVTO				1359.0	1418.0	3				V
		POTS				1359.7	1404.0U	3				IIIGG,V
		SGMR				1400.0	1404.0	3				III
		SGMR				1408.0	1417.0	1				III
		SGMR				1508.0	1511.0	1				III
		SGMR				1701.0	1703.0	3				III
		PALE				1906.0	1909.0	2				III

SOLAR RADIO EMISSION
Spectral Observations

JANUARY 1994

Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
05		SGMR				1907.0	1908.0	2				III
		PALE				2044.0	2048.0	2				III
		SGMR				2047.0	2047.0	1				III
		PALE				2121.0	2136.0	2				S
		LEAR				2241.0	2243.0	2				III
		PALE				2241.0	2249.0	2				V
		LEAR				2309.0	2313.0	2				III
		PALE				2309.0	2313.0	1				III
		LEAR				2332.0	2333.0	1				III
06		LEAR				0102.0	0116.0	2				III
		LEAR				0133.0	0133.0	1				III
		LEAR				0220.0	0220.0	2				III
		LEAR				0241.0	0241.0	1				III
		LEAR				0613.0	0629.0	3				S
		LEAR				0646.0	0708.0	1				S
	0700	1200 IZMI				0700.0E	1200.0D	1				IS
		IZMI				0707.2	0707.3	1				III
		IZMI				0758.1	0759.0	2				IIIG,CONT
	0800	1404 POTS				0800.0E	1404.0U	1				I,S
		IZMI				0805.8	0806.1	1				IIIG
		POTS				0805.8	0805.9	1				IIIB
		POTS				0809.5E	0810.2	2				IIIG
		IZMI				0853.4	0853.5	2				III
		POTS				0853.5	0853.6	2				RS,IIIB
	0834	1340 ONDR	1120.7	1120.8	3							IIIG
		ONDR	1128.0	1129.0	2							IIIGG
07	0650	1200 IZMI				0650.0E	1200.0D	1				IN
		IZMI				0713.3	0729.3	1				IIIN
	0800	1404 POTS				0800.0E	1404.0U	1				I,S
		POTS				0854.5	0854.6	1				IIIB
	0833	1338 ONDR	0941.8	0942.2	3							IIIG
		ONDR	1054.4	1054.8	3							IIIGG
		ONDR	1127.2	1127.8	3							IIIG
		ONDR	1233.1	1236.6	3							DCIM
		PALE				1906.0	1906.0	1				III
		SGMR				1906.0	1906.0	1				V
		PALE				2158.0	2158.0	1				III
		LEAR				2240.0	2241.0	2				III
		PALE				2240.0	2241.0	1				III
		LEAR				2340.0	2340.0	2				III
		PALE				2340.0	2340.0	1				III
08		LEAR				0331.0	0332.0	3				III
		PALE				0331.0	0332.0	2				III
		LEAR				0457.0	0458.0	3				III
		LEAR				0513.0	0514.0	2				III
	0700	1200 IZMI				0700.0E	1200.0D	1				IS
		LEAR				0701.0	0702.0	2				III
		IZMI				0701.9	0702.1	1				IIIG
		LEAR				0730.0	0730.0	1				III
	0832	1340 ONDR										
		IZMI				0935.2	0936.6	1				IIIG
		IZMI				1127.6	1127.7	1				III
		IZMI				1130.0	1130.8	2				III
		SVTO				1130.0	1130.0	1				III
		SVTO				1201.0	1201.0	1				III
		IZMI				1201.3	1201.6	2				IIIG
		PALE				1928.0	1928.0	2				III
		SGMR				1928.0	1928.0	2				V
09		LEAR				0615.0	0616.0	1				III
	0650	1200 IZMI				0650.0E	1200.0D	1				IS
	0842	1332 ONDR										
		SVTO				1413.0	1414.0	3				III
		PALE				2319.0	2340.0	1				II 0800km/s
		LEAR				2320.0	2335.0	1				II 0600km/s
		LEAR				2338.0	0023.0	1				CONT

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

JANUARY 1994

Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
10		LEAR				0114.0	0114.0	1				III
		LEAR				0230.0	0230.0	1				III
0700	1200	IZMI				0655.0E	1200.0D	1				IS
0800	1216	POTS				0800.0E	1216.0U	1				I,S
0830	1332	ONDR										
		IZMI				0947.7	0948.2	1				IIIG
		POTS				1118.7	1118.8	1				IIIB
		POTS				1139.5	1147.2	1				IIIGG
		IZMI				1144.7	1144.8	1				III
		IZMI				1146.4	1147.3	1				IIIG
		POTS				1158.5	1158.6	1				IIIB
		POTS				1205.8	1206.0	1				IIIG
		SGMR				1341.0	1348.0	1				III
		SVTO				1341.0	1408.0	2				S
		SGMR				1402.0	1408.0	2				V
		SGMR				1412.0	1417.0	1				III
		SGMR				1445.0	1447.0	1				III
		SGMR				1512.0	1517.0	1				III
		SGMR				1546.0	1551.0	1				III
		SGMR				1625.0	1635.0	1				III
		SGMR				1717.0	1720.0	2				V
		LEAR				2221.0	2221.0	2				III
		PALE				2221.0	2221.0	2				III
11		LEAR				0213.0	0215.0	2				III
		LEAR				0329.0	0330.0	3				III
		PALE				0329.0	0329.0	2				III
		LEAR				0459.0	0500.0	2				III
0650	1200	IZMI				0650.0E	1200.0	1				IS
		LEAR				0724.0	0725.0	2				III
		IZMI				0724.5	0625.0	2				IIIG
		LEAR				0739.0	0741.0	2				III
		SVTO				0739.0	0741.0	1				V
		IZMI				0739.3	0741.7	2				IIIGG
0800	1414	POTS				0800.0E	1414.0U	1				I,S
0830	1348	ONDR										
		POTS				1127.6	1127.9	1				IIIGG
		PALE				2055.0	2056.0	2				III
		SGMR				2055.0	2056.0	1				III
		LEAR				2219.0	2220.0	1				III
		PALE				2219.0	2221.0	1				III
		LEAR				2353.0	2354.0	2				III
		PALE				2353.0	2354.0	2				III
12		LEAR				0002.0	0003.0	1				III
		PALE				0002.0	0003.0	2				III
		LEAR				0104.0	0104.0	2				III
		PALE				0104.0	0105.0	2				III
		LEAR				0200.0	0201.0	2				III
		PALE				0200.0	0202.0	2				III
		LEAR				0254.0	0255.0	1				III
		LEAR				0428.0	0437.0	2				III
0700	1200	IZMI				0700.0E	1200.0D	1				IS
		LEAR				0751.0	0752.0	2				III
		SVTO				0751.0	0752.0	1				III
		IZMI				0751.2	0752.3	2				IIIG
0800	1414	POTS				0800.0E	1414.0U	1				I,S
0829	1350	ONDR										
		POTS				0940.9	0942.6	1				IIIGG
		IZMI				0941.5	0942.4	1				IIIG
		POTS				1024.8	1024.9	1				IIIB
		POTS				1052.3	1053.8	2				IIIGG
		IZMI				1053.1	1053.6	2				IIIG
		SVTO				1144.0	1145.0	2				III
		IZMI				1144.3	1146.1	2				IIIGG
		POTS				1144.3	1150.9	2				IIIGG
		POTS				1326.4	1327.3	1				IIIG
		SGMR				1630.0	1630.0	1				V
		SGMR				1741.0	1741.0	1				V

SOLAR RADIO EMISSION
Spectral Observations

JANUARY 1994

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
12			PALE				2016.0	2023.0	1				III
			SGMR				2016.0	2016.0	1				III
			PALE				2055.0	2058.0	1				V
13			LEAR				0105.0	0106.0	2				III
			LEAR				0329.0	0330.0	1				III
			LEAR				0644.0	0644.0	1				III
	0700	1200	IZMI				0700.0E	1200.0D	2				IS
	0800	1414	POTS				0800.0E	1414.0U	1				I,S
	0828	1352	ONDR										
			POTS				1137.6	1140.5	1				IIIG
			POTS				1349.6	1350.0	1				IIIB
			POTS				1411.6	1411.9	1				IIIB
			PALE				2136.0	2136.0	1				III
14			IZMI				0658.9	0700.9	1				IIIGG
	0700	1200	IZMI				0700.0E	1200.0D	2				IS
			IZMI				0753.2	0753.3	1				III
	0800	1414	POTS				0800.0E	1414.0U	2				I,S
	0828	1354	ONDR										
			POTS				0919.7	0919.8	1				UNCLF
			POTS				1007.8	1008.0	1				IIIB
			POTS				1230.6	1230.9	1				UNCLF
			POTS				1305.5	1310.5	2				IIIG
			SVTO				1308.0	1309.0	2				III
			POTS				1320.8	1321.1	1				UNCLF
			POTS				1404.8	1407.7	1				IIIG
			SGMR				1605.0	1610.0	2				V
15	0700	1200	IZMI				0735.5	0736.6	2				III
	0826	1356	ONDR										
			IZMI				1015.6	1016.9	1				IIIG
			IZMI				1129.6	1130.3	1				I
			PALE				2114.0	2115.0	1				III
			PALE				2217.0	2218.0	1				III
			LEAR				2353.0	2353.0	1				III
16			LEAR				0503.0	0504.0	1				III
			LEAR				0633.0	0633.0	1				III
			LEAR				0656.0	0700.0	1				III
	0700	1200	IZMI				0656.9	0657.4	1				IIIG
			IZMI				0659.9	0700.1	2				IIIG
			IZMI				0801.9	0802.3	2				III,V
			LEAR				0802.0	0802.0	2				III
			IZMI				0808.5	0809.3	1				IIIG
			IZMI				0821.8	0822.5	2				IIIG
	0823	1357	ONDR										
			IZMI				0919.0	0820.4	1				IIIG
			IZMI				0958.0	1200.0D	1				IN
			SGMR				1329.0	1330.0	1				V
			SVTO				1329.0	1330.0	1				III
			SGMR				1534.0	1534.0	1				III
			SGMR				1835.0	1835.0	1				III
			LEAR				2311.0	2324.0	2				S
			PALE				2317.0	2336.0	1				S
			LEAR				2332.0	2337.0	2				II 1600km/s
17			LEAR				0519.0	0521.0	2				III
			LEAR				0627.0	0627.0	1				III
	0700	1200	IZMI				0700.0E	1200.0D	1				IN
			IZMI				0701.0	0702.7	1				IIIG
			IZMI				0714.2	0714.4	1				IIIG
			IZMI				0722.9	0724.0	3				IIIG
			IZMI				0736.4	0736.6	1				IIIG
			IZMI				0740.1	0740.8	2				IIIG
			SVTO				0742.0	0743.0	2				III
			LEAR				0743.0	0744.0	3				III
			LEAR				0750.0	0750.0	1				III
	0800	1414	POTS				0800.0E	1414.0U	1				I,S

SOLAR RADIO EMISSION
Spectral Observations

JANUARY 1994

Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1–3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1–3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1–3)	Spectral Type
Day 17												
		POTS				0800.6	0801.6	2				IIIG,I
		IZMI				0800.8	0801.7	2				IIIG
		POTS	0814.1	0814.3	2							DCIM,RS,U
		POTS				0908.4	0908.7	1				UNCLF
		POTS				0915.8	0933.6	2				IIIGG,RS
		LEAR				0916.0	0931.0	2				S
		IZMI				0916.1	0916.4	2				III
0821	1400	ONDR	0916.3	0918.5	3							CONT
		IZMI				0918.0	0919.0	2				IIIG
		SVTO				0922.0	0931.0	2				S
		IZMI				0922.2	0923.1	2				IIIG
		IZMI				0926.0	0926.7	2				IIIG
		IZMI				0930.9	0933.3	1				IIIGG
		IZMI				1019.3	1019.6	1				IIIGG
		POTS				1019.3	1019.5	1				IIIG
		POTS				1231.7	1237.5	1				IIIG
		POTS				1310.2	1310.4	1				IIIG
		POTS				1338.3	1347.3	1				IIIGG,RS
		SGMR				1424.0	1424.0	1				III
		SVTO				1424.0	1424.0	2				III
		PALE				1900.0	1903.0	3				V
		SGMR				1900.0	1904.0	3				V
		PALE				1933.0	1933.0	1				III
		SGMR				1933.0	1933.0	1				III
		PALE				2132.0	2133.0	1				III
Day 18												
		LEAR				0015.0	0113.0	1				S
		LEAR				0127.0	0133.0	2				III
		LEAR				0153.0	0202.0	3				III
		PALE				0153.0	0202.0	2				V
		LEAR				0229.0	0319.0	2				S
		LEAR				0529.0	0535.0	3				III
		LEAR				0624.0	0844.0	3				S
0700	1200	IZMI				0700.0E	0832.0	1				IN
		IZMI				0701.8	0701.9	1				III
		IZMI				0704.5	0704.6	1				IIIG
		IZMI				0744.8	0746.1	2				IIIGG
		SVTO				0745.0	0804.0	2				S
		IZMI				0800.3	0800.6	2				IIIG
0800	1414	POTS				0800.3	0800.6	1				IIIG
		IZMI				0803.8	0804.2	2				IIIG
0821	1402	ONDR										
		SVTO				0843.0	0844.0	2				V
		IZMI				0843.7	0844.6	2				IIIGG
		POTS				0843.7	0844.6	2				IIIG
		LEAR				0929.0	0937.0	2				III
		IZMI				0929.8	0930.1	2				IIIG
		POTS				0929.9	0937.2	1				IIIG
		IZMI				0937.0	0937.2	1				III
		IZMI				0945.5	0945.6	1				III
		POTS				1007.6	1008.6	1				IIIG
		IZMI				1027.8	1027.9	1				III
		POTS				1119.4	1119.5	1				IIIB
		SGMR				1350.0	1357.0	1				III
		POTS				1350.6	1357.2	1				IIIG
		SGMR				1419.0	1420.0	1				III
		SGMR				1543.0	1602.0	1				S
		SGMR				1809.0	1810.0	1				III
		PALE				2125.0	2127.0	1				III
		PALE				2150.0	2202.0	3				S
		LEAR				2315.0	2315.0	1				III
		PALE				2315.0	2315.0	1				III
		LEAR				2344.0	2345.0	2				III
		PALE				2344.0	0005.0	/				S
Day 19												
		LEAR				0157.0	0158.0	1				III
		LEAR				0238.0	0239.0	2				III
		LEAR				0615.0	0616.0	1				III
0700	1200	IZMI				0655.0E	1033.5	1				IIIN

SOLAR RADIO EMISSION
Spectral Observations

JANUARY 1994

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
19			LEAR				0722.0	0723.0	1				III
	0800	1414	POTS				0813.9	0815.0	1				IIIG
	0817	1402	ONDR										
			POTS				0823.0	0827.7	1				IIIG
			POTS				0848.1	0849.6	1				IIIG
			POTS				0901.7	0902.1	1				IIIG
			POTS				0918.9	0920.5	1				IIIG
			POTS				0931.0	0933.5	1				IIIG
			POTS				0958.8	0958.9	1				IIIB
			POTS				1204.8	1217.5	1				IIIG
			POTS				1234.1	1234.2	1				IIIG
			POTS				1318.6	1318.7	1				IIIB
			POTS				1334.0	1334.2	1				IIIG
20			LEAR				0057.0	0101.0	3				III
			PALE				0057.0	0101.0	2				III
	0817	1406	ONDR										
	0700	1200	IZMI				0946.0	0946.4	2				IIIG
			IZMI				1039.3	1040.4	2				IIIGG
			IZMI				1043.3	1045.0	2				IIIG,V
			SVTO				1049.0	1054.0	2				III
			IZMI				1146.7	1151.5	1				IIIN
			PALE				2033.0	2034.0	1				III
			PALE				2103.0	2104.0	1				III
21	0700	1200	IZMI				0733.1	0733.2	1				IIIG
			IZMI				0743.9	0744.0	1				III
			IZMI				0758.9	0801.0	1				IIIG
	0754	0937	POTS				0758.9	0759.1	1				IIIB
			POTS				0801.8	0801.9	1				IIIB
			POTS				0807.7	0807.8	1				UNCLF
	0818	1403	ONDR										
			POTS				0818.0U	0821.0U	1				I,S
			IZMI				0828.1	0828.2	1				III
			POTS				0828.1	0828.2	1				IIIB
			POTS				0903.6	0909.5	1				UNCLF
			POTS				0911.1	0911.5	1				UNCLF
			POTS				0913.6	0914.1	1				UNCLF
			POTS				0914.9	0915.3	1				UNCLF
			IZMI				0920.5	0920.7	1				CONT
			IZMI				1008.1	1021.3	1				IIIGG
			IZMI				1042.0	1106.2	1				IGG
			IZMI				1154.3	1154.4	1				III
			IZMI				1159.4	1159.6	1				IIIG
			LEAR				2336.0	0000.0	2				CONT
22			LEAR				0104.0	0104.0	1				III
			PALE				0149.0	0357.0	1				CONT
			LEAR				0634.0	0634.0	1				III
			SVTO				0649.0	0649.0	1				III
	0655	1200	IZMI				0655.0E	0900.0	1				IIIN
			SVTO				0807.0	0809.0	1				III
	0816	1407	ONDR										
			IZMI				0858.9	0900.0	2				IIIG
			IZMI				0957.2	0957.7	1				IIIG
			IZMI				0958.3	1000.0	1				IS
			IZMI				1123.2	1123.3	1				III
			IZMI				1127.3	1134.0	1				IS
			IZMI				1134.2	1134.4	2				IIIG, RS
			SGMR				1912.0	1913.0	1				III
			PALE				1928.0	1932.0	1				III
			LEAR				2336.0	0000.0	1				CONT
23	0813	1406	ONDR										
	0700	1200	IZMI				0831.2	0831.3	1				III
			IZMI				0841.0	1006.0	1				IS
			SGMR				1907.0	1907.0	1				III
24			LEAR				0625.0	0900.0	2				CONT

SOLAR RADIO EMISSION
Spectral Observations

JANUARY 1994

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
24	0700	1200	IZMI				0700.6	0700.8	1				IIIG
			IZMI				0713.9	0714.1	1				IIIG
			IZMI				0738.0	1200.0D	1				IN
			IZMI				0738.6	1200.0D	2				IIIN
			IZMI				0742.1	0742.4	2				IIIG
	0754	1428	POTS				0754.0E	1428.0U	1				IS,C,DC,IIIB/INT:1
			POTS				0755.4	0755.5	1				UNCLF
			LEAR				0803.0	0804.0	3				III
			SVTO				0803.0	0805.0	2				III
			POTS				0805.9	0808.2	1				IIIG,RS
			SVTO				0816.0	0849.0	1				CONT
			POTS	0824.6	0825.1	2							DCIM,P
			POTS	0905.7	0905.8	2							DCIM
			POTS				0907.8	0908.2	2				IIIG
			POTS	0928.8	0937.8	2							IIIGG,DCIM
			SVTO				0935.0	1324.0	2				CONT
			POTS				1011.1	1013.7	2				IIIGG
			LEAR				1018.0	1054.0	3				S
			POTS	1023.3	1023.8	1							DCIM
			POTS	1024.6	1025.2	2							DCIM,IIIG
			POTS				1052.8U	1054.5U	2				IIIGG
			POTS				1101.3	1105.0	2				IIIGG
			POTS				1116.0	1122.3	2				IIIGG
			POTS				1144.9	1155.0U	2				IIIGG
	0811	1412	ONDR	1227.5	1229.6	3							IIIG
			SGMR				1228.0	1352.0	1				CONT
			POTS				1228.2	1230.1	2				IIIGG
			POTS				1231.0	1234.4	2				IIIGG
			SVTO				1232.0	1233.0	2				III
			ONDR	1232.3	1232.4	1							IIIG
			ONDR	1235.6	1236.5	3	1235.6	1247.8	3				IIIGG,U
			POTS				1235.6	1236.5	2				IIIGG,DCIM
			POTS				1240.5	1248.3U	2				IIIGG
			ONDR	1240.9	1252.0	3							IIIGG
			POTS				1251.3	1253.5U	2				IIIGG
			POTS				1318.8	1322.3	2				IIIGG
			POTS				1421.0U	1428.0U	2				IIIGG
			SVTO				1422.0	1438.0	1				S
			SGMR				1442.0	1717.0	2				CONT
			PALE				1901.0	1903.0	1				III
			SGMR				1901.0	1903.0	1				III
			PALE				2030.0	2031.0	1				III
			LEAR				2306.0	2314.0	2				III
			PALE				2306.0	2307.0	1				III
25			LEAR				0015.0	0017.0	1				III
			LEAR				0041.0	1054.0	1				CONT
			PALE				0058.0	0156.0	1				S
	0700	1200	IZMI				0700.0E	1100.0	1				IN
	0754	1428	POTS				0754.0E	1428.0U	1				I,S,IIIG,(INT:1)
			IZMI				0859.9	0907.6	2				IIIGG
			POTS				0901.2	0907.6	2				IIIGG
			IZMI				0915.5	1004.5	2				IIIN
			POTS				0915.5	0920.1	2				IIIGG
			SVTO				0918.0	1015.0	1				CONT
			SVTO				0927.0	0951.0	2				S
			POTS				0927.7	0933.3	2				IIIGG,RS
			POTS				0937.0	0937.7	2				IIIG
			POTS				0942.9	0943.5	2				IIIG,DCIM
			IZMI				1025.5	1025.6	1				IIIG
			POTS				1052.9	1053.0	1				U
			IZMI				1055.9	1056.2	2				IIIG
			POTS	1314.7	1317.0	2							DCIM, IIIG
	0809	1403	ONDR	1314.8	1315.1	3							IIIGG
			POTS	1352.8	1353.2	2							DCIM
			ONDR	1354.0	1354.3	3							IIIGG,U
			POTS				1354.0	1355.3	2				IIIG,V
			SGMR				1354.0	1355.0	2				III
			SVTO				1354.0	1354.0	2				III

SOLAR RADIO EMISSION
Spectral Observations

JANUARY 1994

Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
25		POTS				1359.8U	1400.0	1				IIIG
		SGMR				1457.0	1458.0	2				V
		SVTO				1457.0	1458.0	2				III
		SGMR				1522.0	1531.0	1				V
		SGMR				1640.0	1644.0	2				V
		PALE				1715.0	1715.0	1				III
		SGMR				1715.0	1715.0	2				V
		PALE				1817.0	1833.0	1				S
		SGMR				1817.0	1834.0	2				S
		PALE				1852.0	1902.0	1				II 1200km/s
		SGMR				1852.0	1902.0	1				II 0600km/s
		PALE				2348.0	2349.0	1				III
		LEAR				2349.0	2349.0	2				III
26		PALE				0029.0	0031.0	1				III
		LEAR				0030.0	0031.0	1				III
		LEAR				0048.0	0051.0	1				III
		LEAR				0614.0	0615.0	2				III
		LEAR				0722.0	0723.0	2				III
		IZMI				0722.8	0722.9	2				III
		IZMI				0738.0	1200.0D	1				IN
	0754	POTS				0754.0E	1428.0U	1				I,S
		POTS				0822.6	0823.0	1				IIIB
		POTS				0923.1	0923.3	1				IIIB
		POTS				1008.3	1011.3	2				IIIGG,DCIM
	0807	ONDR	1011.0	1011.2	2							IIIG
		POTS				1041.6	1041.7	1				IIIB
		IZMI				1059.1	1059.2	1				III
		POTS				1059.1	1102.2	2				IIIG
		SVTO				1100.0	1102.0	2				III
		POTS				1132.7	1132.8	1				IIIB
		POTS				1137.7	1143.3	2				IIIGG
		ONDR	1138.5	1138.7	1							IIIG
		SVTO				1200.0	1202.0	2				III
		POTS				1200.1	1203.8	2				IIIGG
		SVTO				1229.0	1233.0	3				III
		POTS				1229.1	1234.4	2				IIIGG
		ONDR	1232.0	1232.6	3	1232.0	1232.6	3				IIIGG
		SGMR				1232.0	1232.0	1				III
		SGMR				1318.0	1319.0	1				III
		SVTO				1318.0	1319.0	2				III
		POTS				1318.8	1320.5	2				IIIGG
		POTS				1323.9	1324.1	1				IIIB
		SGMR				1409.0	1409.0	1				III
		SVTO				1409.0	1409.0	2				III
		POTS				1409.4	1419.9	3				IIIGG
		SVTO				1416.0	1419.0	3				III
		SGMR				1417.0	1419.0	2				III
		SGMR				1527.0	1536.0	1				V
		SGMR				1605.0	1605.0	1				III
		SGMR				1718.0	1719.0	2				V
		PALE				1950.0	1950.0	1				III
		SGMR				1950.0	1950.0	1				III
		PALE				2000.0	2001.0	2				V
		SGMR				2000.0	2001.0	2				III
		PALE				2121.0	2122.0	1				III
		LEAR				2236.0	2237.0	1				III
		LEAR				2305.0	2306.0	2				III
		PALE				2305.0	2306.0	1				III
27		LEAR				0213.0	0214.0	2				III
		PALE				0214.0	0214.0	1				III
		LEAR				0343.0	0345.0	2				III
		LEAR				0401.0	0415.0	2				II 1000km/s
		LEAR				0506.0	0510.0	2				III
	0807	ONDR										
		IZMI				0915.6	0920.5	1				IIIG
		PALE				1933.0	1933.0	1				III
		SGMR				1933.0	1933.0	1				III

SOLAR RADIO EMISSION
Spectral Observations

JANUARY 1994

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
27			PALE				1959.0	1959.0	1				III
			PALE				2047.0	2047.0	1				III
28			LEAR				0112.0	0113.0	2				III
	0804	1423	ONDR										
	0754	1428	POTS				0855.8	0856.3	1				UNCLF
			LEAR				0940.0	0940.0	1				III
			SVTO				0940.0	0940.0	2				III
	0700	1200	IZMI				0940.2	0941.3	2				IIIG
			POTS				0940.2	0949.1	2				IIIGG,RS
			POTS				0959.6	1000.4	1				IIIG
			IZMI				1114.5	1114.7	1				IIIG
			POTS				1114.5	1114.6	1				IIIB
			POTS				1123.2	1131.0	1				IIIGG,RS,U
			IZMI				1126.1	1128.5	2				IIIG
			IZMI				1129.2	1130.3	2				IIIG
			POTS				1142.4	1142.8	1				IIIG
			POTS				1202.8	1203.7	1				UNCLF
			POTS				1214.3	1214.5	1				IIIG
			POTS				1314.2	1316.5	1				UNCLF
			POTS				1332.0	1332.2	1				UNCLF
			POTS				1356.1	1357.9	1				UNCLF
			POTS				1400.1	1400.8	1				UNCLF
			SGMR				1902.0	1904.0	1				III
29			LEAR				0020.0	0026.0	2				III
			PALE				0020.0	0037.0	2				S
			LEAR				0601.0	0602.0	1				III
	0802	1405	ONDR										
	0700	1200	IZMI				0811.6	0812.3	1				IIIG
			IZMI				0908.5	0908.7	1				IIIG,U
			IZMI				0910.8	0911.6	1				IIIG
			IZMI				1029.8	1030.3	2				IIIG
			IZMI				1030.0	1031.6	1				IN
			IZMI				1056.9	1057.9	2				IIIG,V
			SVTO				1057.0	1057.0	3				III
			IZMI				1149.2	1149.6	1				IIIG
			SGMR				1639.0	1640.0	1				III
			SGMR				1834.0	1856.0	1				S
			PALE				1855.0	1856.0	1				III
			LEAR				2352.0	0106.0	2				S
			PALE				2352.0	2357.0	1				III
30	0800	1427	ONDR										
			LEAR				0923.0	0924.0	1				III
	0700	1200	IZMI				0923.6	0924.3	2				IIIG,V
			IZMI				0925.3	0925.8	1				IIIG
31	0758	1428	ONDR										
	0700	1200	IZMI				0948.2	0949.5	1				III
	0754	1428	POTS				0948.3	0949.5	1				IIIG
			IZMI				1011.4	1011.6	1				IIIG
			POTS				1011.5	1011.6	1				IIIG
			POTS				1410.0	1414.3U	2				IIIG
			SGMR				1412.0	1413.0	1				III
			SVTO				1412.0	1413.0	2				III

SOLAR RADIO NOISE STORM AT 164 MHZ
FROM NANCAY RADIOHELIOGRAPH

JANUARY 1994

DAY	HELIOGRAPHIC POSITIONS MEAN VALUES* E-W	S-N	IMP**	OBSERVING TIME*** START (UT)	END (UT)
01/01/94	-0.58	+0.15	2	0845 E	1445 D
04/01/94	-0.07	+0.22	2	0915 E	1440 D
05/01/94	-0.90	-0.03	2	0845 E	1440 D
05/01/94	+0.17	-0.09	1	0845 E	1440 D
08/01/94	-0.36	+0.01	2	0835 E	1445 D
08/01/94	+0.08	+0.08	3	0835 E	1445 D
10/01/94	+0.59	+0.16	2	0845 E	1135 D
11/01/94	+0.82	+0.08	3	0855 E	1435 D
12/01/94	+1.10	+0.19	1	0845 E	1435 D
13/01/94	+1.16	+0.15	3	0905 E	1435 D
14/01/94	-1.57	+0.31	2	0845 E	1435 D
14/01/94	+1.27	+0.06	1	0845 E	1435 D
15/01/94	+1.43	+0.20	1	0845 E	1435 D
17/01/94	-0.91	+0.48	1	0850 E	1435 D
18/01/94	-0.61	+0.14	1	0905 E	1435 D
20/01/94	-0.16	+0.20	1	0850 E	1435 D
26/01/94	+0.48	+0.35	1	0855 E	1435 D

2,3,6,7,9,16,22,23,24: NO DATA
OTHER DAYS : NO DETECTABLE NOISE STORMS

---

* POSITIVE E-W AND S-N COORDINATES CORRESPOND TO THE N-W SOLAR QUADRANT

** IMP 1: FLUX<5 SFU IMP 2: 5<FLUX<20 IMP 3: 20<FLUX<100 SFU
IMP 4: 100FLUX<300 SFU IMP 5: FLUX>300 SFU

*** E NOISE STORM IN PROGRESS AT THE BEGINNING OF THE NANCAY OBSERVATIONS
D NOISE STORM IN PROGRESS AT THE END OF THE NANCAY OBSERVATIONS

COSMIC RAY INDICES
(Neutron Monitor)
JANUARY 1994

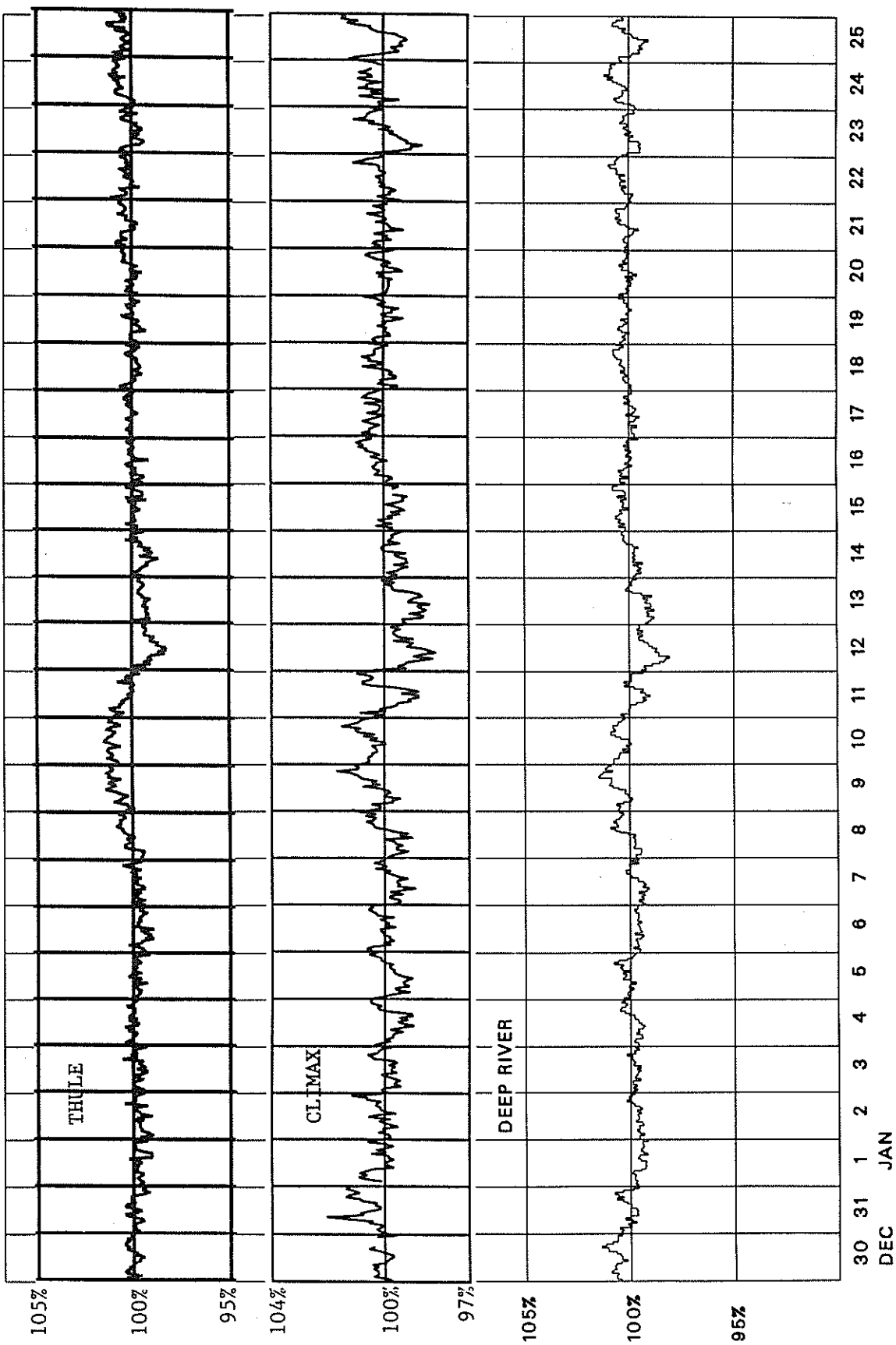
Day	THULE Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h) 256	TOKYO Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	4421	7011.5		4087.6	2016.2	3565.1	3521.1
2	4420	7022.9		4085.1	2007.1	3546.5	3497.3
3	4423	7028.6		4075.3	2003.4	3540.6	3495.1
4	4437	7033.2		4069.8	1995.5	3535.9	3502.1
5	4426	7055.7		4068.2	1991.3	3532.0	3492.9
6	4414	7017.3		4084.6	1999.7	3535.3	3496.5
7	4427	7017.9		4066.6	1989.4	3541.5	3496.0
8	4446	7052.2		4075.0	1994.8	3550.7	3507.7
9	4471	7091.5		4096.2	2003.8	3552.8	3507.8
10	4483	7077.6		4103.8	2004.3	3551.6	3514.4
11	4448	7028.9		4075.7	2001.2	3554.3	3507.8
12	4395	6977.6		4046.2	2003.6	3539.8	3500.8
13	4410	7000.2		4044.3	2003.5	3539.7	3497.0
14	4413	7033.8		4063.6	2001.3	3570.0	3511.3
15	4429	7071.6		4066.2	2000.8	3569.0	3513.1
16	4432	7053.1		4092.7	2016.4	3561.0	3511.9
17	4441	7035.9		4094.1	2017.9	3557.9	3523.8
18	4431	7066.6		4083.3	2019.4	3563.0	3523.5
19	4432	7057.6		4078.8	2020.2	3578.0	3527.0
20	4442	7050.4		4077.5	2019.7	3579.9	3528.2
21	4451	7057.6		4081.4	2022.2	3599.5	3529.3
22	4447	7068.7		4083.2	2018.9	3597.3	3532.9
23	4434	7039.7		4074.5	2021.8	3602.6	3527.3
24	4463	7080.1		4095.0	2025.5	3597.8	3517.0
25	4458	7043.9		4089.3	2018.7	3573.9	3504.7
26	4466	7067.6		4127.2	2023.3	3572.1	3524.4
27	4440	7008.3		4104.1	2015.2	3559.7	3503.5
28	4443	6978.8		4092.9	2014.6	3548.3	3478.5
29	4416	6943.4		4068.4	1999.5	3556.8	3486.1
30	4424	6952.7		4067.5	2005.3	3565.2	3491.3
31	4428	6971.0		4068.7	2000.8	3552.8	3497.4
Mean	4435.8	7032.1		4080.2	2008.9	3561.0	3508.6

For less than 24-hour coverage, parentheses enclose the number of hours for which data are available. For Climax and Haleakala, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.
* = A&B includes only hours when both A&B sections are available.
The Haleakala super neutron monitor data replace the Huancayo IGY neutron monitor data.

Errata: The scaling factor for Haleakala is in error for Jan 91-Dec 93 data. The scaling factor should be (cts/h)/1000. Data in error appear in SGD 590A p.106 (Aug 93 data); 591A p.103 (Sep 93 data); 592A p.120 (Oct 93 data); 593A p.109 (Nov 93 data); 594A p.115 (Dec 93 data); and 592A pp.130-135 (Mar 91-Oct 93 data).

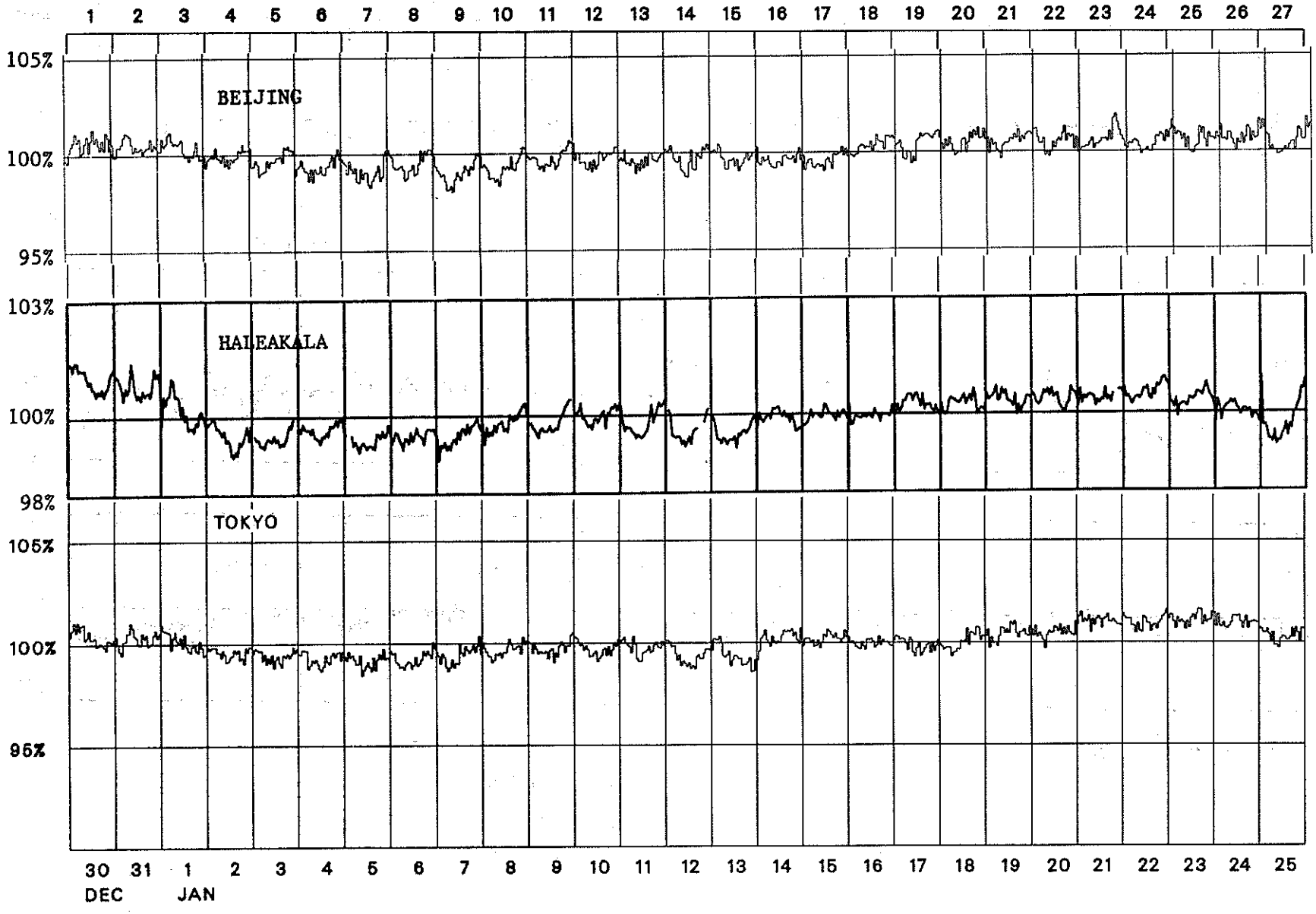
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2191 (December 1993-January 1994)



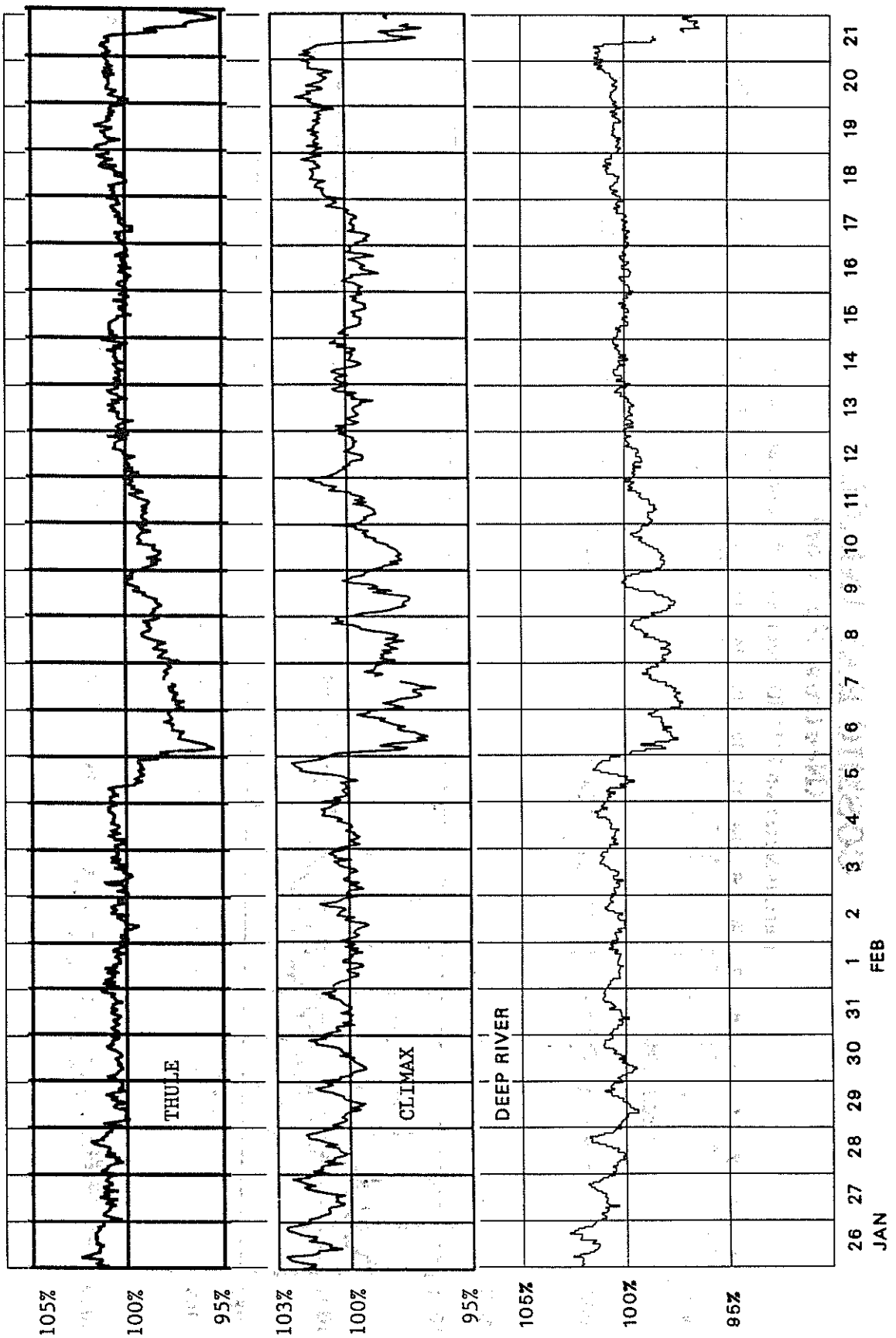
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2191 (December 1993-January 1994)



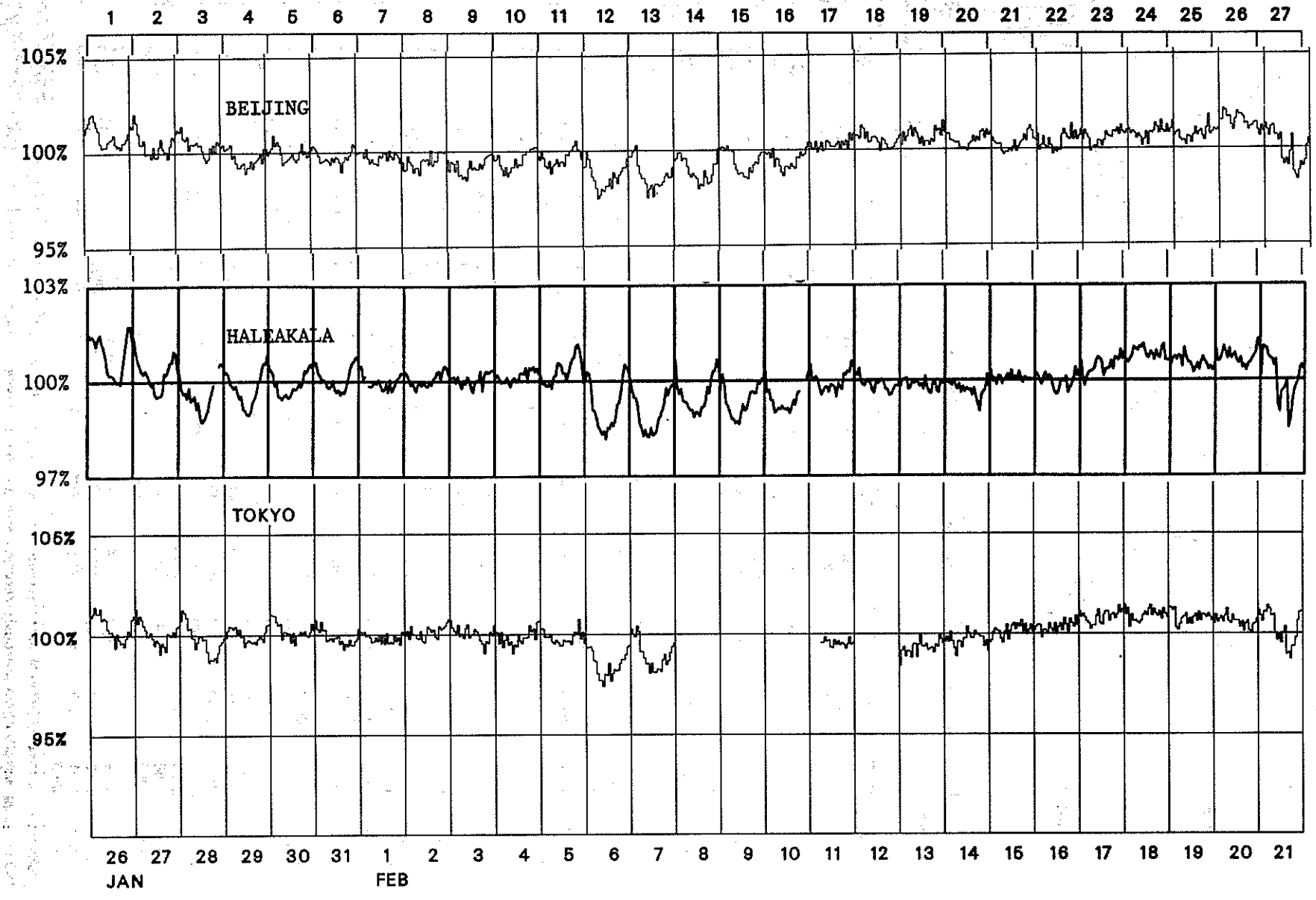
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2192 (January 1994-February 1994)

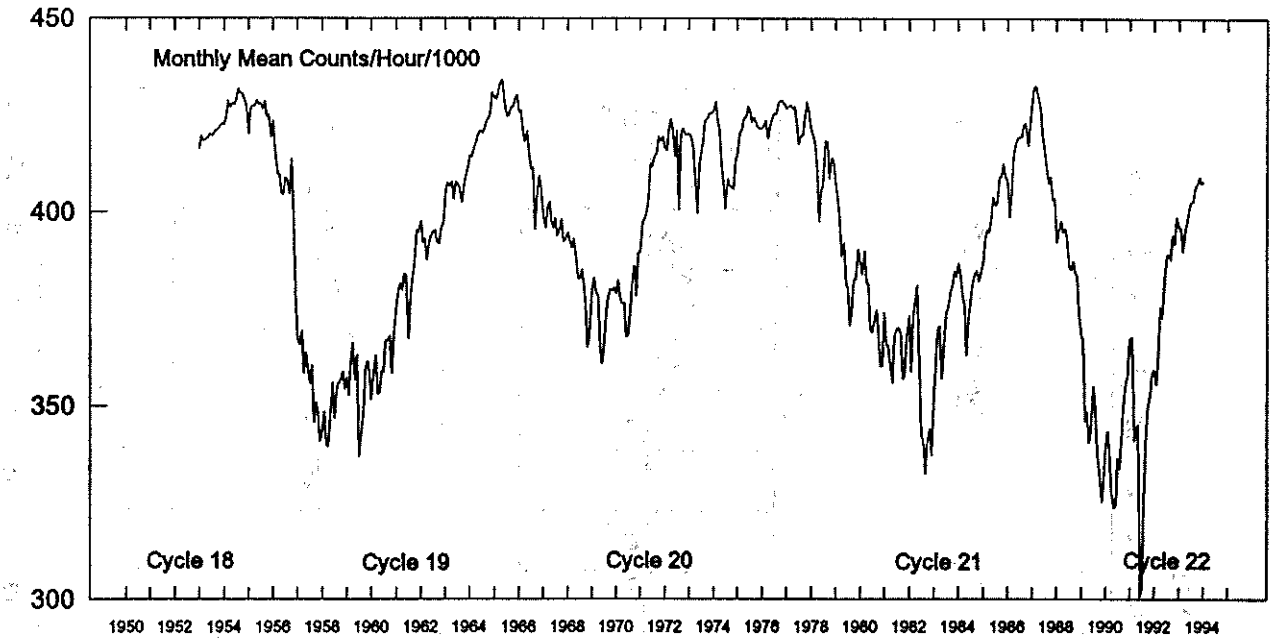


COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2192 (January 1994-February 1994)



Climax Neutron Monitor Pressure-Corrected Values
Jan 1953 - Jan 1994



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1953	4163	4193	4183	4187	4190	4200	4196	4205	4209	4213	4220	4226	4199
1954	4225	4246	4286	4269	4280	4277	4285	4317	4308	4306	4286	4269	4279
1955	4200	4267	4272	4273	4287	4278	4279	4264	4286	4244	4252	4193	4258
1956	4234	4160	4097	4097	4049	4045	4088	4083	4044	4135	3980	3799	4068
1957	3677	3660	3695	3585	3640	3603	3557	3606	3458	3509	3484	3410	3574
1958	3434	3485	3401	3396	3490	3560	3467	3537	3561	3564	3589	3542	3502
1959	3573	3526	3606	3664	3567	3633	3369	3420	3484	3597	3615	3587	3553
1960	3516	3573	3631	3531	3534	3589	3587	3670	3671	3682	3586	3681	3604
1961	3762	3801	3818	3800	3843	3838	3675	3784	3834	3870	3955	3949	3827
1962	3977	3922	3931	3878	3927	3941	3950	3953	3924	3919	3963	3971	3938
1963	4049	4074	4065	4077	4034	4075	4072	4060	4023	4066	4094	4112	4067
1964	4145	4139	4168	4181	4198	4208	4202	4213	4232	4240	4254	4307	4207
1965	4295	4290	4314	4335	4340	4288	4247	4246	4268	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	3940	3956	3980	3922	3933	3970
1968	3946	3925	3909	3932	3895	3830	3830	3853	3817	3761	3652	3685	3836
1969	3801	3831	3798	3783	3656	3610	3652	3730	3781	3803	3798	3807	3754
1970	3792	3824	3781	3765	3765	3679	3684	3755	3832	3862	3786	3895	3785
1971	3898	3976	3981	4003	4032	4124	4117	4145	4149	4193	4181	4192	4083
1972	4163	4158	4211	4239	4215	4141	4207	4005	4198	4214	4198	4198	4179
1973	4201	4193	4173	4075	3997	4119	4151	4180	4235	4240	4255	4253	4172
1974	4262	4283	4238	4207	4121	4077	4009	4083	4064	4064	4058	4131	4133
1975	4146	4206	4210	4239	4245	4271	4262	4231	4243	4231	4218	4214	4226
1976	4216	4223	4236	4188	4218	4244	4254	4253	4283	4287	4285	4280	4247
1977	4268	4272	4274	4267	4272	4231	4175	4194	4197	4245	4284	4260	4245
1978	4213	4198	4173	4107	3977	4058	4068	4183	4180	4085	4139	4128	4126
1979	4071	4035	3983	3888	3921	3815	3808	3710	3745	3829	3829	3905	3878
1980	3874	3842	3900	3820	3817	3697	3692	3719	3750	3687	3604	3604	3750
1981	3744	3663	3656	3601	3558	3683	3703	3702	3687	3570	3581	3682	3652
1982	3735	3590	3732	3773	3814	3606	3421	3415	3324	3402	3441	3372	3552
1983	3508	3600	3699	3708	3570	3656	3744	3752	3799	3814	3850	3834	3711
1984	3868	3850	3784	3760	3633	3727	3767	3818	3844	3851	3825	3844	3798
1985	3872	3937	3954	3948	3977	4039	4018	4026	4089	4090	4124	4091	4014
1986	4079	3988	4049	4148	4181	4191	4192	4193	4226	4229	4171	4226	4156
1987	4279	4324	4325	4294	4271	4203	4165	4120	4073	4089	4031	4035	4184
1988	3923	3949	3976	3948	3957	3934	3859	3852	3876	3846	3840	3752	3893
1989	3686	3673	3458	3485	3405	3437	3551	3494	3382	3311	3252	3309	3454
1990	3392	3434	3383	3278	3236	3244	3366	3337	3409	3497	3564	3577	3393
1991	3675	3680	3409	3428	3452	3005	3026	3253	3440	3508	3527	3585	3416
1992	3595	3557	3639	3757	3730	3830	3891	3892	3880	3941	3919	3988	3801
1993	3961	3959	3901	3955	3979	4012	4026	4027	4063	4073	4089	4073	4010
1994	4080												4080

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.

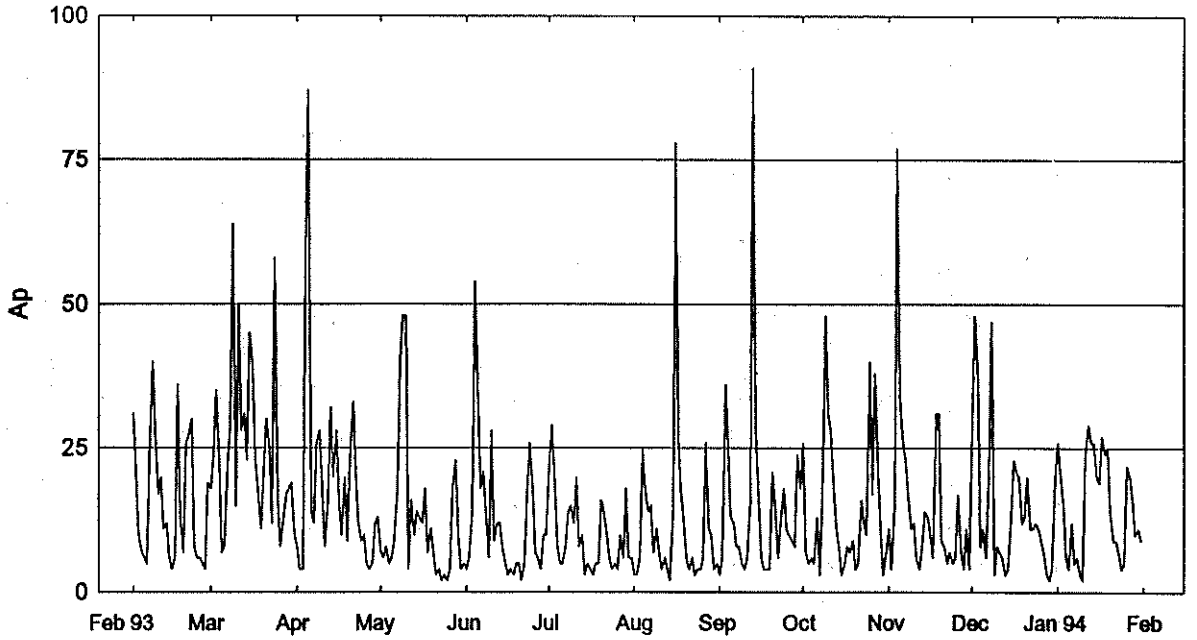
GEONAGNETIC ACTIVITY INDICES

January 1994

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	aa Provisional Am	N	S	M	
1	D5	4	4	4+	4+	4	4	3+	3	31	26	1.2	3+	4-	4-	4o	4-	4-	3-	3-	39	42	39	46	35	
2		3-	3+	4	4-	4+	4-	3+	3	28	21	1.1	2o	3o	3o	4-	4o	3+	3o	3-	33	40	32	31	41	
3		3	2	3	3+	3	4-	4-	2-	23+	15	0.8	3-	1+	3-	3+	3-	4-	4-	2o	28	32	25	21	36	
4	Q7K	2-	3+	2	1	1+	1	1+	1-	12+	6	0.3	1+	2+	2+	1+	1+	1+	1+	0+	11	11	11	15	8	C
5	Q4	0+	1	1-	1	1	1-	1	2+	8	4	0.1	0+	1-	1o	1o	2-	1-	1+	2o	8	9	8	7	10	CC
6		3+	3-	2+	2	2+	3+	2-	3+	21	12	0.7	3o	2+	3-	2+	3o	3+	2-	3o	24	23	26	20	29	
7	Q5	1-	0	0+	1+	2	1	2+	2	10-	5	0.2	1-	0+	1o	2-	2-	1o	2o	1+	9	13	7	5	15	C
8	Q8	1+	2+	3-	1+	2-	1+	1+	1+	13+	6	0.3	1o	2o	2o	2-	2o	2o	1+	1+	12	16	11	14	13	C
9	Q2	1-	0	1-	1	1-	1	1+	0+	6-	3	0.1	1-	1-	1o	1+	1o	1o	1+	1o	7	6	5	6	6	CC
10	Q1	0+	1-	1	0+	1-	0+	0	0	3+	2	0.0	1-	1+	1+	1+	1+	1o	0+	1-	7	6	8	10	4	CK
11		1-	2	3	3-	3	5+	5+	4+	26+	24	1.2	1+	2o	3+	4-	3+	5o	4+	4+	44	52	46	22	77	
12	D1	5-	4+	4-	4-	5-	5-	3	4	33-	29	1.3	4-	4-	3+	4-	5-	4o	3o	4-	46	50	47	46	52	
13	D3	4	4+	3	3+	4+	4	3+	5-	31	26	1.2	3+	3o	3-	3+	4+	4o	3o	4+	43	52	37	29	59	
14	D4	4-	4	3+	4-	5	4	3+	4-	31-	26	1.2	3+	3+	3o	3+	5-	3+	3o	3+	41	48	34	30	52	
15		4-	4-	3-	2	3	3+	5-	4-	27-	20	1.0	3+	3o	3-	2-	3+	3o	4o	3o	33	36	31	25	42	
16		3	4-	4-	3+	4-	3+	4-	3	27+	19	1.0	3-	3o	3+	3+	4-	3+	3+	3-	32	35	39	37	37	
17	D2	4+	5	4+	3+	3+	4-	4-	4-	31+	27	1.2	4-	4o	3+	3+	3+	3+	4-	3+	42	43	43	47	39	
18		3+	3+	3	3+	5	5-	4-	3+	30-	24	1.2	3o	3o	2+	3o	4+	4+	3o	3o	36	40	33	26	47	
19		4	5-	5-	3	4-	2+	4	4-	30	25	1.2	3+	4+	4-	3o	4o	2o	4-	3o	41	41	44	49	36	
20		4-	3+	3+	2+	3	3-	3-	2+	23+	14	0.8	3-	2+	3-	3-	3-	3-	3o	2-	23	32	18	24	26	
21	Q10A	2+	2+	1	1+	2-	2+	3+	3-	17	9	0.5	2-	2o	1o	2o	1+	3-	3+	2+	17	20	11	11	20	
22		4	2+	1+	1+	2-	1-	2	2+	16-	9	0.5	3+	2-	2-	2+	1+	1o	2-	2o	15	20	15	22	13	
23	Q9A	2	2+	1+	2-	1+	2-	2-	2+	14+	7	0.3	2-	3-	2-	2-	1+	2+	2-	2o	14	15	15	16	14	C
24	Q3	2+	1	1	1+	0+	0	0	1	7	4	0.1	2-	1o	1+	1+	0+	0+	0+	1o	6	7	7	10	4	CC
25	Q6	1+	2+	2-	0+	0+	1-	1+	2+	10+	5	0.2	2-	2-	1+	0+	0+	1o	1+	2+	9	12	9	10	11	C
26		3-	3+	5-	3	4	4-	4	3+	29-	22	1.1	3-	3+	4+	3o	4o	4-	3+	3o	40	45	49	46	49	
27		3+	4-	4-	3-	3+	4-	4-	4-	28-	20	1.0	3-	3o	3o	3-	3+	4-	4-	4o	37	36	37	28	46	
28		4+	3+	3-	4-	3+	2	2-	2+	23+	16	0.9	3+	3o	2+	3+	3o	2+	2-	2o	25	29	22	31	20	
29		2-	3-	3	2+	3+	2+	2-	2+	19+	10	0.6	1+	2o	3-	3-	3+	2o	2-	2o	19	21	25	21	25	
30		3+	1+	2-	2	2	4-	3-	2+	19	11	0.6	2+	1o	2-	2o	2o	3+	3-	2+	18	24	15	12	27	
31		3+	2	2-	2-	2-	2	1+	3+	17	9	0.5	2o	1+	2-	2o	2o	2o	2-	3o	15	20	15	13	22	
Mean											15	0.72									25.0	28.4	24.8		26.5	

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	Sa	Prov Ri	Ra	Rs	IMF
1	3o	3o	4-	4-	4-	4-	3o	3-	39	3+	4-	4o	4o	4-	3+	2+	2+	40	143.4	86	89	93		
2	2+	3o	3+	4-	4+	4-	3o	3-	35	2-	3o	3o	4o	4-	3o	3o	3-	31	141.4	84	79	91		
3	3-	2-	3o	3o	3o	4-	4-	2-	27	3o	1+	2+	4-	3-	4-	4-	2+	28	128.7	95	91	77		
4	1+	3-	2-	1+	1+	1+	1+	0+	10	1+	2+	3-	1+	1+	1o	1+	0+	11	124.6	103	101	73		
5	0+	1-	1-	1-	1+	1+	1+	2-	7	0+	1-	1+	1+	2-	0+	1+	2+	8	132.4	104	104	81		
6	3-	2+	2+	3-	3o	4-	2-	3o	24	3o	2+	3-	2+	3-	3o	2-	3+	24	127.7	101	98	76		
7	1o	0o	1-	2-	2-	1+	2+	2-	9	1-	1-	1+	1+	1+	1o	2-	1o	8	122.1	94	94	70		
8	1+	2-	2o	2o	2-	2+	1+	1+	12	1-	2+	2-	1+	2+	2-	1+	2-	12	118.9	81	80	66		
9	0+	0+	0+	1+	1+	1o	1+	1-	6	1-	1-	1+	1+	0+	1-	1+	2-	7	113.1	71	67	60		
10	0+	1o	1o	1o	1o	1+	1-	1-	6	1+	2-	2-	1+	1+	0+	0+	1-	7	106.5	51	51	53		
11	2-	2o	2+	3+	3o	5o	5-	4o	42	1+	2+	4-	4-	4-	5o	4-	4+	47	97.8	38	41	44		
12	4-	3+	3o	3+	5-	4+	3o	3+	45	4-	4o	4-	4-	4+	4o	3o	4-	48	94.6	44	43	40		
13	4-	4-	3-	3o	5-	4-	3+	5-	46	3+	2+	2+	4-	4o	4o	3o	4+	41	91.9	45	45	37		
14	3+	4-	3o	4-	5-	4-	3o	3+	44	3+	3+	3o	3+	4+	3+	3o	3+	38	87.3	36	38	32		
15	3+	3+	2+	2-	3+	3o	4+	3+	34	3+	3-	3o	1+	3+	3+	4o	3o	32	92.6	35	36	38		
16	2+	3o	3+	3o	3+	3+	3+	3-	30	3-	3o	3+	3+	4-	3+	3+	3-	34	97.0	29	32	43		
17	4-	4o	3+	3+	3+	4-	4-	3+	43	4o	4+	4-	3o	3+	3+	3+	3+	43	102.0	25	26	48		
18	3+	3o	3-	3o	5-	4+	3o	3-	40	3-	3-	2o	3-	4-	4+	3o	3+	33	97.5	30	30	43		
19	3+	4o	4o	3o	4o	2o	4o	3o	42	3+	5-	4-	3-	4-	2o	3+	3-	40	99.5	28	31	45		
20	3o	3-	3+	3-	3-	3o	3+	2o	27	2-	2o	2+	3-	3-	2+	3-	1+	18	101.6	35	37	48		
21	2-	2+	1o	2-	1+	3o	3+	3-	18	2-	2o	1-	2+	1+	2+	3o	2o	15	107.3	53	54	54		
22	4-	2o	2-	2o	2-	1+	2o	2-	16	3+	1+	2o	2+	1o	1-	2-	2+	15	109.5	65	66	56		
23	2o	2o	1o	2-	1+	2+	2-	2o	13	2-	3-	2o	2o	2-	2o	2-	2o	15	114.6	60	72	62		
24	2-	1o	1o	1+	0+	0+	0+	1o	6	2-	1+	2-	1+	0o	0o	0o	1-	6	125.1	70	74	73		
25	1+	2o	1+	0+	0+	1o	1+	2+	9	2o	2-	1+	0+	0o	1o	1+	2+	9	128.1	66	74	76		
26	2+	3o	4o	3-	4+	4-	4-	3o	39	3-	4-	5-	3+	4-	4o	3+	3o	42	123.9	67	68	72		
27	3-	3o	3+	3-	4-	4-	4-	4-	37	2+	3o	3-	3-	3+	4o	4-	4+	37	116.8	54	53	64		
28	4-	3o	2+	4-	3+	2+	1+	2+	28	3o	3o	2+	3o	3-	2+	2-	2-	22	115.7	49	49	63		
29	1o	2o	2+	2+	3+	2+	2o	2+	19	2-	2o	3-	3-	3+	2-	2-	1+	19	98.9	46	54	45		
30	3-	1o	2-	2o	2o	3+	3-	2+	19	2-	1+	1+	2+	2o	3+	2+	2+	17	96.1	53	42	42		
31	3-	1+	2-	2+	2o	2+	1+	3o	17	2-	2-	1+	2-	2o	2-	2o	3-	14	94.7	26	33	40		
Mean									25.5									24.5	111.3	58.8	59.7	58.2		

Daily Average Indices Ap
Feb 1993 - Jan 1994

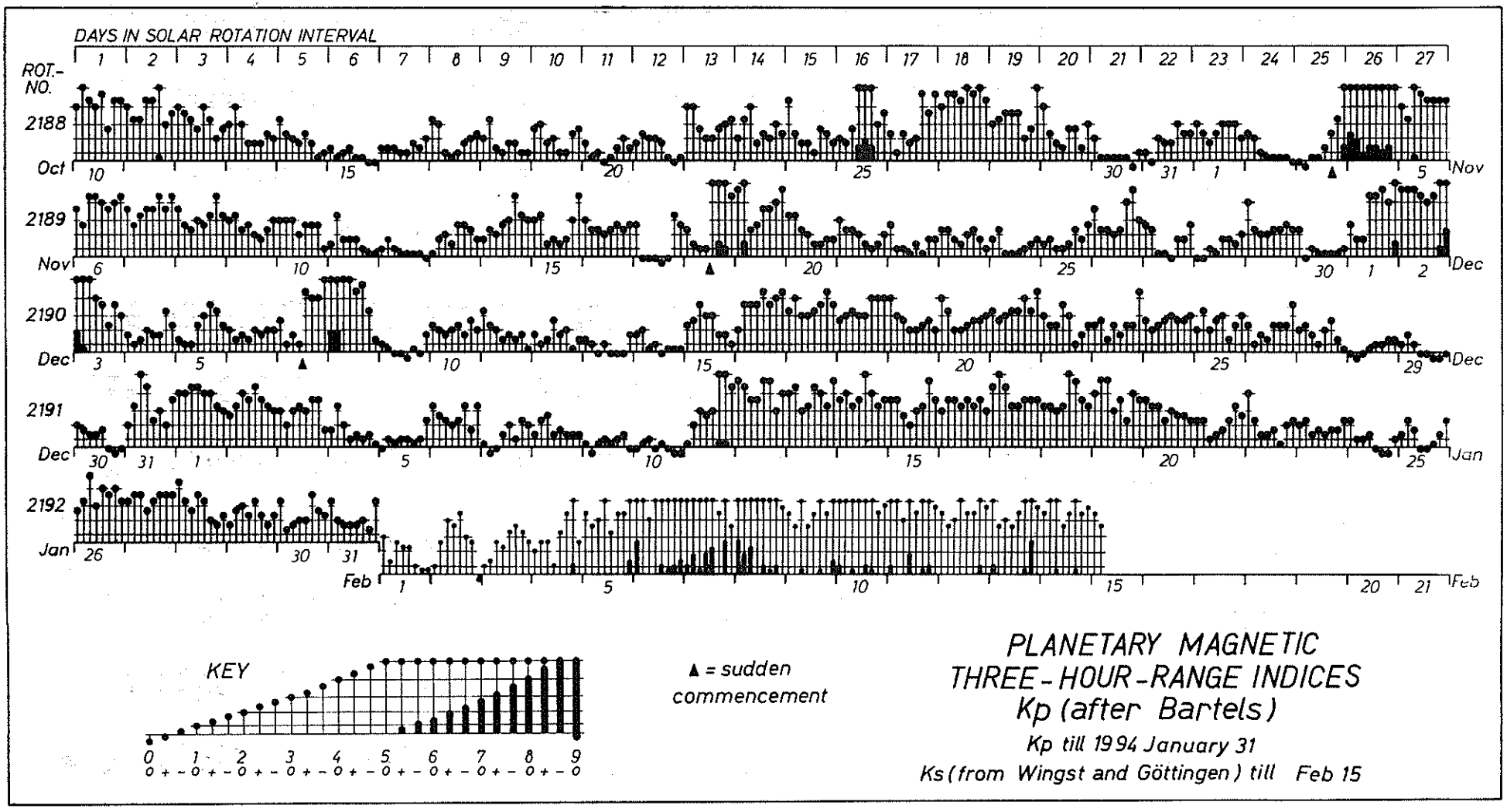


Day	Feb 93	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 94
1	31	18	8	7	4	22	3	3	26	11	29	26
2	21	24	4	6	6	29	3	6	7	4	48	21
3	10	35	4	8	14	21	6	36	5	15	37	15
4	7	23	58	5	54	8	25	25	6	77	8	6
5	6	7	87	6	36	5	18	13	5	34	11	4
6	5	8	14	9	18	5	14	12	13	26	6	12
7	27	22	12	18	21	8	15	8	3	23	20	5
8	40	29	26	40	14	14	7	8	16	17	47	6
9	28	64	28	48	6	15	11	5	48	11	3	3
10	17	15	18	48	28	12	7	4	31	12	8	2
11	20	50	8	4	9	20	4	6	28	6	7	24
12	11	28	16	16	12	8	6	16	18	4	6	29
13	12	31	32	10	12	10	4	91	11	8	3	26
14	6	23	20	14	8	3	2	28	8	14	4	26
15	4	45	28	13	5	5	14	16	3	13	11	20
16	6	39	16	12	3	4	78	6	5	10	23	19
17	36	23	10	18	4	3	27	4	8	6	21	27
18	13	18	20	7	3	5	18	4	7	31	20	24
19	7	11	9	11	5	5	12	4	9	31	12	25
20	26	21	23	7	5	16	6	21	4	9	13	14
21	27	30	33	3	2	14	4	14	5	8	20	9
22	30	25	21	4	5	10	6	6	16	5	11	9
23	8	12	12	2	17	6	3	12	12	7	11	7
24	6	58	9	3	26	4	4	18	10	5	12	4
25	6	16	10	2	18	5	4	11	40	6	11	5
26	5	8	5	4	7	4	6	10	17	17	9	22
27	4	12	4	18	6	10	26	9	38	7	7	20
28	19	17	5	23	4	6	11	8	21	4	3	16
29		18	12	10	10	18	10	24	11	11	2	10
30		19	13	4	10	6	4	18	3	4	4	11
31		10		5		6	5		7		20	9
Mean	16	24	19	12	12	10	12	15	14	15	14	15

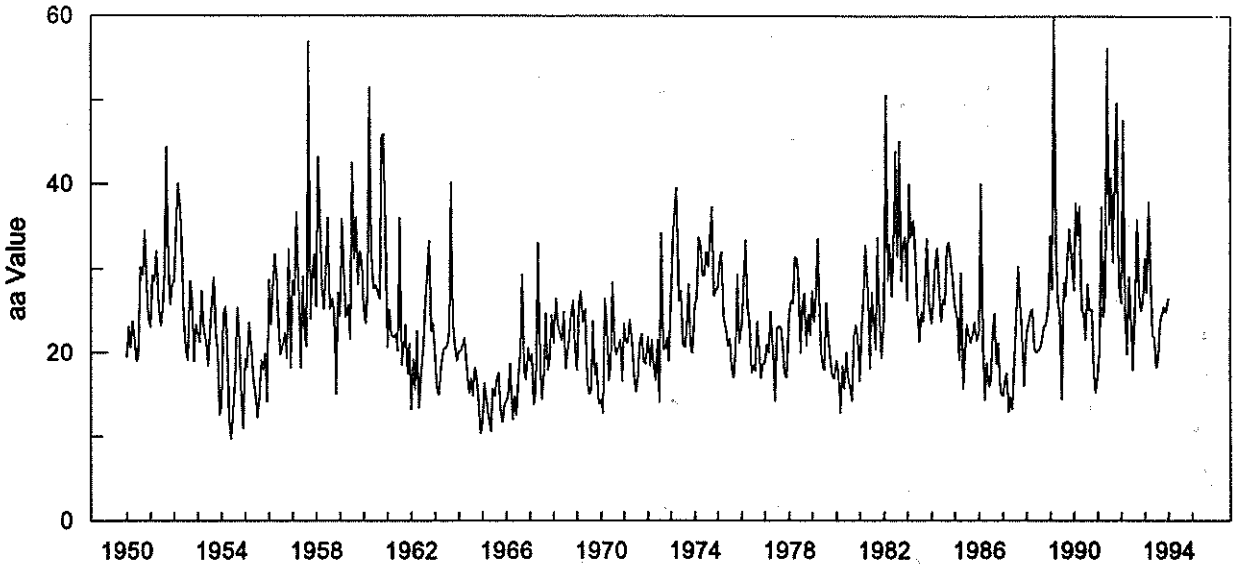
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

University of Gottingen

Kp through January 31, 1994



Monthly Mean aa Index Jan 1950 - Jan 1994

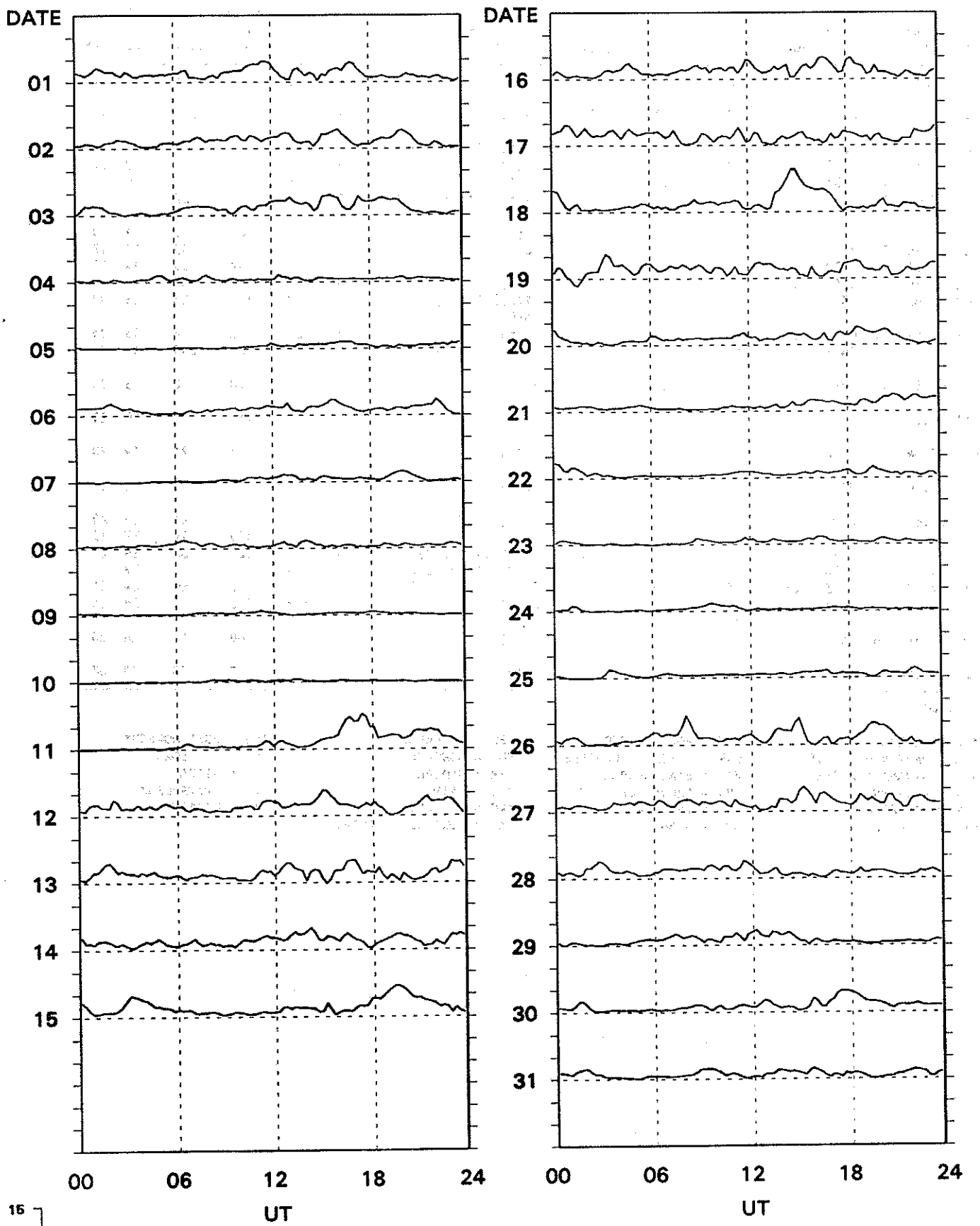


Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	22.5	26.1	29.0	22.4	20.2	12.6	22.2
1954	13.9	24.5	25.5	20.6	12.0	9.7	13.1	16.5	25.4	21.1	14.5	10.9	17.3
1955	19.3	18.2	23.6	21.1	16.7	15.1	12.3	14.3	19.1	17.8	19.9	14.1	17.6
1956	28.7	23.3	27.6	31.7	29.3	23.5	19.8	20.7	22.4	19.3	32.3	18.2	24.7
1957	28.7	26.8	36.7	28.8	18.1	29.1	21.7	20.7	57.0	24.0	29.5	31.7	29.4
1958	25.5	43.2	36.1	27.6	25.2	29.7	36.0	25.1	26.5	24.7	15.0	27.2	28.5
1959	24.3	35.9	29.9	24.2	25.7	21.6	42.5	31.2	36.1	28.2	32.1	30.8	30.2
1960	25.2	23.5	27.6	51.5	31.6	27.6	28.1	27.2	26.4	45.6	45.9	34.5	32.9
1961	20.6	25.1	22.0	21.8	22.3	20.1	36.0	18.5	20.7	23.3	17.3	21.1	22.4
1962	13.2	19.2	15.5	22.6	13.4	18.1	21.0	26.2	29.8	33.3	22.5	23.5	21.5
1963	19.3	15.3	14.9	18.2	20.4	20.5	20.8	22.5	40.2	23.5	20.7	18.9	21.3
1964	20.1	20.1	21.0	21.7	17.5	15.1	16.9	14.8	18.2	16.9	13.8	10.3	17.2
1965	11.8	16.3	14.3	12.6	10.5	15.7	14.7	16.8	17.5	13.1	11.7	13.8	14.1
1966	14.2	14.8	18.6	12.0	14.8	12.5	17.1	20.0	29.4	17.5	16.8	20.5	17.3
1967	18.9	19.8	13.8	15.5	33.1	18.6	14.4	17.5	24.7	17.8	18.9	24.5	19.8
1968	21.1	26.5	23.3	22.2	21.4	24.9	18.0	20.1	22.0	24.8	26.2	20.3	22.6
1969	17.8	25.8	27.3	23.6	25.2	16.7	15.0	15.3	23.8	17.2	18.7	13.8	20.0
1970	14.4	12.7	26.4	23.1	16.6	18.3	28.4	21.0	19.7	20.6	21.6	16.5	19.9
1971	23.5	21.2	21.1	23.9	21.1	17.0	15.2	17.1	21.4	22.2	18.8	18.6	20.1
1972	21.9	18.3	21.5	18.1	16.6	21.5	14.0	34.2	20.4	20.4	21.8	18.9	20.6
1973	26.1	32.7	36.9	39.6	26.1	27.3	20.9	20.6	22.8	28.2	20.7	19.9	26.8
1974	25.8	26.4	33.7	32.9	29.2	29.2	32.0	30.2	33.7	37.3	26.8	27.5	30.4
1975	27.6	31.1	32.0	24.3	22.7	20.7	21.7	18.1	16.9	20.2	29.3	21.1	23.8
1976	23.3	28.5	33.4	25.4	23.7	17.5	18.4	17.7	23.7	20.4	16.9	18.6	22.3
1977	18.7	21.0	19.9	24.9	20.1	14.2	22.9	23.2	23.0	20.9	17.3	17.0	20.3
1978	24.6	26.2	25.9	31.3	31.2	28.3	19.9	25.6	27.0	20.8	24.6	22.0	25.6
1979	27.3	23.7	26.9	33.5	21.0	18.3	17.9	26.0	22.0	19.3	17.1	16.8	22.5
1980	19.0	17.3	12.7	18.4	15.6	20.0	17.0	15.9	14.2	21.9	23.3	21.7	18.1
1981	16.5	23.1	26.6	32.8	26.9	18.0	27.2	24.0	20.4	33.7	24.1	19.3	24.4
1982	24.2	50.6	28.5	32.9	26.7	32.1	43.9	31.4	45.1	28.5	33.0	33.8	34.2
1983	26.2	40.0	33.6	35.7	31.6	24.9	21.3	24.9	23.7	28.3	33.5	26.0	29.1
1984	23.5	26.7	30.7	32.5	27.2	23.7	26.4	25.8	32.6	33.1	31.0	29.0	28.5
1985	25.7	24.1	19.0	29.5	15.6	19.9	23.4	22.0	21.2	22.2	23.7	21.4	22.3
1986	22.4	40.0	21.1	14.3	18.8	15.9	16.3	22.3	24.7	18.6	21.2	15.3	20.9
1987	14.8	16.6	17.6	12.9	14.7	13.2	19.3	24.3	30.3	25.8	22.4	16.0	19.0
1988	22.4	23.4	24.8	25.2	20.5	20.0	20.2	20.6	21.4	23.2	23.3	25.5	22.5
1989	33.9	27.5	60.1	32.8	25.7	24.9	14.4	28.4	26.7	31.4	34.7	31.4	31.0
1990	27.4	37.8	33.9	37.4	25.1	24.6	21.6	28.2	25.1	25.1	17.4	15.2	26.6
1991	17.2	20.1	37.3	24.3	27.3	56.2	35.2	40.8	30.7	44.1	49.7	28.0	34.2
1992	25.9	47.7	24.5	19.8	29.1	24.8	17.9	24.1	35.8	27.0	25.0	26.1	27.3
1993	31.2	27.1	37.9	29.2	22.1	21.8	18.2	19.2	23.8	24.6	25.5	24.8	25.5
1994	26.5												26.5

PC-INDEX

Thule

January, 1994



Preliminary Values.

15-min. Values.

Div. Geophys. D M I

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

JANUARY 1994

Sta	Geomag Lat	Commencement Day	Time (UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	H (Gamma)	Z (Gamma)	End Day	Hour (UT)
ETT	00.7S	02	0200	..	..	..	..		-	4	126	35	03	21
DRV	75.2S	10	2208	SC*	- 20 *	28 *	32 *	14(1)	7	796	777	1099	21	13
FRD	49.4N	11	1000	..	..	..	..	11(6) 13(8) 18(5)	5	22	121	38	20	07
BJI	28.8N	11	0520	SC	0.1	3	0	11(6)	5	9	86	17	12	19
KRC	16.4N	11	1137	..	..	..	..	11(6)	6	63	116	48	15	23
HYB	07.6N	11	0100	..	..	..	..	11(6,7) 12(5,6) 13(8) 14(5)	5	4	159	22	14	21
GUA	04.3N	11	10--	..	..	..	..	11(6)	5	--	60	10	11	20
GUA	04.3N	11	21--	..	..	..	..	12(1)	5	--	90	30	12	17
ETT	00.7S	11	0030	..	..	..	..		-	6	202	59	14	24
CAN	43.6S	11	0400	..	..	..	..	11(6)	5	21	131	37	12	18
AMS	46.8S	11	03--	..	..	..	..	11(6,7,8) 12(5,6) 14(5)	5	27	135	86	15	09
CZT	51.5S	11	03--	..	..	..	..	12(5)	7	29	132	68	15	06
PAF	57.2S	11	06--	..	..	..	..	11(6) 12(5,6)	6	35	380	249	15	09
GUA	04.3N	13	10--	..	..	..	..	13(5)	5	--	40	10	13	20
ETT	00.7S	15	0200	..	..	..	..		-	5	136	44	20	21
HYB	07.6N	16	0700	..	..	..	..	19(5)	5	3	97	21	19	20
GUA	04.3N	21	23--	..	..	..	..	22(1)	5	--	50	20	22	06
HYB	07.6N	25	2200	..	..	..	..	26(5,6) 27(6)	5	5	131	21	28	20
ETT	00.7S	25	2100	..	..	..	..		-	5	186	44	27	23
AMS	46.8S	25	21--	..	..	..	..	26(3) 27(6,7,8)	4	20	125	66	29	21
CZT	51.5S	25	2154	SC	2.5	8	- 4	26(2,3,6) 27(6,7,8)	5	19	92	36	29	21
PAF	57.2S	25	2156	SC*	3 *	8 *	--	26(3) 27(6,7) 28(1)	4	20	150	69	29	21
DRV	75.2S	25	1436	SC	24	8	2	27(1)	6	595	578	770	28	15
GUA	04.3N	26	05--	..	..	..	..	26(3)	5	--	80	10	26	20
GUA	04.3N	28	00--	..	..	..	..	28(1)	5	--	80	30	28	08

Stations:

ABG = ALIBAG
AMS = MARTIN DE VIVIES
ANN = ANNAMALAINAGAR
BJI = BEIJING
CAN = CANBERRA
CMO = COLLEGE
CZT = PORT ALFRED
DRV = DUMONT D'URVILLE
ETT = ETAIYAPURAM
FRD = FREDERICKSBURG
GNA = GNANGARA
GUA = GUAM
HER = HERMANUS
HON = HONOLULU
HYB = HYDERABAD
JAI = JAIPUR
KRC = KARACHI
PAF = PORT AUX FRANCAIS
PMG = PORT MORESBY
SHL = SHILLONG
SIT = SITKA
TRD = TRIVANDRUM
UJJ = UJJAIN

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

JANUARY 1994

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
25	2155	B: WNG*	06	0609-0615	LNP
		C: BDV* CLF CZT* KGL*	15	1523-1554	TEN
			29	1220-1232	BDV EBR (doubtful)

REPORTING OBSERVATORIES (up to the 1st of March):
SOD DOB WNG NGK DOU BDV CLF HRB NAG GCK MMB AQU EBR COI BJI FRD KAK HTY KNY QUE TEN LNP HYB ETT HER CNB AMS CZT KGL DRV

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

WORLD DATA CENTER A
FOR
SOLAR-TERRESTRIAL PHYSICS

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

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