

MARCH 2001 NUMBER 679 - Part I

Solar-Geophysical Data prompt reports



Data for January and February 2001

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

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NATIONAL ENVIRONMENTAL SATELLITE,
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NATIONAL GEOPHYSICAL
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MARCH 2001 NUMBER 679 - Part I

Solar-Geophysical Data prompt reports

Data for January and February 2001

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Boulder, Colorado

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SOLAR-GEOPHYSICAL DATA

Number 679

(Issued in Two Parts)

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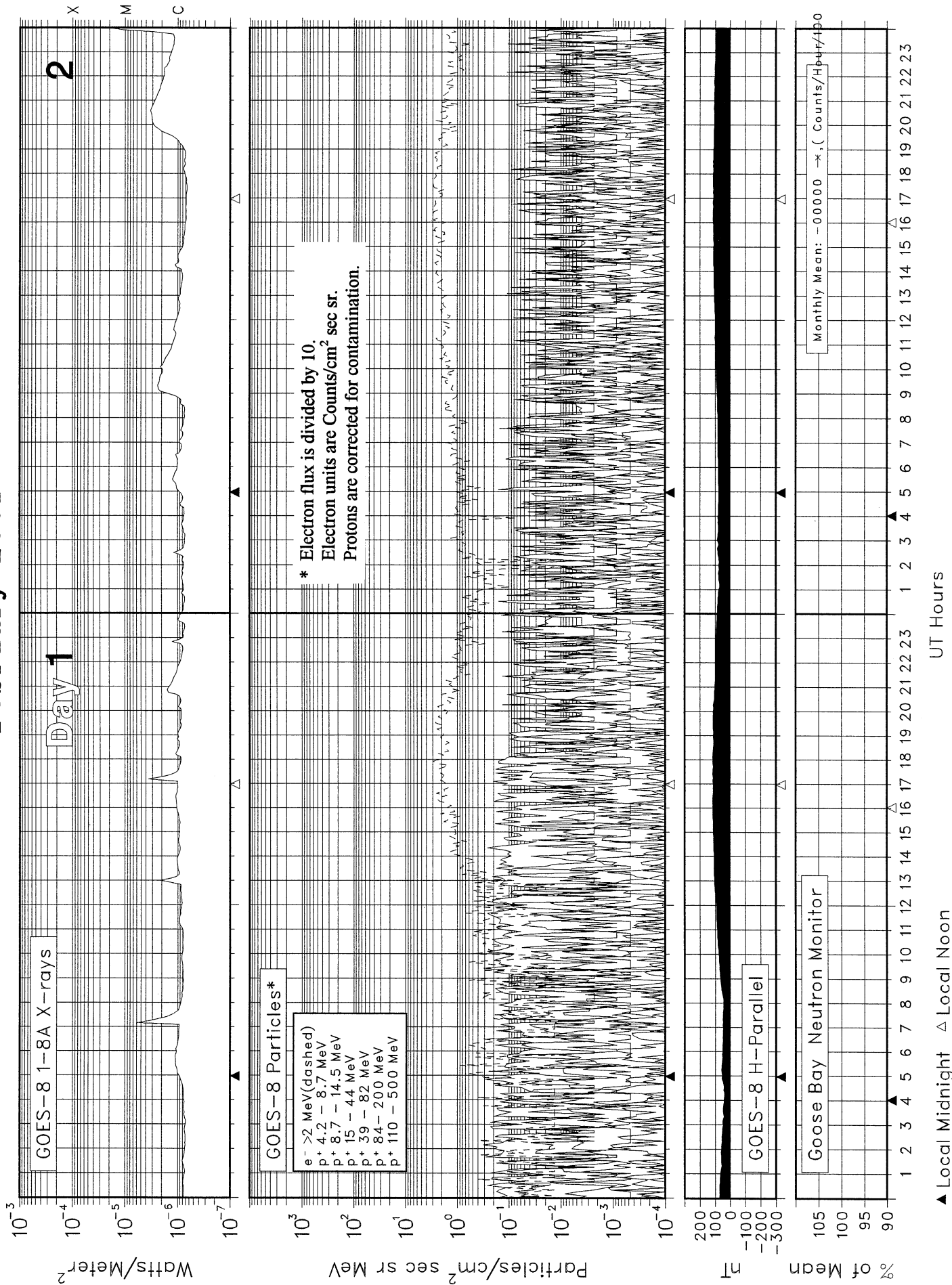
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DATA FOR FEBRUARY 2001

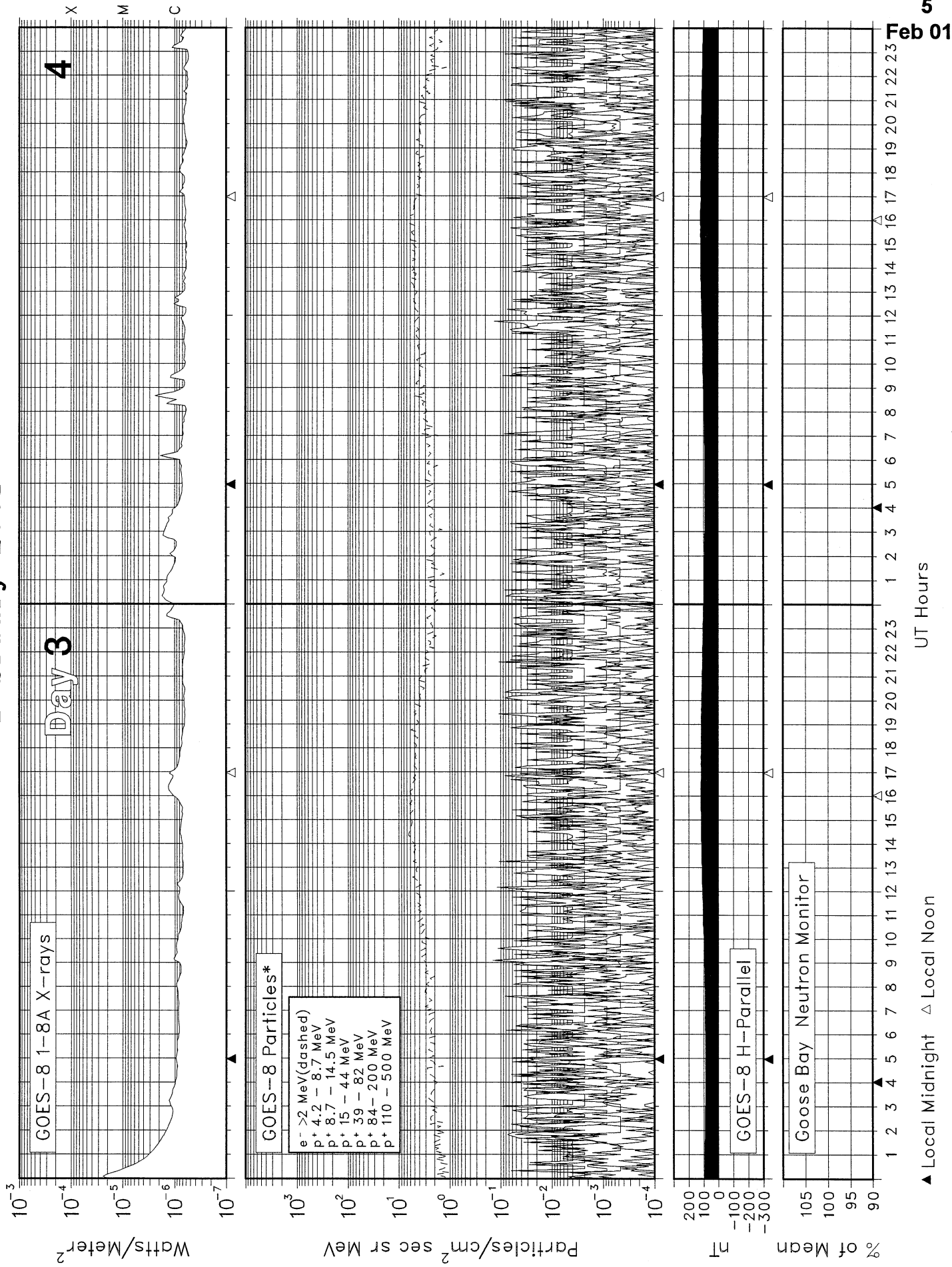
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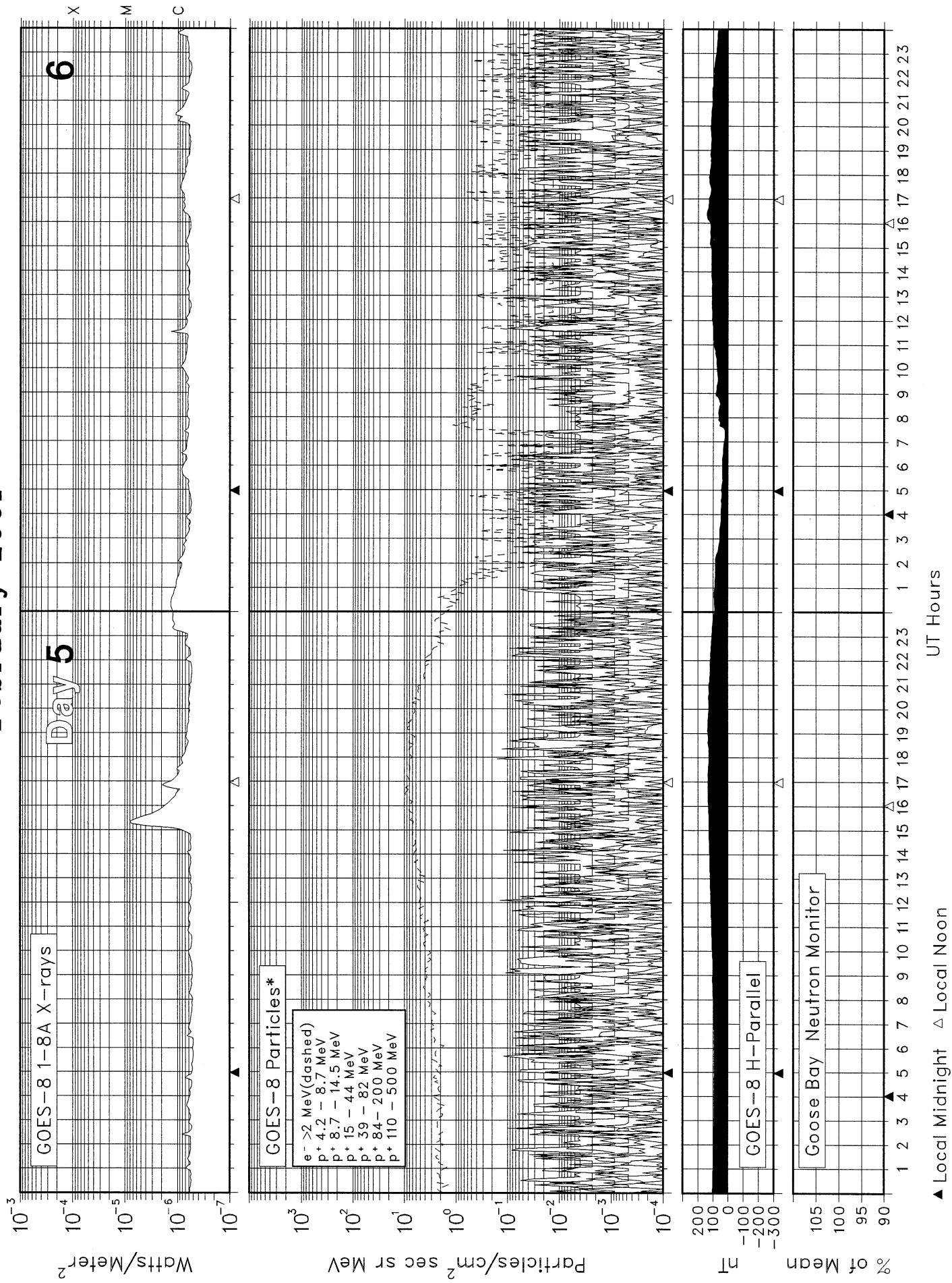
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February 2001



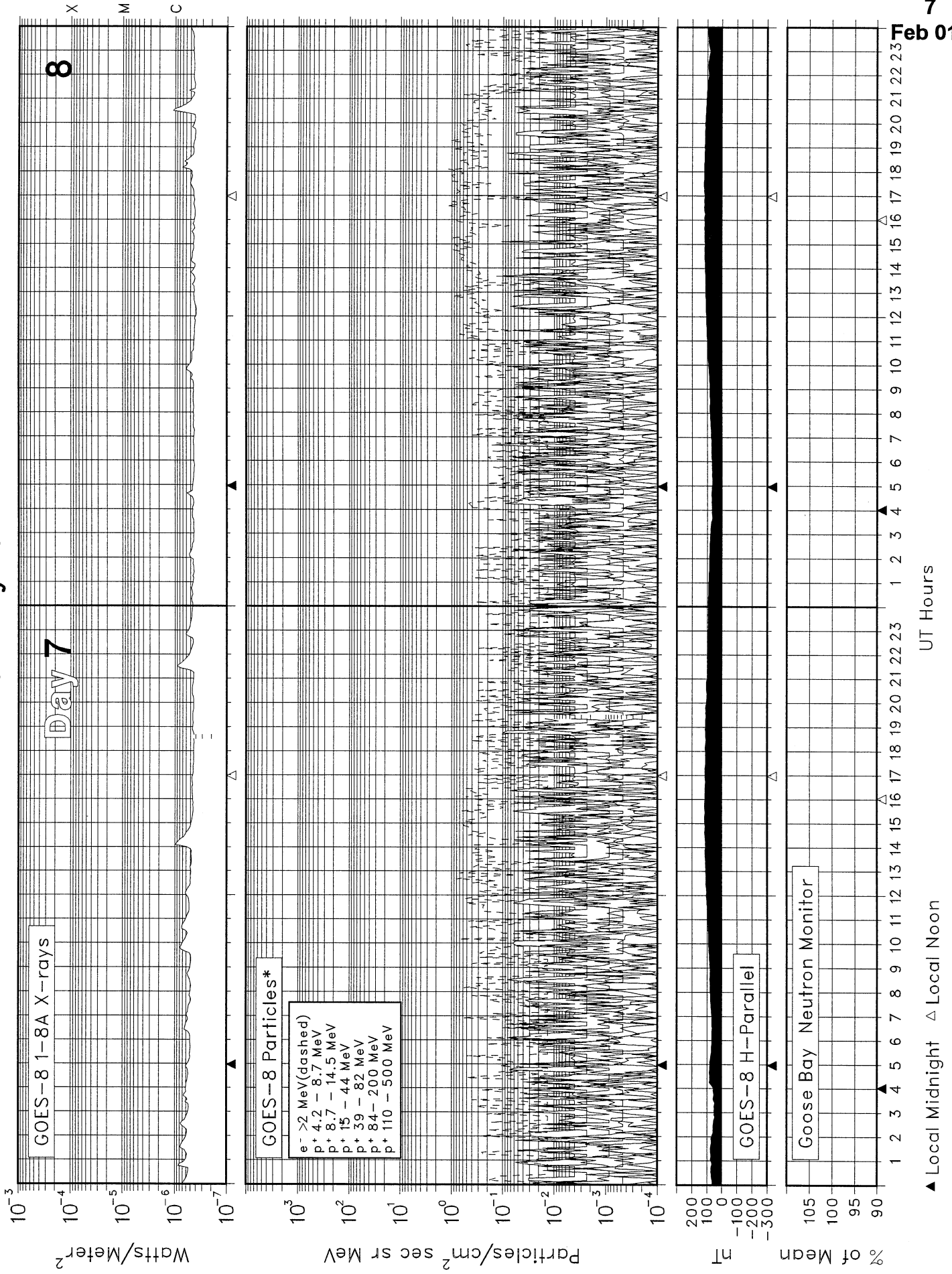
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February 2001



SOLAR-TERRESTRIAL ENVIRONMENT

February 2001



GOES-8 1-8A X-rays

Watts/Meter²

GOES-8 Particles*

- e⁻ >2 MeV (dashed)
- p⁺ 4.2 - 8.7 MeV
- p⁺ 8.7 - 14.5 MeV
- p⁺ 15 - 44 MeV
- p⁺ 39 - 82 MeV
- p⁺ 84 - 200 MeV
- p⁺ 110 - 500 MeV

Particles/cm² sec sr MeV

GOES-8 H-Parallel

nT

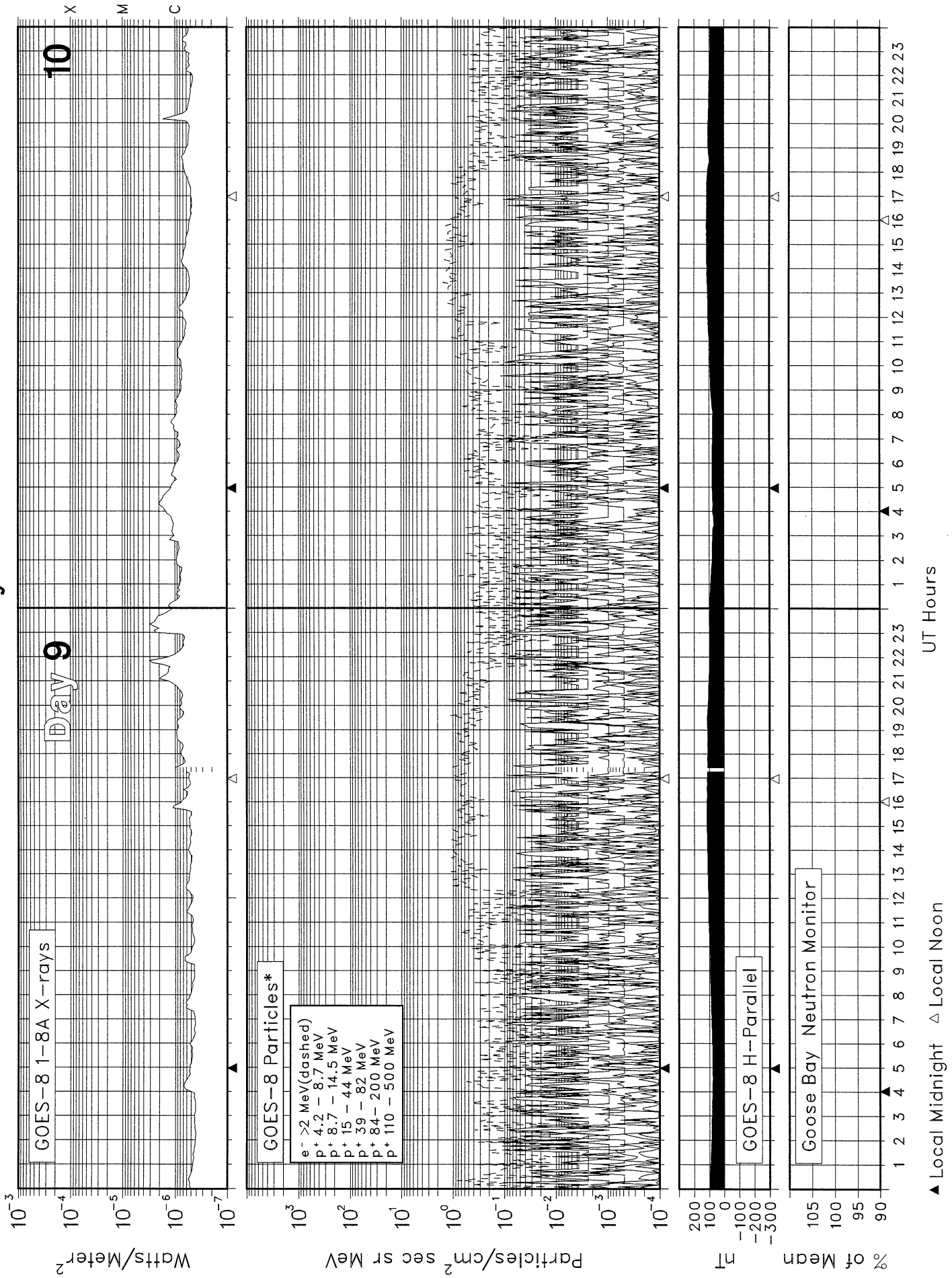
Goose Bay Neutron Monitor

% of Mean

▲ Local Midnight △ Local Noon

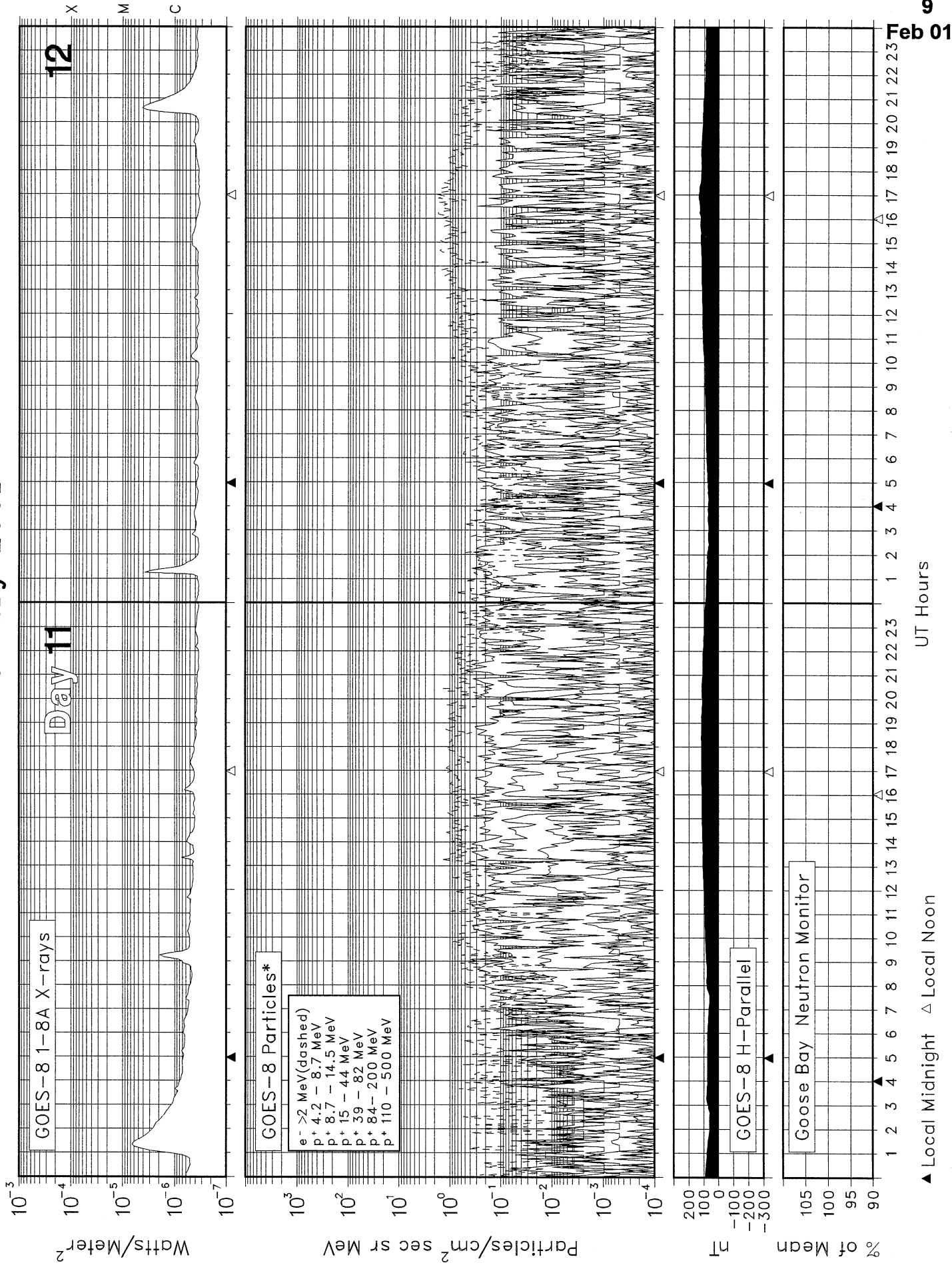
UT Hours

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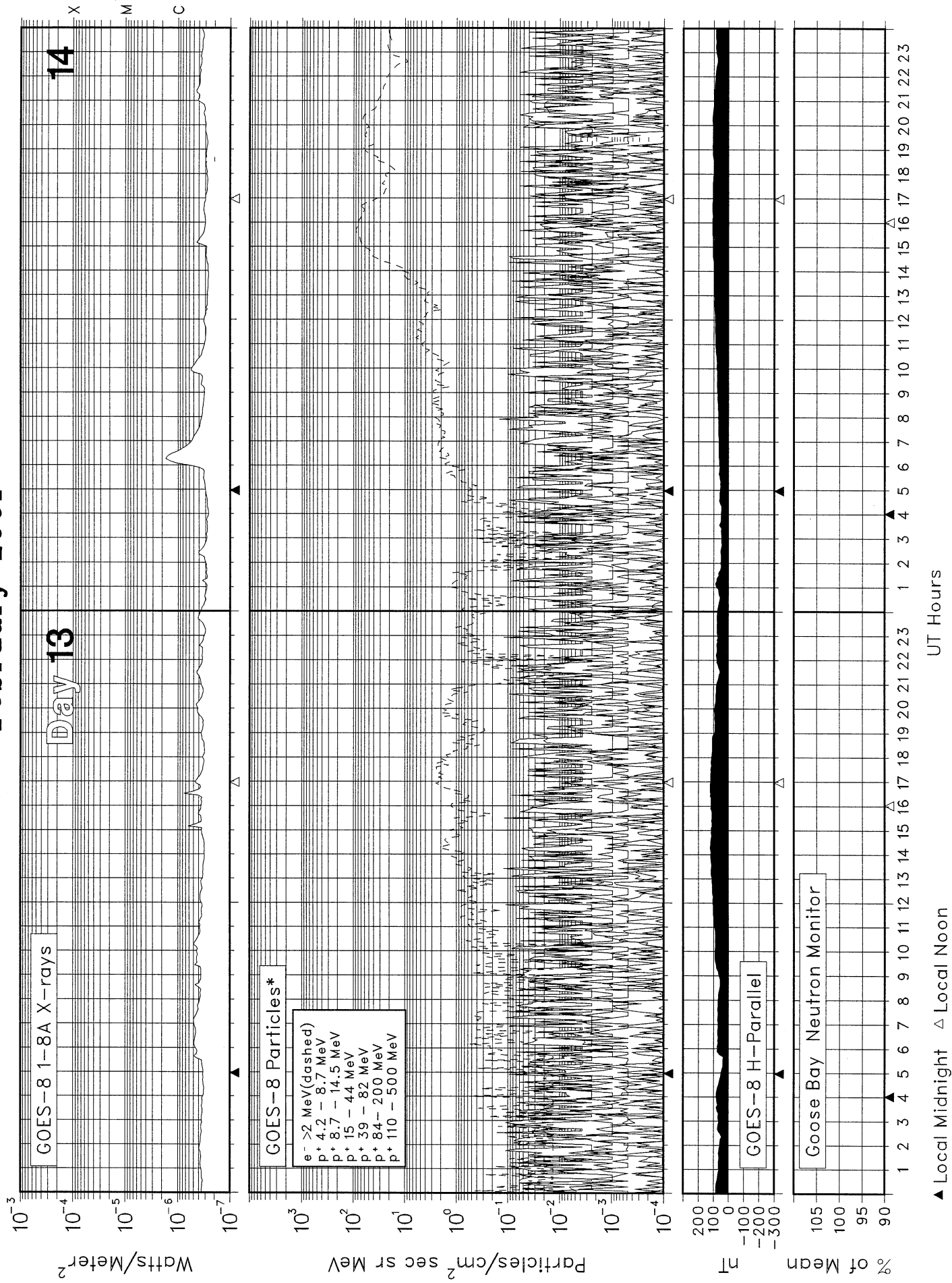
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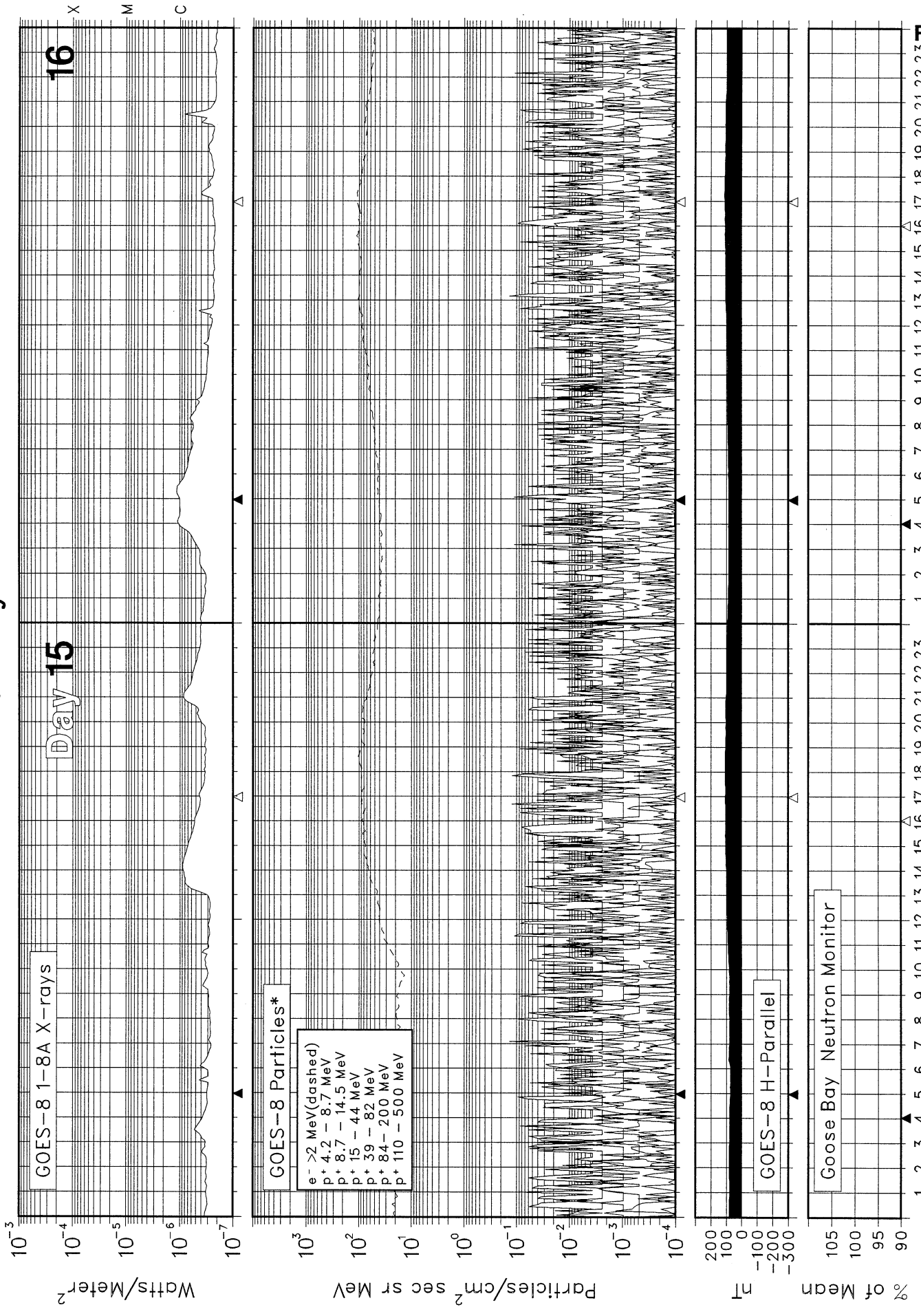
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February 2001

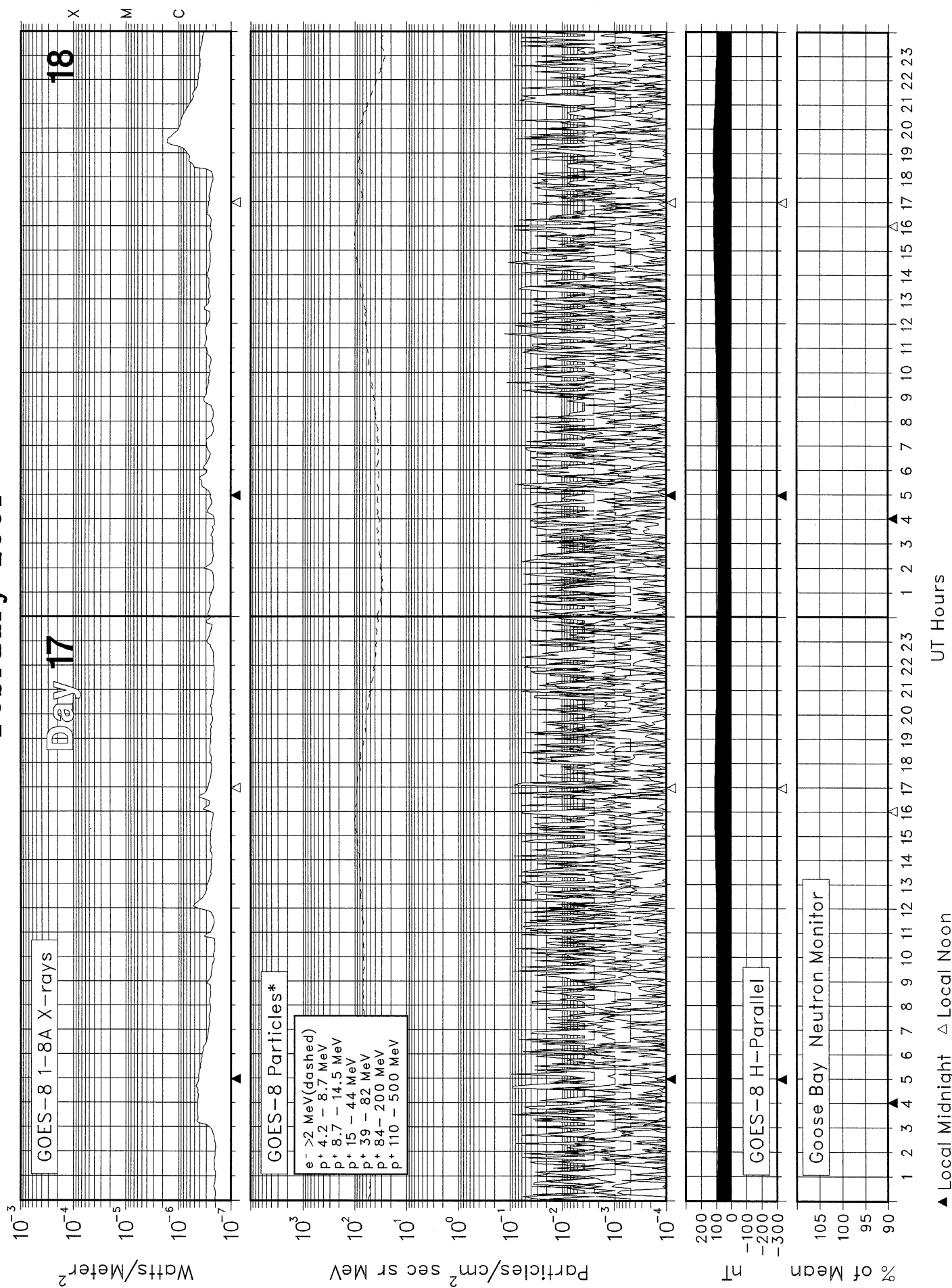


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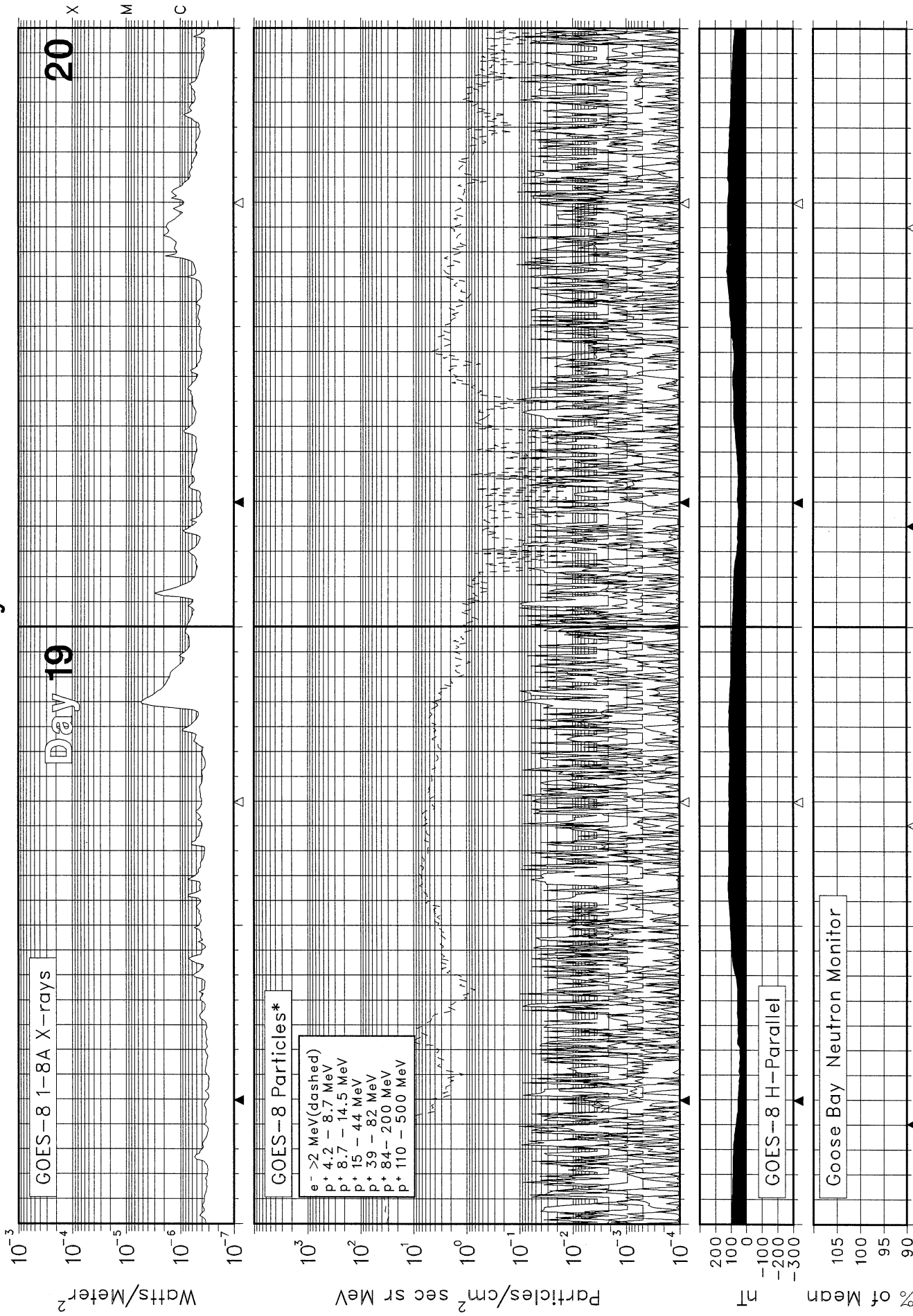


SOLAR-TERRESTRIAL ENVIRONMENT February 2001



SOLAR-TERRÈSTRIAL ENVIRONMENT

February 2001

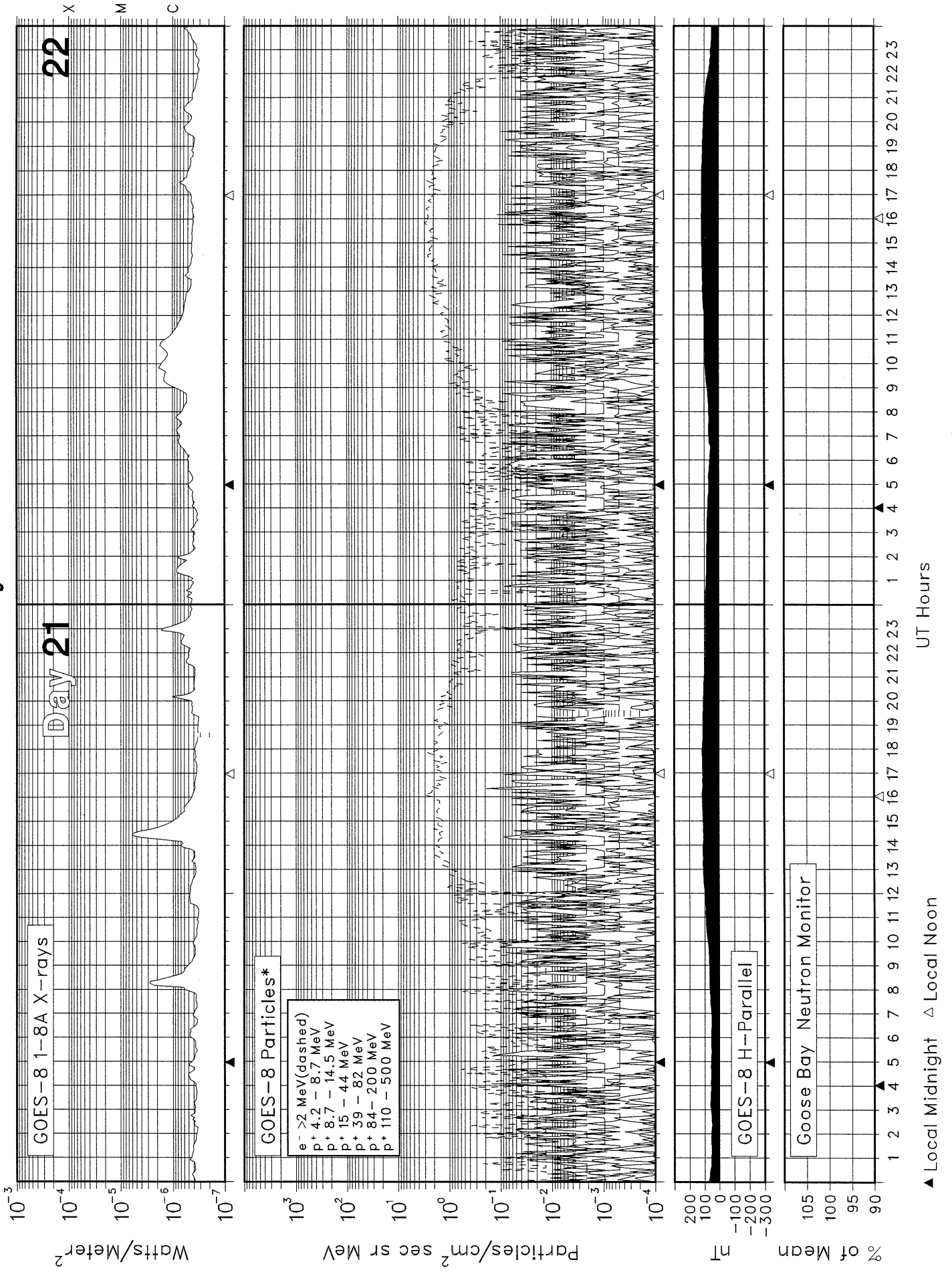


▲ Local Midnight △ Local Noon

▲ Local Midnight △ Local Noon

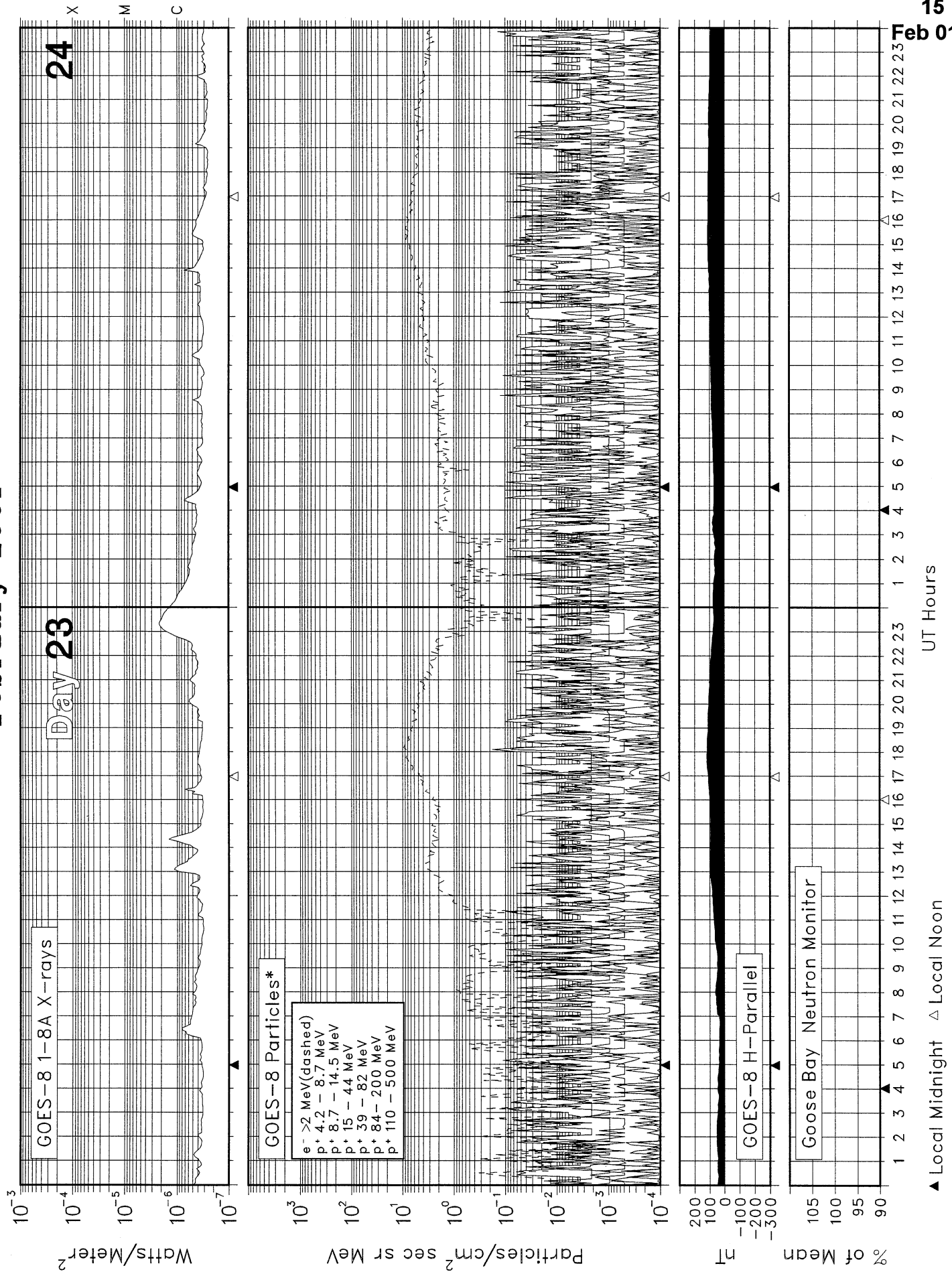
▲ Local Midnight △ Local Noon

SOLAR-TERRESTRIAL ENVIRONMENT February 2001



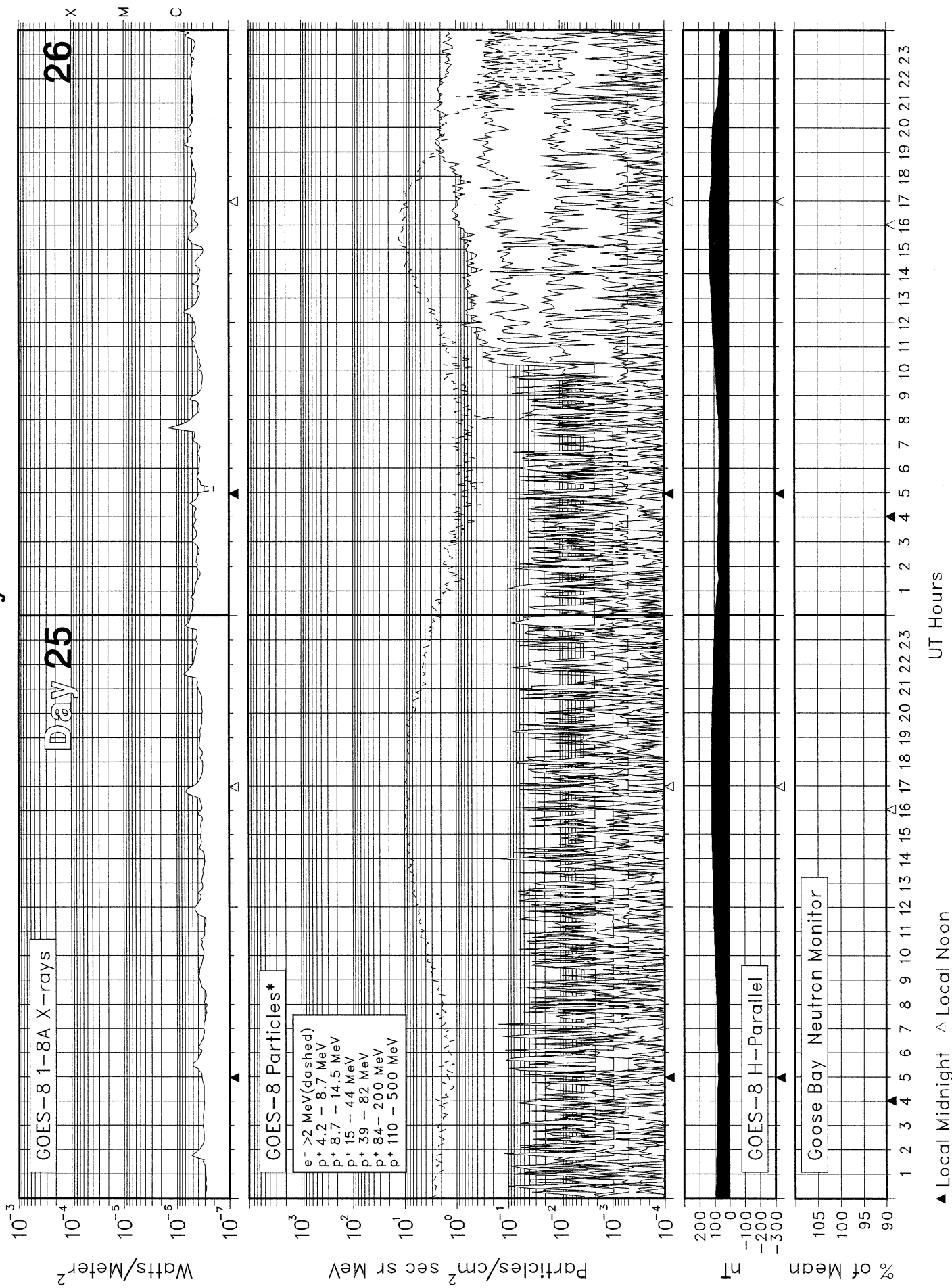
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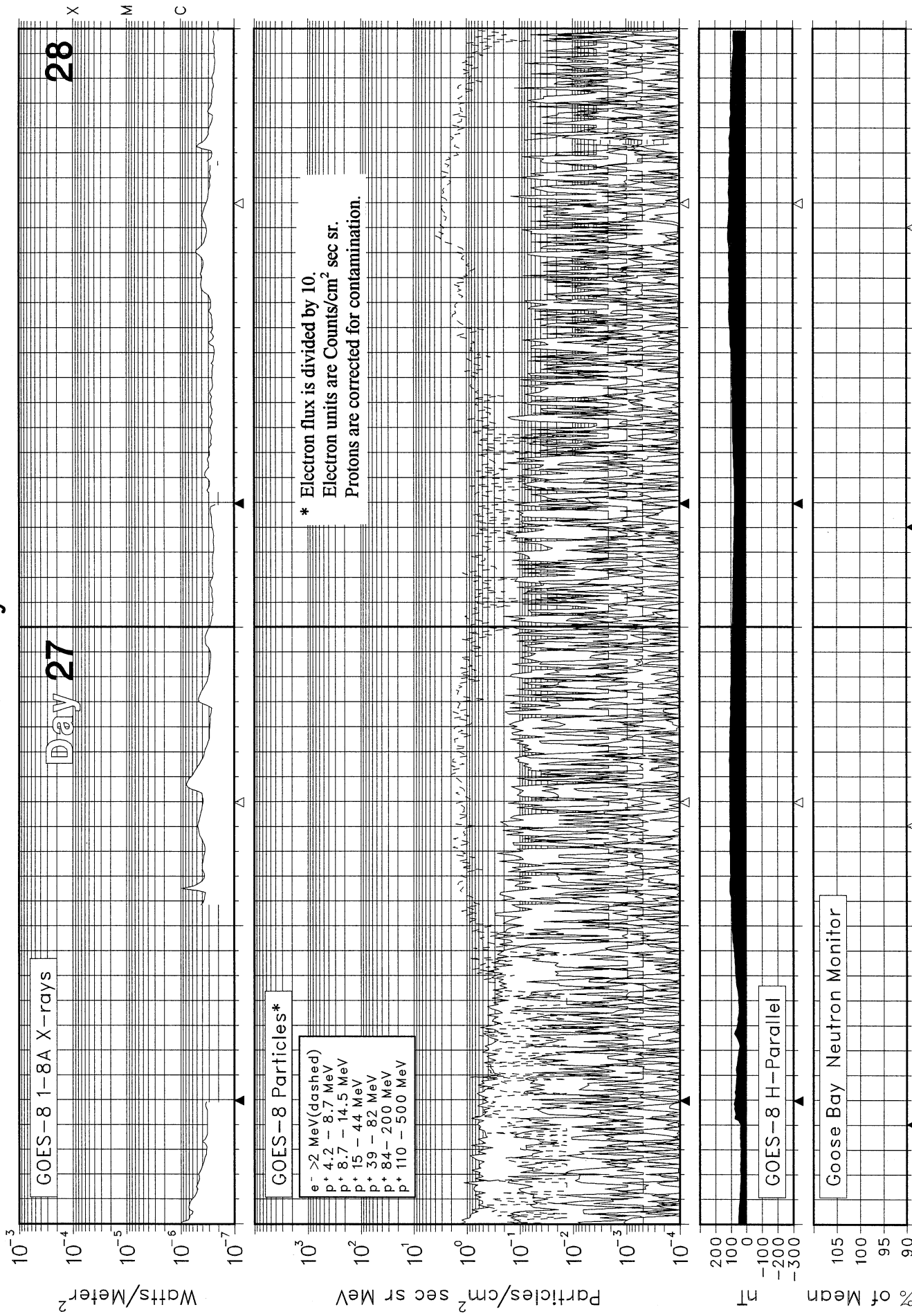
SOLAR-TERRESTRIAL ENVIRONMENT

February 2001



SOLAR-TERRRESTRIAL ENVIRONMENT

February 2001



▲ Local Midnight △ Local Noon

UT Hours

17 Feb 01

18
Feb 01

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

FEBRUARY 2001

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
032	01	31	130	153	17	9321	S04	W66	0	0	0	01	E	SOL: Eruptive MAG: Active PRO: Quiet
						9325	N09	W17	0	0	0	01	Q	
						9327	N18	W07	0	0	0	01	Q	
						9329	S10	E23	0	0	0	01	Q	
						9330	N26	E57	0	0	0	01	E	
						9331	N13	E13	0	0	0	01	Q	
						9332	N08	E10	0	0	0	01	Q	
033	02	01	141	161	8	9321	S04	W81	0	0	0	02	Q	SOL: Eruptive MAG: Quiet PRO: Quiet
						9325	N10	W32	0	0	0	02	Q	
						9327	N18	W21	0	0	0	02	Q	
						9329	S11	E06	0	0	0	02	Q	
						9330	N25	E44	3	0	0	02	E	
						9331	N13	E00	0	0	0	02	Q	
						9332	N08	W03	0	0	0	02	Q	
						9333	N24	W10	0	0	0	02	Q	
						9334	N12	E78	5	0	0	02	Q	
034	03	02	109	166	8	9325	N10	W48	0	0	0	03	Q	SOL: Eruptive MAG: Quiet PRO: Quiet
						9327	N17	W36	0	0	0	03	Q	
						9329	S10	W06	0	0	0	03	Q	
						9330	N26	E31	0	0	0	03	E	
						9332	N08	W19	0	0	0	03	Q	
						9333	N25	W24	0	0	0	03	Q	
						9334	N11	E67	1	1	0	03	Q	
035	04	03	149	164	1	9325	N11	W60	0	0	0	04	Q	SOL: Eruptive MAG: Quiet PRO: Quiet
						9327	N18	W47	0	0	0	04	Q	
						9329	S09	W14	0	0	0	04	Q	
						9330	N26	E18	0	0	0	04	E	
						9332	N09	W32	0	0	0	04	Q	
						9333	N26	W39	0	0	0	04	Q	
						9334	N11	E54	0	0	0	04	E	
						9335	N09	E68	0	0	0	04	Q	
						9336	S10	W01	0	0	0	04	Q	
						9337	S27	E76	0	0	0	04	Q	
036	05	04	164	158	1	9325	N11	W74	0	0	0	05	Q	SOL: Eruptive MAG: Quiet PRO: Quiet
						9327	N17	W62	0	0	0	05	Q	
						9330	N25	E04	3	0	0	05	E	
						9333	N25	W50	0	0	0	05	Q	
						9334	N11	E41	3	0	0	05	E	
						9335	N08	E52	0	0	0	05	Q	
						9336	S10	W17	0	0	0	05	Q	
						9337	S27	E60	0	0	0	05	Q	
						9338	S17	E59	1	0	0	05	Q	
						9339	S12	E74	2	0	0	05	Q	
037	06	05	157	165	2	9327	N19	W73	1	0	0	06	Q	SOL: Eruptive MAG: Quiet PRO: Quiet
						9330	N26	W09	0	0	0	06	E	
						9333	N26	W64	0	0	0	06	Q	
						9334	N12	E27	1	0	0	06	E	
						9335	N08	E40	2	0	0	06	E	
						9336	S09	W27	0	0	0	06	Q	
						9337	S28	E51	0	0	0	06	Q	
						9338	S18	E50	0	0	0	06	Q	
						9339	S11	E62	1	0	0	06	E	
						9340	S13	E05	0	0	0	06	Q	
038	07	06	161	170	12	9330	N26	W21	0	0	0	07	Q	SOL: Eruptive MAG: Quiet PRO: Quiet
						9334	N11	E13	0	0	0	07	E	
						9335	N09	E28	0	0	0	07	E	
						9336	S09	W41	0	0	0	07	Q	
						9337	S29	E38	0	0	0	07	Q	
						9338	S20	E38	0	0	0	07	Q	
						9339	S11	E48	0	0	0	07	E	
						9341	S10	E23	0	0	0	07	Q	

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

FEBRUARY 2001

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Goadvice(1)
							Lat	Lon	Opt	M	X			
						9342	S26	E56	0	0	0	07	Q	
039	08	07	163	164	5	9330	N25	W36	0	0	0	08	Q	SOL: Eruptive
						9334	N12	W01	0	0	0	08	E	MAG: Quiet
						9335	N10	E14	0	0	0	08	E	PRO: Quiet
						9337	S27	E25	0	0	0	08	Q	
						9338	S19	E24	0	0	0	08	Q	
						9339	S09	E34	0	0	0	08	E	
						9341	S08	E09	0	0	0	08	Q	
						9342	S26	E42	0	0	0	08	Q	
						9343	N03	E08	0	0	0	08	Q	
040	09	08	168	157	7	9330	N26	W47	0	0	0	09	Q	SOL: Eruptive
						9334	N12	W14	0	0	0	09	Q	MAG: Quiet
						9335	N09	E01	1	0	0	09	E	PRO: Quiet
						9337	S28	E12	0	0	0	09	Q	
						9338	S18	E10	0	0	0	09	Q	
						9339	S11	E21	0	0	0	09	Q	
						9340	S11	W36	0	0	0	09	Q	
						9341	S09	W03	0	0	0	09	Q	
						9344	N31	E13	0	0	0	09	Q	
						9345	S20	E19	0	0	0	09	Q	
041	10	09	179	162	5	9330	N25	W61	0	0	0	10	Q	SOL: Eruptive
						9334	N12	W27	0	0	0	10	Q	MAG: Quiet
						9335	N09	W13	1	0	0	10	E	PRO: Quiet
						9338	S20	W02	4	0	0	10	E	
						9339	S10	E06	0	0	0	10	Q	
						9341	S09	W16	0	0	0	10	Q	
						9344	N31	E01	0	0	0	10	Q	
						9345	S19	E07	0	0	0	10	Q	
						9346	N18	W54	0	0	0	10	Q	
						9347	N04	E66	0	0	0	10	Q	
042	11	10	172	161	6	9330	N22	W80	0	0	0	11	Q	SOL: Eruptive
						9334	N12	W42	0	0	0	11	Q	MAG: Quiet
						9335	N11	W29	0	0	0	11	E	PRO: Quiet
						9338	S20	W15	3	0	0	11	E	
						9339	S10	W08	0	0	0	11	Q	
						9341	S10	W30	0	0	0	11	Q	
						9344	N30	W14	0	0	0	11	Q	
						9345	S20	W07	0	0	0	11	Q	
						9347	N03	E51	0	0	0	11	Q	
						9348	N09	E05	0	0	0	11	Q	
						9349	N28	E60	0	0	0	11	Q	
043	12	11	169	151	10	9330	N22	W91	0	0	0	12	Q	SOL: Eruptive
						9334	N12	W55	0	0	0	12	Q	MAG: Quiet
						9335	N11	W43	0	0	0	12	Q	PRO: Quiet
						9338	S20	W28	2	0	0	12	E	
						9339	S08	W19	0	0	0	12	Q	
						9341	S09	W43	0	0	0	12	Q	
						9345	S20	W20	0	0	0	12	Q	
						9347	N04	E38	0	0	0	12	Q	
						9348	N11	W08	0	0	0	12	Q	
						9349	N28	E46	0	0	0	12	Q	
						9350	N18	E69	0	0	0	12	Q	
044	13	12	106	145	7	9334	N13	W65	1	0	0	13	Q	SOL: Eruptive
						9335	N11	W55	0	0	0	13	Q	MAG: Quiet
						9338	S20	W41	0	0	0	13	E	PRO: Quiet
						9339	S09	W33	0	0	0	13	Q	
						9347	N04	E25	0	0	0	13	Q	
						9348	N13	W20	0	0	0	13	Q	
						9349	N28	E34	0	0	0	13	Q	
						9350	N18	E56	0	0	0	13	Q	

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
045	14	13	113	141	21	9338	S20	W54	0	0	0	14	E	SOL: Eruptive
						9339	S09	W52	0	0	0	14	Q	MAG: Quiet
						9342	S27	W31	0	0	0	14	Q	PRO: Quiet
						9345	S20	W45	0	0	0	14	Q	
						9347	N04	E12	0	0	0	14	Q	
						9348	N15	W33	2	0	0	14	Q	
						9349	N28	E21	0	0	0	14	Q	
						9350	N18	E43	0	0	0	14	Q	
046	15	14	99	138	17	9338	S20	W69	0	0	0	15	Q	SOL: Eruptive
						9339	S09	W66	0	0	0	15	Q	MAG: Active
						9342	S28	W45	0	0	0	15	Q	PRO: Quiet
						9347	N04	W01	0	0	0	15	Q	
						9348	N15	W45	0	0	0	15	Q	
						9349	N28	E08	0	0	0	15	Q	
						9350	N18	E30	0	0	0	15	Q	
047	16	15	113	135	6	9338	S20	W84	0	0	0	16	Q	SOL: Eruptive
						9339	S09	W80	0	0	0	16	Q	MAG: Active
						9342	S27	W55	0	0	0	16	Q	PRO: Quiet
						9347	N04	W15	0	0	0	16	Q	
						9348	N15	W58	0	0	0	16	Q	
						9349	N28	W05	0	0	0	16	Q	
						9350	N18	E16	0	0	0	16	Q	
						9351	S21	W42	0	0	0	16	Q	
9352	S23	E63	0	0	0	16	Q							
048	17	16	133	130	3	9338	S22	W94	0	0	0	17	Q	SOL: Eruptive
						9339	S11	W92	0	0	0	17	Q	MAG: Quiet
						9342	S23	W65	0	0	0	17	Q	PRO: Quiet
						9347	N04	W29	0	0	0	17	Q	
						9348	N15	W73	0	0	0	17	Q	
						9349	N28	W18	0	0	0	17	Q	
						9350	N18	E04	0	0	0	17	Q	
						9351	S23	W53	0	0	0	17	Q	
						9352	S22	E51	0	0	0	17	Q	
						9353	S23	E17	0	0	0	17	Q	
						9354	S09	E34	0	0	0	17	Q	
049	18	17	95	130	2	9347	N05	W41	0	0	0	18	Q	SOL: Quiet
						9348	N17	W83	0	0	0	18	Q	MAG: Quiet
						9349	N28	W31	0	0	0	18	Q	PRO: Quiet
						9350	N18	W09	0	0	0	18	Q	
						9352	S22	E36	0	0	0	18	Q	
						9353	S23	E03	0	0	0	18	Q	
						9354	S08	E20	0	0	0	18	Q	
050	19	18	143	132	2	9349	N28	W44	0	0	0	19	Q	SOL: Eruptive
						9350	N18	W23	0	0	0	19	Q	MAG: Quiet
						9351	S20	W81	0	0	0	19	Q	PRO: Quiet
						9352	S23	E25	0	0	0	19	Q	
						9353	S22	W10	0	0	0	19	Q	
						9354	S09	E07	0	0	0	19	Q	
						9355	N20	E35	0	0	0	19	Q	
						9356	S13	W10	0	0	0	19	Q	
						9357	S26	E35	0	0	0	19	Q	
						9358	S08	E46	0	0	0	19	Q	
051	20	19	147	137	5	9349	N28	W56	0	0	0	20	Q	SOL: Eruptive
						9350	N18	W36	0	0	0	20	Q	MAG: Quiet
						9351	S21	W92	0	0	0	20	Q	PRO: Quiet
						9352	S21	E14	0	0	0	20	Q	
						9353	S22	W24	0	0	0	20	Q	
						9354	S09	W06	2	0	0	20	E	
						9355	N20	E21	0	0	0	20	Q	
						9356	S13	W23	0	0	0	20	Q	
						9357	S25	E19	0	0	0	20	Q	

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
						9358	S08	E33	0	0	0	20	Q	
052	21	20	119	146	9	9349	N30	W69	0	0	0	21	Q	SOL: Eruptive
						9350	N19	W50	0	0	0	21	Q	MAG: Quiet
						9352	S21	E02	0	0	0	21	Q	PRO: Quiet
						9353	S22	W36	0	0	0	21	Q	
						9354	S08	W20	3	0	0	21	E	
						9357	S26	E06	0	0	0	21	Q	
						9358	S08	E20	0	0	0	21	Q	
						9359	N10	E74	0	0	0	21	Q	
053	22	21	119	144	6	9350	N19	W62	0	0	0	22	Q	SOL: Eruptive
						9353	S24	W50	0	0	0	22	Q	MAG: Quiet
						9354	S08	W32	2	0	0	22	E	PRO: Quiet
						9356	S15	W52	0	0	0	22	Q	
						9357	S26	W07	0	0	0	22	Q	
						9358	S18	E07	0	0	0	22	Q	
						9359	N10	E64	0	0	0	22	Q	
						9360	S11	E58	0	0	0	22	Q	
054	23	22	135	146	7	9350	N18	W76	0	0	0	23	Q	SOL: Eruptive
						9353	S24	W64	1	0	0	23	Q	MAG: Quiet
						9354	S09	W45	4	0	0	23	E	PRO: Quiet
						9356	S15	W66	0	0	0	23	Q	
						9357	S26	W20	0	0	0	23	Q	
						9358	S08	W05	0	0	0	23	Q	
						9359	N12	E52	0	0	0	23	Q	
						9360	S10	E45	0	0	0	23	Q	
						9361	S17	E07	0	0	0	23	Q	
055	24	23	135	145	11	9352	S21	W35	0	0	0	24	Q	SOL: Eruptive
						9354	S09	W59	0	0	0	24	E	MAG: Quiet
						9356	S13	W80	0	0	0	24	Q	PRO: Quiet
						9357	S25	W33	1	0	0	24	Q	
						9358	S04	W22	0	0	0	24	Q	
						9359	N12	E34	1	0	0	24	E	
						9360	S10	E31	0	0	0	24	Q	
						9361	S12	W06	0	0	0	24	Q	
056	25	24	99	137	6	9354	S09	W72	0	0	0	25	E	SOL: Eruptive
						9357	S25	W46	0	0	0	25	Q	MAG: Quiet
						9358	S07	W34	0	0	0	25	Q	PRO: Quiet
						9359	N13	E23	0	0	0	25	E	
						9360	S10	E17	0	0	0	25	Q	
						9361	S16	W18	0	0	0	25	Q	
057	26	25	111	135	2	9354	S09	W83	0	0	0	26	Q	SOL: Eruptive
						9357	S25	W57	0	0	0	26	Q	MAG: Quiet
						9358	S10	W43	0	0	0	26	Q	PRO: Quiet
						9359	N13	E10	0	0	0	26	Q	
						9360	S11	E04	0	0	0	26	Q	
						9361	S15	W36	0	0	0	26	Q	
						9362	S07	E12	0	0	0	26	Q	
058	27	26	91	135	9	9354	S09	W97	1	0	0	27	Q	SOL: Eruptive
						9357	S24	W71	0	0	0	27	Q	MAG: Quiet
						9358	S11	W59	0	0	0	27	Q	PRO: Quiet
						9359	N12	W04	0	0	0	27	Q	
						9360	S11	W09	0	0	0	27	Q	
059	28	27	90	131	12	9358	S10	W75	0	0	0	28	Q	SOL: Eruptive
						9359	N13	W18	1	0	0	28	E	MAG: Quiet
						9360	S10	W23	0	0	0	28	Q	PRO: Quiet
						9363	S20	W15	0	0	0	28	Q	

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A- index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			

(1) Region Forecast and Flare (SOL) Advice

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

Magnetic (MAG) Geoadvice

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

Proton (PRO) Geoadvice

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

STRATWARM ALERTS

02/01/01 03:30:00 GEOALERT WWA032 STRATWARM ALERT/WEDNESDAY/STRATWARM EXISTS.
STRONG MINOR WARMING CONTINUES. TEMPERATURE GRADIENT REVERSED AT 5 HPA AND ABOVE.

02/01/01 03:30:00 GEOALERT WWA033 STRATWARM ALERT/THURSDAY/STRATWARM EXISTS.
WEAK EASTERLY WINDS AT 1 HPA. TEMPERATURE GRADIENT REVERSED AT 10 HPA AND ABOVE.

02/03/01 03:30:00 GEOALERT WWA034 STRATWARM ALERT EXISTS STRATWARM FRIDAY
STRONG MINOR WARMING CONTINUES. TEMPERATURE GRADIENT REVERSED AT 50 HPA AND ABOVE.

02/04/01 03:30:00 GEOALERT WWA035 STRATWARM ALERT EXISTS STRATWARM SATURDAY
STRONG MINOR WARMING CONTINUES. TEMPERATURE GRADIENT REVERSED AT 100 HPA AND ABOVE UP TO 5 HPA.

02/05/01 03:30:00 GEOALERT WWA036 STRATWARM ALERT EXISTS STRATWARM SUNDAY
STRONG MINOR WARMING CONTINUES. TEMPERATURE GRADIENT REVERSED AT 100 HPA AND ABOVE TO 5 HPA.

02/06/01 03:30:00 GEOALERT WWA037 STRATWARM ALERT EXISTS STRATWARM MONDAY
STRONG MINOR WARMING CONTINUES, MAJOR WARMING POSSIBLE. TEMPERATURE GRADIENT REVERSED AT 100 HPA UP TO 5 HPA.

02/07/01 03:30:00 GEOALERT WWA038 STRATWARM ALERT EXISTS STRATWARM TUESDAY
CRITERIA FOR A MAJOR WARMING WILL BE FULLFILLED WITHIN THE NEXT 5 DAYS. POLAR VORTEX WILL SPLIT WITH CENTERS SOUTH OF ICELAND AND WEST SIBERIA, RESPECTIVELY. STRONG ALEUTIAN HIGH STAYS POLEWARDS OF ALASKA.

02/08/01 03:30:00 GEOALERT WWA039 STRATWARM ALERT EXISTS STRATWARM WEDNESDAY
MAJOR WARMING DEVELOPS WITHIN THE NEXT 5 DAYS, WITH A STRONG ALEUTIAN HIGH CENTERED OVER NORTHERN ALASKA AND AN ELONGATED POLAR VORTEX, CENTERED SOUTH OF ICELAND AND OVER WEST SIBERIA, RESPECTIVELY, AT THE 10-HPA LEVEL.

02/09/01 03:30:00 GEOALERT WWA040 STRATWARM ALERT EXISTS STRATWARM THURSDAY
MAJOR WARMING IN PROGRESS. INTENSE POLAR VORTEX IS MOVING TOWARDS WEST SIBERIA, ALEUTIAN HIGH STAYS OVER NORTHERN ALASKA, TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE REVERSED THROUGHOUT THE STRATOSPHERE UP TO THE 2 HPA LEVEL (ABOUT 40 KM), WIND REVERSAL AT 60N/10 HPA EXPECTED WITHIN THE NEXT 5 DAYS.

02/10/01 03:30:00 GEOALERT WWA041 STRATWARM ALERT EXISTS STRATWARM FRIDAY
MAJOR WARMING IN PROGRESS. INTENSE POLAR VORTEX IS MOVING TOWARDS EUROPEAN ARCTIC, ALEUTIAN HIGH STAYS OVER NORTHERN ALASKA, TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE REVERSED THROUGHOUT THE STRATOSPHERE UP TO THE 2 HPA LEVEL (ABOUT 40 KM), WIND REVERSAL AT 60N/10 HPA EXPECTED WITHIN THE NEXT 3 DAYS.

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02/11/01 03:30:00 GEOALERT WWA042 STRATWARM ALERT/SATERDAY/STRATWARM EXISTS.
MAJOR WARMING IN PROGRESS. TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE REVERSED THROUGHOUT THE STRATOSPHERE UP TO THE 5-HPA LEVEL. WIND REVERSAL AT 60N/10HPA EXPECTED WITHIN THE NEXT 3 DAYS.

02/12/01 03:30:00 GEOALERT WWA043 STRATWARM ALERT EXISTS STRATWARM SUNDAY
MAJOR WARMING CONTINUES. TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE REVERSED AT THE 100 TO 10 HPA LEVELS. WIND REVERSAL AT 60N/10HPA EXPECTED WITHIN THE NEXT DAY.

02/13/01 03:30:00 GEOALERT WWA044 STRATWARM ALERT EXISTS STRATWARM MONDAY
THE CRITERION OF A MAJOR WARMING FULFILLED AT 10 AND 5 HPA. REVERSED TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE BETWEEN 100 AND 5 HPA. EASTERLY WINDS AT 60N EXPECTED ALSO IN THE LOWER STRATOSPHERE WITHIN 5 DAYS.

02/14/01 03:30:00 GEOALERT WWA045 STRATWARM ALERT/TUESDAY/STRATWARM EXISTS.
CRITERIA FOR MAJOR WARMING IN MIDDLE STRATOSPHERE EXPECTED TO BE FULFILLED OVER THE NEXT FIVE DAYS. TEMPERATURE REVERSAL ALREADY PRESENT ON 50HPA AND 30HPA.

02/16/01 03:30:00 GEOALERT WWA047 STRATWARM ALERT/THURSAY/STRATWARM EXISTS.
MAJOR WARMING CONTINUES - BOTH CRITERIA FULFILLED IN MID TO LOWER STATOSPHERE. TEMPERATURE AND WIND REVERSAL EXPECTED TO WEAKEN AND STRENGTHEN, RESPECTIVELY, OVER TEH NEXT FIVE DAYS.

02/17/01 03:30:00 GEOALERT WWA048 STRATWARM ALERT/FRIDAY/STRATWARM EXISTS.
MAJOR WARMING CONTINUES. REVERSED TEMPERATURE GRADIENT BETWEEN MIDDLE LATITUDES AND THE POLE, AND NET EASTERLY WINDS AT 60N IN THE LOWER AND MID STRATOSPHERE.

02/18/01 03:30:00 GEOALERT WWA049 STRATWARM ALERT EXISTS STRATWARM SATURDAY
MAJOR WARMING CONTINUES. AN ANTICYCLONE EXTENDING FROM THE CANADIAN ARCTIC TO WESTERN SIBERIA AND A SPLIT VORTEX LEAD TO NET EASTERLY WINDS AT LATITUDE 60N THROUGHOUT THE STRATOSPHERE, ALTHOUGH THE TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE IS NO LONGER REVERSED IN THE UPPER STRATOSPHERE.

02/19/01 03:30:00 GEOALERT WWA050 STRATWARM ALERT EXISTS STRATWARM SUNDAY
MAJOR WARMING CONTINUES. A LARGE WARM AREA COVERS THE POLAR REGION, SIBERIA, EUROPE AND THE EASTERN ATLANTIC LEADING TO A REVERSED TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE UP TO 3 HPA. A POLAR ANTICYCLONE AND A SPLIT, SOUTHWARD DISPLACED VORTEX LEAD TO NET EASTERLY WINDS AT LATITUDE 60N THROUGHOUT THE STRATOSPHERE.

02/20/01 03:30:00 GEOALERT WWA051 STRATWARM ALERT EXISTS STRATWARM MONDAY
MAJOR WARMING CONTINUES. A LARGE WARM AREA COVERS THE POLAR REGION, SIBERIA, EUROPE AND THE EASTERN ATLANTIC REGION LEADING TO A REVERSED TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE IN THE WHOLE OF THE STRATOSPHERE. EXCEPT IN THE UPPER MOST LEVEL, A POLAR ANTICYCLONE AND A SPLIT, SOUTHWARD DISPLACED VORTEX LEAD TO EASTERLY WINDS AT LATITUDE 60N THROUGHOUT THE STRATOSPHERE.

02/21/01 03:30:00 GEOALERT WWA052 STRATWARM ALERT EXISTS STRATWARM TUESDAY
MAJOR WARMING CONTINUES. A LARGE WARM AREA COVERS THE POLAR REGION, SIBERIA, EUROPE AND THE EASTERN ATLANTIC LEADING TO A REVERSED TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE UP TO 5 HPA. DISPLACED VORTEX LEAD TO NET EASTERLY WINDS AT LATITUDE 60N THROUGHOUT THE STRATOSPHERE.

02/22/01 03:30:00 GEOALERT WWA053 STRATWARM ALERT/WEDNESDAY/STRATWARM EXISTS.
MAJOR WARMING CONTINUES. A LARGE WARM AREA COVERS THE POLAR REGION, SIBERIA EUROPE AND THE EASTERN ATLANTIC, LEADING TO A REVERSED TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE UP TO 10 HPA. A POLAR ANTICYCLONE AND A SPLIT, SOUTHWARD DISPLACED VORTEX LEAD TO NET EASTERLY WINDS AT LATITUDE 60N THROUGHOUT THE STRATOSPHERE.

02/23/01 03:30:00 GEOALERT WWA054 STRATWARM ALERT EXISTS STRATWARM THURSDAY
MAJOR WARMING DECAYING, DISTURBED CIRCULATION EXPECTED TO CONTINUE.

02/24/01 03:30:00 GEOALERT WWA055 STRATWARM ALERT EXISTS STRATWARM FRIDAY
MAJOR WARMING DECAYING, BUT DISTURBED CIRCULATION EXPECTED TO CONTINUE.

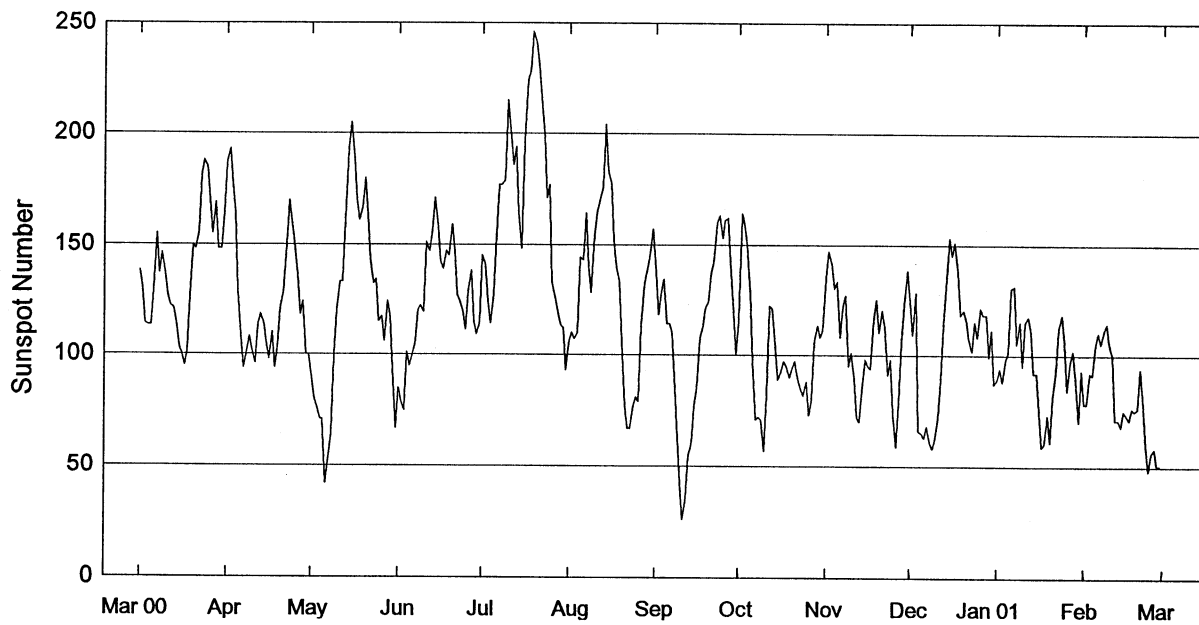
02/25/01 03:30:00 GEOALERT WWA056 STRATWARM ALERT EXISTS STRATWARM SATURDAY
MAJOR WARMING DECAYING. CONTINUATION OF THE DISTURBED CIRCULATION IN THE LOWER AND MIDDLE STRATOSPHERE.

02/26/01 03:30:00 GEOALERT WWA057 STRATWARM ALERT EXISTS STRATWARM SUNDAY
MAJOR WARMING DECAYING. DISTURBED CIRCULATION IN THE LOWER STATOSPHERE CONTINUES.

02/27/01 03:30:00 GEOALERT WWA058 STRATWARM ALERT EXISTS STRATWARM MONDAY
MAJOR WARMING DECAYING. DISTURBED CIRCULATION IN THE LOWER STRATOSPHERE CONTINUES.

02/28/01 03:30:00 GEOALERT WWA059 STRATWARM ALERT/TUESDAY/STRATWARM EXISTS.
DECAYING MAJOR WARMING, FURTHER DISTURBED CIRCULATION IN THE LOWER STRATOSPHERE.

International Relative Sunspot Numbers Mar 2000 - Feb 2001



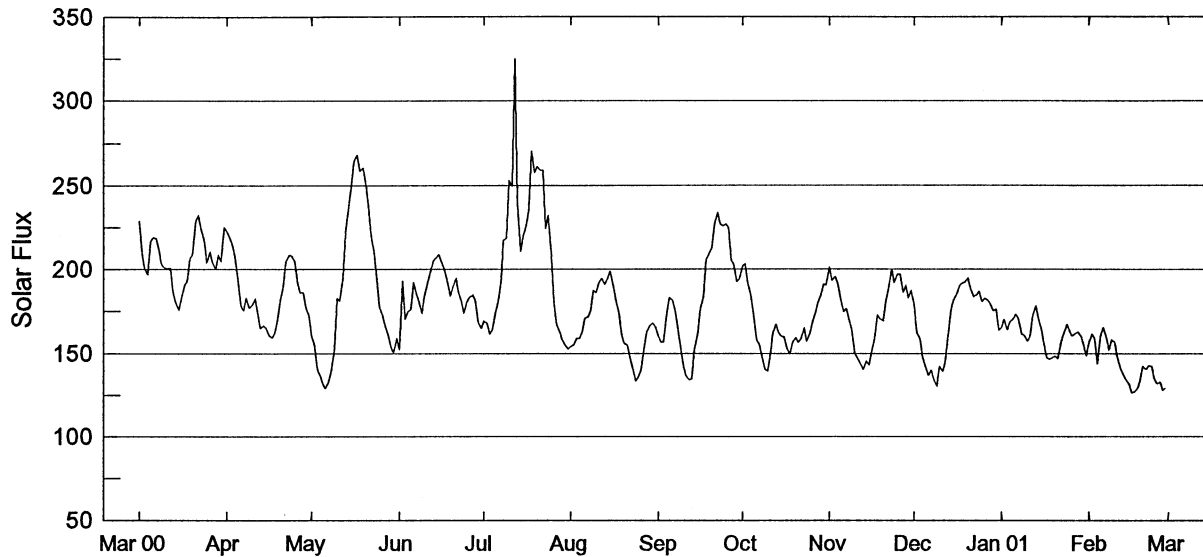
Day	Mar 00	Apr	May	Jun	Jul	Aug	Sep	Oct*	Nov*	Dec*	Jan 01*	Feb*
1	138	187	91	85	145	106	142	115	135	124	89	78
2	130	193	80	79	141	110	118	164	147	109	94	78
3	114	177	76	75	124	107	128	159	141	128	88	92
4	113	164	71	101	114	110	134	150	130	66	98	91
5	113	129	71	95	127	144	114	128	133	65	101	105
6	129	108	42	99	154	143	114	97	108	63	130	110
7	155	94	52	105	177	164	110	71	122	68	131	105
8	145	100	64	120	177	140	85	72	127	61	105	111
9	146	108	99	122	179	128	55	71	95	58	115	114
10	137	102	120	119	215	154	42	57	101	62	95	105
11	127	96	133	151	202	165	26	82	90	72	115	100
12	122	113	133	147	186	170	35	122	72	89	117	71
13	121	118	161	156	194	176	63	121	70	114	111	71
14	115	114	193	171	164	204	60	104	84	135	92	68
15	103	105	205	158	148	183	77	89	98	153	92	75
16	100	98	189	142	197	178	85	92	95	145	75	73
17	95	110	170	139	224	152	108	97	94	151	59	71
18	101	94	161	147	228	140	112	95	116	138	60	76
19	126	103	167	145	246	133	121	90	125	118	73	75
20	150	121	180	159	241	106	124	94	110	120	61	76
21	148	128	163	147	231	77	137	97	120	116	81	94
22	156	145	143	127	216	67	142	89	113	107	93	81
23	182	170	132	124	199	67	160	85	91	102	112	59
24	188	160	134	119	171	77	163	82	98	115	118	48
25	185	151	115	111	177	81	153	88	74	108	106	56
26	170	136	117	129	133	79	161	73	59	121	84	58
27	155	118	106	138	126	113	162	80	79	118	97	50
28	169	124	124	115	120	132	142	106	106	118	102	51
29	148	100	117	109	113	138	119	113	123	99	90	
30	148	100	93	114	112	144	100	108	138	111	70	
31	164		67		93	157		111		87	93	
Mean	138.5	125.5	121.6	124.9	170.1	130.5	109.7	100.1	106.5	104.5	95.1	80.1

* = Provisional.

Penticton 2800 MHz (10.7cm) Solar Flux Mar 2000 - Feb 2001

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Adjusted to 1 AU



Day	Mar 00	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 00	Feb
1	228.7	222.7	160.1	152.3	169.2	153.9	160.5	201.9	201.2	179.3	165.3	156.2
2	209.6	219.3	155.3	192.7+	167.9	155.1	156.7	202.9	193.2	162.3	170.2	161.6
3	200.4	215.5	139.6	170.7	161.5	158.8	156.7	192.1	195.5	158.9	164.2	159.0
4	197.0	206.9	136.8	174.7	163.7	158.7	173.6	184.1	191.4	147.6	168.8	144.0
5	216.8	194.7	132.1	176.1	174.4	163.2	183.1	173.7	183.1	142.7	170.5	160.7
6	219.1	178.1	129.1	192.0	180.1	170.8	181.5	157.9	174.9	136.9	173.4	165.3
7	218.5	175.4	133.4	185.8	193.5	171.6	175.8	155.3	176.6	139.9	170.9	159.6
8	211.8	182.5	139.6	179.9	217.1	175.6	165.7	148.6	169.5	134.1	161.5	152.3
9	203.0	176.9	152.5	174.1	218.4	187.2	153.0	140.4	163.0	130.7	160.8	158.1
10	200.7	178.6	182.8+	185.1	252.7	185.9	142.5	139.1	150.4	142.1	157.4	156.5
11	200.6	182.4	181.3	192.6	249.7	192.3	136.7	150.8	146.6	139.2	160.5	147.4
12	200.8	173.9	194.4	198.7	325.1+	194.3	134.2	161.9	143.6	145.2	172.5	140.9
13	186.0	165.0	222.0	205.5	239.6	190.9	134.8	167.2	140.6	159.5	178.3	137.8
14	180.6	166.3	237.6	206.9	210.6	194.3	152.5	162.3	145.4	176.5	170.6	134.6
15	175.9	164.9	249.9	208.9	220.1	198.9	161.1	160.1	143.2	181.9	163.8	131.8
16	182.5	160.2	264.5	203.8	226.1	190.3	176.4	159.8	150.7	184.4	156.6	126.5
17	190.6	159.2	268.1	199.4	235.8	181.5	183.2	153.0	159.6	190.4	147.0	126.8
18	193.0	161.8	258.8	193.7	270.5	173.6	205.7	149.9	172.9	191.6	146.6	129.0
19	206.5	169.2	260.4	184.2	258.0	160.8	208.8	156.5	170.7	192.2	147.7	134.0
20	208.7	182.4	251.6	189.7	261.1	156.0	213.1	159.3	169.6	194.8	148.3	142.3
21	228.9	189.2	238.0	194.2	259.0	154.9	226.7	156.5	180.9	188.2	146.7	140.5
22	232.2	204.1	220.3	185.6	259.0	147.5	233.8	158.6	190.1	183.8	157.1	142.7
23	222.7	208.4	209.5	181.0	224.3	139.9	226.7	164.8	200.1	184.7	162.0	142.2
24	217.7	208.1	194.3	173.9	232.0	133.5	225.8	157.5	192.1	186.7	167.2	134.6
25	204.1	205.1	177.4	180.9	208.2	136.0	226.8	162.0	197.0#	180.9	163.4	132.2
26	210.4	192.4	172.4	183.4	180.1	139.9	224.7	168.9	197.0	182.6	160.5	132.8
27	204.1	186.0	166.2	184.6	167.4	153.2	205.5	173.7	186.6	181.4	161.8	128.1
28	200.3	186.0	160.2	181.2	162.7	163.2	203.0	179.7	190.3	179.3	162.6	129.4
29	208.3	177.5	153.1	168.8	157.9	166.5	192.6	184.5	183.2	175.5	160.5	
30	205.1	172.0	150.5	165.0	154.5	167.9	194.0	191.0	187.0	176.1	154.9	
31	225.1		158.7		152.4	165.9		190.5		163.9	148.8	
Mean	206.1	185.5	188.7	185.5	211.4	167.2	183.8	166.6	174.9	168.2	161.3	143.1

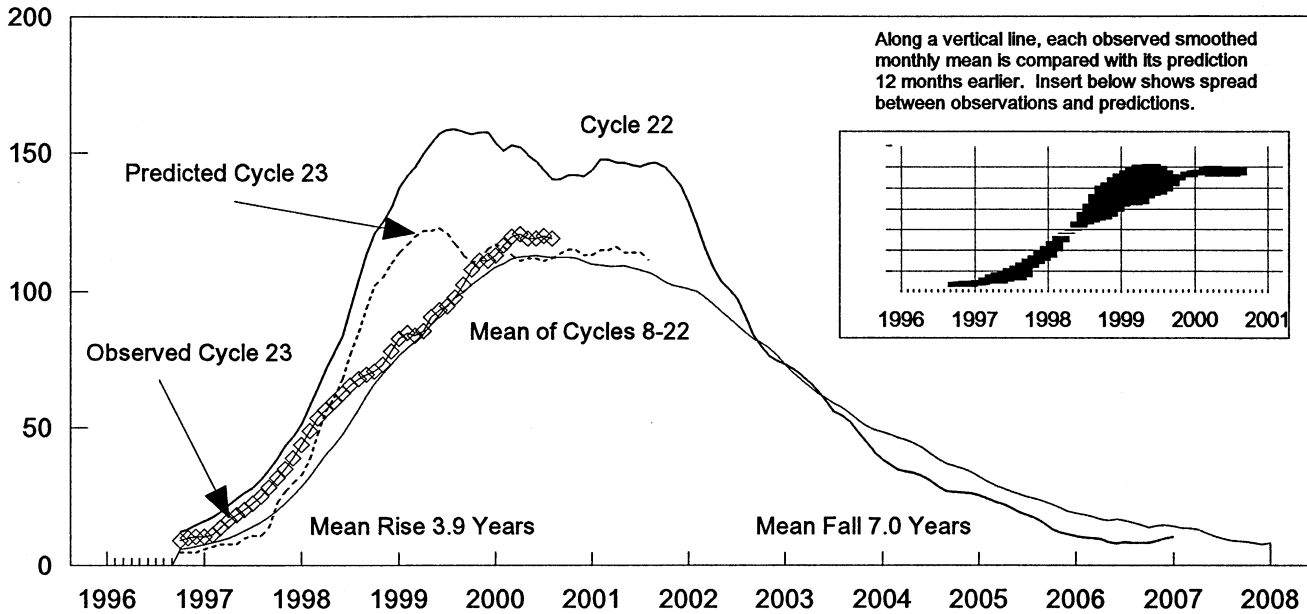
NOTE: #1800UT reading - burst in progress at 2000UT; + Burst in progress.

26
Feb 01

DAILY SOLAR INDICES
February 2001

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers		Obs Flux Penticton (2800)	Solar Flux Adjusted to 1 Astronomical Unit								
			Int	Amer		SGMR (15400)	SGMR (8800)	SGMR (4995)	Pentic (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
1	32	26	78	76	160.9	543	288	185	156.2	135	120	69	41	15
2	33	27	78	88	166.3	545	293	186	161.6	136	120	65	39	15
3	34	1	92	102	163.6	544	297	185	159.0	141	122	62	38	15
4	35	2	91	107	148.1	542	298	184	144.0	139	124	66	40	16
5	36	3	105	112	165.3	541	299	184	160.7	143	129	67	43	26
6	37	4	110	122	170.0	540	291	190	165.3	146	130	65	42	21
7	38	5	105	125	164.0	544	281	177	159.6	135	126	66	40	16
8	39	6	111	124	156.5	537	287	174	152.3	138	127	65	40	15
9	40	7	114	128	162.4	504	280	175	158.1	135	124	62	39	15
10	41	8	105	103	160.7	545	290	179	156.5	137	127	69	43	15
11	42	9	100	100	151.3	541	293	173	147.4	129	120	68	--	15
12	43	10	71	75	144.6	536	286	170	140.9	119	112	63	40	15
13	44	11	71	84	141.3	535	275	166	137.8	120	109	65	45	23
14	45	12	68	81	137.9	520	280	163	134.6	114	103	62	40	13
15	46	13	75	79	135.1	538	274	163	131.8	115	104	65	40	17
16	47	14	73	68	129.6	525	266	158	126.5	111	99	62	40	14
17	48	15	71	66	129.8	521	270	154	126.8	109	100	62	37	14
18	49	16	76	81	132.0	531	282	158	129.0	110	99	62	38	15
19	50	17	75	84	137.0	532	268	157	134.0	117	103	65	39	16
20	51	18	76	88	145.5	533	278	171	142.3	124	110	68	39	16
21	52	19	94	102	143.6	531	273	168	140.5	122	110	68	43	14
22	53	20	81	84	145.8	521	284	171	142.7	126	111	61	37	14
23	54	21	59	72	145.2	537	281	187	142.2	122	113	67	40	17
24	55	22	48	66	137.3	535	281	175	134.6	117	105	62	39	15
25	56	23	56	62	134.9	375	183	179	132.2	118	101	64	40	15
26	57	24	58	61	135.4	530	255	161	132.8	116	105	64	40	15
27	58	25	50	53	130.6	533	265	164	128.1	116	104	62	37	14
28	59	26	51	57	131.8	532	281	169	129.4	114	105	64	40	15
MEAN			80.1	87.5	146.7	528	277	172	143.1	125	112	64	39	15

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



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

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1993	71	69	67	64	60	56	55	52	48	45	41	38	56
1994	37	35	34	34	33	31	29	27	27	27	26	26	31
1995	24	23	22	21	19	18	17	15	13	12	11	11	17
1996	10	10	10	9	8*	9	8	8	8	9**	10	10	8
1997	11	11	14	17	18	20	23	25	28	32	35	39	23
1998	44	49	53	57	59	63	65	68	69	71	73	78	62
1999	83	85	84	85	90	93	94	98	102	108	111	111	95
2000	113	117	120	121	119	119	120	119	118	118	117	116	118
									(5)	(10)	(15)	(18)	(4)
2001	116	116	115	115	114	114	113	111	111	109	108	107	113
	(19)	(22)	(23)	(26)	(29)	(29)	(28)	(28)	(30)	(30)	(30)	(29)	(27)
	Solar Cycle 22				Solar Cycle 23				Min, Max, and Predictions				

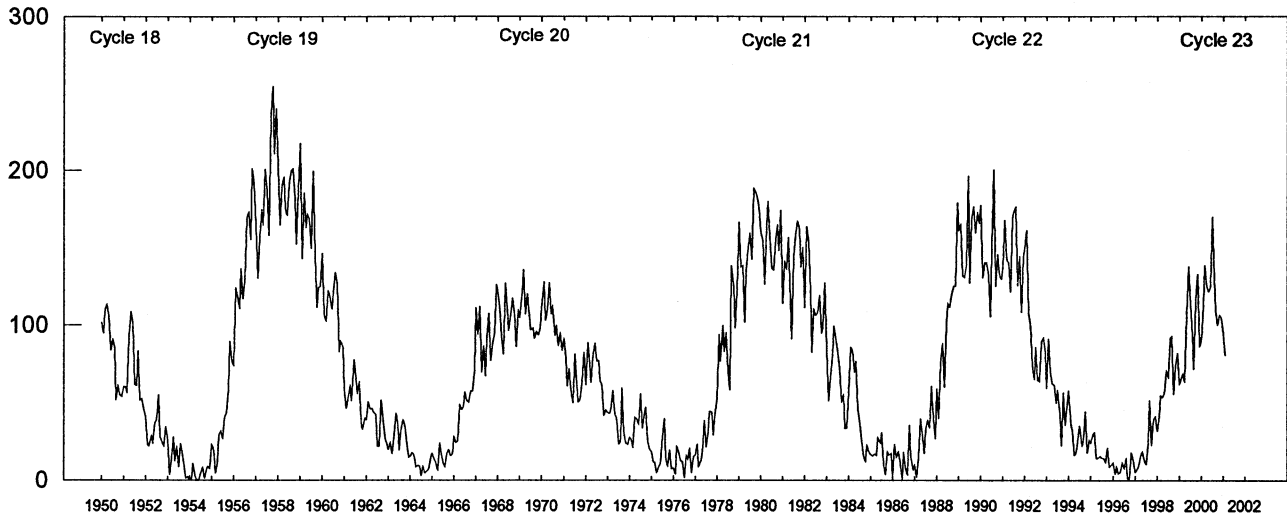
* May 1996 marks Cycle 22's mathematical minimum. ** October 1996 marks the consensus minimum NGDC is now using.

Observed and Predicted Numbers. For the end of Cycle 22, and the rise and decline of Cycle 23, the table above lists observed smoothed sunspot numbers up to the one that includes the most recent monthly mean. We based these smoothed values on final monthly means through Sep 2000 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 August 2001 prediction. There exists a 90% chance that in August 2001, the actual smoothed number will fall somewhere between 83 and 139.

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

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

Mean Monthly Sunspot Numbers Jan 1950 - Feb 2001



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.1	83.9
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8	69.4
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3	31.5
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5	13.9
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6	4.4 m
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9	38.0
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1	141.7
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4	190.2 M
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6	184.8
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0	159.0
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6	122.3
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.8	63.6	37.7	32.6	39.9	53.9
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2	37.6
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9	27.9
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1	10.2 m
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0	15.1
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4	47.0
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4	93.8
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8	105.9 M
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9	105.5
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5	104.5
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2	66.6
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3	68.9
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3	38.0
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5	34.5
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8	15.5
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3	12.6 m
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.2	27.5
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.7	92.5
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.3	155.4 M
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.4	154.6
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.1	140.4
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.0	115.9
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.4	66.6
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7	12.0	22.8	18.7	45.9
1985	16.5	15.9	17.2	16.2	27.5	24.2	30.7	11.1	3.9	18.6	16.2	17.3	17.9
1986	2.5	23.2	15.1	18.5	13.7	1.1	18.1	7.4	3.8	35.4	15.2	6.8	13.4 m
1987	10.4	2.4	14.7	39.6	33.0	17.4	33.0	38.7	33.9	60.6	39.9	27.1	29.4
1988	59.0	40.0	76.2	88.0	60.1	101.8	113.8	111.6	120.1	125.1	125.1	179.2	100.2
1989	161.3	165.1	131.4	130.6	138.5	196.2	126.9	168.9	176.7	159.4	173.0	165.5	157.6 M
1990	177.3	130.5	140.3	140.3	132.2	105.4	149.4	200.3	125.2	145.5	131.4	129.7	142.6
1991	136.9	167.5	141.9	140.0	121.3	169.7	173.7	176.3	125.3	144.1	108.2	144.4	145.7
1992	150.0	161.1	106.7	99.8	73.8	65.2	85.7	64.5	63.9	88.7	91.8	82.6	94.3
1993	59.3	91.0	69.8	62.2	61.3	49.8	57.9	42.2	22.4	56.4	35.6	48.9	54.6
1994	57.8	35.5	31.7	16.1	17.8	28.0	35.1	22.5	25.7	44.0	18.0	26.2	29.9
1995	24.2	29.9	31.1	14.0	14.5	15.6	14.5	14.3	11.8	21.1	9.0	10.0	17.5
1996	11.5	4.4	9.2	4.8	5.5	11.8	8.2	14.4	1.6	0.9	17.9	13.3	8.6 m
1997	5.7	7.6	8.7	15.5	18.5	12.7	10.4	24.4	51.3	22.8	39.0	41.2	21.5
1998	31.9	40.3	54.8	53.4	56.3	70.7	66.6	92.2	92.9	55.5	74.0	81.9	64.3
1999	62.0	66.3	68.8	63.7	106.4	137.7	113.5	93.7	71.5	116.7	133.2	84.6	93.2
2000	90.1	112.9	138.5	125.5	121.6	124.9	170.1	130.5	109.7	100.1	106.5	104.5	119.6
2001	95.1	80.1											87.6

Values are preliminary after Sep 00. For the yearly means, each 'M' marks a sunspot cycle maximum and each 'm' a minimum.

H α SOLAR FLARES

FEBRUARY 2001

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF		Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement		Remarks
							Region	Mo Day						Time (UT)	Apparent (10 ⁻⁶ Disk)		Corr (Sq Deg)
GOES	01	0707	0712	0715	N28	E55	9330		8	SF	C	7.9				2.1E-03
LEAR		0710	0711	0718	N28	E55	9330	02	5.6	8	SF		3	E	61	F
GOES		1255	1300	1304	N26	E53	9330			9	SF	C	2.6			9.6E-04
RAMY		1259	1259	1306	N26	E53	9330	02	5.6	7	SF		3	E	25	F
HOLL		1558	1559	1602	N10	E88		02	8.3	4	SF		3	E	31	
HOLL		1606	1607	1610	N10	E89		02	8.3	4	SF		3	E	22	F
GOES		1707	1712	1717	N28	E51	9330			10	SF	C	4.1			1.7E-03
HOLL		1710	1710	1723	N28	E51	9330	02	5.7	13	SF		3	E	80	F
RAMY		1710	1711U	1725	N27	E51	9330	02	5.7	15	SF		3	E	79	
HOLL		1849	1849	1854	N10	E79	9334	02	7.7	5	SF		3	E	10	
GOES		2030	2054	2121						51		C	1.5			3.9E-03
GOES		2246	2250	2254						8		C	1.3			5.5E-04
HOLL		2336	2337	2344	N10	E74	9334	02	7.5	8	SF		3	E	40	F
HOLL		2356	2359	2402	N08	E74	9334	02	7.5	6	SF		3	E	37	F
GOES	02	0226	0230	0234						8		C	1.3			5.4E-04
GOES		0847	0918	1033						106		C	2.3			1.2E-02
GOES		1909	2037	2207						178		C	3.3			2.5E-02
GOES		2348	2406	2420	N09	E72	9334			32	1F	M	2.4			2.9E-02
HOLL		2357E	2359U	2401D	N08	E68	9334	02	8.1	4D	SF		3	E	60	F
LEAR		2359E	2404	2436	N09	E72	9334	02	8.4	37D	1F		2	E	193	F
GOES	03	1536	1619	1706						90		C	1.3			5.9E-03
GOES	04	0002	0022	0111	N26	E20	9330			69	SF	C	1.7			6.2E-03
LEAR		0020	0022	0032	N26	E20	9330	02	5.6	12	SF		4	E	15	
LEAR		0202	0204	0214	N25	E18	9330	02	5.5	12	SF		4	E	23	F
GOES		0235	0253	0326	N15	E43	9334			51	SF	C	1.7			4.3E-03
LEAR		0244	0251	0338	N15	E43	9334	02	7.4	54	SF		4	E	63	
GOES		0604	0610	0616	S17	E70				12	SF	C	2.0			1.1E-03
LEAR		0615	0616	0620	S17	E70		02	9.6	5	SF		3	E	13	
GOES		0818	0823	0827						9		C	1.7			7.0E-04
GOES		0835	0841	0847	N23	E13	9330			12	SF	C	2.5			1.4E-03
LEAR		0837	0838	0850	N23	E13	9330	02	5.4	13	SF		3	E	73	
GOES		0923	0928	0937	S10	E83				14	SF	C	1.4			9.4E-04
LEAR		0926	0927	0930	S10	E83		02	10.6	4	SF		3	E	32	
GOES		1224	1231	1238	S12	E83				14	SF	C	1.0			7.8E-04
RAMY		1229	1231	1246	S12	E83		02	10.8	17	SF		3	E	51	
GOES		1242	1245	1250	N12	E39	9334			8	SF	C	1.0			4.6E-04
RAMY		1244	1244	1251	N12	E39	9334	02	7.5	7	SF		3	E	23	F
GOES		2308	2313	2319	N10	E35	9334			11	SF	C	1.3			6.8E-04
HOLL		2311	2312	2314	N10	E36	9334	02	7.7	3	SF		3	E	30	
LEAR		2312	2312	2317	N10	E35	9334	02	7.6	5	SF		3	E	15	F
GOES	05	0057	0104	0107	S09	E78	9339			10	SF	B	8.0			3.9E-04
LEAR		0103	0104	0107	S09	E78	9339	02	10.9	4	SF		3	E	14	
GOES		0222	0226	0228	N12	E32	9334			6	SF	B	9.5			2.8E-04
LEAR		0224	0225	0229	N12	E32	9334	02	7.5	5	SF		3	E	25	F
GOES		1505	1520	1535	N07	E38	9335			30	1F	C	8.2			1.0E-02
HOLL		1509	1514	1541	N09	E37	9335	02	8.4	32	1F		3	E	100	F
RAMY		1517	1519	1556	N07	E38	9335	02	8.5	39	1F		3	E	143	F
GOES		1644	1652	1700	N21	W74	9327			16	SF	C	1.9			1.6E-03
RAMY		1646	1650	1658	N23	W72	9327	01	31.1	12	1F		3	E	106	
HOLL		1647	1652	1658	N21	W74	9327	01	31.0	11	SF		3	E	35	
GOES		2315	2321	2330	N13	E44	9335			15	SF	C	1.2			1.1E-03
HOLL		2316	2319	2325	N13	E44	9335	02	9.3	9	SF		3	E	12	F
GOES	06	1127	1132	1134						7		C	1.5			4.8E-04
GOES		2006	2011	2022						16		B	9.9			8.5E-04
GOES		2023	2028	2036						13		C	1.1			8.1E-04
GOES		2345	2350	2355						10		C	1.0			5.8E-04
GOES	07	0044	0048	0053						9		C	1.0			4.6E-04
GOES		1401	1408	1423						22		B	9.9			1.1E-03
GOES		2121	2131	2146						25		B	9.2			1.1E-03
GOES	08	1807	1811	1815						8		B	7.8			3.3E-04
GOES		2025	2030	2042	N08	E04	9335			17	SF	C	1.1			9.2E-04

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Feb 01

H α SOLAR FLARES

FEBRUARY 2001

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
HOLL	08	2029	2029	2033	N08	E04	9335	02	9.1	4	SF	3	E			16		
		GOES	2119	2122						2124									5	B 6.4	1.6E-04
GOES	09	0920	0924	0943						23	B 6.7							8.7E-04
GOES		1541	1549	1557						16	C 1.2							9.3E-04
GOES		1716	1727	1733			9335			17	C 1.0							8.8E-04
RAMY		1719	1721	1729	S19	W01	9338	02	9.6	10	SF	3	E					F
HOLL		1720	1720	1725	S19	W01	9338	02	9.6	5	SF	3	E					F
RAMY		1726	1727	1731	N08	W06	9335	02	9.3	5	SF	3	E					F
GOES		2102	2107	2115	S19	W02	9338			13	SF C 2.0							1.4E-03
HOLL		2105	2107	2135	S19	W02	9338	02	9.7	30	SF	3	E					UF
RAMY		2108	2108	2117	S19	W02	9338	02	9.7	9	SF	3	E					F
GOES		2140	2150	2155	S21	E01	9338			15	SF C 3.5							2.3E-03
HOLL		2143	2144	2213	S21	E01	9338	02	10.0	30	SF	3	E					F
GOES		2257	2321	2345	S19	W01	9338			48	SF C 3.1							6.7E-03
HOLL		2300	2302	2354	S19	W01	9338	02	9.9	54	SF	3	E					UF
GOES	10	0005	0009	0011						6	C 1.6							5.0E-04
LEAR		0146	0152	0202	S17	W04	9338	02	9.8	16	SF	3	E					F
GOES		0249	0253	0256	S18	W06	9338			7	SF C 1.5							5.2E-04
LEAR		0251	0253	0336	S18	W06	9338	02	9.7	45	SF	3	E					F
GOES		0355	0421	0434						39	C 2.0							4.0E-03
GOES		0531	0534	0537						6	C 1.4							4.5E-04
GOES		2007	2010	2017	S21	W12	9338			10	SF C 1.9							8.3E-04
RAMY		2010	2010	2024	S21	W12	9338	02	9.9	14	SF	3	E					F
HOLL		2012	2012	2016	S22	W12	9338	02	9.9	4	SF	3	E					UF
GOES	11	0057	0123	0146	N24	W57	9346			49	1F C 6.5							1.3E-02
LEAR		0059	0108	0205	N24	W57	9330	02	6.6	66	1F	3	E					F
LEAR		0107	0113	0151	N16	W63	9346	02	6.3	44	SF	3	E					29
LEAR	0908E	0912	0927	0927	S17	W23	9338	02	9.6	190	SF	3	E					F
GOES		0909	0915	0920	S17	W23	9338			11	SF C 2.1							1.1E-03
GOES		1317	1321	1326	S18	W25	9338			9	SF B 7.8							3.5E-04
RAMY		1321	1321	1328	S18	W25	9338	02	9.6	7	SF	3	E					FH
GOES		1607	1614	1620						13	B 6.5							4.6E-04
GOES	12	0112	0118	0121			9338			9	C 5.9							1.6E-03
GOES		2021	2037	2053	N12	W60	9334			32	SF C 4.2							5.5E-03
HOLL		2026	2027	2056	N12	W60	9334	02	8.3	30	SF	3	E					F
LEAR	13	0538	0539	0548	N08	W23	9348	02	11.5	10	SF	3	E					F
GOES		1508	1512	1514						6	B 8.2							2.1E-04
GOES		1629	1633	1635	N15	W33	9348			6	SF C 1.1							2.7E-04
RAMY		1630	1634	1645	N15	W33	9348	02	11.2	15	SF	3	E					36
GOES	14	0552	0618	0638	N18	E41	9350			46	SF C 1.7							3.1E-03
LEAR		0601	0614	0634	N18	E41	9350	02	17.4	33	SF	4	E					F
GOES	15	0531	0533	0536						5	B 6.4							1.4E-04
GOES		1040	1043	1046						6	B 4.6							1.4E-04
GOES		1308	1416	1518						130	B 8.8							6.0E-03
GOES		2020	2106	2131						71	B 8.5							2.8E-03
GOES	16	1230	1235	1238						8	B 5.5							2.0E-04
GOES		2007	2012	2019						12	B 4.1							2.6E-04
GOES		2026	2030	2034						8	B 9.8							3.6E-04
GOES	17	0310	0314	0317						7	B 6.0							1.9E-04
GOES		1048	1053	1059						11	B 3.5							2.0E-04
GOES		1631	1639	1645						14	B 4.2							3.2E-04
GOES	18	0156	0201	0207						11	B 3.3							2.0E-04
GOES		1821	1929	2006						105	C 1.7							6.1E-03
GOES	19	1030	1043	1047						17	B 7.5							6.5E-04
RAMY		1131E	1132U	1135	S09	E00	9354	02	19.5	40	SF	3	E					F
GOES		1308	1314	1319	S09	W01	9354			11	SF B 7.9							4.5E-04
RAMY		1312	1313	1321	S09	W01	9354	02	19.5	9	SF	3	E					F

H α SOLAR FLARES

FEBRUARY 2001

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/	CMP	Dur	Imp	Obs	Area Measurement			Remarks
							USAF					Region	Mo	Day		Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)
GOES	19	1348	1351	1358					10	B 7.8					4.0E-04
GOES		1514	1518	1525					11	B 7.7					4.0E-04
GOES		1947	1952	2000					13	B 9.7					6.5E-04
GOES		2043	2100	2121					38	C 5.4					8.5E-03
GOES	20	0110	0122	0129					19	C 3.1					2.4E-03
GOES		0344	0349	0357					13	B 9.8					6.4E-04
GOES		1356	1400	1404					8	B 8.4					3.3E-04
GOES		1447	1451	1454	S09	W15	9354		7	SF C 2.2					6.9E-04
HOLL		1450	1451	1455	S09	W15	9354	02	19.5	5	SF	3	E	41	
GOES		1537	1541	1547	S09	W15	9354		10	SF C 2.1					1.1E-03
HOLL		1540	1540	1546	S09	W15	9354	02	19.5	6	SF	3	E	14	F
GOES		1706	1711	1716					10	C 1.5					7.5E-04
RAMY		2029	2029	2038	S09	W19	9354	02	19.4	9	SF	3	E	17	F
GOES		2337	2341	2345					8	B 6.4					2.4E-04
GOES	21	0758	0802	0806					8	B 6.2					2.7E-04
GOES		0807	0820	0828					21	C 3.0					2.9E-03
GOES		1411	1427	1440	S08	W29	9354		29	SF C 6.2					7.1E-03
RAMY		1416	1426	1447	S08	W29	9354	02	19.4	31	SF	3	E	49	F
SVTO		1422	1425	1430	S09	W28	9354	02	19.5	8	SF	3	E	16	F
HOLL		1423E	1423U	1440	S07	W27	9354	02	19.6	17D	SF	3	E	55	F
GOES		2005	2010	2014	S08	W31	9354		9	SF C 1.2					4.8E-04
RAMY		2009	2010	2031	S08	W31	9354	02	19.5	22	SF	3	E	23	F
GOES		2251	2259	2306					15	C 1.8					1.3E-03
LEAR	22	0004E	0004	0009	S08	W34	9354	02	19.4	5D	SF	5	E	14	
LEAR		0036	0036	0043	S09	W34	9354	02	19.5	7	SF	5	E	11	F
GOES		0156	0159	0202	S22	W53	9353		6	SF C 1.1					3.2E-04
LEAR		0157	0158	0212	S22	W53	9353	02	18.0	15	SF	5	E	80	F
LEAR		0650E	0650U	0656	S09	W36	9354	02	19.6	6D	SF	3	E	17	F
RAMY		1319	1323	1326	S07	W41	9354	02	19.5	7	SF	3	E	49	
GOES	23	0611	0631	0638					27	B 8.3					1.1E-03
GOES		1224	1228	1233					9	B 6.2					3.0E-04
GOES		1256	1309	1322					26	C 1.1					1.5E-03
GOES		1417	1423	1428	N11	E44	9359		11	SF C 1.4					8.6E-04
RAMY		1419	1421	1436	N11	E44	9359	02	26.9	17	SF	3	E	16	F
GOES		1613	1617	1620					7	B 5.6					2.0E-04
GOES		1622	1626	1629	S26	W27	9357		7	SF B 8.2					2.7E-04
RAMY		1625	1627	1632	S26	W27	9357	02	21.6	7	SF	3	E	16	H
GOES		2147E	2319U	2406D					139D	C 2.2					1.0E-02
LEAR		2300E	2327	2408	S12	E46		02	27.4	68D	SF	4	E	64	FT
GOES	24	0420	0426	0435					15	B 7.3					5.8E-04
GOES		0832	0835	0838					6	B 5.4					1.7E-04
GOES		1354	1357	1359					5	C 1.1					2.2E-04
GOES		2155	2201	2204					9	B 4.5					2.2E-04
GOES	25	0140	0146	0157					17	B 5.2					4.9E-04
GOES		2129	2137	2151	S27	W56	9357		22	SF B 7.4					8.5E-04
RAMY		2140	2141	2144	S27	W56	9357	02	21.5	4	SF	3	E	11	
GOES		2329	2335	2351					22	B 7.1					8.0E-04
LEAR	26	0046	0046	0050	S04	W88	9354	02	19.4	4	SF	4	E	16	
GOES		0514	0741	0749					155	C 1.6					4.2E-03
GOES		1225	1229	1232					7	B 8.4					3.2E-04
GOES		2345	2348	2351					6	B 8.1					2.6E-04
GOES		2359	2403	2409					10	C 1.1					6.0E-04
GOES	27	1004	1008	1012	N12	W12	9359		8	SF C 1.3					4.8E-04
LEAR		1007	1008	1012	N12	W12	9359	02	26.5	5	SF	3	E	35	F
GOES		1242	1245	1252					10	B 4.8					2.7E-04
GOES		1324	1331	1334					10	C 1.1					4.3E-04
GOES		1731	1742	1752					21	B 7.9					9.4E-04

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

FEBRUARY 2001

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
01	2695 LEAR	4 S/F	0710.0	0710.0	1010.0	120.0			QL=2 ST=1 TYP=3
	8800 LEAR	4 S/F	0710.0	0710.0	1010.0	99.0			QL=2 ST=1 TYP=3
02	2695 LEAR	48 C	2354.0	2359.0	8.0	100.0			QL=2 ST=2 TYP=8
	2695 PALE	48 C	2354.0	2359.0	8.0	86.0			QL=4 ST=2 TYP=8
	8800 LEAR	4 S/F	2354.0	2359.0	20.0	77.0			QL=2 ST=2 TYP=3
	8800 PALE	48 C	2354.0	2359.0	21.0	110.0			QL=4 ST=2 TYP=8
05	2695 LEAR	8 S	0443.0	0443.0	U	66.0			QL=2 ST=2 TYP=3
	2695 SVTO	4 S/F	1510.0	1512.0	4.0	39.0			QL=4 ST=2 TYP=3
	2695 SGMR	4 S/F	1510.0	1512.0	12.0	68.0			QL=4 ST=2 TYP=3
	8800 SGMR	4 S/F	1514.0	1516.0	8.0	34.0			QL=4 ST=2 TYP=3
11	2695 SVTO	8 S	1029.0	1030.0	1.0	54.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	1029.0	1030.0	1.0	97.0			QL=4 ST=2 TYP=3
21	8800 SVTO	4 S/F	1418.0	1425.0	9.0	93.0			QL=4 ST=2 TYP=3
	8800 SGMR	4 S/F	1419.0	1420.0	4.0	89.0			QL=4 ST=2 TYP=3
	8800 SGMR	4 S/F	1425.0	1425.0	3.0	100.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	1425.0	1425.0	1.0	79.0			QL=4 ST=3 TYP=3

Reports are received routinely from the following observatories:

LEAR = Learmonth

PALE = Palehua

SGMR = Sagamore Hill

SVTO = San Vito

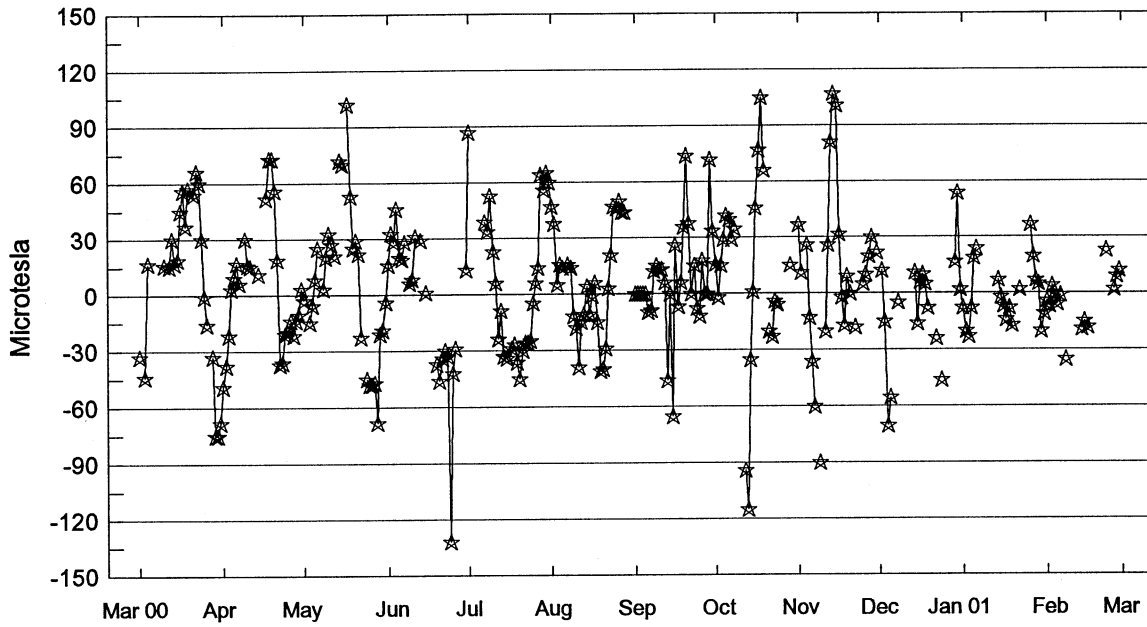
Explanation of Type Code:

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

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

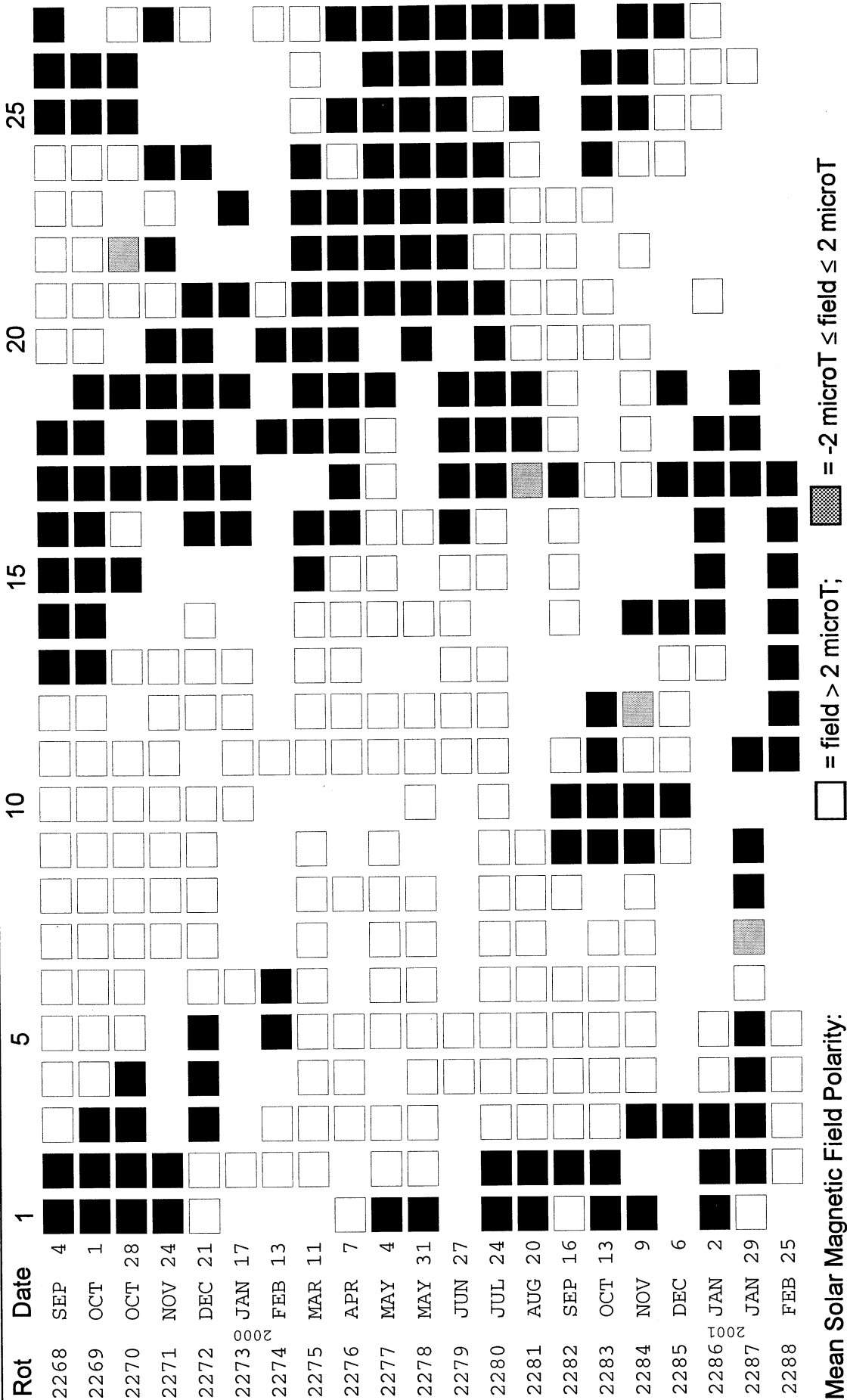
Stanford Mean Solar Magnetic Field (Microtesla) "Sun-As-A-Star"

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Feb 01



Day	Mar 00	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 01	Feb
1	-33	-49	-3	16	87	47	---	16	37	---	-8	-4
2	---	-38	---	33	---	38	---	-2	11	12	-20	-7
3	-44	-22	-15	28	---	5	---	15	---	-15	-23	4
4	17	3	-6	46	---	16	---	29	26	-70	-8	0
5	---	9	8	20	---	14	0	42	-13	-55	19	-6
6	---	17	25	19	---	---	-10	40	-36	---	24	-1
7	---	6	---	28	39	16	-9	29	-60	---	---	---
8	---	---	3	---	34	14	12	35	---	-5	---	-35
9	---	30	20	6	53	-12	15	---	-90	---	---	---
10	16	26	33	8	23	-18	13	---	---	---	---	---
11	---	15	27	31	6	-39	13	---	-20	---	---	---
12	15	---	21	---	-24	-15	6	-94	26	---	---	---
13	30	---	---	29	-9	-11	-46	-115	81	---	---	---
14	17	11	72	---	-33	4	---	-35	107	11	7	-19
15	19	---	70	1	-34	-11	-65	1	101	-16	-2	-15
16	45	---	---	---	---	-1	26	46	32	6	-7	-18
17	56	52	102	---	-29	6	-7	77	-2	10	-14	---
18	37	73	53	---	-27	-15	6	105	-17	5	-8	---
19	57	73	25	-37	-36	-41	36	66	9	-8	-17	---
20	---	56	29	-46	-45	-40	74	---	0	---	---	---
21	54	19	22	-34	-30	-29	38	-20	---	---	---	---
22	66	-37	-23	-30	-26	3	---	-23	-18	-24	2	---
23	60	-36	---	-33	-26	21	15	-4	---	---	---	23
24	30	-21	-45	-132	-25	47	-8	-6	---	-46	---	---
25	-1	-20	-48	-42	-5	46	-12	---	5	---	---	---
26	-16	-14	-48	-29	6	50	18	---	10	---	37	2
27	---	-22	-47	---	14	44	---	---	20	---	20	9
28	-33	-14	-68	---	64	44	---	---	30	---	7	12
29	-75	-11	-21	---	56	---	72	15	---	17	5	---
30	-75	3	-19	13	65	---	34	---	22	54	-20	---
31	-68	---	-4	---	60	---	---	---	---	2	-11	---

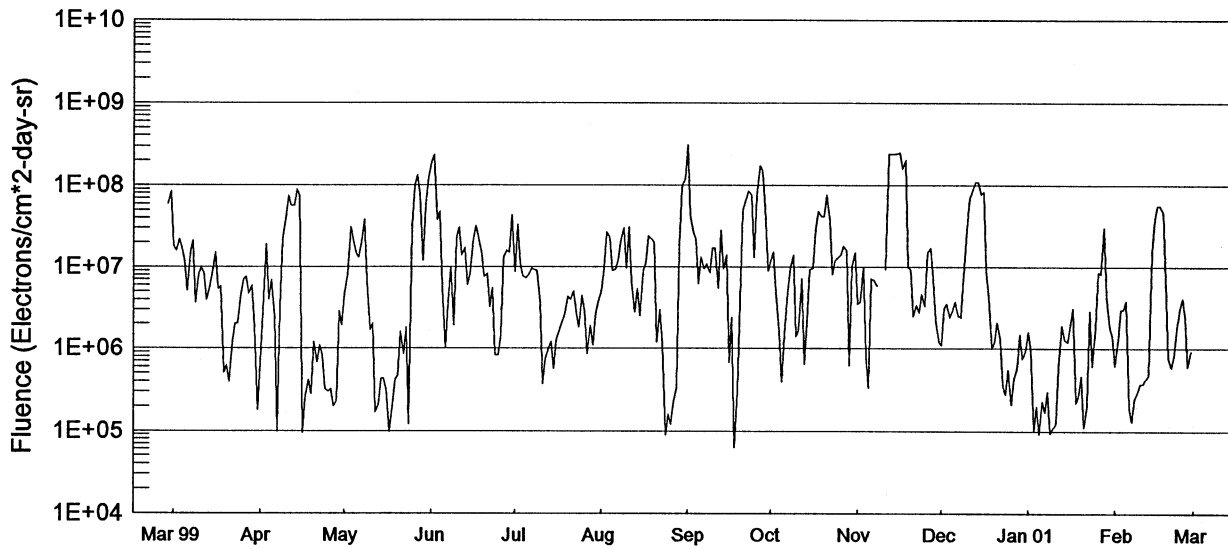
STANFORD MEAN SOLAR MAGNETIC FIELD



= field > 2 microT;
 = field < -2 microT;
 = -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.

GOES Daily Electron Fluence Mar 2000 - Feb 2001



Day	Mar 00	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 01	Feb
1	1.8E+07	6.8E+05	4.6E+06	1.9E+08	8.7E+06	5.0E+06	3.1E+08	1.2E+07	3.5E+06	1.1E+06	1.6E+06	6.2E+05
2	1.6E+07	2.9E+06	8.1E+06	2.3E+08	3.3E+07	9.5E+06	4.3E+07	1.5E+07	3.7E+06	3.1E+06	1.0E+06	1.3E+06
3	2.2E+07	1.9E+07	3.1E+07	3.8E+07	1.1E+07	2.7E+07	2.7E+07	4.8E+06	1.0E+07	3.5E+06	1.0E+05	3.0E+06
4	1.7E+07	4.0E+06	2.1E+07	4.7E+07	7.7E+06	2.3E+07	2.2E+07	1.6E+06	8.3E+05	2.4E+06	2.0E+05	3.0E+06
5	1.2E+07	6.9E+06	1.5E+07	5.5E+06	7.3E+06	9.0E+06	6.2E+06	3.9E+05	3.3E+05	2.9E+06	9.2E+04	3.8E+06
6	5.1E+06	2.4E+06	1.3E+07	1.0E+06	8.3E+06	9.4E+06	1.3E+07	1.5E+06	7.1E+06	3.7E+06	2.3E+05	1.9E+05
7	1.5E+07	9.7E+04	2.1E+07	3.7E+06	9.6E+06	1.2E+07	9.5E+06	4.8E+06	6.8E+06	2.5E+06	1.7E+05	1.3E+05
8	2.1E+07	3.1E+06	3.8E+07	1.0E+07	9.2E+06	2.1E+07	1.1E+07	9.5E+06	5.8E+06	2.4E+06	3.0E+05	2.4E+05
9	3.6E+06	2.2E+07	6.6E+06	1.9E+06	9.1E+06	3.0E+07	8.6E+06	1.4E+07	-999	7.6E+06	9.3E+04	3.0E+05
10	8.2E+06	4.1E+07	1.7E+06	2.3E+07	3.7E+06	9.7E+06	1.7E+07	1.4E+06	-999	2.8E+07	1.1E+05	3.7E+05
11	9.8E+06	7.4E+07	2.0E+06	3.0E+07	3.7E+05	3.1E+07	1.7E+07	1.7E+06	9.4E+06	6.9E+07	1.2E+05	3.7E+05
12	8.5E+06	5.7E+07	1.7E+05	1.4E+07	7.4E+05	6.3E+06	5.5E+06	7.1E+06	2.4E+08	8.9E+07	6.1E+05	4.2E+05
13	4.0E+06	5.7E+07	2.1E+05	1.7E+07	1.0E+06	2.8E+06	2.8E+07	6.4E+05	2.4E+08	1.1E+08	1.9E+06	4.7E+05
14	5.7E+06	8.8E+07	4.3E+05	6.0E+06	1.2E+06	5.4E+06	9.5E+06	2.1E+06	2.4E+08	1.1E+08	1.3E+06	1.5E+07
15	9.4E+06	7.4E+07	4.3E+05	8.2E+06	5.7E+05	2.5E+06	1.4E+07	9.4E+06	2.4E+08	7.8E+07	1.2E+06	3.9E+07
16	1.5E+07	9.3E+04	3.2E+05	2.2E+07	1.3E+06	9.1E+06	6.8E+05	9.7E+06	2.5E+08	8.3E+07	1.9E+06	5.7E+07
17	5.4E+06	2.6E+05	9.8E+04	3.2E+07	1.7E+06	1.1E+07	2.4E+06	2.9E+07	1.6E+08	8.9E+06	3.1E+06	5.6E+07
18	5.8E+06	4.1E+05	2.1E+05	2.3E+07	2.1E+06	2.4E+07	6.2E+04	4.8E+07	2.0E+08	4.3E+06	2.2E+05	4.7E+07
19	5.1E+05	2.8E+05	4.2E+05	1.5E+07	2.6E+06	2.2E+07	3.0E+05	4.2E+07	1.0E+07	1.0E+06	2.7E+05	6.8E+06
20	6.2E+05	1.2E+06	4.6E+05	7.6E+06	4.3E+06	2.0E+07	3.9E+06	4.2E+07	9.4E+06	1.2E+06	4.6E+05	7.7E+05
21	3.9E+05	6.8E+05	1.6E+06	8.3E+06	4.0E+06	1.2E+06	5.0E+07	7.6E+07	2.5E+06	2.1E+06	1.1E+05	5.9E+05
22	1.2E+06	1.1E+06	8.6E+05	3.2E+06	5.0E+06	3.0E+06	6.7E+07	3.7E+07	3.4E+06	1.3E+06	2.0E+05	8.2E+05
23	2.0E+06	8.1E+05	1.8E+06	5.5E+06	2.8E+06	1.1E+06	8.6E+07	8.1E+06	2.8E+06	3.5E+05	2.9E+06	1.7E+06
24	2.0E+06	3.2E+05	1.2E+05	8.3E+05	1.8E+06	8.9E+04	7.6E+07	1.2E+07	4.6E+06	2.8E+05	6.1E+05	3.1E+06
25	4.6E+06	3.0E+05	3.2E+07	8.3E+05	4.4E+06	1.6E+05	1.3E+07	1.3E+07	3.3E+06	5.5E+05	1.8E+06	4.1E+06
26	7.0E+06	3.2E+05	1.0E+08	1.4E+06	2.9E+06	1.2E+05	7.6E+07	1.4E+07	1.5E+07	2.1E+05	8.6E+06	2.5E+06
27	7.5E+06	2.0E+05	1.3E+08	1.3E+07	8.6E+05	2.2E+05	1.7E+08	1.8E+07	1.7E+07	4.3E+05	8.2E+06	6.0E+05
28	4.7E+06	2.3E+05	7.8E+07	1.6E+07	1.9E+06	3.3E+05	1.5E+08	1.6E+07	7.0E+06	5.8E+05	3.0E+07	9.3E+05
29	5.9E+06	2.9E+06	1.2E+07	1.5E+07	1.1E+06	1.8E+07	5.4E+07	6.2E+05	2.2E+06	1.5E+06	4.2E+06	
30	1.8E+06	1.9E+06	5.7E+07	4.3E+07	2.6E+06	1.0E+08	9.0E+06	1.0E+07	1.2E+06	7.5E+05	1.8E+06	
31	1.8E+05		1.2E+08		3.7E+06	1.2E+08		1.5E+07		9.3E+05	1.4E+06	

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

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

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Number 679 Part I

DATA FOR JANUARY 2001

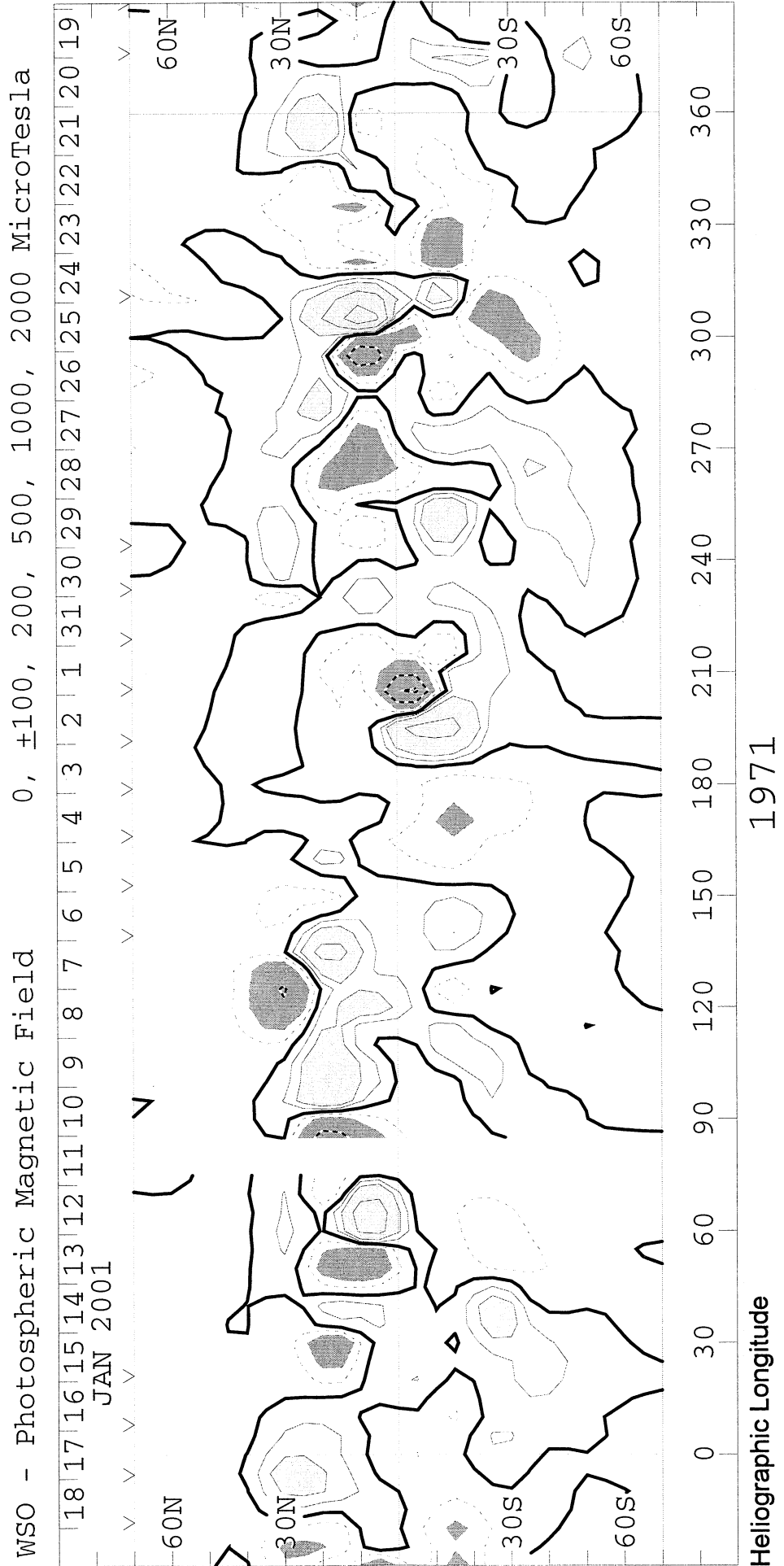
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SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION NUMBER 1971
(21 December 2000 to 17 January 2001)

WILCOX SOLAR OBSERVATORY

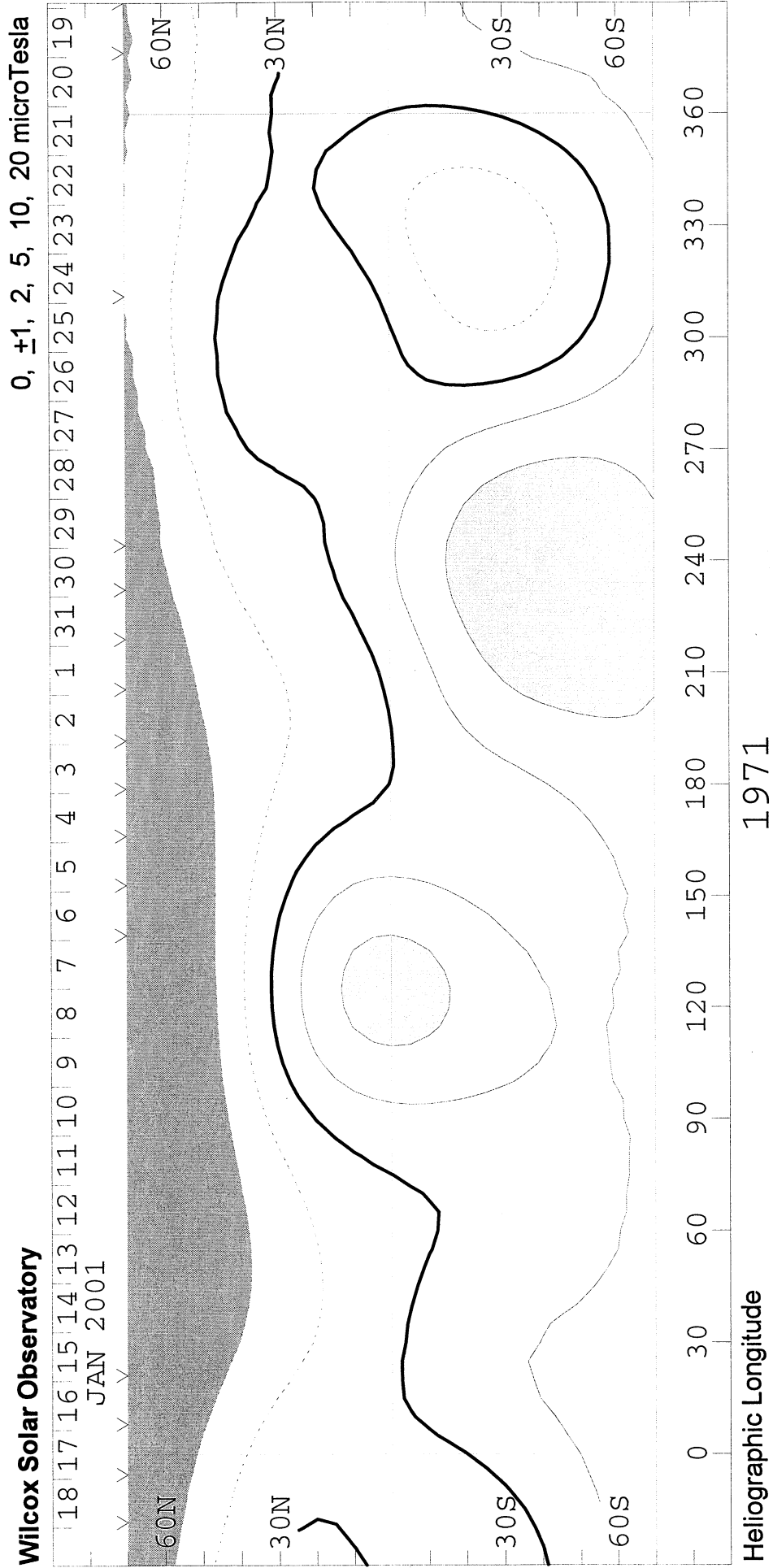
Mean Field



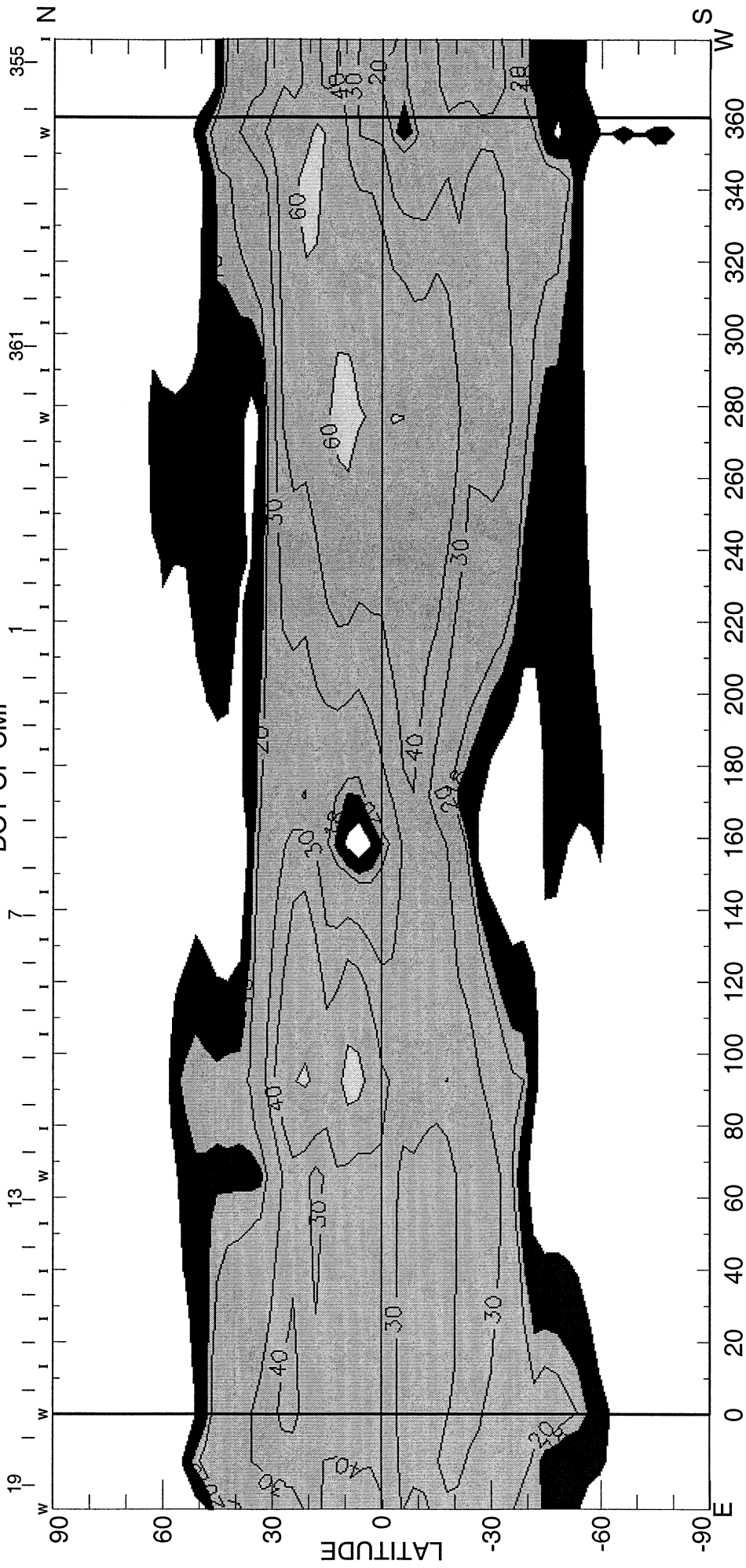
SOLAR MAGNETIC FIELD SYNOPTIC CHART

SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1971
(21 December 2000 to 17 January 2001)

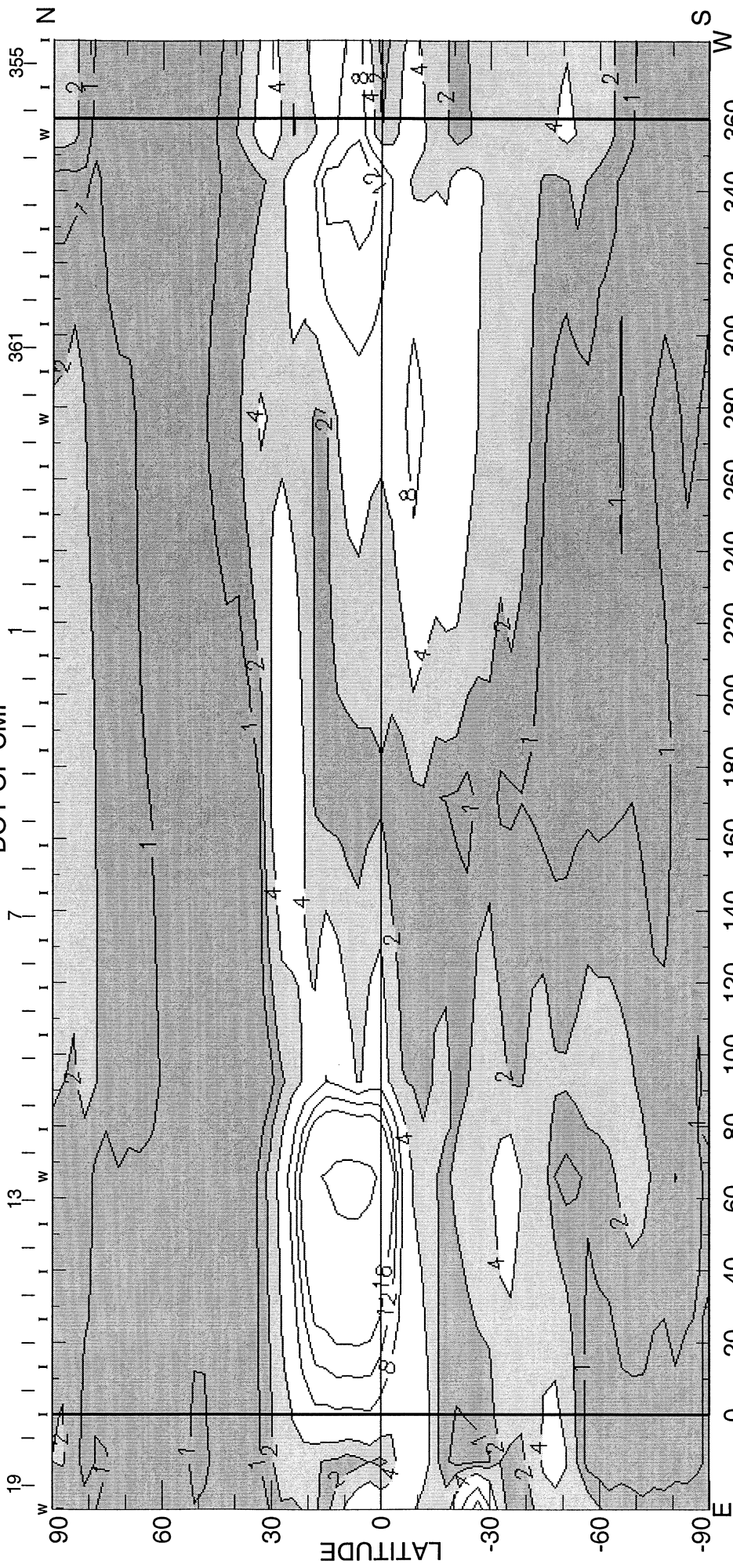


CARRINGTON ROTATION NUMBER 1971 ; NSO/SACRAMENTO PEAK FE XIV @ R = 1.15R_o
DOY OF CMP



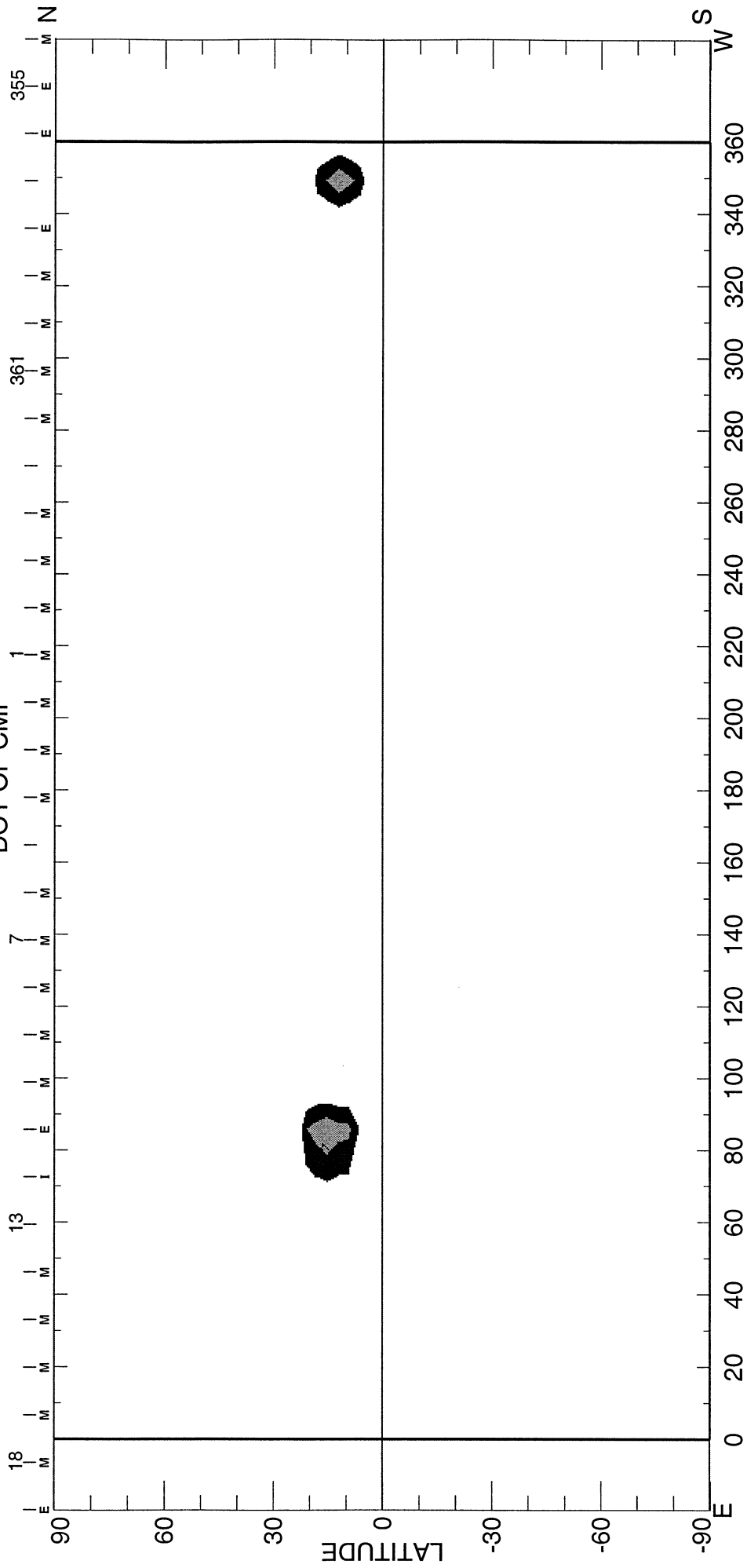
(16-Mar-01) 2001 E+W LIMB CONTOURS: 14, 18, 20, 30, 40, 60, 80, 100, 120, 140, 160 MILLIONTHS OF I_o
HELIOGRAPHIC LONGITUDE
<I> = 20.13μ
CORONAL HOLES ARE SHOWN AS WHITE BORDERED BY BLACK

CARRINGTON ROTATION NUMBER 1971 ; NSO/SACRAMENTO PEAK FEX @ R = 1.15R_o
DOY OF CMP



HELIOGRAPHIC LONGITUDE
2001 E+W LIMB CONTOURS: 1, 2, 4, 8, 12, 16, 32, 48 MILLIONTHS OF I_o <l> = 2.69μ
(01-Mar-01)

CARRINGTON ROTATION NUMBER 1971 ; NSO/SACRAMENTO PEAK CA XV @ R = 1.15R_o
DOY OF CMP



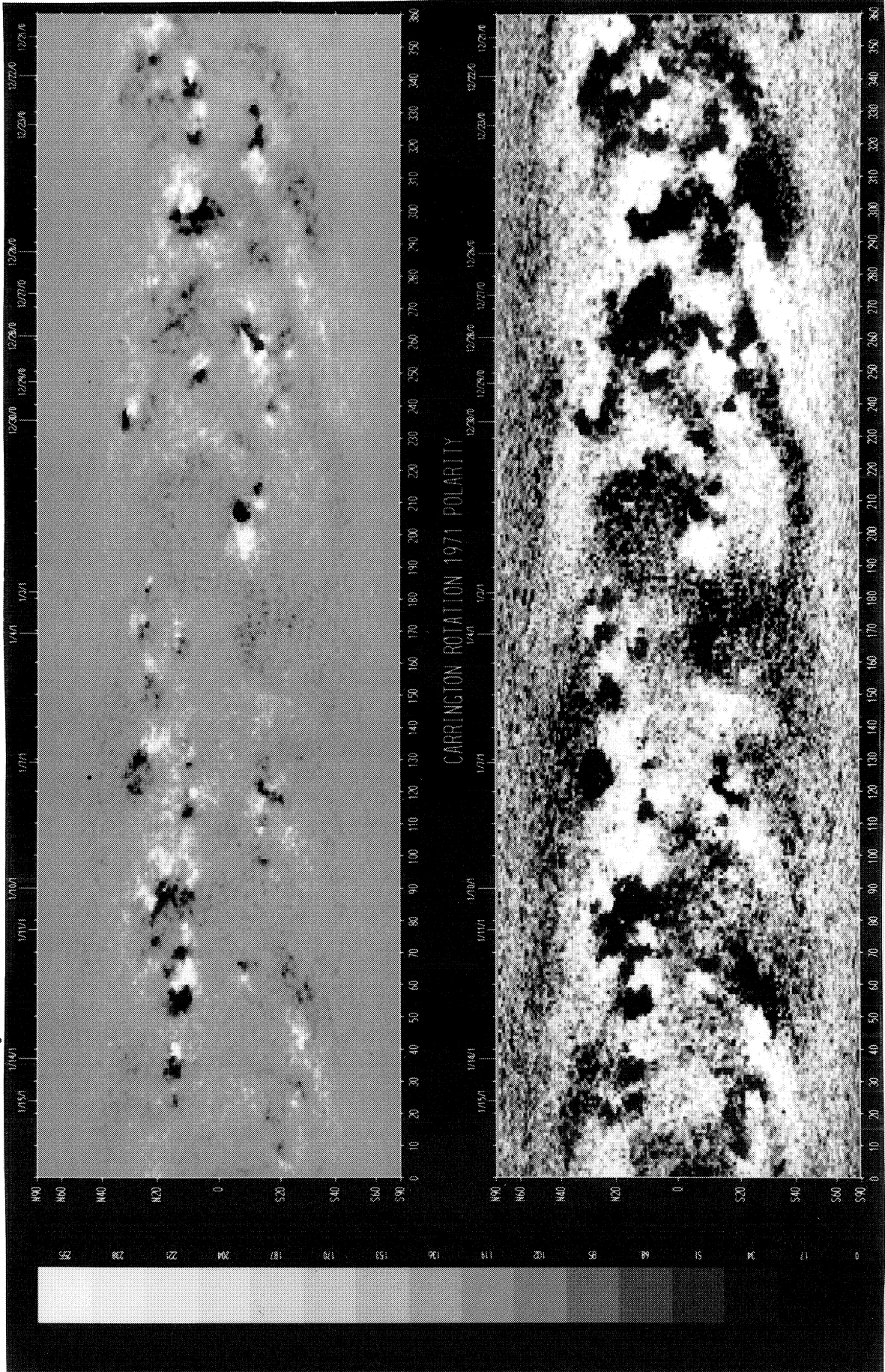
(01-Mar-01) 2001 W+E LIMB CONTOURS: YELMIN, 1, 2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20 MILLIONTHS OF I_o

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1971
(21 December 2000 to 17 January 2001)

Dates of Observation

National Solar Observatory/Kitt Peak



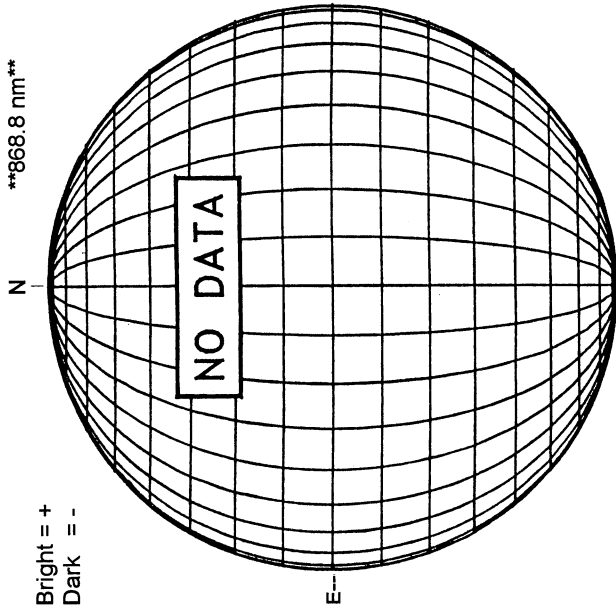
Heliographic Longitude

JANUARY 1, 2001 (P= 2.01, Bo = -3.04, Lo = 217.28)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



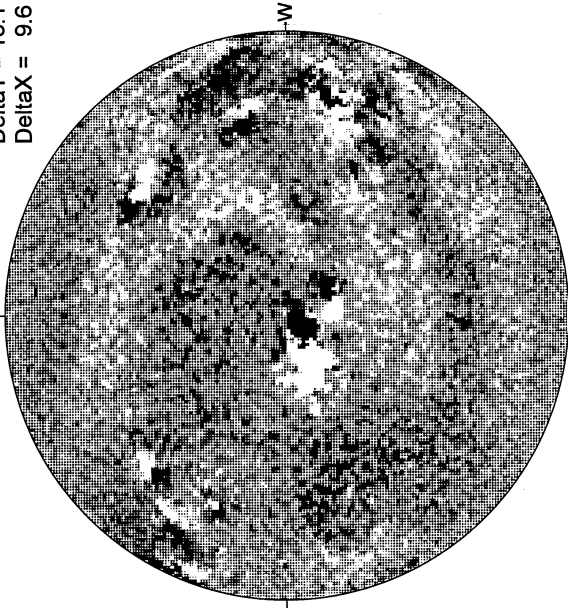
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

DeltaY = 13.1
DeltaX = 9.6

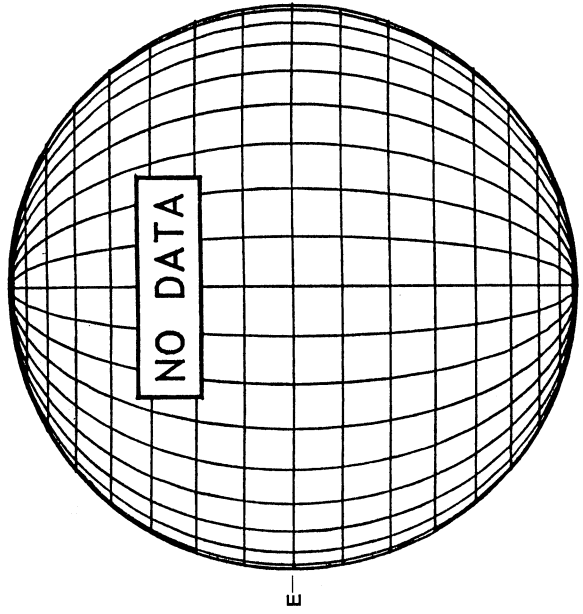


White = +7.5G
Black = -7.5G

17.86 -
18.84 UT

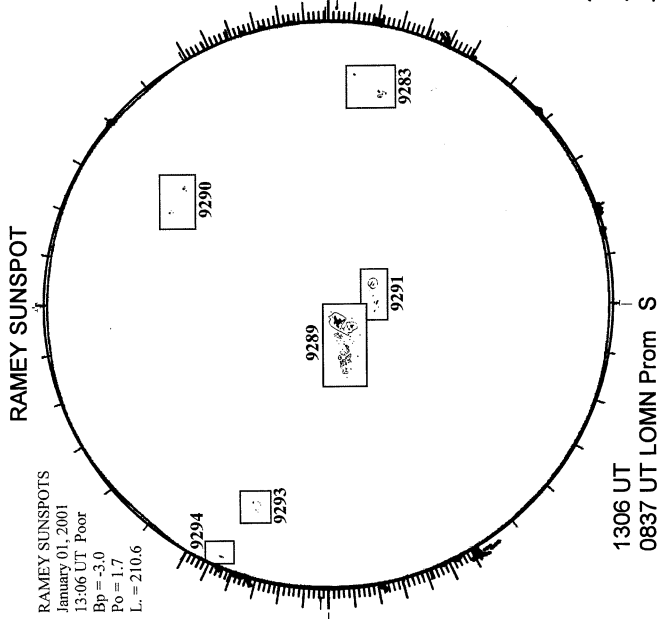
MEUDON H-ALPHA

NO DATA



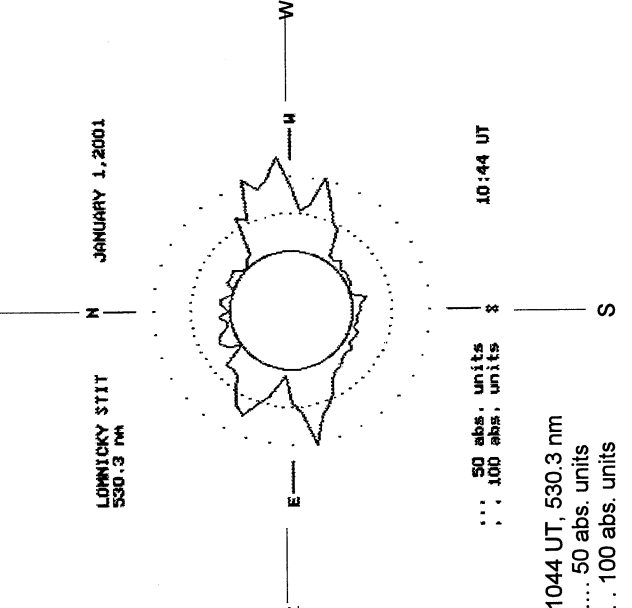
RAMEY SUNSPOTS

RAMEY SUNSPOTS
January 01, 2001
13:06 UT Poor
Bp = -3.0
Po = 1.7
L = 210.6



LOMNICKY PEAK CORONA (1.04 Radii)----

LOMNICKY \$TIT\$
530.3 nm



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

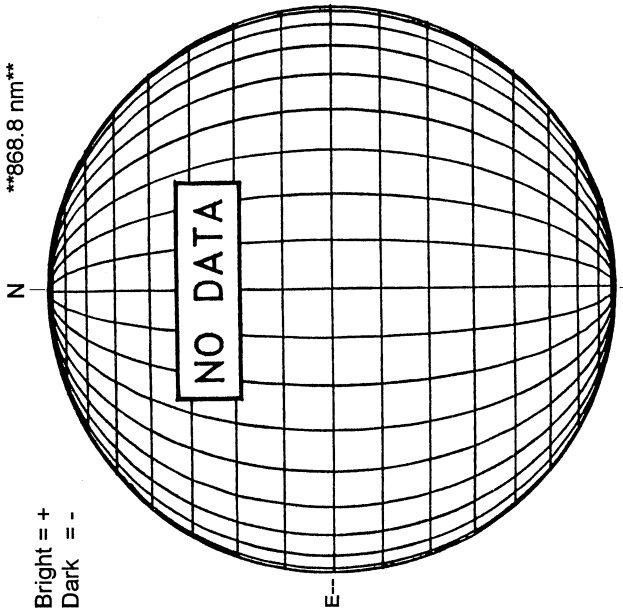
1044 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

10:44 UT

JANUARY 2, 2001 (P= 1.52, Bo = -3.16, Lo = 204.11)

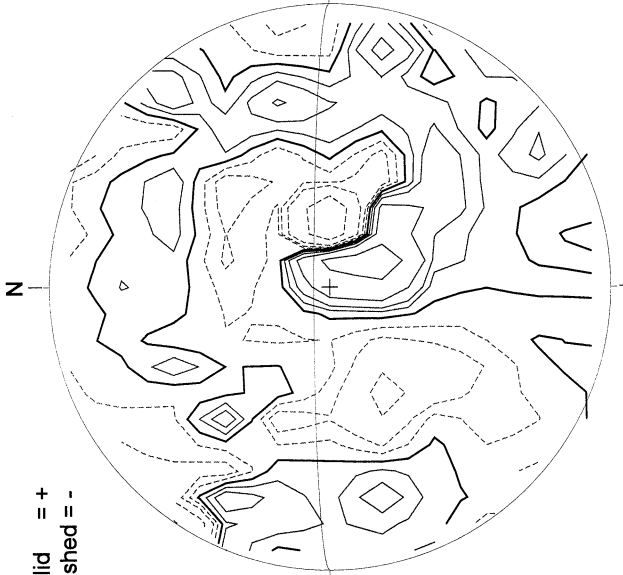
KITT PEAK MAGNETOGRAM
868.8 nm

Bright = +
Dark = -



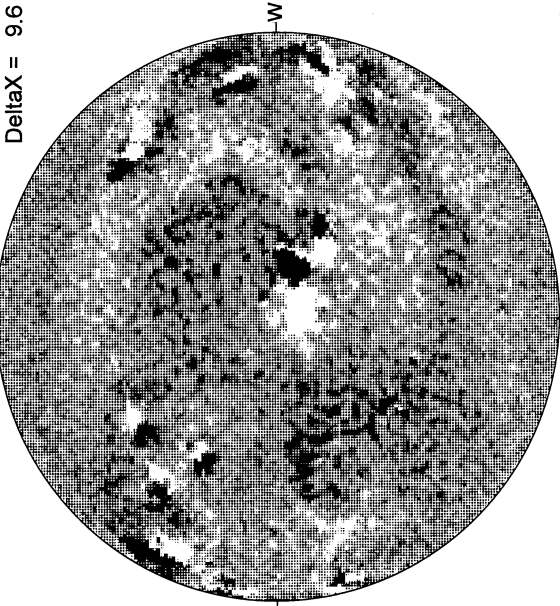
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

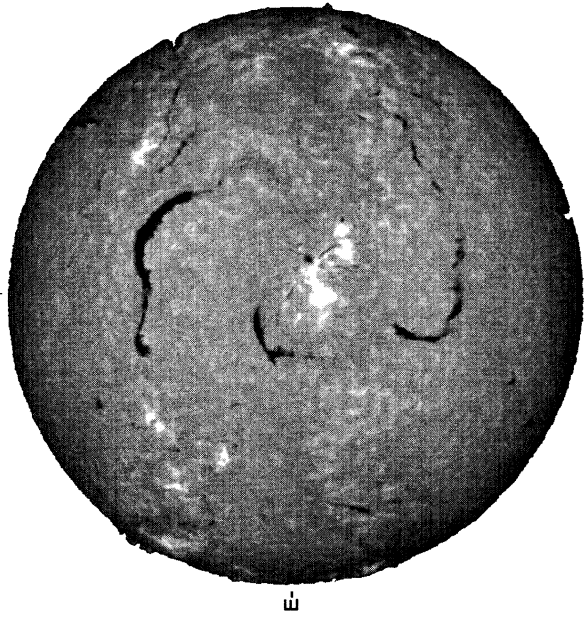
DeltaY = 13.1
DeltaX = 9.6



White = +7.5G
Black = -7.5G

16.79 -
17.77 UT

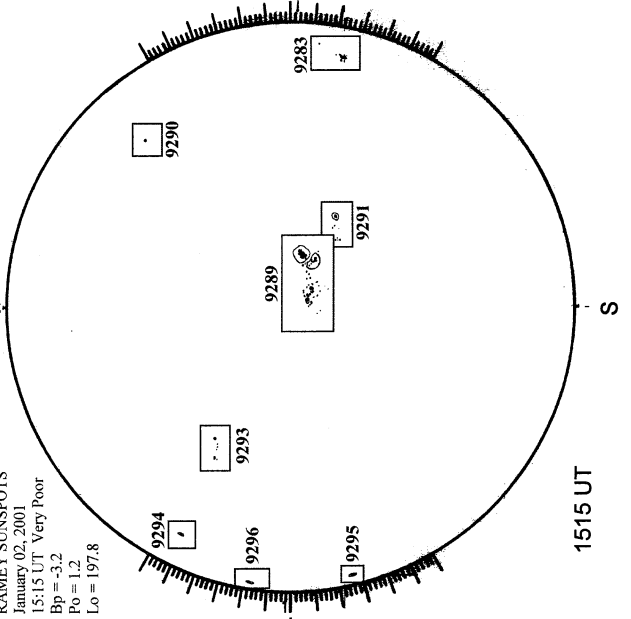
MEUDON H-ALPHA



0850 UT

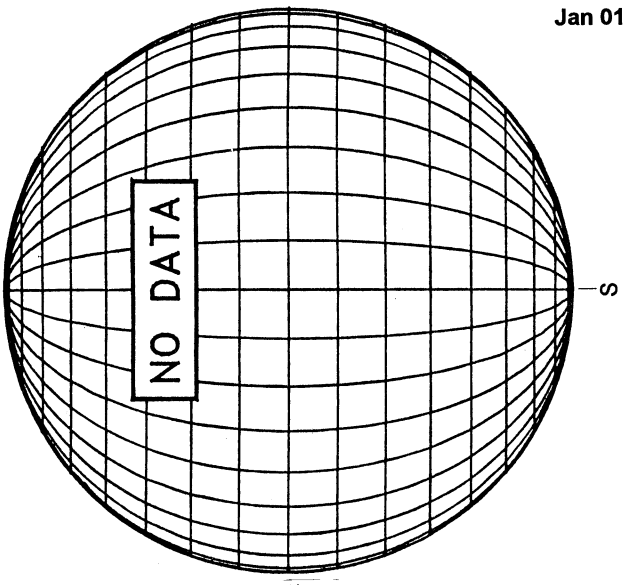
RAMEY SUNSPOT

KAMELY SUNSPOTS
January 02, 2001
15:15 UT Very Poor
Bp = -3.2
Po = 1.2
Lo = 197.8



1515 UT

LOMNICKY PEAK CORONA (1.04 Radii)----

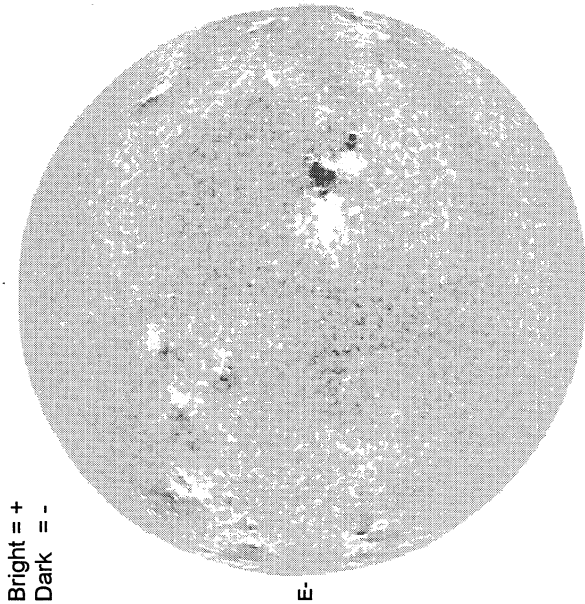


JANUARY 3, 2001 (P= 1.04, Bo = -3.27, Lo = 190.94)

46
Jan 01

KITT PEAK MAGNETOGRAM

868.8 nm



Bright = +
Dark = -

1545 UT

STANFORD MAGNETOGRAM

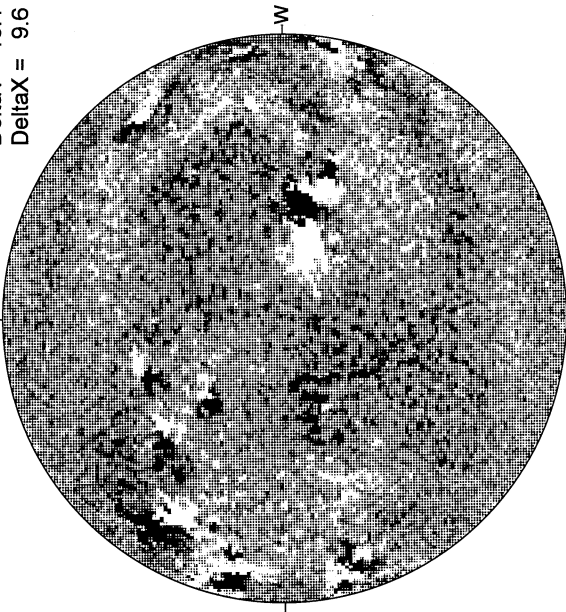
Solid = +
Dashed = -



2202 UT

MT. WILSON MAGNETOGRAM

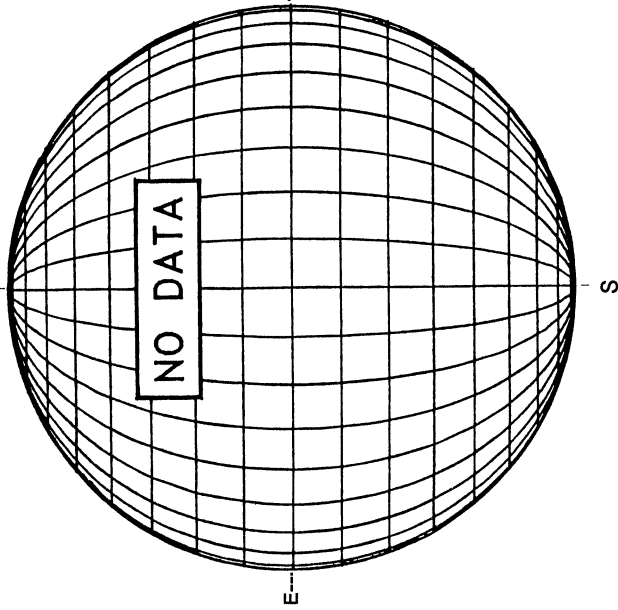
Delta Y = 13.1
Delta X = 9.6



16.97 -
17.94 UT

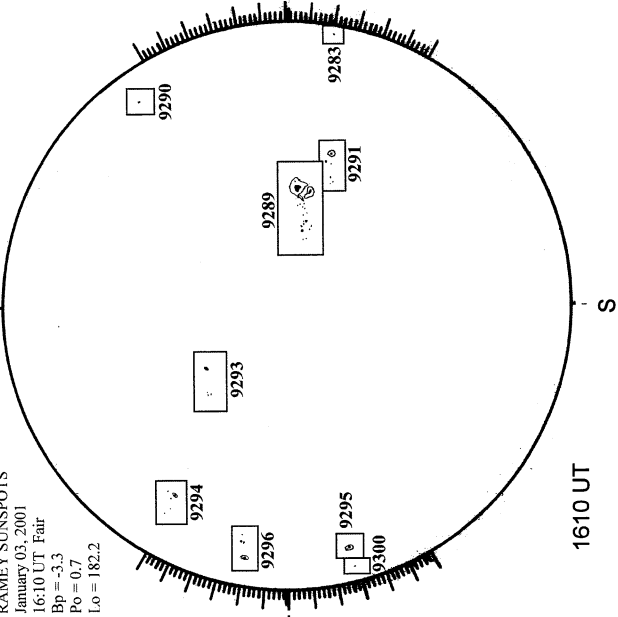
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



RAMEY SUNSPOTS

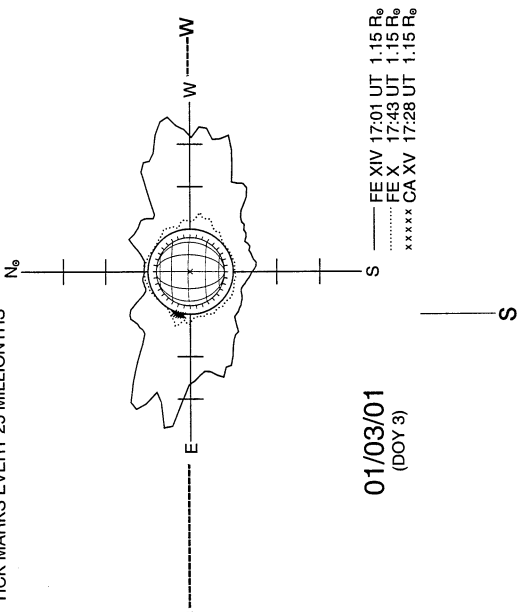
RAMEY SUNSPOTS
January 03, 2001
16:10 UT Fair
Bp = -3.3
Po = 0.7
Lo = 182.2



1610 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 25 MILLIONTHS

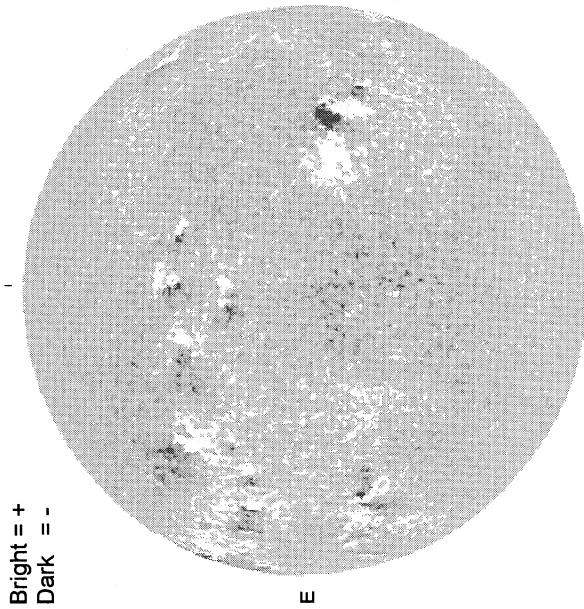


01/03/01
(DOY 3)

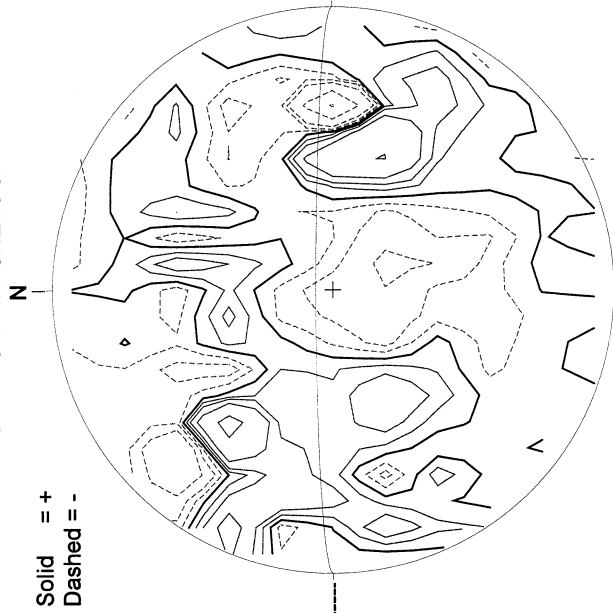
— FE XIV 17:01 UT 1.15 R_e
..... FE X 17:43 UT 1.15 R_e
xxxxx CA XV 17:28 UT 1.15 R_e

JANUARY 4, 2001 (P= 0.55, Bo = -3.39, Lo = 177.77)

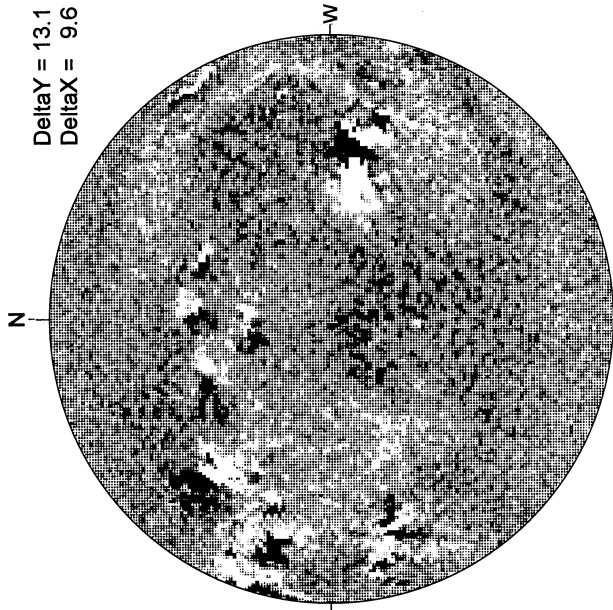
KITT PEAK MAGNETOGRAM
868.8 nm



STANFORD MAGNETOGRAM

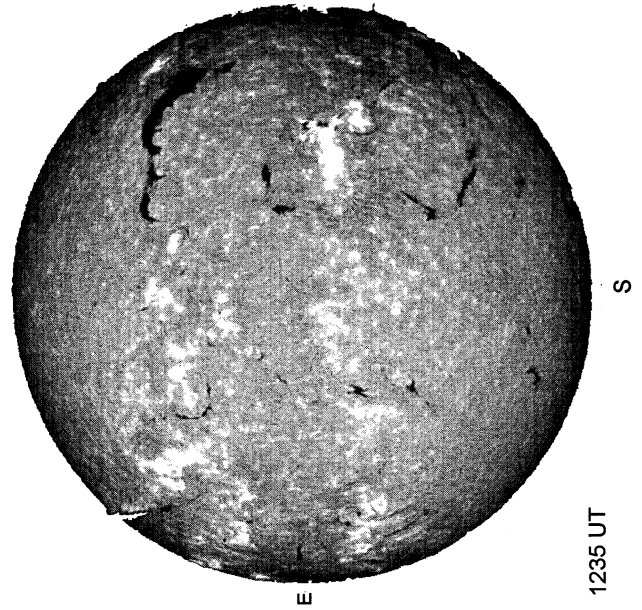


MT. WILSON MAGNETOGRAM

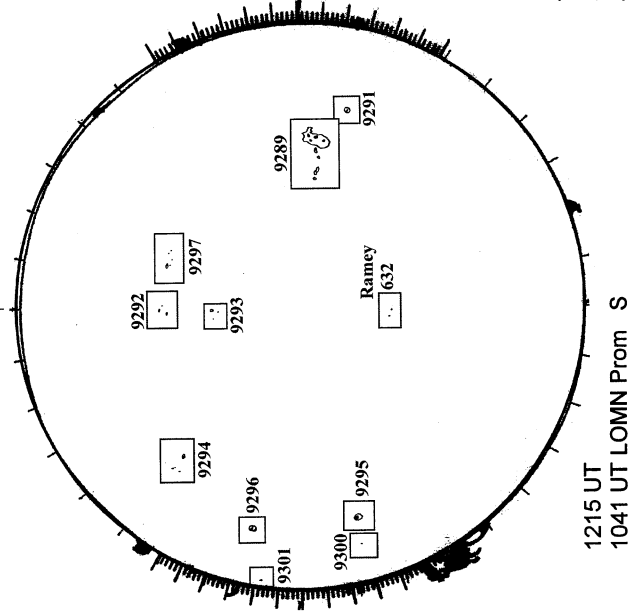


White = +7.5G
Black = -7.5G

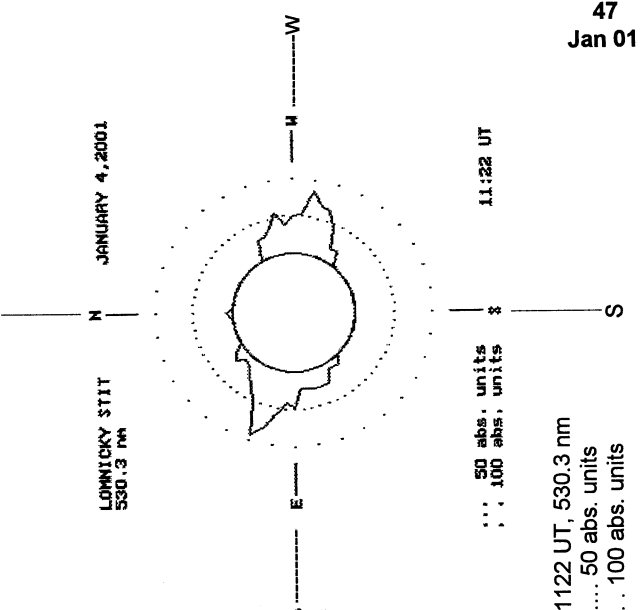
MEUDON H-ALPHA



RAMEY SUNSPOT



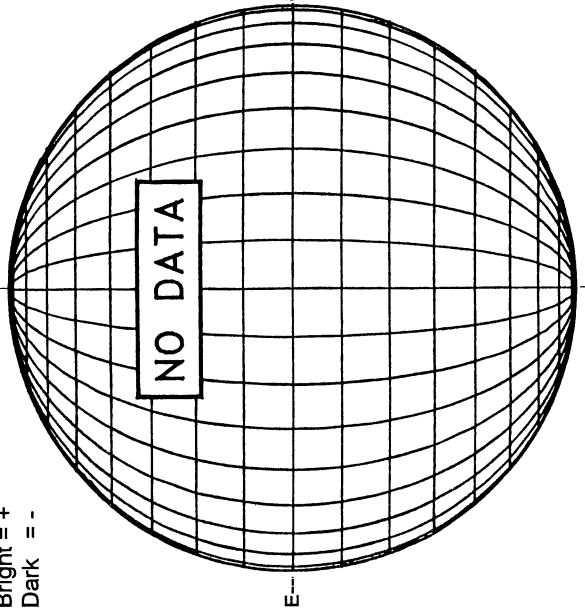
LOMNICKY PEAK CORONA (1.04 Radii)----



JANUARY 5, 2001 (P= 0.07, Bo = -3.50, Lo = 164.60)

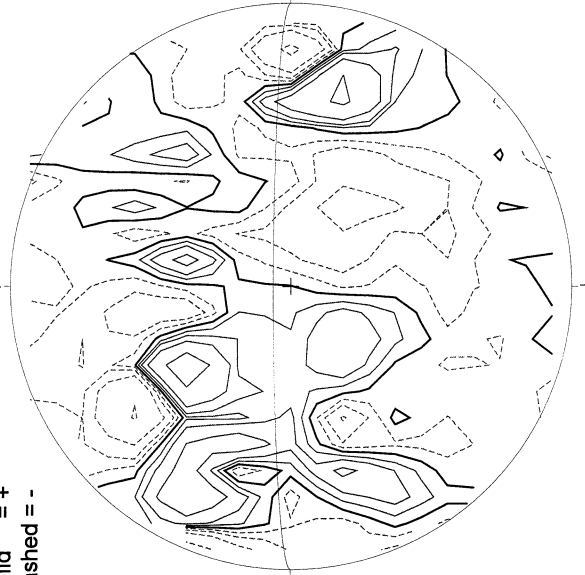
KITT PEAK MAGNETOGRAM
***868.8 nm**

Bright = +
Dark = -



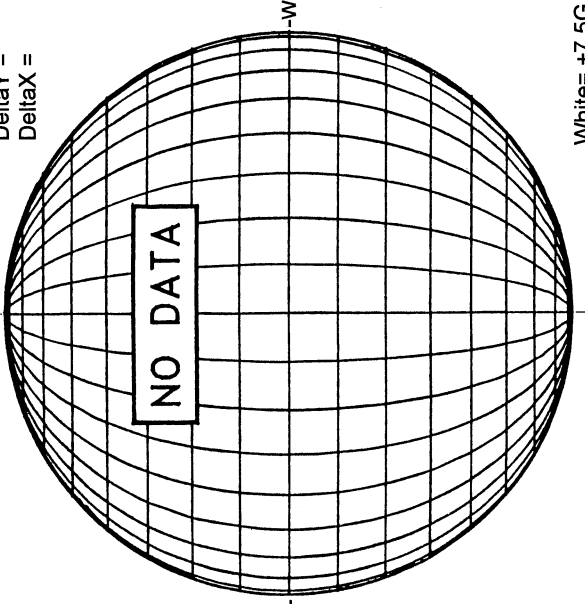
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

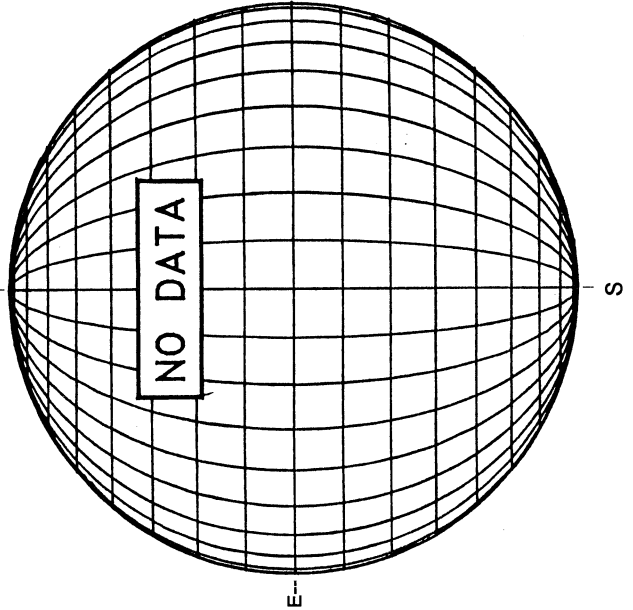
Delta Y =
Delta X =



White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

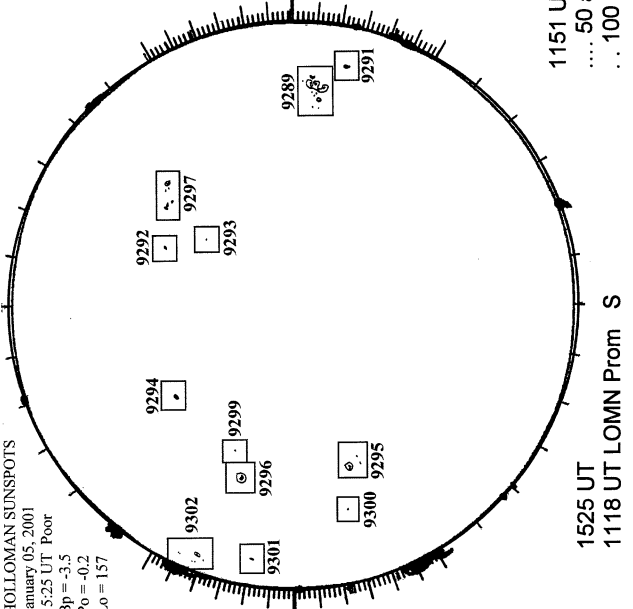
NO DATA



2107 UT

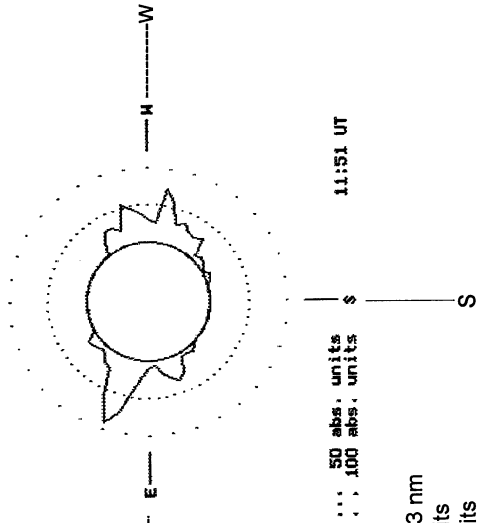
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
January 05, 2001
15:25 UT, Poor
Bp = -3.5
Po = -0.2
Lo = 157



LOMNICKY PEAK CORONA (1.04 Radii)----

LOMNICKY STIT
530.3 nm



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

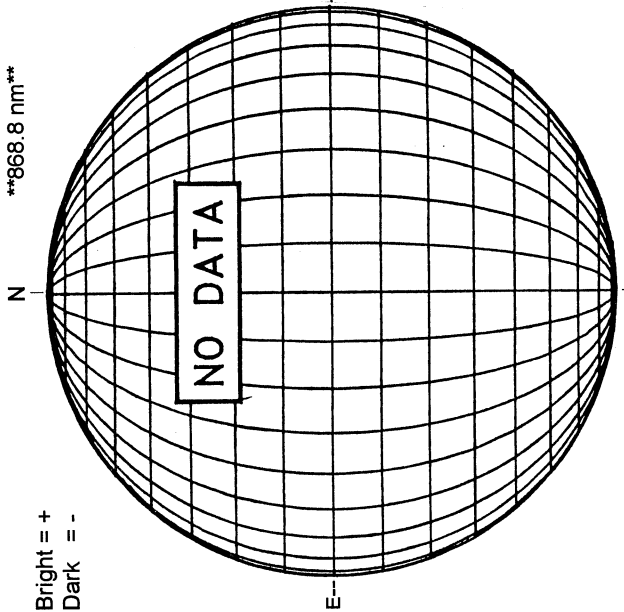
1151 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

11:51 UT

JANUARY 6, 2001 (P= -0.41, Bo = -3.61, Lo = 151.43)

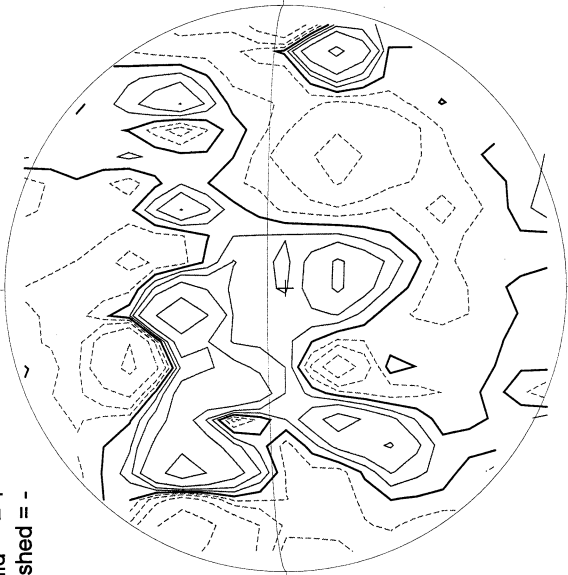
KITT PEAK MAGNETOGRAM
868.8 nm

Bright = +
Dark = -



STANFORD MAGNETOGRAM

Solid = +
Dashed = -

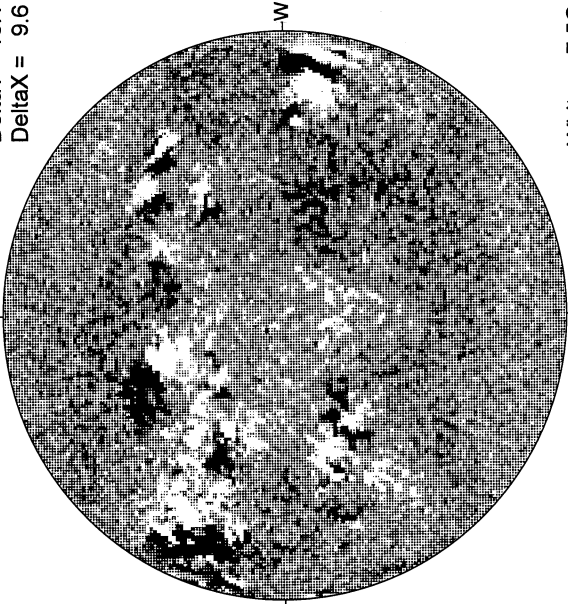


2145 UT

16.85 -
17.82 UT

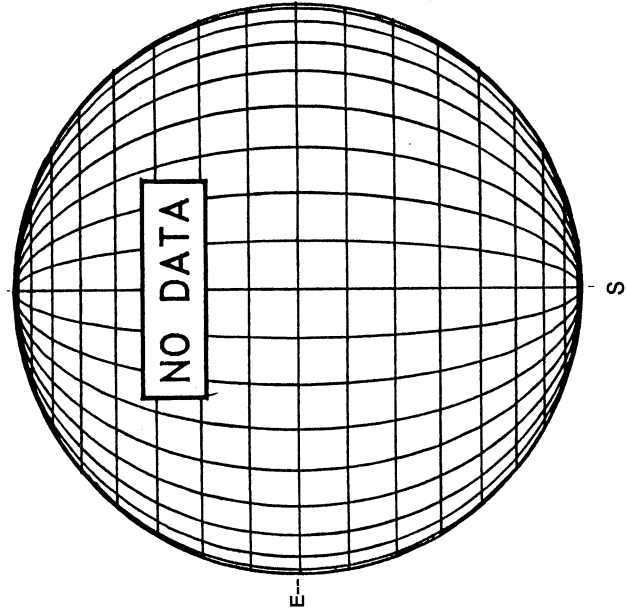
MT. WILSON MAGNETOGRAM

DeltaY = 13.1
DeltaX = 9.6



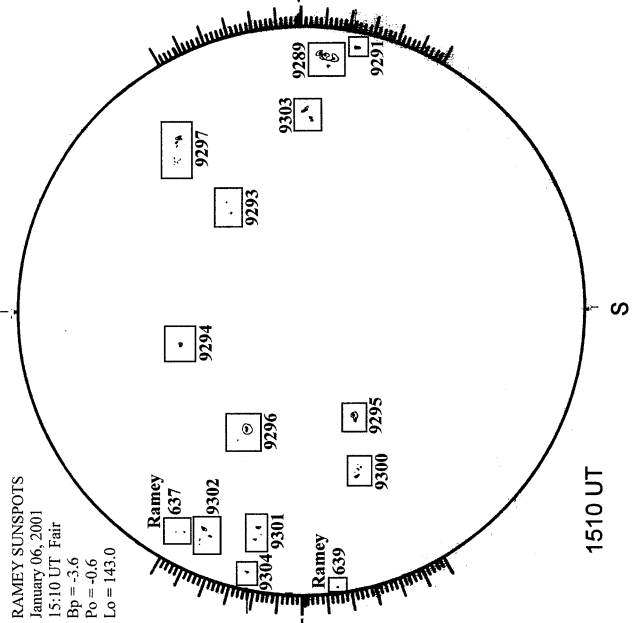
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

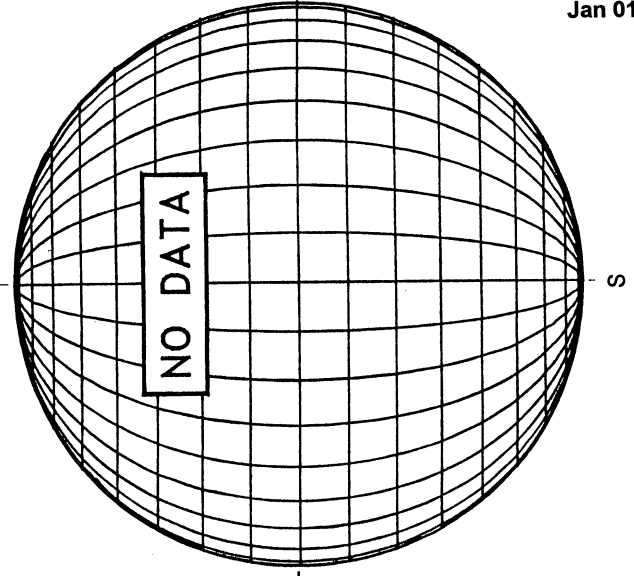


RAMEY SUNSPOT

RAMEY SUNSPOTS
January 06, 2001
15:10 UT Fair
Bo = -3.6
Po = -0.6
Lo = 143.0

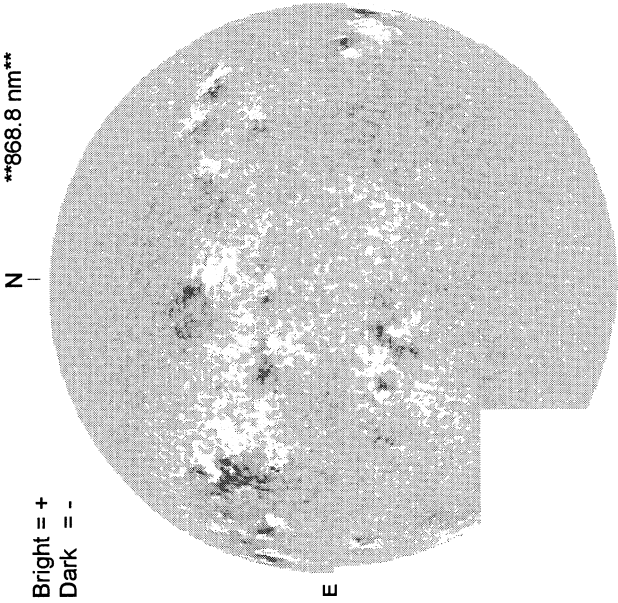


SACRAMENTO PEAK CORONA (1.15 Radii)



JANUARY 7, 2001 (P= -0.90, Bo = -3.73, Lo = 138.26)

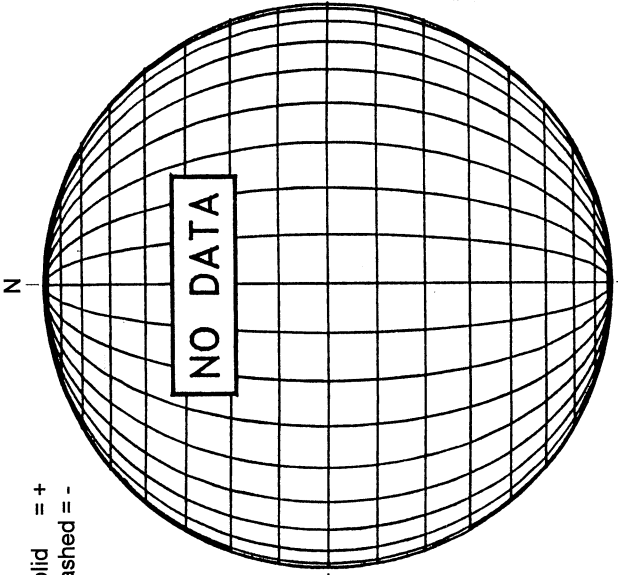
KITT PEAK MAGNETOGRAM
868.8 nm



Bright = +
Dark = -

1611 UT

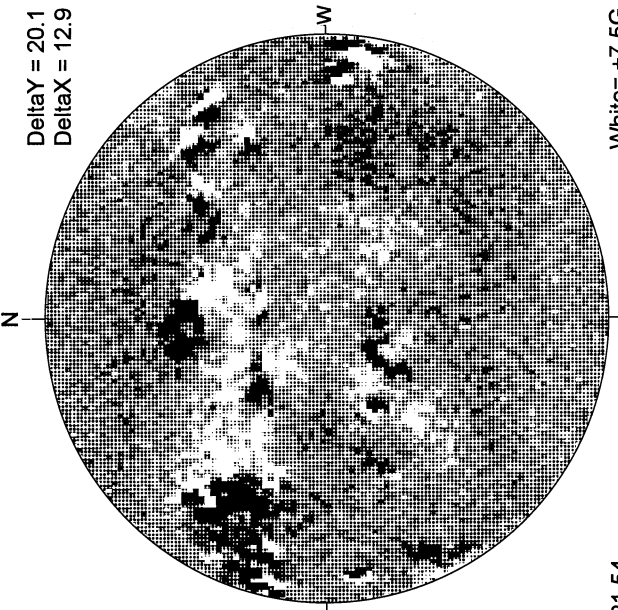
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

21.54 -
21.97 UT

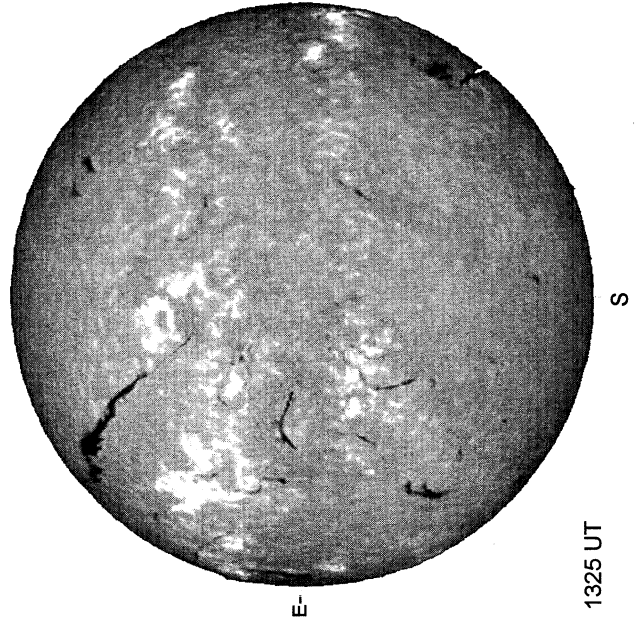
MT. WILSON MAGNETOGRAM



Delta Y = 20.1
Delta X = 12.9

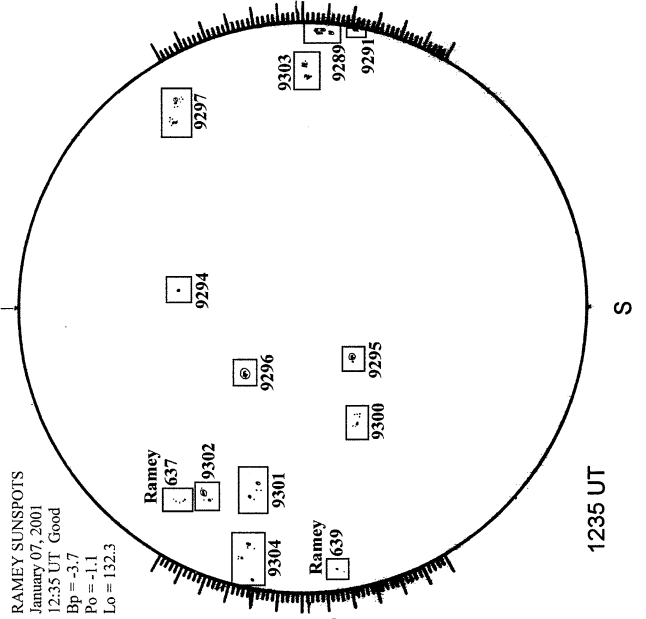
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



1325 UT

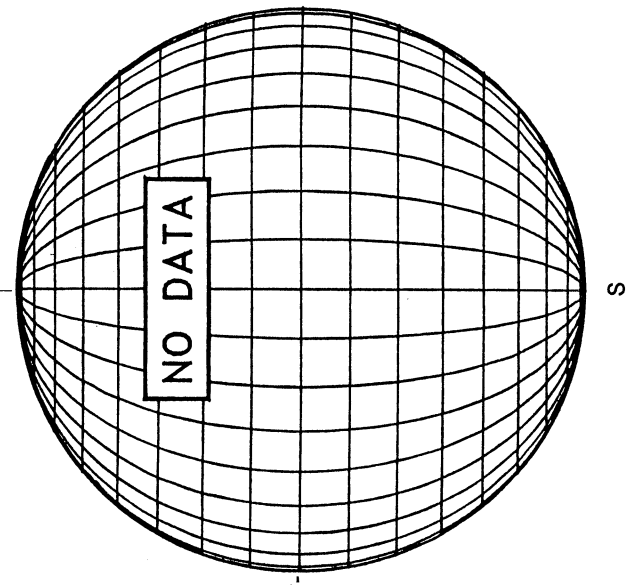
RAMEY SUNSPOTS



RAMEY SUNSPOTS
January 07, 2001
12:35 UT, Good
Bp = -3.7
Po = -1.1
Lo = 132.3

1235 UT

LOMNICKY PEAK CORONA (1.04 Radii)----

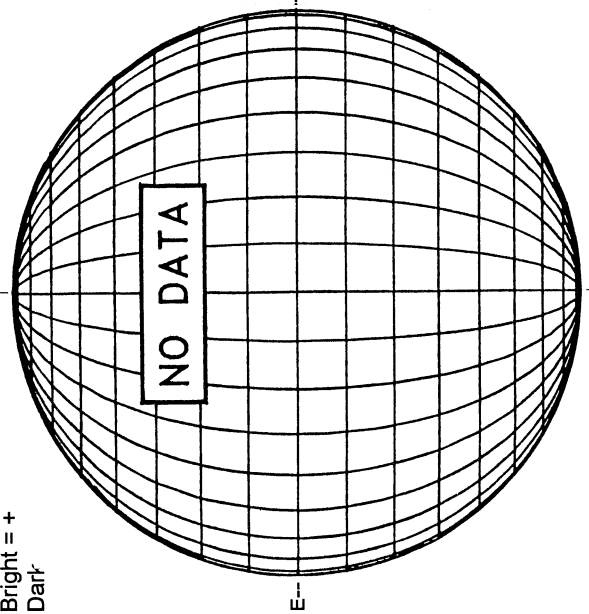


JANUARY 8, 2001 (P= -1.38, Bo = -3.84, Lo = 125.09)

KITT PEAK MAGNETOGRAM

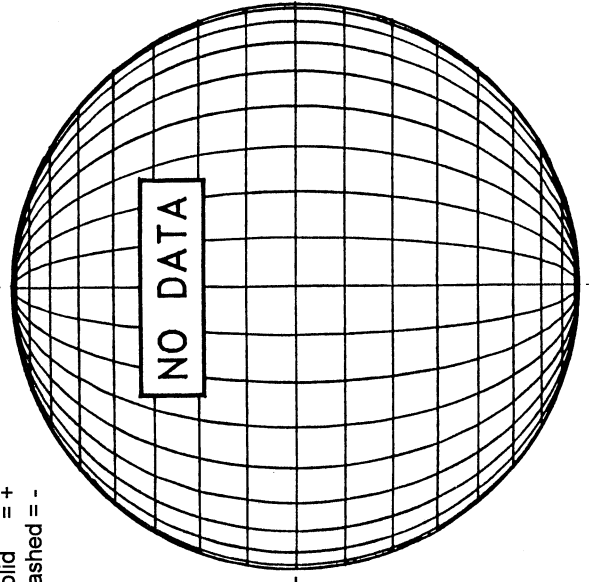
868.8 nm

Bright = +
Dark = -



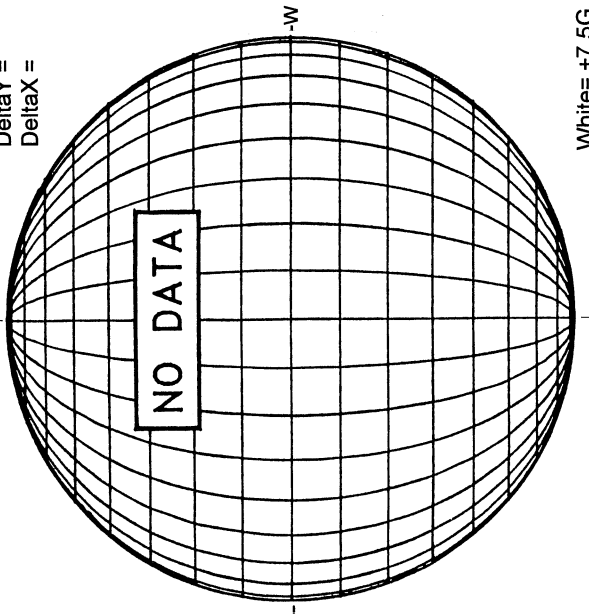
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



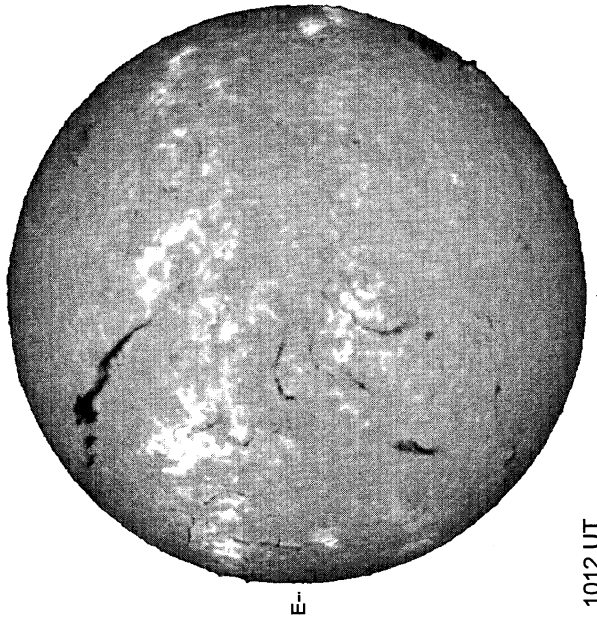
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



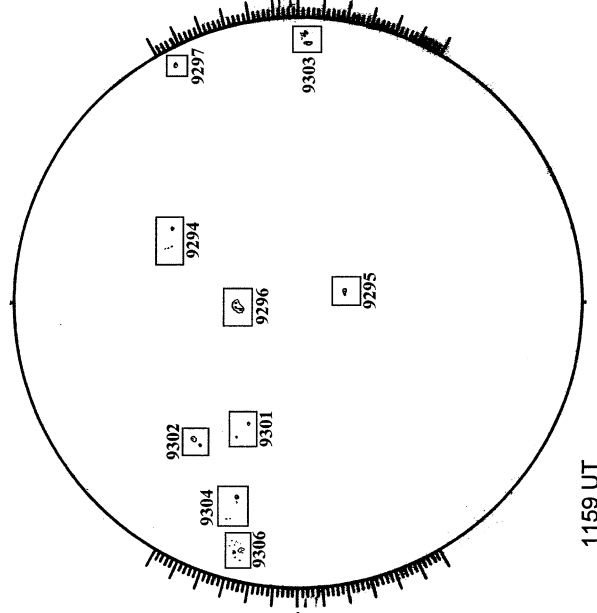
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



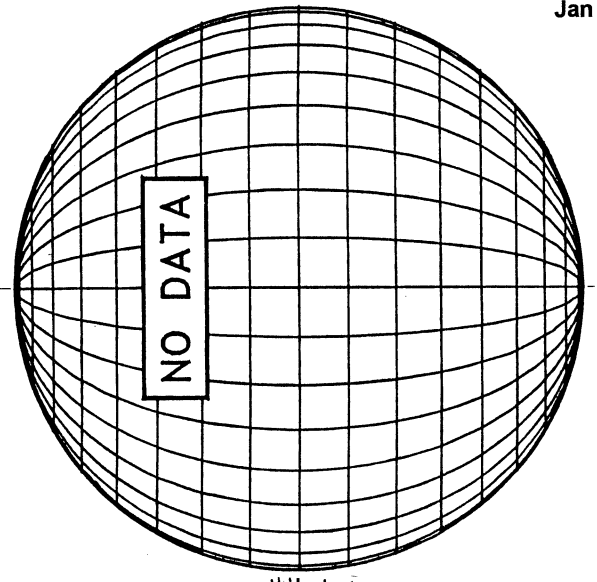
1012 UT

RAMEY SUNSPOT



1159 UT

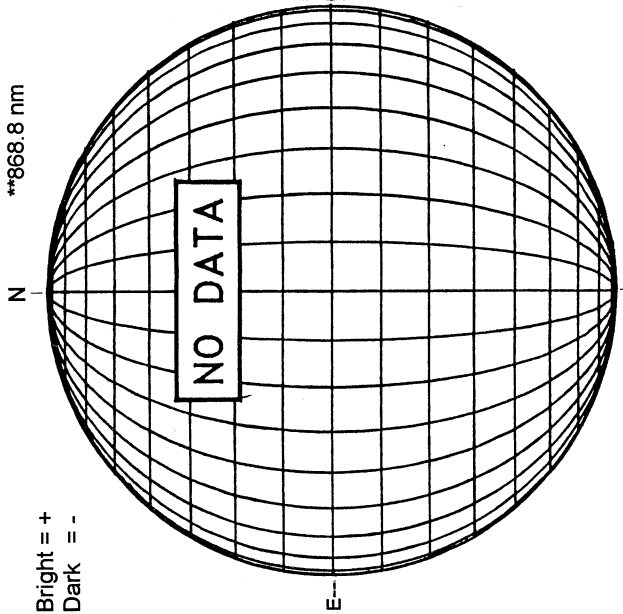
SACRAMENTO PEAK CORONA (1.15 Radii)----



JANUARY 9, 2001 (P = -1.86, Bo = -3.94, Lo = 111.92)

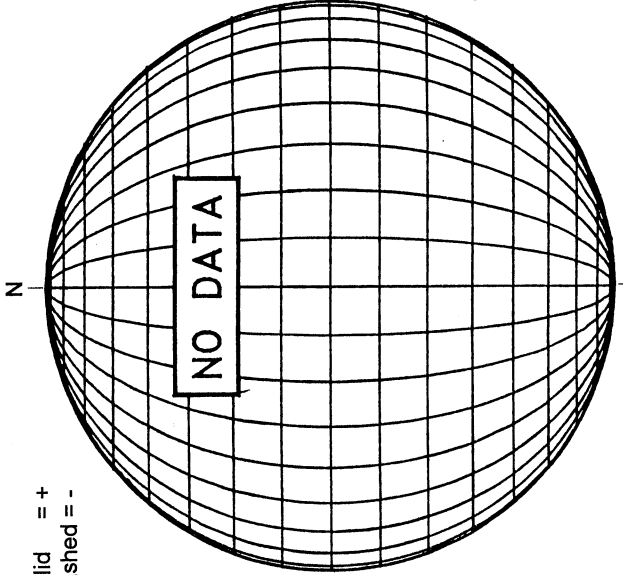
KITT PEAK MAGNETOGRAM
**868.8 nm

Bright = +
Dark = -



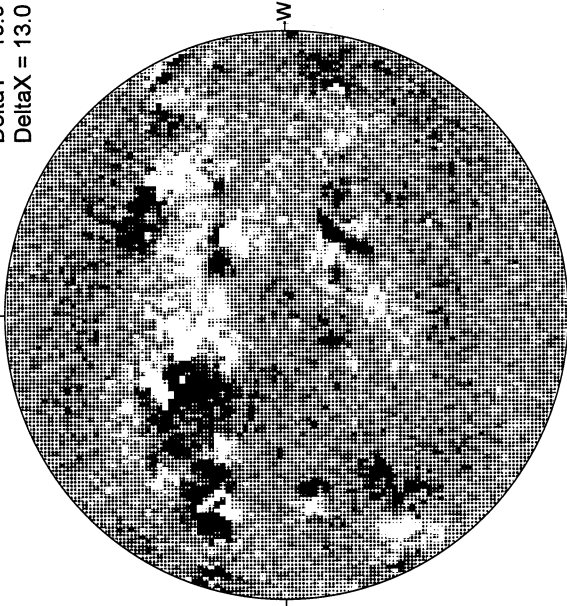
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

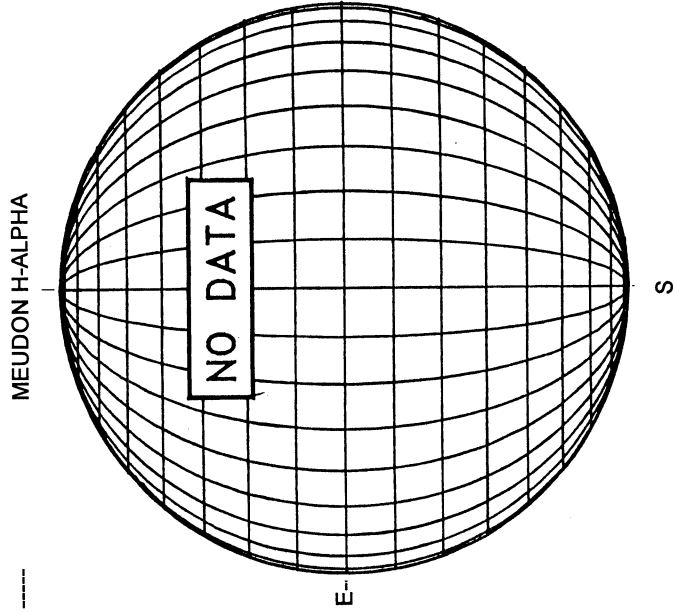
DeltaY = 19.9
DeltaX = 13.0



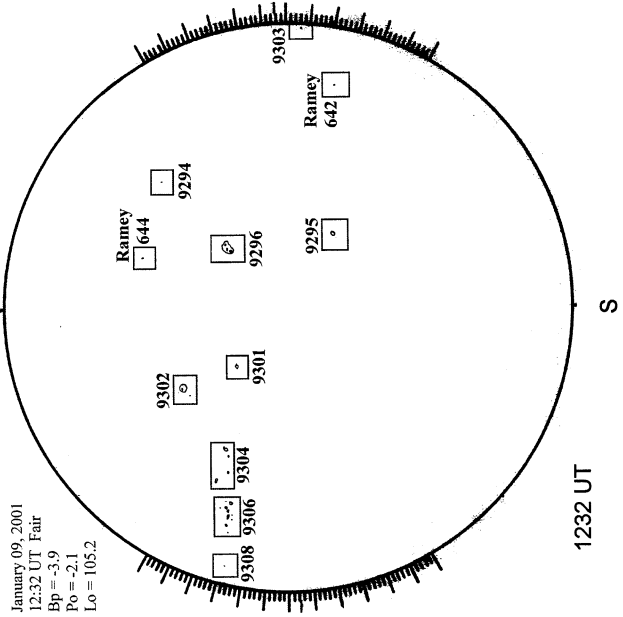
20.49 -
21.02 UT

White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

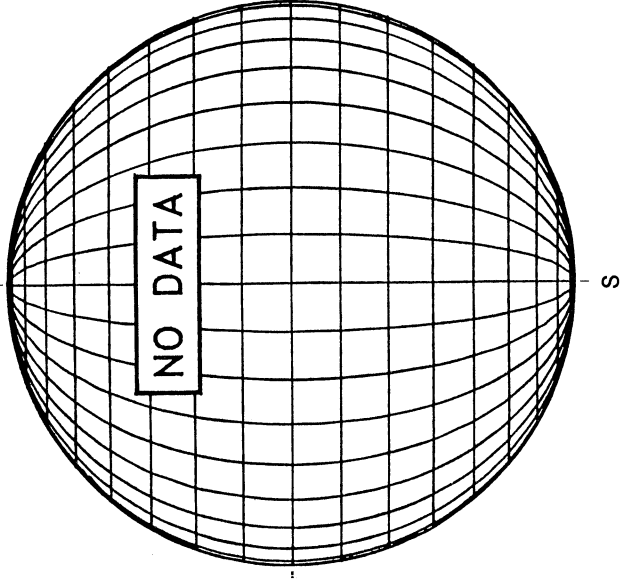


RAMEY SUNSPOT



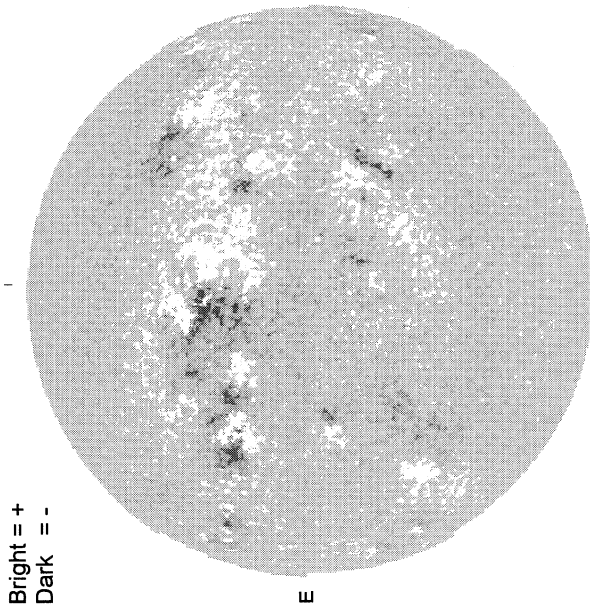
January 09, 2001
12:32 UT Fair
Bp = -3.9
Po = -2.1
Lo = 105.2

LOMNICKY PEAK CORONA (1.04 Radii)----



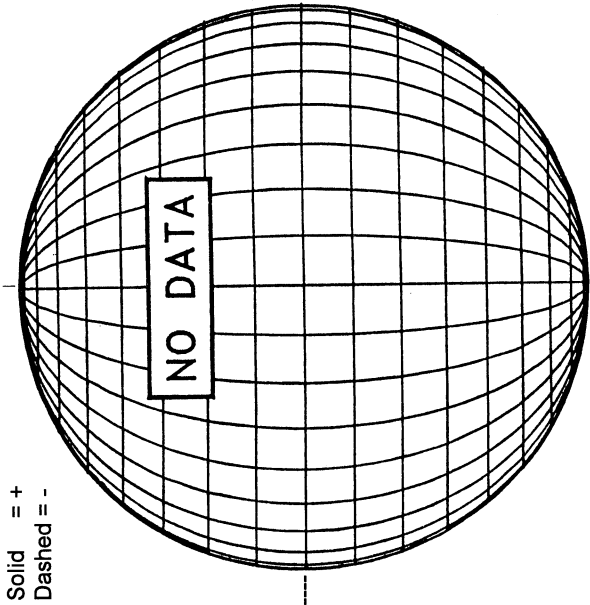
JANUARY 10, 2001 (P = -2.34, Bo = -4.05 Lo = 98.75)

KITT PEAK MAGNETOGRAM
868.8 nm

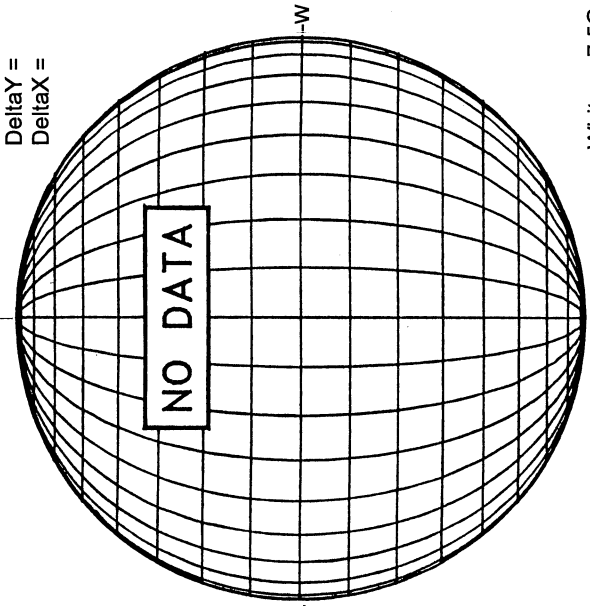


1625 UT

STANFORD MAGNETOGRAM

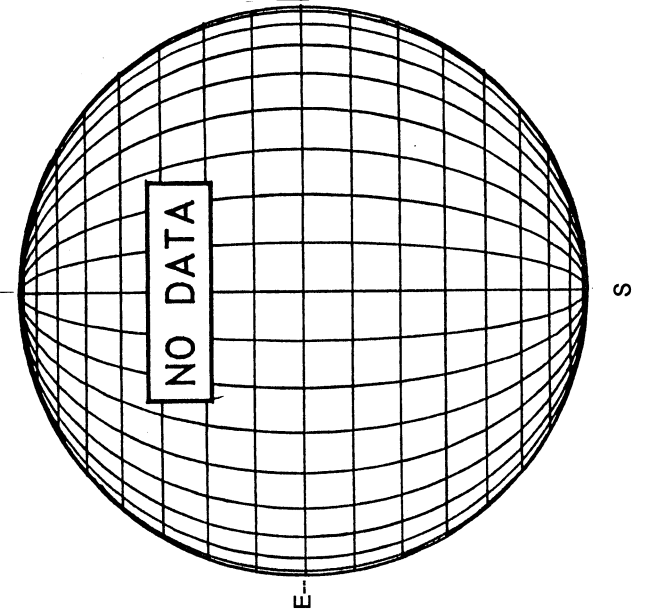


MT. WILSON MAGNETOGRAM

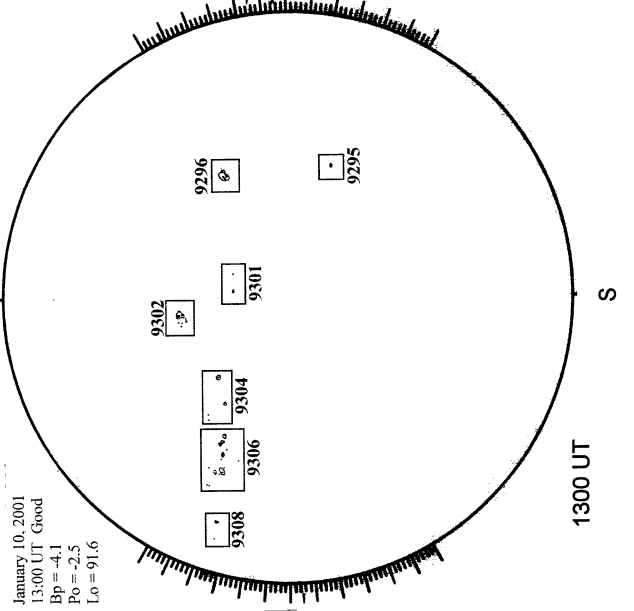


White = +7.5G
Black = -7.5G

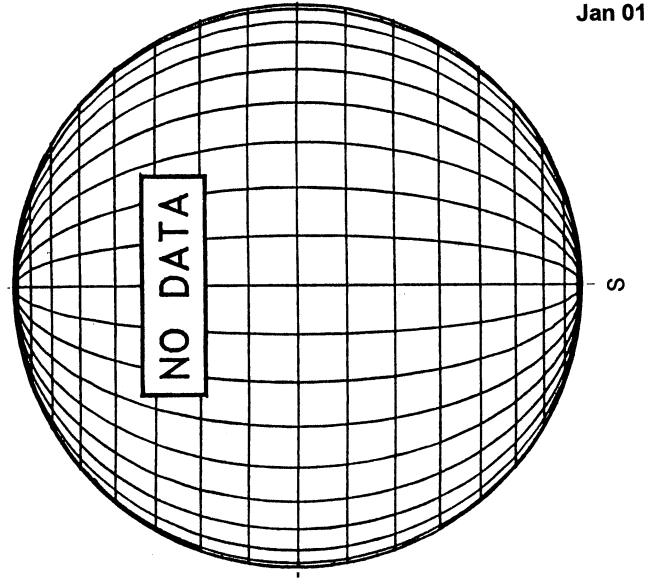
MEUDON H-ALPHA



RAMEY SUNSPOTS



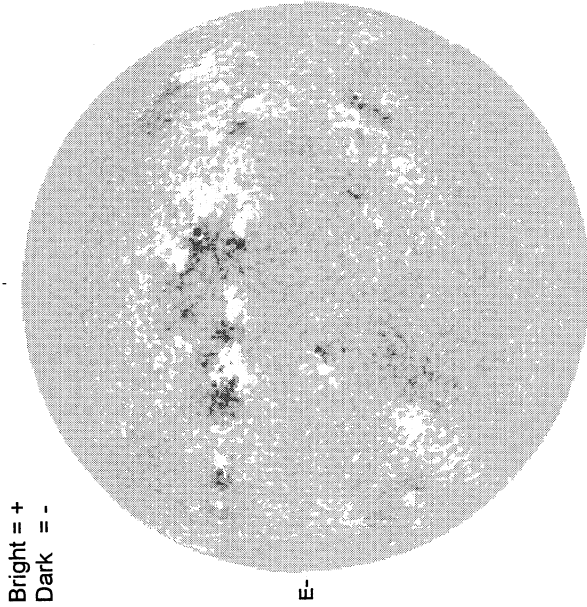
LOMNICKY PEAK CORONA (1.04 Radii)



JANUARY 11, 2001 (P = -2.82, Bo = -4.16, Lo = 85.58)

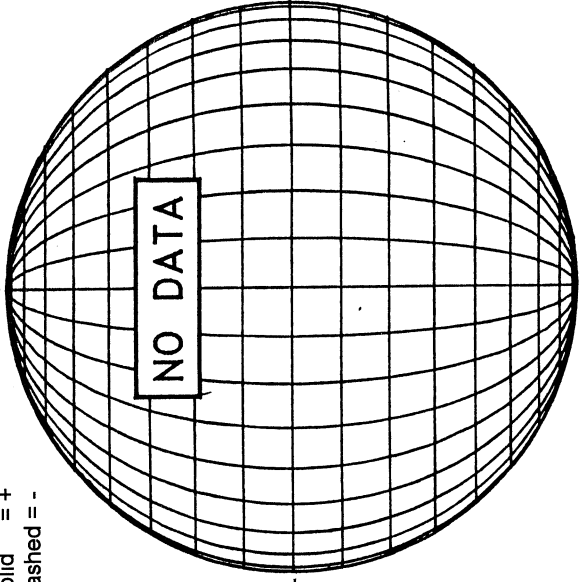
KITT PEAK MAGNETOGRAM

868.8 nm



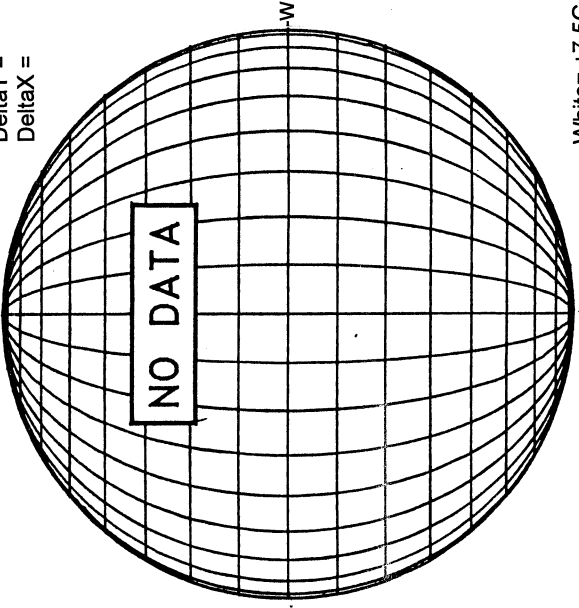
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

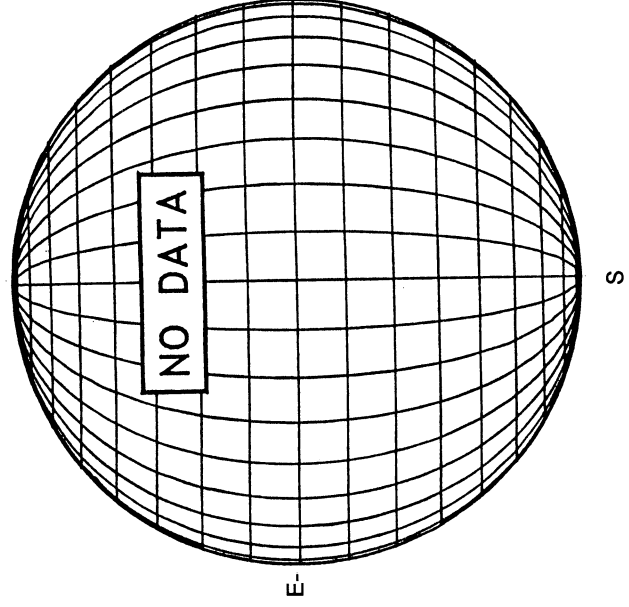
Delta Y =
Delta X =



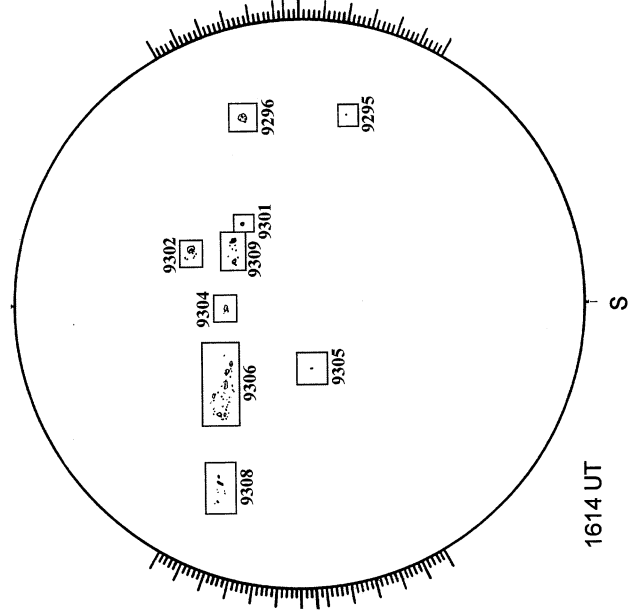
White = +7.5G
Black = -7.5G

1618 UT

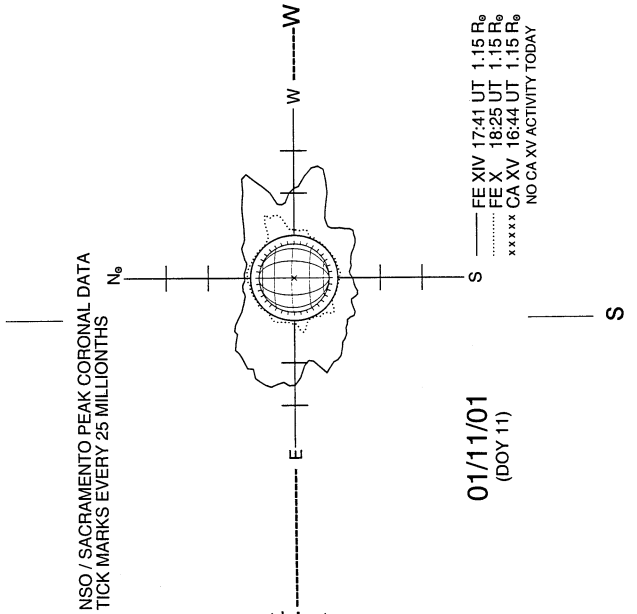
MEUDON H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

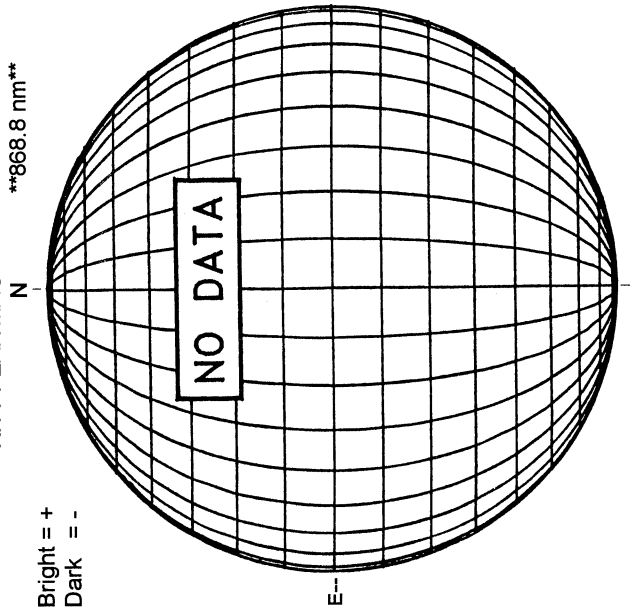


JANUARY 12, 2001 (P= -3.29, Bo = -4.26, Lo = 72.42)

KITT PEAK MAGNETOGRAM

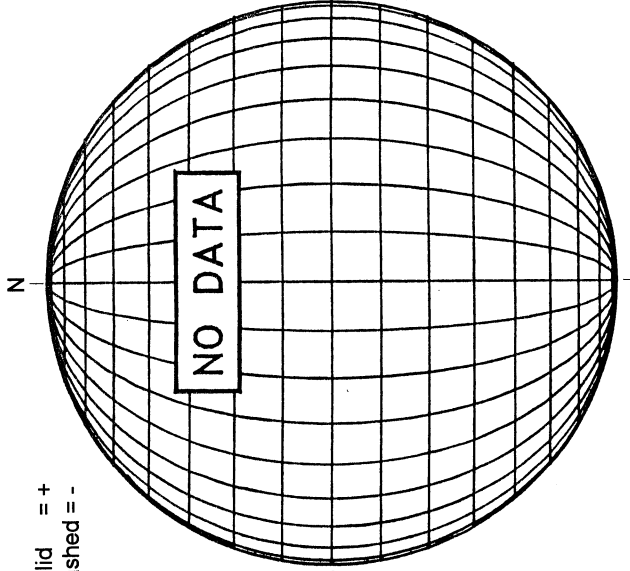
868.8 nm

Bright = +
Dark = -



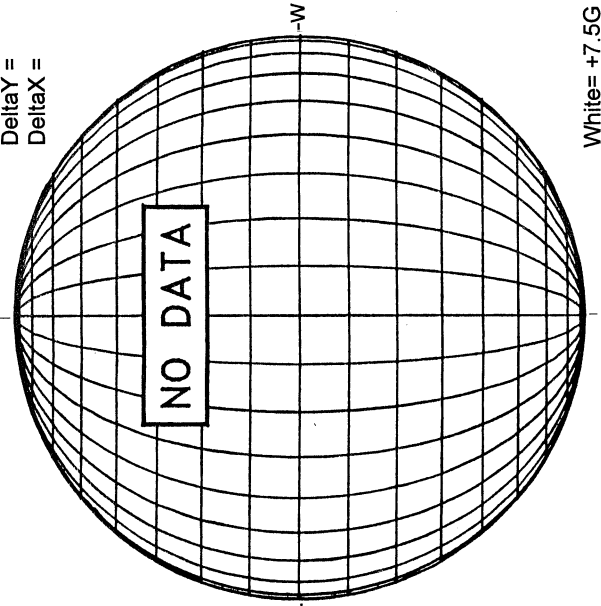
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



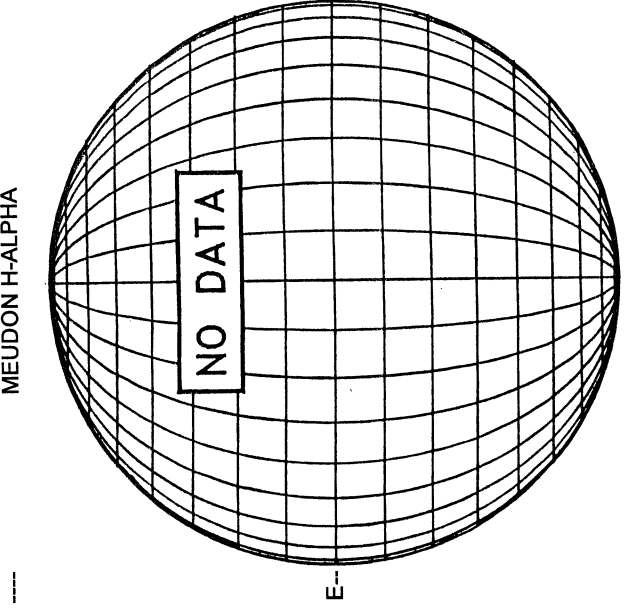
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



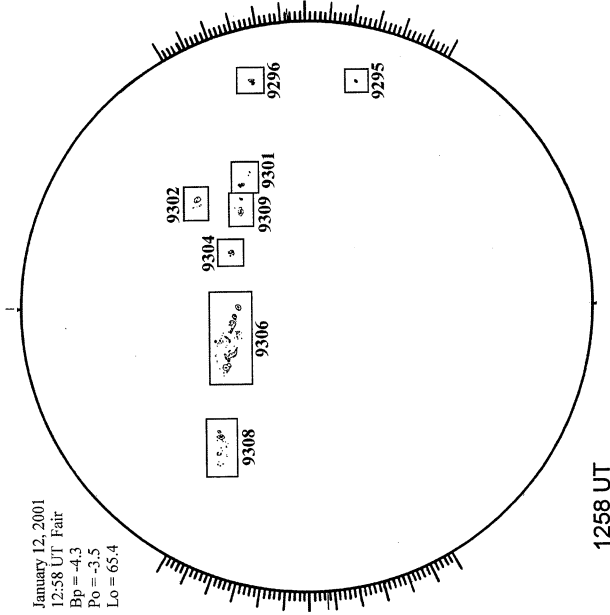
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

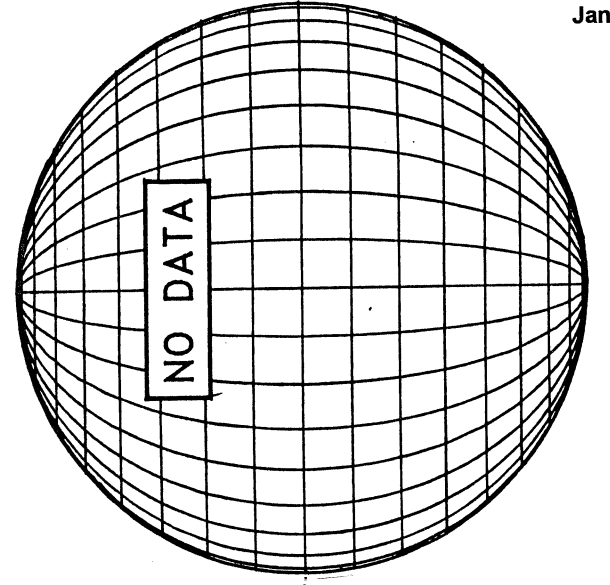


RAMEY SUNSPOTS

January 12, 2001
12:58 UT Fair
Bp = -4.3
Po = -3.5
Lo = 65.4



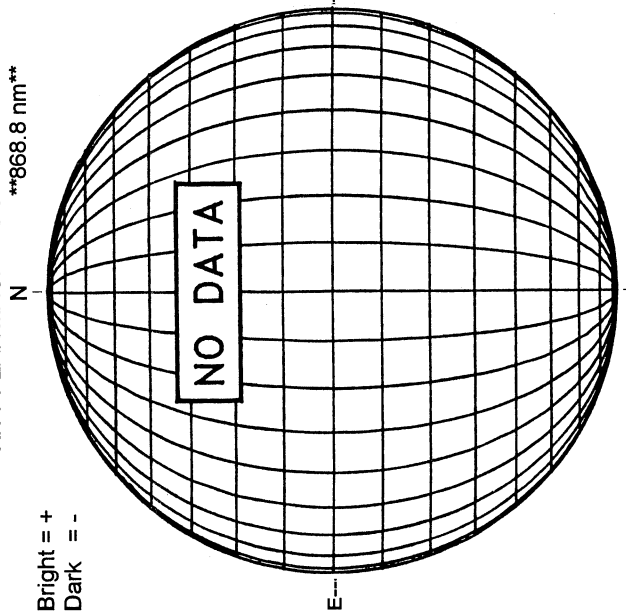
SACRAMENTO PEAK CORONA (1.15 Radii)----



JANUARY 13, 2001 (P= -3.77, Bo = -4.37, Lo = 59.25)

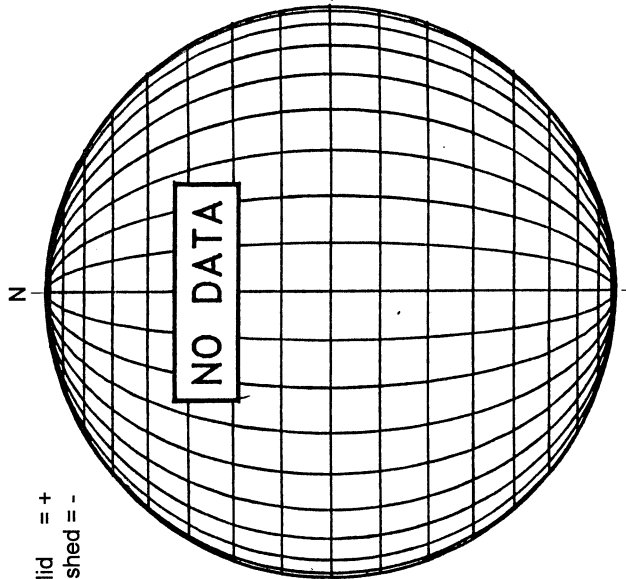
KITT PEAK MAGNETOGRAM
868.8 nm

Bright = +
Dark = -



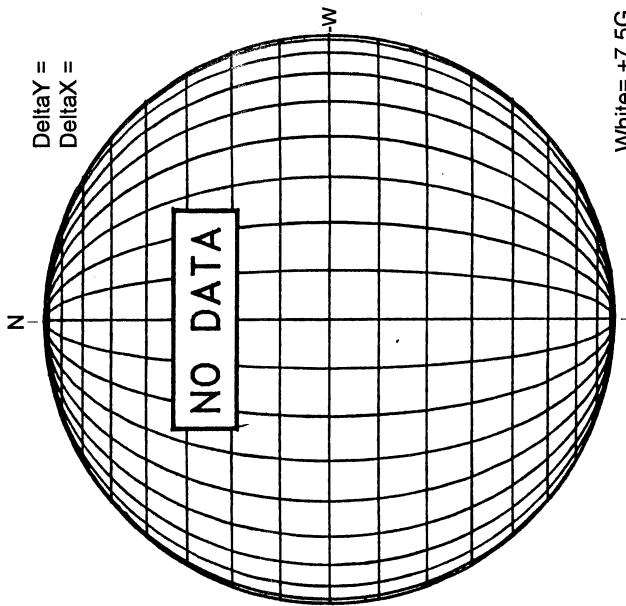
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



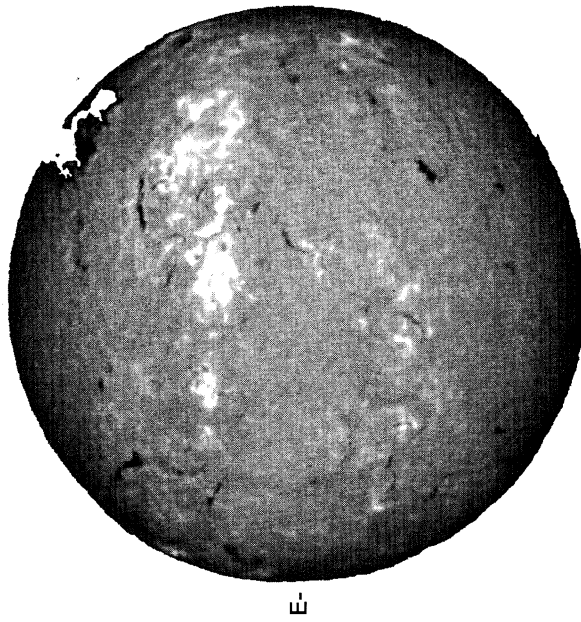
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



White = +7.5G
Black = -7.5G

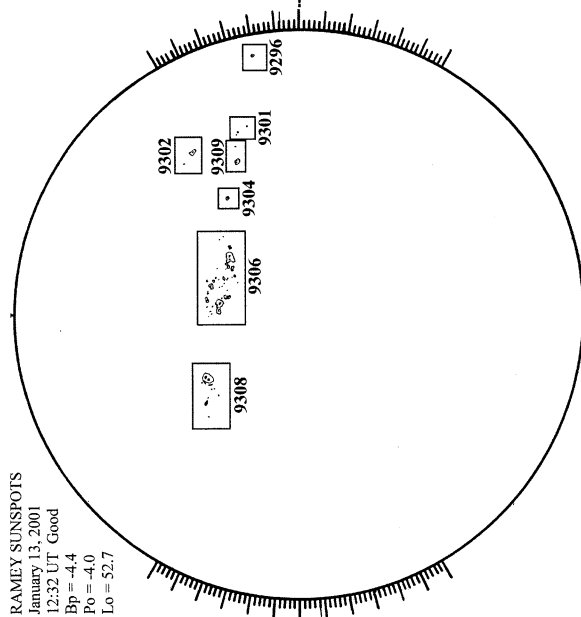
MEUDON H-ALPHA



0957 UT

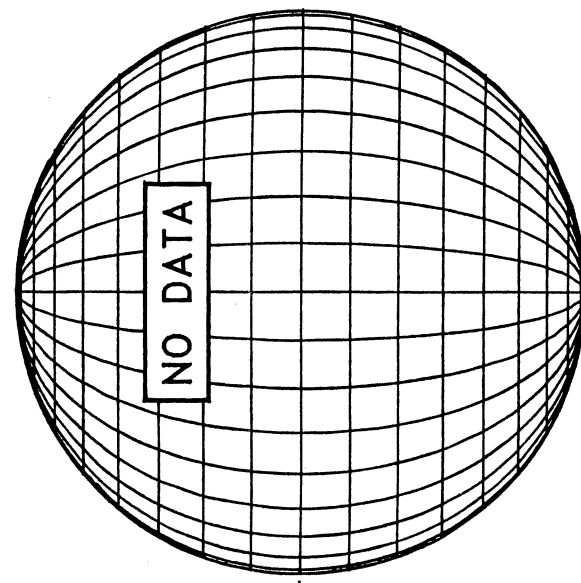
RAMEY SUNSPOT

RAMEY SUNSPOTS
January 13, 2001
12:32 UT Good
Bp = -4.4
Po = -4.0
Lo = 52.7



1232 UT

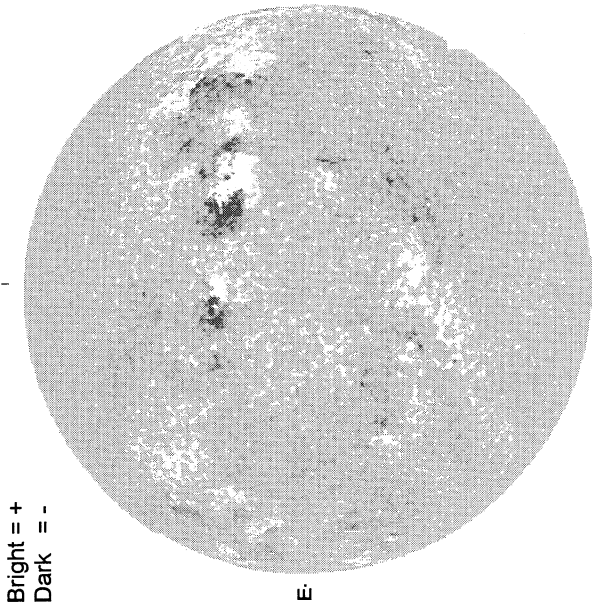
SACRAMENTO PEAK CORONA (1.15 Radii)----



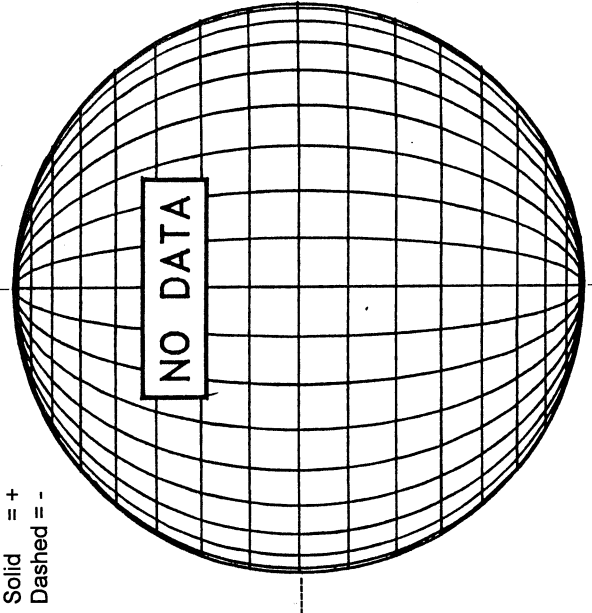
S

JANUARY 14, 2001 (P= -4.24, Bo = -4.47, Lo = 46.08)

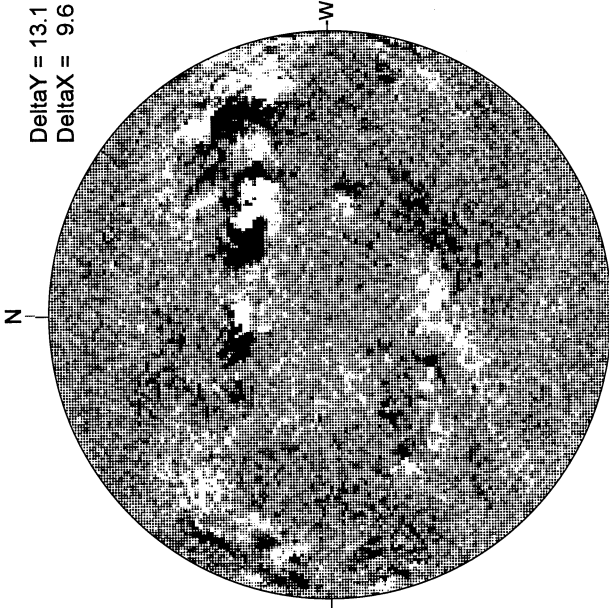
KITT PEAK MAGNETOGRAM
868.8 nm



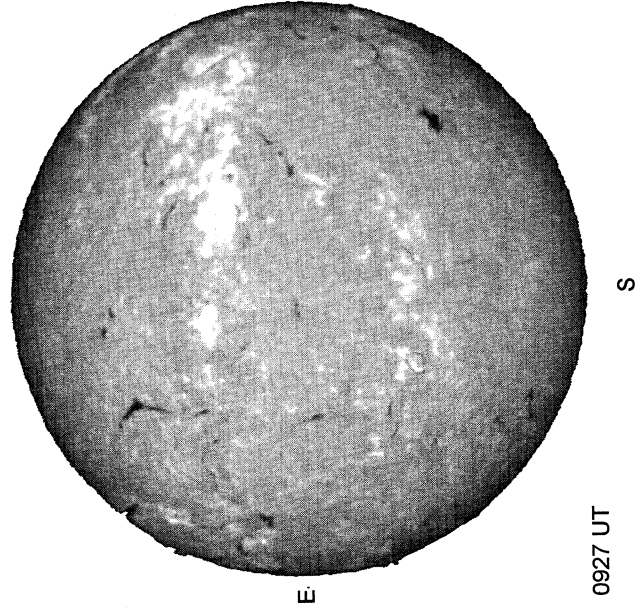
STANFORD MAGNETOGRAM



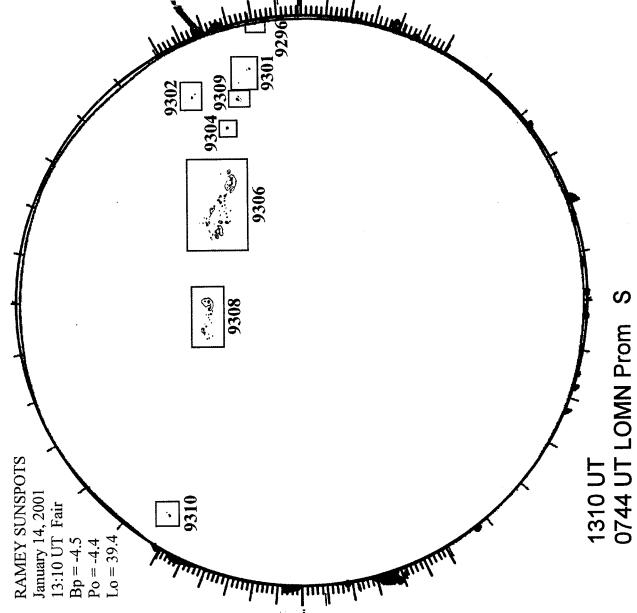
MT. WILSON MAGNETOGRAM



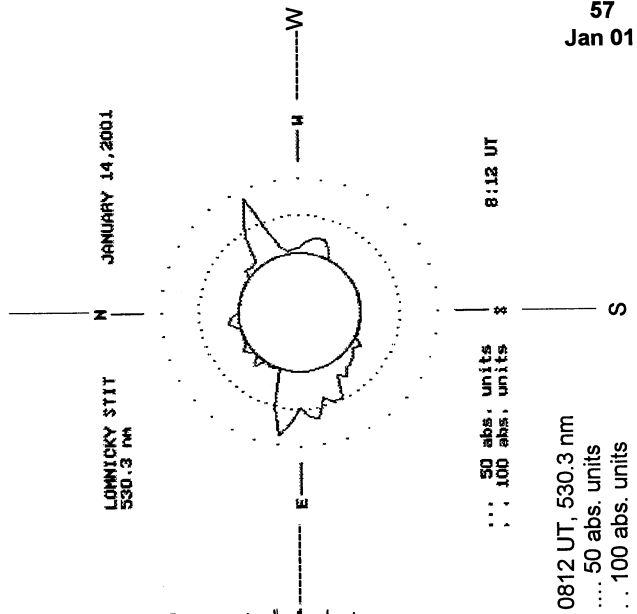
MEUDON H-ALPHA



RAMEY SUNSPOT



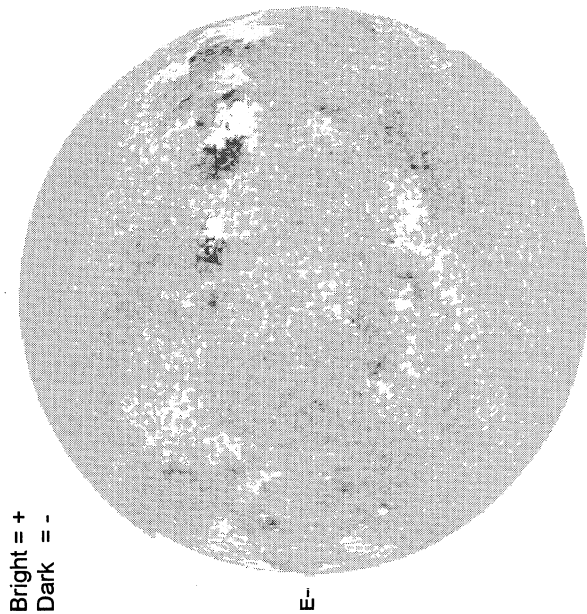
LOMNICKY PEAK CORONA (1.04 Radii)----



JANUARY 15, 2001 (P = -4.71, Bo = -4.57, Lo = 32.91)

KITT PEAK MAGNETOGRAM

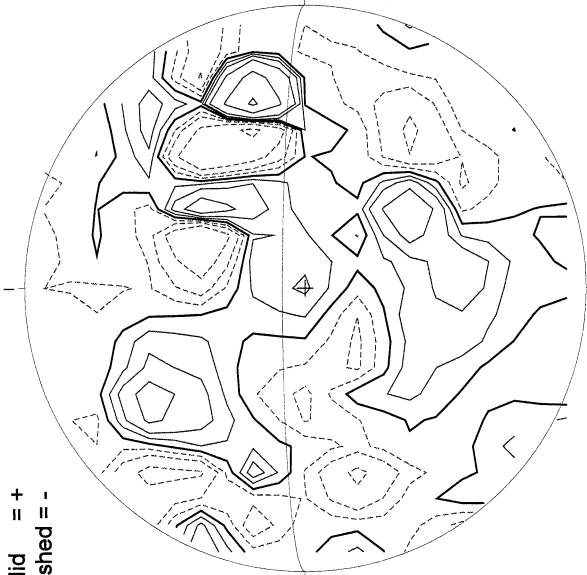
868.8 nm



Bright = +
Dark = -

STANFORD MAGNETOGRAM

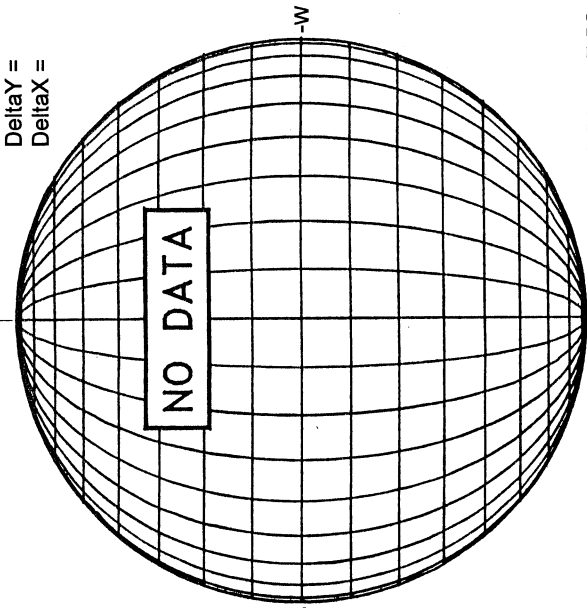
N



Solid = +
Dashed = -

MT. WILSON MAGNETOGRAM

N

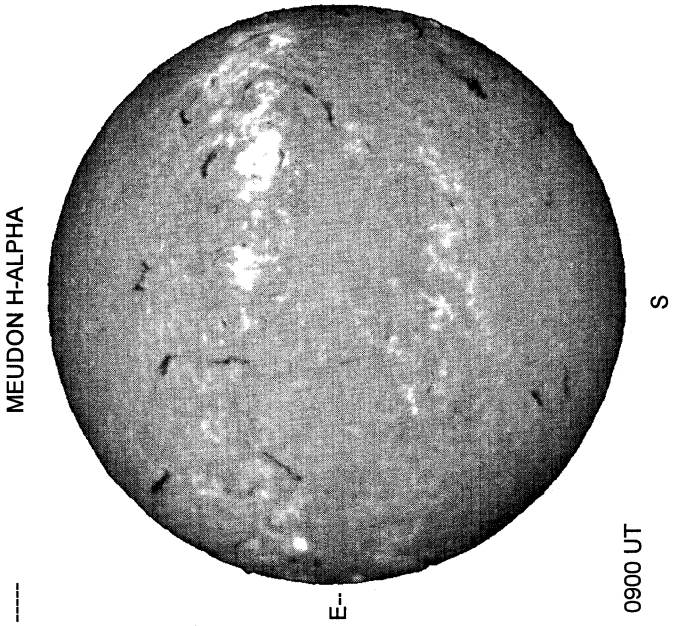


Delta Y =
Delta X =

White = +7.5G
Black = -7.5G

1622 UT

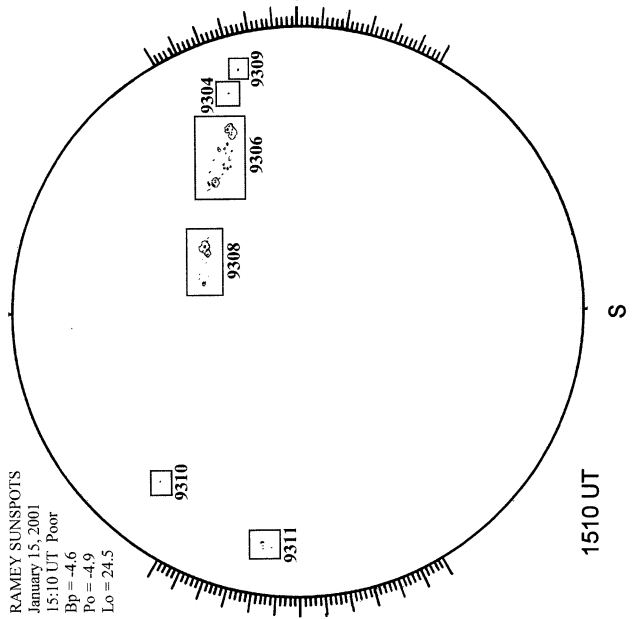
MEUDON H-ALPHA



E

0900 UT

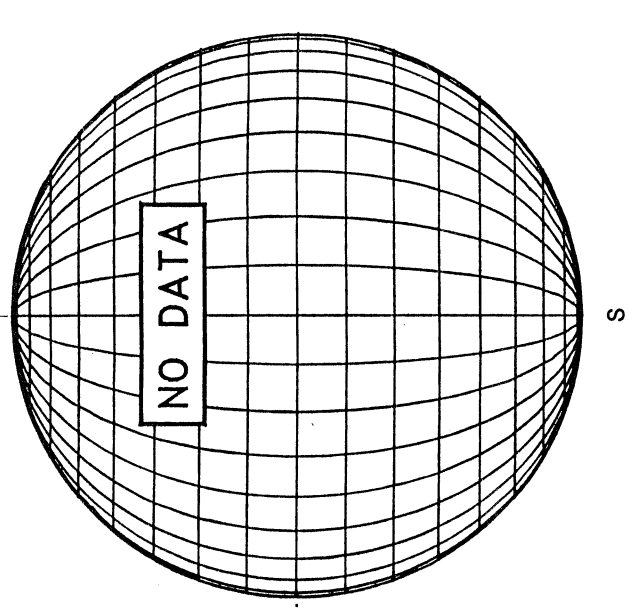
RAMEY SUNSPOT



RAMEY SUNSPOTS
January 15, 2001
15:10 UT Poor
Bp = -4.6
Po = -4.9
Lo = 24.5

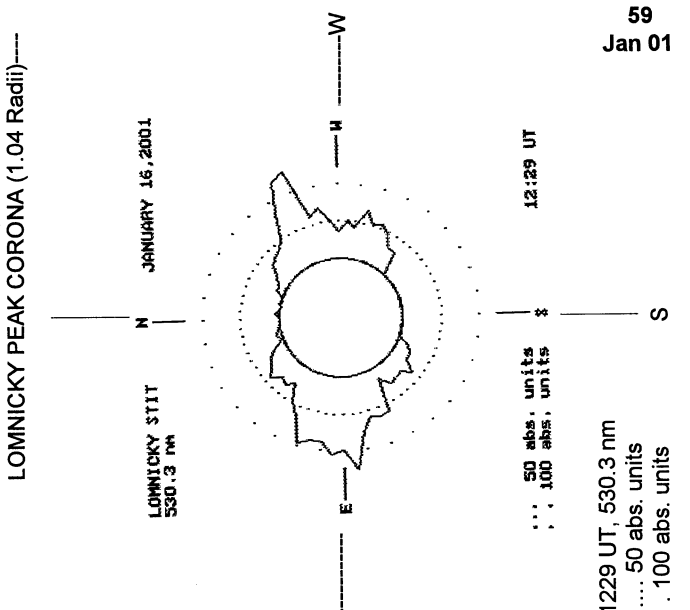
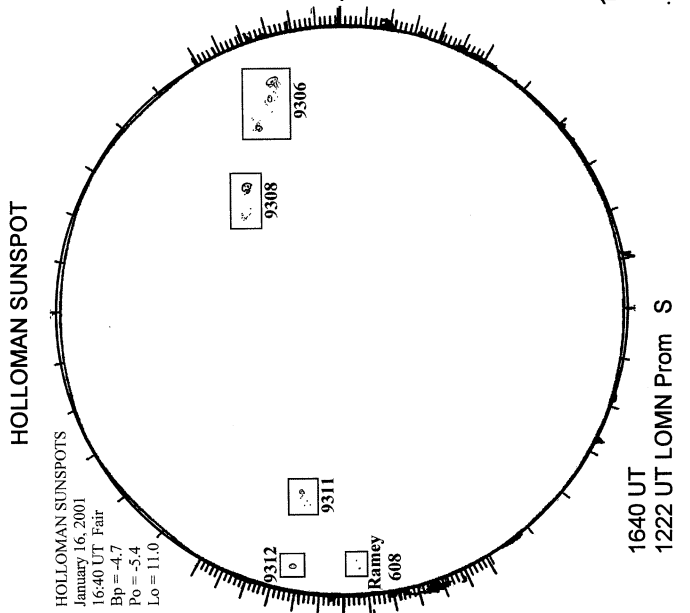
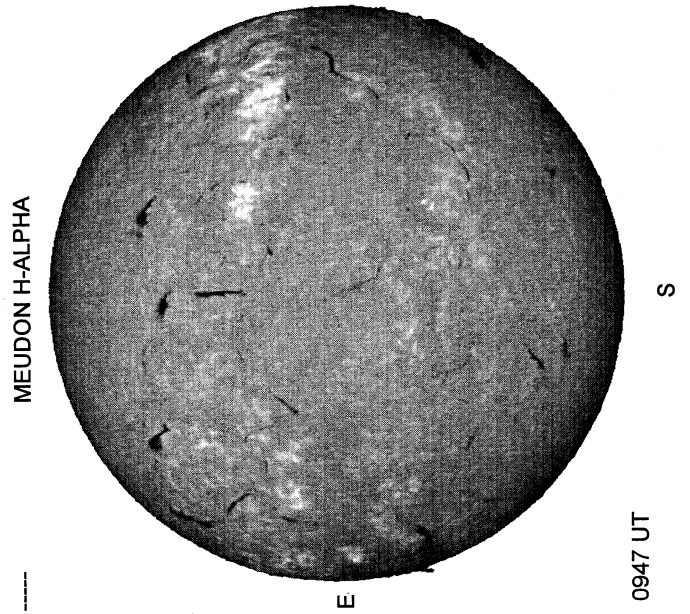
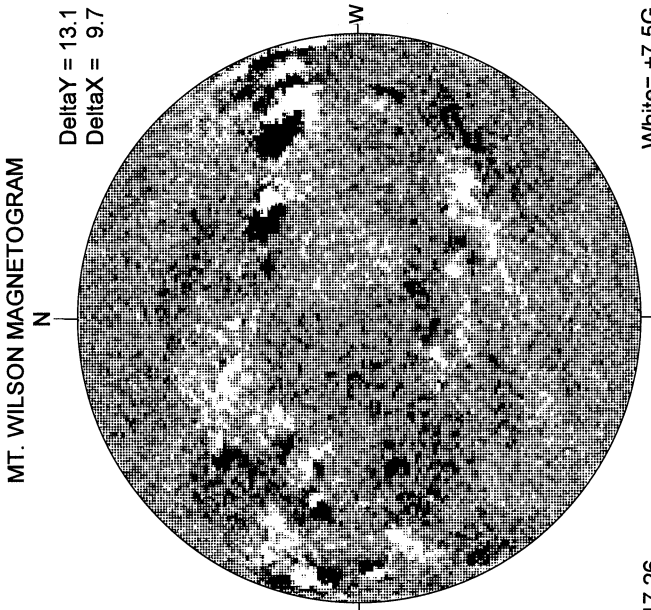
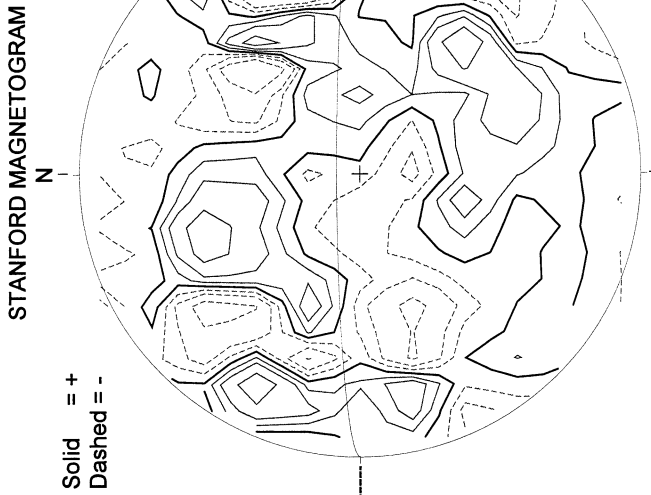
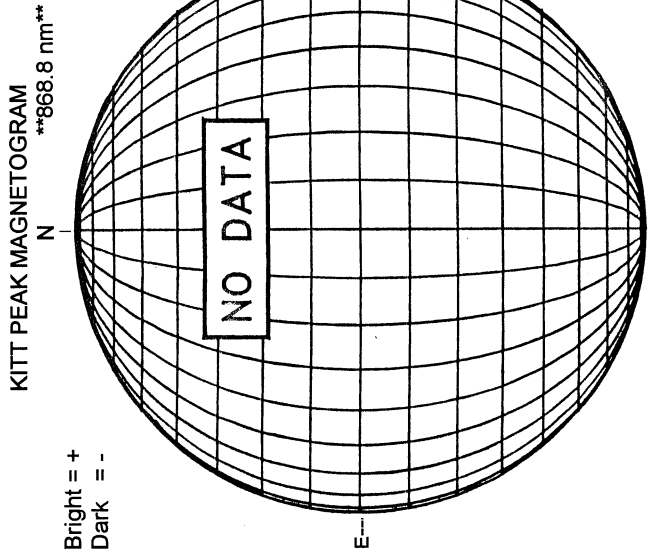
1510 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

JANUARY 16, 2001 (P= -5.18, Bo = -4.67, Lo = 19.74)



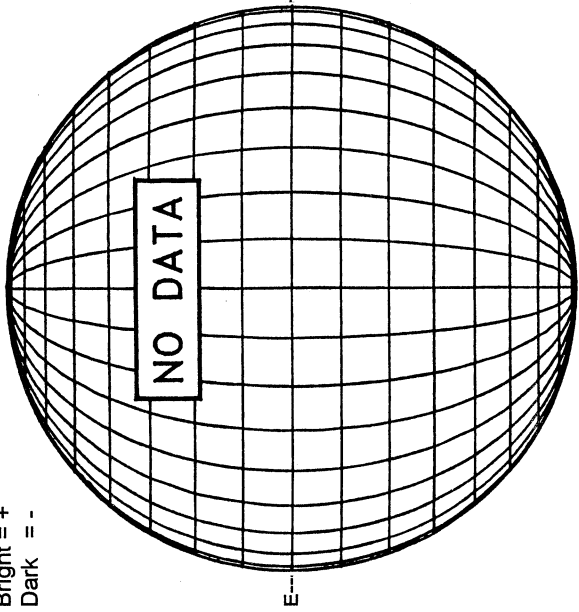
JANUARY 17, 2001 (P= -5.64, Bo = -4.77, Lo = 6.58)

60
Jan 01

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



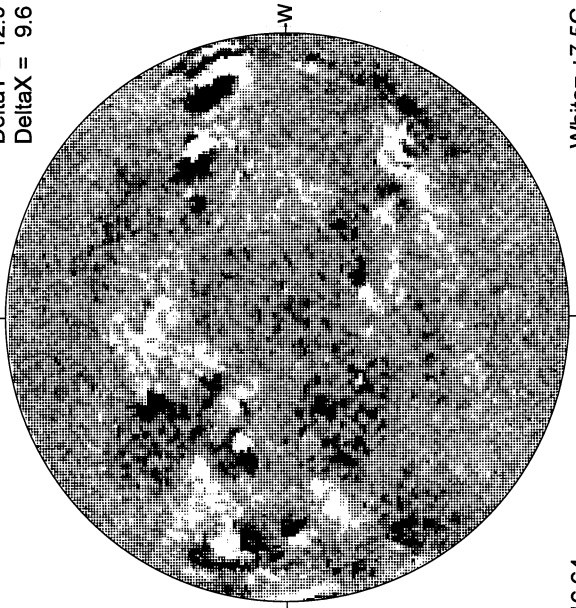
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

Delta Y = 12.9
Delta X = 9.6



16.64 -
17.62 UT

White = +7.5G
Black = -7.5G

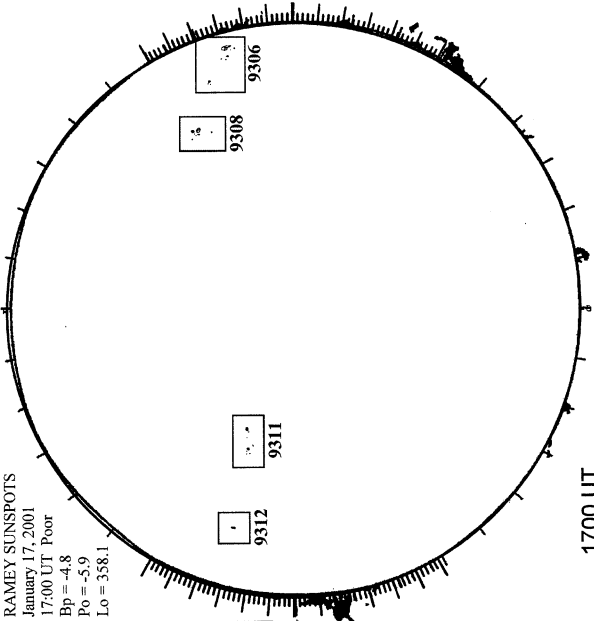
MEUDON H-ALPHA



0845 UT

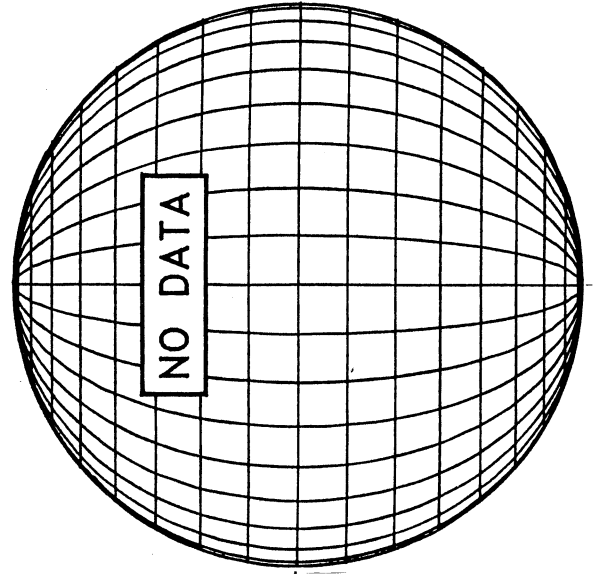
RAMEY SUNSPOTS

RAMEY SUNSPOTS
January 17, 2001
17:00 UT Poor
Bp = -4.8
Po = -5.9
Lo = 358.1



1700 UT
1123 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)---



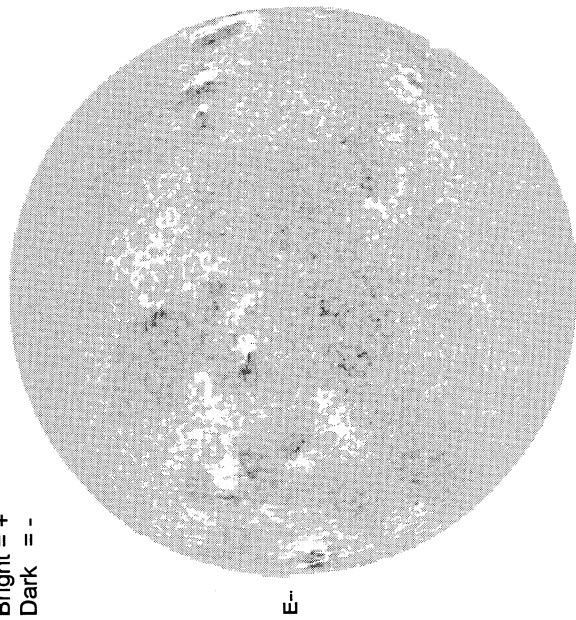
S

JANUARY 18, 2001 (P = -6.10, Bo = -4.86, Lo = 353.41)

KITT PEAK MAGNETOGRAM

868.8 nm

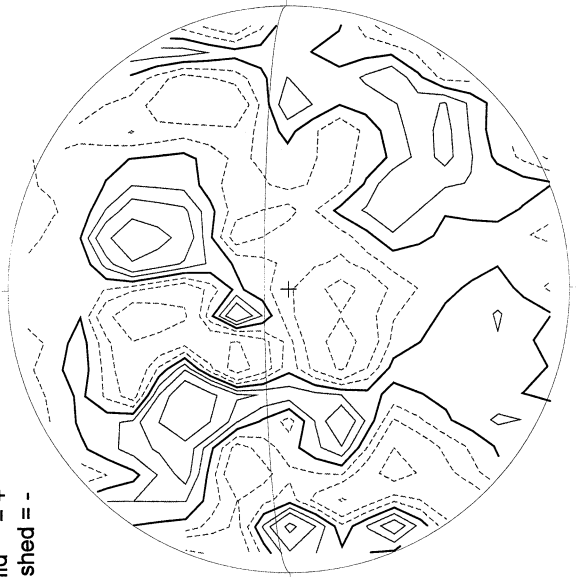
Bright = +
Dark = -



1738 UT

STANFORD MAGNETOGRAM

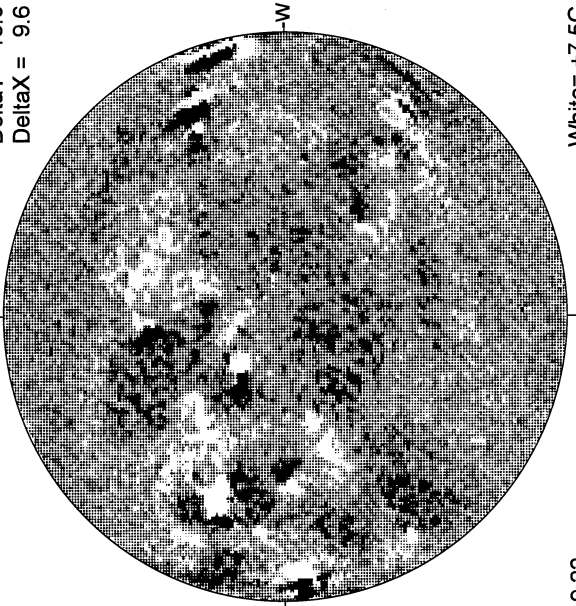
Solid = +
Dashed = -



2129 UT

MT. WILSON MAGNETOGRAM

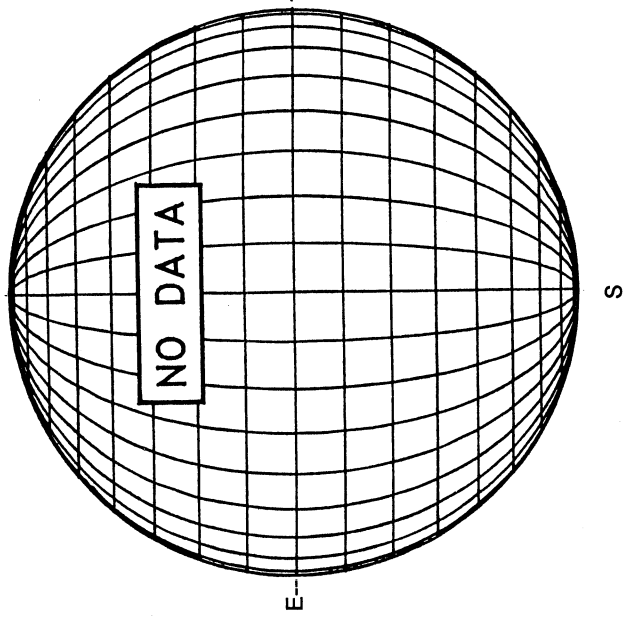
DeltaY = 13.0
DeltaX = 9.6



19.22 -
20.20 UT

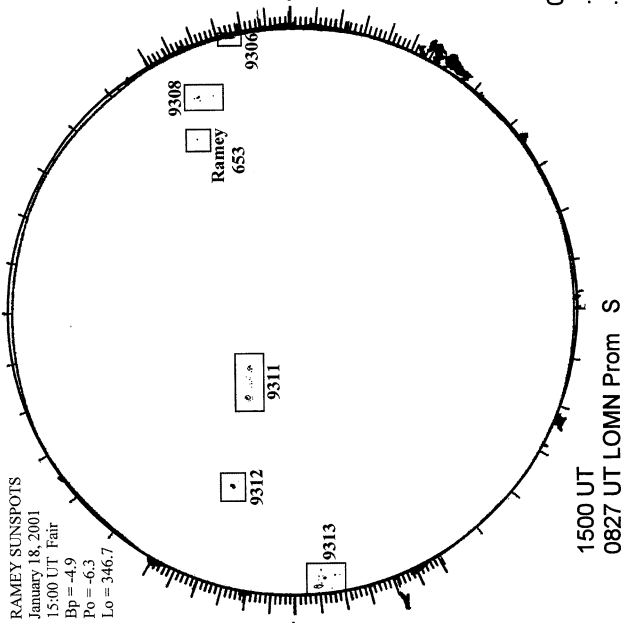
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



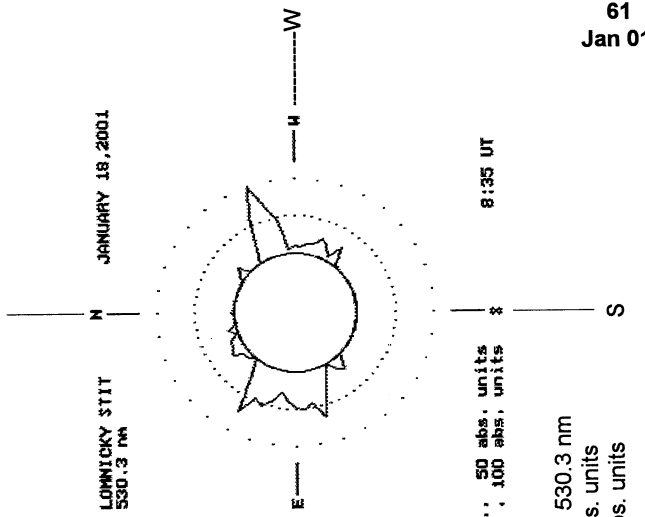
RAMEY SUNSPOT

RAMEY SUNSPOTS
January 18, 2001
15:00 UT Fair
Bp = -4.9
Po = -6.3
Lo = 346.7



1500 UT
0827 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)---



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

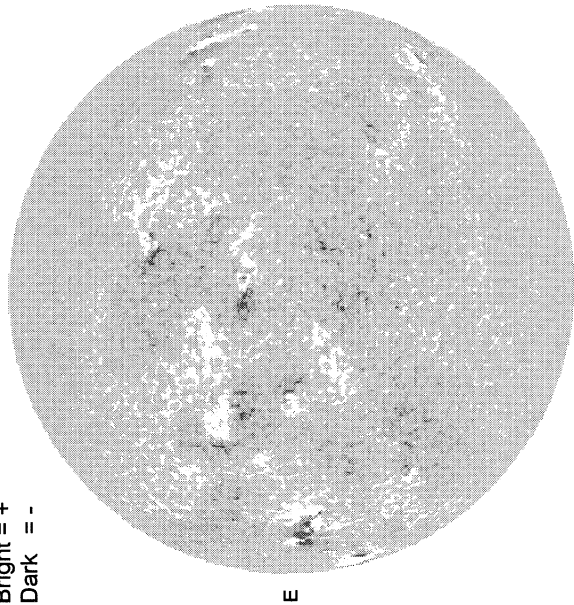
0835 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

JANUARY 19, 2001 (P = -6.56, Bo = -4.96, Lo = 340.24)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



1642 UT

STANFORD MAGNETOGRAM

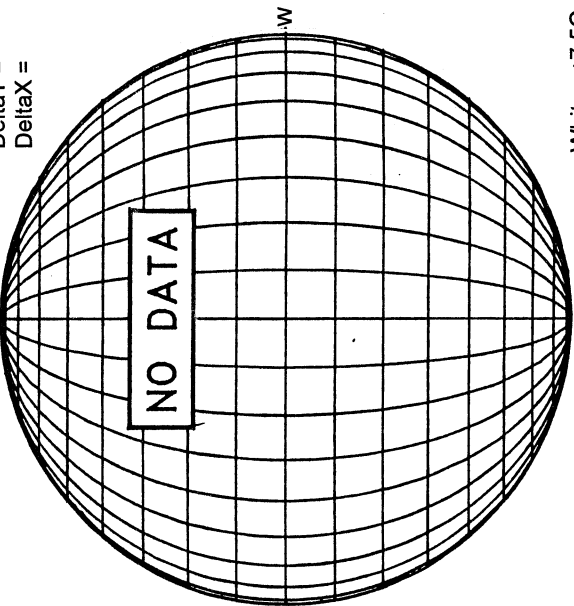
Solid = +
Dashed = -



2138 UT

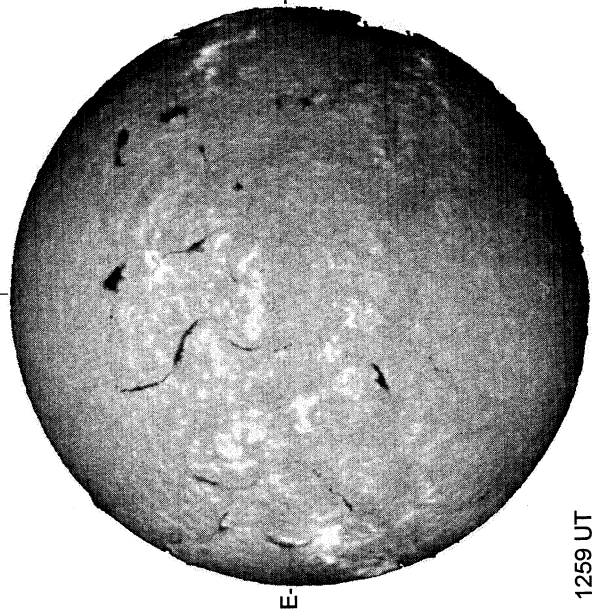
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



White = +7.5G
Black = -7.5G

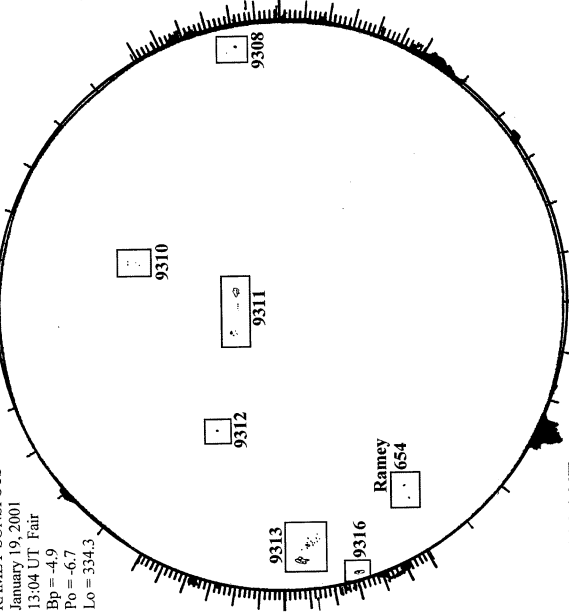
MEUDON H-ALPHA



1259 UT

RAMEY SUNSPOT

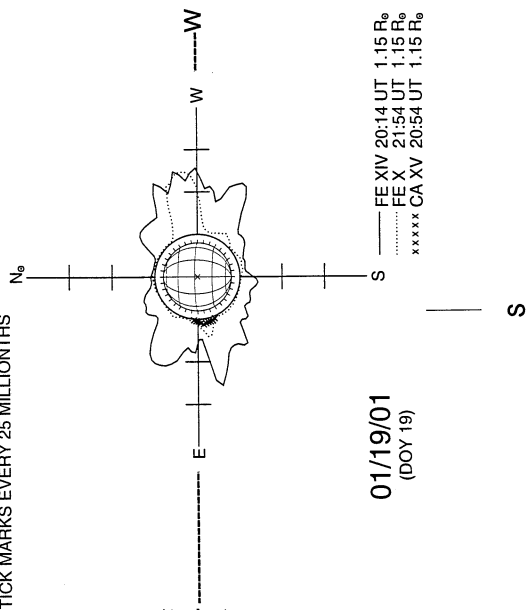
RAMEY SUNSPOTS
January 19, 2001
13:04 UT Fair
Bp = 4.9
Po = -6.7
Lo = 334.3



1304 UT
1011 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 25 MILLIONTHS



01/19/01
(DOY 19)

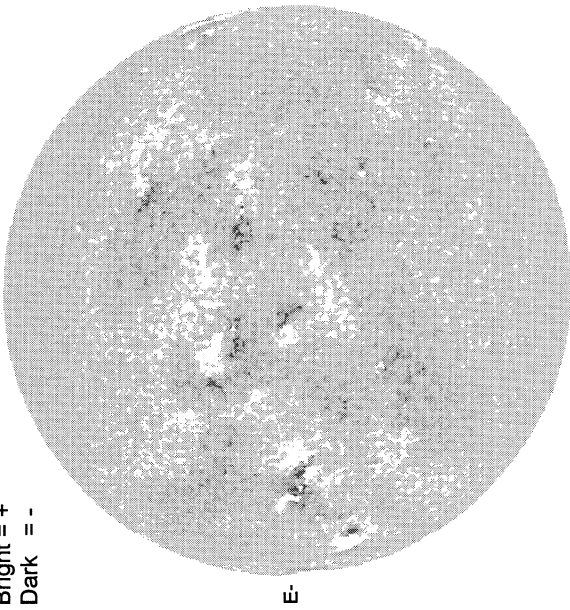
— FE XIV 20:14 UT 1.15 R_o
..... FE X 21:54 UT 1.15 R_o
xxxxx CA XV 20:54 UT 1.15 R_o

JANUARY 20, 2001 (P= -7.02, Bo = -5.05, Lo = 327.08)

KITT PEAK MAGNETOGRAM

868.8 nm

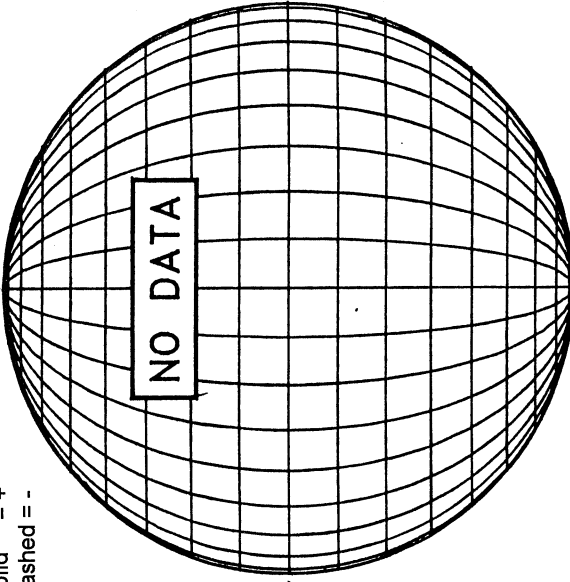
Bright = +
Dark = -



1927 UT

STANFORD MAGNETOGRAM

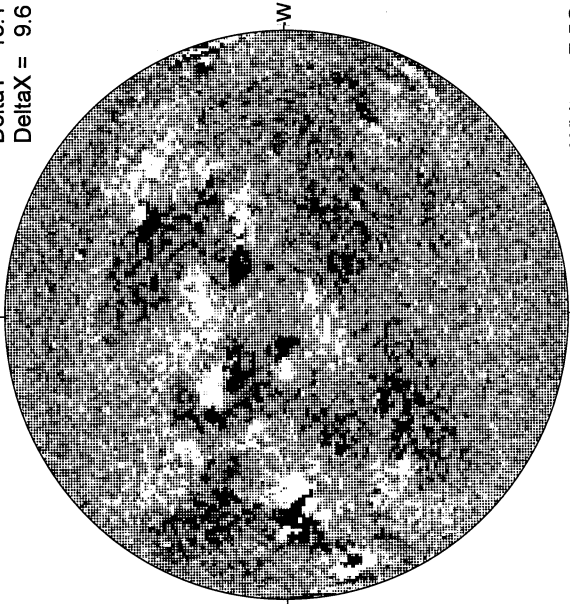
Solid = +
Dashed = -



17.19 -
18.17 UT

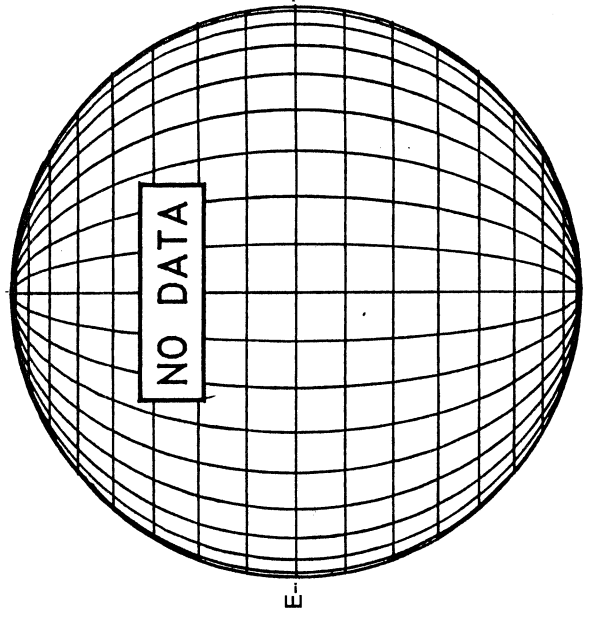
MT. WILSON MAGNETOGRAM

Delta Y = 13.1
Delta X = 9.6



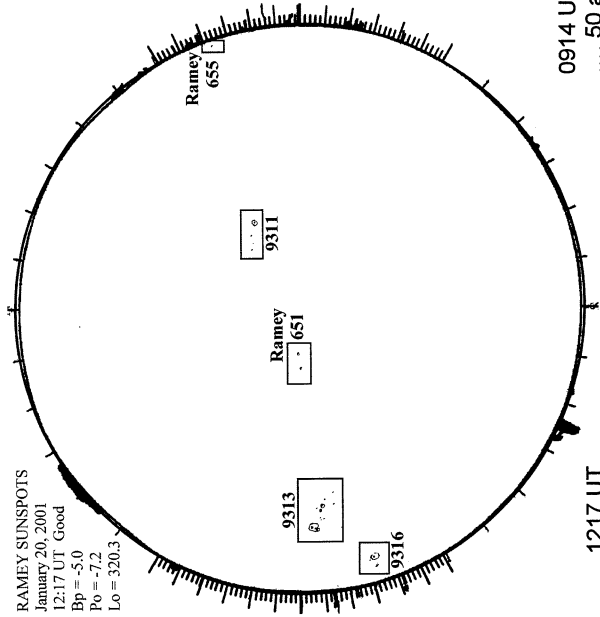
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



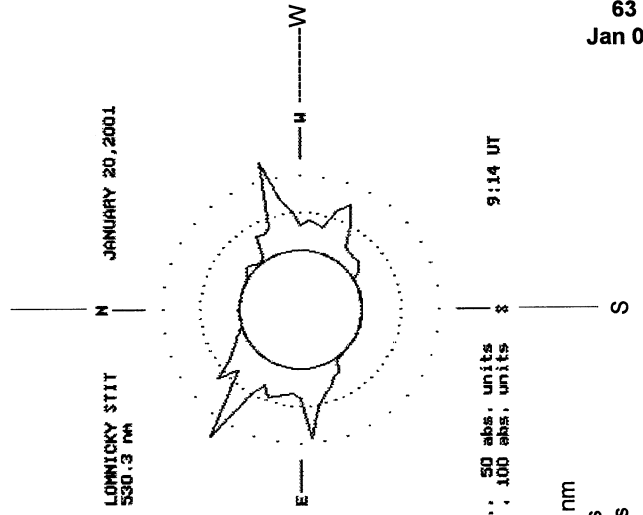
RAMEY SUNSPOT

RAMEY SUNSPOTS
January 20, 2001
12:17 UT Good
Bp = -5.0
Po = -7.2
Lo = 320.3



1217 UT
0749 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



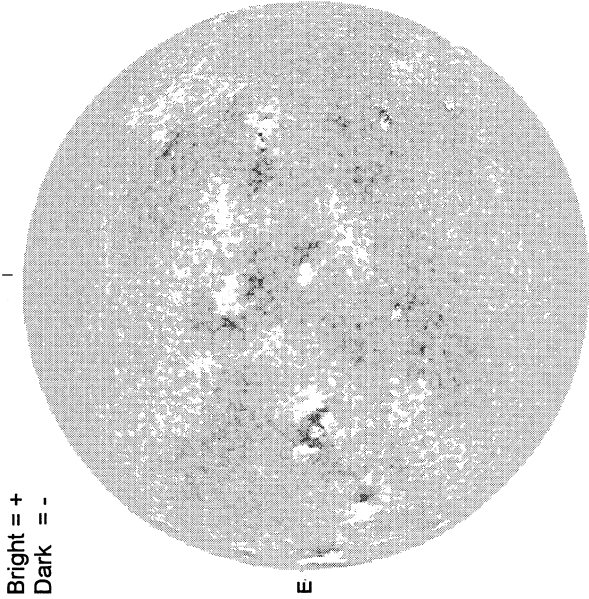
... 50 abs. units
... 100 abs. units

0914 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

9:14 UT

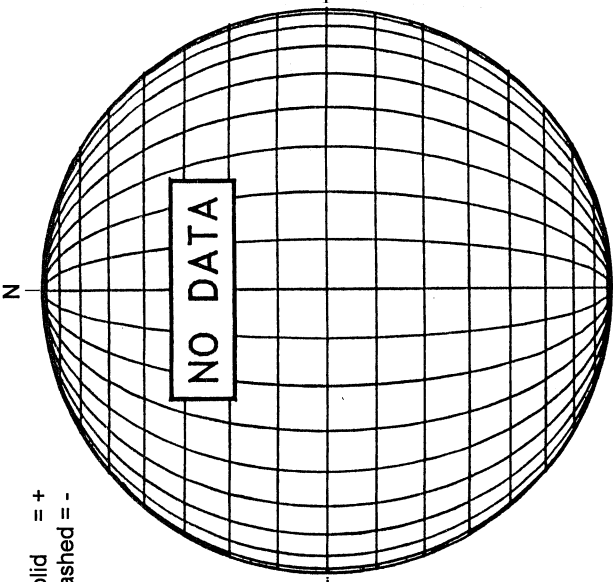
JANUARY 21, 2001 (P = -7.47, Bo = -5.14, Lo = 313.91)

KITT PEAK MAGNETOGRAM
868.8 nm



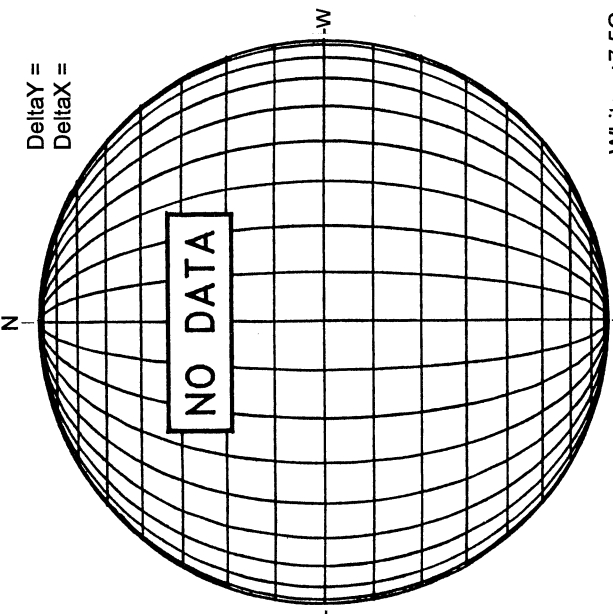
Bright = +
Dark = -

STANFORD MAGNETOGRAM



Solid = +
Dashed = -

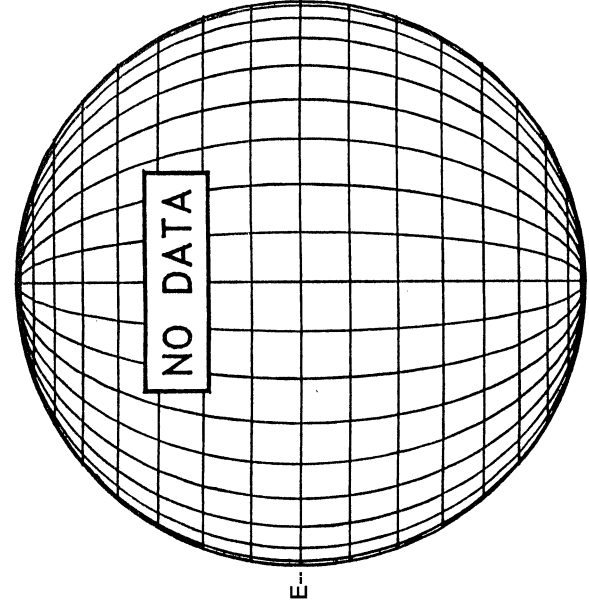
MT. WILSON MAGNETOGRAM



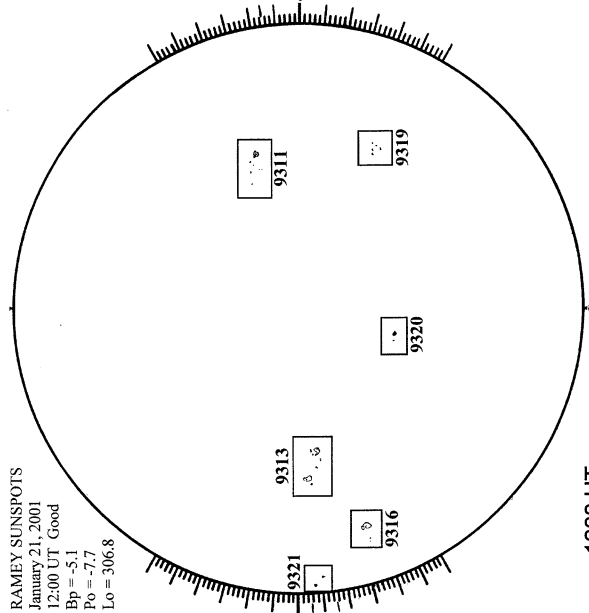
Delta Y =
Delta X =

White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

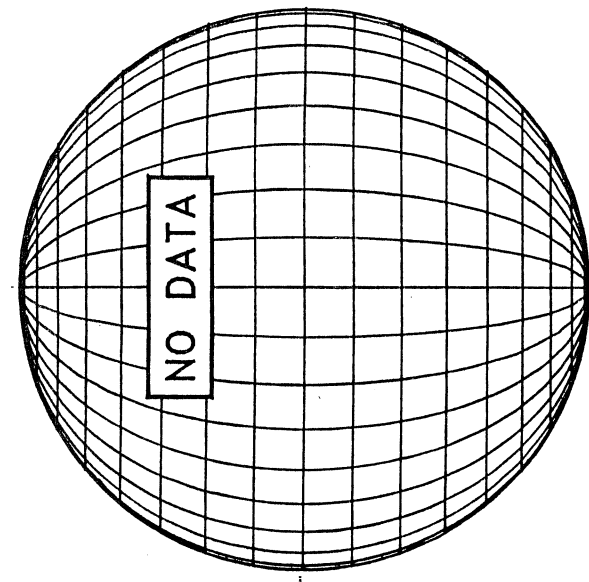


RAMEY SUNSPOTS

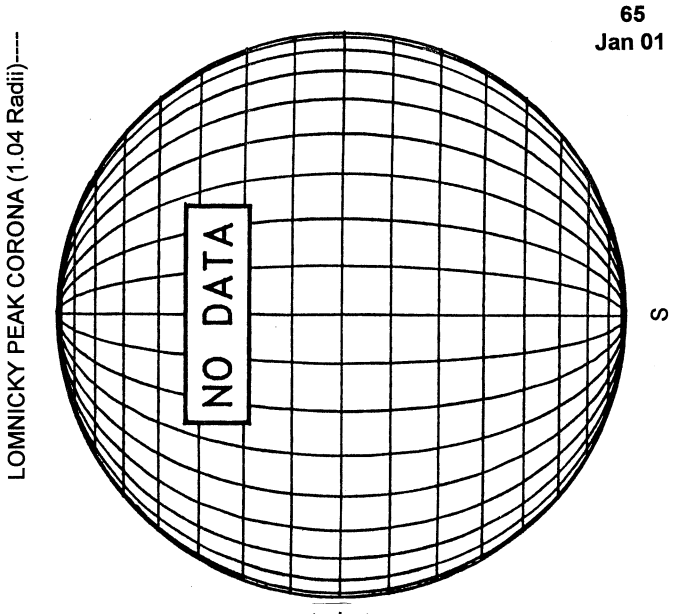
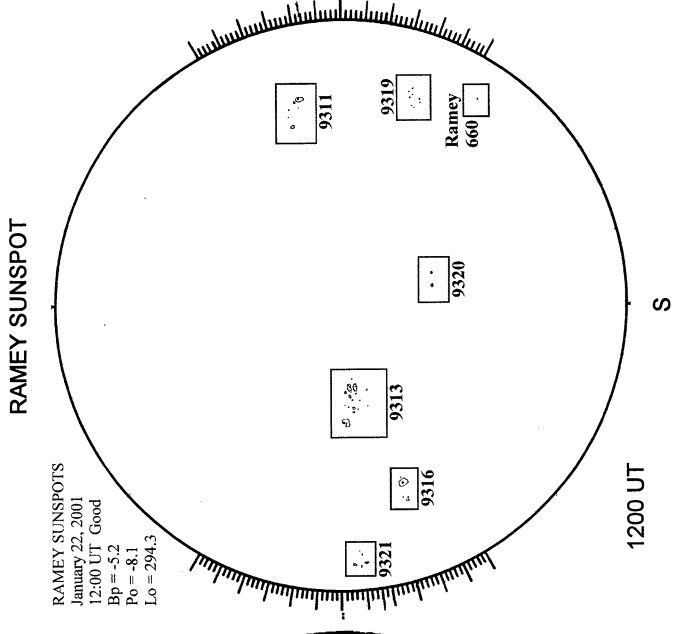
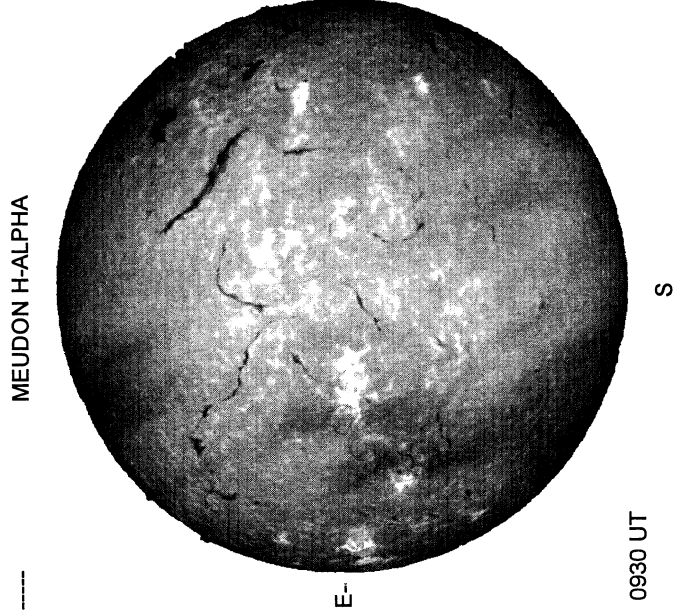
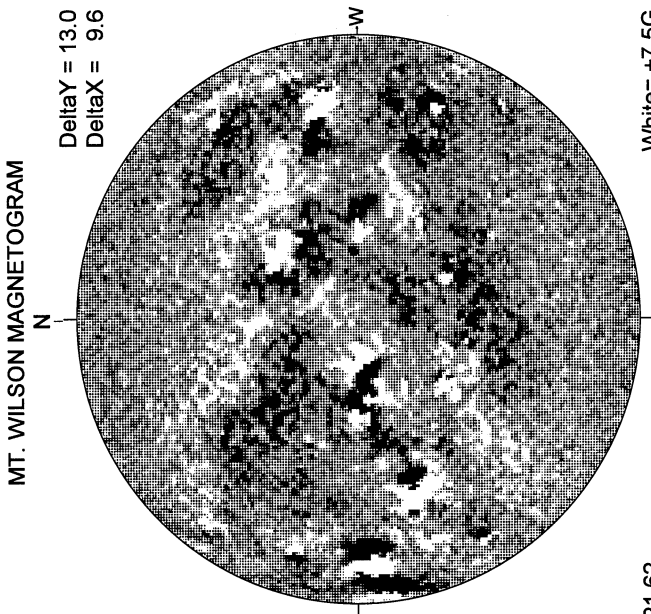
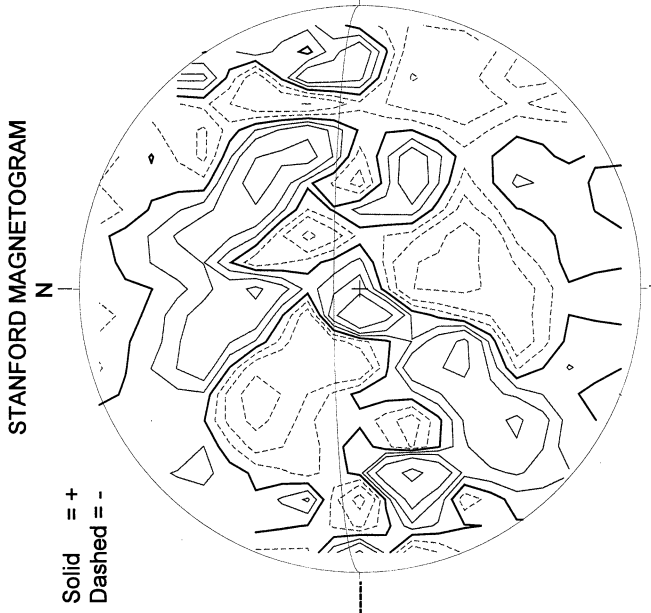
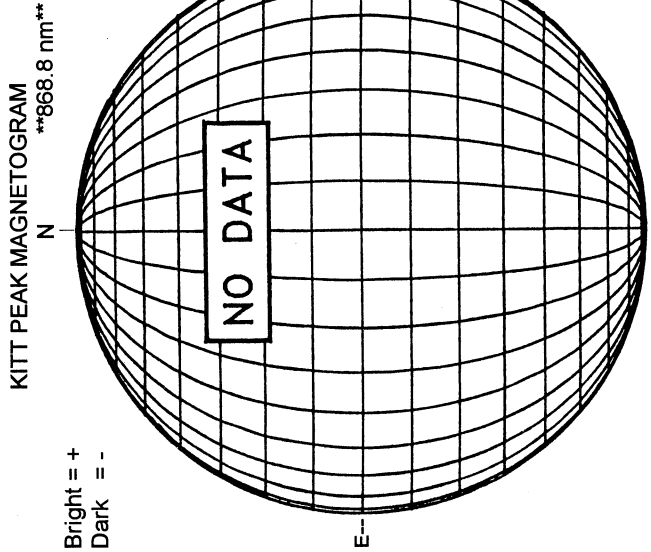


RAMEY SUNSPOTS
January 21, 2001
12:00 UT, Good
Bp = -5.1
Po = -7.7
Lo = 306.8

LOMNICKY PEAK CORONA (1.04 Radii)----



JANUARY 22, 2001 (P= -7.92, Bo = -5.23, Lo = 300.74)



21.62 -
 22.60 UT

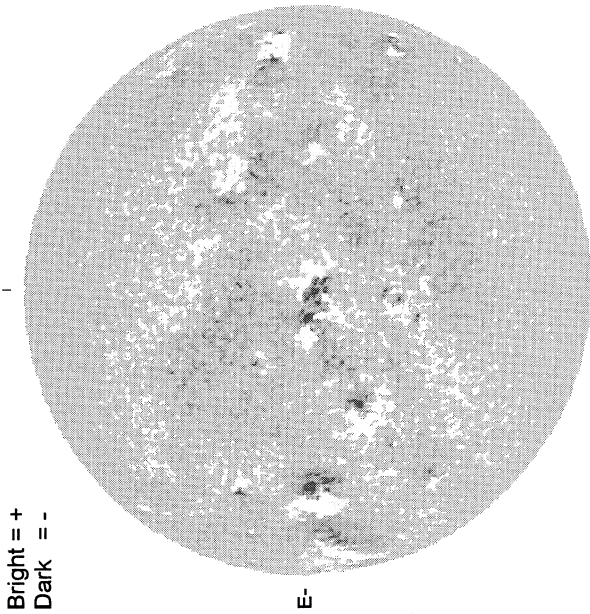
2108 UT

0930 UT

JANUARY 23, 2001 (P= -8.37, Bo = -5.32, Lo = 287.58)

66
Jan 01

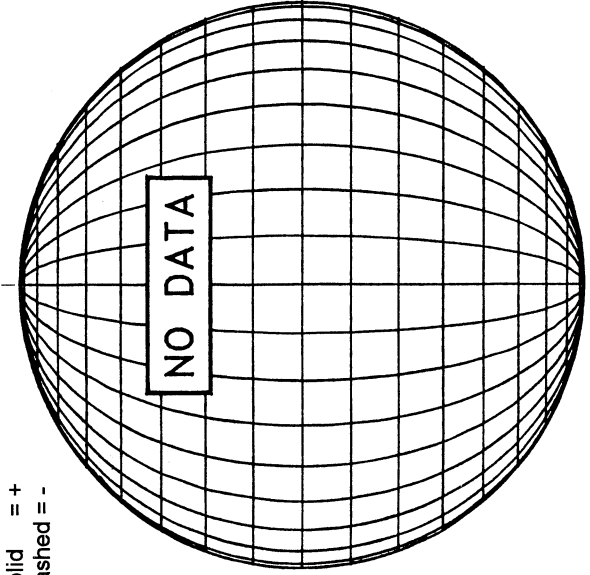
KITT PEAK MAGNETOGRAM
***868.8 nm**



Bright = +
Dark = -

1639 UT

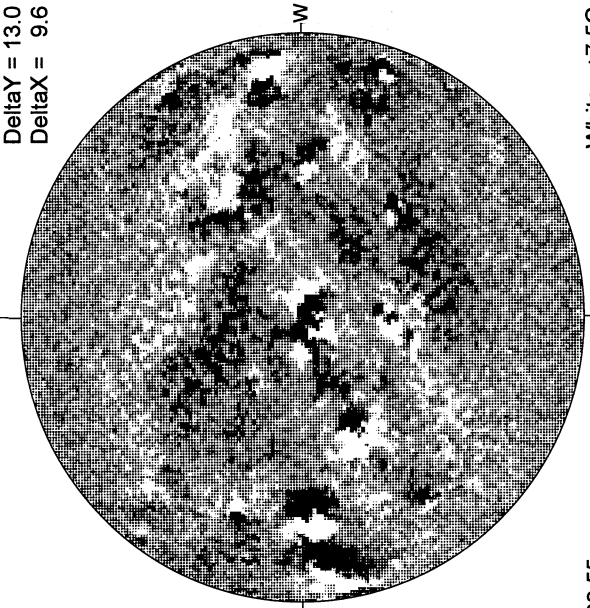
STANFORD MAGNETOGRAM



Solid = +
Dashed = -

20.55 -
21.53 UT

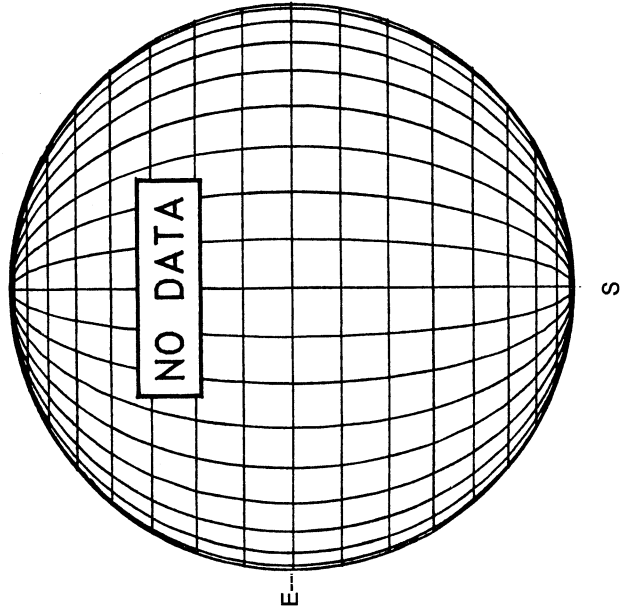
MT. WILSON MAGNETOGRAM



Delta Y = 13.0
Delta X = 9.6

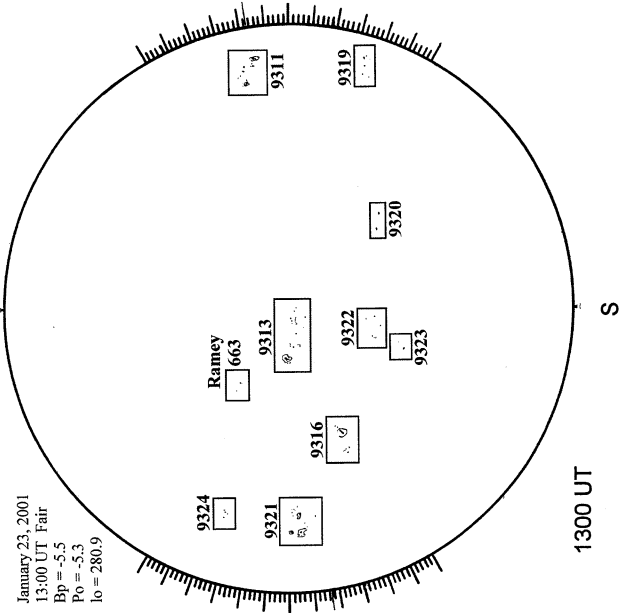
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



E-

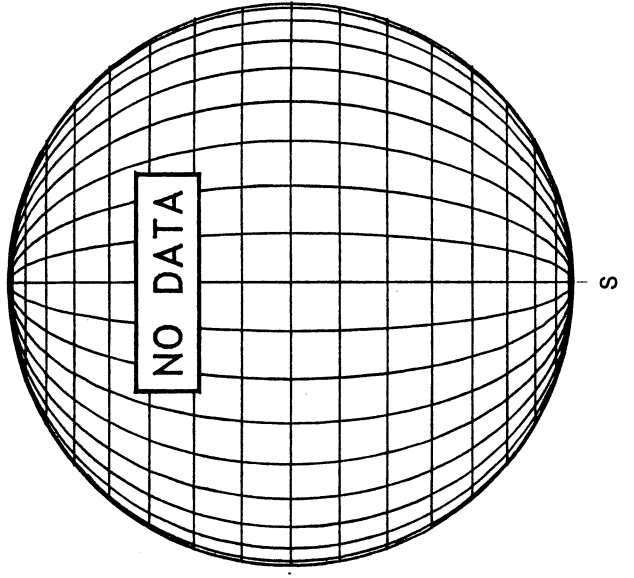
RAMEY SUNSPOT



January 23, 2001
13:00 UT Fair
Bp = -5.5
Po = -5.3
Io = 280.9

1300 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

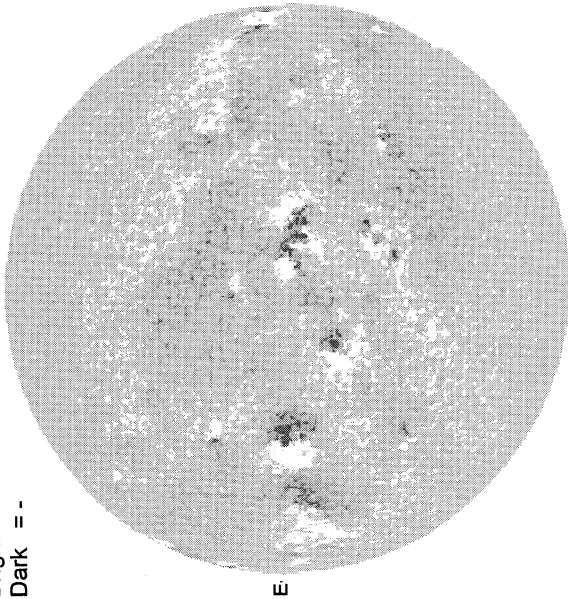


JANUARY 24, 2001 (P= -8.81, Bo = -5.41, Lo = 274.41)

KITT PEAK MAGNETOGRAM

868.8 nm

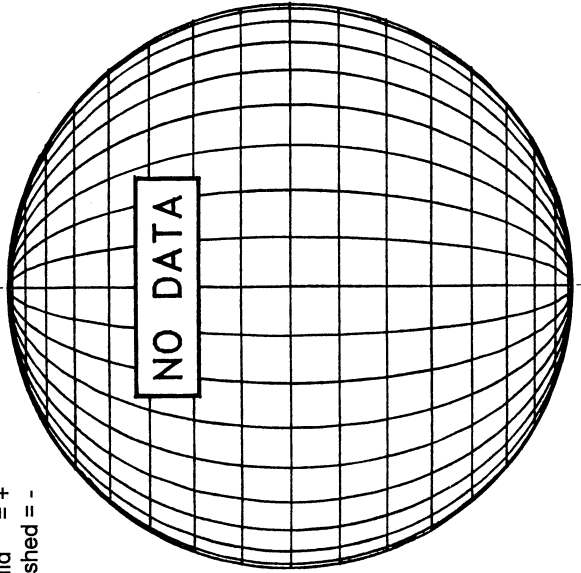
Bright = +
Dark = -



1651 UT

STANFORD MAGNETOGRAM

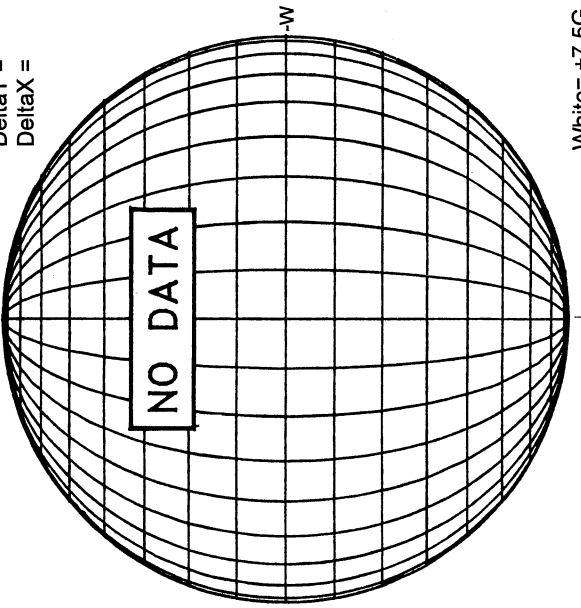
Solid = +
Dashed = -



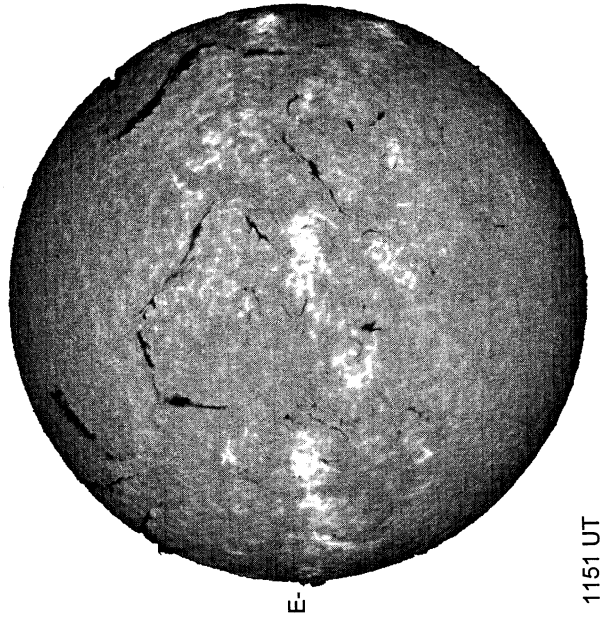
White = +7.5G
Black = -7.5G

MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



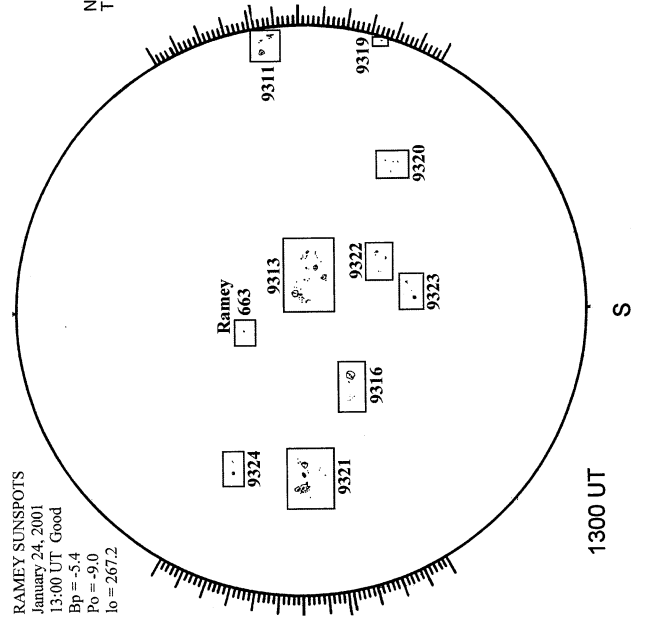
MEUDON H-ALPHA



1151 UT

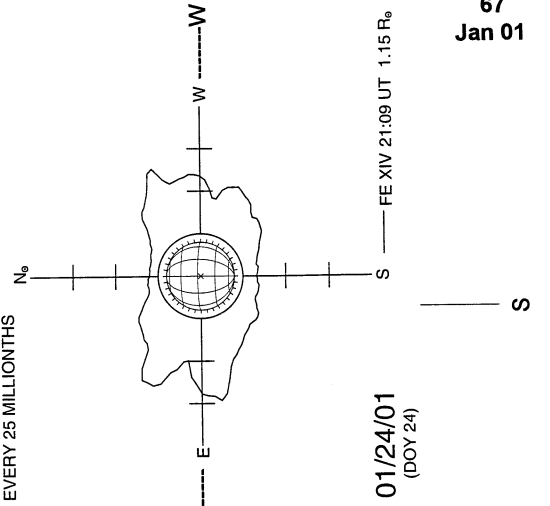
RAMEY SUNSPOT

RAMEY SUNSPOTS
January 24, 2001
13:00 UT Good
Bp = -5.4
Po = -9.0
lo = -267.2



SACRAMENTO PEAK CORONA (1.15 RadII)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 25 MILLIONTHS



01/24/01
(DOY 24)

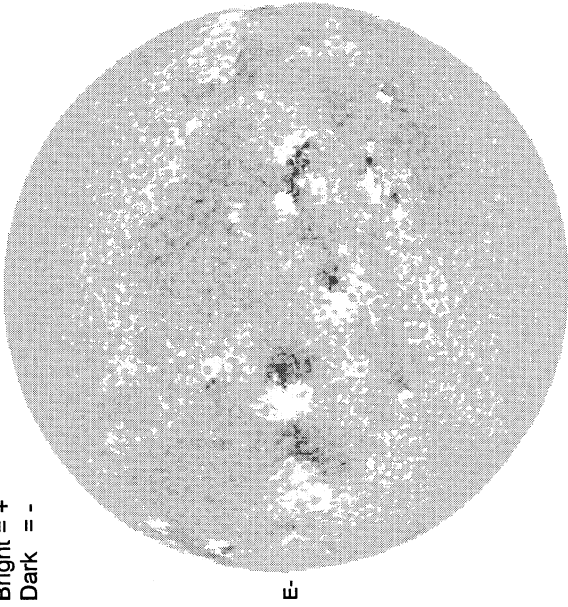
JANUARY 25, 2001 (P= -9.25, Bo = -5.49, Lo = 261.24)

68
Jan 01

KITT PEAK MAGNETOGRAM

868.8 nm

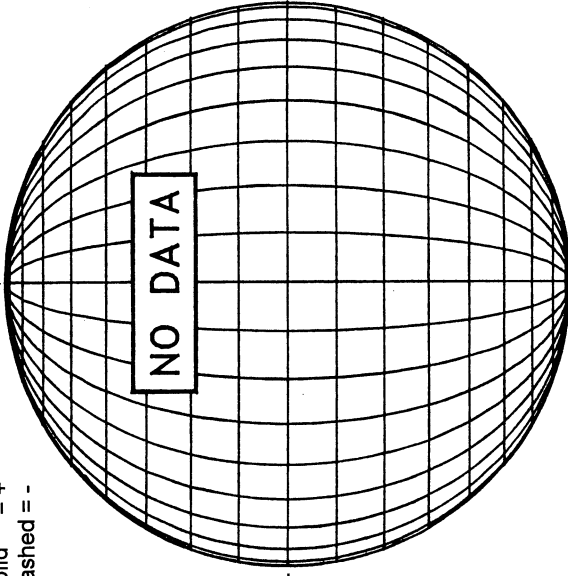
Bright = +
Dark = -



1633 UT

STANFORD MAGNETOGRAM

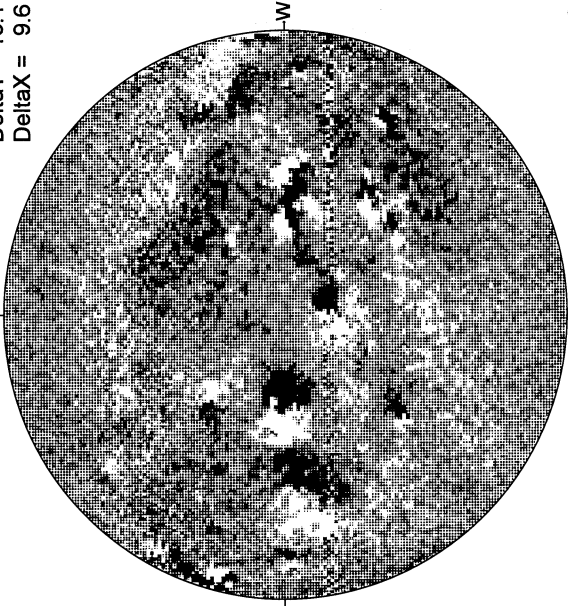
Solid = +
Dashed = -



18.54 -
19.52 UT

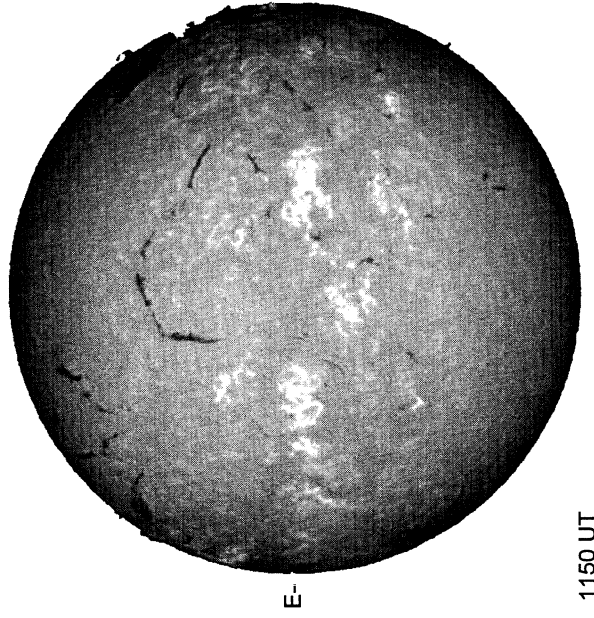
MT. WILSON MAGNETOGRAM

DeltaY = 13.1
DeltaX = 9.6



White = +7.5G
Black = -7.5G

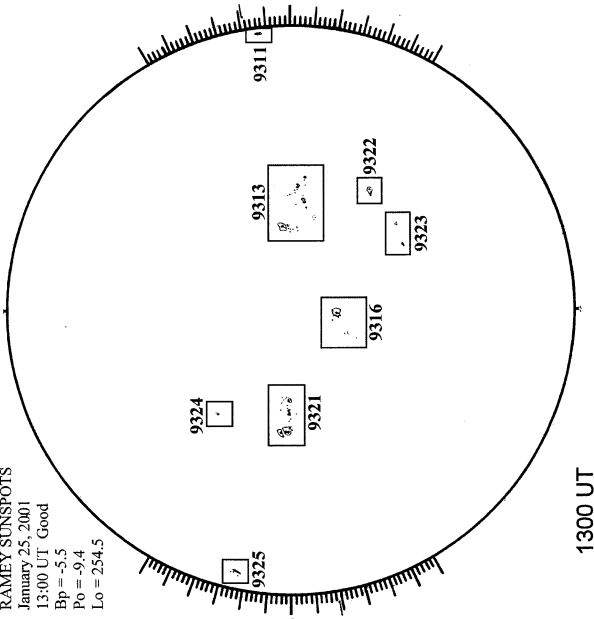
MEUDON H-ALPHA



1150 UT

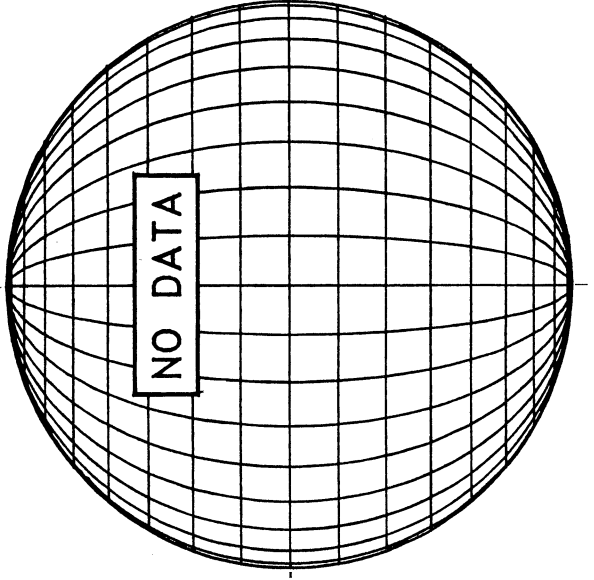
RAMEY SUNSPOT

RAMEY SUNSPOTS
January 25, 2001
13:00 UT Good
Bp = -5.5
Po = -9.4
Lo = 254.5



1300 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

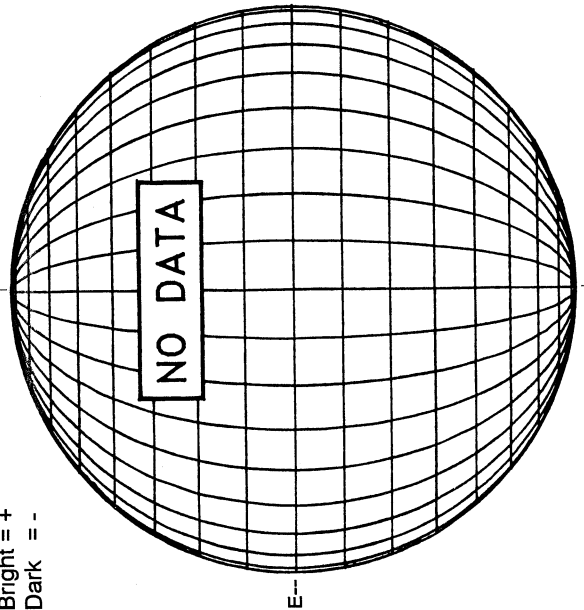


JANUARY 26, 2001 (P= -9.68, Bo = -5.58, Lo = 248.08)

KITT PEAK MAGNETOGRAM

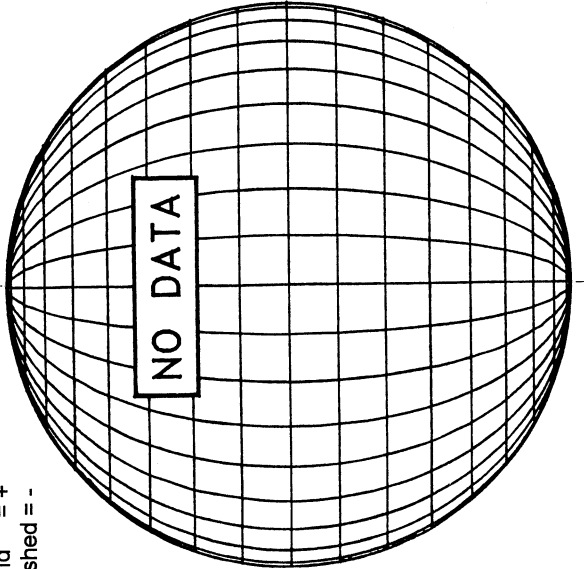
868.8 nm

Bright = +
Dark = -



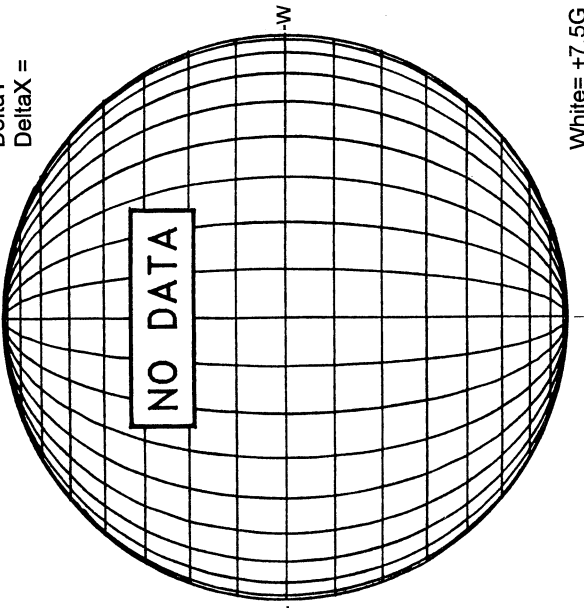
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



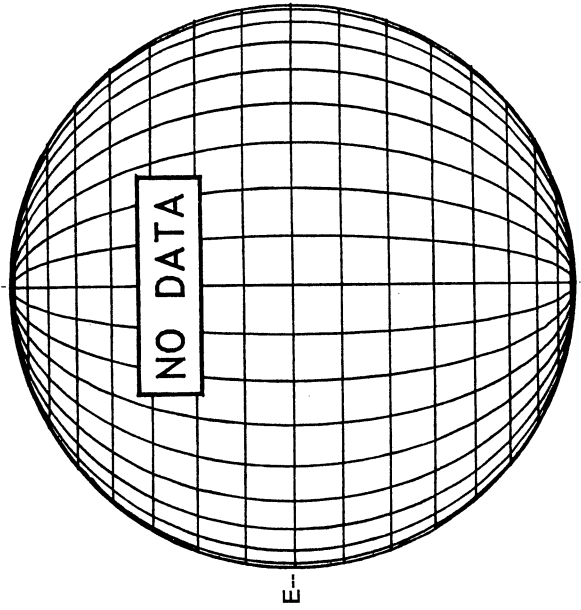
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



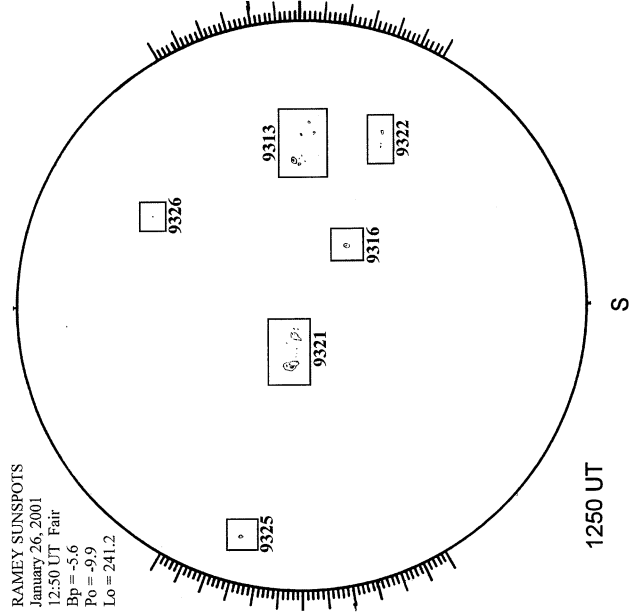
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA



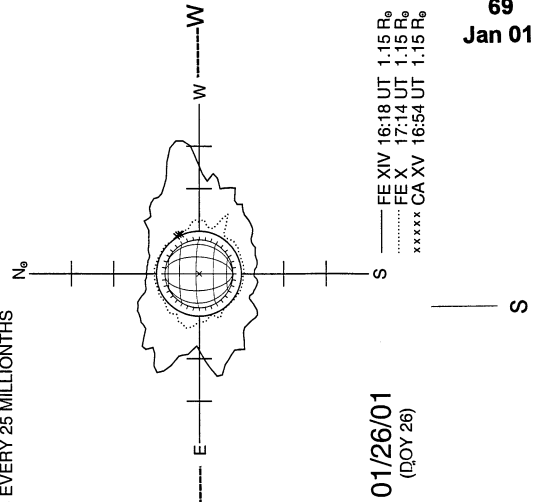
RAMEY SUNSPOTS

RAMEY SUNSPOTS
January 26, 2001
12:50 UT Fair
Bp = -5.6
Po = -9.9
Lo = 241.2



SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 25 MILLIONTHS



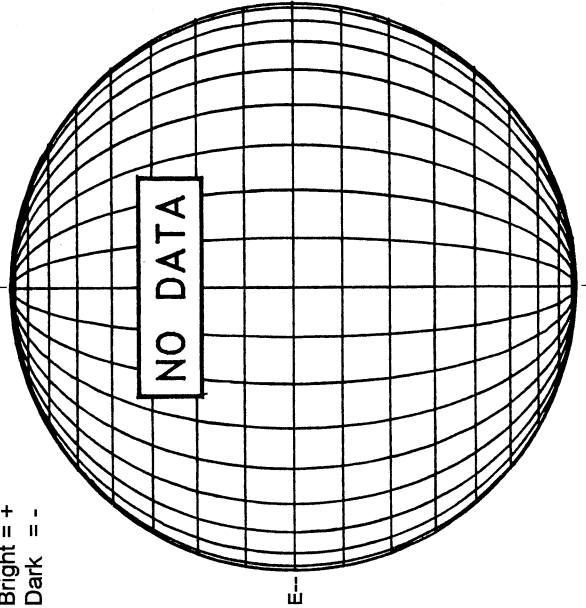
70
Jan 01

JANUARY 27, 2001 (P = -10.12, Bo = -5.66, Lo = 234.91)

KITT PEAK MAGNETOGRAM

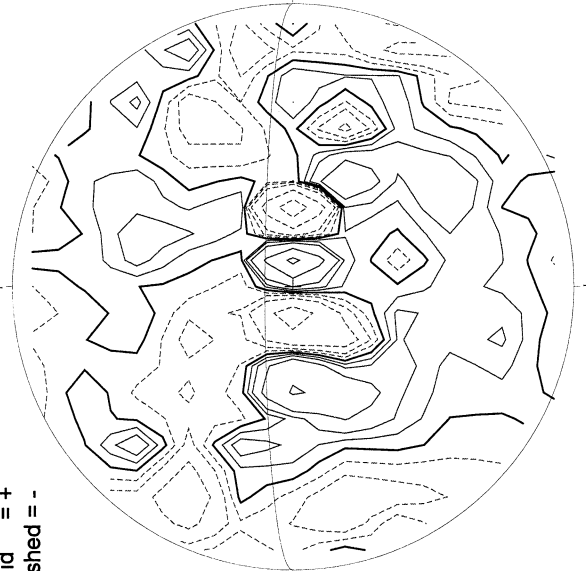
868.8 nm

Bright = +
Dark = -



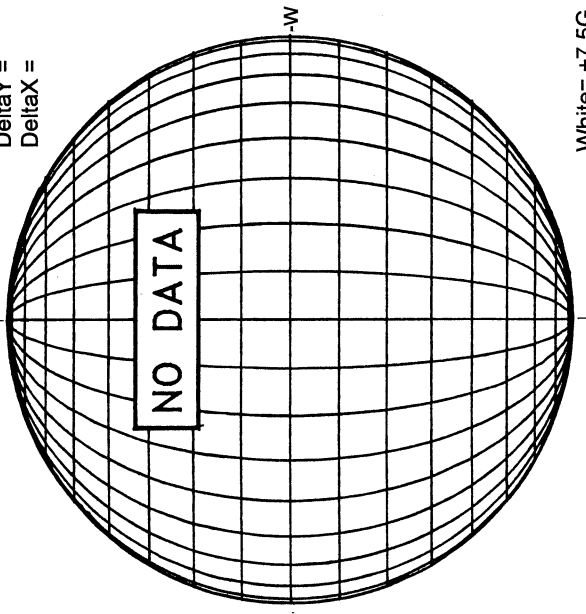
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



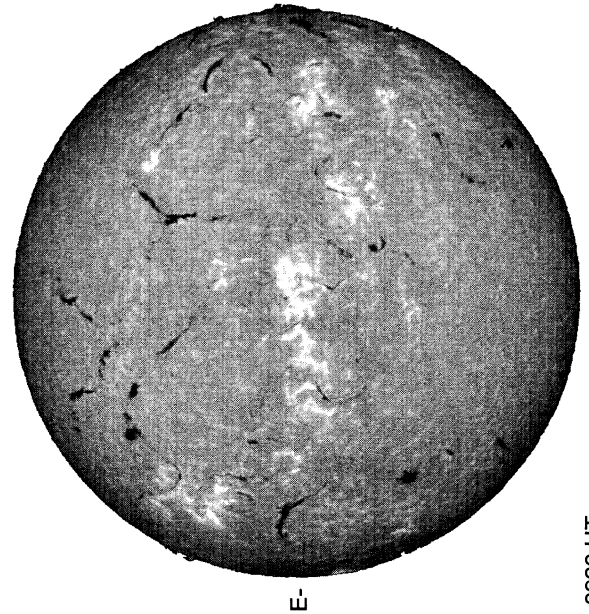
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



White = +7.5G
Black = -7.5G

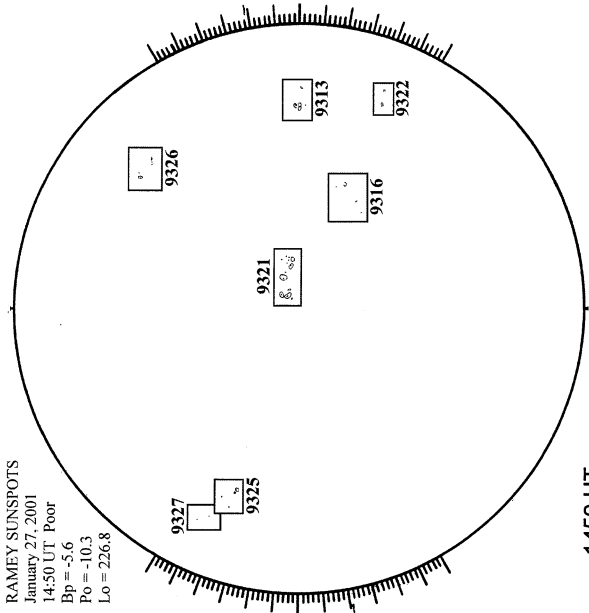
MEUDON H-ALPHA



0926 UT

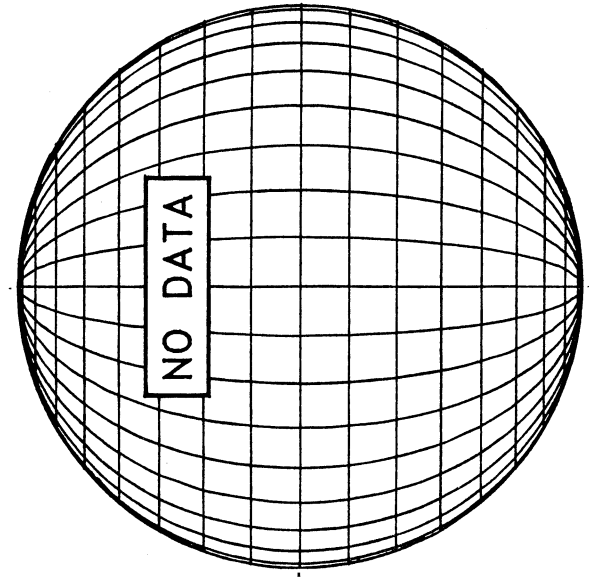
RAMEY SUNSPOTS

RAMEY SUNSPOTS
January 27, 2001
14:50 UT Poor
Bp = -5.6
Po = 10.3
Lo = 226.8

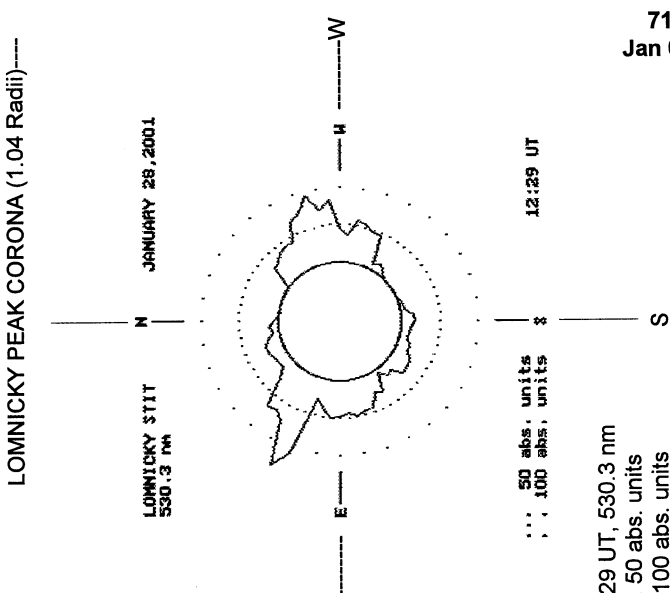
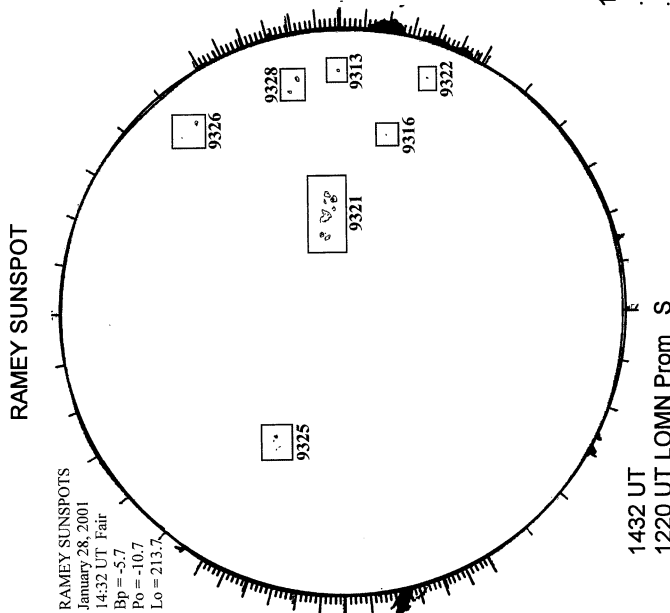
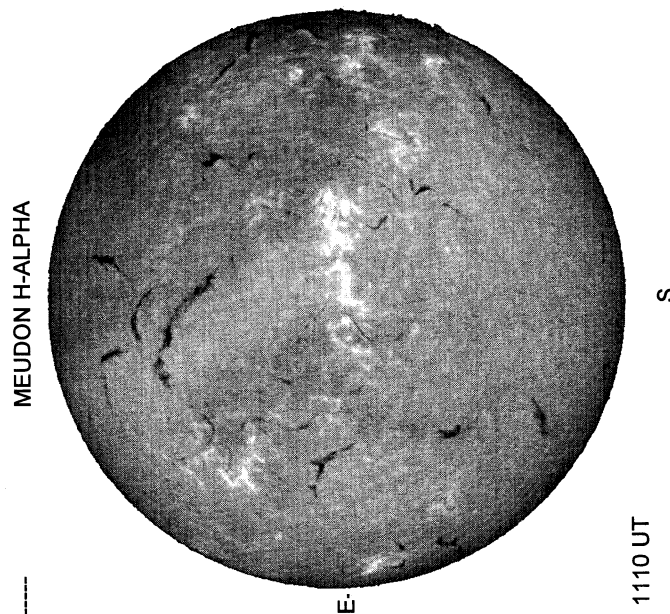
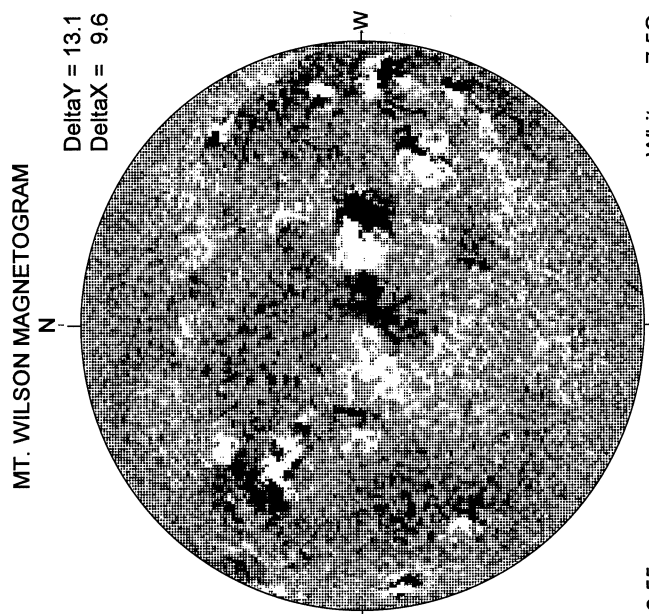
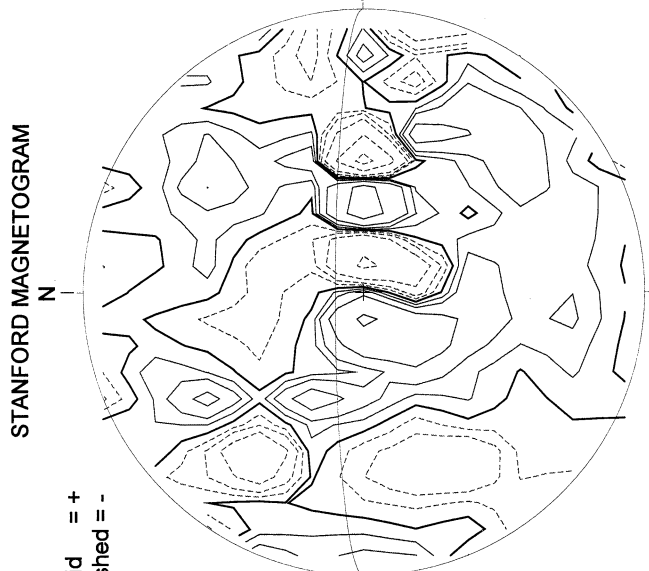
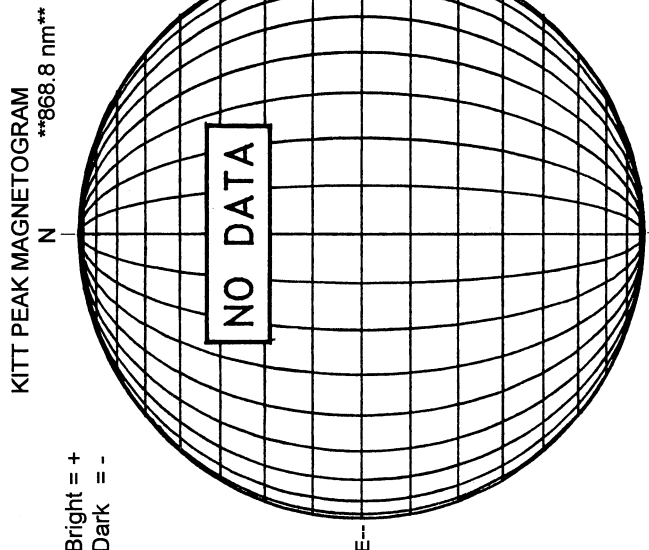


1450 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

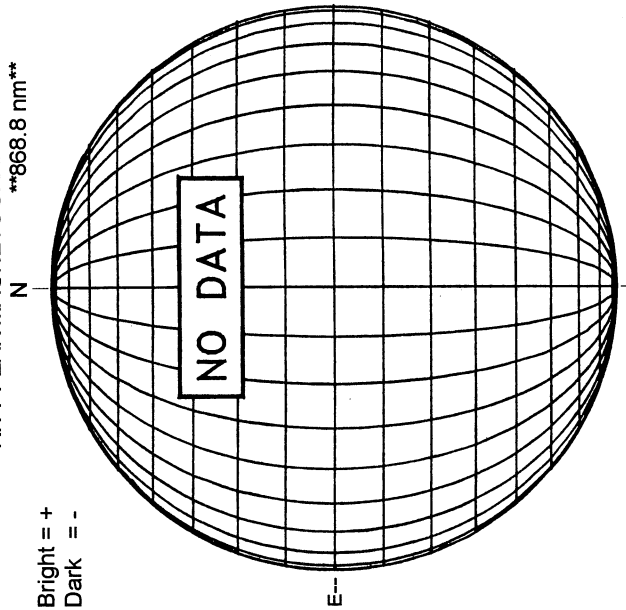


JANUARY 28, 2001 (P = -10.54, Bo = -5.74, Lo = 221.75)



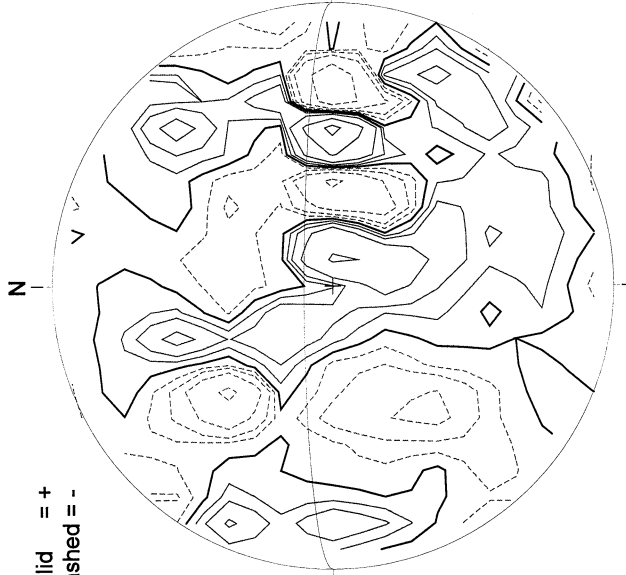
KITT PEAK MAGNETOGRAM
868.8 nm

Bright = +
Dark = -



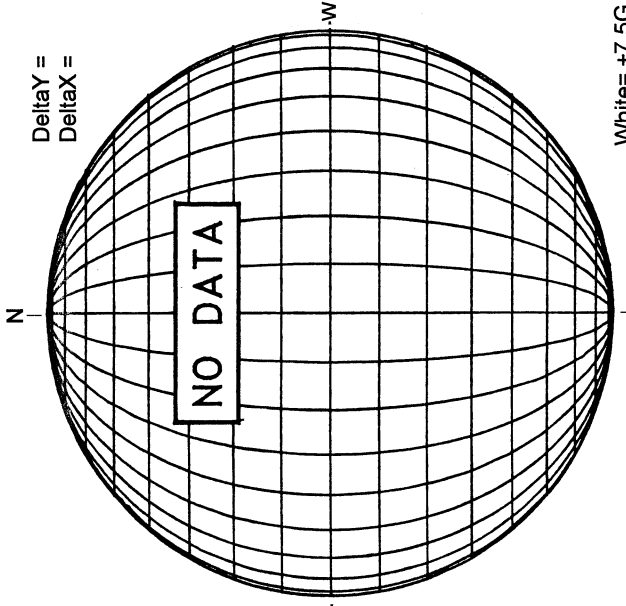
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



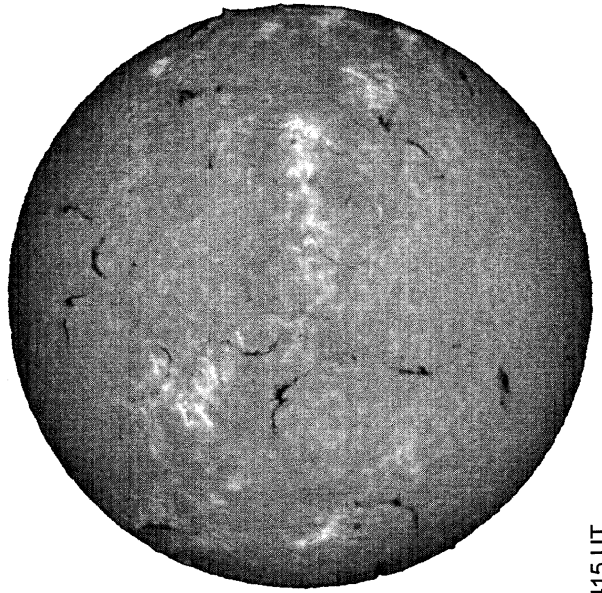
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



White = +7.5G
Black = -7.5G

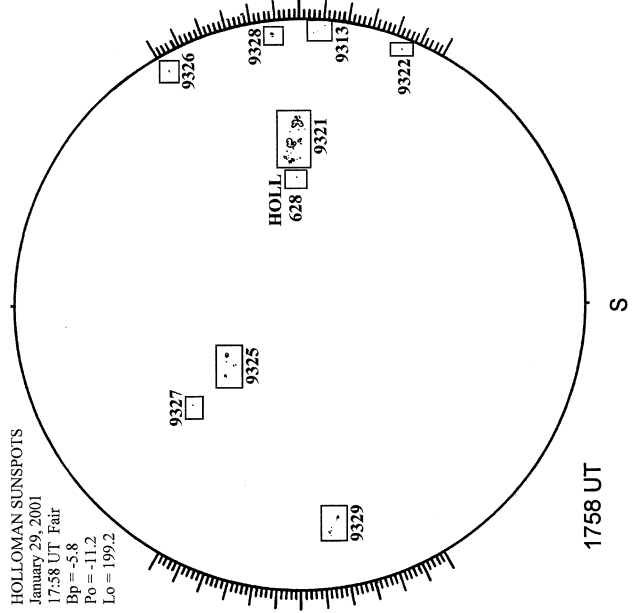
MEUDON H-ALPHA



1415 UT

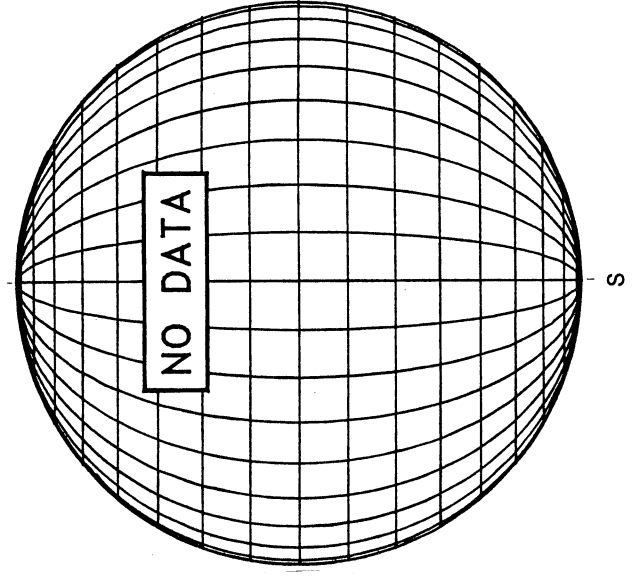
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
January 29, 2001
17:58 UT Fair
Bp = -5.8
P6 = 11.2
Lo = 199.2



1758 UT

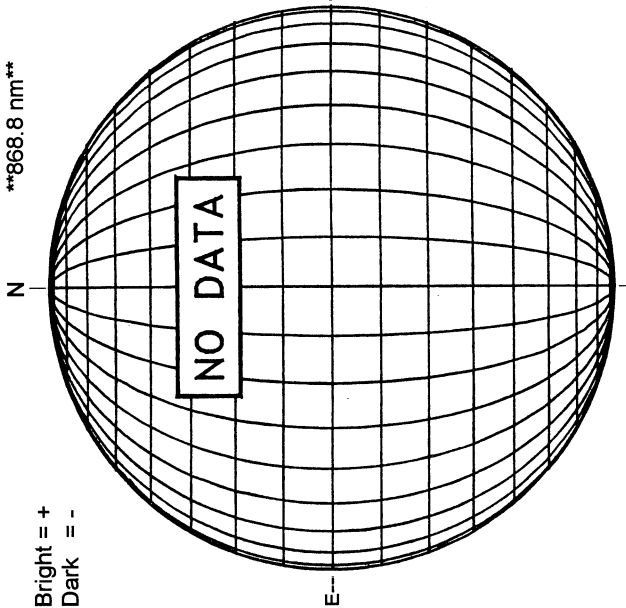
SACRAMENTO PEAK CORONA (1.15 Radii)----



JANUARY 30, 2001 (P = -11.39, Bo = -5.89, Lo = 195.41)

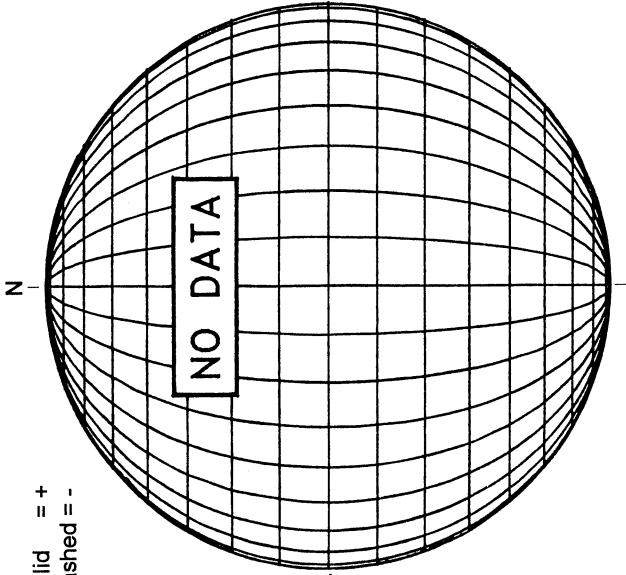
KITT PEAK MAGNETOGRAM
868.8 nm

Bright = +
Dark = -



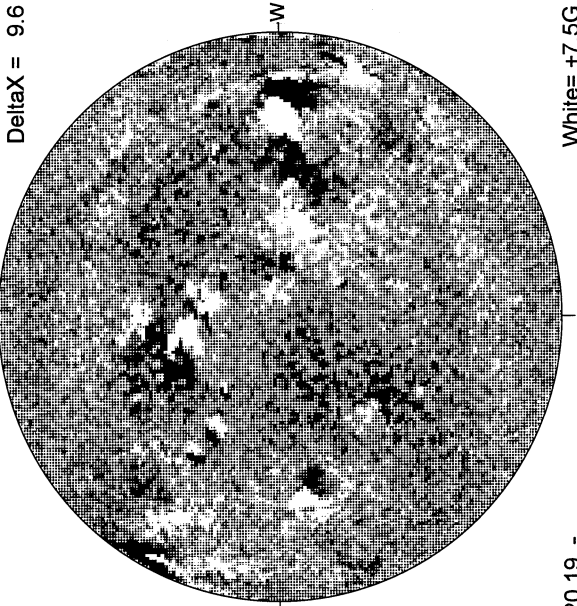
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

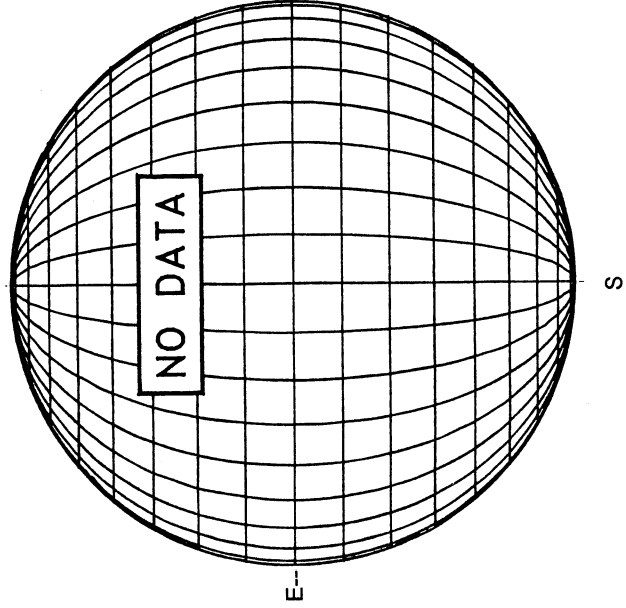
Delta Y = 13.0
Delta X = 9.6



20.19 -
21.17 UT

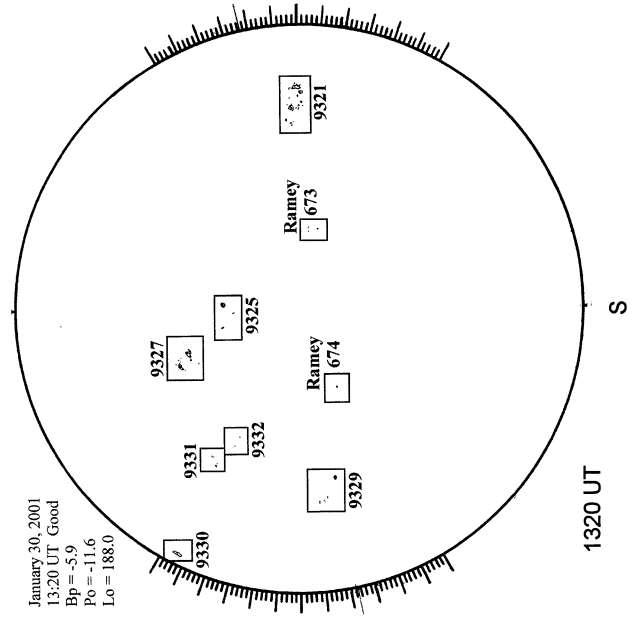
White = +7.5G
Black = -7.5G

MEUDON H-ALPHA

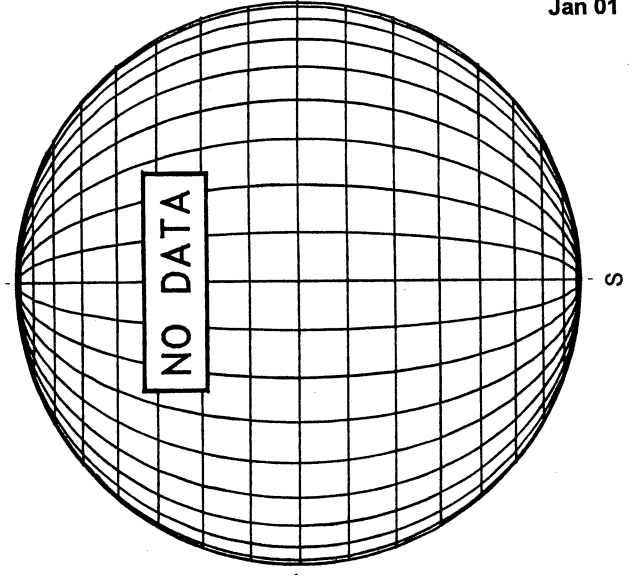


RAMEY SUNSPOT

January 30, 2001
13:20 UT Good
Bp = -5.9
Po = -11.6
Lo = 188.0

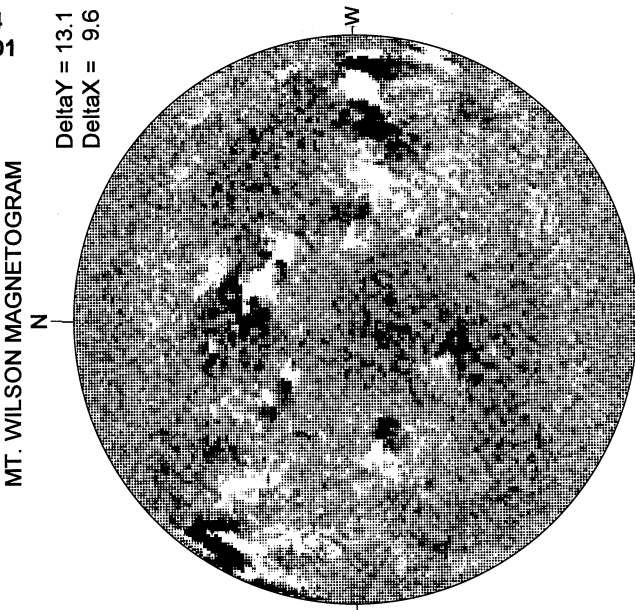
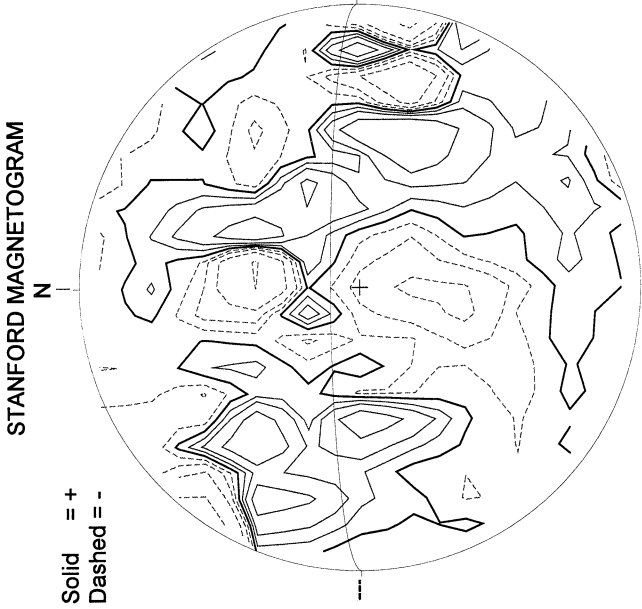
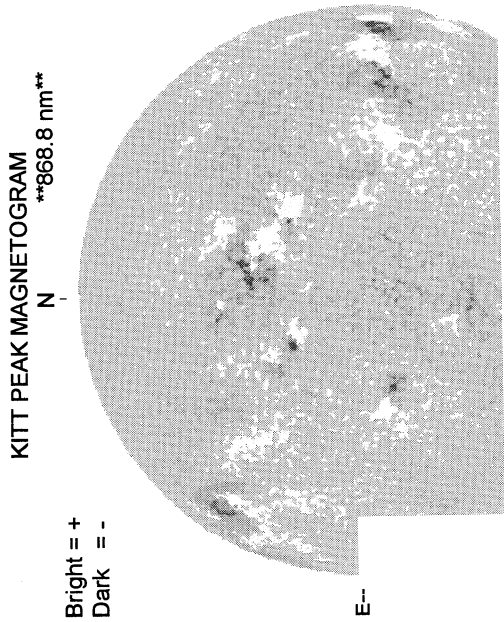


SACRAMENTO PEAK CORONA (1.15 Radii)



JANUARY 31, 2001 (P = -11.80, Bo = -5.96, Lo = 182.25)

74
Jan 01

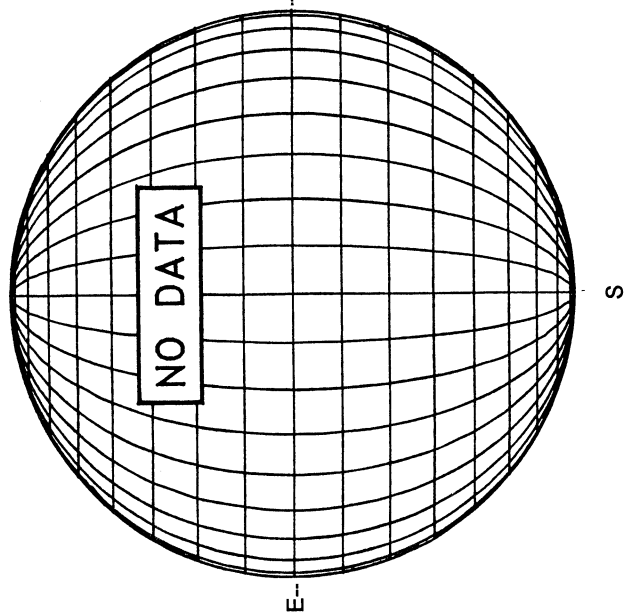


White = +7.5G
Black = -7.5G

16.76 -
17.74 UT

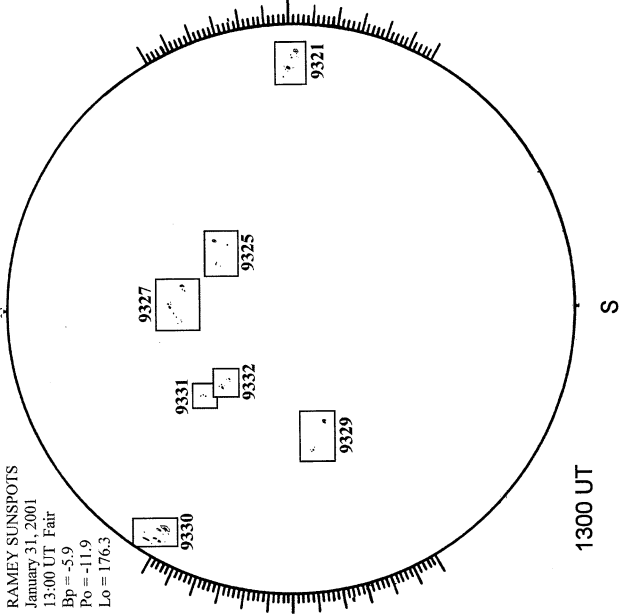
2120 UT

MEUDON H-ALPHA



RAMEY SUNSPOTS

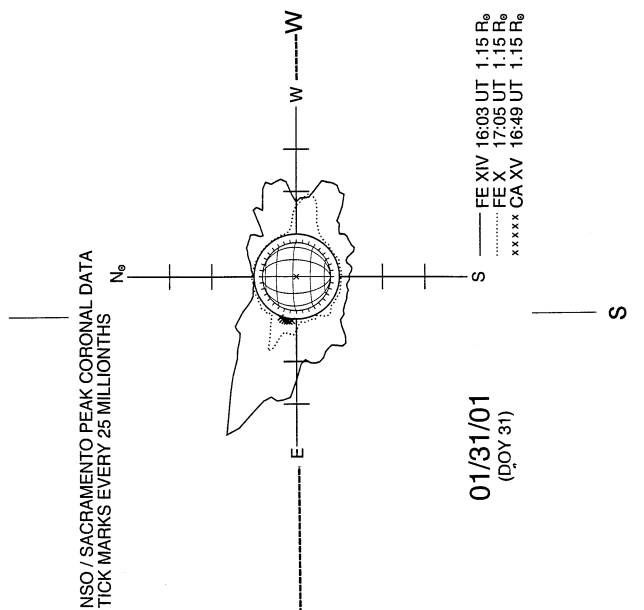
RAMEY SUNSPOTS
January 31, 2001
13:00 UT Fair
Bp = -5.9
Po = -11.9
Lo = 176.3



2107 UT

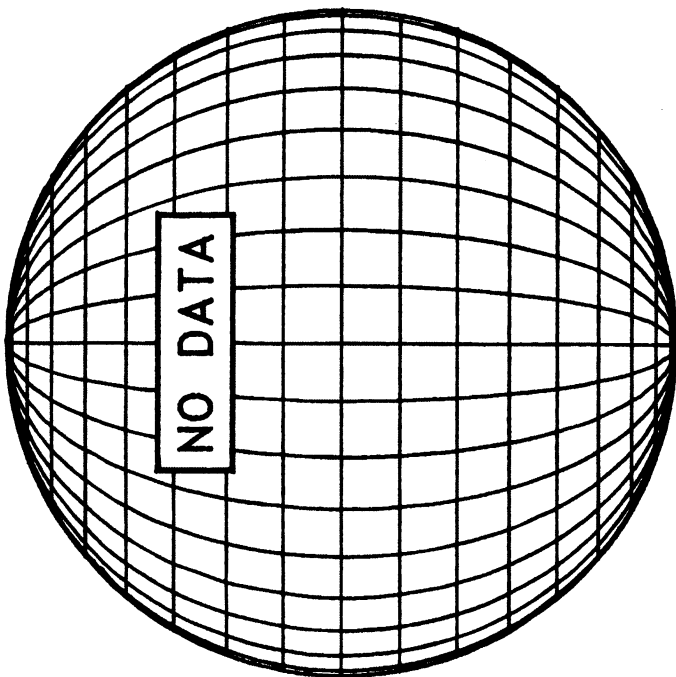
1300 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



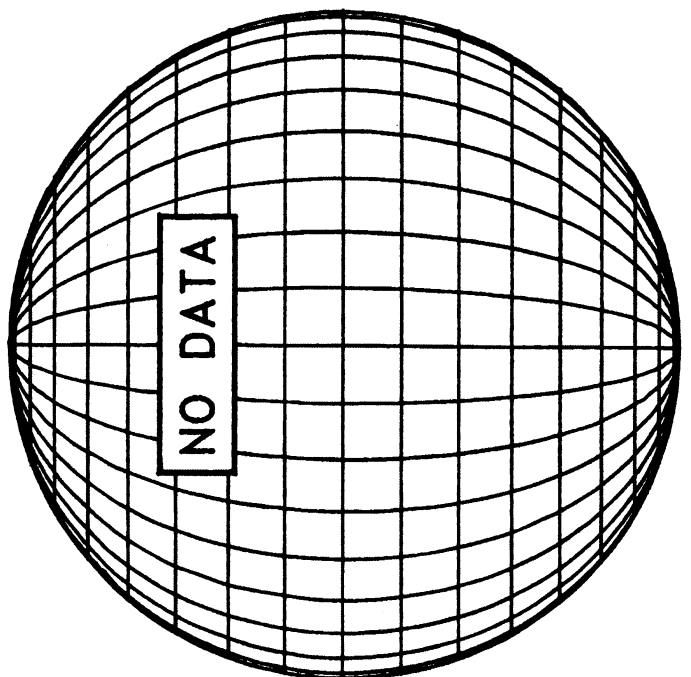
YOHKOH
SOFT X-RAY
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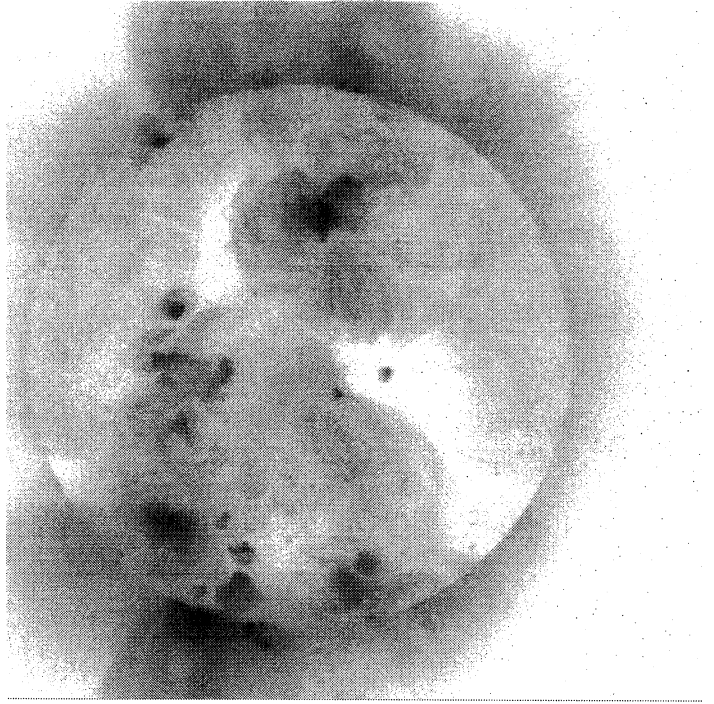
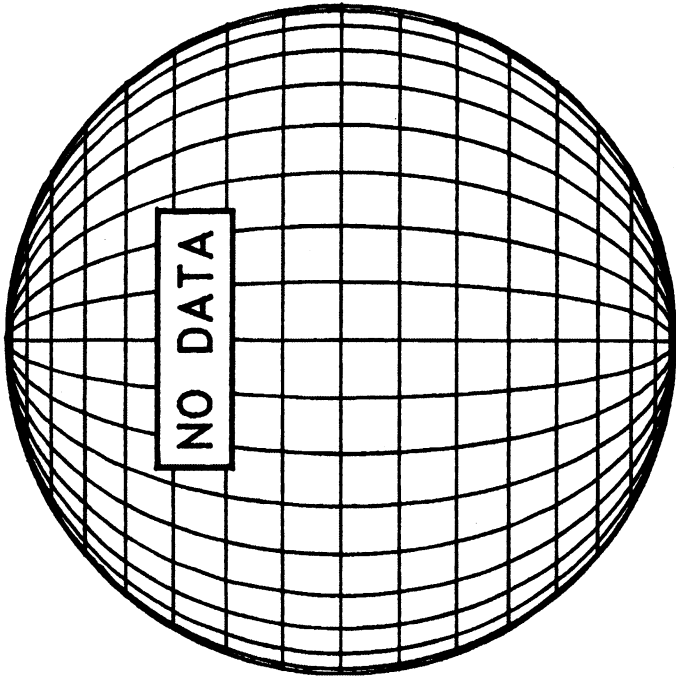
Day 1

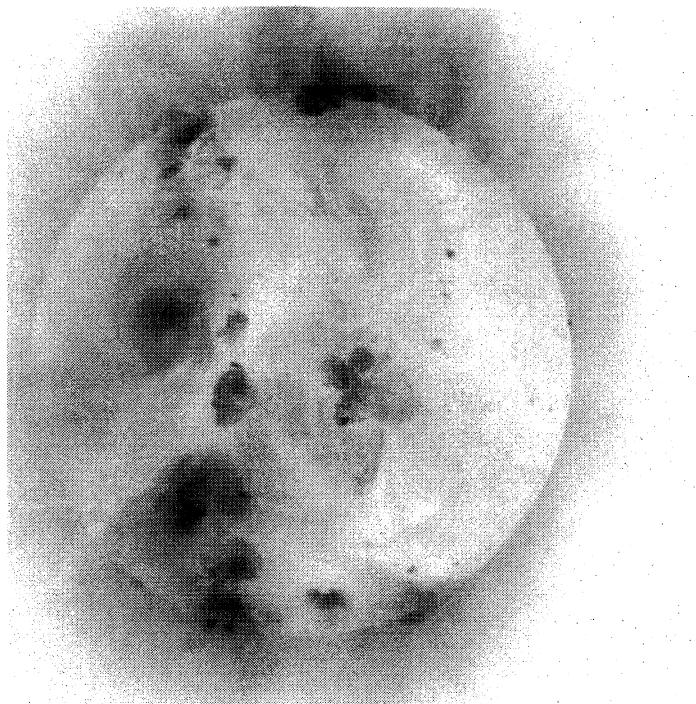
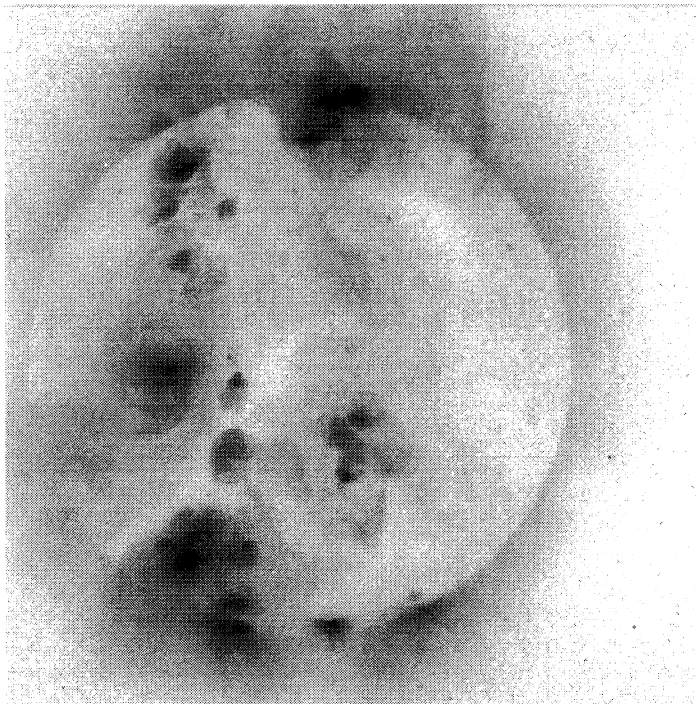
Day 3



Day 2

Day 4
12:00:22 UT



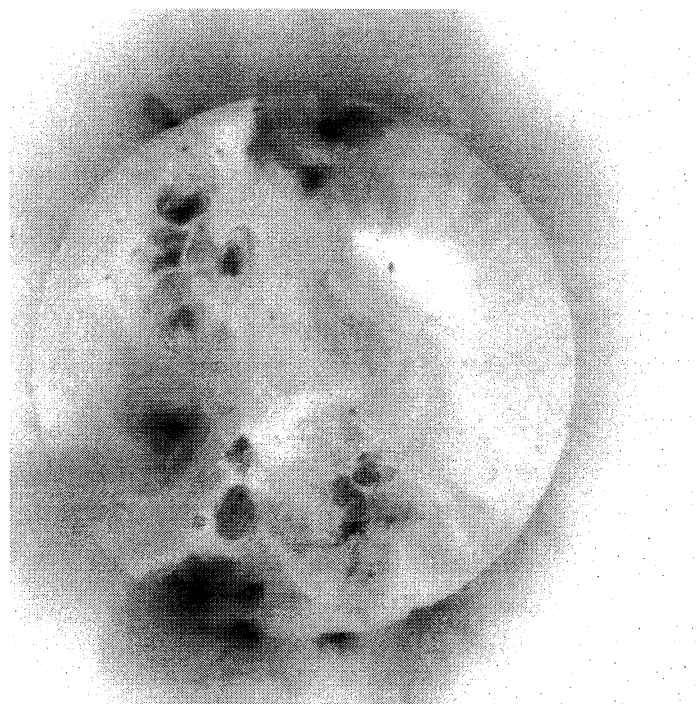
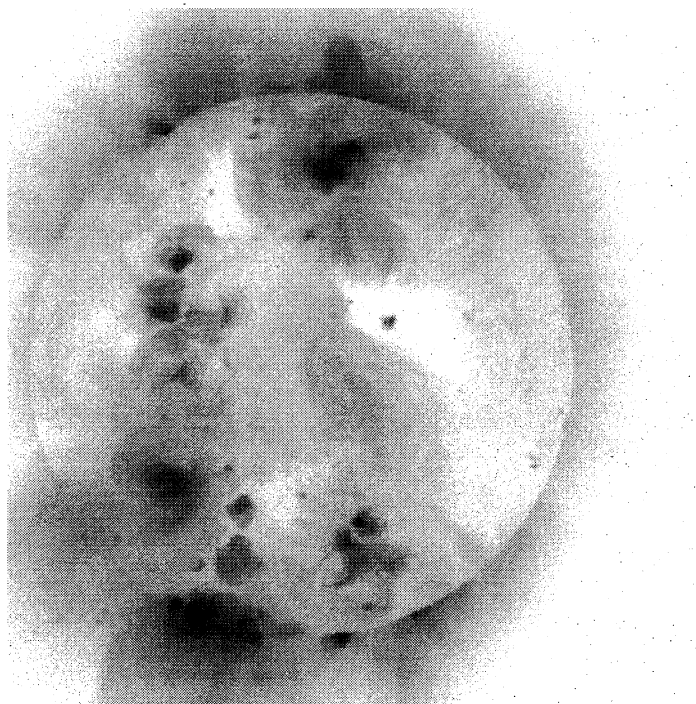


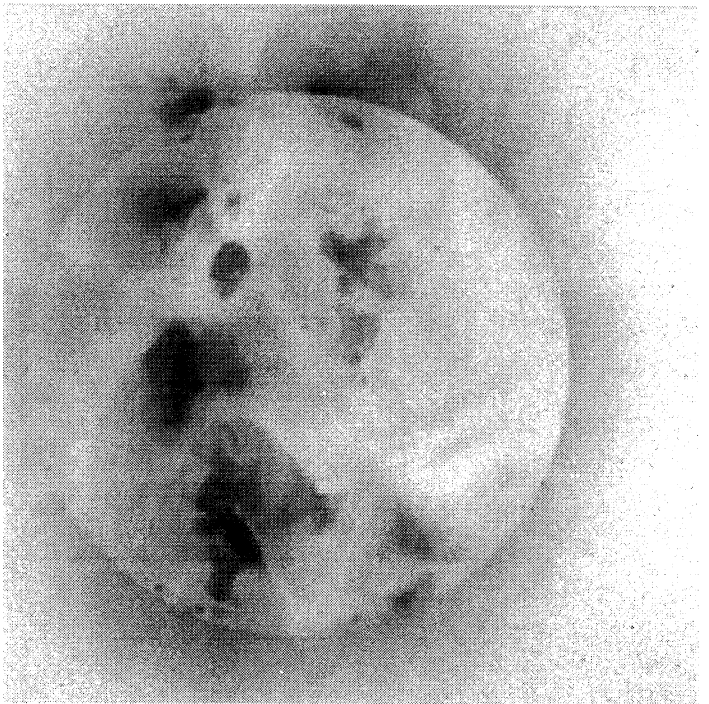
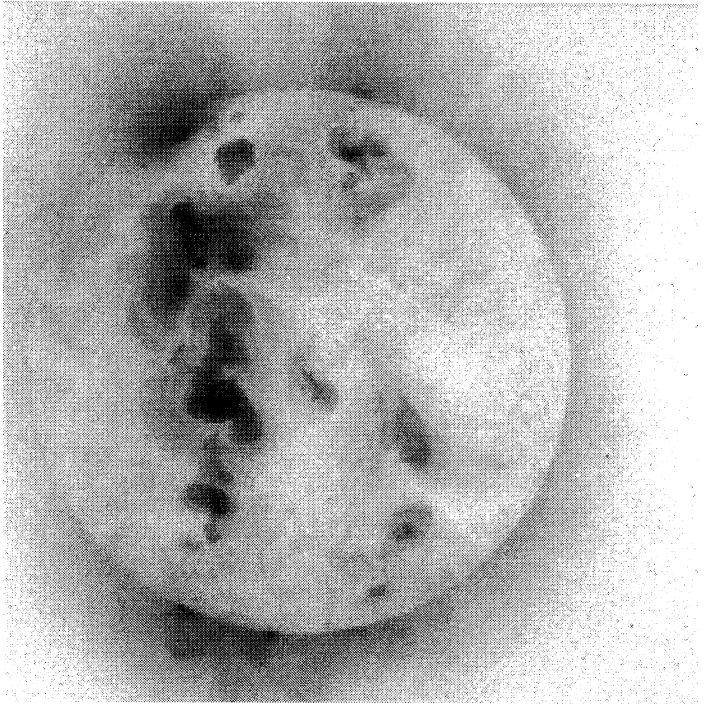
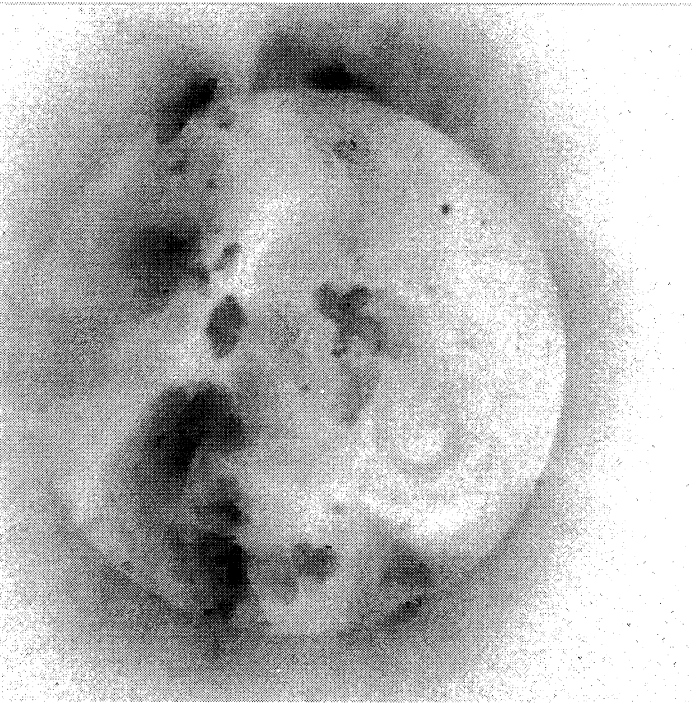
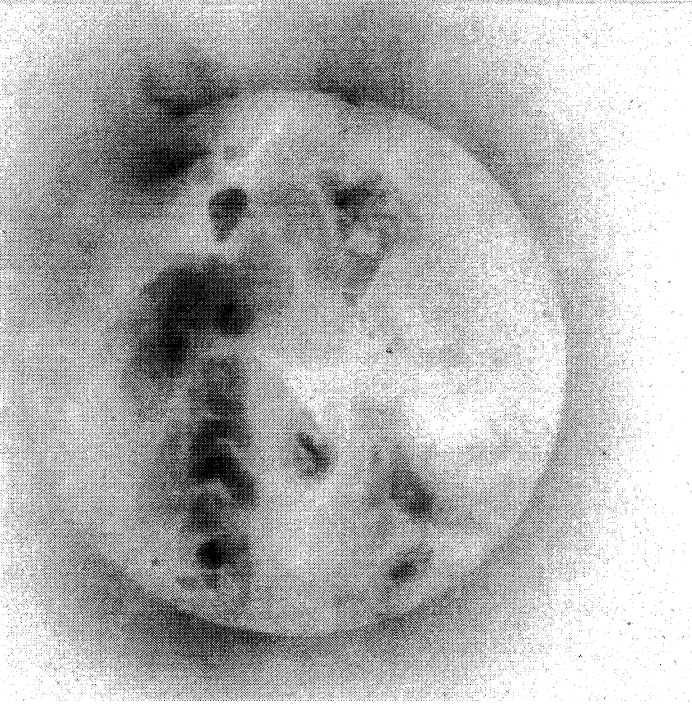
YOHKOH
SOFT X-RAY
TELESCOPE
IMAGES

January
2001

Day 5 12:11:57 UT
Day 7 12:01:49 UT

Day 6 11:59:29 UT
Day 8 10:52:05 UT



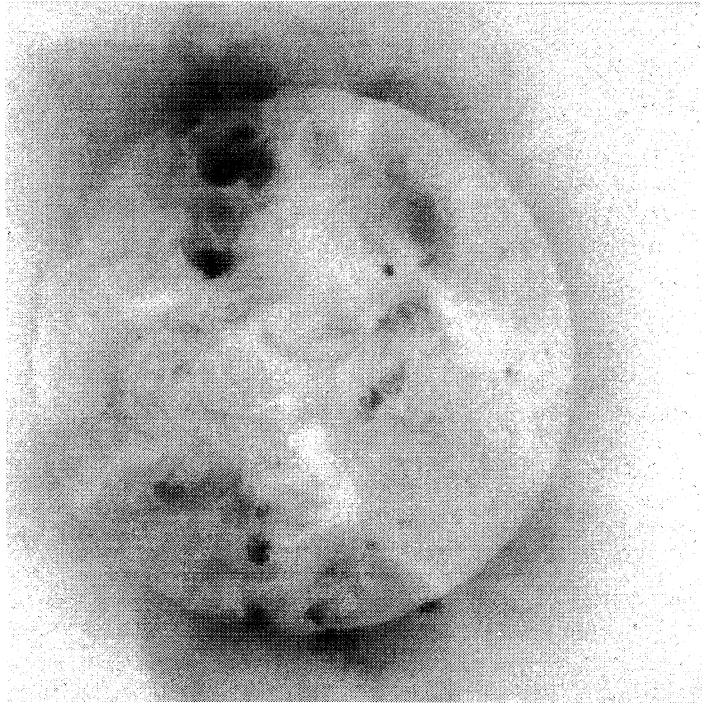
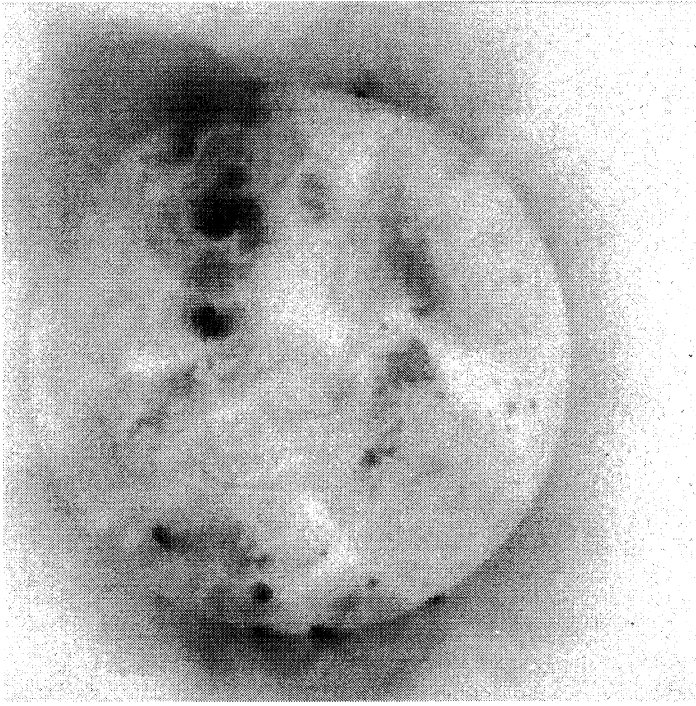


YOHKOH
SOFT X-RAY
TELESCOPE
IMAGES

January
2001

Day 9 Day 11
12:25:49 UT 11:53:16 UT

Day 10 Day 12
12:05:48 UT 12:24:12 UT

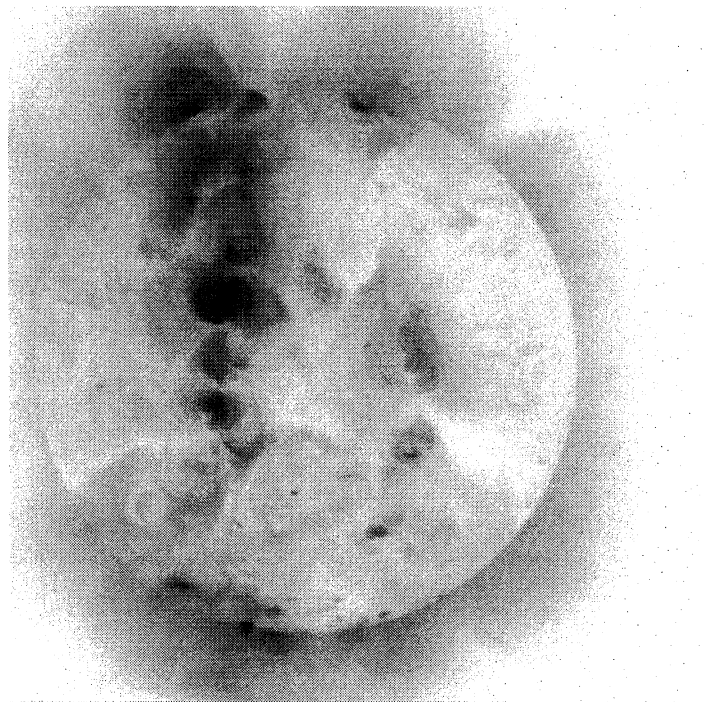
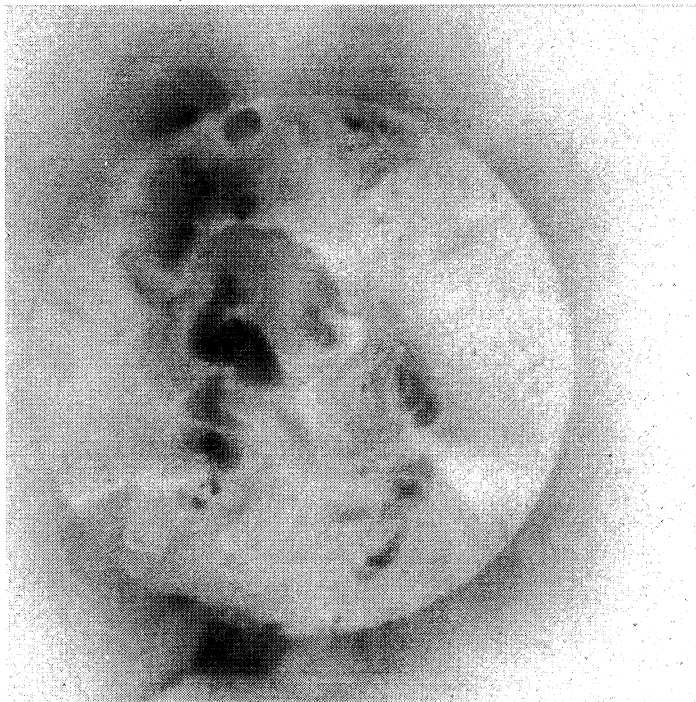


YOHKOH
SOFT X-RAY
TELESCOPE
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January
2001

Day 13 Day 15
12:00:44 UT 12:25:32 UT

Day 14 Day 16
02:46:24 UT 12:29:47 UT



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SOFT X-RAY
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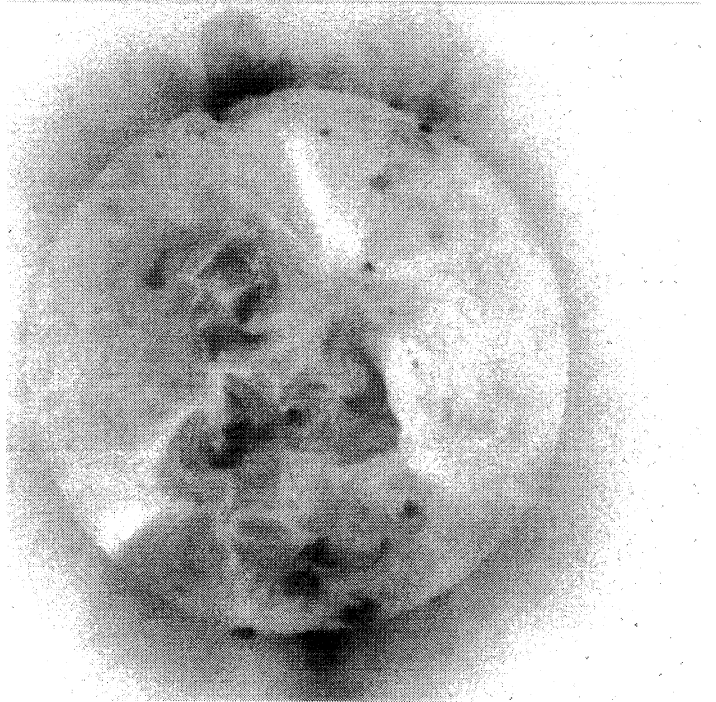
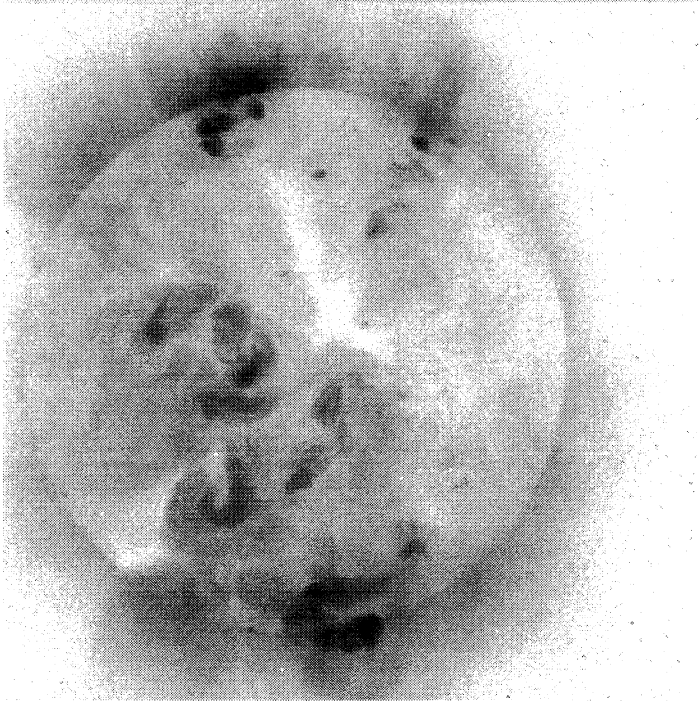
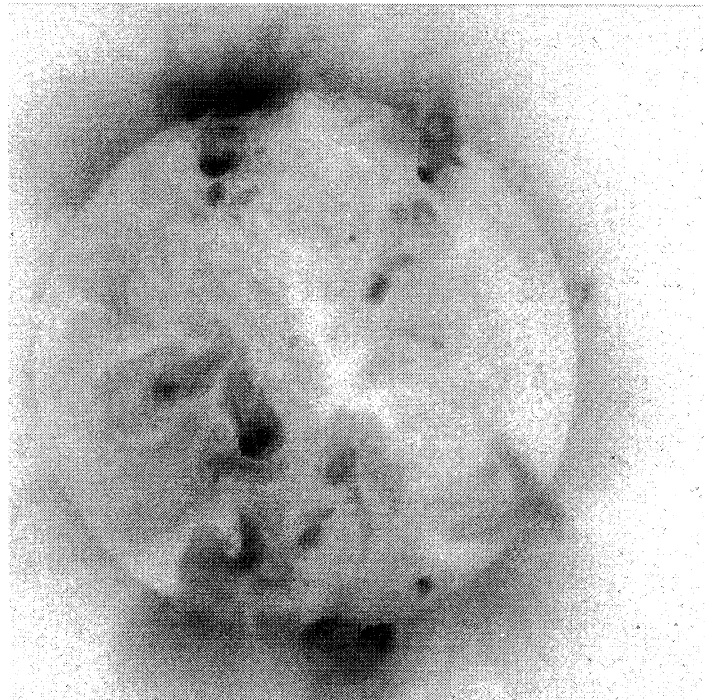
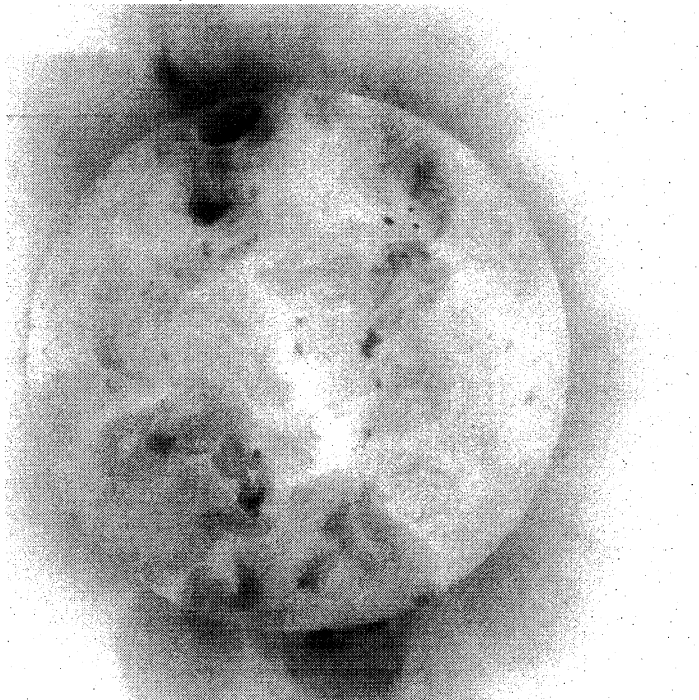
January
2001

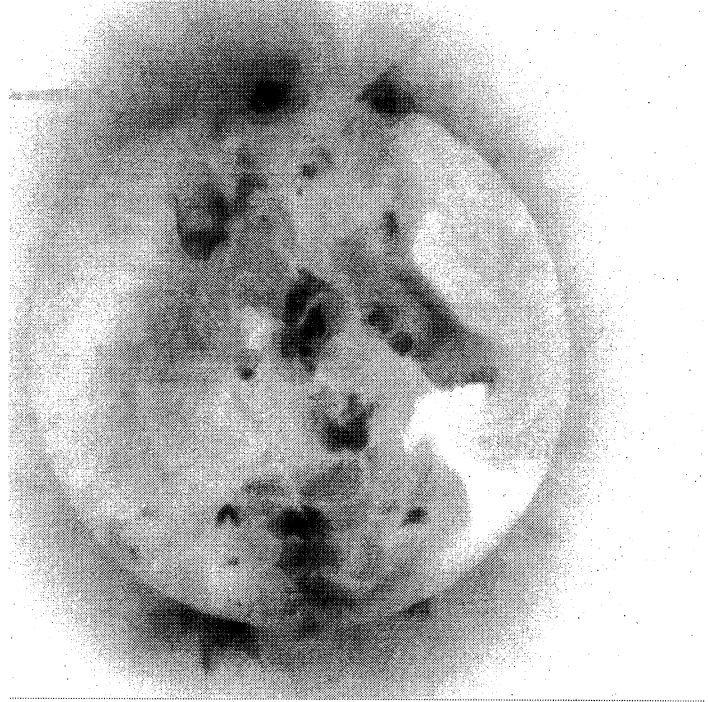
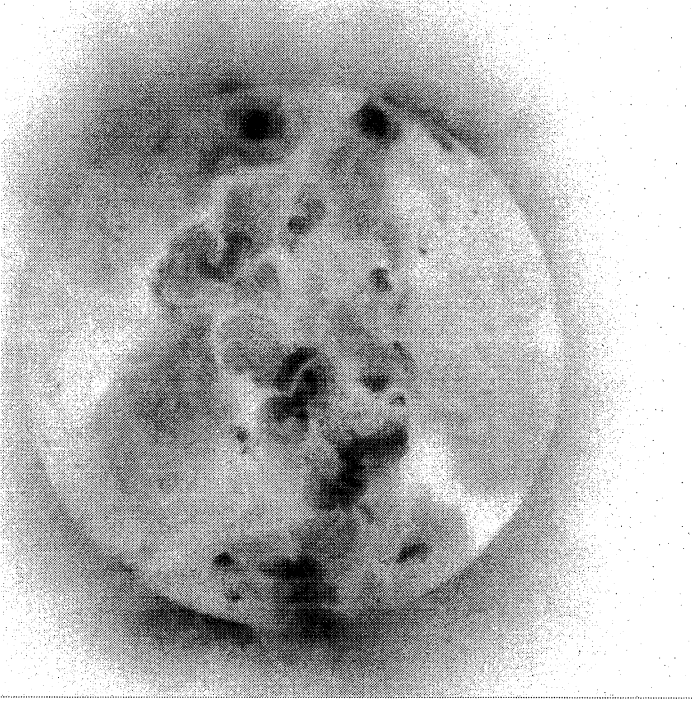
Day 17
11:34:33 UT

Day 19
11:34:03 UT

Day 18
12:16:27 UT

Day 20
11:46:51 UT



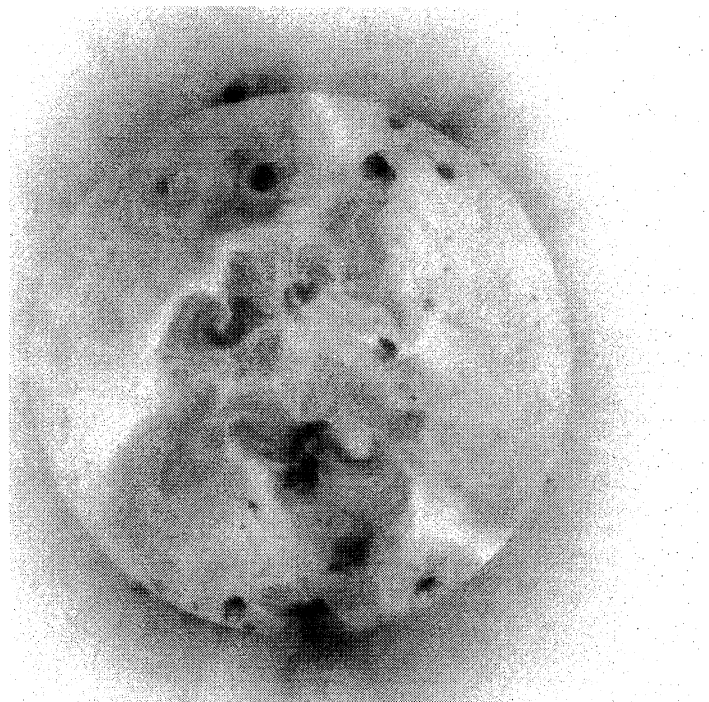
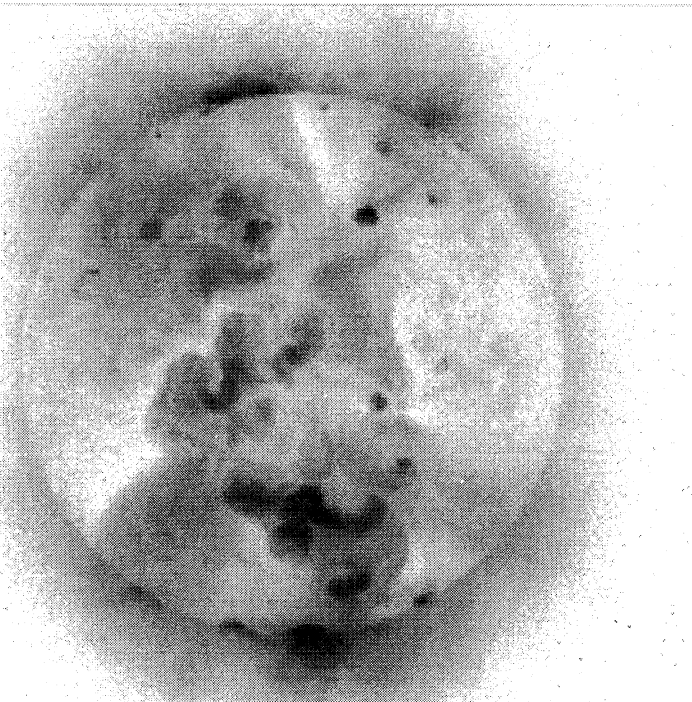


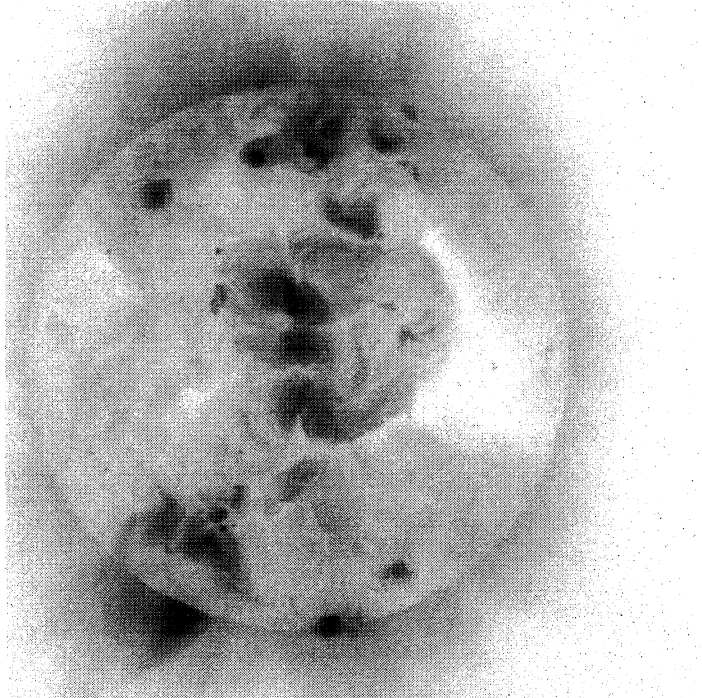
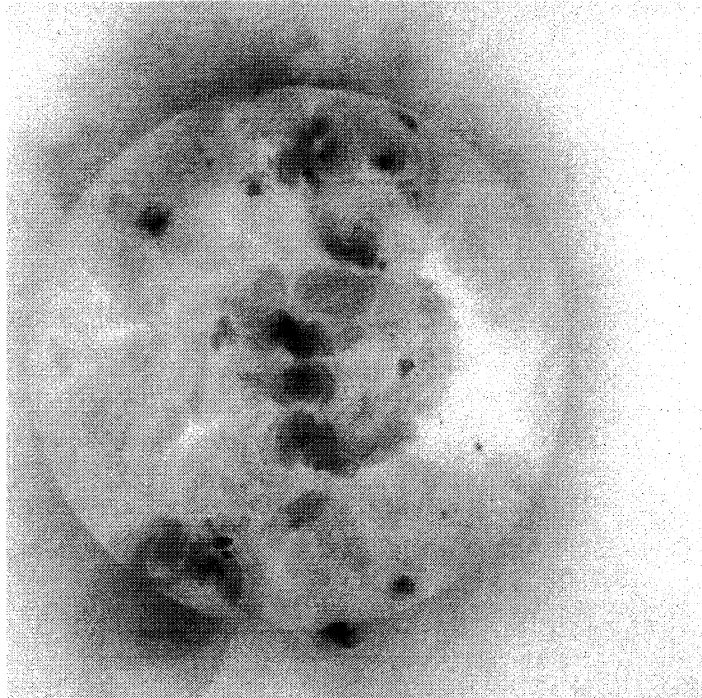
YOHKOH
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January
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Day 21 Day 23
11:46:50 UT 11:56:02 UT

Day 22 Day 24
11:52:44 UT 12:00:14 UT



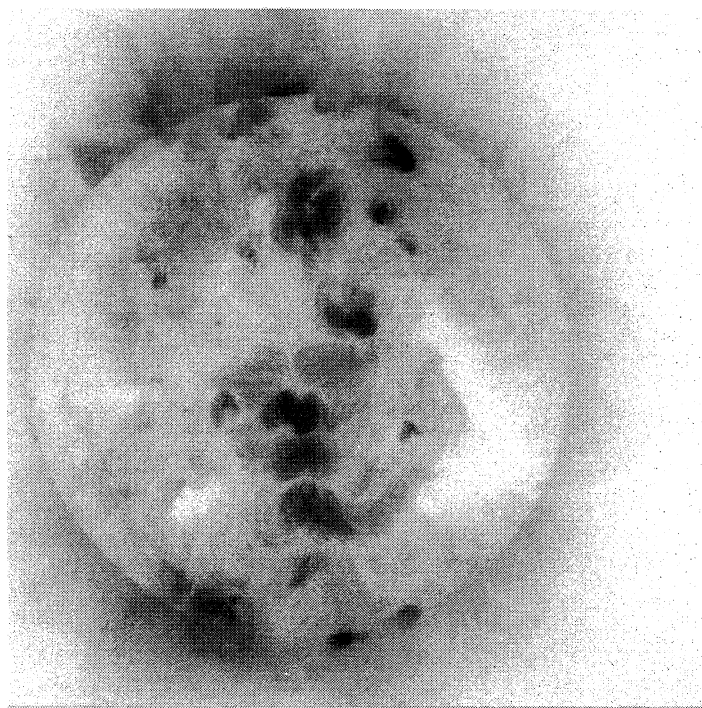
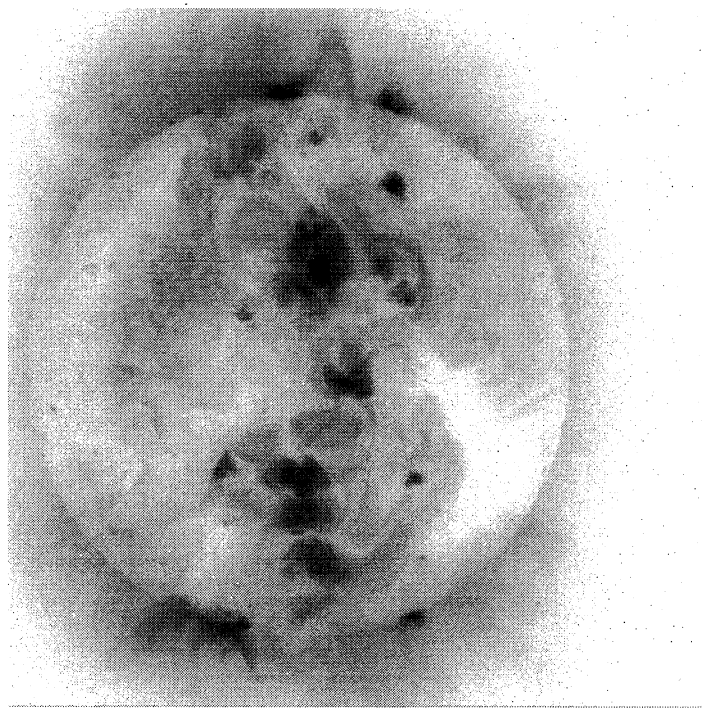


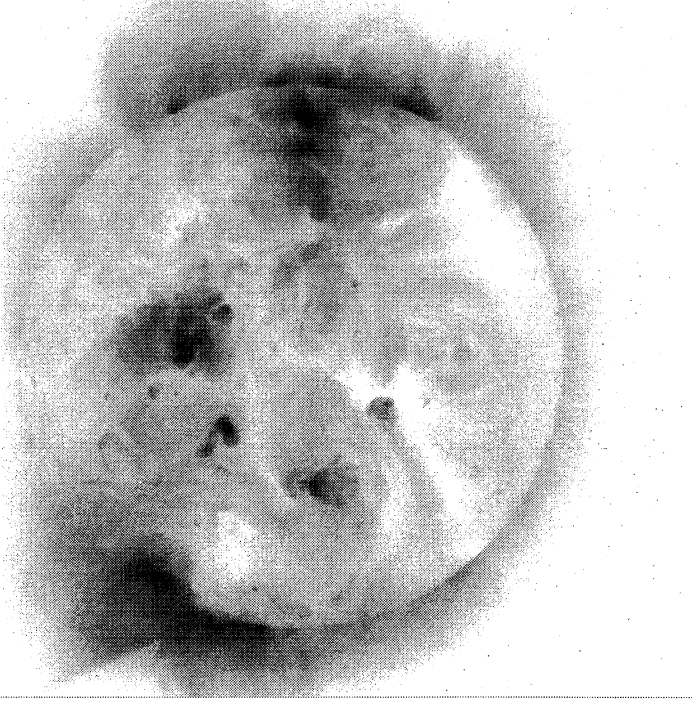
YOHKOH
SOFT X-RAY
TELESCOPE
IMAGES

January
2001

Day 25 11:58:42 UT
Day 27 12:01:13 UT

Day 26 12:07:25 UT
Day 28 00:54:53 UT

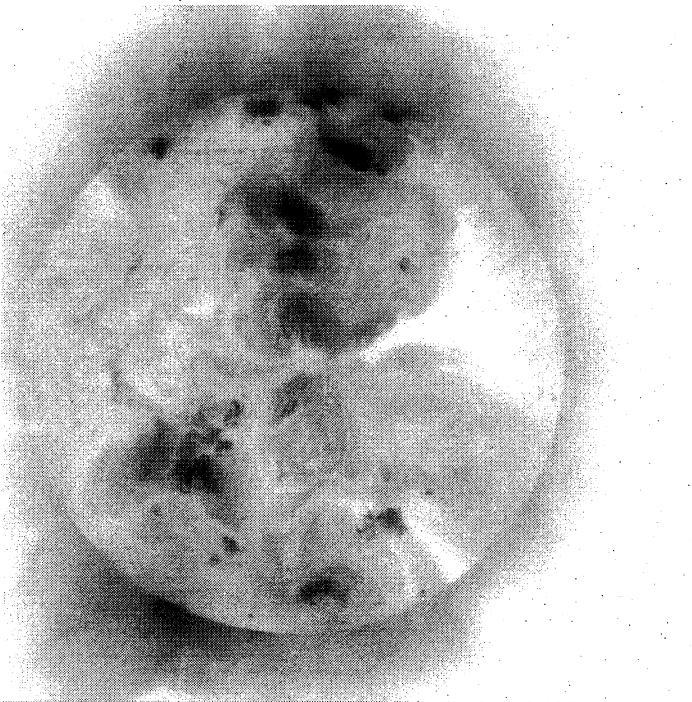




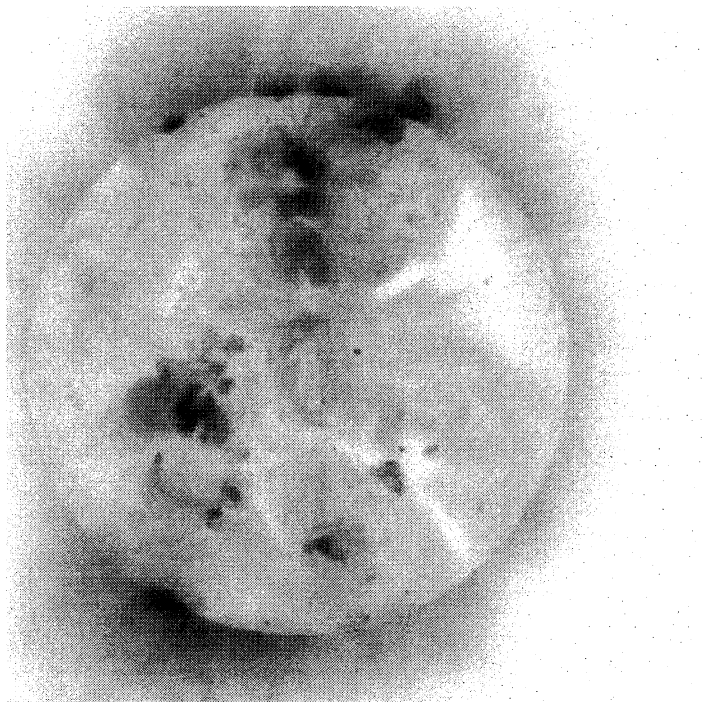
YOHKOH
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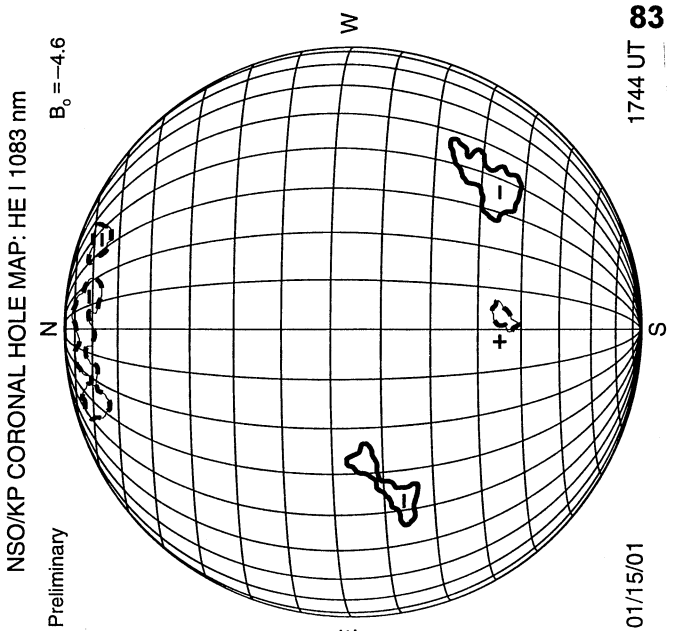
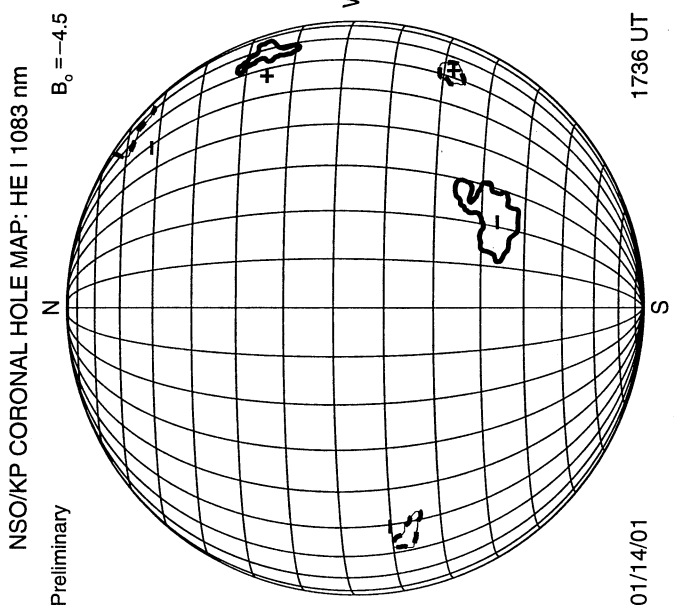
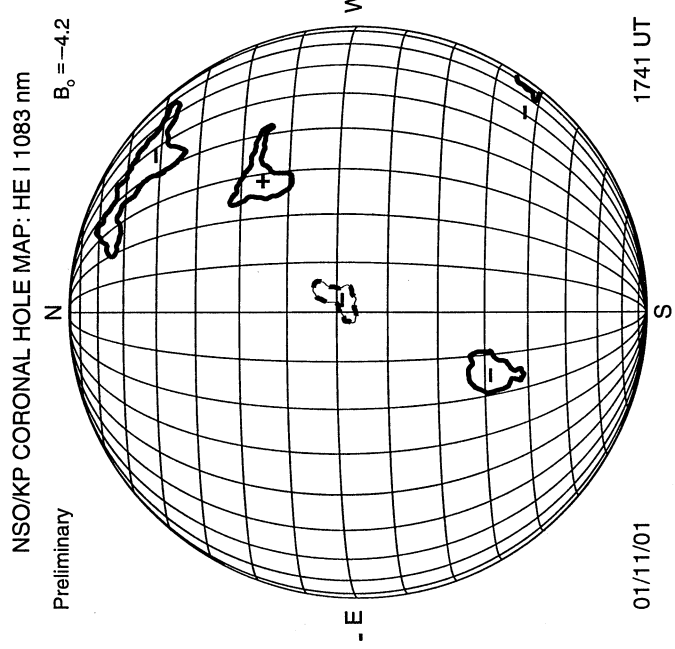
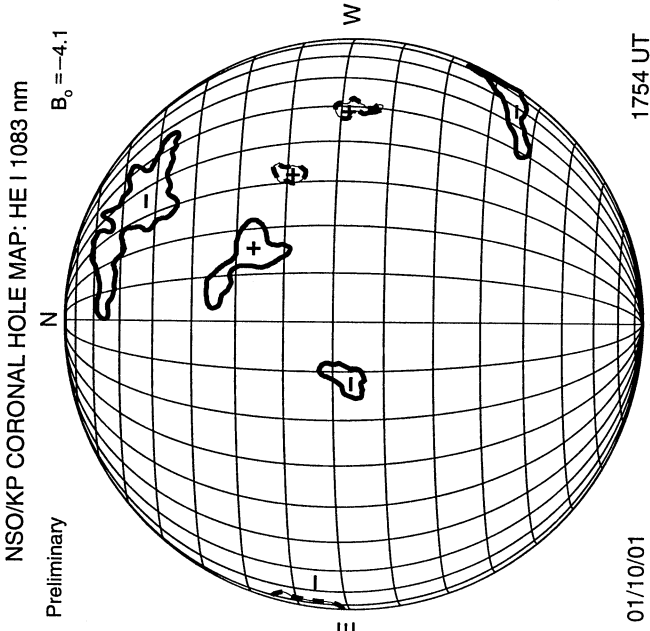
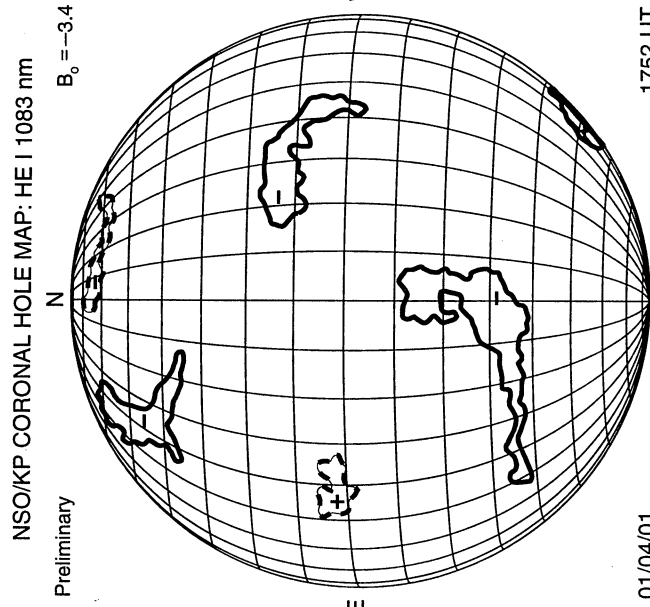
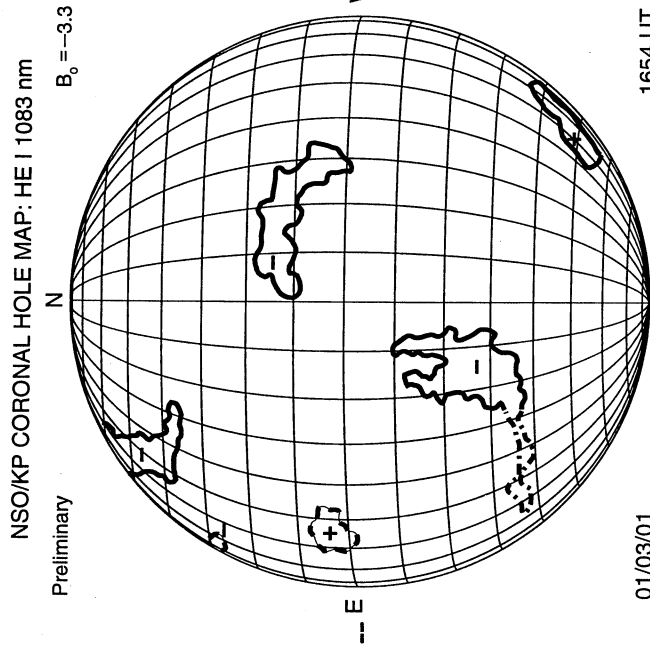
Day 29 11:59:31 UT Day 31 12:08:31 UT



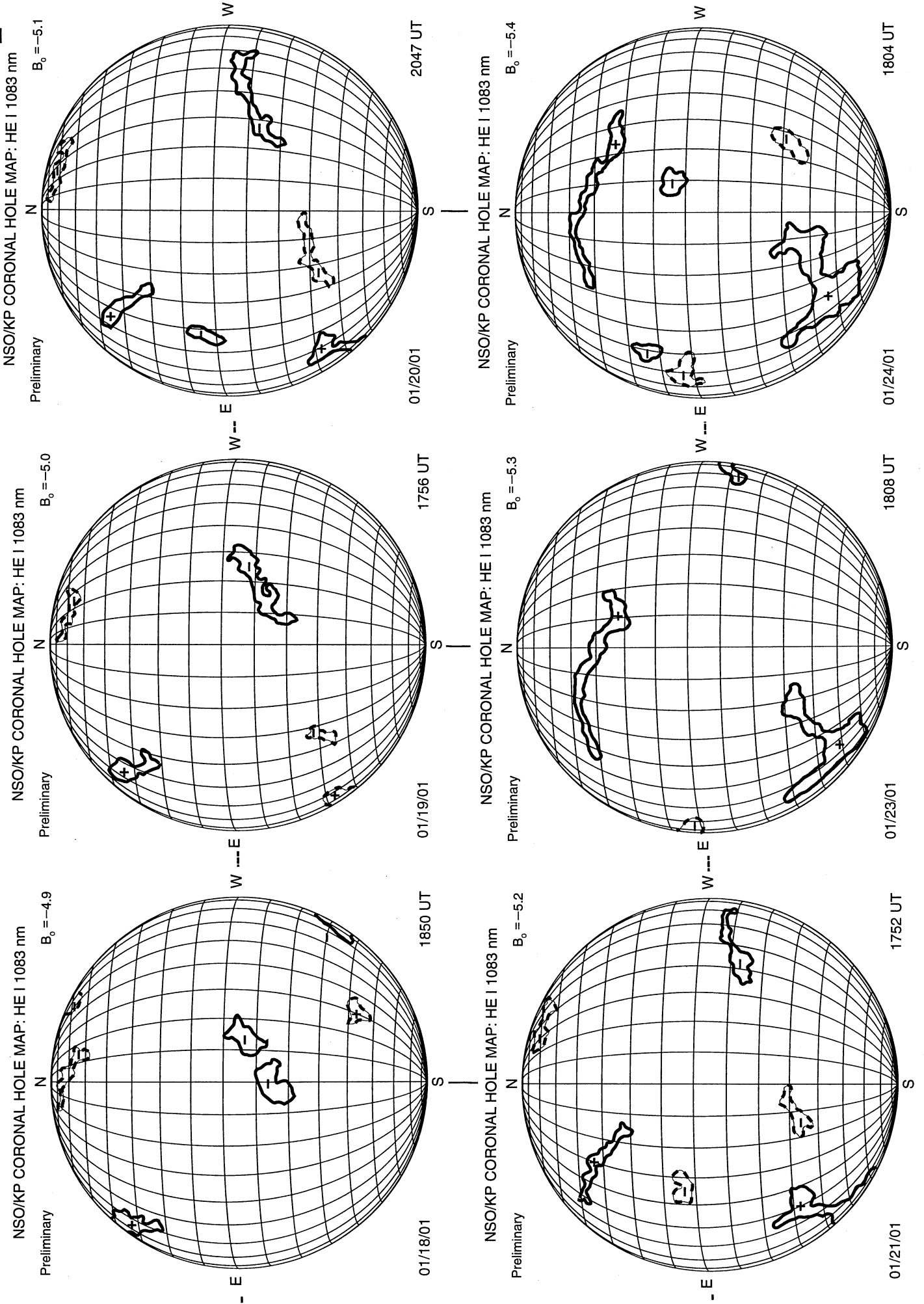
Day 30 12:06:43 UT



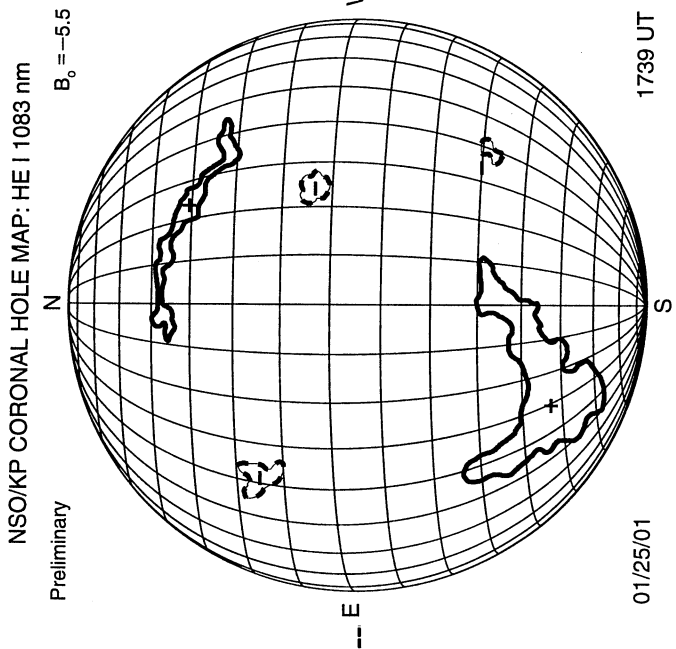
KITT PEAK CORONAL HOLE MAPS HE I 1083 nm January 2001



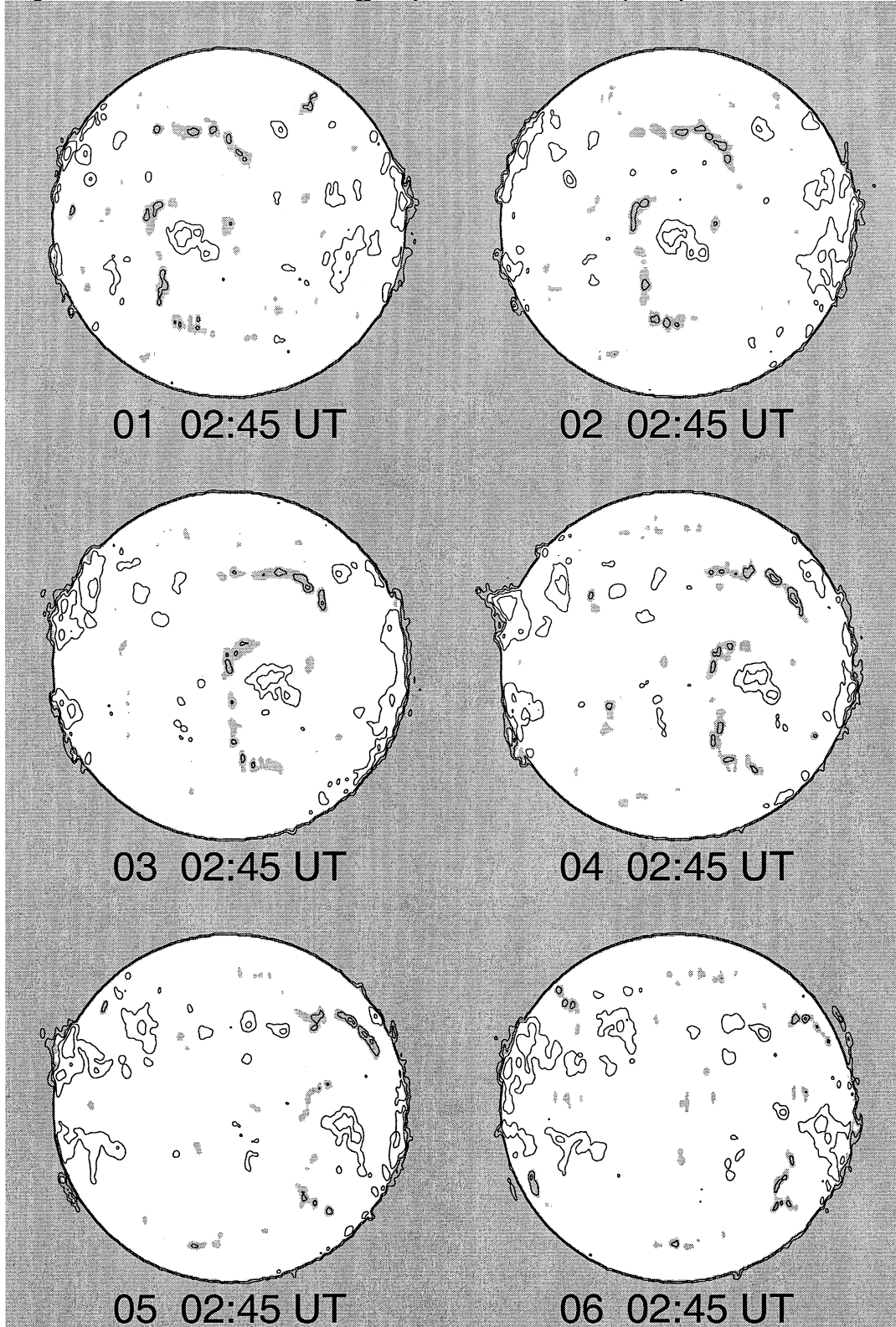
**KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
January 2001**



KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
January 2001

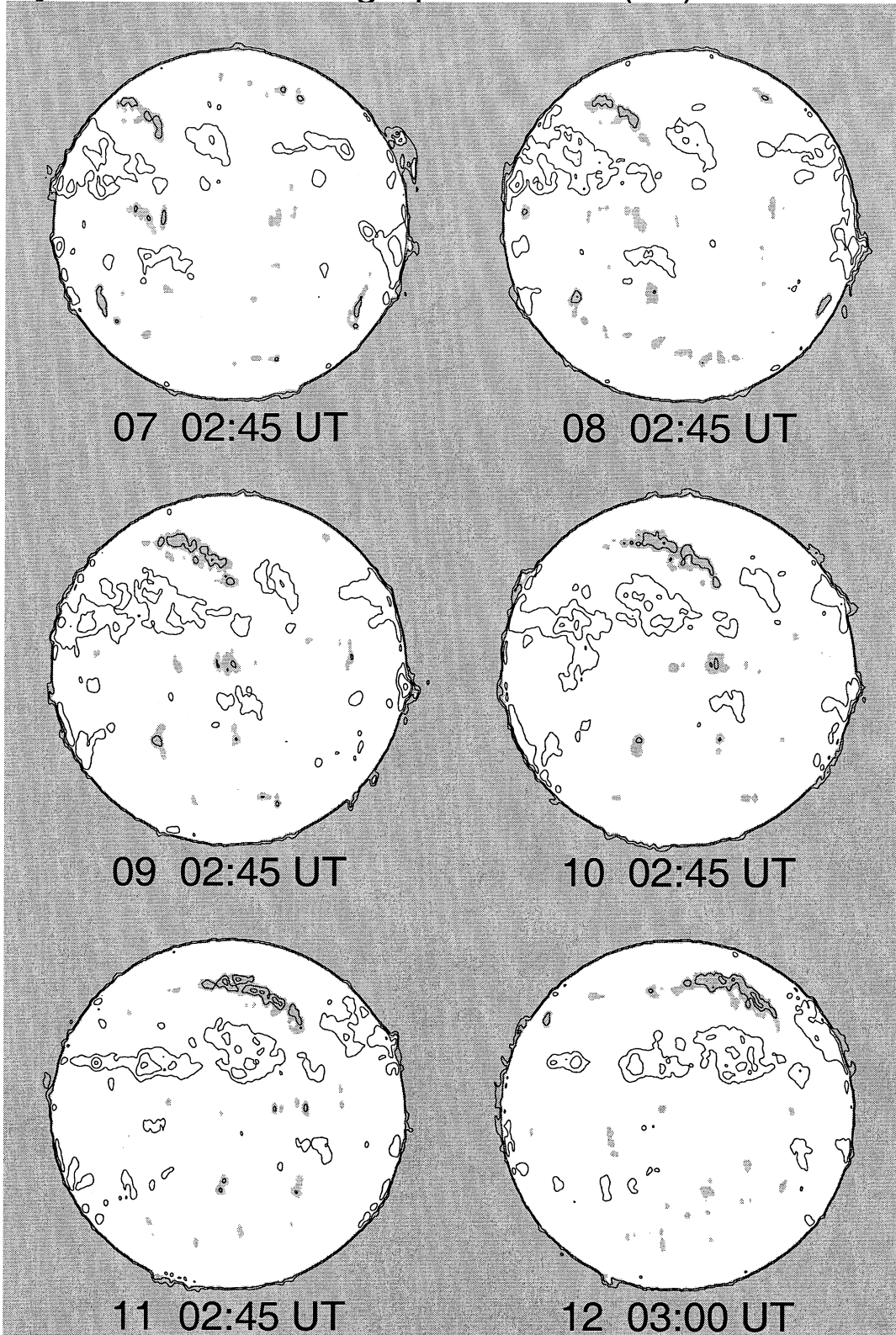


Nobeyama Radio Heliograph 17 GHz (Tb) 2001 January



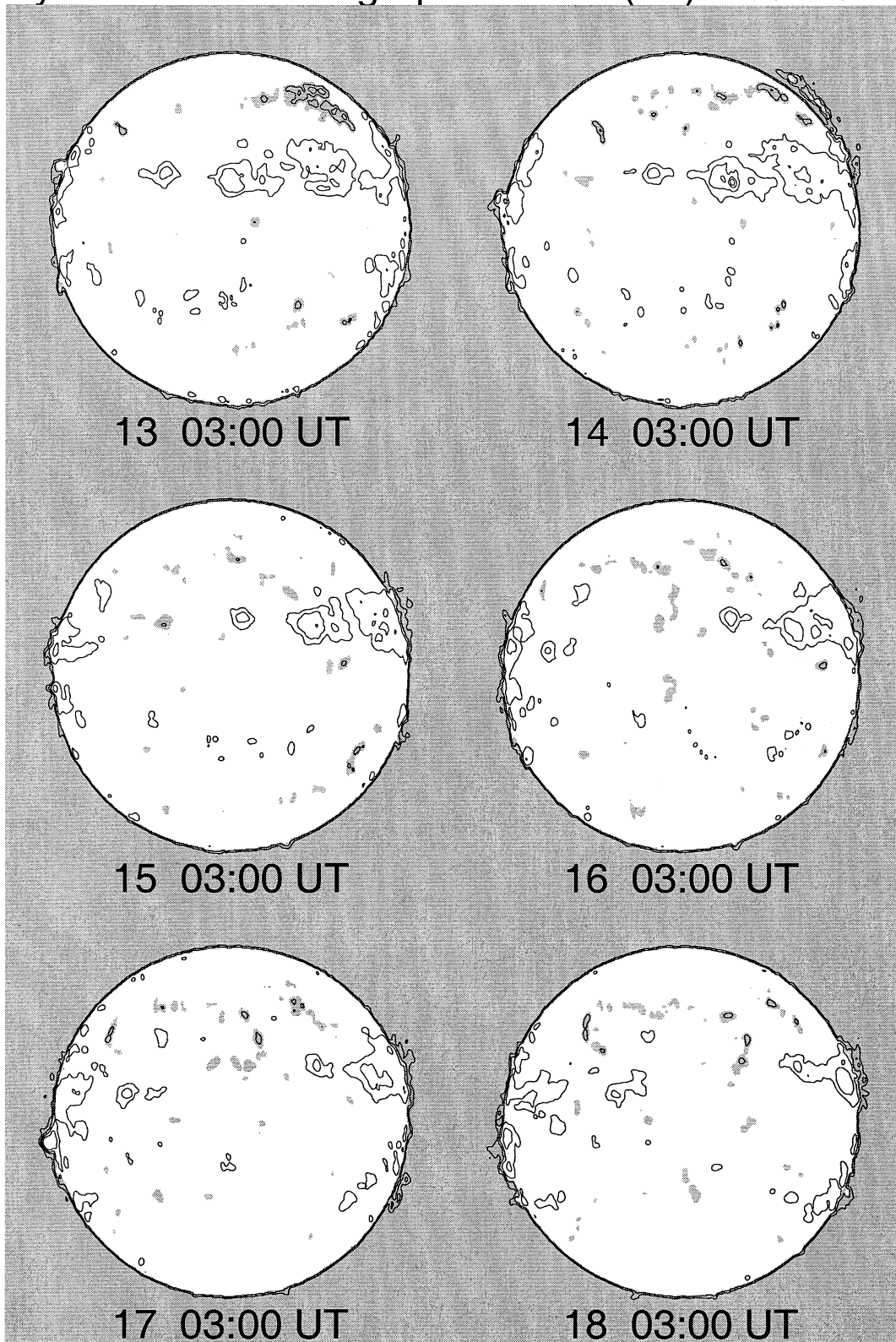
Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2001 January



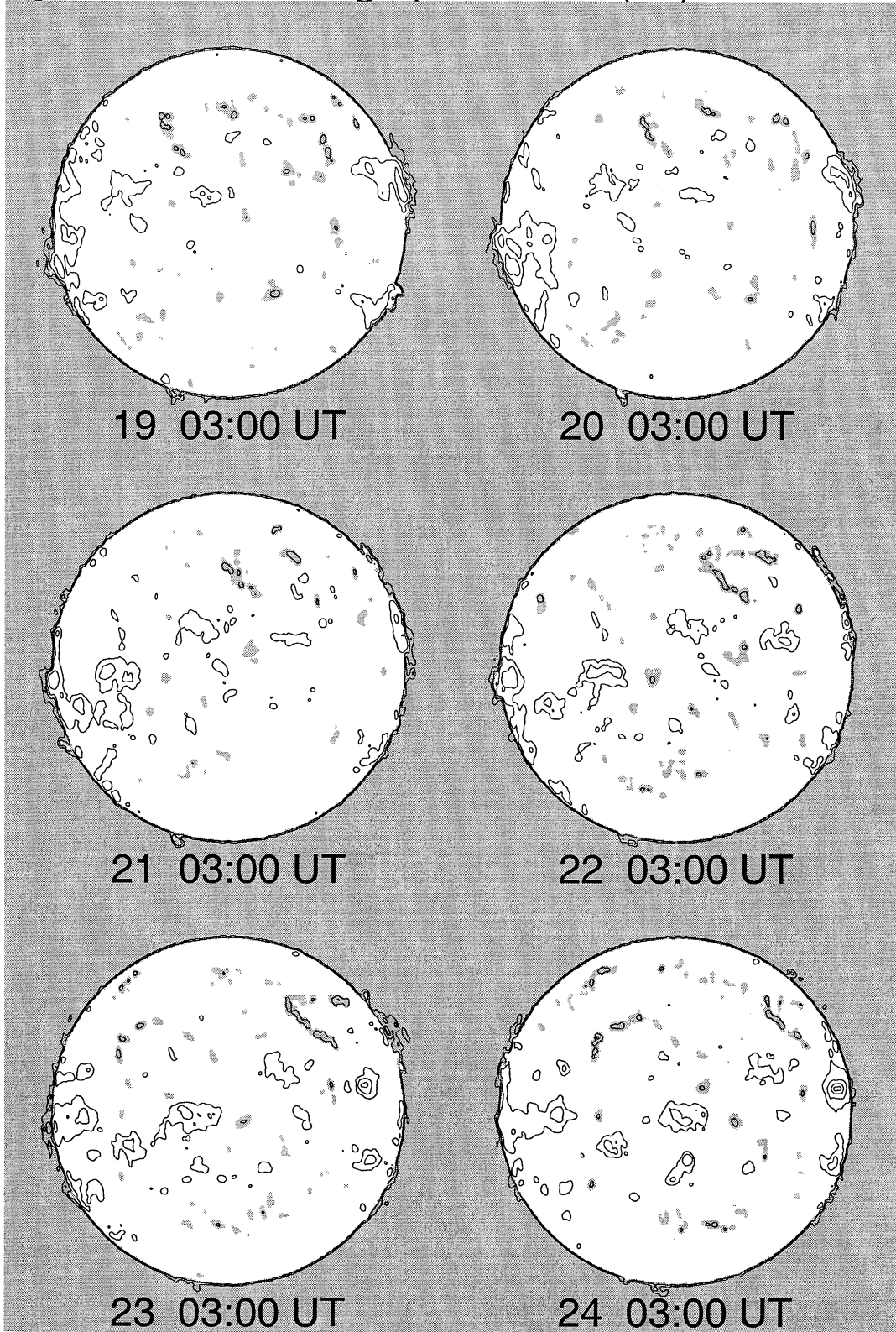
Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2001 January



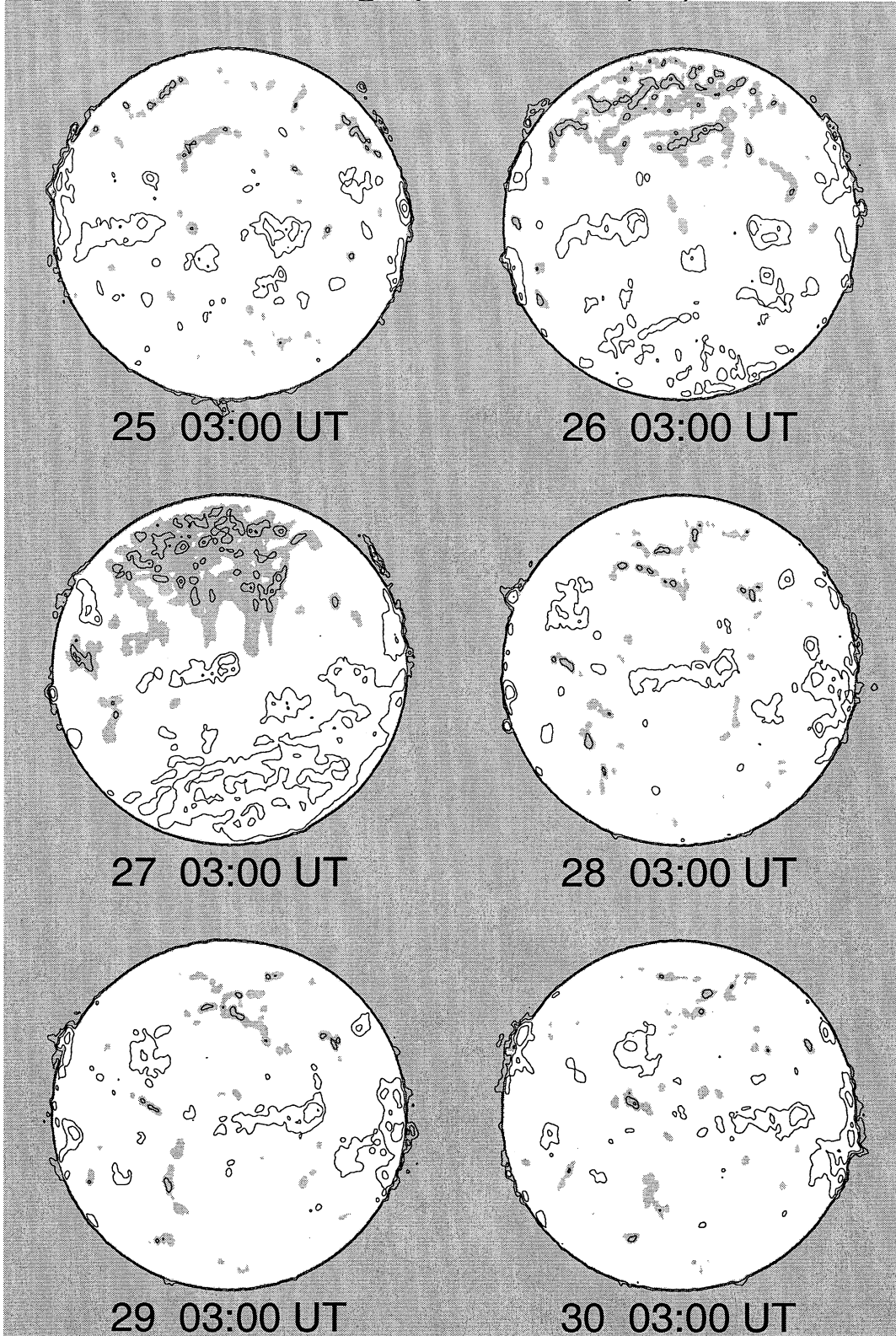
Contour Levels $T_b = [5, 8, 12, 20, 50, 100] \times 10^3$ K
Grey level $T_b \leq 9,500$ K

Nobeyama Radio Heliograph 17 GHz (Tb) 2001 January



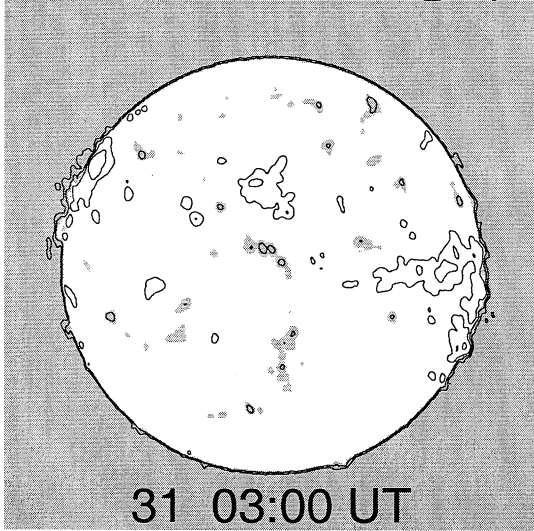
Contour Levels $T_b = [5, 8, 12, 20, 50, 100] \times 10^3$ K
Grey level $T_b \leq 9,500$ K

Nobeyama Radio Heliograph 17 GHz (Tb) 2001 January



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

Nobeyama Radio Heliograph 17 GHz (Tb) 2001 January



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

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JANUARY 2001

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
9291		KAND	12 29 1225	S12 E39	01 1.4			CSO		5	5	1
9291		RAMY	12 29 1415	S13 E39	01 1.5		A	HSX	20	1	1	3
9291	30244	MWIL	12 29 1545	S12 E38	01 1.5	5	(B)					
9291		HOLL	12 29 1624	S13 E38	01 1.5		B	CSO	40	13	5	3
9291		LEAR	12 30 0115	S12 E32	01 1.5		B	CSO	20	5	4	3
9291		SVTO	12 30 0736	S13 E30	01 1.6		B	DAO	70	6	6	2
9291		TACH	12 30 0738	S12 E28	01 1.4			BAO	46	5	4	3
9291		KAND	12 30 0835	S12 E29	01 1.5			BXO		9	5	5
9291		RAMY	12 30 1315	S13 E27	01 1.6		B	DHO	90	7	6	3
9291	30244	MWIL	12 30 1545	S12 E24	01 1.5	5	(B)					
9291		HOLL	12 30 1546	S11 E25	01 1.5		B	CAO	80	8	8	4
9291		LEAR	12 31 0155	S12 E21	01 1.7		B	DAO	80	13	8	4
9291		TACH	12 31 0705	S11 E11	01 1.1			HSX	50	1	1	2
9291		KAND	12 31 0900	S12 E14	01 1.4			CSO		7	8	3
9291		RAMY	12 31 1310	S11 E13	01 1.5		B	DSO	80	11	7	3
9291	30244	MWIL	12 31 1600	S12 E10	01 1.4	5	(BP)					
9291		VORO	01 01 0029	S12 E03	01 1.2			HAX	201	2		3
9291		LEAR	01 01 0110	S12 E05	01 1.4		B	CAO	90	6	8	3
9291		TACH	01 01 0705	S10 W01	01 1.2			HH	120	1	2	2
9291		SVTO	01 01 0750	S12 E02	01 1.5		B	DSO	120	8	8	3
9291		RAMY	01 01 1306	S12 W01	01 1.5		B	DSO	120	9	6	2
9291	30244	MWIL	01 01 1600	S12 W04	01 1.4	5	(BP)					
9291		HOLL	01 01 1725	S13 W04	01 1.4		B	CAO	110	11	8	2
9291		LEAR	01 02 0135	S12 W09	01 1.4		B	DAO	60	15	8	3
9291		VORO	01 02 0155	S12 W12	01 1.2			HAX	223	3		3
9291		SVTO	01 02 0730	S11 W13	01 1.3		B	CAO	80	6	7	3
9291		RAMY	01 02 1515	S12 W16	01 1.4		B	CSO	70	8	6	1
9291	30244	MWIL	01 02 1545	S12 W17	01 1.4	4	(BP)					
9291		HOLL	01 02 1733	S13 W16	01 1.5		B	CSO	100	13	8	2
9291		LEAR	01 03 0104	S12 W22	01 1.4		B	DSO	130	8	7	3
9291		VORO	01 03 0444	S12 W26	01 1.2			HAX	164	3		3
9291		KAND	01 03 0755	S13 W25	01 1.4			DSO		5	8	3
9291		SVTO	01 03 0915	S12 W27	01 1.3		B	CAO	80	6	8	3
9291	30244	MWIL	01 03 1545	S12 W30	01 1.4	5	(BP)					
9291		RAMY	01 03 1610	S11 W29	01 1.5		B	DSO	60	7	7	3
9291		HOLL	01 03 1630	S12 W31	01 1.3		B	CSO	60	6	10	2
9291		LEAR	01 04 0145	S12 W38	01 1.2		B	CSO	50	3	3	3
9291		VORO	01 04 0414	S13 W40	01 1.1			HAX	80	1		2
9291		TACH	01 04 0726	S12 W40	01 1.3			HSX	155	2	2	3
9291		SVTO	01 04 0742	S13 W41	01 1.2		B	CSO	50	2	4	2
9291		KAND	01 04 0745	S13 W42	01 1.1			HS		2	3	4
9291		RAMY	01 04 1215	S13 W45	01 1.1		A	HSX	50	1	2	3
9291	30244	MWIL	01 04 1600	S12 W46	01 1.2	5	(BP)					
9291		HOLL	01 04 1611	S12 W47	01 1.1		A	HAX	50	1	2	4
9291		LEAR	01 05 0115	S12 W51	01 1.2		A	HSX	60	1	2	3
9291		SVTO	01 05 1108	S13 W57	01 1.2		A	HAX	70	1	2	2
9291		KAND	01 05 1330	S12 W58	01 1.2			HS		1	2	2
9291		HOLL	01 05 1525	S13 W58	01 1.3		A	HSX	80	1	2	2
9291		VORO	01 06 0029	S13 W63	01 1.3			HAX	127	1		1
9291		LEAR	01 06 0030	S12 W63	01 1.3		A	HAX	80	2	2	3
9291		KAND	01 06 0640	S14 W68	01 1.1			HS		1	2	3
9291		SVTO	01 06 0750	S13 W68	01 1.2		A	HAX	50	2	2	2
9291		RAMY	01 06 1510	S13 W72	01 1.2		A	HSX	60	1	2	3
9291	30244	MWIL	01 06 1600	S13 W71	01 1.3	4	(AP)					
9291		VORO	01 06 2342	S14 W75	01 1.3			HAX	125	1		2
9291		LEAR	01 07 0627	S13 W80	01 1.2		A	HRX	20	1	1	3
9291		KAND	01 07 0845	S14 W86	12 31.9			HS		1	2	4
9291		RAMY	01 07 1235	S12 W86	01 1.0		A	HSX	30	1	1	4
9289		RAMY	12 26 1242	S07 E87	01 2.0		B	DSO	50	2	4	3
9289		LEAR	12 27 0050	S08 E85	01 2.4		A	HHX	180	1	3	3
9289		KAND	12 27 1015	S06 E78	01 2.3			DKO		6	10	2
9289		RAMY	12 27 1252	S08 E75	01 2.1		B	DAO	350	8	10	3
9289	30241	MWIL	12 27 1545	S07 E74	01 2.2	5	(BP)					
9289		HOLL	12 27 1710	S07 E70	01 1.9		B	CAO	520	17	9	2
9289		RAMY	12 28 1230	S06 E62	01 2.2		BG	EKO	710	14	11	3
9289	30241	MWIL	12 28 1545	S07 E60	01 2.1	5	(D)					
9289		HOLL	12 28 1550	S07 E61	01 2.2		BG	EKI	860	25	13	3
9289		LEAR	12 29 0120	S07 E54	01 2.1		B	EKO	630	16	12	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9289		SVTO	12 29 0920	S08 E52	01 2.3		B	EKO	390	6	12	2
9289		KAND	12 29 1225	S06 E48	01 2.1			EKO		27	12	1
9289		RAMY	12 29 1415	S06 E50	01 2.3		B	EKO	650	7	12	3
9289	30241	MWIL	12 29 1545	S06 E47	01 2.2	5	(D)					
9289		HOLL	12 29 1624	S06 E46	01 2.1		B	EKO	1030	33	14	3
9289		LEAR	12 30 0115	S07 E42	01 2.2		B	EKO	710	22	12	3
9289		SVTO	12 30 0736	S06 E38	01 2.2		B	EKO	1020	11	13	2
9289		TACH	12 30 0738	S06 E37	01 2.1			DHI	150	12	7	3
9289		KAND	12 30 0835	S07 E37	01 2.1			EKI		30	14	5
9289		RAMY	12 30 1315	S06 E35	01 2.2		B	EKI	1100	24	15	3
9289	30241	MWIL	12 30 1545	S06 E33	01 2.1	5	(D)					
9289		HOLL	12 30 1546	S08 E35	01 2.3		BG	EKI	810	32	12	4
9289		LEAR	12 31 0155	S08 E28	01 2.2		BG	EKI	900	45	12	4
9289		TACH	12 31 0705	S06 E22	01 1.9			DHI	904	8	7	2
9289		KAND	12 31 0900	S06 E24	01 2.2			EKC		29	14	3
9289		RAMY	12 31 1310	S06 E22	01 2.2		BG	EKC	850	34	14	3
9289	30241	MWIL	12 31 1600	S06 E19	01 2.1	5	(BG)					
9289		LEAR	01 01 0110	S08 E15	01 2.2		BG	EKI	840	39	12	3
9289		TACH	01 01 0705	S06 E11	01 2.1			DAI	1206	11	8	2
9289		SVTO	01 01 0750	S05 E10	01 2.1		B	EKI	980	28	15	3
9289		RAMY	01 01 1306	S07 E09	01 2.2		BG	EKC	940	48	15	2
9289	30241	MWIL	01 01 1600	S06 E06	01 2.1	5	(BG)					
9289		HOLL	01 01 1725	S07 E06	01 2.2		BG	EKI	720	34	13	2
9289		LEAR	01 02 0135	S07 E03	01 2.3		B	EKI	650	34	13	3
9289		SVTO	01 02 0730	S06 W02	01 2.2		B	EKI	700	39	15	3
9289		RAMY	01 02 1515	S08 W06	01 2.2		BG	EKC	770	35	15	1
9289	30241	MWIL	01 02 1545	S06 W07	01 2.1	5	(BP)					
9289		HOLL	01 02 1733	S07 W07	01 2.2		BG	EKI	710	40	14	2
9289		LEAR	01 03 0104	S07 W13	01 2.1		B	EHO	620	17	12	3
9289		KAND	01 03 0755	S07 W16	01 2.1			EKI		16	12	3
9289		SVTO	01 03 0915	S06 W17	01 2.1		B	EKI	720	27	14	3
9289	30241	MWIL	01 03 1545	S06 W21	01 2.1	5	(BG)					
9289		RAMY	01 03 1610	S06 W20	01 2.2		B	EKO	490	24	14	3
9289		HOLL	01 03 1630	S08 W21	01 2.1		BG	EKI	480	27	13	2
9289		LEAR	01 04 0145	S07 W26	01 2.1		B	EKO	410	19	12	3
9289		TACH	01 04 0726	S06 W27	01 2.3			DAI	1230	20	9	3
9289		SVTO	01 04 0742	S06 W29	01 2.1		B	EKO	570	15	12	2
9289		KAND	01 04 0745	S07 W30	01 2.1			EKO		19	13	4
9289		RAMY	01 04 1215	S06 W33	01 2.0		B	EKO	700	9	12	3
9289	30241	MWIL	01 04 1600	S07 W35	01 2.0	5	(BG)					
9289		HOLL	01 04 1611	S07 W35	01 2.0		BG	EKI	480	27	12	4
9289		LEAR	01 05 0115	S08 W40	01 2.0		B	EKI	430	15	12	3
9289		SVTO	01 05 1108	S07 W46	01 2.0		B	EAI	520	17	12	2
9289		KAND	01 05 1330	S07 W49	01 1.9			EKI		11	11	3
9289		HOLL	01 05 1525	S07 W48	01 2.0		B	EKI	380	13	11	2
9289		LEAR	01 06 0030	S06 W55	01 1.9		B	DKI	4000	12	9	3
9289		KAND	01 06 0640	S08 W60	01 1.8			DKO		4	7	3
9289		SVTO	01 06 0750	S06 W57	01 2.1		B	EKI	720	10	11	2
9289		RAMY	01 06 1510	S03 W65	01 1.8		B	DAO	330	4	5	3
9289	30241	MWIL	01 06 1600	S07 W65	01 1.8	5	(AP)					
9289		LEAR	01 07 0627	S07 W72	01 1.9		B	DKO	280	3	6	3
9289		KAND	01 07 0845	S08 W74	01 1.8			DAO		6	5	4
9289		RAMY	01 07 1235	S05 W79	01 1.6		B	DAO	230	4	5	4
9289	30241	MWIL	01 07 1600	S07 W79	01 1.7	4	(AP)					
9289		HOLL	01 07 1634	S06 W80	01 1.7		B	CSO	180	5	7	2
9289		LEAR	01 08 0025	S07 W84	01 1.7		B	DSO	90	2	4	3
9289A		HOLL	12 29 1624	S08 E59	01 3.1		A	AXX	10	1	1	3
9303		LEAR	01 06 0030	S04 W35	01 3.4		B	CRO	30	4	3	3
9303		KAND	01 06 0640	S05 W34	01 3.7			BXO		6	8	3
9303		SVTO	01 06 0750	S05 W39	01 3.4		B	DAO	40	4	6	2
9303		RAMY	01 06 1510	S04 W43	01 3.4		B	DSO	50	4	4	3
9303	30259	MWIL	01 06 1600	S04 W44	01 3.4	4	(B)					
9303		LEAR	01 07 0627	S05 W52	01 3.4		B	DAO	90	6	5	3
9303		KAND	01 07 0845	S05 W54	01 3.3			DAO		3	5	4
9303		RAMY	01 07 1235	S03 W56	01 3.3		B	DAO	90	9	6	4
9303	30259	MWIL	01 07 1600	S04 W58	01 3.3	4	(B)					
9303		HOLL	01 07 1634	S04 W58	01 3.3		B	CAO	70	6	7	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9303		VORO	01 08 0018	S05 W63	01 3.3			DAO	189	2	5	2
9303		LEAR	01 08 0025	S04 W61	01 3.4		B	DAO	110	5	6	3
9303		KAND	01 08 0825	S05 W65	01 3.5			CSO		8	7	3
9303		SVTO	01 08 1045	S04 W71	01 3.1		B	DAO	100	5	7	2
9303		RAMY	01 08 1159	S03 W69	01 3.3		B	DAO	180	4	8	3
9303		HOLL	01 08 1520	S04 W72	01 3.2		B	DAO	240	6	10	3
9303		LEAR	01 09 0147	S05 W76	01 3.4		B	DAO	90	4	6	3
9303		KAND	01 09 0805	S06 W79	01 3.4			HS		1	2	3
9303		SVTO	01 09 1040	S04 W84	01 3.2		A	HSX	60	1	2	3
9303		RAMY	01 09 1232	S03 W85	01 3.2		A	AXX	30	1	2	3
9297		LEAR	01 04 0145	N24 W04	01 3.8		B	CAO	20	2	3	3
9297		TACH	01 04 0726	N24 W10	01 3.5			CRO	60	4	7	3
9297		SVTO	01 04 0742	N23 W08	01 3.7		B	CRO	30	5	4	2
9297		KAND	01 04 0745	N24 W09	01 3.6			XO		4	4	4
9297		RAMY	01 04 1215	N24 W12	01 3.6		B	CSO	30	5	4	3
9297	30252	MWIL	01 04 1600	N24 W12	01 3.7	5	(B)					
9297		HOLL	01 04 1611	N24 W12	01 3.7		B	CSO	30	5	4	4
9297		LEAR	01 05 0115	N23 W15	01 3.9		B	DAO	70	4	6	3
9297		SVTO	01 05 1108	N23 W22	01 3.8		B	DAO	70	8	7	2
9297		KAND	01 05 1330	N24 W24	01 3.7			DSO		4	7	2
9297		HOLL	01 05 1525	N24 W25	01 3.7		B	DAO	110	7	7	2
9297		VORO	01 06 0029	N23 W30	01 3.7			DAI	234	5	6	1
9297		LEAR	01 06 0030	N24 W29	01 3.8		B	DSO	100	14	7	3
9297		KAND	01 06 0640	N22 W34	01 3.7			CSO		11	8	3
9297		SVTO	01 06 0750	N23 W34	01 3.7		B	DAO	70	10	10	2
9297		RAMY	01 06 1510	N23 W37	01 3.8		B	CAO	70	11	8	3
9297	30252	MWIL	01 06 1600	N23 W38	01 3.7	4	(B)					
9297		VORO	01 06 2342	N23 W42	01 3.7			DAI	315	6	7	2
9297		LEAR	01 07 0627	N23 W46	01 3.7		B	DSO	50	6	8	3
9297		KAND	01 07 0845	N22 W48	01 3.7			DSO		7	9	4
9297		RAMY	01 07 1235	N24 W49	01 3.7		B	DSO	100	16	10	4
9297	30252	MWIL	01 07 1600	N23 W51	01 3.7	4	(B)					
9297		HOLL	01 07 1634	N23 W52	01 3.7		B	DSO	90	8	10	2
9297		LEAR	01 08 0025	N23 W55	01 3.8		B	DSO	50	4	9	3
9297		VORO	01 08 0050	N23 W56	01 3.7			CRO	95	2	8	2
9297		KAND	01 08 0825	N21 W64	01 3.4			HS		1	2	3
9297		RAMY	01 08 1159	N25 W67	01 3.3		A	HSX	50	1	2	3
9297		HOLL	01 08 1520	N23 W69	01 3.3		A	HSX	120	1	2	3
9297		LEAR	01 09 0147	N23 W74	01 3.4		A	HSX	30	1	1	3
9292	30245	MWIL	12 29 1545	N25 E78	01 4.7	4	AP					
9292	30245	MWIL	12 30 1545	N24 E65	01 4.7	4	(AF)					
9292		HOLL	12 30 1546	N25 E67	01 4.8		A	HSX	60	1	1	4
9292		LEAR	12 31 0155	N24 E59	01 4.6		A	HRX		1		4
9292		LEAR	01 01 0110	N25 E48	01 4.8		A	HRX		1		3
9292		TACH	01 04 0726	N24 E04	01 4.6			AXX	22	3	1	3
9292		SVTO	01 04 0742	N25 E04	01 4.6		A	AXX	10	2	2	2
9292		KAND	01 04 0745	N25 E03	01 4.5			AX		2	3	4
9292		RAMY	01 04 1215	N26 E02	01 4.7		B	BXO	20	3	3	3
9292	30253	MWIL	01 04 1600	N25 W01	01 4.6	4	(B)					
9292		HOLL	01 04 1611	N25 W01	01 4.6		B	CAO	40	8	3	4
9292		LEAR	01 05 0115	N25 W05	01 4.7		B	DSO	60	2	3	3
9292		SVTO	01 05 1108	N24 W12	01 4.5		B	DSO	20	2	4	2
9292		KAND	01 05 1330	N24 W12	01 4.6			HS		1	1	2
9292		HOLL	01 05 1525	N24 W13	01 4.6		A	HSX	20	1	1	2
9292		VORO	01 06 0029	N23 W18	01 4.6			HRX	25	1		1
9292		LEAR	01 06 0030	N24 W17	01 4.7		A	AXX	10	2	1	3
9292	30253	MWIL	01 06 1600	N23 W26	01 4.7	3	(AF)					
9293		LEAR	01 01 0110	N12 E52	01 5.0		A	HSX	10	1	1	3
9293		TACH	01 01 0705	N13 E48	01 4.9			AXX	10	1	1	2
9293		SVTO	01 01 0750	N13 E49	01 5.0		B	DAO	60	3	3	3
9293		RAMY	01 01 1306	N12 E46	01 5.0		B	CSO	20	7	3	2
9293	30248	MWIL	01 01 1600	N13 E45	01 5.1	4	(B)					
9293		HOLL	01 01 1725	N13 E44	01 5.0		B	CAO	20	3	3	2
9293		LEAR	01 02 0135	N12 E38	01 4.9		B	DSO	30	3	4	3
9293		SVTO	01 02 0730	N13 E37	01 5.1		B	DAO	60	5	6	3
9293		RAMY	01 02 1515	N13 E30	01 4.9		B	DSO	30	6	4	1

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9293	30248	MWIL	01 02 1545	N13	E31	01 5.0	4	(BP)					
9293		HOLL	01 02 1733	N14	E28	01 4.8		B	CSO	20	7	6	2
9293		LEAR	01 03 0104	N13	E25	01 4.9		B	DRO	20	9	6	3
9293		VORO	01 03 0444	N13	E22	01 4.8			BXO	51	7	8	3
9293		KAND	01 03 0755	N13	E20	01 4.8			CAO		6	7	3
9293		SVTO	01 03 0915	N14	E21	01 5.0		B	DAO	40	5	7	3
9293	30248	MWIL	01 03 1545	N14	E16	01 4.9	5	(BP)					
9293		RAMY	01 03 1610	N13	E17	01 4.9		B	CSO	10	5	6	3
9293		HOLL	01 03 1630	N13	E16	01 4.9		B	CAO	40	5	8	2
9293		LEAR	01 04 0145	N13	E11	01 4.9		B	CAO	20	5	6	3
9293		VORO	01 04 0414	N14	E09	01 4.8			CAO	56	6	6	2
9293		TACH	01 04 0726	N14	E07	01 4.8			BRO	31	3	6	3
9293		SVTO	01 04 0742	N14	E07	01 4.8		B	CAO	30	4	6	2
9293		KAND	01 04 0745	N14	E05	01 4.7			CSO		4	6	4
9293		RAMY	01 04 1215	N14	E01	01 4.6		B	CSO	20	3	3	3
9293	30248	MWIL	01 04 1600	N14	W01	01 4.6	4	(AP)					
9293		HOLL	01 04 1611	N16	W01	01 4.6		A	HSX	20	2	2	4
9293		LEAR	01 05 0115	N15	W05	01 4.7		A	HAX	10	1	1	3
9293		SVTO	01 05 1108	N13	W12	01 4.5		A	HRX	10	1	1	2
9293		KAND	01 05 1330	N15	W13	01 4.6			AX		1	1	2
9293		HOLL	01 05 1525	N15	W14	01 4.6		A	AXX	10	1	1	2
9293		KAND	01 06 0640	N11	W17	01 5.0			BXO		3	3	3
9293		SVTO	01 06 0750	N12	W17	01 5.0		B	DAO	20	4	4	2
9293		RAMY	01 06 1510	N11	W22	01 5.0		B	CSO	10	2	2	3
9293	30248	MWIL	01 06 1600	N11	W22	01 5.0	3	(B)					
9298		SVTO	01 04 0742	S22	E06	01 4.8		A	AXX	10	2	2	2
9298		KAND	01 04 0745	S22	E04	01 4.6			AX		1		4
9298		RAMY	01 04 1215	S22	E02	01 4.7		A	AXX	10	2	2	3
9298	30254	MWIL	01 04 1600	S21	E01	01 4.7	3	(B)					
9298		HOLL	01 04 1611	S21	E00	01 4.7		B	BXO	10	4	2	4
9293A		KAND	01 03 0755	S10	E21	01 4.9			AX		1		3
9292A		LEAR	12 31 0155	N22	E73	01 5.7		A	AXX		1		4
9292A	30246	MWIL	12 31 1600	N24	E62	01 5.4	4	(AP)					
9298A		LEAR	01 09 0147	S13	W45	01 5.7		B	CRO	20	5	3	3
9298A		KAND	01 09 0805	S14	W49	01 5.6			AX		2	3	3
9298A		SVTO	01 09 1040	S13	W53	01 5.4		A	HSX	20	2	4	3
9298A		RAMY	01 09 1232	S12	W54	01 5.4		A	AXX	10	1	1	3
9298A		LEAR	01 10 0117	S13	W60	01 5.5		A	AXX		1	1	3
9298A		SVTO	01 10 0810	S13	W64	01 5.5		A	AXX		1	1	2
9298B		HOLL	01 08 1520	N15	W28	01 6.5		A	AXX	10	1	1	3
9298B		LEAR	01 09 0147	N15	W34	01 6.5		A	AXX		1		3
9294	30247	MWIL	12 31 1600	N23	E84	01 7.1	4	AP					
9294		LEAR	01 01 0110	N21	E78	01 7.0		A	HSX	30	1	2	3
9294		TACH	01 01 0705	N23	E77	01 7.2			AXX	5	1	1	2
9294		SVTO	01 01 0750	N22	E78	01 7.3		A	HSX	40	1	2	3
9294		RAMY	01 01 1306	N22	E74	01 7.2		A	HSX	30	1	1	2
9294	30247	MWIL	01 01 1600	N22	E71	01 7.1	4	(AP)					
9294		HOLL	01 01 1725	N23	E70	01 7.1		A	HSX	60	1	2	2
9294		LEAR	01 02 0135	N22	E66	01 7.1		A	HSX	20	1	2	3
9294		VORO	01 02 0155	N22	E65	01 7.1			AXX	25	1		3
9294		SVTO	01 02 0730	N22	E65	01 7.3		B	CAO	40	2	5	3
9294		RAMY	01 02 1515	N21	E60	01 7.2		A	HSX	40	1	1	1
9294	30247	MWIL	01 02 1545	N22	E58	01 7.1	4	(AP)					
9294		HOLL	01 02 1733	N24	E57	01 7.1		A	HSX	40	1	2	2
9294		LEAR	01 03 0104	N22	E54	01 7.2		A	HSX	40	1	1	3
9294		VORO	01 03 0444	N21	E52	01 7.2			AXX	28	1		3
9294		KAND	01 03 0755	N22	E51	01 7.2			CSO		3	6	3
9294		SVTO	01 03 0915	N21	E50	01 7.2		B	CSO	70	2	2	3
9294	30247	MWIL	01 03 1545	N22	E46	01 7.2	5	(BP)					
9294		RAMY	01 03 1610	N22	E49	01 7.4		B	CSO	40	5	5	3
9294		HOLL	01 03 1630	N22	E45	01 7.1		B	CSO	40	2	2	2
9294		LEAR	01 04 0145	N24	E43	01 7.4		B	CAO	30	6	7	3
9294		VORO	01 04 0414	N22	E39	01 7.2			HAX	83	3		2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP Mo	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day										
9294		TACH	01	04	0726	N23 E39	01	7.3		CRO	98	3	4	3
9294		SVTO	01	04	0742	N23 E40	01	7.4		B DAO	40	3	5	2
9294		KAND	01	04	0745	N23 E39	01	7.3		CSO		3	5	4
9294		RAMY	01	04	1215	N23 E37	01	7.4		B CSO	30	4	6	3
9294	30247	MWIL	01	04	1600	N22 E33	01	7.2	4	(BP)				
9294	30255	MWIL	01	04	1600	N24 E37	01	7.5	4	(AP)				
9294		HOLL	01	04	1611	N23 E35	01	7.4		B CSO	60	5	6	4
9294		LEAR	01	05	0115	N22 E30	01	7.3		B CSO	20	2	3	3
9294		SVTO	01	05	1108	N22 E25	01	7.4		B DSO	30	3	4	2
9294		KAND	01	05	1330	N23 E21	01	7.2		HS		1	1	3
9294		HOLL	01	05	1525	N22 E21	01	7.2		A HSX	30	1	2	2
9294		VORO	01	06	0029	N22 E16	01	7.2		A HAX	83	1		1
9294		LEAR	01	06	0030	N17 E22	01	7.7		A HAX	20	1	2	3
9294		KAND	01	06	0640	N21 E13	01	7.3		CSO		2	5	3
9294		SVTO	01	06	0750	N22 E13	01	7.3		B CSO	20	2	2	2
9294		RAMY	01	06	1510	N21 E07	01	7.2		A HSX	20	2	1	3
9294	30247	MWIL	01	06	1600	N22 E07	01	7.2	4	(AP)				
9294	30255	MWIL	01	06	1600	N23 E14	01	7.7	3	B				
9294		VORO	01	06	2342	N22 E04	01	7.3		HRX	44	1		2
9294		LEAR	01	07	0627	N22 W02	01	7.1		A HSX	10	1	1	3
9294		KAND	01	07	0845	N21 W01	01	7.3		CAO		3	6	4
9294		RAMY	01	07	1235	N21 W04	01	7.2		A HSX	10	1	1	4
9294	30247	MWIL	01	07	1600	N22 W06	01	7.2	4	(AP)				
9294	30255	MWIL	01	07	1600	N23 W02	01	7.5	4	(BP)				
9294		HOLL	01	07	1634	N22 W04	01	7.4		B CSO	70	9	8	2
9294		LEAR	01	08	0025	N23 W08	01	7.4		B DSO	20	4	5	3
9294		VORO	01	08	0050	N23 W08	01	7.4		BXO	27	2	4	2
9294		KAND	01	08	0825	N21 W15	01	7.2		AX		1		3
9294		KAND	01	08	0825	N23 W10	01	7.6		BXO		7	5	3
9294		SVTO	01	08	1045	N24 W13	01	7.4		B CSO	30	5	9	2
9294		RAMY	01	08	1159	N23 W13	01	7.5		B CAO	30	4	5	3
9294		HOLL	01	08	1520	N22 W18	01	7.2		A HSX	20	1	1	3
9294		LEAR	01	09	0147	N22 W22	01	7.4		B CSO	10	4	5	3
9294		KAND	01	09	0805	N22 W29	01	7.1		HS		1	1	3
9294		SVTO	01	09	1040	N25 W24	01	7.6		B CSO	20	6	7	3
9294		RAMY	01	09	1232	N23 W28	01	7.4		A AXX		1		3
9294		VORO	01	09	2347	N22 W35	01	7.3		HAX	41	6		3
9294		LEAR	01	10	0117	N21 W35	01	7.4		B BXX		2	2	3
9294		LEAR	01	10	0117	N25 W33	01	7.5		B BXX	10	4	8	3
9294		SVTO	01	10	0810	N24 W39	01	7.3		A HAX	10	1	1	2
9294	30247	MWIL	01	10	1545	N24 W44	01	7.2	4	(AP)				
9294		HOLL	01	10	2105	N23 W48	01	7.2		A AXX	10	1	1	3
9294		LEAR	01	11	0140	N22 W50	01	7.2		A AXX		1		2
9299	30251	MWIL	01	03	1545	N09 E56	01	7.8	4	(B)				
9299		LEAR	01	04	0145	N08 E52	01	8.0		A AXX		1		3
9299	30251	MWIL	01	04	1600	N09 E41	01	7.7	3	(B)				
9299		HOLL	01	04	1611	N09 E42	01	7.8		A AXX	10	3	3	4
9299		LEAR	01	05	0115	N09 E36	01	7.7		A AXX		1		3
9299		HOLL	01	05	1525	N09 E32	01	8.0		A AXX	10	1	1	2
9299	30264	MWIL	01	07	1600	N10 E02	01	7.8	4	(B)				
9299		HOLL	01	07	1634	N10 E01	01	7.8		B BXO	10	2	2	2
9295		LEAR	01	02	0135	S13 E82	01	8.2		A HSX	60	1	2	3
9295		SVTO	01	02	0730	S13 E85	01	8.7		A HAX	40	1	2	3
9295		RAMY	01	02	1515	S13 E76	01	8.4		A HSX	60	1	2	1
9295	30249	MWIL	01	02	1545	S13 E76	01	8.4	4	(AP)				
9295		HOLL	01	02	1733	S10 E75	01	8.4		A HSX	120	1	2	2
9295		LEAR	01	03	0104	S13 E70	01	8.3		A HSX	60	1	2	3
9295		VORO	01	03	0444	S14 E69	01	8.4		HAX	93	1		3
9295		KAND	01	03	0755	S13 E69	01	8.5		HS		3	4	3
9295		SVTO	01	03	0915	S14 E67	01	8.4		A HSX	80	1	2	3
9295	30249	MWIL	01	03	1545	S13 E64	01	8.5	5	(BP)				
9295		RAMY	01	03	1610	S14 E62	01	8.3		A HSX	100	1	2	3
9295		HOLL	01	03	1630	S13 E61	01	8.3		A HSX	60	1	2	2
9295		LEAR	01	04	0145	S13 E57	01	8.4		A HSX	70	1	2	3
9295		VORO	01	04	0414	S13 E56	01	8.4		HAX	107	1		2
9295		TACH	01	04	0726	S13 E60	01	8.8		CAO	190	2	12	3
9295		SVTO	01	04	0742	S13 E58	01	8.7		B CSO	70	2	10	2

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

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Jan 01

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9295		KAND	01 04 0745	S12 E55	01 8.5			CSO		2	11	4
9295		RAMY	01 04 1215	S13 E50	01 8.3		A	HSX	90	1	2	3
9295	30249	MWIL	01 04 1600	S14 E52	01 8.6	5	(BP)					
9295		HOLL	01 04 1611	S13 E48	01 8.3		A	HSX	90	1	2	4
9295		LEAR	01 05 0115	S14 E42	01 8.2		B	CSO	50	3	3	3
9295		SVTO	01 05 1108	S15 E37	01 8.3		B	DAO	100	3	4	2
9295		KAND	01 05 1330	S13 E37	01 8.3			HS		3	4	3
9295		HOLL	01 05 1525	S14 E35	01 8.3		B	CAO	110	4	4	2
9295		VORO	01 06 0029	S14 E31	01 8.4			HAX	162	1		1
9295		LEAR	01 06 0030	S13 E31	01 8.3		B	DAO	80	5	4	3
9295		KAND	01 06 0640	S14 E27	01 8.3			HA		3	4	3
9295		SVTO	01 06 0750	S14 E29	01 8.5		B	CSO	70	2	2	2
9295		RAMY	01 06 1510	S14 E22	01 8.3		A	HAX	60	3	2	3
9295	30249	MWIL	01 06 1600	S14 E22	01 8.3	4	(AP)					
9295		VORO	01 06 2342	S14 E18	01 8.3			HSX	146	1		2
9295		LEAR	01 07 0627	S13 E14	01 8.3		A	HSX	40	3	2	3
9295		KAND	01 07 0845	S13 E15	01 8.5			CSO		6	8	4
9295		RAMY	01 07 1235	S14 E11	01 8.3		B	CSO	60	2	2	4
9295	30249	MWIL	01 07 1600	S14 E10	01 8.4	4	(BP)					
9295		HOLL	01 07 1634	S13 E09	01 8.4		B	CSO	60	3	3	2
9295		LEAR	01 08 0025	S14 E04	01 8.3		A	HSX	40	2	2	3
9295		VORO	01 08 0050	S14 E04	01 8.3			HAX	102	2		2
9295		KAND	01 08 0825	S14 E01	01 8.4			HS		3	2	3
9295		SVTO	01 08 1045	S13 W02	01 8.3		B	CSO	40	3	3	2
9295		RAMY	01 08 1159	S13 W02	01 8.3		A	HAX	30	2	1	3
9295		HOLL	01 08 1520	S13 W03	01 8.4		B	CAO	40	3	3	3
9295		LEAR	01 09 0147	S13 W08	01 8.5		B	CSO	30	5	3	3
9295		KAND	01 09 0805	S13 W12	01 8.4			HS		3	3	3
9295		SVTO	01 09 1040	S13 W14	01 8.4		B	CSO	30	3	3	3
9295		RAMY	01 09 1232	S13 W16	01 8.3		A	HSX	20	1	1	3
9295		VORO	01 09 2347	S13 W21	01 8.4			HAX	78	4		3
9295		LEAR	01 10 0117	S13 W22	01 8.4		B	DSO	30	3	3	3
9295		SVTO	01 10 0810	S13 W25	01 8.4		B	DAO	10	2	4	2
9295		KAND	01 10 0855	S13 W26	01 8.4			HS		1	1	1
9295		RAMY	01 10 1300	S13 W28	01 8.4		A	HSX	10	1	1	4
9295	30249	MWIL	01 10 1545	S13 W28	01 8.5	4	(AP)					
9295		HOLL	01 10 2105	S12 W32	01 8.5		A	HSX	20	1	1	3
9295		VORO	01 10 2327	S13 W34	01 8.4			HAX	27	1		3
9295		LEAR	01 11 0140	S12 W34	01 8.5		A	HSX	20	1	2	2
9295		TACH	01 11 0605	S12 W36	01 8.5			HSX	40	1	1	3
9295		KAND	01 11 0725	S13 W38	01 8.4			HS		1	1	3
9295		SVTO	01 11 0950	S12 W40	01 8.4		A	HSX	10	1	1	2
9295		HOLL	01 11 1614	S13 W43	01 8.4		A	AXX	10	1	1	2
9295		VORO	01 12 0024	S13 W47	01 8.5			HAX	20	1		3
9295		LEAR	01 12 0030	S13 W46	01 8.6		B	CRO	20	2	3	2
9295		TACH	01 12 0507	S14 W47	01 8.7			AXX	31	2	3	4
9295		KAND	01 12 0740	S13 W51	01 8.5			CSO		2	2	3
9295		SVTO	01 12 0814	S13 W51	01 8.5		B	CRO	60	2	4	2
9295		RAMY	01 12 1258	S12 W54	01 8.5		A	HSX	20	1	1	3
9295		HOLL	01 12 1615	S12 W57	01 8.4		A	HSX	20	1	1	3
9295		LEAR	01 13 0120	S12 W60	01 8.5		A	HRX	20	1		2
9295		VORO	01 13 0128	S13 W60	01 8.5			HRX	36	1		2
9295		LEAR	01 14 0120	S13 W72	01 8.6		A	AXX		1		4
9296		SVTO	01 02 0730	N09 E87	01 8.8		A	HAX	40	1	2	3
9296		RAMY	01 02 1515	N08 E79	01 8.5		A	HSX	60	1	1	1
9296	30250	MWIL	01 02 1545	N08 E77	01 8.4	4	(AP)					
9296		HOLL	01 02 1733	N12 E76	01 8.4		A	HSX	120	1	2	2
9296		LEAR	01 03 0104	N08 E73	01 8.5		A	HSX	120	1	3	3
9296		VORO	01 03 0444	N08 E72	01 8.6			HAX	82	2		3
9296		KAND	01 03 0755	N09 E69	01 8.5			CSO		2	8	3
9296		SVTO	01 03 0915	N08 E69	01 8.5		A	HSX	80	1	2	3
9296	30250	MWIL	01 03 1545	N08 E64	01 8.4	5	(AP)					
9296		RAMY	01 03 1610	N08 E60	01 8.2		B	DSO	90	4	10	3
9296		HOLL	01 03 1630	N08 E60	01 8.2		B	CSO	110	3	8	2
9296		LEAR	01 04 0145	N08 E59	01 8.5		A	HSX	70	1	2	3
9296		VORO	01 04 0414	N09 E57	01 8.4			HAX	99	1		2
9296		TACH	01 04 0726	N09 E56	01 8.5			HSX	200	1	2	3
9296		SVTO	01 04 0742	N08 E56	01 8.5		A	HSX	100	1	3	2

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JANUARY 2001

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)		Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9296		KAND	01 04	0745	N09 E55	01 8.4		HS			1	3	4
9296		RAMY	01 04	1215	N08 E52	01 8.4		A HSX	60	1	2	3	
9296	30250	MWIL	01 04	1600	N08 E50	01 8.4	5	(AP)					
9296		HOLL	01 04	1611	N09 E51	01 8.5		A HSX	70	2	2	4	
9296		LEAR	01 05	0115	N08 E46	01 8.5		A HSX	100	1	2	3	
9296		SVTO	01 05	1108	N08 E42	01 8.6		A HSX	190	1	3	2	
9296		KAND	01 05	1330	N10 E37	01 8.3		CSO		2	9	2	
9296		HOLL	01 05	1525	N08 E38	01 8.5		A HSX	180	1	2	2	
9296		VORO	01 06	0029	N08 E34	01 8.6		HAX	248	1		1	
9296		LEAR	01 06	0030	N08 E34	01 8.6		A HSX	100	1	2	3	
9296		KAND	01 06	0640	N08 E30	01 8.5		CSO		6	5	3	
9296		SVTO	01 06	0750	N09 E29	01 8.5		B CSO	110	2	3	2	
9296		RAMY	01 06	1510	N09 E26	01 8.6		B CSO	170	2	3	3	
9296	30250	MWIL	01 06	1600	N09 E26	01 8.6	5	(BP)					
9296		VORO	01 06	2342	N08 E21	01 8.6		HSX	309	1		2	
9296		LEAR	01 07	0627	N08 E17	01 8.5		A HSX	150	1	3	3	
9296		KAND	01 07	0845	N08 E15	01 8.5		HS		1	3	4	
9296		RAMY	01 07	1235	N09 E13	01 8.5		A HSX	130	1	3	4	
9296	30250	MWIL	01 07	1600	N08 E11	01 8.5	5	(AP)					
9296		HOLL	01 07	1634	N08 E12	01 8.6		A HSX	100	3	3	2	
9296		LEAR	01 08	0025	N08 E07	01 8.5		A HSX	150	2	3	3	
9296		VORO	01 08	0050	N09 E07	01 8.6		HAX	290	2		2	
9296		KAND	01 08	0825	N08 E03	01 8.6		HA		4	3	3	
9296		SVTO	01 08	1045	N08 W02	01 8.3		A HAX	100	3	3	2	
9296		RAMY	01 08	1159	N08 E01	01 8.6		A HSX	160	4	3	3	
9296		HOLL	01 08	1520	N08 W02	01 8.5		A HSX	180	5	2	3	
9296		LEAR	01 09	0147	N08 W07	01 8.5		A HAX	120	4	3	3	
9296		KAND	01 09	0805	N08 W11	01 8.5		HK		3	3	3	
9296		SVTO	01 09	1040	N08 W11	01 8.6		A HKX	200	3	3	3	
9296		RAMY	01 09	1232	N08 W12	01 8.6		A HSX	180	3	3	3	
9296		VORO	01 09	2347	N08 W19	01 8.6		HAX	249	1		3	
9296		LEAR	01 10	0117	N08 W19	01 8.6		A HAX	100	4	3	3	
9296		SVTO	01 10	0810	N08 W23	01 8.6		B CAO	100	5	4	2	
9296		KAND	01 10	0855	N08 W23	01 8.6		HA		3	4	1	
9296		RAMY	01 10	1300	N09 W26	01 8.6		A HAX	150	4	3	4	
9296	30250	MWIL	01 10	1545	N09 W25	01 8.8	5	(BP)					
9296		HOLL	01 10	2105	N08 W30	01 8.6		B DAI	90	6	3	3	
9296		VORO	01 10	2327	N09 W32	01 8.6		HAX	159	3		3	
9296		LEAR	01 11	0140	N08 W32	01 8.7		B DAO	70	6	3	2	
9296		TACH	01 11	0605	N09 W35	01 8.6		HSX	140	4	2	3	
9296		KAND	01 11	0725	N08 W36	01 8.6		HA		3	2	1	
9296		SVTO	01 11	0950	N09 W38	01 8.5		A HAX	70	5	3	2	
9296		HOLL	01 11	1614	N08 W42	01 8.5		A HAX	140	5	2	2	
9296		VORO	01 12	0024	N08 W46	01 8.6		HAX	175	3		3	
9296		LEAR	01 12	0030	N08 W45	01 8.6		B CAO	80	5	2	2	
9296		TACH	01 12	0507	N08 W47	01 8.7		HSX	83	4	1	4	
9296		KAND	01 12	0740	N08 W51	01 8.5		HA		1	3	3	
9296		SVTO	01 12	0814	N09 W50	01 8.6		B CAO	50	3	2	2	
9296		RAMY	01 12	1258	N09 W53	01 8.6		A HRX	50	2	2	3	
9296		HOLL	01 12	1615	N09 W56	01 8.5		A HAX	90	2	2	3	
9296		LEAR	01 13	0120	N09 W59	01 8.6		A HAX	50	2	4	2	
9296		VORO	01 13	0128	N08 W60	01 8.6		HRX	60	1		2	
9296		TACH	01 13	0618	N08 W61	01 8.7		AXX	5	1	1	3	
9296		RAMY	01 13	1232	N07 W67	01 8.5		A HSX	30	1	2	4	
9296		HOLL	01 13	1609	N09 W69	01 8.5		A HSX	80	2	1	2	
9296		LEAR	01 14	0120	N08 W70	01 8.8		B DSO	30	2	2	4	
9296		RAMY	01 14	1310	N08 W81	01 8.5		B CSO	30	2	2	3	
9295A		SVTO	01 09	1040	N27 W12	01 8.5		A AXX	10	1	1	3	
9295A		RAMY	01 09	1232	N27 W11	01 8.7		A AXX		1		3	
9295A		LEAR	01 10	0117	N27 W19	01 8.6		B BXX		2	1	3	
9300		RAMY	01 03	1610	S14 E72	01 9.1		A HRX	10	1	1	3	
9300		LEAR	01 04	0145	S13 E68	01 9.2		A AXX		1		3	
9300		RAMY	01 04	1215	S13 E60	01 9.0		A AXX		1		3	
9300	30256	MWIL	01 04	1600	S10 E62	01 9.3	3	(AP)					
9300		HOLL	01 04	1611	S16 E60	01 9.2		B BXO	30	4	2	4	
9300		HOLL	01 05	1525	S13 E48	01 9.3		A AXX	10	1	1	2	
9300		LEAR	01 06	0030	S12 E44	01 9.3		B BXO	20	3	2	3	

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

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Jan 01

JANUARY 2001

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)		Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9300		KAND	01	06	0640	S13 E40	01	9.3			BXO		3	4	3
9300		SVTO	01	06	0750	S14 E40	01	9.3		B	DAO	30	3	3	2
9300		RAMY	01	06	1510	S14 E36	01	9.3		B	CSO	20	5	3	3
9300	30260	MWIL	01	06	1600	S14 E36	01	9.4	3	(B)					
9300		LEAR	01	07	0627	S13 E28	01	9.4		B	CRO	20	6	3	3
9300		KAND	01	07	0845	S13 E27	01	9.4			CRI		6	4	4
9300		RAMY	01	07	1235	S14 E24	01	9.3		B	CSO	20	7	4	4
9300	30260	MWIL	01	07	1600	S13 E22	01	9.3	3	(BF)					
9300		HOLL	01	07	1634	S14 E22	01	9.3		B	BXO	30	6	3	2
9300		VORO	01	08	0018	S13 E19	01	9.4			AXX	26	3		2
9300		LEAR	01	08	0025	S13 E18	01	9.4		B	BXO	10	4	3	3
9301		RAMY	01	04	1215	N08 E78	01	10.3		A	AXX		1	1	3
9301	30258	MWIL	01	04	1600	N07 E78	01	10.5	2	(AP)					
9301		HOLL	01	04	1611	N07 E78	01	10.5		A	AXX	30	2	1	4
9301		LEAR	01	05	0115	N08 E72	01	10.4		A	HSX	40	1	2	3
9301		SVTO	01	05	1108	N07 E68	01	10.5		A	HAX	40	1	1	2
9301		KAND	01	05	1330	N08 E68	01	10.7			HR		1	1	2
9301		HOLL	01	05	1525	N07 E65	01	10.5		A	HSX	50	1	1	2
9301		LEAR	01	06	0030	N07 E59	01	10.4		A	HAX	40	1	1	3
9301		KAND	01	06	0640	N07 E54	01	10.3			HS		1	1	3
9301		SVTO	01	06	0750	N07 E56	01	10.5		B	DAO	30	2	5	2
9301		RAMY	01	06	1510	N08 E53	01	10.6		B	CSO	40	3	6	3
9301	30258	MWIL	01	06	1600	N07 E52	01	10.6	4	(B)					
9301		LEAR	01	07	0627	N08 E43	01	10.5		B	DSO	30	3	5	3
9301		KAND	01	07	0845	N08 E41	01	10.4			DSO		4	5	4
9301		RAMY	01	07	1235	N08 E40	01	10.5		B	DSO	40	5	5	4
9301	30258	MWIL	01	07	1600	N08 E38	01	10.5	4	(BP)					
9301		HOLL	01	07	1634	N08 E39	01	10.6		B	CSO	60	5	4	2
9301		VORO	01	08	0018	N07 E32	01	10.4			AXX	29	2		2
9301		LEAR	01	08	0025	N07 E34	01	10.6		B	CSO	10	2	4	3
9301		KAND	01	08	0825	N07 E28	01	10.4			CSO		4	4	3
9301		SVTO	01	08	1045	N08 E28	01	10.5		B	DSO	30	3	5	2
9301		RAMY	01	08	1159	N08 E28	01	10.6		B	DSO	20	2	4	3
9301		HOLL	01	08	1520	N08 E25	01	10.5		B	CSO	30	2	4	3
9301		LEAR	01	09	0147	N09 E19	01	10.5		B	CSO	10	2	4	3
9301		KAND	01	09	0805	N08 E15	01	10.5			CSO		2	4	3
9301		SVTO	01	09	1040	N07 E13	01	10.4		A	HSX	10	1	1	3
9301		RAMY	01	09	1232	N06 E12	01	10.4		A	HSX	20	1	1	3
9301		VORO	01	10	0037	N08 E07	01	10.5			DAI	102	7	8	4
9301		LEAR	01	10	0117	N07 E07	01	10.6		B	CSO	10	2	3	3
9301		SVTO	01	10	0810	N07 E04	01	10.6		B	DSO	10	3	3	2
9301	30258	RAMY	01	10	1300	N07 W03	01	10.3		B	DSO	10	2	4	4
9301		MWIL	01	10	1545	N09 W00	01	10.6	4	(B)					
9301		HOLL	01	10	2105	N09 W03	01	10.6		B	CSO	50	7	8	3
9301		LEAR	01	11	0140	N08 W09	01	10.4		A	HSX	20	1	1	2
9301		TACH	01	11	0605	N09 W07	01	10.7			DAO	189	10	7	3
9301		SVTO	01	11	0950	N08 W12	01	10.5		A	HSX	20	2	1	2
9301		HOLL	01	11	1614	N07 W17	01	10.4		A	HSX	40	1	1	2
9301		VORO	01	12	0008	N09 W17	01	10.7			DAI	207	12	8	3
9301		LEAR	01	12	0030	N08 W20	01	10.5		A	HSX	60	9	4	2
9301		TACH	01	12	0507	N10 W19	01	10.8			DAI	283	14	8	4
9301		SVTO	01	12	0814	N08 W25	01	10.5		A	HSX	20	1	1	2
9301		RAMY	01	12	1258	N09 W27	01	10.5		B	DSO	20	4	3	3
9301		HOLL	01	12	1615	N10 W27	01	10.6		B	CSO	40	3	3	3
9301		VORO	01	13	0048	N09 W31	01	10.7			CAI	194	4	9	2
9301		LEAR	01	13	0120	N09 W33	01	10.6		B	CAO	40	4	3	2
9301		TACH	01	13	0618	N09 W32	01	10.9			CAI	75	6	8	3
9301		RAMY	01	13	1232	N07 W40	01	10.5		B	DSO	20	3	3	4
9301		HOLL	01	13	1609	N10 W41	01	10.6		B	CSO	60	4	6	2
9301		LEAR	01	14	0120	N08 W46	01	10.6		B	CSO	20	5	6	4
9301		TACH	01	14	0619	N09 W41	01	11.2			AXX	12	3	1	4
9301		RAMY	01	14	1310	N08 W52	01	10.6		B	CSO	30	3	6	3
9301		HOLL	01	14	1519	N07 W57	01	10.4		A	AXX	10	2	1	2
9301		VORO	01	14	2346	N09 W61	01	10.4			CRO	44	2	5	2
9301		LEAR	01	15	0118	N08 W61	01	10.5		A	AXX	10	2	1	4
9301	30258	MWIL	01	15	1600	N11 W66	01	10.7	4	(B)					
9302	30257	MWIL	01	04	1600	N18 E80	01	10.7	4	AP					

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SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)		Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9302		LEAR	01 05	0115	N18 E75	01 10.8		A	HSX	60	1	2	3
9302		SVTO	01 05	1108	N19 E75	01 11.2		B	DSO	180	4	10	2
9302		KAND	01 05	1330	N19 E72	01 11.0			DSO		2	4	2
9302		HOLL	01 05	1525	N21 E71	01 11.1		B	CSO	120	6	8	2
9302		LEAR	01 06	0030	N19 E63	01 10.8		B	CSO	100	4	7	3
9302		KAND	01 06	0640	N19 E61	01 10.9			DAO		7	8	3
9302		SVTO	01 06	0750	N19 E61	01 11.0		B	EAO	120	8	12	2
9302		RAMY	01 06	1510	N18 E56	01 10.9		B	DSO	50	5	7	3
9302	30257	MWIL	01 06	1600	N19 E56	01 10.9	4	(BG)					
9302		LEAR	01 07	0627	N22 E48	01 10.9		B	CSO	70	4	9	3
9302		KAND	01 07	0845	N19 E46	01 10.9			CSO		4	4	4
9302		RAMY	01 07	1235	N18 E44	01 10.9		B	DSO	70	5	4	4
9302	30257	MWIL	01 07	1600	N18 E41	01 10.8	5	(G)					
9302		HOLL	01 07	1634	N19 E43	01 11.0		B	CSO	110	7	5	2
9302		VORO	01 08	0018	N19 E40	01 11.1			CAI	143	3	6	2
9302		LEAR	01 08	0025	N18 E38	01 10.9		B	DSO	70	6	4	3
9302		KAND	01 08	0825	N19 E32	01 10.8			CSO		4	4	3
9302		SVTO	01 08	1045	N18 E32	01 10.9		B	CSO	60	2	3	2
9302		RAMY	01 08	1159	N18 E31	01 10.8		B	DSO	60	2	3	3
9302		HOLL	01 08	1520	N18 E28	01 10.8		B	CAO	70	3	3	3
9302		LEAR	01 09	0147	N18 E23	01 10.8		B	DSO	60	5	3	3
9302		KAND	01 09	0805	N19 E19	01 10.8			CSO		3	2	3
9302		SVTO	01 09	1040	N18 E19	01 10.9		B	CSO	80	2	3	3
9302		RAMY	01 09	1232	N17 E18	01 10.9		B	CSO	90	2	3	3
9302		LEAR	01 10	0117	N18 E11	01 10.9		B	DSO	60	11	4	3
9302		SVTO	01 10	0810	N17 E07	01 10.9		B	DSO	70	8	5	2
9302		KAND	01 10	0855	N19 E06	01 10.8			CSO		4	3	1
9302		RAMY	01 10	1300	N18 E04	01 10.8		B	DAO	90	6	3	4
9302	30257	MWIL	01 10	1545	N19 E03	01 10.9	5	(BG)					
9302		HOLL	01 10	2105	N19 W01	01 10.8		B	CSO	80	6	3	3
9302		LEAR	01 11	0140	N18 W03	01 10.8		B	CAX	40	5	3	2
9302		TACH	01 11	0605	N19 W05	01 10.9			CAI	174	7	2	3
9302		KAND	01 11	0725	N19 W07	01 10.8			DSO		6	3	3
9302		SVTO	01 11	0950	N19 W07	01 10.9		B	DAO	100	9	4	2
9302		HOLL	01 11	1614	N18 W11	01 10.8		B	CAO	80	8	3	2
9302		VORO	01 12	0008	N19 W16	01 10.8			HAX	183	5	5	3
9302		LEAR	01 12	0030	N19 W14	01 10.9		B	CAO	40	7	3	2
9302		TACH	01 12	0507	N19 W16	01 11.0			CAI	188	8	3	4
9302		KAND	01 12	0740	N19 W20	01 10.8			CSO		5	4	3
9302		SVTO	01 12	0814	N19 W19	01 10.9		B	CAO	60	5	4	2
9302		RAMY	01 12	1258	N19 W22	01 10.9		B	CSO	50	6	2	3
9302		HOLL	01 12	1615	N19 W25	01 10.8		B	CAO	40	6	4	3
9302		VORO	01 13	0048	N19 W30	01 10.7			HAX	127	2	2	2
9302		LEAR	01 13	0120	N19 W28	01 10.9		B	CAO	60	3	3	2
9302		TACH	01 13	0618	N19 W32	01 10.8			HSX	51	2	1	3
9302		RAMY	01 13	1232	N19 W35	01 10.8		B	CAO	50	2	4	4
9302		HOLL	01 13	1609	N20 W39	01 10.7		B	CAO	70	4	3	2
9302		LEAR	01 14	0120	N19 W42	01 10.8		B	CAO	30	4	4	4
9302		TACH	01 14	0619	N19 W45	01 10.8			AXX	6	3	1	4
9302		RAMY	01 14	1310	N20 W50	01 10.7		B	CSO	30	3	3	3
9302		HOLL	01 14	1519	N18 W51	01 10.7		A	AXX	10	2	1	2
9302		VORO	01 14	2346	N19 W52	01 11.0			HRX	48	2	2	2
9302		LEAR	01 15	0118	N19 W57	01 10.7		B	BXO	10	2	2	4
9309		VORO	01 08	0018	N12 E35	01 10.6			DAO	90	2	7	2
9309		VORO	01 10	0037	N11 E10	01 10.8			HAX	41	3	4	4
9309		LEAR	01 11	0140	N09 W02	01 10.9		B	CAX	30	7	2	2
9309		KAND	01 11	0725	N10 W06	01 10.8			DAO		7	9	3
9309		SVTO	01 11	0950	N10 W07	01 10.9		B	DAO	90	11	6	2
9309		HOLL	01 11	1614	N10 W11	01 10.8		B	DAO	90	11	6	2
9309		VORO	01 12	0008	N11 W14	01 10.9			HAX	40	3	3	3
9309		LEAR	01 12	0030	N10 W14	01 11.0		B	DAO	50	11	3	2
9309		KAND	01 12	0740	N10 W20	01 10.8			DAO		7	10	3
9309		SVTO	01 12	0814	N10 W19	01 10.9		B	DSO	100	6	7	2
9309		RAMY	01 12	1258	N10 W21	01 11.0		B	DAO	60	3	4	3
9309		HOLL	01 12	1615	N09 W21	01 11.1		B	CSO	50	8	5	3
9309		VORO	01 13	0048	N11 W18	01 11.7			HAX	55	1	2	2
9309		LEAR	01 13	0120	N10 W26	01 11.1		B	DAO	50	2	1	2
9309		RAMY	01 13	1232	N09 W34	01 11.0		B	CSO	60	2	4	4

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

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9309		HOLL	01 13 1609	N10 W35	01 11.0		A	HSX	50	1	2	2
9309		LEAR	01 14 0120	N09 W39	01 11.1		B	CSO	40	3	2	4
9309		HOLL	01 14 1519	N08 W47	01 11.1		A	HSX	30	2	2	2
9309		VORO	01 14 2346	N11 W53	01 11.0			AXX	20	1	2	2
9309		LEAR	01 15 0118	N09 W52	01 11.1		A	HSX	20	2	1	4
9309		RAMY	01 15 1510	N10 W60	01 11.1		A	HSX	20	1	1	2
9309		HOLL	01 15 1712	N10 W61	01 11.1		A	AXX	20	1	1	2
9309A		KAND	01 05 1330	N24 E73	01 11.2			AX		1		2
9309A		KAND	01 06 0640	N22 E62	01 11.0			AX		1		3
9309A		RAMY	01 06 1510	N23 E57	01 11.0		B	CSO	70	7	7	3
9309A	30261	MWIL	01 06 1600	N25 E56	01 11.0	4	(B)					
9309A		KAND	01 07 0845	N25 E49	01 11.2			BXO		4	2	4
9309A		RAMY	01 07 1235	N23 E46	01 11.1		B	BXO	10	5	2	4
9309A	30261	MWIL	01 07 1600	N24 E45	01 11.1	3	(B)					
9309A		HOLL	01 07 1634	N24 E47	01 11.3		B	BXO	30	2	2	2
9309A		LEAR	01 08 0025	N23 E41	01 11.2		B	BXO	10	3	2	3
9309A		LEAR	01 09 0147	N23 E28	01 11.2		B	BXO	10	4	3	3
9309A		KAND	01 09 0805	N23 E25	01 11.3			AX		3	1	3
9304		KAND	01 06 0640	N11 E76	01 12.0			HA		1	1	3
9304		SVTO	01 06 0750	N12 E76	01 12.0		A	HRX	20	1	1	2
9304		RAMY	01 06 1510	N11 E71	01 12.0		A	HSX	30	2	1	3
9304	30263	MWIL	01 06 1600	N11 E70	01 11.9	4	(BP)					
9304		LEAR	01 07 0627	N12 E65	01 12.2		B	DSO	50	4	8	3
9304		KAND	01 07 0845	N12 E61	01 12.0			CSO		6	7	4
9304		RAMY	01 07 1235	N11 E66	01 12.5		B	FSO	80	8	19	4
9304	30263	MWIL	01 07 1600	N11 E59	01 12.1	4	(B)					
9304		HOLL	01 07 1634	N11 E62	01 12.3		B	CSO	120	9	12	2
9304		LEAR	01 08 0025	N11 E60	01 12.5		B	FSO	50	12	23	3
9304		KAND	01 08 0825	N12 E49	01 12.0			BXO		7	8	3
9304		SVTO	01 08 1045	N11 E48	01 12.0		B	DAO	60	4	10	2
9304		RAMY	01 08 1159	N11 E48	01 12.1		B	CSO	30	5	7	3
9304		HOLL	01 08 1520	N13 E46	01 12.1		B	CAO	40	5	8	3
9304		LEAR	01 09 0147	N12 E40	01 12.1		B	DSO	30	7	8	3
9304		KAND	01 09 0805	N12 E37	01 12.1			DAO		7	10	3
9304		SVTO	01 09 1040	N11 E37	01 12.2		B	DAO	60	7	9	3
9304		RAMY	01 09 1232	N10 E34	01 12.1		B	DAO	50	4	9	3
9304		LEAR	01 10 0117	N10 E27	01 12.1		B	DSO	30	8	10	3
9304		SVTO	01 10 0810	N12 E23	01 12.1		B	ESO	50	3	11	2
9304		KAND	01 10 0855	N12 E21	01 11.9			CSO		12	9	3
9304		RAMY	01 10 1300	N12 E21	01 12.1		B	DSO	50	4	10	4
9304	30263	MWIL	01 10 1545	N13 E19	01 12.1	5	(BP)					
9304		HOLL	01 10 2105	N11 E12	01 11.8		B	CSO	50	3	4	3
9304		LEAR	01 11 0140	N12 E13	01 12.0		B	EAO	40	9	11	2
9304		TACH	01 11 0605	N11 E07	01 11.8			HSX	100	1	1	3
9304		KAND	01 11 0725	N12 E06	01 11.8			HS		2	2	3
9304		SVTO	01 11 0950	N11 E05	01 11.8		A	HAX	30	2	1	2
9304		HOLL	01 11 1614	N12 E02	01 11.8		A	HAX	20	3	2	2
9304		LEAR	01 12 0030	N12 W04	01 11.7		A	HAX	20	4	2	2
9304		TACH	01 12 0507	N11 W06	01 11.8			HSX	53	3	1	4
9304		KAND	01 12 0740	N12 W09	01 11.6			HA		4	2	3
9304		SVTO	01 12 0814	N11 W07	01 11.8		B	CSO	30	3	2	2
9304		RAMY	01 12 1258	N11 W11	01 11.7		B	DAO	40	2	1	3
9304		HOLL	01 12 1615	N11 W12	01 11.8		A	HAX	20	2	1	3
9304		LEAR	01 13 0120	N11 W18	01 11.7		B	CAO	20	3	1	2
9304		TACH	01 13 0618	N12 W20	01 11.7			AXX	40	1	1	3
9304		RAMY	01 13 1232	N11 W24	01 11.7		A	HSX	20	1	1	4
9304		HOLL	01 13 1609	N11 W27	01 11.6		A	HSX	40	1	1	2
9304		LEAR	01 14 0120	N11 W31	01 11.7		A	HSX	30	1	1	4
9304		TACH	01 14 0619	N11 W34	01 11.7			AXX	10	1	1	4
9304		RAMY	01 14 1310	N10 W42	01 11.4		B	CSO	40	8	8	3
9304		HOLL	01 14 1519	N11 W38	01 11.8		A	HSX	20	1	1	2
9304		LEAR	01 15 0118	N12 W44	01 11.7		A	HRX	10	1	1	4
9304		RAMY	01 15 1510	N12 W52	01 11.7		A	AXX	10	1		2
9304		HOLL	01 15 1712	N12 W53	01 11.7		A	AXX	20	1	1	2
9304		LEAR	01 16 0225	N11 W59	01 11.7		A	HSX	20	1	2	2
9304A		TACH	01 18 0505	N15 W77	01 12.4			HSX	100	1	3	2

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(Ordered by Central Meridian Passage Date)

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)		Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual	
9305		RAMY	01	06	1510	S08 E82	01	12.8	A	HRX	20	1	1	3
9305	30262	MWIL	01	06	1600	S07 E78	01	12.5	3	(AP)				
9305		LEAR	01	07	0627	S07 E72	01	12.7	A	AXX	10	1		3
9305		KAND	01	07	0845	S06 E72	01	12.7	A	AX		1	1	4
9305		RAMY	01	07	1235	S08 E70	01	12.8	B	CRO	10	2	2	4
9305	30262	MWIL	01	07	1600	S07 E67	01	12.7	4	(AP)				
9305		HOLL	01	07	1634	S07 E68	01	12.8	A	AXX	30	1	1	2
9305		VORO	01	08	0018	S10 E64	01	12.8	A	DRO	53	2	4	2
9305		LEAR	01	08	0025	S07 E62	01	12.7	A	AXX		1		3
9305		LEAR	01	11	0140	S07 E22	01	12.7	B	BXO	10	2	2	2
9305		KAND	01	11	0725	S07 E19	01	12.7	A	AX		2	2	3
9305		SVTO	01	11	0950	S07 E16	01	12.6	A	AXX		2	1	2
9305		HOLL	01	11	1614	S06 E14	01	12.7	A	AXX	10	2	1	2
9305		LEAR	01	12	0030	S05 E08	01	12.6	A	AXX		2		2
9305		TACH	01	12	0507	S05 E06	01	12.7	A	AXX	5	1	1	4
9305		SVTO	01	12	0814	S07 E03	01	12.6	A	HRX	10	1	1	2
9306	30265	MWIL	01	07	1600	N12 E75	01	13.3	3	(AP)				
9306		KAND	01	08	0825	N12 E65	01	13.2		CRO		8	8	3
9306		SVTO	01	08	1045	N12 E65	01	13.3	B	CSO	70	5	8	2
9306		RAMY	01	08	1159	N11 E63	01	13.2	B	DAI	140	13	10	3
9306		HOLL	01	08	1520	N12 E62	01	13.3	B	EAI	110	15	11	3
9306		VORO	01	08	2340	N11 E59	01	13.4		HAX	64	1		2
9306		LEAR	01	09	0147	N12 E56	01	13.3	BG	DAI	110	14	10	3
9306		KAND	01	09	0805	N12 E51	01	13.2		CAI		16	10	3
9306		SVTO	01	09	1040	N11 E49	01	13.1	B	DAI	60	20	9	3
9306		RAMY	01	09	1232	N10 E48	01	13.1	B	DAI	90	10	10	3
9306		VORO	01	10	0037	N11 E37	01	12.8		DAI	480	18	10	4
9306		LEAR	01	10	0117	N11 E39	01	13.0	BG	EAI	120	16	12	3
9306		SVTO	01	10	0810	N12 E38	01	13.2	B	EAI	130	20	14	2
9306		KAND	01	10	0855	N12 E36	01	13.1		EAC		12	11	1
9306		RAMY	01	10	1300	N10 E36	01	13.2	B	ESI	180	14	13	4
9306	30265	MWIL	01	10	1545	N13 E33	01	13.1	5	(BG)				
9306		HOLL	01	10	2105	N12 E28	01	13.0	BG	EAC	250	25	14	3
9306		LEAR	01	11	0140	N13 E27	01	13.1	BG	EAI	150	29	15	2
9306		TACH	01	11	0605	N12 E23	01	13.0		DAI	322	19	10	3
9306		KAND	01	11	0725	N13 E24	01	13.1		EAC		26	14	3
9306		SVTO	01	11	0950	N12 E22	01	13.1	B	EAO	290	32	14	2
9306		HOLL	01	11	1614	N12 E17	01	12.9	BG	EAI	220	40	14	2
9306		VORO	01	12	0008	N11 E14	01	13.0		DAI	449	56	12	3
9306		LEAR	01	12	0030	N12 E14	01	13.1	BG	EAI	250	40	13	2
9306		TACH	01	12	0507	N13 E13	01	13.2		DAI	548	52	15	4
9306		KAND	01	12	0740	N13 E10	01	13.1		FSI		30	17	3
9306		SVTO	01	12	0814	N12 E09	01	13.0	BG	FAI	310	27	16	2
9306		RAMY	01	12	1258	N12 E07	01	13.1	BG	EAI	370	49	15	3
9306		HOLL	01	12	1615	N11 E05	01	13.0	BG	FAI	360	54	17	3
9306		VORO	01	13	0048	N11 W01	01	12.9		EAI	649	29	13	2
9306		LEAR	01	13	0120	N13 E01	01	13.1	BG	EKI	350	39	15	2
9306		TACH	01	13	0618	N13 W06	01	12.8		DAI	704	27	13	3
9306		RAMY	01	13	1232	N13 W08	01	12.9	BG	FAI	400	37	17	4
9306		HOLL	01	13	1609	N12 W08	01	13.1	BG	FAC	530	54	18	2
9306		LEAR	01	14	0120	N12 W12	01	13.1	BG	FAC	600	80	17	4
9306		TACH	01	14	0619	N12 W16	01	13.0		DAI	534	35	11	4
9306		RAMY	01	14	1310	N12 W20	01	13.0	BG	FAC	410	46	17	3
9306		HOLL	01	14	1519	N12 W22	01	13.0	BG	FKC	460	40	17	2
9306		VORO	01	14	2346	N11 W22	01	13.3		EAI	740	32	11	2
9306		LEAR	01	15	0118	N12 W26	01	13.1	BG	FAC	450	58	16	4
9306		RAMY	01	15	1510	N13 W35	01	13.0	BG	EAI	510	25	15	2
9306	30265	MWIL	01	15	1600	N12 W35	01	13.0	5	(BG)				
9306		HOLL	01	15	1712	N12 W35	01	13.1	BG	FKC	440	29	17	2
9306		VORO	01	16	0036	N12 W42	01	12.9		EAI	457	13	14	3
9306		LEAR	01	16	0225	N13 W42	01	12.9	BG	FKI	380	36	18	2
9306		HOLL	01	16	1640	N10 W49	01	13.0	BG	FKC	300	22	18	3
9306		LEAR	01	17	0100	N12 W51	01	13.2	BG	EAI	150	23	15	2
9306		SVTO	01	17	0800	N14 W57	01	13.0	BG	FAI	140	17	19	2
9306		TACH	01	17	0818	N12 W58	01	13.0		CAI	212	9	16	3
9306	30265	MWIL	01	17	1600	N12 W61	01	13.1	4	(BP)				
9306		RAMY	01	17	1700	N13 W67	01	12.6	BG	FAO	110	11	17	2
9306		SVTO	01	18	1007	N14 W79	01	12.4	B	CSO	120	2	5	2

S U N S P O T G R O U P S
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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9306		RAMY	01 18 1500	N12 W84	01 12.3		A	HSX	60	1	3	3
9306	30265	MWIL	01 18 1600	N11 W80	01 12.6	4	AP					
9306A		LEAR	01 19 0130	N07 W61	01 14.5		A	AXX	10	1		2
9306A	30271	MWIL	01 19 1600	N07 W67	01 14.6	4	B					
9306A		HOLL	01 19 1612	N08 W68	01 14.6		B	BXO	30	2	2	4
9308A	30272	MWIL	01 19 1600	S28 W65	01 14.6	3	AP					
9308		KAND	01 09 0805	N15 E74	01 14.9			AX		1	1	3
9308		SVTO	01 09 1040	N14 E71	01 14.8		A	AXX	10	1	1	3
9308		VORO	01 10 0037	N14 E68	01 15.2			AXX	15	1		4
9308		LEAR	01 10 0117	N14 E65	01 15.0		B	BXX		2	5	3
9308		SVTO	01 10 0810	N14 E58	01 14.7		B	CAO	10	2	2	2
9308		KAND	01 10 0855	N14 E58	01 14.7			AX		1	1	1
9308		RAMY	01 10 1300	N12 E57	01 14.8		B	CSO	20	2	7	4
9308	30266	MWIL	01 10 1545	N14 E55	01 14.8	4	(BP)					
9308		HOLL	01 10 2105	N16 E53	01 14.9		B	CSO	60	4	8	3
9308		LEAR	01 11 0140	N15 E51	01 14.9		B	BXO	20	5	9	2
9308		TACH	01 11 0605	N15 E48	01 14.9			BRO	13	4	4	3
9308		KAND	01 11 0725	N16 E48	01 14.9			CSO		9	9	3
9308		SVTO	01 11 0950	N13 E46	01 14.9		B	DSO	80	12	8	2
9308		HOLL	01 11 1614	N14 E43	01 14.9		B	DAO	70	10	9	2
9308		VORO	01 12 0008	N15 E38	01 14.9			DAI	150	17	8	3
9308		LEAR	01 12 0030	N16 E37	01 14.8		BGD	DAO	70	11	6	2
9308		TACH	01 12 0507	N15 E36	01 14.9			CAI	147	13	6	4
9308		KAND	01 12 0740	N16 E34	01 14.9			CSO		9	9	3
9308		SVTO	01 12 0814	N13 E34	01 14.9		B	DAO	100	12	8	2
9308		RAMY	01 12 1258	N15 E31	01 14.9		B	DSO	90	17	8	3
9308		HOLL	01 12 1615	N13 E28	01 14.8		B	DAO	140	17	9	3
9308		VORO	01 13 0048	N15 E23	01 14.8			DAO	300	3	5	2
9308		LEAR	01 13 0120	N17 E25	01 14.9		B	DAO	150	12	8	2
9308		TACH	01 13 0618	N15 E19	01 14.7			DAI	233	8	5	3
9308		RAMY	01 13 1232	N15 E18	01 14.9		B	DSO	210	11	9	4
9308		HOLL	01 13 1609	N15 E15	01 14.8		B	DAI	130	8	8	2
9308		LEAR	01 14 0120	N15 E11	01 14.9		B	DAO	220	12	9	4
9308		TACH	01 14 0619	N15 E07	01 14.8			DAI	300	4	5	4
9308		RAMY	01 14 1310	N15 E04	01 14.8		B	DAO	180	18	9	3
9308		HOLL	01 14 1519	N14 E03	01 14.9		B	DAO	170	14	8	2
9308		VORO	01 14 2346	N15 E01	01 15.1			DAI	467	4	6	2
9308		LEAR	01 15 0118	N15 W03	01 14.8		B	DAI	160	25	8	4
9308		RAMY	01 15 1510	N14 W10	01 14.9		B	EAO	250	13	11	2
9308	30266	MWIL	01 15 1600	N15 W12	01 14.7	5	(BP)					
9308		HOLL	01 15 1712	N16 W11	01 14.9		B	DAO	190	14	9	2
9308		VORO	01 16 0036	N15 W18	01 14.7			CAI	166	7	6	3
9308		LEAR	01 16 0225	N15 W15	01 15.0		B	DAO	110	17	9	2
9308		HOLL	01 16 1640	N14 W25	01 14.8		B	DAO	100	16	9	3
9308		LEAR	01 17 0100	N15 W28	01 14.9		B	DAO	70	8	8	2
9308		SVTO	01 17 0800	N17 W32	01 14.9		B	DAO	110	7	8	2
9308		TACH	01 17 0818	N15 W32	01 14.9			CAO	107	4	5	3
9308	30266	MWIL	01 17 1600	N15 W39	01 14.7	4	(AP)					
9308		RAMY	01 17 1700	N17 W40	01 14.7		B	DSO	70	7	3	2
9308		TACH	01 18 0505	N15 W46	01 14.7			AR	41	3	2	2
9308		SVTO	01 18 1007	N18 W47	01 14.8		B	CSO	30	4	3	2
9308		RAMY	01 18 1500	N15 W52	01 14.7		B	CSO	20	4	4	3
9308	30266	MWIL	01 18 1600	N15 W53	01 14.6	4	(AP)					
9308		HOLL	01 18 2000	N15 W55	01 14.7		B	CAO	50	6	5	2
9308		VORO	01 19 0002	N15 W60	01 14.4			HRX	51	1		2
9308		LEAR	01 19 0130	N17 W56	01 14.8		B	CRO	20	2	1	2
9308		RAMY	01 19 1304	N19 W65	01 14.6		B	CSO	30	2	5	3
9308	30266	MWIL	01 19 1600	N15 W66	01 14.7	4	AP					
9308		HOLL	01 19 1612	N17 W67	01 14.6		B	CSO	70	3	3	4
9308		VORO	01 20 0011	N16 W72	01 14.5			HRX	63	1		2
9308		RAMY	01 20 1217	N18 W70	01 15.2		A	AXX	10	1	1	4
9308	30266	MWIL	01 20 1600	N16 W72	01 15.2	3	(B)					
9308		HOLL	01 20 1932	N16 W75	01 15.1		B	BXO	10	3	11	3
9314		RAMY	01 18 1500	N16 W40	01 15.6		A	AXX		1		3
9314		HOLL	01 18 2000	N14 W42	01 15.6		B	BXO	10	4	3	2

SUNSPOT GROUPS
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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9314		LEAR	01 19 0130	N17 W46	01 15.6		B	BXO	10	3	2	2
9314A		HOLL	01 13 1609	S19 E43	01 16.9		A	AXX	10	1	1	2
9314B	30276	MWIL	01 20 1600	S33 W37	01 17.7	3	(AF)					
9314B	30276	MWIL	01 21 1600	S33 W47	01 17.9	3	(AP)					
9314B		LEAR	01 22 0136	S32 W52	01 17.9		B	BXO		2	3	4
9314B		KAND	01 22 1115	S33 W56	01 18.0			AX		1	1	2
9314B		RAMY	01 22 1200	S32 W58	01 17.9		A	AXX	10	1		4
9319		RAMY	01 21 1243	S20 W37	01 18.7		B	BXO	30	5	3	4
9319		HOLL	01 21 1550	S20 W39	01 18.7		B	CSO	20	5	4	2
9319	30278	MWIL	01 21 1600	S19 W38	01 18.8	4	(B)					
9319		LEAR	01 22 0136	S18 W44	01 18.7		B	DRO	30	5	7	4
9319		KAND	01 22 1115	S20 W49	01 18.7			BXO		5	7	2
9319		RAMY	01 22 1200	S18 W50	01 18.7		B	BXO	30	8	5	4
9319	30278	MWIL	01 22 1700	S19 W53	01 18.7	4	(B)					
9319		LEAR	01 23 0021	S18 W55	01 18.8		B	DAO	60	9	7	3
9319		TACH	01 23 0859	S19 W65	01 18.4			AR	22	3	2	2
9319		SVTO	01 23 1015	S15 W63	01 18.6		B	CRO	20	3	7	2
9319		RAMY	01 23 1300	S18 W64	01 18.7		B	BXO	10	5	9	3
9319	30278	MWIL	01 23 1545	S19 W68	01 18.5	4	(BP)					
9319		HOLL	01 23 1735	S19 W68	01 18.5		B	BXO	10	2	4	2
9319		LEAR	01 24 0035	S19 W72	01 18.5		A	AXX		1		2
9319		RAMY	01 24 1300	S18 W85	01 18.1		A	AXX	10	1	1	4
9310		LEAR	01 14 0120	N26 E64	01 19.0		B	CSO	30	2	2	4
9310		TACH	01 14 0619	N25 E61	01 19.0			AXX	1	1	1	4
9310		RAMY	01 14 1310	N26 E58	01 19.0		B	CSO	30	2	2	3
9310		HOLL	01 14 1519	N24 E56	01 19.0		A	AXX	10	1	1	2
9310		LEAR	01 15 0118	N26 E49	01 18.9		A	HRX	20	1	1	4
9310		RAMY	01 15 1510	N26 E41	01 18.8		A	AXX	10	1		2
9310	30267	MWIL	01 15 1600	N26 E42	01 18.9	4	(AP)					
9310		LEAR	01 16 0225	N26 E33	01 18.7		A	AXX		1		2
9310		RAMY	01 19 1304	N27 W10	01 18.8		B	BXO	10	4	2	3
9310	30273	MWIL	01 19 1600	N27 W12	01 18.7	3	(AP)					
9310		HOLL	01 19 1612	N27 W11	01 18.8		A	AXX	10	2	1	4
9319A		HOLL	01 13 1609	N04 E69	01 18.8		A	AXX	30	1	1	2
9311		LEAR	01 15 0118	N03 E65	01 19.9		A	AXX		1		4
9311		RAMY	01 15 1510	N04 E56	01 19.8		B	CAO	30	4	3	2
9311	30268	MWIL	01 15 1600	N05 E55	01 19.8	4	(B)					
9311		HOLL	01 15 1712	N05 E56	01 19.9		B	CSO	60	4	2	2
9311		VORO	01 16 0036	N05 E45	01 19.4			HRX	48	2		3
9311		LEAR	01 16 0225	N05 E47	01 19.6		A	HSX	10	1	1	2
9311		HOLL	01 16 1640	N03 E40	01 19.7		B	CSO	50	7	5	3
9311		LEAR	01 17 0100	N03 E36	01 19.7		B	DSO	40	4	4	2
9311		SVTO	01 17 0800	N04 E34	01 19.9		B	DAO	50	6	6	2
9311		TACH	01 17 0818	N05 E32	01 19.7			CAO	46	2	4	3
9311	30268	MWIL	01 17 1600	N05 E28	01 19.8	4	(BP)					
9311		RAMY	01 17 1700	N05 E28	01 19.8		B	DSO	40	9	6	2
9311		TACH	01 18 0505	N05 E20	01 19.7			BRO	28	4	6	2
9311		SVTO	01 18 1007	N04 E19	01 19.8		B	DAO	60	7	7	2
9311		RAMY	01 18 1500	N04 E15	01 19.7		B	DSO	50	19	8	3
9311	30268	MWIL	01 18 1600	N04 E15	01 19.8	4	(B)					
9311		HOLL	01 18 2000	N03 E11	01 19.6		B	DAO	70	21	9	2
9311		VORO	01 19 0002	N05 E06	01 19.4			CRI	70	5	7	2
9311		LEAR	01 19 0130	N05 E09	01 19.7		B	DAO	70	14	8	2
9311		RAMY	01 19 1304	N04 E02	01 19.7		B	DSO	60	12	8	3
9311	30268	MWIL	01 19 1600	N04 W01	01 19.6	5	(BP)					
9311		HOLL	01 19 1612	N04 E00	01 19.7		B	DSO	90	9	10	4
9311		VORO	01 20 0011	N04 W10	01 19.3			HAX	80	3		2
9311		RAMY	01 20 1217	N05 W15	01 19.4		B	CSO	60	4	7	4
9311	30268	MWIL	01 20 1600	N05 W18	01 19.3	4	(BG)					
9311		HOLL	01 20 1932	N04 W16	01 19.6		B	CSO	50	4	13	3
9311		LEAR	01 21 0152	N05 W23	01 19.3		B	CSO	40	4	7	3
9311		RAMY	01 21 1243	N05 W30	01 19.3		B	CSO	40	7	9	4
9311		HOLL	01 21 1550	N04 W33	01 19.2		B	DAO	90	8	8	2

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9311	30268	MWIL	01 21 1600	N05 W30	01 19.4	5	(BG)					
9311		VORO	01 22 0010	N04 W35	01 19.4			DSO	105	11	10	2
9311		LEAR	01 22 0136	N04 W36	01 19.4		B	DSO	80	7	10	4
9311		KAND	01 22 1115	N04 W43	01 19.2			DSO		6	10	2
9311		RAMY	01 22 1200	N06 W43	01 19.3		B	DSO	110	7	8	4
9311	30268	MWIL	01 22 1700	N05 W46	01 19.3	5	(BP)					
9311		LEAR	01 23 0021	N05 W48	01 19.4		B	DAO	100	8	10	3
9311		TACH	01 23 0859	N04 W54	01 19.3			DSI	193	7	10	2
9311		SVTO	01 23 1015	N09 W55	01 19.3		B	EAO	120	11	11	2
9311		RAMY	01 23 1300	N06 W57	01 19.3		B	DSO	170	12	10	3
9311	30268	MWIL	01 23 1545	N04 W57	01 19.4	5	(D)					
9311		HOLL	01 23 1735	N04 W60	01 19.2		B	DAO	190	14	10	2
9311		VORO	01 23 2358	N04 W63	01 19.3			DSO	163	12	10	2
9311		LEAR	01 24 0035	N05 W64	01 19.2		B	DAO	130	11	6	2
9311		KAND	01 24 0805	N03 W67	01 19.3			ESO		4	13	3
9311		SVTO	01 24 0905	N09 W67	01 19.3		B	EAO	360	11	13	3
9311		RAMY	01 24 1300	N05 W72	01 19.1		B	ESO	170	8	12	4
9311		HOLL	01 24 1725	N04 W71	01 19.4		BG	EAI	260	4	14	2
9311		TACH	01 25 0630	N03 W74	01 19.7			HSX	30	1	2	2
9311		KAND	01 25 0740	N04 W76	01 19.6			HS		1	2	2
9311		SVTO	01 25 0920	N04 W78	01 19.5		B	CAO	60	2	2	2
9311		RAMY	01 25 1300	N06 W81	01 19.5		A	HSX	60	2	1	4
9311		HOLL	01 25 1545	N04 W79	01 19.7		A	HSX	60	1	2	1
9311		VORO	01 25 2347	N04 W78	01 20.2			DSO	425	5	12	3
9311B		VORO	01 19 0002	S17 E13	01 20.0			HRX	30	1		2
9311A		HOLL	01 21 1550	N15 W09	01 21.0		A	AXX		1		2
9311A	30279	MWIL	01 21 1600	N16 W08	01 21.0	3	(AP)					
9318		VORO	01 16 0036	S05 E66	01 21.0			AXX	5	1		3
9318		HOLL	01 16 1640	S05 E62	01 21.3		A	AXX	10	2	2	3
9318		LEAR	01 17 0100	S05 E56	01 21.2		A	AXX		1		2
9318		SVTO	01 17 0800	S06 E52	01 21.2		A	AXX	10	1	1	2
9318		SVTO	01 17 0800	S09 E56	01 21.5		A	AXX	10	1	1	2
9318		RAMY	01 20 1217	S05 E11	01 21.3		B	DSO	20	2	3	4
9318	30277	MWIL	01 20 1600	S04 E09	01 21.3	4	(B)					
9318		HOLL	01 20 1932	S04 E07	01 21.3		B	CAO	20	3	4	3
9318		LEAR	01 21 0152	S04 E03	01 21.3		B	BXO	10	6	4	3
9312	30269	MWIL	01 15 1600	N09 E79	01 21.6	4	(AP)					
9312		VORO	01 16 0036	N09 E70	01 21.3			HRX	33	1		3
9312		LEAR	01 16 0225	N09 E69	01 21.3		A	HAX	20	1	1	2
9312		HOLL	01 16 1640	N08 E65	01 21.6		A	HSX	80	2	2	3
9312		LEAR	01 17 0100	N08 E59	01 21.5		A	HSX	20	1	1	2
9312		SVTO	01 17 0800	N07 E56	01 21.5		A	HAX	30	1	2	2
9312		TACH	01 17 0818	N09 E55	01 21.5			AXX	5	1	1	3
9312	30269	MWIL	01 17 1600	N10 E52	01 21.6	4	(AP)					
9312		RAMY	01 17 1700	N09 E50	01 21.5		A	HSX	20	1	1	2
9312		TACH	01 18 0505	N09 E43	01 21.4			AXX	15	1	1	2
9312		SVTO	01 18 1007	N07 E44	01 21.7		A	HSX	10	1	1	2
9312		RAMY	01 18 1500	N09 E39	01 21.5		A	HSX	20	2	1	3
9312	30269	MWIL	01 18 1600	N09 E38	01 21.5	4	(AP)					
9312		HOLL	01 18 2000	N08 E37	01 21.6		A	HSX	20	2	1	2
9312		LEAR	01 19 0130	N09 E34	01 21.6		B	BXO	20	3	30	2
9312		RAMY	01 19 1304	N09 E27	01 21.6		A	HSX	10	1	1	3
9312	30269	MWIL	01 19 1600	N09 E26	01 21.6	4	AP					
9312		HOLL	01 19 1612	N08 E26	01 21.6		B	BXO	20	2	5	4
9312	30269	MWIL	01 20 1600	N06 E13	01 21.6	3	(AF)					
9312		HOLL	01 20 1932	N06 E09	01 21.5		B	BXO	10	3	4	3
9320		LEAR	01 21 0152	S24 E14	01 22.1		B	CRO	10	3	3	3
9320		RAMY	01 21 1243	S25 E06	01 22.0		B	CSO	20	2	3	4
9320		HOLL	01 21 1550	S25 E05	01 22.0		B	CSO	40	4	3	2
9320	30281	MWIL	01 21 1600	S23 E06	01 22.1	4	(BP)					
9320		LEAR	01 22 0136	S23 E01	01 22.1		B	DRO	20	2	2	4
9320		KAND	01 22 1115	S23 W03	01 22.2			CSO		2	4	2
9320		RAMY	01 22 1200	S24 W06	01 22.0		B	DSO	20	2	3	4
9320	30281	MWIL	01 22 1700	S23 W08	01 22.1	4	(BG)					

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

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9320		LEAR	01 23 0021	S23 W12	01 22.1		B	BXO	10	3	4	3
9320		TACH	01 23 0859	S24 W16	01 22.1			BSO	15	2	3	2
9320		SVTO	01 23 1015	S22 W19	01 22.0		B	CAO	20	2	4	2
9320		RAMY	01 23 1300	S22 W20	01 22.0		B	CRO		2	3	3
9320	30281	MWIL	01 23 1545	S24 W20	01 22.1	4	(BP)					
9320		HOLL	01 23 1735	S24 W22	01 22.0		B	BXO	10	3	4	2
9320		LEAR	01 24 0035	S23 W25	01 22.1		B	BXO		2	4	2
9320		SVTO	01 24 0905	S22 W33	01 21.8		B	BXO	10	4	2	3
9320		RAMY	01 24 1300	S23 W33	01 22.0		B	BXO	50	4	3	4
9320		HOLL	01 25 1545	S24 W47	01 22.0		A	AXX	10	1		1
9320		LEAR	01 26 0220	S25 W50	01 22.2		A	AXX		1		3
9320A		HOLL	01 21 1550	N08 E07	01 22.2		B	BXO	10	3	4	2
9320A	30280	MWIL	01 21 1600	N10 E08	01 22.3	3	(B)					
9315A		HOLL	01 18 2000	S29 E59	01 23.4		A	AXX		1		2
9315A		RAMY	01 19 1304	S29 E49	01 23.4		B	CSO	10	2	4	3
9315A	30274	MWIL	01 19 1600	S29 E48	01 23.4	3	(B)					
9315A		HOLL	01 19 1612	S28 E49	01 23.5		B	CSO	40	2	8	4
9315A	30274	MWIL	01 20 1600	S28 E32	01 23.2	3	(AP)					
9315A		LEAR	01 23 0021	S28 E04	01 23.3		A	AXX		1		3
9322		LEAR	01 23 0021	S23 E14	01 24.1		A	AXX		1		3
9322		SVTO	01 23 1015	S24 E06	01 23.9		B	CAO	30	3	3	2
9322		RAMY	01 23 1300	S22 E04	01 23.8		B	BXO	10	6	4	3
9322	30283	MWIL	01 23 1545	S22 E03	01 23.9	4	(BG)					
9322		HOLL	01 23 1735	S22 E03	01 24.0		B	BXO	10	8	5	2
9322		VORO	01 24 0006	S23 W03	01 23.8			AXX	24	4		3
9322		LEAR	01 24 0035	S23 W02	01 23.9		B	BXO	10	9	6	2
9322		KAND	01 24 0805	S22 W07	01 23.8			CSO		4	4	3
9322		SVTO	01 24 0905	S22 W09	01 23.7		B	DAO	40	8	5	3
9322		RAMY	01 24 1300	S21 W11	01 23.7		B	CRO	10	6	6	4
9322		HOLL	01 24 1725	S22 W12	01 23.8		B	CAO	40	4	5	2
9322		VORO	01 25 0011	S22 W19	01 23.5			AXX	53	6		3
9322		TACH	01 25 0630	S22 W21	01 23.6			AR	20	2	1	2
9322		KAND	01 25 0740	S21 W22	01 23.6			HS		2	3	2
9322		SVTO	01 25 0920	S23 W24	01 23.5		B	CRO	20	2	2	2
9322		RAMY	01 25 1300	S21 W26	01 23.5		A	HSX	40	4	3	4
9322		HOLL	01 25 1545	S22 W26	01 23.6		B	CAO	50	7	5	1
9322		VORO	01 25 2351	S22 W33	01 23.4			HRX	95	4		3
9322		LEAR	01 26 0220	S22 W31	01 23.7		B	CAO	60	6	6	3
9322		SVTO	01 26 0828	S23 W36	01 23.6		B	DAO	20	4	4	2
9322		KAND	01 26 0900	S22 W35	01 23.7			CAO		4	5	4
9322		RAMY	01 26 1250	S21 W38	01 23.6		B	CSO	20	3	4	3
9322		HOLL	01 26 1625	S22 W41	01 23.5		B	CSO	40	6	6	3
9322		LEAR	01 27 0115	S22 W43	01 23.7		B	DSO	40	8	7	3
9322		SVTO	01 27 0815	S23 W46	01 23.8		B	DAO	50	3	4	2
9322		KAND	01 27 0940	S23 W49	01 23.6			BXO		5	6	3
9322		RAMY	01 27 1450	S21 W53	01 23.5		B	D O	50	2	6	2
9322		LEAR	01 28 0053	S22 W57	01 23.6		B	DSO	30	3	6	3
9322		VORO	01 28 0415	S22 W59	01 23.6			CRO	50	3	5	3
9322		TACH	01 28 0614	S22 W57	01 23.9			AXX	10	1	1	3
9322		RAMY	01 28 1432	S21 W62	01 23.8		A	AXX	10	1	1	3
9322		VORO	01 28 2332	S23 W63	01 24.1			AXX	12	1		3
9322		LEAR	01 29 0045	S22 W68	01 23.8		B	CSO	20	2	2	3
9322		KAND	01 29 0740	S24 W73	01 23.7			AX		2	1	3
9322	30283	MWIL	01 29 1615	S23 W75	01 23.9	4	(AP)					
9322		HOLL	01 29 1758	S23 W77	01 23.8		A	AXX	10	1	1	3
9313		SVTO	01 18 1007	S08 E80	01 24.4		A	HAX	60	1	4	2
9313		RAMY	01 18 1500	S08 E75	01 24.2		B	DSO	130	18	10	3
9313	30270	MWIL	01 18 1600	S06 E73	01 24.1	4	(AP)					
9313		HOLL	01 18 2000	S07 E75	01 24.4		B	DAO	150	9	10	2
9313		LEAR	01 19 0130	S06 E64	01 23.8		B	DAO	160	9	5	2
9313		VORO	01 19 0438	S05 E70	01 24.4			HAX	186	1		2
9313		RAMY	01 19 1304	S08 E60	01 24.0		B	EAO	100	17	11	3
9313	30270	MWIL	01 19 1600	S06 E60	01 24.1	5	(D)					
9313		HOLL	01 19 1612	S07 E60	01 24.2		B	EAI	280	18	11	4
9313		VORO	01 20 0040	S05 E55	01 24.1			DSO	250	7	7	3

SUNSPOT GROUPS
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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9313		RAMY	01 20	1217	S07	E47	01 24.0		B	EAO	210	11	11	4
9313	30270	MWIL	01 20	1600	S06	E46	01 24.1	5	(D)					
9313		HOLL	01 20	1932	S06	E44	01 24.1		B	EAO	230	19	13	3
9313		VORO	01 20	2351	S06	E41	01 24.1			DSO	227	12	7	3
9313		LEAR	01 21	0152	S07	E41	01 24.1		B	EAO	120	13	11	3
9313		RAMY	01 21	1243	S07	E34	01 24.1		B	DAO	180	8	9	4
9313		HOLL	01 21	1550	S07	E31	01 24.0		B	DAO	190	15	10	2
9313	30270	MWIL	01 21	1600	S06	E33	01 24.1	5	(D)					
9313		VORO	01 21	2333	S06	E29	01 24.1			DSO	421	39	8	3
9313		LEAR	01 22	0136	S07	E27	01 24.1		B	EAI	150	21	12	4
9313		KAND	01 22	1115	S05	E20	01 24.0			EAI		19	12	2
9313		RAMY	01 22	1200	S07	E20	01 24.0		B	EAI	220	16	11	4
9313	30270	MWIL	01 22	1700	S06	E18	01 24.0	5	(D)					
9313		VORO	01 22	2346	S06	E13	01 24.0			DSO	186	30	10	3
9313		LEAR	01 23	0021	S07	E14	01 24.1		BG	EAO	110	25	11	3
9313		TACH	01 23	0859	S07	E07	01 23.9			CAI	304	14	10	2
9313		SVTO	01 23	1015	S06	E07	01 23.9		BG	EAO	80	16	12	2
9313		RAMY	01 23	1300	S06	E06	01 24.0		B	CAO	100	19	11	3
9313	30270	MWIL	01 23	1545	S06	E06	01 24.1	5	(BG)					
9313		HOLL	01 23	1735	S06	E04	01 24.0		B	CAO	100	17	12	2
9313		VORO	01 24	0006	S07	E02	01 24.1			DSO	143	21	11	3
9313		LEAR	01 24	0035	S07	E01	01 24.1		BG	DAO	110	16	9	2
9313		KAND	01 24	0805	S07	W04	01 24.0			DSO		11	10	3
9313		SVTO	01 24	0905	S07	W04	01 24.1		BG	EAI	90	43	13	3
9313		RAMY	01 24	1300	S07	W07	01 24.0		B	DAI	150	36	10	4
9313		HOLL	01 24	1725	S08	W08	01 24.1		BG	DAC	150	33	10	2
9313		VORO	01 25	0011	S06	W14	01 23.9			DHO	301	36	9	3
9313		TACH	01 25	0630	S04	W12	01 24.4			HR	43	4	3	2
9313		TACH	01 25	0630	S09	W19	01 23.8			BRI	112	9	8	2
9313		KAND	01 25	0740	S05	W17	01 24.0			EAO		14	12	2
9313		SVTO	01 25	0920	S08	W19	01 24.0		BG	EAI	120	20	15	2
9313		RAMY	01 25	1300	S07	W21	01 24.0		BG	EAI	130	32	14	4
9313		HOLL	01 25	1545	S07	W23	01 23.9		BG	EAI	120	23	13	1
9313		VORO	01 25	2351	S07	W28	01 23.9			DHO	169	21	12	3
9313		LEAR	01 26	0220	S08	W27	01 24.1		BG	EAI	200	28	14	3
9313		SVTO	01 26	0828	S07	W33	01 23.9		B	EAI	110	10	14	2
9313		KAND	01 26	0900	S06	W31	01 24.0			EAO		19	13	4
9313		RAMY	01 26	1250	S06	W35	01 23.9		B	ESO	110	10	11	3
9313		HOLL	01 26	1625	S07	W37	01 23.9		B	ESO	120	28	13	3
9313		LEAR	01 27	0115	S06	W39	01 24.1		BG	DAI	150	18	10	3
9313		SVTO	01 27	0815	S06	W45	01 24.0		BG	EAI	110	15	11	2
9313		KAND	01 27	0940	S06	W45	01 24.0			CAO		10	7	3
9313		RAMY	01 27	1450	S04	W47	01 24.1		B	DSO	90	5	7	2
9313		LEAR	01 28	0053	S05	W53	01 24.1		B	CSO	30	7	9	3
9313		VORO	01 28	0415	S05	W56	01 24.0			CRO	42	3	5	3
9313		TACH	01 28	0614	S04	W54	01 24.2			AXX	20	1	1	3
9313		RAMY	01 28	1432	S03	W59	01 24.2		A	HSX	20	1	1	3
9313		VORO	01 28	2332	S05	W63	01 24.3			AXX	17	1		3
9313		LEAR	01 29	0045	S04	W65	01 24.2		B	DSO	30	2	2	3
9313		KAND	01 29	0740	S06	W68	01 24.2			AX		2	2	3
9313	30270	MWIL	01 29	1615	S04	W73	01 24.2	4	(AF)					
9313		HOLL	01 29	1758	S05	W78	01 23.9		B	BXO		3	7	3
9323		TACH	01 23	0859	S26	E10	01 24.1			BRO	65	3	7	2
9323		SVTO	01 23	1015	S30	E09	01 24.1		A	AXX		1		2
9323		RAMY	01 23	1300	S28	E08	01 24.2		B	BXO		2	2	3
9323	30284	MWIL	01 23	1545	S29	E09	01 24.4	4	(BF)					
9323		HOLL	01 23	1735	S28	E08	01 24.3		B	BXO	10	2	1	2
9323		LEAR	01 24	0035	S27	E03	01 24.2		B	DRO	10	2	3	2
9323		KAND	01 24	0805	S28	W03	01 24.1			DSO		2	4	3
9323		SVTO	01 24	0905	S28	W03	01 24.1		B	DAO	30	5	5	3
9323		RAMY	01 24	1300	S28	W04	01 24.2		B	CRO	10	5	5	4
9323		HOLL	01 24	1725	S27	W07	01 24.2		B	DSO	40	2	5	2
9323		TACH	01 25	0530	S28	W12	01 24.3			BSO	18	2	5	2
9323		KAND	01 25	0740	S27	W14	01 24.2			DSO		2	5	2
9323		SVTO	01 25	0920	S29	W15	01 24.2		B	CRO	20	2	5	2
9323		RAMY	01 25	1300	S29	W18	01 24.1		B	CRO	10	4	5	4
9323		HOLL	01 25	1545	S28	W18	01 24.2		B	BXO	20	2	5	1
9323		LEAR	01 26	0220	S29	W23	01 24.3		B	CRO	20	4	6	3

SUNSPOT GROUPS
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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)		Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9326		RAMY	01	26	1250	N26 W21	01	24.9		A	AXX		1		3
9326		HOLL	01	26	1625	N27 W23	01	24.9		B	CSO	20	3	4	3
9326		LEAR	01	27	0115	N27 W27	01	24.9		B	DSO	40	4	5	3
9326		SVTO	01	27	0815	N27 W33	01	24.8		B	DAO	60	6	7	2
9326		KAND	01	27	0940	N25 W31	01	25.0			BXO		8	5	3
9326		RAMY	01	27	1450	N28 W35	01	24.9		B	DSO	40	4	6	2
9326		LEAR	01	28	0053	N27 W40	01	24.9		B	DSO	40	4	8	3
9326		VORO	01	28	0415	N27 W43	01	24.8			BXO	26	3	4	3
9326		TACH	01	28	0614	N27 W42	01	25.0			BRO	21	2	4	3
9326		RAMY	01	28	1432	N29 W49	01	24.8		B	CSO	40	2	3	3
9326		VORO	01	28	2332	N25 W56	01	24.6			AXX	15	1		3
9326		LEAR	01	29	0045	N26 W56	01	24.7		B	CSO	20	2	1	3
9326		KAND	01	29	0740	N24 W59	01	24.8			AX		2	1	3
9326	30288	MWIL	01	29	1615	N25 W64	01	24.7	4	(AP)			2		
9326		HOLL	01	29	1758	N26 W65	01	24.7		A	AXX	10	2	1	3
9328		RAMY	01	23	1300	N06 E16	01	24.7		B	BXO		3	2	3
9328	30285	MWIL	01	23	1545	N06 E15	01	24.8	4	(BP)			3	3	2
9328		HOLL	01	23	1735	N06 E14	01	24.8		B	BXO	10	2	4	2
9328		LEAR	01	24	0035	N06 E09	01	24.7		B	BXO	10	2	5	3
9328		KAND	01	24	0805	N06 E04	01	24.6			BXO		2	5	3
9328		SVTO	01	24	0905	N06 E06	01	24.8		B	BXO	10	2	5	3
9328		RAMY	01	24	1300	N07 E04	01	24.8		A	AXX		1		4
9328		HOLL	01	24	1725	N06 E02	01	24.9		A	AXX	10	2	2	2
9328		LEAR	01	28	0053	N05 W45	01	24.7		B	DAO	30	4	4	3
9328		VORO	01	28	0415	N04 W48	01	24.6			CRO	39	2	4	3
9328		TACH	01	28	0614	N05 W48	01	24.7			BSO	20	2	3	3
9328		RAMY	01	28	1432	N06 W55	01	24.5		B	DSO	50	2	6	3
9328		VORO	01	28	2332	N04 W59	01	24.6			CRO	48	2	5	3
9328		LEAR	01	29	0045	N06 W60	01	24.5		B	DSO	50	3	5	3
9328		KAND	01	29	0740	N03 W67	01	24.3			AX		2	1	3
9328	30287	MWIL	01	29	1615	N03 W70	01	24.4	4	(AP)					
9328		HOLL	01	29	1758	N04 W73	01	24.3		B	CSO	30	2	3	3
9328		VORO	01	29	2341	N04 W76	01	24.3			HRX	35	1		3
9328		LEAR	01	30	0030	N06 W75	01	24.4		A	HAX	50	3	1	2
9316A		VORO	01	20	0040	S35 E65	01	25.2			HRX	33	1		3
9316		RAMY	01	19	1304	S16 E80	01	25.6		A	HSX	80	3	2	3
9316	30275	MWIL	01	19	1600	S16 E78	01	25.6	4	(AP)					
9316		HOLL	01	19	1612	S17 E79	01	25.7		A	HSX	110	3	2	4
9316		VORO	01	20	0040	S16 E73	01	25.6			HAX	329	2		3
9316		RAMY	01	20	1217	S17 E69	01	25.7		B	DSO	190	3	9	4
9316	30275	MWIL	01	20	1600	S15 E66	01	25.7	4	(BP)					
9316		HOLL	01	20	1932	S16 E66	01	25.8		B	CAO	220	13	8	3
9316		VORO	01	20	2351	S15 E60	01	25.5			HAX	110	6		3
9316		LEAR	01	21	0152	S16 E63	01	25.8		B	DAO	140	5	8	3
9316		RAMY	01	21	1243	S17 E56	01	25.8		B	CAO	120	3	7	4
9316		HOLL	01	21	1550	S15 E52	01	25.6		B	DAO	150	6	7	2
9316	30275	MWIL	01	21	1600	S15 E55	01	25.8	5	(BP)					
9316		VORO	01	21	2333	S15 E48	01	25.6			HAX	193	15		3
9316		LEAR	01	22	0136	S16 E50	01	25.8		B	DAO	110	6	6	4
9316		KAND	01	22	1115	S14 E42	01	25.6			CSO		7	7	2
9316		RAMY	01	22	1200	S17 E43	01	25.8		B	DSO	150	5	6	4
9316	30275	MWIL	01	22	1700	S15 E40	01	25.7	5	(BG)					
9316		VORO	01	22	2346	S15 E35	01	25.6			HAX	178	10		3
9316		LEAR	01	23	0021	S16 E37	01	25.8		B	CAO	60	8	7	3
9316		TACH	01	23	0859	S14 E31	01	25.7			CAO	282	5	5	2
9316		SVTO	01	23	1015	S17 E31	01	25.8		B	CAO	100	8	7	2
9316		RAMY	01	23	1300	S15 E29	01	25.7		B	CSO	120	8	6	3
9316	30275	MWIL	01	23	1545	S15 E27	01	25.7	5	(BP)					
9316		HOLL	01	23	1735	S14 E24	01	25.5		A	HAX	120	3	3	2
9316		VORO	01	24	0006	S15 E22	01	25.7			HAX	92	3		3
9316		LEAR	01	24	0035	S14 E23	01	25.8		B	CAO	80	4	5	2
9316		KAND	01	24	0805	S15 E16	01	25.5			HS		2	3	3
9316		SVTO	01	24	0905	S17 E21	01	26.0		B	CAO	120	11	8	3
9316		RAMY	01	24	1300	S15 E16	01	25.7		B	CSO	100	11	6	4
9316		HOLL	01	24	1725	S15 E12	01	25.6		B	CAO	100	8	6	2
9316		VORO	01	25	0011	S15 E08	01	25.6			HAX	125	8		3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JANUARY 2001

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
9316		TACH	01 25 0630	S14 E05	01 25.6			HA	100	2	2	2
9316		KAND	01 25 0740	S14 E06	01 25.8			CAO		6	7	2
9316		SVTO	01 25 0920	S16 E03	01 25.6		B	CAO	70	5	2	2
9316		RAMY	01 25 1300	S16 E03	01 25.8		B	CAO	90	12	6	4
9316		HOLL	01 25 1545	S16 E02	01 25.8		B	DAO	80	9	7	1
9316		VORO	01 25 2351	S15 W05	01 25.6			HAX	151	10		3
9316		LEAR	01 26 0220	S17 W03	01 25.9		B	DAO	100	10	8	3
9316		SVTO	01 26 0828	S17 W07	01 25.8		B	CSO	50	8	7	2
9316		KAND	01 26 0900	S15 W08	01 25.8			CAO		5	7	4
9316		RAMY	01 26 1250	S16 W13	01 25.5		A	HSX	40	1	1	3
9316		HOLL	01 26 1625	S17 W13	01 25.7		B	CAO	50	9	6	3
9316		LEAR	01 27 0115	S16 W17	01 25.8		B	DAO	50	7	6	3
9316		SVTO	01 27 0815	S16 W22	01 25.7		B	DAO	20	4	6	2
9316		KAND	01 27 0940	S16 W21	01 25.8			CAO		8	5	3
9316		KAND	01 27 0940	S23 W18	01 26.0			AX		1		3
9316		RAMY	01 27 1450	S16 W24	01 25.8		B	CSO	30	4	7	2
9316		LEAR	01 28 0053	S15 W32	01 25.6		A	HSX	10	1	1	3
9316		VORO	01 28 0415	S16 W32	01 25.7			BXO	12	2	4	3
9316		TACH	01 28 0614	S14 W34	01 25.7			AXX	1	1	1	3
9316		RAMY	01 28 1432	S14 W40	01 25.6		A	AXX		1		3
9316		LEAR	01 29 0045	S15 W46	01 25.5		B	DSO	10	2	1	3
9316		KAND	01 31 1125	S20 W74	01 25.8			AX		3	4	1
9324		RAMY	01 23 1300	N10 E48	01 27.1		B	BXO	100	4	2	3
9324	30286	MWIL	01 23 1545	N10 E46	01 27.1	4	(B)					
9324		HOLL	01 23 1735	N11 E45	01 27.1		B	BXO	10	4	3	2
9324		LEAR	01 24 0035	N10 E41	01 27.1		B	CRO	40	3	2	2
9324		KAND	01 24 0805	N10 E36	01 27.0			CSO		2	4	3
9324		SVTO	01 24 0905	N07 E38	01 27.2		B	CAO	40	5	4	3
9324		RAMY	01 24 1300	N10 E34	01 27.1		B	CRO	10	3	3	4
9324		HOLL	01 24 1725	N09 E31	01 27.0		B	CSO	20	3	4	2
9324		TACH	01 25 0530	N11 E24	01 27.0			AXX	5	1	1	2
9324		KAND	01 25 0740	N11 E25	01 27.2			AX		1	1	2
9324		SVTO	01 25 0920	N09 E24	01 27.2		A	HRX	10	1	1	2
9324		RAMY	01 25 1300	N10 E21	01 27.1		B	BXO	10	3	1	4
9324		HOLL	01 25 1545	N09 E21	01 27.2		A	AXX	10	1		1
9324		LEAR	01 26 0220	N10 E14	01 27.1		B	BXO		2		3
9324		SVTO	01 26 0828	N10 E09	01 27.0		A	AXX		1		2
9324		LEAR	01 27 0115	N09 E00	01 27.0		B	BXO		2		3
9321		RAMY	01 21 1243	S05 E75	01 27.1		B	DRO	60	2	9	4
9321		HOLL	01 21 1550	S05 E72	01 27.0		B	DAO	180	4	9	2
9321	30282	MWIL	01 21 1600	S04 E74	01 27.2	4	(B)					
9321		VORO	01 21 2333	S03 E69	01 27.1			CRI	194	6	7	3
9321		LEAR	01 22 0136	S05 E68	01 27.1		B	DRO	120	8	5	4
9321		KAND	01 22 1115	S03 E64	01 27.2			CSO		10	11	2
9321		RAMY	01 22 1200	S06 E65	01 27.4		B	DAO	80	5	8	4
9321	30282	MWIL	01 22 1700	S04 E62	01 27.3	4	(B)					
9321		VORO	01 22 2346	S05 E57	01 27.2			DSO	269	9	9	3
9321		LEAR	01 23 0021	S05 E56	01 27.2		B	DAO	110	15	10	3
9321		TACH	01 23 0859	S03 E51	01 27.2			DAI	231	8	6	2
9321		SVTO	01 23 1015	S08 E52	01 27.3		B	DAO	140	7	8	2
9321		RAMY	01 23 1300	S06 E49	01 27.2		B	DAO	200	25	9	3
9321	30282	MWIL	01 23 1545	S04 E49	01 27.3	5	(BF)					
9321		HOLL	01 23 1735	S05 E46	01 27.2		B	DAO	210	21	8	2
9321		VORO	01 24 0006	S05 E44	01 27.3			DSO	185	10	6	3
9321		LEAR	01 24 0035	S05 E44	01 27.3		B	DAO	120	17	6	2
9321		KAND	01 24 0805	S03 E39	01 27.2			DAO		7	9	3
9321		SVTO	01 24 0905	S07 E39	01 27.3		B	DAI	190	30	10	3
9321		RAMY	01 24 1300	S05 E37	01 27.3		B	DAI	200	22	10	4
9321		HOLL	01 24 1725	S05 E33	01 27.2		BG	DAC	190	24	9	2
9321		VORO	01 25 0011	S04 E30	01 27.2			DHO	421	18	7	3
9321		TACH	01 25 0630	S05 E25	01 27.1			CAI	228	6	8	2
9321		KAND	01 25 0740	S03 E26	01 27.3			DAO		11	9	2
9321		SVTO	01 25 0920	S05 E25	01 27.2		B	DAO	160	13	10	2
9321		RAMY	01 25 1300	S05 E22	01 27.2		B	DAO	160	22	8	4
9321		HOLL	01 25 1545	S04 E21	01 27.2		B	DAI	180	18	9	1
9321		VORO	01 25 2351	S04 E17	01 27.3			DHO	311	20	7	3
9321		LEAR	01 26 0220	S05 E15	01 27.2		B	EAI	250	24	11	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9321		SVTO	01 26 0828	S04 E12	01 27.2		B	DAI	210	18	10	2
9321		KAND	01 26 0900	S03 E11	01 27.2			DAO		15	8	4
9321		RAMY	01 26 1250	S04 E09	01 27.2		B	DAO	290	13	8	3
9321		HOLL	01 26 1625	S04 E06	01 27.1		B	DAO	250	35	9	3
9321		LEAR	01 27 0115	S05 E04	01 27.3		BG	DAI	280	37	10	3
9321		SVTO	01 27 0815	S05 W04	01 27.0		B	EAI	240	30	11	2
9321		KAND	01 27 0940	S04 W04	01 27.1			DAI		37	9	3
9321		RAMY	01 27 1450	S04 W06	01 27.2		B	DAI	220	13	8	2
9321		LEAR	01 28 0053	S04 W12	01 27.1		BG	DAI	260	28	10	3
9321		VORO	01 28 0415	S03 W14	01 27.1			DAI	553	46	8	3
9321		TACH	01 28 0614	S02 W14	01 27.2			DAI	684	14	8	3
9321		RAMY	01 28 1432	S03 W20	01 27.1		B	DAO	340	12	10	3
9321		VORO	01 28 2332	S04 W25	01 27.1			DAI	545	15	9	3
9321		LEAR	01 29 0045	S03 W25	01 27.2		B	EAI	200	28	11	3
9321		KAND	01 29 0740	S05 W30	01 27.1			EAI		13	11	3
9321	30282	MWIL	01 29 1615	S04 W34	01 27.1	5	(B)					
9321		HOLL	01 29 1758	S03 W35	01 27.1		B	EAC	220	25	12	3
9321		VORO	01 29 2341	S04 W38	01 27.1			EAI	505	16	12	3
9321		LEAR	01 30 0030	S04 W39	01 27.1		B	DAI	180	16	9	2
9321		KAND	01 30 0740	S05 W44	01 27.0			ESI		13	14	4
9321		RAMY	01 30 1320	S08 W46	01 27.1		B	EAI	130	23	12	4
9321	30282	MWIL	01 30 1545	S04 W47	01 27.1	4	(B)					
9321		HOLL	01 30 1630	S05 W49	01 27.0		B	EAI	150	19	11	2
9321		KAND	01 31 1125	S05 W61	01 26.9			ESO		10	14	1
9321		RAMY	01 31 1300	S05 W61	01 27.0		B	EAI	90	16	11	3
9321		HOLL	01 31 1516	S04 W62	01 27.0		B	EAO	70	9	13	3
9321	30282	MWIL	01 31 1545	S05 W64	01 26.9	4	(B)					
9321		LEAR	02 01 0125	S04 W68	01 27.1		B	EAO	120	9	11	4
9321		VORO	02 01 0352	S04 W71	01 26.9			DAI	181	3	9	2
9321		TACH	02 01 0511	S04 W71	01 27.0			DAO	38	3	7	3
9321		RAMY	02 01 1209	S03 W75	01 27.0		B	DSO	90	3	10	3
9321		HOLL	02 01 1515	S06 W78	01 26.9		B	DAO	120	4	10	2
9321	30282	MWIL	02 01 2100	S04 W79	01 27.1	3	B					
9321A		KAND	01 29 0740	S09 W23	01 27.6			BXO		3	5	3
9321A		HOLL	01 29 1758	S05 W26	01 27.8		A	AXX		1		3
9321B		RAMY	01 30 1320	S08 W17	01 29.3		A	AXX		3	2	4
9325		VORO	01 25 0011	N10 E73	01 30.5			HAX	107	3		3
9325		KAND	01 25 0740	N12 E74	01 30.9			HS		1	2	2
9325		SVTO	01 25 0920	N11 E72	01 30.8		A	HAX	30	1	2	2
9325		RAMY	01 25 1300	N09 E71	01 30.9		B	CSO	60	4	3	4
9325		HOLL	01 25 1545	N10 E67	01 30.7		B	CSO	60	3	2	1
9325		LEAR	01 26 0220	N10 E62	01 30.7		B	CSO	60	2	2	3
9325		SVTO	01 26 0828	N10 E57	01 30.6		A	HSX	40	1	1	2
9325		KAND	01 26 0900	N11 E59	01 30.8			HS		1	1	4
9325		RAMY	01 26 1250	N09 E56	01 30.7		A	HSX	30	1	1	3
9325		HOLL	01 26 1625	N10 E54	01 30.7		A	HSX	50	3	2	3
9325		LEAR	01 27 0115	N10 E49	01 30.7		B	CSO	60	8	3	3
9325		SVTO	01 27 0815	N12 E44	01 30.6		B	DAO	70	5	7	2
9325		KAND	01 27 0940	N11 E45	01 30.8			CSO		9	4	3
9325		RAMY	01 27 1450	N10 E43	01 30.8		B	DSO	50	4	6	2
9325		LEAR	01 28 0053	N10 E37	01 30.8		B	CSO	70	7	7	3
9325		VORO	01 28 0415	N07 E28	01 30.3			AXX	3	1		3
9325		VORO	01 28 0415	N10 E35	01 30.8			CRI	114	5	6	3
9325		TACH	01 28 0614	N12 E32	01 30.7			BRO	32	3	3	3
9325		RAMY	01 28 1432	N09 E29	01 30.8		B	CSO	30	4	3	3
9325		VORO	01 28 2332	N10 E23	01 30.7			CRI	104	5	4	3
9325		LEAR	01 29 0045	N08 E22	01 30.7		B	DAO	50	9	4	3
9325		KAND	01 29 0740	N09 E18	01 30.7			CSO		8	5	3
9325	30289	MWIL	01 29 1615	N09 E14	01 30.7	5	(BP)					
9325		HOLL	01 29 1758	N09 E12	01 30.6		B	DSO	40	5	5	3
9325		VORO	01 29 2341	N09 E10	01 30.7			HRX	52	4	3	3
9325		LEAR	01 30 0030	N10 E08	01 30.6		B	DAO	40	4	6	2
9325		KAND	01 30 0740	N09 E03	01 30.5			DSO		4	6	4
9325		RAMY	01 30 1320	N10 E02	01 30.7		B	CSO	20	4	4	4
9325	30289	MWIL	01 30 1545	N09 E00	01 30.6	4	(BP)					
9325		HOLL	01 30 1630	N08 W02	01 30.5		B	CSO	20	3	5	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9325		KAND	01 31 1125	N09 W12	01 30.6			CSO		4	7	1
9325		RAMY	01 31 1300	N10 W11	01 30.7		B	CSO	20	5	6	3
9325		HOLL	01 31 1516	N08 W13	01 30.7		B	CAO	20	5	6	3
9325	30289	MWIL	01 31 1545	N08 W14	01 30.6	4	(BP)					
9325		LEAR	02 01 0125	N09 W20	01 30.6		B	CAO	30	3	2	4
9325		VORO	02 01 0352	N10 W23	01 30.5			AXX	8	1		2
9325		TACH	02 01 0511	N11 W23	01 30.6			HSX	25	1	1	3
9325		RAMY	02 01 1209	N11 W27	01 30.6		B	CSO	20	3	3	3
9325		HOLL	02 01 1515	N09 W29	01 30.5		A	HAX	40	1	1	2
9325	30289	MWIL	02 01 2100	N10 W32	01 30.6	4	(AP)					
9325		VORO	02 02 0044	N10 W35	01 30.5			AXX	10	1		2
9325		LEAR	02 02 0055	N10 W35	01 30.5		A	HSX	10	1	1	3
9325		TACH	02 02 0705	N11 W36	01 30.7			AXX	25	1	1	4
9325		RAMY	02 02 1240	N11 W41	01 30.5		A	HSX	10	1	1	3
9325		HOLL	02 02 1450	N09 W44	01 30.4		A	HSX	10	1	1	3
9325	30289	MWIL	02 02 1600	N10 W42	01 30.6	4	(AP)					
9325		VORO	02 03 0043	N10 W47	01 30.6			AXX	10	1		2
9325		LEAR	02 03 0122	N10 W47	01 30.6		A	HAX	10	1		2
9325		SVTO	02 03 1130	N11 W55	01 30.4		A	AXX	10	1		3
9325		RAMY	02 03 1245	N12 W54	01 30.6		A	AXX		1		3
9325	30289	MWIL	02 03 1600	N10 W56	01 30.5	4	(AP)					
9325		LEAR	02 04 0007	N10 W61	01 30.5		A	HRX	10	1		5
9325		SVTO	02 04 0815	N10 W66	01 30.5		A	AXX	10	1		3
9325		TACH	02 04 0848	N11 W65	01 30.6			AXX	1	1	1	2
9325		RAMY	02 04 1226	N12 W68	01 30.5		A	AXX		1	1	4
9325	30289	MWIL	02 04 1600	N10 W68	01 30.6	3	(AP)					
9325A		SVTO	02 04 0815	S22 W60	01 30.8		A	AXX		1		3
9325B	30305	MWIL	02 05 1600	S08 W80	01 30.8	4	(AP)					
9327		LEAR	01 27 0115	N18 E58	01 31.5		A	AXX		1		3
9327		SVTO	01 27 0815	N18 E57	01 31.7		A	HSX	20	1	1	2
9327		KAND	01 27 0940	N19 E55	01 31.6			AX		1	1	3
9327		RAMY	01 27 1450	N16 E50	01 31.4		B	BXO	10	2	3	2
9327		LEAR	01 28 0053	N14 E44	01 31.4		B	BXO		2	2	3
9327		VORO	01 28 0415	N14 E42	01 31.3			AXX	12	2		3
9327		LEAR	01 29 0045	N12 E28	01 31.1		A	AXX		1		3
9327		HOLL	01 29 1758	N17 E22	01 31.4		A	AXX		1		3
9327		VORO	01 29 2341	N19 E20	01 31.5			AXX	25	3		3
9327		LEAR	01 30 0030	N17 E18	01 31.4		B	DRO	20	3	2	2
9327		KAND	01 30 0740	N18 E13	01 31.3			DAO		7	4	4
9327		RAMY	01 30 1320	N18 E11	01 31.4		B	DAO	60	13	4	4
9327	30291	MWIL	01 30 1545	N18 E10	01 31.4	4	(B)					
9327		HOLL	01 30 1630	N18 E09	01 31.4		B	DAO	40	8	4	2
9327		KAND	01 31 1125	N17 W03	01 31.2			ESI		13	11	1
9327		RAMY	01 31 1300	N19 W01	01 31.5		B	DAO	30	15	8	3
9327		HOLL	01 31 1516	N17 W04	01 31.3		B	DAO	60	17	10	3
9327	30291	MWIL	01 31 1545	N17 W03	01 31.4	4	(BG)					
9327		LEAR	02 01 0125	N18 W08	01 31.4		B	EAO	70	19	11	4
9327		VORO	02 01 0352	N18 W11	01 31.3			DRO	45	2	4	2
9327		TACH	02 01 0511	N19 W10	01 31.4			BRO	25	6	8	3
9327		RAMY	02 01 1209	N18 W16	01 31.3		B	DSO	30	5	6	3
9327		HOLL	02 01 1515	N17 W19	01 31.2		B	CAO	30	6	6	2
9327	30291	MWIL	02 01 2100	N18 W21	01 31.3	4	(B)					
9327		VORO	02 02 0044	N18 W24	01 31.2			AXX	21	2	5	2
9327		LEAR	02 02 0055	N17 W23	01 31.3		B	DSO	20	3	5	3
9327		TACH	02 02 0705	N18 W26	01 31.3			BRO	14	4	5	4
9327		RAMY	02 02 1240	N18 W30	01 31.2		B	DSO	30	3	5	3
9327		HOLL	02 02 1450	N17 W32	01 31.2		B	CSO	30	6	7	3
9327	30291	MWIL	02 02 1600	N18 W30	01 31.4	4	(BG)					
9327		VORO	02 03 0043	N17 W36	01 31.3			CRI	121	11	6	2
9327		LEAR	02 03 0122	N17 W35	01 31.4		B	DAO	50	6	6	2
9327		SVTO	02 03 1130	N16 W43	01 31.2		B	CAO	30	6	9	3
9327		RAMY	02 03 1245	N20 W40	01 31.5		B	DSO	40	4	3	3
9327	30291	MWIL	02 03 1600	N17 W44	01 31.3	5	(BP)					
9327		LEAR	02 04 0007	N17 W49	01 31.3		B	CAO	80	6	6	5
9327		VORO	02 04 0044	N18 W47	01 31.4			HRX	48	1		2
9327		SVTO	02 04 0815	N17 W55	01 31.2		B	CAO	30	4	6	3

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SUNSPOT GROUPS
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JANUARY 2001

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9327		TACH	02 04 0848	N17 W50	01 31.6			AXX	6	2	1	2
9327		KAND	02 04 1110	N16 W54	01 31.4			HS		3	3	2
9327		RAMY	02 04 1226	N19 W55	01 31.3		B	CSO	30	4	5	4
9327		HOLL	02 04 1530	N17 W56	01 31.4		A	HSX	40	2	2	2
9327	30291	MWIL	02 04 1600	N17 W57	01 31.3	4	(AP)					
9327		LEAR	02 05 0025	N18 W60	01 31.4		A	HRX	10	1		3
9327		SVTO	02 05 0737	N18 W66	01 31.3		A	AXX		1		3
9327		KAND	02 05 0835	N18 W67	01 31.2			AX		1	1	4
9327		RAMY	02 05 1319	N20 W68	01 31.3		A	HSX	10	1	1	3
9327	30291	MWIL	02 05 1600	N18 W68	01 31.5	3	(AP)					
9327A		KAND	01 29 0740	S13 E29	01 31.5			AX		1		3
9327A		KAND	01 30 0740	S13 E19	01 31.7			AX		2	2	4
9327A		RAMY	01 30 1320	S12 E17	01 31.8		A	AXX		1		4
9327A		HOLL	01 30 1630	S14 E16	01 31.9		A	AXX		1		2
9327B		LEAR	01 30 0030	N05 E25	01 31.9		A	AXX		1		2

Stations reporting:

HOLL = Holloman
KAND = Kandilli
LEAR = Learmonth

MWIL = Mt. Wilson
PALE = Palehua

RAMY = Ramey
SVTO = San Vito

TACH = Tashkent
VORO = Voroshilov

SUDDEN IONOSPHERIC DISTURBANCES
JANUARY 2001

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Jan 01

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
01	1645	1730U	1804	1	1		1				1653	C1.7	
01	1706	1752	1818	2	5		1			1	No flare		
02	0745	0804	0916	3-	3					2	0744	C7.5	
02	0814	0822	0854	1	1		1				0744	C7.5	
02	1703	1710	1739	2	3					3	1701	C6.9	
03	0617	0622	0715	2+	1					1	0614	C4.4	
03	0947	1022	1039	3	1		1				No flare		
03	1037	1047	1128	2	5		1			3	1037	C2.6	
03	1805	1807	1825	1	3					3	1759	C2.7	9290
04	0855	0900	0945	2+	1					1	0850	C4.5	
04	1853	1917	1945	1+	5		1			2	1909	C2.5	9301
04	2006	2008	2033	1	1					1	2004	C3.6	9289
05	0705	0711	0745	2	1					1	0703	C3.2	9302
05	1608	1614	1642	2	1					1	1544	C2.0	
05	1636	1649	1710	3	1		1				No flare		
05	1710	1800U	1916	3	1		1				No flare		
05	1826	1834	1907	1+	3					4	1823	C6.8	9302
05	1849	1852	1931	2-	3					3	1823	C6.8	9302
07	1220	1225	1230	1-	1					1	1204	C1.9	
08	0739	0743	0759	2	1		1				No flare		
08	0759	0853	0937	3	1		1				No flare		
08	0905	0926	1014	3	1		1				No flare		
09	0648	0654	0720	2-	3					2	0645	M1.8	9306
09	0849	0854	0911	1	3					3	0844	C5.1	
09	1601	1606	1623	1	3					3	1557	C2.6	
10	1015	1022	1022D	3	5	1	3	1		2	1012	M3.5	9302
10	1130	1134	1140	1-	1					1	No flare		
10	1709	1713	1740	1+	1					1	No flare		
10	1804	1806	1823	1-	3					2	1800	C2.5	9302
11	1047	1104	1222	1	1		1				*		
11	1240	1303	1351	1	1		1				No flare		
11	1828	1913	1930	1+	1		1				1828	C1.8	
12	1156	1212	1230	1	1		1				1202	C2.1	
12	1258	1330U	1408	1	1		1				No flare		
13	1943	1945	2002	1	1					1	1940	C3.4	9306
14	0844	0848	0859	1	1					1	0843	C2.4	
14	1026	1032	1055	1	3					3	1024	C4.6	
14	1152	1227U	1441	2	1		1				1213	C1.3	
14	1445	1453	1545	2+	1					1	No flare		
14	1600	1601	1615	1-	1					1	1553	C1.7	9306
15	0800	0827	0841	1+	1		1				No flare		
15	0835	0910	0955	3	1		1				0900	C1.2	9306
15	1101	1118	1138	1	1		1				*		
15	1132	1140	1155	1	3					2	1132	C1.1	
15	1308	1313	1344	2-	3		1			2	1304	C2.9	
15	1520	1537	1607	2+	1					1	No flare		
15	1602	1604	1718	2+	3					4	1556	C9.4	9306
15	1846	1852	1946	2+	3					3	1842	C4.9	9306
16	0606	0610	0637	1+	1					1	0605	C2.2	9306
16	1513	1529	1615	2	5		1			4	1509	C2.4	
16	1956	2000	2015	1	1					1	1952	C1.8	
17	0545	0605	0730	3	1					1	0539	C4.0	
17	0907	0952	1019	2	1		1				0916	C1.3	
17	1253	1310	1434	1	1		1				1219	C1.6	
17	1300	1400U	1534	3	1		1				1219	C1.6	

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES
JANUARY 2001

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
18	1050	1130	1200	1	1		1				No flare		
18	1157	1209	1230	1	1		1				No flare		
19	1155	1219	1424	1	1		1				1131	C1.8	
19	1436	1441	1512	1	1		1				No flare		
19	1606	1630U	1726	2	1		1				1625	M1.0	9313
19	1650	1711	1824	2+	3					3	1625	M1.0	9313
20	0837	0915	0952	3	1		1				0849	C1.4	
20	1435	1448	1530	1	1		1				1428	C1.0	
20	1837	1848	1936	2	3					4	1833	M1.2	9313
20	2113	2119	2222	2+	3					3	2106	M7.7	9313
21	0913	0920	1006	2	1		1				No flare		
21	1919	1924	1952	2-	3					2	1917	C3.0	9313
22	0643	0649	0725	1+	1					1	0640	C2.7	9313
22	2203	2208	2233	1+	1					1	2157	C2.8	
23	1752	1802	1848	2+	3					4	1747	C2.5	
23	2035	2044	2135	2	3					2	2032	C4.3	9311
24	0530	0533	0600	1+	1					1	0525	C2.6	
24	0722	0725	0725D	1	1					1	0716	C1.8	9321
24	1057	1105	1125	1+	3		1			4	1055	C6.4	
24	1235	1245U	1255	1	1					1	1236	C2.2	9319
24	1327	1337	1412	1	1		1				No flare		
24	1443	1448	1525	1+	5		1			5	1437	M1.0	9311
24	1548	1554	1620	1+	5					6	1540	C6.3	9311
24	1715	1719	1745	1+	1					1	1708	C1.4	
24	1829	1836	1923	2+	3					4	1825	C4.5	9311
24	1928	1932	2002	2	3					2	1929	C2.1	9311
25	0708	0711	0734	1+	3					2	0707	C7.4	
25	0817	0820	0850D	1+	1					1	0816	C4.0	
25	0851	0855	0911	1-	3					3	0850	C4.2	
25	0915	0940U	0956	1	1		1				*		
25	1024	1026	1045	1-	3					2	1022	C2.9	
26	0601	0605	0630	1+	1					1	0553	M1.0	9325
26	0852	0857	0916	1-	1					1	0850	C1.3	9313
26	2012	2013	2041	1+	1					1	2006	C2.4	9313
27	1858	1902	1907D	1-	1					1	1854	C3.1	
28	0457	0500	0515	1-	1					1	0455	C1.6	
28	1237	1240U	1336	1	1		1				1255	B9.5	
28	1345	1401	1427	1	1		1				*		
28	1435	1500	1519	1+	3		2				1508		9313
28	1541	1552	1633	2	5		1			7	1540	M1.5	9313
28	1845	1850	1915	1+	1					1	1846	C2.9	
29	1021	1043	1113	2	1		1				*		
29	1530	1540	1601	1	3		2			1	1532	C5.7	9329
29	1712	1733	1809	2	1		1				1741	C2.1	
30	1510	1514	1538	1+	3					3	1501	C2.2	
30	1733	1808	1848D	2	1		1				1822	C2.0	9330

* = no flare patrol.

OBSERVATORIES REPORTING FOR JANUARY 2001

Bedford, Massachusetts, USA	SES	Marlboro, Massachusetts, USA	SES
Cambridge, England, UK	SES	Nerja, Spain	SES
Edenvale, Rep of S. Africa	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Houston, Texas, USA	SES	Parma, Ohio, USA	SES
Hudson, Ohio, USA	SES	Sofia, Bulgaria	SES
Isola del Gran Sasso, Italy	SES	Upice, Czech Republic	SEA
Koniz, Switzerland	SES	Vlasim, Czech Republic	SEA

Observations are not necessarily continuous.

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

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Jan 01

JANUARY 2001

OBSERVATION			Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End (UT)	Start (UT)		End (UT)	Lower (MHz)				Upper (MHz)		
01	0000 0755	CULG	0046.0	0046.0	III	G	1	40U	100		
		CULG	0136.0	0500.0	III	N	1	20	90		
		CULG	0452.0	0453.0	III	G	1	23	180		
		CULG	0551.0	0755.00	III	N	1	20	90		
		IZMI	0704.0E	1200.00	III	N	1	45	95		
	0704 1200	IZMI	0704.0E	1020.00	I	N	1	190	270		
		IZMI	0736.0	0736.1	III	B	2	45	95		
		IZMI	0803.2	0805.8	III	G	2	40	90		
	0803 1344	POTS	0826 E	1344 U	I	S	1	110U	300		
		IZMI	0829.5	0835.8	III	GG	2	40	80		
	0836 1333	ONDR									
		POTS	0837.8	0839.3	III	G	2	110U	170U		
		IZMI	0838.2	0839.3	III	G	2	45	170		
	0850 1450	IZMI	0844.0	0846.1	III	GG	2	40	95		
		BLEN									
		POTS	0956.9	0957.1	III	B	2	40X	65		
		IZMI	1040.6	1040.8	III	G	2	30	90		
		POTS	1042.5	1042.7	III	G	1	110U	160		
		IZMI	1110.9	1111.1	III	B	2	35	65		
		POTS	1125.5	1126.3	III	G	2	40X	70		
		POTS	1142.1	1142.3	III	G	2	40X	120		
		POTS	1145	1333	III	N	1	40X	90U		
		POTS	1157.9	1200.9	III	G	2	40X	130		
		POTS	1206.6	1206.7	III	B	1	40X	170U		
		POTS	1229.3	1230.1	III	G	2	40X	70		
		POTS	1239.0	1239.2	III	G	2	40X	210		
		POTS	1253.8	1254.1	III	G	2	40X	150		
		POTS	1302.6	1302.7	III	B	2	60	90U		
		SVTO	1322.0	1402.0	III	N	1	25U	40U		
		HOLL	1936.0	1936.0	III		1	25	85		
		PALE	1936.0	2059.0	III	N	2	25	140		
		HOLL	1946.0	1951.0	III		1	25	83		
		HOLL	1957.0	1957.0	III		1	25	85		
		HOLL	2019.0	2153.0	III	N	1	25	158		
		2000 2400	CULG	2020.0	2031.0	III	GG	2	18	180	
			CULG	2041.0	2041.0	III	B	1	20	90	
			CULG	2100.0	2103.0	III	G	1	20	180	
			CULG	2128.0	2128.0	III	B	1	23	100	
	LEAR		2205.0	2246.0	III	N	2	25	167		
	CULG		2213.0	2214.0	III	G	1	20	160		
	HOLL		2213.0	2213.0	III		1	25	86		
	PALE		2213.0	0213.0	III	N	2	25	180		
	HOLL		2223.0	2230.0	III		1	25	135		
	CULG		2225.0	2231.0	III	GG	2	18	180		
	CULG		2328.0	2328.0	III	B	1	50U	160		
	LEAR		2328.0	2328.0	III		1	75	99		
	LEAR		2339.0	2340.0	III		1	25	48		
CULG	2340.0		2340.0	III	B	1	35U	90			
02	0000 0735		LEAR	0020.0	0043.0	III	N	2	25	103	
		HIRA	0022.0	0022.5	III	B	1	30	120		
	0000 0755	CULG	0022.0	0022.0	III	B	2	20	120		
		CULG	0025.0	0044.0	III	N	1	30	150		
	LEAR	0115.0	0119.0	III		1	26	48			
	LEAR	0119.0	0216.0	III	N	1	25	96			
	CULG	0150.0	0157.0	III	G	1	28	85			
	CULG	0158.0	0158.0	III	B	2	20	170			
	CULG	0215.0	0216.0	III	G	1	20	80			
	CULG	0310.0	0311.0	III	G	1	23	90			
	LEAR	0310.0	0311.0	III		2	25	56			
	LEAR	0337.0	0344.0	III		1	31	72			
	CULG	0345.0	0345.0	III	B	1	18	90			
	CULG	0415.0	0421.0	III	G	1	18	100			
	LEAR	0415.0	0420.0	III		1	25	62			
	LEAR	0443.0	0815.0	III	N	3	25	180			
	CULG	0446.0	0446.0	III	B	1	18	100			
	CULG	0527.0	0553.0	III	N	2	18X	280			
	HIRA	0537.0	0546.0	III	G	2	30	320			
	CULG	0643.0	0648.0	III	G	2	18	400			

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

JANUARY 2001

OBSERVATION			EVENT					FREQUENCY		Remarks	
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)
02	0650	1200	HIRA	0646.0	0647.0	III	G	2	50	380	
			SVTO	0646.0	0647.0	III		1	31	160	
			IZMI	0651.0	1114.0	III	N	1	45	90	
			CULG	0700.0	0700.0	III	G	1	23	70	
			CULG	0705.0	0705.0	III	B	1	23	70	
			IZMI	0723.0	0723.2	III	G,FS	2	45	180	
			IZMI	0727.2	0727.3	III	G,FS	2	40	145	
			CULG	0734.0	0755.00	III	N	1	30	80	
			SVTO	0807.0	0809.0	III		1	28	48	
			IZMI	0807.1	0810.0	III	GG	2	35	215	
			IZMI	0812.0U	0944.0U	I	N	1	190	270	
			SVTO	0813.0	0815.0	III		2	26	49	
			IZMI	0813.2	0815.7	III	GG	2	25	270	
			POTS	0813.2	0815.4	III	G	2	40X	90U	
			POTS	0825 E	1345 U	I	S,W	1	110U	170U	
	ONDR										
	0836	1334		BLEN							
	0850	1450		IZMI	1053.4	1056.3	III	GG	2	30	90
				POTS	1209.6	1209.9	III	G	3	75	170U
				POTS	1236.6	1241.5	III	G	3	40X	170U
				POTS	1248.5	1248.6	III	B	2	40X	70U
				SVTO	1310.0	1313.0	III		1	30U	163U
				POTS	1310.5	1312.6	III	GG	3	40X	300
				POTS	1319.3	1319.8	III	G	1	110U	170U
				POTS	1333.3	1335.0	III	G	2	40X	170U
	2000	2400		CULG	2048.0	2048.0	III	B	1	30	140
				CULG	2139.0	2142.0	III	G	1	25	160
	2148	2400		HIRA							
				LEAR	2339.0	2340.0	III		1	25	48
				LEAR	2357.0	0027.0	III	N	1	25	103
03	0000	0755	CULG	0011.0	0011.0	III	B	1	35	130	
			CULG	0027.0	0027.0	III	B	1	45	90	
			CULG	0201.0	0203.0	III	G	1	18	130	
			LEAR	0201.0	0253.0	III	N	3	25	180	
			CULG	0213.0	0223.0	III	GG	2	18	180	
			PALE	0217.0	0222.0	III		1	25	180	
			HIRA	0217.0	0223.0	III	G	3	25X	230	
			CULG	0219.0	0219.0	III	B	3	20	140	
			CULG	0254.0	0254.0	III	B	1	20	80	
			CULG	0407.0	0408.0	III	G	2	28	190	
	HIRA	0407.0	0407.5	III	B	2	40	210			
	LEAR	0407.0	0407.0	III		1	25	180			
	LEAR	0504.0	0505.0	III		1	25	106			
	CULG	0505.0	0506.0	III	G	1	20	100			
	CULG	0544.0	0611.0	III	N	1	18	90			
	LEAR	0544.0	0544.0	III		1	25	101			
	SVTO	0636.0	1003.0	CONT		1	25	180			
	CULG	0640.0	0651.0	III	G	1	20	180			
	LEAR	0641.0	0812.0	III	N	1	25	180			
	CULG	0719.0	0722.0	III	G	3	18	180			
	HIRA	0719.0	0720.5	III	G	2	500	200			
	LEAR	0719.0	0720.0	III		3	25	180			
	SVTO	0719.0	0720.0	III		2	25	180			
	IZMI	0719.2	0720.9	III	GG,C	2	30	270X			
	IZMI	0721.2	0722.6	III	GG	2	40	215			
	IZMI	0735.7	0738.8	III	GG,FS	2	35	240			
	CULG	0736.0	0739.0	III	G	1	25	160			
	IZMI	0811.0	0812.7	III	GG	1	40	95			
	ONDR										
	IZMI	0911.4	0911.6	III	B	1	45	65			
	POTS	0923	1345 U	I	S	1	110U	400			
	IZMI	0939.0	0939.7	III	G	2	40	150			
	LEAR	0939.0	0939.0	III		1	25U	151U			
	POTS	0939.0	0939.7	III	G	3	40X	170U			
	SVTO	0939.0	0939.0	III		1	75U	154U			
	POTS	0946.4	0946.5	III	B	1	110U	170U			
	POTS	1000.9	1003.8	III	G	3	40X	170U			
	IZMI	1001.0	1001.0	III	B	1	45	90			

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

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JANUARY 2001

OBSERVATION		Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks	
Start (UT)	End (UT)		Start (UT)	End (UT)				Lower (MHz)	Upper (MHz)		
05		LEAR	2249.0	2249.0	III		1	102	168		
		PALE	2249.0	2249.0	III		1	109U	150U		
		CULG	2250.0	2250.0	III	B	1	65	180		
06		LEAR	0012.0	0013.0	III		1	36	180		
		PALE	0012.0	0012.0	III		1	84U	180U		
	0000	0755	CULG	0012.0	0013.0	III	G	1	40	200	
		CULG	0040.0	0042.0	III	G	1	50U	170		
		LEAR	0040.0	0040.0	III		1	51	102		
		LEAR	0135.0	0136.0	V		3	25	162		
		PALE	0135.0	0136.0	III		2	25	180		
	0022	0738	HIRA	0135.5	0136.0	III	B	3	30	230	
		CULG	0136.0	0136.0	III	B	3	23	170		
		CULG	0215.0	0216.0	III	G	1	23	90		
		LEAR	0215.0	0216.0	III		1	25	101		
		LEAR	0358.0	0359.0	III		1	25	158		
		HIRA	0358.5	0359.0	III	B	2	50	130		
		CULG	0359.0	0359.0	III	B	1	25	170		
		IZMI	0632.0	0933.0	III	G	2	30	180		
		LEAR	0656.0	0657.0	III		1	25	161		
	0656	1204	IZMI	0656.7	0657.2	III	G	2	45	100	
		IZMI	0716.0U	0937.0	I	N	1	180	270		
	0803	1400	POTS	0830	E 1327	I	S	1	200U	400	110-170 MHz no obs
	0833	1340	ONDR								
		IZMI	0843.9	0844.4	III	G	2	45	95		
	0850	1455	BLEN								
		IZMI	0850.4	0852.3	III	G	1	45	95		
		IZMI	0922.4	0922.7	III	G	2	45	95		
		IZMI	0926.7	0928.4	III	G	1	45	95		
		LEAR	0932.0	0932.0	III		1	25	139		
		SVTO	0932.0	0932.0	III		1	29U	132U		
		POTS	0932.1	0932.3	III	B	2	40X	90U		
		IZMI	0937.0U	1200.0D	I	S	2	45	270X		
		IZMI	1003.1	1003.4	III	B	1	45	95		
		IZMI	1011.6	1011.9	III	B	1	45	95		
		POTS	1017.5	1017.6	III	B	1	40X	90U		
		IZMI	1108.5	1108.8	III	B	1	40	95		
	SVTO	1205.0	1337.0	CONT		1	30U	157U			
	POTS	1246.5	1246.6	III	B	1	40X	90U			
	POTS	1331.4	1339.8	III	G	2	40X	90U			
	POTS	1350.8	1359.6	III	GG	3	40X	90U			
	SGMR	1351.0	1359.0	III		1	30	80			
	SVTO	1351.0	1359.0	III		2	31	180			
	SVTO	1420.0	1420.0	III		1	34	145			
2000	2400	CULG	2025.0	2030.0	III	G	1	50U	180		
	CULG	2225.0	2227.0	III	G	1	20	90			
	CULG	2244.0	2248.0	III	G	1	60	360			
	LEAR	2244.0	2248.0	III		1	46	180			
2148	2256	HIRA	2247.0	2247.5	III	B	1	60	290		
	LEAR	2337.0	2338.0	III		1	30	90			
	CULG	2338.0	2338.0	III	G	2	35	90			
07	0000	0755	CULG								
	0020	0739	HIRA								
	0700	1200	IZMI	0729.2	0729.3	III	B	1	45	70	
	0803	1400	POTS	0820	E 1350	I	S,C,DC	3	40X	400	
	0845	1455	BLEN								
		IZMI	0929.9	0932.2	III	GG	2	30	250		
		POTS	0930.4	0931.2	III	GG	3	40X	350		
		IZMI	0931.2	0932.5	I	GG,DC	2	120	160		
		IZMI	1002.8	1121.0	I	N	1	200	270X		
	0832	1342	ONDR	1118.1	1119.8	DCIM	G,W	1	2605	4373	
		SVTO	1140.0	1141.0	III		1	25	180		
		POTS	1140.4	1141.2	III	G	3	40X	325		
		IZMI	1140.5	1141.3	III	G	2	30	270X		
		IZMI	1143.1	1143.2	III	B	1	45	100		
		POTS	1217.4	1222.8	III	GG,C	3	40X	300		
	SVTO	1253.0	1254.0	III		1	29	68			
	POTS	1253.7	1254.3	III	G	1	50	170U			

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OBSERVATION		Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End (UT)		Start (UT)	End (UT)				Lower (MHz)	Upper (MHz)	
07		SVTO	1255.0	1512.0	CONT		1	33U	153U	
		POTS	1340.0	1344.3	III	G	3	40X	170U	
		SGMR	1340.0	1343.0	III		1	30	60	
		SVTO	1343.0	1343.0	III		2	25	180	
	2000 2400	CULG	2000.0E	2400.0D	I	S,C	1	80	180	
		PALE	2032.0	2035.0	III		1	25	180	
		CULG	2033.0	2035.0	III	G	3	18	300	
	2149 2400	HIRA								
		LEAR	2315.0	1054.0	CONT		1	70	180	
08	0000 0740	HIRA								
	0000 0755	CULG	0000.0E	0755.0D	I	S,C	1	60	180	
		LEAR	0046.0	0049.0	III		1	25	78	
		CULG	0553.0	0556.0	III	G	1	23	70	
		SVTO	0647.0	1513.0	CONT		1	28U	162U	
		IZMI	0700.0E	1200.0D	I	S,C	2	45	270X	
		CULG	0712.0	0714.0	III	G	1	23	90	
		IZMI	0712.4	0714.2	III	GG	2	45	90	
		CULG	0754.0	0754.0	III	B	1	18	100	
		IZMI	0801.2	0801.8	III	G	2	50	95	
	0803 1359	POTS	0830 E	1359 U	I	S	1	200U	400	110-170 MHz no obs
		POTS	0833.6	0833.7	UNCLF		2	200U	260	
	0845 1455	BLEN								
		IZMI	1008.4	1008.6	III	B	1	40	60	
		IZMI	1011.3	1011.4	III	B,C	1	40	70	
	0832 1344	ONDR	1050.2	1053.2	DCIM	G	1	2000X	3992	
		ONDR	1050.3	1102.3	DCIM	W	1	1123	2000X	
		SVTO	1214.0	1214.0	III		2	29	161	
		POTS	1214.2	1219.3	III	G	3	40X	400	
		ONDR	1312.5	1314.5	DCIM	GG	3	800X	2000X	
		POTS	1312.7	1316.6	III	GG,C	3	40X	400	
		ONDR	1313.0	1313.3	DCIM	G	1	2000X	3055	
		SVTO	1313.0	1313.0	III		2	28	174	
	2000 2400	CULG	2031.0	2031.0	III	B	1	18	75	
		CULG	2119.0	2120.0	III	G	1	60U	90	
		CULG	2251.0	2251.0	III	B	1	60U	90	
		LEAR	2251.0	2253.0	III		1	25	103	
		LEAR	2320.0	2331.0	III		1	25	120	
		HOLL	2322.0	2324.0	III		1	25	177	
		CULG	2324.0	2328.0	III	G	1	20	150	
		PALE	2324.0	2324.0	III		1	25U	63U	
	2149 2400	HIRA	2324.0	2325.0	III	B	1	40	160	
		CULG	2356.0	2358.0	III	G	3	18	170	
		LEAR	2356.0	2357.0	III		2	25	180	
		HIRA	2356.5	2358.0	III	G	3	40	130	
09	0000 0755	CULG	0025.0	0025.0	III	B	1	35	80	
		LEAR	0151.0	0152.0	III		1	25	71	
		LEAR	0225.0	0226.0	III		1	25	66	
		CULG	0226.0	0226.0	III	B	1	35	80	
		CULG	0251.0	0254.0	III	G	1	28	170	
		LEAR	0251.0	0253.0	III		1	25	160	
	0000 0741	HIRA	0253.0	0254.0	III	B	1	40	180	
		CULG	0259.0	0259.0	III	B	1	18	100	
		LEAR	0259.0	0259.0	III		1	25	100	
		CULG	0600.0	0602.0	III	G	2	18	110	
		LEAR	0600.0	0601.0	III		1	25	116	
		CULG	0648.0	0650.0	III	B	1	23	750	
		HIRA	0648.0	0648.5	III	B	1	60	1800	
		LEAR	0648.0	0649.0	III		1	25	180	
	0708 1200	IZMI	0818.9	0819.0	III	B	1	45	95	
		LEAR	0828.0	0828.0	III		1	25	109	
		IZMI	0828.3	0828.9	III	GG	2	40	95	
		IZMI	0829.6	0830.7	III	GG	2	45	100	
	0831 1345	ONDR								
	0803 1400	POTS	0838	1400 U	I	S	1	110U	300	
	0840 1500	BLEN								
		POTS	0852.7	0857.6	III	GG	2	40X	170U	
		LEAR	0855.0	0857.0	III		2	25	105	

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OBSERVATION Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
						Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
11	0000	0743	HIRA								
	0000	0755	CULG	0510.0	0550.0	I	S	1	110	170	
	0701	1200	IZMI	0701.0E	1200.0D	I	S	2	190	270X	
	0800	1400	POTS	0825	1352 U	I	S	1	110U	350	
	0829	1349	ONDR								
	0840	1500	BLEN								
			IZMI	0841.4	0841.7	III	G,C	2	30	180	
			POTS	0841.5	0842.4	III	G	2	110U	170U	
			IZMI	0857.5	0857.7	III	B	1	45	60	
	2000	2400	CULG								
	2148	2400	HIRA								
12	0000	0744	HIRA								
	0000	0755	CULG	0452.0	0452.0	III	B	1	28	70	
	0700	1200	IZMI	0700.0E	1200.0D	I	N	2	170	270X	
			IZMI	0710.8	0711.0	III	B	1	45	95	
			CULG	0711.0	0711.0	III	B	1	23	70	
			IZMI	0805.6	0805.8	III	B	1	45	95	
	0800	1400	POTS	0820 E	1336	I	S	1	200U	350	110-170 MHz no obs
	0827	1350	ONDR								
			IZMI	0832.1	0832.9	III	G,FS	2	45	100	
			IZMI	0947.2	0947.4	III	B	1	45	70	
	0840	1505	BLEN	1210.5	1211.3	DCIM	C	2	1415X	4000	
			POTS	1307.3	1307.6	III	G	2	250	500	
			POTS	1332.5	1332.7	III	G	2	260	400	
			SGMR	1429.0	1429.0	III		1	30	80	
			SVTO	1430.0	1430.0	III		1	77	180	
	2000	2400	CULG								
	2148	2400	HIRA								
13	0000	0755	CULG	0255.0	0255.0	III	B	1	28	90	
			LEAR	0629.0	0630.0	III		1	83	180	
	0000	0744	HIRA	0629.5	0630.0	III	B	2	80	260	
			CULG	0630.0	0630.0	III	B	1	100	300	
	0650	1200	IZMI	0812.7	0813.2	III	G	2	75	270	
			LEAR	0813.0	0813.0	III		1	72	169	
	0800	1400	POTS	0820	1355	I	S,C,DC	2	110U	350	
			IZMI	0825.0	0825.5	III	G	2	150	270X	
			POTS	0825.0	0825.6	III	G,U	3	135	350	
	0826	1352	ONDR								
	0840	1505	BLEN								
			IZMI	0911.7	0919.5	UNCLF		2	45	95	
			IZMI	0936.6	0940.2	III	GG	2	45	95	
			IZMI	0943.0U	1200.0D	I	N	2	45	270	
			POTS	1059.9	1106.8	III	G	3	40X	170U	
			IZMI	1106.5	1106.8	III	G,U	2	45	160	
			POTS	1331.5	1331.9	III	G	2	110U	250	
	2000	2400	CULG								
	2148	2400	HIRA								
14	0000	0745	HIRA								
	0000	0755	CULG	0527.0	0630.0	I	S	1	110	170	
	0651	1200	IZMI	0651.0E	1200.0D	I	N	2	160	270	
			LEAR	0654.0	0655.0	III		2	25	96	
			SVTO	0654.0	0655.0	III		1	25	77	
			IZMI	0654.6	0655.8	III	GG	2	30	100	
			CULG	0655.0	0656.0	III	G	2	20	90	
			IZMI	0817.1	0819.1	III	GG,FS	1	45	95	
	0825	1354	ONDR								
	0800	1400	POTS	0834	1335	I	S,W	1	200U	300	110-170 MHz no obs
			IZMI	1025.2	1028.6	III	N	1	45	95	
	0840	1505	BLEN	1027.3	1030.0	DCIM	C	3	1415X	4000X	
			BLEN	1213.4	1215.5	DCIM	C	2	1415X	3900	
	2000	2400	CULG	2025.0	2139.0	III	N	1	25	180	
			CULG	2029.0	2400.0D	I	S	1	100	170	
	2148	2400	HIRA								
15	0000	0746	HIRA								
	0000	0755	CULG	0000.0E	0251.0	I	S	1	100	170	

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OBSERVATION			Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks		
Start Day (UT)	End Day (UT)	Start (UT)		End (UT)	Lower (MHz)				Upper (MHz)				
15	0700	1200	IZMI	0700.0E	1200.0D	I	S	2	130	270X			
			IZMI	0720.2	0725.5	III	GG,FS	2	45	160			
			IZMI	0740.7	0744.7	III	GG,FS	2	45	95			
	0800	1400	POTS	0812	1358 U	I	S	2	110U	350			
			0840	1515	BLEN								
				IZMI	0912.0	1008.0	III	N	1	45	95		
				ONDR	1306.4	1308.4	DCIM	GG	2	870	1658		
	0824	1357	ONDR	1306.5	1309.0	DCIM	G		1	2000X	4500X		
			2000	2400	CULG	2220.0	2220.0	III	B	1	23	90	
	16	0000	0755	CULG									
0305				0747	HIRA								
					LEAR	0428.0	0536.0	CONT		1	71	180	
0656		1200	IZMI	0656.0E	1200.0E	I	S		2	80	270X		
			IZMI	0736.0	0737.6	III	G		2	45	95		
			IZMI	0757.7	0922.0	III	N		1	45	95		
0800		1400	POTS	0810 E	1205	I	S		1	110U	300		
			0823	1359	ONDR								
0840		1515	BLEN										
			POTS	0852.3	0852.4	III	B		2	110U	170U		
				POTS	0917.9	0920.8	III	G		3	110U	170U	
				IZMI	0936.2	0936.4	III	G		2	120	190	
				POTS	0936.3	0936.4	III	B		3	125	170U	
				IZMI	0955.6	0957.8	III	GG		2	115	250	
				POTS	0955.6	0957.9	III	G		3	110U	170U	
				POTS	1130.6	1130.7	III	G		1	110U	170	
				HOLL	2222.0	2222.0	III			1	116	180	
				LEAR	2222.0	2227.0	III			1	86	180	
2147		2400	HIRA	2222.5	2223.0	III	B		2	80	250		
			2000	2400	CULG	2223.0	2223.0	III	B		1	120	260
				CULG	2227.0	2227.0	III	B		2	80	260	
				HOLL	2227.0	2227.0	III			1	111	180	
				HIRA	2227.5	2228.0	III	B		3	80	280	
				CULG	2239.0	2334.0	III	N		1	120	180	
				HOLL	2245.0	2246.0	III			1	113	180	
				LEAR	2245.0	2246.0	III			1	83	180	
				PALE	2245.0	2246.0	III			1	99	180	
				HIRA	2246.0	2246.5	III	B		3	110	240	
17		0000	0755	LEAR	0017.0	0017.0	III			1	25	140	
				CULG	0017.0	0017.0	III	B		1	30	170	
	0000	0748	HIRA	0048.0	0048.5	III	B		2	120	200		
			CULG	0049.0	0049.0	III	B		1	120	200		
				LEAR	0049.0	0049.0	III			1	119	180	
				LEAR	0128.0	0138.0	II			1	41	137	ESS 0350
				CULG	0130.0	0139.0	II	SH		2	70	130	ESS 300
				LEAR	0150.0	0310.0	IV			1	30	100	
				CULG	0215.0	0215.0	III	B		1	100	180	
				LEAR	0215.0	0215.0	III			1	83	180	
	0650	1200	IZMI	0704.8	0706.9	III	G		2	175	215		
			IZMI	0728.0U	0817.0U	I	N		1	200	270		
	0821	1400	ONDR	0823	1352	I	S,W		1	200U	350	110-170 MHz no obs	
			0800	1400	POTS								
	0840	1515	BLEN										
			IZMI	0846.7	0847.7	III	GG		2	145	270X		
			IZMI	0856.2	0856.3	III	B		2	190	250		
			IZMI	0911.9	0917.9	III	N		1	180	270		
			LEAR	0918.0	0919.0	III			1	38U	180U		
			SVTO	0918.0	0926.0	III			1	25	180		
			IZMI	0918.7	0919.4	III	GG,C		2	30	170		
			IZMI	0926.3	0926.8	III	G		2	105	270X		
POTS			0926.3	0926.9	III	G		2	200U	400			
IZMI			0936.6	0939.0	III	GG		3	35	270X			
LEAR			0937.0	0937.0	III			1	25U	180U			
SVTO			0937.0	0937.0	III			1	35	180			
POTS			0937.1	0937.8	III	G		3	40X	400			
IZMI			0941.6	0943.5	III	G		2	150	270X			
POTS			0941.9	0943.5	III	G		1	200U	300			
IZMI	1010.7	1010.9	III	G		2	165	240					

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OBSERVATION		Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End Day (UT)		Start (UT)	End (UT)				Lower (MHz)	Upper (MHz)	
17		IZMI	1030.0	1031.4	III	G	2	130	270X	
		POTS	1030.0	1031.5	III	G	2	200U	400	
		POTS	1057.1	1111.5	III	G	2	200U	500	
		IZMI	1102.4	1102.7	III	G	2	145	270X	
		IZMI	1104.5	1107.9	III	N	1	180	270	
		IZMI	1105.9	1106.4	III	G	2	135	270	
		SVTO	1109.0	1111.0	III		1	135	180	
		IZMI	1109.8	1110.0	III	G	2	130	270	
		IZMI	1110.9	1111.5	III	GG	2	105	270X	
		IZMI	1122.1	1124.3	III	GG	2	105	270X	
		POTS	1122.2	1123.0	III	G	3	200U	400	
		SVTO	1132.0	1133.0	III		1	54	180	
		IZMI	1132.1	1133.6	III	GG	2	30	270X	
		POTS	1132.2	1133.3	III	G	3	50	500	
		SVTO	1142.0	1142.0	III		1	116	180	
		IZMI	1142.4	1142.6	III	G	2	80	270X	
		POTS	1142.4	1142.6	III	G	3	200U	325	
		IZMI	1145.8	1145.8	III	B	1	120	190	
		IZMI	1150.1	1151.2	III	G	1	80	215	
		POTS	1151.0	1151.1	III	B	1	200U	325	
		POTS	1233.0	1239.1	III	G	2	200U	500	
		POTS	1257.5	1306.2	III	G	2	40X	300	
		HOLL	1506.0	1506.0	III		1	25	66	
		SGMR	1506.0	1506.0	III		1	30	50	
		SVTO	1506.0	1506.0	III		1	35	48	
		HOLL	1747.0	1748.0	III		1	25	112	
		HOLL	1915.0	1915.0	III		1	105	180	
	2000 2400	CULG	2132.0	2132.0	III	B	1	60	180	
	2146 2400	HIRA								
18	0000 0755	CULG	0514.0	0517.0	III	G	1	23	90	
	0000 0749	HIRA	0648.5	0649.0	III	B	2	140	240	
		CULG	0649.0	0649.0	III	B	1	35	250	
	0800 1400	POTS								
	0820 1403	ONDR								
	0650 1200	IZMI	0820.5	0820.6	III	B	1	80	245	
	0840 1515	BLEN								
	2000 2400	CULG								
	2145 2400	HIRA								
19	0000 0750	HIRA								
	0000 0755	CULG								
	0840 1515	BLEN								
	0804 1400	POTS	1008.5	1008.9	III	G	1	170U	575	
	0658 1200	IZMI	1008.6	1008.9	III	G	2	170	270X	
	0818 1405	ONDR	1100.3	1101.2		DCIM	1	2420	4500X	
		POTS	1158.4	1211 U	II		3	75	170U	UE, H
		IZMI	1158.5	1200.0D	II		2	90	170U	
		SVTO	1159.0	1200.0	III		1	60	170	
		IZMI	1159.1	1159.7	III	G	2	85	190	
		SGMR	1300.0	1301.0	III		1	30	55	
	2000 2400	CULG								
	2145 2400	HIRA								
20	0000 0751	HIRA								
		LEAR	0645.0	0645.0	III		1	25	63	
	0000 0755	CULG	0645.0	0645.0	III	B	1	30	80	
	0700 1200	IZMI	0801.6	0803.8	III	G	1	45	70	
	0817 1407	ONDR								
	0840 1515	BLEN	1236.6	1238.6	III	GG,RS	2	1415X	3900	
	0800 1406	POTS	1400.4	1405.3	III	G	2	110U	170U	
		HOLL	1840.0	1853.0	II		2	25	180	ESS 0760
		PALE	1842.0	1853.0	II		3	25	180	ESS 0610
		SGMR	1842.0	1853.0	II		3	30	80	ESS 0700
	2000 2400	CULG	2110.0	2158.0	IV		1	30U	1600	
		CULG	2112.0	2121.0	II		3	18X	160	ESS 1600
		HOLL	2112.0	2149.0	II		2	25	180	ESS 1350
		CULG	2113.0	2122.0	II		3	20	250	
		PALE	2113.0	2125.0	II		2	25	180	ESS 0800

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

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JANUARY 2001

OBSERVATION		Sta	EVENT		Event Remarks	Int (1-3)	FREQUENCY		Remarks	
Start Day (UT)	End (UT)		Start (UT)	End (UT)			Spectral Class	Lower (MHz)		Upper (MHz)
20		SGMR	2114.0	2116.0	II		30U	70U	ESS 1300	
		CULG	2117.0	2126.0	II	SH,H	55	180		
		CULG	2118.0	2126.0	II	FN	20	90	ESS 800	
		CULG	2123.0	2135.0	III	G	23	150		
	2145	2400	HIRA							
21	0000	LEAR	0015.0	0017.0	III		25	92		
		CULG	0015.0	0017.0	III	G	30	160		
		CULG	0433.0	0436.0	III	G	23	160		
		LEAR	0434.0	0434.0	III		25	180		
		LEAR	0630.0	0630.0	III		25	105		
	0700	1200	CULG	0631.0	0631.0	III	B	23	100	
			CULG	0702.0	0702.0	III	B	28	120	
			IZMI	0702.1	0702.6	III	G	45	150	
			IZMI	0729.6	0729.8	III	B	45	100	
			CULG	0745.0	0747.0	III	G	18	350	
	0000	0752	LEAR	0745.0	0747.0	III		25	180	
			SVTO	0745.0	0746.0	III		25	166	
			IZMI	0745.3	0747.0	III	GG,FS	35	270X	
			HIRA	0745.5	0746.5	III	G	70	300	
			ONDR							
	0815	1409	ONDR							
	0825	1520	BLEN							
	0800	1400	LEAR	0903.0	0905.0	III		25	146	
			SVTO	0903.0	0905.0	III		25	131	
			IZMI	0903.3	0903.5	III	G	40	160	
			IZMI	0904.8	0905.1	III	G	45	145	
			IZMI	0928.9	0929.6	III	G	40	160	
			POTS	0928.9	0929.1	III	B	40X	90U	110-800 MHz no obs
			LEAR	1027.0	1027.0	III		25	180	
			SVTO	1027.0	1027.0	III		25	133	
			IZMI	1027.1	1028.0	III	GG	45	270X	
			POTS	1027.2	1027.4	III	B	40X	90U	
			IZMI	1047.0	1047.8	III	G	45	190	
			IZMI	1051.0	1052.0	III	G	40	90	
			SVTO	1151.0	1151.0	III		25	180	
			IZMI	1151.4	1151.9	III	GG,C	25	270X	
			POTS	1151.4	1152.0	III	G	3	40X	350U
			POTS	1205.4	1205.6	III	G	2	40X	90U
			POTS	1221.9	1223.8	III	G	2	40X	90U
			SVTO	1222.0	1224.0	III		1	25	82
POTS			1223.8	1224.3	V		2	40X	55	
HOLL			1916.0	1923.0	III		1	25	120	
PALE	1916.0	1936.0	III	N	1	25	95			
2144	2400	HIRA								
2000	2400	CULG	2151.0	2151.0	III	B	60	120		
		CULG	2217.0	2330.0	I	S	110	180		
		LEAR	2218.0	2314.0	CONT		108	180		
22	0000	LEAR	0330.0	0330.0	III		25	180		
		PALE	0330.0	0330.0	III		25	180		
		HIRA	0330.0	0330.5	III	B	50	280		
	0000	0755	CULG	0330.0	0330.0	III	B	18	180	
			LEAR	0420.0	0525.0	CONT		88	180	
			CULG	0643.0	0645.0	III	G	18	250	
			HIRA	0643.0	0644.5	III	G	50	210	
			LEAR	0643.0	0644.0	III		25	180	
			SVTO	0643.0	0644.0	III		25	154	
	0703	1200	IZMI							
	0814	1412	ONDR							
	0825	1520	BLEN							
	0750	1401	SVTO	1245.0	1248.0	III		25	132	
			POTS	1245.1	1249.0	III	G	3	40X	150U
	2143	2400	HIRA						110-800 MHz no obs	
	2000	2400	CULG	2250.0	2250.0	III	B	23	90	
	23	0000	LEAR	0434.0	0435.0	III		25	180	
			CULG	0434.0	0436.0	III	G	18X	280	
0700		1200	HIRA	0434.5	0436.0	III	G	25X	300	
			IZMI	0751.3	0751.5	III	B	45	90	

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JANUARY 2001

OBSERVATION			EVENT					FREQUENCY		Remarks	
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)
23			IZMI	0807.0U	0835.0U	I	S	2	45	270X	
	0812	1413	ONDR								
	0825	1520	BLEN								
			IZMI	0854.8	0855.2	UNCLF		1	45	65	
	0750	1411	POTS	0858.1	0900.5	III	B	1	110U	150	
			IZMI	0901.4	0903.5	III	G	1	45	70	
			POTS	1004.7	1004.8	III	B	1	110U	150	
			SVTO	1246.0	1248.0	III		1	31U	155U	
			POTS	1246.3	1250.0	III	G	3	40X	170U	
			POTS	1257.1	1257.3	III	B	2	110U	250	
			POTS	1405.7	1410.0	III	GG	2	40X	350	
			SVTO	1406.0	1407.0	III		1	31U	170U	
			SGMR	1407.0	1407.0	III		2	30	80	
	2000	2400	CULG	2013.0	2016.0	III	G	1	28	80	
	2200	2400	HIRA								
24	0000	0755	CULG								
	0000	0756	HIRA								
	0701	1200	IZMI								
	0810	1415	ONDR								
	0825	1520	BLEN								
	0750	1414	POTS	1149.7	1151.5	III	G	1	200U	400	110-170 MHz no obs
			POTS	1215.0	1215.2	III	B	2	40X	90U	
	2143	2400	HIRA								
	2000	2400	CULG	2143.0	2143.0	III	B	1	100	180	
25			LEAR	0328.0	0330.0	III		1	25	150	
	0000	0755	CULG	0328.0	0330.0	III	G	1	30	160	
	0000	0757	HIRA	0328.5	0330.5	III	G	1	30	280	
	0658	1200	IZMI								
	0809	1418	ONDR								
	0825	1520	BLEN								
	0750	1413	POTS	1125.3	1125.4	III	B	1	110U	170U	
			POTS	1154.8	1154.9	III	G	1	110U	170U	
			POTS	1213.8	1219.4	III	GG	3	40X	350	
			SVTO	1217.0	1218.0	III		1	34	167	
			POTS	1217.7	1218.4	V		3	55	75	
			POTS	1243.2	1248.1	III	G	1	110U	250	
			POTS	1300.9	1301.4	III	B	1	110U	170U	
			POTS	1357.2	1357.3	III	G	2	110U	250	
	2000	2400	CULG								
	2143	2400	HIRA								
26			LEAR	0601.0	0603.0	III		1	25	136	
	0000	0755	CULG	0601.0	0603.0	III	G	1	18	140	
			LEAR	0604.0	0605.0	III		3	25	180	
			LEAR	0604.0	0617.0	II		2	39	180	ESS 0534
			HIRA	0604.5	0615.0	II		3	90	220	
	0000	0758	HIRA	0604.5	0605.5	III	B	3	40	270	
			CULG	0605.0	0606.0	III	G	3	20	300	
			CULG	0606.0	0615.0	II	FN	3	40	90	
			CULG	0606.0	0616.0	II	SH	3	70	190	ESS 500
			CULG	0622.0	0625.0	III	G	1	28	75	
			CULG	0746.0	0746.0	III	B	1	23	80	
	0703	1200	IZMI	0746.0	0746.2	III	G	1	45	95	
	0750	1420	POTS	0851.2	0852.7	DCIM		2	200U	750	110-170 MHz no obs
			IZMI	0851.3	0852.6	III	GG,C	2	115	270X	
	0825	1520	BLEN	0851.3	0854.0	DCIM	C	3	1415X	4000X	
			ONDR	0851.4	0852.4	DCIM	GG	1	800X	2000X	
	0807	1420	ONDR	0851.4	0853.2	DCIM	G	2	2000X	4500X	
			IZMI	1146.2	1155.3	III	S	1	45	95	
			IZMI	1153.7	1153.8	III	G	1	65	190	
			IZMI	1155.5	1200.9D	II	G	2	40U	105	
			SVTO	1157.0	1201.0	III		2	25U	84U	
			SVTO	1157.0	1207.0	II		2	25U	84U	ESS 0676
			POTS	1157.1	1209.6U	II	UE,H	3	40X	90U	
			IZMI	1157.8	1159.7	II	HARM,SF	2	32U	120	
			IZMI	1159.3	1159.7	III	N	2	40	160	
			POTS	1245.6	1245.9	UNCLF		2	40X	65	

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

JANUARY 2001

OBSERVATION Day	Start End (UT) (UT)		Sta	Start (UT)	End (UT)	EVENT Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower Upper (MHz) (MHz)		Remarks
	Day	Start							End	Lower		Upper
30	0750	1428	POTS	0803	1422	U I	S,W	1	110U	250	
	0825	1530	BLEN								
	2139	2400	HIRA	1257.6	1257.8	III	B	1	110U	250	
	2000	2400	CULG	2153.0	2153.0	III	B	1	18	80	
			HOLL	2215.0	2216.0	III		2	25	90	
			CULG	2216.0	2216.0	III	B	1	20	90	
			CULG	2220.0	2400.0	III	S	1	40U	90	
31	0000	0802	HIRA								
	0000	0755	CULG	0602.0	0602.0	III	B	1	60U	90	
	0750	1430	POTS	0750	1420	U I	S,W	1	200U	300	
	0758	1431	ONDR								
	0825	1530	BLEN								
	0701	1200	IZMI	0905.6	0906.7	III	GG	2	40	95	
			POTS	1209.7	1210.0	III	B	2	40X	90U	110-170 MHz no obs
			POTS	1239.7	1239.8	III	B	1	325	400	
			POTS	1335.3	1335.5	III	B	1	40X	70	
	2000	2400	CULG								
	2138	2400	HIRA								

Event Remarks:

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

Frequency qualifiers:

X = Extends beyond instrument range
U = Uncertain frequency

Remarks:

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

Stations Reporting:

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

SOLAR RADIO NOISE STORM AT 164 MHZ**FROM NANCAY RADIOHELIOGRAPH**

JANUARY 2001

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES ¹		IMP ²	OBSERVING TIME ³	
	E-W	S-N		START(UT)	END(UT)
01/01/01*	+0.23	-0.60	I	11H17	14H58 D
02/01/01*	+0.11	-0.19	I	8H24 E	13H00
06/01/01*	-0.36	+0.05	II	8H26 E	15H27 D
06/01/01*	+1.35	+0.03	III	8H26 E	15H27 D
07/01/01*	-0.19	+0.09	III	8H26 E	15H27 D
08/01/01*	-0.11	+0.02	III	8H27 E	15H28 D
11/01/01*	-0.31	+0.16	I	9H34 E	15H29 D
12/01/01*	-0.16	+0.17	I	9H08 E	15H30 D
13/01/01*	+0.39	+0.20	III	8H28 E	15H22 D
14/01/01*	+0.03	+0.17	I	8H29 E	15H30 D
14/01/01*	+0.47	+0.16	I	8H29 E	15H30 D
15/01/01*	+0.85	+0.33	II	8H29 E	15H03D
16/01/01*	+0.53	+0.06	I	8H59 E	11H30
16/01/01*	+1.16	+0.33	I	8H59 E	15H31 D
22/01/01	-0.12	+0.08	I	13H00	15H33 D
25/01/01	-0.54	+0.06	I	9H46 E	14H30
26/01/01	-1.02	+0.51	I	8H32 E	15H33 D
26/01/01	-0.22	+0.33	I	8H32 E	15H33 D
27/01/01*	-0.81	+0.53	I	8H33 E	13H00
27/01/01*	-0.03	+0.23	I	8H33 E	15H34 D
28/01/01*	+0.26	+0.6	I	8H33 E	15H34 D
29/01/01	+0.54	+0.20	I	8H33 E	15H34 D
29/01/01	+0.99	+0.11	I	8H33 E	15H34 D
30/01/01	+1.22	+0.05	II	8H33 E	15H34 D

¹ POSITIVE E-W AND S-N COORDINATES CORRESPOND TO THE N-W QUADRANT² IMP1: FLUX < 5 SFU IMP2: 5 < FLUX < 20 SFU IMP3: 20 < FLUX < 100 SFU

IMP4: 100 < FLUX < 300 SFU IMP5 > 300 SFU

³ E NOISE STORM IN PROGRESS AT THE BEGINNING OF THE NANCAY OBSERVATIONS

D NOISE STORM IN PROGRESS AT THE END OF THE NANCAY OBSERVATIONS

**NOISE STORM AT 327 MHZ
FROM NANCAY RADIOHELIOGRAPH
JANUARY 2001**

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES ¹		IMP ²	OBSERVING TIME ³	
	E-W	S-N		START(UT)	END(UT)
01/01/01*	+0.16	-0.11	II	8H23 E	14H58 D
02/01/01*	+0.33	+0.08	I	8H24 E	15H25 D
03/01/01*	+0.65	-0.05	III	8H24 E	15H25 D
04/01/01*	+0.88	-0.08	I	8H25 E	14H39 D
05/01/01*	+0.45	+0.50	I	8H25 E	15H26 D
05/01/01*	+0.98	-0.03	I	8H25 E	15H26 D
06/01/01*	-0.36	+0.16	I	8H26 E	15H27 D
06/01/01*	+0.99	+0.02	II	8H26 E	15H27 D
06/01/01*	+1.26	+0.03	II	8H26 E	15H27 D
07/01/01*	-0.23	+0.23	II	8H26 E	15H27 D
07/01/01*	+1.30	-0.05	I	8H26 E	15H27 D
08/01/01*	+0.02	+0.17	III	8H27 E	15H28 D
11/01/01*	-0.74	+0.42	I	9H34 E	14H00
11/01/01*	-0.45	+0.28	II	9H34 E	15H29 D
12/01/01*	-0.23	+0.22	II	9H08 E	15H30 D
13/01/01*	+0.16	+0.16	I	14H20	15H22 D
13/01/01*	+0.29	+0.23	III	8H28 E	15H22 D
14/01/01*	+0.23	+0.60	I	8H29 E	15H30 D
14/01/01*	+0.60	+0.19	II	8H29 E	15H30 D
15/01/01*	+0.82	+0.23	III	8H29 E	15H03 D
16/01/01*	+0.67	+0.37	I	8H59 E	15H31 D
16/01/01*	+1.09	+0.19	I	8H59 E	15H31 D
17/01/01*	+1.19	+0.16	I	8H30 E	15H31 D
22/01/01	+0.12	-0.25	I	10H11 E	15H33 D
22/01/01	+0.95	+0.19	II	10H11 E	15H33 D
24/01/01	-1.04	+0.37	I	8H32 E	15H33 D
24/01/01	-0.70	+0.09	I	8H32 E	15H33 D
25/01/01	-0.99	+0.22	I	9H46 E	15H34 D
25/01/01	-0.50	+0.02	II	9H46 E	15H34 D
26/01/01	-0.93	+0.23	I	8H32 E	15H33 D
26/01/01	-0.26	+0.11	I	8H32 E	15H33 D
27/01/01*	-0.03	+0.11	I	8H33 E	15H34 D
27/01/01*	+0.59	+0.67	I	8H33 E	15H34 D
28/01/01*	+0.56	+0.08	I	8H33 E	15H34 D
28/01/01*	+1.02	+0.02	I	12H45	15H34 D
29/01/01	+0.51	+0.12	I	8H33 E	15H34 D
29/01/01	+0.84	+0.03	I	8H33 E	15H34 D
30/01/01	+1.01	-0.02	I	8H33 E	15H34 D

18, 21 JANUARY: NO DATA

OTHERS DAYS: NO DETECTABLE NOISE STORM

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

** Due to the onset of the strongest storm at 13H15, the end time cannot be determined.

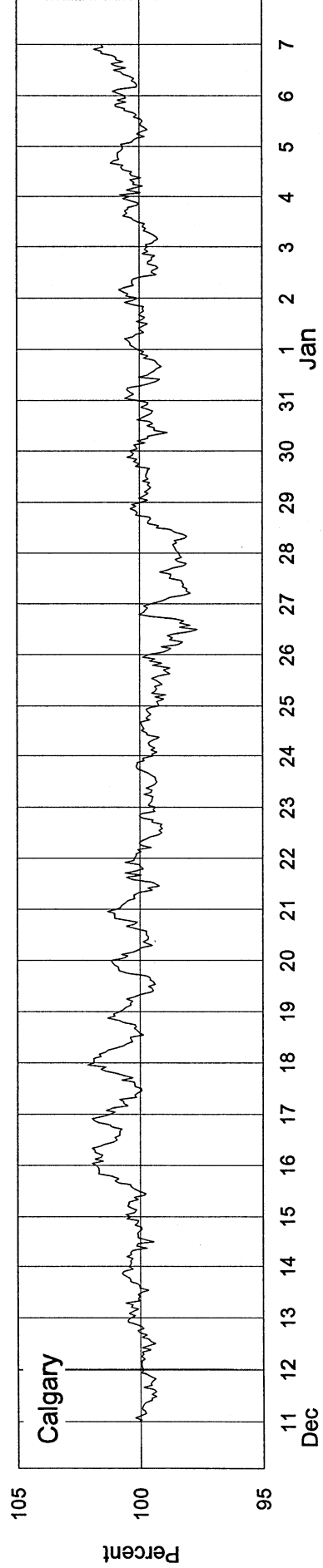
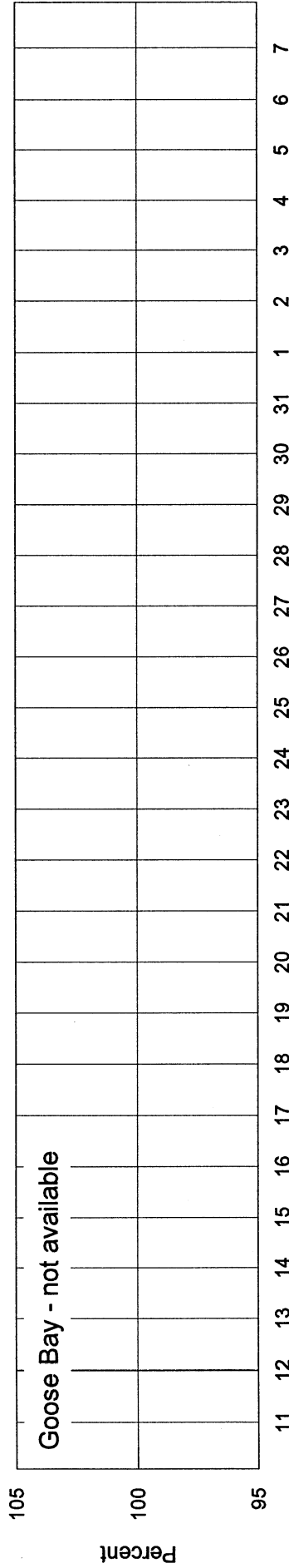
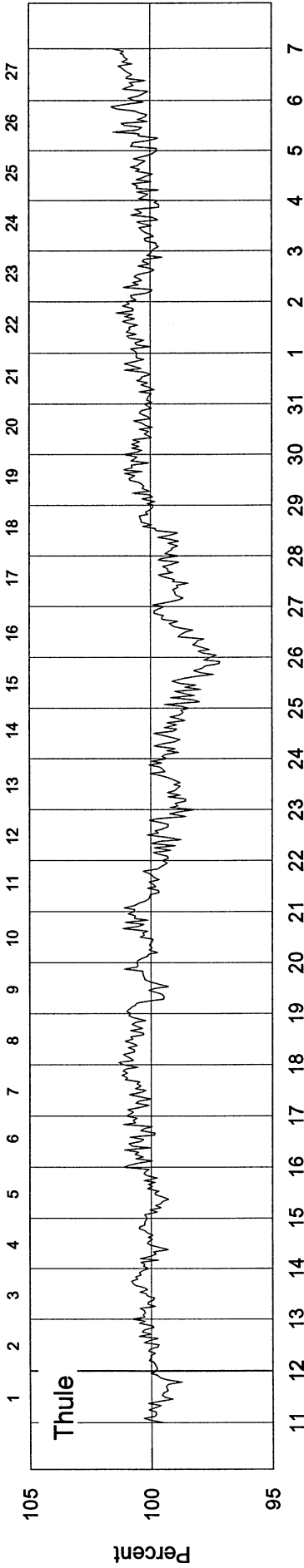
COSMIC RAY INDICES
(Neutron Monitor)
January 2001

Day	THULE Average (cts/h)/100	GOOSE BAY Average (cts/h)/100	CALGARY Average (cts/h)/300	KIEL Average (cts/h)/100	MOSCOW Average (cts/h)/64	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	4044.0	not	3480.8	5631.5	8297.8	3713.2	1941.6	3515.0
2	4027.1	available	3474.7	5615.2	8282.5	3698.8	1941.8	3501.2
3	4016.7		3476.8	5621.6	8271.0	3688.2	1961.9	3510.9
4	4025.7		3496.0	5623.2	8283.3	3690.6	1958.4	3515.3
5	4035.6		3487.3	5614.4	8270.1	3691.7	1953.4	3507.0
6	4048.0		3506.0	5626.5	8278.7	3703.8	1942.6	3513.8
7	4050.5		3522.3	5637.5	8275.7	3718.5	1942.1	3518.1
8	4053.8		3504.8	5627.8	8282.0	3707.4	1944.8	3517.3
9	4041.2		3493.8	5624.7	8267.2	3710.4	1951.6	3521.0
10	4035.2		3515.5	5640.6	8293.5	3724.6	1956.9	3517.0
11	4047.4		3524.2	5652.7	8291.6	3728.3	1961.2	3522.1
12	4064.0		3562.3	5691.5	8367.1	3774.4	1978.3	3542.1
13	4019.7		3544.7	5677.4	8366.1	3758.0	1982.9	3523.9
14	4009.3		3540.5	5639.4	8343.7	3735.2	1979.1	3519.9
15	4021.6		3549.2	5635.0	8303.1	3741.8	1977.9	3528.1
16	4001.5		3526.7	5641.2	8316.1	3742.0	1971.2	3527.8
17	4005.2		3504.3	5626.0	8319.5	3708.3	1955.0	3511.1
18	3995.7		3500.0	5611.5	8322.5	3701.9	1951.2	3503.6
19	3998.0		3505.8	5624.7	8342.0	3704.6	1953.4	3517.5
20	4010.7		3531.3	5652.5	8411.8	3734.7	1975.8	3534.8
21	4024.1		3542.2	5675.5	8444.2	3741.2	1977.0	3546.2
22	4007.0		3529.7	5648.3	8412.3	3711.5	1968.8	3534.0
23	4010.8		3509.7	5632.5	8399.2	3693.8	1958.8	3519.3
24	3932.8		3467.5	5533.5	8207.9	3648.1	1948.7	3512.9
25	3941.1		3462.8	5542.5	8210.2	3656.3	1949.3	3513.1
26	3956.5		3480.8	5577.5	8228.2	3673.8	1952.5	3522.8
27	3976.9		3502.0	5621.5	8259.2	3707.5	1960.5	3531.4
28	4002.7		3514.7	5652.7	8309.4	3736.4	1963.0	3536.1
29	4021.0		3499.0	5636.7	8330.6	3722.9	1956.5	3531.7
30	4033.0		3521.7	5645.2	8380.9	3720.9	1948.8	3527.0
31	4003.6		3518.8	5627.7	8353.2	3720.5	1956.0	3535.9
Mean	4014.0		3509.5	5629.3	8313.6	3713.2	1958.7	3521.9

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

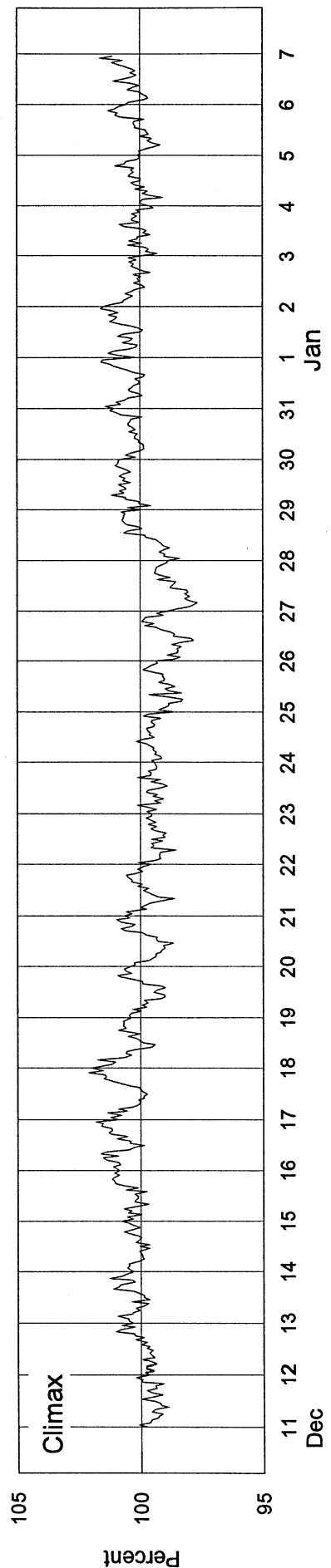
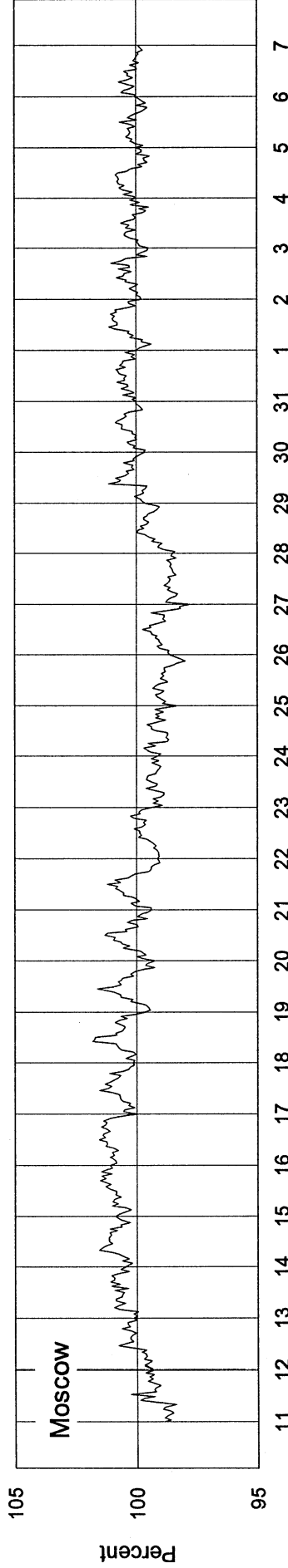
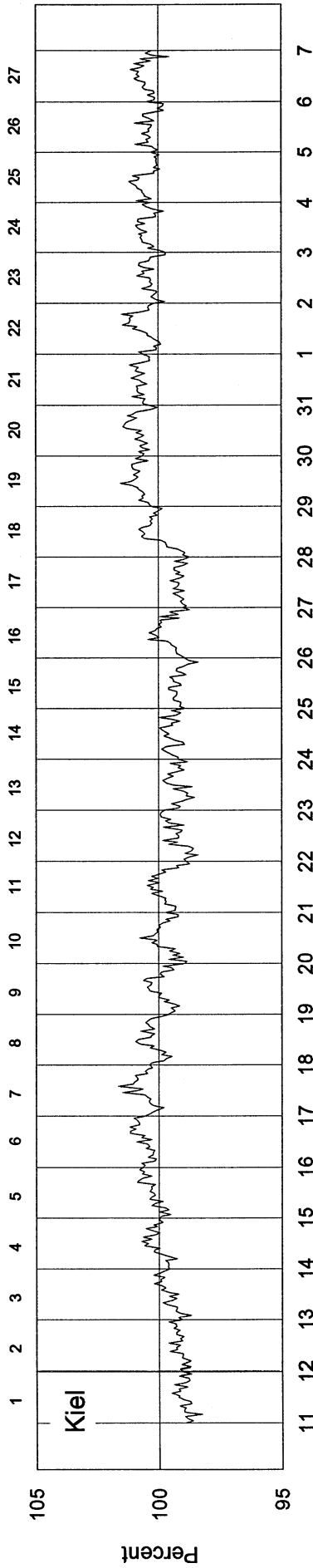
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2285 - Beginning 11 Dec 2000



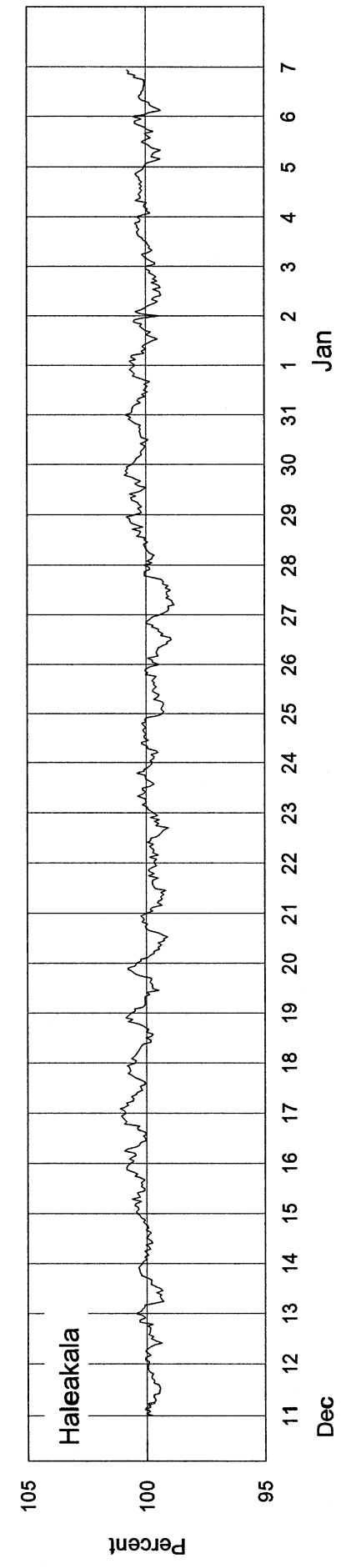
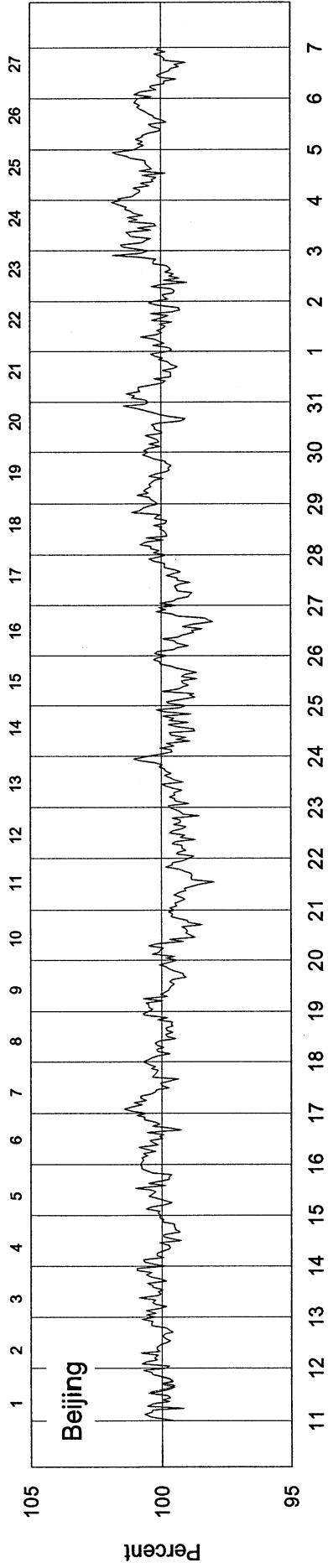
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2285 - Beginning 11 Dec 2000



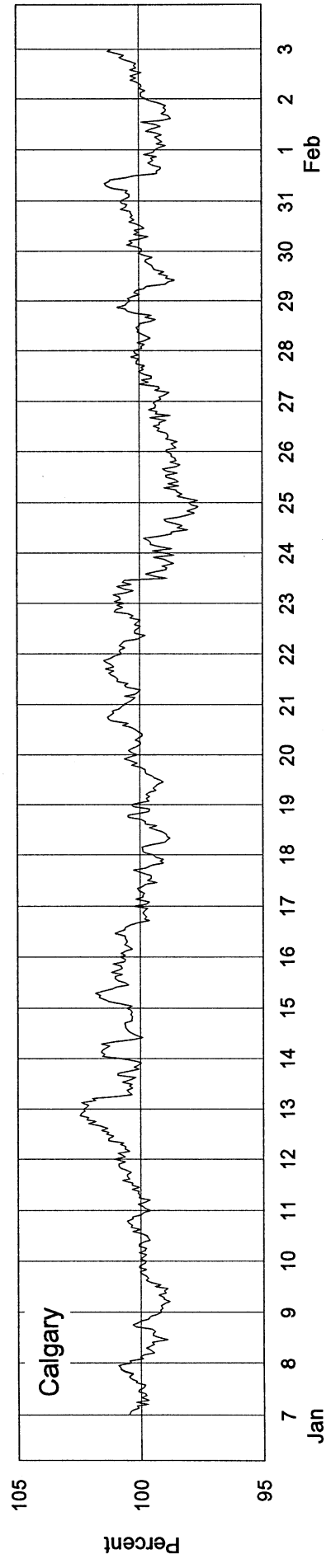
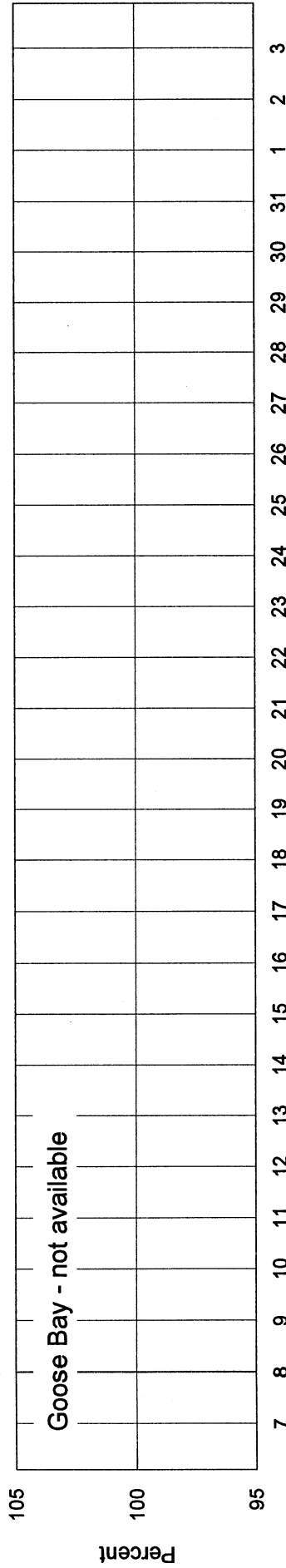
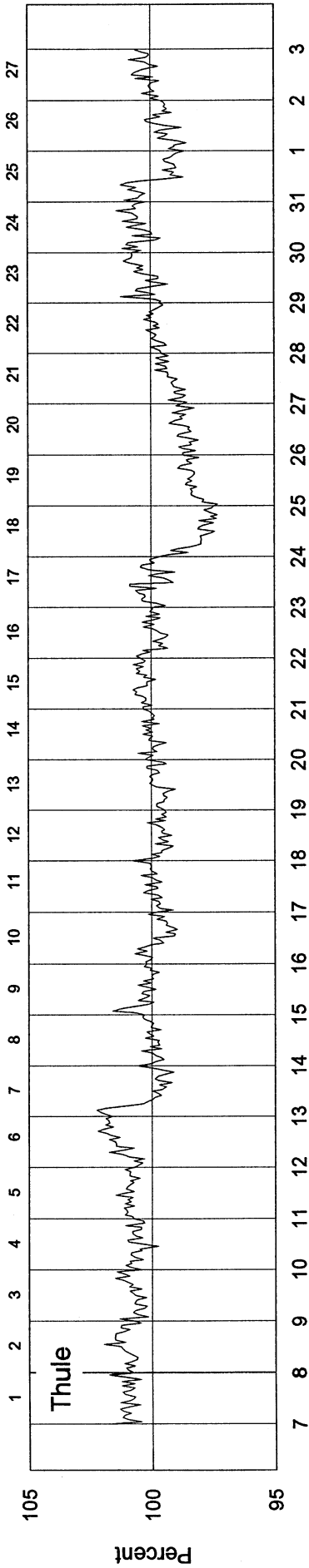
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2285 - Beginning 11 Dec 2000

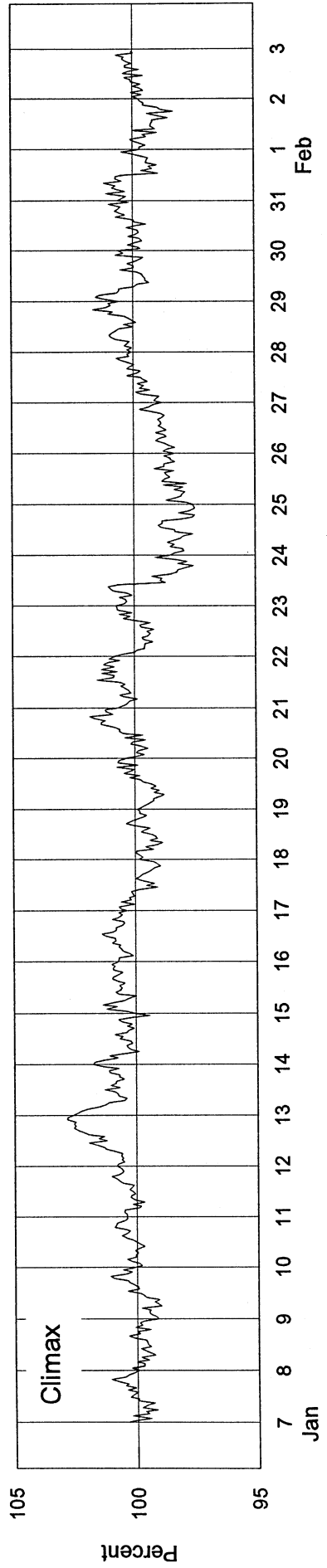
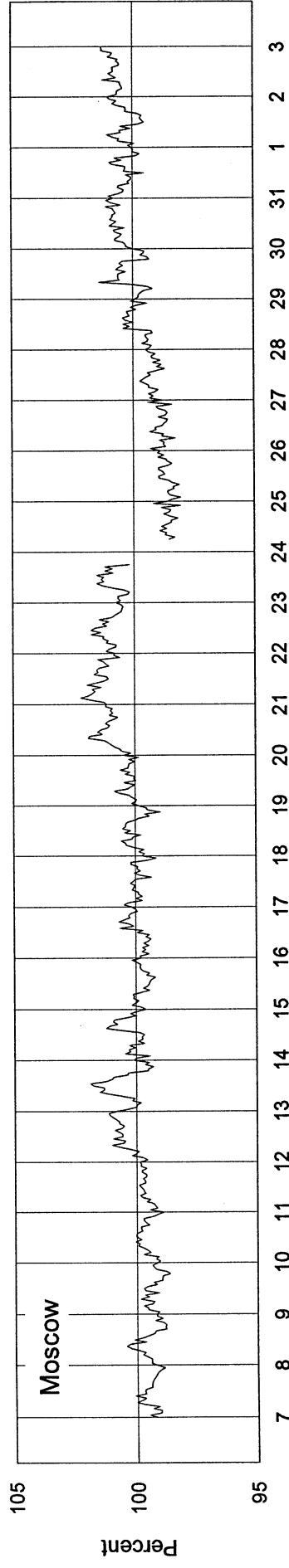
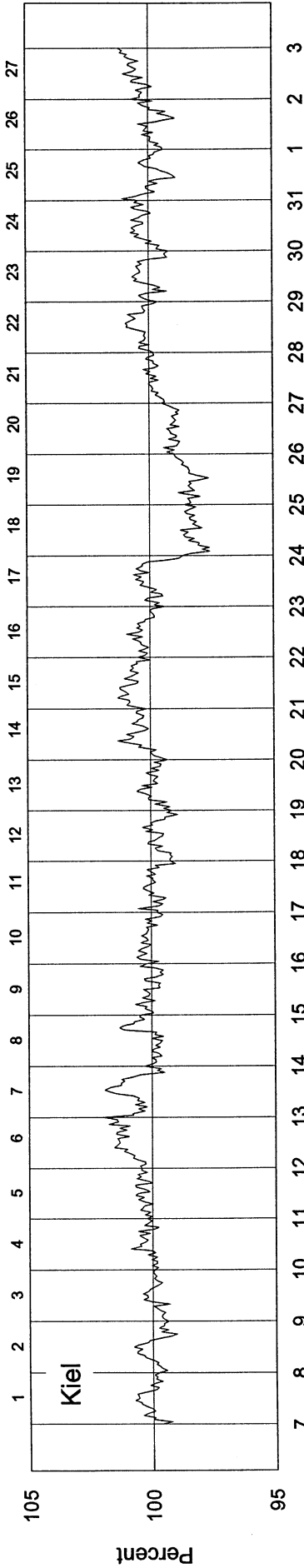


COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2286 - Beginning 7 Jan 2001

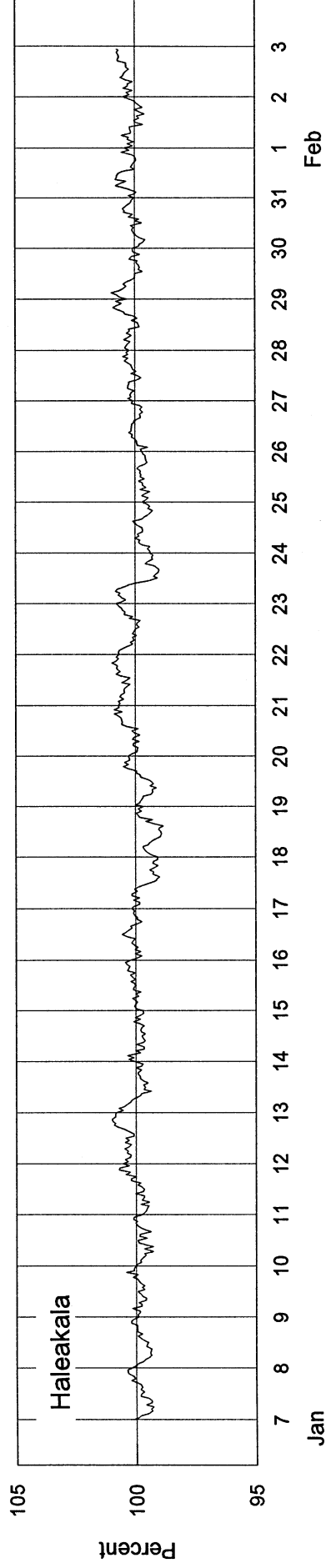
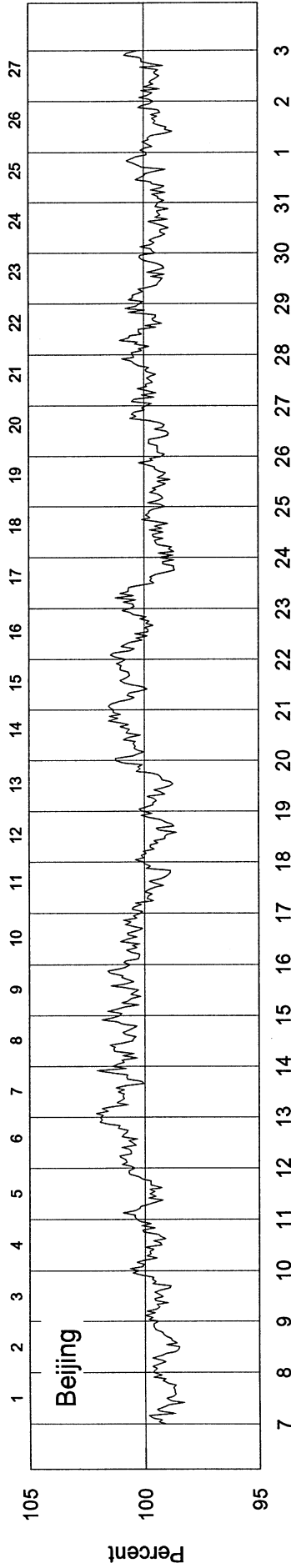


COSMIC RAY INDICES (Neutron Monitor) Bartels Rotation 2286 - Beginning 7 Jan 2001

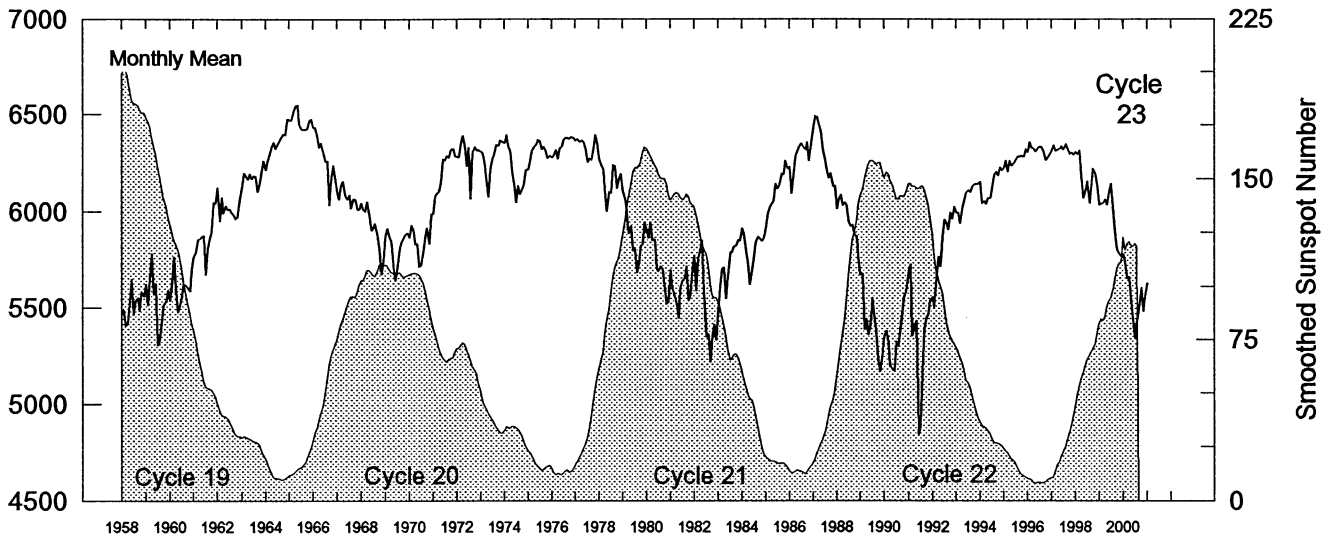


COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2286 - Beginning 7 Jan 2001



Kiel Neutron Monitor Pressure-Corrected Values Jan 1958 - Jan 2001



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1958	5481	5488	5409	5417	5523	5651	5466	5538	5553	5485	5584	5561	5513
1959	5623	5515	5659	5783	5569	5625	5307	5328	5420	5518	5536	5593	5540
1960	5539	5628	5764	5596	5480	5509	5557	5628	5620	5607	5586	5692	5601
1961	5766	5793	5853	5856	5872	5874	5672	5804	5859	5898	6046	6041	5861
1962	6122	5949	6072	5989	6030	6010	6013	5991	5982	5963	5971	6052	6012
1963	6125	6197	6191	6163	6194	6168	6185	6182	6103	6133	6197	6260	6175
1964	6215	6253	6287	6331	6355	6321	6347	6366	6383	6399	6393	6475	6344
1965	6474	6469	6506	6542	6545	6451	6424	6420	6423	6424	6467	6475	6468
1966	6433	6432	6375	6330	6353	6300	6258	6258	6033	6168	6236	6172	6279
1967	6101	6061	6139	6155	6088	6061	6086	6016	6064	6063	6014	6009	6071
1968	6041	6011	6001	6048	5997	5901	5910	5937	5878	5805	5673	5739	5912
1969	5876	5909	5872	5845	5686	5640	5700	5812	5843	5864	5879	5887	5818
1970	5863	5928	5906	5830	5831	5716	5719	5803	5885	5915	5832	5985	5851
1971	5985	6081	6094	6103	6151	6268	6265	6286	6275	6314	6322	6288	6203
1972	6281	6278	6351	6387	6344	6232	6328	6065	6306	6334	6313	6318	6295
1973	6309	6298	6250	6155	6074	6220	6271	6296	6341	6340	6365	6360	6273
1974	6353	6391	6331	6308	6201	6139	6047	6132	6090	6113	6139	6215	6205
1975	6217	6267	6308	6334	6341	6370	6363	6320	6334	6313	6272	6286	6310
1976	6275	6281	6314	6269	6325	6331	6370	6380	6379	6375	6383	6380	6339
1977	6366	6371	6355	6366	6357	6322	6254	6272	6263	6317	6391	6355	6332
1978	6271	6242	6215	6113	5998	6101	6095	6241	6232	6117	6167	6193	6165
1979	6104	6063	6006	5883	5923	5794	5806	5682	5723	5820	5827	5942	5881
1980	5905	5862	5942	5850	5854	5702	5690	5717	5704	5611	5522	5528	5741
1981	5697	5600	5569	5517	5447	5600	5642	5650	5717	5539	5564	5702	5604
1982	5772	5586	5755	5799	5848	5582	5347	5362	5217	5349	5414	5329	5530
1983	5481	5606	5702	5711	5549	5659	5787	5785	5814	5820	5852	5849	5718
1984	5911	5880	5799	5740	5622	5706	5753	5837	5867	5856	5844	5864	5807
1985	5911	5986	6016	6038	6049	6142	6114	6135	6193	6192	6260	6220	6105
1986	6229	6093	6176	6280	6308	6336	6350	6331	6315	6356	6259	6359	6283
1987	6429	6489	6484	6443	6410	6319	6273	6217	6171	6198	6131	6131	6308
1988	6013	6064	6085	6030	6047	6033	5945	5922	5931	5880	5872	5761	5965
1989	5673	5678	5385	5441	5360	5407	5552	5460	5378	5228	5167	5241	5414
1990	5348	5381	5313	5197	5177	5173	5324	5297	5382	5471	5563	5584	5351
1991	5696	5726	5355	5405	5431	4841	4882	5162	5390	5443	5466	5540	5361
1992	5553	5500	5624	5766	5713	5869	5956	5942	5905	5994	5960	6024	5817
1993	5996	5992	5937	6026	6061	6094	6108	6099	6129	6137	6142	6141	6072
1994	6150	6042	6052	6067	6070	6068	6129	6189	6203	6183	6226	6209	6132
1995	6225	6260	6205	6260	6234	6250	6267	6279	6281	6285	6279	6319	6262
1996	6301	6354	6330	6324	6306	6325	6332	6331	6303	6262	6277	6294	6312
1997	6313	6337	6313	6314	6324	6336	6317	6347	6319	6295	6301	6289	6317
1998	6305	6293	6312	6177	6069	6101	6154	6042	6149	6220	6190	6124	6178
1999	6034	6040	6041	6062	6032	6100	6140	6023	5898	5805	5780	5765	5977
2000	5778	5729	5650	5661	5537	5441	5339	5425	5487	5602	5481	5542	5556
2001	5629												5629

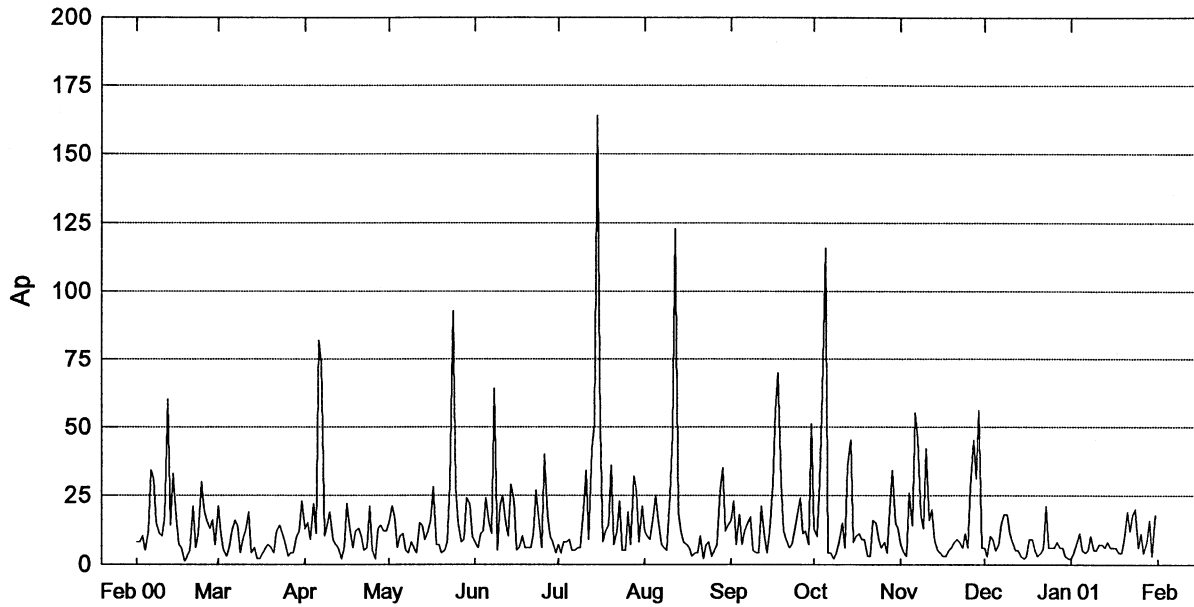
Multiply table entries by 100 to obtain hourly counting rate. Kiel, Germany: N54, E10, Alt= 54 m, Cutoff Rigidity= 2.32GV.

Geomagnetic Activity Indices January 2001

Day	Kp Three-Hourly Indices									Sum	Ap	Cp	Km Three-Hourly Indices								Am	aa Provisional						
	1	2	3	4	5	6	7	8	1				2	3	4	5	6	7	8	N		S	M					
1	Q1	0	0+	1	1	0+	0+	1-	1-	4+	2	0.0	0+	1-	1+	1+	0+	0+	1o	1+	6	4	9	8	6	CC		
2	Q4	1+	0+	0	0	1-	0+	1	3-	6+	4	0.1	1+	0+	0+	0o	1o	1o	2-	3o	8	10	10	4	15	KK		
3		2+	4-	2+	2+	2+	1-	1-	1	15+	8	0.5	3-	3+	2+	3-	3-	1o	1o	2-	19	17	23	26	14			
4		2+	1+	3	2+	3	3	2+	2+	20-	11	0.6	2o	1+	3-	3-	3o	3+	2+	3-	22	25	28	23	30			
5	Q9K	2-	1-	1-	0+	1-	0+	1+	3	9-	5	0.2	1+	1-	1-	0+	1+	1-	2-	3o	9	15	8	7	16	K		
6	Q3	2	1	1	1-	1	1	0+	1	8	4	0.1	1+	1+	1+	1o	1+	2-	1-	1+	8	6	13	10	9	CK		
7	Q8	2	2-	1+	1-	0+	1	1	2	10	5	0.2	2-	1o	2-	1-	1-	1+	2-	2o	9	13	9	10	12	CC		
8		2	2	1	2-	1	2	4	4-	17+	10	0.6	2-	2-	1o	1+	1+	2+	4-	4-	20	31	18	14	35			
9	Q10	2	1-	1	2-	2-	1	1+	1+	11-	5	0.2	2-	1-	1o	2-	2+	1+	2o	1+	11	9	13	11	11	C		
10		0+	0+	0+	0+	1	3	2	2+	10-	5	0.2	1-	0+	0+	1-	1+	3-	2+	3-	12	9	13	5	17	CC		
11		2-	0+	1-	1	2-	3-	3-	3-	13+	7	0.4	2-	0+	1-	1o	2o	3-	3-	3-	14	17	15	9	24			
12		3+	3	3-	2-	1	0+	0	0+	12+	7	0.4	3-	3-	2-	2+	2-	1-	1-	1-	13	12	13	19	6	K		
13		1	1	2-	2+	3-	1+	1-	1+	12	6	0.3	2-	1o	2-	2+	3o	2-	2-	2-	14	11	16	17	10	K		
14		2+	3-	2+	2-	1	1	2+	2	15+	8	0.4	2-	2+	2o	2o	1+	1+	3-	2+	15	19	15	18	16			
15		1-	0	1+	2	2+	1+	2-	3	12+	6	0.3	1o	0+	1+	2+	3-	2-	2+	3o	14	12	17	11	19	K		
16		1	0+	1+	1+	3	2-	1	1	11-	6	0.3	1o	0+	1+	2-	3o	2-	2-	1-	11	12	15	8	21			
17		3	2-	1-	0+	1+	2+	2	1+	13-	6	0.3	2o	1+	1o	1-	1+	3-	3-	2-	13	15	15	11	19			
18	Q6	0	0	1+	2	1+	1-	1	2	8+	4	0.1	1-	0+	2-	2o	1+	1-	2-	2-	9	11	16	14	13	KK		
19	Q5	2-	1+	0+	0	1	1	1+	2	9-	4	0.1	1+	2-	1-	0+	1o	1-	2-	2-	8	8	10	8	10	CC		
20		1-	1-	3-	2+	2+	2+	3-	3+	17	9	0.5	1-	1-	3o	2o	3o	2+	3o	3o	20	20	25	16	29			
21	D2*	2+	3-	3-	4	3+	4-	4-	4	26+	19	1.0	2+	2o	3o	4-	3o	4-	4-	4o	36	41	36	27	51			
22		4-	3+	2+	2+	2+	3-	2	3-	21+	12	0.7	3o	3-	3-	3-	2+	3o	2+	3-	24	27	24	29	22			
23	D4*	2	2-	0+	4	3	3+	5-	4	23	18	1.0	2o	2o	1o	4-	3o	3+	5-	4o	34	44	31	22	53			
24	D1	3-	3	1	3+	4	4	5-	3	26-	20	1.0	3-	2+	1o	3+	4o	4o	5-	3-	38	33	38	24	48			
25		2-	1+	1-	1-	0+	2-	3-	2	11	6	0.2	2o	1+	1o	1-	0+	2-	3-	2+	11	12	10	10	12	C		
26		2	2+	4-	3-	2	2	2+	3-	20-	11	0.6	2o	2-	4-	2+	2+	2+	2+	3-	20	21	24	26	19			
27	Q7	2+	2	1	1-	1-	1-	1-	1-	9-	4	0.2	2o	2-	1+	1o	1-	1-	1o	1-	8	9	9	10	8	CC		
28		0+	1	1+	2	3	2	3	3-	15	8	0.4	1-	1o	2-	2o	3-	3-	3+	3o	18	16	24	12	28			
29	D5*	5-	5	2	1+	1	1	2+	3-	20	16	0.9	4-	4-	2+	2-	1o	1+	2+	3-	23	24	20	30	14			
30	Q2	2	2	0+	0+	0+	1-	0	0	6-	3	0.1	2o	2+	1-	1-	0+	1o	0o	0+	7	6	9	10	5	C		
31	D3*	0+	1-	4	4	4-	4-	4	3	23+	18	1.0	0+	1-	4-	4+	4-	4+	4o	3-	39	35	42	28	49			
Mean										8		0.42									16.5	17.6	18.5	18.0				

Day	Kn Three-Hourly Indices								An	Ks Three-Hourly Indices								As	Sa	Prov Ri	Ra	Rs	IMF				
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8										
1	0o	0+	1+	2-	0+	0+	1-	1-	5	1-	1o	1+	1o	0+	1-	1+	2-	7	165.3	89	90	117					
2	1-	0o	0o	0o	1-	0+	1+	2o	5	1+	1-	1-	0o	1+	1+	2o	3+	11	170.2	94	106	122					
3	2o	3-	2-	3-	3-	1-	0+	1o	15	3+	4-	3-	3-	2+	1o	1+	2+	23	164.2	88	94	115					
4	2-	1o	3-	3-	3o	3+	2+	2+	20	2o	2-	3-	3o	3o	3o	3-	3-	24	168.8	98	109	120					
5	1o	1-	1-	0+	1-	1-	1+	3o	8	1+	1o	1-	0+	1+	1-	2+	3-	10	170.5	101	118	122					
6	1o	1o	1o	1-	1+	1+	0+	1-	6	2-	1+	2-	1+	1+	2-	1o	2-	10	173.4	130	130	125					
7	1+	1o	1+	1-	0+	1+	1o	2-	7	2o	1o	2-	1o	1o	2-	2o	2+	12	170.9	131	126	123					
8	1+	1+	1-	1+	1+	2+	4-	3o	17	2o	2o	1+	2-	1+	2+	4-	4+	24	161.5	105	116	112					
9	2-	1-	1-	2-	2+	1o	2o	1+	10	2o	1-	1+	2o	2+	2-	2o	2-	12	160.8	115	109	112					
10	0o	0o	0o	0+	2-	3-	2o	2+	9	1+	1-	0+	1-	1+	3-	3-	3+	14	157.4	95	105	108					
11	1+	0o	0+	1o	3-	3o	3-	2+	14	2-	1-	1o	1+	2-	3-	3-	3-	14	160.5	115	119	111					
12	2+	3-	2-	2o	1+	0+	0+	1-	11	3o	3-	2o	2+	2-	1-	1o	1-	14	172.5	117	125	124					
13	1+	1o	1o	2o	3o	2-	1o	1+	12	2-	1+	2o	3-	3-	2-	2o	2o	17	178.3	111	122	131					
14	2-	2o	2+	2o	1+	1+	3-	2-	14	2o	2+	2o	2o	1+	1+	3-	3-	16	170.6	92	115	122					
15	1-	0o	1+	2+	3-	2+	2+	3-	15	1+	1-	1+	2o	2+	1o	2+	3o	14	163.8	92	104	115					
16	1o	0+	1+	1+	3+	2o	2-	1-	12	1+	1-	1+	2-	3-	1+	1+	1o	10	156.6	75	88	107					
17	2+	1o	1-	0+	1+	3-	2o	1o	11	2-	2-	1+	1o	2-	3o	3+	2+	16	147.0	59	58	97					
18	0+	0o	1+	2-	1o	1-	1o	2-	7	1o	1-	2+	3-	1+	1-	2+	2-	12	146.6	60	66	96					
19	1o	1+	0+	0o	1+	1-	1+	2-	7	2-	2o	1+	0+	1-	1-	2o	2-	9	147.7	73	73	98					
20	0+	0+	3-	2-	3-	3-	3o	3+	18	1o	1+	3+	2+	3-	2o	3o	3o	22	148.3	61	66	98					
21	2o	2o	3-	4-	3+	4o	4-	4-	36	2+	2o	3o	4-	3o	3+	3+	4+	36	146.7	81	82	96					
22	3o	3-	2o	2+	2+	3-	2+	2+	21	3o	3o	3o	3-	2+	3o	3-	3-	26	157.1	93	106	108					
23	1+	1+	0+	4-	3o	3+	5-	4-	34	2+	2+	1+	4-	3o	3o	4+	4o	34	162.0	112	122	113					
24	2+	2+	1o	4-	4+	4o	5-	3-	37	3+	2+	1o	3+	4-	4o	5-	3o	38	167.2	118	129	119					
25	1+	1o	0+	1-	1-	2-	3o	2o	10	2+	1+	1+	1o	0o	2-	3-	2+	13	163.4	106	109	114					
26	2-	1+	3+	3-	2+	2o	2o	2+	19	2o	2o	4-	2o	2o	2+	3-	3-	22	160.5	84	99	111					
27	2-	2-	1o	1-	1-	1-	1-	1-	7	2o	2-	1+	1+	0+	1-	1o	1o	8	161.8	97	109	113					
28	0+	1-	1+	2o	3o	2+	3+	3-	17	1-	1+	2o	2o	2o	3o	3+	3+	20	162.6	102	103	114					
29	4o	4-	2+	1+	1+	1+	2+	2+	24	3+	3+	2o	2-	1o	2-	3-	3o	22	160.5	90	95	111					
30	2-	2+	0+	0+	0+	1-	0+	0o	6	2+	2o	1-	1o	0+	1o	0o	1o	8	154.9	70	97	105					
31	0o	0+	4-	4o	4-	5-	4o	3-	39	1-	1-	3+	4+	4o	4o	4o	3o	39	148.8	93	91	99					
Mean									15.3										18.0	161.3	95.1	102.6	112.2				

Daily Average Indices Ap Feb 2000 - Jan 2001

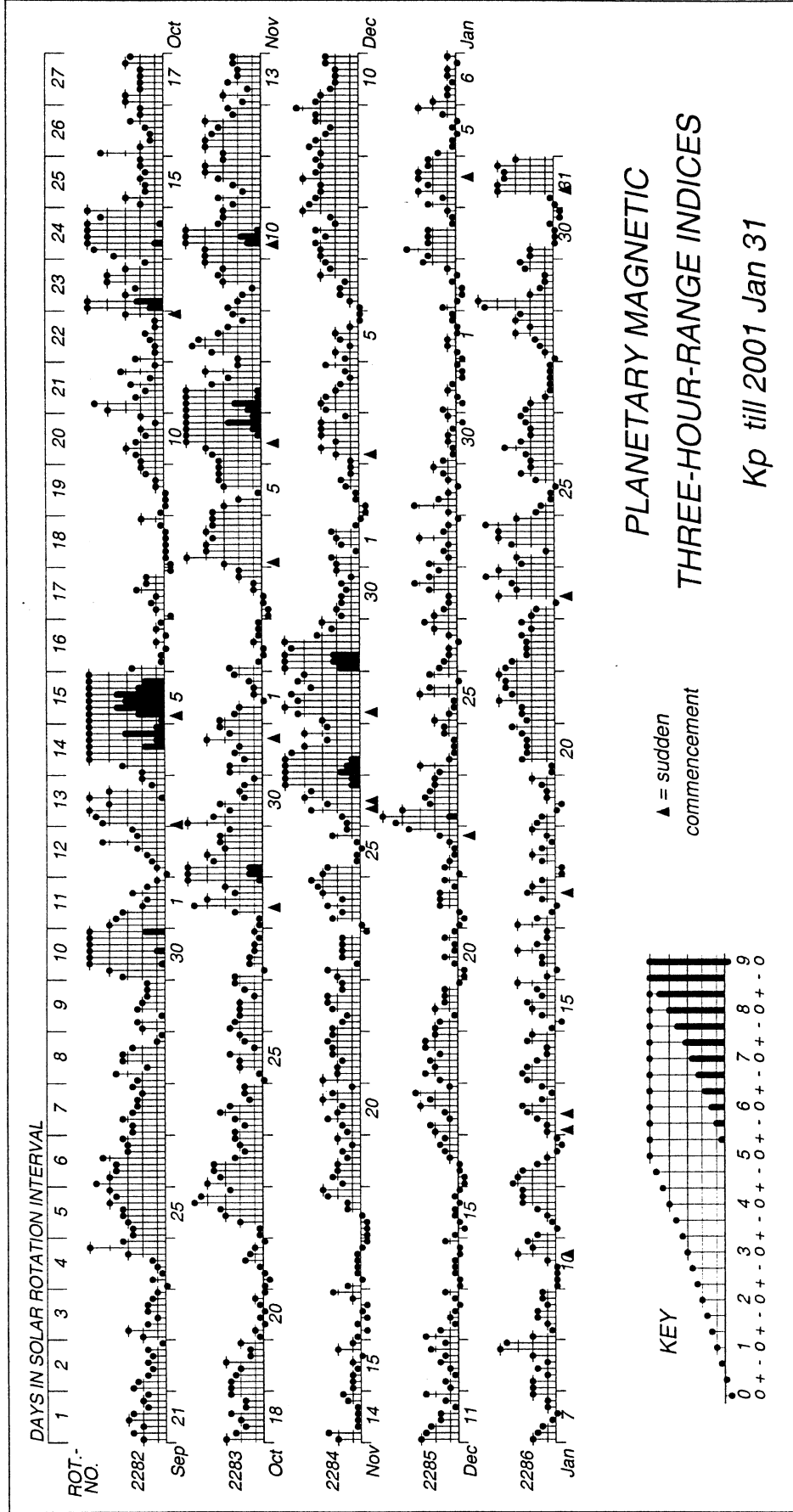


Day	Feb 00	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 01
1	8	21	13	15	8	7	12	16	13	7	6	2
2	8	11	15	21	6	4	10	23	10	4	3	4
3	10	5	9	17	11	8	9	7	30	3	10	8
4	5	3	22	6	12	8	17	18	63	26	9	11
5	12	6	11	10	24	9	25	7	116	14	5	5
6	34	12	82	11	15	5	16	12	4	55	7	4
7	31	16	74	5	11	5	7	15	4	46	15	5
8	15	14	10	4	64	6	6	17	2	18	18	10
9	11	4	14	8	5	6	5	5	4	13	18	5
10	10	9	19	6	21	20	25	4	8	42	11	5
11	17	13	9	4	25	34	47	4	15	16	8	7
12	60	19	7	15	15	9	123	21	6	20	5	7
13	14	4	6	14	10	42	19	10	36	9	5	6
14	33	6	2	9	29	51	12	4	45	5	3	8
15	17	2	6	12	23	164	8	12	8	4	2	6
16	7	2	22	16	5	50	7	29	10	3	3	6
17	6	4	12	28	6	8	6	56	11	3	9	6
18	1	6	6	7	10	12	3	70	9	5	9	4
19	3	7	12	7	6	14	4	30	9	6	5	4
20	5	6	13	4	6	36	4	12	3	8	3	9
21	21	4	10	5	6	7	10	9	3	9	4	19
22	6	12	5	8	11	12	2	6	16	8	6	12
23	11	14	6	29	27	23	7	7	15	6	21	18
24	30	11	21	93	15	5	8	12	9	11	6	20
25	20	8	5	28	6	5	3	19	6	6	6	6
26	16	3	2	15	40	19	5	24	8	28	6	11
27	13	4	13	8	18	7	7	11	4	45	8	4
28	16	4	14	9	10	32	27	12	20	31	6	8
29	7	10	12	24	8	27	35	7	34	56	6	16
30		12	12	22	4	8	12	51	15	6	3	3
31		23		10		21	14		13		2	18
Mean	16	9	15	15	15	21	16	18	18	17	7	8

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

Kp through January 31, 2001

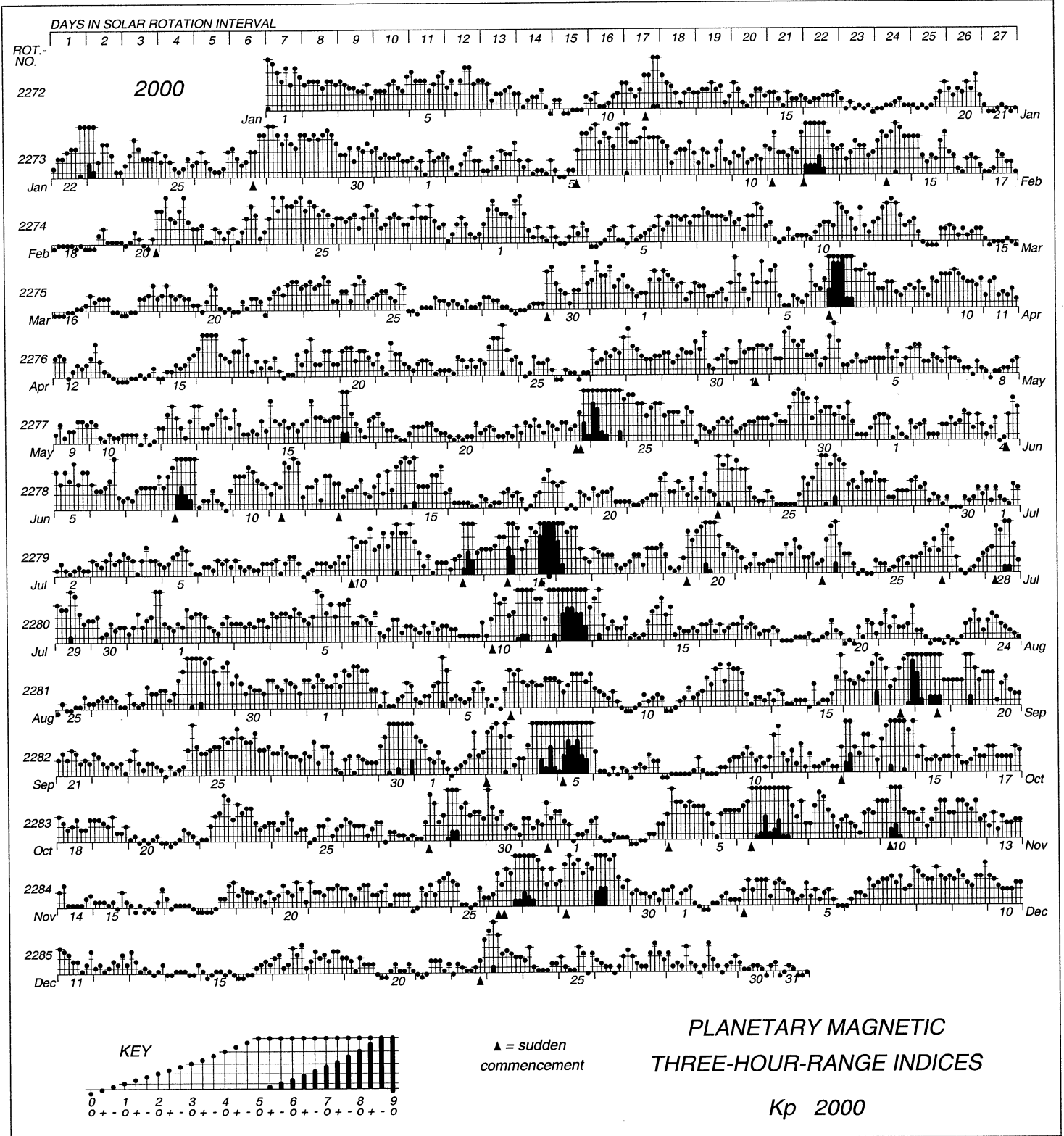
GeoForschungsZentrum Potsdam



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

GeoForschungsZentrum Potsdam

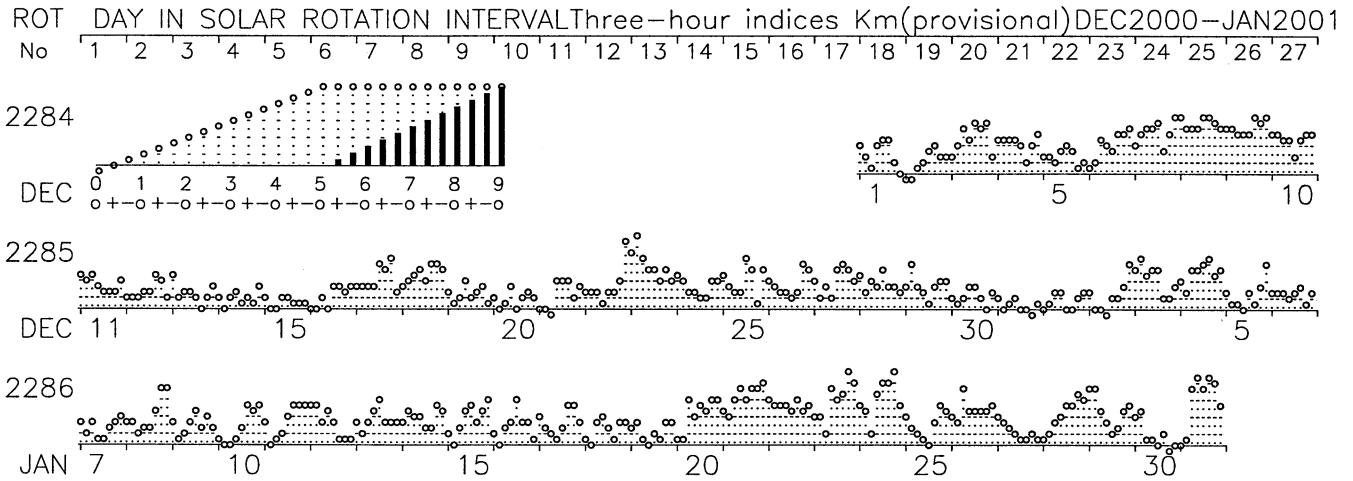
Kp for 2000



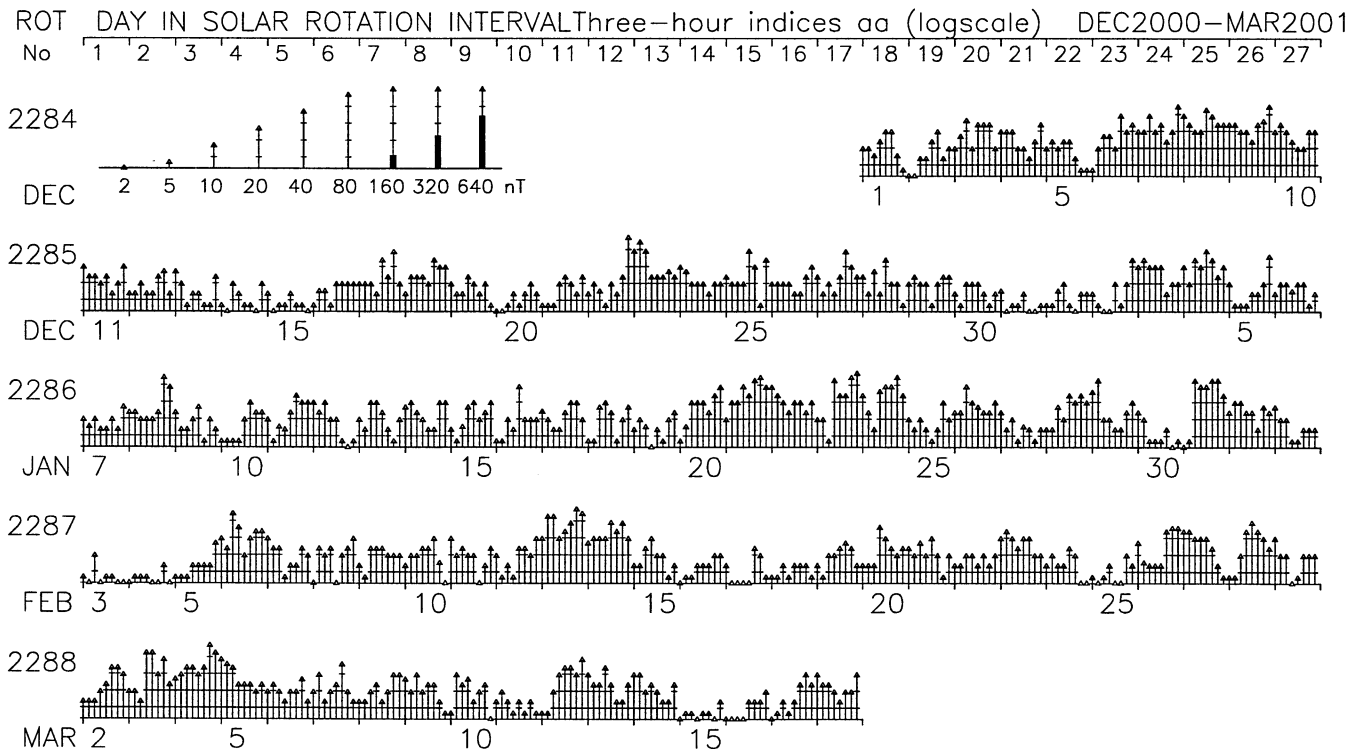
PLANETARY GEOMAGNETIC ACTIVITY

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

ISGI PUBLICATION OFFICE – EMail : ISGI.PUBOFF@cetp.ipsl.fr
 CETP, 4 Avenue de Neptune, F-94107 Saint Maur des Fosses CEDEX – FRANCE



Indices Derivation at C.E.T.P.; Graph Prepared at ISGI Publication Office.

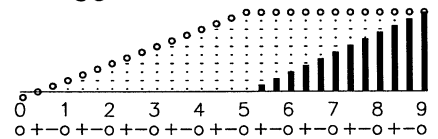
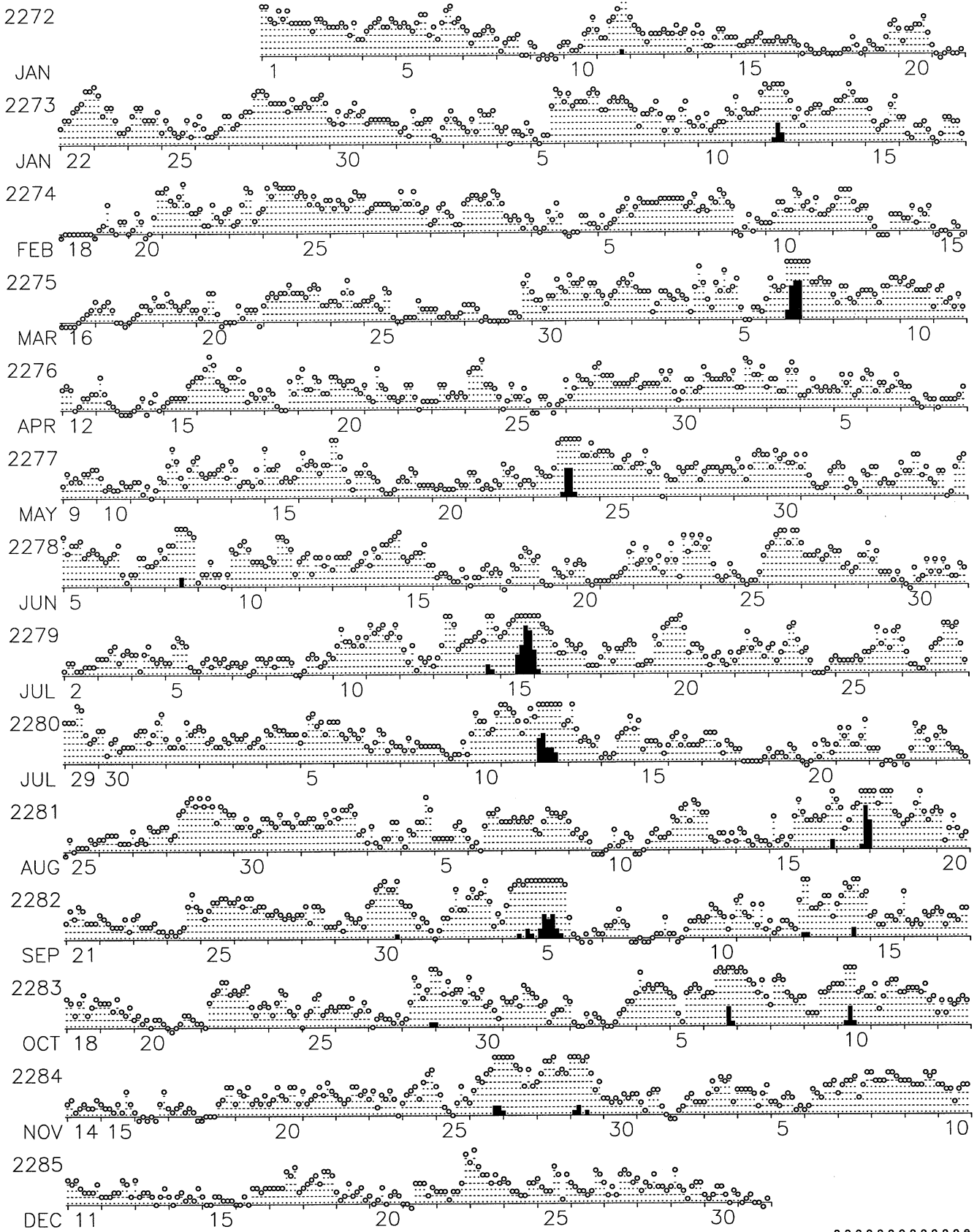


Indices Derivation at C.E.T.P.; Graph Prepared at ISGI Publication Office.

PLANETARY GEOMAGNETIC ACTIVITY – MUSICAL DIAGRAM OF Km 2000

ROT DAY IN SOLAR ROTATION INTERVAL Three-hour indices Km (provisional) JAN–DEC 2000

No 1' 2' 3' 4' 5' 6' 7' 8' 9' 10' 11' 12' 13' 14' 15' 16' 17' 18' 19' 20' 21' 22' 23' 24' 25' 26' 27'

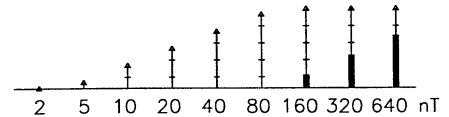
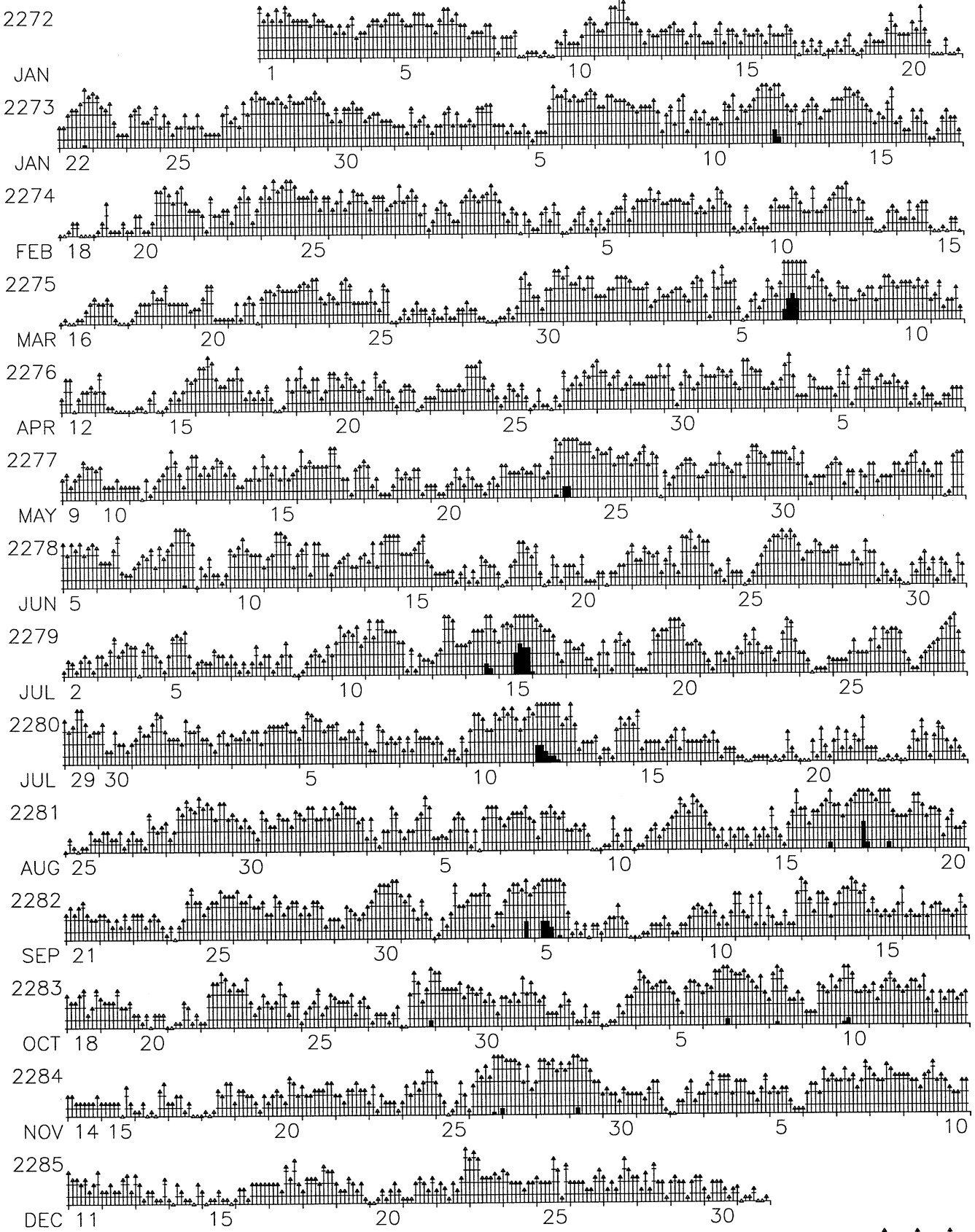


PLANETARY GEOMAGNETIC ACTIVITY - MUSICAL DIAGRAM OF aa 2000

Jan 01

ROT DAY IN SOLAR ROTATION INTERVAL Three-hour indices aa (logscale) JAN-DEC 2000

NO 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

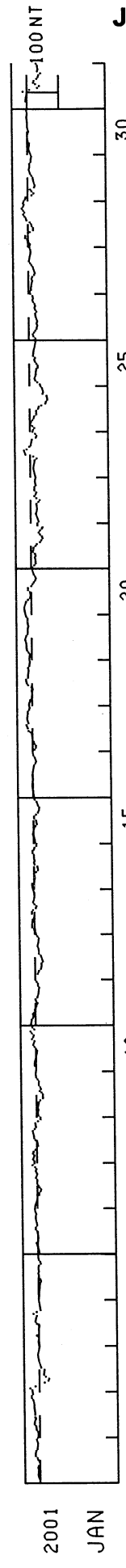


Indices Derivation at C.E.T.P.; Graph Prepared at ISGI Publication Office.

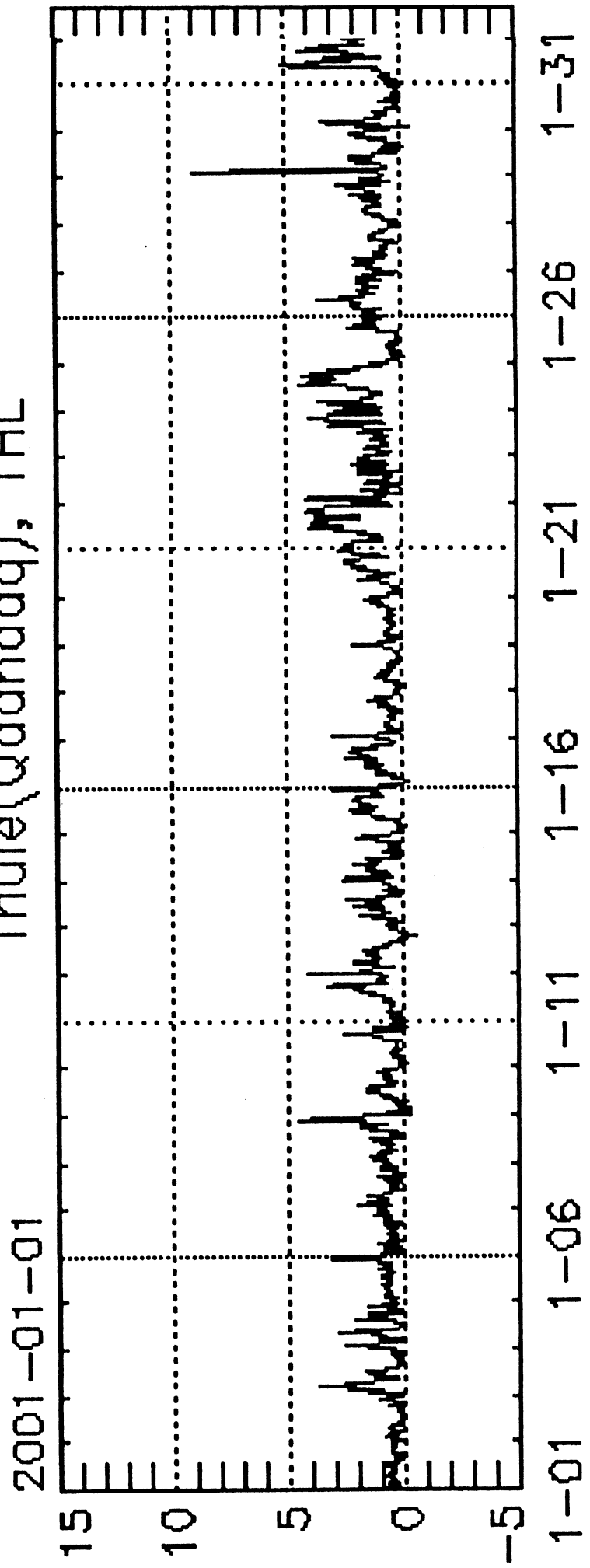
HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

JANUARY 2001

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	4	6	8	11	7	6	6	8	6	2	3	7	10	15	15	15	13	9	10	8	7	9	11	8
2	30	14	14	0	12	14	17	18	15	13	15	15	15	15	19	18	18	19	21	22	26	27	23	25
3	-1	4	3	1	-4	-29	-30	-21	-14	-13	-15	-15	-5	-3	-2	1	3	3	5	6	4	1	0	-1
4	-1	4	3	1	4	7	1	-2	-4	-7	-1	-2	11	12	10	7	18	8	-6	-4	-2	-2	-1	0
5	-2	-2	-2	-1	-1	-3	-4	-4	-6	-7	-5	-2	-1	-1	-1	1	2	-2	-7	-6	-2	1	1	-2
6	-4	-4	-2	0	4	5	2	-1	-2	0	2	4	7	7	4	3	5	8	7	7	6	7	10	10
7	9	7	6	4	2	0	-5	-5	-9	-11	-7	-3	0	1	0	5	4	2	3	5	3	8	15	9
8	10	13	11	9	13	12	6	1	-3	-2	-2	5	10	10	12	14	14	8	4	6	5	-3	-12	-12
9	-6	-4	-4	-6	-4	-6	-6	-7	-11	-19	-21	-21	-16	-10	-13	-11	-7	-7	-7	-4	1	3	3	2
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11	15	14	13	10	8	9	6	4	0	-2	-3	-5	-2	0	-5	-7	-10	-9	-12	-8	-8	-7	-3	0
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14	8	7	7	1	-1	-1	-1	0	-6	-12	-12	-10	-1	1	-1	0	2	2	5	6	2	-2	-7	-7
15	-4	-4	-2	0	3	2	0	-2	-6	-10	-8	-7	-2	-2	-8	-13	-15	-18	-18	-14	-11	-9	-4	-4
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20	22	23	24	24	23	21	17	12	6	3	3	6	11	11	1	-4	-8	-11	-14	-12	-7	-5	-4	-1
21	-4	-9	-14	-13	-14	-12	-14	-11	-6	-7	-7	-14	-17	-28	-33	-37	-34	-28	-25	-29	-35	-38	-20	-21
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31	1	0	2	5	5	4	3	1	14	-8	-83	-39	-27	-21	-22	-31	-36	-37	-43	-33	-36	-33	-32	-29



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

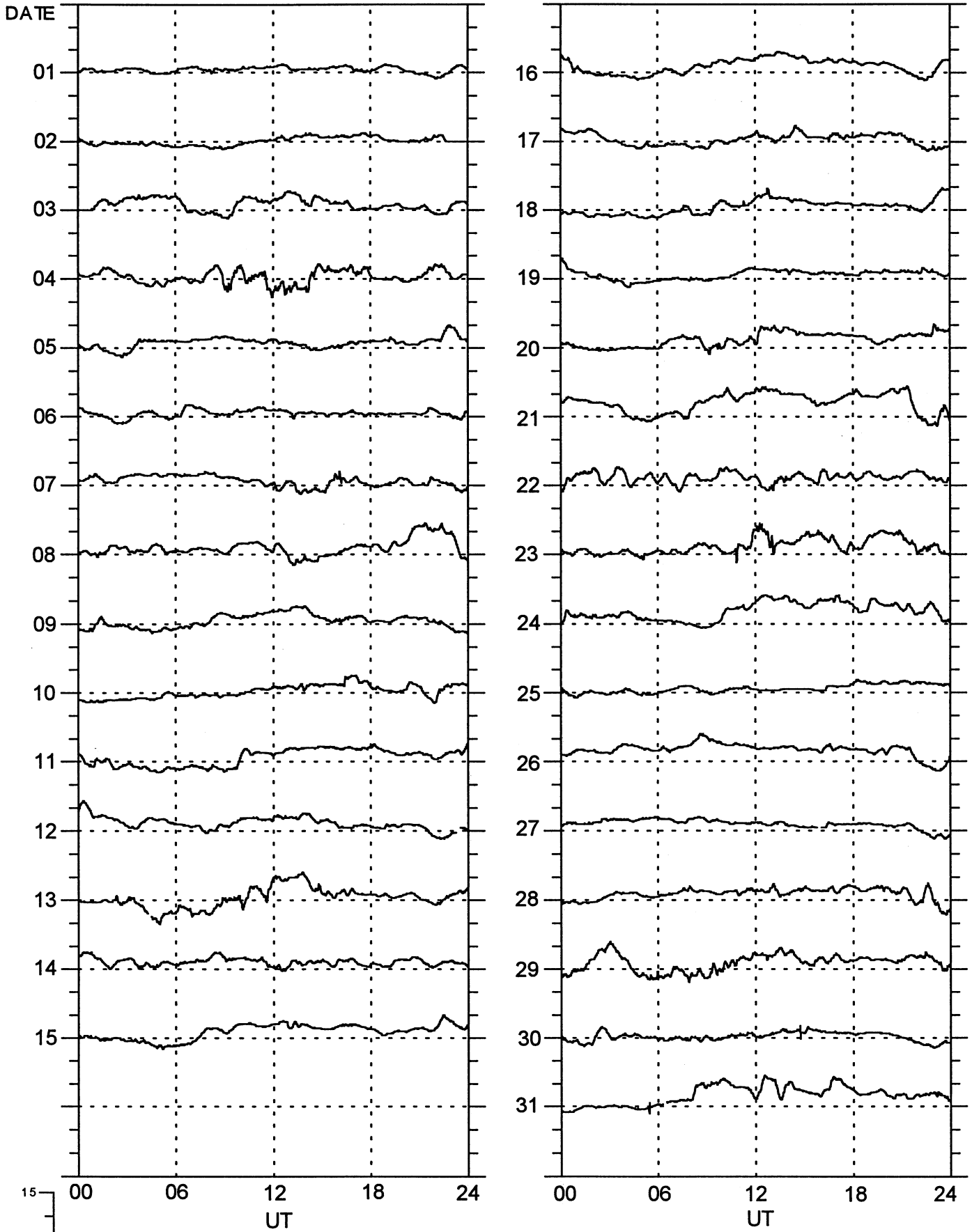


Date, mm-dd
Data source: Solar-Terrestrial Physics Division
Danish Meteorological Institute

PC-INDEX

Vostok

January, 2001



15
0

1-min. Values

PRINCIPAL MAGNETIC STORMS

JANUARY 2001

Sta	Geomag Lat	Commencement Time (UT)		Type	SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges			End Hour		
		Day	Time		D (Min)	H (Gamma)	Z (Gamma)		D (Min)	H (Gamma)	Z (Gamma)	Day	Hour	
ETT	00.7S	02	1300	..	..	..	..		-	--	93	44	04	22
UJJ	13.6N	04	0100	..	..	..	..		-	2	57	17	04	24
NGP	11.3N	04	0100	..	..	..	..		-	2	83	12	04	24
ABG	09.7N	04	0100	..	..	..	..	04(5,6)	5	2	63	21	04	24
HYB	07.6N	04	1401	SC	- 0.4	26	- 2		-	--	--	--	--	--
PND	02.0N	04	0100	..	..	..	..		-	2	67	44	04	24
TIR	00.6S	04	0100	..	..	..	..		-	3	96	52	04	24
HYB	07.6N	10	1620	SC	- 0.3	14	- 1		-	--	--	--	--	--
ETT	00.7S	10	1621	SC	- 0.1	14	13		-	--	--	--	--	--
HYB	07.6N	13	0219	SC	- 0.3	10	- 1		-	--	--	--	--	--
ETT	00.7S	13	0220	SC	- 0.1	13	10		-	--	118	38	13	17
HYB	07.6N	17	1632	SC	- 0.3	24	- 1		-	--	--	--	--	--
ETT	00.7S	17	1632	SC	0.1	23	16		-	--	--	--	--	--
KRC	16.4N	20	1850	..	..	..	..	21(5,6,7,8)	5	6	130	49	22	11
UJJ	13.6N	20	0500	..	..	..	..		-	4	119	27	22	19
NGP	11.3N	20	0500	..	..	..	..		-	5	156	27	22	19
ABG	09.7N	20	0500	..	..	..	..	21(5,6,7,8)	5	4	145	38	22	19
HYB	07.6N	20	0500	..	..	..	..	21(6,8)	5	4	147	36	22	24
PND	02.0N	20	0500	..	..	..	..		-	5	159	75	22	19
TIR	00.6S	20	0500	..	..	..	..		-	4	207	87	22	19
ETT	00.7S	20	0500	..	..	..	..		-	--	195	70	22	22
HER	33.6S	20	05--	..	..	..	..	21(8)	5	28	100	92	22	24
KRC	16.4N	23	1047	SC	- 2.0	39	25	23(4,7,8) 24(4,5,7)	5	5	131	53	25	07
UJJ	13.6N	23	1000	..	..	..	..		-	2	119	30	25	01
NGP	11.3N	23	1000	..	..	..	..		-	2	156	20	25	01
ABG	09.7N	23	1000	..	..	..	..	23(4,7)	5	3	145	23	25	01
HYB	07.6N	23	1048	SC	- 0.3	27	- 3	23(7) 24(5,7)	5	3	146	14	25	12
PND	02.0N	23	1000	..	..	..	..		-	3	147	50	25	01
TIR	00.6S	23	1000	..	..	..	..		-	4	175	66	25	01
ETT	00.7S	23	1049	SC	0.1	31	26		-	--	168	55	24	23
HER	33.6S	23	1049	SC	3	34	29	24(7)	5	30	90	103	25	06
ETT	00.7S	26	0200	..	..	..	..		-	--	175	37	27	22
ETT	00.7S	28	0400	..	..	..	..		-	--	117	42	29	24
KRC	16.4N	31	0804	SC	- 2.0	46	26	31(3,4,7)	5	6	155	46	01	08
UJJ	13.6N	31	0804	SC	- 0.2	33	- 7		-	4	125	19	31	24
NGP	11.3N	31	0804	SC	0.1	35	- 5		-	4	158	12	31	24
ABG	09.7N	31	0804	SC	- 0.4	31	- 8	31(4)	6	4	149	18	31	24
HYB	07.6N	31	0804	SC	- 0.4	33	- 4	31(4,6,7)	5	4	146	23	01	22
PND	02.0N	31	0804	SC	- 0.2	38	27		-	2	157	69	31	24
TIR	00.6S	31	0804	SC	- 0.7	49	52		-	3	194	95	31	24
ETT	00.7S	31	0805	SC	0.4	50	36		-	--	188	71	31	24
HER	33.6S	31	0806	SC	- 5 *	34	15	31(3,5)	4	36	114	105	01	13

Stations:

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

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

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

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

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

JANUARY 2001

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
10	1620	C: NGK BDV EBR HYB si: VAL	10	1012-1024	NGK+ BDV+ NAG
17	1631	A: NAG* GNA CNB* B: SOD* NGK* VAL* EBR SPT* GUI HYB C: BDV* si: HRB	13	0948-1012	GUI (ssc: NGK)
			16	0252-0315	KAK+
			24	1110-1127	GUI
			25	0412-0423	NAG (si: HRB)
			25	0506-0515	NAG (si; HRB at 0500)
23	1048	A: SOD* VAL* HRB NAG* SPT* GUI* HYB B: NUR* NGK* BDV* EBR* HTY* GNA CNB*	26	0252-0315	MMB+ KNY+
31	0805	A: SOD* NAG* SPT* HYB B: NUR* NGK* BDV* HRB MMB EBR KAK HTY KNY GNA CNB C: VAL* (bps): GUI	28	1540-1554	HTY+

REPORTING OBSERVATORIES (up to the 6th of March 2001):

SOD NUR NGK VAL BDV HRB NAG MMB EBR SPT KAK HTY KNY GUI HYB GNA CNB

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