SEPTEMBER 2001 NUMBER 685 - Part I

Solar-Geophysical Data prompt reports

Data for July and August 2001
Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

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Data for July and August 2001

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SOLAR-GEOPHYSICAL DATA

Number 685

(Issued in Two Parts)

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Solar-Terrestrial Physics Division

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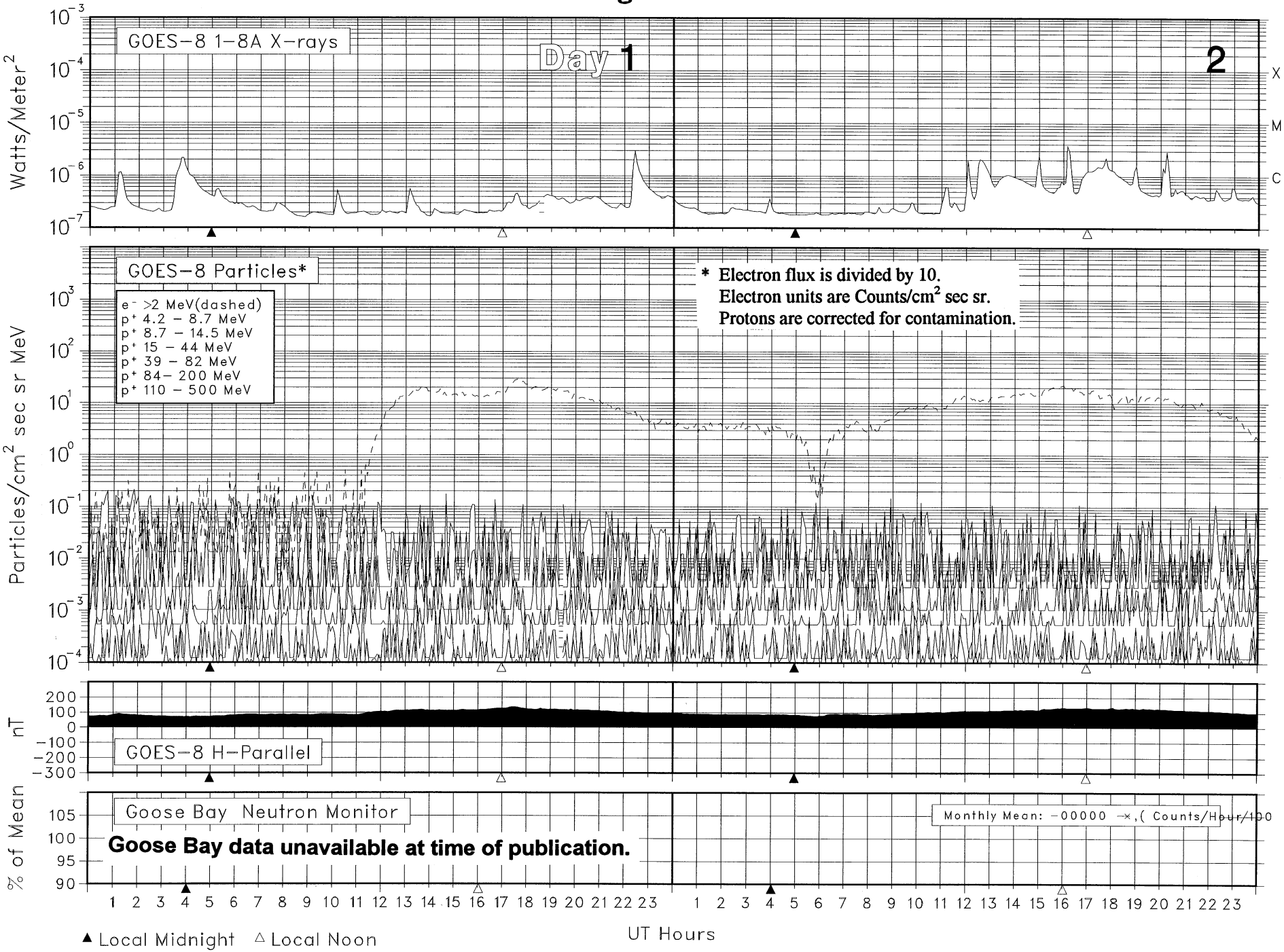

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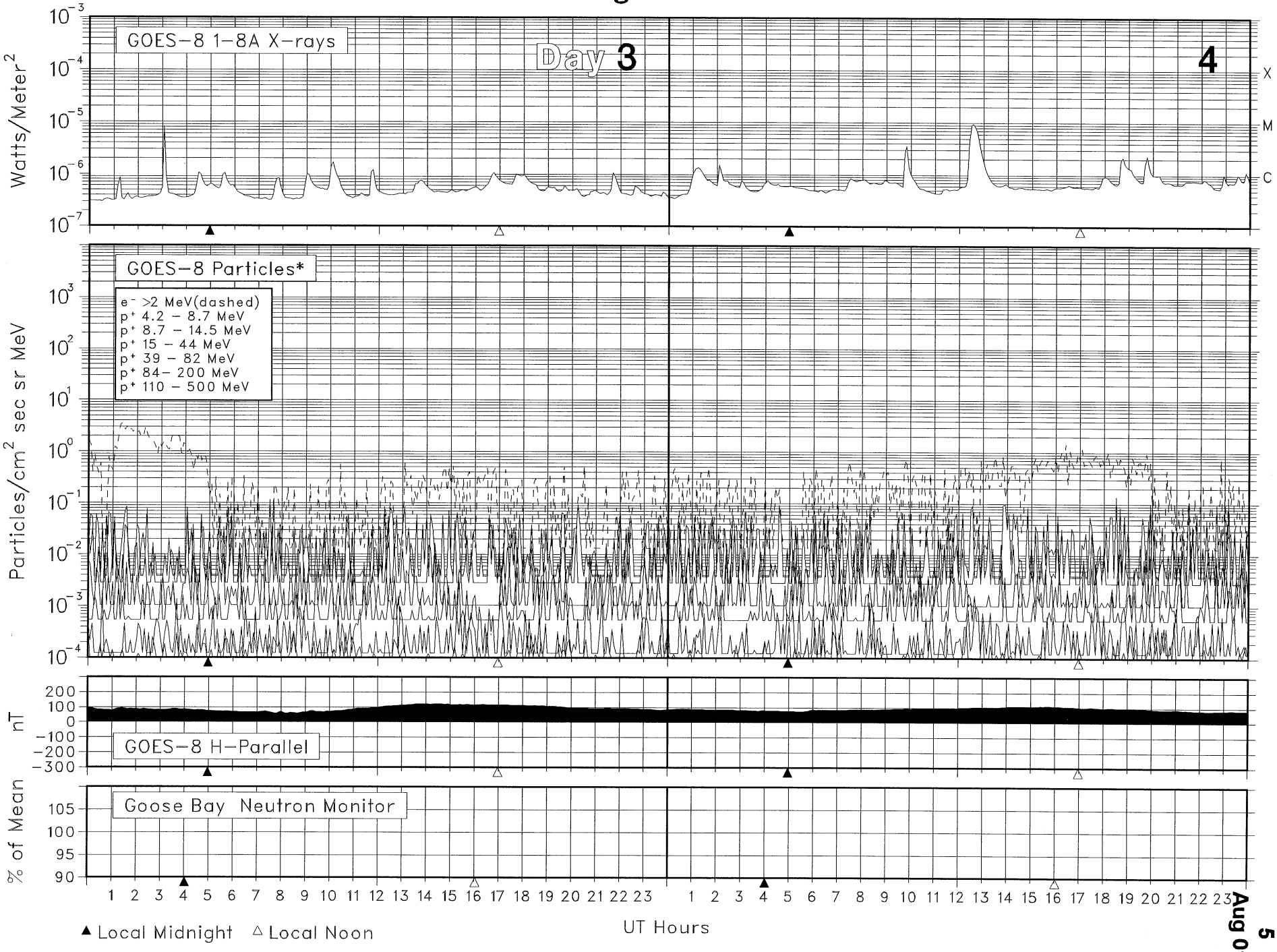

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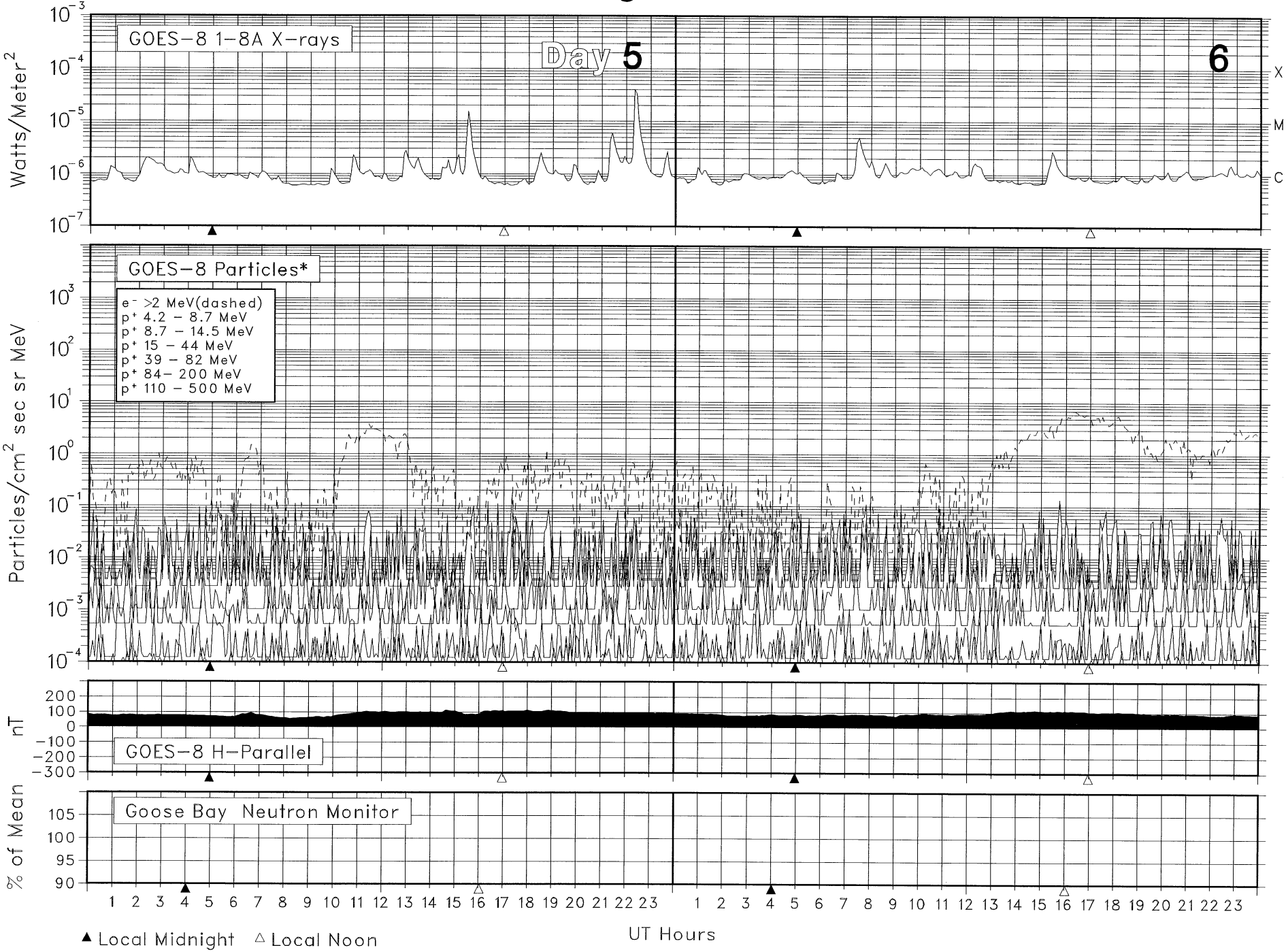

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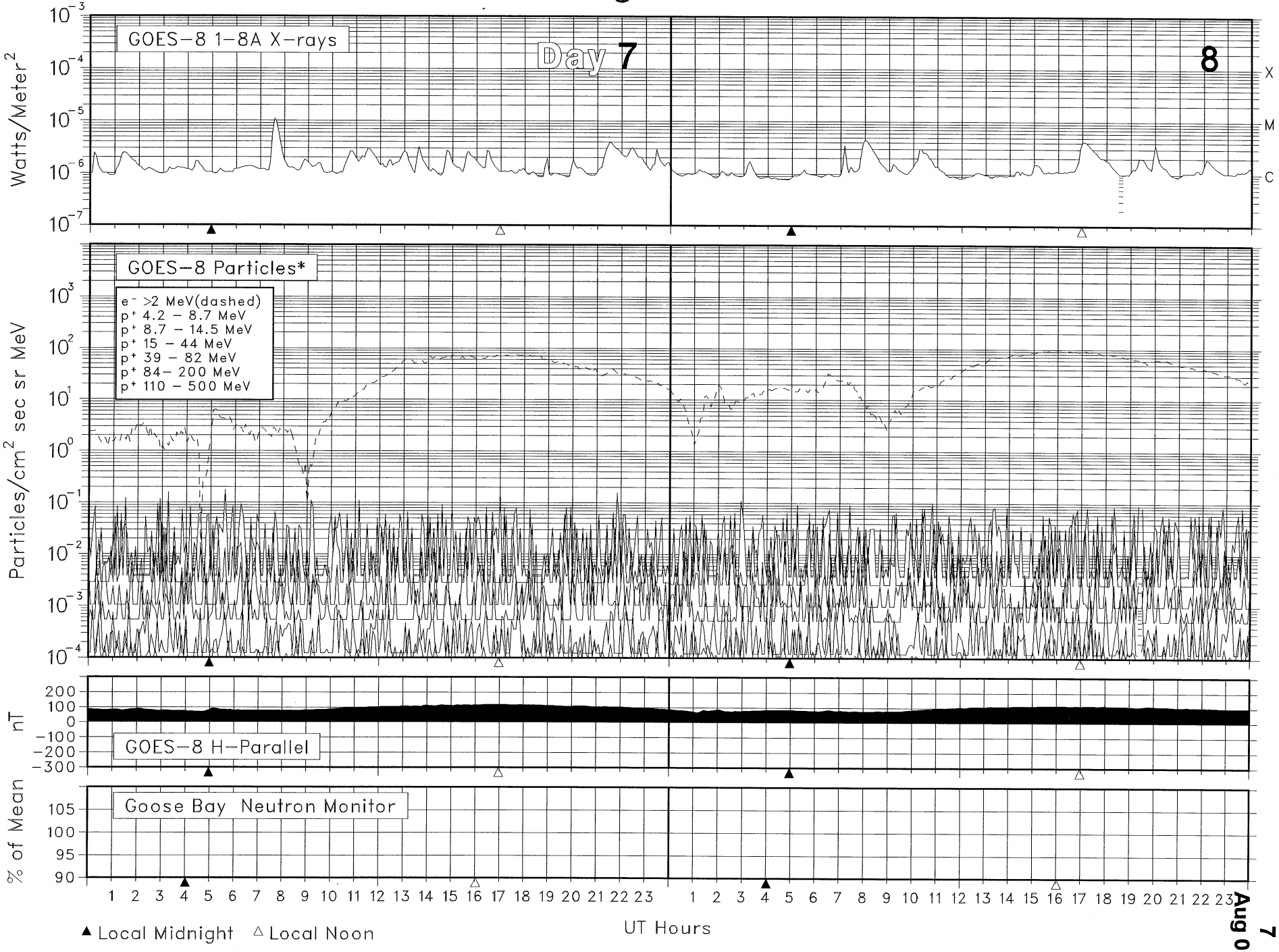

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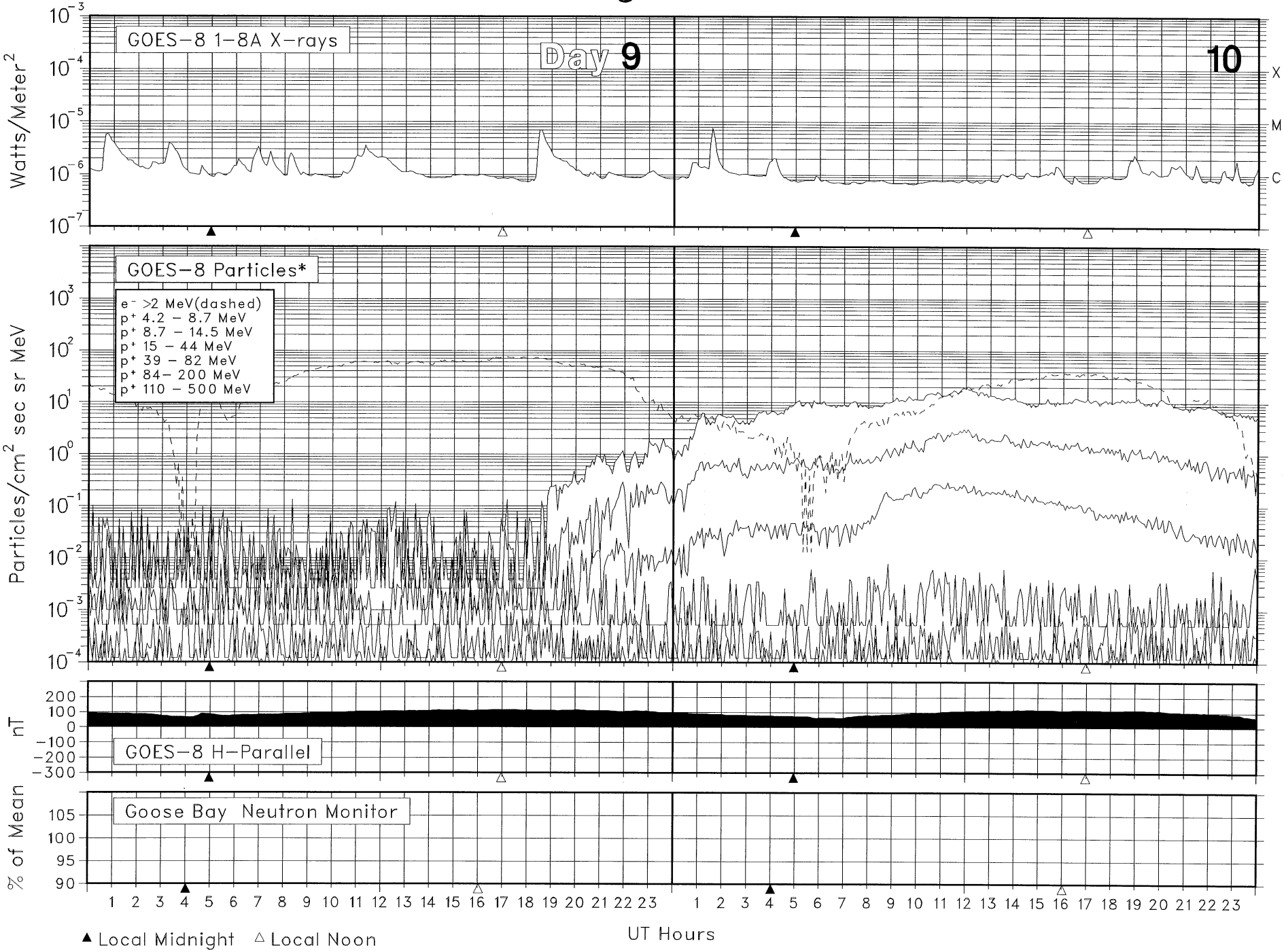

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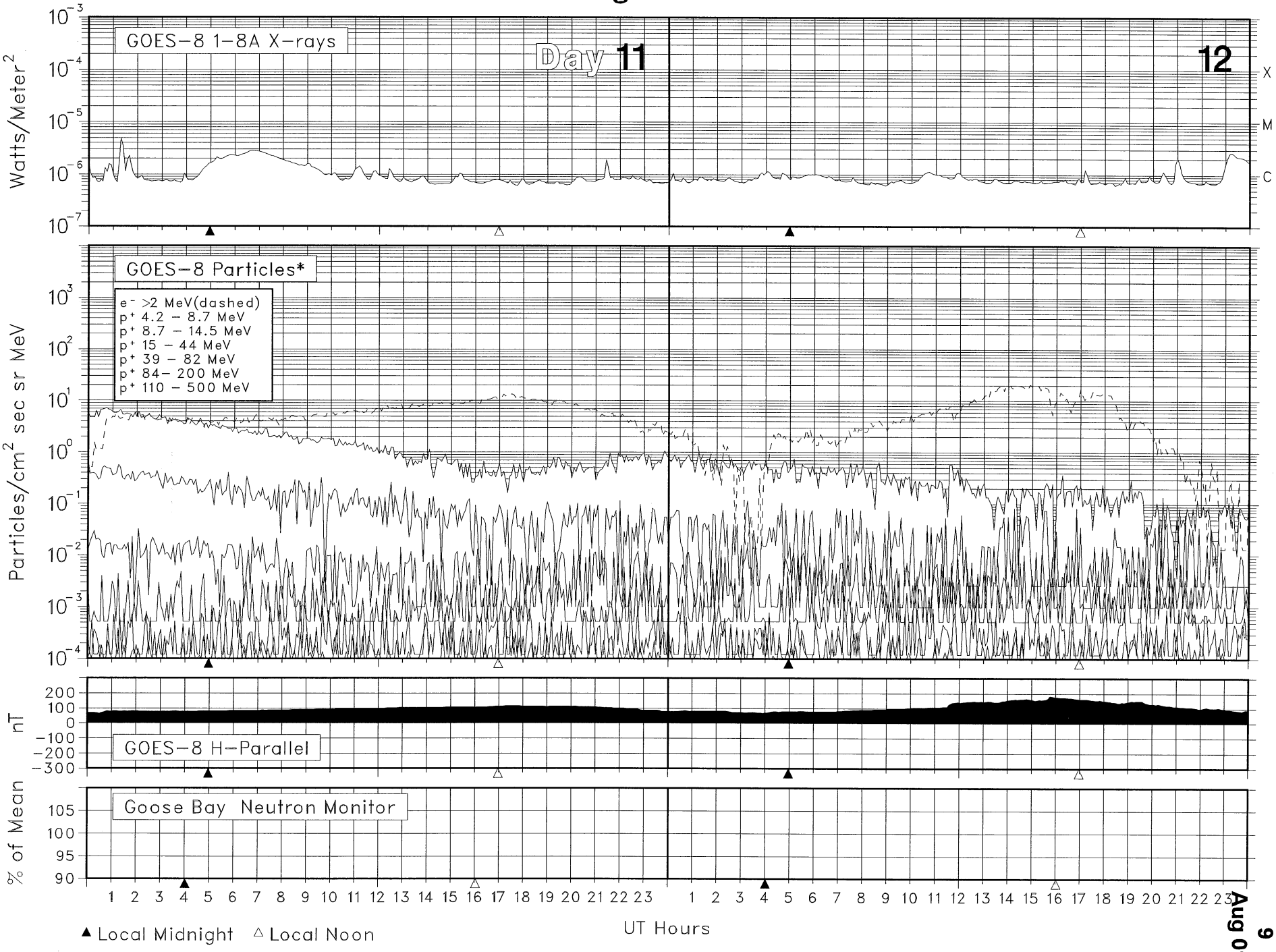

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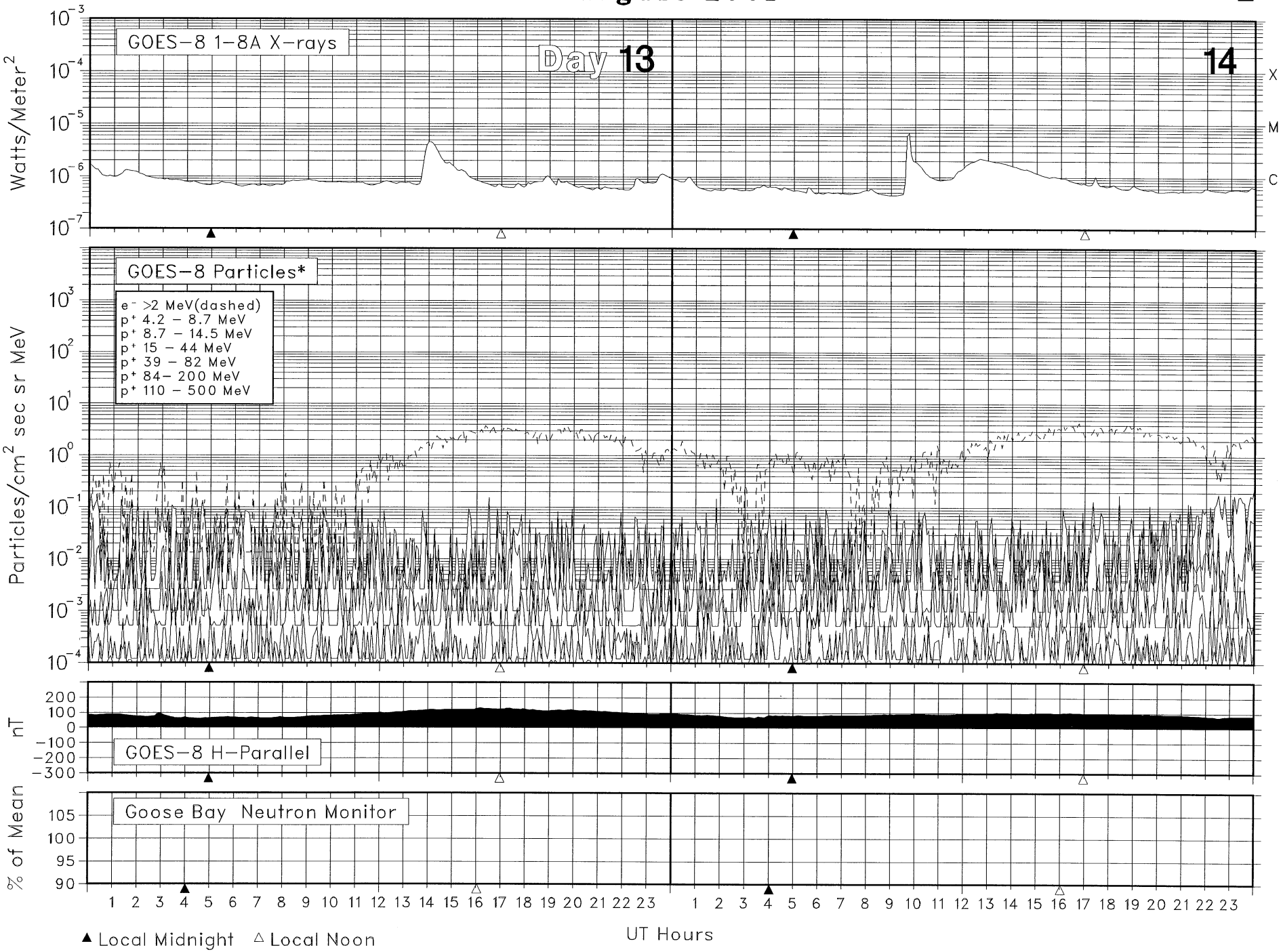

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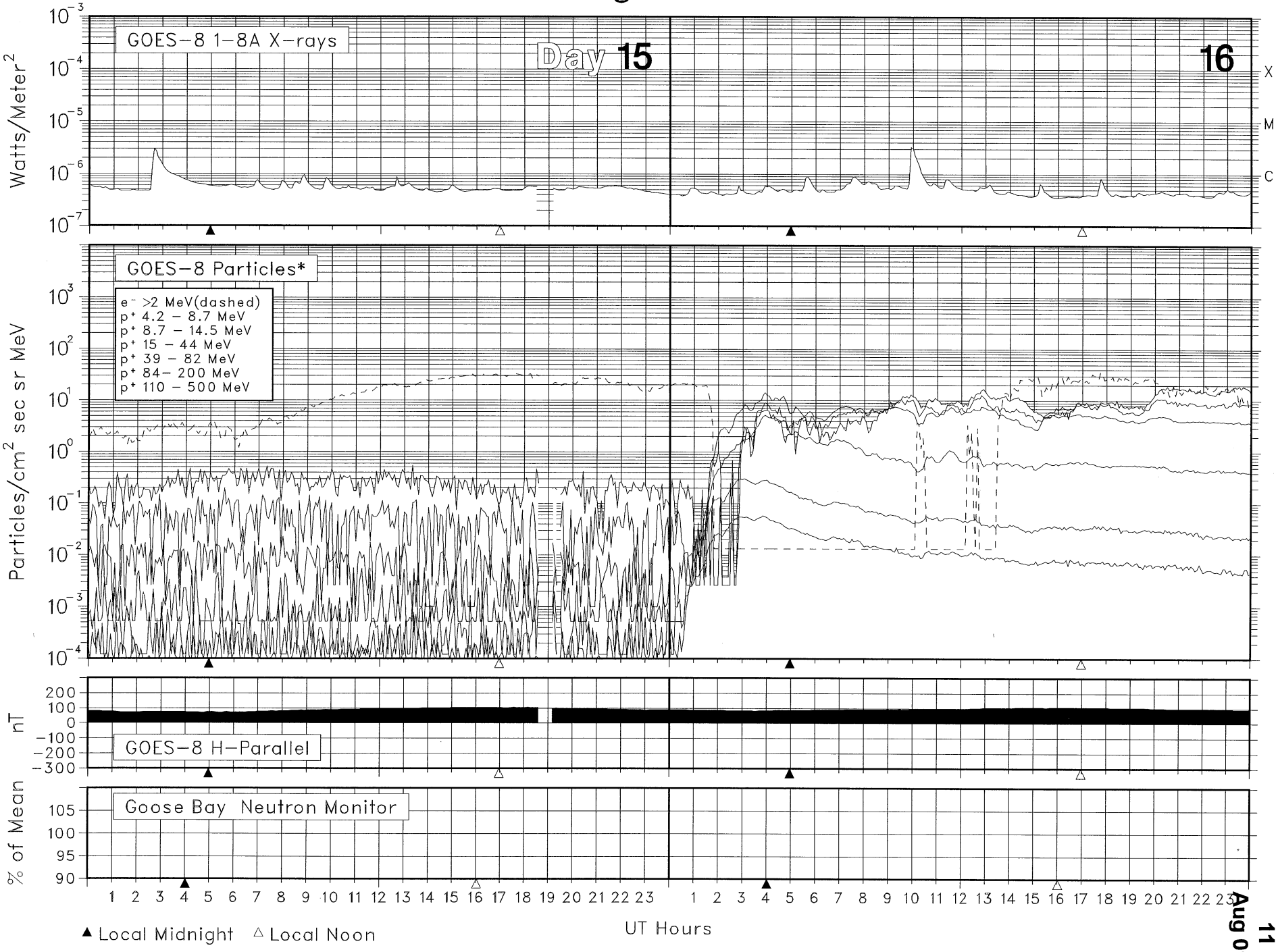

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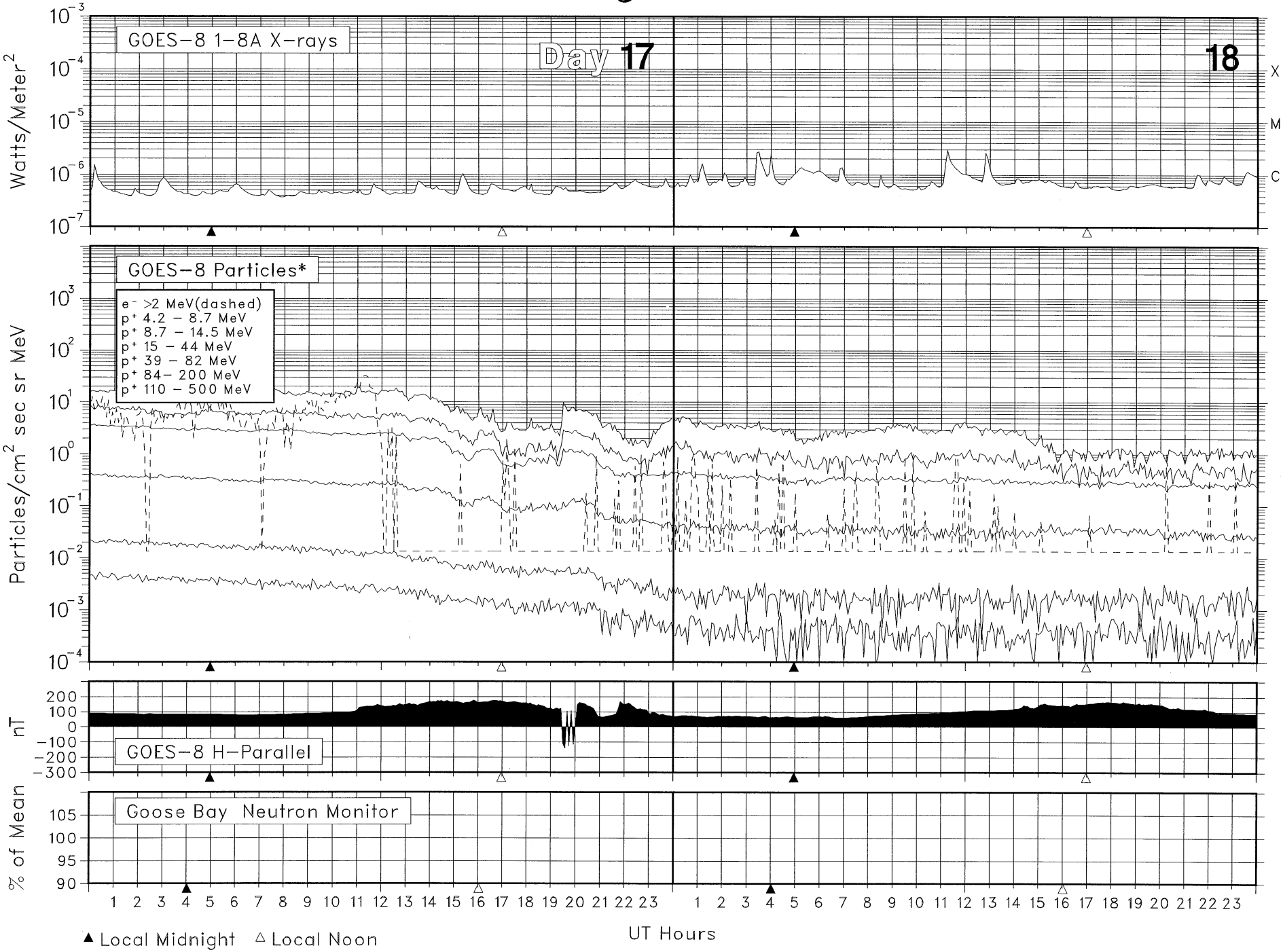

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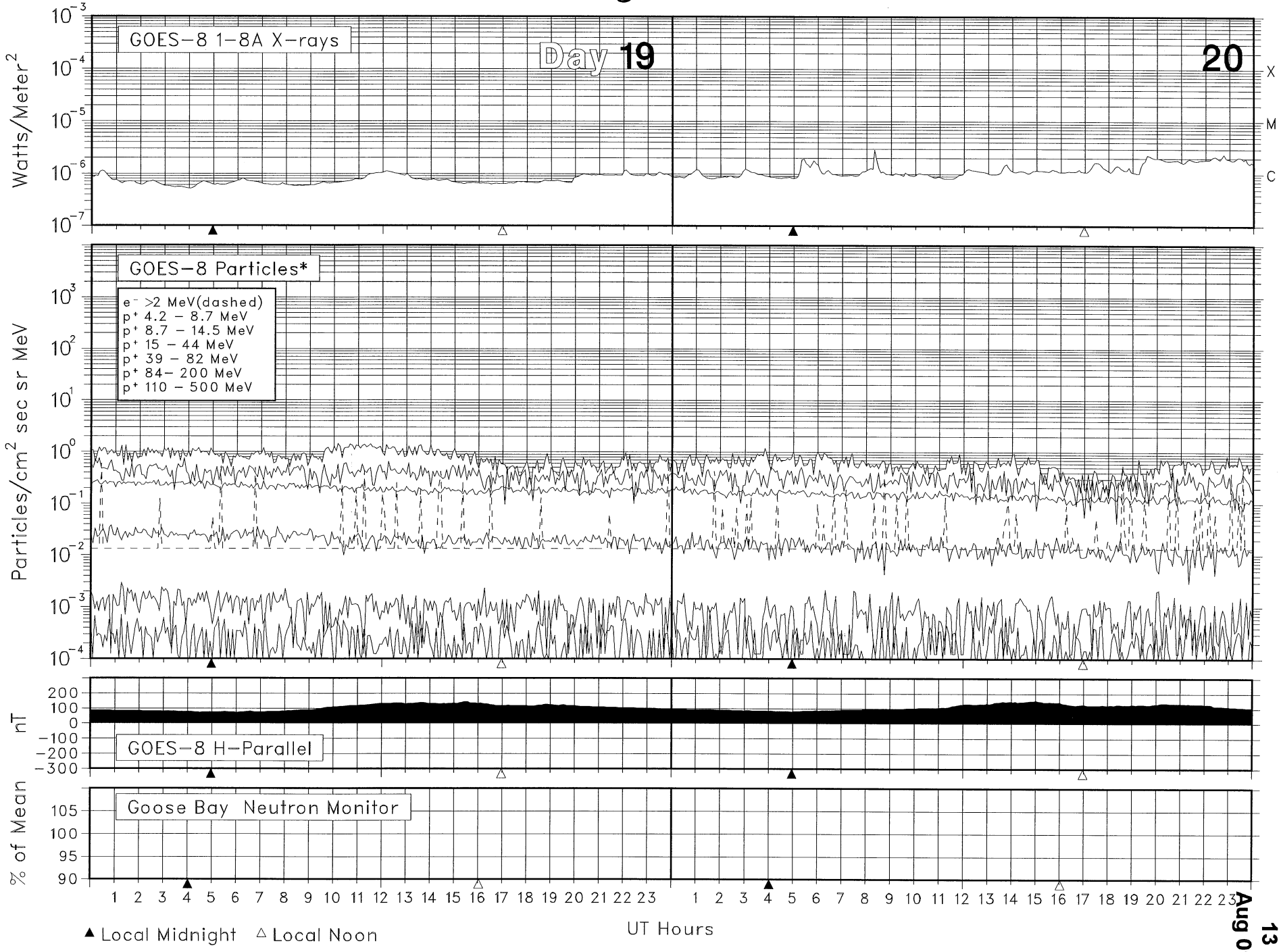

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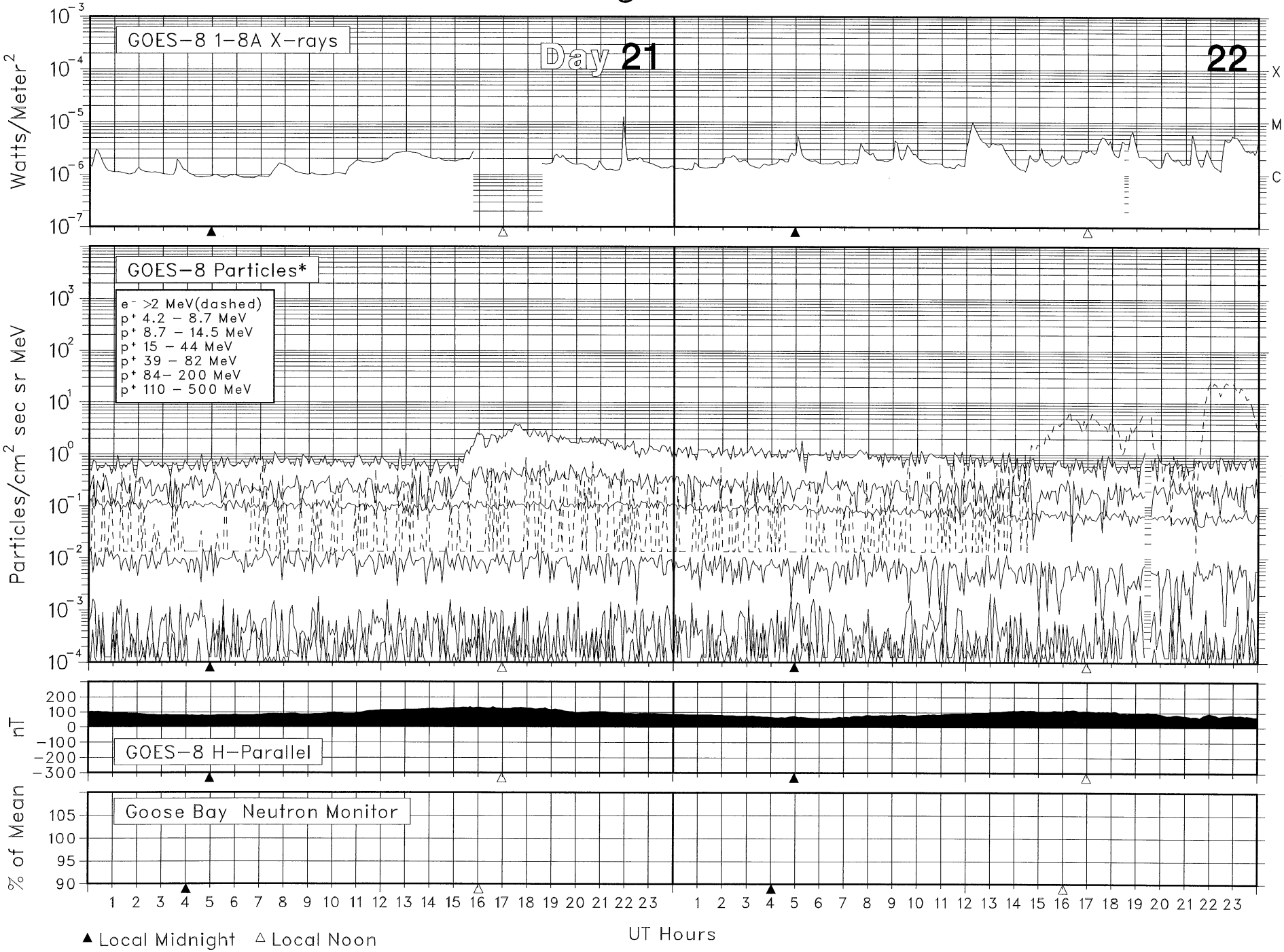

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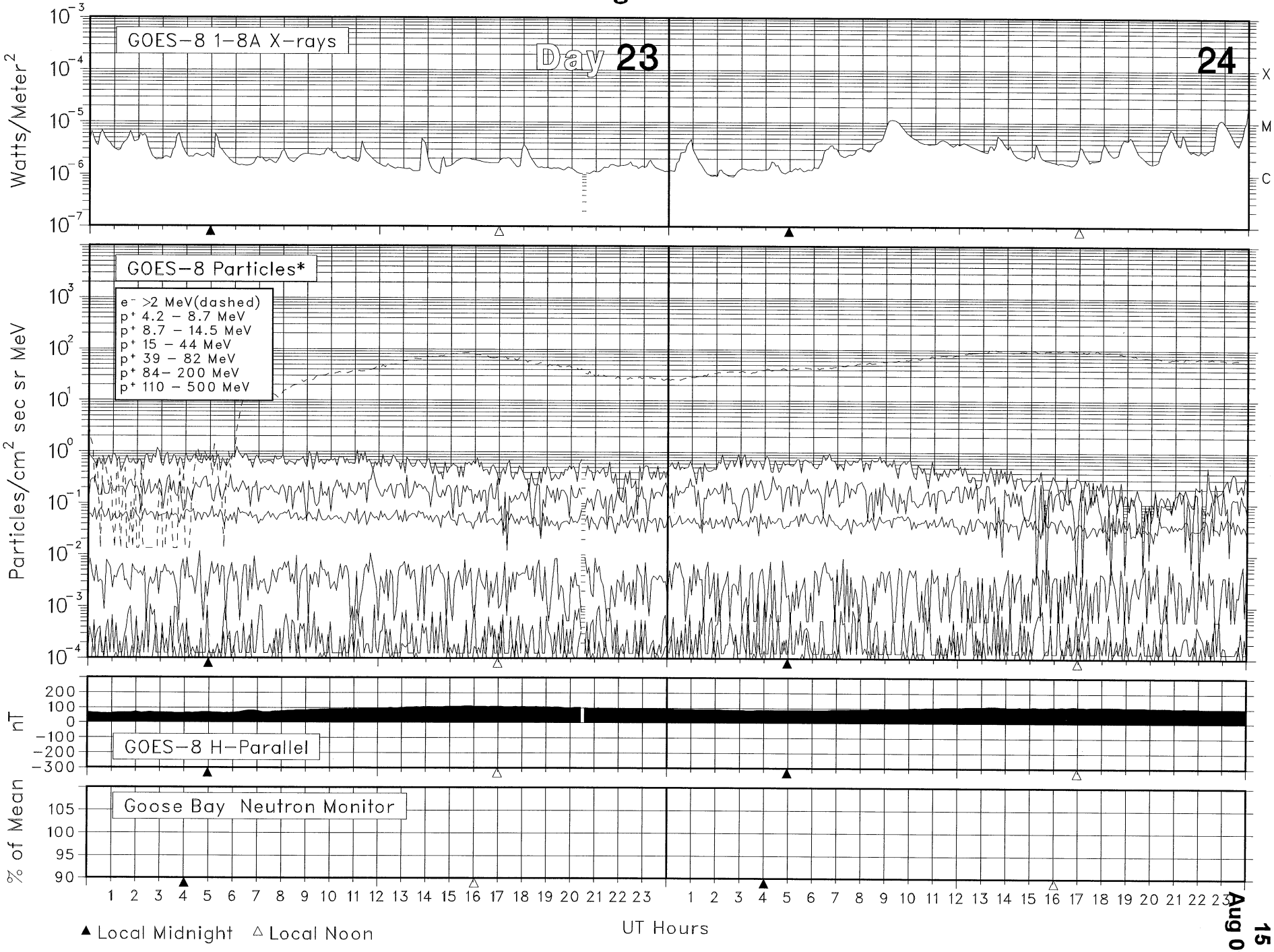

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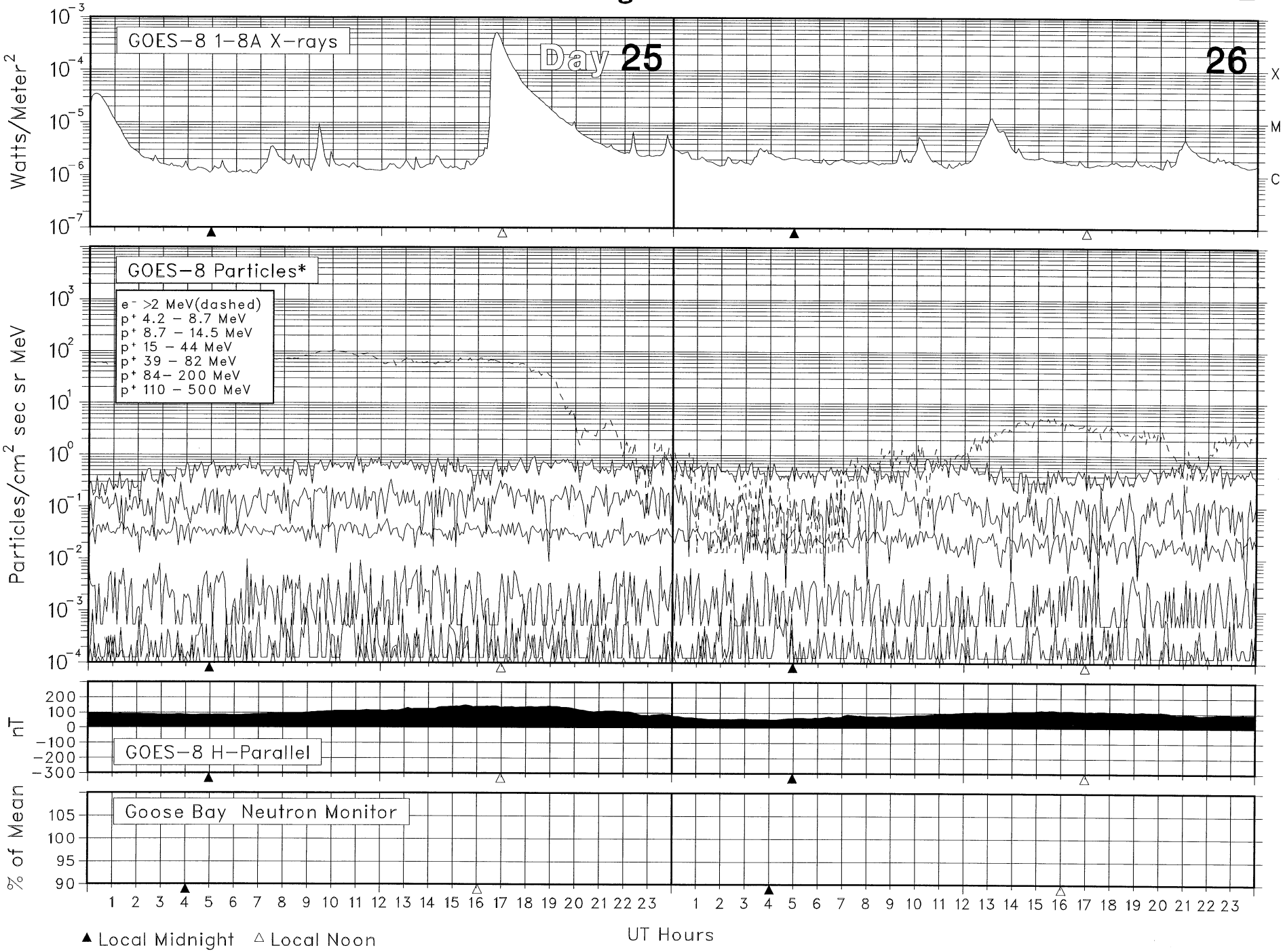

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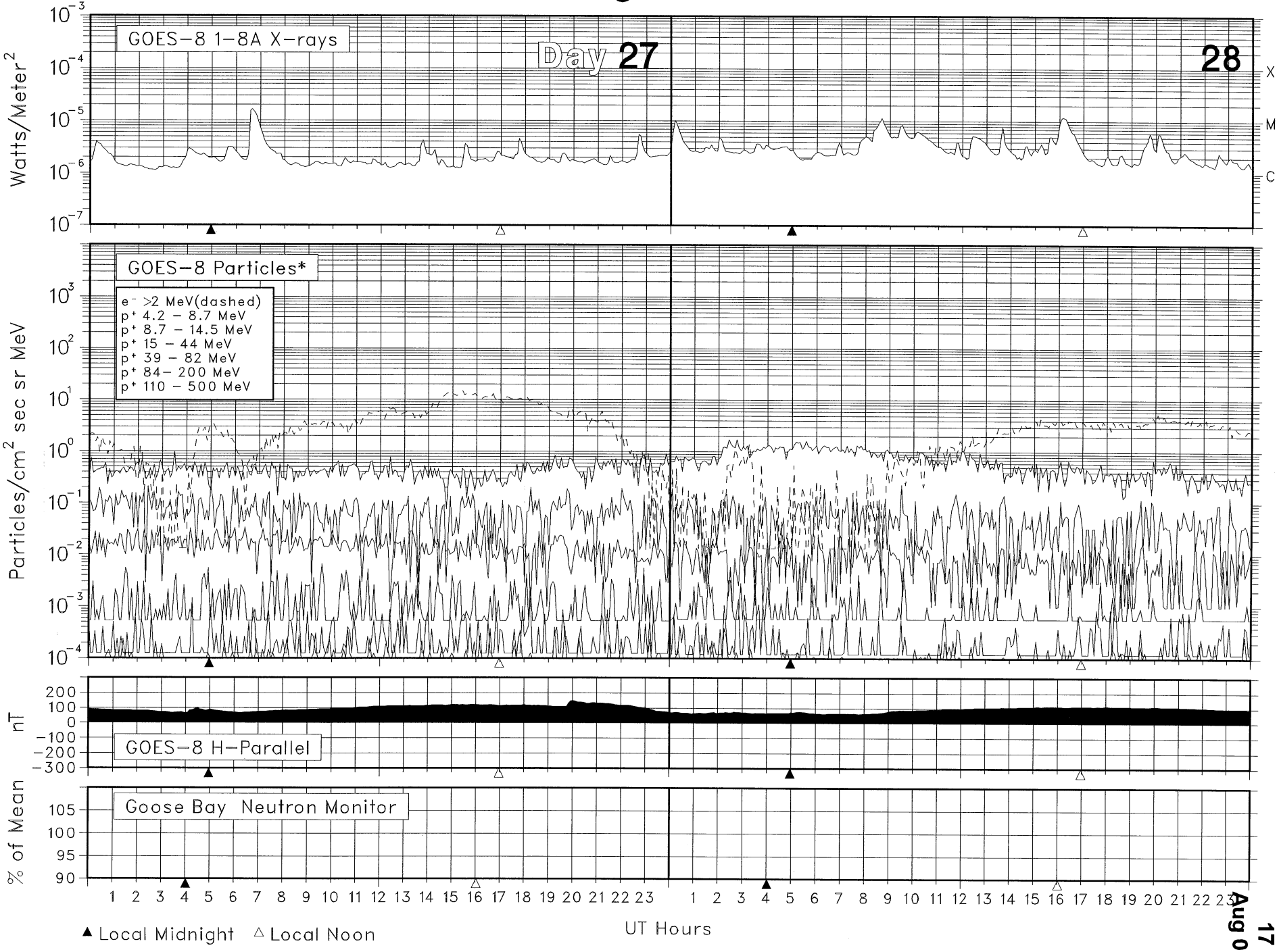

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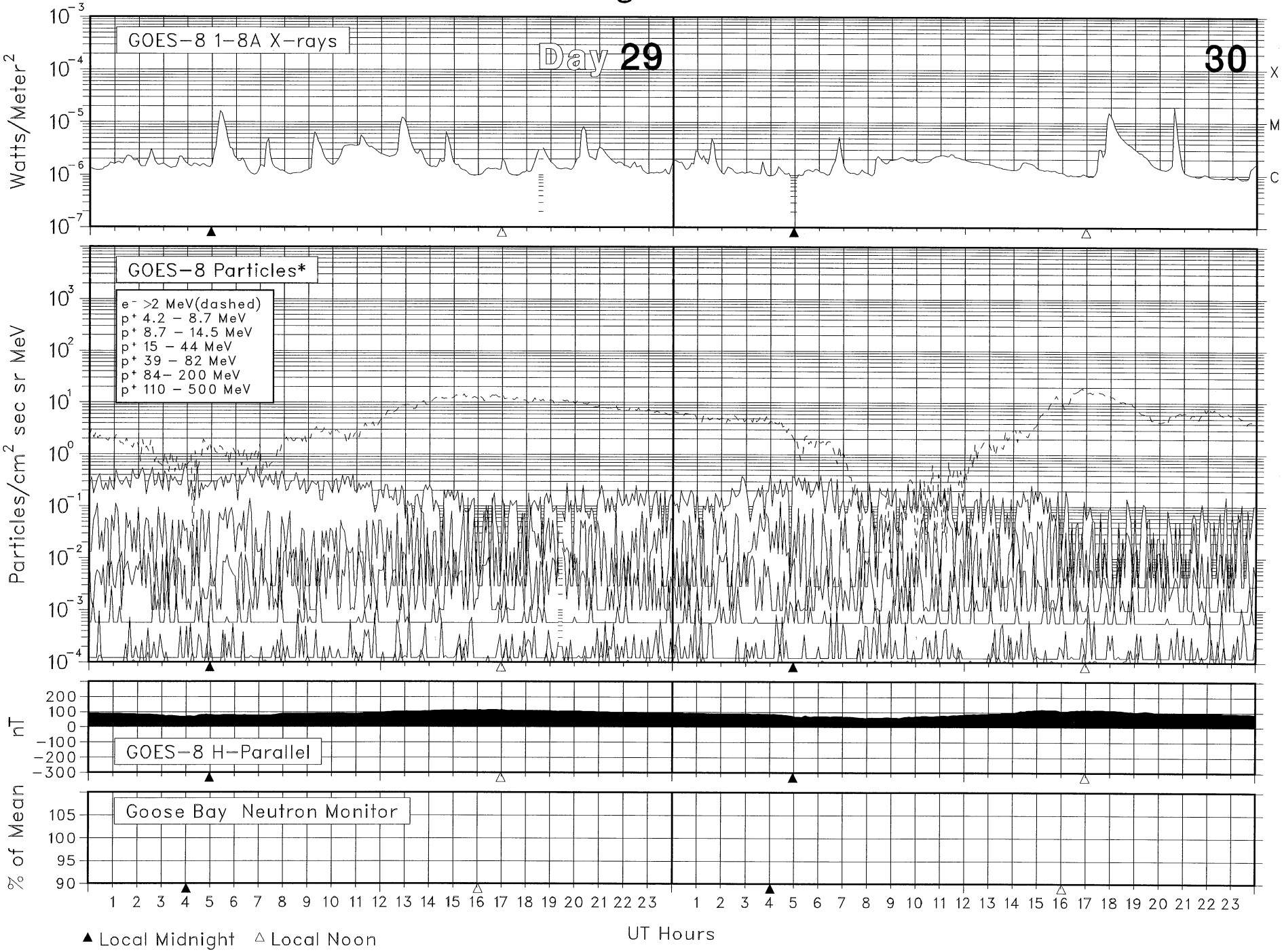

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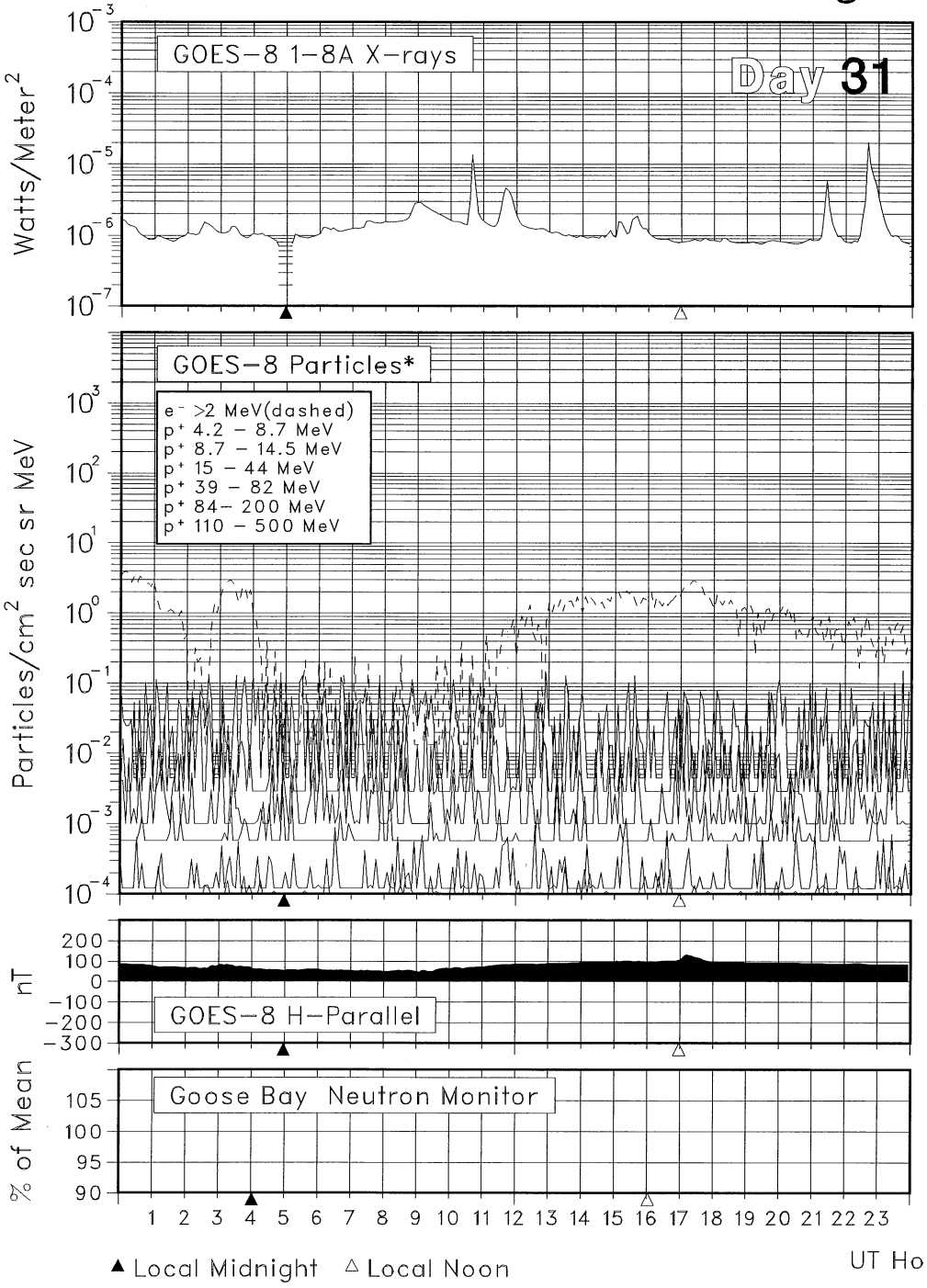
August 2001



* Electron flux is divided by 10.
Electron units are Counts/cm^2 sec sr.
Protons are corrected for contamination.

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

AUGUST 2001

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
213	01	31	85	117	18	9557	S20	E08	2	0	0	01	E	SOL: Eruptive
						9559	S22	W38	0	0	0	01	Q	MAG: Quiet
						9561	S12	E49	2	0	0	01	Q	PRO: Quiet
						9562	N06	E58	1	0	0	01	Q	
						9563	N24	E57	0	0	0	01	Q	
214	02	01	108	120	13	9557	S19	W03	0	0	0	02	Q	SOL: Eruptive
						9561	S12	E37	4	0	0	02	Q	MAG: Quiet
						9562	N05	E44	0	0	0	02	Q	PRO: Quiet
						9563	N24	E44	0	0	0	02	Q	
						9564	N14	W40	0	0	0	02	Q	
						9565	N04	E22	0	0	0	02	Q	
						9566	N17	E63	0	0	0	02	Q	
215	03	02	113	121	7	9557	S20	W15	1	0	0	03	Q	SOL: Eruptive
						9561	S13	E24	1	0	0	03	Q	MAG: Quiet
						9562	N05	E31	0	0	0	03	Q	PRO: Quiet
						9563	N25	E31	7	0	0	03	E	
						9564	N14	W54	0	0	0	03	Q	
						9566	N16	E50	1	0	0	03	Q	
216	04	03	140	132	13	9557	S21	W26	4	0	0	04	Q	SOL: Eruptive
						9561	S13	E10	2	0	0	04	Q	MAG: Quiet
						9562	N04	E16	0	0	0	04	Q	PRO: Quiet
						9563	N24	E18	4	1	0	04	E	
						9564	N14	W67	1	0	0	04	Q	
						9566	N18	E34	1	0	0	04	Q	
						9567	S15	W02	1	0	0	04	Q	
						9568	S19	W50	0	0	0	04	Q	
217	05	04	182	148	9	9557	S21	W37	2	0	0	05	E	SOL: Active
						9561	S13	W03	0	0	0	05	Q	MAG: Quiet
						9562	N05	E03	0	0	0	05	Q	PRO: Quiet
						9563	N23	E05	4	0	0	05	E	
						9564	N14	W81	0	0	0	05	Q	
						9565	N03	W19	0	0	0	05	Q	
						9566	N17	E22	3	0	0	05	Q	
						9567	S15	W16	0	0	0	05	Q	
						9568	S18	W61	1	0	0	05	Q	
218	06	05	214	156	23	9557	S21	W51	10	2	0	06	E	SOL: Active
						9561	S13	W19	0	0	0	06	Q	MAG: Quiet
						9562	N05	W11	0	0	0	06	Q	PRO: Quiet
						9563	N23	W07	3	0	0	06	E	
						9565	N03	W34	0	0	0	06	Q	
						9566	N17	E08	9	0	0	06	E	
						9567	S15	W31	4	0	0	06	E	
						9568	S18	W78	3	0	0	06	Q	
						9569	S18	E10	0	0	0	06	Q	
						9570	S10	E76	0	0	0	06	Q	
219	07	06	182	164	19	9557	S20	W64	4	0	0	07	A	SOL: Active
						9561	S11	W35	0	0	0	07	A	MAG: Quiet
						9562	N05	W26	0	0	0	07	A	PRO: Quiet
						9563	N23	W21	2	0	0	07	A	
						9566	N17	W08	3	0	0	07	A	
						9567	S14	W44	0	0	0	07	A	
						9568	S20	W89	0	0	0	07	A	
						9569	S17	W04	0	0	0	07	A	
						9570	S10	E61	2	0	0	07	A	
						9571	N05	E78	0	0	0	07	A	
220	08	07	177	166	14	9557	S20	W78	11	1	0	08	A	SOL: Active
						9561	S11	W48	0	0	0	08	A	MAG: Quiet
						9562	N05	W39	0	0	0	08	A	PRO: Quiet
						9563	N24	W34	3	0	0	08	A	
						9566	N17	W18	3	0	0	08	A	

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

AUGUST 2001

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
						9567	S14	W61	0	0	0	08	A	
						9569	S18	W15	5	0	0	08	A	
						9570	S11	E45	0	0	0	08	A	
						9571	N06	E66	0	0	0	08	A	
						9572	N16	E23	0	0	0	08	A	
221	09	08	191	167	10	9557	S21	W93	2	0	0	09	E	SOL: Active
						9561	S11	W63	0	0	0	09	Q	MAG: Quiet
						9562	N05	W56	0	0	0	09	Q	PRO: Quiet
						9563	N24	W48	3	0	0	09	E	
						9566	N17	W33	3	0	0	09	E	
						9567	S14	W70	1	0	0	09	Q	
						9569	S18	W28	1	0	0	09	Q	
						9570	S10	E31	0	0	0	09	Q	
						9571	N06	E52	0	0	0	09	Q	
						9572	N16	E08	0	0	0	09	Q	
						9573	S08	E70	0	0	0	09	Q	
222	10	09	157	163	11	9561	S10	W76	0	0	0	10	Q	SOL: Eruptive
						9562	N05	W69	1	0	0	10	Q	MAG: Quiet
						9563	N24	W61	2	0	0	10	E	PRO: Quiet
						9566	N17	W45	2	0	0	10	E	
						9567	S13	W84	1	0	0	10	Q	
						9569	S17	W41	1	0	0	10	Q	
						9570	S12	E20	1	0	0	10	Q	
						9571	N06	E39	1	0	0	10	Q	
						9573	S09	E58	0	0	0	10	Q	
223	11	10	119	160	9	9563	N25	W74	2	0	0	11	E	SOL: Eruptive
						9566	N17	W58	2	0	0	11	Q	MAG: Quiet
						9569	S18	W54	0	0	0	11	Q	PRO: Quiet
						9570	S11	E06	0	0	0	11	Q	
						9571	N07	E25	0	0	0	11	Q	
						9573	S09	E46	0	0	0	11	Q	
						9574	S03	E04	0	0	0	11	Q	
224	12	11	151	165	4	9563	N26	W83	2	0	0	12	E	SOL: Eruptive
						9566	N17	W72	1	0	0	12	Q	MAG: Quiet
						9569	S18	W68	0	0	0	12	Q	PRO: Quiet
						9570	S12	W07	0	0	0	12	Q	
						9571	N04	E11	0	0	0	12	Q	
						9573	S09	E33	0	0	0	12	Q	
						9574	S04	W10	2	0	0	12	E	
						9575	N11	E73	0	0	0	12	Q	
						9576	N12	W53	0	0	0	12	Q	
225	13	12	196	160	16	9563	N26	W94	0	0	0	13	Q	SOL: Eruptive
						9566	N17	W84	0	0	0	13	Q	MAG: Active
						9569	S18	W82	0	0	0	13	Q	PRO: Quiet
						9570	S12	W20	0	0	0	13	Q	
						9571	N06	W02	0	0	0	13	Q	
						9573	S10	E20	0	0	0	13	Q	
						9574	S04	W24	1	0	0	13	Q	
						9575	N11	E61	0	0	0	13	Q	
						9576	N12	W67	0	0	0	13	Q	
						9577	N16	W15	0	0	0	13	Q	
						9578	S10	W11	0	0	0	13	Q	
226	14	13	141	152	20	9569	S17	W94	0	0	0	14	Q	SOL: Eruptive
						9570	S12	W34	0	0	0	14	Q	MAG: Active
						9571	N06	W16	0	0	0	14	Q	PRO: Quiet
						9573	S10	E07	0	0	0	14	Q	
						9574	S05	W38	1	0	0	14	E	
						9575	N11	E47	0	0	0	14	Q	
						9576	N13	W80	0	0	0	14	Q	
						9578	S09	W25	0	0	0	14	Q	

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
227	15	14	133	147	13	9570	S10	W47	0	0	0	15	Q	SOL: Eruptive
						9571	N07	W29	0	0	0	15	Q	MAG: Active
						9573	S08	W08	0	0	0	15	Q	PRO: Quiet
						9574	S04	W51	0	0	0	15	E	
						9575	N11	E34	0	0	0	15	Q	
						9578	S08	W38	0	0	0	15	Q	
						9579	S17	W10	1	0	0	15	Q	
						9580	N24	E73	0	0	0	15	Q	
228	16	15	155	147	7	9570	S12	W60	0	0	0	16	Q	SOL: Eruptive
						9571	N06	W43	0	0	0	16	Q	MAG: Active
						9573	S08	W23	0	0	0	16	Q	PRO: IP
						9574	S04	W66	1	0	0	16	E	
						9575	N12	E20	0	0	0	16	Q	
						9577	N13	W61	0	0	0	16	Q	
						9578	S08	W53	0	0	0	16	Q	
						9579	S19	W22	0	0	0	16	Q	
						9580	N25	E61	0	0	0	16	Q	
						9581	S28	W09	0	0	0	16	Q	
						9582	N32	E73	0	0	0	16	Q	
229	17	16	171	143	5	9570	S11	W73	0	0	0	17	Q	SOL: Eruptive
						9571	N06	W56	0	0	0	17	Q	MAG: Active
						9573	S09	W35	0	0	0	17	Q	PRO: IP
						9574	S04	W79	0	0	0	17	E	
						9575	N12	E08	0	0	0	17	Q	
						9577	N13	W74	0	0	0	17	Q	
						9578	S10	W65	0	0	0	17	Q	
						9579	S20	W36	0	0	0	17	Q	
						9580	N25	E48	0	0	0	17	Q	
						9581	S26	W23	1	0	0	17	Q	
						9582	N32	E59	0	0	0	17	Q	
						9583	S23	E13	0	0	0	17	Q	
						9584	S11	E60	0	0	0	17	Q	
						9585	N15	E74	0	0	0	17	Q	
230	18	17	158	145	30	9570	S10	W90	0	0	0	18	Q	SOL: Eruptive
						9573	S08	W49	0	0	0	18	Q	MAG: Active
						9574	S04	W90	0	0	0	18	Q	PRO: IP
						9575	N11	W02	1	0	0	18	Q	
						9577	N15	W92	0	0	0	18	Q	
						9579	S22	W50	0	0	0	18	Q	
						9580	N24	E35	0	0	0	18	Q	
						9581	S25	W42	1	0	0	18	E	
						9582	N30	E45	0	0	0	18	Q	
						9584	S13	E47	0	0	0	18	Q	
						9585	N15	E63	4	0	0	18	E	
						9586	S15	W47	0	0	0	18	Q	
						9587	S11	E56	0	0	0	18	Q	
231	19	18	148	156	17	9573	S08	W62	0	0	0	19	Q	SOL: Eruptive
						9575	N11	W12	0	0	0	19	Q	MAG: Active
						9579	S24	W63	0	0	0	19	Q	PRO: Quiet
						9580	N25	E22	0	0	0	19	Q	
						9581	S26	W50	0	0	0	19	Q	
						9582	N28	E33	5	0	0	19	E	
						9584	S13	E36	0	0	0	19	Q	
						9585	N15	E50	1	0	0	19	E	
						9586	S16	W62	1	0	0	19	Q	
						9587	S11	E43	0	0	0	19	Q	
232	20	19	142	158	12	9573	S08	W75	1	0	0	20	Q	SOL: Eruptive
						9575	N11	W32	2	0	0	20	Q	MAG: Quiet
						9580	N26	E09	0	0	0	20	Q	PRO: Quiet
						9581	S26	W65	0	0	0	20	Q	
						9582	N28	E20	0	0	0	20	E	
						9584	S12	E20	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 Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
						9585	N15	E37	0	0	0	20	E	
						9587	S11	E28	0	0	0	20	Q	
						9588	S32	W55	0	0	0	20	Q	
233	21	20	172	156	8	9573	S08	W87	0	0	0	21	Q	SOL: Eruptive
						9575	N10	W46	0	0	0	21	Q	MAG: Quiet
						9580	N25	W05	0	0	0	21	Q	PRO: Quiet
						9581	S26	W77	0	0	0	21	Q	
						9582	N28	E05	3	0	0	21	E	
						9584	S12	E05	0	0	0	21	Q	
						9585	N15	E22	2	0	0	21	E	
						9587	S11	E15	1	0	0	21	Q	
						9588	S32	W70	0	0	0	21	Q	
						9589	N15	W21	0	0	0	21	Q	
						9590	S28	E80	0	0	0	21	Q	
234	22	21	169	160	12	9575	N09	W59	0	0	0	22	Q	SOL: Eruptive
						9580	N25	W17	0	0	0	22	Q	MAG: Quiet
						9582	N28	W07	0	0	0	22	Q	PRO: Quiet
						9584	S12	W08	0	0	0	22	Q	
						9585	N15	E11	2	0	0	22	E	
						9587	S10	E02	0	0	0	22	Q	
						9588	S32	W80	0	0	0	22	Q	
						9589	N14	W35	0	0	0	22	Q	
						9590	S28	E64	0	0	0	22	Q	
						9591	S18	E71	0	0	0	22	E	
235	23	22	183	162	15	9575	N10	W73	0	0	0	23	Q	SOL: Active
						9580	N24	W30	0	0	0	23	Q	MAG: Quiet
						9582	N27	W20	1	0	0	23	Q	PRO: Quiet
						9584	S12	W24	0	0	0	23	Q	
						9585	N14	W04	0	0	0	23	Q	
						9587	S10	W14	0	0	0	23	Q	
						9589	N16	W46	0	0	0	23	Q	
						9590	S28	E50	0	0	0	23	Q	
						9591	S17	E63	8	0	0	23	E	
						9592	S09	W59	0	0	0	23	Q	
236	24	23	194	170	7	9575	N10	W86	0	0	0	24	Q	SOL: Active
						9580	N24	W43	0	0	0	24	Q	MAG: Quiet
						9582	N28	W33	0	0	0	24	Q	PRO: Quiet
						9585	N14	W16	0	0	0	24	Q	
						9589	N16	W59	0	0	0	24	Q	
						9590	S28	E37	0	0	0	24	Q	
						9591	S17	E53	5	0	0	24	E	
						9592	S08	W73	3	0	0	24	Q	
						9593	N00	E01	0	0	0	24	Q	
237	25	24	187	175	5	9580	N25	W54	0	0	0	25	Q	SOL: Active
						9582	N27	W48	0	0	0	25	Q	MAG: Quiet
						9585	N13	W29	1	1	0	25	Q	PRO: Quiet
						9587	S11	W35	0	0	0	25	Q	
						9589	N15	W73	0	0	0	25	Q	
						9590	S28	E25	1	0	0	25	Q	
						9591	S18	E42	6	1	0	25	E	
						9592	S09	W87	0	0	0	25	Q	
						9593	N00	W12	0	0	0	25	Q	
						9594	N37	E05	0	0	0	25	Q	
						9595	N16	E27	0	0	0	25	Q	
238	26	25	132	199	11	9580	N24	W68	0	0	0	26	Q	SOL: Active
						9585	N13	W44	0	0	0	26	E	MAG: Quiet
						9587	S10	W50	5	0	0	26	Q	PRO: Quiet
						9590	S29	E12	1	0	0	26	Q	
						9591	S19	E32	21	2	1	26	E	
						9594	N37	W10	0	0	0	26	Q	
						9596	N23	E79	0	0	0	26	Q	

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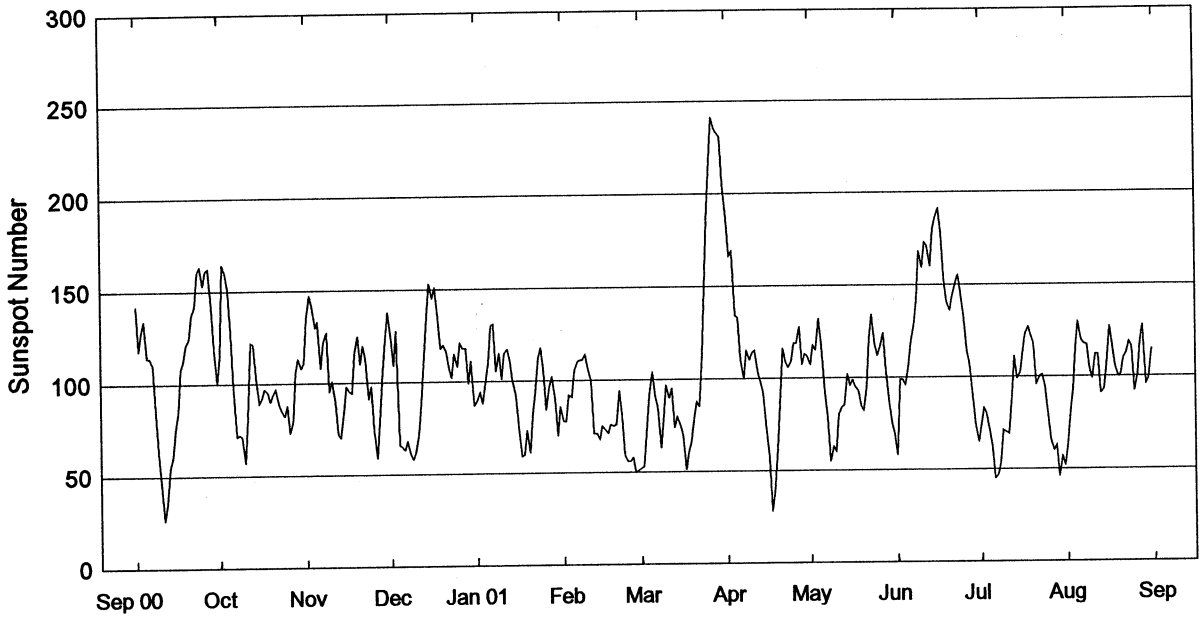
Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
239	27	26	139	190	13	9580	N23	W82	0	0	0	27	Q	SOL: Active
						9585	N12	W58	0	0	0	27	Q	MAG: Quiet
						9587	S10	W64	1	0	0	27	Q	PRO: Quiet
						9590	S29	W02	0	0	0	27	Q	
						9591	S19	E18	14	0	0	27	E	
						9596	N22	E67	0	0	0	27	Q	
						9597	N17	E48	0	0	0	27	Q	
240	28	27	182	192	14	9580	N23	W94	0	0	0	28	Q	SOL: Active
						9585	N13	W71	2	0	0	28	Q	MAG: Quiet
						9587	S09	W78	0	0	0	28	Q	PRO: Quiet
						9590	S29	W14	1	0	0	28	Q	
						9591	S18	E06	11	0	0	28	E	
						9596	N22	E54	0	0	0	28	Q	
						9597	N16	E35	0	0	0	28	Q	
						9598	S16	W75	0	0	0	28	Q	
						9599	S18	E65	1	0	0	28	Q	
						9600	N16	E81	0	0	0	28	Q	
						9601	N10	E85	0	1	0	28	Q	
241	29	28	189	199	13	9585	N12	W85	0	0	0	29	Q	SOL: Active
						9587	S10	W90	3	0	0	29	Q	MAG: Active
						9590	S26	W31	0	0	0	29	Q	PRO: Quiet
						9591	S19	W06	3	1	0	29	E	
						9595	N15	W31	0	0	0	29	Q	
						9596	N22	E40	0	0	0	29	Q	
						9597	N17	E22	0	0	0	29	Q	
						9598	S17	W88	0	0	0	29	Q	
						9599	S17	E51	0	0	0	29	Q	
						9600	N16	E68	7	0	0	29	Q	
						9601	N12	E73	11	2	0	29	Q	
242	30	29	136	197	10	9590	S27	W42	0	0	0	30	Q	SOL: Active
						9591	S18	W22	1	0	0	30	E	MAG: Quiet
						9596	N21	E28	0	0	0	30	Q	PRO: Quiet
						9597	N17	E09	1	0	0	30	Q	
						9599	S19	E36	1	0	0	30	Q	
						9600	N14	E56	4	2	0	30	E	
						9601	N09	E58	4	0	0	30	E	
243	31	30	138	199	16	9590	S30	W56	1	0	0	31	Q	SOL: Active
						9591	S20	W33	4	1	0	31	E	MAG: Quiet
						9596	N22	E14	0	0	0	31	Q	PRO: Quiet
						9597	N19	W02	0	0	0	31	Q	
						9599	S18	E24	2	1	0	31	Q	
						9601	N14	E49	4	1	0	31	E	

STRATWARM ALERTS - NONE

International Relative Sunspot Numbers
Sep 2000 - Aug 2001

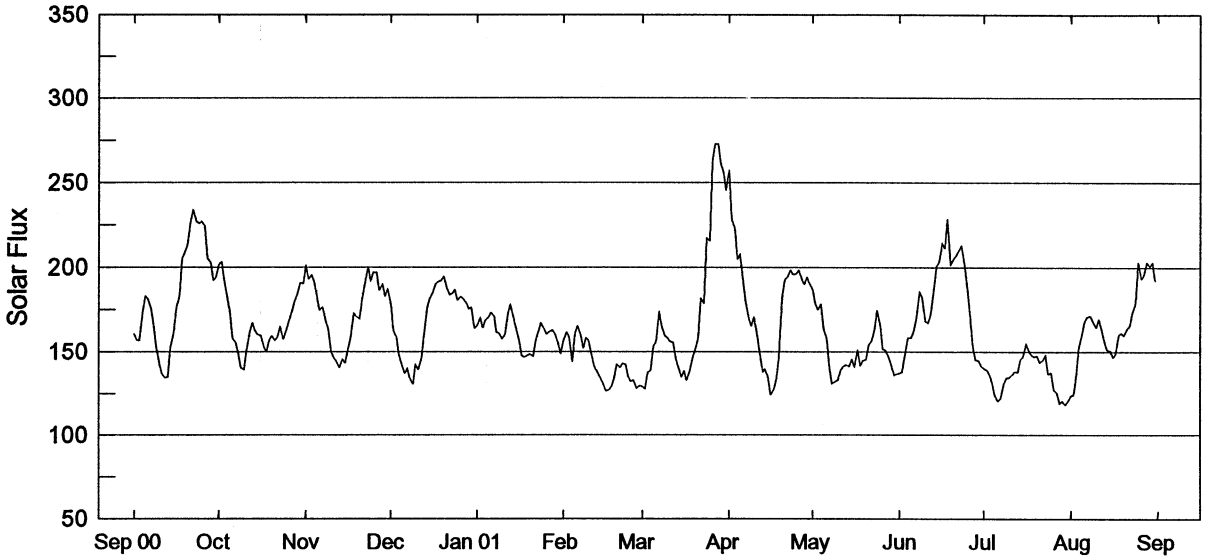


Day	Sep 00	Oct	Nov	Dec	Jan 01	Feb	Mar	Apr	May	Jun	Jul*	Aug*
1	142	115	140	116	89	78	52	186	107	58	74	62
2	118	153	147	109	94	78	53	166	118	99	83	81
3	128	159	141	118	88	92	75	169	115	99	80	93
4	134	150	130	72	98	91	92	134	132	96	71	115
5	114	128	133	65	110	105	104	133	118	106	62	130
6	114	97	108	57	130	110	91	110	92	119	45	120
7	110	66	122	68	131	111	85	100	79	129	47	118
8	85	72	127	57	105	111	63	115	55	142	54	117
9	55	71	95	58	115	114	79	110	63	168	71	104
10	42	57	101	62	101	105	97	114	60	159	70	99
11	26	82	90	72	115	100	90	115	80	173	69	112
12	35	122	72	89	117	71	95	103	84	171	90	112
13	63	121	70	114	111	71	74	98	85	160	111	91
14	60	104	84	135	100	68	80	92	102	180	99	93
15	77	83	98	153	92	75	75	75	96	186	102	106
16	85	92	95	145	75	73	70	58	99	191	113	127
17	108	97	94	151	59	71	51	28	95	178	123	117
18	112	95	116	138	60	76	61	38	93	153	127	106
19	121	90	125	118	73	75	66	62	85	141	122	100
20	124	94	110	127	61	76	80	86	82	136	118	101
21	137	97	120	116	81	94	88	116	95	144	96	110
22	142	89	113	107	93	81	85	109	121	151	100	112
23	160	85	91	102	112	59	113	106	134	155	101	119
24	163	82	98	115	118	56	149	109	118	145	96	116
25	153	88	74	108	106	56	186	119	112	131	79	92
26	161	73	59	121	84	58	218	119	118	114	66	101
27	162	80	84	118	97	50	241	128	124	107	60	119
28	142	106	106	118	102	51	235	107	103	89	63	128
29	119	113	123	110	90		233	113	85	74	46	96
30	100	108	138	111	70		231	112	75	65	57	99
31		111		87	86		205		69		52	115
Mean	109.7	99.4	106.8	104.4	95.6	80.6	113.5	107.7	96.6	134.0	82.2	106.8

* = Provisional.

Penticton 2800 MHz (10.7cm) Solar Flux
Sep 2000 - Aug 2001

Adjusted to 1 AU



Day	Sep 00	Oct	Nov	Dec	Jan 01	Feb	Mar	Apr	May	Jun	Jul	Aug
1	160.5	201.9	201.2	179.3	165.3	156.2	129.0	257.2	187.4~	136.8	119.0	123.8
2	156.7	202.9	193.2	162.3	170.2	161.6	127.4	227.9	179.0	137.8	120.5	124.3
3	156.7	192.1	195.5	158.9	164.2	159.0	137.3	223.1	175.1	149.5	118.0	135.5
4	173.6	184.1	191.4	147.6	168.8	144.0	138.7	205.0	178.6	158.3	120.3	152.7
5	183.1	173.7	183.1	142.7	170.5	160.7	153.4	207.8*	163.5	158.0	135.6	160.5
6	181.5	157.9	174.9	136.9	173.4	165.3	155.4	192.0~	157.8	162.4	120.3	168.3
7	175.8	155.3	176.6	139.9	170.9	159.6	174.0	180.0	140.9	169.8	121.8	171.0
8	165.7	148.6	169.5	134.1	161.5	152.3	164.8	169.7	131.1	185.7	130.5	171.5
9	153.0	140.4	163.0	130.7	160.8	158.1	159.2	165.4	131.9	182.4	134.4	167.8
10	142.5	139.1	150.4	142.1	157.4	156.5	158.0	170.4	133.0	168.0	134.3	164.7
11	136.7	150.8	146.6	139.2	160.5	147.4	155.8	160.3	139.4	167.4	136.3	169.5
12	134.2	161.9	143.6	145.2	172.5	140.9	155.7	149.8	141.0	171.6	138.3	164.0
13	134.8	167.2	140.6	159.5	178.3	137.8	145.6	137.8	141.9	187.1	137.7	155.5
14	152.5	162.3	145.4	176.5	170.6	134.6	140.7	139.6	141.2	200.9	145.4	151.1
15	161.1	160.1	143.2	181.9	163.8	131.8	134.7	135.1	145.2	203.2	146.8	150.5
16	176.4	159.8	150.7	184.4	156.6	126.5	138.5	124.3	140.9	214.3	154.7	146.2
17	183.2	153.0	159.6	190.4	147.0	126.8	132.9	127.1	150.8	211.2	150.4	148.4
18	205.7	149.9	172.9	191.6	146.6	129.0	138.5	133.0	141.5	228.5	147.7	159.9
19	208.8	156.5	170.7	192.2	147.7	134.0	145.7	145.8	144.6	201.7	146.9	161.3
20	213.1	159.3	169.6	194.8	148.3	142.3	152.1	182.2	144.9	205.0	147.2	159.8
21	226.7	156.5	180.9	188.2	146.7	140.5	158.2	193.0	153.8	206.9	143.5	163.9
22	233.8	158.6	190.1	183.8	157.1	142.7	181.8	194.6	155.8	210.3	144.9	165.2
23	226.7	164.8	200.1	184.7	162.0	142.2	178.9	198.6	162.8	213.0	147.8	173.4
24	225.8	157.5	192.1	186.7	167.2	134.6	217.5	195.8	174.7	201.3	136.7	178.7
25	226.8	162.0	197.0#	180.9	163.4	132.2	215.7	196.3	166.1	188.4	137.5	203.2
26	224.7	168.9	197.0	182.6	160.5	132.8	262.6	198.7	151.3	173.5	127.2	193.8
27	205.5	173.7	186.6	181.4	161.8	128.1	272.4	193.3	150.8	152.8	125.1	195.9
28	203.0	179.7	190.3	179.3	162.6	129.4	272.6	190.4	146.9	144.9	119.0	203.1
29	192.6	184.5	183.2	175.5	160.5		261.0	194.5	142.3	144.6	120.5	200.9
30	194.0	191.0	187.0	176.1	154.9		256.3	190.7	136.0	141.2	118.0	203.0
31		190.5		163.9	148.8		245.3		136.6		120.3	192.2
Mean	183.8	166.6	174.9	168.2	161.3	143.1	176.1	179.3	152.0	179.2	135.6	167.1

NOTE: #1800UT reading - burst IP at 2000UT;
~ 1700UT reading - burst IP at 2000UT; * 2300UT reading - burst IP at 2000UT.

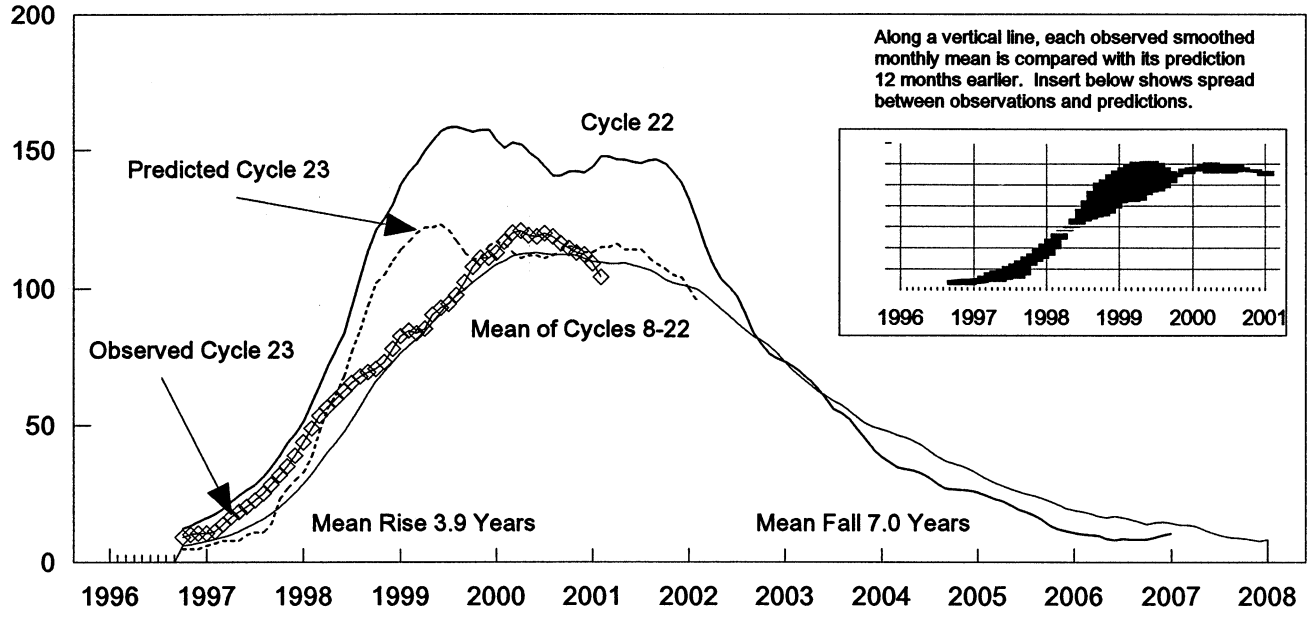
DAILY SOLAR INDICES

August 2001

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers Int	Sunspot Numbers Amer	Obs Flux Penticton (2800)	Solar Flux Adjusted to 1 Astronomical Unit — SGMR (15400)	SGMR (8800)	SGMR (4995)	Pentic (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
1	213	18	62	73	120.2	537	278	168	123.8	113	83	50	34	17
2	214	19	81	94	120.8	541	278	174	124.3	116	86	53	39	19
3	215	20	93	111	131.6	--	--	--	135.5	--	--	--	--	--
4	216	21	115	132	148.4	551	307	208	152.7	139	97	57	37	18
5	217	22	130	146	156.0	556	312	219	160.5	149	102	54	40	26
6	218	23	120	139	163.7	566	331	230	168.3	158	109	60	40	50
7	219	24	118	140	166.3	565	332	232	171.0	166	112	58	38	52
8	220	25	117	133	166.9	577	319	229	171.5	164	111	59	29	22
9	221	26	104	111	163.3	561	318	218	167.8	154	109	61	40	19
10	222	27	99	106	160.3	403	277	210	164.7	150	113	61	58	191
11	223	1	112	131	165.0	578	327	225	169.5	162	113	60	41	25
12	224	2	112	122	159.8	535	319	209	164.0	154	113	61	43	21
13	225	3	91	95	151.5	561	310	207	155.5	149	111	60	40	18
14	226	4	93	100	147.3	564	309	203	151.1	146	108	60	33	18
15	227	5	106	118	146.7	563	291	192	150.5	141	103	56	39	18
16	228	6	127	124	142.6	555	286	186	146.2	137	105	56	38	18
17	229	7	117	113	144.9	--	--	--	148.4	--	--	--	--	--
18	230	8	106	115	156.1	558	290	200	159.9	146	104	55	36	19
19	231	9	100	110	157.5	563	304	204	161.3	150	103	55	39	25
20	232	10	101	102	156.1	559	310	205	159.8	148	103	56	38	18
21	233	11	110	125	160.2	569	316	221	163.9	154	111	56	38	18
22	234	12	112	126	161.5	570	307	208	165.2	156	107	56	39	19
23	235	13	119	124	169.7	585	319	229	173.4	162	109	56	39	19
24	236	14	116	114	174.9	584	341	229	178.7	165	111	53	37	16
25	237	15	92	107	199.0	721	454	317	203.2	213	138	62	44	25
26	238	16	101	113	189.9	611	350	236	193.8	177	119	58	44	27
27	239	17	119	125	192.0	579	330	226	195.9	180	118	54	42	52
28	240	18	128	123	199.2	587	332	246	203.1	195	126	57	40	19
29	241	19	96	112	197.0	584	340	249	200.9	182	121	57	38	17
30	242	20	99	116	199.2	578	339	246	203.0	192	125	60	57	18
31	243	21	115	126	188.7	567	315	227	192.2	185	123	61	44	35
MEAN			106.8	117.1	163.1	566	318	219	167.1	158	110	57	40	29

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

Cycle 23 Smoothed Sunspot Numbers: Observed and Predicted



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

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1994	37	35	34	34	33	31	29	27	27	27	26	26	31
1995	24	23	22	21	19	18	17	15	13	12	11	11	17
1996	10	10	10	9	8*	9	8	8	8	9**	10	10	8
1997	11	11	14	17	18	20	23	25	28	32	35	39	23
1998	44	49	53	57	59	63	65	68	69	71	73	78	62
1999	83	85	84	85	90	93	94	98	102	108	111	111	95
2000	113	117	120	121+	119	119	120	119	116	115	113	112	107
2001	109	104	104	103	103	102	101	101	100	99	98	97	102
			(3)	(9)	(14)	(15)	(15)	(16)	(18)	(19)	(19)	(20)	(12)
2001	96	95	93	92	90	87	85	83	80	78	66	73	86
	(20)	(20)	(22)	(22)	(21)	(20)	(20)	(20)	(20)	(20)	(20)	(18)	(20)

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.**

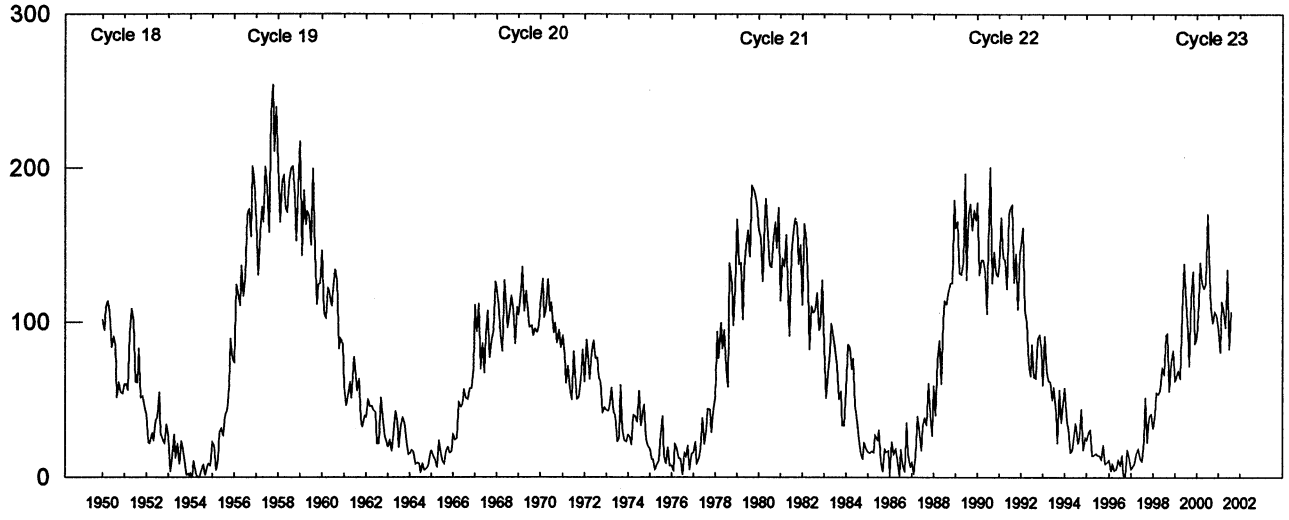
+ April 2000 marks Cycle 23 maximum.

Observed and Predicted Numbers. For the end of Cycle 22, and the rise and decline of Cycle 23, the table above lists observed smoothed sunspot numbers up to the one that includes the most recent monthly mean. We based these smoothed values on final monthly means through Jun 2001 and on provisional numbers thereafter. Table entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the Jul 1987 supplement to *Solar-Geophysical Data.*) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval. Subtracting the number from the predicted value generates the lower limit. Consider, for example, the February 2002 prediction. There exists a 90% chance that in February 2002, the actual smoothed number will fall somewhere between 75 and 115.

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 - Aug 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	99.4	106.8	104.4	119.6	M
2001	95.6	80.6	113.5	107.7	96.6	134.0	82.2	106.8					102.1	

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

Hα SOLAR FLARES

AUGUST 2001

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	01	0105	0114	0124						19		C 1.2						1.1E-03
GOES		0325	0350	0400	S14	E49	9561			35	SF	C 2.4						3.0E-03
LEAR		0329	0358	0428	S14	E49	9561	08	4.8	59	SF		3	E		41		F
GOES		0509	0515	0520						11		B 5.8						3.5E-04
GOES		1005	1012	1017						12		B 5.4						3.1E-04
GOES		1304	1310	1317	S12	E44	9561			13	SF	B 6.4						3.6E-04
RAMY		1308	1309	1316	S12	E44	9561	08	4.9	8	SF		3	E		20		
HOLL		1309	1313	1319	S13	E42	9561	08	4.7	10	SF		3	E		25		
GOES		1724	1735	1747	S14	E43	9561			23	SF	B 4.8						5.4E-04
HOLL		1728	1737	1746	S14	E43	9561	08	5.0	18	SF		3	E		18		F
HOLL		2222	2224U	2250	S13	E40	9561	08	5.0	28	SF		2	E		84		U
GOES	02	0351	0356	0400						9		B 3.9						1.8E-04
GOES		0822	0825	0829						7		B 2.8						1.0E-04
GOES		0944	0950	0952						8		B 3.7						1.6E-04
GOES		1059	1114	1118						19		B 8.2						5.5E-04
GOES		1200	1205	1209	N24	E34	9563			9	SF	C 2.4						7.5E-04
SVTO		1204	1205	1213	N23	E35	9563	08	5.2	9	SF		3	E		42		H
RAMY		1204	1205	1214	N24	E34	9563	08	5.1	10	SF		3	E		47		H
GOES		1225	1238	1257	N17	E52	9566			32	SF	C 2.1						3.1E-03
SVTO		1233	1234	1254	N17	E52	9566	08	6.5	21	SF		3	E		80		F
RAMY		1249	1250	1307	N17	E51	9566	08	6.4	18	SF		3	E		48		HF
HOLL		1333	1406	1414	S18	W02	9557	08	2.4	41	SF		3	E		24		F
GOES		1455	1500	1504	N23	E35	9563			9	SF	C 3.1						1.1E-03
HOLL		1457	1458	1514	N23	E35	9563	08	5.3	17	SF		3	E		22		
RAMY		1500	1501	1508	N24	E33	9563	08	5.2	8	SF		3	E		18		F
HOLL		1546	1558	1607	S12	E29	9561	08	4.8	21	SF		3	E		45		H
HOLL		1557	1557	1602	N23	E34	9563	08	5.3	5	SF		3	E		11		
GOES		1606	1613	1618	N22	E34	9563			12	SF	C 4.8						2.1E-03
HOLL		1609	1612	1628	N22	E35	9563	08	5.4	19	SF		3	E		55		H
SVTO		1610	1613	1624	N22	E34	9563	08	5.3	14	SF		3	E		20		F
RAMY		1610	1613	1627	N23	E31	9563	08	5.1	17	SF		3	E		33		HF
HOLL		1723	1727	1737	N23	E33	9563	08	5.3	14	SF		3	E		19		
GOES		1742	1746	1748	N23	E32	9563			6	SF	C 2.8						7.9E-04
HOLL		1744	1746	1755	N23	E32	9563	08	5.2	11	SF		3	E		53		
HOLL		1853	1901	1908	N24	E31	9563	08	5.2	15	SF		3	E		32		
GOES		1855	1900	1903	N24	E31	9563			8	SF	C 2.1						7.4E-04
GOES		2001	2009	2012						11		C 1.8						7.7E-04
GOES		2013	2017	2021						8		C 3.3						1.2E-03
GOES		2213	2217	2222						9		B 6.1						2.9E-04
GOES		2253	2257	2259						6		B 7.3						2.1E-04
GOES	03	0110	0115	0117						7		C 1.3						3.5E-04
GOES		0131	0134	0138						7		B 4.6						1.8E-04
GOES		0302	0307	0309	N22	E27	9563			7	SN	M 1.5						2.5E-03
LEAR		0303	0306	0313	N22	E27	9563	08	5.2	10	SN		3	E		61		E
GOES		0425	0431	0441	N16	E41	9566			16	SF	C 1.1						8.8E-04
LEAR		0427	0434	0449	N16	E41	9566	08	6.3	22	SF		3	E		47		F
GOES		0528	0534	0540	S15	E06				12	SF	C 1.2						7.0E-04
LEAR		0534	0534	0542	S15	E06		08	3.7	8	SF		3	E		18		F
GOES		0740	0750	0754	N24	E28	9563			14	SF	B 9.6						6.5E-04
LEAR		0743	0746	0759	N24	E27	9563	08	5.4	16	SF		3	E		20		F
SVTO		0744	0745	0757	N24	E28	9563	08	5.5	13	SF		3	E		15		F
GOES		0853	0902	0912	S13	E18	9561			19	SF	C 1.1						9.4E-04
LEAR		0858	0858	0913	S13	E18	9561	08	4.7	15	SF		3	E		10		F
LEAR		0900	0902	0911	S15	E04		08	3.7	11	SF		3	E		24		F
SVTO		0901	0902	0909	S14	E05		08	3.7	8	SF		3	E		18		
GOES		0957	1005	1013	N25	E26	9563			16	SF	C 1.7						1.3E-03
SVTO		1001	1003	1016	N25	E26	9563	08	5.4	15	SF		3	E		28		F
GOES		1138	1144	1148						10		C 1.6						6.7E-04
HOLL		1504	1504	1513	N14	W63	9564	07	30.0	9	SF		3	E		16		
GOES		1636	1646	1653	S22	W20	9557			17	SF	C 1.0						9.8E-04
HOLL		1637	1640	1704	S22	W20	9557	08	2.1	27	SF		3	E		25		F
RAMY		1638	1639	1653	S23	W18	9557	08	2.3	15	SF		3	E		16		F
SVTO		1640E	1642U	1655D	S21	W23	9557	08	1.9	15D	SF		2	E		34		F
HOLL		1739	1739	1746	N25	E24	9563	08	5.6	7	SF		3	E		12		F
HOLL		1857	1901	1905	S22	W21	9557	08	2.2	8	SF		3	E		14		F
GOES		2136	2142	2150	S15	W03	9567			14	SF	C 1.1						7.5E-04

Hα SOLAR FLARES

AUGUST 2001

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	03	2141	2144	2152	S15	W03	9567	08	3.7	11	SF		3	E		12		
HOLL		2146	2147	2151	S13	W02	9567	08	3.7	5	SF		3	E		12		
GOES		2232	2239	2250						18		B 6.1						6.0E-04
HOLL		2333	2335	2340	S21	W23	9557	08	2.2	7	SF		3	E		10		F
HOLL		2345	2348	2359	S21	W23	9557	08	2.2	14	SF		3	E		15		F
GOES	04	0204	0209	0211	N22	E13	9563			7	SF	C 2.7						6.2E-04
LEAR		0207	0209	0214	N22	E13	9563	08	5.1	7	SF		3	E		57		FH
LEAR		0300	0303	0305	N17	E32	9566	08	6.5	5	SF		3	E		14		F
LEAR		0404	0405	0409	N22	E12	9563	08	5.1	5	SF		3	E		42		F
LEAR		0901	0903	0908	S17	W57	9568	07	31.0	7	SF		3	E		17		
GOES		0944	0949	0951	N24	E08	9563			7	SF	C 7.9						1.5E-03
SVTO		0949	0950	0954	N24	E08	9563	08	5.0	5	SF		3	E		22		
GOES		1221	1235	1250						29		C 9.6						1.2E-02
HOLL		1754	1758	1818	N17	E25	9566	08	6.6	24	SF		3	E		29		
GOES		1837	1846	1854	N16	E24	9566			17	SF	C 2.3						1.8E-03
HOLL		1839	1840U	1942D	N16	E24	9566	08	6.6	63D	SF		3	E		65		
GOES		1939	1945	1949	S22	W34	9557			10	SF	C 2.8						1.2E-03
HOLL		1941E	1943U	2018D	S22	W34	9557	08	2.2	37D	SF		3	E		98		
GOES		2007	2016	2017	N21	E05	9563			10	SF	C 1.0						6.0E-04
HOLL		2013E	2016U	2101D	N21	E05	9563	08	5.2	48D	SF		3	E		28		
GOES		2253	2257	2259						6		C 1.5						3.5E-04
HOLL		2340	2344	2350	S22	W36	9557	08	2.2	10	SF		3	E		11		
GOES		2348	2353	2356	N25	E08	9563			8	SF	C 1.2						5.2E-04
HOLL		2351	2351	2405	N25	E08	9563	08	5.6	14	SF		3	E		24		
GOES	05	0046	0052	0105	S20	W44	9557			19	SF	C 1.4						1.4E-03
LEAR		0050	0052	0104	S20	W44	9557	08	1.7	14	SF		3	E		13		
GOES		0112	0114	0117	N16	E19	9566			5	SF	C 1.1						3.3E-04
LEAR		0113	0113	0127	N16	E19	9566	08	6.5	14	SF		3	E		38		
GOES		0338	0342	0349	N24	E03	9563			11	SF	C 1.2						7.7E-04
LEAR		0340	0343	0349	N24	E03	9563	08	5.4	9	SF		3	E		18		F
LEAR		0352	0353	0401	N23	E02	9563	08	5.3	9	SF		3	E		14		F
GOES		0402	0407	0414	S15	W20	9567			12	SF	C 2.3						1.3E-03
LEAR		0405	0408	0417	S15	W20	9567	08	3.6	12	SF		3	E		24		F
LEAR		0405	0408	0419	N16	E18	9566	08	6.5	14	SF		3	E		31		F
GOES		0512	0515	0517	N20	W01	9563			5	SF	C 1.0						2.9E-04
LEAR		0514	0514	0518	N20	W01	9563	08	5.1	4	SF		3	E		36		F
LEAR		0535	0541	0556	S13	W22	9567	08	3.6	21	SF		3	E		18		F
GOES		0546	0548	0551	S13	W22	9567			5	SF	C 1.0						3.0E-04
GOES		0948	0953	0957	N17	E15	9566			9	SF	C 1.5						6.2E-04
SVTO		0952	0952	0958	N17	E15	9566	08	6.5	6	SF		3	E		15		F
GOES		1039	1047	1054						15		C 2.4						1.6E-03
GOES		1200	1203	1207						7		C 1.2						4.5E-04
GOES		1249	1254	1258	N17	E14	9566			9	SF	C 4.1						1.4E-03
RAMY		1252	1254	1307D	N16	E13	9566	08	6.5	15D	SF		3	E		51		F
SVTO		1253	1254	1257	N17	E14	9566	08	6.6	4	SF		3	E		16		F
RAMY		1257	1258	1309D	S20	W73	9568	07	31.0	12D	SF		3	E		13		
GOES		1320	1325	1329	S23	W46	9557			9	SF	C 2.2						1.0E-03
RAMY		1326E	1326	1339	S23	W46	9557	08	2.0	13D	SF		3	E		18		F
GOES		1422	1441	1445	S19	W44	9557			23	SF	C 2.0						1.9E-03
HOLL		1427	1439	1455	S19	W44	9557	08	2.2	28	SF		3	E		31		F
HOLL		1455	1455	1501	S18	W73	9568	07	31.1	6	SF		3	E		19		
GOES		1500	1504	1507	S20	W46	9557			7	SF	C 3.5						9.7E-04
HOLL		1503	1504	1517	S20	W46	9557	08	2.1	14	SF		3	E		35		F
SVTO		1504	1504	1510	S19	W45	9557	08	2.2	6	SF		3	E		12		F
GOES		1522	1531	1536			9557			14		M 1.7						7.2E-03
HOLL		1526	1527	1544	N17	E13	9566	08	6.6	18	SF		3	E		33		F
HOLL		1526	1533	1555	S21	W46	9557	08	2.1	29	SF		3	E		94		F
SVTO		1528	1528	1535	N17	E11	9566	08	6.5	7	SF		3	E		16		F
SVTO		1528	1531	1544D	S19	W45	9557	08	2.2	16D	SF		2	E		60		F
RAMY		1534E	1534	1550	N17	E11	9566	08	6.5	16D	SF		3	E		75		F
RAMY		1534E	1534	1550	S22	W45	9557	08	2.2	16D	SF		3	E		114		F
GOES		1611	1614	1616						5		C 1.1						2.9E-04
HOLL		1812	1828	1841	S13	W29	9567	08	3.6	29	SF		3	E		52		F
RAMY		1816	1826	1837	S15	W26	9567	08	3.8	21	SF		3	E		23		F
GOES		1825	1830	1833	S20	W49	9557			8	SF	C 3.3						1.1E-03
HOLL		1829	1829	1839	S20	W49	9557	08	2.0	10	SF		3	E		21		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	05	1829	1829	1840	S23	W49	9557	08	2.0	11	SF		3	E		20		F
HOLL		1853	1904	1911	S20	W49	9557	08	2.0	18	SF		3	E		31		F
HOLL		1914	1919	1933	S19	W48	9557	08	2.1	19	SF		3	E		15		F
GOES		1948	1953	2000	N18	E09	9566			12	SF	C 1.6						1.0E-03
RAMY		1950	1952	2004	N17	E09	9566	08	6.5	14	SF		3	E		31		F
HOLL		1953	1953	2007	N18	E09	9566	08	6.5	14	SF		3	E		28		F
GOES		2046	2052	2057	N17	E09	9566			11	SF	C 1.2						6.9E-04
RAMY		2049	2049	2105	N16	E09	9566	08	6.6	16	SF		3	E		12		F
HOLL		2050	2054	2104	N17	E09	9566	08	6.5	14	SF		3	E		18		F
GOES		2116	2124	2133	S14	W30	9567			17	1N	C 7.1						4.3E-03
RAMY		2117	2117	2120	S16	W30	9567	08	3.6	3	SF		3	E		24		
HOLL		2119	2123	2158	S14	W30	9567	08	3.6	39	1N		3	E		135		F
HOLL		2127	2128	2144	S19	W50	9557	08	2.1	17	SF		3	E		24		F
HOLL		2148	2154	2200	S17	W76	9568	07	31.1	12	SF		3	E		43		
HOLL		2155	2156	2159	N17	E08	9566	08	6.5	4	SF		3	E		11		
GOES		2216	2224	2229	S20	W49	9557			13	1N	M 4.9						2.2E-02
HOLL		2220	2224	2250	S20	W49	9557	08	2.2	30	1N		3	E		148		F
GOES		2326	2339	2343	N17	E08	9566			17	SF	C 3.8						1.7E-03
LEAR		2339E	2340U	2346	N16	E07	9566	08	6.5	7D	SF		3	E		54		F
HOLL		2339	2340	2351	N17	E08	9566	08	6.6	12	SF		3	E		48		
GOES	06	0052	0058	0103	S20	W54	9557			11	SF	C 1.4						8.1E-04
LEAR		0054	0058	0121	S20	W54	9557	08	1.9	27	SF		3	E		32		FH
GOES		0559	0601	0603	N23	W12	9563			4	SF	B 8.6						1.9E-04
LEAR		0601	0601	0605	N23	W12	9563	08	5.3	4	SF		3	E		25		H
GOES		0633	0636	0650	N17	E01	9566			17	SF	C 1.1						1.0E-03
LEAR		0635	0636	0641	N17	E01	9566	08	6.3	6	SF		3	E		20		F
GOES		0722	0730	0738	S18	W54	9557			16	SF	C 5.5						3.8E-03
LEAR		0725	0731	0747	S18	W54	9557	08	2.2	22	SF		3	E		67		F
SVTO		0726	0728	0736	S20	W53	9557	08	2.2	10	SF		3	E		16		F
GOES		0759	0803	0806						7		C 2.0						7.6E-04
GOES		0831	0838	0842	N18	E03	9566			11	SF	C 1.7						1.0E-03
LEAR		0832	0834	0848	N18	E03	9566	08	6.6	16	SF		1	E		36		HF
GOES		0907	0917	0922	S12	E67	9570			15	SF	C 1.1						9.8E-04
LEAR		0910	0912	0918	S12	E67	9570	08	11.4	8	SF		1	E		20		
GOES		1208	1216	1233						25		C 1.7						2.2E-03
GOES		1512	1527	1535			9570			23		C 2.9						2.6E-03
HOLL		1515	1515	1521	N23	W17	9563	08	5.3	6	SF		3	E		15		F
HOLL		1521	1524	1543	S13	E63	9570	08	11.4	22	SF		3	E		72		F
RAMY		1523	1526	1539	S13	E65	9570	08	11.5	16	SF		3	E		24		HF
HOLL		1903	1905	1913	N17	W02	9566	08	6.6	10	SF		3	E		17		F
GOES		2007	2010	2012	S19	W66	9557			5	SF	C 1.4						3.7E-04
HOLL		2010	2010	2013	S19	W66	9557	08	1.8	3	SF		3	E		12		
GOES		2240	2245	2250						10		C 1.7						9.2E-04
HOLL		2302E	2304U	2319D	S20	W60	9557	08	2.4	17D	SF		3	E		56		
HOLL		2349	2352	2358	S17	W01	9569	08	6.9	9	SF		3	E		72		
GOES	07	0008	0013	0017	S20	W70	9557			9	SF	C 3.1						1.2E-03
LEAR		0012	0012	0023	S20	W70	9557	08	1.6	11	SF		3	E		26		
HOLL		0012	0018	0023	S20	W70	9557	08	1.6	11	SF		3	E		27		
GOES		0102	0125	0147	S22	W65	9557			45	SF	C 2.5						5.1E-03
LEAR		0113	0126	0146	S22	W65	9557	08	2.0	33	SF		4	E		29		F
LEAR		0202	0202	0206	N26	W20	9563	08	5.5	4	SF		4	E		15		FH
GOES		0225	0228	0231	N17	W08	9566			6	SF	C 1.3						4.5E-04
LEAR		0228	0231	0235	N17	W08	9566	08	6.5	7	SF		4	E		18		FH
GOES		0516	0521	0528	N17	W09	9566			12	SF	C 1.2						8.3E-04
LEAR		0518	0520	0525	N17	W09	9566	08	6.5	7	SF		3	E		16		FH
GOES		0555	0641	0658						63		C 1.3						4.9E-03
LEAR		0556	0557	0559	N17	W09	9566	08	6.6	3	SF		3	E		26		
LEAR		0603	0606	0609	S17	W08	9569	08	6.6	6	SF		3	E		15		
GOES		0726	0737	0747	S20	W71	9557			21	SF	M 1.1						9.6E-03
LEAR		0728	0729	0810	S20	W71	9557	08	1.9	42	SF		3	E		61		F
SVTO		0729	0729	0750	S21	W71	9557	08	1.9	21	SF		3	E		14		F
GOES		0836	0854	0906	S19	W76	9557			30	SF	C 1.8						2.7E-03
LEAR		0842	0843	0901	S19	W76	9557	08	1.6	19	SF		3	E		17		
GOES		1032	1050	1102	S20	W73	9557			30	1F	C 2.7						3.9E-03
RAMY		1045E	1048U	1057D	S20	W73	9557	08	1.9	12D	1F		3	E		150		
RAMY		1045E	1054U	1129	S16	W07	9569	08	6.9	44D	SF		3	E		72		

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RAMY	07	1112	1113	1144	S20	W62	9557	08	2.7	32	SF		3	E		33		
GOES		1112	1115	1120	S20	W62	9557			8	SF	C 2.2						9.9E-04
RAMY		1121	1125	1143	S24	W70	9557	08	2.1	22	SF		3	E		52		
GOES		1123	1132	1142	S24	W70	9557			19	SF	C 3.1						3.0E-03
RAMY		1150	1154	1205	S25	W72	9557	08	1.9	15	SF		3	E		19		
RAMY		1218	1218	1221	S21	W79	9557	08	1.4	3	SF		3	E		18		
SVTO		1218	1219	1221	S21	W75	9557	08	1.8	3	SF		3	E		16		
GOES		1220	1225	1227	S21	W75	9557			7	SF	C 2.3						7.9E-04
RAMY		1232	1233	1240	S21	W81	9557	08	1.3	8	SF		3	E		10		
GOES		1233	1303	1310	S21	W81	9557			37	SF	C 2.8						4.3E-03
RAMY		1238	1238	1246	S18	W08	9569	08	6.9	8	SF		3	E		23		
GOES		1330	1335	1343						13		C 3.5						2.1E-03
GOES		1440	1447	1458						18		C 2.8						2.5E-03
HOLL		1530	1535	1546	N26	W27	9563	08	5.5	16	1F		3	E		124		F
GOES		1530	1541	1558	N26	W27	9563			28	1F	C 2.7						3.6E-03
RAMY		1531	1535	1544	N26	W27	9563	08	5.5	13	SF		3	E		87		FH
SVTO		1532	1534	1538	N25	W27	9563	08	5.5	6	SF		3	E		32		
HOLL		1558	1559	1600	S17	W09	9569	08	7.0	2	SF		3	E		21		
GOES		1623	1628	1633	S20	W72	9557			10	SF	C 3.6						1.6E-03
RAMY		1627	1627	1635	S22	W78	9557	08	1.7	8	SF		3	E		12		
HOLL		1627	1628	1636	S20	W72	9557	08	2.2	9	SF		3	E		24		
GOES		1739	1746	1749	N26	W27	9563			10	SF	C 1.2						6.5E-04
HOLL		1743	1745	1754	N26	W27	9563	08	5.6	11	SF		3	E		46		
GOES		1752	1755	1801	S17	W13	9569			9	SF	C 1.2						6.6E-04
HOLL		1753	1754	1805	S17	W13	9569	08	6.7	12	SF		3	E		22		F
GOES		1851	1855	1857						6		C 3.5						7.6E-04
GOES		1954	2000	2006						12		C 1.9						1.1E-03
GOES		2112	2133	2154						42		C 4.1						7.6E-03
GOES		2316	2319	2323						7		C 1.7						6.6E-04
GOES		2324	2328	2331						7		C 3.8						1.2E-03
GOES		2351	2355	2358	S18	W83	9557			7	SF	C 1.8						7.0E-04
LEAR		2354	2355	2358	S18	W83	9557	08	1.7	4	SF		3	E		24		
GOES	08	0058	0113	0120			9557			22		C 1.2						1.4E-03
LEAR		0101	0101	0104	S21	W78	9557	08	2.1	3	SF		3	E		16		
GOES		0205	0209	0211	S15	W59	9567			6	SF	C 1.3						4.3E-04
LEAR		0208	0208	0213	S15	W59	9567	08	3.6	5	SF		3	E		11		F
GOES		0356	0402	0404	S10	E89				8	SF	B 8.9						4.2E-04
LEAR		0400	0401	0404	S10	E89		08	14.8	4	SF		3	E		12		
GOES		0626	0629	0637	S10	E89				11	SF	C 1.0						6.7E-04
LEAR		0628	0628	0632	S10	E89		08	14.9	4	SF		3	E		16		
GOES		0706	0711	0715						9		C 3.9						1.5E-03
GOES		0721	0725	0731	N24	W37	9563			10	SF	C 1.4						7.7E-04
SVTO		0724	0725	0728	N26	W37	9563	08	5.4	4	SF		3	E		22		
LEAR		0724	0725	0730	N24	W37	9563	08	5.4	6	SF		3	E		51		
GOES		0749	0802	0820	S20	W88	9557			31	SF	C 4.5						6.7E-03
LEAR		0802	0811	0815	S20	W88	9557	08	1.6	13	SF		3	E		31		
SVTO		1029	1029	1031	N26	W39	9563	08	5.4	2	SF		3	E		13		
GOES		1029	1032	1034	N26	W39	9563			5	SF	C 2.6						7.8E-04
RAMY		1343	1343	1347	N17	W26	9566	08	6.6	4	SF		3	E		13		F
RAMY		1433	1433	1435	S18	W23	9569	08	6.8	2	SF		3	E		17		F
HOLL		1433	1433	1436	S17	W24	9569	08	6.8	3	SF		3	E		27		F
GOES		1459	1503	1517	N25	W43	9563			18	SF	C 1.6						1.6E-03
RAMY		1511	1512	1514	N25	W43	9563	08	5.3	3	SF		3	E		14		F
GOES		1650	1705	1730						40		C 4.2						8.3E-03
GOES		1917	1922	1938	N15	W31	9566			21	SF	C 2.0						2.4E-03
RAMY		1918	1918	1939	N15	W31	9566	08	6.4	21	SF		3	E		13		F
GOES		1954	2001	2006	N18	W29	9566			12	SF	C 4.0						2.0E-03
HOLL		1956	2000	2008	N18	W29	9566	08	6.6	12	SF		2	E		62		FH
GOES	09	0032	0045	0107	S16	W30	9569			35	SF	C 6.0						9.2E-03
LEAR		0044	0048	0058	S16	W30	9569	08	6.7	14	SF		3	E		18		
GOES		0243	0244	0245	N23	W52	9563			2	SF	C 1.8						2.1E-04
LEAR		0244	0245	0248	N23	W52	9563	08	5.1	4	SF		3	E		26		
LEAR		0310	0318	0339	N18	W33	9566	08	6.6	29	SF		3	E		64		F
GOES		0313	0318	0327	N18	W33	9566			14	SF	C 4.2						3.2E-03
GOES		0434	0438	0440	N23	W52	9563			6	SF	C 1.9						5.2E-04

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	09	0436	0440	0449	N23	W52	9563	08	5.2	13	SF		3	E		61		
LEAR		0557	0558	0602	N18	W37	9566	08	6.4	5	SF		3	E		17		
GOES		0604	0608	0611						7		C 2.2						8.1E-04
GOES		0639	0655	0702						23		C 3.8						3.6E-03
GOES		0721	0724	0730						9		C 3.1						1.4E-03
GOES		0808	0815	0827	S13	W76	9567			19	SF	C 2.6						2.4E-03
LEAR		0812	0814	0824	S13	W76	9567	08	3.6	12	SF		3	E		55		
GOES		1116	1122	1127						11		C 3.7						2.1E-03
SVTO		1133	1138	1150	N11	E54	9571	08	13.5	17	SF		3	E		23		F
GOES		1417	1419	1420	N06	W56	9562			3	SF	B 8.9						1.6E-04
SVTO		1417	1419	1422	N07	W56	9562	08	5.4	5	SF		3	E		13		
RAMY		1417	1420	1422	N06	W56	9562	08	5.4	5	SF		3	E		13		
GOES		1822	1834	1847	S17	E19	9570			25	1F	C 7.8						7.7E-03
RAMY		1825	1829	1914	S17	E19	9570	08	11.2	49	1F		3	E		227		FH
RAMY		1914	1921	1927	N04	W69	9565	08	4.6	13	SF		3	E		34		
GOES		1919	1922	1924	N04	W69	9565			5	SF	C 2.0						5.9E-04
GOES		2035	2038	2040						5		C 1.4						3.4E-04
GOES	10	0041	0055	0106						25		C 1.8						2.4E-03
GOES		0128	0136	0143	N05	W72	9562			15	SF	C 8.0						4.7E-03
LEAR		0133	0134	0144	N05	W72	9562	08	4.7	11	SF		3	E		26		F
GOES		0350	0410	0416	N24	W61	9563			26	SF	C 2.2						2.9E-03
LEAR		0352	0354	0357	N24	W61	9563	08	5.4	5	SF		3	E		29		F
LEAR		0552	0554	0602	N17	W49	9566	08	6.5	10	SF		2	E		21		F
GOES		0553	0554	0556	N17	W49	9566			3	SF	C 1.0						1.8E-04
GOES		1540	1543	1548						8		C 1.7						7.4E-04
GOES		1623	1628	1633						10		C 1.0						5.6E-04
GOES		1840	1857	1904	N23	W70	9563			24	SF	C 2.4						2.9E-03
HOLL		1902	1902	1907	N23	W70	9563	08	5.4	5	SF		3	E		30		
HOLL		1903	1905	1910	N20	W53	9566	08	6.7	7	SF		3	E		36		
HOLL		1907	1907	1911	N23	W71	9563	08	5.3	4	SF		3	E		20		
GOES		1936	1938	1943						7		C 1.3						5.4E-04
GOES		2021	2029	2037						16		C 1.6						1.4E-03
GOES		2120	2127	2132						12		C 1.7						1.0E-03
GOES		2223	2235	2239						16		C 1.5						1.0E-03
GOES		2300	2307	2311						11		C 1.9						1.0E-03
GOES		2347	2401	2405						18		C 1.8						1.3E-03
HOLL	11	0027	0033	0045	S04	E03	9574	08	11.2	18	SF		3	E		19		UF
GOES		0028	0033	0036	S04	E03	9574			8	SF	B 8.1						3.7E-04
GOES		0039	0043	0047	N18	W61	9566			8	SF	C 1.6						6.1E-04
LEAR		0040	0042	0051	N18	W61	9566	08	6.4	11	SF		1	E		94		F
GOES		0049	0054	0058			9566			9		C 1.8						8.5E-04
GOES		0114	0121	0128						14		C 5.2						2.9E-03
GOES		0135	0138	0143						8		C 2.9						1.1E-03
GOES		0352	0356	0401	N21	W59	9566			9	SF	C 1.0						5.1E-04
LEAR		0354	0355	0400	N21	W59	9566	08	6.6	6	SF		3	E		50		F
GOES		0417	0640	0809						232		C 2.8						2.9E-02T
GOES		0858	0904	0908						10		C 1.7						9.5E-04
GOES		0949	0954	0958						9		C 1.0						5.4E-04
GOES		1004	1009	1013						9		C 1.1						5.7E-04
RAMY		1135	1148U	1200	N21	W81	9563	08	5.3	25	SF		3	E		60		H
GOES		1135	1149	1200	N21	W81	9563			25	SF	C 1.2						1.5E-03
GOES		1223	1227	1233						10		C 1.3						7.1E-04
RAMY		1753	1754	1806	S03	W06	9574	08	11.3	13	SF		3	E		35		F
GOES		2122	2128	2132						10		C 2.2						9.7E-04
GOES	12	0005	0011	0013						8		C 1.5						4.6E-04
GOES		0438	0441	0444	S04	W13	9574			6	SF	C 1.1						3.7E-04
LEAR		0441	0442	0446	S04	W13	9574	08	11.2	5	SF		3	E		28		F
GOES		1709	1714	1716						7		C 1.6						5.2E-04
GOES		1921	1924	1927						6		C 1.0						3.2E-04
GOES		2018	2027	2030						12		C 1.1						7.4E-04
GOES		2052	2101	2109						17		C 2.2						1.7E-03
GOES		2252	2316	2420						88		C 2.7						1.0E-02
GOES	13	1343	1405	1427						44		C 4.6						9.2E-03
GOES		1918	1921	1925	S02	W35	9574			7	SF	C 1.0						3.7E-04

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	13	1921	1922	1929	S02	W35	9574	08	11.2	8	SF		3	E		16		F
RAMY		1922	1922	1927	S04	W33	9574	08	11.3	5	SF		3	E		11		
GOES	14	0029	0044	0049	S17	E01	9579			20	SF	C 1.0						1.1E-03
HOLL		0035	0035	0040	S16	E02		08	14.2	5	SF		3	E		11		F
HOLL		0041	0042	0053	S17	E00		08	14.0	12	SF		3	E		12		
GOES		0934	0944	0949						15		C 9.7						4.1E-03
GOES		1130	1242	1404						154		C 2.3						1.7E-02
RAMY		1237	1238	1240	N16	W36	9577	08	11.8	3	SF		3	E		10		
GOES		1721	1725	1729						8		C 1.1						4.8E-04
GOES	15	0233	0243	0256						23		C 3.1						3.0E-03
GOES		1238	1242	1244	S06	W57	9574			6	SF	C 1.0						3.0E-04
RAMY		1241	1241	1244	S06	W57	9574	08	11.3	3	SF		3	E		20		F
GOES	16	0249	0252	0254						5		B 7.6						1.8E-04
GOES		0951	0957	1008						17		C 3.9						2.6E-03
GOES		1118	1127	1137	S28	W20	9581			19	SF	B 8.1						8.6E-04
RAMY		1120	1121	1124	S28	W20	9581	08	14.9	4	SF		3	E		13		
GOES		1514	1518	1522						8		B 7.6						3.1E-04
GOES		1740	1746	1753						13		B 8.8						5.6E-04
HOLL	17	0001	0002	0005	N16	E59	9585	08	21.5	4	SF		3	E		22		
GOES		0007	0011	0017	S24	W30	9581			10	SF	C 1.6						7.4E-04
HOLL		0009	0009	0019	S24	W30	9581	08	14.7	10	SF		3	E		34		
GOES		0146	0150	0157						11		B 5.5						3.3E-04
GOES		0247	0301	0314						27		B 8.7						1.2E-03
GOES		0922	0925	0927						5		B 5.9						1.5E-04
GOES		1326	1333	1346	N19	E71	9585			20	SF	B 7.5						8.2E-04
RAMY		1329	1330	1339	N19	E71	9585	08	23.0	10	SF		3	E		15		
HOLL		1413	1414	1422	N10	E01	9575	08	17.7	9	SF		3	E		12		F
GOES		1514	1521	1530						16		C 1.0						8.8E-04
HOLL		1740	1749	1750	N15	E55	9585	08	21.9	10	SF		3	E		16		FE
HOLL		2334	2334	2338	N14	E63	9585	08	22.7	4	SF		3	E		16		
GOES		2339	2342	2345						6		B 9.6						3.0E-04
GOES	18	0019	0043	0048	N14	E62	9585			29	SF	C 1.0						1.2E-03
HOLL		0035E	0043U	0043D	N14	E62	9585	08	22.7	8D	SF		3	E		31		
GOES		0103	0112	0116						13		C 1.7						1.0E-03
GOES		0204	0209	0212						8		C 1.2						5.1E-04
GOES		0322	0328	0336	N25	E44	9582			14	SF	C 3.5						1.9E-03
LEAR		0325	0329	0356	N25	E44	9582	08	21.5	31	SF		3	E		72		F
GOES		0355	0403	0405						10		C 2.9						1.1E-03
GOES		0506	0515	0524	N26	E43	9582			18	SF	C 1.4						1.4E-03
LEAR		0513	0515	0520	N26	E43	9582	08	21.5	7	SF		3	E		23		
GOES		0651	0654	0657	N25	E41	9582			6	SF	C 1.9						5.6E-04
LEAR		0652	0653	0659	N25	E41	9582	08	21.5	7	SF		2	E		32		F
GOES		0828	0832	0835	S15	W52	9586			7	SF	C 1.1						3.8E-04
SVTO		0831	0833	0839	S15	W52	9586	08	14.4	8	SF		3	E		69		
GOES		1109	1117	1123	N25	E39	9582			14	SF	C 3.1						1.9E-03
SVTO		1112	1118	1140	N25	E39	9582	08	21.5	28	SF		3	E		29		
GOES		1245	1251	1259	N26	E39	9582			14	SF	C 2.8						1.7E-03
SVTO		1248	1252	1313	N26	E39	9582	08	21.6	25	SF		3	E		54		F
RAMY		1248	1253	1305	N27	E39	9582	08	21.6	17	SF		3	E		52		F
GOES		2155	2158	2209						14		B 9.2						6.8E-04
LEAR	19	0143	0143	0145	S08	W61	9573	08	14.5	2	SF		3	E		11		
RAMY		1300	1302	1311	N09	W24	9575	08	17.7	11	SF		3	E		23		F
GOES		2200	2203	2212	N11	W29	9575			12	SF	C 1.2						8.2E-04
HOLL		2202	2203	2216	N11	W29	9575	08	17.7	14	SF		3	E		40		F
GOES	20	0250	0302	0316	N15	E33	9585			26	SF	C 1.2						1.8E-03
LEAR		0255	0257	0305	N15	E33	9585	08	22.6	10	SF		3	E		17		F
GOES		0516	0525	0534	N28	E23	9582			18	SF	C 2.0						1.8E-03
LEAR		0519	0527	0547	N28	E23	9582	08	22.0	28	SF		3	E		46		F
LEAR		0546	0548	0600	N16	E34	9585	08	22.8	14	SF		3	E		40		UF
LEAR		0600	0600	0604	N29	E22	9582	08	22.0	4	SF		3	E		16		
LEAR		0750	0750	0756	N14	E13		08	21.3	6	SF		3	E		11		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	20	0807	0821	0844	N28	E20	9582	08	21.9	37	1F		3	E		110		FH
GOES		0817	0822	0825	N28	E20	9582			8	1F	C 3.6						1.2E-03
SVTO		0821	0825	0831	N30	E20	9582	08	21.9	10	SF		3	E		28		FH
HOLL		1452	1454	1459	S14	E26	9587	08	22.6	7	SF		3	E		10		
GOES		1919	1937	2102						103		C 2.3						1.2E-02
LEAR		2357	2358	2405	N15	E25	9585	08	22.9	8	SF		3	E		27		
GOES	21	0010	0018	0028						18		C 3.0						2.9E-03
GOES		0156	0200	0206	N15	E24	9585			10	SF	C 1.3						7.8E-04
LEAR		0157	0157	0202	N15	E24	9585	08	22.9	5	SF		3	E		10		
GOES		0331	0337	0346						15		C 1.9						1.5E-03
GOES		0721	0748	0813						52		C 1.6						4.3E-03
GOES		1035	1303	1434						239		C 2.7						3.0E-02T
RAMY		1422	1422	1428	N15	E14	9585	08	22.6	6	SF		3	E		11		F
GOES		2052	2057	2102						10		C 1.9						1.0E-03
GOES		2151	2157	2200						9		M 1.5						4.7E-03
LEAR	22	0338	0338	0341	N27	W09	9582	08	21.4	3	SF		3	E		18		
GOES		0502	0507	0511						9		C 6.2						2.5E-03
GOES		0735	0742	0752						17		C 4.2						3.3E-03
GOES		0904	0908	0912						8		C 6.6						2.2E-03
GOES		0924	0937	0945						21		C 3.9						3.7E-03
GOES		1158	1216	1229						31		M 1.0						1.2E-02
GOES		1432	1437	1445						13		C 2.5						1.7E-03
HOLL		1502	1504	1523	S17	E77	9591	08	28.5	21	SF		3	E		73		F
GOES		1502	1506	1510	S17	E77	9591			8	SF	C 3.7						1.4E-03
RAMY		1504	1504U	1534D	S16	E84	9591	08	29.0	30D	SF		3	E		15		
GOES		1554	1558	1601						7		C 2.8						1.0E-03
HOLL		1655	1657	1704	S18	E75	9591	08	28.4	9	SF		3	E		37		F
HOLL		1715	1720	1731	S18	E69	9591	08	28.0	16	SF		3	E		40		
GOES		1725	1737	1750	S18	E69	9591			25	SF	C 5.4						7.1E-03
HOLL		1753	1756	1809	S17	E74	9591	08	28.4	16	1N		4	E		102		E
GOES		1819	1826	1835						16		C 4.5						3.8E-03
GOES		1844	1849	1856	S19	E73	9591			12	SF	C 7.5						4.4E-03
HOLL		1846	1846	1900	S19	E73	9591	08	28.3	14	SF		3	E		12		F
GOES		2112	2117	2122	S18	E73	9591			10	SF	C 7.0						2.8E-03
HOLL		2115	2115	2125	S18	E73	9591	08	28.4	10	SF		3	E		14		F
HOLL		2142	2143	2156	S18	E67	9591	08	28.0	14	SF		3	E		22		F
GOES		2146	2150	2155	S18	E67	9591			9	SF	C 3.5						1.5E-03
GOES		2229	2256	2323			9591			54		C 5.8						1.5E-02
HOLL		2233	2239	2241	S18	E65	9591	08	27.9	8	SF		3	E		21		
HOLL		2331	2332	2341	S18	E66	9591	08	28.0	10	SF		3	E		36		
LEAR		2353		2411	S19	E74	9591	08	28.6	18	SF		2	E		93		
HOLL		2355		2411	S17	E73	9591	08	28.5	16	SF		3	E		86		F
GOES		2357	2407	2412	S19	E74	9591			15	SF	C 6.9						4.7E-03
GOES	23	0023	0030	0039	S21	E72	9591			16	SF	C 7.0						5.7E-03
LEAR		0027	0028	0035	S21	E72	9591	08	28.5	8	SF		2	E		15		
GOES		0201	0205	0209						8		C 6.6						2.7E-03
GOES		0325	0339	0347						22		C 6.9						5.9E-03
GOES		0508	0513	0517						9		C 8.3						2.9E-03
GOES		0755	0800	0804						9		C 3.0						1.5E-03
GOES		0944	0949	0958						14		C 3.3						2.5E-03
GOES		1112	1116	1122						10		C 4.8						2.2E-03
GOES		1342	1348	1358			9591			16		C 5.9						3.8E-03
HOLL		1346	1347	1400	S19	E61	9591	08	28.2	14	1F		3	E		108		F
SVTO		1347E	1347U	1357D	S18	E75	9591	08	29.3	10D	SF		2	E		99		
GOES		1434	1440	1442	S18	E68	9591			8	SF	C 3.3						1.0E-03
HOLL		1436	1441	1445	S18	E68	9591	08	28.8	9	SF		3	E		55		
SVTO		1437	1440	1444	S18	E69	9591	08	28.9	7	SF		2	E		31		F
HOLL		1607	1609	1618	S05	W67	9592	08	18.7	11	SF		3	E		12		
GOES		1752	1801	1814	S21	E63	9591			22	SF	C 3.8						4.1E-03
HOLL		1754	1755	1808	S21	E63	9591	08	28.6	14	SF		3	E		30		
HOLL		1843	1846	1850	S18	E64	9591	08	28.6	7	SF		3	E		23		
HOLL		2239	2240	2244	S07	W74	9592	08	18.4	5	SF		3	E		21		
HOLL		2330	2332	2336	S07	W74	9592	08	18.4	6	SF		3	E		15		
GOES	24	0019	0055	0101						42		C 5.4						7.7E-03

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	24	0622	0646	0703						41		C 3.8						7.8E-03
GOES		0848	0913	0941	S15	E57	9591			53	SF	M 1.1						3.0E-02
SVTO		0902E	0902U	0914D	S16	E58	9591	08	28.8	12D	SF		2	E		16		F
LEAR		0902	0903	0913	S15	E57	9591	08	28.7	11	SF		3	E		29		F
RAMY		1113	1122	1140	S24	E31	9590	08	26.9	27	SF		3	E		59		F
SVTO		1118E	1125U	1140D	S26	E30	9590	08	26.8	22D	SF		3	E		24		F
RAMY		1152	1153	1201	S16	E53	9591	08	28.5	9	SF		3	E		15		
SVTO		1153E	1156U	1200D	S18	E52	9591	08	28.4	7D	SF		3	E		17		
GOES		1315	1319	1322	S18	E52	9591			7	SF	C 4.3						1.6E-03
SVTO		1317	1317	1324	S18	E52	9591	08	28.5	7	SF		3	E		36		
RAMY		1317	1317	1326	S16	E53	9591	08	28.6	9	SF		3	E		44		
GOES		1330	1336	1350	S20	E55	9591			20	1F	C 5.7						5.8E-03
HOLL		1330	1348	1404	S24	E53	9591	08	28.6	34	1F		3	E		169		FE
RAMY		1333	1335	1358	S20	E55	9591	08	28.8	25	1F		3	E		128		F
SVTO		1333	1336	1341	S21	E52	9591	08	28.5	8	SF		3	E		89		
SVTO		1346	1348	1354	S23	E53	9591	08	28.6	8	SF		3	E		18		
HOLL		1405	1405	1415	S18	E43	9591	08	27.9	10	SF		3	E		17		
HOLL		1457	1512	1540	S18	E42	9591	08	27.8	43	SF		3	E		46		F
GOES		1508	1512	1516	S18	E50	9591			8	SF	C 4.8						1.8E-03
RAMY		1510	1512	1522	S18	E50	9591	08	28.4	12	SF		3	E		28		F
SVTO		1510	1512	1528	S18	E44	9591	08	28.0	18	SF		3	E		20		F
GOES		1658	1703	1709						11		C 3.8						2.2E-03
GOES		1750	1802	1812						22		C 4.0						4.2E-03
GOES		1829	1908	1918						49		C 5.5						1.2E-02
GOES		2005	2048	2101						56		C 7.8						1.4E-02
GOES		2113	2118	2121						8		C 7.0						2.8E-03
GOES		2231	2254	2313						42		M 1.2						2.2E-02
HOLL		2245	2248	2435D	S18	E46	9591	08	28.4	110D	1N		3	E		213		F
HOLL		2309	2309	2316	N18	W27	9585	08	22.9	7	SF		3	E		33		
GOES		2347	2417	2444	S18	E44	9591			57	SF	M 3.5						8.6E-02
LEAR		2352		2456	S18	E44	9591	08	28.3	64	SF		3	E		96		F
LEAR	25	0059	0103	0116	S18	E43	9591	08	28.3	17	SF		3	E		34		
GOES		0239	0242	0244						5		C 3.2						7.1E-04
LEAR		0333	0336	0337	S19	E40	9591	08	28.2	4	SF		3	E		15		
GOES		0351	0355	0358						7		C 2.0						7.3E-04
GOES		0522	0526	0530						8		C 1.9						8.5E-04
GOES		0707	0710	0713	S20	E42	9591			6	SF	C 1.8						6.0E-04
SVTO		0710	0711	0717	S20	E42	9591	08	28.5	7	SF		3	E		12		F
GOES		0717	0732	0742	S18	E37	9591			25	SF	C 3.6						4.5E-03
SVTO		0719	0725	0746	S17	E38	9591	08	28.2	27	SF		3	E		61		F
LEAR		0721	0728	0801	S18	E37	9591	08	28.1	40	SF		3	E		67		F
LEAR		0802	0806	0813	S18	E34	9591	08	27.9	11	SF		3	E		25		
GOES		0819	0823	0826	S18	E32	9591			7	SF	C 2.6						9.9E-04
LEAR		0819	0823	0832	S18	E32	9591	08	27.8	13	SF		3	E		20		
SVTO		0824	0824	0830	S17	E32	9591	08	27.8	6	SF		3	E		10		
GOES		0840	0844	0848	S18	E34	9591			8	SF	C 2.5						1.0E-03
SVTO		0841	0843	0849	S18	E34	9591	08	27.9	8	SF		3	E		23		
SVTO		0850E	0850U	0905D	S19	E37	9591	08	28.2	15D	SF		2	E		13		
GOES		0909	0928	0932	S18	E31	9591			23	SF	M 1.2						6.3E-03
SVTO		0909	0928U	0948	S17	E32	9591	08	27.8	39	1N		2	E		154		F
LEAR		0924	0928	0933	S18	E31	9591	08	27.7	9	SF		3	E		39		FH
GOES		0953	0957	1000	S17	E31	9591			7	SF	C 3.7						1.1E-03
SVTO		0955	0959	1008D	S17	E31	9591	08	27.8	13D	SF		2	E		30		F
GOES		1047	1049	1051	S18	E33	9591			4	SF	C 1.9						4.2E-04
RAMY		1048	1048	1057	S18	E35	9591	08	28.1	9	SF		3	E		12		F
SVTO		1048	1054	1101	S18	E33	9591	08	28.0	13	SF		3	E		28		F
GOES		1106	1108	1110						4		C 1.6						3.6E-04
GOES		1257	1301	1307	S18	E32	9591			10	SF	C 2.0						1.1E-03
RAMY		1300	1300	1308	S18	E32	9591	08	28.0	8	SF		3	E		10		F
GOES		1323	1327	1329	S17	E31	9591			6	SF	C 3.2						7.5E-04
RAMY		1327	1327	1334	S17	E31	9591	08	27.9	7	SF		3	E		36		
SVTO		1327	1328	1332	S17	E29	9591	08	27.8	5	SF		3	E		28		
GOES		1411	1418	1426						15		C 2.3						2.0E-03
SVTO		1441	1441	1444	S18	E30	9591	08	27.9	3	SF		3	E		16		
SVTO		1515	1630U	1655D	S20	E38	9591	08	28.5	100D	1N		1	E		145		UF
HOLL		1524	1529	1545	S18	E32	9591	08	28.1	21	SF		3	E		54		F
GOES		1529	1533	1537	S18	E32	9591			8	SF	C 2.2						9.2E-04

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	25	1554	1555	1557	S18	E32	9591	08	28.1	3	SF		3	E		11		
HOLL		1614	1615	1623	S20	E38	9591	08	28.6	9	SF		3	E		94		
RAMY		1616	1616	1621	S19	E39	9591	08	28.6	5	SF		3	E		15		
GOES		1623	1645	1704	S17	E34	9591			41	3B	X 5.3						8.2E-01
HOLL		1624	1652	1917	S17	E34	9591	08	28.3	173	3B		3	E		605		UU
HOLL		1930	1930	1934	S20	E35	9591	08	28.5	4	SF		3	E		11		
GOES		1952	1956	1959	S19	E37	9591			7	SF	M 1.1						4.3E-03
RAMY		1954	1955	2001	S19	E37	9591	08	28.6	7	SF		3	E		28		
RAMY		2049	2049	2054	S12	W49	9587	08	22.2	5	SF		3	E		10		
RAMY		2112	2118	2121	S11	W48	9587	08	22.3	9	SF		3	E		10		
HOLL		2116	2126	2201	S19	E24	9591	08	27.7	45	SF		3	E		22		
GOES		2121	2126	2130	S19	E24	9591			9	SF	C 4.0						2.0E-03
HOLL		2158	2201	2212	S10	W49	9587	08	22.2	14	SF		3	E		11		
HOLL		2206	2216	2246	S19	E29	9591	08	28.1	40	SF		3	E		17		
HOLL		2213	2215	2231	S10	W49	9587	08	22.2	18	SF		3	E		14		
GOES		2216	2223	2225	S10	W49	9587			9	SF	C 9.6						2.9E-03
HOLL		2302	2304	2306	S19	E29	9591	08	28.2	4	SF		3	E		52		
HOLL		2303	2304	2307	S27	E13	9590	08	27.0	4	SF		3	E		75		F
HOLL		2314	2352	2356	S10	W50	9587	08	22.2	42	SF		3	E		23		
GOES		2341	2345	2349	S19	E25	9591			8	SF	C 7.0						2.5E-03
LEAR		2344	2345	2419	S19	E25	9591	08	27.9	35	SF		2	E		50		F
GOES	26	0100	0114	0116	S09	W52	9587			16	SF	C 2.5						2.1E-03
LEAR		0110	0113	0117	S09	W52	9587	08	22.1	7	SF		2	E		27		
GOES		0608	0611	0615	S19	E21	9591			7	SF	C 2.2						8.7E-04
LEAR		0610	0610	0614	S19	E21	9591	08	27.8	4	SF		2	E		13		F
SVTO		0610	0610	0623	S19	E21	9591	08	27.8	13	SF		3	E		31		
SVTO		0912	0921	0935	S18	E21	9591	08	28.0	23	SF		3	E		74		F
GOES		0916	0920	0925	S18	E21	9591			9	SF	C 3.4						1.6E-03
GOES		1002	1007	1016	S19	E16	9591			14	SF	C 6.1						4.2E-03
SVTO		1004	1007	1030	S19	E16	9591	08	27.6	26	SF		3	E		85		H
SVTO		1120	1121	1126	S17	E28	9591	08	28.6	6	SF		3	E		32		
RAMY		1120	1122	1126	S16	E29	9591	08	28.7	6	SF		3	E		10		
GOES		1206	1306	1323						77		M 1.3						2.8E-02
HOLL		1405	1411	1423	S22	E27	9591	08	28.7	18	SF		3	E		31		F
GOES		1410	1413	1415	S22	E27	9591			5	SF	C 4.0						1.1E-03
RAMY		1411	1411	1421	S21	E27	9591	08	28.7	10	SF		3	E		24		F
SVTO		1411	1412	1420	S20	E26	9591	08	28.6	9	SF		3	E		18		
HOLL		1728	1730	1733	S20	E23	9591	08	28.5	5	SF		3	E		14		
HOLL		1742	1743	1747	S17	E26	9591	08	28.7	5	SF		3	E		17		
HOLL		1812	1812	1819	S20	E24	9591	08	28.6	7	SF		3	E		11		
HOLL		1936	1937	1943	S22	E24	9591	08	28.7	7	SF		3	E		11		
GOES		2011	2015	2023	S22	E23	9591			12	SF	C 2.4						1.5E-03
HOLL		2013	2015	2055	S22	E23	9591	08	28.6	42	SF		3	E		23		
GOES		2039	2100	2112	S21	E23	9591			33	SF	C 5.7						7.6E-03
HOLL		2100	2100	2107	S21	E23	9591	08	28.6	7	SF		3	E		49		
HOLL		2119	2126	2130	S17	E21	9591	08	28.5	11	SF		3	E		23		
HOLL		2223	2224	2228	S18	E20	9591	08	28.4	5	SF		3	E		15		
HOLL		2234	2236	2240	S21	E23	9591	08	28.7	6	SF		3	E		14		
HOLL	27	0009	0014U	0116	S17	E19	9591	08	28.4	67	SF		3	E		76		F
GOES		0010	0017	0032	S17	E19	9591			22	SF	C 4.1						4.6E-03
GOES		0345	0405	0437	S17	E18	9591			52	SF	C 3.0						7.2E-03
LEAR		0403	0404	0406	S17	E18	9591	08	28.5	3	SF		2	E		15		F
GOES		0529	0551	0604	S19	E12	9591			35	SF	C 3.2						5.7E-03
LEAR		0535	0542	0550	S19	E12	9591	08	28.1	15	SF		3	E		19		
GOES		0631	0638	0656						25		M 1.9						2.0E-02
GOES		1026	1030	1038						12		C 2.0						1.3E-03
RAMY		1141	1141	1152	S15	E14	9591	08	28.5	11	SF		3	E		10		F
SVTO		1141	1146	1152	S16	E12	9591	08	28.4	11	SF		3	E		14		F
RAMY		1247	1250	1253	N11	W63	9585	08	22.8	6	SF		3	E		12		
GOES		1338	1345	1351	S17	E07	9591			13	SF	C 4.6						2.8E-03
SVTO		1341	1341	1357	S17	E08	9591	08	28.2	16	SF		3	E		24		F
RAMY		1341	1341	1408	S16	E09	9591	08	28.2	27	SF		3	E		34		F
HOLL		1341	1347	1402	S17	E07	9591	08	28.1	21	SF		3	E		25		F
HOLL		1402	1404	1411	S23	W07	9590	08	27.0	9	SF		3	E		27		F
RAMY		1404	1404	1407	S23	W06	9590	08	27.1	3	SF		3	E		15		
GOES		1411	1414	1418	S19	E14	9591			7	SF	C 3.3						1.2E-03

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
SVTO	27	1413	1413	1421	S20	E13	9591	08	28.6	8	SF		3	E		13		
HOLL		1413	1417	1422	S22	E14	9591	08	28.7	9	SF		3	E		22		F
RAMY		1413	1417	1423	S19	E14	9591	08	28.7	10	SF		3	E		22		F
GOES		1430	1433	1436						6		C 2.1						6.8E-04
GOES		1525	1534	1540	S19	E14	9591			15	SF	C 3.9						2.7E-03
SVTO		1527	1529	1545	S19	E10	9591	08	28.4	18	SF		3	E		23		F
RAMY		1528	1534	1555	S19	E14	9591	08	28.7	27	SF		3	E		56		FH
HOLL		1653	1653	1659	S20	E11	9591	08	28.5	6	SF		3	E		17		
HOLL		1737	1737	1740	S18	E05	9591	08	28.1	3	SF		3	E		17		
RAMY		1737	1737	1741	S16	E06	9591	08	28.2	4	SF		3	E		20		F
GOES		1743	1746	1753	S18	E05	9591			10	SF	C 5.0						2.5E-03
HOLL		1744	1746	1801	S18	E05	9591	08	28.1	17	SF		3	E		61		
RAMY		1745	1746	1758	S16	E06	9591	08	28.2	13	SF		3	E		59		F
HOLL		1752	1752	1758	S12	W71	9587	08	22.4	6	SF		3	E		17		
HOLL		1752	1753	1757	S13	W84	9584	08	21.4	5	SF		3	E		21		
HOLL		1845	1845	1851	S18	E63		09	1.6	6	SF		3	E		23		
HOLL		1936	1936	1947	S22	E10	9591	08	28.6	11	SF		3	E		18		F
HOLL		1947	1957	2039	S22	E10	9591	08	28.6	52	SF		3	E		32		
RAMY		1949	1958	2028	S20	E12	9591	08	28.7	39	SF		3	E		26		FH
RAMY		2016	2017	2019	N13	W84		08	21.5	3	SF		3	E		14		
GOES		2127	2131	2136						9		C 2.2						1.1E-03
GOES		2236	2244	2249	S21	E08	9591			13	SN	C 6.6						3.7E-03
HOLL		2238	2243	2325	S21	E08	9591	08	28.5	47	SN		3	E		50		F
HOLL		2355	2356	2359	S12	W74	9587	08	22.4	4	SF		3	E		23		
GOES	28	0002	0012	0023	S13	E06	9591			21	1N	M 1.0						9.6E-03
HOLL		0002	0014U	0042	S13	E06	9591	08	28.4	40	1N		3	E		166		F
LEAR		0004	0011	0041	S15	E05	9591	08	28.4	37	1F		3	E		102		FH
HOLL		0011	0013	0019	N13	E79	9600	09	3.0	8	SF		3	E		62		F
GOES		0159	0203	0208	N16	E78	9600			9	SF	C 6.1						2.6E-03
LEAR		0201	0201	0205	N16	E78	9600	09	3.0	4	SF		3	E		15		F
GOES		0329	0333	0344	S10	W81	9587			15	SF	C 4.0						3.3E-03
LEAR		0331	0333	0336	S10	W81	9587	08	22.1	5	SF		3	E		12		
GOES		0650	0658	0701	N13	E76	9600			11	SF	C 4.2						2.4E-03
LEAR		0651	0657	0714D	N13	E76	9600	09	3.0	23D	SF		3	E		34		
GOES		0743	0840	0853	N12	E80	9601			70	SF	M 1.2						2.8E-02
SVTO		0840	0840	0842	N12	E80	9601	09	3.4	2	SF		3	E		14		
GOES		0923	0929	0938						15		C 9.0						7.1E-03
GOES		1003	1010	1022	S20	E02	9591			19	SF	C 6.3						6.9E-03
SVTO		1008	1014	1040	S20	E02	9591	08	28.6	32	SF		3	E		18		F
SVTO		1041	1044	1053	S20	E02	9591	08	28.6	12	SF		3	E		13		F
GOES		1145	1149	1153	N15	E78	9600			8	SF	C 5.1						2.0E-03
RAMY		1147	1147	1152	N15	E78	9600	09	3.4	5	SF		3	E		28		
GOES		1217	1229	1301	S12	W88	9587			44	SF	C 5.5						1.2E-02
RAMY		1224	1225	1235	S12	W88	9587	08	21.9	11	SF		3	E		12		
GOES		1335	1341	1344	S13	W85	9587			9	SF	C 9.4						3.5E-03
RAMY		1337	1338	1351	S13	W85	9587	08	22.1	14	SF		3	E		36		H
GOES		1434	1438	1443						9		C 4.4						1.8E-03
HOLL		1458	1458	1503	N10	E79	9601	09	3.5	5	SF		3	E		10		
GOES		1532	1539	1550	N16	E66	9600			18	SF	C 5.7						4.9E-03
SVTO		1535	1538	1553	N16	E66	9600	09	2.6	18	SF		3	E		29		
HOLL		1536	1536	1540	N13	E69	9601	09	2.8	4	SF		3	E		15		F
HOLL		1544	1612	1623	N12	E69	9601	09	2.8	39	1F		3	E		118		FH
SVTO		1548	1551	1553	N13	E66	9601	09	2.6	5	SF		3	E		12		
GOES		1556	1611	1626	N15	E65	9600			30	SF	M 1.1						1.8E-02
SVTO		1558	1609	1645D	N15	E65	9600	09	2.6	47D	SF		2	E		74		
RAMY		1559E	1603U	1616D	N18	E65	9600	09	2.6	17D	SF		3	E		55		
SVTO		1601	1609	1614	N13	E68	9601	09	2.8	13	SF		3	E		32		
HOLL		1650	1653	1658	N10	E76	9601	09	3.4	8	SF		3	E		19		
GOES		1755	1802	1806						11		C 2.2						1.4E-03
HOLL		1828	1832	1838	N10	E76	9601	09	3.5	10	SF		3	E		54		
GOES		1828	1835	1841	N10	E76	9601			13	SF	C 2.4						1.7E-03
HOLL		1922	1932	1954	N10	E70	9601	09	3.1	32	SF		3	E		75		
RAMY		1927	1927	1933	N16	E78	9600	09	3.7	6	SF		3	E		14		
GOES		1942	1947	1951	N16	E78	9600			9	SF	C 6.1						3.0E-03
GOES		2002	2008	2017	N15	E66	9600			15	SF	C 6.5						4.7E-03
HOLL		2003	2005	2029	N15	E66	9600	09	2.8	26	SF		3	E		24		
HOLL		2023	2024	2028	N11	E71	9601	09	3.2	5	SF		3	E		16		

Hα SOLAR FLARES

AUGUST 2001

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	28	2056	2111	2117	N12	E74	9601			21	SF	C 2.6						2.9E-03
HOLL		2102	2103	2110	N12	E74	9601	09	3.4	8	SF		3	E		22		
GOES		2230	2236	2247						17		C 2.5						2.2E-03
GOES	29	0221	0231	0238						17		C 3.1						2.5E-03
GOES		0503	0523	0534			9600			31		M 1.6						1.7E-02
LEAR		0507	0519U	0552D	N12	E69	9601	09	3.4	45D	2F		3	E		452		FE
LEAR		0508	0520U	0551D	N16	E64	9600	09	3.1	43D	1F		3	E		138		
LEAR		0550	0550	0559	N16	E20	9597	08	30.7	9	SF		3	E		14		
GOES		0713	0719	0724						11		C 6.7						2.8E-03
GOES		0908	0917	0931						23		C 6.5						6.4E-03
SVTO		1026	1027	1037	N17	E16	9597	08	30.6	11	SF		3	E		19		F
SVTO		1030	1035	1042	S17	W25	9591	08	27.5	12	SF		3	E		16		F
GOES		1108	1113	1117	S16	W18	9591			9	1F	C 6.2						2.9E-03
SVTO		1109	1113	1122	S17	W22	9591	08	27.8	13	SF		3	E		72		F
RAMY		1113	1114	1132	S16	W18	9591	08	28.1	19	1F		3	E		129		F
GOES		1242	1253	1307	N18	E65	9600			25	1F	M 1.2						1.5E-02
RAMY		1244	1248	1317	N18	E65	9600	09	3.5	33	1F		3	E		137		UF
SVTO		1246	1249	1311	N13	E66	9601	09	3.5	25	SF		3	E		37		F
RAMY		1248	1248	1320	N15	E64	9601	09	3.4	32	SF		3	E		46		F
GOES		1437	1441	1449	N16	E66	9601			12	SF	C 7.4						3.7E-03
SVTO		1440	1440	1448	N13	E66	9601	09	3.6	8	SF		3	E		15		
RAMY		1440	1440	1450	N16	E66	9601	09	3.6	10	SF		3	E		11		
GOES		1658	1704	1708						10		C 2.1						1.1E-03
GOES		1819	1841	1850	N18	E58	9600			31	1F	C 3.3						3.9E-03
HOLL		1824	1839U	1929	N18	E58	9600	09	3.2	65	1F		3	E		103		F
HOLL		2013	2017	2041	N16	E56	9600	09	3.1	28	1N		3	E		117		F
GOES		2013	2019	2028	N16	E56	9600			15	1N	C 9.6						6.4E-03
GOES		2053	2100	2115	S17	E39	9599			22	SF	C 3.4						4.0E-03
HOLL		2056	2100	2112	S17	E39	9599	09	1.8	16	SF		3	E		50		F
GOES		2337	2342	2345	S21	W18	9591			8	SF	C 1.3						6.0E-04
HOLL		2341	2342	2349	S21	W18	9591	08	28.6	8	SF		3	E		22		F
GOES		2355	2405	2427						32		C 1.9						3.4E-03
GOES	30	0053	0059	0105	N12	E59	9601			12	SF	C 3.3						1.9E-03
LEAR		0058	0059	0102	N12	E59	9601	09	3.5	4	SF		2	E		14		F
GOES		0130	0139	0143	N12	E52	9601			13	SF	C 5.4						3.0E-03
LEAR		0136	0139	0150	N12	E52	9601	09	3.0	14	SF		2	E		64		FH
GOES		0337	0342	0345						8		C 2.0						7.6E-04
LEAR		0418	0419	0424	S19	W27	9591	08	28.1	6	SF		2	E		12		
GOES		0418	0421	0426	S19	W27	9591			8	SF	C 1.5						6.8E-04
GOES		0506	0554	0620						74		C 1.3						5.1E-03
GOES		0641	0652	0655	S20	W28	9591			14	SF	C 6.0						3.2E-03
SVTO		0644	0644	0648	S20	W28	9591	08	28.1	4	SF		3	E		12		
LEAR		0644	0645	0650	S19	W29	9591	08	28.1	6	SF		2	E		30		F
GOES		0817	0828	0847						30		C 2.3						3.5E-03
GOES		1413	1429	1452						39		C 1.8						3.9E-03
HOLL		1621	1622	1623	N15	E49	9600	09	3.4	2	SF		3	E		14		
GOES		1727	1734	1741						14		C 3.7						2.4E-03
HOLL		1729	1750	1859	S21	W28	9591	08	28.6	90	2N		3	E		299		ZF
GOES		1745	1757	1811	S21	W28	9591			26	2N	M 1.5						1.7E-02
HOLL		1751	1756	1838	S18	E26	9599	09	1.7	47	SF		3	E		79		H
HOLL		1900	1901	1909	S18	W28	9591	08	28.6	9	SF		3	E		47		F
HOLL		1922	1926	1927	N16	E43	9600	09	3.1	5	SF		3	E		11		
HOLL		1927	1928	1932	S29	W53	9590	08	26.6	5	SF		3	E		14		
HOLL		2022	2023	2026	N17	E45	9601	09	3.3	4	SF		3	E		15		
HOLL		2032	2038	2106	N15	E44	9601	09	3.2	34	1N		3	E		132		F
GOES		2034	2038	2041	N15	E44	9601			7	1N	M 3.0						7.6E-03
HOLL		2304	2312	2319	S18	E22	9599	09	1.6	15	SF		3	E		50		
SVTO	31	0849	0856	0917	S21	W35	9591	08	28.7	28	SF		3	E		26		F
LEAR		0854	0903	0909	S18	W35	9591	08	28.7	15	SF		1	E		14		F
GOES		1035	1042	1045	N15	E37	9601			10	SN	M 1.6						5.6E-03
SVTO		1038	1041	1047	N15	E37	9601	09	3.2	9	SN		3	E		83		
RAMY		1039	1039U	1053	N18	E38	9601	09	3.3	14	SF		3	E		74		F
RAMY		1127	1140	1208	N17	E31	9601	09	2.8	41	1F		3	E		113		F
GOES		1133	1142	1152	N17	E31	9601			19	1F	C 4.8						4.6E-03
RAMY		1136	1137	1143	S15	E18	9599	09	1.8	7	SF		3	E		15		F

Hα SOLAR FLARES

AUGUST 2001

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	31	1448	1451	1458	N19	E33	9601	09	3.1	10	SF		3	E		14		U
GOES		1503	1509	1517	N13	E30	9601			14	SF	C 1.7						1.2E-03
RAMY		1506	1506	1519	N16	E29	9601	09	2.8	13	SF		3	E		13		
HOLL		1507	1508	1522	N13	E30	9601	09	2.9	15	SF		3	E		44		FH
GOES		1528	1540	1545	N13	E29	9601			17	SF	C 2.0						1.8E-03
HOLL		1529	1531	1552	N13	E29	9601	09	2.8	23	SF		3	E		48		F
RAMY		1531	1532	1546	N16	E28	9601	09	2.8	15	SF		3	E		29		FH
GOES		2120	2125	2128	N16	E37	9601			8	1N	C 8.6						2.2E-03
HOLL		2122	2126	2156	N16	E37	9601	09	3.7	34	1N		3	E		159		F
GOES		2227	2242	2245	N14	E25	9601			18	2N	M 2.9						8.5E-03
HOLL		2228	2243	2418	N14	E25	9601	09	2.8	110	2N		3	E		325		UF

"Remarks"

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

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

NOTE: Beginning July 1997, the times of all GOES X-ray events are now included in this table.

SOLAR RADIO EMISSION
Selected Fixed Frequency Events

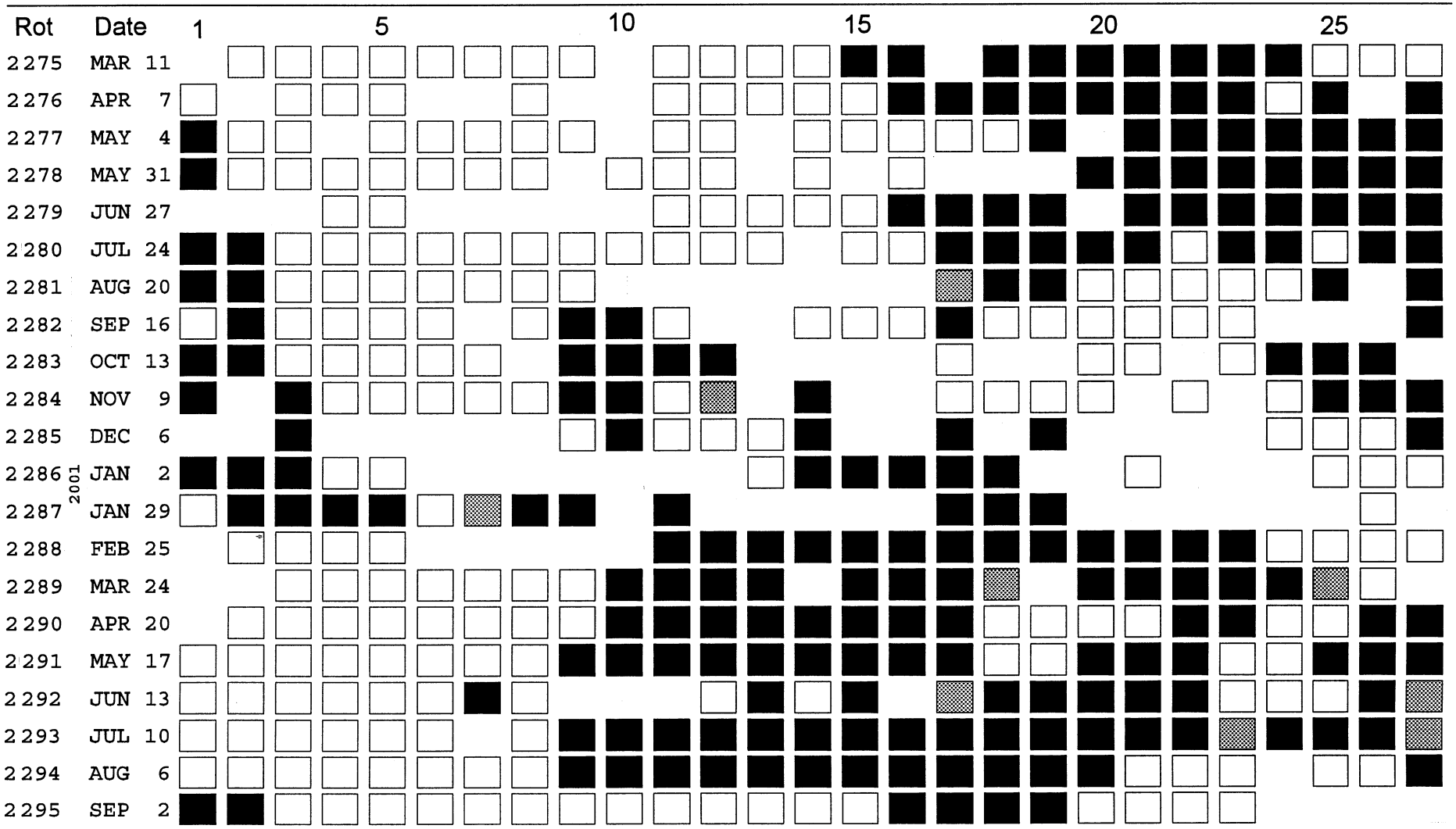
AUGUST 2001

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
03	8800	LEAR	8	S	0305.0	0305.0	1.0	77.0			QL=4 ST=2 TYP=3
05	8800	SVTO	8	S	1201.0	1202.0	2.0	40.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1202.0	1202.0	1.0	42.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1503.0	1503.0	2.0	44.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1503.0	1504.0	2.0	47.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1526.0	1528.0	10.0	93.0			QL=4 ST=2 TYP=3
	8800	SGMR	48	C	1527.0	1528.0	16.0	82.0			QL=4 ST=2 TYP=8
	8800	PALE	4	S/F	2219.0	2220.0	9.0	340.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	2219.0	2220.0	7.0	300.0			QL=4 ST=2 TYP=3
07	8800	LEAR	8	S	0011.0	0012.0	1.0	46.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0728.0	0729.0	8.0	130.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0728.0	0729.0	15.0	150.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1254.0	1255.0	3.0	130.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1254.0	1255.0	2.0	130.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1441.0	1442.0	3.0	130.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1442.0	1442.0	1.0	110.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1626.0	1626.0	5.0	90.0			QL=4 ST=3 TYP=3
	8800	SVTO	8	S	1626.0	1626.0	1.0	92.0			QL=4 ST=2 TYP=3
	8800	SGMR	46	C	1854.0	1854.0	2.0	40.0			QL=4 ST=3 TYP=8
	2695	SGMR	46	C	1854.0	1854.0	1.0	46.0			QL=4 ST=3 TYP=8
08	8800	LEAR	8	S	0312.0	0312.0	1.0	41.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1652.0	1653.0	5.0	55.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1652.0	1653.0	3.0	34.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1653.0	1653.0	4.0	44.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1653.0	1656.0	7.0	90.0			QL=4 ST=2 TYP=3
10	2695	PALE	4	S/F	0131.0	0132.0	5.0	64.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	0131.0	0133.0	5.0	44.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0132.0	0133.0	3.0	46.0			QL=4 ST=2 TYP=3
11	2695	LEAR	8	S	0116.0	0117.0	2.0	67.0			QL=4 ST=2 TYP=3
20	2695	PALE	8	S	1921.0	1921.0	1.0	120.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1921.0	1921.0	1.0	72.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1921.0	1921.0	U	41.0			QL=4 ST=2 TYP=3
21	8800	SGMR	4	S/F	1036.0	1037.0	5.0	130.0			QL=2 ST=2 TYP=3
	2695	SGMR	4	S/F	1036.0	1037.0	5.0	120.0			QL=2 ST=2 TYP=3
	8800	SVTO	4	S/F	1036.0	1037.0	3.0	140.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1036.0	1037.0	4.0	110.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	2155.0	2155.0	2.0	150.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	2155.0	2155.0	U	43.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	2155.0	2155.0	1.0	170.0			QL=4 ST=2 TYP=3
22	8800	SGMR	8	S	1556.0	1557.0	1.0	60.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1556.0	1557.0	1.0	77.0			QL=4 ST=2 TYP=3
23	8800	LEAR	8	S	0027.0	0027.0	U	32.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0510.0	0511.0	6.0	82.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0510.0	0511.0	3.0	99.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	1754.0	1754.0	2.0	110.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1754.0	1754.0	3.0	120.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1755.0	1755.0	U	30.0			QL=4 ST=2 TYP=3
24	8800	SVTO	8	S	0623.0	0624.0	1.0	54.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1332.0	1333.0	5.0	120.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1332.0	1333.0	5.0	49.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1332.0	1333.0	5.0	150.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1332.0	1333.0	3.0	49.0			QL=4 ST=2 TYP=3
	8800	PALE	48	C	2017.0	2040.0	36.0	330.0			QL=4 ST=2 TYP=8
	8800	SGMR	48	C	2037.0	2039.0	9.0	330.0			QL=4 ST=2 TYP=8
	2695	PALE	4	S/F	2039.0	2040.0	6.0	120.0			QL=4 ST=2 TYP=3
	2695	SGMR	48	C	2039.0	2040.0	7.0	100.0			QL=4 ST=2 TYP=8
	8800	PALE	20	GRF	2243.0	2249.0	19.0	67.0			QL=4 ST=2 TYP=2
	8800	PALE	48	C	2348.0	2401.0	43.0	1700.0			QL=4 ST=2 TYP=8
	8800	LEAR	48	C	2350.0	2401.0	57.0	1700.0			QL=4 ST=2 TYP=8

SOLAR RADIO EMISSION
Selected Fixed Frequency Events
AUGUST 2001

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean	Int	Remarks
24	2695	LEAR	4	S/F	2358.0	2401.0	14.0	280.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	2359.0	2401.0	10.0	250.0			QL=4 ST=2 TYP=3
25	8800	SVTO	49	GB	1624.0	1631.0	49.0	15000.0			QL=4 ST=2 TYP=6
	2695	SVTO	49	GB	1624.0	1631.0	49.0	7900.0			QL=4 ST=2 TYP=6
	2695	SGMR	49	GB	1624.0	1631.0	66.0	8100.0			QL=4 ST=2 TYP=6
	8800	SGMR	49	GB	1624.0	1631.0	66.0	14000.0			QL=4 ST=2 TYP=6
	2695	PALE	48	C	1636.0	1643.0	444.0	500.0			QL=2 ST=2 TYP=8
27	8800	LEAR	4	S/F	0634.0	0635.0	3.0	280.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0634.0	0635.0	3.0	270.0			QL=4 ST=3 TYP=3
	8800	SVTO	8	S	1258.0	1258.0	1.0	130.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1527.0	1527.0	3.0	28.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1527.0	1527.0	1.0	38.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1930.0	1930.0	5.0	28.0			QL=4 ST=2 TYP=3
28	2695	LEAR	4	S/F	0006.0	0007.0	13.0	99.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	0007.0	0008.0	2.0	84.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0007.0	0008.0	18.0	46.0			QL=4 ST=2 TYP=3
	8800	PALE	48	C	0009.0	0014.0	15.0	75.0			QL=4 ST=2 TYP=8
	8800	LEAR	49	GB	0200.0	0200.0	3.0	540.0			QL=4 ST=2 TYP=6
	2695	LEAR	8	S	0200.0	0200.0	2.0	110.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	0200.0	0200.0	2.0	110.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0200.0	0200.0	1.0	280.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0819.0	0820.0	4.0	64.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0819.0	0820.0	6.0	59.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1218.0	1221.0	8.0	120.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1218.0	1221.0	8.0	130.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1221.0	1221.0	2.0	27.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1557.0	1557.0	6.0	41.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1557.0	1557.0	1.0	41.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1558.0	1602.0	5.0	35.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1602.0	1602.0	U	26.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	2004.0	2005.0	2.0	80.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	2004.0	2004.0	2.0	10.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	2004.0	2005.0	2.0	180.0			QL=4 ST=2 TYP=3
29	2695	LEAR	4	S/F	0229.0	0229.0	3.0	17.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0514.0	0519.0	15.0	110.0			QL=4 ST=2 TYP=3
	8800	SVTO	48	C	0517.0	0519.0	11.0	92.0			QL=4 ST=2 TYP=8
	2695	SVTO	46	C	0519.0	0519.0	1.0	21.0			QL=4 ST=2 TYP=8
	2695	LEAR	8	S	0610.0	0611.0	2.0	110.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	0611.0	0611.0	U	85.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1229.0	1246.0	47.0	230.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1244.0	1246.0	14.0	180.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1246.0	1246.0	1.0	26.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1247.0	1247.0	U	22.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1439.0	1439.0	U	54.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1439.0	1439.0	U	64.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	2015.0	2016.0	3.0	72.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	2017.0	2017.0	1.0	32.0			QL=4 ST=2 TYP=3
30	8800	LEAR	8	S	0133.0	0134.0	2.0	38.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0134.0	0134.0	1.0	34.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	1730.0	1731.0	3.0	36.0			QL=4 ST=2 TYP=3
	8800	SGMR	48	C	1730.0	1731.0	5.0	100.0			QL=4 ST=2 TYP=8
	8800	SGMR	48	C	1749.0	1751.0	15.0	170.0			QL=4 ST=2 TYP=8
	8800	PALE	8	S	1750.0	1751.0	2.0	130.0			QL=4 ST=2 TYP=3
	2695	SGMR	46	C	1750.0	1750.0	14.0	37.0			QL=4 ST=2 TYP=8
	8800	SGMR	4	S/F	2035.0	2036.0	10.0	1800.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	2035.0	2036.0	10.0	1000.0			QL=4 ST=2 TYP=3
	2695	PALE	49	GB	2036.0	2036.0	4.0	930.0			QL=4 ST=2 TYP=6
	8800	PALE	49	GB	2036.0	2036.0	2.0	1700.0			QL=4 ST=2 TYP=6
31	2695	SVTO	4	S/F	1035.0	1038.0	7.0	270.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1035.0	1038.0	6.0	500.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1136.0	1137.0	3.0	21.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1531.0	1531.0	U	31.0			QL=4 ST=2 TYP=3
	8800	PALE	49	GB	2240.0	2241.0	2.0	1100.0			QL=4 ST=2 TYP=6
	2695	PALE	49	GB	2240.0	2241.0	3.0	540.0			QL=4 ST=2 TYP=6

STANFORD MEAN SOLAR MAGNETIC FIELD

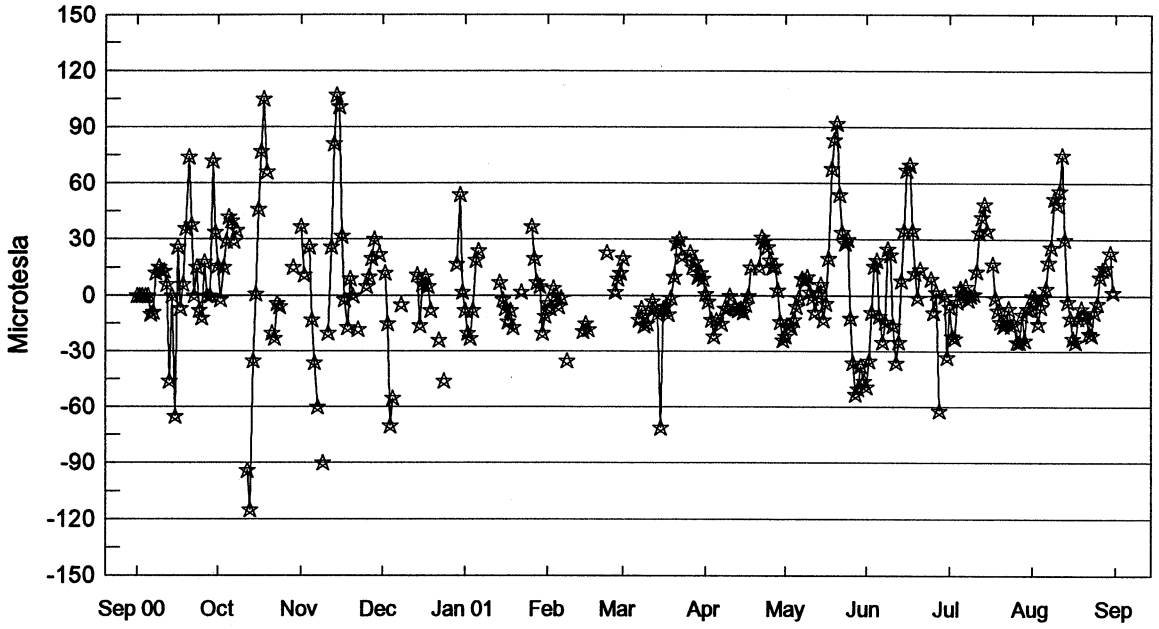


Mean Solar Magnetic Field Polarity: = field > 2 microT; = -2 microT ≤ field ≤ 2 microT

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

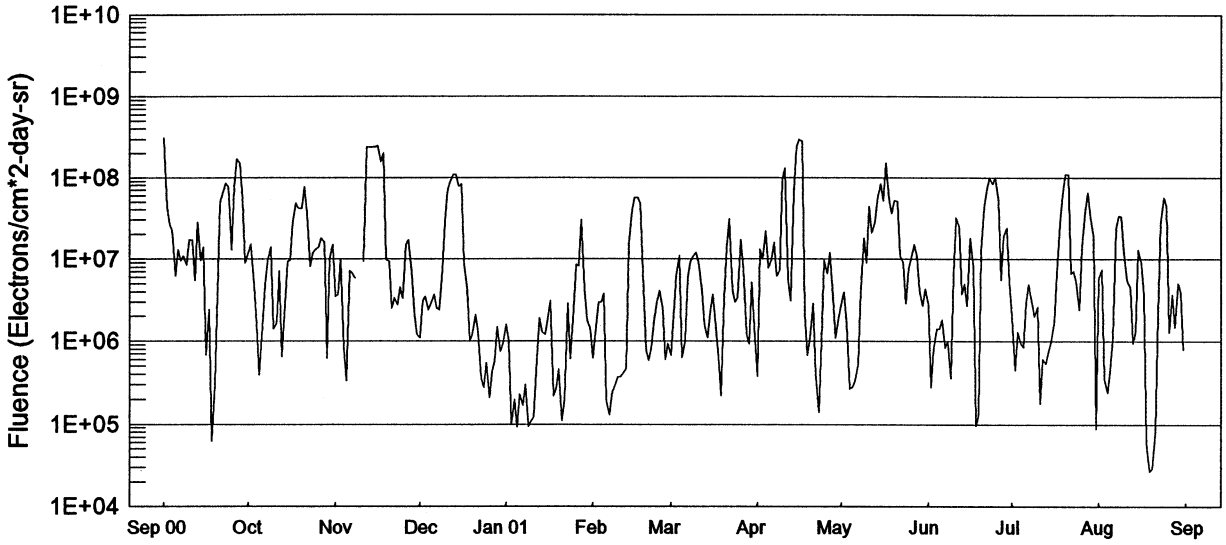
Observations are taken at 2000 UT. Rotation numbers given are the Bartels series, but the dates are not; these dates are five days earlier, to mark times of occurrence of phenomena on the Sun that affect the Earth during the given Bartels Rotation.

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



Day	Sep 00	Oct	Nov	Dec	Jan 01	Feb	Mar	Apr	May	Jun	Jul	Aug
1	---	16	37	---	-8	-4	20	1	-22	-35	-6	0
2	---	-2	11	12	-20	-7	---	-3	-16	-9	-22	-1
3	---	15	---	-15	-23	4	---	-13	-17	16	-23	-15
4	---	29	26	-70	-8	0	---	-22	-13	19	-3	-6
5	0	42	-13	-55	19	-6	---	-13	-6	-11	4	0
6	-10	40	-36	---	24	-1	---	---	-1	-25	2	4
7	-9	29	-60	---	---	---	-13	-15	9	-14	5	18
8	12	35	---	-5	---	-35	-7	-7	8	25	-2	26
9	15	---	-90	---	---	---	-16	-7	10	22	0	52
10	13	---	---	---	---	---	-15	0	2	-16	1	49
11	13	---	-20	---	---	---	-7	---	-1	-36	13	56
12	6	-94	26	---	---	---	-3	-6	-9	-25	34	75
13	-46	-115	81	---	---	---	-7	-8	1	8	42	30
14	---	-35	107	11	7	-19	-10	-7	6	35	49	-3
15	-65	1	101	-16	-2	-15	-71	-9	-13	67	35	-12
16	26	46	32	6	-7	-18	-7	-5	-4	70	---	-23
17	-7	77	-2	10	-14	---	-6	0	20	35	17	-25
18	6	105	-17	5	-8	---	-10	15	68	12	-1	-12
19	36	66	9	-8	-17	---	-1	---	83	-1	-8	-7
20	74	---	0	---	---	---	10	---	92	14	-14	-10
21	38	-20	---	---	---	---	28	15	54	---	-16	-12
22	---	-23	-18	-24	2	---	30	31	34	---	-14	-20
23	15	-4	---	---	---	23	21	29	28	---	-7	-21
24	-8	-6	---	-46	---	---	---	26	30	9	-16	-9
25	-12	---	5	---	---	---	---	19	-12	-9	-15	-4
26	18	---	10	---	37	2	23	15	-36	2	-25	10
27	---	---	20	---	20	9	15	16	-53	-62	-25	14
28	---	---	30	---	7	12	18	3	-50	---	-10	15
29	72	15	---	17	5		10	-14	-38	0	-24	---
30	34	---	22	54	-20		12	-24	-46	-33	-7	23
31		---		2	-11		9		-49		-7	2

GOES Daily Electron Fluence
Sep 2000 - Aug 2001



Day	Sep 00	Oct	Nov	Dec	Jan 01	Feb	Mar	Apr	May	Jun	Jul	Aug
1	3.1E+08	1.2E+07	3.5E+06	1.1E+06	1.6E+06	6.2E+05	6.8E+05	3.8E+05	2.9E+06	2.8E+06	2.0E+06	5.9E+06
2	4.3E+07	1.5E+07	3.7E+06	3.1E+06	1.0E+06	1.3E+06	2.1E+06	1.3E+07	4.0E+06	2.8E+05	4.5E+05	7.4E+06
3	2.7E+07	4.8E+06	1.0E+07	3.5E+06	1.0E+05	3.0E+06	6.4E+06	1.0E+07	1.7E+06	8.1E+05	1.3E+06	3.5E+05
4	2.2E+07	1.6E+06	8.3E+05	2.4E+06	2.0E+05	3.0E+06	1.1E+07	2.2E+07	2.7E+05	1.4E+06	9.3E+05	2.4E+05
5	6.2E+06	3.9E+05	3.3E+05	2.9E+06	9.2E+04	3.8E+06	6.3E+05	7.8E+06	2.8E+05	1.4E+06	8.6E+05	4.5E+05
6	1.3E+07	1.5E+06	7.1E+06	3.7E+06	2.3E+05	1.9E+05	1.0E+06	9.8E+06	3.3E+05	1.8E+06	3.0E+06	1.1E+06
7	9.5E+06	4.8E+06	6.8E+06	2.5E+06	1.7E+05	1.3E+05	5.8E+06	1.6E+07	5.3E+05	8.4E+05	4.9E+06	2.4E+07
8	1.1E+07	9.5E+06	5.8E+06	2.4E+06	3.0E+05	2.4E+05	9.3E+06	6.2E+06	4.2E+06	1.0E+06	3.0E+06	3.4E+07
9	8.6E+06	1.4E+07	-999	7.6E+06	9.3E+04	3.0E+05	1.1E+07	7.4E+06	1.8E+07	3.6E+05	2.0E+06	3.3E+07
10	1.7E+07	1.4E+06	-999	2.8E+07	1.1E+05	3.7E+05	1.2E+07	9.5E+07	9.0E+06	6.5E+06	2.6E+06	1.2E+07
11	1.7E+07	1.7E+06	9.4E+06	6.9E+07	1.2E+05	3.7E+05	9.1E+06	1.3E+08	4.4E+07	3.2E+07	1.8E+05	5.4E+06
12	5.5E+06	7.1E+06	2.4E+08	8.9E+07	6.1E+05	4.2E+05	4.2E+06	5.6E+06	2.1E+07	2.5E+07	6.1E+05	4.6E+06
13	2.8E+07	6.4E+05	2.4E+08	1.1E+08	1.9E+06	4.7E+05	1.6E+06	3.1E+06	2.8E+07	3.8E+06	5.4E+05	9.6E+05
14	9.5E+06	2.1E+06	2.4E+08	1.1E+08	1.3E+06	1.5E+07	1.1E+06	6.5E+07	5.5E+07	5.0E+06	7.5E+05	1.3E+06
15	1.4E+07	9.4E+06	2.4E+08	7.8E+07	1.2E+06	3.9E+07	2.3E+06	2.4E+08	8.4E+07	2.7E+06	1.0E+06	1.3E+07
16	6.8E+05	9.7E+06	2.5E+08	8.3E+07	1.9E+06	5.7E+07	3.7E+06	3.0E+08	5.2E+07	1.8E+07	1.7E+06	9.0E+06
17	2.4E+06	2.9E+07	1.6E+08	8.9E+06	3.1E+06	5.6E+07	1.8E+06	2.8E+08	1.5E+08	7.9E+06	6.6E+06	3.6E+06
18	6.2E+04	4.8E+07	2.0E+08	4.3E+06	2.2E+05	4.7E+07	6.5E+05	2.2E+06	5.4E+07	9.5E+04	2.8E+07	5.9E+04
19	3.0E+05	4.2E+07	1.0E+07	1.0E+06	2.7E+05	6.8E+06	2.2E+05	6.8E+05	3.6E+07	1.3E+05	6.2E+07	2.7E+04
20	3.9E+06	4.2E+07	9.4E+06	1.2E+06	4.6E+05	7.7E+05	3.4E+06	1.1E+06	5.2E+07	1.3E+07	1.1E+08	2.9E+04
21	5.0E+07	7.6E+07	2.5E+06	2.1E+06	1.1E+05	5.9E+05	1.4E+07	2.9E+06	5.1E+07	4.5E+07	1.1E+08	8.0E+04
22	6.7E+07	3.7E+07	3.4E+06	1.3E+06	2.0E+05	8.2E+05	3.1E+07	3.9E+05	1.1E+07	7.2E+07	6.6E+06	2.2E+06
23	8.6E+07	8.1E+06	2.8E+06	3.5E+05	2.9E+06	1.7E+06	4.2E+06	1.4E+05	9.1E+06	1.0E+08	7.2E+06	2.8E+07
24	7.6E+07	1.2E+07	4.6E+06	2.8E+05	6.1E+05	3.1E+06	3.0E+06	1.0E+06	2.9E+06	8.4E+07	5.3E+06	5.6E+07
25	1.3E+07	1.3E+07	3.3E+06	5.5E+05	1.8E+06	4.1E+06	3.4E+06	9.6E+06	7.5E+06	1.0E+08	2.4E+06	4.5E+07
26	7.6E+07	1.4E+07	1.5E+07	2.1E+05	8.6E+06	2.5E+06	1.7E+07	6.6E+06	1.1E+07	5.4E+07	1.4E+07	1.3E+06
27	1.7E+08	1.8E+07	1.7E+07	4.3E+05	8.2E+06	6.0E+05	7.6E+06	1.2E+07	1.5E+07	5.6E+06	3.9E+07	3.7E+06
28	1.5E+08	1.6E+07	7.0E+06	5.8E+05	3.0E+07	9.3E+05	1.2E+06	4.5E+06	1.1E+07	1.9E+07	6.5E+07	1.5E+06
29	5.4E+07	6.2E+05	2.2E+06	1.5E+06	4.2E+06		9.4E+05	1.1E+06	4.2E+06	2.4E+07	3.4E+07	5.0E+06
30	9.0E+06	1.0E+07	1.2E+06	7.5E+05	1.8E+06		5.2E+06	1.8E+06	2.7E+06	5.2E+06	1.9E+07	4.0E+06
31		1.5E+07		9.3E+05	1.4E+06		1.1E+06		4.3E+06		8.7E+04	7.8E+05

NOTE: The electron detector responds significantly to protons above 32 MeV; therefore, electron data are contaminated when a proton event is in progress. These days are indicated with '-999' in the table and are not plotted. '--' indicates data not available.
NOTE: GOES9 data began April, 1996 and ended on 26 July, 1998. GOES8 is primary satellite as of 27 July, 1998.

CONTENTS

Prompt Reports — Number 685 Part I

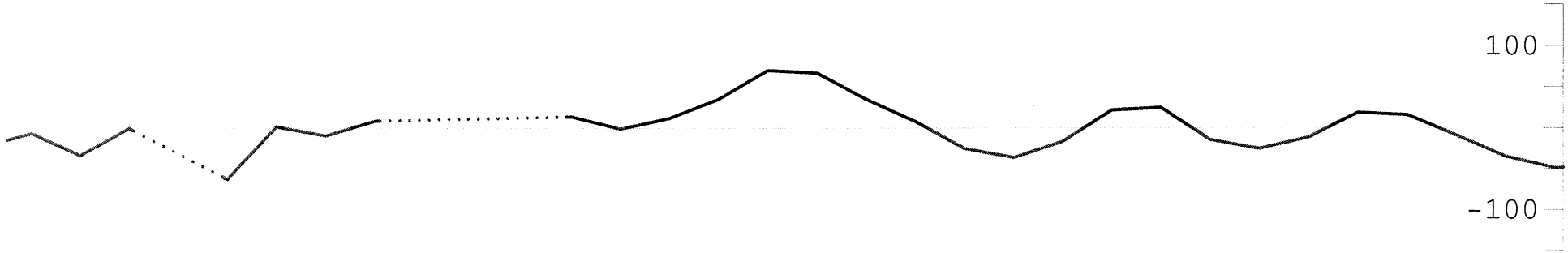
DATA FOR JULY 2001

SOLAR MAGNETIC FIELD SYNOPTIC CHART

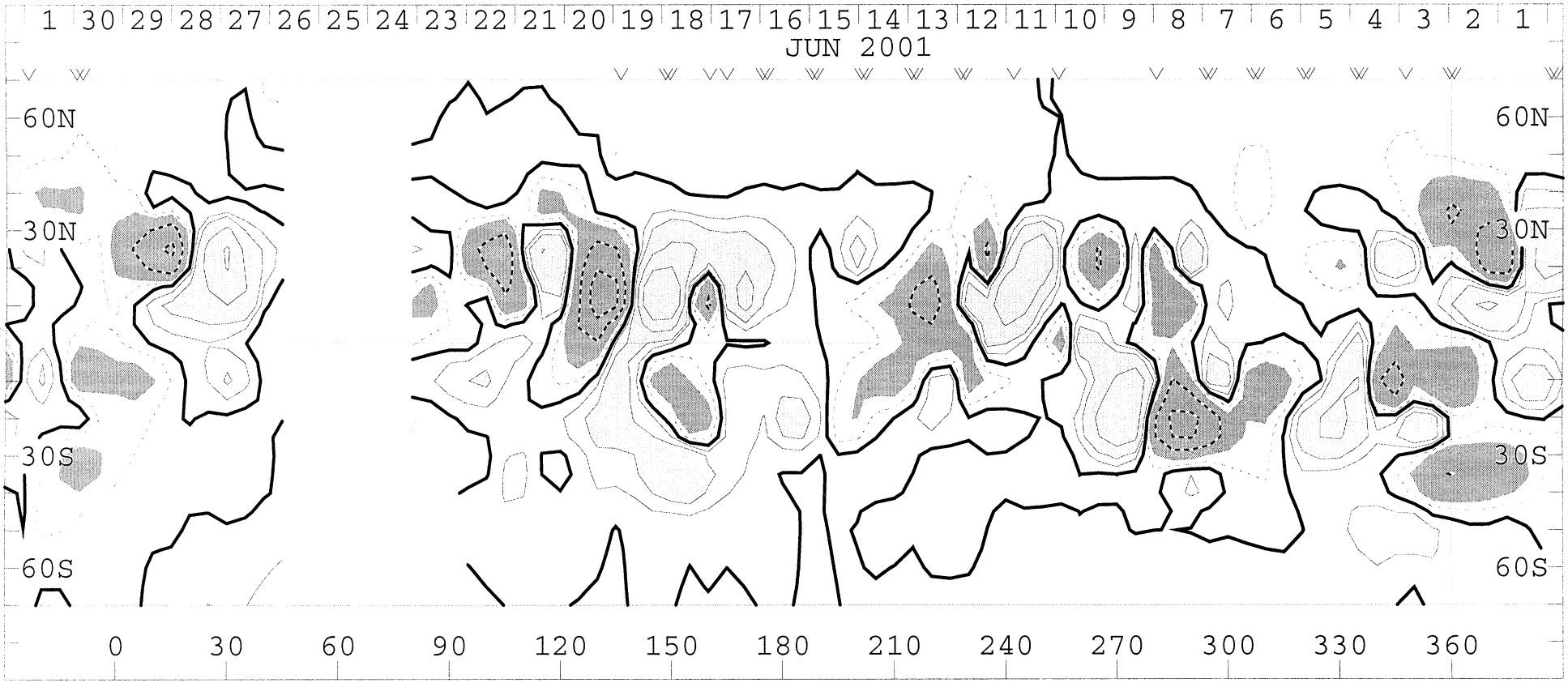
CARRINGTON ROTATION NUMBER 1977

(2 to 30 June 2001)

WILCOX SOLAR OBSERVATORY



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



SOLAR MAGNETIC FIELD SYNOPTIC CHART

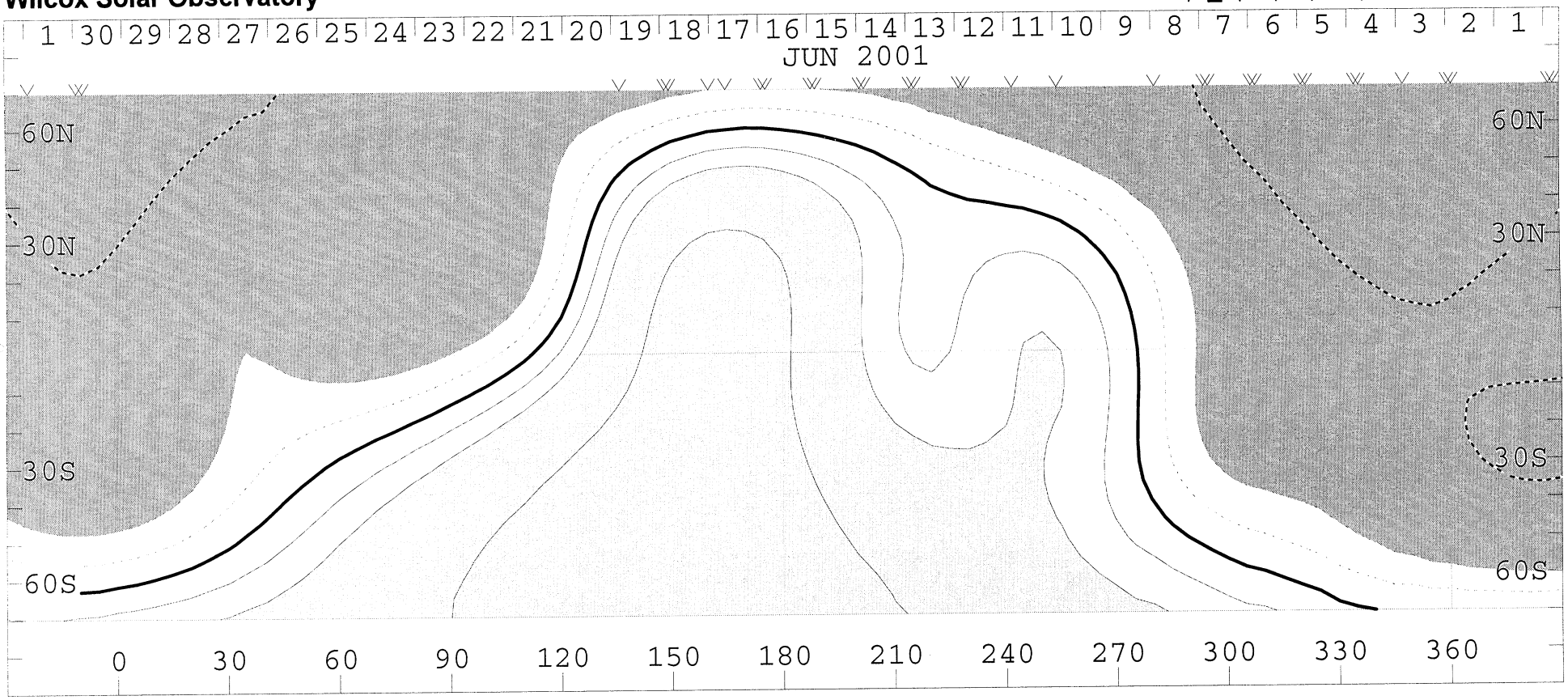
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1977

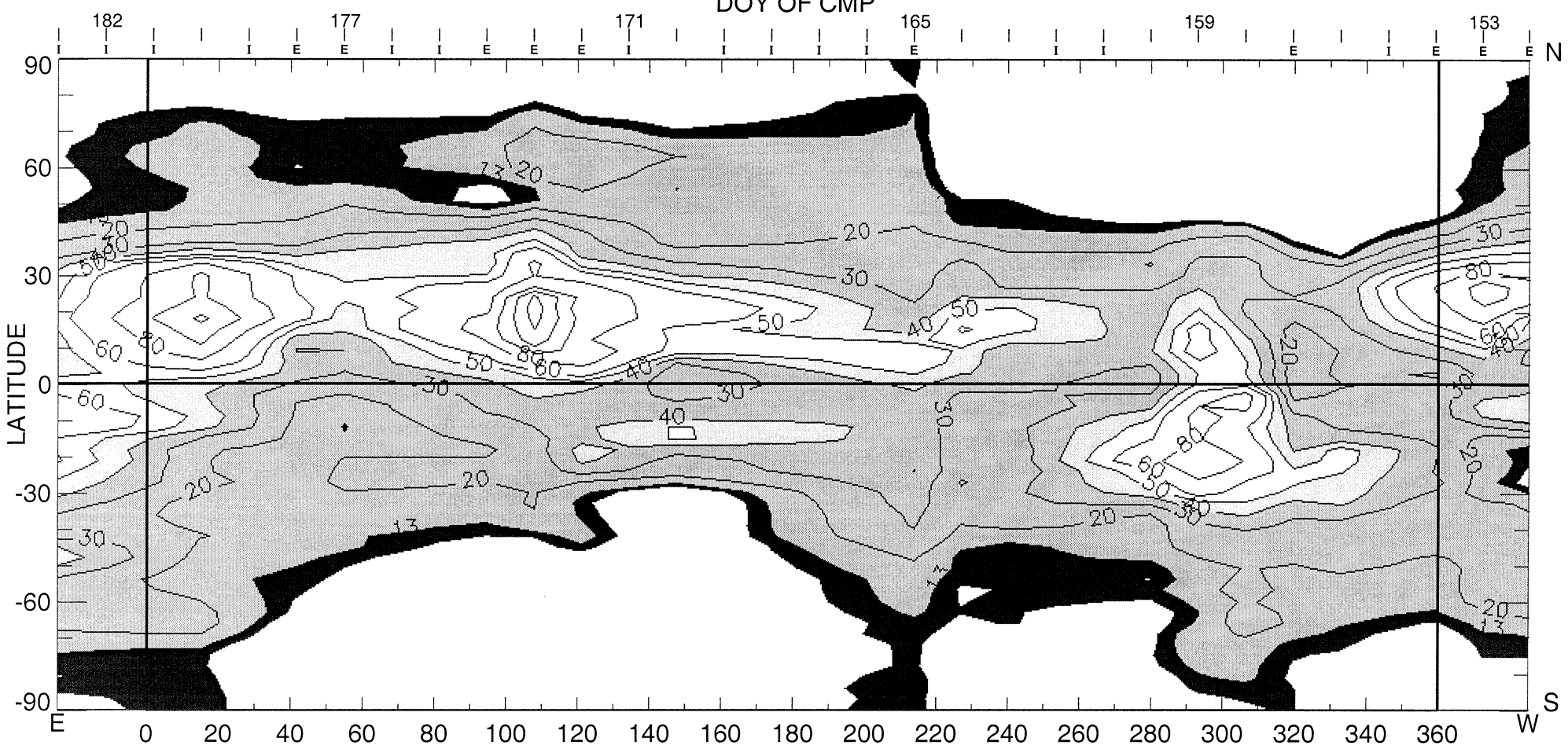
(2 to 30 June 2001)

Wilcox Solar Observatory

0, ±1, 2, 5, 10, 20 microTesla



CARRINGTON ROTATION NUMBER 1977 ; NSO/SACRAMENTO PEAK FE XIV @ R = 1.15R_o

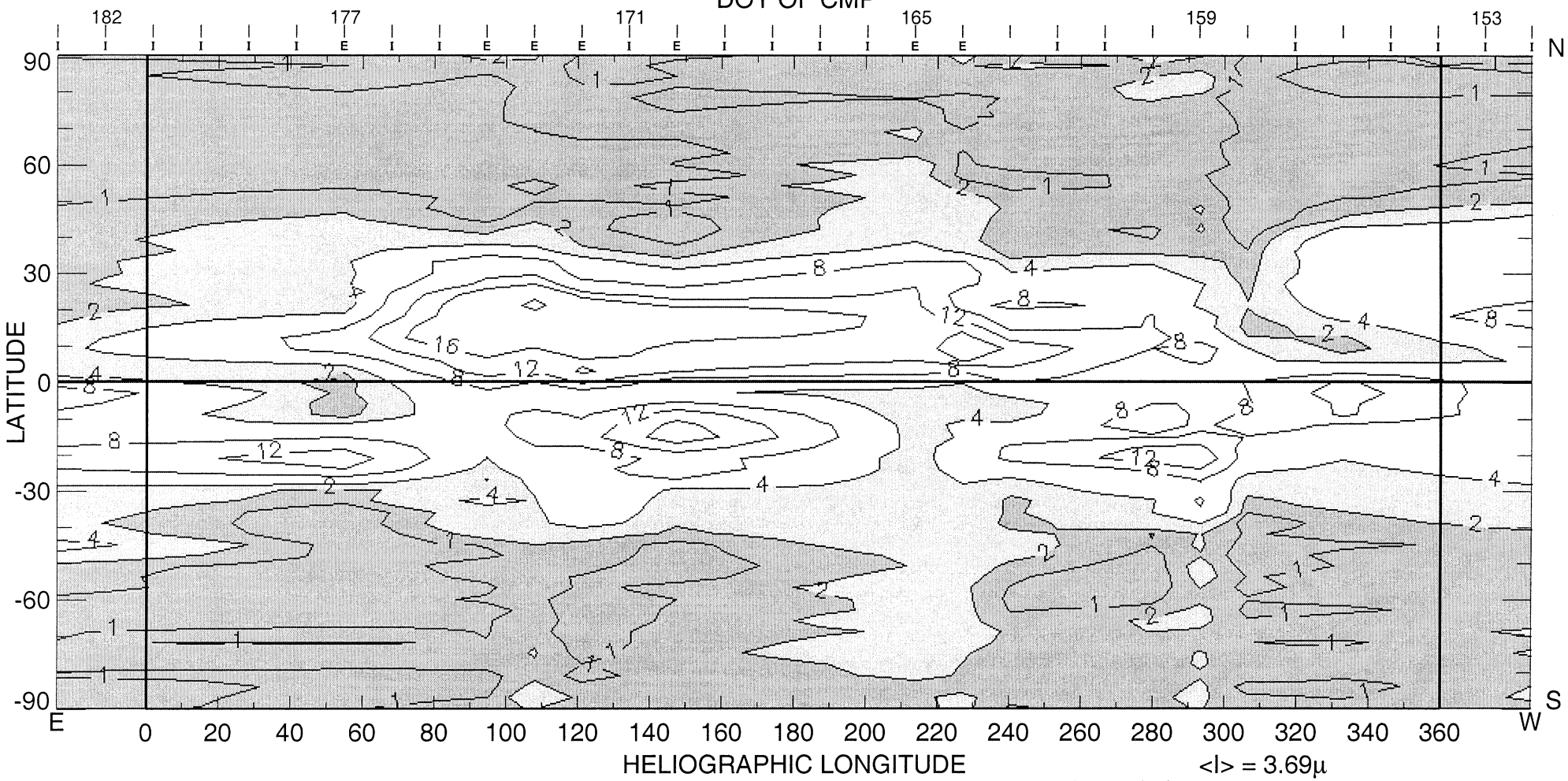


<I> = 23.70μ

(14-Sep-01) 2001 W+E LIMB CONTOURS: 10, 13, 20, 30, 40, 50, 60, 80, 100, 120, 140, 160 MILLIONTHS OF I_o

CORONAL HOLES ARE SHOWN AS WHITE BORDERED BY BLACK

CARRINGTON ROTATION NUMBER 1977 ; NSO/SACRAMENTO PEAK FE X @ R = 1.15R_o

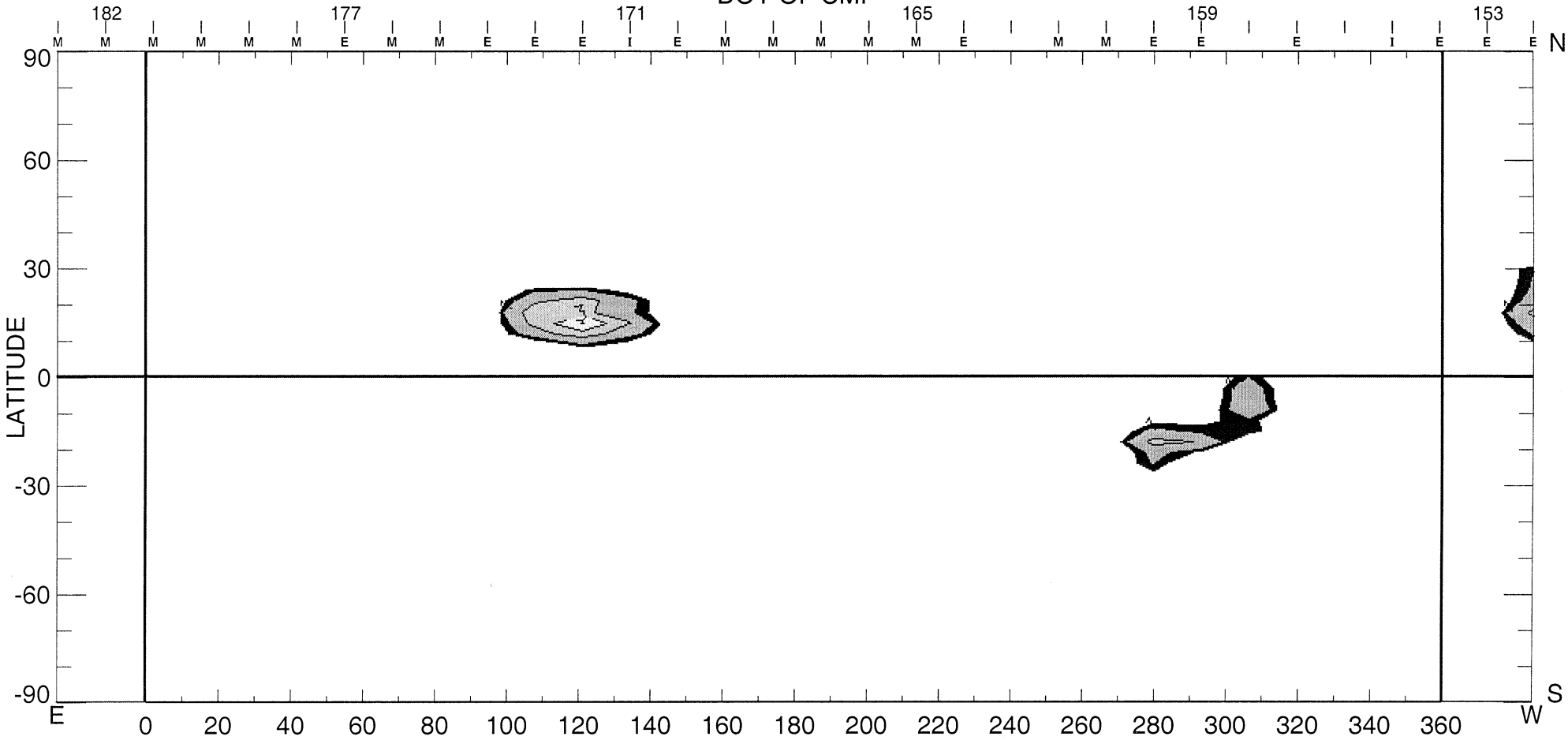


<I> = 3.69μ

(11-Sep-01)

2001 W+E LIMB CONTOURS: 1, 2, 4, 8, 12, 16, 32, 48 MILLIONTHS OF I_o

CARRINGTON ROTATION NUMBER 1977 ; NSO/SACRAMENTO PEAK CA XV @ R = 1.15R_o



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

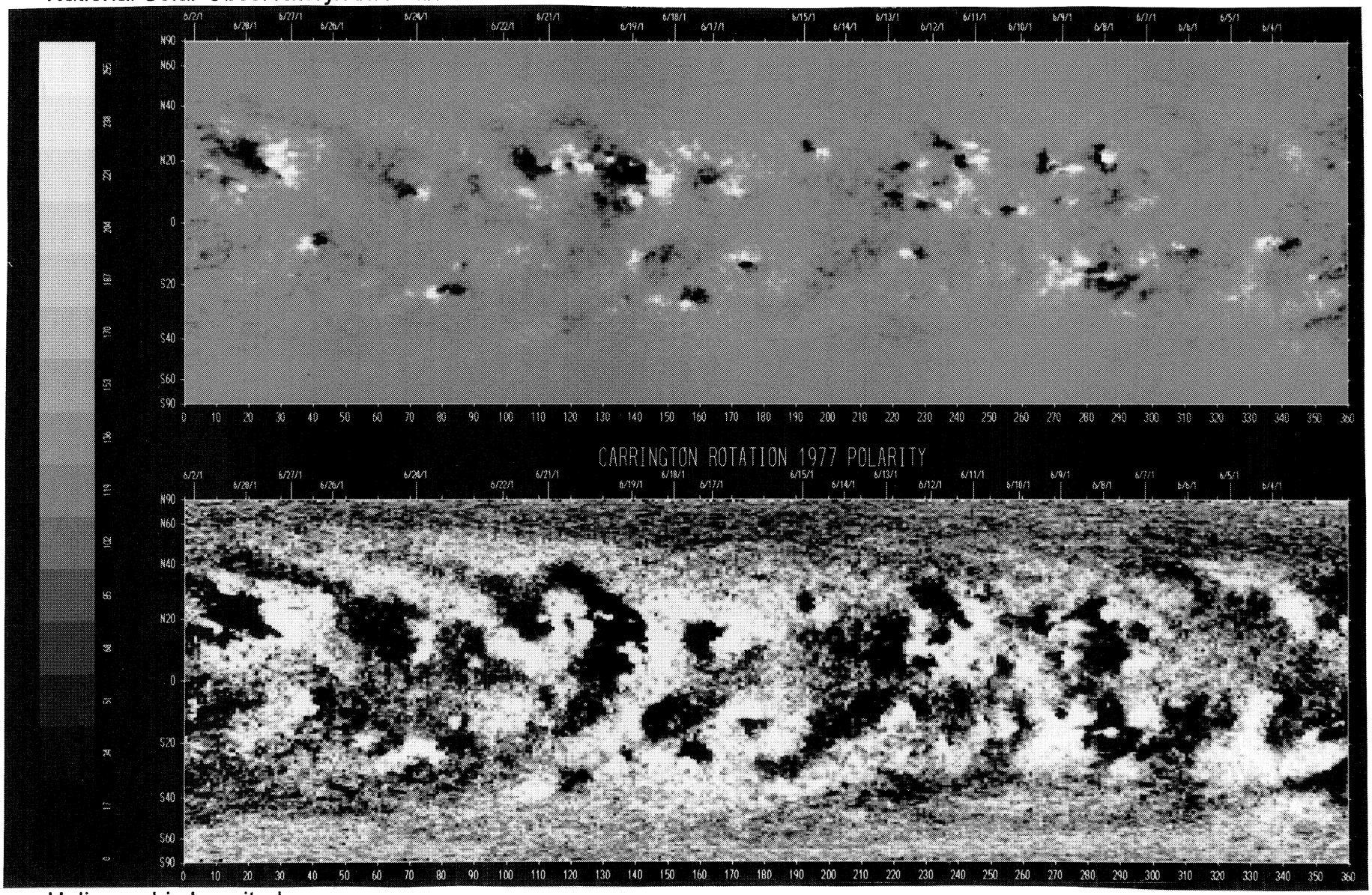
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1977

(2 to 30 June 2001)

National Solar Observatory/Kitt Peak

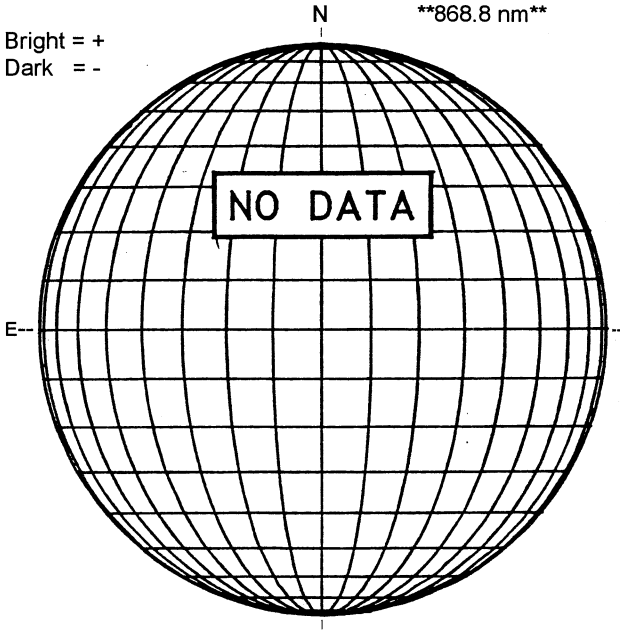
Dates of Observation



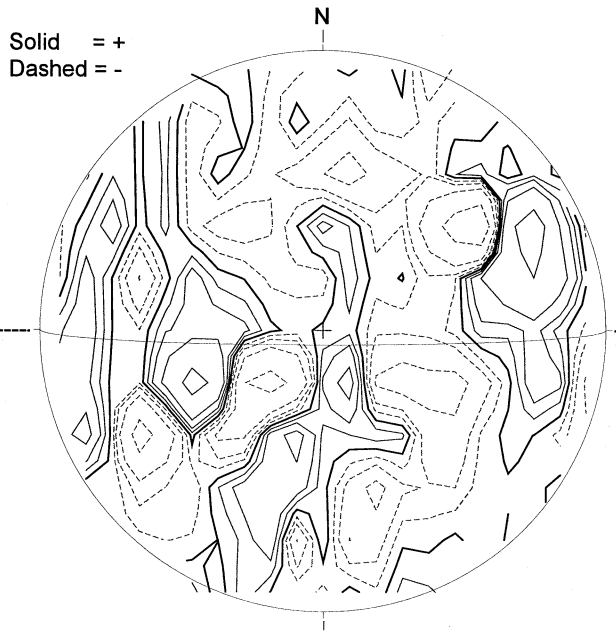
Heliographic Longitude

JULY 1, 2001 (P= - 2.67, Bo = 2.88, Lo = 348.51)

KITT PEAK MAGNETOGRAM

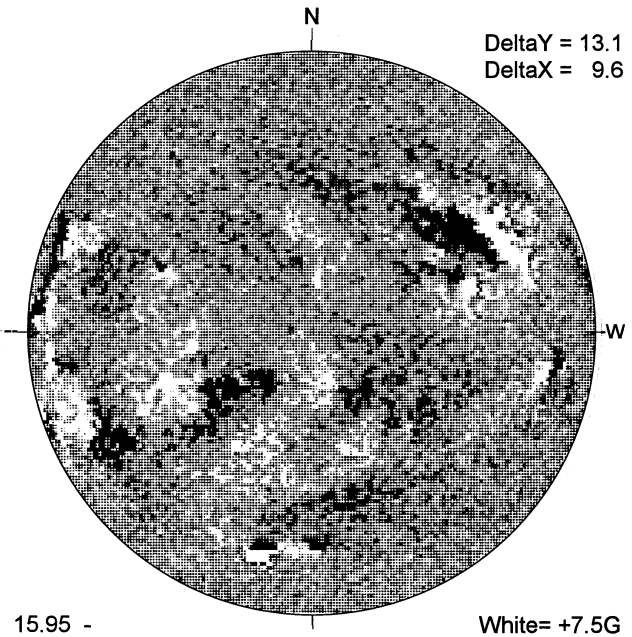


STANFORD MAGNETOGRAM



2216 UT

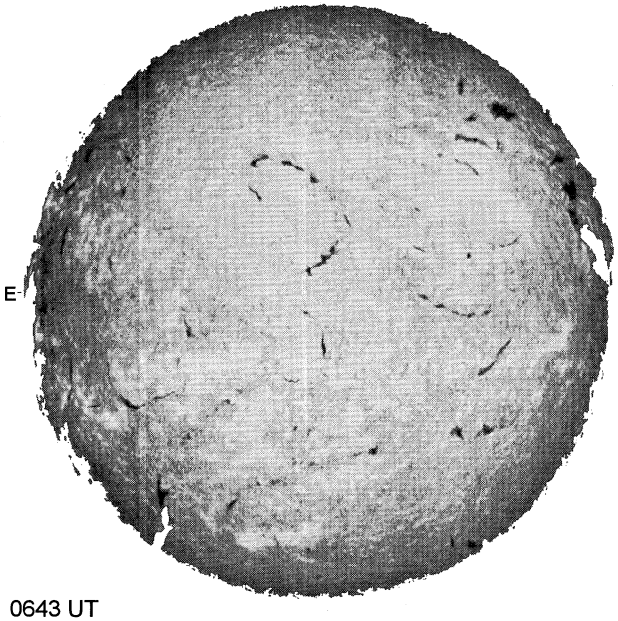
MT. WILSON MAGNETOGRAM



15.95 -
16.86 UT

White= +7.5G
Black = -7.5G

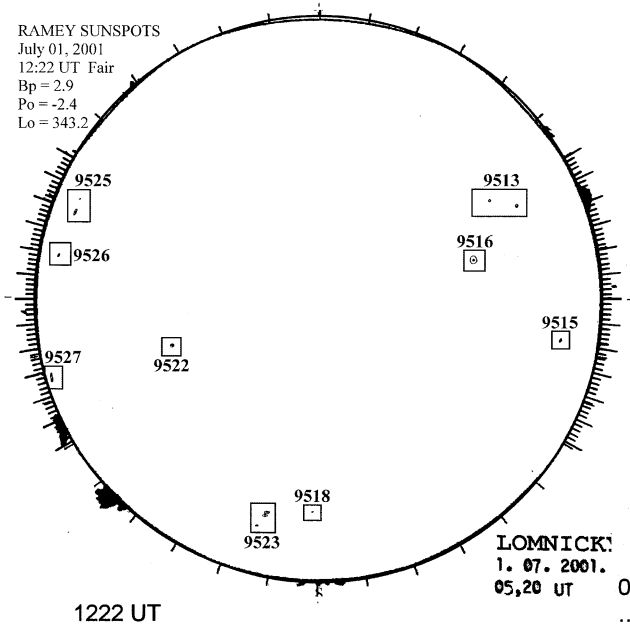
MEUDON H-ALPHA



0643 UT

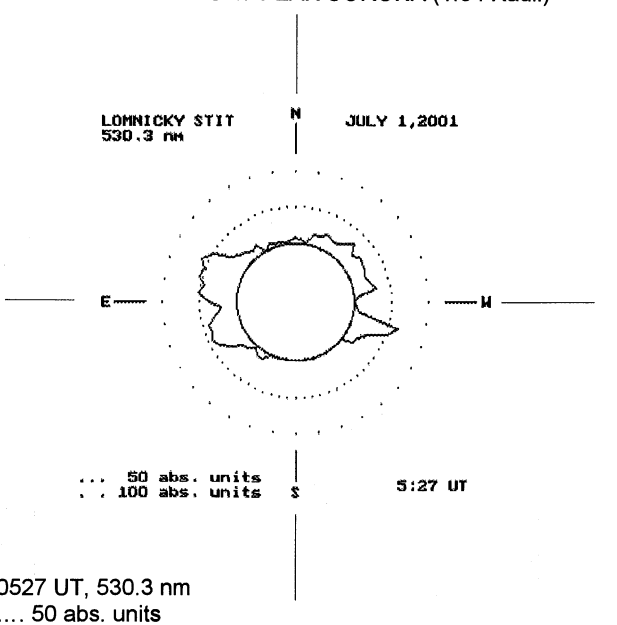
S

RAMEY SUNSPOT



1222 UT
0520 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)

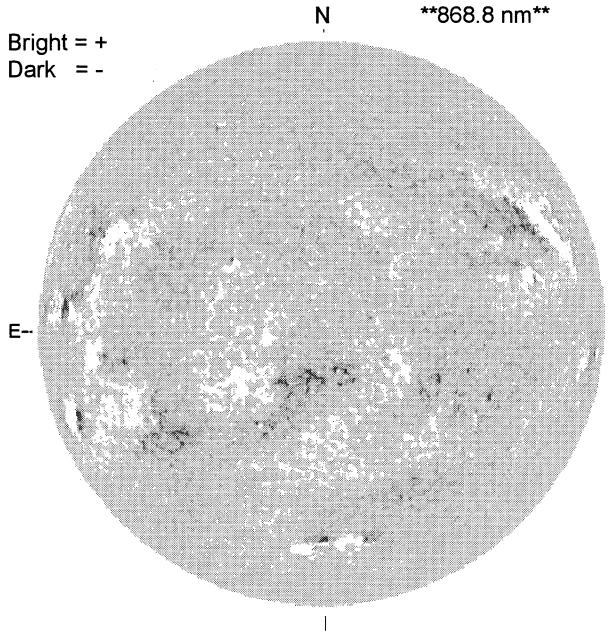


0527 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

S

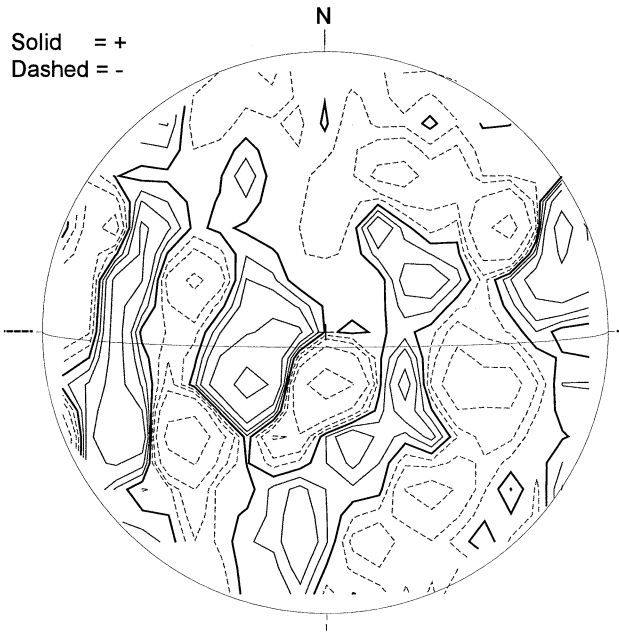
JULY 2, 2001 (P= - 2.22, Bo = 2.99, Lo = 335.27)

KITT PEAK MAGNETOGRAM



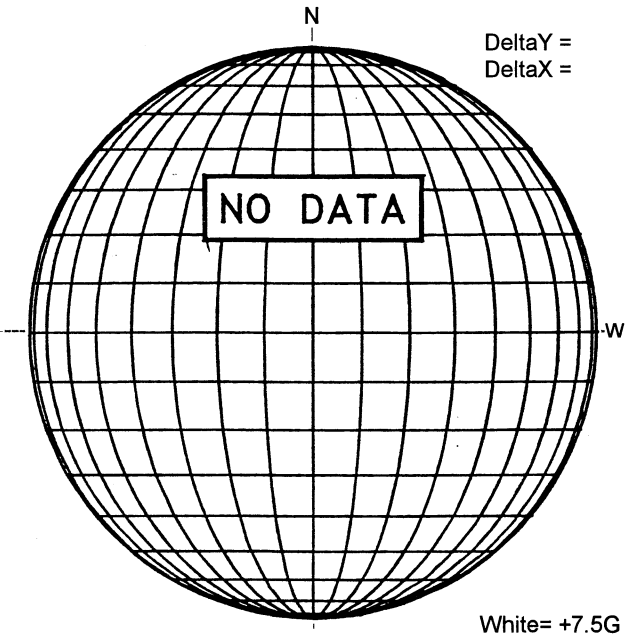
1605 UT

STANFORD MAGNETOGRAM



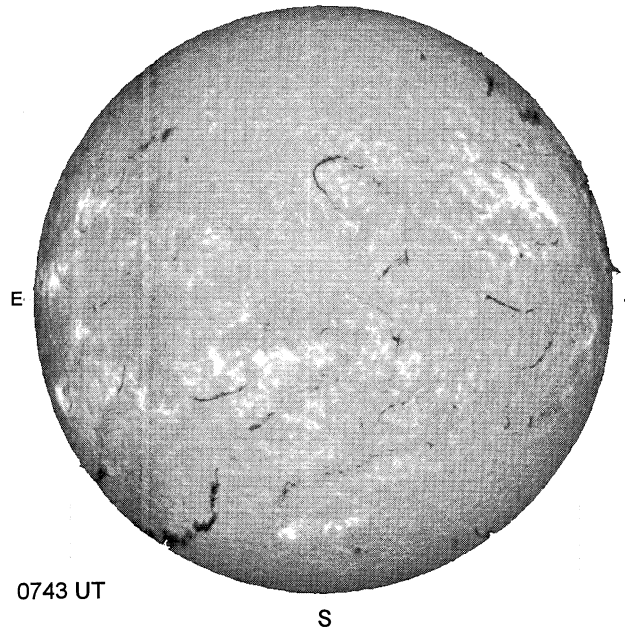
2031 UT

MT. WILSON MAGNETOGRAM



White= +7.5G
Black = -7.5G

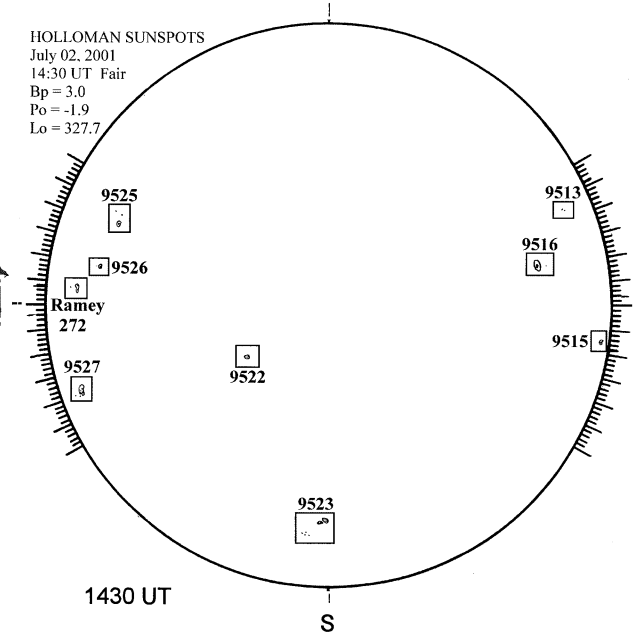
MEUDON H-ALPHA



0743 UT

S

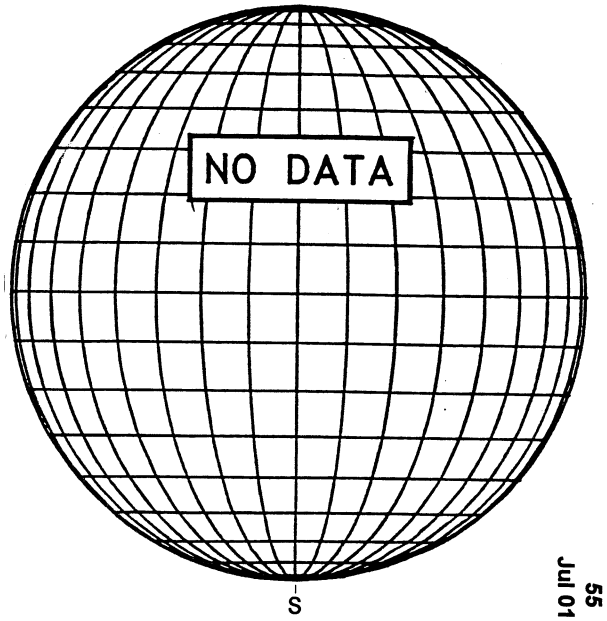
HOLLOMAN SUNSPOT



1430 UT

S

LOMNICKY PEAK CORONA (1.04 Radii)----



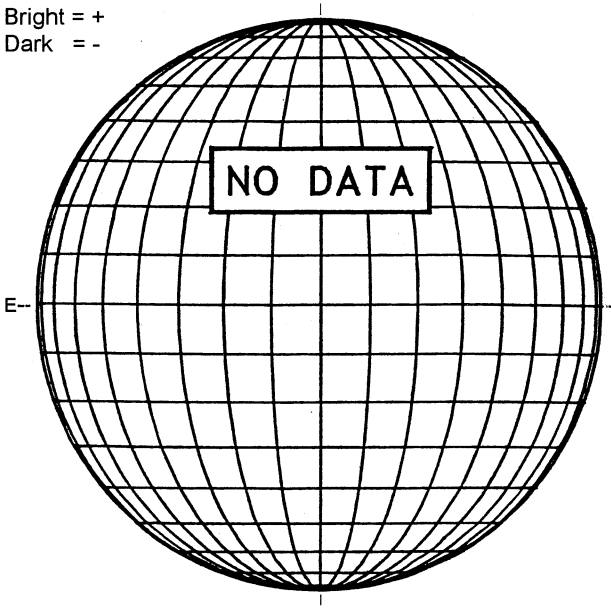
S

55
Jul 01

JULY 3, 2001 (P= - 1.77, Bo = 3.10, Lo = 322.04)

KITT PEAK MAGNETOGRAM

N
868.8 nm
Bright = +
Dark = -



E--

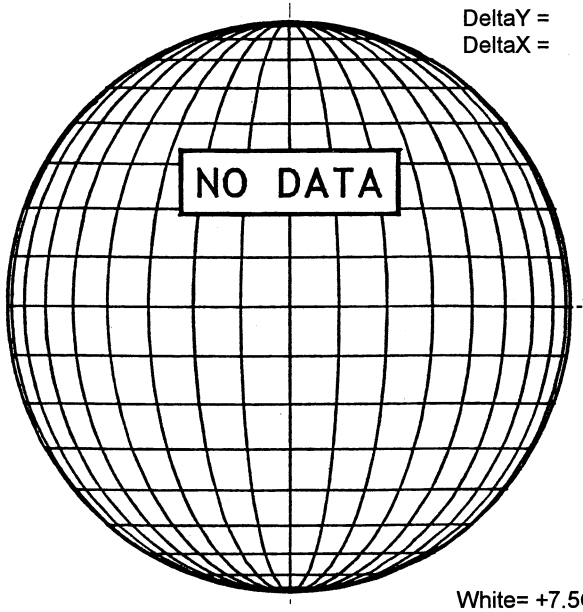
STANFORD MAGNETOGRAM

N
Solid = +
Dashed = -

2219 UT

MT. WILSON MAGNETOGRAM

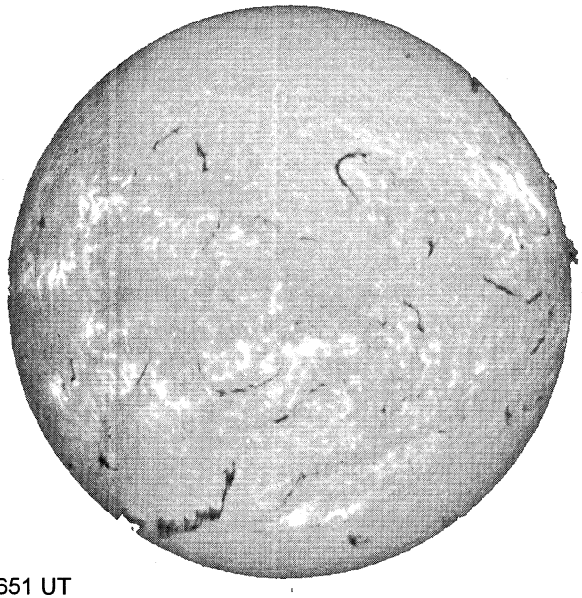
N
DeltaY =
DeltaX =



-W

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

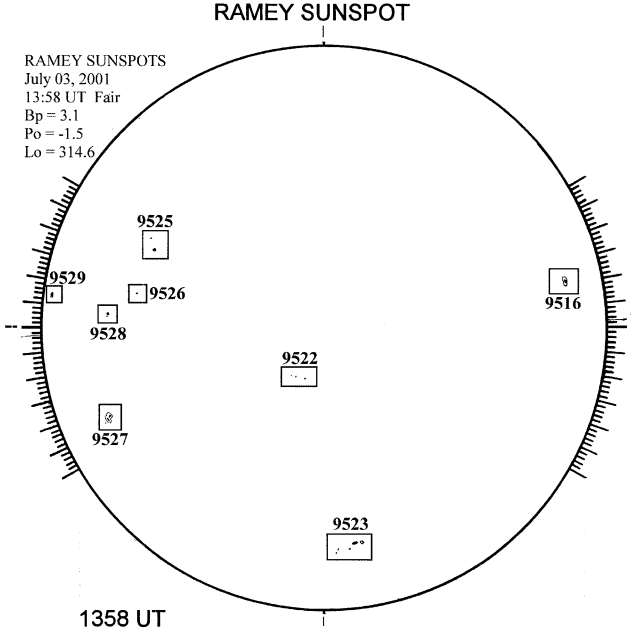


E-

0651 UT

S

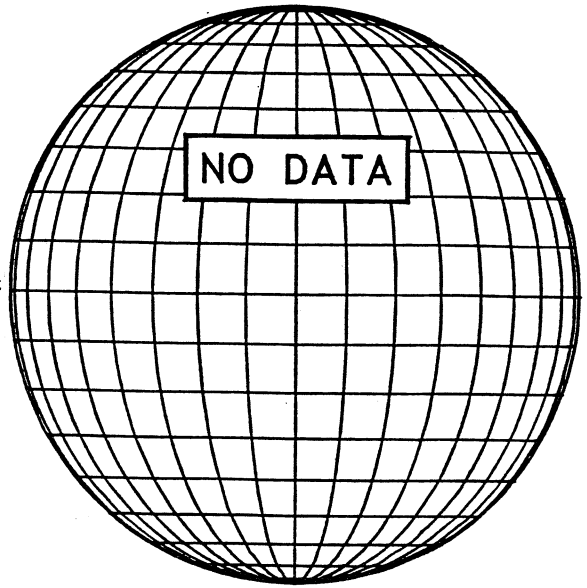
RAMEY SUNSPOT



1358 UT

S

LOMNICKY PEAK CORONA (1.04 Radii)----



S

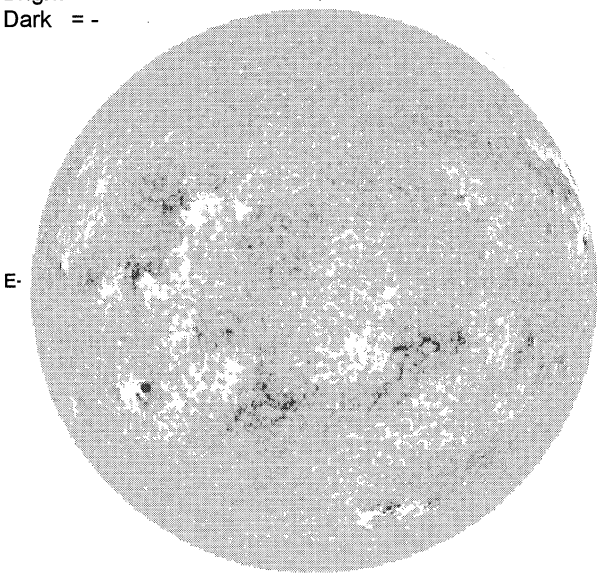
JULY 4, 2001 (P= - 1.31, Bo = 3.21, Lo = 308.80)

KITT PEAK MAGNETOGRAM

N

868.8 nm

Bright = +
Dark = -



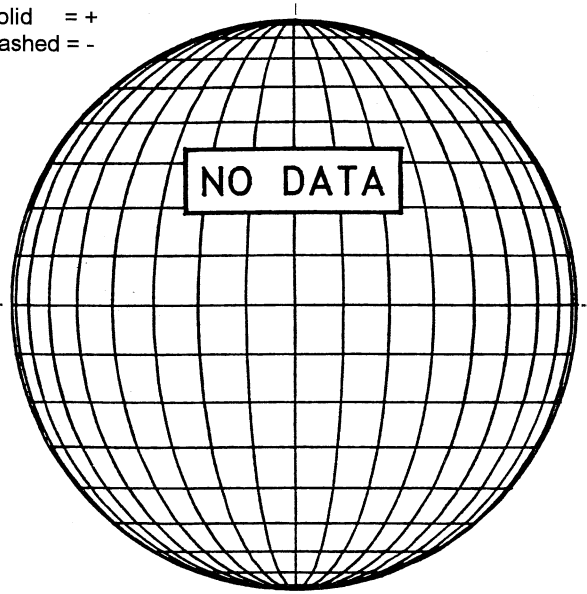
E-

1432 UT

STANFORD MAGNETOGRAM

N

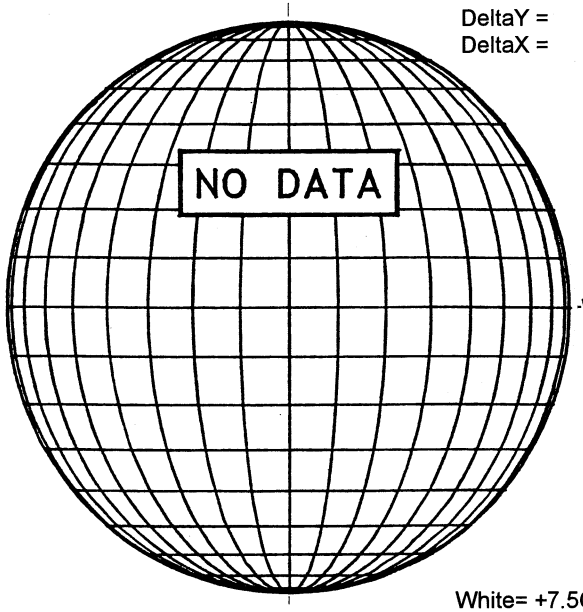
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

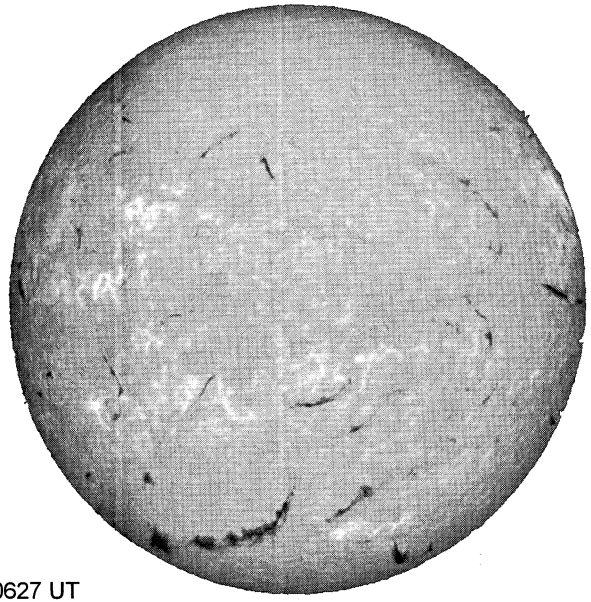
DeltaY =
DeltaX =



-W

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

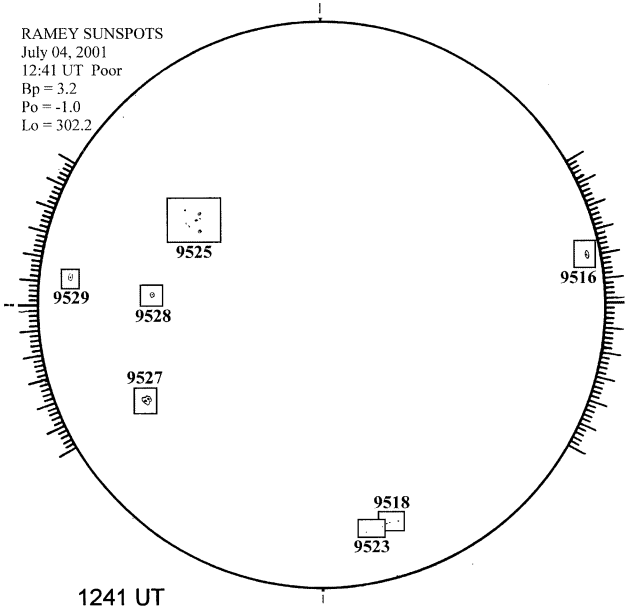


E-

0627 UT

S

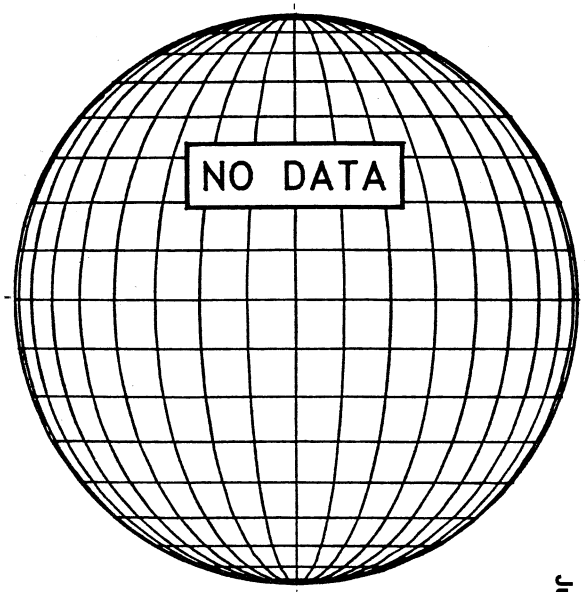
RAMEY SUNSPOT



1241 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

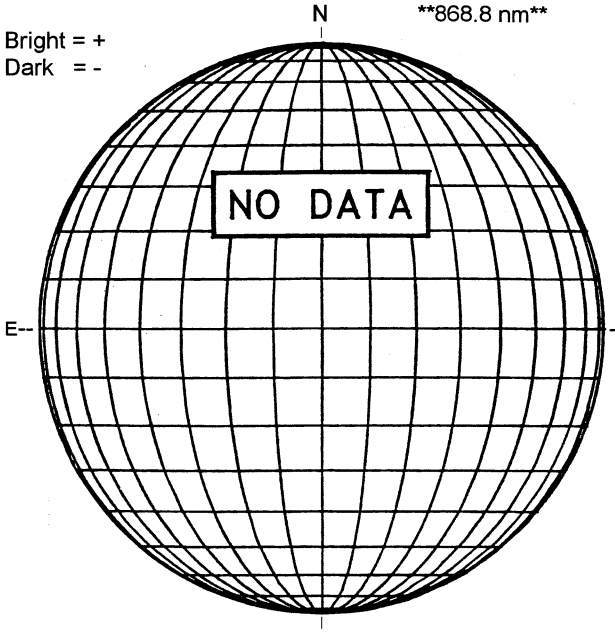
57
Jul 01

JULY 5, 2001 (P= - 0.86, Bo = 3.32, Lo = 295.56)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



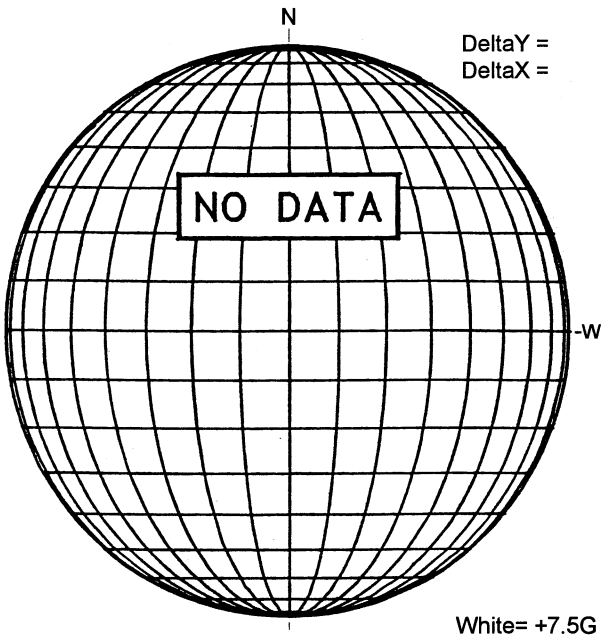
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

2126 UT

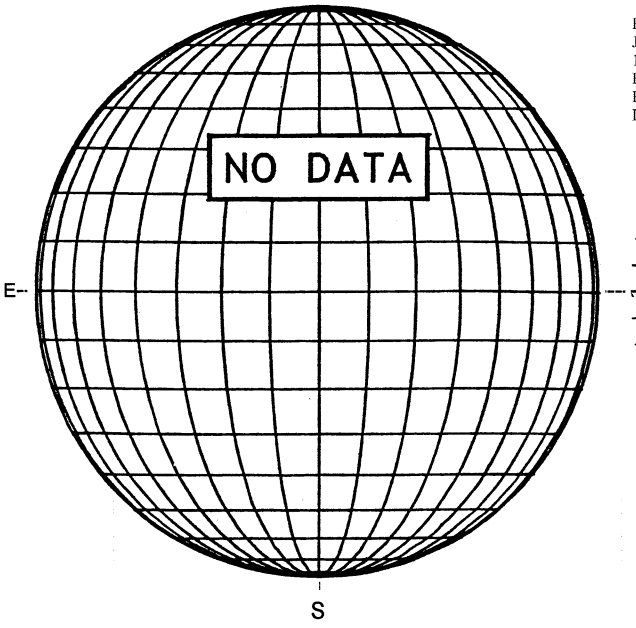
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



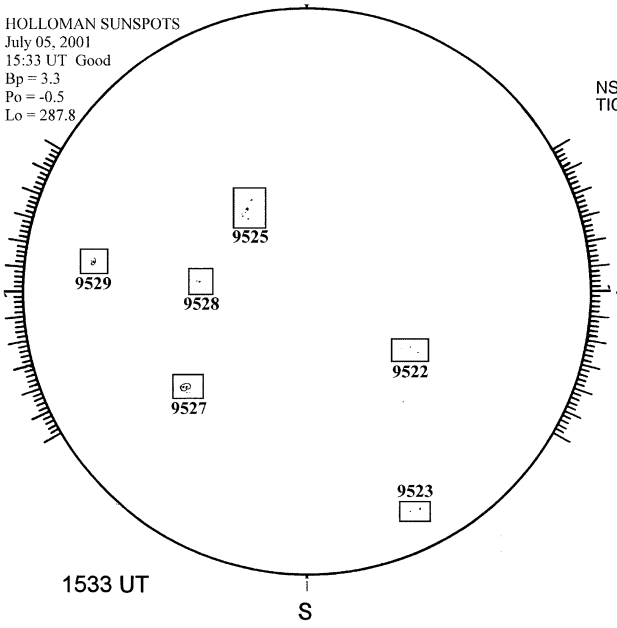
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



HOLLOMAN SUNSPOT

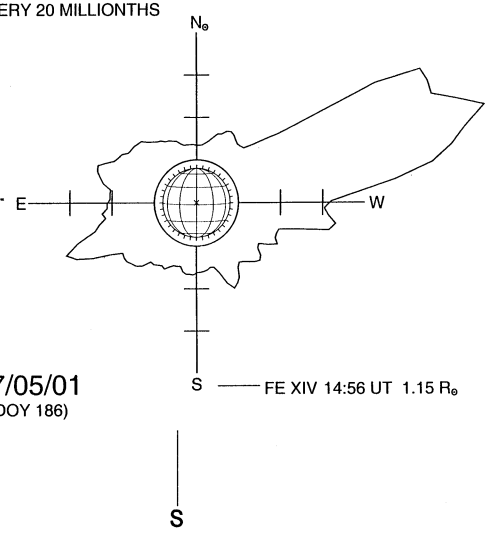
HOLLOMAN SUNSPOTS
July 05, 2001
15:33 UT Good
Bp = 3.3
Po = -0.5
Lo = 287.8



1533 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 20 MILLIONTHS



07/05/01
(DOY 186)

FE XIV 14:56 UT 1.15 R⊙

S

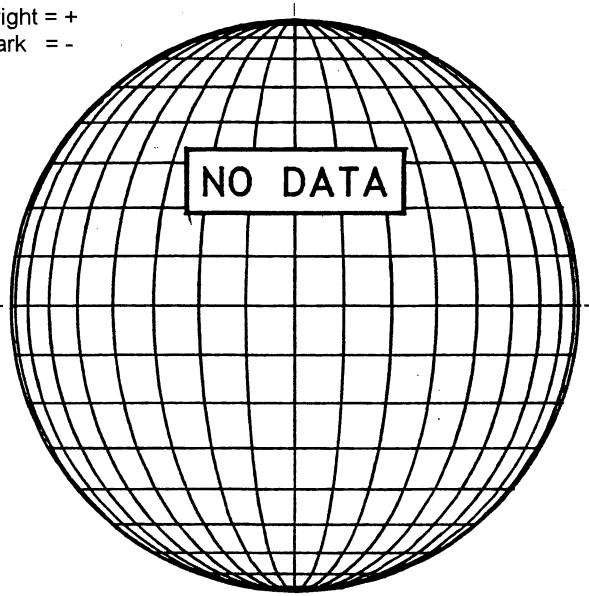
JULY 6, 2001 (P= - 0.41, Bo = 3.42, Lo = 282.33)

KITT PEAK MAGNETOGRAM

N

868.8 nm

Bright = +
Dark = -

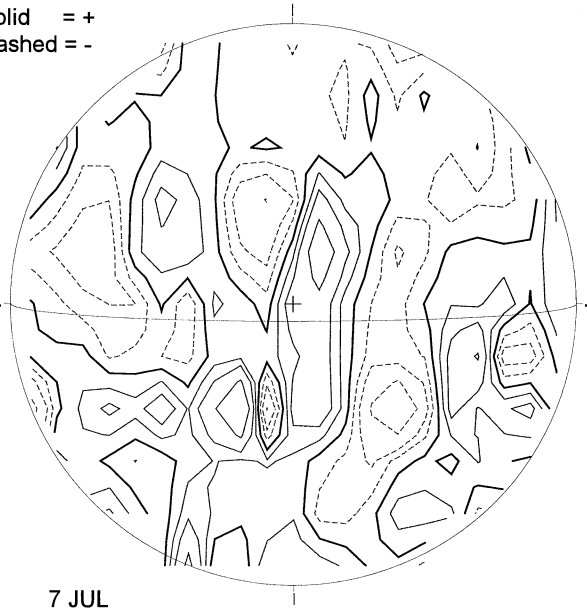


E

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

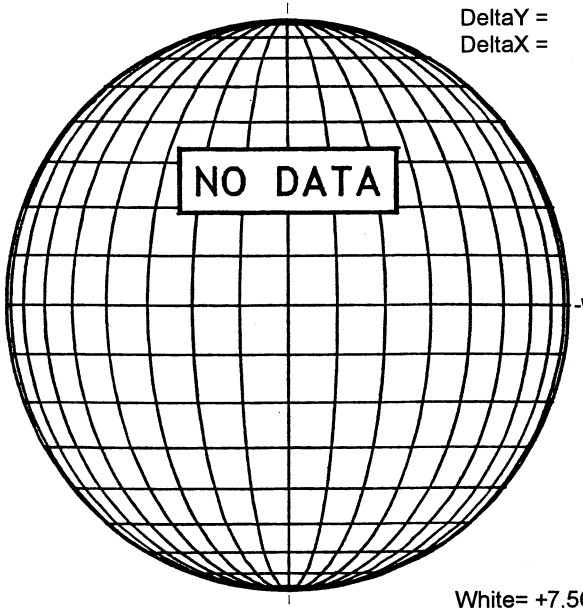


7 JUL
0008 UT

MT. WILSON MAGNETOGRAM

N

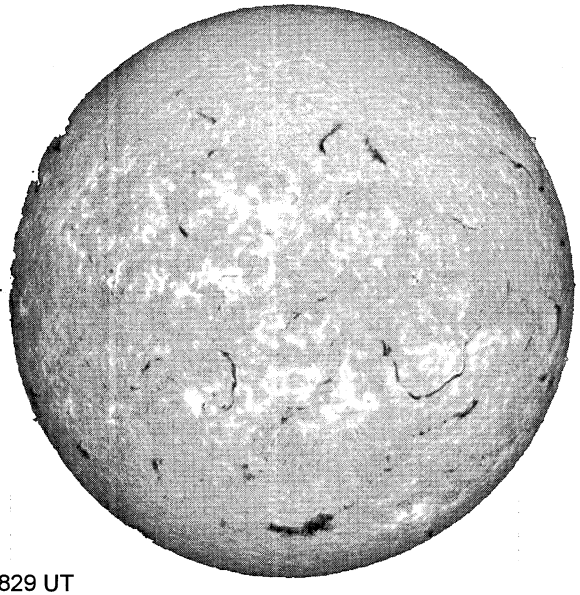
DeltaY =
DeltaX =



W

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

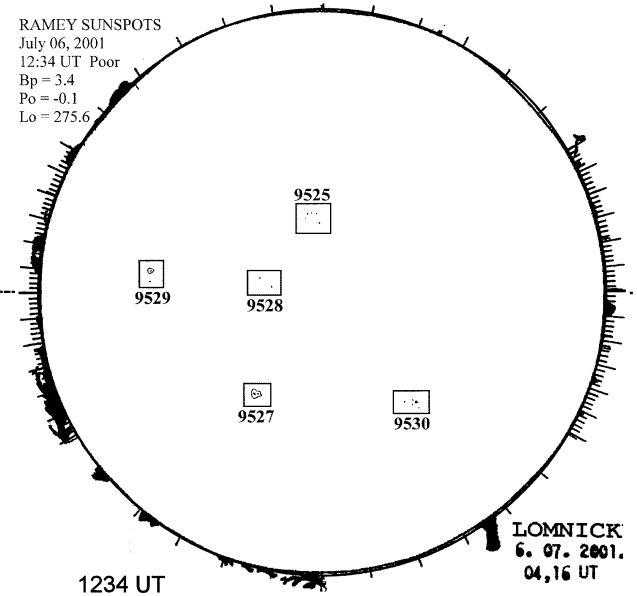


0829 UT

S

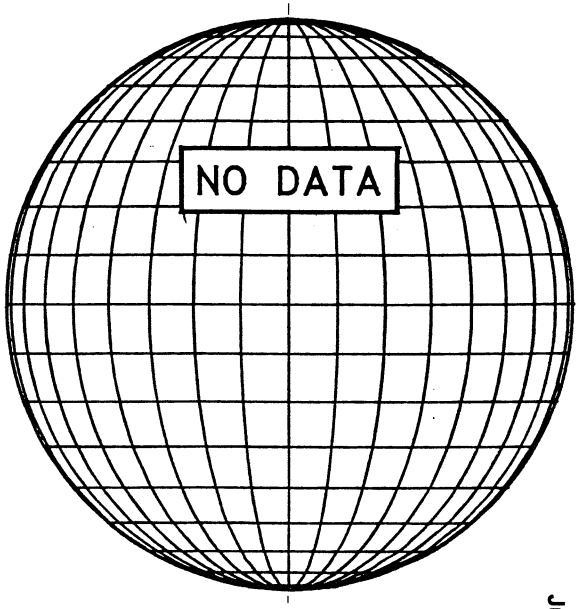
RAMEY SUNSPOT

RAMEY SUNSPOTS
July 06, 2001
12:34 UT Poor
Bp = 3.4
Po = -0.1
Lo = 275.6



1234 UT
0416 UT LOMN Prom S

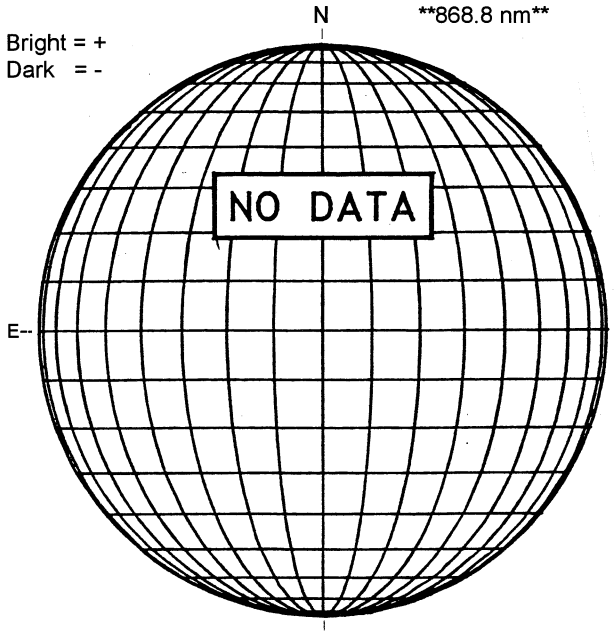
SACRAMENTO PEAK CORONA (1.15 Radii)----



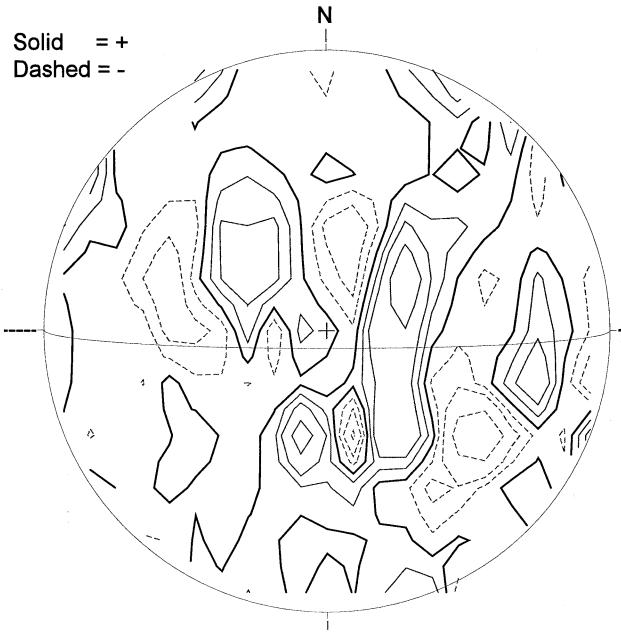
S

JULY 7, 2001 (P= 0.05, Bo = 3.53, Lo = 269.09)

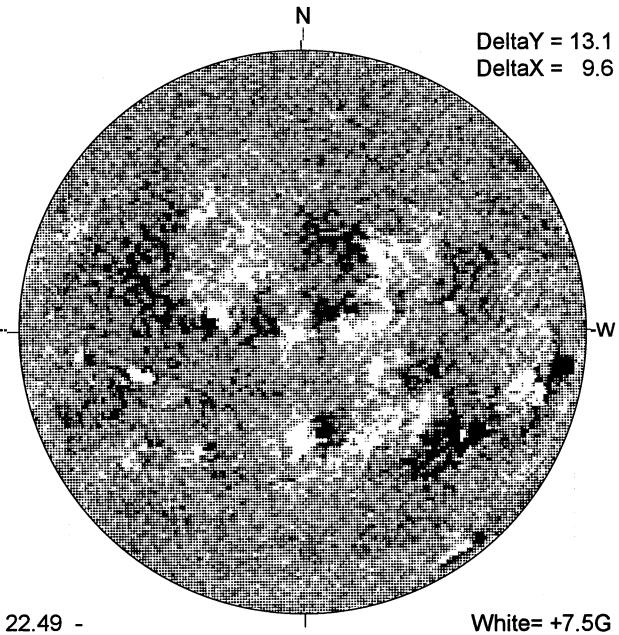
KITT PEAK MAGNETOGRAM



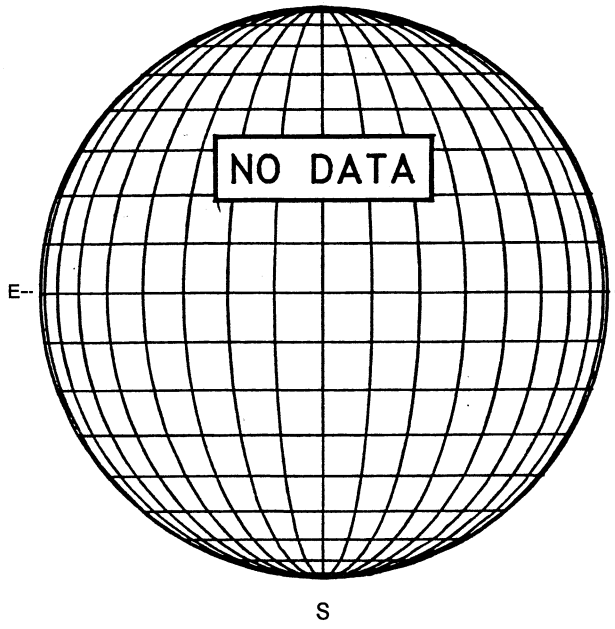
STANFORD MAGNETOGRAM



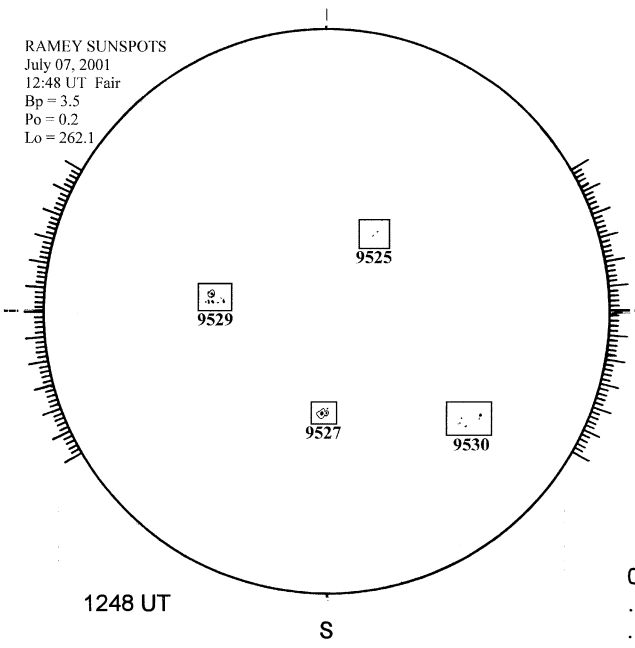
MT. WILSON MAGNETOGRAM



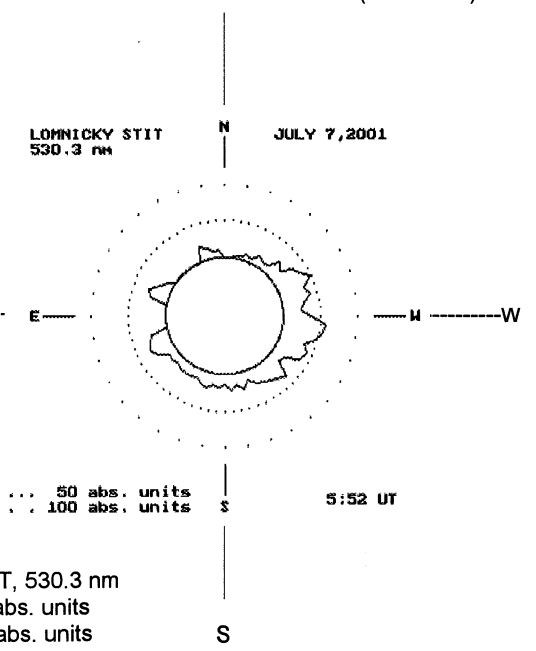
MEUDON H-ALPHA



RAMEY SUNSPOTS

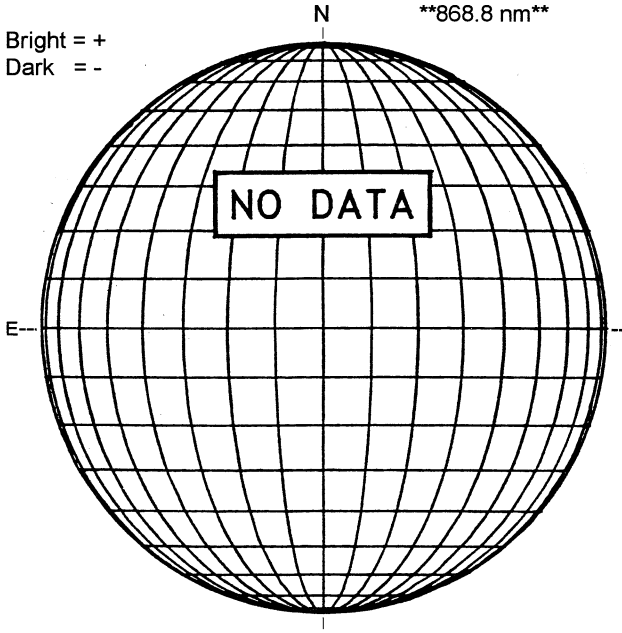


LOMNICKY PEAK CORONA (1.04 Radii)

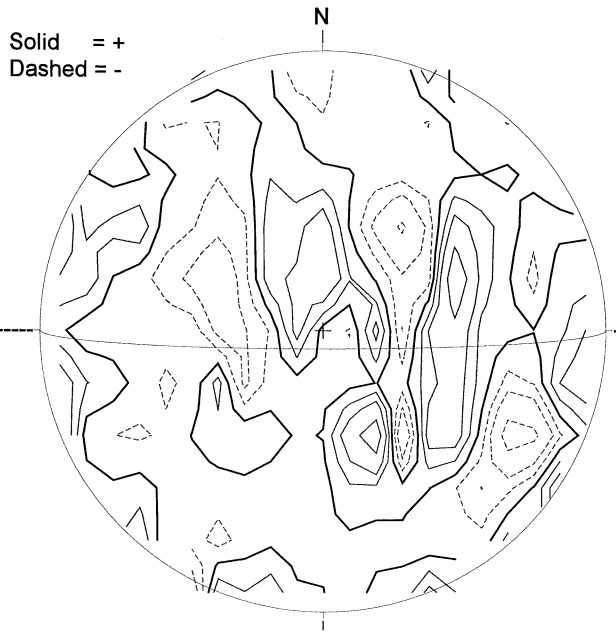


JULY 8, 2001 (P= 0.50, Bo = 3.63, Lo = 255.86)

KITT PEAK MAGNETOGRAM

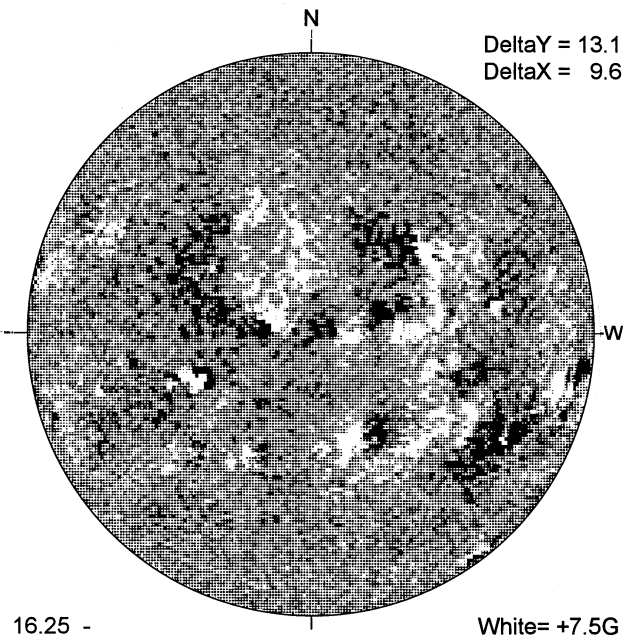


STANFORD MAGNETOGRAM



2006 UT

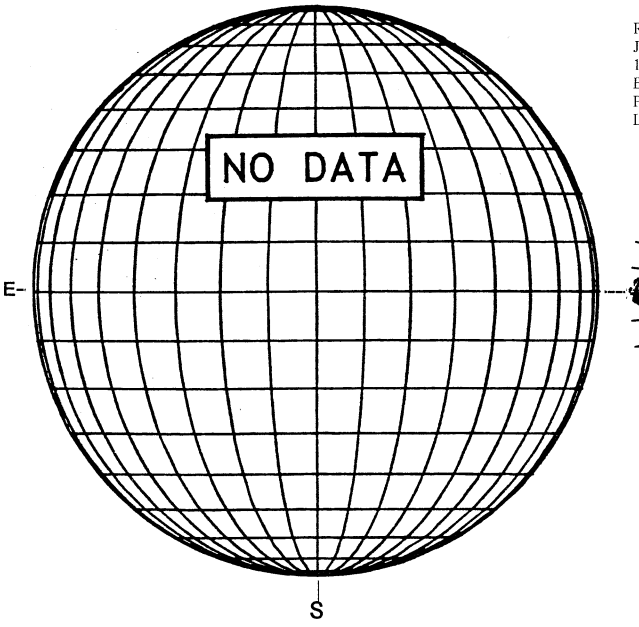
MT. WILSON MAGNETOGRAM



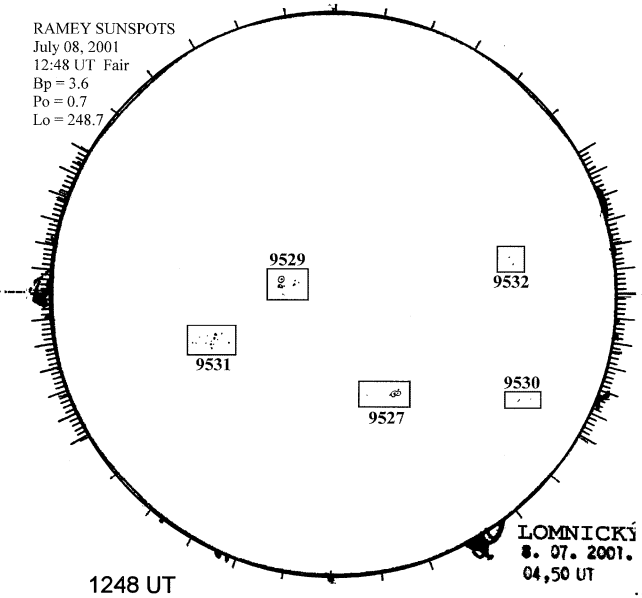
16.25 -
17.17 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

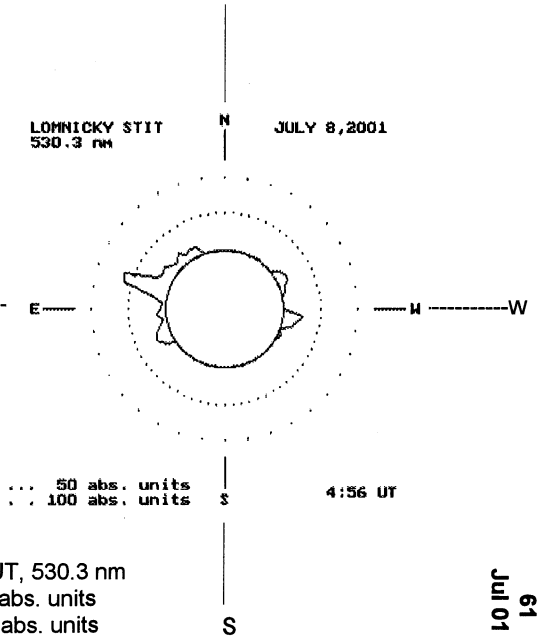


RAMEY SUNSPOT



1248 UT
0450 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



LOMNICKÝ
8. 07. 2001.
04,50 UT

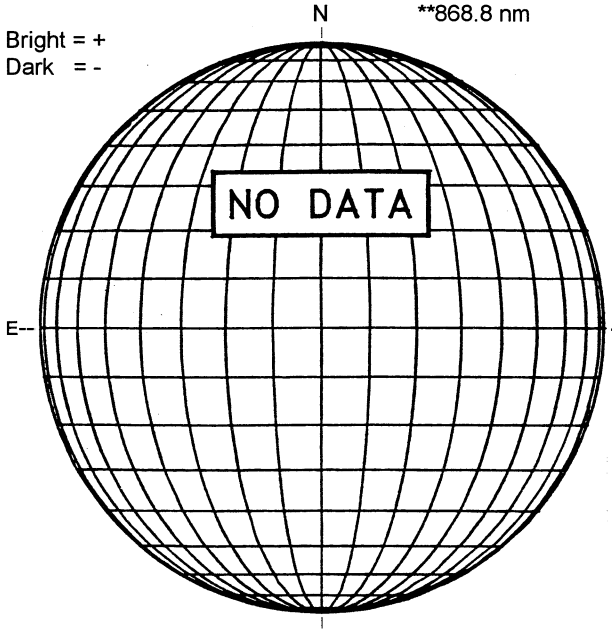
456 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

JULY 9, 2001 (P= 0.95, Bo = 3.74, Lo = 242.62)

KITT PEAK MAGNETOGRAM

N **868.8 nm

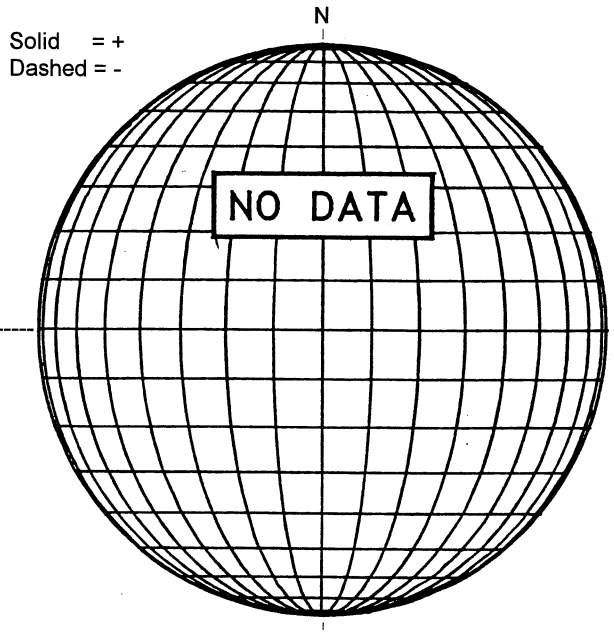
Bright = +
Dark = -



STANFORD MAGNETOGRAM

N

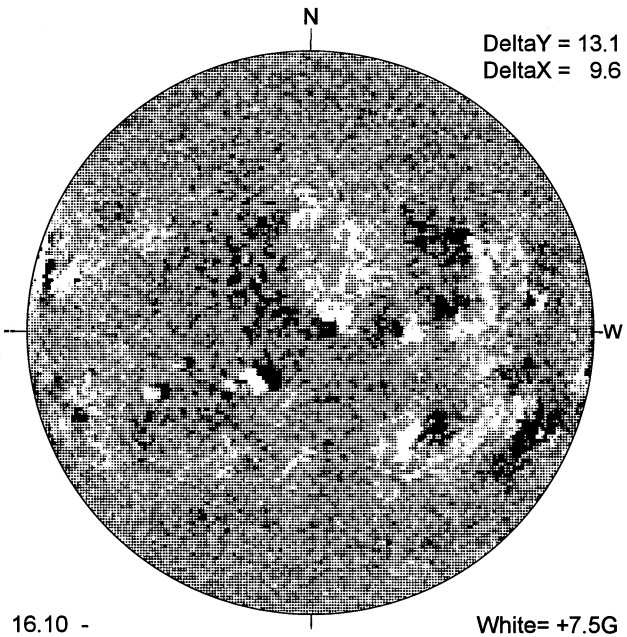
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

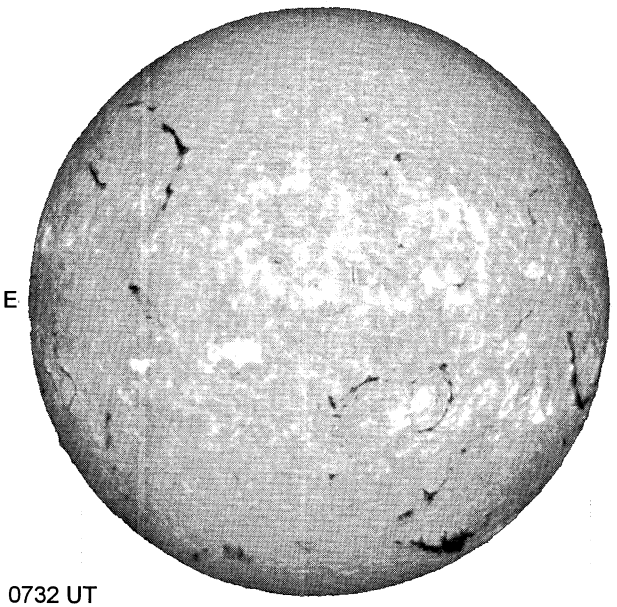
DeltaY = 13.1
DeltaX = 9.6



16.10 -
17.02 UT

White= +7.5G
Black = -7.5G

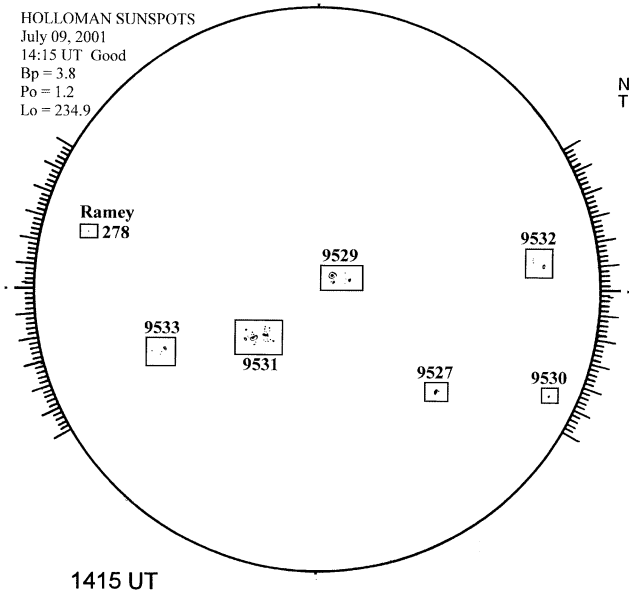
MEUDON H-ALPHA



0732 UT

S

HOLLOMAN SUNSPOT

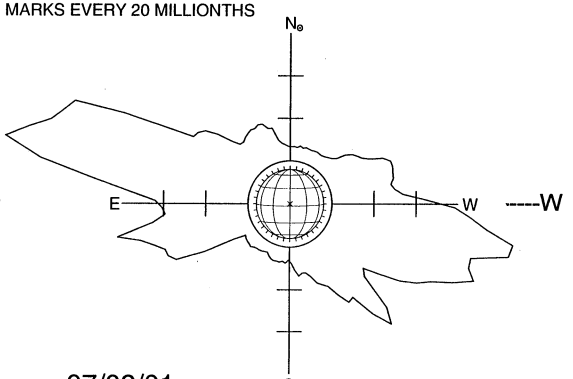


1415 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 20 MILLIONTHS



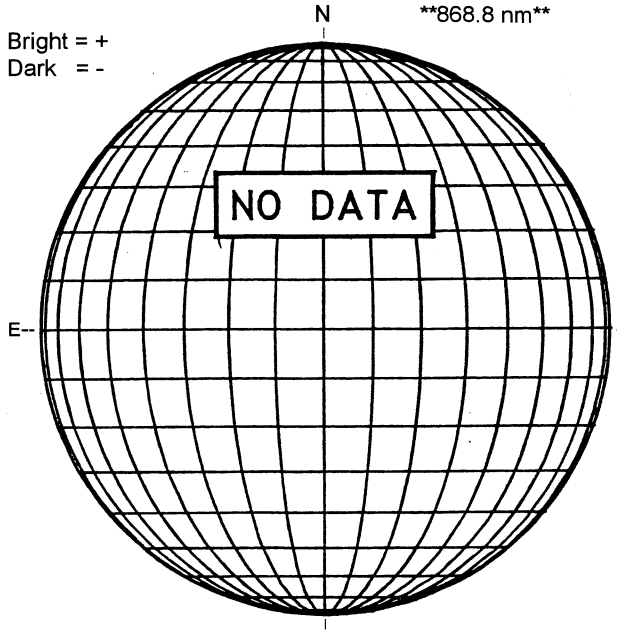
07/09/01
(DOY 190)

FE XIV 14:43 UT 1.15 $R_\odot$

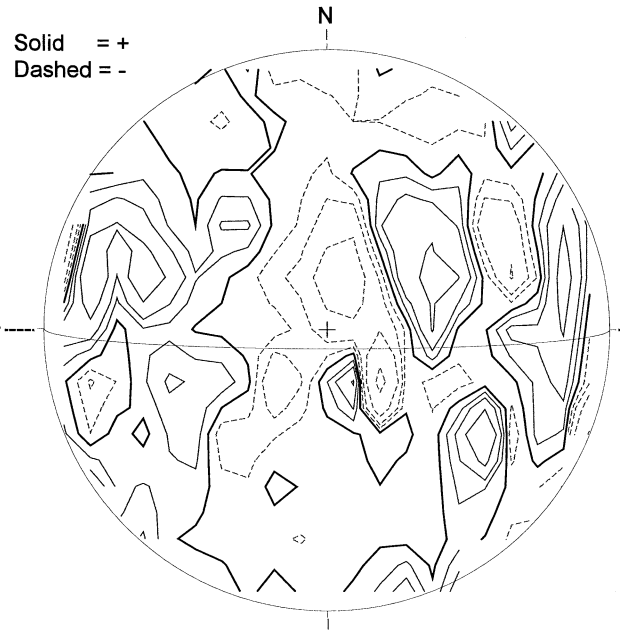
S

JULY 10, 2001 (P= 1.40, Bo = 3.84 Lo = 229.39)

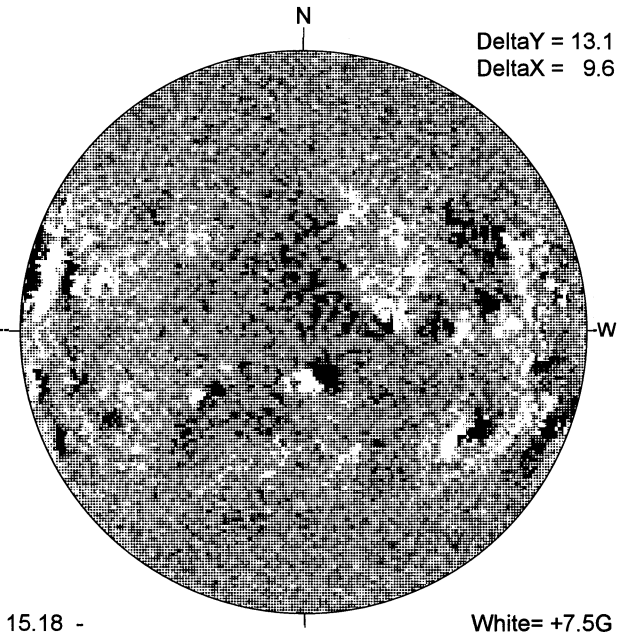
KITT PEAK MAGNETOGRAM



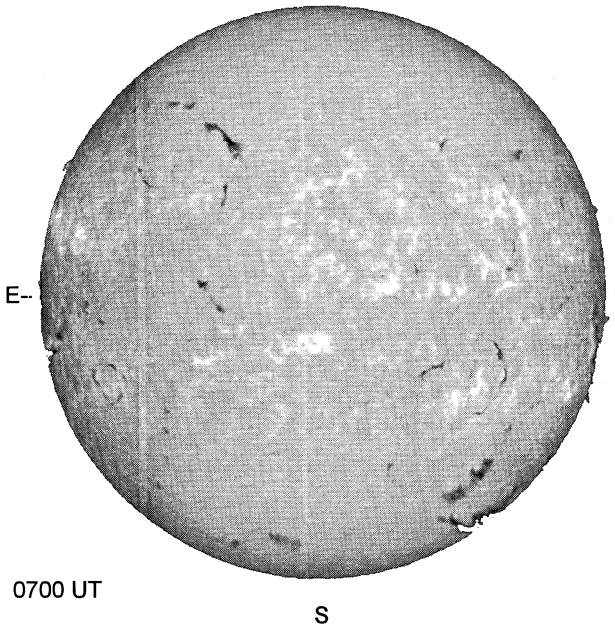
STANFORD MAGNETOGRAM



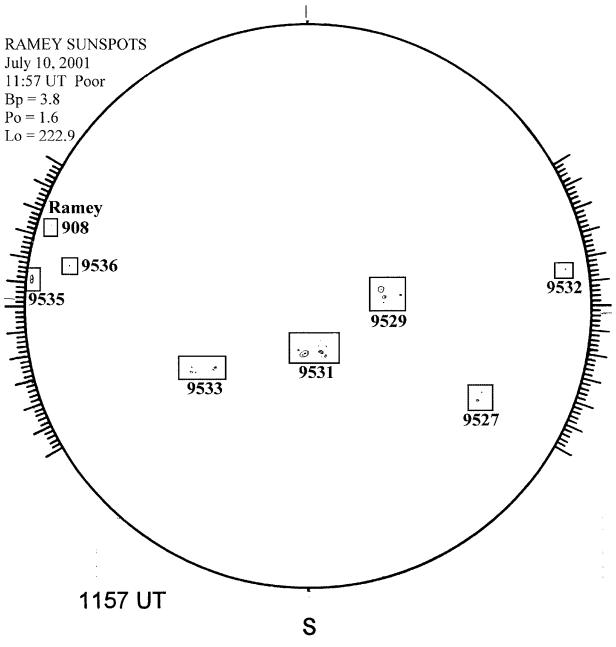
MT. WILSON MAGNETOGRAM



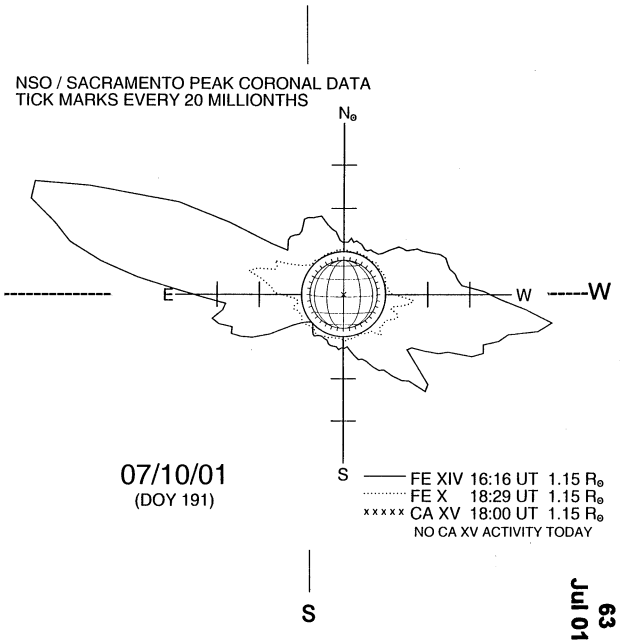
MEUDON H-ALPHA



RAMEY SUNSPOTS



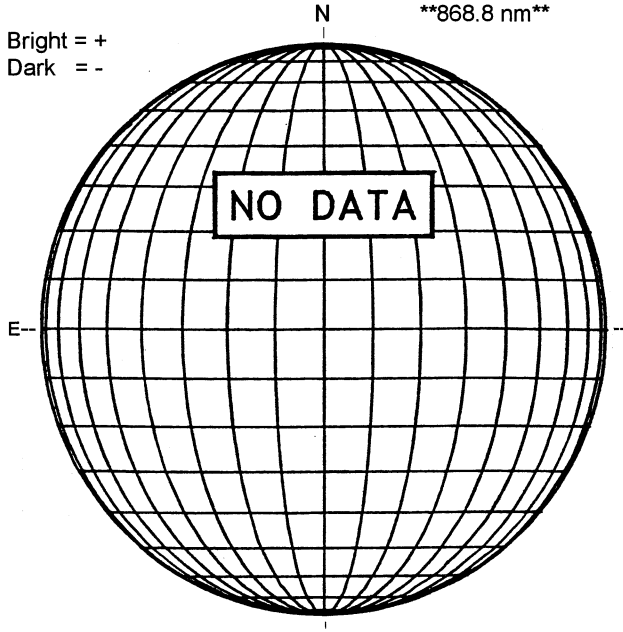
SACRAMENTO PEAK CORONA (1.15 Radii)----



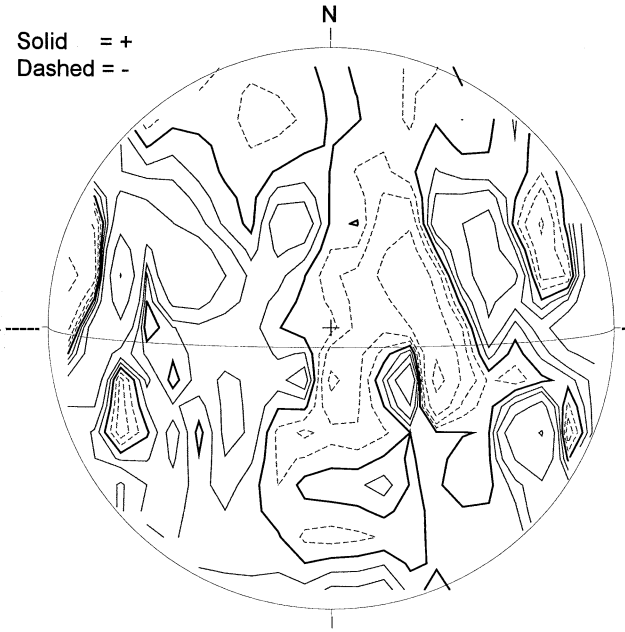
63
Jul 01

JULY 11, 2001 (P= 1.85, Bo = 3.94, Lo = 216.15)

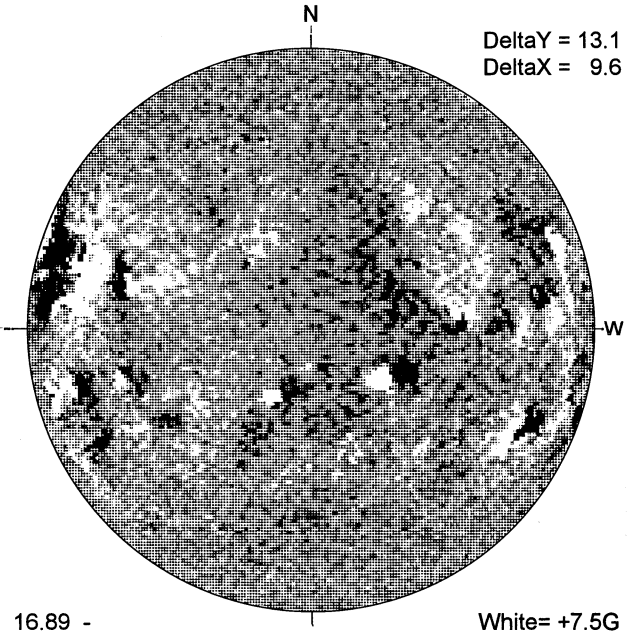
KITT PEAK MAGNETOGRAM



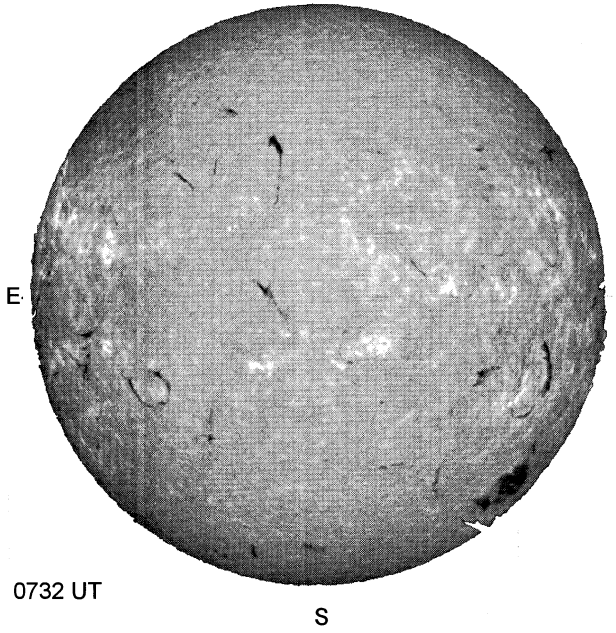
STANFORD MAGNETOGRAM



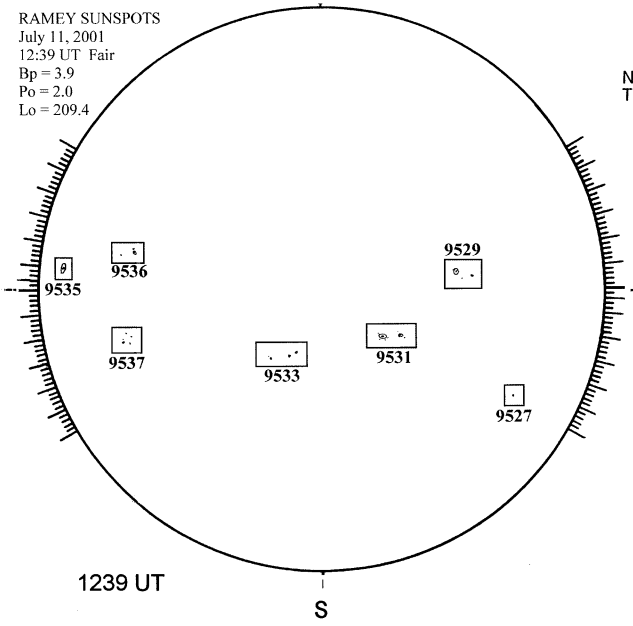
MT. WILSON MAGNETOGRAM



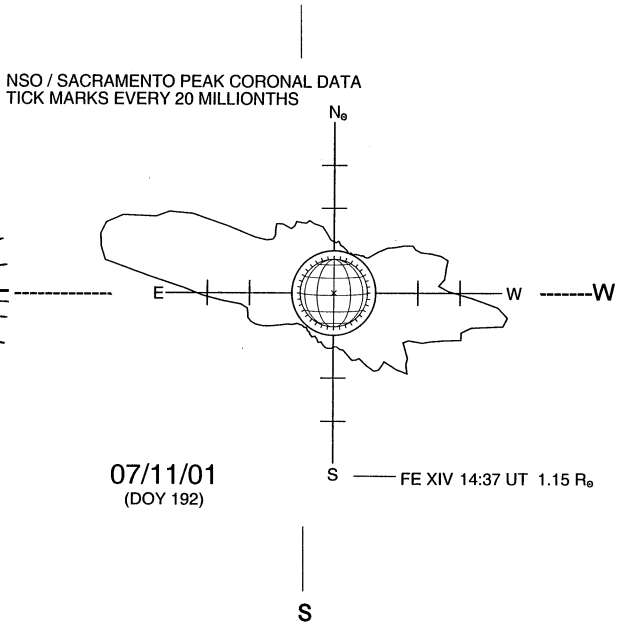
MEUDON H-ALPHA



RAMEY SUNSPOTS

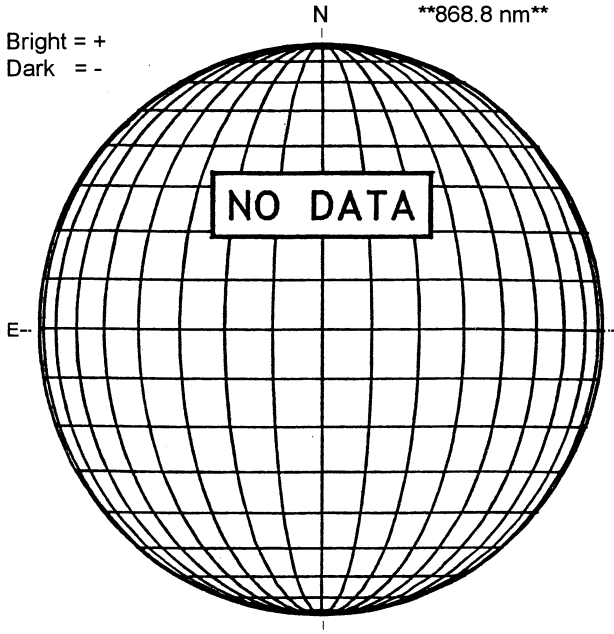


SACRAMENTO PEAK CORONA (1.15 Radii)

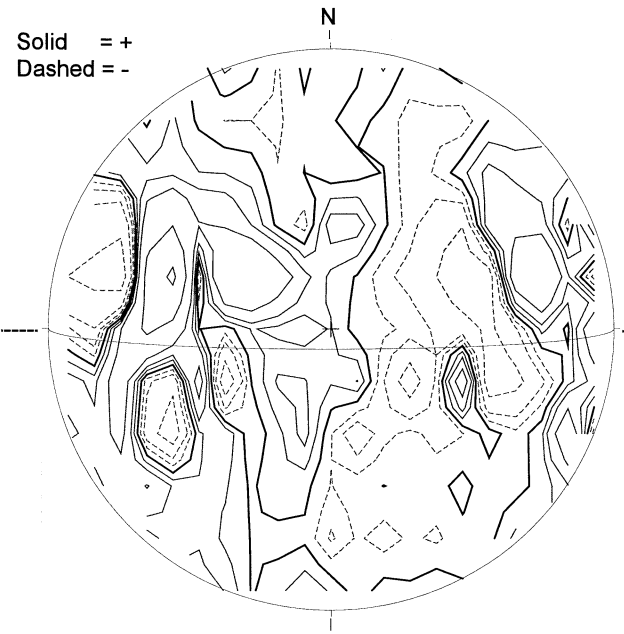


JULY 12, 2001 (P= 2.30, Bo = 4.04, Lo = 202.92)

KITT PEAK MAGNETOGRAM

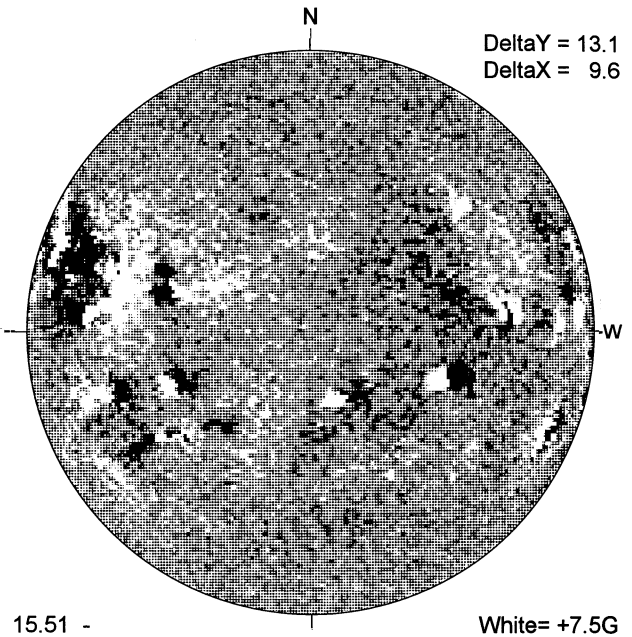


STANFORD MAGNETOGRAM



2146 UT

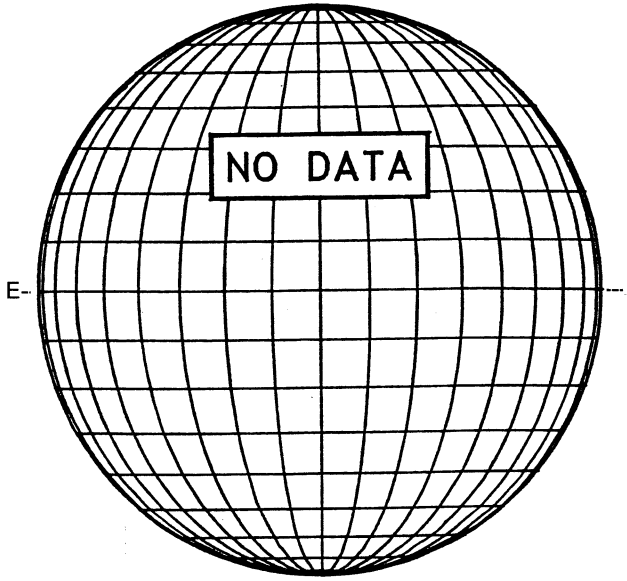
MT. WILSON MAGNETOGRAM



15.51 -
16.43 UT

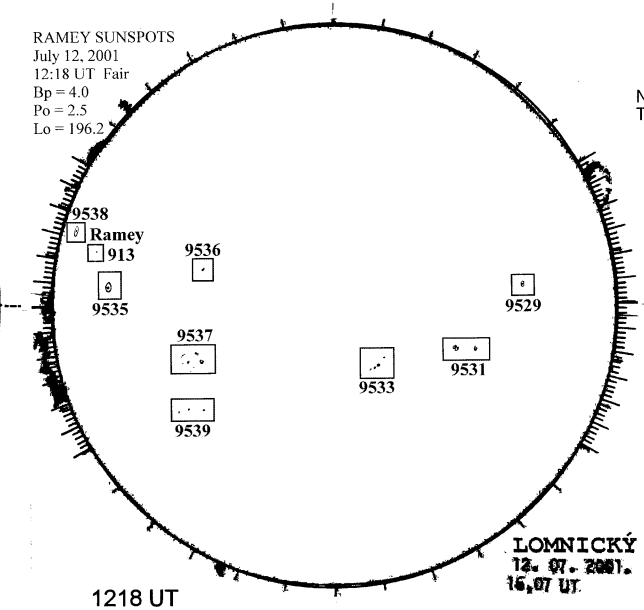
White= +7.5G
Black = -7.5G

---- MEUDON H-ALPHA



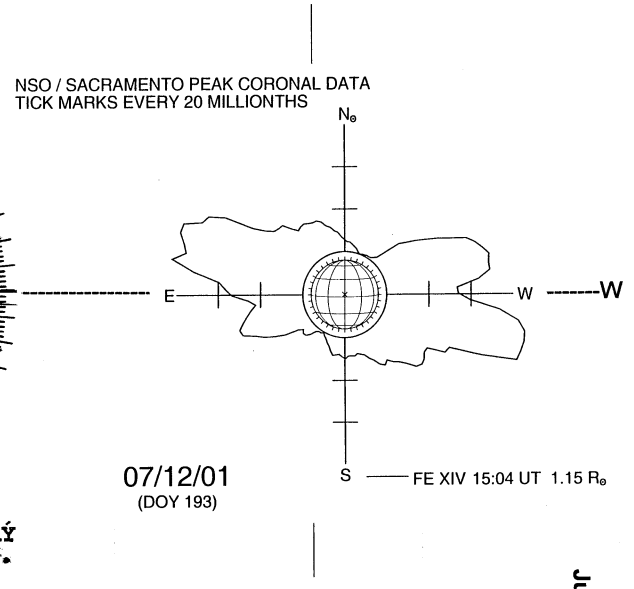
S

RAMEY SUNSPOTS



1218 UT
1607 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----

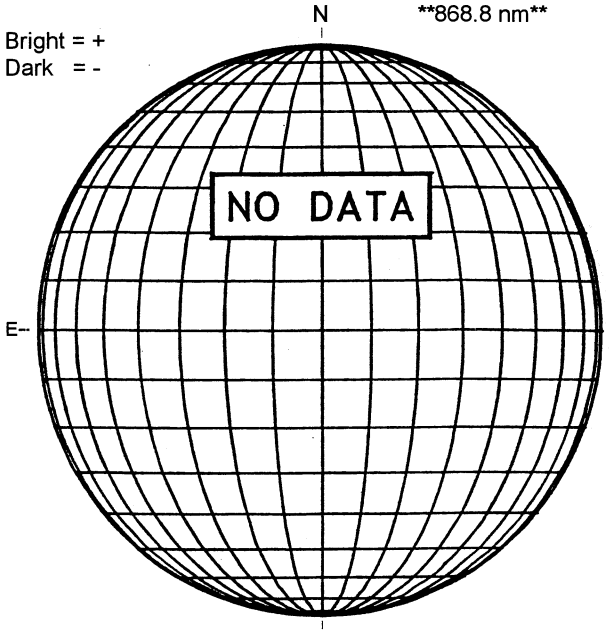


07/12/01
(DOY 193)

S

JULY 13, 2001 (P= 2.75, Bo = 4.14, Lo = 189.69)

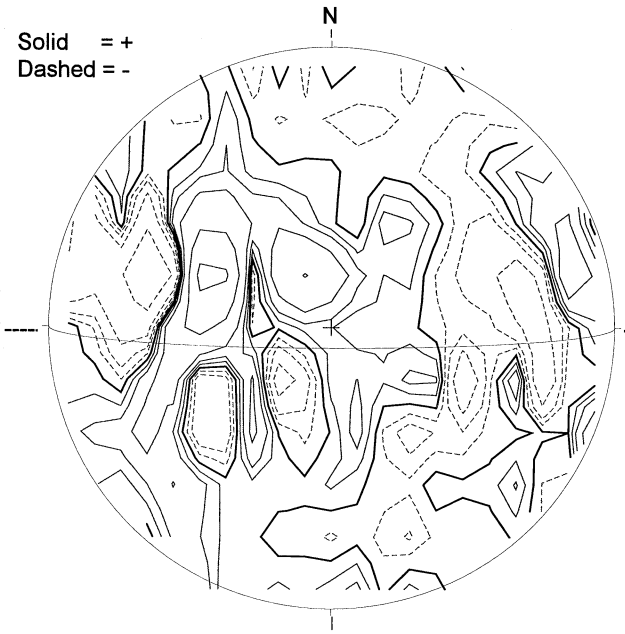
KITT PEAK MAGNETOGRAM



0834 UT

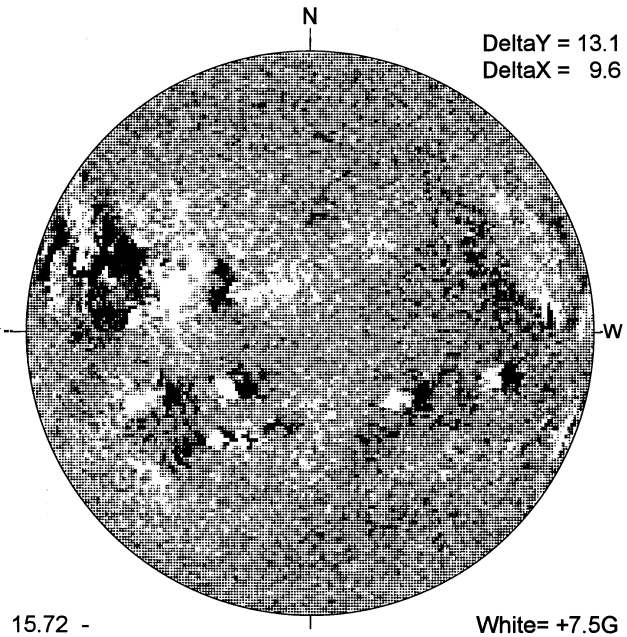
S

STANFORD MAGNETOGRAM



2012 UT

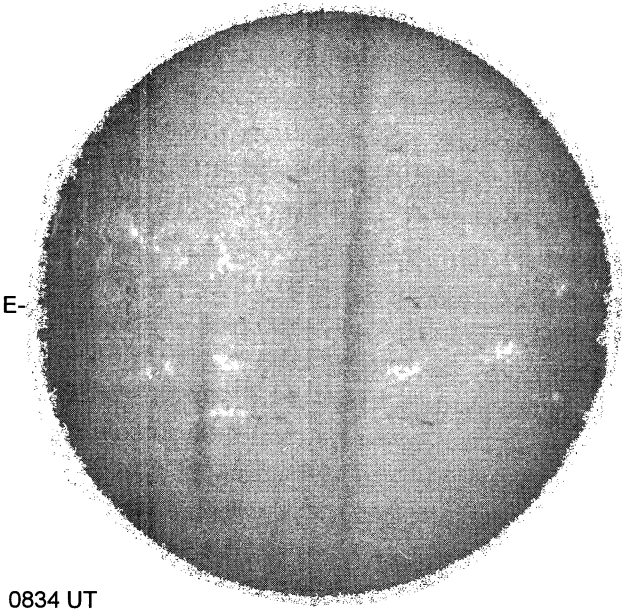
MT. WILSON MAGNETOGRAM



15.72 -
16.64 UT

White= +7.5G
Black = -7.5G

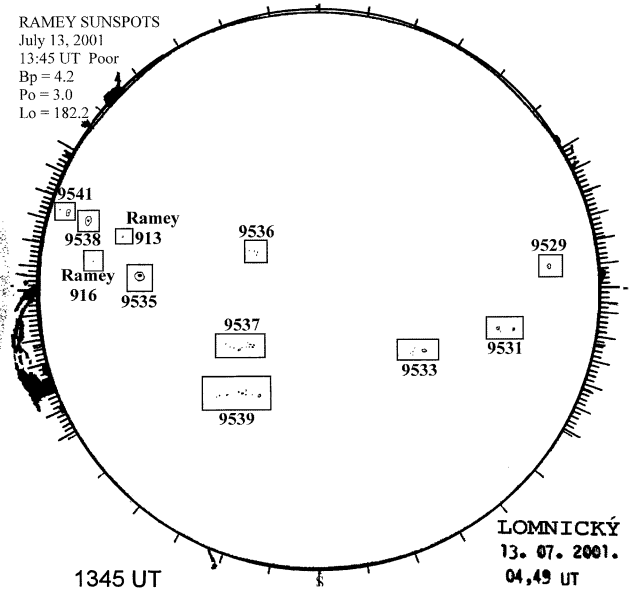
MEUDON H-ALPHA



0834 UT

S

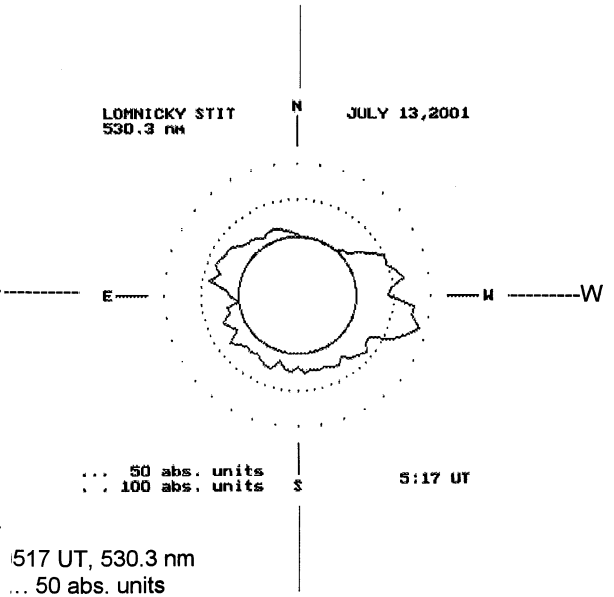
RAMEY SUNSPOT



1345 UT

0449 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



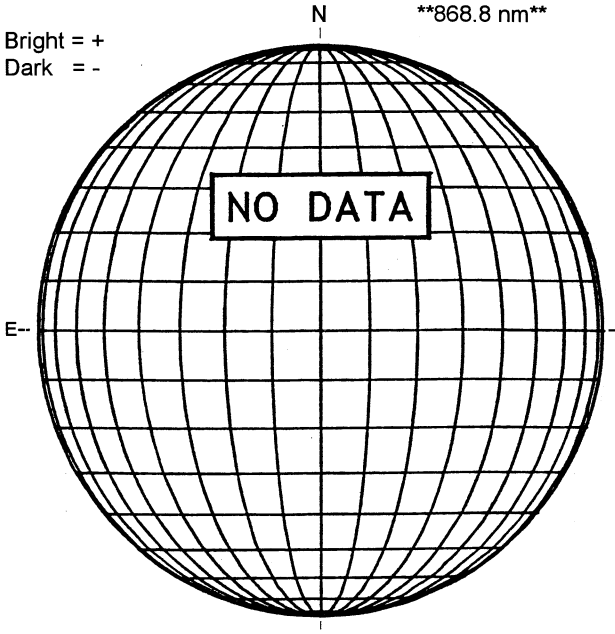
LOMNICKÝ
13. 07. 2001.
04,49 UT

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

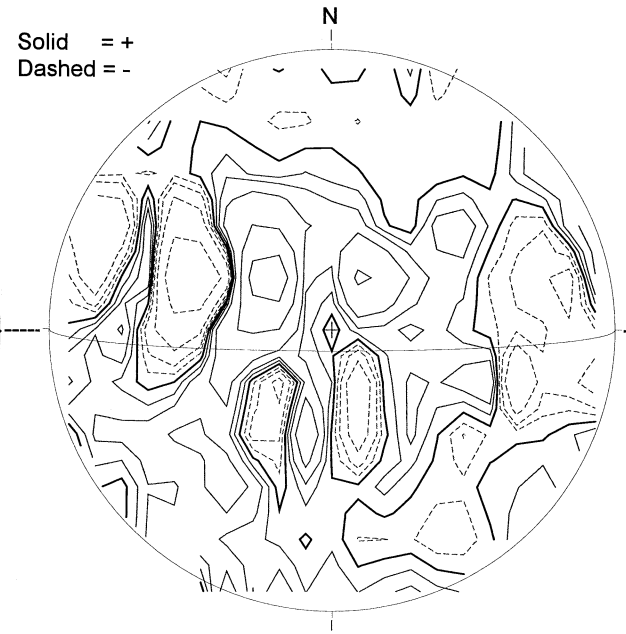
S

JULY 14, 2001 (P= 3.19, Bo = 4.24, Lo = 176.45)

KITT PEAK MAGNETOGRAM

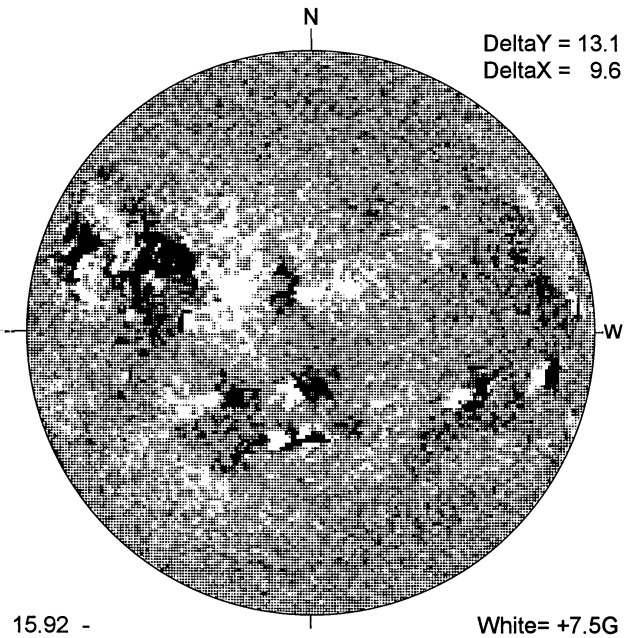


STANFORD MAGNETOGRAM



1925 UT

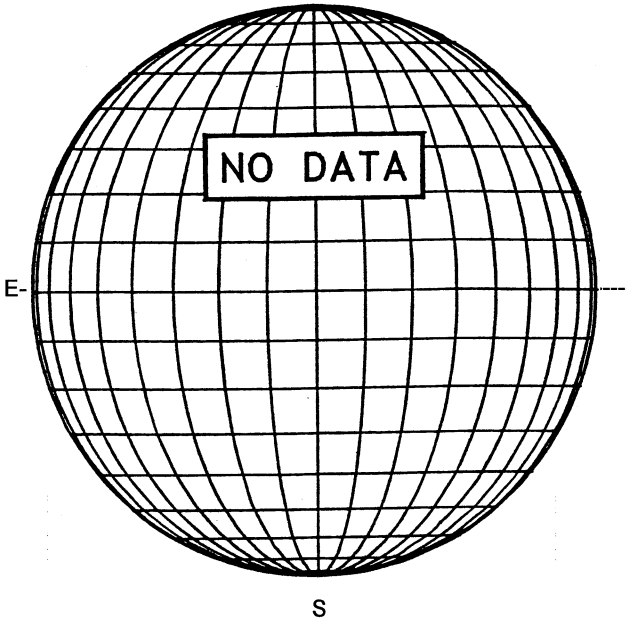
MT. WILSON MAGNETOGRAM



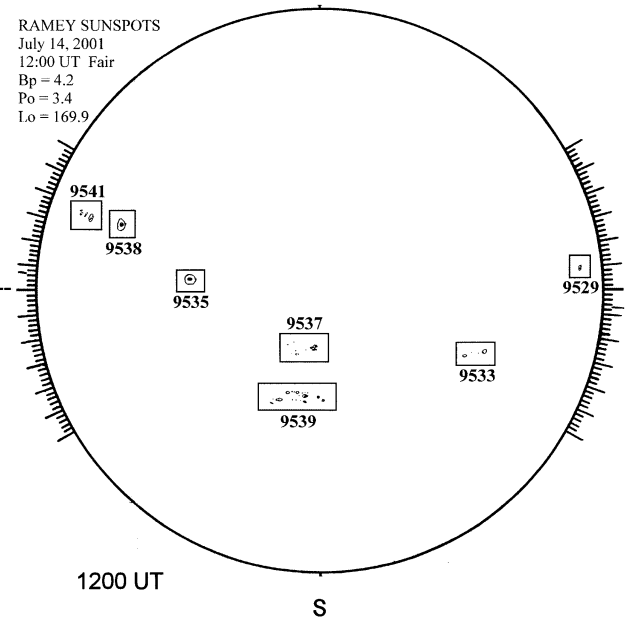
15.92 -
16.84 UT

White= +7.5G
Black = -7.5G

----- MEUDON H-ALPHA

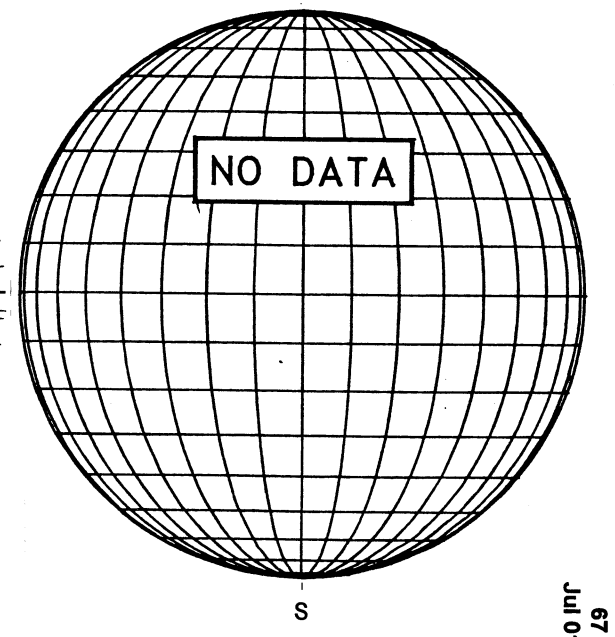


RAMEY SUNSPOT



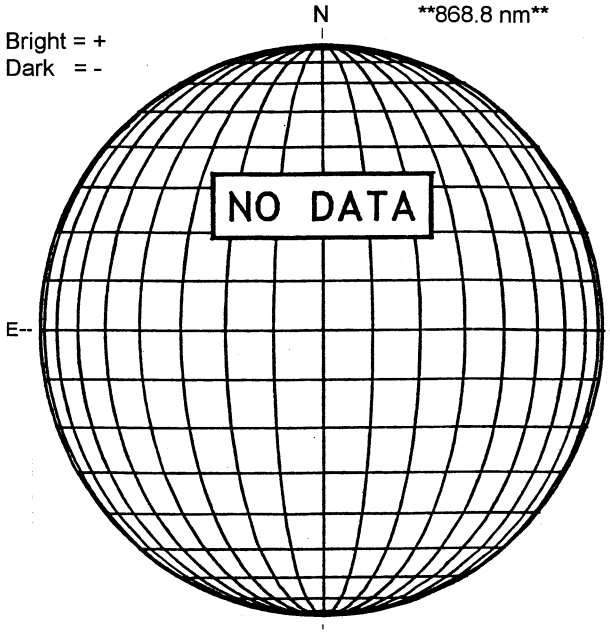
1200 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

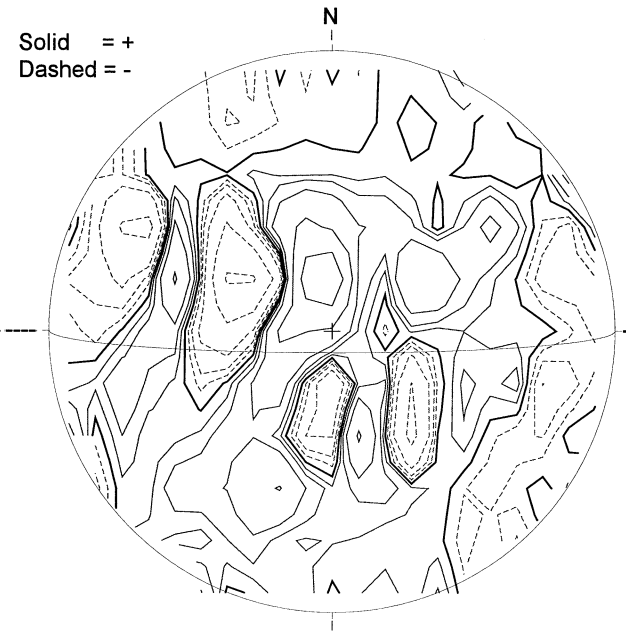


JULY 15, 2001 (P= 3.64, Bo = 4.34, Lo = 163.22)

KITT PEAK MAGNETOGRAM

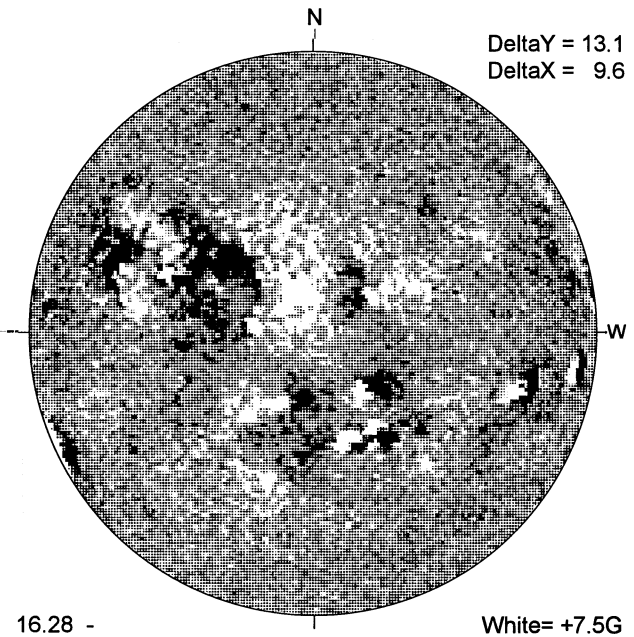


STANFORD MAGNETOGRAM



1635 UT

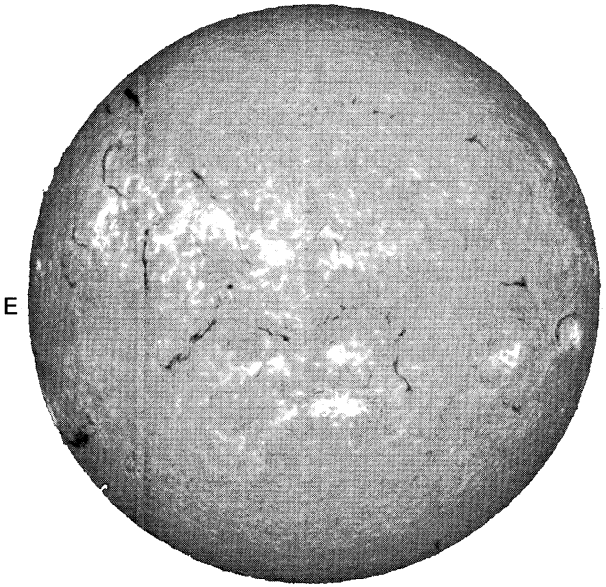
MT. WILSON MAGNETOGRAM



16.28 -
17.20 UT

White= +7.5G
Black = -7.5G

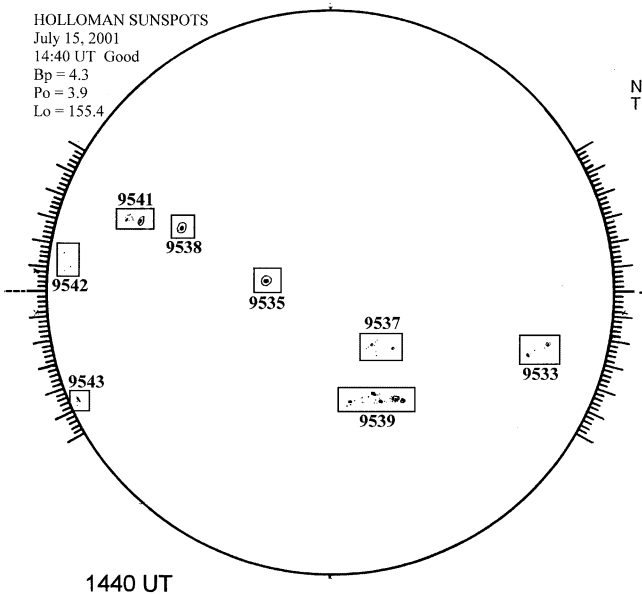
MEUDON H-ALPHA



0715 UT

S

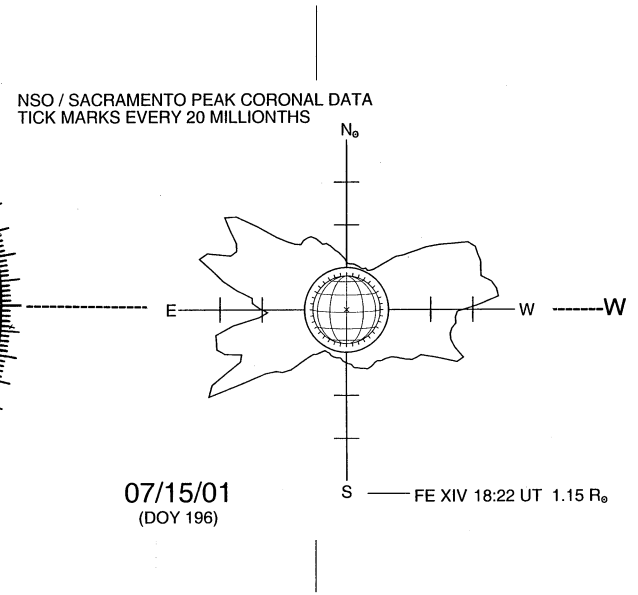
HOLLOMAN SUNSPOT



1440 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----

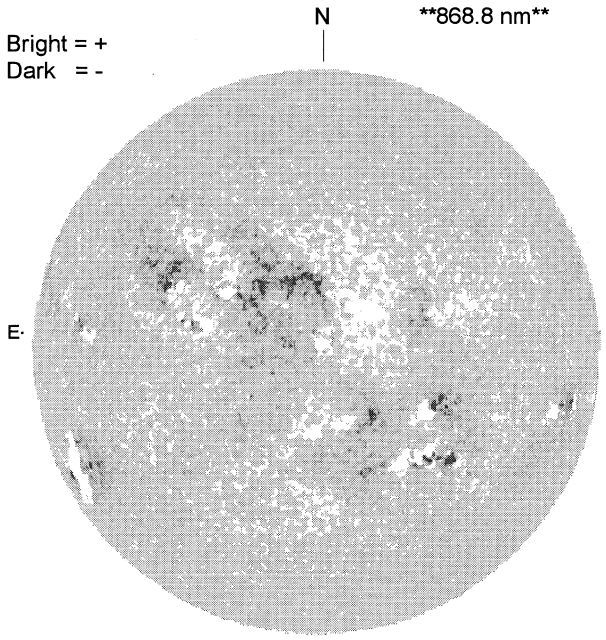


07/15/01
(DOY 196)

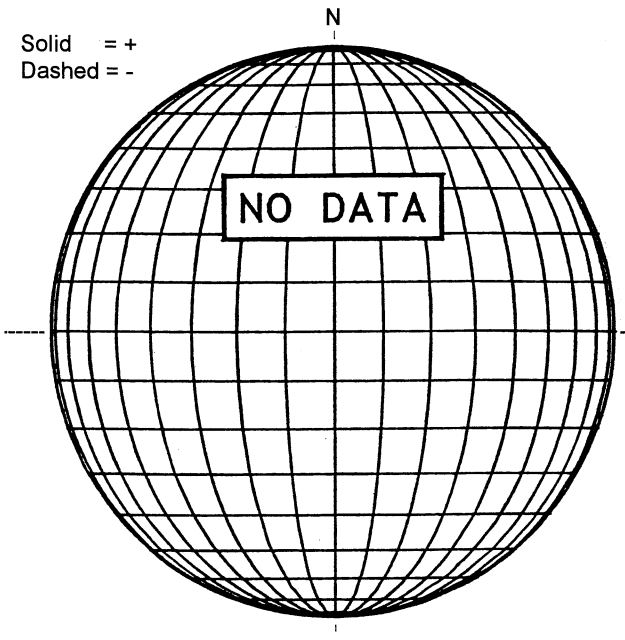
S

JULY 16, 2001 (P= 4.08, Bo = 4.43, Lo = 149.99)

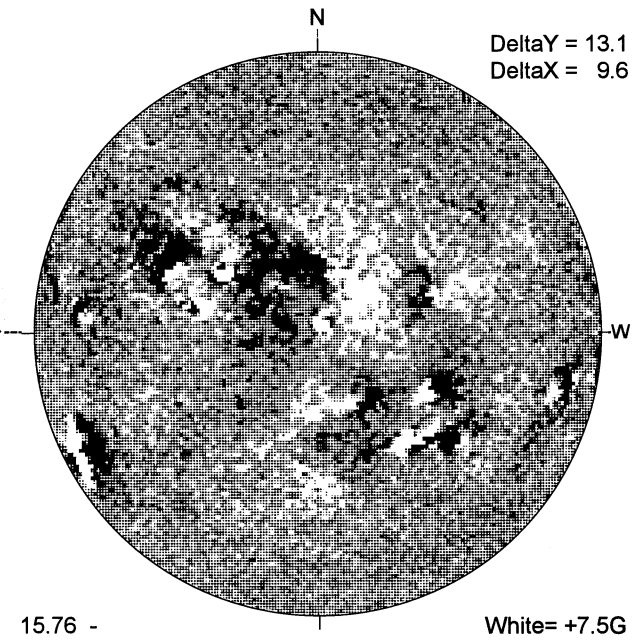
KITT PEAK MAGNETOGRAM



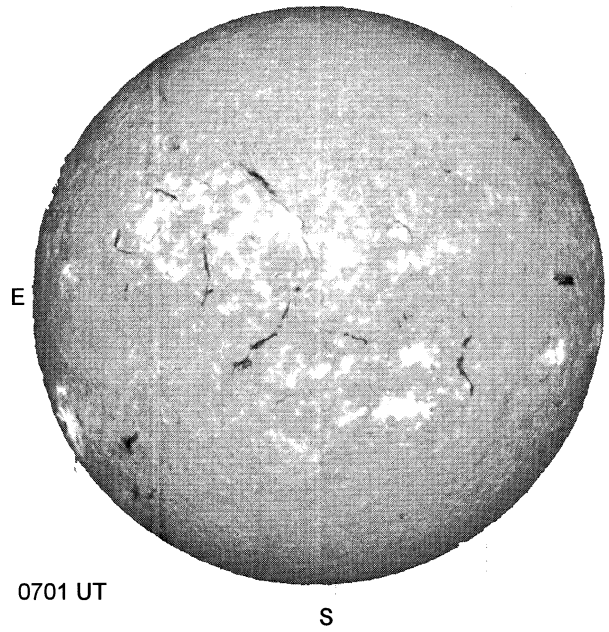
STANFORD MAGNETOGRAM



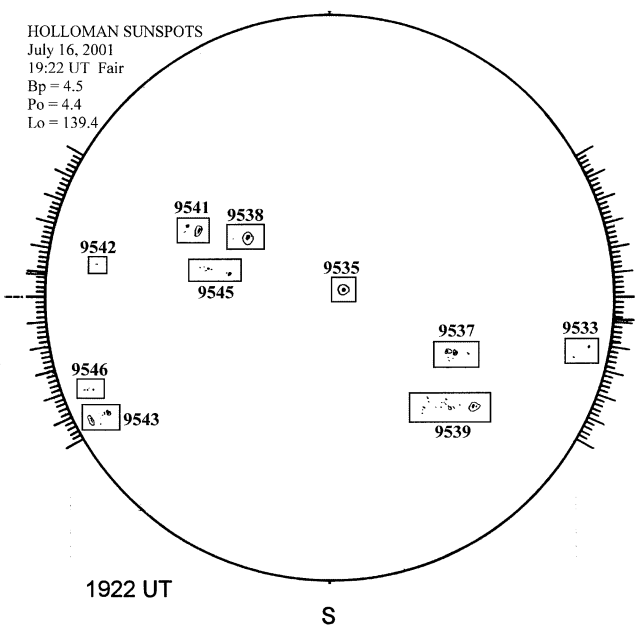
MT. WILSON MAGNETOGRAM



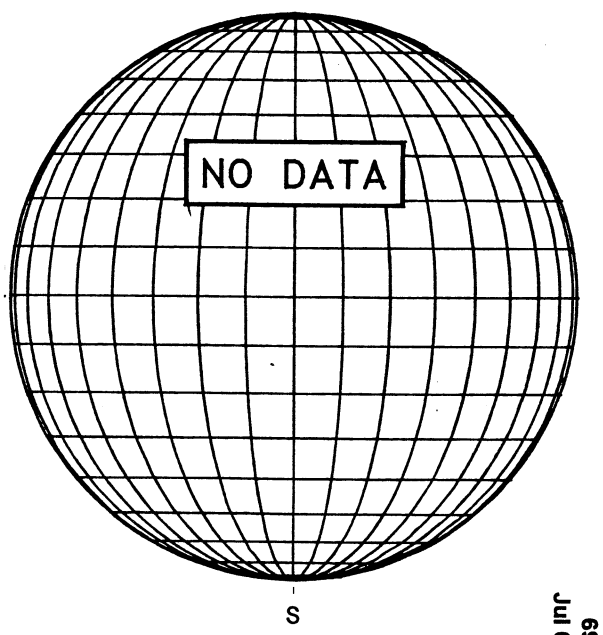
MEUDON H-ALPHA



HOLLOMAN SUNSPOT



LOMNICKY PEAK CORONA (1.04 Radii)----



JULY 17, 2001 (P= 4.52, Bo = 4.53, Lo = 136.76)

Jul 01

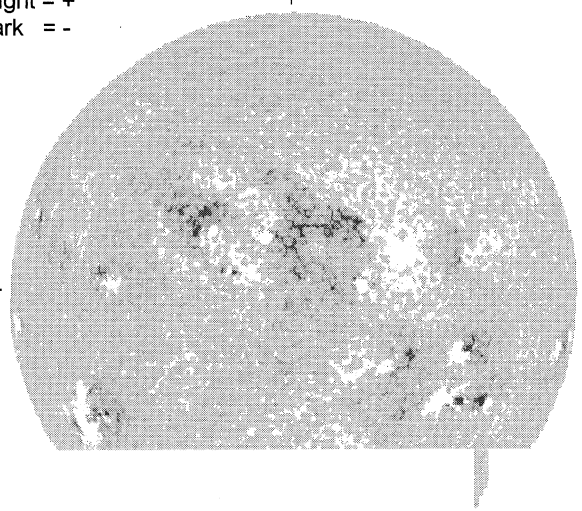
KITT PEAK MAGNETOGRAM

N

868.8 nm

Bright = +
Dark = -

E--

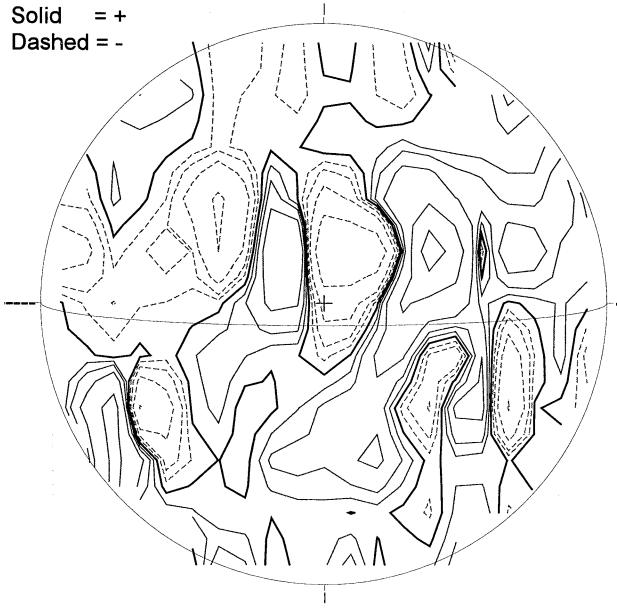


1606 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

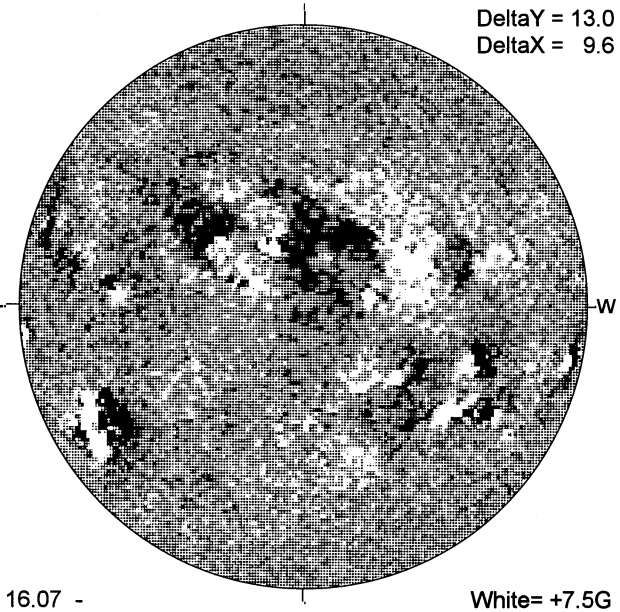


1755 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.0
DeltaX = 9.6



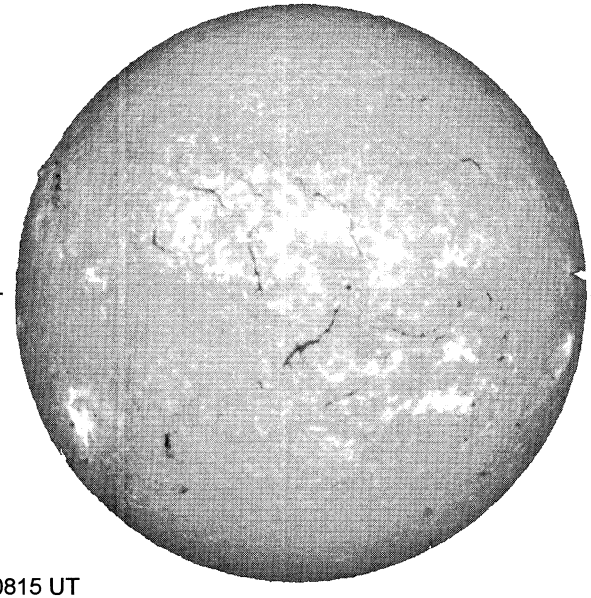
W

16.07 -
16.99 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

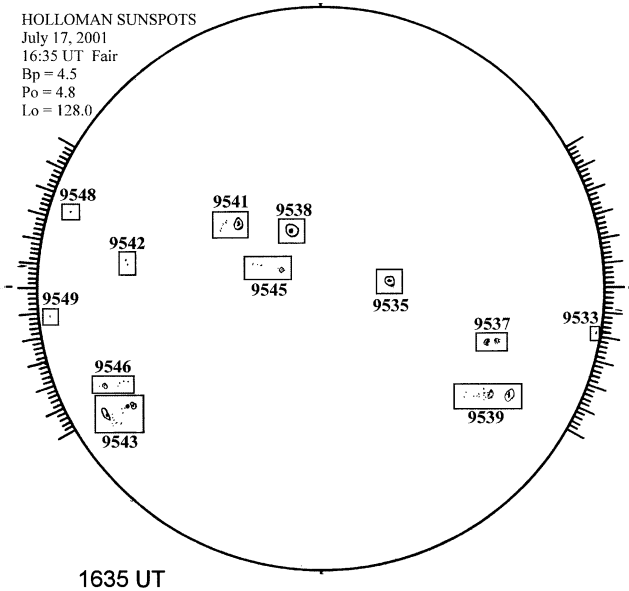
E-



0815 UT

S

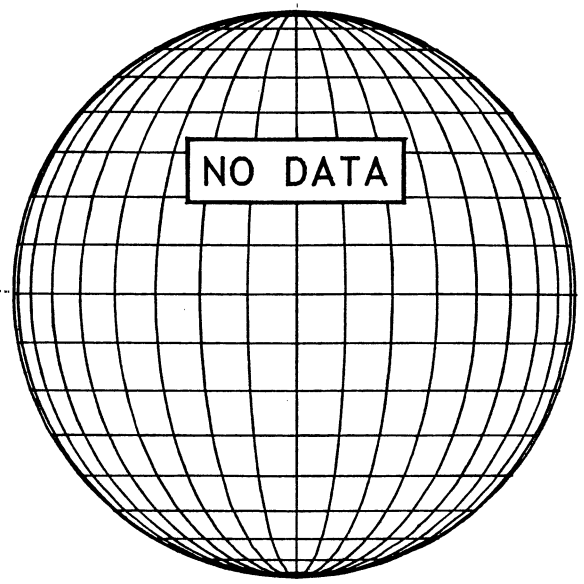
HOLLOMAN SUNSPOT



1635 UT

S

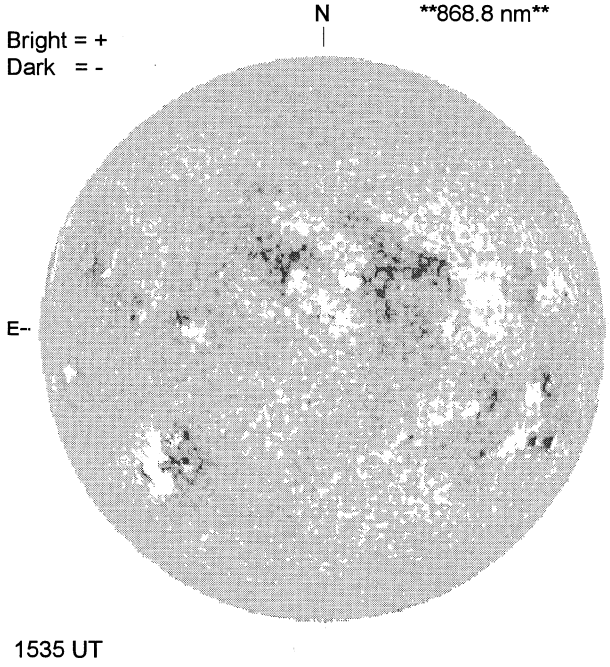
SACRAMENTO PEAK CORONA (1.15 Radii)----



S

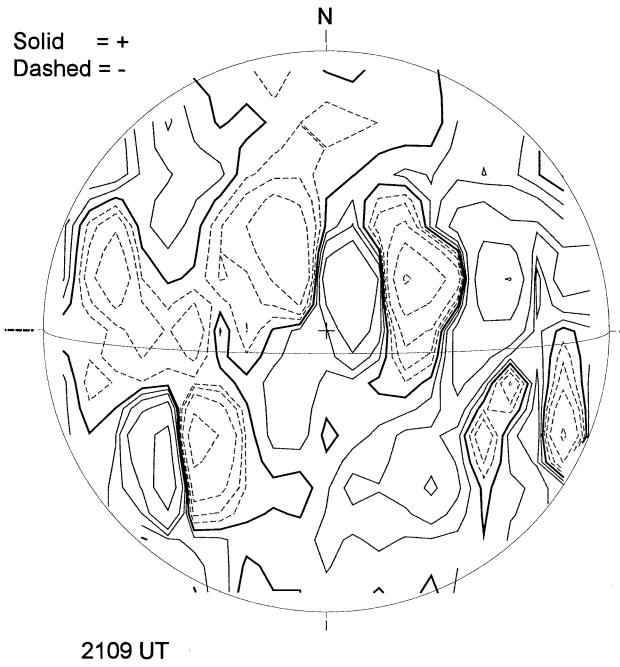
JULY 18, 2001 (P= 4.96, Bo = 4.62, Lo = 123.52)

KITT PEAK MAGNETOGRAM



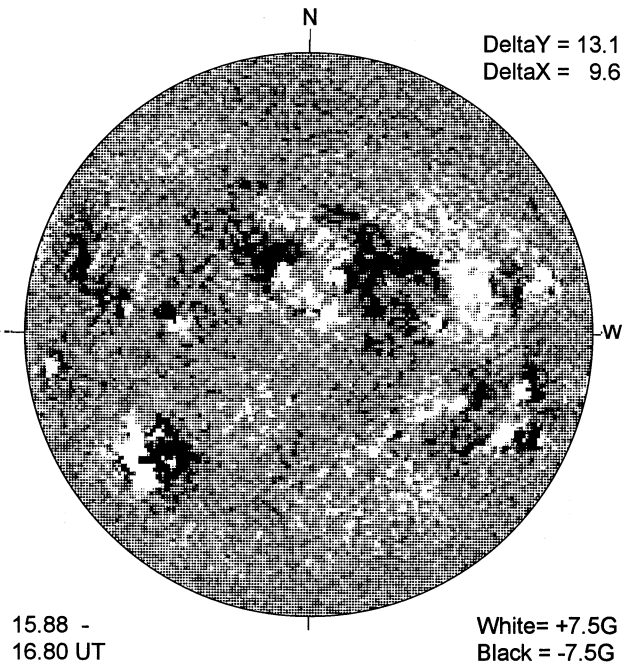
1535 UT

STANFORD MAGNETOGRAM



2109 UT

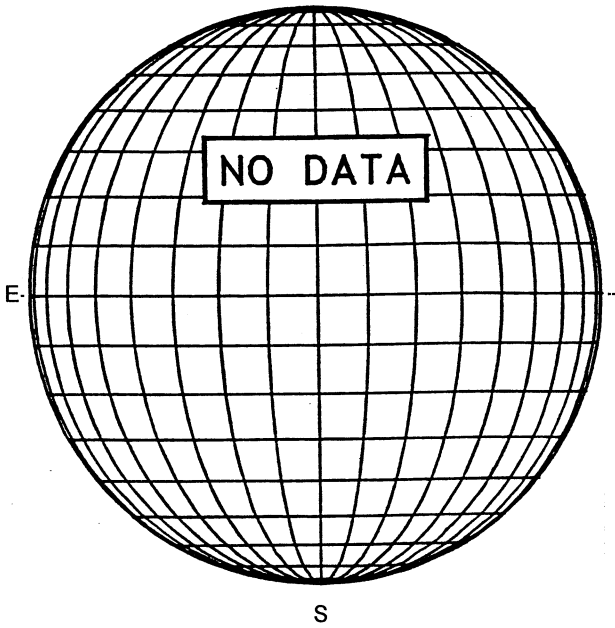
MT. WILSON MAGNETOGRAM



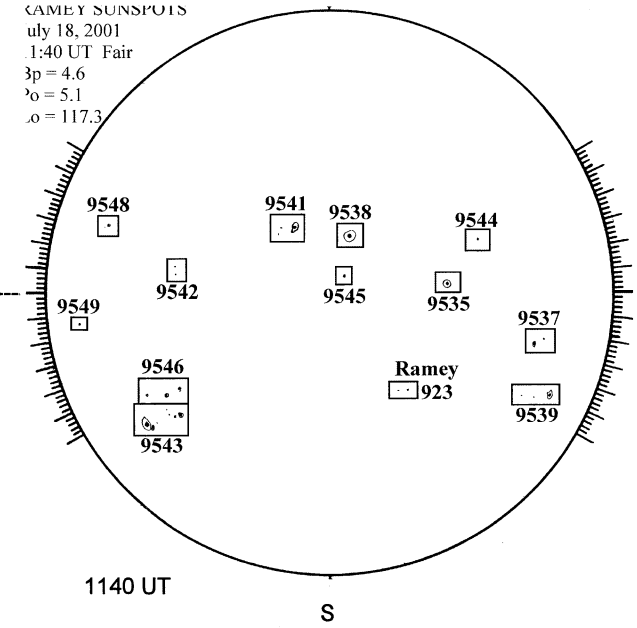
15.88 -
16.80 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

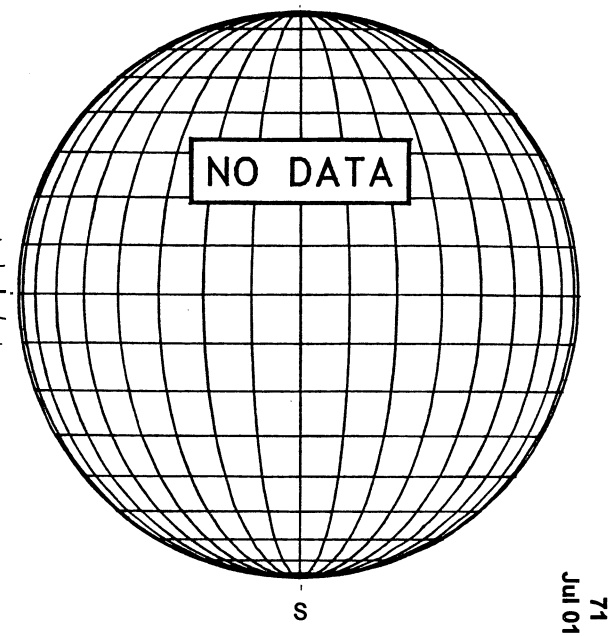


RAMEY SUNSPOT



1140 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



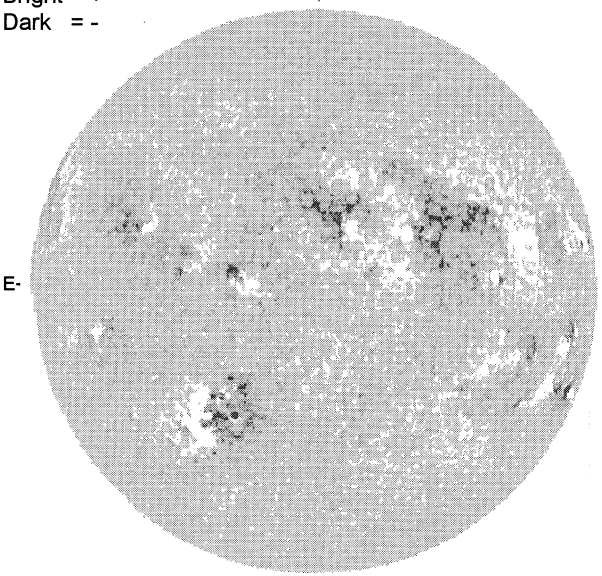
71
Jul 01

JULY 19, 2001 (P= 5.40, Bo = 4.72, Lo = 110.29)

KITT PEAK MAGNETOGRAM

N **868.8 nm**

Bright = +
Dark = -



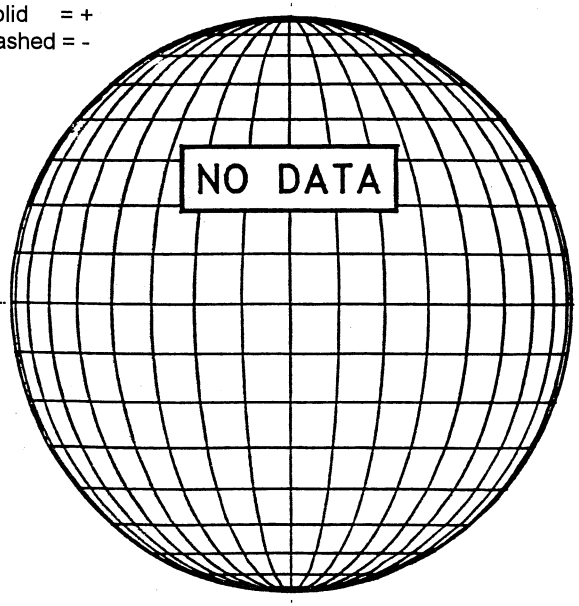
E-

1622 UT

STANFORD MAGNETOGRAM

N

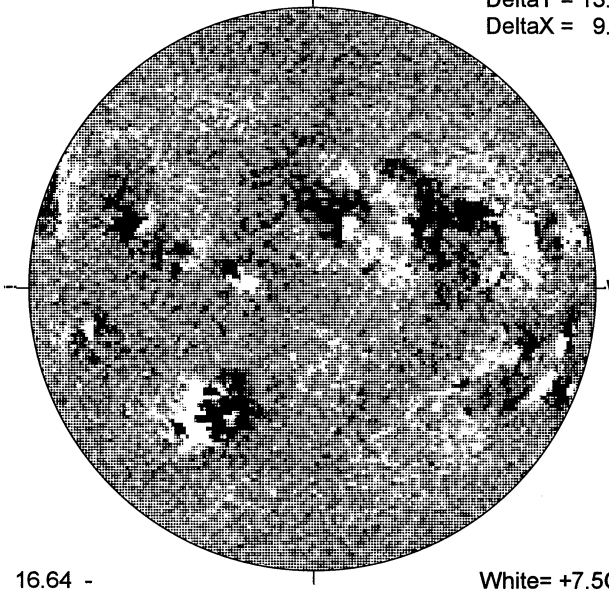
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

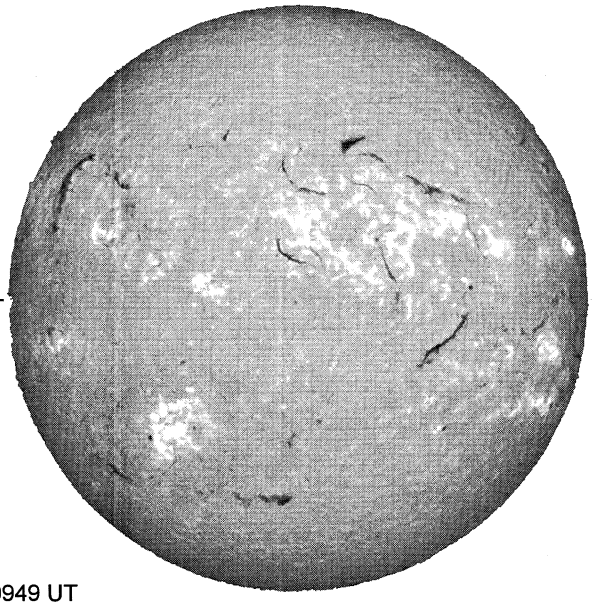


W

16.64 -
17.56 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

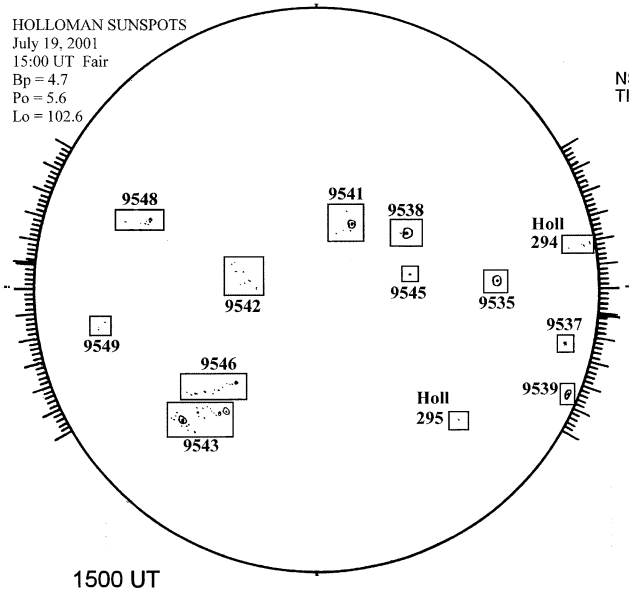


E-

0949 UT

S

HOLLOMAN SUNSPOT

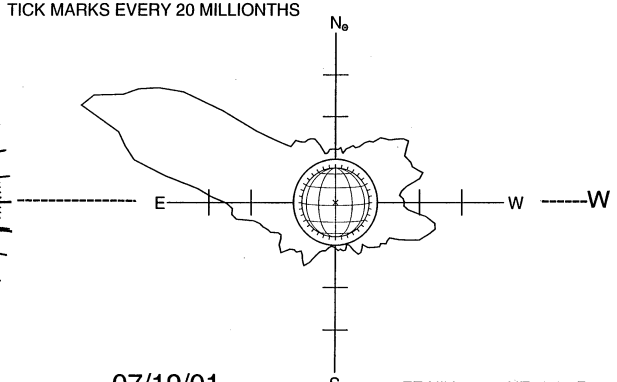


1500 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 20 MILLIONTHS



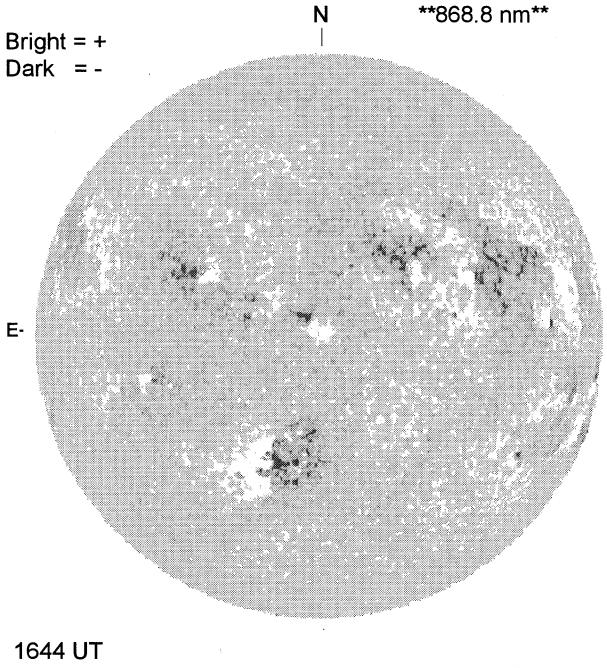
07/19/01
(DOY 200)

FE XIV 14:57 UT 1.15 $R_\odot$

S

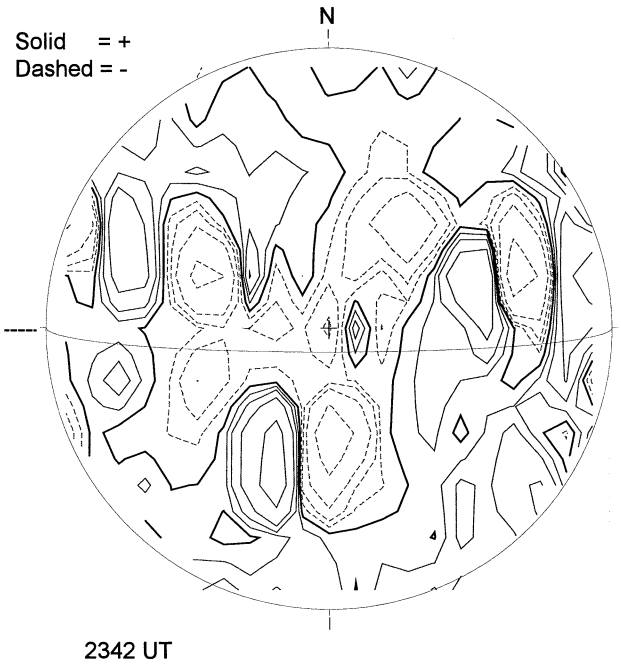
JULY 20, 2001 (P= 5.83, Bo = 4.81, Lo = 97.06)

KITT PEAK MAGNETOGRAM



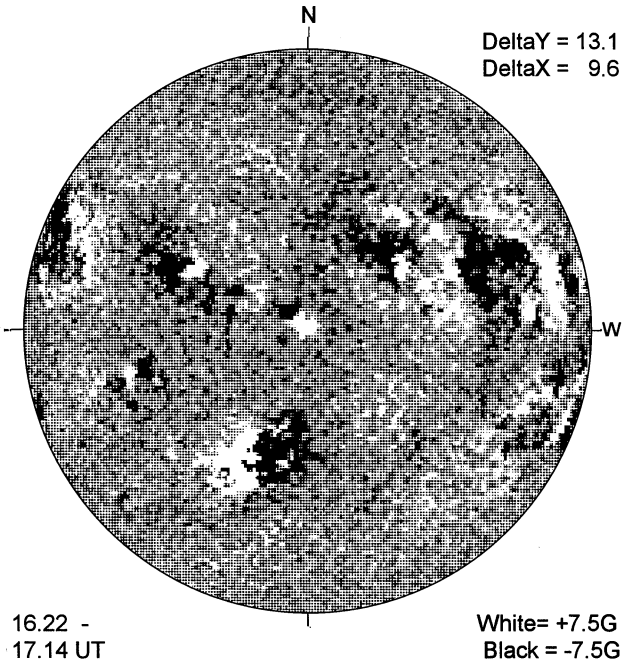
1644 UT

STANFORD MAGNETOGRAM



2342 UT

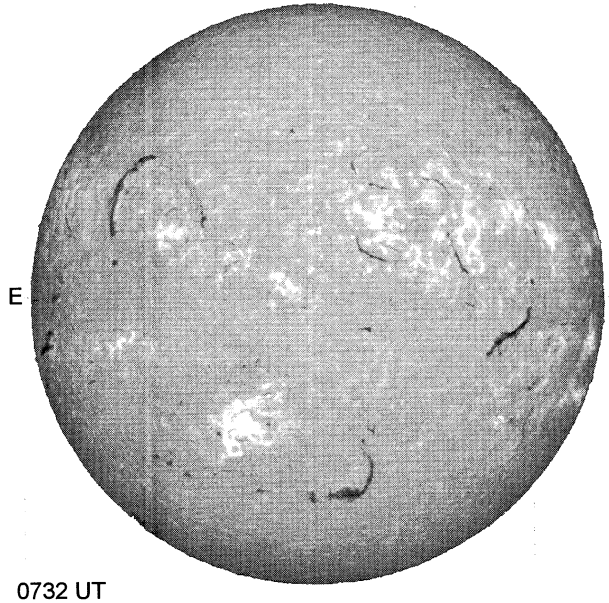
MT. WILSON MAGNETOGRAM



16.22 -
17.14 UT

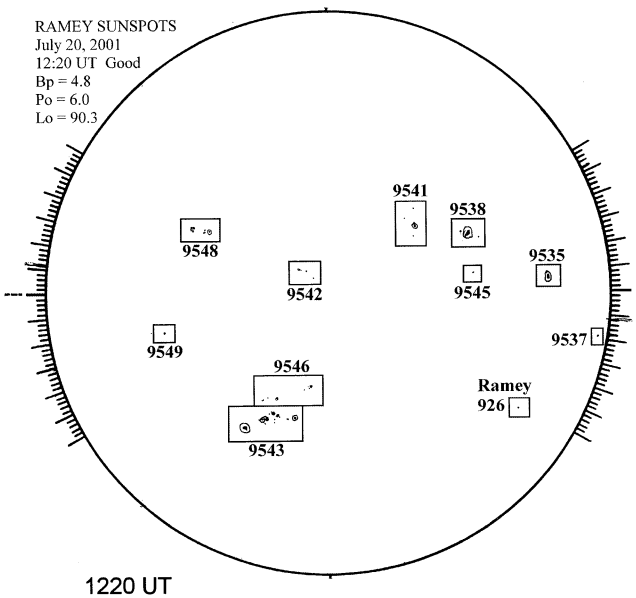
White= +7.5G
Black = -7.5G

---- MEUDON H-ALPHA



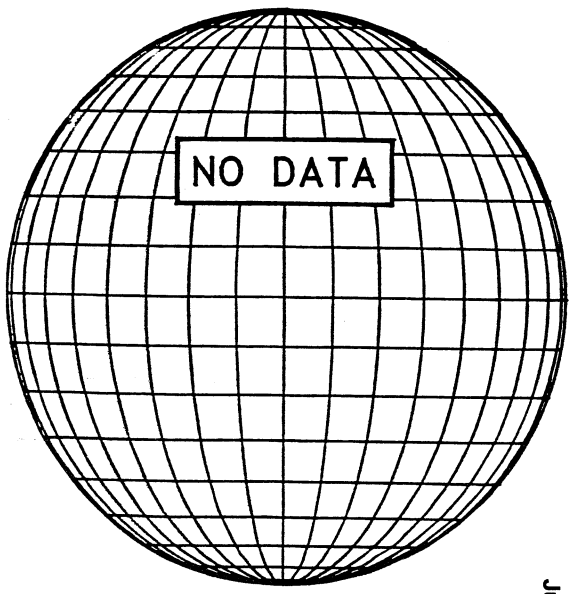
0732 UT

RAMEY SUNSPOT



1220 UT

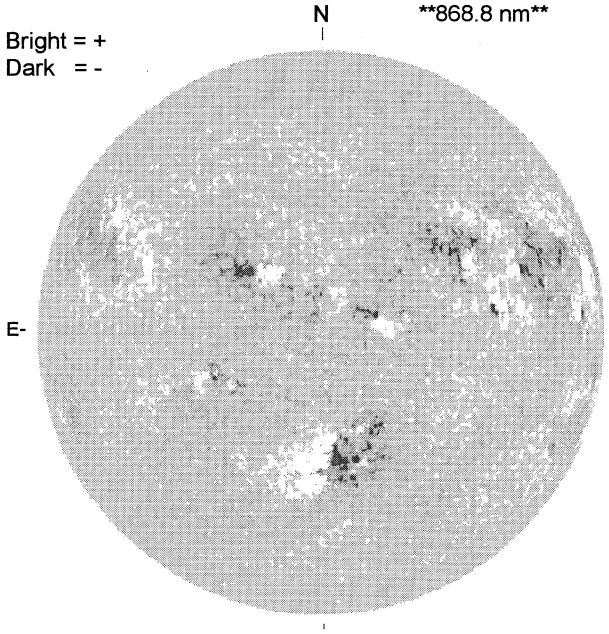
SACRAMENTO PEAK CORONA (1.15 Radii)----



73
Jul 01

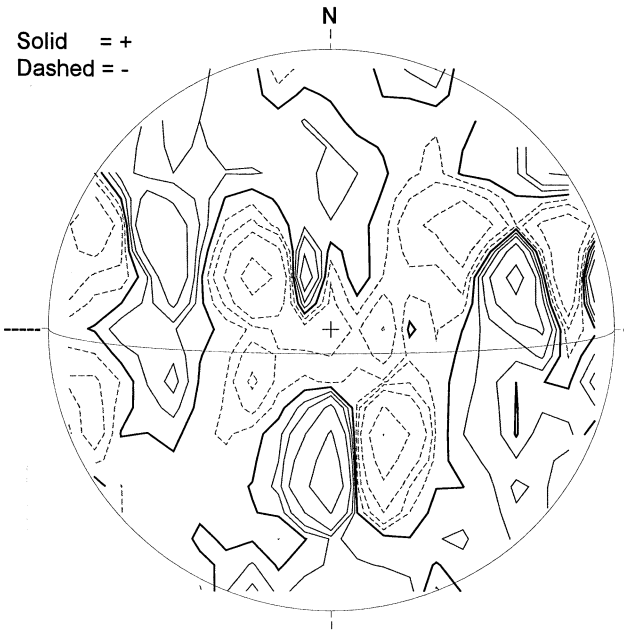
JULY 21, 2001 (P= 6.26, Bo = 4.90, Lo = 83.83)

KITT PEAK MAGNETOGRAM



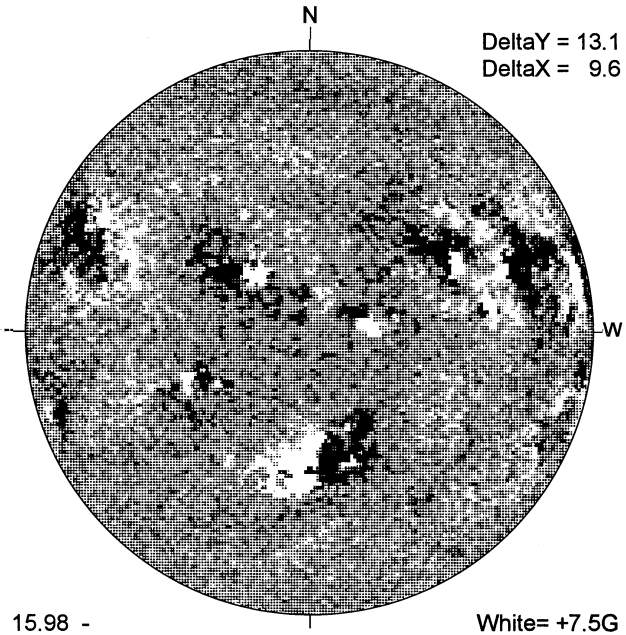
1559 UT

STANFORD MAGNETOGRAM



2156 UT

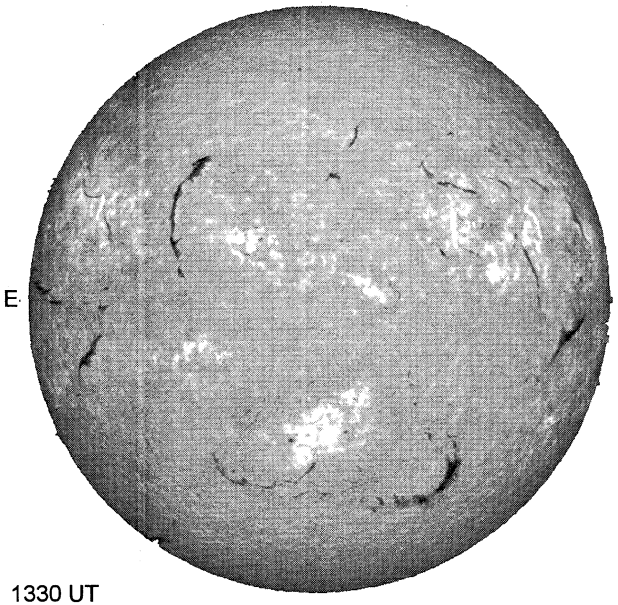
MT. WILSON MAGNETOGRAM



15.98 -
16.90 UT

White= +7.5G
Black = -7.5G

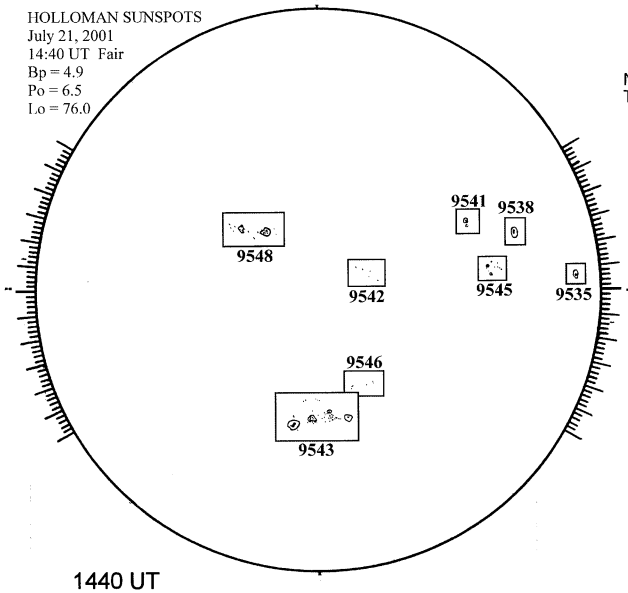
MEUDON H-ALPHA



1330 UT

S

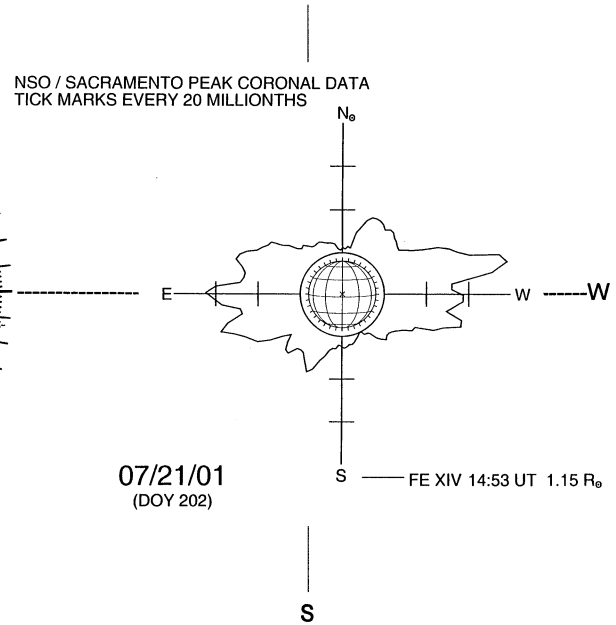
HOLLOMAN SUNSPOT



1440 UT

S

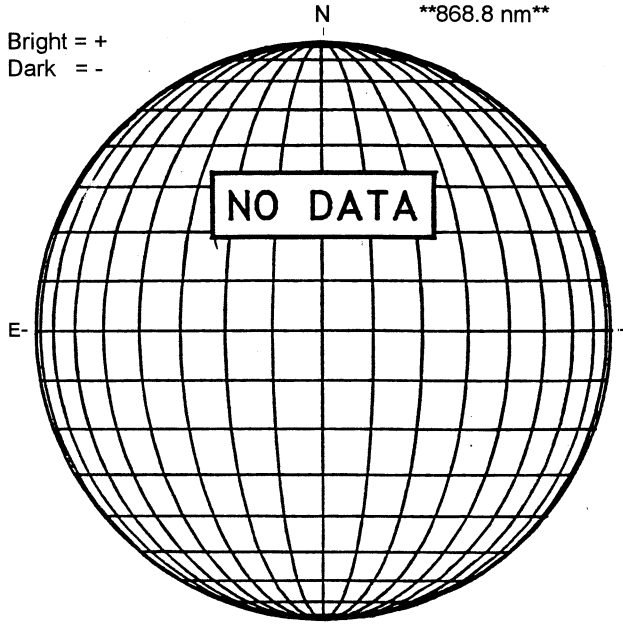
SACRAMENTO PEAK CORONA (1.15 Radii)



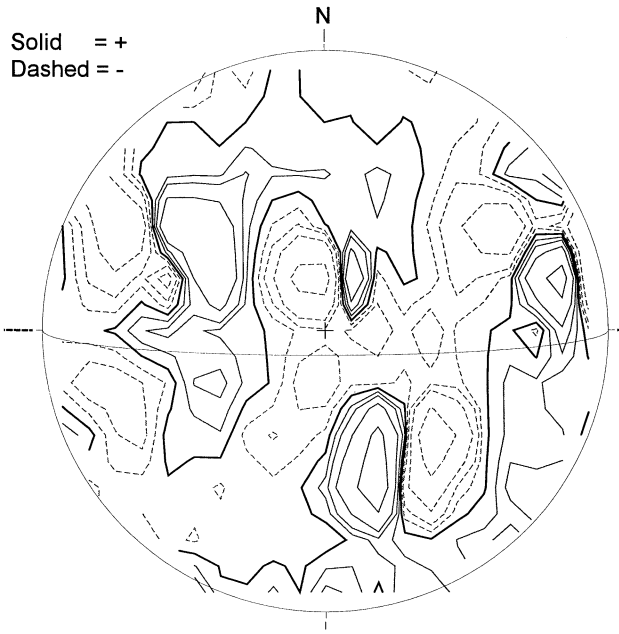
S

JULY 22, 2001 (P= 6.69, Bo = 4.98, Lo = 70.60)

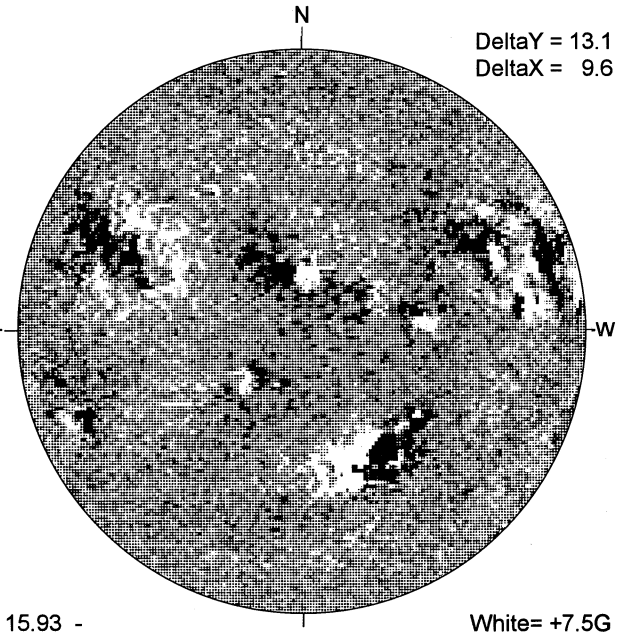
KITT PEAK MAGNETOGRAM



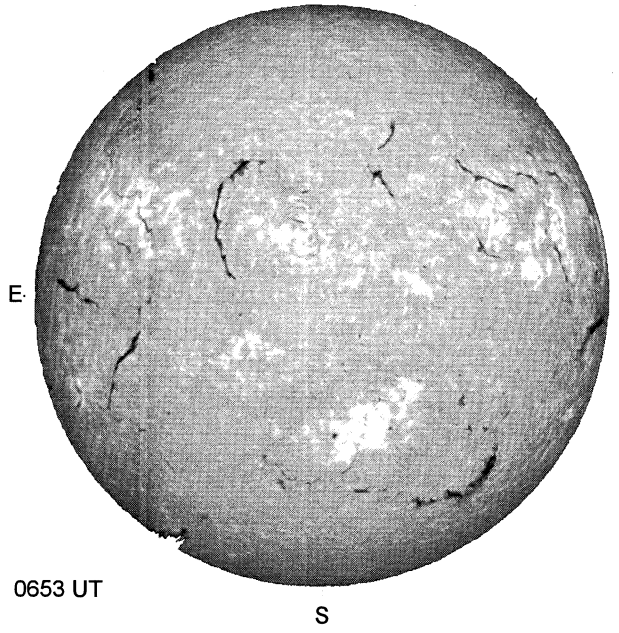
STANFORD MAGNETOGRAM



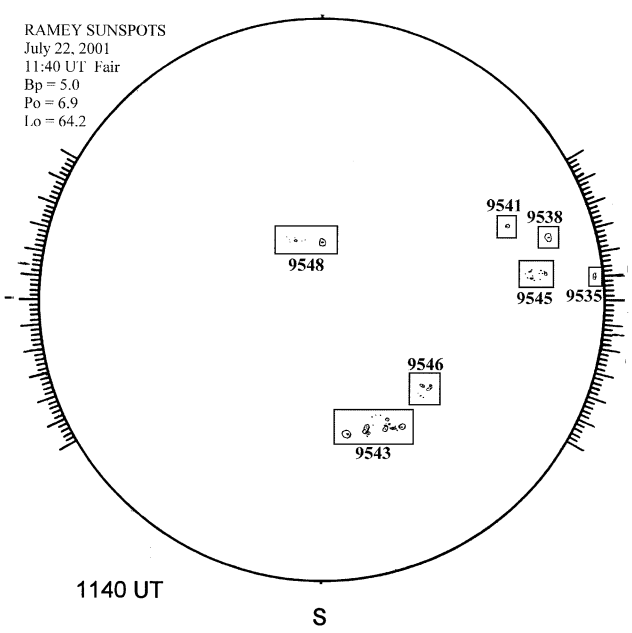
MT. WILSON MAGNETOGRAM



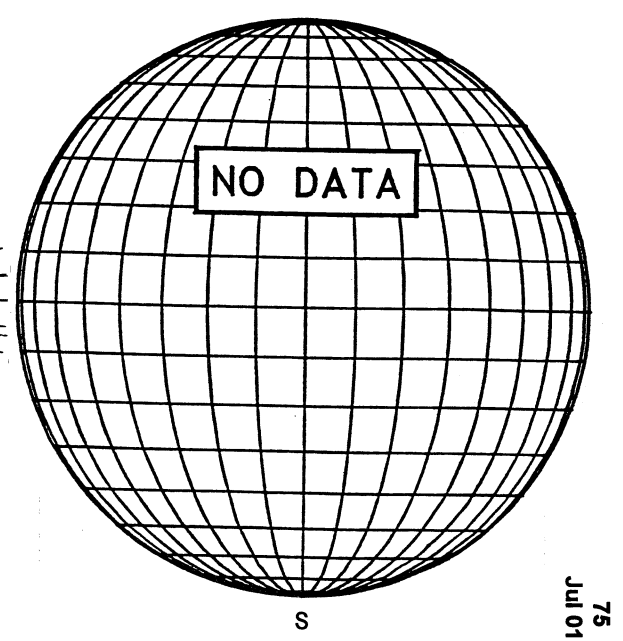
MEUDON H-ALPHA



RAMEY SUNSPOT



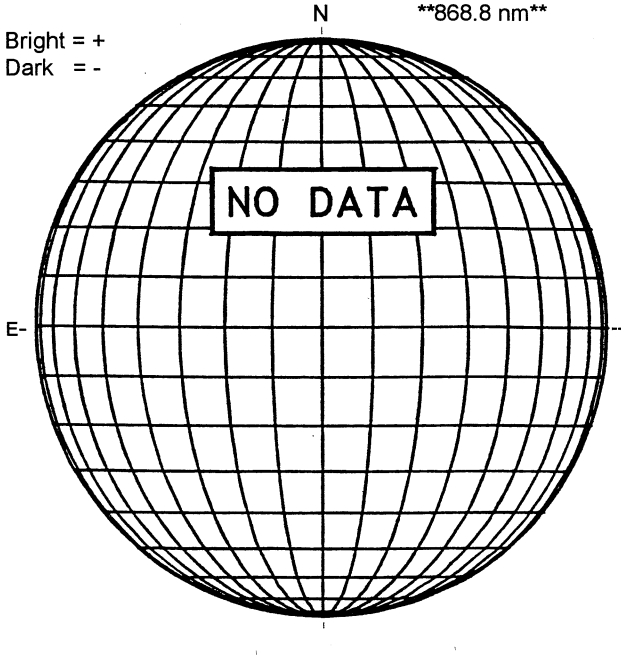
SACRAMENTO PEAK CORONA (1.15 Radii)----



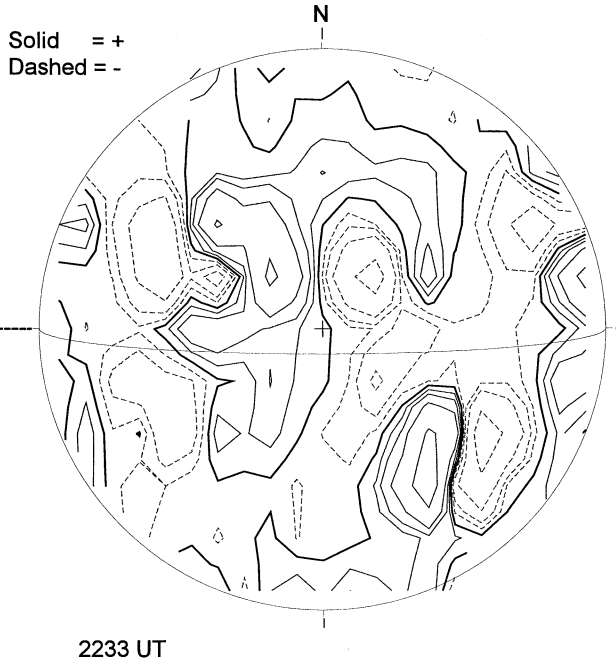
75
Jul 01

JULY 23, 2001 (P= 7.12, Bo = 5.07, Lo = 57.37)

KITT PEAK MAGNETOGRAM

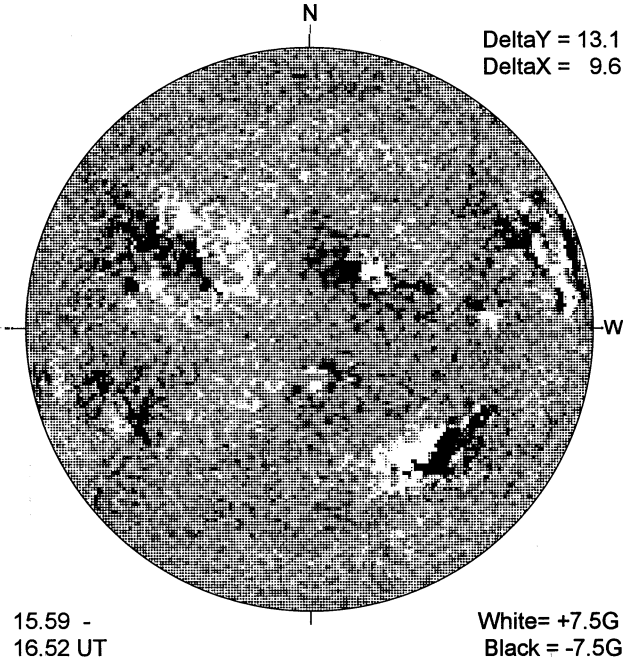


STANFORD MAGNETOGRAM



2233 UT

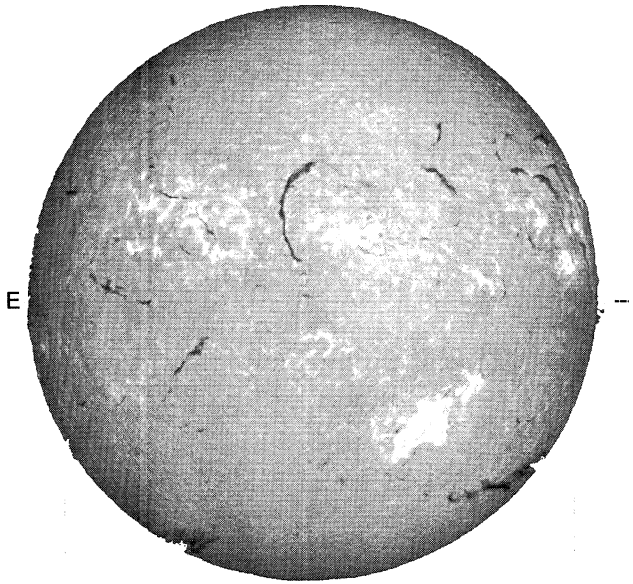
MT. WILSON MAGNETOGRAM



15.59 -
16.52 UT

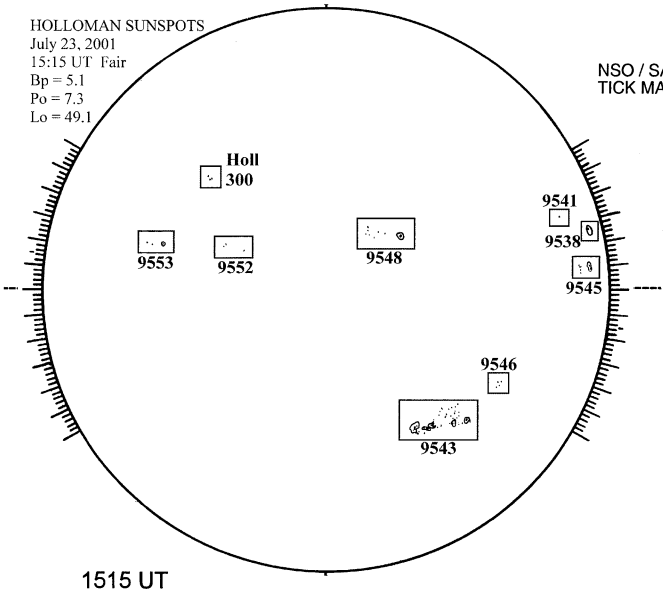
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



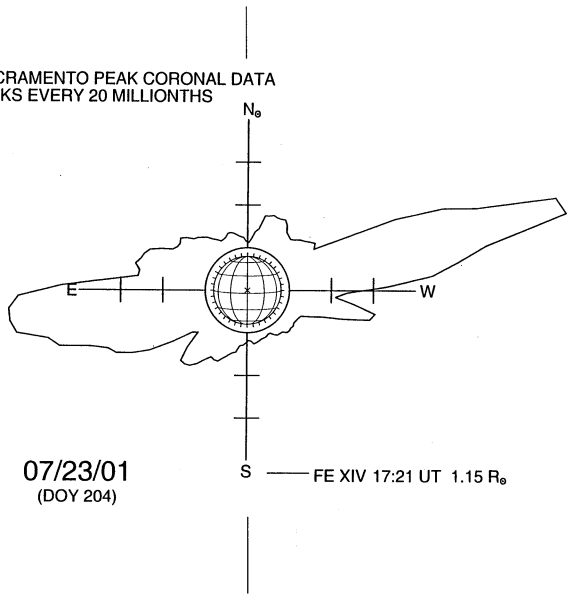
1306 UT

HOLLOMAN SUNSPOT



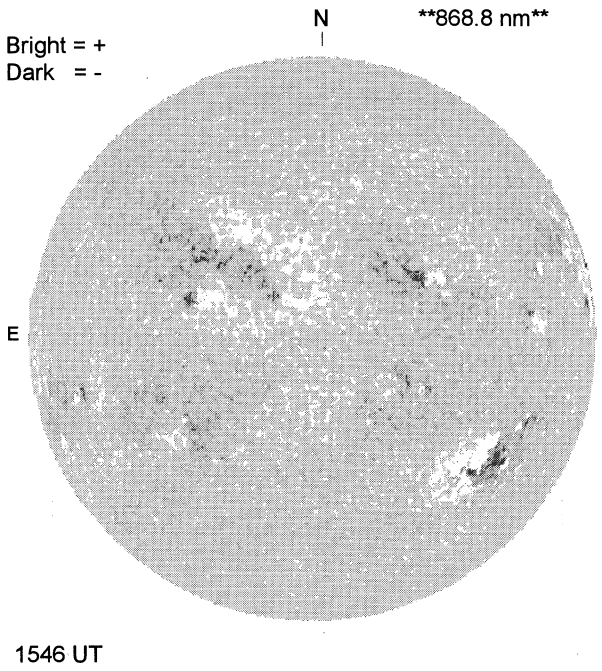
1515 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

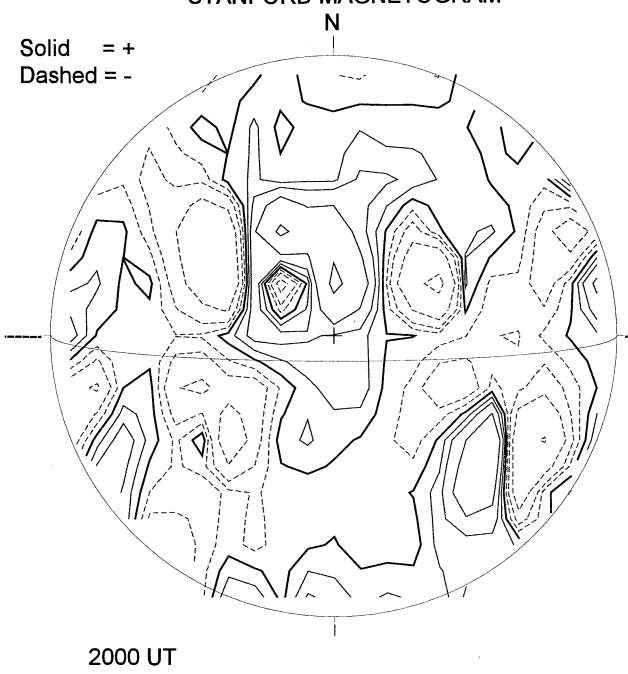


JULY 24, 2001 (P= 7.55, Bo = 5.16, Lo = 44.14)

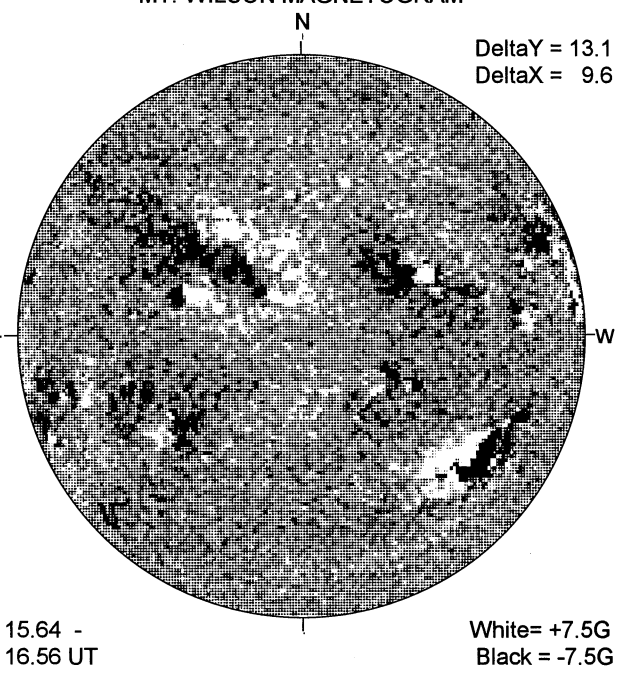
KITT PEAK MAGNETOGRAM



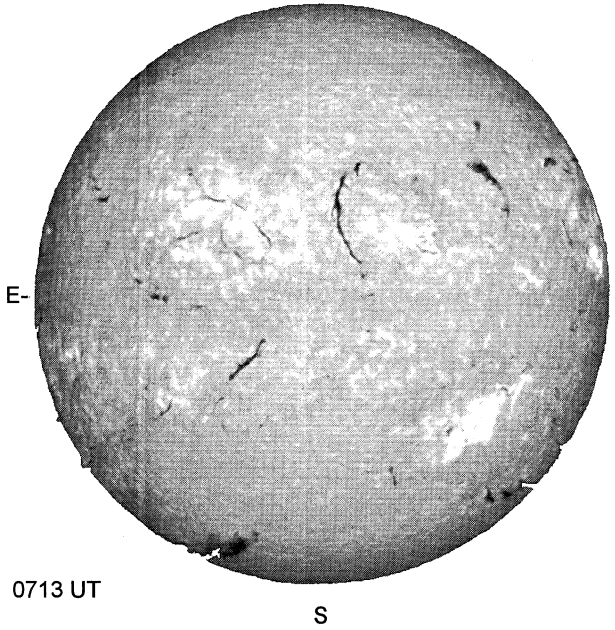
STANFORD MAGNETOGRAM



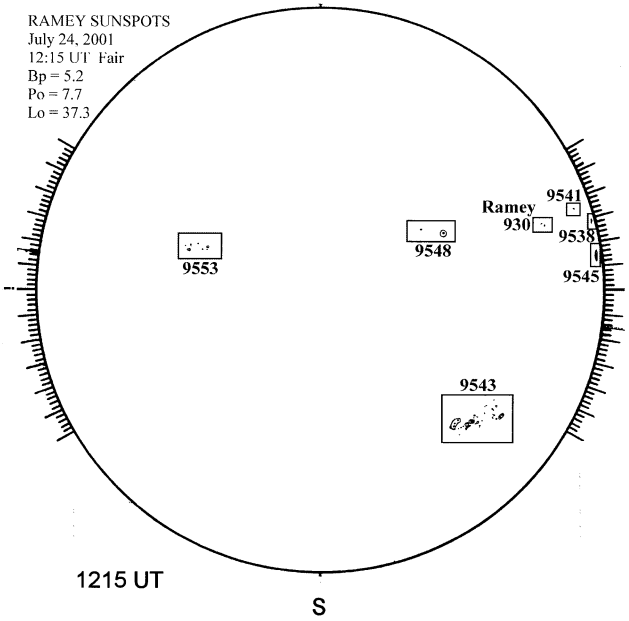
MT. WILSON MAGNETOGRAM



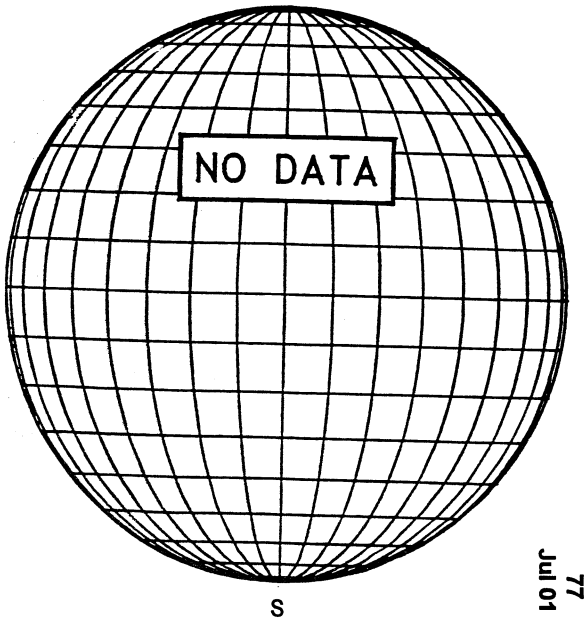
MEUDON H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)----



Jul 01
77

JULY 25, 2001 (P= 7.97, Bo = 5.24, Lo = 30.91)

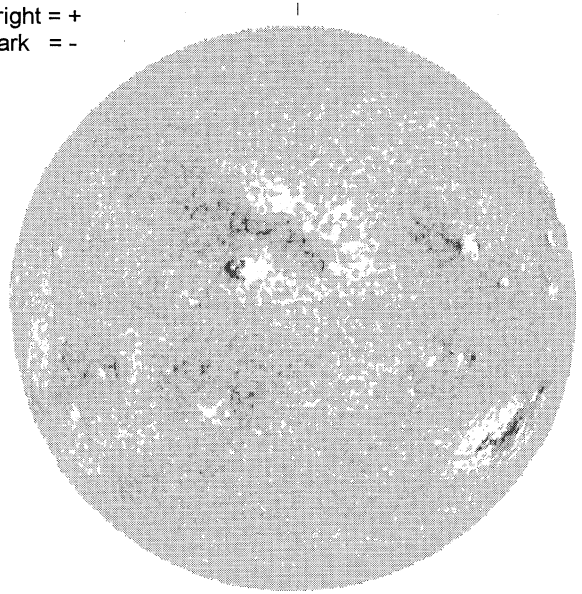
KITT PEAK MAGNETOGRAM

N

868.8 nm

Bright = +
Dark = -

E-

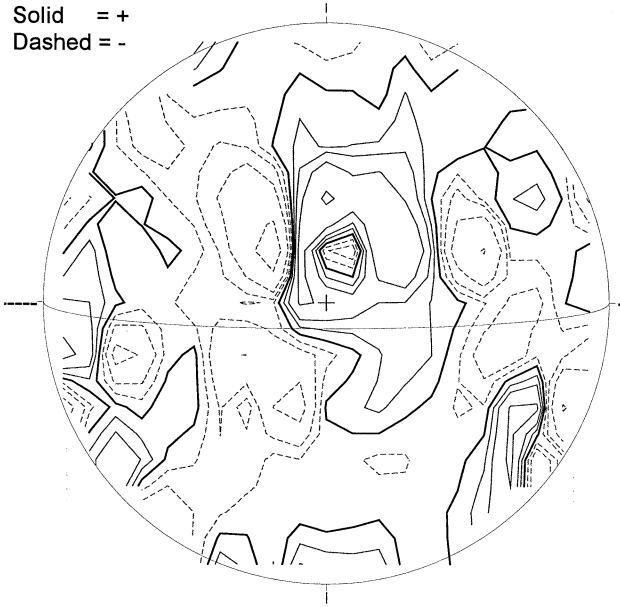


1643 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -



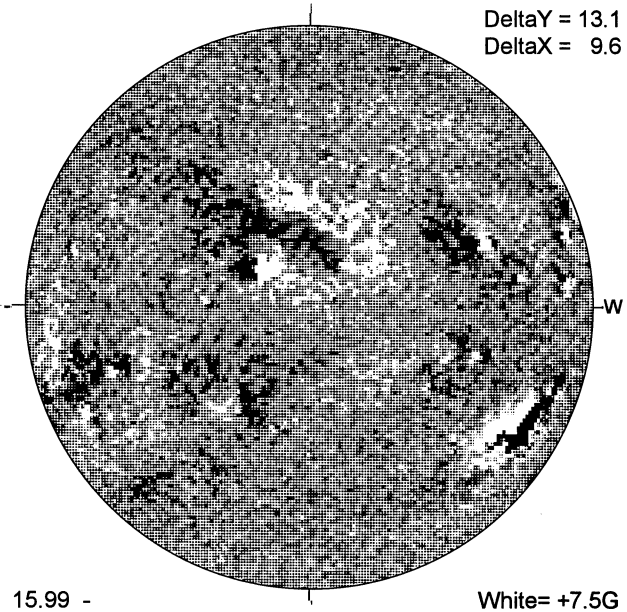
2057 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

-W

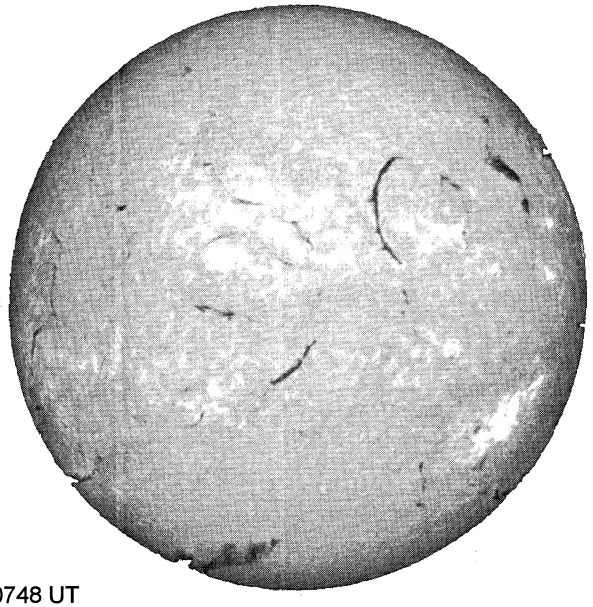


15.99 -
16.91 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

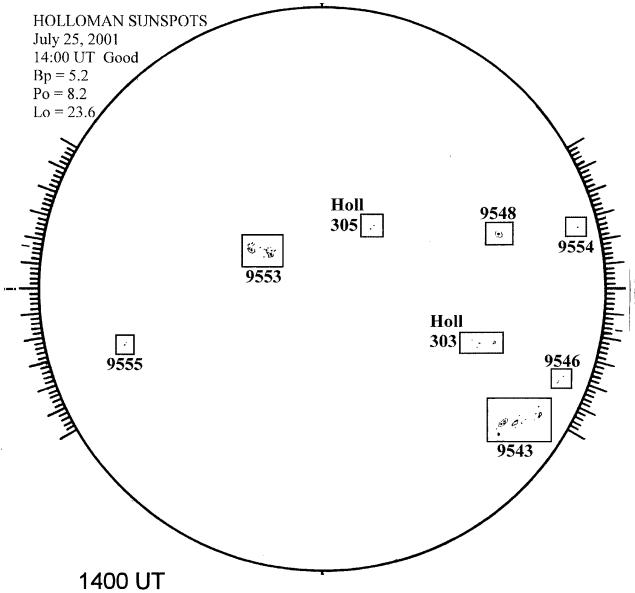
E-



0748 UT

S

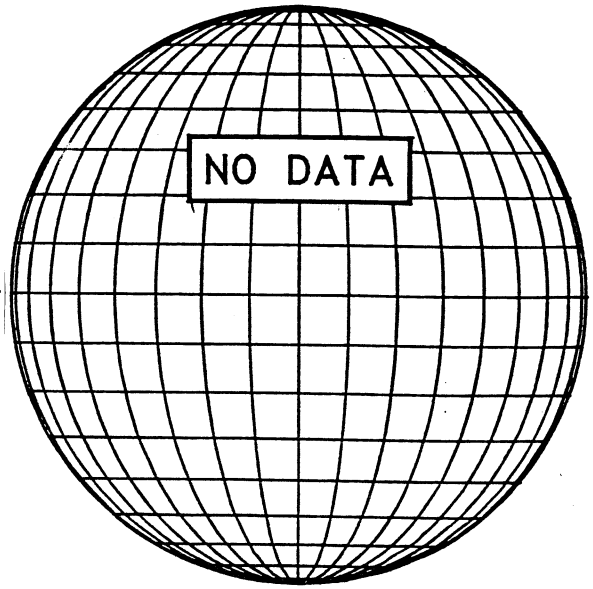
HOLLOMAN SUNSPOT



1400 UT

S

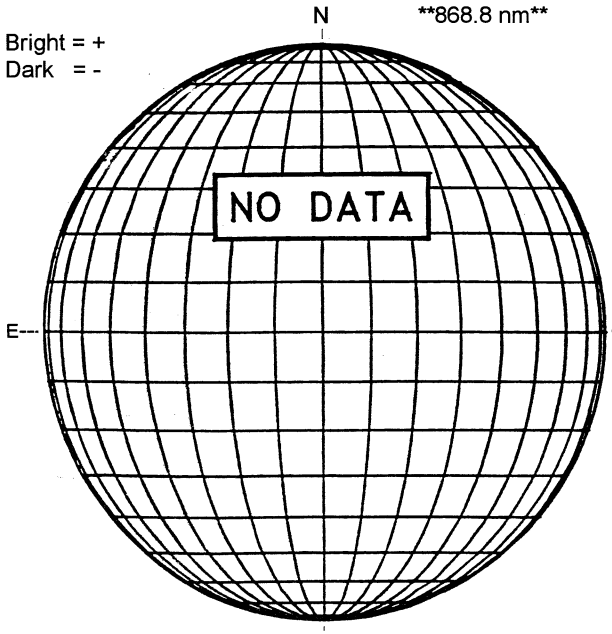
SACRAMENTO PEAK CORONA (1.15 Radii)----



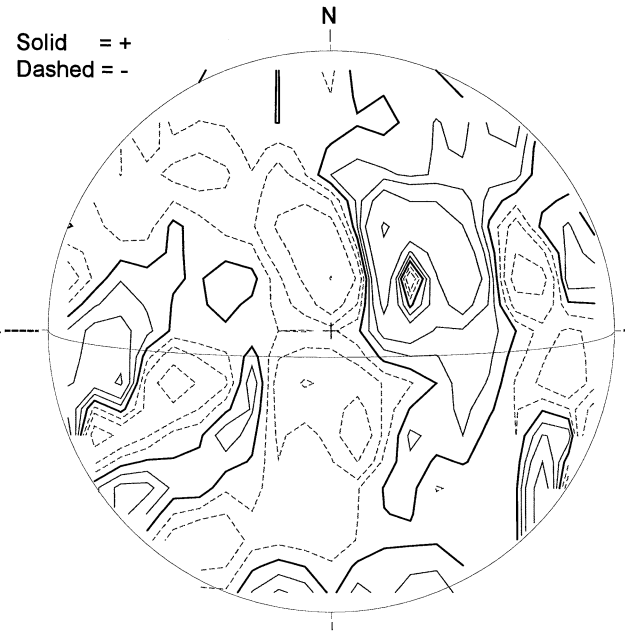
S

JULY 26, 2001 (P= 8.39, Bo = 5.32, Lo = 17.69)

KITT PEAK MAGNETOGRAM

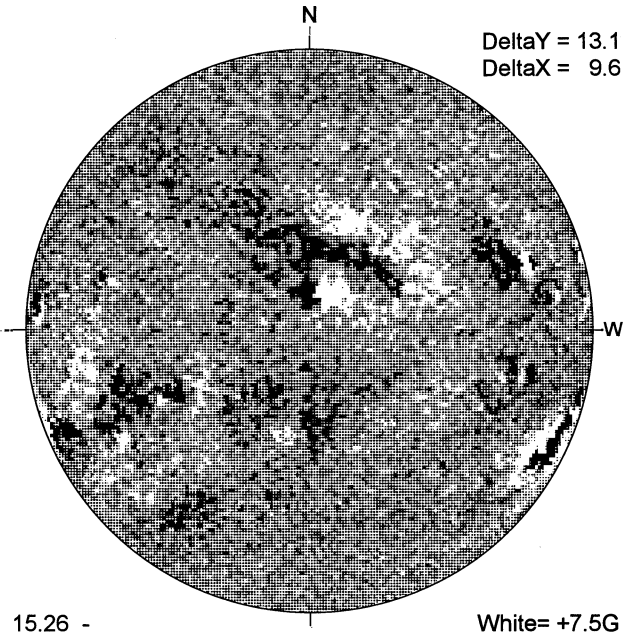


STANFORD MAGNETOGRAM



2101 UT

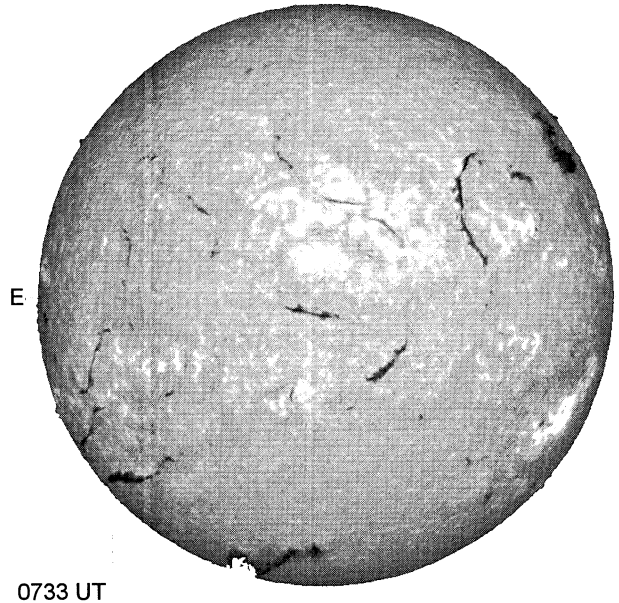
MT. WILSON MAGNETOGRAM



15.26 -
16.18 UT

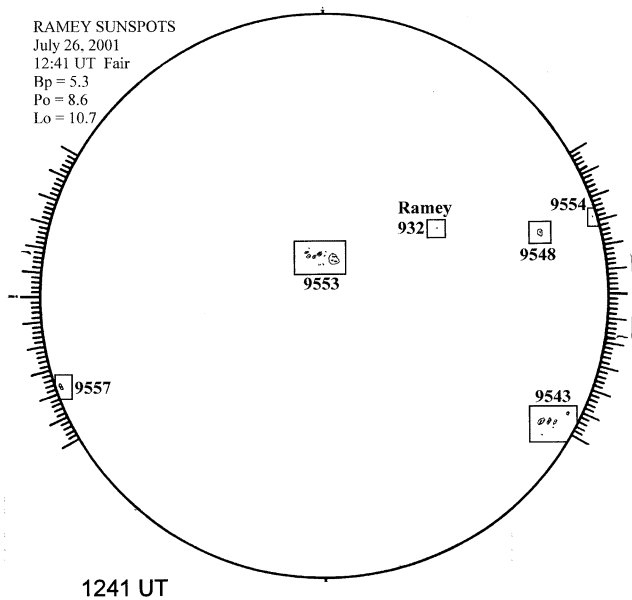
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



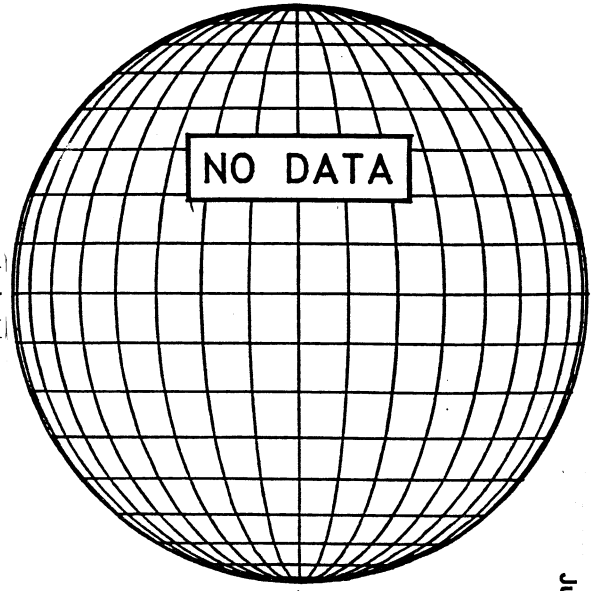
0733 UT

RAMEY SUNSPOT



1241 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



79 Jul 01

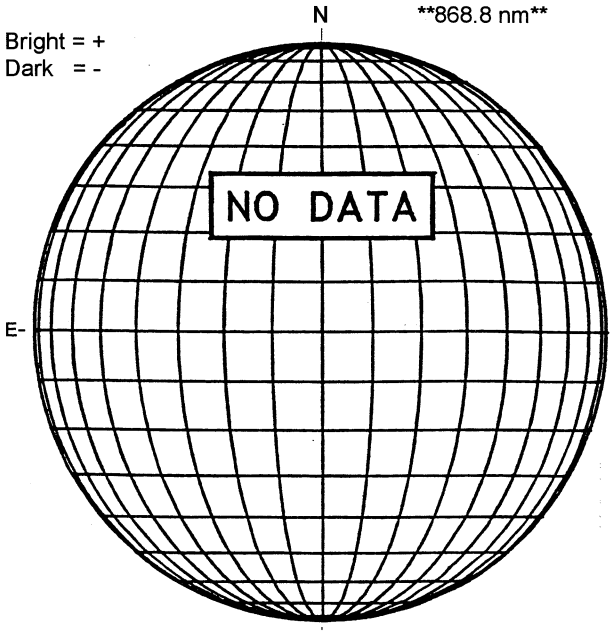
JULY 27, 2001 (P= 8.80, Bo = 5.41, Lo = 4.46)

Jul 01

KITT PEAK MAGNETOGRAM

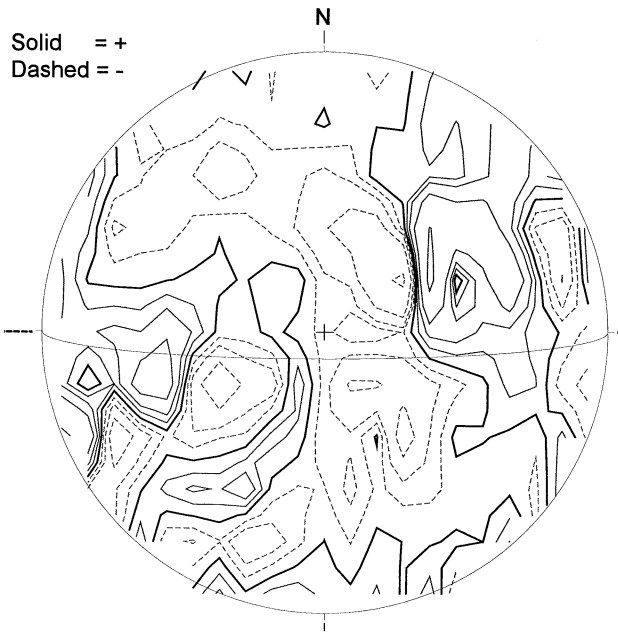
868.8 nm

Bright = +
Dark = -



STANFORD MAGNETOGRAM

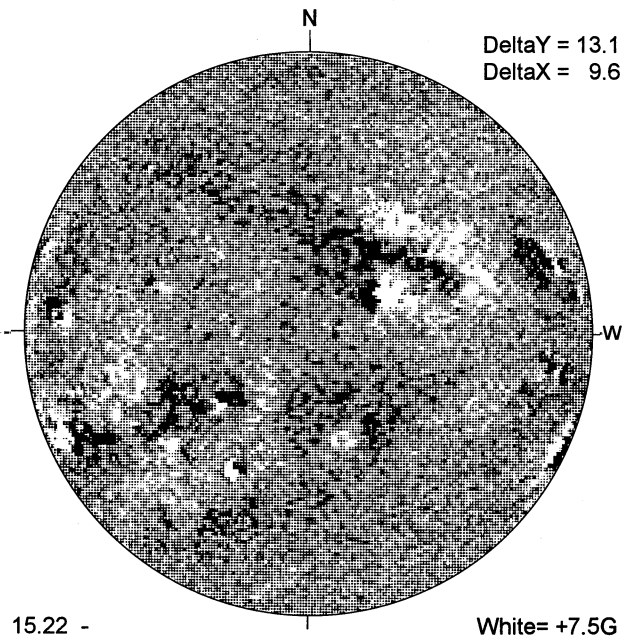
Solid = +
Dashed = -



2056 UT

MT. WILSON MAGNETOGRAM

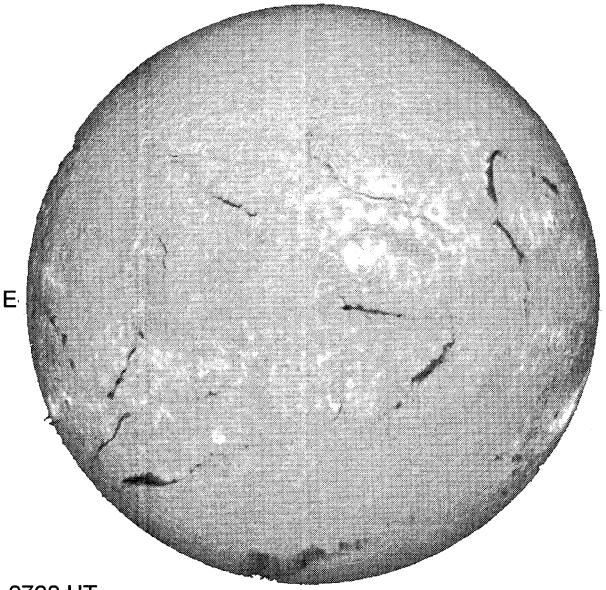
DeltaY = 13.1
DeltaX = 9.6



15.22 -
16.14 UT

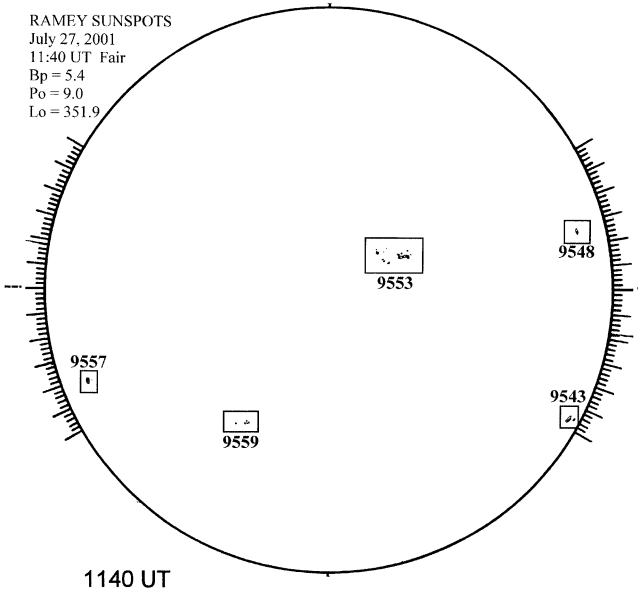
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



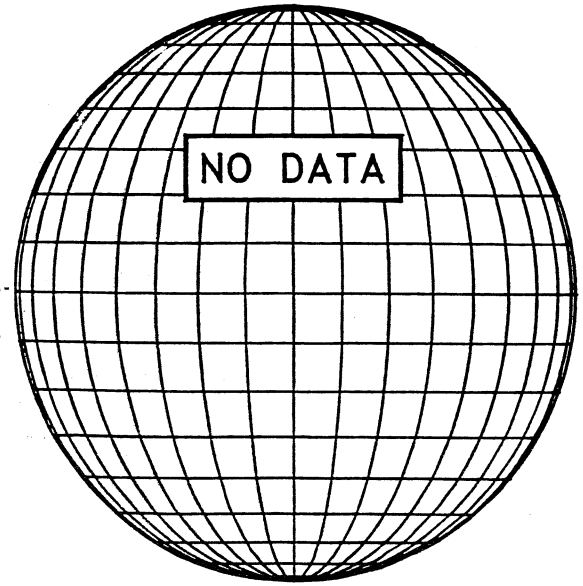
0728 UT

RAMEY SUNSPOT



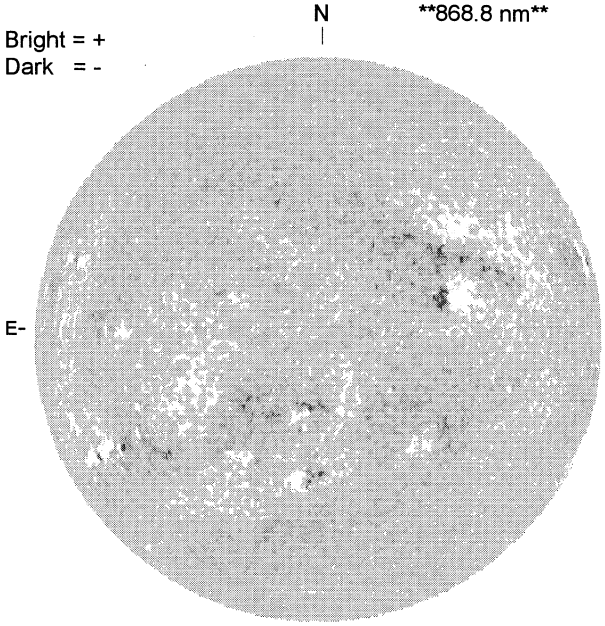
1140 UT

LOMNICKY PEAK CORONA (1.04 Radii)



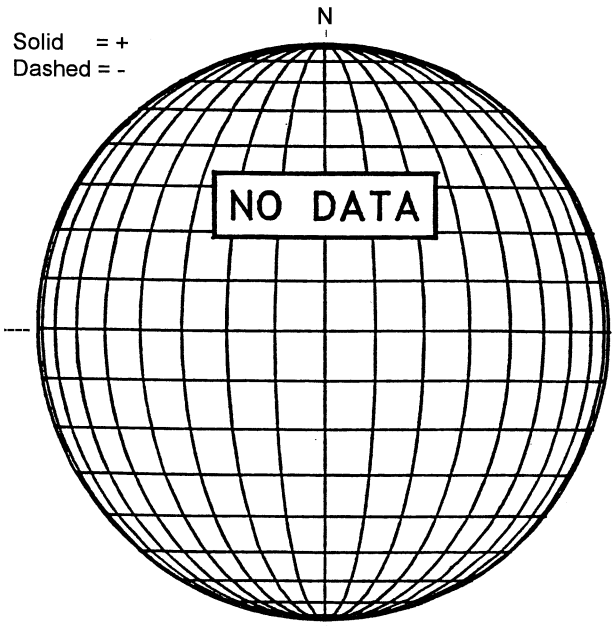
JULY 28, 2001 (P= 9.22, Bo = 5.49, Lo = 351.23)

KITT PEAK MAGNETOGRAM

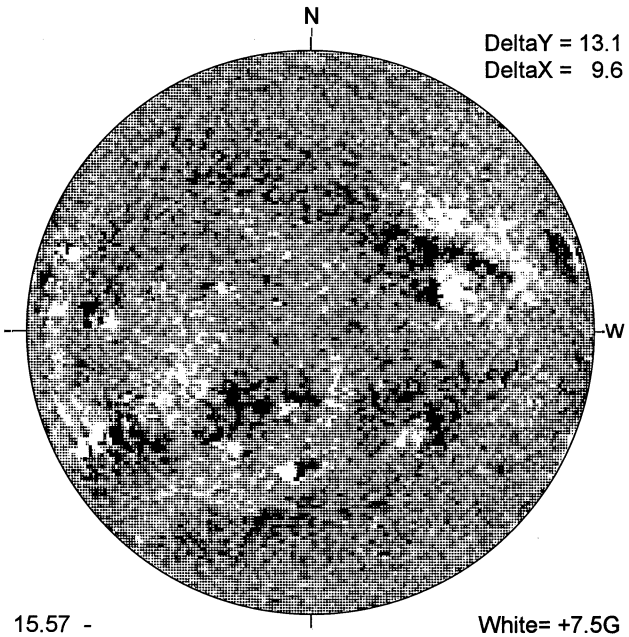


1600 UT

STANFORD MAGNETOGRAM



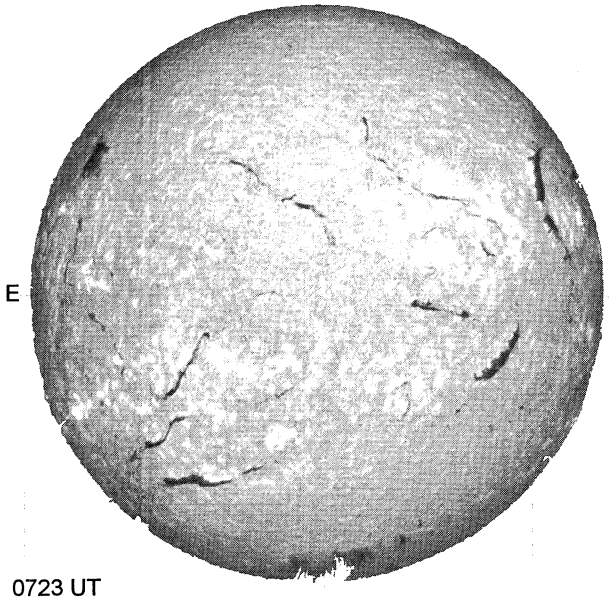
MT. WILSON MAGNETOGRAM



15.57 -
16.50 UT

White= +7.5G
Black = -7.5G

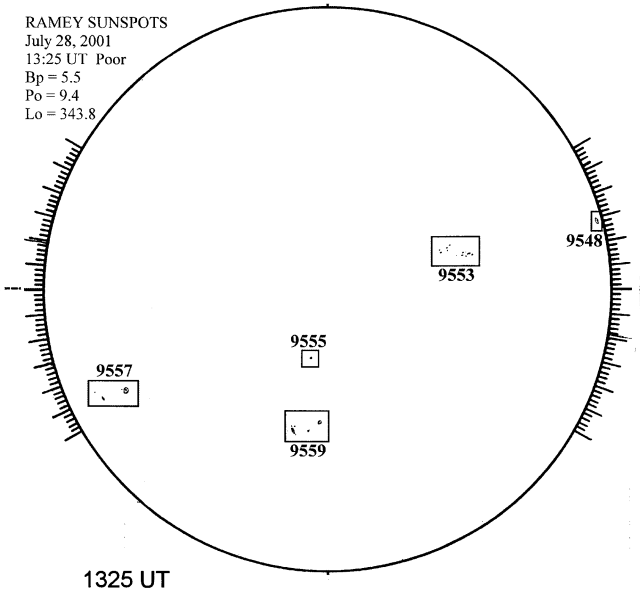
----- MEUDON H-ALPHA



0723 UT

S

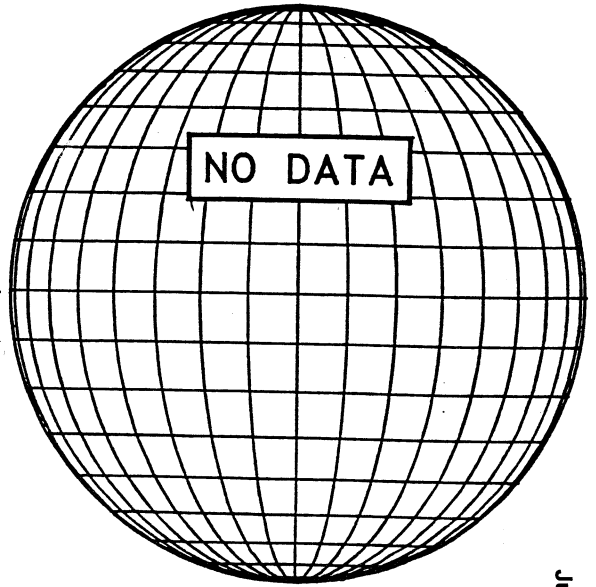
RAMEY SUNSPOT



1325 UT

S

LOMNICKY PEAK CORONA (1.04 Radii)----

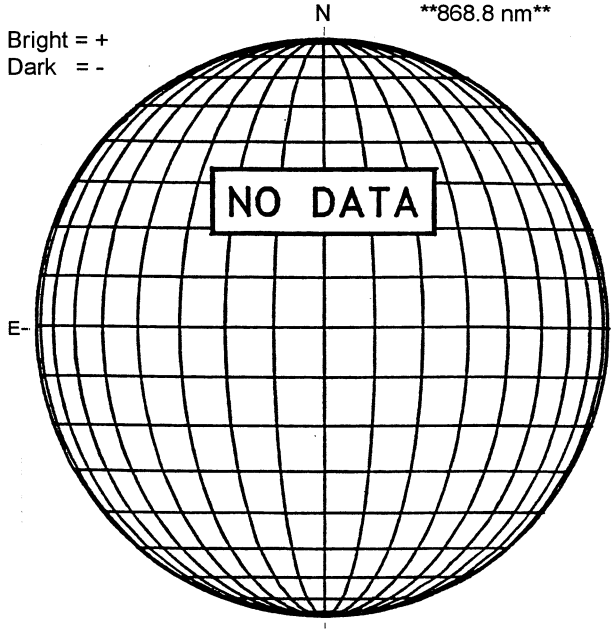


S

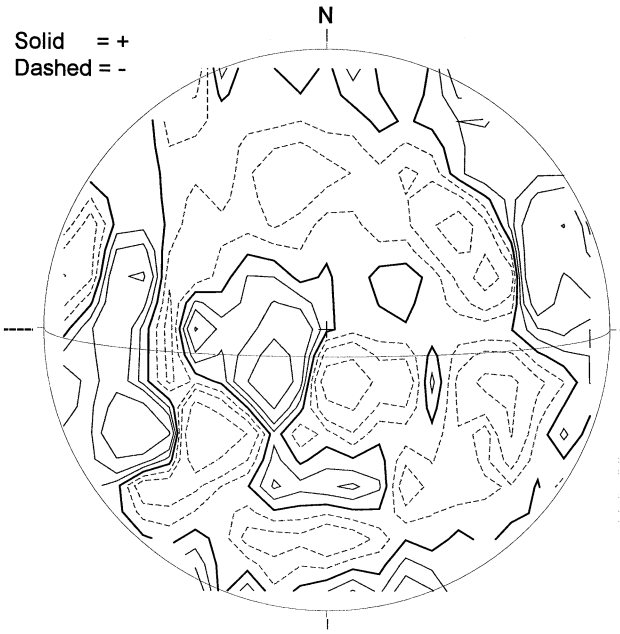
81
Jul 01

JULY 29, 2001 (P= 9.62, Bo = 5.56, Lo = 338.00)

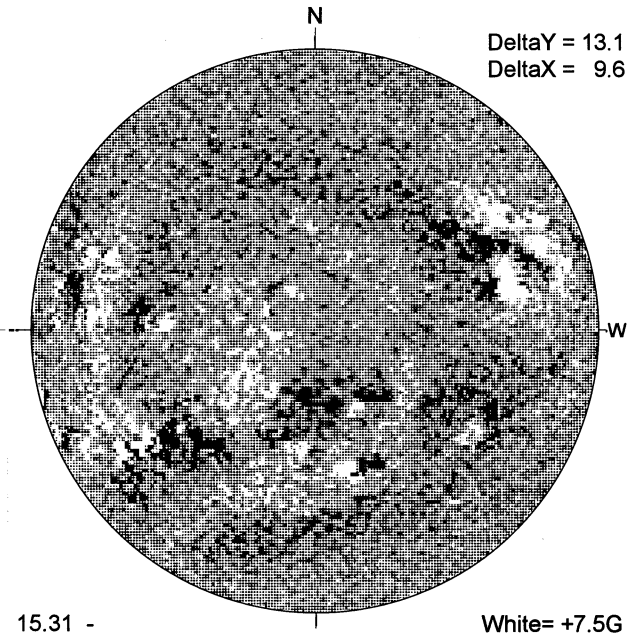
KITT PEAK MAGNETOGRAM



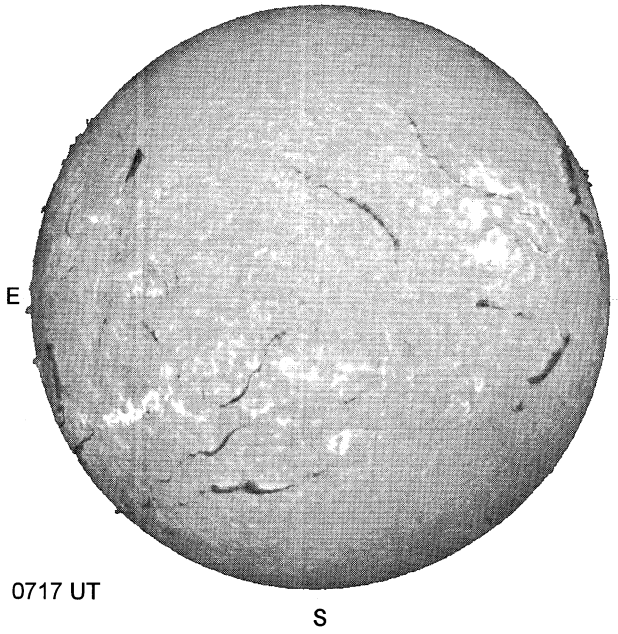
STANFORD MAGNETOGRAM



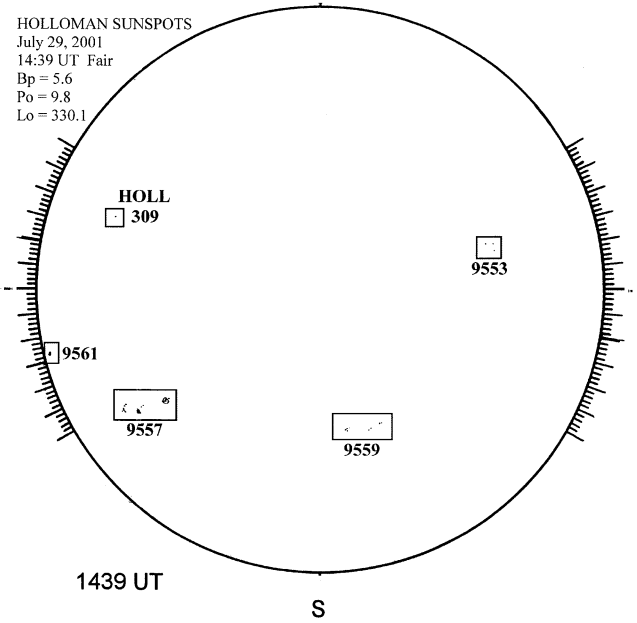
MT. WILSON MAGNETOGRAM



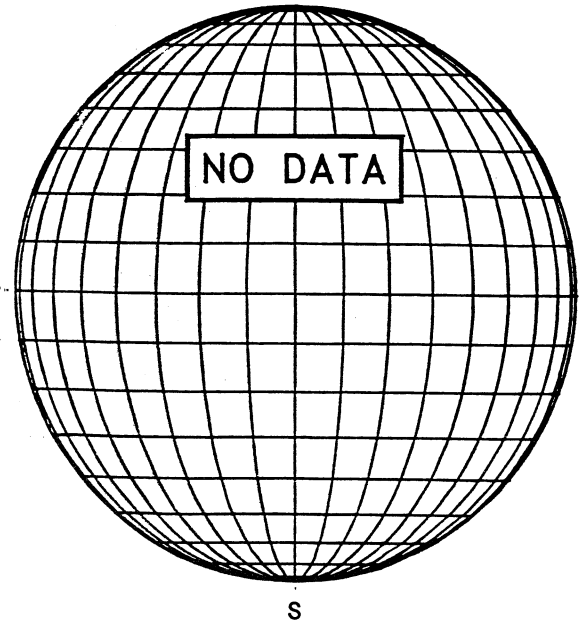
MEUDON H-ALPHA



HOLLOMAN SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)----



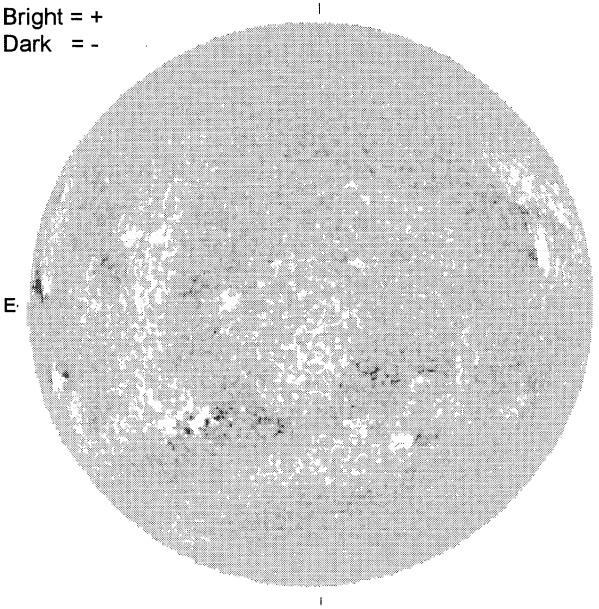
JULY 30, 2001 (P= 10.03, Bo = 5.64, Lo = 324.78)

KITT PEAK MAGNETOGRAM

N

868.8 nm

Bright = +
Dark = -



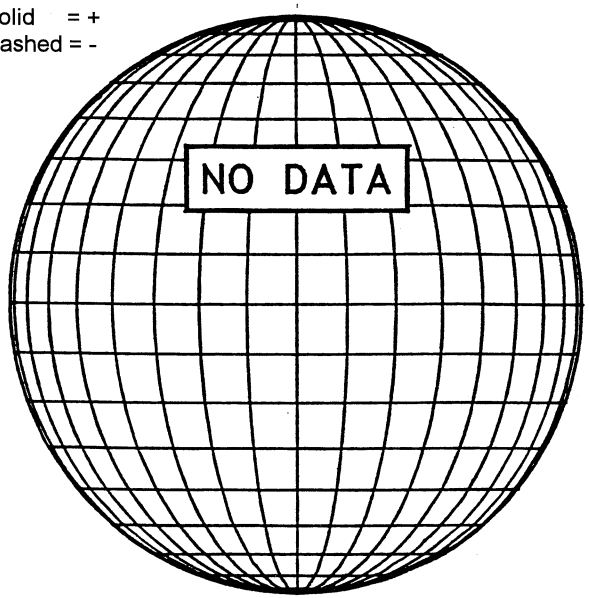
E

1558 UT

STANFORD MAGNETOGRAM

N

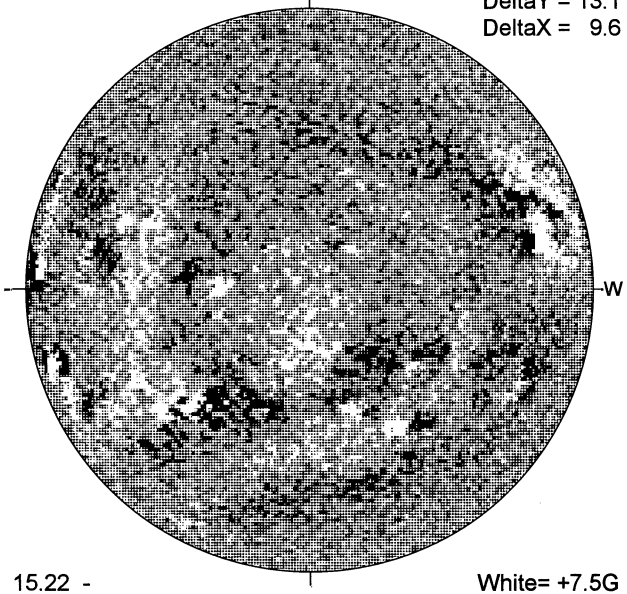
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

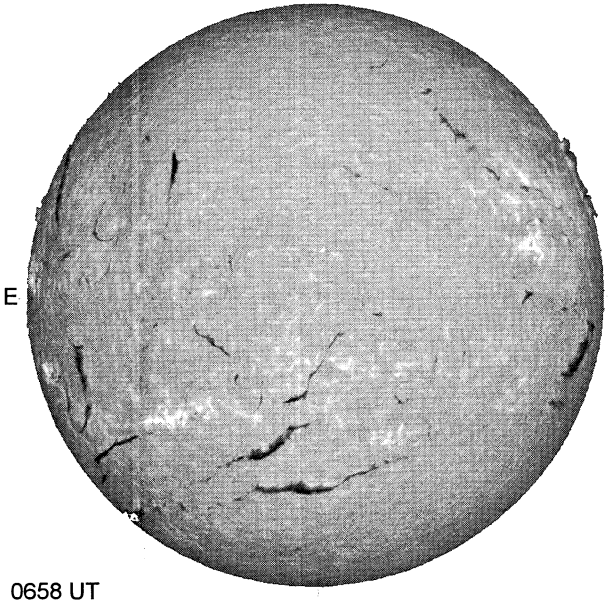


W

15.22 -
16.15 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

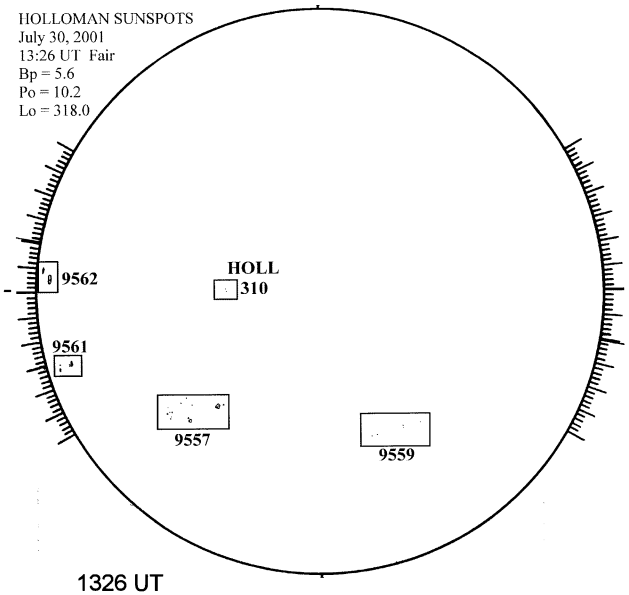


E

0658 UT

S

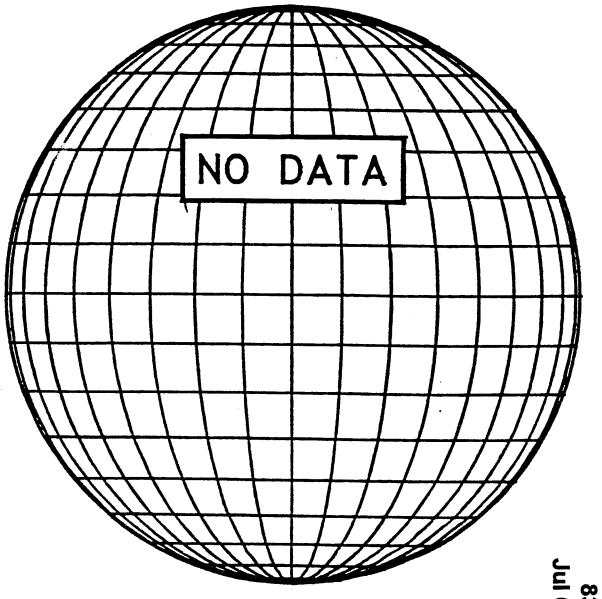
HOLLOMAN SUNSPOT



1326 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

83
Jul 01

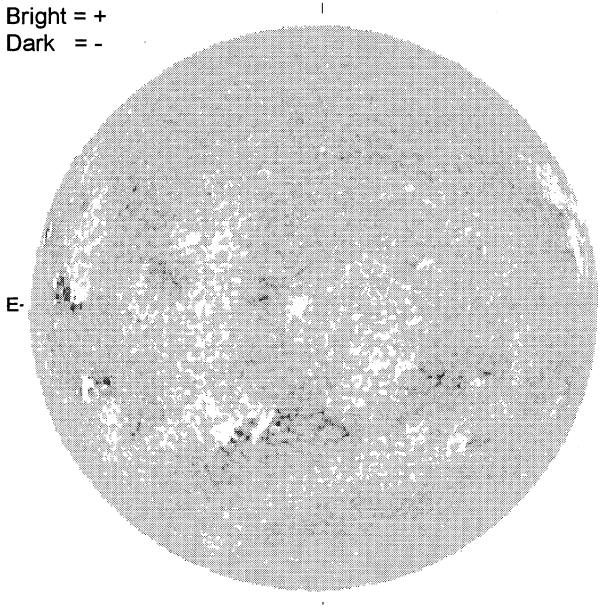
JULY 31, 2001 (P= 10.43, Bo = 5.72, Lo = 311.55)

KITT PEAK MAGNETOGRAM

N

868.8 nm

Bright = +
Dark = -



1714 UT

STANFORD MAGNETOGRAM

N

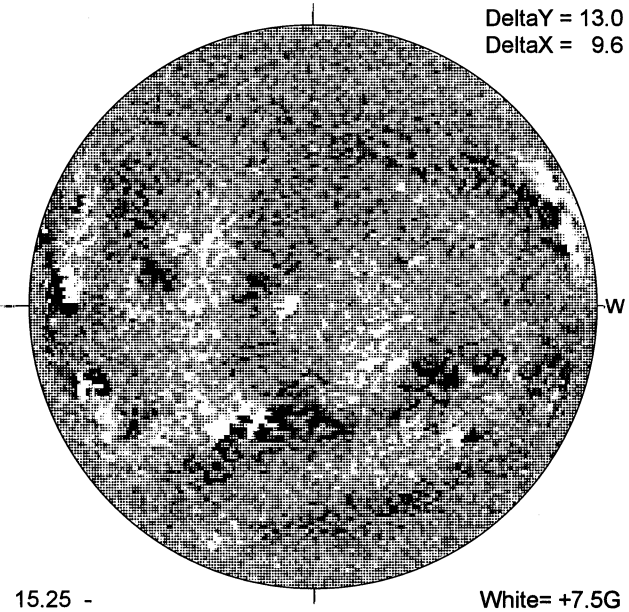
Solid = +
Dashed = -

1926 UT

MT. WILSON MAGNETOGRAM

N

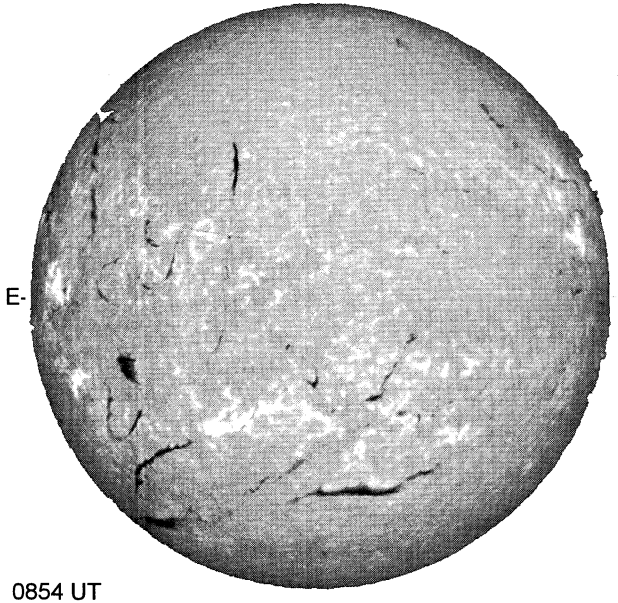
DeltaY = 13.0
DeltaX = 9.6



15.25 -
16.18 UT

White= +7.5G
Black = -7.5G

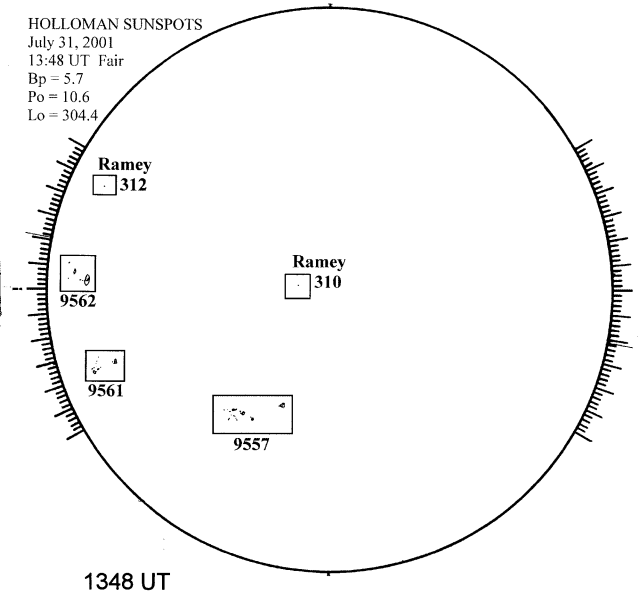
----- MEUDON H-ALPHA



0854 UT

S

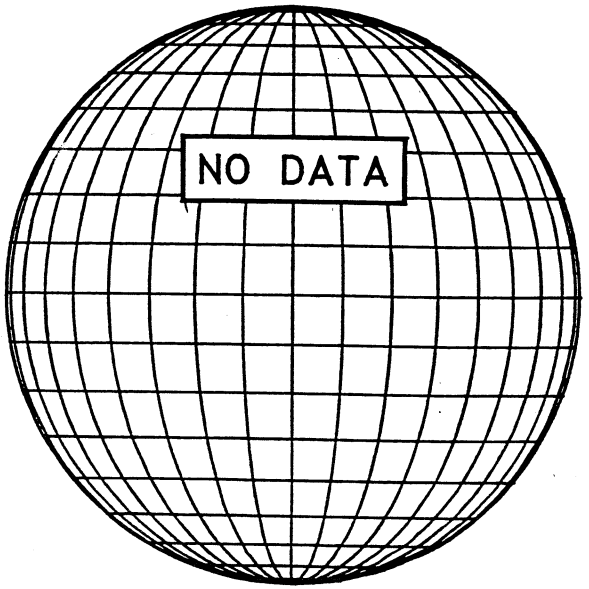
HOLLOMAN SUNSPOT



1348 UT

S

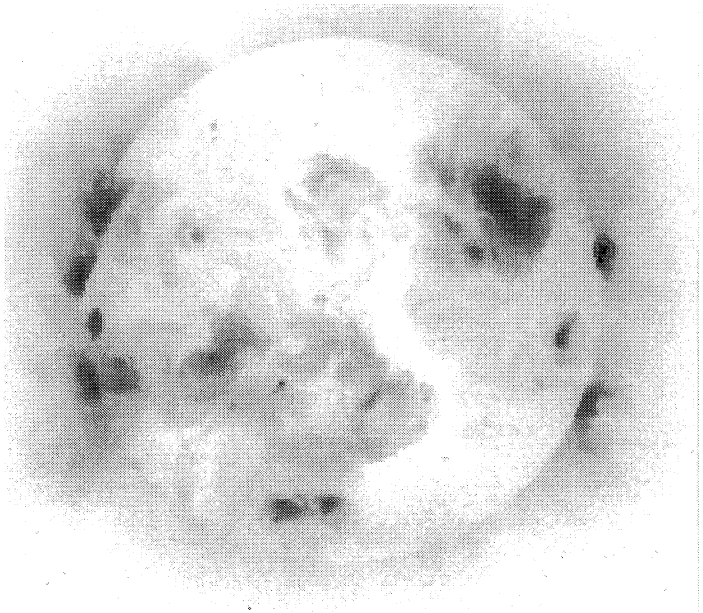
SACRAMENTO PEAK CORONA (1.15 Radii)----



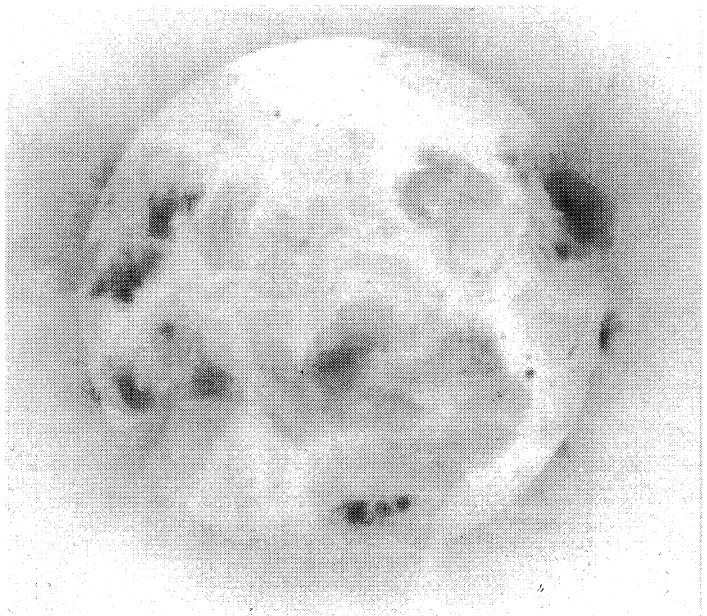
S

YOHKOH SOFT X-RAY TELESCOPE IMAGES

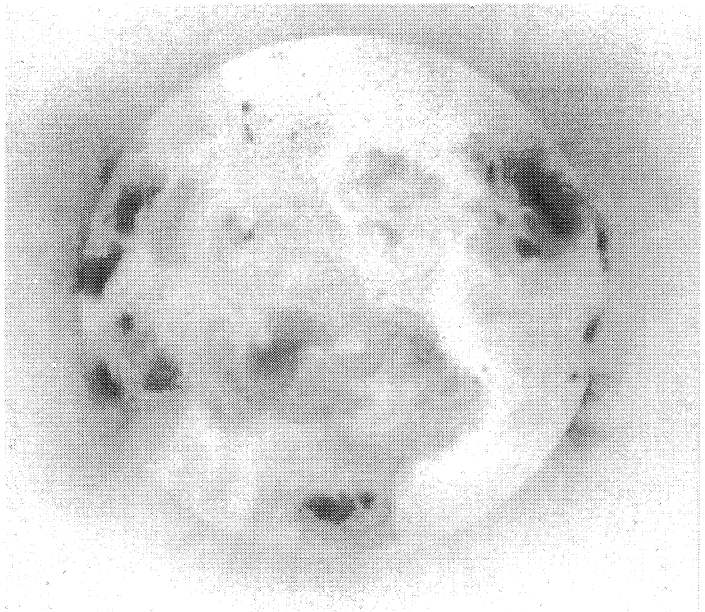
July
2001



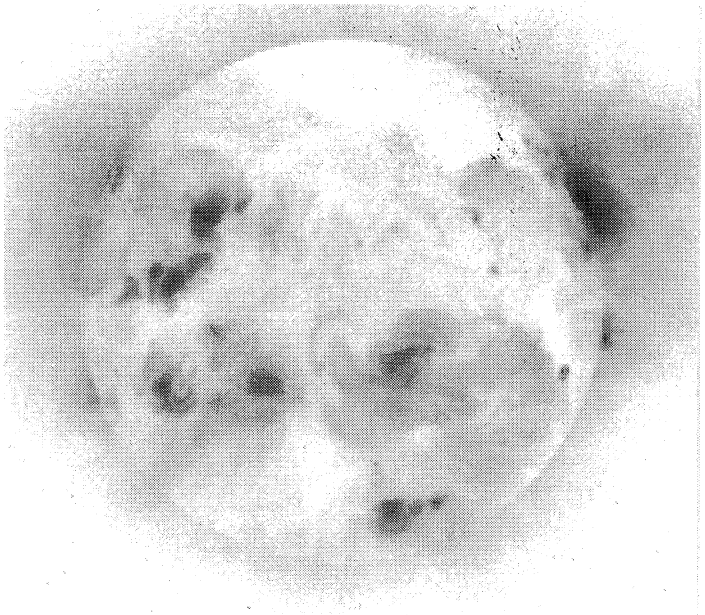
Day 1
12:50:50 UT



Day 3
12:01:30 UT



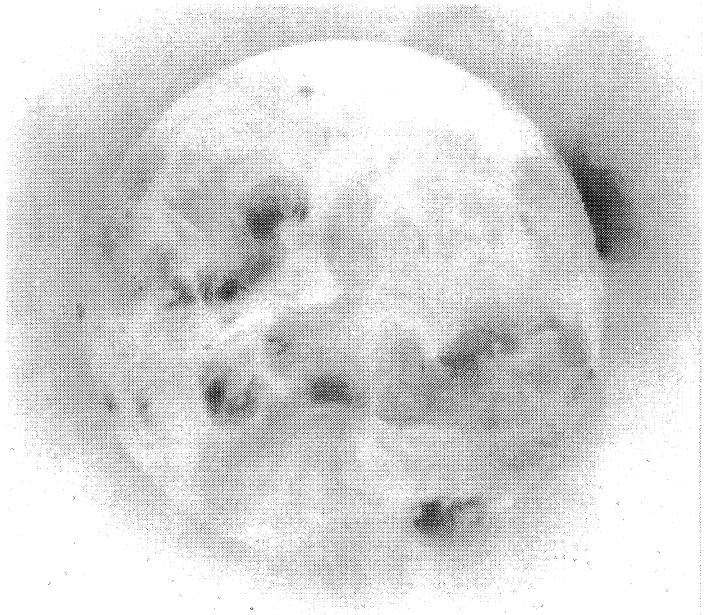
Day 2
12:11:54 UT



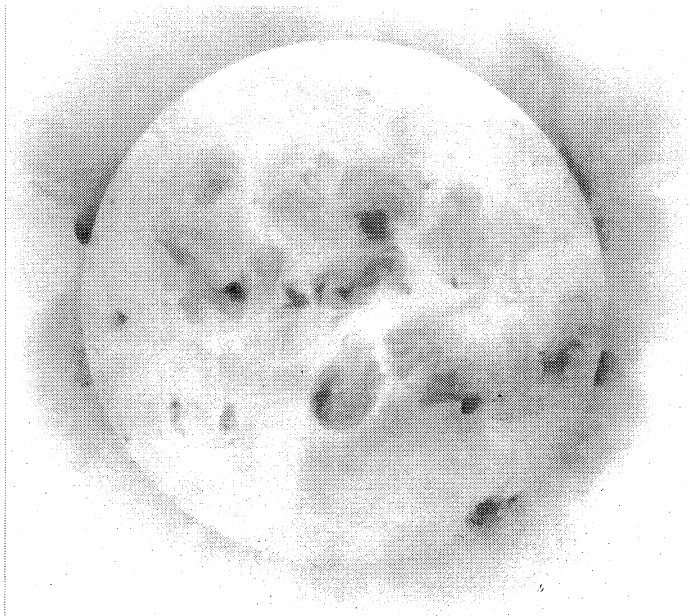
Day 4
11:07:05 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

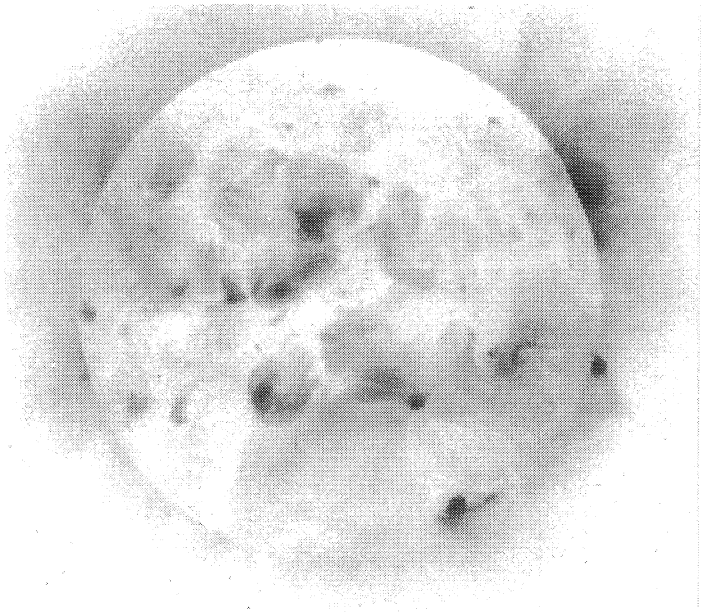
July
2001



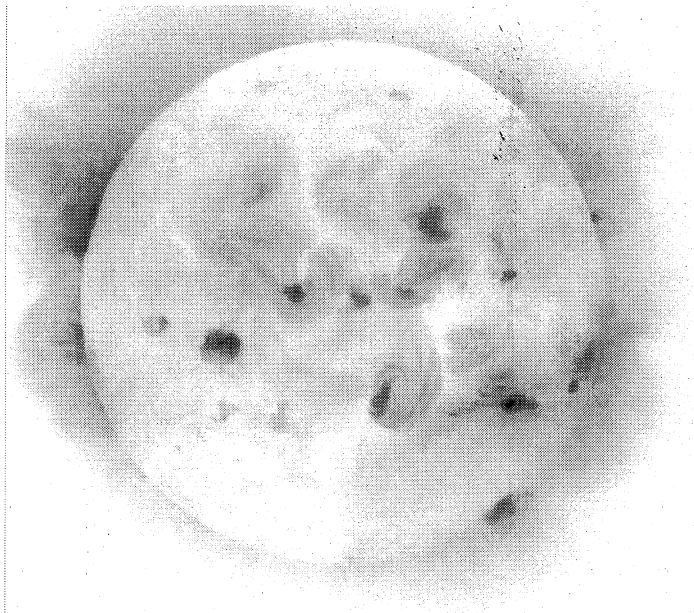
Day 5
12:51:53 UT



Day 7
11:20:33 UT



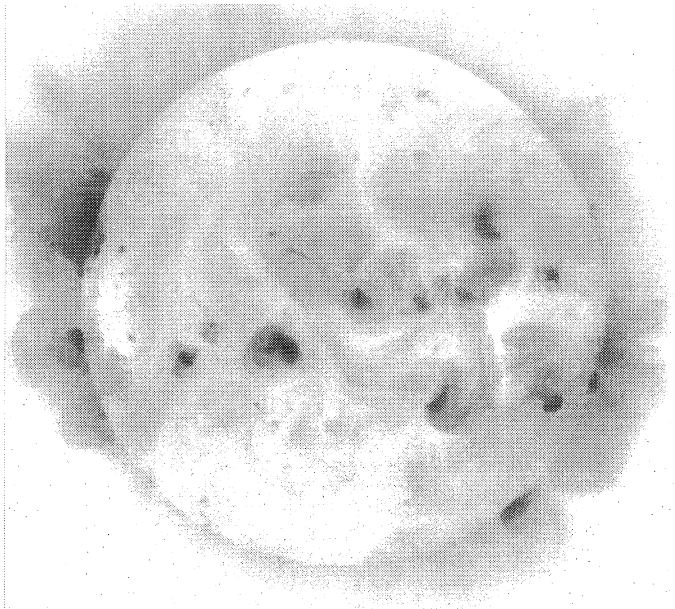
Day 6
12:01:45 UT



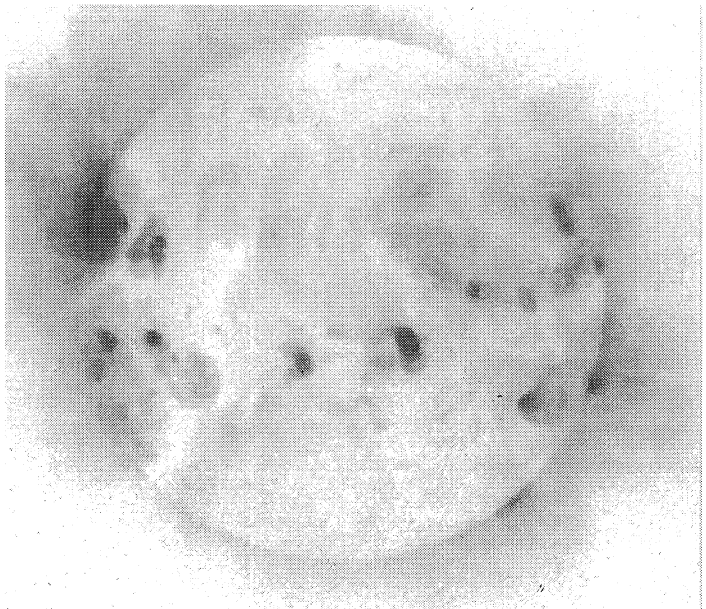
Day 8
11:56:23 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

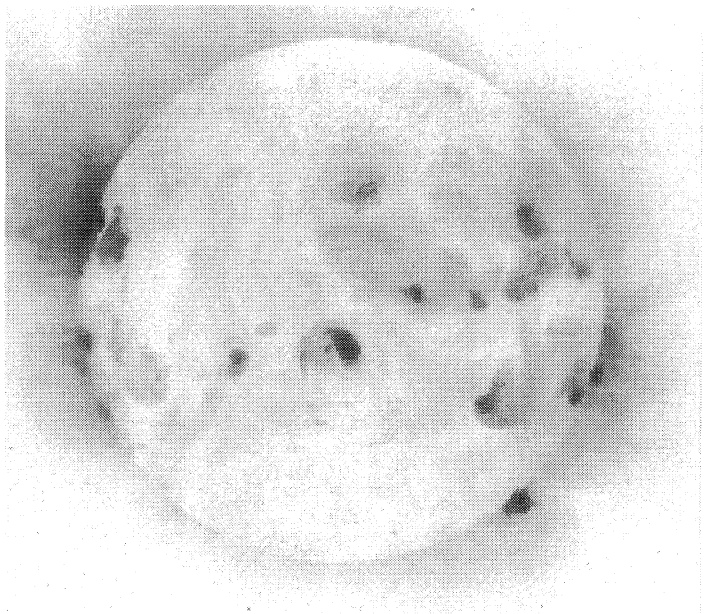
July
2001



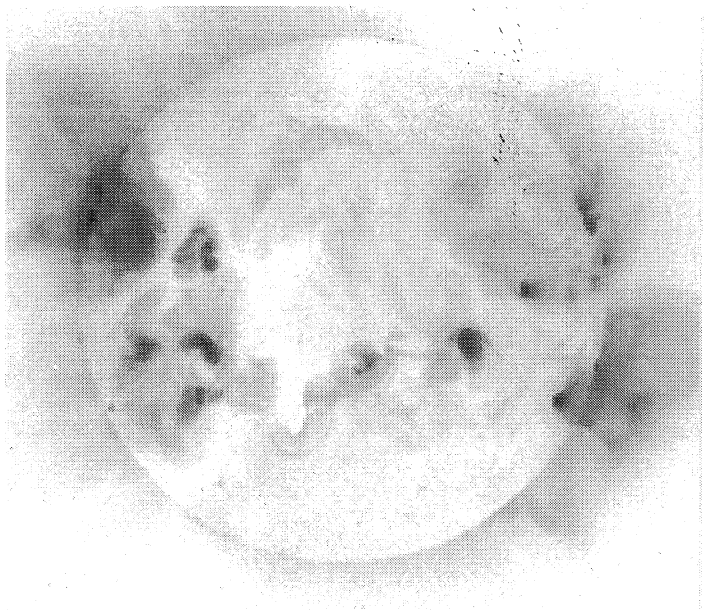
Day 9
11:55:58 UT



Day 11
12:04:08 UT



Day 10
12:02:00 UT

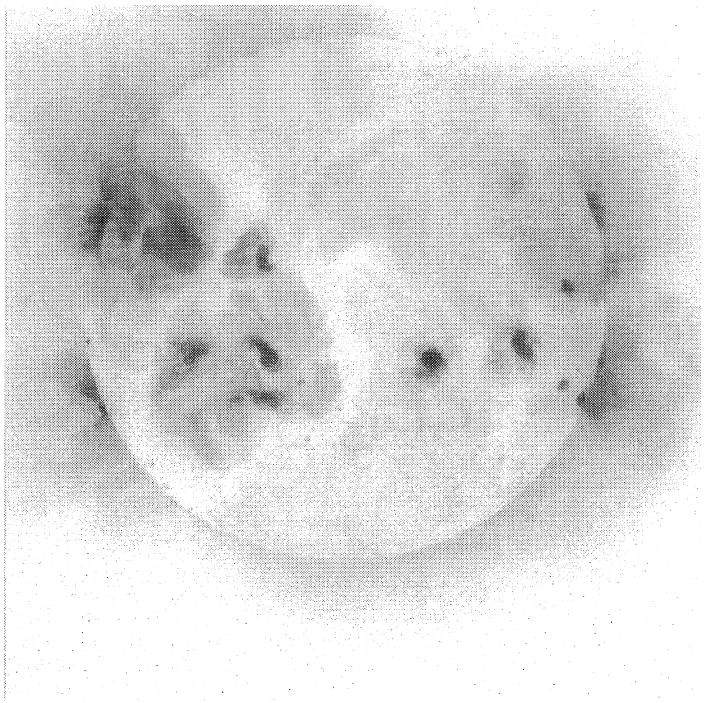


Day 12
12:36:56 UT

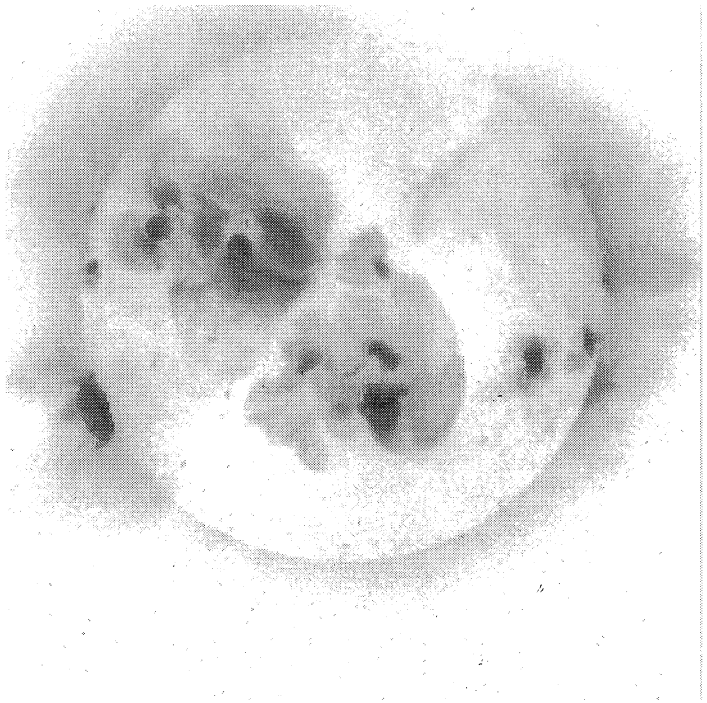
87
Jul 01

YOHKOH SOFT X-RAY TELESCOPE IMAGES

July
2001

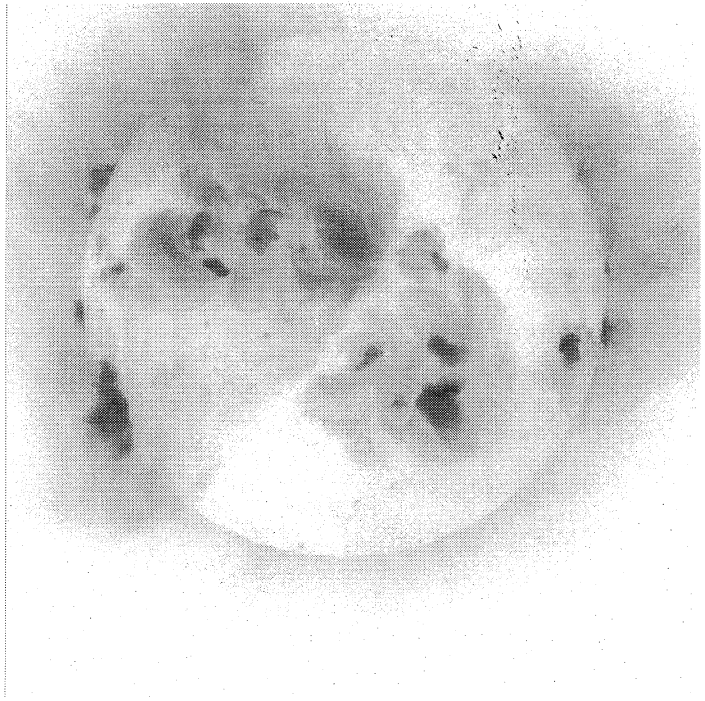


Day 13
12:38:00 UT



Day 15
12:01:43 UT

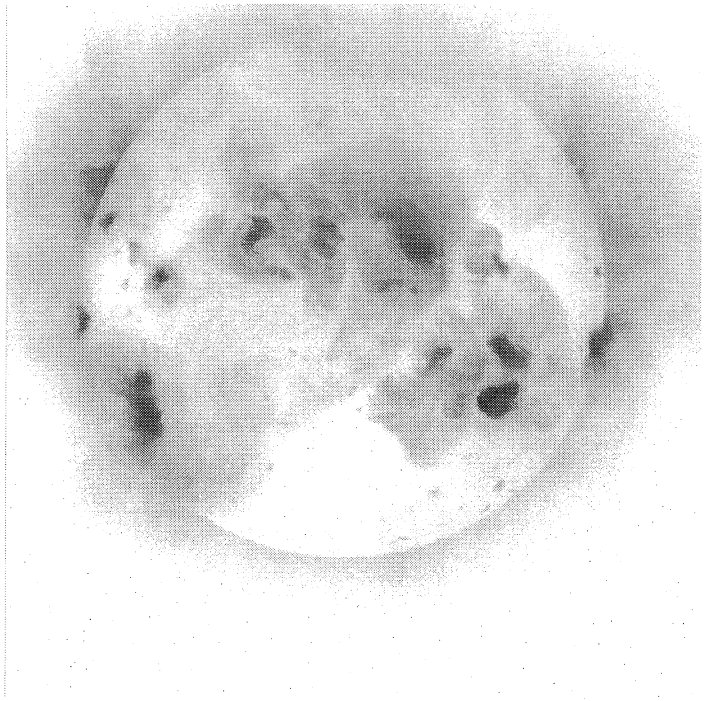
Day 14
12:32:13 UT



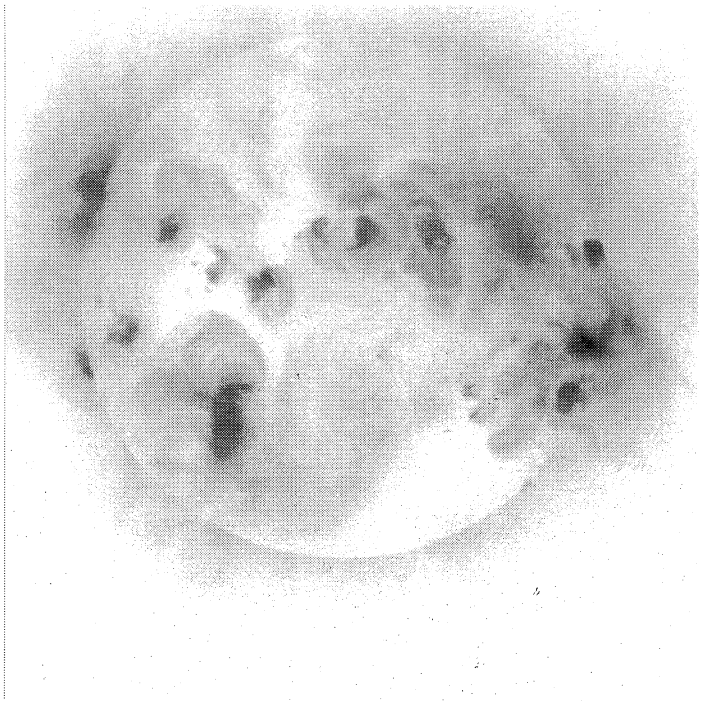
Day 16
11:01:57 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

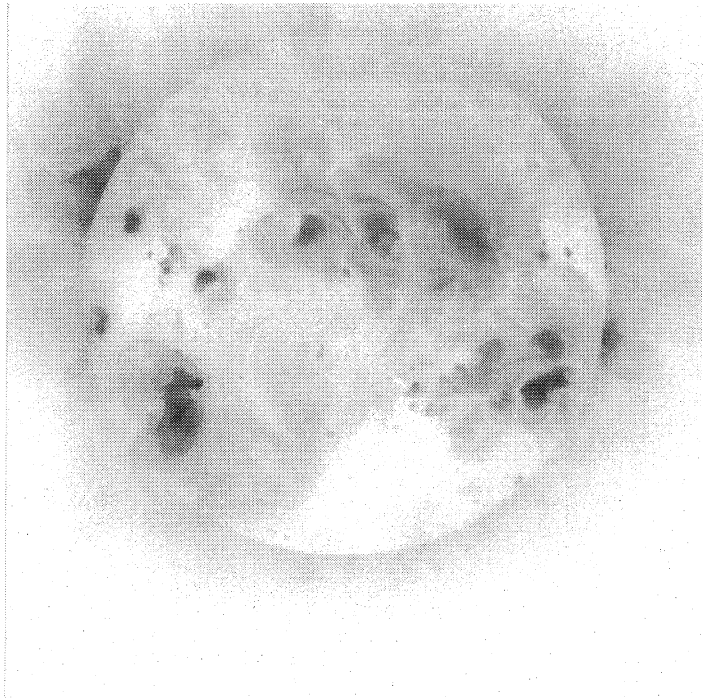
July
2001



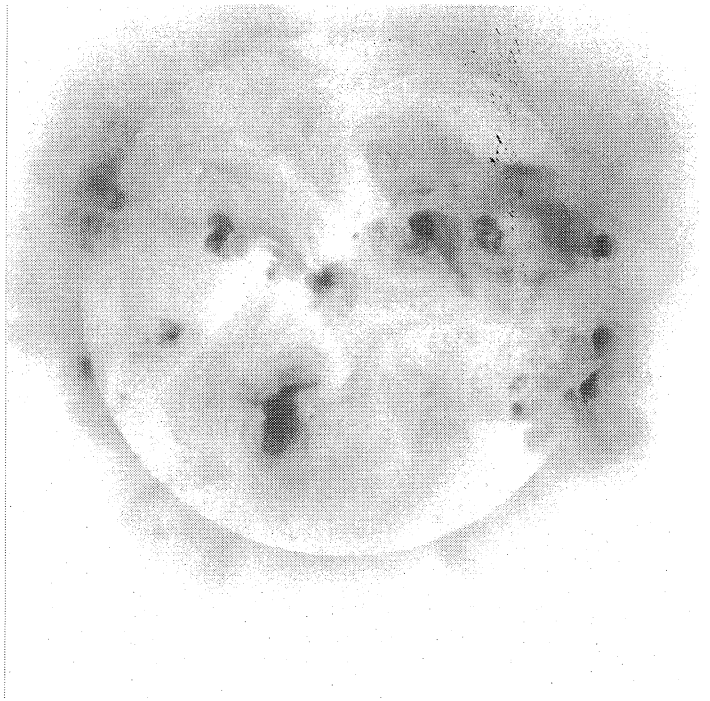
Day 17
14:07:17 UT



Day 19
12:31:40 UT



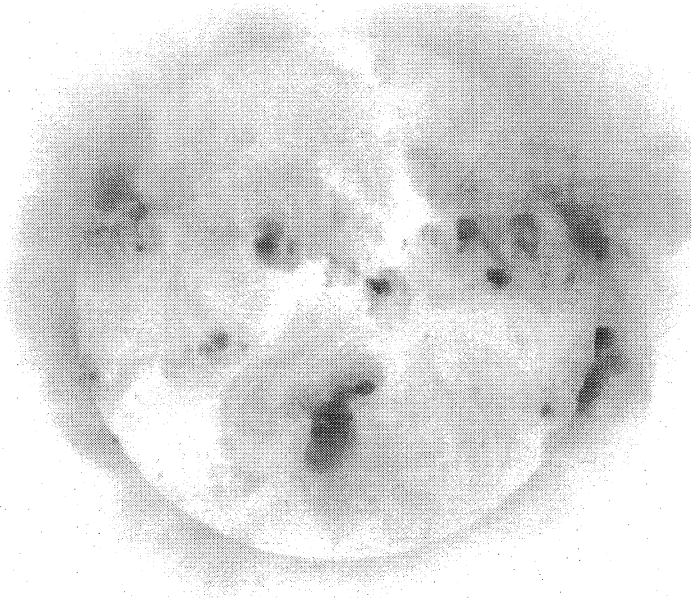
Day 18
12:26:42 UT



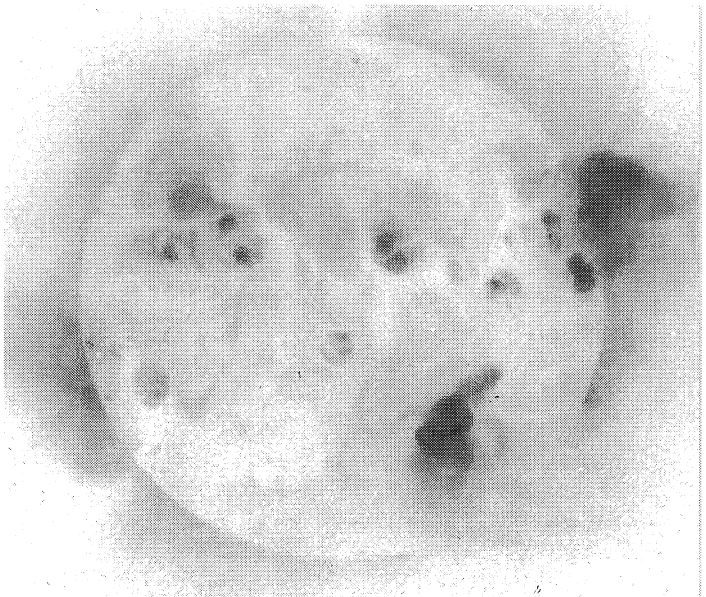
Day 20
12:30:30 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

July
2001

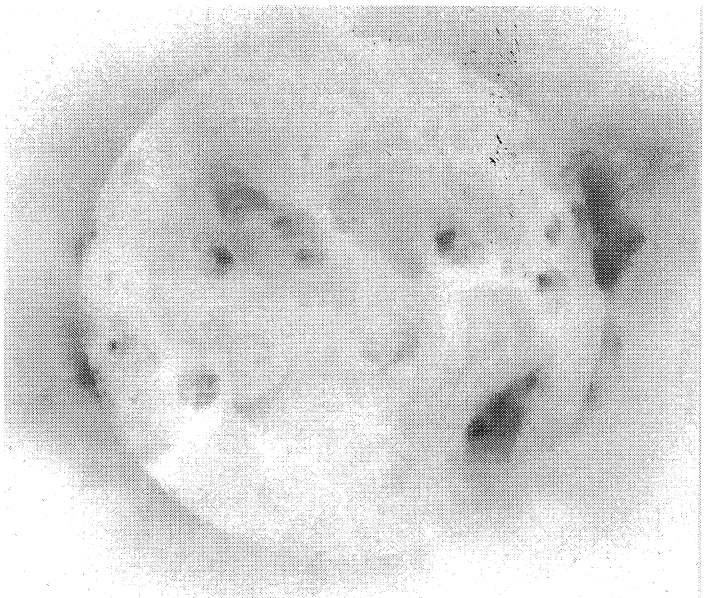


Day 21
12:22:56 UT



Day 23
11:08:37 UT

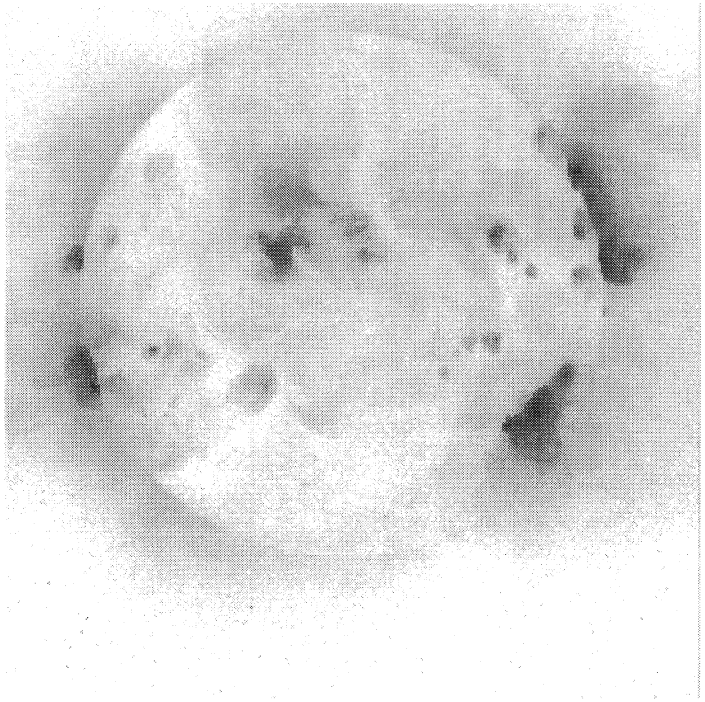
Day 22
12:29:42 UT



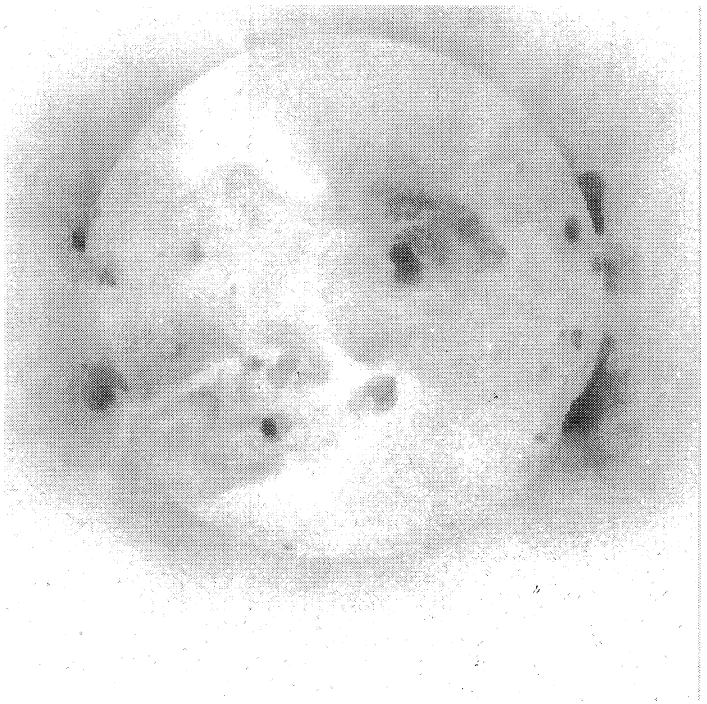
Day 24
12:22:13 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

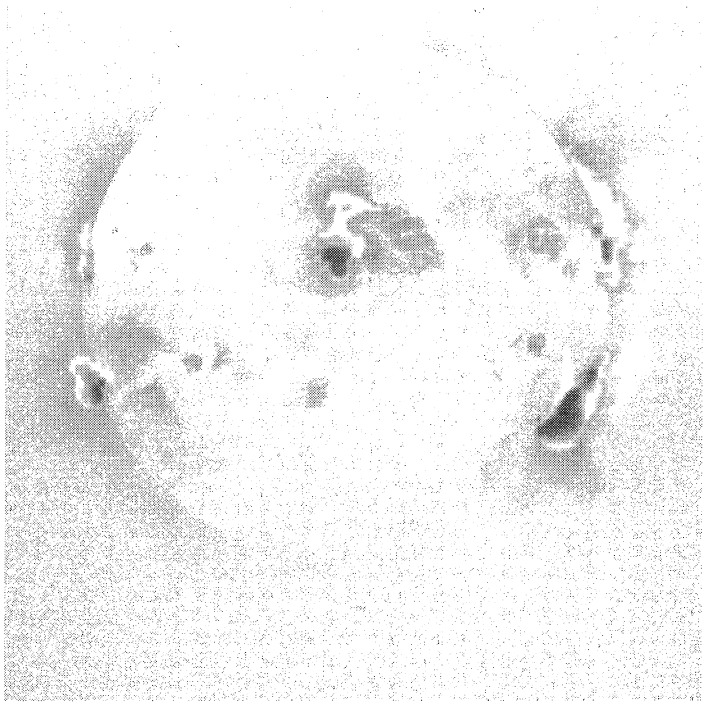
July
2001



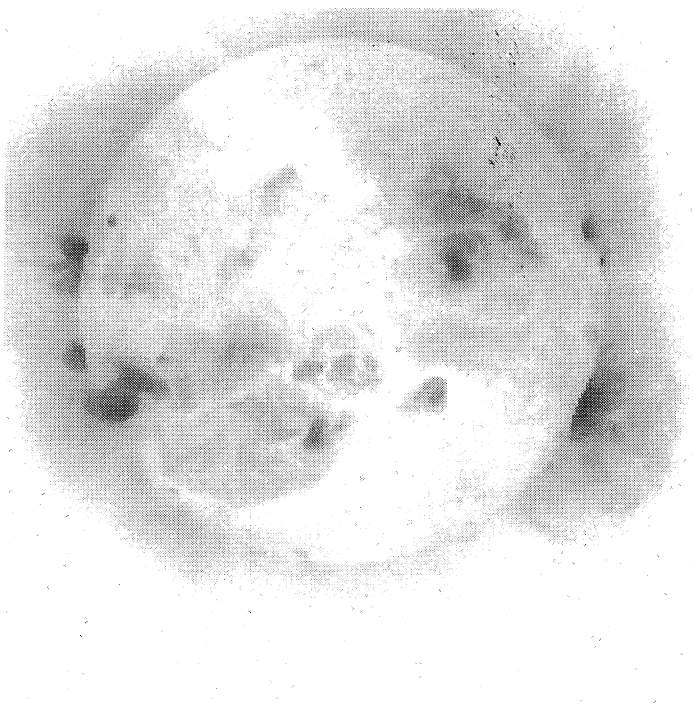
Day 25
12:15:01 UT



Day 27
14:02:29 UT



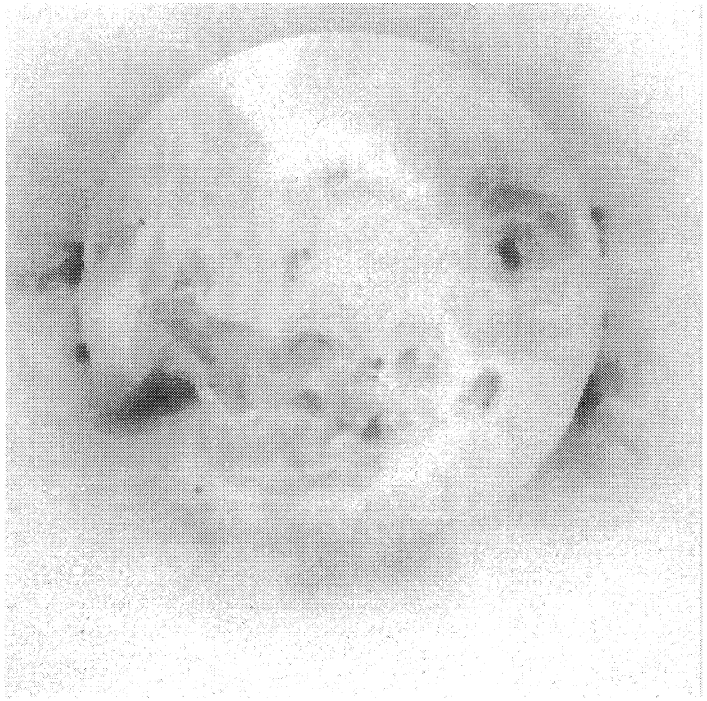
Day 26
09:31:15 UT



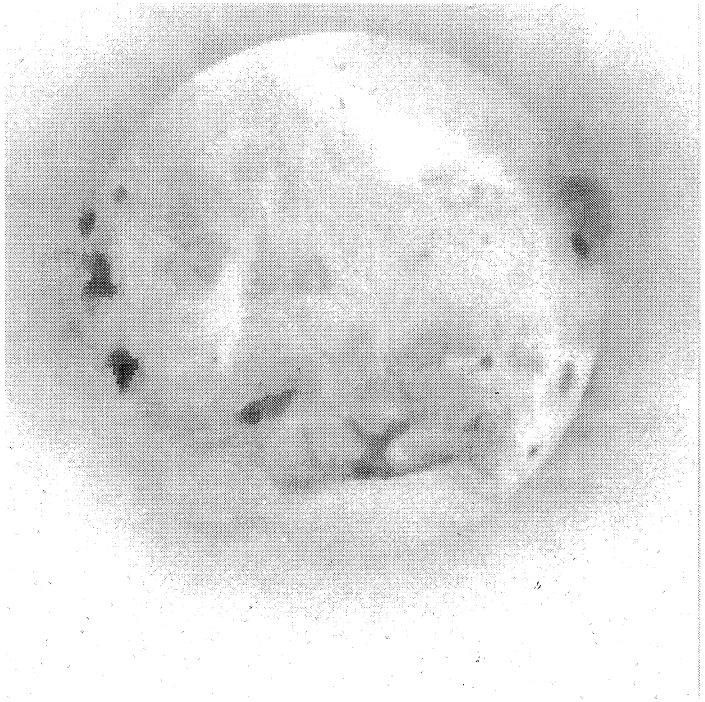
Day 28
11:56:20 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

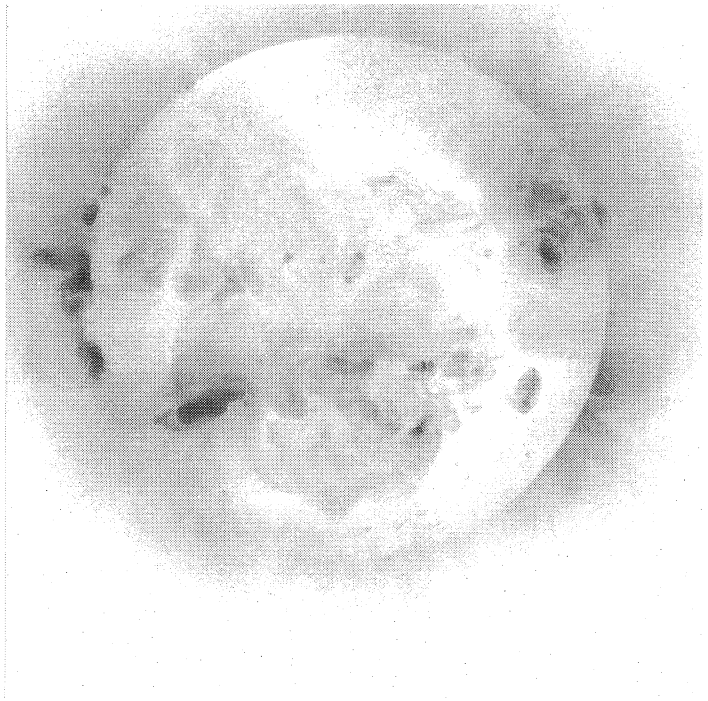
July
2001



Day 29
12:00:04 UT

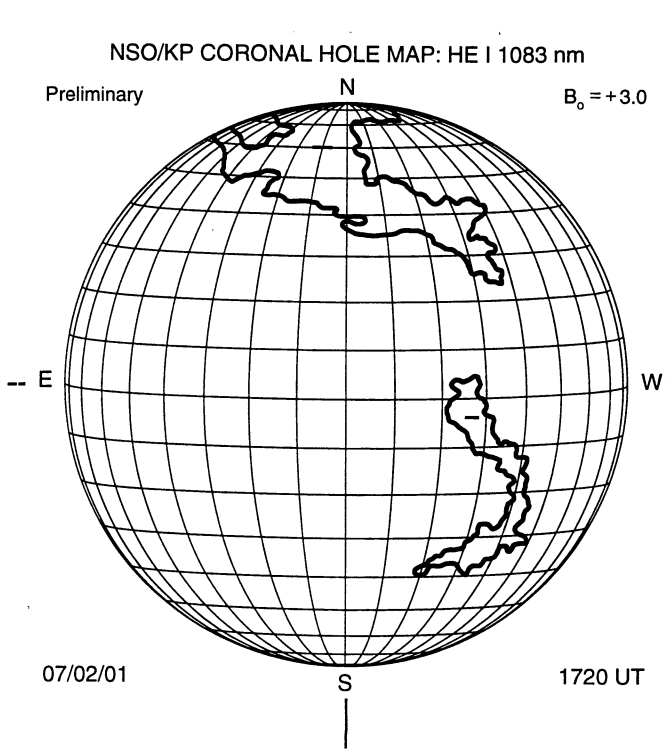


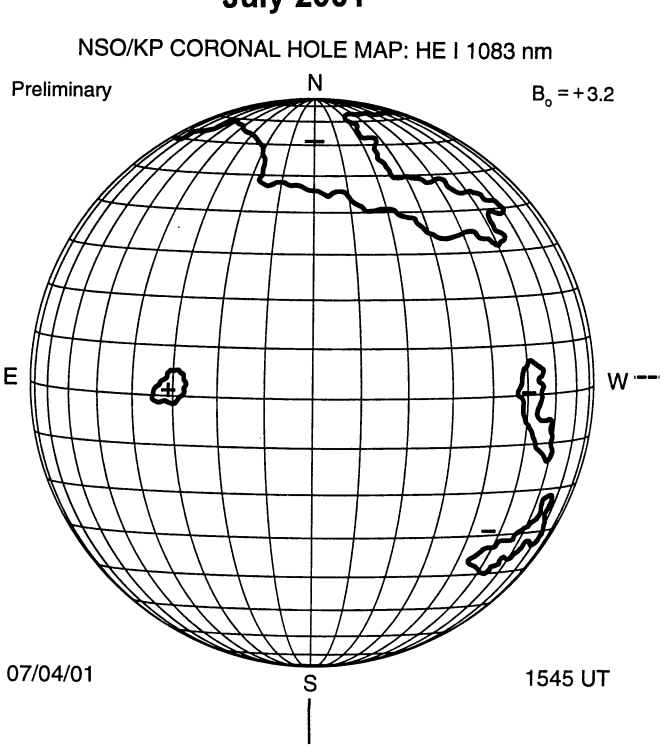
Day 31
11:59:48 UT

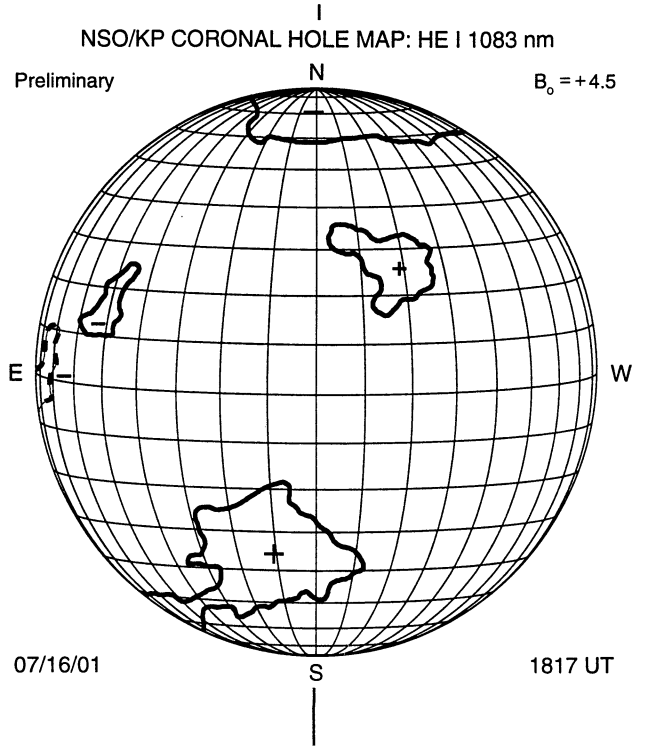


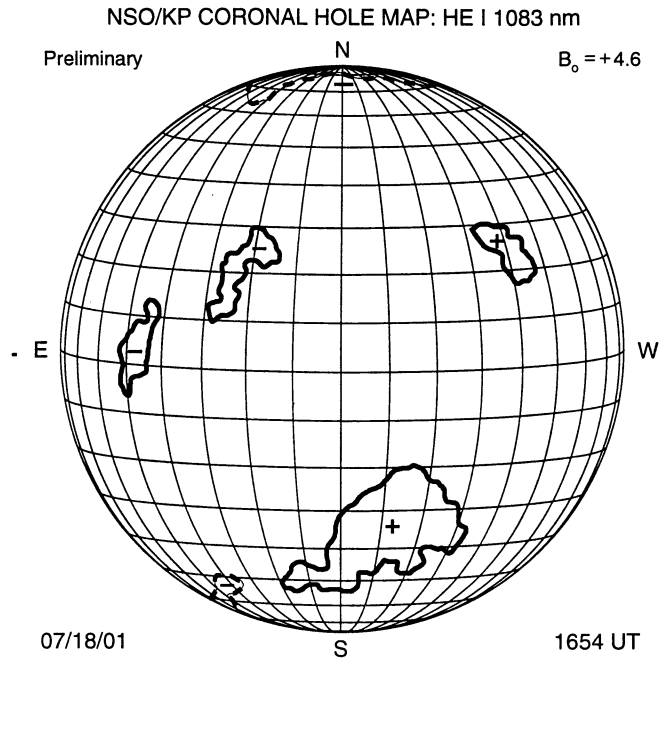
Day 30
07:47:14 UT

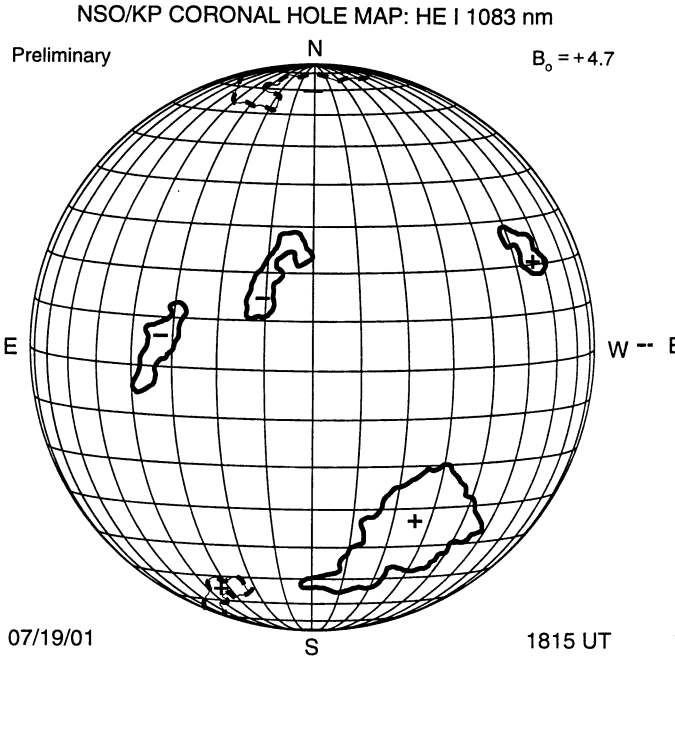
KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
July 2001

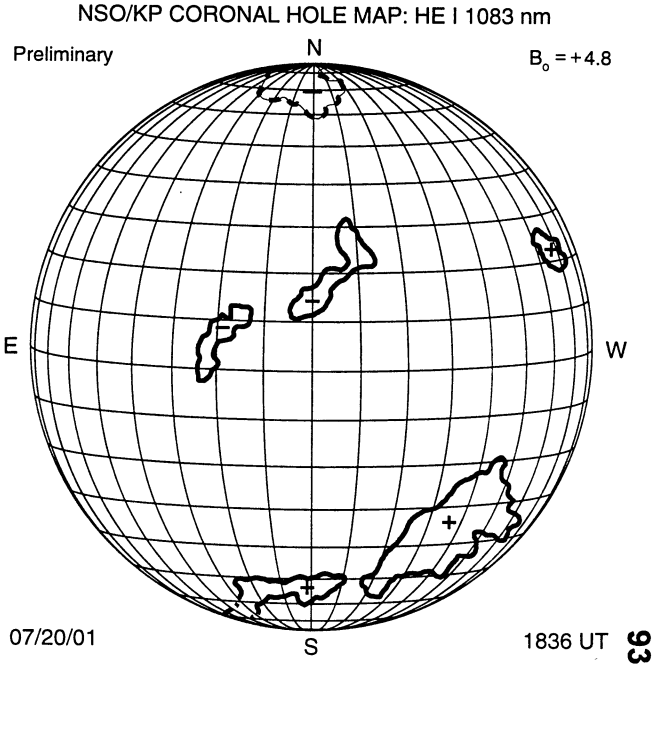






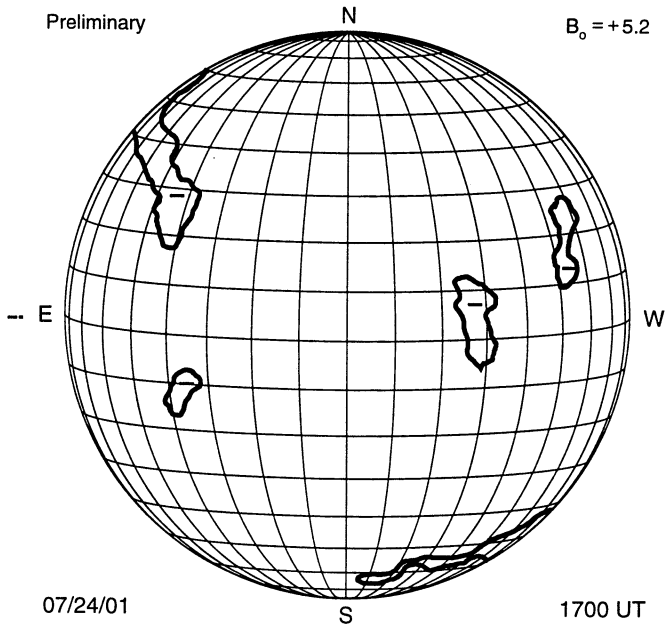




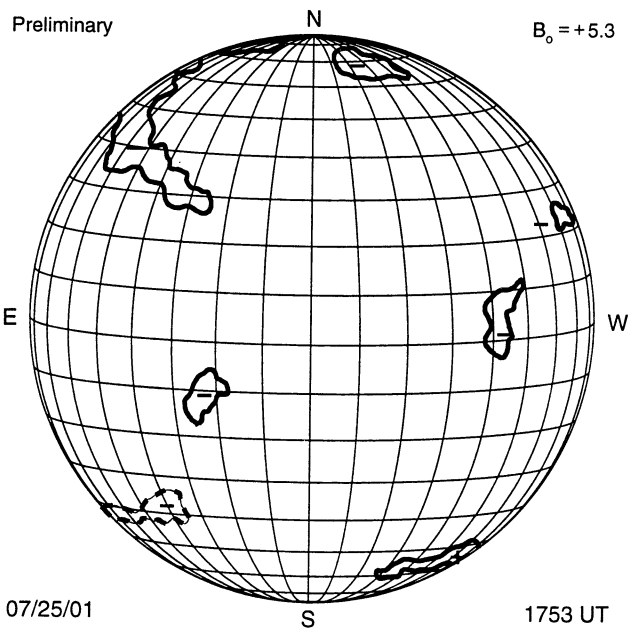


KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
July 2001

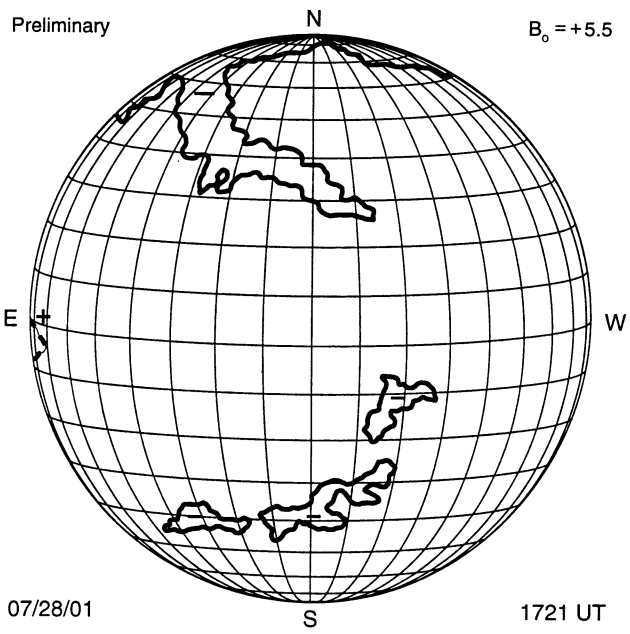
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



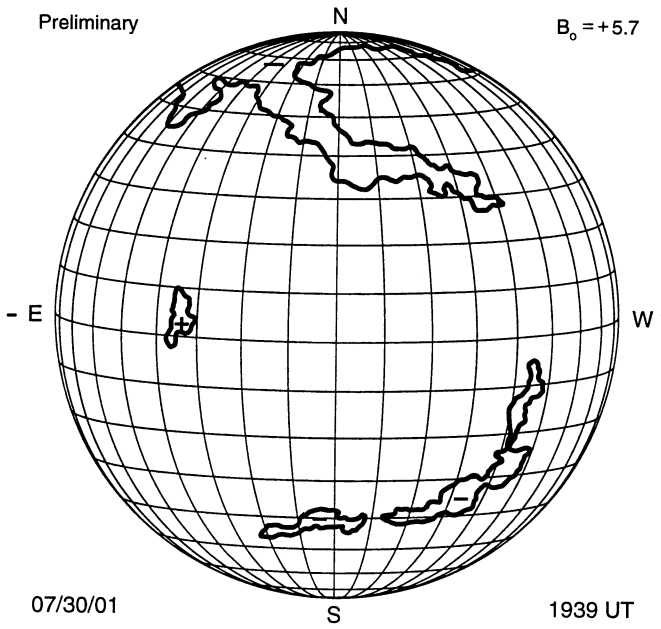
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



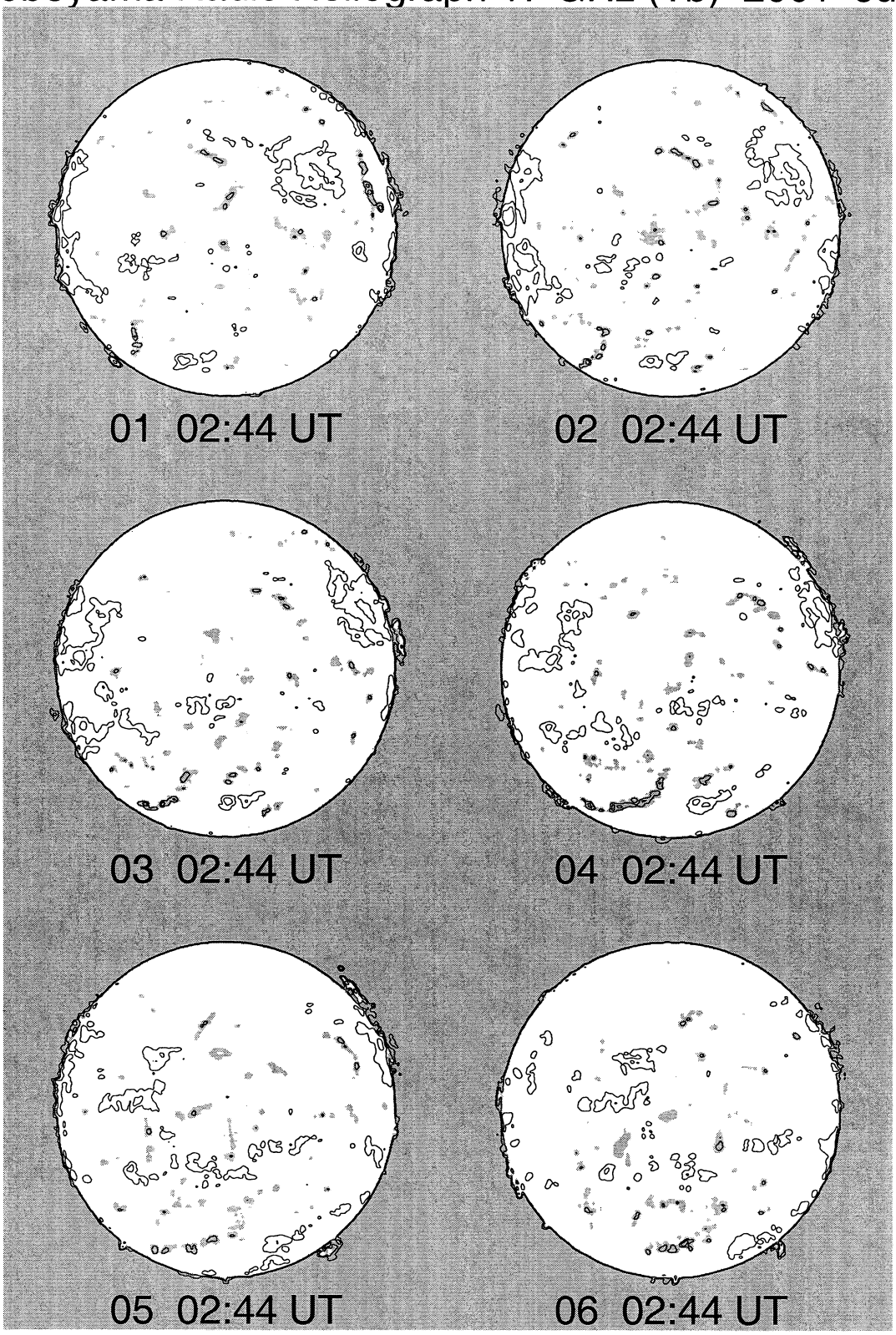
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



NSO/KP CORONAL HOLE MAP: HE I 1083 nm

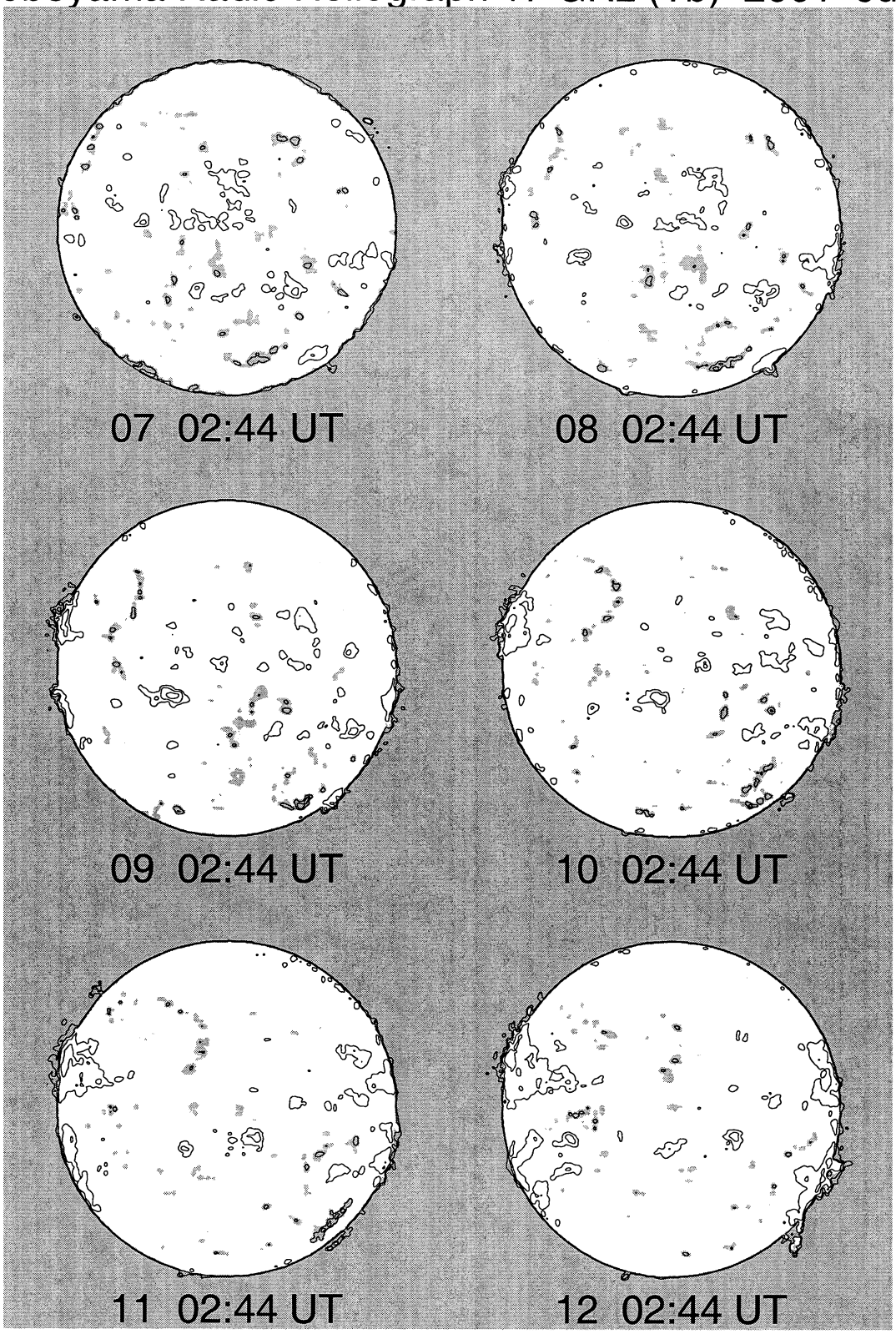


Nobeyama Radio Heliograph 17 GHz (Tb) 2001 July



Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2001 July



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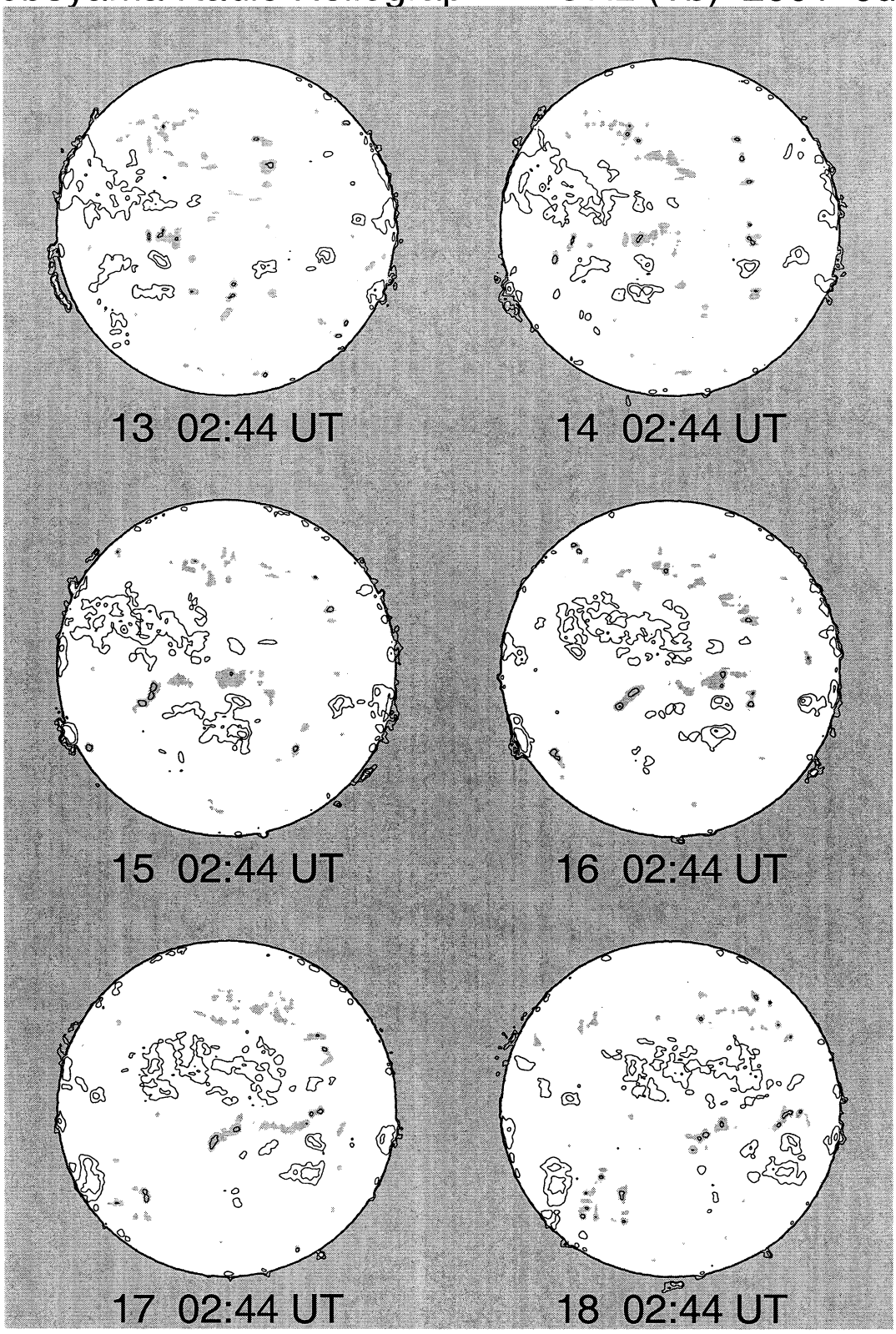
Nobeyama Radio Heliograph 17 GHz (Tb) 2001 July



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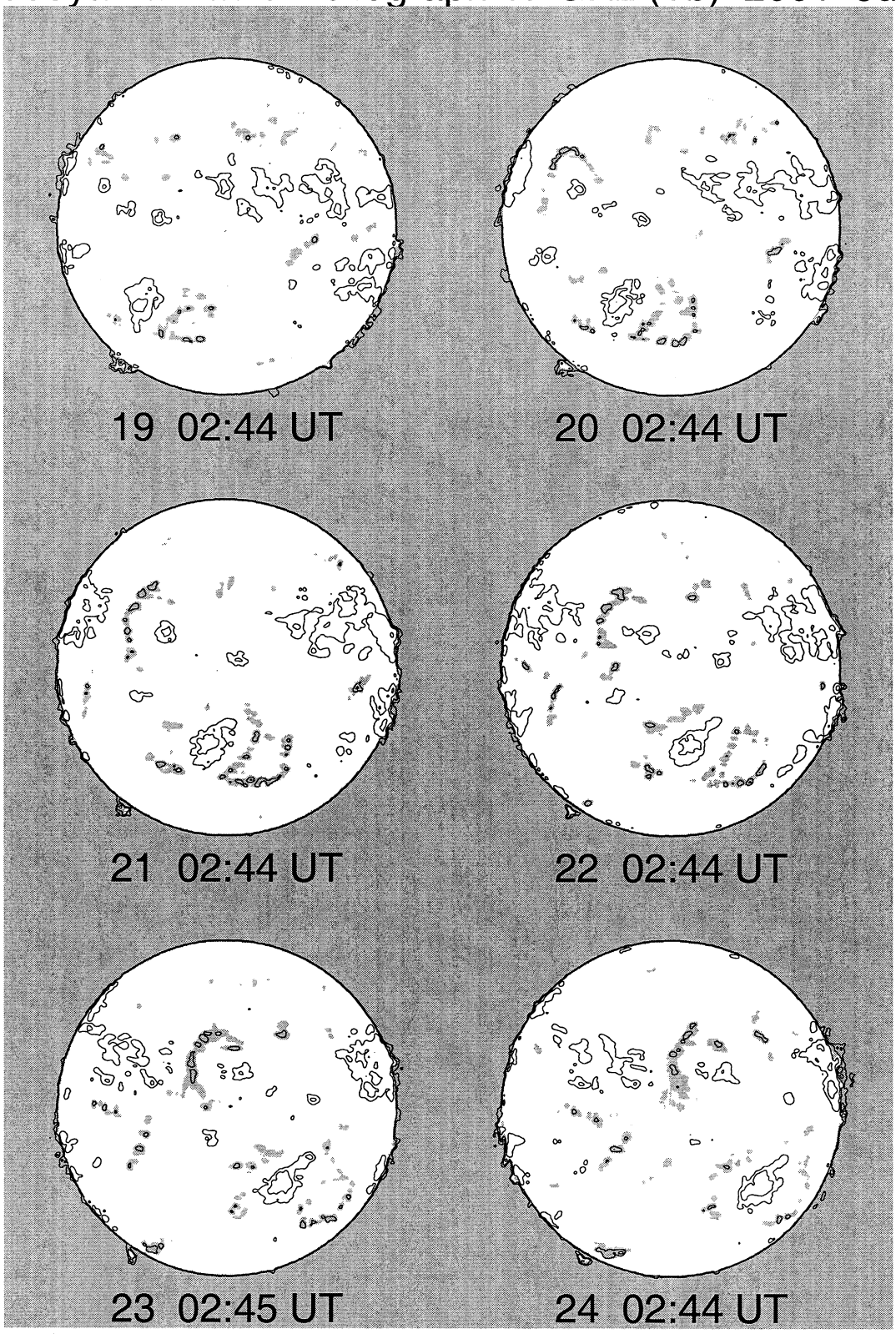
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2001 July



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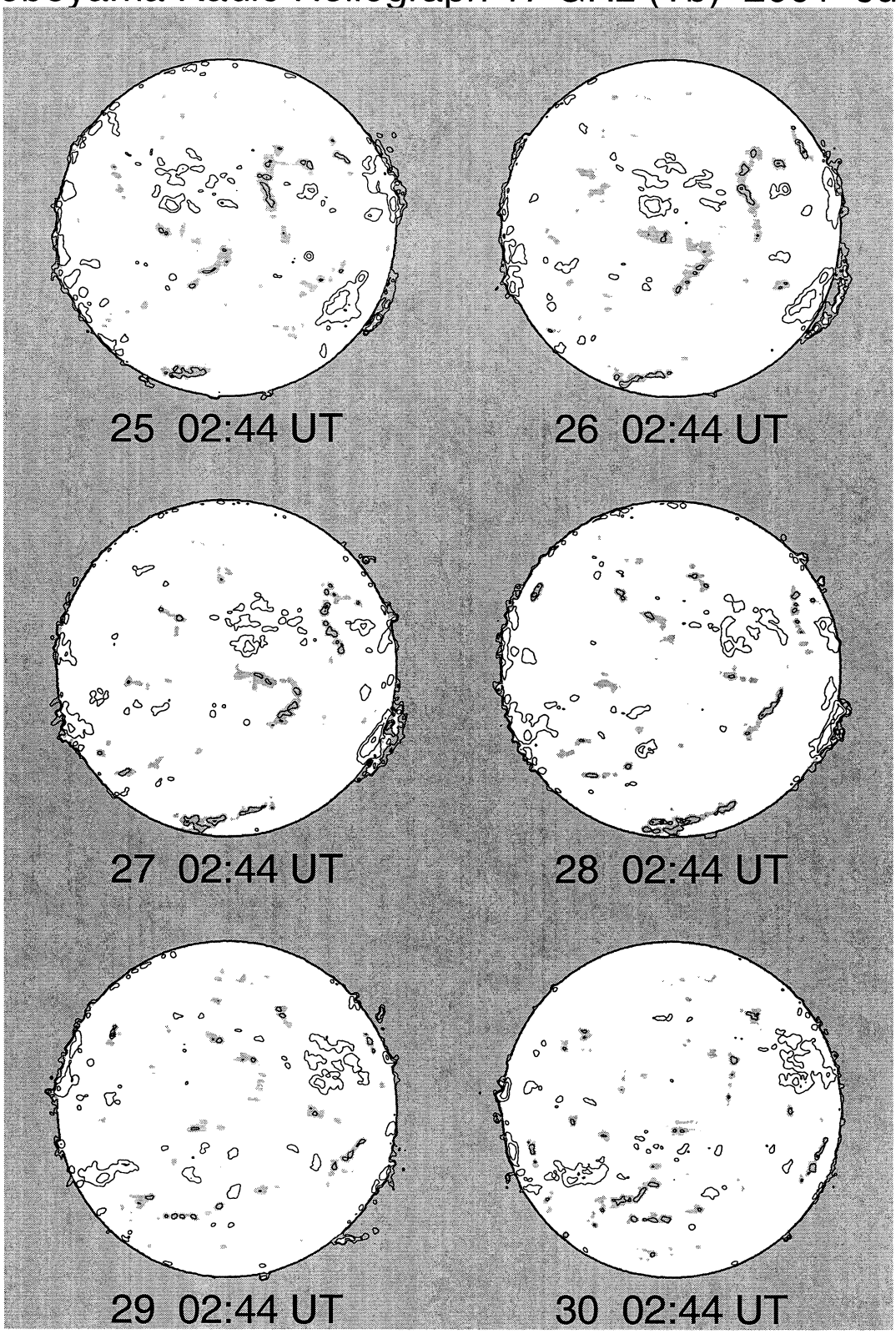
Nobeyama Radio Heliograph 17 GHz (Tb) 2001 July



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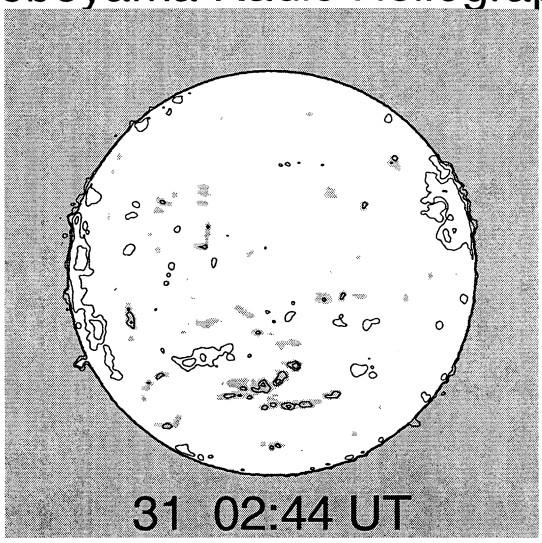
Nobeyama Radio Heliograph 17 GHz (Tb) 2001 July



Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JULY 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
9516B	30546	MWIL	06 25 1445	S07 E74	07 1.1	4	(AP)					
9516B		SVTO	06 26 0504	S08 E67	07 1.2		A	AXX		1		3
9516B	30546	MWIL	06 26 1445	S08 E61	07 1.2	4	(AP)					
9516B		LEAR	06 27 0038	S08 E55	07 1.2		A	AXX		1		3
9516B		SVTO	06 27 0530	S08 E53	07 1.2		A	AXX		1		3
9518		LEAR	06 27 0038	S48 E57	07 1.8		B	DSO	60	4	8	3
9518		SVTO	06 27 0530	S48 E56	07 1.9		B	DSO	80	7	8	3
9518		RAMY	06 27 1231	S48 E50	07 1.7		B	DAO	60	4	8	3
9518		HOLL	06 27 1345	S47 E50	07 1.7		B	DSO	70	4	8	4
9518	30549	MWIL	06 27 1430	S47 E49	07 1.7	4	(BG)					
9518		LEAR	06 28 0055	S48 E44	07 1.7		B	CAO	60	6	10	3
9518		TACH	06 28 0535	S47 E45	07 2.0			AXX	20	1	1	4
9518		KAND	06 28 0730	S48 E48	07 2.3			AX		3	1	4
9518		SVTO	06 28 1042	S47 E42	07 2.0		B	DAO	40	2	6	3
9518		RAMY	06 28 1215	S47 E41	07 1.9		B	DSO	10	2	4	3
9518	30549	MWIL	06 28 1400	S46 E37	07 1.7	4	(BF)					
9518		HOLL	06 28 1600	S47 E39	07 1.9		B	BXO	10	3	9	3
9518		KAND	06 29 0555	S47 E32	07 1.9			BXO		2	8	5
9518		LEAR	06 29 0630	S48 E35	07 2.2		B	ERO	20	3	14	3
9518		SVTO	06 29 0900	S47 E35	07 2.3		B	DSO	50	4	14	3
9518		RAMY	06 29 1238	S47 E28	07 1.9		B	DSO	10	2	6	3
9518		HOLL	06 29 1439	S47 E28	07 1.9		B	BXO		2	4	4
9518	30549	MWIL	06 29 1445	S47 E27	07 1.9	4	(BF)					
9518		LEAR	06 30 0350	S47 E20	07 1.8		B	BXO	20	3	4	4
9518		TACH	06 30 0425	S47 E26	07 2.4			CAO	110	6	9	4
9518		SVTO	06 30 0820	S47 E22	07 2.2		A	AXX		1		3
9518		RAMY	06 30 1202	S47 E21	07 2.2		A	AXX		1		3
9518	30549	MWIL	06 30 1445	S47 E15	07 1.9	4	(B)					
9518		HOLL	06 30 1545	S48 E13	07 1.7		A	AXX	10	2	2	2
9518		LEAR	07 01 0015	S47 E06	07 1.5		B	BXO	10	3	2	3
9518		SVTO	07 01 0450	S47 E07	07 1.8		B	DSO	20	2	8	3
9518		RAMY	07 01 1222	S46 E04	07 1.8		A	AXX		1		3
9518		HOLL	07 01 1422	S46 E01	07 1.7		A	AXX	10	1	1	4
9518	30549	MWIL	07 01 1445	S46 W00	07 1.6	3	(AP)					
9518		LEAR	07 02 0015	S47 W08	07 1.3		B	BXO	10	4	2	3
9518		LEAR	07 03 0035	S47 W20	07 1.3		B	BXO	10	3	3	2
9518		LEAR	07 05 0115	S46 W42	07 1.5		B	CSO	20	2	3	3
9518A		LEAR	07 04 0030	N22 W26	07 2.0		B	BXO	20	2	3	2
9518A		SVTO	07 04 0530	N22 W28	07 2.1		B	BXO	20	3	3	3
9518A		KAND	07 04 0750	N20 W32	07 1.9			AX		1	1	5
9518A		HOLL	07 04 1615	N17 W37	07 1.9		A	AXX	10	1	1	3
9518A		LEAR	07 05 0115	N22 W42	07 1.8		A	AXX		1	1	3
9523		KAND	06 29 0555	S49 E47	07 3.2			BXO		2	1	5
9523		RAMY	06 29 1238	S48 E39	07 2.8		B	CSO	20	3	3	3
9523		HOLL	06 29 1439	S48 E41	07 3.0		B	CSO	30	4	4	4
9523	30554	MWIL	06 29 1445	S48 E38	07 2.8	4	(BF)					
9523		LEAR	06 30 0350	S49 E31	07 2.8		B	DAO	120	12	4	4
9523		SVTO	06 30 0820	S49 E32	07 3.0		B	DAO	180	9	7	3
9523		KAND	06 30 0945	S48 E31	07 3.0			CAO		6	7	1
9523		RAMY	06 30 1202	S48 E31	07 3.1		B	DSO	90	7	9	3
9523	30554	MWIL	06 30 1445	S48 E26	07 2.8	4	(BP)					
9523		HOLL	06 30 1545	S50 E28	07 3.0		B	DAO	140	6	6	2
9523		LEAR	07 01 0015	S49 E22	07 2.9		B	DAO	130	8	5	3
9523		TACH	07 01 0400	S46 E18	07 2.7			HA	170	2	4	3
9523		SVTO	07 01 0450	S49 E21	07 3.0		BG	DSO	170	4	9	3
9523		KAND	07 01 0605	S47 E21	07 3.0			CAO		3	7	4
9523		RAMY	07 01 1222	S49 E18	07 3.0		B	DAO	70	5	6	3
9523		HOLL	07 01 1422	S48 E17	07 3.0		B	DAO	90	5	7	4
9523	30554	MWIL	07 01 1445	S48 E14	07 2.8	4	(BP)					
9523		VORO	07 01 2131	S47 E09	07 2.6			HRX	104	3		3
9523		LEAR	07 02 0015	S49 E09	07 2.8		B	DAO	70	6	7	3
9523		TACH	07 02 0540	S48 E07	07 2.8			CAO	140	3	6	3
9523		SVTO	07 02 0730	S48 E06	07 2.8		B	DAO	70	7	9	3
9523		KAND	07 02 0850	S47 E06	07 2.9			CAO		5	8	3
9523		RAMY	07 02 1225	S49 E03	07 2.8		B	DSO	30	3	7	2
9523		HOLL	07 02 1430	S49 E01	07 2.7		B	DAO	90	4	3	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JULY 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
9523		HOLL	07	02	1430	S52	E04	07	2.9		B	CAO	110	8	8	3
9523		HOLL	07	02	1430	S52	E08	07	3.3		A	AXX	20	4	2	3
9523	30554	MWIL	07	02	1445	S48	E02	07	2.8	4	(BP)					
9523		VORO	07	02	2140	S47	W03	07	2.6			CSO	67	4	2	3
9523		LEAR	07	03	0035	S50	W03	07	2.8		B	CSO	40	8	9	2
9523		SVTO	07	03	0530	S49	W04	07	2.9		B	DAO	90	10	9	3
9523		TACH	07	03	0617	S46	W04	07	2.9			BRO	35	4	6	3
9523	30554	MWIL	07	03	1430	S48	W10	07	2.8	4	(B)					
9523		HOLL	07	03	1444	S47	W07	07	3.0		B	DSO	90	9	9	3
9523		VORO	07	03	2204	S48	W14	07	2.7			CSO	52	5	4	3
9523		LEAR	07	04	0030	S49	W16	07	2.7		B	DAO	60	8	10	2
9523		SVTO	07	04	0530	S50	W15	07	2.9		B	EAO	80	6	11	3
9523		KAND	07	04	0750	S48	W20	07	2.6			CAO		3	5	5
9523		RAMY	07	04	1241	S50	W17	07	3.1		B	BXO	40	2	5	2
9523		RAMY	07	04	1241	S50	W20	07	2.8		B	BXO	40	5	9	2
9523		RAMY	07	04	1241	S50	W22	07	2.7		B	BXO	30	3	4	2
9523		HOLL	07	04	1615	S51	W18	07	3.1		B	EAO	70	5	13	3
9523		LEAR	07	05	0115	S51	W22	07	3.2		A	AXX		1	1	3
9523		TACH	07	05	0436	S45	W31	07	2.6			BXO	12	2	3	3
9523		SVTO	07	05	0543	S47	W33	07	2.5		B	DAO	40	2	4	3
9523		KAND	07	05	0720	S48	W34	07	2.4			BXO		2	5	3
9523		RAMY	07	05	1226	S47	W35	07	2.6		B	BXO	10	2	4	2
9523		HOLL	07	05	1533	S49	W36	07	2.6		B	BXO		2	3	4
9523	30554	MWIL	07	07	1500	S48	W52	07	3.2	2	(AF)					
9521		SVTO	06	27	0530	S07	E72	07	2.6		A	AXX		2	2	3
9521		SVTO	06	28	1042	S06	E55	07	2.6		A	HSX	10	1	1	3
9521		RAMY	06	28	1215	S06	E53	07	2.5		A	HRX		1	1	3
9521	30553	MWIL	06	28	1400	S06	E53	07	2.5	3	(AP)					
9521		HOLL	06	28	1600	S06	E52	07	2.5		A	AXX		2	2	3
9521		VORO	06	28	2144	S07	E51	07	2.7			HRX	38	1		2
9521	30553	MWIL	06	29	1445	S06	E39	07	2.5	4	(AP)					
9521		LEAR	07	05	0115	S08	W24	07	3.2		A	AXX		1		3
9522G	30561A	MWIL	07	03	1430	S02	W02	07	3.4	4	(BF)					
9521A	30565	MWIL	07	08	1500	S16	W67	07	3.5	3	(B)					
9522	30550	MWIL	06	27	1430	S07	E85	07	4.0	4	AF					
9522		LEAR	06	28	0055	S07	E80	07	4.0		B	BXO	20	3	3	3
9522		LEAR	06	28	0055	S09	E79	07	4.0		A	HAX	20	1	1	3
9522		TACH	06	28	0535	S07	E77	07	4.0			AXX	10	1	1	4
9522		KAND	06	28	0730	S07	E74	07	3.8			HS		1	1	4
9522		SVTO	06	28	1042	S07	E72	07	3.8		A	HSX	40	1	2	3
9522		RAMY	06	28	1215	S07	E70	07	3.7		A	HSX	10	1	1	3
9522	30550	MWIL	06	28	1400	S07	E70	07	3.8	4	(AF)					
9522		HOLL	06	28	1600	S07	E70	07	3.9		A	HSX	60	1	2	3
9522		TACH	06	29	0505	S08	E61	07	3.8			HSX	45	1	1	3
9522		KAND	06	29	0555	S07	E63	07	4.0			HS		1	1	5
9522		LEAR	06	29	0630	S08	E60	07	3.8		A	HSX	20	1	1	3
9522		SVTO	06	29	0900	S08	E60	07	3.9		A	HSX	40	1	1	3
9522		RAMY	06	29	1238	S08	E57	07	3.8		A	HSX	40	1	1	3
9522		HOLL	06	29	1439	S07	E57	07	3.9		A	HAX	30	1	1	4
9522	30550	MWIL	06	29	1445	S08	E57	07	3.9	5	(AF)					
9522		LEAR	06	30	0350	S09	E49	07	3.8		A	HAX	40	1	1	4
9522		TACH	06	30	0425	S08	E49	07	3.8			AXX	30	1	1	4
9522		SVTO	06	30	0820	S08	E47	07	3.9		A	HAX	30	1	1	3
9522		KAND	06	30	0945	S07	E46	07	3.8			HS		1	1	1
9522		RAMY	06	30	1202	S07	E44	07	3.8		A	HSX	30	1	1	3
9522	30550	MWIL	06	30	1445	S08	E43	07	3.8	5	(AF)					
9522		HOLL	06	30	1545	S08	E43	07	3.9		A	HAX	30	1	2	2
9522		LEAR	07	01	0015	S09	E38	07	3.9		A	HSX	20	1	1	3
9522		TACH	07	01	0400	S07	E35	07	3.8			AXX	20	1	1	3
9522		SVTO	07	01	0450	S08	E36	07	3.9		A	HSX	20	1	1	3
9522		KAND	07	01	0605	S06	E36	07	3.9			HS		1	2	4
9522		RAMY	07	01	1222	S07	E31	07	3.8		A	HSX	20	1	1	3
9522		HOLL	07	01	1422	S08	E27	07	3.6		B	CSO	30	3	8	4
9522	30550	MWIL	07	01	1445	S09	E27	07	3.6	4	(BF)					
9522		VORO	07	01	2131	S08	E27	07	3.9			AXX	9	1		3

S U N S P O T G R O U P S
(Ordered by Central Meridian Passage Date)
JULY 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
9522		LEAR	07	02	0015	S09	E24	07	3.8		A	HSX	10	1	1	3
9522		TACH	07	02	0540	S07	E21	07	3.8			HSX	50	1	1	3
9522		SVTO	07	02	0730	S08	E22	07	4.0		A	HSX	10	2	4	3
9522		KAND	07	02	0850	S07	E20	07	3.9			AX		1	1	3
9522		RAMY	07	02	1225	S08	E18	07	3.9		A	HSX	10	1	1	2
9522		HOLL	07	02	1430	S08	E17	07	3.9		A	HSX	20	1	2	3
9522	30550	MWIL	07	02	1445	S08	E16	07	3.8	5	(AF)					
9522		VORO	07	02	2140	S08	E13	07	3.9			AXX	10	1		3
9522		LEAR	07	03	0035	S08	E11	07	3.8		A	HSX	10	1	1	2
9522		SVTO	07	03	0530	S08	E08	07	3.8		A	HSX	10	1	1	3
9522		TACH	07	03	0617	S07	E08	07	3.9			AXX	15	1	1	3
9522	30550	MWIL	07	03	1430	S07	E04	07	3.9	4	(AF)					
9522		HOLL	07	03	1444	S07	E04	07	3.9		B	BXO	20	4	3	3
9522		KAND	07	05	0720	S08	W16	07	4.1			AX		2	1	3
9522		HOLL	07	05	1533	S09	W22	07	4.0		B	BXO		3	4	4
9522A		LEAR	06	30	0350	N14	E50	07	3.9		A	AXX	10	1		4
9522A		SVTO	06	30	0820	N15	E49	07	4.0		A	AXX		1		3
9522A		RAMY	06	30	1202	N15	E47	07	4.0		A	AXX		1		3
9522A	30555	MWIL	06	30	1445	N15	E46	07	4.1	4	(AP)					
9522A		HOLL	06	30	1545	N15	E46	07	4.1		A	AXX	10	1	1	2
9522F	30562	MWIL	07	03	1430	S12	E16	07	4.8	3	(B)					
9530		KAND	07	06	0837	S20	W17	07	5.0			BXO		5	4	4
9530		HOLL	07	06	1532	S19	W21	07	5.0		B	CSO	40	5	5	3
9530		VORO	07	06	2222	S19	W25	07	5.0			BXO	40	5	4	3
9530		LEAR	07	07	0308	S19	W28	07	5.0		B	DSO	20	10	5	3
9530		TACH	07	07	0405	S18	W28	07	5.0			BRI	19	5	4	3
9530		SVTO	07	07	0645	S19	W29	07	5.1		B	DAO	60	17	7	3
9530		KAND	07	07	0655	S20	W29	07	5.1			CRO		7	6	3
9530		RAMY	07	07	1248	S20	W33	07	5.0		B	CSO	20	6	6	3
9530		HOLL	07	07	1404	S21	W34	07	5.0		B	CSO	50	8	7	3
9530	30564	MWIL	07	07	1500	S19	W34	07	5.0	4	(BP)					
9530		VORO	07	07	2221	S20	W37	07	5.1			DSO	45	4	3	3
9530		LEAR	07	08	0121	S18	W40	07	5.0		B	CSO	30	7	7	3
9530		TACH	07	08	0539	S20	W37	07	5.4			AXX	3	1	1	3
9530		KAND	07	08	0645	S21	W42	07	5.1			CSO		3	4	4
9530		SVTO	07	08	0710	S20	W43	07	5.0		B	CAO	50	9	7	3
9530		RAMY	07	08	1248	S20	W46	07	5.0		B	CSO	10	2	4	3
9530		HOLL	07	08	1418	S20	W47	07	5.0		B	CSO	40	3	5	4
9530	30564	MWIL	07	08	1500	S20	W48	07	4.9	3	(BG)					
9530		LEAR	07	09	0043	S18	W52	07	5.1		B	DAO	10	3	5	3
9530		SVTO	07	09	0615	S23	W55	07	5.0		B	DSO	30	4	9	3
9530		KAND	07	09	0845	S20	W58	07	4.9			AX		1	1	4
9530		RAMY	07	09	1201	S20	W60	07	4.9		A	AXX	20	1	1	3
9530		HOLL	07	09	1415	S20	W61	07	4.9		A	AXX	30	2	1	4
9530	30564	MWIL	07	09	1445	S19	W61	07	4.9	4	(AP)					
9530		LEAR	07	10	0134	S18	W68	07	4.9		A	HRX	10	1		3
9532		RAMY	07	08	1248	N10	W39	07	5.6		B	BXO		2	2	3
9532		HOLL	07	08	1418	N09	W41	07	5.5		B	BXO	20	2	2	4
9532	30566	MWIL	07	08	1500	N09	W40	07	5.6	3	(B)					
9532		LEAR	07	09	0043	N09	W45	07	5.6		B	DAO	30	5	5	3
9532		TACH	07	09	0609	N09	W48	07	5.6			HSX	70	1	1	3
9532		SVTO	07	09	0615	N06	W47	07	5.7		B	DAO	20	4	4	3
9532		KAND	07	09	0845	N09	W49	07	5.7			CAO		3	3	4
9532		RAMY	07	09	1201	N08	W51	07	5.7		B	CSO	60	3	1	3
9532		HOLL	07	09	1415	N08	W52	07	5.7		B	CSO	50	5	4	4
9532	30566	MWIL	07	09	1445	N09	W52	07	5.7	4	(BP)					
9532		VORO	07	09	2342	N08	W59	07	5.6			HRX	21	1		2
9532		LEAR	07	10	0134	N08	W59	07	5.6		A	HRX	10	1		3
9532		TACH	07	10	0511	N08	W62	07	5.6			AXX	5	1	1	4
9532		KAND	07	10	0640	N08	W63	07	5.5			AX		1		4
9532		SVTO	07	10	0755	N05	W66	07	5.4		A	AXX	20	1	1	3
9532		RAMY	07	10	1157	N08	W68	07	5.4		A	AXX	10	1		2
9532	30566	MWIL	07	10	1400	N09	W67	07	5.5	4	(AP)					
9532		HOLL	07	10	1435	N08	W68	07	5.5		A	AXX	10	1	1	4
9522B		LEAR	06	30	0350	N18	E78	07	6.1		A	HSX	30	1	2	4

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9522B		SVTO	06	30	0820	N18	E81	07	6.5		A	HSX	30	1	1	3
9522B		RAMY	06	30	1202	N20	E78	07	6.5		A	HSX	50	1	2	3
9522B	30556	MWIL	06	30	1445	N17	E79	07	6.6	4	(AP)					
9522B	30557	MWIL	06	30	1445	N20	E81	07	6.8	3	AP					
9522B		HOLL	06	30	1545	N19	E82	07	6.9		A	HSX	60	1	3	2
9532A		HOLL	07	04	1615	S14	E27	07	6.7		A	AXX	10	1	1	3
9532A		LEAR	07	05	0115	S14	E20	07	6.6		A	AXX	10	1	1	3
9532A		TACH	07	05	0436	S13	E18	07	6.5			AXX	1	1	1	3
9525		LEAR	07	01	0015	N17	E73	07	6.5		A	HSX	30	1	2	3
9525		TACH	07	01	0400	N19	E69	07	6.4			AXX	5	1	1	3
9525		SVTO	07	01	0450	N19	E70	07	6.5		B	CAO	60	2	3	3
9525		KAND	07	01	0605	N19	E73	07	6.8			HS		1	2	4
9525		RAMY	07	01	1222	N21	E66	07	6.6		B	CSO	60	2	3	3
9525		HOLL	07	01	1422	N19	E64	07	6.5		B	CAO	60	2	2	4
9525	30556	MWIL	07	01	1445	N18	E65	07	6.6	5	(AP)					
9525	30557	MWIL	07	01	1445	N21	E66	07	6.7	4	(B)					
9525		VORO	07	01	2131	N18	E61	07	6.5			HRX	67	1		3
9525		LEAR	07	02	0015	N18	E59	07	6.5		B	CAO	40	4	3	3
9525		TACH	07	02	0540	N19	E56	07	6.5			CSO	90	2	2	3
9525		SVTO	07	02	0730	N18	E57	07	6.6		B	DAO	50	2	3	3
9525		KAND	07	02	0850	N19	E56	07	6.6			HS		1	2	3
9525		KAND	07	02	0850	N21	E56	07	6.7			AX		1	1	3
9525		RAMY	07	02	1225	N19	E53	07	6.6		B	CSO	20	2	3	2
9525		HOLL	07	02	1430	N17	E52	07	6.5		B	CSO	30	3	4	3
9525	30556	MWIL	07	02	1445	N18	E52	07	6.6	4	(AP)					
9525	30557	MWIL	07	02	1445	N20	E53	07	6.7	4	(BP)					
9525		VORO	07	02	2140	N17	E48	07	6.5			HRX	61	1		3
9525		LEAR	07	03	0035	N18	E47	07	6.6		B	CAO	40	5	4	2
9525		SVTO	07	03	0530	N19	E44	07	6.6		B	CAO	30	3	4	3
9525		TACH	07	03	0617	N19	E44	07	6.6			CAO	54	3	2	3
9525	30556	MWIL	07	03	1430	N17	E39	07	6.6	4	(AP)					
9525	30557	MWIL	07	03	1430	N21	E42	07	6.8	4	(BP)					
9525		HOLL	07	03	1444	N21	E39	07	6.6		B	CSO	70	6	7	3
9525		VORO	07	03	2204	N18	E35	07	6.6			HSX	26	1		3
9525		LEAR	07	04	0030	N19	E35	07	6.7		B	DAO	40	7	6	2
9525		SVTO	07	04	0530	N18	E35	07	6.9		B	DAO	80	9	9	3
9525		KAND	07	04	0750	N18	E30	07	6.6			CAO		2	4	5
9525		KAND	07	04	0750	N21	E31	07	6.7			BXO		6	4	5
9525		RAMY	07	04	1241	N20	E28	07	6.7		B	DSO	70	8	5	2
9525		HOLL	07	04	1615	N21	E25	07	6.6		B	DAO	70	7	5	3
9525		LEAR	07	05	0115	N21	E23	07	6.8		B	CSO	10	5	5	3
9525		TACH	07	05	0436	N21	E20	07	6.7			BRI	31	5	5	3
9525		SVTO	07	05	0543	N18	E20	07	6.8		B	DAO	70	11	8	3
9525		KAND	07	05	0720	N18	E18	07	6.7			HR		1	1	3
9525		KAND	07	05	0720	N21	E19	07	6.8			BXO		3	5	3
9525		RAMY	07	05	1226	N20	E15	07	6.7		B	CRO	30	6	4	2
9525		HOLL	07	05	1533	N19	E13	07	6.6		B	CSO	20	7	3	4
9525		VORO	07	05	2209	N19	E10	07	6.7			AXX	27	3	1	3
9525		SVTO	07	06	0540	N18	E07	07	6.8		B	DSO	40	7	4	3
9525		TACH	07	06	0617	N19	E06	07	6.7			BRO	40	3	3	3
9525		KAND	07	06	0837	N18	E05	07	6.7			CRO		4	3	4
9525		HOLL	07	06	1532	N19	E01	07	6.7		B	CSO	20	3	4	3
9525		LEAR	07	07	0308	N19	W04	07	6.8		B	BXO	10	5	3	3
9525		SVTO	07	07	0645	N21	W08	07	6.7		B	BXO	30	7	4	3
9525		RAMY	07	07	1248	N20	W11	07	6.7		B	BXO		2	2	3
9525		HOLL	07	07	1404	N18	W11	07	6.7		B	BXO	20	2	3	3
9525	30556	MWIL	07	07	1500	N19	W11	07	6.8	3	(AP)					
9525		SVTO	07	08	0710	N19	W21	07	6.7		A	AXX		2	1	3
9526	30558	MWIL	06	30	1445	N07	E83	07	6.8	4	AP					
9526		LEAR	07	01	0015	N07	E77	07	6.8		A	HAX	30	1	1	3
9526		TACH	07	01	0400	N10	E71	07	6.5			AXX	1	1	1	3
9526		SVTO	07	01	0450	N09	E74	07	6.7		A	HAX	30	1	1	3
9526		KAND	07	01	0605	N09	E77	07	7.0			HA		1	1	4
9526		RAMY	07	01	1222	N11	E70	07	6.8		A	HSX	30	1	1	3
9526		HOLL	07	01	1422	N08	E69	07	6.8		A	HSX	50	3	2	4
9526	30558	MWIL	07	01	1445	N08	E70	07	6.9	4	(BP)					

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9526		LEAR	07	02	0015	N07	E65	07	6.9		B	CAO	40	2	6	3
9526		SVTO	07	02	0730	N08	E63	07	7.0		B	CAO	20	2	7	3
9526		KAND	07	02	0850	N10	E59	07	6.8			AX		1	1	3
9526		RAMY	07	02	1225	N06	E61	07	7.1		B	DSO	30	4	9	2
9526		HOLL	07	02	1430	N10	E55	07	6.7		A	HSX	30	2	2	3
9526	30558	MWIL	07	02	1445	N08	E57	07	6.9	5	(BP)					
9526		LEAR	07	03	0035	N07	E49	07	6.7		A	HSX	20	1	1	2
9526		SVTO	07	03	0530	N09	E47	07	6.7		A	HSX	10	1	1	3
9526		HOLL	07	03	1444	N10	E42	07	6.8		A	AXX	10	2	1	3
9526		LEAR	07	04	0030	N09	E35	07	6.6		A	AXX	10	1	1	2
9526		SVTO	07	04	0530	N08	E34	07	6.8		A	HSX	10	1	1	3
9528	30559	MWIL	07	01	1445	N04	E77	07	7.4	4	(AP)					
9528		TACH	07	02	0540	N07	E64	07	7.0			BXO	25	2	9	3
9528		SVTO	07	02	0730	N03	E68	07	7.4		A	HAX	50	2	2	3
9528		KAND	07	02	0850	N05	E69	07	7.5			HA		2	2	3
9528		HOLL	07	02	1430	N05	E63	07	7.3		B	CAO	80	3	3	3
9528	30559	MWIL	07	02	1445	N04	E64	07	7.4	4	(BP)					
9528		VORO	07	02	2140	N04	E59	07	7.3			HRX	68	2		3
9528		LEAR	07	03	0035	N04	E59	07	7.4		B	CAO	50	5	5	2
9528		SVTO	07	03	0530	N05	E56	07	7.4		B	CAO	60	4	5	3
9528		TACH	07	03	0617	N06	E50	07	7.0			CSO	85	2	9	3
9528	30559	MWIL	07	03	1430	N04	E50	07	7.3	4	(BP)					
9528		HOLL	07	03	1444	N07	E53	07	7.6		B	CSO	50	6	6	3
9528		VORO	07	03	2204	N04	E46	07	7.3			HRX	46	1		3
9528		LEAR	07	04	0030	N03	E44	07	7.3		B	CSO	30	3	3	2
9528		SVTO	07	04	0530	N04	E43	07	7.4		B	CAO	30	2	2	3
9528		KAND	07	04	0750	N04	E39	07	7.2			HA		2	4	5
9528		RAMY	07	04	1241	N04	E37	07	7.3		A	HSX	30	1	1	2
9528		HOLL	07	04	1615	N05	E35	07	7.3		A	HAX	50	4	2	3
9528		LEAR	07	05	0115	N03	E31	07	7.4		A	HSX	10	1	1	3
9528		TACH	07	05	0436	N05	E27	07	7.2			AXX	15	1	1	3
9528		SVTO	07	05	0543	N04	E27	07	7.2		B	AAO	30	2	1	3
9528		KAND	07	05	0720	N05	E27	07	7.3			AX		3	2	3
9528		RAMY	07	05	1226	N04	E25	07	7.4		A	HSX	10	2	1	2
9528		HOLL	07	05	1533	N05	E23	07	7.4		A	AXX	10	2	1	4
9528		SVTO	07	06	0540	N05	E15	07	7.3		B	BXO	10	2	4	3
9528		HOLL	07	06	1532	N04	E08	07	7.2		A	AXX	10	1	1	3
9528		LEAR	07	07	0308	N04	E02	07	7.3		A	AXX		1		3
9528	30559	MWIL	07	07	1500	N08	W02	07	7.5	3	(AF)					
9527		SVTO	07	01	0450	S17	E85	07	7.7		B	CAO	30	2	2	3
9527		RAMY	07	01	1222	S14	E80	07	7.6		A	HSX	80	2	2	3
9527		HOLL	07	01	1422	S17	E79	07	7.6		A	HAX	90	2	2	4
9527	30560	MWIL	07	01	1445	S17	E77	07	7.5	5	AP					
9527		VORO	07	01	2131	S17	E72	07	7.4			HRX	250	1		3
9527		LEAR	07	02	0015	S19	E72	07	7.5		B	CAO	70	5	7	3
9527		TACH	07	02	0540	S17	E70	07	7.5			HA	180	2	2	3
9527		SVTO	07	02	0730	S18	E70	07	7.6		B	CAO	110	4	3	3
9527		KAND	07	02	0850	S16	E70	07	7.7			HA		2	3	3
9527		RAMY	07	02	1225	S17	E67	07	7.6		A	HAX	150	2	2	2
9527		HOLL	07	02	1430	S15	E66	07	7.6		B	CAO	140	4	4	3
9527	30560	MWIL	07	02	1445	S17	E65	07	7.5	5	(BP)					
9527		VORO	07	02	2140	S18	E61	07	7.5			HRX	169	4		3
9527		LEAR	07	03	0035	S18	E60	07	7.6		B	CAO	100	6	5	2
9527		SVTO	07	03	0530	S18	E61	07	7.9		B	CAO	130	5	8	3
9527		TACH	07	03	0617	S18	E58	07	7.7			HSX	160	1	3	3
9527	30560	MWIL	07	03	1430	S18	E52	07	7.6	4	(AP)					
9527		HOLL	07	03	1444	S16	E54	07	7.7		B	CAO	150	6	7	3
9527		VORO	07	03	2204	S18	E49	07	7.6			CSO	148	3	2	3
9527		LEAR	07	04	0030	S19	E47	07	7.6		B	CAO	100	3	5	2
9527		SVTO	07	04	0530	S17	E47	07	7.8		B	CAO	130	5	9	3
9527		KAND	07	04	0750	S17	E44	07	7.7			CAO		3	4	5
9527		RAMY	07	04	1241	S17	E41	07	7.6		A	HAX	140	2	2	2
9527		HOLL	07	04	1615	S17	E39	07	7.6		B	DAO	100	3	4	3
9527		LEAR	07	05	0115	S18	E32	07	7.5		B	DSO	100	2	2	3
9527		TACH	07	05	0436	S16	E30	07	7.5			HH	300	2	4	3
9527		SVTO	07	05	0543	S18	E33	07	7.7		B	DAO	180	7	9	3
9527		KAND	07	05	0720	S17	E31	07	7.7			HA		2	4	3

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9527		RAMY	07	05	1226	S18	E28	07	7.6		A	HAX	120	2	2	2
9527		HOLL	07	05	1533	S17	E27	07	7.7		A	HAX	110	4	2	4
9527		VORO	07	05	2209	S18	E22	07	7.6			DSO	136	2	2	3
9527		SVTO	07	06	0540	S17	E18	07	7.6		A	HAX	120	3	3	3
9527		TACH	07	06	0617	S17	E17	07	7.5			HA	200	2	2	3
9527		KAND	07	06	0837	S18	E18	07	7.7			CAO		4	5	4
9527		HOLL	07	06	1532	S18	E12	07	7.6		A	HAX	90	2	3	3
9527		VORO	07	06	2222	S18	E09	07	7.6			DSO	106	5	1	3
9527		LEAR	07	07	0308	S18	E07	07	7.7		A	HAX	100	3	3	3
9527		TACH	07	07	0405	S17	E05	07	7.5			HA	140	2	2	3
9527		SVTO	07	07	0645	S17	E04	07	7.6		B	CAO	100	4	3	3
9527		KAND	07	07	0655	S17	E04	07	7.6			HA		2	3	3
9527		RAMY	07	07	1248	S17	E01	07	7.6		A	HAX	130	3	3	3
9527		HOLL	07	07	1404	S18	E00	07	7.6		A	HAX	80	3	2	3
9527	30560	MWIL	07	07	1500	S18	E01	07	7.7	4	(BP)					
9527		VORO	07	07	2221	S18	W05	07	7.5			DSO	115	6	1	3
9527		LEAR	07	08	0121	S18	W05	07	7.7		B	DAO	80	8	8	3
9527		TACH	07	08	0539	S16	W07	07	7.7			HA	130	3	2	3
9527		KAND	07	08	0645	S18	W07	07	7.7			CAO		5	7	4
9527		SVTO	07	08	0710	S17	W06	07	7.8		B	CAO	70	7	7	3
9527		RAMY	07	08	1248	S17	W10	07	7.8		B	CAO	70	5	7	3
9527		HOLL	07	08	1418	S17	W14	07	7.5		A	HAX	60	4	3	4
9527	30561	MWIL	07	08	1500	S17	W12	07	7.7	4	(BP)					
9527		LEAR	07	09	0043	S17	W19	07	7.6		B	DSO	60	7	4	3
9527		TACH	07	09	0609	S16	W22	07	7.6			CAO	140	3	4	3
9527		SVTO	07	09	0615	S18	W22	07	7.6		B	DAO	40	6	2	3
9527		KAND	07	09	0845	S17	W23	07	7.6			HA		2	3	4
9527		RAMY	07	09	1201	S17	W26	07	7.5		A	HSX	90	1	1	3
9527		HOLL	07	09	1415	S18	W27	07	7.5		B	CAO	30	3	2	4
9527	30561	MWIL	07	09	1445	S19	W25	07	7.7	4	(BP)					
9527		VORO	07	09	2342	S17	W32	07	7.5			HAX	35	2		2
9527		LEAR	07	10	0134	S17	W33	07	7.5		A	HSX	30	3	2	3
9527		TACH	07	10	0511	S17	W34	07	7.6			AXX	25	1	1	4
9527		KAND	07	10	0640	S17	W35	07	7.6			AX		1		4
9527		SVTO	07	10	0755	S19	W37	07	7.5		A	HSX	50	3	2	3
9527		RAMY	07	10	1157	S17	W39	07	7.5		B	CSO	20	3	3	2
9527	30561	MWIL	07	10	1400	S17	W38	07	7.7	4	(BG)					
9527		HOLL	07	10	1435	S18	W37	07	7.8		B	BXO	20	3	7	4
9527		VORO	07	10	2127	S18	W44	07	7.5			AXX	15	1		2
9527		TACH	07	11	0435	S19	W43	07	7.9			BXO	8	2	6	4
9527		SVTO	07	11	0600	S18	W46	07	7.7		B	BXO	20	5	8	3
9527		RAMY	07	11	1239	S20	W46	07	8.0		A	HSX	10	1	1	3
9527	30561	MWIL	07	11	1400	S19	W50	07	7.8	4	(BF)					
9527		HOLL	07	11	1500	S20	W48	07	7.9		B	BXO	30	4	2	4
9529B	30579	MWIL	07	13	1400	S17	W59	07	9.1	4	(AP)					
9529		LEAR	07	03	0035	N05	E84	07	9.3		A	HAX	30	1	1	2
9529		SVTO	07	03	0530	N07	E80	07	9.2		A	HSX	60	1	2	3
9529		TACH	07	03	0617	N06	E82	07	9.4			HSX	25	1	1	3
9529	30563	MWIL	07	03	1430	N06	E77	07	9.4	5	(AP)					
9529		HOLL	07	03	1444	N08	E78	07	9.5		A	HAX	120	1	3	3
9529		VORO	07	03	2204	N07	E73	07	9.4			HRX	95	1		3
9529		LEAR	07	04	0030	N05	E70	07	9.2		A	HAX	60	1	2	2
9529		SVTO	07	04	0530	N06	E69	07	9.4		A	HSX	70	1	2	3
9529		KAND	07	04	0750	N07	E68	07	9.4			HS		1	2	5
9529		RAMY	07	04	1241	N07	E63	07	9.2		A	HSX	110	1	2	2
9529		HOLL	07	04	1615	N08	E61	07	9.2		A	HAX	80	1	2	3
9529		LEAR	07	05	0115	N06	E58	07	9.4		A	HSX	30	1	2	3
9529		TACH	07	05	0436	N07	E54	07	9.2			HSX	50	1	1	3
9529		SVTO	07	05	0543	N06	E55	07	9.3		A	HAX	70	1	1	3
9529		KAND	07	05	0720	N08	E54	07	9.3			HA		1	2	3
9529		RAMY	07	05	1226	N06	E52	07	9.4		A	HSX	110	1	2	2
9529		HOLL	07	05	1533	N08	E50	07	9.4		A	HSX	90	1	2	4
9529		VORO	07	05	2209	N07	E47	07	9.4			HRX	62	1		3
9529		SVTO	07	06	0540	N07	E42	07	9.4		A	HSX	80	1	2	3
9529		TACH	07	06	0617	N07	E41	07	9.3			HSX	60	1	1	3
9529		KAND	07	06	0837	N07	E41	07	9.4			HS		1	2	3
9529		HOLL	07	06	1532	N06	E36	07	9.3		A	HSX	60	4	2	3

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9529		VORO	07	06	2222	N07	E33	07	9.4			DSO	77	5	1	3
9529		LEAR	07	07	0308	N06	E30	07	9.4		B	DSO	70	7	4	3
9529		TACH	07	07	0405	N06	E28	07	9.3			DAI	220	4	3	3
9529		SVTO	07	07	0645	N07	E27	07	9.3		B	DAO	100	8	5	3
9529		KAND	07	07	0655	N08	E28	07	9.4			DSO		5	4	3
9529		RAMY	07	07	1248	N07	E22	07	9.2		B	DSO	90	8	5	3
9529		HOLL	07	07	1404	N06	E22	07	9.2		B	DSO	100	13	5	3
9529	30563	MWIL	07	07	1500	N06	E22	07	9.3	5	(BP)					
9529		VORO	07	07	2221	N06	E19	07	9.3			DSO	152	7	4	3
9529		LEAR	07	08	0121	N07	E17	07	9.3		B	DSO	90	12	5	3
9529		TACH	07	08	0539	N08	E13	07	9.2			DAI	191	5	8	3
9529		KAND	07	08	0645	N06	E13	07	9.2			DSO		10	5	4
9529		SVTO	07	08	0710	N07	E12	07	9.2		B	DSO	150	12	6	3
9529		RAMY	07	08	1248	N06	E08	07	9.1		B	DAO	80	9	5	3
9529		HOLL	07	08	1418	N07	E08	07	9.2		B	DSO	110	15	5	4
9529	30563	MWIL	07	08	1500	N06	E08	07	9.2	5	(B)					
9529		LEAR	07	09	0043	N06	E04	07	9.3		B	DSO	100	14	5	3
9529		TACH	07	09	0609	N07	W01	07	9.2			DAI	307	8	3	3
9529		SVTO	07	09	0615	N06	W01	07	9.2		B	DSO	90	12	8	3
9529		KAND	07	09	0845	N07	W01	07	9.3			DSO		6	5	4
9529		RAMY	07	09	1201	N07	W04	07	9.2		B	DSO	40	5	4	3
9529		HOLL	07	09	1415	N07	W05	07	9.2		B	DSO	90	9	5	4
9529	30563	MWIL	07	09	1445	N06	W05	07	9.2	5	(BG)					
9529		VORO	07	09	2342	N06	W10	07	9.2			DSI	119	3	4	2
9529		LEAR	07	10	0134	N06	W10	07	9.3		B	DSO	80	9	5	3
9529		TACH	07	10	0511	N07	W13	07	9.2			CAO	95	3	4	4
9529		KAND	07	10	0640	N07	W12	07	9.4			CSO		3	5	4
9529		SVTO	07	10	0755	N07	W15	07	9.2		B	DSO	100	5	5	3
9529		RAMY	07	10	1157	N07	W17	07	9.2		B	DSO	90	5	5	2
9529	30563	MWIL	07	10	1400	N06	W18	07	9.2	5	(BG)					
9529		HOLL	07	10	1435	N07	W18	07	9.2		B	CSO	60	5	5	4
9529		VORO	07	10	2127	N06	W22	07	9.2			CAO	138	4	4	2
9529		LEAR	07	11	0055	N07	W25	07	9.2		BG	CAO	50	4	5	1
9529		TACH	07	11	0435	N07	W25	07	9.3			CAO	104	3	5	4
9529		SVTO	07	11	0600	N06	W27	07	9.2		B	CSO	60	6	5	3
9529		KAND	07	11	0730	N06	W26	07	9.4			DSO		5	5	3
9529		RAMY	07	11	1239	N06	W31	07	9.2		B	DSO	50	3	4	3
9529	30563	MWIL	07	11	1400	N06	W31	07	9.3	5	(BG)					
9529		HOLL	07	11	1500	N07	W32	07	9.2		B	CSO	60	3	5	4
9529		VORO	07	11	2237	N07	W34	07	9.4			HSX	107	1		2
9529		LEAR	07	12	0120	N07	W36	07	9.3		B	CSO	70	3	2	3
9529		SVTO	07	12	0530	N04	W38	07	9.4		B	CSO	50	2	2	3
9529		TACH	07	12	0617	N07	W38	07	9.4			HSX	50	1	1	3
9529		RAMY	07	12	1218	N07	W43	07	9.3		A	HSX	30	1	1	3
9529		KAND	07	12	1355	N07	W42	07	9.4			HS		1	2	3
9529	30563	MWIL	07	12	1400	N07	W43	07	9.4	5	(AP)					
9529		HOLL	07	12	1405	N07	W43	07	9.4		A	HSX	50	1	2	4
9529		VORO	07	12	2121	N07	W47	07	9.4			HAX	104	1		3
9529		LEAR	07	13	0035	N07	W48	07	9.4		A	HAX	50	1	2	3
9529		TACH	07	13	0538	N07	W52	07	9.3			HSX	60	1	1	3
9529		SVTO	07	13	0712	N06	W53	07	9.3		A	HSX	60	1	1	3
9529		KAND	07	13	0755	N07	W53	07	9.3			HS		1	2	4
9529		RAMY	07	13	1345	N06	W56	07	9.4		A	HSX	50	1	1	2
9529	30563	MWIL	07	13	1400	N07	W56	07	9.4	4	(AP)					
9529		HOLL	07	13	1415	N08	W57	07	9.3		A	HSX	60	1	2	3
9529		VORO	07	13	2125	N07	W60	07	9.4			HAX	89	1		2
9529		LEAR	07	14	0150	N07	W62	07	9.4		A	HAX	40	1	2	2
9529		TACH	07	14	0433	N08	W63	07	9.5			AXX	20	1	1	4
9529		SVTO	07	14	0511	N06	W65	07	9.3		A	HAX	40	1	1	3
9529		RAMY	07	14	1200	N05	W69	07	9.3		A	HSX	80	1	1	3
9529		KAND	07	14	1315	N06	W69	07	9.4			HS		1	2	5
9529	30563	MWIL	07	14	1400	N07	W68	07	9.5	4	(AP)					
9529		HOLL	07	14	1440	N08	W70	07	9.4		A	HAX	50	2	1	4
9529		LEAR	07	15	0154	N07	W78	07	9.2		A	HSX	30	1	1	4
9529		TACH	07	15	0518	N07	W75	07	9.6			AXX	10	1	1	3
9529		KAND	07	15	0613	N06	W80	07	9.3			HA		1	2	4
9529		SVTO	07	15	0700	N08	W81	07	9.2		A	HAX	30	1	1	3
9529	30563	MWIL	07	15	1500	N07	W85	07	9.2	4	(AP)					
9529A		VORO	07	12	2121	N32	W46	07	9.2			AXX	5	1		3

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9529A		VORO	07	13	2125	N28	W57	07	9.4			AXX	4	1		2
9531		LEAR	07	08	0121	S06	E31	07	10.4		B	DSO	20	11	5	3
9531		TACH	07	08	0539	S04	E29	07	10.4			BRI	17	4	4	3
9531		KAND	07	08	0645	S06	E30	07	10.5			CSO		6	10	4
9531		SVTO	07	08	0710	S05	E27	07	10.3		B	DAO	60	11	5	3
9531		RAMY	07	08	1248	S06	E25	07	10.4		B	DRI	40	14	9	3
9531		HOLL	07	08	1418	S06	E26	07	10.5		B	DAO	80	16	9	4
9531	30567	MWIL	07	08	1500	S05	E25	07	10.5	4	(G)					
9531		LEAR	07	09	0043	S06	E19	07	10.4		BG	DAO	120	30	9	3
9531		TACH	07	09	0609	S05	E16	07	10.4			CSO	75	2	3	3
9531		SVTO	07	09	0615	S05	E17	07	10.5		BG	DAO	130	28	9	3
9531		KAND	07	09	0845	S05	E15	07	10.5			DAI		17	7	4
9531		RAMY	07	09	1201	S06	E12	07	10.4		BG	DAC	180	16	6	3
9531		HOLL	07	09	1415	S06	E12	07	10.5		BG	DAI	160	27	7	4
9531	30567	MWIL	07	09	1445	S06	E12	07	10.5	5	(BG)					
9531		VORO	07	09	2342	S06	E06	07	10.4			DAI	238	12	4	2
9531		LEAR	07	10	0134	S07	E06	07	10.5		B	DSO	140	13	6	3
9531		TACH	07	10	0511	S05	E04	07	10.5			CAI	148	11	4	4
9531		KAND	07	10	0640	S06	E03	07	10.5			DAO		13	6	4
9531		SVTO	07	10	0755	S05	W03	07	10.1		B	DAO	140	19	7	3
9531		RAMY	07	10	1157	S05	W02	07	10.3		BG	DAI	140	17	7	2
9531	30567	MWIL	07	10	1400	S06	W01	07	10.5	5	(BG)					
9531		HOLL	07	10	1435	S05	W03	07	10.4		BG	DAO	130	16	7	4
9531		VORO	07	10	2127	S06	W06	07	10.4			DAI	217	12	4	2
9531		LEAR	07	11	0055	S05	W08	07	10.4		BG	DAO	120	14	6	1
9531		TACH	07	11	0435	S05	W09	07	10.5			DAO	152	5	4	4
9531		SVTO	07	11	0600	S06	W11	07	10.4		B	DAO	130	12	7	3
9531		KAND	07	11	0730	S06	W11	07	10.5			DAO		5	6	3
9531		RAMY	07	11	1239	S06	W14	07	10.5		B	DSO	70	8	6	3
9531	30567	MWIL	07	11	1400	S06	W15	07	10.5	5	(B)					
9531		HOLL	07	11	1500	S06	W15	07	10.5		B	DAO	100	8	7	4
9531		VORO	07	11	2237	S06	W20	07	10.4			DAI	100	8	4	2
9531		LEAR	07	12	0120	S05	W22	07	10.4		B	DAO	70	10	7	3
9531		SVTO	07	12	0530	S08	W23	07	10.5		B	DAO	50	7	7	3
9531		TACH	07	12	0617	S05	W24	07	10.5			BXO	65	2	5	3
9531		RAMY	07	12	1218	S05	W28	07	10.4		B	DAO	30	3	5	3
9531		KAND	07	12	1355	S06	W28	07	10.5			DAO		2	5	3
9531	30567	MWIL	07	12	1400	S06	W28	07	10.5	5	(B)					
9531		HOLL	07	12	1405	S06	W28	07	10.5		B	DSO	70	7	6	4
9531		VORO	07	12	2121	S06	W32	07	10.5			CAI	60	9	5	3
9531		LEAR	07	13	0035	S05	W34	07	10.5		B	DAO	60	7	7	3
9531		TACH	07	13	0538	S05	W38	07	10.4			BRO	35	4	5	3
9531		SVTO	07	13	0712	S06	W37	07	10.5		B	DAO	40	4	7	3
9531		KAND	07	13	0755	S05	W38	07	10.5			DSO		4	6	4
9531		RAMY	07	13	1345	S06	W43	07	10.3		B	DSO	40	3	5	2
9531	30567	MWIL	07	13	1400	S06	W42	07	10.4	4	(B)					
9531		HOLL	07	13	1415	S06	W44	07	10.3		B	DAO	50	4	7	3
9531		VORO	07	13	2125	S06	W47	07	10.4			CRO	39	2	4	2
9531		LEAR	07	14	0150	S05	W49	07	10.4		B	BXO	20	2	5	2
9531		TACH	07	14	0433	S05	W48	07	10.6			AXX	5	1	1	4
9531		SVTO	07	14	0511	S06	W51	07	10.4		B	BXO	20	2	5	3
9531	30567	MWIL	07	14	1400	S05	W56	07	10.4	3	(B)					
9531A		LEAR	07	09	0043	N16	E19	07	10.5		A	AXX		2	2	3
9531A		SVTO	07	09	0615	N14	E16	07	10.5		A	AXX	10	3	3	3
9533		KAND	07	09	0845	S09	E37	07	12.1			BXO		3	2	4
9533		RAMY	07	09	1201	S10	E35	07	12.1		B	DSO	50	2	3	3
9533		HOLL	07	09	1415	S09	E34	07	12.1		B	CSO	30	4	4	4
9533	30568	MWIL	07	09	1445	S09	E33	07	12.1	5	(BP)					
9533		VORO	07	09	2342	S09	E29	07	12.2			CAO	46	3	4	2
9533		LEAR	07	10	0134	S09	E28	07	12.2		B	DSO	30	6	5	3
9533		TACH	07	10	0511	S09	E26	07	12.2			BRO	15	3	6	4
9533		KAND	07	10	0640	S09	E26	07	12.2			CRO		7	6	4
9533		SVTO	07	10	0755	S08	E26	07	12.3		B	CAO	30	7	6	3
9533		RAMY	07	10	1157	S09	E23	07	12.2		B	DSO	40	5	7	2
9533	30568	MWIL	07	10	1400	S09	E21	07	12.1	4	(B)					
9533		HOLL	07	10	1435	S09	E21	07	12.2		B	DAO	40	6	6	4

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9533		VORO	07 10 2127	S10 E17	07 12.2			CRO	46	4	5	2
9533		LEAR	07 11 0055	S09 E15	07 12.2		B	DAO	40	6	7	1
9533		TACH	07 11 0435	S08 E13	07 12.2			BRO	33	5	5	4
9533		SVTO	07 11 0600	S09 E12	07 12.1		B	DAO	30	7	6	3
9533		KAND	07 11 0730	S09 E10	07 12.1			AX		2	2	3
9533		RAMY	07 11 1239	S10 E07	07 12.0		B	DSO	20	4	5	3
9533	30568	MWIL	07 11 1400	S09 E07	07 12.1	5	(BP)					
9533		HOLL	07 11 1500	S09 E08	07 12.2		B	CSO	20	4	6	4
9533		VORO	07 11 2237	S09 E02	07 12.1			BXI	33	5	8	2
9533		LEAR	07 12 0120	S09 W01	07 12.0		BG	CSO	30	9	8	3
9533		SVTO	07 12 0530	S09 W02	07 12.1		BG	DAO	40	10	9	3
9533		TACH	07 12 0617	S07 W05	07 11.9			BRO	9	3	3	3
9533		RAMY	07 12 1218	S09 W08	07 11.9		B	DSO	20	4	4	3
9533		KAND	07 12 1355	S09 W05	07 12.2			BXO		5	8	3
9533	30568	MWIL	07 12 1400	S09 W06	07 12.1	4	(B)					
9533		HOLL	07 12 1405	S09 W06	07 12.1		B	CRO	40	6	7	4
9533		VORO	07 12 2121	S09 W11	07 12.1			BXI	21	6	7	3
9533		LEAR	07 13 0035	S09 W13	07 12.0		B	CSO	40	6	7	3
9533		TACH	07 13 0538	S09 W18	07 11.9			BRI	55	9	8	3
9533		SVTO	07 13 0712	S10 W16	07 12.1		B	BXO	20	7	7	3
9533		KAND	07 13 0755	S09 W16	07 12.1			BXO		8	6	4
9533		RAMY	07 13 1345	S09 W22	07 11.9		B	CSO	30	5	4	2
9533	30568	MWIL	07 13 1400	S10 W20	07 12.1	5	(BP)					
9533		HOLL	07 13 1415	S08 W22	07 11.9		B	CSO	30	3	4	3
9533		VORO	07 13 2125	S10 W25	07 12.0			CAI	35	3	4	2
9533		LEAR	07 14 0150	S10 W27	07 12.0		B	CSO	20	10	5	2
9533		TACH	07 14 0433	S09 W29	07 12.0			BRO	42	4	4	4
9533		SVTO	07 14 0511	S09 W29	07 12.0		B	DAO	40	4	6	3
9533		RAMY	07 14 1200	S10 W34	07 11.9		B	DAO	60	5	6	3
9533		KAND	07 14 1315	S09 W34	07 12.0			DAO		10	6	5
9533	30568	MWIL	07 14 1400	S09 W35	07 11.9	4	(B)					
9533		HOLL	07 14 1440	S09 W35	07 12.0		B	DAO	70	12	6	4
9533		LEAR	07 15 0154	S08 W42	07 11.9		B	DSO	40	9	7	4
9533		TACH	07 15 0518	S09 W43	07 12.0			BRO	23	5	5	3
9533		KAND	07 15 0613	S09 W44	07 11.9			DSO		4	7	4
9533		SVTO	07 15 0700	S07 W45	07 11.9		B	DAO	60	9	8	3
9533		RAMY	07 15 1350	S10 W48	07 12.0		B	DSO	30	4	6	3
9533	30568	MWIL	07 15 1500	S09 W48	07 12.0	5	(BG)					
9533		VORO	07 15 2124	S09 W52	07 12.0			CAI	55	4	6	3
9533		LEAR	07 16 0141	S09 W55	07 11.9		B	DSO	70	6	8	4
9533		TACH	07 16 0456	S09 W56	07 12.0			BRO	40	3	5	4
9533		SVTO	07 16 0559	S09 W56	07 12.0		B	DAO	50	7	7	3
9533		KAND	07 16 0805	S08 W58	07 12.0			CRO		3	6	4
9533	30568	MWIL	07 16 1445	S09 W61	07 12.0	4	(BF)					
9533		RAMY	07 16 1530	S10 W63	07 11.9		B	DSO	30	2	7	1
9533		HOLL	07 16 1922	S09 W65	07 11.9		B	DSO	20	2	8	3
9533		VORO	07 16 2140	S09 W64	07 12.1			CAI	69	2	5	3
9533		LEAR	07 17 0050	S09 W67	07 12.0		B	DSO	50	5	8	4
9533		KAND	07 17 0710	S08 W72	07 11.9			AX		1	1	5
9533		SVTO	07 17 0710	S09 W72	07 11.9		B	CSO	40	4	7	2
9533	30568	MWIL	07 17 1445	S08 W78	07 11.8	4	(AP)					
9533		HOLL	07 17 1635	S08 W80	07 11.7		A	AXX	10	1	1	3
9551		RAMY	07 09 1201	N13 E58	07 13.9		A	AXX	10	1		3
9551		HOLL	07 09 1415	N14 E57	07 13.9		A	AXX	10	1	1	4
9551	30569	MWIL	07 09 1445	N13 E56	07 13.8	4	(AP)					
9551	30592	MWIL	07 18 1445	N12 W62	07 13.9	4	(AP)					
9551		LEAR	07 19 0045	N13 W67	07 14.0		B	BXO	10	2	3	2
9551		TACH	07 19 0536	N12 W67	07 14.2			AXX	10	1	1	4
9551		KAND	07 19 0743	N12 W70	07 14.0			BXO		3	3	5
9551		RAMY	07 19 1140	N11 W69	07 14.3		A	HSX	50	1	1	3
9551		HOLL	07 19 1500	N11 W73	07 14.1		B	CAO	60	4	14	3
9551	30592	MWIL	07 19 1500	N12 W75	07 14.0	4	(B)					
9551		LEAR	07 20 0025	N12 W77	07 14.2		B	CAO	40	2	9	3
9551		SVTO	07 20 0620	N09 W80	07 14.2		B	BXO	30	3	8	3
9551		KAND	07 20 0735	N12 W78	07 14.4			BXO		3	6	5
9539A	30580	MWIL	07 13 1400	S15 E10	07 14.3	4	(AP)					
9536		RAMY	07 10 1157	N11 E59	07 14.9		A	AXX		1		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
9536		HOLL	07 10 1435	N12 E57	07 14.9		B	BXO	20	3	3	4
9536		VORO	07 10 2127	N10 E53	07 14.9			BXO	18	2	3	2
9536		LEAR	07 11 0055	N11 E52	07 14.9		B	DSO	40	4	5	1
9536		TACH	07 11 0435	N12 E49	07 14.9			BXO	10	2	5	4
9536		SVTO	07 11 0600	N11 E49	07 14.9		B	DAO	50	5	4	3
9536		KAND	07 11 0730	N11 E47	07 14.8			CSO		3	4	3
9536		RAMY	07 11 1239	N11 E44	07 14.8		B	CSO	20	3	4	3
9536	30573	MWIL	07 11 1400	N11 E44	07 14.9	5	(BP)					
9536		HOLL	07 11 1500	N11 E44	07 14.9		B	BXO	30	5	4	4
9536		VORO	07 11 2237	N11 E37	07 14.7			AXX	18	3		2
9536		LEAR	07 12 0120	N11 E35	07 14.7		B	CAO	30	4	2	3
9536		SVTO	07 12 0530	N15 E32	07 14.6		B	CAO	20	7	3	3
9536		TACH	07 12 0617	N12 E32	07 14.7			AXX	10	1	1	3
9536		RAMY	07 12 1218	N11 E28	07 14.6		A	HSX	10	1	1	3
9536		KAND	07 12 1355	N11 E28	07 14.7			AX		3	1	3
9536	30573	MWIL	07 12 1400	N11 E28	07 14.7	4	(AP)					
9536		HOLL	07 12 1405	N11 E28	07 14.7		B	CRO	20	4	2	4
9536		VORO	07 12 2121	N11 E24	07 14.7			AXX	24	5		3
9536		LEAR	07 13 0035	N11 E22	07 14.7		B	CAO	20	4	2	3
9536		TACH	07 13 0538	N12 E18	07 14.6			AR	35	2	1	3
9536		SVTO	07 13 0712	N12 E18	07 14.6		B	CAO	20	3	1	3
9536		KAND	07 13 0755	N11 E18	07 14.7			AX		4	2	4
9536		RAMY	07 13 1345	N12 E13	07 14.5		B	BXO	10	4	3	2
9536	30573	MWIL	07 13 1400	N11 E14	07 14.6	4	(AP)					
9536		HOLL	07 13 1415	N11 E14	07 14.6		B	CSO	20	6	3	3
9536		VORO	07 13 2125	N12 E11	07 14.7			AXX	12	4	2	2
9536		LEAR	07 14 0150	N11 E08	07 14.7		B	CRO	10	5	4	2
9536		SVTO	07 14 0511	N11 E07	07 14.7		B	CRO	10	3	2	3
9536	30573	MWIL	07 15 1500	N13 W11	07 14.8	4	(AP)					
9536		VORO	07 15 2124	N13 W14	07 14.8			AXX	7	1		3
9536	30596	MWIL	07 19 1500	N12 W65	07 14.7	4	(AP)					
9536	30596	MWIL	07 20 1500	N12 W80	07 14.6	3	(AP)					
9537		RAMY	07 11 1239	S07 E44	07 14.8		B	CRO	20	5	3	3
9537	30572	MWIL	07 11 1400	S07 E44	07 14.9	4	(BG)					
9537		HOLL	07 11 1500	S07 E44	07 14.9		B	CRO	50	8	3	4
9537		VORO	07 11 2237	S08 E39	07 14.9			BXI	64	11	4	2
9537		LEAR	07 12 0120	S07 E37	07 14.8		B	DAO	50	12	5	3
9537		SVTO	07 12 0530	S03 E34	07 14.8		B	DAO	70	11	6	3
9537		TACH	07 12 0617	S06 E34	07 14.8			CAI	79	6	4	3
9537		RAMY	07 12 1218	S07 E30	07 14.7		B	DAO	30	9	6	3
9537		KAND	07 12 1355	S08 E30	07 14.8			CSO		8	6	3
9537	30572	MWIL	07 12 1400	S07 E30	07 14.8	5	(B)					
9537		HOLL	07 12 1405	S07 E30	07 14.8		B	CSO	70	9	6	4
9537		VORO	07 12 2121	S07 E26	07 14.8			CAI	56	13	5	3
9537		LEAR	07 13 0035	S08 E24	07 14.8		B	DAO	60	15	6	3
9537		TACH	07 13 0538	S08 E21	07 14.8			BRI	85	15	5	3
9537		SVTO	07 13 0712	S08 E20	07 14.8		B	DAO	40	14	7	3
9537		KAND	07 13 0755	S08 E20	07 14.8			CRI		12	7	4
9537		RAMY	07 13 1345	S08 E16	07 14.8		B	DSI	50	12	6	2
9537	30572	MWIL	07 13 1400	S08 E17	07 14.8	5	(BP)					
9537		HOLL	07 13 1415	S08 E15	07 14.7		B	DAO	70	13	8	3
9537		VORO	07 13 2125	S07 E13	07 14.9			CAI	67	7	6	2
9537		LEAR	07 14 0150	S08 E09	07 14.7		B	CAO	30	11	6	2
9537		TACH	07 14 0433	S07 E08	07 14.8			BRO	9	4	4	4
9537		SVTO	07 14 0511	S08 E07	07 14.7		B	CSO	20	7	7	3
9537		RAMY	07 14 1200	S08 E03	07 14.7		B	DSO	60	9	6	3
9537		KAND	07 14 1315	S08 E02	07 14.7			CAO		10	7	5
9537	30572	MWIL	07 14 1400	S08 E03	07 14.8	5	(B)					
9537		HOLL	07 14 1440	S08 E02	07 14.8		B	DAO	50	13	7	4
9537		LEAR	07 15 0154	S08 W04	07 14.8		B	DSO	30	7	5	4
9537		TACH	07 15 0518	S07 W06	07 14.8			BRO	3	3	4	3
9537		KAND	07 15 0613	S08 W05	07 14.9			CSI		8	6	4
9537		SVTO	07 15 0700	S07 W07	07 14.8		B	DSO	40	11	5	3
9537		RAMY	07 15 1350	S08 W10	07 14.8		B	DSO	30	9	6	3
9537	30572	MWIL	07 15 1500	S07 W10	07 14.9	5	(B)					
9537		VORO	07 15 2124	S07 W13	07 14.9			BXI	41	6	2	3
9537		LEAR	07 16 0141	S07 W17	07 14.8		B	CSO	50	9	6	4
9537		TACH	07 16 0456	S07 W19	07 14.8			CAO	105	5	4	4

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9537		SVTO	07 16 0559	S08 W19	07 14.8		B	DAO	90	10	6	3
9537		KAND	07 16 0805	S07 W19	07 14.9			CAO		4	6	4
9537	30572	MWIL	07 16 1445	S07 W23	07 14.9	5	(B)					
9537		RAMY	07 16 1530	S07 W23	07 14.9		B	DSO	60	4	3	1
9537		HOLL	07 16 1922	S08 W27	07 14.8		B	DSO	70	6	6	3
9537		VORO	07 16 2140	S07 W27	07 14.9			DSI	142	3	2	3
9537		LEAR	07 17 0050	S07 W29	07 14.9		B	DAO	80	11	6	4
9537		SVTO	07 17 0710	S07 W33	07 14.8		B	DAO	70	9	4	2
9537		KAND	07 17 0710	S08 W32	07 14.9			DSO		6	4	5
9537	30572	MWIL	07 17 1445	S07 W36	07 14.9	5	(B)					
9537		HOLL	07 17 1635	S08 W38	07 14.8		B	DAO	70	8	4	3
9537		VORO	07 17 2207	S07 W40	07 14.9			DSI	127	3	3	3
9537		LEAR	07 18 0040	S06 W42	07 14.9		B	DAO	70	6	5	2
9537		SVTO	07 18 0450	S08 W45	07 14.8		B	CAO	70	4	4	3
9537		KAND	07 18 0645	S07 W46	07 14.8			CSO		3	4	5
9537		TACH	07 18 0729	S08 W45	07 14.9			BXO	40	2	4	4
9537		RAMY	07 18 1140	S08 W47	07 15.0		B	DAO	30	2	1	3
9537		HOLL	07 18 1152	S08 W50	07 14.7		A	HAX	20	1	1	2
9537	30572	MWIL	07 18 1445	S07 W49	07 14.9	4	(BF)					
9537		LEAR	07 19 0045	S07 W54	07 15.0		B	CAO	40	3	3	2
9537		SVTO	07 19 0451	S09 W57	07 14.9		A	HSX	20	1	1	3
9537		TACH	07 19 0536	S08 W56	07 15.0			AXX	20	1	1	4
9537		KAND	07 19 0743	S07 W59	07 14.9			HS		1	2	5
9537		RAMY	07 19 1140	S08 W59	07 15.1		A	HSX	40	1	1	3
9537	30572	MWIL	07 19 1500	S07 W63	07 14.9	4	(AP)					
9537		HOLL	07 19 1500	S08 W64	07 14.8		B	CSO	30	2	1	3
9537		LEAR	07 20 0025	S07 W68	07 14.9		A	HAX	30	1	1	3
9537		SVTO	07 20 0620	S09 W75	07 14.6		A	HRX	30	1	1	3
9537	30572	MWIL	07 20 1500	S08 W76	07 14.9	4	(AF)					
9539		VORO	07 11 2237	S19 E41	07 15.1			BXI	18	3	5	2
9539		LEAR	07 12 0120	S19 E38	07 14.9		B	CAO	30	3	6	3
9539		SVTO	07 12 0530	S15 E38	07 15.1		B	CAO	30	6	7	3
9539		TACH	07 12 0617	S17 E38	07 15.1			BXO	18	2	4	3
9539		RAMY	07 12 1218	S18 E31	07 14.9		B	DRO	10	3	6	3
9539		KAND	07 12 1355	S19 E31	07 14.9			BXO		3	8	3
9539	30576	MWIL	07 12 1400	S18 E32	07 15.0	5	(B)					
9539		HOLL	07 12 1405	S18 E31	07 14.9		B	CSO	40	6	7	4
9539		VORO	07 12 2121	S19 E28	07 15.0			BXI	37	8	8	3
9539		LEAR	07 13 0035	S19 E25	07 14.9		B	DAO	50	9	9	3
9539		TACH	07 13 0538	S16 E20	07 14.7			BRI	47	9	12	3
9539		SVTO	07 13 0712	S18 E19	07 14.7		B	EAO	40	7	15	3
9539		KAND	07 13 0755	S18 E21	07 14.9			CSO		8	10	4
9539		RAMY	07 13 1345	S18 E16	07 14.8		B	DSO	60	9	10	2
9539	30576	MWIL	07 13 1400	S18 E18	07 14.9	5	(BG)					
9539		HOLL	07 13 1415	S19 E16	07 14.8		B	ESO	60	12	11	3
9539		VORO	07 13 2125	S18 E12	07 14.8			DAI	90	10	8	2
9539		LEAR	07 14 0150	S18 E10	07 14.8		BG	DSO	40	15	11	2
9539		TACH	07 14 0433	S17 E08	07 14.8			DAI	130	11	9	4
9539		SVTO	07 14 0511	S18 E09	07 14.9		BG	DAO	100	18	10	3
9539		RAMY	07 14 1200	S18 E04	07 14.8		BG	ESI	160	19	11	3
9539		KAND	07 14 1315	S19 E04	07 14.8			ESI		16	12	5
9539	30576	MWIL	07 14 1400	S18 E03	07 14.8	5	(BG)					
9539		HOLL	07 14 1440	S18 E01	07 14.7		BG	EAI	120	44	12	4
9539		LEAR	07 15 0154	S18 W03	07 14.8		BG	EAI	100	20	12	4
9539		TACH	07 15 0518	S18 W05	07 14.8			BRI	53	15	10	3
9539		KAND	07 15 0613	S19 W05	07 14.9			EAO		24	13	4
9539		SVTO	07 15 0700	S18 W06	07 14.8		BG	EAI	100	26	13	3
9539		RAMY	07 15 1350	S19 W10	07 14.8		BG	EAI	140	16	12	3
9539	30576	MWIL	07 15 1500	S18 W10	07 14.9	5	(BG)					
9539		VORO	07 15 2124	S19 W14	07 14.8			DAI	217	18	12	3
9539		LEAR	07 16 0141	S18 W17	07 14.8		BG	EAI	200	26	13	4
9539		TACH	07 16 0456	S18 W17	07 14.9			CAI	238	10	12	4
9539		SVTO	07 16 0559	S19 W19	07 14.8		BG	EAI	180	19	13	3
9539		KAND	07 16 0805	S18 W20	07 14.8			EAI		12	14	4
9539	30576	MWIL	07 16 1445	S17 W23	07 14.9	5	(BG)					
9539		RAMY	07 16 1530	S19 W25	07 14.7		BG	EAI	160	9	14	1
9539		HOLL	07 16 1922	S18 W26	07 14.8		BG	EAI	190	17	13	3
9539		VORO	07 16 2140	S19 W28	07 14.8			DAI	226	11	12	3

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9539		LEAR	07	17	0050	S18	W30	07	14.7		BG	EAI	190	26	14	4
9539		SVTO	07	17	0710	S18	W33	07	14.8		BG	EAI	220	13	14	2
9539		KAND	07	17	0710	S19	W33	07	14.8			ESO		15	14	5
9539	30576	MWIL	07	17	1445	S18	W37	07	14.8	5	(BG)					
9539		HOLL	07	17	1635	S18	W42	07	14.5		BG	EAI	260	18	13	3
9539		VORO	07	17	2207	S18	W43	07	14.6			DAI	206	8	10	3
9539		LEAR	07	18	0040	S18	W45	07	14.6		BG	EAI	150	9	12	2
9539		SVTO	07	18	0450	S19	W47	07	14.6		B	CHO	190	9	13	3
9539		KAND	07	18	0645	S19	W50	07	14.5			CSO		7	13	5
9539		TACH	07	18	0729	S20	W48	07	14.6			CAI	132	7	10	4
9539		RAMY	07	18	1140	S19	W51	07	14.6		B	CAO	110	3	11	3
9539		HOLL	07	18	1152	S20	W56	07	14.2		B	CAO	100	5	9	2
9539	30576	MWIL	07	18	1445	S18	W54	07	14.5	5	(BP)					
9539		LEAR	07	19	0045	S18	W57	07	14.7		B	CAO	120	9	14	2
9539		SVTO	07	19	0451	S21	W66	07	14.1		A	HAX	60	1	2	3
9539		TACH	07	19	0536	S19	W64	07	14.3			HSX	120	1	2	4
9539		KAND	07	19	0743	S19	W67	07	14.2			HA		3	3	5
9539		RAMY	07	19	1140	S19	W69	07	14.2		A	HSX	150	1	3	3
9539	30576	MWIL	07	19	1500	S18	W69	07	14.4	5	(BP)					
9539		HOLL	07	19	1500	S21	W71	07	14.2		A	HAX	120	1	4	3
9539		LEAR	07	20	0025	S18	W75	07	14.3		A	HAX	110	1	2	3
9539		SVTO	07	20	0620	S21	W79	07	14.2		A	HAX	120	1	6	3
9539		KAND	07	20	0735	S19	W80	07	14.2			HA		1	2	5
9539	30576	MWIL	07	20	1500	S19	W83	07	14.3	4	AP					
9544	30570	MWIL	07	09	1445	N18	E87	07	16.2	4	AP					
9544		LEAR	07	10	0134	N16	E82	07	16.3		A	AXX		1		3
9544		SVTO	07	10	0755	N21	E78	07	16.3		A	HSX	30	2	1	3
9544		RAMY	07	10	1157	N17	E73	07	16.0		B	BXO	10	2	3	2
9544	30570	MWIL	07	10	1400	N16	E73	07	16.1	4	(B)					
9544		HOLL	07	10	1435	N18	E71	07	16.0		B	BXO	20	2	4	4
9544		LEAR	07	13	0035	N11	E35	07	15.6		A	AXX	10	1	1	3
9544	30583	MWIL	07	15	1500	N13	E03	07	15.8	3	(AP)					
9544	30584	MWIL	07	15	1500	N17	E07	07	16.1	3	(AP)					
9544		SVTO	07	16	0559	N13	W05	07	15.9		B	BXO	20	8	5	3
9544	30583	MWIL	07	16	1445	N15	W07	07	16.1	4	(BP)					
9544		LEAR	07	17	0050	N16	W13	07	16.0		B	BXO	20	8	5	4
9544		KAND	07	17	0710	N14	W15	07	16.2			AX		2	1	5
9544		SVTO	07	17	0710	N15	W17	07	16.0		A	AXX		2	1	2
9544	30583	MWIL	07	17	1445	N15	W16	07	16.4	4	(BP)					
9544		LEAR	07	18	0040	N15	W26	07	16.0		B	BXO	10	3	2	2
9544		SVTO	07	18	0450	N14	W28	07	16.1		B	BXO	20	5	3	3
9544		KAND	07	18	0645	N14	W29	07	16.1			BXO		3	2	5
9544		TACH	07	18	0729	N15	W30	07	16.0			AXX	3	1	1	4
9544		RAMY	07	18	1140	N15	W33	07	16.0		A	HRX		1	1	3
9544	30583	MWIL	07	18	1445	N17	W30	07	16.3	4	(B)					
9535		KAND	07	10	0640	N08	E86	07	16.7			HA		1	2	4
9535		SVTO	07	10	0755	N10	E88	07	16.9		A	HAO	120	1	3	3
9535		RAMY	07	10	1157	N07	E80	07	16.5		A	HSX	120	1	4	2
9535	30571	MWIL	07	10	1400	N06	E79	07	16.5	4	(AP)					
9535		HOLL	07	10	1435	N08	E78	07	16.4		A	HAX	60	1	3	4
9535		VORO	07	10	2127	N06	E76	07	16.6			HAX	197	1		2
9535		LEAR	07	11	0055	N06	E74	07	16.6		A	HAX	90	1	2	1
9535		TACH	07	11	0435	N08	E73	07	16.7			HSX	110	1	2	4
9535		SVTO	07	11	0600	N06	E73	07	16.7		A	HSX	110	1	2	3
9535		KAND	07	11	0730	N07	E69	07	16.5			HS		1	2	3
9535		RAMY	07	11	1239	N06	E68	07	16.6		A	HSX	140	1	2	3
9535	30571	MWIL	07	11	1400	N06	E67	07	16.6	5	(AP)					
9535		HOLL	07	11	1500	N07	E66	07	16.6		B	CAO	110	2	2	4
9535		VORO	07	11	2237	N06	E61	07	16.5			HAX	203	1		2
9535		LEAR	07	12	0120	N06	E60	07	16.5		A	HSX	120	1	2	3
9535		SVTO	07	12	0530	N02	E59	07	16.6		A	HSX	140	1	3	3
9535		TACH	07	12	0617	N07	E58	07	16.6			HSX	110	1	2	3
9535		RAMY	07	12	1218	N07	E53	07	16.5		A	HSX	100	1	3	3
9535		KAND	07	12	1355	N05	E54	07	16.6			HS		1	2	3
9535	30571	MWIL	07	12	1400	N06	E53	07	16.5	5	(AP)					
9535		HOLL	07	12	1405	N06	E53	07	16.5		A	HSX	110	1	2	4
9535		VORO	07	12	2121	N06	E50	07	16.6			HAX	199	1		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
9535		LEAR	07 13 0035	N06 E48	07 16.6		A	HSX	120	1	2	3
9535		TACH	07 13 0538	N06 E44	07 16.5			HSX	250	1	2	3
9535		SVTO	07 13 0712	N06 E44	07 16.6		A	HSX	130	1	3	3
9535		KAND	07 13 0755	N06 E44	07 16.6			HS		1	3	4
9535		RAMY	07 13 1345	N06 E40	07 16.6		A	HSX	140	1	2	2
9535	30571	MWIL	07 13 1400	N06 E40	07 16.6	5	(AP)					
9535		HOLL	07 13 1415	N04 E39	07 16.5		A	HSX	120	1	2	3
9535		VORO	07 13 2125	N06 E36	07 16.6			HHX	203	1		2
9535		LEAR	07 14 0150	N05 E33	07 16.5		A	HSX	90	1	2	2
9535		TACH	07 14 0433	N07 E31	07 16.5			HSX	180	1	2	4
9535		SVTO	07 14 0511	N07 E32	07 16.6		A	HAX	100	1	3	3
9535		RAMY	07 14 1200	N07 E27	07 16.5		A	HSX	160	1	3	3
9535		KAND	07 14 1315	N07 E27	07 16.6			HS		1	3	5
9535	30571	MWIL	07 14 1400	N06 E26	07 16.5	5	(AP)					
9535		HOLL	07 14 1440	N06 E27	07 16.6		A	HSX	160	1	3	4
9535		LEAR	07 15 0154	N06 E19	07 16.5		A	HSX	150	1	2	4
9535		TACH	07 15 0518	N07 E18	07 16.6			HH	200	1	2	3
9535		KAND	07 15 0613	N06 E18	07 16.6			HS		1	2	4
9535		SVTO	07 15 0700	N05 E17	07 16.6		A	HAX	170	1	3	3
9535		RAMY	07 15 1350	N06 E13	07 16.5		A	HSX	160	1	2	3
9535	30571	MWIL	07 15 1500	N06 E13	07 16.6	5	(AP)					
9535		VORO	07 15 2124	N07 E10	07 16.6			HHX	123	1		3
9535		LEAR	07 16 0141	N06 E07	07 16.6		A	HSX	150	1	3	4
9535		TACH	07 16 0456	N07 E05	07 16.6			HSX	230	1	2	4
9535		SVTO	07 16 0559	N06 E04	07 16.5		A	HSX	150	1	2	3
9535		KAND	07 16 0805	N05 E04	07 16.6			HS		1	2	4
9535	30571	MWIL	07 16 1445	N07 E00	07 16.6	5	(AP)					
9535		RAMY	07 16 1530	N06 W01	07 16.6		A	HSX	140	1	2	1
9535		HOLL	07 16 1922	N06 W03	07 16.6		A	HSX	110	1	2	3
9535		VORO	07 16 2140	N06 W04	07 16.6			HHX	158	1		3
9535		LEAR	07 17 0050	N07 W06	07 16.6		A	HSX	140	1	2	4
9535		KAND	07 17 0710	N06 W08	07 16.7			HS		1	3	5
9535		SVTO	07 17 0710	N07 W09	07 16.6		A	HSX	130	1	2	2
9535	30571	MWIL	07 17 1445	N07 W13	07 16.6	5	(AP)					
9535		HOLL	07 17 1635	N05 W15	07 16.6		A	HSX	100	1	2	3
9535		VORO	07 17 2207	N06 W17	07 16.6			HHX	165	1		3
9535		LEAR	07 18 0040	N07 W19	07 16.6		A	HSX	110	1	2	2
9535		SVTO	07 18 0450	N06 W21	07 16.6		A	HSX	100	1	3	3
9535		KAND	07 18 0645	N06 W22	07 16.6			HS		2	3	5
9535		TACH	07 18 0729	N05 W21	07 16.7			HSX	3	1	2	4
9535		RAMY	07 18 1140	N07 W25	07 16.6		A	HSX	90	1	2	3
9535		HOLL	07 18 1152	N06 W27	07 16.5		A	HSX	90	1	2	2
9535	30571	MWIL	07 18 1445	N07 W26	07 16.7	5	(AP)					
9535		LEAR	07 19 0045	N07 W32	07 16.6		A	HSX	100	1	2	2
9535		SVTO	07 19 0451	N06 W34	07 16.6		A	HSX	110	1	3	3
9535		TACH	07 19 0536	N07 W34	07 16.7			HSX	200	1	2	4
9535		KAND	07 19 0743	N07 W35	07 16.7			HS		1	2	5
9535		RAMY	07 19 1140	N06 W37	07 16.7		A	HSX	90	1	2	3
9535		HOLL	07 19 1500	N06 W40	07 16.6		A	HSX	130	1	2	3
9535	30571	MWIL	07 19 1500	N07 W39	07 16.7	6	(AP)					
9535		LEAR	07 20 0025	N07 W45	07 16.6		A	HSX	100	1	2	3
9535		SVTO	07 20 0620	N06 W49	07 16.6		A	HSX	120	1	3	3
9535		KAND	07 20 0735	N07 W48	07 16.7			HS		1	2	5
9535	30571	MWIL	07 20 1500	N06 W52	07 16.7	5	(AP)					
9535		HOLL	07 20 2015	N06 W57	07 16.6		A	HSX	150	1	2	2
9535		VORO	07 21 0047	N06 W58	07 16.7			HHX	201	1		3
9535		LEAR	07 21 0145	N07 W59	07 16.6		A	HSX	70	1	2	3
9535		TACH	07 21 0437	N05 W60	07 16.7			HSX	70	1	2	3
9535		SVTO	07 21 0505	N07 W63	07 16.5		A	HSX	120	1	2	3
9535		KAND	07 21 0740	N07 W63	07 16.6			HS		1	2	4
9535		RAMY	07 21 1220	N06 W65	07 16.6		A	HSX	80	1	2	3
9535	30571	MWIL	07 21 1430	N06 W66	07 16.7	5	(AP)					
9535		HOLL	07 21 1440	N07 W67	07 16.6		A	HAX	100	1	2	3
9535		TACH	07 22 0458	N08 W72	07 16.8			HSX	50	1	2	4
9535		SVTO	07 22 0732	N07 W77	07 16.5		A	HAX	60	1	3	3
9535		KAND	07 22 0740	N07 W75	07 16.7			HA		1	3	2
9535		RAMY	07 22 1140	N06 W78	07 16.6		A	HSX	90	1	3	3
9535	30571	MWIL	07 22 1400	N07 W78	07 16.7	4	(AP)					
9535		HOLL	07 22 1445	N05 W80	07 16.6		A	HAX	120	1	2	4

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9535		VORO	07 22 2345	N06 W85	07 16.6			HAX	121	1		2
9534		HOLL	07 11 1500	N15 E72	07 17.1		A	AXX	10	1	1	4
9534		LEAR	07 12 0120	N13 E66	07 17.0		A	AXX	10	1	1	3
9534		SVTO	07 12 0530	N18 E65	07 17.2		A	AXX	20	1	1	3
9534		RAMY	07 12 1218	N13 E60	07 17.0		A	AXX		1		3
9534		HOLL	07 12 1405	N14 E59	07 17.0		A	AXX	10	1	1	4
9534		VORO	07 12 2121	N14 E56	07 17.1			AXX	8	1		3
9534		LEAR	07 13 0035	N13 E54	07 17.1		A	AXX	10	1	1	3
9534		TACH	07 13 0538	N14 E50	07 17.0			AR	12	2	1	3
9534		RAMY	07 13 1345	N14 E46	07 17.0		A	AXX	10	1		2
9534		HOLL	07 13 1415	N12 E47	07 17.1		A	AXX	20	2	1	3
9534B	30597	MWIL	07 19 1500	S22 W34	07 17.0	4	(B)					
9534B		HOLL	07 19 1500	S24 W34	07 17.0		A	AXX	10	1	1	3
9534B		KAND	07 20 0735	S21 W42	07 17.1			BXO		2	2	5
9534B	30597	MWIL	07 20 1500	S21 W46	07 17.1	4	(B)					
9534B		HOLL	07 20 2015	S23 W49	07 17.1		A	AXX	10	2	2	2
9534A		LEAR	07 18 0040	S15 W09	07 17.3		B	CSO	10	2	3	2
9534A		SVTO	07 18 0450	S16 W12	07 17.3		B	CRO	10	2	3	3
9534A		KAND	07 18 0645	S16 W13	07 17.3			BXO		2	2	5
9534A	30593	MWIL	07 18 1445	S16 W16	07 17.4	4	(B)					
9540	30574	MWIL	07 11 1400	N14 E74	07 17.2	3	(AF)					
9540	30574	MWIL	07 12 1400	N14 E59	07 17.0	4	(AP)					
9540		LEAR	07 13 0035	N18 E55	07 17.2		A	AXX	10	1	1	3
9540		SVTO	07 13 0712	N14 E51	07 17.1		A	AXX		1		3
9540		KAND	07 13 0755	N13 E51	07 17.2			AX		1		4
9540	30574	MWIL	07 13 1400	N14 E46	07 17.0	4	(AP)					
9540	30581	MWIL	07 13 1400	N18 E47	07 17.2	3	(AF)					
9540		LEAR	07 14 0150	N19 E42	07 17.3		B	BXO	10	2	2	2
9540		SVTO	07 14 0511	N19 E46	07 17.7		B	BXO	10	3	4	3
9540		SVTO	07 14 0511	N21 E42	07 17.4		B	BXO	10	2	4	3
9540	30581	MWIL	07 14 1400	N22 E36	07 17.3	4	(AP)					
9540	30594	MWIL	07 18 1445	N23 W14	07 17.5	4	(AF)					
9540	30594	MWIL	07 19 1500	N20 W25	07 17.7	4	(AF)					
9540	30594	MWIL	07 20 1500	N19 W39	07 17.6	4	(AP)					
9540		HOLL	07 20 2015	N18 W43	07 17.6		A	AXX	10	2	2	2
9540A		RAMY	07 13 1345	N08 E54	07 17.6		A	AXX	10	1		2
9540A	30582	MWIL	07 13 1400	N07 E55	07 17.7	4	(BF)					
9540A		VORO	07 13 2125	N08 E51	07 17.7			AXX	5	1		2
9540A		LEAR	07 14 0150	N07 E48	07 17.7		B	BXO	10	3	3	2
9540A		TACH	07 14 0433	N09 E46	07 17.6			AXX	3	1	1	4
9540A	30582	MWIL	07 14 1400	N08 E42	07 17.7	4	(AF)					
9540B		RAMY	07 18 1140	S16 W06	07 18.0		B	BXO		2	3	3
9538	30575	MWIL	07 11 1400	N17 E87	07 18.2	5	AP					
9538		HOLL	07 11 1500	N17 E90	07 18.5		A	HSX	30	1	3	4
9538		VORO	07 11 2237	N17 E84	07 18.3			HAX	161	1		2
9538		LEAR	07 12 0120	N16 E80	07 18.1		A	HAX	90	1	2	3
9538		SVTO	07 12 0530	N22 E78	07 18.2		A	HSX	180	1	4	3
9538		TACH	07 12 0617	N18 E76	07 18.0			HSX	100	1	2	3
9538		RAMY	07 12 1218	N16 E73	07 18.0		A	HSX	110	1	3	3
9538		KAND	07 12 1355	N16 E74	07 18.2			HS		1	2	3
9538	30577	MWIL	07 12 1400	N17 E72	07 18.0	5	(AP)					
9538		HOLL	07 12 1405	N17 E75	07 18.3		B	EHO	170	2	11	4
9538		VORO	07 12 2121	N17 E69	07 18.1			HAX	288	1		3
9538		LEAR	07 13 0035	N16 E71	07 18.4		B	EAO	150	2	13	3
9538		TACH	07 13 0538	N17 E68	07 18.4			DSO	310	2	9	3
9538		SVTO	07 13 0712	N17 E64	07 18.2		A	HHX	200	1	3	3
9538		KAND	07 13 0755	N16 E64	07 18.2			HS		1	3	4
9538		RAMY	07 13 1345	N17 E59	07 18.0		A	HSX	150	1	2	2
9538	30577	MWIL	07 13 1400	N17 E60	07 18.1	5	(AP)					
9538		HOLL	07 13 1415	N14 E59	07 18.0		A	HAX	20	1	2	3
9538		VORO	07 13 2125	N16 E56	07 18.1			HKX	306	1		2
9538		LEAR	07 14 0150	N16 E52	07 18.0		A	HKX	140	1	2	2

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9538		TACH	07	14	0433	N17	E51	07	18.1			HSX	250	1	2	4
9538		SVTO	07	14	0511	N17	E52	07	18.2		A	HKX	150	1	4	3
9538		RAMY	07	14	1200	N17	E47	07	18.1		A	HSX	190	1	3	3
9538		KAND	07	14	1315	N17	E47	07	18.1			HS		1	3	5
9538	30577	MWIL	07	14	1400	N17	E46	07	18.1	5	(AP)					
9538		HOLL	07	14	1440	N16	E48	07	18.2		A	HAX	200	1	3	4
9538		LEAR	07	15	0154	N16	E40	07	18.1		A	HSX	260	1	3	4
9538		TACH	07	15	0518	N17	E38	07	18.1			HSX	200	1	2	3
9538		KAND	07	15	0613	N16	E39	07	18.2			HS		1	2	4
9538		SVTO	07	15	0700	N15	E38	07	18.2		A	HKX	270	1	3	3
9538		RAMY	07	15	1350	N17	E33	07	18.1		A	HKX	210	1	2	3
9538	30577	MWIL	07	15	1500	N16	E33	07	18.1	5	(AP)					
9538		VORO	07	15	2124	N17	E30	07	18.2			HKX	170	1		3
9538		LEAR	07	16	0141	N16	E27	07	18.1		A	HSX	220	1	4	4
9538		TACH	07	16	0456	N17	E25	07	18.1			HSX	350	1	2	4
9538		SVTO	07	16	0559	N16	E25	07	18.1		A	HSX	210	2	3	3
9538		KAND	07	16	0805	N16	E24	07	18.1			HS		1	3	4
9538	30577	MWIL	07	16	1445	N17	E20	07	18.1	5	(BG)					
9538		RAMY	07	16	1530	N17	E19	07	18.1		A	HSX	150	1	2	1
9538		HOLL	07	16	1922	N16	E19	07	18.2		B	CSO	150	2	2	3
9538		VORO	07	16	2140	N16	E17	07	18.2			HKX	226	1		3
9538		LEAR	07	17	0050	N17	E15	07	18.2		A	HHX	170	1	3	4
9538		KAND	07	17	0710	N15	E13	07	18.3			HS		1	3	5
9538		SVTO	07	17	0710	N17	E12	07	18.2		A	HSX	190	1	2	2
9538	30577	MWIL	07	17	1445	N17	E07	07	18.1	5	(AP)					
9538		HOLL	07	17	1635	N15	E07	07	18.2		A	HHX	200	1	3	3
9538		VORO	07	17	2207	N17	E04	07	18.2			HKX	236	1		3
9538		LEAR	07	18	0040	N17	E02	07	18.2		A	HKX	170	1	3	2
9538		SVTO	07	18	0450	N17	W02	07	18.0		A	HSX	200	1	4	3
9538		KAND	07	18	0645	N16	W01	07	18.2			HS		1	3	5
9538		TACH	07	18	0729	N16	W02	07	18.2			HSX	220	1	2	4
9538		RAMY	07	18	1140	N17	W04	07	18.2		A	HAX	170	1	2	3
9538		HOLL	07	18	1152	N17	W07	07	18.0		A	HAX	150	1	2	2
9538	30577	MWIL	07	18	1445	N17	W06	07	18.1	5	(AP)					
9538		LEAR	07	19	0045	N17	W11	07	18.2		A	HKX	170	1	3	2
9538		SVTO	07	19	0451	N17	W13	07	18.2		A	HAX	120	1	4	3
9538		TACH	07	19	0536	N17	W14	07	18.2			AXX	15	1	1	4
9538		KAND	07	19	0743	N17	W15	07	18.2			HS		1	3	5
9538		RAMY	07	19	1140	N16	W16	07	18.3		A	HSX	150	1	2	3
9538		HOLL	07	19	1500	N17	W19	07	18.2		B	CAO	110	2	3	3
9538	30577	MWIL	07	19	1500	N17	W19	07	18.2	5	(BF)					
9538		LEAR	07	20	0025	N17	W25	07	18.1		A	HAX	120	1	2	3
9538		SVTO	07	20	0620	N17	W28	07	18.1		A	HAX	130	1	4	3
9538		KAND	07	20	0735	N17	W28	07	18.2			CAO		3	4	5
9538	30577	MWIL	07	20	1500	N17	W32	07	18.2	5	(BP)					
9538		HOLL	07	20	2015	N16	W34	07	18.3		B	CAO	160	5	6	2
9538		VORO	07	21	0047	N17	W38	07	18.1			HKX	222	1		3
9538		LEAR	07	21	0145	N17	W38	07	18.2		A	HAX	110	1	2	3
9538		TACH	07	21	0437	N16	W39	07	18.2			HSX	120	1	1	3
9538		SVTO	07	21	0505	N17	W42	07	18.0		A	HAX	140	1	3	3
9538		KAND	07	21	0740	N17	W41	07	18.2			HS		1	2	4
9538		RAMY	07	21	1220	N16	W45	07	18.1		A	HSX	140	1	2	3
9538	30577	MWIL	07	21	1430	N17	W45	07	18.2	5	(AP)					
9538		HOLL	07	21	1440	N14	W45	07	18.2		A	HAX	80	1	2	3
9538		TACH	07	22	0458	N18	W52	07	18.2			HSX	100	1	2	4
9538		SVTO	07	22	0732	N18	W56	07	18.0		A	HAX	170	1	2	3
9538		KAND	07	22	0740	N17	W55	07	18.1			HS		1	3	2
9538		RAMY	07	22	1140	N15	W57	07	18.2		A	HSX	130	1	2	3
9538	30577	MWIL	07	22	1400	N17	W58	07	18.2	5	(AP)					
9538		HOLL	07	22	1445	N14	W59	07	18.1		A	HAX	150	1	2	4
9538		VORO	07	22	2345	N16	W63	07	18.2			HKX	153	1		2
9538		TACH	07	23	0531	N17	W65	07	18.3			HSX	55	1	2	4
9538		SVTO	07	23	0710	N18	W69	07	18.0		A	HAX	100	1	2	3
9538		KAND	07	23	0755	N16	W67	07	18.2			HS		1	3	3
9538		RAMY	07	23	1200	N14	W71	07	18.1		A	HSX	90	1	2	3
9538	30577	MWIL	07	23	1430	N17	W71	07	18.2	4	(AP)					
9538		VORO	07	23	2126	N16	W74	07	18.3			HAX	200	1		3
9538		LEAR	07	24	0047	N17	W77	07	18.2		A	HSX	120	1	2	4
9538		SVTO	07	24	0503	N16	W80	07	18.1		A	HSX	90	1	3	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
9538		TACH	07 24 0505	N17 W77	07 18.4			HSX	40	1	3	3
9538		KAND	07 24 0645	N17 W82	07 18.0			HS		1	2	4
9538		RAMY	07 24 1215	N14 W82	07 18.3		A	HSX	20	1	2	3
9538	30577	MWIL	07 24 1400	N16 W85	07 18.1	4	(AP)					
9538		HOLL	07 24 1425	N13 W86	07 18.1		A	HAX	120	1	3	4
9545		TACH	07 15 0518	N12 E49	07 18.9			HA	102	3	3	3
9545		LEAR	07 16 0141	N09 E34	07 18.6		B	DRO	20	5	3	4
9545		TACH	07 16 0456	N10 E31	07 18.5			BRO	13	4	3	4
9545		SVTO	07 16 0559	N09 E32	07 18.6		BG	DAO	40	7	6	3
9545		KAND	07 16 0805	N09 E30	07 18.6			CSO		4	6	4
9545	30588	MWIL	07 16 1445	N10 E27	07 18.6	4	(BG)					
9545		RAMY	07 16 1530	N10 E26	07 18.6		B	DSO	20	7	7	1
9545		HOLL	07 16 1922	N09 E24	07 18.6		B	DAO	40	7	7	3
9545		VORO	07 16 2140	N09 E22	07 18.5			BXO	71	3	4	3
9545		LEAR	07 17 0050	N09 E21	07 18.6		BG	DAI	70	9	7	4
9545		KAND	07 17 0710	N08 E18	07 18.6			DAO		6	7	5
9545		SVTO	07 17 0710	N10 E17	07 18.6		BG	DAO	40	8	7	2
9545	30588	MWIL	07 17 1445	N10 E13	07 18.6	4	(BG)					
9545		HOLL	07 17 1635	N09 E10	07 18.4		B	CSO	20	5	7	3
9545		VORO	07 17 2207	N09 E07	07 18.4			BXO	44	4	5	3
9545		LEAR	07 18 0040	N09 E06	07 18.5		BG	CSO	40	4	6	2
9545		SVTO	07 18 0450	N09 E04	07 18.5		B	CRO	20	3	7	3
9545		KAND	07 18 0645	N09 E04	07 18.6			CRO		3	7	5
9545		TACH	07 18 0729	N08 E03	07 18.5			BXO	7	2	7	4
9545		RAMY	07 18 1140	N09 W03	07 18.3		A	HSX	50	1	6	3
9545		HOLL	07 18 1152	N07 W06	07 18.0		B	CSO	20	3	1	2
9545	30588	MWIL	07 18 1445	N09 W02	07 18.5	5	(BP)					
9545		LEAR	07 19 0045	N08 W10	07 18.3		B	CSO	30	3	3	2
9545		SVTO	07 19 0451	N08 W13	07 18.2		A	HRX	10	1	1	3
9545		TACH	07 19 0536	N08 W13	07 18.2			HSX	300	1	2	4
9545		KAND	07 19 0743	N08 W14	07 18.3			AX		1		5
9545		RAMY	07 19 1140	N08 W16	07 18.3		A	AXX	10	1		3
9545	30588	MWIL	07 19 1500	N08 W19	07 18.2	4	(AP)					
9545		LEAR	07 20 0025	N09 W25	07 18.1		A	AXX	10	1	1	3
9545		SVTO	07 20 0620	N08 W28	07 18.2		A	HRX		1		3
9545		KAND	07 20 0735	N09 W28	07 18.2			AX		1		5
9545	30588	MWIL	07 20 1500	N08 W32	07 18.2	3	(AP)					
9545		SVTO	07 21 0505	N09 W33	07 18.7		B	DAO	30	5	3	3
9545		KAND	07 21 0740	N09 W34	07 18.8			BXI		5	2	4
9545		RAMY	07 21 1220	N08 W37	07 18.7		B	DSO	30	6	4	3
9545	30598	MWIL	07 21 1430	N10 W38	07 18.7	4	(B)					
9545		HOLL	07 21 1440	N09 W39	07 18.7		B	DSO	40	11	4	3
9545		TACH	07 22 0458	N11 W46	07 18.7			BRI	8	8	4	4
9545		SVTO	07 22 0732	N10 W48	07 18.7		B	DRO	60	17	6	3
9545		KAND	07 22 0740	N09 W48	07 18.7			DAO		6	5	2
9545		RAMY	07 22 1140	N08 W51	07 18.7		B	DSI	90	13	8	3
9545	30598	MWIL	07 22 1400	N09 W52	07 18.7	5	(B)					
9545		HOLL	07 22 1445	N08 W52	07 18.7		B	DAO	50	17	6	4
9545		VORO	07 22 2345	N09 W58	07 18.6			CAI	172	11	4	2
9545		TACH	07 23 0531	N10 W58	07 18.9			CAI	67	5	6	4
9545		SVTO	07 23 0710	N10 W63	07 18.6		B	DAO	150	8	8	3
9545		KAND	07 23 0755	N08 W61	07 18.7			DAO		6	7	3
9545		RAMY	07 23 1200	N07 W65	07 18.6		B	DAO	110	5	7	3
9545	30598	MWIL	07 23 1430	N09 W66	07 18.6	5	(B)					
9545		VORO	07 23 2126	N09 W70	07 18.6			CAI	155	5	5	3
9545		LEAR	07 24 0047	N08 W70	07 18.8		B	CSO	120	6	6	4
9545		SVTO	07 24 0503	N09 W77	07 18.4		A	HAX	60	1	2	3
9545		TACH	07 24 0505	N10 W74	07 18.6			HSX	50	1	2	3
9545		KAND	07 24 0645	N10 W78	07 18.4			HS		1	2	4
9545		RAMY	07 24 1215	N07 W80	07 18.5		A	HSX	90	1	3	3
9545	30598	MWIL	07 24 1400	N09 W79	07 18.6	5	(BP)					
9545		HOLL	07 24 1425	N08 W80	07 18.6		A	HAX	120	3	3	4
9545		VORO	07 24 2130	N09 W86	07 18.4			HAX	178	1		3
9541		KAND	07 12 1355	N17 E87	07 19.2			HS		1	2	3
9541	30578	MWIL	07 12 1400	N17 E84	07 19.0	4	AP					
9541		VORO	07 12 2121	N18 E79	07 18.9			HAX	123	1		3
9541		SVTO	07 13 0712	N17 E78	07 19.2		B	CAO	90	2	6	3

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9541		KAND	07	13	0755	N17	E77	07	19.2			CSO		2	7	4
9541		RAMY	07	13	1345	N18	E74	07	19.2		B	CSO	130	2	8	2
9541	30578	MWIL	07	13	1400	N17	E72	07	19.0	4	B					
9541		HOLL	07	13	1415	N15	E74	07	19.2		B	CAO	140	7	8	3
9541		VORO	07	13	2125	N17	E69	07	19.1			CAI	172	3	5	2
9541		LEAR	07	14	0150	N17	E68	07	19.2		B	DSO	120	6	7	2
9541		TACH	07	14	0433	N18	E67	07	19.3			CSO	56	3	6	4
9541		SVTO	07	14	0511	N18	E65	07	19.2		B	DSO	150	6	6	3
9541		RAMY	07	14	1200	N18	E60	07	19.1		B	DSO	160	4	8	3
9541		KAND	07	14	1315	N17	E60	07	19.1			CSO		5	7	5
9541	30578	MWIL	07	14	1400	N17	E59	07	19.1	5	(BP)					
9541		HOLL	07	14	1440	N17	E58	07	19.0		B	CAO	70	8	7	4
9541		LEAR	07	15	0154	N17	E54	07	19.2		B	DSO	150	9	7	4
9541		KAND	07	15	0613	N17	E51	07	19.1			DSO		6	6	4
9541		SVTO	07	15	0700	N16	E54	07	19.4		B	DSO	150	9	8	3
9541		RAMY	07	15	1350	N18	E47	07	19.1		B	DSO	140	6	5	3
9541	30585	MWIL	07	15	1500	N14	E48	07	19.2	4	(AF)					
9541	30578	MWIL	07	15	1500	N17	E47	07	19.2	5	(BP)					
9541		VORO	07	15	2124	N18	E42	07	19.1			HHX	116	1		3
9541		LEAR	07	16	0141	N17	E41	07	19.2		B	CSO	110	8	5	4
9541		TACH	07	16	0456	N17	E38	07	19.1			CAO	187	3	3	4
9541		SVTO	07	16	0559	N17	E38	07	19.1		B	CSO	140	9	5	3
9541		KAND	07	16	0805	N17	E37	07	19.1			CSO		5	5	4
9541	30578	MWIL	07	16	1445	N18	E33	07	19.1	5	(BG)					
9541		RAMY	07	16	1530	N17	E31	07	19.0		B	DSO	80	3	4	1
9541		HOLL	07	16	1922	N17	E31	07	19.2		B	DAO	100	3	4	3
9541		VORO	07	16	2140	N18	E28	07	19.0			HHX	169	2		3
9541		LEAR	07	17	0050	N18	E28	07	19.2		B	DSO	100	6	5	4
9541		KAND	07	17	0710	N17	E25	07	19.2			DAO		4	5	5
9541		SVTO	07	17	0710	N18	E24	07	19.1		B	DAO	150	4	4	2
9541	30578	MWIL	07	17	1445	N18	E21	07	19.2	5	(BP)					
9541		HOLL	07	17	1635	N16	E19	07	19.1		B	CAO	150	8	5	3
9541		VORO	07	17	2207	N18	E16	07	19.1			HHX	184	3	3	3
9541		LEAR	07	18	0040	N18	E15	07	19.2		B	DAO	110	5	5	2
9541		SVTO	07	18	0450	N18	E13	07	19.2		B	CSO	130	5	4	3
9541		KAND	07	18	0645	N17	E12	07	19.2			CSO		3	4	5
9541		TACH	07	18	0729	N17	E12	07	19.2			CSO	148	3	5	4
9541		RAMY	07	18	1140	N18	E09	07	19.2		B	CAO	80	4	3	3
9541		HOLL	07	18	1152	N17	E06	07	18.9		B	CSO	70	4	4	2
9541	30578	MWIL	07	18	1445	N18	E07	07	19.1	5	(BP)					
9541		LEAR	07	19	0045	N18	E02	07	19.2		B	CAO	90	3	4	2
9541		SVTO	07	19	0451	N18	W01	07	19.1		B	CSO	90	4	4	3
9541		TACH	07	19	0536	N18	W01	07	19.1			CAI	210	5	2	4
9541		KAND	07	19	0743	N18	W02	07	19.2			CAO		4	4	5
9541		RAMY	07	19	1140	N18	W04	07	19.2		B	CSO	70	4	4	3
9541	30578	MWIL	07	19	1500	N18	W06	07	19.2	5	(BP)					
9541		HOLL	07	19	1500	N18	W07	07	19.1		B	CSO	80	5	2	3
9541		LEAR	07	20	0025	N21	W12	07	19.1		B	CSO	80	4	3	3
9541		SVTO	07	20	0620	N18	W16	07	19.0		A	HAX	60	1	3	3
9541		KAND	07	20	0735	N20	W16	07	19.1			CAO		3	2	5
9541	30578	MWIL	07	20	1500	N18	W21	07	19.0	5	(BP)					
9541		HOLL	07	20	2015	N20	W24	07	19.0		B	CAO	70	2	2	2
9541		VORO	07	21	0047	N19	W25	07	19.1			HAX	82	1		3
9541		LEAR	07	21	0145	N19	W26	07	19.1		A	HSX	20	1	1	3
9541		TACH	07	21	0437	N19	W27	07	19.1			HSX	70	1	1	3
9541		SVTO	07	21	0505	N19	W27	07	19.1		A	HAX	30	1	1	3
9541		KAND	07	21	0740	N19	W29	07	19.1			HA		2	1	4
9541		RAMY	07	21	1220	N18	W32	07	19.1		B	CSO	30	2	3	3
9541	30578	MWIL	07	21	1430	N19	W32	07	19.2	5	(BP)					
9541		HOLL	07	21	1440	N18	W33	07	19.1		B	DAO	30	2	3	3
9541		TACH	07	22	0458	N21	W39	07	19.2			AXX	10	1	1	4
9541		SVTO	07	22	0732	N21	W42	07	19.1		A	HSX	20	1	1	3
9541		KAND	07	22	0740	N19	W41	07	19.2			HS		1	1	2
9541		RAMY	07	22	1140	N18	W44	07	19.1		A	HSX	30	1	1	3
9541	30578	MWIL	07	22	1400	N19	W45	07	19.1	5	(AP)					
9541		HOLL	07	22	1445	N18	W47	07	19.0		A	HSX	20	1	1	4
9541		VORO	07	22	2345	N19	W51	07	19.1			AXX	16	1		2
9541		TACH	07	23	0531	N20	W52	07	19.2			AXX	5	1	1	4
9541		SVTO	07	23	0710	N21	W56	07	19.0		A	HSX	40	1	1	3

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9541		KAND	07 23 0755	N19 W54	07 19.2			HR		1	1	3
9541		RAMY	07 23 1200	N19 W59	07 19.0		A	HSX	10	1	1	3
9541	30578	MWIL	07 23 1430	N19 W58	07 19.2	4	(AP)					
9541		VORO	07 23 2126	N20 W62	07 19.1			AXX	14	1		3
9541		LEAR	07 24 0047	N19 W63	07 19.2		A	HRX	20	1	1	4
9541		KAND	07 24 0645	N20 W67	07 19.1			AX		1	1	4
9541		RAMY	07 24 1215	N18 W72	07 19.0		A	HSX	10	1	1	3
9541	30578	MWIL	07 24 1400	N19 W72	07 19.1	4	(AP)					
9541		HOLL	07 24 1425	N18 W71	07 19.2		A	AXX		1	1	4
9554	30599	MWIL	07 22 1400	N17 W29	07 20.4	4	(AP)					
9554		HOLL	07 22 1445	N16 W30	07 20.3		A	AXX	10	1	1	4
9554		RAMY	07 24 1215	N16 W56	07 20.3		B	CSO	10	2	2	3
9554	30599	MWIL	07 24 1400	N17 W56	07 20.3	4	(BP)					
9554		HOLL	07 24 1425	N16 W55	07 20.4		A	AXX	10	2	2	4
9554		VORO	07 24 2130	N17 W60	07 20.3			AXX	17	1		3
9554		LEAR	07 25 0020	N18 W62	07 20.3		A	HAX	40	1	1	2
9554		SVTO	07 25 0530	N17 W65	07 20.3		A	HRX	10	1	1	3
9554		TACH	07 25 0556	N16 W63	07 20.5			AXX	3	1	1	4
9554		KAND	07 25 0710	N18 W65	07 20.3			AX		1	1	3
9554		RAMY	07 25 1129	N15 W67	07 20.4		A	AXX	10	1	1	3
9554	30599	MWIL	07 25 1400	N17 W68	07 20.4	4	(B)					
9554		RAMY	07 26 1241	N16 W80	07 20.5		A	AXX	10	1	1	3
9542		LEAR	07 15 0154	N07 E78	07 20.9		B	BXO	10	2	3	4
9542		KAND	07 15 0613	N07 E76	07 20.9			BXO		2	3	4
9542		SVTO	07 15 0700	N05 E76	07 21.0		B	CAO	300	2	8	3
9542		RAMY	07 15 1350	N06 E70	07 20.8		B	CSO	30	2	4	3
9542	30586	MWIL	07 15 1500	N08 E70	07 20.9	4	(AP)					
9542		VORO	07 15 2124	N08 E66	07 20.8			AXX	22	2	3	3
9542		LEAR	07 16 0141	N07 E65	07 20.9		B	CSO	20	4	6	4
9542		TACH	07 16 0456	N10 E64	07 21.0			AXX	5	1	1	4
9542		SVTO	07 16 0559	N07 E62	07 20.9		B	CSO	40	5	6	3
9542		KAND	07 16 0805	N08 E63	07 21.1			AX		1	1	4
9542	30586	MWIL	07 16 1445	N08 E58	07 21.0	4	(BF)					
9542		RAMY	07 16 1530	N09 E58	07 21.0		A	HSX	10	1	1	1
9542		HOLL	07 16 1922	N09 E57	07 21.1		A	HSX	10	1	1	3
9542		LEAR	07 17 0050	N07 E53	07 21.0		B	CSO	30	4	3	4
9542		KAND	07 17 0710	N07 E49	07 21.0			BXO		3	2	5
9542		SVTO	07 17 0710	N08 E49	07 21.0		B	BXO	20	5	5	2
9542	30586	MWIL	07 17 1445	N08 E45	07 21.0	4	(BF)					
9542		HOLL	07 17 1635	N08 E44	07 21.0		B	BXO	20	2	2	3
9542		LEAR	07 18 0040	N07 E39	07 20.9		B	CSO	30	4	3	2
9542		SVTO	07 18 0450	N08 E36	07 20.9		B	BXO	20	5	4	3
9542		KAND	07 18 0645	N07 E35	07 20.9			BXO		4	3	5
9542		TACH	07 18 0729	N09 E36	07 21.0			AXX	3	1	1	4
9542		RAMY	07 18 1140	N09 E34	07 21.0		B	BXO		2	2	3
9542		HOLL	07 18 1152	N08 E28	07 20.6		B	BXO	20	4	5	2
9542	30586	MWIL	07 18 1445	N08 E30	07 20.9	4	(B)					
9542		LEAR	07 19 0045	N08 E25	07 20.9		B	CAO	30	6	6	2
9542		SVTO	07 19 0451	N08 E23	07 20.9		B	CRO	40	9	6	3
9542		TA6H	07 19 0536	N07 E21	07 20.8			BRI	19	9	5	4
9542	30586	MWIL	07 19 1500	N07 E16	07 20.8	4	(BP)					
9542		HOLL	07 19 1500	N08 E16	07 20.8		B	CRO	40	7	3	3
9542		LEAR	07 20 0025	N08 E11	07 20.8		B	CRO	30	6	6	3
9542		SVTO	07 20 0620	N07 E07	07 20.8		B	DAO	30	8	7	3
9542		KAND	07 20 0735	N08 E09	07 21.0			BXI		8	4	5
9542	30586	MWIL	07 20 1500	N09 E03	07 20.8	4	(B)					
9542		HOLL	07 20 2015	N08 W01	07 20.8		B	BXO	20	10	5	2
9542		LEAR	07 21 0145	N08 W03	07 20.8		B	DSO	10	12	6	3
9542		SVTO	07 21 0505	N08 W05	07 20.8		B	DAO	20	8	6	3
9542		KAND	07 21 0740	N09 W07	07 20.8			BXO		3	3	4
9542	30586	MWIL	07 21 1430	N09 W09	07 20.9	4	(BF)					
9542		HOLL	07 21 1440	N08 W11	07 20.8		B	BXO	20	5	5	3
9546	30589	MWIL	07 16 1445	S17 E65	07 21.5	4	(BF)					
9546		HOLL	07 16 1922	S17 E62	07 21.5		B	DSO	50	4	6	3
9546		VORO	07 16 2140	S17 E59	07 21.4			AXX	43	2	3	3
9546		LEAR	07 17 0050	S17 E60	07 21.6		B	DAO	70	7	8	4

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9546		SVTO	07 17 0710	S17 E56	07 21.5		B	DSO	50	5	6	2
9546		KAND	07 17 0710	S18 E57	07 21.6			DSO		3	7	5
9546	30589	MWIL	07 17 1445	S17 E52	07 21.6	4	(B)					
9546		HOLL	07 17 1635	S18 E48	07 21.3		B	CAO	70	5	8	3
9546		VORO	07 17 2207	S17 E46	07 21.4			AXX	33	3	8	3
9546		LEAR	07 18 0040	S17 E44	07 21.4		B	DAO	70	7	10	2
9546		SVTO	07 18 0450	S17 E43	07 21.5		B	DSO	60	7	8	3
9546		KAND	07 18 0645	S18 E43	07 21.5			DAO		9	11	5
9546		TACH	07 18 0729	S17 E41	07 21.4			BXI	35	3	10	4
9546		RAMY	07 18 1140	S18 E38	07 21.4		B	DSO	50	4	10	3
9546		HOLL	07 18 1152	S16 E36	07 21.2		B	ESO	70	6	11	2
9546	30589	MWIL	07 18 1445	S17 E37	07 21.4	5	(BG)					
9546		LEAR	07 19 0045	S17 E30	07 21.3		BG	EAI	80	8	12	2
9546		SVTO	07 19 0451	S17 E29	07 21.4		BG	ESI	70	7	13	3
9546		TACH	07 19 0536	S15 E27	07 21.3			BRI	82	7	10	4
9546		KAND	07 19 0743	S16 E27	07 21.4			CSO		10	12	5
9546		RAMY	07 19 1140	S18 E24	07 21.3		B	ESO	120	7	11	3
9546		HOLL	07 19 1500	S16 E24	07 21.4		B	ESO	80	12	11	3
9546	30589	MWIL	07 19 1500	S17 E22	07 21.3	5	(BG)					
9546		LEAR	07 20 0025	S17 E16	07 21.2		BG	EAI	70	11	12	3
9546		SVTO	07 20 0620	S16 E13	07 21.2		BG	EAI	30	11	11	3
9546		KAND	07 20 0735	S16 E11	07 21.1			BXO		6	8	5
9546	30589	MWIL	07 20 1500	S17 E09	07 21.3	5	(B)					
9546		HOLL	07 20 2015	S16 E05	07 21.2		B	CAO	20	7	12	2
9546		VORO	07 21 0047	S14 W03	07 20.8			AXX	17	1		3
9546		LEAR	07 21 0145	S14 W04	07 20.8		A	HSX	10	1	1	3
9546		TACH	07 21 0437	S15 E01	07 21.3			BXO	7	3	9	3
9546		SVTO	07 21 0505	S15 W06	07 20.7		B	DSO	20	2	1	3
9546		KAND	07 21 0740	S14 W07	07 20.8			AX		2	2	4
9546		RAMY	07 21 1220	S15 W07	07 21.0		B	CSO	30	3	5	3
9546	30589	MWIL	07 21 1430	S14 W09	07 20.9	4	(BP)					
9546		HOLL	07 21 1440	S15 W08	07 21.0		B	BXO	20	6	6	3
9546		TACH	07 22 0458	S13 W16	07 21.0			BRI	6	6	5	4
9546		SVTO	07 22 0732	S15 W20	07 20.8		B	DSO	40	8	7	3
9546		KAND	07 22 0740	S14 W20	07 20.8			CRO		8	4	2
9546		RAMY	07 22 1140	S15 W22	07 20.8		B	DSO	330	18	14	3
9546	30589	MWIL	07 22 1400	S14 W24	07 20.8	4	(B)					
9546		HOLL	07 22 1445	S15 W19	07 21.2		B	CAO	90	9	5	4
9546		VORO	07 22 2345	S14 W31	07 20.6			AXX	21	3		2
9546		TACH	07 23 0531	S12 W35	07 20.6			AR	6	2	1	4
9546		SVTO	07 23 0710	S13 W37	07 20.5		A	HSX	20	2	2	3
9546		KAND	07 23 0755	S13 W35	07 20.7			CAO		4	4	3
9546		RAMY	07 23 1200	S15 W38	07 20.6		B	CSO	10	2	1	3
9546	30589	MWIL	07 23 1430	S14 W39	07 20.6	4	(AP)					
9546		LEAR	07 24 0047	S14 W46	07 20.5		B	CSO	10	2	1	4
9546	30589	MWIL	07 24 1400	S13 W53	07 20.6	4	(AP)					
9546	30589	MWIL	07 25 1400	S15 W62	07 20.9	4	(B)					
9543		KAND	07 15 0613	S23 E85	07 21.8			HS		1	2	4
9543		SVTO	07 15 0700	S25 E81	07 21.6		A	HAX	600	1	3	3
9543		RAMY	07 15 1350	S23 E75	07 21.3		A	HSX	60	1	3	3
9543	30587	MWIL	07 15 1500	S23 E77	07 21.5	4	B					
9543		VORO	07 15 2124	S22 E73	07 21.5			DSO	240	2	10	3
9543		LEAR	07 16 0141	S24 E75	07 21.9		B	ESO	210	7	11	4
9543		TACH	07 16 0456	S22 E71	07 21.7			DAO	116	3	11	4
9543		SVTO	07 16 0559	S24 E72	07 21.8		B	ESO	280	5	15	3
9543		KAND	07 16 0805	S23 E70	07 21.7			EAO		5	15	4
9543	30587	MWIL	07 16 1445	S23 E65	07 21.6	5	(B)					
9543		RAMY	07 16 1530	S23 E65	07 21.6		B	ESO	200	3	14	1
9543		HOLL	07 16 1922	S23 E63	07 21.7		B	EAO	200	7	13	3
9543		VORO	07 16 2140	S23 E61	07 21.6			DAI	283	4	10	3
9543		LEAR	07 17 0050	S23 E59	07 21.6		B	EAO	220	13	15	4
9543		SVTO	07 17 0710	S24 E57	07 21.7		B	ESO	300	13	14	2
9543		KAND	07 17 0710	S24 E58	07 21.8			ESO		10	14	5
9543	30587	MWIL	07 17 1445	S23 E53	07 21.7	5	(BF)					
9543		HOLL	07 17 1635	S22 E53	07 21.8		BG	EAI	270	13	14	3
9543		VORO	07 17 2207	S23 E47	07 21.5			DAI	245	10	11	3
9543		LEAR	07 18 0040	S23 E46	07 21.6		B	DAI	250	17	14	2
9543		SVTO	07 18 0450	S23 E46	07 21.7		BG	EAO	290	12	15	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
9543		KAND	07 18 0645	S24 E44	07 21.7			ESI		13	13	5
9543		TACH	07 18 0729	S23 E42	07 21.5			DAI	233	7	11	4
9543		RAMY	07 18 1140	S23 E41	07 21.6		B	E I	290	8	12	3
9543		HOLL	07 18 1152	S24 E37	07 21.3		B	EAI	210	12	13	2
9543	30587	MWIL	07 18 1445	S23 E40	07 21.7	5	(BF)					
9543		LEAR	07 19 0045	S23 E33	07 21.6		B	EAI	250	13	14	2
9543		SVTO	07 19 0451	S23 E33	07 21.7		B	ESO	230	8	15	3
9543		TACH	07 19 0536	S22 E29	07 21.5			DAI	380	13	11	4
9543		KAND	07 19 0743	S22 E30	07 21.6			ESO		18	15	5
9543		RAMY	07 19 1140	S22 E28	07 21.6		B	ESO	200	9	14	3
9543	30587	MWIL	07 19 1500	S22 E25	07 21.5	5	(B)					
9543		HOLL	07 19 1500	S23 E26	07 21.6		B	ESI	250	22	15	3
9543		LEAR	07 20 0025	S22 E19	07 21.5		BG	EAI	210	16	15	3
9543		SVTO	07 20 0620	S23 E17	07 21.6		BG	EAI	300	22	14	3
9543		KAND	07 20 0735	S23 E18	07 21.7			ESO		16	14	5
9543	30587	MWIL	07 20 1500	S21 E13	07 21.6	5	(B)					
9543		HOLL	07 20 2015	S23 E09	07 21.5		B	FSI	320	37	16	2
9543		VORO	07 21 0047	S23 E07	07 21.6			DHI	441	15	12	3
9543		LEAR	07 21 0145	S22 E06	07 21.5		BG	ESO	120	25	13	3
9543		TACH	07 21 0437	S21 E06	07 21.6			DSI	286	11	12	3
9543		SVTO	07 21 0505	S25 E03	07 21.4		BG	FAO	190	27	16	3
9543		KAND	07 21 0740	S23 E03	07 21.5			ESI		21	13	4
9543		RAMY	07 21 1220	S22 E01	07 21.6		BG	ESI	280	18	13	3
9543	30587	MWIL	07 21 1430	S22 W00	07 21.6	5	(B)					
9543		HOLL	07 21 1440	S23 W01	07 21.5		BG	EAI	320	49	15	3
9543		TACH	07 22 0458	S21 W09	07 21.5			DAI	289	14	11	4
9543		SVTO	07 22 0732	S23 W11	07 21.5		B	FAI	360	40	16	3
9543		KAND	07 22 0740	S22 W09	07 21.6			EAO		20	14	2
9543		RAMY	07 22 1140	S22 W12	07 21.6		BG	ESI	330	18	14	3
9543	30587	MWIL	07 22 1400	S22 W12	07 21.7	5	(B)					
9543		HOLL	07 22 1445	S21 W14	07 21.5		BG	EAI	430	59	14	4
9543		VORO	07 22 2345	S23 W18	07 21.6			DHI	564	29	12	2
9543		TACH	07 23 0531	S21 W21	07 21.6			DAI	440	21	12	4
9543		SVTO	07 23 0710	S23 W24	07 21.4		BG	FAI	200	42	16	3
9543		KAND	07 23 0755	S22 W23	07 21.6			EAO		27	14	3
9543		RAMY	07 23 1200	S27 W25	07 21.5		BG	EAI	250	32	14	3
9543	30587	MWIL	07 23 1430	S22 W25	07 21.7	5	(BG)					
9543		LEAR	07 24 0047	S23 W32	07 21.6		BG	EKI	290	37	15	4
9543		SVTO	07 24 0503	S22 W34	07 21.6		BG	FAI	310	21	16	3
9543		TACH	07 24 0505	S22 W34	07 21.6			DAI	389	22	12	3
9543		KAND	07 24 0645	S22 W34	07 21.7			EAI		24	15	4
9543		RAMY	07 24 1215	S22 W38	07 21.6		BG	EAI	350	35	14	3
9543	30587	MWIL	07 24 1400	S23 W38	07 21.6	5	(BG)					
9543		HOLL	07 24 1425	S25 W40	07 21.5		BG	EAC	430	34	14	4
9543		VORO	07 24 2130	S23 W43	07 21.6			DHI	495	17	13	3
9543		LEAR	07 25 0020	S23 W46	07 21.5		BG	EAO	260	21	11	2
9543		SVTO	07 25 0530	S23 W48	07 21.5		BG	FKI	350	15	17	3
9543		TACH	07 25 0556	S23 W46	07 21.7			DAI	286	12	11	4
9543		KAND	07 25 0710	S22 W48	07 21.6			EAO		15	15	3
9543		RAMY	07 25 1129	S25 W50	07 21.6		BG	ESI	280	12	15	3
9543	30587	MWIL	07 25 1400	S23 W50	07 21.7	5	(BG)					
9543		VORO	07 25 2314	S24 W56	07 21.6			DAI	544	6	12	2
9543		TACH	07 26 0535	S23 W60	07 21.6			DSI	280	6	12	3
9543		SVTO	07 26 0710	S24 W61	07 21.6		B	FAI	260	11	16	2
9543		KAND	07 26 0720	S23 W59	07 21.7			EAO		9	15	4
9543		RAMY	07 26 1241	S25 W63	07 21.6		BG	ESO	390	10	15	3
9543	30587	MWIL	07 26 1400	S23 W64	07 21.6	4	(BG)					
9543		HOLL	07 26 1430	S24 W65	07 21.6		BG	EHO	280	11	14	3
9543		LEAR	07 27 0100	S23 W70	07 21.6		BG	EAI	220	10	15	3
9543		TACH	07 27 0536	S23 W66	07 22.1			HA	250	2	6	3
9543		SVTO	07 27 0550	S24 W75	07 21.4		BG	ESI	250	9	15	3
9543		KAND	07 27 0745	S22 W71	07 21.9			EAO		3	13	3
9543		RAMY	07 27 1140	S27 W74	07 21.7		B	DSO	110	2	9	3
9543	30587	MWIL	07 27 1400	S23 W74	07 21.9	4	(BG)					
9543		HOLL	07 27 1432	S23 W76	07 21.7		B	EAO	140	5	11	3
9543		LEAR	07 28 0130	S22 W78	07 22.1		A	HSX	60	1	2	1
9543		SVTO	07 28 0454	S23 W89	07 21.3		A	HSX	60	1	2	3
9550		SVTO	07 18 0450	N08 E48	07 21.8		B	BXO	10	2	3	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
9550		KAND	07 18 0645	N08 E47	07 21.8			BXO		2	4	5
9550	30595	MWIL	07 18 1445	N08 E42	07 21.8	4	(B)					
9550		LEAR	07 19 0045	N07 E36	07 21.7		B	BXO	10	3	4	2
9550		LEAR	07 27 0100	N09 W66	07 22.1		A	AXX	10	1	1	3
9548	30590	MWIL	07 17 1445	N18 E70	07 22.9	4	(AP)					
9548		HOLL	07 17 1635	N17 E69	07 22.9		A	AXX	10	1	2	3
9548		VORO	07 17 2207	N17 E63	07 22.7			HRX	36	1		3
9548		LEAR	07 18 0040	N16 E65	07 22.9		B	CRO	30	2	5	2
9548		SVTO	07 18 0450	N17 E59	07 22.7		A	AXX		1		3
9548		KAND	07 18 0645	N16 E62	07 23.0			BXO		2	6	5
9548		TACH	07 18 0729	N16 E58	07 22.7			AXX	5	1	1	4
9548		RAMY	07 18 1140	N16 E56	07 22.7		A	HSX	20	2	2	3
9548		HOLL	07 18 1152	N17 E54	07 22.6		B	CSO	30	2	5	2
9548	30590	MWIL	07 18 1445	N17 E54	07 22.7	4	(BP)					
9548		LEAR	07 19 0045	N17 E49	07 22.7		B	CSO	30	3	6	2
9548		SVTO	07 19 0451	N18 E46	07 22.7		A	HSX	30	1	1	3
9548		TACH	07 19 0536	N17 E46	07 22.7			BRO	33	3	7	4
9548		KAND	07 19 0743	N18 E44	07 22.7			HA		2	1	5
9548		RAMY	07 19 1140	N18 E42	07 22.7		B	CSO	40	1	3	3
9548	30590	MWIL	07 19 1500	N17 E39	07 22.6	4	(B)					
9548		HOLL	07 19 1500	N18 E41	07 22.7		B	CSO	50	7	8	3
9548		LEAR	07 20 0025	N17 E37	07 22.8		B	DAO	50	7	7	3
9548		SVTO	07 20 0620	N17 E34	07 22.8		B	DAO	80	7	5	3
9548		KAND	07 20 0735	N16 E31	07 22.7			DAO		7	5	5
9548	30590	MWIL	07 20 1500	N17 E27	07 22.7	5	(B2)					
9548		HOLL	07 20 2015	N18 E24	07 22.7		B	DAO	180	8	7	2
9548		VORO	07 21 0047	N17 E22	07 22.7			DSO	150	6	5	3
9548		LEAR	07 21 0145	N16 E22	07 22.7		B	DSO	120	4	6	3
9548		TACH	07 21 0437	N18 E19	07 22.6			CAO	122	4	5	3
9548		SVTO	07 21 0505	N16 E19	07 22.6		B	DAO	120	7	6	3
9548		KAND	07 21 0740	N17 E18	07 22.7			DSO		3	7	4
9548		RAMY	07 21 1220	N17 E16	07 22.7		B	DSO	110	4	7	3
9548	30590	MWIL	07 21 1430	N17 E14	07 22.7	4	(B)					
9548		HOLL	07 21 1440	N16 E12	07 22.5		B	DAO	130	20	10	3
9548		TACH	07 22 0458	N18 E07	07 22.7			CSI	163	5	6	4
9548		SVTO	07 22 0732	N17 E07	07 22.8		B	DSO	120	14	9	3
9548		KAND	07 22 0740	N17 E05	07 22.7			DSO		7	8	2
9548		RAMY	07 22 1140	N18 E04	07 22.8		B	DSO	90	9	9	3
9548	30590	MWIL	07 22 1400	N17 E01	07 22.6	5	(B)					
9548		HOLL	07 22 1445	N16 W01	07 22.5		B	CSO	120	12	8	4
9548		VORO	07 22 2345	N17 W03	07 22.8			CSI	167	9	8	2
9548		TACH	07 23 0531	N18 W07	07 22.7			CSI	58	6	7	4
9548		SVTO	07 23 0710	N18 W07	07 22.8		B	DAO	90	7	9	3
9548		KAND	07 23 0755	N17 W08	07 22.7			DAO		6	9	3
9548		RAMY	07 23 1200	N18 W11	07 22.7		B	DSO	80	5	8	3
9548	30590	MWIL	07 23 1430	N17 W12	07 22.7	5	(BP)					
9548		VORO	07 23 2126	N18 W15	07 22.7			CSO	169	4	7	3
9548		LEAR	07 24 0047	N17 W17	07 22.7		B	CSO	80	5	7	4
9548		SVTO	07 24 0503	N17 W23	07 22.5		A	HSX	40	1	2	3
9548		TACH	07 24 0505	N17 W23	07 22.5			HSX	140	1	2	3
9548		KAND	07 24 0645	N17 W24	07 22.4			HS		1	2	4
9548		RAMY	07 24 1215	N17 W25	07 22.6		B	DSO	70	2	6	3
9548	30590	MWIL	07 24 1400	N17 W26	07 22.6	5	(BP)					
9548		HOLL	07 24 1425	N15 W27	07 22.5		A	HSX	90	2	6	4
9548		VORO	07 24 2130	N17 W32	07 22.5			HSX	127	1		3
9548		LEAR	07 25 0020	N17 W31	07 22.6		B	CAO	90	4	6	2
9548		SVTO	07 25 0530	N17 W36	07 22.5		A	HSX	70	1	2	3
9548		TACH	07 25 0556	N17 W35	07 22.6			HSX	100	1	1	4
9548		KAND	07 25 0710	N17 W36	07 22.6			HS		1	2	3
9548		RAMY	07 25 1129	N16 W38	07 22.6		A	HSX	80	1	2	3
9548	30590	MWIL	07 25 1400	N17 W40	07 22.5	5	(AP)					
9548		VORO	07 25 2314	N17 W45	07 22.5			HSX	130	1		2
9548		TACH	07 26 0535	N18 W48	07 22.6			HSX	80	1	2	3
9548		SVTO	07 26 0710	N17 W50	07 22.5		A	HSX	60	1	1	2
9548		KAND	07 26 0720	N17 W49	07 22.6			HS		1	2	4
9548		RAMY	07 26 1241	N16 W53	07 22.5		A	HSX	80	1	2	3
9548	30590	MWIL	07 26 1400	N17 W53	07 22.5	5	(AP)					
9548		HOLL	07 26 1430	N16 W53	07 22.6		A	HSX	50	1	2	3

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9548		LEAR	07	27	0100	N16	W59	07	22.6		A	HSX	70	1	2	3
9548		TACH	07	27	0536	N17	W58	07	22.8			HSX	50	1	2	3
9548		SVTO	07	27	0550	N17	W62	07	22.5		A	HAX	80	1	2	3
9548		KAND	07	27	0745	N17	W62	07	22.6			HA		1	2	3
9548		RAMY	07	27	1140	N14	W65	07	22.6		A	HSX	40	1	1	3
9548	30590	MWIL	07	27	1400	N17	W66	07	22.6	5	(AP)					
9548		HOLL	07	27	1432	N17	W66	07	22.6		A	HSX	70	1	2	3
9548		LEAR	07	28	0130	N18	W68	07	22.9		A	HSX	50	1	2	1
9548		SVTO	07	28	0454	N17	W74	07	22.6		A	HSX	60	1	3	3
9548		TACH	07	28	0717	N17	W74	07	22.7			HSX	50	1	2	2
9548		KAND	07	28	1312	N18	W77	07	22.7			HS		1	2	3
9548		RAMY	07	28	1325	N15	W82	07	22.3		A	HSX	60	1	2	2
9548	30590	MWIL	07	28	1400	N17	W79	07	22.6	4	(AP)					
9548		HOLL	07	28	1733	N17	W80	07	22.6		A	HSX	60	1	2	3
9548		LEAR	07	29	0130	N17	W85	07	22.6		A	HAX	30	1	2	2
9549	30591	MWIL	07	17	1445	S05	E76	07	23.3	4	AP					
9549		HOLL	07	17	1635	S05	E76	07	23.4		A	AXX	20	1	1	3
9549		LEAR	07	18	0040	S06	E69	07	23.2		A	AXX	10	1	1	2
9549		SVTO	07	18	0450	S04	E67	07	23.2		A	AXX		1		3
9549		KAND	07	18	0645	S05	E67	07	23.3			AX		1	1	5
9549		TACH	07	18	0729	S05	E66	07	23.2			AXX	3	1	1	4
9549		RAMY	07	18	1140	S04	E63	07	23.2		A	AXX	10	1	1	3
9549		HOLL	07	18	1152	S04	E61	07	23.0		A	AXX	90	1	1	2
9549	30591	MWIL	07	18	1445	S04	E62	07	23.2	4	(AP)					
9549		LEAR	07	19	0045	S05	E56	07	23.2		A	HSX	20	1	1	2
9549		SVTO	07	19	0451	S04	E55	07	23.3		A	HAX	20	1	1	3
9549		TACH	07	19	0536	S04	E52	07	23.1			AXX	15	1	1	4
9549		KAND	07	19	0743	S04	E53	07	23.3			AX		1		5
9549		RAMY	07	19	1140	S04	E51	07	23.3		A	HSX	10	1	1	3
9549	30591	MWIL	07	19	1500	S04	E48	07	23.2	4	(AP)					
9549		HOLL	07	19	1500	S04	E50	07	23.4		B	CSO	20	2	2	3
9549		LEAR	07	20	0025	S05	E44	07	23.3		A	HSX	20	1	1	3
9549		KAND	07	20	0735	S05	E39	07	23.2			AX		1	1	5
9549	30591	MWIL	07	20	1500	S05	E35	07	23.2	4	(AP)					
9549		HOLL	07	20	2015	S03	E33	07	23.3		A	AXX	10	1	1	2
9549		LEAR	07	21	0145	S05	E28	07	23.2		A	HRX	10	1	1	3
9549		SVTO	07	21	0505	S05	E26	07	23.1		A	HRX	10	1	1	3
9549		KAND	07	21	0740	S04	E25	07	23.2			AX		1		4
9549	30604	MWIL	07	24	1400	S06	W23	07	22.9	4	(AP)					
9549		HOLL	07	24	1425	S07	W22	07	22.9		A	AXX	10	1	1	4
9549		VORO	07	24	2130	S05	W28	07	22.8			AXX	9	1		3
9549		LEAR	07	25	0020	S07	W29	07	22.8		B	CAO	20	2	2	2
9549		SVTO	07	25	0530	S07	W32	07	22.8		B	CAO	20	2	3	3
9549		TACH	07	25	0556	S06	W33	07	22.8			AXX	5	1	1	4
9549		KAND	07	25	0710	S05	W32	07	22.9			BXO		2	4	3
9549	30604	MWIL	07	25	1400	S06	W38	07	22.7	4	(AP)					
9549		VORO	07	25	2314	S06	W44	07	22.7			AXX	12	1		2
9549A		TACH	07	23	0531	N13	E23	07	25.0			AXX	5	1	1	4
9549A		SVTO	07	23	0710	N13	E25	07	25.2		B	CRO	20	2	5	3
9549A		KAND	07	23	0755	N13	E24	07	25.1			BXO		2	4	3
9549A		RAMY	07	23	1200	N13	E22	07	25.1		B	DRO		2	4	3
9549A	30602	MWIL	07	23	1430	N13	E20	07	25.1	4	(BF)					
9549A		KAND	07	24	0645	N13	E11	07	25.1			AX		1		4
9549A	30605	MWIL	07	24	1400	N17	E02	07	24.7	4	(AP)					
9549A		RAMY	07	25	1129	N17	W08	07	24.9		A	AXX		1		3
9549A	30605	MWIL	07	25	1400	N18	W10	07	24.8	4	(AP)					
9549A		RAMY	07	26	1241	N18	W25	07	24.6		A	AXX	10	1		3
9549A	30605	MWIL	07	26	1400	N19	W23	07	24.8	4	(AP)					
9549A		HOLL	07	26	1430	N17	W24	07	24.8		B	BXO	10	2	2	3
9549C		VORO	07	23	2126	N40	E12	07	24.9			AXX	1	1		3
9549B	30600	MWIL	07	22	1400	N27	E43	07	25.9	3	(AP)					
9549B		VORO	07	22	2345	N28	E38	07	25.9			AXX	4	1		2
9549B		SVTO	07	23	0710	N28	E34	07	25.9		A	HSX	30	2	2	3
9549B		RAMY	07	23	1200	N28	E31	07	25.9		A	AXX		1	1	3
9549B	30600	MWIL	07	23	1430	N27	E29	07	25.9	4	(AP)					

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9549B		LEAR	07	24	0047	N27	E23	07	25.8		B	BXO		2	1	4
9553B	30606	MWIL	07	24	1400	N21	E25	07	26.5	4	(AP)					
9553B	30606	MWIL	07	25	1400	N21	E09	07	26.3	3	(AF)					
9553C	30609	MWIL	07	27	1400	S14	W14	07	26.5	4	(AP)					
9553	30601	MWIL	07	22	1400	N13	E55	07	26.7	3	(AF)					
9553		TACH	07	23	0531	N14	E43	07	26.5			AXX	3	1	1	4
9553		SVTO	07	23	0710	N12	E44	07	26.6		B	BXO	40	3	4	3
9553		KAND	07	23	0755	N13	E42	07	26.5			HR		3	2	3
9553		RAMY	07	23	1200	N13	E38	07	26.4		B	DSO	10	2	2	3
9553	30601	MWIL	07	23	1430	N13	E39	07	26.5	5	(B)					
9553		VORO	07	23	2126	N12	E36	07	26.6			CRO	31	2	4	3
9553		LEAR	07	24	0047	N12	E33	07	26.5		B	CSO	20	6	4	4
9553		SVTO	07	24	0503	N13	E32	07	26.6		B	DSO	30	3	5	3
9553		TACH	07	24	0505	N13	E30	07	26.5			BRO	17	4	4	3
9553		KAND	07	24	0645	N12	E30	07	26.5			BXO		8	6	4
9553		RAMY	07	24	1215	N13	E27	07	26.5		B	DSO	20	8	6	3
9553	30601	MWIL	07	24	1400	N13	E26	07	26.5	4	(BF)					
9553		HOLL	07	24	1425	N12	E26	07	26.5		B	CSO	20	12	6	4
9553		VORO	07	24	2130	N13	E22	07	26.5			CSI	82	10	5	3
9553		LEAR	07	25	0020	N13	E20	07	26.5		B	DAO	40	16	5	2
9553		SVTO	07	25	0530	N12	E18	07	26.6		B	DAO	100	12	6	3
9553		TACH	07	25	0556	N13	E17	07	26.5			CAI	113	1	4	4
9553		KAND	07	25	0710	N12	E17	07	26.6			CSO		27	6	3
9553		RAMY	07	25	1129	N13	E14	07	26.5		BG	EAI	140	12	6	3
9553	30601	MWIL	07	25	1400	N13	E13	07	26.6	5	(B)					
9553		VORO	07	25	2314	N13	E08	07	26.6			DAI	165	15	6	2
9553		TACH	07	26	0535	N13	E05	07	26.6			CAI	206	9	5	3
9553		SVTO	07	26	0710	N13	E04	07	26.6		B	DAI	90	15	8	2
9553		KAND	07	26	0720	N13	E04	07	26.6			DAI		19	7	4
9553		RAMY	07	26	1241	N13	E01	07	26.6		B	DAI	280	14	7	3
9553	30601	MWIL	07	26	1400	N13	W00	07	26.6	5	(B)					
9553		HOLL	07	26	1430	N12	W01	07	26.5		B	DKO	190	17	9	3
9553		LEAR	07	27	0100	N13	W06	07	26.6		B	DAI	140	16	8	3
9553		TACH	07	27	0536	N13	W08	07	26.6			CAI	105	10	6	3
9553		SVTO	07	27	0550	N12	W08	07	26.6		B	DAO	120	17	7	3
9553		KAND	07	27	0745	N13	W10	07	26.6			DAO		15	8	3
9553		RAMY	07	27	1140	N12	W14	07	26.4		B	DAI	80	16	8	3
9553	30601	MWIL	07	27	1400	N13	W13	07	26.6	4	(B)					
9553		HOLL	07	27	1432	N13	W14	07	26.5		B	DAO	80	35	7	3
9553		LEAR	07	28	0130	N13	W18	07	26.7		B	DRO	10	10	8	1
9553		SVTO	07	28	0454	N13	W22	07	26.5		B	DRO	40	12	9	3
9553		TACH	07	28	0717	N13	W22	07	26.6			BRI	34	5	6	2
9553		KAND	07	28	1312	N13	W26	07	26.6			BXO		13	8	3
9553		RAMY	07	28	1325	N13	W28	07	26.4		B	CSO	10	11	8	2
9553	30601	MWIL	07	28	1400	N13	W26	07	26.6	4	(B)					
9553		HOLL	07	28	1733	N13	W31	07	26.4		B	BXO	30	15	12	3
9553		LEAR	07	29	0130	N14	W35	07	26.4		B	BXO	20	5	6	2
9553		SVTO	07	29	0522	N14	W39	07	26.3		B	BXO	10	2	4	3
9553		KAND	07	29	0905	N14	W36	07	26.6			BXO		2	7	4
9553	30601	MWIL	07	29	1415	N13	W41	07	26.5	4	(BF)					
9553		HOLL	07	29	1439	N13	W38	07	26.7		B	BXO	10	3	3	3
9555		SVTO	07	23	0710	S10	E76	07	29.0		A	HSX	20	2	1	3
9555	30603	MWIL	07	23	1430	S08	E69	07	28.8	4	(AP)					
9555		LEAR	07	24	0047	S09	E67	07	29.1		B	BXO		2	3	4
9555		KAND	07	24	0645	S10	E62	07	28.9			BXO		3	2	4
9555	30603	MWIL	07	24	1400	S09	E58	07	28.9	4	(B)					
9555		HOLL	07	24	1425	S08	E58	07	28.9		A	AXX	20	2	3	4
9555		VORO	07	24	2130	S08	E52	07	28.8			AXX	14	1		3
9555		LEAR	07	25	0020	S10	E50	07	28.8		B	BXO	10	2	3	2
9555		SVTO	07	25	0530	S09	E49	07	28.9		B	CRO	10	2	3	3
9555		KAND	07	25	0710	S10	E47	07	28.8			BXO		2	3	3
9555		RAMY	07	25	1129	S06	E36	07	28.2		A	HSX	10	1	1	3
9555		VORO	07	25	2314	S10	E38	07	28.8			AXX	2	1		2
9555		SVTO	07	28	0454	S10	E09	07	28.9		B	CRO	10	2	2	3
9555		KAND	07	28	1312	S09	E03	07	28.8			AX		1	1	3

SUNSPOT GROUPS
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JULY 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
9555		RAMY	07 28 1325	S08 E08	07 29.1		A	HRX		1	1	2
9555	30611	MWIL	07 28 1400	S08 E03	07 28.8	4	(AP)					
9559		SVTO	07 27 0550	S26 E23	07 29.0		A	AXX		1		3
9559		KAND	07 27 0745	S24 E19	07 28.8			AX		2	1	3
9559		RAMY	07 27 1140	S24 E19	07 28.9		B	DSO	10	5	3	3
9559	30610	MWIL	07 27 1400	S24 E17	07 28.9	4	(B)					
9559		HOLL	07 27 1432	S24 E16	07 28.8		B	CSO	20	8	5	3
9559		LEAR	07 28 0130	S24 E12	07 29.0		B	CSO	20	3	6	1
9559		SVTO	07 28 0454	S25 E10	07 29.0		B	DSO	40	7	7	3
9559		TACH	07 28 0717	S23 E08	07 28.9			BXO	50	2	5	2
9559		KAND	07 28 1312	S24 E05	07 28.9			CRO		8	7	3
9559		RAMY	07 28 1325	S23 E04	07 28.9		B	DSO	20	7	7	2
9559	30610	MWIL	07 28 1400	S24 E04	07 28.9	5	(B)					
9559		HOLL	07 28 1733	S24 E02	07 28.9		B	BXO	20	10	7	3
9559		LEAR	07 29 0130	S23 W03	07 28.8		B	DAO	50	7	7	2
9559		VORO	07 29 0308	S24 W03	07 28.9			CAI	44	3	7	2
9559		SVTO	07 29 0522	S24 W04	07 28.9		B	DSO	40	4	7	3
9559		TACH	07 29 0619	S22 W05	07 28.9			BRO	12	3	7	2
9559		KAND	07 29 0905	S24 W06	07 28.9			BXO		4	8	4
9559	30610	MWIL	07 29 1415	S23 W09	07 28.9	4	(B)					
9559		HOLL	07 29 1439	S24 W09	07 28.9		B	BXO	20	8	8	3
9559		VORO	07 30 0136	S23 W12	07 29.1			HAX	29	1		2
9559		LEAR	07 30 0230	S23 W14	07 29.0		B	DAO	20	2	2	2
9559		SVTO	07 30 0520	S24 W13	07 29.2		B	CSO	10	2	1	3
9559		KAND	07 30 0835	S23 W17	07 29.0			CRO		2	4	3
9559		HOLL	07 30 1326	S24 W16	07 29.3		B	BXO	10	5	12	3
9559	30610	MWIL	07 30 1415	S23 W21	07 29.0	4	(BF)					
9559		LEAR	07 31 0020	S22 W25	07 29.1		B	BXO	10	2	2	3
9564		LEAR	08 01 0305	N14 W26	07 30.3		A	AXX	10	1	1	3
9564		SVTO	08 01 0713	N14 W31	07 30.0		B	BXO		2	4	2
9564		KAND	08 01 0745	N16 W32	07 30.0			AX		2	2	3
9564		RAMY	08 01 1125	N13 W35	07 29.9		B	DSO	50	2	3	3
9564		HOLL	08 01 1430	N14 W36	07 30.0		B	CRO	20	2	3	2
9564	30619	MWIL	08 01 1500	N15 W35	07 30.1	4	(B)					
9564		LEAR	08 02 0030	N15 W41	07 30.0		B	DAO	30	7	4	2
9564		SVTO	08 02 0620	N14 W45	07 30.0		B	CSO	40	9	4	2
9564		TACH	08 02 0640	N15 W45	07 30.0			BXO	45	2	3	3
9564		RAMY	08 02 1205	N12 W49	07 29.9		B	DSO	20	6	3	2
9564		HOLL	08 02 1430	N14 W48	07 30.1		B	DSO	60	5	5	4
9564	30619	MWIL	08 02 1500	N15 W50	07 29.9	4	(B)					
9564		VORO	08 02 2341	N14 W54	07 30.0			CSO	57	7	3	2
9564		LEAR	08 03 0130	N15 W55	07 30.0		B	DSO	30	8	6	3
9564		TACH	08 03 0457	N15 W55	07 30.1			BRI	8	4	4	3
9564		SVTO	08 03 0555	N14 W58	07 30.0		B	CRO	30	9	5	3
9564		KAND	08 03 0650	N16 W59	07 29.9			CRO		6	5	4
9564		RAMY	08 03 1218	N12 W61	07 30.0		B	DAO	30	6	6	3
9564		HOLL	08 03 1500	N14 W65	07 29.8		B	DAO	130	5	8	3
9564	30619	MWIL	08 03 1500	N15 W63	07 29.9	5	(B)					
9564		VORO	08 03 2145	N14 W66	07 30.0			DSO	142	2	5	2
9564		LEAR	08 04 0100	N14 W67	07 30.1		B	DAO	60	5	6	4
9564		SVTO	08 04 0545	N14 W74	07 29.7		B	DAO	70	5	7	3
9564		TACH	08 04 0550	N14 W70	07 30.0			DSO	105	2	3	3
9564		KAND	08 04 0815	N16 W74	07 29.8			CSO		3	7	3
9564		RAMY	08 04 1205	N12 W74	07 30.0		B	DSO	120	2	8	3
9564	30619	MWIL	08 04 1430	N14 W76	07 30.0	4	(B)					
9564		HOLL	08 04 1745	N14 W78	07 29.9		B	CSO	60	2	7	3
9568		RAMY	08 03 1218	S20 W44	07 31.1		A	HSX	20	1	1	3
9568	30622	MWIL	08 03 1500	S18 W46	07 31.1	4	(BP)					
9568		HOLL	08 03 1500	S18 W47	07 31.0		A	AXX	10	1	1	3
9568		LEAR	08 04 0100	S18 W50	07 31.2		B	BXO	20	4	5	4
9568		KAND	08 04 0815	S16 W55	07 31.2			AX		2	1	3
9568		RAMY	08 04 1205	S19 W53	07 31.4		B	CSO	30	3	5	3
9568	30622	MWIL	08 04 1430	S17 W58	07 31.2	4	(B)					
9568		HOLL	08 04 1745	S18 W60	07 31.2		B	BXO	20	2	4	3
9568		LEAR	08 05 0155	S17 W65	07 31.1		B	BXO	10	3	6	3
9568		TACH	08 05 0443	S18 W69	07 31.0			AXX	10	1	1	3

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
9568		SVTO	08 05 0815	S19 W69	07 31.1		B	CAO	40	3	8	3
9568		KAND	08 05 0840	S17 W69	07 31.1			CSO		3	8	2
9568		RAMY	08 05 1235	S19 W71	07 31.1		B	BXO	60	3	10	2
9568	30622	MWIL	08 05 1500	S18 W70	07 31.3	3	(B)					
9568		HOLL	08 05 1545	S17 W76	07 31.0		B	BXO	10	2	8	3
9568		VORO	08 05 2253	S18 W71	07 31.5			BXO	32	2	0	3
9568		SVTO	08 06 0534	S20 W79	07 31.2		A	AXX		1		3
9568		KAND	08 06 0830	S18 W79	07 31.3			AX		1		3

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

JULY 2001

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
01	1054	1109	1138	1	1		1				No flare		
01	1925	1930	1950	1	1					1	1927	C1.4	
03	1014	1033	1108	1	1		1				No flare		
05	0537	0543	0738	1	1		1				No flare		
08	1138	1143	1221	2	5	1	1	1		2	1134	C2.5	
08	1341	1350	1418	2-	1					1	1331	C1.2	
08	1418	1422	1445	1+	1					1	1434	B6.7	9531
08	1610	1617	1652	2-	3					4	1606	C3.4	9531
08	2031	2037	2112	2	3					2	2026	C1.3	
09	0519	0556U	0646	1	1		1				0538	C3.1	
09	0740	0745	0750	2+	1					1	0734	B9.6	9531
11	1654	1708	1746	2+	3					2	1703	C2.4	
11	1703	1722	1754	1	1		1				1703	C2.4	
14	1745	1753	1815	1+	1					1	1747	C1.4	9539
14	1810	1812	1815	1-	1					1	No flare		
14	2129	2134	2223	2	3					4	2126	M1.0	9539
15	0645	0653	0710	3-	5	1	1	1		1	0642	C6.9	9539
15	1401	1410	1443	2-	3					3	1357	C2.4	9539
16	0851	0914	0945	1	1		1				0846	C2.2	9539
16	0955	1011U	1033	1	1		1				No flare		
18	2134	2138	2230	2+	1					1	2135	C5.4	9546
19	0926	0957	0957	1	1		1				0952	M1.8	9537
19	0956	1008	1110	3	5	1	2	1		2	0952	M1.8	9537
19	1537	1546	1610	1	1		1				No flare		
21	0859	0911	1025	1	1		1				0903	C1.0	9543
21	1318	1323	1357	1	1		1				1331	B6.9	
28	1314	1319	1415	2+	1					1	1341	C7.8	
28	1344	1355	1422	3	5	1	2	1		7	1341	C7.8	
30	0830	0836	0847	2	5		2	1		2	0820	C4.5	
30	2041	2045	2130	2	3					2	2036	C6.0	
31	1202	1211	1237	2	3					2	1155	C1.8	9561
31	1717	1723	1753	2-	3					3	1707	C2.6	9561

* = no flare patrol.

OBSERVATORIES REPORTING FOR JULY 2001

Bern, Switzerland	SES	Milan, Italy	SES
Brookline, Massachusetts, USA	SES	Nerja, Spain	SES
Cambridge, England, UK	SES	New Milford, New York, USA	SES
Houston, Texas, USA	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Hudson, Ohio, USA	SES	Sussex, United Kingdom	SES
Isola del Gran Sasso, Italy	SES	Upice, Czech Republic	SEA
Marlboro, Massachusetts, USA	SES		

Observations are not necessarily continuous.

SOLAR RADIO EMISSION
Spectral Observations

JULY 2001

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	EVENT Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
01	0000	0700	CULG								
	0000	1001	HIRA								
	0415	1753	ONDR								
	0445	1815	BLEN								
	0452	1200	IZMI								
	1922	2400	HIRA								
	2100	2400	CULG								
02	0000	0700	CULG								
	0000	1000	HIRA								
	0416	1753	ONDR								
	0420	1820	BLEN								
	0502	1200	IZMI	0749.0	0749.2	III	B	2	30	95	
			IZMI	0919.6	0919.9	III	B	2	30	160	
	1922	2400	HIRA								
03			PALE	0038.0	0038.0	III		1	25	87	
	0000	0700	CULG	0038.0	0038.0	III	B	1	57X	180	
	0000	1000	HIRA	0038.0	0038.5	III	B	1	40	210	
	0417	1753	ONDR								
	0420	1820	BLEN								
			CULG	0628.0	0633.0	III	G	2	57X	180	
			LEAR	0628.0	0645.0	III	N	1	25	180	
			SVTO	0628.0	0940.0	III	N	1	25U	83U	
	0501	1200	IZMI	0628.3	0629.5	III	G,HARM	2	25	155	
			IZMI	0630.3	0630.6	III	G	2	25X	170	
			IZMI	0631.1	0632.9	III	GG	1	45	95	
			IZMI	0644.4	0647.1	III	GG	2	30	160	
			CULG	0645.0	0647.0	III	G	1	57X	180	
			HIRA	0856.0	0859.0	III	G	2	50	500	
	1922	2400	HIRA								
04	0000	1000	HIRA								
	0015	0700	CULG								
	0417	1752	ONDR								
	0425	1820	BLEN								
	0450	1200	IZMI								
			HOLL	1804.0	1804.0	III		1	25	63	
	1923	2400	HIRA								
	2100	2400	CULG								
05	0000	0700	CULG								
	0000	1000	HIRA								
	0418	1752	ONDR								
	0425	1820	BLEN								
			LEAR	0842.0	0842.0	III		1	25	97	
			SVTO	0842.0	0842.0	III		1	25	81	
	0451	1200	IZMI	0842.1	0842.5	III	B	2	25X	140U	
	1923	2400	HIRA								
	2100	2400	CULG								
06	0000	0700	CULG								
	0000	1000	HIRA								
	0419	1752	ONDR								
	0425	1820	BLEN								
	0503	1200	IZMI								
	1924	2400	HIRA								
	2100	2400	CULG								
07			LEAR	0325.0	0328.0	III		2	25	180	
	0000	1000	HIRA	0326.5	0328.0	III	G	1	30	400	
			PALE	0327.0	0342.0	II		2	25	180	ESS 0880
	0000	0700	CULG	0327.0	0329.0	III	G	1	57X	280	
			CULG	0330.0	0347.0	II	SH	3	57X	150	ESS 500
			HIRA	0330.0	0343.0	II		3	60	140	
			LEAR	0330.0	0345.0	II		2	33	153	ESS 0440
			CULG	0331.0	0338.0	II	FN	3	57X	80	
			HIRA	0332.0	0341.0	II		1	25X	70	
	0419	1751	ONDR								

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Spectral Observations

JULY 2001

OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
07 0425	1820	BLEN								
		HIRA	0751.0	0751.5	III	B	1	60	420	
0500	1200	IZMI	0751.2	0751.5	III	G	2	45	270X	
		HOLL	1925.0	1926.0	III		1	25	48	
		PALE	1925.0	1926.0	III		1	25	60	
		SGMR	1925.0	1926.0	V		1	30	55	
		HOLL	2239.0	2240.0	III		1	25	87	
1925	2400	HIRA	2239.5	2240.5	III	B	1	40	290	
2100	2400	CULG	2240.0	2240.0	III	B	1	57X	180	
08		PALE	0111.0	0126.0	III	N	1	25	110	
0000	0700	CULG	0111.0	0126.0	III	GG	1	57X	160	
0000	0959	HIRA	0113.0	0115.5	III	G	1	25X	160	
		LEAR	0115.0	0126.0	III	N	1	25	180	
		HIRA	0121.0	0126.0	III	G	1	25X	180	
0420	1751	ONDR								
		CULG	0621.0	0621.0	III	B	1	57X	150	
		HIRA	0621.0	0621.5	III	B	1	50	180	
0500	1200	IZMI	0621.2	0621.3	III	B	2	45	160	
0425	1820	BLEN	1130.8	1138.0	DCIM	C	1	2300	4000X	
		IZMI	1137.8	1141.8	III	GG,FS	2	25X	270X	
		SVTO	1138.0	1141.0	III		1	25	180	
		SGMR	1139.0	1139.0	III		1	30	55	
		BLEN	1610.5	1622.0	DCIM	C	2	1200X	4000X	
1925	2400	HIRA								
2100	2400	CULG								
		HOLL	2133.0	2134.0	III		1	25	53	
		PALE	2133.0	2133.0	III		1	25	50	
09 0000	0700	CULG	0016.0	0016.0	III	B	1	57X	90	
0421	1751	ONDR								
0430	1820	BLEN								
		CULG	0430.0	0431.0	III	G	1	57X	140	
		LEAR	0430.0	0430.0	III		1	75	145	
		SVTO	0430.0	0430.0	III		1	114U	151U	
0000	0959	HIRA	0430.0	0430.5	III	B	1	30	210	
		HIRA	0927.0	0927.5	III	B	1	40	140	
0453	1200	IZMI	0927.2	0927.3	III	G,HARM,FS	2	40	140	
		IZMI	0945.7	0945.9	III	G,FS	2	40	90	
		IZMI	0946.8	0947.0	III	B	2	45	100	
		IZMI	0948.3	0950.3	III	G	1	25X	95	
		SGMR	1139.0	1139.0	III		1	30	55	
		HOLL	1553.0	1554.0	III		1	25	88	
		SGMR	1553.0	1554.0	III		1	30	70	
		SVTO	1553.0	1554.0	III		2	25	83	
2100	2400	CULG	2214.0	2217.0	III	G	1	25U	100	
1926	2400	HIRA	2215.0	2216.0	III	B	1	25X	120	
		CULG	2224.0	2224.0	III	B	1	30U	90	
		HIRA	2224.0	2224.5	III	B	1	40	90	
		LEAR	2322.0	2322.0	III		1	25	62	
10 0000	0700	CULG	0112.0	0112.0	III	B	1	40U	90	
0000	0959	HIRA	0121.5	0122.0	III	B	1	90	500	
		LEAR	0147.0	0148.0	III		1	25	93	
		LEAR	0151.0	0340.0	III	N	2	25	180	
		CULG	0257.0	0303.0	III	G	1	25U	180	
		PALE	0258.0	0302.0	III		1	25	180	
		HIRA	0258.5	0300.5	III	G	2	25X	210	
		CULG	0318.0	0326.0	III	G	1	30U	90	
		HIRA	0319.0	0326.0	III	G	1	25X	160	
0422	1750	ONDR								
0430	1820	BLEN								
		LEAR	0515.0	0655.0	III	N	1	25	135	
		HIRA	0708.5	0709.0	III	B	1	300	510	
0514	1200	IZMI	1137.6	1138.2	III	G	1	45	155	
		HOLL	1558.0	1601.0	III		1	25	77	
		SGMR	1558.0	1601.0	III		1	30	60	
		SVTO	1558.0	1601.0	III		1	25	82	
		HOLL	2022.0	2023.0	III		1	25	62	

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Spectral Observations

JULY 2001

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
10	1926	2400	HIRA	2022.0	2023.0	III	B	1	40	130	
			HIRA	2036.0	2042.5	III	G	1	50	230	
			HOLL	2039.0	2040.0	III		1	25	58	
			HIRA	2148.0	2151.0	III	G	2	25X	240	
			HOLL	2148.0	2150.0	III		1	25	180	
			SGMR	2148.0	2150.0	III		1	30	80	
	2100	2400	CULG	2148.0	2152.0	III	G	2	25U	180	
			HIRA	2224.5	2225.5	III	B	1	100	220	
			CULG	2240.0	2240.0	III	B	1	28U	170	
			HIRA	2240.0	2240.5	III	B	2	60	190	
			HOLL	2240.0	2240.0	III		1	25	126	
			CULG	2253.0	2254.0	III	G	1	25U	160	
			CULG	2350.0	2350.0	III	B	1	57X	90	
			LEAR	2350.0	2350.0	III		1	61	180	
11			LEAR	0237.0	0237.0	III		1	25	48	
	0422	1750	ONDR								
	0430	1820	BLEN								
			LEAR	0434.0	0615.0	III	N	1	25	117	
	0500	1200	IZMI	0508.7	0509.5	III	G	1	45	95	
			IZMI	0524.0	0524.3	III	G,C	2	45	125	
			SVTO	0524.0	0635.0	III	N	1	33	161	
	0000	0700	CULG	0524.0	0525.0	III	G	1	57X	130	
	0000	0959	HIRA	0524.0	0524.5	III	B	1	50	120	
			IZMI	0537.3	0537.4	III	B	2	75	95	
			CULG	0629.0	0629.0	III	G	1	80	140	
			IZMI	0629.0	0629.4	III	G	2	75	155	
			HOLL	1405.0	1409.0	III		1	25	58	
			SVTO	1405.0	1409.0	III		1	25	57	
	1927	2400	HIRA								
			PALE	2031.0	0500.0	III	N	1	25	80	
	2100	2400	CULG								
12			LEAR	0109.0	0112.0	III		2	25	146	
			PALE	0109.0	0112.0	III		1	25	70	
	0000	0700	CULG	0110.0	0112.0	III	G	1	30U	130	
	0000	0959	HIRA	0110.5	0111.5	III	B	1	25X	140	
			LEAR	0240.0	0354.0	III	N	1	25	119	
	0423	1749	ONDR								
	0430	1820	BLEN								
	0450	1200	IZMI								
	1928	2400	HIRA	2021.5	2022.0	III	B	1	25X	110	
	2100	2400	CULG	2249.0	2250.0	III	G	1	30U	90	
13	0000	0958	HIRA								
	0424	1748	ONDR								
	0430	1820	BLEN								
	0450	1200	IZMI	0450.0E	1200.0D	I	N	2	110	270	
			IZMI	0524.0	0524.0	III	B	2	220	270X	
	0000	0700	CULG	0600.0	0700.0D	I	S	1	110	170	
			IZMI	0627.5	0630.8	III	GG,FS	2	45	90	
			CULG	0628.0	0628.0	III	B	1	57X	110	
			IZMI	0708.8	0709.9	III	B	1	45	70	
			IZMI	0750.2	0752.4	III	G	1	45	70	
			IZMI	0854.0	0854.8	III	GG	2	45	270X	
			IZMI	0912.5	0916.0	III	G	1	45	70	
			HOLL	2136.0	2138.0	III		1	25	83	
			PALE	2136.0	2138.0	III		1	25	95	
	1928	2400	HIRA	2136.0	2139.0	III	G	1	25X	210	
	2100	2400	CULG	2136.0	2139.0	III	G	1	23U	90	
			HOLL	2218.0	2218.0	III		1	25	54	
			PALE	2218.0	2218.0	III		1	25	76	
			HIRA	2218.5	2219.0	III	B	1	25X	60	
14	0000	0700	CULG								
	0000	0957	HIRA								
			LEAR	0009.0	0321.0	III	N	1	25	111	
	0425	1747	ONDR								
	0430	1820	BLEN								

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

JULY 2001

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
14	0500	1200	IZMI	0521.0	0521.3	III	G	2	45	95	
			IZMI	0819.7	0820.0	III	B	2	45	150	
			IZMI	1048.2	1048.4	III	B	2	40	95	
			HOLL	1239.0	1239.0	III		1	25	180	
			SGMR	1239.0	1239.0	III		2	30	80	
			SVTO	1239.0	1239.0	III		2	25	180	
			SVTO	1319.0	1321.0	III		1	25	63	
			HOLL	1718.0	1719.0	III		1	25	85	
			SVTO	1719.0	1719.0	III		1	62U	127U	
	1929	2400	HIRA								
	2100	2400	CULG	2244.0	2244.0	III	B	1	30U	170	
			CULG	2254.0	2254.0	III	B	1	23U	90	
15	0000	0527	CULG								
	0500	1200	IZMI	0547.6	0547.9	III	GG	2	160	260	
			ONDR	0649.2	0658.5	DCIM	G	2	800X	2000X	
	0426	1747	ONDR	0649.5	0657.3	DCIM	G	2	2000X	4500X	
	0440	1815	BLEN	0650.0	0653.5	IV	C	3	1200X	4000X	
			IZMI	0652.0U	0700.0U	CONT		2	180U	270X	
			IZMI	0654.2	0657.6	III	GG	2	30	270X	
			LEAR	0657.0	0657.0	III		1	25	46	
			SVTO	0657.0	0658.0	III		1	25	146	
	0000	0957	HIRA	0657.0	0658.0	III	B	1	60	260	
	1930	2400	HIRA								
			HOLL	2340.0	0034.0	III	N	1	25	178	
16	0000	0956	HIRA	0126.5	0127.0	III	B	1	100	310	
	0427	1746	ONDR								
	0440	1815	BLEN								
	0450	1200	IZMI	0457.8	0457.9	III	G	2	170	270X	
			HIRA	0550.0	0550.5	III	B	1	120	330	
			IZMI	0550.2	0550.6	III	GG	2	120	270X	
			SVTO	0645.0	0646.0	III		1	25	53	
			IZMI	0717.0U	0808.0U	I	N	1	240	270X	
			HIRA	0756.0	0756.5	III	B	1	170	280	
			IZMI	0756.1	0756.8	III	G	2	140	270X	
			IZMI	0841.6	0841.7	III	B	2	120	230	
			IZMI	1114.1	1114.4	III	G	2	155	270X	
			IZMI	1152.1	1152.3	III	G	1	200	230	
			HOLL	1548.0	1549.0	III		1	25	78	
			SGMR	1548.0	1549.0	III		1	30	40	
			SVTO	1548.0	1549.0	III		1	25U	81U	
	1930	2400	HIRA								
17	0000	0956	HIRA								
	0450	1200	IZMI	0553.3	0554.8	I	GG	2	195	270X	
			IZMI	0633.0U	0637.0U	I	N	1	180	270	
			IZMI	0636.2	0636.6	III	G	1	195	270	
	0440	1815	BLEN	1019.9	1021.8	IV	C	3	1400	4000X	
	0428	1745	ONDR	1020.0	1021.1	DCIM	G,W	1	2332	4500X	
	1931	2400	HIRA								
18	0000	0955	HIRA								
	0429	1745	ONDR								
	0440	1815	BLEN								
	0500	1200	IZMI	0508.7	0509.6	III	G	1	45	95	
			IZMI	0545.6	0550.0	III	GG	1	45	95	
	1932	2155	HIRA								
19			LEAR	0322.0	0328.0	V		3	25	180	
			PALE	0322.0	0328.0	V		2	25U	136U	
			LEAR	0359.0	0401.0	III		1	25	180	
			PALE	0359.0	0400.0	III		1	25U	145U	
			LEAR	0539.0	0541.0	III		2	25	180	
			SVTO	0539.0	0540.0	III		2	25	160	
	0435	0954	HIRA	0539.0	0541.0	III	G	2	25X	420	
	0500	1200	IZMI	0539.2	0541.0	III	GG	2	25X	270X	
			IZMI	0632.4	0632.6	III	G	2	200	270	
			IZMI	0641.0U	0709.0U	I	N	1	200	270X	

SOLAR RADIO EMISSION
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JULY 2001

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
19			LEAR	0754.0	0757.0	III		2	25	180	
			SVTO	0754.0	0758.0	III		2	25	180	
			IZMI	0754.4	0758.8	III	GG,FS	2	25X	270X	
			HIRA	0755.0	0757.5	III	G	2	25X	310	
			IZMI	0825.6	0825.8	III	B	2	40	135	
			ONDR	0955.1	1043.0	DCIM	GG,SP,FS	3	800X	2000X	
	0513	1743	ONDR	0955.1	1041.0	DCIM	GG	2	2000X	4500X	
	0440	1815	BLEN	0955.4	1037.8	IV	C,P,F	3	1250X	4000X	
			IZMI	0957.6	0959.0	III	GG,FS	2	40	270X	
			IZMI	0957.8	0958.8	I	GG,DC	2	130	210	
			IZMI	0958.0	0958.6	CONT		2	165	235	
			SVTO	0958.0	0959.0	III		2	25	180	
			IZMI	0959.5U	1200.0D	I	N	1	200	270X	
			IZMI	1001.0U	1012.0U	III	N,FS	2	45	100	
			IZMI	1004.4	1005.1	III	G	2	120X	160	
			IZMI	1012.0	1023.9	III	GG,FS	2	25X	95	
			SVTO	1012.0	1025.0	III	N	2	25	80	
			IZMI	1015.0	1016.2	III	G,C	2	25X	65	
			IZMI	1131.0	1131.3	III	B	1	45	90	
			SVTO	1226.0	1226.0	III		1	25	180	
20	0335	0954	HIRA								
			LEAR	0407.0	0654.0	III	N	1	94	180	
	0431	1743	ONDR								
	0440	1815	BLEN								
	0550	1200	IZMI	0452.1	0452.7	I	GG	2	195	250	
			IZMI	0944.0U	0952.7U	I	N	1	195	250	
	1933	2400	HIRA								
21			IZMI								
	0000	0953	HIRA								
	0432	1742	ONDR								
	0440	1815	BLEN								
			LEAR	2330.0	2330.0	III		1	67	180	
	1934	2400	HIRA	2330.5	2331.0	III	B	1	50	200	
22			LEAR	0120.0	0121.0	III		1	25	94	
	0000	0953	HIRA	0120.5	0121.0	III	B	1	30	270	
	0433	1741	ONDR								
	0440	1810	BLEN								
			LEAR	0855.0	0855.0	III		1	25	152	
			SVTO	0855.0	0855.0	III		2	25	83	
	0500	1200	IZMI	0855.3	0856.1	III	GG,C,FS	2	45X	270X	
			IZMI	1149.7	1150.6	III	GG	2	45X	200	
			SVTO	1150.0	1150.0	III		1	25	65	
			SVTO	1611.0	1613.0	III		1	25	180	
			HOLL	1914.0	1914.0	III		1	25	70	
	1935	2400	HIRA								
			HOLL	2330.0	2330.0	III		1	25	86	
23	0434	1740	ONDR								
	0440	1805	BLEN								
	0000	0952	HIRA	0621.0	0623.5	III	G	1	100	600	
	0500	1204	IZMI	0621.3	0622.0	III	GG,C	2	155	270X	
			IZMI	0622.5	0623.4	III	G	1	180	270	
			HIRA	0750.0	0750.5	III	B	1	40	200	
			IZMI	0750.0	0750.5	III	G	2	45X	120	
			LEAR	0750.0	0750.0	III		1	25	180	
			HOLL	1605.0	1605.0	III		1	25	89	
			SVTO	1605.0	1605.0	III		1	25	83	
	1936	2400	HIRA	2245.0	2245.5	III	B	1	200	400	
24			LEAR	0052.0	0053.0	III		1	25	77	
			PALE	0053.0	0053.0	III		1	25U	64U	
	0000	0951	HIRA	0053.0	0053.5	III	B	1	25X	70	
	0438	1739	ONDR								
	0445	1805	BLEN								
	0450	1200	IZMI	0450.0E	0519.0	I	S	2	130	270X	
			IZMI	0609.0	0613.0	III	GG	2	25X	150	

SOLAR RADIO EMISSION
Spectral Observations

JULY 2001

OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
Day 24		LEAR	0609.0	0618.0	III		2	25	149	
		SVTO	0609.0	0617.0	III		1	25	150	
		HIRA	0609.5	0613.0	III	G	2	25X	150	
		IZMI	0613.6	0618.7	I	GG,DC	2	110	220	
		HIRA	0617.0	0618.0	III	B	2	30	130	
		IZMI	0617.4	0618.0	III	GG	2	40	150	
		IZMI	0627.9	0629.7	I	GG,DC	2	70U	95	
		LEAR	0628.0	0629.0	III		2	75	93	
		SVTO	0628.0	0629.0	III		1	70U	85U	
		IZMI	0629.9	0630.1	II	G	1	40	95	
		HOLL	1612.0	1613.0	III		1	25	180	
		SGMR	1612.0	1613.0	III		1	30	70	
		SVTO	1612.0	1613.0	III		1	25	164	
1936	2400	HIRA								
25 0000	0950	HIRA								
0408	0700	CULG								
0439	1738	ONDR								
0445	1805	BLEN								
0451	1200	IZMI	0701.0U	1200.0D	I	N	2	130	240	
		SVTO	0710.0	0712.0	III		1	25	85	
		IZMI	0710.9	0712.0	III	GG	2	25V	160	
		IZMI	0723.4	0724.0	III	G	1	45	85	
		IZMI	0925.7	0928.0	III	GG	2	90	270X	
		IZMI	1146.3	1146.4	III	G	2	90	150	
		IZMI	1148.2	1148.7	III	G	2	90	150	
		HOLL	1413.0	1700.0	CONT		1	25U	75U	
1937	2400	HIRA								
2050	2400	CULG								
26 0000	0700	CULG								
0000	0950	HIRA								
0440	1737	ONDR								
0445	1805	BLEN								
0502	1200	IZMI	0752.8	0753.0	UNCLF		1	55	70	
		IZMI	1007.5	1008.2	III	G	2	45	270	
		IZMI	1014.2	1014.5	III	G	1	45	155	
		IZMI	1015.3	1015.8	III	G,FS,C	2	30	140	
		IZMI	1018.1	1018.2	III	B	2	60	265	
		IZMI	1030.0U	1130.0U	I	N	2	180	270	
1938	2400	HIRA								
27 0000	0949	HIRA								
0441	1736	ONDR								
0445	1805	BLEN								
0506	1200	IZMI	0506.0E	0529.0	I	N	1	180	260	
		IZMI	0732.7	0732.8	III	B	1	45	70	
1939	2400	HIRA								
28		LEAR	0227.0	0227.0	III		1	90	180	
0000	0948	HIRA	0227.5	0228.0	III	B	1	90	200	
0442	1734	ONDR								
0454	1200	IZMI	0454.0	1200.0D	I	N	2	105	270	
		IZMI	0539.2	0539.4	III	G	2	115	215	
		IZMI	1006.8	1007.3	III	GG	2	200	270X	
		IZMI	1012.5	1012.7	III	G,HARM	2	45	160	
		IZMI	1102.8	1105.3	III	GG,FS	2	25X	230	
		SGMR	1103.0	1130.0	III	N	1	30	60	
		SVTO	1103.0	1104.0	III		2	25	150	
		IZMI	1113.3	1113.6	III	G	2	50	215	
		SVTO	1129.0	1130.0	III		1	25	158	
		IZMI	1129.5	1130.3	III	G,C	2	25X	235	
		SVTO	1251.0	1252.0	III		1	25	136	
		HOLL	1358.0	1500.0	III	N	1	25	139	
		SVTO	1358.0	1359.0	III		1	25	148	
		SGMR	1359.0	1413.0	III	N	2	30	70	
		SVTO	1412.0	1413.0	III		2	25	146	
		SVTO	1444.0	1449.0	III		2	25	180	
		HOLL	1446.0	1447.0	III		2	25	180	

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

JULY 2001

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
28			SGMR	1446.0	1447.0	III		2	30	80	
	0445	1805	BLEN	1446.2	1447.4	DCIM	C	1	1250X	2500	
	1939	2400	HIRA	2138.0	2149.0	III	G	1	50	200	
			HIRA	2151.0	2153.0	III	G	1	360	700	
			LEAR	2359.0	2359.0	III		1	25	65	
			PALE	2359.0	2359.0	III		1	25U	59U	
29			LEAR	0221.0	0221.0	III		1	25	52	
			PALE	0221.0	0221.0	III		1	25U	54U	
	0443	1733	ONDR								
	0445	1805	BLEN								
	0451	1200	IZMI	0827.4	0827.7	III	G	2	25	270X	
	0000	0947	HIRA	0835.5	0836.0	III	B	1	300	450	
	1940	2400	HIRA	2236.0	2236.5	III	B	1	100	200	
	2300	2400	CULG								
			HOLL	2359.0	2359.0	III		1	25	71	
30	0000	0700	CULG	0518.0	0518.0	III	B	1	57X	80	
	0457	1200	IZMI	0518.2	0518.6	III	G,U	2	45	90	
			LEAR	0623.0	0624.0	III		1	70	180	
			SVTO	0623.0	0624.0	III		1	72	180	
			IZMI	0623.5	0624.5	III	GG,C	2	75	265	
			CULG	0624.0	0624.0	III	B	1	70	160	
	0000	0946	HIRA	0625.0	0625.5	III	B	2	70	210	
			HIRA	0641.5	0642.0	III	B	1	80	220	
			IZMI	0641.7	0642.4	III	G	2	75	250	
			CULG	0642.0	0642.0	III	B	1	60	160	
	0444	1732	ONDR	0822.3	0833.0	DCIM	G	2	2000X	4500X	
			ONDR	0827.1	0832.3	DCIM	G	1	800X	2000X	
	0445	1805	BLEN	0829.7	0833.3	DCIM	C	1	1250X	3400	
			IZMI	0830.4	0831.4	III	G,C	2	25X	95	
			IZMI	0832.3	0833.2	III	GG,C	2	130	200	
			IZMI	0838.4	0839.0	III	G,C	2	78	100	
			IZMI	0841.0	0841.1	III	G,FS	2	45	85	
			HIRA	2040.0	2042.5	III	G	1	25X	1100	
			HOLL	2041.0	2044.0	III		1	25	129	
			PALE	2041.0	2043.0	III		1	25U	86U	
			HIRA	2044.0	2050.0	II		2	50	120	
			HIRA	2044.0	2053.0	II		2	70	300	
			PALE	2045.0	2051.0	II		1	83U	180U	ESS 0700
			HOLL	2051.0	2057.0	II		2	25	180	ESS 0633
	2100	2400	CULG								
			SGMR	2141.0	2044.0	V		1	30	80	
31			LEAR	0400.0	0404.0	III		1	25	180	
			PALE	0400.0	0403.0	III		1	25	180	
	0000	0700	CULG	0401.0	0404.0	III	G	2	57X	300	
	0000	0945	HIRA	0401.0	0404.0	III	G	2	60	380	
			CULG	0413.0	0415.0	III	G	1	57X	160	
			HIRA	0413.0	0413.5	III	B	1	100	230	
			LEAR	0413.0	0413.0	III		1	48	172	
	0445	1430	BLEN								
	0500	1200	IZMI	0813.7	0814.0	III	G	1	45	95	
	0445	1731	ONDR	0848.5	0849.5	UNCLF		3	2752	3250	
			SGMR	1220.0	1220.0	III		1	30	55	
			HOLL	1720.0	1720.0	III		1	25	138	
			HOLL	2241.0	2242.0	III		1	25	180	
			PALE	2241.0	2242.0	III		1	25	180	
	1942	2400	HIRA	2241.0	2241.5	III	B	1	60	280	
	2100	2400	CULG	2241.0	2242.0	III	G	2	57X	240	
			HIRA	2317.5	2318.0	III	B	1	100	370	
			CULG	2318.0	2320.0	III	G	1	57X	170	
			HIRA	2320.0	2320.5	III	B	1	100	270	

SOLAR RADIO NOISE STORM AT 164 MHZ

FROM NANCAY RADIOHELIOGRAPH

JULY 2001

	HELIOGRAPHICS POSITIONS MEAN VALUES[1]		IMP[2]	OBSERVING TIME[3]	
DAY	E-W	S-N		START(UT)	END(UT)
13/07/01	-0.29	+0.03	III	8H26 E	15H26 D
15/07/01	+0.42	-0.59	I	8H27 E	15H27 D
16/07/01	-1.26	-0.19	I	12H30	15H27 D
16/07/01	+0.34	+0.09	I	8H27 E	15H27 D
20/07/01	-0..19	+0.11	I	8H27 E	15H27 D
20/07/01	+1.01	-0.76	II	8H27 E	14H00
22/07/01	+0.37	-0.25	I	8H31 E	15H28 D
23/07/01	+0.23	-0.85	I	8H50 E	15H28 D
24/07/01	+0.57	-0.70	I	8H27 E	15H27 D
25/07/01	+0.73	-0.54	II	8H27 E	15H27 D
26/07/01	+0.96	-0.86	I	8H27 E	15H27 D
27/07/01	+1.18	-0.43	I	12H16 E	15H28 D
29/07/01	-1.01	-0.39	II	8H27 E	15H27 D
29/07/01	+1.22	-0.43	I	8H27 E	15H27 D
31/07/01	-1.02	-0.25	I	12H27	15H27 D

[1] POSITIVE E-W AND S-N COORDINATES CORRESPOND TO THE N-W QUADRANT

[2] 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

JULY 2001

	HELIOGRAPHICS POSITIONS MEAN VALUES[1]		IMP[2]	OBSERVING TIME[3]	
DAY	E-W	S-N		START(UT)	END(UT)
05/07/01	+1.27	+0.14	I	8H38 E	12H07
13/07/01	-0.28	+0.11	I	8H26 E	15H26 D
15/07/01	+0.36	-0.48	I	8H27 E	15H27 D
16/07/01	-1.09	-0.33	I	8H27 E	15H27 D
16/07/01	+0.70	-0.51	I	8H27 E	15H27 D
18/07/01	-0.78	-0.57	I	8H27 E	15H27 D
19/07/01	+1.10	-0.54	II	9H00 E	15H28 D
20/07/01	-0.42	-0.62	I	8H31 E	15H28 D
20/07/01	+1.07	-0.51	I	8H31 E	15H28 D
21/07/01	-0.20	-0.62	I	8H31 E	15H28 D
22/07/01	+0.02	-0.62	I	8H31 E	15H28 D
22/07/01	+0.42	-0.19	I	8H31 E	15H28 D
24/07/01	+0.50	-0.57	I	8H27 E	15H27 D
25/07/01	+0.76	-0.54	III	8H27 E	15H27 D
26/07/01	+0.99	-0.48	II	8H27 E	15H27 D
27/07/01	+1.07	-0.40	I	12H16 E	15H28 D
29/07/01	-0.88	-0.34	III	8H27 E	12H10
31/07/01	-0.90	-0.31	II	8H27 E	14H00

01, 28 JULY NO DATA

OTHERS DAYS: NO DETECTABLE NOISE STORM

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

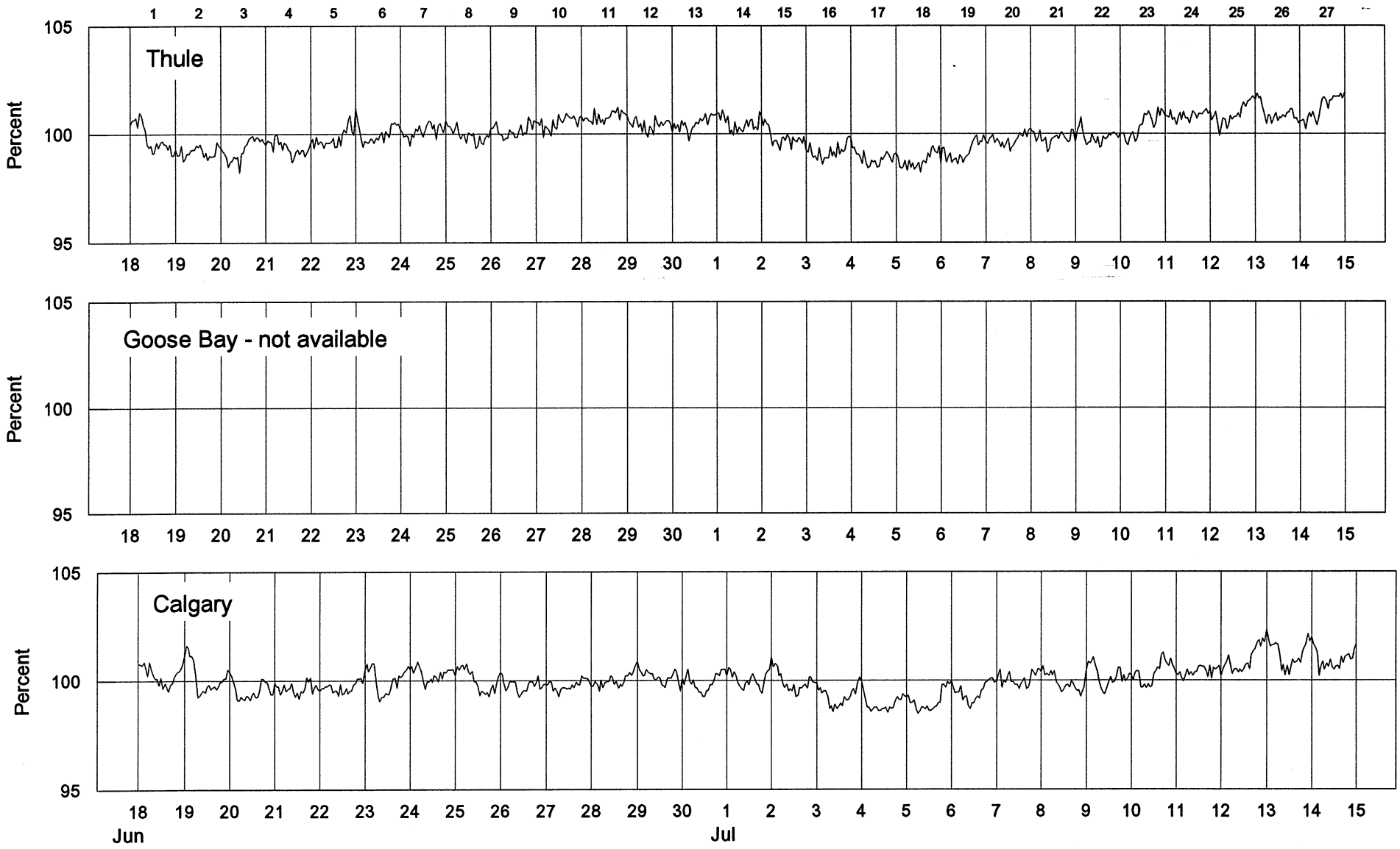
*** importance not well determined due to the proximity of the very strong other source.

COSMIC RAY INDICES
(Neutron Monitor)
July 2001

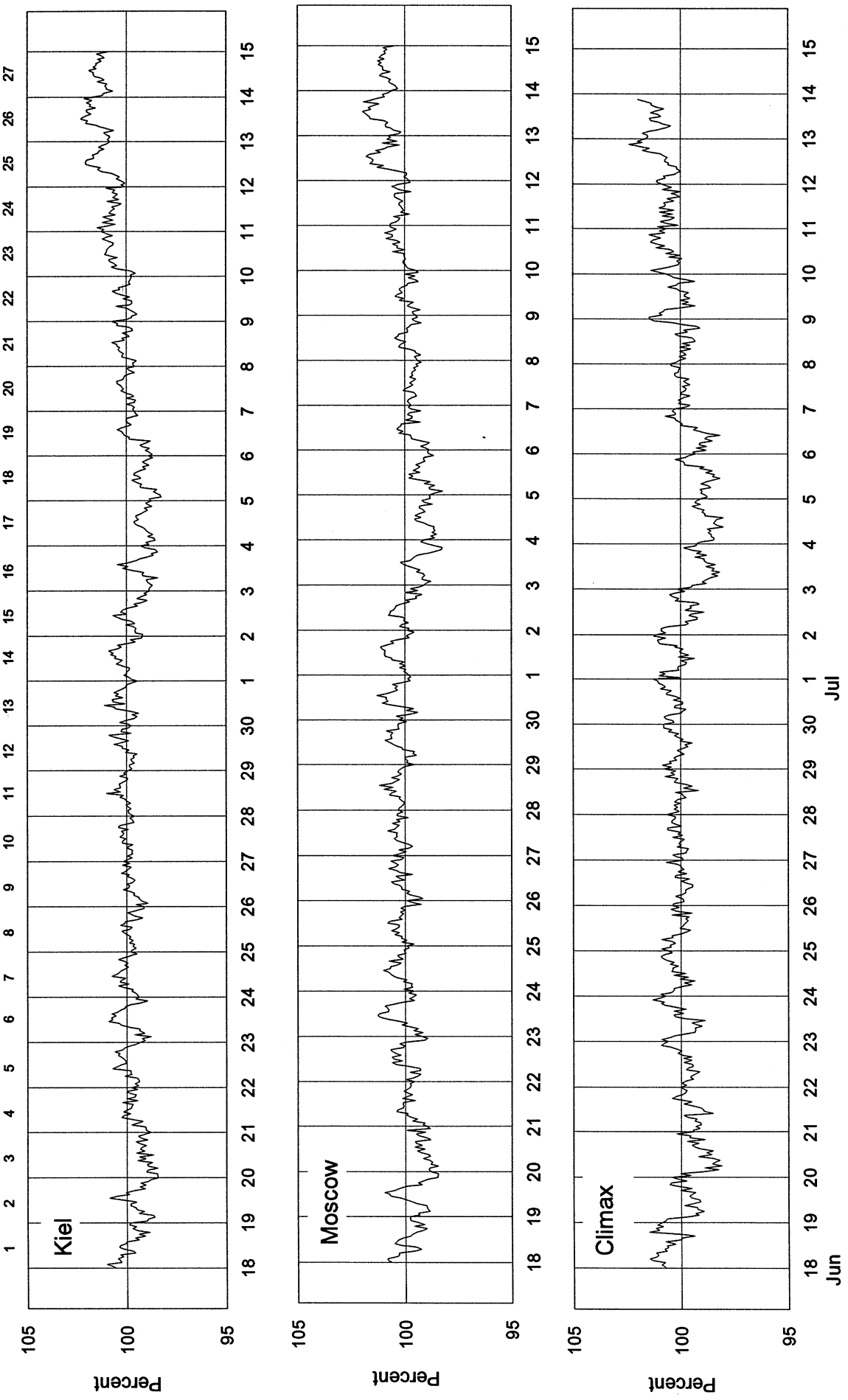
Day	THULE Average (cts/h)/100	GOOSE BAY Average (cts/h)/100	CALGARY Average (cts/h)/300	KIEL Average (cts/h)/100	MOSCOW Average (cts/h)/64	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	4072.2	not	3553.7	5690.8	8492.4	3787.5	1883.8	3512.2
2	4047.6	available	3550.7	5663.4	8461.4	3773.8	1877.2	3503.9
3	4018.6		3526.7	5634.2	8394.0	3736.9	1872.3	3490.3
4	4008.3		3514.7	5631.2	8377.0	3728.6	1872.4	3494.0
5	4003.4		3518.0	5627.6	8385.1	3739.7	1875.3	3495.4
6	4019.0		3534.0	5658.6	8431.9	3754.7	1875.8	3497.1
7	4041.0		3554.3	5679.3	8431.1	3773.7	1864.1	3500.9
8	4046.3		3549.0	5687.1	8444.6	3771.2	1859.6	3503.3
9	4047.2		3559.8	5683.0	8446.6	3783.7	1880.8	3517.9
10	4067.9		3565.3	5718.1	8483.5	3803.7	1894.2	3531.1
11	4086.2		3566.7	5727.2	8483.2	3797.2	1892.4	3533.8
12	4088.8		3585.3	5746.6	8531.5	3812.4	1887.0	3531.8
13	4092.0		3596.0	5771.6	8560.7	3824.0	1890.0	3533.8
14	4100.0		3586.3	5759.1	8536.8	---	1887.8	3537.8
15	4113.5		3611.3	5780.3	8575.9	---	1886.5	3540.8
16	4111.3		3608.5	5771.2	8547.6	---	1886.1	3541.9
17	4102.8		3590.3	5758.9	8518.2	---	1874.9	3527.5
18	4127.9		3612.8	5780.1	8553.5	3863.7(12)	1875.0	3529.5
19	4113.5		3611.3	5760.7	8527.7	3834.4	1877.2	3534.6
20	4104.1		3602.7	5752.2	8522.2	3829.3	1874.2	3529.0
21	4099.6		3594.7	5730.0	8496.4	3820.3	1872.0	3525.2
22	4089.2		3591.8	5724.5	8521.8	3839.0	1884.1	3529.9
23	4066.2		3566.3	5694.7	8455.9	3814.0	1875.3	3517.3
24	4062.4		3554.2	5673.2	8425.8	3785.5	1871.6	3497.3
25	4045.9		3548.7	5659.8	8357.1(9)	3778.3	1881.0	3506.4
26	4041.7		3556.0	5669.2	8415.8(18)	3787.0	1884.5	3514.8
27	4051.5		3566.2	5692.0	8439.3	3791.9	1885.8	3516.5
28	4063.3		3570.0	5703.9	8464.7	3793.5	1874.7	3512.9
29	4077.2		3585.5	5703.0	8456.4	3796.4	1873.4	3513.5
30	4053.2		3568.5	5663.7	8428.9	3782.4	1872.7	3491.0
31	4062.7		3574.8	5706.9	8483.5	3803.4	1876.4	3507.8
Mean	4068.0		3570.1	5706.5	8472.6	3790.7	1878.6	3516.7

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.

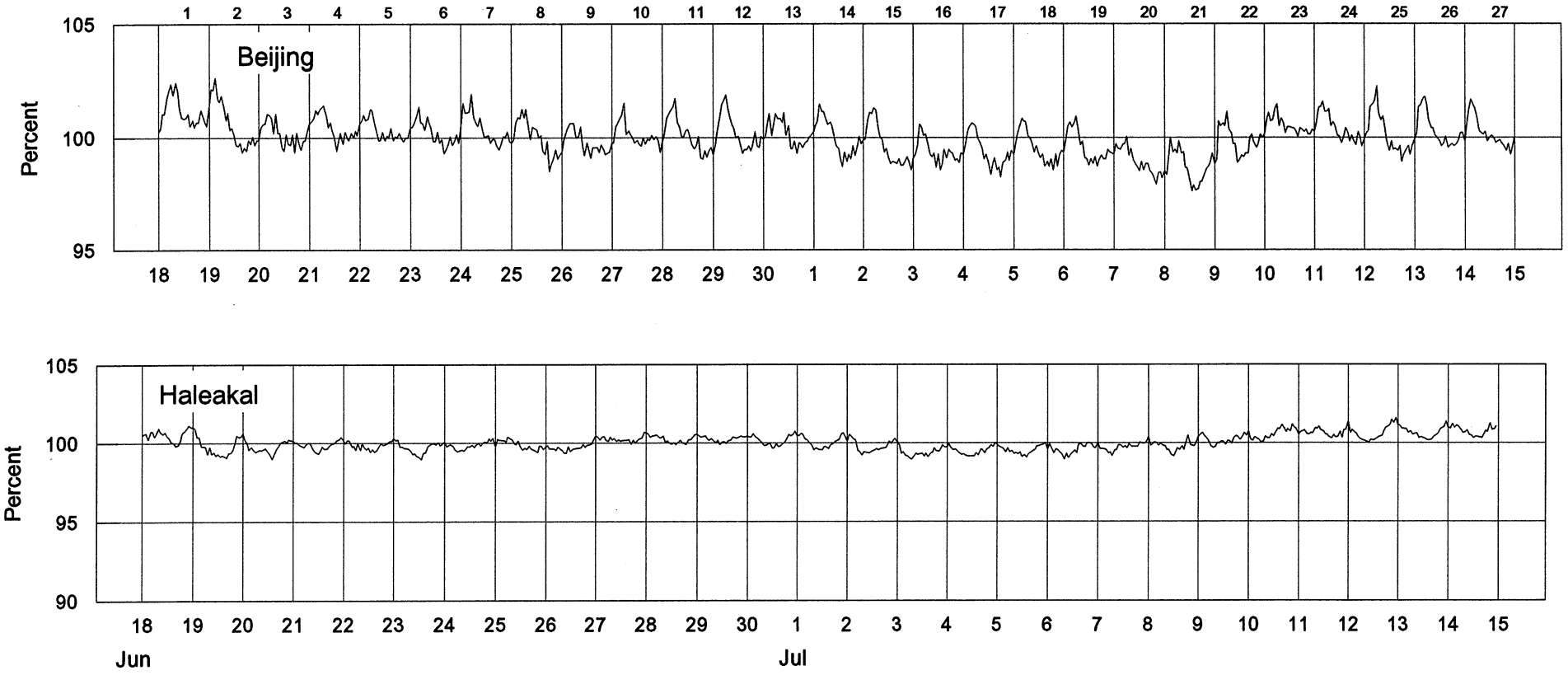
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2292 - Beginning 18 June 2001



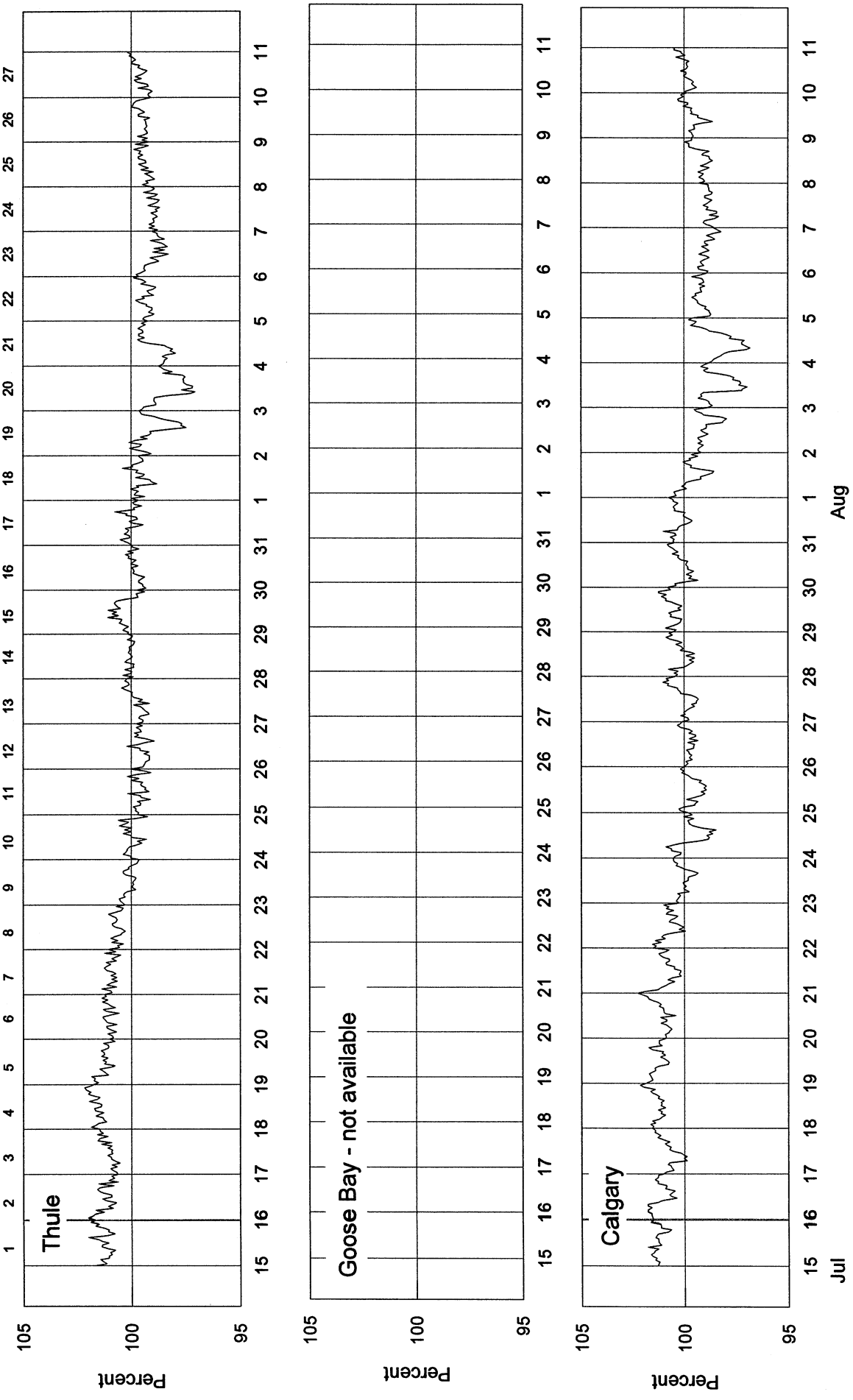
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2292 - Beginning 18 June 2001



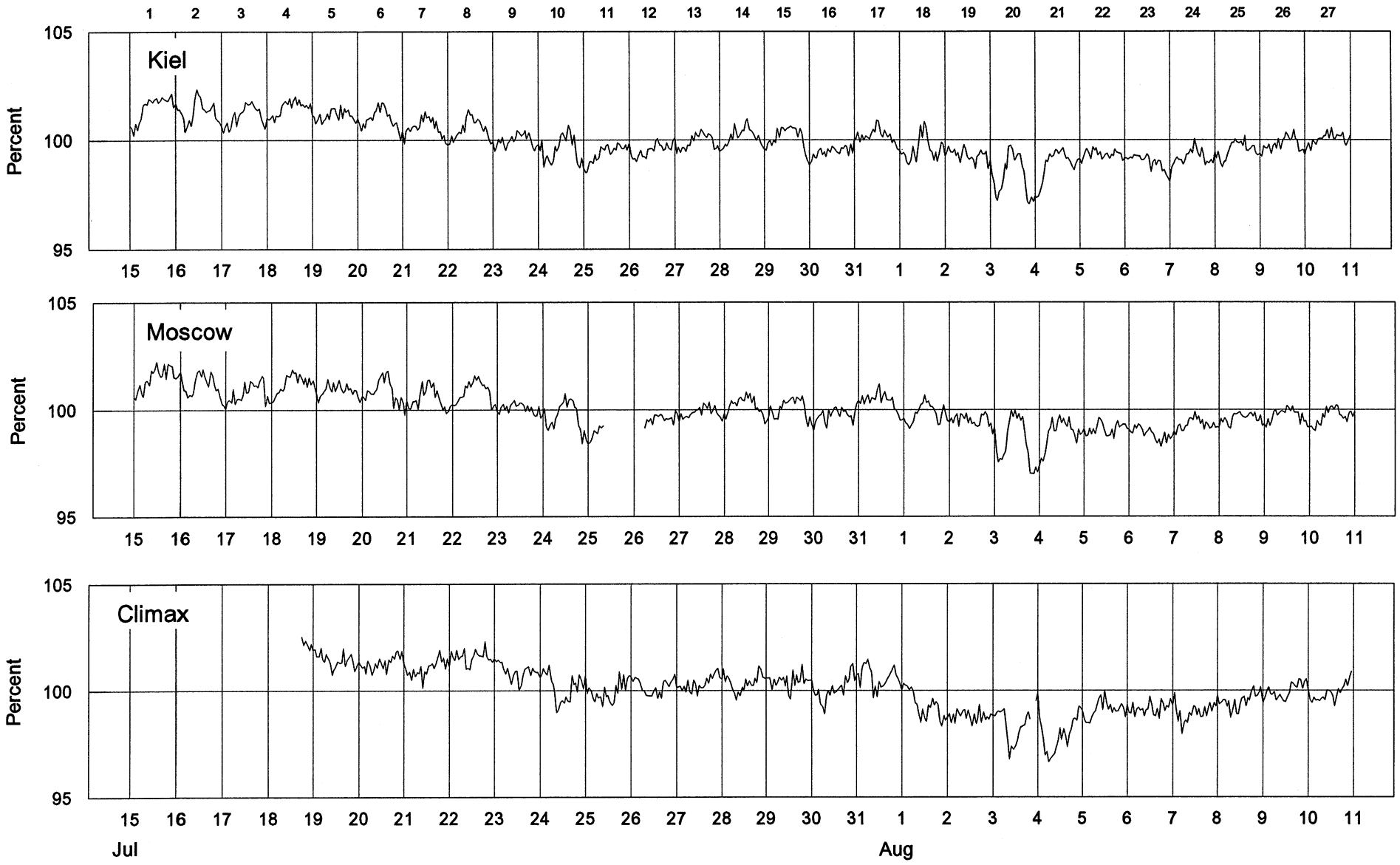
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2292 - Beginning 18 June 2001



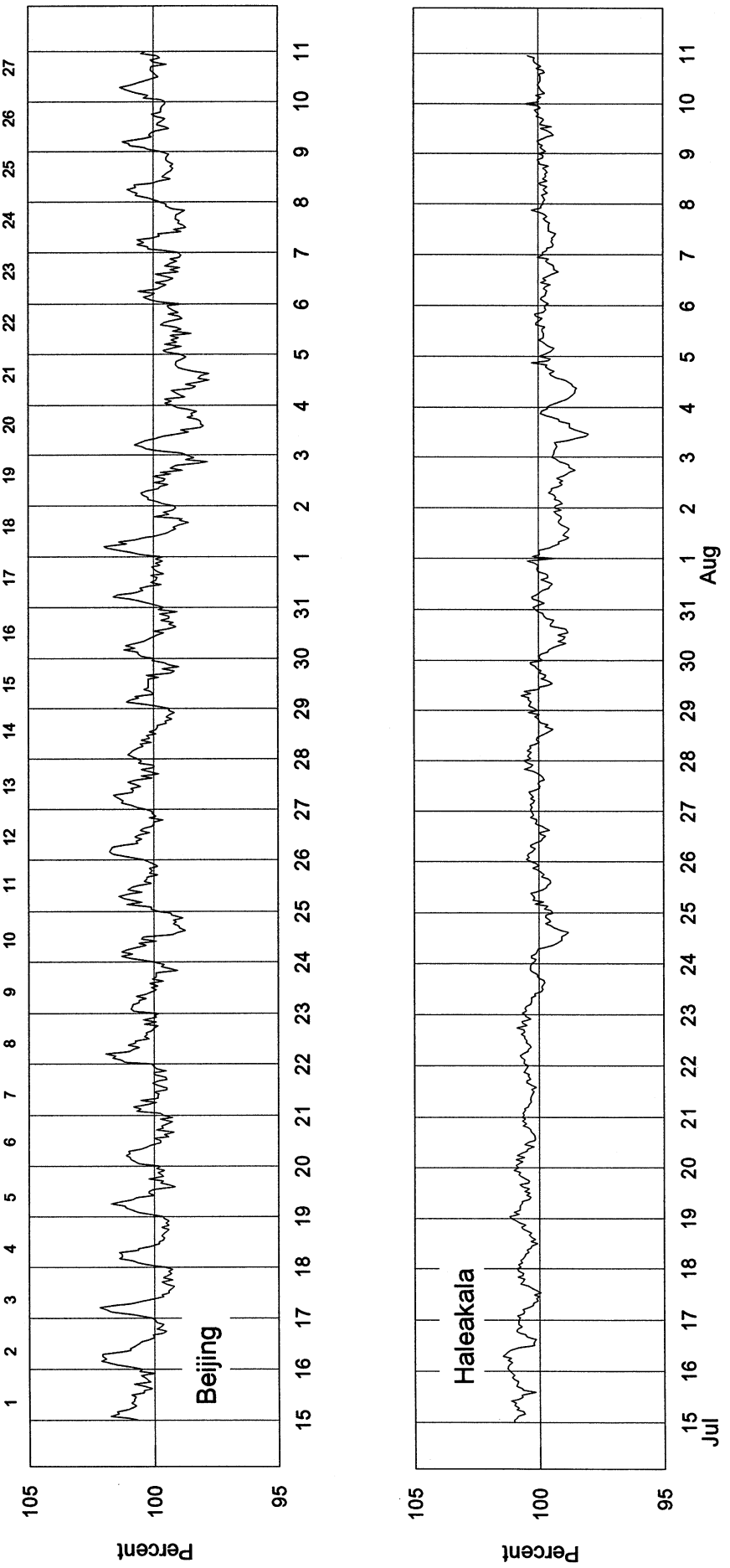
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2293 - Beginning 15 Jul 2001



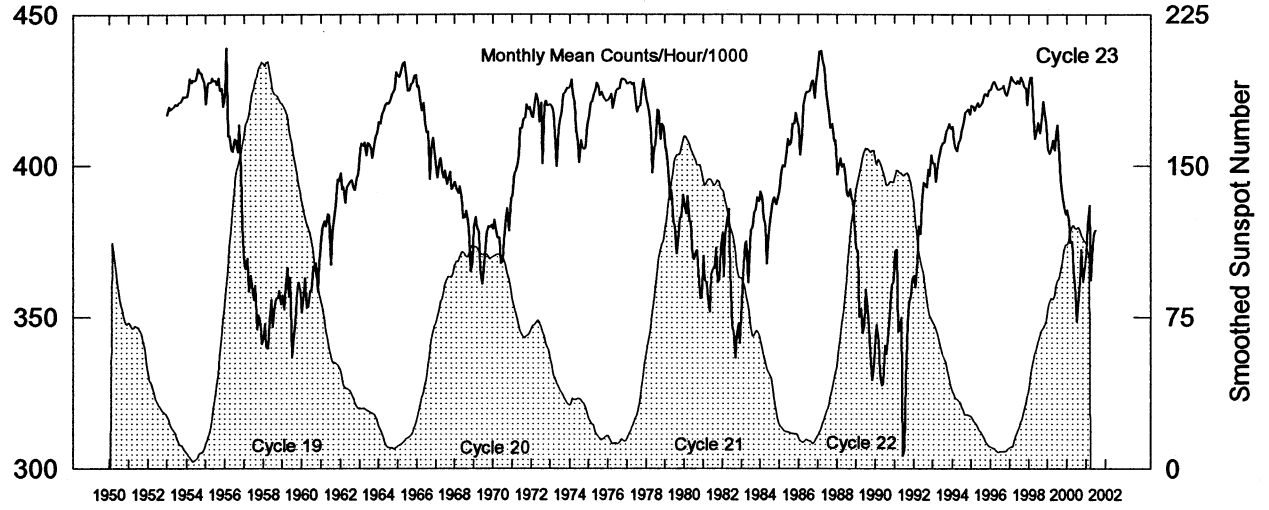
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2293 - Beginning 15 Jul 2001



COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2293 - Beginning 15 Jul 2001



Climax Neutron Monitor Pressure-Corrected Values
Jan 1953 - Jul 2001



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1953	4165	4193	4182	4188	4190	4200	4197	4205	4208	4216	4225	4226	4200
1954	4225	4247	4285	4269	4280	4277	4284	4318	4308	4303	4286	4269	4279
1955	4200	4267	4272	4273	4287	4278	4279	4263	4286	4245	4252	4193	4258
1956	4234	4388	4097	4097	4049	4045	4088	4083	4044	4134	3980	3799	4087
1957	3677	3660	3695	3585	3640	3603	3557	3606	3458	3509	3484	3410	3574
1958	3435	3479	3400	3396	3490	3560	3467	3537	3561	3564	3589	3542	3502
1959	3573	3526	3606	3664	3567	3633	3367	3420	3484	3597	3615	3587	3553
1960	3516	3573	3631	3532	3534	3589	3587	3670	3670	3682	3586	3681	3604
1961	3761	3801	3819	3800	3843	3838	3675	3784	3834	3870	3955	3950	3828
1962	3977	3922	3931	3878	3927	3940	3950	3954	3924	3919	3963	3971	3938
1963	4049	4073	4065	4077	4033	4075	4072	4060	4024	4066	4094	4111	4067
1964	4144	4139	4168	4181	4198	4208	4202	4213	4232	4240	4254	4307	4207
1965	4294	4290	4314	4335	4340	4288	4247	4246	4267	4271	4294	4300	4291
1966	4258	4262	4211	4180	4207	4146	4108	4112	3956	4055	4091	4053	4137
1967	3991	3960	4014	4025	3974	3960	3985	3939	3955	3980	3922	3933	3970
1968	3946	3925	3909	3932	3895	3830	3830	3853	3817	3761	3652	3685	3836
1969	3801	3831	3798	3782	3656	3609	3652	3730	3781	3803	3798	3807	3754
1970	3792	3824	3781	3765	3765	3679	3684	3755	3832	3862	3786	3895	3785
1971	3898	3975	3981	4003	4032	4124	4124	4152	4156	4200	4184	4192	4085
1972	4162	4157	4209	4237	4215	4141	4207	4005	4198	4214	4198	4198	4178
1973	4200	4193	4173	4075	3997	4119	4150	4180	4235	4240	4255	4253	4173
1974	4261	4283	4237	4207	4121	4077	4009	4083	4061	4054	4058	4140	4133
1975	4155	4206	4210	4239	4244	4271	4262	4231	4243	4231	4218	4213	4227
1976	4216	4223	4236	4188	4218	4244	4254	4253	4283	4287	4285	4280	4247
1977	4268	4272	4274	4267	4272	4231	4175	4193	4197	4245	4284	4260	4245
1978	4213	4198	4173	4107	3976	4058	4068	4183	4180	4085	4139	4128	4126
1979	4071	4034	3983	3888	3920	3814	3806	3710	3745	3829	3829	3905	3878
1980	3873	3842	3900	3819	3817	3697	3692	3719	3723	3647	3564	3564	3738
1981	3703	3623	3616	3561	3518	3643	3663	3662	3732	3613	3624	3726	3640
1982	3780	3634	3778	3819	3860	3650	3463	3456	3364	3444	3482	3413	3595
1983	3550	3643	3744	3753	3613	3700	3789	3798	3845	3860	3897	3881	3756
1984	3915	3896	3830	3806	3677	3773	3813	3865	3891	3897	3871	3890	3844
1985	3919	3985	4002	3995	4026	4088	4066	4075	4139	4139	4174	4141	4062
1986	4128	4036	4098	4199	4232	4242	4243	4244	4277	4280	4221	4277	4206
1987	4331	4376	4378	4346	4323	4254	4216	4170	4123	4139	4080	4084	4235
1988	3970	3997	4024	3995	4005	3981	3906	3899	3923	3893	3886	3798	3940
1989	3731	3717	3500	3527	3446	3478	3594	3535	3467	3347	3291	3349	3499
1990	3432	3476	3424	3317	3275	3283	3406	3377	3450	3540	3608	3620	3434
1991	3719	3725	3451	3470	3501	3041	3062	3293	3482	3550	3570	3628	3458
1992	3639	3600	3684	3803	3776	3876	3945	3939	3928	3989	3966	4036	3848
1993	4011	4007	3947	4003	4028	4061	4075	4076	4113	4122	4138	4122	4059
1994	4130	4079	4058	4048	4076	4085	4117	4140	4173	4179	4187	4168	4120
1995	4198	4194	4180	4199	4208	4193	4198	4209	4235	4236	4228	4246	4210
1996	4249	4266	4276	4269	4252	4250	4254	4256	4264	4243	4231	4242	4254
1997	4273	4293	4278	4274	4268	4281	4268	4290	4278	4260	4255	4199	4268
1998	4270	4290	4291	4160	4087	4116	4142	4107	4141	4212	4175	4133	4177
1999	4056	4040	4057	4083	4050	4106	4133	4031	3953	3899	3870	3840	4010
2000	3855	3822	3748	3752	3656	3583	3485	3562	3617	3725	3615	3651	3673
2001	3713	3812	3869	3622	3734	3779	3791						3760

Multiply table entries by 100 to obtain hourly counting rate. Climax, Colorado: N39, W106, Alt=3400 m, Cutoff Rigidity=2.99GV (1980).
NOTE: Data may differ from previously reported values due to subsequent cleanup of data and slight changes in the averaging algorithm. See http://astro.uchicago.edu/home/web/pyle/neutron.html for latest changes. Sunspot numbers are preliminary after March, 2000.

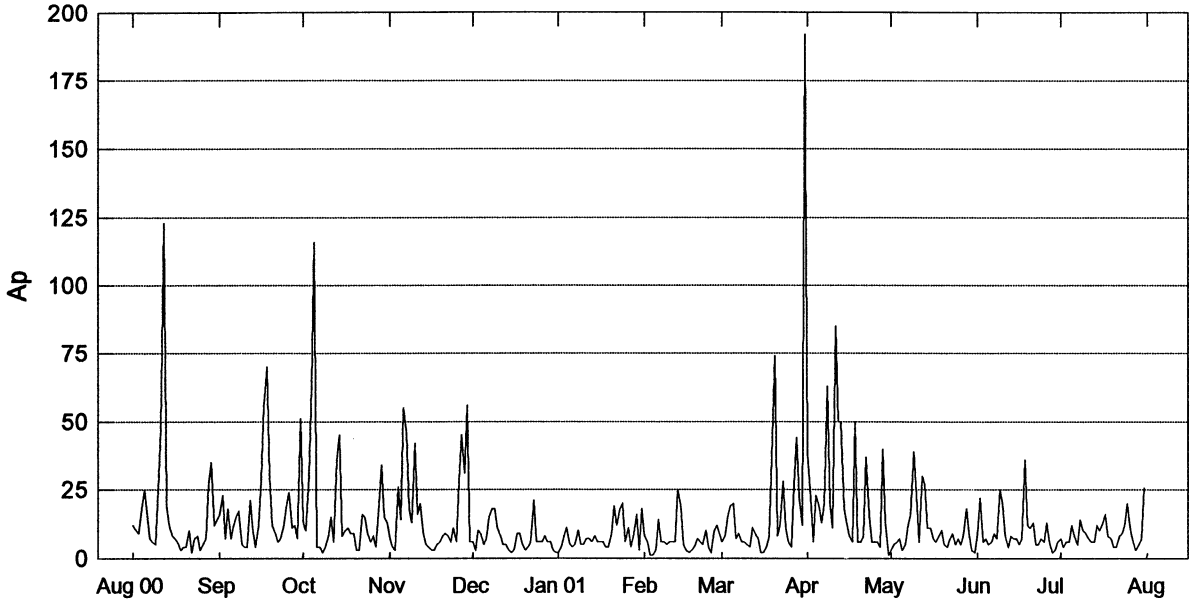
Geomagnetic Activity Indices

July 2001

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	Am	aa Provisional N	S	M	
1		3-	2-	1	1-	1	1+	3-	3-	14-	7	0.4	3o	2-	2-	1o	1o	2o	2o	2+	14	20	9	14	15	
2	Q3	1+	1+	0+	1-	1	1-	2	1	8+	4	0.1	2o	2o	1o	1+	1o	1-	2-	1o	9	11	7	10	8	CC
3	Q8	1-	1+	1+	2-	2+	1+	2+	1	12	6	0.3	1-	2o	2-	3-	2o	1+	2o	1+	13	17	14	12	19	K
4	Q9	2-	2-	1	1+	1+	2+	1+	2	13-	6	0.3	2-	2-	1+	2-	1+	2+	1+	2-	12	15	9	10	14	C
5		2	2+	3-	2	3	3	3	3-	21-	12	0.7	2-	2+	3-	2+	2+	3-	3-	3-	20	31	12	18	25	
6		2-	1+	1+	2-	2+	2+	3	2	16-	8	0.4	1+	2-	1+	2+	2+	2+	2+	2o	14	19	12	10	21	
7	Q5	2-	1+	1-	1	1	1+	2-	1+	10	5	0.2	1+	1+	1-	1+	1+	1+	1+	2-	9	10	8	8	10	CK
8	D4*	2	2+	2+	2-	1+	3-	4	5-	21	14	0.8	2+	3o	3-	2o	1+	2+	3+	4o	26	32	17	15	34	
9		5	2+	1	0+	1	1+	2-	1+	14	10	0.6	4o	2+	1+	1-	1o	1+	2-	2-	16	18	11	17	12	
10		0+	2-	1+	2	2+	3	3+	2+	16+	9	0.5	1-	2-	2-	3o	2o	3-	3o	2o	18	22	18	10	30	
11		3+	3	1-	1-	1+	1	2	1-	13-	7	0.4	3o	3-	1+	1-	1o	1o	1+	1-	12	15	6	13	9	C
12		2-	2-	2-	1+	2	1+	2	2+	14	6	0.3	2-	2o	2+	2o	2o	1+	2o	2o	14	17	12	12	17	C
13	Q7	2-	2	1-	1+	0+	0+	2	3-	11	6	0.2	1+	2o	1-	2o	0+	0+	2-	3-	10	15	5	9	12	C
14		4	4+	2-	2+	3-	2	1-	1	19-	12	0.7	4-	4o	2o	2+	2+	2+	1o	1o	22	25	19	30	15	
15		1-	1-	2	1+	3-	4-	4-	2+	17	10	0.6	1-	1o	2o	2o	3-	3o	3o	2o	18	25	17	9	33	
16	D5*	3-	3	2-	3	3-	3+	2+	3+	22	13	0.8	3o	3o	2-	3-	2o	3-	2-	3+	23	27	15	18	24	
17	D3*	4+	4-	3-	2+	3+	3+	2	2-	23+	16	0.9	4o	4-	3-	3o	3o	3-	2o	2-	29	32	21	29	24	
18		2-	3-	2+	2-	2+	3-	1+	1+	16	8	0.4	2-	3-	3-	2o	2o	2+	1+	2-	16	16	13	16	13	
19		1	1+	1+	2	2	3	2	1	14-	7	0.3	1+	2-	2-	2o	2+	2+	2+	1+	14	19	13	9	23	K
20	Q4	1+	2-	1+	1+	2-	1+	0+	0+	9+	4	0.2	2-	1+	2-	2o	2-	2-	1o	1-	10	9	8	8	9	CK
21	Q2	1	1+	1-	1	1+	1	1-	2-	9-	4	0.1	1o	2-	1o	1o	2-	1+	1-	2-	8	10	8	9	9	CC
22		2	2+	2+	2-	2	2+	2+	3-	18-	8	0.5	2o	2o	3-	2+	2-	2o	2-	2+	16	24	12	15	21	
23		3	3-	2-	2-	2+	2+	2+	2	18	9	0.5	3-	3-	2o	2+	2o	2o	2-	2o	17	24	21	22	23	
24		3-	2	2	2	4-	3	3	2+	21-	12	0.7	3-	2+	2+	2+	3o	3-	3-	3-	23	34	24	26	33	
25	D2	2+	4-	4	4+	3+	4	3+	2+	27+	20	1.0	2+	4-	4-	4+	3-	4-	3o	2o	37	38	49	53	35	
26		4-	4-	2-	2	2	1	2-	2	18-	10	0.6	5-	3+	2o	2+	2+	1-	2o	2-	25	24	29	37	16	
27	Q10	1	1+	2+	2-	2-	2	1+	2	13+	6	0.3	1+	2-	3-	2+	1+	2-	1+	2o	14	12	21	17	16	
28	Q1	1	0+	0+	0+	1	0+	0+	1-	4+	3	0.0	2-	1o	1-	1-	1o	0+	0+	1o	6	6	10	10	6	CK
29	Q6	1+	2	2	1+	2-	2-	1	1-	12-	5	0.2	2o	2+	2+	2-	2-	1+	1o	1o	12	15	20	20	15	K
30		1+	1	1+	1+	1+	2-	3-	3	14-	7	0.4	2-	1+	2-	2-	1o	2-	3-	3o	15	17	14	11	20	
31	D1	4-	4+	4	3-	5	5-	3-	3+	30+	26	1.2	4o	4-	4-	3-	4-	4o	3o	3o	42	59	44	47	56	
Mean											9	0.47									17.2	21.3	16.2	18.7		

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	Sa	Prov Ri	Ra	Rs	IMF
1	3-	2o	2o	1+	1+	2o	3-	3-	16	3+	1+	1o	1-	0+	2-	1o	2-	12	140.0	74	81	89		
2	2o	2-	1o	1+	1+	1+	2+	1+	11	2o	2o	1-	1-	1-	0+	1o	1-	8	138.8	83	87	88		
3	1o	2-	2+	3-	2+	2-	2+	2-	15	0o	2o	1o	3-	2-	1o	1+	1o	9	136.3	80	79	85		
4	2o	2-	2-	2o	2-	3o	2o	2+	16	1+	1+	1-	1o	1-	1+	1o	1o	7	131.3	71	82	80		
5	2o	3-	3-	3-	3-	3o	3-	3o	24	2-	2+	3-	2-	2-	2-	3-	3-	16	123.6	62	64	71		
6	2-	2o	1+	2+	3-	3-	3-	2+	18	1+	1+	1o	2-	2-	1+	2o	2-	11	120.3	45	48	68		
7	2-	1+	1-	2-	2-	1+	2-	2o	11	1o	1+	1-	1+	1+	1o	1o	1o	7	121.8	47	45	70		
8	2+	3-	3-	2+	2-	3-	4-	4-	28	2+	3o	3-	2-	1o	2-	3o	4+	24	130.5	54	62	79		
9	4o	3-	2-	1o	1+	2o	2-	1+	17	4+	2-	1-	0+	1-	0+	1+	2-	14	134.4	71	78	83		
10	0+	2o	2o	3o	2+	3o	3o	2+	20	1-	2-	2-	3-	2-	2+	3o	2-	16	134.3	70	74	83		
11	3o	3-	1+	1o	1+	1+	2o	1o	14	3o	3-	1+	0+	1-	0+	1-	0o	10	136.3	69	81	85		
12	2+	2+	3-	2+	2+	2-	2+	3-	19	1-	1+	2+	2-	1+	1+	2-	1o	10	138.3	90	101	87		
13	2-	2+	1o	2+	0+	1-	2+	3-	12	1o	2o	1-	1+	0o	0o	1+	3-	8	137.7	111	118	87		
14	4-	4o	2o	2+	3-	3-	1o	1+	23	4-	4o	2+	2o	2-	2+	1-	1-	21	145.4	99	106	95		
15	1+	1o	2+	2+	3o	4-	3+	2-	22	0+	1o	1+	2-	2o	3-	2+	2+	13	146.8	102	111	97		
16	3o	3o	2o	3o	3-	3o	2+	3+	27	3+	3o	2-	2+	2-	2+	1o	3o	20	154.7	113	122	105		
17	4o	4-	3o	3o	3+	3o	2+	2o	33	4+	4-	2o	3-	2+	2o	2-	1+	26	150.4	123	126	100		
18	2+	3-	3-	2+	2+	3-	1+	2o	19	1o	2o	3-	2-	1+	2o	1o	1o	12	147.7	127	126	98		
19	2-	2o	2-	2+	3-	3o	3-	2-	18	1o	1+	2-	2-	2-	2-	2-	1+	10	146.9	122	129	97		
20	2o	2o	2o	2+	2-	2-	1o	1-	12	2-	1o	1+	2-	1+	1+	1-	1-	9	147.2	118	111	97		
21	1+	2-	1-	1+	2-	1+	1-	2o	10	1-	1+	1o	1-	1+	1o	0+	1o	6	143.5	96	105	93		
22	2o	2+	3-	3-	2o	3-	2+	2+	19	2-	2o	3-	2-	1+	1o	1o	3-	13	144.9	100	108	94		
23	3o	3-	2+	2+	2+	2+	2o	2-	19	3-	2+	2-	2o	1+	2-	1+	2o	15	147.8	101	106	98		
24	3-	3-	3-	3-	4-	3+	3o	3-	29	3-	2o	2o	2-	2+	2o	2-	2+	17	136.7	96	94	86		
25	3-	3+	3+	4o	3-	4-	3+	3-	36	2o	4-	4o	5-	3-	4-	3-	1+	38	137.5	79	83	87		
26	4o	4-	2o	3-	2+	1o	2o	2o	23	5o	3+	2o	2+	2+	1-	2o	1+	26	127.2	66	64	75		
27	1+	1+	3-	3-	2-	2-	1+	2o	14	1+	2-	3-	2+	1o	2-	1+	2-	13	125.1	60	64	73		
28	1+	0+	1-	1o	1+	1-	0+	1+	6	2-	1+	1o	1-	1o	0+	0+	1-	6	119.0	63	61	67		
29	1+	2-	2o	2-	2-	2o	1+	1o	12	2+	3-	3-	1+	1+	1o	1-	1-	12	120.5	46	47	68		
30	2-	1+	2o	2o	1+	2o	3-	3+	17	1+	1+	2-	1+	1-	1o	2+	3o	12	118.0	57	55	65		
31	3+	4o	4o	3o	4o	4-	3o	3o	43	4+	4-	3o	2o	3+	4+	3o	3o	40	120.3	52	60	68		
Mean									19.5									14.9	135.6	82.2	86.5	84.4		

Daily Average Indices Ap
Aug 2000 -Jul 2001

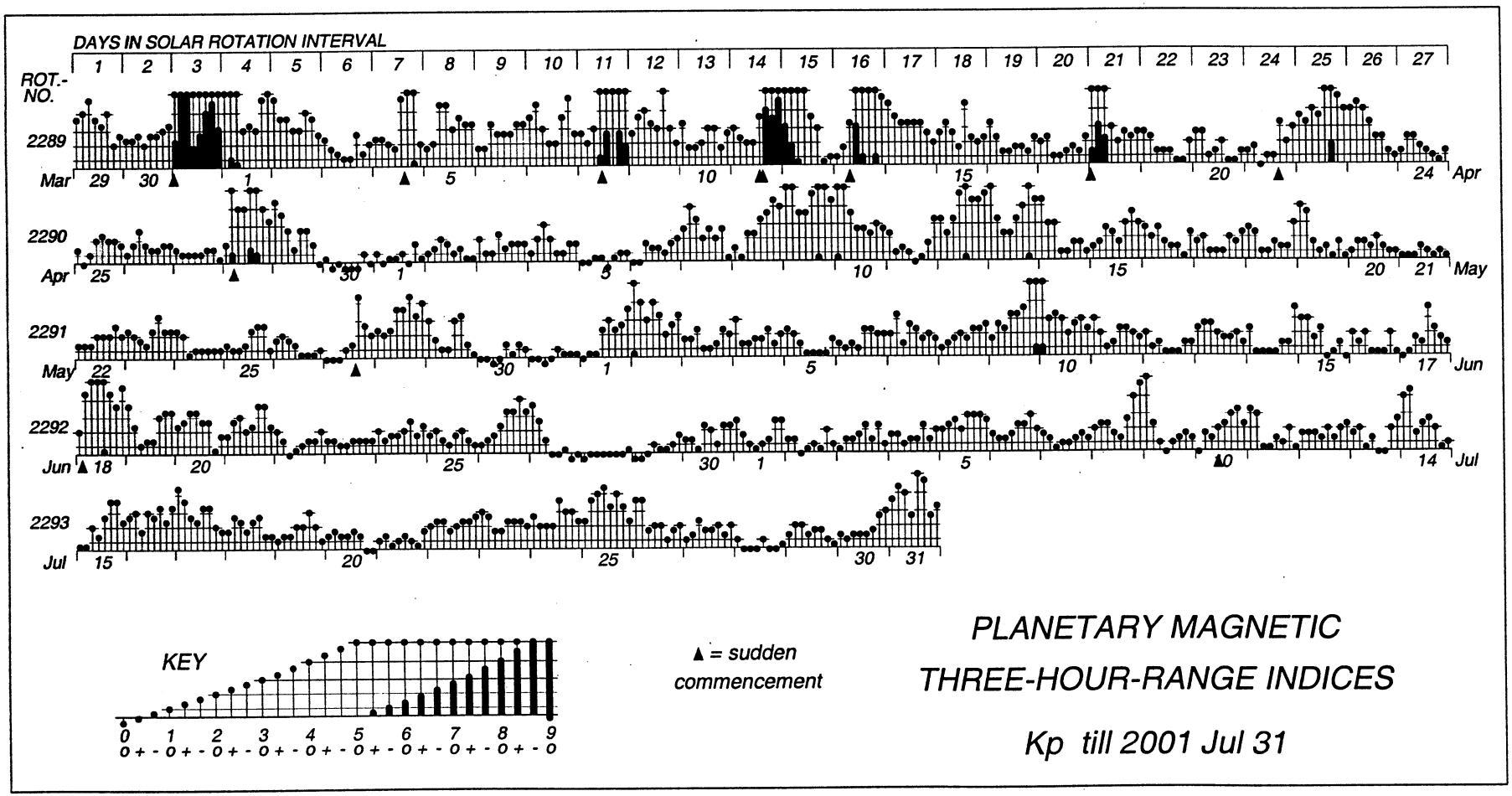


Day	Aug 00	Sep	Oct	Nov	Dec	Jan 01	Feb	Mar	Apr	May	Jun	Jul
1	12	16	13	7	6	2	8	6	38	3	9	7
2	10	23	10	4	3	4	6	8	22	5	22	4
3	9	7	30	3	10	8	1	15	6	6	6	6
4	17	18	63	26	9	11	1	19	23	7	7	6
5	25	7	116	14	5	5	3	20	19	3	5	12
6	16	12	4	55	7	4	14	7	13	5	6	8
7	7	15	4	46	15	5	6	9	20	12	9	5
8	6	17	2	18	18	10	6	6	63	16	7	14
9	5	5	4	13	18	5	5	6	20	39	25	10
10	25	4	8	42	11	5	6	5	11	23	20	9
11	47	4	15	16	8	7	6	4	85	6	8	7
12	123	21	6	20	5	7	6	11	50	30	4	6
13	19	10	36	9	5	6	25	9	50	27	8	6
14	12	4	45	5	3	8	19	7	18	11	7	12
15	8	12	8	4	2	6	5	2	13	11	7	10
16	7	29	10	3	3	6	3	2	8	7	5	13
17	6	56	11	3	9	6	2	4	6	6	7	16
18	3	70	9	5	9	4	3	8	50	8	36	8
19	4	30	9	6	5	4	4	37	6	10	12	7
20	4	12	3	8	3	9	7	74	6	5	11	4
21	10	9	3	9	4	19	6	8	8	4	13	4
22	2	6	16	8	6	12	5	12	37	7	5	8
23	7	7	15	6	21	18	10	28	16	9	5	9
24	8	12	9	11	6	20	4	11	6	5	7	12
25	3	19	6	6	6	6	2	6	6	7	6	20
26	5	24	8	28	6	11	10	4	6	5	13	10
27	7	11	4	45	8	4	12	27	4	8	6	6
28	27	12	20	31	6	8	9	44	40	18	2	3
29	35	7	34	56	6	16		22	13	9	3	5
30	12	51	15	6	3	3		12	1	3	6	7
31	14		13		2	18		192		2		26
Mean	16	18	18	17	7	8	7	20	22	10	10	9

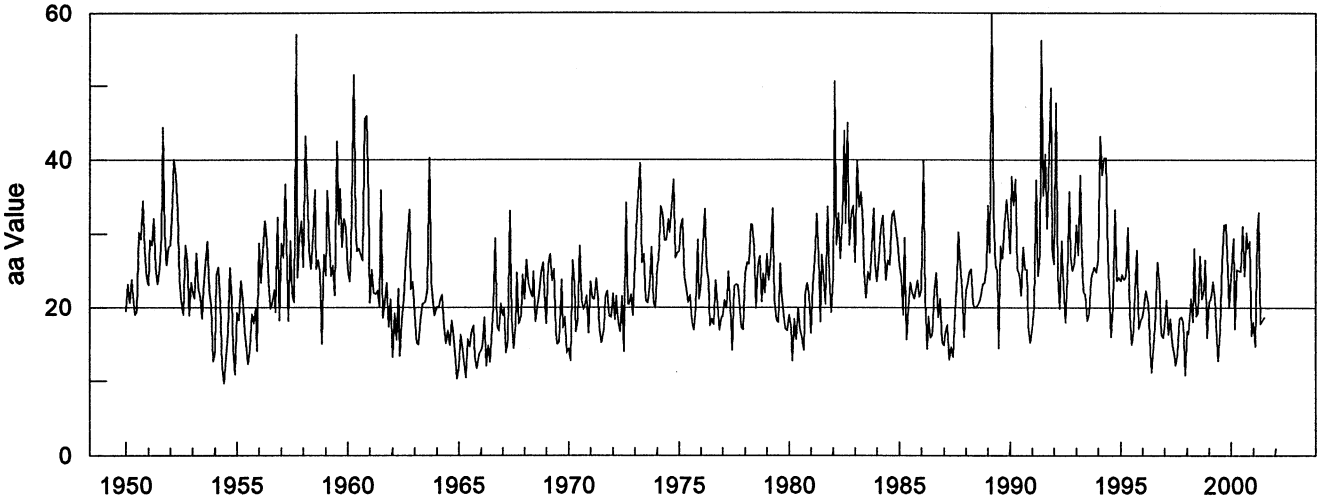
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

GeoForschungsZentraum Potsdam

Kp through July 31, 2001



Monthly Mean aa Index Jan 1950 - Jul 2001



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	22.5	26.1	29.0	22.4	20.2	12.6	22.2
1954	13.9	24.5	25.5	20.6	12.0	9.7	13.1	16.5	25.4	21.1	14.5	10.9	17.3
1955	19.3	18.2	23.6	21.1	16.7	15.1	12.3	14.3	19.1	17.8	19.9	14.1	17.6
1956	28.7	23.3	27.6	31.7	29.3	23.5	19.8	20.7	22.4	19.3	32.3	18.2	24.7
1957	28.7	26.8	36.7	28.8	18.1	29.1	21.7	20.7	57.0	24.0	29.5	31.7	29.4
1958	25.5	43.2	36.1	27.6	25.2	29.7	36.0	25.1	26.5	24.7	15.0	27.2	28.5
1959	24.3	35.9	29.9	24.2	25.7	21.6	42.5	31.2	36.1	28.2	32.1	30.8	30.2
1960	25.2	23.5	27.6	51.5	31.6	27.6	28.1	27.2	26.4	45.6	45.9	34.5	32.9
1961	20.6	25.1	22.0	21.8	22.3	20.1	36.0	18.5	20.7	23.3	17.3	21.1	22.4
1962	13.2	19.2	15.5	22.6	13.4	18.1	21.0	26.2	29.8	33.3	22.5	23.5	21.5
1963	19.3	15.3	14.9	18.2	20.4	20.5	20.8	22.5	40.2	23.5	20.7	18.9	21.3
1964	20.1	20.1	21.0	21.7	17.5	15.1	16.9	14.8	18.2	16.9	13.8	10.3	17.2
1965	11.8	16.3	14.3	12.6	10.5	15.7	14.7	16.8	17.5	13.1	11.7	13.8	14.1
1966	14.2	14.8	18.6	12.0	14.8	12.5	17.1	20.0	29.4	17.5	16.8	20.5	17.3
1967	18.9	19.8	13.8	15.5	33.1	18.6	14.4	17.5	24.7	17.8	18.9	24.5	19.8
1968	21.1	26.5	23.3	22.2	21.4	24.9	18.0	20.1	22.0	24.8	26.2	20.3	22.6
1969	17.8	25.8	27.3	23.6	25.2	16.7	15.0	15.3	23.8	17.2	18.7	13.8	20.0
1970	14.4	12.7	26.4	23.1	16.6	18.3	28.4	21.0	19.7	20.6	21.6	16.5	19.9
1971	23.5	21.2	21.1	23.9	21.1	17.0	15.2	17.1	21.4	22.2	18.8	18.6	20.1
1972	21.9	18.3	21.5	18.1	16.6	21.5	14.0	34.2	20.4	20.4	21.8	18.9	20.6
1973	26.1	32.7	36.9	39.6	26.1	27.3	20.9	20.6	22.8	28.2	20.7	19.9	26.8
1974	25.8	26.4	33.7	32.9	29.2	29.2	32.0	30.2	33.7	37.3	26.8	27.5	30.4
1975	27.6	31.1	32.0	24.3	22.7	20.7	21.7	18.1	16.9	20.2	29.3	21.1	23.8
1976	23.3	28.5	33.4	25.4	23.7	17.5	18.4	17.7	23.7	20.4	16.9	18.6	22.3
1977	18.7	21.0	19.9	24.9	20.1	14.2	22.9	23.2	23.0	20.9	17.3	17.0	20.3
1978	24.6	26.2	25.9	31.3	31.2	28.3	19.9	25.6	27.0	20.8	24.6	22.0	25.6
1979	27.3	23.7	26.9	33.5	21.0	18.3	17.9	26.0	22.0	19.3	17.1	16.8	22.5
1980	19.0	17.3	12.7	18.4	15.6	20.0	17.0	15.9	14.2	21.9	23.3	21.7	18.1
1981	16.5	23.1	26.6	32.8	26.9	18.0	27.2	24.0	20.4	33.7	24.1	19.3	24.4
1982	24.2	50.6	28.5	32.9	26.7	32.1	43.9	31.4	45.1	28.5	33.0	33.8	34.2
1983	26.2	40.0	33.6	35.7	31.6	24.9	21.3	24.9	23.7	28.3	33.5	26.0	29.1
1984	23.5	26.7	30.7	32.5	27.2	23.7	26.4	25.8	32.6	33.1	31.0	29.0	28.5
1985	25.7	24.1	19.0	29.5	15.6	19.9	23.4	22.0	21.2	22.2	23.7	21.4	22.3
1986	22.4	40.0	21.1	14.3	18.8	15.9	16.3	22.3	24.7	18.6	21.2	15.3	20.9
1987	14.8	16.6	17.6	12.9	14.7	13.2	19.3	24.3	30.3	25.8	22.4	16.0	19.0
1988	22.4	23.4	24.8	25.2	20.5	20.0	20.2	20.6	21.4	23.2	23.3	25.5	22.5
1989	33.9	27.5	60.1	32.8	25.7	24.9	14.4	28.4	26.7	31.4	34.7	31.4	31.0
1990	27.4	37.8	33.9	37.4	25.1	24.6	21.6	28.2	25.1	25.1	17.4	15.2	26.6
1991	17.2	20.1	37.3	24.3	27.3	56.2	35.2	40.8	30.7	44.1	49.7	28.0	34.2
1992	25.9	47.7	24.5	19.8	29.1	24.8	17.9	24.1	35.8	27.0	25.0	26.1	27.3
1993	31.2	27.1	37.9	29.2	22.1	21.8	18.2	19.2	23.8	24.6	25.5	24.8	25.5
1994	26.5	43.2	37.9	40.2	40.2	27.2	20.6	16.0	20.2	33.3	23.6	24.1	29.4
1995	23.6	24.5	23.8	24.2	30.9	19.1	14.9	17.0	22.2	27.9	17.2	18.2	22.0
1996	18.8	20.8	22.3	20.5	14.0	11.1	14.7	18.8	26.2	23.5	16.3	15.9	18.6
1997	17.4	21.0	16.3	18.4	15.1	13.7	12.1	13.7	18.4	18.7	18.0	10.8	16.1
1998	16.8	16.4	21.2	18.0	28.1	18.8	19.3	27.0	21.1	22.4	26.5	15.9	21.0
1999	20.8	21.3	23.5	21.3	15.8	12.7	16.9	26.2	31.2	31.3	25.1	20.1	22.2
2000	24.2	29.4	17.1	25.1	25.0	24.9	31.1	24.3	30.2	28.1	29.1	16.1	25.4
2001	18.0	14.7	30.2	33.0	17.8	18.2	18.7						21.5

PLANETARY GEOMAGNETIC ACTIVITY

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

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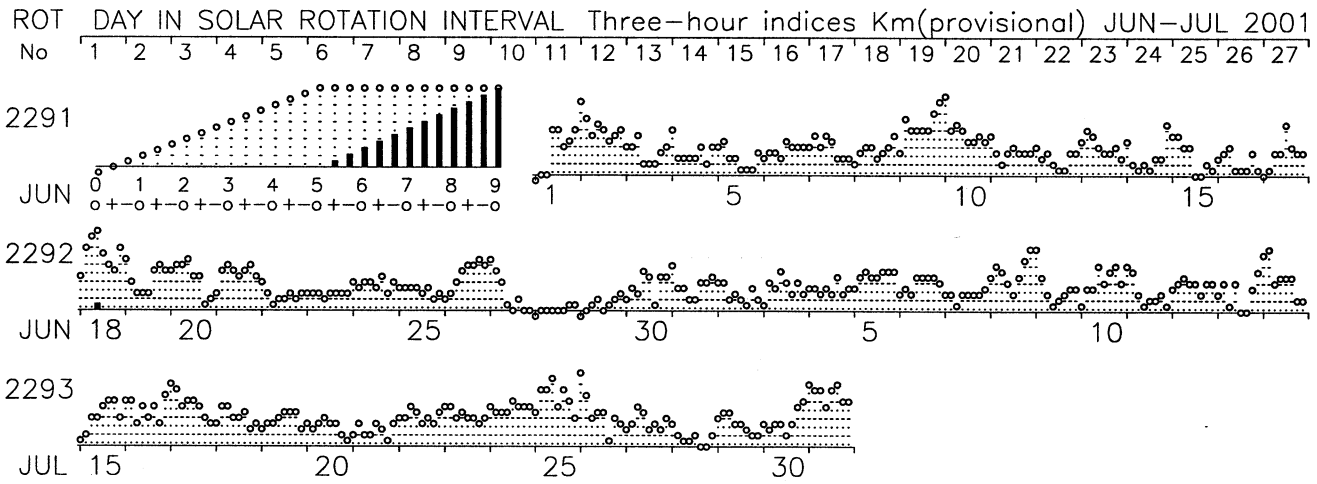
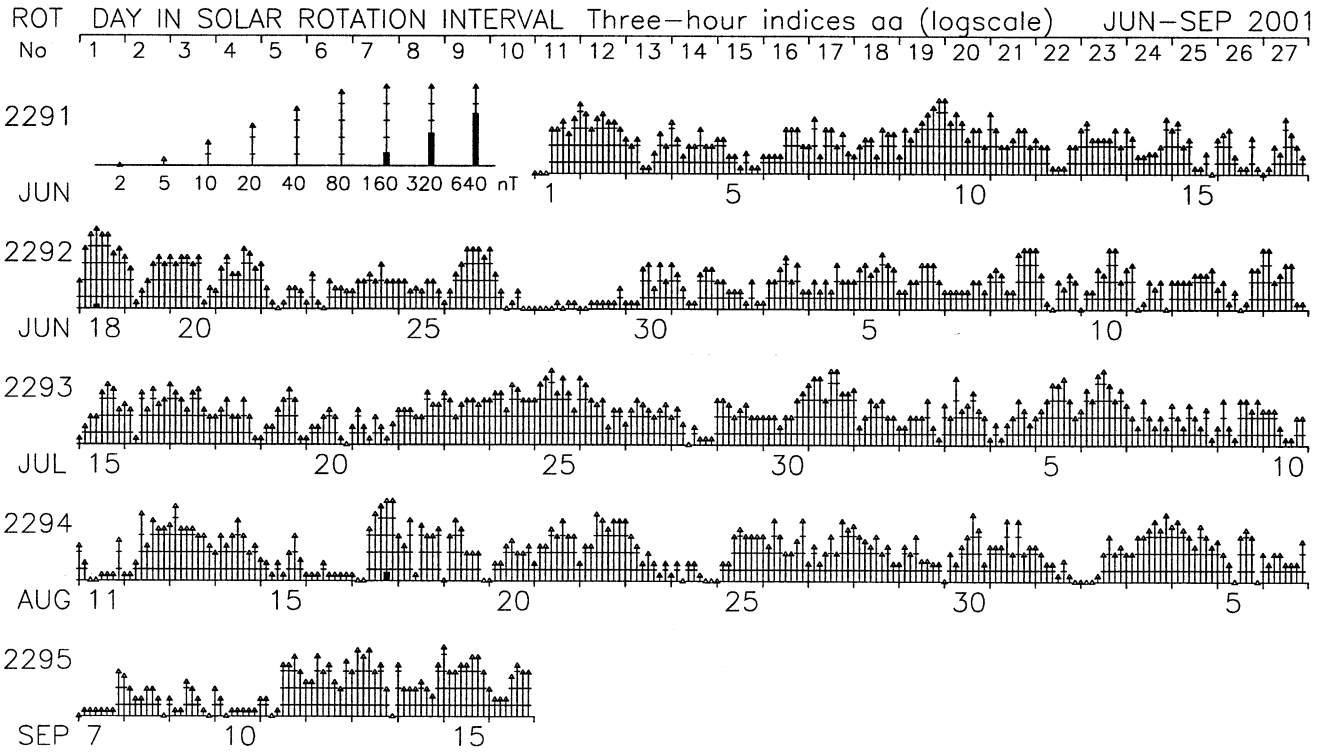


Indices Derivation at C.E.T.P.; Graph Prepared at ISGI Publication Office.



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

WDC FOR GEOMAGNETISM, KYOTO UNIVERSITY

HOURLY EQUATORIAL DST VALUES(PROVISIONAL)

JULY 2001

UNIT=NT

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	U.T. 24
1	-14	-10	-7	-4	-4	-2	-1	-1	0	-1	0	1	4	8	9	8	8	5	-2	-10	-6	-8	-9	-6
2	-2	0	-2	-2	-6	-6	-2	0	-2	-3	-5	-3	0	1	2	3	4	3	3	1	-4	-2	1	2
3	4	6	8	14	17	20	20	22	17	10	5	4	5	5	3	-1	-6	-8	-6	-5	-3	-4	-6	-10
4	-13	-12	-6	-2	-4	-4	-2	1	3	5	5	6	10	14	17	19	12	8	9	10	7	4	1	-2
5	0	5	6	2	5	3	8	5	5	5	1	2	4	6	4	3	4	3	-2	0	-5	-7	-5	-2
6	-7	-5	-7	-4	-2	-1	1	0	0	7	2	1	2	2	2	3	1	1	-1	-9	-11	-10	-4	-4
7	-3	-3	-3	0	4	7	8	6	3	2	3	4	6	6	3	3	1	1	2	3	1	3	3	3
8	2	3	8	9	11	16	11	7	10	13	17	14	17	20	23	23	17	15	16	13	5	-8	-15	-17
9	-27	-33	-26	-21	-20	-18	-14	-14	-14	-10	-5	-3	-1	-3	-4	-5	-7	-3	-3	-3	-4	-8	-10	-9
10	-9	-7	-5	-5	-10	-12	-12	-16	-18	-11	-8	-8	-9	-13	-18	-24	-27	-26	-23	-21	-26	-31	-35	-38
11	-41	-39	-35	-30	-34	-36	-32	-32	-31	-27	-23	-22	-21	-19	-18	-15	-12	-9	-8	-6	-5	-4	-1	1
12	0	1	3	-2	-4	-2	-1	-2	-3	-3	1	-1	-2	-2	0	0	2	3	3	7	8	6	5	-2
13	-5	-4	-3	-1	-5	-3	0	2	4	3	1	0	0	2	2	3	3	5	6	6	-1	-7	-7	-8
14	-3	5	-8	-11	-22	-25	-20	-12	-9	-5	-4	-8	-10	-13	-16	-18	-21	-16	-11	-7	-7	-7	-5	-4
15	-3	-4	-2	0	0	3	6	6	3	5	7	5	6	7	7	0	-15	-23	-21	-18	-21	-20	-16	-9
16	-10	-14	-17	-20	-18	-9	-9	-10	-9	-4	-7	-5	5	5	1	-5	-3	4	5	3	0	-7	-8	-15
17	-20	-18	-21	-22	-22	-23	-16	-16	-15	-13	-13	-10	-13	-16	-17	-20	-18	-15	-14	-13	-14	-17	-16	-16
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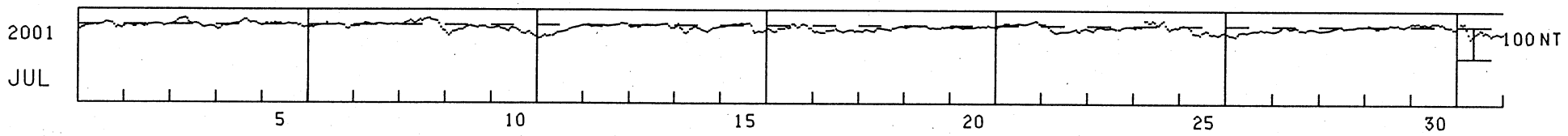
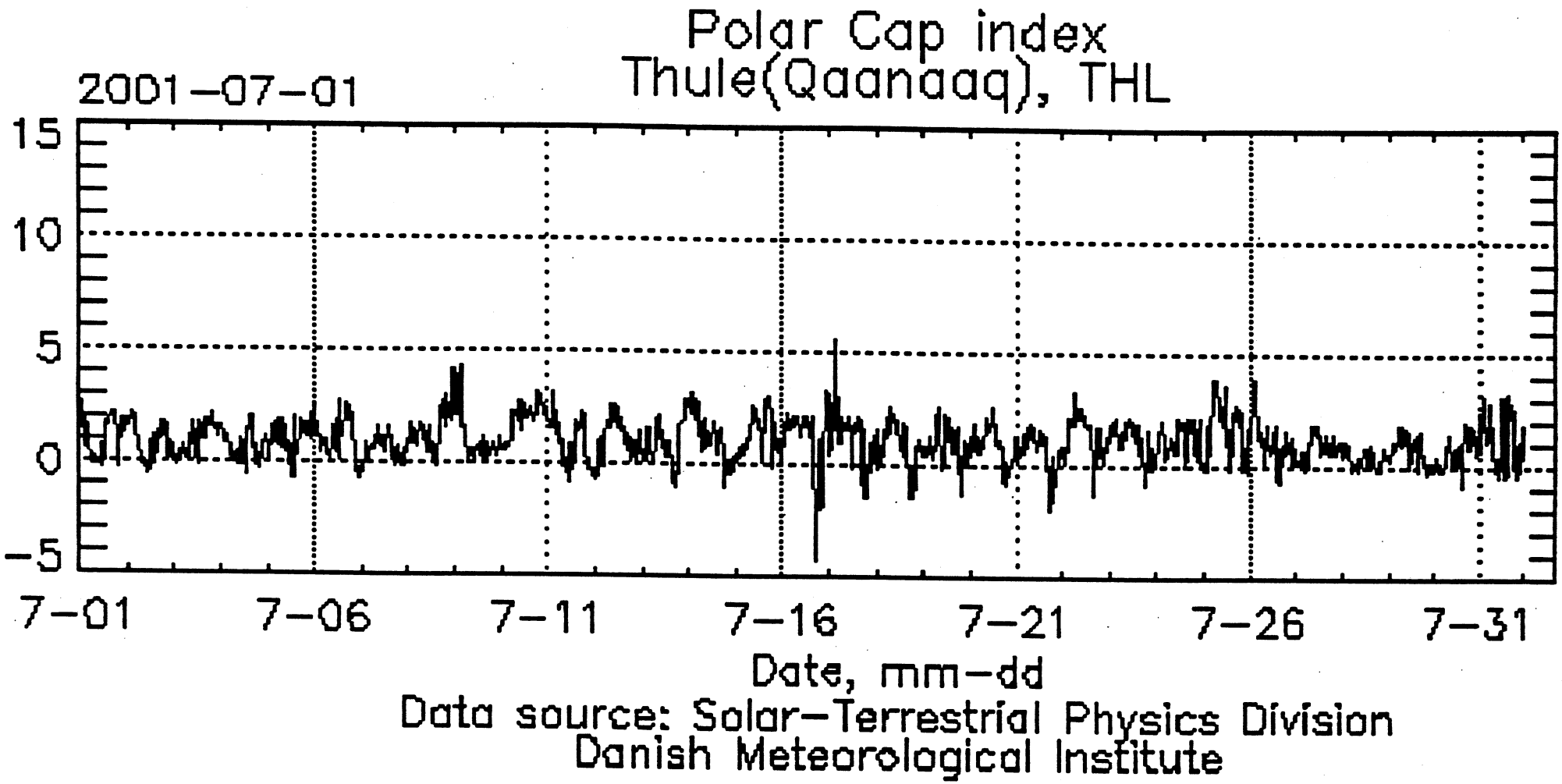
20	-5	-4	-2	-1	-3	-5	-8	-6	-5	-6	-5	-5	-5	-4	-2	-3	-2	-2	-4	0	-1	-3	-3	-3
21	-5	-2	2	3	8	7	7	4	3	6	7	7	7	5	5	5	7	9	12	14	16	14	8	5
22	6	6	2	-3	-11	-15	-20	-23	-21	-18	-17	-17	-17	-17	-15	-13	-11	-10	-15	-17	-12	-10	-7	-9
23	-12	-14	-15	-9	-6	-4	-4	-5	-7	-7	-7	-5	-6	-8	-9	-10	-10	-5	-3	-1	-2	-2	-2	-4
24	-6	-2	-2	-3	1	17	18	11	11	17	13	5	3	8	14	19	3	-5	-11	-8	-5	-4	-5	-3
25	0	4	2	1	-4	-9	-22	-25	-25	-24	-28	-21	-18	-14	-16	-24	-27	-24	-27	-28	-26	-23	-21	-20
26	-25	-29	-29	-31	-32	-26	-20	-18	-17	-18	-20	-18	-15	-14	-14	-14	-13	-10	-12	-14	-12	-13	-14	-15
27	-16	-13	-12	-8	-4	0	1	-3	-7	-7	-5	-3	-6	-11	-12	-11	-13	-9	-7	-7	-7	-9	-12	-13
28	-14	-13	-12	-12	-12	-10	-8	-6	-3	-1	0	-2	-6	-5	-4	-4	-4	-3	-2	0	2	1	0	1
29	2	5	4	2	-2	-6	-5	-2	-1	-1	-1	1	5	5	4	4	5	1	1	-1	1	3	6	9
30	11	10	12	12	8	8	9	8	6	7	11	12	12	11	8	9	6	2	-2	-2	-1	-8	-8	-3
31	2	12	10	12	-6	-22	-38	-31	-24	-19	-16	-10	-12	-20	-16	-17	-22	-28	-25	-23	-19	-23	-24	-23



Note: The baselines for the observatories were adjusted for secular change for the Provisional Dst values for July 2001.

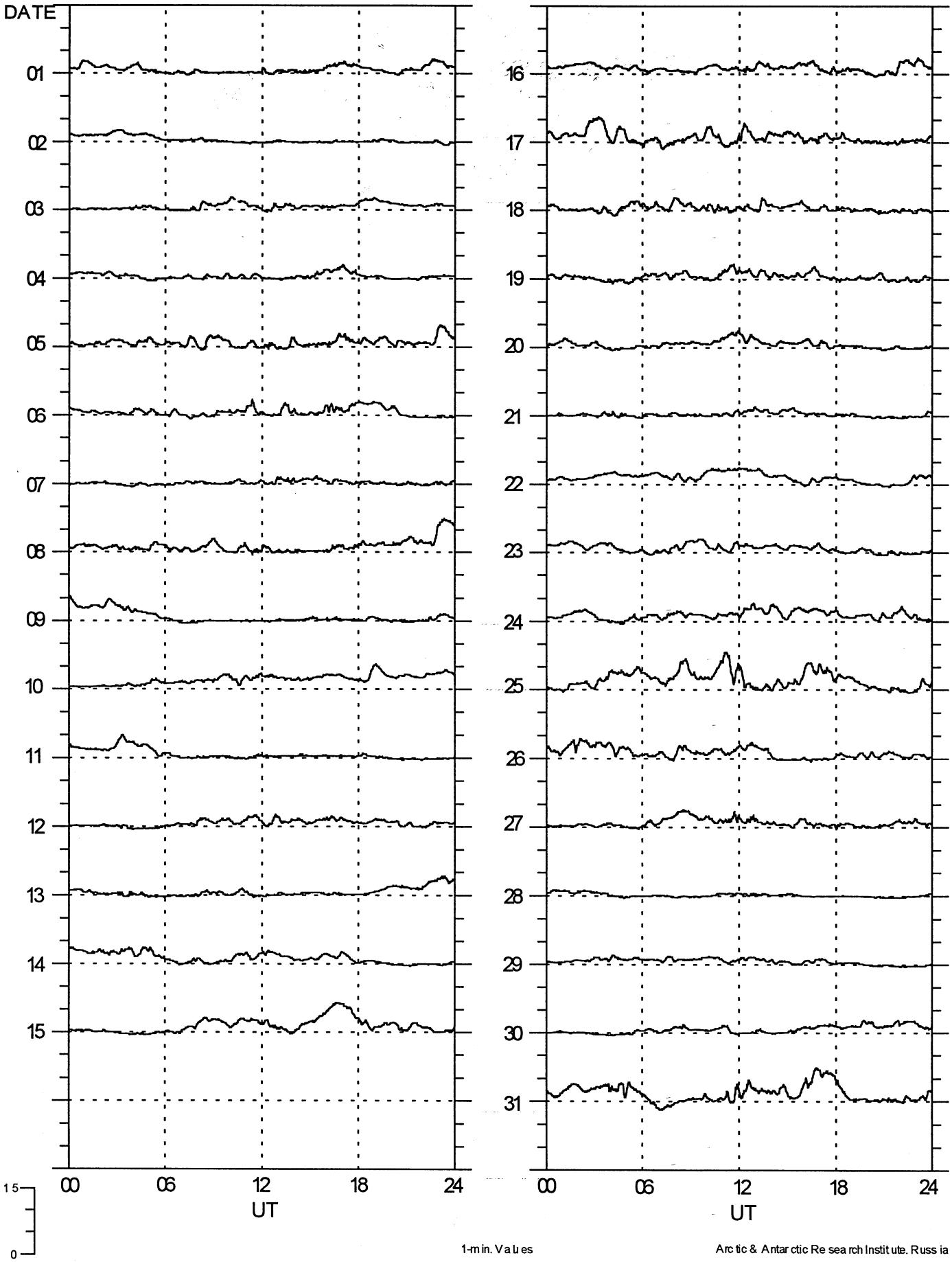
WDC C1 for Geomagnetism, Copenhagen



PC-INDEX

Vostok

July, 2001



1-min. Values

Arctic & Antarctic Research Institute, Russia

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

JULY 2001

Sta	Geomag Lat	Commencement Time Day	(UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	H (Gamma)	Z (Gamma)	End Hour Day	(UT)
UJJ	13.6N	08	0700	..	..	..	..		-	6	57	48	09	19
NGP	11.3N	08	0700	..	..	..	..		-	7	97	43	09	19
ABG	09.4N	08	0700	..	..	..	..	09(1)	4	6	89	70	19	19
PND	02.0N	08	0700	..	..	..	..		-	6	114	47	09	19
TIR	00.6S	08	0700	..	..	..	..		-	6	172	41	09	19
UJJ	13.6N	10	1000	..	..	..	..		-	7	51	23	11	18
NGP	11.3N	10	1000	..	..	..	..		-	7	72	19	11	18
ABG	09.4N	10	1000	..	..	..	..	11(2)	4	7	69	36	11	18
PND	02.0N	10	1000	..	..	..	..		-	6	58	21	11	18
TIR	00.6S	10	1000	..	..	..	..		-	6	62	40	11	18
UJJ	13.6N	15	1000	..	..	..	..		-	5	71	31	17	18
NGP	11.3N	15	1000	..	..	..	..		-	6	78	28	17	18
ABG	09.4N	15	1000	..	..	..	..	14(1) 15(5) 16(5)	4	6	78	34	17	18
HYB	07.6N	15	0500	..	..	..	..	15(6) 16(6)	4	7	118	34	17	23
PND	02.0N	15	1000	..	..	..	..		-	6	79	32	17	18
TIR	00.6S	15	1000	..	..	..	..		-	5	112	41	17	18
UJJ	13.6N	24	0900	..	..	..	..		-	7	77	41	25	20
NGP	11.3N	24	0900	..	..	..	..		-	8	94	42	25	20
ABG	09.4N	24	0900	..	..	..	..	24(2,4,5,6,7) 25(2,4)	4	7	95	53	25	20
HYB	07.6N	24	0000	..	..	..	..	24(2,4,5,6,7) 25(4)	4	7	118	42	25	22
PND	02.0N	24	0900	..	..	..	..		-	6	106	55	25	20
TIR	00.6S	24	0900	..	..	..	..		-	5	151	61	25	20
UJJ	13.6N	30	1300	..	..	..	..		-	7	86	30	31	21
NGP	11.3N	30	1300	..	..	..	..		-	7	115	27	31	21
ABG	09.4N	30	1300	..	..	..	..	31(2)	5	7	110	40	31	21
HYB	07.6N	30	1200	..	..	..	..	31(2)	5	6	111	23	31	23
PND	02.0N	30	1300	..	..	..	..		-	5	118	42	31	21
TIR	00.6S	30	1300	..	..	..	..		-	4	110	99	31	21
HER	33.6S	30	19--	..	..	..	..	31(1)	5	23	100	91	31	19

Stations:

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

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

July 2001

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
None			09	1434-1449	NGK+
			31	0352-0405	NGK+

REPORTING OBSERVATORIES (up to the 5th of September 2001):
SOD NUR NGK VAL BDV CLF HRB NAG GCK MMB EBR SPT KAK HTY KNY HYB HER

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 (+).