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NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
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Data for January 1992, December 1991 and Late Data

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NUMBER 570

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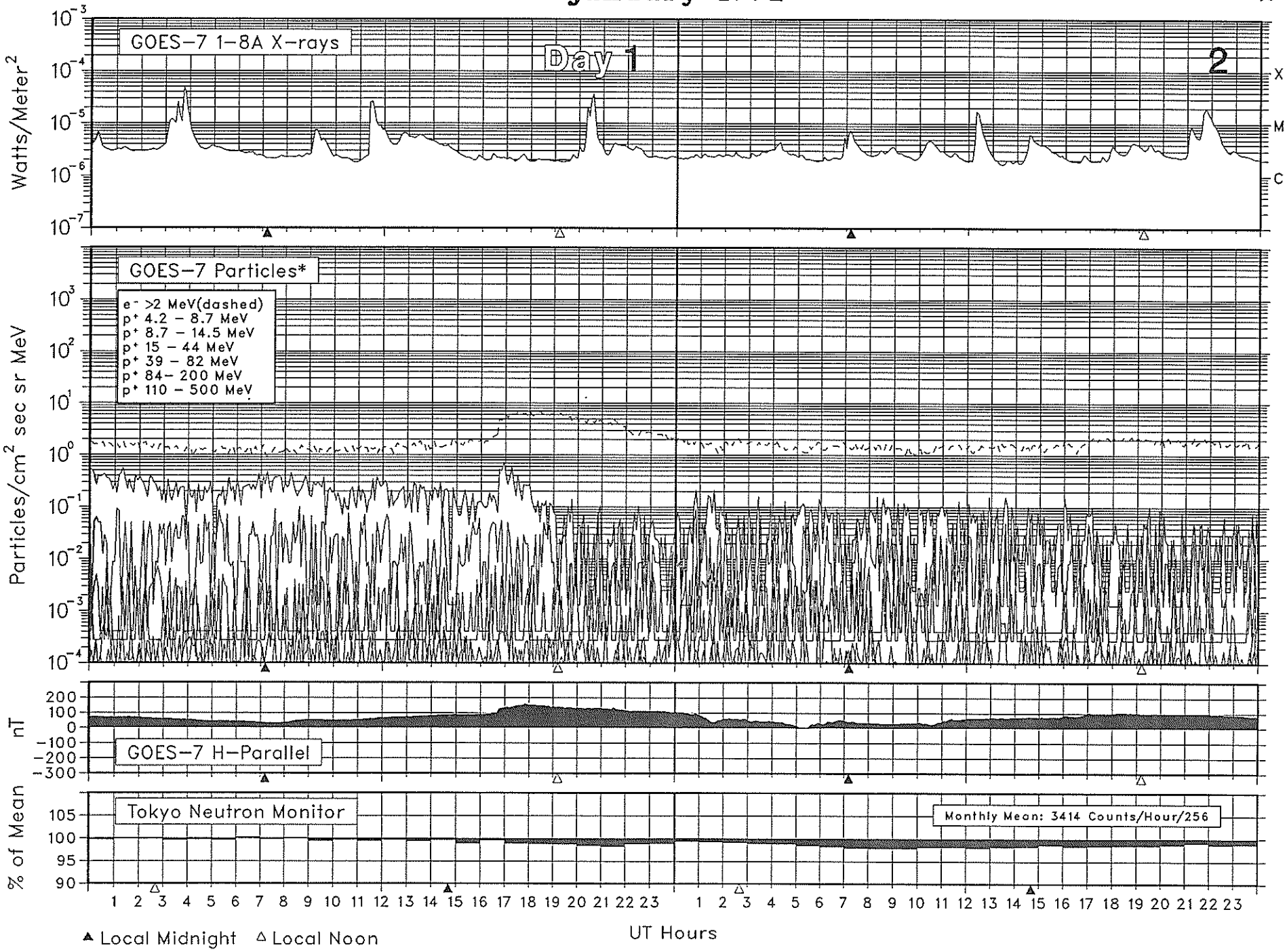

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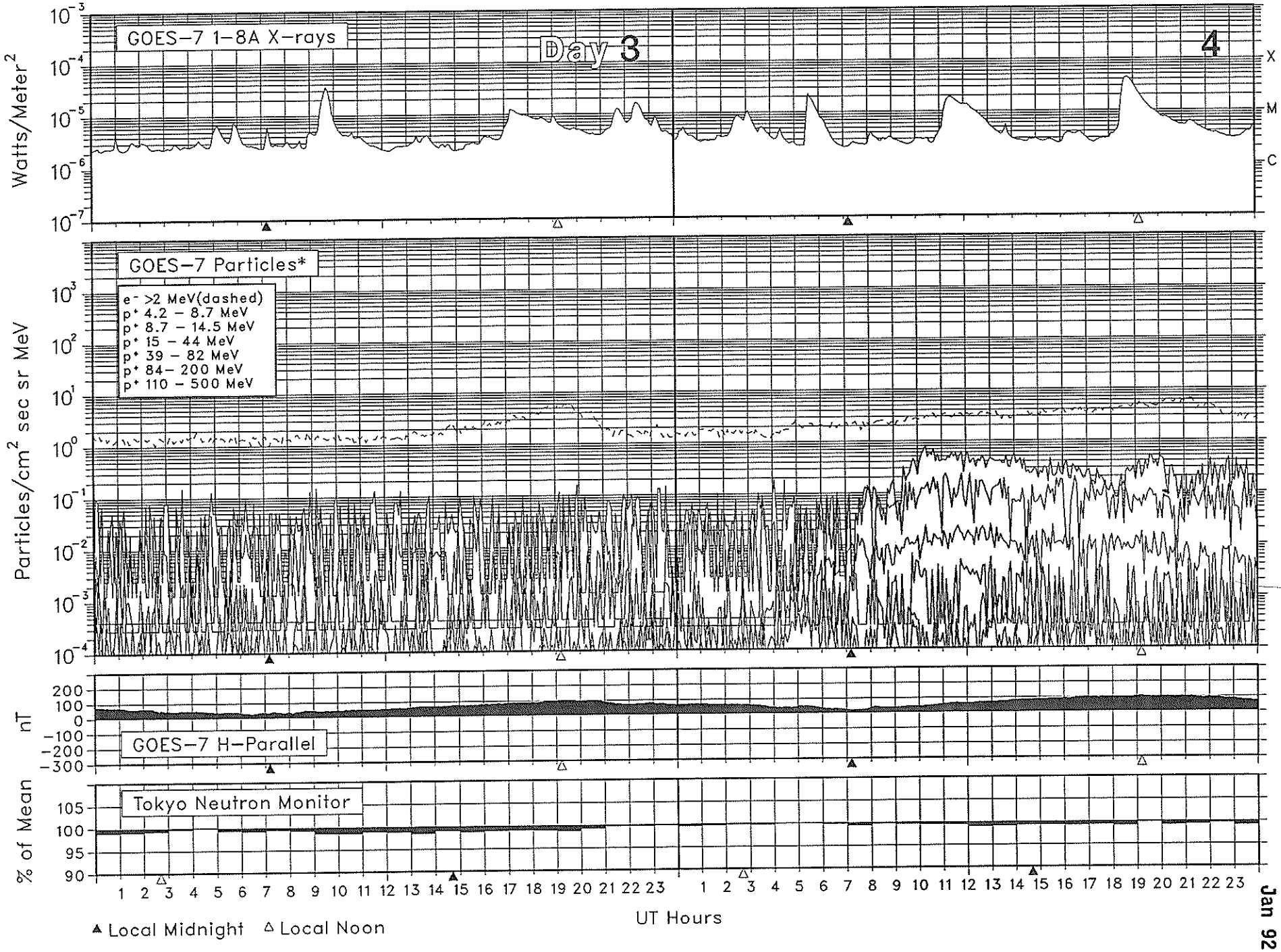
January 1992



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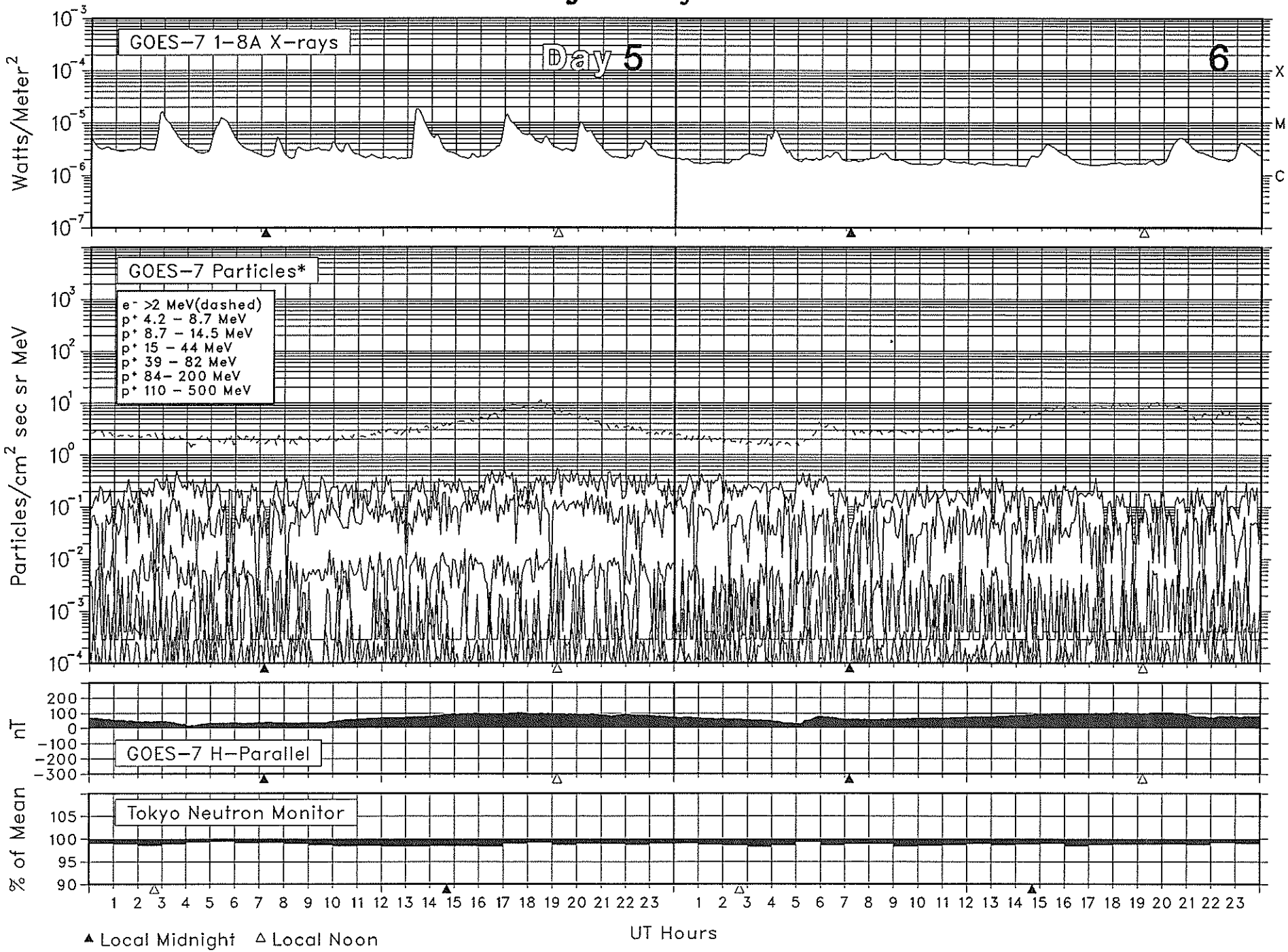
Jan 92

SOLAR-TERRESTRIAL ENVIRONMENT
January 1992



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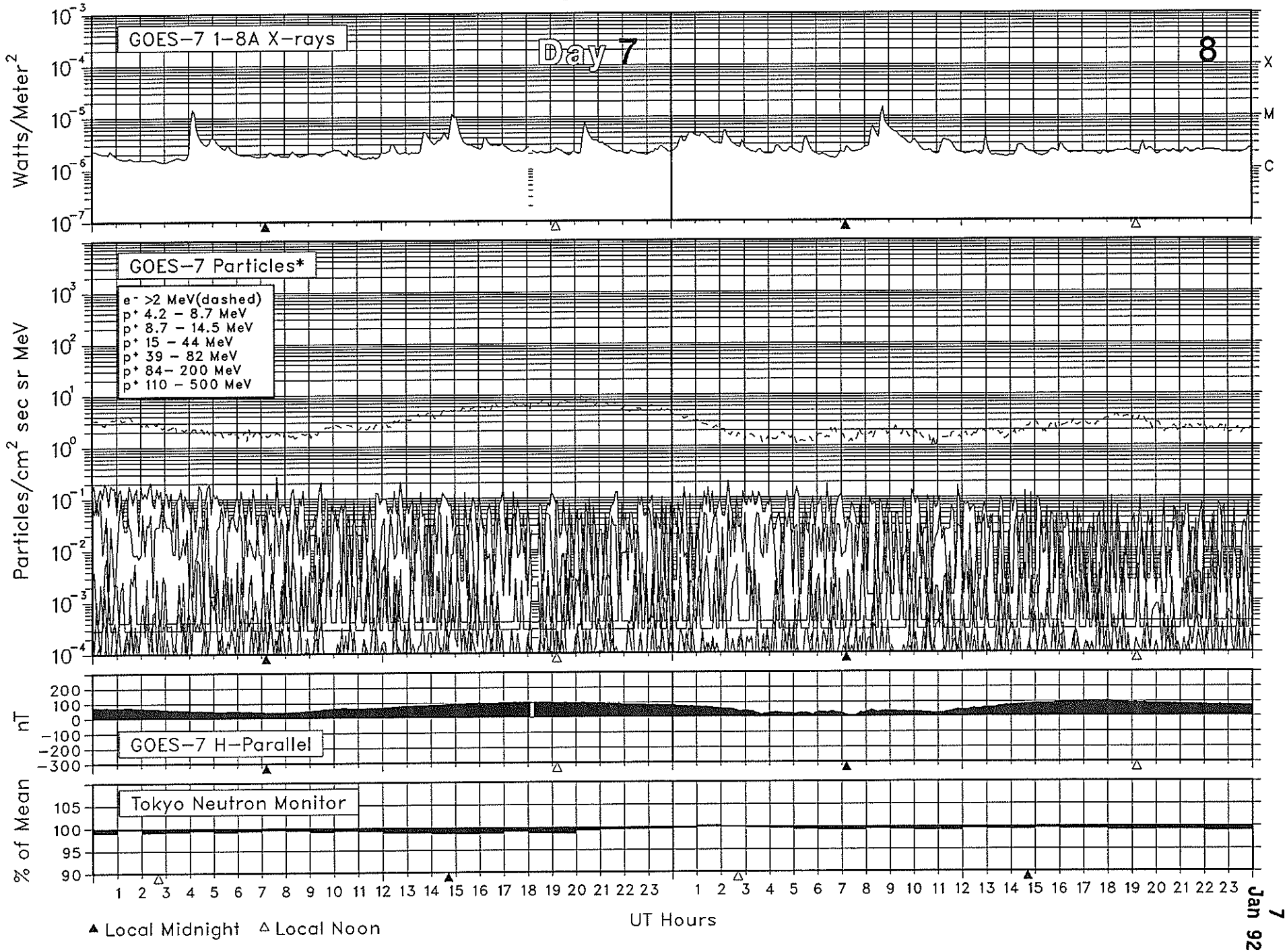
January 1992



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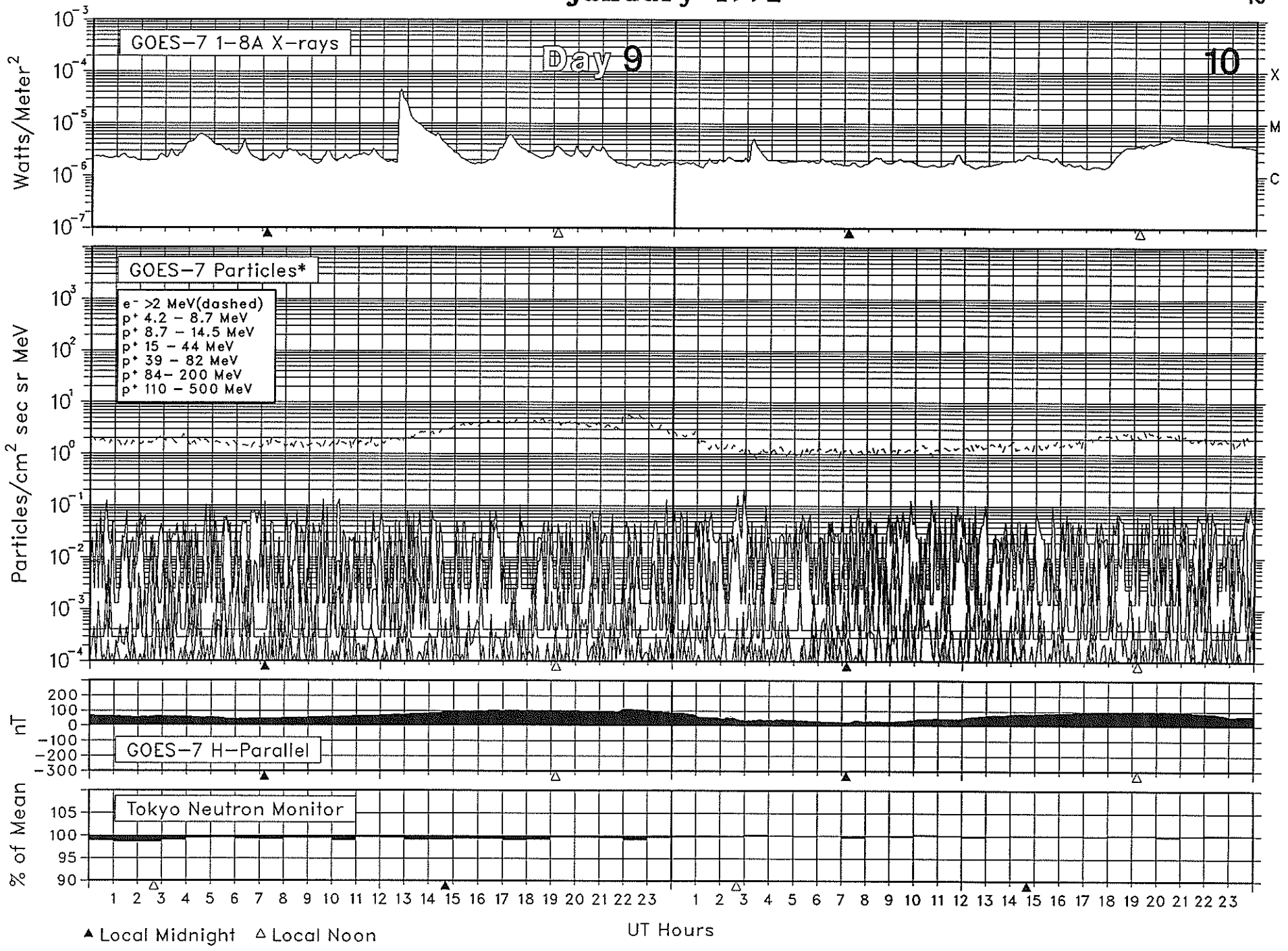
January 1992



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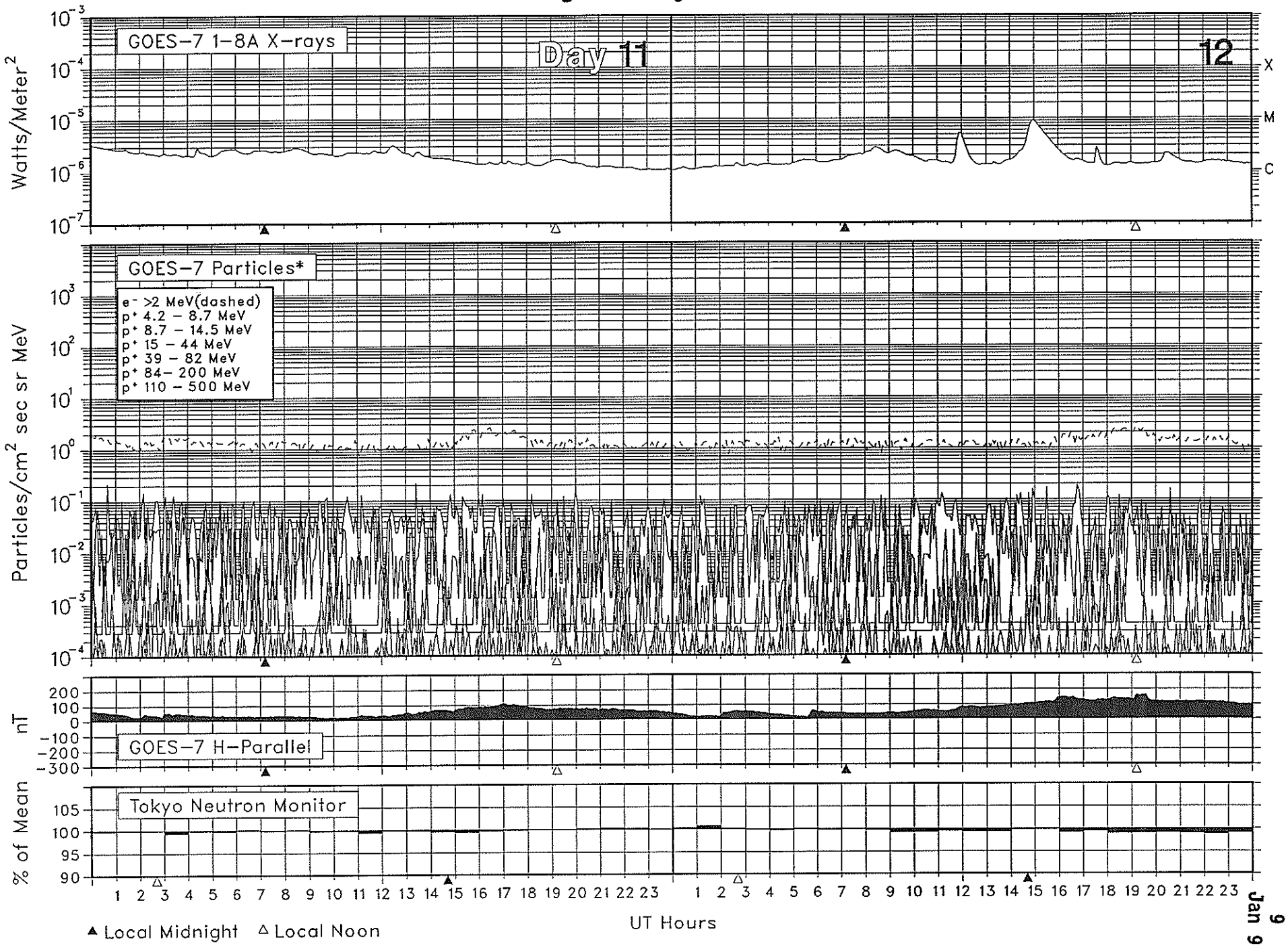

SOLAR-TERRESTRIAL ENVIRONMENT
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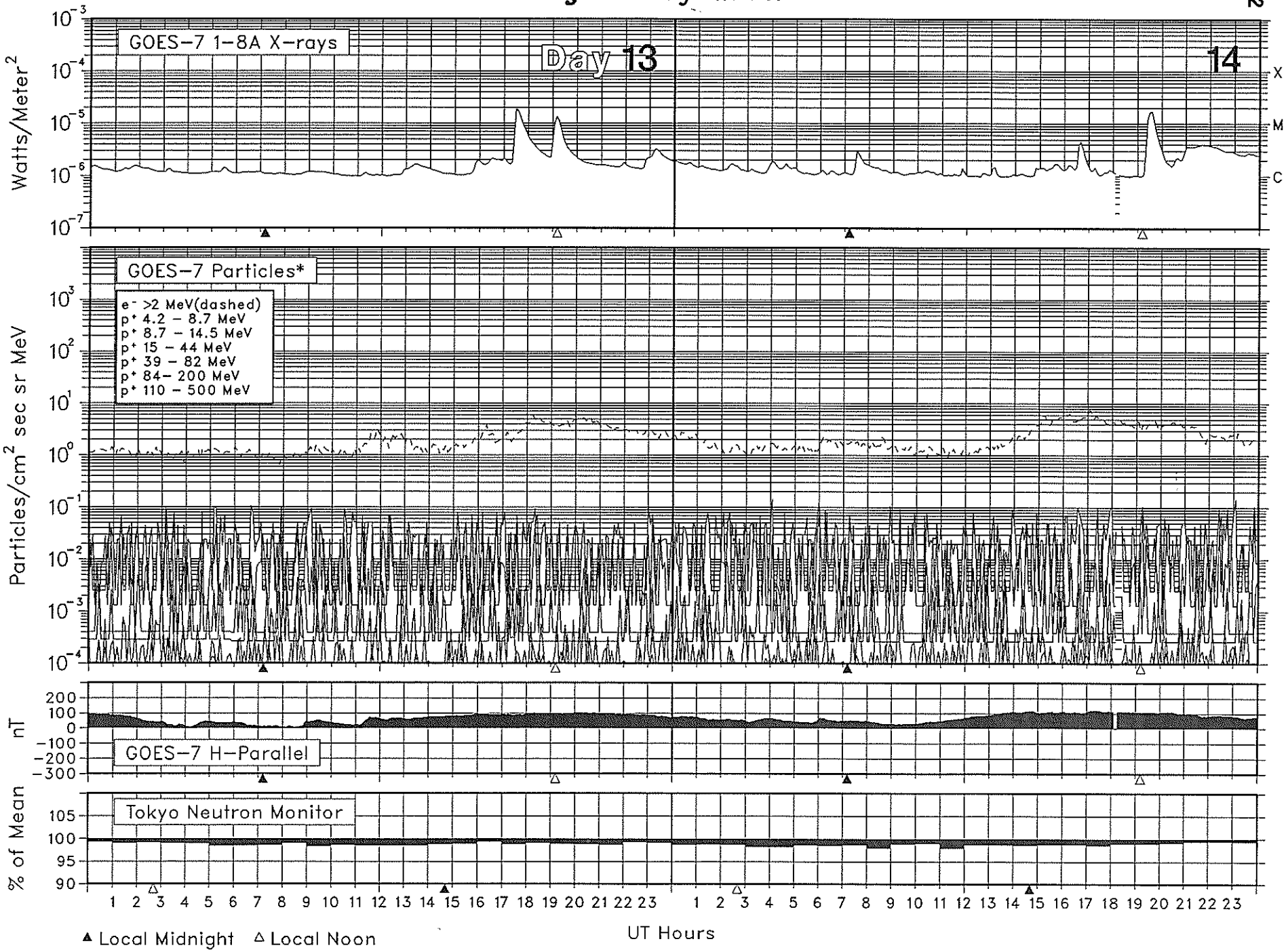

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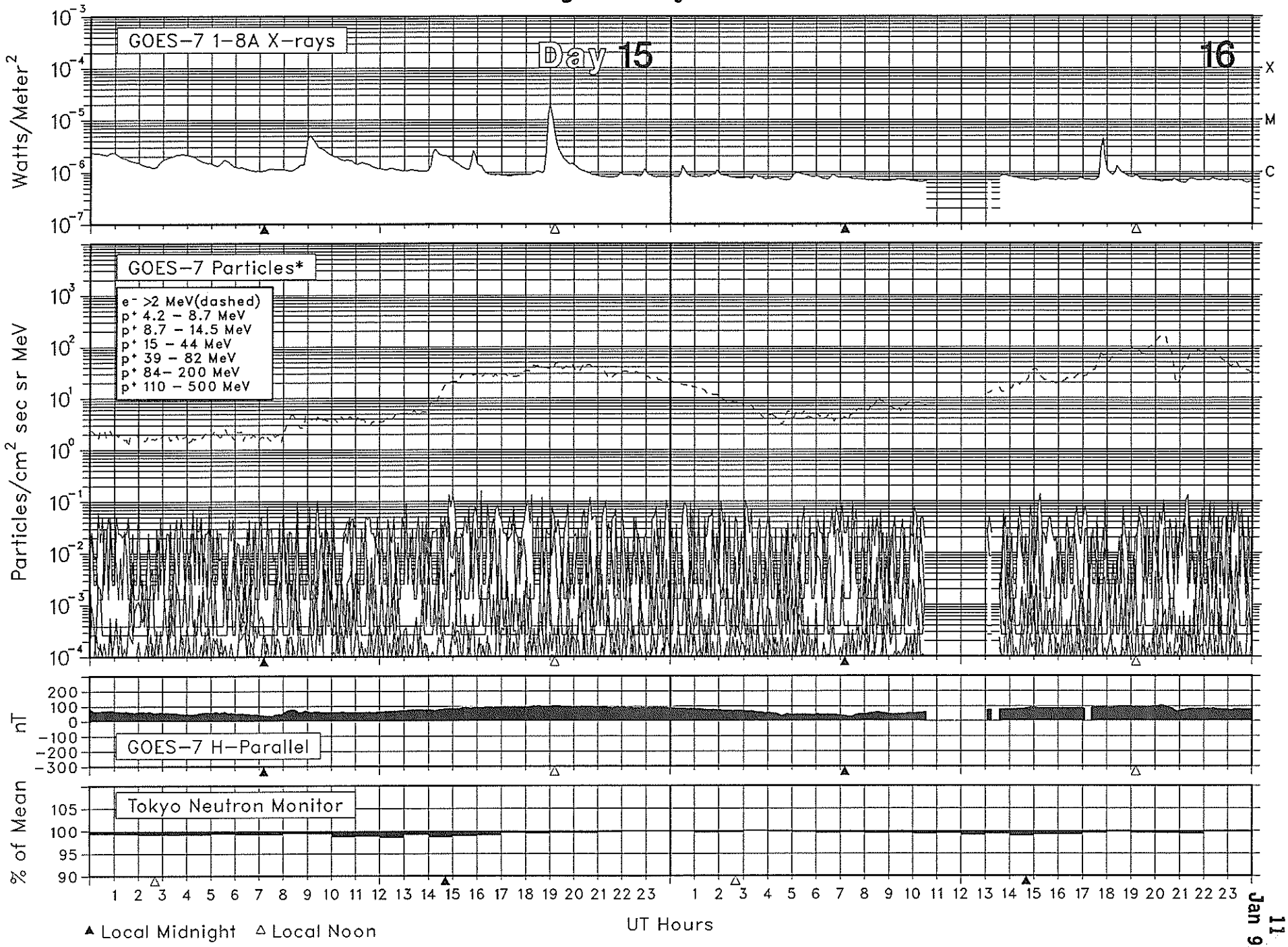

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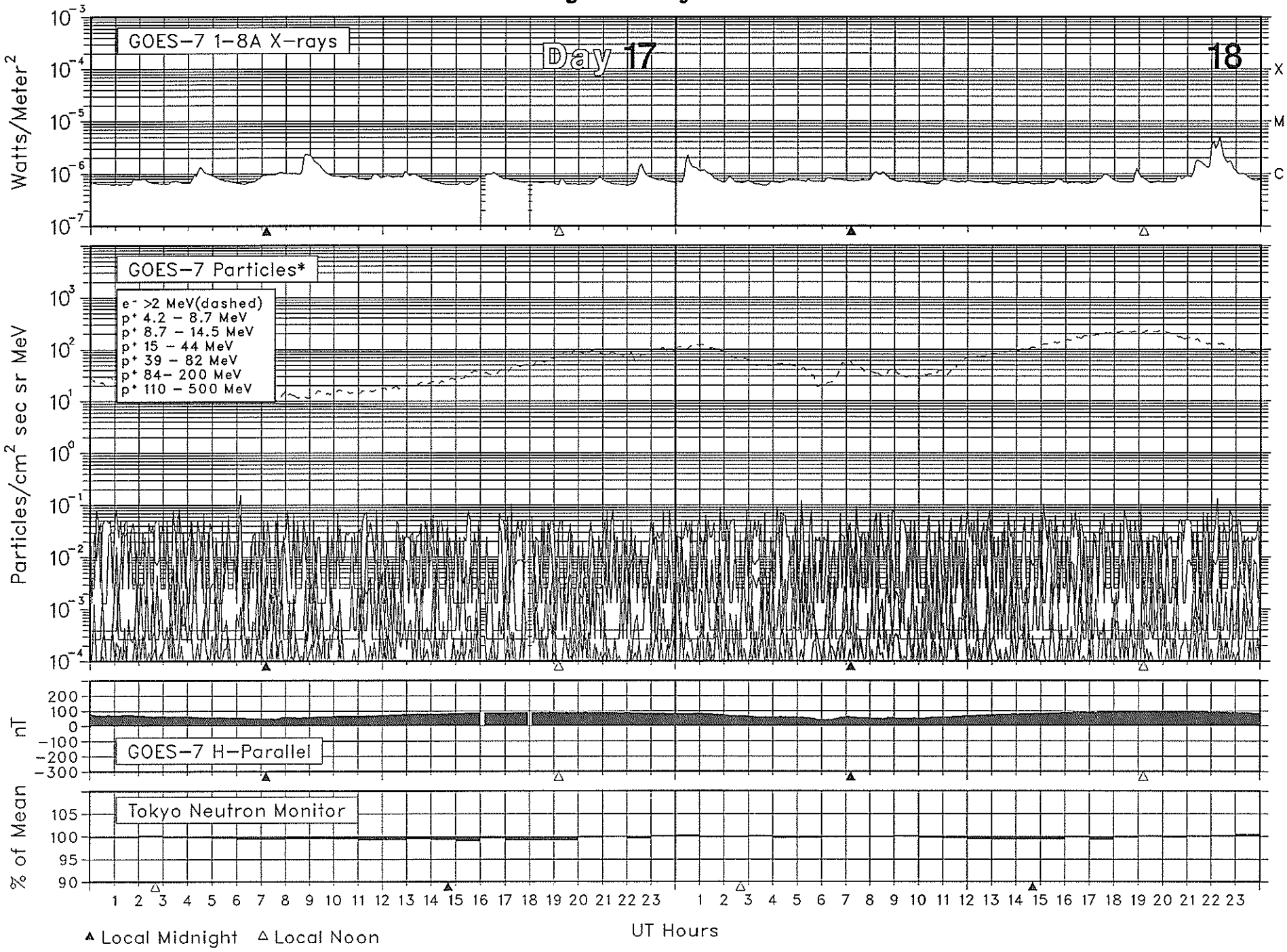

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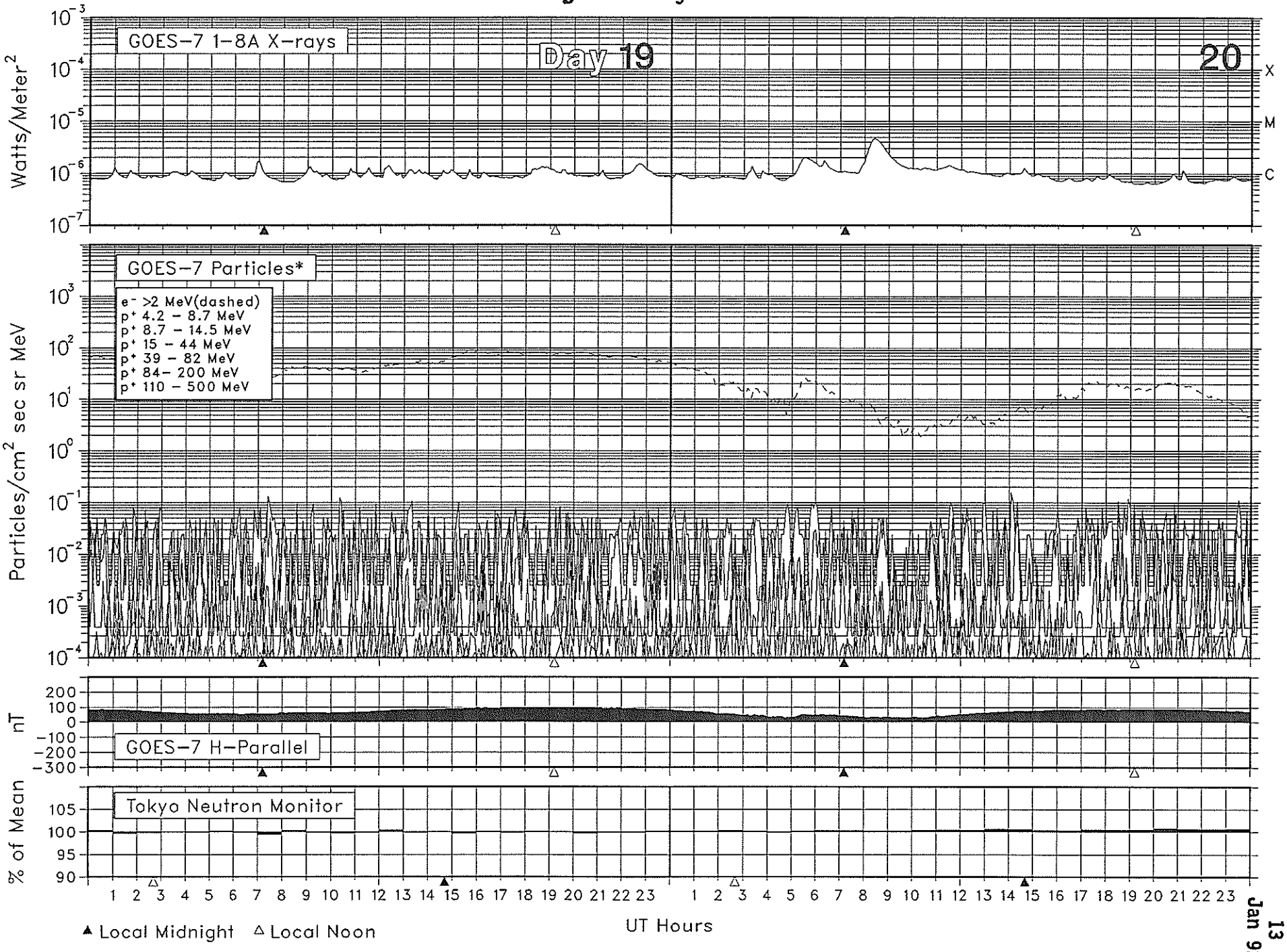
January 1992



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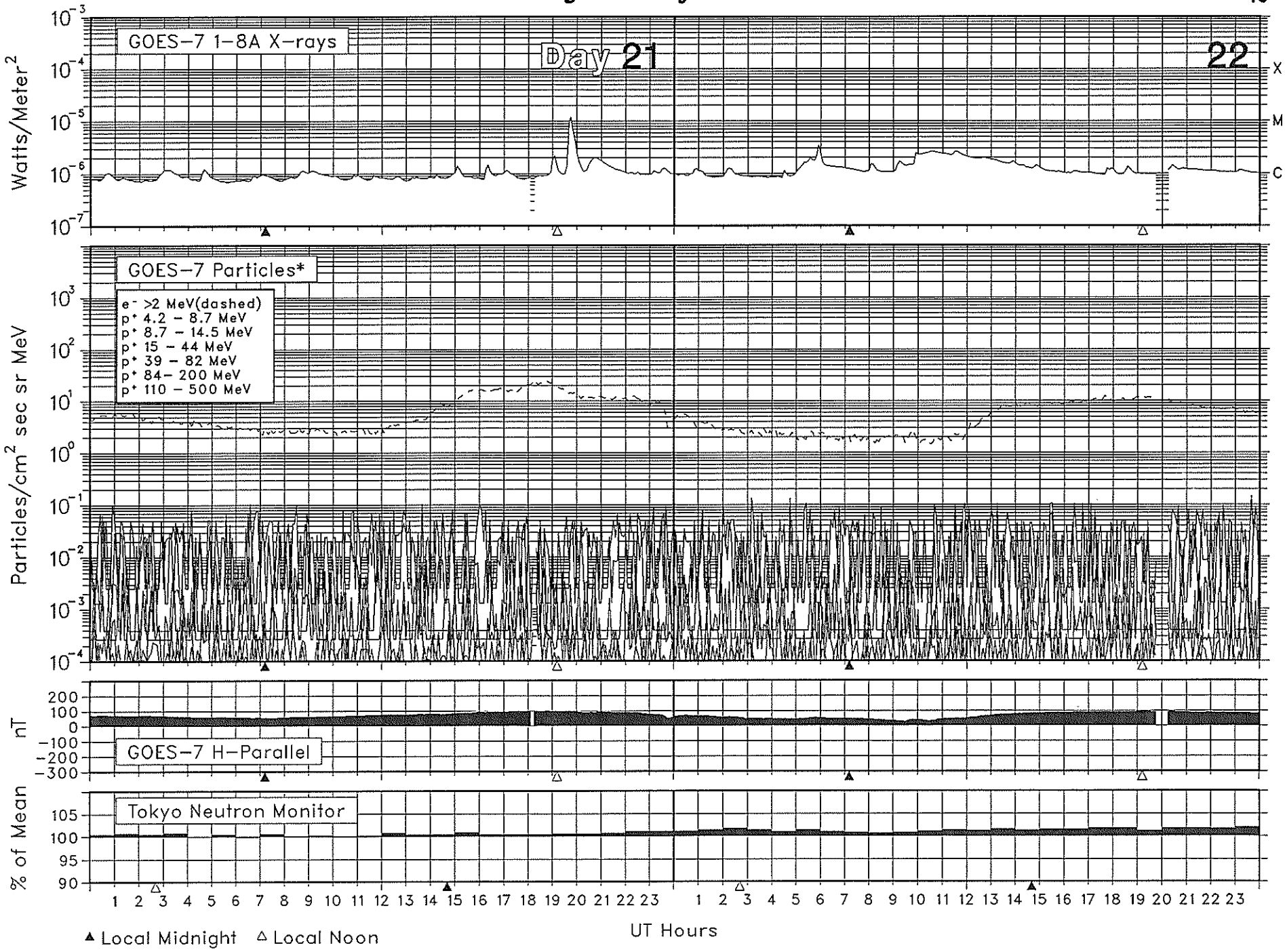

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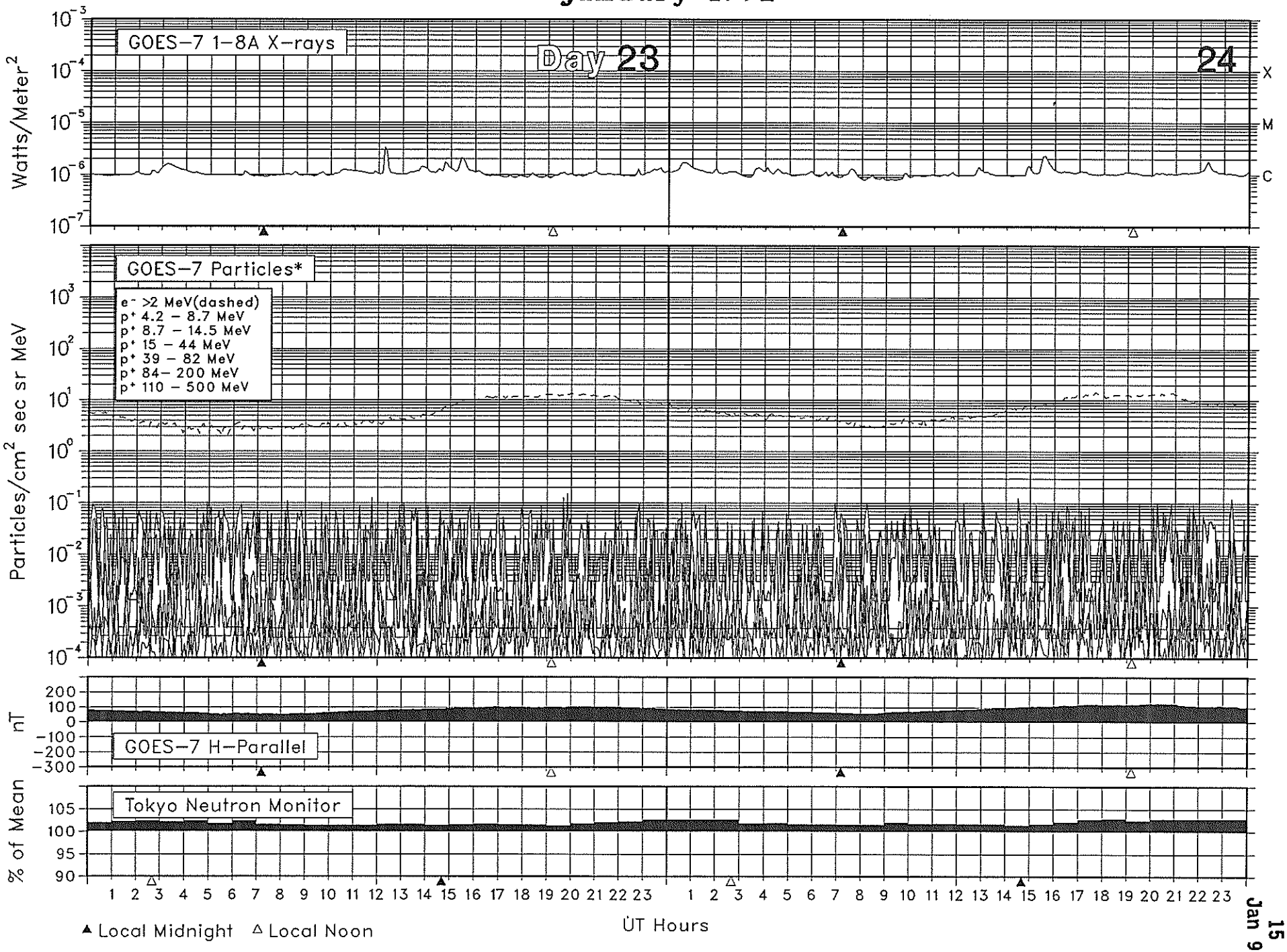
January 1992



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January 1992

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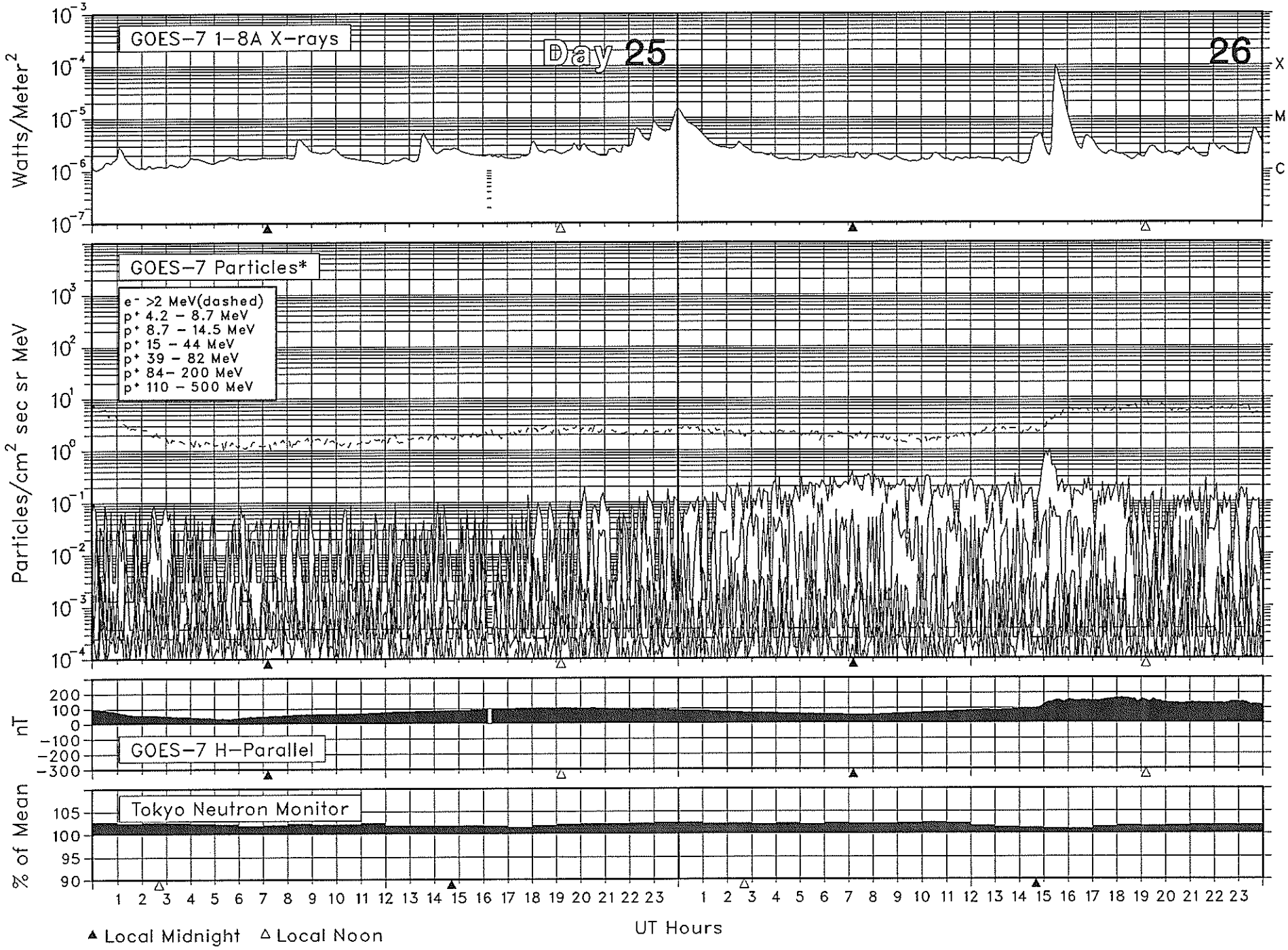

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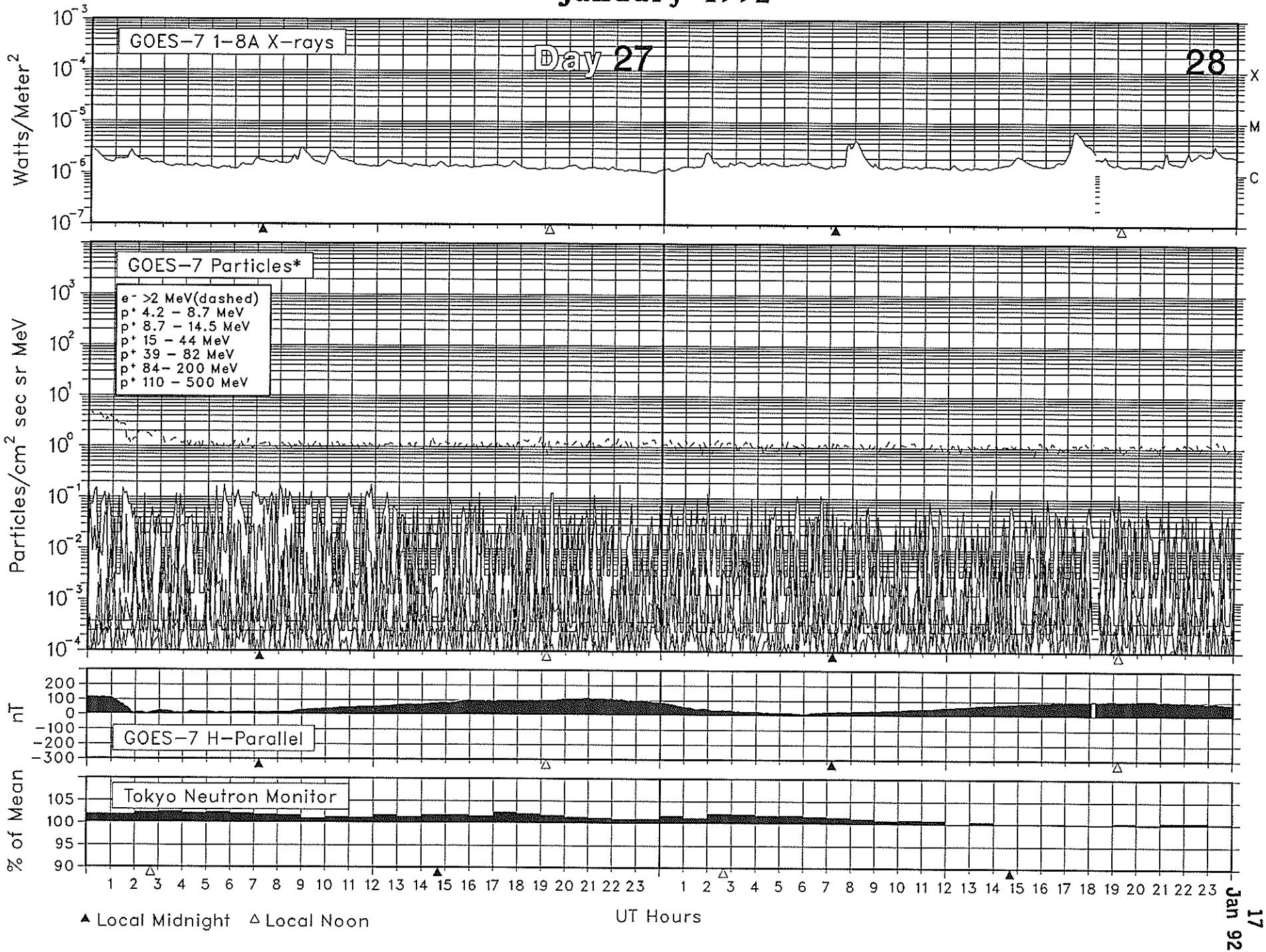

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January 1992

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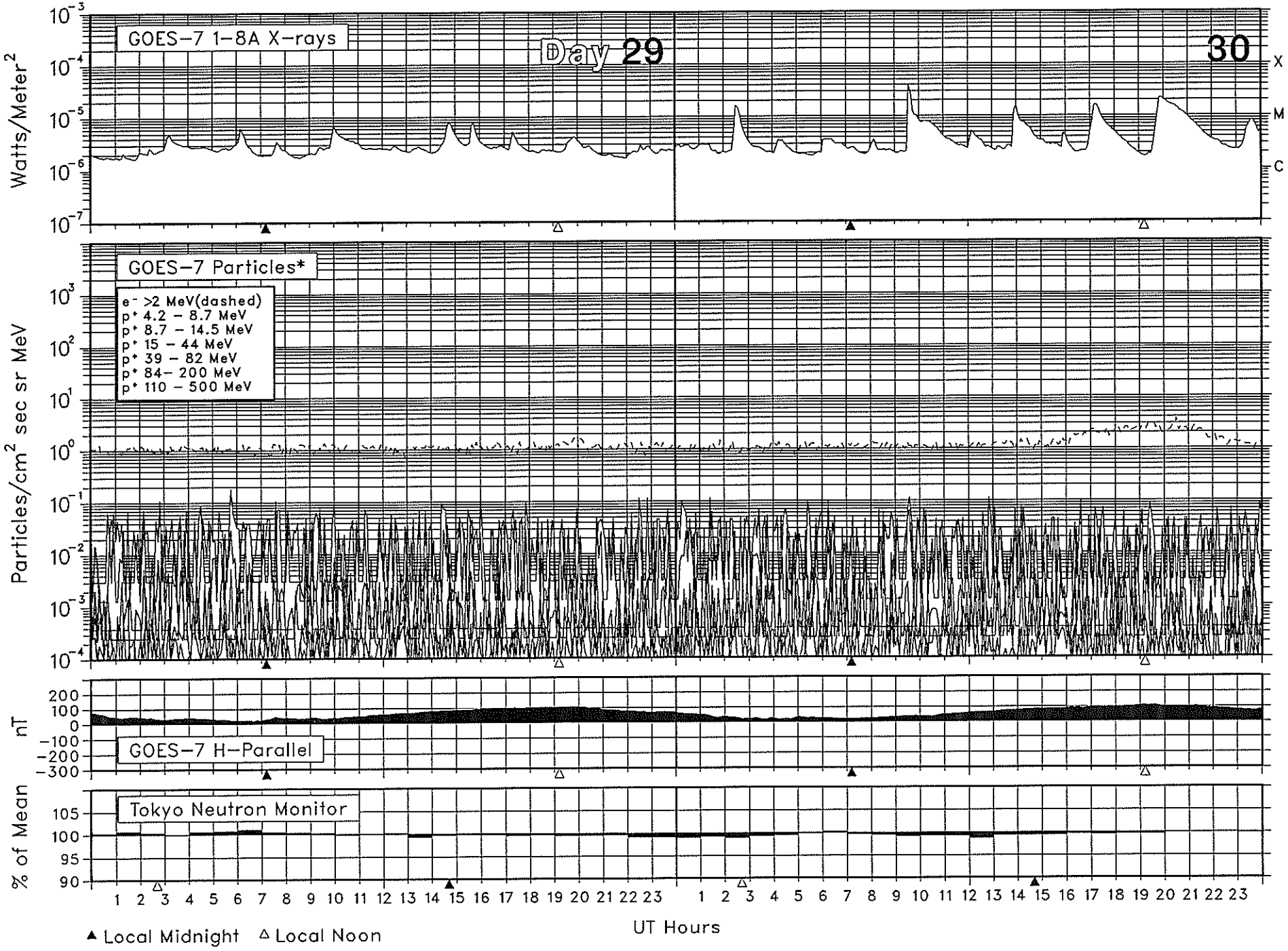

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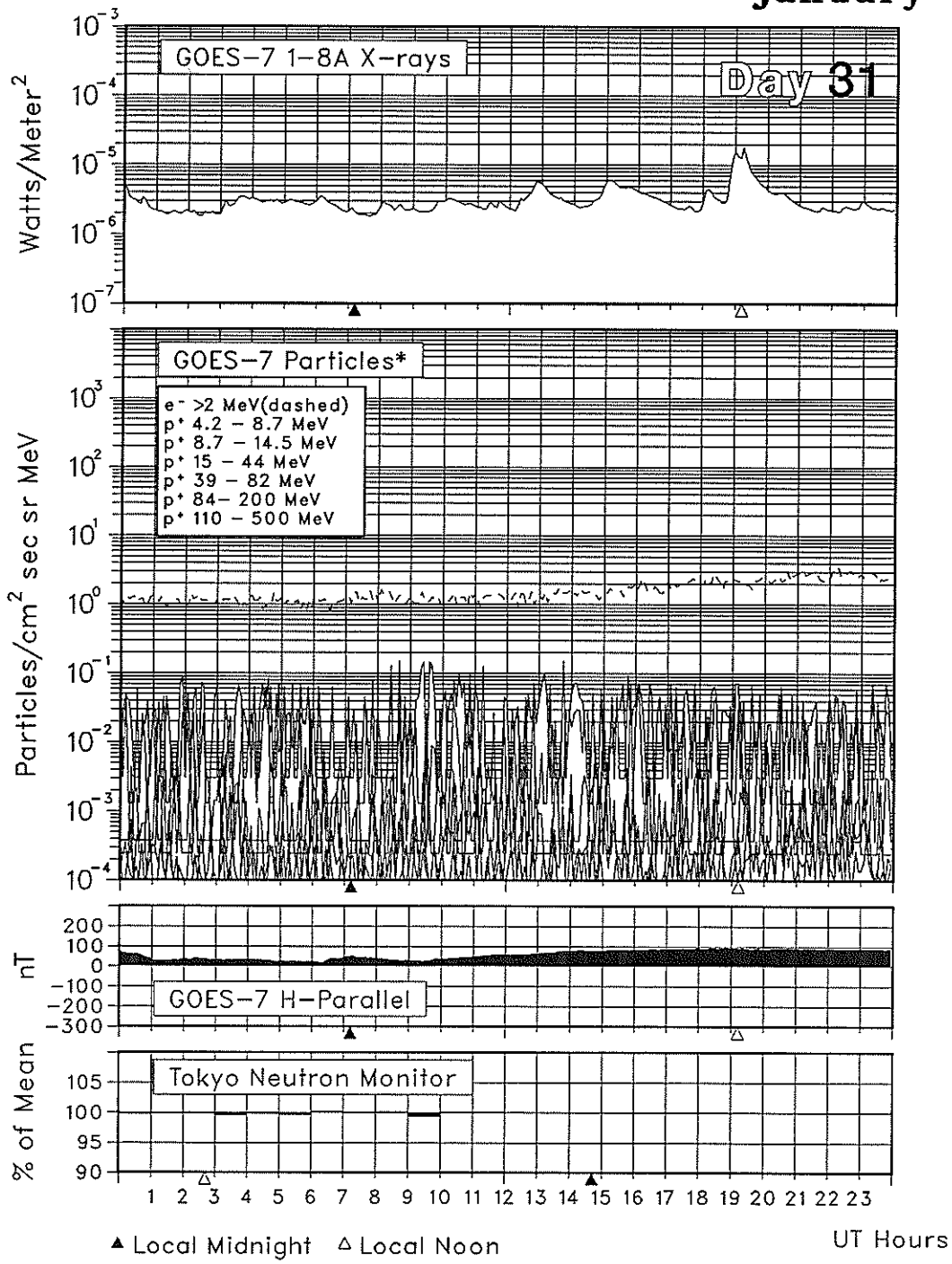
January 1992



** Electron flux is divided by 10.*
Protons are corrected for contamination.

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages JANUARY 1992

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat	Location °Long	Flares Total	Flares M	Flares X	Date of Forecast	Location °Lat	Location °Long	Region Forecast [1]	Geoalerts
001	01	31	253	243	9	S14	W86	0	0	0	01	S14	W86	E	Solalert 01/XX,
						S17	W43	2	0	0		S17	W43	E	Magalert 01/02.
						S15	W22	3	1	0		S15	W22	A	
						S04	W03	0	0	0		S04	W03	Q	
						S11	E45	1	0	0		S11	E45	E	
						S09	E68	2	0	0		S09	E68	E	
						S15	E73	3	0	0		S15	E73	E	
						N09	W31	0	0	0		N09	W31	Q	
002	02	01	216	249	10	S17	W55	7	2	0	02	S17	W55	E	Solalert 02/XX,
						S15	W36	5	2	0		S15	W36	A	Magalert 02
						S04	W18	0	0	0		S04	W18	Q	Flare.
						S11	E32	3	0	0		S11	E32	E	
						S17	W21	0	0	0		S17	W21	Q	
						S09	E55	4	2	0		S09	E55	E	
						S15	E62	2	0	0		S15	E62	E	
		Presto:[2]	Boulder	Tenflare 610 flux units 01/2032 UT duration 7 minutes.											
003	03	02	206	260	21	S17	W66	4	0	0	03	S17	W66	E	Solalert 03/XX,
						S15	W48	6	0	0		S15	W48	A	Magalert 03/XX.
						S04	W30	0	0	0		S04	W30	Q	
						S11	E20	2	0	0		S11	E20	E	
						S09	E43	6	1	0		S09	E43	E	
						S15	E49	4	1	0		S15	E49	E	
						N08	E76	0	0	0		N08	E76	Q	
004	04	03	230	280	9	S18	W79	0	0	0	04	S18	W79	E	Solalert 04/XX,
						S14	W59	1	0	0		S14	W59	E	Magalert 04/XX
						S10	E07	0	0	0		S10	E07	E	Coronal Hole.
						S09	E30	9	4	0		S09	E30	E	
						S16	E36	2	1	0		S16	E36	E	
						N09	E62	0	0	0		N09	E62	Q	
						S21	E38	0	0	0		S21	E38	E	
						N03	E69	0	0	0		N03	E69	Q	
005	05	04	253	275	8	S20	W90	1	0	0	05	S20	W90	E	Solalert 05/XX,
						S14	W72	2	1	0		S14	W72	E	Magalert 05/05.
						S10	W05	0	0	0		S10	W05	E	
						S12	W55	0	0	0		S12	W55	Q	
						S09	E18	4	2	0		S09	E18	E	
						S15	E23	0	0	0		S15	E23	E	
						N10	E50	0	0	0		N10	E50	Q	
						S21	E25	1	0	0		S21	E25	E	
						N03	E57	0	0	0		N03	E57	Q	
						N21	E66	0	0	0		N21	E66	Q	
						N13	W27	0	0	0		N13	W27	Q	
		Presto:	Boulder	Tenflare 290 flux units 04/1828 UT duration 8 minutes.											
006	06	05	239	267	8	S14	W84	0	0	0	06	S14	W84	E	Solalert 06/XX,
						S10	W19	0	0	0		S10	W19	E	Magnil.
						S12	W69	0	0	0		S12	W69	Q	
						S09	E03	4	1	0		S09	E03	E	
						S15	E10	4	3	0		S15	E10	E	
						N10	E35	1	0	0		N10	E35	Q	
						S21	E10	1	0	0		S21	E10	E	
						N04	E43	0	0	0		N04	E43	Q	
						N21	E53	0	0	0		N21	E53	Q	
						N13	W41	0	0	0		N13	W41	Q	
						N25	E73	0	0	0		N25	E73	Q	

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages JANUARY 1992

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat	Location °Long	Flares Total	Flares M	Flares X	Date of Forecast	Location °Lat	Location °Long	Region Forecast [1]	Geoalerts
007	07	06	268	254	9	S15	W95	0	0	0	07	S15	W95	Q	Solalert 07/XX, Magquiet.
						S10	W32	0	0	0		S10	W32	E	
						S14	W83	0	0	0		S14	W83	Q	
						S09	W10	1	0	0		S09	W10	E	
						S16	W03	1	0	0		S16	W03	E	
						N07	E23	2	0	0		N07	E23	E	
						S22	W01	0	0	0		S22	W01	E	
						N03	E27	0	0	0		N03	E27	Q	
						N20	E41	0	0	0		N20	E41	Q	
						N14	W47	0	0	0		N14	W47	Q	
						N25	E59	0	0	0		N25	E59	Q	
						N08	W37	0	0	0		N08	W37	Q	
008	08	07	329	262	6	S10	W46	1	0	0	08	S10	W46	E	Solalert 08/XX, Magquiet.
						S10	W22	4	0	0		S10	W22	E	
						S16	W17	8	2	0		S16	W17	E	
						N08	E09	0	0	0		N08	E09	E	
						S23	W15	0	0	0		S23	W15	E	
						N03	E14	0	0	0		N03	E14	Q	
						N21	E27	2	0	0		N21	E27	Q	
						N25	E46	0	0	0		N25	E46	Q	
						N08	W51	2	0	0		N08	W51	Q	
						N16	E26	3	0	0		N16	E26	E	
						S16	E09	0	0	0		S16	E09	Q	
						N21	E11	0	0	0		N21	E11	Q	
						N10	E19	0	0	0		N10	E19	Q	
						S05	E81	2	0	0		S05	E81	Q	
009	09	08	296	263	14	S10	W62	0	0	0	09	S10	W62	E	Solalert 09/XX, Magquiet.
						S10	W34	5	0	0		S10	W34	E	
						S16	W31	3	1	0		S16	W31	E	
						N08	W04	1	0	0		N08	W04	E	
						S22	W29	0	0	0		S22	W29	Q	
						N02	E01	0	0	0		N02	E01	Q	
						N25	E34	0	0	0		N25	E34	Q	
						N08	W66	4	0	0		N08	W66	E	
						N16	E12	0	0	0		N16	E12	E	
						S15	W04	0	0	0		S15	W04	Q	
						N21	W03	1	0	0		N21	W03	Q	
						N10	E06	0	0	0		N10	E06	Q	
						S05	E66	2	0	0		S05	E66	E	
010	10	09	247	257	4	S10	W49	1	0	0	10	S10	W49	E	Solalert 10/XX, Magquiet.
						S16	W45	4	1	0		S16	W45	E	
						N08	W17	0	0	0		N08	W17	E	
						N02	W11	0	0	0		N02	W11	Q	
						N24	E21	0	0	0		N24	E21	Q	
						N08	W79	1	0	0		N08	W79	E	
						N16	W01	0	0	0		N16	W01	E	
						S15	W17	0	0	0		S15	W17	Q	
						N22	W16	0	0	0		N22	W16	Q	
						N11	W07	0	0	0		N11	W07	Q	
						S05	E56	1	0	0		S05	E56	E	

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011	11	10	224	233	11	S10	W62	1	0	0	11	S10	W62	E	Solalert 11/XX,
						S15	W58	0	0	0		S15	W58	E	Magquiet.
						N09	W31	1	0	0		N09	W31	E	
						N02	W24	0	0	0		N02	W24	Q	
						N25	E08	0	0	0		N25	E08	Q	
						N08	W89	0	0	0		N08	W89	E	
						N16	W14	1	0	0		N16	W14	E	
						S15	W31	0	0	0		S15	W31	Q	
						N21	W28	0	0	0		N21	W28	Q	
						N09	W20	1	0	0		N09	W20	Q	
						S05	E41	1	0	0		S05	E41	E	
012	12	11	187	209	20	S11	W76	0	0	0	12	S11	W76	E	Solalert 12/XX,
						S16	W70	0	0	0		S16	W70	E	Magalert 12/XX.
						N09	W44	0	0	0		N09	W44	Q	
						N02	W39	0	0	0		N02	W39	Q	
						N24	W05	0	0	0		N24	W05	Q	
						N16	W28	0	0	0		N16	W28	Q	
						S14	W44	1	0	0		S14	W44	E	
						N20	W42	0	0	0		N20	W42	Q	
						N11	W36	0	0	0		N11	W36	Q	
						S04	E28	0	0	0		S04	E28	E	
						S05	E74	1	0	0		S05	E74	E	
013	13	12	173	189	20	S12	W90	0	0	0	13	S12	W90	Q	Solnil,
						S17	W80	0	0	0		S17	W80	E	Magalert 13/XX.
						N08	W56	1	0	0		N08	W56	E	
						N02	W52	0	0	0		N02	W52	Q	
						N25	W20	0	0	0		N25	W20	Q	
						N15	W42	0	0	0		N15	W42	Q	
						S16	W58	0	0	0		S16	W58	E	
						N19	W57	0	0	0		N19	W57	Q	
						S04	E14	0	0	0		S04	E14	Q	
						S08	E62	0	0	0		S08	E62	E	
014	14	13	192	183	20	S16	W87	0	0	0	14	S16	W87	E	Solquiet,
						N08	W71	0	0	0		N08	W71	E	Magalert 14/XX.
						N01	W66	0	0	0		N01	W66	Q	
						N24	W33	0	0	0		N24	W33	Q	
						N15	W54	0	0	0		N15	W54	Q	
						S15	W71	0	0	0		S15	W71	Q	
						N18	W71	0	0	0		N18	W71	Q	
						S05	E01	0	0	0		S05	E01	Q	
						S09	E49	0	0	0		S09	E49	E	
						N14	E62	0	0	0		N14	E62	Q	
						S13	W54	0	0	0		S13	W54	Q	
						S16	W10	0	0	0		S16	W10	Q	
015	15	14	140	179	18	N07	W85	0	0	0	15	N07	W85	Q	Solquiet,
						N15	W68	0	0	0		N15	W68	Q	Magnil.
						S15	W84	0	0	0		S15	W84	Q	
						N19	W82	0	0	0		N19	W82	Q	
						S05	W13	2	0	0		S05	W13	E	
						S09	E36	1	0	0		S09	E36	E	
						N14	E48	0	0	0		N14	E48	Q	
						S14	W69	0	0	0		S14	W69	Q	
						S16	W23	0	0	0		S16	W23	Q	

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016	16	15	119	173	9	N15	W84	0	0	0	16	N15	W84	Q	Solquiet,
						S05	W27	0	0	0		S05	W27	Q	Magquiet.
						S10	E23	2	0	0		S10	E23	E	
						N13	E37	0	0	0		N13	E37	Q	
						S13	W81	0	0	0		S13	W81	Q	
						S16	W41	0	0	0		S16	W41	Q	
						S09	E72	1	0	0		S09	E72	A	
017	17	16	130	161	21	S06	W41	0	0	0	17	S06	W41	Q	Solquiet,
						S10	E10	2	0	0		S10	E10	E	Magquiet.
						N13	E22	0	0	0		N13	E22	Q	
						S13	W93	0	0	0		S13	W93	Q	
						S17	W59	0	0	0		S17	W59	Q	
						S10	E56	0	0	0		S10	E56	E	
						S09	W20	0	0	0		S09	W20	Q	
						N25	W23	0	0	0		N25	W23	Q	
018	18	17	117	156	8	S06	W56	0	0	0	18	S06	W56	Q	Solquiet,
						S11	W03	1	0	0		S11	W03	Q	Magquiet.
						N12	E10	0	0	0		N12	E10	Q	
						S10	E44	1	0	0		S10	E44	E	
						S09	W32	0	0	0		S09	W32	Q	
						N25	W36	0	0	0		N25	W36	Q	
						S27	E41	0	0	0		S27	E41	Q	
019	19	18	126	152	9	S06	W70	0	0	0	19	S06	W70	Q	Solquiet,
						S10	W16	0	0	0		S10	W16	Q	Magquiet.
						N13	W05	0	0	0		N13	W05	Q	
						S11	E32	2	0	0		S11	E32	E	
						S10	W43	0	0	0		S10	W43	Q	
						N24	W49	0	0	0		N24	W49	Q	
						N04	E73	0	0	0		N04	E73	Q	
						S14	E75	0	0	0		S14	E75	Q	
						S21	W29	0	0	0		S21	W29	Q	
020	20	19	146	160	7	S09	W32	0	0	0	20	S09	W32	Q	Solquiet,
						N13	W19	0	0	0		N13	W19	Q	Magquiet.
						S11	E19	0	0	0		S11	E19	Q	
						S25	E11	0	0	0		S25	E11	Q	
						N04	E63	3	0	0		N04	E63	E	
						S14	E65	0	0	0		S14	E65	Q	
						S23	W42	0	0	0		S23	W42	Q	
						N18	E14	1	0	0		N18	E14	Q	
						S06	W42	0	0	0		S06	W42	Q	
						N18	W34	0	0	0		N18	W34	Q	
021	21	20	187	168	10	S09	W45	0	0	0	21	S09	W45	Q	Solquiet,
						N13	W32	0	0	0		N13	W32	Q	Magquiet.
						S10	E06	0	0	0		S10	E06	Q	
						N04	E51	1	0	0		N04	E51	E	
						S14	E53	0	0	0		S14	E53	Q	
						N17	W00	1	0	0		N17	W00	Q	
						S06	W54	0	0	0		S06	W54	Q	
						N19	E26	0	0	0		N19	E26	Q	
						S11	E36	0	0	0		S11	E36	Q	
						S11	E65	0	0	0		S11	E65	Q	
						S17	E72	0	0	0		S17	E72	Q	
						S14	E84	0	0	0		S14	E84	Q	

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022	22	21	207	174	3	S08	W58	0	0	0	22	S08	W58	Q	Solquiet,
						S13	W04	0	0	0		S13	W04	Q	Magquiet.
						N03	E38	3	1	0		N03	E38	E	
						S17	E40	0	0	0		S17	E40	Q	
						N17	W12	1	0	0		N17	W12	Q	
						S04	W70	0	0	0		S04	W70	Q	
						N19	E13	0	0	0		N19	E13	Q	
						S11	E24	0	0	0		S11	E24	Q	
						S10	E50	0	0	0		S10	E50	Q	
						S17	E59	0	0	0		S17	E59	Q	
						S13	E70	1	0	0		S13	E70	Q	
						S20	E33	0	0	0		S20	E33	Q	
						S27	E56	0	0	0		S27	E56	Q	
023	23	22	199	173	5	S09	W72	0	0	0	23	S09	W72	Q	Solquiet,
						S13	W18	0	0	0		S13	W18	Q	Magquiet.
						N03	E25	4	0	0		N03	E25	E	
						S16	E27	0	0	0		S16	E27	Q	
						N17	W26	3	0	0		N17	W26	Q	
						S07	W83	0	0	0		S07	W83	Q	
						N19	W02	0	0	0		N19	W02	Q	
						S12	E12	0	0	0		S12	E12	Q	
						S17	E45	0	0	0		S17	E45	Q	
						S13	E54	2	0	0		S13	E54	Q	
						S19	E18	0	0	0		S19	E18	Q	
						S27	E44	0	0	0		S27	E44	Q	
024	24	23	180	173	3	S10	W84	0	0	0	24	S10	W84	Q	Solquiet,
						S14	W31	0	0	0		S14	W31	Q	Magquiet.
						N03	E12	2	0	0		N03	E12	E	
						S15	E15	0	0	0		S15	E15	Q	
						N17	W39	0	0	0		N17	W39	Q	
						S12	W00	0	0	0		S12	W00	Q	
						S17	E32	0	0	0		S17	E32	Q	
						S12	E40	0	0	0		S12	E40	Q	
						S20	E07	4	0	0		S20	E07	E	
						S27	E35	0	0	0		S27	E35	Q	
						N18	E66	0	0	0		N18	E66	Q	
025	25	24	193	178	4	S10	W94	0	0	0	25	S10	W94	Q	Solquiet,
						S12	W44	0	0	0		S12	W44	Q	Magquiet.
						N03	W02	1	0	0		N03	W02	E	
						S16	E04	0	0	0		S16	E04	Q	
						N15	W53	1	0	0		N15	W53	Q	
						S10	W13	0	0	0		S10	W13	Q	
						S18	E20	0	0	0		S18	E20	Q	
						S12	E28	0	0	0		S12	E28	Q	
						S21	W04	0	0	0		S21	W04	Q	
						S26	E22	0	0	0		S26	E22	Q	
						N18	E50	0	0	0		N18	E50	Q	
						N09	E75	0	0	0		N09	E75	Q	
						S05	E72	4	0	0		S05	E72	Q	

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026	26	25	161	202	4	S17	W57	1	0	0	26	S17	W57	Q	Solquiet,
						N03	W18	2	0	0		N03	W18	Q	Magquiet.
						S17	W09	0	0	0		S17	W09	Q	
						N15	W70	0	0	0		N15	W70	Q	
						S18	E05	0	0	0		S18	E05	Q	
						S12	E16	1	0	0		S12	E16	Q	
						S22	W19	0	0	0		S22	W19	Q	
						N08	E61	2	0	0		N08	E61	Q	
						S04	E59	3	1	0		S04	E59	E	
						N07	E49	0	0	0		N07	E49	Q	
027	27	26	199	209	9	S17	W69	2	0	1	27	S17	W69	E	Solquiet,
						N03	W31	1	0	0		N03	W31	Q	Magalert 27/XX.
						S17	W22	0	0	0		S17	W22	Q	
						S17	W09	0	0	0		S17	W09	Q	
						S13	E02	1	0	0		S13	E02	E	
						S23	W32	0	0	0		S23	W32	Q	
						S27	W04	0	0	0		S27	W04	Q	
						N07	E48	1	0	0		N07	E48	Q	
						S04	E44	5	0	0		S04	E44	E	
						N06	E36	0	0	0		N06	E36	Q	
						S12	E65	2	0	0		S12	E65	Q	
		Presto:[2]	Boulder	X-ray event X1/3B S16 W66 26/1521 UT duration 20 minutes.											
			Boulder	Tenflare 360 flux units 26/1529 UT duration 30 minutes.											
028	28	27	299	221	15	S17	W82	0	0	0	28	S17	W82	Q	Solquiet,
						N02	W45	0	0	0		N02	W45	Q	Magnil.
						S15	W33	0	0	0		S15	W33	Q	
						S11	W32	0	0	0		S11	W32	Q	
						S18	W19	0	0	0		S18	W19	Q	
						S13	W13	0	0	0		S13	W13	E	
						N18	E14	0	0	0		N18	E14	Q	
						N08	E34	0	0	0		N08	E34	Q	
						S05	E32	2	0	0		S05	E32	E	
						N07	E22	0	0	0		N07	E22	Q	
						S12	E52	0	0	0		S12	E52	Q	
						N08	E67	0	0	0		N08	E67	Q	
						S21	E74	0	0	0		S21	E74	Q	
						S14	E69	0	0	0		S14	E69	Q	
						N06	E29	0	0	0		N06	E29	Q	
						S12	E20	0	0	0		S12	E20	Q	
029	29	28	258	238	10	N02	W60	1	0	0	29	N02	W60	Q	Solquiet,
						S18	W33	0	0	0		S18	W33	Q	Magquiet.
						S13	W27	0	0	0		S13	W27	E	
						N18	W00	0	0	0		N18	W00	Q	
						N08	E22	0	0	0		N08	E22	Q	
						S05	E19	6	0	0		S05	E19	E	
						N06	E07	1	0	0		N06	E07	Q	
						S11	E39	1	0	0		S11	E39	Q	
						N10	E55	0	0	0		N10	E55	Q	
						S21	E60	0	0	0		S21	E60	Q	
						S14	E55	0	0	0		S14	E55	Q	
						N07	E14	0	0	0		N07	E14	Q	
						S12	E06	1	0	0		S12	E06	Q	
						S16	E74	2	0	0		S16	E74	E	
						S12	W33	0	0	0		S12	W33	Q	

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030	30	29	324	266	11	N01	W73	0	0	0	30	N01	W73	Q	Solalert 30/XX, Magquiet.
						S14	W38	0	0	0		S14	W38	E	
						N18	W13	0	0	0		N18	W13	E	
						N08	E10	0	0	0		N08	E10	Q	
						S05	E05	6	0	0		S05	E05	E	
						N07	W07	0	0	0		N07	W07	Q	
						S10	E25	2	0	0		S10	E25	Q	
						N10	E41	0	0	0		N10	E41	Q	
						S21	E46	1	0	0		S21	E46	Q	
						S13	E43	0	0	0		S13	E43	Q	
						N07	W00	0	0	0		N07	W00	Q	
						S11	W07	8	0	0		S11	W07	E	
						S15	E64	6	0	0		S15	E64	E	
						S14	W45	0	0	0		S14	W45	Q	
						N07	E77	0	0	0		N07	E77	Q	
031	31	30	360	280	14	N02	W87	0	0	0	31	N02	W87	Q	Solalert 31/XX, Magquiet.
						S14	W52	1	1	0		S14	W52	E	
						N18	W26	2	0	0		N18	W26	E	
						N08	W01	1	0	0		N08	W01	Q	
						S05	W08	8	3	0		S05	W08	E	
						N06	W13	0	0	0		N06	W13	Q	
						S10	E12	8	0	0		S10	E12	E	
						N09	E29	0	0	0		N09	E29	Q	
						S21	E34	0	0	0		S21	E34	Q	
						S14	E30	0	0	0		S14	E30	Q	
						N06	W10	2	0	0		N06	W10	Q	
						S11	W16	5	0	0		S11	W16	E	
						S14	E51	2	0	0		S14	E51	E	
						S13	W59	1	0	0		S13	W59	Q	
						N07	E64	0	0	0		N07	E64	Q	
						S13	E72	3	1	0		S13	E72	E	
						N02	E63	0	0	0		N02	E63	Q	

Presto:[2] Boulder Tenflare 590 flux units 30/0935 UT duration 11 minutes.

[1]Q = quiet, E = eruptive, A = active, P = proton.
[2]Presto message is a rapid report of a major event.

STRATWARM ALERTS

08 January Stratwarm exists. Intense warming over Bering Sea/Alaska and northeastern Siberia, the east Siberian Sea the adjacent Arctic with temperature increase of more than 30° over the east Siberian Sea during the last week. Strong polar vortex displaced to the Barents Sea and cold air extends from the Barents Sea across Iceland to south of Greenland.

09 January Stratwarm exists. Intense warming over the Aleutian area, Alaska, the east Siberian and Beaufort Sea continues, but slowly weakening.

10 January Stratwarm exists.

12 January Stratwarm exists. Strong minor warming at 10 HPA further intensifying and northwards spreading. Center of warming reached 75N in Siberian Arctic.

13 January Stratwarm exists. Strong minor warming reaches polar region in the upper stratosphere. Mean meridional temperature gradient between 60N and pole reversed at 10 HPA on 12 January.

14 January Stratwarm exists. Strong minor warming reached the polar region at 10 HPA and upwards in the upper stratosphere. Temperature gradient reversed between 60N and the pole from 10 HPA upwards.

15 January Stratwarm exists. Strong minor warming over polar region at 10 HPA continues. Temperature gradient reversed between 60N and the pole from 10 HPA upwards.

17 January Stratwarm exists. Strong minor warming over the polar region, Alaska, and northeastern Siberia.

18 January Stratwarm exists. Intense minor warming over the whole polar region to eastern Europe and western Siberia continues. Temperature gradient reversed between 60N and the pole in the middle and upper stratosphere (from 30 HPA upwards) and mean zonal wind at 60N is from the east at 10 HPA.

19 January Stratwarm exists. Intense minor warming from Alaska across the polar region to Siberia and European Russia continues. Warm center over northern Siberia intensifying. Temperature gradient reversed between 60N and the pole in the middle and upper stratosphere above 30 HPA.

20 January Stratwarm exists. Intense minor warming from Alaska and northern Canada across the polar region to western Siberia and European Russia at 10 HPA continues. Temperature gradient reversed between 60N and the pole in the middle and upper stratosphere from 30 HPA upwards.

21 January Stratwarm exists. Intense minor warming from Alaska and northern Canada across the whole Arctic to eastern Europe continues. Temperature gradient reversed between 60N and the pole above 30 HPA into the upper stratosphere,.

22 January Stratwarm exists. Minor warming over Alaska and northern Canada across the polar region to European Russia continues, but is weakening. Temperature gradient reversed between 60N and the pole in the middle and upper stratosphere.

24 January Stratwarm exists. Minor warming over the polar region, the European Russia and northwestern Siberia at 10 HPA continues, slowly weakening. Temperature gradient reversed between 60N and the pole at 10 HPA.

25 January Stratwarm exists. Warm region stays over eastern Europe and northern Siberia, extending over the pole towards Canada. Temperature gradient reversed between 60N and the pole at 10 HPA and above.

26 January Stratwarm exists. Warm region stays over eastern Europe and northern Siberia, but weakening. Temperature gradient between 60N and the pole no longer reversed at 10 HPA.

27 January Stratwarm exists. Minor warming over northern Siberia intensifying and spreading northeastwards.

28 January Stratwarm exists. Minor warming over northern Siberia continues, spreading northeastwards into the Siberian and Canadian Arctic. Temperature gradient reversed between 60N and the pole from 10 HPA upwards into the upper stratosphere.

29 January Stratwarm exists. Warm region from northern Siberia over the pole to the Baffin Bay. Temperature gradient reversed between 60N and the pole at 10 HPA and above.

30 January Stratwarm exists. Warm region from Siberia across the Siberian and Canadian Arctic to the Baffin area and southern Greenland continues. Temperature gradient reversed between 60N and the pole from 10 HPA upwards into the upper stratosphere.

31 January Stratwarm exists. Minor warming over Siberia, Siberian Arctic and Greenland weakening, but temperature gradient still slightly reversed between 60N and the pole at 10 HPA.

INTERNATIONAL RELATIVE SUNSPOT NUMBERS

Day	Feb 91	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct†	Nov†	Dec†	Jan 92†
01	205	95	89	93	177	188	132	170	165	183	102	141
02	209	93	92	86	175	213	138	161	147	163	96	144
03	176	71	118	106	171	238	143	147	159	127	124	171
04	144	55	139	95	179	250	136	147	158	109	109	197
05	127	74	160	89	180	217	148	132	165	113	131	183
06	117	88	159	96	167	204	119	137	129	125	144	185
07	119	131	164	99	171	209	120	111	115	134	154	190
08	118	146	146	125	210	203	106	135	116	141	174	204
09	134	156	172	140	240	179	89	122	137	132	209	182
10	136	159	167	134	241	181	75	127	140	121	185	198
11	140	167	195	145	250	170	86	123	141	129	193	155
12	153	163	227	133	219	138	98	130	129	114	175	132
13	166	152	197	116	175	139	126	143	125	98	177	142
14	163	161	211	134	177	132	122	147	138	94	175	108
15	173	182	227	119	154	117	164	123	145	88	155	96
16	159	202	188	113	165	102	212	101	126	73	129	87
17	136	167	172	113	149	91	257	103	111	75	124	76
18	191	168	171	125	142	89	279	101	105	75	133	71
19	206	155	173	116	143	114	280	84	82	93	134	92
20	198	173	161	121	113	132	291	80	83	90	117	115
21	223	167	115	97	147	171	300	115	77	82	109	142
22	214	179	79	117	135	184	294	124	81	78	80	127
23	200	179	72	120	124	212	275	129	107	76	119	117
24	192	154	33	117	135	205	259	112	138	99	130	112
25	194	146	39	121	137	189	215	111	152	95	143	114
26	187	153	73	139	150	199	177	117	171	83	150	155
27	175	137	82	156	143	183	147	120	217	104	132	178
28	134	129	119	158	162	183	157	124	234	106	130	187
29		140	132	150	177	182	171	144	248	104	149	196
30		141	129	141	183	197	166	138	223	80	151	219
31		115		145		173	184		188		151	211
Mean	167.5	141.9	140.0	121.3	169.7	173.7	176.3	125.3	143.6	106.1	141.4	149.3

†=preliminary. The preliminary yearly mean sunspot number equals 145.2 for 1991.

Algonquin Radio Observatory

OTTAWA 2800 MHz (10.7 cm) SOLAR FLUX

Adjusted to 1 AU

Day	Feb 91	Mar	Apr	May	Jun†	Jul†	Aug†	Sep†	Oct†	Nov†	Dec†	Jan 92†
01	307.3	216.5	192.8	163.6	224.9	250.3	232.0	179.1	208.0	226.8	167.6	240.3
02	289.3	207.5	189.1	159.6	243.1	251.8	213.2	184.3	220.9	214.8	166.2	251.6
03	258.4	206.4	195.9	159.5	226.8	257.3	219.4	178.1	211.8	183.1	177.7	270.4
04	239.2	218.9J	195.1	165.8	245.6	255.4	198.8	173.8	212.6	173.9	185.2	265.6
05	216.5	208.1	196.7	183.2	258.1	259.5	179.4	166.2	193.4	172.6	186.3	257.7
06	198.7	206.7	199.9	207.2*	241.3	240.8	171.4	179.0	181.9	183.4	191.6	245.7
07	192.7	214.5	192.6	215.3	236.6	226.1	170.0	177.1	180.0	190.0	202.9	253.7
08	192.7	209.1	182.8	235.6	250.7	211.2	163.5	199.0	178.7	196.7	219.6	253.1
09	174.0	215.7	204.2	230.1	245.3	200.6	154.6	183.3	183.7	193.6	249.7	248.8
10	169.5	222.8	223.6	237.0	246.2	200.2	145.7	187.2	179.2	191.5	252.5	225.1
11	176.5	221.9	231.5	234.5	242.8	202.3	142.4	179.9	178.2	193.6	237.8	202.4
12	181.6	228.7	254.4	253.7	236.8	209.9	150.7	185.4	187.2	188.5	235.8	182.4
13	182.2	239.1	242.6	219.7	224.7	202.3	159.6	187.1	182.5	177.4	246.6	177.3
14	184.0	241.6	269.3	212.8	207.2	194.8	179.6	183.4	186.1	179.6	222.2	172.8
15	191.9	242.2	263.1	197.7	203.1	192.0	220.5	182.2	177.7	169.4	206.5	167.7
16	200.4	258.5	269.1	193.4	190.5	172.6	270.7	176.1	180.3	161.9	225.1	156.1
17	210.2	245.4	254.2	176.2	182.1	163.9	277.7	178.7	168.2	160.8	192.0	150.6
18	259.6	274.8	239.1	174.2	178.7	194.8	290.5	182.9	156.5	159.6	189.0	147.0
19	269.8	264.9	232.0	162.7*	180.7	184.1	296.6	173.9	153.0	154.6	181.8	155.0
20	283.8	254.2	235.3	151.8	171.7	205.3	293.2	171.1	155.5	149.6	191.8	162.9
21	299.2	253.1	181.6	153.0	175.1	221.6	291.8	178.0	166.8	141.5	186.2	168.7
22	302.6	257.7	168.7	151.9	175.4	230.2	291.5	189.0	182.7	135.7	216.0	167.6
23	311.5	233.4	149.0	158.6	166.6	234.0	277.0	186.1	192.0	133.0	218.9	167.6
24	313.1*	260.5	137.4	162.8	173.9	240.8	255.4	180.9	228.0	128.1	222.3	172.9
25	288.4*	235.2	138.1	178.8	178.8	237.5	243.4	181.9	237.4	130.9	250.8	195.9
26	271.8	229.4	138.3*	191.4	191.3	226.6	214.7	201.6	248.1	140.4	252.2	202.7
27	248.7	203.0	144.6	202.9	206.3	219.5	200.4	178.7	246.3	148.9	243.7	214.0
28	228.0	197.7	158.4	221.4	217.5	219.4	193.7	176.3	267.5	150.4	263.3	230.6
29		192.9	161.0	231.1	234.4	226.6	199.2	195.4	268.8	156.6	246.0	258.3
30		201.3	161.7	213.5	243.6	228.4	199.4	200.4	258.0	163.2	263.2	272.0
31		194.7		230.7		225.9	185.2		228.1		235.0	293.5
Mean	237.2	227.6	200.1	194.5	213.3	218.9	215.5	182.5	200.0	168.3	217.0	210.6

†=Penticton; *=corrected for burst in progress; yearly mean equals 208.0 for 1991.

DAILY SOLAR INDICES

January 1992

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers Int	Sunspot Numbers Amer	Obs Flux Penticton (2800)	Solar Flux Adjusted to 1 Astronomical Unit SVTO (15400)	SVTO (8800)	SVTO (4995)	Pentic (2800)	SVTO (2695)	SVTO (1415)	PALE (610)	SVTO (410)	SVTO (245)
01	1	1	141	143	248.5	593	334	286	240.3	263	157	85	44	--
02	2	2	144	131	260.2	586	335	301	251.6	265	159	93	42	22
03	3	3	171	161	279.6	618	372	339	270.4	281	163	100	43	21
04	4	4	197	179	274.7	601	355	322	265.6	282	168	--	45	22
05	5	5	183	170	266.5	589	354	337	257.7	287	175	81	45	21
06	6	6	185	176	254.1	584	343	301	245.7	266	168	92	--	28
07	7	7	190	193	262.4	585	344	290	253.7	276	169	--	54	--
08	8	8	204	199	261.7	592	349	290	253.1	276	183	95	51	27
09	9	9	182	164	257.3	584	336	273	248.8	262	163	95	45	22
10	10	10	198	151	232.8	592	317	286	225.1	249	157	97	46	17
11	11	11	155	137	209.3	577	319	296	202.4	237	150	86	43	19
12	12	12	132	120	188.6	559	305	202	182.4	216	142	85	40	18
13	13	13	142	131	183.3	574	301	235	177.3	190	134	83	40	18
14	14	14	108	99	178.6	572	296	---	172.8	194	133	79	41	18
15	15	15	96	75	173.3	567	295	206	167.7	183	128	61	42	19
16	16	16	87	80	161.3	583	288	206	156.1	170	120	82	37	18
17	17	17	76	64	155.6	563	278	198	150.6	152	119	77	39	16
18	18	18	71	83	151.9	550	278	195	147.0	158	116	78	37	18
19	19	19	92	92	160.1	547	281	204	155.0	165	119	82	39	16
20	20	20	115	115	168.3	543	289	213	162.9	179	124	85	44	25
21	21	21	142	139	174.2	539	287	215	168.7	186	128	--	40	20
22	22	22	127	124	173.0	567	294	---	167.6	197	138	84	41	23
23	23	23	117	111	173.1	571	289	219	167.6	187	131	88	38	19
24	24	24	112	115	178.4	555	287	227	172.9	178	132	95	41	18
25	25	25	114	121	202.2	606	310	252	195.9	203	139	94	43	43
26	26	26	155	124	209.0	579	318	262	202.7	220	142	93	45	24
27	27	27	178	154	220.7	605	340	289	214.0	237	152	98	51	29
28	28	1	187	176	237.7	593	344	297	230.6	239	157	99	53	--
29	29	2	196	210	266.2	609	378	341	258.3	273	---	102	--	--
30	30	3	219	231	280.3	607	392	369	272.0	303	187	--	58	50
31	31	4	211	233	302.3	609	384	379	293.5	311	189	155	--	--
Mean			149.3	142.0	217.6	581	322	270	210.6	229	148	91	44	23

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

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

Equipment problems produced any gaps in the Air Weather Service's San Vito (SVTO) and Palehua (PALE) observations.

SMOOTHED (OBSERVED AND PREDICTED) SUNSPOT NUMBERS: CYCLES 21 AND 22

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	140	142	143	143	143	142	140	141	143	142	139	138
1982	137	133	129	124	120	117	115	109	101	96	95	95
1983	93	90	86	82	77	70	66	66	68	68	67	64
1984	60	56	53	50	48	46	44	40	34	29	25	22
1985	20	20	19	18	18	18	17	17	17	17	17	15
1986	14	13	13	14	14	14	14	13	12*	13	15	16
1987	18	20	22	24	26	28	31	35	39	44	47	51
1988	58	65	71	78	84	94	104	114	121	125	130	138
1989	142	145	150	154	157	158	159*	158	157	157	158	154
1990	151	153	152	149	147	144	141	141	142	142	142	144
1991	148	148	147	147	145	145	146	140	134	131	130	130
								(3)	(3)	(4)	(9)	(13)
1992	129	121	114	108	103	101	98	94	91	87	79	67
	(15)	(14)	(10)	(4)	(9)	(4)	(8)	(12)	(13)	(16)	(22)	(30)
1993	55	50	49	46	45	42	38	31	25	22	23	27
	(39)	(40)	(37)	(35)	(33)	(33)	(34)	(37)	(40)	(39)	(35)	(28)

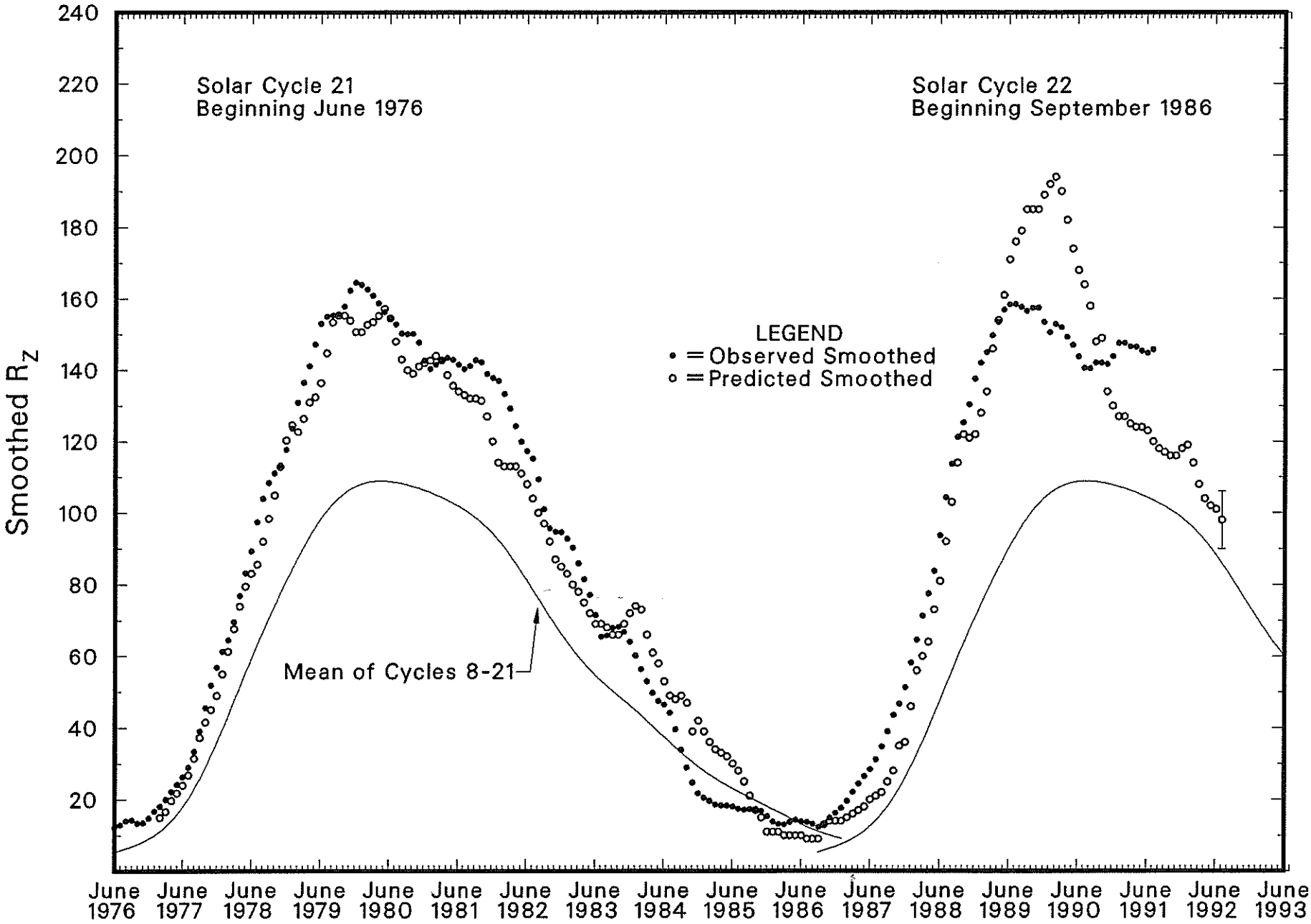
*Sep 1986 marks the minimum of Cycle 21 and the onset of Cycle 22; Cycle 22 reached a maximum in Jul 1989.

For the end of Solar Cycle 21, and the beginning of 22, the table gives observed smoothed sunspot numbers up to the one calculated from the most recently available monthly mean. These smoothed observed values are based on final, monthly means through September 1991 and on provisional numbers thereafter.

Table entries, with numbers in parentheses below them, denote predictions by the McNish-Lincoln method. (See page 9 in the July 1987 supplement to *Solar-Geophysical Data*.) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval; subtracting the number from the predicted value generates the lower limit. Consider, for example, the July 1992 prediction. There exists a 90% chance that in July 1992 the actual smoothed sunspot number will fall somewhere between 90 and 106.

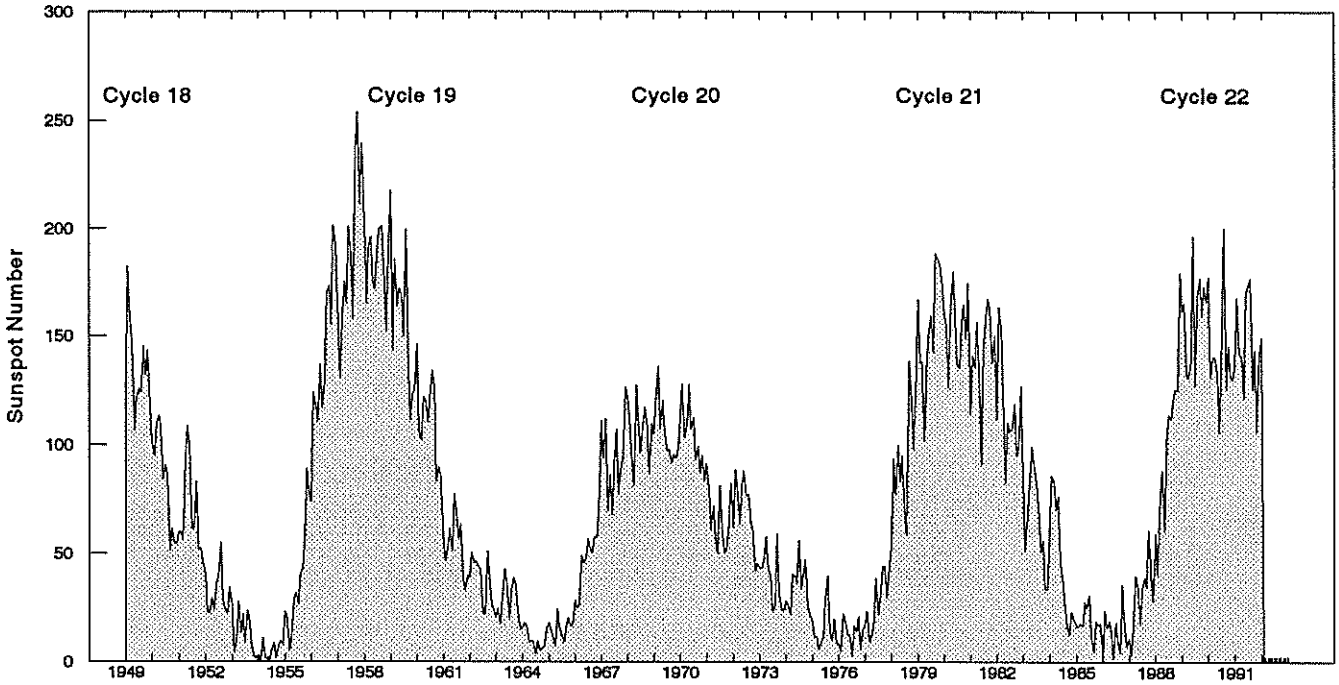
THE MCNISH-LINCOLN PREDICTION METHOD GENERATES USEFUL ESTIMATES OF SMOOTHED, MONTHLY MEAN SUNSPOT NUMBERS FOR NO MORE THAN 12 MONTHS AHEAD. Beyond a year the predictions regress rapidly toward the mean of all 13 cycles used in the computation. Moreover, the method is very sensitive to the data defined as the beginning of the current sunspot cycle, that is, to the date of the most recent sunspot minimum. The new cycle predictions tabulated above are based on the minimum value of 12.3 that occurred in September 1986.

OBSERVED AND ONE-YEAR-AHEAD PREDICTED SUNSPOT NUMBERS



31
Jan 92

Monthly Mean Sunspot Numbers Jan 1949 – Jan 1992



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1949	119.1	182.3	157.5	147.0	106.2	121.7	125.8	123.8	145.3	131.6	143.5	117.6	134.7
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.1	83.9
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8	69.4
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3	31.5
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5	13.9
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6	4.4 m
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9	38.0
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1	141.7
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4	190.2 M
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6	184.8
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0	159.0
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6	112.3
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.8	63.6	37.7	32.6	39.9	53.9
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2	37.6
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9	27.9
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1	10.2 m
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0	15.1
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4	47.0
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4	93.8
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8	105.9 M
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9	105.5
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5	104.5
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2	66.6
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3	68.9
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3	38.0
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5	34.5
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8	15.5
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3	12.6 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	143.6	106.1	141.4	145.2
1992	149.3												149.3

Monthly values are preliminary since October 1991. For the yearly means, each "M" marks a sunspot cycle maximum and each "m" a minimum.

Hα SOLAR FLARES

JANUARY 1992

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
LEAR	01	0006	0018	0047	S15	W48	6985	12	28.5	41	SF		3	E		50		
PALE		0015	0017	0128D	S17	W47	6985	12	28.5	73D	SF		3	E		21		
LEAR		0303	0314	0354	S12	W18	6988	12	30.9	51	1N	M 1.2	3	E		180		FE
LEAR		0323	0331	0351	S18	W47	6985	12	28.7	28	SN	M 2.8	3	E		67		FE
LEAR		0342	0354	0429	S11	E67	6993	01	6.2	47	1F	M 5.8	3	E		120		FE
LEAR		0904	0911	0929	S12	W22	6988	12	30.8	25	SF	C 7.8	3	E		66		
LEAR		0930	0933	0942	S11	E61	6993	01	6.0	12	1F		3	E		131		
SVTO		1028	1029	1033	S14	W24	6988	12	30.7	5	SF		3	E		29		
SVTO		1118	1131	1159	S09	E64	6993	01	6.3	41	1N	M 3.3	3	E		182		F
RAMY		1137E	1137U	1157	S13	E64	6993	01	6.3	20D	SF		1	E		78		F
SVTO		1145	1204	1213	S14	E71	6994	01	6.8	28	SF		3	E		27		
SVTO		1200	1200	1212	S11	E41	6991	01	4.6	12	SF		3	E		31		
RAMY		1243	1254	1314	S16	E73	6994	01	7.1	31	SF	C 7.0	4	E		83		F
SVTO		1246	1255	1316	S14	E74	6994	01	7.1	30	SF		3	E		33		
HOLL		1549E	1549U	1556	S14	W49	6985	12	29.0	7D	SF	C 2.6	2	E		29		
HOLL		1623	1625	1636	S20	W29	6988	12	30.6	13	SF		3	E		56		
RAMY		1625	1626	1635	S16	W32	6988	12	30.3	10	SF		3	E		17		F
HOLL		1733	1743	1756	S16	W57	6985	12	28.5	23	SF		3	E		20		
HOLL		1747	1749	1759	S12	E64	6993	01	6.6	12	SF		3	E		21		
HOLL		1941	1946	1958	S15	W56	6985	12	28.7	17	SF		3	E		20		F
HOLL		1958	2033	2124D	S16	W58	6985	12	28.5	86D	1N	M 5.1	3	E		181		EH
HOLL		2011	2023	2050	S12	W26	6988	12	31.0	39	2B	M 2.4	3	E		384		F
PALE		2021	2023	2038	S11	W27	6988	12	30.9	17	1F		3	E		232		FH
PALE		2032	2032	2043	S16	W58	6985	12	28.5	11	SF		3	E		62		FH
PALE		2054E	2054U	2103	S17	W58	6985	12	28.6	9D	SF		3	E		38		
HOLL		2140	2149	2201	S11	E34	6991	01	4.5	21	SF		3	E		22		
HOLL		2222	2240	2258	S13	E33	6991	01	4.4	36	SF		3	E		23		F
LEAR	02	0358	0410	0437	S16	W37	6988	12	30.4	39	SF	C 4.9	3	E		71		F
LEAR		0414	0415	0428	S15	E59	6994	01	6.6	14	SF		3	E		43		F
LEAR		0643	0657	0713	S17	W66	6985	12	28.4	30	1N	C 6.6	3	E		201		EH
LEAR		0656	0702	0714	S16	W39	6988	12	30.4	18	SF		3	E		43		
LEAR		0657	0708	0735	S10	E52	6993	01	6.2	38	SF	C 8.4	3	E		63		F
SVTO		0709E	0710	0722	S08	E52	6993	01	6.2	13D	SF		1	E		57		F
SVTO		0749	0803	0810	S23	W56	6985	12	29.1	21	SF		3	E		11		
LEAR		0751	0831	0903	S17	W59	6985	12	28.9	72	SF		3	E		28		
LEAR		0753	0827	0849	S09	E50	6993	01	6.1	56	SF		3	E		56		
SVTO		0826	0827	0843	S09	E53	6993	01	6.3	17	SF		3	E		41		
SVTO		0844	0852	0910	S09	E34	6991	01	4.9	26	SF	C 3.7	3	E		22		F
LEAR		0845	0852	0905	S11	E28	6991	01	4.5	20	SF		3	E		25		
SVTO		0908	0908	0912	S14	E62	6994	01	7.1	4	SF		3	E		18		
SVTO		1012E	1018	1104	S20	W40	6988	12	30.5	52D	SF	C 4.8	3	E		84		F
SVTO		1054	1055	1107	S08	E53	6993	01	6.4	13	SF		3	E		22		
RAMY		1220	1228	1307	S17	E58	6994	01	6.9	47	SF	M 1.8	3	E		84		F
RAMY		1429	1430	1516	S15	W43	6988	12	30.4	47	SF	C 6.7	3	E		49		F
HOLL		1644	1651	1704	S11	W38	6988	12	30.9	20	SF	C 2.7	3	E		43		F
GOES		1730	1732	1739						9		C 2.7						
HOLL		1749	1752	1804	S11	E55	6993	01	6.9	15	SF	C 3.9	3	E		45		F
HOLL		1749	1801	1814	S12	E27	6991	01	4.8	25	SF		3	E		34		F
HOLL		1754	1757	1814	S18	W65	6985	12	28.9	20	SF		3	E		58		
HOLL		1831	1842	1905	S19	W52	6988	12	29.9	34	SF	C 4.3	3	E		38		F
HOLL		1922	1928	1934	S17	W65	6985	12	29.0	12	SF	C 5.0	3	E		48		
HOLL		1943	1949	2021	S09	E48	6993	01	6.4	38	SF		3	E		28		
HOLL		2104	2107	2230D	S15	E53	6994	01	6.9	86D	SN	C 9.3	3	E		55		FE
PALE		2107E	2111U	2147D	S14	E56	6994	01	7.1	40D	SN		3	E		32		FE
PALE		2142E	2142U	2230	S08	E50	6993	01	6.6	48D	SN	M 1.9	3	E		43		F
GOES	03	0059	0102	0105						6		C 4.9						
PALE		0154	0154	0212	S11	W43	6988	12	30.9	18	SF		3	E		30		
LEAR		0425	0502	0536	S12	E41	6993	01	6.3	71	SN	C 7.1	3	E		71		FE
LEAR		0538	0549U	0549D	S18	E45	6994	01	6.7	11D	1N	C 8.0	3	E		207		
GOES		0712	0717	0720						8		C 7.2						
SVTO		0803	0804	0812	S13	W47	6988	12	30.9	9	SF		3	E		11		
SVTO		0824	0835	0919	S09	E39	6993	01	6.3	55	SF	C 4.4	3	E		51		F
LEAR		0835	0837	0843	S11	E40	6993	01	6.4	8	SF		3	E		31		F
LEAR		0853	0940	1020	S19	E44	6994	01	6.7	87	1N	M 3.6	3	E		162		FE
SVTO		0853	0942	1031D	S15	E45	6994	01	6.8	98D	1N		3	E		123		F
GOES		1042	1046	1048						6		C 5.7						

Hα S O L A R F L A R E S

JANUARY 1992

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
GOES	03	1321	1326	1336						15		C 4.2						
RAMY		1323	1327	1411	S12	E37	6993			48	SF			E		36		K
RAMY		1323	1344	1411	S12	E37	6993	01	6.3	48	SF	C 4.2	3	E		33		F
RAMY		1625	1714	1815	S12	E34	6993	01	6.2	110	SF	M 1.3	3	E		78		
PALE		1740E	1740U	1851D	S08	E33	6993	01	6.2	71D	SF		2	E		27		F
PALE		1905E	1905U	1911	S09	E36	6993	01	6.5	6D	SF	M 1.1	3	E		28		
PALE		2135	2141	2208D	S10	E31	6993	01	6.2	33D	SF	M 1.3	3	E		39		F
PALE		2220	2224U	2257D	S08	E32	6993	01	6.3	37D	SN	M 1.7	3	E		69		FE
LEAR		2305	2305	2351	S10	E30	6993	01	6.2	46	SF	C 9.6	3	E		69		F
LEAR	04	0012	0015	0019	S18	W81	6985	12	28.9	7	SF	C 5.6	3	E		30		
GOES		0218	0241	0300						42		C 8.9						
LEAR		0301	0302	0330	S10	E28	6993	01	6.2	29	SN	M 1.1	3	E		24		FE
LEAR		0419	0426	0439	S10	E27	6993	01	6.2	20	SF	C 5.3	3	E		26		F
LEAR		0530	0537	0623	S10	E26	6993	01	6.2	53	1N	M 2.4	3	E		110		F
GOES		0805	0812	0816						11		C 4.2						
SVTO		1028	1029	1047D	S19	E33	6997	01	6.9	19D	SF		3	E		21		F
SVTO		1053	1059	1107	S19	W70	6988	12	30.2	14	SF		3	E		21		F
GOES		1108	1129	1314						126		M 1.9						
GOES		1343	1346	1349						6		C 6.4						
GOES		1610	1649	1659						49		C 4.0						
PALE		1830	1835	1949	S17	W71	6988	12	30.5	79	1F		3	E		168		F
RAMY		1831	1832	1908	S17	W74	6988	12	30.2	37	1N	M 4.4	4	E		173		ZE
LEAR		2356	2359	2411	S09	E18	6993	01	6.3	15	SF	C 6.2	3	E		52		F
LEAR	05	0237	0252	0356	S18	E21	6994	01	6.7	79	1N	M 1.8	3	E		247		F
PALE		0246E	0253	0338D	S19	E24	6994	01	6.9	52D	SF		3	E		96		F
LEAR		0248	0252	0357	S21	E26	6997	01	7.1	69	SF		3	E		45		
LEAR		0455	0525	0604	S16	E20	6994	01	6.7	69	1F	M 1.3	3	E		140		F
LEAR		0729	0741	0855	S10	E13	6993	01	6.3	86	SF	C 5.6	3	E		59		F
LEAR		0729	0829	0855	S10	E13	6993			86	SN			E		37		K
SVTO		0736E	0750	0813	S10	E13	6993	01	6.3	37D	SF		3	E		36		F
GOES		0821	0834	0900						39		C 3.5						
SVTO		0825	0844	0933	S10	E13	6993	01	6.3	68	SF		3	E		19		F
SVTO		0849	0907	0925	N06	E47	6996	01	8.9	36	SF		3	E		34		
SVTO		0935	0956	1109	S12	E10	6993	01	6.1	94	SF	C 4.7	3	E		42		F
GOES		1023	1031	1044						21		C 4.3						
SVTO		1316	1324	1438D	S11	E10	6993	01	6.3	82D	1N	M 1.9	3	E		153		F
RAMY		1345E	1346U	1408D	S14	E09	6993	01	6.2	23D	SF		2	E		68		F
GOES		1652	1706	1815						83		M 1.5						
GOES		1830	1842	1848						18		C 5.7						
HOLL		2022	2024U	2054D	S16	E13	6994	01	6.8	32D	1F	M 1.0	2	E		127		F
HOLL		2237	2245	2249	S15	E10	6994	01	6.7	12	SF	C 4.8	3	E		26		
LEAR	06	0337	0400	0459	S11	E02	6993	01	6.3	82	1F	C 7.5	3	E		167		FH
GOES		0627	0638	0644						17		C 2.8						
SVTO		0822	0825	0843	N06	E29	6996	01	8.5	21	SF		3	E		42		
SVTO		0835	0838	0846	S13	E13	6994	01	7.3	11	SF	C 2.7	3	E		19		F
SVTO		1432E	1433U	1451D	N09	E29	6996	01	8.8	19D	SF	C 3.9	2	E		39		F
GOES		1954	2044	2112						78		C 5.2						
GOES		2247	2312	2339						52		C 4.2						
LEAR	07	0045	0046	0053	S13	W11	6993	01	6.2	8	SF		3	E		44		
PALE		0047	0047	0050	S14	W10	6993	01	6.3	3	SF	C 2.5	3	E		10		
LEAR		0403	0417	0448	S14	W12	6994	01	6.3	45	SN	M 1.5	3	E		89		FE
LEAR		0449	0454	0533	S16	W07	6994	01	6.7	44	SF	C 4.4	3	E		85		
SVTO		0803	0817	0843	N16	E35		01	10.0	40	SF		3	E		30		
SVTO		0804	0816	0833	N22	E39	6999	01	10.3	29	SF		3	E		29		
SVTO		0815	0817	0834	S19	W12	6994	01	6.4	19	SF		3	E		20		
SVTO		0837	0921	0941	N22	E38	6999	01	10.3	64	SF		3	E		21		
SVTO		0843	0848	0859	S11	W14	6993	01	6.3	16	SF		3	E		26		
SVTO		0847	0921	0938	N17	E35		01	10.0	51	SF		3	E		23		
SVTO		0848	0849	0852	N06	W44	7002	01	4.1	4	SF		3	E		11		F
SVTO		1019	1022	1029	N16	E34		01	10.0	10	SF		3	E		15		
SVTO		1042	1042	1048	S13	W22	6993	01	5.8	6	SF		3	E		54		F
SVTO		1042	1043	1048	S18	W31	6991	01	5.1	6	SF		3	E		20		
SVTO		1128	1131	1133	S16	W15	6994	01	6.3	5	SF		3	E		13		
GOES		1220	1230	1235						15		C 3.2						

Hα SOLAR FLARES

JANUARY 1992

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	07	1343	1344	1404	S17	W11	6994	01	6.7	21	SF	C 5.4	3	E		34		F
GOES		1416	1436	1442						26		C 5.7						
RAMY		1503E	1505	1519	S05	E89		01	14.3	16D	SF		3	E		19		
RAMY		1503E	1507	1522	S15	W16	6994	01	6.4	19D	SF	M 1.2	3	E		68		F
RAMY		1612	1616	1625	S12	W18	6993	01	6.3	13	SF	C 4.4	3	E		38		F
RAMY		1615	1622	1627	S16	W12	6994	01	6.8	12	SF		3	E		12		F
RAMY		1646	1647	1653	N08	W50	7002	01	3.9	7	SF		3	E		15		F
PALE		1802	1802	1810	S02	E83		01	13.9	8	SF		3	E		26		
PALE		2022	2025	2037	S16	W18	6994	01	6.5	15	SF	C 8.9	3	E		52		F
GOES	08	0021	0026	0031						10		C 4.7						
PALE		0046E	0046U	0110	N09	E12	6996	01	8.9	24D	SF	C 5.0	3	E		39		F
LEAR		0203	0213	0300	N20	E11	7005	01	8.9	57	1N	C 6.2	3	E		128		E
LEAR		0203	0226	0230	S04	E80	7007	01	14.1	27	SF		3	E		37		F
PALE		0212	0213	0229	N20	E09	7005	01	8.8	17	SB		3	E		95		F
LEAR		0213	0256	0323	N08	W54	7002	01	4.0	70	SF	C 3.8	3	E		64		
PALE		0254	0255	0301	N05	W55	7002	01	4.0	7	SF		3	E		18		
LEAR		0416	0423	0432	S04	E73	7007	01	13.6	16	SF	C 3.2	3	E		73		F
LEAR		0534	0534	0539	N08	W55	7002	01	4.1	5	SF	C 4.9	3	E		33		F
LEAR		0752	0818	0908	S17	W22	6994			76	2N			E		286		K
LEAR		0752	0842	0908	S17	W22	6994	01	6.6	76	1N	M 1.7	3	E		177		FE
LEAR		0816	0817	0835	S10	W29	6993	01	6.2	19	1N	C 6.5	3	E		122		F
SVTO		1130	1133	1150	N06	W59	7002	01	4.1	20	SF		3	E		12		F
SVTO		1130	1137	1148	S16	W21	6994	01	6.9	18	SF		3	E		29		F
SVTO		1131	1138	1154	S09	W21	6993	01	6.9	23	SF	C 3.6	3	E		36		F
GOES		1258	1301	1305						7		C 5.4						
RAMY		1421	1422	1438	S09	W23	6993	01	6.9	17	SF	C 3.1	3	E		34		FE
RAMY		1606	1606	1614	S10	W32	6993	01	6.3	8	SF	C 3.5	3	E		22		F
RAMY		1928	1928	1937	S11	W33	6993	01	6.3	9	SF	C 4.8	3	E		38		
PALE		2117	2117	2133	S15	W25	6994	01	7.0	16	SF		3	E		18		F
GOES	09	0311	0315	0321						10		C 3.5						
LEAR		0356	0406	0415	S17	W32	6994	01	6.7	19	SF	C 6.3	3	E		33		F
LEAR		0536	0536	0542	S10	W39	6993	01	6.3	6	SF		3	E		35		
LEAR		0603	0614	0623	S07	E68	7007	01	14.3	20	1F	C 5.6	3	E		126		
SVTO		0931	0945	0953	S15	W33	6994	01	6.9	22	SF		3	E		25		F
SVTO		1003	1010	1025	N06	W74	7002	01	3.9	22	SF		3	E		16		
SVTO		1024	1027	1037	S15	W33	6994	01	6.9	13	SF		3	E		32		F
SVTO		1241	1245U	1336	S17	W37	6994	01	6.7	55	1N	M 5.4	3	E		128		F
GOES		1952	1957	2004						12		C 4.0						
LEAR	10	0213	0214	0224	N15	W02	7003	01	9.9	11	SF		3	E		24		F
LEAR		0250	0257	0303	S12	W58	6991	01	5.7	13	SF		3	E		44		
LEAR		0254	0256	0303	S12	W57	6993	01	5.8	9	SF	C 2.5	3	E		16		
PALE		0312	0313	0325	S11	E75		01	15.8	13	SF	C 5.5	3	E		84		F
LEAR		0319	0321	0329	S13	E75		01	15.8	10	SF		3	E		73		F
GOES		1758	2033	2256						298		C 6.2						T
RAMY		1938E	1938	1946D	N10	W18	7006	01	9.5	8D	SF		3	E		14		F
RAMY		1938E	1938	1946D	N05	W28	6996	01	8.7	8D	SF		3	E		25		F
LEAR	11	0423	0427	0439	S15	W39	7004	01	8.2	16	SF	C 3.2	3	E		53		
LEAR		0845	0846	0852	S10	E82		01	17.5	7	SF		3	E		31		
GOES	12	1148	1159	1210						22		C 5.4						
RAMY		1433	1434	1446D	N14	W50	6996	01	8.8	13D	SF	C 9.3	3	E		64		H
GOES		1734	1739	1743						9		C 3.4						
GOES		2022	2030	2045						23		C 2.2						
GOES	13	1723	1734	1807						44		M 2.0						
GOES		1859	1913	1931						32		M 1.3						
GOES		2248	2316	2335						47		C 3.3						
LEAR	14	0600	0608	0615	N25	W47	6999	01	10.6	15	SF		3	E		51		F
LEAR		0728	0733	0753	S06	W04	7007	01	14.0	25	1F	C 3.1	3	E		102		F
GOES		1149	1152	1157						8		C 1.5						
GOES		1306	1311	1313						7		C 1.7						
GOES		1449	1540	1556						67		C 1.8						
RAMY		1637	1637	1707	S15	E43	7008	01	17.9	30	SF	C 4.8	4	E		91		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	14	1935E	1939	2004	S11	E89		01	21.5	29D	SF	M 1.7	4	E		16		
GOES		2028	2143	2304						156		C 4.0						
LEAR		2330	2332	2357	S06	W13	7007	01	14.0	27	SF		3	E		51		F
GOES	15	0245	0347	0430						105		C 2.2						
GOES		0855	0907	0927						32		C 5.0						
GOES		1409	1417	1432						23		C 2.8						
SVTO		1434E	1435	1449	S09	E72	7012	01	21.0	15D	SF		3	E		67		
RAMY		1548	1549	1616	S12	E28	7008	01	17.8	28	SF	C 2.6	3	E		38		F
GOES		1849	1902	1916						27		M 2.0						
PALE		2156	2157	2206	S11	E25	7008	01	17.8	10	SF	C 1.0	3	E		20		F
GOES		2251	2256	2305						14		C 1.2						
GOES	16	0027	0032	0038						11		C 1.3						
GOES		0145	0155	0203						18		C 1.1						
LEAR		0326	0329	0340	S08	E24	7008	01	17.9	14	SF	B 9.7	3	E		21		
GOES		0458	0515	0544						46		B 9.7						
SVTO		1437	1439	1444	S10	E15	7008	01	17.7	7	SF		3	E		18		F
GOES		1743	1752	1757						14		C 4.8						
GOES		1823	1826	1833						10		C 1.3						
GOES	17	0409	0415	0420						11		C 1.0						
GOES		0421	0429	0454						33		C 1.4						
SVTO		0843	0848	0946	S10	E50	7012	01	21.1	63	SF	C 2.5	3	E		61		F
SVTO		1135	1137	1210	S07	E04	7008	01	17.8	35	SF		3	E		56		F
GOES		2231	2236	2241						10		C 1.6						
PALE	18	0033	0036	0045	S06	E43	7012	01	21.2	12	SF	C 2.4	3	E		36		
GOES		0205	0213	0222						17		B 9.1						
GOES		0800	0812	0825						25		C 1.1						
GOES		0826	0831	0840						14		C 1.1						
GOES		1535	1540	1545						10		B 8.4						
GOES		1729	1735	1749						20		C 1.0						
GOES		1847	1855	1906						19		C 1.3						
GOES		2033	2038	2044						11		C 1.0						
GOES		2114	2123	2157						43		C 1.8						
GOES		2158	2206	2213						15		C 4.9						
GOES		2216	2223	2227						11		C 5.2						
PALE		2240E	2240U	2305	S09	W30	7012	01	16.7	25D	SF		3	E		71		
GOES	19	0059	0102	0107						8		C 1.3						
GOES		0137	0141	0147						10		C 1.2						
GOES		0654	0701	0706						12		C 1.8						
GOES		1043	1047	1053						10		C 1.2						
SVTO		1051	1132	1144	N03	E70	7016	01	24.7	53	SF	C 1.4	2	E		34		
GOES		1208	1220	1231						23		C 1.4						
RAMY		1249	1250	1254	S05	W74	7007	01	14.0	5	SF		2	E		21		
SVTO		1424	1429	1437	N17	E18		01	21.0	13	SF		2	E		17		
SVTO		1436	1438	1449	N04	E66	7016	01	24.5	13	SF		2	E		30		
HOLL		1524	1542	1551	N03	E71	7016	01	24.9	27	SF		2	E		82		
PALE	20	0314	0314	0330	N17	E12	7019	01	21.0	16	SF	C 1.5	3	E		27		F
PALE		0345	0346	0403D	N03	E59	7016	01	24.6	18D	SF	C 1.1	2	E		20		
GOES		0506	0534	0546						40		C 2.0						
GOES		0749	0827	0905						76		C 4.7						
GOES		1432	1436	1443						11		C 1.3						
GOES		2108	2113	2119						11		C 1.1						
GOES	21	0028	0042	0100						32		C 1.1						
GOES		0242	0302	0344						62		C 1.2						
GOES		0428	0438	0458						30		C 1.2						
GOES		1448	1506	1524						36		C 1.5						
RAMY		1617	1617	1623	S13	E75	7026	01	27.3	6	SF	C 1.7	3	E		23		
RAMY		1902	1903	1916	N02	E41	7016	01	24.8	14	SF	C 2.4	3	E		14		F
RAMY		1936	1946	2014	N01	E40	7016	01	24.8	38	SF	M 1.3	3	E		84		F
GOES		2029	2046	2110						41		C 2.0						
HOLL		2214E	2214U	2225	N02	E38	7016	01	24.8	11D	SF		2	E		22		
HOLL		2300	2310	2326	N14	W12	7019	01	21.0	26	SF		2	E		67		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
LEAR	22	0206	0211	0240	N14	W12	7019	01	21.2	34	SF	C 1.3	3	E		34		F
LEAR		0336	0338	0354	S13	E69	7026	01	27.3	18	SF		3	E		34		
LEAR		0430	0432	0445	N13	W15	7019	01	21.0	15	SF	C 1.2	3	E		31		
LEAR		0530	0535	0543	S13	E69	7026	01	27.4	13	SF	C 2.7	3	E		72		
LEAR		0542	0556	0626	N02	E37	7016	01	25.0	44	SF	C 3.8	3	E		89		FE
LEAR		0808	0809	0817	N01	E35	7016	01	24.9	9	SF	C 1.8	3	E		26		F
SVTO		0949	0956	1042D	N01	E32	7016	01	24.8	53D	SF		2	E		39		F
GOES		0953	1136	1205						132		C 2.7						
LEAR		0955	0959	1005	N02	E33	7016	01	24.9	10	SF		3	E		68		F
HOLL		1744	1747	1807	N02	E28	7016	01	24.8	23	SF	C 1.3	3	E		45		F
GOES		1754	1759	1804						10		C 1.3						
HOLL		1832	1834	1855	N15	W23	7019	01	21.0	23	SF		3	E		33		
GOES		2021	2027	2035						14		C 1.5						
LEAR	23	0238	0239	0248	N00	E18	7016	01	24.4	10	1F	C 1.3	3	E		114		
GOES		1213	1221	1224						11		C 3.8						
GOES		1444	1449	1454						10		C 1.8						
RAMY		1522	1529	1553	N01	E17	7016	01	24.9	31	SF	C 2.2	2	E		65		F
HOLL		1528E	1530U	1606D	N01	E17	7016	01	24.9	38D	SN		2	E		56		F
HOLL		1606	1607	1658	S21	E12	7027	01	24.6	52	SF		3	E		19		
HOLL		1747	1748	1757	S21	E12	7027	01	24.7	10	SF		3	E		14		
PALE		1812	1819	1835	S21	E12	7027	01	24.7	23	SF		2	E		29		
HOLL		1815	1821	1828	S19	E07	7027	01	24.3	13	SF		3	E		14		
HOLL		2055	2102	2112	S21	E10	7027	01	24.6	17	SF		3	E		28		F
GOES		2242	2246	2248						6		C 1.6						
RAMY	24	1251	1252	1255	N14	W46	7019	01	21.0	4	SF	C 1.5	3	E		13		F
GOES		1450	1455	1502						12		C 1.5						
HOLL		1520E	1524U	1606D	N03	E02	7016	01	24.8	46D	SF		1	E		41		F
RAMY		1534	1535	1617	N01	E04	7016	01	24.9	43	SF	C 2.4	3	E		45		F
HOLL		1621	1622	1628	S05	E79		01	30.6	7	SF		3	E		33		
HOLL		1703	1716	1723	S05	E78	7031	01	30.5	20	SF		3	E		40		
HOLL		1821	1823	1838	S05	E75	7031	01	30.4	17	SF		3	E		12		
HOLL		2215	2218	2234	S07	E74	7031	01	30.5	19	SF	C 2.0	3	E		61		
HOLL		2359E	U	2407	S08	E69	7031	01	30.2	8D	SF		2	E		42		
LEAR	25	0003	0004	0015	S05	E75	7031	01	30.6	12	SF		3	E		22		
PALE		0103	0105	0127	N02	W02	7016	01	24.9	24	SF		2	E		29		F
LEAR		0103E	0105U	0147	N02	W02	7016	01	24.9	44D	SF	C 2.9	3	E		58		F
LEAR		0219	0219	0229	N03	W03	7016	01	24.9	10	SF		3	E		31		F
GOES		0344	0403	0438						54		C 1.8						
GOES		0823	0832	0851						28		C 4.1						
GOES		0945	0956	1004						19		C 2.7						
SVTO		1249E	1253U	1334D	S05	E68	7031	01	30.6	45D	SF		2	E		30		
SVTO		1250	1253U	1259	S18	W50	7012	01	21.7	9	SF		2	E		18		
SVTO		1252E	1252U	1257	S29	W54	7015	01	21.3	5D	SF		2	E		23		
GOES		1328	1337	1349						21		C 5.3						
GOES		1752	1807	1815						23		C 3.8						
GOES		1930	1949	1953						23		C 3.5						
PALE		2005	2005	2021	N07	E64	7030	01	30.6	16	SF	C 3.3	3	E		22		
GOES		2108	2113	2131						23		C 2.8						
PALE		2212	2216	2236	S12	E17	7026	01	27.2	24	SN	C 6.5	3	E		18		F
PALE		2257	2302	2315	N08	E63	7030	01	30.7	18	SN	C 8.9	3	E		63		F
PALE		2349	2358	2422	S02	E58	7031	01	30.3	33	SB	M 1.6	3	E		57		F
LEAR	26	0419	0423	0429	S05	E55	7031	01	30.3	10	SF		3	E		22		
SVTO		0809	0811	0831	S05	E56	7031	01	30.5	22	SF		3	E		22		
SVTO		0815	0817	0825	S18	W63	7012	01	21.5	10	SF		3	E		20		
SVTO		1045	1045U	1056	S09	E74		02	1.0	11	SF		3	E		18		
SVTO		1103	1132	1139	S10	E75		02	1.1	36	SF		3	E		22		
SVTO		1209	1210	1213	N04	W25	7016	01	24.6	4	SF		3	E		14		H
SVTO		1212	1220	1232	S06	E53	7031	01	30.5	20	SF		3	E		18		FE
SVTO		1220	1319	1444	N09	E60	7030	01	31.0	144	SF		3	E		31		
SVTO		1426	1445	1449D	S13	E07	7026	01	27.1	23D	SF	C 5.3	2	E		17		F
RAMY		1523	1529	1625	S16	W66	7012	01	21.6	62	3B	X 1.0	3	E		659		F
GOES		1636	1649	1707						31		C 4.5						
PALE		1741	1742	1808	S06	E49	7031	01	30.4	27	SF		2	E		16		F
RAMY		1742	1742	1803	S09	E48	7031	01	30.3	21	SF		3	E		22		

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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
HOLL	26	2152E	2155U	2201	S22	E90		02	2.8	9D	SF	C 3.7	3	E		51		
LEAR		2257	2337	2406	S05	E46	7031	01	30.4	69	1F		3	E		120		FE
PALE		2333	2335	2349	S04	E47	7031	01	30.5	16	SF	C 6.1	3	E		23		F
PALE		2349	2358	2422	S02	E58	7031	01	31.3	33	SB		3	E		57		F
GOES	27	0136	0141	0144						8		C 3.3						
SVTO		0830E	0832U	0842	N08	E43	7030	01	30.6	12D	SF		2	E		16		F
SVTO		0844	0855	0909	S07	E40	7031	01	30.4	25	SF	C 3.1	3	E		42		
SVTO		0934	0936	0938	S06	E39	7031	01	30.3	4	SF		3	E		14		
GOES		0952	1007	1024						32		C 2.7						
GOES		1736	1745	1750						14		C 1.8						
LEAR	28	0010	0011	0018	S11	E20	7038	01	29.5	8	SF		3	E		19		
GOES		0138	0151	0203						25		C 2.6						
PALE		0210	0211	0218	N04	W48	7016	01	24.5	8	SF		3	E		16		H
GOES		0738	0805	0818						40		C 4.6						
RAMY		1442	1443	1503	S10	E42	7033	01	31.8	21	SF	C 2.2	3	E		11		F
HOLL		1654	1710	1759	S18	E70		02	3.0	65	1F	C 6.9	3	E		145		F
HOLL		1749	1750	1810	S05	E22	7031	01	30.4	21	SF	C 3.7	4	E		27		
HOLL		1827	1832	1838	S03	E16	7031	01	30.0	11	SF	C 2.5	4	E		54		E
HOLL		1931	1950	2024	S09	E19	7031	01	30.2	53	SF		3	E		17		
HOLL		2044	2046	2053	S03	E15	7031	01	30.0	9	SF		4	E		42		H
HOLL		2103	2103	2118	S15	E74	7039	02	3.5	15	SF	C 3.4	4	E		25		
HOLL		2141	2202	2210	S02	E14	7031	01	29.9	29	SF	C 3.3	3	E		81		EH
HOLL		2225	2226	2241	S03	E14	7031	01	30.0	16	SF		3	E		26		
HOLL		2251	2308	2350	N05	E11	7032	01	29.8	59	SF	C 3.9	3	E		30		
GOES	29	0117	0121	0127						10		C 2.2						
LEAR		0200	0201	0214	S20	E64	7035	02	3.0	14	SF		3	E		18		
LEAR		0219	0228	0241	S05	E17	7031	01	30.4	22	SN	C 3.1	3	E		92		F
GOES		0306	0316	0324						18		C 5.1						
LEAR		0534	0540	0544	S02	E10	7031	01	30.0	10	SF		3	E		36		F
LEAR		0608	0616	0642	S12	E04	7038	01	29.5	34	SF	C 6.8	3	E		52		F
LEAR		0636	0637	0639	S05	E14	7031	01	30.3	3	SF		3	E		18		F
LEAR		0711	0745	0815	S12	E03	7038	01	29.5	64	SF	C 3.6	3	E		53		
SVTO		0806E	0814U	0825D	S11	E01	7038	01	29.4	19D	SF		2	E		25		F
SVTO		1001E	1003U	1034D	S11	E01	7038	01	29.5	33D	SF	C 7.3	3	E		37		
LEAR		1015E	1015U	1036	S11	E04	7038	01	29.7	21D	SF		2	E		61		F
RAMY		1318	1320	1326	S04	E14	7031	01	30.6	8	SF		3	E		17		
SVTO		1325	1443U	1507	S12	W01	7038	01	29.5	102	1F		3	E		100		
RAMY		1328	1329	1342	S09	E11	7031	01	30.4	14	SF		3	E		33		
RAMY		1434	1451	1535	S12	W01	7038	01	29.5	61	SF	C 8.9	3	E		57		FH
RAMY		1539	1543	1607	S16	E66	7039	02	3.6	28	1F	C 9.9	3	E		104		
RAMY		1539	1547	1618	S12	W01	7038	01	29.6	39	SF		3	E		15		F
HOLL		1543E	1546	1602	S15	E65	7039	02	3.6	19D	SN		3	E		56		FE
HOLL		1544	1610	1640	S11	W03	7038	01	29.4	56	SF		3	E		28		
HOLL		1546	1547	1613	N00	E10	7031	01	30.4	27	SF		2	E		11		F
RAMY		1557	1559	1609	N01	E11	7031	01	30.5	12	SF		3	E		10		
HOLL		1636	1639	1649	S19	E56	7039	02	3.0	13	SF		3	E		12		
RAMY		1648	1652	1701	S12	W02	7038	01	29.5	13	SF		3	E		11		F
HOLL		1717	1718	1743	S13	E68	7039	02	3.8	26	SF	C 5.5	3	E		37		F
RAMY		1723	1724	1744	S14	E70	7039	02	4.0	21	SF		3	E		57		
RAMY		1745	1754	1804	S14	E69	7039	02	3.9	19	SF		3	E		22		
RAMY		1749	1751	1811	S12	W03	7038	01	29.5	22	SF		3	E		12		
HOLL		1830	1832	1850	S20	E55	7039	02	3.0	20	SF		3	E		32		
GOES		1921	1953	2008						47		C 4.3						
HOLL		1928	1931	1940	S10	E28	7033	01	31.9	12	SF		3	E		15		F
HOLL		1930	1944	2000	S15	E65	7039	02	3.7	30	SF		3	E		38		FE
HOLL		1949	2012	2032	S12	W05	7038	01	29.4	43	SN		3	E		28		FE
HOLL		2224	2226	2238	S11	E26	7033	01	31.9	14	SF		3	E		10		F
HOLL		2233	2235	2344D	S03	E01	7031	01	30.0	71D	SN	C 3.1	3	E		70		FE
LEAR		2234	2237	2253	S04	E06	7031	01	30.4	19	SN		2	E		66		F
LEAR	30	0008	0009	0014	S04	E10	7031	01	30.7	6	SF		3	E		17		
LEAR		0057	0058	0105	S11	W08	7038	01	29.4	8	SF		3	E		26		
LEAR		0125	0126	0130	S14	W45	7040	01	26.6	5	SF		3	E		34		
LEAR		0223	0234	0315	S02	W02	7031	01	29.9	52	2N	M 1.6	3	E		594		FE
LEAR		0420	0432	0451	S10	E22	7033	01	31.8	31	SF	C 3.7	3	E		27		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	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	30	0603	0606U	0659	S07	E01	7031	01	30.3	56	1F	C 3.9	3	E		106		F
LEAR		0603	0625	0659	S20	E01	7031			56	1F			E		111		K
LEAR		0636	0654	0711	S11	E21	7033	01	31.8	35	2N		3	E		474		FE
SVTO		0728E	0731U	0819	S05	E00	7031	01	30.3	51D	SF		2	E		18		F
LEAR		0802	0803	0821	S02	W06	7031	01	29.9	19	SF		3	E		20		F
SVTO		0826	0924	1146D	S13	E52	7039	02	3.3	200D	SF		3	E		67		
LEAR		0847	0849	0904	N06	W01	7037	01	30.3	17	SF	C 2.4	3	E		56		
SVTO		0933	0942	0945	S06	E00		01	30.4	12	2B		3	E		481		
LEAR		0935	0938	1013	S03	W06	7031	01	29.9	38	2B	M 4.9	3	E		502		F
SVTO		0937	0944	0953	N06	W03	7037	01	30.2	16	SF		3	E		38		
SVTO		1015	1018	1116	S12	W12	7038	01	29.5	61	SF		2	E		53		
SVTO		1025	1032	1048	N18	W17	7029	01	29.1	23	SF		3	E		21		
SVTO		1044	1048	1116	S10	E18	7033	01	31.8	32	SF		2	E		41		
SVTO		1127	1129	1134	N18	W17	7029	01	29.2	7	SF		2	E		32		
SVTO		1204	1206	1242	S14	E58	7039	02	3.9	38	SF		3	E		55		
RAMY		1206	1207	1234	S15	E57	7039	02	3.8	28	SF	C 5.2	3	E		35		F
RAMY		1209	1235	1323	S11	E22	7033	02	1.2	74	SF		3	E		37		
SVTO		1211	1237	1302	S10	E17	7033	01	31.8	51	SF		3	E		52		
RAMY		1343	1345	1400	S04	W03	7031	01	30.3	17	SF		3	E		12		
SVTO		1356	1357U	1425D	S14	W43	7026	01	27.3	29D	2N		3	E		304		UF
SVTO		1357	1413	1425D	S19	W54	7025	01	26.5	28D	1F		3	E		118		
RAMY		1359	1400	1443	S14	W47	7026	01	27.0	44	1F	M 1.8	3	E		170		F
RAMY		1418	1424	1431	S15	E80		02	5.6	13	SF		3	E		22		
RAMY		1432	1433	1445	S11	E19	7033	02	1.0	13	SF		3	E		29		
HOLL		1433E	1433U	1545D	S14	W45	7026	01	27.2	72D	1F		1	E		116		FH
HOLL		1433E	1433U	1556	S17	E10	7033	01	31.4	83D	SF		1	E		36		FH
RAMY		1542	1543	1548	S11	E18	7033	02	1.0	6	SF		3	E		16		
HOLL		1556E	1600U	1609	S22	W75	7027	01	24.9	13D	SF		3	E		49		H
RAMY		1558	1558	1603	S21	W79	7027	01	24.6	5	SF	C 7.0	3	E		19		
HOLL		1656	1709	1729	S13	E84	7042	02	6.0	33	SN	M 1.6	3	E		43		
RAMY		1656	1710	1730	S14	E86	7042	02	6.2	34	SF		3	E		25		
HOLL		1702	1737	1751	S10	E18	7033	02	1.1	49	SF		3	E		21		
HOLL		1750	1815	1833	S12	W17	7038	01	29.5	43	SF		3	E		20		
HOLL		1924	1946	1959	S12	W18	7038	01	29.4	35	SF		3	E		25		F
HOLL		1935	1958	2142	S07	W06	7031	01	30.4	127	2B	M 2.4	4	E		217		ZU
HOLL		1935	1958	2142	S07	W06	7031			127	2B			E		258		K
HOLL		1942	1951	2017	S11	E13	7033	01	31.8	35	SB		3	E		85		F
PALE		2012E	2014	2204D	S07	W07	7031	01	30.3	112D	SN		4	E		62		F
HOLL		2015	2016	2033	S13	W16	7038	01	29.6	18	SF		3	E		30		F
HOLL		2050	2056	2100	S13	E83	7042	02	6.1	10	SF		3	E		22		
HOLL		2154	2155	2206	N06	W03	7030	01	30.7	12	SF		3	E		20		F
LEAR		2319	2332	2431	S07	W09	7031	01	30.3	72	1F	C 8.4	3	E		153		F
HOLL		2320	2324	2324D	S07	W08	7031	01	30.4	4D	SF		2	E		52		FH
PALE		2324	2336	2358	S08	W08	7031	01	30.4	34	SF		3	E		79		F
GOES	31	0001	0004	0006						5		C 6.2						
LEAR		0317	0337	0434	S23	E46	7039	02	3.7	77	SF		3	E		90		
LEAR		0333	0337	0340	S05	W10	7031	01	30.4	7	SF		3	E		44		
LEAR		0356	0401	0421	S05	W11	7031	01	30.3	25	SF		3	E		44		
LEAR		0423	0447	0556	S06	W10	7031	01	30.4	93	SF		3	E		89		
LEAR		0608	0610	0624	S13	E66	7042	02	5.2	16	SF	C 3.6	3	E		62		
LEAR		0609	0610	0616	S27	E76		02	6.2	7	SF		3	E		35		
LEAR		0645	0710	0750	S28	E78		02	6.4	65	SF		3	E		23		
LEAR		0701	0706	0727	S11	E09	7033	02	1.0	26	SF		3	E		32		
SVTO		0706	0707	0916	S11	E07	7033	01	31.8	130	SF		2	E		21		F
SVTO		0901	0906	0909	N07	W06	7030	01	30.9	8	SF		3	E		41		
SVTO		0915	0922	1010	N07	W06	7030	01	30.9	55	SF		2	E		68		
SVTO		1122	1126	1136	S03	W20	7031	01	30.0	14	SF		2	E		47		
SVTO		1216	1220	1402	S09	W15	7031	01	30.4	106	SF	C 5.9	3	E		75		ZF
RAMY		1217	1246	1342	S07	W16	7031	01	30.3	85	SF		3	E		50		F
RAMY		1229	1235	1248	S16	E42	7039	02	3.7	19	SF		3	E		24		
GOES		1435	1507	1518						43		C 6.1						
HOLL		1634	1636	1646	S08	W19	7031	01	30.3	12	SF		3	E		13		F
RAMY		1738	1740	1745	S05	W19	7031	01	30.3	7	SF		3	E		16		F
RAMY		1801	1810	1825	S16	E38	7039	02	3.6	24	SF	C 4.6	3	E		42		F
PALE		1803	1804	1824	S15	E38	7039	02	3.6	21	SF		1	E		35		F
PALE		1850	1855	1948	N07	W25	7032	01	29.9	58	1N	M 1.5	3	E		222		UF
PALE		1912	1916	1947	S03	W24	7031	01	30.0	35	1F	M 1.9	3	E		173		F

Hα SOLAR FLARES

JANUARY 1992

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	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	31	1917E	1917U	1935	S03	W21	7031	01	30.2	18D	1F		3	E		172		F
HOLL		1929E	1929U	2015	S03	W19	7031	01	30.4	46D	1F		2	E		136		F
HOLL		1929E	1929U	2039	N07	W24	7032	01	30.0	70D	SF		2	E		90		U
HOLL		2218E	2220	2228	N18	W41	7029	01	28.8	10D	SF		2	E		37		

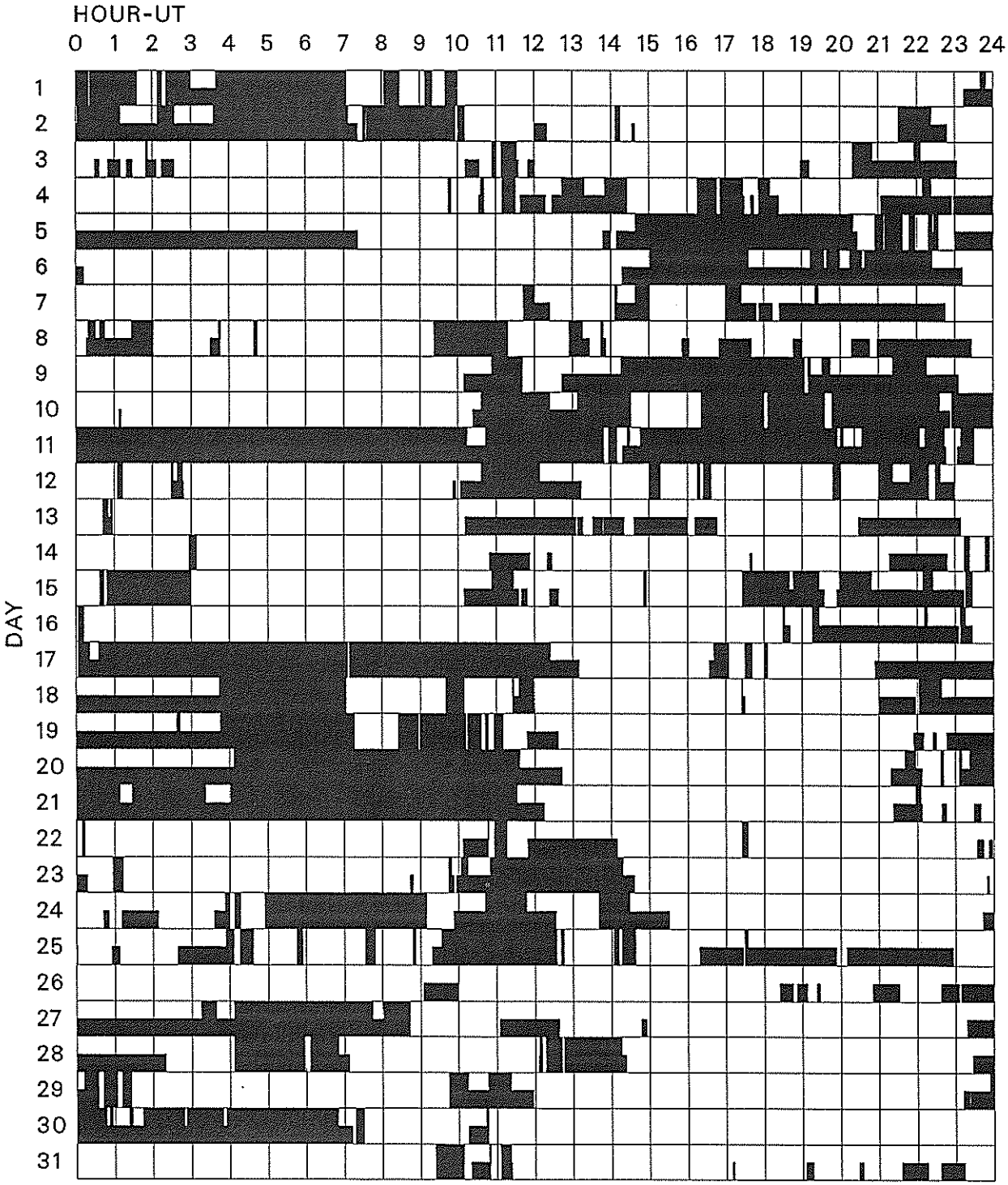
"Remarks"

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.

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

JANUARY 1992



Times of no flare patrol, shown here as shaded areas, combine reports from the observatories listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind, that is, of neither visual nor cinematographic; portions of a panel with only the bottom half shaded mark times of strictly visual patrol.

Holloman Learmonth Palehua Ramey San Vito

SOLAR RADIO EMISSION
Selected Fixed Frequency Events

JANUARY 1992

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
01	8800	PALE	8	S	0306.0E	0306.0	2.0D	88.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	0306.0E	0308.0	1254.0D	48.0			QL=4 ST=1 TYP=3
	2695	LEAR	4	S/F	0327.0E	0330.0	9.0D	170.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0328.0E	0330.0	7.0D	170.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	0328.0E	0330.0	6.0D	130.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	0328.0E	0330.0	10.0D	140.0			QL=4 ST=2 TYP=5
	2695	SVTO	8	S	0931.0E	0931.0	1.0D	64.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1124.0E	1127.0	5.0D	200.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1124.0E	1127.0	5.0D	86.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	1959.0E	2000.0	1.0D	27.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1959.0E	2003.0	5.0D	31.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1959.0E	2003.0	5.0D	34.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	2003.0E	2003.0	U	33.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	2022.0E	2023.0	1.0D	86.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	2022.0E	2023.0	1.0D	42.0			QL=4 ST=2 TYP=3
	8800	PALE	49	GB	2031.0E	2032.0	6.0D	630.0			QL=4 ST=2 TYP=6
	2695	SGMR	4	S/F	2031.0E	2032.0	6.0D	270.0			QL=2 ST=2 TYP=3
	8800	SGMR	4	S/F	2031.0E	2032.0	6.0D	200.0			QL=2 ST=2 TYP=3
	8800	PALE	4	S/F	2044.0E	2044.0	6.0D	23.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	2044.0E	2044.0	3.0D	50.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	2215.0E	2216.0	2.0D	34.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	2215.0E	2216.0	2.0D	49.0			QL=4 ST=2 TYP=3
02	8800	LEAR	8	S	0505.0E	0505.0	2.0D	110.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0506.0E	0506.0	U	24.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	0651.0E	0652.0	3.0D	180.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0651.0E	0652.0	2.0D	83.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	0651.0E	0652.0	5.0D	150.0			QL=2 ST=2 TYP=3
	8800	SVTO	8	S	0652.0E	0652.0	U	35.0			QL=2 ST=2 TYP=3
	2695	SVTO	8	S	1217.0E	1218.0	2.0D	51.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1217.0E	1219.0	2.0D	32.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	1927.0E	1928.0	1.0D	86.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1927.0E	1928.0	1.0D	81.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	2103.0E	2106.0	5.0D	100.0			QL=4 ST=2 TYP=3
03	2695	LEAR	4	S/F	0713.0E	0713.0	4.0D	65.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0713.0E	0719.0	8.0D	63.0			QL=4 ST=2 TYP=5
	2695	SVTO	4	S/F	0713.0E	0713.0	4.0D	83.0			QL=4 ST=2 TYP=5
	8800	LEAR	8	S	0716.0E	0716.0	2.0D	37.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1658.0E	1700.0	4.0D	51.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1713.0E	1714.0	2.0D	99.0			QL=4 ST=3 TYP=3
	2695	PALE	4	S/F	1733.0E	1758.0	80.0D	260.0			QL=4 ST=2 TYP=5
	2695	SGMR	4	S/F	1741.0E	1758.0	48.0D	220.0			QL=4 ST=2 TYP=5
	8800	SGMR	20	GRF	1752.0E	1758.0	27.0D	61.0			QL=4 ST=2 TYP=2
	2695	PALE	4	S/F	2208.0E	2209.0	3.0D	27.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	2209.0E	2209.0	1.0D	36.0			QL=4 ST=2 TYP=3
04	2695	SVTO	4	S/F	1111.0E	1112.0	3.0D	50.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1112.0E	1112.0	1.0D	20.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1342.0E	1343.0	1.0D	74.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1343.0E	1343.0	U	78.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1343.0E	1343.0	U	47.0			QL=2 ST=2 TYP=3
	2695	PALE	4	S/F	1828.0E	1832.0	8.0D	290.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	1829.0E	1832.0	7.0D	85.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1830.0E	1832.0	6.0D	290.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1831.0E	1832.0	2.0D	88.0			QL=2 ST=2 TYP=3
05	2695	PALE	8	S	0250.0E	0250.0	1.0D	29.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1315.0E	1317.0	5.0D	100.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1315.0E	1317.0	4.0D	42.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1317.0E	1317.0	2.0D	72.0			QL=4 ST=2 TYP=3
07	8800	PALE	49	GB	0110.0E	0114.0	4.0D	1300.0			QL=4 ST=2 TYP=7
	2695	LEAR	8	S	0405.0E	0406.0	1.0D	29.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0412.0E	0413.0	5.0D	93.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1451.0E	1451.0	2.0D	53.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	2021.0E	2022.0	5.0D	170.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	2021.0E	2022.0	4.0D	77.0			QL=2 ST=2 TYP=5
	2695	SGMR	4	S/F	2021.0E	2022.0	4.0D	140.0			QL=2 ST=2 TYP=3

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

JANUARY 1992

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
09	8800	SGMR	4	S/F	1240.0E	1242.0	5.0D	140.0			QL=2 ST=2 TYP=3
	2695	SGMR	4	S/F	1240.0E	1240.0	5.0D	120.0			QL=2 ST=2 TYP=3
	8800	SVTO	4	S/F	1240.0E	1242.0	6.0D	210.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1240.0E	1241.0	4.0D	160.0			QL=4 ST=2 TYP=3
13	8800	SGMR	49	GB	1725.0E	1728.0	8.0D	840.0			QL=4 ST=2 TYP=6
	2695	SGMR	4	S/F	1727.0E	1729.0	4.0D	74.0			QL=4 ST=2 TYP=3
14	8800	SGMR	8	S	1633.0E	1633.0	U	31.0			QL=2 ST=2 TYP=3
	8800	SGMR	8	S	1927.0E	1928.0	1.0D	31.0			QL=2 ST=2 TYP=3
15	2695	LEAR	8	S	0507.0E	0507.0	U	29.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	1852.0E	1855.0	6.0D	50.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	1852.0E	1855.0	10.0D	82.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1852.0E	1855.0	10.0D	71.0			QL=4 ST=2 TYP=5
	2695	SGMR	4	S/F	1855.0E	1855.0	4.0D	40.0			QL=4 ST=2 TYP=3
21	8800	SGMR	8	S	1941.0E	1942.0	1.0D	33.0			QL=4 ST=3 TYP=3
26	8800	SGMR	49	GB	1525.0E	1528.0	30.0D	1100.0			QL=4 ST=2 TYP=6
	2695	SGMR	4	S/F	1525.0E	1528.0	30.0D	360.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1526.0E	1528.0	7.0D	370.0			QL=2 ST=3 TYP=3
	8800	SVTO	49	GB	1527.0E	1528.0	6.0D	990.0			QL=2 ST=3 TYP=6
28	8800	SGMR	8	S	1749.0E	1749.0	U	27.0			QL=2 ST=2 TYP=3
29	2695	LEAR	8	S	2233.0E	2233.0	1.0D	77.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	2233.0E	2233.0	2.0D	150.0			QL=4 ST=2 TYP=3
30	8800	LEAR	8	S	0227.0E	0228.0	2.0D	110.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	0227.0E	0230.0	3.0D	33.0			QL=4 ST=2 TYP=5
	2695	PALE	4	S/F	0227.0E	0229.0	3.0D	32.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	0227.0E	0228.0	1293.0D	96.0			QL=4 ST=1 TYP=3
	8800	LEAR	49	GB	0935.0E	0936.0	16.0D	620.0			QL=4 ST=2 TYP=6
	2695	SVTO	49	GB	0935.0E	0936.0	11.0D	590.0			QL=4 ST=2 TYP=6
	8800	SVTO	49	GB	0935.0E	0936.0	11.0D	650.0			QL=2 ST=2 TYP=6
	2695	LEAR	49	GB	0935.0E	0936.0	26.0D	570.0			QL=4 ST=2 TYP=6
	8800	SGMR	4	S/F	1355.0E	1356.0	3.0D	59.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1355.0E	1357.0	4.0D	82.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1355.0E	1357.0	5.0D	140.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	1934.0E	1946.0	162.0D	110.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	1935.0E	1946.0	83.0D	230.0			QL=4 ST=2 TYP=5
	2695	SGMR	4	S/F	1936.0E	1946.0	91.0D	200.0			QL=4 ST=2 TYP=5
	8800	SGMR	20	GRF	1939.0E	1946.0	92.0D	87.0			QL=4 ST=2 TYP=2
31	2695	PALE	4	S/F	1855.0E	1857.0	305.0D	44.0			QL=4 ST=3 TYP=3
	8800	PALE	4	S/F	1855.0E	1857.0	305.0D	37.0			QL=4 ST=3 TYP=3
	8800	PALE	4	S/F	1912.0E	1914.0	5.0D	430.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1912.0E	1914.0	6.0D	460.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	1913.0E	1914.0	7.0D	230.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1913.0E	1914.0	5.0D	230.0			QL=4 ST=2 TYP=3

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

Explanation of Type Code:

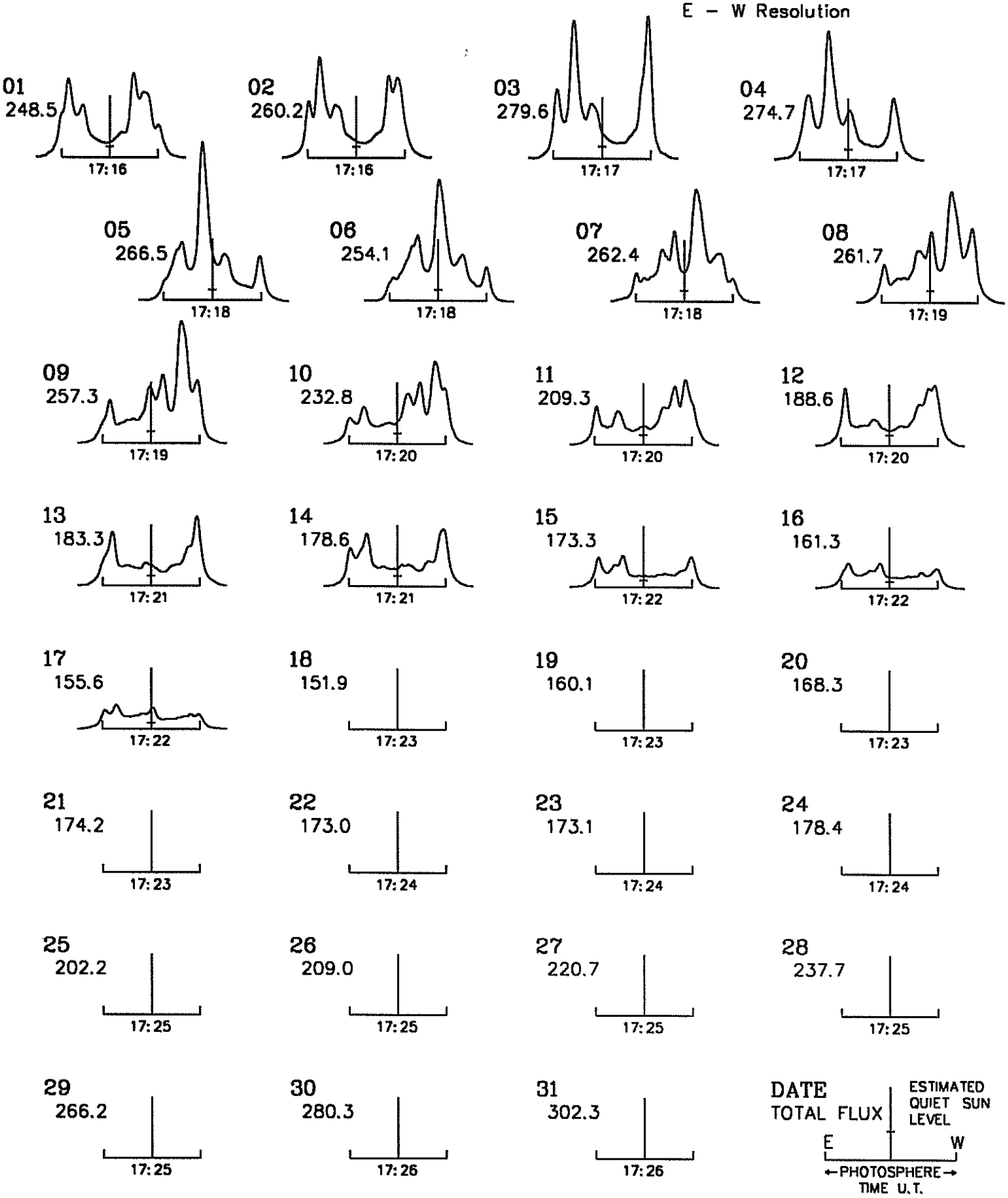
1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple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

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

EAST – WEST SOLAR SCANS
JANUARY 1992

ALGONQUIN RADIO OBSERVATORY
CANADA

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

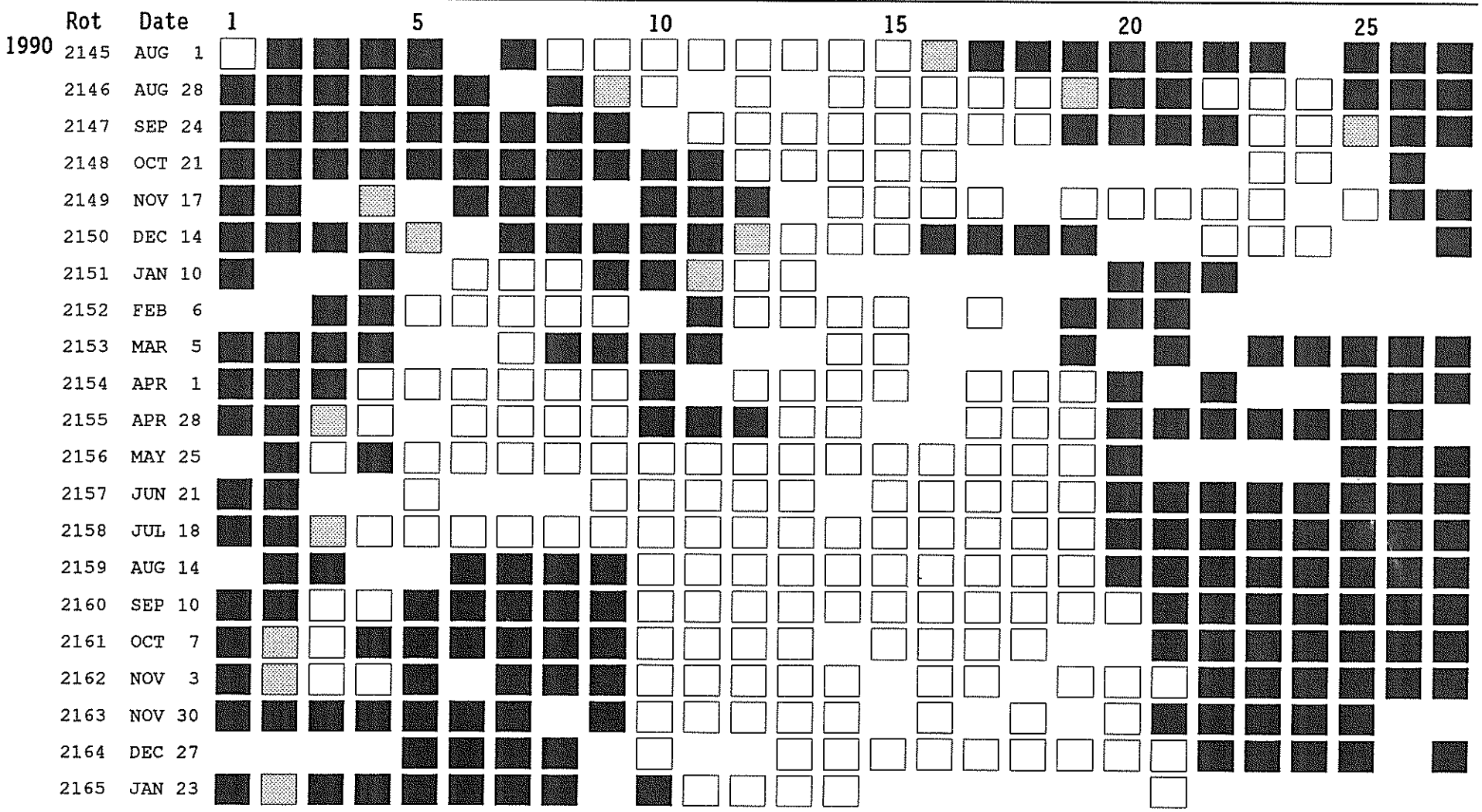


STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

Day	1991 Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1992 Jan
1	.	.	-75	10	38	54	123	54	-89	-82	-20	-97
2	.	.	-47	.	21	90	116	-8	-78	-57	-14	-78
3	.	.	-8	68	17	106	119	-37	-91	-37	-17	-45
4	.	.	11	80	31	.	87	-67	-88	-1	-28	.
5	.	-100	55	63	44	132	49	-75	-75	21	-44	53
6	.	-88	69	5	52	156	-23	-89	-50	4	-55	.
7	.	-36	73	-40	89	154	-60	-104	-22	-27	.	.
8	-99	-6	74	-51	116	89	-93	-104	-1	.	-28	104
9	-54	.	43	-23	157	32	-105	-157	19	-80	23	101
10	7	.	-27	36	153	-19	-129	-55	-8	-79	81	125
11	72	45	.	101	115	-60	-131	-15	-47	-43	92	145
12	97	-39	19	.	64	-123	-136	4	-66	24	04	126
13	73	-63	79	.	-11	-144	-113	11	-90	71	87	102
14	27	-112	144	209	.	-170	.	-35	-88	111	.	54
15	.	-70	148	127	.	-168	-54	-52	-65	95	128	37
16	-6	.	.	42	.	-139	-36	-91	18	88	.	12
17	26	.	116	-30	.	-118	.	-64	65	.	103	-21
18	89	131	60	-157	-130	-101	.	-55	103	114	.	-43
19	142	137	16	-198	-94	-41	-23	11	99	127	43	-46
20	175	.	-38	-203	-94	0	-44	106	.	.	-16	-20
21	.	.	.	-165	-74	18	-69	102	142	77	-9	.
22	85	.	-208	-102	-24	45	-37	93	133	54	-73	-6
23	.	-52	.	-80	.	84	16	102	109	26	-102	-16
24	-11	.	.	.	.	88	41	126	79	-27	-101	0
25	-93	-163	-98	.	12	56	53	132	.	-102	.	-46
26	-134	.	-80	-6	.	37	89	115	.	-126	.	-36
27	.	-113	-71	2	.	54	100	91	-68	-123	.	-113
28	.	-79	-61	-8	.	67	119	72	-95	-89	.	-126
29		-75	-29	6	34	101	111	49	-121	-72	.	-115
30		-79	-2	32	40	111	99	-47	-116	46	.	-74
31		-87		46		115	71		-108		-72	.

Dot symbol indicates no data available for the day.

STANFORD MEAN SOLAR MAGNETIC FIELD



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

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

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

C O N T E N T S

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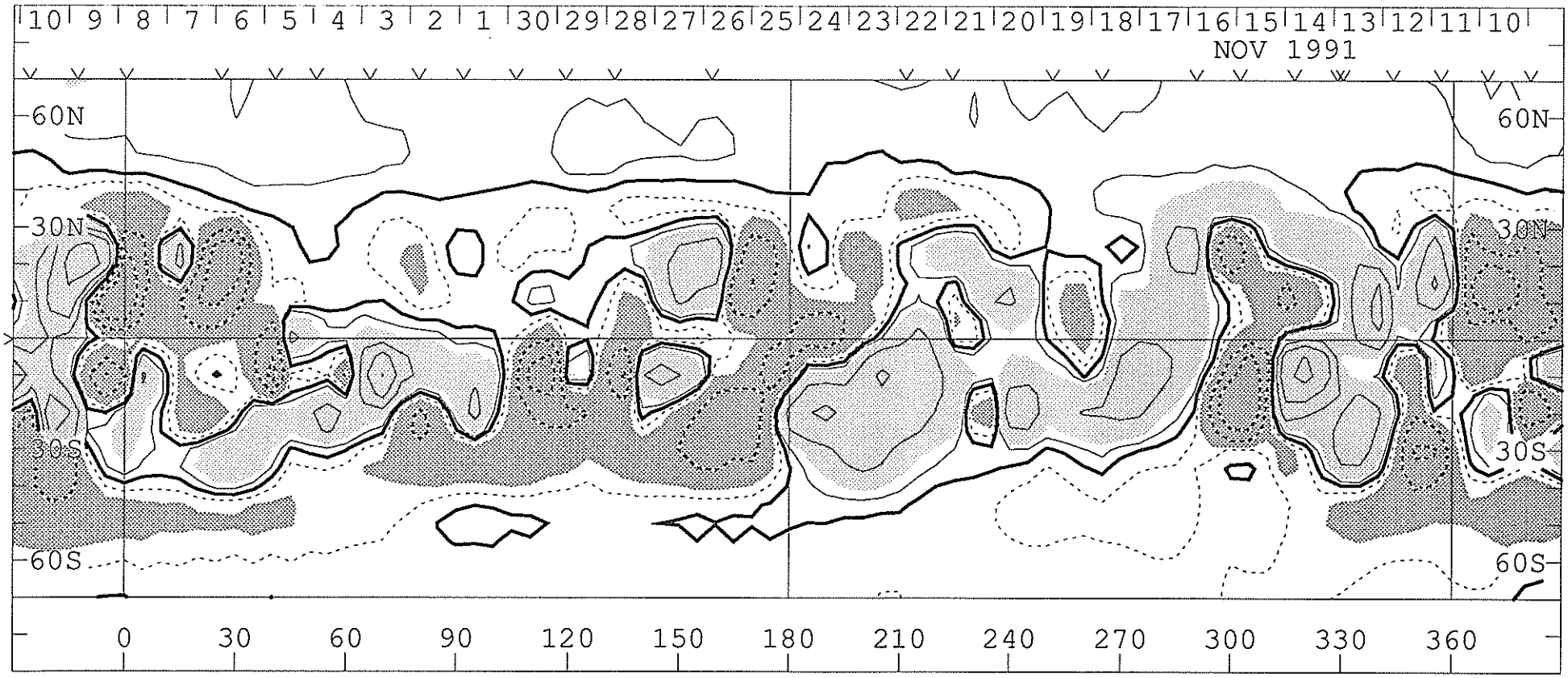
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1849
(11 November to 8 December 1991)

WILCOX SOLAR OBSERVATORY

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



Heliographic Longitude

1849

SOLAR MAGNETIC FIELD SYNOPTIC CHART

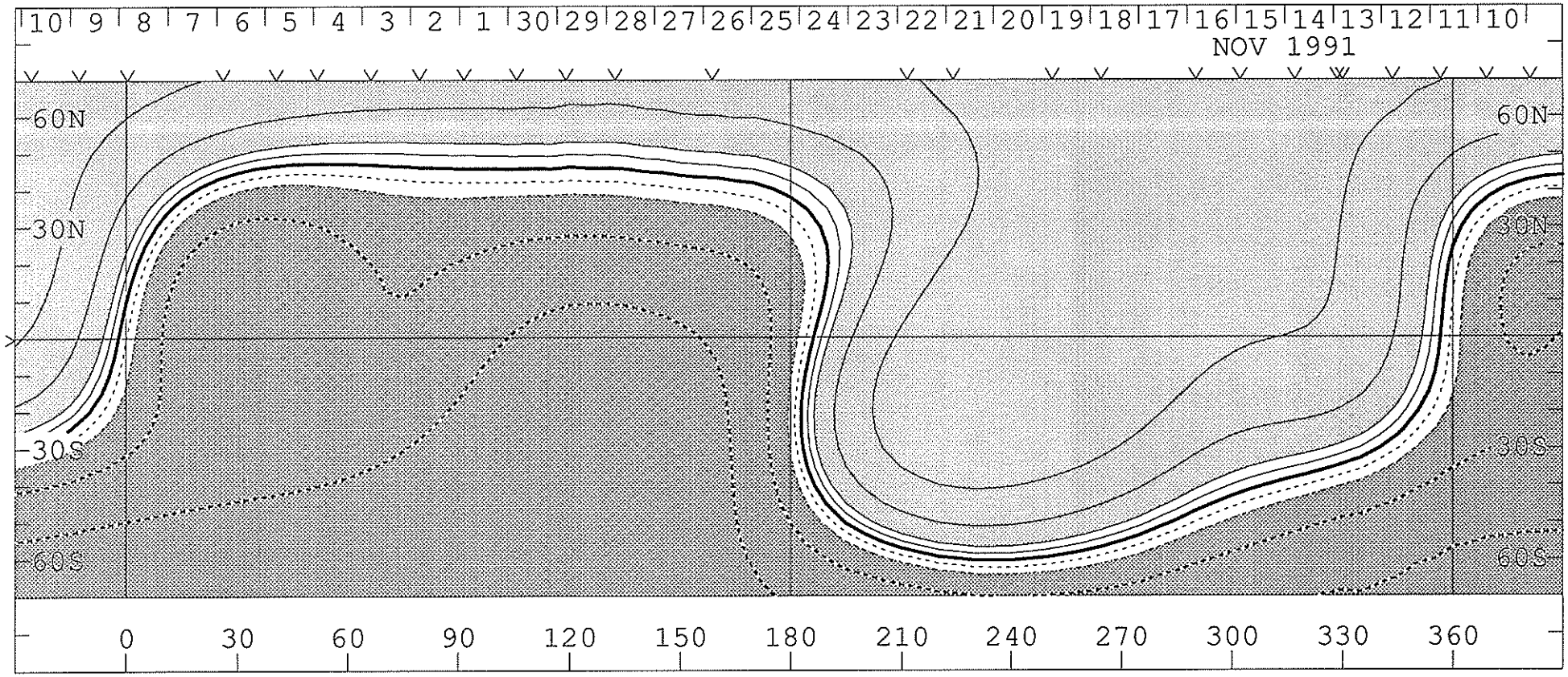
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1849

(11 November to 8 December 1991)

Wilcox Solar Observatory

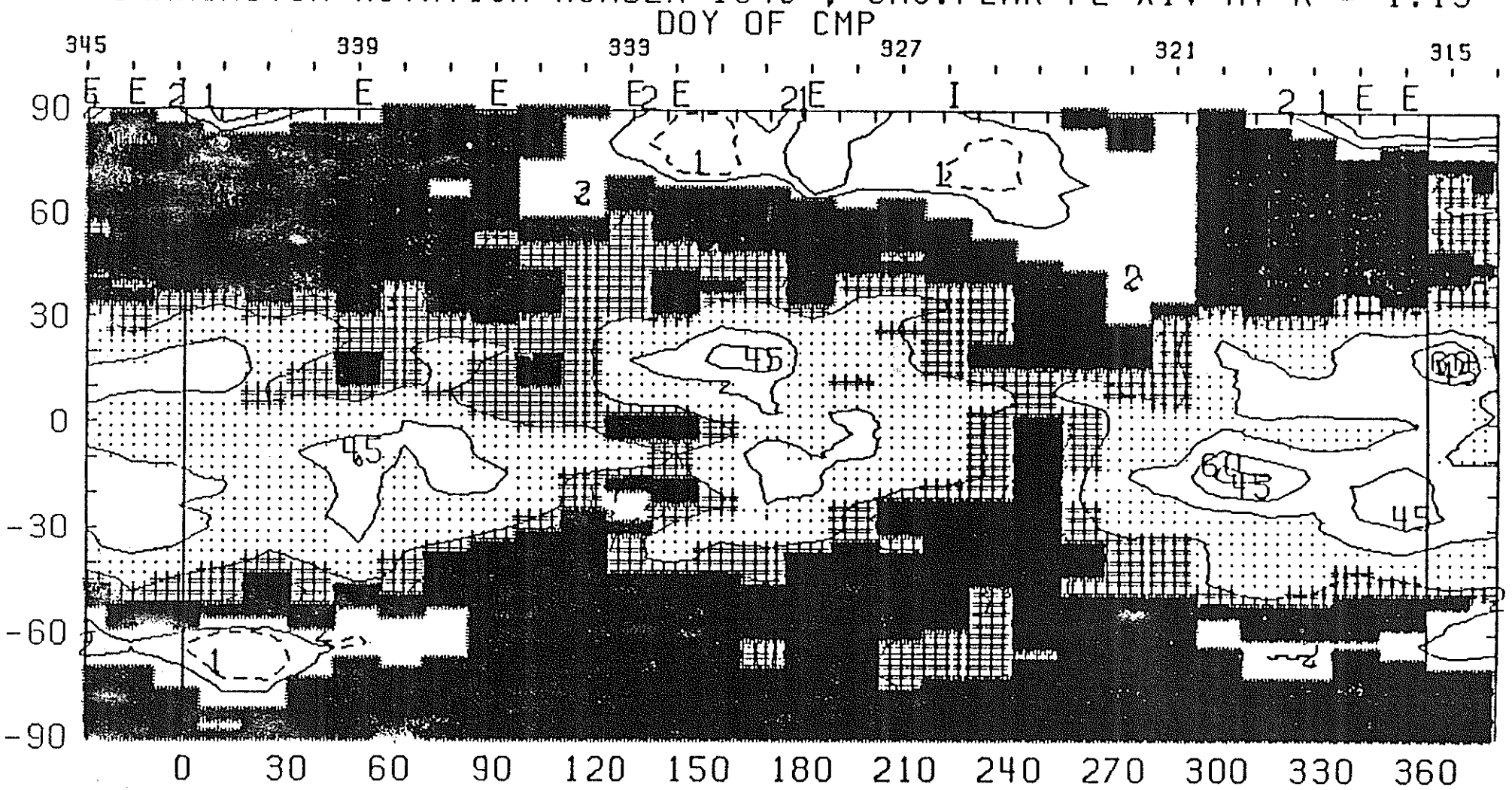
0, ±1, 2, 5, 10, 20 microTesla



Heliographic Longitude

1849

CARRINGTON ROTATION NUMBER 1849 ; SAC.PEAK FE XIV AT R = 1.15

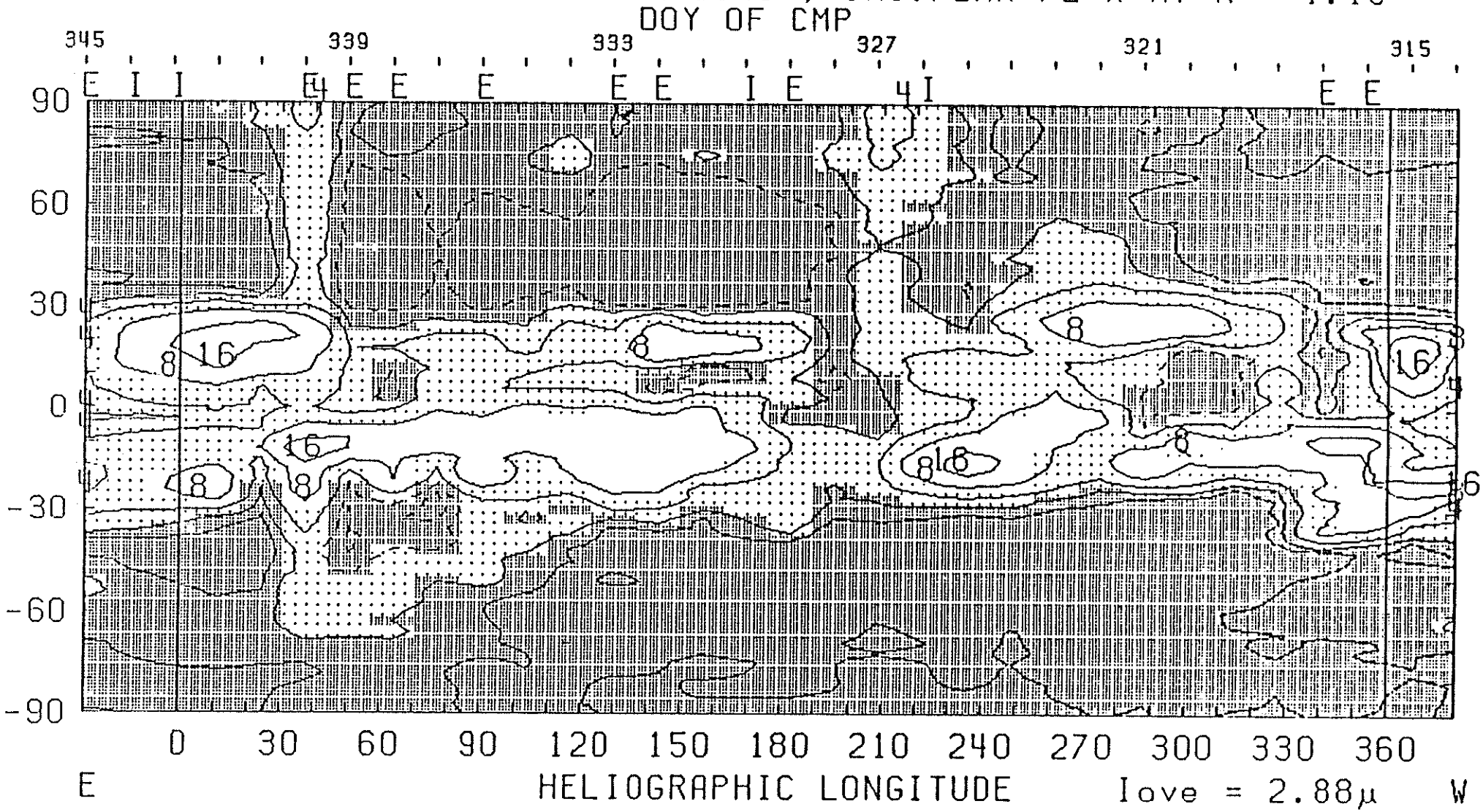


Iave = 12.92μ

1991 W+E LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF Io

(4-Feb-92) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK

CARRINGTON ROTATION NUMBER 1849 ; SAC.PEAK FE X AT R = 1.15

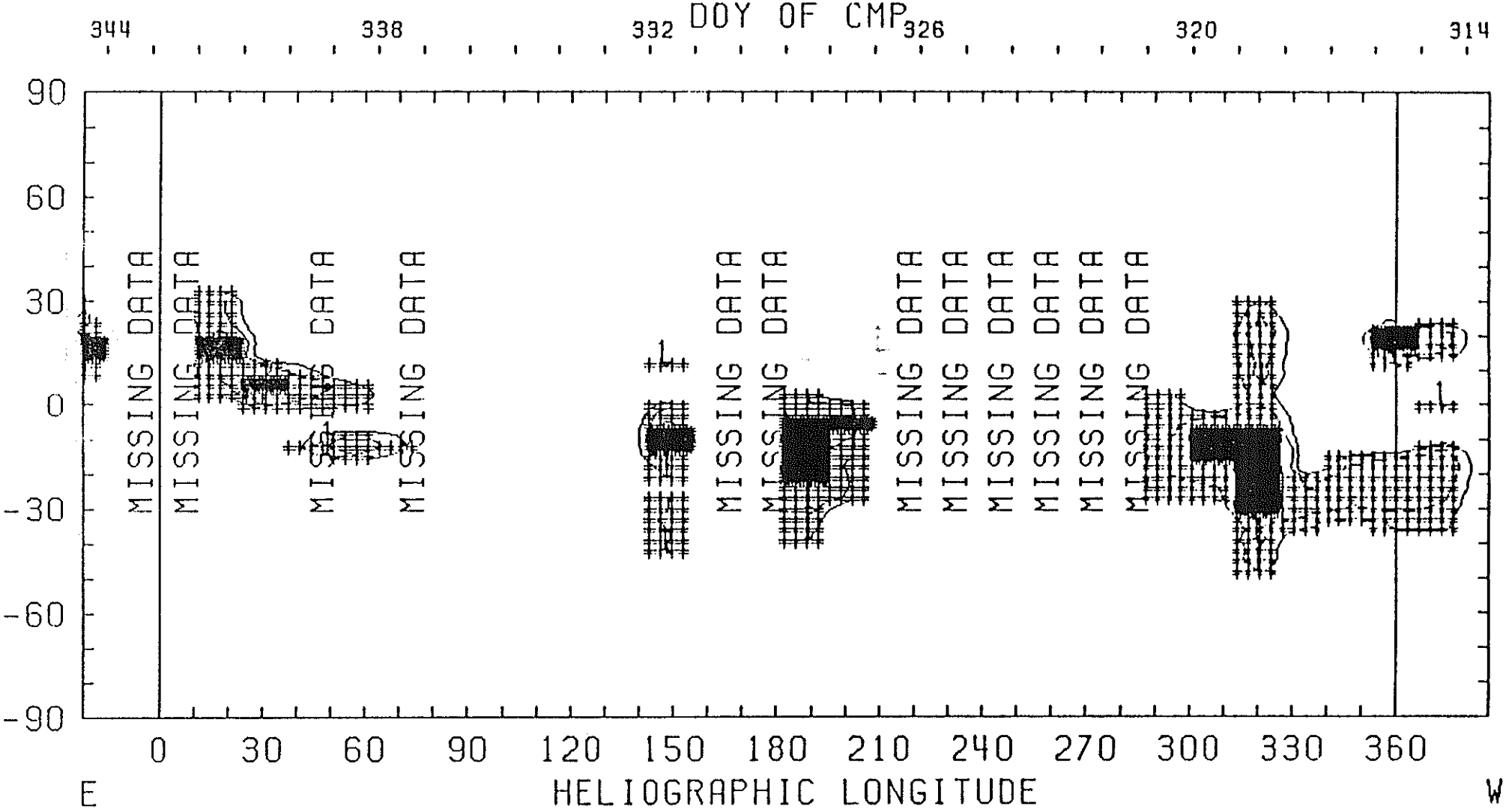


Iave = 2.88μ

1991 W+E LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF Io

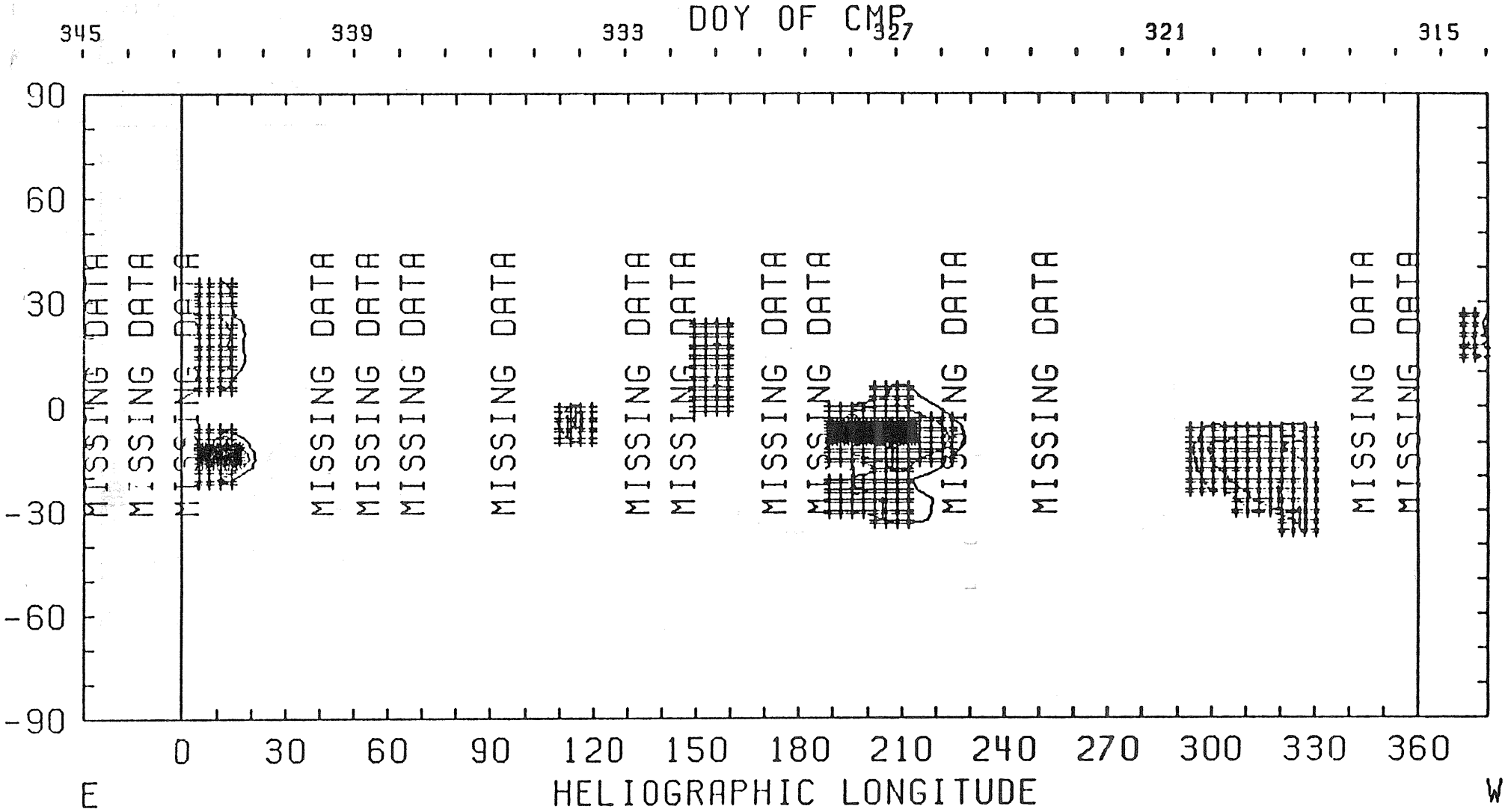
(4-Feb-92)

CARRINGTON ROTATION NUMBER 1849 ; SAC.PEAK CA XV at R = 1.13



1991 EAST LIMB CONTOURS: YELLOW-MINIMUM,1,2,4,8 MILLIONTHS OF Io
(4-Feb-92)

CARRINGTON ROTATION NUMBER 1849 ; SAC.PEAK CA XV at R = 1.13



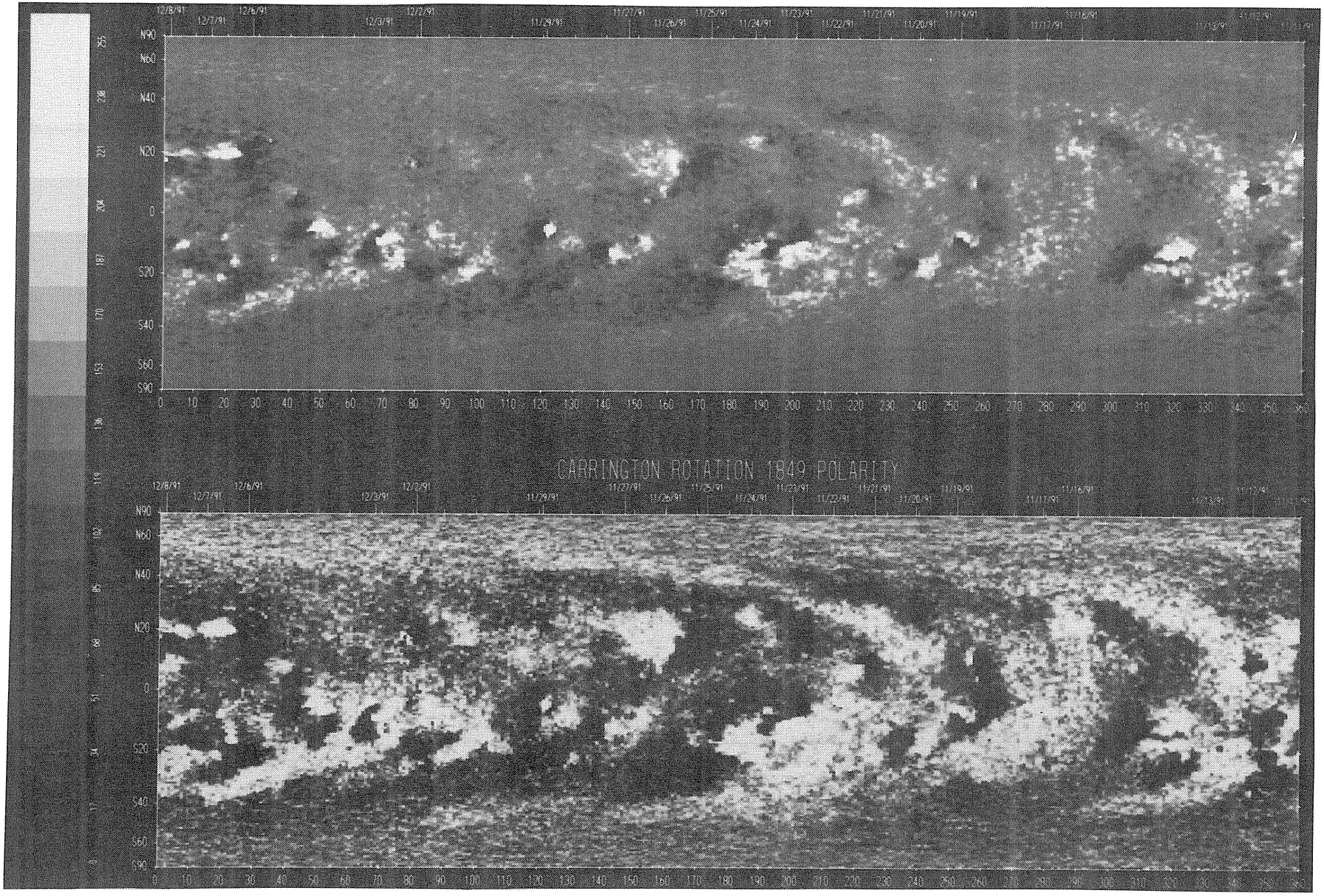
1991 WEST LIMB CONTOURS: YELLOW-MINIMUM,1,2,4,8 MILLIONTHS OF Io
(4-Feb-92)

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1849
(11 November to 8 December 1991)

National Solar Observatory/Kitt Peak

Dates of Observation

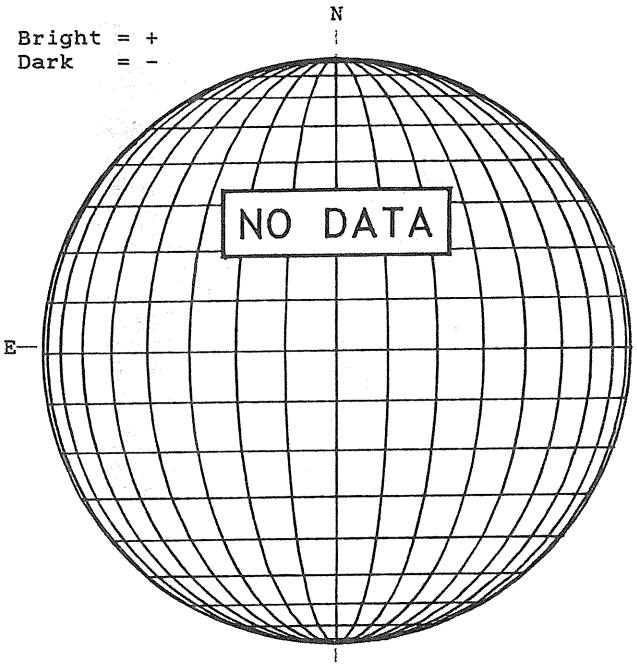


Heliographic Longitude

DECEMBER 1, 1991 (P= 16.29, B_o = 0.93, L_o = 103.33)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



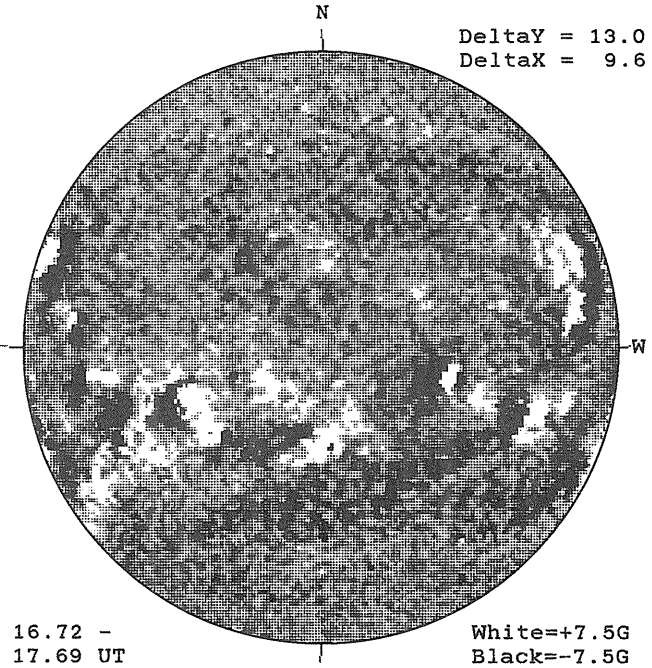
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

2138 UT

MT. WILSON MAGNETOGRAM

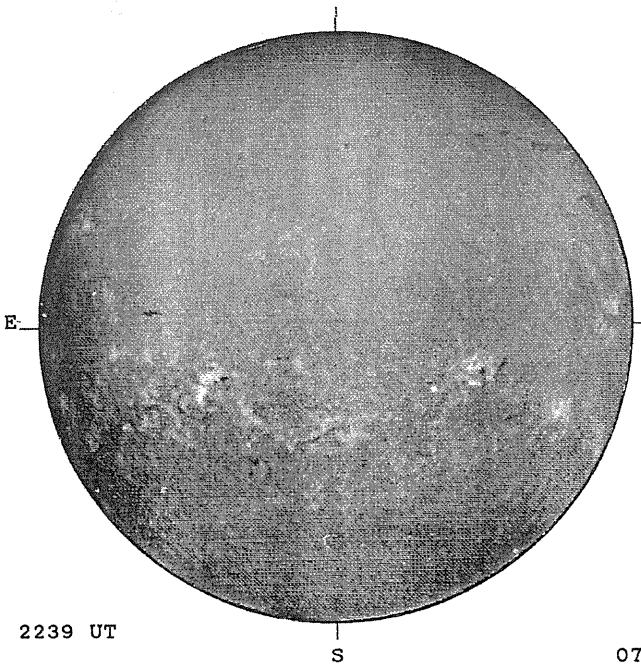
DeltaY = 13.0
DeltaX = 9.6



16.72 -
17.69 UT

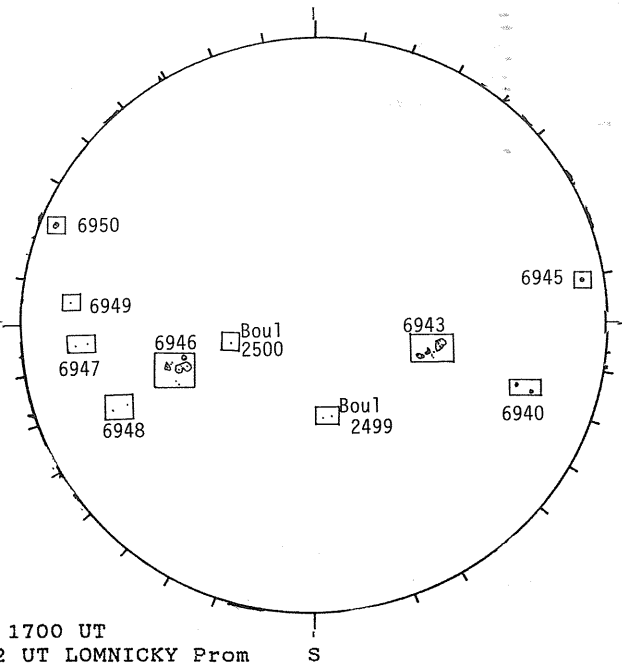
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



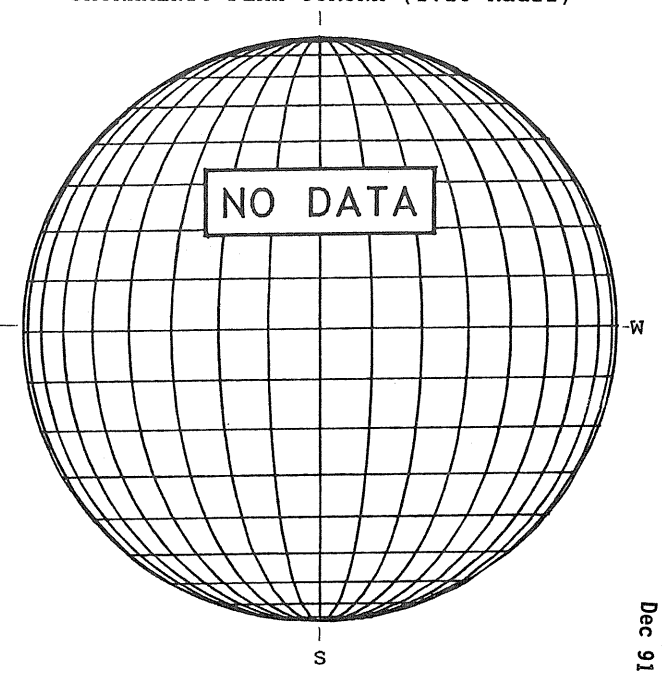
2239 UT

BOULDER SUNSPOT



1700 UT
0742 UT LOMNICKY Prom

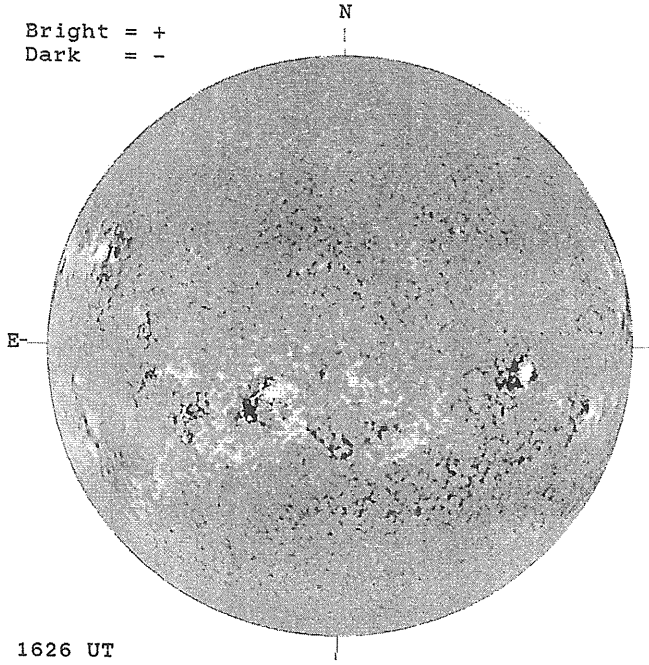
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 2, 1991 (P= 15.90, B_o = 0.80, L_o = 90.15)

KITT PEAK MAGNETOGRAM

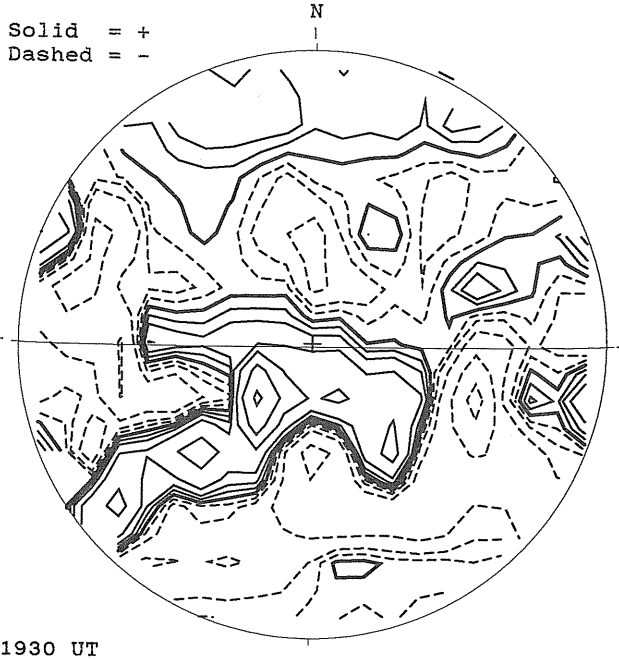
Bright = +
Dark = -



1626 UT

STANFORD MAGNETOGRAM

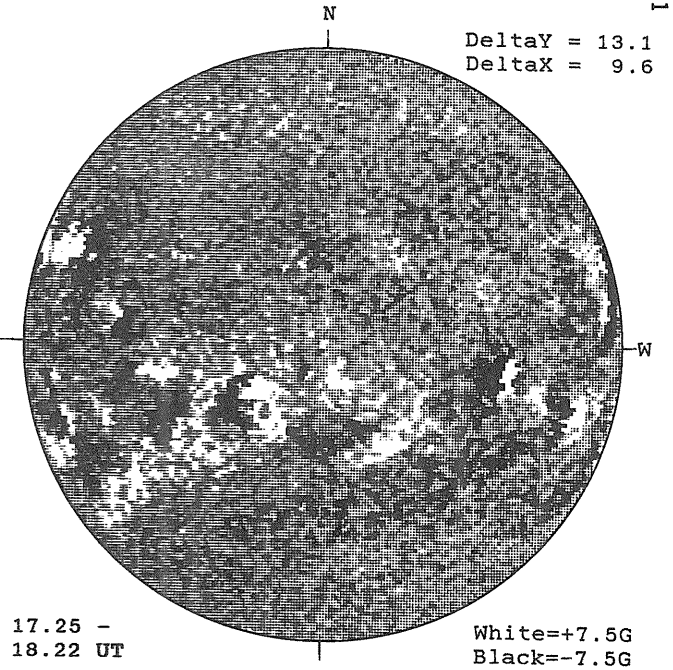
Solid = +
Dashed = -



1930 UT

MT. WILSON MAGNETOGRAM

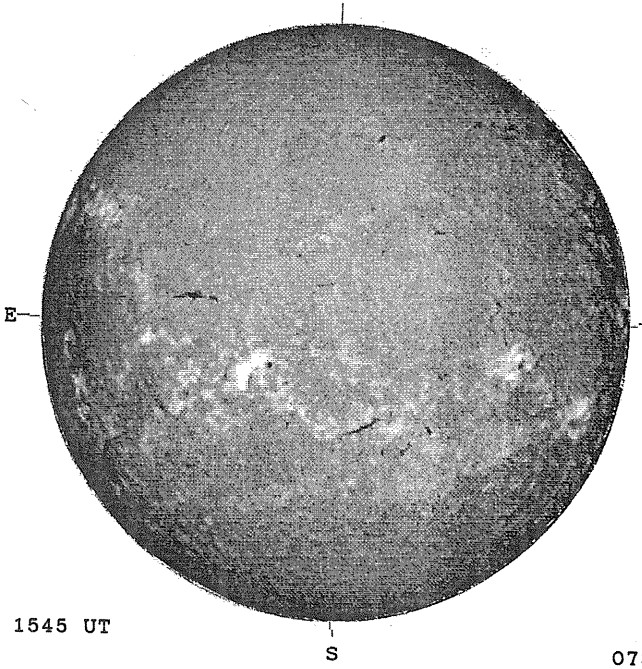
DeltaY = 13.1
DeltaX = 9.6



17.25 -
18.22 UT

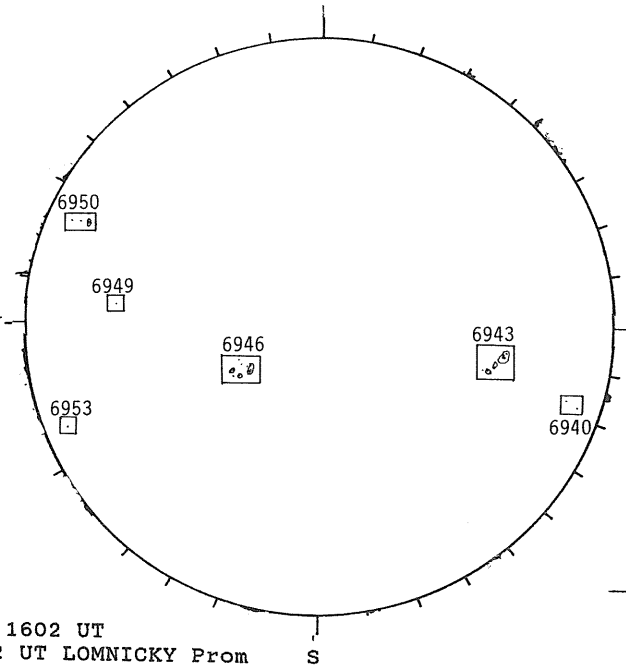
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



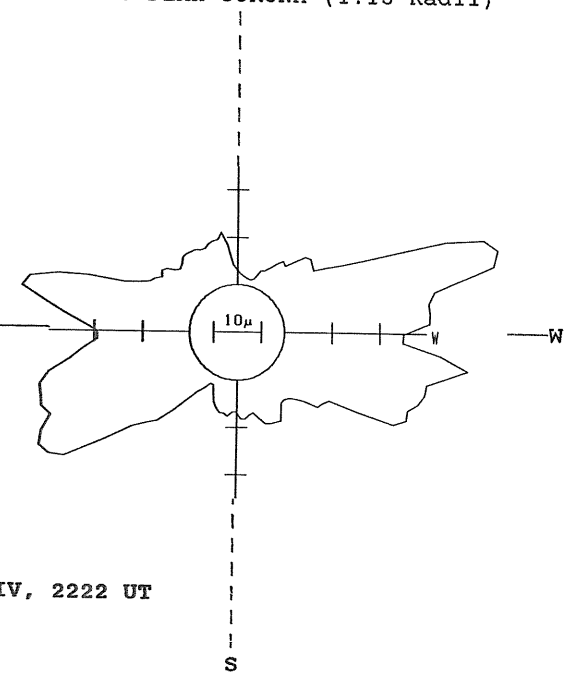
1545 UT

BOULDER SUNSPOT



1602 UT
0732 UT LOMNICKY Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

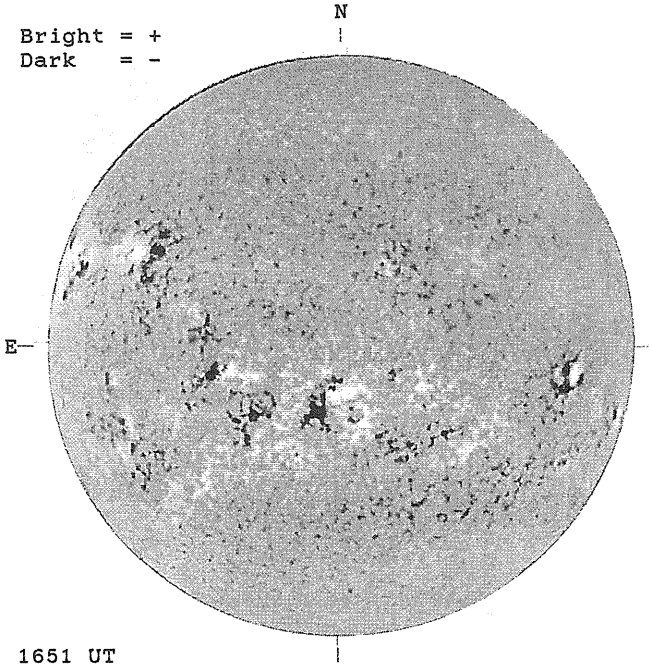


FeXIV, 2222 UT

DECEMBER 3, 1991 (P= 15.51, B_o = 0.68, L_o = 76.97)

KITT PEAK MAGNETOGRAM

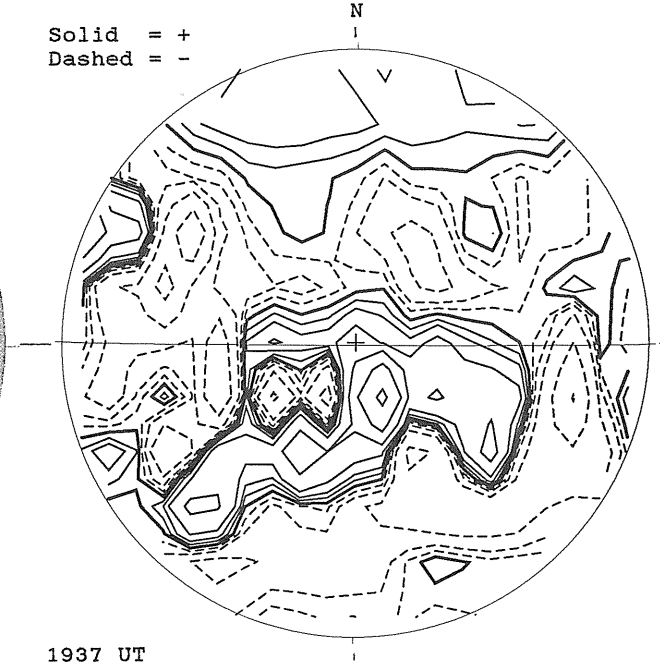
Bright = +
Dark = -



1651 UT

STANFORD MAGNETOGRAM

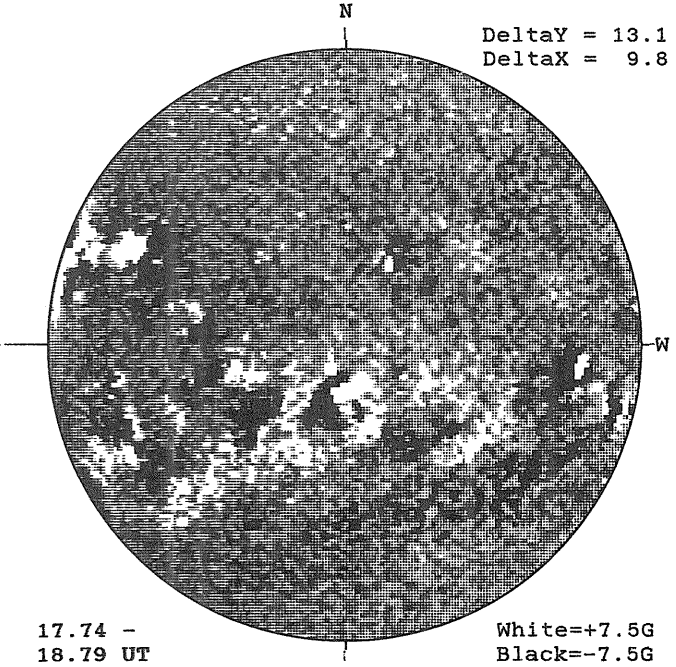
Solid = +
Dashed = -



1937 UT

MT. WILSON MAGNETOGRAM

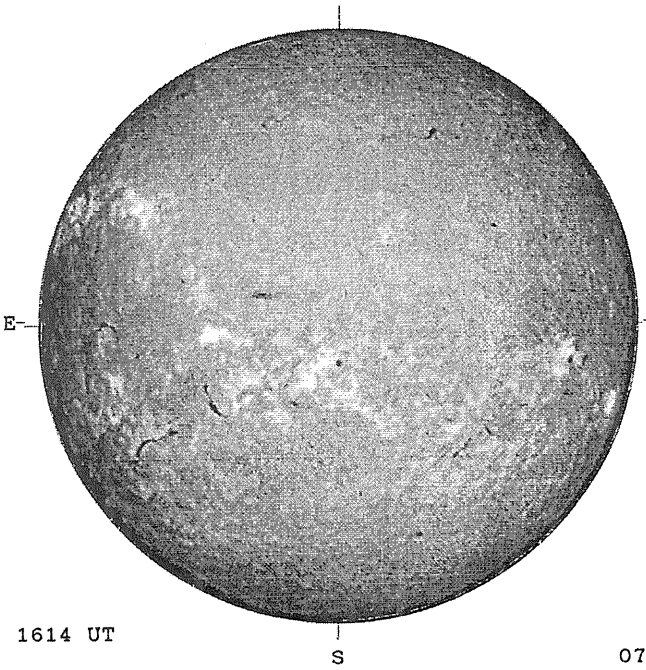
DeltaY = 13.1
DeltaX = 9.8



17.74 -
18.79 UT

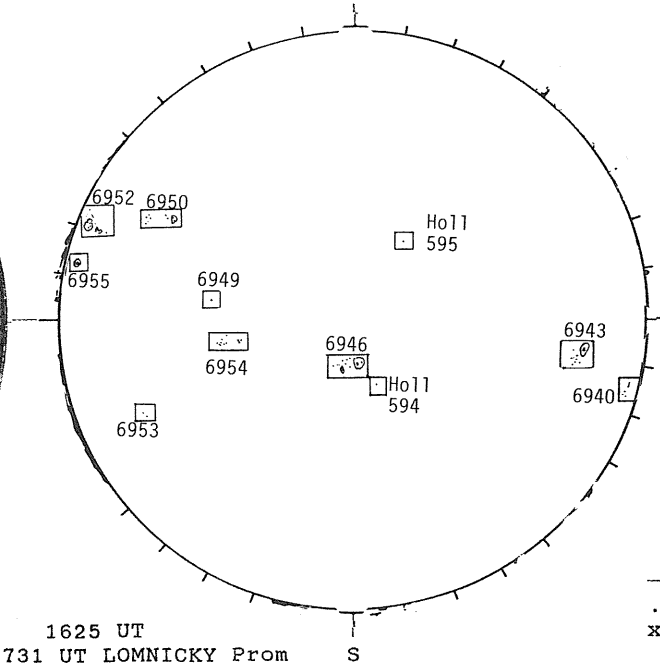
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



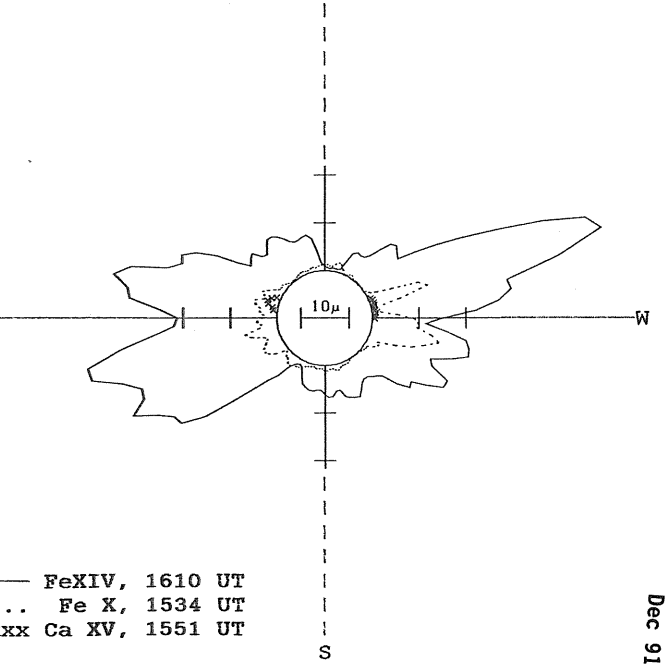
1614 UT

HOLLOMAN SUNSPOT



1625 UT
0731 UT LOMNICKY Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

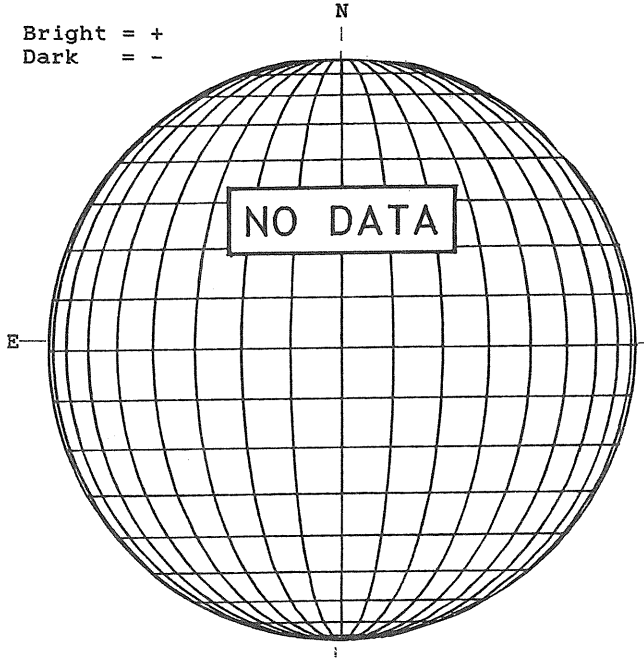


—— FeXIV, 1610 UT
.... Fe X, 1534 UT
xxxx Ca XV, 1551 UT

DECEMBER 4, 1991 (P= 15.12, B_o = 0.55, L_o = 63.79)

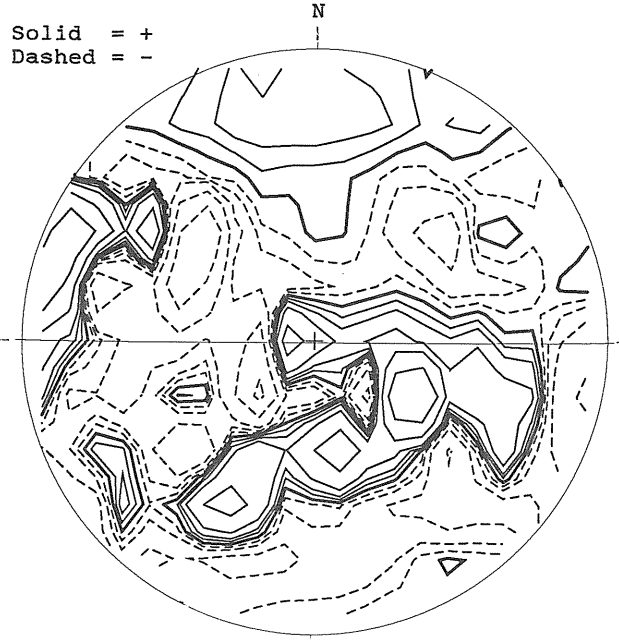
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

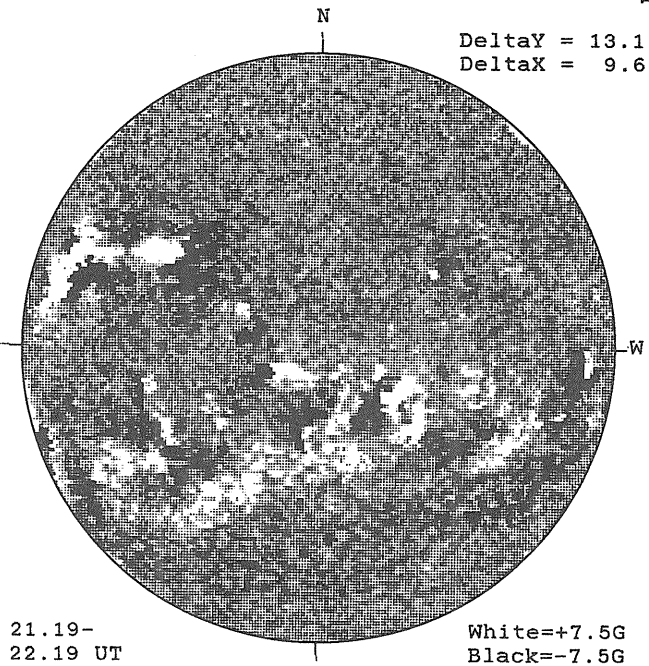
Solid = +
Dashed = -



2210 UT

MT. WILSON MAGNETOGRAM

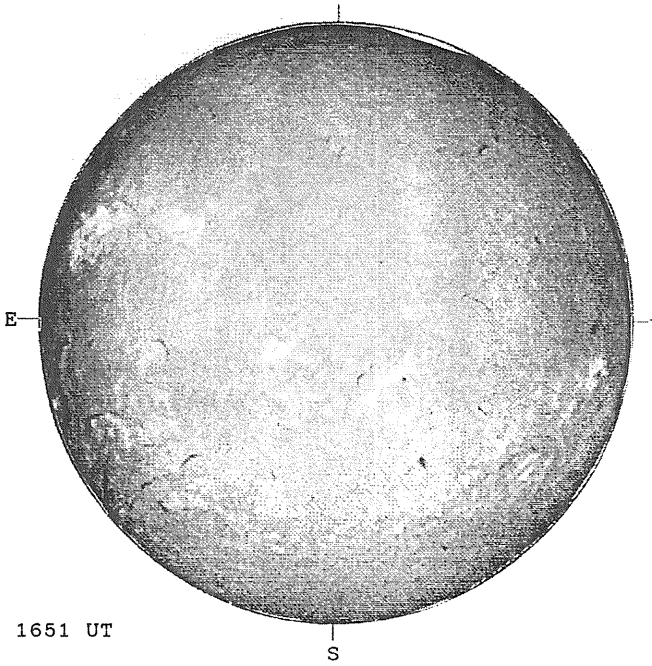
DeltaY = 13.1
DeltaX = 9.6



21.19-
22.19 UT

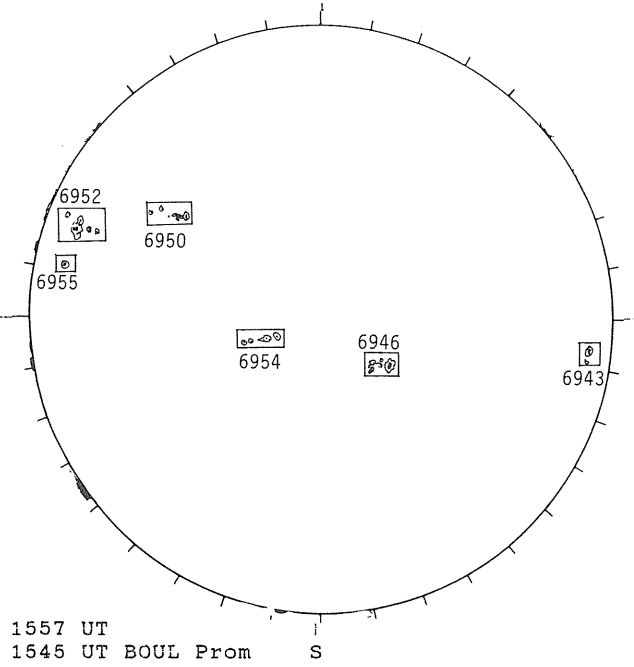
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



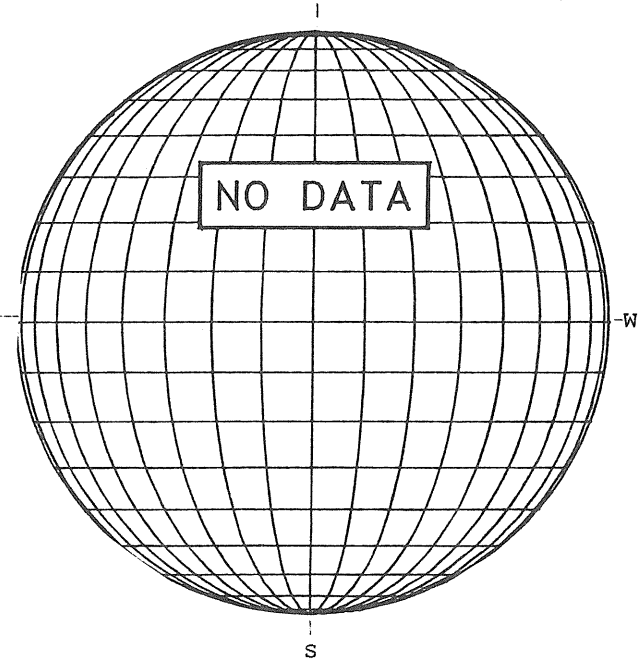
1651 UT

BOULDER SUNSPOT



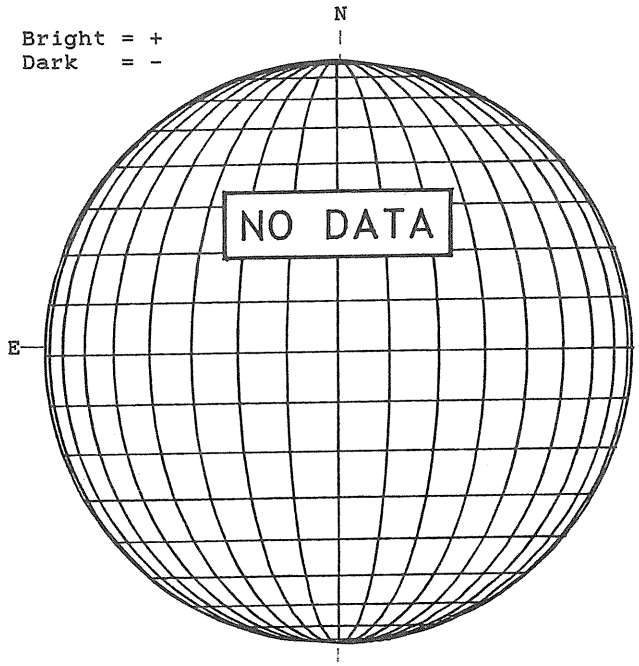
1557 UT
1545 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

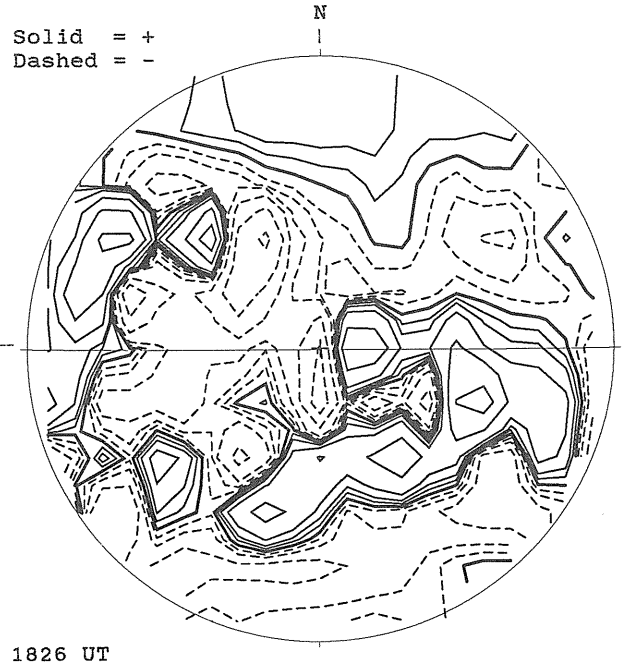


DECEMBER 5, 1991 (P= 14.72, B_o = 0.42, L_o = 50.61)

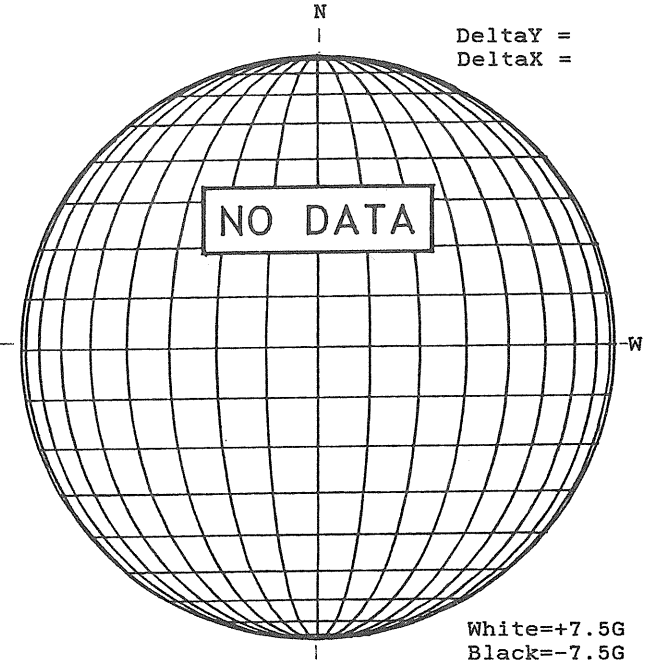
KITT PEAK MAGNETOGRAM



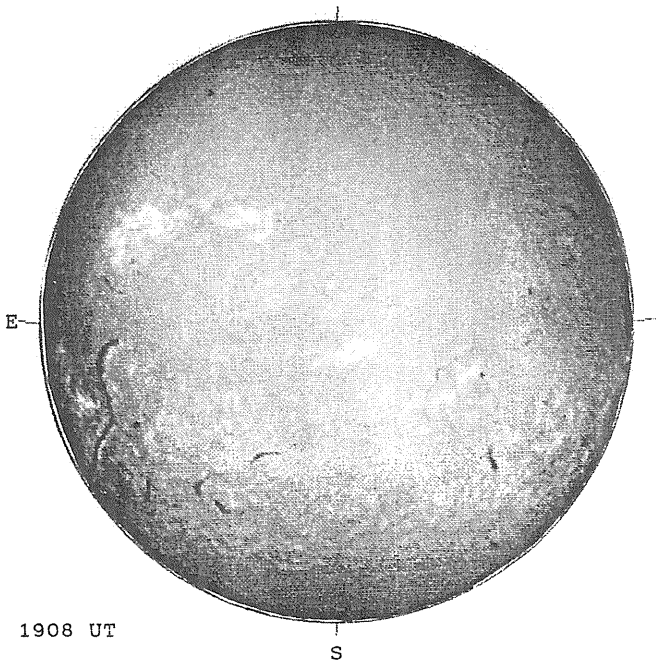
STANFORD MAGNETOGRAM



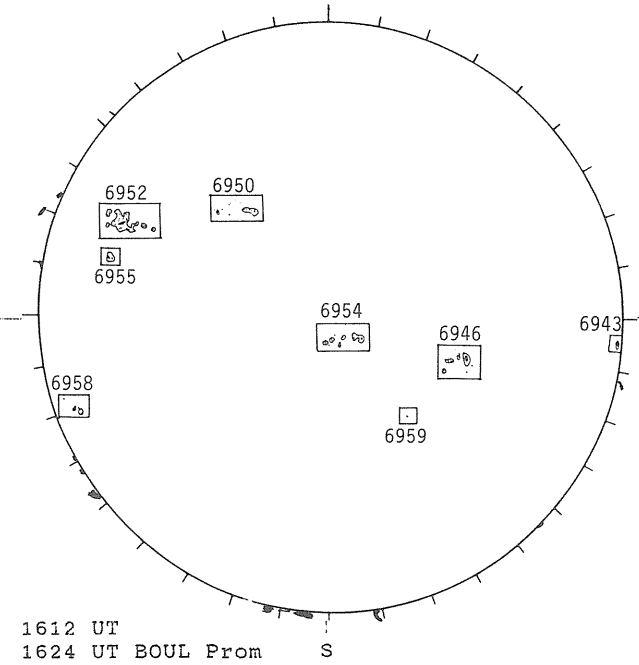
MT. WILSON MAGNETOGRAM



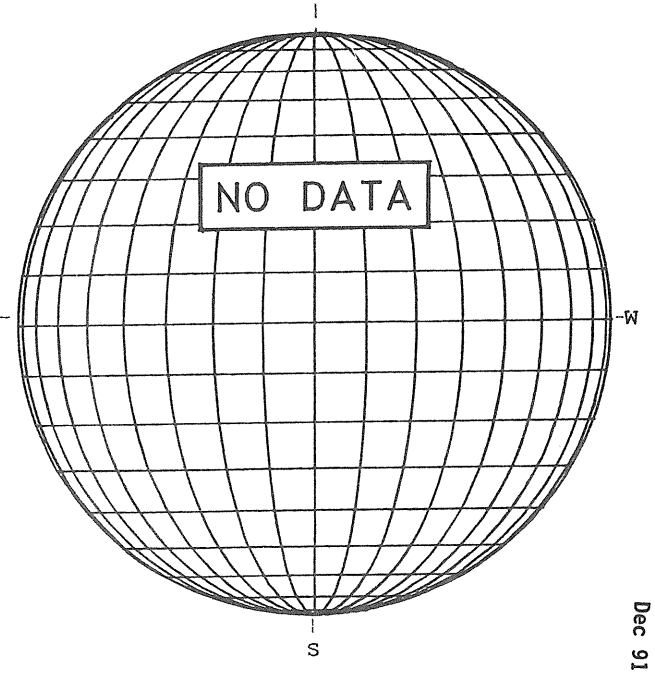
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



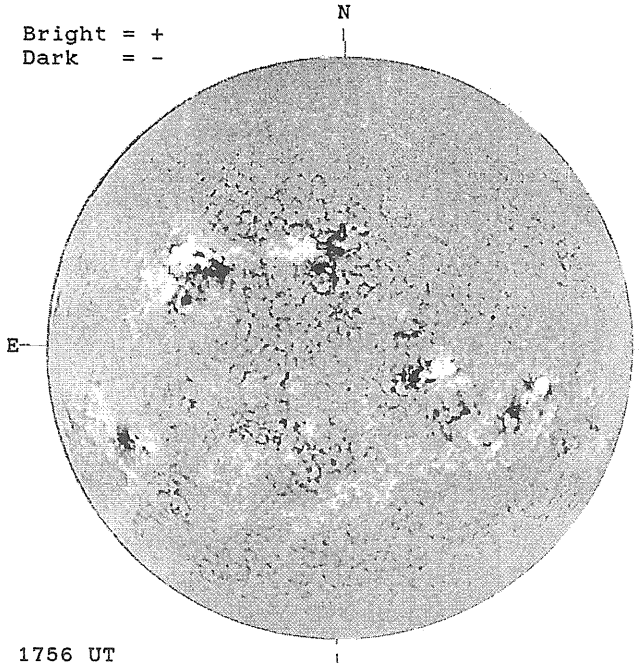
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 6, 1991 (P= 14.31, B_o = 0.29, L_o = 37.44)

KITT PEAK MAGNETOGRAM

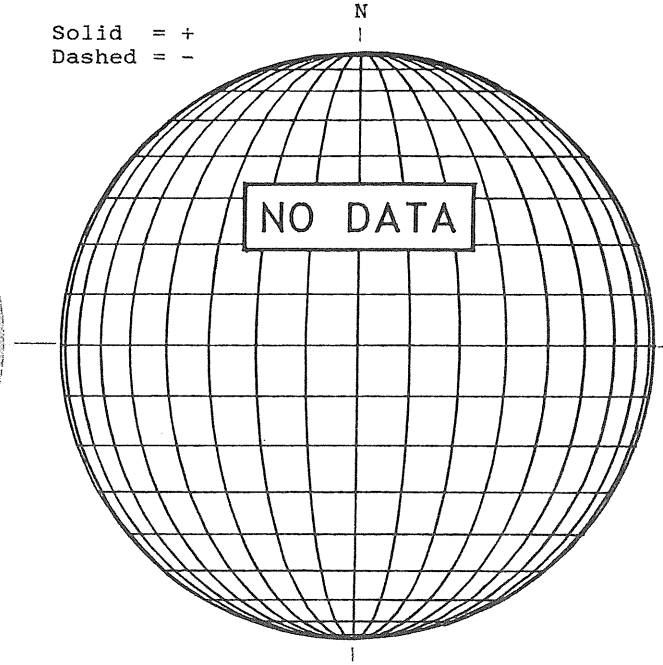
Bright = +
Dark = -



1756 UT

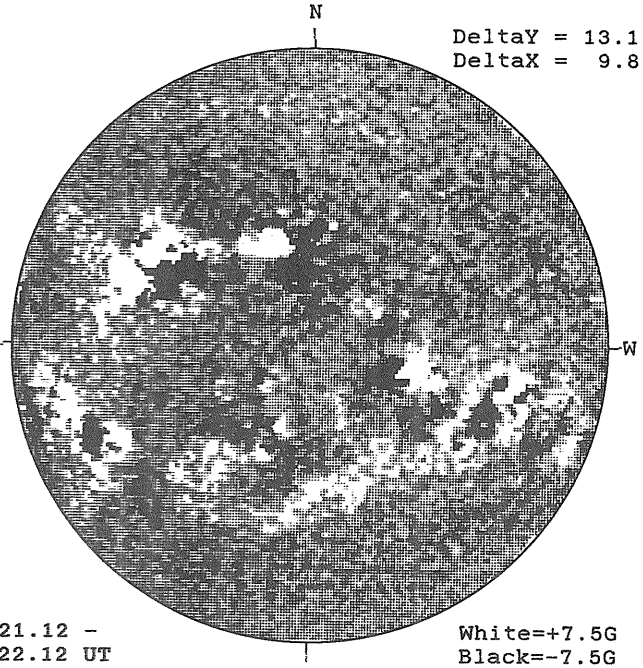
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

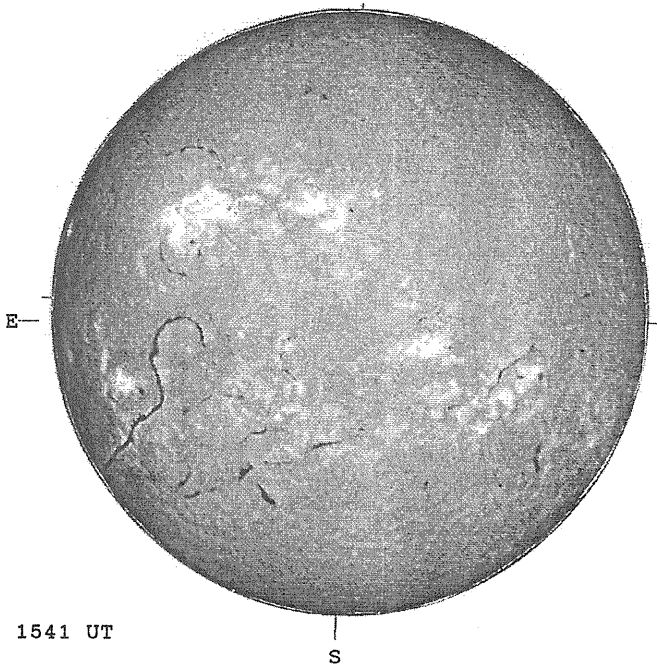
DeltaY = 13.1
DeltaX = 9.8



21.12 -
22.12 UT

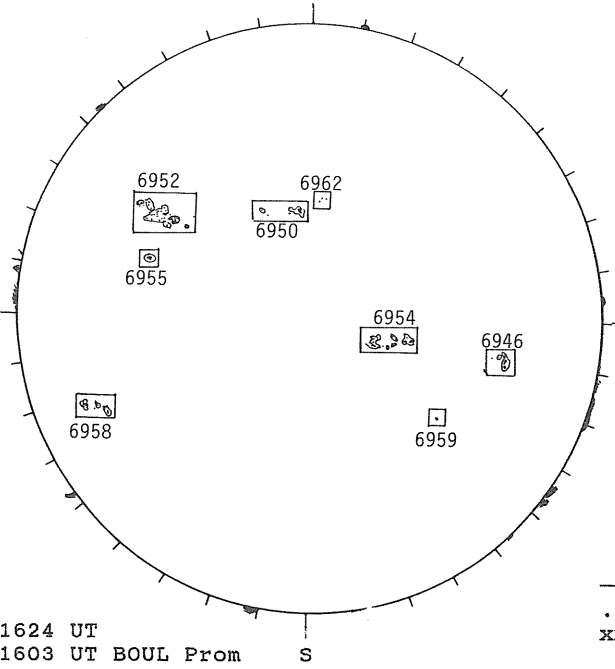
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



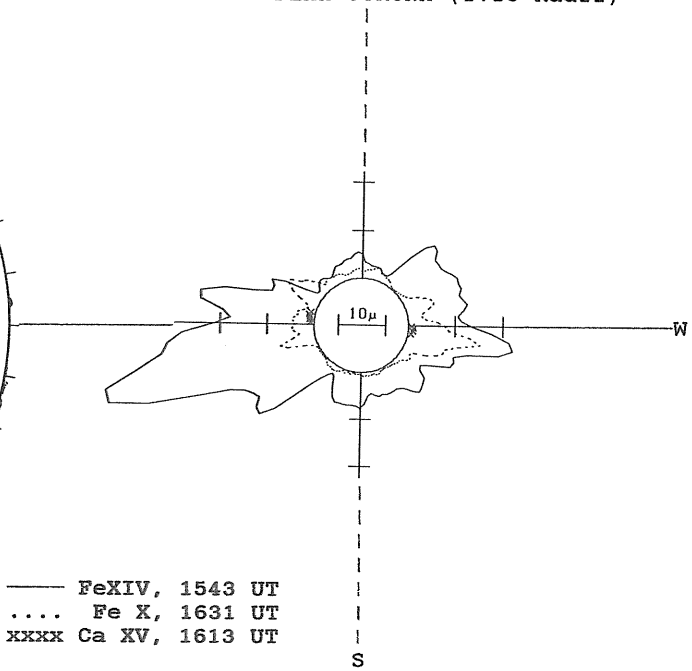
1541 UT

BOULDER SUNSPOT



1624 UT
1603 UT BOUL Prom

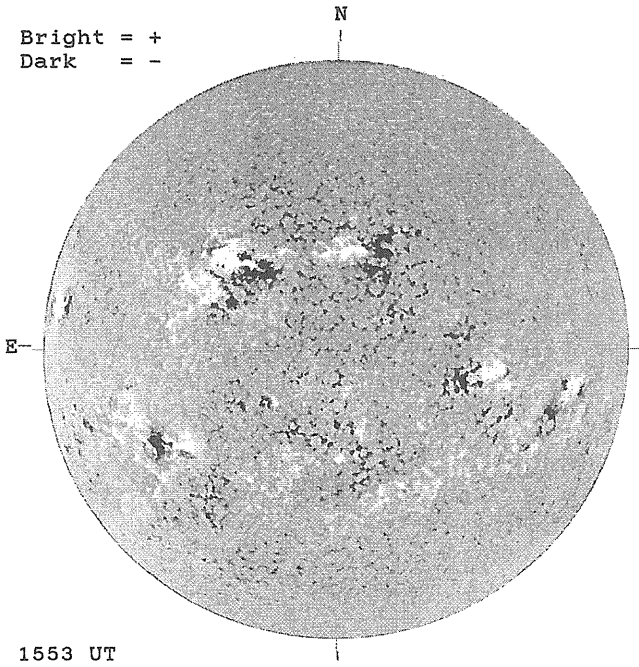
SACRAMENTO PEAK CORONA (1.15 Radii)



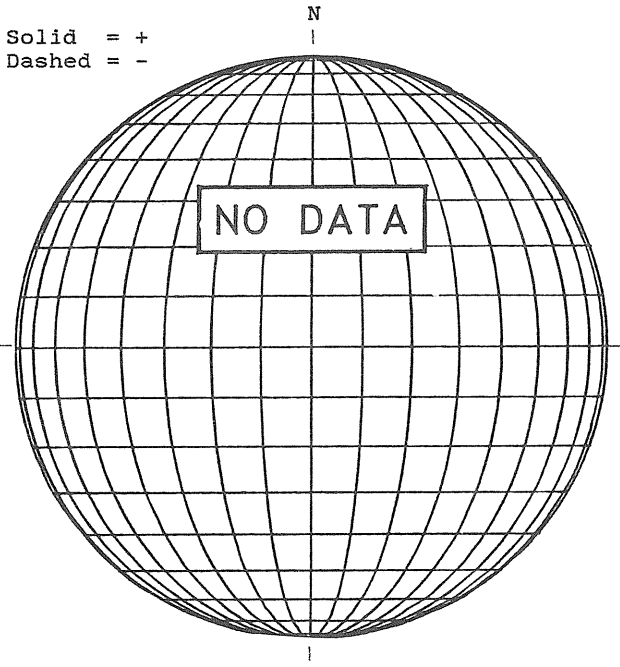
—— FeXIV, 1543 UT
.... Fe X, 1631 UT
xxxx Ca XV, 1613 UT

DECEMBER 7, 1991 (P= 13.89, B_o = 0.17, L_o = 24.26)

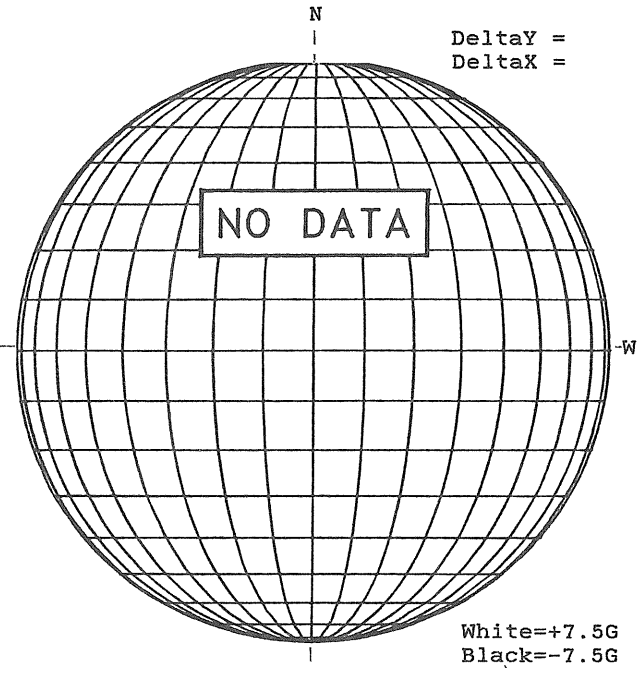
KITT PEAK MAGNETOGRAM



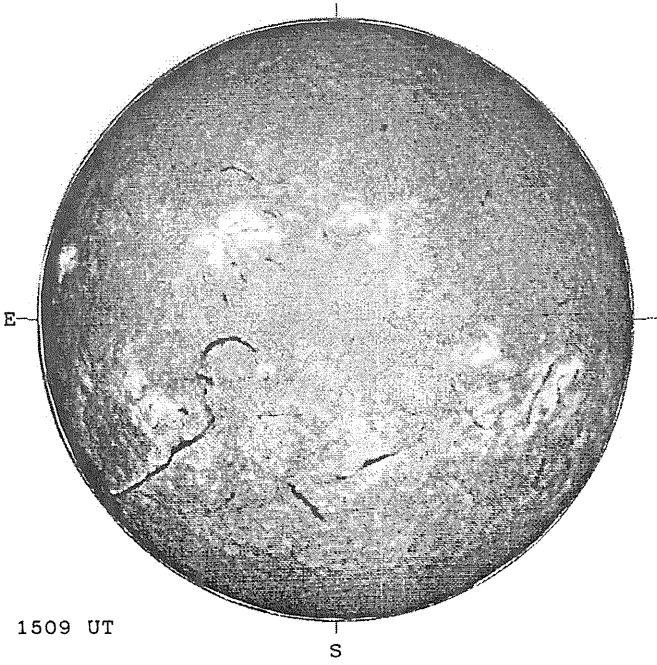
STANFORD MAGNETOGRAM



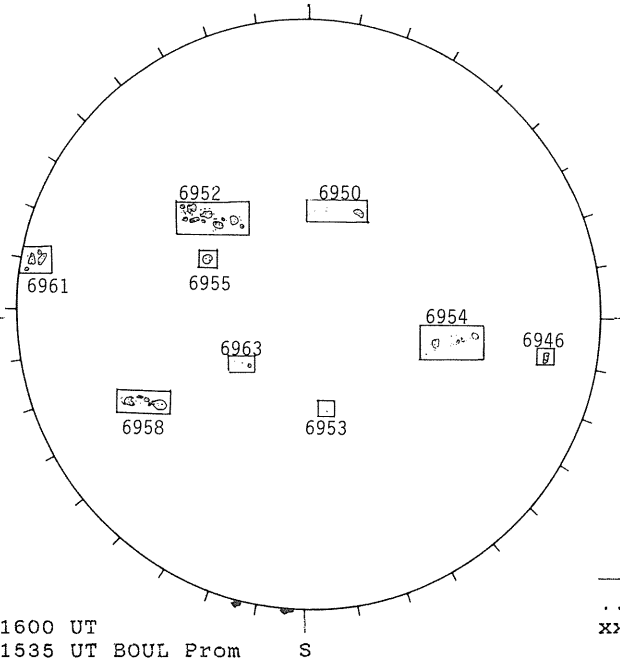
MT. WILSON MAGNETOGRAM



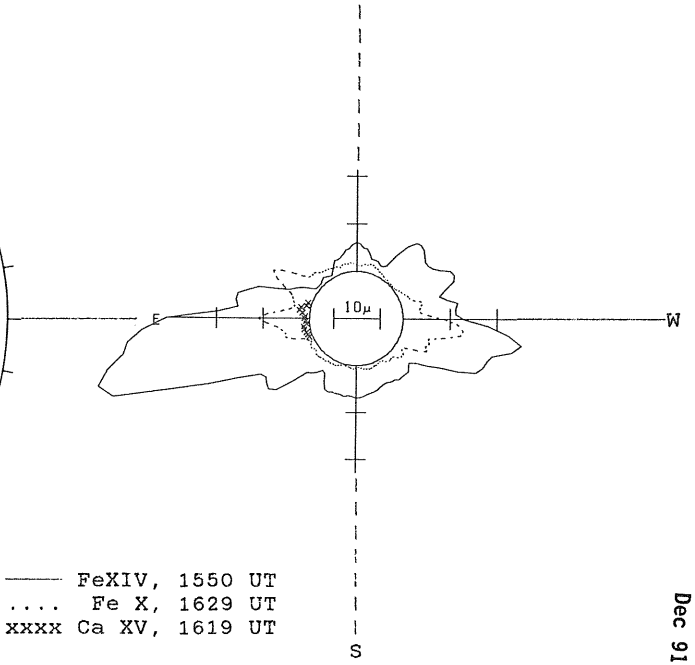
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



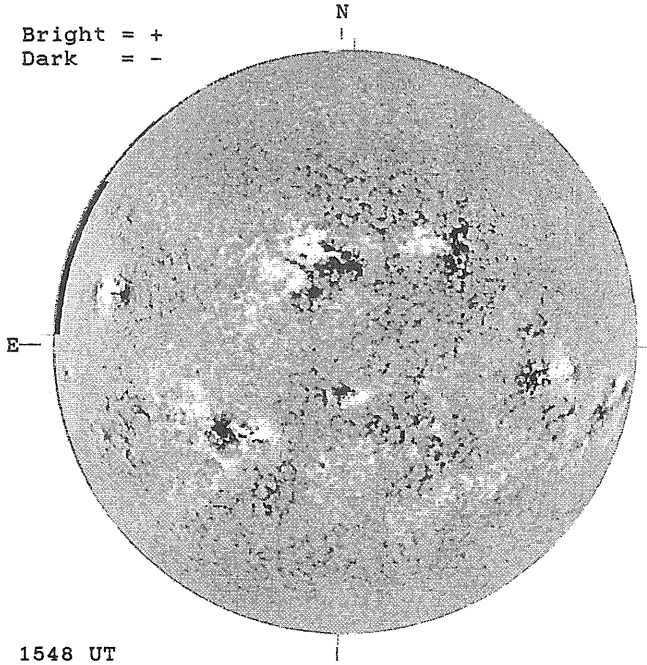
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 8, 1991 (P= 13.48, B_o = 0.04, L_o = 11.08)

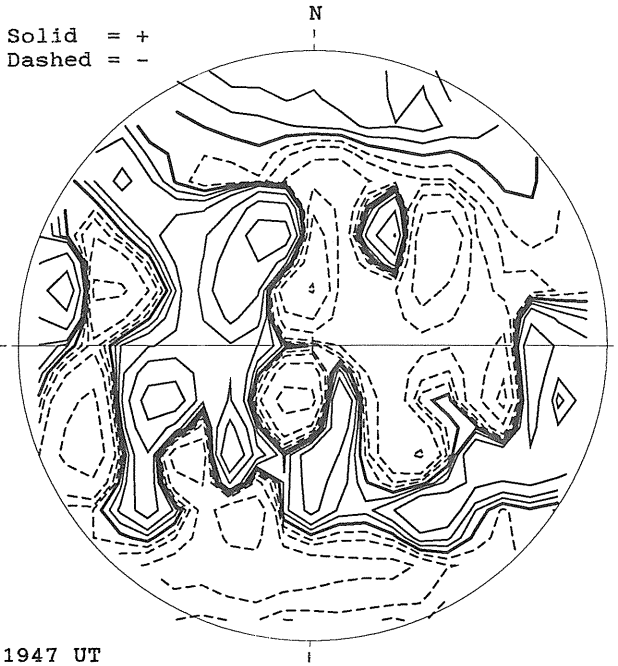
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



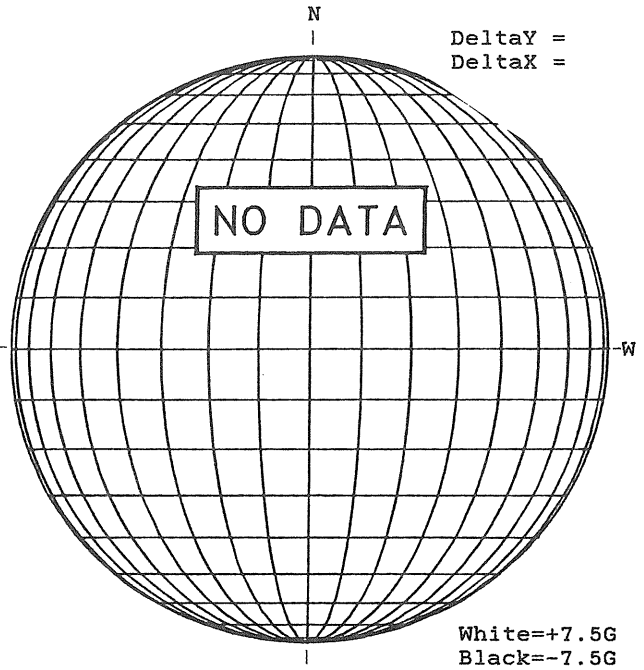
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

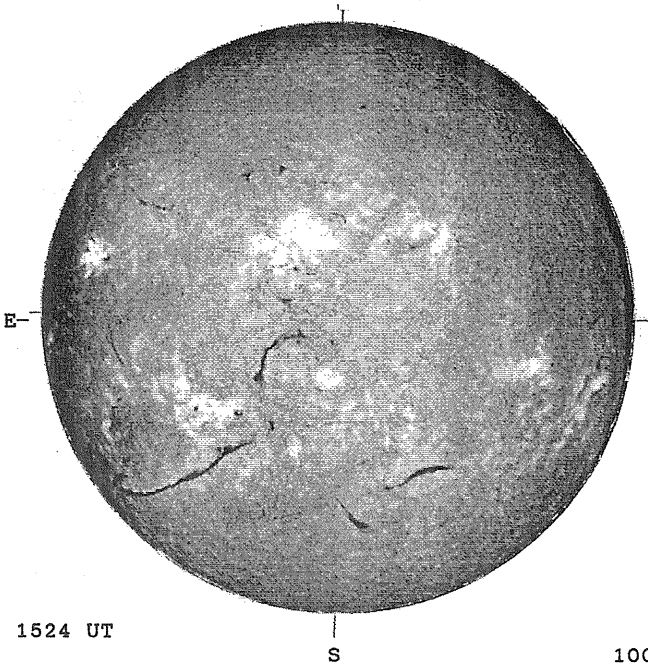


MT. WILSON MAGNETOGRAM

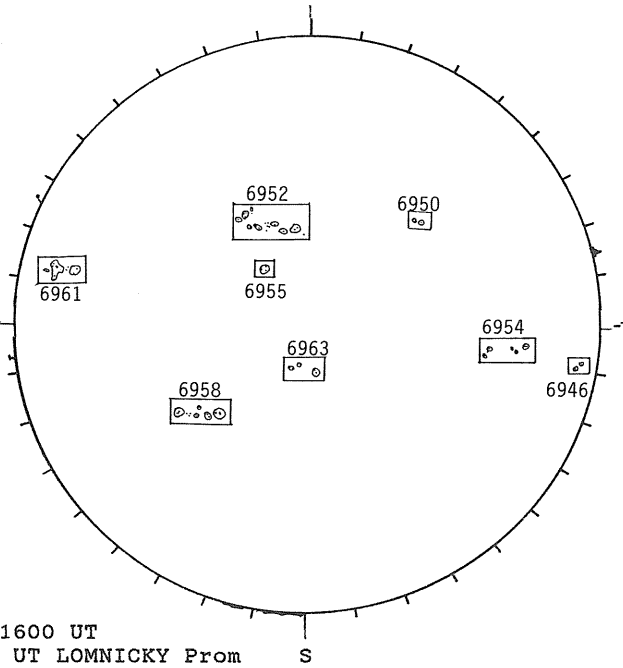
DeltaY =
DeltaX =



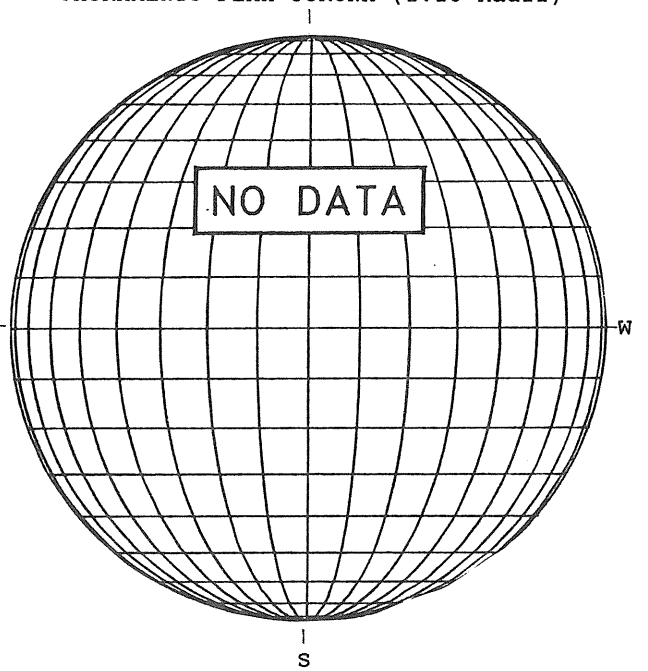
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



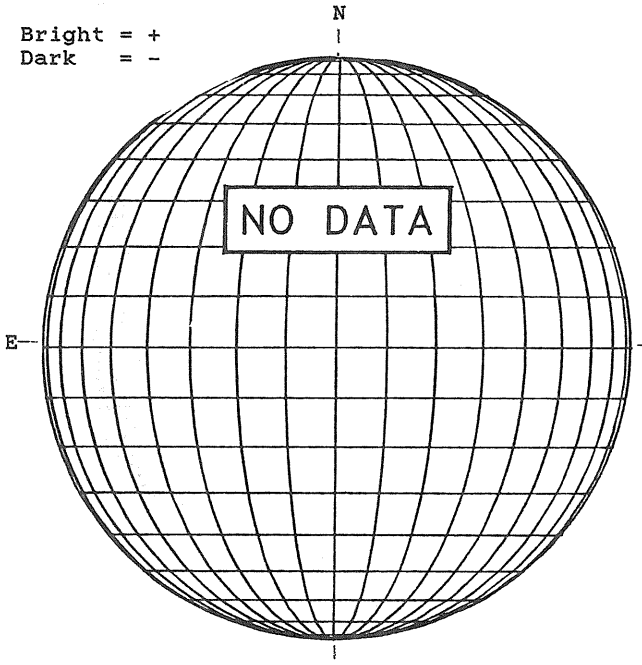
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 9, 1991 (P= 13.05, B_o =-0.09, L_o = 357.91)

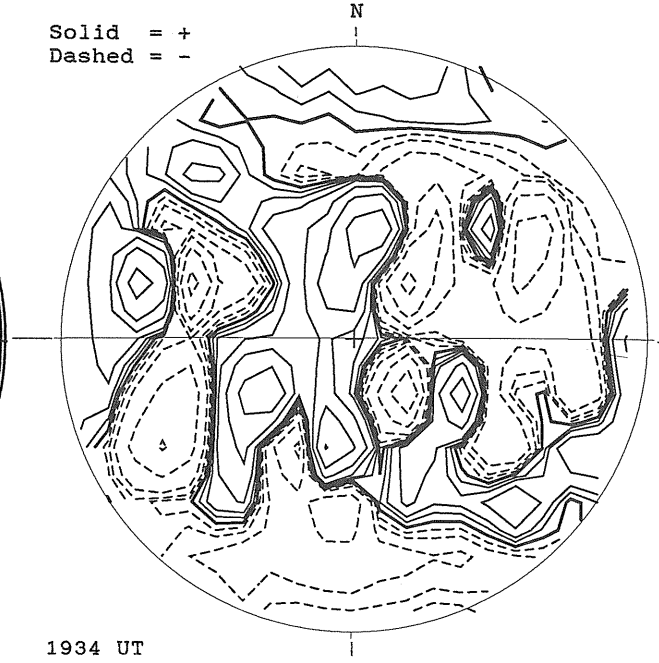
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

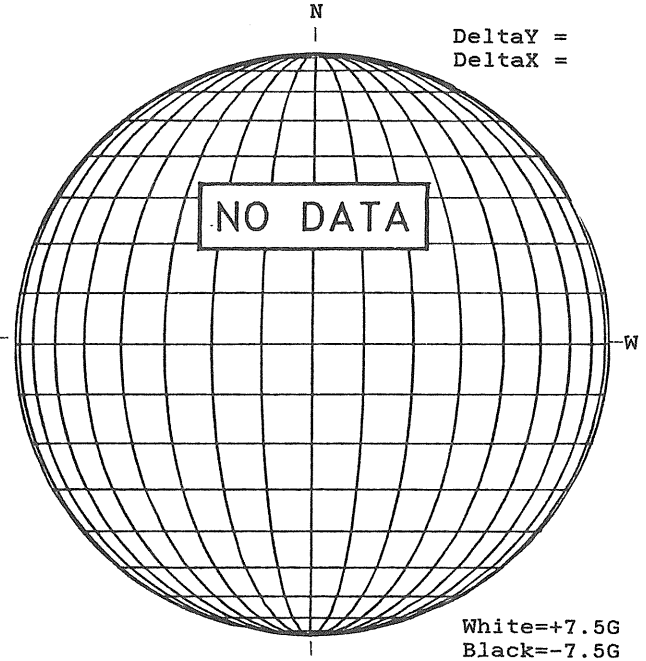
Solid = +
Dashed = -



1934 UT

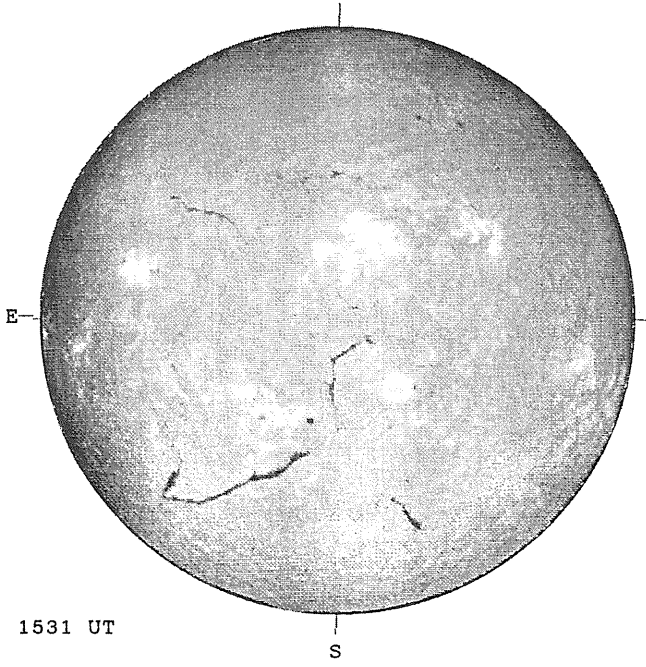
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



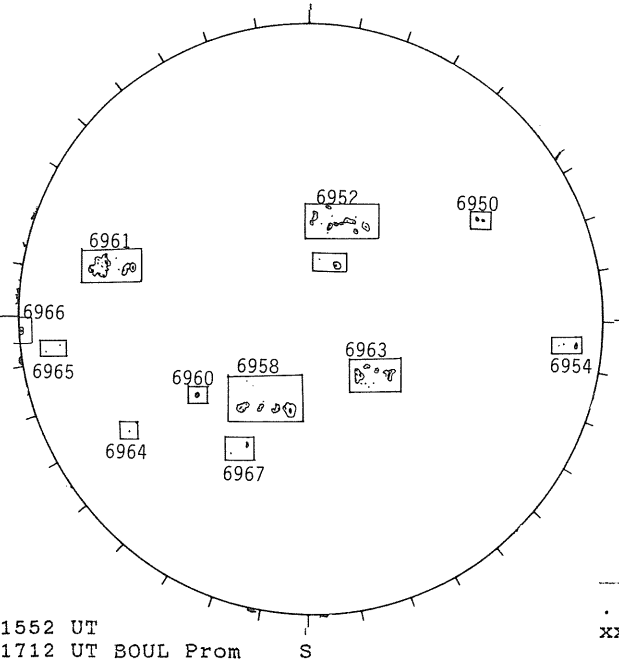
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



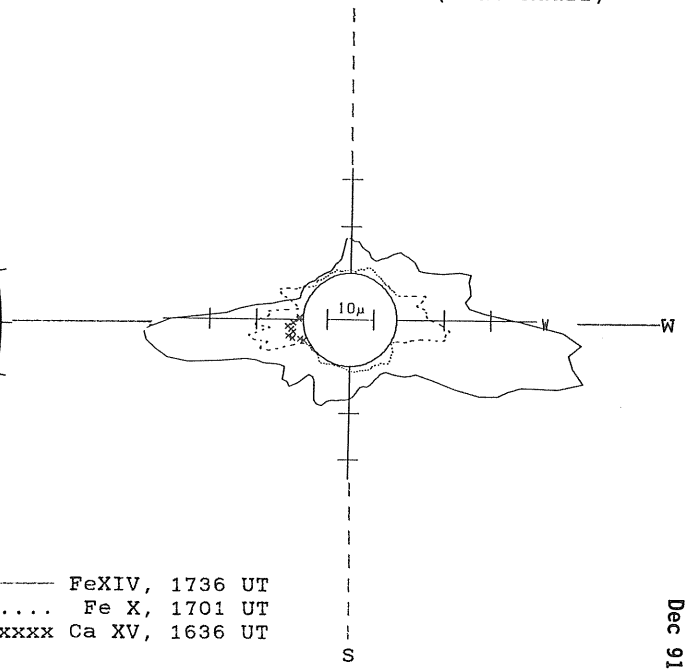
1531 UT

BOULDER SUNSPOT



1552 UT
1712 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

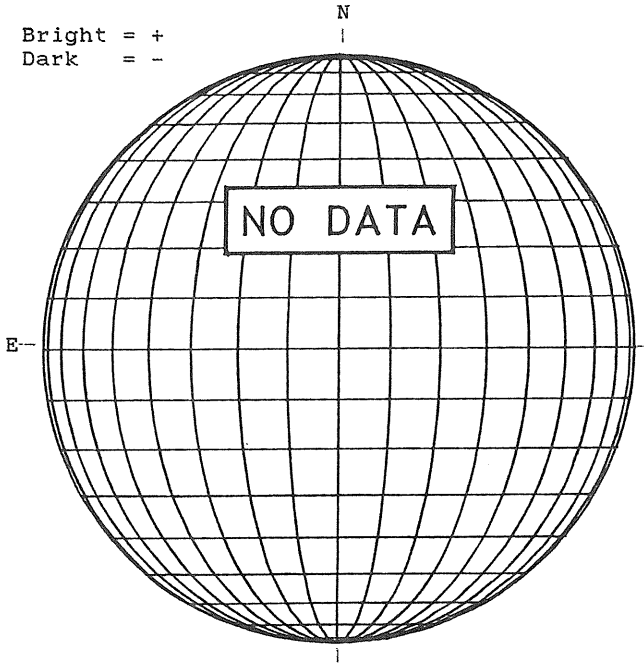


—— FeXIV, 1736 UT
.... Fe X, 1701 UT
xxxx Ca XV, 1636 UT

DECEMBER 10, 1991 (P= 12.63, B_o =-0.22, L_o = 344.73)

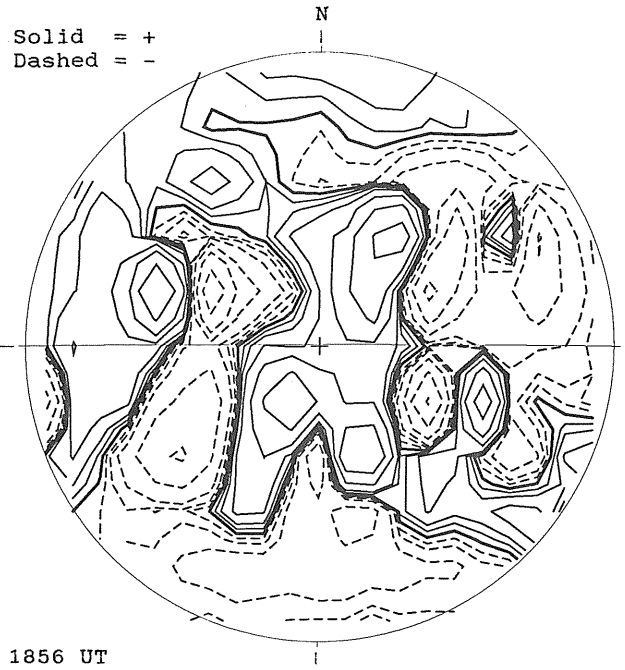
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

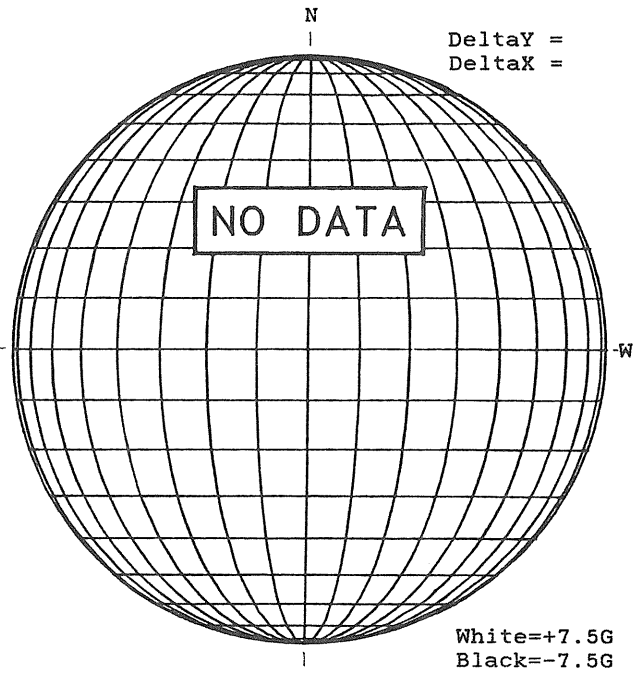
Solid = +
Dashed = -



1856 UT

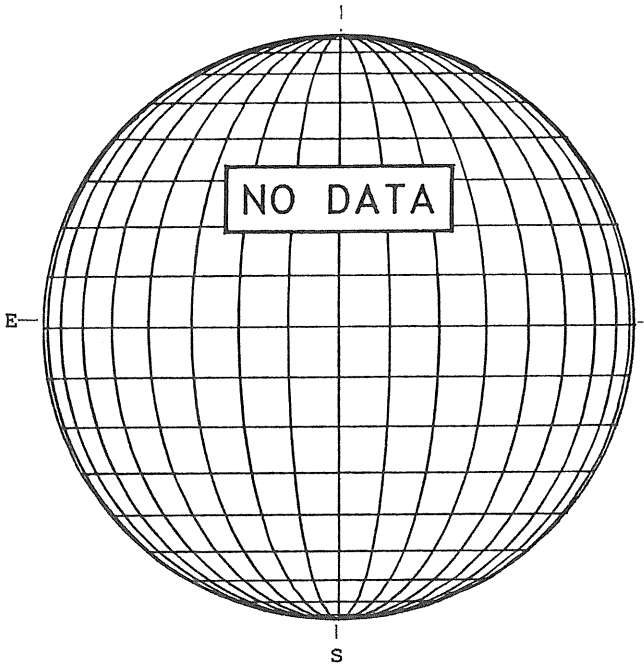
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

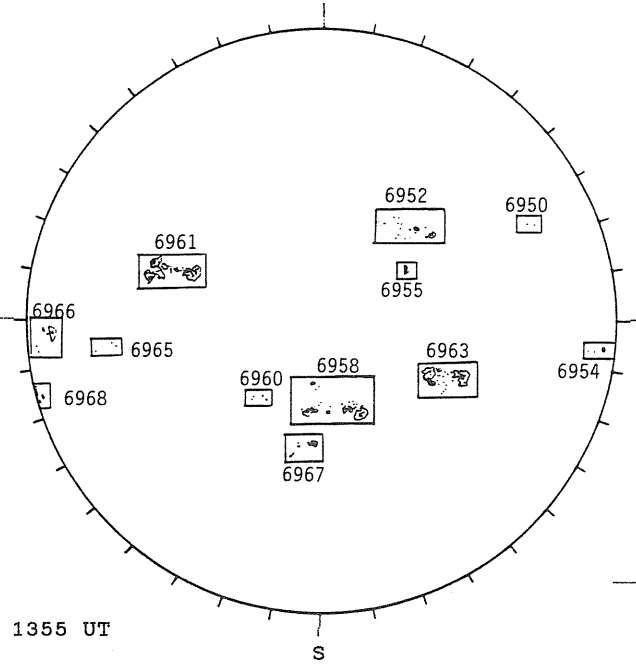


White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

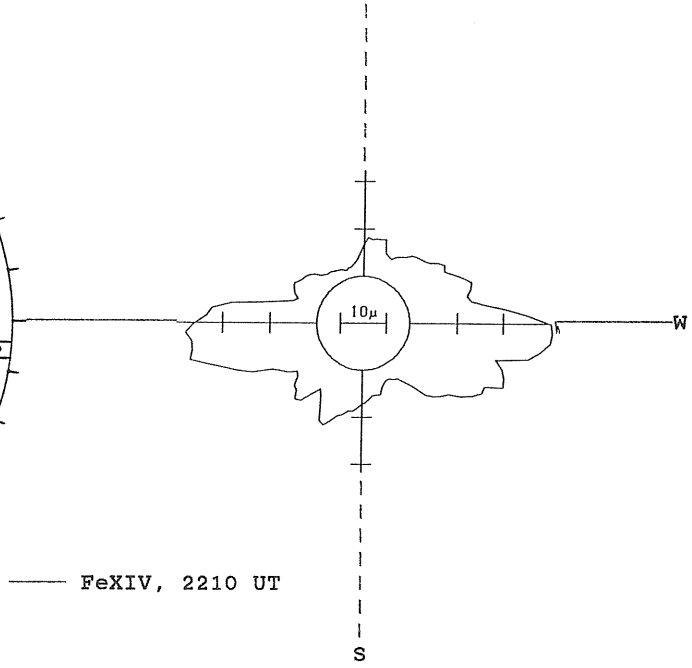


RAMEY SUNSPOT



1355 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

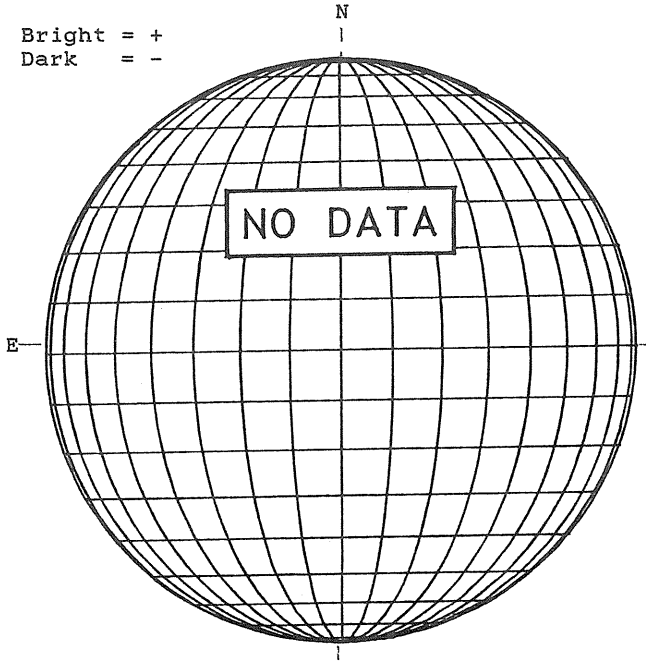


—— FeXIV, 2210 UT

DECEMBER 11, 1991 (P= 12.19, B_o =-0.35, L_o = 331.55)

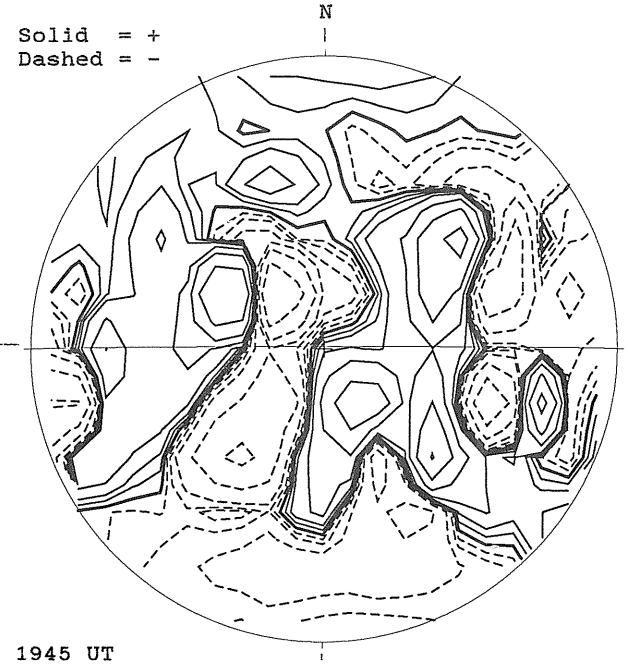
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

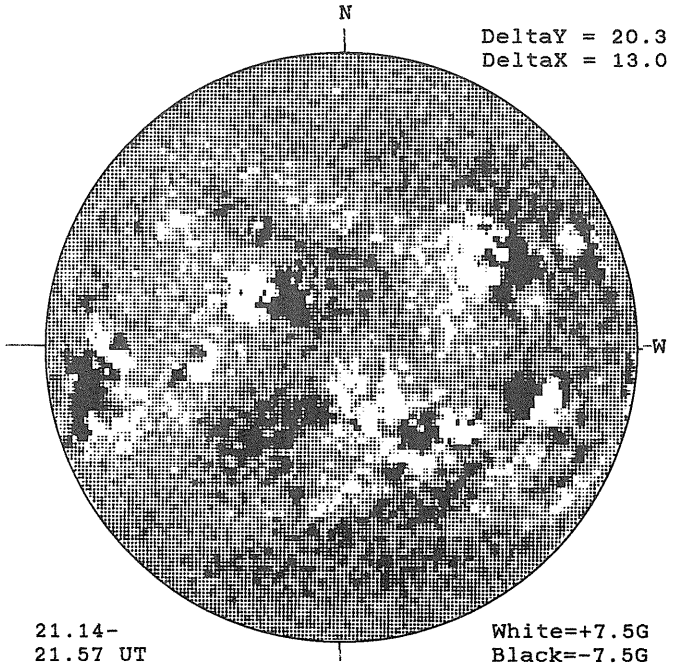
Solid = +
Dashed = -



1945 UT

MT. WILSON MAGNETOGRAM

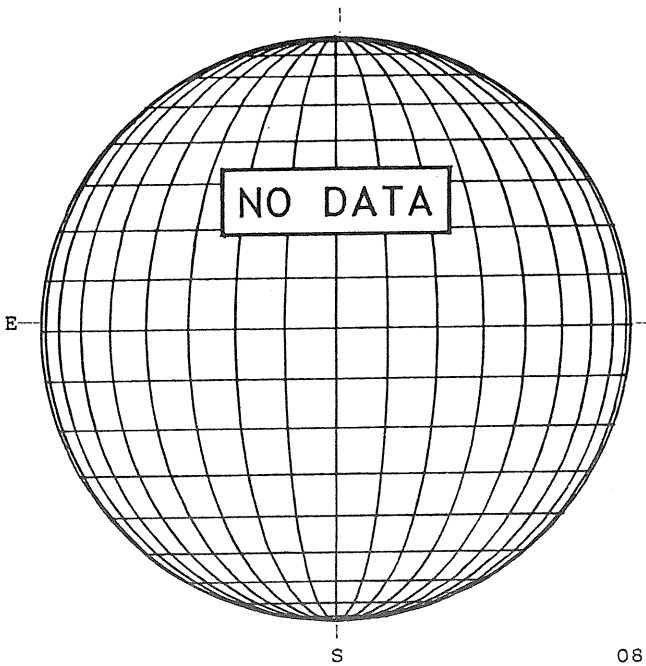
DeltaY = 20.3
DeltaX = 13.0



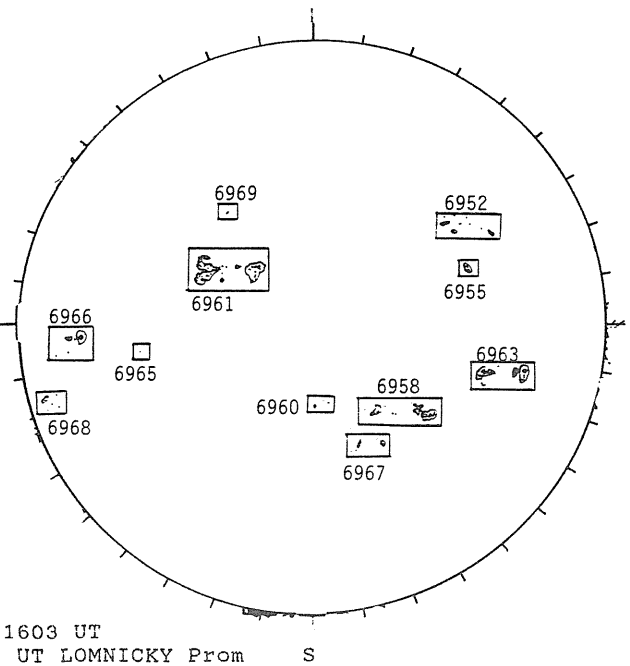
21.14-
21.57 UT

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

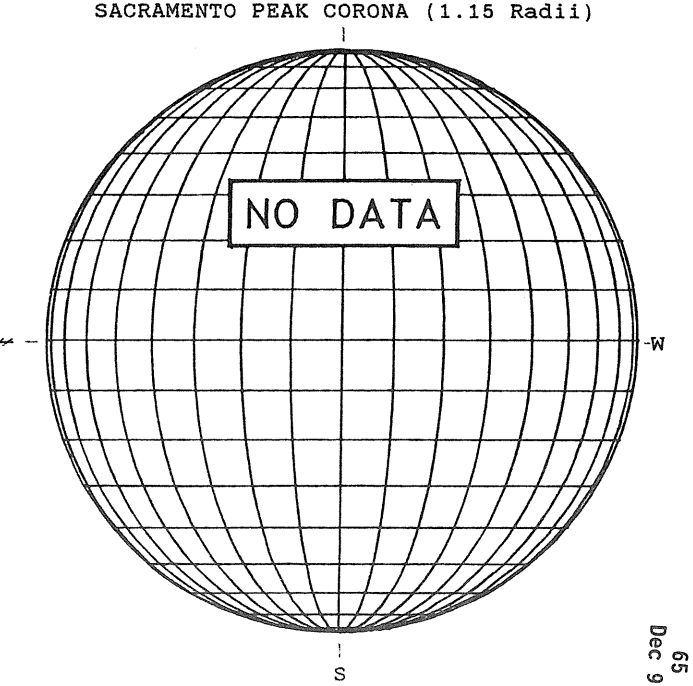


BOULDER SUNSPOT



1603 UT
0814 UT LOMNICKY Prom

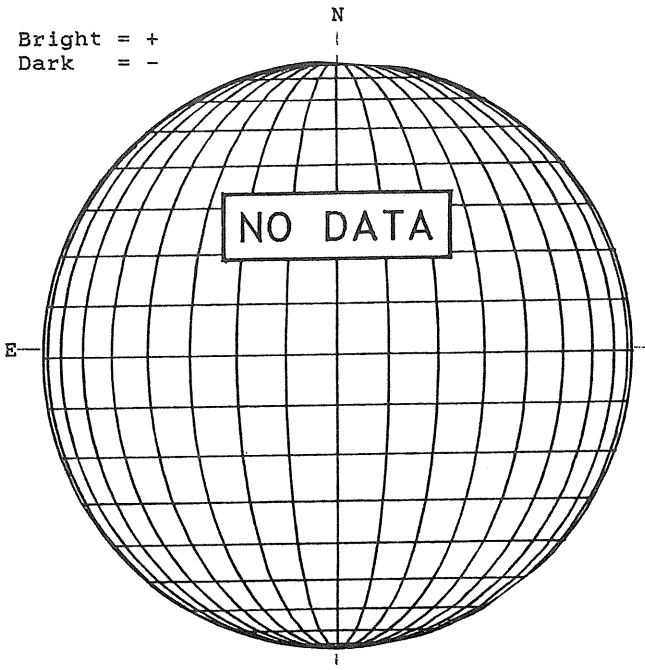
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 12, 1991 (P= 11.76, B_o =-0.47, L_o = 318.38)

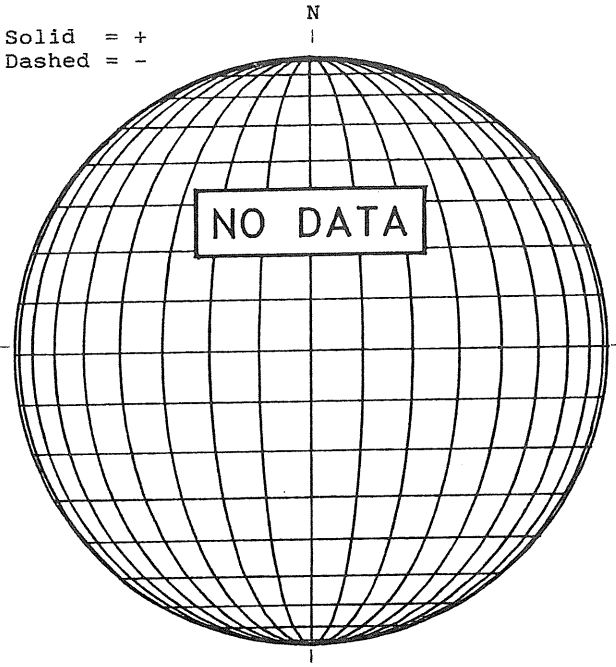
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



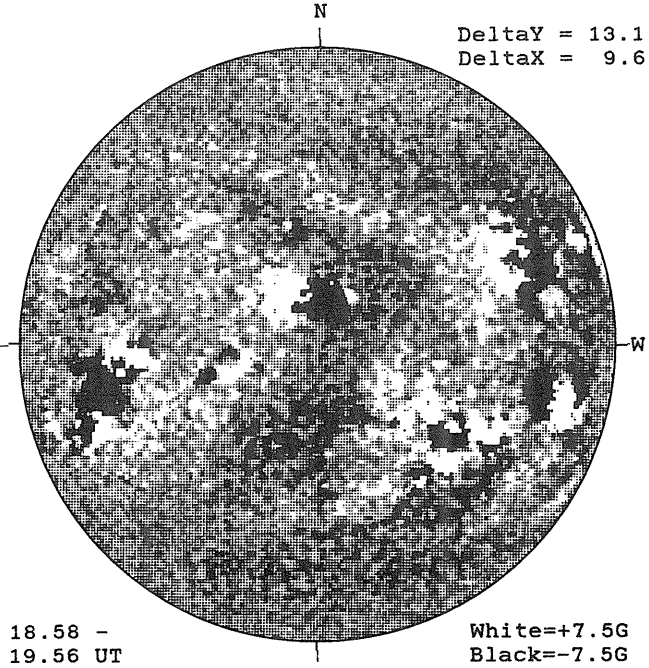
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

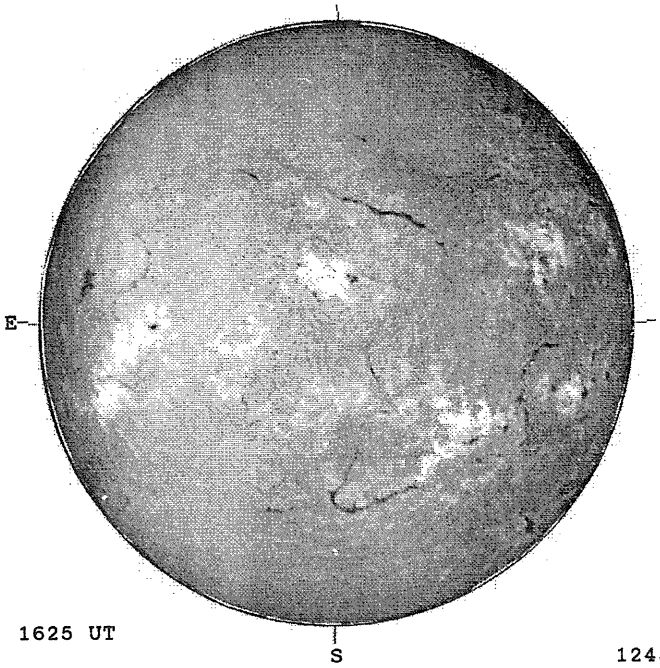
DeltaY = 13.1
DeltaX = 9.6



18.58 -
19.56 UT

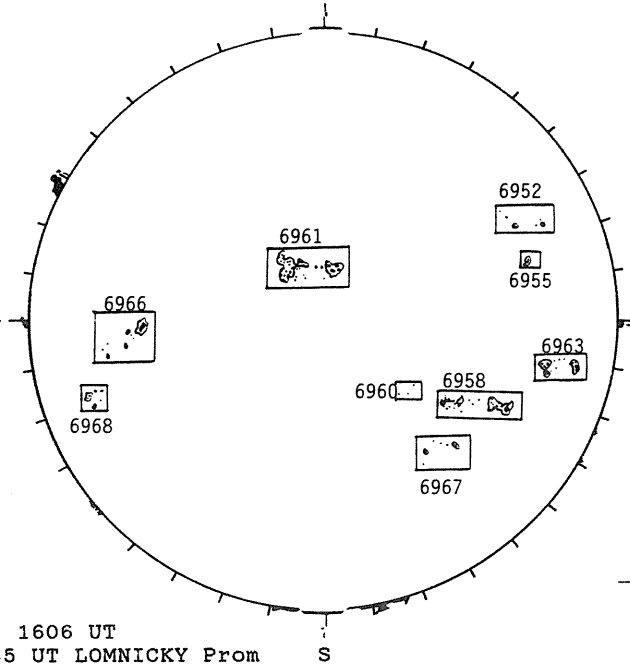
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



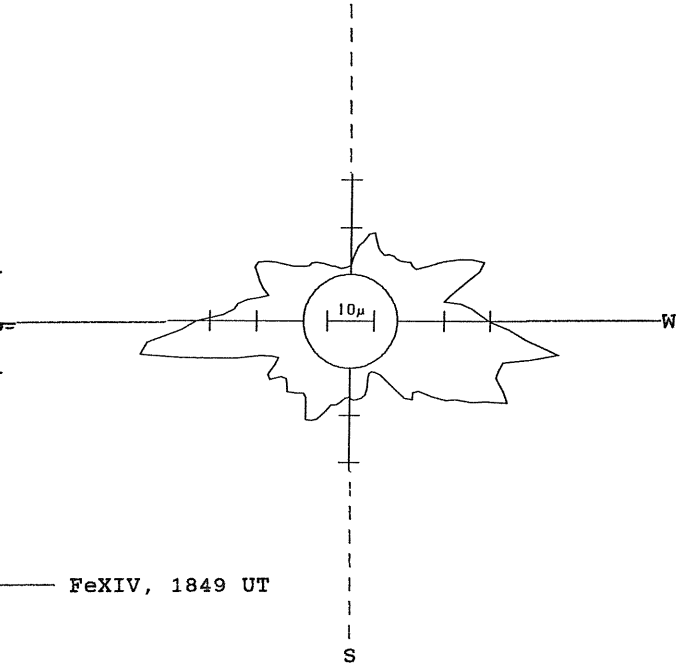
1625 UT

BOULDER SUNSPOT



1606 UT
1245 UT LOMNICKY Prom

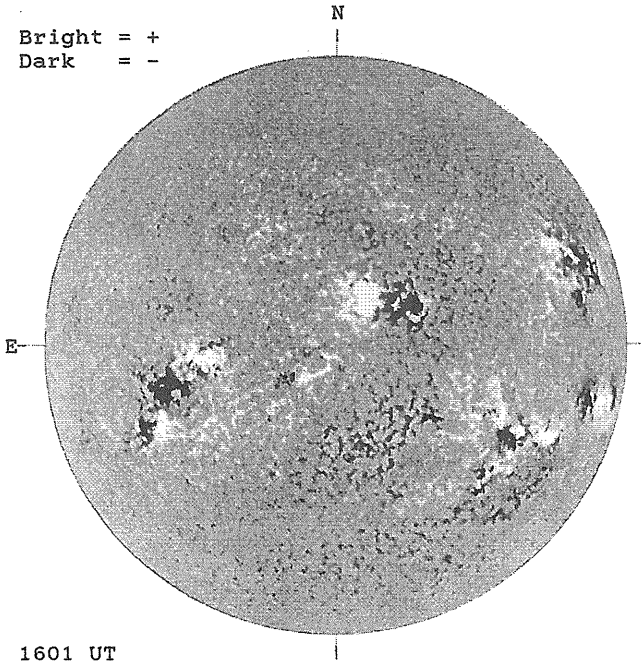
SACRAMENTO PEAK CORONA (1.15 Radii)



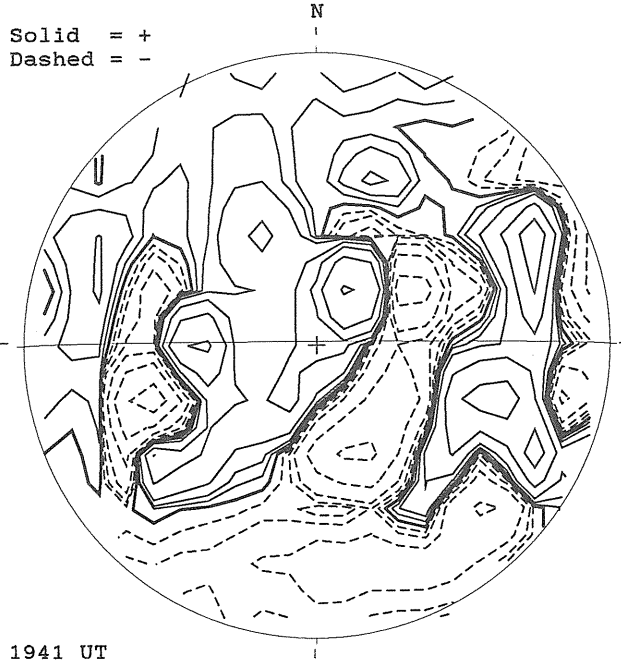
—— FeXIV, 1849 UT

DECEMBER 13, 1991 (P= 11.32, B_o =-0.60, L_o = 305.20)

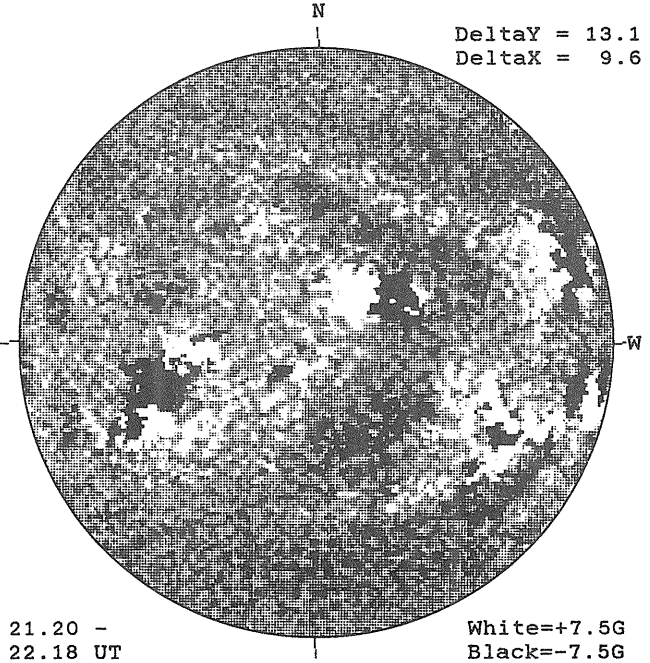
KITT PEAK MAGNETOGRAM



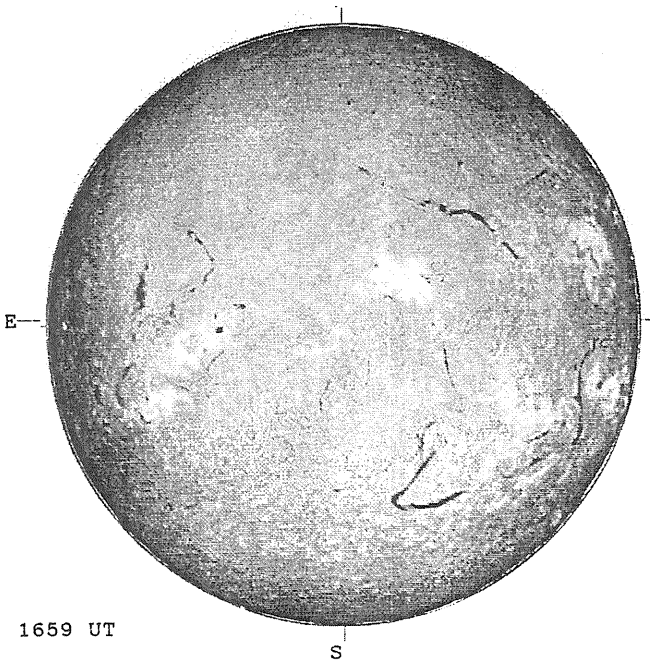
STANFORD MAGNETOGRAM



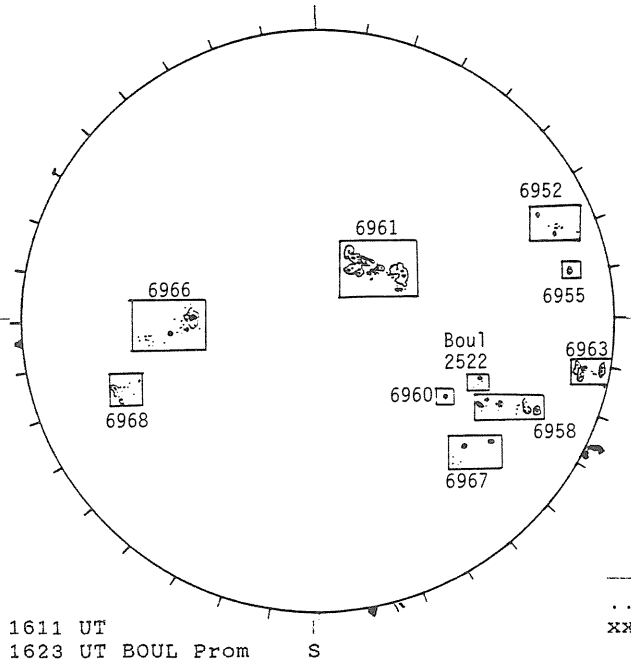
MT. WILSON MAGNETOGRAM



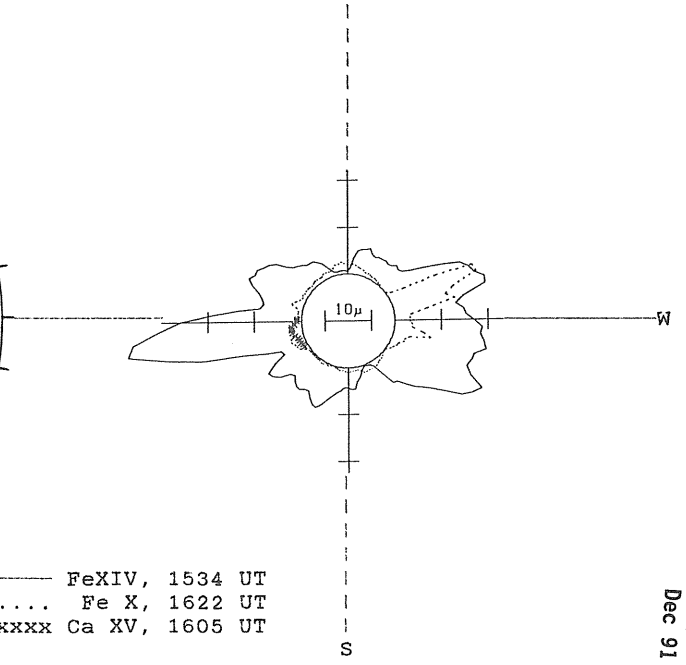
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



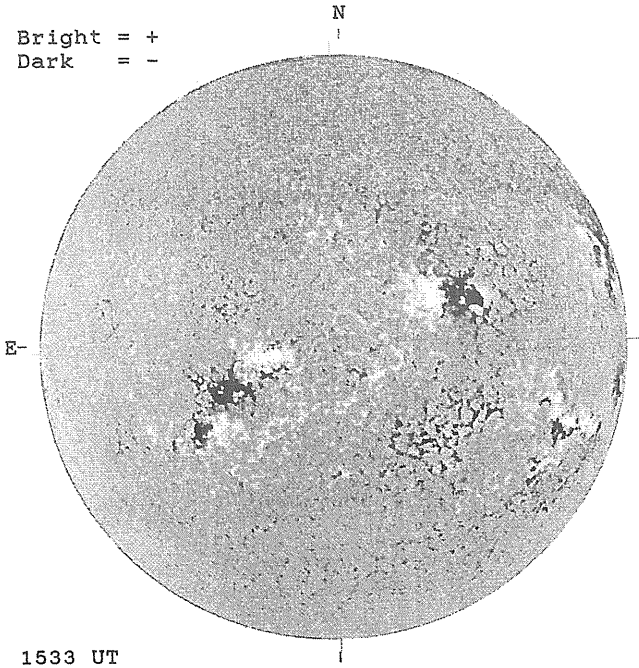
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 14, 1991 (P= 10.87, B_o =-0.73, L_o = 292.03)

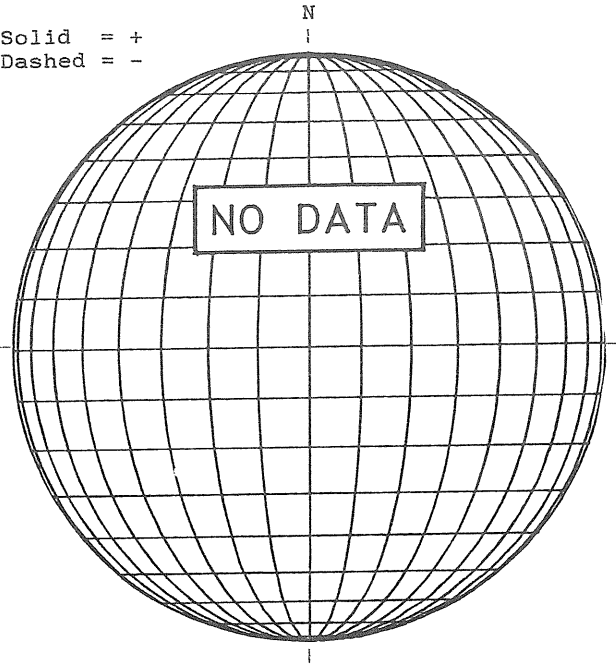
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



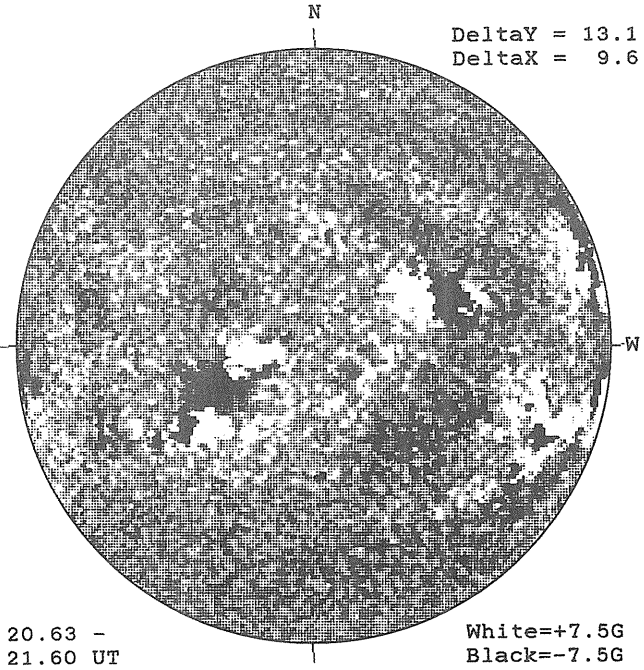
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

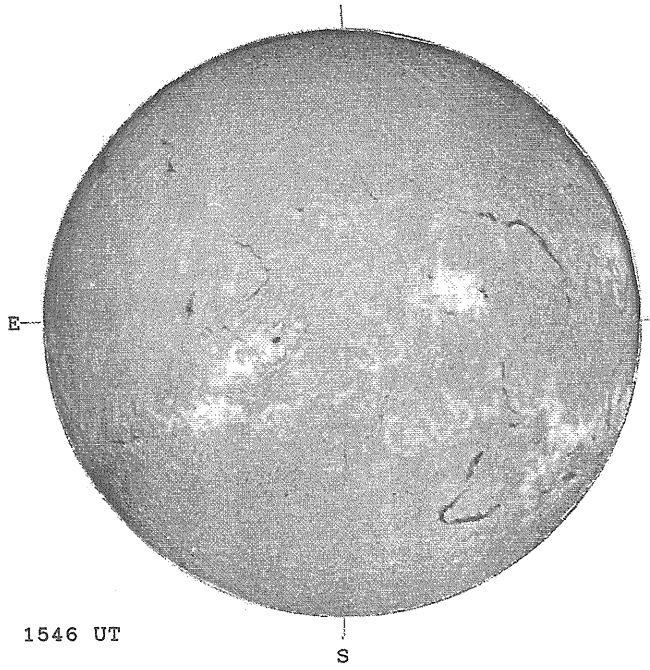


MT. WILSON MAGNETOGRAM

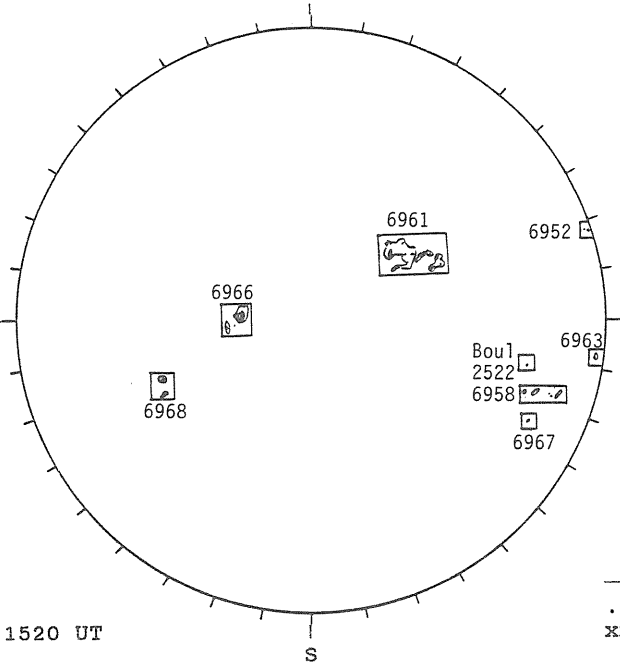
DeltaY = 13.1
DeltaX = 9.6



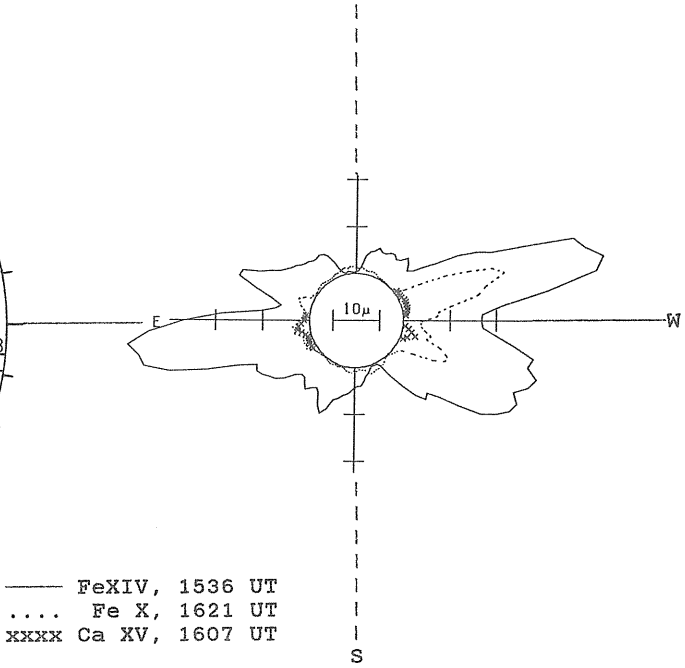
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

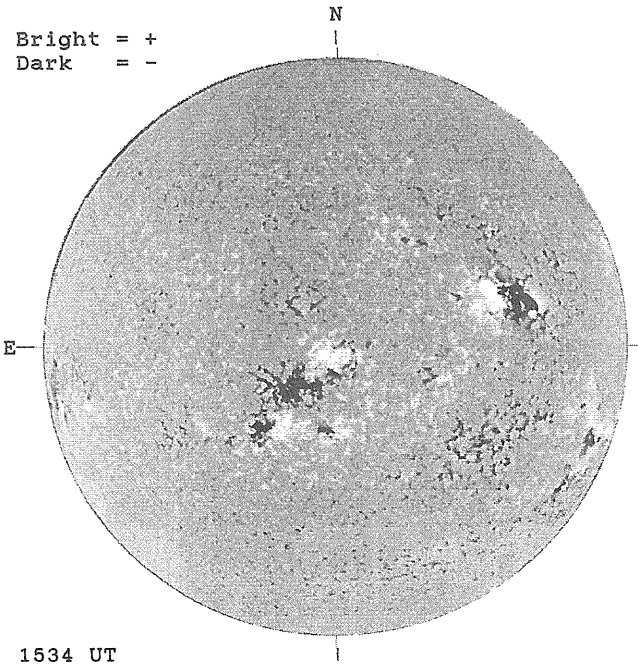


—— FeXIV, 1536 UT
.... Fe X, 1621 UT
xxxx Ca XV, 1607 UT

DECEMBER 15, 1991 (P= 10.42, B_o =-0.86, L_o = 278.85)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



1534 UT

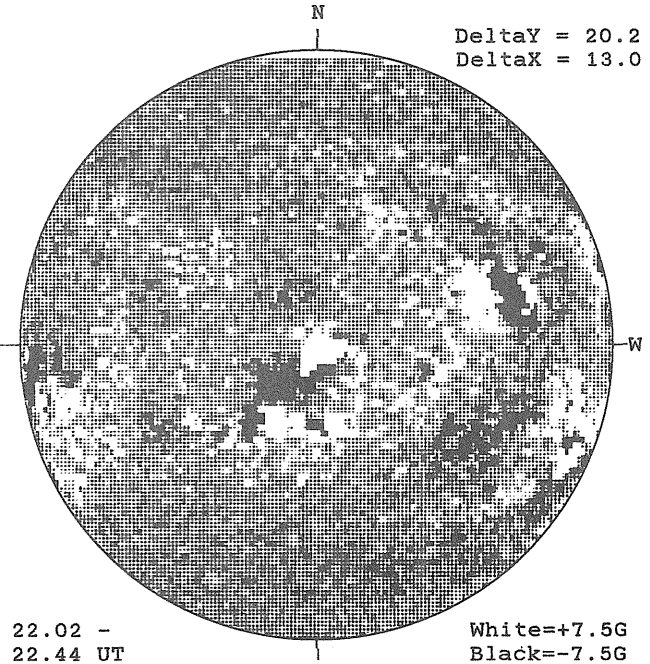
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

1953 UT

MT. WILSON MAGNETOGRAM

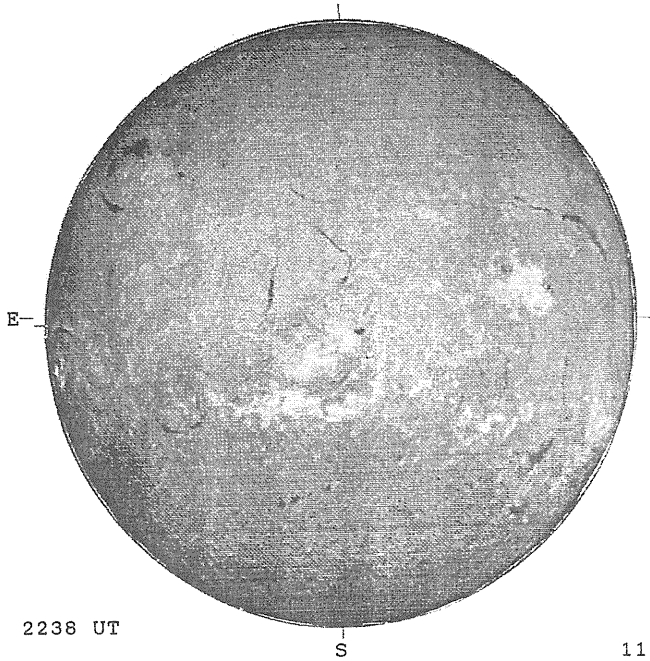
DeltaY = 20.2
DeltaX = 13.0



22.02 -
22.44 UT

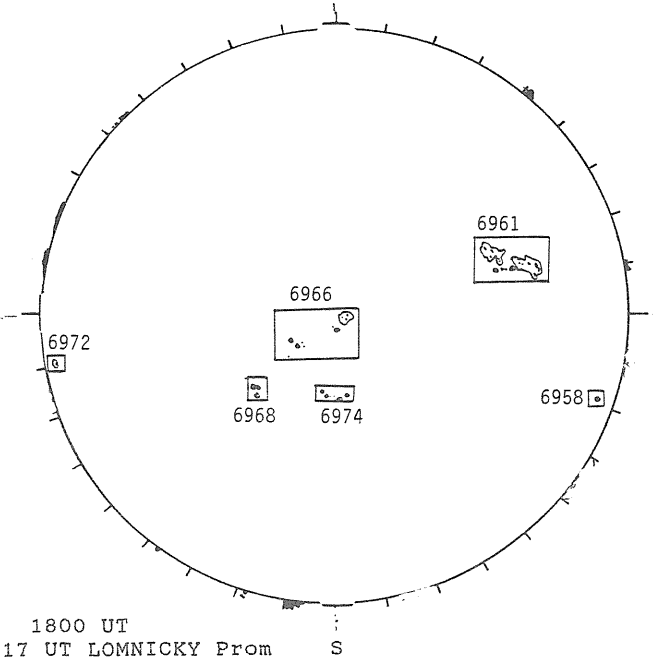
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



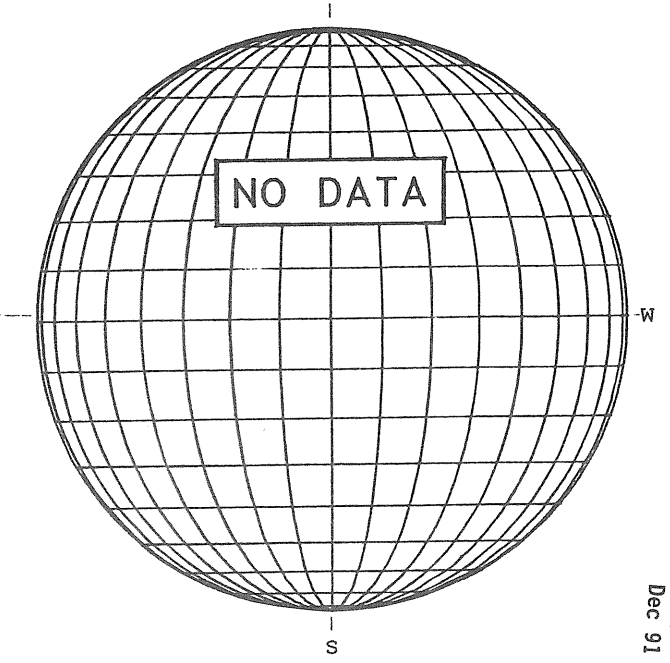
2238 UT

BOULDER SUNSPOT



1800 UT
1117 UT LOMNICKY Prom

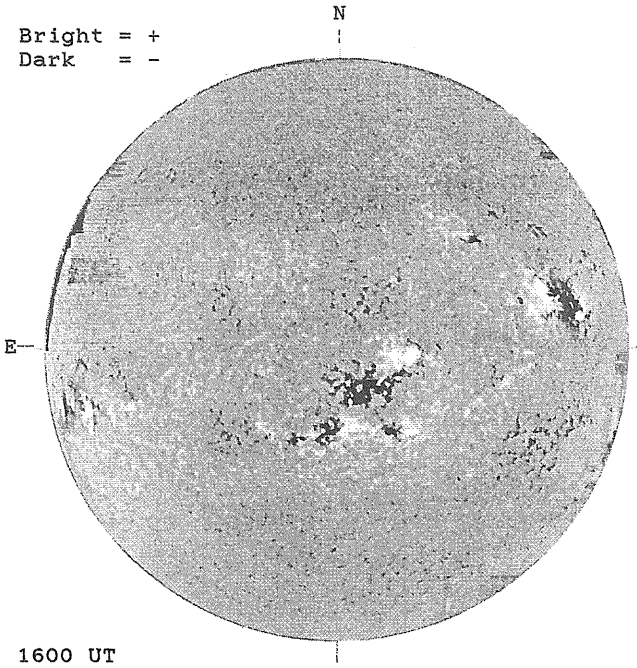
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 16, 1991 (P= 9.97, B_o =-0.98, L_o = 265.68)

KITT PEAK MAGNETOGRAM

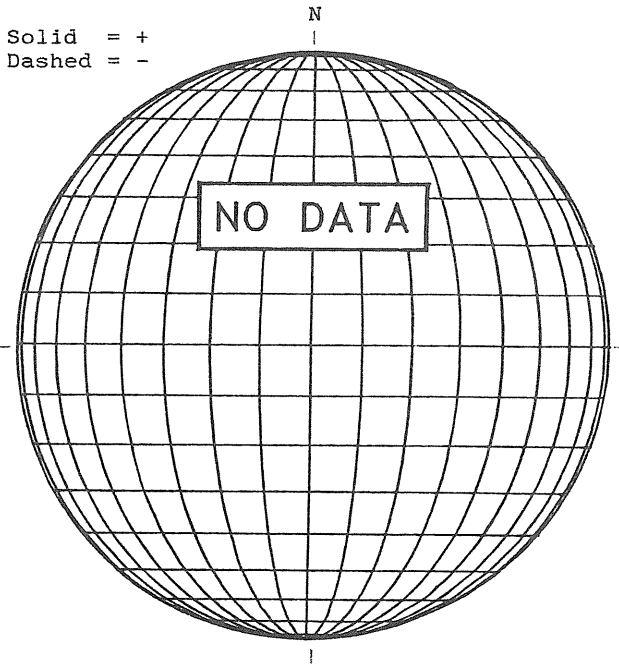
Bright = +
Dark = -



1600 UT

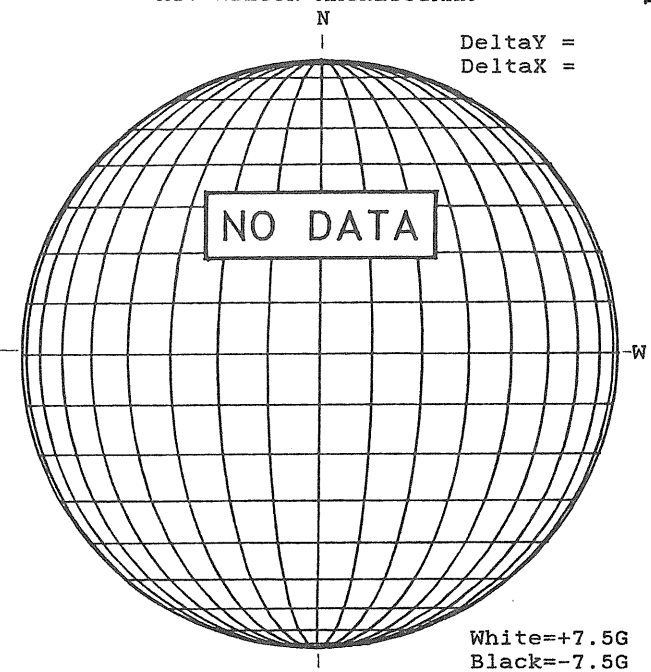
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



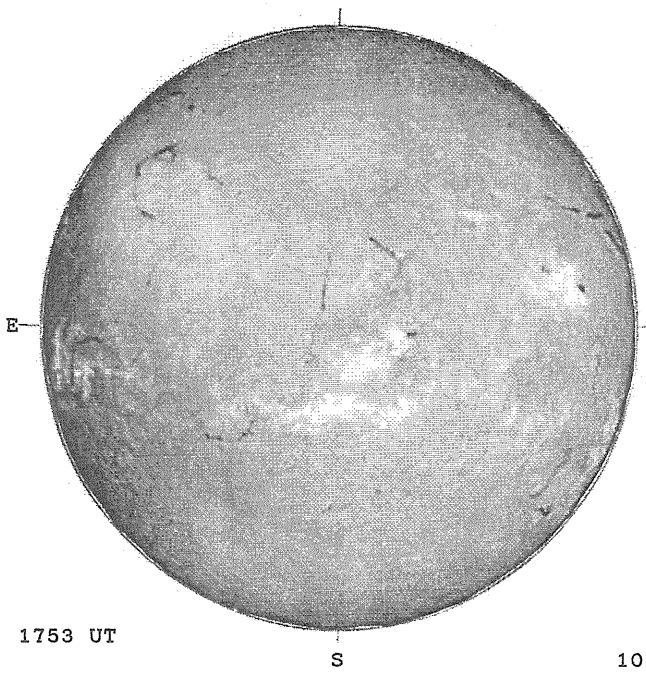
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



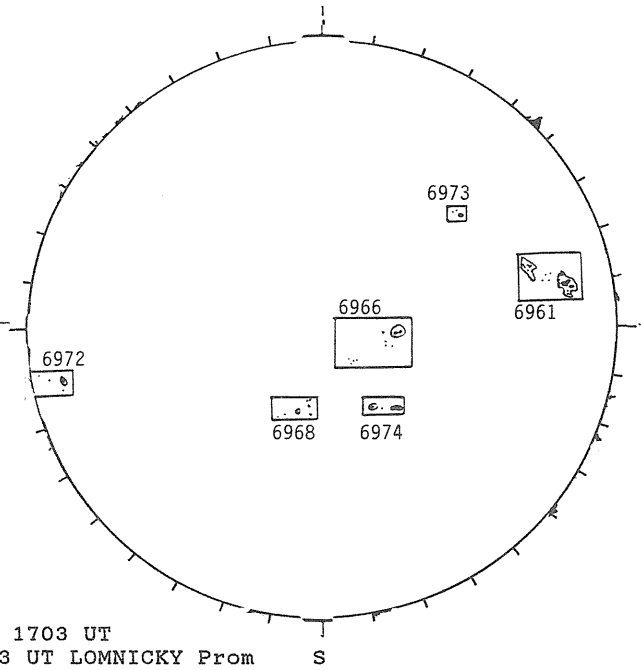
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



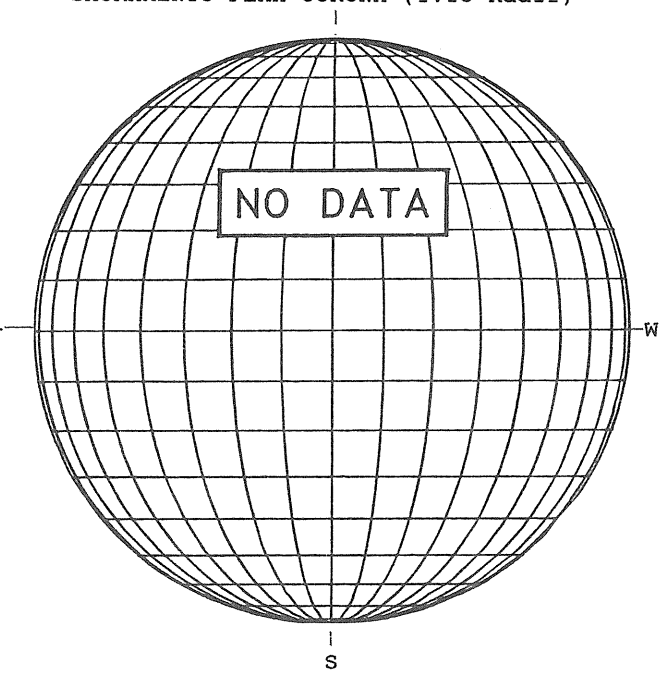
1753 UT

BOULDER SUNSPOT



1703 UT
1043 UT LOMNICKY Prom

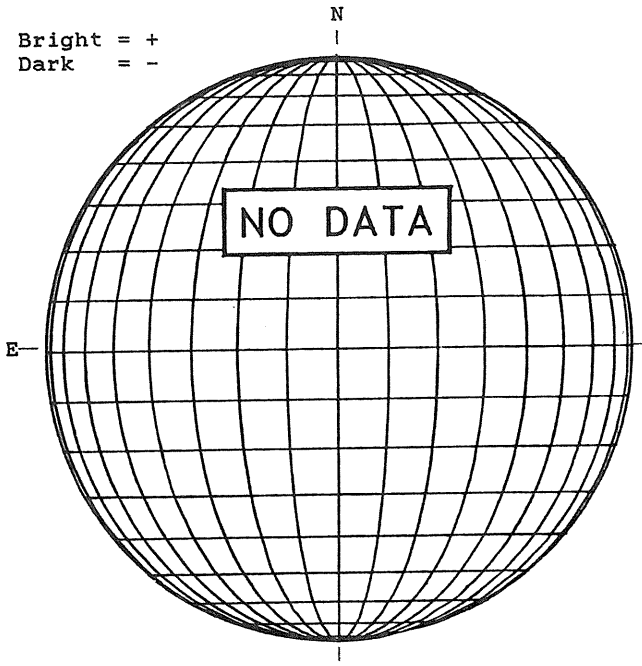
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 17, 1991 (P= 9.51, B_o =-1.11, L_o = 252.50)

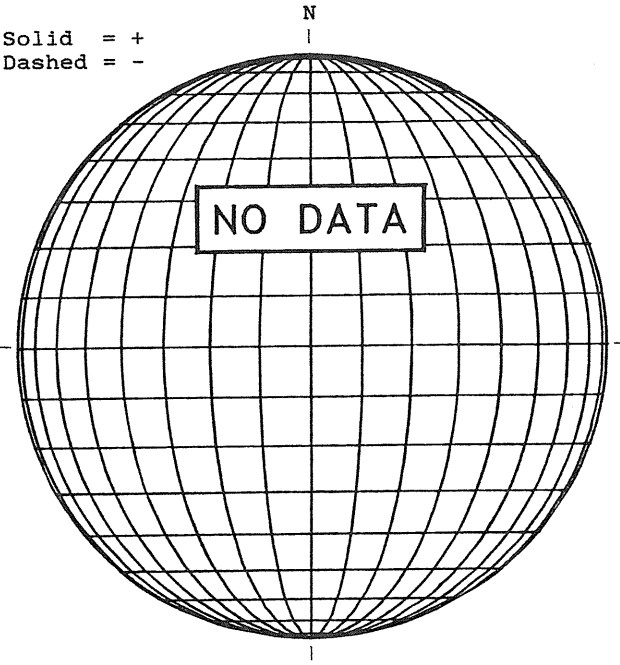
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



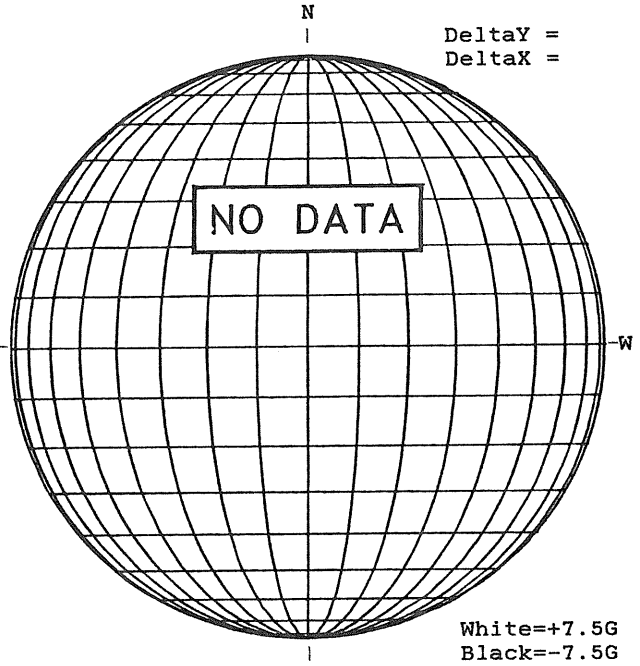
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



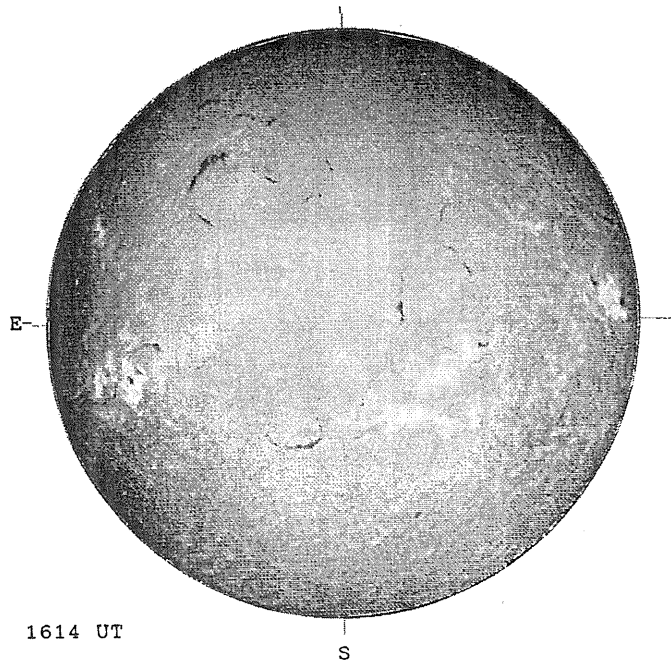
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



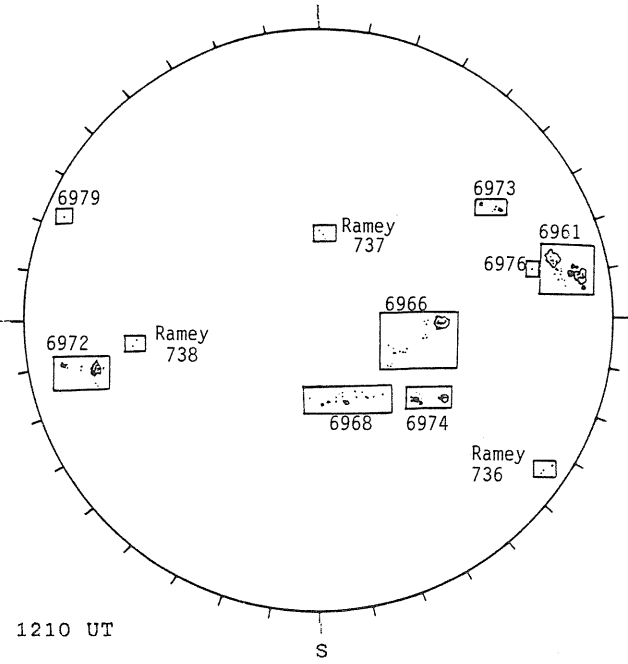
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



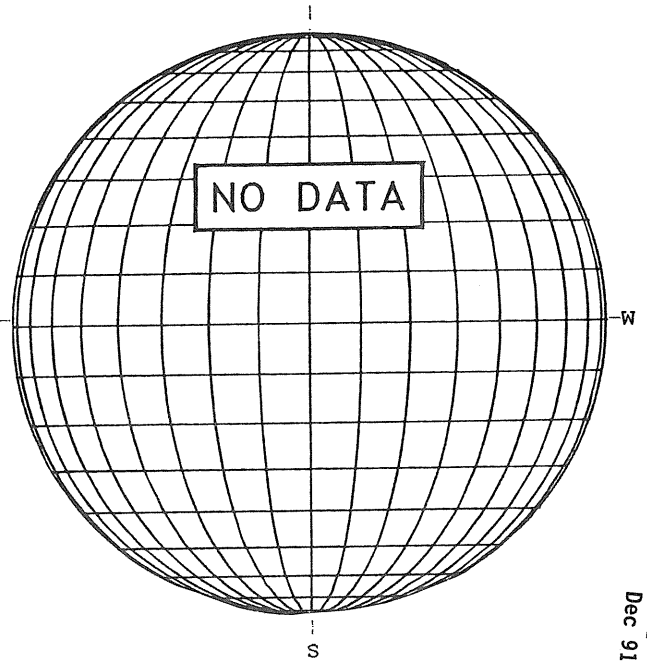
1614 UT

RAMEY SUNSPOT



1210 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

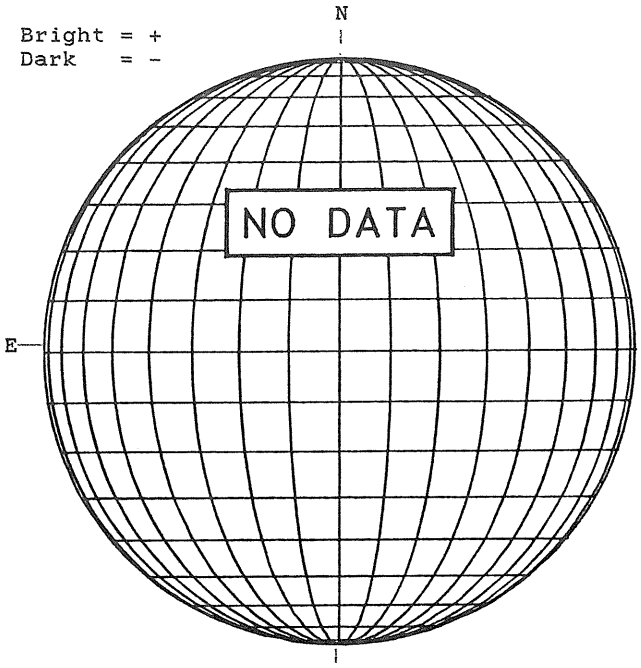


71
Dec 91

DECEMBER 18, 1991 (P= 9.05, B_o =-1.24, L_o = 239.33)

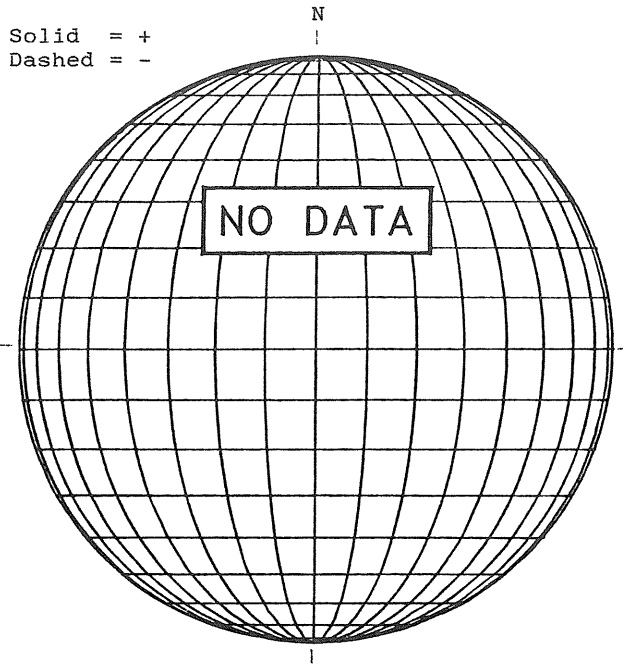
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



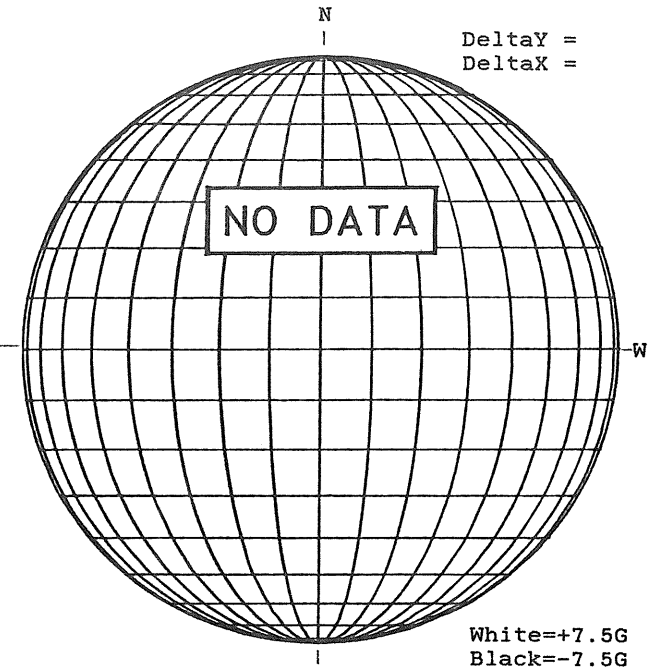
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



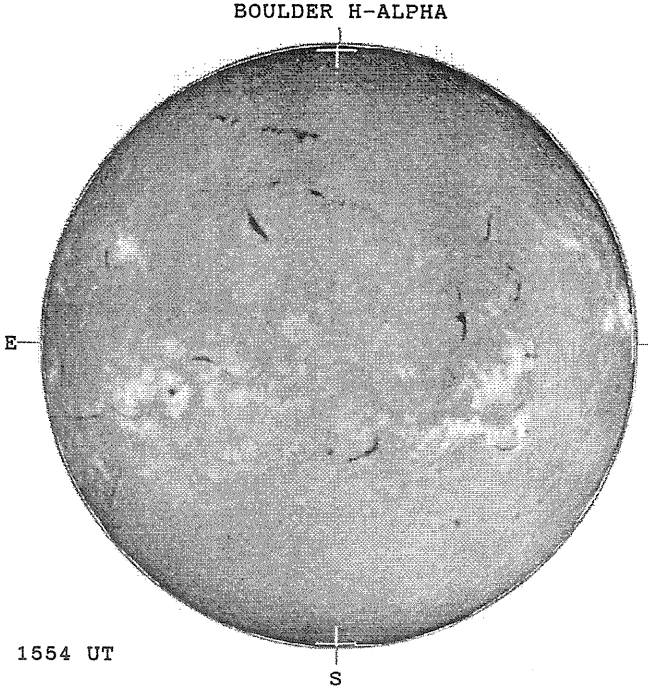
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



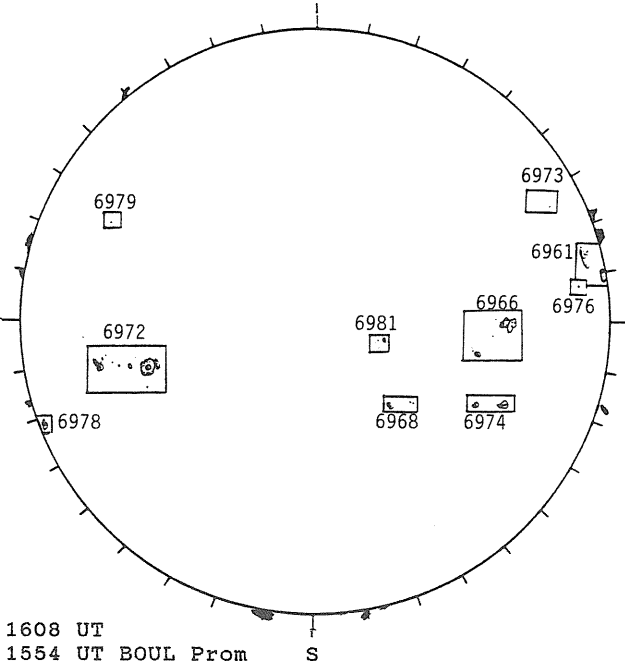
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



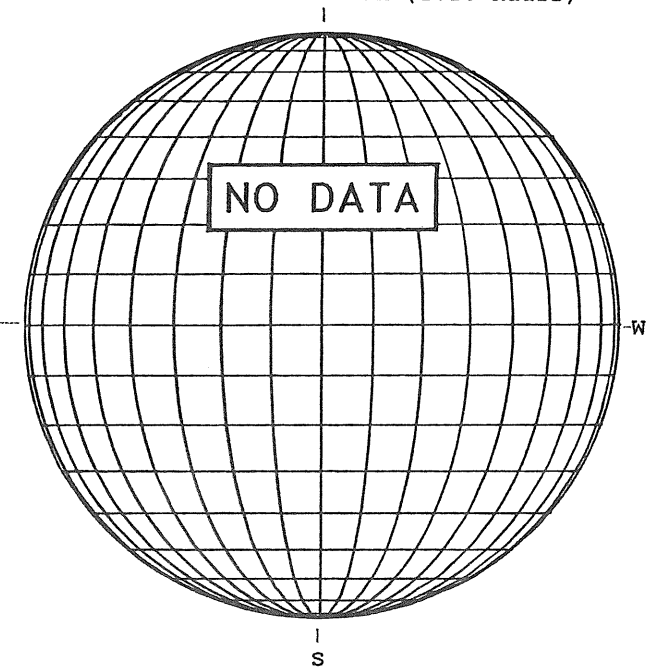
1554 UT

BOULDER SUNSPOT



1608 UT
1554 UT BOUL Prom

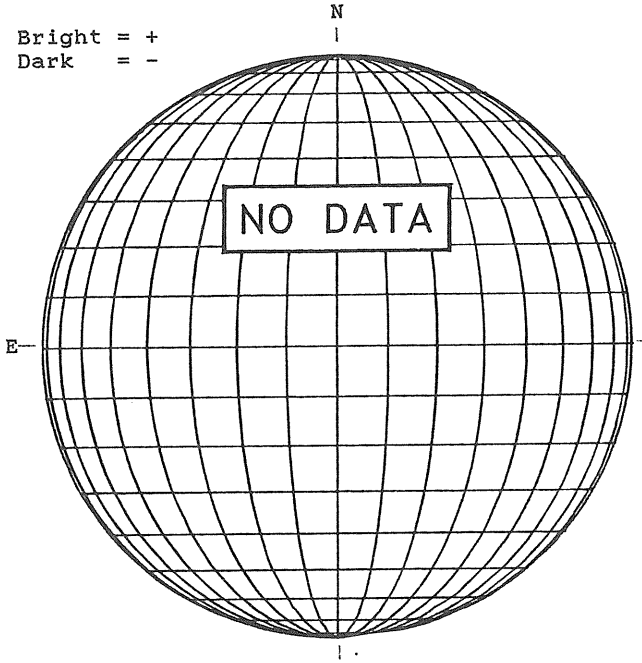
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 19, 1991 (P= 8.59, B_o =-1.36, L_o = 226.15)

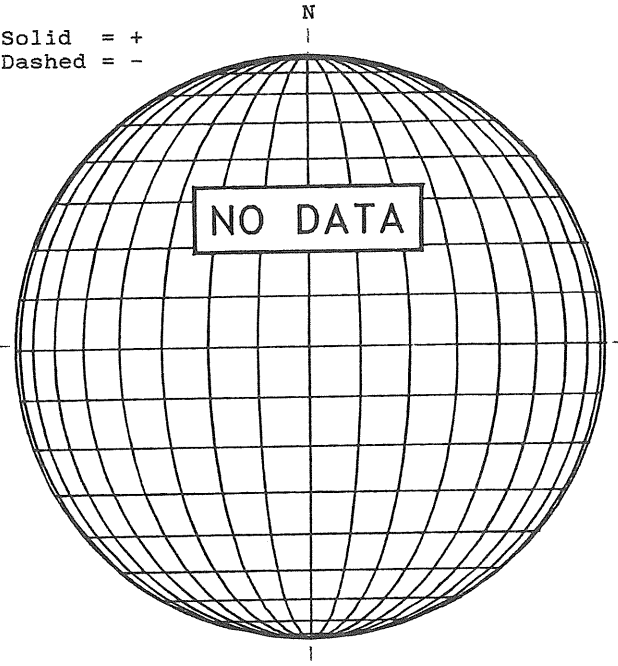
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



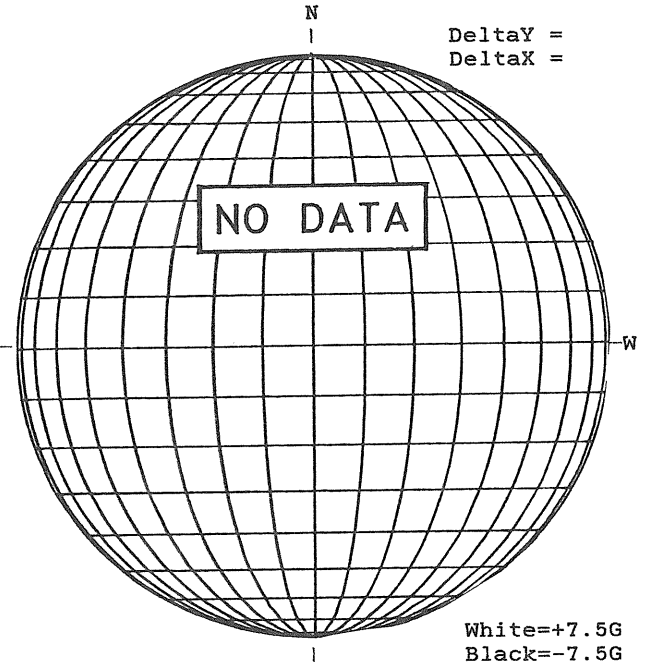
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



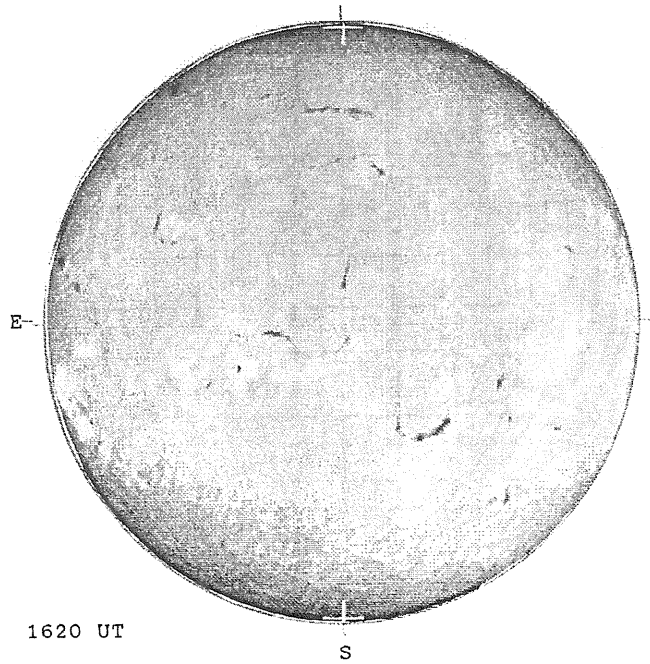
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



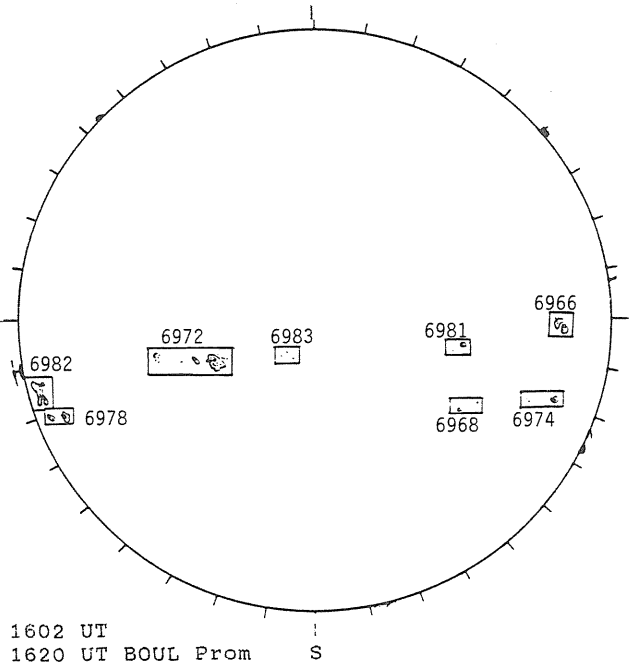
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



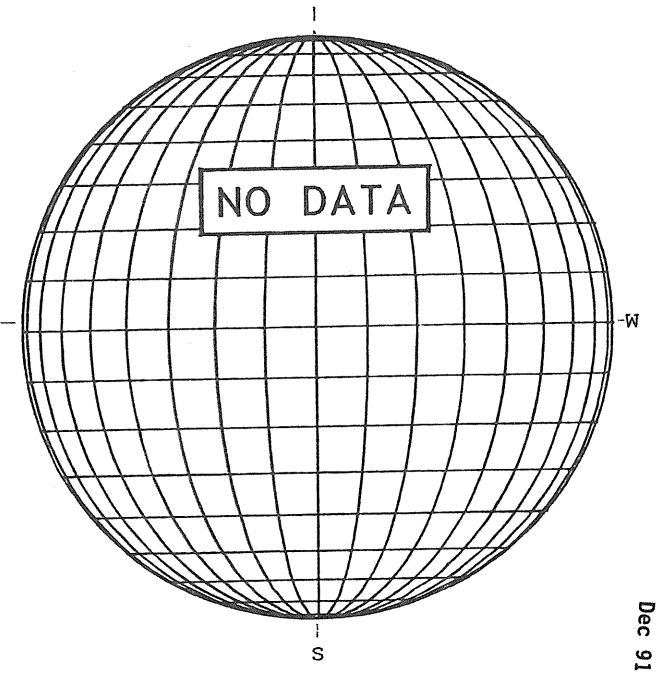
1620 UT

BOULDER SUNSPOT



1602 UT
1620 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

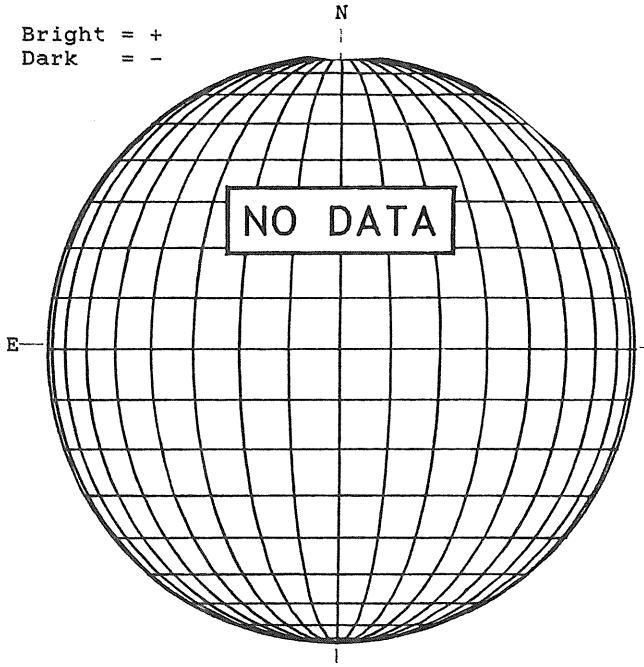


73
Dec 91

DECEMBER 20, 1991 (P= 8.12, B_o =-1.49, L_o = 212.98)

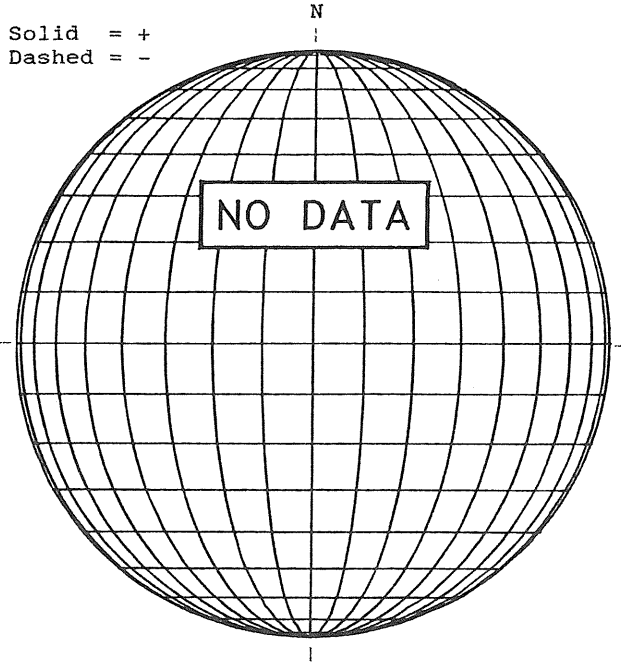
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



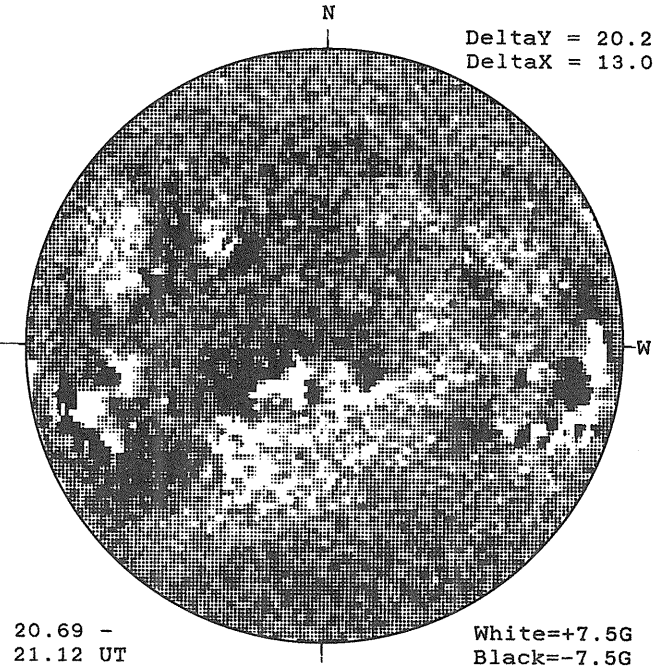
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

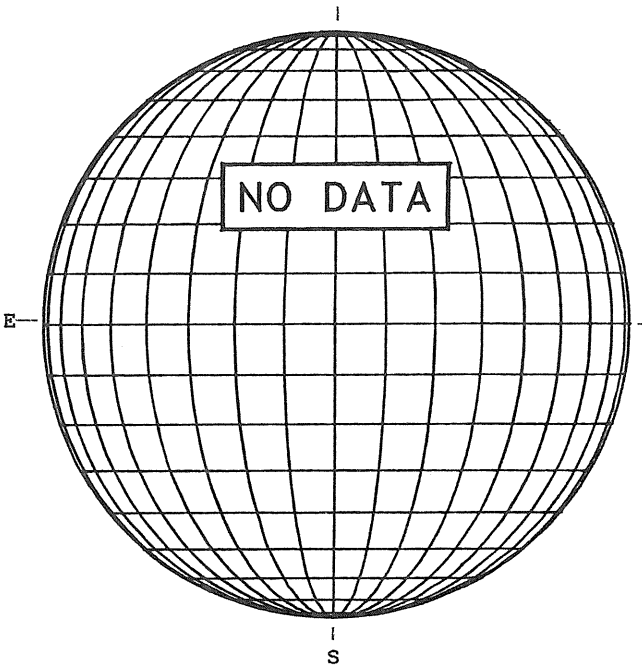
DeltaY = 20.2
DeltaX = 13.0



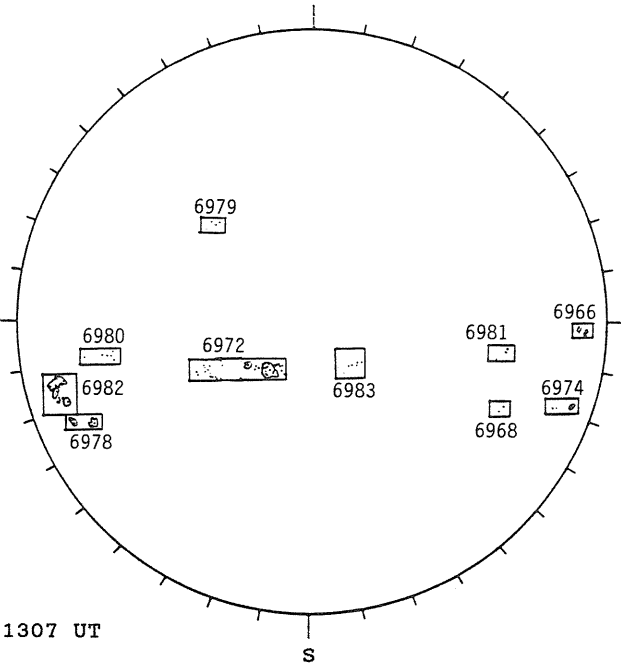
20.69 -
21.12 UT

White=+7.5G
Black=-7.5G

BOULDER H-ALPHA

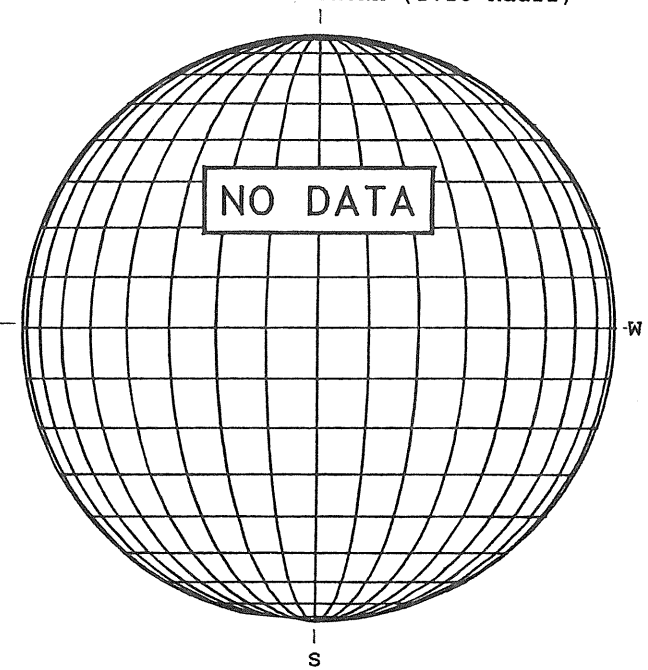


RAMEY SUNSPOT



1307 UT

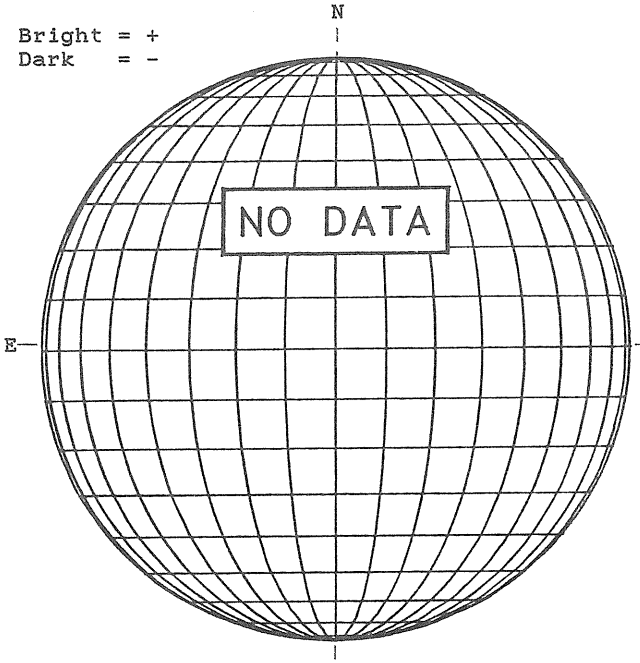
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 21, 1991 (P= 7.66, B_o =-1.61 L_o = 199.80)

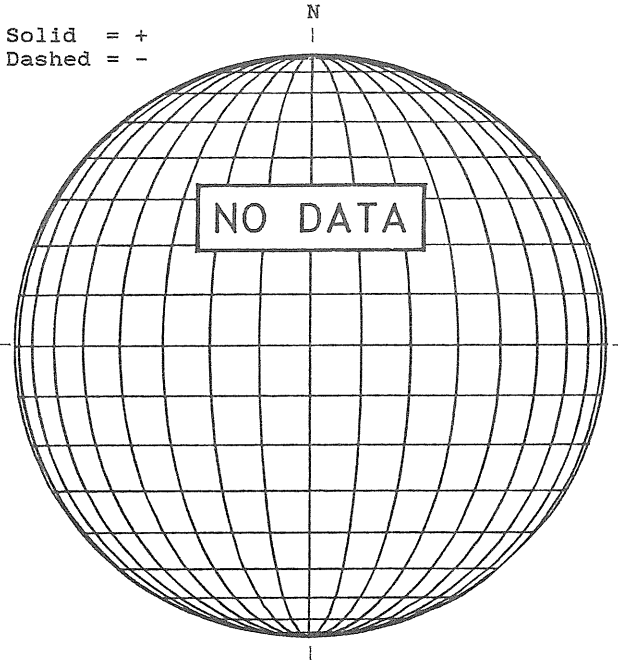
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



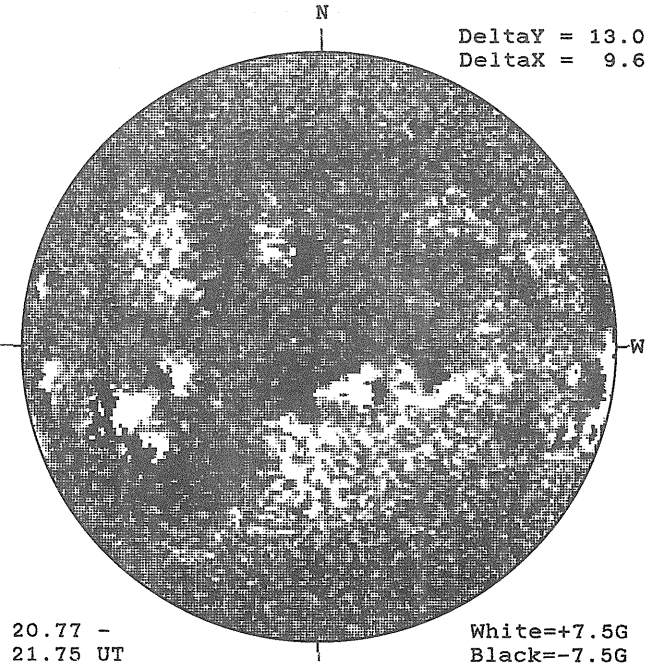
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

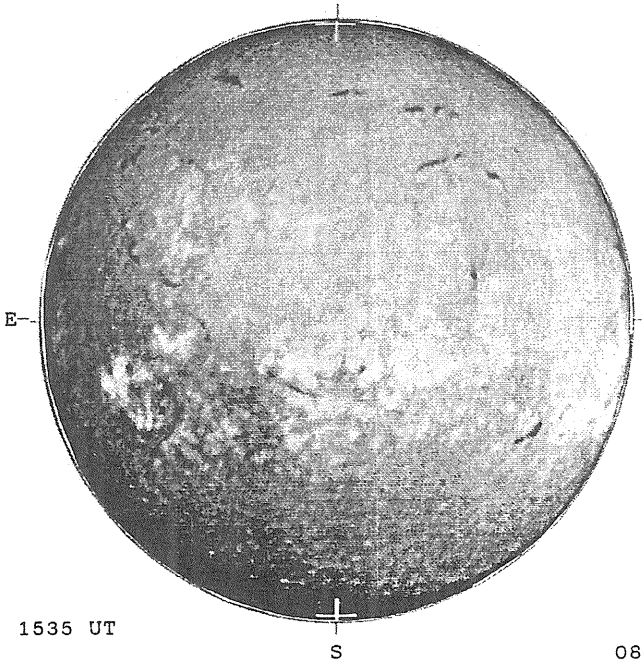
DeltaY = 13.0
DeltaX = 9.6



20.77 -
21.75 UT

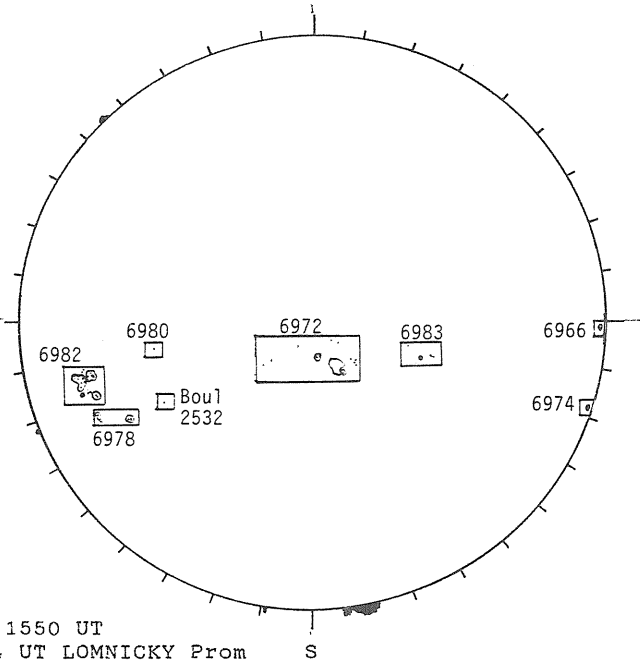
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



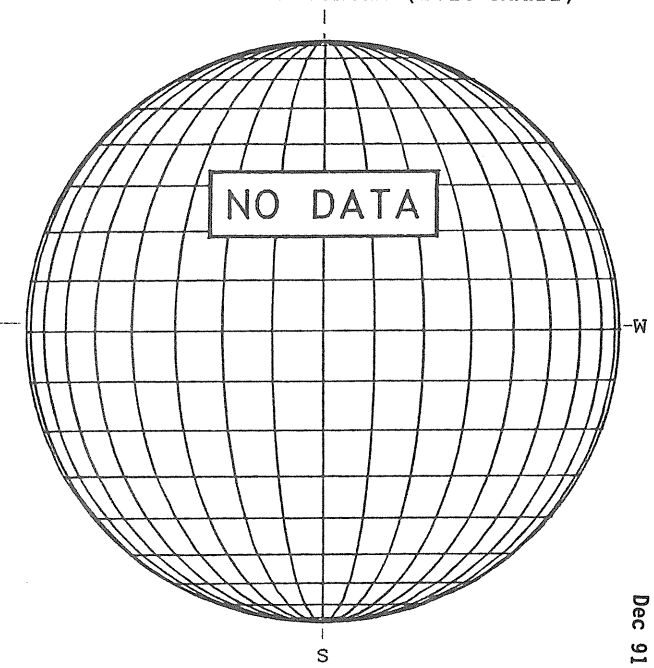
1535 UT

BOULDER SUNSPOT



1550 UT
0844 UT LOMNICKY Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

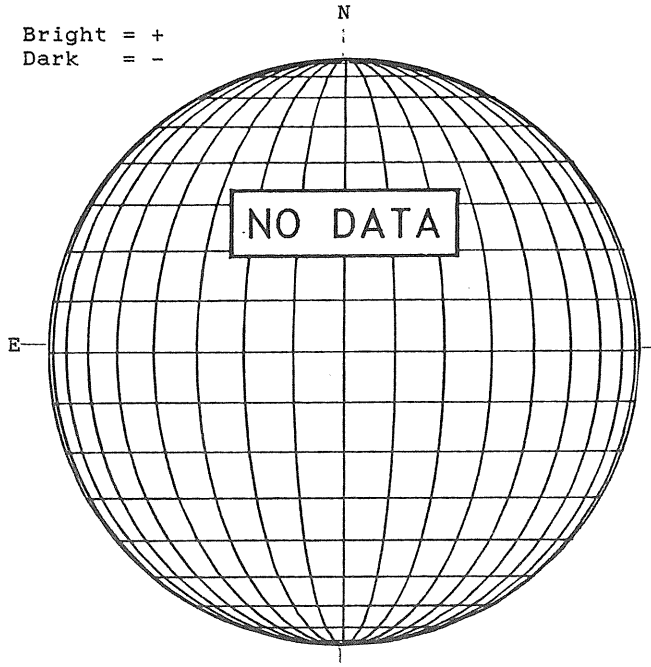


75
Dec 91

DECEMBER 22, 1991 (P= 7.19, B_o =-1.74, L_o = 186.63)

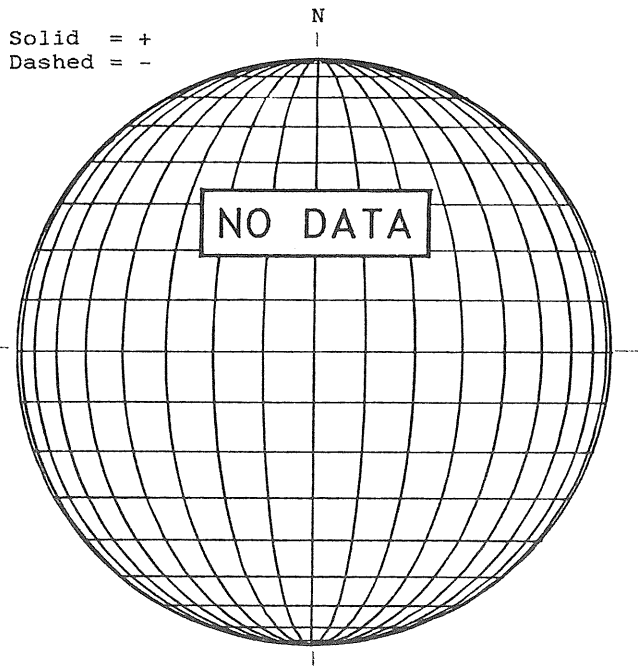
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



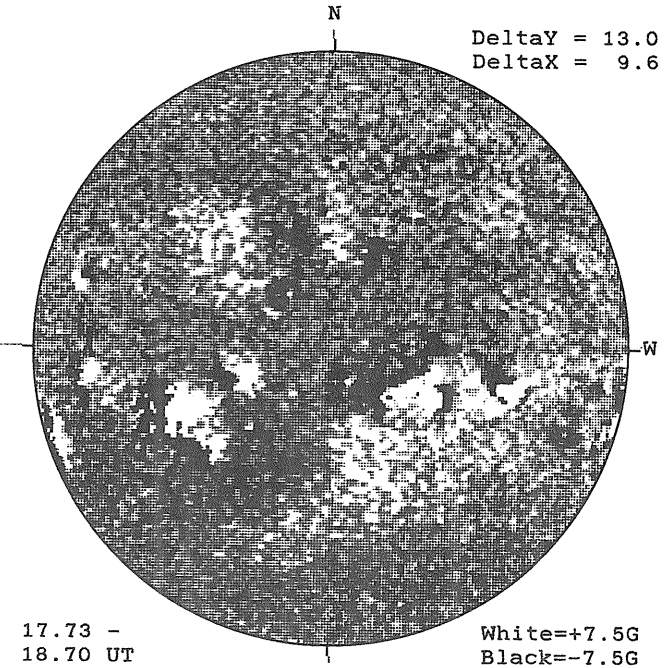
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

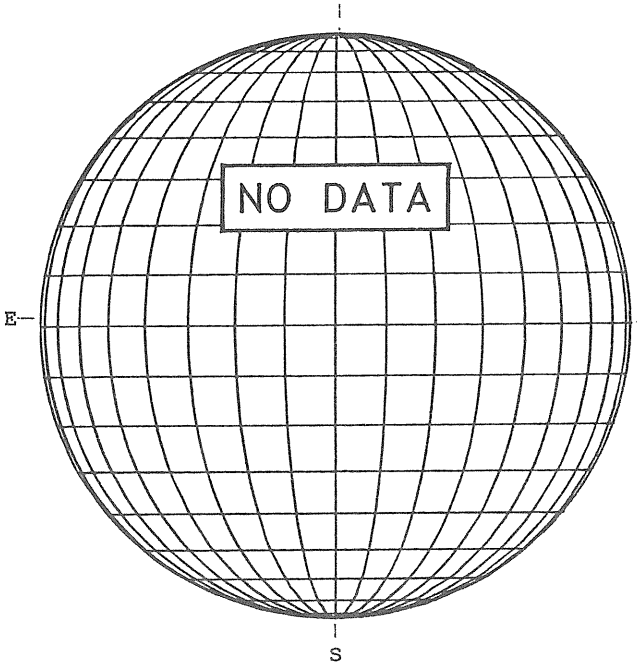
DeltaY = 13.0
DeltaX = 9.6



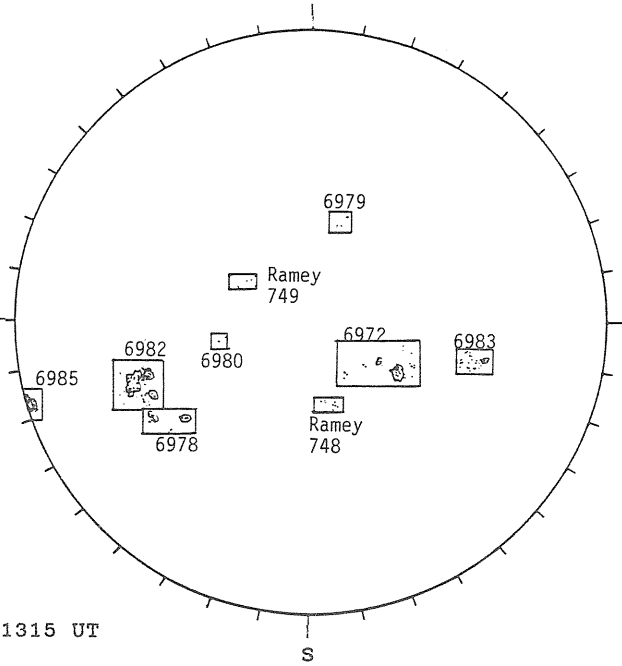
17.73 -
18.70 UT

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

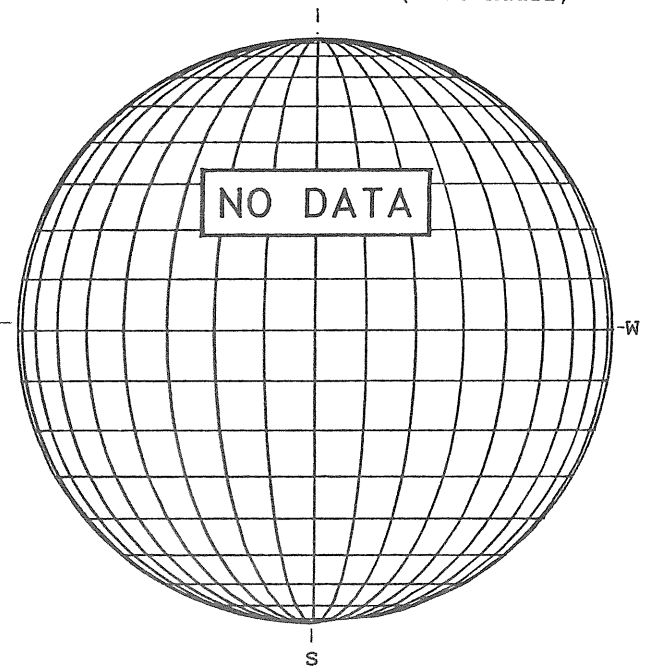


RAMEY SUNSPOT



1315 UT

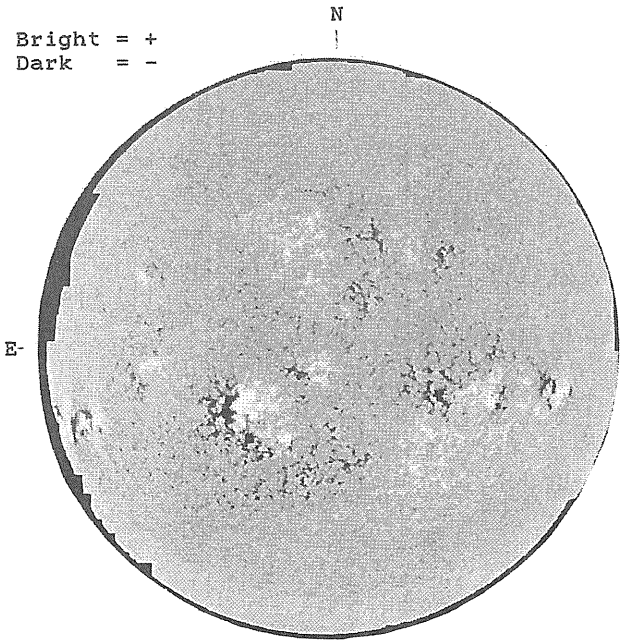
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 23, 1991 (P= 6.71, B_o =-1.86, L_o = 173.46)

KITT PEAK MAGNETOGRAM

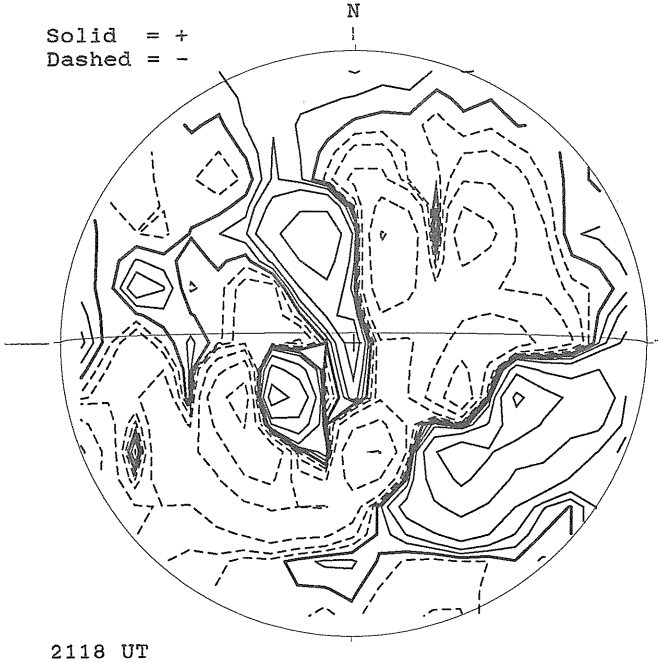
Bright = +
Dark = -



1754 UT

STANFORD MAGNETOGRAM

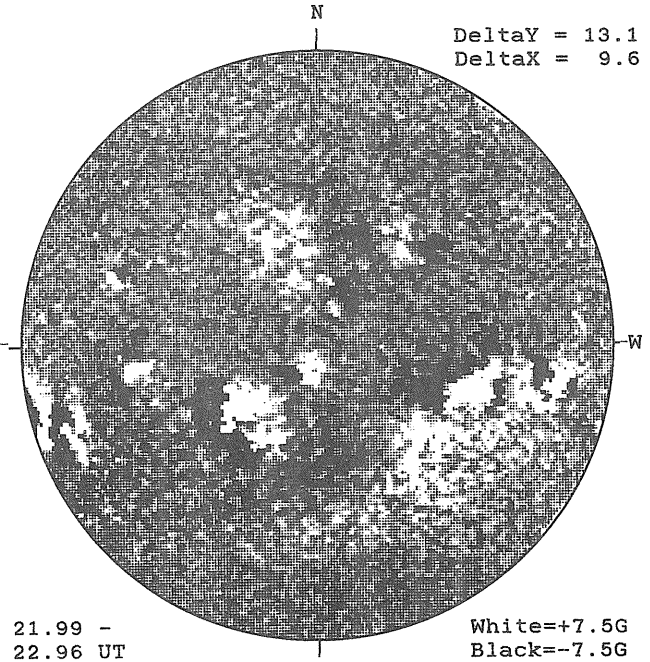
Solid = +
Dashed = -



2118 UT

MT. WILSON MAGNETOGRAM

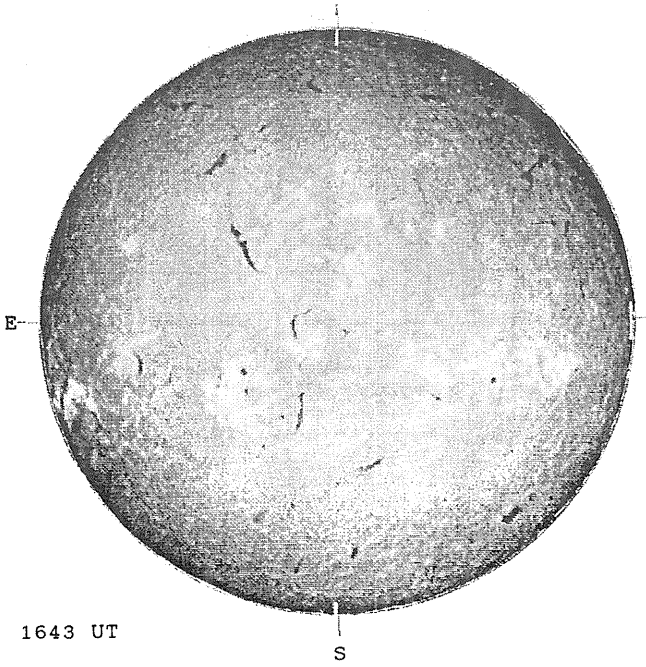
DeltaY = 13.1
DeltaX = 9.6



21.99 -
22.96 UT

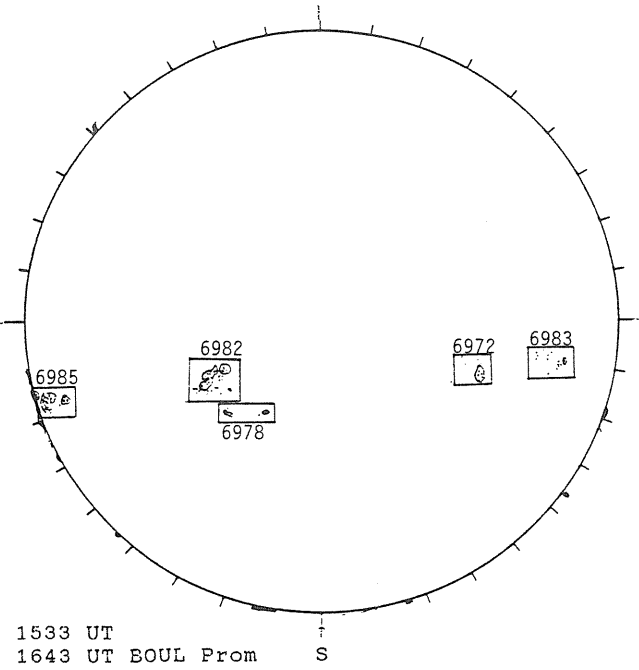
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



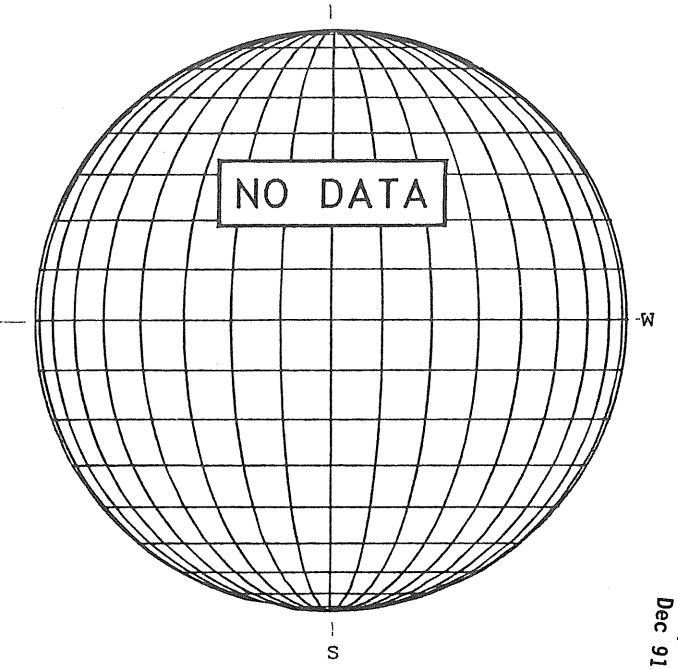
1643 UT

BOULDER SUNSPOT



1533 UT
1643 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

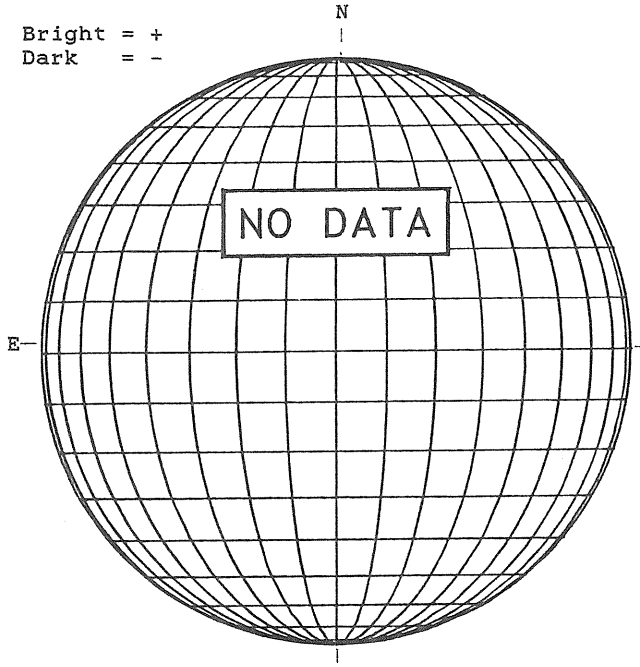


77
Dec 91

DECEMBER 24, 1991 (P= 6.24 B_o =-1.99, L_o = 160.28)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



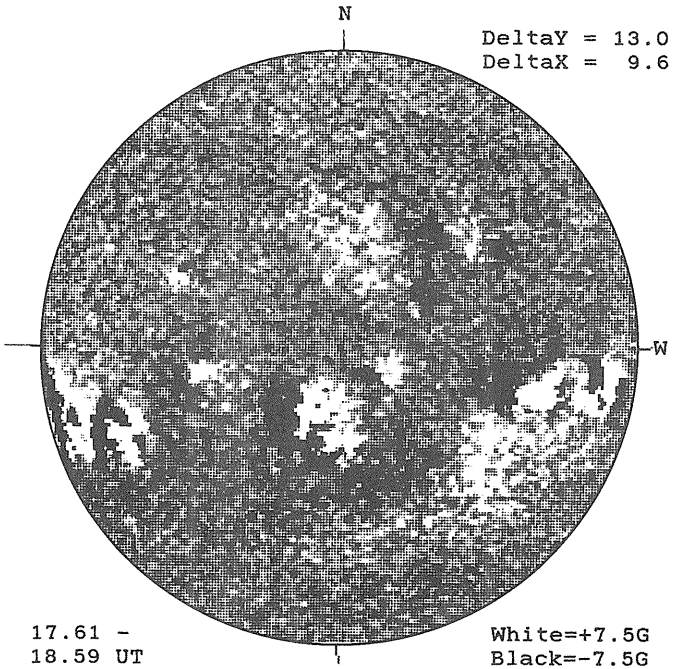
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

2156 UT

MT. WILSON MAGNETOGRAM

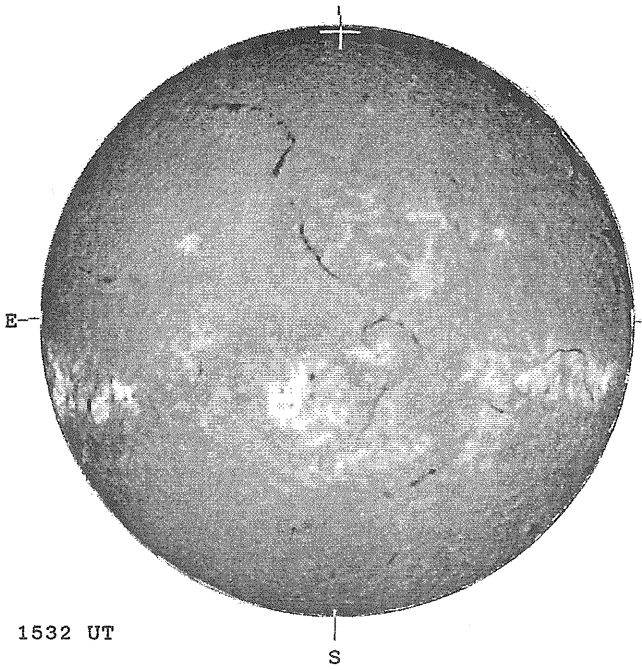
DeltaY = 13.0
DeltaX = 9.6



17.61 -
18.59 UT

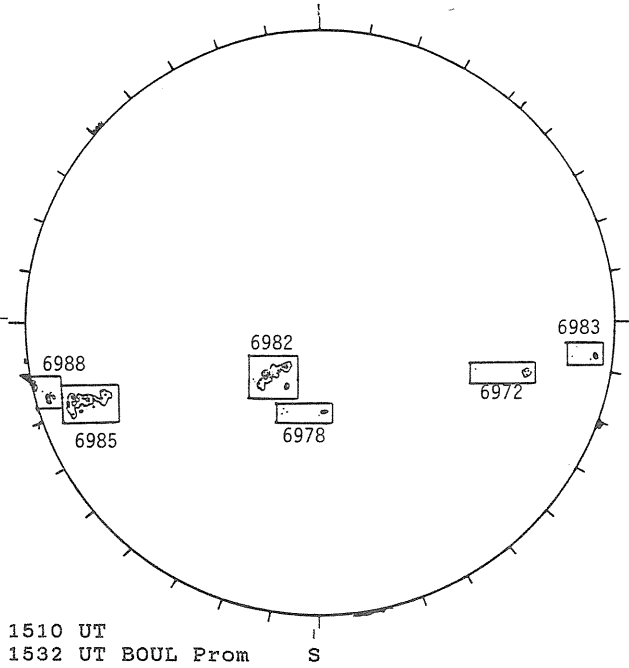
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



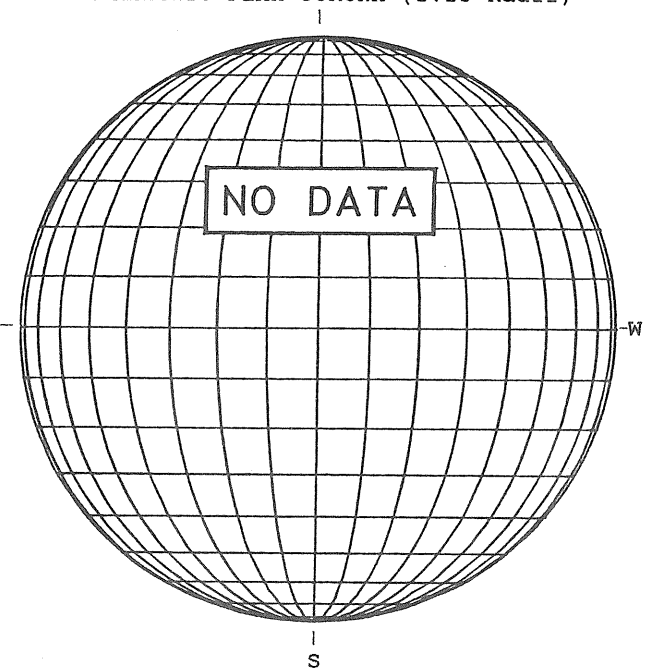
1532 UT

BOULDER SUNSPOT



1510 UT
1532 UT BOUL Prom

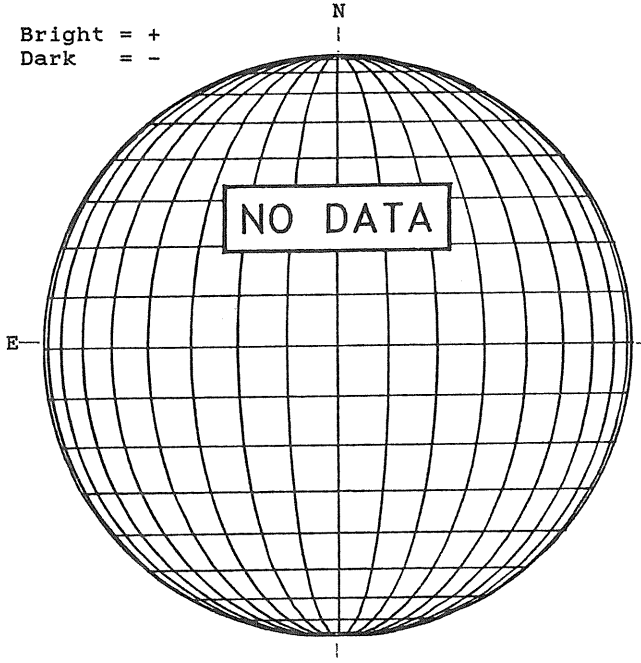
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 25, 1991 (P= 5.76, B_o =-2.11, L_o = 147.11)

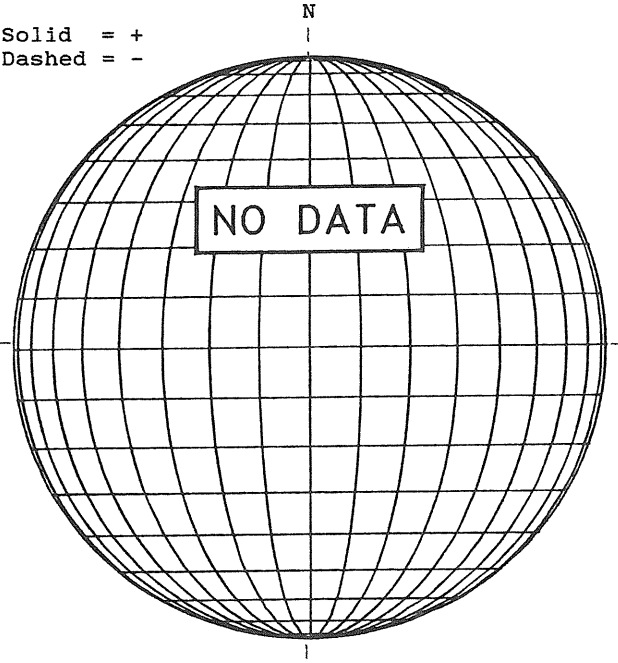
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



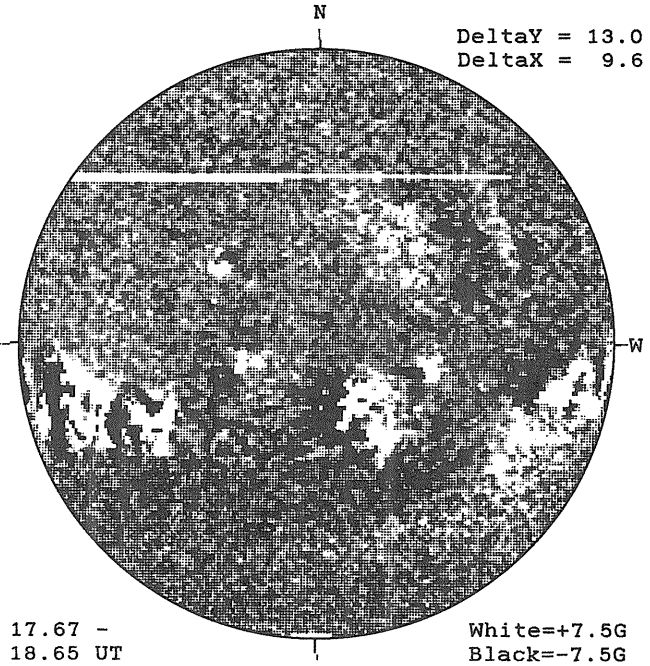
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

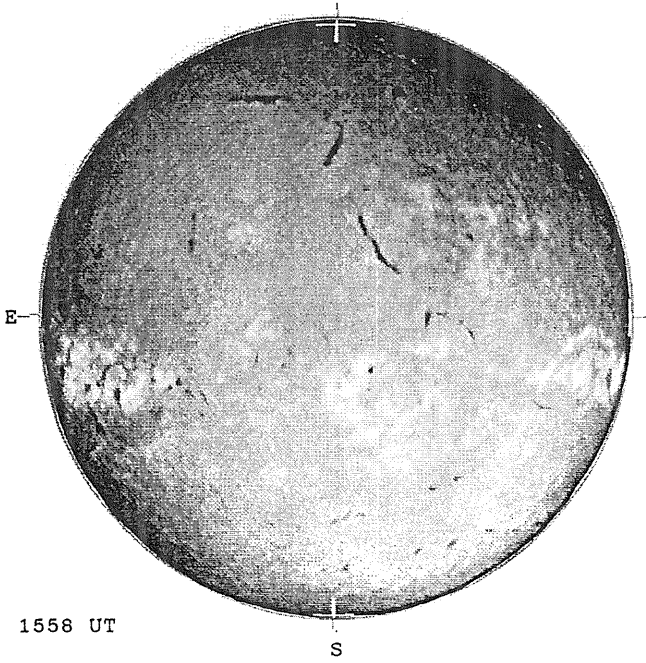
DeltaY = 13.0
DeltaX = 9.6



17.67 -
18.65 UT

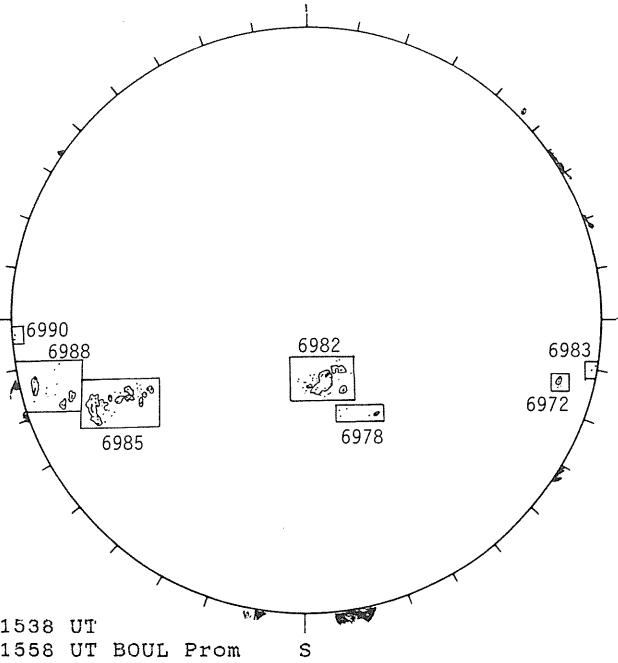
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



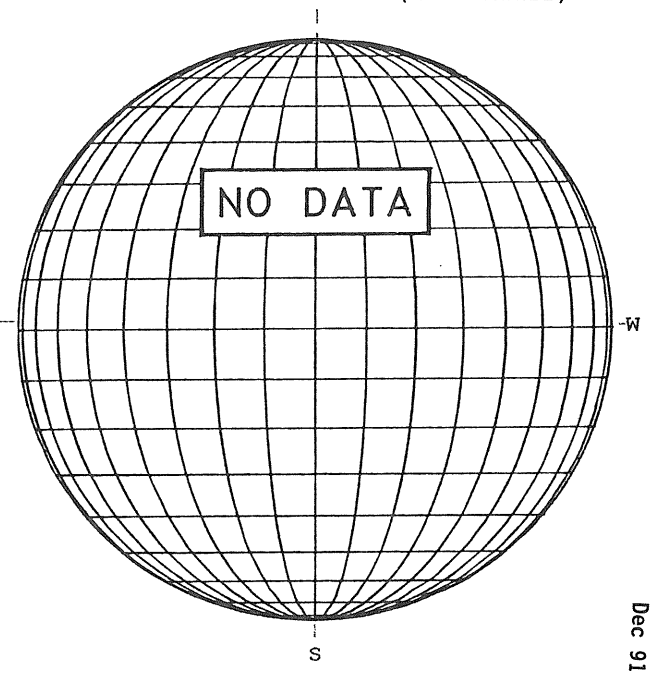
1558 UT

BOULDER SUNSPOT



1538 UT
1558 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

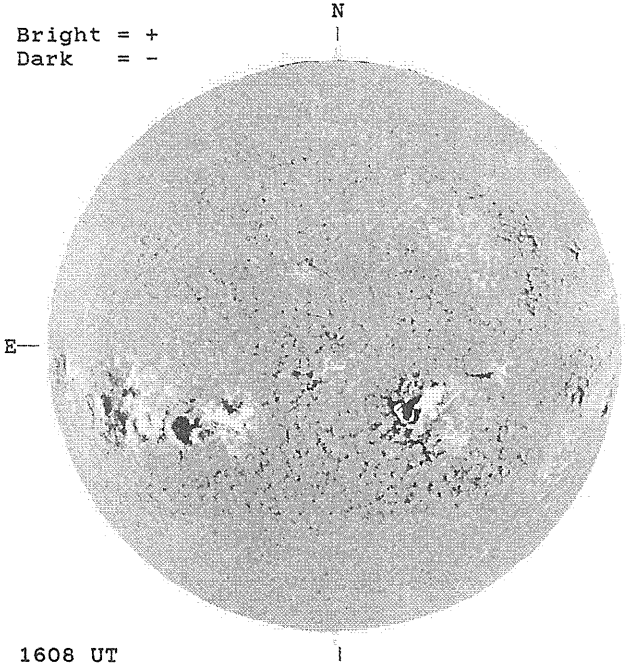


79
Dec 91

DECEMBER 26, 1991 (P= 5.28, B_o =-2.23, L_o = 133.94)

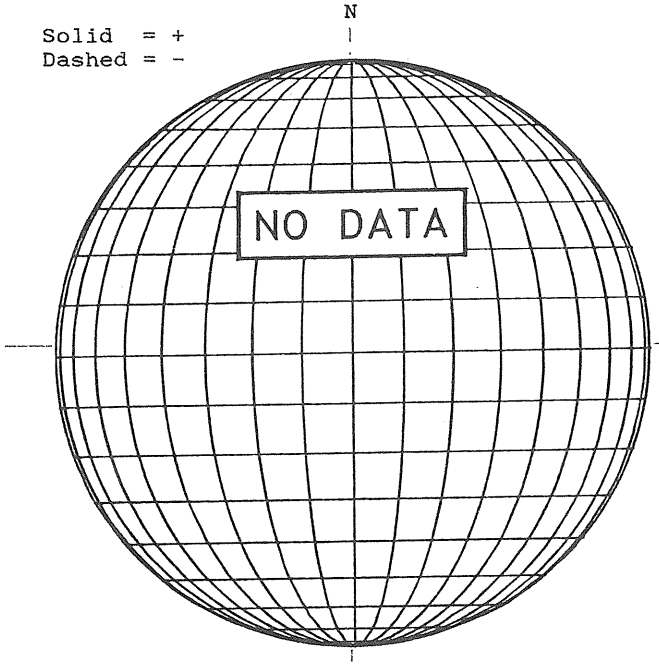
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



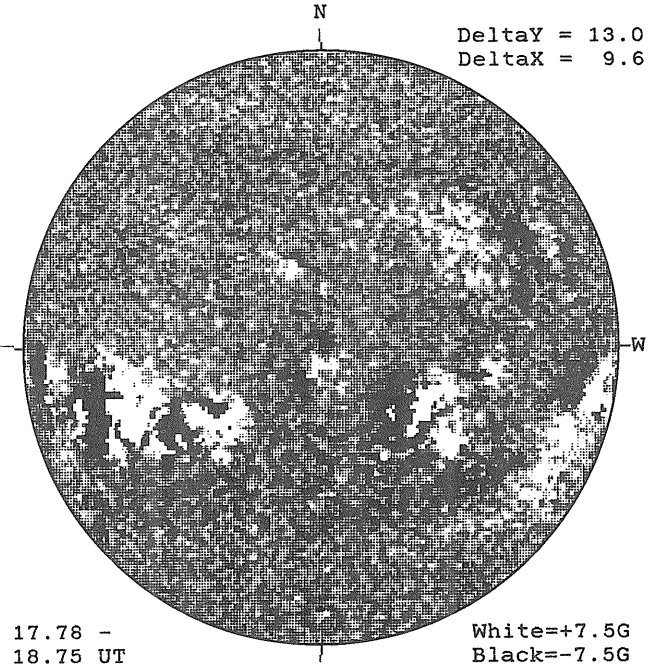
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

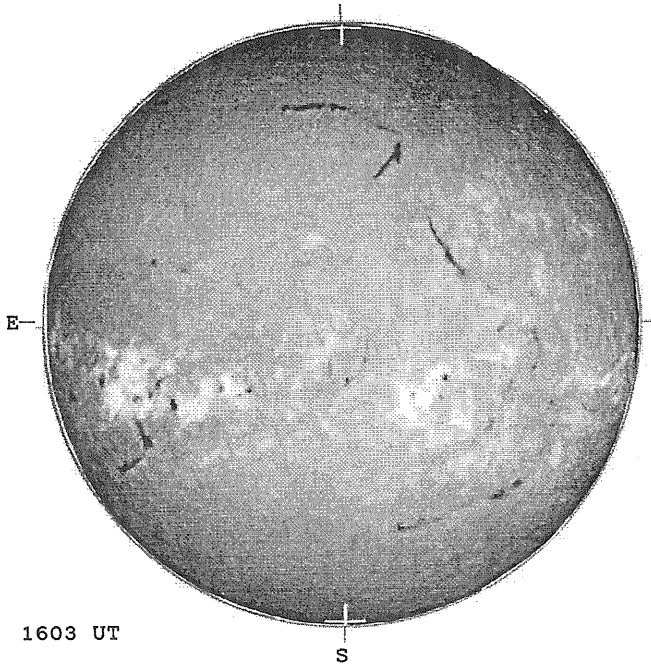


MT. WILSON MAGNETOGRAM

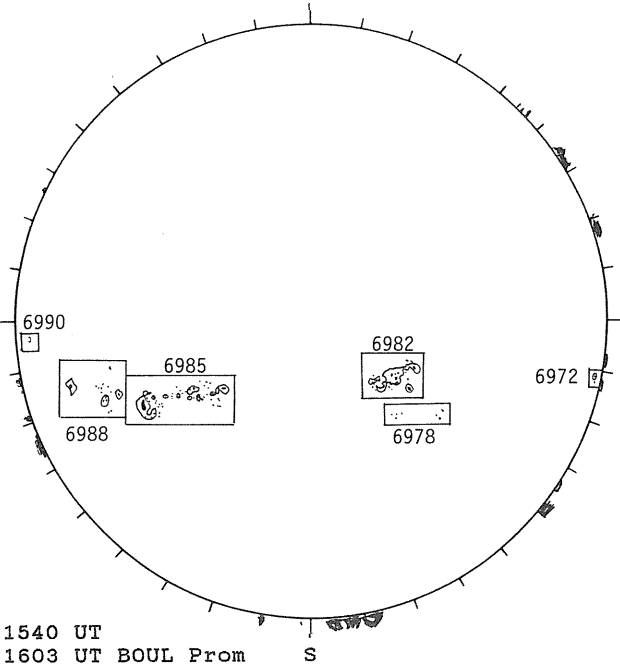
DeltaY = 13.0
DeltaX = 9.6



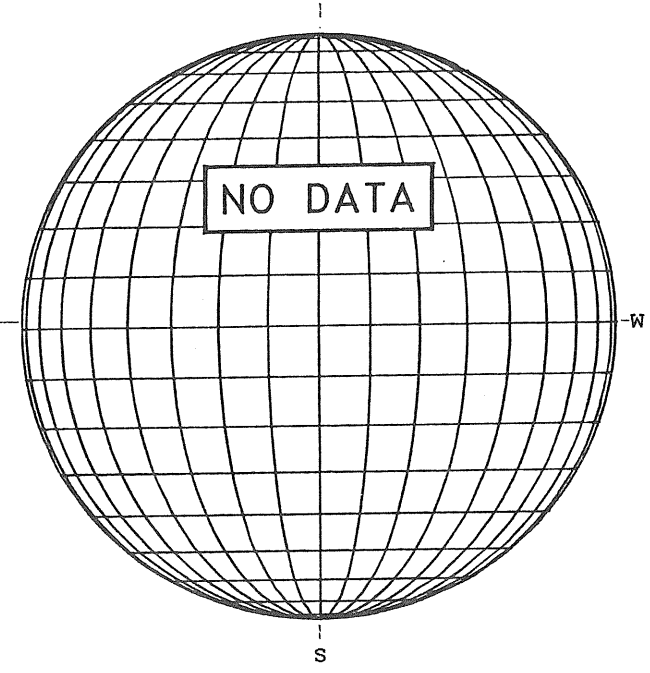
BOULDER H-ALPHA



BOULDER SUNSPOT



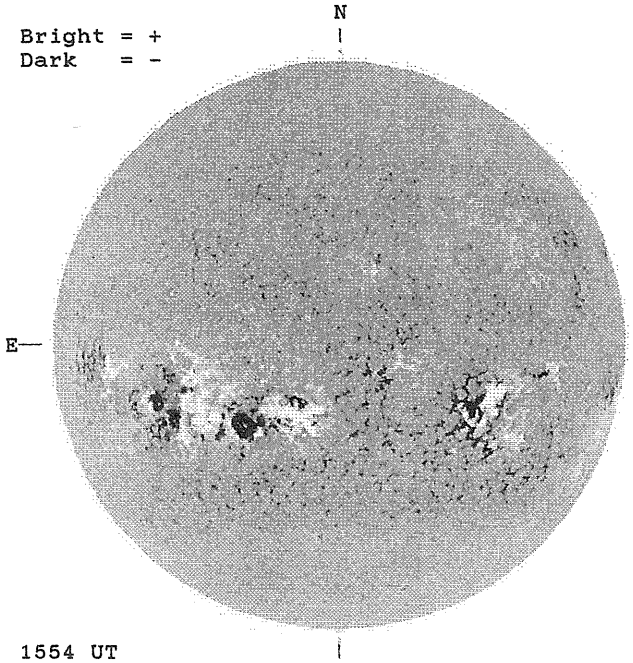
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 27, 1991 (P= 4.80, B_o =-2.35, L_o = 120.77)

KITT PEAK MAGNETOGRAM

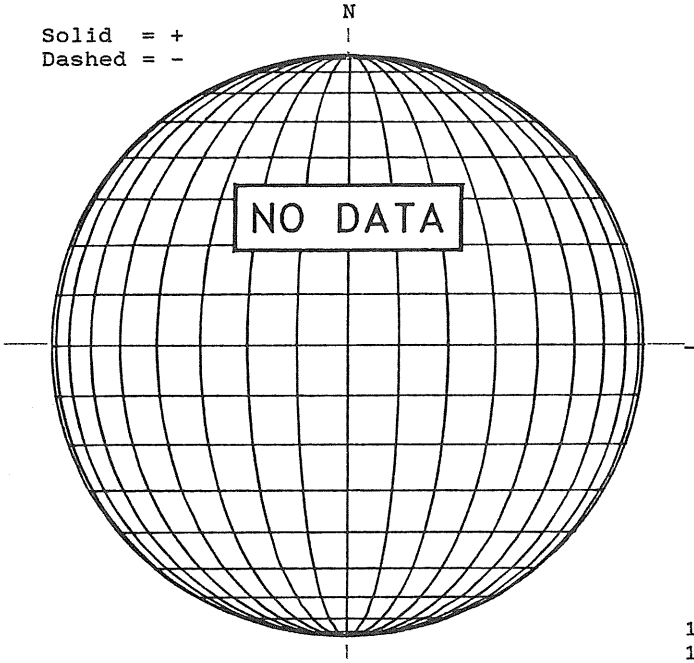
Bright = +
Dark = -



1554 UT

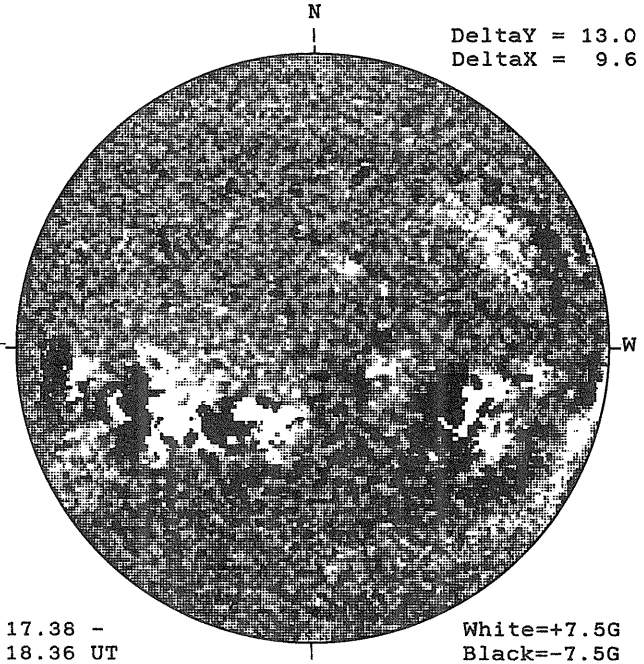
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

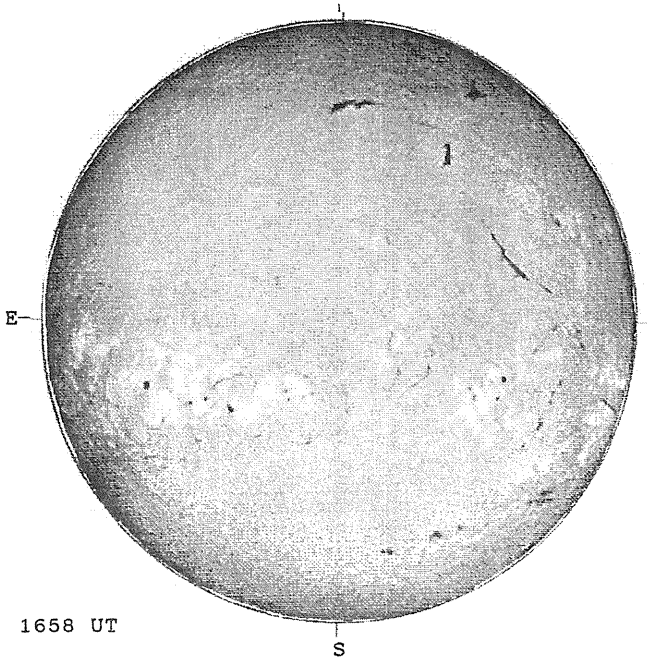
DeltaY = 13.0
DeltaX = 9.6



17.38 -
18.36 UT

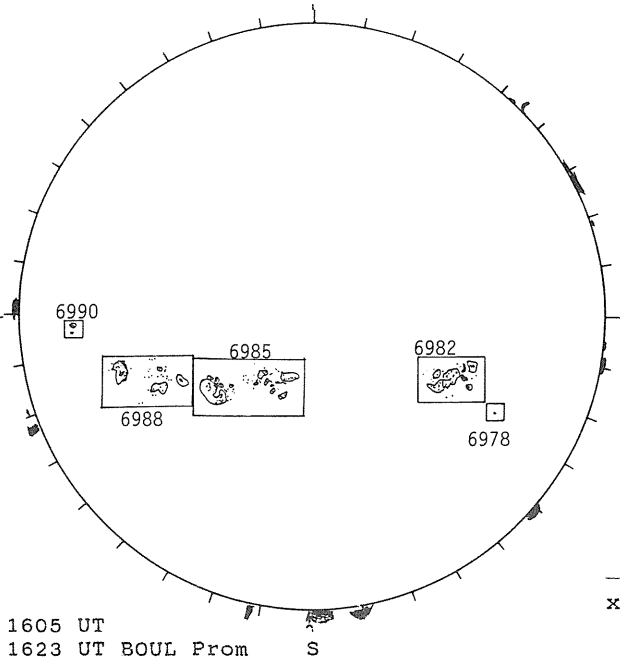
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



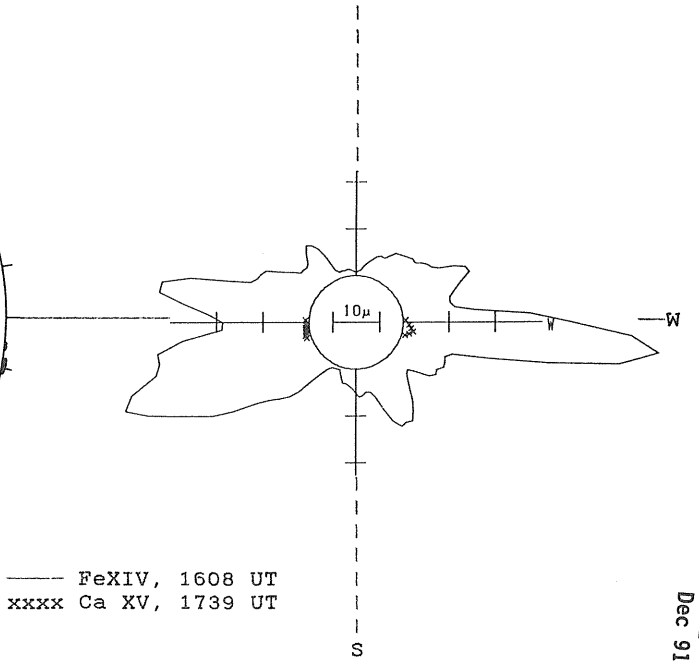
1658 UT

BOULDER SUNSPOT



1605 UT
1623 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



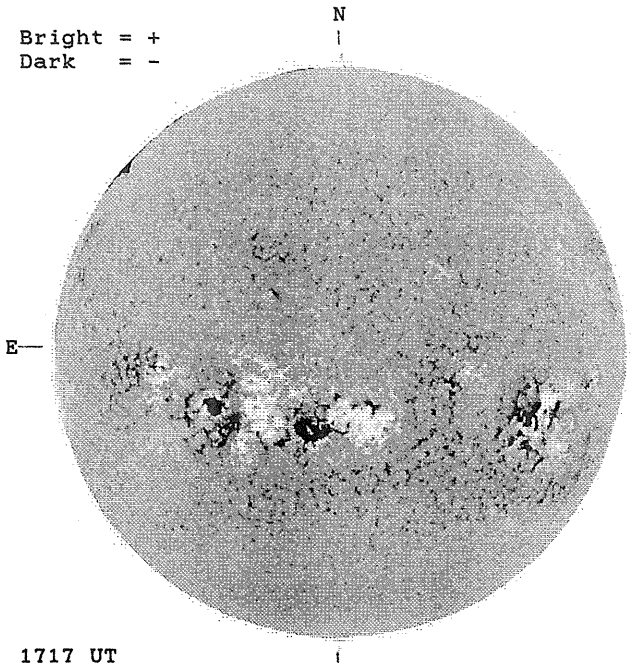
—— FeXIV, 1608 UT
xxxx Ca XV, 1739 UT

81
Dec 91

DECEMBER 28, 1991 (P= 4.32 B_o =-2.47, L_o = 107.59)

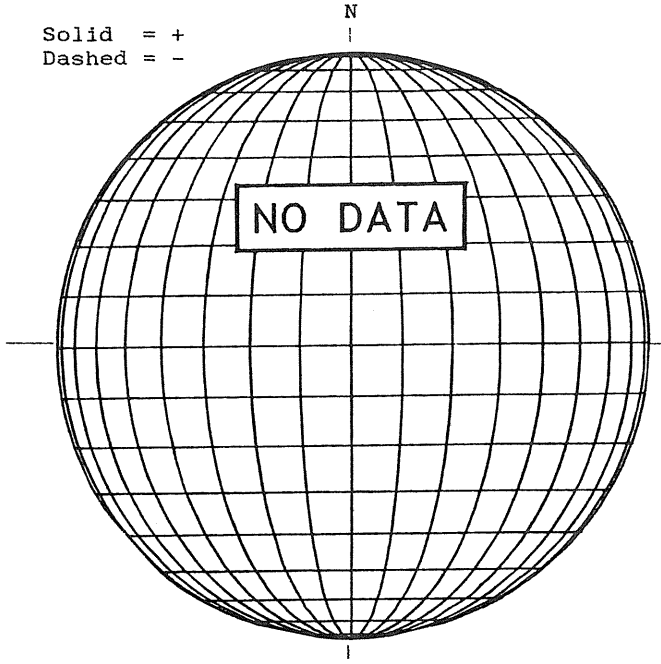
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



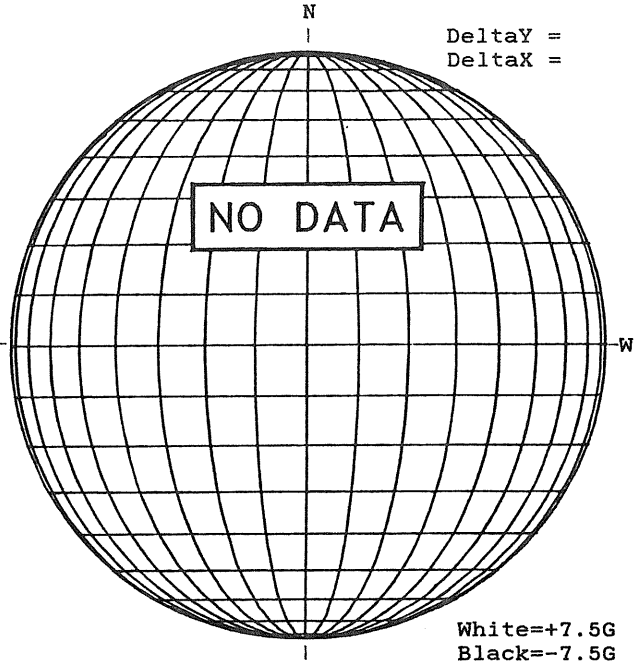
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



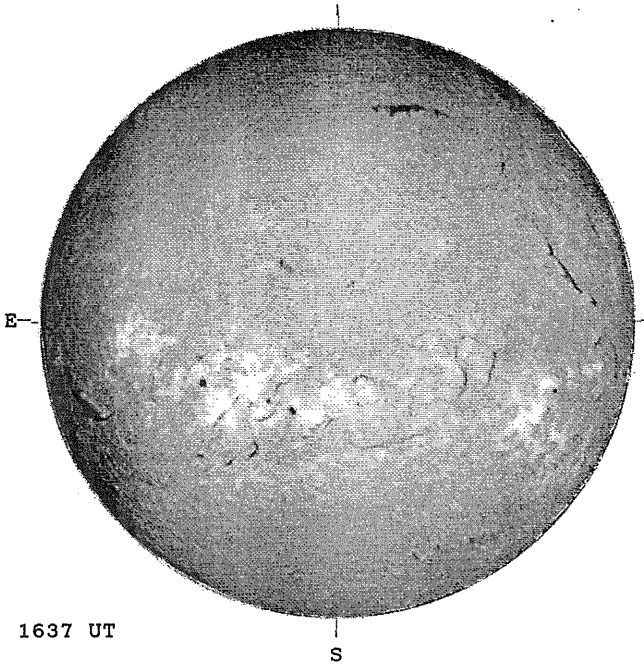
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

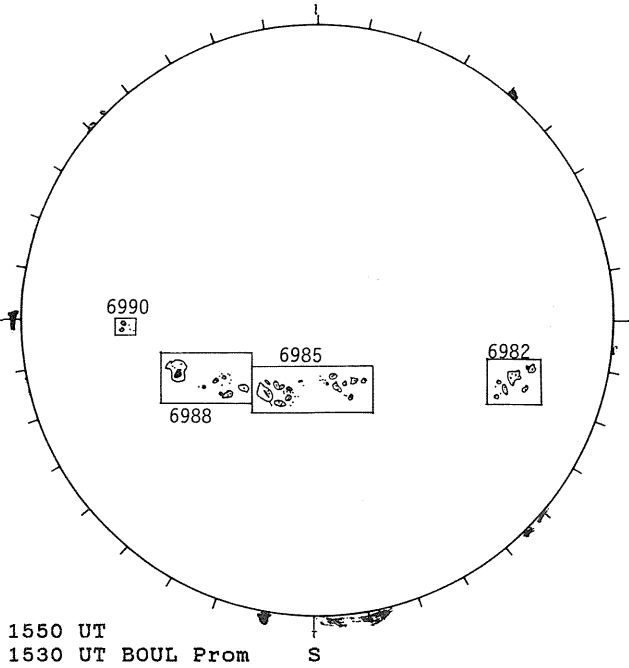


White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

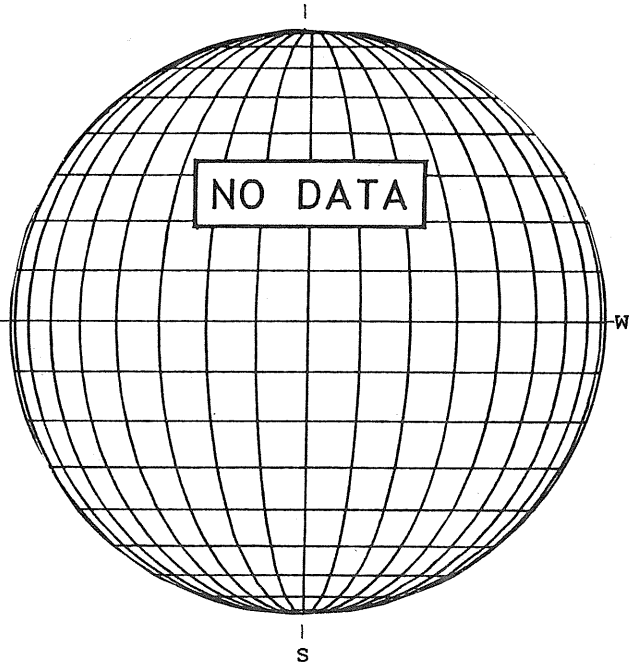


BOULDER SUNSPOT



1550 UT
1530 UT BOUL Prom

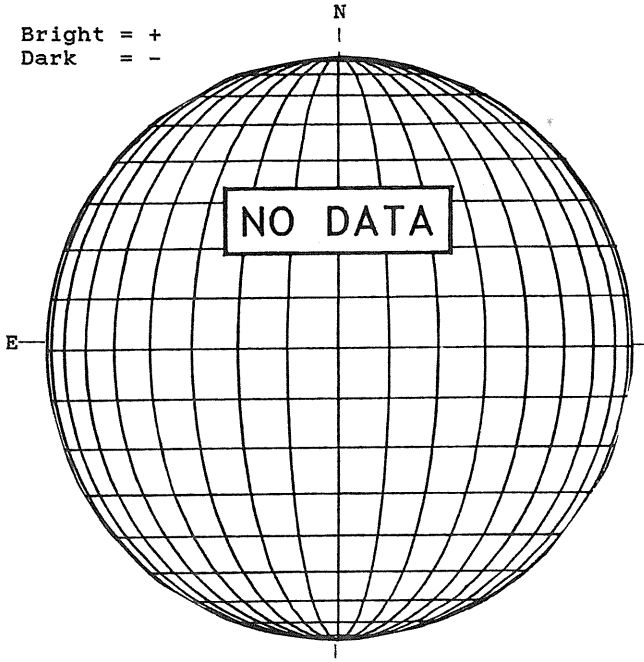
SACRAMENTO PEAK CORONA (1.15 Radii)



DECEMBER 29, 1991 (P= 3.84, B_o =-2.60, L_o = 94.42)

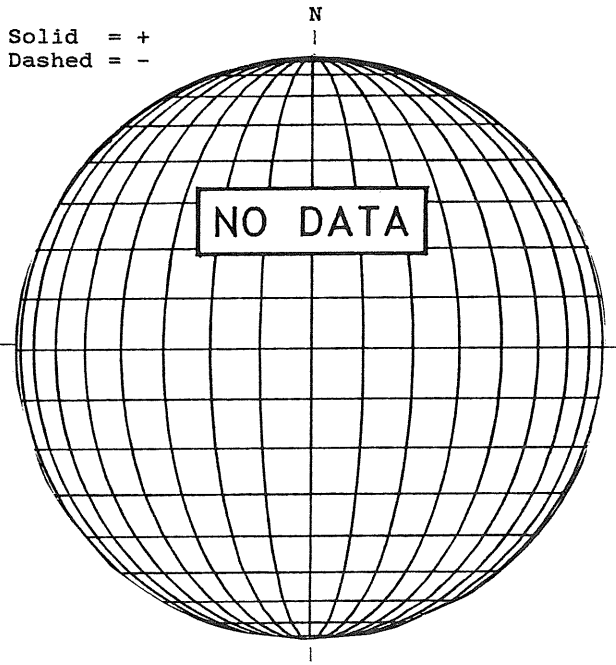
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



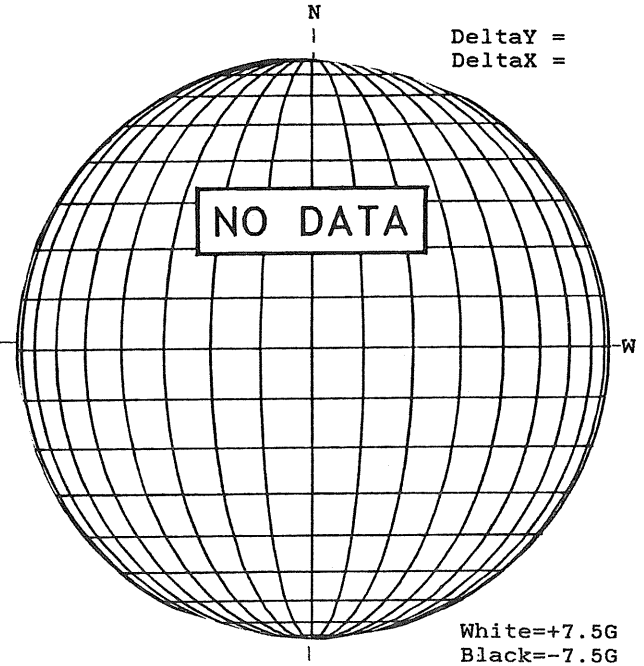
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



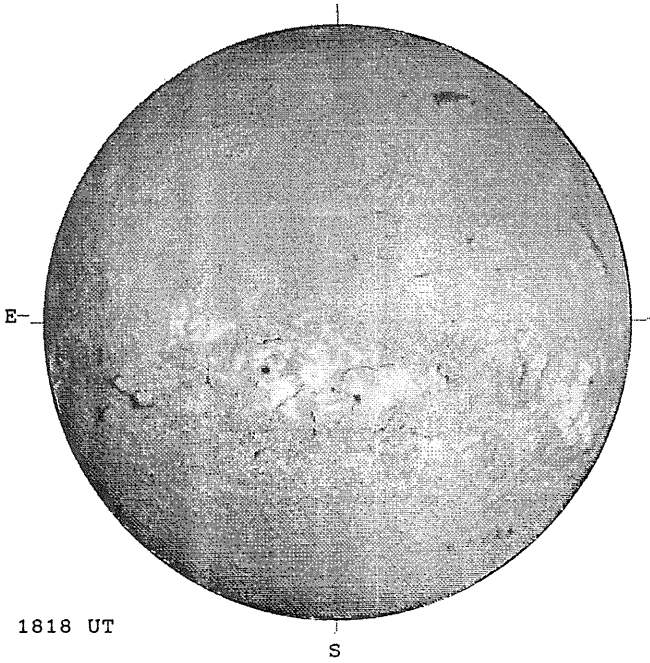
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



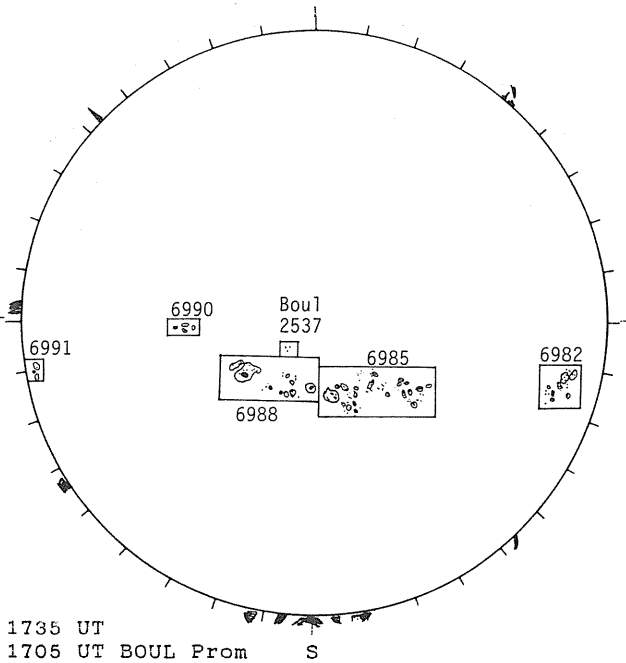
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



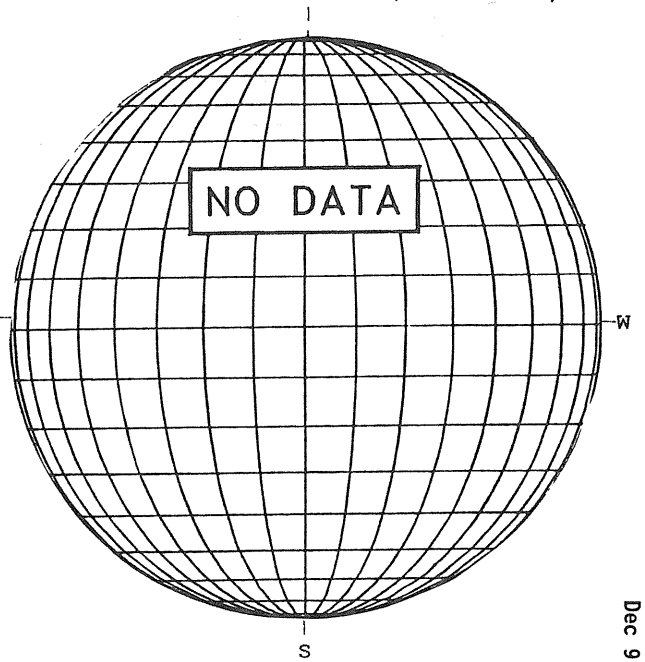
1818 UT

BOULDER SUNSPOT



1735 UT
1705 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

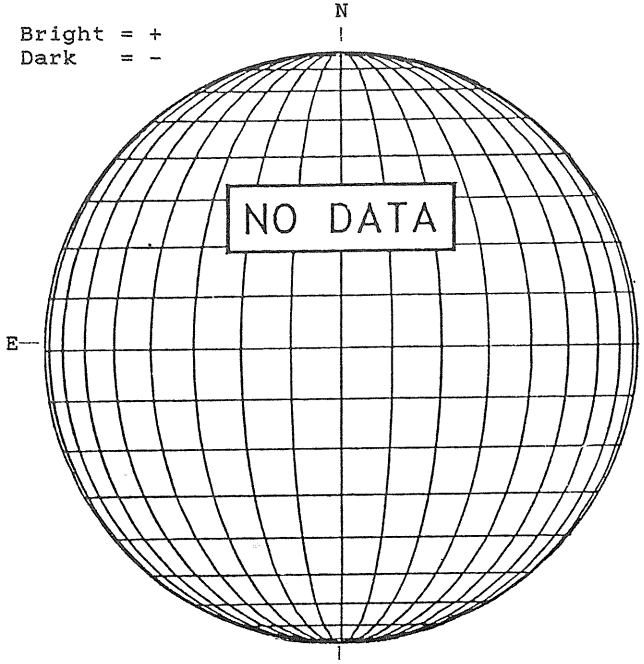


83
Dec 91

DECEMBER 30, 1991 (P= 3.35, B_o =-2.71, L_o = 81.25)

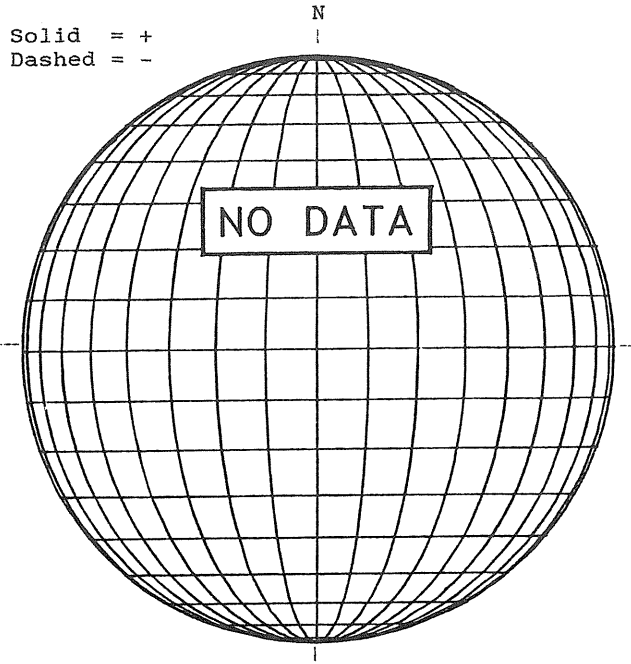
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



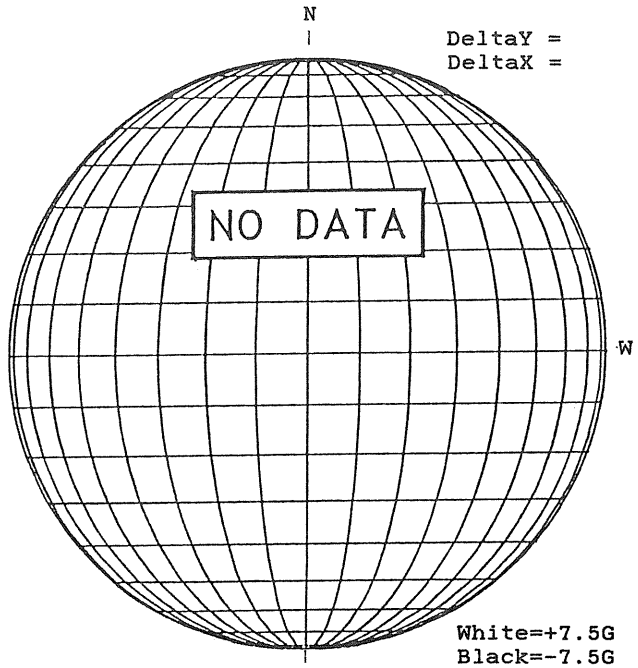
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

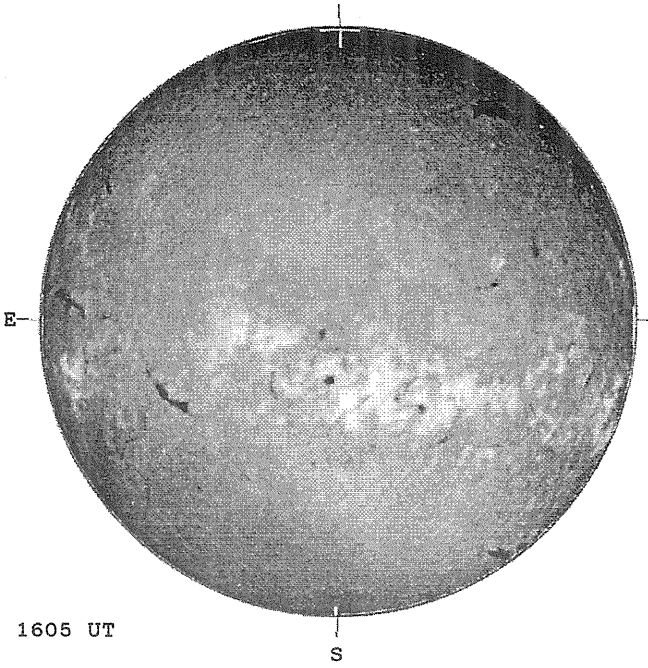


MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

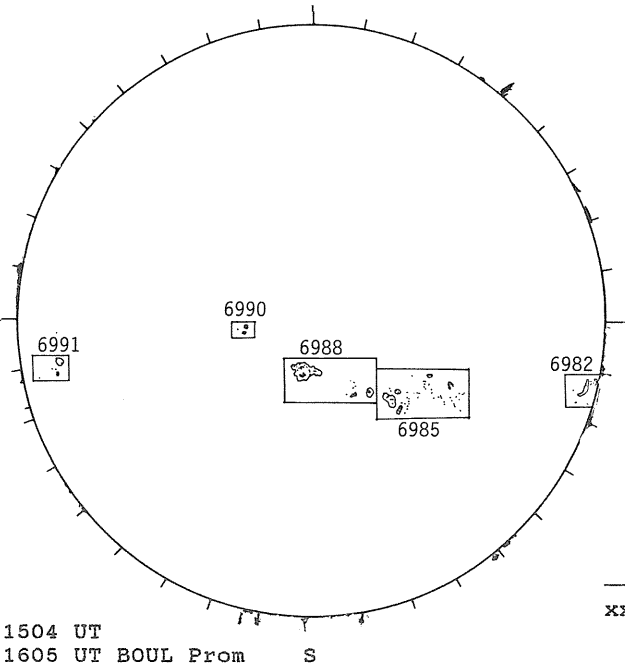


BOULDER H-ALPHA



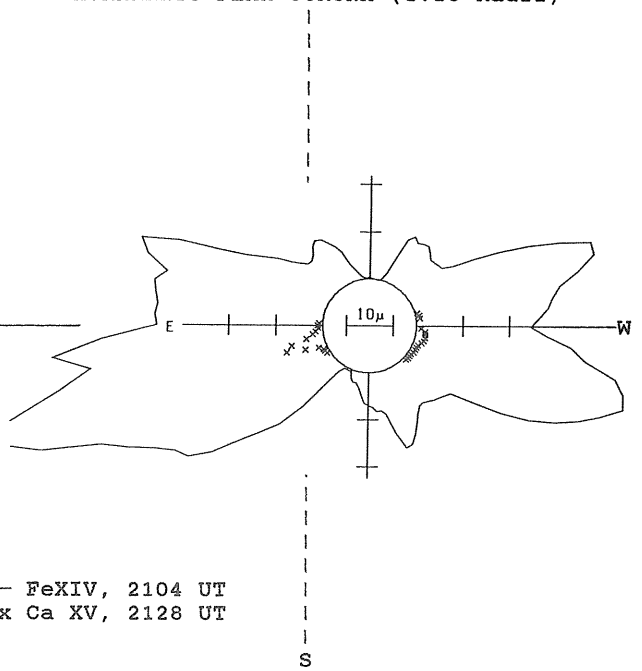
1605 UT

BOULDER SUNSPOT



1504 UT
1605 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

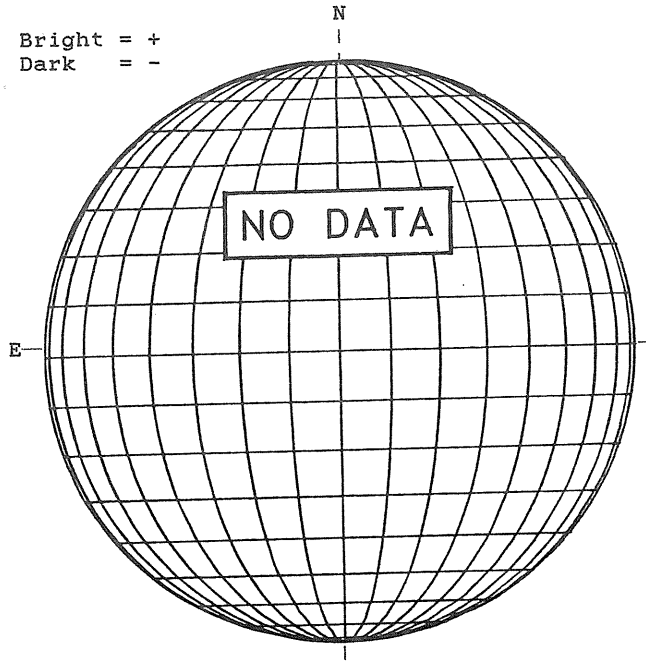


—— FeXIV, 2104 UT
xxxx Ca XV, 2128 UT

DECEMBER 31, 1991 (P= 2.87, B_o =-2.83 L_o = 68.08)

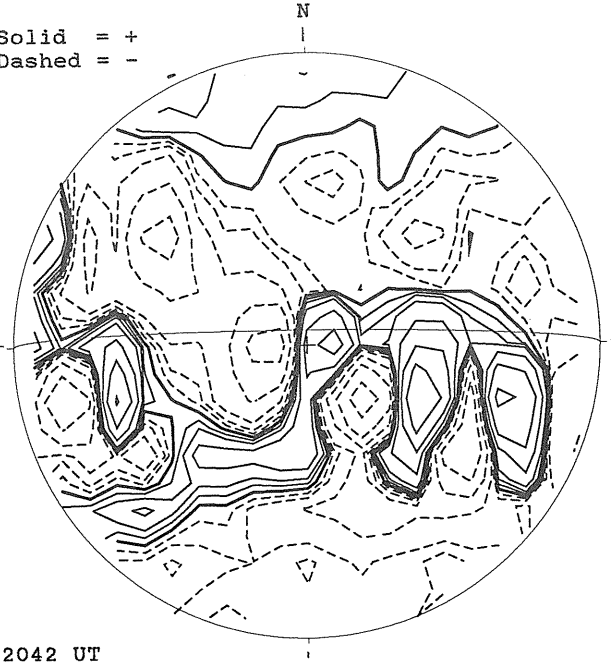
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

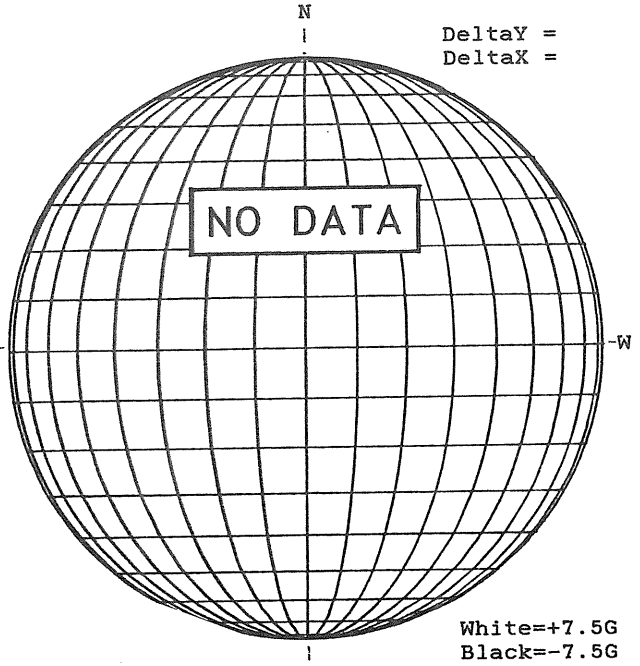
Solid = +
Dashed = -



2042 UT

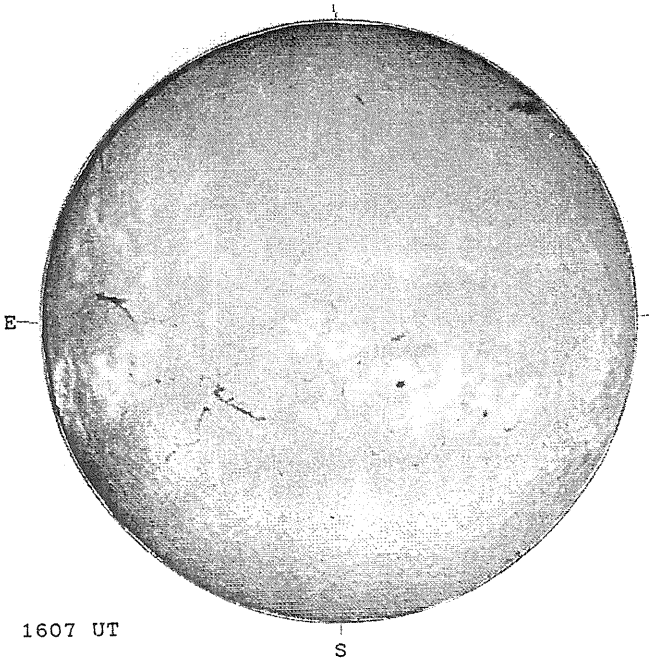
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



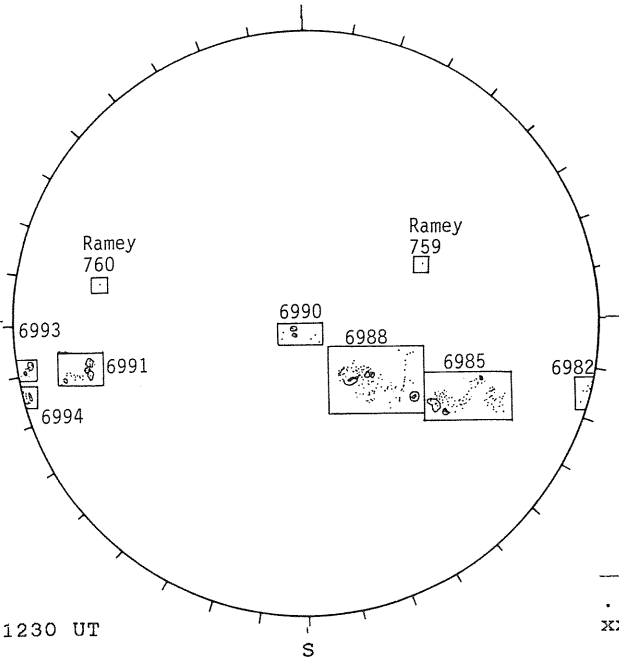
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



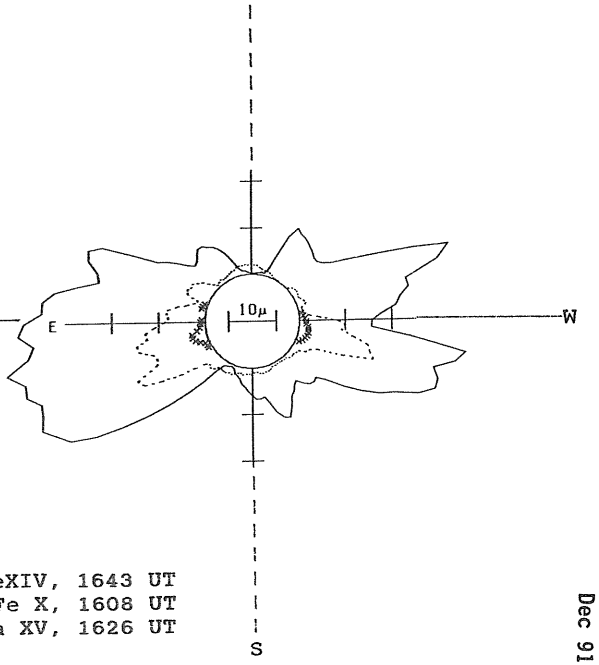
1607 UT

RAMEY SUNSPOT



1230 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1643 UT
.... Fe X, 1608 UT
xxxx Ca XV, 1626 UT

85
Dec 91

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

DECEMBER 1991

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
6943A		CULG	11	29	0030	S18	E28	12	1.1		A	AX		1		3
6943A		RAMY	11	29	1330	S18	E20	12	1.1		A	AX		1		3
6943A	27217	MWIL	12	04	1715	S14	W56	11	30.5	4	(AF)					
6951		SVTO	12	01	0710	S19	E03	12	1.5		B	BXO	10	3	3	3
6951		RAMY	12	01	1320	S18	W01	12	1.5		B	BXO		2	3	3
6951		BOUL	12	01	1700	S17	W02	12	1.5		B	BXO		2	2	4
6951		PALE	12	01	1913	S19	W02	12	1.6		A	AX		2	2	3
6951		LEAR	12	02	0013	S19	W07	12	1.5		B	BXO	10	2	3	3
6951		CULG	12	02	0110	S18	W08	12	1.4		A	AX		2	2	2
6951A		RAMY	12	02	1210	S15	W06	12	2.0		A	AX	10	3	1	3
6951A	27211	MWIL	12	02	1600	S16	W08	12	2.0	4	(AF)					
6951A		PALE	12	02	2059	S17	W12	12	2.0		A	AX		3	1	3
6951A		SVTO	12	03	1042	S12	W16	12	2.2		B	BXO	10	3	7	3
6951B		BOUL	12	01	1700	S03	E17	12	3.0		A	AX		1		4
6951B		PALE	12	01	1913	S05	E15	12	2.9		A	AX		3	1	3
6951B		CULG	12	02	0110	S04	E12	12	2.9		A	AX		1	1	2
6951B		PALE	12	02	2059	S02	E01	12	2.9		A	AX		1		3
6951C		HOLL	12	03	1625	N17	W10	12	2.9		A	AX		1		3
6951C		LEAR	12	04	0007	N16	W15	12	2.9		A	AX		1	1	4
6956		PALE	12	02	2059	S12	E08	12	3.5		A	AX		3	2	3
6956		CULG	12	03	0015	S12	E06	12	3.5		B	BXO		3	4	3
6956		LEAR	12	03	0104	S13	E06	12	3.5		B	BXO		3	4	3
6956		SVTO	12	03	1042	S12	E00	12	3.4		B	BXO	10	4	3	3
6956		HOLL	12	03	1625	S12	W05	12	3.3		A	AX		1		3
6956		PALE	12	03	2100	S13	W06	12	3.4		B	BXO	10	4	3	3
6956		LEAR	12	04	0007	S14	W09	12	3.3		B	BXO	20	4	4	4
6946		SVTO	11	27	1037	S09	E89	12	4.1		A	HA	90	1	2	2
6946		RAMY	11	27	1220	S09	E85	12	3.9		A	HA	90	1	2	3
6946	27207	MWIL	11	27	1615	S09	E80	12	3.7	4	AP					
6946		BOUL	11	27	1646	S09	E80	12	3.7		A	HS	90	1	2	1
6946		HOLL	11	27	1815	S08	E78	12	3.6		A	HS	120	1	2	3
6946		LEAR	11	28	0006	S09	E78	12	3.8		A	HS	120	1	2	4
6946		PALE	11	28	0030	S08	E78	12	3.9		A	HS	60	1	3	3
6946		CULG	11	28	0110	S10	E76	12	3.7		A	HS	120	1	2	3
6946		RAMY	11	28	1315	S09	E72	12	3.9		B	CAO	100	3	6	3
6946		PALE	11	28	1940	S09	E69	12	4.0		A	HS	200	1	2	3
6946		HOLL	11	28	2305	S09	E65	12	3.8		A	HS	180	1	2	2
6946		LEAR	11	29	0010	S09	E62	12	3.7		A	HS	80	1	2	2
6946		CULG	11	29	0030	S09	E63	12	3.7		B	DAC	130	2	2	3
6946		SVTO	11	29	1308	S09	E57	12	3.8		A	HS	230	2	2	1
6946		RAMY	11	29	1330	S08	E57	12	3.8		B	CKO	180	5	6	3
6946		HOLL	11	29	1545	S08	E55	12	3.8		B	DSI	240	4	4	2
6946	27207	MWIL	11	29	1645	S10	E55	12	3.8	4	(AP)					
6946		PALE	11	29	2000	S09	E52	12	3.7		B	CSO	180	9	4	2
6946		CULG	11	30	0040	S07	E49	12	3.7		B	CKO	300	9	2	3
6946		SVTO	11	30	0945	S08	E46	12	3.8		B	CKO	340	10	6	2
6946		RAMY	11	30	1314	S08	E42	12	3.7		B	CKI	320	13	4	3
6946		HOLL	11	30	1615	S08	E42	12	3.8		B	DAI	400	17	4	2
6946		BOUL	11	30	1800	S07	E40	12	3.7		B	DAO	150	10	5	3
6946		PALE	11	30	2358	S09	E37	12	3.8		B	DSO	140	10	4	1
6946		LEAR	12	01	0006	S08	E37	12	3.8		B	DAO	130	9	5	3
6946		CULG	12	01	0015	S08	E37	12	3.8		B	DKI	240	17	4	1
6946		SVTO	12	01	0710	S08	E34	12	3.8		B	DAO	250	18	6	3
6946		RAMY	12	01	1320	S09	E31	12	3.9		B	DKO	290	29	9	3
6946	27207	MWIL	12	01	1530	S09	E28	12	3.7	4	(AP)					
6946		BOUL	12	01	1700	S07	E28	12	3.8		B	DAO	250	14	5	4
6946		PALE	12	01	1913	S09	E27	12	3.8		B	DAI	250	16	6	3
6946		LEAR	12	02	0013	S10	E24	12	3.8		B	DKO	210	10	8	3
6946		CULG	12	02	0110	S09	E23	12	3.8		B	DAI	260	20	8	2
6946		SVTO	12	02	1015	S08	E18	12	3.8		B	DAO	280	22	10	2
6946		RAMY	12	02	1210	S09	E18	12	3.8		B	DKI	280	29	8	3
6946	27207	MWIL	12	02	1600	S08	E15	12	3.8	5	(D)					
6946		BOUL	12	02	1602	S07	E15	12	3.8		B	DSI	200	11	5	1

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

DECEMBER 1991

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6946		HOLL	12	02	1615	S08	E15	12	3.8		B	DKI	360	23	7	3
6946		PALE	12	02	2059	S10	E13	12	3.8		B	DAI	240	23	7	3
6946		CULG	12	03	0015	S09	E10	12	3.8		B	DAI	260	20	8	3
6946		LEAR	12	03	0104	S10	E11	12	3.9		B	DKI	210	24	8	3
6946		SVTO	12	03	1042	S08	E05	12	3.8		B	DKI	250	15	6	3
6946		HOLL	12	03	1625	S08	E01	12	3.7		B	CSI	240	18	7	3
6946		PALE	12	03	2100	S08	W01	12	3.8		B	DSO	190	21	9	3
6946	27207	MWIL	12	03	2100	S09	W03	12	3.6	5	(AP)					
6946		LEAR	12	04	0007	S09	W03	12	3.8		B	DAO	210	9	6	4
6946		CULG	12	04	0050	S07	W04	12	3.7		B	DSO	190	7	6	2
6946		SVTO	12	04	1045	S08	W07	12	3.9		B	DSO	240	10	6	2
6946		RAMY	12	04	1345	S09	W12	12	3.7		B	EKI	200	17	11	3
6946		BOUL	12	04	1557	S09	W12	12	3.8		B	DKO	260	6	5	1
6946	27207	MWIL	12	04	1715	S08	W12	12	3.8	5	(BG)					
6946		PALE	12	04	2015	S09	W15	12	3.7		B	DSI	140	16	7	3
6946		HOLL	12	04	2105	S08	W16	12	3.7		B	CAO	240	11	6	2
6946		LEAR	12	05	0006	S09	W17	12	3.7		B	DSO	120	11	5	3
6946		CULG	12	05	0200	S09	W18	12	3.7		B	DSI	220	12	6	1
6946		SVTO	12	05	1140	S09	W24	12	3.7		B	DSO	220	11	6	2
6946		RAMY	12	05	1339	S09	W25	12	3.7		B	DAO	240	16	6	3
6946		HOLL	12	05	1600	S09	W26	12	3.7		B	DHI	280	8	6	1
6946		BOUL	12	05	1612	S08	W27	12	3.6		B	DAO	230	11	7	1
6946		PALE	12	05	1850	S09	W28	12	3.7		B	CSO	180	17	7	3
6946	27207	MWIL	12	05	1900	S08	W27	12	3.8	5	B					
6946		LEAR	12	06	0003	S10	W31	12	3.7		B	DSO	140	14	7	3
6946		CULG	12	06	0120	S07	W33	12	3.6		B	DSO	150	6	6	3
6946		RAMY	12	06	1331	S09	W37	12	3.8		B	CAO	160	11	8	3
6946		HOLL	12	06	1525	S09	W39	12	3.7		B	CSO	230	14	7	4
6946	27207	MWIL	12	06	1545	S08	W41	12	3.6	5	(BP)					
6946		BOUL	12	06	1624	S08	W42	12	3.5		B	DAO	230	5	5	1
6946		PALE	12	06	2324	S09	W43	12	3.7		B	CAO	110	8	4	2
6946		LEAR	12	07	0020	S08	W46	12	3.6		B	CHO	150	10	6	3
6946		CULG	12	07	0110	S07	W47	12	3.5		B	DAO	110	9	5	4
6946		RAMY	12	07	1329	S08	W51	12	3.7		B	CAO	110	5	5	3
6946	27207	MWIL	12	07	1545	S08	W55	12	3.5	5	(AP)					
6946		BOUL	12	07	1600	S07	W55	12	3.5		A	HA	140	2	3	3
6946		HOLL	12	07	1630	S08	W55	12	3.6		B	CSO	170	3	4	3
6946		PALE	12	07	1947	S08	W56	12	3.6		B	CAO	180	6	5	3
6946		CULG	12	08	0030	S08	W62	12	3.4		B	DAO	80	4	3	4
6946		LEAR	12	08	0117	S07	W64	12	3.2		B	CAO	140	3	4	2
6946		RAMY	12	08	1305	S09	W65	12	3.7		B	CAO	70	6	4	1
6946		BOUL	12	08	1600	S07	W69	12	3.5		B	DSO	110	2	4	1
6946		HOLL	12	08	1615	S08	W69	12	3.5		B	CAO	90	9	3	3
6946		PALE	12	08	1906	S07	W69	12	3.6		B	CAO	90	10	5	3
6946		LEAR	12	09	0046	S08	W73	12	3.5		B	CAO	80	2	5	3
6946		CULG	12	09	0120	S07	W76	12	3.4		B	CAO	30	4	4	3
6946		RAMY	12	09	1350	S09	W84	12	3.3		A	HA	30	1	1	2
6946		HOLL	12	09	1620	S09	W81	12	3.6		A	HS	30	2	1	4
6946		PALE	12	09	1810	S07	W85	12	3.4		B	CAO	70	3	4	3
6959		RAMY	12	05	1339	S20	W16	12	4.3		B	BRO	10	3	3	3
6959		HOLL	12	05	1600	S17	W20	12	4.1		A	AX	10	1		1
6959		BOUL	12	05	1612	S19	W17	12	4.4		A	AX	10	1	1	1
6959		PALE	12	05	1850	S20	W18	12	4.4		B	BXO	20	3	5	3
6959	27219	MWIL	12	05	1900	S20	W19	12	4.3	4	B					
6959		LEAR	12	06	0003	S20	W21	12	4.4		B	BXO	10	3	3	3
6959		CULG	12	06	0120	S19	W22	12	4.4		B	BXO	10	3	4	3
6959		RAMY	12	06	1331	S19	W28	12	4.4		B	BXO		2	4	3
6959		HOLL	12	06	1525	S20	W30	12	4.3		B	BXO	10	5	5	4
6959	27219	MWIL	12	06	1545	S19	W31	12	4.3	4	(B)					
6959		BOUL	12	06	1624	S20	W28	12	4.5		A	AX	10	1	1	1
6959		PALE	12	06	2324	S21	W33	12	4.4		B	BXO		4	3	2
6959		LEAR	12	07	0020	S19	W34	12	4.4		A	AX	10	2	2	3
6959		CULG	12	07	0110	S19	W36	12	4.3		B	BXO		2	1	4
6959		RAMY	12	07	1329	S20	W40	12	4.5		A	AX		1		3
6959		PALE	12	07	1947	S19	W48	12	4.2		A	AX		1		3
6959		PALE	12	08	1906	S19	W59	12	4.3		A	AX		2		3
6948		RAMY	11	30	1314	S17	E59	12	5.0		B	BXO	20	4	2	3

S U N S P O T G R O U P S
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DECEMBER 1991

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6948		HOLL	11	30	1615	S17	E58	12	5.1		A	AX		1		2
6948		LEAR	12	01	0006	S17	E54	12	5.1		B	BXO	30	3	3	3
6948		CULG	12	01	0015	S17	E53	12	5.0		B	BXO		4	3	1
6948		SVTO	12	01	0710	S17	E49	12	5.0		B	BXO	20	4	4	3
6948		RAMY	12	01	1320	S16	E46	12	5.0		B	BXO	10	4	4	3
6948		BOUL	12	01	1700	S15	E44	12	5.0		B	BXO	10	2	5	4
6948		PALE	12	01	1913	S16	E42	12	5.0		A	AX		1		3
6948		LEAR	12	02	0013	S18	E39	12	5.0		B	BXO	10	2	5	3
6948		CULG	12	02	0110	S17	E39	12	5.0		B	BXO		2	4	2
6948		RAMY	12	02	1210	S16	E35	12	5.2		A	AX	10	2	2	3
6954		RAMY	12	01	1320	S03	E53	12	5.5		B	CRO	10	3	4	3
6954		PALE	12	01	1913	S04	E43	12	5.0		B	BXO		2	5	3
6954		PALE	12	02	2059	S05	E37	12	5.6		A	AX		4	2	3
6954		HOLL	12	03	1625	S04	E25	12	5.5		B	CSO	40	16	6	3
6954		PALE	12	03	2100	S04	E24	12	5.7		B	CSO	50	16	7	3
6954	27215	MWIL	12	03	2100	S05	E22	12	5.5	5	(B)					
6954		LEAR	12	04	0007	S05	E20	12	5.5		B	DRI	50	23	7	4
6954		CULG	12	04	0050	S03	E19	12	5.4		B	DAI	80	14	8	2
6954		SVTO	12	04	1045	S04	E16	12	5.6		B	DAO	60	20	8	2
6954		RAMY	12	04	1345	S06	E14	12	5.6		B	DSO	90	24	8	3
6954		BOUL	12	04	1557	S04	E12	12	5.6		B	DAO	190	6	8	1
6954	27215	MWIL	12	04	1715	S05	E11	12	5.5	5	(B)					
6954		PALE	12	04	2015	S05	E08	12	5.4		B	DSO	80	25	10	3
6954		HOLL	12	04	2105	S05	E09	12	5.5		B	DAI	100	21	8	2
6954		LEAR	12	05	0006	S05	E08	12	5.6		B	DSO	100	19	8	3
6954		CULG	12	05	0200	S05	E05	12	5.4		B	DAO	140	8	8	1
6954		SVTO	12	05	1140	S06	E00	12	5.5		B	DSI	110	21	8	2
6954		RAMY	12	05	1339	S06	W02	12	5.4		B	DAO	130	27	8	3
6954		HOLL	12	05	1600	S05	W02	12	5.5		B	DAI	140	10	9	1
6954		BOUL	12	05	1612	S04	W03	12	5.4		B	DAO	210	16	8	1
6954		PALE	12	05	1850	S05	W04	12	5.5		B	DAO	100	23	10	3
6954	27215	MWIL	12	05	1900	S05	W04	12	5.5	5	B					
6954		LEAR	12	06	0003	S06	W07	12	5.5		B	DAO	120	27	10	3
6954		CULG	12	06	0120	S05	W09	12	5.4		B	EAO	260	19	11	3
6954		RAMY	12	06	1331	S05	W15	12	5.4		B	DAO	240	34	10	3
6954		HOLL	12	06	1525	S05	W15	12	5.5		B	DKI	240	48	10	4
6954	27215	MWIL	12	06	1545	S05	W16	12	5.4	5	(BG)					
6954		BOUL	12	06	1624	S05	W16	12	5.5		B	DAI	370	18	10	1
6954		PALE	12	06	2324	S06	W20	12	5.5		B	DAI	190	25	10	2
6954		LEAR	12	07	0020	S06	W21	12	5.4		B	DAO	280	16	9	3
6954		CULG	12	07	0110	S04	W22	12	5.4		B	DAO	240	25	9	4
6954		RAMY	12	07	1329	S05	W28	12	5.5		B	EAO	230	31	11	3
6954	27215	MWIL	12	07	1545	S05	W30	12	5.4	5	(B)					
6954		BOUL	12	07	1600	S05	W29	12	5.5		B	EAI	190	18	11	3
6954		HOLL	12	07	1630	S05	W30	12	5.4		B	EAI	230	30	13	3
6954		PALE	12	07	1947	S05	W32	12	5.4		B	EAI	130	23	11	3
6954		CULG	12	08	0030	S05	W36	12	5.3		B	DAI	140	22	10	4
6954		LEAR	12	08	0117	S06	W35	12	5.4		B	EAO	200	11	12	2
6954		RAMY	12	08	1305	S05	W40	12	5.5		B	EAO	100	21	12	1
6954		BOUL	12	08	1600	S05	W43	12	5.4		B	EAO	120	8	12	1
6954		HOLL	12	08	1615	S06	W43	12	5.4		B	ESO	80	10	12	3
6954		PALE	12	08	1906	S05	W45	12	5.4		B	CAO	70	9	12	3
6954		LEAR	12	09	0046	S06	W49	12	5.4		B	CAO	80	6	11	3
6954		CULG	12	09	0120	S06	W50	12	5.3		B	EAO	60	9	11	3
6954		RAMY	12	09	1350	S05	W57	12	5.3		B	CAO	60	12	11	2
6954		BOUL	12	09	1552	S04	W61	12	5.1		B	CSO	80	3	7	1
6954		HOLL	12	09	1620	S06	W57	12	5.4		B	CSO	60	10	12	4
6954		PALE	12	09	1810	S05	W58	12	5.4		B	CAO	50	13	11	3
6954		LEAR	12	10	0012	S05	W62	12	5.4		B	CSO	70	4	13	3
6954		SVTO	12	10	1210	S05	W71	12	5.2		B	DSO	50	4	9	3
6954		RAMY	12	10	1355	S05	W70	12	5.3		B	CRO	40	3	9	2
6954		PALE	12	10	2024	S05	W74	12	5.3		B	CAO	30	3	11	2
6954		HOLL	12	10	2155	S06	W77	12	5.1		B	BXO	20	3	9	4
6954		LEAR	12	11	0012	S05	W76	12	5.3		B	CAO	60	5	9	3
6947		RAMY	11	29	1330	S06	E75	12	5.2		A	AX		1		3
6947		HOLL	11	29	1545	S05	E73	12	5.1		A	AX	20	1		2
6947	27209	MWIL	11	29	1645	S06	E72	12	5.1	3	(AP)					

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6947		PALE	11	29	2000	S06	E70	12	5.1		A	AX		1		2
6947		CULG	11	30	0040	S04	E68	12	5.1		A	AX		1		3
6947		SVTO	11	30	0945	S05	E62	12	5.0		A	AX		1		2
6947		RAMY	11	30	1314	S05	E59	12	5.0		A	AX		1		3
6947		LEAR	12	01	0006	S05	E61	12	5.6		A	AX	10	1	1	3
6947		CULG	12	01	0015	S05	E58	12	5.3		B	BXO		3	6	1
6947		SVTO	12	01	0710	S05	E56	12	5.5		B	BXO	20	3	5	3
6947		BOUL	12	01	1700	S04	E53	12	5.7		B	BXO	10	2	5	4
6947		LEAR	12	02	0013	S06	E46	12	5.4		A	AX	10	2	6	3
6947		CULG	12	02	0110	S04	E45	12	5.4		A	AX		2	1	2
6947		CULG	12	03	0015	S04	E32	12	5.4		A	AX		2	1	3
6947		LEAR	12	03	0104	S05	E33	12	5.5		B	CSO	10	5	3	3
6947		SVTO	12	03	1042	S05	E29	12	5.6		B	CRO	70	14	5	3
6949		RAMY	11	29	1330	N04	E80	12	5.5		A	HA	30	1	1	3
6949		CULG	11	30	0040	N06	E77	12	5.8		A	AX		1		3
6949		SVTO	11	30	0945	N04	E72	12	5.8		A	AX	10	2	1	2
6949		RAMY	11	30	1314	N04	E69	12	5.7		A	AX	20	3	2	3
6949		HOLL	11	30	1615	N04	E68	12	5.8		A	AX	10	3	2	2
6949		LEAR	12	01	0006	N04	E65	12	5.9		A	AX	10	2	2	3
6949		CULG	12	01	0015	N04	E65	12	5.9		A	AX		2	1	1
6949		SVTO	12	01	0710	N05	E59	12	5.7		A	AX	10	2	2	3
6949		RAMY	12	01	1320	N05	E57	12	5.8		A	AX		1		3
6949		PALE	12	01	1913	N04	E56	12	6.0		A	AX		1		3
6949		LEAR	12	02	0013	N03	E52	12	5.9		A	AX	10	1	1	3
6949		CULG	12	02	0110	N04	E50	12	5.8		A	AX		1		2
6949		SVTO	12	02	1015	N04	E46	12	5.9		B	BXO	10	2	1	2
6949		RAMY	12	02	1210	N03	E44	12	5.8		A	AX	10	1	1	3
6949	27212	MWIL	12	02	1600	N04	E43	12	5.9	4	(AP)					
6949		BOUL	12	02	1602	N05	E43	12	5.9		A	AX		1		1
6949		HOLL	12	02	1615	N04	E42	12	5.8		A	AX	10	2	1	3
6949		PALE	12	02	2059	N04	E40	12	5.9		A	AX		1		3
6949		CULG	12	03	0015	N04	E35	12	5.6		A	AX		1		3
6949		LEAR	12	03	0104	N03	E37	12	5.8		A	AX	10	1	1	3
6949		SVTO	12	03	1042	N03	E32	12	5.8		A	AX	10	1		3
6949		HOLL	12	03	1625	N04	E30	12	5.9		A	AX		1		3
6949		LEAR	12	04	0007	N03	E25	12	5.9		A	AX		1	1	4
6962		HOLL	12	06	1525	N23	W02	12	6.5		A	AX	10	3	1	4
6962	27220	MWIL	12	06	1545	N23	W00	12	6.6	5	(BG)					
6962		BOUL	12	06	1624	N24	W03	12	6.4		B	CAO	10	3	2	1
6962		PALE	12	06	2324	N22	W08	12	6.4		A	AX	10	3	1	2
6962		LEAR	12	07	0020	N23	W08	12	6.4		A	AX	10	2	2	3
6962		CULG	12	07	0110	N24	W08	12	6.4		B	BXO		3	2	4
6962		RAMY	12	07	1329	N24	W15	12	6.4		B	BXO		2	3	3
6962	27220	MWIL	12	07	1545	N24	W16	12	6.4	3	(B)					
6962		HOLL	12	07	1630	N24	W17	12	6.4		B	BXO	10	2	3	3
6962		PALE	12	07	1947	N23	W21	12	6.2		A	AX		2	1	3
6950		HOLL	11	30	1615	N20	E80	12	6.8		A	HA	60	3	2	2
6950		PALE	11	30	2358	N20	E75	12	6.7		A	HA	60	1	1	1
6950		LEAR	12	01	0006	N19	E77	12	6.9		A	HS	90	1	2	3
6950		CULG	12	01	0015	N20	E78	12	7.0		A	HS	60	2	2	1
6950		SVTO	12	01	0710	N19	E72	12	6.8		A	HA	60	1	2	3
6950		RAMY	12	01	1320	N21	E68	12	6.8		A	HS	100	1	2	3
6950	27210	MWIL	12	01	1530	N19	E69	12	6.9	3	(AP)					
6950		BOUL	12	01	1700	N21	E69	12	7.0		A	HS	60	1	2	4
6950		PALE	12	01	1913	N21	E69	12	7.1		B	CAO	80	2	3	3
6950		LEAR	12	02	0013	N19	E65	12	7.0		B	DSO	10	4	7	3
6950		CULG	12	02	0110	N20	E64	12	6.9		B	DAO	90	6	8	2
6950		SVTO	12	02	1015	N20	E60	12	7.0		B	CAO	60	6	9	2
6950		RAMY	12	02	1210	N20	E60	12	7.1		B	DAO	110	8	9	3
6950	27210	MWIL	12	02	1600	N21	E57	12	7.0	5	(B)					
6950		BOUL	12	02	1602	N20	E59	12	7.2		B	CSO	120	3	6	1
6950		HOLL	12	02	1615	N20	E57	12	7.0		B	DAO	210	10	8	3
6950		PALE	12	02	2059	N20	E55	12	7.1		B	DAO	140	8	9	3
6950		CULG	12	03	0015	N20	E53	12	7.1		B	DAO	90	6	8	3
6950		LEAR	12	03	0104	N19	E53	12	7.1		B	DAO	140	9	9	3
6950		HOLL	12	03	1625	N20	E46	12	7.2		B	EAO	130	12	12	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6950	27210	MWIL	12	03	2100	N19	E43	12	7.1	5	(B)					
6950		PALE	12	03	2100	N21	E45	12	7.3		B	CSO	100	12	11	3
6950		LEAR	12	04	0007	N19	E41	12	7.1		B	DAO	80	13	9	4
6950		CULG	12	04	0050	N22	E41	12	7.2		B	DAO	90	4	9	2
6950		SVTO	12	04	1045	N20	E36	12	7.2		B	CAO	70	12	9	2
6950		RAMY	12	04	1345	N19	E34	12	7.2		B	DAO	110	18	8	3
6950		BOUL	12	04	1557	N21	E33	12	7.2		B	EAO	180	7	11	1
6950	27210	MWIL	12	04	1715	N19	E32	12	7.2	5	(B)					
6950		PALE	12	04	2015	N20	E30	12	7.1		B	CSO	70	7	11	3
6950		HOLL	12	04	2105	N20	E29	12	7.1		B	DSO	110	9	9	2
6950		LEAR	12	05	0006	N20	E28	12	7.1		B	DSO	120	12	8	3
6950		CULG	12	05	0200	N21	E27	12	7.1		B	DSO	110	6	9	1
6950		SVTO	12	05	1140	N19	E21	12	7.1		B	CSO	90	15	9	2
6950		RAMY	12	05	1339	N19	E20	12	7.1		B	DAO	130	29	8	3
6950		HOLL	12	05	1600	N20	E19	12	7.1		B	CSO	100	10	9	1
6950		BOUL	12	05	1612	N21	E20	12	7.2		B	DAO	130	13	9	1
6950		PALE	12	05	1850	N21	E18	12	7.2		B	CSO	150	28	11	3
6950	27210	MWIL	12	05	1900	N19	E18	12	7.2	5	BP					
6950		LEAR	12	06	0003	N19	E15	12	7.1		B	CAO	80	17	9	3
6950		CULG	12	06	0120	N20	E14	12	7.1		B	DAO	120	13	9	3
6950		RAMY	12	06	1331	N19	E05	12	6.9		B	CAO	110	13	4	3
6950		HOLL	12	06	1525	N19	E06	12	7.1		B	CSI	150	20	8	4
6950	27210	MWIL	12	06	1545	N19	E04	12	7.0	5	(BP)					
6950		BOUL	12	06	1624	N20	E06	12	7.1		B	DAO	160	6	9	1
6950		PALE	12	06	2324	N20	E03	12	7.2		B	CAO	90	12	10	2
6950		LEAR	12	07	0020	N19	W02	12	6.9		B	DKO	120	3	4	3
6950		CULG	12	07	0110	N21	E00	12	7.0		B	CAO	90	13	8	4
6950		RAMY	12	07	1329	N19	W05	12	7.2		B	CAO	100	17	11	3
6950	27210	MWIL	12	07	1545	N20	W09	12	7.0	5	(BP)					
6950		BOUL	12	07	1600	N21	W06	12	7.2		B	CAO	70	8	11	3
6950		HOLL	12	07	1630	N18	W08	12	7.1		B	CAO	120	19	11	3
6950		PALE	12	07	1947	N20	W10	12	7.0		B	CAO	90	17	9	3
6950		CULG	12	08	0030	N21	W12	12	7.1		B	DAO	70	9	9	4
6950		LEAR	12	08	0117	N21	W13	12	7.0		B	CSO	110	6	11	2
6950		RAMY	12	08	1305	N20	W18	12	7.2		B	CAO	60	14	9	1
6950		BOUL	12	08	1600	N21	W24	12	6.8		B	DSO	50	2	3	1
6950		PALE	12	08	1906	N20	W21	12	7.2		B	CAO	50	7	9	3
6950		LEAR	12	09	0046	N19	W26	12	7.0		B	CAO	70	5	9	3
6950		CULG	12	09	0120	N20	W28	12	6.9		B	DSO	40	5	7	3
6950		RAMY	12	09	1350	N20	W31	12	7.2		B	CAO	40	6	11	2
6950		BOUL	12	09	1552	N20	W38	12	6.7		B	DSO	30	2	3	1
6950		HOLL	12	09	1620	N19	W36	12	6.9		B	CAO	30	5	7	4
6950		PALE	12	09	1810	N20	W37	12	6.9		B	CAO	30	5	4	3
6950		LEAR	12	10	0012	N19	W40	12	6.9		B	CSO	20	3	4	3
6950		SVTO	12	10	1210	N19	W48	12	6.8		B	CSO	30	3	4	3
6950		RAMY	12	10	1355	N19	W49	12	6.8		A	AX	10	3	3	2
6950		PALE	12	10	2024	N19	W53	12	6.8		A	AX	10	2	1	2
6950		HOLL	12	10	2155	N19	W52	12	6.9		B	BXO	20	5	5	4
6950		LEAR	12	11	0012	N20	W54	12	6.9		B	BXO		4	3	3
6953		SVTO	12	02	1015	S18	E63	12	7.2		A	AX		1		2
6953		RAMY	12	02	1210	S19	E64	12	7.4		B	CRO	20	2	3	3
6953	27213	MWIL	12	02	1600	S19	E61	12	7.3	4	(AP)					
6953		BOUL	12	02	1602	S20	E64	12	7.6		A	AX		1		1
6953		HOLL	12	02	1615	S19	E60	12	7.2		A	AX	10	2	2	3
6953		PALE	12	02	2059	S20	E60	12	7.5		A	AX		2		3
6953		CULG	12	03	0015	S19	E58	12	7.4		B	BXO		5	3	3
6953		LEAR	12	03	0104	S20	E58	12	7.5		B	BXO	10	5	4	3
6953		SVTO	12	03	1042	S21	E52	12	7.4		B	BXO	20	4	4	3
6953		HOLL	12	03	1625	S19	E48	12	7.3		A	AX	20	3	1	3
6953		PALE	12	03	2100	S18	E48	12	7.5		A	AX	10	3	2	3
6953		LEAR	12	04	0007	S20	E43	12	7.3		A	AX	10	2	1	4
6953		SVTO	12	04	1045	S19	E40	12	7.5		A	AX	10	1	1	2
6953		RAMY	12	04	1345	S20	E37	12	7.4		A	AX	10	2	1	3
6953		LEAR	12	05	0006	S19	E31	12	7.4		A	AX		1	1	3
6953		CULG	12	05	0200	S18	E29	12	7.3		A	AX		1	1	1
6953		RAMY	12	07	1329	S19	W03	12	7.3		A	AX		2	1	3
6953	27222	MWIL	12	07	1545	S19	W05	12	7.3	4	(AF)					
6953		BOUL	12	07	1600	S19	W04	12	7.4		A	AX		1		3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6953		HOLL	12	07	1630	S20	W05	12	7.3		A	AX		1		3
6953A		HOLL	12	06	1525	N26	E20	12	8.2		A	AX		1		4
6953A		CULG	12	09	0120	N27	W18	12	7.6		A	AX		1		3
6963	27223	MWIL	12	07	1545	S10	E13	12	8.6	4	(B)					
6963		BOUL	12	07	1600	S09	E13	12	8.6		B	CSO	10	3	3	3
6963		HOLL	12	07	1630	S10	E13	12	8.7		B	BXO	20	7	3	3
6963		PALE	12	07	1947	S10	E11	12	8.6		B	BXO	20	10	3	3
6963		CULG	12	08	0030	S10	E08	12	8.6		B	DAO	50	13	4	4
6963		LEAR	12	08	0117	S10	E07	12	8.6		B	DAO	90	11	5	2
6963		RAMY	12	08	1305	S09	E02	12	8.7		B	DAO	50	11	7	1
6963		BOUL	12	08	1600	S08	E00	12	8.7		B	CAO	60	5	6	1
6963		HOLL	12	08	1615	S10	E00	12	8.7		B	DAO	80	21	7	3
6963		PALE	12	08	1906	S10	W02	12	8.6		B	DAI	50	17	7	3
6963		LEAR	12	09	0046	S13	W07	12	8.5		B	DAO	430	22	6	3
6963		CULG	12	09	0120	S10	W06	12	8.6		B	DAI	60	27	7	3
6963		RAMY	12	09	1350	S10	W11	12	8.7		B	DAO	210	50	8	2
6963		BOUL	12	09	1552	S10	W13	12	8.7		B	DKI	380	14	8	1
6963		HOLL	12	09	1620	S12	W13	12	8.7		BG	EKI	620	57	8	4
6963		PALE	12	09	1810	S11	W15	12	8.6		B	DAI	440	43	8	3
6963		LEAR	12	10	0012	S11	W18	12	8.6		B	DKI	440	38	8	3
6963		SVTO	12	10	1210	S12	W24	12	8.7		B	DKI	700	28	10	3
6963		RAMY	12	10	1355	S10	W26	12	8.6		B	DKI	650	24	10	2
6963		PALE	12	10	2024	S11	W30	12	8.6		B	EKI	600	38	11	2
6963		HOLL	12	10	2155	S11	W31	12	8.6		BG	EKI	820	27	11	4
6963		LEAR	12	11	0012	S11	W32	12	8.6		B	EKO	610	22	11	3
6963		SVTO	12	11	0935	S11	W37	12	8.6		B	EKI	660	14	12	3
6963		RAMY	12	11	1250	S09	W38	12	8.7		B	EKO	440	26	12	3
6963		BOUL	12	11	1603	S11	W41	12	8.6		B	EKI	730	23	14	2
6963		LEAR	12	12	0005	S10	W44	12	8.7		B	EKO	500	28	14	3
6963		SVTO	12	12	0808	S14	W49	12	8.6		B	EKI	780	16	12	3
6963		RAMY	12	12	1230	S11	W51	12	8.7		B	EKO	530	24	13	3
6963		BOUL	12	12	1606	S10	W51	12	8.8		B	EKO	570	13	13	1
6963	27223	MWIL	12	12	1630	S10	W54	12	8.6	5	(B)					
6963		HOLL	12	12	1630	S12	W53	12	8.7		B	EKO	600	31	13	3
6963		PALE	12	12	1933	S13	W56	12	8.6		B	EKO	480	21	15	3
6963		LEAR	12	13	0018	S11	W58	12	8.6		B	EKO	290	18	14	2
6963		CULG	12	13	0115	S10	W61	12	8.5		B	EKI	660	18	14	3
6963		SVTO	12	13	1225	S11	W65	12	8.6		B	EKO	500	10	14	2
6963		RAMY	12	13	1309	S12	W64	12	8.7		B	EKO	600	16	15	3
6963	27223	MWIL	12	13	1530	S10	W67	12	8.6	5	(B)					
6963		BOUL	12	13	1611	S11	W71	12	8.3		B	FKO	630	18	19	2
6963		HOLL	12	13	1730	S11	W68	12	8.6		B	EKO	620	12	15	3
6963		LEAR	12	14	0011	S10	W70	12	8.7		B	EHO	840	8	15	3
6963		SVTO	12	14	0907	S11	W78	12	8.5		B	EKO	630	11	14	2
6963		RAMY	12	14	1310	S12	W79	12	8.6		B	FKO	250	13	18	4
6963		BOUL	12	14	1520	S08	W78	12	8.8		A	HA	120	1	4	2
6963	27223	MWIL	12	14	1530	S12	W78	12	8.8	5	AF)					
6963		HOLL	12	14	1630	S12	W77	12	8.9		B	DSI	230	11	7	3
6963		LEAR	12	15	0056	S11	W77	12	9.2		B	DKO	240	2	4	3
6963		CULG	12	15	0100	S12	W80	12	9.0		A	HS	60	1	2	3
6952		RAMY	12	02	1210	N18	E85	12	9.0		A	HA	50	2	2	3
6952	27214	MWIL	12	02	1600	N18	E81	12	8.8	4	(AP)					
6952		HOLL	12	02	1615	N17	E79	12	8.7		B	CAO	60	4	4	3
6952		PALE	12	02	2059	N18	E80	12	9.0		B	EKO	110	2	12	3
6952		CULG	12	03	0015	N16	E81	12	9.1		A	HS	100	1	2	3
6952		CULG	12	03	0015	N18	E78	12	9.0		B	DKO	130	7	10	3
6952		LEAR	12	03	0104	N17	E75	12	8.7		B	DKO	210	6	8	3
6952		SVTO	12	03	1042	N17	E76	12	9.2		B	DAO	290	12	8	3
6952		HOLL	12	03	1625	N19	E70	12	9.0		B	EKI	480	18	13	3
6952	27214	MWIL	12	03	2100	N17	E69	12	9.1	5	(B)					
6952		PALE	12	03	2100	N20	E70	12	9.2		B	FKI	290	22	17	3
6952		LEAR	12	04	0007	N18	E68	12	9.2		B	FAI	500	19	17	4
6952		CULG	12	04	0050	N22	E67	12	9.2		B	EAO	440	8	14	2
6952		SVTO	12	04	1045	N17	E62	12	9.1		B	EKO	700	12	12	2
6952		RAMY	12	04	1345	N18	E62	12	9.3		B	EKC	750	21	14	3
6952		BOUL	12	04	1557	N18	E61	12	9.3		B	FKO	760	7	16	1

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6952	27214	MWIL	12	04	1715	N17	E59	12	9.2	5	(D)					
6952		PALE	12	04	2015	N20	E58	12	9.3		B	EHI	320	28	15	3
6952		HOLL	12	04	2105	N18	E55	12	9.1		BGD	EKC	590	26	14	2
6952		LEAR	12	05	0006	N17	E55	12	9.2		B	EKO	500	21	14	3
6952		CULG	12	05	0200	N19	E54	12	9.2		BG	FKI	720	16	16	1
6952		SVTO	12	05	1140	N17	E49	12	9.2		BG	EKI	600	30	15	2
6952		RAMY	12	05	1339	N17	E47	12	9.1		BD	EKC	510	40	14	3
6952		HOLL	12	05	1600	N18	E45	12	9.1		BGD	EKC	600	30	14	1
6952		BOUL	12	05	1612	N18	E47	12	9.2		B	EKI	840	30	15	1
6952		PALE	12	05	1850	N21	E44	12	9.1		BGD	EKC	260	42	13	3
6952	27214	MWIL	12	05	1900	N17	E45	12	9.2	5	D *					
6952		LEAR	12	06	0003	N17	E41	12	9.1		BGD	EKC	660	50	14	3
6952		CULG	12	06	0120	N18	E42	12	9.2		BD	EKI	1100	22	15	3
6952		RAMY	12	06	1331	N18	E33	12	9.1		BD	EKI	640	54	14	3
6952		HOLL	12	06	1525	N18	E35	12	9.3		BGD	EKC	560	64	14	4
6952	27214	MWIL	12	06	1545	N17	E33	12	9.2	5	(D)					
6952		BOUL	12	06	1624	N20	E32	12	9.1		B	EKC	650	37	15	1
6952		PALE	12	06	2324	N19	E27	12	9.0		B	EKI	470	39	12	2
6952		LEAR	12	07	0020	N17	E27	12	9.1		BGD	EKI	520	36	15	3
6952		CULG	12	07	0110	N19	E28	12	9.2		BD	EKI	650	43	14	4
6952		RAMY	12	07	1329	N19	E21	12	9.2		BG	EAI	580	76	16	3
6952	27214	MWIL	12	07	1545	N18	E20	12	9.2	5	(D)					
6952		BOUL	12	07	1600	N19	E20	12	9.2		B	EAC	530	48	13	3
6952		HOLL	12	07	1630	N18	E19	12	9.1		BGD	EAC	800	74	13	3
6952		PALE	12	07	1947	N18	E17	12	9.1		BG	EKI	570	54	13	3
6952		CULG	12	08	0030	N19	E14	12	9.1		BGD	EKC	570	65	13	4
6952		LEAR	12	08	0117	N17	E14	12	9.1		BGD	EKI	520	34	14	2
6952		RAMY	12	08	1305	N20	E11	12	9.4		BG	EAI	420	49	13	1
6952		BOUL	12	08	1600	N20	E08	12	9.3		B	EAC	330	19	15	1
6952		HOLL	12	08	1615	N18	E07	12	9.2		BG	EAI	410	64	14	3
6952		PALE	12	08	1906	N19	E05	12	9.2		B	EAI	450	50	14	3
6952		LEAR	12	09	0046	N18	E02	12	9.2		BG	EAI	410	36	13	3
6952		CULG	12	09	0120	N19	E01	12	9.1		BG	EAC	360	40	13	3
6952		RAMY	12	09	1350	N19	W06	12	9.1		B	EHI	230	70	12	2
6952		BOUL	12	09	1552	N20	W06	12	9.2		BG	EKI	600	17	13	1
6952		HOLL	12	09	1620	N18	W07	12	9.1		BG	EAI	470	72	13	4
6952		PALE	12	09	1810	N18	W08	12	9.1		BG	EAI	380	56	13	3
6952		LEAR	12	10	0012	N18	W10	12	9.2		BG	EAI	320	33	14	3
6952		SVTO	12	10	1210	N18	W18	12	9.1		BG	EAO	150	29	13	3
6952		RAMY	12	10	1355	N19	W18	12	9.2		B	EAI	100	28	12	2
6952		PALE	12	10	2024	N19	W21	12	9.2		BG	CAI	120	40	13	2
6952		HOLL	12	10	2155	N18	W22	12	9.2		B	FAI	70	36	16	4
6952		LEAR	12	11	0012	N19	W24	12	9.2		B	CAI	60	23	15	3
6952		SVTO	12	11	0935	N18	W28	12	9.3		BG	ESO	110	26	13	3
6952		RAMY	12	11	1250	N19	W30	12	9.2		BD	EAO	100	25	13	3
6952		BOUL	12	11	1603	N19	W34	12	9.1		B	EAI	130	15	12	2
6952		LEAR	12	12	0005	N19	W37	12	9.2		B	EAO	60	25	15	3
6952		SVTO	12	12	0808	N17	W42	12	9.1		B	CAO	90	12	13	3
6952		RAMY	12	12	1230	N18	W43	12	9.2		B	EAO	70	10	14	3
6952		BOUL	12	12	1606	N19	W45	12	9.2		B	EAO	80	6	12	1
6952		HOLL	12	12	1630	N17	W46	12	9.2		BG	EAO	90	15	15	3
6952	27214	MWIL	12	12	1630	N18	W46	12	9.2	5	(BF)					
6952		PALE	12	12	1933	N17	W48	12	9.2		B	CAO	40	11	10	3
6952		LEAR	12	13	0018	N18	W47	12	9.4		B	CSO	20	6	5	2
6952		SVTO	12	13	1225	N19	W53	12	9.5		B	BXO	20	2	6	2
6952		RAMY	12	13	1309	N17	W56	12	9.3		B	DAO	60	10	14	3
6952	27214	MWIL	12	13	1530	N18	W56	12	9.4	4	(AF)					
6952		BOUL	12	13	1611	N18	W58	12	9.2		B	EAO	80	10	15	2
6952		LEAR	12	14	0011	N19	W61	12	9.3		B	CSO	120	5	7	3
6952		SVTO	12	14	0907	N18	W66	12	9.3		B	CRO	30	4	7	2
6952		RAMY	12	14	1310	N18	W67	12	9.4		B	BXO	50	9	10	4
6952		BOUL	12	14	1520	N18	W70	12	9.3		A	AX	10	1	2	2
6952	27214	MWIL	12	14	1530	N18	W71	12	9.2	3	(AP)					
6952		HOLL	12	14	1630	N17	W75	12	9.0		B	BXO	60	6	6	3
6952A		RAMY	12	08	1305	S23	E08	12	9.2		A	AX	10	2	2	1
6952A		HOLL	12	08	1615	S24	E06	12	9.1		A	AX		1		3
6952A		RAMY	12	09	1350	S24	W05	12	9.2		A	AX	10	2	2	2
6952A		HOLL	12	09	1620	S24	W07	12	9.1		A	AX		1		4

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6955		LEAR	12	03	0104	N10	E79	12	9.0		A	HS	60	1	2	3
6955		SVTO	12	03	1042	N09	E78	12	9.3		A	HH	180	1	4	3
6955		HOLL	12	03	1625	N11	E75	12	9.3		A	HS	120	2	1	3
6955	27216	MWIL	12	03	2100	N10	E73	12	9.4	5	(AP)					
6955		PALE	12	03	2100	N12	E72	12	9.3		A	HA	80	1	4	3
6955		LEAR	12	04	0007	N10	E70	12	9.3		B	CAO	130	3	3	4
6955		CULG	12	04	0050	N12	E69	12	9.2		A	HA	160	2	1	2
6955		SVTO	12	04	1045	N09	E66	12	9.4		A	HS	130	2	4	2
6955		RAMY	12	04	1345	N10	E62	12	9.2		A	HK	120	3	3	3
6955		BOUL	12	04	1557	N10	E63	12	9.4		A	HS	150	1	2	1
6955	27216	MWIL	12	04	1715	N10	E61	12	9.3	5	(AP)					
6955		PALE	12	04	2015	N11	E59	12	9.3		A	HS	70	1	3	3
6955		HOLL	12	04	2105	N10	E58	12	9.2		A	HA	140	3	2	2
6955		LEAR	12	05	0006	N10	E58	12	9.4		A	HS	180	4	2	3
6955		CULG	12	05	0200	N12	E57	12	9.4		A	HA	100	2	2	1
6955		SVTO	12	05	1140	N10	E50	12	9.2		A	HS	140	4	3	2
6955		RAMY	12	05	1339	N10	E48	12	9.2		A	HK	140	2	3	3
6955		HOLL	12	05	1600	N10	E47	12	9.2		A	HS	150	3	2	1
6955		BOUL	12	05	1612	N11	E50	12	9.4		A	HA	140	2	3	1
6955		PALE	12	05	1850	N12	E47	12	9.3		B	CHO	140	4	4	3
6955	27216	MWIL	12	05	1900	N10	E48	12	9.4	5	AP					
6955		LEAR	12	06	0003	N09	E43	12	9.2		A	HA	130	2	2	3
6955		CULG	12	06	0120	N11	E42	12	9.2		A	HS	130	2	2	3
6955		RAMY	12	06	1331	N12	E37	12	9.3		B	CAO	140	8	6	3
6955		HOLL	12	06	1525	N10	E35	12	9.3		A	HS	150	9	5	4
6955	27216	MWIL	12	06	1545	N10	E34	12	9.2	5	(BG)					
6955		BOUL	12	06	1624	N11	E33	12	9.2		A	HA	110	1	2	1
6955		PALE	12	06	2324	N11	E30	12	9.2		A	HS	110	2	2	2
6955		LEAR	12	07	0020	N09	E30	12	9.3		A	HH	170	1	3	3
6955		CULG	12	07	0110	N11	E29	12	9.2		A	HS	130	3	2	4
6955		RAMY	12	07	1329	N11	E25	12	9.4		B	CAO	170	9	6	3
6955	27216	MWIL	12	07	1545	N10	E22	12	9.3	5	(AP)					
6955		BOUL	12	07	1600	N11	E21	12	9.2		A	HA	110	3	2	3
6955		HOLL	12	07	1630	N10	E21	12	9.3		A	HS	200	5	3	3
6955		PALE	12	07	1947	N10	E19	12	9.2		A	HS	150	3	2	3
6955		CULG	12	08	0030	N11	E16	12	9.2		A	HA	150	2	2	4
6955		LEAR	12	08	0117	N10	E15	12	9.2		A	HS	150	1	2	2
6955		RAMY	12	08	1305	N11	E12	12	9.4		B	CKO	210	7	7	1
6955		BOUL	12	08	1600	N11	E08	12	9.3		A	HA	80	3	2	1
6955		HOLL	12	08	1615	N10	E08	12	9.3		A	HS	130	4	2	3
6955		PALE	12	08	1906	N11	E07	12	9.3		A	HS	140	1	2	3
6955		LEAR	12	09	0046	N09	E03	12	9.2		A	HS	150	3	2	3
6955		CULG	12	09	0120	N11	E05	12	9.4		B	CSO	150	4	5	3
6955		BOUL	12	09	1552	N11	W04	12	9.4		B	CSO	100	2	5	1
6955		HOLL	12	09	1620	N11	W03	12	9.4		B	CSO	190	7	6	4
6955		PALE	12	09	1810	N12	W02	12	9.6		B	CSO	170	8	9	3
6955		LEAR	12	10	0012	N10	W07	12	9.5		B	CSO	160	6	6	3
6955		SVTO	12	10	1210	N11	W14	12	9.4		B	CAO	120	4	5	3
6955		RAMY	12	10	1355	N11	W17	12	9.3		A	HA	80	1	2	2
6955		PALE	12	10	2024	N10	W21	12	9.3		A	HS	60	1	1	2
6955		HOLL	12	10	2155	N10	W22	12	9.3		A	HS	90	2	2	4
6955		LEAR	12	11	0012	N10	W22	12	9.3		A	HA	100	3	3	3
6955		SVTO	12	11	0935	N10	W27	12	9.4		B	CAO	110	4	6	3
6955		RAMY	12	11	1250	N12	W28	12	9.4		B	CAO	100	3	5	3
6955		BOUL	12	11	1603	N11	W32	12	9.3		A	HA	90	2	2	2
6955		LEAR	12	12	0005	N11	W35	12	9.4		A	HA	100	2	2	3
6955		SVTO	12	12	0808	N07	W41	12	9.3		A	HA	100	2	2	3
6955		RAMY	12	12	1230	N09	W43	12	9.3		A	HA	80	2	2	3
6955		BOUL	12	12	1606	N11	W44	12	9.4		A	HA	110	1	2	1
6955		HOLL	12	12	1630	N09	W45	12	9.3		A	HA	60	2	2	3
6955	27216	MWIL	12	12	1630	N10	W45	12	9.3	5	(AP)					
6955		PALE	12	12	1933	N09	W46	12	9.4		A	HS	60	1	1	3
6955		LEAR	12	13	0018	N10	W49	12	9.3		A	HA	60	2	2	2
6955		SVTO	12	13	1225	N11	W55	12	9.4		A	HS	100	2	2	2
6955		RAMY	12	13	1309	N09	W57	12	9.3		A	HA	70	1	2	3
6955	27216	MWIL	12	13	1530	N10	W57	12	9.4	5	(AP)					
6955		BOUL	12	13	1611	N08	W59	12	9.2		A	HA	80	2	2	2
6955		HOLL	12	13	1730	N09	W59	12	9.3		A	HS	60	2	1	3

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6955		LEAR	12	14	0011	N10	W62	12	9.3		A	HS	90	1	2	3
6955		SVTO	12	14	0907	N10	W69	12	9.2		A	HA	90	1	2	2
6955		RAMY	12	14	1310	N09	W69	12	9.4		A	HA	70	1	2	4
6955	27216	MWIL	12	14	1530	N10	W70	12	9.4	4	(AP)					
6955		HOLL	12	14	1630	N09	W71	12	9.3		A	HS	60	1	2	3
6955		LEAR	12	15	0056	N09	W75	12	9.4		A	HS	120	2	2	3
6955		CULG	12	15	0100	N10	W80	12	9.0		A	HS	30	1	1	3
6955		SVTO	12	15	1026	N10	W82	12	9.3		A	HS	20	1	3	2
6958		RAMY	12	04	1345	S18	E75	12	10.3		A	AX		1	1	3
6958	27218	MWIL	12	04	1715	S18	E73	12	10.3	4	(AP					
6958		PALE	12	04	2015	S17	E72	12	10.3		B	BXO	30	2	3	3
6958		LEAR	12	05	0006	S18	E71	12	10.4		A	HS	30	1	1	3
6958		CULG	12	05	0200	S17	E68	12	10.2		A	AX	10	1	1	1
6958		SVTO	12	05	1140	S18	E66	12	10.5		B	CSO	70	10	8	2
6958		RAMY	12	05	1339	S19	E63	12	10.4		B	CAO	90	19	9	3
6958		HOLL	12	05	1600	S18	E64	12	10.5		B	CSO	120	8	11	1
6958		BOUL	12	05	1612	S18	E68	12	10.8		B	DAO	100	5	7	1
6958		PALE	12	05	1850	S16	E61	12	10.4		B	CSO	130	11	11	3
6958	27218	MWIL	12	05	1900	S18	E62	12	10.5	5	BP					
6958		LEAR	12	06	0003	S17	E57	12	10.3		B	CRO	50	15	9	3
6958		CULG	12	06	0120	S18	E57	12	10.4		B	DAO	130	13	9	3
6958		RAMY	12	06	1331	S17	E52	12	10.5		B	EAO	260	27	11	3
6958		HOLL	12	06	1525	S18	E50	12	10.4		B	EAI	200	27	11	4
6958	27218	MWIL	12	06	1545	S18	E48	12	10.3	5	(BP)					
6958		BOUL	12	06	1624	S19	E50	12	10.5		B	DAO	260	8	8	1
6958		PALE	12	06	2324	S17	E46	12	10.5		B	DAO	130	18	9	2
6958		LEAR	12	07	0020	S20	E44	12	10.4		B	DSO	320	14	10	3
6958		CULG	12	07	0110	S19	E43	12	10.3		B	DAO	200	19	10	4
6958		RAMY	12	07	1329	S18	E38	12	10.4		B	EAO	330	36	11	3
6958	27218	MWIL	12	07	1545	S19	E36	12	10.4	5	(B)					
6958		BOUL	12	07	1600	S17	E36	12	10.4		B	EAI	330	18	11	3
6958		HOLL	12	07	1630	S18	E35	12	10.3		B	EAI	520	32	12	3
6958		PALE	12	07	1947	S18	E35	12	10.5		BG	EKI	360	24	12	3
6958		CULG	12	08	0030	S17	E30	12	10.3		B	EAO	330	26	11	4
6958		LEAR	12	08	0117	S18	E29	12	10.3		B	EHO	350	20	13	2
6958		RAMY	12	08	1305	S17	E26	12	10.5		B	EKO	450	23	12	1
6958		BOUL	12	08	1600	S17	E23	12	10.4		B	EAI	200	11	11	1
6958		HOLL	12	08	1615	S17	E23	12	10.4		B	EAO	370	36	13	3
6958		PALE	12	08	1906	S18	E22	12	10.5		BG	EKI	520	32	12	3
6958		LEAR	12	09	0046	S19	E17	12	10.3		B	EKO	370	21	12	3
6958		CULG	12	09	0120	S18	E17	12	10.3		B	EKI	550	25	13	3
6958		RAMY	12	09	1350	S18	E12	12	10.5		B	FKO	610	51	16	2
6958		BOUL	12	09	1552	S16	E09	12	10.3		BG	EKI	460	13	11	1
6958		HOLL	12	09	1620	S16	E08	12	10.3		B	EKI	660	36	13	4
6958		PALE	12	09	1810	S16	E08	12	10.4		B	ESI	530	37	13	3
6958		LEAR	12	10	0012	S19	E03	12	10.2		B	EKI	460	24	14	3
6958		SVTO	12	10	1210	S18	W02	12	10.3		B	EKO	370	22	14	3
6958		RAMY	12	10	1355	S15	W04	12	10.3		B	EHO	360	24	14	2
6958		PALE	12	10	2024	S15	W07	12	10.3		B	EKI	360	36	14	2
6958		HOLL	12	10	2155	S15	W07	12	10.4		B	EAI	460	33	13	4
6958		LEAR	12	11	0012	S18	W09	12	10.3		B	FKI	300	34	17	3
6958		SVTO	12	11	0935	S18	W14	12	10.3		B	EAO	350	20	14	3
6958		RAMY	12	11	1250	S17	W16	12	10.3		B	EKO	390	34	15	3
6958		BOUL	12	11	1603	S18	W18	12	10.3		B	FKI	400	27	16	2
6958		LEAR	12	12	0005	S17	W21	12	10.4		B	FAI	400	30	16	3
6958		SVTO	12	12	0808	S19	W25	12	10.4		B	FKI	650	27	16	3
6958		RAMY	12	12	1230	S17	W27	12	10.5		B	FAO	80	31	16	3
6958		BOUL	12	12	1606	S18	W32	12	10.2		B	FKI	570	23	17	1
6958		HOLL	12	12	1630	S18	W26	12	10.7		BG	FKI	600	58	17	3
6958	27218	MWIL	12	12	1630	S18	W31	12	10.3	5	(D)					
6958		PALE	12	12	1933	S19	W32	12	10.4		BG	FAI	300	33	17	3
6958		LEAR	12	13	0018	S18	W35	12	10.3		BG	HAI	230	19	18	2
6958		SVTO	12	13	1225	S17	W44	12	10.2		BG	FAI	360	22	16	2
6958		RAMY	12	13	1309	S18	W48	12	9.9		BG	FAO	310	33	17	3
6958	27218	MWIL	12	13	1530	S18	W42	12	10.4	5	(D)					
6958		BOUL	12	13	1611	S18	W43	12	10.4		B	FKI	410	22	19	2
6958		HOLL	12	13	1730	S18	W42	12	10.5		BG	FAI	280	31	13	3
6958		LEAR	12	14	0011	S17	W48	12	10.3		B	FKO	410	18	17	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6958		SVTO	12	14	0907	S18	W54	12	10.3		B	FAI	290	16	17	2
6958		RAMY	12	14	1310	S18	W54	12	10.4		BG	FSO	260	22	17	4
6958		BOUL	12	14	1520	S15	W54	12	10.5		B	EAO	260	7	12	2
6958	27218	MWIL	12	14	1530	S18	W57	12	10.3	5	(B)					
6958		HOLL	12	14	1630	S19	W57	12	10.3		B	FSI	280	21	18	3
6958		LEAR	12	15	0056	S18	W62	12	10.3		B	FAO	260	12	16	3
6958		CULG	12	15	0100	S18	W66	12	10.0		B	FAO	220	11	18	3
6958		RAMY	12	15	1555	S18	W69	12	10.4		B	FSO	200	10	17	4
6958	27218	MWIL	12	15	1700	S17	W72	12	10.2	3	(BP)					
6958		BOUL	12	15	1800	S17	W67	12	10.6		A	HS	30	1	2	1
6958		PALE	12	15	1830	S18	W70	12	10.4		B	CAO	180	9	17	2
6958		HOLL	12	15	2230	S17	W75	12	10.2		B	CAO	60	5	7	2
6958		LEAR	12	16	0022	S18	W75	12	10.3		B	CAO	90	2	11	3
6958		CULG	12	16	0120	S18	W75	12	10.3		B	CAO	20	3	16	4
6967		RAMY	12	09	1350	S26	E18	12	11.0		B	DAO	40	9	5	2
6967		BOUL	12	09	1552	S23	E15	12	10.8		B	CSO	40	2	5	1
6967		HOLL	12	09	1620	S26	E17	12	11.0		B	DAO	40	7	6	4
6967		LEAR	12	10	0012	S27	E11	12	10.9		B	DSO	90	4	6	3
6967		SVTO	12	10	1210	S26	E04	12	10.8		B	DAO	110	8	6	3
6967		RAMY	12	10	1355	S25	E03	12	10.8		B	CAO	60	7	6	2
6967		PALE	12	10	2024	S25	E00	12	10.8		B	DSO	80	9	7	2
6967		HOLL	12	10	2155	S25	W01	12	10.8		B	DAO	40	13	7	4
6967		LEAR	12	11	0012	S25	W04	12	10.7		B	DAO	90	9	7	3
6967		SVTO	12	11	0935	S26	W08	12	10.8		B	DAO	80	7	7	3
6967		RAMY	12	11	1250	S26	W09	12	10.8		B	DAO	80	12	7	3
6967		BOUL	12	11	1603	S25	W12	12	10.7		B	DAO	70	6	7	2
6967		LEAR	12	12	0005	S24	W15	12	10.8		B	CRO	40	8	8	3
6967		SVTO	12	12	0808	S29	W18	12	10.9		B	CSO	80	8	7	3
6967		RAMY	12	12	1230	S26	W22	12	10.8		B	CSO	50	9	8	3
6967		BOUL	12	12	1606	S28	W26	12	10.6		B	DAO	100	6	9	1
6967	27224	MWIL	12	12	1630	S26	W25	12	10.7	5	(B)					
6967		HOLL	12	12	1630	S27	W23	12	10.9		B	DAO	50	11	9	3
6967		PALE	12	12	1933	S29	W26	12	10.8		B	CAO	50	10	9	3
6967		LEAR	12	13	0018	S26	W27	12	10.9		B	DAO	60	8	9	2
6967		CULG	12	13	0115	S27	W30	12	10.7		B	CAO	40	8	9	3
6967		SVTO	12	13	1225	S26	W36	12	10.7		B	DAO	70	7	8	2
6967		RAMY	12	13	1309	S28	W34	12	10.9		B	DAO	60	11	11	3
6967	27224	MWIL	12	13	1530	S26	W38	12	10.7	4	(BP)					
6967		BOUL	12	13	1611	S28	W36	12	10.9		B	DAO	60	7	10	2
6967		HOLL	12	13	1730	S27	W36	12	10.9		B	ESO	40	4	12	3
6967		LEAR	12	14	0011	S27	W42	12	10.7		B	CAO	60	6	10	3
6967		SVTO	12	14	0907	S26	W48	12	10.6		B	BXO	20	4	6	2
6967		RAMY	12	14	1310	S27	W48	12	10.8		B	CAO	30	6	9	4
6967		BOUL	12	14	1520	S27	W52	12	10.6		BGD	AX	10	1	1	2
6967	27224	MWIL	12	14	1530	S26	W51	12	10.7	4	(BP)					
6967		HOLL	12	14	1630	S28	W50	12	10.8		B	CSO	30	5	10	3
6967		LEAR	12	15	0056	S26	W58	12	10.5		A	HS	40	1	2	3
6967		CULG	12	15	0100	S27	W58	12	10.5		B	CRO	10	2	6	3
6967		SVTO	12	15	1026	S28	W59	12	10.8		B	BXO	20	3	15	2
6967		RAMY	12	15	1555	S28	W60	12	11.0		B	BXO	10	2	10	4
6967	27224	MWIL	12	15	1700	S26	W69	12	10.3	3	(AP)					
6967		PALE	12	15	1830	S28	W65	12	10.7		B	BXO	20	2	10	2
6967		HOLL	12	15	2230	S26	W70	12	10.5		A	AX		1		2
6967		LEAR	12	16	0022	S26	W73	12	10.3		A	AX	20	1	1	3
6967		CULG	12	16	0120	S26	W74	12	10.3		A	AX		1		4
6970		PALE	12	07	1947	S13	E45	12	11.2		A	AX		1		3
6970		SVTO	12	13	1225	S12	W32	12	11.1		B	BXO	20	6	3	2
6970		RAMY	12	13	1309	S13	W33	12	11.0		B	CAO	50	11	3	3
6970		BOUL	12	13	1611	S16	W33	12	11.2		B	CAO	40	4	3	2
6970		LEAR	12	14	0011	S13	W41	12	10.9		B	BXO	50	8	5	3
6970		SVTO	12	14	0907	S13	W45	12	11.0		B	CRO	30	6	7	2
6970		RAMY	12	14	1310	S13	W46	12	11.1		B	CRO	30	5	5	4
6970		BOUL	12	14	1520	S15	W48	12	11.0		A	AX	10	1	1	2
6970		HOLL	12	14	1630	S13	W50	12	10.9		A	HS	20	3	1	3
6970		LEAR	12	15	0056	S12	W54	12	11.0		A	AX	20	2	2	3
6970		SVTO	12	15	1026	S12	W59	12	11.0		A	AX	10	1		2
6970		RAMY	12	15	1555	S12	W62	12	11.0		A	AX		1	1	4

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6970		PALE	12	15	1830	S12	W64	12	10.9		A	AX	10	1	1	2
6960		RAMY	12	07	1329	S13	E48	12	11.2		A	AX		1		3
6960		RAMY	12	08	1305	S13	E37	12	11.3		A	AX		1	1	1
6960		HOLL	12	08	1615	S13	E37	12	11.5		A	AX	10	2	2	3
6960		PALE	12	08	1906	S14	E36	12	11.5		A	AX		3	1	3
6960		LEAR	12	09	0046	S17	E31	12	11.4		A	HR	30	1	1	3
6960		CULG	12	09	0120	S14	E32	12	11.5		A	HS	10	3	1	3
6960		RAMY	12	09	1350	S13	E24	12	11.4		B	CSO	20	4	3	2
6960		BOUL	12	09	1552	S15	E22	12	11.3		A	HS	20	1	1	1
6960		HOLL	12	09	1620	S12	E22	12	11.3		B	CAO	20	4	4	4
6960		PALE	12	09	1810	S13	E21	12	11.3		B	CSO	20	3	4	3
6960		LEAR	12	10	0012	S16	E19	12	11.4		B	CSO	40	5	4	3
6960		SVTO	12	10	1210	S15	E13	12	11.5		B	CSO	20	6	4	3
6960		RAMY	12	10	1355	S15	E12	12	11.5		A	AX	10	4	3	2
6960		PALE	12	10	2024	S14	E10	12	11.6		B	BXO	20	8	3	2
6960		HOLL	12	10	2155	S16	E07	12	11.4		B	BXO	20	8	4	4
6960		LEAR	12	11	0012	S15	E06	12	11.5		B	BXO		8	4	3
6960		SVTO	12	11	0935	S16	E02	12	11.5		B	DRO	20	4	4	3
6960		RAMY	12	11	1250	S16	W01	12	11.4		B	DSO	20	6	4	3
6960		BOUL	12	11	1603	S16	W02	12	11.5		B	CAO	30	4	3	2
6960		LEAR	12	12	0005	S14	W07	12	11.5		B	BXO	100	7	4	3
6960		SVTO	12	12	0808	S17	W10	12	11.6		B	BXO	20	3	5	3
6960		RAMY	12	12	1230	S16	W14	12	11.4		B	CSO	20	4	4	3
6960		BOUL	12	12	1606	S15	W17	12	11.4		B	BXO	20	3	3	1
6960	27225	MWIL	12	12	1630	S15	W16	12	11.5	4	X					
6960		HOLL	12	12	1630	S16	W16	12	11.5		B	CAO	20	6	5	3
6960		PALE	12	12	1933	S17	W18	12	11.4		A	AX		4	2	3
6960		LEAR	12	13	0018	S14	W21	12	11.4		B	BXO		3	3	2
6960		SVTO	12	13	1225	S16	W27	12	11.5		A	AX	10	1	1	2
6960		RAMY	12	13	1309	S16	W27	12	11.5		A	HA	10	1	1	3
6960	27225	MWIL	12	13	1530	S16	W32	12	11.2	4	(BG)					
6960		BOUL	12	13	1611	S16	W27	12	11.6		A	AX	10	1	1	2
6960		HOLL	12	13	1730	S17	W30	12	11.4		A	HS	10	1	1	3
6960		LEAR	12	14	0011	S16	W34	12	11.4		A	AX	80	1	1	3
6960		SVTO	12	14	0907	S16	W39	12	11.4		A	AX		1		2
6960		RAMY	12	14	1310	S16	W40	12	11.5		A	AX		1		4
6960	27225	MWIL	12	14	1530	S14	W47	12	11.1	4	(AP)					
6960		HOLL	12	14	1630	S17	W42	12	11.5		A	AX	10	1		3
6960		CULG	12	15	0100	S13	W57	12	10.7		B	BXO		2	2	3
6960	27225	MWIL	12	15	1700	S12	W65	12	10.8	3	(AP)					
6960		HOLL	12	15	2230	S17	W63	12	11.2		A	AX	10	1	1	2
6960		CULG	12	16	0120	S12	W69	12	10.8		A	AX		1		4
6960A		SVTO	12	15	1026	N16	W47	12	11.9		A	AX	10	1		2
6960A		RAMY	12	15	1555	N16	W50	12	11.9		A	AX		1	1	4
6960A	27230	MWIL	12	15	1700	N17	W52	12	11.7	3	(AP)					
6960A		PALE	12	15	1830	N16	W52	12	11.8		A	AX	10	1	1	2
6977		RAMY	12	17	1210	S32	W66	12	12.3		B	BXO	20	3	4	4
6977		HOLL	12	17	1843	S34	W68	12	12.3		A	AX	10	1	1	2
6977		PALE	12	17	1951	S33	W73	12	12.0		A	AX		2	2	3
6977		RAMY	12	18	1348	S32	W81	12	12.2		A	AX		1		4
6961		RAMY	12	06	1331	N10	E82	12	12.7		B	DAO	80	6	6	3
6961		HOLL	12	06	1525	N09	E80	12	12.6		B	CRO	60	3	3	4
6961	27221	MWIL	12	06	1545	N09	E82	12	12.8	4	AP					
6961		PALE	12	06	2324	N12	E81	12	13.1		B	CAO	80	9	10	2
6961		LEAR	12	07	0020	N08	E75	12	12.6		B	DAO	180	7	5	3
6961		CULG	12	07	0110	N09	E77	12	12.8		B	CSO	80	6	7	4
6961		RAMY	12	07	1329	N11	E69	12	12.7		B	DAO	370	20	6	3
6961	27221	MWIL	12	07	1545	N09	E70	12	12.9	5	(B					
6961		BOUL	12	07	1600	N09	E71	12	13.0		B	EAI	550	12	13	3
6961		HOLL	12	07	1630	N10	E68	12	12.8		BG	DKI	710	23	8	3
6961		PALE	12	07	1947	N10	E69	12	13.0		B	DKO	460	17	8	3
6961		CULG	12	08	0030	N11	E65	12	12.9		B	DKC	620	19	10	4
6961		LEAR	12	08	0117	N09	E62	12	12.7		B	EKO	550	15	11	2
6961		RAMY	12	08	1305	N11	E59	12	13.0		B	EKI	990	21	14	1
6961		BOUL	12	08	1600	N10	E59	12	13.1		B	EKI	610	10	13	1

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6961		HOLL	12	08	1615	N10	E57	12	13.0		BD	EKC	920	37	11	3
6961		PALE	12	08	1906	N10	E58	12	13.1		B	EKO	800	19	12	3
6961		LEAR	12	09	0046	N08	E50	12	12.8		B	EKI	850	20	14	3
6961		CULG	12	09	0120	N12	E51	12	12.9		B	EKC	760	24	11	3
6961		RAMY	12	09	1350	N10	E46	12	13.0		B	EKI	1120	38	13	2
6961		BOUL	12	09	1552	N10	E44	12	13.0		B	EKI	740	15	13	1
6961		HOLL	12	09	1620	N10	E43	12	12.9		BGD	EKC	1310	56	13	4
6961		PALE	12	09	1810	N09	E43	12	13.0		B	EKI	1020	45	13	3
6961		LEAR	12	10	0012	N09	E38	12	12.9		B	EKI	520	33	13	3
6961		SVTO	12	10	1210	N09	E32	12	12.9		B	EKI	740	29	14	3
6961		RAMY	12	10	1355	N10	E32	12	13.0		B	EKI	1120	22	13	2
6961		PALE	12	10	2024	N09	E28	12	12.9		B	EKI	770	31	12	2
6961		HOLL	12	10	2155	N10	E25	12	12.8		B	EKI	740	42	14	4
6961		LEAR	12	11	0012	N09	E24	12	12.8		BG	EKI	790	31	14	3
6961		SVTO	12	11	0935	N09	E20	12	12.9		B	EKI	970	32	13	3
6961		RAMY	12	11	1250	N09	E18	12	12.9		B	EKO	870	50	13	3
6961		BOUL	12	11	1603	N11	E17	12	12.9		B	EKC	890	38	14	2
6961		LEAR	12	12	0005	N09	E12	12	12.9		BD	EKI	880	33	14	3
6961		RAMY	12	12	1230	N08	E07	12	13.0		B	EKO	770	39	13	3
6961		BOUL	12	12	1606	N10	E03	12	12.9		B	EKC	900	39	13	1
6961		HOLL	12	12	1630	N08	E03	12	12.9		B	EKI	820	63	13	3
6961	27221	MWIL	12	12	1630	N08	E04	12	13.0	5	(D)					
6961		PALE	12	12	1933	N08	E01	12	12.9		B	EKI	950	52	14	3
6961		LEAR	12	13	0018	N09	W01	12	12.9		BG	EKI	740	30	14	2
6961		SVTO	12	13	1225	N08	W08	12	12.9		BG	EKI	1000	35	13	2
6961		RAMY	12	13	1309	N09	W09	12	12.9		BG	FKI	1240	77	15	3
6961	27221	MWIL	12	13	1530	N08	W08	12	13.0	5	(BG)					
6961		BOUL	12	13	1611	N09	W12	12	12.8		B	FKC	1090	42	11	2
6961		HOLL	12	13	1730	N08	W12	12	12.8		BG	FKI	910	75	17	3
6961		LEAR	12	14	0011	N09	W15	12	12.9		B	EKI	930	48	14	3
6961		SVTO	12	14	0907	N08	W20	12	12.9		B	FKC	1300	49	14	2
6961		RAMY	12	14	1310	N09	W21	12	13.0				1180	64	16	4
6961		BOUL	12	14	1520	N12	W22	12	13.0		B	EKO	1180	16	12	2
6961	27221	MWIL	12	14	1530	N08	W22	12	13.0	5	(D)					
6961		HOLL	12	14	1630	N08	W25	12	12.8		BGD	FKC	1380	82	16	3
6961		LEAR	12	15	0056	N09	W28	12	12.9		BD	EKC	1320	46	15	3
6961		CULG	12	15	0100	N09	W30	12	12.8		BGD	EKC	1560	40	14	3
6961		SVTO	12	15	1026	N09	W33	12	12.9		BGD	FKI	1340	63	16	2
6961		RAMY	12	15	1555	N08	W36	12	13.0		BG	EKI	1550	48	14	4
6961	27221	MWIL	12	15	1700	N09	W37	12	12.9	5	(D)					
6961		BOUL	12	15	1800	N09	W36	12	13.0		B	EKO	1150	19	15	1
6961		PALE	12	15	1830	N08	W38	12	12.9		BG	EKI	1420	43	14	2
6961		HOLL	12	15	2230	N08	W40	12	12.9		BGD	FKC	1670	79	17	2
6961		LEAR	12	16	0022	N09	W42	12	12.9		BG	EKI	1420	43	15	3
6961		RAMY	12	16	1425	N09	W45	12	13.2		BG	EKI	1230	26	13	1
6961	27221	MWIL	12	16	1645	N09	W50	12	12.9	5	(B)					
6961		BOUL	12	16	1703	N09	W50	12	12.9		B	EKO	1260	20	15	1
6961		PALE	12	16	1840	N08	W49	12	13.1		BG	EKI	1050	43	13	3
6961		LEAR	12	17	0013	N09	W54	12	12.9		BG	EKI	880	21	15	3
6961		CULG	12	17	0120	N10	W57	12	12.8		BG	EKI	1240	24	15	3
6961		SVTO	12	17	1200	N08	W60	12	13.0		B	CRO	20	2	6	3
6961		PALE	12	17	1200	N08	W60	12	13.0		B	CRO	20	2	6	3
6961		RAMY	12	17	1210	N08	W59	12	13.1		BG	EKI	1220	31	14	4
6961		HOLL	12	17	1843	N08	W62	12	13.1		BG	DKI	730	24	14	2
6961		PALE	12	17	1951	N08	W65	12	12.9		BG	EKI	680	36	13	3
6961		LEAR	12	18	0007	N09	W65	12	13.1		BG	FKI	730	20	16	3
6961		CULG	12	18	0050	N08	W72	12	12.6		BG	FKO	1170	9	17	3
6961		SVTO	12	18	0755	N10	W73	12	12.8		BG	EKO	860	8	14	1
6961		RAMY	12	18	1348	N10	W74	12	13.0		BG	EKI	1070	9	15	4
6961		BOUL	12	18	1608	N11	W74	12	13.1		B	EKO	630	12	14	2
6961	27221	MWIL	12	18	1715	N10	W76	12	13.0	5	D)					
6961		CULG	12	19	0055	N09	W78	12	13.2		B	CAO	180	2	5	2
6961		LEAR	12	19	0428	N12	W77	12	13.4		BG	DKO	150	3	5	2
6961		RAMY	12	19	1325	N10	W86	12	13.1		B	HA	190	3	7	3
6969		HOLL	12	10	2155	N23	E29	12	13.1		A	AX	20	2	1	4
6969		LEAR	12	11	0012	N22	E28	12	13.2		B	BXO		2	3	3
6969		SVTO	12	11	0935	N23	E22	12	13.1		A	AX		2	2	3
6969		RAMY	12	11	1250	N22	E20	12	13.1		A	AX		2	1	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6969		BOUL	12	11	1603	N23	E18	12	13.0		A	AX	10	1	1	2
6969		LEAR	12	12	0005	N23	E13	12	13.0		A	AX		1	1	3
6964		RAMY	12	08	1305	S21	E58	12	13.0		B	CRO	20	3	3	1
6964		HOLL	12	08	1615	S22	E52	12	12.7		B	BXO	20	4	3	3
6964		PALE	12	08	1906	S23	E55	12	13.0		A	AX		1		3
6964		LEAR	12	09	0046	S24	E47	12	12.7		B	BXO	60	2	4	3
6964		CULG	12	09	0120	S22	E50	12	12.9		B	CRO	20	3	3	3
6964		RAMY	12	09	1350	S21	E42	12	12.8		B	BXO	10	3	3	2
6964		BOUL	12	09	1552	S23	E41	12	12.8		A	AX		1		1
6964		HOLL	12	09	1620	S22	E42	12	12.9		A	AX		1		4
6964		PALE	12	09	1810	S21	E40	12	12.8		B	CSO	40	4	4	3
6964		LEAR	12	10	0012	S23	E35	12	12.7		B	BXO	10	2	4	3
6964		PALE	12	10	2024	S19	E29	12	13.1		A	AX		3	1	2
6976		SVTO	12	15	1026	N10	W21	12	13.8		B	BXO	10	2	2	2
6976		RAMY	12	15	1555	N09	W24	12	13.9		A	AX	10	2	2	4
6976		PALE	12	15	1830	N09	W24	12	14.0		A	AX	10	1	1	2
6976		RAMY	12	16	1425	N09	W35	12	14.0		A	AX	10	3	2	1
6976	27234	MWIL	12	16	1645	N08	W38	12	13.8	4	(B)					
6976		PALE	12	16	1840	N09	W37	12	14.0		A	AX		1	1	3
6976		RAMY	12	17	1210	N09	W47	12	14.0		A	AX		1		4
6976		RAMY	12	18	1348	N04	W65	12	13.7		B	BXO	10	6	5	4
6976		BOUL	12	18	1608	N07	W64	12	13.9		A	AX	20	1	1	2
6976	27235	MWIL	12	18	1715	N05	W67	12	13.7	5	(AP)					
6976		CULG	12	19	0055	N04	W72	12	13.6		B	BXO	20	3	6	2
6976		LEAR	12	19	0428	N06	W71	12	13.9		B	BXO	30	5	8	2
6976		RAMY	12	19	1325	N04	W78	12	13.7		B	CAO	60	4	6	3
6965		RAMY	12	08	1305	S05	E75	12	14.1		B	CAO	30	2	4	1
6965		HOLL	12	08	1615	S06	E75	12	14.3		B	BXO	20	4	4	3
6965		PALE	12	08	1906	S06	E73	12	14.2		A	AX		1		3
6965		LEAR	12	09	0046	S09	E67	12	14.1		B	BXO	30	2	6	3
6965		RAMY	12	09	1350	S06	E61	12	14.1		B	DAO	30	4	6	2
6965		BOUL	12	09	1552	S04	E62	12	14.3		B	BXO	20	2	6	1
6965		HOLL	12	09	1620	S06	E60	12	14.2		B	BXO	30	8	7	4
6965		PALE	12	09	1810	S06	E59	12	14.2		B	CSO	40	4	6	3
6965		LEAR	12	10	0012	S07	E55	12	14.1		B	BXO	50	4	6	3
6965		SVTO	12	10	1210	S05	E48	12	14.1		B	BXO	10	3	6	3
6965		RAMY	12	10	1355	S05	E47	12	14.1		B	BXO	10	3	6	2
6965		PALE	12	10	2024	S04	E45	12	14.2		B	BXO		3	7	2
6965		HOLL	12	10	2155	S06	E43	12	14.1		B	BXO	20	4	8	4
6965		LEAR	12	11	0012	S05	E42	12	14.1		B	CAO	30	4	7	3
6965		SVTO	12	11	0935	S05	E37	12	14.2		B	BXO	10	8	7	3
6965		RAMY	12	11	1250	S06	E34	12	14.1		B	BXO	10	4	7	3
6965		BOUL	12	11	1603	S05	E36	12	14.4		A	AX	10	1	1	2
6965		LEAR	12	12	0005	S06	E32	12	14.4		A	AX		1	1	3
6965		RAMY	12	14	1310	S07	W07	12	14.0		B	BXO	10	4	2	4
6965		RAMY	12	15	1555	S08	W21	12	14.1		A	AX		1	1	4
6965		PALE	12	15	1830	S08	W22	12	14.1		A	AX		1	1	2
6973	27229	MWIL	12	14	1530	N21	W01	12	14.6	3	(AP)					
6973		LEAR	12	15	0056	N20	W07	12	14.5		A	AX	10	1	1	3
6973		SVTO	12	15	1026	N20	W14	12	14.4		B	BXO	10	2	3	2
6973		RAMY	12	15	1555	N21	W15	12	14.5		B	BXO	10	4	4	4
6973	27229	MWIL	12	15	1700	N22	W15	12	14.5	3	(BG)					
6973		HOLL	12	15	2230	N21	W18	12	14.5		A	AX	10	3	2	2
6973		LEAR	12	16	0022	N20	W19	12	14.6			B I	30	4	3	3
6973		CULG	12	16	0120	N22	W21	12	14.4		B	CRO	20	7	3	4
6973		RAMY	12	16	1425	N21	W27	12	14.5		B	DAO	40	5	4	1
6973	27229	MWIL	12	16	1645	N22	W28	12	14.5	4	(B)					
6973		BOUL	12	16	1703	N22	W29	12	14.5		B	CSO	40	3	3	1
6973		PALE	12	16	1840	N21	W28	12	14.6		B	DAO	50	8	7	3
6973		LEAR	12	17	0013	N22	W34	12	14.4		B	DAO	60	3	6	3
6973		CULG	12	17	0120	N22	W36	12	14.3		B	DAO	30	5	6	3
6973		PALE	12	17	1200	N22	W42	12	14.3		BG	EKO	1330	22	17	3
6973		RAMY	12	17	1210	N21	W39	12	14.5		B	DAO	40	7	5	4
6973		SVTO	12	17	1226	N22	W42	12	14.3		BG	EKO	1330	22	17	2
6973		HOLL	12	17	1843	N21	W43	12	14.5		B	BXO	40	5	6	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6973		PALE	12	17	1951	N21	W44	12	14.4		B	CAO	20	4	6	3
6973		LEAR	12	18	0007	N22	W47	12	14.4		B	BXO	20	7	7	3
6973		CULG	12	18	0050	N22	W50	12	14.2		B	BXO	30	4	6	3
6973		SVTO	12	18	0755	N21	W52	12	14.3		B	BXO	20	4	6	1
6973		RAMY	12	18	1348	N21	W56	12	14.3		B	BXO	10	4	7	4
6973		BOUL	12	18	1608	N24	W56	12	14.3		B	BXO	40	4	6	2
6973	27229	MWIL	12	18	1715	N22	W55	12	14.5	4	(B)					
6973		CULG	12	19	0055	N18	W62	12	14.3		B	BXO		2	6	2
6973		LEAR	12	19	0428	N22	W61	12	14.5		B	BXO	20	2	8	2
6973		RAMY	12	19	1325	N21	W68	12	14.3		B	BXO		2	6	3
6971		RAMY	12	13	1309	S27	E13	12	14.6		B	BXO		2	3	3
6971	27228	MWIL	12	13	1530	S26	E13	12	14.6	3	(AP					
6971		LEAR	12	14	0011	S27	E07	12	14.5		A	AX	10	1	1	3
6971		SVTO	12	14	0907	S26	E02	12	14.5		A	AX	10	1		2
6971		RAMY	12	14	1310	S26	E02	12	14.7		B	BXO	10	3	3	4
6971	27228	MWIL	12	14	1530	S27	W01	12	14.6	4	(AP)					
6971		HOLL	12	14	1630	S27	E00	12	14.7		A	AX	10	3	2	3
6971		LEAR	12	15	0056	S26	W07	12	14.5		A	AX	10	1	2	3
6971		CULG	12	15	0100	S26	W08	12	14.4		A	AX		1	1	3
6966		RAMY	12	09	1350	S02	E81	12	15.6		A	HK	180	1	3	2
6966		BOUL	12	09	1552	S04	E80	12	15.6		A	HS	120	1	2	1
6966		HOLL	12	09	1620	S03	E79	12	15.6		B	CSO	460	5	7	4
6966		PALE	12	09	1810	S03	E80	12	15.7		B	CSO	200	5	8	3
6966		LEAR	12	10	0012	S05	E73	12	15.5		B	DHO	330	6	10	3
6966		SVTO	12	10	1210	S04	E72	12	15.9		B	DAO	340	7	11	3
6966		RAMY	12	10	1355	S03	E70	12	15.8		B	DAO	340	7	10	2
6966		PALE	12	10	2024	S03	E67	12	15.8		B	DSO	270	8	10	2
6966		HOLL	12	10	2155	S05	E67	12	15.9		B	DSO	360	17	14	4
6966		LEAR	12	11	0012	S03	E61	12	15.6		B	DKO	240	6	5	3
6966		SVTO	12	11	0935	S04	E57	12	15.7		B	DAO	270	13	8	3
6966		RAMY	12	11	1250	S07	E58	12	15.9		B	DKO	340	13	10	3
6966		BOUL	12	11	1603	S04	E56	12	15.8		B	EKO	320	6	12	2
6966		LEAR	12	12	0005	S05	E51	12	15.8		B	CSO	210	9	13	3
6966		RAMY	12	12	1230	S05	E44	12	15.8		B	EKO	290	8	13	3
6966		BOUL	12	12	1606	S04	E43	12	15.9		B	EKO	300	8	12	1
6966		HOLL	12	12	1630	S04	E43	12	15.9		B	EHI	460	22	14	3
6966	27226	MWIL	12	12	1630	S05	E43	12	15.9	6	(BP)					
6966		PALE	12	12	1933	S04	E41	12	15.9		B	CKO	300	19	13	3
6966		LEAR	12	13	0018	S04	E35	12	15.6		B	EKO	300	24	12	2
6966		CULG	12	13	0115	S03	E38	12	15.9		B	EHO	360	20	14	3
6966		SVTO	12	13	1225	S07	E33	12	16.0		B	DKO	390	16	10	2
6966		RAMY	12	13	1309	S05	E31	12	15.9		B	EKO	370	41	12	3
6966	27226	MWIL	12	13	1530	S05	E28	12	15.7	5	(BG)					
6966		BOUL	12	13	1611	S02	E30	12	15.9		B	EKI	430	29	13	2
6966		HOLL	12	13	1730	S04	E30	12	16.0		B	CKO	290	29	13	3
6966		LEAR	12	14	0011	S06	E24	12	15.8		B	EHO	350	23	13	3
6966		SVTO	12	14	0907	S07	E21	12	15.9		B	DKI	360	27	13	2
6966		RAMY	12	14	1310	S06	E19	12	16.0		B	CKO	380	32	15	4
6966		BOUL	12	14	1520	S02	E15	12	15.7		B	DKO	360	3	5	2
6966	27226	MWIL	12	14	1530	S03	E13	12	15.6	6	(BG)					
6966		HOLL	12	14	1630	S05	E17	12	15.9		B	EHI	410	52	13	3
6966		LEAR	12	15	0056	S03	E11	12	15.9		BG	EHO	290	15	12	3
6966		CULG	12	15	0100	S04	E11	12	15.9		BG	EKO	370	15	11	3
6966		SVTO	12	15	1026	S05	E06	12	15.9		BG	ESO	320	20	15	2
6966		RAMY	12	15	1555	S07	E05	12	16.0		B	CKO	350	30	12	4
6966	27226	MWIL	12	15	1700	S02	W02	12	15.5	5	(BF)					
6966		BOUL	12	15	1800	S05	E03	12	16.0		B	ESO	200	10	12	1
6966		PALE	12	15	1830	S05	E03	12	16.0		B	ESO	300	17	13	2
6966		HOLL	12	15	2230	S06	E02	12	16.1		B	CHO	320	19	16	2
6966		LEAR	12	16	0022	S07	W02	12	15.9		B	EHO	310	12	14	3
6966		CULG	12	16	0120	S05	W03	12	15.8		BG	EKO	330	19	11	4
6966		RAMY	12	16	1425	S03	W09	12	15.9		B	CHO	330	16	11	1
6966	27226	MWIL	12	16	1645	S02	W14	12	15.6	5	(AP)					
6966		BOUL	12	16	1703	S05	W09	12	16.0		B	CSO	180	10	11	1
6966		PALE	12	16	1840	S08	W10	12	16.0		B	DAO	320	22	14	3
6966		LEAR	12	17	0013	S06	W11	12	16.2		B	CHO	240	14	17	3
6966		CULG	12	17	0120	S04	W16	12	15.8		B	CKO	320	19	10	3

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6966		PALE	12	17	1200	S03	W26	12	15.5		A	HK	330	5	3	3
6966		RAMY	12	17	1210	S05	W19	12	16.1		B	CHO	330	24	12	4
6966		SVTO	12	17	1226	S03	W26	12	15.6		A	HK	330	5	3	2
6966		HOLL	12	17	1843	S06	W24	12	16.0		B	CAO	310	15	15	2
6966		PALE	12	17	1951	S05	W27	12	15.8		B	CHO	300	22	9	3
6966		LEAR	12	18	0007	S04	W28	12	15.9		B	DKO	260	14	10	3
6966		CULG	12	18	0050	S06	W29	12	15.9		B	CHO	400	14	12	3
6966		SVTO	12	18	0755	S04	W33	12	15.9		B	DKO	260	7	8	1
6966		RAMY	12	18	1348	S04	W36	12	15.9		B	DKO	380	14	10	4
6966		BOUL	12	18	1608	S04	W37	12	15.9		B	DKO	300	5	10	2
6966	27226	MWIL	12	18	1715	S02	W41	12	15.6	5	(AP)					
6966		CULG	12	19	0055	S06	W42	12	15.9		B	DAO	210	8	9	2
6966		LEAR	12	19	0428	S02	W48	12	15.6		B	DAO	180	6	6	2
6966		RAMY	12	19	1325	S03	W53	12	15.6		B	DAO	200	9	5	3
6966		BOUL	12	19	1602	S03	W57	12	15.4		B	DAO	270	10	4	2
6966		CULG	12	20	0055	S04	W60	12	15.5		B	DAO	150	3	5	2
6966		SVTO	12	20	0817	S03	W64	12	15.6		B	DSO	100	5	5	4
6966		RAMY	12	20	1307	S03	W66	12	15.6		B	DAO	150	6	5	3
6966	27226	MWIL	12	20	1615	S02	W67	12	15.7	5	(AP)					
6966		PALE	12	20	1800	S03	W69	12	15.6		B	DAO	190	4	5	1
6966		CULG	12	21	0210	S04	W76	12	15.4		B	CAO	130	4	5	2
6966		LEAR	12	21	0345	S03	W71	12	15.8		B	CSO	130	3	5	2
6966		SVTO	12	21	0843	S02	W82	12	15.2		B	CAO	60	3	7	3
6966		RAMY	12	21	1406	S03	W81	12	15.5		B	CAO	70	3	5	2
6966		BOUL	12	21	1550	S02	W80	12	15.7		A	HS	50	1	2	2
6966	27226	MWIL	12	21	1600	S02	W79	12	15.8	5	(AP)					
6966		PALE	12	21	1850	S03	W83	12	15.6		A	HS	90	1	3	2
6966		CULG	12	22	0025	S05	W87	12	15.5		B	HSO	40	1	1	2
6974		HOLL	12	13	1730	S17	E26	12	15.7		A	AX		1		3
6974		LEAR	12	15	0056	S18	E09	12	15.7		B	BXO	30	4	3	3
6974		CULG	12	15	0100	S18	E09	12	15.7		B	CSO	10	3	3	3
6974		SVTO	12	15	1026	S17	E04	12	15.7		B	DSI	40	10	5	2
6974		RAMY	12	15	1555	S18	E02	12	15.8		B	DAO	40	18	5	4
6974	27231	MWIL	12	15	1700	S18	E01	12	15.8	5	(BG)					
6974		BOUL	12	15	1800	S17	E00	12	15.8		B	DSI	60	6	5	1
6974		PALE	12	15	1830	S18	E00	12	15.8		B	DAO	110	9	5	2
6974		HOLL	12	15	2230	S18	W03	12	15.7		B	DAI	90	18	6	2
6974		LEAR	12	16	0022	S18	W05	12	15.6		B	DSO	120	8	7	3
6974		CULG	12	16	0120	S17	W05	12	15.7		B	DAC	100	15	6	4
6974		RAMY	12	16	1425	S16	W11	12	15.8		B	DAO	160	11	7	1
6974	27231	MWIL	12	16	1645	S18	W13	12	15.7	5	(B)					
6974		BOUL	12	16	1703	S16	W12	12	15.8		B	DSO	120	4	7	1
6974		PALE	12	16	1840	S18	W14	12	15.7		B	DAO	120	17	7	3
6974		LEAR	12	17	0013	S17	W17	12	15.7		B	DAO	180	8	7	3
6974		CULG	12	17	0120	S17	W18	12	15.7		B	DAO	120	7	8	3
6974		PALE	12	17	1200	S17	W25	12	15.6		B	DAO	150	8	8	3
6974		RAMY	12	17	1210	S17	W23	12	15.7		B	DAO	170	12	9	4
6974		SVTO	12	17	1226	S17	W25	12	15.6		B	DAO	150	8	8	2
6974		HOLL	12	17	1843	S18	W26	12	15.8		B	DAO	110	14	8	2
6974		PALE	12	17	1951	S18	W27	12	15.8		B	DAO	140	13	8	3
6974		LEAR	12	18	0007	S16	W30	12	15.7		B	CAO	230	11	8	3
6974		CULG	12	18	0050	S17	W32	12	15.6		B	DAO	90	9	8	3
6974		RAMY	12	18	1348	S16	W35	12	15.9		BG	ESO	120	10	14	4
6974		BOUL	12	18	1608	S17	W38	12	15.8		B	DAO	130	4	8	2
6974	27231	MWIL	12	18	1715	S17	W38	12	15.8	5	(BG)					
6974		CULG	12	19	0055	S18	W43	12	15.8		B	EAO	90	6	12	2
6974		LEAR	12	19	0428	S16	W45	12	15.8		B	DAO	100	7	9	2
6974		RAMY	12	19	1325	S16	W50	12	15.8		B	CAO	70	6	8	3
6974		BOUL	12	19	1602	S17	W53	12	15.6		B	CAO	120	3	10	2
6974		CULG	12	20	0055	S18	W58	12	15.6		B	CAO	40	3	8	2
6974		SVTO	12	20	0817	S16	W61	12	15.7		B	CSO	30	3	8	4
6974		RAMY	12	20	1307	S17	W61	12	15.9		B	CAO	50	3	9	3
6974	27231	MWIL	12	20	1615	S18	W68	12	15.5	4	(AP)					
6974		PALE	12	20	1800	S19	W65	12	15.8		B	CSO	100	3	12	1
6974		CULG	12	21	0210	S20	W78	12	15.1		A	HA	50	1	2	2
6974		LEAR	12	21	0345	S18	W75	12	15.4		A	HS	120	1	3	2
6974		SVTO	12	21	0843	S17	W80	12	15.3		A	HA	60	1	4	3
6974		RAMY	12	21	1406	S17	W81	12	15.4		A	HA	50	1	2	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6974		BOUL	12	21	1550	S18	W81	12	15.5		A	HS	40	1	2	2
6974	27231	MWIL	12	21	1600	S17	W81	12	15.5	5	(AP)					
6974		PALE	12	21	1850	S18	W81	12	15.6		A	HS	60	1	2	2
6966A	27232	MWIL	12	15	1700	S08	E08	12	16.3	4	(AF)					
6966A		CULG	12	16	0120	S09	E06	12	16.5		B	CAO	20	6	5	4
6966A	27232	MWIL	12	16	1645	S08	W06	12	16.2	3	(AF)					
6966A		CULG	12	17	0120	S08	W14	12	16.0		B	BXO		2	1	3
6966A	27232	MWIL	12	18	1715	S08	W34	12	16.2	5	(AF)					
6968		SVTO	12	10	1210	S15	E80	12	16.6		B	DSO	80	5	9	3
6968		RAMY	12	10	1355	S15	E81	12	16.7		B	CRO	60	4	8	2
6968		PALE	12	10	2024	S15	E77	12	16.7		B	CAO	80	8	6	2
6968		HOLL	12	10	2155	S15	E76	12	16.7		B	DRO	80	7	7	4
6968		LEAR	12	11	0012	S15	E73	12	16.5		B	CAO	180	8	7	3
6968		SVTO	12	11	0935	S15	E66	12	16.4		B	DAO	100	7	7	3
6968		RAMY	12	11	1250	S17	E65	12	16.5		B	DAO	180	8	8	3
6968		BOUL	12	11	1603	S15	E67	12	16.7		B	CAO	140	6	7	2
6968		SVTO	12	12	0808	S13	E58	12	16.7		B	CAO	130	8	8	3
6968		RAMY	12	12	1230	S17	E54	12	16.6		B	DAO	140	10	8	3
6968		BOUL	12	12	1606	S15	E54	12	16.7		B	DAO	120	6	6	1
6968		HOLL	12	12	1630	S15	E52	12	16.6		B	DAI	210	19	8	3
6968	27227	MWIL	12	12	1630	S17	E54	12	16.8	5	(BF)					
6968		PALE	12	12	1933	S16	E52	12	16.7		B	DSO	140	7	7	3
6968		LEAR	12	13	0018	S16	E50	12	16.8		B	DAO	100	10	8	2
6968		CULG	12	13	0115	S14	E48	12	16.7		B	DAO	210	13	8	3
6968		SVTO	12	13	1225	S17	E44	12	16.9		B	DAO	100	9	8	2
6968		RAMY	12	13	1309	S16	E42	12	16.7		B	CAO	120	13	5	3
6968	27227	MWIL	12	13	1530	S17	E41	12	16.8	5	(BF)					
6968		BOUL	12	13	1611	S15	E41	12	16.8		B	DAO	200	14	7	2
6968		HOLL	12	13	1730	S15	E40	12	16.7		B	DSO	90	15	7	3
6968		LEAR	12	14	0011	S18	E36	12	16.7		B	DAO	210	14	6	3
6968		SVTO	12	14	0907	S17	E32	12	16.8		B	CAO	110	13	5	2
6968		RAMY	12	14	1310	S16	E31	12	16.9				80	13	12	4
6968		BOUL	12	14	1520	S14	E31	12	17.0		B	DAO	190	2	3	2
6968	27227	MWIL	12	14	1530	S17	E28	12	16.8	5	(BF)					
6968		HOLL	12	14	1630	S16	E28	12	16.8		B	DAO	90	15	6	3
6968		LEAR	12	15	0056	S17	E25	12	16.9		B	DAO	90	6	6	3
6968		CULG	12	15	0100	S15	E24	12	16.8		B	DAO	90	6	5	3
6968		SVTO	12	15	1026	S16	E18	12	16.8		B	CAO	50	6	6	2
6968		RAMY	12	15	1555	S16	E14	12	16.7		B	CAO	80	18	8	4
6968	27227	MWIL	12	15	1700	S17	E16	12	16.9	5	(AF)					
6968		BOUL	12	15	1800	S16	E16	12	17.0		B	DSO	60	4	3	1
6968		PALE	12	15	1830	S17	E15	12	16.9		B	CAO	80	9	4	2
6968		HOLL	12	15	2230	S17	E15	12	17.1		B	CAO	50	10	7	2
6968		LEAR	12	16	0022	S17	E12	12	16.9		B	CAO	60	9	6	3
6968		CULG	12	16	0120	S16	E10	12	16.8		B	CAO	130	17	13	4
6968		RAMY	12	16	1425	S16	E05	12	17.0		B	EAO	80	18	12	1
6968	27227	MWIL	12	16	1645	S17	E05	12	17.1	5	(BG)					
6968		BOUL	12	16	1703	S16	E06	12	17.2		B	CSI	60	7	8	1
6968		PALE	12	16	1840	S17	E02	12	16.9		B	EAO	70	21	16	3
6968		LEAR	12	17	0013	S17	E01	12	17.1		B	CHO	90	14	17	3
6968		CULG	12	17	0120	S18	W02	12	16.9		B	CAO	40	16	17	3
6968		PALE	12	17	1200	S17	W04	12	17.2		B	CAO	30	4	7	3
6968		RAMY	12	17	1210	S17	W08	12	16.9		B	FAO	70	16	16	4
6968		SVTO	12	17	1226	S17	W04	12	17.2		B	CAO	30	4	7	2
6968		HOLL	12	17	1843	S17	W11	12	16.9		B	DRO	60	6	14	2
6968		PALE	12	17	1951	S19	W10	12	17.1		B	EAO	40	13	13	3
6968		LEAR	12	18	0007	S16	W14	12	16.9		B	EAO	60	14	13	3
6968		CULG	12	18	0050	S18	W12	12	17.1		B	DSO	50	9	8	3
6968		RAMY	12	18	1348	S17	W17	12	17.3		B	DAO	20	2	6	4
6968		BOUL	12	18	1608	S18	W18	12	17.3		B	CSO	50	3	5	2
6968	27227	MWIL	12	18	1715	S18	W19	12	17.3	5	(B)					
6968		CULG	12	19	0055	S19	W23	12	17.3		B	CAO	30	3	5	2
6968		LEAR	12	19	0428	S18	W23	12	17.4		B	CSO	10	5	6	2
6968		RAMY	12	19	1325	S17	W31	12	17.2		B	BXO	10	3	5	3
6968		BOUL	12	19	1602	S19	W33	12	17.1		B	CSO	20	3	5	2
6968		CULG	12	20	0055	S19	W38	12	17.1		B	BXO	10	2	4	2
6968		SVTO	12	20	0817	S17	W44	12	17.0		B	BXO	10	3	10	4

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6968		RAMY	12	20	1307	S18 W42	12 17.3		B	BXO	60	2	3	3
6968		PALE	12	20	1800	S19 W46	12 17.2		B	BXO	20	3	3	1
6968A		RAMY	12	17	1210	N15 W01	12 17.4		B	BXO	10	3	2	4
6968A		PALE	12	17	1951	N14 W05	12 17.4		A	AX		2	1	3
6968A		LEAR	12	18	0007	N16 W08	12 17.4		A	AX		1	1	3
6981		RAMY	12	18	1348	S05 W12	12 17.7		B	BXO	10	6	3	4
6981		BOUL	12	18	1608	S05 W13	12 17.7		B	CAO	30	4	3	2
6981	27236	MWIL	12	18	1715	S06 W14	12 17.7	5	(B)					
6981		CULG	12	19	0055	S06 W21	12 17.5		A	AX	10	1	1	2
6981		LEAR	12	19	0428	S05 W22	12 17.5		B	CSO	110	2	2	2
6981		RAMY	12	19	1325	S06 W27	12 17.5		B	BXO	10	3	2	3
6981		BOUL	12	19	1602	S07 W28	12 17.6		B	CSO	20	2	3	2
6981		LEAR	12	20	0017	S06 W34	12 17.5		A	AX	10	2	1	2
6981		SVTO	12	20	0817	S06 W38	12 17.5		A	AX		2		4
6981		RAMY	12	20	1307	S07 W42	12 17.4		B	BXO	10	3	7	3
6981	27236	MWIL	12	20	1615	S06 W43	12 17.4	3	(AP)					
6981		PALE	12	20	1800	S07 W43	12 17.5		B	CAO	30	2	3	1
6983		RAMY	12	17	1210	S05 E38	12 20.3		A	AX	10	2	2	4
6983		RAMY	12	19	1325	S10 E08	12 20.2		A	AX		3	2	3
6983		BOUL	12	19	1602	S09 E06	12 20.1		B	BXO	10	3	3	2
6983		LEAR	12	20	0017	S08 E00	12 20.0		B	BXO	10	3	2	2
6983		CULG	12	20	0055	S08 W01	12 20.0		B	CRO	10	5	2	2
6983		SVTO	12	20	0817	S10 W05	12 20.0		B	CAO	20	7	4	4
6983		RAMY	12	20	1307	S09 W08	12 19.9		B	DAO	40	9	6	3
6983	27241	MWIL	12	20	1615	S09 W09	12 20.0	4	(AP)					
6983		PALE	12	20	1800	S10 W10	12 20.0		B	DAO	50	6	5	1
6983		CULG	12	21	0210	S09 W16	12 19.9		B	CSO	20	3	6	2
6983		LEAR	12	21	0345	S09 W15	12 20.0		B	CSO	40	5	6	2
6983		RAMY	12	21	1406	S09 W22	12 19.9		B	BXO	20	10	6	2
6983		BOUL	12	21	1550	S08 W23	12 19.9		B	CSO	20	5	6	2
6983	27241	MWIL	12	21	1600	S08 W23	12 19.9	4	(B)					
6983		PALE	12	21	1850	S10 W24	12 20.0		B	DRO	30	11	4	2
6983		CULG	12	22	0025	S10 W28	12 19.9		B	DAO	30	12	6	2
6983		LEAR	12	22	0045	S10 W27	12 20.0		B	CAO	20	11	5	2
6983		RAMY	12	22	1315	S10 W34	12 20.0		B	DAO	100	26	7	4
6983	27241	MWIL	12	22	1630	S09 W36	12 20.0	5	(B)					
6983		HOLL	12	22	1800	S10 W36	12 20.0		B	DAI	170	27	7	3
6983		PALE	12	22	2005	S10 W40	12 19.8		B	DAO	160	10	7	1
6983		CULG	12	23	0000	S11 W42	12 19.8		B	DAO	120	23	8	2
6983		RAMY	12	23	1330	S10 W48	12 19.9		B	DAO	170	24	9	3
6983		BOUL	12	23	1533	S09 W50	12 19.9		B	CSI	170	16	10	1
6983	27241	MWIL	12	23	1600	S09 W50	12 19.9	5	(B)					
6983		HOLL	12	23	1720	S10 W50	12 20.0		BG	EAO	150	26	11	3
6983		PALE	12	23	1930	S10 W49	12 20.1		B	EAO	170	29	13	3
6983		CULG	12	24	0015	S12 W56	12 19.8		B	DAO	210	14	10	3
6983		LEAR	12	24	0050	S08 W52	12 20.1		B	EAO	260	10	12	3
6983		SVTO	12	24	0935	S08 W60	12 19.9		B	DAO	160	8	11	3
6983		RAMY	12	24	1212	S10 W61	12 19.9		B	DAO	200	19	10	3
6983		BOUL	12	24	1510	S08 W65	12 19.7		B	CSO	140	4	12	1
6983	27241	MWIL	12	24	1600	S08 W64	12 19.9	5	(BG)					
6983		HOLL	12	24	1725	S08 W64	12 19.9		B	DAO	90	9	10	3
6983		PALE	12	24	2030	S08 W68	12 19.7		B	DAO	170	10	10	3
6983		CULG	12	25	0000	S11 W70	12 19.7		B	CAO	100	13	10	3
6983		LEAR	12	25	0004	S08 W66	12 20.0		B	CSO	170	4	9	4
6983		SVTO	12	25	1035	S08 W75	12 19.8		B	CSO	90	7	10	4
6983		RAMY	12	25	1323	S09 W77	12 19.8		B	CAO	190	6	9	2
6983		BOUL	12	25	1538	S09 W80	12 19.6		B	BXO	10	2	5	2
6983	27241	MWIL	12	25	1545	S09 W78	12 19.8	3	B)					
6983		PALE	12	25	1749	S10 W75	12 20.1		B	CRO	100	3	3	2
6983		LEAR	12	26	0013	S10 W79	12 20.1		B	BXO	30	2	3	3
6983		CULG	12	26	0130	S11 W82	12 19.9		B	BXO		2	2	3
6983A		CULG	12	21	0210	S24 E03	12 21.3		A	HA	20	2	2	2
6983A		LEAR	12	21	0345	S25 E03	12 21.4		A	AX		1	1	2
6972		LEAR	12	15	0056	S11 E78	12 20.9		B	DSO	150	2	3	3

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6972		CULG	12	15	0100	S09	E83	12	21.3		B	BXO	90	2	4	3
6972		SVTO	12	15	1026	S11	E78	12	21.3		B	CSO	60	4	4	2
6972		RAMY	12	15	1555	S11	E72	12	21.1		B	CAO	150	7	8	4
6972	27233	MWIL	12	15	1700	S12	E74	12	21.3	4	(BP)					
6972		BOUL	12	15	1800	S10	E72	12	21.2		A	HS	120	1	3	1
6972		PALE	12	15	1830	S10	E80	12	21.8		A	AX	10	1	1	2
6972		PALE	12	15	1830	S11	E72	12	21.2		B	CAO	200	4	4	2
6972		HOLL	12	15	2230	S10	E73	12	21.4		B	CKO	300	8	9	2
6972		LEAR	12	16	0022	S11	E66	12	21.0		B	CSO	190	6	6	3
6972		CULG	12	16	0120	S10	E71	12	21.4		B	CKO	360	11	12	4
6972		RAMY	12	16	1425	S10	E65	12	21.5		B	DAO	290	6	10	1
6972	27233	MWIL	12	16	1645	S11	E65	12	21.6	5	(BP)					
6972		BOUL	12	16	1703	S11	E69	12	21.9		B	CKO	260	4	14	1
6972		PALE	12	16	1840	S11	E63	12	21.5		B	EAO	360	12	12	3
6972		LEAR	12	17	0013	S11	E58	12	21.4		B	EAO	370	12	13	3
6972		CULG	12	17	0120	S10	E60	12	21.6		B	EAO	460	13	14	3
6972		PALE	12	17	1200	S11	E53	12	21.5		B	EAO	240	9	12	3
6972		RAMY	12	17	1210	S10	E51	12	21.3		B	EKO	390	22	13	4
6972		SVTO	12	17	1226	S11	E53	12	21.5		B	EAO	240	9	12	2
6972		HOLL	12	17	1843	S09	E51	12	21.6		B	EKO	450	21	15	2
6972		PALE	12	17	1951	S10	E53	12	21.8		B	FKO	400	22	18	3
6972		LEAR	12	18	0007	S10	E48	12	21.6		B	EKO	320	21	14	3
6972		RAMY	12	18	1348	S10	E40	12	21.6		B	EKO	480	19	15	4
6972		BOUL	12	18	1608	S11	E40	12	21.7		B	FKI	490	30	16	2
6972	27233	MWIL	12	18	1715	S10	E38	12	21.6	5	(BG)					
6972		CULG	12	19	0055	S08	E34	12	21.6		B	EKO	380	27	15	2
6972		LEAR	12	19	0428	S10	E32	12	21.6		B	FKO	320	32	16	2
6972		RAMY	12	19	1325	S10	E26	12	21.5		B	FKO	500	23	16	3
6972		BOUL	12	19	1602	S10	E25	12	21.5		B	EKI	330	30	15	2
6972		CULG	12	20	0055	S08	E22	12	21.7		B	FKO	410	23	17	2
6972		SVTO	12	20	0817	S10	E17	12	21.6		BD	FKI	300	26	16	4
6972		RAMY	12	20	1307	S10	E17	12	21.8				480	37	18	3
6972	27233	MWIL	12	20	1615	S11	E11	12	21.5	5	(BG)					
6972		PALE	12	20	1800	S11	E13	12	21.7		B	FHO	480	15	17	1
6972		CULG	12	21	0210	S11	E08	12	21.7		B	FKO	350	18	16	2
6972		LEAR	12	21	0345	S12	E09	12	21.8		B	FKO	370	15	18	2
6972		SVTO	12	21	0843	S12	E03	12	21.6		B	FKO	370	17	17	3
6972		RAMY	12	21	1406	S11	E02	12	21.7		BG	DKO	420	18	17	2
6972		BOUL	12	21	1550	S09	W01	12	21.6		B	FKO	300	19	18	2
6972	27233	MWIL	12	21	1600	S10	W03	12	21.4	5	(BG)					
6972		PALE	12	21	1850	S11	W01	12	21.7		B	EKO	430	26	18	2
6972		CULG	12	22	0025	S12	W05	12	21.6		B	FKO	400	24	18	2
6972		LEAR	12	22	0045	S12	W05	12	21.6		B	FKO	270	21	17	2
6972		RAMY	12	22	1315	S11	W14	12	21.5		BG	EKO	360	38	14	4
6972	27233	MWIL	12	22	1630	S12	W16	12	21.5	5	(BG)					
6972		HOLL	12	22	1800	S12	W14	12	21.7		B	CKO	310	29	14	3
6972		PALE	12	22	2005	S11	W17	12	21.5		B	EKO	320	8	13	1
6972		CULG	12	23	0000	S12	W19	12	21.6		B	EKO	290	15	13	2
6972		RAMY	12	23	1330	S11	W31	12	21.2		B	DAO	200	9	6	3
6972		BOUL	12	23	1533	S11	W31	12	21.3		B	CKI	250	11	5	1
6972	27233	MWIL	12	23	1600	S11	W31	12	21.3	5	(BF)					
6972		HOLL	12	23	1720	S12	W28	12	21.6		B	CKO	210	17	13	3
6972		PALE	12	23	1930	S12	W27	12	21.8		B	CKO	150	21	16	3
6972		CULG	12	24	0015	S13	W32	12	21.6		B	CAO	210	11	14	3
6972		LEAR	12	24	0050	S10	W33	12	21.5		B	EKO	220	11	15	3
6972		SVTO	12	24	0935	S12	W35	12	21.8		B	CKO	110	7	15	3
6972		RAMY	12	24	1212	S12	W38	12	21.6		B	CAO	170	18	14	3
6972		BOUL	12	24	1510	S11	W39	12	21.7		B	CAO	160	4	14	1
6972	27233	MWIL	12	24	1600	S12	W43	12	21.4	5	(BP)					
6972		HOLL	12	24	1725	S12	W40	12	21.7		B	BSO	130	5	14	3
6972		PALE	12	24	2030	S12	W42	12	21.7		B	CSO	160	14	15	3
6972		CULG	12	25	0000	S13	W45	12	21.6		B	CAO	190	6	13	3
6972		LEAR	12	25	0004	S13	W44	12	21.7		B	CSO	130	4	14	4
6972		SVTO	12	25	1035	S12	W49	12	21.7		B	CAO	110	7	13	4
6972		RAMY	12	25	1323	S12	W50	12	21.8		B	CAO	140	8	13	2
6972		BOUL	12	25	1538	S12	W55	12	21.5		B	CAO	120	4	3	2
6972	27233	MWIL	12	25	1545	S13	W59	12	21.2	4	(BP)					
6972		PALE	12	25	1749	S13	W60	12	21.2		B	CRO	140	10	3	2
6972		LEAR	12	26	0013	S11	W63	12	21.3		B	CAO	150	4	5	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
6972		CULG	12	26	0130	S15	W65	12	21.1		B	CAO	190	4	2	3
6972		RAMY	12	26	1313	S12	W71	12	21.2		A	HA	170	3	3	2
6972		BOUL	12	26	1540	S12	W73	12	21.1		B	CSO	90	2	3	2
6972	27233	MWIL	12	26	1600	S13	W71	12	21.3	4	(B)					
6972		PALE	12	26	1910	S12	W75	12	21.1		A	HS	120	1	2	1
6972		LEAR	12	27	0010	S13	W74	12	21.4		B	CAO	60	3	4	4
6972		CULG	12	27	0120	S14	W78	12	21.2		A	HS	90	1	2	3
6972		RAMY	12	27	1358	S13	W87	12	21.0		A	HS	30	1	2	3
6979		RAMY	12	17	1210	N20	E65	12	22.5		A	AX	10	1	1	4
6979		LEAR	12	18	0007	N18	E54	12	22.1		B	BXO		3	3	3
6979		SVTO	12	18	0755	N17	E50	12	22.1		A	HA	20	2	1	1
6979		RAMY	12	18	1348	N18	E47	12	22.1		A	AX		2	1	4
6979		BOUL	12	18	1608	N18	E47	12	22.2		A	AX	10	1	1	2
6979	27237	MWIL	12	18	1715	N18	E45	12	22.1	4	(AP)					
6979		CULG	12	19	0055	N14	E44	12	22.4		A	AX		1	1	2
6979		LEAR	12	20	0017	N18	E27	12	22.1		B	BXO	10	3	3	2
6979		CULG	12	20	0055	N18	E25	12	21.9		B	BXO	10	2	2	2
6979		SVTO	12	20	0817	N16	E23	12	22.1		B	BXO		3	4	4
6979		RAMY	12	20	1307	N18	E21	12	22.1				10	0	3	3
6979		RAMY	12	20	1307	N18	E21	12	22.1		B	BXO	10	3	3	3
6979		PALE	12	20	1800	N18	E17	12	22.0		B	BXO	20	3	3	1
6979		CULG	12	21	0210	N18	E11	12	21.9		A	AX		1	1	2
6979		SVTO	12	21	0843	N17	E09	12	22.0		A	AX		2	2	3
6979		RAMY	12	21	1406	N18	E05	12	22.0		A	AX		1		2
6979		PALE	12	21	1850	N17	E00	12	21.8		A	AX		1		2
6979		RAMY	12	22	1315	N18	W07	12	22.0		A	AX	10	4	2	4
6979A		CULG	12	18	0050	S19	E54	12	22.1		A	AX	10	1	1	3
6979A		RAMY	12	22	1315	S18	W04	12	22.2		A	AX	10	7	2	4
6979A	27243	MWIL	12	22	1630	S18	W06	12	22.2	4	(AP)					
6979A		HOLL	12	22	1800	S20	W07	12	22.2		A	AX	10	4	6	3
6979B		SVTO	12	24	0935	S11	W25	12	22.5		A	AX	10	1		3
6979C		RAMY	12	21	1406	N19	E20	12	23.1		A	AX		1		2
6979D		LEAR	12	24	0050	S25	W08	12	23.4		A	AX	10	1	1	3
6979D		RAMY	12	24	1212	S25	W11	12	23.6		B	BXO	10	4	4	3
6987		RAMY	12	22	1315	N06	E13	12	23.5		B	BXO	10	3	3	4
6987	27244	MWIL	12	22	1630	N06	E12	12	23.6	4	(B)					
6987		HOLL	12	22	1800	N06	E11	12	23.6		B	BXO	10	3	4	3
6987		PALE	12	22	2005	N06	E10	12	23.6		B	BXO	20	2	3	1
6987		CULG	12	23	0000	N06	E07	12	23.5		B	BXO		2	3	2
6987		PALE	12	23	1930	N08	W02	12	23.7		A	AX		2	2	3
6987	27248	MWIL	12	26	1600	N06	W43	12	23.4	3	(AP)					
6987A		RAMY	12	21	1406	S18	E30	12	23.9		A	AX		1		2
6987A		BOUL	12	21	1550	S18	E30	12	23.9		A	AX		1		2
6987A	27242	MWIL	12	21	1600	S18	E29	12	23.9	4	(AF)					
6987A		PALE	12	21	1850	S18	E28	12	23.9		A	AX		1		2
6980		RAMY	12	18	1348	S07	E75	12	24.2		B	BXO	10	4	5	4
6980	27238	MWIL	12	18	1715	S07	E70	12	24.0	4	(AP)					
6980		CULG	12	19	0055	S04	E66	12	24.0		A	AX		1	1	2
6980		LEAR	12	19	0428	S06	E62	12	23.8		A	AX	10	1	1	2
6980		RAMY	12	19	1325	S06	E58	12	23.9		A	AX		3	2	3
6980		LEAR	12	20	0017	S07	E52	12	23.9		A	AX	10	1	1	2
6980		CULG	12	20	0055	S05	E52	12	23.9		A	AX		1	1	2
6980		SVTO	12	20	0817	S07	E47	12	23.9		A	AX		1		4
6980		RAMY	12	20	1307	S07	E43	12	23.8		B	BXO	10	5	5	3
6980		PALE	12	20	1800	S07	E42	12	23.9		A	AX	10	1	1	1
6980		CULG	12	21	0210	S07	E38	12	23.9		A	AX	10	1	1	2
6980		LEAR	12	21	0345	S07	E37	12	23.9		A	AX	10	1	1	2
6980		SVTO	12	21	0843	S07	E35	12	24.0		A	AX		1		3
6980		RAMY	12	21	1406	S06	E31	12	23.9		A	AX		1		2
6980		BOUL	12	21	1550	S07	E31	12	24.0		A	AX		1		2
6980	27238	MWIL	12	21	1600	S07	E31	12	24.0	4	(AP)					

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6980		PALE	12	21	1850	S07	E29	12	23.9		A	AX		1		2
6980		CULG	12	22	0025	S06	E26	12	24.0		A	AX		1		2
6980		RAMY	12	22	1315	S06	E18	12	23.9		A	AX		1		4
6980		RAMY	12	23	1330	S07	E04	12	23.9		A	AX		2	1	3
6980	27238	MWIL	12	23	1600	S05	E08	12	24.3	4	(AP)					
6980		HOLL	12	23	1720	S08	E04	12	24.0		B	BXO		4	4	3
6980		PALE	12	23	1930	S08	E04	12	24.1		A	AX		1	1	3
6980		CULG	12	24	0015	S08	E00	12	24.0		A	AX		2	1	3
6980		LEAR	12	24	0050	S06	E01	12	24.1		B	BXO	20	3	3	3
6980		RAMY	12	24	1212	S07	W07	12	24.0		B	BXO	10	4	3	3
6980	27238	MWIL	12	24	1600	S06	W06	12	24.2	4	(B)					
6980		PALE	12	24	2030	S08	W11	12	24.0		A	AX	10	2	2	3
6980		CULG	12	25	0000	S08	W12	12	24.1		B	BXO		3	3	3
6980		LEAR	12	25	0004	S07	W09	12	24.3		B	BXO	20	3	7	4
6980		SVTO	12	25	1035	S07	W20	12	23.9		A	AX		1		4
6980		RAMY	12	25	1323	S06	W22	12	23.9		A	AX		2	1	2
6978		LEAR	12	18	0007	S21	E80	12	24.1		A	HA	60	2	3	3
6978		CULG	12	18	0050	S22	E85	12	24.6		A	AX	30	1	2	3
6978		RAMY	12	18	1348	S21	E79	12	24.6		B	DAO	180	2	6	4
6978		BOUL	12	18	1608	S22	E77	12	24.6		A	HA	150	1	4	2
6978	27239	MWIL	12	18	1715	S21	E76	12	24.5	5	(B					
6978		CULG	12	19	0055	S18	E77	12	24.9		B	DAO	180	3	10	2
6978		LEAR	12	19	0428	S20	E70	12	24.5		B	DAO	250	3	10	2
6978		RAMY	12	19	1325	S20	E69	12	24.8		B	DAO	240	2	8	3
6978		BOUL	12	19	1602	S20	E66	12	24.7		B	DAO	340	3	10	2
6978		LEAR	12	20	0017	S20	E63	12	24.8		B	DAO	280	2	10	2
6978		CULG	12	20	0055	S17	E63	12	24.8		B	DAO	260	4	10	2
6978		SVTO	12	20	0817	S20	E58	12	24.8		B	DSO	130	3	9	4
6978		RAMY	12	20	1307	S20	E56	12	24.8		B	DAO	260	5	10	3
6978	27239	MWIL	12	20	1615	S21	E53	12	24.7	4	(B)					
6978		PALE	12	20	1800	S21	E54	12	24.9		B	DAO	230	7	10	1
6978		CULG	12	21	0210	S20	E48	12	24.8		B	DAO	200	5	8	2
6978		LEAR	12	21	0345	S21	E49	12	24.9		B	DAO	190	5	9	2
6978		SVTO	12	21	0843	S22	E46	12	24.9		B	DAO	260	14	9	3
6978		RAMY	12	21	1406	S20	E42	12	24.8		B	DAO	140	6	9	2
6978		BOUL	12	21	1550	S21	E44	12	25.0		B	DAO	160	4	10	2
6978	27239	MWIL	12	21	1600	S20	E41	12	24.8	5	(B)					
6978		PALE	12	21	1850	S21	E40	12	24.8		B	DSO	180	9	9	2
6978		CULG	12	22	0025	S19	E37	12	24.8		B	DAO	160	5	10	2
6978		LEAR	12	22	0045	S21	E38	12	24.9		B	DAO	180	4	10	2
6978		RAMY	12	22	1315	S21	E30	12	24.8		B	DAO	250	9	10	4
6978	27239	MWIL	12	22	1630	S20	E28	12	24.8	5	(B)					
6978		PALE	12	22	2005	S21	E26	12	24.8		B	DAO	140	5	9	1
6978		CULG	12	23	0000	S19	E24	12	24.8		B	DAO	190	8	9	2
6978		RAMY	12	23	1330	S20	E17	12	24.9		B	DAO	200	5	10	3
6978		BOUL	12	23	1533	S20	E16	12	24.9		B	DAO	170	8	9	1
6978	27239	MWIL	12	23	1600	S21	E15	12	24.8	5	(B)					
6978		HOLL	12	23	1720	S20	E15	12	24.9		B	DSO	180	16	10	3
6978		PALE	12	23	1930	S21	E15	12	25.0		B	DAO	170	10	10	3
6978		CULG	12	24	0015	S20	E12	12	24.9		B	DAO	110	9	10	3
6978		LEAR	12	24	0050	S20	E10	12	24.8		B	EAO	180	6	11	3
6978		SVTO	12	24	0935	S20	E06	12	24.8		B	EAO	110	12	12	3
6978		RAMY	12	24	1212	S20	E04	12	24.8		B	EAO	100	17	11	3
6978		BOUL	12	24	1510	S20	E03	12	24.9		B	CSO	80	5	9	1
6978	27239	MWIL	12	24	1600	S20	E02	12	24.8	5	(B)					
6978		HOLL	12	24	1725	S20	E02	12	24.9		B	DAO	90	10	10	3
6978		PALE	12	24	2030	S21	E00	12	24.8		B	DAO	70	9	12	3
6978		CULG	12	25	0000	S20	W02	12	24.8		B	DAO	100	13	10	3
6978		LEAR	12	25	0004	S21	W03	12	24.8		B	EAO	110	8	11	4
6978		SVTO	12	25	1035	S20	W08	12	24.8		B	CSO	50	13	10	4
6978		RAMY	12	25	1323	S20	W09	12	24.9		B	CAO	60	8	11	2
6978		BOUL	12	25	1538	S20	W11	12	24.8		B	CSO	50	3	8	2
6978	27239	MWIL	12	25	1545	S21	W10	12	24.9	5	(B)					
6978		PALE	12	25	1749	S19	W20	12	24.2		B	CAO	60	7	9	2
6978		LEAR	12	26	0013	S24	W12	12	25.1		B	CAO	70	5	11	3
6978		CULG	12	26	0130	S21	W15	12	24.9		B	ESO	40	8	12	3
6978		RAMY	12	26	1313	S21	W22	12	24.9		B	CSO	30	7	12	2
6978		BOUL	12	26	1540	S20	W22	12	25.0		B	BXO	20	7	12	2

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6978	27239	MWIL	12	26	1600	S21	W23	12	24.9	5	(BP)					
6978		PALE	12	26	1910	S20	W30	12	24.5		A	HS	40	1	1	1
6978		LEAR	12	27	0010	S21	W27	12	24.9		B	CSO	20	3	11	4
6978		CULG	12	27	0120	S22	W28	12	24.9		B	CRO	20	3	12	3
6978		RAMY	12	27	1358	S20	W41	12	24.4		A	HS	10	1	2	3
6978		BOUL	12	27	1605	S22	W40	12	24.6		A	AX	10	1	1	2
6978		HOLL	12	27	1640	S16	W40	12	24.7		B	CAO	20	2	9	4
6978	27239	MWIL	12	27	2115	S22	W41	12	24.7	4	(B)					
6978		PALE	12	27	2155	S21	W46	12	24.4		A	AX	10	1	1	2
6978		LEAR	12	28	0015	S20	W46	12	24.5		A	AX	10	1	1	3
6978		CULG	12	28	0110	S22	W47	12	24.4		A	AX	10	1		3
6978		RAMY	12	28	1320	S21	W53	12	24.5		A	AX		1		4
6978		CULG	12	29	0040	S22	W62	12	24.3		A	AX		1		3
6982		RAMY	12	18	1348	S16	E89	12	25.3		A	HA	60	1	1	4
6982	27240	MWIL	12	18	1715	S17	E85	12	25.2	4	AP					
6982		CULG	12	19	0055	S13	E84	12	25.4		B	EKO	270	3	11	2
6982		LEAR	12	19	0428	S15	E76	12	24.9		B	DAO	240	7	7	2
6982		RAMY	12	19	1325	S14	E75	12	25.2		B	DKI	540	9	8	3
6982		BOUL	12	19	1602	S14	E74	12	25.3		B	DKO	710	12	9	2
6982		LEAR	12	20	0017	S15	E69	12	25.2		B	DKI	620	12	8	2
6982		CULG	12	20	0055	S13	E68	12	25.2		B	DKO	810	10	8	2
6982		SVTO	12	20	0817	S14	E64	12	25.2		B	DKO	590	15	7	4
6982		RAMY	12	20	1307	S14	E61	12	25.1		BGD	DKI	760	25	7	3
6982	27240	MWIL	12	20	1615	S15	E60	12	25.2	4	(B)					
6982		PALE	12	20	1800	S14	E60	12	25.3		B	DKI	690	13	10	1
6982		CULG	12	21	0210	S14	E55	12	25.2		BGD	DKI	700	17	8	2
6982		LEAR	12	21	0345	S15	E56	12	25.4		BGD	DKI	820	14	8	2
6982		SVTO	12	21	0843	S15	E51	12	25.2		BGD	DKI	720	32	9	3
6982		RAMY	12	21	1406	S13	E47	12	25.1		BD	DKI	670	25	9	2
6982		BOUL	12	21	1550	S14	E50	12	25.4		B	DKI	740	20	8	2
6982	27240	MWIL	12	21	1600	S14	E48	12	25.3	5	(D)					
6982		PALE	12	21	1850	S13	E45	12	25.2		B	DKO	550	30	8	2
6982		CULG	12	22	0025	S13	E43	12	25.3		BGD	DKI	760	26	7	2
6982		LEAR	12	22	0045	S14	E42	12	25.2		BGD	DKI	670	22	8	2
6982		RAMY	12	22	1315	S14	E35	12	25.2		B	DKI	970	65	9	4
6982	27240	MWIL	12	22	1630	S13	E35	12	25.3	6	(D)					
6982		HOLL	12	22	1800	S13	E33	12	25.2		BGD	DKC	880	51	9	3
6982		PALE	12	22	2005	S15	E32	12	25.2		B	DKO	790	22	8	1
6982		CULG	12	23	0000	S13	E30	12	25.3		BGD	DKI	800	33	8	2
6982		RAMY	12	23	1330	S13	E22	12	25.2		B	DKI	870	29	9	3
6982		BOUL	12	23	1533	S13	E22	12	25.3		B	DKI	750	33	8	1
6982	27240	MWIL	12	23	1600	S13	E22	12	25.3	5	(D)					
6982		HOLL	12	23	1720	S14	E22	12	25.4		BD	EKC	770	63	11	3
6982		PALE	12	23	1930	S13	E20	12	25.3		BD	DKC	1100	47	9	3
6982		CULG	12	24	0015	S13	E16	12	25.2		BG	DKI	820	32	10	3
6982		LEAR	12	24	0050	S14	E14	12	25.1		BD	EKI	740	22	11	3
6982		SVTO	12	24	0935	S13	E12	12	25.3		BG	DKI	900	30	10	3
6982		RAMY	12	24	1212	S13	E10	12	25.3		B	DKI	820	41	10	3
6982		BOUL	12	24	1510	S12	E09	12	25.3		B	DKC	810	21	8	1
6982	27240	MWIL	12	24	1600	S13	E08	12	25.3	6	(D)					
6982		HOLL	12	24	1725	S13	E08	12	25.3		BD	DKC	850	31	9	3
6982		PALE	12	24	2030	S12	E07	12	25.4		BD	EKC	1060	52	11	3
6982		CULG	12	25	0000	S13	E04	12	25.3		BGD	DKI	990	41	10	3
6982		LEAR	12	25	0004	S14	E04	12	25.3		BGD	DKC	830	36	9	4
6982		SVTO	12	25	1035	S14	W02	12	25.3		BGD	EKC	890	48	12	4
6982		RAMY	12	25	1323	S14	W03	12	25.3		B	DKI	960	20	10	2
6982		BOUL	12	25	1538	S12	W04	12	25.4		B	DKC	770	43	10	2
6982	27240	MWIL	12	25	1545	S14	W04	12	25.3	5	(D)					
6982		PALE	12	25	1749	S14	W05	12	25.4		BG	DKI	530	45	11	2
6982		LEAR	12	26	0013	S14	W07	12	25.5		BGD	EKC	770	30	12	3
6982		CULG	12	26	0130	S13	W10	12	25.3		BGD	EKC	900	42	11	3
6982		RAMY	12	26	1313	S13	W15	12	25.4		B	DKI	500	26	10	2
6982		BOUL	12	26	1540	S12	W16	12	25.4		B	EKC	870	37	10	2
6982	27240	MWIL	12	26	1600	S14	W16	12	25.4	6	(D)					
6982		PALE	12	26	1910	S14	W20	12	25.3		BGD	DKC	660	12	9	1
6982		LEAR	12	27	0010	S13	W21	12	25.4		BGD	EKC	740	39	11	4
6982		CULG	12	27	0120	S14	W22	12	25.4		BGD	DKC	990	34	9	3
6982		RAMY	12	27	1358	S14	W28	12	25.5		BD	EKI	660	40	11	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6982		BOUL	12	27	1605	S15	W30	12	25.4		B	EKI	990	50	12	2
6982		HOLL	12	27	1640	S13	W32	12	25.3		BGD	EKI	1010	57	12	4
6982	27240	MWIL	12	27	2115	S15	W34	12	25.3	6	(D)					
6982		PALE	12	27	2155	S14	W34	12	25.3		BGD	DKI	950	28	10	2
6982		LEAR	12	28	0015	S14	W35	12	25.4		BGD	DKC	730	41	10	3
6982		CULG	12	28	0110	S14	W36	12	25.3		BGD	DKC	890	31	10	3
6982		RAMY	12	28	1320	S14	W42	12	25.4		BD	EKI	850	38	13	4
6982		SVTO	12	28	1329	S14	W42	12	25.4		BGD	DKI	600	25	9	2
6982		BOUL	12	28	1550	S14	W44	12	25.3		B	DKI	550	18	10	1
6982		HOLL	12	28	1740	S14	W46	12	25.2		BGD	EKC	700	30	13	4
6982		PALE	12	28	1820	S14	W45	12	25.4		BGD	DKI	670	32	10	3
6982		CULG	12	29	0040	S15	W49	12	25.3		BGD	DKC	800	21	10	3
6982		SVTO	12	29	0758	S14	W50	12	25.5		BGD	DKI	670	22	10	3
6982		RAMY	12	29	1330	S10	W56	12	25.3		BG	EKI	540	25	11	3
6982		BOUL	12	29	1735	S14	W60	12	25.2		B	EAI	540	23	11	3
6982		HOLL	12	29	1840	S12	W58	12	25.4		BD	EKC	630	27	11	2
6982		PALE	12	29	1930	S13	W58	12	25.4		BG	EKI	530	27	11	2
6982		LEAR	12	30	0010	S14	W60	12	25.5		BG	EKC	500	18	11	3
6982		CULG	12	30	0045	S14	W63	12	25.3		BG	EKI	500	9	11	1
6982		SVTO	12	30	0915	S15	W65	12	25.5		BG	DKI	520	11	9	4
6982		RAMY	12	30	1225	S15	W68	12	25.4		B	DKI	520	15	9	4
6982		BOUL	12	30	1504	S14	W73	12	25.1		B	EKI	450	9	13	3
6982		HOLL	12	30	1600	S15	W70	12	25.4		B	EKC	640	13	12	3
6982		RAMY	12	31	1230	S15	W82	12	25.3		B	DAO	150	6	8	4
6982		SVTO	12	31	1305	S15	W77	12	25.7		B	DAO	180	3	6	2
6982		HOLL	12	31	1730	S15	W81	12	25.6		B	DSI	120	2	5	2
6982		PALE	12	31	1921	S13	W83	12	25.5		A	AX		3	2	3
6982A	27249	MWIL	12	26	1600	S24	W11	12	25.8	3	(B)					
6982B	27250	MWIL	12	26	1600	S06	W01	12	26.6	3	(AP)					
6989		SVTO	12	25	1035	N14	E20	12	26.9		A	AX		1		4
6989		RAMY	12	25	1323	N15	E19	12	27.0		A	AX		1		2
6989		RAMY	12	26	1313	N14	E09	12	27.2		A	AX		2	1	2
6989A		RAMY	12	30	1225	N10	W30	12	28.3		B	BXO	10	5	3	4
6989A		RAMY	12	30	1225	N10	W30	12	28.3		B	BXO	10	5	3	4
6989A		HOLL	12	30	1600	N11	W32	12	28.2		A	AX		2	1	3
6985		CULG	12	22	0025	S15	E88	12	28.7		A	HK	200	1	3	2
6985		LEAR	12	22	0045	S17	E79	12	28.0		A	HA	60	1	3	2
6985		RAMY	12	22	1315	S17	E79	12	28.5		B	EKI	360	13	13	4
6985	27245	MWIL	12	22	1630	S16	E78	12	28.6	5	(B					
6985		HOLL	12	22	1800	S16	E79	12	28.7		BGD	FKC	530	17	16	3
6985		PALE	12	22	2005	S17	E78	12	28.8		B	FKO	270	7	16	1
6985		CULG	12	23	0000	S15	E79	12	29.0		B	FKO	780	11	20	2
6985		RAMY	12	23	1330	S17	E69	12	28.8		B	FKO	1230	21	29	3
6985		BOUL	12	23	1533	S16	E73	12	29.2		B	FKI	1550	20	25	1
6985	27245	MWIL	12	23	1600	S17	E69	12	28.9	5	(B)					
6985		HOLL	12	23	1720	S16	E71	12	29.1		BGD	FKC	1680	54	23	3
6985		PALE	12	23	1930	S17	E70	12	29.1		BGD	FKC	1800	45	24	3
6985		CULG	12	24	0015	S15	E68	12	29.1		BGD	FKC	1950	30	26	3
6985		SVTO	12	24	0935	S17	E56	12	28.6		BGD	FKC	2160	22	18	3
6985		RAMY	12	24	1212	S17	E55	12	28.7		BGD	FKC	1450	41	16	3
6985		BOUL	12	24	1510	S17	E55	12	28.8		B	FKC	1520	21	17	1
6985	27245	MWIL	12	24	1600	S17	E56	12	28.9	5	(D)					
6985		HOLL	12	24	1725	S18	E53	12	28.8		BGD	FKC	1500	38	17	3
6985		PALE	12	24	2030	S17	E55	12	29.0		BGD	FKC	1890	45	17	3
6985		CULG	12	25	0000	S17	E49	12	28.7		BGD	FKC	1850	59	19	3
6985		LEAR	12	25	0004	S17	E48	12	28.6		BGD	FKC	1520	49	18	4
6985		SVTO	12	25	1035	S16	E43	12	28.7		BGD	FKI	1180	77	17	4
6985		RAMY	12	25	1323	S16	E43	12	28.8		BGD	FKC	1260	39	17	2
6985		BOUL	12	25	1538	S17	E41	12	28.8		B	FKC	1550	57	19	2
6985	27245	MWIL	12	25	1545	S16	E40	12	28.7	6	(BG)					
6985		PALE	12	25	1749	S16	E40	12	28.8		BG	FKI	790	69	19	2
6985		LEAR	12	26	0013	S17	E37	12	28.8		BG	FKC	1200	58	20	3
6985		CULG	12	26	0130	S15	E34	12	28.6		BD	FKC	1310	54	19	3
6985		RAMY	12	26	1313	S16	E29	12	28.7		BGD	FKC	1050	66	20	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6985		BOUL	12	26	1540	S17	E27	12	28.7		B	FKI	1180	62	23	2
6985	27245	MWIL	12	26	1600	S17	E28	12	28.8	6	(BG)					
6985		PALE	12	26	1910	S16	E26	12	28.8		BD	FKI	1240	27	20	1
6985		LEAR	12	27	0010	S18	E23	12	28.7		BG	FKI	910	90	20	4
6985		CULG	12	27	0120	S15	E22	12	28.7		BG	FKC	1260	68	18	3
6985		RAMY	12	27	1358	S16	E16	12	28.8		B	FKI	1140	70	21	3
6985		BOUL	12	27	1605	S17	E13	12	28.6		B	FKI	1250	0	21	2
6985		HOLL	12	27	1640	S20	E12	12	28.6		BG	FKI	1210	0	23	4
6985	27245	MWIL	12	27	2115	S17	E11	12	28.7	5	(B)					
6985		PALE	12	27	2155	S16	E10	12	28.7		BG	FKI	1140	49	21	2
6985		LEAR	12	28	0015	S17	E10	12	28.8		BG	FKI	1120	71	21	3
6985		CULG	12	28	0110	S15	E08	12	28.6		BG	FKI	1110	47	21	3
6985		RAMY	12	28	1320	S16	E03	12	28.8		BG	FKI	930	0	21	4
6985		SVTO	12	28	1329	S18	E03	12	28.8		BG	FKI	860	62	20	2
6985		BOUL	12	28	1550	S17	E01	12	28.7		B	FKI	820	49	23	1
6985		HOLL	12	28	1740	S18	E00	12	28.7		B	FKI	1050	96	21	4
6985		PALE	12	28	1820	S16	E00	12	28.8		BG	FKI	960	80	21	3
6985		CULG	12	29	0040	S16	W04	12	28.7		BG	FKI	950	75	20	3
6985		SVTO	12	29	0758	S18	W08	12	28.7		BG	FKI	970	82	22	3
6985		RAMY	12	29	1330	S14	W12	12	28.6		B	FKI	830	0	21	3
6985		BOUL	12	29	1735	S16	W13	12	28.7		B	FKI	810	86	21	3
6985		HOLL	12	29	1840	S17	W13	12	28.8		BG	FKI	1370	0	21	2
6985		PALE	12	29	1930	S16	W13	12	28.8		B	FKO	850	82	22	2
6985		LEAR	12	30	0010	S17	W15	12	28.9		BG	FKI	670	0	20	3
6985		CULG	12	30	0045	S16	W18	12	28.7		B	FKI	930	61	21	1
6985		SVTO	12	30	0915	S17	W20	12	28.9		BG	FKI	950	74	21	4
6985		RAMY	12	30	1225	S16	W23	12	28.8		B	FKI	750	0	24	4
6985		BOUL	12	30	1504	S16	W24	12	28.8		B	FKI	810	64	25	3
6985		HOLL	12	30	1600	S18	W25	12	28.8		BG	FKI	660	83	23	3
6985		RAMY	12	31	1230	S17	W36	12	28.8		B	FKO	480	0	23	4
6985		SVTO	12	31	1305	S17	W37	12	28.7		BG	FAI	570	54	22	2
6985		HOLL	12	31	1730	S18	W39	12	28.7		B	FKI	570	56	26	2
6985	27245	MWIL	12	31	1800	S16	W36	12	29.0	5	(D)					
6985		PALE	12	31	1921	S17	W40	12	28.8		B	FAI	370	43	23	3
6985		LEAR	01	01	0008	S16	W41	12	29.0		B	FAO	210	54	22	3
6985		CULG	01	01	0115	S20	W43	12	28.9		B	FSI	280	40	24	4
6985		SVTO	01	01	0902	S18	W47	12	28.9		B	FAO	300	39	23	4
6985		RAMY	01	01	1310	S17	W49	12	28.9		B	FAO	360	62	24	5
6985		BOUL	01	01	1630	S11	W50	12	29.0		B	FAI	250	16	20	3
6985	27245	MWIL	01	01	1630	S17	W49	12	29.1	5	(BG)					
6985		HOLL	01	01	1630	S18	W51	12	28.9		BG	FSI	440	62	24	3
6985		PALE	01	01	1840	S16	W54	12	28.8		B	FAI	300	48	23	3
6985		LEAR	01	02	0026	S18	W53	12	29.1		B	FAI	400	49	16	3
6985		CULG	01	02	0035	S16	W55	12	28.9		B	FSO	230	21	17	3
6985		SVTO	01	02	0852	S18	W56	12	29.2		B	FAI	410	32	17	4
6985		RAMY	01	02	1235	S16	W59	12	29.1		B	FAO	400	23	21	4
6985		BOUL	01	02	1615	S16	W62	12	29.1		B	FAI	400	12	16	2
6985		HOLL	01	02	1640	S17	W62	12	29.1		BG	FAI	350	34	23	3
6985		PALE	01	02	1930	S16	W66	12	28.9		B	FAO	370	25	22	3
6985	27245	MWIL	01	02	2100	S16	W64	12	29.1	5	(BG					
6985		LEAR	01	03	0019	S19	W67	12	29.0		B	FAO	170	15	16	3
6985		CULG	01	03	0025	S17	W67	12	29.0		B	FAO	190	17	18	3
6985		SVTO	01	03	0935	S18	W69	12	29.2		B	FAI	210	15	16	3
6985		RAMY	01	03	1250	S17	W70	12	29.3		B	EAO	210	10	13	3
6985		PALE	01	03	2130	S19	W80	12	28.9		B	FAO	320	15	16	4
6985		LEAR	01	04	0005	S20	W74	12	29.4		B	DAO	240	5	9	3
6985		CULG	01	04	0030	S20	W76	12	29.3		B	DAO	120	7	7	2
6985		SVTO	01	04	0851	S20	W87	12	28.8		B	DAO	60	3	9	2
6995		RAMY	12	31	1230	N09	W24	12	29.7		A	AX		1		4
6995		HOLL	12	31	1730	N09	W28	12	29.6		A	AX	10	1		2
6995	27251	MWIL	12	31	1800	N09	W27	12	29.7	4	(AP)					
6995		PALE	12	31	1921	N09	W28	12	29.7		A	AX		1		3
6995A		BOUL	12	29	1735	S08	E06	12	30.2		A	AX	10	3	1	3
6988	27246	MWIL	12	23	1600	S16	E81	12	29.8	5	AP					
6988		SVTO	12	24	0935	S14	E77	12	30.2		BG	FKO	440	9	19	3
6988		RAMY	12	24	1212	S14	E70	12	29.8		B	EKO	600	12	11	3

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6988		BOUL	12	24	1510	S14	E74	12	30.2		B	FKO	600	7	18	1
6988	27246	MWIL	12	24	1600	S15	E72	12	30.1	5	(B					
6988		HOLL	12	24	1725	S14	E71	12	30.1		B	FKO	630	8	16	3
6988		PALE	12	24	2030	S15	E70	12	30.1		B	FKO	420	11	18	3
6988		CULG	12	25	0000	S13	E71	12	30.3		B	FKO	540	9	18	3
6988		LEAR	12	25	0004	S15	E66	12	30.0		B	FKO	620	8	16	4
6988		SVTO	12	25	1035	S15	E65	12	30.4		B	FHO	540	17	16	4
6988		RAMY	12	25	1323	S14	E61	12	30.2		BG	FKO	830	15	16	2
6988		BOUL	12	25	1538	S14	E61	12	30.3		B	FKI	850	17	19	2
6988	27246	MWIL	12	25	1545	S14	E60	12	30.2	5	(B)					
6988		PALE	12	25	1749	S15	E60	12	30.3		B	DKO	520	10	10	2
6988		LEAR	12	26	0013	S17	E56	12	30.3		B	FHO	790	12	17	3
6988		CULG	12	26	0130	S16	E53	12	30.1		B	FKO	640	22	16	3
6988		RAMY	12	26	1313	S13	E50	12	30.3		BG	FKO	690	18	17	2
6988		BOUL	12	26	1540	S14	E48	12	30.3		B	FKI	650	16	16	2
6988	27246	MWIL	12	26	1600	S15	E47	12	30.2	6	(BG)					
6988		PALE	12	26	1910	S15	E46	12	30.3		B	FHO	280	7	16	1
6988		LEAR	12	27	0010	S15	E43	12	30.3		B	FKO	600	28	17	4
6988		CULG	12	27	0120	S13	E42	12	30.2		B	FKO	690	23	16	3
6988		RAMY	12	27	1358	S14	E36	12	30.3		BG	FKO	700	30	19	3
6988		BOUL	12	27	1605	S16	E36	12	30.4		B	FKI	970	61	19	2
6988		HOLL	12	27	1640	S15	E32	12	30.1		B	FKO	930	48	18	4
6988	27246	MWIL	12	27	2115	S16	E32	12	30.3	5	(B)					
6988		PALE	12	27	2155	S15	E31	12	30.3		B	FKI	920	25	17	2
6988		LEAR	12	28	0015	S15	E30	12	30.3		BG	FKO	800	34	18	3
6988		CULG	12	28	0110	S13	E28	12	30.2		B	FKO	860	29	17	3
6988		RAMY	12	28	1320	S13	E23	12	30.3		BG	FKO	950	51	18	4
6988		SVTO	12	28	1329	S16	E22	12	30.2		B	FKO	830	27	17	2
6988		BOUL	12	28	1550	S15	E23	12	30.4		B	FKI	810	24	17	1
6988		HOLL	12	28	1740	S15	E22	12	30.4		BGD	FKI	840	34	18	4
6988		PALE	12	28	1820	S14	E21	12	30.3		B	FKI	910	35	17	3
6988		CULG	12	29	0040	S14	E16	12	30.2		BG	FKO	830	21	17	3
6988		SVTO	12	29	0758	S16	E13	12	30.3		BG	FKO	880	36	17	3
6988		RAMY	12	29	1330	S15	E09	12	30.2		B	FKO	780	31	18	3
6988		BOUL	12	29	1735	S14	E08	12	30.3		B	FKI	790	36	17	3
6988		HOLL	12	29	1840	S14	E06	12	30.2		BGD	FKI	970	56	18	2
6988		PALE	12	29	1930	S13	E10	12	30.6		B	FKO	960	28	18	2
6988		LEAR	12	30	0010	S15	E05	12	30.4		B	FKI	850	62	16	3
6988		CULG	12	30	0045	S14	E04	12	30.3		B	FKO	800	28	18	1
6988		SVTO	12	30	0915	S14	W01	12	30.3		BG	FKO	900	41	18	4
6988		RAMY	12	30	1225	S15	W03	12	30.3		BG	FKI	910	0	18	4
6988		BOUL	12	30	1504	S14	W04	12	30.3		B	FKI	640	20	16	3
6988		HOLL	12	30	1600	S15	W05	12	30.3		BG	FKI	750	39	18	3
6988		RAMY	12	31	1230	S16	W15	12	30.4		BG	FKI	920	0	19	4
6988		SVTO	12	31	1305	S15	W17	12	30.2		BG	FKI	680	25	18	2
6988		HOLL	12	31	1730	S16	W20	12	30.2		BD	FKI	740	32	18	2
6988	27246	MWIL	12	31	1800	S15	W18	12	30.4	6	(D)					
6988		PALE	12	31	1921	S14	W19	12	30.4		BG	FKI	720	34	17	3
6988		LEAR	01	01	0008	S15	W21	12	30.5		BG	FKO	530	37	18	3
6988		CULG	01	01	0115	S16	W23	12	30.4		BG	FKO	840	23	17	4
6988		SVTO	01	01	0902	S16	W28	12	30.3		BG	FKO	790	31	17	4
6988		RAMY	01	01	1310	S16	W29	12	30.4		BG	FKO	910	71	18	5
6988	27246	MWIL	01	01	1630	S15	W31	12	30.4	6	(D)					
6988		BOUL	01	01	1630	S15	W32	12	30.4		B	FKO	710	20	18	3
6988		HOLL	01	01	1630	S15	W32	12	30.4		BD	FKC	800	53	18	3
6988		PALE	01	01	1840	S16	W33	12	30.4		B	FKO	830	59	17	3
6988		LEAR	01	02	0026	S14	W36	12	30.4		BG	FKO	700	33	17	3
6988		CULG	01	02	0035	S14	W36	12	30.4		BG	FKO	660	27	16	3
6988		SVTO	01	02	0852	S16	W39	12	30.5		BG	FKI	730	33	17	4
6988		RAMY	01	02	1235	S14	W41	12	30.5		BG	FKO	670	37	17	4
6988		BOUL	01	02	1615	S13	W43	12	30.5		B	FKO	700	11	18	2
6988		HOLL	01	02	1640	S15	W44	12	30.5		BD	FKC	780	29	16	3
6988		PALE	01	02	1930	S15	W46	12	30.4		B	FKO	670	35	16	3
6988	27246	MWIL	01	02	2100	S14	W46	12	30.5	6	D *					
6988		LEAR	01	03	0019	S12	W42	12	30.9		BG	FKO	500	18	17	3
6988		LEAR	01	03	0019	S12	W42	12	30.9		BG	FKO	500	18	17	3
6988		CULG	01	03	0025	S14	W48	12	30.5		BG	FKO	740	21	16	3
6988		SVTO	01	03	0935	S16	W53	12	30.5		BG	FKO	660	22	16	3
6988		RAMY	01	03	1250	S17	W57	12	30.3		BG	FKO	580	12	16	3

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

DECEMBER 1991

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6988		PALE	01	03	2130	S15	W60	12	30.4		B	FKO	650	14	16	4
6988		LEAR	01	04	0005	S15	W60	12	30.6		BG	FKO	680	10	18	3
6988		CULG	01	04	0030	S14	W59	12	30.7		BG	FKO	550	10	16	2
6988		SVTO	01	04	0851	S13	W66	12	30.5		BG	FKO	580	8	19	2
6988		RAMY	01	04	1240	S15	W65	12	30.7		BG	EKO	460	10	14	1
6988		BOUL	01	04	1555	S14	W70	12	30.5		B	FKO	390	10	18	3
6988		PALE	01	04	1928	S15	W72	12	30.5		B	FKO	330	9	16	3
6988		LEAR	01	05	0006	S16	W71	12	30.7		BG	FKO	490	5	16	3
6988		CULG	01	05	0010	S14	W73	12	30.6		BG	EKO	310	10	13	2
6988		RAMY	01	05	1350	S13	W77	12	30.9		A	HK	180	1	3	2
6988		BOUL	01	05	1540	S14	W77	12	30.9		A	HS	120	1	3	3
6988		HOLL	01	05	2205	S14	W81	12	30.9		A	HS	120	1	2	2
6988		LEAR	01	06	0020	S15	W80	12	31.0		A	HS	180	1	6	2
6988		CULG	01	06	0040	S14	W85	12	30.7		A	HS	120	1	2	2
6992		HOLL	12	27	1640	S12	E53	12	31.7		B	DAO	100	2	3	4
6992		HOLL	12	28	1740	S17	E39	12	31.7		A	HA	110	4	2	4
6992		SVTO	12	29	0758	S13	E31	12	31.7		B	BXO	10	3	4	3
6992		RAMY	01	01	1310	S17	W15	12	31.4		A	AX	10	4	2	5
6992	27255	MWIL	01	01	1630	S17	W17	12	31.4	4	(AF)					
6992		PALE	01	01	1840	S18	W18	12	31.4		A	AX		2	1	3
6992		SVTO	01	03	0935	S11	W34	12	31.8		A	AX		2	2	3
6992		PALE	01	03	2130	S11	W42	12	31.7		A	AX		2	1	4
6992		CULG	01	04	0030	S12	W44	12	31.7		A	AX		2	1	2
6992		RAMY	01	04	1240	S08	W47	01	1.0		B	CSO	20	3	4	1
6992		BOUL	01	04	1555	S11	W51	12	31.8		B	CSO	20	3	3	3
6992		PALE	01	04	1928	S12	W53	12	31.8		B	CAO	40	6	5	3
6992		LEAR	01	05	0006	S12	W56	12	31.8		B	CSO	50	2	6	3
6992		CULG	01	05	0010	S11	W57	12	31.7		B	CAO	40	3	4	2
6992		RAMY	01	05	1350	S11	W65	12	31.7		B	CAO	30	2	6	2
6992		BOUL	01	05	1540	S13	W63	12	31.9		B	CSO	30	2	4	3
6992		HOLL	01	05	2205	S13	W72	12	31.5		A	HA	20	2	1	2
6992		LEAR	01	06	0020	S13	W71	12	31.6		A	AX	40	1	1	2
6992		CULG	01	06	0040	S14	W75	12	31.3		A	HR	30	1		2
6992		PALE	01	06	2208	S14	W82	12	31.7		A	AX		1	1	3
6988A		RAMY	12	28	1320	S09	E39	12	31.5		B	BXO		2	2	4
6988A		SVTO	12	28	1329	S11	E39	12	31.5		B	BXO	10	2	3	2
6988A		CULG	12	29	0040	S10	E32	12	31.4		B	BXO		2	3	3
6988A		RAMY	12	29	1330	S15	E26	12	31.5		A	AX		1		3
6990		SVTO	12	25	1035	S06	E85	12	31.8		A	AX	10	1	1	4
6990		RAMY	12	25	1323	S04	E80	12	31.5		A	HA	80	2	2	2
6990		BOUL	12	25	1538	S04	E85	01	1.0		A	HA	20	2	2	2
6990	27247	MWIL	12	25	1545	S04	E80	12	31.6	3	(AP)					
6990		PALE	12	25	1749	S05	E79	12	31.6		B	CSO	110	2	3	2
6990		LEAR	12	26	0013	S03	E74	12	31.5		B	DSO	180	2	4	3
6990		CULG	12	26	0130	S02	E75	12	31.7		B	DSO	120	4	7	3
6990		RAMY	12	26	1313	S04	E69	12	31.7		A	HS	110	3	2	2
6990		BOUL	12	26	1540	S04	E71	01	1.0		B	CSO	110	2	3	2
6990	27247	MWIL	12	26	1600	S05	E69	12	31.8	5	(AP)					
6990		PALE	12	26	1910	S04	E67	12	31.8		A	HA	90	2	2	1
6990		LEAR	12	27	0010	S05	E63	12	31.7		B	DSO	60	3	4	4
6990		CULG	12	27	0120	S02	E63	12	31.8		B	DSO	80	3	1	3
6990		RAMY	12	27	1358	S04	E55	12	31.7		A	HA	80	3	3	3
6990		BOUL	12	27	1605	S05	E55	12	31.8		B	DAO	90	2	3	2
6990	27247	MWIL	12	27	2115	S05	E52	12	31.8	5	(AP)					
6990		PALE	12	27	2155	S04	E51	12	31.7		A	HS	90	2	2	2
6990		LEAR	12	28	0015	S04	E48	12	31.6		B	DSO	700	2	2	3
6990		CULG	12	28	0110	S02	E49	12	31.7		B	DSO	70	3	2	3
6990		RAMY	12	28	1320	S04	E40	12	31.5		BG	CAO	80	7	4	4
6990		SVTO	12	28	1329	S05	E42	12	31.7		B	DSO	50	4	3	2
6990		BOUL	12	28	1550	S04	E40	12	31.6		B	DSO	70	4	3	1
6990		PALE	12	28	1820	S04	E39	12	31.7		B	CAO	70	3	3	3
6990		CULG	12	29	0040	S03	E35	12	31.6		B	DAO	90	5	3	3
6990		SVTO	12	29	0758	S05	E32	12	31.7		B	DAO	100	6	5	3
6990		RAMY	12	29	1330	S07	E27	12	31.6		B	DAO	80	7	4	3
6990		BOUL	12	29	1735	S04	E26	12	31.7		B	DSO	90	4	5	3
6990		HOLL	12	29	1840	N01	E25	12	31.6		B	CAO	140	6	5	2

S U N S P O T G R O U P S
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DECEMBER 1991

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6990		PALE	12	29	1930	S04	E26	12	31.7		B	DAO	40	5	4	2
6990		LEAR	12	30	0010	S05	E22	12	31.6		B	DSO	50	5	4	3
6990		CULG	12	30	0045	S03	E22	12	31.7		B	DSO	80	5	5	1
6990		SVTO	12	30	0915	S03	E18	12	31.7		B	DAO	100	5	4	4
6990		RAMY	12	30	1225	S05	E16	12	31.7		B	CAO	100	11	6	4
6990		BOUL	12	30	1504	S04	E13	12	31.6		B	DSO	70	3	3	3
6990		HOLL	12	30	1600	S04	E15	12	31.8		B	CSI	60	5	3	3
6990		RAMY	12	31	1230	S05	E01	12	31.6		B	CAO	60	10	8	4
6990		SVTO	12	31	1305	S04	E03	12	31.8		B	DAO	60	4	4	2
6990		HOLL	12	31	1730	N00	E05	01	1.1		B	CSO	50	5	3	2
6990	27247	MWIL	12	31	1800	S04	W01	12	31.7	5	(BP)					
6990		PALE	12	31	1921	S04	W01	12	31.7		A	HA	30	4	1	3
6990		LEAR	01	01	0008	S04	W04	12	31.7		B	DAO	40	3	3	3
6990		CULG	01	01	0115	S04	W06	12	31.6		B	CAO	20	3	1	4
6990		SVTO	01	01	0902	S05	W09	12	31.7		B	DAO	40	5	3	4
6990		RAMY	01	01	1310	S05	W12	12	31.6		B	BXO	10	7	12	5
6990		BOUL	01	01	1630	S03	W13	12	31.7		A	AX	10	3	3	3
6990	27247	MWIL	01	01	1630	S04	W13	12	31.7	5	(BG)					
6990		HOLL	01	01	1630	S05	W14	12	31.6		B	DAO	40	5	3	3
6990		PALE	01	01	1840	S05	W14	12	31.7		B	CRO	20	5	5	3
6990		LEAR	01	02	0026	S04	W17	12	31.7		B	CAO	10	9	6	3
6990		CULG	01	02	0035	S04	W17	12	31.7		B	BX	20	3	3	3
6990		SVTO	01	02	0852	S07	W21	12	31.8		A	AX	10	2	2	4
6990		PALE	01	02	1930	S05	W30	12	31.6		A	AX		1		3
6990		SVTO	01	03	0935	S11	W34	12	31.8		A	AX		2	2	3

Stations reporting:

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

SUDDEN IONOSPHERIC DISTURBANCES

DECEMBER 1991

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	0020	0025	0039	1-	1			1			0019	C2.5	
01	0206	0240	0419D	3	3	1		1			0204	M3.0	6946
01	0419E	0427	0450D	3	5	1		1		1	0419	C7.9	
01	0450E	0519	0543D	3-	1			1			No flare		
01	0543E	0602	0817	3	1			1			0535	M1.6	
01	1146	1159	1208	1	1		1				No flare		
01	1211	1221	1235	1	1		1				*		
01	1358	1410	1440	2	1					1	No flare		
01	1900	1904	1927	1	3					2	1903	C2.8	6946
01	2330	2347	2347D	1-	1			1			2330	C4.0	
02	0111	0121	0245	2+	3	1		1			0109	M1.1	
02	0446	0507	0716	3	3	1		1			0507	M3.6	
02	0931	0945	1120	1	5		1	1	1	4	0928	C9.4	
02	1138	1143	1154	1-	1					1	1142		6946
02	1210	1217	1244	2	1					1	1209	C2.9	6946
02	1303	1304	1323	1	1					1	1307		6945
02	1409	1426	1504	1-	5		1	1		5	1407	C4.9	6946
02	1457	1503	1535	2-	3					2	1501	C3.9	6946
02	1744	1748	1807	1	3					3	1743	C3.6	6946
02	1844	1846	1930	2+	1					1	1844	C1.8	
02	1920	1930	2003	2	3					4	1922	C2.7	6952
02	2000	2008	2018	1-	1					1	2013		6946
02	2325	2339	2413	1-	5			1		2	2322	C4.1	
03	0516	0529	0615	1	1			1			0514	C3.2	
03	0620	0628	0656	1-	1			1			0619	C1.8	
03	0956	1018	1038	1+	1		1				1006	C1.3	
03	1634	1644	1820	2	5			1		7	1634	X2.2	6952
03	2315	2324	2347	1-	1			1			No flare		
04	0056	0100	0109	1-	1			1			No flare		
04	0157	0201	0213D	1-	1			1			0157		6952
04	0213E	0216	0238	1-	1			1			0212	C2.0	
04	0413	0418	0436	1-	1			1			0415	C1.6	
04	0515	0521	0531	1-	1			1			0515	C1.6	6952
04	0658	0704	0722	1	1		1				No flare		
04	1037	1042	1058	1-	5		1	1	1	2	1036	C3.2	
04	1117	1143	1225	2	5	1	3	1	1	2	1138E	M1.4	6952
04	1240	1243	1250	1-	3		2		1	1	1236	C5.1	
04	1430	1436	1512	2-	3					3	1437	C3.4	6952
04	1744	1749	1841	2-	3					7	1750		6952
04	2331	2336	2349	1-	1			1			2317	C2.3	6954
05	0059	0103	0126	1-	1			1			0057	C2.8	
05	0128	0132	0146	1-	5			1		1	0127	C2.2	
05	0224	0246	0500	3	3	2		1		1	0230	M2.6	6952
05	0717	0734	0823	2-	3		1			3	0734	M2.0	6952
05	0956	1000	1015	1-	1					1	*		
05	1055	1122	1144	1-	5		3	1	1	4	1101	C8.3	6952
05	1146	1159	1253	1	5	1	3	1	1	2	1143	M1.2	
05	1302	1309	1331	1-	5		3	1	1	1	1307	C6.7	
05	1406	1407	1414	1-	1					1	1408	C3.3	6954
05	1615	1619	1630	1-	1					1	1604	C3.1	6952
05	1712	1716	1728	1-	3					4	1712	C2.7	
05	1945	1951	2004	1-	3					2	No flare		
05	2007	2013	2038	1+	3					3	2008	C7.0	6952
06	0034	0046	0127	1-	3	1		1			0035	C4.7	6952
06	0226	0238	0251	1-	1			1			0224	C2.7	6958
06	0301	0311	0421	2	3	1		1			0300	C6.0	
06	0427	0434	0447D	1-	5			1		1	0427	C2.7	6958
06	0447E	0459	0640	3	5	1		1		1	0446	M1.0	6952
06	0642	0648	0705	1-	1			1			0633	C2.1	
06	1144	1149	1211	1-	5		1			2	1141	C3.3	
06	1220	1225	1245	1	1					1	1221	C1.7	6952
06	1555	1606	1632	1-	5			1		8	1555	C5.7	6952

* = no flare patrol.

DECEMBER 1991

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
06	2010	2010	2030	1+	1					1	2003	C2.3	6952
06	2059	2105	2131	1+	3					3	2059	C5.1	
07	0012	0015	0030	1+	5	1				1	0016		6961
07	0417	0431	0513	1-	1			1			0419	C4.8	
07	0843	0846	0900	1-	1					1	0842	C2.5	
07	1218	1237	1251	1-	5			1		2	1220E	C6.3	6961
07	1511	1515	1544	2-	1					1	1508E		6961
07	1541	1545	1555	1-	1					1	1600E	C4.7	6961
07	1555	1601	1617	1	1					1	1600E	C4.7	6961
07	1757	1800	1825	1	3					4	1756	C3.0	6961
07	1819	1822	1843	1	3					4	1820	C5.0	6958
07	1854	1900	1915	1	1					1	1900		6961
07	1929	1931	1949	1-	1					1	1929	C3.0	
07	1952	1959	2010	1-	1					1	1954	C4.1	6961
07	2055	2107	2118D	1	1					1	No flare		
07	2118	2122	2130	1-	1					1	2114		6961
07	2152	2158	2223	1-	5			1		1	2152	C6.4	6961
07	2231	2251	2331	1-	5			1		1	2227	C6.7	6961
08	0009	0019	0036D	2+	5	1		1		1	0013	M1.6	6961
08	0036E	0051	0240	2	1			1			0039	M1.0	
08	0312	0318	0355	1-	1			1			0300	C4.6	6952
08	0521	0559	0717D	2+	3	1		1			0533	M1.2	6955
08	0618	0619	0644	1	5	1				2	*		
08	0717E	0740	0940	3	5	1		1		1	0627		6961
08	0801	0803	0816	1-	3					2	0801		6958
08	1336	1357	1434	1-	1			1			*		
08	1438	1440	1453	1-	1					1	1439E		6958
08	1456	1502	1523	1-	5			1		7	1457	M1.0	6952
08	1602	1614	1639	1-	5			1		12	1558	M1.4	6952
08	1702	1709	1741	1-	5			1		8	1637	M3.4	6961
08	1803	1808	1831	1	1					1	1809		6961
08	1905	1913	1930	1+	3					2	No flare		
08	2000	2001	2013D	1-	1					1	No flare		
08	2022	2027	2041D	1	5			1		3	2013	M1.4	6961
08	2041E	2101	2146	1-	5	1		1		3	2040	M1.5	6955
08	2256	2319	2454D	3-	5	2		1		1	2308E	M5.3	6961
09	0054E	0105	0157D	1	1			1			0108E	C8.7	6958
09	0155E	0212	0255D	2+	3	1		1			0200	M1.4	
09	0255E	0307	0410D	2+	1			1			0221	M1.2	6961
09	0410E	0418	0524D	3	3	1		1			0408	M3.6	
09	0524E	0528	0643D	2	1			1			No flare		
09	0643E	0651	0717D	1+	5			1		2	0643	C6.1	
09	0717E	0740	0934D	3	5	2		1		3	0715	M2.4	6961
09	0815	0824	0844	1+	3					2	0816	M1.2	
09	0903	0907	0919	1-	1					1	No flare		
09	0936	0949	1053	3-	5	3	4	1	1	6	0933	M4.1	
09	1115	1116	1128	1-	1					1	*		
09	1211	1219	1315	1	5		4	1	1	5	1208	M1.1	
09	1240	1250	1314	1	5		1			2	1237	C7.3	
09	1315	1316	1346D	1+	1					1	*		
09	1334	1343	1408	1+	5		2			2	1341	M7.2	6961
09	1346	1356	1502	3-	5	1	4	1	1	8	1341	M7.2	6961
09	1428	1432	1440	1-	5		1		1	5	1428	M1.2	6961
09	1530	1534	1552	1	5					2	1531	C8.8	6952
09	1702	1707	1727	1	3					2	1702		6952
09	1727	1731	1746	1-	3					2	1729E		6952
09	1747	1751	1824	2-	3					2	1750		6963
09	1808	1809	1828	1	1					1	1808		6961
09	1850	1853	1913	1	3					3	1850	M1.1	6966
09	1906	1913	1924	1-	3					2	1902		6963
09	2000	2009	2035	1-	5			1		4	1949	M1.2	6954
09	2153	2155	2300	2+	1					1	2141		6963
09	2334	2357	2441D	2-	3	1		1			2345	M1.0	6966

* = no flare patrol.

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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
10	0023	0045	0059	2-	1	1					0014	C8.8	6961
10	0041E	0118	0235	2+	5			1		1	0056	M1.2	6961
10	0237E	0247	0330	1-	3	1		1			No flare		
10	0349	0406	0443D	2	5	1		1		2	0359	C9.3	
10	0443E	0515	0542D	1-	1			1			0444		6961
10	0542E	0605	0630D	1-	1			1			0543		6961
10	0630E	0646	0742D	1-	1			1			0639	C4.9	
10	0742E	0754	0846D	3-	5	1	2	1	1	5	0751E	M1.2	
10	0846E	0857	0958	1	5		1	1	1	5	0847	C7.4	6961
10	1058	1101	1138	1+	3					2	No flare		
10	1119	1122	1138	1-	3		2			1	1119	C5.6	
10	1152	1154	1204	1-	1					1	1152E		6961
10	1222	1227	1249	1	1		1				1215		6963
10	1252	1255	1313	1-	5		3	1	1	4	1250	C9.7	6963
10	1425	1428	1440	1-	1					1	1425		6961
10	1548	1552	1602	1-	1					1	1556		6961
10	1630	1634	1659	1+	3					2	1632	C6.7	6963
10	1812	1815	1840	1+	1					1	1812	C7.4	6963
10	1841	1843	1857	1-	1					1	1840	C7.6	6961
10	1948	1952	2013	1	1					1	1940	C7.2	6961
10	2111	2112	2130U	1	1					1	2112	C4.8	6961
10	2259	2307	2323	1-	1			1			2245	C6.1	
11	0033	0038	0120	1-	1			1			0031	C4.0	
11	0204	0216	0228	1-	1			1			0155		6963
11	0555	0609	0712	1-	1			1			0553	C5.4	6952
11	0814	0826	0851	1-	5			1		1	0808	C4.8	6968
11	0927	0937	1000	2	1					1	0925	C3.5	
11	1127	1135	1207	1-	5	1	3	1	1	5	1127	C6.4	6958
11	1227	1233	1300	2	1					1	1227		6958
11	1505	1513	1638	1+	5	1	2	1	1	11	1505E	M4.0	6966
11	1831	1832	1848	1-	3					2	1830	C5.7	
11	1912	1915	1927	1-	1					1	1914	C3.0	6958
11	2103	2106	2200	1+	5	1		1		4	2102	M2.1	6958
11	2226	2234	2314	1-	1			1			2226	C4.4	
11	2359	2405	2425	1-	1			1			No flare		
12	0114	0115	0145U	1+	1					1	0116	C2.6	6958
12	0300	0315	0443	3-	3	1		1			0257	M1.1	6966
12	0420	0429	0434	1-	1	1					0429		6966
12	0451	0456	0504	1-	1			1			No flare		
12	0511	0516	0608	1-	1			1			0510	C4.2	
12	0636	0641	0705	1-	1			1			0633	C3.7	
12	0727	0731	0748	1-	1			1			0728	C2.5	6966
12	0955	1005	1030	1+	1		1				1000E		
12	1022	1031	1128	1-	5		1	1		2	1019	C6.7	6958
12	1132	1134	1142	1-	1					1	No flare		
12	1147	1151	1206	1-	1					1	No flare		
12	1629	1637	1700D	1+	1						1636		6966
12	1705	1711	1743	1-	5			1		9	1704	M1.3	6958
13	0048	0057	0135	1-	1			1			0042	C5.1	6968
13	0304	0322	0344	1-	1			1			No flare		
13	0350E	0400	0618	3	5	1		1		2	0350	M2.9	6952
13	0618	0627	0706	1-	1			1			No flare		
13	0801	0806	0824	1-	1			1			0801	C3.6	6961
13	1255	1300	1329	1	1		1				1256	C3.6	6958
13	1327	1329	1345	1-	1					1	No flare		
13	1423	1429	1453	1+	5					4	1428E	C4.6	6961
13	1615	1630	1730	2+	1					1	1529	C7.0	
13	1749	1752	1812	1	3					2	1752	C5.7	6958
14	0103	0109	0231D	1	5	1		1		1	0102	C9.0	6961
14	0231E	0240	0307	1-	1			1			0229	C2.6	
14	0549	0557	0706D	2	3	1		1			0548	C8.1	
14	0706E	0720	0936	3-	5	1		1		1	0704E	M1.4	6958
14	0946	0954	1005	1-	5			1		1	0945		6961

* = no flare patrol.

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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
14	1448	1454	1535	1	5		3	1	1	9	1447	M1.6	
14	1645	1703	1731	2+	1					1	1655		
14	1901	1905	1915	1-	1					1	1906	C2.6	6961
14	1922	1924	1933	1-	3					2	1922	C3.5	
14	2054	2101	2227	2	5	1		1		5	2053	M2.0	
15	0001	0004	0021	1-	5			1		1	*		
15	0047	0104	0151	1-	1			1			0040	C4.2	6961
15	0205	0210	0235	1-	1			1			0201	C3.5	
15	0241	0248	0354	2	5	1		1		1	0239	M1.2	
15	0506	0514	0528D	1-	1			1			0508	C2.7	
15	0528E	0557	0624D	1	5			1		1	0528	C3.5	6961
15	0624E	0628	0759	3-	5	1		1		1	0623	M1.4	
15	1016	1031	1038	1-	5		2	1	1	3	1018	C5.9	6961
15	1136	1151	1214	1-	5		3	1	1	3	1138	C8.6	
15	1215	1218	1230	1-	3				1	3	1214		6961
15	1246	1250	1308	1	5					2	1248		6968
15	1257	1301	1321	1-	1					1	1255	C2.7	6961
15	1355	1400	1420D	1-	5		2	1	1	7	1357	C6.0	
15	1420E	1431	1515	1	5		1	1	1	8	1419	M1.0	6961
15	1430	1438	1454	1	5					2	1419	M1.0	6961
15	1525	1529	1547	1	3					3	1529	C3.0	6961
15	1759	1800	1812	1-	3					4	1758	C4.0	
15	1829	1831	1904	2-	3					9	1829E	M1.4	
15	1918	1921	1936D	1-	1					1	1923		6961
15	1938	1940	1953	1-	3					3	1937	C3.9	
15	2002	2005	2021	1-	5			1		3	No flare		
15	2115	2120	2133	1-	1					1	2118		6972
15	2203	2210	2223	1-	1			1			2203		6961
15	2236	2240	2303	1-	1			1			2233	C3.6	
16	0057	0107	0157	1	3	1		1			0050E	C7.5	6966
16	0200	0206	0219D	1-	1			1			0200	C2.7	
16	0219E	0224	0258	1-	1			1			0217	C3.4	
16	0312	0318	0435	2-	3	1		1			0313	C7.8	6972
16	0447	0501	0636D	3	3	1		1			0447	C7.4	6972
16	0636E	0643	0816	3	3	1		1			0634	M1.6	6972
16	0640E	0720D	0720	1+	1		1				0634	M1.6	6972
16	1151	1158	1216	1	3		1			1	1157	M1.2	
16	1200	1208	1228D	1+	5		3	1	1	3	1157	M1.2	
16	1228E	1300	1500	1+	1			1			1211	M3.2	
16	1304	1321	1351	1+	5		1			1	1211	M3.2	
16	1511	1515	1540	1+	3					2	1510E		6961
16	1700	1715	1735	2	1					1	*		
16	1924	1928	2027	2-	5	1		1		6	1922	M6.9	
16	1935	1944	2026	2+	3					2	No flare		
16	2205	2209	2247	1-	5			1		1	2205	C7.4	6972
17	0341	0348	0421	1-	3	1		1			0338	C2.4	
17	0622	0632	0811	3	5	1		1		1	0619	M2.8	6961
17	0639E	0642	0652	1-	1	1					0619	M2.8	6961
17	0825	0836	0852	1-	1			1			No flare		
17	1312	1327	1347	1-	1			1			*		
17	1516	1533	1557	1-	5			1		4	1518	C4.9	
17	1719	1723	1753	1+	3					4	1716E	C3.8	6972
17	1928	1939	2015	2-	3					3	1929	C9.6	6961
17	2145	2153	2226	1-	1			1			2155E	C5.5	6972
18	0037	0039	0052	1-	1			1			*		
18	0233	0250	0411	1-	1			1			0231	C4.0	
18	0433	0439	0504D	1-	1			1			0432	C3.8	
18	0504E	0510	0552	1-	1			1			0500		6966
18	0722	0739	0806	1-	1			1			0714	C3.2	
18	0808	0810	0828	1	1		1				0808		6972
18	1001	1009	1052	1+	5	1	1				1013	M3.5	
18	1032E	1032	1150	3-	5	1	3	1	1	5	1013	M3.5	
18	1222	1229	1251	1-	5		2	1	1	2	1217	C4.4	6966

* = no flare patrol.

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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
18	1326	1330	1351	1	5					2	1331	C4.8	6972
18	1339	1351	1410	1-	5		1	1			1331	C4.8	6972
18	1359	1414	1414D	2	1					1	No flare		
18	1652	1658	1715	1-	5			1		6	1651	C5.2	6966
18	2201	2213	2248	1-	5			1		1	2204	C6.2	
19	0053	0058	0122	1-	1			1			0050	C3.2	
19	0133	0141	0141D	1-	1			1			*		
19	0352	0357	0420	1-	1			1			0351	C2.7	
19	0434	0444	0524D	1-	1			1			*		
19	0524E	0527	0559	1-	1			1			*		
19	0647	0653	0714	1-	1			1			0646	C2.7	
19	0749	0804	1001	3	3	1		1		1	0747	M1.5	6972
19	0840	0843	0900	1	1		1				0830	C5.0	
19	1258	1308	1316	1-	1					1	1258	C3.1	
19	1906	1908	1922	1-	1					1	1907	C3.3	6978
19	1948	1950	2010	1	3					4	1943	C3.6	
20	0253	0303	0323	1-	1			1			No flare		
20	0332	0345	0414	1-	1			1			No flare		
20	1046	1102	1152	1+	5		2	1	1	2	1042	C7.3	6972
20	1400	1414	1703	3	5	3	4	1	1	11	1400	X3.5	6982
20	1855	1901	1921	1	1					1	1843	C7.2	
20	2331	2336	2351	1-	1			1			2327	C4.0	
21	0240	0251	0351	2	3	1		1			0240	C5.0	
21	0413	0427	0626	3	5	1		1		1	0412	C9.8	
21	0655	0704	0733	1-	1			1			*		
21	0806	0822	0910	1	5			1		3	0813	C5.2	6966
21	0913	0917	0940	1	1					1	No flare		
21	0954	0959	1030	1	1					1	No flare		
21	1042	1058	1130	2-	5	1	2	1	1	4	1044	C9.6	
21	1115	1130	1145	1	1		1				No flare		
21	1145	1154	1214	1	3				1	2	1145	M1.6	
21	1148	1212	1259	2-	5		2	1	1	4	1145	M1.6	
21	1316	1326	1348	1+	5					2	1317	C5.6	
21	1502	1513	1555	1-	5			1		5	1505	C7.5	6972
21	1605	1613	1624	1	5					2	1605	C5.3	
21	1802	1817	1853	2	3					9	1751	M1.6	
21	2056	2100	2131	2	3					2	2054	C4.4	
21	2215	2230	2315	1-	1			1			2214	C4.4	
22	0114	0126	0200	1-	3	1		1			0112	C3.9	
22	0353	0403	0424	1-	1			1			0352	C2.8	
22	0527	0542	0725	2+	5			1		1	0526	C6.8	
22	0752	0802	0833	1-	5			1		2	0751	C3.3	
22	0912	0922	1055D	2+	5	1	4	1	1	6	0911	M1.4	
22	1057E	1114	1200	1-	5			1	1	5	1048	C9.5	
22	1134	1140	1221	1	1					1	*		
22	1244	1251	1311	1	5					3	1243	C3.7	
22	1251	1303	1323	1-	1			1			1243	C3.7	
22	1351	1353	1403D	1-	1					1	1352		
22	1406	1416	1434	1+	5					2	1404	C4.4	
22	1650	1703	1827	1+	5			1		7	1649	M8.5	
22	1738	1741	1800	1	1					1	1739		6982
22	2037	2042	2106	1+	3					4	2036	C5.4	
22	2241	2302	2339	1-	1			1			2258	C5.9	6985
23	0007	0035	0141D	2	3	1		1			0021	M1.0	
23	0141E	0148	0204	1-	1			1			No flare		
23	0530	0532	0550	1-	1	1					*		
23	0604	0613	0735D	1+	1			1			0603	C7.0	
23	0734	0746	0759	1-	5			1		1	No flare		
23	1111	1131	1340	3	1					1	1118		6982
23	1116	1143	1408	2+	5		2	1			1118		6982
23	1229	1244	1310	2	1					1	1152E	M4.7	6982
23	1701	1705	1715	1-	1					1	1703		6978

* = no flare patrol.

DECEMBER 1991

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
23	1739	1741	1753	1-	3					2	1740	C5.1	6972
23	2134	2142	2240	2+	5	1		1		5	2132	M4.5	
24	0031	0044	0049	1-	1	1					*		
24	0108	0121	0130	1	1	1					No flare		
24	0219	0236	0307D	2+	3	1		1			0212	M1.1	6982
24	0308E	0313	0352	3	5			1		2	0305	M3.4	
24	0603	0650	0740	1-	1			1			0639	C4.6	
24	0745	0810	0835	2-	1		1				No flare		
24	1011	1033	1157	3	5	1	3	1	1	7	1013	X1.4	6982
24	1537	1540	1554	1-	3					2	1533	C2.9	6982
24	1606	1618	1704	1-	5			1		4	1614	M1.1	
24	1832	1835	1905	1+	3					2	1834	C4.5	6988
24	2015	2018	2028	1-	1					1	2009	C2.9	
24	2248	2256	2331	1-	5			1		1	2255	C5.4	6988
25	0110	0118	0214D	2	3	1		1			0108	C7.5	
25	0214E	0220	0237D	1-	1			1			*		
25	0237E	0243	0310D	1-	1			1			*		
25	0310E	0317	0331	1-	1			1			*		
25	0356	0405	0416	1-	1			1			No flare		
25	0425	0428	0437	1-	1			1			No flare		
25	0721	0727	0739	1-	5			1		1	0721	C2.5	6982
25	1008	1036	1055D	1+	5			1	1	2	1011E	C9.1	6988
25	1055E	1109	1149	1+	5		2	1	1	5	1054	M1.1	
25	1156	1200	1207	1	1	1				1	*		
25	1207	1215	1230	1-	1		1		1		*		
25	1252	1258	1325	1	3					2	1255E	M1.4	6985
25	1254	1308	1358	2-	5		3	1	1	3	1255E	M1.4	6985
25	1427	1431	1507	1+	3					2	1437	M1.2	6982
25	1436	1449	1535	1-	5		1	1		8	1437	M1.2	6982
25	1454	1500	1541	2+	1					1	*		
25	2316	2319	2346	1-	1			1			2317E	C6.7	6982
26	0049	0053	0138	1	3	1		1			0048	C9.4	
26	0142E	0150	0216	1-	1			1			*		
26	0357	0408	0422	1-	1			1			0341		6985
26	0425	0433	0453D	1	5	1		1		2	0427	C5.4	6982
26	0453E	0503	0549	2-	5	1		1		2	0449	C5.2	6985
26	0618	0626	0633D	1-	5			1		1	0617	C2.9	
26	0633E	0649	0732D	3	5	1		1		3	0617	C2.9	
26	0732E	0742	0837D	3	5	1		1		3	0729	M2.9	6982
26	0837E	0842	0909	1-	5			1	1	3	0839	C7.3	6988
26	0933	0949	1046D	2+	5		1	1	1	6	0921	M1.4	6985
26	1046E	1057	1148	2+	5	1	2	1	1	5	1047	M4.6	
26	1207	1211	1218	1-	1					1	1204	C3.6	6982
26	1229	1230	1245U	1-	1					1	1231	C2.4	
26	1247	1305	1335	2-	1		1				No flare		
26	1334	1342	1428	1-	5			1	1	4	1333	C4.9	6982
26	1355	1405	1415	1	1		1				No flare		
26	1433	1444	1520	1-	5			1		7	1431	C7.0	6988
26	1458	1500	1511	1-	5					5	1458		6982
26	1607	1609	1619	1-	1					1	1607	C3.5	
26	1716	1723	1758	1-	5			1		8	1714	M1.9	
26	1831	1833	1845	1-	3					2	1833	C3.2	
26	2032	2038	2059	1-	5			1		2	2040	C5.7	
26	2134	2149	2318	3-	5	2		1		4	2137E	M4.2	6985
27	0001	0009	0021	1-	1			1			*		
27	0130	0139	0152	1-	1			1			*		
27	0246	0249	0307D	1-	1			1			0246		6982
27	0307E	0316	0430	3	5	1		1		1	0305	M1.5	6982
27	0521	0530	0602D	1-	1			1			*		
27	0602E	0620	0758	3	5	1		1		3	0603	M2.1	
27	0837	0845U	0905	1	1		1				*		
27	0913	0914	0936	1	3				1	4	0911	C7.5	
27	1107	1118	1217	2-	5	1		1	1	5	1106	M1.3	

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

DECEMBER 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
27	1630	1633	1650	1-	3					5	1629	C3.0	
27	1712	1732	1801	1-	5			1		8	1712	M2.3	6982
27	2251	2253	2305	1-	1			1			2251	C2.3	6982
28	0049	0058	0109	1-	1			1			No flare		
28	0349	0404	0427	1-	1			1			0348	C3.3	
28	0444	0456	0548	1	1			1			0444	C4.6	
28	0849	0852	0859	1-	5			1		1	0848	C2.8	
28	0909	0912	0922	1-	5			1		2	0908	C2.9	
28	0949	0952	1038	2+	1					1	0951E		6988
28	1035	1046	1128	1-	5		1	1	1	3	1038	C7.5	
28	1150	1200	1220	1	1		1				No flare		
28	1225	1234	1358	2	5	2	3	1	1	6	1223	M3.3	
28	1324	1328	1336	1	1		1				No flare		
28	1531	1540	1633	2	3					4	No flare		
28	1608	1612	1636	1+	3					2	1606	C4.6	6982
28	1708	1715	1729	1	1					1	1704		6988
28	1804	1808	1825	1-	3					5	1804	C4.6	6985
28	1823	1824	1844	1	3					3	1823	C5.2	6982
28	1938	1957	2048	2	3					2	No flare		
28	2047	2057	2135D	1-	5			1		2	2108	M7.8	6982
28	2109	2113	2148D	2+	5	1		1		2	2108	M7.8	6982
28	2145E	2319	2319D	3-	5	1		1			2148	M2.7	6982
29	0604	0613	0638	1-	1			1			0550	C3.8	
29	1122	1124	1133	1-	1					1	1121	C2.4	
29	1203	1212	1241	1-	5		2	1	1	3	1157	C8.4	6982
29	1322	1328	1346	1	1					1	1321	C2.9	
29	1535	1536	1544	1-	1					1	1533		6982
29	1559	1605	1613	1-	5			1		6	1558	C5.3	6982
29	1911	1918	1945	2	1					1	No flare		
29	2047	2053	2115	1+	1					1	2046	C6.3	
29	2120	2126	2143	1	1					1	2111		6982
29	2135	2148	2231	1-	1			1			No flare		
29	2333	2347	2347D	1-	1			1			2331	C5.2	
30	0131	0137	0204	1-	1			1			0130	C3.6	6985
30	0308	0318	0338	1-	1			1			0247	C3.0	
30	0454	0509	0546D	2	3	1		1			0455	C6.1	6988
30	0546E	0630	0740	2	1			1			0545	C6.6	
30	0914	0920	1120	2	1					1	No flare		
30	0952	1000	1006D	1-	5			1		1	0953	M4.6	6985
30	1006E	1023	1123	3-	5	2	3	1	1	5	0953	M4.6	6985
30	1216	1242	1403	2	5	1	4	1	1	6	1215	M2.1	6985
30	1445	1447	1505	1	1					1	1442		6985
30	1515	1515	1530	1-	1					1	1516	C5.3	6985
30	1543	1551	1650	2+	1					1	1555E		6988
30	1612	1627	1646D	1-	5			1		2	1616	M3.4	
30	1646E	1655	1747	1-	5		1	1		4	1655		6985
30	1845	1852	1916	1+	3					3	1844	C8.2	
30	1918	1936	2050	2	3					4	1848	M2.7	6988
30	2059	2100	2110	1-	3					2	2058	C5.4	
30	2122	2123	2137U	1-	1					1	2103		6982
30	2305	2311	2427D	3-	5	2		1		1	2302	M4.6	6985
31	0023E	0040	0115D	1+	5			1		1	0025	C8.0	
31	0114E	0121	0153D	1+	3	1		1			0113	C8.8	
31	0130	0137	0155	1-	1	1					0130	C9.9	
31	0152E	0205	0320D	1+	3	1		1			0130	C9.9	
31	0322	0328	0453	3	3	1		1			0318	M4.8	
31	0520	0528	0546	1-	1	1					0518	C3.2	
31	0537	0547	0612	1-	1			1			0518	C3.2	
31	0748	0757	0908	3	5	1	1	1		1	0747	M2.2	
R1	0931	0937	0951	1-	1			1			*		
31	1023	1033	1124	2-	5		2	1	1	4	1021	M1.2	
31	1124	1135	1153	1-	5		1	1	1	3	1122	C4.5	
31	1206	1212	1254	1-	5		2	1	1	3	1207	C6.8	

* = no flare patrol.

DECEMBER 1991

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
31	1242	1250	1250D	2	1					1	1247	C3.7	
31	1305	1308	1321	1	1					1	1305	C3.1	
31	1448	1452	1510	1-	5			1		3	1443	C5.4	
31	1540	1555	1647	1	5			1		4	1537	M2.8	6988
31	2226	2231	2243D	1-	1			1			2239	C5.2	6985
31	2243E	2251	2340	1-	5	1		1		1	2239	C5.2	6985
31	2350	2358	2411D	1	5	1		1		1	2351	C7.0	6988

* = no flare patrol.

OBSERVATORIES REPORTING FOR DECEMBER 1991

Amherst, New Hampshire, USA	SES	Locust Grove, Georgia, USA	SES
Athens, Georgia, USA	SES	Madison, Wisconsin, USA	SES
Ayrshire, Scotland	SES	Manahawkin, New Jersey, USA	SES
Boksburg, Rep of S. Africa	SES	Maui, Hawaii, USA	SWF
Cleveland, Ohio, USA	SES	Nerja, Spain	SES
Edenvale, Rep of S. Africa	SES	Panska Ves, Czechoslovakia	SES, SEA, SWF
Farsta, Sweden	SES	Paterson, New Jersey, USA	SES
Gettysburg, Pennsylvania, USA	SES	Piscataway, New Jersey, USA	SES
Hiraiso, Japan	SWF	Rochester, New Hampshire,USA	SES
Houston, Texas, USA	SES	San Francisco, California, USA	SES
Hudson, Ohio, USA	SES	Shaker Heights, Ohio, USA	SES
Inubo, Japan	SPA	Sofia, Bulgaria	SES
Johannesburg, Rep of S. Africa	SES	Tucson, Arizona, USA	SES
Juliusruh, Germany	SWF	Upice, Czechoslovakia	SEA
Kandilli, Turkey	SEA	Vlasim, Czechoslovakia	SEA
Kuhlungsborn, Germany	SEA, SPA	Windsor Locks, Connecticut, USA	SES
LaCrescenta, California, USA	SES		

Observations are not necessarily continuous.

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

DECEMBER 1991

Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band Start (UT)	End (UT)	Int (1-3)	Metric Band Start (UT)	End (UT)	Int (1-3)	Dekametric Band Start (UT)	End (UT)	Int (1-3)	Spectral Type
01			LEAR				0017.0	0023.0	3				III
			PALE				0018.0	0023.0	2				V
	0000	0721	CULG				0018.5	0024.0	2				IIIGG
			CULG				0027.0	0029.0	1				II B
			LEAR				0136.0	0137.0	2				III
			CULG				0137.0	0137.0	1				IIIB
			LEAR				0159.0	0200.0	2				III
			LEAR				0238.0	0239.0	1				III
			CULG				0239.0	0239.0	1				IIIB
			LEAR				0255.0	0257.0	2				III
			CULG				0256.0	0305.0	1				IIIN
			LEAR				0300.0	0304.0	2				III
			CULG				0416.0	0445.0	1				IIIN
			LEAR				0416.0	0417.0	2				III
			LEAR				0416.0	0441.0	2				S
			LEAR				0435.0	0437.0	3				III
			LEAR				0443.0	0445.0	3				III
			LEAR				0543.0	0544.0	2				III
			LEAR				0547.0	0548.0	2				III
			CULG				0559.0	0559.0	1				IIIPAIR
	0735	1500	WEIS				0808.0	1505.0	3				I,N
			LEAR				0904.0	0905.0	2				III
	0810	1303	ONDR				0918.4	1140.0	1				IN
			WEIS				1359.8	1400.0	2				IIIG
			PALE				1903.0	1915.0	2				III
			SGMR				1903.0	1912.0	2				III
	2021	2400	CULG										
02			LEAR				0020.0	0020.0	1				III
			LEAR				0149.0	0213.0	2				S
			LEAR				0241.0	0242.0	2				III
			PALE				0241.0	0241.0	1				III
	0000	0721	CULG				0242.0	0242.0	1				IIIB
	0812	0837	ONDR										
	0737	1504	WEIS				1113.0	1400.0	2				I,N
	1024	1303	ONDR				1115.0	1303.0	1				IN
			WEIS				1133.7	1133.8	1				IIIB
			PALE				2009.0	2011.0	1				III
			PALE				2112.0	2113.0	1				III
	2021	2400	CULG				2251.0	2251.0	1				IIIB
			CULG				2333.0	2335.5	1				UNCLF
			LEAR				2333.0	0037.0	1				CONT
			LEAR				2355.0	2355.0	2				III
			CULG				2356.0	2356.0	1				IIIB
03			LEAR				0005.0	0007.0	2				III
	0000	0722	CULG				0006.0	0009.5	1				IIIG
			LEAR				0028.0	0028.0	2				III
			LEAR				0209.0	0212.0	2				V
			CULG				0210.5	0210.5	1				IIIB
			CULG				0318.0	0318.0	1				IIIB
			LEAR				0319.0	0320.0	2				III
			CULG				0320.0	0320.0	1				IIIB
			LEAR				0343.0	0343.0	1				III
			LEAR				0425.0	0434.0	1				III
			LEAR				0450.0	0513.0	2				S
			CULG				0451.0	0451.0	1				IIIB
			CULG				0513.0	0514.0	1				IIIG
			LEAR				0620.0	0714.0	3				S
			CULG				0621.0	0635.0	1				IIIN
			SVTO				0629.0	0630.0	2				III
			WEIS				0816.0	1222.0	1				I,N
	0814	1302	ONDR				0819.2	1302.0	1				IN
			LEAR				0928.0	0931.0	1				III
			WEIS				0928.4	0931.4	2				IIIG
			WEIS				1326.1	1329.3	3				IIIG
			SGMR				1328.0	1329.0	2				V
	2021	2400	CULG										

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

DECEMBER 1991

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
04			LEAR				0033.0	0033.0	2				III
	0000	0721	CULG				0125.0	0128.5	1				IIIGG
	0739	1140	WEIS				0940.0	1041.0	1				I,N
	0816	1304	ONDR				0952.0	1304.0	1				IN
			WEIS				1135.3	1135.6	3				IIIG
	1148	1504	WEIS				1203.7	1204.6	2				IIIG
			WEIS				1334.0	1340.0	1				I
			WEIS				1407.1	1407.1	2				IIIG
	2052	2400	CULG				2348.0	2349.0	1				IIIB
05	0000	0721	CULG										
	0817	1304	ONDR										
	0740	1503	WEIS				0946.1	0946.3	2				IIIB
			SVTO				1404.0	1405.0	2				III
			WEIS				1404.3	1404.7	2				IIIG
			PALE				1949.0	1953.0	1				III
	2023	2400	CULG										
06			LEAR				0115.0	0118.0	2				III
	0000	0710	CULG				0115.5	0117.0	2				IIIG
			LEAR				0225.0	0233.0	1				III
	0819	1303	ONDR										
	0743	1503	WEIS				1137.4	1137.5	1				IIIB
			SVTO				1141.0	1151.0	2				III
			WEIS				1141.7	1144.9	1				IIIG
	2150	2400	CULG										
07			LEAR				0221.0	0221.0	2				III
			LEAR				0252.0	0302.0	2				III
	0000	0723	CULG				0332.0	0332.5	1				IIIB
	0820	1303	ONDR	1238.3	1239.5	2	1238.3	1239.5	2				IIIG,B
	0743	1503	WEIS				1238.4	1239.5	2				IIIG
			WEIS				1421.5	1424.0	1				IIIG
			SGMR				1733.0	1734.0	2				V
			PALE				1802.0	1802.0	1				III
			SGMR				1802.0	1802.0	1				V
			PALE				1923.0	1929.0	2				III
			PALE				1952.0	1959.0	2				III
			PALE				1958.0	2000.0	2				V
			SGMR				1958.0	2000.0	2				III
	2023	2400	CULG				2048.5	2049.0	1				IIIG
			PALE				2135.0	2135.0	1				III
			CULG				2135.5	2136.0	1				IIIB
			CULG				2141.5	2142.5	2				IIIG
08			LEAR				0041.0	0042.0	2				III
			PALE				0041.0	0042.0	1				III
	0000	0720	CULG				0041.5	0042.5	1				IIIG
			LEAR				0321.0	0819.0	1				CONT
			CULG				0712.0	0712.5	1				IIIB
			LEAR				0712.0	0713.0	2				III
	0822	1304	ONDR										
	0744	1501	WEIS				0843.2	0843.4	2				IIIG
			WEIS				1036.7	1036.7	1				IIIG
	2025	2400	CULG										
			LEAR				2248.0	0300.0	1				CONT
			PALE				2248.0	0145.0	1				CONT
09			LEAR				0154.0	0154.0	2				III
			PALE				0154.0	0154.0	1				III
			LEAR				0414.0	0414.0	1				III
	0000	0720	CULG				0415.0	0415.5	1				IIIB
			LEAR				0428.0	0429.0	2				III
			CULG				0428.5	0429.0	1				IIIB
			CULG				0429.0	0429.5	1				IIIB
			LEAR				0537.0	0538.0	2				III
			CULG				0538.5	0539.0	1				IIIG
	0824	1304	ONDR										
	1107	1503	WEIS										

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

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Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
09	0747	1059	WEIS				1358.4	1402.2	2				IIIG
			SGMR				1359.0	1402.0	1				III
			PALE				2105.0	2105.0	1				III
	2025	2400	CULG				2105.5	2106.0	1				IIIPAIR
			LEAR				2154.0	2206.0	1				S
			PALE				2154.0	2156.0	1				III
			CULG				2154.5	2156.0	1				IIIG
			CULG				2206.0	2206.5	1				IIIG
			CULG				2239.0	2239.0	1				IIIB
			LEAR				2242.0	2242.0	2				III
			PALE				2242.0	2242.0	1				III
			CULG				2242.5	2242.5	1				IIIB
			LEAR				2311.0	2312.0	1				III
			CULG				2312.0	2312.0	1				IIIB
			LEAR				2321.0	2321.0	2				III
			PALE				2321.0	2338.0	2				S
			CULG				2322.0	2322.0	1				IIIB
			LEAR				2336.0	2342.0	3				III
			CULG				2337.0	2339.0	1				IIIGG
			CULG				2341.0	2342.0	1				IIIG
10	0000	0725	CULG				0001.0	0002.0	2				IIIG
			LEAR				0034.0	0035.0	2				III
			CULG				0035.0	0035.0	1				IIIG
			LEAR				0105.0	0111.0	2				III
			CULG				0106.0	0111.0	1				IIIG
			LEAR				0223.0	0237.0	2				S
			CULG				0237.5	0237.5	1				IIIB
			LEAR				0309.0	0310.0	1				III
			CULG				0310.0	0310.5	1				IIIB
			LEAR				0349.0	0350.0	1				III
			LEAR				0431.0	0432.0	1				III
			CULG				0432.0	0432.0	1				IIIB
			CULG				0513.5	0515.0	1				IIIG
			LEAR				0514.0	0526.0	2				S
			LEAR				0626.0	0643.0	2				S
			LEAR				0651.0	0747.0	3				S
			CULG				0652.0	0654.5	1				IIIG
			SVTO				0708.0	0719.0	2				S
			CULG				0710.0	0712.0	1				IIIG
			CULG				0719.0	0720.0	1				IIIG
	0825	1303	ONDR				0832.5	1303.0	1				IN
			ONDR	1016.1	1016.3	2							IIIG,B
	0746	1503	WEIS				1100.3	1100.5	1				IIIG
			SVTO				1104.0	1106.0	2				III
			WEIS				1104.2	1106.5	3				IIIG,RS
			ONDR	1104.5	1104.7	2	1104.2	1106.6	3				IIIGG
			SGMR				1539.0	1539.0	1				III
			SGMR				1550.0	1551.0	1				III
			SGMR				1635.0	1635.0	1				III
	2030	2400	CULG				2121.0	2129.0	1				IIIN
			PALE				2127.0	2129.0	1				III
			CULG				2204.0	2205.5	1				IIIG
			CULG				2228.0	2228.0	1				IIIB
			LEAR				2234.0	2314.0	1				S
			CULG				2239.0	2240.5	1				IIIG
			CULG				2250.0	2250.0	1				IIIB
			PALE				2316.0	2338.0	1				S
			CULG				2319.0	2338.0	1				IIIN
			CULG				2323.0	2323.0	2				IIIB
11	0000	0725	CULG				0004.0	0004.0	1				IIIB
			LEAR				0018.0	0038.0	3				S
			CULG				0022.0	0023.0	1				IIIG
			PALE				0022.0	0028.0	2				III
			CULG				0027.0	0027.0	1				IIIB
			CULG				0039.0	0039.0	1				IIIB
			LEAR				0114.0	0155.0	2				III
			CULG				0115.0	0241.0	1				IIIN

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11			LEAR				0209.0	0258.0	1				S
			CULG				0301.0	0302.5	2				IIIG
			LEAR				0301.0	0311.0	3				III
			CULG				0343.5	0343.5	1				IIIB
			LEAR				0347.0	0413.0	3				S
			CULG				0347.5	0400.0	2				IIIN
			CULG				0413.0	0413.0	1				IIIB
			LEAR				0448.0	0453.0	1				III
			CULG				0451.0	0451.0	1				IIIB
			CULG				0508.0	0508.0	1				IIIB
			CULG				0619.0	0623.0	1				IIIG
			SVTO				0659.0	0659.0	3				III
			CULG				0659.5	0700.0	2				IIIG
			LEAR				0735.0	0739.0	2				III
			LEAR				0811.0	0815.0	3				III
			SVTO				0814.0	0815.0	2				III
	0747	1501	WEIS				0814.7	0815.1	3				IIIG,U
	0826	1303	ONDR				0847.0	1303.0	1				IN
			LEAR				0850.0	0851.0	2				III
			SVTO				0850.0	0850.0	1				III
			WEIS				1035.9	1041.5	3				IIIGG,U
			LEAR				1036.0	1038.0	2				III
			ONDR	1036.0	1038.0	3	1036.0	1038.0	3				IIIGG
			SVTO				1036.0	1041.0	3				III
			ONDR	1038.7	1038.8	3	1038.7	1038.8	3				IIIB
			ONDR	1039.4	1039.5	2	1039.4	1039.5	2				IIIB
			ONDR	1040.5	1040.6	2	1040.5	1040.6	2				IIIB
			ONDR	1041.3	1041.3	3	1041.3	1041.4	3				V
			SVTO				1056.0	1057.0	3				III
			ONDR				1056.4	1056.9	3				IIIG
			WEIS				1056.4	1057.0	3				IIIG,U
			ONDR	1125.5	1128.0	2	1126.8	1128.0	3				IIIGG
			WEIS				1125.8	1129.4	3				IIIGG
			SVTO				1126.0	1130.0	3				V
			SVTO				1148.0	1151.0	2				III
			WEIS				1148.6	1149.1	2				IIIG
			WEIS				1151.3	1151.5	2				IIIG
			ONDR				1204.6	1208.0	2				IIIG
			WEIS				1204.8	1205.2	3				IIIG,U
			SVTO				1205.0	1209.0	2				III
			WEIS				1206.4	1208.3	3				IIIG
			SGMR				1300.0	1301.0	2				III
			WEIS				1300.8	1301.9	3				IIIG
			ONDR				1301.0	1301.6	3				IIIG
			SVTO				1301.0	1302.0	2				III
			WEIS				1332.6	1332.7	1				IIIB
			SGMR				1351.0	1352.0	1				III
			SVTO				1351.0	1352.0	2				III
			WEIS				1451.7	1451.9	3				IIIG,U
			WEIS				1453.7	1454.6	2				IIIG
			SGMR				1509.0	1527.0	2				S
			SGMR				1531.0	1534.0	3				III
			SGMR				1554.0	1557.0	2				III
			PALE				1831.0	1834.0	3				III
			SGMR				1854.0	1855.0	1				III
			PALE				1911.0	1915.0	2				V
			SGMR				1911.0	1914.0	2				III
	2025	2400	CULG				2028.0	2054.0	1				IIIN
			CULG				2047.0	2047.0	2				IIIB
			CULG				2055.0	0256.0	1				IIIG
			PALE				2101.0	0000.0	3				II
			CULG				2102.0	2106.0	2				IIIGG
			CULG				2108.0	2124.0	2				IIIB
			CULG				2157.0	2157.0	1				IIIB
			LEAR				2222.0	2243.0	2				S
			CULG				2223.0	2223.0	2				IIIB
			PALE				2229.0	2230.0	1				III
			CULG				2230.0	2230.0	2				IIIB
			CULG				2254.0	2254.0	1				IIIB

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11			LEAR				2309.0	2309.0	1				III
12			LEAR				0044.0	0135.0	3				S
	0000	0726	CULG				0053.0	0054.0	2				IIIG
			CULG				0107.0	0144.0	1				IIIN
			PALE				0121.0	0122.0	1				III
			LEAR				0139.0	0143.0	3				III
			LEAR				0209.0	0210.0	1				III
			LEAR				0247.0	0328.0	2				S
			CULG				0248.0	0255.0	1				IIIN
			LEAR				0402.0	0434.0	3				S
			CULG				0428.0	0429.0	2				IIIPAIR
			CULG				0434.0	0434.0	1				IIIB
			LEAR				0505.0	0549.0	3				S
			CULG				0511.5	0515.0	2				IIIGG
			CULG				0524.0	0726.0D	1				IIIN
			LEAR				0614.0	0635.0	3				S
			LEAR				0710.0	0754.0	3				S
			SVTO				0724.0	0754.0	2				S
	0750	0922	WEIS				0753.3	0753.5	2				IIIG
			LEAR				0846.0	0849.0	2				III
	0828	1304	ONDR				0902.0	1304.0	1				IN
			LEAR				0929.0	0951.0	2				S
			SVTO				0929.0	0938.0	2				III
			SVTO				0945.0	1153.0	2				CONT
			SVTO				0947.0	0956.0	2				II
	0934	1502	WEIS				0948.1	0953.4	2				IIIG
			LEAR				0951.0	0956.0	2				II
			WEIS				0955.2	0959.2	2				IIIG
			LEAR				0956.0	1042.0	2				IV
			WEIS				1004.1	1010.8	2				IIIG
			ONDR	1016.8	1017.7	1	1016.8	1017.7	1				IIIG
			WEIS				1020.3	1022.9	2				IIIG
			ONDR				1020.7	1020.9	3				IIIG
			WEIS				1054.2	1054.3	1				IIIB
			WEIS				1100.0	1300.0	1				I,N
			WEIS				1114.7	1115.1	2				IIIG
			WEIS				1120.7	1120.9	2				IIIG
			WEIS				1122.2	1122.7	1				IIIG
			ONDR	1122.5	1122.6	1							IIIG
			WEIS				1133.3	1133.6	2				IIIG
			WEIS				1140.7	1141.7	1				IIIG
			ONDR	1141.5	1141.7	1	1141.5	1141.7	1				IIIG
			WEIS				1147.7	1148.3	3				IIIG,RS
			ONDR				1147.8	1148.1	3				IIIG
			WEIS				1150.7	1151.2	3				IIIG
			SGMR				1319.0	1320.0	1				III
			WEIS				1319.8	1321.5	3				IIIG
			SVTO				1320.0	1321.0	2				III
			WEIS				1329.7	1329.9	2				IIIG
			SGMR				1411.0	1412.0	1				III
			WEIS				1433.2	1433.7	2				IIIG
			SGMR				1636.0	1637.0	2				V
			SGMR				1736.0	1737.0	1				III
			PALE				1929.0	1931.0	1				V
			SGMR				1930.0	1932.0	2				V
			PALE				2005.0	2006.0	1				III
	2028	2400	CULG				2054.5	2057.0	1				IC
			PALE				2056.0	2110.0	2				S
			CULG				2103.0	2111.0	1				IIIGG
			CULG				2154.0	2156.0	1				IIIG
			PALE				2154.0	2155.0	1				III
			CULG				2205.0	2207.0	1				IIIG
			LEAR				2206.0	2236.0	1				S
			PALE				2206.0	2207.0	1				III
			CULG				2322.0	2326.0	1				IIIGG
			LEAR				2327.0	0026.0	2				S
			CULG				2328.0	2329.0	1				IIIG

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13			LEAR				0037.0	0042.0	1				III
	0000	0402	CULG				0059.0	0100.0	1				IIIG
			LEAR				0059.0	0128.0	2				S
			PALE				0208.0	0209.0	1				III
			CULG				0209.0	0210.0	2				IIIB
			LEAR				0209.0	0308.0	3				S
			CULG				0236.0	0236.5	2				IIIG
			CULG				0245.0	0246.0	1				IIIB
			CULG				0257.0	0258.0	1				IIIG
			LEAR				0316.0	0341.0	3				S
			CULG				0335.5	0336.0	1				IIIB
			LEAR				0413.0	0507.0	2				S
			LEAR				0531.0	0554.0	2				S
			LEAR				0708.0	0803.0	3				S
			SVTO				0715.0	0718.0	1				III
	0749	1502	WEIS				0753.0	1320.0	1				I,N
			SVTO				0754.0	0756.0	1				III
			WEIS				0800.4	0802.4	3				IIIGG
			SVTO				0801.0	0803.0	3				V
	0829	1303	ONDR				0843.5	1303.0	1				IN
			WEIS				0906.8	0907.0	2				IIIG
			LEAR				0907.0	0910.0	3				III
			ONDR	0907.4	0907.5	3	0907.4	0907.5	3				IIIG
			WEIS				0909.8	0910.3	2				IIIG
			SVTO				0910.0	0910.0	2				III
			LEAR				0941.0	0942.0	2				III
			WEIS				1015.9	1016.2	1				IIIB
			LEAR				1016.0	1042.0	2				S
			SVTO				1016.0	1107.0	2				S
			WEIS				1021.9	1022.6	1				IIIG
			WEIS				1024.3	1026.3	2				IIIG
			ONDR				1032.9	1033.0	3				IIIG
			WEIS				1032.9	1033.4	3				IIIG
			SVTO				1050.0	1054.0	3				V
			WEIS				1051.4	1054.1	3				IIIGG
			ONDR	1052.3	1054.1	2	1052.3	1054.1	2				IIIGG,P
			WEIS				1106.9	1107.2	2				IIIB
			WEIS				1206.3	1206.4	1				IIIB
			WEIS				1208.4	1208.7	1				IIIG
			WEIS				1221.2	1221.3	2				IIIG
			SGMR				1301.0	1301.0	1				III
			WEIS				1307.6	1308.9	2				IIIG
			WEIS				1337.3	1337.6	1				IIIB
			SGMR				1416.0	1416.0	1				III
			SGMR				1425.0	1427.0	1				V
			WEIS				1425.4	1427.6	3				IIIGG,SP
			SGMR				1727.0	1727.0	2				III
			PALE				2004.0	2019.0	2				S
			SGMR				2018.0	2019.0	1				III
	2013	2400	CULG				2019.0	2020.0	1				IIIB
			PALE				2202.0	2210.0	1				III
			LEAR				2206.0	2211.0	2				III
			CULG				2206.5	2207.0	1				IIIB
			CULG				2209.5	2210.0	1				IIIG
			CULG				2325.0	2326.0	1				IIIG
14	0000	0728	CULG				0012.0	0013.5	2				IIIG
			LEAR				0012.0	0013.0	2				III
			CULG				0027.5	0028.0	1				IG
			CULG				0039.0	0040.0	1				IB
			LEAR				0039.0	0040.0	2				III
			CULG				0048.0	0051.0	2				IG
			LEAR				0101.0	0107.0	3				III
			CULG				0101.5	0105.0	3				IIIB
			PALE				0102.0	0104.0	1				III
			PALE				0103.0	0117.0	1				II
			CULG				0107.0	0120.0	3				II B
			LEAR				0107.0	0119.0	2				II
			LEAR				0145.0	0145.0	2				III

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14			LEAR				0217.0	0551.0	1				CONT
			LEAR				0242.0	0243.0	2				III
			LEAR				0329.0	0330.0	2				III
			LEAR				0359.0	0401.0	3				III
			CULG				0400.0	0401.5	2				IIIG
			LEAR				0408.0	0559.0	2				S
			CULG				0409.0	0410.0	2				IIIG
			CULG				0415.0	0456.0	1				IIIS
			CULG				0545.0	0551.0	3				IIIB
			LEAR				0548.0	0551.0	3				V
			CULG				0553.0	0607.0	2				II B
			LEAR				0554.0	0607.0	2				II
			CULG				0614.0	0644.0	1				IIIS
			SVTO				0722.0	0727.0	2				III
	0750	1503	WEIS				0808.0	1503.0	2				IS,DC
			SVTO				0835.0	0836.0	2				III
			WEIS				0835.2	0835.5	1				IIIB
			SVTO				0854.0	0856.0	2				III
			WEIS				0854.4	0856.4	3				IIIGG
			ONDR				0854.5	0856.4	3				IIIG
			WEIS				0859.1	0859.2	1				IIIG
			SVTO				0924.0	0925.0	2				III
			WEIS				0924.0	0924.9	2				IIIG,SP
	0830	0925	ONDR				0938.0	0925.0	1				IN
			SVTO				0943.0	0954.0	2				S
			WEIS				0943.4	0945.0	2				IIIGG
			WEIS				0946.2	0948.4	2				IIIGG,SP
			LEAR				0953.0	0954.0	3				III
			WEIS				0953.2	0954.5	3				IIIG
			WEIS				1050.7	1053.4	3				IIIGG,DCIM
			SVTO				1051.0	1053.0	3				V
	1120	1303	ONDR										
			WEIS				1121.5	1121.9	1				IIIG
			SVTO				1126.0	1127.0	2				III
			WEIS				1126.4	1126.6	2				IIIG
			WEIS				1205.3	1205.5	1				IIIG
			WEIS				1238.7	1240.0	3				IIIB
			SGMR				1327.0	1328.0	1				III
			WEIS				1327.8	1328.3	2				IIIG
			SGMR				1350.0	1351.0	1				III
			WEIS				1350.7	1350.9	2				IIIG
			WEIS				1448.1	1449.3	1				IIIG
			SGMR				1524.0	1524.0	1				III
			SGMR				1630.0	1639.0	1				III
			SGMR				1708.0	1709.0	2				III
			SGMR				1729.0	1730.0	3				III
			SGMR				2005.0	2008.0	1				III
	2028	2400	CULG				2055.0	2057.5	2				IIIG
			PALE				2056.0	2057.0	2				III
			PALE				2250.0	2251.0	2				III
			CULG				2251.0	2252.0	1				IIIB
			LEAR				2331.0	0031.0	1				S
15			LEAR				0046.0	0046.0	2				III
	0000	0728	CULG				0059.0	0100.0	2				IIIB
			LEAR				0059.0	0101.0	3				III
			PALE				0059.0	0100.0	2				III
			LEAR				0106.0	0217.0	1				CONT
			LEAR				0204.0	0206.0	3				III
			PALE				0204.0	0206.0	2				III
			CULG				0205.0	0206.5	1				IIIG
			LEAR				0211.0	0211.0	2				III
			LEAR				0231.0	0234.0	1				III
			CULG				0240.0	0241.0	1				IIIG
			LEAR				0240.0	0245.0	2				III
			PALE				0240.0	0245.0	2				III
			CULG				0244.0	0245.0	1				IIIG
			LEAR				0307.0	1044.0	1				CONT
			LEAR				0344.0	0356.0	2				S

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15			CULG				0355.0	0356.0	1				IIIB
			LEAR				0507.0	0509.0	3				III
			CULG				0507.5	0508.5	1				IIIB
			LEAR				0550.0	0554.0	2				III
			SVTO				0624.0	0624.0	2				III
			CULG				0624.5	0626.0	2				IIIG
			LEAR				0729.0	0754.0	3				S
			SVTO				0730.0	0730.0	2				III
			SVTO				0752.0	0753.0	2				III
	0755	1503	WEIS				0755.0	1444.0	2				I,S,DC
			WEIS				0906.2	0906.3	1				IIIB
			WEIS				0908.7	0908.8	1				IIIB
	0832	1303	ONDR				0914.0	1303.0	1				IN
			SVTO				0915.0	1210.0	2				CONT
			WEIS				1008.7	1008.8	2				IIIG
			WEIS				1012.3	1012.4	1				IIIB
			WEIS	1020.4	1020.5	1							IIIB
			WEIS				1022.8	1023.1	1				IIIG
			SVTO				1141.0	1143.0	3				III
			ONDR	1141.3	1141.7	1	1141.3	1141.7	1				IIIG
			WEIS				1141.3	1142.7	3				IIIGG
			SGMR				1356.0	1357.0	2				III
			SVTO				1356.0	1357.0	2				III
			WEIS				1356.4	1357.3	2				IIIG
			SGMR				1410.0	1410.0	2				III
			SVTO				1410.0	1411.0	2				III
			WEIS				1410.2	1410.7	2				IIIG
			SGMR				1527.0	1527.0	1				III
			SGMR				1731.0	1731.0	1				III
			SGMR				1745.0	1801.0	1				S
			SGMR				1822.0	1823.0	1				III
			SGMR				1828.0	1834.0	3				V
			SGMR				1843.0	1846.0	1				III
			PALE				1947.0	1949.0	1				V
			PALE				2028.0	2033.0	2				III
			PALE				2114.0	2115.0	2				V
	2027	2400	CULG				2114.5	2115.5	2				IIIG
			LEAR				2231.0	2249.0	1				S
			LEAR				2234.0	2235.0	2				III
			PALE				2234.0	2235.0	2				III
			LEAR				2249.0	1044.0	2				CONT
			LEAR				2320.0	2321.0	2				III
			LEAR				2327.0	2329.0	2				III
			PALE				2327.0	2328.0	1				III
			CULG				2328.0	2329.0	1				IIIG
16	0000	0727	CULG				0052.5	0053.0	1				IIIB
			CULG				0059.5	0100.5	1				IIIG
			CULG				0102.0	0103.0	1				IIIG
			CULG				0115.5	0119.0	1				IIIB
			LEAR				0311.0	0314.0	3				III
			CULG				0312.0	0313.0	2				IIIG
			PALE				0312.0	0313.0	2				V
			CULG				0423.5	0424.5	1				IIIG
			LEAR				0446.0	0451.0	3				III
			CULG				0446.5	0447.5	1				IIIG
			LEAR				0606.0	0609.0	3				III
			CULG				0607.0	0609.0	1				IIIG
			LEAR				0633.0	0640.0	3				III
			SVTO				0633.0	0638.0	1				III
			CULG				0634.0	0643.0	1				IIIGG
			SVTO				0834.0	1458.0	1				CONT
	0752	1503	WEIS				0853.0	1342.0	1				I,N
			SVTO				1042.0	1046.0	3				V
			WEIS				1042.7	1045.5	3				IIIGG,SP
	0832	1304	ONDR	1042.8	1045.5	2	1042.8	1045.5	2				IIIGG
			WEIS				1119.9	1122.9	3				IIIG
			SVTO				1122.0	1123.0	3				III
			WEIS				1150.7	1150.9	2				U

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16			SVTO				1152.0	1302.0	2				S
			WEIS				1213.2	1214.2	3				IIIG,U
			WEIS				1252.0	1500.0	2				I
			WEIS				1254.6	1254.8	2				IIIG
			WEIS				1303.3	1303.4	2				IIIG
			WEIS				1353.3	1355.2	3				IIIG
			SGMR				1354.0	1355.0	1				V
			SGMR				1401.0	1924.0	1				CONT
			PALE				1917.0	1926.0	1				V
			SGMR				1924.0	1926.0	2				III
			PALE				2107.0	2110.0	1				III
			PALE				2123.0	2123.0	1				III
			LEAR				2227.0	1045.0	2				CONT
			PALE				2247.0	2257.0	2				III
			LEAR				2248.0	2250.0	3				III
	2027	2400	CULG				2249.0	2250.0	1				IIIG
			LEAR				2255.0	2257.0	2				III
			CULG				2256.0	2256.5	1				IIIG
			LEAR				2318.0	2331.0	2				S
			PALE				2318.0	2331.0	2				S
17	0000	0630	CULG				0111.5	0112.0	1				IIIB
			LEAR				0230.0	0233.0	3				III
			PALE				0230.0	0233.0	2				III
			CULG				0230.5	0233.5	1				IIIGG
			CULG				0336.0	0336.5	1				IIIB
			LEAR				0346.0	0402.0	3				S
			CULG				0347.5	0348.0	1				IIIB
			CULG				0349.5	0350.5	1				IIIG
			CULG				0355.0	0402.5	2				IIIGG
			LEAR				0531.0	0536.0	3				III
			CULG				0532.0	0533.5	1				IIIG
			CULG				0536.0	0536.5	1				IIIB
			LEAR				0651.0	0656.0	3				III
	0630	0730	CULG				0652.0	0653.0	1				IIIG
	0753	0941	WEIS				0803.0	1210.0	1				I,N
			LEAR				0822.0	0829.0	3				III
	1009	1502	WEIS				0822.7	0829.3	3				IIIGG
			SVTO				0823.0	0829.0	2				III
	0833	1304	ONDR				0839.0	1304.0	1				IN
			SVTO				0858.0	1458.0	1				CONT
			WEIS				1157.6	1157.8	2				IIIG
			WEIS				1318.0	1451.0	2				I,S
			WEIS				1403.5	1403.7	2				IIIG
			SGMR				1532.0	1533.0	1				V
			SGMR				1757.0	1757.0	2				III
			SGMR				1800.0	1800.0	2				III
	2028	2400	CULG				2036.5	2037.0	1				IIIB
			PALE				2041.0	2046.0	2				III
			CULG				2042.0	2042.5	1				IIIB
			CULG				2043.0	2043.5	1				IIIB
			CULG				2047.0	2047.5	1				IIIB
			CULG				2131.0	2132.0	1				IIIB
			PALE				2131.0	2132.0	1				III
			CULG				2218.0	2220.0	1				IIIG
			LEAR				2218.0	2225.0	3				III
			CULG				2224.0	2225.0	1				IIIG
			PALE				2318.0	0039.0	2				S
18			LEAR				0104.0	0158.0	2				S
	0000	0728	CULG				0122.0	0122.5	1				IIIB
			CULG				0127.0	0127.5	1				IIIB
			CULG				0140.5	0141.5	1				IIIG
			CULG				0148.0	0148.5	1				IIIG
			CULG				0152.0	0158.0	1				IIIGG
			PALE				0157.0	0201.0	1				III
			LEAR				0200.0	0202.0	3				III
			CULG				0201.0	0202.0	2				IIIGG
			LEAR				0214.0	0222.0	2				III

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18			CULG				0215.0	0215.5	1				IIIG
			LEAR				0319.0	0319.0	1				III
			LEAR				0416.0	0452.0	2				S
			CULG				0435.5	0436.0	1				IIIB
			LEAR				0530.0	0608.0	2				S
			CULG				0537.0	0538.0	1				IIIG
			LEAR				0618.0	0632.0	1				S
			CULG				0618.5	0620.0	1				IIIG
			LEAR				0713.0	0715.0	2				III
			CULG				0714.5	0715.0	1				IIIG
			LEAR				0724.0	0724.0	2				III
	0834	1303	ONDR										
			LEAR				0858.0	0907.0	2				III
	0755	1504	WEIS				1003.2	1003.6	2				SP
			WEIS				1006.8	1007.0	2				I
			SVTO				1150.0	1153.0	1				III
			WEIS				1151.2	1151.3	2				IIIB
			WEIS				1153.3	1153.6	2				IIIG
			WEIS				1157.3	1157.5	1				IIIB
			WEIS				1227.3	1227.5	1				IIIG
			WEIS				1252.2	1252.5	1				IIIG
			SGMR				1254.0	1254.0	2				III
			SVTO				1254.0	1255.0	3				III
			WEIS				1254.3	1254.8	3				IIIG
			WEIS				1343.0	1343.4	2				IIIG
			PALE				1908.0	1922.0	1				III
			SGMR				1909.0	1909.0	2				III
	2032	2400	CULG				2105.0	2111.0	1				IIIGG
			CULG				2225.0	2225.5	1				IIIB
			LEAR				2326.0	2326.0	1				III
19			LEAR				0136.0	0201.0	2				S
	0000	0728	CULG				0137.0	0137.5	1				IIIB
			CULG				0157.0	0159.0	1				IIIG
			LEAR				0654.0	0656.0	2				III
			CULG				0655.5	0656.0	1				IIIG
			LEAR				0750.0	0752.0	3				III
			SVTO				0750.0	0752.0	2				V
			LEAR				0754.0	0808.0	2				II
			SVTO				0755.0	0804.0	2				II
	0834	1303	ONDR										
	0754	1504	WEIS				0905.8	0905.9	2				IIIB
			WEIS				1115.1	1115.9	1				IIIG
			WEIS				1458.1	1458.3	2				IIIG
	2033	2400	CULG										
20			LEAR				0111.0	0149.0	1				S
			LEAR				0151.0	0209.0	2				S
			CULG				0152.0	0153.0	1				IIIB
	0000	0728	CULG				0207.0	0208.0	1				IIIG
			LEAR				0729.0	0731.0	2				III
	0755	1505	WEIS				0759.2	0759.3	2				IIIB
	0836	1304	ONDR	1045.2	1045.9	1	1045.2	1045.9	1				IIIG
			WEIS				1045.2	1045.8	2				IIIG,RS
			WEIS				1115.2	1115.3	1				IIIB
			ONDR	1258.2	1258.4	1							IIIG
			WEIS				1302.6	1302.8	2				IIIB
			WEIS				1403.0	1505.0	1				CONT
			WEIS				1403.7	1407.3	2				IIIB
			WEIS				1403.7	1407.3	3				IIIGG
			SGMR				1406.0	1407.0	2				II
			SVTO				1406.0	1407.0	3				II
			SVTO				1406.0	1407.0	3				V
			SGMR				1416.0	1515.0	1				IV
			WEIS				1451.0	1503.0	3				SP,RS
	2028	2400	CULG										
21			LEAR				0149.0	0202.0	2				S
	0000	0728	CULG				0152.0	0154.5	1				IIIG

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21			LEAR				0413.0	0424.0	2				S
			CULG				0420.0	0421.0	1				IIIG
			LEAR				0633.0	0638.0	2				III
			CULG				0634.0	0634.5	1				IIIB
			CULG				0636.0	0636.5	1				IIIB
			CULG				0638.0	0638.5	1				IIIB
			LEAR				0650.0	0653.0	3				III
			CULG				0650.5	0652.0	2				IIIGG
	0836	1304	ONDR										
	0759	1505	WEIS				1152.8	1153.3	2				IIIG
			WEIS				1501.8	1502.7	2				IIIG
			PALE				2001.0	2003.0	1				III
			PALE				2119.0	2122.0	1				III
	2030	2400	CULG				2231.0	2234.5	1				IIIB
			CULG				2320.0	2320.0	1				IIIB
22	0000	0730	CULG				0000.0	0000.0	1				IIIB
			LEAR				0039.0	0039.0	2				III
			LEAR				0514.0	0514.0	2				III
			LEAR				0743.0	0743.0	2				III
	0836	1303	ONDR										
			SVTO				1103.0	1110.0	2				V
			SVTO				1235.0	1236.0	2				V
	0756	1031	WEIS				1235.2	1236.6	2				IIIG
	1124	1506	WEIS				1416.9	1417.1	2				U
			SGMR				1434.0	1434.0	2				III
			WEIS				1434.1	1434.3	1				U
			PALE				1740.0	1740.0	1				III
	2030	2400	CULG				2311.0	2311.0	1				IIIB
			LEAR				2341.0	2342.0	1				III
23	0000	0731	CULG										
	0756	1505	WEIS										
	0838	1303	ONDR										
			SVTO				1136.0	1231.0	2				CONT
			SGMR				1318.0	1319.0	2				III
			PALE				2103.0	2104.0	1				III
			PALE				2134.0	2136.0	1				III
	2031	2400	CULG				2135.0	2136.5	1				IIIG
			CULG				2139.0	2146.0	2				II B
			PALE				2239.0	2246.0	2				III
			LEAR				2241.0	2247.0	3				III
			CULG				2242.0	2242.0	1				IIIB
			CULG				2245.0	2245.0	2				IIIB
			CULG				2246.5	2246.5	2				IIIB
			LEAR				2348.0	2351.0	1				III
24			LEAR				0054.0	0054.0	1				III
			LEAR				0104.0	0644.0	1				CONT
	0000	0731	CULG				0222.0	0222.0	1				IIIB
			LEAR				0306.0	0321.0	3				S
			CULG				0307.0	0312.0	2				IIIGG
			PALE				0307.0	0309.0	3				III
			CULG				0312.0	0317.0	1				II B
			CULG				0315.0	0333.0	1				IV C
			LEAR				0427.0	0428.0	3				III
			CULG				0428.0	0428.0	1				IIIB
			LEAR				0832.0	0834.0	2				III
	0838	1300	ONDR										
			SVTO				1015.0	1023.0	2				V
			LEAR				1022.0	1023.0	2				III
	0758	1507	WEIS				1327.9	1328.0	1				IIIB
			SGMR				1635.0	1636.0	1				III
			PALE				1945.0	1948.0	1				III
			SGMR				1946.0	1946.0	1				III
	2031	2400	CULG				2118.0	2118.0	1				IIIB
			PALE				2135.0	2143.0	2				S
			CULG				2136.0	2137.0	2				IIIG
			CULG				2141.5	2143.0	1				IIIG

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24			CULG				2154.0	2154.0	2				IIIB
			LEAR				2208.0	2208.0	1				III
			PALE				2208.0	2238.0	1				S
			CULG				2209.0	2243.0	1				IIIN
			CULG				2216.0	2333.0	1				IS
			LEAR				2220.0	2220.0	2				III
			LEAR				2232.0	2240.0	2				III
			LEAR				2333.0	2333.0	2				III
			CULG				2334.0	2334.0	1				IIIB
			LEAR				2352.0	2352.0	1				III
25	0000	0732	CULG				0002.0	0732.0D	3				IV C
			LEAR				0002.0	1049.0	2				CONT
			LEAR				0100.0	0101.0	2				III
			PALE				0217.0	0219.0	2				III
			LEAR				0218.0	0218.0	3				III
			CULG				0224.0	0224.0	2				IIIB
			LEAR				0455.0	0500.0	3				III
			CULG				0456.0	0457.0	2				IIIG
			CULG				0500.0	0500.0	2				IIIB
			SVTO				0646.0	1035.0	2				CONT
	0757	1507	WEIS				0805.1	0806.5	2				II HB
	0906	1304	ONDR										
			LEAR				0950.0	0955.0	3				III
			SVTO				0950.0	0955.0	3				III
			WEIS				0950.6	0952.1	3				IIIG
			WEIS				0954.4	0955.3	2				IIIG
			WEIS				1001.7	1001.9	1				IIIG
			LEAR				1020.0	1021.0	2				III
			WEIS				1020.2	1021.3	3				IIIG
			WEIS				1136.1	1137.4	1				IIIG
			SGMR				1224.0	1226.0	2				V
			WEIS				1233.4	1233.7	1				IIIG
			SVTO				1251.0	1257.0	3				V
			WEIS				1251.0	1251.9	1				IIIG
			SGMR				1254.0	1256.0	2				V
			WEIS				1254.0	1256.5	3				IIIGG
			WEIS	1254.7	1256.1	1							SP
			WEIS				1301.4	1303.2	1				IIIG
			SVTO				1334.0	1334.0	2				III
			WEIS				1334.2	1334.4	3				IIIG
			WEIS				1339.7	1339.8	1				IIIB
			WEIS				1349.7	1350.2	2				IIIG
			SGMR				1516.0	1516.0	1				III
			PALE				2056.0	2057.0	2				III
			PALE				2109.0	2110.0	3				V
	2032	2400	CULG				2110.0	2111.0	2				IIIPAIR
			LEAR				2209.0	2214.0	1				III
			PALE				2209.0	2214.0	1				III
			CULG				2210.0	2210.5	1				IIIB
			CULG				2212.5	2213.0	1				IIIB
			LEAR				2314.0	2318.0	3				III
			PALE				2314.0	2317.0	2				III
			CULG				2315.0	2316.0	2				IIIG
			CULG				2317.0	2318.0	2				IIIG
			LEAR				2322.0	2322.0	2				III
			CULG				2322.5	2323.0	2				IIIB
			LEAR				2335.0	1049.0	2				CONT
26			LEAR				0013.0	0032.0	2				S
	0000	0730	CULG				0014.5	0015.0	2				IIIB
			LEAR				0045.0	0051.0	3				V
			PALE				0047.0	0050.0	3				III
			CULG				0048.0	0051.0	2				IIIGG
			LEAR				0104.0	0106.0	3				III
			PALE				0104.0	0129.0	1				S
			CULG				0105.0	0106.0	2				IIIG
			LEAR				0128.0	0130.0	3				III
			LEAR				0237.0	0237.0	2				III

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Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band Start (UT)	End (UT)	Int (1-3)	Metric Band Start (UT)	End (UT)	Int (1-3)	Dekametric Band Start (UT)	End (UT)	Int (1-3)	Spectral Type
26			CULG				0300.0	0330.0	2				IIIN
			LEAR				0300.0	0301.0	3				III
			LEAR				0307.0	0317.0	2				III
			LEAR				0323.0	0328.0	3				III
			PALE				0323.0	0328.0	2				III
			LEAR				0336.0	0343.0	2				III
			LEAR				0351.0	0357.0	2				III
			CULG				0352.0	0403.0	2				IIIN
			LEAR				0357.0	0402.0	3				III
			LEAR				0414.0	0415.0	3				III
			LEAR				0428.0	0429.0	3				III
			CULG				0429.0	0430.0	1				IIIG
			LEAR				0439.0	0442.0	3				III
			CULG				0440.0	0441.0	2				IIIG
			CULG				0441.5	0458.0	1				IIIN
			LEAR				0446.0	0456.0	3				III
			LEAR				0528.0	0529.0	3				III
			CULG				0604.0	0630.0	1				IIIN
			LEAR				0614.0	0614.0	3				III
			LEAR				0626.0	0629.0	3				III
			LEAR				0644.0	0645.0	3				III
			CULG				0645.0	0645.5	2				IIIB
			CULG				0710.0	0720.0	1				IIIN
			LEAR				0710.0	0716.0	3				III
			SVTO				0710.0	0710.0	2				III
			LEAR				0730.0	0733.0	3				III
			SVTO				0730.0	0731.0	3				III
			LEAR				0741.0	0742.0	2				III
			SVTO				0742.0	0742.0	1				III
			LEAR				0758.0	0801.0	2				III
			LEAR				0803.0	0811.0	3				III
			SVTO				0803.0	0811.0	3				V
	0757	1507	WEIS				0803.7	0811.7	3				IIIGG
			WEIS	0804.9	0808.6	2							SP
			LEAR				0816.0	0818.0	3				III
			SVTO				0818.0	0818.0	2				III
			WEIS				0818.0	1453.0	3				IIIN
			LEAR				0822.0	0822.0	2				III
			WEIS				0827.0	1457.0	1				I,N
			WEIS				0838.9	0842.4	2				IIIG,SP
			LEAR				0843.0	0845.0	2				III
			SVTO				0844.0	0845.0	2				III
			WEIS	0847.3	0848.0	1							DCIM,RS
			LEAR				0905.0	0906.0	3				III
			SVTO				0905.0	0906.0	3				III
			LEAR				0932.0	0937.0	3				III
			SVTO				0932.0	1102.0	3				IV
			WEIS				0932.8	0936.3	3				IIIGG
			LEAR				0939.0	0945.0	2				III
			WEIS				0939.2	0940.9	2				IIIGG
			LEAR				0947.0	0958.0	2				II
			SVTO				0947.0	0958.0	3				II
			WEIS				0947.9	0953.6	3				II
	0838	1303	ONDR				1007.0	1303.0	1				IN
			WEIS	1011.0	1014.2	2							SP,RS
			ONDR	1011.4	1014.1	1							
			WEIS				1041.9	1042.7	3				IIIG
			ONDR	1042.1	1042.3	1	1042.1	1042.3	1				IIIG
			LEAR				1046.0	1050.0	3				III
			SVTO				1046.0	1051.0	3				III
			WEIS				1046.5	1051.2	3				IIIGG
			ONDR	1047.5	1051.5	3	1047.5	1051.5	3				IIIGG,U
			WEIS	1047.6	1051.8	2							SP,RS
			SVTO				1131.0	1134.0	3				III
			ONDR	1131.7	1135.0	3							IIIGG
			WEIS	1131.7	1135.9	2							SP
			WEIS				1133.4	1134.0	3				IIIG
			SVTO				1134.0	1319.0	2				CONT
			SVTO				1203.0	1210.0	3				III

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26			WEIS				1203.2	1209.9	3				IIIGG,SP
			ONDR	1204.5	1205.0	2	1204.5	1205.0	3				V
			WEIS				1230.5	1232.4	3				IIIGG,SP
			ONDR	1231.8	1232.0	3							IIIG
			ONDR	1234.5	1238.8	2							
			WEIS				1234.5	1234.7	2				IIIG
			WEIS	1234.6	1236.8	1							SP
			SGMR				1237.0	1253.0	1				CONT
			SGMR				1317.0	1318.0	2				V
			WEIS				1317.2	1318.9	3				IIIGG,SP
			WEIS				1325.4	1326.3	2				SP
			SGMR				1329.0	1333.0	2				V
			SVTO				1329.0	1334.0	3				III
			WEIS				1329.3	1333.7	3				IIIGG
			WEIS	1329.7	1335.8	1							SP
			SGMR				1340.0	1353.0	1				S
			WEIS				1357.1	1359.1	1				SP
			SGMR				1400.0	1401.0	3				III
			WEIS				1400.8	1401.4	3				IIIG
			SVTO				1401.0	1401.0	2				III
			SGMR				1405.0	2050.0	1				CONT
			WEIS				1411.7	1412.0	3				IIIG,SP
			SGMR				1414.0	1415.0	2				III
			WEIS				1414.2	1416.6	3				IIIGG,SP
			SVTO				1415.0	1415.0	2				III
			WEIS				1434.8	1435.6	1				IIIB,SP
			SGMR				1442.0	1446.0	2				III
			SVTO				1442.0	1444.0	2				III
			SGMR				1607.0	1611.0	2				III
			SGMR				1716.0	1717.0	3				III
			SGMR				1719.0	1720.0	2				III
			PALE				1745.0	1750.0	1				III
			PALE				1802.0	1814.0	3				S
			SGMR				1802.0	1804.0	3				III
			SGMR				1808.0	1814.0	3				III
			PALE				1930.0	0000.0	1				CONT
			PALE				2030.0	2038.0	3				V
	0733	2400	CULG				2033.0	2038.0	1				IIIGG
			PALE				2135.0	0147.0	1				CONT
			PALE				2135.0	2156.0	3				S
			CULG				2135.5	2138.5	1				IIIGG
			CULG				2144.5	2245.0	2				CONT
			LEAR				2251.0	2301.0	3				III
			CULG				2252.0	2253.0	2				IIIB
			CULG				2258.5	2259.0	2				IIIB
			LEAR				2341.0	2341.0	2				III
			LEAR				2356.0	0000.0	2				III
27			LEAR				0021.0	0024.0	3				III
	0000	0534	CULG				0022.0	0022.5	1				IIIB
			LEAR				0030.0	0128.0	2				S
			LEAR				0033.0	0035.0	2				III
			LEAR				0142.0	0143.0	2				III
			CULG				0143.0	0143.5	1				IIIG
			LEAR				0154.0	0156.0	3				III
			CULG				0154.5	0155.5	2				IIIG
			LEAR				0203.0	0203.0	2				III
			LEAR				0224.0	0225.0	2				III
			LEAR				0314.0	0347.0	3				S
			CULG				0315.0	0316.0	2				IIIG
			CULG				0334.5	0355.0	1				IIIB
			LEAR				0357.0	0437.0	2				S
			CULG				0424.0	0423.0	2				IIIG
			CULG				0439.5	0440.0	2				IIIB
			CULG				0459.0	0534.5	1				IIIN
	0535	0730	CULG				0544.0	0544.5	1				IIIB
			CULG				0609.5	0704.0	1				IIIN
	0759	1125	WEIS				0816.3	0816.9	2				IIIG
	1208	1509	WEIS				0819.6	0819.7	1				IIIB

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27			WEIS				0836.4	0839.2	2				IIIG
	0838	1302	ONDR	0844.3	0844.3	2	0844.3	0844.3	2				IIIS
			WEIS				0844.3	0844.8	1				IIIG
			WEIS				0903.8	0904.1	2				IIIG
			WEIS				0911.4	0914.6	3				IIIGG
			ONDR				0912.8	0913.1	2				IIIG
			WEIS				0912.8	0915.6	2				SP
			WEIS				0935.8	0936.2	3				IIIG
			WEIS				0938.5	0938.7	1				IIIG
			WEIS				1009.6	1009.9	1				IIIG
			WEIS				1016.8	1017.7	2				IIIG
			ONDR	1046.6	1046.7	1							IIIG,fib
			WEIS				1051.4	1057.1	3				IIIGG
			WEIS				1106.2	1110.7	3				IIIGG,U
			WEIS				1114.8	1122.3	2				II H
			WEIS				1229.1	1232.3	3				IIIG
			WEIS				1255.5	1258.2	2				IIIG
			SGMR				1256.0	1258.0	2				III
			SVTO				1257.0	1257.0	2				III
			SGMR				1326.0	1327.0	1				III
			WEIS				1326.8	1327.9	2				IIIG,RS
			WEIS				1329.4	1329.5	1				IIIB
			WEIS				1331.4	1332.2	1				IIIG
			SGMR				1341.0	1342.0	2				III
			SVTO				1341.0	1342.0	2				III
			WEIS				1341.1	1342.4	3				IIIG
			WEIS				1412.5	1413.6	2				IIIG
			WEIS				1421.0	1423.0	2				I
			SGMR				1436.0	1448.0	2				S
			WEIS				1441.8	1442.3	1				IIIG
			WEIS				1443.8	1444.0	2				IIIG
			WEIS				1445.5	1448.6	3				IIIG
			WEIS				1458.3	1458.7	1				IIIG
			SGMR				1520.0	1521.0	2				III
			SGMR				1544.0	1556.0	2				S
			SGMR				1630.0	1635.0	2				V
			SGMR				1644.0	1650.0	3				V
			SGMR				1659.0	1659.0	1				III
			SGMR				1710.0	1714.0	2				V
			SGMR				1750.0	1750.0	1				III
			SGMR				1837.0	1837.0	1				III
			SGMR				1852.0	1852.0	1				III
			PALE				1908.0	1912.0	2				V
			PALE				2038.0	2038.0	1				III
			PALE				2055.0	2056.0	1				III
	2033	2400	CULG				2055.5	2056.0	1				IIIB
			CULG				2057.0	2057.5	1				IIIB
			PALE				2109.0	2125.0	1				S
			CULG				2125.5	2126.0	1				IIIB
			PALE				2250.0	2251.0	3				III
			CULG				2251.0	2252.0	3				IIIG
			LEAR				2251.0	2254.0	3				III
28			LEAR				0158.0	1050.0	2				CONT
	0000	0733	CULG				0704.5	0705.0	1				IIIB
			SVTO				0719.0	0728.0	2				III
			SVTO				0742.0	0756.0	1				S.
			SVTO				0904.0	0904.0	2				III
	0758	1509	WEIS				0904.3	0905.6	1				IIIG
			WEIS				0931.0	1509.0	2				I
			WEIS				0945.9	0946.2	1				IIIG
			WEIS				1012.6	1017.7	1				SP
			SVTO				1031.0	1031.0	2				III
			SVTO				1055.0	1056.0	2				III
			WEIS				1055.8	1056.0	2				IIIG
			SVTO				1137.0	1139.0	3				III
			WEIS				1137.6	1140.6	3				IIIG
			WEIS				1210.2	1211.4	2				IIIG
			SVTO				1211.0	1223.0	2				S

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28			WEIS				1211.3	1215.7	2				IIIG
			WEIS				1218.8	1219.9	2				IIIG
			WEIS				1222.6	1225.7	1				IIIB
			WEIS	1226.2	1226.8	1							SP
			WEIS				1226.7	1227.7	2				IIIG
			SVTO				1227.0	1228.0	3				III
			SVTO				1228.0	1243.0	2				CONT
			SGMR				1638.0	1926.0	1				CONT
			PALE				1901.0	2204.0	1				S
	2033	2400	CULG				2140.0	2150.0	1				UNCLF
			CULG				2150.0	2245.0	1				CONT
			PALE				2224.0	2258.0	2				CONT
29			PALE				0129.0	0133.0	1				III
	0000	0733	CULG				0638.5	0640.0	1				IIIG
			CULG				0643.0	0643.5	1				IIIB
	0758	1509	WEIS				0844.0	1430.0	1				I,N
			WEIS				1015.4	1015.6	1				IIIG
			WEIS				1241.6	1243.7	1				SP
			WEIS				1241.6	1245.2	2				IIIG
			SGMR				1242.0	1242.0	1				III
			SVTO				1242.0	1242.0	2				III
			SGMR				1345.0	1345.0	1				III
			WEIS				1428.2	1429.4	2				RS
			SGMR				1454.0	1454.0	1				III
			WEIS				1454.4	1454.5	1				IIIB
			SGMR				1629.0	1908.0	1				CONT
			PALE				1906.0	1906.0	1				III
			PALE				1924.0	0341.0	1				CONT
	2029	2400	CULG				2029.0	2055.0	2				UNCLF
			LEAR				2159.0	1013.0	1				CONT
			LEAR				2324.0	2350.0	2				S
30	0000	0730	CULG				0429.0	0429.5	1				IIIB
			CULG				0434.0	0434.5	1				IIIB
			CULG				0437.0	0437.5	1				IIIG
			CULG				0454.0	0455.0	1				IIIG
			CULG				0617.5	0618.5	1				IIIG
			CULG				0726.0	0727.0	1				IIIG
	0800	1048	WEIS				0818.0	1438.0	2				IS,DC
			SVTO				0845.0	1013.0	1				CONT
	1120	1512	WEIS				0917.6	0917.8	2				IIIG
			WEIS				0944.0	1035.0	3				I,S
			WEIS				0947.8	0947.9	1				IIIB
			LEAR				1013.0	1021.0	3				V
			SVTO				1013.0	0000.0	3				IV
			WEIS				1013.7	1015.7	3				IIIGG
			WEIS				1015.0	1020.0	2				CONT,SP
			WEIS				1015.7	1018.3	3				V
			WEIS				1017.0	1023.0	3				II H
			LEAR				1021.0	1040.0	2				IV
			WEIS				1023.4	1036.5	3				II
			SVTO				1044.0	1254.0	2				CONT
			WEIS				1130.2	1130.6	2				IIIG
			WEIS				1154.7	1154.8	2				IIIB
			SGMR				1437.0	1438.0	2				V
			SVTO				1437.0	1438.0	2				III
			WEIS				1437.2	1438.1	3				IIIG
			PALE				1834.0	1835.0	1				III
			SGMR				1835.0	1835.0	1				III
			PALE				1914.0	1915.0	1				III
			SGMR				2012.0	2012.0	1				III
			LEAR				2306.0	2314.0	3				III
			PALE				2306.0	2325.0	3				II
			LEAR				2314.0	2328.0	2				II
31			PALE				0045.0	0000.0	1				CONT
	0530	0730	CULG				0611.0	0612.0	2				IIIB
			SVTO				0749.0	0751.0	2				V

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31			SVTO				0850.0	0851.0	2				III
	0758	1511	WEIS				0850.7	0851.1	3				IIIB
			WEIS				1205.4	1207.2	2				IIIG
			SVTO				1221.0	1232.0	2				S
			WEIS				1221.8	1222.8	2				IIIG
			SGMR				1226.0	1227.0	1				III
			WEIS				1226.8	1226.9	2				IIIG
			WEIS				1230.1	1232.1	2				IIIG
			WEIS				1248.9	1249.3	2				IIIG
			WEIS				1326.1	1327.5	2				IIIG
			SGMR				1354.0	1354.0	1				III
			WEIS				1354.7	1355.4	2				IIIG
			SGMR				1444.0	1447.0	2				V
			WEIS				1444.6	1445.3	2				IIIG
			SGMR				1457.0	1457.0	1				III
			SGMR				1946.0	1948.0	1				III
			PALE				2108.0	2109.0	1				III
			PALE				2237.0	2241.0	1				III
	2034	2400	CULG				2238.0	2242.0	1				IIIGG

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

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of burst
C = Underlying continuum (particularly with Type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III

RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity
DCIM = Fast drift

Stations Reporting:

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

COSMIC RAY INDICES
(Neutron Monitor)

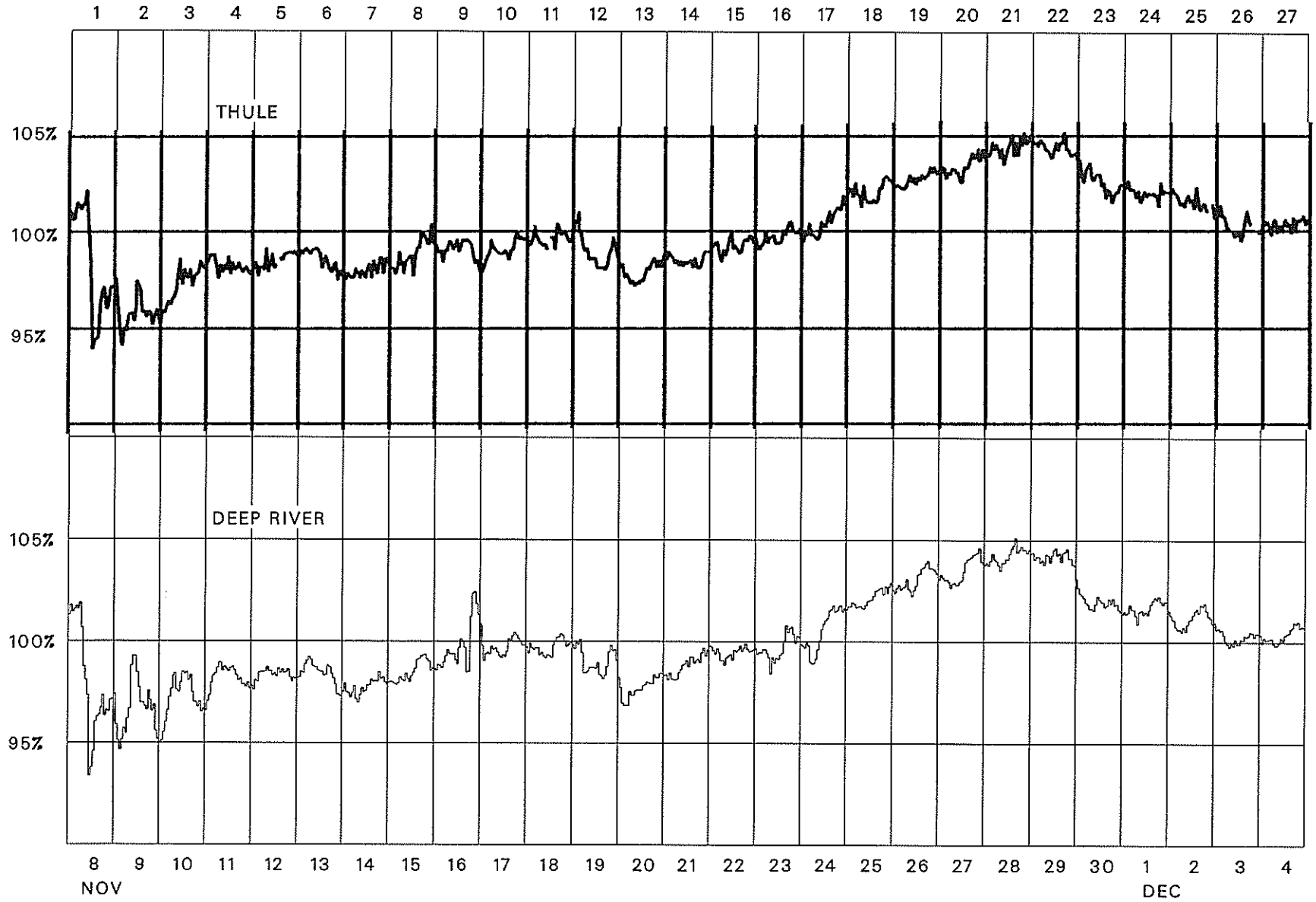
DECEMBER 1991

Day	THULE Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4004	6253.3	5569.2		3422.2	
2	3985	6223.4	5545.0		3408.3	
3	3937	6167.6	5505.2		3396.3	
4	3941	6173.2	5500.3		3398.0	
5	3941	6203.4	5514.1		3398.9	
6	3950	6225.7	5545.4		3410.8	
7	3969	6205.0	5557.6		3414.9	
8	3973	6198.2	5555.5		3421.7	
9	3970	6176.2	5540.1		3427.2	
10	3968	6180.6	5527.7		3420.0	
11	3915	6101.2	5471.9		3393.2	
12	3906	6087.0	5436.1		3418.4	
13	3899	6067.8	5436.5		3396.1	
14	3929	6113.5	5437.4		3399.4	
15	3931	6134.1	5476.3		3403.9	
16	3937	6172.2	5508.0		3404.1	
17	3962	6204.5	5537.8		3401.4	
18	4000	6265.7	5595.5		3407.8	
19	3996	6261.7	5581.4		3414.1	
20	3993	6221.2	5577.0		3392.7	
21	3997	6208.3	5574.7		3390.9	
22	4007	6213.5	5566.8		3399.1	
23	4021	6262.7	5594.4		3406.0	
24	4028	6315.8	5602.9		3411.2	
25	4077	6371.0	5654.9		3435.7	
26	4121	6397.1	5706.5		3462.0	
27	4048	6298.0	5613.8		3401.8	
28	3973	6200.7	5512.8		3408.8	
29	3919	6127.1	5464.8		3394.4	
30	3919	6154.5	5479.9		3387.7	
31	3959	6214.7	5538.2		3401.9	
Mean	3973	6206.4	5539.6		3408.0	

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

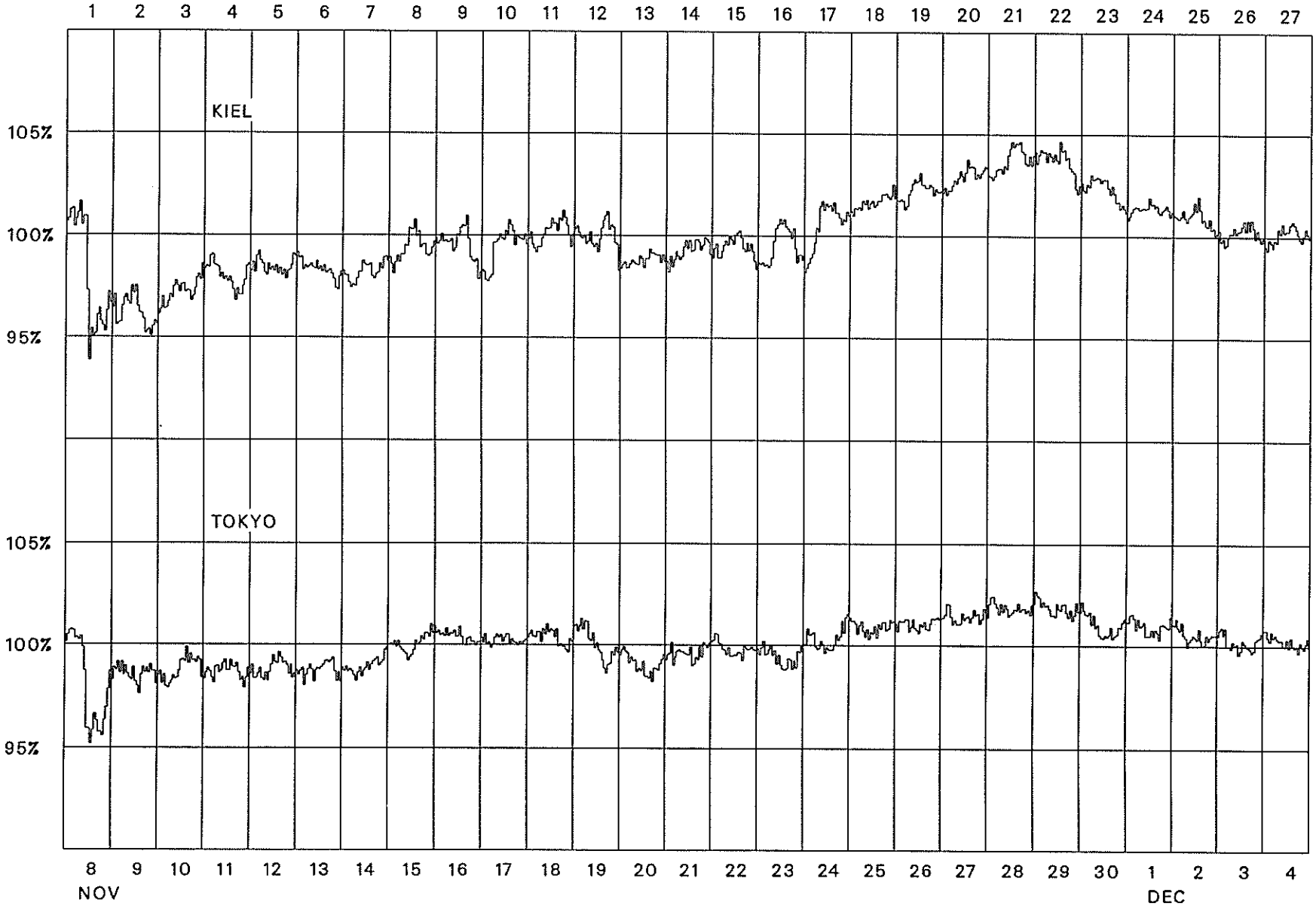
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2162 (November 1991-December 1991)



COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2162 (November 1991-December 1991)



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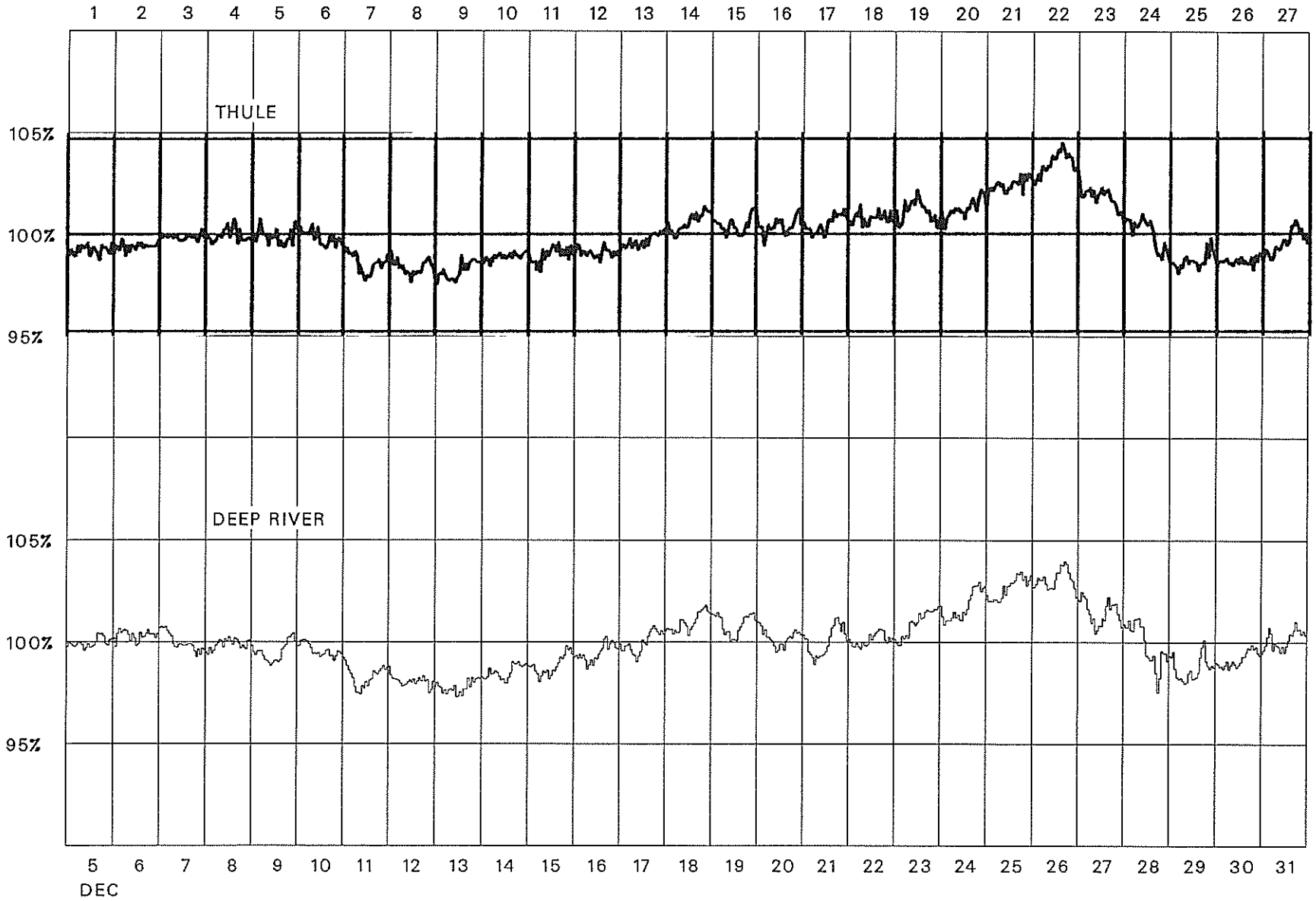
Dec 91

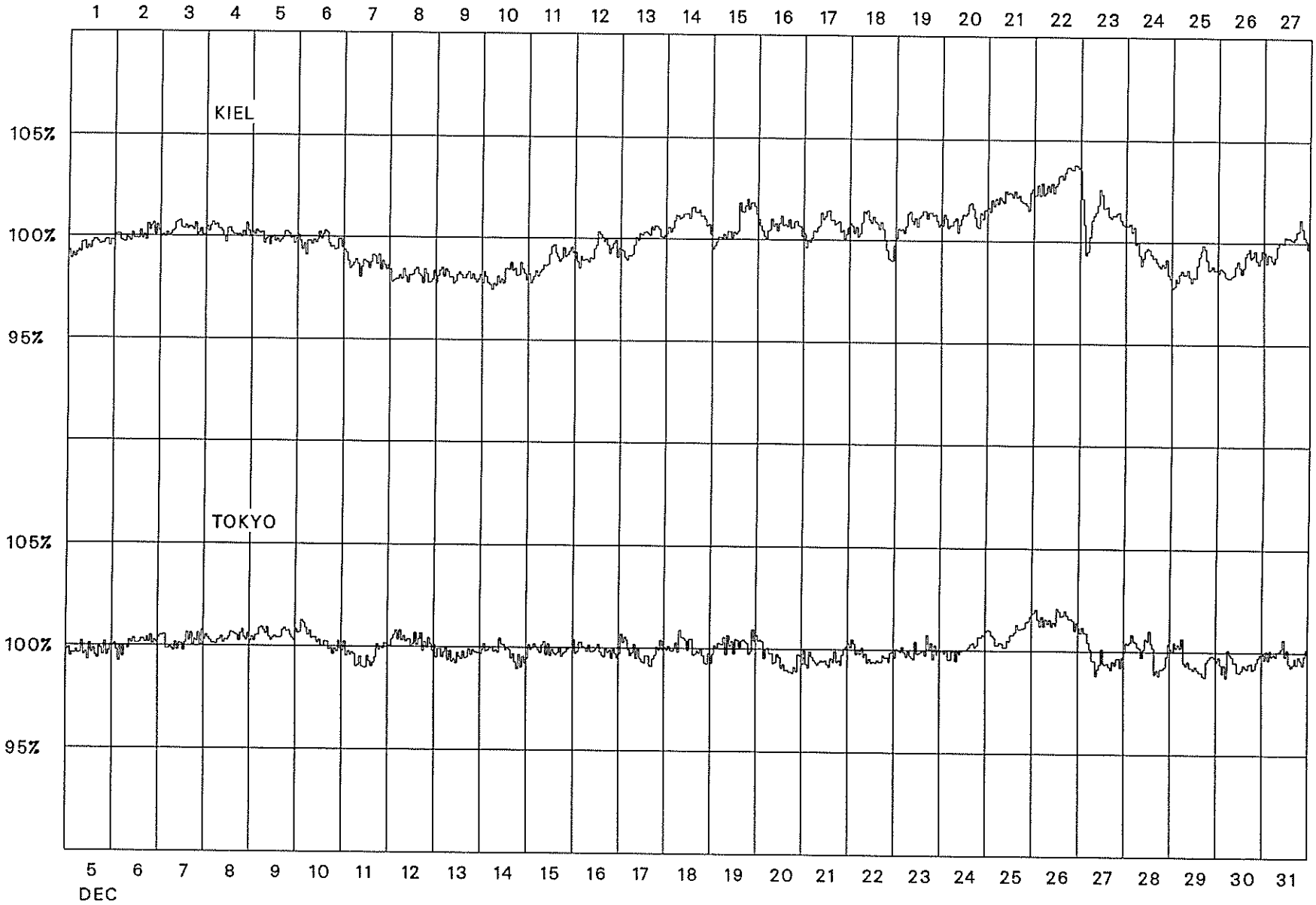
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2163 (December 1991)



COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2163 (December 1991)



GEOMAGNETIC ACTIVITY INDICES

December 1991

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+	2+	2-	2+	2+	3-	3-	19	10	0.5												
2		4	2+	3-	4-	4	3	3+	3	26	18	1.0												
3		2	2+	3-	3	3+	2+	3-	3+	22-	12	0.7												
4		3+	3	3-	2+	3-	3	4-	3	24-	15	0.8												
5	Q8A	3-	3	2	2	1+	2-	3-	2-	17	9	0.5												
6	Q1	2	1+	1	1+	1	1	1-	2	10+	5	0.2												
7	Q2	1+	2-	1+	1+	2-	1	2-	3-	13-	6	0.3												
8	Q6A	1+	2+	2+	2+	3	2	1	0+	15-	8	0.4												
9	Q10A	1	1+	2-	3-	2-	3	3-	3+	17+	10	0.5												
10		3+	2+	3	2+	2+	3-	3+	4+	24-	15	0.9												
11		4-	3-	2-	2-	2+	3-	3+	4	22	14	0.8												
12		4-	4-	2-	2-	2+	3	3-	3	22-	13	0.8												
13		3	3-	2+	3+	4	3	3-	3	24	15	0.9												
14		2	2+	4-	3	3+	4	3	4-	25	17	0.9												
15	Q4A	3	2+	2	1	2	1	1-	1	13	7	0.3												
16		1-	1+	2-	3+	4+	5-	4+	4	24+	20	1.0												
17	D1	5+	5	4+	4+	4+	4+	4+	3+	35+	35	1.4												
18		4-	3-	3+	3	2	3-	2	1-	20	12	0.7												
19		1	1+	3	3+	3+	4-	3	2-	20+	13	0.7												
20		1-	2	2	1+	3	4-	2+	2+	17+	10	0.5												
21	D4	5-	5-	4+	4+	4-	4-	3-	3+	31+	27	1.2												
22	Q3K	3	2	2	2-	0+	1	1	1+	12+	6	0.3												
23		3+	4-	3	3-	2+	2+	3	3	23+	14	0.8												
24		3	3	2+	3+	2+	2+	1	1-	18	10	0.6												
25	Q5A	1	1-	1+	2	3	2-	2-	2+	14-	7	0.3												
26	Q7A	2	3+	2	1	1+	2	2+	3-	17-	9	0.5												
27	D2	4	3	3	5-	3+	5-	5-	6+	34-	36	1.4												
28	D5	4-	3-	2+	3-	4	4	5-	5-	29-	23	1.1												
29	D3	4	4+	5-	3-	3	3+	4+	5+	32-	29	1.3												
30		5-	4	2	2	3	2+	3-	3-	23+	16	0.9												
31	Q9A	3-	1+	1	2-	3-	3-	3	2+	17+	9	0.5												
Mean											15	0.73										.	.	.

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																			167.6	102	102	119	
2																			166.2	96	93	117	
3																			177.7	124	112	130	
4																			185.2	109	110	138	
5																			186.3	131	130	139	
6																			191.6	144	154	145	
7																			202.9	154	171	157	
8																			219.6	174	185	175	
9																			249.7	209	217	208	
10																			252.5	185	205	211	
11																			237.8	193	186	195	
12																			235.8	175	166	193	
13																			246.6	177	167	204	
14																			222.2	175	164	178	
15																			206.5	155	150	161	
16																			225.1	129	129	181	
17																			192.0	124	114	145	
18																			189.0	133	125	142	
19																			181.8	134	124	134	
20																			191.8	117	111	145	
21																			186.2	109	103	139	
22																			216.0	80	127	171	
23																			218.9	119	129	174	
24																			222.3	130	136	178	
25																			250.8	143	148	209	
26																			252.2	150	152	210	
27																			243.7	132	154	201	
28																			263.3	130	150	222	
29																			246.0	149	142	204	
30																			263.2	151	152	222	
31																			235.0	151	162	192	
Mean																			217.0	141.4	144.2	172.4	

D A I L Y A V E R A G E I N D I C E S Ap

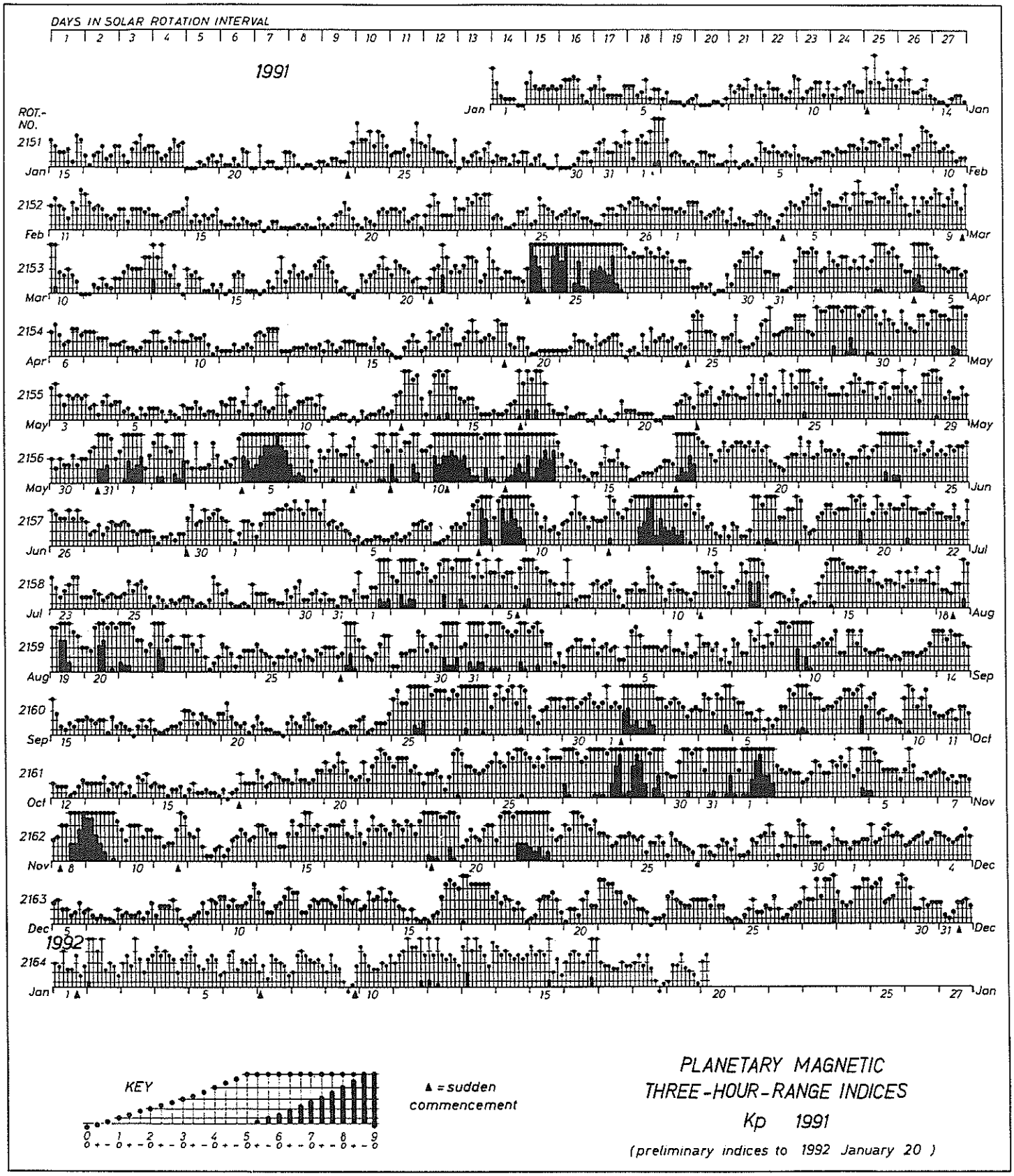
January 1991 to December 1991

DAY	1991 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	8	28	13	29	27	74	11	36	47	54	109	10
2	10	12	9	22	45	60	21	52	28	67	41	18
3	11	5	6	37	16	16	29	42	16	19	17	12
4	8	6	9	50	9	58	13	44	12	35	38	15
5	8	8	22	15	5	196	4	32	21	15	27	9
6	4	6	24	14	5	49	8	32	14	23	18	5
7	3	10	24	10	6	27	7	16	14	32	12	6
8	8	14	17	6	10	26	68	11	22	41	98	8
9	8	17	25	10	12	58	117	15	49	14	119	10
10	9	8	21	8	9	119	19	8	37	30	22	15
11	7	16	4	5	3	88	20	24	22	12	20	14
12	19	13	17	13	4	66	28	64	8	6	10	13
13	12	11	27	5	27	120	134	8	13	7	13	15
14	4	8	7	6	33	8	75	19	26	8	18	17
15	12	9	6	6	8	13	12	36	9	5	30	7
16	7	5	8	5	15	5	22	19	7	4	25	20
17	11	4	13	13	35	67	41	21	5	6	22	35
18	10	4	9	12	4	26	21	26	6	11	30	12
19	4	8	12	14	4	28	40	74	10	12	56	13
20	5	6	12	4	4	14	28	67	8	22	18	10
21	4	8	26	6	7	25	32	41	5	28	65	27
22	4	14	20	8	17	18	23	48	7	22	57	6
23	6	21	11	8	21	47	14	13	4	22	33	14
24	22	6	161	11	26	31	6	11	7	23	14	10
25	13	11	130	17	35	24	11	10	50	38	11	7
26	11	8	114	12	23	22	5	8	37	32	8	9
27	7	9	31	24	21	10	8	37	48	50	7	36
28	5	18	20	33	31	9	6	16	40	98	10	23
29	4		4	59	22	5	6	14	18	128	16	29
30	4		26	34	12	21	8	49	24	34	13	16
31	14		9		52		6	52		59		9
MEAN	8	10	27	17	18	44	27	30	20	31	33	15

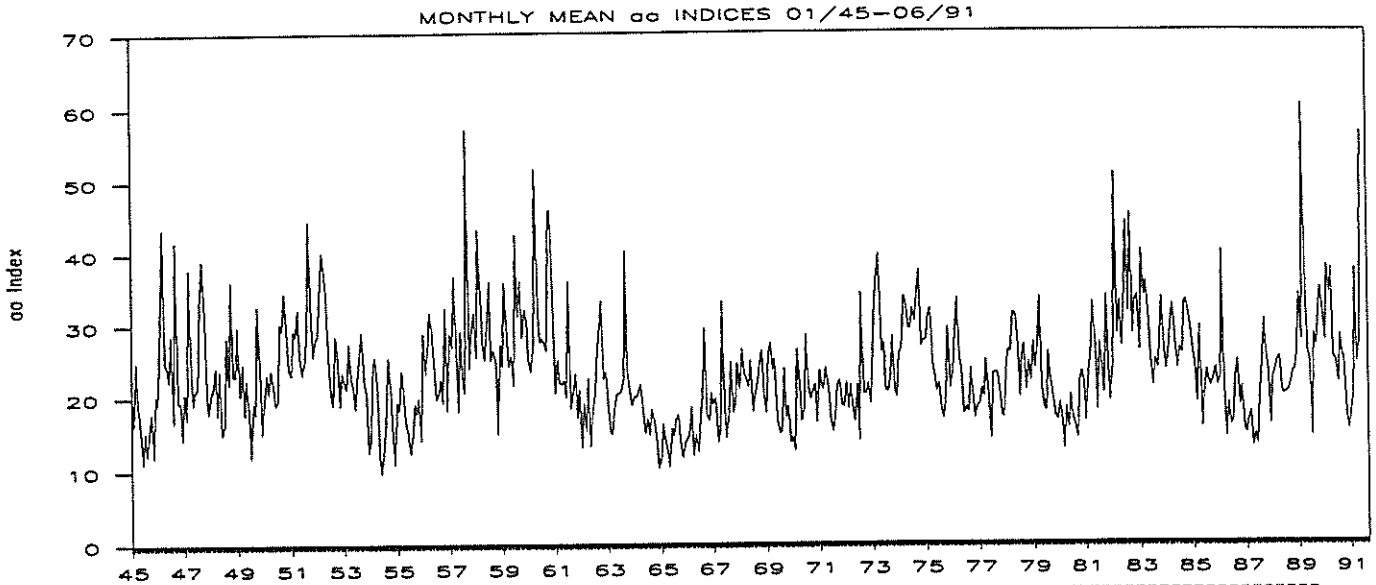
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

University of Göttingen

Kp through December 31, 1991



MONTHLY MEAN aa INDICES 01/45–06/91



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1947	20.6	17.1	37.9	23.3	19.1	21.1	21.4	32.9	39.1	31.3	20.7	17.9	25.2
1948	20.8	21.0	24.2	17.7	23.7	15.0	16.2	28.3	22.0	36.1	23.1	23.0	22.6
1949	29.8	20.4	24.7	17.6	22.4	17.9	11.8	19.2	17.8	32.7	24.6	15.1	21.2
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	22.5	26.1	29.0	22.4	20.2	12.6	22.2
1954	13.9	24.5	25.5	20.6	12.0	9.7	13.1	16.5	25.4	21.1	14.5	10.9	17.3
1955	19.3	18.2	23.6	21.1	16.7	15.1	12.3	14.3	19.1	17.8	19.9	14.1	17.6
1956	28.7	23.3	27.6	31.7	29.3	23.5	19.8	20.7	22.4	19.3	32.3	18.2	24.7
1957	28.7	26.8	36.7	28.8	18.1	29.1	21.7	20.7	57.0	24.0	29.5	31.7	29.4
1958	25.5	43.2	36.1	27.6	25.2	29.7	36.0	25.1	26.5	24.7	15.0	27.2	28.5
1959	24.3	35.9	29.9	24.2	25.7	21.6	42.5	31.2	36.1	28.2	32.1	30.8	30.2
1960	25.2	23.5	27.6	51.5	31.6	27.6	28.1	27.2	26.4	45.6	45.9	34.5	32.9
1961	20.6	25.1	22.0	21.8	22.3	20.1	36.0	18.5	20.7	23.3	17.3	21.1	22.4
1962	13.2	19.2	15.5	22.6	13.4	18.1	21.0	26.2	29.8	33.3	22.5	23.5	21.5
1963	19.3	15.3	14.9	18.2	20.4	20.5	20.8	22.5	40.2	23.5	20.7	18.9	21.3
1964	20.1	20.1	21.0	21.7	17.5	15.1	16.9	14.8	18.2	16.9	13.8	10.3	17.2
1965	11.8	16.3	14.3	12.6	10.5	15.7	14.7	16.8	17.5	13.1	11.7	13.8	14.1
1966	14.2	14.8	18.6	12.0	14.8	12.5	17.1	20.0	29.4	17.5	16.8	20.5	17.3
1967	18.9	19.8	13.8	15.5	33.1	18.6	14.4	17.5	24.7	17.8	18.9	24.5	19.8
1968	21.1	26.5	23.3	22.2	21.4	24.9	18.0	20.1	22.0	24.8	26.2	20.3	22.6
1969	17.8	25.8	27.3	23.6	25.2	16.7	15.0	15.3	23.8	17.2	18.7	13.8	20.0
1970	14.4	12.7	26.4	23.1	16.6	18.3	28.4	21.0	19.7	20.6	21.6	16.5	19.9
1971	23.5	21.2	21.1	23.9	21.1	17.0	15.2	17.1	21.4	22.2	18.8	18.6	20.1
1972	21.9	18.3	21.5	18.1	16.6	21.5	14.0	34.2	20.4	20.4	21.8	18.9	20.6
1973	26.1	32.7	36.9	39.6	26.1	27.3	20.9	20.6	22.8	28.2	20.7	19.9	26.8
1974	25.8	26.4	33.7	32.9	29.2	29.2	32.0	30.2	33.7	37.3	26.8	27.5	30.4
1975	27.6	31.1	32.0	24.3	22.7	20.7	21.7	18.1	16.9	20.2	29.3	21.1	23.8
1976	23.3	28.5	33.4	25.4	23.7	17.5	18.4	17.7	23.7	20.4	16.9	18.6	22.3
1977	18.7	21.0	19.9	24.9	20.1	14.2	22.9	23.2	23.0	20.9	17.3	17.0	20.3
1978	24.6	26.2	25.9	31.3	31.2	28.3	19.9	25.6	27.0	20.8	24.6	22.0	25.6
1979	27.3	23.7	26.9	33.5	21.0	18.3	17.9	26.0	22.0	19.3	17.1	16.8	22.5
1980	19.0	17.3	12.7	18.4	15.6	20.0	17.0	15.9	14.2	21.9	23.3	21.7	18.1
1981	16.5	23.1	26.6	32.8	26.9	18.0	27.2	24.0	20.4	33.7	24.1	19.3	24.4
1982	24.2	50.6	28.5	32.9	26.7	32.1	43.9	31.4	45.1	28.5	33.0	33.8	34.2
1983	26.2	40.0	33.6	35.7	31.6	24.9	21.3	24.9	23.7	28.3	33.5	26.0	29.1
1984	23.5	26.7	30.7	32.5	27.2	23.7	26.4	25.8	32.6	33.1	31.0	29.0	28.5
1985	25.7	24.1	19.0	29.5	15.6	19.9	23.4	22.0	21.2	22.2	23.7	21.4	22.3
1986	22.4	40.0	21.1	14.3	18.8	15.9	16.3	22.3	24.7	18.6	21.2	15.3	20.9
1987	14.8	16.6	17.6	12.9	14.7	13.2	19.3	24.3	30.3	25.8	22.4	16.0	19.0
1988	22.4	23.4	24.8	25.2	20.5	20.0	20.2	20.6	21.4	23.2	23.3	25.5	22.5
1989	33.9	27.5	60.1	32.8	25.7	24.9	14.4	28.4	26.7	31.4	34.7	31.4	31.0
1990	27.4	37.8	33.9	37.4	25.1	24.6	21.6	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	40.8	49.7	28.0	34.0

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

DECEMBER 1991

Sta	Geomag Lat	Commencement Day	Time (UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	H (Gamma)	Z (Gamma)	End Day	Hour (UT)
HYB	07.6N	02	0000	..	..	..	..	02(5)	5	3	116	19	04	21
ETT	00.6S	02	0400	..	..	..	..		-	4	188	50	04	21
HER	33.7S	02	04--	..	..	..	..	02(5)	5	33	83	71	02	18
HYB	07.6N	08	0500	..	..	..	..	09(4)	5	3	108	22	11	10
GUA	04.0N	09	23--	..	..	..	..	10(1)	5	--	50	30	10	05
ETT	00.6S	09	0000	..	..	..	..		-	4	169	81	12	20
GUA	04.0N	12	02--	..	..	..	..	12(1)	5	--	80	20	12	06
GUA	04.0N	12	22--	..	..	..	..	13(1)	5	--	50	40	13	04
BJI	28.5N	16	09--	..	..	..	..	16(5)	5	8	89	9	17	23
UJJ	13.5N	16	0900	..	..	..	..		-	4	108	21	17	23
ABG	09.5N	16	0900	..	..	..	..	16(5,6) 17(7)	5	3	107	27	17	23
HYB	07.6N	16	0500	..	..	..	..	16(4,5,6) 17(7)	5	3	116	30	18	03
GUA	04.0N	16	09--	..	..	..	..	16(4)	5	--	70	10	16	18
GUA	04.0N	16	21--	..	..	..	..	17(1)	5	--	60	30	17	08
ETT	00.6S	16	0100	..	..	..	..		-	5	180	68	17	20
TRD	01.1S	16	0900	..	..	..	..		-	4	190	120	17	23
HER	33.7S	16	09--	..	..	..	..	16(6)	5	33	104	146	17	20
HYB	07.6N	20	0600	..	..	..	..	20(4) 21(2,3,4,5,6)	4	4	103	21	21	23
ETT	00.6S	20	1400	..	..	..	..		-	5	157	53	21	20
GUA	04.0N	22	22--	..	..	..	..	23(1)	5	--	150	30	23	15
HYB	07.6N	23	1801	SC	- .2	11	- 1	24(6)	4	3	84	13	24	21
ETT	00.6S	23	1801	SC	- .3	11	10		-	4	136	38	24	18
UJJ	13.5N	24	1400	..	..	..	..		-	4	117	32	28	01
TRD	01.1S	24	1400	..	..	..	..		-	5	232	91	28	01
BJI	28.5N	26	1640	SC	.2	15	1	27(6)	6	7	109	20	28	05
KRC	16.4N	26	1642	SC	- .8	14	10	27(6,8)	6	5	120	50	28	06
ABG	09.5N	26	1400	..	..	..	..	27(6)	6	4	118	41	28	01
HYB	07.6N	26	0500	..	..	..	..	27(6)	6	4	147	32	28	01
GUA	04.0N	26	21--	..	..	..	..	27(1)	5	--	100	50	27	04
ETT	00.6S	26	0400	..	..	..	..		-	5	249	77	27	23
HER	33.7S	26	16--	..	..	..	..	27(1,6,7)	5	16	122	79	28	02
CNB	43.9S	26	16--	..	..	..	..	27(4,6)	5	17	120	51	28	00
GUA	04.0N	27	20--	..	..	..	..	27(8)	5	10	70	60	28	09
KGL	56.5S	27	0800	..	..	..	..	27(8)	7	115	600	320	30	04
UJJ	13.5N	28	1100	..	..	..	..		-	5	134	17	30	01
ABG	09.5N	28	1100	..	..	..	..	28(7)	5	--	--	--	30	01
HYB	07.6N	28	0900	..	..	..	..	28(7) 29(2,7)	5	4	147	35	31	01
GUA	04.0N	28	21--	..	..	..	..	29(2)	5	--	100	50	29	09
ETT	00.6S	28	0100	..	..	..	..		-	5	184	60	31	21
TRD	01.1S	28	1100	..	..	..	..		-	4	184	101	30	01
HER	33.7S	28	18--	..	..	..	..	29(1,8)	5	32	98	93	30	04
CNB	43.9S	28	11--	..	..	..	..	28(7,8) 29(2,7)	5	19	145	59	30	09
GUA	04.0N	29	16--	..	..	..	..	29(8)	5	--	90	60	30	10
HYB	07.6N	30	1127	SC	0	13	- 1		-	--	--	--	--	--
HYB	07.6N	31	1426	SC	- .2	12	- 1		-	--	--	--	--	--

Stations:

ABG = ALIBAG
ANN = ANNAMALAINAGAR
API = APIA
BJI = BEIJING
CNB = CANBERRA
COL = COLLEGE
ETT = ETAIYAPURAM
FRD = FREDERICKSBURG
GNA = GNANGARA
GUA = GUAM
HER = HERMANUS
HON = HONOLULU
HYB = HYDERABAD
JAI = JAIPUR
KGL = KERGUELEN
KRC = KARACHI
PMG = PORT MORESBY
SHL = SHILLONG
SIT = SITKA
TRD = TRIVANDRUM
UJJ = UJJAIN
WIT = WITTEVEEN

C O N T E N T S

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Tokyo August 1991. 155
Climax February, March, August-October 1988. 156-157
Huancayo November 1987-May 1990. 158-170

TABLE

Station	Start	End	Problem
Climax	Feb 29,1988(20:00)	Mar 02,1988(22:00)	Pressure incorrect
"	Aug 12,1988(23:00)	Oct 11,1988(17:00)	Date 1 day too soon
Huancayo	Nov 08,1987(00:00)	Dec 03,1987(15:00)	New electronics, 1.7% low
"	Dec 03,1987(16:00)	Apr 12,1988(01:00)	Old electronics, 0.5% low
"	Apr 12,1988(01:00)	May 22,1988(15:00)	New electronics, 1.7% low
"	May 22,1988(16:00)	Aug 05,1988(14:00)	Old electronics, 0.5% low
"	Aug 05,1988(15:00)	to present	New electronics, 1.7% low

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335	01	30	121	168	10	S13	W37	0	0	0	01	S13	W37	Q	Solalert 01/XX,
						S06	W14	0	0	0		S06	W14	E	Magquiet.
						N08	W56	0	0	0		N08	W56	Q	
						S08	E37	9	1	0		S08	E37	E	
						S05	E54	0	0	0		S05	E54	Q	
						S17	E53	0	0	0		S17	E53	Q	
						N05	E64	0	0	0		N05	E64	Q	
336	02	01	152	172	7	S13	W50	1	0	0	02	S13	W50	Q	Solalert 02/XX,
						S05	W28	1	0	0		S05	W28	E	Magquiet.
						N05	W60	0	0	0		N05	W60	Q	
						N08	W67	1	0	0		N08	W67	Q	
						S08	E24	2	1	0		S08	E24	E	
						S05	E48	0	0	0		S05	E48	Q	
						S16	E40	0	0	0		S16	E40	Q	
						N05	E52	0	0	0		N05	E52	Q	
						N20	E64	1	0	0		N20	E64	Q	
						S18	W06	0	0	0		S18	W06	Q	
337	03	02	143	171	14	S13	W65	0	0	0	03	S13	W65	Q	Solnil,
						S06	W41	0	0	0		S06	W41	E	Magquiet.
						S09	E11	8	0	0		S09	E11	E	
						S17	E27	0	0	0		S17	E27	Q	
						N04	E38	0	0	0		N04	E38	Q	
						N20	E53	0	0	0		N20	E53	E	
						S19	W20	0	0	0		S19	W20	Q	
						N18	E77	2	1	0		N18	E77	E	
						S19	E57	0	0	0		S19	E57	Q	
338	04	03	175	183	10	S13	W77	1	0	0	04	S13	W77	Q	Solalert 04/XX,
						S06	W54	0	0	0		S06	W54	E	Magquiet.
						S09	W02	1	0	0		S09	W02	E	
						N03	E25	0	0	0		N03	E25	Q	
						N19	E41	1	0	0		N19	E41	Q	
						N18	E66	1	0	1		N18	E66	A	
						S20	E45	0	0	0		S20	E45	Q	
						S05	E21	3	0	0		S05	E21	E	
						N10	E69	0	0	0		N10	E69	Q	
						S12	W07	0	0	0		S12	W07	Q	
		Presto:[2]	Boulder	Tenflare 1200 flux units 03/1635 UT duration 12 minutes.											
			Boulder	X-ray event X2/2B N17 E72 03/1639 UT duration 53 minutes.											
339	05	04	151	191	7	S06	W69	0	0	0	05	S06	W69	E	Solalert 05/XX,
						S08	W17	0	0	0		S08	W17	E	Magquiet.
						N20	E28	1	0	0		N20	E28	Q	
						N18	E55	6	2	0		N18	E55	A	
						S19	E31	0	0	0		S19	E31	Q	
						S05	E07	0	0	0		S05	E07	E	
						N10	E57	0	0	0		N10	E57	Q	
						S14	W59	0	0	0		S14	W59	Q	
340	06	05	198	192	7	S07	W83	0	0	0	06	S07	W83	Q	Solalert 06/XX,
						S09	W31	2	1	0		S09	W31	E	Magquiet.
						N20	E15	0	0	0		N20	E15	Q	
						N18	E42	6	1	0		N18	E42	A	
						S19	E18	0	0	0		S19	E18	Q	
						S05	W07	4	0	0		S05	W07	E	
						N11	E44	0	0	0		N11	E44	Q	
						S18	E58	2	0	0		S18	E58	Q	
						S19	W22	0	0	0		S19	W22	Q	

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341	07	06	243	197	4	S05	W96	0	0	0	07	S05	W96	Q	Solalert 07/XX, Magquiet.
						S09	W44	1	0	0		S09	W44	E	
						N19	E01	0	0	0		N19	E01	Q	
						N18	E29	8	1	0		N18	E29	A	
						S05	W20	1	0	0		S05	W20	E	
						N11	E30	0	0	0		N11	E30	E	
						S18	E45	4	0	0		S18	E45	E	
						S19	W34	0	0	0		S19	W34	Q	
						N09	E75	0	0	0		N09	E75	Q	
						N23	W07	0	0	0		N23	W07	Q	
342	08	07	276	209	3	S08	W59	1	0	0	08	S08	W59	Q	Solalert 08/XX, Magquiet.
						N20	W12	0	0	0		N20	W12	Q	
						N18	E15	2	0	0		N18	E15	A	
						S19	W09	0	0	0		S19	W09	Q	
						S05	W34	0	0	0		S05	W34	E	
						N10	E17	1	0	0		N10	E17	E	
						S18	E31	2	0	0		S18	E31	E	
						S19	W48	1	0	0		S19	W48	Q	
						S13	E43	0	0	0		S13	E43	Q	
						N09	E64	14	0	0		N09	E64	E	
						N24	W21	1	0	0		N24	W21	Q	
						S10	E09	0	0	0		S10	E09	Q	
343	09	08	266	226	8	S08	W76	0	0	0	09	S08	W76	Q	Solalert 09/XX, Magquiet.
						N20	W25	0	0	0		N20	W25	Q	
						N19	E02	4	2	0		N19	E02	A	
						S05	W48	0	0	0		S05	W48	Q	
						N11	E04	2	2	0		N11	E04	E	
						S17	E18	3	0	0		S17	E18	E	
						S13	E33	0	0	0		S13	E33	Q	
						N10	E53	9	5	0		N10	E53	E	
						S10	W05	0	0	0		S10	W05	Q	
						S22	E50	0	0	0		S22	E50	Q	
						S06	E70	0	0	0		S06	E70	Q	
344	10	09	335	257	6	S08	W87	0	0	0	10	S08	W87	Q	Solalert 10/XX, Magquiet.
						N20	W40	0	0	0		N20	W40	Q	
						N19	W11	4	0	0		N19	W11	A	
						S05	W62	1	1	0		S05	W62	Q	
						N11	W07	1	0	0		N11	W07	E	
						S17	E05	1	0	0		S17	E05	E	
						S13	E18	0	0	0		S13	E18	Q	
						N10	E39	7	4	0		N10	E39	A	
						S11	W18	5	0	0		S11	W18	E	
						S22	E37	1	0	0		S22	E37	Q	
						S07	E56	0	0	0		S07	E56	Q	
						S03	E76	3	2	0		S03	E76	E	
						S26	E13	0	0	0		S26	E13	Q	

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345	11	10	292	260	9	N19	W54	0	0	0	11	N19	W54	Q	Solalert 11/XX, Magquiet.
						N18	W24	2	0	0		N18	W24	E	
						S05	W76	0	0	0		S05	W76	Q	
						N11	W21	1	0	0		N11	W21	E	
						S15	W10	1	1	0		S15	W10	E	
						S15	E06	0	0	0		S15	E06	Q	
						N09	E25	15	2	0		N09	E25	A	
						S11	W31	8	0	0		S11	W31	E	
						S21	E24	2	0	0		S21	E24	Q	
						S05	E42	1	0	0		S05	E42	Q	
						S04	E63	7	1	0		S04	E63	E	
						S26	W02	0	0	0		S26	W02	Q	
						S15	E74	0	0	0		S15	E74	E	
346	12	11	279	245	10	N19	W37	1	0	0	12	N19	W37	E	Solalert 12/XX, Magquiet.
						S05	W89	0	0	0		S05	W89	Q	
						N11	W35	0	0	0		N11	W35	E	
						S18	W22	4	1	0		S18	W22	E	
						S16	W07	1	0	0		S16	W07	Q	
						N09	E12	2	0	0		N09	E12	A	
						S10	W45	0	0	0		S10	W45	E	
						S05	E29	1	0	0		S05	E29	Q	
						S05	E50	2	1	0		S05	E50	E	
						S26	W16	0	0	0		S26	W16	Q	
						S16	E60	2	0	0		S16	E60	E	
						N23	E14	0	0	0		N23	E14	Q	
347	13	12	248	243	8	N18	W50	0	0	0	13	N18	W50	E	Solalert 13/XX, Magquiet.
						N09	W49	0	0	0		N09	W49	E	
						S18	W32	5	1	0		S18	W32	A	
						S16	W20	0	0	0		S16	W20	Q	
						N08	W01	2	0	0		N08	W01	E	
						S12	W57	2	0	0		S12	W57	Q	
						S04	E39	4	1	0		S04	E39	E	
						S27	W28	1	0	0		S27	W28	Q	
						S15	E49	2	0	0		S15	E49	E	
		Presto:[2]	Boulder	Tenflare 250 flux units 12/0946 UT duration 17 minutes.											
348	14	13	248	254	11	N18	W63	1	1	0	14	N18	W63	E	Solalert 14/XX, Magquiet.
						N10	W63	0	0	0		N10	W63	Q	
						S18	W49	2	0	0		S18	W49	E	
						S16	W33	0	0	0		S16	W33	Q	
						N09	W15	4	0	0		N09	W15	E	
						S11	W72	0	0	0		S11	W72	E	
						S04	E25	0	0	0		S04	E25	E	
						S27	W41	1	0	0		S27	W41	Q	
						S15	E36	1	0	0		S15	E36	Q	
		Presto:	Boulder	Tenflare 350 flux units 13/0350 UT duration 11 minutes.											
349	15	14	250	229	15	N18	W76	0	0	0	15	N18	W76	E	Solalert 15/XX, Magquiet.
						N09	W75	0	0	0		N09	W75	Q	
						S18	W61	2	1	0		S18	W61	E	
						S16	W46	0	0	0		S16	W46	Q	
						N09	W28	5	0	0		N09	W28	E	
						S11	W84	0	0	0		S11	W84	E	
						S05	E12	1	0	0		S05	E12	E	
						S26	W55	0	0	0		S26	W55	Q	
						S16	E24	1	0	0		S16	E24	Q	
						S13	W53	0	0	0		S13	W53	Q	
						S27	W05	0	0	0		S27	W05	Q	

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350	16	15	238	213	4	N10	W90	0	0	0	16	N10	W90	Q	Solalert 16/XX,
						S18	W75	0	0	0		S18	W75	E	Magalert 16/XX
						N09	W41	13	1	0		N09	W41	E	Coronal Hole.
						S12	W91	0	0	0		S12	W91	Q	
						S05	W01	0	0	0		S05	W01	E	
						S27	W68	2	0	0		S27	W68	Q	
						S16	E11	3	0	0		S16	E11	E	
						S12	W66	0	0	0		S12	W66	Q	
						S11	E69	6	1	0		S11	E69	E	
						N20	W20	0	0	0		N20	W20	Q	
						S18	W03	0	0	0		S18	W03	Q	
						N16	W54	0	0	0		N16	W54	Q	
						N09	W28	0	0	0		N09	W28	Q	
351	17	16	196	233	15	S18	W87	0	0	0	17	S18	W87	E	Solalert 17/XX,
						N09	W54	4	2	0		N09	W54	E	Magalert 17/19.
						S06	W14	1	0	0		S06	W14	E	
						S26	W86	0	0	0		S26	W86	Q	
						S17	W01	0	0	0		S17	W01	E	
						S11	E58	6	0	0		S11	E58	E	
						N21	W32	0	0	0		N21	W32	Q	
						S17	W16	0	0	0		S17	W16	Q	
						N09	W40	0	0	0		N09	W40	Q	
		Presto:[2]	Boulder	Tenflare 740 flux units 16/1924 UT duration 4 minutes.											
352	18	17	175	198	26	N09	W67	2	1	0	18	N09	W67	E	Solalert 18/20,
						S05	W27	0	0	0		S05	W27	E	Magalert 18/20.
						S17	W14	0	0	0		S17	W14	E	
						S10	E47	6	0	0		S10	E47	E	
						N21	W47	0	0	0		N21	W47	Q	
						S17	W30	0	0	0		S17	W30	Q	
						N09	W54	0	0	0		N09	W54	Q	
						S33	W73	0	0	0		S33	W73	Q	
353	19	18	189	195	12	N09	W81	0	0	0	19	N09	W81	E	Solalert 19/XX,
						S04	W42	4	0	0		S04	W42	E	Magnil.
						S17	W24	0	0	0		S17	W24	E	
						S10	E35	2	0	0		S10	E35	E	
						N22	W61	0	0	0		N22	W61	Q	
						S16	W43	0	0	0		S16	W43	Q	
						N05	W70	0	0	0		N05	W70	Q	
						S32	W87	0	0	0		S32	W87	Q	
						S21	E71	0	0	0		S21	E71	Q	
						N18	E41	0	0	0		N18	E41	Q	
						S07	E69	1	0	0		S07	E69	Q	
354	20	19	189	188	11	N10	W91	0	0	0	20	N10	W91	E	Solalert 20/XX,
						S03	W59	1	0	0		S03	W59	Q	Magalert 20/21.
						S18	W36	0	0	0		S18	W36	Q	
						S10	E21	1	1	0		S10	E21	E	
						N20	W74	0	0	0		N20	W74	Q	
						S17	W56	0	0	0		S17	W56	Q	
						N05	W84	0	0	0		N05	W84	Q	
						S06	E62	1	0	0		S06	E62	Q	
						N16	E31	0	0	0		N16	E31	Q	
						S05	E52	0	0	0		S05	E52	Q	
						S06	W33	0	0	0		S06	W33	Q	
						S14	E69	0	0	0		S14	E69	Q	
		Presto:	Boulder	Tenflare 200 flux units 19/0748 UT duration 7 minutes.											

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355	21	20	168	198	7	S03	W72	0	0	0	21	S03	W72	Q	Solalert 21/XX, Magnil.
						S18	W51	0	0	0		S18	W51	Q	
						S10	E09	1	0	0		S10	E09	E	
						S17	W69	0	0	0		S17	W69	Q	
						S20	E50	0	0	0		S20	E50	Q	
						N17	E14	0	0	0		N17	E14	Q	
						S07	E38	0	0	0		S07	E38	Q	
						S07	W47	0	0	0		S07	W47	Q	
						S14	E55	1	0	1		S14	E55	A	
						S09	W14	0	0	0		S09	W14	Q	
		Presto:[2]	Boulder	X-ray event X3/2B S15 E64 20/1355 UT duration 25 minutes.											
			Boulder	Tenflare 1200 flux units 20/1400 UT in progress.											
356	22	21	154	192	13	S03	W86	1	0	0	22	S03	W86	E	Solalert 22/XX, Magalert 22/23 Flare.
						S09	W04	1	0	0		S09	W04	E	
						S18	W87	0	0	0		S18	W87	Q	
						S21	E38	0	0	0		S21	E38	Q	
						N17	W01	0	0	0		N17	W01	Q	
						S07	E26	0	0	0		S07	E26	Q	
						S14	E43	0	0	0		S14	E43	A	
						S09	W27	0	0	0		S09	W27	Q	
						S18	E25	0	0	0		S18	E25	Q	
357	23	22	214	223	6	S12	W18	0	0	0	23	S12	W18	Q	Solalert 23/XX, Magalert 23/XX.
						S21	E24	1	0	0		S21	E24	Q	
						N18	W13	2	0	0		N18	W13	Q	
						S06	E12	0	0	0		S06	E12	Q	
						S14	E30	2	0	0		S14	E30	E	
						S10	W40	1	0	0		S10	W40	Q	
						S16	E73	4	1	0		S16	E73	A	
						S19	W10	0	0	0		S19	W10	Q	
						N06	E08	0	0	0		N06	E08	Q	
358	24	23	201	226	11	S12	W33	4	0	0	24	S12	W33	Q	Solalert 24/XX, Magnil.
						S20	E12	2	0	0		S20	E12	Q	
						S08	W00	0	0	0		S08	W00	Q	
						S13	E17	6	1	0		S13	E17	E	
						S10	W53	0	0	0		S10	W53	Q	
						S16	E66	3	0	0		S16	E66	A	
						N07	W05	0	0	0		N07	W05	Q	
		Presto:	Boulder	Tenflare 920 flux units 23/1110 UT duration 57 minutes.											
359	25	24	182	230	6	S12	W44	0	0	0	25	S12	W44	Q	Solalert 25/XX, Magquiet.
						S20	W02	0	0	0		S20	W02	Q	
						S07	W12	0	0	0		S07	W12	Q	
						S13	E04	4	1	1		S13	E04	A	
						S09	W68	1	0	0		S09	W68	Q	
						S17	E50	2	0	0		S17	E50	A	
						S14	E67	4	1	0		S14	E67	E	
		Presto:	Boulder	Tenflare 260 flux units 24/0305 UT duration 7 minutes.											
			Boulder	X-ray event X1/2B S17 E14 24/1012 UT duration 27 minutes.											
			Boulder	Tenflare 460 flux units 24/1018 UT duration 11 minutes.											
360	26	25	228	259	7	S13	W58	0	0	0	26	S13	W58	Q	Solalert 26/XX, Magquiet.
						S20	W16	0	0	0		S20	W16	Q	
						S07	W25	0	0	0		S07	W25	Q	
						S14	W09	5	1	0		S14	W09	A	
						S09	W81	0	0	0		S09	W81	Q	
						S17	E36	2	1	0		S17	E36	A	
						S14	E56	1	0	0		S14	E56	E	
						N14	E13	0	0	0		N14	E13	Q	
						S05	E77	0	0	0		S05	E77	Q	

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages **DECEMBER 1991**

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat	Location °Long	Flares Total	Flares M	Flares X	Date of Forecast	Location °Lat	Location °Long	Region Forecast [1]	Geoalerts
361	27	26	202	261	7	S13	W78	1	0	0	27	S13	W78	Q	Solalert 27/XX,
						S22	W27	0	0	0		S22	W27	Q	Magquiet.
						S13	W21	10	2	0		S13	W21	A	
						S11	W93	0	0	0		S11	W93	Q	
						S15	E23	6	2	0		S15	E23	A	
						S14	E43	2	0	0		S14	E43	E	
						N14	E03	0	0	0		N14	E03	Q	
						S04	E63	0	0	0		S04	E63	Q	
		Presto:[2]	Toyokawa	Tenflare 200 flux units 26/0048 UT duration 7 minutes.											
			Boulder	Tenflare 390 flux units 26/1047 UT duration 5 minutes.											
			Boulder	Tenflare 300 flux units 26/2135 UT duration 20 minutes.											
362	28	27	242	252	19	S13	W90	0	0	0	28	S13	W90	Q	Solalert 28/XX,
						S20	W43	0	0	0		S20	W43	Q	Magquiet.
						S14	W34	5	2	0		S14	W34	A	
						S17	E09	2	0	0		S17	E09	A	
						S16	E30	0	0	0		S16	E30	E	
						S04	E50	0	0	0		S04	E50	Q	
		Presto:	Boulder	Tenflare 430 flux units 27/1106 UT duration 6 minutes.											
			Boulder	Tenflare 310 flux units 27/1715 UT duration 7 minutes.											
363	29	28	217	272	14	S21	W59	1	0	0	29	S21	W59	Q	Solalert 29/XX,
						S14	W48	4	1	0		S14	W48	A	Magalert 29/30.
						S17	W03	2	0	0		S17	W03	A	
						S14	E17	3	0	0		S14	E17	E	
						S04	E35	1	0	0		S04	E35	Q	
						S10	E81	0	0	0		S10	E81	Q	
		Presto:	Boulder	Tenflare 420 flux units 28/1225 UT duration 8 minutes.											
			Boulder	Tenflare 620 flux units 28/2109 UT duration 4 minutes.											
364	30	29	211	254	15	S13	W61	5	0	0	30	S13	W61	A	Solalert 30/XX,
						S16	W17	1	0	0		S16	W17	E	Magalert 30/31.
						S15	E04	0	0	0		S15	E04	E	
						S05	E22	0	0	0		S05	E22	Q	
						S10	E68	0	0	0		S10	E68	E	
						S13	E20	0	0	0		S13	E20	Q	
365	31	30	225	272	10	S15	W74	7	0	0	31	S15	W74	A	Solalert 31/XX,
						S17	W29	9	3	0		S17	W29	E	Magalert 31.
						S15	W09	5	1	0		S15	W09	A	
						S04	E10	0	0	0		S04	E10	Q	
						S11	E58	0	0	0		S11	E58	E	
		Presto:	Boulder	Tenflare 500 flux units 30/1014 UT duration 6 minutes.											
			Boulder	Tenflare 280 flux units 30/2305 UT duration 4 minutes.											

[1]Q = quiet, E = eruptive, A = active, P = proton.
[2]Presto message is a rapid report of a major event.

GEOMAGNETIC ACTIVITY INDICES

November 1991

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	aa Provisional Am	N	S	M	
1	D2	5+	3+	5+	5+	7-	8	8+	7	49+	109	1.9	5-	3	4+	6-	6	7-	7	6	144	128	127	65	191
2		7	6+	4-	3+	3	3+	3	3	33-	41	1.5	6-	5+	3	2+	3-	3+	3	3	51	56	41	63	34
3		2	2+	3	4	4-	3	3	4	25	17	0.9	2	2	2+	4-	3+	3	3	3+	28	38	33	29	42
4		4-	4+	4-	5	3-	3+	6	6-	34+	38	1.4	3	4-	3	4-	2+	3	5+	5	49	64	53	37	80
5		6-	5-	4	3+	3+	3+	3+	2+	30	27	1.2	5-	4-	3+	3-	3	3	3	2+	36	43	33	50	26
6		3+	5	4-	2+	2+	3	3-	3	25+	18	1.0	3	4	3	2+	2	3+	3-	3	29	26	33	32	28
7	Q6A	3+	3	2+	3-	2	3-	3-	2+	21	12	0.7	3	2+	2+	2	2	3-	2+	2+	20	26	22	24	24
8	D3	3-	3	4	4	7-	7-	8-	9-	43+	98	1.9	3	2	4+	4+	6+	6+	7-	9-	160	183	144	49	278
9	D1	8+	8+	7+	7-	6	5	5+	4+	51+	119	1.9	8	7	6+	6	5+	5+	5	4-	168	160	136	193	103
10		4-	3-	4	4	4	3	4-	4-	29-	22	1.1	3	3-	4-	4-	4	3	3+	3+	37	40	33	32	41
11		3	3	2	2+	2+	4-	5	5-	26	20	1.0	2+	2	2-	2+	3-	4	5-	5	40	39	43	18	65
12	Q5A	3+	3	4-	2	1	1	2-	2	18-	10	0.6	3	2+	3-	1+	1-	1+	2-	2	16	21	15	23	13
13	Q7A	1	2-	3-	3	4-	3+	3-	3	21	13	0.7	1	1	2+	3-	4-	3+	3-	3	24	30	20	15	35
14		4	4	4-	3+	3+	2	2	3+	26-	18	1.0	4-	3	3	3	3+	2	3-	4-	33	31	44	42	33
15		4+	3+	4	5	5	4-	4	3	32+	30	1.3	4-	3-	3	5-	5+	4-	4-	3	51	45	50	48	48
16		4-	4	4	4	4+	3+	3	4+	31-	25	1.2	3	4-	3	4+	4	3	3	4-	43	47	49	46	51
17		3+	2+	4-	5-	4-	4	4-	3+	29-	22	1.1	3-	2	3	4+	3+	4-	4	3	38	40	41	38	42
18		4+	4	4-	4+	4	3+	4+	5	33	30	1.3	3+	3	3+	5	4-	3+	5-	4+	53	54	51	46	60
19	D5	6-	5+	5+	5-	5-	6+	5+	5-	42	56	1.6	5-	4+	5-	4	5-	6-	5+	4+	87	93	69	61	102
20		2	3-	4-	3	3-	4-	4	4	26-	18	1.0	2	2	3	3-	3-	4-	4	4-	31	37	24	23	38
21	D4	3-	5-	5	5	5-	7-	7-	7-	42	65	1.7	3-	4-	4+	5-	5	6+	6	6	100	95	75	47	122
22		6+	6	6+	5+	6	4-	3-	3	39+	57	1.6	5	5	5	5	5+	3+	3-	3+	73	68	67	86	49
23		4	4-	5	5	5-	4	4-	4+	34+	33	1.3	3+	3	4+	5-	4	3+	3	3+	46	54	44	51	47
24	Q9A	3+	3+	3	2	2+	3	3	3+	23+	14	0.8	3-	3-	3-	2-	3-	3	3	3	24	36	18	18	36
25	Q4A	3	3-	3	1+	2+	2+	3	2+	20	11	0.6	2-	3-	3	2+	2	3-	3	2+	20	21	17	17	20
26	Q2A	1	3+	3-	2+	2	2-	1+	0	14+	8	0.4	1+	3-	2	3-	2	2	2-	0+	14	15	14	18	12
27	Q1A	2	2	1+	1	2	3-	2+	2-	15	7	0.4	2-	1+	1+	1	2-	3-	2+	2	14	14	16	13	17 C
28	Q3A	3-	1	1	1+	3-	2+	3	3+	17+	10	0.6	2	1-	1	2-	3-	2+	3+	4-	21	20	21	8	33
29	Q10A	4	3+	1	2	3+	3	2	4+	23	16	0.9	4	3	1	2-	3+	3	2+	4	30	33	34	24	44
30	Q8A	4	3	2+	2+	2+	2-	2	4-	21+	13	0.7	3	3-	2+	2+	2	2-	2+	4-	23	26	30	29	27
Mean											33	1.11									50.1	52.7	46.7	49.7	

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	5-	3	4+	6-	6	7	7	6	140	5	3+	4	6	6+	7-	7	6+	147	226.8	183	181	183	
2	6-	5	3-	3-	3-	3+	3	3-	50	6-	5+	3+	2	3	4-	3+	3	52	214.8	163	174	170	
3	2-	2	3-	4-	3	3	3	3+	27	2+	2	2+	4	4-	3-	3	4-	30	183.1	127	139	136	
4	3	4-	3	4	2+	3	5+	5-	50	3	3+	3	4-	2+	3	5	5+	49	173.9	109	131	126	
5	4+	4-	3+	2+	3-	3-	3	2+	33	5	4	3+	3-	3	3+	3-	2	39	172.6	113	122	124	
6	3+	4	3-	2	2	3+	3	3	29	3-	4	3	2+	2	3+	2+	3+	30	183.4	125	126	136	
7	3	2+	2+	2	2+	3-	3-	2+	20	3	3-	2+	2	2-	3	2+	3-	20	190.0	134	138	143	
8	3-	2	4-	4+	7-	7	7-	8+	167	3	2	5-	4+	6-	6-	6+	9-	154	196.7	141	139	150	
9	8-	7-	7-	6-	5+	6-	5	4	165	8	7	6	6+	5+	5	5	3+	171	193.6	132	133	147	
10	3	2+	4-	4	4-	3	4-	3	37	3-	3-	4-	4-	4	3	3+	3+	36	191.5	121	135	145	
11	2	2+	1+	2+	3-	4	5-	5-	39	3-	1+	2	3-	3-	4	5-	5+	41	193.6	129	128	147	
12	3	3-	3-	1+	1	2-	2-	2	17	3	2	3-	1+	0+	1	2-	2	14	188.5	114	110	142	
13	1	1	3-	3-	4	4-	3-	3	26	1	1	2	3-	4-	3	3-	3	22	177.4	98	100	130	
14	3+	3	3	3	4-	2+	3-	3	31	4	3+	3	3+	3	2	3-	4+	36	179.6	94	99	132	
15	4	3	3	5-	5+	4-	4-	3	53	4-	3-	3-	5	5	4-	3+	3+	50	169.4	88	91	121	
16	3	4-	3+	5-	4+	3	3+	4-	45	3+	4-	3-	4+	4	3	3	4-	41	161.9	73	71	113	
17	3-	2	3	4+	3+	4+	4+	3	41	3-	2+	3-	4+	4-	3	4	3	35	160.8	75	80	112	
18	4-	3	3+	5	4+	3+	5	5-	61	3+	3	3+	5-	3	3+	4	4	45	159.6	75	79	110	
19	5-	4+	4+	4	5-	6+	6-	5	93	5	4+	5	4+	5-	5+	5-	4	80	154.6	93	97	105	
20	2-	2	3-	3-	3-	4-	4	4-	32	2+	2	3	3-	3	4-	4-	3+	30	149.6	90	98	100	
21	3-	4	4+	5-	5	7-	6+	6	107	3-	3+	4+	5-	5-	6	6-	6	93	141.5	82	81	91	
22	5	5	5	5	5	3+	3-	3	70	5	5	5	5	5+	3+	3-	4-	76	135.7	78	72	85	
23	3+	3	4+	5-	5-	4-	3+	4-	50	3+	3	4+	4+	4-	3+	3	3	42	133.0	76	79	82	
24	3-	3-	3-	2	3-	3	3	3+	26	3-	2+	3-	2-	3-	3	3	3-	22	128.1	99	88	76	
25	2+	3-	3-	2	2-	3-	3	2-	20	1+	3-	3	2+	2+	3-	3-	3-	21	130.9	95	93	79	
26	1+	3	2+	3-	2	2-	2-	0+	15	1+	3-	2-	3-	2	2	2-	0+	14	140.4	83	102	90	
27	1+	1+	1-	1	2	3	2+	1+	13	2-	1+	2-	1	2-	3-	3-	2+	14	148.9	104	112	99	
28	2	1	1	2-	3-	2+	3+	4-	21	2	1-	1+	2-	2+	2	4-	4-	21	150.4	106	115	100	
29	3+	3	1-	2-	3+	3	2+	4	28	4+	3	1+	2-	4-	3	3-	4-	32	156.6	104	103	107	
30	3	3-	2	2+	2+	2-	2	4-	22	3-	3-	3-	3-	2	2	3-	4	24	163.2	80	81	114	
Mean									50.9									49.4	168.3	106.1	109.9	119.8	

ERRATA: Two errors appear in the August 1991 cosmic ray indices table. The values for the Tokyo data on 13 and 31 August are 3311.0 and 3300.8, respectively.

The errors were published in SGD 566 Part 1, Oct 1991, p. 158 and SGD 568 Part 1, Dec 1991, p. 153. Corrected data appear here.

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

AUGUST 1991

Day	THULE Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	3641	5677.3	5124.2		3290.3	
2	3616	5657.3	5104.4		3274.0	
3	3641	5671.9	5122.8		3283.5	
4	3650	5677.5	5149.1		3302.6	
5	3659	5735.7	5172.9		3316.6	
6	3607	5675.5	5106.2		3302.3	
7	3635	5683.3	5136.7		3301.1	
8	3673	5729.6	5171.0		3312.2	
9	3721	5823.0	5250.7		3347.6	
10	3716	5797.2	5216.1		3342.2	
11	3736	5802.8	5233.0		3342.8	
12	3746	5843.2	5262.7		3341.2	
13	3681	5774.2	5214.3		3311.0	
14	3708	5805.5	5234.1		3312.0	
15	3716	5800.8	5236.4		3329.2	
16	3690	5780.4	5222.3		3319.9	
17	3664	5734.6	5182.2		3307.0	
18	3678	5760.3	5173.0		3296.9	
19	3519	5500.2	4981.2		3251.4	
20	3544	5570.7	5006.7		3244.7	
21	3587	5620.2	5067.3		3262.7	
22	3607	5641.5	5082.1		3278.5	
23	3643	5691.3	5116.5		3285.9	
24	3666	5755.9(23)	5161.6		3310.1	
25	3701	5783.4	5200.2		3327.1	
26	3720	5795.3(23)	5227.1		3331.6	
27	3734	5835.2	5256.9		3348.0	
28	3656	5686.0	5135.8		3288.6	
29	3698	5740.1	5178.7		3294.5	
30	3693	5755.3	5203.0		3303.2	
31	3677	5756.5	5180.3		3300.8	
Mean	3665	5727.8	5164.9		3305.1	

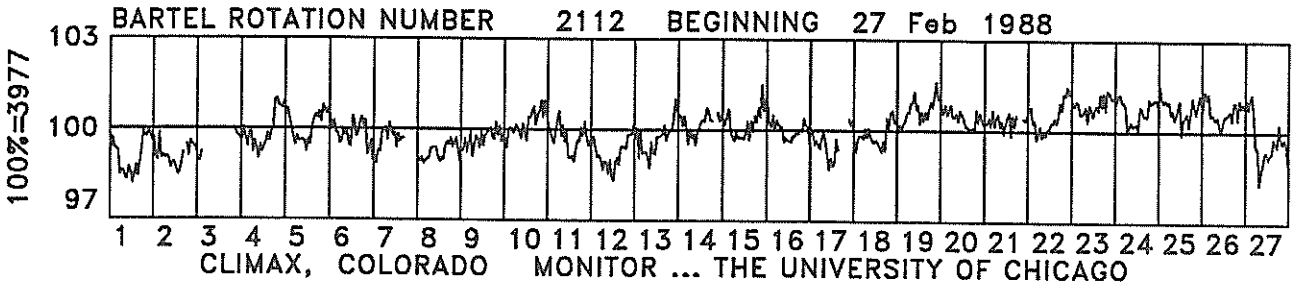
For less than 24-hour coverage, parentheses enclose the number of hours for which data are available. For Climax and Huancayo, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.
* = A&B includes only hours when both A&B sections are available.

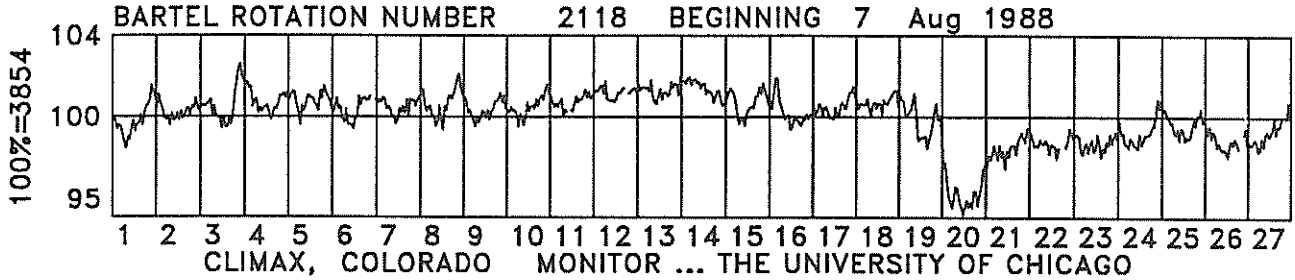
C O S M I C R A Y I N D I C E S
(Neutron Monitor)

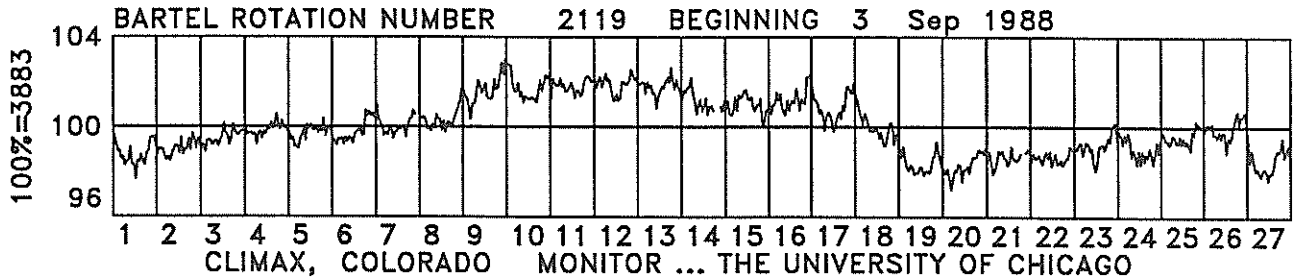
CORRECTED DATA

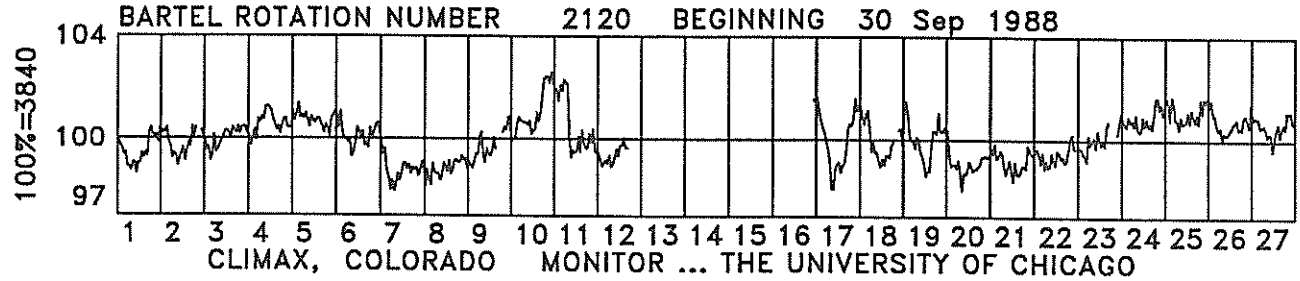
Day	FEB 88 CLIMAX Average (cts/h)/100	MAR 88 CLIMAX Average (cts/h)/100	AUG 88 CLIMAX Average (cts/h)/100	SEP 88 CLIMAX Average (cts/h)/100	OCT 88 CLIMAX Average (cts/h)/100
1	4003.6	3973.2	3810.8	3807.3	3831.6
2	4000.8	3979.7	3830.9	3822.8	3840.2
3	4001.0	3970.8	3828.9	3835.2	3861.3
4	3992.0	3962.8(34)	3834.9	3844.9	3867.8
5	3986.1	3946.3	3868.9	3863.2	3845.0
6	3997.2	3964.3	3826.7	3877.3	3792.7
7	4019.2	3984.7	3846.8	3871.8	3794.5
8	4021.0	3966.1	3863.0	3873.8	3828.0
9	4020.2	3945.1	3875.9	3884.1	3879.2
10	4010.3(18)	3965.5	3882.2	3895.2	3858.9
11	---	3985.1	3884.0	3945.3	3815.4(34)
12	---	3985.4	3867.2	3949.9	---
13	3902.7	3977.7	3872.6	3952.4	---
14	3873.2	3960.2(38)	3879.2	3955.8	---
15	3913.0	3970.9	3867.0	3951.4	3898.0
16	3940.1	4003.7	3872.5	3926.9	3838.1
17	3956.0	3994.1	3875.4	3919.8	3836.9
18	3955.8	3989.9	3897.5	3928.9	3840.3
19	3960.8	3996.0	3904.1	3915.3	3803.5
20	3964.5	4012.1	3907.2	3882.0	3807.3
21	3799.5	4004.4	3880.6	3818.7	3816.3
22	3839.5	4007.5	3862.0	3815.3	3840.9(38)
23	3895.7	4004.0	3872.3	3829.1	3871.7
24	3895.4	3965.3	3880.2	3829.5	3880.8
25	3901.9(34)	3935.7	3848.1	3850.5	3865.0
26	3926.4	3959.4	3707.7	3844.1	3860.8
27	3939.3	3979.0	3792.7	3865.8	3857.0
28	3941.4	3984.3	3803.2	3879.9	3857.0
29	3955.6(14)	3962.9	3802.5	3824.1	3866.8
30		3948.6	3824.0	3820.6	3895.4
31		3955.7	3838.0		3840.5
Mean	3947.1	3975.7	3851.9	3876.2	3844.8

Parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.


BARTEL ROTATION NUMBER 2112 BEGINNING 27 Feb 1988
103
100
97
100%=3977
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
CLIMAX, COLORADO MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2118 BEGINNING 7 Aug 1988
104
100
95
100%=3854
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
CLIMAX, COLORADO MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2119 BEGINNING 3 Sep 1988
104
100
96
100%=3883
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
CLIMAX, COLORADO MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2120 BEGINNING 30 Sep 1988
104
100
97
100%=3840
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
CLIMAX, COLORADO MONITOR ... THE UNIVERSITY OF CHICAGO

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

CORRECTED DATA

Day	NOV 87 HUANCAYO Average (cts/h)/100	DEC 87 HUANCAYO Average (cts/h)/100
1	1772.6	1757.3
2	1774.7	1754.3
3	1767.0	1756.5(34)
4	1764.0	1758.8
5	1765.5	1756.4
6	1768.2	1758.3
7	1762.0	1760.6
8	---	1759.0
9	---	1756.6
10	---	1759.2
11	1774.0(2)	1762.5
12	1763.4	1764.8
13	1760.8	1765.4
14	1755.2	1766.5
15	1760.3	1769.3
16	1759.5	1767.9
17	1766.4	1765.4
18	1769.4	1763.3
19	1766.1	1760.8
20	1767.1	1761.6
21	1767.0	1765.9
22	1768.9	1767.1
23	1768.6	1762.7
24	1767.0	1763.0
25	1753.9	1766.4
26	1756.3	1765.9
27	1761.7	1765.7
28	1763.6	1767.6
29	1766.9(22)	1768.3
30	1770.1	1764.9
31		1762.8
Mean	1764.8	1762.8

Parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

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

CORRECTED DATA

Day	JAN 88 HUANCAYO Average (cts/h)/100	FEB 88 HUANCAYO Average (cts/h)/100	MAR 88 HUANCAYO Average (cts/h)/100	APR 88 HUANCAYO Average (cts/h)/100	MAY 88 HUANCAYO Average (cts/h)/100	JUN 88 HUANCAYO Average (cts/h)/100
1	1756.4	1768.0	1760.3	1752.0	1760.8	---
2	1752.5	1767.0	1761.0	1752.1	1755.7	1745.0(18)
3	1760.3	1764.3	1756.4	1747.5	1757.2(38)	1744.5
4	1761.8	1761.4(30)	1756.3	1734.9(34)	1762.2	1742.6(12)
5	1735.0	---	1755.7	1744.1	1756.7	1747.0
6	1731.2	---	1759.8	1747.0	1758.3	1741.4
7	1718.5	---	1764.2	1734.2(36)	1753.0	1739.9
8	1732.3	---	1761.3	1737.4	1751.3	1745.8(38)
9	1734.9	---	1751.5	1738.2	1752.8	1748.1
10	1740.2	---	1746.0	1740.0	1749.5	1753.3
11	1738.7(28)	1753.8(8)	1751.5	1742.5(28)	1749.1	1757.1
12	1743.3	1753.2	1752.5	1749.0(6)	1755.0	1757.6
13	1745.3	1737.6	1755.2(24)	1754.5	1757.5(24)	1750.8
14	1721.9	1724.7	1750.3	1756.5	1757.1	1758.5
15	1737.7	1741.5	1751.4	1761.5	1751.4(10)	1758.8(26)
16	1742.3	1747.3	1757.4	1757.7	---	1762.7(22)
17	1748.5	1751.9	1760.9(38)	1752.7	---	1759.3
18	1750.0(36)	1748.7(18)	1764.0	1756.4	---	1753.8
19	1752.5	1756.6	1762.6	1757.5(38)	---	1754.0
20	1753.2	1761.0	1765.1	1761.7	1739.0(6)	1756.8
21	1757.2	1726.7	1767.0	1757.5	1749.8	1756.7
22	1759.1	1737.8	1761.7	1758.3	1744.1(36)	1757.4(36)
23	1756.9	1742.0	1761.7	1749.8	1744.4	1757.7
24	1757.7	1742.3	1752.8(38)	1750.0	1743.9	1747.0
25	1760.9	1743.9(36)	1750.9	1754.0	1748.4	1734.0
26	1757.7	1750.4	1750.4	1754.6	1749.8	1742.5
27	1757.8	1757.1	1754.8	1756.0	1752.2	1750.0
28	1758.4	1755.9	1753.4	1761.7	1751.5	1759.4
29	1760.2	1756.7	1751.9	1763.2	1749.0	1745.3
30	1760.3		1746.9	1756.8	1743.1	1739.9
31	1770.2(22)		1748.5		1729.5(4)	
Mean	1748.2	1749.7	1756.3	1751.7	1751.9	1750.5

Parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

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

CORRECTED DATA

Day	JUL 88 HUANCAYO Average (cts/h)/100	AUG 88 HUANCAYO Average (cts/h)/100	SEP 88 HUANCAYO Average (cts/h)/100	OCT 88 HUANCAYO Average (cts/h)/100	NOV 88 HUANCAYO Average (cts/h)/100	DEC 88 HUANCAYO Average (cts/h)/100
1	1737.3(36)	1721.1(20)	1729.6(28)	1738.5	1735.5	1732.9(38)
2	1742.4	1731.0(6)	1740.3(16)	1740.8	1745.3(36)	1737.8
3	1744.2	1730.6	1744.7	1748.9(32)	1742.3	1730.7
4	1744.9	1720.7(36)	1741.5	1744.9	1740.5	1729.8
5	1751.5	1719.9(34)	1745.1	1744.9	1742.7	1732.9
6	1750.4	1735.3	1747.8	1730.5	1741.7	1737.2
7	1751.0	1736.0	1746.5	1736.5	1735.5	1738.0(4)
8	1750.7	1741.7	1744.7	1739.9	1738.0	1743.5(12)
9	1749.6	1741.5	1747.1(36)	1746.2	1729.7	1746.9
10	1746.8	1749.3	1750.4	1727.7(12)	1738.9	1745.2
11	1743.3	1751.4	1755.6	1732.7	1739.7	1736.5
12	1738.6(14)	1740.8(38)	1755.5	1731.5	1732.5	1729.8
13	1737.3	1744.0	1753.2	1736.6	1729.1	1725.8
14	1737.7	1744.1	1750.1	1739.0	1720.3	1715.0
15	1746.8	1742.2	1749.9	1742.4	1706.8	1694.8
16	1746.7	1742.3	1744.0(38)	1729.1	1709.2	1702.7
17	1746.6	1745.4	1751.7	1726.1(38)	1708.2	1711.1
18	1749.2	1749.8	1748.6	1731.4	1720.8	1670.9
19	1754.4(28)	1756.3(12)	1747.5	1719.3	1718.5	1683.1
20	1746.4	1753.7	1741.7	1725.3	1729.7	1696.1(28)
21	1731.0	1752.7	1727.7	1730.3	1738.5	1702.8(16)
22	1732.3	1753.5	1729.9	1735.7	1737.1	---
23	1728.6	1749.0	1733.9(38)	1738.9	1739.6(34)	1721.4(10)
24	1735.5	1748.4	1734.5	1733.5	1741.3	1719.1
25	1742.5	1731.5	1741.7	1732.1(38)	1729.3	1723.5
26	1743.0	1696.7(32)	1738.5	1730.6	1738.3	1721.5
27	1731.3	1720.5	1742.3	1731.2	1739.2	1712.0
28	1727.2	1719.5	1744.2	1738.1	1741.8	1710.9
29	1726.7	1722.6	1736.6	1743.1(38)	1749.9	1715.6
30	1727.0	1732.3	1733.4	1745.7	1736.2	1714.4
31	1723.9	1732.5		1732.8		1709.4
Mean	1740.6	1738.0	1743.5	1735.6	1733.2	1719.1

Parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

COSMIC RAY INDICES
(Neutron Monitor)

CORRECTED DATA

Day	JAN 89 HUANCAYO Average (cts/h)/100	FEB 89 HUANCAYO Average (cts/h)/100	MAR 89 HUANCAYO Average (cts/h)/100	APR 89 HUANCAYO Average (cts/h)/100	MAY 89 HUANCAYO Average (cts/h)/100	JUN 89 HUANCAYO Average (cts/h)/100
1	1712.7(32)	1703.0(30)	1704.7(36)	1682.7	1667.0	1683.5(38)
2	1715.9(38)	1708.4	1693.7	1681.0	1672.2(26)	1686.8
3	1720.1	1703.3(30)	1699.8	1686.0	---	1684.7
4	1715.8	1706.2(20)	1697.1	1689.6(14)	---	1690.5(38)
5	1704.4	1702.0	1702.0	1687.8	---	1692.1
6	1696.3	1707.4	1707.8	1692.4(22)	---	1693.5
7	1690.1	1712.3	1711.1	1689.9	---	1692.0
8	1701.7	1715.5	1708.3(38)	1688.9	---	1687.6(14)
9	1696.1(36)	1718.4	1709.2	1693.3	1684.5(12)	1661.0
10	1708.1	1726.0	1704.1	1698.9	1669.1	1685.9
11	1707.4	1725.4	1709.8	1700.8(30)	1678.2(18)	1681.8
12	1699.2	1716.8	1708.2	1668.2	1677.9	1674.0
13	1705.3	1701.5	1671.8	1677.8	1684.7	1670.6
14	1709.9	1697.6	1603.3	1669.5	1677.0	1648.0
15	1715.7	1705.9(28)	1586.4	1677.5	1670.9(38)	1658.2
16	1710.6	1714.3	1594.6	1678.3	1673.0(24)	1666.0
17	1712.5	1696.7	1611.1	1674.5	1674.7	1671.3
18	1720.7	1698.5	1622.3	1677.6(32)	1686.5	1678.5
19	1718.5	1699.2	1612.3	1664.2	1688.6	1681.7
20	1720.4	1711.1	1631.4	1666.5	1698.5	1688.4
21	1712.3	1706.6	1650.4	1662.1	1689.1	1670.4
22	1713.6	1706.5	1663.5(34)	1666.7	1691.1	1683.3(32)
23	1709.8	1699.6	1674.3	1671.5	1678.5(22)	1690.1
24	1708.6	1699.8	1676.2	1678.5	1661.8	1701.9
25	1711.3(30)	1688.9	1668.5	1675.3(30)	1650.8	1701.2
26	1708.2	1690.7	1675.1	1678.8	1656.2	1698.6
27	1702.3	1695.6(38)	1648.2	1680.9(38)	1658.2	1692.8
28	1693.3	1698.4	1648.2	1679.5(22)	1657.2	1691.3
29	1702.3		1666.0	1677.0	1662.1	1701.3(30)
30	1696.9		1675.3	1675.1	1666.5	1706.7
31	1707.4		1682.4		1677.6	
Mean	1707.7	1705.6	1668.2	1678.9	1673.5	1683.4

Parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

COSMIC RAY INDICES
(Neutron Monitor)

CORRECTED DATA

Day	JUL 89 HUANCAYO Average (cts/h)/100	AUG 89 HUANCAYO Average (cts/h)/100	SEP 89 HUANCAYO Average (cts/h)/100	OCT 89 HUANCAYO Average (cts/h)/100	NOV 89 HUANCAYO Average (cts/h)/100	DEC 89 HUANCAYO Average (cts/h)/100
1	1681.8	1716.4(34)	1711.6(28)	1700.3	1678.9	1657.2(38)
2	1683.4	1720.6	1711.4	1680.8(38)	1660.9(30)	1645.2
3	1688.4	1723.7	1707.5	1686.5	1660.9	1654.5
4	1695.3	1723.5	1697.5	1688.5	1667.2	1647.3
5	1699.4	1726.7	1679.5	1681.5	1654.0	1660.8
6	1703.1(34)	1725.1	1657.4	1671.3	1651.4	1669.3
7	1702.2	1728.5(22)	1657.2	1675.8	1650.8(16)	1677.8
8	1703.8	1721.9(20)	1677.3(36)	1656.2	1641.3	1685.9
9	1706.7	1726.3	1674.0	1656.8(30)	1625.7	1680.7
10	1702.9	1712.2	1672.5	1660.1	1631.1	1668.3
11	1705.1	1702.0	1670.7	1662.9	1630.8	1668.2(38)
12	1710.0	1707.8	1675.4	1662.5	1638.8	1679.0
13	1712.9(34)	1713.2(30)	1662.7	1659.4	1636.8(38)	1683.9
14	1714.1	1700.6	1657.8	1662.8	1650.0(12)	1683.9
15	1720.7	1681.1(34)	1681.5(12)	1663.0	1649.8(32)	1680.5
16	1720.6	1678.1	1688.9	1671.1(30)	1655.5	1684.2
17	1714.8	1680.7	1685.0	1670.7	1655.2	1683.4
18	1719.6	1683.9	1671.7	1673.3	1664.2	1683.4(38)
19	1715.9	1666.2	1651.4	1673.2	1668.0	1683.5
20	1720.2(26)	1649.5	1651.0	1653.8	1683.0	1684.5
21	1722.1	1662.2(26)	1666.0	1571.9	1685.8	1692.0
22	1726.9	1658.1(14)	1688.0(34)	1613.9	1672.6	1687.6
23	1725.0	1672.4	1697.6	1632.4(34)	1676.5	1682.6
24	1721.2	1675.2	1700.1	1633.5	1677.7	1673.5
25	1720.0	1675.6	1712.5	1616.8	1673.7	1680.7(38)
26	1717.8	1679.1	1716.3	1631.2	1673.5	1682.5
27	1712.6	1696.7	1711.0	1625.8	1689.5	1669.9
28	1710.3	1674.2	1708.4	1627.7	1633.8(26)	1662.5
29	1708.2	1698.3	1718.3	1641.3	1582.5	1644.1
30	1712.7	1697.0	1706.4	1673.2	1624.4	1659.7
31	1716.0	1706.9		1676.1		1661.8
Mean	1709.9	1696.2	1684.9	1656.4	1655.5	1672.8

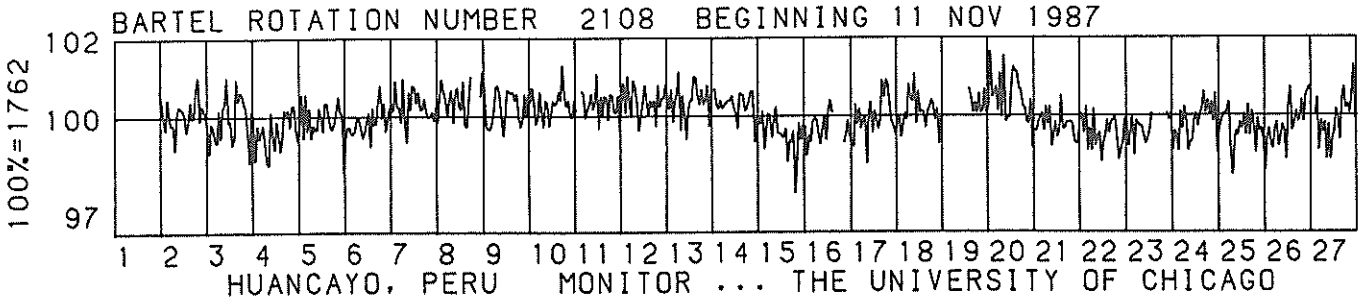
Parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

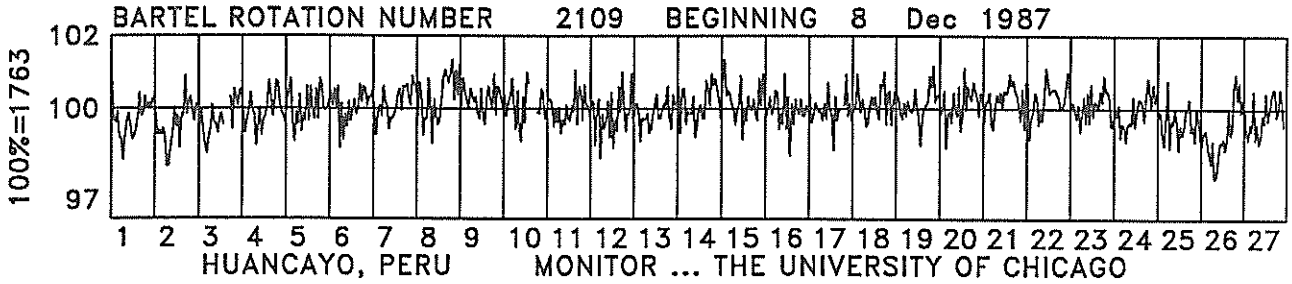
COSMIC RAY INDICES
(Neutron Monitor)

CORRECTED DATA

Day	JAN 90 HUANCAYO Average (cts/h)/100	FEB 90 HUANCAYO Average (cts/h)/100	MAR 90 HUANCAYO Average (cts/h)/100	APR 90 HUANCAYO Average (cts/h)/100	MAY 90 HUANCAYO Average (cts/h)/100
1	1661.8	1688.6	1683.3(36)	---	---
2	1662.5(38)	1691.8	1689.5	---	1651.0
3	1672.1	1690.7	1694.7	---	1654.3
4	1675.2	1693.8	1695.0	1668.6(16)	1663.2
5	1679.5	1698.4	1693.1	1657.4	1665.1
6	1680.4	1689.0	1683.8	1662.4	1671.8
7	1680.0	1686.9	1680.7	1665.5(20)	1674.5
8	1679.4	1689.1(34)	1674.8	---	1670.9
9	1679.5	---	1676.8	---	1671.4
10	1684.3	---	1677.2	---	1664.7
11	1689.4	---	1681.7	1646.4(14)	1667.9
12	1692.0	1691.7(14)	1688.8	1635.2	1671.1
13	1690.6	1698.6	1661.9	1636.5	1673.2
14	1689.5	1688.6	1680.2	1648.4	1670.9
15	1688.4	1680.6(38)	1680.1(26)	1652.1	1672.6(34)
16	1686.8	1688.0	1686.0	1657.7	1679.4(20)
17	1690.1	1673.4	1683.0	1662.0(36)	1669.9
18	1691.5	1669.0	1682.6	1662.0	1673.5
19	1693.1(24)	1672.0	1673.1	---	1670.5
20	1688.8	1678.0	1667.2	---	1655.4
21	1693.1	1672.4	1660.4(38)	1648.9(38)	1655.2
22	1694.4	1678.9	1637.2	1657.2(36)	1645.8
23	1695.4(34)	1684.9(32)	1635.9	1649.6(38)	1655.3
24	1688.1	1686.2	1637.3	---	1657.3
25	1689.8	1686.3	1643.6	---	1657.5
26	1689.2	1684.8	1648.6	---	1663.5
27	1690.5	1684.1	1641.0	---	1660.1
28	1680.5	1682.1	1641.4(36)	---	1660.5
29	1682.3		1646.7	---	1644.1
30	1680.3		1644.8	---	1638.2
31	1681.9		---		1641.9
Mean	1684.4	1684.8	1669.1	1652.8	1661.8

Parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.


BARTEL ROTATION NUMBER 2108 BEGINNING 11 NOV 1987
100%=1762
102
100
97
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2109 BEGINNING 8 Dec 1987
100%=1763
102
100
97
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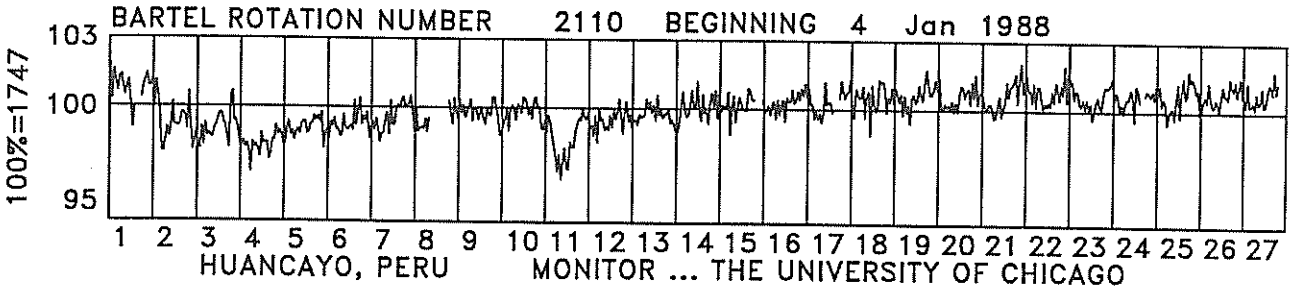
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2110 BEGINNING 4 Jan 1988
100%=1747
103
100
95
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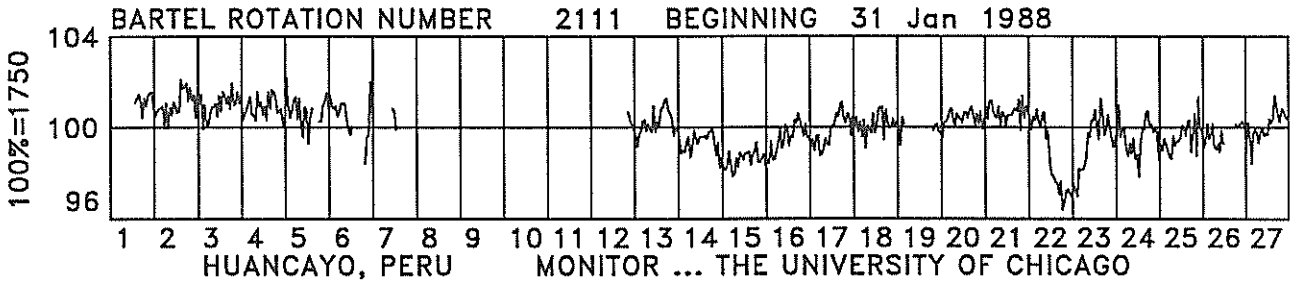
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2111 BEGINNING 31 Jan 1988
100%=1750
104
100
96
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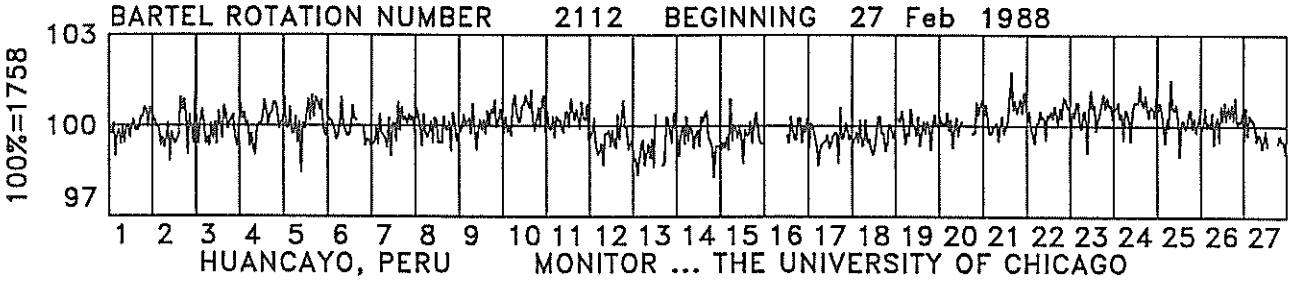
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2112 BEGINNING 27 Feb 1988
100%=1758
103
100
97
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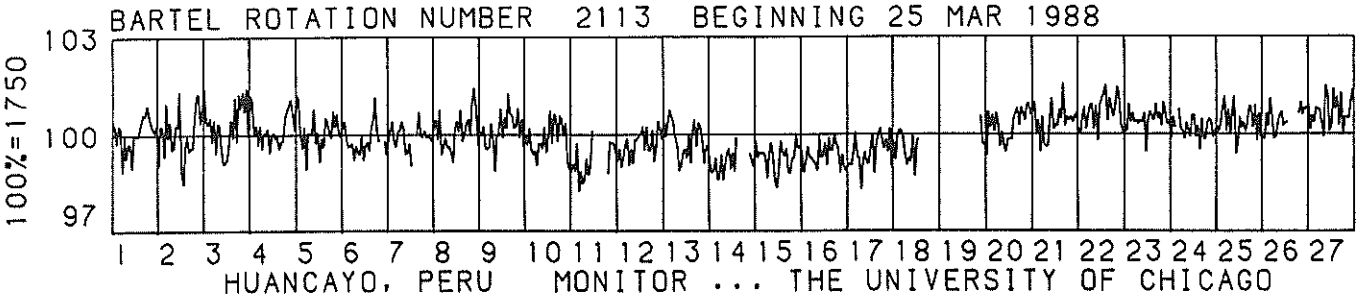
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2113 BEGINNING 25 MAR 1988
103
100
97
100%=1750
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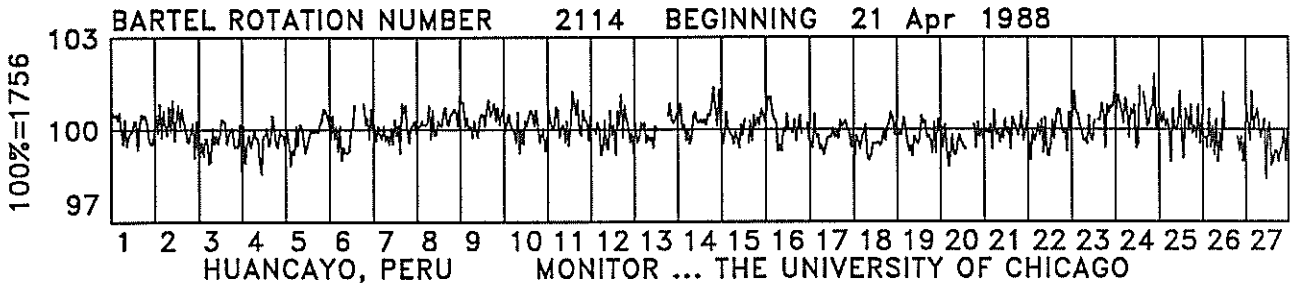
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2114 BEGINNING 21 Apr 1988
103
100
97
100%=1756
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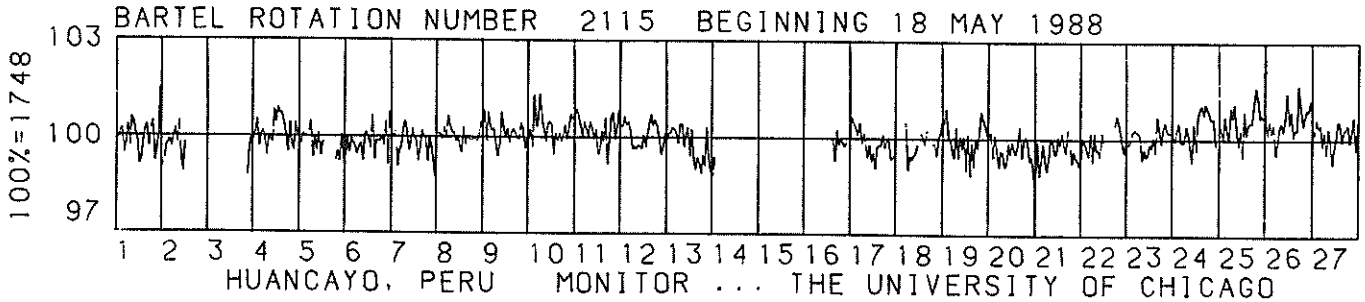
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2115 BEGINNING 18 MAY 1988
103
100
97
100%=1748
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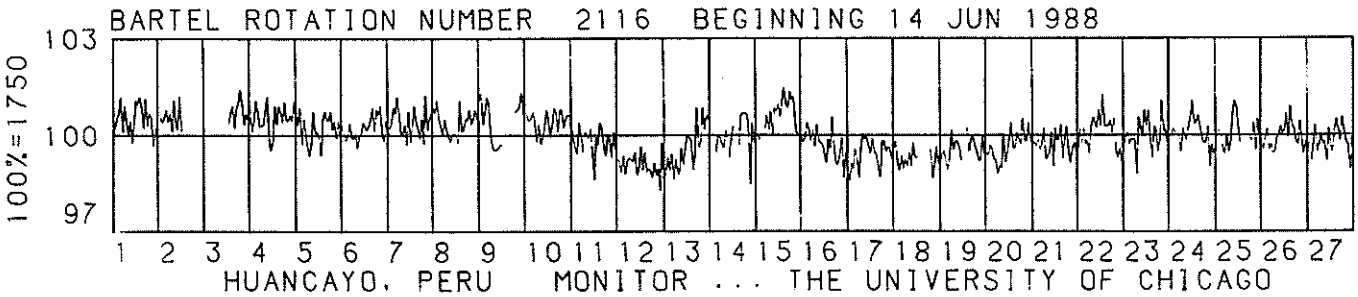
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2116 BEGINNING 14 JUN 1988
103
100
97
100%=1750
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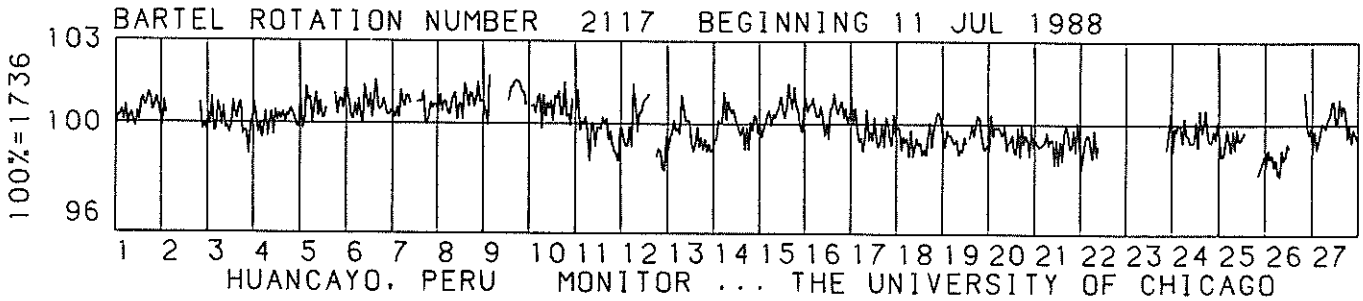
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2117 BEGINNING 11 JUL 1988
103
100
96
100%=1736
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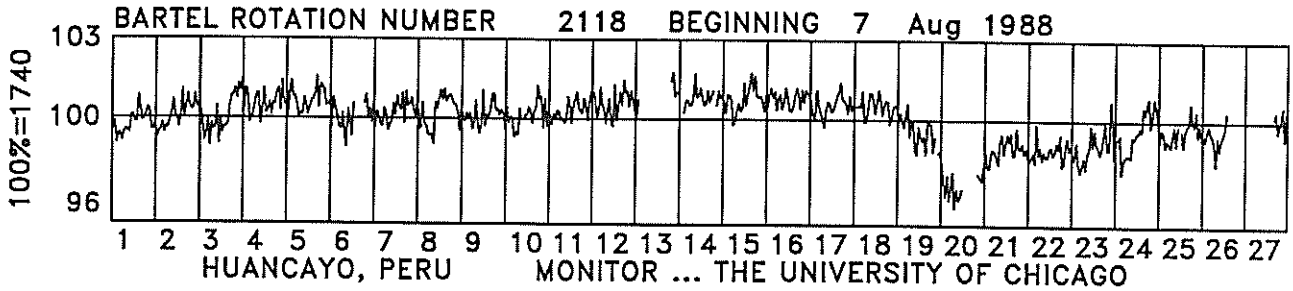
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2118 BEGINNING 7 Aug 1988
100%=1740
103
100
96
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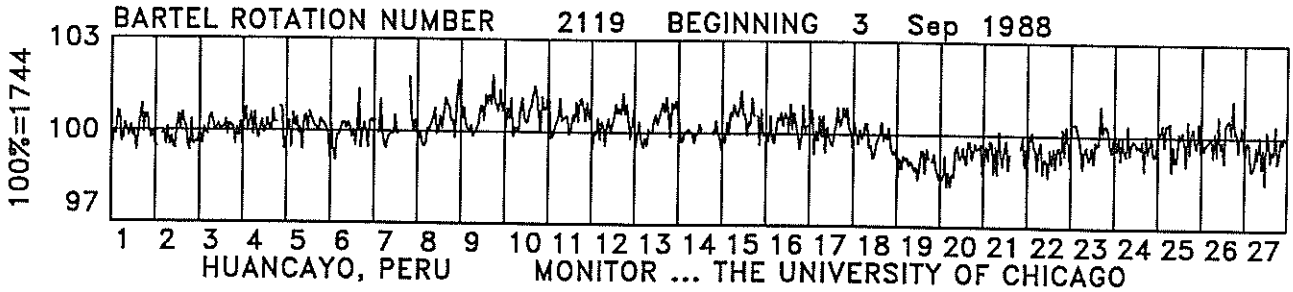
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2119 BEGINNING 3 Sep 1988
100%=1744
103
100
97
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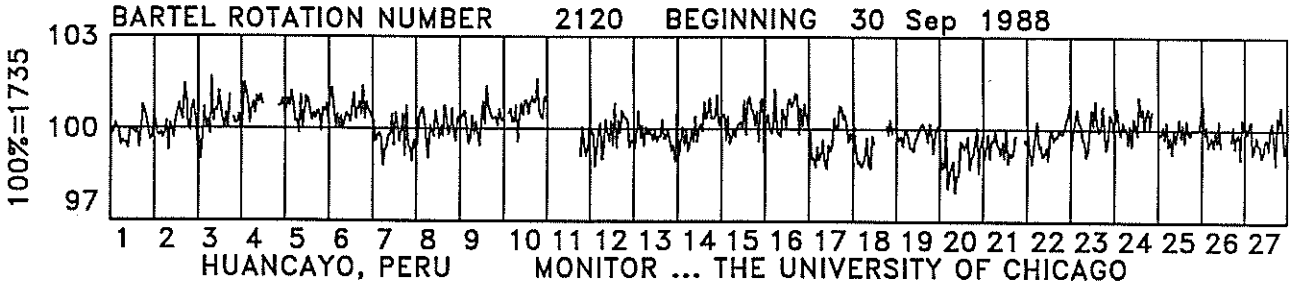
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2120 BEGINNING 30 Sep 1988
100%=1735
103
100
97
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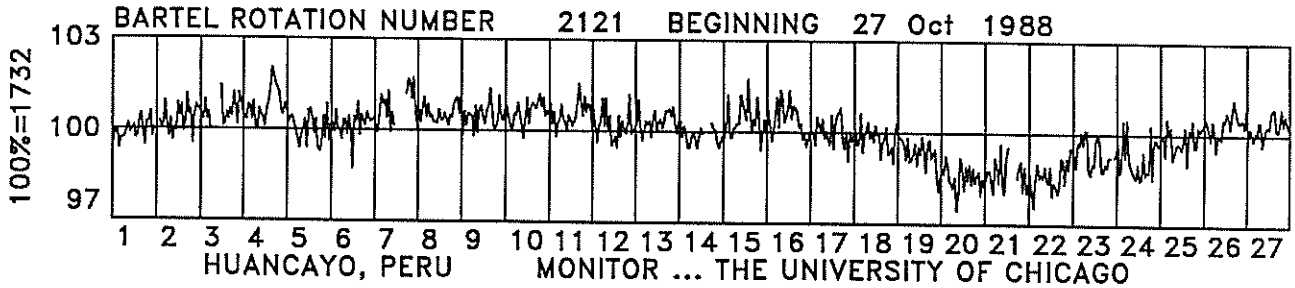
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2121 BEGINNING 27 Oct 1988
100%=1732
103
100
97
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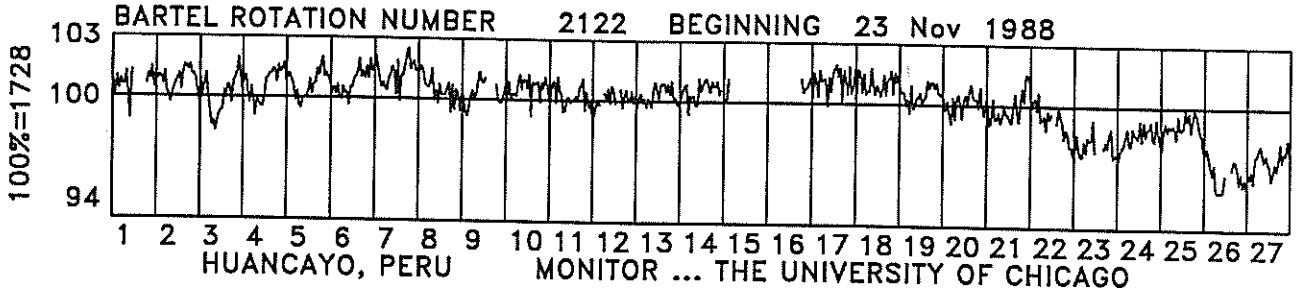
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2122 BEGINNING 23 Nov 1988
100%=1728
103
100
94
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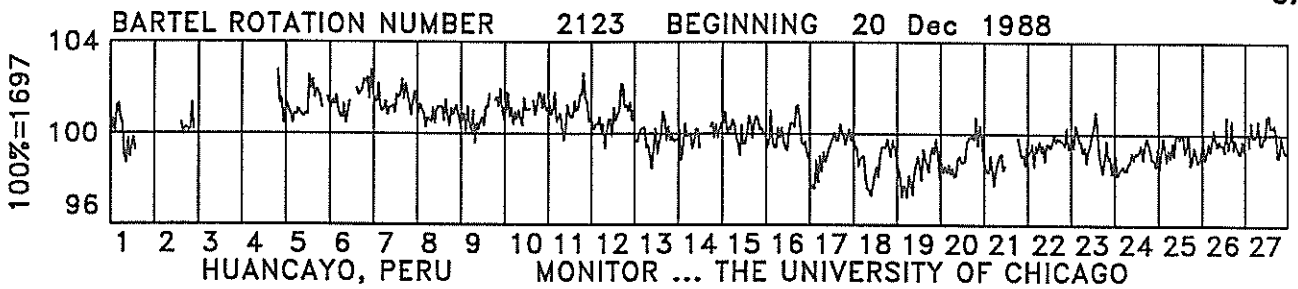
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2123 BEGINNING 20 Dec 1988
104
100
96
100%=1697
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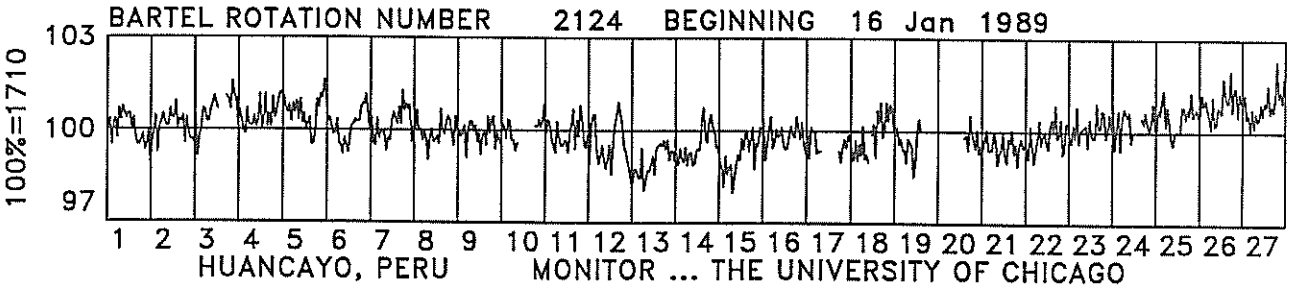
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2124 BEGINNING 16 Jan 1989
103
100
97
100%=1710
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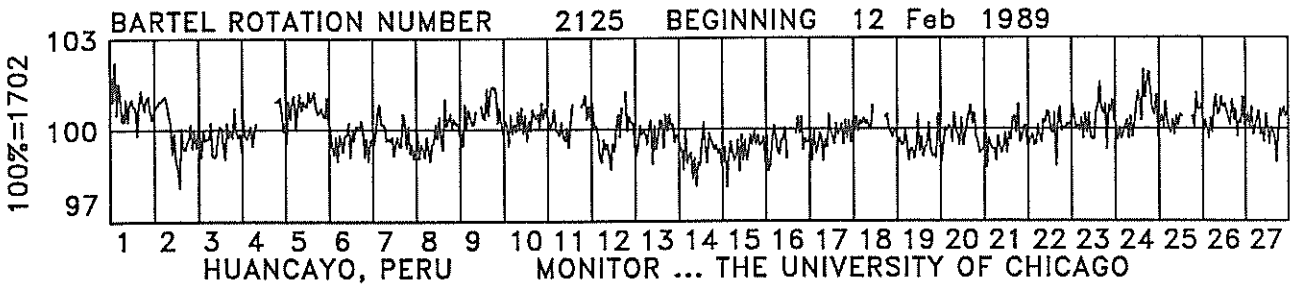
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2125 BEGINNING 12 Feb 1989
103
100
97
100%=1702
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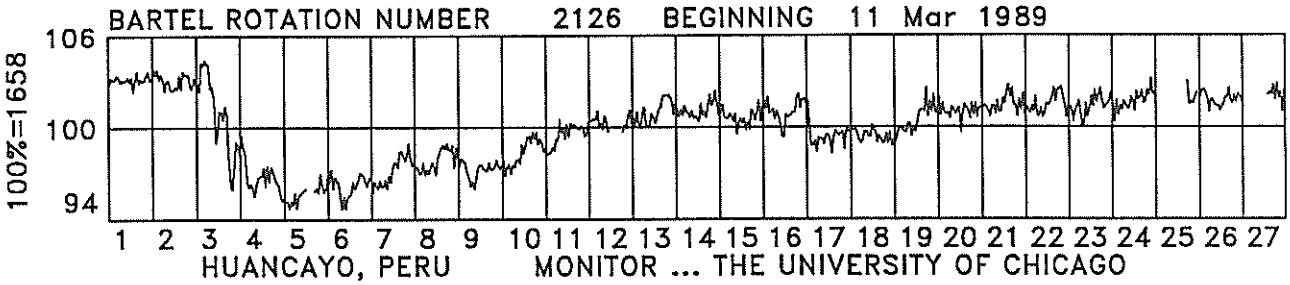
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2126 BEGINNING 11 Mar 1989
106
100
94
100%=1658
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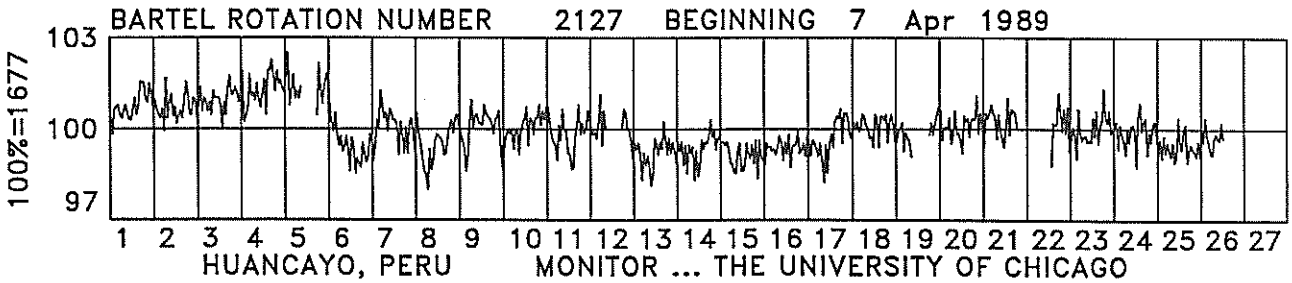
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2127 BEGINNING 7 Apr 1989
103
100
97
100%=1677
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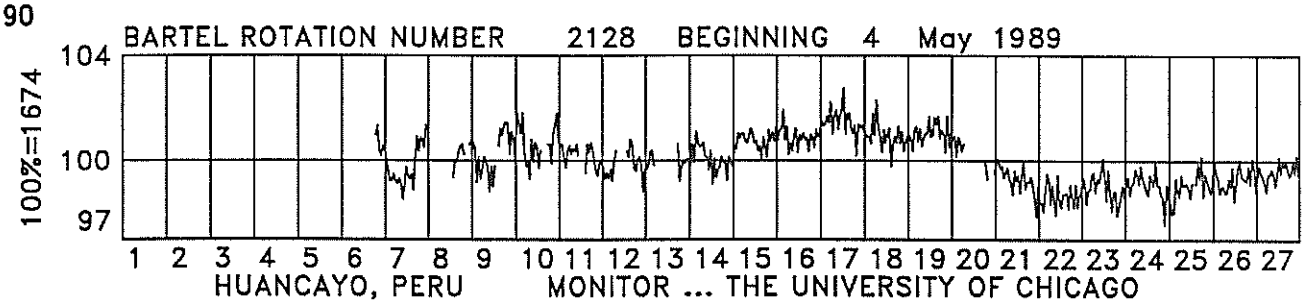
HUANCAYO, PERU
MONITOR ... THE UNIVERSITY OF CHICAGO

168
ERR
87-90


BARTEL ROTATION NUMBER 2128 BEGINNING 4 May 1989
100%=1674
104
100
97
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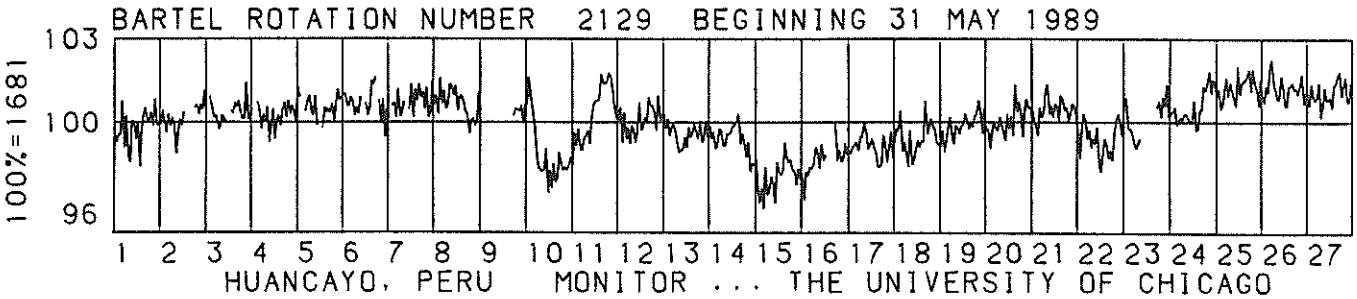
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2129 BEGINNING 31 MAY 1989
100%=1681
103
100
96
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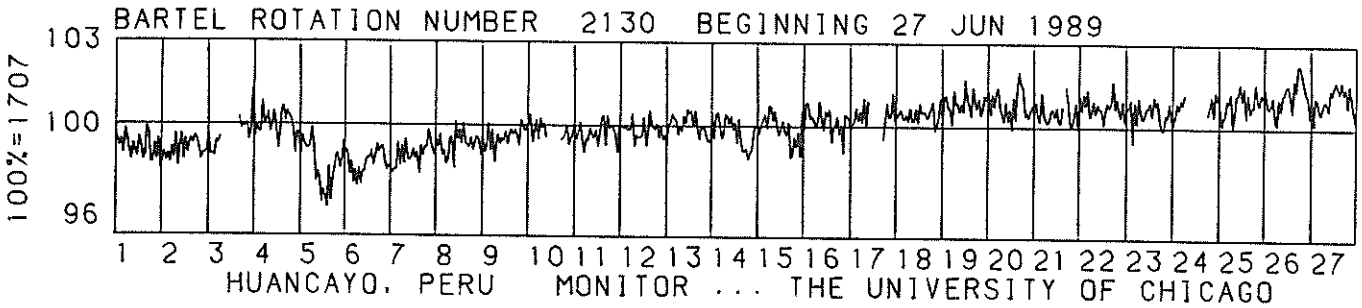
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2130 BEGINNING 27 JUN 1989
100%=1707
103
100
96
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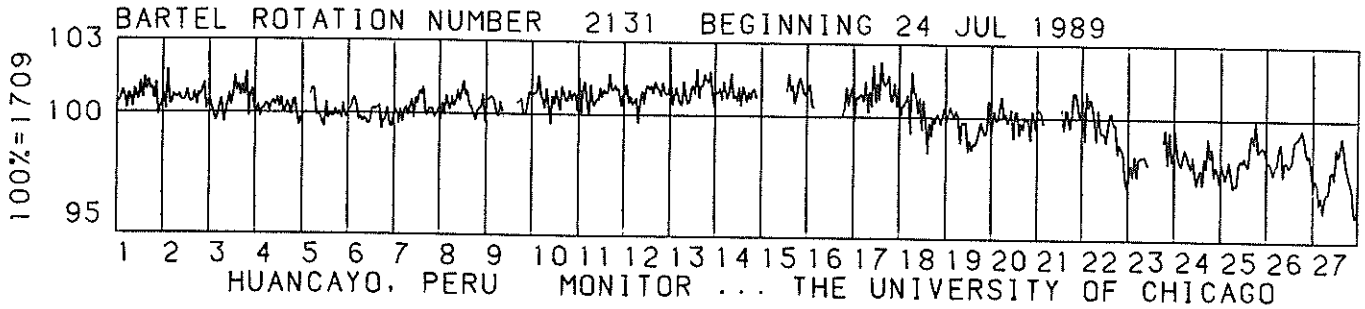
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2131 BEGINNING 24 JUL 1989
100%=1709
103
100
95
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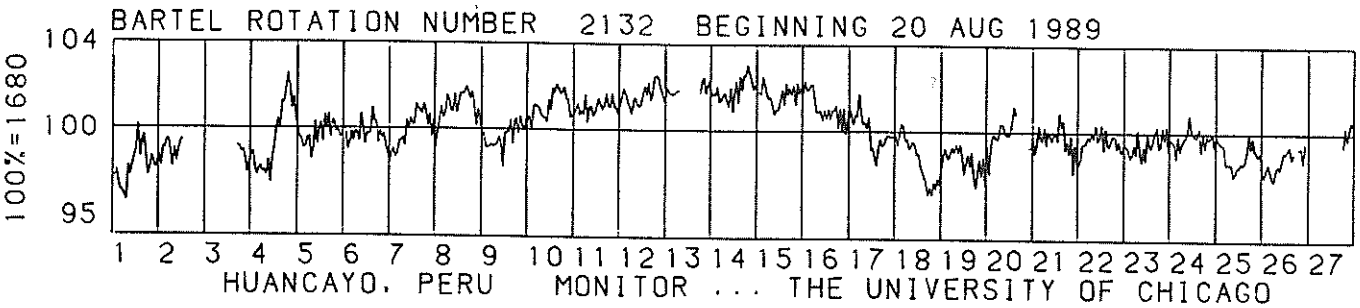
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2132 BEGINNING 20 AUG 1989
100%=1680
104
100
95
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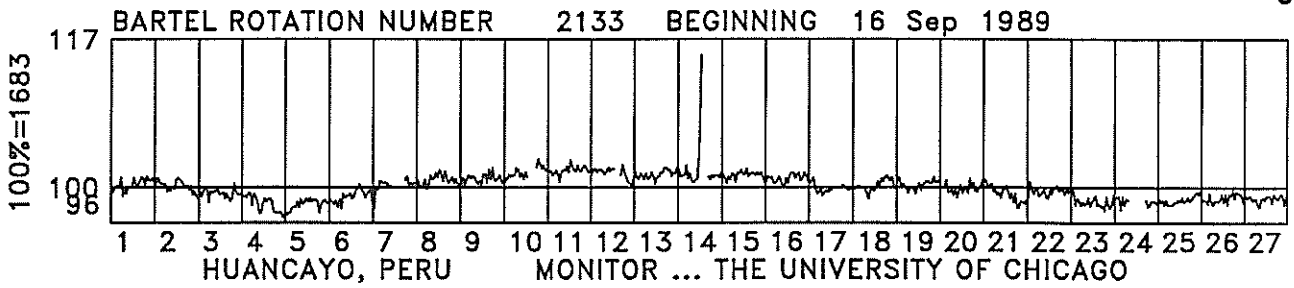
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2133 BEGINNING 16 Sep 1989
100%=1683
117
100
96
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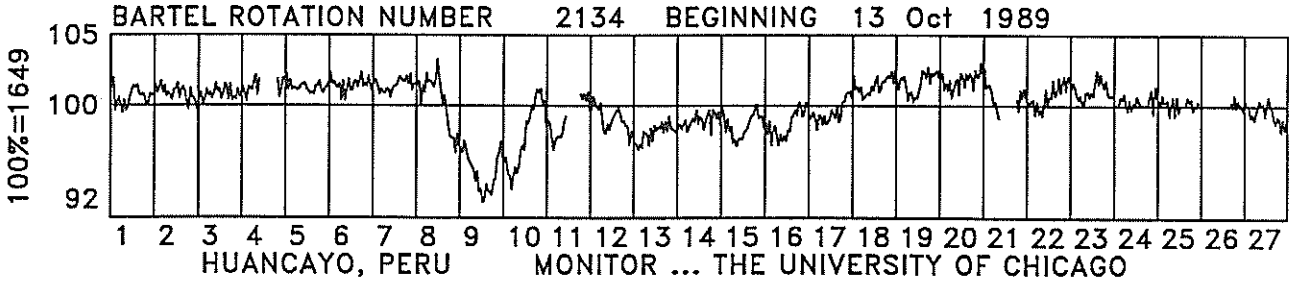
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2134 BEGINNING 13 Oct 1989
100%=1649
105
100
92
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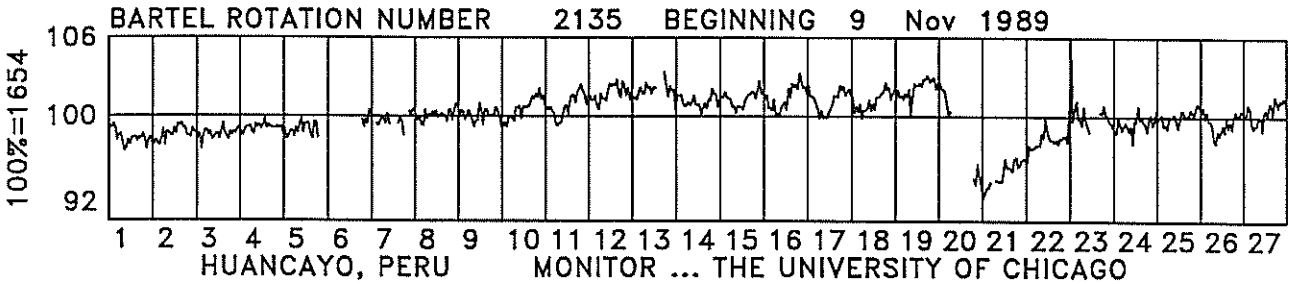
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2135 BEGINNING 9 Nov 1989
100%=1654
106
100
92
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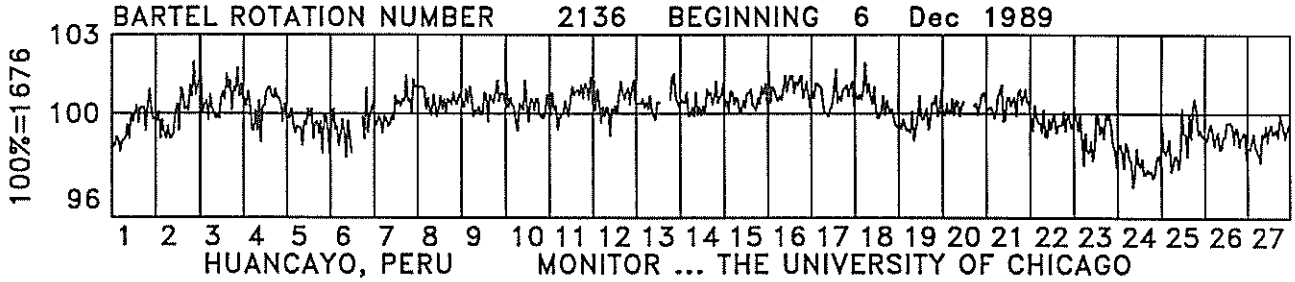
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2136 BEGINNING 6 Dec 1989
100%=1676
103
100
96
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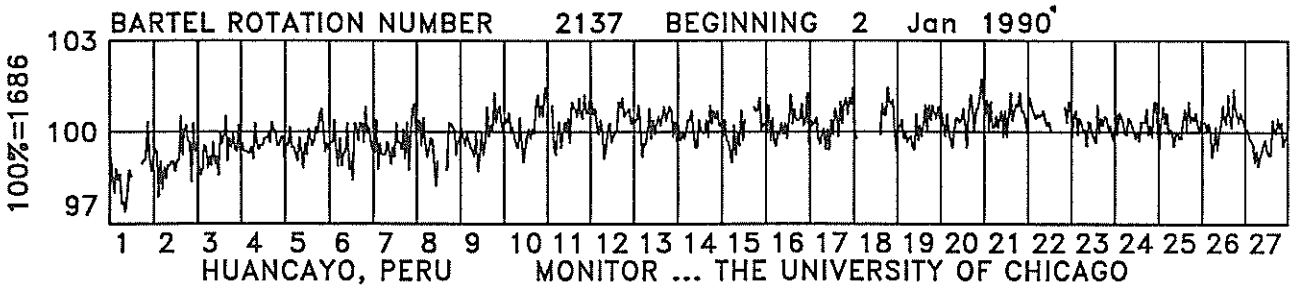
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO


BARTEL ROTATION NUMBER 2137 BEGINNING 2 Jan 1990
100%=1686
103
100
97
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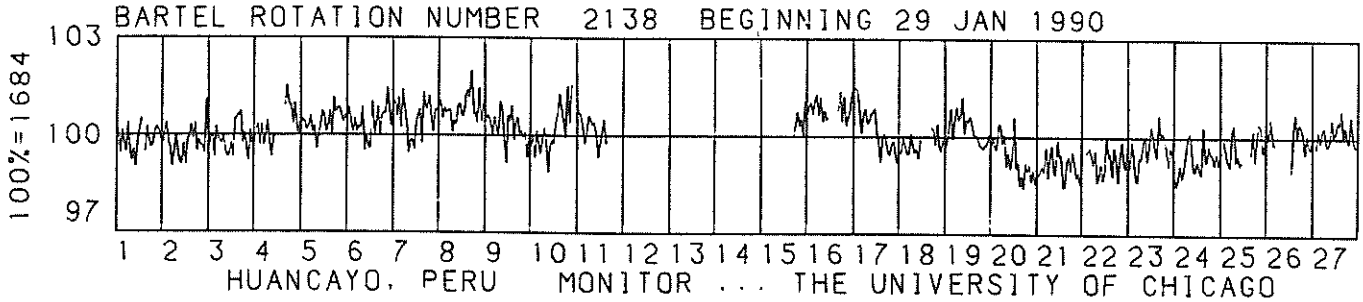
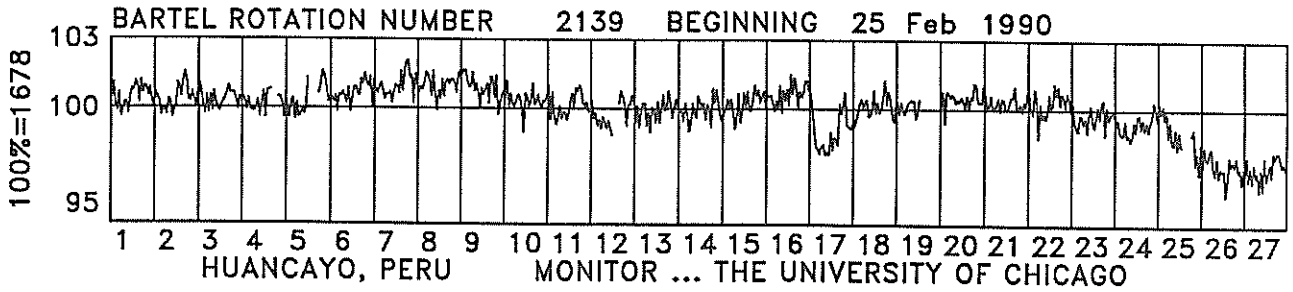
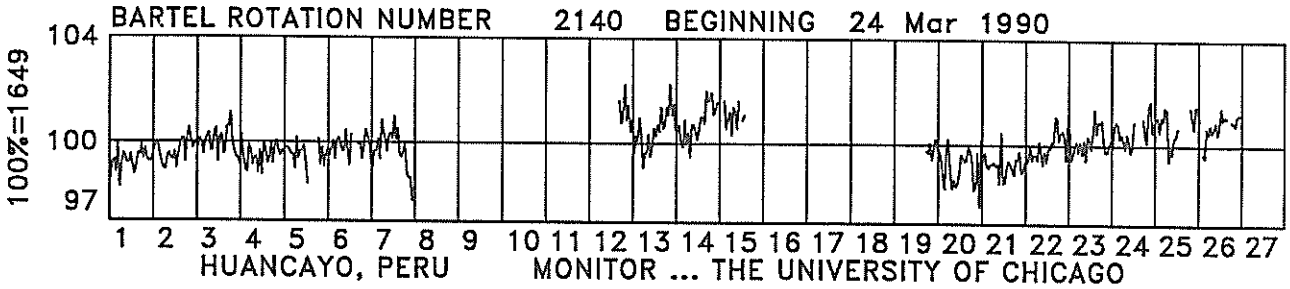
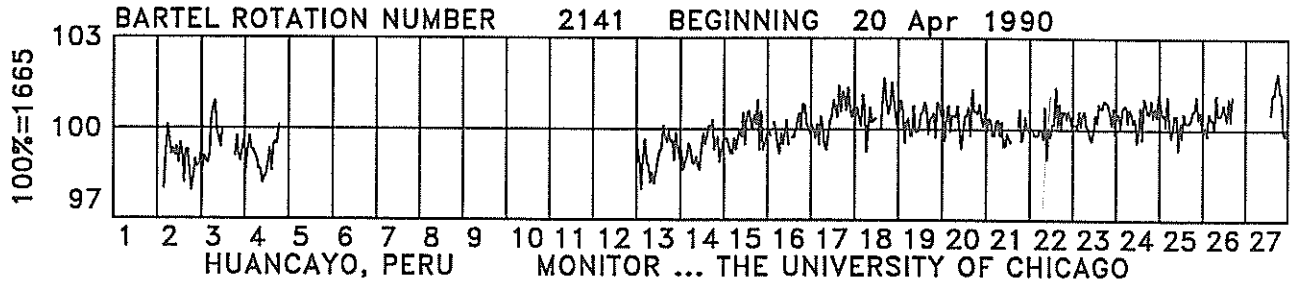
HUANCAYO, PERU MONITOR ... THE UNIVERSITY OF CHICAGO









*U.S. Government Printing Office: 1992 — 673-029/41005

WORLD DATA CENTER A
FOR
SOLAR-TERRESTRIAL PHYSICS

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

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