



H $\alpha$  SOLAR FLARES

DECEMBER 2003

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks	
																Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0004	KANZ	14	0919E	0919E	0923	N00	E25	10520	12	16.2	4D	SF		2	E					
		14	1327		1412			No Flare Patrol												
		14	2351		2352			No Flare Patrol												
		15	1016		1051			No Flare Patrol												
		15	1110		1111			No Flare Patrol												
		15	1120		1121			No Flare Patrol												
		15	1123		1124			No Flare Patrol												
		15	1138		1139			No Flare Patrol												
		15	1308		1310			No Flare Patrol												
		15	1451		1537			No Flare Patrol												
		15	1607		1634			No Flare Patrol												
		15	1733		1737			No Flare Patrol												
		15	1820		1827			No Flare Patrol												
		15	2029		2117			No Flare Patrol												
		15	2354		2400			No Flare Patrol												
		16	0131		0153			No Flare Patrol												
		16	1101		1141			No Flare Patrol												
		16	1147		1219			No Flare Patrol												
		16	1314		2259			No Flare Patrol												
		17	0008		0022			No Flare Patrol												
0005	LEAR	17	0307	0307	0333	N08	E72	10525	12	22.5	26	SF		3	E		35		F	
0006	KANZ	18	0834	0834	0846	N10	E52	10525	12	22.3	12	SF		2	E					
0007		18	09241	09283	0938	N08	E52	10525	12	22.3	14	SF					46		F	
	KANZ	18	0924	0928	0940	N09	E52	10525	12	22.3	16	SF		2	E					
	LEAR	18	0925	0931	0935	N08	E53	10525	12	22.4	10	SF		3	E		46		F	
0008	KANZ	18	1200	1205	1207	N10	E50	10525	12	22.2	7	SF		2	E					
0009		18	12304	1236	1241	N10	E48	10525	12	22.1	11	SF					16			
	KANZ	18	1230	1236	1242	N10	E50	10525	12	22.3	12	SF		2	E					
	SVTO	18	1234	1236	1240	N10	E47	10525	12	22.0	6	SF		3	E		16			
0010	KANZ	18	1347	1348	1354	N09	E49	10525	12	22.2	7	SF		2	E					
		18	1457		1501			No Flare Patrol												
0011	HOLL	18	2018	2019	2022	N11	E47	10525	12	22.4	4	SF		3	E		14			
0012	HOLL	18	2217	2217	2221	N10	E46	10525	12	22.4	4	SF		3	E		12			F
0013	LEAR	19	0026	0027	0031	N09	E47	10525	12	22.5	5	SF		3	E		19			FH
0014	LEAR	19	0105	0105	0119	N08	E46	10525	12	22.5	14	SF		3	E		41			FH
0015	LEAR	19	0218	0220	0224	N09	E46	10525	12	22.5	6	SF		3	E		34			FH
0016	LEAR	19	0619	0619	0625	N10	E47	10525	12	22.8	6	SF		3	E		16			
0017	LEAR	19	0659	0702	0706	N09	E43	10525	12	22.5	7	SF		2	E		19			FH
0018		19	08054	08095	0842	N09	E42	10525	12	22.5	37	SF					54			FH
	KANZ	19	0805	0814	0840	N09	E41	10525	12	22.4	35	SN		2	E					
	LEAR	19	0807	0810	0850	N10	E44	10525	12	22.6	43	SF		2	E		71			FH
	SVTO	19	0809	0809	0835	N08	E40	10525	12	22.3	26	SF		3	E		36			F
0019	LEAR	19	0813	0814	0818	N09	E90	10528	12	26.1	5	SF		2	E		22			H
0020	KANZ	19	1223	1230	1239	N09	E37	10525	12	22.3	16	SN		2	E					
		19	1404		1426			No Flare Patrol												
		19	1443		1447			No Flare Patrol												
0021	HOLL	19	1645	1646	1653	N10	E36	10525	12	22.4	8	SF		3	E		53			F
0022	LEAR	20	0010	0011	0020	N08	E32	10525	12	22.4	10	SF		3	E		13			FH

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															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
0023	LEAR	20	0156	0157	0205	N08	E31	10525	12 22.4	9	SF		2	E		35		FH
0024	KANZ	20	0946	0948	0949	N07	E25	10525	12 22.3	3	SF		2	E				
0025	KANZ	20	1242	1245	1252	N08	E22	10525	12 22.2	10	SF		2	E				
		20	2033		2057	No Flare Patrol												
0026	LEAR	21	0242	0244	0312	N09	E46	10528	12 24.6	30	SF		3	E		85		F
0027	LEAR	21	0413	0414	0417	S24	E89	10530	12 28.0	4	SF		3	E		36		
0028	LEAR	21	0620	0620	0626	N08	E12	10525	12 22.2	6	SF		3	E		21		FH
		21	1441		1453	No Flare Patrol												
0029	LEAR	22	0042	0045	0052	N08	E41	10528	12 25.1	10	SF		3	E		32		F
		22	0119		0320	No Flare Patrol												
0030	LEAR	22	0653	0654	0705	N07	E28	10528	12 24.4	12	SF		3	E		22		
		22	1025		1417	No Flare Patrol												
0031	HOLL	22	1943	1949	2013	N09	E23	10528	12 24.5	30	SF		3	E		64		F
0032	HOLL	22	2036	2042	2046	S18	E51	10530	12 26.7	10	SF		3	E		21		F
		23	0128		0141	No Flare Patrol												
0033	LEAR	23	0650	0650	0654	N11	E23	10528	12 25.0	4	SF		3	E		30		
0034	LEAR	23	0731	0733	0746	N11	W10	10525	12 22.6	15	SF		3	E		30		F
0035		23	0805	0810	0818	N09	E16	10528	12 24.5	13	SF					48		
	KANZ	23	0805	0815	0818	N09	E17	10528	12 24.6	13	SF		2	E				
	LEAR	23	0808	0810	0817	N09	E16	10528	12 24.5	9	SF		3	E		48		
0036	KANZ	23	1015	1019	1103	N07	W15	10525	12 22.3	48	1F		2	E				
		23	1357		1417	No Flare Patrol												
0037	KANZ	24	0803	0809	0818	N07	E02	10528	12 24.5	15	SF		2	E				
0038	KANZ	24	1001	1004	1014	N03	W44	10531	12 21.1	13	SF		2	E				
		24	1224		1439	No Flare Patrol												
		24	1451		1755	No Flare Patrol												
		24	1800		1842	No Flare Patrol												
		24	2039		2209	No Flare Patrol												
0039	LEAR	24	2316	2316	2329	N09	E00	10528	12 25.0	13	SF		2	E		18		F
0040	LEAR	24	2350	2402	2408	N09	W05	10528	12 24.6	18	SF		3	E		23		FH
0041	LEAR	25	0154E	0154	0219	S15	E03	10532	12 25.3	25D	SF		3	E		37		F
0042	LEAR	25	0216	0216	0223	N09	W36	10525	12 22.4	7	SF		3	E		16		FH
0043	LEAR	25	0226	0230	0252	N09	W01	10528	12 25.0	26	SF		3	E		63		FH
0044	LEAR	25	0232	0235	0239	N09	W36	10525	12 22.4	7	SF		3	E		13		FH
0045	LEAR	25	0256	0302	0318	N09	W37	10525	12 22.3	22	SF		3	E		79		FH
0046	LEAR	25	0347	0347	0352	N09	W02	10528	12 25.0	5	SF		3	E		23		FH
0047	LEAR	25	0400	0401	0410	N09	W38	10525	12 22.3	10	SF		3	E		65		FH

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																Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
0048	LEAR	25	0522	0527	0544	N11	W39	10525	12	22.3	22	SF		3	E		34		FH	
0049		25	0754	0823	0904	N09	W04	10528	12	25.0	70	SF					69		FH	
	LEAR	25	0754	0823	0901	N09	W04	10528	12	25.0	67	SF		3	E		69		FH	
	KANZ	25	0759	0825	0908	N09	W05	10528	12	24.9	69	SF		2	E					
0050	KANZ	25	1145	1153	1207	N07	W13	10528	12	24.5	22	SF		2	E					
		25	1359		1418	No Flare Patrol														
		25	1455		1538	No Flare Patrol														
		25	1958		2006	No Flare Patrol														
		25	2151		2308	No Flare Patrol														
		25	2325		2400	No Flare Patrol														
		26	0000		0045	No Flare Patrol														
		26	0237		0301	No Flare Patrol														
		26	0310		0315	No Flare Patrol														
		0051	SVTO	26	1027	1038	1114	N08	W22	10528	12	24.8	47	1F		3	E		102	
0052	HOLL	26	1619	1621	1630	N09	W29	10528	12	24.5	11	SF		3	E		30		F	
0053	HOLL	26	1921	1928	1945	N09	W30	10528	12	24.5	24	1N		3	E		164		F	
		26	2137		2242	No Flare Patrol														
		27	1452		1511	No Flare Patrol														
		28	1225		1351	No Flare Patrol														
		29	0112		0405	No Flare Patrol														
		29	1030		1225	No Flare Patrol														
		29	1303		1419	No Flare Patrol														
		30	1030		1238	No Flare Patrol														
		30	1247		1450	No Flare Patrol														
		30	1504		1604	No Flare Patrol														
		30	1649		1658	No Flare Patrol														
		30	1839		1844	No Flare Patrol														
		30	2131		2230	No Flare Patrol														
		31	0416		0459	No Flare Patrol														
		31	1031		1447	No Flare Patrol														
31	1500		2224	No Flare Patrol																

"Remarks"

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