Hα SOLAR FLARES

DECEMBER 2004

Grp #	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)	Area Measurement Corr (Sq Deg)	Remarks
0001	LEAR	01	0142	0144	0154	S14	W18	10707	11	29.8	12	SF		3	E		35		EF
0002	LEAR	01	0142E	0144	0209	S14	W18	10707	11	29.8	27D	SF		3	E		35		EF
0003	LEAR	01	0142E	0144	0242	S14	W18	10707	11	29.8	60D	SF		3	E		35		FS
0004		01	0706	0715	0821	N06	E20	10708	12	2.8	75	1N					89		FZ
	LEAR	01	0706	0715	0816	N06	E20	10708	12	2.8	70	SN		3	E		89		ZF
	KANZ	01	0726E	0726E	0826	N07	E21	10708	12	2.9	60D	1N		2	E				
		01	1013		1020	No Flare Patrol													
		01	1024		1026	No Flare Patrol													
		01	1144		1145	No Flare Patrol													
		01	1344		1356	No Flare Patrol													
		01	1358		1359	No Flare Patrol													
		01	1401		1402	No Flare Patrol													
		01	1409		1417	No Flare Patrol													
		01	1421		1427	No Flare Patrol													
0005	HOLL	01	1601	1603	1612	S19	W20	10707	11	30.1	11	SF		3	E		90		FH
0006	HOLL	01	1615	1620	1633	S18	W20	10707	11	30.1	18	SF		3	E		79		FH
0007	HOLL	01	1733	1734	1739	S17	W19	10707	11	30.3	6	SF		3	E		15		
0008	HOLL	01	1823	1830	1843	S17	W20	10707	11	30.2	20	SF		3	E		34		FH
		01	2058		2209	No Flare Patrol													
		01	2223		2243	No Flare Patrol													
		02	1054		1056	No Flare Patrol													
		02	1101		1403	No Flare Patrol													
		02	1600		1742	No Flare Patrol													
		02	1946		2052	No Flare Patrol													
0009	LEAR	02	2349	0001	0119	N09	E03	10708	12	3.2	90	2F		3	E		310		FZ
		03	0147		0158	No Flare Patrol													
		03	1016		1033	No Flare Patrol													
		03	1038		1039	No Flare Patrol													
		03	1041		1049	No Flare Patrol													
		03	1341		1413	No Flare Patrol													
		03	1712		2159	No Flare Patrol													
		04	0901		1101	No Flare Patrol													
		04	1104		1509	No Flare Patrol													
		04	1749		1803	No Flare Patrol													
		04	1808		2151	No Flare Patrol													
		05	0235		0322	No Flare Patrol													
		05	0344		0401	No Flare Patrol													
		05	0446		0520	No Flare Patrol													
		05	0531		0705	No Flare Patrol													
		05	0827		0849	No Flare Patrol													
		05	0941		1037	No Flare Patrol													
		05	1046		1156	No Flare Patrol													
		05	1209		1416	No Flare Patrol													
		06	0108		0203	No Flare Patrol													
		06	1017		1036	No Flare Patrol													
		06	1123		1124	No Flare Patrol													
		06	1132		1147	No Flare Patrol													
		06	1258		1259	No Flare Patrol													
		06	1309		1312	No Flare Patrol													
		06	1324		1329	No Flare Patrol													
		06	1444		1813	No Flare Patrol													
		06	1946		2150	No Flare Patrol													
		06	2207		2210	No Flare Patrol													
		08	1349		1658	No Flare Patrol													
		08	1745		1832	No Flare Patrol													
0010	HOLL	08	1942	1944	2010	N05	W03	10709	12	8.6	28	SF		3	E		34		FS
		09	0000		0759	No Flare Patrol													

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0011	LEAR	09	0009	0010	0015	S09	E49	10710	12	12.7	6	SF		3	E		16		F
		09	0851		0921	No Flare Patrol													
		09	1053		1100	No Flare Patrol													
		09	1350		1556	No Flare Patrol													
		09	2349		2400	No Flare Patrol													
		10	0000		0040	No Flare Patrol													
		10	1021		1042	No Flare Patrol													
		10	1350		1410	No Flare Patrol													
		11	2350		2400	No Flare Patrol													
		12	0000		0654	No Flare Patrol													
		12	2349		2352	No Flare Patrol													
		13	1352		1412	No Flare Patrol													
		14	2400		2400	No Flare Patrol													
		15	0000		0009	No Flare Patrol													
		15	0029		0035	No Flare Patrol													
		15	1353		1410	No Flare Patrol													
		15	1546		1648	No Flare Patrol													
		16	1319		1333	No Flare Patrol													
		16	1339		1342	No Flare Patrol													
		16	1353		1414	No Flare Patrol													
		16	1725		1735	No Flare Patrol													
		16	1748		1752	No Flare Patrol													
		16	1829		1859	No Flare Patrol													
		16	1906		1921	No Flare Patrol													
		17	1024		1425	No Flare Patrol													
		18	0818		0856	No Flare Patrol													
		18	0900		0902	No Flare Patrol													
		18	0906		0908	No Flare Patrol													
		18	0914		0915	No Flare Patrol													
		18	0917		0923	No Flare Patrol													
		18	1040		1042	No Flare Patrol													
		18	1050		1052	No Flare Patrol													
		18	1054		1055	No Flare Patrol													
		18	1100		1102	No Flare Patrol													
		18	1104		1107	No Flare Patrol													
		18	1249		1252	No Flare Patrol													
		18	1254		1302	No Flare Patrol													
		18	1431		1443	No Flare Patrol													
		18	2353		2400	No Flare Patrol													
		19	0000		0701	No Flare Patrol													
		20	0118		0410	No Flare Patrol													
		20	0437		0443	No Flare Patrol													
		20	1356		1416	No Flare Patrol													
		21	0059		0136	No Flare Patrol													
		21	0550		0638	No Flare Patrol													
		21	0643		0716	No Flare Patrol													
		21	1356		1417	No Flare Patrol													
		21	1459		1507	No Flare Patrol													
		21	1523		2242	No Flare Patrol													
		21	2310		2320	No Flare Patrol													
0012	KANZ	22	0849	0856	0858	S18	E70		12	27.7	9	SF		2	E				
		22	1357		1455	No Flare Patrol													
		22	1503		1825	No Flare Patrol													
		22	1912		1952	No Flare Patrol													
0013	HOLL	22	2016	2018	2037	S08	E13	10713	12	23.8	21	SF		3	E		26		FU
		22	2144		2152	No Flare Patrol													
		22	2200		2205	No Flare Patrol													
0014	LEAR	22	2333	2333	2343	S13	E04	10713	12	23.3	10	SF		3	E		63		U
0015	KANZ	23	1019E	1019E	1038	S08	E01	10713	12	23.5	19D	SF		2	E				
		23	1455		2204	No Flare Patrol													
		24	1449		1705	No Flare Patrol													
		25	1028		1031	No Flare Patrol													

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		25	1033		1037	No Flare Patrol													
		25	1039		1046	No Flare Patrol													
		25	1052		1054	No Flare Patrol													
		25	1056		1058	No Flare Patrol													
		25	1108		1112	No Flare Patrol													
		25	1114		1118	No Flare Patrol													
		25	1121		1122	No Flare Patrol													
		25	1125		1137	No Flare Patrol													
		25	1153		1227	No Flare Patrol													
		25	1323		1411	No Flare Patrol													
		26	1029		1419	No Flare Patrol													
		26	1954		2022	No Flare Patrol													
		26	2045		2205	No Flare Patrol													
		26	2217		2236	No Flare Patrol													
		26	2329		2400	No Flare Patrol													
		27	0000		0707	No Flare Patrol													
		27	0814		1418	No Flare Patrol													
		27	1451		1703	No Flare Patrol													
		27	1853		1948	No Flare Patrol													
		27	2004		2153	No Flare Patrol													
		27	2204		2213	No Flare Patrol													
0016	LEAR	27	2239	2242	2249	S11	W82	10713	12	21.8	10	SF		3	E		22		F
0017	LEAR	27	2317	2318	2321	S11	W82	10713	12	21.8	4	SF		3	E		25		F
0018	LEAR	28	0009	0011	0016	S11	W83	10713	12	21.8	7	1F		3	E		129		F
0019	LEAR	28	0630	0631	0633	S10	W64	10713	12	23.5	3	SF		3	E		27		FH
0020	LEAR	28	0915	0922	0926	S12	W75	10713	12	22.7	11	SF		3	E		67		F
0021	LEAR	28	0931	0932	0934	S11	W77	10713	12	22.6	3	SF		3	E		13		F
		28	1708		1720	No Flare Patrol													
0022	HOLL	28	1747	1747	1750	N05	E77	10715	01	3.5	3	SF		3	E		24		
0023	HOLL	28	2056	2057	2106	S12	W80	10713	12	22.8	10	SF		3	E		26		FR
0024	LEAR	29	0258	0258	0303	S09	W90	10713	12	22.4	5	SF		3	E		33		EF
		29	1220		1222	No Flare Patrol													
		29	1235		1240	No Flare Patrol													
		29	1248		1249	No Flare Patrol													
		29	1253		1254	No Flare Patrol													
		29	1257		1259	No Flare Patrol													
		29	1312		1313	No Flare Patrol													
		29	1331		1333	No Flare Patrol													
		29	1340		2051	No Flare Patrol													
0025	HOLL	29	2159	2159	2206	N01	E57	10715	01	3.2	7	SF		3	E		16		
		29	2336		2352	No Flare Patrol													
		30	0120		0128	No Flare Patrol													
		30	0503		0519	No Flare Patrol													
		30	0810		0817	No Flare Patrol													
0026	KANZ	30	0842	0842	0844	N04	E58	10715	01	3.7	2	SF		2	E				
0027		30	10374	10421	1114	N02	E52	10715	01	3.3	37	1N					91		FH
	KANZ	30	1037	1042	1128	N02	E52	10715	01	3.3	51	1N		2	E				
	SVTO	30	1041	1043	1059	N03	E53	10715	01	3.4	18	SF		3	E		91		FH
0028	SVTO	30	1316E	1318U	1320	N07	E51	10715	01	3.4	4D	SF		3	E		14		
		30	1455		1551	No Flare Patrol													
0029	HOLL	30	2145	2149	2159	N02	E50	10715	01	3.6	14	SF		3	E		97		FS

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0030		30	2205*	2217*	2256	N03	E48	10715	01	3.5	51	2N					368		FHU
	HOLL	30	2205	2217	2257	N03	E48	10715	01	3.5	52	2N		3	E		426		UF
	LEAR	30	2227	2228	2255	N03	E48	10715	01	3.5	28	2F		3	E		309		FH
0031	LEAR	31	0033	0036	0040	N03	E47	10715	01	3.5	7	SF		3	E		18		
0032	LEAR	31	0417	0429	0524	N05	E45	10715	01	3.5	67	SF		3	E		58		FZ
0033	LEAR	31	0625	0629	0706	N01	E46	10715	01	3.7	41	SF		3	E		17		FZ
		31	1402		1412	No Flare Patrol													
		31	1414		1420	No Flare Patrol													
0034	HOLL	31	1450	1452U	1539	N02	E40	10715	01	3.6	49	SF		3	E		39		F
		31	1453		1532	No Flare Patrol													
		31	1737		1745	No Flare Patrol													
		31	1753		1804	No Flare Patrol													
		31	2228		2232	No Flare Patrol													
		31	2242		2318	No Flare Patrol													

"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