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Solar - Geophysical Data

Part II (Comprehensive Reports)

NO. 459 NOVEMBER 1982

DATA FOR
MAY 1982
JUNE 1980

NATIONAL GEOPHYSICAL DATA CENTER
BOULDER, COLORADO

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SOLAR-GEOPHYSICAL DATA

No. 459

Issued in two parts

Helen E. Coffey, Editor

Joe H. Allen, Chief
Solar-Terrestrial Physics Division

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Part II (Comprehensive Reports)

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MAY 1982 DATA

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MAY 1982

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01	2000	TYKW	20	GRF	0110.0	0200.0	100.0	1.5	.7		
	3750	TYKW	21	GRF	0110.0	0200.0	100.0	2.0	1.0		
	3750	TYKW	5	S	0120.0	0120.2	1.0	3.0	.7		
	1000	TYKW	5	S	0244.0	0245.2	2.5	1.0	.3		
	3750	TYKW	5	S	0437.0	0445.0	25.0	1.5	.7		
	3750	TYKW	21	GRF	0509.0	0520.0	65.0	1.5	.7		
	2000	TYKW	20	GRF	0530.0	0550.0	60.0	1.5	.7		
	3750	TYKW	20	GRF	0540.0	0555.0	30.0	2.0	1.0		
	260	ONDR	40	F	0907.4	0927.0	22.7	34.0	2.0		0
	204	IZMI	4	S/F	0926.0	0926.8	1.5	160.0			
	260	ONDR	8	S	1316.4	1316.4	.1	3.0			0
	260	ONDR	8	S	1355.8	1355.9	.2	51.0			0
	2800	OTTA	27	RF	1540.0		165.0	2.0	1.7		
	2800	OTTA	24	R	1540.0	1600.0	20.0	2.0	1.0		
	2800	OTTA	24P	R	1600.0		120.0	2.0			
	2800	OTTA	26	FAL	1800.0	1825.0	25.0	-2.0	-1.0		
	2800	OTTA	22	GRF	2020.0	2315.0	250.0	8.6	3.0		
	3750	TYKW	21	GRF	2220.0	2245.0	130.0	2.0	1.0		
	3750	TYKW	20	GRF	2306.0	2316.5	75.0	7.0	3.0		
	9400	TYKW	20	GRF	2307.0	2317.0	80.0	8.0	4.0		RAIN
	2000	TYKW	20	GRF	2308.0	2323.0	75.0	3.0	1.5		
	245	LEAR	8	S	2326.6	2326.8	.5	18.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	2337.1	2337.1	.2	10.0			QL=6 ST=2 TYP=3
02	245	LEAR	8	S	0005.0	0005.1	.1	45.0			QL=6 ST=2 TYP=3
	3750	TYKW	20	GRF	0110.0	0126.0	90.0	2.0	1.0		
	3750	TYKW	45	C	0328.0	0332.0	9.0	6.0	2.0		
	9100	GORK			0328.1	0351.0	61.0	6.0			
	100	GORK	46	C	0328.3	0330.3	7.1	220.0D			
	100	GORK			0328.3	0332.7		220.0			
	200	GORK	2	S/F	0328.7	0329.2	6.8	8.0			
	245	LEAR	4	S/F	0328.8	0332.0	3.3	11.0			QL=6 ST=2 TYP=3
	9400	TYKW	5	S	0329.0	0332.0	8.0	6.0	2.0		RAIN
	2000	TYKW	45	C	0329.0	0332.0	8.0	1.5	.5		
	650	GORK	2	S/F	0330.0	0330.4	3.5	2.0			
	9100	GORK	1	S	0330.8	0331.7	2.8	3.5			
	9400	TYKW	45	C	0341.0	0349.3	15.0U	13.0	4.0U		RAIN
	3750	TYKW	45	C	0341.0	0349.6	17.0	14.0	4.0		
	950	GORK	22	GRF	0342.0	0349.5	9.5	3.0			
	650	GORK	20	GRF	0343.4	0349.1	7.6	5.5			
	1000	TYKW	45	C	0344.0	0349.2	8.0	4.0	1.0		
	2000	TYKW	45	C	0344.0	0349.7	10.0	10.0	3.0		
	500	HIRA			0344.0	0347.3		4.0			0
	500	HIRA	46	C	0344.0	0348.9	6.6	5.0	2.0		0
	200	GORK	2	S/F	0344.3	0349.0	6.8	5.0			
	9100	GORK	41	F	0346.6	0349.0	67.0	2.8			
	9100	GORK			0346.6	0349.5		11.0			
	100	GORK	46	C	0348.7	0348.9	1.9	200.0			
	100	GORK			0348.7	0349.3		220.0D			
	2950	GORK	1	S	0348.9	0349.7	4.5	9.6	4.5		
	4995	PALE	8	S	0349.1	0349.8	.7	23.0			QL=6 ST=2 TYP=3
	1415	PALE	8	S	0349.1	0350.0	1.0	17.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	0349.1	0350.1	1.0	20.0			QL=6 ST=2 TYP=3
	15400	PALE	8	S	0349.8	0350.0	.3	40.0			QL=6 ST=2 TYP=3
	6100	KISV	1	S	0857.9	0858.1	.3	3.0			
	650	GORK	1	S	0937.3	0941.1	6.3	1.5			
	260	ONDR	2	S/F	1040.4	1041.3	4.0	7.0	2.0		0
	204	IZMI	8	S	1152.4	1152.4	.4	3600.0	3000.0		
	2800	OTTA	21	GRF	1400.0	1535.0	180.0	5.4	2.4		
	930	BORD	45	C	1520.0	1520.5	10.0	92.0	10.0		
	9400	HUAN	4	S/F	1522.5	1526.3	6.2	77.5	41.2		0
	8400	BERN	4	S/F	1522.6	1528.8	14.0	107.0			
	19600	BERN	4	S/F	1522.6	1528.8	14.0	34.0			
	11800	BERN	4	S/F	1522.6	1528.8	14.0	79.0			
	2650	DWIN	4	S/F	1523.0	1527.0	7.0	45.0	20.0		
	2800	OTTA	46F	C	1523.0	1525.8	7.5	50.0	20.0		
	8800	ATHN	47	GB	1523.1E	1525.8	6.5D	56.0			QL=6 ST=2 TYP=5
	1415	ATHN	47	GB	1523.3E	1528.5	12.3D	77.0			QL=2 ST=2 TYP=5
	4995	ATHN	47	GB	1523.5E	1525.8	6.8D	54.0			QL=6 ST=2 TYP=5
	2695	ATHN	4	S/F	1523.5E	1526.0	6.1D	35.0			QL=6 ST=2 TYP=3

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MAY 1982

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
02	9400	HUAN	29	PBI	1528.7	1528.7	58.9	17.4	5.9		0
	245	LEAR	8	S	2314.8	2315.0	.3	20.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	2355.1	2355.6	.7	30.0			QL=6 ST=2 TYP=3
03	100	GORK	43	NS	1103.0		57.0		5.0		
	245	LEAR	43	NS	2301.0	2302.5	639.0D	83.0			QL=6 ST=2 TYP=1
	245	LEAR	8	S	0100.0	0100.1	.1	25.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0327.3	0327.8	.7	13.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0549.8	0550.0	.3	10.0			QL=6 ST=2 TYP=3
	260	ONDR	8	S	0748.9	0749.0	.2	8.0			0
	245	LEAR	8	S	0903.8	0903.8	.2	17.0			QL=6 ST=2 TYP=3
	260	ONDR	41	F	1048.0	1114.8	29.0	20.0U	4.0		0
┌	2950	GORK	1	S	1112.0	1112.1	1.1	3.1	3.0		
└	2800	OTTA	8	S	1112.0	1112.1	.7	6.2	3.0		
	6100	KISV	1	S	1206.8	1207.0	.4	4.0			
	2800	OTTA	20	GRF	1456.0	1459.0	15.0	3.4	1.5		
	9400	HUAN	20	GRF	1616.0	1637.2	41.5	5.2	3.9		R
	9400	HUAN	22	GRF	1728.1	1755.4	46.4	7.0	5.0		0
	2800	OTTA	21	GRF	1840.0	1905.0	80.0	5.0	2.4		
┌	2800	OTTA	1	S	1900.0	1902.0	2.5	6.6	3.3		
├	2695	SGMR	8	S	1900.8	1901.3	1.3	8.0			QL=6 ST=2 TYP=3
├	4995	SGMR	8	S	1900.8	1901.3	1.3	24.0			QL=6 ST=2 TYP=3
└	4995	PALE	8	S	1901.0	1901.6	.8	17.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	2120.0	2150.0	100.0	4.0	2.0		
	2800	OTTA	1	S	2153.0	2154.0	2.5	2.2	1.1		
04	410	LEAR	43	NS	0233.1	0234.5	7.5	25.0			QL=6 ST=2 TYP=1
	100	GORK	44	NS	0303.0E		72.0D		10.0		
	260	ONDR	44	NS	0603.0E	1332.0U	485.0D	4.0U			0
┌	245	PALE	43	NS	1645.0	1808.6	710.0D	100.0			QL=6 ST=2 TYP=1
└	208	VORO	44	NS	2100.0E		240.0D				
	245	LEAR	43	NS	2331.0	0721.1	609.0D	90.0			QL=6 ST=2 TYP=1
	2695	LEAR	20	GRF	0005.0	0008.0	15.0	5.0			QL=6 ST=2 TYP=2
┌	1000	TYKW	45	C	0006.7	0006.9	1.0	47.0	4.0		
├	1415	LEAR	8	S	0006.8	0007.3	.7	18.0			QL=6 ST=2 TYP=3
└	610	LEAR	8	S	0007.0	0007.6	.8	35.0			QL=6 ST=2 TYP=3
	410	LEAR	47	GB	0011.1	0011.1	.2	68.0			QL=6 ST=2 TYP=5
┌	2000	TYKW	20	GRF	0233.0	0257.2	140.0	7.0	2.5		
└	3750	TYKW	20	GRF	0233.0	0257.2	140.0	8.0	2.5		
	9400	TYKW	20	GRF	0233.0	0303.0	90.0	10.0	4.0		
┌	245	LEAR	8	S	0251.6	0252.3	1.2	13.0			QL=6 ST=2 TYP=3
└	410	LEAR	8	S	0251.8	0252.3	1.2	9.0			QL=6 ST=2 TYP=3
	1000	TYKW	5	S	0254.5	0254.8	.5	24.0	4.0		
	1000	TYKW	45	C	0638.4	0638.5	.6	75.0	12.0		
05	200	GORK	43	NS	0555.0		411.0D		15.0		
├	204	IZMI	43	NS	0600.0		360.0	28.0			
├	260	ONDR	44	NS	0602.0E	1303.0U	490.0D	11.0U			
├	127	TORN	43	NS	0840.0		240.0		1.0		V=1DISTURBED
├	245	SGMR	43	NS	0955.0	1655.1	810.0D	119.0			QL=6 ST=2 TYP=1
├	200	HIRA	44	NS	1937.0E	0726.0	830.0D	120.0	20.0		SL
├	208	VORO	44	NS	2100.0E		240.0D		7.0		
└	245	LEAR	43	NS	2302.0	0711.1	637.0D	620.0			QL=6 ST=2 TYP=1
	410	LEAR	8	S	0003.8	0004.0	.3	16.0			QL=6 ST=2 TYP=3
	3750	TYKW	5	S	0055.0	0055.2	1.5	3.0	1.0		
	610	LEAR	8	S	0736.3	0736.8	.8	30.0			QL=6 ST=2 TYP=3
	536	ONDR	40	F	1028.8	1037.2	15.0	8.0	4.0		0
	2800	OTTA	20	GRF	1410.0	1430.0	60.0	2.4	1.2		
	930	BORD	8	S	1526.2	1526.2	.1	300.0	1.0		
	9400	HUAN	20	GRF	1715.4	1742.5	70.6	5.6	3.0		0
	3750	TYKW	5	S	2127.0	2133.0	25.0	2.0	1.0		
	208	VORO	40	F	2254.0	2254.0	7.0	100.0D			
06	200	GORK	44	NS	0251.0E		549.0D		40.0		
├	100	GORK	44	NS	0300.0E		57.0D		5.0		
├	260	ONDR	44	NS	0556.0E	0724.0U	495.0D	34.0U			
├	204	IZMI	44	NS	0600.0E		360.0D	58.0			
├	127	TORN	43	NS	0652.0	0745.1	428.0	840.0	19.0		V=1
├	100	GORK	43	NS	0657.0		267.0		15.0		
├	245	SGMR	43	NS	0954.0	1042.5	812.0D	219.0			QL=6 ST=2 TYP=1

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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
06	245	PALE	43	NS	1632.0	0311.3	724.0D	340.0			QL=6 ST=2 TYP=1
	100	HIRA	44	NS	1937.0E	0000.0	830.0D	500.0	180.0		ML
	200	HIRA	44	NS	1937.0E	0000.0	830.0D	110.0	30.0		SL
	208	VORO	44	NS	2100.0E		240.0D		36.0		
	245	LEAR	43	NS	2302.0	0311.3	636.0D	350.0			QL=6 ST=2 TYP=1
	3750	TYKW	20	GRF	0110.0	0140.0	60.0	2.0	1.0		
	3750	TYKW	20	GRF	0230.0	0241.0	30.0	2.0	1.0		
	3750	TYKW	20	GRF	0336.0	0337.0	40.0	2.0	1.0		
	3750	TYKW	28	PRE	0441.0	0512.0	40.0	3.0	1.5		
	9395	PEKG	45	C	0454.0	0455.5	4.0	19.3	5.2		
	9395	PEKG	20	GRF	0504.0	0523.0	38.0	7.4	3.8		
	4995	LEAR	4	S/F	0505.0	0523.0	30.0	18.0			QL=6 ST=2 TYP=3
	3750	TYKW	45	C	0521.0	0522.9	7.0	17.0	8.0		
	6100	KISV	20	GRF	0521.0	0523.0	10.0	8.0			
	3100	CRIM	1	S	0521.0	0522.8	5.0	11.0	4.0		
	2950	GORK	20	GRF	0521.0	0523.0	16.0	7.5			
	2000	TYKW	5	S	0522.0	0522.9	2.0	1.5	.5		
	9400	TYKW	20	GRF	0522.0	0523.0	30.0	4.0	2.0		
	9100	GORK	22	GRF	0522.5	0525.2	13.9	3.5			
	3750	TYKW	29	PBI	0528.0		30.0	6.0	2.5		
	234	POTS	42	SER	0704.0	0719.0	20.0	230.0	1.0		
	100	GORK	8	S	0902.0	0906.0	4.0	110.0D			
	113	POTS	4	S/F	0949.5	0950.0	.6	200.0	30.0		
	234	POTS	4	S/F	1006.6	1006.6	.1	170.0	40.0		
	234	POTS	4	S/F	1025.2	1025.3	.1	150.0	30.0		
	113	POTS	42	SER	1035.4	1035.6	4.6	525.0	15.0		
	6100	KISV	1	S	1204.0	1204.3	.5	4.0			
	2695	SGMR	8	S	1618.8	1619.1	.5	39.0			QL=6 ST=2 TYP=3
	4995	SGMR	8	S	1658.8	1659.0	.3	20.0			QL=6 ST=2 TYP=3
	8800	SGMR	47	GB	1658.8	1659.1	.5	52.0			QL=6 ST=2 TYP=5
	15400	SGMR	8	S	1658.8	1659.1	.5	49.0			QL=6 ST=2 TYP=3
	8800	ATHN	8	S	1658.8	1659.3	1.3	87.0			QL=5 ST=2 TYP=3
	9400	HUAN	1	S	1701.2	1705.0	6.9	8.6	3.4		0
	2800	OTTA	20	GRF	1710.0	1716.0	50.0	2.2	1.0		
	9400	HUAN	1	S	1837.8	1839.2	4.3	10.3	3.7		0
	9400	HUAN	20	GRF	1953.0	2006.1	32.0	5.2	2.6		0
	2800	OTTA	27	RF	1955.0		165.0	2.8	2.4		
	2800	OTTA	24	R	1955.0	2002.0	7.0	2.8	1.4		
	2800	OTTA	24P	R	2002.0		118.0	2.8			
	9400	HUAN	1	S	2106.4	2107.0	1.5	8.6	4.0		0
	9400	HUAN	2	S/F	2112.7	2114.0	2.8	12.0	4.6		R
	9400	HUAN	1	S	2135.7	2136.7	3.4	15.5	5.7		0
	9400	TYKW	45	C	2136.4	2136.7	2.5	16.0	5.0		
	8800	PALE	8	S	2136.5	2136.6	.3	22.0			QL=6 ST=2 TYP=3
	100	HIRA	46	C	2139.7	2140.0	2.0	2800.0	1400.0		ML
	2800	OTTA	26	FAL	2200.0	2240.0	40.0	-2.8	-1.4		
	3750	TYKW	20	GRF	2358.0	0028.0	60.0	2.0	1.0		
07	100	HIRA	43	NS	0200.0	0320.0	200.0	350.0	130.0		ML
	200	GORK	44	NS	0257.0E		350.0D		40.0		
	100	GORK	44	NS	0300.0E		195.0D		20.0		
	260	ONDR	44	NS	0543.0E		507.0D				
	204	IZMI	43	NS	0600.0		360.0	50.0			
	127	TORN	43	NS	0841.0	1356.3	419.0	170.0	2.0		V=1
	245	SGMR	43	NS	0953.0	1228.3	814.0D	119.0			QL=6 ST=2 TYP=1
	245	PALE	43	NS	1645.0	1908.5	715.0D	540.0			QL=6 ST=2 TYP=1
	200	HIRA	44	NS	1936.0E	0811.0	830.0D	25.0	10.0		ML
	208	VORO	44	NS	2100.0E		240.0D		6.0		
	100	LEAR	43	NS	2303.0	0209.6	635.0D	110.0			QL=6 ST=2 TYP=1
	2000	TYKW	20	GRF	0130.0	0136.0	70.0	1.5	.7		
	9400	TYKW	21	GRF	0130.0	0136.0	75.0	5.0	2.0		
	3750	TYKW	21	GRF	0130.0	0136.0	75.0	4.0	1.5		
	9395	PEKG	20	GRF	0205.0	0211.7	19.0	10.6	4.5		
	9400	TYKW	45	C	0205.0	0212.0	20.0U	8.0	2.0U		INTERFERENCE
	3750	TYKW	5	S	0210.0	0212.0	15.0	2.0	1.0		
	3750	TYKW	5	S	0325.0	0325.2	1.5	1.5	.5		
	3750	TYKW	5	S	0355.0	0356.3	13.0	1.5	.7		
	9395	PEKG	45	C	0432.0	0436.0	10.0	16.4	5.6		
	3750	TYKW	20	GRF	0445.0	0530.0	105.0	2.0	1.0		
	930	BORD	8	S	0617.5	0617.5	.1	14.0	1.0		

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07	930	BORD	8	S	0739.8	0740.0	.3	49.0	2.0		
	2000	TYKW	5	S	0853.0	0853.8	2.0	12.0	5.0		
	1000	TYKW	5	S	0853.0	0854.0	2.0U	9.0	4.0U		INTERFERENCE
	3750	TYKW	45	C	0853.0	0854.3	2.0	14.0	7.0		
	930	BORD	41	F	0908.3	0908.4	.4	174.0	2.0		
	3100	CRIM	3	S	0913.0	0917.2	8.0	30.0	10.0		
	2695	ATHN	4	S/F	0913.3	0915.6	19.2	19.0			QL=6 ST=2 TYP=3
	2950	GORK	21	GRF	0913.4	0917.4	36.0	11.6			
	8800	ATHN	4	S/F	0913.5	0917.8	19.3	17.0			QL=6 ST=2 TYP=3
	4995	ATHN	4	S/F	0913.6	0915.6	19.2	11.0			QL=6 ST=2 TYP=3
	2650	DWIN	2	S/F	0915.0	0917.0	4.0	22.0	10.0		
	3000	POTS	29	PBI	0915.0	0917.4	55.0	28.0			
	9500	POTS	20	GRF	0915.0	0917.5	60.0	10.0			
	2950	GORK	4	S/F	0915.3	0917.3	4.1	18.0			
	6100	KISV	21	GRF	0915.5	0917.4	40.0	13.0			
	9100	GORK	20	GRF	0915.8	0917.4	47.2	9.0			
	3100	CRIM	29	PBI	0919.8	0919.8	20.0	12.0	4.0		
	930	BORD	8	S	0933.3	0933.3	.2	32.0	2.0		
	930	BORD	8	S	1235.0	1235.0	.1	19.0	1.0		
	2695	SGMR	47	GB	1346.8	1347.1	.3	59.0			QL=6 ST=2 TYP=5
	245	SGMR	8	S	1406.3	1406.8	.8	22.0			QL=6 ST=2 TYP=3
	2800	OTTA	1	S	2023.0	2025.0	10.0	1.6	.8		
	2800	OTTA	22	GRF	2125.0	2155.0	85.0	2.8	1.4		
	3750	TYKW			2133.0	2134.2		-8.0			
	9400	TYKW			2133.0	2134.5		-17.0			OSCILLATION
	1000	TYKW			2133.0	2134.5		-6.0			
	1000	TYKW	40	F	2133.0	2134.5	6.0	-6.0	-.1		
	2000	TYKW			2133.0	2135.1		-8.0			
	3750	TYKW			2133.0	2136.5		8.0			
	3750	TYKW	40	F	2133.0	2136.5	6.0	8.0	1.0		
	2000	TYKW	40	F	2133.0	2136.6	10.0	11.0	.5		
	1000	TYKW			2133.0	2136.6		5.0			
	2000	TYKW			2133.0	2136.6		11.0			
	9400	TYKW			2133.0	2136.7		19.0			
	9400	TYKW	40	F	2133.0	2136.7	6.0	19.0	1.0		UNUSUAL
	9400	TYKW	29	PBI	2139.0		20.0	2.0	1.0		
	3750	TYKW	30	PBI	2139.0		80.0	2.0	1.0		
	3750	TYKW	20	GRF	2143.0	2153.0	70.0	3.0	1.5		
	2000	TYKW	20	GRF	2144.0	2153.0	40.0	2.0	1.0		
	3750	TYKW	20	GRF	2305.0	2319.0	75.0	6.0	2.0		
	2695	PENT	20	GRF	2305.0	2325.0	40.0	4.0	2.0		
	2000	TYKW	20	GRF	2310.0	2319.0	40.0	2.0	1.0		
08	200	GORK	44	NS	0300.0E		353.0D		30.0		
	260	ONDR	44	NS	0600.0E	0805.0U	501.0D	2.0			
	204	IZMI	43	NS	0600.0		360.0	34.0			
	127	TORN	43	NS	0612.5	0824.7	512.0	190.0	3.0		V=1
	100	GORK	43	NS	0639.0		132.0		20.0		
	245	SGMR	43	NS	0952.0	1537.5	816.0D	250.0			QL=6 ST=2 TYP=1
	245	PALE	43	NS	1700.0	1833.1	700.0D	410.0			QL=6 ST=2 TYP=1
	200	HIRA	44	NS	1935.0E	2000.0	830.0D	35.0	5.0		WL
	208	VORO	44	NS	2100.0E		240.0D		5.0		
	245	LEAR	43	NS	2303.0	0307.6	634.0D	160.0			QL=6 ST=2 TYP=1
	3750	TYKW	20	GRF	0030.0	0040.0	40.0	1.5	.7		
	3750	TYKW	20	GRF	0145.0	0201.0	45.0	1.5	.7		
	8800	LEAR	47	GB	0506.5	0506.6	.5	82.0			QL=6 ST=2 TYP=5
	410	LEAR	8	S	0506.6	0506.8	.2	17.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0825.5	0825.6	.1	13.0			QL=6 ST=2 TYP=3
	6100	KISV	1	S	1042.0	1042.8	1.5	4.0			
	6100	KISV	1	S	1054.3	1054.8	1.0	4.0			
	2800	OTTA	27	RF	1225.0		185.0	2.8	2.2		
	2800	OTTA	24	R	1225.0	1315.0	50.0	2.8	1.4		
	2800	OTTA	24P	R	1315.0		105.0	2.8			
	234	POTS	4	S/F	1339.8	1339.8	.1	290.0	50.0		
	9400	HUAN	1	S	1352.0	1352.5	2.3	19.6	8.3		L
	2800	OTTA	26	FAL	1500.0	1530.0	30.0	-2.8	-1.4		
	2800	OTTA	20	GRF	1545.0	1620.0	65.0	2.8	2.0		
	2800	OTTA	22	GRF	1805.0	2025.0	255.0	8.2	5.6		
	9400	HUAN	20	GRF	1920.5	1937.0	25.8	5.4	3.1		0
	9400	TYKW	20	GRF	2100.0E	2100.0U	270.0D	10.0D	4.0D		

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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
08	2000	TYKW	20	GRF	2100.0E	2120.0	250.0D	8.0	3.0D		
	3750	TYKW	21	GRF	2100.0E	2120.0	250.0D	5.0U	2.0D		
	3750	TYKW	5	S	2223.0	2224.1	8.0	4.0	1.5		
	3750	TYKW	20	GRF	2320.0	2335.0	40.0	1.5	.7		
09	200	GORK	44	NS	0302.0E		404.0D		15.0		
	260	ONDR	44	NS	0622.0E	0657.0U	439.0D	12.0U			
	200	HIRA	43	NS	2110.0	2347.0	740.0D	20.0	5.0		WL
	245	LEAR	43	NS	2303.0	0703.3	597.0D	100.0			QL=6 ST=2 TYP=1
	3750	TYKW	20	GRF	0154.0	0157.0	30.0	2.0	1.0		
	3750	TYKW	45	C	0446.0	0446.5	6.0	3.0	1.0		
	9395	PEKG	41	F	0459.0	0459.5		22.2			
	9395	PEKG			0459.0	0501.2	4.0	23.3	6.6		
	650	GORK	2	S/F	0517.8	0519.8	6.2	7.5			
	410	LEAR	4	S/F	0543.3	0545.5	2.5	20.0			QL=6 ST=2 TYP=3
	650	GORK	20	GRF	0635.9	0646.9	11.0U	4.0			
	410	LEAR	47	GB	0831.8	0832.0	.3	169.0			QL=6 ST=2 TYP=5
	113	POTS	4	S/F	0846.6	0846.8	.5	250.0	50.0		
	410	LEAR	8	S	0908.3	0908.3	.3	23.0			QL=6 ST=2 TYP=3
	430	KRAK	8	S	0908.5	0908.6	.2	77.0			
	430	KRAK	8	S	0919.0	0919.2	.8	42.0			
	430	KRAK	8	S	0954.5	0954.5	.4	18.0			
	2800	OTTA	20	GRF	1107.0	1112.0	35.0	2.8	1.4		
	2800	OTTA	260	FAL	1200.0	1345.0	105.0	-5.6	-2.8		
	9400	HUAN	20	GRF	1328.6	1405.0	77.9	5.1	1.8		0
	2800	OTTA	20	GRF	1420.0	1445.0	50.0	2.6	1.6		
	2800	OTTA	260	FAL	1515.0	1535.0	20.0	-2.8	-1.4		
	9400	HUAN	20	GRF	1619.5	1625.0	17.5	3.4	1.3		0
	2800	OTTA	240	R	1740.0	1930.0	110.0	2.8	1.2		
	3750	TYKW	5	S	2222.0	2222.8	2.0	3.0	1.0		
	3750	TYKW	21	GRF	2222.0	2226.0	30.0	2.0	1.0		
	3750	TYKW	20	GRF	2320.0	2326.3	80.0	5.0	1.5		
	410	LEAR	8	S	2345.3	2345.5	.3	13.0			QL=6 ST=2 TYP=3
10	208	VORO	44	NS	0000.0E		60.0D		8.0		
	100	GORK	44	NS	0324.0E		243.0D		10.0		
	200	GORK	44	NS	0327.0E		515.0D		10.0		
	260	ONDR	44	NS	0541.0E	0913.0U	512.0D	19.0U			
	204	IZMI	43	NS	0600.0		360.0	23.0			
	245	SGMR	44	NS	0949.0E	1134.6	361.0D	42.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2130.0E		210.0D		1.0		
	245	PALE	8	S	0145.6	0145.8	.2	40.0			QL=6 ST=2 TYP=3
	245	PALE	47	GB	0347.0	0347.1	.1	56.0			QL=6 ST=2 TYP=5
	2840	PEKG	1	S	0459.2	0459.9	9.0	8.5	4.4		
	2950	GORK	20	GRF	0549.7	0555.6	162.0	2.5			
	3750	TYKW	5	S	0555.0	0555.6	1.5	2.0	.7		
	9400	TYKW	5	S	0555.0	0555.6	1.5	10.0	3.0		
	500	HIRA	45	C	0555.0	0555.2	.5	130.0	60.0		WL
	9100	GORK	1	S	0555.1	0555.5	.6	9.0			
	650	GORK	4	S/F	0555.2	0555.5	1.2	19.0			
	536	ONDR	8	S	0555.2	0555.6	1.2	36.0			
	6100	KISV	1	S	0555.3	0555.5	.5	4.0			
	8800	LEAR	8	S	0555.3	0555.6	1.2	11.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0555.3	0555.6	.5	44.0			QL=6 ST=2 TYP=3
	410	LEAR	47	GB	0555.3	0555.6	.3	360.0			QL=6 ST=2 TYP=5
	2000	TYKW	5	S	0555.4	0555.5	1.0	2.5	.7		
	950	GORK	1	S	0555.4	0555.5	.3	.5			
	1000	TYKW	5	S	0555.4	0555.6	1.5	1.5	.5		
	9100	GORK	29	PBI	0555.8	0555.8	6.0	3.0			
	9100	GORK	1	S	0604.5	0605.7	2.9	7.0			
	8800	LEAR	4	S/F	0604.6	0605.6	2.4	10.0			QL=6 ST=2 TYP=3
	650	GORK	2	S/F	0604.8	0605.6	1.5	4.5			
	6100	KISV	1	S	0604.8	0605.8	1.5	4.0			
	536	ONDR	7	C	0604.9	0605.4	1.9	7.0	4.0		
	410	LEAR	8	S	0605.6	0605.6	.2	27.0			QL=6 ST=2 TYP=3
	950	GORK	1	S	0605.6	0605.7	.3	.5			
	536	ONDR	7	C	0654.0	0655.0	2.3	6.0	3.0		
	650	GORK	41	F	0654.2	0659.0	21.1	41.0			
	650	GORK			0654.2	0712.2		2.5			
	6100	KISV	2	S/F	0700.7	0701.0	.4	3.0			

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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
10	113	POTS	8	S	0924.7	0924.7	.3	850.0	300.0		
	650	GORK			0930.0	0938.7		32.0			
	650	GORK	41	F	0936.0	0936.3	4.3	4.0			
	9500	POTS	23	GRF	0937.0	0938.7	33.0	11.0			
	3000	POTS	3	S	0937.5	0938.0U	1.0	10.0	.4		
	9100	GORK	41	F	0938.3	0938.7	28.0	11.0			
	9100	GORK			0938.3	0940.5		9.0			
	2950	GORK	1	S	0938.5	0938.7	.5	8.7			
	6100	KISV	2	S/F	0938.5	0938.8	1.0	7.0			
	430	KRAK	8	S	0938.6	0938.6	.4	210.0			
	950	GORK	1	S	0938.6	0938.7	.4	.5			
	1470	POTS	1	S	0938.6	0939.0	.9	3.0			
	536	ONDR	8	S	0938.7	0938.9	.8	78.0			
	430	KRAK	8	S	1017.8	1017.8	.3	20.0			
	410	SGMR	8	S	1042.0	1042.1	.5	28.0			QL=6 ST=3 TYP=3
	430	KRAK	41	F	1042.2	1044.8	4.2	48.0			
	536	ONDR	8	S	1043.4	1043.4	.1	4.0			
	410	SGMR	8	S	1044.8	1045.0	1.0	33.0			QL=6 ST=2 TYP=3
	536	ONDR	8	S	1045.7	1045.7	.1	10.0			
	536	ONDR	40	F	1134.0	1136.8	5.4	4.0	4.0		
	650	GORK	4	S/F	1134.1	1136.0	6.4	7.0	3.5		
	930	BORD	41	F	1148.8	1148.8	.4	20.0	2.0		
	810	KRAK	8	S	1148.9	1148.9	.2	65.0			
	1470	POTS	4	S/F	1150.0	1152.3	7.5	8.5			
	2800	OTTA	23	GRF	1150.0	1315.0	150.0	10.0	3.4		
	6100	KISV	1	S	1150.3	1152.0	3.5	4.0			
	2950	GORK	1	S	1150.5	1151.6	5.4	5.0			
	3000	POTS	1	S	1150.5	1152.5	5.5	6.0			
	2800	OTTA	1	S	1151.0	1152.0	9.0	5.4	2.4		
	930	BORD	8	S	1248.4	1248.4	.1	25.0	1.0		
	9500	POTS	20	GRF	1305.0	1311.0	55.0	8.0			
	3000	POTS	23	GRF	1305.0	1311.3	50.0	13.0			
	6100	KISV	21	GRF	1307.0	1311.2	30.0	11.0			
	2800	OTTA	2	S/F	1310.0	1311.0	3.0	5.4	2.6		
	8800	SGMR	20	GRF	1310.0	1312.1	5.8	13.0			QL=6 ST=2 TYP=2
	2695	SGMR	20	GRF	1310.3	1311.3	3.7	10.0			QL=6 ST=2 TYP=2
	4995	SGMR	20	GRF	1310.6	1311.1	4.5	17.0			QL=6 ST=2 TYP=2
	2800	OTTA	260	FAL	1540.0	1620.0	40.0	-4.2	-2.1		
	9400	HUAN	20	GRF	1735.3	1745.0	13.7	3.6	1.3		0
	245	PALE	8	S	1748.6	1748.8	.2	42.0			QL=6 ST=2 TYP=3
	245	SGMR	8	S	1748.6	1748.8	.2	32.0			QL=6 ST=2 TYP=3
	2800	OTTA	240	AR	1920.0	2050.0	90.0	2.8			
	2800	OTTA	20	GRF	1925.0	1940.0	80.0	4.4	2.4		
11	200	GORK	44	NS	0255.0E		575.0D		5.0		
	260	ONDR	44	NS	0554.0E	1326.0U	504.0D	7.0U			
	245	PALE	43	NS	1632.0	0036.3	726.0D	66.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2100.0E		240.0D				
	245	LEAR	43	NS	2304.0	0531.8	632.0D	38.0			QL=6 ST=2 TYP=1
	410	LEAR	8	S	0146.1	0146.3	.4	21.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0222.8	0222.8	.2	11.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0225.3	0225.5	.3	13.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0306.0	0306.3	1.0	22.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0308.8	0308.8	.2	17.0			QL=6 ST=2 TYP=3
	100	HIRA	46	C	0320.0	0321.4	3.1	180.0	100.0		WR
	2840	PEKG	4	S/F	0320.6	0321.3	2.8	18.0	2.3		
	500	HIRA	45	C	0320.8	0321.0	1.0	600.0	50.0		WL
	9400	TYKW	5	S	0321.0	0321.3	2.0	38.0	8.0		
	3750	TYKW	45	C	0321.0	0321.3	1.5	14.0	3.5		
	1000	TYKW	45	C	0321.0	0321.3	2.0	16.0	3.0		
	2000	TYKW	45	C	0321.0	0321.3	1.5	20.0	4.0		
	950	GORK	4	S/F	0321.0	0321.3	2.3	15.0			
	15400	PALE	8	S	0321.1	0321.3	.2	41.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0321.1	0321.3	.5	47.0			QL=6 ST=2 TYP=3
	610	PALE	47	GB	0321.1	0321.3	.2	230.0			QL=6 ST=2 TYP=5
	410	LEAR	8	S	0620.5	0620.6	.3	22.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0623.8	0624.1	2.0	24.0			QL=6 ST=2 TYP=3
	3750	TYKW	5	S	0650.0	0653.0	10.0	2.0	1.0		
	9100	GORK	22	GRF	0709.5	0711.6	13.5	9.0			
	1000	TYKW	5	S	0711.0	0711.6	1.5	5.0	1.0		

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11	8800	LEAR	8	S	0711.1	0711.6	1.0	4.0			QL=6 ST=2 TYP=3
	650	GORK	4	S/F	0711.2	0711.6	.6	11.0	3.0		
	15400	LEAR	8	S	0711.3	0711.5	.7	21.0			QL=6 ST=2 TYP=3
	950	GORK	1	S	0711.4	0711.5	.6	3.0			
	610	LEAR	8	S	0711.5	0711.6	.6	24.0			QL=6 ST=2 TYP=3
	410	LEAR	47	GB	0711.6	0711.6	.4	230.0			QL=6 ST=2 TYP=5
	6100	KISV	1	S	0711.6	0711.6	.5	3.0			
	6100	KISV	1	S	0718.0	0719.0	2.0	3.0			
	1000	TYKW	45	C	0718.0	0719.9	2.5	6.0	1.0		
	410	LEAR	47	GB	0718.0	0718.6	2.3	55.0			QL=6 ST=2 TYP=5
	650	GORK	2	S/F	0718.2	0718.5	2.3	5.5			
	536	ONDR	2	S/F	0718.4	0718.6	1.1	10.0	7.0		
	245	LEAR	8	S	0811.5	0812.1	1.1	35.0			QL=6 ST=2 TYP=3
	810	KRAK	8	S	0919.2	0919.3	.2	7.0			
	9100	GORK	4	S/F	0948.6	0949.3	3.5	34.0			
	650	GORK	4	S/F	0948.7	0949.1	2.3	25.0			
	536	ONDR	4	S/F	0948.7	0949.2	1.2	46.0	38.0		
	8400	BERN	3	S	0948.8	0949.2	1.5	48.0			
	19600	BERN	1	S	0948.8	0949.2	1.5	29.0			
	950	GORK	4	S/F	0948.9	0949.0	1.0	9.0			
	930	BORD	46	C	0949.0	0949.0	1.0	20.0	4.0		
	6100	KISV	4	S/F	0949.0	0949.3	2.0	11.0			
	9500	POTS	3	S	0949.0	0949.0	1.0	32.0			
	3000	POTS	3	S	0949.0	0949.2	1.0	10.0			
	1470	POTS	3	S	0949.0	0949.3	1.0	10.0			
	2950	GORK	2	S/F	0949.0	0949.3	1.3	8.7			
	808	ONDR	4	S/F	0949.1	0949.3	1.2	27.0	20.0		
	245	SGMR	8	S	1328.6	1328.6	1.2	68.0			QL=6 ST=2 TYP=3
	245	SGMR	8	S	1330.3	1331.0	1.0	21.0			QL=6 ST=2 TYP=3
	9400	HUAN	20	GRF	1343.2	1359.0	38.4	2.6	1.8		0
	930	BORD	41	F	1407.4	1407.4	.4	18.0	2.0		
	245	SGMR	8	S	1513.8	1514.1	.3	39.0			QL=6 ST=2 TYP=3
	2000	TYKW	5	S	2127.4	2127.8	1.0	2.0	.7		
	3750	TYKW	5	S	2127.5	2127.8	1.0	3.0	1.0		
	3750	TYKW	5	S	2312.0	2315.5	15.0	1.5	.7		
12	200	GORK	44	NS	0300.0E		127.0D		5.0		
	260	ONDR	43	NS	1126.0	1353.0U	162.0D	5.0			
	3750	TYKW	28	PRE	0145.0	0148.0	12.0	2.0	1.5		
	3750	TYKW	45	C	0157.0	0159.7	13.0	39.0	12.0		
	2840	PEKG	5	S	0157.0	0159.8	24.0	16.0	4.9		
	2000	TYKW	45	C	0158.0	0200.0	12.0	10.0	3.0		
	9400	TYKW	21	GRF	0158.0	0215.0	47.0	9.0	5.0		
	9400	TYKW	45	C	0158.5	0159.7	10.0	12.0	3.0		
	8800	LEAR	4	S/F	0158.6	0159.6	4.5	21.0			QL=6 ST=3 TYP=3
	2695	LEAR	4	S/F	0158.6	0159.8	4.5	28.0			QL=6 ST=2 TYP=3
	4995	LEAR	4	S/F	0158.8	0159.6	5.3	42.0			QL=6 ST=2 TYP=3
	4995	PALE	4	S/F	0158.8	0159.6	5.5	47.0			QL=6 ST=2 TYP=3
	4995	MANI	3	S	0159.0	0200.2	2.2	42.7	14.2		
	2695	MANI	3	S	0159.0	0200.2	2.2	23.5	7.8		
	2695	PALE	8	S	0159.1	0159.8	1.2	29.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0159.3	0159.6	1.0	22.0			QL=6 ST=2 TYP=3
	2000	TYKW	30	PBI	0210.0		20.0	2.0	1.0		
	3750	TYKW	30	PBI	0210.0		25.0	7.0	3.5		
	2000	TYKW	31	ABS	0230.0	0310.0	110.0	-2.0	-1.0		
	3750	TYKW	31	ABS	0235.0	0310.0	150.0	-5.0	-3.0		
	9400	TYKW	31	ABS	0245.0	0310.0	95.0	-4.0	-2.0		
	410	LEAR	8	S	0501.1	0501.5	.7	22.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0725.8	0726.6	1.2	38.0			QL=6 ST=2 TYP=3
	3750	TYKW	5	S	0730.0	0730.3	1.0	1.5	.5		
	3750	TYKW	5	S	0738.0	0743.2	15.0	5.0	2.0		
	9400	HUAN	20	GRF	1524.4	1549.0	55.3	5.1	2.9		0
	2800	OTTA	20	GRF	1705.0	1755.0	100.0	2.8	1.8		
	9400	HUAN	21	GRF	1755.0	1831.5	59.6	5.1	2.1		L
	9400	HUAN	1	S	1758.3	1759.9	2.8	3.4	1.7		0
	9400	HUAN	1	S	1825.1	1826.7	2.5	6.8	3.4		0
	410	SGMR	47	GB	2030.3	2030.3	.8	59.0			QL=6 ST=2 TYP=5
	610	SGMR	8	S	2030.3	2030.3	1.5	24.0			QL=6 ST=2 TYP=3
	245	PALE	47	GB	2034.6	2034.6	.2	59.0			QL=6 ST=2 TYP=5
	245	SGMR	8	S	2034.6	2034.6	.4	40.0			QL=6 ST=2 TYP=3

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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
12	500	HIRA	46	C	2241.0	2251.4	17.0	20.0	8.0		WR
	1000	TYKW	45	C	2243.0	2248.0	15.0	12.0	3.0		
	9400	TYKW	20	GRF	2243.0	2249.0	170.0	8.0	3.0		
	3750	TYKW	20	GRF	2243.0	2304.0	190.0	6.0	2.5		
	2000	TYKW	21	GRF	2245.0	2305.0	165.0	4.0	2.0		
	2695	PENT	22	GRF	2245.0	2310.0	180.0	5.4	2.8		
	2000	TYKW	45	C	2246.0	2248.0	6.0	6.0	1.5		
	610	PALE	4	S/F	2247.0	2247.8	4.8	30.0			QL=5 ST=2 TYP=3
	1000	TYKW	29	PBI	2258.0		140.0	2.0	1.0		
13	8800	ATHN	43	NS	0357.0	0402.0	11.6	160.0			QL=4 ST=2 TYP=1
	260	ONDR	44	NS	0540.0E	1343.0U	506.0D	7.0			
	127	TORN	43	NS	0726.0	0737.2	133.0	3100.0	2.0		V=1
	3750	TYKW	20	GRF	0357.0	0359.2	30.0	4.0	1.5		
	410	LEAR	4	S/F	0430.1	0430.6	2.7	18.0			QL=6 ST=2 TYP=3
	6100	KISV	2	S/F	0500.7	0501.1	1.0	3.0			
	930	BORD	8	S	0719.2	0719.3	.2	63.0	2.0		
	9400	HUAN	2	S/F	1530.0	1531.9	3.8	6.7	4.9		0
	9400	HUAN	20	GRF	1639.5	1647.0	19.2	3.8	2.7		0
	9400	HUAN	20	GRF	1816.5	1825.0	15.5	4.8	3.1		0
	9400	HUAN	20	GRF	1921.0	1937.5	29.0	6.7	3.4		0
	9400	HUAN	20	GRF	2004.0	2010.0	17.3	5.8	3.2		0
	9400	TYKW	20	GRF	2355.0	2356.6	35.0	8.0	3.0		
14	245	LEAR	43	NS	0235.0	0241.0	11.0	16.0			QL=6 ST=2 TYP=1
	245	LEAR	43	NS	0525.0	0732.0	250.0D	34.0			QL=6 ST=3 TYP=1
	260	ONDR	44	NS	0555.0E	0736.0U	157.0D	5.0			
	260	ONDR	43	NS	0942.0	1012.0U	86.0	3.0			
	260	ONDR	43	NS	1258.0	1352.0U	68.0D	5.0			
	208	VORO	44	NS	2115.0E		345.0D				
	245	PALE	43	NS	2134.3	0050.8	427.7D	80.0			QL=6 ST=2 TYP=1
	245	LEAR	43	NS	2355.3	0546.3	578.7D	150.0			QL=6 ST=2 TYP=1
	245	LEAR	8	S	0017.8	0017.8	.2	27.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0021.6	0022.0	.9	30.0			QL=6 ST=2 TYP=3
	3750	TYKW	20	GRF	0033.0	0125.0	120.0	2.0	1.0		
	245	LEAR	8	S	0043.6	0043.6	.2	13.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0100.1	0101.0	1.0	28.0			QL=6 ST=2 TYP=3
	410	LEAR	4	S/F	0216.1	0219.8	4.0	27.0			QL=6 ST=2 TYP=3
	15400	PALE	8	S	0404.6	0404.8	.5	37.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0404.8	0404.8	.2	17.0			QL=6 ST=2 TYP=3
	6100	KISV	2	S/F	0445.8	0446.7	1.5	5.0			
	6100	KISV	1	S	0805.6	0805.8	.3	3.0			
	245	LEAR	8	S	0858.6	0858.8	.2	31.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0858.6	0858.8	.2	5.0			QL=6 ST=2 TYP=3
	430	KRAK	8	S	1217.7	1218.0	.8	48.0			
	245	SGMR	8	S	2134.1	2135.1	1.4	44.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	2330.8	2331.5	1.2	18.0			QL=6 ST=2 TYP=3
15	200	GORK	44	NS	0300.0E		337.0D		10.0		
	204	IZMI	43	NS	0606.0		194.0	36.0			
	260	ONDR	44	NS	0611.0E	0912.0U	297.0D	13.0			
	245	SGMR	43	NS	0944.0	1605.8	831.0D	239.0			QL=6 ST=2 TYP=1
	260	ONDR	43	NS	1155.0	1358.0U	139.0D	8.0			
	245	PALE	43	NS	1635.0	1955.1	725.0D	500.0			QL=6 ST=2 TYP=1
	200	HIRA	44	NS	1929.0E	2340.0	330.0D	7.0	2.0		WR
	208	VORO	44	NS	2100.0E		240.0D				
	245	LEAR	43	NS	2306.0	0006.8	628.0D	139.0			QL=6 ST=2 TYP=1
	3750	TYKW	20	GRF	0100.0	0130.0	90.0	1.5	.7		
	245	LEAR	8	S	0215.1	0215.5	.5	5.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0215.1	0215.5	.7	19.0			QL=6 ST=2 TYP=3
	536	ONDR	41	F	1149.3	1149.5	.8	23.0	10.0		
	430	KRAK	8	S	1231.5	1231.5	1.0	60.0			
	536	ONDR	41	F	1310.1	1310.8	1.4	9.0	4.0		
	15400	PALE	8	S	1640.3	1641.1	1.8	47.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	1640.5	1640.8	1.3	27.0			QL=6 ST=2 TYP=3
	4995	PALE	8	S	1640.6	1640.8	.2	11.0			QL=6 ST=2 TYP=3
	245	PALE	8	S	2120.8	2121.1	.5	39.0			QL=5 ST=2 TYP=3
	245	PALE	47	GB	2130.3	2130.5	.8	57.0			QL=6 ST=2 TYP=5
16	410	LEAR	43	NS	0049.0	0050.0	4.8	19.0			QL=6 ST=2 TYP=1

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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
16	260	ONDR	44	NS	0629.0E	0836.0U	158.0D	11.0			
	245	SGMR	43	NS	0943.0	1923.5	833.0D	180.0			QL=6 ST=2 TYP=1
	260	ONDR	43	NS	0949.0	1023.0U	262.0D	5.0			
	245	PALE	43	NS	1630.0	0125.3	730.0D	1000.0			QL=6 ST=2 TYP=1
	245	LEAR	43	NS	2307.0	0037.3	626.0D	30.0			QL=6 ST=2 TYP=1
	3750	TYKW	21	GRF	0022.0	0120.0	120.0	2.0	1.0		
	1000	TYKW	5	S	0050.0	0050.2	.6	19.0	5.0		
	2000	TYKW	5	S	0053.0	0053.7	1.5	2.0	.5		
	3750	TYKW	5	S	0053.4	0053.7	1.0	1.5	.5		
	1000	TYKW	45	C	0053.4	0053.7	1.0	10.0	2.0		
	1415	LEAR	8	S	0053.6	0053.6	.2	18.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0349.1	0349.3	.2	13.0			QL=6 ST=2 TYP=3
	9395	PEKG	3	S	0432.0	0432.8	2.0	12.2	6.1		
	410	LEAR	47	GB	0537.8	0539.3	4.5	230.0			QL=6 ST=2 TYP=5
	245	LEAR	8	S	0538.8	0539.0	.3	27.0			QL=6 ST=2 TYP=3
	2000	TYKW	21	GRF	0710.0	0755.0	100.0	2.0	1.0		
	3750	TYKW	20	GRF	0710.0	0755.0	100.0	5.0	2.5		
	9400	TYKW	20	GRF	0710.0	0755.0	85.0D	6.0	4.0D		
	610	LEAR	8	S	0754.0	0754.1	.1	31.0			QL=5 ST=2 TYP=3
	1415	LEAR	8	S	0754.1	0754.1	.2	45.0			QL=5 ST=2 TYP=3
	1000	TYKW	8	S	0754.1	0754.2	.3	10.0	3.0		
	3750	TYKW	8	S	0754.1	0754.2	.3	6.0	2.0		
	2000	TYKW	8	S	0754.1	0754.2	.3	3.0	1.0		
	536	ONDR	8	S	0754.6	0754.7	.6	32.0			
	810	KRAK	8	S	0825.5	0825.5	.2	17.0			
	536	ONDR	8	S	0828.3	0828.4	.1	88.0			
	610	LEAR	47	GB	0828.3	0828.5	.3	88.0			QL=6 ST=2 TYP=5
	610	LEAR	8	S	0832.8	0832.8	.2	11.0			QL=6 ST=2 TYP=3
	810	KRAK	8	S	0833.0	0833.0	.2	18.0			
	610	LEAR	47	GB	0925.0	0925.1	.1	189.0			QL=6 ST=2 TYP=5
	536	ONDR	8	S	0925.1	0925.1	.1	84.0			
	810	KRAK	8	S	0943.0	0943.0	.2	14.0			
	1415	SGMR	8	S	1228.1	1228.3	.2	40.0			QL=6 ST=2 TYP=3
	2695	PENT	240	R	1915.0	2100.0	105.0	4.2	2.8		
	245	PALE	47	GB	1923.3	1923.5	.5	370.0			QL=6 ST=2 TYP=5
	208	VORO	42	SER	2100.0E	2113.0	100.0D	60.0			
	2695	PENT	240	R	2150.0	2220.0	30.0	2.8	1.4		
	2000	TYKW	20	GRF	2210.0	2220.0	90.0	2.0	1.0		
	3750	TYKW	20	GRF	2210.0	2225.0	80.0	2.0	1.0		
	1000	TYKW	21	GRF	2210.0	2250.0	100.0	1.5	.7		
	1000	TYKW	45	C	2218.5	2220.8	4.5	14.0	1.5		
	500	HIRA	45	C	2224.3	2225.1	1.0	250.0	30.0		WL
	410	SGMR	8	S	2225.0	2225.5	.8	90.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	2311.8	2312.6	1.0	20.0			QL=6 ST=2 TYP=3
17	260	ONDR	44	NS	0537.0E	0614.0U	162.0D	6.0			
	260	ONDR	43	NS	1157.0	1328.0U	91.0D	6.0			
	245	PALE	44	NS	1632.0E	1957.1		40.0			QL=6 ST=3 TYP=1
	2840	PEKG	23	GRF	0006.0	0046.2	46.0	5.6	2.1		
	2000	TYKW	21	GRF	0015.0	0025.0	50.0	1.5	.7		
	2695	PENT	21	GRF	0015.0	0025.0	25.0	2.8	1.4		
	2000	TYKW	45	C	0021.0	0021.6	2.0	25.0	5.0		
	2840	PEKG	3	S	0021.0	0021.6	2.0	36.0	6.0		
	3750	TYKW	5	S	0021.0	0021.6	1.5	24.0	7.0		
	2695	PENT	3	S	0021.0	0021.6	1.5	33.0	11.0		
	2695	LEAR	8	S	0021.3	0021.5	.5	38.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	0021.3	0021.6	.7	49.0			QL=6 ST=2 TYP=3
	1000	TYKW	5	S	0021.3	0021.7	1.0	1.0	.3		
	4995	LEAR	8	S	0021.5	0021.6	.1	19.0			QL=6 ST=2 TYP=3
	3750	TYKW	29	PBI	0022.5		20.0	2.0	1.0		
	245	PALE	47	GB	0027.3	0027.5	.3	420.0			QL=6 ST=2 TYP=5
	410	LEAR	47	GB	0027.3	0027.6	.5	80.0			QL=6 ST=2 TYP=5
	610	LEAR	47	GB	0027.3	0027.6	.5	60.0			QL=6 ST=2 TYP=5
	245	LEAR	47	GB	0027.3	0027.6	.5	380.0			QL=6 ST=2 TYP=5
	1000	TYKW	5	S	0028.3	0028.5	.5	6.0	1.5		
	1000	TYKW	5	S	0030.0	0030.1	.6	6.0	1.5		
	610	LEAR	8	S	0030.1	0030.1	.2	8.0			QL=6 ST=2 TYP=3
	245	LEAR	47	GB	0030.1	0030.1	.2	390.0			QL=6 ST=2 TYP=5
	410	LEAR	8	S	0030.1	0030.1	.2	26.0			QL=6 ST=2 TYP=3
	2840	PEKG	41	F	0058.0	0105.6	23.0	56.0	2.9		

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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
17	3750	TYKW	20	GRF	0105.0	0140.0	75.0	3.0	1.0		
	2000	TYKW	20	GRF	0130.0	0140.0	60.0	1.5	.7		
	2840	PEKG	41	F	0335.0E	0336.5	8.0D	37.0			
	245	SGMR	8	S	1328.5	1328.6	.1	20.0			QL=6 ST=2 TYP=3
	1415	SGMR	8	S	1408.0	1408.3	.3	26.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	1630.0	1900.0	210.0	5.8	3.4		
	9400	HUAN	20	GRF	1633.6	1703.3U	65.4	4.5	2.7		0
	2800	OTTA	1	S	1634.5	1634.8	1.2	2.8	1.3		
	930	BORD	41	F	1652.9	1653.0	2.5	101.0	2.0		
	930	BORD	41	F	1749.5	1749.7	.4	36.0	2.0		
	9400	HUAN	20	GRF	1758.5	1823.3	32.0	5.4	2.2		0
	2000	TYKW	5	S	2109.0	2110.7	2.0	3.5	1.5		
	2800	OTTA	2	S/F	2109.8	2110.5	1.8	3.0	1.8		
	500	HIRA	8	S	2110.5	2110.5	.4	100.0			0
	2840	PEKG	3	S	2318.0	2320.8	19.0	31.0	4.6		
	3750	TYKW	5	S	2318.0	2320.9	6.0	36.0	11.0		
	9395	PEKG	4	S/F	2318.0	2320.9	12.0	23.5	5.7		
	2695	PENT	3	S	2318.0	2321.0	6.0	26.0	8.6		
	2000	TYKW	5	S	2318.5	2320.9	4.5	12.0	5.0		
	1000	TYKW	5	S	2319.0	2320.3	5.0	3.0	1.0		
	4995	LEAR	4	S/F	2319.1	2320.6	2.7	34.0			QL=5 ST=2 TYP=3
	2695	LEAR	4	S/F	2319.3	2320.8	2.5	29.0			QL=5 ST=2 TYP=3
	9400	TYKW	5	S	2319.5	2320.8	2.5	21.0	9.0		
	8800	LEAR	8	S	2319.6	2320.6	2.0	20.0			QL=5 ST=2 TYP=3
	4995	PALE	8	S	2320.0	2320.5	1.8	37.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	2320.0	2320.5	1.1	22.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2320.0	2320.5	1.5	39.0			QL=6 ST=2 TYP=3
	2695	MANI	3	S	2320.0	2321.0	2.0	35.1	11.7		
	4995	MANI	3	S	2320.5	2320.8	1.5	38.9	13.0		
	8800	MANI	3	S	2320.5	2321.0	1.5	41.8	13.9		
	9400	TYKW	30	PBI	2322.0		60.0	6.0	2.0		
	2000	TYKW	29	PBI	2323.0		55.0	2.0	1.0		
	3750	TYKW	30	PBI	2324.0		280.0	5.0	3.0		
	2695	PENT	29	PBI	2324.0	2324.0	80.0	3.2	1.6		
	9400	TYKW	5	S	2326.0	2326.8	1.5	4.0	1.5		
	410	LEAR	8	S	2339.5	2339.6	1.6	27.0			QL=6 ST=2 TYP=3
18	260	ONDR	44	NS	0547.0E	0658.0U	158.0D	4.0			
	260	ONDR	43	NS	0917.0	0919:0U	90.0D	3.0			
	260	ONDR	43	NS	1150.0	1338.0U	137.0D	6.0			
	245	PALE	43	NS	1629.0	0313.0	733.0D	56.0			QL=6 ST=2 TYP=1
	245	LEAR	8	S	0033.8	0033.8	.2	20.0			QL=6 ST=2 TYP=3
	3750	TYKW	28	PRE	0145.0	0146.0	20.0	3.0	15.0		
	9400	TYKW	28	PRE	0145.0	0148.0	20.0	4.0	2.0		
	2000	TYKW	5	S	0146.5	0147.4	2.0	1.5	.5		
	1000	TYKW	45	C	0204.5	0205.0	3.5	67.0	8.0		
	2695	LEAR	4	S/F	0204.8	0205.8	15.5	13.0			QL=6 ST=2 TYP=3
	4995	LEAR	4	S/F	0204.8	0206.0	15.5	11.0			QL=6 ST=2 TYP=3
	245	PALE	8	S	0204.8	0206.1	2.0	30.0			QL=6 ST=2 TYP=3
	1415	LEAR	47	GB	0204.8	0206.8	2.8	78.0			QL=6 ST=2 TYP=5
	610	LEAR	4	S/F	0204.8	0207.1	2.8	34.0			QL=6 ST=2 TYP=3
	2000	TYKW	45	C	0205.0	0205.9	15.0	20.0	5.0		
	9395	PEKG	20	GRF	0205.0	0206.9	17.0	10.1	5.7		
	2840	PEKG	45	C	0205.0	0210.3	22.0	24.9	8.1		
	3750	TYKW	45	C	0205.0	0210.5	30.0	14.0	8.0		
	9400	TYKW	45	C	0205.0	0223.8	35.0	16.0	12.0		
	245	LEAR	8	S	0205.0	0206.3	1.6	13.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0205.0	0211.3	15.0	20.0			QL=6 ST=2 TYP=3
	15400	LEAR	4	S/F	0205.1	0206.3	14.9	17.0			QL=6 ST=2 TYP=3
	17000	NOBE	20	GRF	0205.4	0209.4	27.0	13.0			0
	1000	TYKW	29	PBI	0208.0		60.0	1.5	.5		
	2000	TYKW	30	PBI	0220.0		70.0	2.0	1.0		
	245	LEAR	8	S	0221.0	0221.1	.1	10.0			QL=6 ST=2 TYP=3
	2000	TYKW	5	S	0223.7	0224.1	1.0	1.5	.5		
	3750	TYKW	29	PBI	0235.0		65.0	6.0	3.0		
	9400	TYKW	29	PBI	0240.0		60.0	11.0	4.0		
	410	LEAR	8	S	0304.5	0304.8	.8	5.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0304.6	0304.8	1.0	22.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0514.1	0515.3	1.7	19.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0514.1	0515.6	1.7	8.0			QL=6 ST=2 TYP=3

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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
18	245	LEAR	8	S	0547.8	0548.0	.3	47.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0559.8	0600.1	1.0	15.0			QL=6 ST=2 TYP=3
	2000	TYKW	20	GRF	0700.0	0709.0	80.0	2.0	1.0		
	9400	TYKW	20	GRF	0700.0	0720.0	65.0U	8.0	4.0		INTERFERENCE
	3750	TYKW	21	GRF	0703.0	0709.0	80.0	4.0	1.5		
	9100	GORK	20	GRF	0704.0	0730.3	74.0	11.0			
	245	LEAR	8	S	0709.5	0709.8	.6	11.0			QL=6 ST=2 TYP=3
	3750	TYKW	5	S	0710.5	0710.8	2.0	2.0	.7		
	245	LEAR	8	S	0747.1	0747.3	.2	28.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0813.6	0813.6	.2	35.0			QL=6 ST=2 TYP=3
	930	BORD	8	S	1015.3	1015.3	.1	16.0	1.0		
	2800	PENT	21	GRF	1105.0	1230.0	255.0	9.4	2.4		
	930	BORD	8	S	1135.1	1135.1	.1	22.0	1.0		
	6100	KISV			1211.0	1216.3		184.0			
	6100	KISV	46	C	1211.0	1217.0	10.0	19.2			
	6100	KISV			1211.0	1219.4		72.0			
	9500	POTS	45	C	1211.0	1216.8	114.0	270.0			
	4995	ATHN	47	GB	1211.1	1216.0	15.0	189.0			QL=5 ST=3 TYP=5
	1470	POTS	45	C	1211.5	1214.8	29.0	235.0			
	2695	ATHN	47	GB	1211.6	1216.0	12.7	110.0			QL=5 ST=3 TYP=5
	9400	HUAN	45	C	1211.9	1224.5U	12.6U	147.4	87.2		L
	930	BORD	45	C	1212.0	1215.4	10.0	624.0	35.0		
	2800	PENT	4	S/F	1212.0	1216.0	15.0	110.0	28.8		
	3000	POTS	45	C	1212.0	1216.4	33.0	194.0			
	4995	SGMR	47	GB	1212.1	1216.1	19.7	239.0			QL=6 ST=2 TYP=5
	15400	SGMR	47	GB	1212.3	1216.6	19.5	230.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	1212.6	1216.6	19.2	300.0			QL=6 ST=2 TYP=5
	19600	BERN	4	S/F	1213.1	1216.9	35.0U	153.0			
	8400	BERN	45	C	1213.1	1216.9	35.0U	428.0			
	1415	ATHN	49	GB	1213.3	1214.5	9.0	520.0			QL=5 ST=3 TYP=6
	2695	SGMR	47	GB	1213.3	1216.1	10.2	119.0			QL=6 ST=2 TYP=5
	1415	SGMR	49	GB	1213.6	1214.6	7.7	670.0			QL=6 ST=2 TYP=6
	2650	DWIN	4	S/F	1214.0	1216.0	15.0	100.0	50.0		
	610	SGMR	8	S	1214.6	1216.0	1.9	40.0			QL=6 ST=2 TYP=3
	810	KRAK	45	C	1214.7	1215.5	5.6	97.0	25.0		
	430	KRAK	7	C	1214.8	1216.0	2.3	40.0	7.0		
	245	SGMR	8	S	1215.3	1215.8	.8	119.0			QL=6 ST=2 TYP=3
	9400	HUAN	29	PBI	1220.5	1220.5	27.7	41.9	19.3		L
	6100	KISV	29	PBI	1221.0	1221.0	60.0	30.0			
	536	ONDR	41	F	1224.2	1226.2	4.6	10.0	6.0		
	930	BORD	41	F	1236.7	1236.7	2.2	18.0	1.0		
	9400	HUAN	20	GRF	1717.2	1742.4	49.4	5.5	3.3		0
	9400	HUAN	20	GRF	1827.0	1845.0	32.0	9.1	5.5		0
	2800	PENT	240	R	1950.0	2020.0	30.0	5.2	3.5		
	2800	PENT	1	S	2049.5	2052.0	4.0	1.8	.9		
19	245	LEAR	43	NS	0248.0	0309.8	405.0D	39.0			QL=3 ST=2 TYP=1
	260	ONDR	44	NS	0551.0E	0748.0U	121.0D	4.0			
	127	TORN	44	NS	0800.0E		230.0D		1.0		V=1DISTURBED
	260	ONDR	43	NS	0856.0	0920.0U	110.0D	2.0			
	260	ONDR	44	NS	1232.0E	1330.0U	116.0D	5.0			
	245	LEAR	8	S	0245.3	0245.3	1.0	38.0			QL=3 ST=2 TYP=3
	9395	PEKG	3	S	0250.0	0250.3	5.0	16.7	5.8		
	2000	TYKW	21	GRF	0500.0	0525.0	160.0	2.0	1.0		
	9400	TYKW	21	GRF	0500.0	0525.0	160.0	4.0	2.0		
	3750	TYKW	21	GRF	0500.0	0545.0	210.0	9.0	4.0		
	2840	PEKG	45	C	0526.0	0530.9	12.0	8.7	2.3		
	9100	GORK	20	GRF	0526.7	0541.3	99.0	13.0			
	2000	TYKW	20	GRF	0527.0	0532.0	120.0	3.0	1.5		
	9400	TYKW	20	GRF	0527.0	0539.0	120.0	11.0	4.0		
	3750	TYKW	5	S	0528.0	0530.7	5.0	12.0	5.0		
	2950	GORK	20	GRF	0528.3	0530.8	126.0	8.4			
	3750	TYKW	29	PBI	0533.0		8.0	4.0	1.5		
	2840	PEKG	45	C	0611.0	0613.7	4.0	28.0	2.0		
	3750	TYKW	20	GRF	0620.0	0630.0	50.0	2.5	1.0		
	3100	CRIM	26	FAL	0712.0	0912.0		7.0			
	536	ONDR	41	F	0713.7	0714.6	6.0	4.0	3.0		
	9400	HUAN	20	GRF	1353.8	1413.4	45.1	3.7	2.2		0
	2800	PENT	20	GRF	1510.0	1540.0	60.0	2.4	1.2		
	9400	HUAN	21	GRF	1734.2	1752.0	80.4	8.3	4.8		0

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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
19	9400	HUAN	2	S/F	1746.0	1748.0	4.5	9.2	4.6		0
	2800	PENT	20	GRF	1808.0	1814.0	35.0	3.8	1.6		
	9400	HUAN	1	S	1811.2	1813.7	5.0	5.5	1.8		R
	2800	PENT	27A	RF	1920.0		160.0	3.2	2.7		
	2800	PENT	24	R	1920.0	1945.0	25.0	3.2	1.6		
	9400	HUAN	1	S	1937.9	1939.4	3.3	7.3	3.0		0
	2800	PENT	24P	R	1945.0		105.0	3.2			
	2800	PENT	1	S	2041.0	2044.5	9.0	8.2	2.0		
	2800	PENT	26	FAL	2130.0	2200.0	30.0	-3.2	-1.6		
	9400	TYKW	5	S	2250.5	2251.2	1.5	8.0	4.0		RAIN
	9400	TYKW	29	PBI	2252.0		20.0	4.0	2.0		
	3750	TYKW	20	GRF	2320.0	2330.0	60.0	4.0	2.0		
	2000	TYKW	20	GRF	2320.0	2345.0	60.0	2.0	1.0		
	2695	PENT	20	GRF	2320.0	2330.0	70.0	3.2	2.0		
	9400	TYKW	20	GRF	2321.0	2327.0	40.0	6.0	2.0		RAIN
20	245	LEAR	43	NS	0334.6	0335.8	4.5	20.0			QL=6 ST=2 TYP=1
	260	ONDR	44	NS	0554.0E	0840.0U	268.0D	4.0			
	260	ONDR	43	NS	1232.0	1337.0U	97.0D	6.0			
	208	VORO	44	NS	2217.0E		108.0D				
	3750	TYKW	20	GRF	0134.0	0151.5	75.0	7.0	3.0		
	9400	TYKW	20	GRF	0140.0	0153.0	55.0	12.0	4.0		
	2000	TYKW	20	GRF	0140.0	0153.0	70.0	3.0	1.5		
	2840	PEKG	20	GRF	0145.0	0151.7	29.0	5.9	2.5		
	9395	PEKG	20	GRF	0149.0	0151.8	25.0	11.7	4.9		
	1000	TYKW	20	GRF	0150.0	0200.0U	60.0	1.0	.5		INTERFERENCE
	610	LEAR	8	S	0200.8	0201.3	1.0	5.0			QL=6 ST=2 TYP=3
	1415	LEAR	8	S	0201.1	0201.3	.7	21.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0201.1	0201.3	.2	5.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0201.1	0201.3	.2	6.0			QL=6 ST=2 TYP=3
	3750	TYKW	20	GRF	0325.0	0328.0	70.0	4.0	2.0		
	9400	TYKW	20	GRF	0325.0	0335.0	90.0	5.0	3.0		
	9400	TYKW	21	GRF	0527.0	0554.0	90.0U	5.0	2.5U		INTERFERENCE
	3750	TYKW	21	GRF	0527.0	0554.0	120.0	7.0	4.0		RAIN
	2000	TYKW	21	GRF	0530.0	0600.0	120.0	3.0	1.5		
	4995	ATHN	4	S/F	0531.6	0535.6	7.5	16.0			QL=5 ST=2 TYP=3
	9400	TYKW	45	C	0532.0	0534.0	13.0	22.0	5.0		
	8800	ATHN	4	S/F	0532.1	0535.6	7.0	24.0			QL=5 ST=2 TYP=3
	8400	BERN	3	S	0532.8	0535.9	6.0	41.0			
	9395	PEKG	45	C	0533.0	0533.4	25.0	23.5	7.1		
	6100	KISV			0533.0	0534.1		13.0			
	6100	KISV	45	C	0533.0	0535.8	6.0	17.0			
	2840	PEKG	20	GRF	0533.0	0536.0	12.0	5.6	2.5		
	2000	TYKW	5	S	0533.0	0536.0	10.0	3.0	1.0		
	3750	TYKW	45	C	0533.0	0536.4	10.0	6.0	2.0		
	2950	GORK	20	GRF	0533.0	0536.0	121.0	7.4			
	9100	GORK	21	GRF	0533.0	0537.4	73.4	11.0			
	8800	LEAR	4	S/F	0533.6	0534.0	3.5	27.0			QL=6 ST=2 TYP=3
	9100	GORK	2	S/F	0533.6	0534.1	3.6	15.0			
	4995	LEAR	8	S	0534.0	0535.6	1.8	17.0			QL=6 ST=2 TYP=3
	2695	ATHN	4	S/F	0534.1	0536.5	6.2	2.0			QL=5 ST=2 TYP=3
	1415	ATHN	4	S/F	0534.1	0536.6	5.0	5.0			QL=5 ST=2 TYP=3
	35000	BERN	3	S	0535.8	0536.5	3.0	107.0			
	19600	BERN	3	S	0535.8	0536.5	3.0	42.0			
	6100	KISV	29	PBI	0539.0	0539.0	50.0	8.0			
	3750	TYKW	5	S	0613.0	0614.3	2.0	9.0	3.0		
	4995	LEAR	8	S	0613.8	0614.1	1.0	11.0			QL=6 ST=2 TYP=3
	6100	KISV	2	S/F	0613.9	0614.4	1.0	6.0			
	245	LEAR	8	S	0614.8	0614.8	1.0	28.0			QL=6 ST=2 TYP=3
	3750	TYKW	29	PBI	0615.0		30.0	3.0	1.5		
	245	LEAR	8	S	0716.6	0716.8	.4	19.0			QL=6 ST=2 TYP=3
	204	IZMI	41	F	0741.5	0741.7	3.5	130.0			
	245	LEAR	8	S	0840.0	0840.1	.1	21.0			QL=6 ST=2 TYP=3
	3000	POTS	45	C	1413.0	1421.2	57.0D	102.0			
	4995	ATHN	47	GB	1413.3	1417.5	22.0	139.0			QL=6 ST=2 TYP=5
	9500	POTS	45	C	1413.5	1420.8	57.0D	130.0			
	8400	BERN	45	C	1413.5	1421.2	47.0U	197.0			ONLY PAPER REC
	1470	POTS	45	C	1413.5	1421.4	57.0D	85.0			
	8800	ATHN	47	GB	1413.6	1417.5	24.2	119.0			QL=6 ST=2 TYP=5
	15400	SGMR	47	GB	1413.8	1421.1	9.2	75.0			QL=6 ST=2 TYP=5

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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
20	4995	SGMR	47	GB	1413.8	1421.1	11.0	189.0			QL=6 ST=2 TYP=5
	930	BORD	45	C	1414.0	1421.0	11.0	135.0	15.0		
	2650	DWIN	4	S/F	1414.0	1422.0	11.0	187.0	90.0		
	9400	HUAN	45	C	1414.0	1417.0	9.1	113.8	97.4		R
	2800	OTTA	45	C	1414.0	1421.0	16.0	105.0	45.0		
	9400	HUAN			1414.0	1421.0		155.2			
	2695	SGMR	47	GB	1414.0	1421.1	11.0	119.0			QL=6 ST=2 TYP=5
	2695	ATHN	47	GB	1414.1	1417.8	25.9	63.0			QL=6 ST=2 TYP=5
	1415	SGMR	47	GB	1414.3	1421.1	8.7	130.0			QL=6 ST=2 TYP=5
	610	SGMR	47	GB	1414.5	1421.5	9.8	139.0			QL=6 ST=2 TYP=5
	1415	ATHN	47	GB	1414.6	1421.3	26.2	139.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	1415.3	1421.3	8.5	160.0			QL=6 ST=2 TYP=5
	410	SGMR	47	GB	1418.8	1421.0	5.7	85.0			QL=6 ST=2 TYP=5
	9400	HUAN	29	PBI	1423.1	1423.1	71.6	48.3	22.5		R
	2800	OTTA	29	PBI	1430.0	1430.0	285.0	22.8	9.0		
	2800	OTTA	21	GRF	2000.0	2140.0	200.0	3.8	2.0		
	9400	TYKW	21	GRF	2110.0	2128.0	80.0	6.0	1.5		
	3750	TYKW	21	GRF	2110.0	2130.0	100.0	4.0	2.0		
	9400	TYKW	5	S	2112.0	2115.0	8.0	8.0	3.0		
	9400	HUAN	20	GRF	2112.1	2128.2	27.4	8.6	3.6		0
	2800	OTTA	1	S	2114.0	2115.5	3.0	2.4	1.2		
	3750	TYKW	45	C	2158.0	2200.4	25.0	5.0	2.0		
21	245	LEAR	43	NS	0523.8	0527.1	6.2	21.0			QL=6 ST=2 TYP=1
	3750	TYKW	5	S	0159.0	0202.0	6.0	1.5	.7		
	3750	TYKW	5	S	0206.0	0208.5	20.0	4.0	1.5		
	9400	TYKW	5	S	0206.0	0209.0	20.0	6.0	2.0		
	1000	TYKW	21	GRF	0230.0	0320.0	200.0	3.0	1.5		
	2000	TYKW	21	GRF	0234.0	0323.0	200.0	9.0	4.0		
	3750	TYKW	20	GRF	0238.0	0323.0	120.0	14.0	7.0		
	9400	TYKW	20	GRF	0242.0	0313.0	200.0	13.0	5.0		
	9395	PEKG	20	GRF	0305.0	0311.4	41.0	8.0	3.9		
	9100	GORK	20	GRF	0314.0E	0325.9	80.0D	11.0			
	2000	TYKW	45	C	0321.8	0322.2	.7	10.0	2.5		
	1000	TYKW			0322.0	0322.2		2.0			
	1000	TYKW	45	C	0322.0	0323.5	3.0	2.0	.5		
	3750	TYKW	20	GRF	0457.0	0515.0	70.0	4.0	2.0		
	410	LEAR	47	GB	0533.3	0539.1	15.5	100.0			QL=6 ST=2 TYP=5
	245	LEAR	20	GRF	0534.8	0539.5	9.0	11.0			QL=6 ST=2 TYP=2
	3750	TYKW	20	GRF	0630.0	0750.0	150.0D	5.0	3.0D		
	2000	TYKW	20	GRF	0635.0	0800.0	150.0D	3.0	2.0D		
	260	ONDR	8	S	0651.8	0651.9	.2	8.0			
	9100	GORK	20	GRF	0851.5	0934.2	183.0D	14.0			
	2950	GORK	20	GRF	0901.0	1018.0	180.0D	16.0			
	9500	POTS	21	GRF	0911.0	1221.5	349.0D	22.0			
	3000	POTS	21	GRF	0917.0	0933.0	343.0D	9.0			
	1470	POTS	21	GRF	0920.0	1250.0	340.0D	7.0			
	430	KRAK	8	S	1107.2	1107.2	.4	41.0			
	4995	SGMR	47	GB	1412.8	1423.6	21.2	260.0			QL=6 ST=3 TYP=5
	2695	SGMR	47	GB	1413.0	1423.8	19.8	95.0			QL=6 ST=3 TYP=5
	2695	PENT	4	S/F	1414.0	1424.0	19.0	77.0	30.0		
	2650	DWIN	4	S/F	1415.0	1424.0	15.0	170.0	80.0		
	8400	BERN	4	S/F	1415.0	1423.7	45.0U	266.0			
	8800	SGMR	47	GB	1416.0	1423.6	15.3	180.0			QL=6 ST=3 TYP=5
	1415	SGMR	47	GB	1420.8	1422.3	9.0	70.0			QL=6 ST=3 TYP=5
	1470	POTS	45	C	1421.0	1422.8	10.0	60.0			
	19600	BERN	3	S	1421.0	1423.0	45.0U	59.0			
	9500	POTS	45	C	1421.0	1423.5	9.0	165.0			
	3000	POTS	45	C	1421.0	1424.4	13.0	76.0			
	15400	SGMR	47	GB	1421.1	1422.8	5.5	110.0			QL=6 ST=3 TYP=5
	930	BORD	40	F	1421.5	1422.8	11.0	23.0	4.0		
	2800	OTTA	29	PBI	1433.0	1433.0	202.0	19.4	8.8		
	2800	OTTA	0	FAL	1756.0	1811.0	15.0	-6.2	-3.1		
	9400	HUAN	20	GRF	1945.4	2009.5	88.6	22.8	9.4		R
	2800	OTTA	20	GRF	1957.0	2006.0	40.0	5.2			
	9400	TYKW	21	GRF	2140.0	2205.0	120.0	10.0	4.0		
	3750	TYKW	21	GRF	2140.0	2222.0	165.0	11.0	5.0		
	2000	TYKW	20	GRF	2145.0	2225.0	160.0	7.0	3.0		
	9400	TYKW	45	C	2155.0	2157.0	4.0	11.0	3.0		
	3750	TYKW	5	S	2155.0	2204.0	20.0	5.0	2.0		

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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
21	2800	OTTA	20	GRF	2155.0	2220.0	145.0	9.4	5.0		
	9400	HUAN	1	S	2155.1	2157.0	3.5	10.5	6.1		R
22	260	ONDR	44	NS	0609.0E	1028.0U	259.0D	3.0			
	260	ONDR	43	NS	1130.0	1347.0U	151.0D	8.0			
	9400	TYKW	45	C	0032.0	0039.2	28.0	27.0	15.0		
	9395	PEKG	3	S	0034.0	0035.3	10.0	14.2	6.4		
	2840	PEKG	3	S	0034.0	0035.4	9.0D	11.7			
	3750	TYKW	45	C	0036.0	0039.3	14.0	28.0	14.0		
	2695	PENT	21	GRF	0036.0	0055.0	70.0D	11.6			
	2000	TYKW	45	C	0038.0	0040.0	4.0	15.0	8.0		
	2000	TYKW	21	GRF	0038.0	0116.0	170.0	7.0	4.0		
	4995	MANI	3	S	0038.0	0040.0	3.0	48.0	16.0		
	1000	TYKW	45	C	0038.5	0038.9	1.5	15.0	2.0		
	2695	PENT	3	S	0038.5	0039.2	4.0	27.2	13.0		
	1000	TYKW			0038.5	0039.5		12.0			
	8800	LEAR	4	S/F	0038.6	0039.1	7.2	38.0			QL=6 ST=2 TYP=3
	4995	LEAR	4	S/F	0038.8	0039.1	7.0	26.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0038.8	0039.1	1.5	22.0			QL=6 ST=2 TYP=3
	4995	PALE	4	S/F	0038.8	0039.1	2.2	23.0			QL=6 ST=2 TYP=3
	2695	MANI	3	S	0039.0	0040.0	3.0	40.0	13.3		
	2695	LEAR	8	S	0039.1	0039.1	1.2	27.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	0039.1	0039.5	1.2	24.0			QL=6 ST=2 TYP=3
	17000	NOBE	20	GRF	0039.1	0049.7	170.0	11.0			0
	2000	TYKW	29	PBI	0042.0		10.0	4.0	1.5		
	3750	TYKW	30	PBI	0050.0		160.0	14.0	8.0		
	9400	TYKW	30	PBI	0100.0		150.0	15.0	8.0		
	9400	TYKW	5	S	0223.0	0224.0	2.0	35.0	9.0		
	8800	LEAR	8	S	0223.6	0224.0	.7	44.0			QL=6 ST=2 TYP=3
	3750	TYKW	5	S	0223.7	0224.0	.9	1.5	.5		
	8800	PALE	8	S	0223.8	0224.0	.3	37.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0223.8	0224.0	.8	11.0			QL=6 ST=2 TYP=3
	4995	LEAR	8	S	0223.8	0224.0	.7	9.0			QL=6 ST=3 TYP=3
	9400	TYKW	29	PBI	0225.0		7.0	5.0	2.0		
	3750	TYKW	20	GRF	0247.0	0255.0	30.0	3.0	1.5		
	9400	TYKW	20	GRF	0249.0	0257.0	30.0	8.0	4.0		
	2000	TYKW	32	ABS	0335.0	0510.0	165.0	-4.0	-2.5		
	9400	TYKW	32	ABS	0340.0	0430.0	115.0	-5.0	-3.0		
	3750	TYKW	32	ABS	0345.0	0430.0	125.0	-5.0	-3.0		
	1000	TYKW	32	ABS	0345.0	0455.0	140.0	-1.0	-.5		
	9100	GORK	21	GRF	0531.6	0724.0	253.0	12.0			
	9400	TYKW	20	GRF	0535.0	0550.0	65.0	5.0	2.5		
	3750	TYKW	20	GRF	0550.0	0620.0	45.0	2.0	1.0		
	2950	GORK	20	GRF	0657.0	0900.0	180.0D	9.5			
	3750	TYKW	20	GRF	0700.0	0716.5	120.0D	5.0	2.0D		
	2000	TYKW	20	GRF	0700.0	0718.5	120.0D	3.0	2.0D		
	9400	TYKW	21	GRF	0700.0	0725.0	80.0	12.0	5.0		
	6100	KISV			0713.5	0714.2		5.0			
	6100	KISV	45	C	0713.5	0716.5	5.0	19.0			
	8800	LEAR	47	GB	0713.8	0716.5	5.2	56.0			QL=6 ST=2 TYP=5
	9395	PEKG	4	S/F	0715.0	0716.5	13.0	83.0	15.8		
	9400	TYKW	5	S	0715.0	0716.5	3.0	43.0	11.0		
	9500	POTS	29	PBI	0715.0	0716.4	45.0	40.0			
	8400	BERN	3	S	0715.3	0716.5	4.0	56.0			
	9100	GORK	4	S/F	0715.5	0716.6	2.1	44.0			
	8800	ATHN	8	S	0715.6	0716.6	1.7	33.0			QL=5 ST=2 TYP=3
	15400	LEAR	4	S/F	0715.8	0716.5	3.7	21.0			QL=6 ST=2 TYP=3
	4995	LEAR	4	S/F	0716.0	0716.6	3.3	8.0			QL=6 ST=2 TYP=3
	9400	TYKW	29	PBI	0718.0		5.0	4.0	2.0		
	930	BORD	41	F	1021.5	1021.6	.4	141.0	2.0		
	810	KRAK	8	S	1022.1	1022.1	.2	15.0			
	808	ONDR	8	S	1022.4	1022.6	.7	11.0			
	810	KRAK	8	S	1045.2	1045.2	.2	12.0			
	430	KRAK	8	S	1128.3	1128.4	.3	38.0			
	9400	HUAN	21	GRF	1328.0	1347.4	41.1	5.6	4.5		0
	2800	OTTA	27A	RF	1330.0		380.0	3.2	3.0		
	2800	OTTA	24	R	1330.0	1350.0	20.0	3.2	1.6		
	2800	OTTA	24P	R	1350.0		340.0	3.2			
	9400	HUAN	2	S/F	1352.8	1354.7	3.3	7.5	4.9		0
	9400	HUAN	2	S/F	1436.5	1437.2	3.0	8.5	2.8		0

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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
22	2800	OTTA	20	GRF	1440.0	1443.0	25.0	3.8	1.9		
	8400	BERN	45	C	1702.0	1703.4	15.0U	208.0			
	19600	BERN	45	C	1702.0	1703.4	15.0U	83.0			
	8800	ATHN	47	GB	1702.5	1703.6	13.1	230.0			QL=5 ST=2 TYP=5
	4995	ATHN	47	GB	1702.6	1704.0	13.0	119.0			QL=5 ST=2 TYP=5
	1415	ATHN	4	S/F	1702.6	1707.6	12.9	11.0			QL=5 ST=2 TYP=3
	8800	PALE	47	GB	1702.8	1703.3	7.2	160.0			QL=6 ST=3 TYP=5
	15400	SGMR	47	GB	1702.8	1703.3	1.8	110.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	1702.8	1703.3	2.0	160.0			QL=6 ST=2 TYP=5
	4995	SGMR	47	GB	1702.8	1703.8	6.3	139.0			QL=6 ST=2 TYP=5
	4995	PALE	47	GB	1702.8	1703.8	6.2	169.0			QL=6 ST=2 TYP=5
	2695	ATHN	4	S/F	1702.8	1704.0	12.8	27.0			QL=5 ST=2 TYP=3
	2800	OTTA	45	C	1703.0	1707.5	8.0	45.0	22.5		
	15400	PALE	4	S/F	1703.1	1703.5	6.4	74.0			QL=6 ST=3 TYP=3
	2695	SGMR	4	S/F	1703.1	1703.8	6.0	43.0			QL=6 ST=2 TYP=3
	2695	PALE	4	S/F	1703.3	1703.8	8.2	32.0			QL=6 ST=3 TYP=3
	9400	HUAN	3	S	1705.0E	1707.1	4.1D	74.6	36.8		L
	9400	HUAN	29	PBI	1709.1	1709.1	94.4	10.2	7.8		L
	2800	OTTA	30	PBI	1711.0	1711.0	87.0	15.8	6.9		
	2800	OTTA	20	GRF	1755.0	1805.0	30.0	3.2	1.6		
	2800	OTTA	26	FAL	1930.0	1950.0	20.0	-3.2	-1.6		
	500	HIRA	46	C	2040.6	2040.8	1.0	40.0	20.0		WL
	2800	OTTA	1	S	2040.9	2041.1	1.0	3.6	1.8		
	8800	SGMR	47	GB	2057.5	2057.6	.3	139.0			QL=6 ST=2 TYP=5
	3750	TYKW	20	GRF	2215.0	2230.0	50.0	2.0	1.0		
	3750	TYKW	20	GRF	2325.0	2340.0	90.0	2.0	1.0		
23	245	LEAR	8	S	0001.6	0001.8	.2	30.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0029.0	0029.1	.1	13.0			QL=6 ST=2 TYP=3
	1000	TYKW	21	GRF	0150.0	0255.0	160.0	2.0	1.0		
	2000	TYKW	21	GRF	0152.0	0255.0	160.0	9.0	4.0		
	3750	TYKW	28	PRE	0153.0	0235.5	50.0	10.0	5.0		
	9400	TYKW	21	GRF	0210.0	0255.0	150.0	15.0	6.0		
	2840	PEKG	28	PRE	0226.0	0243.0	17.0	7.3	5.7		
	2000	TYKW	5	S	0243.0	0245.0	5.0	21.0	7.0		
	2840	PEKG	3	S	0243.0	0245.2	4.0	65.4	21.8		
	3750	TYKW	5	S	0243.0	0245.2	6.0	71.0	30.0		
	4995	LEAR	47	GB	0243.8	0245.1	5.5	69.0			QL=6 ST=2 TYP=5
	9400	TYKW	5	S	0244.0	0245.1	2.0	14.0	6.0		
	1000	TYKW	5	S	0244.0	0245.5	5.0	1.5	.5		
	9395	PEKG	21	GRF	0244.0	0246.4	33.0	13.7	5.9		
	2695	LEAR	4	S/F	0244.1	0245.1	5.2	49.0			QL=6 ST=2 TYP=3
	2695	MANI	3	S	0244.2	0245.9	2.8	50.5	16.8		
	1415	LEAR	4	S/F	0244.3	0245.1	3.0	11.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0244.5	0245.1	4.8	28.0			QL=6 ST=2 TYP=3
	4995	MANI	3	S	0244.5	0245.8	2.5	48.8	16.3		
	9395	PEKG	1	S	0244.6	0245.3	1.4	8.2	3.4		
	9400	TYKW	29	PBI	0246.0		6.0	5.0	2.0		
	2840	PEKG	29	PBI	0247.0		35.0	19.1	5.0		
	2000	TYKW	29	PBI	0248.0		6.0	2.0	1.0		
	3750	TYKW	29	PBI	0249.0		95.0	18.0	8.0		
	9100	GORK	20	GRF	0257.0	0258.4	102.0	22.0			
	245	LEAR	8	S	0533.1	0533.3	.5	11.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0557.3	0557.5	.3	15.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0628.0	0628.1	.5	11.0			QL=6 ST=2 TYP=3
	260	ONDR	8	S	0628.2	0628.3	1.2	2.0			
	245	LEAR	8	S	0727.8	0728.0	.3	13.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0831.6	0831.8	.2	36.0			QL=6 ST=2 TYP=3
	260	ONDR	8	S	0847.4	0847.4	.1	3.0			
	245	LEAR	8	S	0902.1	0902.1	.2	42.0			QL=6 ST=2 TYP=3
	245	LEAR	47	GB	0928.8	0929.0	.3	52.0			QL=6 ST=2 TYP=5
	260	ONDR	8	S	0950.9	0950.9	.1	2.0			
	260	ONDR	7	C	1038.0	1039.4	1.4	4.0	4.0		
	260	ONDR	8	S	1224.8	1224.8	.1	1.0			
	9400	HUAN	20	GRF	1244.6	1257.7U	45.6	10.0	4.3		0
	260	ONDR	8	S	1317.3	1317.3	.1	4.0			
	2800	OTTA	20	GRF	1600.0	1630.0	100.0	3.0	1.6		
	9400	HUAN	20	GRF	1611.8	1650.2U	67.4	8.5	3.7		0
	930	BORD	8	S	1616.2	1616.2	.1	52.0	1.0		
	9400	HUAN	1	S	1842.3	1842.9	1.5	12.8	6.9		L

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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
23	2800	OTTA	4	S/F	1842.5	1844.9	3.5	43.0	8.0		
	9400	HUAN	3	S	1844.5	1845.2	2.0	59.8	27.5		L
	2695	SGMR	8	S	1844.6	1844.8	.7	38.0			QL=6 ST=2 TYP=3
	4995	PALE	47	GB	1844.6	1845.0	.7	71.0			QL=6 ST=2 TYP=5
	8800	PALE	47	GB	1844.6	1845.0	.7	82.0			QL=6 ST=2 TYP=5
	4995	SGMR	47	GB	1844.6	1845.0	.5	51.0			QL=6 ST=2 TYP=5
	2695	PALE	8	S	1844.6	1845.0	.5	40.0			QL=6 ST=2 TYP=3
	8800	SGMR	47	GB	1844.8	1845.0	.3	52.0			QL=6 ST=2 TYP=5
	15400	PALE	8	S	1844.8	1845.0	.3	33.0			QL=6 ST=2 TYP=3
	2800	OTTA	29	PBI	1846.0	1846.0	67.0	7.6	3.5		
	9400	HUAN	29	PBI	1846.0	1846.5	33.1	11.4	4.3		L
	3750	TYKW	20	GRF	2120.0	2130.0	30.0	4.0	1.5		
	3750	TYKW	5	S	2212.0	2212.3	1.0	5.0	3.0		
	3750	TYKW	29	PBI	2213.0		35.0	2.0	1.0		
	9400	TYKW	5	S	2216.0	2216.6	1.5	7.0	2.0		
	3750	TYKW	21	GRF	2310.0	2325.0	50.0	2.0	1.0		
	3750	TYKW	5	S	2313.0	2313.5	2.0	3.0	1.0		
	2000	TYKW	5	S	2313.3	2313.5	.7	2.0	.5		
	245	LEAR	8	S	2342.3	2342.5	.3	21.0			QL=6 ST=2 TYP=3
24	260	ONDR	43	NS	0857.0	1323.0U	311.0D	3.0			
	3750	TYKW	20	GRF	0310.0	0454.0	310.0	5.0	2.0		
	2000	TYKW	21	GRF	0320.0	0440.0	280.0	3.0	1.0		
	1000	TYKW	20	GRF	0330.0	0450.0	240.0	2.0	1.0U		INTERFERENCE
	2000	TYKW	20	GRF	0452.0	0454.4	30.0	4.0	1.0U		INTERFERENCE
	2840	PEKG	20	GRF	0452.0	0455.5	17.0	3.9	2.0		
	3100	CRIM	26	FAL	0548.0	0700.0		5.0			
	930	BORD	41	F	0655.6	0656.0	.4	24.0	2.0		
	2840	PEKG	1	S	0704.0	0705.5	3.0	5.5	3.6		
	2800	OTTA	1	S	1126.0	1126.5	2.0	8.4	4.4		
	2800	OTTA	22	GRF	1140.0	1230.0	480.0	8.4	4.4		
	2000	TYKW	20	GRF	2150.0	2159.0	70.0	2.0	1.0		
	245	LEAR	8	S	2357.6	2357.6	.2	19.0			QL=6 ST=2 TYP=3
25	245	LEAR	43	NS	0646.0	0742.0	165.0D	35.0			QL=6 ST=2 TYP=1
	2000	TYKW	5	S	0027.0	0028.0	7.0	1.5	.5		
	3750	TYKW	20	GRF	0027.0	0030.0	50.0	1.5	.7		
	3750	TYKW	20	GRF	0303.0E	0324.0	75.0D	4.0	1.5D		
	245	LEAR	8	S	0319.6	0319.8	.2	11.0			QL=6 ST=2 TYP=3
	2000	TYKW	20	GRF	0320.0	0325.0	30.0	1.5	.7		
	3750	TYKW	20	GRF	0421.0	0445.0	55.0	1.5	.7		
	2000	TYKW	20	GRF	0430.0	0447.0	65.0	2.0	1.0		
	245	LEAR	8	S	0618.5	0618.6	.1	25.0			QL=6 ST=2 TYP=3
	3750	TYKW	21	GRF	0630.0	0710.0	90.0	3.0	1.5		
	2000	TYKW	20	GRF	0630.0	0710.0	90.0	2.0	1.0		
	3750	TYKW	5	S	0639.5	0642.0	8.0	2.0	1.0		
	260	ONDR	8	S	0658.2	0658.6	.8	27.0			
	260	ONDR	8	S	0742.4	0742.6	.3	52.0			
	9400	HUAN	20	GRF	1246.1	1259.5U	32.5	9.1	2.5		0
	2800	OTTA	20	GRF	1250.0	1300.0	50.0	3.4	1.7		
	9400	HUAN	1	S	1347.3	1348.6	2.7	10.9	5.7		L
	9400	HUAN	1	S	1538.1	1539.2	2.4	7.3	4.0		0
	9400	HUAN	22	GRF	1707.5	1722.5	64.5	5.5	2.8		0
	2800	OTTA	22	GRF	1850.0	1907.0	60.0	3.0	1.5		
	8800	PALE	47	GB	1928.5	1933.6	5.3	119.0			QL=6 ST=2 TYP=5
	245	PALE	47	GB	2217.5E	2224.8	8.5D	90.0			QL=1 ST=2 TYP=5
	208	VORO	40	F	2218.0	2222.0	11.0	90.0			
	2000	TYKW	20	GRF	2220.0	2230.0	70.0	1.5	.7		
	3750	TYKW	20	GRF	2220.0	2234.0	70.0	2.0	1.0		
	245	SGMR	8	S	2224.6	2224.6	.2	59.0			QL=6 ST=2 TYP=3
	3750	TYKW	20	GRF	2352.0	2355.0	35.0	3.0	1.0		
	2000	TYKW	20	GRF	2352.0	2355.0	35.0	3.0	1.0		
26	245	LEAR	43	NS	0055.0	0452.8	515.0D	30.0			QL=6 ST=2 TYP=1
	410	LEAR	43	NS	0407.8	0408.3	4.5	20.0			QL=6 ST=2 TYP=1
	260	ONDR	43	NS	0652.0	0805.0U	79.0D	18.0			
	260	ONDR	43	NS	0933.0	1109.0U	105.0D	111.0			
	260	ONDR	43	NS	1151.0	1325.0U	111.0D	27.0			
	3750	TYKW	20	GRF	0048.0	0056.0	30.0	1.5	.7		
	3750	TYKW	20	GRF	0137.0	0143.0	30.0	2.0	1.0		

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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
26	2000	TYKW	5	S	0148.0	0150.0	5.0	1.0	.5		
	9400	TYKW	5	S	0150.3	0150.6	2.0	3.0	1.0		
	2000	TYKW	31	ABS	0153.0	0240.0	185.0	-3.0	-1.5		
	3750	TYKW	32	ABS	0215.0	0253.0	135.0	-1.5	-.7		
	1000	TYKW	45	C	0343.5	0345.9	3.5	25.0	1.5		
	2000	TYKW	45	C	0345.0	0346.2	2.0	10.0	3.5		
	3750	TYKW	45	C	0345.0	0346.2	2.0U	7.0U	2.0U		
	2950	GORK	45	C	0345.0	0345.3	3.4	7.3			
	2950	GORK			0345.0	0346.2		9.8			
	2000	TYKW	29	PBI	0347.0		10.0	3.0	1.0		
	3750	TYKW	29	PBI	0347.0U		7.0U	2.0U	1.0U		
	3750	TYKW	20	GRF	0440.0	0445.0	30.0	2.0	1.0		
	1000	TYKW	5	S	0458.3	0458.6	1.0	1.5	.5		
	610	LEAR	4	S/F	0516.3	0516.3	10.0	17.0			QL=6 ST=2 TYP=3
	1000	TYKW	45	C	0519.0	0519.6	2.0	9.0	1.5		
	1415	LEAR	8	S	0522.3	0522.5	1.0	16.0			QL=6 ST=2 TYP=3
	1000	TYKW	42	SER	0522.5	0523.3	1.5	5.0	.7		
	1000	TYKW	45	C	0526.4	0526.5	1.0	3.0	.5		
	6100	KISV	2	S/F	0527.8	0527.8	1.0	8.0			
	3750	TYKW	5	S	0529.0	0531.0	3.0	3.0	1.5		
	3750	TYKW	29	PBI	0532.0		25.0	1.5	.7		
	1000	TYKW	45	C	0638.7	0638.8	1.0	27.0	3.0		
	536	ONDR	40	F	0700.8	0708.5U	16.0	7.0	5.0		
	9400	TYKW	45	C	0701.0	0702.7	12.0	22.0	8.0		
	2650	DWIN	2	S/F	0701.0	0703.0	10.0	28.0	15.0		
	3750	TYKW	45	C	0701.0	0703.0	11.0	28.0	12.0		
	2000	TYKW	45	C	0701.0	0703.0	10.0	20.0	10.0		
	1000	TYKW	45	C	0701.0	0705.2	10.0	12.0	3.0		
	9100	GORK	22	GRF	0701.3	0702.9	24.0	25.0			
	2950	GORK	21	GRF	0701.3	0705.2	132.0	14.0			
	500	HIRA	41	F	0701.5	0701.9	12.0	5.0			0
	950	GORK	46	C	0701.5	0702.2	18.5	4.0			
	3000	POTS	29	PBI	0701.5	0703.1	29.0	27.0			
	950	GORK			0701.5	0705.2		12.0			
	950	GORK			0701.5	0708.1		3.0			
	650	GORK	46	C	0701.6	0702.2	16.7	7.5			
	650	GORK			0701.6	0704.3		7.5			
	650	GORK			0701.6	0708.3		7.0			
	200	GORK	2	S/F	0701.7	0702.1	1.1	10.0			
	2695	LEAR	4	S/F	0701.8	0702.8	7.8	32.0			QL=6 ST=2 TYP=3
	245	LEAR	47	GB	0702.0	0702.1	8.3	180.0			QL=6 ST=2 TYP=5
	3100	CRIM	3	S	0702.0	0703.0	9.0	29.0	10.0		
	234	POTS	4	S/F	0702.2	0702.2	.3	200.0	40.0		
	4995	LEAR	4	S/F	0702.3	0702.8	8.0	22.0			QL=6 ST=2 TYP=3
	8800	ATHN	4	S/F	0702.3	0703.1	8.5	16.0			QL=6 ST=2 TYP=3
	4995	ATHN	4	S/F	0702.3	0703.1	8.5	29.0			QL=6 ST=2 TYP=3
	2695	ATHN	4	S/F	0702.3	0703.1	8.5	30.0			QL=6 ST=2 TYP=3
	8800	LEAR	47	GB	0702.3	0704.5	5.3	89.0			QL=6 ST=3 TYP=5
	2950	GORK	3	S	0702.4	0703.0	2.0	14.5			
	9500	POTS	29	PBI	0702.4	0703.4	88.0	18.0			
	9500	POTS			0702.4	0705.1		18.0			
	1415	LEAR	4	S/F	0702.8	0703.6	7.5	11.0			QL=6 ST=2 TYP=3
	1000	TYKW	29	PBI	0711.0		25.0	1.5	.7		
	2000	TYKW	29	PBI	0711.0		110.0	6.0	3.0		
	3100	CRIM	29	PBI	0711.0	0711.0		10.0			
	3750	TYKW	29	PBI	0712.0		100.0	6.0	3.0		
	9400	TYKW	29	PBI	0713.0		50.0	6.0	3.0		
	245	LEAR	8	S	0713.8	0713.8	.2	10.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0713.8	0713.8	.2	9.0			QL=6 ST=2 TYP=3
	810	KRAK	8	S	0741.3	0741.3	.2	10.0			
	650	GORK	20	GRF	0757.8		44.2	2.5			
	1000	TYKW	45	C	0803.0	0805.0	3.0	8.0	1.0		
	1000	TYKW	45	C	0819.0	0820.4	3.0	23.0	1.5		
	810	KRAK	8	S	0820.2	0820.2	.2	16.0			
	808	ONDR	41	F	1101.0	1108.3	9.0	28.0	8.0		
	810	KRAK	27	RF	1101.7	1108.3	8.6	37.0	8.0		
	430	KRAK	45	C	1101.7	1108.8	12.6	520.0	59.0		
	930	BORD	46	C	1102.8	1108.4	7.2	53.0	4.0		
	410	SGMR	47	GB	1103.8	1108.8	9.8	260.0			QL=6 ST=2 TYP=5
	536	ONDR	41	F	1104.9	1106.2	9.0	72.0	25.0		

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26	2800	OTTA	1	S	1106.0	1108.0	3.5	7.0	2.4		
	2950	GORK	1	S	1106.0	1108.0	3.4	5.8			
	204	IZMI	41	F	1107.2	1108.0	1.2	13.0			
	245	SGMR	47	GB	1107.8	1108.0	1.3	63.0			QL=6 ST=2 TYP=5
	2800	OTTA	240	AR	1204.0	1216.0	12.0	5.6	2.8		
	536	ONDR	40	F	1206.8	1207.4	4.0	10.0	10.0		
	2800	OTTA	1	S	1207.0	1208.0	3.5	2.8	1.6		
	2800	OTTA	20	GRF	1218.0	1228.0	80.0	3.4	1.7		
	930	BORD	41	F	1335.4	1335.5	.3	23.0	2.0		
	2800	OTTA	240	R	1725.0	1750.0	25.0	4.2	2.1		
	9400	HUAN	22	GRF	1727.0	1846.6	96.0	10.6	3.8		L
	2800	OTTA	23	GRF	1804.0	1828.0	95.0	6.2	2.0		
	2800	OTTA	8	S	1805.5	1805.7	.7	2.2	1.0		
	2800	OTTA	1	S	1837.0	1837.2	1.0	2.2			
	2800	OTTA	1	S	1845.0	1846.1	4.0	8.4	4.2		
	2800	OTTA	1	S	1926.8	1927.0	1.2	2.8	1.4		
	9400	HUAN	1	S	2035.3	2038.2	4.7	5.3	2.8		R
	1000	TYKW	5	S	2117.0	2118.1	2.5	2.0	.7		
	2000	TYKW	45	C	2117.0	2118.9	3.0	6.0	1.5		
	2800	OTTA	2	S/F	2117.0	2118.0	4.0	4.2	2.0		
	2000	TYKW	29	PBI	2120.0		40.0	2.0	1.0		
	3750	TYKW	21	GRF	2209.0	2224.0	120.0	5.0	2.0		
	2000	TYKW	21	GRF	2210.0	2224.0	100.0	2.5	1.0		
	2800	OTTA	20	GRF	2210.0	2225.0	120.0	3.8	1.9		
	3750	TYKW	20	GRF	2250.0	2311.0	65.0	4.0	2.0		
	9400	TYKW	20	GRF	2252.0	2310.0	50.0	5.0	2.0		
	2000	TYKW	45	C	2311.0	2311.4	1.0	2.0	.5		
	1000	TYKW	45	C	2311.0	2311.6	1.5	5.0	1.0		
27	200	GORK	44	NS	0509.0E		411.0D		5.0		
	245	LEAR	43	NS	0510.0	0844.3	260.0D	62.0			QL=6 ST=2 TYP=1
	260	ONDR	44	NS	0540.0E	0828.0U	508.0D	131.0			
	204	IZMI	43	NS	0720.0		280.0	29.0			
	245	SGMR	43	NS	0935.0	1232.0	852.0D	150.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2100.0E		360.0D				
	245	LEAR	43	NS	2312.0	0429.8	618.0D	66.0			QL=6 ST=2 TYP=1
	9395	PEKG	1	S	0011.6	0012.4	1.9	31.0	14.5		
	2000	TYKW	32	ABS	0030.0	0130.0	140.0	-2.0	-1.0		
	1000	TYKW	32	ABS	0030.0	0240.0	300.0	-2.0	-1.0		
	9400	TYKW	5	S	0036.0	0036.6	2.0	4.0	1.5		
	3750	TYKW	5	S	0036.0	0036.7	2.0	4.0	1.5		
	3750	TYKW	32	ABS	0050.0	0127.0	70.0	-3.0	-1.5		
	9400	TYKW	32	ABS	0050.0	0140.0	170.0	-4.0	-2.0		
	3750	TYKW	20	GRF	0205.0	0217.4	35.0	3.0	1.0		
	2000	TYKW	45	C	0212.0	0217.3	10.0	1.5	.5		
	245	LEAR	47	GB	0214.8	0215.3	3.2	68.0			QL=6 ST=3 TYP=5
	410	LEAR	4	S/F	0215.3	0216.8	2.8	5.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0215.5	0216.8	1.8	18.0			QL=6 ST=2 TYP=3
	3750	TYKW	45	C	0256.5E	0259.0U	15.0D	4.0	1.5D		
	9400	TYKW	45	C	0256.5	0301.3	7.5D	5.0	2.0D		
	1000	TYKW	45	C	0307.7	0308.3	1.0	240.0D	40.0D		
	9400	TYKW	20	GRF	0348.0	0400.0	50.0	6.0	2.0		
	3750	TYKW	5	S	0350.0	0351.5	2.0	7.0	2.5		
	3750	TYKW	29	PBI	0352.0		15.0	2.0	1.0		
	2000	TYKW	20	GRF	0430.0	0445.0	50.0	1.0	.5		
	3750	TYKW	21	GRF	0450.0	0455.0	30.0	2.0	1.0		
	245	LEAR	8	S	0500.1	0500.1	.2	42.0			QL=6 ST=2 TYP=3
	9400	TYKW	5	S	0507.0	0508.0	2.0	12.0	2.5		
	3750	TYKW	5	S	0507.5	0508.0	2.0	4.0	1.5		
	9100	GORK	1	S	0507.7	0508.0	4.0	10.0	5.0		
	6100	KISV	1	S	0507.7	0508.0	1.0	5.0			
	8800	LEAR	4	S/F	0507.8	0508.0	2.3	17.0			QL=6 ST=2 TYP=3
	9400	TYKW	29	PBI	0509.0		20.0	3.0	1.5		
	3750	TYKW	21	GRF	0526.0	0614.0	105.0	7.0	3.5		
	2000	TYKW	21	GRF	0530.0	0615.0	130.0	3.0	1.5		
	9400	TYKW	20	GRF	0545.0	0637.0	120.0	10.0	5.0		
	410	LEAR	8	S	0622.8	0623.0	.3	17.0			QL=6 ST=2 TYP=3
	3750	TYKW	21	GRF	0625.0	0638.0	35.0	2.0	1.0		
	3750	TYKW	5	S	0641.0	0644.0	12.0	3.0	1.0		
	2000	TYKW	5	S	0643.5	0644.1	2.0	1.5	.5		

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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
27	2950	GORK	1	S	0643.7	0643.8	.9	2.5			
	536	ONDR	40	F	0644.3	0650.0	8.7	11.0			
	410	LEAR	8	S	0645.5	0647.1	1.8	25.0			QL=6 ST=2 TYP=3
	1000	TYKW	42	SER	0645.5	0647.5	2.0	8.0	.7		
	500	HIRA	40	F	0648.6	0650.0	4.5	12.0	4.0		0
	6100	KISV	1	S	0739.3	0739.6	1.0	3.0			
	3100	CRIM	25	R	0745.0	0825.0		5.0			
	3750	TYKW	21	GRF	0822.0	0827.0	35.0U	3.0	1.5		
	2950	GORK	20	GRF	0827.0	0829.2	35.0	3.8	1.9		
	9100	GORK	22	GRF	0827.0	0941.5	216.0	17.0			
	3100	CRIM	1	S	0828.0	0829.1	2.0	4.0	1.0		
	6100	KISV	2	S/F	0828.4	0829.2	2.0	4.0			
	536	ONDR	4	S/F	0828.4	0929.2	60.8U	18.0	16.0		
	3750	TYKW	5	S	0828.5	0829.2	3.0	6.0	1.5		
	2000	TYKW	45	C	0828.5	0829.3	2.5	6.0	1.5		
	950	GORK	2	S/F	0828.5	0829.4	1.3	10.0			
	245	LEAR	47	GB	0828.6	0828.8	.7	160.0			QL=6 ST=2 TYP=5
	200	GORK	4	S/F	0828.6	0829.0	1.1	80.0D			
	930	BORD	46C		0828.6	0829.4	1.3	52.0	4.0		
	650	GORK	4	S/F	0828.7	0829.2	1.4	14.0	2.0		
	1000	TYKW	45	C	0828.7	0829.4	2.0	11.0	3.0		
	410	LEAR	47	GB	0828.8	0829.0	.5	130.0			QL=6 ST=3 TYP=5
	2695	LEAR	8	S	0828.8	0829.0	1.2	10.0			QL=6 ST=2 TYP=3
	4995	LEAR	8	S	0828.8	0829.1	.8	5.0			QL=6 ST=2 TYP=3
	430	KRAK	8	S	0828.9	0829.1	1.1	280.0			
	1415	LEAR	8	S	0829.0	0829.3	.8	17.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0829.0	0829.3	.8	30.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0903.1	0903.3	.2	23.0			QL=6 ST=2 TYP=3
	2950	GORK	20	GRF	0924.8	0942.0	50.0	6.4	3.2		
	1415	LEAR	8	S	0925.0	0925.3	.6	17.0			QL=6 ST=2 TYP=3
	6100	KISV	1	S	0937.1	0937.6	1.0	6.0			
	6100	KISV	2	S/F	0939.4	0939.7	1.0	6.0			
	6100	KISV	2	S/F	0941.0	0941.6	1.5	7.0			
	808	ONDR	4	S/F	1028.8	1029.4	1.3	10.0			
	2800	OTTA	20	GRF	1100.0	1220.0	115.0	4.8	2.4		
	930	BORD	8	S	1245.0	1245.0	.1	19.0	1.0		
	9400	HUAN	20	GRF	1304.3	1335.1U	71.7	5.5	3.3		0
	2800	OTTA	20	GRF	1420.0	1555.0	220.0D	7.6	3.8		
	9400	HUAN	21	GRF	1601.1	1613.0	53.0	6.4	2.4		0
	9400	HUAN	2	S/F	1608.0	1609.1	2.0	12.7	5.0		0
	2800	OTTA	240	R	1825.0	1840.0	15.0	4.2	2.1		
	9400	HUAN	20	GRF	1829.5	1845.0	51.8	9.1	5.1		R
	2800	OTTA	20	GRF	1841.0	1910.0	75.0	2.8	1.4		
	2000	TYKW	20	GRF	2313.0	2324.0	40.0	2.0	.7		
	3750	TYKW	5	S	2318.0	2322.5	12.0	3.0	1.0		
	2840	PEKG	20	GRF	2334.0	2358.6	55.0	7.5	.2		
	9395	PEKG	21	GRF	2336.0	2358.6	58.0	7.0	2.6		
	3750	TYKW	28	PRE	2337.0	2355.0	18.0	3.0	1.5		
	9400	TYKW	21	GRF	2340.0	2357.0	60.0	5.0	2.0		
	3750	TYKW	5	S	2355.0	2356.7	4.0	8.0	6.0		
	3750	TYKW	30	PBI	2359.0		45.0	5.0	2.0		
28	200	GORK	43	NS	0504.0		414.0D		5.0		
	260	ONDR	44	NS	0554.0E	1037.0U	492.0D	4.0			
	245	PALE	43	NS	1640.0	2039.6	725.0D	180.0			QL=6 ST=2 TYP=1
	245	SGMR	43	NS	1726.3	2039.3	381.7D	119.0			QL=6 ST=3 TYP=1
	208	VORO	44	NS	2100.0E		350.0D				
	245	LEAR	43	NS	2312.0	0314.0	618.0D	76.0			QL=6 ST=2 TYP=1
	610	LEAR	8	S	0001.6	0001.8	.2	10.0			QL=6 ST=2 TYP=3
	2695	PENT	2	S/F	0012.0	0014.7	6.0	8.6	3.0		
	9400	TYKW	5	S	0020.0	0023.0	15.0	4.0	2.0		
	3750	TYKW	5	S	0029.0	0030.2	7.0	2.0	1.0		
	3750	TYKW	5	S	0059.0	0100.7	12.5	4.0	1.5		
	2000	TYKW	21	GRF	0059.0	0125.0	80.0	2.0	1.0		
	9395	PEKG	28	PRE	0100.0	0103.0	12.0	2.3	.4		
	2840	PEKG	28	PRE	0100.0	0104.5	10.0	2.9	.1		
	2840	PEKG	45	C	0110.0	0114.5	9.0	10.9	.3		
	2000	TYKW	45	C	0111.5	0112.8	6.0	10.0	1.0		
	9400	TYKW			0111.5	0114.0		39.0			
	3750	TYKW	45	C	0111.5	0114.4	4.5	18.0	8.0		

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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
28	9400	TYKW	45	C	0111.5	0119.8	14.5	45.0	13.0		
	9395	PEKG	45	C	0112.0	0114.1		42.0			
	9395	PEKG			0112.0	0114.4	7.0	37.1	18.3		
	2695	LEAR	4	S/F	0112.1	0114.6	5.0	10.0			QL=6 ST=2 TYP=3
	17000	NOBE	20	GRF	0112.7	0114.8	32.0	17.0			0
	1415	LEAR	8	S	0112.8	0112.8	.2	24.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0112.8	0112.8	.2	33.0			QL=6 ST=2 TYP=3
	8800	LEAR	47	GB	0112.8	0114.0	9.5	40.0			QL=6 ST=2 TYP=5
	15400	LEAR	4	S/F	0113.3	0114.8	10.5	32.0			QL=6 ST=2 TYP=3
	4995	LEAR	8	S	0113.6	0114.3	1.0	22.0			QL=6 ST=2 TYP=3
	3750	TYKW	30	PBI	0116.0		60.0	6.0	3.0		
	3750	TYKW	45	C	0119.0	0119.8	5.0	4.0	1.0		
	2840	PEKG	29	PBI	0119.0	0120.5	27.0	5.2	.5		
	9395	PEKG	29	PBI	0119.0	0121.3	31.0	14.9	.9		
	9400	TYKW	29	PBI	0126.0		45.0	14.0	6.0		
	3750	TYKW	5	S	0221.0	0222.1	4.0	14.0	5.0		
	9395	PEKG	3	S	0221.0	0222.2	3.4	14.9	4.3		
	2840	PEKG	1	S	0221.0	0222.4	4.0	7.2	1.7		
	9400	TYKW	5	S	0221.5	0222.2	1.5	12.0	6.0		
	4995	MANI	3	S	0221.6	0222.0	1.8	55.9	18.6		
	8800	MANI	3	S	0221.6	0222.0	1.2	34.5	11.5		
	2695	MANI	3	S	0221.6	0222.7	1.8	7.1	2.4		
	4995	LEAR	8	S	0221.8	0222.1	.5	17.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0221.8	0222.1	1.0	10.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0222.0	0222.1	.1	17.0			QL=6 ST=2 TYP=3
	9400	TYKW	29	PBI	0223.0		20.0	2.0	1.0		
	3750	TYKW	29	PBI	0225.0		25.0	2.0	1.0		
	2840	PEKG	29	PBI	0225.0	0227.0	20.0	1.7	.1		
	2950	GORK	21	GRF	0254.7	0306.0	150.0	9.9			
	2840	PEKG	21	GRF	0302.0	0306.2	39.0	8.9	.3		
	9395	PEKG	21	GRF	0302.0	0307.0	19.0	6.1	2.9		
	4995	LEAR	4	S/F	0302.3	0302.8	5.7	13.0			QL=6 ST=2 TYP=3
	2840	PEKG	45	C	0302.4	0303.0	1.6	32.5	.5		
	9395	PEKG	3	S	0302.4	0303.3	2.6	15.8	4.8		
	9400	TYKW	5	S	0302.5	0303.1	1.5D	18.0	8.0D		
	9100	GORK	2	S/F	0302.5	0303.2	6.3	17.0			
	2000	TYKW	45	C	0302.5	0303.2	3.5D	11.0	5.0D		
	2695	LEAR	4	S/F	0302.6	0302.8	5.4	26.0			QL=6 ST=2 TYP=3
	17000	NOBE	1	S	0302.6	0303.1	1.5	17.0			0
	2950	GORK	3	S	0302.7	0302.9	.8	21.0			
	8800	LEAR	8	S	0302.8	0303.1	.3	18.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0302.8	0303.1	.5	21.0			QL=6 ST=2 TYP=3
	1415	LEAR	4	S/F	0302.8	0303.1	5.2	13.0			QL=6 ST=2 TYP=3
	3750	TYKW	45	C	0303.0E	0303.1	10.0D	9.0	2.0D		
	3750	TYKW	21	GRF	0303.0E	0322.0	150.0D	7.0	3.0D		
	8800	MANI	3	S	0303.0	0303.3	1.0	30.6	10.2		
	1415	MANI	3	S	0303.0	0303.3	1.0	21.3	7.1		
	4995	MANI	3	S	0303.0	0303.3	1.0	23.5	7.8		
	2695	MANI	3	S	0303.0	0303.3	1.0	27.5	9.2		
	9400	TYKW	29	PBI	0304.0		15.0U	5.0U	2.0D		
	2000	TYKW	29	PBI	0309.0E		110.0D	6.0	2.5D		
	9395	PEKG	20	GRF	0321.0	0328.6	38.0	13.0	5.9		
	3750	TYKW	5	S	0326.0	0328.3	4.0	9.0	4.0		
	2840	PEKG	20	GRF	0327.0	0328.4	12.0	5.2	.2		
	9400	TYKW	20	GRF	0327.0U	0330.0U	40.0U	9.0	4.0		INTERFERENCE
	9100	GORK	22	GRF	0327.2	0328.5	55.0	10.0			
	3750	TYKW	29	PBI	0330.0		15.0	4.0	2.0		
	3750	TYKW	21	GRF	0448.0	0454.0	35.0	3.0	1.5		
	9400	TYKW	20	GRF	0450.0	0510.0	45.0	3.0	1.5		
	3750	TYKW	5	S	0450.5	0450.8	1.0	3.0	1.0		
	3750	TYKW	21	GRF	0543.0	0549.0	30.0	2.0	1.0		
	9400	TYKW	20	GRF	0543.0	0550.0	35.0	3.0	1.5		
	410	LEAR	8	S	0546.5	0546.6	.3	11.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0602.3	0602.5	.5	11.0			QL=6 ST=2 TYP=3
	3750	TYKW	5	S	0608.7	0609.2	3.0	4.0	1.5		
	2000	TYKW	5	S	0609.0E	0609.3	2.0D	3.0	1.0D		
	2950	GORK	1	S	0609.0	0609.3	1.4	2.4	1.2		
	930	BORD	8	S	0704.6	0704.6	.1	30.0	1.0		
	930	BORD	41	F	0816.3	0816.5	.2	45.0	3.0		
	9100	GORK	20	GRF	0829.9	0830.7	10.6	4.0			

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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
28	2950	GORK	20	GRF	0933.8	0935.0	19.5	11.3			
	9100	GORK	20	GRF	0933.9	0934.8	66.0	9.0			
	2650	DWIN	1	S	0934.0	0935.0	2.0	12.0	6.0		
	4995	ATHN	4	S/F	0934.1	0934.8	4.2	16.0			QL=5 ST=2 TYP=3
	2695	ATHN	4	S/F	0934.1	0935.0	3.4	8.0			QL=5 ST=2 TYP=3
	8800	ATHN	4	S/F	0934.3	0935.1	3.2	5.0			QL=5 ST=2 TYP=3
	930	BORD	8	S	1138.2	1138.2	.1	23.0	1.0		
	536	ONDR	8	S	1139.2	1139.2	.1	5.0			
	9100	GORK	1	S	1151.4	1151.7	.7	6.0	3.0		
	2800	OTTA	21	GRF	1220.0	1250.0	185.0	5.0	2.5		
	9400	HUAN	21	GRF	1231.7	1250.8	55.0	8.9	4.8		0
	9400	HUAN	3	S	1248.6	1249.7	1.6	40.9	18.2		0
	4995	ATHN	8	S	1249.3	1249.6	1.2	11.0			QL=5 ST=2 TYP=3
	8800	ATHN	8	S	1249.3	1249.6	1.2	27.0			QL=5 ST=2 TYP=3
	9500	POTS	3	S	1249.4	1249.5	3.1	24.0			
	2800	OTTA	1	S	1426.2	1427.0	2.0	3.0	1.4		
	8800	SGMR	4	S/F	1426.3	1427.0	2.3	28.0			QL=6 ST=2 TYP=3
	2695	ATHN	8	S	1426.3	1427.1	1.8	8.0			QL=6 ST=2 TYP=3
	4995	ATHN	8	S	1426.3	1427.1	1.8	38.0			QL=6 ST=2 TYP=3
	8800	ATHN	47	GB	1426.3	1427.1	1.8	55.0			QL=6 ST=2 TYP=5
	9500	POTS	3	S	1426.3	1427.5	1.7	23.0			
	3000	POTS	1	S	1426.4	1427.0	3.1	6.0			
	4995	SGMR	8	S	1426.6	1427.0	.7	37.0			QL=6 ST=2 TYP=3
	2800	OTTA	23	GRF	1528.0	1548.0	200.0	7.0			
	8800	SGMR	47	GB	1528.1	1530.0	3.7	150.0			QL=6 ST=3 TYP=5
	4995	SGMR	47	GB	1528.3	1530.1	4.0	100.0			QL=6 ST=3 TYP=5
	8800	ATHN	47	GB	1528.6	1530.5	4.7	139.0			QL=6 ST=2 TYP=5
	4995	ATHN	47	GB	1528.6	1530.5	4.7	93.0			QL=6 ST=3 TYP=5
	15400	SGMR	47	GB	1528.8	1530.0	2.8	169.0			QL=6 ST=3 TYP=5
	2695	SGMR	4	S/F	1528.8	1530.3	3.2	28.0			QL=6 ST=3 TYP=3
	2650	DWIN	1	S	1529.0	1530.0	3.0	20.0	10.0		
	2800	OTTA	4	S/F	1529.0	1530.0	5.0	23.0	8.0		
	2695	ATHN	4	S/F	1529.1	1530.5	4.2	18.0			QL=6 ST=2 TYP=3
	8400	BERN	45	C	1529.7	1530.0	6.0U	168.0			
	19600	BERN	4	S/F	1529.7	1530.0	6.0U	96.0			
	930	BORD	46	C	1614.5	1615.0	1.2	54.0	3.0		
	1415	ATHN	47	GB	1704.5	1704.8	6.6	73.0			QL=6 ST=2 TYP=5
	2695	ATHN	47	GB	1704.5	1705.1	5.3	68.0			QL=6 ST=2 TYP=5
	4995	ATHN	47	GB	1704.5	1705.5	6.3	119.0			QL=6 ST=2 TYP=5
	8800	ATHN	47	GB	1704.5	1705.5	6.6	100.0			QL=6 ST=2 TYP=5
	2650	DWIN	4	S/F	1705.0	1707.0	3.0	95.0	45.0		
	19600	BERN	3	S	1705.0	1706.5	7.0	101.0			
	2800	OTTA	3	S	1705.0	1706.5	5.0	100.0	45.0		
	8400	BERN	4	S/F	1705.0	1706.5	7.0	122.0			
	1415	SGMR	47	GB	1705.3	1705.3	1.3	54.0			QL=6 ST=2 TYP=5
	8800	PALE	47	GB	1705.3	1706.0	5.0	130.0			QL=6 ST=2 TYP=5
	4995	PALE	47	GB	1705.3	1706.1	3.3	160.0			QL=6 ST=2 TYP=5
	15400	SGMR	47	GB	1705.3	1706.1	1.8	80.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	1705.3	1706.1	2.5	110.0			QL=6 ST=2 TYP=5
	4995	SGMR	47	GB	1705.3	1706.3	3.8	119.0			QL=6 ST=2 TYP=5
	2695	PALE	47	GB	1705.3	1706.3	3.0	100.0			QL=6 ST=2 TYP=5
	2695	SGMR	47	GB	1705.3	1706.5	3.3	91.0			QL=6 ST=2 TYP=5
	15400	PALE	47	GB	1705.5	1706.0	1.6	66.0			QL=6 ST=2 TYP=5
	1415	ATHN	47	GB	1705.5	1706.0	5.6	73.0			QL=6 ST=3 TYP=5
	2695	ATHN	47	GB	1705.5	1706.3	4.8	68.0			QL=6 ST=3 TYP=5
	4995	ATHN	47	GB	1705.5	1706.3	5.3	119.0			QL=6 ST=3 TYP=5
	8800	ATHN	47	GB	1705.5	1706.3	5.6	100.0			QL=6 ST=3 TYP=5
	1415	PALE	8	S	1705.6	1705.8	.2	23.0			QL=6 ST=2 TYP=3
	2800	OTTA	29	PBI	1710.0	1710.0	60.0	15.2	5.2		
	2800	OTTA	2	S/F	1921.0	1923.0	7.0	2.8	1.4		
	2800	OTTA	240	R	1935.0	2005.0	30.0	2.6	1.4		
	500	HIRA	45	C	2036.4	2036.7	1.0	200.0	40.0		ML
	2800	OTTA	20	GRF	2045.0	2120.0	75.0	2.8	1.7		
	2800	OTTA	21	GRF	2200.0	2218.0	38.0	2.8	1.4		
	9400	TYKW	5	S	2216.0	2217.5	3.0	16.0	6.0		
	3750	TYKW	5	S	2216.0	2217.7	3.0	5.0	2.5		
	2800	OTTA	8	S	2216.6	2216.6	.1	8.8			
	8800	SGMR	8	S	2217.0	2217.6	1.1	27.0			QL=6 ST=2 TYP=3
	9400	TYKW	29	PBI	2219.0		20.0	4.0	2.0U		INTERFERENCE
	3750	TYKW	29	PBI	2219.0		30.0	2.0	1.0		

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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
28	2695	PENT	21	GRF	2255.0		125.0	4.0	2.0		
	3750	TYKW	21	GRF	2320.0	0015.0	110.0	4.0	2.0		
	9400	TYKW	21	GRF	2320.0	2400.0	120.0	2.0	1.0		
	2840	PEKG	21	GRF	2329.0E	2345.3	25.0D	9.6			
	9395	PEKG	3	S	2340.0	2345.2	12.0	14.2	4.5		
	9400	TYKW	5	S	2343.0	2345.0	5.0	13.0	4.0		
	3750	TYKW	5	S	2343.0	2345.2	10.0	8.0	3.0		
	2000	TYKW	45	C	2343.5	2345.1	2.5	5.0	1.0		
	2695	PENT	1	S	2344.5	2345.5	10.0	3.4	1.8		
29	410	LEAR	43	NS	0305.0	0308.3	32.8	9.0			QL=6 ST=2 TYP=1
	200	GORK	43	NS	0309.0		198.0		5.0		
	410	LEAR	43	NS	0517.8	0519.8	6.3	47.0			QL=6 ST=2 TYP=1
	260	ONDR	44	NS	0633.0E	0722.0U	447.0D	4.0			
	245	PALE	43	NS	1628.0	1731.3	737.0D	54.0			QL=6 ST=2 TYP=1
	1000	TYKW	5	S	0017.0	0018.4	3.0	1.0	.3		
	410	LEAR	8	S	0023.3	0023.5	.3	13.0			QL=6 ST=3 TYP=3
	1000	TYKW	32	ABS	0030.0	0120.0	100.0	-1.0	-.5		
	2000	TYKW	32	ABS	0030.0	0120.0	80.0	-3.0	-1.5		
	2695	PENT	1	S	0031.0	0032.0	2.0	4.2	2.5		
	2840	PEKG	45	C	0126.0	0131.8	11.0	28.3	4.4		
	9400	TYKW	5	S	0131.0	0131.5	2.0	35.0	12.0		
	3750	TYKW	5	S	0131.0	0131.7	2.0	20.0	9.0		
	9395	PEKG	45	C	0131.0	0131.7	8.0	50.6	8.2		
	17000	NOBE	1	S	0131.2	0131.7	1.0	18.0			0
	8800	PALE	8	S	0131.3	0131.3	.5	50.0			QL=6 ST=2 TYP=3
	4995	PALE	8	S	0131.3	0131.5	.5	28.0			QL=6 ST=2 TYP=3
	4995	LEAR	8	S	0131.3	0131.6	.5	28.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0131.3	0131.6	.5	43.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0131.3	0131.6	.5	32.0			QL=6 ST=2 TYP=3
	15400	PALE	8	S	0131.5	0131.6	.1	20.0			QL=6 ST=2 TYP=3
	8800	MANI	3	S	0131.7	0132.1	.7	80.6	26.9		
	4995	MANI	3	S	0131.7	0132.1	.7	43.9	14.6		
	2695	MANI	3	S	0131.7	0132.1	.7	18.8	6.3		
	9400	TYKW	29	PBI	0133.0		10.0	4.0	2.0		
	3750	TYKW	30	PBI	0133.0		30.0	4.0	3.0		
	3750	TYKW	45	C	0203.0	0208.5	17.0	88.0	20.0		
	9395	PEKG	45	C	0204.0	0206.9		10.1			
	2840	PEKG	45	C	0204.0	0207.1		23.5			
	9400	TYKW	45	C	0204.0	0208.5	15.0	80.0	15.0		
	9395	PEKG			0204.0	0208.5	9.0	91.5	23.9		
	2840	PEKG			0204.0	0208.6	9.0	56.9	14.0		
	4995	MANI	4	S/F	0204.0	0208.7	6.0	165.9	55.3		
	2695	MANI	4	S/F	0204.5	0209.0	6.5	112.8	37.6		
	4995	LEAR	47	GB	0204.8	0208.5	12.0	86.0			QL=6 ST=2 TYP=5
	2000	TYKW	5	S	0205.0	0208.6	10.0	17.0	6.0		
	2695	PALE	47	GB	0205.3	0208.5	7.8	62.0			QL=6 ST=2 TYP=5
	4995	PALE	47	GB	0205.3	0208.5	8.0	84.0			QL=6 ST=2 TYP=5
	2695	LEAR	47	GB	0205.6	0208.5	7.2	60.0			QL=6 ST=2 TYP=5
	8800	LEAR	47	GB	0205.6	0208.5	9.5	90.0			QL=6 ST=2 TYP=5
	17000	NOBE	20	GRF	0205.7	0208.7	16.0	35.0			0
	8800	MANI	4	S/F	0205.8	0208.7	4.9	84.8	28.3		
	15400	LEAR	4	S/F	0206.8	0208.3	7.2	41.0			QL=6 ST=2 TYP=3
	8800	PALE	47	GB	0206.8	0208.5	2.3	91.0			QL=6 ST=2 TYP=5
	15400	PALE	4	S/F	0207.1	0208.5	6.2	49.0			QL=6 ST=2 TYP=3
	2840	PEKG	29	PBI	0213.0		11.0	29.4	3.0		
	9395	PEKG	29	PBI	0213.0		10.0	32.5	13.5		
	2000	TYKW	29	PBI	0215.0		30.0	4.0	1.5		
	9400	TYKW	29	PBI	0219.0		25.0	11.0	4.0		
	3750	TYKW	30	PBI	0220.0		200.0	13.0	3.0		
	410	LEAR	8	S	0304.5	0304.8	.6	17.0			QL=6 ST=2 TYP=3
	2950	GORK	20	GRF	0314.0E	0338.0	82.0D	9.6			
	9400	TYKW	21	GRF	0315.0	0338.0	60.0	4.0	2.0		
	2000	TYKW	21	GRF	0330.0	0340.0	45.0	1.5	.7		
	3750	TYKW	20	GRF	0330.0	0342.0	45.0	5.0	2.5		
	1000	TYKW	32	ABS	0350.0	0455.0	125.0	-2.0	-1.0		
	2000	TYKW	31	ABS	0415.0	0453.0	80.0	-4.0	-2.0		
	9400	TYKW	31	ABS	0415.0	0455.0	60.0U	-4.0	-2.0		INTERFERENCE
	3750	TYKW	31	ABS	0420.0	0455.0	60.0	-5.0	-2.5		
	9395	PEKG	1	S	0433.0	0434.5	5.0	7.4	2.0		

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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
29	9400	TYKW	45	C	0436.0	0437.6	3.0	9.0	2.0		
	9100	GORK	21	GRF	0436.2		8.7				
	9100	GORK	1	S	0436.8	0437.7	8.8	7.0			
	2840	PEKG	28	PRE	0502.0	0537.0	67.0	5.6	4.0		
	9395	PEKG	21	GRF	0505.0	0517.8	45.0	21.2	3.9		
	9395	PEKG	1	S	0518.0	0518.6	4.0	9.3	3.3		
	9100	GORK	1	S	0518.9	0519.5	1.7	10.0			
	9400	TYKW	5	S	0519.0	0519.6	5.0	13.0	3.0		
	8800	LEAR	4	S/F	0519.0	0519.5	3.3	11.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0519.3	0519.6	1.3	10.0			QL=6 ST=2 TYP=3
	9100	GORK	29	PBI	0520.6	0520.6	10.2	5.0			
	650	GORK	21	GRF	0522.0	0556.6	251.0	3.0			
	950	GORK	4	S/F	0530.5	0531.0	1.3	48.0			
	1000	TYKW	45	C	0530.7	0531.0	1.5	42.0	7.0		
	245	LEAR	8	S	0550.6	0550.8	.5	13.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0550.6	0551.0	.5	27.0			QL=6 ST=2 TYP=3
	2000	TYKW	21	GRF	0600.0	0810.0	180.0D	12.0	7.0D		
	3750	TYKW	21	GRF	0605.0	0657.0	160.0	10.0	5.0		
	1000	TYKW	21	GRF	0605.0	0755.0	175.0D	5.0	3.0D		
	2950	GORK	21	GRF	0606.9	0612.0	200.0D	9.6			
	9400	TYKW	21	GRF	0608.0	0701.0	120.0	17.0	8.0		
	9100	GORK	22	GRF	0608.5		27.0				
	8800	LEAR	4	S/F	0608.6	0612.0	6.7	13.0			QL=6 ST=2 TYP=3
	4995	LEAR	4	S/F	0608.6	0612.5	7.2	13.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0608.8	0611.5	4.5	13.0			QL=6 ST=2 TYP=3
	2840	PEKG	45	C	0609.0	0611.5		17.4			
	9395	PEKG	45	C	0609.0	0611.9		12.0			
	9400	TYKW	45	C	0609.0	0612.4	6.0	9.0	4.0		
	2840	PEKG			0609.0	0627.5	25.0	21.4	11.2		
	9395	PEKG			0609.0	0627.6	26.0	6.0	3.4		
	3750	TYKW	45	C	0609.0	0627.6	30.0	15.0	6.0		
	2000	TYKW	45	C	0609.0	0627.8	35.0	15.0	5.0		
	8800	ATHN	20	GRF	0609.8E	0612.0	5.7D	11.0			QL=5 ST=2 TYP=2
	2650	DWIN	1	S	0610.0	0612.0	3.0	10.0	5.0		
	1415	ATHN	20	GRF	0610.0E	0610.5	4.6D	11.0			QL=5 ST=2 TYP=2
	2695	ATHN	20	GRF	0610.0E	0611.8	5.5D	11.0			QL=5 ST=2 TYP=2
	1415	LEAR	4	S/F	0610.1	0610.5	3.7	25.0			QL=6 ST=2 TYP=3
	1415	MANI	3	S	0610.3	0611.4	2.2	18.9	6.3		
	2695	MANI	3	S	0610.3	0612.0	3.7	11.4	3.8		
	4995	ATHN	20	GRF	0610.5E	0612.1	5.0D	13.0			QL=5 ST=2 TYP=2
	4995	MANI	3	S	0610.8	0612.0	2.7	21.2	7.1		
	1000	TYKW	5	S	0611.0	0611.4	1.0	2.0	.5		
	9400	TYKW	5	S	0624.0	0627.4	12.0	6.0	2.0		
	1000	TYKW	45	C	0624.0	0627.7	5.0	6.0	1.0		
	1415	LEAR	4	S/F	0624.6	0627.6	4.7	10.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0624.8	0627.6	8.8	11.0			QL=6 ST=2 TYP=3
	2650	DWIN	1	S	0625.0	0628.0	5.0	15.0	5.0		
	1415	MANI	1	S	0625.5	0628.2	4.5	6.6	2.2		
	2695	MANI	3	S	0625.5	0628.6	4.5	13.7	4.6		
	2950	GORK	1	S	0626.0	0627.8	3.2	7.2	3.6		
	650	GORK	4	S/F	0626.9	0627.1	1.1	49.0			
	610	LEAR	47	GB	0627.0	0627.3	1.0	91.0			QL=6 ST=2 TYP=5
	606	MANI	4	S/F	0627.5	0628.7	1.8	51.0	17.0		
	1000	TYKW	29	PBI	0629.0		15.0	1.0	.5		
	2840	PEKG	29	PBI	0634.0		50.0	13.4	6.9		
	9395	PEKG	21	GRF	0642.0	0703.2	66.0	12.6	2.4		
	9100	GORK	20	GRF	0646.5	0701.4	33.7	7.0			
	8800	LEAR	4	S/F	0659.8	0701.0	3.3	8.0			QL=6 ST=2 TYP=3
	4995	LEAR	8	S	0659.8	0701.1	1.8	10.0			QL=6 ST=2 TYP=3
	3750	TYKW	5	S	0700.0	0701.1	20.0	6.0	2.0		
	610	LEAR	8	S	0740.1	0740.1	.7	11.0			QL=6 ST=2 TYP=3
	536	ONDR	40	F	0740.1	0740.2	4.0	20.0	8.0		
	610	LEAR	8	S	0743.6	0743.6	.2	28.0			QL=6 ST=2 TYP=3
	9395	PEKG	3	S	0818.0E	0820.2	7.0D	46.8	14.9		
	9100	GORK	2	S/F	0819.6	0820.0	2.2	48.0			
	9400	TYKW	5	S	0819.7	0820.1	3.0	60.0	12.0		
	8800	LEAR	47	GB	0819.8	0820.0	1.5	50.0			QL=6 ST=2 TYP=5
	15400	LEAR	8	S	0819.8	0820.1	.5	32.0			QL=6 ST=2 TYP=3
	9500	POTS	3	S	0819.9	0820.3	3.1	48.0			
	9100	GORK	29	PBI	0821.8	0821.9	15.3	3.4			

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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
29	3750	TYKW	5	S	0849.0	0851.5	5.0	37.0	14.0		
	9395	PEKG	3	S	0849.0	0851.6	16.0	236.0	30.6		
	9400	TYKW	45	C	0849.0	0851.7	6.0	296.0	60.0		
	9100	GORK	21	GRF	0849.3	0854.9	36.0	12.0			
	9500	POTS	29	PBI	0849.5	0851.6	36.0	270.0			
	8400	BERN	4	S/F	0849.8	0851.7	7.0	326.0			
	2840	PEKG	1	S	0850.0	0851.5	7.0	7.5	4.0		
	3000	POTS	29	PBI	0850.0U	0851.8	20.0U	17.0			
	8800	LEAR	47	GB	0850.0	0851.6	9.3	340.0			QL=6 ST=2 TYP=5
	9100	GORK	4	S/F	0850.0	0851.7	4.0	290.0			
	4995	MANI	3	S	0850.0	0852.1	4.0	98.1	32.7		
	8800	MANI	3	S	0850.0	0852.2	3.5	185.2	61.7		
	4995	LEAR	47	GB	0850.3	0851.6	9.3	110.0			QL=6 ST=2 TYP=5
	19600	BERN	3	S	0850.5	0851.7	4.0	99.0			
	15400	LEAR	47	GB	0850.8	0851.6	3.0	189.0			QL=6 ST=2 TYP=5
	2950	GORK	1	S	0850.9	0851.5	1.6	6.4			
	3750	TYKW	29	PBI	0854.0		20.0U	6.0	3.0U		
	9400	TYKW	29	PBI	0855.0		20.0D	12.0	10.0D		
	9100	GORK	1	S	0915.8	0916.3	1.5	3.0			
	8400	BERN	1	S	0947.2	0948.5	3.5	23.0			
	9500	POTS	3	S	0947.3	0948.0	2.7	14.0			
	8400	BERN	2	S/F	1012.0	1014.3	9.0	24.0			
	9500	POTS	29	PBI	1012.5	1013.0	23.0	17.0			
	8800	SGMR	4	S/F	1026.8	1028.3	5.3	42.0			QL=6 ST=2 TYP=3
	15400	SGMR	47	GB	1027.0	1030.3	5.1	93.0			QL=6 ST=2 TYP=5
	4995	SGMR	4	S/F	1028.1	1028.6	4.0	18.0			QL=6 ST=2 TYP=3
	430	KRAK	8	S	1035.8	1035.9	.2	70.0			
	536	ONDR	8	S	1130.6	1130.7	.3	7.0			
	9400	HUAN	20	GRF	1254.2	1300.0U	33.9	9.6	3.0		0
	9500	POTS	23	GRF	1318.0	1321.4	22.0	17.0			
	2800	OTTA	21	GRF	1410.0	1530.0	130.0	2.4	1.2		
	2800	OTTA	1	S	1426.6	1426.8	1.0	2.4			
	9400	HUAN	2	S/F	1534.2	1536.0	2.5	11.2	5.1		L
	9400	HUAN	3	S	1654.2	1655.3	4.5	217.9	87.5		L
	8400	BERN	3	S	1654.5	1655.4	4.0	191.0			
	19600	BERN	3	S	1654.5	1655.4	4.0	84.0			
	8800	PALE	47	GB	1654.6	1655.3	5.2	230.0			QL=6 ST=2 TYP=5
	8800	ATHN	47	GB	1654.6	1655.6	4.2	58.0			QL=6 ST=2 TYP=5
	4995	SGMR	47	GB	1654.8	1655.3	2.8	119.0			QL=6 ST=2 TYP=5
	4995	PALE	47	GB	1654.8	1655.3	3.0	160.0			QL=6 ST=2 TYP=5
	15400	SGMR	47	GB	1654.8	1655.3	1.5	139.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	1654.8	1655.3	2.5	180.0			QL=6 ST=2 TYP=5
	15400	PALE	47	GB	1654.8	1655.3	2.3	189.0			QL=6 ST=2 TYP=5
	2695	ATHN	4	S/F	1654.8	1655.6	8.0	24.0			QL=6 ST=2 TYP=3
	4995	ATHN	47	GB	1654.8	1655.6	5.8	78.0			QL=6 ST=2 TYP=5
	2695	PALE	8	S	1655.0	1655.3	1.1	39.0			QL=6 ST=2 TYP=3
	2695	SGMR	8	S	1655.0	1655.5	1.1	30.0			QL=6 ST=2 TYP=3
	2800	OTTA	3	S	1655.0	1655.5	4.0	40.0	12.0		
	9400	HUAN	29	PBI	1658.7	1658.7	58.9	16.0	8.2		L
	2800	OTTA	29	PBI	1659.0	1659.0	40.0	3.4	1.6		
	8800	ATHN	47	GB	1712.8	1715.5	7.2	58.0			QL=6 ST=2 TYP=5
	4995	ATHN	47	GB	1713.1	1715.5	5.4	55.0			QL=6 ST=2 TYP=5
	1415	ATHN	4	S/F	1713.1	1715.5	5.4	8.0			QL=6 ST=2 TYP=3
	2695	ATHN	47	GB	1713.1	1715.5	5.4	61.0			QL=6 ST=2 TYP=5
	9400	HUAN	28	PRE	2040.2	2058.0	17.8	9.6	4.8		L
	2800	OTTA	21	GRF	2045.0	2058.0	55.0	12.6	4.2		
	9400	HUAN	4	S/F	2058.0	2101.0		49.7	19.0		L
	2000	TYKW	21	GRF	2059.0E	2059.0U	290.0D	17.0D	6.0D		
	9400	TYKW	45	C	2059.0E	2101.0	5.0D	68.0	34.0D		
	2800	OTTA	3	S	2100.0	2101.0	2.0	14.2	4.8		
	4995	SGMR	8	S	2100.1	2101.0	1.2	29.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2100.6	2101.0	.5	40.0			QL=6 ST=2 TYP=3
	2000	TYKW	5	S	2100.7	2101.0	.7	9.0	2.5		
	2695	SGMR	8	S	2100.8	2101.0	.3	19.0			QL=6 ST=2 TYP=3
	9400	HUAN	29	PBI	2102.5	2102.5	26.0	2.4	1.8		L
	3750	TYKW	21	GRF	2103.0E	2103.0U	220.0D	25.0D	10.0D		
	9400	TYKW	30	PBI	2107.0E		240.0D	24.0	12.0D		
	9400	TYKW	21	GRF	2145.0	2240.0	170.0	36.0	22.0		
	3750	TYKW	21	GRF	2145.0	2245.0	160.0	27.0	20.0		
	9400	HUAN	28	PRE	2146.2	2200.1	13.9	11.2	7.6		0

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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
29	2800	OTTA	21	GRF	2147.0	2240.0	190.0	20.4	12.6		
	1000	TYKW	5	S	2149.0	2149.2	.5	10.0	2.5		
	2000	TYKW	21	GRF	2153.0	2205.0	165.0	13.0	8.0		
	3750	TYKW	45	C	2155.0	2201.0	15.0	22.0	6.0		
	1000	TYKW	21	GRF	2200.0	2300.0	180.0	2.0	1.0		
	9400	HUAN	4	S/F	2200.1	2201.1	2.7	40.0	19.1		0
	17000	NOBE	1	S	2200.4	2201.0	1.5	38.0			0
	2800	OTTA	3	S	2200.5	2201.0	1.5	10.0	5.0		
	9400	TYKW	45	C	2200.5	2201.0	6.5	65.0	8.0		
	2000	TYKW	5	S	2200.5	2201.0	1.5	7.0	3.0		
	1000	TYKW	42	SER	2200.5	2201.0	4.5	3.0	.5		
	4995	SGMR	8	S	2200.6	2201.0	.7	21.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2200.6	2201.0	.9	42.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	2200.6	2201.0	.5	27.0			QL=6 ST=2 TYP=3
	15400	PALE	8	S	2200.6	2201.0	1.0	41.0			QL=6 ST=2 TYP=3
	2695	SGMR	8	S	2200.8	2201.0	.7	17.0			QL=6 ST=2 TYP=3
	2000	TYKW	8	S	2310.0	2310.0	.2	28.0	4.0		
30	245	LEAR	43	NS	0110.8	0906.1	498.2D	76.0			QL=6 ST=2 TYP=1
	260	ONDR	43	NS	0611.0	0722.0U	169.0D	17.0			
	245	PALE	43	NS	2230.0	0117.6	370.0D	169.0			QL=6 ST=2 TYP=1
	245	LEAR	8	S	0005.3	0005.6	.5	18.0			QL=6 ST=2 TYP=3
	9395	PEKG	41	F	0112.0	0113.3		13.5			
	9395	PEKG			0112.0	0115.5	6.0	7.5	2.3		
	3750	TYKW	21	GRF	0113.0	0135.0	50.0	2.0	1.0		
	2840	PEKG	1	S	0114.0	0115.5	4.0	6.1	1.8		
	3750	TYKW	5	S	0115.0	0115.4	2.0	6.0	2.0		
	9400	TYKW	5	S	0115.0	0115.4	2.0	9.0	2.0		
	2000	TYKW	5	S	0115.0	0115.5	1.5	3.0	1.0		
	4995	LEAR	8	S	0115.1	0115.3	.9	8.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0115.1	0115.3	.7	10.0			QL=6 ST=2 TYP=3
	1415	LEAR	8	S	0115.1	0115.3	.2	21.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0115.1	0115.3	.9	11.0			QL=6 ST=2 TYP=3
	2695	PENT	1	S	0115.2	0115.5	1.5	8.8	3.0		
	3750	TYKW	21	GRF	0230.0	0330.0	335.0	6.0	3.0		
	1000	TYKW	45	C	0308.0	0308.5	.6	10.0	1.5		
	200	GORK	4	S/F	0309.3	0309.9	1.7	290.0			
	2000	TYKW	28	PRE	0319.0	0321.6	17.0	2.0	1.5		
	1000	TYKW	5	S	0320.0	0322.0	5.0	1.0	.5		
	2695	ATHN	47	GB	0331.8	0333.3	11.3	230.0			QL=5 ST=2 TYP=5
	4995	ATHN	47	GB	0331.8	0333.3	10.8	320.0			QL=5 ST=2 TYP=5
	1415	ATHN	4	S/F	0331.8	0333.3	10.5	8.0			QL=5 ST=2 TYP=3
	8800	ATHN	47	GB	0332.3	0333.3	10.3	130.0			QL=5 ST=2 TYP=5
	9395	PEKG	3	S	0333.0	0337.9	10.0	137.0	31.4		
	2000	TYKW	8	S	0335.8	0335.9	.2	97.0	14.0		
	9400	TYKW	5	S	0336.0	0337.9	7.0	148.0	45.0		
	3750	TYKW	5	S	0336.0	0338.0	7.0	345.0	100.0		
	2000	TYKW	5	S	0336.0	0338.1	8.0	70.0	22.0		
	9400	TYKW	21	GRF	0336.0	0407.0	100.0	14.0	8.0		
	2950	GORK	3	S	0336.0	0337.9	4.3	211.0			
	9100	GORK	3	S	0336.2	0337.9	4.3	166.0			
	950	GORK	20	GRF	0336.5	0337.9	7.5	2.0			
	2695	PALE	47	GB	0336.5	0338.1	7.3	239.0			QL=6 ST=2 TYP=5
	4995	PALE	47	GB	0336.6	0337.8	10.5	390.0			QL=6 ST=2 TYP=5
	1000	TYKW	45	C	0337.0	0338.0	6.0	1.5	.5		
	8800	PALE	47	GB	0337.0	0337.8	5.8	260.0			QL=6 ST=2 TYP=5
	17000	NOBE	3	S	0337.2	0338.1	5.0	43.0	1.0		L
	1415	PALE	8	S	0337.3	0337.6	.8	27.0			QL=6 ST=2 TYP=3
	15400	PALE	47	GB	0337.3	0337.8	5.3	79.0			QL=6 ST=2 TYP=5
	1415	LEAR	4	S/F	0337.5E	0337.6	6.5D	22.0			QL=2 ST=2 TYP=3
	2695	LEAR	47	GB	0337.6E	0338.0	7.2D	230.0			QL=2 ST=2 TYP=5
	4995	LEAR	47	GB	0337.8E	0338.0	6.8D	250.0			QL=2 ST=2 TYP=5
	4995	MANI	3	S	0338.0	0339.6	5.5	358.4	119.5		
	2695	MANI	3	S	0338.0	0339.8	7.0	245.7	81.9		
	1415	MANI	3	S	0338.2	0339.7	2.8	18.6	6.2		
	8800	MANI	3	S	0338.4	0339.6	3.6	168.0	56.0		
	8800	LEAR	4	S/F	0340.0E	0340.1	4.5D	49.0			QL=2 ST=2 TYP=3
	15400	LEAR	4	S/F	0340.1E	0340.1	2.5D	26.0			QL=2 ST=2 TYP=3
	2950	GORK	30	PBI	0340.3	0340.4	260.0	38.0			
	9100	GORK	30	PBI	0341.5	0346.0	238.0	33.0			

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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
30	9395	PEKG	30	PBI	0343.0		72.0	14.0	8.3		
	9400	TYKW	29	PBI	0343.0		10.0	8.0	4.0		
	3750	TYKW	29	PBI	0343.0		75.0	21.0	10.0		
	2000	TYKW	30	PBI	0344.0		260.0	10.0	3.0		
	9400	TYKW	45	C	0408.0	0409.5	5.0	68.0	14.0		
	9395	PEKG	5	S	0408.0	0409.7	5.0	63.4	13.7		
	8800	LEAR	47	GB	0408.3	0409.6	4.2	76.0			QL=6 ST=2 TYP=5
	9100	GORK	3	S	0408.4	0409.7	3.3	65.0			
	17000	NOBE	3	S	0408.8	0409.6	3.0	43.0	1.0		L
	410	LEAR	8	S	0409.0	0409.1	.8	9.0			QL=6 ST=2 TYP=3
	15400	LEAR	47	GB	0409.0	0409.5	3.1	60.0			QL=6 ST=2 TYP=5
	8800	PALE	47	GB	0409.1	0409.6	1.2	70.0			QL=6 ST=2 TYP=5
	15400	PALE	47	GB	0409.1	0409.6	1.5	63.0			QL=6 ST=2 TYP=5
	9400	TYKW	29	PBI	Q413.0		10.0	2.0	1.0		
	3750	TYKW	5	S	0501.0	0504.5	10.0	14.0	2.5		
	2840	PEKG	5	S	0502.0	0504.3	18.0	11.7	3.1		
	2000	TYKW	5	S	0503.0	0504.4	3.0	3.5	1.5		
	2950	GORK	1	S	0503.9	0504.5	2.0	8.1			
	2000	TYKW	30	PBI	0506.0		40.0	1.5	.7		
	2000	TYKW	5	S	0523.0	0527.0	15.0	1.0	.5		
	9400	TYKW	21	GRF	0545.0	0650.0	180.0U	15.0	8.0U		RAIN
	3750	TYKW	5	S	0550.0	0555.3	8.0	50.0	15.0		
	2695	LEAR	4	S/F	0551.8	0555.1	12.2	30.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0551.8	0555.1	6.0	26.0			QL=6 ST=2 TYP=3
	15400	LEAR	4	S/F	0551.8	0555.1	5.2	6.0			QL=6 ST=2 TYP=3
	4995	LEAR	47	GB	0551.8	0555.1	12.2	50.0			QL=6 ST=2 TYP=5
	2000	TYKW	45	C	0552.0	0554.4	4.0	13.0	4.0		
	4995	ATHN	47	GB	0552.1	0555.1	7.7	56.0			QL=6 ST=2 TYP=5
	2695	ATHN	4	S/F	0552.3	0555.1	7.8	27.0			QL=6 ST=2 TYP=3
	8800	ATHN	4	S/F	0552.5	0555.1	5.6	27.0			QL=6 ST=2 TYP=3
	1415	ATHN	4	S/F	0553.8	0555.6	6.3	5.0			QL=6 ST=2 TYP=3
	2840	PEKG	1	S	0554.0	0555.2	10.0	3.5	1.9		
	9395	PEKG	3	S	0554.0	0555.3	4.0	21.0	1.4		
	8400	BERN	1	S	0554.4	0555.2	3.0	37.0			
	9100	GORK	1	S	0554.4	0555.3	3.0	18.0			
	9400	TYKW	5	S	0554.5	0555.3	3.5	13.0	5.0		RAIN
	2950	GORK	3	S	0554.8	0555.3	3.2	17.0			
	2650	DWIN	1	S	0555.0	0555.0	1.0	18.0	9.0		
	4995	MANI	3	S	0555.6	0556.5	2.9	48.0	16.0		
	2000	TYKW	29	PBI	0556.0		125.0	7.0	4.0		
	2695	MANI	3	S	0556.0	0556.8	2.0	25.7	8.6		
	3750	TYKW	29	PBI	0558.0		120.0	17.0	10.0		
	410	LEAR	8	S	0636.1	0636.3	.2	22.0			QL=6 ST=3 TYP=3
	1470	POTS	4	S/F	1013.0	1015.0	3.5	6.0			
	8400	BERN	3	S	1013.7	1014.9	5.0	107.0			
	204	IZMI	5	S	1013.8	1014.5	3.0	48.0	20.0		
	2650	DWIN	1	S	1014.0	1015.0	2.0	18.0	9.0		
	4995	SGMR	47	GB	1014.1	1014.6	2.0	110.0			QL=6 ST=2 TYP=5
	2695	SGMR	8	S	1014.1	1014.6	1.2	20.0			QL=6 ST=2 TYP=3
	15400	SGMR	4	S/F	1014.3	1015.1	6.7	38.0			QL=6 ST=2 TYP=3
	9500	POTS	3	S	1014.4	1014.9	4.1	62.0			
	8800	SGMR	8	S	1014.6	1014.6	.7	28.0			QL=6 ST=2 TYP=3
	810	KRAK	8	S	1048.5	1048.5	.2	20.0			
	2800	OTTA	260	FAL	1130.0	1300.0	90.0	-6.2	-3.6		
	810	KRAK	8	S	1159.5	1159.7	.3	14.0			
	2800	OTTA	1	S	1932.0	1932.5	1.5	3.6	1.8		
	3750	TYKW	20	GRF	2240.0	2310.0	120.0	3.0	1.5		
	9400	TYKW	20	GRF	2240.0	2320.0	110.0	4.0	2.0		
31	245	LEAR	43	NS	0013.8	0117.6	555.2D	139.0			QL=6 ST=2 TYP=1
	410	LEAR	43	NS	0234.1	0303.6	205.9	11.0			QL=6 ST=2 TYP=1
	245	LEAR	8	S	0011.8	0012.5	.8	30.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0012.3	0012.5	.3	21.0			QL=6 ST=2 TYP=3
	9395	PEKG	3	S	0306.0	0310.0	36.0	48.6	4.8		
	2840	PEKG	3	S	0308.0	0310.0	6.0	122.0	20.5		
	2930	VORO	3	S	0308.0	0310.0	17.0	116.0			
	650	GORK	4	S/F	0308.5	0309.6	5.5	27.0	7.0		
	950	GORK	4	S/F	0308.8	0309.4	5.7	105.0			
	1415	LEAR	47	GB	0308.8	0309.8	4.2	75.0			QL=6 ST=2 TYP=5
	1000	TYKW	45	C	0309.0	0309.4	5.0	117.0	15.0		

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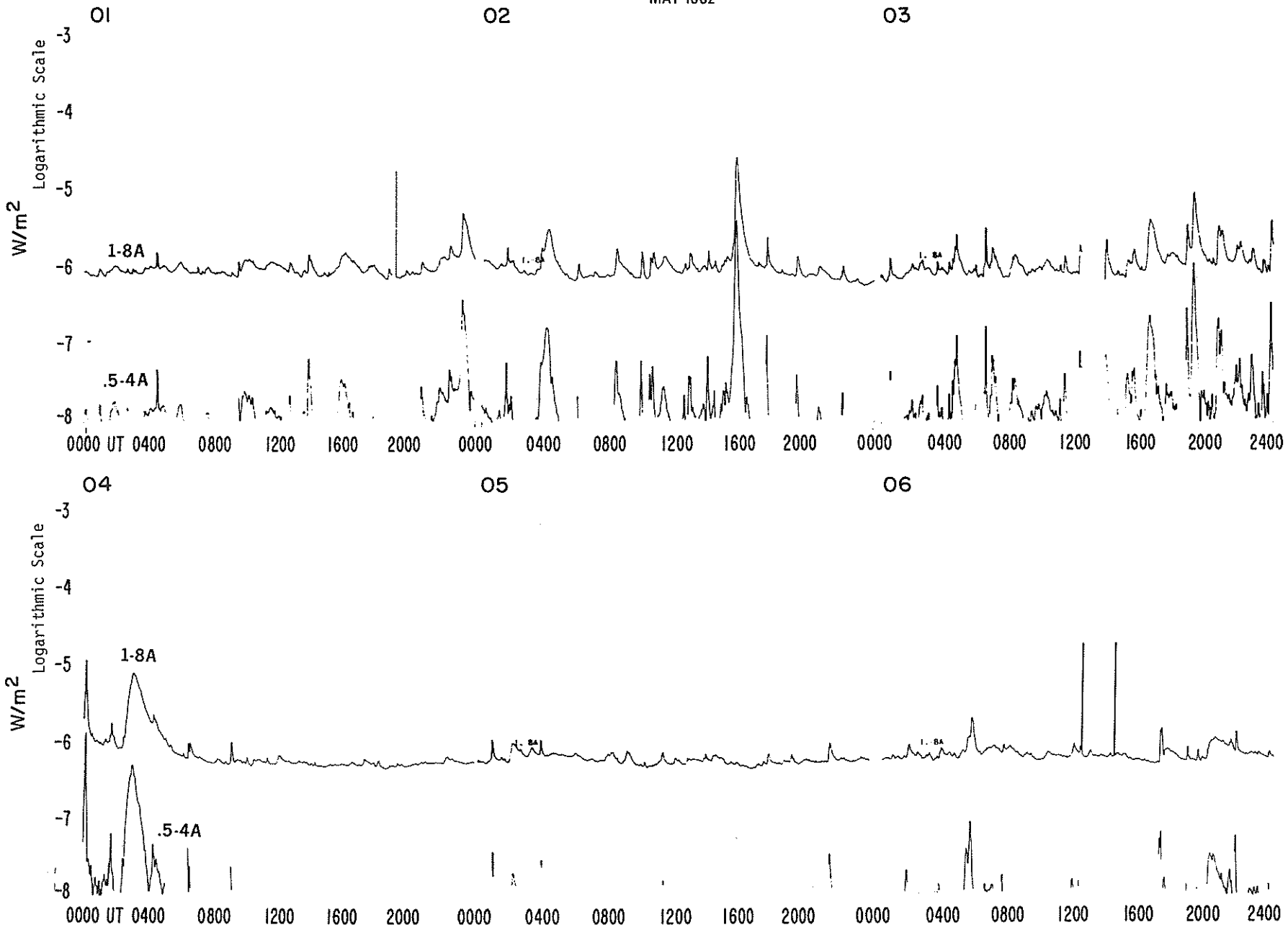
Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
31	9400	TYKW	5	S	0309.0	0310.0	4.0	38.0	14.0		
	3750	TYKW	5	S	0309.0	0310.2	5.0	90.0	26.0		
	2000	TYKW	5	S	0309.0	0310.3	5.0	80.0	23.0		
	410	LEAR	47	GB	0309.0	0309.6	2.1	110.0			QL=6 ST=2 TYP=5
	610	LEAR	4	S/F	0309.0	0309.6	2.1	35.0			QL=6 ST=2 TYP=3
	2695	LEAR	47	GB	0309.0	0310.0	3.8	130.0			QL=6 ST=2 TYP=5
	9100	GORK	3	S	0309.0	0310.1	2.2	40.0			
	4995	LEAR	47	GB	0309.0	0310.1	3.8	80.0			QL=6 ST=2 TYP=5
	245	LEAR	47	GB	0309.1	0309.6	2.0	400.0			QL=6 ST=2 TYP=5
	1415	PALE	47	GB	0309.1	0309.8	2.0	56.0			QL=6 ST=2 TYP=5
	2950	GORK	3	S	0309.1	0310.0	2.9	106.0	53.0		
	8800	LEAR	4	S/F	0309.1	0310.1	3.2	40.0			QL=6 ST=2 TYP=3
	200	HIRA	45	C	0309.2	0309.7	1.7	320.0	86.0		0
	500	HIRA	45	C	0309.2	0310.1	2.0	54.0	30.0		WR
	410	PALE	47	GB	0309.3	0309.6	1.2	139.0			QL=6 ST=2 TYP=5
	245	PALE	47	GB	0309.3	0309.6	1.5	460.0			QL=6 ST=2 TYP=5
	606	MANI	4	S/F	0309.4	0310.0	2.9	37.8	12.6		
	1415	MANI	4	S/F	0309.4	0310.3	3.6	49.0	16.3		
	2695	PALE	47	GB	0309.5	0310.0	2.0	110.0			QL=6 ST=2 TYP=5
	4995	PALE	47	GB	0309.5	0310.1	1.6	78.0			QL=6 ST=2 TYP=5
	2695	MANI	3	S	0309.5	0310.4	3.5	115.6	38.5		
	4995	MANI	3	S	0309.5	0310.4	3.0	91.6	30.5		
	8800	PALE	8	S	0309.6	0310.1	1.0	39.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0309.6	0310.3	1.7	20.0			QL=6 ST=2 TYP=3
	8800	MANI	3	S	0309.6	0310.4	2.0	51.9	17.3		
	17000	NOBE	1	S	0309.8	0310.1	4.0	14.0			0
	100	GORK	45	C	0310.0	0310.1	1.1	60.0			
	610	PALE	8	S	0310.0	0310.1	.3	21.0			QL=6 ST=2 TYP=3
	100	GORK			0310.0	0310.3		70.0			
	9100	GORK	30	PBI	0311.2	0311.2	30.8	14.0			
	2950	GORK	29	PBI	0312.0	0312.0	6.8	8.7			
	9400	TYKW	29	PBI	0313.0		65.0	5.0	2.0		
	2000	TYKW	30	PBI	0314.0		45.0	1.0	.5		
	3750	TYKW	29	PBI	0314.0		160.0	2.0	1.0		
	1000	TYKW	29	PBI	0314.0		40.0	1.0	.5		
	2840	PEKG	29	PBI	0314.0	0326.9	20.0	3.6	1.1		
	2000	TYKW	5	S	0324.0	0327.0	10.0	2.0	.7		
	2000	TYKW	20	GRF	0432.0	0440.0	50.0	1.0	.5		
	610	LEAR	8	S	0542.5	0542.8	.3	20.0			QL=6 ST=2 TYP=3
	260	ONDR	40	F	0724.7	0724.7	2.0	11.0	9.0		
	3750	TYKW	5	S	0725.4	0725.8	1.0	2.5	1.0		
	2000	TYKW	5	S	0725.5	0725.8	1.1	1.0	.3		
	1000	TYKW	5	S	0725.5	0726.0	1.1	2.0	.5		
	536	ONDR	8	S	0725.8	0726.0	.7	1.0			
	260	ONDR	8	S	0851.8	0853.0	1.8	30.0			
	410	LEAR	8	S	0852.6	0853.0	.5	7.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0852.8	0853.0	.3	40.0			QL=6 ST=2 TYP=3
	430	KRAK	42	SER	1221.2	1225.1	15.7	71.0			
	930	BORD	41	F	1257.0	1257.2	1.0	22.0	2.0		
	2800	OTTA	20	GRF	1300.0	1435.0	190.0	6.6	2.8		
	9400	HUAN	20	GRF	1412.6	1435.5	44.9	4.4	2.2		0
	9400	HUAN	20	GRF	1833.6	1855.0	45.4	5.1	1.8		0
	2800	OTTA	1	S	1851.5	1853.0	3.0	2.0	1.0		
	245	PALE	49	GB	1851.8	1852.1	.8	42000.0			QL=5 ST=2 TYP=6
	9400	HUAN	20	GRF	2014.6	2028.7	23.3	3.4	2.0		0
	2800	OTTA	22	GRF	2015.0	2115.0	105.0	2.0	1.0		
	9395	PEKG	20	GRF	2338.0	0004.5	54.0	9.4	4.2		

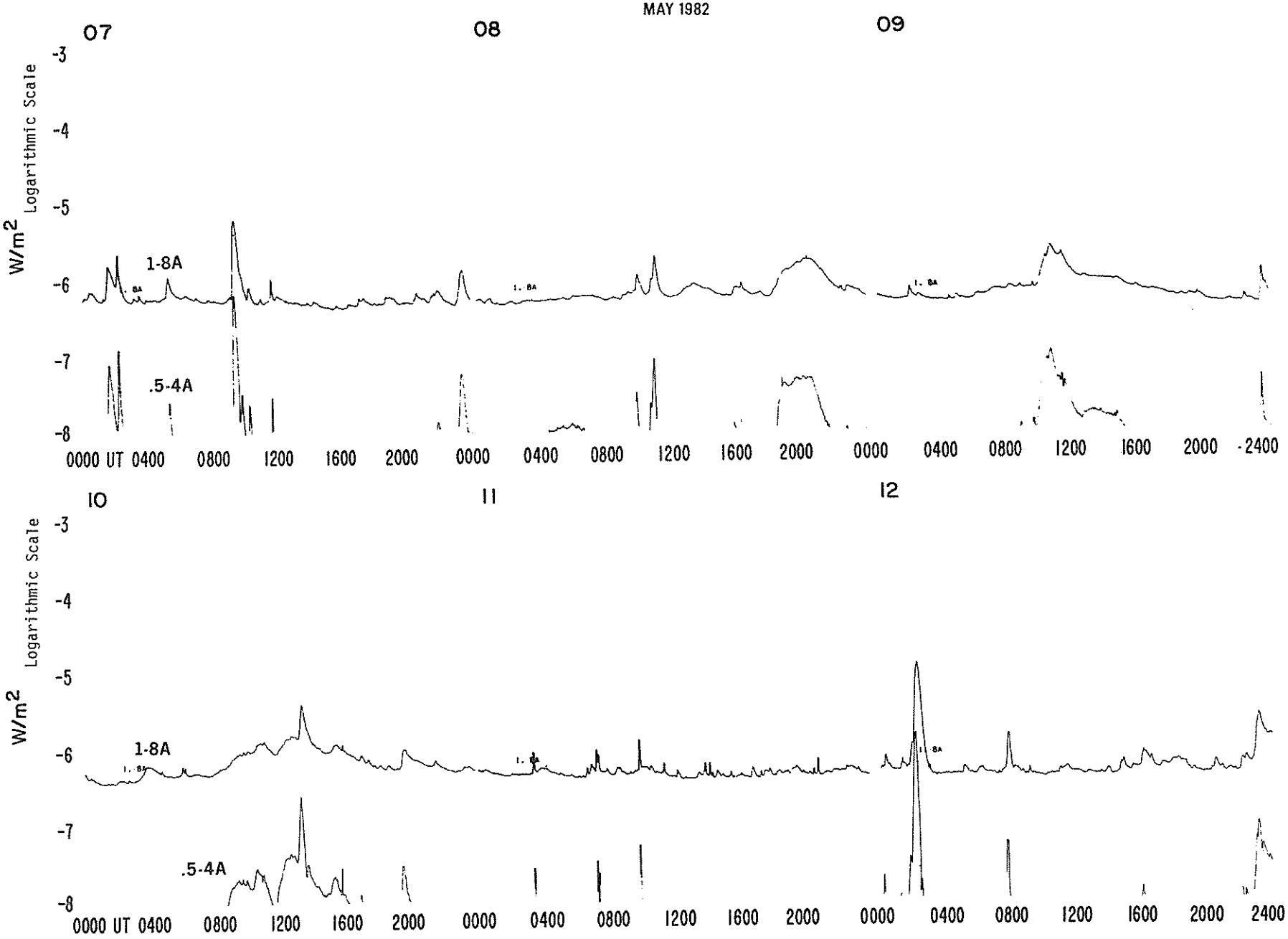
SMS-GOES X-RAYS

MAY 1982



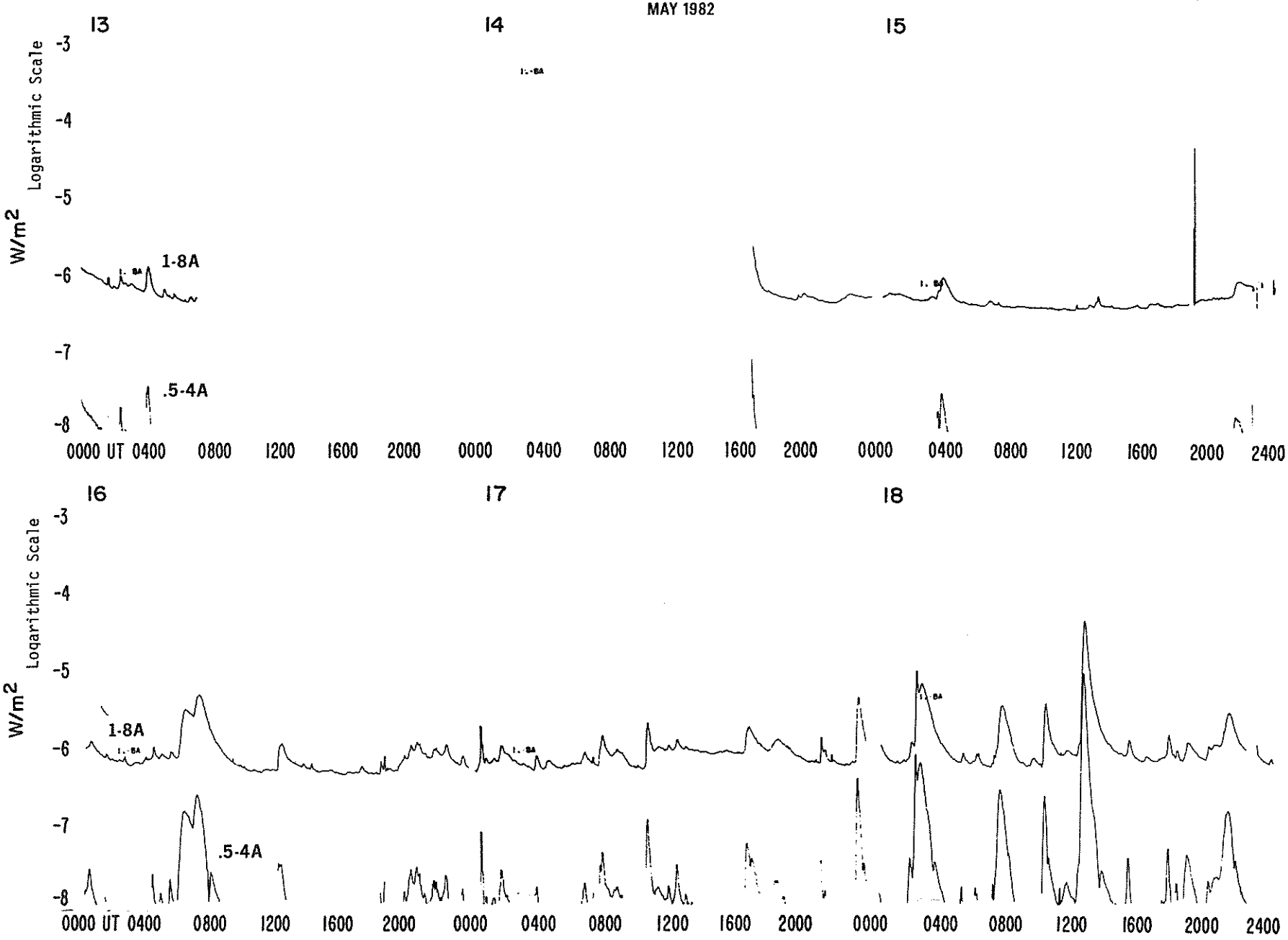
SMS-GOES X-RAYS

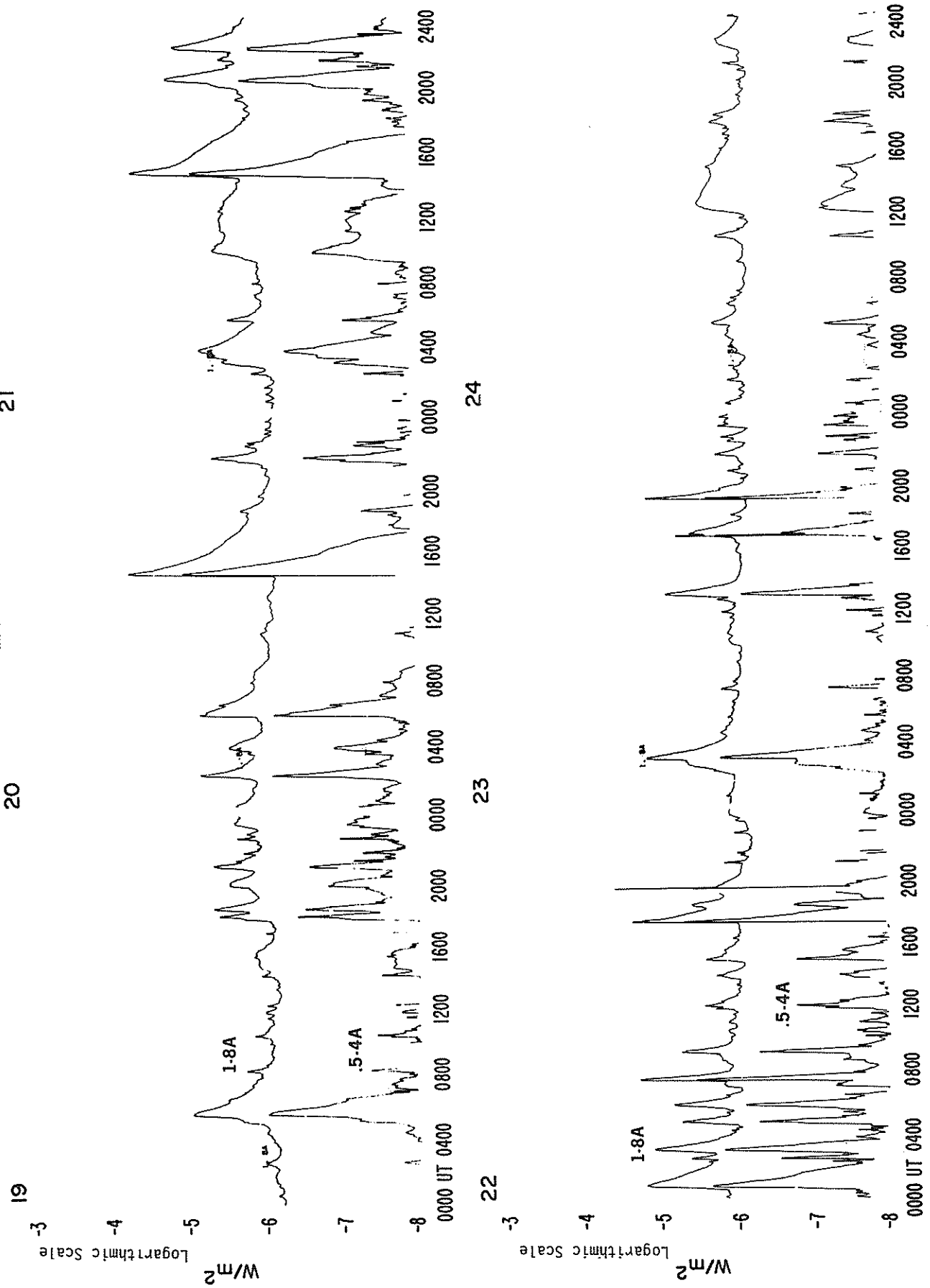
MAY 1982



SMS-GOES X-RAYS

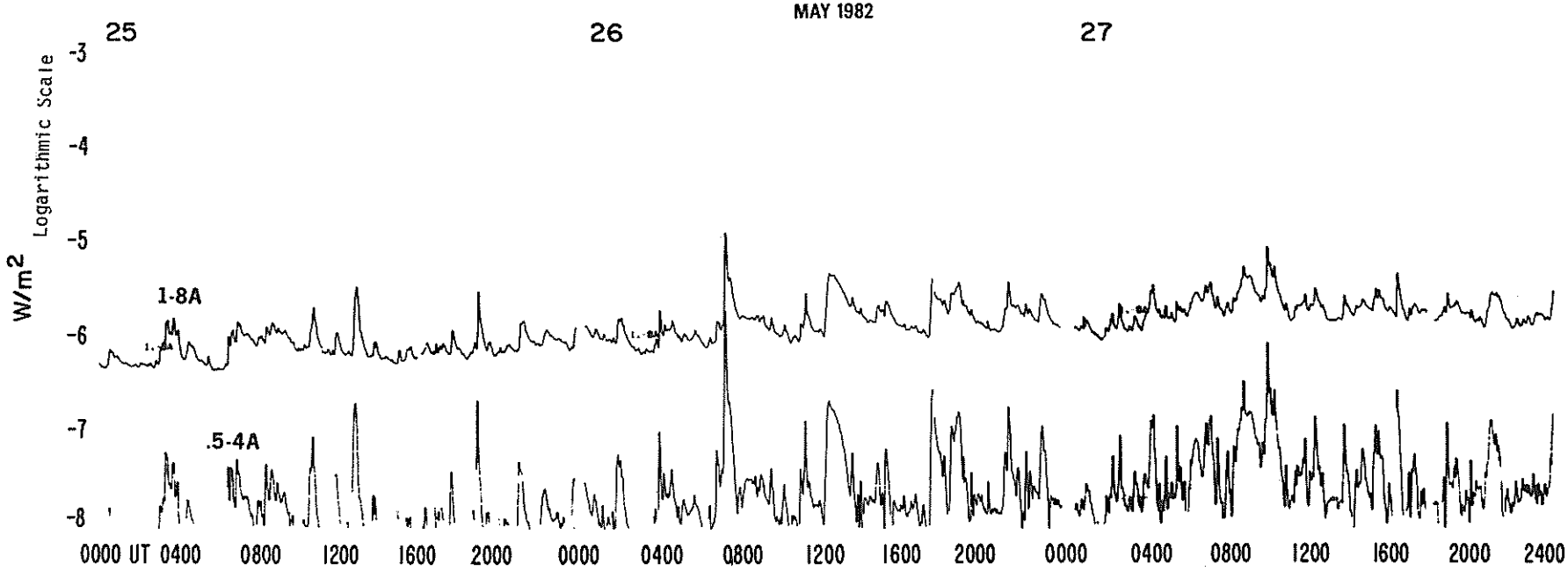
MAY 1982

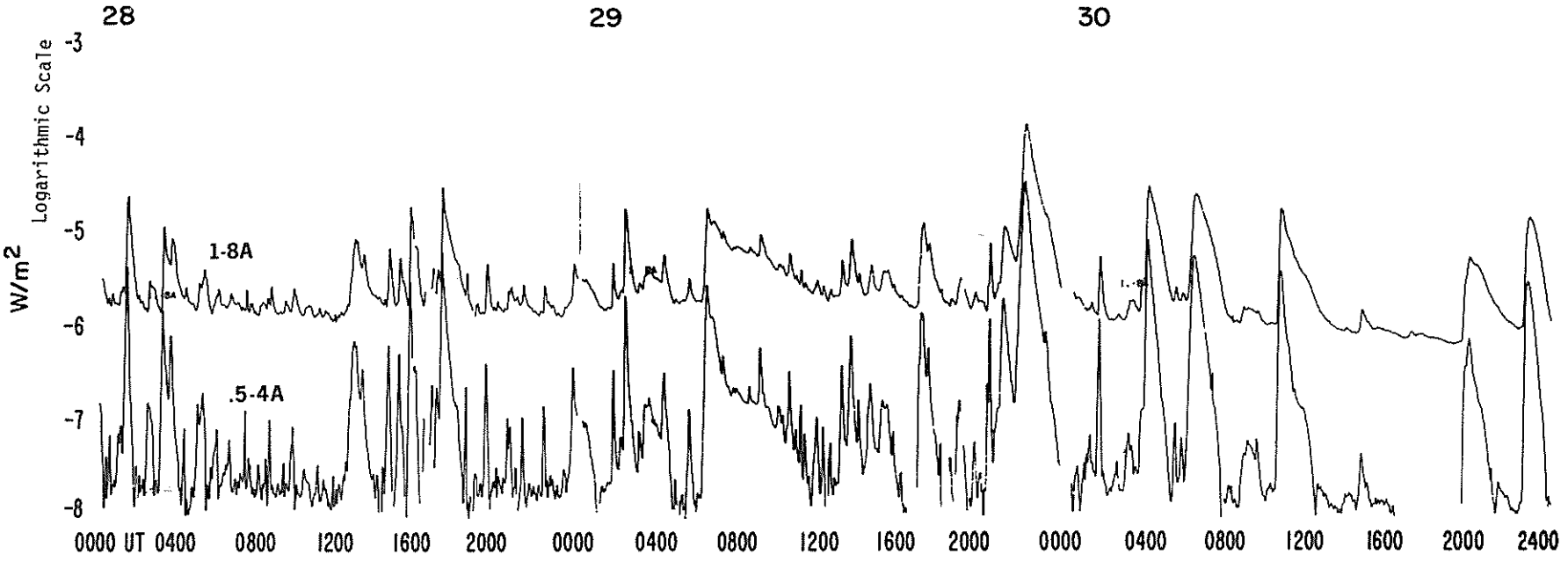


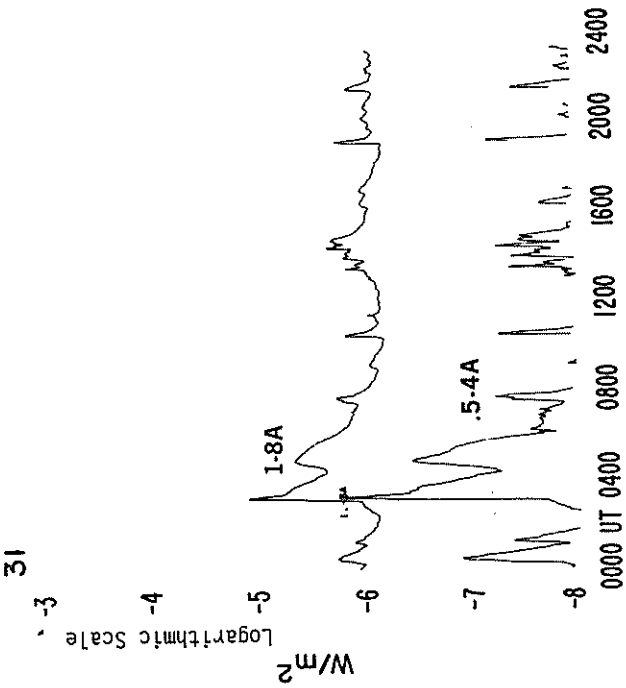

SMS-GOES X-RAYS
MAY 1982
19
20
21
22
23
24
1-8A
.5-4A
W/m²
Logarithmic Scale
-3
-4
-5
-6
-7
-8
0000 UT 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 2400

SMS-GOES X-RAYS

MAY 1982






SMS-GOES X-RAYS
MAY 1982
31
-3
-4
-5
-6
-7
-8
Logarithmic Scale
W/m2
1-8A
.5-4A
0000 UT 0400 0800 1200 1600 2000 2400

MASS EJECTIONS FROM THE SUN

May 1982

Sta	Day	Observed UT Start	Max	End	Location RA°	R/R_o	Freq or Wavelength	Kind of Event
ABST	May 01	0718	0724	0745	288	0.98	H-alpha	SP
KHAR	May 01	0940	0947		258	1.0	H-alpha	S
KHAR	May 01	0951	1016		258	1.0	H-alpha	S
GEOR	May 01	1150E			289		H-alpha	S
GEOR	May 01	1212E			289		H-alpha	S
GEOR	May 02	1123E			303		H-alpha	CB
HARV	May 02	1523		1526			Decimeter	IV
ABST	May 03	0620	0628	0648	114	1.00	H-alpha	SP
WEND	May 03	0628E		0644	112	1.0	H-alpha	S
WEND	May 03	0654	0700	0715	112	1.0	H-alpha	S
WEND	May 03	0742E	0747	0800D	112	1.0	H-alpha	S
WEND	May 03	0918	0929	0944	112	1.0	H-alpha	S
GEOR	May 03	0922E		0943U	113		H-alpha	S
WEND	May 03	1527	1534	1552	112	0.99	H-alpha	S
WEND	May 03	1620	1624	1631	112	0.99	H-alpha	S
WEND	May 11	1408	1409	1418	110	0.99-1.03	H-alpha	S
KHAR	May 12	0925	0944		000	0.17	H-alpha	S
KHAR	May 13	1016	1030		282	1.0	H-alpha	S
WEND	May 14	0642	0650	0723	266	1.0	H-alpha	S
KHAR	May 14	0718	0745		093	1.0	H-alpha	S
KHAR	May 14	0806	0822		119	0.71	H-alpha	S
WEND	May 14	1531	1537	1609	266	1.00-1.06	H-alpha	S
GEOR	May 16	1424E		1307D	276		H-alpha	CB
KHAR	May 17	0615	0632		292	0.18	H-alpha	S
KHAR	May 17	0627	0639		107	0.98	H-alpha	S
KHAR	May 17	0635	0910		066	1.0	H-alpha	S
KHAR	May 17	0702	0930		068	1.0	H-alpha	S
ABST	May 17	0703E	0703	0728D	065	1.00	H-alpha	SP
KHAR	May 17	0955	1145		060	0.98	H-alpha	S
KHAR	May 17	0956	1101		066	1.0	H-alpha	S
KHAR	May 17	1117	1127		065	1.0	H-alpha	S
KHAR	May 18	0707	0710		063	0.88	H-alpha	S
KHAR	May 18	0738	0750		068	1.0	H-alpha	S
KHAR	May 18	0753	0812		067	1.0	H-alpha	S
KHAR	May 18	0830	0837		067	1.0	H-alpha	S
WEND	May 18	0906	0912	0920	068	1.0	H-alpha	S
KHAR	May 18	0906	0920		067	1.0	H-alpha	S
WEND	May 18	0942		0958	068	1.0	H-alpha	S
KHAR	May 18	1018	1022		066	0.98	H-alpha	S
KHAR	May 19	0701	0739		062	0.73	H-alpha	S
KHAR	May 19	0704	0757		070	0.93	H-alpha	S
KHAR	May 19	0734	0758		065	0.77	H-alpha	S
KHAR	May 19	0826	0843	0827	266	1.0	H-alpha	S
KHAR	May 19	0836	1200		068	0.8	H-alpha	S
KHAR	May 19	0856	0937		063	0.7	H-alpha	S
WEND	May 20	0711	0742	0911D	284	1.0	H-alpha	A
ABST	May 24	0457	0511	0607D	075	0.82	H-alpha	SP
HARV	May 25	1853		1858			Meter	II
WEND	May 26	0827	0853	0957	089	1.00-1.09	H-alpha	Q
WEND	May 26	1250	1257	1302	259	0.99-1.05	H-alpha	SP
KHAR	May 27	0707	0716		097	1.0	H-alpha	S
KHAR	May 27	0758	0820		225	0.64	H-alpha	S
KHAR	May 27	1026	1048		239	0.63	H-alpha	S
KHAR	May 27	1123	1128		232	0.63	H-alpha	S

MASS EJECTIONS FROM THE SUN

May 1982

Sta	Day	Observed UT Start	Max	End	Location RA°	R/R_o	Freq or Wavelength	Kind of Event
KHAR	May 28	0845	0905	0849	102	1.0	H-alpha	S
KHAR	May 28	0950	1058		290	1.0	H-alpha	S
KHAR	May 28	1043	1048		243	0.83	H-alpha	S
KHAR	May 29	0710	0900		280	1.0	H-alpha	S
KHAR	May 29	0731	0750		284	1.0	H-alpha	S
KHAR	May 29	0740	0747		287	1.0	H-alpha	S
KHAR	May 29	0754	0807		284	1.0	H-alpha	S
KHAR	May 29	0754	1013		289	1.0	H-alpha	S
KHAR	May 29	0829	0855		280	1.0	H-alpha	S
KHAR	May 29	0902	0929		290	1.0	H-alpha	S
KHAR	May 29	0958	1037		279	1.0	H-alpha	S
KHAR	May 29	1119	1138		279	1.0	H-alpha	S
KHAR	May 30	0700	0707		140	0.10	H-alpha	S
WEND	May 30	0711	0742	0911D	284	1.0	H-alpha	A
WEND	May 30	0711	0816	0911D	284	1.0	H-alpha	A
KHAR	May 30	0716	0824		289	1.0	H-alpha	S
WEND	May 30	1103E		1139	284	1.0	H-alpha	A

QUALIFIERS ON START, MAX AND END TIMES
D = event ended after tabulated time
E = event began before the tabulated time
U = uncertain time

TYPE OF EVENT
A = eruptive active region prominence
CB = coronal cloud bubble
D = coronal depletions
E = coronal enhancement
EL = coronal expanding loop
II = Type II radio burst
IVm = moving Type IV radio burst
Q = eruptive quiescent prominence
R = coronal ray or streamer
S = flare-surge if there is a known flare association
SP = flare-spray if there is a known flare association
* = movement may be caused by ionospheric refraction

REPORTING STATIONS
ABST = Abastumani
BIGB = Big Bear
BLEN = Bleien
CULG = Culgoora
DWIN = Dwingeloo
GEOR = Georgiana
HALE = Haleakala
HAOC = High Altitude Observatory's SMM Coronagraph/Polarimeter
HAOK = High Altitude Observatory's MARK-III Coronameter at Mauna Loa
HARV = Harvard (Fort Davis)
KHAR = Kharkov
LEAR = Learmonth
LVOV = Lvov
MANI = Manila
MITK = Mitaka
NRLC = Naval Research Laboratory's White-Light Coronagraph Experiment on P78-1
PALE = Palehua
SGMR = Sagamore Hill
TELV = Tel Aviv
VORO = Voroshilov
WEIS = Weissenau
WEND = Wendelstein
UDAI = Udaipur

NOTE: Because only a small fraction of the data taken by satellite-borne coronagraph had been analyzed at the time this table was assembled, many events are defined solely by ground-based observatory reports.

JUNE 1980 DATA

Contents

H - ALPHA S O L A R F L A R E S

JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Hale Cen Dist	Plage Region	CMP Day	Dur (Min)	Imp		Obs Type		Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP84856	01	0005+6	0012	0023D	S09	W16	.308	16867	30.8	18	-F							IK
CULG	01	0005U	0027U	0226U	S12	W18	.361	16867	30.7	141D	1F		C		0027	400	4.4	FIKT
VORO	01	0011	0012	0023	S07	W14	.264	16867	31.0	12	-F		C		0012	143	1.5	D
GRP84857	01	0058+5	0103+1	0117	S22	W70	.947	16864	26.8	19	-N					70		D
CULG	01	0058	0103	0123	S21	W72	.956	16864	26.6	25	1N		C		0103	90		
VORO	01	0103	0104	0111	S23	W68	.937	16864	26.9	8	-F		C		0104	63		D
858 CULG	01	0224	0234	0256	S16	W61	.883	16865	27.5	32	-F		C		0234	20	.3	
GRP84859	01	0243+9	0255+3	0312	S12	W19	.374	16867	30.7	29	1F					210	2.3	E
CULG	01	0243	0258	0323	S11	W20	.381	16867	30.6	40	-N		C		0258	160	1.8	T
VORO	01	0252	0255	0300	S13	W19	.383	16867	30.7	8	1F		C		0255	260	2.8	E
	01	0309	0315	NO FLARE PATROL														
	01	0326	0333	NO FLARE PATROL														
860 CULG	01	0402	0413	0420	N08	W50	.773	16866	28.4	18	-N		C		0413	80	1.3	
861 ABST	01	0458E	0507	0527	S13	W25	.464	16867	30.3	29D	-F		P		0507	174	1.9	FJ
862 CULG	01	0531	0535	0545	S19	W19	.440		30.8	14	-N	*	C		0535	90	1.0	TL
863 ABST	01	0535	0539	0545	S12	E56	.836	16881	5.4	10	-N		C		0539	87	1.7	DJ
GRP84864	01	0542+4	0548 0556+5	0610	S14	W23	.444	16867	30.5	28	-N							FJLV
CULG	01	0542	0556	0615	S16	W24	.472	16867	30.4	33	1N	*	C		0556	260	2.9	FTL
ABST	01	0546	0548	0552	S15	W25	.478	16867	30.4	6	-N	*	C		0548	87	1.0	DJ
ABST	01	0600	0601	0604	S11	W19	.367	16867	30.8	4	-N	*	C		0601	87	1.0	DV
GRP84865	01	0710+2	0718+2	0729	S12	W21	.402	16867	30.7	19	1N					260	2.9	JR
CATA	01	0710E	0720	0730D	S12	W22	.416	16867	30.6	20D	1F	2	P		0720	281	3.2	R
ABST	01	0711	0720	0727D	S12	W24	.444	16867	30.5	16D	1N		P		0720	264	2.9	FJ
ISTA	01	0712	0718	0728	S12	W21	.402	16867	30.7	16	1B							E
ATHN	01	0718E	0720	0726D	S13	W20	.396	16867	30.8	8D	-N	2	V		0720	127	1.4	
GRP84866	01	0730+9	0737 0750	0810	S11	W22	.409	16867	30.7	40	-N							
TELV	01	0730E	0737	0756D	S10	W23	.418	16867	30.6	26D	-N	3				82	.9	F
ISTA	01	0739	0750	0810	S13	W21	.410	16867	30.7	31	1N							E
GRP84867	01	0856+9	0905+5	0920	S12	W23	.430	16867	30.6	24	-N					100	1.1	
TELV	01	0856	0907	0924	S12	W24	.444	16867	30.6	28	-N	2				98	1.1	
CATA	01	0905	0905	0920	S12	W23	.430	16867	30.7	15	1F	2	C		0905	281	3.2	
ATHN	01	0907E	0910	0919	S13	W22	.423	16867	30.7	12D	-N	2	V		0910	95	1.1	
	01	1010	1014	NO FLARE PATROL														
868 YUNN	01	1030	1032	1037	S11	W24	.438	16867	30.6	7	-N		C			80	.9	EJ
	01	1037	1044	NO FLARE PATROL														
GRP84869	01	1243+5	1250+0	1305	S11	W25	.452	16867	30.7	22	-N							D
TELV	01	1243E	1250	1312	S12	W25	.458	16867	30.7	29D	-N	2				82	.9	
HUAN	01	1248	1250	1258	S11	W25	.452	16867	30.7	10	-N	1	C		1250	20	.2	D
870 HUAN	01	1354	1356	1357	S11	W24	.438	16867	30.8	3	-F	1	C		1356	20	.2	D
871 HUAN	01	1409	1410	1412	S11	W25	.452	16867	30.7	3	-F	1	C		1410	30	.4	
872 HUAN	01	1424		1433D	S11	W25	.452	16867	30.7	9D	-N	1	P		1426	40	.5	E
873 HUAN	01	1446	1447	1449	S11	W25	.452	16867	30.7	3	-F	1	C		1447	20	.2	D
874 HUAN	01	1453		1459D	S11	W25	.452	16867	30.7	6D	-N	1	P		1458	25	.3	D
GRP84875	01	1520+1	1522+2	1529	S11	W25	.452	16867	30.8	9	-N					50	.6	
BIGB	01	1520	1522	1530	S11	W25	.622	16867	30.8	10	-B	3	C		1522	70	.8	
HUAN	01	1521	1524	1527	S11	W25	.452	16867	30.8	6	-N	1	C		1524	35	.4	

H - ALPHA S O L A R F L A R E S

JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type		Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP84876	01	1539+1	1542	1556	S14	E90	1.000	16884	8.4	17	-N						
BIGB	01	1539	1542	1606	S15	E90	1.000	16884	8.4	27	1N	3	C	1542	110		
HUAN	01	1540		1546	S14	E90	1.000	16884	8.4	6	-F	1	C				
877 HUAN	01	1559	1601	1604	S11	W25	.452	16867	30.8	5	-F	1	C	1601	20	.2	D
878 HUAN	01	1643		1649	S11	W28	.495	16867	30.6	6	-F	1	C	1644	20	.2	D
GRP84879	01	1650+1	1652+3	1704	S12	W25	.458	16867	30.8	14	-B				50	.6	
HOLL	01	1650E	1655U	1658D	S12	W25	.458	16867	30.8	8D	-B	3	C		50		
HUAN	01	1651	1652	1700	S12	W25	.458	16867	30.8	9	-N	2	C	1652	30	.4	
BIGB	01	1651	1652	1708	S11	W25	.452	16867	30.8	17	-B	2	C	1652	60	.7	
880 BIGB	01	1751	1754	1814	S14	E90	1.000	16884	8.5	23	?N	2	C	1754	80		
			IMP.1 NO : HUAN														
881 HUAN	01	1927	1929	1932	S11	W29	.509	16867	30.6	5	-N	1	C	1929	35	.4	
GRP84882	01	1929>9	1946	2011D	S14	E90	1.000	16884	8.6	42	-N						
BIGB	01	1929	1946	2054	S15	E90	1.000	16884	8.6	85	1B	1	C	1946	90		
HUAN	01	1944		2011	S14	E90	1.000	16884	8.6	27	-F	1	C	1952	30		
883 HUAN	01	2011		2022	S11	W30	.523	16867	30.6	11	-F	1	C	2014	30	.4	
GRP84884	01	2040>9	2049+1 2058	2102	S11	W30	.523	16867	30.6	22	-N						E
HOLL	01	2040	2049	2112	S12	W28	.500	16867	30.8	32	-N	3	C		116		
BIGB	01	2048	2050	2102	S11	W30	.523	16867	30.6	14	-N	1	C	2050	50	.6	
HUAN	01	2050	2058	2100	S10	W30	.519	16867	30.6	10	-N	1	C	2058	65	.8	E
885 BIGB	01	2046	2048	2110	S07	W90	1.000	16863	26.1	24	?B	1	C	2048	70		
			IMP.1 NO : HUAN HOLL														
886 CULG	01	2158	2204	2207	S12	W28	.500	16867	30.8	9	-B		C	2204	100	1.2	
GRP84887	02	0010	0018 0029	0046	S11	W30	.524	16867	30.8	36	-N						DJ
CULG	02	0010	0018	0048U	S11	W31	.537	16867	30.7	38D	-N		C	0018	60	.7	TJ
MITK	02	0013E		0034D	S12	W30	.528	16867	30.8	21D	-N		P	0030			D
BIGB	02	0021	0029	0043	S10	W30	.519	16867	30.8	22	-N	1	C	0029	90	1.1	
888 CULG	02	0059	0125	0200	S17	W28	.531	16867	30.9	61	-F		C	0125	140	1.6	
889 TACH	02	0424	0426	0430	S10	W35	.589	16867	30.6	6	-N		C	0426	53	.7	D
890 CULG	02	0429	0437	0445	N10	W65	.910	16866	28.3	16	-F		C	0437	60	1.4	
GRP84891	02	0442+7	0454 0506+1	0530	S11	W28	.496	16867	31.1	48	1F				330	3.8	J
CULG	02	0442	0454	0531U	S13	W26	.479	16867	31.2	49D	-N		C	0454	100	1.2	
TACH	02	0444	0507	0513	S10	W31	.533	16867	30.9	29	1F		C	0507	318	3.9	EFJ
PEKG	02	0449		0449D	S11	W27	.481	16867	31.2		-F		P	0449	42	.5	D
ABST	02	0505E	0506	0530D	S10	W34	.575	16867	30.7	25D	1F		P	0506	174	2.2	EJ
ABST	02	0505E	0507	0530D	S12	W26	.473	16867	31.3	25D	-F		P	0506	174	2.0	EJ
892 PEKG	02	0449		0449D	S16	E86	.998	16884	8.7		-N			0449	42		A
893 CULG	02	0450	0452	0456	N10	W65	.910	16866	28.3	6	-F		C	0452	50	1.1	
894 CULG	02	0559	0602	0608	S25	W61	.896	16865	28.7	9	-N		C	0602	60	1.3	G
	02	0620	0628	NO FLARE PATROL													
GRP84895	02	0659+1	0659+4	0722	S09	W32	.544	16867	30.9	23	1F						J
KANZ	02	0659	0703	0720	S09	W32	.544	16867	30.9	21	-F	2					
TELV	02	0659E	0659E	0722	S08	W32	.541	16867	30.9	23D	1F	3			184	2.2	F
ABST	02	0700	0703	0723	S10	W30	.519	16867	31.0	23	1N		C	0703	174	2.1	EJ
896 ISTA	02	0724E		0745D	S21	W90	1.000	16864	26.6	21D	?B						A
			IMP.3 NO : KANZ MONT														

H - ALPHA S O L A R F L A R E S

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type		Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP84897	02	0728	0746+1	0820D	S15	E90	1.000	16884	9.1	52	1N						ADJ
KANZ	02	0728	0747	0820	S15	E90	1.000	16884	9.1	52	-N	*					
ABST	02	0740E	0746	0752D	S14	E90	1.000	16884	9.1	12D	1N	*	P	0746	174		ADJ
ISTA	02	0744		1000	S14	E90	1.000	16884	9.1	136	2B	*					A
ISTA	02	0815E		1000	S16	E90	1.000	16884	9.1	105D	3B	*					A
898 KANZ	02	0736		0820D	S11	W34	.579	16867	30.8	44D	-F	1					
899 ISTA	02	0821		0828	S10	W29	.505	16867	31.2	7	-F						E
GRP84900	02	0835E	0837+3	0848D	S11	W28	.496	16867	31.3	13	-F						EJ
ABST	02	0835E	0837	0848D	S10	W30	.519	16867	31.1	13D	-F		P	0837	131	1.5	EJ
ABST	02	0835E	0840	0848D	S12	W26	.473	16867	31.4	13D	-F		P	0840	87	1.0	DJ
901 MONT	02	0924E	0927	0941	S10	W33	.561	16867	30.9	17D	-N		C	0927	150		
GRP84902	02	0945E	0950	1005D	S11	W28	.496	16867	31.3	20	?N						J
			IMP.1 NO : MONT KANZ														
ABST	02	0945E	0950	1005D	S10	W30	.519	16867	31.2	20D	1N		P	0950	261	3.1	EJ
ABST	02	0945E	0950	1005D	S12	W26	.473	16867	31.5	20D	-F		P	0950	131	1.5	FJ
GRP84903	02	1156	1328+3	1344D	S12	W36	.609	16867	30.8	108	-N				160	2.0	D
RAMY	02	1156	1331	1441	S05	W44	.697	16867	30.2	165	-N	3	C		162		
HOLL	02	1322E	1328	1333D	S12	W36	.609	16867	30.9	11D	-B	3	C		174		
HUAN	02	1336E		1344	S12	W36	.609	16867	30.9	8D	-F	1	P	1337	25	.3	D
RAMY	02	1407E		1441	S05	W44	.697	16867	30.3	34D	-N	3	C		162		
904 HOLL	02	1322E	1324	1333D	S12	E83	.993	16884	8.8	11D	-F	3	C		58		
905 HUAN	02	1355		1412	S14	E87	.999	16884	9.1	17	-F	1	C	1406	20		D
GRP84906	02	1424+8	1434+1	1444	S15	E85	.996	16884	9.0	20	-N						A
RAMY	02	1424	1434	1443	S14	E81	.988	16884	8.7	19	-F	3	C				
BIGB	02	1432	1435	1445	S16	E89	1.000	16884	9.3	13	1B	3	C	1435	60		A
GRP84907	02	1448+4	1452+3	1511	S14	E85	.996	16884	9.0	23	-F						D
HUAN	02	1448		1511	S14	E85	.996	16884	9.0	23	-F	1	C				D
RAMY	02	1452	1452	1504	S14	E81	.988	16884	8.7	12	-F	3	C				
KANZ	02	1452	1455	1530	S15	E90	1.000	16884	9.4	38	-N	2					
908 RAMY	02	1456	1505	1516	S11	W37	.618	16867	30.8	20	-F	3	C		24		
909 HUAN	02	1653		1700	S11	W41	.670	16867	30.6	7	-F	1	C				
GRP84910	02	1733+3	1741 1747+4	1804	S12	E79	.982	16884	8.7	31	-F						
PALE	02	1733	1741	1746	S12	E81	.988	16884	8.8	13	-F	3	C				
HOLL	02	1736	1747	1806	S12	E78	.979	16884	8.6	30	-F	3	C		42		
PALE	02	1747	1751	1801	S13	E81	.988	16884	8.8	14	-F	3	C				
911 HUAN	02	1908		1915D	S15	E80	.985	16884	8.8	7D	-F	1	P	1913	40		
GRP84912	02	2021E	2023+0	2036	S09	W39	.639	16867	30.9	15	-F				50	.7	
HOLL	02	2021E	2023	2034	S09	W39	.639	16867	30.9	13D	-F	3	C		52		
RAMY	02	2023E	2023U	2037	S09	W39	.639	16867	30.9	14D	-F	3	C		59		
GRP84913	02	2028+1	2033+0	2046	S16	E84	.995	16884	9.2	18	-N						A
HOLL	02	2028	2033	2041	S15	E79	.982	16884	8.8	13	-F	3	C				
BIGB	02	2029	2033	2051	S17	E90	1.000	16884	9.6	22	1B	3	C	2033	100		A
GRP84914	02	2129	2137+0 2239	2243	S13	E82	.990	16884	9.0	74	-B						
HOLL	02	2129	2137	2236	S13	E75	.967	16884	8.5	67	-B	3	C				
PALE	02	2130E	2137U	2216D	S13	E82	.990	16884	9.0	46D	-N	3	C				
BIGB	02	2209	2239	2250	S16	E90	1.000	16884	9.7	41	1B	3	C	2239	40		
915 MANI	02	2223E	2223U	2240	S10	W42	.680	16867	30.8	17D	-F	2	P		50	.7	F
916 BIGB	02	2321	2329	2348	S25	E90	1.000	16889	9.7	27	?B	3	C	2329	210		
			IMP.2 NO : CULG														

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Hale Cen Dist	Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP84917	02	2332E	2332 2348	0005	S12	W42	.685	16867	30.8	33	-N						F
MANI	02	2332E	2332U	2352D	S10	W43	.692	16867	30.8	20D	-N	2	P		40	.6	F
HOLL	02	2343E	2348	0005	S14	W42	.690	16867	30.8	22D	-F	2	C		55		
GRP84918	02	2352+6	0017+0	0031	S13	E77	.975	16884	8.8	39	1N						
CULG	03	0009	0017	0028	S15	E82	.991	16884	9.2	19	1N		C	0017	140		
HOLL	02	2352	2417	0053	S13	E75	.967	16884	8.6	61	1B	2	C				
PALE	02	2358	2417	0031	S13	E77	.975	16884	8.8	33	1N	3	C				
GRP84919	03	0103+0	0117 0127+2	0148	S13	E74	.963	16884	8.6	45	-N						
HOLL	03	0103	0129	0142D	S13	E71	.948	16884	8.4	39D	1N	1	C				
PALE	03	0103	0127	0148	S12	E76	.971	16884	8.7	45	-F	3	C				
MANI	03	0115E	0117U	0119D	S13	E74	.963	16884	8.6	4D	-N	2	P		60	1.4	
GRP84920	03	0147	0151 0212+1	0220	S11	W47	.742	16867	30.5	33	-F				90	1.3	DK
YUNN	03	0147	0151	0221	S10	W48	.751	16867	30.5	34	-N	*	C		64	1.0	DK
VORO	03	0210E		0219D	S11	W51	.785	16867	30.3	9D	-F	*	P	0216	99	1.6	D
PALE	03	0211	0213	0220	S13	W45	.723	16867	30.7	9	-F	*	C		83		
PURP	03	0212	0212	0214	S12	W46	.732	16867	30.6	2	1N	*	C				
GRP84921	03	0200	0212+4	0234	S15	E77	.976	16884	8.9	34	1N				140		DJK
YUNN	03	0200	0212	0221	S16	E75	.968	16884	8.7	21	1N		C		161		DKJ
MITK	03	0212E	0216	0246D	S14	E80	.985	16884	9.1	34D	1N		C	0216	120		D
922 CULG	03	0258	0304	0314	N10	W78	.979	16866	28.3	16	-F		C	0304	40		
923 CULG	03	0356	0359	0408	S11	W48	.753	16867	30.6	12	-N		C	0359	60	.9	T
GRP84924	03	0441+3	0444+0	0450	S18	E84	.995	16889	9.5	9	-N						H
CULG	03	0441	0444	0454	S18	E85	.996	16889	9.6	13	-N		C	0444	50		
PURP	03	0444	0444	0446	S18	E83	.993	16889	9.4	2	-N		C				H
925 HTPR	03	0446E		0505	S08	W45	.713	16867	30.8	19D	-F		C	0446	30	.4	E
GRP84926	03	0506+6	0512+0	0518	S11	W49	.764	16867	30.5	12	-F				60	.9	EJ
ABST	03	0506	0512	0520	S07	W49	.758	16867	30.5	14	1F		C	0512	131	2.0	EJ
CULG	03	0509	0512	0518	S11	W48	.753	16867	30.6	9	-N		C	0512	60	.9	T
HTPR	03	0512	0512	0514	S11	W52	.796	16867	30.3	2	-F		C	0512	40	.6	E
927 ABST	03	0540E	0541	0600	S14	E72	.953	16884	8.6	20D	?N		P	0541	87		DJK
			IMP.1 NO : CULG PURP YUNN HTPR														
928 CULG	03	0542	0545	0552	S12	W48	.755	16867	30.6	10	-F		C	0545	60	.9	T
GRP84929	03	0655+3	0700+1	0713	S15	E73	.959	16884	8.8	18	-N				70		DJK
YUNN	03	0655	0700	0718	S15	E73	.959	16884	8.8	23	1B		C		113		T
HTPR	03	0656	0701	0710	S15	E75	.968	16884	8.9	14	-N		C	0701	30		
PURP	03	0658	0658	0658	S17	E76	.972	16884	9.0		-N		C				D
ABST	03	0658	0701	0720	S14	E71	.948	16884	8.6	22	1N		C	0701	87		DJK
MONT	03	0703E	0703	0707	S15	E73	.959	16884	8.8	4D	-F		C	0703	50		D
MANI	03	0707E	0707	0716D	S13	E73	.958	16884	8.8	9D	-N	2	P		80	1.8	
GRP84930	03	0740+2	0742+3	0751	S14	E72	.953	16884	8.7	11	-N						D
HTPR	03	0740	0742	0751	S14	E73	.958	16884	8.8	11	-B		C	0742	20		
MANI	03	0741E	0745	0747D	S13	E69	.936	16884	8.5	6D	-N	2	P		50	1.1	
YUNN	03	0741	0744	0750	S15	E72	.954	16884	8.7	9	1N		C		96		T
PURP	03	0742	0743	0756	S15	E74	.963	16884	8.9	14	-N		C				D
GRP84931	03	0755>9	0806+8 0820	0826	S14	E72	.953	16884	8.7	31	1N				120		DJKW
ABST	03	0755	0811	1000	S14	E71	.948	16884	8.7	125	1B		C	0811	131		DJK
HTPR	03	0801	0809	0830	S14	E71	.948	16884	8.7	29	1N		C	0814	120		EK
HTPR	03	0801	0814	0830	S14	E71	.948	16884	8.7	29	1N		C				
MANI	03	0802E	0806U	0810D	S12	E72	.953	16884	8.7	8D	1N	1	V		100	2.3	
YUNN	03	0805	0806	0818	S15	E72	.954	16884	8.7	13	2B		C		241		TW
PURP	03	0819	0820	0821	S14	E72	.953	16884	8.7	2	-F		C				D
932 ABST	03	0813E	0814	0825	S07	W50	.769	16867	30.6	12D	?F		P	0814	131	2.0	DJ
			IMP.1 NO : PURP YUNN HTPR MONT CATA														

H - ALPHA SOLAR FLARES

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type		Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP84933	03	0912+3	0916+2	0925	N26	W13	.489	16871	2.4	13	-F				60	.7	DG
ABST	03	0912	0916	0922	N28	W12	.510	16871	2.5	10	-F		C	0916	87	1.0	D
HTPR	03	0915	0918	0927	N25	W14	.482	16871	2.3	12	-F		C	0918	40	.4	G
GRP84934	03	0928	0931	0950	S21	E90	1.000	16889	10.1	22	2N						ADJ
ABST	03	0928	0931	0950	S23	E90	1.000	16889	10.1	22	1N		C	0931	131		ADJ
CATA	03	0935E	0935	0935D	S20	E90	1.000	16889	10.1		3F	2	P	0935	337		
GRP84935	03	1130+9	1143 1205+2	1230	S13	E70	.942	16884	8.7	60	-B				80		EK
HTPR	03	1130	1143	1230	S14	E71	.948	16884	8.8	60	-B		C	1206	80		EK
RAMY	03	1134	1205	1304	S13	E69	.936	16884	8.7	90	1B	3	C		87		D
ATHN	03	1139	1207	1212D	S13	E70	.942	16884	8.7	33D	1B	3	V	1207	111	3.4	
MONT	03	1204	1206	1212	S15	E71	.949	16884	8.8	8	-F		C	1206	50		E
GRP84936	03	1413+0	1414+0	1430	S13	E68	.930	16884	8.7	17	-N				40		
RAMY	03	1413	1414	1439	S13	E66	.917	16884	8.5	26	-B	3	C		52		D
HTPR	03	1413	1414	1430	S14	E71	.948	16884	8.9	17	-N		C	1414	30		E
HUAN	03	1413	1414	1427	S13	E68	.930	16884	8.7	14	-F	1	C	1414	30		
937 HUAN	03	1817	1818	1820	S11	W57	.844	16867	30.5	3	-F	1	C	1818	45	.9	
938 HOLL	03	2057	2104	2110	S13	E68	.930	16884	9.0	13	-N	3	C		56		
GRP84939	03	2127+3	2130+4	2208	S14	E67	.925	16884	8.9	41	1B				190		
BOUL	03	2127	2134U	2210D	S14	E67	.925	16884	8.9	43D	1B	3	C		160		
BIGB	03	2128	2130	2203	S15	E69	.937	16884	9.1	35	2B	3	C	2130	300		
HOLL	03	2128	2134	2244	S12	E64	.903	16884	8.7	76	1B	2	C		218		D
HUAN	03	2130		2143D	S15	E70	.943	16884	9.1	13D	-N	1	P	2137	100		E
PALE	03	2157E	2157U	2206D	S12	E64	.903	16884	8.7	9D	-N	3	C		42		
940 HOLL	03	2208E	2212	2222	S13	W60	.872	16867	30.4	14D	-N	2	C		39		
941 HOLL	03	2343E	2348	0005	S14	W42	.691	16867	31.8	22D	-F	2	C		55		
GRP84942	03	2352+6	0017	0019D	S13	E76	.971	16889	9.7	27	1N						
HOLL	03	2352	2416	0016D	S13	E75	.967	16889	9.6	24D	1N	3	C				
PALE	03	2358	2417	0019D	S13	E77	.975	16889	9.8	21D	1N	3	C				
GRP84943	04	0003>9	0007 0049	0055	S13	E65	.911	16884	8.9	52	-N						D
PALE	04	0003	0007U	0038D	S13	E64	.904	16884	8.8	35D	-N	3	C		86		D
PURP	04	0015	0049	0055	S14	E66	.918	16884	9.0	40	1F		P				
944 PALE	04	0227	0233	0239	S13	W59	.864	16867	30.7	12	-F	3	C		65		
GRP84945	04	0310>9	0314 0337	0352	S10	W61	.878	16867	30.6	42	-N						EK
YUNN	04	0310E	0314	0350	S10	W58	.852	16867	30.8	40D	1N		C		113	2.2	EK
CULG	04	0324	0337	0353	S10	W64	.902	16867	30.3	29	-F		C	0337	80	1.7	T
946 CULG	04	0334	0350	0413	S25	E78	.982	16889	10.0	39	?F		C	0350	100		
			IMP.1 NO : MITK PURP YUNN TACH														
947 ABST	04	0512	0515	0520	S13	E56	.838	16884	8.4	8	?N		C	0515	174	3.2	EJ
			IMP.1 NO : PURP TACH MITK														
GRP84948	04	0552	0607 0615	0638	S14	E59	.865	16884	8.7	46	-F						E
HTPR	04	0552	0607	0645	S14	E58	.857	16884	8.6	53	-F		C	0615	40	.7	E
HTPR	04	0552	0615	0645	S14	E58	.857	16884	8.6	53	-F		C				
YUNN	04	0608E	0608	0630	S15	E60	.875	16884	8.8	22D	-N		P		16	.4	E
GRP84949	04	0606+1	0607+1	0610	S10	W64	.902	16867	30.5	4	-F						DH
PURP	04	0606	0607	0609	S12	W64	.903	16867	30.5	3	-F		C				DH
HTPR	04	0607	0608	0610	S10	W63	.894	16867	30.5	3	-F		C	0608	20	.4	
YUNN	04	0608E	0608	0608D	S09	W65	.908	16867	30.4		1N		P		161	3.8	

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JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Measurement Time (UT)	Area Measurement Appar (Disk)	Area Measurement Corr (Sq Deg)	Remarks
GRP84950	04	0653+1	0654+6	0727	S14	E59	.865	16884	8.7	34	1B			150	3.0	EJ
PEKG	04	0653	0700	0718	S15	E60	.875	16884	8.8	25	1B	P	0700	126	2.7	E
ATHN	04	0654	0656	0728	S14	E59	.865	16884	8.7	34	-B	3 V	0656	80	1.7	
MITK	04	0654	0655	0725	S13	E59	.864	16884	8.7	31	1B	C	0655	190	4.0	E
ABST	04	0654	0654	0935D	S13	E56	.838	16884	8.5	161D	1B	C	0654	174	3.4	FJ
HTPR	04	0654		0729D	S14	E58	.857	16884	8.6	35D	1B	C	0655	150	2.7	E
951 HTPR	04	0701	0710	0727	S11	E15	.314	16881	5.4	26	-F	C	0710	30	.3	E
GRP84952	04	0753	0759+3 0835>9	0938	S15	E58	.858	16884	8.7	105	1N			250	4.9	EJKU
PURP	04	0658	0839	0945	S16	E60	.876	16884	8.8	167	2B	* C	0839	264	5.1	W
MITK	04	0753	0802	0814D	S16	E59	.868	16884	8.8	21D	1N	* C	0802	110	2.3	E
MANI	04	0756E	0759	0816D	S13	E60	.873	16884	8.8	20D	-N	* P		60	1.2	F
HTPR	04	0804		0950	S14	E57	.848	16884	8.6	106	1N	* C	0905	180	3.2	E
PEKG	04	0811E	0811	0815	S17	E58	.861	16884	8.7	4D	1B	* P	0811	126	2.7	E
PEKG	04	0815	0840	0920	S16	E57	.851	16884	8.6	65	1B	* P	0840	252	5.1	JKUZ
CATA	04	0830	0845	0930D	S12	E57	.846	16884	8.6	60D	2F	* P	0845	337	6.5	
ATHN	04	0835E	0835	0842D	S14	E58	.857	16884	8.7	7D	-B	* V	0835	127	2.6	
MANI	04	0856E	0856U	0900D	S13	E59	.864	16884	8.8	4D	-N	* P		100	1.9	F
953 ABST	04	0839	0840	0848	N28	E08	.490	16878	5.0	9	-N	C	0840	87	1.0	DJK
954 ABST	04	0924	0925	0935	N28	E07	.487	16878	4.9	11	-N	C	0925	87	1.0	DJV
955 YUNN	04	0952E		0952D	S14	E58	.857	16884	8.8		-N	P	0952	16	.4	E
956 CATA	04	1000	1000	1010	N07	W65	.908		30.5	10	-F	2 C	1000	28	.7	
957 HTPR	04	1012	1013	1017	S10	W65	.909	16867	30.5	5	-N	C	1013	60	1.4	
GRP84958	04	1019+6	1021+4	1043	N27	E07	.472	16878	5.0	24	-F			120	1.3	E
HTPR	04	1019	1021	1043	N27	E08	.476	16878	5.0	24	-N	C	1021	80	.9	E
CATA	04	1025	1025	1030D	N27	E07	.472	16878	5.0	5D	-F	2 P	1025	167	2.0	
959 HTPR	04	1036	1038	1041	S10	W61	.878	16867	30.9	5	-N	C	1038	30	.6	
960 HTPR	04	1054	1055	1104D	S08	W66	.915	16867	30.5	10D	-F	C	1055	10	.2	
GRP84961	04	1153+1	1158+1	1214	N27	E06	.468	16878	4.9	21	-N			110	1.2	E
HTPR	04	1153	1159	1210	N27	E07	.472	16878	5.0	17	-N	C	1159	150	1.7	E
RAMY	04	1154	1158	1217	N27	E06	.468	16878	4.9	23	-N	3 C		84		
962 HOLL	04	1305	1305	1356	S13	E00	.219	16877	4.5	51	-F	3 C		48		
GRP84963	04	1348+0	1352+1	1409	S14	W62	.890	16867	30.9	21	-N			40	.9	
HUAN	04	1348		1409	S14	W63	.897	16867	30.9	21	-F	1 C	1352	30	.7	
HOLL	04	1348	1353	1416	S14	W62	.890	16867	30.9	28	-B	3 C		43		
HTPR	04	1348	1352	1355	S10	W62	.886	16867	30.9	7	-F	C	1352	40	.9	
964 HUAN	04	1439		1446	S12	W67	.924	16867	30.6	7	-F	1 C				
965 HOLL	04	1449	1450	1514	S12	E01	.203	16877	4.7	25	-F	3 C		23		
966 HOLL	04	1454	1456	1504	S13	W65	.911	16867	30.7	10	-N	3 C		13		
GRP84967	04	1509+0	1509+0	1515	S14	E54	.820	16884	8.7	6	-F			35	.6	
HOLL	04	1509	1509	1514	S14	E55	.830	16884	8.8	5	-N	3 C		16		
RAMY	04	1509	1509	1516	S14	E53	.811	16884	8.6	7	-F	3 C		47		
GRP84968	04	1645+1	1648+0	1654	S14	W68	.931	16867	30.6	9	-N			30		D
RAMY	04	1645	1648	1659	S12	W68	.930	16867	30.6	14	-N	3 C		35		
HOLL	04	1646	1648	1654	S14	W67	.925	16867	30.7	8	-N	3 C		19		
HUAN	04	1646	1648	1650	S14	W68	.931	16867	30.6	4	-F	1 C	1648	20		D
GRP84969	04	1741	1745+0	1803	S12	W68	.930	16867	30.6	22	-N			70		
HUAN	04	1741	1745	1756	S13	W68	.930	16867	30.6	15	-N	1 C	1745	65		
HOLL	04	1742E	1745U	1810D	S12	W69	.936	16867	30.6	28D	-B	2 C		72		
970 HOLL	04	1752E	1752U	1759D	S14	E61	.882	16889	9.3	7D	-F	2 C		19		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
GRP84971	04	1836+1	1837+1	1843	S13	E53	.809	16884	8.7	7	-N			70	1.2	
HOLL	04	1836	1837	1845	S13	E52	.799	16884	8.7	9	-N	3 C		77		
HUAN	04	1837	1838	1841	S14	E54	.820	16884	8.8	4	-N	1 C	1838	60	1.1	
972 CULG	04	2135E	2135E	2148	S10	W67	.923	16867	30.9	13D	-N	P	2135	40	.9	T
973 CULG	04	2155	2156	2159	S10	W69	.935	16867	30.7	4	-N	C	2156	30	.7	T
974 CULG	04	2159	2204	2208U	S15	E40	.671		7.9	9D	-N	C	2204	120	1.9	
975 CULG	04	2216U	2239	2319U	S15	E50	.783	16884	8.7	63D	?F	C	2239	200	3.0	F
		IMP.1 NO : HOLL PALE MITK														
976 CULG	04	2237	2309	0015	S30	E61	.906	16885	9.5	98	?F	C	2309	140	3.5	GF
		IMP.1 NO : HOLL PALE MITK														
GRP84977	04	2254+3	2259+3	2317	S13	W69	.937	16867	30.8	23	1B			160		DHJ
CULG	04	2254	2302	2319	S11	W70	.942	16867	30.7	25	2B	C	2302	200		HJ
MITK	04	2256	2259	2312	S13	W68	.930	16867	30.9	16	1N	C	2259	100		DH
PALE	04	2257	2301	2331D	S14	W69	.937	16867	30.8	34D	1B	3 C		186		D
HOLL	04	2257	2301	2314	S14	W69	.937	16867	30.8	17	1B	3 C		168		
978 HOLL	04	2317	2408	0101	S11	E60	.871		9.5	104	?B	2 C		198		D
		IMP.1 NO : CULG MITK PALE PURP														
979 CULG	04	2320	2325	2333	S12	E49	.766	16884	8.6	13	-N	C	2325	120	1.9	
GRP84980	04	2320>9	2334+5 2345	0028	S13	W05	.235	16877	4.6	68	-N					F
CULG	04	2320	2339	0030	S13	W05	.235	16877	4.6	70	1N	* C	2339	280	2.8	F
MITK	04	2328	2345	0026	S13	W05	.235	16877	4.6	58	-F	* C	2345			E
MANI	04	2330	2334	2347D	S11	W06	.212	16877	4.5	17D	-N	* P		50	.5	F
981 MITK	04	2338E	2351	0012	S10	W75	.967	16867	30.4	34D	?N	C	2351	150		D
		IMP.1 NO : HOLL CULG PALE														
982 HOLL	04	2352	2402	0025	S11	W55	.826	16867	31.9	33	-F	2 C		38		
983 CULG	05	0016	0024	0043	S10	W70	.941	16867	30.8	27	-F	C	0024	50		T
GRP84984	05	0020+5	0026+6	0102	S14	E56	.839	16889	9.2	42	1N					
CULG	05	0020	0032	0102U	S13	E58	.856	16889	9.4	42D	2N	C	0032	280	5.0	F
HOLL	05	0022	0027	0122	S13	E57	.847	16889	9.3	60	-N	3 C		115		
MITK	05	0022	0031	0122	S15	E55	.832	16889	9.1	60	1N	C	0031	130	2.4	E
BIGB	05	0023	0030	0120	S15	E55	.832	16889	9.1	57	-B	3 C	0030	110	2.0	
PEKG	05	0025	0028	0032	S17	E54	.826	16889	9.1	7	1B	P	0028	240	4.5	E
PALE	05	0025	0026	0046	S15	E54	.823	16889	9.1	21	-F	3 C		48		D
MANI	05	0030E	0030U	0039D	S13	E58	.856	16889	9.4	9D	-N	2 P		70	1.3	F
985 PALE	05	0055	0056	0058	S11	W76	.971	16867	30.3	3	-F	3 C				D
986 PALE	05	0115	0117	0120	S12	W77	.975	16867	30.3	5	-F	3 C				
987 PALE	05	0206	0206	0212	N12	W44	.711	16886	1.8	6	-F	3 C		27		
988 PALE	05	0220	0220	0225	N12	W44	.711	16886	1.8	5	-F	3 C		24		
GRP84989	05	0300+0	0300+3	0313	N13	W43	.702	16886	1.9	13	-F			25	.3	D
PALE	05	0300E	0300U	0320D	N11	W43	.697	16886	1.9	20D	-F	3 C		23		D
PEKG	05	0300	0303	0305	N15	W43	.709	16886	1.9	5	-N	P	0303	34	.5	D
990 CULG	05	0352	0355	0403	N22	E65	.921	16891	10.0	11	-F	C	0355	20	.5	
991 CULG	05	0411	0412	0423	S14	E53	.811	16884	9.1	12	-F	C	0412	70	1.2	
GRP84992	05	0418+1	0423+2	0429	S08	W78	.978	16867	30.3	11	-N			70		D
CULG	05	0418	0425	0430	S08	W79	.982	16867	30.3	12	-F	C	0425	80		T
TACH	05	0419	0423	0428	S09	W77	.975	16867	30.4	9	1B	C	0423	70		D

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GRP84993	05	0434	0454 0506	0526	S13	E47	.747	16884	8.7	52	1N					U
CULG	05	0434	0454	0526	S13	E48	.758	16884	8.8	52	1N	C	0454	260	3.9	UF
TACH	05	0502E	0506	0510D	S13	E47	.747	16884	8.7	8D	-B	C	0506	53	.8	D
994 CULG	05	0452	0455	0504	S08	W79	.982	16867	30.3	12	-F	C	0455	80		T
995 ABST	05	0524	0524	0530	S11	W75	.967	16867	30.6	6	?F	P	0524	131		EJ
			IMP.1 NO : PURP CULG													
996 ABST	05	0524	0538	0538D	N30	W15	.551	16872	4.1	14D	-F	P	0534	87	1.0	DJ
997 ABST	05	0524	0538	0538D	N26	W04	.446	16878	4.9	14D	-F	P	0538	131	1.4	EJ
GRP84998	05	0558+3	0605+5	0624	S12	W71	.948	16867	30.9	26	-B			40		
HTPR	05	0558	0605	0616	S12	W70	.942	16867	31.0	18	-N	C	0605	50		
CULG	05	0601	0610	0615U	S12	W75	.967	16867	30.6	14D	-B	C	0610	30		T
ATHN	05	0608E	0609	0631	S11	W71	.947	16867	30.9	23D	-B	3 V	0609	32	1.0	
GRP84999	05	0645	0647	0658	S10	W70	.941	16867	31.0	13	1B			90		
ATHN	05	0645	0647	0656	S09	W70	.941	16867	31.0	11	-B	3 V	0647	80	2.4	
CATA	05	0650E	0650	0700	S11	W70	.942	16867	31.0	10D	1F	2 P	0650	112		
0 ABST	05	0724	0726	0740	N26	W02	.443	16878	5.2	16	-F	C	0726	87	1.0	DJ
1 CATA	05	0925	0925	0930D	S10	E51	.784		9.2	5D	-F	2 P	0925	84	1.4	
2 ABST	05	0945E	0945	1012D	S14	W45	.727		2.0	27D	?N	P	0945	217	3.1	EJ
			IMP.1 NO : CATA													
3 CATA	05	1040E	1040	1045D	N06	E44	.699		8.7	5D	-F	2 P	1040	112	1.6	
4 ATHN	05	1058	1100	1126D	S16	E45	.733	16884	8.8	28D	-B	3 V	1100	48	.7	
5 HTPR	05	1201E		1215	S13	E44	.712	16884	8.8	14D	-N	C	1204	40	.6	E
6 HTPR	05	1224	1225	1230	S09	W88	.999	16867	29.9	6	-B	C	1225	20		
	05	1348	1350	NO FLARE PATROL												
7 HOLL	05	1413	1428	1437	S13	E41	.677	16884	8.7	24	-F	3 C		35		
8 HOLL	05	1454	1455	1505	S13	E41	.677	16884	8.7	11	-F	3 C		25		
9 HTPR	05	1654	1702	1709	S14	E42	.692	16884	8.9	15	-N	C	1702	40	.5	E
GRP85010	05	1723	1729 1736	1745	N30	W12	.534	16878	4.8	22	-N					EK
HTPR	05	1723	1729	1745	N30	W12	.534	16878	4.8	22	-N	C	1736	80	.9	EK
HTPR	05	1723	1736	1745	N30	W12	.534	16878	4.8	22	-N	C				
11 HOLL	05	1907	1909	1918	S12	E38	.636	16884	8.6	11	-F	3 C		25		
	05	1951	2007	NO FLARE PATROL												
12 PALE	05	2001	2003	2007	S10	W79	.982	16867	30.9	6	-F	3 C				
GRP85013	05	2028	2029	2035	S10	W79	.982	16867	30.9	7	-N					
HUAN	05	2028	2029	2030	S10	W80	.985	16867	30.9	2	-N	2 C	2029	35		
PALE	05	2030E	2030	2040	S10	W79	.982	16867	30.9	10D	-F	3 C				
14 CULG	05	2257	2302	2320	N32	W13	.566	16878	5.0	23	-F	C	2302	60	.7	
15 CULG	05	2258	2305	2330	S07	W85	.996	16867	30.6	32	-F	C	2305	50		
GRP85016	05	2341+0	2342+2	0020	S13	E36	.614	16884	8.7	39	1N			210	2.7	HK
CULG	05	2341	2344	0021	S15	E36	.623	16884	8.7	40	1B	C	2344	150	2.0	F
VORO	05	2341	2342	0018	S13	E36	.614	16884	8.7	37	1N	C	2342	269	3.5	EHK
HOLL	05	2341	2344	2347D	S13	E35	.601	16884	8.6	6D	1N	3 C		220		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
GRP85017	06	0042+8	0112 0144	0158	S14	E35	.606	16884	8.7	76	-N			120	1.5	H
VORO	06	0042E		0158	S14	E35	.606	16884	8.7	76D	-B	P	0143	152	1.9	EH
HOLL	06	0050	0112	0115	S13	E35	.602	16884	8.7	25	-F	3 C		23		
CULG	06	0140	0144	0202	S15	E34	.598	16884	8.6	22	-N	C	0144	90	1.1	FT
GRP85018	06	0244	0248	0259	S13	E35	.602	16884	8.7	15	-N			80	1.0	
CULG	06	0244	0248	0300	S13	E34	.589	16884	8.7	16	-N	C	0248	80	1.0	T
VORO	06	0246E		0258	S13	E36	.615	16884	8.8	12D	-N	C	0251	90	1.1	
19 CULG	06	0320	0327	0351	S12	W12	.290	16881	5.2	31	-F	C	0327	80	.8	H
20 CULG	06	0343	0346	0405	S15	E34	.598	16884	8.7	22	-N	C	0346	80	1.0	T
21 CULG	06	0445	0451	0506	S15	E34	.598	16884	8.7	21	-N	C	0451	130	1.5	F
22 ABST	06	0826	0832	0848	S14	E32	.568	16884	8.8	22	-F	C	0832	131	1.6	EJ
23 ABST	06	0856	0859	0911	N14	W60	.875	16886	1.9	15	-N	C	0859	87	1.7	DJ
24 ABST	06	0859	0902	0910	S23	E46	.768	16889	9.8	11	-F	C	0902	131	1.9	EJ
25 ABST	06	0910	0912	0918	S10	W25	.450	16877	4.5	8	-N	C	0912	174	1.9	EJ
26 ABST	06	0950	0952	1000	N14	W60	.875	16886	1.9	10	-N	C	0952	87	1.7	DJ
27 HTPR	06	1030	1035	1050	S28	E57	.876	16893	10.7	20	-F	C	1035	30	.5	
GRP85028	06	1058	1119	1137	S13	E31	.549	16884	8.8	39	-N					E
HTPR	06	1058		1125D	S14	E31	.555	16884	8.8	27D	-N	C	1102	40	.5	E
KHAR	06	1102E	1119	1134	S14	E31	.555	16884	8.8	32D	-N	P	1119	40	.5	E
RAMY	06	1110E	1110U	1139	S13	E31	.549	16884	8.8	29D	-F	3 C		40		
KHAR	06	1119E	1119	1134	S13	E34	.589	16884	9.0	15D	-F	P	1119	30	.4	DT
GRP85029	06	1130+1	1130+1	1148	N11	W64	.903	16886	1.7	18	-N					D
KHAR	06	1119	1119	1205D	N12	W62	.888	16886	1.8	46D	-N	P	1119	50		D
CATA	06	1130	1130	1135	N10	W65	.909	16886	1.6	5	1F	2 C	1130	112	2.8	
RAMY	06	1131	1131	1148	N11	W64	.903	16886	1.7	17	-N	3 C		27		
GRP85030	06	1140+3	1143+0	1148	S12	E33	.571	16884	9.0	8	-B			60	.7	
HTPR	06	1140	1143	1149	S13	E34	.589	16884	9.0	9	-B	C	1143	80	1.0	
RAMY	06	1143	1143	1146	S12	E33	.571	16884	9.0	3	-B	3 C		53		
GRP85031	06	1150+2	1152+4 1202	1208	S15	E30	.547	16884	8.7	18	-F			20	.2	E
HTPR	06	1150	1156	1208	S15	E30	.547	16884	8.7	18	-F	C	1156	20	.2	
RAMY	06	1152	1152	1158	S15	E29	.534	16884	8.7	6	-F	3 C		20		
KHAR	06	1154E	1154	1212D	S16	E30	.553	16884	8.7	18D	-N	P	1154	40	.5	D
KHAR	06	1154E	1154	1217D	S13	E34	.589	16884	9.0	23D	-F	P	1154	30	.4	DT
KHAR	06	1201E	1202	1222D	S14	E30	.542	16884	8.8	21D	-F	P	1202	130	1.6	E
KHAR	06	1212		1217D	S11	E30	.526	16884	8.8	5D	-F	P	1217	30	.4	T
32 RAMY	06	1151	1159	1212	N12	W65	.911	16886	1.6	21	-F	3 C		73		
33 KHAR	06	1233E	1233	1237D	S13	E34	.589	16884	9.1	4D	-F	P	1233	40	.5	T
34 RAMY	06	1250	1252	1258	S13	W26	.482	16877	4.6	8	-F	3 C		26		
35 KHAR	06	1312E		1319D	S14	E28	.515	16884	8.6	7D	-F	P	1312	40	.5	
36 KHAR	06	1319	1322	1401	N12	W63	.896	16886	1.8	42	-N	P	1322	20		E
GRP85037	06	1357+0	1358+3	1435	S13	E28	.509	16884	8.7	38	-N					E
HUAN	06	1357	1400	1441	S14	E28	.515	16884	8.7	44	-N	1 C	1400	70	.9	E
HTPR	06	1357	1358	1430	S13	E28	.509	16884	8.7	33	-B	C	1358	70	.8	E
KHAR	06	1358E	1401	1434D	S14	E30	.542	16884	8.8	36D	1N	C	1414	190	2.3	E
BIGB	06	1410E	1410U	1436	S13	E29	.523	16884	8.8	26D	-N	2 C	1410	80	.9	

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Time (UT)	Area Measurement Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85038	06	1411+1	1414+0	1428	N13	W65	.911	16886	1.7	17	-F				70		E
KHAR	06	1411	1414	1434D	N14	W65	.912	16886	1.7	23D	-F		P	1414	80		E
BIGB	06	1412	1414	1428	N13	W65	.911	16886	1.7	16	-N	3	C	1414	80		
HUAN	06	1412	1414	1417	N12	W65	.911	16886	1.7	5	-F	1	C	1414	40		
39 HOLL	06	1420	1425	1452	S13	W27	.496	16877	4.6	32	-F	3	C		27		
40 BIGB	06	1447	1458	1529	S07	W90	1.000	16867	30.9	42	?N	3	C	1458	70		
			IMP.1 NO : HTPR HUAN HOLL														
41 HOLL	06	1456	1513	1516	S13	W28	.509	16877	4.5	20	-F	3	C		21		
42 HTPR	06	1510	1512	1520	S14	E28	.515	16884	8.7	10	-F		C	1512	30	.3	E
GRP85043	06	1544+6	1553+1	1608	N11	W65	.910	16886	1.8	24	-N				40		E
HTPR	06	1544E		1605	N13	W66	.918	16886	1.7	21D	-F		C	1553	30	.7	E
HOLL	06	1547	1553	1611	N10	W65	.909	16886	1.8	24	-N	3	C		61		
BIGB	06	1550	1553	1611	N11	W65	.910	16886	1.8	21	-B	2	C	1553	40		
HUAN	06	1550	1554	1601	N11	W65	.910	16886	1.8	11	-N	1	C	1554	40		
GRP85044	06	1720+1	1722+1	1739	N12	W66	.918	16886	1.8	19	-N				45		
BIGB	06	1720	1722	1741	N13	W67	.925	16886	1.7	21	-B	3	C	1722	60		
HUAN	06	1721	1723	1737	N11	W65	.910	16886	1.8	16	-N	1	C	1723	30		
45 BIGB	06	1856	1859	1905	S12	W90	1.000	16867	31.0	9	-B	3	C	1859	50		
GRP85046	06	1904+1	1907	1934	S13	E27	.496	16884	8.8	30	-F						
HOLL	06	1904	1907	1947	S12	E26	.476	16884	8.7	43	-N	3	C		71		
HUAN	06	1905		1920	S14	E28	.515	16884	8.9	15	-F	1	C				
47 HOLL	06	2021	2024	2032	S11	E25	.456	16884	8.7	11	-F	3	C		27		
GRP85048	06	2035>9	2110+0	2122D	S14	W29	.528	16877	4.7	47	-F				50	.6	
HOLL	06	2035	2110	2208	S14	W30	.542	16877	4.6	93	-N	3	C		74		
PALE	06	2109	2110	2122	S14	W29	.528	16877	4.7	13	-F	3	C		33		
49 HOLL	06	2044	2050	2057	N11	W68	.930	16886	1.8	13	-N	3	C		21		
GRP85050	06	2114>9	2131+2	2144	N12	W70	.942	16886	1.6	30	-B				80		D
HOLL	06	2114	2131	2144	N10	W70	.942	16886	1.6	30	-B	3	C		87		
BIGB	06	2124	2133	2147	N13	W67	.925	16886	1.9	23	-B	3	C	2133	60		
VORO	06	2130E	2133	2144	N12	W70	.942	16886	1.6	14D	-N		C	2133	90		D
51 HOLL	06	2341	2344	0046	S13	E35	.602	16889	9.6	65	?N	3	C		220		
			IMP.1 NO : BIGB PALE														
GRP85052	07	0045+1	0048+1	0057	N09	W76	.971	16868	1.3	12	-F						
PALE	07	0045	0049U	0059D	N08	W83	.993	16868	31.8	14D	-F	3	C				
HOLL	07	0046	0048	0054	N10	W70	.942	16868	1.8	8	-N	2	C		17		
GRP85053	07	0050	0051	0058	S13	E23	.442	16884	8.8	8	-N				60	.7	E
HOLL	07	0050	0051	0058	S13	E23	.442	16884	8.8	8	-N	2	C		40		
VORO	07	0052E		0058	S13	E23	.442	16884	8.8	6D	-N		C	0052	90	1.0	E
GRP85054	07	0116+3	0118+2	0129	N13	W72	.954	16886	1.7	13	1B				100		A
MANI	07	0116	0118	0129	N12	W72	.953	16886	1.7	13	1B	2	P		110	2.5	
BIGB	07	0117	0118	0130	N13	W72	.954	16886	1.7	13	1B	3	C	0118	90		
PEKG	07	0119	0120	0123	N15	W72	.954	16886	1.7	4	1B		P	0120	97		A
55 PEKG	07	0300	0309	0315	S10	W34	.578	16877	4.6	15	-F		P	0309	126	1.6	U
GRP85056	07	0311	0315	0330	N12	W74	.963	16886	1.6	19	1B						DU
PEKG	07	0311	0315	0330	N14	W76	.972	16886	1.4	19	2B		P	0313	231		U
MANI	07	0319E	0319U	0322D	N12	W74	.963	16886	1.6	3D	-N	2	P		50	1.2	
TACH	07	0322E		0329	N12	W71	.948	16886	1.8	7D	1F		V	0326	210		D
57 ABST	07	0500	0504	0510	S13	E17	.363	16884	8.5	10	-F		C	0504	131	1.4	EJ

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Time (UT)	Area Appar (Disk)	Area Corr (Sq Deg)	Remarks
GRP85058	07	0511+7	0520+2	0539	S12	W36	.612	16877	4.5	28	1N				190	2.4	EJU
YUNN	07	0511	0516	0516D	S12	W35	.598	16877	4.6	5D	1N		P		161	2.1	
MITK	07	0512	0522	0535	S13	W37	.628	16877	4.4	23	1N		C	0522	200	2.6	E
ABST	07	0515	0520	0600	S12	W36	.612	16877	4.5	45	1N		C	0520	174	2.2	EJ
TACH	07	0516	0521	0534	S12	W36	.612	16877	4.5	18	1N		C	0521	177	2.3	E
PEKG	07	0518	0522	0530	S14	W35	.607	16877	4.6	12	1B		P	0521	177	2.3	U
CULG	07	0523E	0523E	0548	S13	W37	.628	16877	4.4	25D	1N		P	0523	280	3.7	FUB
59 ABST	07	0540	0544	0605	N16	W80	.986	16886	1.2	25	?N		C	0544	87		DJ
			IMP.1 NO : TACH MITK CULG														
GRP85060	07	0702	0707+2 0725+3	0736	N12	W76	.972	16886	1.6	34	1N				110		DHJ
KANZ	07	0702	0709	0709D	N13	W78	.979	16886	1.4	7	-N	1					
KHAR	07	0707E	0707	0801D	N09	W73	.957	16886	1.8	54D	1B		P	0727			DH
ABST	07	0723	0726	0730	N16	W80	.986	16886	1.3	7	1B		C	0726	131		DJ
MANI	07	0725	0725	0735D	N13	W76	.972	16886	1.6	10D	-N	*	P		50	1.2	
CATA	07	0725	0728	0740	N10	W70	.942	16886	2.1	15	1F	*	C	0728	112		
KANZ	07	0726E	0726	0734	N12	W78	.979	16886	1.5	8D	-B	*					
61 KHAR	07	0707E		0718D	N18	E23	.483	16891	9.0	11D	-F		P	0707	50	.6	EH
62 KHAR	07	0813E	0813	0832D	N11	W74	.963	16886	1.8	19D	-F		P	0813			D
GRP85063	07	0833E	0837 0847	0853D	S13	E19	.389	16884	8.8	20	-N						E
KHAR	07	0833E	0837	0850D	S14	E16	.361	16884	8.6	17D	-N		P	0837	40	.4	E
KHAR	07	0840E	0847	0853D	S13	E22	.429	16884	9.0	13D	-N		P	0847	30	.4	D
64 KHAR	07	0850E	0853	0900D	S16	W35	.617	16877	4.7	10D	-F		P	0853	40	.5	
GRP85065	07	0905+0	0905+1	0910	S11	W37	.621	16877	4.6	5	-N				70	.9	EJ
ABST	07	0905	0906	0910	S11	W37	.621	16877	4.6	5	-N		C	0906	86	1.7	EJ
PURP	07	0905	0905	0908	S10	W35	.591	16877	4.8	3	-F		C				E
KHAR	07	0907E	0907	0914D	S12	W37	.624	16877	4.6	7D	-N		P	0907	50	.6	E
66 KHAR	07	0910E	0910	0917D	S14	E16	.361	16884	8.6	7D	-F		P	0910	40	.4	D
67 KHAR	07	0943E	0957	1009D	S18	E20	.449	16884	8.9	26D	-F		P	0943	30	.4	D
	07	1030	1040	NO FLARE PATROL													
	07	1100	1105	NO FLARE PATROL													
68 RAMY	07	1107	1225	1323	N12	W75	.967	16886	1.8	136	-N	3	C				
GRP85069	07	1258	1321 1328	1400	S11	W24	.443	16881	5.7	62	-F						E
HUAN	07	1258		1331	S11	W24	.443	16881	5.7	33	-F	1	C	1312	45	.5	E
HOLL	07	1320E	1321U	1400	S12	W25	.463	16881	5.7	40D	-F	2	C		135		
RAMY	07	1325	1328	1519	S11	W23	.429	16881	5.8	114	-F	3	C		111		
70 HOLL	07	1628	1628	1637	N12	W80	.985	16886	1.7	9	-N	3	C				
71 HUAN	07	1728		1739D	N11	W78	.979	16886	1.9	11D	-F	1	C				D
72 HOLL	07	1755	1811	1833	N11	W79	.982	16886	1.8	38	-N	3	C				
73 HOLL	07	1813	1820	1854	N19	E19	.448	16891	9.2	41	-F	3	C		36		
74 BIGB	07	1840	1844	1854	N16	E90	1.000	16898	14.5	14	-B	1	C	1844	30		
75 PALE	07	1843	1923	1938	N10	W84	.995	16886	1.5	55	-F	3	C		37		
76 HOLL	07	1953	1954	2001	N10	W78	.979	16886	2.0	8	-F	3	C				
77 PALE	07	2005	2039	2104	N10	W84	.995	16886	1.5	59	-F	3	C		10		
78 BIGB	07	2103	2131	2207	N15	E90	1.000	16898	14.6	64	?B	1	C	2131	70		
			IMP.1 NO : PALE														

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Measurement Time (UT)	Area Measurement Appar (Disk)	Area Measurement Corr (Sq Deg)	Remarks
GRP85079	07	2257+8	2301 2322	2329	N11	W87	.999	16886	1.4	32	-N					A
BIGB	07	2257	2301	2333	N13	W85	.996	16886	1.6	36	1B	3 C	2301	50		A
PALE	07	2305	2322	2324	N10	W89	1.000	16886	1.3	19	-F	3 C				
80 CULG	07	2322	2331	2345	S27	E17	.524	16889	9.2	23	-N	C	2331	100	1.2	H
GRP85081	08	0032		0050	N15	E87	.999	16898	14.5	18	-N					
BIGB	08	0032	0047	0047D	N16	E90	1.000	16898	14.8	15D	1N	2 P	0047	120		
YUNN	08	0045E	0045	0050	N15	E84	.995	16898	14.3	5D	-N	P		32		
82 CULG	08	0038	0042	0058	S10	W46	.730	16877	4.6	20	-N	C	0042	100	1.5	K
GRP85083	08	0039+6	0042+6	0049	N14	W86	.998	16886	1.6	10	-F			45		AG
CULG	08	0039	0042	0048	N14	W88	.999	16886	1.4	9	-F	C	0042	40		
YUNN	08	0045	0048	0050D	N15	W84	.995	16886	1.7	5D	-N	P		48		AG
84 CULG	08	0356	0408	0430	S18	E08	.338	16884	8.8	34	-F	C	0408	120	1.3	
85 CULG	08	0403	0404	0414	S20	W76	.974	16873	2.5	11	-F	C	0404	30		
86 CULG	08	0427	0436	0441	S18	W42	.708	16887	5.0	14	-F	C	0436	40	.6	
87 CULG	08	0427	0430	0441	N16	W89	1.000	16886	1.5	14	-N	C	0430	30		
88 CULG	08	0450	0454	0501	S48	E41	.864		11.3	11	?F	C	0454	120	2.4	G
			IMP.1 NO : PURP TACH													
GRP85089	08	0516	0519 0540	0553	N19	E90	1.000	16898	15.0	37	1N					ADJ
ABST	08	0516	0519	0550	N16	E90	1.000	16898	15.0	34	1N	C	0519	87		ADJ
CATA	08	0535E	0540	0555	N22	E90	1.000	16898	15.0	20D	1F	2 P	0540	56		
90 CULG	08	0545	0554	0605	S18	W42	.708	16887	5.1	20	-N	C	0554	60	.9	
91 CATA	08	0605	0610	0630	N21	E90	1.000	16898	15.0	25	?F	2 C	0610	56		
			IMP.1 NO : PURP CULG ABST													
92 ABST	08	0721	0723	0730	N17	E15	.381	16891	9.4	9	-F	C	0723	131	1.3	EJ
93 GEOR	08	0758	0800	0802	N30	E90	1.000		15.1	4	-N	2				
94 ABST	08	0920	0923	0935	N25	E19	.514	16891	9.8	15	-F	C	0923	87	1.0	DJ
95 GEOR	08	1305		1308	N12	W90	1.000	16886	1.8	3	-N	2				
96 BIGB	08	1519	1523	1606	N12	W90	1.000	16886	1.9	47	1N	1 C	1523	80		
GRP85097	08	1655+1	1659+4	1758	S17	E04	.302	16884	9.0	63	1B			290	3.1	E
PALE	08	1655	1659	1740	S17	E04	.302	16884	9.0	45	1B	3 C		252		
HOLL	08	1655E	1701	1758	S17	E04	.302	16884	9.0	63D	2B	3 C		531		
HOLL	08	1655	1659	1659D	S15	E00	.261	16884	8.7	4D	1B	* C		347		
BIGB	08	1656	1703	1809	S17	E05	.306	16884	9.1	73	1B	* C	1703	310	3.2	
HUAN	08	1659E		1726D	S17	E05	.306	16884	9.1	27D	1N	* P	1700	280	3.0	E
98 HOLL	08	1820	1828	1837D	S15	E01	.262	16884	8.8	17D	-F	3 C		28		
99 HOLL	08	2230	2236	2306	N14	E34	.593	16897	11.5	36	-F	3 C		20		
100 CULG	08	2347	2351	2359	S25	E03	.428	16889	9.2	12	-F	C	2351	60	.7	
GRP85101	09	0009+2	0011+1	0019	S13	W02	.232	16884	8.9	10	-F			45	.5	H
CULG	09	0009	0012	0022	S12	E00	.213	16884	9.0	13	-N	C	0012	50	.5	H
HOLL	09	0011	0011	0016	S15	W04	.272	16884	8.7	5	-F	2 C		43		
102 HOLL	09	0020	0023	0035D	S25	E05	.434	16889	9.4	15D	-F	2 C		36		
	09	0100	0106	NO FLARE PATROL												
	09	0213	0228	NO FLARE PATROL												
103 CULG	09	0229	0231	0250U	S26	E03	.445	16889	9.3	21D	-F	C	0231	140	1.5	H

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Time (UT)	Area Measurement Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85104	09	0250+4	0253+5	0306	S13	W02	.232	16884	9.0	16	-N			50	.5	D
CULG	09	0250	0253	0310	S13	W02	.232	16884	9.0	20	-B	C	0253	70	.7	T
YUNN	09	0254	0258	0302	S13	W02	.232	16884	9.0	8	-N	C		32	.3	D
105 CULG	09	0252	0307	0355	N25	E10	.447	16891	9.9	63	-F	C	0307	40	.4	
GRP85106	09	0312+4	0317+1	0330	S25	E03	.430	16889	9.4	18	-F					H
CULG	09	0312	0318	0335	S26	E03	.445	16889	9.4	23	-N	C	0318	140	1.5	H
PALE	09	0316	0317	0324	S25	E04	.432	16889	9.4	8	-F	3 C		39		
107 CULG	09	0336	0342	0403U	S18	W09	.347	16884	8.5	27D	-F	C	0342	120	1.3	S
GRP85108	09	0543>9	0547 0606	0614	S14	W04	.256	16884	8.9	31	-F					EHJ
CULG	09	0543	0547	0614	S13	W03	.235	16884	9.0	31	-F	C	0547	50	.5	HT
ABST	09	0604	0606	0612D	S16	W06	.298	16884	8.8	8D	-F	P	0606	131	1.3	EJ
GRP85109	09	0703E	0705	0728D	S11	E89	1.000	16901	16.0	25	-F					
KHAR	09	0703E	0705	0716D	S11	E90	1.000	16901	16.0	13D	-F	P	0705			D
KHAR	09	0703E		0728D	S12	E88	.999	16901	15.9	25D	-F	P	0717			D
110 KHAR	09	0728E	0728	0733D	S16	W05	.293	16884	8.9	5D	-F	P	0731	30	.3	D
111 KHAR	09	0734E	0735	0750D	S24	E38	.696	16893	12.2	16D	-F	P	0735			E
112 KHAR	09	0736	0740	0802D	N14	E27	.501	16897	11.3	26D	?F	P	0740			
IMP.1 NO : YUNN																
113 KHAR	09	0745E	0745	0754D	S12	E88	.999	16901	15.9	9D	-F	V	0745			D
GRP85114	09	0804E	0806 0813	0823D	S14	E90	1.000	16901	16.1	19	-F					
KHAR	09	0804E	0806	0823D	S11	E90	1.000	16901	16.1	19D	-F	V	0806			D
KHAR	09	0811E	0813	0820D	S17	E90	1.000	16901	16.1	9D	-F	V	0813			D
115 KHAR	09	0820E	0822	0834D	S25	E01	.427	16889	9.4	14D	-F	V	0822			DH
116 KHAR	09	0934E	0935	0945D	S17	W90	1.000	16873	2.6	11D	-F	V	0935			D
117 KHAR	09	1105	1108	1123D	S17	W13	.367	16884	8.5	18D	-F	P	1116	40	.4	
118 KHAR	09	1307E		1307D	S16	W01	.281	16889	9.5		-F	P	1307	20	.2	D
119 KHAR	09	1310E	1313	1327D	N24	W61	.896	16878	5.0	17D	-F	P	1313	40		D
120 HOLL	09	1620	1626	1710	S19	W10	.369	16884	8.9	50	-F	2 C		27		
121 BIGB	09	1939	1941	1951	S21	W90	1.000	16873	3.1	12	-B	3 C	1941	40		
122 BIGB	09	2033	2038	2051	S11	E90	1.000	16901	16.6	18	-B	3 C	2038	30		
	09	2359	0000	NO FLARE PATROL												
	10	0045	0046	NO FLARE PATROL												
	10	0123	0131	NO FLARE PATROL												
123 CULG	10	0145	0149	0157	S10	W75	.967	16877	4.4	12	-N	C	0149	40		
GRP85124	10	0216	0231+3	0243D	N21	W06	.365	16891	9.6	27	-F					D
CULG	10	0216	0234U	0321	N21	W05	.361	16891	9.7	65	-N	C	0234	100	1.1	
PALE	10	0229E	0231U	0243	N21	W07	.370	16891	9.6	14D	-F	3 C		27		D
GRP85125	10	0234>9	0246+1	0259	N18	E66	.921	16898	15.1	25	-N			60		D
CULG	10	0234	0246	0304	N17	E68	.933	16898	15.2	30	1N	C	0246	80	2.0	
PALE	10	0246	0247	0254	N19	E64	.909	16898	14.9	8	-F	3 C		44		D
GRP85126	10	0257+5	0306+2	0358	S11	E76	.972	16901	15.8	61	-N					
CULG	10	0257	0308	0358	S12	E78	.979	16901	16.0	61	1N	C	0308	160		F
PALE	10	0302	0306	0339D	S10	E75	.967	16901	15.8	37D	-F	3 C				D
127 CULG	10	0428	0449	0610	S10	E50	.775	16907	13.9	102	?F	C	0449	300	4.5	S
IMP.1 NO : TACH																

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JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
128 CULG	10	0441	0444	0455	N17	E67	.927	16898	15.2	14	?F		C	0444	90	2.2	
			IMP.1 NO : TACH														
129 ABST	10	0458E	0459	0515	S15	W24	.474	16884	8.4	17D	-F		P	0459	87	.9	DJ
GRP85130	10	0521+0	0522+0	0537	S25	W11	.462	16889	9.4	16	-N						J
TACH	10	0521	0522	0530	S25	W11	.462	16889	9.4	9	-N		C	0522	70	.8	D
ABST	10	0521E	0522	0541D	S25	W11	.462	16889	9.4	20D	-N		P	0522	131	1.5	EJ
CULG	10	0521	0522	0537	S25	W12	.468	16889	9.3	16	1B		C	0522	230	2.5	
131 CULG	10	0523	0526	0532	N18	E60	.879	16898	14.7	9	?N		C	0526	130	2.6	
			IMP.1 NO : TACH ABST														
132 CULG	10	0552	0555	0600	S12	W16	.345	16884	9.0	8	-N		C	0555	40	.4	
GRP85133	10	0802	0807+1	0815	S14	E71	.949	16901	15.7	13	-F						DJ
ABST	10	0802	0807	0811	S15	E70	.944	16901	15.6	9	1F		C	0807	87		DJ
KHAR	10	0805E	0808	0818D	S14	E73	.959	16901	15.8	13D	-F		P				D
134 ABST	10	0824	0826	0828D	N18	E65	.915	16898	15.2	4D	1F		P	0826	87		DJ
135 ABST	10	0825E	0826	0828D	N13	E16	.346	16897	11.6	3D	-N		P	0826	87	.9	DJ
136 KHAR	10	1019E	1023	1048D	S16	W12	.346	16889	9.5	29D	-F		P	1023	40	.5	D
137 KHAR	10	1021E	1021	1038D	N24	W09	.425	16891	9.8	17D	-F		P	1021	50	.6	
138 KHAR	10	1128E		1142D	S20	W22	.495	16884	8.8	14D	-F		P	1128	30	.4	
139 KHAR	10	1148E		1158D	S20	W22	.495	16884	8.8	10D	-F		P	1148	30	.4	
140 KHAR	10	1215E	1219	1230D	S20	W22	.495	16884	8.9	15D	-F		P	1219	40	.5	
141 KHAR	10	1352E	1356	1400D	S14	W71	.949	16881	5.3	8D	-N		P				E
142 RAMY	10	1405	1408	1428	N25	W10	.445	16891	9.8	23	-N	3	C		86		
GRP85143	10	1407+5	1412+5	1436	S20	W23	.506	16884	8.9	29	-N				60	.7	D
RAMY	10	1407	1412	1433	S20	W23	.506	16884	8.9	26	-N	3	C		70		
BIGB	10	1411	1417	1438	S20	W23	.506	16884	8.9	27	-N	2	C	1417	60	.7	
HUAN	10	1412		1417D	S21	W23	.516	16884	8.9	5D	-F	1	P	1414	20	.2	D
144 HUAN	10	1543E		1550	S12	E74	.963	16901	16.2	7D	-F	1	P				E
GRP85145	10	1950+4	1950 1957	2002	S12	E69	.937	16901	16.0	12	-F						D
HOLL	10	1950	1950	2011	S12	E68	.931	16901	15.9	21	-F	3	C		40		
HUAN	10	1951		1958	S13	E70	.943	16901	16.1	7	-F	1	C				
PALE	10	1954	1957	2002	S11	E69	.937	16901	16.0	8	-F	3	C		19		D
GRP85146	10	2218+5	2226+3 2238	2258	N17	E56	.844	16898	15.1	40	-N						D
CULG	10	2218	2229	2258	N17	E58	.861	16898	15.3	40	1N		C	2229	160	3.0	
BIGB	10	2223	2226	2304	N17	E56	.844	16898	15.1	41	-B	3	C	2226	50	.9	
PALE	10	2229E	2238	2248	N19	E55	.839	16898	15.1	19D	-F	3	C		24		D
147 CULG	10	2221	2225	2233	S38	W07	.628	16885	10.4	12	-N		C	2225	50	.7	G
148 CULG	10	2308	2316	2319	S15	W30	.551	16884	8.7	11	-F		C	2316	60	.7	T
GRP85149	10	2332>9	2345 2352+2	0044	S15	W32	.576	16884	8.6	72	-F						
HOLL	11	0007E	0008U	0055	S15	W33	.590	16884	8.5	48D	-N	*	C		159		
PALE	10	2332	2354	0030	S15	W32	.576	16884	8.6	58	-F	*	C		76		
BIGB	10	2342	2345	0044	S15	W31	.563	16884	8.7	62	-N	*	C	2345	80	1.0	
MANI	10	2352E	2352U	0010D	S11	W34	.583	16884	8.4	18D	-F	*	V		30	.4	
GRP85150	10	2336+7	2342+4	2353	N20	E56	.849	16898	15.2	17	-F				35	.7	
CULG	10	2336	2342	2354	N19	E58	.864	16898	15.3	18	-N		C	2342	50	.9	
PALE	10	2343	2346	2352	N21	E54	.834	16898	15.0	9	-F	3	C		19		

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JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
151 CULG	10	2353	2356	2357D	S41	W08	.670	16885	10.4	4D	-F		P	2356	120	1.7	G
152 HOLL	11	0017	0028	0032	N20	E50	.795	16898	14.8	15	-F	3	C		21		
153 CULG	11	0056	0102	0114	S23	W24	.547	16889	9.2	18	-F		C	0102	100	1.2	
154 CULG	11	0127	0133	0140	S16	W31	.570	16884	8.7	13	-N		C	0133	50	.6	
155 CULG	11	0133	0136	0146	N19	W27	.534	16891	9.0	13	-N		C	0136	80	1.6	
156 VORO	11	0254	0254	0256	S27	W21	.561	16889	9.5	2	-F		C	0254	18	.2	D
157 CULG	11	0446	0601	0615D	S28	W60	.899		6.7	89D	?F		C	0601	260	5.2	S
			IMP.2 NO : ABST HTPR														
158 ABST	11	0538	0545	0555	N26	W19	.521	16891	9.8	17	-F		C	0545	87	1.0	DJ
159 ABST	11	0539	0547	0557	S15	W35	.615	16884	8.6	18	?F		C	0547	174	2.3	EJ
			IMP.1 NO : HTPR														
GRP85160	11	0541+2	0548+1	0554	N14	W19	.393	16895	9.8	13	-N				100	1.1	EJ
ABST	11	0541	0548	0555	N15	W18	.390	16895	9.9	14	-N		C	0548	131	1.4	EJ
HTPR	11	0543	0549	0553	N14	W20	.406	16895	9.7	10	-N		C	0549	70	.7	
161 HTPR	11	0559	0610	0631	S23	W23	.537	16889	9.5	32	-F		C	0610	10	.1	
162 ABST	11	0603	0607	0611	N29	W24	.595	16891	9.5	8	-F		C	0607	87	1.1	DJ
GRP85163	11	0611+0	0612+2	0619	N19	E50	.792	16898	15.0	8	-F						DJV
HTPR	11	0611	0614	0617	N19	E49	.782	16898	14.9	6	-F		C	0614	20	.3	
ABST	11	0611	0612	0620	N19	E51	.802	16898	15.1	9	-N		C	0612	87	1.9	DJV
164 HTPR	11	0734	0736	0742	S24	W23	.547	16889	9.6	8	-F		C	0736	10	.1	
GRP85165	11	0756+3	0802+5	0823	N24	W21	.516	16891	9.8	27	-F				70	.8	EJ
ABST	11	0756	0805	0825	N19	W25	.511	16891	9.5	29	1N		C	0805	174	2.3	EJ
YUNN	11	0758	0802	0810	N27	W19	.532	16891	9.9	12	-N		C		32	.4	F
HTPR	11	0759	0807	0821	N25	W21	.527	16891	9.8	22	-F		C	0807	60	.7	E
CATA	11	0800E	0805	0825	N24	W22	.526	16891	9.7	25D	-F	2	P	0805	84	1.0	
166 YUNN	11	0800	0802	0804	S14	W40	.671	16884	8.3	4	-N		C		80	1.1	
167 HTPR	11	0800	0802	0807	N15	W34	.596	16908	8.8	7	-N		C	0802	50	.6	
168 HTPR	11	0825	0829	0833	S14	W33	.584	16884	8.9	8	-F		C	0829	30	.4	
GRP85169	11	0840+2	0845+2	0855D	S25	W24	.566	16889	9.6	15	-F						
TELV	11	0840	0847	1002	S26	W25	.586	16889	9.5	82	-N	3			98	1.1	
HTPR	11	0842	0845	0855	S24	W24	.557	16889	9.6	13	-F		C	0845	30	.3	
GRP85170	11	0903+2	0909+1 0919+6	0932	S15	W33	.590	16884	8.9	29	-N						EJ
HTPR	11	0903	0910	0942	S15	W37	.639	16884	8.6	39	-B	*	C	0910	80	1.0	E
TELV	11	0904	0910	0958	S15	W32	.577	16884	9.0	54	1B	3			184	2.2	
KANZ	11	0904	0910	0918	S13	W34	.592	16884	8.8	14	-B	*					
ABST	11	0905	0909	0921D	S15	W34	.602	16884	8.8	16D	-N	*	P	0909	87	1.1	DJ
CATA	11	0910	0915	0925D	S14	W31	.559	16884	9.1	15D	1F	*	P	0915	169	2.1	
HTPR	11	0916	0921	0926	S21	W37	.670	16884	8.6	10	-F	*	C	0921	10	.1	
HTPR	11	0916	0919	0922	S18	W33	.607	16884	8.9	6	-F	*	C	0919	10	.1	
HTPR	11	0921	0924	0930	S17	W37	.649	16884	8.6	9	-F	*	C	0924	20	.2	
ABST	11	0922E	0925	0930D	S16	W35	.620	16884	8.8	8D	-N	*	P	0925	87	1.1	DJ
171 ABST	11	0942E	0944	1000D	N19	W25	.511	16891	9.5	18D	-F		P	0944	131	1.6	EJ
GRP85172	11	1027+3	1030+4	1051	S17	W38	.660	16884	8.6	24	-N						E
TELV	11	1027	1034	1051	S17	W40	.684	16884	8.4	24	-B	2			98	1.3	
HTPR	11	1030	1031	1050	S17	W38	.660	16884	8.6	20	-N		C	1031	50	.6	E
YUNN	11	1030	1030	1041D	S15	W37	.639	16884	8.7	11D	1N		P		161	2.1	E

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Hale Plage Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type		Area Measurement Time (UT)	Area Measurement Appar (Disk)	Area Measurement Corr (Sq Deg)	Remarks
GRP85173	11	1327E		1354D	S13	E56	.840	16901	15.8	27	-N						E
KANZ	11	1327E		1336D	S13	E57	.849	16901	15.8	9D	-N	2					
HTPR	11	1330E		1354D	S13	E55	.831	16901	15.7	24D	-N		C	1330	40	7	E
174 HOLL	11	2125	2127	2159	S11	E53	.808	16901	15.9	34	-F	3	C		62		
175 HOLL	12	0032	0034	0042	N21	W33	.617	16891	9.5	10	-N	3	C		28		
GRP85176	12	0034+4	0038+2	0057	S16	W45	.736	16884	8.6	23	-N				80	1.2	
CULG	12	0034	0038U	0059U	S14	W45	.730	16884	8.6	25D	1F		C	0038	150	2.2	
HOLL	12	0037	0038	0055	S18	W45	.743	16884	8.7	18	-B	3	C		71		
BIGB	12	0037	0038	0102	S14	W45	.730	16884	8.7	25	-B	2	C	0038	50	.7	
PALE	12	0038	0040	0050	S18	W45	.743	16884	8.7	12	-F	3	C		86		
177 HOLL	12	0043	0044	0114	N12	E35	.595	16898	14.7	31	-N	3	C		40		
GRP85178	12	0129+2	0130+1	0143	N13	E36	.612	16898	14.8	14	-N				45	.6	
BIGB	12	0129	0130	0144	N13	E37	.625	16898	14.8	15	-B	2	C	0130	40	.5	
PALE	12	0131	0131	0142	N14	E35	.603	16898	14.7	11	-F	3	C		47		
179 YUNN	12	0225		0235	N11	E36	.605	16898	14.8	10	?N		P	0230	241	3.1	
		IMP.1 NO : PALE CULG MITK															
180 PALE	12	0302	0302	0307	N12	E34	.582	16898	14.7	5	-F	3	C		22		
181 YUNN	12	0310	0312	0317	N24	W31	.616	16891	9.8	7	-N		C		113	1.5	E
182 CULG	12	0402	0430	0439D	S23	W35	.662	16889	9.5	37D	-F		C	0430	30	.4	
183 ABST	12	0458	0542	0555	N11	E32	.551	16898	14.6	57	?N		C	0542	174	2.1	EJK
		IMP.1 NO : MITK KANZ															
184 ABST	12	0515	0518	0540	N14	W11	.296	16897	11.4	25	-F		C	0518	131	1.4	EJ
185 ABST	12	0517	0519	0540	N25	W34	.655	16891	9.7	23	-N		C	0519	131	1.7	EJ
GRP85186	12	0559+1	0601+4 0612	0617	S15	E44	.722	16901	15.5	18	-N				100	1.4	EJ
ABST	12	0559	0601	0612	S17	E44	.729	16901	15.5	13	1N		C	0601	131	2.1	EJ
KANZ	12	0559	0602	0618	S15	E44	.722	16901	15.5	19	-B	3					
CATA	12	0600	0605	0615	S14	E45	.730	16901	15.6	15	-F	2	C	0605	84	1.3	
ATHN	12	0600E	0612	0621D	S16	E43	.714	16901	15.5	21D	-B	3	V	0612	64	.9	
187 GEOR	12	0636	0648	0659	N16	E90	1.000	16911	19.0	23	-N	2					
GRP85188	12	0636+9	0646 0659	0723	N11	E32	.551	16898	14.7	47	-F						EJ
ABST	12	0636	0646	0735	N11	E32	.551	16898	14.7	59	-N		C	0646	131	1.5	EJ
KANZ	12	0645	0659	0711	N12	E32	.555	16898	14.7	26	-F	2					
189 KANZ	12	0734	0749	0808	S12	E38	.640	16901	15.2	34	-B	3					D
190 ABST	12	0757	0801	0812	N14	W11	.296	16897	11.5	15	-F		C	0801	131	1.4	EJ
GRP85191	12	0835+1	0840+0	0910	N12	E32	.555	16898	14.8	35	-F				120	1.4	EJ
CATA	12	0835	0840	0910D	N12	E31	.541	16898	14.7	35D	-F	2	P	0840	112	1.4	
KANZ	12	0835		0921	N12	E32	.555	16898	14.8	46	-F	1					
ABST	12	0836	0840	0855	N11	E32	.551	16898	14.8	19	-N		C	0840	131	1.5	EJ
GRP85192	12	1004+1	1005+5	1043	S19	W46	.757	16884	9.0	39	-N				100	1.5	F
TELV	12	0953	1005	1045	S20	W46	.761	16884	9.0	52	-B	3			98	1.4	F
KANZ	12	1004		1023D	S19	W46	.757	16884	9.0	19D	-N	1					
CATA	12	1005	1010	1040	S21	W45	.755	16884	9.0	35	-F	2	C	1010	112	1.8	
WEND	12	1032E		1034D	S19	W50	.797	16884	8.7	2D	1F		P	1032	180	3.1	
193 RAMY	12	1032	1109	1126	N18	E31	.574	16898	14.8	54	-F	3	C		27		
GRP85194	12	1249+1	1251+1	1301	N13	W13	.307	16897	11.6	12	-F				80	.8	
RAMY	12	1249	1251	1305	N13	W15	.331	16897	11.4	16	-N	3	C		55		
WEND	12	1250	1252	1257	N14	W11	.296	16897	11.7	7	-F		C	1252	106	1.1	

H - ALPHA SOLAR FLARES

JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Hale Cen Dist	Plage Region	CMP Day	Dur (Min)	Imp	Obs Type		Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
195 WEND	12	1259		1309D	N15	E84	.995	16911	18.8	10D	-N		C	1303	47		
196 HOLL	12	1337	1339	1412	S23	E40	.713	16902	15.6	35	-F	3	C		17		
GRP85197	12	1340+2	1340+2	1348	S12	E34	.588	16901	15.1	8	-N				60	.7	D
CATA	12	1340	1340	1345	S12	E34	.588	16901	15.1	5	-F	2	C	1340	56	.7	
HOLL	12	1340	1341	1348	S11	E41	.674	16901	15.6	8	-N	3	C		45		
HUAN	12	1340		1344	S12	E35	.601	16901	15.2	4	-F	1	C				
RAMY	12	1341	1342	1350	S11	E34	.584	16901	15.1	9	-B	3	C		44		D
WEND	12	1342	1342	1347	S13	E34	.593	16901	15.1	5	-N		C	1342	80	1.0	D
KANZ	12	1342	1342	1350	S12	E34	.588	16901	15.1	8	-F	1					
198 HOLL	12	1345	1349	1405	N12	E28	.500	16898	14.7	20	-F	3	C		25		
199 HOLL	12	1345	1347	1415	S29	W38	.730	16885	9.7	30	-F	3	C		28		
GRP85200	12	1346+4	1350+1	1403	N12	W14	.308	16897	11.5	17	-F				70	.7	
HOLL	12	1346	1350	1429	N12	W18	.361	16897	11.2	43	-N	3	C		74		
RAMY	12	1347	1351	1401	N12	W14	.308	16897	11.5	14	-F	3	C		46		
WEND	12	1347	1351	1403	N13	W12	.295	16897	11.7	16	-N		C	1351	88	1.0	
KANZ	12	1350	1350	1402	N14	W15	.342	16897	11.5	12	-F	1					
GRP85201	12	1402+1	1402+2	1411	N22	W36	.657	16891	9.9	9	-F				60	.8	
KANZ	12	1402	1402	1409	N23	W36	.663	16891	9.9	7	-F	1					
HOLL	12	1402	1403	1414	N19	W40	.686	16891	9.6	12	-N	3	C		58		
WEND	12	1403	1403	1412	N23	W35	.652	16891	10.0	9	-N		C	1403	94	1.3	
RAMY	12	1403	1404	1410	N22	W37	.667	16891	9.8	7	-F	3	C		31		
202 HOLL	12	1436	1437	1447	N12	W18	.361	16897	11.3	11	-F	3	C		21		
GRP85203	12	1454+3	1456+5	1542	N12	E27	.486	16898	14.6	48	-N				80	.9	
HUAN	12	1454	1456	1501	N12	E27	.486	16898	14.6	7	-F	1	C				
BIGB	12	1454	1501	1606	N13	E28	.506	16898	14.7	72	-N	3	C	1501	70	.8	
HOLL	12	1454	1501	1609	N12	E28	.500	16898	14.7	75	-N	3	C		90		
WEND	12	1455	1459	1524	N11	E28	.495	16898	14.7	29	1F		C	1459	206	2.4	
RAMY	12	1455	1501	1527	N13	E27	.492	16898	14.6	32	-N	3	C		42		
KANZ	12	1457		1552D	N12	E26	.472	16898	14.6	55D	-N	1					
204 HOLL	12	1509	1510	1521	N19	W41	.697	16891	9.6	12	-F	3	C		28		
GRP85205	12	1512+6	1518+2	1526	S11	E34	.584	16901	15.2	14	-B				130	1.6	L
KANZ	12	1512	1520	1528	S12	E34	.588	16901	15.2	16	-B	3					L
HUAN	12	1517	1519	1525	S12	E35	.601	16901	15.3	8	-N	2	C	1519	80		
BIGB	12	1517	1519	1527	S11	E34	.584	16901	15.2	10	-B	3	C	1519	110	1.4	
HOLL	12	1517	1518	1526	S11	E40	.662	16901	15.6	9	-B	3	C		144		
WEND	12	1517	1519	1524	S13	E33	.580	16901	15.1	7	1N		C	1519	188	2.4	
RAMY	12	1518	1519	1527	S11	E33	.571	16901	15.1	9	-B	3	C		148		
GRP85206	12	1640+1	1641+1	1715	N12	E26	.472	16898	14.6	35	-N				40	.5	
HOLL	12	1640	1642	1727	N12	E27	.486	16898	14.7	47	-N	3	C		51		
RAMY	12	1641	1641	1703	N13	E25	.465	16898	14.6	22	-N	3	C		32		
207 HOLL	12	1728	1728	1734	N12	E26	.472	16898	14.7	6	-F	3	C		27		
208 HOLL	12	1808	1810	1835	N11	W19	.367	16897	11.3	27	-N	3	C		51		
209 HOLL	12	1929	2004	2022	N12	W18	.361	16897	11.5	53	-N	3	C		57		
210 HOLL	12	2049	2054	2111	N18	E24	.489	16898	14.7	22	-N	3	C		60		
211 HOLL	12	2131	2131	2139	N18	E24	.489	16898	14.7	8	-F	3	C		25		
GRP85212	12	2205+2	2207+1	2229	N12	E24	.444	16898	14.7	24	-N						H
CULG	12	2205	2207	2215D	N11	E23	.424	16898	14.6	10D	1N		P	2207	200	2.2	
HOLL	12	2206	2207	2220	N12	E22	.416	16898	14.6	14	-B	3	C		96		
BIGB	12	2206	2207	2235	N12	E24	.444	16898	14.7	29	-N	3	C	2207	60	.7	
PALE	12	2207	2208	2223	N12	E24	.444	16898	14.7	16	-N	3	C		117		
VORO	12	2207	2208	2246	N13	E27	.492	16898	14.9	39	1N		C	2208	278	3.2	H

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
GRP85213	12	2237+0	2237+3	2248	S11	E29	.516	16901	15.1	11	-F			35	.4	E
HOLL	12	2237	2240	2252	S11	E29	.516	16901	15.1	15	-F	3 C		29		
VORO	12	2237	2237	2244	S12	E29	.522	16901	15.1	7	-F	C	2237	36	.4	E
GRP85214	12	2326+2	2328+1	2334	N18	E24	.489	16898	14.8	8	-N			50	.6	J
HOLL	12	2326	2328	2343	N18	E22	.465	16898	14.6	17	-N	3 C		64		
VORO	12	2327	2329	2331	N19	E25	.509	16898	14.9	4	-N	C	2329	63	.7	EJ
PALE	12	2328	2328	2334	N18	E24	.489	16898	14.8	6	-F	3 C		42		D
215 CULG	12	2346	2347	2351	N14	E20	.405	16898	14.5	5	-F	C	2347	40	.4	
216 CULG	12	2352	2401	0023U	N10	E20	.374	16898	14.5	31D	-F	C	2401	100	1.1	
217 CULG	13	0015	0020	0033D	S12	E38	.640	16901	15.9	18D	-N	P	0020	120	1.6	
218 VORO	13	0030	0031	0034	N19	E25	.508	16898	14.9	4	-N	C	0031	54	.6	E
219 PALE	13	0120	0123	0133	N18	E21	.452	16898	14.6	13	-F	3 C		21		D
GRP85220	13	0130+0	0130+1	0137	S12	E28	.509	16901	15.2	7	-F			60	.7	E
CULG	13	0130E	0130U	0139	S12	E28	.509	16901	15.2	9D	-N	P	0130	60	.7	
VORO	13	0130	0131	0135	S12	E28	.509	16901	15.2	5	-F	C	0131	63	.7	E
GRP85221	13	0152+8	0155+3 0205+2	0237	S12	E36	.615	16901	15.8	45	-N			70	.9	HJ
CULG	13	0152	0155	0206	S14	E28	.521	16901	15.2	14	-N	C	0155	80	.9	F
CULG	13	0154	0158	0234U	S13	E38	.644	16901	15.9	40D	-N	C	0158	140	1.8	
PALE	13	0156	0207	0237	S12	E36	.615	16901	15.8	41	-F	3 C		67		
VORO	13	0200	0205	0211	S11	E44	.711	16901	16.4	11	-N	C	0205	81	1.2	EHJ
CULG	13	0230	0233	0242	S12	E28	.509	16901	15.2	12	-N	C	0233	80	.9	
222 VORO	13	0215	0219	0227	N12	E23	.429	16898	14.8	12	-N	C	0219	63	.7	D
223 CULG	13	0237	0240 IMP.1 NO : VORO	0250	N20	W50	.794	16891	9.4	13	?N	C	0240	140	2.4	
224 VORO	13	0250	0251	0255	N19	E23	.485	16898	14.8	5	-F	C	0251	72	.8	D
GRP85225	13	0255	0300+0	0310	S14	E26	.495	16901	15.1	15	-N					EH
CULG	13	0255	0300	0311	S14	E26	.495	16901	15.1	16	1N	C	0300	240	2.9	H
VORO	13	0259E		0308	S13	E27	.502	16901	15.1	9D	-N	C	0300	90	1.0	E
MANI	13	0300E	0300U	0307D	S15	E26	.502	16901	15.1	7D	-F	1 V		30	.4	
226 CULG	13	0256	0257	0305	S16	W60	.879	16884	8.6	9	-F	C	0257	40	.8	T
227 CULG	13	0517	0521	0528	S16	W60	.879	16884	8.7	11	-B	C	0521	80	1.6	T
228 ABST	13	0531E	0533	0536D	N15	W24	.464	16897	11.4	5D	-F	P	0533	87	.9	DJ
GRP85229	13	0531E	0533	0536D	N14	E20	.404	16898	14.7	5	-F					J
ABST	13	0531E	0533	0536D	N13	E21	.409	16898	14.8	5D	-F	P	0533	87	.9	DJ
ABST	13	0531E	0533	0536D	N16	E20	.421	16898	14.7	5D	-F	P	0533	87	.9	DJ
230 MANI	13	0623E	0626U	0628D	S17	E25	.506	16901	15.1	5D	-N	1 V		25	.3	
GRP85231	13	0624+0	0628	0641	N17	E18	.407	16898	14.6	17	-F					
BUCA	13	0624		0639	N17	E18	.407	16898	14.6	15	-F	C	0626	161	1.8	
KANZ	13	0624	0628	0643	N18	E19	.429	16898	14.7	19	-N	2				
GRP85232	13	0731+1	0732	0737	N18	E20	.441	16898	14.8	6	-F					D
WEND	13	0731E		0737	N18	E20	.441	16898	14.8	6D	-N	C	0731	38	.4	D
KANZ	13	0732	0732	0736	N18	E20	.441	16898	14.8	4	-F	2				
GRP85233	13	0811+0	0815+4 0852	0908	S13	E35	.606	16901	16.0	57	2B			410	5.2	H
WEND	13	0811	0817	0903	S12	E35	.602	16901	16.0	52	2N	C	0817	730	9.4	H
ATHN	13	0811	0815	0827D	S14	E33	.586	16901	15.8	16D	1B	3 V	0815	270	3.5	
KANZ	13	0811	0819	0929	S13	E34	.594	16901	15.9	78	2B	2				
MANI	13	0814E	0817U	0828D	S15	E35	.616	16901	16.0	14D	1B	1 V		300	4.0	F
KHAR	13	0817E	0852	0913D	S13	E36	.619	16901	16.0	56D	2N	C	0824	400	5.2	E
CATA	13	0820E	0820	0903	S12	E35	.602	16901	16.0	43D	2F	2 P	0820	534	6.9	

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234 KHAR	13	0848E		0902D	N15	E18	.387	16898	14.7	14D	-F	P				D
GRP85235	13	0857+2	0859+1	0908	S17	W60	.880	16884	8.9	11	-N			45	.9	D
TELV	13	0857	0900	0922D	S17	W60	.880	16884	8.9	25D	-N	2		54	1.1	
WEND	13	0859	0859	0904	S17	W57	.856	16884	9.1	5	-F	C	0859	44	.9	D
KHAR	13	0902E	0902	0908D	S17	W60	.880	16884	8.9	6D	-N	V	0903			D
236 KHAR	13	0903E	0904	0910	N17	E26	.505	16898	15.3	7D	-F	V	0904			D
237 WEND	13	0907	0909	0914	S14	E24	.469	16901	15.2	7	-N	C	0909	34	.4	D
GRP85238	13	0951+2	0953	1005	S09	E87	.999	16913	19.9	14	-N					A
WEND	13	0951		0959D	S09	E85	.996	16913	19.8	8D	-N	C	0953	44		A
KANZ	13	0953	0953	1005	S10	E90	1.000	16913	20.2	12	-N	2				
239 WEND	13	1016E		1018D	S17	W58	.864	16884	9.1	2D	-F	P	1016	50	1.0	D
GRP85240	13	1103+7	1111	1119	N12	W51	.786	16895	9.6	16	-F			45	.7	D
KANZ	13	1103	1111	1119	N12	W51	.786	16895	9.6	16	-F	2				
WEND	13	1108E		1112D	N12	W50	.775	16895	9.7	4D	-N	C	1108	34	.6	D
CATA	13	1110	1110	1110D	N10	W51	.783	16895	9.6		-F	2 P	1110	56	.9	
GRP85241	13	1247+4	1252+1	1301	N12	E16	.333	16898	14.7	14	-F			50	.5	
RAMY	13	1247	1253	1303	N12	E16	.333	16898	14.7	16	-N	3 C		44		
WEND	13	1251	1252	1258	N12	E17	.346	16898	14.8	7	-F	C	1252	56	.6	
GRP85242	13	1405>9	1408 1415+3	1434	N18	E17	.407	16898	14.9	29	-N			150	1.6	D
HOLL	13	1405	1418	1504	N18	E15	.386	16898	14.7	59	-B	* C		195		
WEND	13	1406	1417	1427	N18	E18	.418	16898	14.9	21	-N	* C	1417	162	1.9	
HUAN	13	1406	1408	1410	N19	E17	.418	16898	14.9	4	-F	* C	1408	40	.4	
BIGB	13	1410	1417	1446	N21	E18	.451	16898	14.9	36	-B	* C	1417	120	1.3	
LVOV	13	1415	1415	1432	N18	E17	.407	16898	14.9	17	1N	* C	1415	200	2.3	D
HUAN	13	1416	1418	1430	N19	E17	.418	16898	14.9	14	-N	* C	1418	85	1.0	
RAMY	13	1418	1418	1429	N19	E16	.408	16898	14.8	11	-B	* C		122		D
243 WEND	13	1406	1407	1413	S27	W64	.923	16889	8.8	7	-F	C	1407	69		
244 WEND	13	1547	1549	1557	S27	W64	.923	16889	8.9	10	-F	C	1549	44		
245 HOLL	13	1548	1549	1602	N16	E13	.341	16898	14.6	14	-N	3 C		38		
246 HOLL	13	1648	1705	1714	N16	E12	.330	16898	14.6	26	-N	3 C		56		
GRP85247	13	1655+1	1657+7 1711	1731	S12	E30	.536	16901	16.0	36	-N			50	.6	
HOLL	13	1655	1657	1736	S12	E30	.536	16901	16.0	41	-N	3 C		50		
BIGB	13	1655	1700	1731	S12	E30	.536	16901	16.0	36	-N	3 C	1700	50	.6	
WEND	13	1656	1704	1727	S12	E31	.549	16901	16.0	31	-N	C	1704	141	1.7	
HUAN	13	1701E		1733D	S13	E30	.541	16901	16.0	32D	-F	1 P				
PALE	13	1711	1711	1730	S12	E28	.509	16901	15.8	19	-F	3 C		28		
248 WEND	13	1710	1713	1719	S27	W65	.929	16889	8.8	9	?F	C	1713	81		
			IMP.1 NO : BIGB HOLL HUAN													
249 HOLL	13	1730	1731	1806	N19	E14	.388	16898	14.8	36	-N	3 C		33		
250 HOLL	13	1826	1827	1837	N16	E11	.321	16898	14.6	11	-F	3 C		23		
251 HOLL	13	1904	1930	1942	N16	E11	.321	16898	14.6	38	-N	3 C		47		
GRP85252	13	1925+1	1927+4	2002	S14	W60	.876	16904	9.3	37	-F			50	1.0	E
PALE	13	1925	1927	2002	S14	W60	.876	16904	9.3	37	-F	3 C		53		
HOLL	13	1926	1927	1940	S14	W61	.884	16904	9.2	14	-F	3 C		38		
BIGB	13	1926	1931	2009	S11	W59	.864	16904	9.4	43	-N	3 C	1931	70	1.4	
HUAN	13	1937E		2001	S14	W62	.892	16904	9.2	24D	-F	1 P	1940	40	.8	E
253 HUAN	13	1952	1952	1956	N15	E09	.289	16898	14.5	4	-F	1 C	1952	30	.3	
254 PALE	13	2032	2033	2043D	N17	E11	.334	16898	14.7	11D	-F	2 C		35		D

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255 HOLL	13	2131	2136	2148	N17	E10	.325	16898	14.6	17	-F	3	C		53		
GRP85256	13	2231+1	2234+1	2328	N17	E11	.334	16898	14.8	57	1B				310	3.3	
HOLL	13	2217	2234	2328	N17	E11	.334	16898	14.8	71	1B	3	C		290		
CULG	13	2231	2235	2306	N18	E10	.339	16898	14.7	35	1B		C	2235	300	3.0	
BIGB	13	2232	2235	2344D	N18	E11	.348	16898	14.8	72D	-B	3	P	2235	150	1.6	
HOLL	13	2233	2234	2236D	N12	E10	.259	16898	14.7	3D	-B	3	C		82		
MITK	13	2240E		2328D	N17	E11	.334	16898	14.8	48D	1N		C	2240	330	3.6	T
257 CULG	13	2323	2337	2358	N10	E66	.915	16911	18.9	35	-F		C	2337	40	.9	
258 CULG	14	0028	0036	0048	S14	E14	.348	16901	15.1	20	-N		C	0036	70	.7	HT
GRP85259	14	0107+5	0117+6 0146	0152	N17	E09	.316	16898	14.7	45	1N				210	2.2	E
CULG	14	0107	0117	0146	N18	E10	.338	16898	14.8	39	1N		C	0117	240	2.5	
HOLL	14	0112	0123	0159D	N16	E07	.286	16898	14.6	47D	-B	2	C		203		
MANI	14	0115E	0122U	0133D	N19	E09	.345	16898	14.7	18D	1N	1	V		200	2.2	
MITK	14	0133E		0139D	N17	E09	.316	16898	14.7	6D	-N		P	0133			ET
YUNN	14	0141	0146	0152	N17	E10	.324	16898	14.8	11	-N		C		129	1.4	E
260 CULG	14	0146	0152	0200	S12	E13	.313	16901	15.0	14	-F		C	0152	50	.5	T
261 CULG	14	0215	0218	0227	N18	E13	.364	16898	15.1	12	-N		C	0218	80	.8	
262 CULG	14	0335	0339	0347	N17	W58	.859	16891	9.8	12	-F		C	0339	30	.6	
GRP85263	14	0351+4	0359+1	0429	N18	E07	.316	16898	14.7	38	1N				230	2.4	
CULG	14	0351	0400	0432	N18	E07	.316	16898	14.7	41	1N		C	0400	200	2.1	
TACH	14	0355	0359	0420	N18	E07	.316	16898	14.7	25	1N		C	0359	256	2.8	F
MITK	14	0406E		0429D	N17	E08	.308	16898	14.8	23D	1N		C	0406	210	2.3	ET
264 CULG	14	0359	0407	0433	S22	W25	.551	16893	12.3	34	-F		C	0407	160	1.9	G
265 CULG	14	0421	0430	0440	N11	E05	.195	16898	14.6	19	-F		C	0430	80	.8	
266 CULG	14	0425	0430	0456	S17	E17	.415	16901	15.5	31	-F		C	0430	40	.4	T
267 CULG	14	0515	0520	0541	S17	W70	.947	16884	9.0	26	-F		C	0520	40		
268 HTPR	14	0542	0543	0545	N16	E02	.263	16898	14.4	3	-F	*	C	0543	20	.2	
GRP85269	14	0545+2	0548+2	0605	S15	E13	.349	16901	15.2	20	-F						
CULG	14	0545	0550	0601	S16	E14	.372	16901	15.3	16	-N		C	0550	80	.9	T
HTPR	14	0547	0548	0608	S15	E13	.349	16901	15.2	21	-F		C	0548	30	.3	
GRP85270	14	0545+2	0549+1 0632+1	0639	N17	E06	.295	16898	14.7	54	1N				290	3.0	JK
CULG	14	0545	0549	0612U	N18	E06	.311	16898	14.7	27D	-N	*	C	0549	150	1.6	
HTPR	14	0547	0549	0702	N17	E04	.286	16898	14.5	75	1B	*	C	0632	250	2.5	EK
HTPR	14	0547	0632	0702	N17	E04	.286	16898	14.5	75	1B	*	C				
MANI	14	0549E	0550U	0554D	N20	E12	.382	16898	15.1	5D	-N	*	V		40	.4	F
TACH	14	0552E		0608	N18	E07	.316	16898	14.8	16D	1F	*	C	0552	221	2.4	F
WEND	14	0558E	0559	0700	N16	E07	.286	16898	14.8	62D	1N	*	C	0559	244	2.6	B
WEND	14	0558E	0633	0700	N16	E07	.286	16898	14.8	62D	1B	*	C	0633	263	2.8	
ABST	14	0611E	0613	0620D	N18	E07	.316	16898	14.8	9D	-N	*	P	0613	174	1.9	EJ
CATA	14	0620E	0620	0625D	N17	E05	.290	16898	14.6	5D	1F	*	P	0620	253	2.7	
MITK	14	0633E		0653D	N17	E07	.301	16898	14.8	20D	1N	*	C	0633	370	4.0	T
KANZ	14	0653E		0705	N17	E07	.301	16898	14.8	12D	-F	*					
271 HTPR	14	0641	0643	0647	S15	E10	.321	16901	15.0	6	-F		C	0643	10	.1	
272 WEND	14	0651	0653	0708	N12	W59	.862	16895	9.9	17	-F		C	0653	38	.8	
GRP85273	14	0705+0	0709	0717	S15	E15	.370	16901	15.4	12	-F						E
KANZ	14	0705	0709	0717	S15	E16	.381	16901	15.5	12	-F	2					
HTPR	14	0705		0706D	S15	E14	.359	16901	15.3	1D	-N		C	0706	50	.5	E
GRP85274	14	0720+9	0729	0740	N15	W59	.865	16895	9.9	20	-N						
KHAR	14	0720E		0742	N16	W60	.875	16895	9.8	22D	1F		P	0733	110	2.3	
KANZ	14	0729	0729	0737	N15	W59	.865	16895	9.9	8	-N	2					

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Time (UT)	Area Measurement Appar (Disk)	Area Measurement Corr (Sq Deg)	Remarks
275 KHAR	14	0736E	0738	0752D	S08	W78	.979	16884	8.5	16D	-F	P	0738			
276 ISTA	14	0741		0747	N16	E10	.310	16898	15.1	6	-F					E
GRP85277	14	0800+7	0803+2 0816	0830	N17	E04	.286	16898	14.6	30	-F					EK
KHAR	14	0800E	0803	0806D	N18	E04	.302	16898	14.6	6D	-F	V	0804			
HTPR	14	0801	0816	0830	N16	E04	.269	16898	14.6	29	-F	C				
HTPR	14	0801	0805	0830	N16	E04	.269	16898	14.6	29	-F	C	0805	30	.3	K
PURP	14	0807	0823	0823D	N17	E05	.290	16898	14.7	16D	-N	C				E
GRP85278	14	0822+2	0828 0840+2	0915	N13	E06	.233	16898	14.8	53	-F			90	.9	E
HTPR	14	0822	0842	0901	N13	E06	.233	16898	14.8	39	-F *	C	0842	60	.6	
KANZ	14	0824	0840	0915	N12	E05	.211	16898	14.7	51	-N *					
KHAR	14	0827E	0828	0920D	N13	E06	.233	16898	14.8	53D	-F	P	0840	120	1.3	BE
GRP85279	14	0831	0834+2	0849	S15	E11	.330	16901	15.2	18	-F					D
HTPR	14	0831	0836	0849	S15	E13	.349	16901	15.3	18	-F	C	0836	20	.2	
KHAR	14	0833E	0834	0837D	S15	E10	.321	16901	15.1	4D	-F	V	0834			D
GRP85280	14	0845+9	0845+2 0854	0856	N16	E04	.269	16898	14.7	11	-F					E
CATA	14	0845	0845	0850	N16	W04	.269	16898	14.1	5	-F *	C	0845	169	1.8	
PURP	14	0846	0847	0856	N14	E05	.242	16898	14.7	10	-F *	C				E
KHAR	14	0854	0854	0857	N20	E04	.334	16898	14.7	3	-F *	P	0854	10	.1	E
281 KHAR	14	0852E	0854	0903D	S13	W82	.991	16884	8.2	11D	-F	P				D
GRP85282	14	0901+6	0907+4	0923	S17	E34	.615	16901	16.9	22	-F			45	.6	EG
HTPR	14	0901	0908	0920	S17	E31	.579	16901	16.7	19	-F	C	0908	40	.5	E
KHAR	14	0903	0907	0923D	S17	E35	.627	16901	17.0	20D	-F	P	0907	50	.6	E
KANZ	14	0907	0911	0923	S17	E34	.615	16901	16.9	16	-F 2					G
283 KHAR	14	0927	0929	0947D	N13	W62	.887	16895	9.7	20D	?F	P	0930	100		
			IMP.1 NO : WEND KANZ HTPR													
GRP85284	14	0950	1005 1017	1053D	N15	E68	.931	16911	19.5	63	-F					
KHAR	14	0950	1005	1053D	N16	E67	.925	16911	19.4	63D	-F	P	1005			
KHAR	14	1016E	1017	1053D	N14	E69	.936	16911	19.6	37D	-F *	P	1017			D
285 KHAR	14	1008E		1040D	S14	W79	.983	16884	8.5	32D	-F	P	1035			D
286 KANZ	14	1016	1018	1025	S26	W75	.974	16889	8.8	9	-N 1					
GRP85287	14	1038E	1041	1055	N17	E04	.286	16898	14.7	17	-F			30	.3	
KHAR	14	1038E	1041	1045D	N18	E03	.299	16898	14.7	7D	-F	P	1041	30	.3	D
HTPR	14	1038E		1055	N17	E05	.290	16898	14.8	17D	-F	C	1046	30	.3	E
GRP85288	14	1041+0		1058D	S15	E13	.349	16901	15.4	17	-F					
KHAR	14	1041E		1051D	S15	E14	.359	16901	15.5	10D	-F	P	1048			D
HTPR	14	1041		1058D	S15	E12	.339	16901	15.3	17D	-F	C	1043	30	.3	E
289 WEND	14	1240	1242	1248	N12	W62	.887	16895	9.9	8	-F	C	1242	62	1.4	
GRP85290	14	1345+1	1349+3	1404	N12	W63	.894	16895	9.8	19	1N			110	2.5	D
WEND	14	1345	1349	1404	N12	W62	.887	16895	9.9	19	-N	C	1349	88	2.0	
LVOV	14	1346	1352	1402	N13	W64	.903	16895	9.8	16	1N	C	1352	150		D
RAMY	14	1346	1350	1427	N11	W63	.894	16895	9.8	41	-B 3	C		92		
GRP85291	14	1417+1	1419+1	1430	N11	W63	.894	16895	9.9	13	-N			60	1.3	
BIGB	14	1417	1419	1434	N11	W65	.909	16895	9.7	17	-B 3	C	1419	60		
WEND	14	1418	1420	1426	N12	W62	.887	16895	9.9	8	-F	C	1420	70	1.6	
292 BIGB	14	1448	1450	1509	S10	E90	1.000	16918	21.4	21	?B 3	C	1450	110		
			IMP.1 NO : WEND RAMY LVOV													
GRP85293	14	1624+1	1625+2	1636	S25	W71	.957	16889	9.4	12	-N					
HOLL	14	1624	1627	1636	S27	W71	.959	16889	9.4	12	-N 3	C				
KANZ	14	1625	1625	1636	S24	W72	.961	16889	9.3	11	-N 1					

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
GRP85294	14	1658+0	1700+7	1741	S10	E60	.872	16913	19.2	43	2B			260	5.3	DH
BIGB	14	1658	1700	1724	S10	E57	.846	16913	19.0	26	-B	3 C	1700	110	2.0	
KANZ	14	1658	1706	1734	S12	E60	.874	16913	19.2	36	2B	2				H
WEND	14	1658	1701	1716D	S11	E60	.873	16913	19.2	18D	1B	C	1701	238	5.0	H
RAMY	14	1701E	1702U	1752D	S10	E59	.863	16913	19.1	51D	1B	3 C		283		D
HOLL	14	1704	1707	1747	S10	E61	.880	16913	19.3	43	2B	3 C		332		
295 HOLL	14	1718	1718	1726	N11	W42	.681	16897	11.6	8	-F	3 C		19		
GRP85296	14	1822+1	1824+1	1844	S15	E09	.312	16901	15.4	22	-B			90	.9	
BIGB	14	1822	1824	1846	S15	E09	.312	16901	15.4	24	-B	3 C	1824	70	.7	
HOLL	14	1823	1825	1842	S16	E10	.335	16901	15.5	19	-B	3 C		110		
297 HOLL	14	2154	2157	2206	N16	E02	.263	16898	15.1	12	-F	3 C		52		
298 CULG	14	2211E	2220	2243	S23	W75	.973	16889	9.3	32D	-F	C	2220	60		F
299 HOLL	14	2218	2222	2229	N15	E60	.873	16911	19.4	11	-F	3 C		29		
300 BIGB	14	2254	2303	2314	S11	E90	1.000	16918	21.7	20	?B	3 C	2303	140		
			IMP.1 NO : HOLL CULG													
GRP85301	14	2324+4	2331+1 2345	0010	S24	W78	.983	16889	9.1	46	1N			70		AFHK
CULG	14	2324	2332	0010	S23	W78	.983	16889	9.1	46	1N	C	2332	80		KHF
BIGB	14	2328	2331	2352	S24	W85	.997	16889	8.6	24	1B	3 C	2331	70		A
HOLL	14	2334E	2345	0028	S26	W75	.974	16889	9.4	54D	-N	2 C				
302 CULG	14	2333	2341	2354	S11	E54	.819	16913	19.0	21	?N	C	2341	120	2.2	GU
			IMP.1 NO : BIGB HOLL MITK													
303 PURP	15	0017		0031	S16	W80	.987	16884	9.0	14	?F	P				
			IMP.1 NO : BIGB CULG HOLL													
GRP85304	15	0029+5	0041 0056	0102D	S23	W71	.956	16889	9.7	33	-N					F
CULG	15	0029	0056U	0156	S21	W70	.950	16889	9.8	87	1N	P	0056	160		F
HOLL	15	0034	0041	0102	S25	W72	.962	16889	9.6	28	-F	2 C				
305 CULG	15	0119	0122	0125D	S12	E03	.231	16901	15.3	6D	-N	P	0122	50	.5	
306 PURP	15	0656	0656	0722	S23	W34	.654	16900	12.7	26	-N	C				E
307 KHAR	15	0733E	0740	0815D	N18	W10	.336	16898	14.6	42D	-F	P	0807	100	1.1	E
GRP85308	15	0807+8	0815+5	0834	S11	E90	1.000	16918	22.1	27	-N			50		D
KHAR	15	0807E	0815	0828D	S16	E90	1.000	16918	22.1	21D	-N	P	0817			D
GEOR	15	0808	0819	0832	S06	E90	1.000	16918	22.1	24	-N	3				
ISTA	15	0810		0838	S09	E90	1.000	16918	22.1	28	-F					D
KANZ	15	0814	0818	0830	S11	E90	1.000	16918	22.1	16	-B	1				
CATA	15	0815	0820	0830	S08	E90	1.000	16918	22.1	15	1F	2 C	0820	56		
YUNN	15	0817E	0817	0817D	S13	E84	.995	16918	21.6		1B	P		48		
GEOR	15	0829	0845	0853	S13	E90	1.000	16918	22.1	24	-N	3				
309 KHAR	15	0843E	0844	0901D	N18	W05	.304	16898	15.0	18D	-F	P	0848	80	.9	D
GRP85310	15	1023>9	1027 1055	1105	S20	E90	1.000	16918	22.2	42	-F					D
KHAR	15	1023	1027	1100D	S25	E90	1.000	16918	22.2	37D	-F	P	1027			D
CATA	15	1035	1055	1105	S15	E90	1.000	16918	22.2	30	-F	2 C	1055	28		
GRP85311	15	1130+4	1135+1	1145D	S10	E90	1.000	16918	22.2	15	-N					
CATA	15	1130	1135	1145D	S09	E90	1.000	16918	22.2	15D	1F	2 P	1135	56		
KANZ	15	1134	1136	1143D	S11	E90	1.000	16918	22.2	9D	-N	2				
312 KHAR	15	1148E	1159	1212D	S25	E90	1.000	16918	22.2	24D	-N	P	1159			D
313 KHAR	15	1213E	1240	1333D	N12	W10	.256	16898	14.8	80D	-F	P	1240	30	.3	E
314 KHAR	15	1213E	1213	1214D	N17	W10	.322	16898	14.8	1D	-F	P	1213	10	.1	D

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GRP85315	15	1213>9	1307+4	1318	S11	E90	1.000	16918	22.3	65	-N						D
KHAR	15	1213E	1311	1323D	S12	E90	1.000	16918	22.3	70D	1N		P				D
HUAN	15	1301	1307	1313	S10	E90	1.000	16918	22.3	12	-N	1	C	1307	40		
316 KHAR	15	1239E	1239	1240D	N18	W13	.363	16898	14.6	1D	-F	*	P	1239	10	.1	
317 KHAR	15	1259E	1259	1310D	N13	W10	.268	16898	14.8	11D	-F	*	P	1259	20	.2	D
318 HUAN	15	1504	1505	1511	S10	E47	.744	16913	19.2	7	-N	1	C	1505	35	.5	
319 HUAN	15	1525		1553	N15	W75	.967	16895	10.0	28	-F	1	C	1530	40		E
320 HUAN	15	1545		1557	S15	W04	.284	16901	15.4	12	-F	1	C				E
321 HUAN	15	1729	1730	1732	N17	W15	.371	16898	14.6	3	-N	1	C	1730	30	.3	
GRP85322	15	1845+0	1846+1	1900	S10	E84	.995	16918	22.1	15	-N						
HOLL	15	1845	1846	1857	S09	E82	.991	16918	21.9	12	-N	3	C				
HUAN	15	1845	1847	1902	S11	E87	.999	16918	22.3	17	-N	1	C	1847	30		
GRP85323	15	2029+1	2036+1	2042	S10	E79	.983	16918	21.8	13	-N				40		
HOLL	15	2029	2036	2045	S10	E79	.983	16918	21.8	16	-N	3	C		41		
HUAN	15	2030	2036	2042	S10	E85	.997	16918	22.2	12	-N	1	C	2036	40		
PALE	15	2030	2037	2041	S09	E77	.976	16918	21.6	11	-F	3	C		29		
GRP85324	15	2046+2	2050	2054	S09	E43	.694	16913	19.1	8	-F						
HUAN	15	2046		2052	S09	E44	.707	16913	19.2	6	-F	1	C				
RAMY	15	2048	2050	2055	S10	E43	.697	16913	19.1	7	-F	3	C		20		
325 BIGB	15	2213	2218	2307	S24	W90	1.000	16889	9.2	54	?B	3	C	2218	90		
			IMP.1 NO : HOLL														
GRP85326	16	0442	0447	0518	S11	E43	.700	16913	19.4	36	1N						E
TACH	16	0442	0447	0510	S13	E43	.706	16913	19.4	28	1N		C	0447	336	4.8	E
CATA	16	0505E	0505	0525	S10	E44	.709	16913	19.5	20D	-F	2	P	0505	28	.4	
GRP85327	16	0740+8	0745 0752+4	0809	S11	E75	.968	16918	21.9	29	1N				90		
CATA	16	0740	0745	0805	S10	E75	.968	16918	21.9	25	-F	2	C	0745	56		
YUNN	16	0745	0752	0753D	S11	E76	.972	16918	22.0	8D	1N		P		96		
KANZ	16	0748	0756	0812	S12	E78	.980	16918	22.2	24	-N	1					
WEND	16	0753E		0802D	S12	E75	.968	16918	22.0	9D	1N		C	0755	88		
GRP85328	16	1018	1025	1031	S12	E74	.964	16918	22.0	13	1N						
YUNN	16	1018	1020	1020D	S11	E76	.972	16918	22.1	2D	1N		P		80		
WEND	16	1019E		1027	S12	E74	.964	16918	22.0	8D	1N		C	1020	78		
ATHN	16	1023E	1025	1035	S13	E74	.964	16918	22.0	12D	-B	3	V	1025	64	2.3	
329 CATA	16	1235	1235	1250	S11	W14	.317	16901	15.5	15	-F	2	C	1235	56	.6	
GRP85330	16	1942	1953	2010	S11	E34	.587	16913	19.4	28	-F				60	.7	E
HUAN	16	1942		2007D	S12	E35	.604	16913	19.4	25D	-N	1	P	1950	50	.6	E
PALE	16	1949E	1953U	2010	S11	E34	.587	16913	19.4	21D	-F	3	C		66		
331 HUAN	16	2034		2039	S14	E70	.945	16918	22.1	5	-F	1	C				E
332 RAMY	16	2110	2111	2115	S14	E64	.907	16918	21.7	5	-F	3	C		14		
333 CULG	16	2249	2253U	2306D	N11	E26	.464	16911	18.9	17D	-N		P	2253	140	1.6	F
334 CULG	16	2255	2259	2306	S23	W58	.877	16900	12.6	11	-F		C	2259	70	1.5	
GRP85335	16	2310+1	2314+0	2322	S10	E68	.931	16918	22.1	12	1N				100		D
PALE	16	2310	2314	2322	S09	E67	.924	16918	22.0	12	1N	3	C		104		D
HOLL	16	2311	2314	2322	S11	E69	.937	16918	22.1	11	-N	3	C		76		
CULG	16	2313E	2314U	2331	S14	E70	.945	16918	22.2	18D	1F		P	2314	150		
MANI	16	2315E	2315U	2322D	S10	E68	.931	16918	22.1	7D	-N	1	V		80	1.7	
GRP85336	16	2333+1	2335+2	2338	S11	E68	.931	16918	22.1	5	-F				15		
HOLL	16	2333	2337	2339	S11	E68	.931	16918	22.1	6	-F	3	C		14		
PALE	16	2334	2335	2337	S11	E68	.931	16918	22.1	3	-F	3	C		16		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
337 HOLL	16	2347	2355	0000	S11	E68	.931	16918	22.1	13	-F	3	C		38		
GRP85338	17	0007	0008	0114	S11	E69	.938	16918	22.2	67	-F				30		
PALE	17	0007	0008	0114	S11	E68	.932	16918	22.1	67	-F	3	C		26		
MANI	17	0012E	0012U	0025D	S11	E70	.943	16918	22.3	13D	-N	1	V		30	.7	
339 CULG	17	0028	0036	0050U	S25	W59	.889	16900	12.6	22D	-F		C	0036	90	1.8	
340 TACH	17	0314E		0320	S13	W24	.465	16901	15.3	6D	?F		V	0315	398	4.7	D
			IMP.1 NO : CULG														
341 CULG	17	0335	0357	0430U	S22	W58	.876	16900	12.8	55D	?N		C	0357	220	4.4	
			IMP.1 NO : TACH														
342 YUNN	17	0522E	0523	0525	N20	W36	.641	16898	14.5	3D	-N		P		80	1.1	
343 CULG	17	0540	0543	0606	S21	W61	.896	16900	12.7	26	?F		C	0543	140	3.2	F
			IMP.1 NO : YUNN														
GRP85344	17	0716+4	0719+1	0752	N15	E27	.500	16911	19.3	36	-F						FJ
ABST	17	0716	0719	0804	N14	E27	.494	16911	19.3	48	1N		C	0719	236	2.8	FJ
CATA	17	0720	0720	0740	N17	E27	.513	16911	19.3	20	-F	2	C	0720	56	.7	
MANI	17	0729E	0729U	0738D	N15	E25	.474	16911	19.2	9D	-F	1	V		20	.2	
345 ABST	17	0718	0725	0736	S29	E85	.998	16923	23.7	18	?F		C	0725	79		D
			IMP.1 NO : CATA														
GRP85346	17	0718+2	0720+0	0752	S11	W25	.465	16901	15.4	34	-N				170	1.9	F
ABST	17	0718	0720	0754	S11	W25	.465	16901	15.4	36	1N	*	C	0720	218	2.5	F
CATA	17	0720	0720	0745	S13	W25	.479	16901	15.4	25	-F	*	C	0720	124	1.4	
TELV	17	0727E	0727E	0752	S11	W26	.479	16901	15.4	25D	-B	*			123	1.4	
347 KHAR	17	0820E	0824	0847D	N19	W37	.648	16898	14.6	27D	-F		P	0824	60	.8	D
GRP85348	17	1159>9	1226+2 1235	1305	S18	E64	.912	16918	22.3	66	-F				50		E
RAMY	17	1159	1228	1311	S18	E64	.912	16918	22.3	72	-F	3	C		55		
HTPR	17	1215	1226	1300	S17	E64	.911	16918	22.3	45	-F		C	1226	50	1.0	E
CATA	17	1225	1235	1305	S18	E66	.925	16918	22.5	40	1F	2	C	1235	84		
349 RAMY	17	1259	1259	1318	S07	E54	.814	16918	21.6	19	-F	3	C		16		
GRP85350	17	1315+5	1319+1	1333	S13	W21	.426	16901	16.0	18	-F				60	.7	E
HUAN	17	1315	1319	1335	S14	W21	.435	16901	16.0	20	-F	1	C	1319	45	.5	E
RAMY	17	1318	1320	1329	S13	W22	.439	16901	15.9	11	-F	3	C		34		
CATA	17	1320	1320	1345	S14	W22	.448	16901	15.9	25	-F	2	C	1320	84	1.0	
HTPR	17	1324E		1331D	S13	W20	.413	16901	16.1	7D	-N		C	1325	80	.8	E
351 RAMY	17	1411	1415	1424	S08	E54	.815	16918	21.6	13	-F	3	C		14		
GRP85352	17	1509+1	1511+0 1519	1529	S12	W29	.525	16901	15.5	20	-N				60	.7	E
HTPR	17	1509	1511	1530	S13	W30	.544	16901	15.4	21	-N		C	1511	120	1.4	E
RAMY	17	1510	1511	1527	S12	W28	.512	16901	15.5	17	-N	3	C		35		
HUAN	17	1510	1519	1525	S13	W29	.531	16901	15.5	15	-N	1	C	1519	75	.9	E
BIGB	17	1510	1511	1534	S11	W29	.520	16901	15.5	24	-N	3	C	1511	60	.7	
GRP85353	17	1639+2	1640+2	1652	N10	W42	.678	16898	14.5	13	-N				50	.7	E
HTPR	17	1639	1640	1655	N12	W42	.682	16898	14.5	16	-B		C	1640	60	.8	E
RAMY	17	1641	1641	1652	N10	W42	.678	16898	14.5	11	-F	3	C		43		
HUAN	17	1641	1642	1650	N10	W43	.690	16898	14.5	9	-F	1	C	1642	45	.6	E
354 CULG	17	2327	2347	0050	S19	E62	.900	16918	22.6	83	?F		C	2347	290	6.5	F
			IMP.2 NO : BIGB														
355 CULG	18	0005	0007	0012	S11	W42	.689	16901	14.9	7	-F		C	0007	50	.7	
356 CULG	18	0236	0237	0240	N18	W52	.805	16898	14.2	4	-F		C	0237	40	.6	
357 CULG	18	0250	0313	0350	S30	E60	.907	16923	22.6	60	1F		C	0313	210	4.7	F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
358 CULG	18	0405	0410	0420	N10	W03	.159	16906	17.9	15	-F	C	0410	100	1.0	
359 CULG	18	0423	0433	0449	S13	E14	.342	16913	19.2	26	-N	C	0433	120	1.3	
GRP85360	18	0715	0721+6	0750	N17	E14	.356	16911	19.4	35	-F					D
HTPR	18	0715	0721	0750	N18	E15	.378	16911	19.4	35	-N	C	0721	30	.3	
ABST	18	0725E	0727	0747D	N17	E14	.356	16911	19.4	22D	-F	P	0727	87	1.0	D
361 HTPR	18	0828	0829	0836	N18	E14	.368	16911	19.4	8	-N	C	0829	20	.2	
GRP85362	18	0857	0859+1	0930	S11	E50	.780	16918	22.1	33	-B					
HTPR	18	0857	0900	0930	S13	E51	.794	16918	22.2	33	-B	C	0900	100	1.6	E
ABST	18	0858E	0859	0901D	S10	E50	.778	16918	22.1	3D	1N	P	0859	279	4.5	F
GRP85363	18	1330E	1333	1349	S29	E67	.944	16923	23.6	19	-N					
KHAR	18	1330E	1333	1343D	S30	E68	.950	16923	23.7	13D	-N	P				D
HTPR	18	1332E		1345	S29	E68	.949	16923	23.7	13D	-B	C	1337	20	.4	
KHAR	18	1340E		1353D	S28	E64	.927	16923	23.4	13D	-N	P				D
GRP85364	18	1853+0	1857+1	1917	S08	E35	.590	16918	21.4	24	-N			120	1.5	E
BIGB	18	1853	1857	1924	S09	E35	.593	16918	21.4	31	-B	3 C	1857	130	1.6	
HUAN	18	1853	1858	1909	S08	E35	.590	16918	21.4	16	-N	1 C	1858	110	1.4	E
365 BIGB	18	1942	1946	1958	N11	E90	1.000		25.6	16	?N	3 C	1946	90		
			IMP.1 NO : HUAN HOLL													
GRP85366	18	2222+5	2226+5	2236	S20	E51	.812	16918	22.8	14	-N			40	.7	DH
VORO	18	2222	2226	2230	S20	E51	.812	16918	22.8	8	-F	C	2226	36	.6	DH
CULG	18	2225	2230	2238	S21	E51	.815	16918	22.8	13	-N	C	2230	100	1.6	
HOLL	18	2227	2231	2236	S19	E51	.809	16918	22.8	9	-N	3 C		39		
367 VORO	18	2256	2257	2302	N22	W58	.866	16898	14.6	6	-F	C	2257	54	1.0	D
368 VORO	18	2316	2318	2321	S27	E62	.913	16923	23.6	5	-F	C	2318	45		D
GRP85369	18	2325+7	2329	0003	S11	W41	.677	16901	15.9	38	-N			110	1.5	H
			2334+4													
VORO	18	2325	2329	2338	S11	W39	.652	16901	16.1	13	-N	C	2329	116	1.6	DH
MITK	18	2332	2336	2354	S11	W42	.689	16901	15.8	22	-N	C	2336			EH
BIGB	18	2332	2335	0020	S11	W41	.677	16901	15.9	48	-N	3 C	2335	100	1.4	
PALE	18	2334E	2334U	0001	S13	W50	.784	16901	15.2	27D	-F	2 C		46		
CULG	18	2335E	2338U	0015	S11	W41	.677	16901	15.9	40D	1N	P	2338	240	3.1	
370 VORO	18	2330	2331	2335	S28	E65	.932	16923	23.9	5	-F	C	2331	36		D
371 PALE	18	2337E	2337U	2357	S27	E63	.919	16923	23.7	20D	-F	2 C		39		
372 VORO	19	0003	0004	0007	S28	E64	.927	16923	23.8	4	-F	C	0004	45		E
GRP85373	19	0034+6	0036	0052	S30	E59	.901	16923	23.4	18	-F			50	1.1	E
			0042+5													
VORO	19	0034	0036	0048	S30	E59	.901	16923	23.4	14	-F	C	0036	81	2.0	E
HOLL	19	0040	0042	0045D	S30	E59	.901	16923	23.5	5D	-N	3 C		41		
CULG	19	0040E	0047	0055	S33	E60	.914	16923	23.5	15D	-F	P	0047	60	1.4	
374 VORO	19	0106	0107	0111	S28	E54	.862	16923	23.1	5	-F	C	0107	36	.7	DH
375 VORO	19	0130	0130	0135	S28	E65	.933	16923	23.9	5	-F	C	0130	36		D
GRP85376	19	0147+4	0151+5	0212	N18	W01	.285	16911	19.0	25	1N			330	3.5	E
VORO	19	0147	0151	0203	N18	E00	.285	16911	19.1	16	1N	C	0151	305	3.2	E
CULG	19	0151	0156	0220	N18	W02	.286	16911	18.9	29	1B	C	0156	350	3.5	
377 CULG	19	0151	0155	0216	S33	E52	.865	16923	23.0	25	-F	C	0155	30	.6	
378 CULG	19	0210	0240	0323	S23	E26	.577	16917	21.0	73	1F	C	0240	360	4.1	FISW
379 VORO	19	0213	0215	0218	S28	E65	.933	16923	24.0	5	-F	C	0215	36		D
380 CULG	19	0214	0217	0229	S10	W54	.819	16901	15.0	15	?F	C	0217	140	2.4	
			IMP.1 NO : VORO													

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	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp		Obs Type	Area Time (UT)	Measurement Appar (Disk)	Corr (Sq Deg)	Remarks
381	CULG	19	0243	0244	0253	S32	E50	.847	16923	22.9	10	-F		C	0244	60	1.1	
382	CULG	19	0251	0255	0259	S14	E02	.269	16913	19.3	8	-F		C	0255	150	1.5	
383	CULG	19	0254	0306	0439D	S10	W54	.819	16901	15.1	105D	2N		P	0306	300	5.1	KF
384	CULG	19	0334	0334	0336	N17	W03	.272	16911	18.9	2	-F		C	0334	50	.5	
385	CULG	19	0420E	0420E	0423	S11	E28	.508	16918	21.3	3D	-N		P	0420	80	.9	
386	CULG	19	0444E	0444D	0444D	S33	E58	.903	16923	23.5		-F		P	0444	80	1.6	
387	ABST	19	0459	0501	0514	N17	W02	.270	16911	19.1	15	-N		C	0501	87	.9	D
388	ABST	19	0538	0539	0546	S31	E61	.916	16923	23.8	8	-F		C	0539	87		DJ
GRP85389		19	0600+1	0602+2	0609	S14	E40	.676	16918	22.2	9	-F				60	.8	DJ
	ABST	19	0600	0602	0608	S15	E43	.715	16918	22.5	8	-N		C	0602	79	1.2	DJ
	HTPR	19	0601	0604	0610	S13	E38	.648	16918	22.1	9	-F		C	0604	50	.6	
390	CATA	19	0610	0610	0615	N08	E90	1.000		26.0	5	?F	2	C	0610	56		
				IMP.1 NO : ABST HTPR														
GRP85391		19	0616+9	0622+6	0632	N18	W04	.292	16911	19.0	16	-N				80	.8	J
	ABST	19	0616	0622	0640	N18	W04	.292	16911	19.0	24	1N	*	C	0622	262	2.8	EJ
	HTPR	19	0618	0623	0633	N17	W05	.281	16911	18.9	15	-B	*	C	0623	80	.8	
	ISTA	19	0620	0623	0628	N18	W04	.292	16911	19.0	8	-B	*					D
	CATA	19	0625	0628	0630	N18	W05	.296	16911	18.9	5	-F	*	C	0628	56	.6	
392	ABST	19	0619	0622	0627	S31	E48	.828	16923	22.9	8	*-F		C	0622	87	1.6	DJ
GRP85393		19	0621+6	0624	0636	S29	E60	.905	16923	23.8	15	-N						DJK
	ABST	19	0621	0624	0637	S28	E60	.903	16923	23.8	16	-N		C	0624	79	1.9	DJK
	ISTA	19	0627		0635	S30	E60	.908	16923	23.8	8	-N						D
GRP85394		19	0711	0723	0732	N20	W60	.878	16898	14.8	21	-F				40	.8	E
	HTPR	19	0711		0732D	N19	W62	.892	16898	14.6	21D	-F		C	0718	30	.6	E
	ATHN	19	0720E	0723	0731	N21	W58	.864	16898	15.0	11D	-N	3	V	0723	48	.9	
GRP85395		19	0719>9	0731+1 0750+4	0818	S11	E39	.653	16918	22.2	59	1N						EIJK
	TELV	19	0719	0731	0848	S13	E38	.699	16918	22.2	89	1B	3			245	3.2	F
	HTPR	19	0722		0732D	S10	E38	.636	16918	22.2	10D	-N		C	0730	80	1.0	EI
	ISTA	19	0727		0740	S12	E40	.668	16918	22.3	13	-N						E
	YUNN	19	0730	0732	0755	S14	E40	.676	16918	22.3	25	1N		C		161	2.3	EKW
	CATA	19	0730	0750	0830	S10	E39	.649	16918	22.2	60	1F	2	C	0750	309	4.2	
	KHAR	19	0738E	0754	0828D	S10	E35	.597	16918	21.9	50D	-F		P	0752	130	1.6	
	KHAR	19	0738E	0754	0828D	S11	E38	.640	16918	22.2	50D	-F		P	0752	120	1.6	
	KHAR	19	0738E	0755	0828D	S14	E41	.688	16918	22.4	50D	-F		P	0752	100	1.5	
	ABST	19	0804E	0805	0817D	S11	E35	.601	16918	22.0	13D	-F		P	0805	96	1.2	DJ
GRP85396		19	0804E	0805+1	0817D	N16	W02	.253	16911	19.2	13	-F						E
	KHAR	19	0804E	0806	0812D	N15	W03	.239	16911	19.1	8D	-F		V	0806			E
	ABST	19	0804E	0805	0817D	N17	W02	.270	16911	19.2	13D	-N		P	0805	175	1.9	E
GRP85397		19	0805+1	0808+1	0817	S07	E29	.502	16918	21.5	12	-F				90	1.0	DJ
	ABST	19	0805	0808	0816	S06	E32	.542	16918	21.7	11	-N		C	0808	87	1.1	DJ
	ABST	19	0806	0809	0817D	S09	E27	.483	16918	21.4	11D	-F		P	0809	87	1.0	DJ
	KHAR	19	0810E	0827	0837D	S08	E28	.492	16918	21.4	27D	-F		P	0827	50	.6	E
	KHAR	19	0810E		0836D	S06	E30	.513	16918	21.6	26D	-F		P	0827			D
GRP85398		19	0859	0908+3	0919	N18	W04	.292	16911	19.1	20	-N				50	.5	EJ
	HTPR	19	0859	0908	0912	N18	W06	.302	16911	18.9	13	-N		C	0908	30	.3	E
	KHAR	19	0907E	0911	0916D	N18	W07	.307	16911	18.9	9D	-F		P	0914	50	.6	D
	ABST	19	0909E	0909	0915	N18	W06	.302	16911	18.9	6D	-N		P	0909	87	.9	DJ
	ABST	19	0909E	0911	0925D	N19	W02	.303	16911	19.2	16D	-F		P	0911	157	1.7	EJ
	KHAR	19	0913E		0919D	N19	W02	.303	16911	19.2	6D	-F		P	0916	50	.6	E
399	KHAR	19	0907E		0907D	S29	E54	.865	16923	23.4		-F		P	0907	40	.8	E

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
GRP85400	19	0932	0938+0 0944	1005	S28	E55	.869	16923	23.5	33	-F					
HTPR	19	0932	0938	1005	S28	E54	.862	16923	23.4	33	-F	C	0938	30	.5	E
ABST	19	0934E	0938	0951D	S30	E55	.875	16923	23.5	17D	-F	P	0938	87	1.8	D
KHAR	19	0943E	0944	1000D	S27	E56	.874	16923	23.6	17D	1N	V	0944			
401 KHAR	19	1115E		1115D	N20	W67	.927	16898	14.4		-F	P				D
GRP85402	19	1120+1	1123+0	1136	S29	E52	.851	16923	23.4	16	-F			20	.4	E
HTPR	19	1120	1123	1135	S28	E53	.855	16923	23.4	15	-F	C	1123	20	.3	E
RAMY	19	1121	1123	1136	S31	E52	.858	16923	23.4	15	-F	3 C		22		
403 KHAR	19	1147E		1159D	N19	W62	.892	16898	14.8	12D	-F	P				D
GRP85404	19	1325+3	1349+6 1521	1530	S11	E31	.548	16918	21.9	125	-F			60	.7	
HTPR	19	1325	1355	1430	S12	E32	.567	16918	22.0	65	-N	C	1355	80	.9	
RAMY	19	1328	1349	1523D	S11	E32	.562	16918	22.0	115D	-F	3 C		48		
HTPR	19	1517	1521	1530	S10	E27	.488	16918	21.7	13	-N	C	1521	10	.1	
GRP85405	19	1353+2	1356	1359	S12	W57	.850	16901	15.3	6	-F					
HUAN	19	1353		1358	S13	W58	.860	16901	15.2	5	-F	1 C				
RAMY	19	1355	1356	1400	S12	W57	.850	16901	15.3	5	-F	3 C		31		
GRP85406	19	1743+1	1744 1756	1809	S10	E28	.502	16918	21.8	26	-N					EK
HTPR	19	1743	1756	1814	S11	E27	.494	16918	21.8	31	-B	C				
HTPR	19	1743	1744	1814	S11	E27	.494	16918	21.8	31	-B	C	1744	60	.7	EK
HUAN	19	1744		1803	S10	E30	.530	16918	22.0	19	-F	1 C				
407 HUAN	19	1816	1816	1820	S20	E38	.682	16918	22.6	4	-F	1 C	1816	30	.4	
GRP85408	19	1832+1	1838+5	1902	S27	E41	.751	16923	22.8	30	1B			160	2.4	
PALE	19	1832	1838	1901	S27	E43	.769	16923	23.0	29	1B	3 C		144		D
BIGB	19	1832	1839	1905	S28	E41	.756	16923	22.8	33	1B	3 C	1839	190	2.6	
HUAN	19	1833	1843	1900	S28	E42	.765	16923	22.9	27	-N	2 C	1843	70	1.1	E
HOLL	19	1836E	1842	1902	S27	E41	.751	16923	22.8	26D	1B	3 C		177		
409 BIGB	19	1859	1902	1909	S11	E90	1.000	16927	26.5	10	?B	3 C	1902	60		
			IMP.1 NO : HUAN PALE HOLL													
GRP85410	19	1948	1957+0	2107D	S23	E53	.839	16931	23.8	79	2B					E
BIGB	19	1948	1957	2141	S26	E55	.864	16931	23.9	113	2B	3 C	1957	360	6.5	
HOLL	19	1949E	1957	1959D	S23	E53	.839	16931	23.8	10D	3B	3 C		987		
VORO	19	2025E		2107	S22	E52	.828	16931	23.8	42D	2F	C	2040	457	8.1	E
411 CULG	19	2200	2206	2213	S28	E48	.816	16923	23.5	13	-F	C	2206	40	1.8	T
412 HOLL	19	2334	2338	2352	N21	W07	.353	16911	19.5	18	-F	3 C		28		
413 CULG	20	0046	0050	0102	N24	W58	.869	16898	15.7	16	?F	C	0050	120	2.4	
			IMP.1 NO : BIGB													
414 CULG	20	0053	0100	0119	S08	W62	.887	16901	15.4	26	-N	C	0100	60	1.5	
415 CULG	20	0129	0138	0151	S30	E38	.744	16923	22.9	22	-N	C	0138	100	1.5	T
416 CULG	20	0316	0327	0339	N13	E70	.941		25.4	23	-F	C	0327	50		
GRP85417	20	0323	0334 0403	0416	S27	E45	.787	16923	23.5	53	-N					F
CULG	20	0323	0334	0411U	S26	E46	.791	16923	23.6	48D	-N	C	0334	100	1.5	F
CULG	20	0400	0403	0416	S29	E45	.796	16923	23.5	16	-N	C	0403	80	1.3	
GRP85418	20	0438E	0508	0644D	S09	E17	.342	16918	21.5	126	2N					IJ
CULG	20	0438U	0508U	0644D	S10	E20	.391	16918	21.7	126D	2N	C	0508	500	5.5	FI
ABST	20	0555E	0556	0556D	S09	E15	.314	16918	21.4	1D	-F	P	0556	114	1.2	DJ
419 CULG	20	0444	0449	0505	S08	W68	.930	16901	15.1	21	-N	C	0449	60	1.5	

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85420	20	0515	0531	0550	S29	E36	.720	16923	22.9	35	-N						E
CULG	20	0515	0531	0544	S30	E36	.727	16923	22.9	29	-N		C	0531	200	3.0	T
HTPR	20	0532E		0555	S29	E37	.729	16923	23.0	23D	-B		C	0534	120	1.5	E
GRP85421	20	0545+1	0549+1	0605	S09	W69	.937	16901	15.1	20	1N						E
CULG	20	0545	0550	0610	S09	W69	.937	16901	15.1	25	1N		C	0550	180		
HTPR	20	0546	0549	0600	S11	W68	.932	16901	15.1	14	-N		C	0549	50	1.2	E
ABST	20	0555E	0556	0556D	S09	W69	.937	16901	15.1	1D	1F		P	0556	122		BE
GRP85422	20	0742	0742+6 0809+1	0847	S12	E24	.461	16918	22.1	65	-F				30	.3	EJ
HTPR	20	0742	0742	0752	S13	E27	.508	16918	22.3	10	-F	*	C	0742	30	.3	
ABST	20	0746E	0748	0807	S11	E24	.454	16918	22.1	21D	-F	*	P	0748	87	1.0	DJ
ABST	20	0746E	0748	0807	S15	E27	.522	16918	22.3	21D	-F	*	P	0748	87	1.1	DJ
HTPR	20	0751	0754	0800	S11	E22	.426	16918	22.0	9	-F	*	C	0754	20	.2	
KHAR	20	0752E	0752	0809D	S10	E21	.405	16918	21.9	17D	-F	*	P	0752	30	.3	D
KHAR	20	0756E	0810	0841D	S11	E25	.467	16918	22.2	45D	-F	*	P	0810	40	.5	E
KHAR	20	0801E	0809	0848D	S09	E19	.370	16918	21.8	47D	-F	*	P	0809	90	1.0	E
KHAR	20	0806E	0825	0854D	S12	E26	.488	16918	22.3	48D	-F	*	P	0825	60	.7	D
ABST	20	0832E	0836	0847	S16	E26	.517	16918	22.3	15D	-F	*	P	0836	79	1.0	DJ
GRP85423	20	0747>9	0748 0755+3	0810	S29	E35	.711	16923	22.9	23	-F				90	1.3	J
ABST	20	0747E	0748	0819	S24	E40	.725	16923	23.3	32D	-F		P	0748	87	1.3	DJ
CATA	20	0750	0755	0800D	S29	E35	.711	16923	23.0	10D	-F	2	P	0755	112	1.6	
ABST	20	0755E	0756	0803D	S29	E34	.703	16923	22.9	8D	-N		P	0756	96	1.4	DJ
HTPR	20	0757	0758	0805	S29	E35	.711	16923	23.0	8	-N		C	0758	30	.4	
KHAR	20	0758E	0758	0810D	S29	E35	.711	16923	23.0	12D	-F		P	0758	90	1.3	
GRP85424	20	0754>9	0759 0905+1	0947	S08	E14	.291	16918	21.4	113	-F				60	.6	J
ABST	20	0754	0759	0914	S09	E11	.263	16918	21.2	80	-F	*	P	0759	87	.9	DJ
HTPR	20	0850	0905	1000	S09	E14	.301	16918	21.4	70	-F	*	C	0905	40	.4	E
KHAR	20	0851E		0857D	S06	E16	.304	16918	21.6	6D	-F	*	P	0854	60	.6	E
ABST	20	0858	0906	1008	S07	E15	.297	16918	21.5	70	-F	*	C	0906	87	.9	DJ
KHAR	20	0909E	0927	0933D	S09	E20	.384	16918	21.9	24D	-F	*	P	0927	10	.1	D
425 KHAR	20	0803E	0806	0819D	S10	W69	.938	16901	15.2	16D	-F		P				
GRP85426	20	0809>9	0819 0851	0926	N23	W10	.399	16911	19.6	77	-F						D
KHAR	20	0809	0819	0851D	N22	W12	.399	16911	19.4	42D	-F	*	P				D
ABST	20	0846	0851	0925	N24	W10	.413	16911	19.6	39	-N	*	C	0851	79	.9	D
KHAR	20	0854E		0857D	N23	W09	.393	16911	19.7	3D	-F	*	P	0854	30	.3	D
KHAR	20	0906E	0912	0927D	N23	W09	.393	16911	19.7	21D	-F	*	P				D
GRP85427	20	0810+3	0810+6	0825	N12	W33	.564	16906	17.9	15	1N						E
CATA	20	0810E	0810	0820	N12	W33	.564	16906	17.9	10D	1F	2	P	0810	169	2.1	
ABST	20	0811	0814	0824	N13	W33	.568	16906	17.9	13	1N		C	0814	192	2.4	E
KHAR	20	0813E	0816	0825D	N13	W33	.568	16906	17.9	12D	1N		P	0816	180	2.2	E
HTPR	20	0813	0816	0825	N11	W31	.533	16906	18.0	12	-B	*	C	0816	100	1.1	
428 KHAR	20	0828E	0830	0851D	S10	W69	.938	16901	15.2	23D	-F		P				
GRP85429	20	0927+3	0930+3	0947	S29	E34	.703	16923	22.9	20	1N				160	2.2	EJ
ABST	20	0927	0932	0949	S30	E31	.685	16923	22.7	22	1N		C	0932	157	2.2	EJ
KHAR	20	0928E	0930	0947D	S29	E34	.703	16923	22.9	19D	1N		P	0930	160	2.2	
HTPR	20	0930	0933	0945	S29	E34	.703	16923	22.9	15	-B		C	0933	30	.4	
430 KHAR	20	0935E	0937	0944D	S10	W70	.943	16901	15.1	9D	-F		P				D
431 KHAR	20	0944E		1006D	S11	W66	.919	16901	15.5	22D	-F		P				E
GRP85432	20	0958+2	1003+0	1011D	S12	E78	.980	16927	26.3	13	-N						D
ABST	20	0958	1003	1010D	S17	E76	.975	16927	26.1	12D	1F		P	1003	79		D
KHAR	20	1000	1003	1011D	S08	E80	.986	16927	26.4	11D	-N		P				
GRP85433	20	1000+5	1002+3	1018	S24	E45	.773	16931	23.8	18	-N				110	1.7	EJ
ABST	20	1000	1002	1010D	S26	E45	.782	16931	23.8	10D	1N		P	1002	140	2.2	EJ
HTPR	20	1003	1003	1015	S24	E45	.773	16931	23.8	12	-N		C	1003	30	.4	E
CATA	20	1005	1005	1020	S23	E44	.759	16931	23.7	15	-F	2	C	1005	112	1.8	

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JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type		Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
434 HTPR	20	1105	1110	1130	S30	E38	.744	16923	23.3	25	-B		C	1110	60	.8	E
435 HTPR	20	1142	1151	1215	S13	E23	.455	16918	22.2	33	-B		C	1151	50	.5	E
GRP85436	20	1200+1	1206+0	1228	S28	E33	.686	16923	23.0	28	1N				160	2.2	E
RAMY	20	1200	1206	1227	S28	E32	.678	16923	22.9	27	1B	3	C		177		
HTPR	20	1201	1206	1228	S29	E34	.703	16923	23.1	27	-N		C	1206	150	1.8	E
437 HTPR	20	1234	1238	1243	S30	E39	.752	16923	23.4	9	-F		C	1238	30	.4	E
GRP85438	20	1413	1417	1443D	S23	E42	.740	16931	23.7	30	-N						E
HTPR	20	1413	1417	1436	S25	E42	.750	16931	23.7	23	-N		C	1417	40	.5	E
HTPR	20	1422		1443D	S22	E43	.745	16931	23.8	21D	-N		C	1426	30	.4	E
439 RAMY	20	1508	1510	1515	N16	W24	.465	16911	18.8	7	-N	3	C		22		
440 HOLL	20	1536	1538	1547	N22	W14	.415	16911	19.6	11	-F	3	C		52		
GRP85441	20	1542+1	1543 1552	1632D	S30	E34	.710	16923	23.2	50	-N				90	1.3	E
HTPR	20	1542		1608D	S29	E34	.703	16923	23.2	26D	-N		C	1552	80	1.0	E
BIGB	20	1543	1552	1632	S30	E35	.719	16923	23.3	49	-B	3	C	1552	110	1.4	
RAMY	20	1543	1543	1720D	S30	E33	.702	16923	23.1	97D	-N	3	C		30		
GRP85442	20	1713+1	1714	1722	S29	E29	.660	16923	22.9	9	-F				20	.3	D
HTPR	20	1713	1714	1722	S30	E30	.677	16923	23.0	9	-F		C	1714	20	.2	
HUAN	20	1714		1721	S29	E28	.652	16923	22.8	7	-F	1	C	1714	15	.2	D
443 HUAN	20	1800		1805	S12	W70	.944	16901	15.5	5	-F	1	C				E
444 PALE	20	2010	2011	2015	S28	E31	.669	16923	23.2	5	-F	3	C		22		D
445 CULG	20	2326	2329	2336	S12	W90	1.000		14.2	10	-N		C	2329	40		
446 CULG	20	2345	2352	2357D	S30	E22	.615	16923	22.6	12D	-N		C	2352	60	.8	
GRP85447	21	0003>9	0055+4 0117	0248	S12	E14	.334	16918	22.1	165	2N						FILU
PALE	21	0003	0059	0248D	S12	E17	.371	16918	22.3	165D	2N	3	C		822		
PALE	21	0034	0055	0213D	S10	E11	.276	16918	21.8	99D	-N	3	C		164		
MANI	21	0043E	0055U	0059D	S12	E14	.334	16918	22.1	16D	1N	1	V		300	3.3	F
PEKG	21	0043	0117	0225	S13	E17	.381	16918	22.3	102	2B		P	0116	967	10.8	FIU
CULG	21	0128E	0128U	0351	S14	E15	.369	16918	22.2	143D	2B		C	0128	940	10.3	UFIL
GRP85448	21	0121	0121	0135	N19	W90	1.000	16898	14.3	14	1B						
PALE	21	0121	0121	0133	N17	W90	1.000	16898	14.3	12	1B	3	C				
CULG	21	0128E	0128U	0136	N21	W90	1.000	16898	14.3	8D	-N		P	0128	40		
449 CULG	21	0253	0300	0314	S09	W80	.986	16901	15.1	21	-F		C	0300	30		
450 CULG	21	0318	0326	0344	S11	E67	.926	16927	26.2	26	-N		C	0326	40		
451 CULG	21	0340	0349	0357	S30	E21	.609	16923	22.7	17	-N		C	0349	50	.6	
	21	0405	0417	NO FLARE PATROL													
452 CULG	21	0450	0458	0525U	S08	E08	.218	16918	21.8	35D	-N		C	0458	100	1.0	TF
453 CULG	21	0526	0558	0616	N22	W23	.503	16911	19.5	50	-N		C	0558	40	.5	
454 CULG	21	0531	0547	0615	S28	E30	.661	16923	23.5	44	-N		C	0547	120	1.7	T
455 KHAR	21	0812E		0825D	S25	E28	.617	16923	23.4	13D	-F		P	0813			
456 KHAR	21	0834E		0900D	S25	E30	.636	16923	23.6	26D	-F		P	0853			E
457 KHAR	21	0900E		0908D	S31	E31	.695	16923	23.7	8D	-F		V	0903			D

H - ALPHA SOLAR FLARES

JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type		Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85458	21	0930+5	0940	1025	S29	E26	.636	16923	23.3	55	-F						E
KHAR	21	0930E		0940D	S28	E29	.652	16923	23.6	10D	-F		V	0932			
CATA	21	0935	0940	1025	S30	E26	.646	16923	23.3	50	-F	2	C	0940	140	1.9	
KHAR	21	0940E		1018D	S30	E23	.623	16923	23.1	38D	-F		V	0942			E
GRP85459	21	1547+0	1547+0	1551	N23	W26	.545	16911	19.7	4	-F				30	.4	
RAMY	21	1547	1547	1550	N23	W26	.545	16911	19.7	3	-N	3	C		28		
HUAN	21	1547	1547	1551	N23	W26	.545	16911	19.7	4	-F	1	C	1547	30	.4	
460 HUAN	21	1625	1625	1628	N23	W26	.545	16911	19.7	3	-F	1	C	1625	30	.4	
461 RAMY	21	1628	1629	1634	S29	E25	.628	16923	23.6	6	-F	3	C		31		
462 HOLL	21	1639	1642	1650	N22	W28	.559	16911	19.6	11	-F	3	C		33		
GRP85463	21	1738+1	1744+1	1756	S29	E19	.583	16923	23.2	18	-F				120	1.5	E
HUAN	21	1738	1744	1747	S29	E18	.577	16923	23.1	9	-F	1	C	1744	60	.8	E
RAMY	21	1738	1744	1758	S30	E19	.595	16923	23.2	20	-F	3	C		123		
HOLL	21	1739	1745	1756	S28	E21	.587	16923	23.3	17	-N	3	C		145		
464 RAMY	21	1853	1855	1906	S22	E28	.590	16931	23.9	13	-F	3	C		41		
465 HUAN	21	1917	1919	1921	S08	E01	.170	16918	21.9	4	-F	1	C	1919	40	.4	
GRP85466	21	2106+0	2107	2154	S08	E67	.924	16927	26.9	48	-F						
HOLL	21	2106	2107	2154	S10	E63	.897	16927	26.6	48	-N	3	C		45		
HUAN	21	2106		2119D	S06	E71	.947	16927	27.2	13D	-F	1	C				
467 BIGB	21	2227	2230	2240	S10	W90	1.000	16901	15.2	13	?N	3	C	2230	80		
			IMP.1 NO : CULG HOLL														
468 CULG	21	2243	2258	2318U	S08	W07	.207	16918	21.4	35D	-N		C	2258	80	.8	
469 CULG	21	2249	2304	2329	S19	E58	.871	16927	26.3	40	-F		C	2304	50	1.1	
470 CULG	21	2325	2340	0002	N09	E26	.452	16921	23.9	37	-F		C	2340	40	.4	
471 CULG	21	2335	2340	2354	N23	W32	.611	16911	19.6	19	-F		C	2340	30	.4	
472 CULG	22	0024	0033	0055	S28	E26	.628	16923	24.0	31	-F		C	0033	70	.9	T
GRP85473	22	0102>9	0135+4	0155D	S23	E25	.570	16931	23.9	53	-N						FJ
CULG	22	0102U	0135U	0414U	S24	E24	.571	16931	23.8	192D	1N		C	0135	300	3.8	FJT
PALE	22	0136	0139	0155	S22	E26	.571	16931	24.0	19	-F	3	C		23		
GRP85474	22	0109	0116 0124	0226	S28	E24	.611	16923	23.8	77	-N						
BIGB	22	0109	0116	0143D	S28	E27	.636	16923	24.1	34D	-N	3	P	0116	50	.6	
PALE	22	0123E	0124	0226	S28	E22	.596	16923	23.7	63D	-F	3	C		70		
475 CULG	22	0148	0153	0202	S12	E01	.239	16918	22.1	14	-F		C	0153	60	.6	
476 CULG	22	0149	0153	0159	S11	E65	.913	16927	27.0	10	-F		C	0153	60	1.4	
GRP85477	22	0214	0240+2	0256D	N19	W34	.608	16911	19.5	42	-N						FJK
CULG	22	0214	0242	0354U	N20	W34	.614	16911	19.5	100D	1N		C	0242	340	4.4	FJK
PALE	22	0225E	0240U	0256	N18	W35	.615	16911	19.5	31D	-F	3	C		42		
478 CULG	22	0234	0256	0319	S28	E19	.573	16923	23.5	45	-N		C	0256	120	1.5	
479 CULG	22	0321	0334	0434	S18	W02	.341	16918	22.0	73	?F		C	0334	220	2.4	KF
			IMP.1 NO : PALE														
480 CULG	22	0428	0434	0444	S11	E54	.821	16927	26.2	16	-N		C	0434	30	.5	
481 CULG	22	0453	0457	0532	S10	W05	.222	16918	21.8	39	-N		C	0457	80	.8	F
GRP85482	22	0540+1	0545+3	0614	S16	W04	.313	16918	21.9	34	1N				210	2.2	
CATA	22	0540	0545	0550D	S17	W04	.329	16918	21.9	10D	1F	2	P	0545	197	2.1	
CULG	22	0541	0548	0614	S15	W04	.297	16918	21.9	33	1B		C	0548	230	2.4	

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
483 ABST	22	0717E	0717	0720D	S10	W07	.237	16918	21.8	3D	-F		P	0717	157	1.7	E
484 KHAR	22	0724E	0732	0750D	S22	E22	.531	16931	24.0	26D	?F		P	0727	220	2.7	E
			IMP.1 NO : CATA														
485 KHAR	22	0724E	0724	0731D	S09	W06	.214	16918	21.9	7D	-F		P	0727	120	1.3	E
486 KHAR	22	0814E	0816	0828D	N20	W38	.660	16911	19.5	14D	-F		V	0816			D
487 KHAR	22	0911E	0915	0921D	S08	W11	.254	16918	21.6	10D	-F		P	0915	110	1.2	E
488 KHAR	22	0918E	0918	0921D	S13	W05	.269	16918	22.0	3D	-F		P	0918	10	.1	D
489 KHAR	22	0940E	0943	0945D	S19	W90	1.000	16902	15.7	5D	-F		P	0943			
490 KHAR	22	1020E	1022	1028D	N20	W38	.660	16911	19.6	8D	-F		V	1022			D
491 KHAR	22	1047E		1101D	S22	E22	.531	16931	24.1	14D	?F		V	1055			
			IMP.1 NO : CATA														
492 CATA	22	1120E	1120	1135	S23	E20	.523	16931	24.0	15D	-F	2	P	1120	56	.7	
493 KHAR	22	1157E		1227D	N19	W40	.679	16911	19.5	30D	-F		P	1157	60	.8	
GRP85494	22	1300+8	1310	1420	S26	E18	.542	16923	23.9	80	-N						E
			1316+1														
KHAR	22	1300E	1317	1419D	S26	E19	.550	16923	24.0	79D	1N	*	P	1317	200	2.5	E
HUAN	22	1301		1426	S27	E19	.561	16923	24.0	85	-N	*	C	1339	30	.4	
RAMY	22	1304	1310	1355	S28	E18	.566	16923	23.9	51	-F	3	C		31		
RAMY	22	1305	1317	1339	S23	E17	.498	16923	23.8	34	-N	*	C		33		
HOLL	22	1308	1316	1420	S25	E18	.530	16923	23.9	72	-N	*	C		122		
GRP85495	22	1303+5	1310+7	1351	S09	W14	.303	16918	21.5	48	1B						EU
TELV	22	1303	1310	1353D	S10	W15	.326	16918	21.4	50D	1B	*			294	3.1	U
RAMY	22	1304	1313	1352	S09	W12	.278	16918	21.6	48	2B	*	C		510		D
HUAN	22	1305	1317	1344	S08	W13	.280	16918	21.6	39	-N	*	C	1317	80	.9	E
KHAR	22	1306E	1313	1410D	S09	W15	.317	16918	21.4	64D	1N	*	P	1310	350	3.6	E
HOLL	22	1308	1314	1348	S09	W15	.317	16918	21.4	40	-B	*	C		189		
GRP85496	22	1317+2	1321	1408	N19	W41	.690	16911	19.5	51	1N						
			1327+5														
RAMY	22	1317	1321	1404	N19	W41	.690	16911	19.5	47	-B	3	C		170		D
HOLL	22	1318	1328	1412	N19	W42	.702	16911	19.4	54	1B	3	C		212		D
KHAR	22	1318E	1332	1421D	N22	W41	.703	16911	19.5	63D	2N		P	1332	410	5.9	E
HUAN	22	1319	1327	1340	N18	W40	.675	16911	19.6	21	-N	1	C	1327	75	1.0	E
497 RAMY	22	1335	1335	1355	S29	E10	.534	16923	23.3	20	-F	*	C		54		
GRP85498	22	1400>9	1403	1425	S09	W09	.243	16918	21.9	25	-F				50	.5	E
			1413+1														
KHAR	22	1400E	1403	1425D	S09	W09	.243	16918	21.9	25D	-N	*	P	1406	110	1.2	E
HOLL	22	1409	1414	1422	S08	W06	.199	16918	22.1	13	-F	*	C		25		
RAMY	22	1413	1413	1432	S11	W11	.290	16918	21.8	19	-F	*	C		71		
499 HUAN	22	1705		1713	S23	E17	.498	16931	24.0	8	-F	1	C				
500 PALE	22	1738	1739	1745	S23	E17	.498	16931	24.0	7	-F	3	C		32		D
GRP85501	22	1858+2	1904+9	1940	N19	W44	.724	16911	19.5	42	-B				140	2.0	
HOLL	22	1858	1904	1933	N21	W41	.699	16911	19.7	35	-B	3	C		150		
PALE	22	1858	1904	1954	N18	W44	.720	16911	19.5	56	-B	3	C		168		D
BIGB	22	1859	1909	1952	N21	W44	.731	16911	19.5	53	-B	3	C	1909	130	1.9	
RAMY	22	1900	1904	1934	N18	W43	.709	16911	19.6	34	-B	3	C		132		
HUAN	22	1900	1913	1924	N17	W44	.717	16911	19.5	24	-N	1	C	1913	60	.9	E
502 PALE	22	1904	1910	1925	S20	E07	.389	16923	23.3	21	-F	3	C		34		
GRP85503	22	2005+9	2014+0	2021	S23	E14	.474	16931	23.9	16	-F				50	.6	E
PALE	22	2005E	2014	2032	S23	E14	.474	16931	23.9	27D	-F	3	C		70		
HUAN	22	2012		2021	S23	E15	.482	16931	24.0	9	-F	1	C	2014	40	.5	E
RAMY	22	2014	2014	2021	S23	E14	.474	16931	23.9	7	-F	3	C		36		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
504 VORO	22	2052	2053	2055	N22	W44	.735	16911	19.6	3	-F		C	2053	108	1.6	D
GRP85505	22	2132>9	2155+2	2205	N22	W44	.735	16911	19.6	33	-N				90	1.3	D
VORO	22	2132E		2157	N22	W44	.735	16911	19.6	25D	-N		C	2132	81	1.2	CD
BIGB	22	2154	2157	2205	N22	W54	.831	16911	18.9	11	-N	3	C	2157	100	1.8	
PALE	22	2154E	2155U	2208	N19	W44	.724	16911	19.6	14D	-N	3	C		75		
506 CULG	22	2256	2305	2323	S23	W08	.439	16918	22.4	27	-F		C	2305	60	.7	
507 CULG	22	2305	2307	2313	S27	W03	.484	16923	22.7	8	-F		C	2307	40	.5	
508 CULG	22	2350	2354	0014	N20	W65	.913		18.1	24	-N		C	2354	60	1.5	
509 CULG	23	0017	0033	0049	S18	W09	.372	16918	22.3	32	-N		C	0033	100	1.0	
510 CULG	23	0027	0032	0043	S28	W03	.501	16923	22.8	16	-N		C	0032	60	.7	T
511 CULG	23	0034	0037	0048	N23	W45	.748	16911	19.6	14	-N		C	0037	80	1.2	T
GRP85512	23	0040>9	0048 0121	0144D	S10	W16	.341	16918	21.8	64	1N						
CULG	23	0040	0048	0129U	S10	W16	.341	16918	21.8	49D	1N		C	0048	200	2.1	
BIGB	23	0115	0121	0144D	S10	W16	.341	16918	21.9	29D	-N	3	P	0121	90	1.0	
GRP85513	23	0121+1	0124+2	0144D	N27	W41	.726	16911	20.0	23	1N				180	2.7	F
CULG	23	0121	0126	0129D	N28	W41	.731	16911	20.0	8D	1N		P	0126	240	3.5	FT
BIGB	23	0122	0124	0144D	N26	W41	.721	16911	20.0	22D	-N	3	P	0124	130	1.8	
514 CULG	23	0200	0213U	0349	S10	W52	.800	16913	19.2	109	1F		C	0213	300	4.8	SIFG
GRP85515	23	0202	0218 0225	0417D	N21	W47	.761	16911	19.6	135	1N						FHK
CULG	23	0202	0225	0455	N21	W48	.771	16911	19.5	173	2N		C	0225	450	6.7	FKH
MANI	23	0217E	0218	0230D	N20	W47	.758	16911	19.6	13D	-N	1	V		80	1.2	F
TACH	23	0403E		0417	N23	W47	.768	16911	19.6	14D	1N		C	0403	301	4.8	E
516 CULG	23	0219	0225	0236	S23	E05	.429	16923	23.5	17	-N		C	0225	30	.3	T
517 CULG	23	0241	0252	0307U	S22	E09	.431	16931	23.8	26D	-F		C	0252	100	1.1	T
518 CULG	23	0247	0248	0304	N21	W69	.938		17.9	17	-N	*	C	0248	60		G
519 CULG	23	0317	0320	0326	S22	E08	.426	16931	23.7	9	-F		C	0320	120	1.3	T
GRP85520	23	0337	0340	0349	S23	E06	.432	16931	23.6	12	-B						E
CULG	23	0337	0340	0349	S23	E05	.429	16931	23.5	12	1B		C	0340	220	2.4	T
MITK	23	0338E		0341D	S23	E07	.436	16931	23.7	3D	-N		P	0339			E
521 ABST	23	0502	0506	0603	S17	E42	.714	16933	26.4	61	?N		C	0506	175	2.5	EJ
			IMP.1 NO : TACH YUNN MITK														
522 ABST	23	0507	0511	0521	S23	E52	.833	16928	27.1	14	?N		C	0511	175	3.1	EJ
			IMP.1 NO : TACH MITK														
523 ABST	23	0522	0524	0532	S22	E05	.414	16931	23.6	10	-B		C	0524	105	1.2	EJ
524 CULG	23	0542	0552	0601	N21	W50	.791	16911	19.5	19	-F		C	0552	70	1.1	
GRP85525	23	0611+9	0625+2 0636	0705	S14	E46	.746	16927	26.7	54	1N				330	5.0	FJ
ABST	23	0611	0625	0705	S14	E47	.757	16927	26.8	54	2B	*	C	0625	357	5.6	FJ
BUCA	23	0620		0700	S14	E46	.746	16927	26.7	40	1N	*	C	0626	322	5.0	
ATHN	23	0625E	0627	0654D	S12	E49	.773	16927	26.9	29D	-B	*	V	0627	127	2.1	
CULG	23	0628E	0636U	0637D	S13	E43	.710	16927	26.5	9D	2N		P	0636	470	7.0	J
CATA	23	0630E	0630	0705	S14	E45	.736	16927	26.6	35D	2F	*	P	0630	337	5.1	
GRP85526	23	0613+2	0614	0637	N21	W51	.801	16911	19.4	24	1N				140	2.4	FJV
ABST	23	0613	0614	0637	N21	W52	.810	16911	19.4	24	1N		C	0614	131	2.2	FJV
BUCA	23	0615		0636	N22	W50	.794	16911	19.5	21	1N		C	0620	161	2.7	
527 ABST	23	0614	0617	0648	S28	W01	.499	16923	23.2	34	-F		C	0617	87	1.0	DJ

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528 ABST	23	0620	0622	0625	S23	E04	.426	16931	23.6	5	-F		C	0622	87	1.0	DJ
529 ABST	23	0643	0644	0648	S24	E04	.442	16931	23.6	5	-F	*	C	0644	87	1.0	DJV
530 ISTA	23	0705		0720	S03	W90	1.000		16.5	15	-F						E
531 ABST	23	0710	0712	0727	N22	W51	.803	16911	19.5	17	-F		C	0712	96	1.6	DJ
532 ABST	23	0718	0721	0804	S17	E46	.756	16927	26.8	46	-F		C	0721	87	1.4	DJ
533 ABST	23	0721	0724	0737	S10	E40	.664	16927	26.3	16	-F		C	0724	87	1.2	DJ
GRP85534	23	0721+9	0732+2	0739D	S24	E06	.448	16931	23.8	18	-N				110	1.2	DJ
TELV	23	0721	0734	0816	S25	E06	.463	16931	23.8	55	-B	2			123	1.4	
ABST	23	0730	0732	0739	S24	E06	.448	16931	23.8	9	-N		C	0732	96	1.1	DJ
535 ABST	23	0742	0744	0748	N22	W51	.803	16911	19.5	6	-F		C	0744	87	1.5	DJ
GRP85536	23	0752+8	0759+1	0818	N19	W72	.953		17.9	26	1N				100		GJ
ABST	23	0752	0759	0808	N20	W72	.953		17.9	16	1N		C	0759	140		FGJ
KHAR	23	0757E	0800	0828D	N19	W72	.953		17.9	31D	-N		P	0800			D
CATA	23	0800	0800	0815	N21	W72	.954		17.9	15	1F	2	C	0800	84		
BUCA	23	0800		0820D	N19	W70	.942		18.1	20D	-N		C	0802	86		
537 ABST	23	0806	0815	0840	S29	E04	.518	16923	23.6	34	?F		C	0815	218	2.6	FJ
			IMP.1 NO : CATA														
538 ABST	23	0829	0830	0841	S22	E05	.414	16931	23.7	12	-F		C	0830	131	1.5	EJV
539 ABST	23	0831	0836	0840	N21	W53	.819	16911	19.4	9	-F		C	0836	87	1.5	DJ
540 KHAR	23	0849E	0850	0903D	N21	W51	.801	16911	19.5	14D	?F		V	0850			
			IMP.1 NO : ABST YUNN														
541 ABST	23	0857	0902	0915	S29	W04	.518	16923	23.1	18	-F		C	0902	87	1.0	D
GRP85542	23	0912	0928+1 0945	1017	N20	W55	.835	16911	19.3	65	-N						FJ
ABST	23	0912	0928	1003D	N21	W54	.828	16911	19.3	51D	1N		P	0928	175	3.1	FJ
KHAR	23	0913E	0929	1023D	N20	W55	.835	16911	19.3	70D	-N		P	0929	60	1.2	
CATA	23	0935E	0945	1010	N20	W55	.835	16911	19.3	35D	-F	2	P	0945	84	1.6	
543 ABST	23	0923	0934	1002	S22	E06	.417	16931	23.8	39	-F		C	0934	87	1.0	DJ
GRP85544	23	1010+7	1017+1	1028	S10	E44	.712	16927	26.7	18	-N				80	1.1	Z
KHAR	23	1010E	1017	1027D	S10	E44	.712	16927	26.7	17D	-N		P	1017	80	1.2	D
YUNN	23	1013	1015	1015D	S11	E43	.703	16927	26.7	2D	1N		P		161	2.4	EZ
ATHN	23	1017	1018	1028	S10	E44	.712	16927	26.7	11	-B	3	V	1018	64	.9	
545 KHAR	23	1033E	1037	1047D	S28	W03	.501	16923	23.2	14D	-F		P				
GRP85546	23	1050	1055 1105	1150D	S26	W02	.470	16923	23.3	60	-F				110	1.2	
CATA	23	1050	1055	1150D	S28	W07	.510	16923	22.9	60D	-F	2	P	1055	112	1.4	
KHAR	23	1054E	1105	1123D	S24	E02	.439	16923	23.6	29D	-F		P	1100	110	1.3	
547 KHAR	23	1053E	1057	1156D	S28	E36	.716	16922	26.2	63D	-N		P	1101	60	.7	D
548 KHAR	23	1054E		1127D	S24	E09	.460	16931	24.1	33D	?F		P	1100	190	2.1	
			IMP.1 NO : CATA														
549 KHAR	23	1137E		1155D	S11	E40	.667	16927	26.5	18D	-F		P	1140	60	.8	D
GRP85550	23	1235	1244+3	1405	N22	W51	.803	16911	19.7	90	-B				100	1.7	D
RAMY	23	1235	1244	1246D	N20	W52	.808	16911	19.6	11D	-B	3	C		87		D
ATHN	23	1243E	1247	1405	N24	W51	.809	16911	19.7	82D	-B	3	V	1247	111	1.9	
GRP85551	23	1448+2	1451+1	1503	S11	E42	.691	16927	26.8	15	-N						
HUAN	23	1448	1451	1459	S10	E41	.676	16927	26.7	11	-N	1	C	1451	40	.6	
BIGB	23	1450	1452	1507	S12	E44	.718	16927	26.9	17	-N	3	C	1452	100	1.4	

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552 HUAN	23	1517		1527	S29	W02	.515	16923	23.5	10	-F	1	C				E
553 HOLL	23	1558	1608	1621	S22	E05	.414	16931	24.0	23	-F	3	C		49		
554 HTPR	23	1613	1614	1615	S18	E35	.640	16933	26.3	2	-F		C	1614	20	.2	
555 HUAN	23	1616		1620	S16	E36	.641	16933	26.4	4	-F	1	C				
556 HOLL	23	1623	1638	1702	S22	E05	.414	16931	24.1	39	-F	3	C		36		
GRP85557	23	1852+6	1900+2	1917	S23	E02	.423	16931	23.9	25	-N				80	.9	
HOLL	23	1852	1900	1926	S22	E02	.407	16931	23.9	34	-B	3	C		98		
BIGB	23	1852	1901	1921	S23	E00	.422	16931	23.8	29	-N	3	C	1901	80	.8	
PALE	23	1857	1901	1915	S23	E02	.423	16931	23.9	18	-N	3	C		76		D
RAMY	23	1857	1902	1914	S23	E02	.423	16931	23.9	17	-N	3	C		43		
HUAN	23	1858		1910	S24	E02	.439	16931	23.9	12	-F	1	C				E
GRP85558	23	1933+1	1934+1	1946	S29	W03	.516	16923	23.6	13	-F				50	.6	D
PALE	23	1933	1935	1949	S29	W03	.516	16923	23.6	16	-F	3	C		59		D
HOLL	23	1934	1934	1946	S28	W03	.501	16923	23.6	12	-N	3	C		39		
HUAN	23	1934		1938	S30	W03	.531	16923	23.6	4	-F	1	C	1935	40	.5	
GRP85559	23	1942>9	1943 1955	2002	S23	00	.422	16931	23.8	20	-F						D
HOLL	23	1942	1943	2000	S22	E01	.406	16931	23.9	18	-F	3	C		31		
PALE	23	1955	1955	2003	S24	E00	.437	16931	23.8	8	-F	3	C		24		D
GRP85560	23	1953+5	2000+1	2007	S28	W04	.503	16923	23.5	14	-F						D
PALE	23	1953	2000	2009	S29	W04	.518	16923	23.5	16	-F	3	C		77		D
HOLL	23	1958	2001	2005	S27	W05	.490	16923	23.5	7	-N	2	C		34		
561 PALE	23	2007	2020	2031	S13	W23	.458	16918	22.1	24	-F	3	C		41		
GRP85562	23	2104+5	2115 2136	2147	S27	W05	.490	16923	23.5	43	-N						
PALE	23	2104	2127U	2147	S28	W05	.505	16923	23.5	43	-F	3	C		63		
HOLL	23	2109	2115	2120	S27	W04	.488	16923	23.6	11	-N	2	C		31		
HOLL	23	2134	2136	2146	S27	W05	.490	16923	23.5	12	-B	3	C		51		
GRP85563	23	2121+6	2127+0	2208	S23	00	.422	16931	23.9	47	-N				110	1.2	
HOLL	23	2121	2127	2214	S22	E00	.406	16931	23.9	53	-N	3	C		150		
BIGB	23	2126	2127	2158D	S24	W02	.439	16931	23.7	32D	-B	3	P	2127	60	.6	
PALE	23	2127	2127	2201	S23	E00	.422	16931	23.9	34	-N	3	C		114		
GRP85564	23	2247+6	2313+1	2335	S28	W08	.514	16923	23.3	48	1N				210	2.4	KV
CULG	23	2247	2314	2332U	S28	W08	.514	16923	23.3	45D	1N		C	2314	370	4.3	KFV
PALE	23	2253	2314	2336	S29	W07	.525	16923	23.4	43	1B	3	C		217		D
HOLL	23	2253	2314	2316D	S27	W08	.499	16923	23.4	23D	1B	3	C		208		
BIGB	23	2311	2313	2334	S29	W08	.528	16923	23.4	23	-N	3	C	2313	150	1.6	
565 HOLL	23	2258	2259	2314	S22	W03	.409	16931	23.7	16	-N	3	C		25		
GRP85566	23	2327+7	2339+3 2408	0017	N19	W63	.898	16911	19.3	50	2B				240	5.6	DU
CULG	23	2327	2408	0024	N19	W60	.875	16911	19.5	57	2N		P	2408	250	5.0	U
PALE	23	2332	2342	0009	N18	W63	.897	16911	19.3	37	1B	3	C		231		D
HOLL	23	2334	2339	2340D	N19	W64	.905	16911	19.2	6D	1B	3	C		251		
GRP85567	23	2358+4	0002+3	0015	S27	W07	.496	16923	23.5	17	-N				60	.7	F
PALE	24	0001	0002	0012	S28	W07	.512	16923	23.5	11	-F	3	C		58		
HOLL	24	0002	0003	0015	S26	W06	.480	16923	23.6	13	-N	3	C		46		
CULG	24	0017	0022	0035	S30	W15	.575	16923	22.9	18	1N		C	0022	180	2.2	F
CULG	23	2358	2405	0038U	S25	W05	.460	16923	23.6	40D	1N		C	2405	270	3.1	T
568 CULG	24	0001	0004	0015	S10	E33	.574	16927	26.5	14	-F		C	0004	120	1.4	F
569 HOLL	24	0003	0005	0059	S23	W02	.425	16931	23.9	56	-N	3	C		115		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85570	24	0139+1	0143+3	0156	S24	W04	.444	16931	23.8	17	-N						
CULG	24	0139	0146	0157	S23	W04	.428	16931	23.8	18	1N		C	0146	260	2.9	
YUNN	24	0140	0145	0155	S25	W04	.459	16931	23.8	15	-N		C		129	1.5	
PALE	24	0141E	0143U	0156	S24	W03	.442	16931	23.8	15D	-F	3	C		55		
571 CULG	24	0141	0144	0147	S11	E30	.538	16933	26.3	6	-F		C	0144	60	.7	
572 CULG	24	0152	0153	0155	S11	E30	.538	16933	26.3	3	-F		C	0153	100	1.2	
GRP85573	24	0206+3	0210+0	0226	S23	W02	.425	16931	23.9	20	-N						F
CULG	24	0206	0210	0230U	S23	W03	.426	16931	23.9	24D	1N		C	0210	310	3.4	F
PALE	24	0209	0210	0221	S23	W02	.425	16931	23.9	12	-F	3	C		60		
GRP85574	24	0257+0	0258+0	0303	S28	W09	.519	16923	23.4	6	-F						D
MITK	24	0257	0258	0303	S28	E00	.501	16923	24.1	6	-N		C	0258			
VORO	24	0257	0258	0301D	S28	W19	.576	16923	22.7	4D	-F		C	0258	72	.9	D
GRP85575	24	0318E	0319 0348	0400	S27	W06	.494	16923	23.7	42	1N						F
CULG	24	0318E	0319D	0405D	S25	W02	.456	16923	24.0	47D	1N		P	0319	200	2.2	F
PALE	24	0346E	0348	0354	S29	W10	.537	16923	23.4	8D	-F	3	C		61		
	24	0329	0330	NO FLARE PATROL													
576 ABST	24	0528	0536	0546	N17	W61	.881	16911	19.7	18	-F		C	0536	87		DJ
577 ABST	24	0544	0546	0548	S23	W07	.438	16931	23.7	4	-F		C	0546	87	.9	DJ
578 HTPR	24	0555	0557	0605	S24	W08	.457	16931	23.6	10	-F		C	0557	30	.3	E
579 HTPR	24	0616	0616	0618	S14	E24	.480	16933	26.1	2	-N		C	0616	30	.3	
580 ABST	24	0623	0630	0635	N21	W64	.907	16911	19.5	12	1F		C	0630	131		EJ
GRP85581	24	0631+4	0633+8	0707	S28	W13	.538	16923	23.3	36	1N				250	2.9	EJU
ABST	24	0631	0633	0715	S29	W13	.551	16923	23.3	44	1N		C	0633	349	4.1	EJ
KHAR	24	0632E	0635	0735D	S28	W12	.533	16923	23.4	63D	1N		P	0635	200	2.4	E
BUCA	24	0634		0705	S28	W14	.544	16923	23.2	31	1N		C	0638	215	2.6	
WEND	24	0634	0637	0706	S28	W12	.533	16923	23.4	32	1N		C	0637	270	3.2	
MITK	24	0634	0636	0714	S28	W14	.544	16923	23.2	40	1N		C	0636	260	3.2	E
ISTA	24	0635		0650	S29	W10	.537	16923	23.5	15	1N						U
ATHN	24	0638E	0641	0653	S29	W18	.581	16923	22.9	15D	-N	3	V	0641	80	1.0	
YUNN	24	0638E	0638	0638D	S28	W13	.538	16923	23.3		1N		P		290	3.6	F
CATA	24	0645E	0645	0650D	S28	W12	.533	16923	23.4	5D	1F	2	P	0645	281	3.4	
GRP85582	24	0649E	0836	0949D	S17	W25	.518	16918	22.4	180	?F						E
KHAR	24	0649E		0949D	S18	W24	.515	16918	22.5	180D	?F	*	P	0649	50	.6	E
			IMP.1 NO : ABST CATA														
KHAR	24	0803E	0836	0934D	S17	W26	.529	16918	22.4	91D	1F		P	0836	190	2.3	E
583 ABST	24	0653	0701	0730	S22	W07	.423	16931	23.8	37	?F		C	0701	220	2.1	EJ
			IMP.1 NO : WEND MITK														
GRP85584	24	0810+6	0818 0850+5	0911	S23	W09	.447	16931	23.7	61	-F				60	.7	EJ
KHAR	24	0810E		0820D	S23	W09	.447	16931	23.7	10D	-F	*	P	0810	60	.6	E
ABST	24	0816	0818	0850	S23	W07	.438	16931	23.8	34	-F		C	0818	131	1.4	EJ
ABST	24	0848	0850	0911	S23	W12	.464	16931	23.5	23	-F	*	C	0850	87	1.0	DJ
KHAR	24	0850E	0855	0900D	S23	W09	.447	16931	23.7	10D	-F	*	P	0854	40	.7	D
585 KHAR	24	0836E		0836D	S09	E30	.528	16927	26.6		-F		P				D
GRP85586	24	0934E	0937	1000D	S11	E31	.552	16927	26.7	26	-F						
KHAR	24	0934E	0937	0948D	S12	E32	.570	16927	26.8	14D	-F		P	0944	50	.6	E
KHAR	24	0945E		1000D	S11	E30	.538	16927	26.7	15D	-F		V	0945			D
GRP85587	24	0945	0951	1016D	S23	W05	.431	16931	24.0	31	-F						DJ
ABST	24	0945	0951	1007D	S23	W06	.434	16931	24.0	22D	-F		P	0951	87	.9	DJ
KHAR	24	0955E		1016D	S23	W04	.428	16931	24.1	21D	-F		P	0956			D

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GRP85588	24	1005+3	1012+1	1018	S30	W11	.555	16923	23.6	13	-N				100	1.2	EJ
ABST	24	1005	1007	1007D	S30	W10	.551	16923	23.7	2D	-N		P	1007	131	1.6	EJ
WEND	24	1008	1012	1016	S28	W11	.528	16923	23.6	8	-N		C	1012	100	1.2	
KHAR	24	1011E	1013	1019D	S30	W11	.555	16923	23.6	8D	-N		P	1011	70	.8	E
GRP85589	24	1043	1046	1115	N23	W64	.909	16911	19.6	32	-N						
WEND	24	1043	1046	1054D	N23	W63	.902	16911	19.7	11D	-N		C	1046	25		
CATA	24	1050E	1050	1115	N24	W65	.916	16911	19.6	25D	1F	2	P	1050	140		
590 CATA	24	1125E	1125	1135	S28	W26	.630	16923	22.5	10D	-F	2	P	1125	140	1.9	H
591 RAMY	24	1216	1218	1222	S13	E23	.459	16933	26.2	6	-N	3	C		28		
592 RAMY	24	1245	1253	1321	S13	E31	.563	16927	26.9	36	-N	3	C		93		
593 RAMY	24	1251	1255	1302	N12	E43	.691	16942	27.8	11	-N	3	C		25		
594 RAMY	24	1251	1258	1333	S21	W08	.412	16931	23.9	42	-N	3	C		54		
GRP85595	24	1256	1303+1	1321	S28	W18	.569	16923	23.2	25	-B				140	1.7	
RAMY	24	1256	1303	1304D	S29	W17	.575	16923	23.3	8D	1N	3	C		190		
ATHN	24	1302E	1304	1321	S28	W19	.576	16923	23.1	19D	-B	3	V	1304	95	1.2	
596 RAMY	24	1336	1341	1420	S23	W09	.447	16931	23.9	44	-N	3	C		73		
597 RAMY	24	1429	1430	1445	S18	E22	.493	16933	26.3	16	-N	3	C		54		
GRP85598	24	1522+1	1523+2	1617	S29	W15	.562	16923	23.5	55	-B				130	1.6	D
RAMY	24	1522	1523	1617	S29	W15	.562	16923	23.5	55	-B	3	C		153		D
BIGB	24	1522	1525	1621	S29	W15	.562	16923	23.5	59	-B	3	C	1525	140	1.5	
HOLL	24	1522	1524	1603	S27	W17	.550	16923	23.4	41	-B	3	C		165		D
HUAN	24	1523	1525	1616	S29	W15	.562	16923	23.5	53	-N	2	C	1525	80	1.0	E
599 HOLL	24	1548	1548	1604	S22	W10	.438	16931	23.9	16	-F	3	C		20		
600 RAMY	24	1701	1702	1711	S23	W07	.438	16931	24.2	10	-N	3	C		29		
601 RAMY	24	1703	1704	1715	S29	W17	.575	16923	23.4	12	-N	3	C		48		
602 RAMY	24	1824	1824	1829	S10	W45	.724	16918	21.4	5	-F	3	C		20		
603 HUAN	24	1833		1838	S10	E22	.423	16927	26.4	5	-F	1	C				
604 PALE	24	1916	1916	1930	S28	W15	.550	16923	23.7	14	-F	3	C		44		D
GRP85605	24	1927+3	1929+3	1938	S23	W09	.447	16931	24.1	11	-F				60	.7	
HOLL	24	1927	1931	1946	S22	W09	.432	16931	24.1	19	-N	*	C		88		
HUAN	24	1928	1932	1934	S24	W08	.457	16931	24.2	6	-F	*	C	1932	60	.7	E
RAMY	24	1929	1929	1938	S23	W10	.452	16931	24.1	9	-N	*	C		44		
PALE	24	1930	1931	1937	S23	W09	.447	16931	24.1	7	-F	*	C		48		D
606 RAMY	24	1928	1929	1938	S10	W45	.724	16918	21.4	10	-F	3	C		46		
GRP85607	24	1955+6	1958+4	2023	N20	W72	.953	16911	19.4	28	-N						
HOLL	24	1955	1958	2025	N21	W72	.954	16911	19.4	30	-N	3	C				
HUAN	24	1956	2002	2023	N20	W75	.967	16911	19.2	27	-N	2	C	2002	30		
PALE	24	2001	2001	2021	N20	W72	.953	16911	19.4	20	-F	3	C				
GRP85608	24	1957+0	1959+4	2038	S23	W14	.478	16931	23.8	41	1B				290	3.3	
BIGB	24	1957	2002	2048	S24	W15	.498	16931	23.7	51	1B	*	C	2002	260	2.7	
HUAN	24	1957	2003	2030	S24	W15	.498	16931	23.7	33	1N	*	C	2003	320	3.8	E
HOLL	24	1957	1959	2044	S23	W14	.478	16931	23.8	47	1B	3	C		208		
PALE	24	2001E	2002U	2032	S21	W11	.430	16931	24.0	31D	1B	3	C		364		D
609 PALE	24	2007	2008	2013	S30	W19	.600	16923	23.4	6	-F	*	C		26		
GRP85610	24	2058>9	2103+8	2120	S12	W39	.659	16918	21.9	22	-F				90	1.2	H
BIGB	24	2058	2108	2146	S10	W40	.664	16918	21.9	48	-F	3	C	2108	110	1.5	
VORO	24	2059	2103	2120	S12	W36	.622	16918	22.2	21	-N		C	2103	90	1.2	H
PALE	24	2108	2111	2119	S12	W39	.659	16918	22.0	11	-F	3	C		18		

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611 VORO	24	2109	2111	2118	S10	E21	.409	16927	26.5	9	-F		C	2111	36	.4	D
GRP85612	24	2145+2	2149+1	2215	S20	E29	.588	16928	27.1	30	-N				110	1.3	
VORO	24	2145	2149	2210	S20	E31	.610	16928	27.2	25	1N		C	2149	278	3.5	E
BIGB	24	2146	2149	2225	S22	E27	.583	16928	26.9	39	-B	3	C	2149	110	1.3	
PALE	24	2147	2150U	2210D	S18	E30	.584	16928	27.2	23D	-F	3	C		66		
MANI	24	2205E	2205U	2215D	S20	E29	.588	16928	27.1	10D	-F	1	V		30	.4	F
GRP85613	24	2255+3	2258+5	2312	S10	E20	.395	16927	26.5	17	-F				20	.2	E
VORO	24	2255	2258	2308	S10	E20	.395	16927	26.5	13	-N		C	2258	81	.9	E
PALE	24	2258	2303	2316	S10	E19	.382	16927	26.4	18	-F	3	C		22		
MANI	24	2306E	2306U	2312D	S10	E20	.395	16927	26.5	6D	-F	1	V		15	.2	
GRP85614	24	2302+2	2306+0 2311+9	0015	S25	W14	.504	16923	23.9	73	1N				300	3.4	H
VORO	24	2302	2320	0030	S25	W13	.498	16923	24.0	88	1B	*	C	2320	376	4.4	EH
PALE	24	2303	2318U	0016D	S28	W14	.544	16923	23.9	73D	1N	3	C		261		D
HOLL	24	2304	2311	2359	S22	W14	.464	16923	23.9	55	1N	*	C		287		
HOLL	24	2305	2306	2333	S26	W17	.538	16923	23.7	28	-N	3	C		32		
BIGB	24	2306	2315U	0145D	S25	W15	.511	16923	23.8	159D	1N	*	P	2315	220	2.3	
PALE	24	2306	2317U	2338D	S25	W12	.492	16923	24.1	32D	-F	*	C		76		
MANI	24	2306E	2312	2335D	S23	W14	.478	16923	23.9	29D	1N	*	V		250	3.0	F
MANI	24	2306E	2306U	2335D	S27	W13	.525	16923	24.0	29D	-N	*	V		50	.6	
GRP85615	24	2334	2339 2408+6	0046	N20	W70	.943	16911	19.7	72	1B						D
PALE	25	0006E	0008U	0052D	N21	W71	.948	16911	19.7	46D	-F	3	C		11		D
HOLL	25	0006	0014	0040	N20	W73	.958	16911	19.5	34	-N	3	C				
HOLL	24	2334	2339	0009	N19	W64	.905	16911	20.2	35	1B	3	C		251		
GRP85616	25	0047+0	0050+2	0110	S22	W13	.459	16931	24.1	23	1N				190	2.1	
HOLL	25	0047	0050	0109D	S22	W13	.459	16931	24.1	22D	-B	*	C		177		
MITK	25	0047	0052	0110	S23	W12	.466	16931	24.1	23	1B	*	C	0052	270	3.2	
VORO	25	0047	0050	0106	S22	W16	.482	16931	23.8	19	1N	*	C	0050	251	2.9	E
MANI	25	0052E	0052U	0105D	S22	W13	.459	16931	24.1	13D	-N	*	V		80	1.0	
PALE	25	0052E	0052U	0113D	S21	W14	.453	16931	24.0	21D	-N	*	C		127		D
GRP85617	25	0226+1	0227	0234	S22	W19	.507	16931	23.7	8	-F				50	.6	
VORO	25	0226E		0233D	S22	W16	.482	16931	23.9	7D	-N		P	0229	72	.9	E
PALE	25	0227	0227	0234	S23	W23	.555	16931	23.4	7	-F	3	C		40		D
618 PALE	25	0305	0306U	0334D	S12	W42	.696	16918	22.0	29D	-F	3	C		43		D
619 TACH	25	0422	0424	0436	S22	W15	.474	16931	24.1	14	-B		C	0424	71	.8	Y
620 ABST	25	0458E	0501	0513	N11	E34	.572	16942	27.8	15D	-F		P	0501	87	1.1	D
GRP85621	25	0458E	0505	0756	S22	W17	.490	16931	23.9	178	-F						EJ
ABST	25	0458E	0505	0756	S22	W17	.490	16931	23.9	178D	-F		P	0505	148	1.6	EJ
KHAR	25	0611E	0611	0703D	S23	W17	.502	16931	24.0	52D	-F		P	0611	70	.8	E
KHAR	25	0732E		0750D	S23	W16	.494	16931	24.1	18D	-F		P	0735	80	.9	D
622 ABST	25	0510	0512	0528	S17	E15	.410	16933	26.3	18	-F		C	0512	131	1.5	EJ
623 ABST	25	0552	0555	0559	S16	E09	.346	16933	25.9	7	-F		C	0555	87	1.0	DJ
GRP85624	25	0604+1	0606+1	0616	N24	W79	.982	16911	19.3	12	-F				60		DJ
ABST	25	0604	0606	0619	N24	W80	.985	16911	19.3	15	1F		C	0606	79		DJ
CULG	25	0605	0607	0612	N24	W79	.982	16911	19.3	7	-F		C	0607	40		
GRP85625	25	0609+1	0614+1	0621	N17	E75	.966	16938	30.9	12	1F				110		EJ
CULG	25	0609	0614	0618D	N16	E75	.966	16938	30.9	9D	1F		P	0614	110		
CATA	25	0610	0615	0620	N17	E70	.941	16938	30.5	10	1F	2	C	0615	68		
ABST	25	0610	0614	0621	N18	E76	.970	16938	1.0	11	1N		C	0614	175		EJ

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85626	25	0644>9	0654+5 0707	0730	N23	W76	.971	16911	19.6	46	-N						JK
KHAR	25	0644E	0654	0710D	N23	W78	.979	16911	19.4	26D	-N		P				
ABST	25	0649	0707	0733	N24	W80	.985	16911	19.3	44	1N		C	0707	166		FJK
BUCA	25	0650		0705D	N24	W77	.975	16911	19.5	15D	-N		C	0705	43		D
ISTA	25	0655		0715	N22	W75	.967	16911	19.7	20	-N						E
ATHN	25	0657	0659	0730	N24	W74	.964	16911	19.7	33	-B	3	V	0659	32	1.0	
CATA	25	0710E	0710	0715D	N22	W76	.971	16911	19.6	5D	1F	2	P	0710	84		
GRP85627	25	0730E	0737+1	0815D	S28	W26	.632	16923	23.4	45	-F						EJ
KHAR	25	0730E		0815D	S28	W30	.666	16923	23.1	45D	-F		P	0735	130	1.8	E
KHAR	25	0733E		0758D	S30	W20	.608	16923	23.8	25D	-F		P	0735	70	.9	D
ABST	25	0736E	0738	0754	S28	W29	.657	16923	23.1	18D	-F		P	0738	87	1.2	DJ
ABST	25	0736E	0738	0803D	S28	W22	.600	16923	23.7	27D	-F		P	0738	87	1.1	DJ
KHAR	25	0736E	0738	0800D	S30	W26	.651	16923	23.4	24D	-F		P	0738			D
ABST	25	0736E	0737	0803D	S27	W35	.702	16923	22.7	27D	-F		P	0737	140	2.0	DJ
KHAR	25	0736E	0738	0758D	S29	W15	.564	16923	24.2	22D	-F	*	P	0745	110	1.3	D
628 KHAR	25	0758E	0812	0833D	N13	E30	.524	16942	27.6	35D	-F		P	0818	90	1.1	E
629 KHAR	25	0845E	0849	0900D	N13	E30	.524	16942	27.6	15D	-F		V	0849			E
GRP85630	25	0852+0	0852	0900	S29	W35	.717	16923	22.7	8	-F						D
KANZ	25	0852	0852	0900	S29	W37	.734	16923	22.6	8	-F	1					
KHAR	25	0852E		0857D	S30	W34	.716	16923	22.8	5D	-F		V	0853			D
GRP85631	25	0912	0915 0941	0947	S24	W19	.530	16931	24.0	35	-F						EJ
ABST	25	0912	0915	0936	S23	W20	.527	16931	23.9	24	1F		C	0915	175	2.1	EJ
KHAR	25	0913E		0938D	S24	W19	.530	16931	24.0	25D	-F		P	0932	70	.8	E
ABST	25	0936	0941	0947	S25	W17	.527	16931	24.1	11	-F		C	0941	87	1.0	DJ
632 KHAR	25	0925E	0925	0946D	S18	E90	1.000		2.1	21D	-F		P	0938			
GRP85633	25	0934	0943+6	1002	S28	W26	.632	16923	23.4	28	-F						J
ABST	25	0934	0943	1002	S28	W19	.577	16923	24.0	28	-F		C	0943	140	1.8	EJ
KHAR	25	0946E	0946	1002D	S30	W27	.659	16923	23.4	16D	-F		V	0946			D
ABST	25	0946	0949	0958	S26	W30	.648	16923	23.2	12	-F		C	0949	148	2.0	DJ
634 KHAR	25	0954E	0955	0958D	N19	W80	.984	16911	19.4	4D	-F		V	0955			
GRP85635	25	1011+0	1012+1	1020	N17	E69	.935	16938	30.6	9	-F						
YUNN	25	1011	1013	1017	N16	E70	.941	16938	30.7	6	-N		C		64		
KHAR	25	1011E	1012	1023D	N19	E68	.931	16938	30.5	12D	-F		P	1012			
GRP85636	25	1041E	1044 1053	1159	S29	W28	.658	16923	23.3	78	-N				90	1.2	EIK
KHAR	25	1041E	1044	1155D	S30	W28	.667	16923	23.3	74D	-N		P	1110	90	1.2	D
KHAR	25	1051E	1053	1200D	S29	W19	.589	16923	24.0	69D	-F		P	1110	90	1.1	E
HTPR	25	1123E		1159	S27	W25	.613	16923	23.6	36D	-N		C	1139	100	1.1	EIK
CATA	25	1125	1125	1150	S31	W35	.731	16923	22.9	25	-F	2	C	1125	112	1.7	
HTPR	25	1125	1134	1144	S31	W32	.707	16923	23.1	19	-N		C	1134	50	.6	
637 KHAR	25	1051E	1053	1200D	S24	W21	.547	16931	23.9	69D	-F		P	1110	60	.7	E
GRP85638	25	1103+2	1104+1 1115	1140	S23	E22	.546	16928	27.1	37	-F				160	1.9	E
KHAR	25	1103E	1105	1127D	S24	E23	.565	16928	27.2	24D	-F		P	1110	120	1.5	E
KHAR	25	1103E	1104	1127D	S22	E20	.516	16928	27.0	24D	-F		P	1110	70	.8	D
CATA	25	1105	1115	1140	S23	E22	.546	16928	27.1	35	-F	2	C	1115	140	1.7	
GRP85639	25	1208	1216 1230	1306	S23	W20	.527	16931	24.0	58	-F						K
HTPR	25	1208	1216	1306	S23	W20	.527	16931	24.0	58	-F		C	1216	20	.2	K
HTPR	25	1208	1230	1306	S23	W20	.527	16931	24.0	58	-F		C				
640 RAMY	25	1216	1218	1222	N19	E62	.890	16938	30.2	6	-F	3	C		14		
641 RAMY	25	1236	1239	1240	N22	E64	.907	16938	30.3	4	-F	3	C		25		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type		Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
GRP85642	25	1238+0	1238+3	1320	S29	W25	.633	16923	23.7	42	-B				60	.8	EK
HTPR	25	1238	1240	1330	S28	W25	.623	16923	23.7	52	-B		C	1240	50	.5	EK
ATHN	25	1238	1241	1258	S28	W25	.623	16923	23.7	20	-B	3	V	1241	48	.7	
RAMY	25	1238	1238	1347	S29	W23	.618	16923	23.8	69	-B	3	C		69		D
HOLL	25	1250	1312	1312D	S31	W25	.654	16923	23.7	22D	-B	3	C		73		
HUAN	25	1309		1317	S30	W27	.659	16923	23.5	8	-F	1	C	1312	40	.5	E
GRP85643	25	1319+6	1326+0	1345	S24	W25	.584	16931	23.7	26	-N				90	1.1	E
HTPR	25	1319	1326	1345	S24	W26	.593	16931	23.6	26	-N		C	1326	80	.9	E
HOLL	25	1322	1326	1345	S24	W23	.565	16931	23.8	23	-N	3	C		101		
HUAN	25	1325		1333	S25	W25	.594	16931	23.7	8	-F	1	C				E
GRP85644	25	1358+1	1359+0	1408	S27	W34	.693	16923	23.0	10	-N				40	.5	E
HOLL	25	1358	1359	1410	S28	W34	.700	16923	23.0	12	-N	3	C		45		
RAMY	25	1358	1359	1408	S27	W34	.693	16923	23.0	10	-N	3	C		40		
HTPR	25	1359	1359	1406	S27	W35	.702	16923	23.0	7	-F		C	1359	30	.3	E
645 RAMY	25	1423	1424	1435	S11	W52	.802	16918	21.7	12	-F	3	C		17		
GRP85646	25	1449+1	1451	1454	N21	W21	.467	16920	24.0	5	-F						EG
HUAN	25	1449		1452	N20	W22	.468	16920	24.0	3	-F	1	C				
HTPR	25	1450	1451	1456	N23	W20	.477	16920	24.1	6	-N		C	1451	60	.6	EG
GRP85647	25	1515+7	1524+1	1538	S17	W36	.648	16918	22.9	23	-F				45	.6	
HTPR	25	1515	1525	1545	S15	W36	.637	16918	22.9	30	-N		C	1525	30	.4	
HOLL	25	1521	1524	1538	S23	W33	.654	16918	23.2	17	-F	3	C		61		
HUAN	25	1522		1530	S17	W36	.648	16918	22.9	8	-F	1	C				
GRP85648	25	1548+2	1553+2 1630	1717	S29	W28	.658	16923	23.6	89	1B				330	4.3	E
HOLL	25	1520	1553	1739	S30	W28	.667	16923	23.5	139	2B	3	C		520		
HTPR	25	1548	1554	1715	S28	W30	.666	16923	23.4	87	1B		C	1554	350	3.9	E
RAMY	25	1550	1554	1713D	S29	W28	.658	16923	23.6	83D	1B	3	C		397		D
HUAN	25	1550		1702	S28	W28	.648	16923	23.6	72	1N	2	C	1555	180	2.5	E
BIGB	25	1550	1555	1722	S28	W29	.657	16923	23.5	92	1B	3	C	1555	250	2.9	
HTPR	25	1625	1630	1641	S30	W40	.765	16923	22.7	16	-N		C	1630	20	.3	
649 HOLL	25	1559	1615	1630	N20	E61	.884	16938	30.2	31	-F	3	C		15		
GRP85650	25	1704+6	1722+3	1733	S28	W35	.709	16923	23.1	29	-N				70	1.0	E
PALE	25	1704	1725	1735	S28	W35	.709	16923	23.1	31	-N	*	C		86		D
HTPR	25	1710	1722	1733	S27	W38	.729	16923	22.9	23	-B	*	C	1722	60	.7	E
HUAN	25	1716E		1727	S28	W36	.718	16923	23.0	11D	-F	*	P				CE
HTPR	25	1725	1726	1729	S28	W33	.692	16923	23.3	4	-F	*	C	1726	10	.1	
GRP85651	25	1721+1	1723+2	1738	S23	W22	.546	16931	24.1	17	-F						
HOLL	25	1721	1723	1738	S23	W22	.546	16931	24.1	17	-N	3	C		42		
HTPR	25	1722	1725	1737	S23	W23	.555	16931	24.0	15	-F		C	1725	10	.1	
GRP85652	25	1741+2	1743+3	1748	S31	W42	.787	16923	22.6	7	-F				15	.2	
PALE	25	1741	1743	1745	S32	W42	.793	16923	22.6	4	-F	3	C		19		
HTPR	25	1743	1746	1751	S30	W43	.789	16923	22.5	8	-F		C	1746	10	.1	
GRP85653	25	1847+0	1849	1900	S24	W25	.584	16931	23.9	13	-F						
HOLL	25	1847	1849	1909	S24	W26	.593	16931	23.8	22	-N	3	C		43		
HUAN	25	1847		1851	S25	W25	.594	16931	23.9	4	-F	1	C				
GRP85654	25	1900+0	1901	1905	S30	W37	.740	16923	23.0	5	-F						
HOLL	25	1900	1901	1905	S29	W37	.734	16923	23.0	5	-F	3	C		23		
HUAN	25	1900		1904	S32	W37	.754	16923	23.0	4	-F	1	C				
655 HUAN	25	1954	1955	2001	S18	E07	.364	16933	26.4	7	-F	1	C	1955	25	.3	D
656 PALE	25	2009	2011	2015	S29	W30	.674	16923	23.6	6	-F	3	C		31		
657 HOLL	25	2120	2121	2131	S28	W39	.744	16923	23.0	11	-N	3	C		44		
658 CULG	25	2149	2153 IMP.1	2305U NO : HOLL	S26 BIGB	W41	.750	16923	22.8	76D	?F		C	2153	200	3.0	FKT
659 CULG	25	2223	2228 IMP.1	2246U NO : HOLL	S23 BIGB	W30	.624	16931	23.7	23D	?F		C	2228	200	2.6	

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660 CULG	25	2223	2227	2233	S11	E19	.391	16927	27.4	10	-F	C	2227	60	.7	
661 CULG	25	2225	2231	2300	S15	E30	.563	16936	28.2	35	-F	C	2231	160	1.9	F
662 CULG	25	2234	2237	2255	S17	E05	.339	16933	26.3	21	-N	C	2237	120	1.3	F
663 BIGB	25	2240	2251	2319	N06	E90	1.000	16946	2.7	39	?N	3 C	2251	100		
			IMP.1 NO : HOLL CULG PALE													
664 PALE	25	2303	2318U	0016D	S28	W14	.545		24.9	73D	?N	3 C		261		D
			IMP.1 NO : HOLL BIGB CULG													
665 CULG	25	2308	2311	2320	S31	W46	.818	16923	22.5	12	-F	C	2311	100	1.7	
666 CULG	25	2334	2344	2355	S30	W33	.707	16923	23.5	21	-F	C	2344	40	.6	
667 BIGB	25	2346	2351	2359	N21	W90	1.000	16911	19.2	13	?N	3 C	2351	80		
			IMP.1 NO : HOLL PALE CULG													
668 CULG	26	0028	0032	0051	S23	W33	.655	16931	23.5	23	-N	C	0032	90	1.2	K
669 CULG	26	0029	0031	0039	S08	W59	.864	16918	21.6	10	-F	C	0031	30	.6	
GRP85670	26	0118+2	0120+0	0127	S23	W32	.645	16931	23.7	9	-B			80	1.0	D
CULG	26	0118	0120	0130	S23	W32	.645	16931	23.7	12	-B	C	0120	110	1.4	
HOLL	26	0120	0120	0127	S25	W32	.660	16931	23.7	7	-B	3 C		61		D
PALE	26	0121E	0121U	0126	S24	W28	.613	16931	24.0	5D	-F	3 C		38		
YUNN	26	0122E	0122	0127	S23	W33	.655	16931	23.6	5D	-N	P		129	1.8	
671 CULG	26	0133	0134	0147	N23	W27	.550	16920	24.0	14	-F	C	0134	50	.6	
GRP85672	26	0211	0225+0	0250	S18	E09	.377	16928	26.8	39	-N					F
CULG	26	0211	0225	0302D	S19	E08	.386	16928	26.7	51D	1N	C	0225	280	3.1	F
PALE	26	0225E	0225U	0238	S18	E11	.391	16928	26.9	13D	-F	3 C		98		
673 CULG	26	0227	0234	0246	N15	E60	.870	16938	30.6	19	-N	C	0234	60	1.1	
674 CULG	26	0231	0248	0253	N23	W88	.999	16911	19.5	22	-F	C	0248	20		
675 CULG	26	0253	0259	0302D	S30	W35	.725	16923	23.5	9D	-N	P	0259	80	1.1	
676 CULG	26	0414E	0414U	0438	N23	W89	1.000	16911	19.5	24D	-F	P	0414	20		
GRP85677	26	0518	0521+6 0533	0619	S27	W44	.783	16923	22.9	61	1F			210	3.3	JL
ABST	26	0518	0521	0540	S26	W44	.778	16923	22.9	22	1F	C	0521	166	2.6	EJ
CULG	26	0524E	0527	0546D	S27	W46	.800	16923	22.8	22D	1N	P	0527	260	4.2	FL
ABST	26	0531	0533	0544	S29	W38	.743	16923	23.4	13	1F	C	0533	148	2.1	EJ
ABST	26	0539	0543	0619	S26	W44	.778	16923	22.9	40	-F	C	0543	87	1.4	DJ
678 ABST	26	0601	0606	0615	N24	W89	.999	16911	19.6	14	?F	C	0606	61		DJ
			IMP.1 NO : YUNN													
679 ABST	26	0631	0640	0653	N25	W89	.999	16911	19.6	22	?F	C	0640	61		DJ
			IMP.1 NO : YUNN CATA													
680 ABST	26	0637	0702	0717	S25	W46	.791	16923	22.8	40	-F	C	0702	87	1.5	DJ
681 ABST	26	0735E	0743	0751	S21	W55	.854	16918	22.2	16D	?F	P	0743	157	3.1	EJ
			IMP.1 NO : YUNN CATA													
682 ABST	26	0744	0745	0751	S28	W46	.804	16923	22.9	7	?F	C	0745	87	1.6	DJV
			IMP.1 NO : YUNN CATA													
GRP85683	26	0818	0820	0904	S28	W47	.812	16923	22.8	46	-F					DJ
ABST	26	0818	0820	0904	S27	W49	.824	16923	22.7	46	-F	C	0820	87	1.5	DJ
KHAR	26	0854E		0903D	S29	W45	.801	16923	23.0	9D	-F	P	0854	40	.7	D

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type		Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85684	26	0854>9	0918 0945	0953	S21	W54	.845	16918	22.3	59	-F						DJK
KHAR	26	0854E	0918	0938D	S21	W54	.845	16918	22.3	44D	-F		P	0919	40	.8	D
ABST	26	0912	0945	0954	S21	W56	.862	16918	22.2	42	-F		C	0945	87	1.8	DJK
HTPR	26	0930E		0952	S20	W50	.807	16918	22.6	22D	-F		C	0945	20	.3	
685 ABST	26	0856	0857	0920	N19	E57	.850	16938	30.6	24	-F		C	0857	87	1.6	DJV
GRP85686	26	0911E	0945	1008D	S28	W47	.812	16923	22.9	57	-F						DJK
ABST	26	0911E	0945	1008D	S27	W49	.824	16923	22.7	57D	-F		P	0945	87	1.6	DJK
KHAR	26	0920E		0920D	S29	W45	.801	16923	23.0		-F		P				D
687 KHAR	26	1250E		1254D	S21	W54	.845	16918	22.5	4D	-F		P	1251	90	1.8	E
GRP85688	26	1250+9	1254 1303	1315	S28	W46	.804	16923	23.1	25	-F						E
KHAR	26	1250E	1254	1322D	S28	W46	.804	16923	23.1	32D	-F		P	1254	100	1.7	E
RAMY	26	1259	1303	1308	S29	W46	.809	16923	23.1	9	-N	3 C			21		
GRP85689	26	1435+4	1437+2	1450	N21	W90	1.000	16911	19.9	15	-N				60		
BIGB	26	1435	1437	1505	N22	W90	1.000	16911	19.9	30	1B	* C		1437	90		
HUAN	26	1436	1439	1445	N20	W90	1.000	16911	19.9	9	-N	1 C		1439	40		
KHAR	26	1436E	1439	1449D	N22	W90	1.000	16911	19.9	13D	-F	* P					
RAMY	26	1439	1439	1447	N20	W85	.995	16911	20.2	8	-N	* C					
HOLL	26	1441E	1441U	1453	N19	W90	1.000	16911	19.9	12D	-B	* C					
690 KHAR	26	1439E	1439	1449D	S30	W42	.782	16923	23.5	10D	-F		P	1439	50	.9	E
GRP85691	26	1511>9	1522 1531	1534	S28	W49	.828	16923	23.0	23	-N						E
HOLL	26	1511	1522	1536	S28	W49	.828	16923	23.0	25	-N	3 C			44		
RAMY	26	1517	1531	1534	S28	W47	.812	16923	23.1	17	-N	3 C			16		
HUAN	26	1521		1534	S28	W52	.851	16923	22.7	13	-F	1 C					E
692 RAMY	26	1615	1616	1624	S18	W05	.356	16933	26.3	9	-F	3 C			44		
693 HOLL	26	1651	1652	1701	S28	W51	.844	16923	22.9	10	-N	3 C			26		
GRP85694	26	1717	1719	1726	N14	W88	.999	16911	20.1	9	-B						
HOLL	26	1717	1719	1726	N16	W90	1.000	16911	20.0	9	-B	3 C					
RAMY	26	1723E	1723	1726	N13	W87	.998	16911	20.2	3D	-B	3 C					
695 HOLL	26	1915	1916	1920	S29	W56	.883	16923	22.6	5	-F	3 C			17		
GRP85696	26	1942	1946	2012	S30	W41	.774	16923	23.7	30	-B				60	.9	D
HOLL	26	1942	1946	2007	S30	W40	.766	16923	23.8	25	-B	3 C			66		D
PALE	26	1947E	1947U	2016D	S31	W42	.788	16923	23.7	29D	-N	3 C			60		
697 HOLL	26	2149	2149	2210	S29	W55	.876	16923	22.8	21	-F	3 C			15		
698 VORO	26	2343	2344	2348	S26	W52	.845	16923	23.1	5	-F		C	2344	81	1.5	EH
GRP85699	27	0037+1	0041+0	0052	S25	W41	.746	16931	24.0	15	-N				90	1.3	H
HOLL	27	0037	0113	0140	S26	W41	.752	16931	24.0	63	-B	3 C			107		
PALE	27	0038E	0041U	0050	S25	W43	.765	16931	23.8	12D	-F	3 C			73		D
VORO	27	0038	0041	0052	S25	W40	.737	16931	24.0	14	-F		C	0041	116	2.0	EH
700 VORO	27	0103	0104	0108	S19	W09	.393	16927	26.4	5	-F		C	0104	90	1.0	E
GRP85701	27	0113+0	0114+1	0127	S26	W53	.853	16923	23.1	14	1N						DH
VORO	27	0113	0115	0128	S26	W52	.845	16923	23.2	15	1N		C	0115	143	2.8	DH
PALE	27	0113E	0114U	0138	S29	W53	.863	16923	23.1	25D	2N	3 C			407		D
YUNN	27	0114E	0114	0123	S26	W54	.860	16923	23.0	9D	-N		P		64	1.4	E
PURP	27	0114E	0114	0126	S27	W55	.871	16923	22.9	12D	1N		P				
GRP85702	27	0505E	0512 0520	0540D	N14	W48	.752	16921	23.6	35	-F						DJK
HTPR	27	0505E	0512	0540	N15	W50	.776	16921	23.5	35D	-F		C	0512	50	.8	
ABST	27	0517E	0520	0640	N14	W47	.741	16921	23.7	83D	-F		P	0520	87	1.4	DJK
703 HTPR	27	0505E	0508	0520	S28	W50	.837	16923	23.5	15D	-F		C	0508	30	.5	E

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Time (UT)	Measurement Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85704	27	0534+1	0535+1	0542	S10	W11	.285	16927	26.4	8	-F			140	1.5	DJ
ABST	27	0534	0536	0543	S10	W12	.296	16927	26.3	9	-N	C	0536	175	1.9	DJ
CATA	27	0535	0535	0540	S11	W11	.297	16927	26.4	5	-F	2 C	0535	112	1.2	
705 ABST	27	0602	0606	0612	S24	E84	.997	16949	3.6	10	-F	C	0606	44		D
GRP85706	27	0605+1	0608+4	0630	S11	W06	.253	16927	26.8	25	1N			200	2.1	J
ATHN	27	0605E	0608	0628	S11	W06	.253	16927	26.8	23D	-N	3 V	0608	80	.8	
HTPR	27	0606	0609	0630	S11	W07	.261	16927	26.7	24	-N	C	0609	150	1.5	E
ABST	27	0606	0612	0634	S12	W06	.269	16927	26.8	28	1N	C	0612	262	2.8	FJ
CATA	27	0610E	0610	0630	S12	W06	.269	16927	26.8	20D	1F	2 P	0610	281	3.0	
707 ABST	27	0633	0636	0646	S12	W06	.269	16927	26.8	13	-F	C	0636	87	.9	D
708 ABST	27	0704	0706	0726	S27	W70	.958		22.0	22	?F	C	0706	175		D
			IMP.1 NO : PURP HTPR CATA YUNN MITK													
709 ABST	27	0718E	0727	0753D	N14	W51	.784	16921	23.5	35D	?F	C	0727	140	2.3	EJ
			IMP.1 NO : PURP HTPR CATA YUNN													
710 KHAR	27	0754E	0757	0804D	S30	W48	.830	16923	23.7	10D	-F	P	0757	60	1.1	
711 KHAR	27	0754E	0757	0817D	S20	W06	.393	16928	26.9	23D	-F	P	0757	60	.6	E
712 KHAR	27	0807E	0817	0828D	S26	W64	.927	16923	22.5	21D	-F	P	0817	50		D
713 KHAR	27	0812E		0833D	S21	W69	.948	16918	22.2	21D	-F	V	0829			D
714 KHAR	27	0812E		0833D	N13	W54	.813	16921	23.3	21D	-F	V	0817			D
GRP85715	27	0904	0945	1000	N13	W52	.793	16921	23.5	56	-F					DJK
ABST	27	0904	0945	1000	N13	W52	.793	16921	23.5	56	-F	C	0945	87	1.5	DJK
KHAR	27	0937E	0937	0957D	N13	W52	.793	16921	23.5	20D	-F	P				D
716 KHAR	27	0910E	0914	0924D	S26	W64	.927	16923	22.6	14D	-F	P	0914	40		D
717 ABST	27	0944	0946	0957	S31	W52	.863	16923	23.5	13	?F	C	0946	131	2.7	EJ
			IMP.1 NO : HTPR CATA													
718 KHAR	27	1004E	1007	1009D	S30	W50	.845	16923	23.7	5D	-F	P	1007	50	.9	E
GRP85719	27	1007>9	1009+1 1021	1024	N14	W52	.795	16921	23.5	17	-F					D
HTPR	27	1007	1009	1026	N14	W50	.774	16921	23.7	19	-F	C	1009	20	.3	
CATA	27	1010	1010	1015	N12	W52	.792	16921	23.5	5	-F	2 C	1010	56	.9	
YUNN	27	1018	1021	1024	N14	W52	.795	16921	23.5	6	-N	C		32	.5	D
720 HTPR	27	1021	1026	1034	S23	W42	.745	16931	24.3	13	-N	C	1026	30	.4	E
GRP85721	27	1021>9	1024 1039	1048	S31	W49	.841	16923	23.8	27	-F					
TELV	27	1021	1024	1046	S35	W45	.832	16923	24.1	25	-N	3		123	1.8	
HTPR	27	1037	1039	1049	S28	W53	.859	16923	23.5	12	-F	C	1039	20	.3	
722 HTPR	27	1300	1304	1317	S33	W44	.815	16923	24.2	17	-F	C	1304	40	.6	
GRP85723	27	1303	1308	1324	N13	W53	.804	16921	23.6	21	-F			30	.5	D
HTPR	27	1303	1308	1330	N14	W51	.784	16921	23.7	27	-F	C	1308	40	.6	
HUAN	27	1307E		1318	N12	W56	.832	16921	23.3	11D	-N	1 P	1308	20	.4	D
GRP85724	27	1346+1	1348+1	1403	S30	W50	.845	16923	23.8	17	-B			110	2.0	
ATHN	27	1346	1349	1356	S30	W49	.837	16923	23.9	10	-B	3 V	1349	95	1.8	
HOLL	27	1347	1349	1423	S30	W51	.852	16923	23.7	36	1B	3 C		128		D
RAMY	27	1347	1348	1402	S31	W49	.841	16923	23.9	15	-B	3 C		96		
HTPR	27	1347	1348	1404	S28	W54	.867	16923	23.5	17	-B	C	1348	100	1.7	E
GRP85725	27	1351+2	1358+0	1428	S23	E44	.764	16951	30.9	37	-N			120	1.8	E
HTPR	27	1351	1358	1430	S23	E45	.773	16951	1.0	39	-B	C	1358	110	1.5	E
HOLL	27	1353	1358	1418	S23	E43	.755	16951	30.8	25	-N	3 C		114		
RAMY	27	1353	1358	1428	S23	E44	.764	16951	30.9	35	-N	3 C		129		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs	Type	Area Time (UT)	Measurement Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85726	27	1454+1	1457+1	1510	S29	W63	.926	16923	22.9	16	-N				90		
HOLL	27	1454	1458	1513	S29	W64	.932	16923	22.8	19	-N	3	C		91		
HTPR	27	1455	1458	1510	S27	W65	.934	16923	22.7	15	-B		C	1458	80	1.9	
RAMY	27	1455	1457	1510	S29	W63	.926	16923	22.9	15	-N	3	C		52		
HTPR	27	1456	1458	1510	S28	W54	.867	16923	23.6	14	-N		C	1458	50	.9	
727 HOLL	27	1545	1545	1553	S31	W54	.876	16923	23.6	8	-F	3	C		13		
GRP85728	27	1615+1	1617+3	1637	S25	W67	.942	16923	22.7	22	-B				90		
HTPR	27	1615	1617	1637	S25	W69	.952	16923	22.5	22	1B		C	1617	120		E
HOLL	27	1615	1617	1637	S25	W64	.925	16923	22.9	22	-B	3	C		116		
RAMY	27	1615	1617	1635D	S27	W67	.944	16923	22.7	20D	-B	3	C		55		D
BIGB	27	1616	1620	1645	S24	W68	.946	16923	22.6	29	-B	1	C	1620	70		
GRP85729	27	1656+0	1657+1	1704	S29	W49	.833	16923	24.0	8	-F						
RAMY	27	1656E	1657	1706	S25	W53	.850	16923	23.7	10D	-F	3	C		21		
HTPR	27	1656	1658	1702	S33	W45	.822	16923	24.3	6	-F		C	1658	60	.8	
730 HTPR	27	1705	1710	1720	S29	W72	.968	16923	22.3	15	-F		C	1710	30		
731 HTPR	27	1705	1705	1707	N20	E35	.622	16938	30.3	2	-N		C	1705	30	.4	
732 PALE	27	1942	1946U	1956	N11	W58	.849	16921	23.5	14	-F	3	C		17		
GRP85733	27	2108+1	2110 2120	2124	S25	W54	.857	16931	23.8	16	-N						
RAMY	27	2108	2110	2117	S25	W55	.865	16931	23.8	9	-N	3	C		81		
HOLL	27	2109	2120	2130	S25	W54	.857	16931	23.8	21	-N	3	C		38		
734 RAMY	27	2115	2118	2127	S28	W74	.975	16923	22.3	12	-N	*	C				
735 CULG	27	2157	2159	2204	S23	W70	.955	16923	22.7	7	-N		C	2159	50		
736 CULG	27	2205	2218	2250	N14	W58	.852	16921	23.6	45	-N		C	2218	80	1.6	
737 CULG	27	2224	2231	2251	S08	W11	.261	16927	27.1	27	-F		C	2231	80	.8	
738 CULG	27	2253	2255	2311	S10	W16	.345	16927	26.8	18	-N		C	2255	60	.6	
739 CULG	27	2256	2303	2307	S24	W74	.972	16923	22.4	11	-N		C	2303	50		
GRP85740	27	2309>9	2325+1	2336	S29	W58	.897	16923	23.6	27	1N				120	2.6	AFK
CULG	27	2309	2326	2349	S28	W58	.894	16923	23.6	40	1B		C	2326	180	4.1	KF
HOLL	27	2317	2326	2336	S30	W62	.923	16923	23.3	19	1N	3	C		117		
BIGB	27	2323	2325	2331	S29	W55	.877	16923	23.8	8	-N	2	C	2325	70	1.3	A
741 HOLL	27	2340	2347	0012	S28	W54	.867	16923	23.9	32	-N	3	C		124		
742 CULG	28	0011	0015	0021	S32	W61	.922	16923	23.4	10	-F		C	0015	50	1.1	
743 CULG	28	0132	0147	0216	S27	E69	.954	16949	3.2	44	-F		C	0147	50		
744 CULG	28	0144	0147	0150	S25	W85	.998		21.7	6	?N		C	0147	50		
			IMP.1 NO : YUNN MITK														
745 CULG	28	0211	0221	0225	S32	W61	.922	16923	23.5	14	-N		C	0221	60	1.4	
746 CULG	28	0245	0247	0256	S27	W79	.989	16923	22.2	11	1N		C	0247	60		
GRP85747	28	0319+2	0322+5	0408	N18	E32	.573	16938	30.5	49	1N				280	3.5	EIS
MANI	28	0319E	0322U	0337D	N20	E40	.710	16938	1.1	18D	-N	1	V		25	.4	
TACH	28	0320	0325	0355	N17	E29	.529	16938	30.3	35	1N		V	0325	406	4.9	E
CULG	28	0320U	0326	0453	N13	E33	.563	16938	30.6	93D	1N		C	0326	320	3.8	SFI
MITK	28	0321	0327	0408	N19	E32	.579	16938	30.5	47	1N		C	0327	250	3.1	E
748 CULG	28	0324	0330	0359	S26	W85	.998		21.8	35	?N		C	0330	80		J
			IMP.1 NO : MITK														
	28	0438	0443	NO FLARE PATROL													

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85749	28	0505	0617 0755	0825	S09	E10	.263	16943	29.0	200	-N					JK
ABST	28	0505	0617	0839D	S09	E12	.286	16943	29.1	214D	1N	P	0617	227	2.4	FJK
HTPR	28	0534E		0650	S10	E09	.265	16943	28.9	76D	-N	C	0534	150	1.5	EK
HTPR	28	0753	0755	0810	S10	E08	.256	16943	28.9	17	-F	C	0755	30	.3	
750 ABST	28	0506	0518 IMP.1	0526 NO : CULG	N09	E71	.945	16946	3.5	20	?F	C	0518	87		DJ
751 ABST	28	0539	0542 IMP.1	0611 NO : CULG TACH HTPR	N15	W65	.908	16921	23.4	32	?F	C	0542	148		EJ
GRP85752	28	0611+2	0617+3	0632	S10	W18	.372	16927	26.9	21	-F					EJ
CULG	28	0611	0617U	0619D	S16	W18	.433	16927	26.9	8D	-N	P	0617	80	.9	
HTPR	28	0613	0620	0629	S10	W18	.372	16927	26.9	16	-F	C	0620	20	.2	E
ABST	28	0614E	0618	0634	S09	W18	.363	16927	26.9	20D	-F	P	0618	157	1.7	EJ
753 ABST	28	0614E	0616	0625	N20	E30	.561	16938	30.5	11D	-F	P	0616	87	1.1	DJ
754 ABST	28	0724	0733	0753	S29	W64	.932	16923	23.5	29	*-F	C	0733	87		DJ
755 ABST	28	0734	0736 IMP.1	0743 NO : HTPR KANZ	S28	W78	.987	16923	22.5	9	?F	C	0736	87		DJ
756 ABST	28	0738	0756	0819	N21	E28	.544	16938	30.4	41	-F	C	0756	131	1.4	EJ
GRP85757	28	0746+0	0750+1	0807	S26	W84	.997		22.0	21	-B			70		DJ
ABST	28	0746	0750	0800	S25	W89	1.000		21.6	14	1N	C	0750	87		DJ
ATHN	28	0746	0751	0813	S27	W80	.991		22.3	27	-B	3 V	0751	48	2.0	
GRP85758	28	0933+2	0945 0953	1005	S16	W33	.609	16933	25.9	32	-F					
HTPR	28	0933	0953	1005	S16	W34	.621	16933	25.8	32	-F	C	0953	30	.4	
CATA	28	0935	0945	1000D	S17	W33	.615	16933	25.9	25D	-F	2 P	0945	140	1.8	
GRP85759	28	1105+5	1105 1111+2	1116	S23	W90	1.000	16918	21.7	11	1N					
CATA	28	1105E	1105	1115	S26	W90	1.000	16918	21.7	10D	1F	2 P	1105	112		
HTPR	28	1106	1111	1116	S21	W90	1.000	16918	21.7	10	-N	C	1111	20		
ATHN	28	1110	1113	1140D	S23	W86	.999	16918	22.0	30D	1B	3 V	1113	111	5.8	
760 HTPR	28	1209	1216	1223	S20	E34	.646	16939	1.1	14	-F	C	1216	40	.5	E
761 HTPR	28	1223	1232	1245	S26	E32	.670	16951	30.9	22	-F	C	1232	40	.5	E
762 RAMY	28	1314	1314	1324	S31	W63	.931	16923	23.8	10	-N	3 C		43		
763 RAMY	28	1421	1422	1426	S28	W83	.996	16923	22.4	5	-N	3 C				
764 HTPR	28	1439	1441	1445	N10	E48	.746		2.2	6	-F	C	1441	10	.1	
GRP85765	28	1707+5	1711+2	1720	S21	E31	.621	16939	1.0	13	-N			45	.6	E
HTPR	28	1707	1711	1721	S21	E32	.632	16939	1.1	14	-B	C	1711	50	.6	E
RAMY	28	1712	1713	1719	S21	E31	.621	16939	1.0	7	-F	3 C		35		
GRP85766	28	1728+2	1731+2	1753	S20	E31	.613	16939	1.1	25	-N			130	1.6	E
HTPR	28	1728	1731	1753	S21	E32	.632	16939	1.1	25	-N	C	1731	150	1.7	E
RAMY	28	1730	1733	1752	S19	E31	.606	16939	1.1	22	-N	3 C		108		
	28	2108	2123	NO FLARE PATROL												
767 HOLL	28	2125	2125	2130	S30	W76	.982	16923	23.2	5	-N	3 C		22		
768 HOLL	28	2222	2225	2230	S30	W77	.985	16923	23.2	8	-N	3 C		50		
769 HOLL	28	2300	2301	2307	S30	W77	.985	16923	23.2	7	-B	3 C		41		
	28	2345	0000	NO FLARE PATROL												
770 PURP	29	0134	0134	0138	S27	W85	.998	16923	22.7	4	-F	C				D

H - ALPHA S O L A R F L A R E S

JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
	29	0258	0300	NO FLARE PATROL												
771 TACH	29	0423	0424	0440	S08	W30	.526	16927	26.9	17	1B	C	0424	177	2.2	Y
772 ABST	29	0506	0508	0516	N21	E18	.429	16938	30.6	10	-F	C	0508	122	1.4	EJ
773 ABST	29	0548	0551	0601	S09	W04	.213	16943	28.9	13	-F	C	0551	131	1.4	EJ
774 ABST	29	0621	0623	0631	S08	W04	.197	16943	29.0	10	-F	C	0623	87	.9	DJ
	29	0652	0653	NO FLARE PATROL												
775 ABST	29	0653E	0658	0728D	N08	E52	.788	16946	3.2	35D	-F	P	0658	87	1.4	DJ
776 CATA	29	1035	1045	1105D	S27	W90	1.000	16923	22.7	30D	1F 2	P	1045	140		A
777 CATA	29	1115E	1120	1130	S32	W90	1.000	16923	22.7	15D	-F 2	P	1120	28		
778 RAMY	29	1255	1255	1259	S36	W67	.957		24.5	4	-F 3	C				
779 BIGB	29	1451	1452U	1506	S24	W90	1.000	16923	22.9	15	?N 1	P	1452	50		
			IMP.1 NO : RAMY HUAN													
780 BIGB	29	1557	1600	1608	S24	W90	1.000	16923	22.9	11	?N 2	C	1600	50		
			IMP.1 NO : RAMY HUAN HOLL													
GRP85781	29	1806+0	1806+0	1816	S11	W36	.620	16927	27.1	10	-F			40	.5	E
HUAN	29	1806	1806	1811	S11	W35	.607	16927	27.1	5	-F 1	C	1806	35	.5	E
HOLL	29	1806	1806	1816	S08	W36	.608	16927	27.1	10	-N 3	C		44		
RAMY	29	1806	1806	1820	S11	W37	.633	16927	27.0	14	-F 3	C		47		
782 BIGB	29	1822	1824	1907	S25	W90	1.000	16923	23.0	45	?B 1	C	1824	230		
			IMP.2 NO : RAMY HUAN HOLL													
783 CULG	29	2313	2317	2331	S15	W11	.354	16943	29.1	18	-F	C	2317	30	.3	
784 CULG	30	0025	0030	0046	N21	E10	.353	16938	30.8	21	-F	C	0030	80	.8	L
GRP85785	30	0114	0217 0245	0554D	S18	W48	.784	16933	26.5	280	1N					I
CULG	30	0114	0217U	0554U	S20	W47	.796	16933	26.5	280D	2N	C	0217	600	8.4	IF
PALE	30	0122E	0245U	0248D	S17	W50	.800	16933	26.3	86D	1F 3	C		214		D
786 CULG	30	0252	0252	0256	S27	W90	1.000	16923	23.4	4	-N	C	0252	20		
787 CULG	30	0329	0337	0410	S18	E02	.356		30.3	41	-F	C	0337	140	1.4	
788 CULG	30	0449	0452	0456	S15	W16	.403	16943	29.0	7	-N	C	0452	60	.6	T
789 ABST	30	0500E	0502	0515D	N16	W44	.710		26.9	15D	-F	P	0502	87	1.3	DJ
790 ABST	30	0516E	0517	0525	N23	E01	.347	16938	30.3	9D	-F *	P	0517	87	.9	DJ
GRP85791	30	0518>9	0601+2	0609	S12	W15	.358	16943	29.1	51	-F			90	1.0	DJ
ABST	30	0518	0603	0610	S10	W15	.336	16943	29.1	52	-F	C	0603	87	.9	DJ
CULG	30	0555	0601	0607	S15	W16	.403	16943	29.0	12	-N	C	0601	90	.9	T
792 CULG	30	0609	0611	0615	S16	W20	.458	16936	28.8	6	-N	C	0611	50	.5	HT
793 ISTA	30	0615E		0623	S27	W90	1.000	16923	23.5	8D	-F					A
GRP85794	30	0720+5	0723+2 0732	0735	S10	W45	.726	16927	26.9	15	-N			100	1.4	EJ
ISTA	30	0720		0730	S09	W45	.724	16927	26.9	10	-F					E
ABST	30	0721	0723	0755	S16	W44	.736	16927	27.0	34	-N	C	0723	131	1.8	EJ
YUNN	30	0721	0724	0726	S10	W45	.726	16927	26.9	5	-B	C		113	1.7	
HTPR	30	0724	0725	0733	S10	W45	.726	16927	26.9	9	-B	C	0725	60	.8	E
BUCA	30	0725		0740	S10	W43	.703	16927	27.1	15	-F	C	0726	86	1.2	E
CATA	30	0725	0725	0735	S11	W44	.718	16927	27.0	10	-F 1	C	0725	112	1.7	
PURP	30	0731	0732	0738	S10	W45	.726	16927	26.9	7	1N	C				

H - ALPHA S O L A R F L A R E S

JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Hale Cen Dist	Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Measurement Time (UT)	Appar (Disk)	Corr (Sq Deg)	Remarks
GRP85795	30	0730	0735+4	0750	S10	W15	.336	16943	29.2	20	-F			120	1.3	FJ
ABST	30	0730	0735	0755	S10	W15	.336	16943	29.2	25	-F	C	0735	131	1.4	FJ
ATHN	30	0736E	0739	0744	S10	W15	.336	16943	29.2	8D	-N	3 V	0739	111	1.2	
796 ISTA	30	0745		0750	S31	W75	.980		24.7	5	-F					D
GRP85797	30	0819>9	0820	0837	S10	W16	.349	16943	29.1	18	-N					EV
ABST	30	0819	0820	0837	S10	W15	.336	16943	29.2	18	-N	C	0820	131	1.4	EV
PURP	30	0834	0834	0834D	S10	W18	.374	16943	29.0		-N	V				E
798 ABST	30	0902	0903	0915	S09	W45	.724	16927	27.0	13	-F	C	0903	87	1.2	DJV
799 ABST	30	0905E	0906	0915	S10	W20	.401	16943	28.9	10D	-F	P	0906	87	.9	DJ
GRP85800	30	0924+8	0933+2	0947	S10	W19	.388	16943	29.0	23	-F			90	1.0	EJ
ABST	30	0924	0933	0940	S10	W18	.374	16943	29.0	16	-F	C	0933	131	1.4	EJ
ATHN	30	0932	0935	0954	S11	W21	.423	16943	28.8	22	-N	3 V	0935	64	.7	
GRP85801	30	1107E	1107 1120	1136D	S11	W23	.449	16943	28.7	29	-F					E
KHAR	30	1107E	1120	1136D	S11	W22	.436	16943	28.8	29D	-F	P	1120	80	.9	E
KHAR	30	1107E	1107	1113D	S11	W24	.463	16943	28.7	6D	-F	P	1107	40	.5	D
802 HTPR	30	1224	1228	1234	S10	W20	.401	16943	29.0	10	-F	C	1224	30	.3	
803 RAMY	30	1302	1303	1307	S20	W57	.869	16927	26.3	5	-F	3 C		25		
GRP85804	30	1317+2	1318+2	1322	S11	W20	.410	16943	29.1	5	-F			30	.3	
RAMY	30	1317	1318	1322	S12	W23	.457	16943	28.8	5	-N	3 C		23		
HOLL	30	1319	1320	1322	S10	W17	.361	16943	29.3	3	-F	3 C		42		
GRP85805	30	1329+2	1333+0	1346	S18	W55	.848	16927	26.4	17	-F					
RAMY	30	1329	1333	1352	S19	W58	.875	16927	26.2	23	-F	3 C		100		
HOLL	30	1331	1333	1339	S18	W52	.822	16927	26.7	8	-F	3 C		42		
GRP85806	30	1330+1	1338+1	1425	S12	W21	.431	16943	29.0	55	1B			200	2.2	E
HOLL	30	1330	1339	1433	S13	W23	.465	16943	28.8	63	1B	3 C		281		
HTPR	30	1330	1338	1425	S10	W21	.415	16943	29.0	55	-B	C	1338	120	1.2	E
RAMY	30	1331	1338	1416	S13	W21	.440	16943	29.0	45	1B	3 C		217		
ATHN	30	1337E	1339	1400D	S11	W22	.436	16943	28.9	23D	-B	3 V	1339	190	2.2	
807 HOLL	30	1455	1457	1501	S10	W18	.374	16943	29.3	6	-F	3 C		25		
GRP85808	30	1507>9	1527+5	1555	S11	W22	.436	16943	29.0	48	-N			160	1.8	KZ
HTPR	30	1507	1530	1555	S10	W21	.415	16943	29.1	48	-N	C	1530	150	1.5	EK
HOLL	30	1513	1540	1540D	S13	W23	.465	16943	28.9	27D	-B	3 C		189		
RAMY	30	1521	1532	1551	S12	W22	.444	16943	29.0	30	-B	3 C		179		D
BIGB	30	1522	1527	1559	S11	W23	.449	16943	28.9	37	-N	2 C	1527	80	.9	
WEND	30	1532E		1542D	S10	W22	.428	16943	29.0	10D	1N	C	1532	295	3.3	Z
GRP85809	30	1559+1	1602+0	1613	N10	E32	.539	16946	3.1	14	-N			50	.6	E
BIGB	30	1559	1602	1619	N09	E32	.536	16946	3.1	20	-B	1 C	1602	60	.7	
RAMY	30	1600	1602	1608	N10	E31	.524	16946	3.0	8	-N	3 C		39		
HTPR	30	1600	1602	1613	N10	E35	.581	16946	3.3	13	-F	C	1602	60	.7	E
810 BIGB	30	1946	1948	2005	S12	W22	.444	16943	29.2	19	-B	1 C	1948	60	.8	

H - ALPHA SOLAR FLARES

JUNE 1980

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Cen Dist	Hale Plage Region	CMP Day	Dur (Min)	Imp	Obs Type	Area Time (UT)	Measurement Appar (Disk)	Measurement Corr (Sq Deg)	Remarks
GRP85811	30	2245+1	2249+0	2315	S12	W23	.457	16943	29.2	30	-N			110	1.2	
PALE	30	2235E	2249U	2315D	S14	W23	.474	16943	29.2	40D	-N	* C		148		D
VORO	30	2245	2249	2300	S12	W24	.470	16943	29.1	15	-N	* C	2249	108	1.2	E
BIGB	30	2246	2249	2321	S12	W22	.444	16943	29.3	35	-B	* C	2249	50	.6	

"Remarks":

A = Eruptive prominence whose base is less than 90° 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 CaII.
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.

DAILY FLARE INDICES
(Includes all Flares)

June 1980

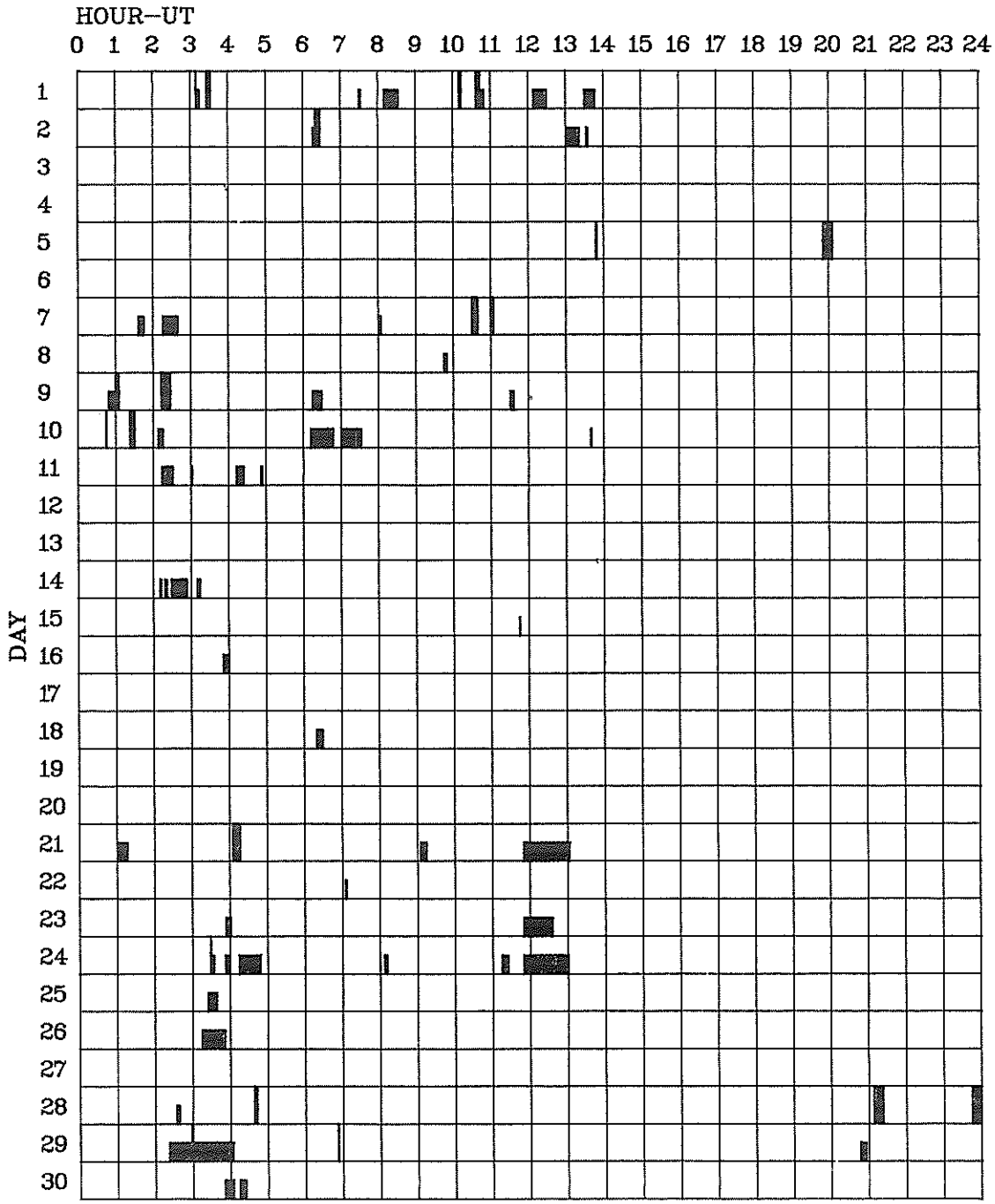
Day	Flare Index*	Hours Observed	Day	Flare Index*	Hours Observed	Day	Flare Index*	Hours Observed
01	147.99	23.6	11	63.17	24.0	21	396.94	23.8
02	139.02	23.9	12	138.04	24.0	22	189.79	24.0
03	138.22	24.0	13	266.82	24.0	23	354.77	24.0
04	125.73	24.0	14	247.65	24.0	24	309.12	24.0
05	102.67	23.7	15	61.27	24.0	25	209.50	24.0
06	83.51	24.0	16	37.33	24.0	26	73.94	24.0
07	97.27	23.7	17	36.94	24.0	27	132.42	24.0
08	90.00	24.0	18	49.24	24.0	28	96.17	23.4
09	68.25	23.6	19	570.84	24.0	29	65.44	23.9
10	75.38	23.8	20	428.56	24.0	30	139.81	24.0

*When no flare index is given, it equals zero for that day.

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

JUNE 1980



Observatories included in total patrol:

Abastumani	Culgoora	Istanbul	Manila	Ramey
Athens	Georgiana	Kanzelhoehe	Mitaka	Tashkent
Big Bear	Haute-Provence	Kharkov	Monte Mario	Tel Aviv
Bucharest	Holloman	Kodaikanal	Palehua	Voroshilov
Catania	Huancayo	Lvov	Peking	Wendelstein
			Purple Mt.	Yunnan

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

MISCELLANEOUS DATA

Contents

ACTIVE REGIONS
CARRINGTON ROTATION 1718
(January 29 to February 25, 1982)

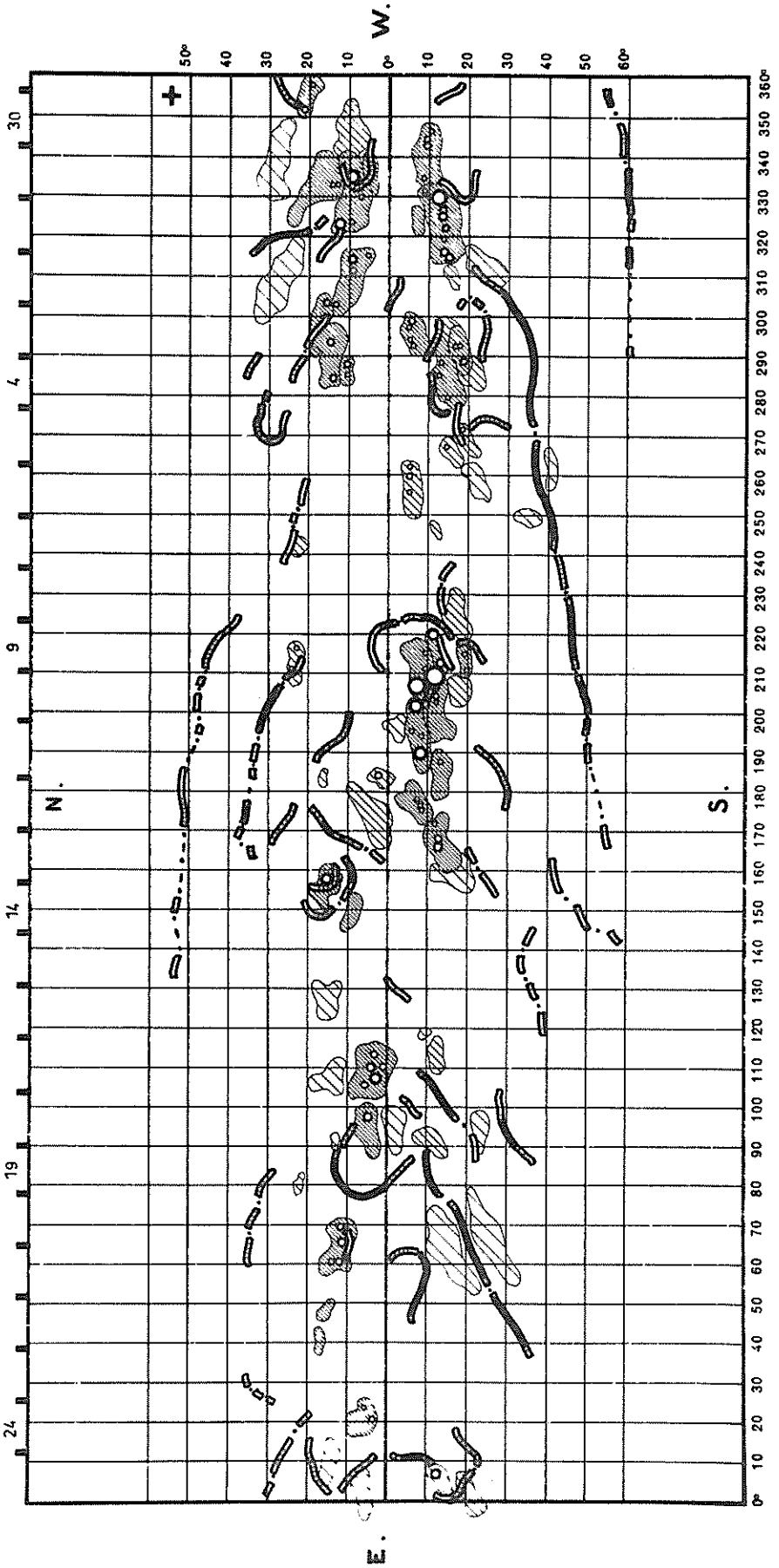
Region No.	Coordinates Lat.	Long.	IMP	Age at CMP	Spot-less Region	Region No. in Rotation 1717	Activity at West Limb
1	21°N	356	2	+5			decreasing
2	10°N	347	1	>6	x		decreasing
3	9°S	341	2	+5			decreasing
4	5°N	336	1	>6	x		decreasing
5	18°N	334	2	>6			decreasing
6	9°N	332	5	>6		4	decreasing
7	7°S	325	1	>6			dispersed
8	13°S	324	6	>6			decreasing
9	24°S	313	1	>6	x	7	dispersed
10	16°S	310	1	>6	x		decreasing
11	10°N	309	3	>6			decreasing
12	17°N	299	2	>6			decreasing
13	6°S	296	2	-2			stable
14	15°N	291	3	+2			stable
15	17°S	291	3	+3			decreasing
16	17°S	290	1	>6	x	10	decreasing
17	11°N	287	2	-4			increasing
18	14°S	287	2	>6		12	decreasing
19	19°S	269	2	>6			decreasing
20	15°S	266	2	>6	16		decreasing
21	22°S	259	1	>6	x		dispersed
22	5°S	257	2	>6			decreasing
23	35°S	250	1	>6	x		dispersed
24	23°N	242	1	-4	x		dispersed
25	16°S	225	1	>6	x		decreasing
26	12°S	216	3	+2			decreasing
27	19°S	214	2	+2			decreasing
28	24°N	213	2	+1			decreasing
29	10°S	206	5	>6			stable
30	18°S	206	1	>6	x		decreasing
31	2°S	197	1	>6	x		dispersed
32	7°S	195	4	>6		24	decreasing
33	13°S	185	2	>6			decreasing
34	3°N	184	2	>6		27	decreasing
35	17°N	184	1	+2	x		disappeared
36	6°S	177	2	>6		30	decreasing
37	5°N	175	1	>6	x		dispersed
38	13°S	167	3	>6			decreasing
39	16°S	159	1	>6	x	32	dispersed
40	16°N	156	3	>6			decreasing
41	9°N	149	1	+6	x		decreasing
42	16°N	127	1	>6	x	39	dispersed
43	12°S	113	1	-4	x		stable
44	4°N	109	5	>6			decreasing
45	15°N	107	1	>6	x	40	decreasing
46	1°S	94	1	>6	x		dispersed
47	5°N	94	3	>6		42	decreasing
48	23°S	94	1	-2	x		disappeared
49	11°S	91	1	>6	x	46	decreasing
50	14°N	91	1	-2	x		decreasing
51	22°N	80	1	-1	x		dispersed
52	12°N	64	4	+6			decreasing
53	16°N	48	1	+2	x		disappeared
54	17°N	40	1	-1	x		decreasing
55	6°N	21	2	>6			decreasing
56	14°S	4	3	>6		54	decreasing
57	7°N	1	1	>6	x		decreasing
58	21°S	1	1	>6	x	54	dispersed

SYNOPTIC SOLAR MAP

CARRINGTON ROTATION 1718

JANUARY 29 - FEBRUARY 25, 1982

MEUDON OBSERVATORY



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UAG-23 "U.R.S.I. Handbook of Ionogram Interpretation and Reduction," Second Edition, November 1972, edited by W.R. Piggott, Radio and Space Research Station, Slough, UK, and K. Rawer, Arbeitsgruppe fur Physikalische Weltraumforschung, Freiburg, GFR, November 1972, 324 pp, $1.75.

UAG-23A "U.R.S.I. Handbook of Ionogram Interpretation and Reduction," Second Edition, Revision of Chapters 1-4, edited by W.R. Piggott, Radio and Space Research Station, Slough, UK, and K. Rawer, Arbeitsgruppe fur Physikalische Weltraumforschung, Freiburg, GFR, November 1972, 135 pp, $2.14.

UAG-24 "Data on Solar-Geophysical Activity Associated with the Major Ground Level Cosmic Ray Events of 24 January and 1 September 1971," Parts 1 and 2, compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, December 1972, 462 pp, $2.00 (Includes Parts 1 and 2).

UAG-25 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 9 September 1968 through 9 December 1971," by James W. Warwick, George A. Dulk and David G. Swann, University of Colorado, Boulder, CO, February 1973, 35 pp, $0.35.

UAG-26 "Data Compilation for the Magnetospherically Quiet Periods February 19-23 and November 29 - December 3, 1970," compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, May 1973, 129 pp, $0.70.

UAG-27 "High Speed Streams in the Solar Wind," by D.S. Intriligator, University of Southern California, Los Angeles, CA, June 1973, 16 pp, $0.15.

UAG-28 "Collected Data Reports on August 1972 Solar-Terrestrial Events," Parts 1, 2 and 3, edited by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, July 1973, 932 pp, $4.50.

UAG-29 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1968," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, October 1973, 148 pp, $0.75.

UAG-30 "Catalogue of Data on Solar-Terrestrial Physics," prepared by NOAA Environmental Data Service, Boulder, CO, October 1973, $1.50. Supersedes UAG-11, 15, and 20 catalogs.

UAG-31 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1969," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, February 1974, 142 pp, $0.75.

UAG-32 "Synoptic Radio Maps of the Sun at 3.3 mm for the Years 1967-1969," by Earle B. Mayfield, Kennon P. White III, and Fred I. Shimabukuro, Aerospace Corp., El Segundo, CA, April 1974, 26 pp, $0.35.

UAG-33 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1967," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, May 1974, 142 pp, $0.75.

UAG-34 "Absorption Data for the IGY/IGC and IQSY," compiled and edited by A.H. Shapley, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; W.R. Piggott, Appleton Laboratory, Slough, UK; and K. Rawer, Arbeitsgruppe fur Physikalische Weltraumforschung, Freiburg, GFR, June 1974, 381 pp, $2.00.

UAG-35 "Catalogue of Digital Geomagnetic Variation Data at World Data Center A for Solar-Terrestrial Physics," prepared by NOAA Environmental Data Service, Boulder, CO, July 1974, 20 pp, $0.20.

UAG-36 "An Atlas of Extreme Ultraviolet Flashes of Solar Flares Observed via Sudden Frequency Deviations During the ATM-SKYLAB Missions," by R.F. Donnelly and E.L. Berger, NOAA Space Environment Laboratory; Lt. J.D. Busman, NOAA Commissioned Corps; B. Henson, NASA Marshall Space Flight Center; T.B. Jones, University of Leicester, UK; G.M. Lerfald, NOAA Wave Propagation Laboratory; K. Najita, University of Hawaii; W.M. Retallack, NOAA Space Environment Laboratory and W.J. Wagner, Sacramento Peak Observatory, October 1974, 95 pp, $0.55.

UAG-37 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1966," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, December 1974, 142 pp, $0.75.

UAG-38 "Master Station List for Solar-Terrestrial Physics Data at WDC-A for Solar-Terrestrial Physics," by R.W. Buhmann, World Data Center A for Solar-Terrestrial Physics, Boulder, CO; Juan D. Roederer, University of Denver, Denver, CO; and M.A. Shea and D.F. Smart, Air Force Cambridge Research Laboratories, Hanscom AFB, MA, December 1974, 110 pp, $1.60.

UAG-39 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1971," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, February 1975, 144 pp, $2.05.

UAG-40 "H-Alpha Synoptic Charts of Solar Activity for the Period of Skylab Observations, May 1973 - March 1974," by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO, February 1975, 32 pp, $0.56.

UAG-41 "H-Alpha Synoptic Charts of Solar Activity During the First Year of Solar Cycle 20 October 1964 - August 1965," by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO and Jerome T. Nolte, American Science and Engineering, Inc., Cambridge, MA, March 1975, 25 pp, $0.48.

UAG-42 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-80 MHz, 10 December 1971 through 21 March 1975," by James W. Warwick, George A. Dulk and Anthony C. Riddle, University of Colorado, Boulder, CO, April 1975, 49 pp, $1.15.

UAG-43 "Catalog of Observation Times of Ground-Based Skylab-Coordinated Solar Observing Programs," compiled by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, May 1975, 159 pp, $3.00.

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UAG-45 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1972," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, May 1975, 144 pp, $2.10 (microfiche only).

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UAG-49 "Catalog of Standard Geomagnetic Variation Data," prepared by NOAA Environmental Data Service, Boulder, CO, August 1975, 125 pp, $1.85.

UAG-50 "High-Latitude Supplement to the URSI Handbook on Ionogram Interpretation and Rediction," edited by W.R. Piggott, British Antarctic Survey, c/o Appleton Laboratory, Slough, UK, October 1975, 294 pp, $4.00.

UAG-51 "Synoptic Maps of Solar Coronal Hole Boundaries Derived from He II 304A Spectroheliograms from the Manned Skylab Missions," by J.D. Bohlin and D.M. Rubenstein, U.S. Naval Research Laboratory, Washington, DC, November 1975, 30 pp, $0.54.

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UAG-53 "Description and Catalog of Ionospheric F-Region Data, Jicamarca Radio Observatory (November 1966 - April 1969), by W.L. Clark and T.E. Van Zandt, NOAA Aeronomy Laboratory, Boulder, CO, and J.P. McClure, University of Texas as Dallas, Dallas, TX, April 1976, 10 pp, $0.33.

UAG-54 "Catalog of Ionosphere Vertical Soundings Data," prepared by NOAA Environmental Data Service, Boulder, CO, April 1976, 130 pp, $2.10.

UAG-55 "Equivalent Ionospheric Current Representations by a New Method, Illustrated for 8-9 November 1969 Magnetic Disturbances," by Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, CO; H.W. Kroehl, Data Studies Division, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; M. Kanamitsu, Advanced Study Program, National Center for Atmospheric Research, Boulder, CO; Joe Haskell Allen, Data Studies Division, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; and S.-I Akasofu, Geophysical Institute, University of Alaska, Fairbanks, AK, April 1976, 91 pp, $1.60 (microfiche only).

UAG-56 "Iso-Intensity Contours of Ground Magnetic H Perturbations for the December 16-18, 1971, Geomagnetic Storm," Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, CO, April 1976, 37 pp, $1.39.

UAG-57 "Manual on Ionospheric Absorption Measurements," edited by K. Rawer, Institut fur Physikalische Weltraumforschung, Freiburg, GFR, June 1976, 302 pp, $4.27.

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UAG-59 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1974," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, December 1976, 144 pp, $2.16.

UAG-60 "Geomagnetic Data for January 1976 (AE(7) Indices and Stacked Magnetograms)," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, July 1977, 57 pp, $1.07.

UAG-61 "Collected Data Reports for STIP Interval II 20 March - 5 May 1976, edited by Helen E. Coffey and John A. McKinnon, World Data Center A for Solar-Terrestrial Physics, Boulder, CO, August 1977, 313 pp, $2.95.

UAG-62 "Geomagnetic Data for February 1976 (AE(7) Indices and Stacked Magnetograms)," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, September 1977, 55 pp, $1.11.

UAG-63 "Geomagnetic Data for March 1976 (AE(7) Indices and Stacked Magnetograms)," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, September 1977, 57 pp, $1.11.

UAG-64 "Geomagnetic Data for April 1976 (AE(8) Indices and Stacked Magnetograms)," by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO, February 1978, 55 pp, $1.00.

UAG-65 "The Information Explosion and Its Consequences for Data Acquisition, Documentation, Processing," by G.K. Hartmann, Max-Planck-Institut fur Aeronomie, Lindau, GFR, May 1978, 36 pp, $0.75.

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UAG-69 "Selected Disturbed D-Region Electron Density Profiles. Their relation to the undisturbed D region," by L.F. McNamara, Ionospheric Prediction Service, Sydney, Australia, October 1978, 50 pp, $1.29 (microfiche only).

UAG-70 "Annotated Atlas of H-Alpha Synoptic Charts for Solar Cycle 20 (1964-1974) Carrington Solar Rotations 1487-1616," by Patrick S. McIntosh, NOAA Space Environment Laboratory, Boulder, CO, February 1979, 327 pp, $3.50.

UAG-71 "Magnetic Potential Plots over the Northern Hemisphere for 26-28 March 1976," A.D. Richmond, NOAA Space Environment Laboratory, Boulder, CO; H.W. Kroehl, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; M.A. Henning, Lockheed Missils and Space Co., Aurora, CO; and Y. Kamide, Kyoto Sangyo University, Kyoto, Japan, April 1979, 118 pp, $1.50.

UAG-72 "Energy Release in Solar Flares, Proceedings of the Workshop on Energy Release in Flares, 26 February - 1 March 1979, Cambridge, Massachusetts, U.S.A.," edited by David M. Rust, American Science and Engineering, Inc., Cambridge, MA, and A. Gordon Emslie, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, July 1979, 68 pp, $1.50 (microfiche only).

UAG-73 "Auroral Electrojet Magnetic Activity Indices AE(11-12) for January - June 1975," by Joe Haskell Allen, Carl C. Abston, J.E. Salazar and J.A. McKinnon, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO, August 1979, 114 pp, $1.75.

UAG-74 "ATS-6 Radio Beacon Electron Content Measurements at Ootacamund, India, October - July 1976," by S.D. Bouwer, K. Davies, R.F. Donnelly, R.N. Grubb, J.E. Jones and J.H. Taylor, NOAA Space Environment Laboratory, Boulder, CO, and R.G. Rastogi, M.R. Deshpande, H. Chandra and G. Sethia, Physical Research Laboratory, Ahmedabad, India, March 1980, 58 pp, $2.50.

UAG-75 "The Alaska IMS Meridian Chain: Magnetic Variations for 9 March - 27 April 1978," by H.W. Kroehl and G.P. Kosinski, National Geophysical and Solar-Terrestrial Data Center, Boulder, CO; S.-I Akasofu, G.J. Romick, C.E. Campbell and G.K. Corrick, University of Alaska, Fairbanks, AK; and C.E. Hornback and A.M. Gray, NOAA Space Environment Laboratory, Boulder, CO, June 1980, 107 pp, $3.00.

UAG-76 "Auroral Electrojet Magnetic Activity Indices AE(12) for July - December 1975," by Joe Haskell Allen, Carl C. Abston, J.E. Salazar and J.A. McKinnon, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO, August 1980, 116 pp, $2.50.

UAG-77 "Synoptic Solar Magnetic Field Maps for the Interval Including Carrington Rotations 1601-1680, May 5, 1973 - April 26, 1979," by J. Harvey, B. Gillespie, P. Miedaner and C. Slaughter, Kitt Peak National Observatory, Tucson, AZ, August 1980, 66 pp, $2.50.

UAG-78 "The Equatorial Latitude of Auroral Activity During 1972-1977," by N.R. Sheeley, Jr. and R.A. Howard, E. O. Hulbert Center for Space Research, U.S. Naval Research Laboratory, Washington, DC and B.S. Dandekar, Air Force Geophysics Laboratory, Hanscom AFB, MA, October 1980, 61 pp, $3.00.

UAG-79 "Solar Observations During Skylab, April 1973 - February 1974, I. Coronal X-Ray Structure, II. Solar Flare Activity," by J.M. Hanson, University of Michigan, Ann Arbor, MI; and E.C. Roelof and R.E. Gold, The Johns Hopkins University, Laurel, MD, December 1980, 43 pp, $2.50.

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UAG-82 "International Reference Ionosphere - IRI 79," edited by J. Virginia Lincoln and Raymond O. Conkright, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO, November 1981, 243 pp, $4.50.

UAG-83 "Solar-Geophysical Activity Reports for September 7-24, 1977 and November 22, 1977," Parts 1 and 2, compiled by John A. McKinnon and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, CO, February 1982, 553 pp, $10.00.

UAG-84 "Catalog of Auroral Radio Absorption During 1976-1979 at Abisko, Sweden," by J.K. Hargreaves, C.M. Taylor and J.M. Penman, Environmental Sciences Department, University of Lancaster, Lancaster, UK, July 1982, 69 pp, $3.00.

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UAG-86 "International Catalog of Geomagnetic Data," compiled by J.H. Allen and C.C. Abston, National Geophysical Data Center, NOAA, Boulder, CO; E.P. Kharin and N.E. Papitashvili, Academy of Sciences of the USSR, World Data Center B2, Moscow, USSR; and V.O. Papitashvili, IZMIRAN, Moscow Region, USSR, November 1982, 188 pp, $4.00.

UAG-87 "Changes in the Global Electric Fields and Currents for March 17-19, 1978, from Six IMS Meridian Chains of Magnetometers," by Y. Kamide, Kyoto Sangyo University, Kyoto, Japan; H.W. Kroehl, National Geophysical Data Center, NOAA, Boulder, CO; and A.D. Richmond, NOAA Space Environment Laboratory, Boulder, CO, November 1982, 102 pp, $3.50.

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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."