

Radio Weather Summary for May 2009

The long march through solar minimum continued in May. Almost certainly cycle 23 had ended but this had yet to be displayed in smoothed figures. More importantly for operators, solar parameters were showing no sign of a sustained upward trend. To be sure, the solar flux was up to 74 on several days, and the sun was spotted on eight, with one small sunspot group remaining visible for seven consecutive days until it rotated off on the 19th. However, by the end of the month the solar flux had fallen back to 69 again, and the 90-day average was a slightly shaky unchanged at 70 at the month's close, having dropped to 69 on several days. The X-ray flux stayed below the minimum reporting threshold for the entire month. There were no solar flares of C-class or higher, though a few smaller ones were reported.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
SSN	0	0	0	0	0	0	0	0	0	0	0	0	12	18	12	15	15	14	11	0	0	0	0	0	0	0	0	0	0	0	15
S.Flux	69	68	69	68	68	69	70	71	72	72	72	74	74	74	74	74	73	72	72	72	72	70	69	69	68	67	68	68	69	69	

Meanwhile, an international panel of experts meeting at the NOAA Space Weather Center revised its 2007 assessment, opining now that cycle 24 would be 'moderately weak', peaking around May 2013 with a daily sunspot number of 90. This would make it the weakest cycle since 16, which peaked with an SDN of 78 in 1928. It is perhaps as well to recall that, although the experts may now have it right, they have only 23 cycles as the basis for their analyses and, as they agree, we still have much more to learn about solar dynamics.

In the course of the month the GB2RS solar report looked back to the solar storm of 1859, which shorted out telegraph wires in North America and Europe, causing fires in some cases, and produced auroras so bright that people could read newspapers by their light. Nothing of that order happened this month. Fairly small-scale coronal hole activity was noted from the 6th to the 8th but, as the table below shows, the 7th and 8th were the only days when the Ap index reached double figures – low double figures at that. There were no 3-hour periods when any of the British observatories reported a K figure greater than 4. Solar wind speeds were generally somewhat below average, with the highest figure being the 498km/sec reported on the 8th and the lowest 267km/sec on the 27th.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Ler	2	5	4	2	3	11	9	15	6	5	5	4	4	11	2	7	1	3	5	8	3	7	5	5	0	2	0	9	7	5	3
Esk	4	8	7	4	5	13	12	20	12	7	7	3	5	14	4	7	1	6	5	11	8	8	7	7	2	5	2	13	9	6	5
Hart	4	9	6	4	6	14	15	20	12	7	6	2	6	15	4	10	2	6	5	12	10	9	7	6	2	6	2	11	10	7	7
Ap	5	5	5	4	2	6	10	13	6	4	4	2	3	8	2	5	3	4	5	4	5	5	4	4	3	3	3	7	5	3	3

Excuses, Excuses, Excuses

All manner of things are not as one would have wished with this Report. On the one hand, the vast quantity of material available led to increasingly compressed listings as work progressed, so presentation and detail are uneven, to say the least. On the other hand, there are gaps. This reflects the fact that our principal source, DX Summit, was down at times, while at other times its restriction of downloading to 10,000 spots in a month when vastly more were submitted meant that material submitted only a few days earlier could not be retrieved. The periods affected were May 1 00-0800UTC; May 9 1700 to 0640 May 10; May 13 1130-May14 1800; May 26-1152-May 27 0706. Despite these gaps, the unprecedented amount of material to hand has meant that this Report arrives far later than one would wish. G3USF

Propagation to and from Britain

Aurora

No reports. Given the quiet geomagnetic levels this is scarcely unexpected.

Tropo

Greater activity brought a marked increase in tropo reports, which were claimed on most days. There were a few with western France (notably GB3BAA heard by F8DBF at 491km around 1200 on the 16th), Belgium and the Netherlands, and a few at good range within the UK, but none were exceptional. Perhaps the best - if indeed by tropo - was at 1434 on the 30th, when G4DEZ reported DH6DAO in JO41

MS/jt6m/iono

MS operation, invariably with JT6M, was possible daily but appeared essentially as a fallback in the absence of sporadic-E. Once Es had arrived that became the default mode. A few operators used JT6M while working by Es. Countries reportedly worked by MS included CN,CT,DL,EA,EA6,F,G-GM,HA,I,IT9,LA,LX,OE,OK,OZ,PA,S5,SMSP,9A

EME

More EME this month and a couple of callsigns that have not previously featured here. But why are so many reports originated from the non-G end?

May 21 16-1700 K5QXY>MI0AYR(eme)

May 23 GM4WJA>W7GJ(eme -23)

May 27 2314 W7GJ>G0LCS(-19)

May 29 2052 G4IGO>W7GJ(eme -28) 2218 W7GJ>G6WQ(-20)

May 30 0007 GM4WJA>W7GJ(-20dB) 2216 G8BCG>W7GJ(-21db) 2229 MI0AYR>W7GJ(-21)
2237 G5WQ>W7GJ(eme -20)

May 31 GI6ATZ>W7GJ(-26)

Other

May 2 1541 GW8IZR>G7RAU(qtf 140 backscatter)

May 4 0926 GB3LER>G0KSC(529) Es or tropo?

Sporadic-e

The tables below show what was reported heard or worked over the month for each 3-hour period, giving the highest strength figure reported. But by no means all signals were S9. Many were much lower during marginal openings or when backscattered. Where no signal report was given this is indicated by the + symbol. There were no reports for times between 00 and 0300.

As expected, the great majority of contacts were by way of single-hop Es within Europe, with a preference for areas with a southerly component and at ranges of ~1500-2000km. Portugal and the Spanish mainland were particularly favoured: openings on the 22nd and 28th focused wholly on these areas with genuine S9 signals for hours on end over much of the UK. Part of this healthy performance should be credited to a clutch of new beacons in Portugal. In their first summer season they were frequently heard in the UK and indeed across Europe as a whole. Comparable results might have been returned for Morocco had not participation been limited to the two beacons and a single active operator. CT3 and EA8 featured prominently, partly because activity has increased in both areas, but favourable propagation almost certainly played a substantial part.

	CT 62%													CT3 20%					CN+EA9 32%											
	2	9	10	17	20	21	22	24	25	26	28	30	31	19	20	24	29	30	31	10	20	21	22	24	25	26	28	30	31	
03-06																														
06-09	7																													
09-12	+	+	+	7						9	5					+ 9 + +														
12-15	+			+						9	+					+														
15-18	+		9	7	9	9	5	9 9 9						6	+				+	9	9	9	+	+				9		
18-21	9 9 9						+ 9 9							+	9	+	+	9					9				8	+		
21-24																														

	DL 39%										EA 1-5,7 55%															EA6 13%											
	13	15	17	18	19	20	21	25	28	31	2	3	4	10	12	13	17	19	20	21	22	24	25	26	28	30	31	25	26	28	31						
03-06																																					
06-09	9	+				7											9						9	9					9								
09-12	9	9	9														5										5	+									
12-15	9		+	7	7		+				9	+	9	8									+	9	4	+		4	9								
15-18	+						+	7											9	5	+			9	6	9	9	9	3	9	9	9	+				
18-21	+						9		+	+											9					9		9	9		9	9	9	9	9	9	9
21-24																																					

Also: DL + 2nd 15-1800 16th 18-21

	EA8 26%	EI	F 19%	ES 13%	HA 45%
	20 22 24 25 28 29 30 31	31	11 17 25 28 29 31	17 18 19 30	2 4 9 13 15 17 18 19 20 21
03-06					
06-09	9		7	8	+ 9 + 5
09-12	9	+	+	+	7 9 7 +
12-15	7		8	+ 9	++ 7 5 9 +
15-18	+ 9 + + +		9 +	9	7 9 9
18-21	9 9 + 7	+	+ + +		9 3
21-24					

	HA cont	HB+4U	I+HV 42%	IS 16%
	25 26 30 31	15 16 17 25	2 4 11 13 16 17 18 19 21 25 26 28 31	2 16 18 26 28
03-06				
06-09	7 5		9 + +	5 +
09-12	+	5	9 + + + + 9	9
12-15	9	+ 3 +	9 + 9 + +	9
15-18	9 + 1 +	5	+ 9 9 1 9 + 9 + +	9 +
18-21	+ +	9	+ 9 + +	+ 9
21-24				

IT 25%
1 2 11 15 16 18 19 21 25 26 31
+ 9 7 +
9
9 7 9 +
9 + 5 +
9 + 7 9

	HI	JY	KP4	LA	LY	LZ 29%
	30	31	30	2 15 23 25	18	2 4 13 15 16 17 19 25 31
03-06					+	
06-09				+	+	9
09-12				+ +	2	5 +
12-15	+	3	+	9	9	9 9 +
15-18		9		9	+	9 6 + 5 5
18-21				3		9
21-24						

	OA	OD	OE 32%	OH 26%	OK 16%
	28 29	8	2 13 15 17 18 20 21 25 28 31	2 10 12 17 18 19 21 25	13 17 18 20 25
03-06					
06-09		2	+	9	9 +
09-12			5 5 +	+ 4	
12-15			+ 9 9 + +	9 + 9	+
15-18	+		7 +	6 9 + +	9
18-21	+ +		9 + 6 +	9 9 9 5 +	9
21-24					

	OM	ON	OY	OZ	PA	SM 29%
	4 17 20 25	16 18 25 30	25	15 18 21	15 21	2 10 12 13 15 18 19 25 30
03-06						
06-09		3		9		9 9 3
09-12				9 +		9 5 + 9
12-15	+ +	+		9 +	8 +	7 + +
15-18	5 +	9 5		+		9 7
18-21	9		9			+ + +
21-24						

	SP 29%	SV1-7 38%	SV8-9
	3 4 13 15 17 18 20 25 31	1 4 11 16 17 18 19 20 21 25 30 31	16 17 18 25 30
03-06	+ +		
06-09	9 9 7	+	+
09-12	5 + 9 9 5 +	9 +	+
12-15	9 9 7 9	+ + 3 + 9	+ 9
15-18	5 + +	+ 7 9 5 1 2	9 3 2 +
18-21	7 9	6 9 5 9	9
21-24			

	TA	TF	TR	UR/EN 19%	W	YL	YO 26%
	17 19 25	25 31	28	4 15 17 18 19 25	29 30	15 17 18	9 13 15 16 17 19 21 25
03-06							
06-09				9 +		+	9
09-12				+		9	9
12-15	+			8 5 9	+	+	9 + + 7
15-18	+ + +			7 9 + +		+	9 9 + 7
18-21	+	+ 9	+	9 +			+
21-24					+		

	YU,4N,E7,S5,9A,4O,Z3 48%	4X 13%	5B,C4 13%	9H	ER	CU2
	1 2 4 9 13 16 17 18 19 21 23 25 26 30 31	16 17 24 31	16 24 25 31	2	15	20
03-06						
06-09	9					
09-12	9 + +		+			
12-15	9 2 + 9 + 5 9 9	5 +		+		
15-18	+ 9 9 9 9 + 1 9	+ 9 +	7 + 9	+	+	
18-21	+ 4 + + +	5	7 7			+
21-24						

Spain was the most consistent source, reported on no 17 days, a little more than Italy and the various countries formerly known as Yugoslavia. Greece, which lies at 2-hop distances for many UK operators, was reported on 12 days – though Costas, SV1DH, records openings to G on only three days. Less was heard of OK and OM than might have been expected, particularly by comparison with HA. TA, 5B/ZC4/C4, 4X, JY and OD, all lying beyond the maximum range for 1Es, were workable from time to time.

All this adds up to be a healthy level of to-be-expected activity. More distant contacts were scarce. Among the less routine ones were several with ER on the afternoon of the 15th and openings to OA on the 28th and 29th, which appear to have reached only south-west England. The biggest event for UK operators was between, roughly, 1200 and 1500 involving MW0HMY,

G8ZVZ, G0LCS, G4RGK, G7RAU, GI4AYR, GM3SEK, GI4OWA, G3JHM, G0JJL, M0AEF, G4RRA, G0WTD and G3SED, to mention but a few, between them covering a healthy spread across these islands. They reported reporting into KP4, HI and W4. A report of MD0CCE working YS1G on the evening of the 19th, appears to be an error.

Continental Europe, Africa and the Middle East

Auroral-related Propagation

May 14 1857 7S6W(JO57)>LA5YJ(JO59) 2011 OH0>OH4

Other Modes

For most of Europe this was an abundant month, with sporadic-E much the predominant mode, but also with a fair sprinkling of MS and tropo. Costas, SV1DH, was not alone in finding the 1st the first 'good day' of the year and his report this month is in marked contrast to the minimal lists in recent months, with a country count of 34. However, like many other operators, he heard relatively little outside Europe, while making a number of 2xEs QSOs.

While the band did not open particularly early or stay open exceptionally late for our continental colleagues, during the intervening hours activity levels were high, even on days when there were no contests and – as the detailed record shows despite a high level of compression, openings frequently extended to almost every corner of the continent.

But in addition to the high daily volumes of contacts within continental Europe, reports show many QSOs outside Europe. The first table below omits the 'bread-and-butter' working of 4X and JY in favour of contacts at greater-than-one-hop range. While eastern Europe is unsurprisingly prominent, there were reports from most areas of Europe (except, it would seem the UK.) The 30 May opening with Japan had a particularly wide reach, leaving the debate about signal paths apparently unresolved. What is clear is that ranges exceeding 10000km were achieved. But how?

Europe<>Asia	
A7 25(DL) 28(I,SV) 31(EA,SV,SV8)	EZ 30(LZ)
JA 24(UR) 30(DL,HA,IT9,ON,OZ,PA,SP,UR,5B,9A)	UK 25(UR,4X) 30(OH)
UN 24(UR) 30(LA,OH,UA,UR) 31(4X)	4L 15(F,HA,LZ,ON,PA)
9M 26(EA6,5B) 28(UR)	

For the last couple of years, North Africa apart, Africa has featured much less in these reports than one would have wished. As with Central and South-East Asia, a large part

of the problem has been that the amateur population is small and thinly-scattered by comparison with, say, South America. When active and knowledgeable operators do appear they can make a marked difference. Put differently, propagation is revealed to be more frequent than many may have thought. Activity by Nicolas, TN5SN, who put a lot of time into Six during the month, is a case in point. He was worked from a wide swathe of countries, particularly during a strong and sustained opening on the 24th. An early opening to TR8 excepted, all the African reports came in the last ten days of the month - a reminder that while activity can breed activity the propagation has to be there in the first place.

Europe<>West/Central Africa

D4 21(9A) 27(CT) 28(EA) 29(EI)	S9 24(DL,HA)
TL 30(DL,EA,IS0,S5) 31(CT,EA,EA9)	TN 21(HA) 22(DL,EA,IT9,S5,SP,9H) 24(EA,EA6,HA,HB,I,OE,OM,OZ,S5,SM,SP,UR,YO,YU 9A) 28(DL,HB,I,PA,SV) 29(OZ) 30(UR)
TR8 10(SP) 24(DL,EA,F,HB,OE,S5,9A) 28(DL,EI,HB,I,OZ,PA) 30(OH,OK,SV,9A)	9Q 24(DL) 25(IS0)

For reasons stated earlier, some listings below record contacts between *call areas* while others simple list *countries* making Es contacts during each hourly period.

May 1 data not received before 1815 18-1900 UZ5,OE4,HA7,HA8,YO5,HA3,SQ8,HA6,S5>EA6 OE6,EA3>E7 I8>HB,F YO4>I5 IT9>LX EA3>YU1,YT2 LX0SIX>IT9 9A>EA719-2000 YO4>I0 EA6>SV2,SV3 IT9X>EA1 20-2100 OH6>PA(jt) EA6>PA(jt) 22-2300 YT1>PA(ms)

May 2 05-0600 HG1BVB>SP6(tr) LZ1>UT5(jt) OH5RAC>SP6 SP6,OK1>HA1 06-0700 SV3BSF(Es),OE3XLB(ms),I0JX(tr/iono),ON0SIX(iono/ms),LX0SIX(ms)>EA3 ON>OZ(ms) 11-1200 UR3>OE3 SM6>EI UX3>I5 OY>DL LY1>SV1 UT9>HA3 12-1300 US3>OE3,OE4 LY3>SV2,Z3 OM3>HA6 OE3>UX5 EA6>EA3 LZ1>SP1,OZ,SM1 YO3,LZ2>OZ LY1,LY2>Z3 UT1>S5,SP6,I2 E7>9A LY2>HA3,SP3 LZ2,YO3,UU5>DL LY3>YU1 EN500>DL,OE3,UT7,OE3 UT8>PA UR3>HB YO3>SP6,OY 13-1400 EA7>EI YO8,UT5,SV2,SV9,EN500>PA HB>UY6,SV2 EA6>SP7 SV2>SP5,ON OZ>SP1,YO3 EN500>DL,F LZ2,YU1>SP2 SV3BSF>EA7 IT9>LY2 LZ1SJ>DL US9>I8 4N0ZNI>SM5 YO8,YO3,SV2,SV3BSF,SV9,SV8,SV9,UX2,LZ3,PA,IS0>DL EA3,EA4>HA1 YO3>OH1 UU5>SQ2 UX3>I2 LZ2,UA4>SP6,SP2 I7>I8 SM6>YO3 UA9,YO8>OZ IT9,YU1>SQ7 UR5>I1 LZ1,UR4,I8>F SM5>LZ3 OH5RAC>Z3 HG1BVB,YO8,SP7,OE1>EA3 UT0>EA6 UR4>HB IG9>SQ9 LY2>IT9 UT5>4X SM5>YO5 PA>I8 US0>LX CN8IG>OE5 14-1500 ED7YAD,EA4UW>OE5 US3,IS0,IG9,SV9,EA6>PA,SQ1 5B>4X YO8,YO9>LA EA6>SP3,I0 F,EA5>HA3 9H>SP5 EA1,EA4,EA5>HA1 EA6,I8,LX>ON TA7>OZ US0,SV3BSF,UY6,EA5,EA6,SV1SIX>DL ON>I0,I8,IG9,UR EA5>OK1 EA3>I8,OZ EA4Q>OE1,SP6 YO9>I1 I7,IT9,I0,IS0>F CS5BCP,EA1,F>9A EA4>I0,I7 E7>EA5 SV3BSF>PA S5,9A>EI EA2,EA4>OE1 EA1>HA3 SV2,SV8>HB LZ1>I2,SM4 S5>OE6 EA2B>SM7 IS0,HA1>EI LX0SIX>SV1 UY6>SP3 15-1600 EA4UW>OE1 I7,UT9,LZ1,YT1,9A>F EA6>DL,HA3,OE4,9A,S5,PA HB>IT9,LZ1 SV9>PA,SV1,OK1 OE3XLB>EI EA2>IT9 SP5,EA5>I8 EA2B>OE5 SV2>HB

DL,EA2,EA4,EA5,ED7TAD,SV1SIX,SV2, SV3BSF,CN8IG,SV9>DL EA2>OE4 I1>I1 IG9>ON
9A>EA5 SV9>OZ,OK1,PA,OE3 EA3>HA3,I7,EA6,SP5 HB,HA8,HA3>EA5 IG9>LX 9A>EB1
CS1RLA>OE5 ON>I8 CU2>CU3 9H>ON I8>SQ2,EA2 SV3>OK1 IS0>EI EA1>HA6 S5,9A>EA5
IT9,IS0>PA I7>OK1 I9,I8>HA6 I1,I5>YU1 IH9>PA EA1>I3,HA6 OM3>I8 HG1BVB>EIEA4>OE1
16-1700 IT9,I8>HA6 EA5>OK,ER1 EA1>9A,YT1,HA6,I3 EA6>I3,ER1,I8,9A
SV3BSF>IH9,F,PA,DL,OK1 IG9>EU4 SV2>F,DL,LA EA5,I1>9A EA4UW>HA3 F>I7 EA2>S5
9A,SV1>I3,DL,EA6 IG9>OM3 IT9X>HA6 SP7>I8 9A>S5 LZ1>I1 ON>YO2 SV6>DL 17-1800
SV1,EA3>EA6 I1>LZ1 LZ1>PA SV1SIX>DL OZ7IGY>YT1 YT1>DL,9A 19-2000 OH6>LA(jt)
2021 OH3>LA(ms) 2147 ED7YAD>9A(Es)

May 3 06-0700 SP7>SP9(tr/jt) OE3XLB(iono),HB9SIX(ms),SV3BSF(ES)I0JX(tr/iono),
IT9X(ms)>EA3 LA>OH5(ms) EA6>F(ms) LZ1,SP9>UT5(ms) EA6>YO2(ms) F>SP9(ms)
F>DL(ms) 07-0800 SV8>4X ON>F(jt) 4X>LZ1I0>4X(jt) EA2>EA1(tr) EA4>EA3(jt) 4X>I8(Es)
4X>SV2(Es) F>PA(ms) 08-0900 F>LA(jt) 5B>I7 PA>EA3 10-1100 OD5SIX>SV8 SV8>UT5(jt)
SV3BSF>9A 11-1200 SM5>SM4 SM7>DL(Es) 9A,HA3>I3 OH3>PA(jt) 1254 LA>SP3(jt)
13-1400 SV1SIX>IT9 SV1>ON SV2>SV1 F>PA 14-1500 LZ1SJ>DL SV1>IT9 15-1600
SV1SIX,SV9>4X I5>EA3(tr) 16-1700 SV3BSF>SV8 F>OZ(jt) I5>F(ms) 17-1800 OZ>5P6
S5>DL S5>LX(tr) S5>I3 OK1>F JY4>SV1 18-1900 EA8>EB1,EA7,F,EA4,CT,EA3 4X>SV1
EA7,EA1>EA4

May 4 0459 OD5SIX>UT7 05-0600 5B4CY,SV5SIX,OD5SIX>UT7 06-0700
5B4CY,SV5SIX>UT7 SV3BSF,ON0SIX>EA3 EA3>Eat(jt) 07-0800 CS5BCP>DL
CS5BLA>DL,LX OD5SIX>HA0,LZ1 SM6>OH8(jt) SV1SIX>DL 08-0900 LX>ON SV9>LX
SV3BSF>DL,EA6,PA,I1 4X,SP6>IT9 SV9SIX>I1 ED7YAD>EI LX>LA CN9IG>ZB IT9>YO2
SV8>DL,9A IT9>DL 09-1000 SV3BSF>F,DL,PA IW9>HA1,OE5 IW3FZQ>EA3
SV8>I1,DL,SV2,PA ED7YAD>ZB IW9>YO7 SV9>I3 IT9>9A,SP6,DL,OZ LZ1>EA3 9H>HA1
OZ7IGY>F IZ1EPM>LZ1 SV3>LX,PA EA3>YO2,YO7,YU2,HA5,LZ4,UZ5 SV2>ON YU1EO>F
IT9X>OE5 SV3,SV2>I1 10-1100 SV8,IT9X>DL SV3BSF>PA 4N1ZNI,YU1EO>F
DL>I8,I7,SV2,E7 OZ>I8,IT9 I5,IS0>SP6 SM5>LA(jt) HA6,OM3,SR9>I2 SV2>PA I5MXX>SP6
OK1>I5,I4 DL>LZ2 9H1SIX>EA3 SR2FHM>I4 S5,HB9SIX1>EI HG8BVB>F IT9X>OZ E7>PA
SP5>EA6 11-1200 EI0SIX>F 12-1300 9A0BHH>DL EI>EA3 SP9>F HA6,HA8>DL
SR2FHM>DL,I1 YO2>PA,DL PA>YO8 S5>UT4 OH0SIX>I5 9A>OZ UZ5>DL,PA SM5>I5 13-
1400 PA>YO2,UT5, SP9,YL2,YO7,UX,I1,SP4,YO2,YO4,YU1,ES0SIX,SP8,SR2FHM,
OH3,HG5BVC,HA6,HA8,HA0, LZ2CM,OM3,SR9FHA>DL SP4>EA3,F SM6,ES0SIX>I5
E7>DL,OZ,LA S5>LA,SM4,SP1 SM6>I0 9A0BHH,S5,OE3XLB>OZ YL2>EA3 SP3,SP5>F
EA7>EB1(ms) S55ZRS>OZ HA1>OZ SM4,SM7,OH0SIX>OE5 UZ5>EI YL5>I3 UT7>ON
HA1>SM6 SP9>PA LA>OE6(bpsk) OZ>I0 YL2>HB OZ>OE3 14-1500
UT,YL2,LZ3,YO8,OH5RAC>DL SP5>EA3 I5>OH7 HA8>LA(jt) OH5RAC>I5,OE5 SM4>I8
SK3SIX>HA1 UT>PA SM7>HA8 OZ 7IGY>HA0 OZ>YO2,YT1 ES2>I2 UT7>PA SM5>SM1
I1>OH7 HA1>SM4 HB,DL>YL2 YO2>HA8 S5>SM4,SM5 HB>SP4 9A>SM7 UX2>F SK0>I3 15-
1600 IW3FZQ>OH1,OH3 SM5>IT9,I5 OH0SIX>OE5 S5,SV3>DL,OH1 IZ1EPM>YL2 I0,OE4>LA
S5>OH2 ES5>OE9 HB>SP2 YL2,UT,OH2>DL F>YL2 OE6>OH7 SP3>F(jt) SA5>9A
SM5,OH7>S5 E7>9A 16-1700 SP3>EB1(ms) SM7>9A(ms) S5>9A 17-1800 SP3>SM2(ms)
OD5SIX>9A 20-2100 S5>SM0(jt) EA6>9A(jt) PA>IH3(jt) PA>on(JT) 21-2200 SP9>9A(MS)

May 5 05-0600 OE3XLB>SP6(tr) OH5RAC>SP6(iono) 06-0700 UT4>DL 16-1700 I2>SV1 IT9>I1
I7,I8,LZ2,YU1>EA6 SV2>EA5 SV9>I5 SV1SIX,IT9X,SV3BSF>EA3 IT9X,9H>F 17-1800 SV9>I5
SV1SIX>IS0 SV9>I0 SV9>SV3 IS0>SV1 CN8IG>IT9 18-1900 EA8>CU3 S5>YO3 19-2000
SP7>SP5(tr)

May 6 0105 CQ3SIX>D44TD 0553_LZ2CC>LZ1_0636_OH0SIX>OH1_07-0800_EA7>EB1(ms)
IS0>SV2(ms) IT9X>4X I0>IS0 08-0900 SM2>LA(jt) OH5>SM2(jt) 09-1000 S5>EA6(jt)
SM2>OH5(ms) S5>EA6(iono) 10-1100 HB9SIX>DL(tr) OM5>I5(jt) 11-1200 IT9X,IS0 13-

1400 OE5>EA5(jt) SP3>YO3(jt) 14-1500 YO3,SP3>LA(jt) I5>S5(jt) 15-1600 SV9>S5(ms) 16-1700 YU1>LZ2 S5>SV2(ms) DL>SM3 SP7>OZ(jt) PA>SM2(jt) 18-1900 I3>S5(jt) 19-2000 ON>OM5(jt) 21-2200 LX0SIX>PA PA>OH8(jt)

May 7 06-0700 SV3BSF>EA3 IS0>F(jt) OH9>OH5(tr/jt) EA6>SV2(iono) 07-0800 EA1>EA7(jt) I5,OK1>EA6(iono) EA6>ON 0956 CN8IG>OE5(Es) 10-1100 HG1BVB>DL(tr) EA3>9A CT>I5(ms) 11-1200 IS0>DL SV3BSF>REA4 5B4CY>SV1 12-1300 F>CN,EA7 IT9X>EA4 1336 HB9SIX>DL(tr) 14-1500 OK1>HA5 15-1600 IQ4AD,IK5ZUL>CN 1556 I4>S5 16-1700 ED7YAD>I4,SV3,IT9 I0,IT9X,RA8>EA4 I4,I0>EA7 ZB>I0 EA8>EA3 SV3BSF>EA5 CS5BLA>IT9 17-1800 I0,I8>EA7 EA8>EA2,EA3,EA4,EA5,F,I7 ZB>I5,I7 9H>I1 DL>OZ 9H1SIX>EA3 CN8IG>I7,9A EA5>SV3BSF,SV1 OH9>SP9(jt) I5,CN8MC,S5>9A EA4>IW9 4X,CS5BCP,EA3RCC,SV9>IT9 OH5>LA(jt) CN>F CT3>EA3,EA5,EA7,SV3 CS5BLA>IS0 SV9,EA6>I8 EA7>I0 5B4CY>I7 EA6>EA7,SV3 CT>I0 S5>HA5 18-1900 EA6>EA7,EA8 HA3>HA5 EA6>CN(Es) CT3>EA6 SV9,IT9>CT EA7>I0 I7,IS0>CN 4X>9A,EA5,S5 EA8>EA3,I5,EA7 SV9,EA8>EA4 CN8IG>I0,IS0 19-2000 EA8>EA3,I5,EA5,EA6,EA7,I0,IS0 CN8MC>IS0 ED7YAD>I0 IT9X>EA7 I5,S5,CN8IG>9A 20-2100 CN8IG>ZB EA8>EA5 LZ2CC,YU1>4X 2148 JW9SIX>LA

May 8 06-0700 HG1BVB,OE3XLB,OH5RAC,OD5SIX>SP6 IT9X,SV3BSF>EA3 08-0900 SV3BSF>SP6 F>DL HG1BVB,F>S5 09-1000 F>DL,OZ EA3>OZ IS0AWZ>F SV3BSF>DL 11-1200 EA7>CN S5>EA5(jt) 12-1300 OE3XAC,IS0AWZ>OE1 13-1400 OE3XAC,HG1BVB>OE5 CQ3SIX>EA8 CS5BCP>IT9 14-1500 LX0SIX>DL(tr) 15-1600 OZ>EA5(jt) 16-1700 OK1>OH3(ms) IT9>I8 SV2>OK1(jt) 18-1900 SV9>I8 F>OK1(jt) 1952 OH7>PA(jt) 20-2100 PA>OE1(ms) OE1>SV2(ms) 21-2200 SP9>OE1 22-2300 PA>LA(jt) LA>OH7(ms)

May 9 05-0600 OK1>IS0(jt) IS0>OZ(ms) F>IS0(jt) 06-0700 I0>OK2(jt) OH1>OG2 PK2>OH5(jt) UR5>OK2(ms) 07-0800 OE5>F(jt) IS0,I0JX,ON>F EN500>IS0 08-0900 LA>OH3(ms) EA7>EB1(jt) SP9>I5(jt) S5>UT5(jt) SP2>I5(jt) IS0>F OH0SIX>OH1 09-1000 CS5BLA>EI(Es) HG1BVB>DL(tr) PA>OH5(ms) EA3>DL(Es) HB9SIX>DL(tr) OH9>OH5(ms) F>EA5(jt) OH9>LA(jt) OH3>LA(jt) HB>ON F>CT(jt) SV2>I5(jt) 10-1100 ON0SIX>DL(tr) S5>HA3(tr) F>CT(jt) S5>OK2(tr) EA1>CT(ms) EA4UW>CU3 S5>IS0 IS0>OK2 F>OE1(ms) 11-1200 9A>DL(tr) 9A>OZ(Es) HG8BVB>PA YO5>PA 9A>LA(Es) OZ>9A 12-1300 9A>OK1 OZ>LA(iono) 9A>OZ CS5BLA>CU2 LA>OZ YO8>PA DL>UT5 LA>LA(bs) CN8MC>CU3 OH0SIX>OH1 13-1400 SV>S5(jt) 9H>SV3 PA>EA7(jt) SV8>UT5(jt) 14-1500 S5>SM0(ms) ON>EA7(jt) EA1>EA7(jt) YT1>PA F>OK2(jt) HB>ON(jt) DL>PA(tr) F>ON EA1>EA3(ms/iono) 15-1600 HB>DL 16-1700 S5>DL EA1>CT(ms) HB>DL EA4>EA7(jt) EA5>EA1(jt) HA1>S5 no data 1700-0640/10

May 10 0640-0700 YO8>SV8(jt) LY2>SM2 JO3JW>UT7 EN500>UY6 YO8>SP9(jt) OH9>OZ(jt) LZ1,YO7>UY6 EA2>9A OH1>SM2I5>PA(jt) EA7>ON(jt) ON>SP3(jt/tr) 07-0800 YO7AQF,YU1EO>UT7 I5>PA(ms) LY2>PA(iono) ON>LY2 UY6>LZ4 ON>I0(ms) HG1BVB>HA5(tr) ON>UT5 SM1>OH7 TA7>SP5 SV2>9A E7>UY6 LY2>PA(iono./Es) EN500,UY6>LZ4 ON,PA>DL ON>SM4 UY6>YU1 UT5>HA3(Es) HG8BVB,9A0BHH>UT7 LY2>DL ON>F EN500>HA8,DL.YT7,OM5 UT5>OE3,DL I7>EA3(iono/Es) ED7YAD,CN8IG>ZB(tr) SP6>OH5(ms) LZ1SJ>RL3 UY6>S5 IS0>EA7(jt) PA>SM4,OH1 UY5>YO3 UU7>LY2 DL>SM4(Es) EA3>EA7(jt) UX3>LZ4 08-0900 UX1>YO3 SV3BSF>F(Es) UR5>IM5 UR9>HA3(Es) UY6>OE3,OM5,OE1 LU2>UU7 UT1>HA3 TA7>SP7,LY2,OK2 F>SM4 5B4CY>I8 EN500>UX1(Es),OM6,S5,I3,SP6 S5>UT5 SV2>IS0 F>I5 OZ>F(jt) DL>ON US5>OK2 UR3>OE3 F>OZ(jt) SV2>SV8(tr) UR3>SP6(Es),OE3(Es) TA7>SQ4 09-1000 OM6,EA3,UY6>DL EN500>OK1,OM3,DL IT9>I8 UY6>SP6 ON>F(jt) ON>CN(jt),EA7(jt),EA5(jt) YO9>DL OE5>ON(jt) ON>CN(jt) 5F1>F(JT) S5>EA7,UT5 UT1>OK2 10-1100 EA7>F(jt),5F1(jt) OE5>EA7(jt) SP3>OE1(ms) F>CN F>IS0(ms) EA7>ON(jt)

EA7>S5(ms) OH3>9A PA>SM0(MS) CT>EA5(ms) UR3>SM4(Es) OH1>9A HG1BVB,HA3>OH6
11-1200 SP3>SM0(ms) HB>EA3(ms) OE3XLB>EA3(ms) OH5RAC>SP6,OK1(ES)
SM4,SM5>UR3 OH3,ES0SIX,OH9SIX,OH6>SP6,OM4 OE5>ES1 OH2>SP3 ES6>DL UY6>LA
UR7>SM0 IT9>YO3 UT7>OH7(Es) LY0SIX>OZ SM2>HA8 HA4>SM2 OH5>DL,OE2,OK1
OH3>HA1 YT1,SP6>OZ ES4>DL 12-1300 SP6,OK2,OE3>OH8 DL>OH5(Es),SM4,SM7,OH3
OH5RAC,OH7>OK1 OK2>OH1 YT1>SV2(ms) SV1>YO9 OK2>SQ9 OH3>SP6 OH7>DL(Es)
SP9>SM2(Es) LA>LY2(ES) YL2,ES5>PA OH6>OE4 UT5>SM4 13-1400 ES5>DL LY2>OZ,DL
14-1500 OE3XLB>DL(tr) DL>OZ(tr) S5>9A OE6>S5 15-1600 IS0>I0 I5>EA5(jt) SV3BSF>EA3
16-1700 LA7SIX>OZ,DL SV8>EA3,SV1 LA>OH3(ms) EA3>SV1 LZ2CC,YU1>EA3 PA>F(jt)
EH1DVY>YU1 SV2>F EA6>YO3 17-1800 EA4>I7,I8 IT9X,IS0,I8>EA1
9A,YT1,I0,I6,I7,I8,E7>EA5 9A,YU1,I4,I5,I6,I7,I0>EA7 YO7,I7>EA3
EA6>9A,YO3,S5,I5,I6,YU1,IS0 EA6>F(ms) IS0>F TR8CA>SP6M I8>IW9 CN8IG>I5 EA8>I2
18-1900 EA7>I0(Es) IT9X>EA3 EA5>I7,I0 SV3BSF>F UT9,OH3>SM2 SV2>EA2,UR3
9H1SIX>F UT9>OH1 SV1>EA6 19-2000 OH3>YO3,OH7 UX3>SM6 UT9,YU1,YO2>OH7
OH9SIX>PA,DL,SP6 YL2,SM2,SM5,OH1>YO3 UR3>OZ,SV1 YU7>OH8 EN500>UT7,SM6,OZ
OH5RAC>YO2 OZ>UT5 OH1>LZ4 OH7>YU7,OE5,DL SM5>ER1 UY6,EN500>PA
YO9>SM0,SM4 DL,HA0,YO2,SP1>OH8 SV1,SV3BSF>EA3 SP6,YO6>OH6 SV2,YO7>SM2
OH3>LZ4,HA0,YU1 OH9>SP3 OH7>PA,YO7 OH9SIX>SP6 YU1EO>OH1 YL2>9A YO3>LZ4
20-2100 UR3>PA OH7,OH8>DL LZ2CM,YO2,HA0,YU7>OH1 OH3>YU1,YO2
HA5,HA8,YU1>OH7 OE6,S5,OH7>OH5,9A,OK1 OH8>9A,DL,OM3,OK2,S5 SM2>HA0,YU1
SR9FHA>OH1 OH7>SV2,OK1,9A,PA,DL HG5BVC>OH1 OZ>OH5 YO2>YU7,SM3 21-2200
OH3,OH7>PA(Es) OK2,OM5,OH3,HG1BVB>OH1 OK1,S5,9A>OH8 DL,OK2>OH7
OH3,SM3>OK2 OH9SIX>YL2 ES1>DL SK3SIX>SP5 DL,OK1>OH5 22-2300 OH9SIX>OE1

May 11 0507 LA>OH7 06-0700 OZ>OH5(jt) ON>PA(jt) 07-0800 PA>I5(jt) OH9>OH5(jt)
SM3>PA(ms) EA3>F(tr) OH3>PA(ms) HG1BVB,EN500>UT7 HA1>HA6 F>PA(iono/ms)
EA1>PA(md/Es) HB>DL(tr) 08-0900 F>EA1(ms) OZ>EA1(ms) HB>DL DL>F(Es) 09-1000
EA6>DL(iono) EH1DVY,EA2B>I8 UX7>OZ SV3BSF>EA6 10-1100
I6,SV3,LZ2CC,LZ1SJ,IT9X,SV1SIX>EA3 I6>OZ SV1,SV3BSF>ON 11-1200
4N1ZNI,LZ2CC(Es)>EA3 F>ON F>DL(tr) IT9X>DL,OH1 IZ1EPM>YO7 DL>I8 12-1300
HG5BVC>EA3 14-1500 S5,F>EA7 S5>DL S5>DL(tr) 15-1600 LZ2>LZ3 LZ2CC>EA6 16-1700
I3>SP3 LZ2>S5 EH1DVY,EA4>IT9 EA6>I7,LZ1 EA5>I7 S5,LZ2>9A SP3>UT5 YU1>LZ3
17-1800 EA2B,EA4>IT9 ES2>OH5 18-1900 S5,EA7>9A LZ2>LZ3 OH7>PA S5,EA7>I3
19-2000 OH3>OZ(jt) OE3XLB>9A OH3>PA(jt) UT5>9A(ms) PA>9A(jt) 21-2200
I8>9A(ms)PA>OK1(ms)

May 12 06-0700 PA>I5(jt) OZ7IGY,DL>TA2 OH1>LZ3 UY5>SP6 ES0SIX>LZ1
EN500,IW3FZQ>UT7 HB>PA(jt) UU5>F TA2,EN500>SP6 LZ1>4X LZ1SJ>DL OH5RAC>S5 07-
0800 LZ3>SP2,SM1 S5>PA LZ2>LA,SM0,DL YO3,LZ1,OH3,OH9SIX>DL SV1SIX,LZ1SJ>SP6
YO9>OZ OH7>OH5(tr) SV9>IS0 I0JX>UR5 OZ>SV2 08-0900 LA>OK1(jt) LZ1SJ>OE5
LZ2CC>OE5,DL I0JX>UR3 SV2>OZ,DL SV9,SM2,OH1,SV3BSF,4N1ZNI>DL SV1SIX>DL,OE5
SV3BSF,SV2>SP6 I4>YO4 PA>I5(jt) YO9>PA(jt) LZ2>PA(Es) SP7>IT9 SP7>I8 09-1000
LZ2CC,LZ2CM,SV8,SV3BSF,SV2,SV9>DL F>CT(jt) SV3>SP1 YU1,SV2>PA DL>OH5(iono) 10-
1100 YU1>HB EA1>F(jt) 11-1200 SR9FHA>OH7,OH5 OH5RAC>SP6 12-1300 OH5,OH7>DL7
13-1400 EA7>F(jt) YO8,HA3 OH3>OE1,SP3 HA8,UT3>OH8 YO8,HA3 14-1500 OH8>DL(jt) 15-
1600 OH3>OK1(jt) EA3>EA7(tr) CN8MC,CN8IG>EA3 ED7YAD>EA3,EA6 CN,EA7>F CN8IG>I8
EA7>I4 Z B>F(Es) CN>HB CN8MC>EI 16-1700 CN>F ED7YAD>I8,I9 CN>I8 OZ>LA(jt)
IT9X,IK5ZUL>EA7 CN8IG>F CS5BLA>IS0 CS5BCP>IT9 S5>9A,I5 17-1800 CT>EA3,I0
IS0,EA4UW>CU2 I2>EA7 CN>F CT0SIX,CS5BCP>CU2 S5>DL,9A CN8MC>F,I0 OH7>LA(jt)
CS5BLA>I8 19-1900 CN>I8 CT>CU3 CU3URA>IT9 SP3>LA(jt) S5>DL 19-2000 DL>OE5(tr)
LX>PA PA>9A(ms) PA>DL(ms) 20-2100 ES0SIX>OH1(Es) PA>ON

May 13 05-0600 HG1BVB>SP6(tr) EI0SIX>EI 06-0700 SV3BSF>SP6,OZ3XLB>EA3(iono)
DL>EA3(iono) F>DL OH7>UY5 OH5RAC,SM2>UA4 OH1>UT3 DL>SV2 07-0800 LZ2>PA
TA2>DL F>EA1(ms) OH3>SM2 LX0SIX>I8 I0JX>UT3 IT9X>SP6 IZ1EPM>UR7 UX7,SV2>EA3
I8>LX LZ1,LZ2,YU1,4N1ZNI>PA HA6,9A>F SV3BSF>DL I5,EA6>SP9 IS0>SP2 SP7>I5
9A,LZ2CM>ON HB9SIX>YO2(Es) EA6>I0 LA7SIX>OZ YU1>PA HA6>F I5>SQ7 9A>OZ,EA6
ON0SIX>YL2 FX4SIX>YO2 08-0900 I3,F>9A EA3,F>SM6 HA6>I2 SM4>SM5 EA3>SP9,OZ,LA
OZ>I8,F,EA3 LZ2,OE6>ON SM1,SQ2>F ON0SIX>I8 DL>I7,F SM1,S5>PA LA,OZ>EA3
LA>LZ1(jt) OH3,SM6,SP5,LA >F LA>F(jt/Es) EI0SIX>DL SM1>EA3 LA>EA6 OZ>I1,F
OZ7IGY>I2 SM6>EA1 09-1000 F>LA,OZ,SM4,SP2,SQ9,SM7,OK1,OK2,HA1
EI0SIX>OE5,SP6,DL S5>PA SM7,DL,OZ,SM4,SM7>EA3 PA>CT EA1>SM6
HB9SIX,ON0SIX,LX0SIX,OZ7IGY>OY EI0SIX>SM2,DL ,SP6 ON>LX
10-1100 EI0SIX>SM2 11-1200 OZ7IGY>OH8 SK3SIX>EI DL>PA F>S5 no subsequent data
received

May 14 no data before 1800 18-1900 SM>OH,S5 OZ>DL,S5(iono) 19-2000
S5,OH0,9A(iono)>SM OZ>HA(ms),DL,OH,9A S5,OH0>LA OH>PA(jt),LA(jt) OH0>S5,DL 20-
2100 OH0,S5>SM SP,7S(jt)>9A OH>OZ,SM SM>PA LA>S5,OH(jt),9A(jt)
YU>I(jt) CT3>EA8 21-2200 CT3>EA8

May 15 0444 LA>DL 0648 DL>EA3(ms) 07-0800 PA>OE(jt) ON0SIX>EA(iono)
IZ1EPM>EA(tr) OE3XLB,HB9SIX>EA(tr) 08-0900 UR>SV SV3BSF(Es),SV1SIX(Es),LZ1SJ>DL
09-1000 UR>SV8,SV,LZ,DL,I OK>DL(tr) SV9>EA6 HG1BVB>DL 10-1100 CT>EA6
DL>OH(jt) SP>DL(jt),EI F4EZJ>EA SM>DL,HB,FHB>DL(tr) 11-1200 SM>EA LA>I EA6>CN
SM>DL EI>OZ OH0SIX>PA 12-1300 EI0SIX>SP F>SM(iono),SM(Es),LA EA>7S OZ>PA,EI
13-1400 CT3>CT OZ7IGY,I5MXX,I0JX,9A>F EA2B,EA4Q,EA4UW>OE EA4UW>SP I>9A,HB
EA6>S5 14-1500 EA6>SM,OZ EA6,9A,SV>DL OZ7IGY,DL>EA CT3>EA8 S5>OE LX0SIX>YU
YO>LZ 15-1600 ON,9A,F,OZ,LZ,4N1ZNI,SV,SV5,SV9,YU,YO,E7>DL
SR2FHM,OZ,S5,DL,LA,SM,OM,OE>9A HA,YU>S5 9A,OZ,DL>SV3
FX4SIX,DL,LX0SIX,ON,PA>YO IQ4AD,ON>UR SV,SV8>OZ
PA>ON,YU,YO SP>F,I RN,OZ,IT9,SM,SP>1 HA,F,ER>ON F>ER LZ>CT 16-1700
ES,YL,OE,OZ,4X4SIX,OD>9A F,ER,UR,YO>ON YO,LZ>DL SP,YL,SM,9A>I S5,OH,I>SM
4X>YO SV>OZ LZ,YO>F UR>S5 CU2>EA OM>OE 17-1800 4X,9A>S5 9A>I 18-1900
OZ7IGY>IS0 19-2000 SV3>EA3 S5>PA 2046 CS5BAL>EA8 ED7YAD>CT3 2129 SP>OH(ms)

May 16 05-0600 IS0>SV8(jt) YU>SV8(ms) OH9SIX>SM I,EA>F 06-0700 OH>OZ,SP PA>LA(jt)
OH>SP,LA,PA IS0>F(jt) 07-0800 OH,LA>PA LX0SIX>PA(tr) F>IS0 IS0>I(tr) 08-0900
EA>EA6(jt) OZ>OH(jt) I>OH(jt) EA6>PA,I(jt) S5>OZ(ms) LZ>PA(jt) 09-1000 YU>HB(ms)
ED7YAD>I HB>ON(jt) SR9FHA>SP PA>SM(jt) DL>LX 10-1100 PA>OH(ms) CT>CN(jt) I>4X
YU>S5(tr) YU>LA(jt) 11-1200 YU>LA(ms) OH>SP(jt),HA DL>SM(ms),OZ,SP(jt) E7>9A, F>DL
12-1300 UR,YU1EO,HA>SM E7,9A>S5 F>PA,LA(ms),DL OE,OH>9A I0JX,YO,DL>UR
LX0SIX>EI,F HB9SIX,ON,DL,F>EI LZ>DL OE,SP>OK DL>ON HG1BVB>TA E7>PA,OE 13-
1400 9A,E7,TA,CS5BALG,OH,EA,UR>OE SV3,I,LZ>F 4X,F4EZJ,OH,UR,EA2B,EA6,SV9>I
UR,YO,CS5BLA,EA,EA6,I0JX>DL E7,HA,YU>SM CT,EA6,EA,OH,SM>9A EA6,EA>HA
WE4RT>EA8CEQ ON0SIX,PA>IT9 OH,EA6,EA>S5 TA>OK OZ>LZ EA,CT>HB EA>PA
EA6,TA>OM E7>CT SV8>ON 14-1500 OE,S5,DL,I,9A,OM>CT
I>PA,TA,EA,SV5,SV9,UR,ON,CT,5B I,F,SV9,EA8,EA,EA6,9H,IT9,IS0,TA,SV3>DL
EA>S5,DL,SP,UR,ON,HA,TA,E7,9A,OZ,F,OE,PA,HB,5B I0JX,SV9,IT9>EI
4X,9A,E7,I,SV,SV3,SV9,YO,S5,SP,OE,Z3,IT9>F EA6>DL,OZ,PA,YU,SP,OE,OM,YO,I,SM
9A>OK,YO 9H>YO,PA,ON I,IT9>PA,YO,ON SV3>PA,ON SV9>ON,I,UR,OM,S5,OE
4X>YO,I,SP 5B,ON>IS0 TA>OK,CT,OM SV8>ON,PA CN8IG>OE HB,UR>SV E7>S5,EI
SV5>I 5B>SP S5>CT CS5BLA>OM 15-1600 YO,SV9,S5,4X,OE,OK,DL,ON,9A,I>F
EA6,EA8,ON,4X,9A,SV9,TA>DL E7,I,OE,9A,OM,OZ>CT IT9,EN500,I>UR
SV9,E7,5B,9A,UR,4X,SV3,SV9,CT>S5 ON,OZ,4X,I,DL,HB,PA,SP,F,OM,YO,OE,IT9>EA

EA6>YO,F,PA,ON,OZ,SP,LX 4X>PA,ON SV3,SV8,TA>SP IT9>YO,PA I0JX>EI SV9>HA
SV,9H>PA ZB>HB SV8>OM 9A>SV,YO F(JN38)>F(JN13 short) I>E7,CT 16-1700
9A,9H,I,EA,IT9X,SV9,OE(tr),ZB>DL S5,DF0ANN>IT9 IS0,EA6(jt),EA,4X,I>YO
SV8>I,F,9A IT9>OE,OK SV9,9H,SV1SIX,4X>SP OZ,SV8,YU,SV9,HB,YO,PA,LX0SIX>EA
E7,9H,SV9>OE IS0,SV>CN I0JX,SV>F I,SV8,EA6>SV 4X>PA,I,YO 5B>OE,S5,F,OK
I>SV9,UR CT>S5 EA6>SV3 17-1800 SV>DL,ON,PA,EA YO,SV3>F LZ2CC>EA,DL,SP,S5
I,9A,EA6,SV8>SP 9H>HA,S5,SM,DL,YO,SP IS0>LZ,SP,ON,YO HA>OE,F,EA
EA6,SV3,SV8,IT9,EA,SV9,I>DL 9A>OM,OE,S5 IT9>SM I>OZ,SV3,IT9,YO,HA,SP,SV8,
EA,SV9,S5,SM EA4UW>OE IT9>S5,SP,HA,DL,YO,LA,LZ OM>OE SV3,EA6,ON,SV8,SV9>PA
LX0SIX>I 4N1ZNI>IS0 SV9>OZ,S5 EA6>LZ,OZ,PA,SV LA,OZ7IGY>IT9 OZ>EA 18-1900
I>OZ 9H>SM,SP SP,PA,OK,SV,DL>EA6 EA>HA,S5,OK,SP IZ1EPM>LZ SV,F>ON IS0,I>PA
SV,SV8>PA,I IT9X,SV3,SV8,I,9H,SV>DL HA,LZ,SV,SV8>F I>SP IS0>LY,UR OZ>IT9 19-2000
EA>HA,OM OE3XLB>DL(tr)

May 17 05-0600 I>EA6(ms) OE3XLB,HB9SIX,ON0SIX(ms),SV3BSF(ms),LZ2CC,4N1ZNI>EA3
06-0700 EA3>PA(iono) SM3>PA(ms/jt) OM>HA(tr) I>SP 07-0800 I,LZ,IT9,SV,UR,YO,SV5,
OH>4X OK>HA DL>HB(ms/tr/jt) DL>HB(jt) 5B,I>IT9 HB>S5(jt),PA(tr),SP(jt) 5B,SV8>108-0900
HB,S5>DL 4X>IT9,I 4X>SV(jt) S5>HA,PA HA>OE,DL TA,PA>I 09-1000 SV9(ms)>S5,OE
LA,OH5RAC>PA SV5>I,IT9 DL,SP>OH EA8>EA3 OH9SIX>DL,OK DL,OH>HA LA>SM,DL
I>4Z4TL UR>OZ CT>CT3 OH>OK OH9SIX>SP 10-1100 OE,LY,HG1BVB>OH SM>LY,SP,HA
IT9X>4X OH>DL,SP,OM,OK,PA,HA,ONYL>PA SV3>OE OZ>UR SK3SIX>DL ON,LA>SP
EA8>EA3 SV9>OE,IS0 SV5>I LZ>9H 11-1200 SM>OE,OK,HA,UR,OM OH9SIX,S5>OE
YL,OH,RU1,ES>DL OH>SP,SM,DL,OE,OK EA6>OZ HA>OK,OM(tr) S5,LZ2CC>9A 12-1300
F>LA,YU,OZ,OH PA>EI,I SP>OH OK,OE,DL,OM>EI EA>YU,YO DL>SV3,EI SM>YU
EI0SIX>S5 13-1400 IT9X>DL,EA YU,LZ>SM OZ7IGY>YO I0JX,EA,UR>DL
EA>YU,5B,IT9,LZ,DL,YO YO,SV>F I>OE 4Z4TL>IT9 YU>ON,SM SV8>PA 5B>SV3,YO EI>OK
IT9>CT 14-1500 EA>HA,OH,OK,I,YU,S5,SM,YO,LA,DL,OE,IT9,OZ,5B
DL>I,SV8,CT,LA,UR,IT9,SP,9A,YO,LZ YU>ON,F,YL IT9,E7,LZ,SV,SV3,SV9,9A I,OK,EA,DL>LA
F,CT,ON>LZ HA,YO,SV8,SV9,OH,SP,9H,4Z4TL,LZ,OE,ON,IT9,YU,SV,SV3,S5,E7>F
LX,5B>SV3 I>4Z4TL,SM,HB,EA6,SP,PA,YL,F,PA,EA,OM,DL,LA,EI,SM,ON,OE
SV3,SV8,SV9,SM,OH,S5,UR,SV>PA UR,IT9,LA,YO,SV9>HB LX>SV OK,DL,SP,LZ>CT
HB,S5,SV>EI EN500,DL,OK,OE,HB,EA6,4X1FO>UR SM,PA>LZ SP,OZ>YO,HB
YO,LZ,YU,4Z4TL>SM IS0,LZ,YO>SP EI0SIX>9A 5B>SV3,SV8 EA6>OK 4Z4TL>IT9
15-1600 SM,UR,YU,ON,SV8,LX,SP,E7,Z3,F,PA,OZ,SV9,HB,DL,IS0,YL,SP,LA,OH>I
PA,SV,YO,9H,SV9,I,SV3BSF,SV8,IT9,OE,IS0,SP,EA6,EA,HA,CT,ON>DL
S5,HA,TA,9A,SV8,UR>HB EI,S5,HA,OE,YO,SP,IT9,SV9,UR,SV,LZ,OM,YU,YL,OK,OH>F
EA,EA6>S5 SV>ON,PA,IT9 SV>IT9 SP,E7,SV9,HA,YO,SV,IT9X,OE,SM,OK,SP>EA
ON0SIX>OH YO>EI,EA6,ON IS0>LA,OZ,PA EA6,9H>SP E7,SP9,9H,SV9>PA LZ,YU,SP>CT
SV9>OZ,YU SV,SV8,YU,IT9,9H>ON EI,PA,IT9>HA HB,LX,IQ4AD>LZ CN8IG,SV8>OE
SV3BSF>EI,OE YU>EI EA6>S5,SM HB>HA SV>SM SQ5>EA3(bpsk) LX>YU EI0SIX>OH
16-1700 YU,E7,OH,UR,SV,HA,ON,OE,SP,I,9A,YO,S5,9H>F LZ,LX,9A,HA,E7,4X1VF>PA
SV,I,E7,Z3,SM,I,SV8,SV9,3A,EA6,IT9,I5MXX,9A,EI0SIX,SV3BSF,PA>DL
OE,HA,UR,9A,YU,S5,SV9,I,OK,SV,E7,LZ,HB,HA>EA IS0,LX,3A>YO SV9>9A,PA
HA>I,EI,ON,IT9,HA,SV8 F,LX,LZ,HB>OH OY,YU,YL>HB SP>IT9,IS0
PA,SM,OE,EA,HA,UR,SP,DL,LZ,YO,CT,YU,OK,S5,OZ,SV9,YL,F,ON,SV8>I 5B>IT9,SP
S5,9A,LZ>CT 9H>OZ OE,HA,Z3,SP,LZ,YU,IT9,9A,S5,LX>ON EA6,EI,IT9>SP
S55ZRS,I,LZ,HA,IT9>LA E7,SV9>PA EI>YU IS0,ON0SIX,IT9>SM S5>SV TA>HB IK5ZUL>OE
17-1800 YO,S5,PA,F,LX,I,ON S5,LZ,OE,E7,OM,YU,YL,9A,SV,TA,Z3,HA,SV9,IS0>DL
9A,I0JX>OZ OK,SM>I 4X4DK>DL,PA,I SP,I>EI F,DL,I,IS0>YO LZ>ON,DL,PA
LA,I,EA,SV,TA>OE SP>EA,IT9,F,I,3A,IS0 OK,OZ,YL I,YL,E7,9A>EA SR9FHA,9A>EI
HB>SM,OE I>YL ES,HA,OM,YO,S5,9A,YU,LZ>ON I>SM,YO,YL,HA Z3,HA,IT9>PA
IS0>SP,OK HA>CU3,F,HB,OE,EI E7,UR,S5>EA F>I,SP,SV9,YL,OE,S5,HA,Z3,OZ,UR
LX>OH,S5,HA,I 9A0BHH>LA 3A>SP [G/ON/F>YO/LZ on 144 1800] 18-1900 SV8>SQ,DL

HA,YO,LZ,E7,EA,YU,SP>ON UR>EA,DL,I,HB OM,YO,YU,UR>F OK>OE,I,CT,DL
E7,I,9A,EA>SP 9A,9H,S5>OZ LZ>OK,DL E7,I,S5>SM YL,HA,SP,OH,YO>I
UR,E7,HA,SV3BSF,YU,YO,LZ,YL,I0JX,4N1ZNI,SP,9A>DL PA>YU,LZ LX>YU
SM,UR,ER,9A,OZ7IGY,PA,OK>EA LZ,SV3BSF,9A>PA I>YL,ES,LY,LX EI>OE,HA
SP,F,LY0SIX,I>OH S5>LA EI,YO,HA>OE Z3,E7>OK HB>YL,YO,HA SV3BSF>OZ IZ1EPM>LA
4X>OE,PA 19-2000 ES0SIX,OH0SIX,I,SP,DL,OK>9A IT9X,I>SM
DL>YO,YU,LZ,HA,SV,9A,E7,OM,OK OH0SIX,SP,OM,SM>I YL>UR,I,EN,S5 S5>LA,SP,OK
I,F,SM,9A>SP EN,UR>OH HA>OM,PA,ON,HB UR>F,EN,HB,OE,I,OH,PA,YL,OZ7IGY
PA>IS0,YO YU,SV,LZ2CC>PA E7,EA,YO,LZ,YU,HA,UR>ON ER,HA,OM,YO,UR>F
CT,E7,I,S5,9A>OK I0JX>SP 4N1ZNI,SV3BSF>DL YO>HB 20-2100 FX4SIX>SP YO,LZ>OH
UR>PA,EN,SM,OH IT9>SM EA4Q>DL EN>YL EA>I ES0SIX,EN>UR 21-2200 OH>UR,EN
YO>PA EN>F

May 18 03-0400 OH9SIX>PA 05-0600 I,HA>OH IT9X,ES0SIX,IW9,OH>YO OH5RAC,EA>LZ
YU1EO,UR>OZ LA>9A,SV UR>I,OH LZ2CC>EA OM,UR,LA>OK SV3BSF>SP
UR,SV3BSF,ES0SIX,LZ2CC,LZ1SJ,I,SV1SIX>DL HB>OH ES0SIX>YO I,UR>SM I>LZ
LY0SIX>PA HG7BVA,LZ2CM>OH 06-0700 OE,HA>LA
SV3BSF,YU,SV,LZ,UR,YO3JW,SM,Z3,4N1ZNI,OH0SIX>DL UR>EA6 HG8BVB,LA>OE
HA>OH,OM SN>SV SP>YU,Z3 LZ2CC>PA,YO YO>OE,IT9 F>OH,CN,SV,YU LZ>ON,SP,EA
LZ2CC>F SV8,HA,UR>OZ ES>PA HB>SV UR,EA6,YU,HA,F,HG7BVA>OH
SV3BSF,SV1SIX>OE5 OH5RAC,OZ>YU UR>YL LA>LZ SP>YO HG1BVB,SP,UR>I
07-0800 LZ,YU>OZ EN,LA,SK3SIX,YU,UR,SV,OH0SIX,OH>DL SV>PA LA,SM,DL,YO,OZ>ON
OK,PA,UR,LX0SIX>OH SM,YO,YU,LZ,OH,ES3>F DL,YO,SV3BSF,OE,YU>OZ SV9,HB>LA
YO>SP,SM,OZ LA,SP>LZ SK3SIX>HB HA,UR,YU>I SV1SIX>UR YU>OK,PA,SM,SP HA>IT9
OH>OK,9A I0JX>OM HG1BVB>OE5 YO,LZ,YU>EA6 SV>SM I>SP UR>SM,I 08-0900
OM,LA,HA,SM>F IT9,F4EZJ,9H,SA6,TA>HA HA,SV2,SV3,SV9,YO,LA,UR>ON SM>YO
UR,YU1EO>PA SM,SV,YL,DL,HA>I FX4SIX,LA>OM S5>5Q TA>OE EA8>EA,EA6 SM>HA
EI>SP SV9,EI,OH,I0JX,YO,IT9X,LZ,LA,UR,SV3BSF>DL LA,YU,IS0,SV3BSF,YO>PA
UR,OH>OH OZ>9A,ON,PA 09-1000 EA>HA(Es/jt) EA6>DL(Es) OH0SIX>F HA>IT9
OL,EA6,YO>DL DL>SV9 YU,HA,UR,DL,9A,SV9>ON S5>YL,DL,I TA>I,DL F,HA>I SV3BSF>DL
F>9A,S5,HA I0JX>DL OZ7IGY>EA 10-1100 SP,EA,EI,I,OH,HB,OK,DL,HA,SM,ON,S5,
PA,F,ES,OM.EA6 11-1200 HB,OH,SM,DL,F,ES,LA,EI,EA,YL,HA,LY,PA,EA,CT,IS0,I
12-1300 OE,HA,SM,PA,F,LX,YL,YU,LZ,OH,SP,SM,LA,OE,S5,OM 13-1400 DL,OH,UR,YL,LA,
SM,OH,ON,I,HB,S5,LX,YU,SP 14-1500 LA,DL,UR,EA,I,EA8,SP,EI,PZ,CT,S5,OH,IS0,
SM,SV8,OK,ON,PA 15-1600 EA,9A,LY,UR,SM,TA,I,LZ,OH,YU,PA,DL,ES,4X,SP,OK,
RN,LA,F,IT9,OZ,OE,CN,PA,YO,CT,OM 16-1700 EA,I,DL,OH,SM,9A,HB,IT9,CN,IS0,CT,LA,
SP,YO,4X,YL,ON,OZ,PAES,LX,UA4,OK,HA,OE 17-1800 ES,PA,OE,SM,LZ,SP,F,YL,EA,
OH,EA8,DL,CT,9A,HB,ZB,I,4N,SP,HA,CT3,YO,UR,SV8,CN,OM,IT9,OE,YU,PA,LA,IS0,LZ,5B,O
Z,LX,4X,E18-1900 FM5AA>CU3EQ NP4A>IK5MEJ,EA7KW FJ5DX>EA8AK
US0MS(KN99)>HA3HV OH,LA,EA,EA8,SM,SV8,OK,DL,SV9,CT,RL3,SP,S5,F,
SV9,9A,IT9,PA,ES,UR,OZ 19-2000 NP4A>CT1FJC,EA1CCM KP4SQ>CU2JT WP3UX>CN8KD
KP4EIT>CN8KD,CN8SG FM5AA>CN8KD V44KAI>CU3EQ EA8,CT 20-2100 9Y4D>CU3EQ
WP3UX>CT3DL PJ/K2GSJ>CT1FFU KP4EIT>CU3EQ,CT1FJC NP4A>CT3DL,CN8LI,CN8KD
CU1,EA,4X,OH,I,CT,CT3,YU,OH 21-2200 QA4TT>CU3EQ

May 19 05-0600 OH,OZ,I,F,SP,EA6,OH,SM,UR,SV3,HA,OE 06-0700
OZ,DL,UR,I,LZ,PA,F,SM,SV8,SP,Z3,EA6,YL,SV,OH,UR,YU,OK,LY,SV3,CT 07-0800
SV3,EA8,DL,UR,LZ,YU,I,EA,OE,HA,YO,OZ,OH,SP,TA,YL,EA6,9A,S5,IS0,SV,OK,IT9,HB,F,LA
08-0900 IT9,OH,SM,UR,LX,IS0,SV5,9H,YO,OE,SV3,I,HA,LZ,IS0,EI,EA,9A,CT,
E7,SV8,EA6,OZ,YU,HB,LX,OZ 09-1000 SV8,DL,SM,OK,TA,I,EA,DL,ES,LY,OH,UA4,SV9,
OE,SV3,HA,IT9,SV,9H,SP,PA,S5,OK,LA,OM,UR,YO,HB 10-1100
EA,ES,LA,SP,F,IS0,OH,E7,SM,DL,I,OH,OZ,YL,9A,SP,LZ,OE,OM,HB,LX,LA,YU,PA,OK 11-1200
HA,ON,SM,DL,I,OH,OZ,YL,9A,LZ,OE,S5,E5,OM,HB,LX,LA,YU,PA,OK,EA 12-1300

CT,CN,OH,DL,SM,F,SP,YL,I,9A,LA,OM,YO,LX,UR,OK,HA,OZ,OE 13-1400
LZ,OE,OH,DL,HB,EA8,CT3,SM 14-1500 HB,YU,EA,YO,S5,SP,F,DL,LZ,SV8,9A,LX,TA,SV,
PA,ON,IT9,I,HA,SV3,OE,EI,PA,OM,SM 15-1600 PA,YU,EA,DL,UR,CT,I,SM,9A,S5,SV,LZ,
ON,HB,TA,S5,SV9,E7,HA,YO,SV3,OE,IT9,F,Z3,LX,OK,SP,F,HA,LA,4X,US0,SV5,ES,OM,OH,L
A,Z3 16-1700 I,CN,SP,EA,9A,SV,ON,UR,9H,SV8,F,HB,SM,E7,IT9, SV9,HA,UR,EA8,
4X,S5,CT,OE,LZ,TA,EA6,Z3,DL,ZB,SV3,YO,EI,PA 17-1800 IT9,I,Z3,EA,9H,F,YU,EA8,ON,
DL,SV9,S5,E7,LZ,UR,TA,HA,IS0,SP,EA6,OM,9A,OK,4X,PA,SV8,OE,CN,ZB,HB,OH 18-1900
NP4A>EA1DDU,EA8CCG,EA8BPX WP3UX>SV2HPY 0H,DL,IT9,EA,EA8,PA,I,OH,S5,
CU3,CT,F,YO,SV9,LZ,SP,EA6,YU 19-2000 NP4A>EA8AAW,SV2DGJ,IT9YTR,F6FHP,
CT1DHM EI,OH,ZB,CU3,TA,9A,IT9,EA,DL, ON,CT,YU 20-2100 NP4A>OZ5AGQ
VE2XK>CT1FFU WP3UX>CU3EQ,EA1DDU YS1G>SP5NVN,IZ8FAV,IZ8EPY
HA,DL,OE,ZB,SM,OH,CU1,CBN,EA9,9A,IT9 21-2200 NP4A>CT1EKY,EA7KW
WP4AZT>CT1FFU WP3UX>OZ3K

May 20 04-0500 OH(ms) 07-0800 HA,OZ,EA6 08-0900 YU,OH,I,LZ,LA,SV3,HB,UR,SM 09-
1000 DL,OH,LY,SP,I, 10-1100 4X,EA,LA,SP,9A,SM,OH,OH,OM,DL,OH0,HB,OE,I,HA 11-
1200 OH,DL,9A,YL,YU,SM,I,OM,LA,F,EI,EA,OH0,EA8,EA6,ES,OZ,HA,9A,PA 12-1300
ES,EI,SP,HA 13-1400 IT9,DL,SP,SM,LX,UR,OH,OE,HB,EA,PA,DL,HA,EA6 14-1500
OM,CU3,EA,SV9,4X,S5,DL,F,IS0,TA,LX,I,ON,SV3,LZ,SV8 15-1600
SV9,I,LZ,EA,9A,EA6,F,TA,IT9,DL,4X,YO,IS0,F,UR,ZB,PA,4X,9H,SV8,5B,YU,HA 16-1700
4X,9A,HB,CS5BLA,TA,YO,S5,I,IT9,EA8,EA,I,CU3,SV,OE,DL,5B,SV9,SV3,JY,E7,9H,CN,YU,SV
8,TA 17-1800 EA,DL,9H,F,UR,OZ,E7,OE,EA8,S5,CN,EA6,I,CS5BLA,HA,EI,CU3,JY,YO,A,SV5
18-1900 SV,SV8,CN,I,CU1,EA,EA8,IT9,F,EA9,9H,S5,CU3,DL(jt),PA,LX 19-2000
CN,I,EA,I,9H,OK,CU3,EA6,F,CT,EA8,ZB,9A 20-2100 NP4A>OZ3K K4SN>CN8LI,CT1FFU
W9DR/4>ZB3B,EB5GP,CT1FJC W4ABC>CU3EQ KP4EIT>CT1FFU
CN,I,EA,9H,OK,CU3,EA6,F,ZB,CT,9A 21-2200 HI3/LY3UM>CT1FFU,EA1CJ,CU3EQ
N3LL/4>CU3EQ VO1TA>EA8CQS NP4A>CT1EKY,OZ3K KP4EIT>CU3BL
HI3TEJ>EA1CCM,CT1FJC,EA1BLA,CT1ANO,EA1FDI W4SO>CT1FJC VE1YX>CN8LI
WP3UX>CU3EQ 22-2300 KP4EIT>CT1FFU K4DR>CN8KD
HI3TEJ,HI3/LY3UM,NP4A>CT1EKY 23-2400 KP4EIT>CT1FFU

May 21 04-0500 CS5BCP,9A,OZ7IGY,9A 05-0600 UR,SP,OZ,OE 06-0700
DL,ZB,F,CS5BAL,EA HB, OH,LZ,EA6,PA, CN,F 07-0800
HA,OE,EA,F,CN,OZ,OH,CS5BLA,EA6,OK 08-0900 OH,OZ,CN,F,EA,EA6,IT9 09-1000
HA,CN,OE,PA,EA,DL,OK,LZ,OZ,SV3,YU,YO,9A,4N,CT,HB,IS0,ZB,CT3,I 10-1100
HA,DL,CN,EA,F,CT3,SP,IS0 11-1200 KP4EIT>OE1WWA ES,OZ,HA,DL,I,PA,OH 12-1300
DL,OZ,I,SM,PA,9A 13-1400 HA,9A,OE,S5,SM,Z3 14-1500 4U,HA,9A,EI,OZ,JY,IT9,LA,OE
15-1600 HA,LA,OE,EI 16-1700 I,F,DL,SV,9A,ON,F,PA,CS5BLA,OE,LX,SM,HB,EA,YU
,S5,4N,CN,SP,LZ,PA,SV3,SV8,OZ 17-1800 NP4A>EA5CA,9A4K,9A1CCY,9A4WW,S57RR
TN5SN>HA1FV F,S5,SV5,PA,I,EA,HA,DL,CN,CT,OE,ON,IS0,LZ,YO,HB, SP,9A,EA6,SV,
EA8,OM,OZ,ZB,CT 18-1900 KP4A>EA6NB YU,EA,S5,9A,EA8,HA,OK,F,EA6,4X,
EA6,I,DL,ON,SV3, OM,PA 20-2100 D44TD>9A5CW,9A9SF CT,I,9A,CN,EA 21-2200 SM

May 22 06-0700 YO,HA 08-0900 4U1ITU, PA 09-1000 4U1ITU, PA,ES,YL,5B,LA,HA,OK,
EA8,I,I9 10-1100 OH,LA,4U1ITU,DL 11-1200 SM,OH,DL,EA 13-1400 9Q1D>EA3TI,TN5SN
SV,HA,4X,LZ,SV5,PA,OH,4U1ITU,EA,DL 14-1500 UR,DL 15-1600
F,CT,EA,DL,S5,LZ,OH,5B,I,YO,PA,ON,EI,SP,SV,UR,CN,IT9,9A,OM,SV8,YU,SM,4X,LZ,HA,LY
W7GJ>OZ1DJJ(eme) 16-1700 PA,UR,9A,SM,LZ,LY,I,CN,EA,HB,4N,OH,EI,DL,ZB,
YO,CU3,4X,CT,5B,HA,YU,EA8,F,ZC4,IT9,IS0,OZ,S5,ON,9H,S5,W1JJ>OZ1DJJ(eme) 17-1800
TN5SN>9H1SP CT,EA,SV5,I,PA,DL,OZ,OH,EA6,EA8,ZB,EI,UR,SV9,9A,YO,F,E7,LA,
SM,9H,YU,SV8,SV,ON,IS0,HB 19-2000 CT,DL,EA,S5,9A,LX,EI,ON,PA,IS0,F,I,CN 18-1900
EA,DL,CT,I,PA,IS0,S5,9A,PA,CN,F,EI,HB,ON TN5SN>DH8WE,EA3AKY,IT9RZR, S57RR,

SP5EWY 19-2000 CT,DL,EA,S5,9A,LX,EI,ON,PA,IS0,F,I,DL,HB,CN 20-2100
CT,EA,CN,F,HB,I,DL,EI,S5,EI,ON,PA

May 23 05-0600 LZ,SP(jt) 06-0700 OH0,UR,DL,PA 07-0800 OZ(ms),LAS(ms),EA(ms)
5B4FL,4Z5LA>A71BU 08-0900 4X,UR,EA8,OH,S5,9A,OE,I,EA 09-1000
4X,LZ,OH,HA,EA8,EA,UR 10-1100 OA4TT>IW5DHN 9A,4X,YU,LZ,OH,YO,E7,S5,UR,I,SM,YO
11-1200 SP,F,SV,4X 12-1300 OZ,PA 13-1400 ON,IT9 14-1500 YU,PA,SM A71BU>5B4FL 15-
1600 SV8,IS0,EA,IT9,ON,PA 16-1700 YU,S5,9A,HA,OE W1JJ>LX1FX,OZ1DJJ(eme)
K6QXY>OZ1DJJ(eme) 17-1800 K6MYC>OZ1DJJ(eme -22) 18-1900 FM5AA.WP3UX>CU3EQ
ED7,I 19-2000 9Y4D>CU3EQ FG5GP>CU3EQ NP4A>CT3FQ PA,SM 20-2100
NP4A.WP3UX>CT3DL PU8TEP.PV8DX>CU3EQ FJ5DX>CT3DL 21-2200 PV8AZ>CU3EQ
WP3UX>CT3DL FG5GP>CT3DL 9Y4D>CU3EQ KP4EIT>CT3DL

May 24 05-0600 JL8GFB>UT7IL 06-0700 4X,UR.YO 07-0800
5B,UR,4X,PA,OZ,F,CT,CN,EA,EA8 08-0900 I,EA,F,EA8,YU,PA,CT3,S5,C4,5B,EA6,S5,DL,IT9
09-1000 EA6,EAZ8,DL,HA,CT,4X,UR,PA,HB,9A,4X,UR,HA 10-1100 EA8,CT,EA,UR,C4
11-1200 TN5SN>EA7KW UR,5B,C4,ZC4,SV 12-1300 UN1SIX>UT5JAJ 4X,YU,EA,EI,LA,I
13-1400 TN5SN>EA3ATI,EA3DBJ CT,EA,EA6,EA8,CN,PA 14-1500
TN5SN>EA3AKY,EA3DBJ,EA6DX,EA4AOZ,IK4DCT,S57A,S56P
TR8CA>DK1MAX,EA7HG,S57A TR0A>DK1MAX CU1,CU3,EA,EA6,F 15-1600
TR8CA>S57RR,EA3TI TN5SN>YO3BL,HA5PT,YU2DX,IZ0AEG,I2SVA,IK5CVV,HA0DU,9A6R
9Q1D>DK1MAX 4X,SV,SV3,SV5,SV9,I,IS0,IT9,ON,EA,EA6,EA9,EI,YO,5B,LZ,F,HA,YU,ZB,S5,
16-1700 TR8CA>DG0JMB,DL1XX,OE6MDF,DL6SBM,DJ8RZ,IZ8DWF,IK2GSB,9A6R,
HA1FV,I4EAT,I2SVA TR0A>DK1MAX 9Q1D>DK1MAX
TN5SN>YO3BL,IZ8FAV,OM3FV,HB9BIN, SP6MLK,HA2RD,SP6NVN, OE1WWA, OE6IMD,
UT7QF,OE4VIE,9A7V S9SIX>DK1MAX ,HA1FV 5B,CN,LZ,EA8,IW9,I,9A,ON,EA,CT,PA,4X,
UR,DL,C4,F,9H,OE,E7,S5,PA,EA6, EA9,SV,SV3,SV5,SV8,SV9,ZB,HB,OE,Z3,IS0,CU2,YO 17-
1800 TN5SN>SM6CMU,IK3VNM,OZ8ZS,DJ8RZ,IK2UTT TR8CA>HB9PHJ,F8BBL,OE5MPL,
9A2TK,DG0JMB,F5JNX,9A4K,DF0FCF ON,OZ,HA,OH,OK,SP,EA,PA,Z3,YU,4X,F,IT9,DL,TA,I,
9H,EA6,CT,OP,EA8,SV3,5B,UR,YL,SV,YO,LZ,ZB,CN,C4,E7 18-1900 TN5SN>SM6CVX,
DK1MAX,F5JNX,F5HRY TR8CA>DK1MAX OK,EA,CT3,IT9,DL,I,EA8,SM,CS5BAL,
SV9,F,Z3,SP,PA,LZ,C4,4X,OZ, EA8,YL,ES0SIX,ON,EA8,F, PA,EA6,SV,SV3,EA,YO,9H,S5,I,
CT,4X,PA,C4,EI,UR,DL,IT9,OE W7GJ>OZ1F(-17) 19-2000 OA4TT>EA7KW,CT1HZE
4X,S5,PA,C4,CN,I,PA,CU3,YU,EA,LX,DL,SV3,IS0,9H,LZ,IT9,9A,E7,ON,EA8,YO,EA,SP,SV8,SV
9,9H,Z3,CU3,DL,EI,HA,OE 20-2100 KP4EIT>CT4DL,EA7KW OA4TT>EA7KW
G,DL,LZ,PA,SV,SV3,SV5,YO,YU,I,IW9,4X,EA6,S5,E7,9A,5B,C4,OE,F,Z3,LZ 21-2200
NP4A>CT3DL I,SV5,YU,4X,HA,OM,E7,9A

May 25 05-0600 UK9AA>UR,4X EN500>OH 06-0700 UK9AA>UR UR>OH,DL,F HG7BVA>F
SV3BSF>EA EN500>OG 07-0800 ES,4X>LZ EN500>DL EA6>SM7 YL>HA 08-0900 EA6>9A
OH5RAC,ES0SIX>YO 4X>DL ES>I 09-1000 LY,SP>LZ UR>ON 4X,I>SV CS5BLA>IT9 10-
1100 UR>DL 11-1200 LZ>DL C4>SM HB>SP TA,C4>IT9 4X>9A EA9>TA 12-1300
TA,UR,YO>SV SM>LZ C4>SP UR>DL 13-1400 9Q1D>IS0AWZ S5,9A,I,LZ>SM
I,SR5FHX,EA,UR>PA OZ>EA,LZ OH0SIX,UR>DL TR8CA>5T5SN LA,UR>9A YO>SV9
OH>I,S,S5 SR5FHX>ON TA,C4>IT9 SV,HA>TA C4>OK 14-1500
DF0ANN,OZ7IGY,YO,ON,EI,TA,OH,OE,LZ,SM,YU>I YO,9A,YU,TA,LZ,SV3BSF>F YO,OE>IT9
OH,SP,IS0,IT9,SVI,SV8,IW3FZQ,SV3BSF>DL EA>OK,IS0,LA ON>LZ,YU,EA IS0,ZB,EA>SP
YO,I0JX,DL,OZ>CT EI,SM>S5 IS0,TA,CT>OM LX0SIX>Z3,SV IS0,9A>LA
SP,HA,OZ,CN8MC,ON0SIX,OZ,YO,S55ZRS,EI,HG7BVA,HB9SIX>EA YU,SP,HA>EA6
IS0>9A,SP SV1SIX,IT9X,SV3BSF>ON EH1DVY>LA SK3SIX,EA,PA>9A 15-1600
F>EA,DL,LZ,SP,SM,LA,OK,YL,SV3BSF,YU,CT,E7,YU,IT9,LZ,Z3,SV7,SV8,SV3BSF,E7,EI,
CS5BCP,I0JX,5B4CY,F,9H,SV5SIX,EA4Q,CT,IS0,4N1ZNI>DL YO>4X,HB
YU,Z3,E7,SV,SV7,LZ,F,HA>ON SV9,TA,YU,EI,Z3,LZ,F,IS0>S5

IS0,SV3BSF,SV8,SV9,YU,HA,9A,I,TA,9H>UR LZ,OH,ON,HA,UR,SV9,SM,SP,EI>I
SV3,SV8,SV9>OH YU,F,SV,SV9,E7,EA>PA IT9>SP,OH,UR,SV
OH0SIX,EI0SIX>9A SV9>SM,9A,UR,OM OM>9H,TA,EA6 YU,LZ,SV>HB SV1SIX>SP,HA
SV8,IS0,SV3BSF,EA>SP Z3,EI>OK,UR TA>OE,S5,HA IT9,IS0>LA EA>SM
CS5BCP,SV3BSF,CS5BALG>OZ LZ>9A CU3URA,SM,SP,ZB>EA SV3BSF>OE OZ7IGY>CT
16-1700 LA,LX,CT,CU3URA,PA,EI,ON,DL>EA Z3,YU,F,TA,CS5BLA,DL,SV,SV3,SV8,
SV9,F,5B>SM EI0SIX,SV8,LA>OE UR,OM,ON,TA,PA,ES,F,LY>I OH>I,IT9,E7
EI0SIX,LX,9H,LZ,SM,Z3,5B,F,C4,IT9,TA,YU,SV3,SV7,IT9>DL SP,ZB,DL>EI
OM,EA,I,5B,HA,SP,TA>PA 9A,LY,LZ,HA,SM,LA,CT,ON,C4,DL,SP>F HB,DL,YU>UR
EN500,TA,YU>S5 YL,ON,HB>CT K1TOL>HA1FV,DK1MAX HB,UR,4X>YO SV8>SM
E7,HA,SV9>LA SP,LZ,SV,Z3>ON SV3,SV9,LZ,Z3>OK IT9>SP,LA SV1SIX,SM,OH>HA
YU>S5,ON,HB,SM SV9,5B>OZ 4X,LZ>UR I,9H>SP 5B>9A,SM SV3>9A LX>SV 4N1ZNI>HB
17-1800 DL>I,UR,YO,OE CT,UR,SM>EI SP>ON,EA YU,SV8,I>SM LZ>DL EI,OY>EA OH>HB
18-1900 TF,HA,SR5FHX,C4,LZ,TA,YU,I,F,EI,LA,YO,EA,OM,9H,UR,OE>DL A71MA>DL8HG
TA,HA,CT,YU>OE TF>OK,DL,HA,PA,I,S5,9A HB,EA>SP OH,TA,OZ,HA,PA>YO
HB,SV5>OZ,SP UR>F,OK,I,I9,PA HB>CN,YL,PA SP>EI,SV5,I CT>LA,OH,I,EU500
TF,OE,PA,EI0SIX>9A F>LA HA,UR,F,S5,LZ,SP,HA,DL,YO,OM,YU,9A>ON LA,EA8>EA
CN>I,DL,SM I,EA,TA,YU,9A>SM,PA LA>SV ED7YAD,CS5BLA>OH OE,TA,OY,OM,E7>PA
LA>I,S5 OZ>YU S5>F,EI,YO EA>EA6,EN500 OZ,UR,LA,9A,EI>EA C4>HA UR>9A,F,PA,HA
TF,UR,SM,LA,CT,EI,OY,OZ>I TA>LX 4L8A>ON5QRP F>OK 19-2000 YO>DL,ON
EA,HB,I,OE,F>SP IS0,F,OE,I,IT9,S5,TA,EA,SP,SV5,9A,EN500,PA,CU3,YU,SV3BSF>DL
9Y4AT>DK1MAX HA,OK,LZ,SP,S5,YU,SV>ON UR>YU,CU3,S5,TA HB>EU4,9A TF>EA,9A,I
HA>CU3,F,S5,C4,I,F 4L8A>LZ2HM,PA2V,F4ENK,HA8BE LY,EA6,SP,S5>EI
OZ>S5,I,EA PA>YO,I,S5,YU,C4,EA F>OE,OK,UR UR,LZ1SJ,TA>UA4 OK>CU3
IS0>YU,YO,UA4 I9>LA CU3URA>EA EI0SIX>ZB UR>ES.EA SK3SIX,I0JX,EA6,EA>CT
TA>PA SM>I CN>EA6 3A>9A QA4TT>S57RR 20-2100 SP,LZ2CM,LZ1SJ,HA,YU>UA4
OZ,SM,SP,PA,EI>EA QA4TT>OE5MPL,OK1FD,YU7EF,OZ3K,9A5CW,UT5URW,IK5MEJ
EI,I>3A EI>PA,F,TF,EA EA6>CN,TF ED7YAD,CS5BLA CT>ON,I,DL LY0SIX,HB,I,DL,EA>F
SV3BSF,4X,YU>UR SV5>F UR>LZ,SV5 21-2200 EA,CS5BLA,CS5BCP>F ZB>PA
ON0SIX>CT SV3BSF,LZ2CC,IT9X,CS5BALG,YU,4N1ZNI,EA>DL
ED7YAD,CS5BLA>EI YU>SP CN>I EA4UW>EI 22-2300 9H,EA>DL 9H>OZ

May 26 0559 HG1BVB>OH 06-0700 EA6>LZ,I,YO,UR IT9X>F SV3BSF>SP,DL,EA
SV1SIX>EA6,DL S5>YO HB9SIX>DL(tr) 07-0800 S5,DL>SV5 4X,IT9X,5B4CY>UR SV8>OE
EA6>LA,OH EI0SIX,CS5BCP>OE CS5BALG,EA,OH>DL 4X>LZ CS5BALG,SP>EA
OE3XAC,SV3BSF>F SV1SIX>IS0 08-0900 HG7BVA,IS0,I,SV3BSF>F
OE3XLB,9A,I0JX,S5,EA6,E7,SV,ON,>EA 4X>YU CS5BLA,EA4Q,CS5BCP,OH,SM,EA8>DL
OH,SM>SP ED7YAD,ZB>S5 CN8IG,CS5BALG,EA2B>OE OH,SM>LA EA4Q>OK CN8IG>PA
09-1000 E7,S5>EA8 E7,S5,9A,I,DL,ON,IT9,HB,YU>EA CS5BLA,YO>9A IT9,IS0>F
SV5>UR,EA8 EA2B,CN8IG>DL LX0SIX,HB9SIX,IQ4AD,DL,F4COT.I5MXX.IW3FZQ,
S55ZRS,DF0ANN, ON>CT CS5BLA>I 10-1100 TA>9A,LZ,EA 5B>HA I9,IS0>F CT0SIX>IS0
ED7YAD>PA I,HB,DL>CT FX4SIX>I EA6>LZ,YU SV3BSF>EA OH>RN3
9M6XRO>5B4FL,EA6SA 11-1200 SV3BSF,IT9X>F DL>EA CU3URA,CU1>EA8 EA6,EA9>9A
12-1300 OH0>OH,SM I>EA3 EA6>OE S5,IS0,IT9>EA 9A>EA8 CN8MC>CU3 CU1>CT
CS5BCP>IT9 13-1400 CS5BCP>IT9 I5MXX,S5,F,LX>EA CU1,DL,I>CT HA>PA 14-1500
EA>PA,LX 15-1600 CN>I EA8>4X 16-1700 EA8>CT,CN,4X,EA,I EA>I 9H>4X 17-1800
EA>HB,9H EA8>I,F,LX,DL CN8IG>HB EI0SIX>9A,HA ED7YAD>PA CU3,EA6>EA
EA6,EA>OH CT3>I,S5 OZ>OE EI0SIX>YU OZ7IGY>EA CT3>EA6 CU3URA>CT I>LA,CU1 18-
1900 CN8IG>CU3 EA>HB,EA8,CN,DL,I CS5BLA>CU3 EA8>HB,I,DL,9A,PA,CN
Spots missing 1821/26>0706/27

May 27 07-0800 4X>LZ OH>LA 5B4CY>I 09-1000 ES0SIX>YL HG1BVB,SR9FHA,OE3XLB>OH
10-1100 DL>SP,OH SV5>I OH5RAC>OE 11-1200 OH,DL>SP OH>LA 12-1300
LA>OHOH5RAC>SP CU3URA,LA>EA8 OH>DL EA8>CU1 13-1400 D44TD>CT1HZE
15-1600 CS3BSM>CT,EA8 EA4Q>EA8 16-1700 CS3BSM>EA8,CT EA8>EA 17-1800 EA8>EA
S5>OE 18-1900 EA8>EA S5>9A 20-2100 W7GJ>9A5CW(eme -18db) CU3URA>CT 21-2200
CU3URA>CT2 W7GJ>IT9TYR(eme) CT3>EA8

May 28 05-0600 SV1SIX,4X>UR 9M6RQ>UT7IL 06-0700 EN500>SV
C4,IT9X,SV3BSF,5B4CY>UR 08-0900 4X,SV1SIX,5B4CY>IT9 09-1000 LZ1SIX>4X
4X>SV,9H,EA,HA 10-1100 4X,C4>9A 5B>IT9 4X>YU C4>LZ1 EA8>EA
SV1SIX,SV3BSF,OH5RAC>UR 11-1200 C4>YU CU3URA>CT CS3BSM>EA 12-1300
CS3BSM>DL A71A>IZ8DWF EA>CN CU3>EA8ON0SIX>UR 13-1400 CU3>CT CU2>EA
SV9>UR 14-1500 FX4SIX>CT CS3BSM>OK,EA6 4X>HA,I 15-1600 TN5SN>UU7JR(?)
CS5BAL>IS0 EA,CS5BALG>F CS3BSM>EA 16-1700 EA8>F,EA,9A EA>EI S5>I
CS3BSM>EA6,F,EA CT>9A TN5SN>IS0GQX,OZ1BNN,IZ8DWF, 9A5CW, 9H1SP,
F6FRR,OE5MPL EI0SIX,ON0SIX>CT 17-1800 TR8CA>HB9HLM,EI3IO,IZ8DWF,PA0WRS,
DH2OAA,DL2NO,PA3C,OZ1BNN TN5SN>PA3C,IZ8DWF,HB9HLM,EI3IO,PA4VHF,
SV2DCD,DL2NO,PA3GCV, PA0WRS IS0>PA EA8>EA,OE CU3URA>CT CQ3SIX>EI EA>SP
18-1900 EA>DL,PA,S5,SM,SP,HA,OZ,OH,CT3,9A,YU QA4TT>DK1MAX
EA8>HA,OZ,YO,DL,PA,EA,F,OE,OK,S5,SM,LA,SP,CT,S5,HA,ON,CN,9A,SV CU3>CT,9A
9A>F,S5 PA>IS0,9H EI,4O>I KP4BJB>EA1CCM EA6>HA CP1FQ>Z32ZM(??)
TR8CA>DH6DAO,PA3C IS0>OZ 7X2GX>OE3EMC(?),OE2LCM,OE5MPL
IS0,EI,CU3URA>DL HB9SIX>EI EI0SIX>OE 19-2000 EA8>F,I,SP,PA,EA,HB,OM,EA,
OK,9A,SM,YO,OE,OZ EA6>SP WP3UX>EA1CCM FM5AA,W9DR/4>CT1HZE
KP4EIT>CT1FFU,EA1KY EI>I,9A KP4BJB>EA1AUS LA>SM I>S5,CT3 CS5BCP,EA8>OE
9H,CT,EA,CU3URA>DL CU3URA,HA>S5 CU3>YU OK,S5,F,HA,HB,CN8IG,SP>EA
CT3>IS0,I,9A CS5BLA,CT,9H>PA CU1>DL QA4TT>DL1MAX CU1>OE 20-2100
EA>YO,E7,I,S5,HA,PA,YO,HB EA8>I,EA,PA,DL CU2>EI CU3URA>I NN4X>CT1HZE
FM5AA>EA1YO,EA1DR D44TD>CT1HZE W9DR/4>EA1CCM NN4X>EA7AGX,CT1FJC CU2>I
EA8>9A,EA,DL,SP,HB,S5,I EA6>S5 CN>EA9 CT>F,9A,DL OZ7IGY>OH SP>YU(fai)
K4SN>CT1HZE CN>F KP4EIT>EA8BPX W9DR/4>CN8LI EA4Q>YO IS0>PA,I CU1>CN
CS3BSM>EI 21-2200 EA6>EA8,9A CU3URA>CT CN8IG>9A W4SQ>CT1HZE
WA4VUT>CT1FJC K4SN>EA7KW EA8,CT3,CU1>EA 22-2300 CU3URA>CT ED7YAD>S5
CS3BSM,EA8>9A

May 29 09-1000 SP>EI CS5BLA>I EA8,IT9X>CT IQ4AD>EA8 4X>YU CU3URA>IT9
10-1100 CS3MSM,CS5BAL>F EI0SIX,9H,CU3URA,EA>CT CT,4X>EA8 4X>YU,OE
11-1200 CU3URA>OK,OZ,CT CN8MC,CS3BSM,SV3BSF>F I0JX CN8IG>I IT9X,I0JX>EA
12-1300 CU3URA,OZ7IGY(iono),CN8IG,CN8MC>F 16-1700 EA,F,OK,CT,DL>EA8
SV>PA,DL,ON SV3BSF>SV 9H>SM CU3URA>EI CS3BSM>EI,F 17-1800 EA8>EA
IQ9TP,EA4Q>DL CU3URA>CT D44TD>EI2IP,EI4EY ED7YAD>OE EA6,EA>YO CS5BALG>9A
EA6>EA8 18-1900 CS3BSM,S5,HA,E7,EA8>EA6,EI EA8>EI SR9FHA>IS0 SV3BSF>F
IT9X>DL EA,S5>HA CN8IG,EA>9A IS0>DL EH1DVY>CN I0JX,CS3BSM>EA 19-2000
CU3>EA8 E7>OE YU1EO>F SV>SV5 CS3BSM>EI 20-2100 OH9>LA(jt)
CS3BSM,CS5BALG>CU3 CU3URA>CT 21-2200 W4GF,AC4TO>CT1ILT W1AW>EA8TX
W1JJ>OZ1DJJ W1OW,K1NA>EA8TX N2NL>EA3AKY KP4EIT>CT3DL,CT1HZE
W1XX,W1JJ>CT1ILT WP3UX>CT1HZE W7GJ>OZ1DJJ(eme -20dB) CT>EI IS0>CT(bs)
CS5BLA,CS5BAL>EI 22-2300 NN4X,KD5M,K4RV>CT1HZE W3TG>EA8TX W9DR/4>EA8CQS
K4PI>CT1ILT K1FPV>CU2JT N2DB(?)>EA8AVI AC4TO,XE2WWW>CT1HZE

May 30 03-0400 UN1SIX,JH8ZND,JF2WXS/2>UT7IL 04-0500 EN500,SV8>UR
UN8GC>UT7IL SM4>LA SV1SIX>UR 05-0600 EN500,IT9X,I0JX,SV3BSF>UR
UN8GC>LA5YJ,UX3HX,EN500I SM4>ON 06-0700 LZ2CC,EN500,Z3,HA,IT9>UR

SV1SIX,SV9>SP SV1SIX,CS5BLA,CQ3SIX,ON0SIX(iono)>EA I0JX,IT9X>YO SV9>OE
HG7BVA>OH 07-0800 SV5,IS0>I JM1KNQ>SP5EWY,OZ3K,PA4VHF,UT7IL,DK1MAX,9A2SB
9A>TF(ms) OH,LY>ON SV5>IW9 JH4IUO>ON4IQ,9A4K JG3GNU>IT9TYR EA8>CN
SV1SIX,SV9,SV8,4X>I CU3URA>CT OH>LA,HA JE2XBY>HA0DU JE1BMJ>5B4FL SV9>9A,I
ZC4>OE UR>IT9,HA CS3BSM>EA6 08-0900 ES,OH>UR CS3BSM>EA IT9,OH>4X HA>9A
LX0SIX>CT LA>PA,ON,OH SV9>I UR>YL,OH SV5>IT9 JH4IUO>PA7FA,SP9HWY,PA2M
JH6VDT>PH7A JE6ART>PA2M JH6VXP>SP5EWY,ON4IQ 09-1000 OH9SIX>DL,SP6
EA8>EA,F,LX,DL UK8OM>OG2M,OH5NZ,OH2AUK UN1SIX>OG2M UR>OH
CS5BCP,OH9SIX>DL SV1SIX>IS0 CS5BSM,FX4SIX,CU3URA>CT SV3BSF>IS0
C56YB>EA5BS CT>EA,DL CS5BLA>LX 10-1100 EA8>EA,CT,EA6,ON 4X>YO SP,LX>DL
UR>OH CS5BLA>ON EA8>F,EI,PA,LX CT>EI,CN,PA EI,ZB>CN UN1SIX>OG2M,OH1ZAA
11-1200 EA8>EA,CT UN1SIX>OH,RK3 UN8GC>OH1ZAA SV>SV3 N4JJ>EA8TX
W3CUR>CT1HZE 12-1300 HI3TEJ>PE1MZS,EA5EF,EA3AKY LX0SIX>PA K4RX>CT1HZE
HA>S5,PA CS5BALG,K4RX,AC4TO,WP4G>CU3EQ W4RVZ>EA1ASG EA6>EA3
N3LL/4>CT1HZE,EA5EF KP4EIT>F6FHP 13-1400 K4SN,N2NL,C6AFP>CT1HZE
WP4U>EI7BMB W9DR/4>CU3EQ HI3TEJ>EA1AHO,ON4IQ OE,OK,ON,OZ>HA
W4SO>EA1CGK ON>DL NN4X,W4SO>EA5EF KP4EIT>EI7BMB 14-1500 EA6>SV,SV3
4X,OK>S5_PA>DL SV1SIX>SP_IT9>OK,HA SV1SIX>F SV3BSF,9A,S5>HA CU3>EA8
9H>HA,OK SV3BSF>IS0 HI3TEJ>CT1DHM,F9IE AC4TO>CT1HZE
W1LXA/4,W4SO,K4SN,AC4TO>EA1AHO 15-1600 4X,IT9>S5,SV9 OD5SIX,SV,HA>F
LZ2CC,SV,YO,IW9,EA6,SV3BSF,F>DL CU2,IS0>LZ SV5>HA,OK,DL 4O,YU,9A>EA
E7,YO,YU>I EZ3ALW>LZ1FH IT9>S5,9A 4X4SIX>UR SV8,4X,LA>OE 4O,LZ1SJ>EA6
SV1SIX>OK,HB TN5SN>UT5JAJ IS0>HA,UR EA6,IS0>YO 4X>9A LZ2CC>EA6,IS0
SV9>SP,OK SV>OK,SP Z3>IS0 SV3>HB 16-1700 IT9>OE LZ,SV,CT3,EA8,E7,Z3,YO,YU>EA
9H>9A,DL,SP,S5 TL0A>S57A,S53AK,DK1MAX,IS0GQX IS0>YO,HA,4O,9A
SV9>YO,HA,9A,OK,HA,S5 IT9>S5,PA,DL,9A,HA,OK,4X,9A TR8CA>SV2DCD,9A5CW
CT3,SV,I,4O>F TA,SV5>SP 4X>DL,OE,SV8 I>S5,YU,4O,OK,DL,SV5,Z3,YO,4X,EA,SV3
CT3>EA8 EA6>SV,LZ LZ2CC>IS0 LZ>CU2 OK,TA,YU>HA IS0>9A CU3URA,CS3BSM,W4SO,
C6AFP,KP4EIT,HI3TEJ,K4RX>CT1HZE SV>YO 17-1800 SV>EA,SP,UR,OE SV9>HB,YU
UR>YO,SV8,YU 9H,IT9>S5 CT3,DF0ANN,YU>EA TR8CA>9A,OK2GM TL0A>EA3TI
9H,SV3BSF>SP IT9,9H>HA LX0SIX,4X,SP>PA CT3>F IS0,SV9>YO

May 31 05-0600 OH5RAC,SV8>SV ES0SIX>SP OH9SIX>SM 06-0700 IT9,SV>SP SV>PA
SR5FHX>EA6 07-0800 A71A>SV1DH,SV8CS,SV8RX,EA3TI HA>I,9A HA>UR S5>IT9,9A
PA>EA,F SV9>SV8 4X4SIX>SV I>DL 08-0900 JY>SV,I9 IS0,SV7>4X
IS0,E7,9A,YU,HA,IS0>EA UN8GC>4Z5AO SV9,SV7>4X JY,A71A>SV1DH CT1ART>ZB
ZB>CT YU1EO,HG8BVA,I,YU1EO>EA6 IZ1EPM>UR IS0,DL>I 9A>S5,I IT9>F OZ7IGY>SV
09-1000 I0JX>SM I>9A,EA,SV CN8IG,CN8MC,EA,EA9,CS5BALG>9A
PA,EA9,SV3BSF,LZ1SJ>DL JY>SV,5B,IT9 OZ7IGY>I YO,SV,IT9,IS0>4X
SV8>SP,SVI,4O,E7,IT9,SV3BSF,YU>EA HA,OE>ON A71A>DK1MAX DF0ANN,I>CT S5>ON
ED7YAD>F HB>EA9 LZ>LX 5B4CY>IT9 10-1100 E7,EA9,4X4SIX,EA8,JY,SP,IS0>EA
EA6>SV,SP OZ7IGY>IS0 F4EZJ>CN OZ,I,IS0,SV,LX>DL E7>9A HB,S55ZRS>CT
I>EA9,OK,PA,DL,CT,OE,OZ,IT9 CS3BSM, CS5BALG>I HA>F,OE,LX LA>SM,OH CS5BLA>OE
SV5>SV,4X OK>F JW9SIX,OZ,LA>I 4X,EA>SV JW9SIX>SM CQ3SIX>9A IT9>OZ 11-1200
EA,EA8>OK I9>SM,EA F>YO,S5 YU,4O,E7,SV,I,9A>ON I,I9>DL 4O,I>PA
HA,EA6,IS0,I9,EA,EA8,CT,I>SP 1,HG5BVC>RK3 I>EA,S5,OZ,DL,YO,EA6 HB>YO,YU
I,IS0,EA6,SP,DL>EA E7,S5,YU,HA,SR9FHA>F E7>DL,PA HG5BVA>RK3 4X4SIX>SV3
CS5BLA,CN>IS0 I9,IS0>ON HA>OE,F,DL OZ7IGY,SR5FHX,EA8>EA6 4O,E7>EI 12-1300
CS1RLA,EA8>OK I>F,PA,DL,HB,ON,EA,ZB,OH EA8>SP,OK,I HA,EA6>RK3 YL>YO
EA,F4EZJ>CT IS0,IT9,OZ>DL OE,YU,HA,E7,LZ>F EA>SP,OE,9A,TA,OK LX>9A CT3>HA,EA
HB>S5,YU,I LA7SIX,UR>SM UR>OZ,SP 3A>OK 13-1400 I,IT9,EA>DL F4COT>HA JY>9H,SV3
9A>F,LY,LX OZ7IGY>YO CN8MC>HB 4X>OZ F>OM,SP,OE,HA UR>ON,OH I>YL,ON,EI,9A
EA6>SP,OK,DL EA>HB,OK,SP EI0SIX,CS3BSM>9A YU1EO>SM LZ>OH 14-1500

4X>ON,OZ,OH JY,S5,E7,9A,4O>ON 4X,LZ,OK,HA,YO,DL,SP,OE,S5,LX,UR>F
 I>PA,YO,DL,ON 9H,I,EA6,IT9>DL LA,4X,IS0>OZ EA,EA6,SV3>SP 5B>SV8
 4X>IT9,TA,SV3,OH,OZ LX>UR ZB>EI JY>IT9 EA0SIX,LY>EA ON0SIX>9A 15-1600
 S5,OM,HA,YO,SP,OE,YU>F SV8,EN500,4X,TA,SV5>UR EA,OE,F>HA 4X>YU,F
 CN8MC,EA>EI PA,S5,DL,PA,OZ,ON,IT9>I OZ7IGY>IS0 ON,EA,CS5BLA>SP 5B,F>OM
 CS5BLA,EA6>SP EA>EA6,SP JY>YU HB,I,9A,4O>PA CU3URA>CT
 9A>ON,PA 5B>LZ,SV SV8>SV 16-1700 EA>ZB 4X>YU,YO,HA,I,9A
 TL0A>CT1EEB,EB7HAF,EA9IB TA>SP5 EA>ON CU3URA,EI0SIX>EA YU>F CS3BSM>PA
 I>UR 17-1800 S5>9A EA8,ON>EA CS5BLA,CU3,EA>F 18-1900 LX0SIX>DL(tr) CT3>PA
 CS5BLA>F 19-2000 CU2,ZB,CS3BSM,CS5BCP,EA8,CS5BLA>ON CU3URA>EA ZB>EA8
 SV2>SV5 EA8>PA 20-2100 KP4EIT>EA3TI CU3URA>EA 23-2400 2157 LA>LA(jt) 22-2300
 CS3BSM,ED7YAD>EI CS5BLA,CS5BALG>CU3 W7GJ>OZ(eme) CS=U3URA>CT JW7SIX>LA
 JW5SIX,JW7SIX,JW9SIX>OH

50MHz PROPAGATION REPORT FOR MAY 2009 BY SV1DH

1. Data for all days, (31)
2. Relatively good days on: 1,7,17,19,24,25,30
3. 48 MHz AF video (9L+3C) on: NIL
4. 55 MHz AF video (5N) on: NI
5. Opening to EA8 on: 7,26,28 (2E)
6. " CT3 on: 7 (2E)
7. " TN on: 24 (TEP+E?)
8. " TA on: 1,13,25
9. " A7 on: 28,31 (2E)
10. " 4X on: 1,3,7,17,23-28,30,31 (R=42 %)
11. " OD on: 1
12. " 5B on: 1,7,24,27,31
13. " JY on: 3,31
14. " CU on: 20,28 (3E) (R=6 %)
15. " EA on: 1,5,7,11,13,19,22,24,28,30 (R=32 %)
16. " EA6 on: 1,2,7,19,24,26,28-30
17. " IS on: 1,5,19,25,26,28,30 (R=23 %)
18. " I on: 1,2,3,5,7,16,19,21,22,24,26,28,30 (R=42 %)
19. " F on: 19,31
20. " HB on: 18,30
21. " OE on: 1,12,18,19,30
22. " G on: 16,25,30 (1-2E) (R=10 %)
23. " PA on: 16,17,19
24. " ON on: 3,11,16,17,25
25. " LX on: 2,25
26. " SM on: 18
27. " OH on: 25
28. " DL on: 1,2,4,12,15,16,18,19,21,25,26,30,31 (R=42 %)
29. " SP on: 2,12,16,19,22,30 (R=19 %)
30. " OK on: 22,30
31. " ES on: 25
32. " LY on: 2
33. " UR on: 2,15,18,25,28,30 (R=19 %)
34. " HA on: 1,19,22,25,30
35. " S5 on: 1,17,19,30
36. " 9A on: 1,22
37. " YO on: 25,30

38. " SV5 on: 31(TR)

39. Special events on:

- 1(first good Es day 2009+ 1630 S5 on 4m)
- 5(2331-0230 JA to W6,7 Es)
- 6(2230-0045 JA to W6,7 Es++0245 JA to W7 Es)
- 17(1445-1615 G+GW+GM+GD+LX+S5+9A+PA+DL+ON on 4m +1715-1830 SV14 to OE+OK+DL +1815 DL to SV2 on 2m)
- 18(1745 KP4 to CT first 2009+1845 KP4 to I5)
- 19(0930 SV14 to LX+1445 9A+S5+OK+G+LX+DL on 4m +1600 SV14 to G+S5 +1700 SV14 to I0+F+LX +1815 KP4 to SV2+1900 KP4 to EA+F+S5)
- 21(0700 JA to W6+1645 SV14 to DL+1700 KP4 to EA+I+9A+S5+HA)
- 22(1800 TN to C.EU E+TEP)
- 24(0600 JA8 to UR first 2009+ 1200 UN to UR+1630-1800 EA6 on 4m+2015 OA4 to CT1+EA7)
- 25(0500 UK to UR +1500 -1530 EI+G+GW+OK+DL+OE on 4m+1600 W7 to 9A hrd+ 1630 W1 to DL first 2009+1630 SV14 to OE+DL +1830 SV14 to PA+ 2000-2100 OA4 to C.EU+UR 12300Km max!)
- 26(1030 9M6 to 5B+EA6 11600Km max +1930 9Y+FM to EA+CT+9H)
- 28(0500 UN to DU7 +0800 A6 vid to JA+1600 TN to N.EU E+TEP +1800 TN+TR to N.EU E+TEP + 1830-1945 OA4 to Z3+9A+DL+G +1830 KP4 to EA+YU +1930 W9 to CT+2000 FM to CT)
- 29(1300 TN to OZ+1400 W4 to EA+G +TN to N.EU +1645 KP4 to F+1715 OA4 to ON+G)
- 30(0500 UN to UR+0715-0830 JA to N.EU+IT+5B+EA6 +1045 UN to OH+1100 KP4+W4,8 to CT+1130 W to EA+1400 KP4+HI+W4 to W.EU+1630 TL to C.EU+IS +TR to SV2)
- 31(0715 A7 to EA3+OK +1215 HI to CT)

40. DXCC entities heard/worked during May 2009: 34 on 3 cont

41. DXCC entities heard/worked on 30th May 2009 : 15 on 3 cont.

The Americas

Auroral-related Modes

May 7 0123 VE8BY>VE2XK(419a)

Other Modes

Leaving the multitude of routine short skip to one side for the moment, one of the highlights of the month was the range of transatlantic openings. As with Europe, increased activity in EA and CT3 on the one side and on the Caribbean islands on the other played a part, but it also seems to have been a good month, doubtless aided by the consistently below-average levels of geomagnetic activity. As the table below shows, all openings occurred in the second half of the month.

The Americas to Europe and Africa

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
																+		+	+	+	+		+	+	+	+		+	+	+	+

The range of countries and call areas working across the Atlantic at one time or another was quite striking (though in the Americas only W4 and KP4 had openings on more than four days). It ran from VO down to PY, with a western boundary around W8 and a principal focus somewhere around KP4, which reported propagation on 9 days. In Europe the main beneficiaries were Iberia, EA8 and CT3, and openings ranged from CN in the south to OZ in the north, while SV seems to have been about the eastern boundary.

Americas<>Europe and Africa	
C6 30(CT)	FG 23(CT3)
FJ 18(EA8) 23(CT30)	FM 18(CN,CT3) 23(CT3) 26(CT,EA,9H) 28(CT,EA)
HI 20(CT,CT3,EA) 30(EA,ON,PA) 31(CT)	KP4 18(CN,CT,CT2,CT3,EA,I) 19(CT,CT3,EA,EA8,F,IT9, OZ,SV) 20(CT,CT3,OZ) 21 (EA,EA6,HA,I,OE,S5,9A) 23(CT3) 24(CT,CT3,EA) 28 (CT,EA,EA8) 29(CT,CT3,F) 30(CT,EI,F)
OA 18(CT3) 24(CT,EA) 25(OE,S5) 28(DL,G,Z3,9A) 29(G,ON)	PJ 18(CT)
PY 23(CT3)	V4 18(CT3)
VE1 20(CN)	
VE2 19(CT)	VO 20(EA8)
W1 25(DL,HA) 29(CU2,EA8,OZ)	W2 29(EA) 30(CT)
W3 29(EA8) 30(CT)	W4 16(EA8) 20(CN,CT,CT3,EA,ZB) 28(CN,CT,EA) 29 (CT,EA,EA8,G) 30(CT,CT3,EA,EA8)
W5 29(CT)	W8 30(CT)
XE 29(CT)	9Y 18(CT3) 23(CT3) 25(DL) 26(CT,EA,9H)

For some years burgeoning activity in the Caribbean has meant that contacts with the US and Canada (as well as inter-island working) have become an increasingly substantial feature of the 50MHz scene, with reports from all US call districts except W6. Apart from an active group of

TIs and the TI2NA beacon relatively little was heard of Central America, though TG, HR and YN put in an occasional appearance. By contrast, northern South America was more prominent than previously, with HK, YV, OA, HP and FY all worked fairly frequently. More remarkably, PY was worked at one time or another from no fewer than 8 US call districts. (It is worth emphasizing that every effort was made to place stations in their 'correct' district, and recalling the days for which data is incomplete.)

US and Canada to Caribbean and South America

W1 12 days 2(PY,P4) 3(TI) 4(TI) 15(YV) 19(P4,9Y) 20(OA) 21(HK) 23(YV,9Y) 28(HI) 29(HI) 30(FG,HI) 30(8P)

W2 9 days 2(J3,PY,TI,ZF) 14(J3) 19(FM,P4) 20(HI,OA) 21(HI,HK) 23(HK,J3,PY,9Y) 25(HI,HP) 28(HI) 30(HI,PJ)

W3 13 days 2(J3,PY,P4,TI,ZF) 3(HI,OA,TI) 4(TI) 14(FM,HI,J3) 15(HI) 17(HI,TI) 19(FY) 20(HI,OA,P4,TI) 21(FG,HK,YN) 22(TI,YN) 23(J3,YV,9Y) 28(HI) 29(YN)

W4 19 days 2(HI,J3,PY,TG,TI,V4,YV,ZF) 3(HI,HK,HP,OA,P4,TI,YV) 4(HK,OA,YV) 7(YV) 13(ZF) 14(FM,HI,J3,V4,9Y) 15(ZF) 16(V4) 17(HI,TI,V4) 20(HI,PY,TI,YN) 21(HI) 22(HI,TG,TI,V4,YN,YV) 23(P4,TI,YV) 24(HK,J3,TI,YV) 25(HP,TI,V4) 26(ZF) 28(HI) 29(YN) 30(FG,HI,V4) 31(FG)

W5 12 days 2(HI,HP,HR,PY,TI,ZF) 3(HK,HR,OA,P4) 4(HK,OA,TI,YN) 20(OA) 22(HI) 23(HI,P4,TI) 24(HI,OA) 25(HI) 26(ZF) 29(YN) 30(FG) 31(FG)

W7 4 days 2(PY) 4(TI) 20(TI) 21(TI,YV)

W8 10 days 2(J3,PY,P4,TI,V4,YV) 3(HP,OA,TI) 4(YN) 14(J3) 19(V4) 20(OA,PY,TI) 21(TI) 22(YN) 28(HI) 30(HI)

W9 10 days 6 days 2(HI,TI,ZF) 3(OA,TI,YN) 13(ZF) 15(ZF) 20(OA,PY) 21(HI) 22(TI) 24(TI) 29(TI) 30(HI)

W0 6 days 2(TI) 3(HI,HP,TI,YV) 4(OA) 17(TI) 20(HI) 30(HI)

VE1 4 days 2(ZF) 15(HI) 19(P4) 23(8P)

VE2 4 days 2(P4,TI) 15(HI,J3) 18(V4) 19(P4)

VE3 7 days 2(HI,TI) 4(YN) 20(HI) 21(TI) 23(J3,PJ) 23(9Y) 28(HI)

VE7 1 day 21(TI)

VE9 3 days 2(P4) 19(P4) 20(HI)

VO 1 day 19(FM)

While many contacts between the US and the Caribbean were by means of single-hop Es, those from more distant call areas and VE/VO would have required at least a second hop. It seems likely that contacts with PY (predominantly PY7 and PY8) were initially by tep, depending on Es for the final leg. It seems to have been a good month for multihop contacts. Apart from openings to the US and Canada operators in South America also had many contacts with the Caribbean, doubtless by 1xEs (though markedly fewer with Central America at comparable ranges).

Caribbean to South America

FY 1(FJ) 2(FJ) 8(FJ,KP4) 23(V4)

HK 3(TI) 21(HI) 25(FM,KP4,V4)

OA 3(HI) 18(FM) 20(HI,KP4,V4,9Y) 24(FJ)

PY 2(FJ,FM) 20(FM,KP4,YV) 23(HI,J3,PJ,YV) 26(FJ) 41(KP4)

YV 8(FJ,FM,HI,KP4) 15(FJ) 23(FG,HI,KP4) 25(V4,9Y) 31(PJ)

Operators in the western United States and Canada have fewer DX propagation opportunities than those in the east because they are looking to vast stretches of water with very few operators. Perhaps partly for that sort of reason they seem less likely to follow up such openings as do occur. So low-powered beacon signals between California and Hawaii on three days without any contacts known to have ensued. Another established feature of 50MHz during the summer is occasional openings to Japan. May was no exception, with such openings on no fewer than 9 days, which were quite well followed up. There was also a JA<>LU opening - a rarity on 50MHz but a more regular occurrence on 28MHz, typically from South American evening to Japanese morning.. In the western hemisphere as in the east we have more to learn about these infrequent long-distance events. (A report of 599 for a JA<>W7 contact, if sincerely meant, suggests some form of ducting or trapping than conventional 'hops') Whatever the mode(s), the openings on May 5, 6 and 7 occurred unusually early in the season.

Transpacific

JA 5(W6) 6(W6,W7,VE7,KL7) 7(W6,W7,KL7) 15(LU) 16(W7) 21(W5,W7,W0) 23(W5) 24(W0) 29(W5) 31(W6)

KH6 3 days 3(W6) 18(W6) 23(W6)

May 1 data before 1815 missing 19-2000 FY7THF>FJ5DX W1>W1 2022 W8>W8 21-2200 PY2>PY2 PY4>PY4 PY7>PY7 W3>W3 22-2300 PY2>PP5,PY4,PY2 PP5>PU5 PY7>PY7 23-2400 PY2>PY2,PY5 PY2,PY7>PY7 W1>W2 PP5>PY2 PP5>PY2

May 2 00-0100 W8>W4 PP5>PU5 ZV2,PY4>PY4 PY2>PP5KP4>XE1 PU8>PV8 XV2>PY4 W4CBX>W4,VE2 01-0200 PP5>PY5 PV8>PV8,PU8 PY1>PY1 PY2>PY2 02-0300 PY2,ZV2>PY4 PY7>PS7 03-0400 PY2>PY4 04-0500 PP5>PY2 05-0600 ZV2>PY2 0554 ZV2>PY2 1155 W1>W4(Es) ZV2>PP5 12-1300 PP5>PU5,PY5 PY5>PY2 W4,W8>W9 W1>W9 TI7/N5BEK>W5 13-1400 PP5,ZV2>PY2 W3>VE2 PY5,ZW5>PU5 W7>W7(jt) TI2NA>W5 W4>W8 PY3>PU3 14-1500 ZF2BI>W3,W4,W5 CO8DM>W4 W5>W7 ZF2ZB>W9,W4 TG9AFX>W4 TI2NA>W4 PY2>PY5 W1>W8 15-1600 W4>W4 ZF2ZB>W4 PY7>PY7 FY7THF>FJ5DX(Es) PY3>PY3 FY1FV>FJ5DX PY5>PY5 ZP9SC>PY2ZJ FY5KAC>FJ5DX PY2>PY2 16-1700 W5>W4 PY2>PY2 PY5>PY5 ZF2FB>W5,W9,W3,W4 PY0FF>PY7 PY5>PY5 W0>W5 PY2>PY2 W5>VE6(Es) ZF2BI>W3 W5>W6 C6AFP>W3 W5RP>W4 PY2>PY4(tr) 17-

1800 ZF2BI>W2,W3,W4,W5 XE2>W4 W5>XE1,W7,W4 ZF2ZB>W3 PY2>PY5 C6AFP>W4,W8
PY7>PY7 W2>W3 KP4>W5 PR8ZIX>FJ5DX W0,XE2,W5,W2,KP4,W3>W4 W7>VE6(ms)
PY4,PY2>PY4 W4>W4 VP9GE>VE2,W2 OH2BC>K2ZD(eme -23) 18-1900 W2>W2
PR8ZIX>K1TOL,W3EP/1,N3DB PR8ZX>K1TOL,N2WB,W3EP/1,K4MM,N3ZM,W3UR,W5OZI
W2,W3,W5,KP4,XE1,W8,VE3>W4 FY7THF,PV8AZ>FJ5DX,K1TOL VP9GE>W2,W1,W3,W8
W7>W6,W7 W5>XE1,W5,XE3,W7 C6AFP>W8 V44KAI>W4,W8 XE3>W3,W5 HR2DMR>W5
XE3RCM>W0 YV4AB>WZ8D KP4>W2,W5,VE9,W1 PY2>PY2 KP4,P43JB>W8 PY1>PY1
PY5>PP5 ZF2ZB>W9 PU8TEP>K1TOL 19-2000 KP4,W2,W1,K4MHZ,W3,W8,VE2>W4
P43JB>W1,VE1,W9,VE9 TI7/N5BEK>W2,W3,VE3 W3>W2 PV8AZ>W1JJ
PR8ZX>WY5I,N3DB,K1AC,N4QWZ,KE4WBO,N5DG,KE4WBO,W4GCB
PR8ZIX>VE3CDX,W7,K1TOL ZF2ZB>W3,W4,W5 XE1>W2(2xEs),W1,W3 XE3>W3,W5
PV8>PU9 TI2NA>VE2,W5,W0 HI8LAM>VE9,W9 PY7,PY2>PY7 W4CBX>W5 YV4AB>N9IW
W5>W2,W0,VE2 C6AFP>W8,W4 KP4>W0,W2,W9 J69B>W2,W4 W2,W8,W9,KP4>W2
V44KAI>W4 FY7THF>KE4WBO PU8>PU9 PT7ZAP>N3DB 20-2100 KP4>W4,W5,W8
ZF2ZB>VE1,W5,W2 W4>W4 W0,W8,W7>W5 J39BS>W2,W3,W8 FY7THF>KE4WBO
TI7/N5BEK>W4,W8,W2 XE3>W3,W5 PT7ZAP>N3DB,KE4WBO,W9DR/4
PR8ZX>WZ8D,W8GG,N2TU/4,KZ4RR PU9OSB>K1TOL,FJ5DX,N3DB,K5UR,WA2RQC
W7>W7 K4TQR>W1 FM1FV>PV8AZ PY5>PP5 TI2NA>W5,VE2 W3DOG>W5 CO8DM>W4
P43JB>W3,W1 HI8LAM>W4 KB3RHR>PT7ZAP YN2N>W1 W2>W2 21-2200 YN2N>W8,W3
FM5WE,N2TU/4,WN3SIX,KZ4RR,K5UR,N4AVV,WZ8D,W3TC,WK4P,N9IW,WZ8D>PU9OSB
W3DOG>W0 PR8ZX>W3UR,KD5PBR,W3TC,WD5K KP4,VE2,K4MHZ,VE1,W9>W4
FY7THF>KE4WBO TI7WAM>W2,W4,W9 XE3RCM>W9 W5RP,VE3,W2,W0,VA2ZFN,W9>W4
C6AFP>VE2,W4,W2,W3 HP1AVS>W7CNK/5,K5UR,W5TDN,WB5KIA J39BS>W4
W2,W4,KP4,W5>W5 CO8DM>KP4,W3,W4 PY5>PY5 PY2>PY2 PY1>PY1,PY2
P43JB>W3,VE2 TI2NA>W4,W9 W1>W7 P43A>W3,W8,W9 22-2300 P43JB>W4,VE9
HP1AVS>XE3ISS P43A>W8,W4 W0,KP4,XE2>W5 TI7WAM>W4 PT7ZAP>WD5K ZF2ZB>KP4
C6AFP>W3,W4 XE3>W5,W8 W5RP>W2 YV4AB>WZ8D,KE4WBO W4>VE1,W3
TI2NA>W3,W4 PY5>PY5 PY2>PY2 W2,XE>W4 PT1>PP5 HI3/LY3UM>W4,W5
TI7/N5BEK>W4,W3,VE3,W0,W2 K4MHZ>W4 PU8TEP>WK4P,N3DB,W7NTK/5,N3LL/4
K4TQR>VE2 W3DOG,W5,W4,W3,NOLL>W4 PY2WF>N3DB PY9MP>WD5K YV4DYJ>N2TU/4
TI5XP>W0 TI2NA>VE3 ,XE1,W0 W4,W5>W0 YV4ESN>W4DTA HI8LAM>W4 W5RP>W8
PV8AZ>WD5K,N3LL/4 YV4DYJ>K4WS TI8II>W3 23-2400 W4>W0,W3,W8,W9,VE3
W5>VE3,W9,VE2 HI3/LY3UM>W4 TI2NA>W2,W3,W4,W8,XE1 W2,W3,W5>W2
TI8II>VE3,W4,W3 PU5>PU5 TI7/N5BEK>W2,W4 PV8AZ>KE4WBO WB5LLI,N8RT>W0
PU8TEP>KE4WBO,N3DB PY2>PY2 PY2>PY4 XE1>W3 C6AFP>W8(2xEs) KP4>W4,W0
XE3RCM>W5 TI8II>W4 W6>W6 PY5>PP5 W3>W5 TI7WAM>VE3 TI5XP>W3

May 3 00-0100 W5>W4,VE2,W8,W9 C6AFP>W8 W3>W5 W5RP>W9 TI2NA>W4,W8,W9,W0
WB5LLI>W8 TI2ALF>W0 W4>W9 W5>W7,W0 TI5KD>W0 HP1AVS>W0,W5 YN2N>W9,W0
01-0200 YN2N>W4,VE3,W0,W5,W8 TI2ALF>W9,W0,W1 W5HN,W8IF,W0>W4
HP1AVS>WZ8D W8>W9,W0 PP5>PY2 XE3>W5 XE3ARV>HK3DES 02-0300 W8IF>W8
W5>W3,W4,W0 TI2NA>W4,W9,HK3DES PY4>PY2 W4,N8RT>W0 XE2K>VE7 ZV2>PY5 03-
0400 PY2>PY2,PU5 PY4>PY4 W5>W4 04-0500 VE4ARM>VE7
VY1DX,VE8WD,K0KP,K0GUV>W7 10-1100 PY4>PY2 PY7>PS7 11-1200 W9DR/4>VE3
KP4>W4 12-1300 W4>W9 HI8LAM>KP4 13-1400 PY2>PY5 KP4,W4>W4 W5>W9 W7>W7
ZF2BI>W4 ZF2ZB>W4 PY5>PY4 PY1>PY1 PY2,PT9,PY2>PP5 14-1500 PY2>PP5
ZF2ZB>W9,W4 ZF2BI>W4 W4>W4 W7>W5,W9,W0(ms) W0>W9(ms) C6AFP>W8 W7>W5
15-1600 W0>W3,W7 W7,W5HN,W4>W4 K4TQR>W3 PY2>PY5 W5>W7 W7>VE6 ZF2ZB>W9
NOLL>W7,W6 N6NB>W5 W4>W4(shortEs) C6AFP>W4 HI8LAM>KP4 16-1700
WA7X>VE6,VE7 W4,W7,W0>W4 W7>W7 W0MTK>VE6 N6NB>W6 W5,VE7>W0
HI3/LY3UM>W4 VE4SPT>VE7 VE7>W4 17-1800 W7,VE7>W7 W0>VE7,W7
W1,W2,W3,W5,VE3>W4 C6AFP>W4 K0EC>W8 18-1900 C6AFP>W5 W8>W8,VE3
VE2,VE3,W1,W2,W3,W5,W9>W4 VE3>W7(jt) VE2>W8 W5>W7 YV4AB>KE4WBO 19-2000

K4TQR>W0 NH7Y/b(KH7Y?)(BK29)>K6QXY HI8ISG>W4 W0>W7 20-2100 W0>W7
KP4,W8>W4 C6AFP>W5 HI8JSG>W4 HP1AVS>N4QV,HI3TEJ(bs) YN2N>KP4
TI2ALF,YN2N>HI3TEJ 21-2200 W4CBX,W5,W6,W8,W0,KP4>W4 YN2N>KP4,HI8JSG
W4,W8>W5 W4,W5>P43A C6AFP>W0 W5>VE3,W9,W8 HI8VB>W4 TI2NA>W4 KP4>W0
N0LL>VE2 TI2ALF>KP4 OA4TT>K4RX,K4WS,KP4CAT 22-2300
OA4TT>K4WZ,K3ZXL,W4GCB,K4SV,KR4WM,N4VHF,W8UV,K8WK,K4RX,N4AVV
J39BS>W5,W0 ZF2ZB>W4,W5,W8,W0 KP4,W2>W4 W1,W3,W4,W8,W9,W0,VE3>W5
XE3,W1>W4 C6AFP>VE2 TI2NA>KP4 W9DR/4>W0 HI3/LY3UM>W4,W3 YV4AB>K0HA
W8>W1 HI3TEJ>W0 HR2DMR>W5 23-2400 OA4TT>HI3TEJ,N3LL/4,N9IW,K3FM,KJ9I,
KN5O,N4AVV, KM0A,W5XX,K0HA,N3SL,W2GFF,N3DB,W8UV N8RT>W0
W4>W1,W3,W5,W9,XE3 N0LL,W9,VE2,XE3>W4 W2>W8 W5>W3 W7,W8>XE3 VE3>W4,W8
VE7FG>W6 TI2NA>W4,W3,W1 TI2ALF>KP4 TI3/N5BEK>KP4 HK3O>KN5O,K4RX

May 4 00-0100 HK3O>N3DB,N4QWZ,K4WZ,N3LL/4,K3ZXL,W4ABC,W3TC,WY5I,K4QI,K0HA,
N2TU/4,WD5K,W5UC XE3>HI3/LY3UM OA4TT>K0HA,K4RX,N4QWZ,K5YG TI2NA>W1,W5
W3>W5 W5>W2 HK3DES>K5UR,W9DR/4 01-0200 HK3DES>N3LL/4 N0LL>W7
HK3O>W3UR,W4GF W5>W0 02-0300 KP4,W4,W9>W8 C6AFP>VE2,W4 W1,W4,W7,W8>W9
W4,W5,KA0CDN>W4 W5>W0,W2 03-0400 K0EC>W4 W5,W7>W9 W5,W7>W0 04-0500
VE7FG,VE6ARC>W6 WA7X>VE7 1137 W4>W5 1314 W6>W7(Es) 1448 W0>W0 15-1600
K2ZD,K4MHZ,WZ8D>W4 W7>W0,W7 KA0CDN>W6 16-1700 W7>W0,W9 WB0RMO,W5>W7
XE2,W8>XE1 W5,XE1>W0 W5>XE1 17-1800 N0LL,XE2>W6 W7>W7,W0 K6FV>W7
KA0CDN,W0MTK,N0LL,XE2>W7 PU1>PY1 VE2>W0 W5>VE7 W1>W2 18-1900 W7>W6
LU9FE>CE3SAD W0>W9(tr) W0>W7 XE2,K0EC>W5 47.9(CEbc)>LW3EX LW3EX>CE3SAD
TI2NA>W7 CE3AA>LW3EX LU5EGY>CE3SAD XE2>W0 NM7D>VE7 LU9TFT>CE3SAD 19-
2000 W7,W6>W6 TI2NA>W3 NM7D,W0MTK,K6FV>W7 W0>W5 C6AFP>VE2 W5>W5 20-2100
W7>W6 W5RP,KA7BGR>W7TI2NA>W4 KA0CDN,W7>VE7 N0LL>W7 VA7SIX>W0 21-2200
W7>W5 WA6X,XE2>W7 W9>W0 22-2300 N6NB>W5 TI2NA>XE3 XE2,W5,W6,W0>W7 23-
2400 W7>W6,W0 (many) XE2K>W7 XE2>W6 W6>W0 W4>W5

May 5 00-0100 WZ8D>W8 W7,W6>W6 (many) KA7BGR>W0 W6>W4,XE2,W0 K6FV>W0
W5,VE6,W0>W7 01-0200 W7>W4,W0,W7 W4,W7>W5 WB0RMO,W3>W7 XE2K>W0
W4,W5>VE7 N0LL>W6 W5RP>W0 K0EC>VE7 02-0300 W4,W5,W7,W0>W7 XE2K>XE1
N6NB,NM7D>W5 03-0400 XE1,W5,W7,W0>W7 XE1,W0>W6 VE6>W5 XE1>XE2 KA0CDN>W0
04-0500 XE1>W6,W7 VE7,VE6,W5,W7,W0>W6 W7>W7 05-0600 W7>W0,W7,VE7 VE6>W6
06-0700 VE6>W6 NM7D,W6>VE7 W7>W7 no data 0810-1343 CO8LY>W8 14-1500
CO8LY>W4 ZF2ZB>W4,W9 W1>W2 KA0CDN>W7 YV4AB>KE4WBO W3>W2 15-1600
W7>W7,W0 W4,WZ8D>W4 TI2NA>W4 16-1700 VE2>W4 17-1800 W8>W3 W4>W4 20-2100
W5HN>W5(tr) 21-2200 W4>W4(Es)

May 6 00-0100 JE1BMJ>KE7V N8RT,W4>W4 01-0200 JL8GFB>W6OAR,VE3CDX/W7
JH7XRZ,JA7GYP>W6XI 02-0300 W5>W5(jt) N6NB>W6 W7<W7 04-0500 VE2>VE9(tr) 11-1200
W4>W4(tr) 12-1300 W4>W4(Es) WZ8D,W9DR/4,W8IF>W4 13-1400 W0>W8 W4>W3,W8
VE3>W3 W8>W9 14-1500 W3,W4,W8>W0 W3,W4>W8 15-1600 W0>W2 W3,W9>W8
VO2FUN,VE3,VE2>W2 VE3>VE3 16-1700 W7>W7 W0MTK>W7 VA7SIX>W0 17-1800
W0,W5,W6>W7 K0EC,KA0CDN>VE7 47.9(CE)>LW3EX 18-1900 W7>W7 W0>VE7
W0MTK>W6 19-2000 W8>W9 21-2200 W4>W4 W8>W4(ms) W2>W2 W4>W4(tr) 22-2300
N0FW>W8 JA7QVI>KE7V,VE7DAY JL8GFB>KE7V JE1BMJ,JN1NDY>VE7DAY
JA8DMB>K7GSE 23-2400 JA7QVI>VE7CC,KL7OO(CM87)
JA1FNA,JA8DMB,JN1GTG,JE1CUS,JH1KYA,JL8GFB>VE7DAY(CO70) JL8GFB>K7GSR

May 7 0048 JE1BMJ>W7MEM(DN17),W7GJ(DN27) JL8GFB>K7JA 01-0200 PY2>PY2 02-0300
KA7BGR>W6 JL8GFB>KE7V(599) 03-0400 W7>W7,W6 XE2K>W7 04-0500 VE7FG>W6 1139
W4>W9 YV4AB>W9DR/4 W4>KP4 12-1300 W4>W4(tr) C6AFP>W8 15-1600 W6>W7(Es)

W9>W5(ms) WA7X>VE7 K6FV,KA0CDN>W7 VE6>W6 16-1700 VE6,VE7>W6
W9DR/4,W8IF>VE2 17-1800 W7>W0 23-2400 KP4>W4

May 8 00-0100 N3CJM>W3 11-1200 K4MHZ,C6AFP>W4 1258 W7>W7 13-1400 W4>W4
WZ8D>W4 W5GPM>W7 14-1500 4U1UN>W2 WZ8D,W3PIE>W4 W8IF>W0 W2>W3(Es)
W5>W5(ms) WZ8D>W0 VE3UBL>W4 W7KNT>W7 15-1600 WR9L>W4C6AFP>VE2 W4>W3
16-1700 W3>W4 17-1800 KA0CDN>W7 1845 VE3UBL>VE3 K0KP>W0 19-2000
K4MHZ,W3DOG>W5 W5>W3 20-2100 W4>W9 W3>W5 21-2200 YV5ESN>WP3UX,FJ5DX
YV4AB,YV4DDK>FJ5DX NP3XF>YV5ESN 22-2300 W4>W4 YV4DYJ>FJ5DX,FM5AA
FJ5DX,HI8LAM,KP4TG,HI3/LY3UM>YV6BFE YV6BFE>WP3UX 9Z4BM>KP4
YV5MM>WP3UX,KP4TG YV4AB>FJ5DX 23-2400 9Y4D>WP3UX PY2>PY2 W4>W4

May 9 0140 W4>W5 02-0300 W4>W4 1037 VE1SMU>W3 11-1200 W9>W8 12-1300 W4>W8
W7,W6>VE6(ms) W7>W0(Es) 13-1400 W6>W6 W6>W7(ms) W5>W6 W8>VE9(tr) 14-1500
W4>W4 W4>W5(sc) W6>VE6(Es) W7>VE6(ms) 15-1600 4U>W2,W3 VE7>VE6(Es)
W7>W5(ms) W1>W3(tr) 16-1700 W5>W5(ms) 4U>W3 W7>W7

May 10 (no data before 0640) 11-1200 W4,W5,W8,W9>W4 12-1300 W4>W1 W0>W4
W8,W4>W0 W8>W5 13-1400 VE1SMU>W3 W3>VE9 W4,W5>W4 W1>W3(sc) W8>W9
W9DR/4,K4TQR,W8IF>VE2 W4>VE3 14-1500 VE3UBL,K4TQR,WZ8D>VE2 W4>W4
W3>W9(Es/jt) 15-1600 W1>W1 W8IF>W4 W5>W7(jt) 16-1700 W9DR/4>W3 KP4>W4 W9>W9
19-2000 K0KP>VE4(Es) W9>W1 21-2200 W6>VE7 W8>W0

May 11 0101 W1>W1 1141 W4>W0 12-1300 W5>W5 14-1500 W4>W3,W4 15-1600 W5>W7
16-1700 N7LT>W5 W0,W5>W7 K9MU>W5 W0>W0 K0KP>W5 KD4NMI>XE3
17-1800 W7,W0>W0 W5>W7 C6AFP>W7 18-1900 W7>W0 KD4NMI>XE3

May 12 2212 HI8LAM>KP4

May 13 no data received 1130-2400

May 14 (no data before 1800) 18-1900 YV4AB>KP4 19-2000 W9>W5 20-2100 YV4AB>KP4
W7>W5,W4,W8 KA0CDN,W0MTK,K0EC,W6>W5 W6>W6 KP4>W4,W3,W7 W9>W8
J39BS,FM5AA,FM5AN,FG5GP>W4 W0>W7 21-2200 W0,W7,W4>W0 KP4>W4,W3
V44KAI,FM5AA,HI3/LY3UM>W4 W7>W5,W9 FM5AN>W3 J39BS>W3,W4,W8 W9>W8
C6AFP>VE3 HI8LAM>KP4 22-2300 HI3/LY3UM>W3 NL7XM>W1 J39BS>W8,W4,W3,W2
W4,W0,W5>W4 HI3TEJ>W4,W2,W8 9Z4BM>W4 23-2400 W3DOG,W2,W4>KP4 W4>W5

May 15 00-0100 HI3TEJ>W3 KP4>W4 1131 W1>W1 W5>W4 12-1300 W7>W5(ms) W8>W0
W7>W6 14-1500 W5>W4 15-1600 W4>W5 16-1700 W4>W4 W5>W5 17-1800 W5>W7
YV4AB>FJ5DX,K1TOL W3APL,W2,W1,W8>KP4 W5>W6 W7>XE1 W9>W9 W0>W4 18-1900
W2,W4,W3,VE1>KP4 W7,W5>W4 19-2000 W9DR/4,W8>W1 W6>W6 W2>VO1 W0DR/4>W2
W4>W8 20-2100 VO1>W1,W2 P43JB>VE1 K8EB,W8EH>W4 C6AFP>W2 KP4>W4,W0
K4MHZ>W5 W9DR/4>W9 21-2200 W9,W2,W5,VE1,W0>W4
KP4>W0,VE9,VE1,VE2,W2,YV6BFE W0,W5>W8 YV5AB,YV6FJE,YV5ESN,YV6BFE>K1TOL
YV6BFE,VE1,VE2>HI3TEJ HI3/LY3UM>VE1 J39BS>VE2 XE2,W5>W0 22-2300 W6>W4
HI3/LY3UM>VE1 W5RP>W8 K4TQR,VE1,W1,VE2,W0,W8>W4 W0,XE2,VE2>W9 K4MHZ>VE9
W0,VE1,W7>W5 XE2>W9 W0>W0 W4,W5,W6,W7>W6 9Z4BM>KP4 23-2400
W4,W5,VE2>VE2 VE1,VE3UBL,VA2ZFN,N0LL,VE9BEA,W3PIE>W4 W7>W7,W6,W5,W9
W9DR/4>W2 PV8AZ>N8JX K4TQR,WB0RMO,W5>W0 VE1,W1,W6>W3 VE3>W8
JL8GFB>LU2LDB C6AFP>VE3

May 16 00-0100 W1,VE1,VE9,VE2,VE3,W3,W8,W6>W4 VE1>VE1,W2 C6AFP>W8
W6>W7,VE7 XE1>W1,W8 JE1BMJ>HI3TEJ,VE3CDX/W7 W5>W6,W0 W6,XE2,W7>W7
W1>W1 01-0200 W9DR/4>W3,W0,VE3,W8 W6>W7,W5,W9,VE7 W8,VE1>W2
VE3,W4,W8,C6AFP>W8 VE2>VE2 W7,W9,W5,W6,WB0RMO>W0 W5,NOLL,WZ8D,W4>W4
W4,W5>W3 W7>W7 02-0300 W5>W7,W0 K6FV>W0 W4>W7,VE3 W6>W6,W7,VE7,W4
W5>W3,W9 K9MU,NOLL>W5 XE2K>XE1 VE1SMU>W2 03-0400 W5>W6 VE1>W3,W2 W4>W1
VE1SMU,VE9BEA>W3 KA7BGR>W6 W5RP>W7 RV9CP>W7CT 06-0700 W7>VE7 1050
W4>W3 11-1200 VE1SMU>W3 W4>W4 12-1300 W4>W4 WA1OJB,W5>W4
K4TQR,W9DR/4>W1 13-1400 W7,W8>W5 W1,W2>W4 KP4>W3,W1 W1,W8>VE1 W5>W7(ms)
W4>W3 14-1500 W9DR/4>W3 W4>W1,VE1,VE9,VE3,W2 W5,W7>W7 W4>W0 W7>W0(ms)
15-1600 W6,W7,W8,W0>W7 W5>W5 VE9>W3 K0EC>W7,W5 W4,W8>W0 W4>VE1,W1
W7PFR,KA0CDN>W7 16-1700 W7>W7,W6 W4>W1 17-1800 KA7BGR>W6 W4>W8 W3>W3
TI2NA>W718-1900 W9D/4, VE3WCC>VE2 VE1SMU>W3 19-2000 W5>W5
HP1AVS,HP1CVZ>KP4 20-2100 KB6BKN>XE2 HP1AVS,HP1CVZ>KP4 W6>W7
XE2K,W6>W6 K6FV>W7 21-2200 VE4ARM>W7(Es) NOLL>VE6 XE2>W6 HK3J>KP4
HK3JRL>KP4 K4MHZ>XE3 22-2300 KP4,K4TQR>VE2 KP4>W8 23-2400 VA2FZN>VE2(gw)
VE9BEA>VE9 C6AFP>KP4,XE3 VE3WCC>VE2 KP4>W5,W0,W8,W4 W0>W4 W4>W9
V44KAI>W4

May 17 00-0100 W4,W9,XE3,W0,VE3,W8,W7>W5 W9DR/4>W3(Es) W3>W5
W4>W7,W5,W0,W9 KP4>W9,W0,W5 C6AFP>W1 K8EB>W5 01-0200 TI2NA>W3,W0
XE2,KP4>W0 C6AFP>W8 W7>W7 XE3,W4,W5,W6>W5,W0 NOLL>VE2 02-0300 W0>VE2,W4
W5,W0,W7>W6 W7,W6,XE2K>W7 W5>W3,W5,XE3,W0,XE2 W4>W3 03-0400
W5>W5,W7,W8,XE2 W6>W7,W0 04-0500 W6,XE2>W6 KA7BGR>W7 XE2>W5 W5RP>W7
05-0600 W7>W5,W6 XE2K>W7 06-0700 W7>W6 W7>W7(Es) W6>W6 11-1200 W4>W2(fsk)
W4>W3(Es) W8>W3(ms) VE3>W8 12-1300 W8>W0 13-1400 V44KAI>W4 W9>W5
KP4,CO8LY>W4 W5>W0 14-1500 V44KAI>W4 HI3/LY3UM>W4,W3 KP4>W4 1759 W4>W4
19-2000 W4>W4 20-2100 W5>XE3 21-2200 KP4>KP4 23-2400 TI2NA>N3LL/4
NOLL,WB0RMO>W5(ms)

May 18 18-1900 CN8KD,CU3EQ,EA7DUD,CU3EM>FJ5DX 19-2000 OA4TT>FM5AA 20-2100
EA8BLL,CN8KD>WP3UX HI8LAM>9Z4BM CN8KD>NP3CW V44KAI>PJ4NX 21-2200
EA8BPX>WP3UX 22-2300 W2>W2,VE2 W4>W9,VE2,VE3 FY7THF>FJ5DX HI8LAM>KP4
V44KAI>VE2 23-2400 W4>W3,W0,W8,W7,W1,VE2 W5>W3,W5,VE2,W2 W2>W2,VE3
NP4A>FY5LH C6AFP>W8,VE2 FM5AN>FJ5DX 0216 VE7>VE6(ms)

May 19 00-0100 W3>W3,VE3 W8>W4,W5,W9 K9MU>W4,W9 W5,VE3>W4 C6AFP>VE2 01-
0200 W5>W8,W9 W3>W8 W4>W5,W0 02-0300 W8>W0,W4 W5>W5,W4,W9 15-1600 W1>W2
17-1800 W4>W3 18-1900 C6AFP>W1,W2,W3 FJ5DX,S57RR>WP3UX 19-2000 W1,W2>W4
WB5LLI>W2 W1,V44KAI>W8 20-2100 W5,W8,W1>W2 W4>VE3,W1,W2 W3>VE9 VO1>KP4
9Y4D>W1 FY5KAC>N3DB FM5AA>W2 VO2FUN>W2,W3 VE1SMU>VE2 21-2200
W4>VE2,VE3,VO1,W3,W8 C6AFP>VE2,VE9,VE1,W8 W2>W2,W3,W5,W8,VE2,VE3
VE3UBL>W5 W1>W8 FM5AA>VO1 22-2300 P43JB>VE1,VE2,VE9,W1,W2 W1,VE2,W6>W4
23-2400 W4>W1,VE2,VE3 W5>W5 P43JB>VE1 HI8LAM>KP4

May 20 00-0100 W4,W1,VE2,VE3>W3 C6AFP>W8,VE2,VE9 W3>KP4 W6>W6>VE1 01-
0200 W4>VE1,VE3,VE9,W4,W9 W1>W2 VP9GE>W8,W9 C6AFP>VE3 02-0300 W4>W8
WB5LLI>W4 W3>W3,KP4 VE3WCC>W4 W4>VE2 C6AFP>VE3 03-0400 W4>VE3
W3DOG>W2,W4 W4>W8 06-0700 W3>W3 13-1400 W2>W2 14-1500 TI2NA>W4
W0MTK>W7 15-1600 C6AFP>W2 16-1700 XE2>W6 W4>VE3 C6AFP>W8 17-1800
W7>W6,W5 W6,XE2>W6 18-1900 W6,W7,XE2>W7 KA7BGR>XE2 19-2000 W5,W0,W6>W7
W5>W5 W0>W6 XE2K>W7 KH6JIM/7>N6PY 20-2100 K1TOL,W2OIB,9Z4BM,WP3UX,
V44KAI>OA4TT CT1APE,CT1FFU>W9DR/4 21-2200 VE4SPT>W7,VE7 PV8AZ>WB4CSW

PJ4JB>W3 W4,VP9,W3,CN8KD,CU3BL>HI3TEJ EA8BPX>W4ABC EA8BLL>N3LL/4
CU3EQ>WP3UX HI3/LY3UM>W3 CN8LI>K4SN N3DB,K5VRX,HI3TEJ, HK3DES,K2PLF,
WB2AMU,K1ME,KB3RHR>OA4TT CT1EKY>VE1YX EA8AK>W2OIB EA8BFK>K1MAA
9Y4D>HK3DES CT1MX>N3LL/4 EA8BPX>W1OW PV8AZ>YV4DDK,WA4CQG,FM5AN
CU1EZ>N3LL/4 EA8CQS>VO1TA,NZ3M,W2OIB CN8KD>N3LL/4 VE6>W7 22-2300
VE9,W3,W4>HI3/LY3UM HK3DES>YV6BFE PV8AZ>W8IF,N3DB,K9SEC KP4>W3
EA8DLL>W4ABC,N3LL/4 VE6,W5,W7>W7 KA0CDN>W0 TI2NA>W8 PV8BZ>NP4A,YV5BFE
HI3TEJ>W2,W3,W4 C6AFP>W8,W9 W3DOG>W4 PV8DZ>YV5ESN EA1ASG>HI3TEJ 23-
2400 KP4>W1,W2,W4,W6,W7,W9,W0 VE2,VE6,W9,W0>W5 YN2N>W4
HI3/LY3UM>W3,W4,W0,VE3 TI2NA>W3,W4,W8 W7,W0>W9 W7>W3,W4,W5,W6,W7,W8,W0
W4,W5>W3 W6>VE6 OA4TT>W0WOI,K4AU,K8KS,WD4IXD,N3LL/4,W8GG
PV8AZ>W8GG,W9DR/4 CO8LY>W8 W4>W5 C6AFP>VE3,W4 W1,W2,W8,W9,K0EC>W4
W0>W0 WP4AZT>PV8DZ

May 21 00-0100 VE6,VE3,VE7,W8,W9>W5 KP4>W0,W4,W7 W7>W1,W4,W5,W8,W0
YN2N>W3 HI3/LY3UM>W4,W9 W0>W8 W1>W4 TI2NA>W8,VE3 TI2KI>W8,W3 HI3TEJ>W2
01-0200 W5>W9,W0,VE6 KP4>W4 TI2NA>W3 02-0300 W7>W6 W0>W5 W5,VE6,W7>W6 03-
0400 W0>W0,W8,VE7,W6,W6 W5>W6,VE6,W4 VE8>W8,W0MTK,VE7,VE6,XE2K 04-0500
W7>W7,W4 W6>W6 W7PFR,VA7SIX>W0 NL7Z>KE7V JL8GFB>VE3CDX/W7 05-0600
W7,W2,W8,W5RP,W5>W7 VE6,VE8>W6 K6FV>W0 04-0500 JL8GFB>VE3CDX/W7 12-1300
W3>W4 TI2NA>W4 14-1500 W0>W6 WB0RMO>W7 W5,W0>W6 15-1600
YV4AB>VE3CDX/W7 W5>W7 16-1700 W7>W7,W6 WB0RMO>W0 17-1800
ZL2NW>W7GJ(eme) W6,W7,VE7>W7 W6>VE6 18-1900 W3>KP4 W7,VE6,VE7>W6
W7,XE2,W0,VE8,W6>W7 W0>VE7,W5 KP4>FG1GW 19-2000 W3,W5,W6,VE7,W7,XE2>W7
TI2NA>VE7,W7 W6>VE7>W0 XE2>W6 21-2200 HK3O>N1DG,W1OW FG1GW,FM5AA>W3
HK3JRL>HI3TEJ,W1OW W5>W7 22-2300 W2,W7>W4 W3>W8 C6AFP>W1,W8,VE3,W2
W9>W0 HK3JRL>AG2A,W2YC,NZ3M HK3O>K1AC,NZ3M W6>W7 23-2400 W2>VE3,W3
W3,W8,W4 W7>W4,W5 ZF2XP>W3,W4,W8 W8>W8,VE3 W2,W1,VE2,VE3>W4 TI2NA>W3
W5,W0>W9 C6AFP>W1,W8,VE3,W2 HK3O>NZ3M(jt)

May 22 00-0100 W4,W5,W8>W7 W5>W5,W0 W0,W3,W4,W8,VE3>W4 W9>W0,W7
C6AFP>W0,W9 W4,W8,W2>W2 01-0200 W5,W4,W7,XE>W0 W3,XE2>W3 W5>W4,W7
W6>W6 W5,W7>W9 XE2>W7 02-0300 W5,W6,W7,XE2>W0 W6,XE2>W7 W5>W6,W7,XE2
W8>W4 03-0400 W5>W5,W6,W7 W6,W7,W0>W0 XE2>W6,W7 W7>W6,W7 04-0500
W5,W6,W7,W4,VE2>W7 W6>W6,W0 XE1,W0>W5 W7,W0>W0 W6>VE7 05-0600 W0,W5>W7
06-0700 W0>W6 W7>W7 07-0800 W7>W6 11-1200 W4,KP4,TI2NA,V44KA1>W4
YV4AB>N3LL/4,K4MM 12-1300 HI8LAM,TI7/N5BEK,TI2NA>W4 TI2NA>HI3/LY3UM 13-1400
W4>W5 XE3,TI2NA,HI3/LY3UM>W4 14-1500 TI2ERS,TI8II,TI7/N5BEK>W4 TI2NA>W4,W5
VE5,W0>W6 PC7M>W1GJ(eme) IW5DHN>W7GJ(eme) XE2,XE3>W4 W5>W4 15-1600
W4,W5,W7>W5 W4,W7>W4 TI7/N5BEK>W4 TI2NA>W4,W3 W6,W7>W7
TI2ERS,TI8II,TG9NX>W4 EAtv>W0 YN2N>W3,W4,W8 VE5,VE6>W6 16-1700 TI2NA>W3,W4
W4>W5,W7,W8,XE2 W9,W0>W9 W7,XE2>W5 W8,XE2>W0 VE7>W6 W7>XE2,W6,W7,W1
HI3/LY3UM,TI7/N5BEK,TG9NX>W4 17-1800 W5,W4,W0>W5 W0>VE7 XE2>W7,W0,W5
TI2NA>W4 18-1900 W7>W5,W4,W0 W5,W9>W6 W4,W0,XE2,W2,W5>W4 TI2NA>W4 XE2>W5
19-2000 W4,W9,W0,W7,W6,W5,W8>W4 W0>W7,W0 W5>W3,W5,W6,W7,W8 XE1>W9
W7>W7,VE7 XE2>VE7 TI2NA>W9 20-2100 W,W5,W4,W0,W9>W5 W0>W4,W2,W7,XE2
W9>W7,W5 W8,VE4>W7 C6AFP>W8 KH7Y>K7CW W4,W7>W8 W4>W4 WB5LLI>W3
OA4TT>W7GJ VE7>W7 21-2200 W5,W7,XE2,W0>W4 W8,W9,W5,XE2,W4>W0 W2>W2
W7>W0,W4,W5,W9 W9,W6,W5,W8>W5 KH7Y>W9DR/4 22-2300 W0>W7,W9,W4,W5
JE1BMJ>W7CNK,K5RK,K0GU JN1NDY>K0GU W7,W8>W7 W9>W3 VA7SIX>W0 23-2400
JA7QVI>K5DG,K5FK JE1BMJ>K7RWT,K9GU,N5DG,W7CNK,N0JK,N4UPX JL3IQE>N4UPX
W9>W7 W3>W3 W7>W5,W9 W4,W0>W7 W0>VE6,W7,W8,W9

May 23 00-0100 W7,W4>W5 02-0300 W5>W6,W8,W0 W0>W8 03-0400 W5>W0,W6,W8 W0>W0 04-0500 W5>W7 11-1200 KP4>W3,W4,W5 12-1300 KP4>W4 W3>W0 YV4AB>K4MM 13-1400 VE2,W8>W4 C6AFP>W2,W8 CO8LY>W4,W8 YV4AB>K4MM TI2NA>W4,W5 W4>W1 14-1500 HI8R>W4 P43JB>W4 TI2NA>W5 KP4,CO8LY>W2 15-1600 W5>VE6 P43JB>W4,W5 YV4AB>W4SO 16-1700 XE2>W0,W7 W5>W9 W4>W4,W0 17-1800 V44KAI,FJ5DX>YV1DIG W7>W4 W8>W3 FG5GP>YV4DYJ 18-1900 PV8AZ>J39BS,PJ4NX PU8TEP>PJ4NX,J39BS FG1GW>P43A YV4DYJ>NP3CW PJ4NX>KP4,HI3TEJ CU3EQ>FM5AA FY1FV,CU3EQ>FJ5DX KP4>YV4AB KP4>YV1DIG FJ5DX>YV1DIG,PJ4NX HI8R>9Y4D YV4DYJ>KP4 9Z4BM>P43A 19-2000 P43A>FM5AA,HI3TEJ YV4DYJ>HI3TEJ TI2NA>W4 P4/K1KG>FJ5DX CU1EZ>PJ4NX,KP4EIT PJ4NX>YV4DYJ,HI3TEJ PU8TEP>HI3TEJ,YV1DIG YV1DIG>KP4,AD4Z EB8CDX>WP3UX EA8AK>YV1DIG,KP4EIT,WP3UX KP4,PJ4NX>YV5SSF V44KAI>FY5LH YV5ZV>KP4 XE2>W4 CT3FQ>NP3CW KP4,HI3TEJ>9Y4D W5>W6 W2>W2 20-2100 XE2>W4 EA8YT,EA8CDX,EA8AK,YV4AB>FJ5DX XE1,XE2>W5 HK3DES>FJ5DX CT3FQ>HI3TEJ,FJ5DX HK3DES>YV4DYJ 21-2200 XE1>W5,W4 CU3EQ>PV8AZ HK3O>YV1DIG FG5GP>CT3DL EA8BPX>WP3UX EA8AK>NP3CW HK3O>YV5KG HI8LAM,YV5KXE>HK3O TI2NA>W4 9Y4D>W1 22-2300 9Y4VU>W3,KP4,W1,W2 8P6DV>KP4 9Y4D>W2,W1,W3 PJ4HX>VE3 J39BS>W2,VE3,HK3O,KP4,W3 PU8TEP>,K2AXX YV4DYJ>W3TC,W3EP/1,K2AXX FM5WE>KP4 HK3O,YV4AB>K2AXX W7>W0 8P6DV>HI3TEJ W1>W1 WA1OJB>W4 FM5WE>KP4 KA0CDB>VE7 W6>W7 23-2400 J63BS>W8,W4,W1 YV4DYJ>W1OW K1NA>YV4AB C6AFP>W3 W3TC,N3DB>YV5ESN 9Y4RX>W1 9Y4VU>VE3,W3 8P6DV>VE1 HK3O>K2AXX NOLL>W7 HI8JSG>YV4DYJ XE2K>VE7 W1>W1,W5 KA7BGR>W6 W8>W8 VE7,W7>W6 K1MS>W 5 W1,W8EH>W4 W7>W7 VE7>W0

May 24 00-0100 W7>VE6,W6,W0 W5>W6 VE7>W0 01-0200 W7>W7,W0,VE6,VE7 VE6>W6 C6AFP>W3 K4TQR,WB5LLI>VE2 VE7,W3>W0 VE3>W4,W5 W2>W5 02-0300 W7,VE6>W7XE2WWW>W0 W4>W7 W5HN>W3 W3DOG,W0>W4 K8EB>W4 W4,W0,W7>VE7 W7,W9>VE6 W0>W6 JE2XBY>K0GU WB5LLI>W8 W5,W0>W7 W3DOG>W4 03-0400 VA7SIX>W0 W8IF>W4 W6>W6 W-0>W7 W4>W9 W6>W0 04-0500 W6>W0 PY2>PY2 05-0600 W7>VE7 1054 KP4>W4 11-1200 KP4,W4>W4 NL7XM>W3 12-1300 W3>W3 OA4TT>N5DG(jt) 13-1400 W8>W0(sc) 14-1500 CU3EQ>KP4EIT W5>W0 CX>CX 15-1600 NOLL>W4W4>W3,W8 W5>W9 1717 W9>W4 19-2000 W0>W8 XE1,W7>W5 20-2100 HK3J,HK3O>KP4 OA4TT>FJ5DX FJ5DX>FM5AN 21-2200 W6>W6 CO8LY>W4 K4MM>HK3O YV4AB>K4MM YV6BFE>W9DR/4 22-2300 YV4DYJ>W4GCB HI8LAM>KP4 J39BS>W4 W4>KP4 TI2NA>W9,W4 CO8LY>W4,W0 W0>W5 HI3/LY3UM>W4 KP4>W0 W5,W0>W4 WB5LLI>W8

May 25 00-0100 W4>W4 W0>W3 01-0200 W7>W7 0252 W3>W3 13-1400 W4>W4,W5,W3 C6AFP>KP4,W5 V44KAI>W4 14-1500 KP4>W4,W5,W8 HP1AC>W9DR/4,K4WZ,WB4CSW,N2NL,W4GCB W5,W9,W0>W4 W4SO>TI7/N5B C6AFP>KP4 15-1600 HI3/LY3UM>W4 W5>W6,W4 HI8LAM>KP4 W4,WB5LLI>W4 NOLL>W6 16-1700 W7>W9 W4>W4,W5 HI3/LY3UM>W5 W6>W5 17-1800 W0>W6 W7>W9,W0 18-1900 W0>VE6 W9,W0>W7 VE6,W5>W7 W9>W8,W6,W0 W5,W7>W4 VA7SIX>W0 19-2000 9Y4AT>FY5LH W5,W6,NOLL,VE6,W7>W7 V44KAI>HK3O W2>W0 W6>VE6 HK3O>KP4 W7>VE7 20-2100 W0>W6 ,W7 KA0CDN,W6 W6>W4,W7 VE7>W7 V44KAI>FY5LH W7KNT>W5 W6,W7>VE7 HI3/LY3>9Y4D 21-2200 W7>W6,W7,W5,W0,W8,W4 FM5AA>FY5LH,HK3O HK3O>WP3UX.9Y4VU W0>W8 V44KAI>FY5LH 22-2300 W5,W6,W7,W0>W7 W6>W0,VE6 9Y4D>FY5LH XE2K>VE7 VA7SIX>W6 HI3/LY3UM>W5 W5>VE2,W3 C6AFP>W4 23-2400 HI3/LY3UM>W2,W4,W5 W9>VE6 K0EC,W8>W8 W6>W6 W6,W0,W7>W7 W2,W3>W5 W4>W8,W6 W0MTK>W7 W0,W7>VE7 W9,W4>KP4

May 26 00-0100 W6>W7 VE2,VE3,W1,W3,W4>W5 XE2K,WB0RMO,W4,W8>W9 W8,W9DR/4>W0 W5>W8,W9,W0 W0MTK>W7 C6ANX,ZF1EJ>W4 KP4>W4,W5

VE2,NOLL>W4 01-0200 W1,NOLL,W7,W9,XE3,VE5>W4 W5>VE2,VE3,W3,W8,W9,W0,XE3
W0>VE6 NM7D>XE2 W6,WA7X>VE7 PV8BR>FJ5DX ZF1EJ>W5 W5RP>W8 02-0300
W4,W5,W0>W0 VE6>W6 W5>VE2,VE3,W8,W9 W7>W4,W8 03-0400 W0>W3,W4,W5
W8>VE3,W7 W3>W7 W5>W9 11-1200 W4>W4 12-1300 C6AFP>W8,W9
VE2,VE3,W8,W9,W4,W5,NOLL>W4 KP4>W8,W9 W5>W9,VE3,W8 W9>W9 13-1400
W5,K8EB,W9,VE3UBL,NOLL>W4 KP4>W9 W5>W3,W4,W5,W0,W8 W8>W8 HI3/LY3UM>W4
14-1500 C6AFP>W2 14-1500 K4TQR,W1>W0 VE3,W5,W8,W9,W0>W4 XE2WWW>W9,W8
VE3UBL>W3 W7,W8,W9,W0,W1,W2,W3,W4,W5>W5 W3>W6 W1>W2 C6AFP>W3 15-1600
W8>W3,W5,W6 W4>W1,W6,W7,VE2,W5,VE1,W2,W9,W0 W5>VE4 W9DR/4>W3 WB5LII>W0
XE2WWW>W9 16-1700 W5>W0,W7,W8,W9 W4>VE2,VE1,W3,W0 W1>VE1,W3
W7>W3,W4,W5 W6>W8 W0>W0 NOLL>W7 17-1800 W5,W0>W6 KA0CDN>VE7
W7>W7,W5,W6,W0,W4 K0EC,W4>W6 W5>W0 18-1900 W6,W7>VE6 W5>W5,W7,VE7
W0>W6,W7 W6,W9>W9 W4>W7 K0KP>W0 no spots for 1821/26> 0706/27

May 27 11-1200 W4>W4 15-1600 K0KP>W7 W1>W1,W2 W9>W8 17-1800 W2>W5 18-1900
W7>W7 19-2000 W1>W3 20-2100 S57TW>W7GJ(eme -30db) 21-2200 XE2>W6,W7 22-2300
NL7XM>W4 PA5JB>W7GJ(eme -24db) W8,XE2>W7 23-2400 W5>W6,W7 W4>W8
W3>W3,W2

May 28 00-0100 W4>W8,W4 W5>W6,W7,W8 W0,W9,W8>W7 W2>W3,W4 01-0200
W5,W7>W6 W5>W5 VE1SMU>W3 02-0300 W5>W6,W7 WA7X>VE7 03-0400 VE7FG>W6 11-
1200 W4>W4 12-1300 W2>W3 W5>W8(ms) 13-1400 W4>W4,W8 KP2>W9 W2>W4 14-1500
W5>W4 XE2WWW>W7,W4 W4>W,W8 15-1600 W6>W4,W5 W0,W7>W4 W3>W3,W4
NOLL>W8 XE2WWW>W4 W7>W5 16-1700 WA7X,NOLL>W7 W4>W5,W6,W7 W5>W6,W2
W0,W7KNT>W6 W5>W4,W7>VE7,W5 C6AFP>W5,W7 XE2WWW>W4 W2,W3>W3 17-1800
XE2>W8 W7KNT,W4,W5RP>W6 XE3>W7 XE2WWW>W4 W7,NN6AA>VE7 KH6JJN>W7EME
K4TQR>XE3 W4>W4 18-1900 W7>W7,W0 C6AFP>W3 KB6BKN>VE7 KP4>W3 KA7BGR>VE7
W4>W5 W9DR/4,W5,W6,W0MTK>W6 19-2000 W6>W7,W6,VE6 W3>W9
CT1HZE>N3LL,WP2B VE3WCC>VE2 WA7X>VE7 K0EC>W6 W7>W7 20-2100 W7,W5>W7
K0EC,W0MTK>W6 KA7BGR>W7 20-2100 KP4>W4,W2,W3 W7>W4,W7,W9,W5 XE2K>VE7
W5,W6,W7,W0>W6 K4TQR>W4 EA7AGX,EA7HAF,CT1FFU>W9DR/4 CT1HZE>N2NL
C6AFP>W3 XE2>W5 EA1YO>FM5AA 21-2200 W4>W2,VE3,W9,W3 KP2>W9 KP4>W4,W9,W8
W3HH/4>VE2 W3>W5 EA7KW>N3LL C6AFP>W8 W6>W6 HI3TEJ>W1,W3 CT1HZE>AC4TO
CT1FFU>K4RX W7KNT>W6 XE2WWW>W7 K6FV>W0 HI3/LY3UM>W3 22-2300
HI3/LY3UM>W3,W4,W8,W2 HI3TEJ>W2,W3,W8,W1,W4,VE3 HI3PJ>W8 KP4>W9,W8
W4>VE2 KP2>W9,W4 C6AFP,K4HMZ>W4 W5>VE3 W3DOG,KA7BGR>W4 W7>W7

May 29 11-1200 W4>W4 12-1300 W8>W4 16-1700 W2>W1 W7>W8,W9,W0,W8,W4,VE7
W2>W1 W7>W9,W7 F6KHM>WP3UX W0>VE7 17-1800 W5>W5 W7>VE6 N0KK>W7
18-1900 C6AFP>VE3 19-2000 C6AFP>W2,W3,VE3 W4>W1 KB6BKN,K6FV,W7>W7
VA7SIX>W6 W4>W2,VE3 W1>W4 20-2100 C6AFP>W8 KP4>W3 W5>W3,W1 W4>W2
HI3/LY3UM>W1 21-2200 W5>W2 CU1ES>W1MNU CU1EZ>K1DAT,WZ1V,K1SIX,W3EP/1
K4HMZ>KP4 EA8CQS>NZ3M,K1MAA,W4TJ,W3RGA,K1SIX EA8CDX>N3DB EA8TX>K8MFO
EA8AK>VE1YX,N4KZ EI0SIX>K4RX EA8/DL6FAW>N3DB W4>VE1,W1 KP4>VE2
EA1DR>N2NL W5>W5 K4MHZ>VE3 VI2FUN>W3 KP4,W5>VE3,W4 W3HH/4>W3 C6AFP>VE3
SV2DCD>W7GJ(eme) 22-2300 W9DR/4>W5 W8,VE1,VE2,W1>W4 W3HH/4>W2
VE1,W1,W2,W3,W9>W8 W5>W0,W5 TI2NA>W5 EA8AK>HI3TEJ,VO1TA,W4GCB,N5DG
CU2JT>W2OIB,NZ3M,K4PI,N3DB,K5RK CU1EZ>N3DB,N5DG,HI3/LY3UM EA8TX>WZ1V
XE2>VE1 EA8CQS>W4UDH,K8SM,N3TH,WB4K EA8CK>N3DB EA8YT>W8IF EA8BPX>K1NA
XE3>W4 W1>W8,W9,W1,W2,VE3 WB0RMO,NOLL>W7 23-2400 KP4>VE3,VE2,W1,W9,
W4,W8 C6AFP>VE2,VE3,W9,W2,W8 W3>W8 W4,W3,W2,W1,VE1,W9,XE2,VE3>W4
W2>W0,W3,VE2 CU1EZ>K4WZ,W3BTX CU2TJ>N4QWZ.W4TJ,W1IMM VE1>W8,W0,W4
W5>W1,W7 YN2GY>W3,W4,W5

May 30 00-0100 W3>VE2,W1 W4>W1,VE1,VE2,VE3,W3 W1,W4>W8 KP4>W1
C6AFP>W8,W2,W3 W5>W5,W7 VE3>W7 W1>VE2,W1,W2 VA2FZN>W4 01-0200
W4>VE3,VE2,W7,W1,VE1 W3APL,W3DOG,W2,W1,VE3UBL>W4 WA!OJB>W1 W1>VE9,W4
C6AFP>W8,VE2 02-0300 W4>W4 03-0400 VE3UBL,W8GTX,W3PIE,VA2FZN>W4 W6>W6
05-0600 W5>W1,W4,W5 10-1100 W8>W4 11-1200 CT1HZE>W4VQ,W4RVZ,W3UR,WN3SIX,
KE4WBO,K8NXI EA8AK>W9DR/4 CS4BLA>N3DB EA8TX>K4PI
CS5BCP,CS5BALG>KE4WBO C6AFP>W8 EA8CQS>W9DR/4,KE4WBO,W4RVZ
EA8TX>K4WZ,KE4WBO 12-1300 KP4>W3,W8,W4 CT1HZE>N4QV W4>W8,VE9,W3,VE3,VE1
W5>W3,W4,W8 ON4IQ>HI3TEJ EI2GLB>W4VQ CT1FFU>WB4IUY,K4IQJ
HI3TEJ>EI8JK,CU3EQ C6AFP>W8,W9,W2,W1 EA8YT>KB4AAB,KE4WBO
EA8TX>KB4AAB,K4JPD EA1ASG>W4RVZ EA8CQS>K4MQL,KI4DJG,K4WZ,KB5AAB
VE1>W3 CU3EQ>HI3TEJ,W 9DR/4 13-1400 KP4>W1,W9 W5>W3,W4,XE2
VE1,W8,K4MHZ,W9>W4 W9>VE3 CT1FFU,EA1AHO,EA1ASG>KE4WBO
EA8CQS>WB4IUY,N4TL,WP4O,W4SO,WY5I,K5RK,N4AVV EA8YT>K4MQL CT1FJC>N4AVV
CO8LY>W4 C6AFP>W0,W1,W9,W8 9Y4D>W1 HI3TEJ>W3,W4,W1EI7BMB>NP3CW
KP4>VE9 W2>W3 W4>W9 CT1HZE>N2NL 14-1500 EA4Q,CS5BCP,CU3URA,
EA1FDI>KE4WBO EA1AHO>N2NL EA8CQS>KO4MA,K4SN,WD4IXD EA8YB>W4UDH
EA8YT>WD4IXD W0,W9,W4,W5,W8>W4 W5>W9,W0,W8,KP4,W3,W2 9Y4D>W1
KP4>W1,W9,W5,W4,W0 W2>W8 C6AFP>W4,VE1 CO8DM>VE1,W4 CO8LY>W1,W3,W4,VE1
KP4>W1 HI3TEJ>W1,W2,W8,W9,W4 FG5FR>W1,W4,W5 W9DR/4>W7 15-1600
C6AFP>VE3,W8 W5>W4,W5,W7,W0,W2,W9 PJ4NX>W2 W0,W5,W9,W8EH,W2,VE3>W4
W3HH/4>W8 KP4>W5 W9>W9 HI3TEJ>W1,W0,W8,W9,W4 W3,KP4,V44KAI>W4 C6ANX>W4
CO8DM>VE1 CO8LY>VE1,W4,W3 W9,KP4>W4 16-1700 W5>W3,W9,W2,W1,W0
KP4>VE9,W0,W8,VE3 CS5BAL>K4MM C6AFP>W9 K0GUV>W7 CO8DM>W8 W9DR/4>W7
W0,W8EH>W4 CU8BC,CT1EEB>KP4EIT HI3TEJ>W0,W1 W3CCX>W4 17-1800
W5>W3,W5,W2 KP4>W4,W0 W7>W6 21-2200 W7>W6,W5,W9 SV2DCD>W7GJ(eme -24)
PY1>PY1 SV8CS>W7GJ(eme -18db) W3,W4>W5 W1,W2,W4>W2 C6AFP>W8,W1
KP4>W3,W9 W3HH/4>W1 KA0CDN>W6 22-2300 W7>W6,W5,W9,XE2,W1,W0
LX1FX>W7GJ(eme -26) XE2>W5 KP4>W8 KA0CDN>W6 C6AFP>W2,W3 HI8LAM>W3
W3>W4 23-2400 KP4>W8,W4 W1,W2>W4 W5,W7>W7 LA7HJA>W7GJ(eme)

May 31 00-0100 PY7>PY7 W2>W2 C6AFP>W101-0200 K0GUV,W6>W5
VE4ARM,VE6,W0>W5 02-0300 VE7>W7 VK7GJ>W7GJ(-29) 03-0400 VE1>VE1 C6AFP>W8
11-1200 W4>W4 NL7XM/2,KL7GLK/3,K4MHZ>W3 12-1300 W2,C6AFP,CS5BAL>HI3TEJ
W5>W3 KP4>W2,VE1,VE2 K4MHZ>W4 W8>W8 13-1400 W5,VE1,KP4>W4 W5>KP4,W4,W8
W5,W8>W9 FG5FR>W5,W4 K4MHZ>W7 KP4>VE9,W3,W2 14-1500 FG5FP>W5
K4TQR,KD4AOZ,W9DR/4>W1 W5>W4,W5 W4>VE9 W7>VE7 15-1600 C6AFP>VE2
KD4AOZ>VE9 W4>VE3,W4 K4HMZ>W8 W1,W2,VE2,W3>W4 W3>W2 K4MHZ>W8 W5>W1
16-1700 K4MHZ>W8,W9 W9DR/4>W2 W4>W1,W9 VA2ZFN,VE3WCC,W5,W3,VE9 W5>VE2
N6NB>W6 VE3UBL>W4 W8>VE2 17-1800 W4>VE2 18-1900 VE3>VE3 K5N>W3 W6>W7 19-
2000 W6>W7 20-2100 W7>W7,W6 W6>VE7 PJ7/K2GSJ>YV4DYJ 21-2200 W7,VE7>W6
FM5WE>HI3TEJ PU8TEP,PV8AZ>WP3UX 22-2300 W7,K6FV>W7 VE7>W6 4O3A>K2ZD(eme
-26db) JA7QVI>NA6XX 23-2400 W7,VE7>W6 JE1BMJ>W6YLL WA7X>W7

Asia and the Pacific

Asia

Activity increased markedly in comparison with April. As we have seen, Japanese operators worked into both Europe and North America and, on a single occasion, South America – but not Australia/New Zealand. Within Asia, the countries most frequently reported outside Japan itself

were Taiwan, Hong Kong and South Korea. There were also a few reports of Guam, Malaysia and the Philippines, one of UN but none of Indonesia.

May 1 2251 JR6YAG>VR2 23-2400 KG6DX>JA7 JI1LET/JD1>JA7,JA2,JA6

May 2 00-0100 AH2G,VR2>JA7,JA2 DS5>JA2 JR6YAG>VR2 01-0200 6M0W>DS4
VR2SIX>JA2 JD1BLK>JA1 JA2IGY>BU2 JD1BLK,JA6,JA1,JA9,JA2,HL2>VR2 JA6>HL2
BD7>JA2 02-0300 BG4,HL2>VR2 BD7>JA3 JA6YGR>BX4 03-0400
BV2YA,JR6YAG,JE7YNQ,JA1>DU1GM AH2G,BV2YA,JI1LET/JD1>JA2 VR2SIX>BX4
JI1LET/JD1>JA0 6M0W/5>JA2 DU1EV>JA1 JI1LET/JD1>HL2 JD1BMT>JA1 04-0500
DU1EV>JA2,BD7 JD1BMT>HL2 DU1>JA1 VR2,JR6YAG>BD7
JE7YNQ,VR2SIX,JR6YAG,JA2IGY,JA1>DU7 05-0600 DU7>JA0 BA4>JA7 VR2>JA1 06-0700
JA0>DU7

May 3 2254 JD1BMT>JR6BU 23-2400 JD1BMT>JA2,JA6 JA9>BA4 0052 JA1>JA1 2211
BV2YA>JA2

May 4 0631 BV2YA>JA2 0723 JD1BLY>JA1 08-0900 AH2G>JA7 BA4>JA2,JA4 BD4>JA2
KG6DX>JA2,JA1 BD7>BA4 09-1000 BD4>VR2 VR2SIX>JA2 JA6YBR,JA2,VR2>BD7 10-1100
VR2>JA7,JA2 BD7>JA2 11-1200 JA0>VR2 VR2SIX>JA7 JD1BLY,AH2G,KG6DX>JA2 2150
BV2JA>JA2 2252 JD1BLY>JA7 23-2400 DS2>JA1,6K2 JD1BLY>JA5

May 5 00-0100 VR2SIX>JA7 DS2,DS4>JA1 VR2>JA7 0138 JD1BMH>JA2 6K2>DS2 02-0300
JD1BMH>JA1,HL2 DS5>JA1 HL2>JA1,JA2,6K2 DS2>JA2 JA0>DS2 03-0400 DS1>JA1(jt) 04-
0500 HL2,HL5>JA1 DS2>JA1 0613 BV2YA>DU7 0736 DU7>JA7 7N1XEM>UA0CW 23-2400
K6QXY>JL8GFB(sssp) JA1>JA8

May 6 00-0100 W6OAR>JL8GFB 0150 WA7NB>JL8GFB 02-0300
W6XI>JA7GYP,JL8GFB(sssp) WA7NB>JH7XRZ,JA7GYP DU1/KI6TIU>JA1IAW,JG1HJV
0859 AH2G>JD1BKQ 09-1000 AH2G>JA1 KH0UA>JH7XRZ,JE1BMJ,JA7XBG,JE1BMJ
AH0BT>JA1 KH0UB>JA8 JD1BMH>JA4,JA5 BV2YA,BYtv>DU7 22-2300 JA7>JA8
NL7Z/b>JH7XRZ KE7V,VE7DAY>JE1BMJ KL7IKV>JH7XRZ,JE1BMJ KE7V>JA2DDN
K7OFT>JA7QVI 23-2400 KL7OO,N6KMR(CN91)>JA7QVI(jt)

May 7 00-0100 KL7IKV>JL8GFB(5w),JE1BMJ W7GJ,W6YLL,W7MEM>JE1BMJ 02-0300
JA6YBR>BA5 VR2SIX>JA6 0832 AH0BT>JH7XRZ 09-1000 DS2>JA2 BYtv>DU7
JA6YBR>RW0LDF JR1CBC>DU7 DU7>JH7XRZ 10-1100 8J120TDC>DU7
JR7YAG,BV2YA>DU7 BV4>DU7 1217 BV2YA>JA4 1518 VR2SIX>BX4

May 8 00-0100 JA1>JA8 VR2SIX,BV2YA,JR6YAG, BD9BA>DU7 07-0800 JR6YAG>VR2
JR6YAG,JA2IGY>BD7 VR2SIX>JN1 BD7>JA1 09-1000 DS2>JA3 DS4,VR2>JA1 BA4>DS5
HL4>JA3 JA6>DS2 10-1100 JR6YAG,BV2YA>VR2 12-1300 VR2SIX,BV2YA>DU7
PA0HIP/DU7,VR2SIX>BX4 2356 JA8>JA7

May 9 0014 HL2>HL2 0158 VR2SIX>6K5 0235 JA2IGY>7L1 03-0400 JR6YAG>DU7 6K5>6L0
JA1>JA1 0405 VR2SIX>DU7 05-0600 DU7>9M6XRO DU1>9M6XRO

May 10 (nil before 0640) 07-0800 BD4>JA1,JA2 09-1000 JE7YNQ,JA1ZYK,JA2IGY,JA7>DU7
HL2>JA1 JA3>BV4 10-1100 6K2>JA1 JA1>BG4 11-1200 VK2TVU>BV4VR DS2>JA1 2345
JA1>JA8

May 11 00-0100 BV2YA>JA2 02-0300 JR6YAG,BV2YA>DU7 0446 JR6YAG>DU7 2357
JA8>JA1

May 12 0453 HL5>JA8 14-1500 BV2YA,JR6YAG>>DU7

May 13 0239 HL5>JA8 DS3>DU7 03-0400 JR6YAG>DU7 VR2SIX>JA7

May 14 2254 BV2YA>JA2

May 15 0311 BV2YA>JA2 04-0500 BV2YA>JA2 07-0800 VR2SIX>JA6 BV2YA>BX4 09-1000 BV2YA,VR2SIX>JA1 JA7>BD4 10-1100 JE7YNQ,JA1>VR2 JA3,JA2IGY>BU2 2342 JA8>JA7 2358 JA1>JA8

May 16 00-0100 JA1,JA4>DS2 JA0>JA8 HL2>JA1 01-0200 DS2>JA1 HL3>JA9 02-0300 DS5>JA1,JA2 JA2>JA1 HL5,HL2>JA1JA7>JA8 03-0400 DS2>JA1 JA5,HL2,JA1>JA2 VR2SIX>JA6 0813 JR6YAG>DU7 11-1200 VR2SIX>BX4,JA6 1240 BV2YA>JA4 JR6YAG>DU7 22-2300 JR6YAG>BU2 23-2400 JA7,JA1,JA5,BD7,BG4>VR2 BV2YA>JA1 BU2>JA3

May 17 23-2400 BV2YA>JA2 BD4>JA3 00-0100 JA3,VR2>BG4 VR2,BX4>JA4 BV1>HL2,JA2 01-0200 BW1,BX5>HL2 JA6>JA5,JA1 BW1>JA2 02-0300 BV1,KL2>JA6 VR2SIX>JA6 BW1>JA2,HL3,JA4 BU2>JA1 03-0400 VR2SIX,BV2YA,HL2>JA2 BW1,BD4>HL2 BG4>VR2 BY8>JA2 BY/UAtv>DU7 04-0500 BG5,BW1>HL2 BD4>JA2,DS2 BY8>JA2 BG4>JA1,DS2 05-0600 BD4>JA4,JA9 BY8>JA2,JA1 JA5,DS5>JA1 DU1>JA7 06-0700 DU1>JA7,JA8 JA2>JA1,BA4 JR6YAG>VR2 07-0800 BG7>VR2 JA2IGY>BU2 0857 JA8>JA2 09-1000 DS4>JA2 JA8>VR2 VR2SIX>BU2 BV2YA,JR7YAG>BD7 BG7>BU2 VR2>BV4 10-1100 JA3,JA2>BA4 BD3,VR2>JA6 VR2SIX>DU1 DU17 11-1200 BD3>JA2 BG5>JA3

May 18 0007 JA3>BD4 0729 JA2IGY>BA4 08-0900 BV2YA>JA1 10-1100 BV2>JA2 VR2SIX>JA1,JA2 JE7YNQ>DU7 13-1400 JR6YAG,BV2>DU7

May 19 00-0100 VR2>JA1 01-0200 VR2>JA2 JG1ZGW,JA2IGY>VR2 JA1>7N4 06-0700 JR6YAG>VR2 VR2SIX>JA2 07-0800 HL5>JA7 08-0900 JA7>HL5 JA0>JA1 BA4>JA7 09-1000 6K2>JA2 HL5>JA1 10-1100 DS2>JA0 11-1200 BD3>JA4 15-1600 JR6YAG>DU7 23-2400 JA6>JA8

May 20 02-0300 JA6YBR>BX4 BV2>JA6 03-0400 JA6>HL5 BA4>JA7 JA4,JE7YNQ,JR6YAG >DU7 04-0500 JA5>DU7 05-0600 JR6YAG>VR2 07-0800 BV2YA>DU7 09-1000 JD1BMN>BX4 10-1100 XV3AA>BA4 DU7>BG4 BG7>JA2 DU7>JA1,JA2 23-2400 JD1BJJ>JA1

May 21 00-0100 JA6YBR,JR6YAG>BA5 BV2YA>JA1 01-0200 VR2SIX>BX4 JA2IGY,JG1GZW,JR6YAG>VR2 02-0300 JR6YAG>BX4 04-0500 VE2SIX>JA7,JA8 JD1BMM>JA7 VR2SIX>JA7,JA8 07-0800 JD1YBJ>JS3,JA7 JE7YNQ>DU7 JD1BYJ>JA 12-1300 JR6YAG>DU7 VE3CDX/W7>JE7YNQ 23-2400 VR2SIX>JA6 KH7Y>JR6EXN,JA2DDN

May 22 02-0300 JR6YAG,BV2YA>VR2 JD1>BD7 JA1>JA7 JA6>BX4 06-0700 JA1,JA7,JA8>DS2 BD4>JA1 09-1000 DS2>JA1 JA8>BV2 AH2G>JA7 10-1100 DS2,HL3>JA1 11-1200 JA2>BX4 22-2300 JH0INP>K0GU JA1,JA7>JA8 23-2400 K5RK,K0GU>JA7QVI JA6,JA7>VR2 N5DG>JH0INP K5RK>JE1BMJ

May 23 00-0100 JD1YBJ>JA7 JE7YNQ>VR2 N5DG>JH4IFF K5RK>JE1BMJ 01-0200 JR6YAG>DU7 6K5>JA1 VR2>JA4 DU7>JA8 BA5,JA7>VR2 02-0300 XV3AA>JA1 DS5>JA1 HL5>JA2,JA6 03-0400 BA8>JA1 BV2YA>DU7 04-0500 BG4>VR2 05-0600 9M2>9M2 07-0800 BD8>VR2 09-1000 JH8ZND>BD7 23-2400 JA8>DS2 JA1>JA8 BG4>JA2,JA1 JD1DYJ>JA2 DS4>JA1 DS2>JA6

May 24 00-0100 VR>JA2 BD9>JA7 DS5>JA6,JA1 BV1>JA2,JA3 01-0200 JA8>DS2 DS5>BA7 JA1>BD4 BA7>JA6 BA5>JA2 JA6>HL2 RW0CB>JA1 BD4>JA6 02-0300 BA8>JA2 BU2>JA7,JA1 BD7>JA2 VR2>JA1 BD4>JA3 BV2NT>JA1 K0GU>JA7WSZ JA6>BD4 JA7>JA8 03-0400 BD4>JA4 BA4>JA1 04-0500 BY8DX>UN8GC,VR2 05-0600 BD3>JA6 0638 JA7,JA1>JA8 10-1200 BG8>VR2 DS2>JA2 1117 BG8>JA823-2400 JA2IGY>KG6DX

May 25 00-0100 AH2G>JA2 JA7>BA8 JE7YNQ>KG6DX 01-0200 BG7>JA2 03-0400 BY2VA>JA2 04-0500 JH8ZND,JA2IGY>KG6DX 0928 JR6YAG,JA6YBR,JE7YNQ,JA0>BX4 22-2300 JD1YBJ>JA1,JA2 2327 JD1YBJ>JA7 BV2YA>JA2

May 26 00-0100 VR2SIX,BV2YA>JA2 BV2NT>JA1 JD1BYJ>JA2 0146 JE7YNQ>DS4 7N4>VR2 0350 VR2SIX>9M6XRO 0747 JA2>VR2 08-0900 BV2YA,VR2SIX>JA2 09-1000 BD4>JA2 BY8>JA1 10-1100 DU7>VR2 BA4>DS2 JA6>DS2

May 27 09-1000 JA2IGY,JA6YBR,DU1GM,VR2SIX>BX4 09-1000 JA6,VR2>BX4 10-1100 VR2>JA1 XV3AA>JA8 11-1200 BD4>JA2 2259 BA7,VR2>JA1

May 28 00-0100 VR2>BV4 JA1>JA8 BD4>7N4 BV2YA>VR2 02-0300 DU7,JA1,JR6YAG>BA8 VR2SIX,BA8>DU7 03-0400 BD9>VR2 VR2>DU7 DU1EV,9M6XRO>VR2 04-0500 BG8,VR2,JA8>JA2 VR2>9M6 05-0600 JE7YNQ,JR6YAG,JA2>VR2 JA1>BD9 JR6YAG,VR2SIX,UN1SIX>DU7 VR2>JA7 BV2NT>JA1 06-0700 BV2YA>JA7,JA1 07-0800 DU1GM>VR2 JA6YBR>BV4PK A6tv>JA3 08-0900 VR2>JA1 VR2SIX>DU7 JD1YBJ>JA7 10-1100 VR2SIX>9M6XRO JA6YBR>JA7

May 29 1138 BV2YA>JA2 1215 7N3>HL2 22-2300 BV2YA>JA1,JA2 HL2>JA1 2353 K5RK>JE1BMJ HL2>JA1

May 30 00-0100 HL2>7K1 01-0200 JR6YAG>VR2 BG8>VR2 VR2>JA7,JA2 02-0300 BG4>VR2 BV2YA>JA1 JA3,JA2>HL2 03-0400 JA0,JA2>BX4 VR2>JA2 04-0500 JA8>JA2 JA2IGY>BU2 05-0600 JA8,6K2>BX4 JA1>DS2 06-0700 JA3>6K2 HL2,HL1>JA1 07-0800 JA1>JA8 HA0DU>JL3IQE,JA7QVI JR6YAG>DU7 08-0900 DS2>HL2 6K2>JA1 JA4>JA1 ON4IQ>JE1BMJ 09-1000 JA8>JA7

May 31 00-0100 BV2YA>JA1,DU7 JR6YAG,VR2SIX,BW2>DU7,JA1 01-0200 JR6YAG>VR2 02-0300 VR2>DU7 HL5>7K1 JA1>JA8 0924 BV2YA>JA2 03-0400 HL2>JA2 04-0500 HL2>6K2 KH6HME>JA7WSZ,JA7QVI HL1>HL2 DS2>JA1 BV2YA>VR2 05-0600 JA8>JA7 NH6P>JA7QVI 07-0800 JA7>JA7 11-1200 VR2SIX>JA1 1738 BV2YA>JA2 22-2300 JT6YAG>VR2 VR2SIX>BX4 NA6XX>JE1BMJ,JA7QVI 23-2400 NA6XX>JE1BMJ,JF1RYU,JA2DDN K6QXY,W6YAL,W6OMF,N6RV>JA7QVI JA1,JA0>BX4

Oceania

Only a modest tally of reports, mostly for beacon reception, including some identifying meteor scatter or tropo as the propagation mode. Not many QSOs were reported, other than purely local ones. The one report that stands out is the one between VK4ABW, a well-known 50MHz operator and N8JX. No mode is suggested, though EME looks the most likely one; any other mode would be truly remarkable.

May 1 2107 VK5RBV>VK4(ms)

May 2 0640 N8JX(EN64)>VK4ABW 2212 VK5RBV>VK3

May 4 0149 VK2RHV>VK5

May 5 0459 VK3RMH>VK3 2336 VK3RMH>VK3(tr) VK5RBV>VK3

May 6 23-2400 VK5RBV>VK6(sc/ms) VK6RSX>VK6(sc/ms) VK5RBV>VK3,VK4

May 7 0302 49750(OK59)>VK6 23-2400 VK5RBV>VK4,VK6

May 8 011449750(OK59)>VK6 0658 48239.6(OJ03)>VK6 2330 VK5RBV>VK4

May 9 02-0300 49750(OK59)>VK6(sc/ms) 48239(OJ03)>VK6 1948 VK5RBV>VK4(ms) 2129 VK5RBV>VK4(ms) 2252 VK5RBV>VK4(ms) 2309 VK5RBV>VK6,VK4(ms)

May 10 0214 49750(OK59)>VK6

May 11 0551 49750(OK59)>VK6 2322 VK5RBV>VK4

May 12 0236 VK5RBV>VK4 2220 VK5RBV>VK4

May 13 2139 VK5RBV>VK4

May 14 2100 VK5RBV>VK4(ms)

May 15 0156 VK5RBV>VK4(ms) 2103 VK5RBV>VK4(ms)

May 18 0026 VK5RBV>VK4 0602 VK7RAE>VK3(tr) 23-2400 K6FV>KH7Y

May 20 2200 VK5RBV>VK4

May 21 0215 48239(OK15)>VK6

May 22 0309 49750(OK59)>VK6 0406 VK5RBV>VK3 1100 VK5RBV>VK4(ms) 2255 VK5RBV>VK4 2307 VK6RSX>VK6 2321 VK5RBV>VK6(ms)

May 23 01-0200 VK5RBV>VK3 VK2RHV,VK4RGG>VK5 02-0300 VK4>VK5 0403 49749.9(UA0 PN53)>VK3 0520 49750(OK59)>VK6 K6FV>KH7Y 2312 VK5RBV>VK4(ms)

May 24 03-0400 49750(OK59)>VK6 50760(NZ RE67)>VK4 0454 VK5RBV>VK4 05-0600 57250(QF02)>VK4 VK4>VK5 VK5>VK6 64260(PF95)>VK4 2316 VK5RBV>VK4

May 25 04-0500 VK5RBV>VK4 05-0600 VK4RGG>VK5 VK4>VK3 VK5RBV>VK4 06-0700 VK5FGN>VK4 VK3RMH>VK4 VK4>VK3 ZL3SIX>VK3 2144 VK5RBV>VK4 57250(PF96)>VK6

May 27 2212 VK2RSY>VK7(ms)

May 28 0107 VK5RBV>VK4 0324 VK5RBV>VK4 2310 VK5RBV>VK4

May 29 0259 ZL2MHF>VK3 50750,55250(NZ)>VK3

May 30 0110 VK5RBV>VK4 2020 VK5RBV>VK4(ms)

May 31 0257 W7GJ>VK7JG(jt/eme) 2356 VK5RBV>VK4

28MHz

28 MHz to and from Britain

May 1st brought a seasonal blossoming for UK ten-metre operators, as for others around the northern hemisphere, heralding a month rich in signals if not of exotic contacts. The tally of countries heard or worked in Britain during May surged. They included CN,CT,DL,E7,EA,EA6,EI,ER,EU,EY,F,FM,FY,HA,HV,I,IT9,KP4, LA,LU,LY,LX,LZ, OH,OH0,OK,OM,OY,OZ,PA,PY,RA9,S5,SM,SP,SV,SV5,SV9,TF,TR,UA,UR, V5,W,YL,YO,YV,Z B,ZC4,ZP,4L,4O,4X,5B,5N,5R,9H,9A. The known tally is 58, and doubtless there were a few more that the compiler overlooked, since some easy one are missing from the list. The list includes all continents except Oceania (though that was worked from elsewhere in Europe). However, apart from improved signals from South America, in propagation terms there were few openings of any real note. Southern Africa, the Far East (except for an SWL report of KH2RU 'loud' into the UK at 1356 on the 24th), and North America (apart from the Caribbean and G6PZ's contacts with K3OO and N2NL around 1156 on the 31st) remained elusive. Essentially, this was a good month for sporadic-E, with propagation every day. Some contacts would have required a second hop, while at the other end of the scale inter-G contacts were made during strong openings, notably on the 25th, when GM>GJ and GM>G(IO82) were reported. On some days the band was open before 0600UTC, though it had usually closed by 2100. Even so this was all very welcome after months of hearing little but the sound of silence.

A good month for beacon reception in the UK, by both contrast with April and with May 2008. 49 beacons are known to have been copied here at some time during the month – 10 more than the previous May, including five from outside Europe. This is partly due to beacons that were not operational in the earlier period, notably several QRP Italians, but it can mostly be credited to improved propagation. The table below shows reported signal strengths reported, where known; where no report was given this is indicated by the + symbol. The most 'reliable' beacons – ie reported on the greatest number of days - were SK5AE and SK0CT. They were reported on 19 days, and were followed by OK0EG and EA4Q, heard on at least 17 days. 4X6TU, which requires two Es hops a creditable 7 days, while 5B4CY, also at two-hop distance, was heard on 6. By contrast, PI7ETE, which was reported on a single day, at very short-skip distance, requires a particularly high Es MUF for reception in most parts of the UK. The German beacons were less prominent than might have been expected. Most beacons were received more consistently in the second half of the month as the Es season built up.

Days on which 28MHz beacons reported in the UK, May 2009

	C3	CS3B	CS5	DB0UM	DBFKS	DF0AAB	DF0ANN	DK0TEN	DL0IGI
UTC									
03-06									1
06-09	3		7	5	3	4	2	5	7
09-12	3	1	4	3		3	2	3	5
12-15	2	1	6	5	1	3		8	7
15-18	2		3			1		1	
18-21	1		1	1		1		2	1
21-24	3		2	2		1		2	3

	DM0ING	EA3TEN	EA4Q	ER1TEN	F5ZUU	F5ZWE	I1DFS	I1M	IZ1GJH	I3GNQ
UTC										
03-06										
06-09	4	5	7			6		5		2
09-12	2	1	4	1	1	3		3		2
12-15	4	3	7	1		6		4		2
15-18			1			2	2	2	1	1
18-21			1							
21-24		3	1			2	1	3		1

	IW3FZQ	IN3KLQ	IZ3LCJ	IW3SGT	IY4M	I8EMG	IQ8CZ	IS0GOV	LA4TEN	LA5TEN
UTC										
03-06	1					2			1	1
06-09	7	2	6	1	6	13	5		1	3
09-12	7		4		4	6	2		2	2
12-15	10	2	4		5	4	4		2	2
15-18	3		2		4	12			1	1
18-21	2				1	5		2	2	1
21-24	4		2	1	4	4				

	OE5XAC	OH2B	OH5RAC	OH9TEN	OK0EG	PI7ETE	SK0CT	SM5HUA	SV3AQR	5B4CY
UTC										
03-06	2				2		1			
06-09	10	6		3	6		7		1	2
09-12	4	3	1	2	7		9	1	1	1
12-15	7	7	1	2	8	1	8	1		
15-18	5	3	1	1	3		2	1		1
18-21	3	3	1	1	4		4	2	1	
21-24	1				4		1	2		

28 MHz Outside Britain

The tables below as always reflect reported propagation – a product of ionospheric conditions, activity patterns and the propensity of operators to report what they have heard or worked. Given that there are areas with few operators, not all of whom submit reports, the tables results as usual offer understated view – ie propagation was *at the very least* this good. In Europe, operators are relatively thick on the ground and abundant short-skip arrived at the beginning of the month and operators were quick to grasp enhanced opportunities and many reported their results. Consequently, we know that contacts could be made within Europe every day at all periods of the day. On many days, that most assiduous of monitors, DJ7KG, reported over 40 beacons by Es or Es scatter into southern Germany. Less well located or less well-equipped operators, may not have experienced such abundant good openings; mid-morning of the 30th, generally a good day, a G operator was complaining that he could hear only 10m signal. Much the same held true in North America. Es occurred every day, and almost at all periods during the day. However, operators in the northern states or on the two coasts seemed more likely to report spotty days or even blank days. The south-central states as usual did better than most, with some monitors reporting over 40 beacons in a UTC day.

The month also brought much more propagation between continents, as shown in the table below of the number of days when this is known to have occurred, whether by means of single- or multi-hop Es or in combination with tep. Thus there was working between Europe and Africa, South America or Asia on most days – though contacts with Asia were mostly with the Middle East rather than deeper into Asia (however G4MIA reported JA5NOB at 0808 on the 25th). Most, mainly evening, contacts between Europe and South America, predominantly involved Mediterranean countries and seem to have been by mixed-mode or multi-hop Es.

UTC Days on Which Propagation was Reported Between and Within Continents

		OC	AS	EU	AF	NA	SA
OC	18	16	3	0	19	7	
AS	16	28	27	8	7	2	
EU	3	27	100	27	10	24	
AF	0	8	27	4	9	6	
NA	18	9	10	9	100	100	
SA	6	2	24	8	100	10	

North American operators reported contacts with South America every day and at all four time periods. As on 50MHz operators in the southern states of the US and the Caribbean were the most favourably placed for multi-hop Es or a mix of Es and tep; the northern states and Canada were mostly a hop too far. Southern states, particularly the W4s, and the Caribbean were also the main beneficiaries of the improvement in propagation between the US and VK. Perhaps the most notable North America<->Asia reports was 9K2MU with 9Y4D at 2213 on the 27^h at 59+20. This was one of several routes that had been virtually closed for months but were now workable for the vigilant on several days. So JA6WJL reported the Z21ANB beacon at 1126 on the 10th and TN5SN was heard in JA at 0939 on the 24th. The only intercontinental path which, as far as was reported, remained entirely closed, even on contest weekends, was Oceania to Africa.

Reliability of Propagation Within and Between Continents (%)

	OC %	AS %	EU %	AF %	NA %	SA %
OC	16 39 29 06	03 06 19 39	00 00 06 03	00 00 00 00	16 32 42 13	06 32 00 00
AS	23 26 23 10	61 65 77 74	45 55 39 58	00 03 06 19	10 03 03 06	00 03 00 03
EU	06 03 00 00	71 48 42 52	++ ++ ++ ++	35 26 48 81	06 06 06 10	00 00 26 77
AF	00 00 00 00	03 10 10 10	35 23 39 81	00 03 00 10	06 03 06 23	00 00 00 19
NA	03 10 16 52	00 06 16 23	06 06 23 10	06 16 06 06	93 93 93 ++	10 58 77 87
SA	00 00 00 19	03 03 00 00	10 52 61 29	00 10 13 06	06 39 68 93	00 16 16 19

++ = 100%