

THE SIX AND TEN REPORT

**May
2005**

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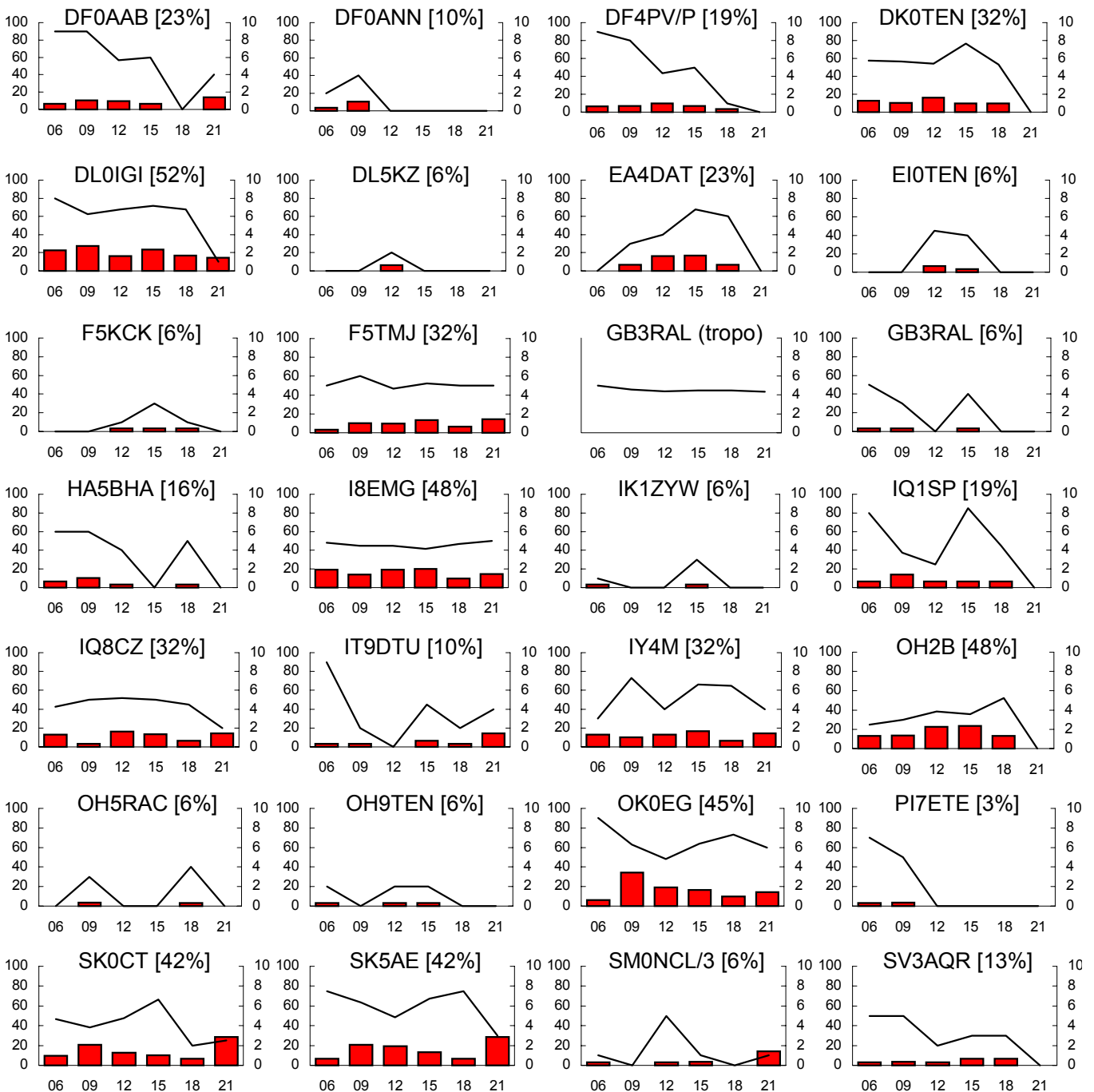
Analysis of 28 MHz reports from the UK

28 MHz reports and logs for May 2005 from 2U0GSY, G2AHU, G3HBR, G3IMW, G3USF, G3YBT, G4JCC, G4TMV, G4UPS, G0AEV, G0IHF and packet cluster reports. Compilation and commentary by G0AEV.

Beacon graphs legend

Legend for all beacon graphs in this Section: - graph bars (left Y-axis): beacon reliability as the percentage of days a beacon was heard by any UK observer within each time band. Graph lines (right Y-axis): Signal Strength as the average of the daily maximum Signal reported by any observer in each time band. Time band codes (X-axis): 6=0600-0900, 9=0900-1200, 12=1200-1500, etc. Callsigns are followed by daily reliability figures, the percentage of days per month when the beacon was reported.

European Propagation / Beacons



Propagation modes for European beacons.

Most of the propagation represented by the graphs on the previous page was single-hop direct-path Sporadic E. There may have been a minor additional component on the graphs for some beacons from Es backscatter – a mode that was presumably responsible for the reception of GB3RAL by several G stations outside of normal tropo range but too close for Es (except extremely short skip). “GB3RAL tropo” are the results of this beacon via “tropo” at G0AEV. F5KCK and EI0TEN are sometimes only heard by scatter, but both these beacons were also reported by short skip Es this month. PI7ETE was also by short Es.

Auroral E contributed to the late evening (21z period) results for Swedish beacons. Many of the German beacons (and GB3RAL too) were heard at G0AEV via auroral backscatter in the early afternoon of the 8th and again in the mid afternoon on 30th. These reports have little influence on the values in the Es-dominated graphs. F2 skip distances are long enough to exclude 28 MHz propagation within Europe by this mode, although 5B and CT3 are still within range.

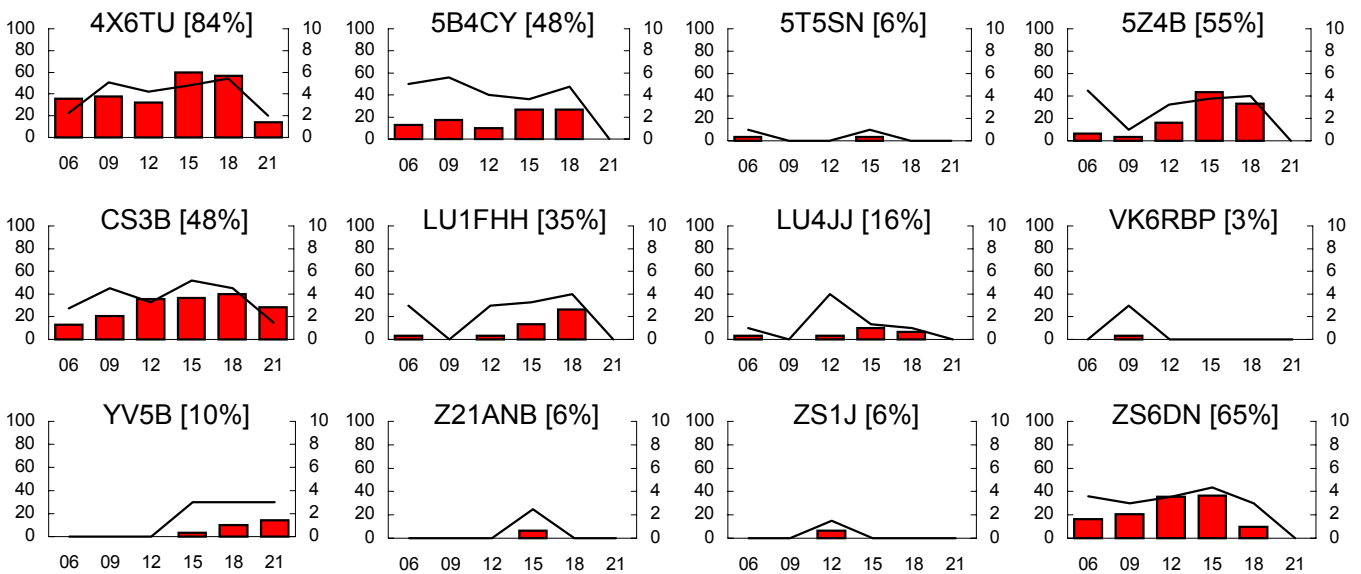
European Beacon Notes.

All of the active DL beacons were heard barring DA5MMB, and all the Italians except I1M, IS0GSR, and I0X (another QRSS QRP beacon apparently transmitting near 28.322 MHz along with IK1ZYW and IS0GSR). Italy is now well supplied with 10m beacons – the list includes a new beacon IQ1SP transmitting with 3w on 28.219.5. The IQ1SP signal was first reported in the UK on 23rd May and the beacon has produced excellent results subsequently. I1M may have been QRT in May - it appeared in June with a much better signal than that heard in previous years.

Scandinavia was well represented by beacons in SM and OH – LA is now without beacon coverage. The results for OH5RAC are rather poorer than might be expected (e.g. when compared with OH2B). Elsewhere a new HA beacon (HA5BHA 28.225) has been heard since mid-May, but there have still been no reports by UK observers of YO2X. EA4DAT seems to have gone off air from about 26th May but this beacon was back on again in mid-June. EI0TEN was also last heard in May (22nd), but unfortunately this beacon has not (yet) come back. Finally, C30P (28.256) became active in the second week of June.

Propagation to Asia, Africa, Oceania, South and Central America

Beacon Graphs.



Suggested propagation modes.

F2 propagation was significantly reduced in May compared with March and April – a function of the approach to mid summer – but this mode still accounted for propagation to central and southern Africa and to South America. F2 was best to ZS6DN, but at a daily reliability of 65% this is a relatively poor performance. Propagation to ZS and on similar paths probably included some TEP or linking of Es to TEP or F2. It is difficult to identify specific cases of Es linking but this style of propagation was responsible for a little propagation to Africa on 6m and equivalent propagation on 10m is likely.. Reliabilities to LU (LU1FFH 35%) were also low, but there was some propagation to all parts of the South American continent. And VK6RBP was still being heard in May – albeit only on one day!

At this time of year there is a problem with interpretation of the results from 4X4TU, 5B4CY and CS3B as these areas are now available by both double hop Es and single hop F2. Data from 10m in previous years and from 6m in May 2005 suggests that double hop Es is a significant factor from mid-May onwards. 6&10 area counts of Es and F assume that F2 was the propagation mode before 15 May and Es for days after this – a simplification.

Beacon Notes.

G3IMW head new beacon 5T5SN (28.190) on 14 and 16 May. There have been no reports since, so it appears activity was of a test or experimental nature. OA4B has been reported again, but on 20m in USA and with broken signals. No signs of a 10m signal. LU4AA is still QRT. The status of other beacons is unclear because of a lack of propagation

10m DX in May 2005

The following list of DX countries worked or heard in the UK comes from packet cluster Spots (DX Summit: <http://oh2aq.kolumbus.com/dxs/>) and from the logs of Six and Ten reporters. The improvement in the number of DX countries from May is mainly due to the presence of Es propagation to the Middle East, Northern Africa and the Caribbean.

DX in May: 4L, 4X, 5B, 5T, 5U, 6W, 7X, 8P, 9G, 9Y, CE, CN, CT3, CX, D4, E2, EA8, EA9, HP, HZ, J7, KP2, LU, P4, PY, PZ, TA, TI, TZ, UN, V2, VU, XT, YV, ZC, ZS.

DX in April for comparison: 4X, 5Z, 6W, 7X, 9G, A2, CE, CX, D2, EA8, LU, PY, SU, TT, TZ, YI, Z2, ZD7, ZS.

Propagation to North America

No continental North American 10m beacons were reported in May, and packet cluster spots suggest that no contacts were made either. There was a little propagation to the Caribbean (8P, 9Y, HP, J7, KP2, V2) and this may have been multi-hop Es. On six metres multi-hop Es produced a one or two weak openings to W and VE as well as to some of the Caribbean countries. This suggests that similar openings were also present at 28 MHz - presumably the openings to W and VE were missed through an absence of the dedicated band usage provided by the 6m community.

Analysis of 50 MHz reports from the UK

UK 50 MHz reports for May 2005 from G2ADR, G2AHU, G3HBR, G3IMW, G3USF, G4UPS, GM4WJA, and via packet cluster spots. Compilation and commentary by G0AEV.

The first half of the month was generally rather poor, enlivened only by a moderate Es opening on 1st and a strong aurora on 8th. In the absence of other propagation, MS via JT6M was used quite frequently to make inter-European contacts.

The second half of the month was quite different. From 15th onwards most days saw moderate to very good propagation with at least some Sporadic E on each day. Very good days for sporadic E were 19, 29 and 30th – 30 or more countries were heard/worked by UK stations on each of these days. DX worked in the second half of the month included 2 and 3 hop Es (e.g. to W/VE on 3 days) and F2/TEP with Es (e.g. to 9Q on 2 days). The period was bracketed by another two good auroras (15th and 30th), and there was reasonably good tropo too. MS activity was significantly lower than in the first two weeks.

Comments on May's propagation from 6&10 contributors:

- "Hopes justified at last" (Eric G2ADR)
- "A wee bit better than last month that's for sure" (Ted G4UPS – whose log shows more than just a "wee" improvement!)
- "The sporadic season seems to have been very slow in starting and then to have been very spotty but there has been some good propagation. There were two days (23 and 31) when the band was open for long periods to Cyprus and very little else. On 30 there was propagation to A4 and A6 and on 31 very strong to A6." (Brian G3HBR)
- "There was a certain amount of Es as well as two good auroras which reached down to SW England" (Jeremy G3IMW)

Sporadic E

Sporadic E results tabulated below ordered alphabetically by country prefix. Percentages following the country name are the daily reliability values (the number of days when propagation was reported). The first row of each table, "D" is the day of the month, subsequent rows give the maximum signal strength reported from the UK in each of three hour time bands ("06" for the band 0600 - 0900, "09" for the band 0900 - 1200, etc.). A figure of "0" indicates that signal strength was not reported.

	4L (3%)	4X Israel (13%)	5B/ZC Cyprus (23%)	5T Mauritania (16%)	7X Algeria (10%)
D	17	19 21 23 31	19 22 23 28 29 30 31	16 17 18 21 26	20 28 29
03			7		
06	0	0	9		
09		0	9	5 7	0
12		5	5 9	9	
15		7	9 9 9 5	9 9	9 9
18		1 9 7	9	9	7
21					

	9H Malta (36%)	A4 Oman (16%)	A6 UAE (19%)	A7 Qatar (6%)
D	1 6 13 20 21 23 25 26 28 29 30	15 22 28 29 31	20 21 22 29 30 31	21 29
06		0		
09	9		7	
12	9 9 9 9	5 5	7	
15	0 0 7 3	7 7 7 5	5 9 5 5 0	0 9
18			0	
21				

	CN Morocco (39%)	CO Cuba (3%)	CT Portugal (39%)
D	1 16 17 18 19 20 21 25 26 28 29 30	30	1 16 19 20 21 22 24 25 26 28 29 30
00	9		5
06	7 7 9 8		9 9
09	1 7 6 9 0		5 9 7
12	8 5 5 5 4 3 9 9	9	4
15	3 7 7 9 7 5 9		9 8 9 9 0 6 7 9
18	0 8 9 9 9 9		5 7 9
21	9		9 0

	CT3 (13%)	CU (13%)	DL Germany (19%)	EA Spain (42%)
D	19 21 25 26	16 22 26 28	17 19 22 29 30 31	1 16 19 20 21 22 24 25 26 27 28 29 30
06			9	7 0 9
09		9 6	9 0 9 9	9 9 7 4 9 6
12	7 9	7 1 5	6 1 9 0	9 5 0 6 0 9 7 3 9 9
15	0 0		9 7 0	9 9 7 2 9 9 9
18	9			9 9 9 9 9 9
21		0		9 0

	EA8 (13%)	EA9 (19%)	EI (10%)	ER (6%)	ES Estonia (13%)	FJ (3%)	FM (6%)
D	20 25 28 29	1 19 20 21 26 28	16 21 30	17 22	19 27 30 31	22	22 26
06		0		0			
09			9	3 0	9		
12	0	0	8 5 9		0	9	9
15	9 0 6	9 9 0	9		0 7		
18	9 5	9 4			0 9		4
21	9						

	F France (29%)	G<>GM (13%)	HA (rx only) (10%)	HB Switzerland (16%)
D	16 19 21 22 23 24 27 29 30	19 21 28 30	19 22 27	19 21 22 29 30
06	0 0 9	9	7	9 6
09	9 9 9	9 9 9	9	9 8
12	5 0 9 0 0	7 9	9	8
15	6 0 9 9 9			9 9
18	9 0			9
21	7			

	I/IS/IT Italy (65%)	JW (3%)	JX Jan Mayen (13%)
D	1 2 3 6 10 13 16 17 18 19 20 21 22 23 25 27 28 29 30 31	28	18 27 28 29
00			9
03	9		
06	9 0 9 9 9 9 9		7
09	5 7 9 5 5 9 9 0 9		
12	9 2 6 5 9 9 7 7 9 9		
15	3 9 5 0 7 0 9 9 0 9 7 9 5		
18	5 9 3 9	2	9 5
21			9 9

	JY (3%)	KP4 (6%)	LA Norway (13%)	LY Lithuania (19%)	LZ Bulgaria (32%)
D	21	16	17 27 28 30	16 19 21 29 30 31	7 17 19 20 21 22 23 28 30 31
03					5
06	0		9		9 5 9
09			8 9	9	0 7 0
12		6		5	9 7 0
15				9 5 9	9 0 0 5 6
18			9 5	9 0 9	0 9 9
21				9 9	7

	OD Lebanon (19%)	OE Austria (26%)	OH Finland (13%)	OK/OM Czech/Slovak (23%)
D	19 21 23 28 29 31	16 17 19 22 27 29 30 31	16 27 30 31	17 19 22 27 29 30 31
06	0			9
09	0 9 3	9 9 8 9 9	9 6	9 0 7 7
12	6 7	5 9 9 9 5	9	9 9 0
15	5 5 5 9	9 0	6	9 0
18	8 9		9	9
21				

	ON (3%)	OY (13%)	OZ Denmark (19%)	PA (3%)	SM Sweden (19%)	SV9 Crete (10%)
D	30	18 21 28 30	17 19 21 22 29 30	22 30	19 21 22 27 29 30	19 29 30
00			9		5	
06	0		9 9	9		0 9
09	9	9 9	0 9	9	9 0 9	
12		9 9		9		
15			5		9 0	
18		2			7	0
21			3		4	

	SP Poland (36%)	SV Greece (19%)	TA (3%)	TF Iceland (16%)	UA (3%)
D	1 16 17 19 20 21 22 27 29 30 31	19 22 23 29 30 31	31	18 28 29 30 31	22
00				0	
06		0 9			0
09	9 9 9 9	5 0			
12	3 9 9 0 9 9			5	
15	7 9 7 9	0 9 9 5	0		
18		7 9		3	
21	0 0 9			9 9 7	

	UR Ukraine (26%)	VE (10%)	VE8 (3%)	W (6%)	YO Romania (32%)
D	11 13 17 19 20 22 29 31	22 29 30	29	22 29	1 16 17 19 21 22 27 29 30 31
00			3		
06	5 9	1			9 0 0 9
09	9 0				0 0 0 0
12	5 5 9 9	2			9 2 5 5
15	5 9 0 0 9			0 9	9 5 5 6
18		1			0 0 0
21					

	YL (3%)	YU/9A/S5/T9/Z3 Ex-Yugoslavia (52%)	ZA (6%)	ZB Gibraltar (16%)
D	19	1 7 13 16 17 19 20 21 22 23 24 27 28 29 30 31	13 22	19 20 25 28 29
06		5 9 0 9 9	9	0
09		9 5 6 9 9 5 3		0
12		7 9 7 5 0 9		0
15	0	9 5 9 9 4 9 9 9 4 7	9	6 7 9 0 7
18		9 0 9 4 7 9		7 9 9
21		5		7

Sporadic E backscatter

- 1st 1146 G4FUF > HB9SIX "Es backscatter"
- 15 1252 GM7PBB (IO68) > GJ8BCG 58 "scatter"
- 30 0632 G3WZT > GM4NFC "Strong back scatter"
- 30 1004 G4OBK (IO94) > MM0CWJ (IO67), GD0TEP 589 (both backscatter)

Es and Aurora on 30th May.

The events of the 30th are quite interesting. Strong sporadic E was present throughout the morning. The period saws good propagation to the north including short skip between southern G and GM, and between G and OY. During this period there was some weak aurora (G to OH and GB3LER. Shortly after 1300 (times different for different locations) the E propagation disappeared to be replaced half an hour or so later with a major aurora that lasted all afternoon. G3IMW and G4UPS (both in IO80) commented on a very sudden change in propagation at this time. Auroral E to JX, TF and VE8 followed (and lightly overlapped) the aurora in the late evening.

The morning propagation must have been Es from the widespread geographical distribution of paths within Europe, and from the inclusion in the event of multihop propagation to the Middle East, VE and the Caribbean. But there may also have been auroral E in the lead up to the aurora (eg, to TF) – although how this could be differentiated from Es in this case I don't know. And, as has been suggested before in similar situations, perhaps the Es was in some way connected to the aurora.

Es Propagation Summary.

The table below displays total counts of country/areas heard/worked via sporadic E by UK amateurs, a summary of the detailed tables presented above. 3-hourly periods in which 20 or more countries were heard or worked are shaded grey, and for 10-19 countries are shaded yellow (or a pale grey if you read is in monochrome!!)

Es Summary

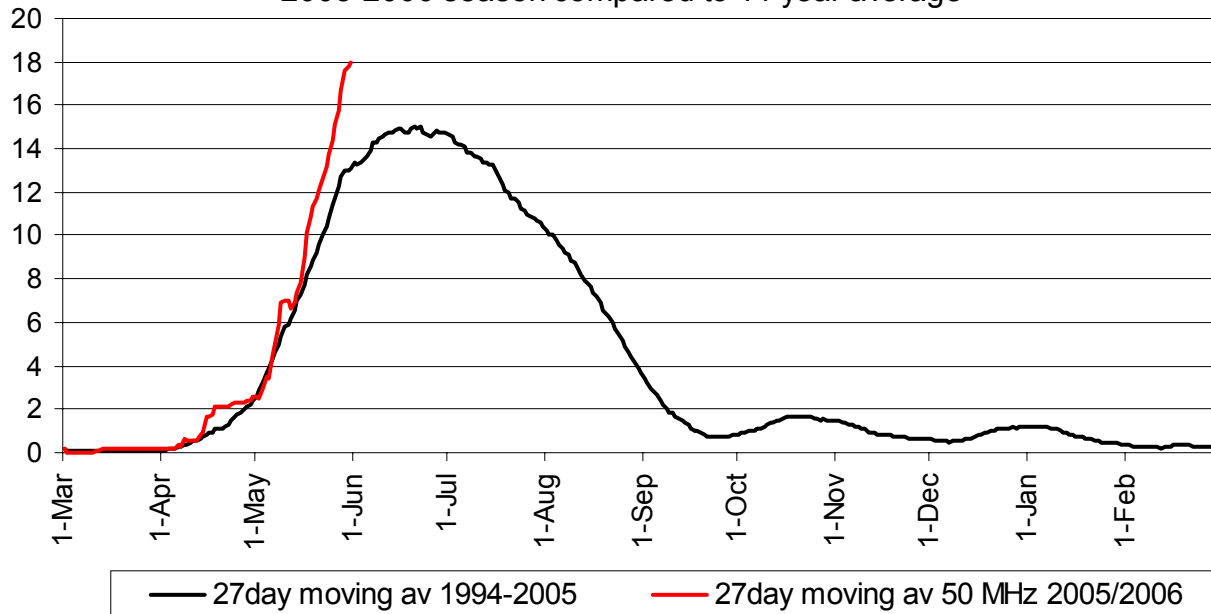
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
06	1											1			5	3	1				10	12				2	5	4	20		
09	2														11	11	1	12			10	12				4	2	7	6	24	
12	6	1								1					2	4	2	9	2	4	14			3	3	4	9	9	7	14	12
15	2		1			2	2			1			4		1	3	2	2	21	11	9	9	9		7	1	2	6	21	1	17
18			1				1									1		2	9	9	7	3	3	1	6	3	6	4	14	1	7
21																		1	3	5	2			1		2	1	2	5		2

The strong Es seen in the last week of April continued only up until 1st May after which activity dropped to the poor and patchy levels more typical of early April than early May. On 16th the period of poor conditions ended abruptly and the second half of the month was characterised by frequent, sometimes strong and extensive, sporadic E on nearly all days – the typical mid-summer pattern. In detail there were two spells of high activity: 16th- 22nd (with 19th the best day) and 27th-31st (best day 30th).

Overall, despite the poor start to the month, May looks quite good in comparison with the results from previous years. This is illustrated in the graph on the following page, which displays 27-day moving averages of the daily 6m country/area scores (as calculated in the 6&10 Reports), against a 10-year average of the same measure. See the May 2004 Six and Ten Report for a detailed discussion of the use of 27 day moving averages in this graph.

The relatively strong showings of sporadic E at the end of April and again at the end of May dominate the data and the poor early May conditions appear to have little influence. The overall trend of the 2005 line is clearly upward, and at a significantly steep gradient than the 11-year mean. Unfortunately, sporadic E in June does not seem to have been up to this standard. Poor conditions that appear to have existed in early June will modify the 27-day averages for late May and these new data will tend to reduce the difference between the 2005 and 11-year mean lines

50 MHz Es (27day moving averages)
2005-2006 season compared to 11 year average



DX Propagation

There were few restricted DX openings, mainly to 9Q0AR, as shown in the tabulation and listings below. 9Q and PY were presumably via Es linking into trans-equatorial F-layer propagation (which was probably true TEP). The openings to D4B are included in this section although, on reflection, these openings are quite likely to be multi-hop Es without other modes involved

	9Q [9Q0AR] (6%)	D4 [D4B] (6%)	PY [PP5AR] (3%)	
D	16 29	24 25	21	
06				
09				
12		0		
15		9 0		
18	2 7	7	4	
21				

- 16th 1917 GJ8BCG > 9Q0AR 429
- 1920 M3CVN > 9Q0AR 319 "lots QSB"
- 21st 1920 G4IGO > PP5AR 54
- 24th 1421 MW0BYS > D4B "v weak"
- 1501 GW3MFY > D4B "peaking 599"
- 1510 G4PCI > D4B 559
- 25th 1740 G0CHE > D4B
- 1755 G0GMS > D4B
- 1810 G4PCI > D4B 579
- 29th 1942 G4IGO > 9Q0AR 559
- 1955 G0JHC > 9Q0AR
- 1957 G4IGO > 9Q0AR 559 "TEP"

Meteor Scatter

The total reported/spotted numbers of meteor scatter QSOs (and of all JT6M QSOs) were slightly lower overall than in the previous month. In particular there was a very significant decline in JT6M activity from 16th May onwards when high sporadic E activity levels appeared to kill off interest in MS.

Most JT6M QSOs are completed via meteor scatter, although this is not always obvious from the available data. In the following analysis JT6M contacts identified as made by Tropo and Es are excluded – these are reported in their respective sections.

Table of MS QSOs (mostly via JT6M) in May by day. Weekend days are highlighted

Date	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
MS QSOs	3	4	2	0	2	0	6	4	0	1	5	1	0	1	0	0	0	6	3	1	0	2	1	0	0	1	0	2	0	0	1
All JT6M	6	4	3	2	9	1	23	14	7	7	9	4	7	7	20	1	2	18	9	4	1	5	4	1	0	2	4	9	0	0	2

MS QSOs = all QSOs where MS mode indicated or inferred: mainly digital modes but some traditional
 All JT6M = all JT6M QSOs/reception reports less those explicitly identified as tropo or Es

Table of MS QSOs (mainly via JT6M) in May 2005 by hour

Hour	QSOs	Countries	Hour	QSOs	Countries
06z	0		15z	0	
07z	17	EA, I, OE, S5, SM	16z	2	EA, I
08z	10	HB, I, OH, S5	17z	1	I
09z	1	EA	18z	0	
10z	4	I, S5	19z	1	CT
11z	3	I, ON, SP	20z	2	F, SP
12z	2	DL, G>GM	21z	1	G>GM
13z	1	GM	22z	0	
14z	0		23z	0	

Tropospheric propagation

Plenty of short and medium haul tropo contacts were spotted this month, many made in contests or from working GJ8BCG/P (who had a very active fortnight). Interesting tropo data includes evidence that “tropo” conditions were significantly above the norm, or contacts made over distances of around 500 km and greater - and clearly most of the inter-UK contacts and those between stations in SE England and PA, ON, etc are not of this order. Actual distances covered can not be determined in the absence of the grid locators for both stations (although some time-consuming locator research would probably find these). The following selected QSOs (all believed to be tropo or probable tropo, although there may be some unintended inclusion of MS or Es backscatter) represent May’s “long(er)-haul” data.

14 th	1102	PA2M > GJ8BCG/P “up to 55 here - 3el@10m”
	1241	DL1EJA > GJ8BCG/P 559
	1353	LX2SM > G4IGO (IO80)
	2024	G4OBK > GJ/G8BCG/P “tropo”
	2025	2147 EI5FK > GJ8BCG/P 559
15 th	1220	DL8PM > GJ8BCG/P 559
	1224	DK5AI (JO51) > GJ8BCG/P 55 (<i>may be scatter</i>)
16 th	0927	ON4IQ > GJ8BCG/P 59 tropo
	1250	EI7BMB > G4DEZ 51
24 th	1916	G4PCI > GM4NFC 31
27 th	1154	G4PCI > EI6JK 57 tropo
31 st	2103	EI5FK > G0TSM 319

Aurora

Several geomagnetic storms produced good auroral conditions on 8th and 30th. There was a moderately good event on 15th and a number of lesser events. On both 8th and 30th openings were extensive providing aurora contacts for stations in all parts of Britain, including to near-European and Scandinavian countries. The most southerly contacts were with S5, made in the late phase of the aurora of the 8th. Auroral E was associated with most of these aurora, and on two occasions auroral E openings extended between GM and VE8.

John GM4WJA writes "I know it's news for next month but (I) worked VE5UF in DO61 on 6m at 2249 on 12th June and exchanged 44a and 55a reports". Something to look forward to!

1 st	15z	1737	MM0AMW (IO75) > GB3LER 53A
	18z		Aurora in early evening at GM4WJA
7 th	18z-21z		Aurora in mid to late evening (GM4WJA). Auroral E in 21z period.
Major event			
8 th	00z	0127	MM0AMW > TF3SIX 52A. Auroral E (including to VE8) – see below.
	12z	1224	LB6YD (JO59) > GB3LER 52A
		1237-1251	MM0AMW > GB3LER 53A; GW8IZR (IO73) > GB3LER 55A QTF 010
		1300-1400	Many reports G<>GM; LA2IM (JP43), SM0TSC > GB6LER (both 55A); MM0AMW > OY6SMC 53A
		1400-1500	Many reports G<>GM; G3HBR > OH3XR 56A, LY1CX 55A; OZ2PJ > MM5DWW 57A; G4IFX (IO91) > OZ9PP, F4EGZ (JN16) 57A; PC5A (JO21) > GM4NZX 51A
	15z		G2ADR (IO93) > F (6A), GM (8A), LY (3A), ON (2A), OZ (6A), PA (7A)
		1500-1600	G > EI, G, GM; G4PCI > DF8XR 55A, SM7FJE 56A
		1600-1700	G > EI, F, G, GM, ON, PA; GM > G, GM, PA; G3IMW > DK5AI 51A; SM7FJE (JO65) 52A, EI8HZ (IO64) 53A QTF 030, PE1BTX 51A QTF 060; SP7VTY (JO82) > M0CTP 59A, G4PCI > DL8BDU; LA6PV > GB3LER 52A; G0PQO (IO92) > S57RR ("aurora")
		1700-1720	G > F, G, GM, ON, PA; G3IMW > ON6AB (JO02) 51A QTF 060; SM7FJE > GM8OEG 59A; LA4LN (JP50) > M0CTP IO93 59A
		1732	G4IGO > S57RR 54A
	18z	1845-1906	EI7BMB > GB3LER 41A; GM7PBB > GB3BUX 53A. AE to TF at 1915
13 th	18z		Auroral E (see below) to North: no associated 50 MHz aurora reported.
15 th	06z	0632-0646	SM7FJE < MM0AMW, GM4DZX 59A; OZ0JD (JO47)> G1YLE (JO02) 55A
		0708-0803	G > GM; GM > E, G, ON, PA; MM0AMW > OY6SMC 55A; G3WZT > SM7AED "Au"; G4PCI > LA5UF 52A; EI5FK > GM4DZO (IO89) "Aurora"; G4IGO > OZ1DJJ > 55a QTF 040
		0830 & 0856	LA2IM (JP43) > GB4LER 53A; MM5AJW (IO88) > GM3JIJ (IO86) 55A
	18z	1930	MM0AMW > GB3LER 42A
		2025	LA2IM > GB3LER 53A
	21z	2238	MM0AMW > G4DEZ
		2329 & 2341	G4IGO > GM4WJA 43a; MM0AMW > OY6SMC 53A. Minor AE reported
16 th	15z	1631	MM0AMW > GB3LER 53A. Auroral E to VE8 at 23z, JX at 00z (see below)
17 th	15z	1648	LA2IM (JP43) > GB3LER 52A
20 th	06z	0706	MM0AMW > GB3LER 53a. LA video "auroral"
21 st	21z		GM4WJA reports aurora in late evening.
23 rd	15z	1658	GM8LFB > GB3LER "going auroral"
28 th	21z	2329	MM0AMW > GB3LER 52A. "Aurora all evening" at GM4WJA
29 th	00z	0012	GM7PBB (IO68) > OY6SMC 52A
29 th	21z	2325	MM0AMW > GB3LER 55A

Major event			
30 th	09z	1107 1154	G4RGK > OH2HK (KP20) QTF 010 "aurora" G4ASR (IO81) > GB3LER 54A QTF 340
	12z	1347-1400 1400-1500	GM4NFC (IO75) < G3IMW 53A QTF 030, G4PCI 57A, G8IZY (IO91) 55A G > EI, G, GI, GM, PA; G3UKV (IO82) > OZ7IGY "weak au"; OH2RF > G7FEW 55A; DL8BDU > MM5AJW 54A; G4OBK (IO94) > SM7AED (JO65) 59A; DD3DJ > GM4SFW 55A
	15z	1500-1550	G2ADR > GM, LA, OH, SM (all aurora) G > EI, G, GI, ON. G3IMW > G beacons all QTF 040-045; G4OBK > ES2RW (KO29) 59A; LX1JX (JO30) < G4PCI 55A, G8IZY (IO91) 55A QTF 065; G8IZY > EI2JD (IO63) 59A QTF 060
		1607-1624 1713	G > GM; F6HRP (IN88) > GM4NFC 57A; G8IZY > EI7BMB 57A QTF 040 SM7FJE > GM4SFW (IO77) 57A. No aurora at G3IMW
		1747 & 1751	MM5AJW > LA5UF 55A; G4PCI > GB3LER 41A
	18z	1808	LI9DK > GB3LER 52A QSB
	21z	2137	LA7SP > GB3LER 51A. Auroral E in period 21.24-22.27 (see below)

Auroral E

7 th	21z	2157-2221 2332-2335 2348	G > JX7SIX to 599 G > TF3SIX to 599 (<i>Described as Es but probably AE: aurora in GM</i>) MM0CWJ (IO67) > JX7SIX 529
8 th	00z	0113 0124	MM0AMW (IO75) > VE8BY 559. Some aurora (see above) MM0AMW > OZ4VV
	09z	0923	G4FUF reports LA video 48260.4 (JP77) "AuE"
	18z	1915	G4FUF > TF3SIX 559 (following extensive period of aurora)
13 th	18z	1952-2009 2039-2051	MM0AMW > JX7SIX 549; TF3SIX 539 GM > JX7SIX 559, TF3SIX 569, OY6SMC 539; G4PCI > TF3SIX 419
15 th	21z	2327	G4IGO > JX7SIX 599. Also at 2341 MM0AMW > LA video "s9 Au-E".
16 th	21z	2321	MM0AMW > VE8BY 529
17 th	00z	0004	MM0AMW > JX7SIX 599
30 th	15z	1757	DL6QS (JO43) > GB3LER "AE" – in dying phase of extensive aurora
	21z	2124-2200 2200-2211 2222-2227	G > JX7SIX to 599, G4FVP (IO94) > TF3SIX 52 G > JX7SIX to 599, TF3SIX 579 GM4ISM (IO85) > VE8BY 559; GI4FUE (IO74) VE8BY 529

EME

EME data this month includes the M0BCG-ZL3TY contact, as described extensively elsewhere.

7	0433	M0BCG > ZL3TY JT65A -21db
7	1822	G4PCI > W7GJ EME -21dB JT65A
15	2004	M0BCG > W7GJ -22dB
15	2132	W7GJ > M0BCG "EME still open!"

Solar and Geomagnetic Data for May 2005

Data supplied by G0CAS (Sun Mag¹) and from Internet sources. Compilation by G0AEV.

Sunspot numbers (SEC)	Mean 65.4	Max 117 (11 th)	Min 22 (20 th)
Solar Flux (28 MHz)	Mean 99.5	Max 126 (13 th)	Min 82 (21 st -22 nd)

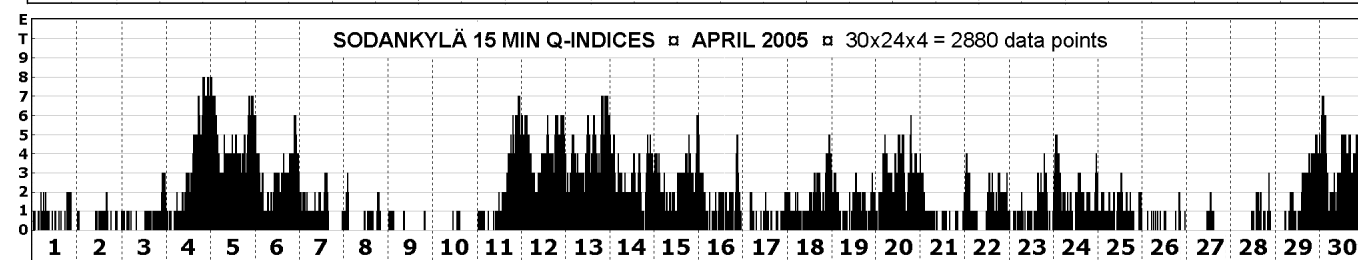
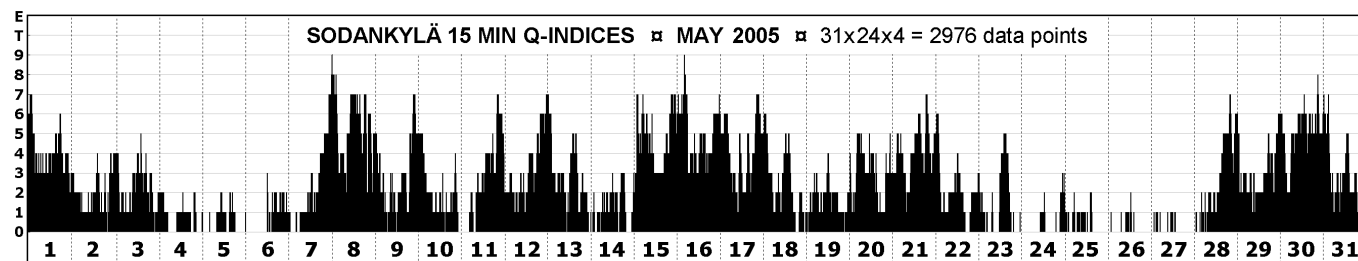
Solar data for May 2005 are presented in the table at the end of this section. Numbers in the 28 and 50 MHz columns of this table are the total daily "areas" worked/heard from the UK for each of several propagation modes and are a summary of the data presented in the first sections of this Report. On 28 MHz "areas" refer to the number of beacons reported via Es and F-layer; on 50 MHz the number of countries via Es, F-layer, Aurora and Auroral E. F2 critical frequencies are from Chilton in Oxfordshire. SIDC spots are from SIDC, and other solar data from the joint USAF/NOAA daily summaries or directly from SEC.

Energetic Events.

The sun was more active in May than May There were 13 M class X-ray solar events on 9 days in May but no M or X class X-ray solar events in May (and none of C class either).

6 th	1111-1135	M1.3		12 th	0727-0737	M1.6 2B		16 th	0233-0250	M1.4 1B
7 th	0757-0819	M1.4			1733-1745	M1.4 1N			0856-0915	M1.6 SF
11 th	0503-0536	M1.3 SF		13 th	1613-1728	M8.0 2B		17 th	0231-0252	M1.8 1B
	0611-0656	M1.2		15 th	2227-2242	M3.5 1N		18 th	0231-0252	M1.8 1B
	1922 1955	M1.1 1F								

Q-indices

 from Sodankylä, Finland (Thanks to OH2LX)


Q-indices for May (top) with data from the previous month (below)

Geomagnetic data from the Finnish observatories for May are:

Monthly averages

Sodankylä: monthly Ak average = 26.8 (17.9 in Apr)
 Nurmijärvi: monthly Ak average = 20.4 (10.0 in Apr)

Most disturbed May days:

Sodankylä: 8th, Ak = 136 (Apr 5th Ak = 60)
 Nurmijärvi: 8th, Ak = 119 (Apr 12th Ak = 29)

¹ Sun Mag: Sunspot and Magnetic data compiled by Neil Clarke G0CAS. Email neil@g0cas.demon.co.uk

K-indices.

The following four tables present the Kp index (from SEC) and the Lerwick ("KL"), Eskdalemuir ("KE"), and Hartland ("KH") K-indices (from the British Geological Survey). Each table is set out with the day of the month in the top row followed by rows containing the K-values or each 3-hour period. The bottom row of each table is the sum of the K-values for the day. Pale (yellow) shading indicates K = 5, darker (grey) when K > 5. There were 10 May days when Kp or the UK K-indices reached 5 or higher.

Planetary K (Kp)

KP	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
00	5	2	3	3	1	1	2	6	3	3	1	3	5	2	5	4	4	3	2	3	3	4	2	1	2	1	1	1	3	4	4
03	6	2	2	3	1	0	1	6	3	3	0	4	5	1	5	6	4	3	3	6	4	2	1	1	1	1	1	3	4	3	4
06	4	2	2	1	1	0	0	4	1	3	2	3	5	3	9	5	4	4	3	6	4	3	1	1	2	0	1	2	3	6	3
09	3	1	3	1	3	1	1	5	1	2	3	4	3	2	8	3	3	3	2	4	4	4	1	1	1	1	1	2	3	7	3
12	3	2	3	1	1	2	2	7	1	2	2	2	3	2	4	4	3	4	2	4	3	3	3	1	1	1	1	2	2	6	3
15	3	2	3	2	2	2	2	6	2	2	3	3	4	2	4	5	3	3	2	3	3	2	3	1	2	1	2	4	3	7	3
18	3	2	2	2	2	2	3	4	3	2	3	3	3	2	4	2	2	2	3	2	3	3	2	2	2	1	1	4	3	5	3
21	2	2	1	1	1	2	4	4	4	2	4	3	2	2	5	2	3	2	3	3	3	2	1	2	1	1	0	4	6	4	3
Σ	29	15	19	14	12	10	15	42	18	19	18	25	30	16	44	31	26	24	20	31	27	23	14	10	12	7	8	22	27	42	26

Lerwick K (Shetlands)

KL	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
00	4	2	2	2	1	0	1	6	3	2	0	2	5	2	3	4	3	3	1	3	2	3	2	1	1	0	0	0	3	4	3
03	3	1	1	2	1	0	0	6	3	1	0	3	2	1	4	6	4	2	1	4	3	2	0	0	1	0	1	1	2	3	4
06	3	0	0	0	0	0	0	2	1	1	1	2	3	1	9	6	3	1	2	3	3	1	0	0	0	0	0	1	2	5	2
09	2	1	1	0	1	0	0	4	1	1	1	1	2	1	6	4	2	1	2	3	2	1	0	0	1	0	0	1	2	5	2
12	4	2	3	1	1	2	3	9	1	2	3	3	3	1	3	5	2	2	2	3	3	3	3	1	0	1	1	2	1	8	4
15	3	2	3	1	2	2	2	7	3	1	3	3	3	2	4	4	4	2	2	3	3	1	2	0	2	0	0	4	3	7	2
18	4	1	2	2	1	2	2	6	3	2	3	3	2	2	5	2	2	1	2	1	4	1	1	1	1	0	0	4	2	7	2
21	2	1	2	1	0	1	5	4	4	2	3	3	1	1	4	2	2	1	1	2	2	1	1	2	0	0	0	2	4	5	2
Σ	25	10	14	9	7	7	13	44	19	12	14	20	21	11	38	33	22	13	13	22	22	13	9	5	6	1	2	15	19	44	21

Eskdalemuir K (southern Scotland)

KE	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
00	3	2	3	2	1	1	1	4	3	3	1	2	4	2	5	3	3	3	1	2	2	3	2	1	1	0	0	0	3	4	3
03	4	1	2	2	1	0	1	5	2	1	0	3	3	1	5	5	4	2	2	4	4	2	1	0	1	0	1	2	3	3	3
06	3	1	1	0	0	0	1	3	1	1	1	3	3	2	8	5	3	2	3	4	3	2	1	0	0	0	0	1	2	5	2
09	2	1	2	0	1	0	1	5	1	1	1	1	2	1	6	3	1	2	2	3	2	2	0	0	1	0	0	2	3	4	3
12	4	2	3	1	1	2	3	8	1	2	3	3	3	1	4	5	1	2	2	4	3	3	3	1	0	1	2	2	2	6	3
15	3	2	3	1	2	2	2	6	3	2	3	3	4	3	4	4	4	3	2	4	3	2	2	0	2	0	0	4	4	7	3
18	4	2	2	2	1	2	3	5	3	2	4	4	3	3	4	2	2	1	3	3	5	1	1	1	1	0	0	4	3	6	2
21	2	2	3	1	0	2	4	3	3	2	3	3	2	1	4	3	2	1	2	3	3	1	1	2	0	0	0	3	5	4	2
Σ	25	13	19	9	7	9	16	39	17	14	16	22	24	14	40	30	20	16	17	27	25	16	11	5	6	1	3	18	25	39	21

Hartland K (SW England)

KH	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
00	3	2	3	2	1	1	1	5	3	2	1	2	4	2	6	4	3	3	1	2	2	3	2	1	1	0	0	0	3	4	3
03	4	1	2	2	1	0	1	5	2	2	1	4	3	1	5	5	4	3	2	4	4	2	1	0	1	1	1	2	3	3	3
06	3	1	1	1	1	0	1	3	1	2	2	3	3	2	7	5	3	2	2	4	4	2	1	0	1	1	0	1	2	5	2
09	3	1	2	0	1	0	1	5	1	1	2	1	2	1	6	3	1	2	1	3	2	2	0	0	1	0	1	2	3	4	3
12	4	2	3	1	1	2	3	7	1	2	3	2	3	1	4	4	0	2	2	3	2	2	2	1	1	1	1	3	2	5	3
15	3	2	2	1	3	2	2	6	2	2	4	3	4	3	5	4	4	4	1	4	3	1	2	1	2	0	0	4	4	6	3
18	4	2	2	2	1	2	3	5	3	2	4	4	3	3	4	1	2	1	3	3	5	1	1	1	1	0	0	4	3	6	3
21	2	2	2	1	0	2	4	4	4	2	3	3	2	0	4	2	3	1	2	2	3	1	1	2	0	0	0	4	5	5	3
Σ	26	13	17	10	9	9	16	40	17	15	20	22	24	13	41	28	20	18	14	25	25	14	10	6	8	3	3	20	25	38	23

May	28 Areas			-- 50 Areas --			2800			- Spots -			Max			X-ray			Min foF2			-- Particle Fluences --		
	Es	F	Es	F	Es	AE	Flux	SEC	SIDC	Kp	Ap	Aa	b.gnd	MHz	Hour	Max foF2	MHz	Hour	2MEV Elec	1MEV Prot	10MEV Prot	1.4E+04	1.4E+04	1.4E+04
01-May	4	4	9	0	1	0	112	61	39	6	26	38	B2.4	6.0	18	2.9	04	8.8E+07	1.4E+06	1.4E+04	1.4E+04	1.4E+04	1.4E+04	
02-May	4	5	1	0	0	0	112	55	42	2	7	12	B2.3	5.9	17	3.1	04	3.5E+08	6.4E+05	1.3E+04	1.3E+04	1.3E+04	1.3E+04	
03-May	1	2	1	0	0	0	112	79	47	3	10	19	B2.6	07	20	3.2	03	2.1E+08	5.6E+05	1.3E+04	1.3E+04	1.3E+04	1.3E+04	
04-May	2	0	0	0	0	0	109	61	43	3	7	9	B2.0	7.8	09	3.8	04	4.2E+08	5.5E+05	1.4E+04	1.4E+04	1.4E+04	1.4E+04	
05-May	3	1	0	0	0	0	109	50	40	3	6	9	B2.8	6.7	20	3.2	04	4.3E+08	8.1E+05	1.5E+04	1.5E+04	1.5E+04	1.5E+04	
06-May	2	2	2	0	0	0	110	66	45	2	4	8	B2.3	7.0	20	3.8	04	5.5E+08	4.5E+06	7.6E+04	7.6E+04	7.6E+04	7.6E+04	
07-May	1	6	2	0	0	2	100	55	37	4	10	17	B2.7	6.4	20	3.5	04	4.1E+07	1.5E+07	1.4E+05	1.4E+05	1.4E+05	1.4E+05	
08-May	6	3	0	0	16	3	101	79	46	7	64	107	B2.4	5.8	16	2.3	03	1.1E+06	1.1E+07	3.6E+04	3.6E+04	3.6E+04	3.6E+04	
09-May	4	2	0	0	0	0	110	106	63	4	11	16	B4.1	5.3	16	2.2	02	7.7E+06	2.7E+06	1.3E+04	1.3E+04	1.3E+04	1.3E+04	
10-May	1	1	1	0	0	0	119	106	77	3	10	12	B4.1	5.9	20	3.1	03	1.6E+07	7.5E+05	1.2E+04	1.2E+04	1.2E+04	1.2E+04	
11-May	0	0	1	0	0	0	125	117	82	4	11	25	B4.4	7.1	21	3.2	03	7.3E+07	7.8E+05	1.5E+04	1.5E+04	1.5E+04	1.5E+04	
12-May	0	1	0	0	0	0	117	110	80	4	17	29	B3.4	5.9	18	3.4	04	5.3E+07	9.7E+05	2.1E+04	2.1E+04	2.1E+04	2.1E+04	
13-May	2	0	5	0	0	2	126	100	62	5	27	35	B2.7	5.9	16	3.1	04	1.4E+08	1.4E+06	2.7E+04	2.7E+04	2.7E+04	2.7E+04	
14-May	6	6	0	0	0	0	100	91	51	3	8	12	B6.8	6.6	21	3.2	04	1.4E+08	6.6E+07	7.7E+06	7.7E+06	7.7E+06	7.7E+06	
15-May	3	3	1	0	9	1	103	69	39	9	105	118	B2.9	5.0	19	2.7	23	1.1E+08	6.7E+08	2.2E+07	2.2E+07	2.2E+07	2.2E+07	
16-May	11	7	15	1	1	1	99	70	43	6	33	54	B2.7	6.8	17	1.9	02	2.2E+08	2.9E+07	1.7E+05	1.7E+05	1.7E+05	1.7E+05	
17-May	8	1	15	0	1	1	90	45	33	4	19	27	B1.4	5.4	20	2.3	03	1.8E+09	1.2E+07	4.2E+04	4.2E+04	4.2E+04	4.2E+04	
18-May	4	2	5	0	0	0	84	46	26	4	13	19	A8.8	5.2	19	2.6	04	2.7E+09	2.5E+06	1.8E+04	1.8E+04	1.8E+04	1.8E+04	
19-May	13	2	30	0	0	0	85	34	23	3	11	14	A6.9	6.7	20	3.1	03	3.0E+09	2.0E+06	1.4E+04	1.4E+04	1.4E+04	1.4E+04	
20-May	5	1	14	0	1	0	84	22	15	6	30	42	A8.4	5.9	20	3.5	03	1.0E+08	1.1E+06	1.4E+04	1.4E+04	1.4E+04	1.4E+04	
21-May	13	2	25	1	0	0	82	37	13	4	21	36	A9.4	7.6	17	3.6	04	6.2E+06	6.0E+05	1.4E+04	1.4E+04	1.4E+04	1.4E+04	
22-May	15	3	28	0	0	0	82	42	24	4	14	15	A6.9	5.1	21	3.0	02	3.2E+07	4.4E+05	1.4E+04	1.4E+04	1.4E+04	1.4E+04	
23-May	14	4	9	0	1	0	83	36	25	3	7	8	A6.6	7.1	20	3.2	03	4.8E+07	3.1E+05	1.5E+04	1.5E+04	1.5E+04	1.5E+04	
24-May	10	0	4	1	0	0	85	40	25	2	5	6	A9.1	5.9	21	2.9	04	2.0E+07	2.9E+05	1.5E+04	1.5E+04	1.5E+04	1.5E+04	
25-May	9	2	8	1	0	0	84	45	30	2	6	7	A7.3	7.0	20	3.7	04	6.3E+07	3.4E+05	1.6E+04	1.6E+04	1.6E+04	1.6E+04	
26-May	8	1	9	0	0	0	90	72	44	1	4	3	A9.9	6.6	20	4.2	04	8.3E+07	4.3E+05	1.6E+04	1.6E+04	1.6E+04	1.6E+04	
27-May	18	1	15	0	0	0	96	51	44	2	4	4	B1.9	7.4	15	3.5	05	9.3E+07	5.4E+05	1.7E+04	1.7E+04	1.7E+04	1.7E+04	
28-May	8	3	21	0	1	0	92	71	37	4	13	24	B1.5	7.0	21	3.7	04	3.6E+07	6.6E+05	1.6E+04	1.6E+04	1.6E+04	1.6E+04	
29-May	19	5	32	1	1	0	93	55	43	6	22	35	B1.1	7.6	16	3.4	06	1.5E+06	3.7E+05	1.4E+04	1.4E+04	1.4E+04	1.4E+04	
30-May	26	4	32	0	13	4	95	76	46	7	67	97	B1.2	5.7	19	3.2	04	6.8E+06	3.7E+06	1.3E+04	1.3E+04	1.3E+04	1.3E+04	
31-May	14	2	20	0	0	0	96	79	58	4	17	22	B1.6	6.3	11	3.1	01	6.2E+07	1.1E+06	1.4E+04	1.4E+04	1.4E+04	1.4E+04	
Sum	234	76	305	5	45	14	99.5	65.4	42.6	4.0	19.6	42.6	B2.1	6.4	18	3.1	03	3.5E+08	2.7E+07	9.8E+05	9.8E+05	9.8E+05	9.8E+05	
Average	7.5	2.5	9.8	0.2	1.5	0.5	126	117	82	9	105	82	B6.8	7.8	21	4.2	23	3.0E+09	6.7E+08	2.2E+07	2.2E+07	2.2E+07	2.2E+07	
Maximum	26	7	32	1	16	4	126	117	82	9	105	82	B6.8	7.8	21	4.2	23	3.0E+09	6.7E+08	2.2E+07	2.2E+07	2.2E+07	2.2E+07	
Minimum	0	0	0	0	0	0	82	22	13	1	4	13	A6.6	5.0	09	1.9	23	1.1E+06	2.9E+05	1.2E+04	1.2E+04	1.2E+04	1.2E+04	

50 MHz Outside Britain

Compilation and Commentary by G3USF

Europe, Africa and the Middle East

Auroral-Related Propagation

Only five auroral days in continental Europe this month - fewer than in North America - but two of them were real crackers. The event on the 8th (Ap 64 with Ak 136 at Sodankyla) ebbed and flowed through most of the day and reached south of the Baltic for a good eight hours. At its peak contacts were worked from Croatia, Slovenia and northern Italy, including a rare one between southern Sweden and Moldova. In addition, the VE8 beacon was received in Scotland and Denmark in the early hours, probably by auroral E - at this time of year it can be more difficult to feel confident about high-latitude T9 reports since multihop Es may also be a possibility. However, in this case, a geomagnetic disturbance was under way, with a K6 at high latitudes for the period 0000-0300UTC, so the probability of AE was quite high. In a few other cases in the listing below identification of the propagation mode is less certain. VE8 reports from GM are not infrequent but reported reception in OZ was unusual.

The other substantial event, on the 30th, spread over about ten hours and covered a wide geographical area, although it did not reach quite as far south. The VE8 beacon, was again heard although as usual no contacts ensued. Again the probable propagation mechanism was auroral E. The report of VE8BY into GM on the 29th is less clear-cut as geomagnetic levels were relatively low.

As always we are indebted to OH5IY and OH2LX for data from Finland.

May 8 0113 VE8BY>MM0AMW(IO75 559) 0127 TF3SIX>GM(IO75 52a) 0135 VE8BY>OZ4VV(JO46QU 559) 0219 JX7SIX>OZ(55a) 1000-10 AuFM>OH5IY 1130-1410 Au>OH5IY 1220-40 AuFM>OH5 1250-1340 AuFM>OH5 13-1400 GB3LER>SM0(55a) OH5RAC>SM0(59a) OZ7IGY>SM0(55a) OH1SIX>SM0(52a) SP8(KP11)>OZ 060) OH3>DL(JO41 55a 000) OZ7IGY>PA(JO23 55a) OH3>PA DL>DL 1350-1410 AuFM>OH5 14-1500 LY>OZ(59a) IK1AIL(JN45)>DK5AI(JO51 55a) GM>OZ(57a) GM>PA(JO21 51a) DK5AI(JO51)>IW1AZJ(JN35 55a) OH3(KP20)>DL(JO62 55a) PA>F(JN16 53a) ON>DL SP2(JO93)>DL(JO62) ON(JO21)>OZ(JO45 55a) PA>PA(JO23 59a) DK5AI(JO51)>IK5RLP 9A4K(JN86)>DL7YS(JO62 050) SM7FJN>ER1AN(55a) DK5AI(JO51)>9A4K(JN86) SM7>SP6(JO81 59a) ON4LO>IW1AZJ(55a) OZ(JO47)>DL(JO62) F(JN26)>DL OK1(JN79)>DL(JO62) DL(JO51)>SP2(JO94 55a) 1430-1540 Au>OH5 1500-30 AuFM>OH5 15-1600 DL>OH3(KP11) EI>PA(JO23) OZ(JO55)>OH3(KP11) EI>DL(55a) LY>OH3(KP11) LA>OH3(KP11) ES2(KO29)>OH3(KP11 59a) OZ>DL(55a) DL>OZ SM7>OH3(KP11) OZ>OH3(KP11) LA(JO43)>DL S57RR(JN65)>DJ6TK(JO53) ON(JO21)>DL(JO53) DL>LX LA(JO59)>SM7(JO77) S57RR>DK5AI(JO51) PA>OZ OK>OZ 1550-1630 Au>OH5 1600-20 AuFM>OH5 16-1700 ON>EI LA>LA(57a) ON>F G>SP7 OH1>LA SM7>LX S57RR>DL6LZM(53a) DL>LA(57a) GB3LER>LA(52a) S57RR>DJ5JK(JN49 57a) DK5AI,JO51)>IZ5EKV(JN53 55a) ES5(KO38)>DL(JO53) DK5AI>IZ1EPM(JN35) PA>LA(56a) SM7>OZ G(IO91)>PA(JO32 55a) 1640-1710 Au>OH5 17-1800 OZ>PA(JO32 559a) OZ>SM3 OH1>SM3 1800-10 Au>OH5 18-1900 GB3LER>EI(41a) G>LY LY(KO25)>OH3(KP20 000) SM0(JO89) LY(KO25) 19-2000 OH3(KP11)>LY(KO25) JW9SIX>OH3(KP11 579) JW9SIX>SM0(599) JX7SIX>OH7(KP42 599) 2148 TF3SIX>LA(mode?) 22-2300 OY6SMC>LA(mode?)

May 15 0610-30 Au>OH5 06-0700 49750>SM2(59a) 49750>PA(59a) SM7>PA(JO21 55a) SM7>DL(JN58 57a) SM7>OK1(JO60 59a) LY>DL(55a) G(JO02)>OZ(JO47 55a) SM7(JO43)>DL(JO66 54a) 0610-

30 AuFM>OH5 07-0800 GM(IO78)>PA(59a) GM(IO88)>PA(JO32 55a) GM>ON(JO21 57a)
SM7>PA(JO32 599a) SM7(JO65)>PA(55a) LA(JO58)>DL(JO62) LA(JO59)PA(JO32 59a)
GM(IO89)>EI OH2>DL(54a) 0740-50 Au>OH5 08-0900 OH2(KP10)>DL(51a) OH6(KP20)>DL(54a)
0820-30 Au>OH5 09-1000 DL>OZ(56a OH3(KP21)>DL(51a) OH5RAC>OH8(59a)
OZ7IGY>LA(56a) OH8(KP24)>OH3 OZ(JO47)>DL(51a) LA(JO58)>PA(JO33) 2225 OH9SIX>LA

May 16 00-0100 OH9SIX>LA(JP99 51a) JW9SIX>LA(JP99 51a) JX7SIX>LA(JP99 52a) 0520-50 Au>OH5
0520-30 AuFM>OH5 0550-0600 AuFM>OH5

May 21 1541 OH1>SM0(55a)

May 30 1040-1510 Au>OH5 13-1400 ES1>OH3(59a) OZ>ON(59a) SM7(JO77)>SM7(JO75) 14-1500
SM7>DL(JO31 59a OZ>JO57)>OZ(JO56 59a) 14-1500 LA>DL(55a) G>OH2(55) GM>DL(54a)
GM>DL(55a) LY>LA(55a) OK(JO70)>OZ(57a) OZ>PA(55a) PA>PA(JO32 59a) 15-1600
DL(JO63)>DL(JN58 59a 000) LY(KO25)>OZ(JO55) OY6SMC>OZ(JO55 55a) G(IO93)>ON(JO20)
16-1700 EI(IO63)>F(IN88 57a) GM(IO75)>F(IN88 57a) PZ>OK1(57a) SP4(JO94)>SQ2(KO03)
OH7>OH8(59a) 1700-30 Au>OH5 17-1800 SM7>OK1(JN69 59a) SM7>SM0(57a) LA>SM0(55a)
ES1>SM0(55a) SP4>SM0(55a) GB3LER>DL(JO43 AE) 18-1900 LA>SP2(330) LY>SM0(mode?)
18-1900 SM7>SM0(AE) JW5SIX>OH3(KP11 559) JX7SIX>OH2(599) TF3SIX>OH3(KP11 519 AE)
19-2000 JW9SIX>OH6(KP02 559 AE) JW9SIX>OH2(559 AE) JW5SIX>OH3(KP11 579)
JW9SIX>OH3(KP11 599) 20-2100 JX7SIX>OH2(559) JX7SIX>LAS(JP99 529)
JW5SIX>OH2(mode?) JW9SIX>SM0(559) 21-2200 JW9SIX>SM0(579) JX7SIX>EI(559)
OY6SMC>LA(JP99 52a) GB3LER>LA(JP99 52a) JX7SIX>EI(559) OY6SMC>OZ(559) 22-2300
TF3SIX>EI(529) JX7SIX>EI(539 ES?) VE8BY>GM4ISM(559 mode?) VE8BY>GI4FUE(529 IO74
mode?)

Other Modes

There is something of a tendency to dismiss 50MHz as lacking interest during the lower half of the cycle. That may be true of the autumn months but this month provided many reminders of how interesting the band can be in the summer, thanks essentially to sporadic-E, either in its own right or in conjunction with other modes. Although the 1st provided early strong openings, including 9Q5AR into the Mediterranean, which SV1DH ascribes to a combination of Es and TEP, the season did not get into full swing until the middle of the month. As in the UK, much of the activity up to that point was reported by operators using JT6M for (mostly) MS working.

From the 15th onwards Es was present for substantial periods every day, producing a more substantial early season than in many years. The 15th was an interesting start point because it was also one of the most disturbed days, yet it brought multihop openings to the Gulf states, including some contacts which probably required 3xEs. Indeed, the remainder of the month was notable for the number of multihop contacts - though this may in part be a consequence of increased activity around the Gulf and in Central Asia - with EX, EY, UK, UN and 4L active - than an underlying enhancement of Es. It is worth noting that a number of multihop contacts were reported on the 30th despite/because of(?) an Ap of 67.

The most notable multihop reports featured openings to 5B,IT9 and 9H (plus A4) between 0715 and 1043 on the 29th. The most distant of these would appear to have called for at least 5xEs hops, and the shortest needed 4xEs. Less unusual, though still worthy of comment, were the many contacts between Europe and the Arabian Gulf. For parts of Europe A4, A6 and A7 would have been within single hop range, but western European stations would have needed two or even three hops. This month's crop was particularly rich. In 2004 openings were reported on only three days, compared with no fewer than fifteen days this year. There is no telling how far this can be attributed to improved propagation and how far to activity, which seems to have increased considerably over the year - perhaps in some measure because of better propagation!

UTC	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	
00-03					+																											
03-06	+												+		+	+		+			+	+	+		+		+	+	+	+	+	
06-09	+		+										+	+		+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	
09-12	+	+	+				+							+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
12-15	+	+				+			+	+	+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
15-18	+	+	+		+	+	+		+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
18-21						+	+					+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
21-24													+	+		+		+	+	+	+	+	+	+	+	+		+	+		+	

Europe<>Middle East and Asia

A4	11 days	7(I,IS0,LZ) 15(DL,G,HB,OK,PA,SV) 18(LZ) 20(DL,9A) 21(I) 22(DL,G,PA,RX,9A,9H) 23(DL,G,I,SP,9A) 27(SV,5B) 28(DL,EA,G,I,SV,SV5,9A) 29(DL,G,OK,SP,SV,9A,9H) 31(DL,G,OH,OZ,PA)
A6	15 days	3(I9) 15(DL,LZ,ON,SV) 18(LZ,YU) 19(G) 20(DL,EA,ER,F,G,OK,ON,9A) 21(DL,I,OE,OK,OM) 22(G,PA) 24(I,SV) 25(I,SV) 26(SV) 27(DL,PA,SV) 28(EA,I,S5,SV) 29(DL,F,G,I) 30(DL,EA,G,I9,LZ,9A) 31(DL,G,OK,PA,SV)
A7	6 days	21(DL,G,I,9A) 22(I9,PA,UR,9H) 23(DL,F) 28(S5,SV,YO,YU,9A) 29(F,G,PA,9A) 31(ES)
HZ	1 day	28(SV)
EX	1 day	31(SP,9A)
EY	4 days	17(LZ,YU) 21(I,SV,UR) 28(I,I9,SP,SV,YO,9A,9H) 31(LX,SV)
UK	1 day	29(RX,YO)
4L	1 day	17(G)

The same cannot be said of propagation between Europe and Africa. There were no reports of contacts with southern Africa; in 2004 openings were reported on eight days. However, somewhat further north, 9Q0AR was worked on four days, on two of which signals extended to northern Europe, probably by a combination of TEP and Es. And while West Africa produced no reports of TR stations, not even the TR0A beacon. However, this was more than compensated by greater activity from 5T5SN/5T5DUB, who was heard across most of Europe - though apparently not Scandinavia. While many of these openings occurred during the evening signals were reported as early as before 1000 on the 21st and at 1254 on the 20th.

Europe<>Africa

5T	12 days	9(EA) 16(DL,EA,F,G,I,I9,IS0,PA,S5,SV,9A,9H) 17(G) 18(G) 19(SV) 20(DL,F,HB) 21(DL,EA,EA6,EI,F,G,HB,I,IS0,OK,S5,SP,Z3) 22(I9) 23(I,LZ) 25(DL,I9,LZ,9H) 26(G,I,I9,PA,SV) 28(DL,I,ON,PA,SV)
9Q	5 days	1(CT,EA,I,SV,S5) 2(I9,9H) 16(F,G,I,SV,9H) 29(G) 30(SP)
D4	3 days	23(DL,EA,I,9A) 24(CT,F,G,I) 25(DL,EA6,EI,F,G,I9,ON)
TZ	1day	22(PA)

Westward, this was a productive month. Apart from the VE8BY loggings on the 1st, 16th and 30th, probably attributable to AE, North America was reported in northern Europe on four days (22, 26, 29, 30), compared with three in 2004, into Iberia on seven days (4) and along the Mediterranean on two days (nil). More strikingly, no openings to the Caribbean were recorded in 2004 but this year brought openings on seven days, covering nine different 'entities' and extending into northern Europe on five of them. All the western hemisphere openings called for at least 3xEs.

Europe<>North/Central America and Caribbean

VE1	2 days	12(EA) 22(SV)	W1	4 days	22(EA,EI,G,SV) 26(EA) 29(EA,F,I) 30(I)
VE3	1 day	22 (EI)	W2	3 days	12(CT) 22(JX7,EI) 29(EA,F,I9,IS0,SV,9H)
VE8	3 days	1(GM,OZ) 16(GM) 30(EI,GM)	W3	1 day	29(SV)
VE9	1 day	30(F)	W4	2 days	26(EA) 29(F,G,I,SV)
VO1	4 days	12(CT,EA) 26(PA) 29(F,G) 30(F,G)	W5	3 days	24(CT) 25(EA) 29(CT,EA,SV)

9Y	1 day	31(CT,EA,LY)			
CO	1 day	30(G)			
FM	3 days	22(DL,G,PA) 26(DL,F,G,I) 28(EA)			
FS/FJ	3 days	22(G) 29(I) 31(CT,EA)			
HI	1 day	31(EA,CT)			
KP2	2 days	22(DL,PA) 31(EA)			
KP4	4 days	16(EI,G,PA) 22(DL,F,LX) 26(EA) 31(CT,EA)			
VP9	1 day	29(EA,SV)			

Finally among DX events, the modest group of openings between Europe and South America again exceeded 2004's modest single PY<>IS0 report and was notable for reaching over to LZ, YO and SV to the east and reaching DL and G further north. Costas, SV1DH, suggests TEP plus multihop Es as the propagation mode.

Europe<>South America

PY	4 days	16(SV) 20(DL,I,I9,LZ,YO,9A) 21(DL,F,G,ON,SP) 22(YO)
LU	1 day	16(CT,EA,SV)
CX	1 day	16(SV)
YV	1 day	22(I9)

May 1 0548 I0JX>5B 0647 I5>IS0(jt) 06-0700 5B>I8 UT7UV>5B YO4>9H 07-0800 SV5>I1 UU5SIX>I9 08-0900 I9>I1,S5,YO5 G>ON UR>SV1 G>I3(jt) SQ9>I8 UU5SIX>9H S5>I2 SV1SIX>I1,I6 I5>I1 I9>YO5,DL I7>I8 9H>YO5 09-1000 YU1,I5,F>I1 UR,I1>S5 S5>5B SV5>I4,I3,9A G>I5 5B>YO7 S5>YO5 SV5SIX>I1,S5 SV8>F IS0>YO7 I9>F,YO9 10-1100 CN>EA7 UT5G,YO3KWJ>9H LZ1>I8 I9,9H,SV1SIX>DL YO7,YU1>EH5 I9>PA I9>DL SV3>SP9 SV8>SQ5 11-1200 I9>DL I8>I9 UT7V>9H LZ2,LZ3>I8 SV3,I9>DL SV8>SP6 EH6,SV3>OE3 EH5>YO7 SV8>OM5,I1,I2 9H>SP6,OK1,DL,OZ I9,SV3>SP6,OE3,PA,I3 LZ1>I0,I1 SV5SIX>DL SV1SIX>I2,DL SV3>I4,9A IT9X,EH5>DL YU1>EA5 LZ1>I4 I6,I3,S5>EH1 UT5G>I8 12-1300 I7,I9,9A>EH1 LZ1>I4,I0 SV3>SQ3,I5,I1,PA Z3>I0 9H>SP6,OK1,PA Z3>I1,I5,DL EH1>OE5 ZA>DL,I1,OM5,9A I8EMG>DL

SV8>OM3 IT9X>OE5 I8>I1, F I9, SV3, EH4>DL PA>DL(t) LZ1>I1 CN, SV2>PA GU, I8>I0 YT1, G>EA5 I9>EH5 13-1400 I0, SV2>F YO5>I8 G>EA5 LZ1>HB I0JX>EI EH5>PA, DL UT5G>I5, I4 YT1, LZ2>EA3 Z3, IT9X, CN>DL EH5>PA, EI LZ1, LZ2>F YO2, YO3KWJ>I4 EH7>CN SV2>PA OE5>I9 LZ2>EH1 DL>9A(t) CT>ON LY>I8 I7>SP6 14-1500 LZ3>F EH4, EH7, LZ2, CT>PA 3A>YO5 SV2>SP1 EH1>9A, PA LZ2CM, I7, LZ1, YU7, CT>DL SV2>SP6 CT, EH5, EH7, PA>ON G, GW>EA5 CT>HB I3, S5>EH1 ZB>CN LY>I0, I8 9A>I3 CN>ON 15-1600 UT5G>DL EH5>PA I3>I5 CT0SIX>PA T9>9A CN>ON 17-1800 SV1SIX>F, EA5 I9>SP6 18-1900
9Q0AR>5B4FL, 5B8AD, CT1GFK, CN8KD, EA7BVD 19-2000
9Q0AR>S57RR, SV1EHP, IZ0FMA, I8NHJ, EA5FX

May 2 0624 YO7>9A(ms) G>I8(ms) 09-1000 YO3KWJ>DL LZ2>DL, OZ 10-1100 I0JX>EH11152 I7>I3 13-1400 OE5>EI 16-1700 S5>OE8, I8 1759 I0JX>EA1 19-2000 9Q0AR>9H1TX, IG9/I2AND

May 3 07-0800 OZ>I2(jt) IW9GXW>A61Q 0858 YU7AZ>F 09-1000 9A>F LX0SIX, OZ7IGY>I0 10-1100 G>I5(jt) 1152 I0>I3 1643 G>I8 1917 LZ2CM>YO7

May 4 07-0800 HB>S5, I2(jt) 0924 G>S5(jt) S5>9A(jt) 1634 EH9>CT

May 5 0123 GB3LER>F 0756 OH8>OZ(ms) 0843 GM>OH8(jt) 1120 SV8>SV5 1213 HB9SIX>DL(t) 1555 OE5>DL(t) 1602 ZB>EA7 2236 G>OZ(jt) 2324 GM>OZ(jt)

May 6 0851 SV1SIX>DL(ms) 1042 GM>SM5(jt) 1322 SV1SIX>DL 14-1500 UR>5B OE3XLB>9H ON>I2(jt) I9>DL UT5G>F 9H1SIX, OE3XLB>SP6 I8EMG>DL Z3>I2 LZ1JH, LZ2, SV3>ON 15-1600 LZ1>I5 I9>SP2, DL LZ1JH, 9H, YO, I9>DL Z3, LZ1>F, OZ I8EMG, SV3, Z3>DL F>I9 UT5G>I2 9H>9A EO6>IS0(jt) I8, I7>SP2 OK1, I2>I9 F, 9A>9H I8, I0>9A LZ1>PA, I2 Z3>HB 16-1700 I8>9A UR, F, SP3>I9 SV3, I9>SP6 Z3>DL ON>I9 T9>9A 5B>9H, SV1, I8, I9 4X>F, I9, ER1, I8 LZ1>PA 17-1800 S5, 5B, SV1>I9 4X>DL, I7, PA, I0, I2, I4 I9>OM5 9H>DL F>SV1 LZ3, LZ1>PA UT5G>IS0 4X, Z3>ER1 3A>F I9>SP7 3A>I1 SV1>I3 SV1SIX>S5 18-1900 SV3>I3 4X>I2, 5B, IS0 SV3>I2 9H1SIX>S5, I7 SV1SIX>I11952 T9>9H

May 7 07-0800 G>I3(ms) G>I2(jt) 08-0900 G>S5(jt) SP9>3Z7 09-1000 SM5>I3(ms) LY0SIX>OZ 10-1100 G>I2(jt) 4X>9H G>I1(jt) 5B4CY>I9 11-1200 9H>YO4 LX>PA(jt) LX>I7(jt) 12-1300 LX>I0, I3 13-1400 VA6SZ>IW5DHN(eme) 1459 GM>LX(jt) 15-1600 CN>ZB SV1SIX>I1 16-1700
A45XR>IK0FTA, IW0GXY, I0JX, IS0GQX, LZ2PB CN>IS0 SV9>SP9 4X>I0, LZ2 17-1800 YU>4X OZ>I0 18-1900 YT2>OZ, 4X, SP3 9A>4X CT>I7(jt) 20-2100 SP3>SM0(jt) 2157-9 JX7SIX>OZ 22-2300 JX7SIX>SM0 23-2400 TF3SIX, JX7SIX>EI

May 8 07-0800 LZ2CM>YO7 G>F(t+ms) 08-0900 I0>LX(jt) G>S5(jt) S5>LX(jt) I7>IS0(jt) 09-1000 I0>LX(jt) 10-1100 G>SM0(jt) EPTv>9A aurora

May 9 09-1000 G>EI(jt) 10-1100 EI>I2(jt) I0>EI(jt) 1547 5T5DUB>EA7KW 1826 9H>I9 0505-8 OH0>OH1, OH6 1009 G>EI 1107 S5>I5(jt) 1231 OD5SIX>I9 1411 G>S5(jt) 16-1700 GW>I5 YU1>F 17-1800 I0>S5(t) LX>ON(t)

May 10 1009 G>EI 1227 OD5SIX>I9 1411 G>S5 1624 GW>I5 16-1700 YU1>F 17-1800 I0>S5(t) LX>OH3(jt) SO5>LX(jt) LX>ON(t) 18-1900 I0>ON(jt) LX>ON(jt) 19-2000 LX>S5(jt) S5>I7(jt) 20-2100 LX>PA(jt, t)

May 11 0854-9 PA>SP9, I2(jt) 09-1000 DL>PA(t) 1044 G>S5(jt) 1351 I5>YO7 1648 F>ON G>I7(jt)

May 12 0948 IK5ZUL>I0(t) 17-1800 I5>SP6 LA, SM6>OZ EH8>EH1, EA4 S5>I5 VE1YX>EB1EHO 18-1900 EH8>CT OH0>SM0 I2>I5(t) S5>I3 EH8>EH4 SK4>SM3 19-2000 I5>I2 SM0>SM3 F>OZ I0>I5(t) OH6>SM0 OZ>PA 20-2100 S5>I2 SK6>S5 21-2200 VO1ZA>EA7

May 13 0557 EY8CQ>5B4FL 0613 A61Q>5B4FL 07-0800 4X,UU5SIX,OD5SIX>5B 08-0900 GJ>EI,PA(jt) 09-1000 GJ>I2(jt) S5>YO7 F>S5 1046 G>I1(jt) 15-1600 I8EMG,Z3,SV1SIX>DL OU7SIX>SV8 I9>SP6,ER1,SPq2 SV9SIX>I0 9H>ER1 SV1>I5 LZ2>F I0JX>OE5 LZ2>4X 16-1700 UU5SIX>4X I0>IS0 YO2>I1 OK2>I0,I9 DL>I8 LZ2>I2,I1 LZ1,ZA>F ZA>F SO5>I0 I9,SV1>OE5 9H,I9>ER1 YO8>I9 OD5SIX>9A 9H,I8>PA LZ1>I6,IS0 LZ4>I2 SV1SIX>S5 G>ON 17-1800 9H1SIX>SP6 9H,I7,SV3>DL ZA,LZ1>F I8EMG,I9>OE5 LZ1,SV1SIX>I1 OD5SIX>9A,I4,SV8 LZ2,Z3>I5 YU1,SV8>ER1 I9,SV1,S5>9A SV9SIX 2227 CT>F

May 14 06-0700 SM7>I2(jt) I0>I2(jt) 07-0800 I0>F(jt) S5>PA(jt) G>I2(jt) 08-0900 I0>I2(jt) I9,JY4NE>4X JY4NE>I9 YO3KWJ>4X CN8MC>I0,IS0 IK5ZUL>I0 09-1000 CN8MC>I0 CN>I8,9H I9>EA4 10-1100 GJ>OZ,F 1241 GJ>DL 1353 G>LX 1430 I0>PA(jt) 1923 JY>4X 9H>I9 21-2200 CU3URA>EA7 GJ>EI 22-2300 CU3URA>EA1 GJ>CN 23-2400 CT>EI(jt) GJ>CT

May 15 0559 UN8GC>5B8AD aurora 09-1000 GJ>9A(jt) GJ>HB(jt) 1141 GJ>PA(jt) G>SM5(jt) 12-1300 KH0/KH2K>IW5DHN(eme) GJ>DL,CN,F 13-1400 GJ,CT>CN 14-1500 UT5G>DL,I5,9A UR>I0 GJ>F SM0>I7(jt) I4>ER1 YO3KWJ>DL UU5SIX>S5,9A Z3>OZ LZ2,4X,LZ1>DL, A45XR>DK5PR, DK1MAX(2xEs), PF7M YO8, YO3KWJ>9A 15-1600 UR>9A A45XR>G4FUF,DK1MAX,GJ8BCG, OK1MP,HB9QQ,5B4FL LY,LZ1,LZ2,YO9, YO3,4X,YO4,LZ4,UR>DL LZ2>SQ2 GJ>F HB>LX(jt) UR>9A LY>9H 3A>I1 A61Q>LZ1ZP,ON4IQ YO7>SP6 OE5>9A UR,YO4>4X SV3>SQ2 SM0>I8 16-1700 A61Q>DL3DXX YO8,UR,OZ,YO4>DL DL,ON>ER1 Z3>SP2 LZ2>SP6 YO7>SM0 LY>I8 A45XR>DL3AMA,DJ9YE UR>S5 A61Q>5B4FL,ON5NT JY>5B LZ1>SP4 17-1800 9Ltv>SV1 LZ2CC,4N1ZNI,S5>DL OZ6VHF>LA 9A>S5 YO3KWJ>ON 18-1900 S5>I3 aurora OH9SIX>SP2(mode?) 23-2400 OH8>SP2(mode?) OH5RAC>OZ(JO47 mode?)

May 16 05-0600 SV1SIX,OE3XLB,9A,YU1>RX3 GB3IOJ,GB3MCB>I0 06-0700 5B>RX3 UT5G>SP2 F>I5 CT0SIX,CN8MC>PA,DL UR>5B G,F,LA>I0 YO3KWJ,I5>OZ LZ1JH>PA EH6>F,DL EH7>DL 07-0800 EH6>SP2 LZ1JH>RX3 YU1,LZ2CM>PA LA>I1 IS0,I0JX>OZ I7,EH7>DL UT5G>4X G>S5,9A,I5 LA>I0 CT0SIX>F T94FC>I2 GW,GB3IOJ>9A F5TND>SP9 UU5SIX>S5 08-0900 PA,F,I8,SP1,IK5ZUL,HB0,EH3,CT0SIX,EI>DL ON>LX UU5SIX>SP9,SP6,DL,OE5 EH3>OZ,DL I5,I8,CT0SIX,ZB,CN8MC>PA F,UT5G>OK2 EH3,EH4>SP2 YU1>RX3 GJ>I3 SP5,SP2>F HB>ON,DL F>OK1 EH3>OZ S5,T94FC,9A0BHH>EI G>I7 LZ1JH>RX3 09-1000 G>ON F>OE5 EH3>OZ EH4>9A UU5SIX>SP2,SP9,4X LZ1,OE6,LZ2CC>RX3 GJ,F>OE5 G>IS0 CT,I2>EI UR>OK1,ON GJ>ON,F I5>LA G>EA3 CT,F>PA UT5G,YO3KWJ>4X GM>EA7 SM5>F OH1>I5 OZ>9A EH2>DL I0>SM5 CT3>EI 10-1100 EI,OH1,ES4,SM7>F EB1>PA,DL GB3BUX>SP9 S5>LA EH3>SP2 9A,T9>4X OH4,IQ4AD,F>OH5 LA>I0 4X>IS0 OH5RAC>DL OH3>DL,OE5,9A ES4>HB YO4>OZ OE9>SM3 UR>PA OH6>9A SV5SIX>DL SM5>OE5 HB9SIX>DL YU1EO>LA 11-1200 SV1SIX>DL,PA LY0SIX,OH1,Z3>DL OH5>I2 UT5G>OZ CU3URA,UR,OH3>PA YO7,YO3KWJ, YU7AZ>RX3 GB3LER>SP9 OD5SIX>9A OH5>F,PA LZ2CC>4X,I4 4X,5B4CY>9A ES5>ON,PA YO7>I0 I9>SP9 12-1300 SV1>OK1,PA,ON UR,SV1,Z3>DL KP4EIT>EI7BMB,G4OBK I9>SQ2,SQ3 LZ2>I3,I4,HB YO3>I9 YO7,YO8>I5 Z3>ON,PA OK2,SP7,OM3,SQ2,RX3,SQ9>I9 GW,G,GB3LER, GB3RMK>EI UT5G,SV1>OZ :Z2>F I9>OH5 I9>OE1 13-1400 PA>DL(bs) SP7>I9 LZ1>LX UR>I5 I8,Z3,SV1,LZ1,LZ2>DL OM3>I9 I8,9H>SQ2 DL>9H I8EMG>OZ LZ2,LX>ON I6>SP7 SV1>OZ LZ1>LX UU5SIX>SV8 14-1500 9Ltv>SV1 15-1600 5T5SN>9H1TX,IH9GPI SP8>F S5>OZ 16-1700 EA9>I8 3Ctv,9Ltv>SV1 A61Q>4Z5LA 5T5SN>IK8BIZ,IS0GQX,S57RR,9H1CG,IW0UWB,IK4DRY, I8LPR,IZ5EKV,IK1YMF,F5JNX,IW9HLM,F8OP 17-1800 5T5SN>IW1FZ,I0APV,9A1CCY,SV1CER ,9A5ST,IZ1EPM LZ2>4X OD5SIX>I0 F>LX IT9X,OD5SIX,I9>EA4 18-1900 I9>EA4 9H1SIX>EB2 5T5SN>9A1CCY,DL1MAX,EA4EOZ,F5TND,G4RGK,IZ1EPM,G4LOH,G4IGO EH5>I9 I9>EA4 I9>4X CN8MC>I4 LU7DZ>EA7KW CX4CR>SV1DH,4Z5LA I9>CT CU3URA>GJ 9H>IS0,EA4 EH7>CN EH8>SV1 PU2PX>SV1DH 4X>I8 19-2000 9Q5AR>GJ8BCG, F6FHP,IK8BYA, SV1CER,SV1DH,9H1CG,I7CSB,IK5YJY,9A6R,IZ5CML 20-2100 GB3LER>F 9Q0AR>IK5RLP,IZ0FMA 2321 VE8BY>MM0AMW(529)

May 17 0617 4L7AZ>5B4FL 07-0800 IZ5ZUL>I0 08-0900 S5>ON(jt) 4L7AZ>G4FUF(Es) 09-1000 LZ2CC>DL LZ2,YO7,LZ1>PA PA>YO4 YO7,YO9>ON UR>F EY8MM>5B4FL 9A,GJ>SP6

F,I5>SQ2 GJ>I0 IK5ZUL>SP6 LA>I2,I0 HB9SIX,I5>OZ OK2>EI 9A>DL 10-1100
F>SP2,SP6,OZ,SM7 G>YO5,DL OZ6VHF>I0 GJ>ER1 LA>I0 UR,I1,I0>OZ LA>I1,F GJ>SQ2,SP7
OZ2VHF>I0 GM>I4 11-1200 GW>SP2 F>OZ SP5,SP7>EI OY,LA,GB3LER>I2 G>SQ2 GB3LER>I4
OY>I4 13-1400 EY8MM>YU7,5B,LZ2 RX9SA>EY8MM 14-1500 5B4FL>EY8MM 15-1600
EY8MM>4X6XQ,5B8AD OD5SIX>EY8MM 5T5DUB>PA2V,G4IGO A61Q>EY8MM SV8>SV1 18-
1900 CT0SIX>I4 I9,9A>EA4 I0JX>EB1 I9,9H>4X EH6>SV1 EH5>I9 EH4>S5 19-2000 EH4>I3,I5
I0>EB1 EH5>I9 9H>EA5 CN>I9 20-2100 EH5,CN>I9 OZ>EI

May 18 05-0600 EY8MM,4L7AZ>5B4FL 07-0800 G>I5(jt) I5>ON(jt) JY4NE>HZ1MD 08-0900 GJ>I1(ms)
I4>OZ EI>ON(jt) 09-1000 OD5SIX>LZ2 GJ>I0,ON(jt) 10-1100 I5>PA(jt) SV1SIX,CN8MC>IS0
SV1SIX>SP6 GM>SP2(jt) 1142 GM>ON(jt) I2>ON(jt) 12-1300 CN8MC>F,EI GJ>EI(t) ON>I5(jT)
GJ>F CN>I5 CT0SIX>EI HB9SIX>DL 13-1400 LZ3RX>A61Q A45XR>LZ2FB SV1>I1 4X>9A 14-
1500 5B4CY,OD5SIX>I7 I2>SV1 9H>DL A61Q>I7CSB 4X>I7,9H SV1>I1 SV1,SV3>I5 SV9>RN6
JY>I5 15-1600 SV1>I4 LZ2CC>I5 SV9,I0,JY>I5 F>I2 4X>I1,I5,I4 SV8>DL A61Q>LZ2PB
4X>LZ2,RN6 SV9SIX>I0 SV1SIX>I3 OD5SIX>ER1 CT0SIX>EI 16-1700 CT>EI 4X>9A,I4
OD,LZ2,JY>I9 OD>I5 SV5SIX>I4 CT3>EA5,4X 17-1800 5T5DUB>G4IGO,G0JHC GJ>PA(jt) 1842
GJ>F UU5SIX>4X 19-2000 I2>F G>LX(jt) OZ>SP6(ms) 20-2100 OY6SMC>LA UT5G,I9>4X
JX7SIX>EI,EB1 LX>OZ(jt) TF3SIX,OY6SMC>E GB3LER>F JW7SIX>PA 2201 JX7SIX>PA

May 19 07-0800 I9JX>EB1 08-0900 I0>SV5 I2>I1(jt) IK5ZUL>SV5 I8EMG>IS0 SP2>EI F>I9 SV5>I5 I1>I9
09-1000 GJ>F(jt) LZ1,LZ2>DL YU7AZ>IS0 YO2,LZ1,LZ2>PA YO7>ON I5MXX>SP1 GJ>5B 10-
1100 YU7AZ,LZ1,5B,LZ2>DL GJ>I2,OE3,HA1 5B,OD5SIX>PA I0JX,9A>OZ PA>YO5 S5>SM6
DL,PA,ON>9A EH3>SP2,SP6 DL>I0 I2>SQ2 LZ3>ON OH4>SV2 GJ>SP9 I3>OZ YU1>PA 11-
1200 EH3,I2>SQ2 I9>I8 ON,PA,G,DL>OE3 PI7SIX,DL,GM>9A OZ6VHF,GJ,UU5SIX>DL
SP9,LZ3>ON I4>LA LA>I2 SQ9>PA OZ>I4 12-1300 LA>I4,I5,I8,S5 SP2>F,PA,ON I2,I0>OZ
GJ>DL GB3LER>OE6,OE3 OZ6VHF,CN8MC>S5 13-1400 I3,I1>OZ CN>I0 SP2>PA LA>DL
CN>DL,F,I0,I8,PA,9A EH9>S5,I9,PA I0>EA5 G>SQ2 I9,IQ4AD,I8EMG,UR>EA4 EH4>I5,9A
I9,UR,9H>EA1 EH7>PA,F GM>SP6 CT0SIX>S5 GJ>EA7,I2 I9UR>EA2 14-1500 CN8MC>EA1
SV3>EA4 I8,I9,I5,9H,EH3,IZ1EPM>EA1 EA1>EA5 9H>EA2 EH9>I5,SV1 CN,EA7>PA EH7>OH3
EI,PA>EA7 4X,OD5SIX>S5 5B>EI CN>OZ,I5 3A>I9 EH6>I1 EH1,UR>DL ZB>SV1,PA EH5>LA
EH7>I5 1500 E2(DL)>OH7(Es) 1510-1700 FM>OH5IY(Es) 15-1600 EH7>S5,I5 EI>I3,9A,I3
EH6>PA I1>ON I8>EA1 SM5>OE3 GJ>I1 F>DL EH9>SV1 G>I8 16-1700 I8,OH5RAC,OH3,CT3>
DL EH5>EH1 CT3>I2,OZ,PA IS0>EA1 OE5>SM2 4X>I0 CT,EH3,EI>9A 4N1ZNI>F EH3,JY>OZ
HB,UR>I9 I9>F,4X EI>SV1,EA7 DL>I8 ES4,SM0,LA,OY6SMC,GB3LER>DL F,LA>EA7 4X>EA5
17-1800 ES0,OH8,OH9SIX,I0,S5,SV9,ZA,SV3>DL OY6SMC>S5 EI>LZ2 G>9A SP7>I7 I0>SP3
EI,GW>I3 CT3,ZA>PA HB,EH1>EA7 GI>SQ2 UR,GI>I4 GW>OM5 SM7>I8 Z3>SP7 9H>4X
LZ5,I7,G>ON LZ2>I3 18-1900 OE3>I5 UR,CT3,I9>EA4 9H>SV1 UR,GM>9A 7X0AD>F
CN>ON,EA9,I8,DL,I3,I0 SV9>I5 LZ1>OE3 CT3>EA1 GB3LER>F EH5>I9 I1>LA OH1,4X>DL
EH4,SP2,SP7,CT>I9 4Z5LA>5T5SN YO3KWJ>9A GB3LER>F EH5>9H 19-2000 G>F
5B4CY,ZA,4X,OD5SIX>DL I0JX>ER1 G,EH4>I5 YO7>I1 SP9>I9 CT3>EA7 9Y4AT>5T5SN
I1,F,I2>EA7 GD>9A CN>HB,I2 EH7,YO3,GM>I4 LZ1>HB SP2>EA1 UR>I5 4X>IS0 OZ7IGY>EA4
Z3>DL,I3 ES5>PA 20-2100 4X,SV9,UR,LA,OH8,I7>DL EH7>CN,CT3 I5>ER1 I8>OE3 EA5>I8
OH1>I4,ON EH9,UR,YO4,YO5,YO7>I5 CN>I8 I3>SM0 LZ2CC,YU7>4X Z3>ON,DL
LZ2CC,LA,4N,OH6,OH3>F ES5,OH5RAC>PA OH6,ES4,OH3>LX UR>EA7 4X>ON I5>9A F>SM0
21-2200 OH8,9H,I8,SV8>DL I4>4X SP2>I8 G>4X LZ1>I3 I9,I7>LA I9>ON YU1,G>F
I8,I7,SV8>ON I9>OK1 SP1>LZ5 22-2300 UR>I9 I0JX,IZ1EPM,IQ4AD>CN

May 20 08-0900 CN8MC,CT>IS0 4X>I9 LZ2CC>IS0 SV7,OD5SIX>I9 0917 OD5SIX>SV1 10-1100
OD5SIX>9A I6>I5 CN8MC>EI 11-1200 JY>9A 1254 5T5DUB>F5TND 13-1400 I9,S55ZRS>EA7
CT,EH6,CN8MC>I9 LZ1>SQ9 OK2>SV1 14-1500 I9,UT5G>DL I9>EA4,F,I3,PA
UT5G,9H,YO6,LZ2CC,UU5SIX,I3,IK5ZUL,IZ1EPM>EA7 CN>I8 LZ1>I2,HB GW,9A,CN,G>I9 F>I0
I8>F,EA7 SP5>I8 I8,LZ1>PA 9H,Z3>HB CN>I1 15-1600 SV3,I5MXX,I0,I5>EA7 I8>OZ,SP2
ON>SV8,I0 ZB,9A>F,I2,I4 YO3KWJ,YO7,LZ1JH,LZ2,9A>RN6 SV3,I9>DL,ON,DL CN8MC>I4
G>9H IS0>ON EH6>OM5 I0>OZ EH7>F I3>OH3 CT>I4 I1,CT>I0 I5>SQ9 F>T9,I0,9A

A45XR>DL7QY A61Q>G3WCS,ER1AN LX>I9 7X0AD>I2 16-1700 ZB>I2,OH3,DL
A61Q>ON5NT,DJ9YE,OK1MP,EA7KW,G3WOS,G4RGK,ER1AN,F5TND EH6>T9 HB,F,I1>EA7
SK0>9A GJ>I9 I4>OH4 I0JX>EA4 I1>T9 UR,I0>DL ZB>I2 CT>HB I9>I3 SU1ER>IT9DLN
SV9>EA1 17-1800 OD5SIX>ER1 UI1>OH3 EH9,UR>PA EH3,CT3,UR,CT,OD5SIX>DL
ZB>I5,9A,EI EA3VHF,G>EI ON>ER1 A61Q>DL9USA,DL6AMI,OK1MP,9A8A EH5>T9 EH3>4X
4X>9A,YO7 A45XR>9A8A,DL9USA 4X5LA>5T5SN I3>IS0 I9>F 18-1900 CT,EH5>ON EH1,EH5>F
IS0>S5 PP5AR>IK2GSO,9A8A,DL7QY,PA3FPQ,HB9SJE EA3>I0 SV9>ER1 5T5SN>4Z5LA
I0JX>EA1 ZB>DL CT, ES6>9A A61Q>DL8PM 4X>DL EH6>SP6 PY1RO>IW9CER,YO7VS
,LZ1ZP,9A2ZH SV1>SV2 JY>4X UR,I4>9A EH9>ON I9>EA2 SV1DH>5T5SN 19-2000
EH9>PA,9A,DL I1>EA1 5T5SN>DL9USA 7X0AD>9A A61Q>DL0RW,9A6R,9A2ZH EH6>DL
EH9>OZ 5T5SN>DK7UY,HB9SJE Z3>ON PP5AR>IW4BET ZA>EH5,OE3 PY1RO>IK2GSO,
9A1Z,DK1MAX ON,EA2>9A F>EA2 I7,I6,ON,I0,I3,EH8>EA1 EH8>HB EH5>DL LX,F>4X CN>I7
SV8>HA5 I0>SP3 20-2100 CN,4X>DL I1,I8,LZ2,I5,9H>EA2 I1,4N,YU1,IK5ZUL,I0JX,I2,F>EA1
A61Q>F6FHP,IK5GQK SV1,SV8>PA F>I5,HA5 EH7>ON EH5>HA5 SV8,SV1>PA DL>4X
A61Q>IK1EGC,EA5BM 3A>9A EH1>I8 PA>I7 I1>T9 I8>SQ2 EH9>9A 21-2200 3A>SP6,LZ5
EH5>I5,I7 I9,SV1,9H,ZA>PA 9H>OE3 SV1>OK1 I9>OE1,ON EH8>DL I9,I7,Z3>EA1 Z3>EA7 22-
2300 CT>F EI>CT ZB>I4 23-2400 CT,CN8MC>F GI,EI>EA7

May 21 05-0600 5B>I4 YU1>4X 4X>9A OD5SIX>I7,SP6 5B4CY>I7,SP6 06-0700 UU5SIX,I0>SV5
A71EM>4Z5LA,9A6R,5B4FL,IW0GXY,IK8BIZ,I8LPR CN8CM,HB9SIX>5T5SN SV5>I8
A61AH>I8LPR,5B4FL 4X,SV5>OM5 07-0800 ZB>EA7 5T5SN>IZ5EKV,DJ9KM,IW0GPN,
S57RR,Z37CKY,HB9AA,I8LPR,F4EGZ CN>I9 5B4CY>S5,SV1 SV9>I4 UT5G>EY8MM Z3>I8
EY8MM>IZ1EPM 08-0900 9A>DL,ON 4X,Z3>PA CT0SIX>I0 5T5SN>I2SVA,EA6AEI,DK5WL,
IZ5CML,SP3RNZ,F5HRY SV9SIX,CN8MC>I0 OM3,UR>ON OD5SIX>I1 GB3LER>F 4X>I8
CN8MC>Z3 UR>OM3 I9>I5 GM>F GB3MCB>OZ YU1>DL: LZ1JH>RN6 UR>9A 09-1000
S5,YU7>RN6 CN>I2,SP2,EA5 LA>F UU5SIX>I4 5T5SN>IS0GQX EI>SP6 SV8,UR>DL,S5,OK1
9H>I2 I3>EA4 YU1>EA5 10-1100 UR>SP6,I4,9A,LZ2,DL I0JX>EA1 UU5SIX>OE3
I6,I8EMG,I0,YU1,CT3,S5,9H>EA4 OE2,OZ7IGY,I3>EI T9>EA5 CN>SP3,EA1 SV8,F>DL IS0>LX
CN8MC>F I0,9A,9H>EA1 IS0>I1 EH3>LA EA5>EA7(short) EH5>I5 I8EMG>F IS0>PA I1>EA7 11-
1200 EH9>LA EH3,EH7>I3 EH7>EA1 CN8MC>I1 GB3LER>EI LZ1>OH2 EH6,EH5>DL
IZ1EPM,GB3MCB,EI5FK,MW1MFY, OK1FFD, G0CHE>5T5SN UT5G>OZ,SP2 UR>DL,OZ F>9A
ES2>LZ2 EH9>ON F>9A 12-1300 F,CU3>EA7 5T5SN>DK5WL,EI5FK EI>CN
CU3URA,CT0SIX>EI 13-1400 CU3URA>EA1 UU5SIX>I1 YO3>DL LY>I5 4N1ZNI>OZ UR>F,I1,I0
14-1500 LY>I9 LZ2>SM0 UT5G>PA,DL,F 4X>OE3 LZ1JH,ZB,EH7,YO3KWJ>PA UR>I9,DL,I7,I9
YL>I9 SV7,SV1,LX,LZ2CC>DL UT7UV/A>F,I9 UU5SIX>I9 LX>CN ES6>I9 A61AH>5B4FL I7>SM0
9A>OH1 Z3>OZ YO3>OK1 A61Q>IK0FTA 15-1600 UR>DL,I6,SV3,I2,I2 YO3>OZ UT5G>OE3
UU5SIX>DL,OE6 PA>CN I0>ES6 SV2,I6,S55ZRS>RN6 I7>ES6 LZ2>LA LZ1>PA OH1>LY LY>I8
SM3>OH1 CU3URA>EA1 YO8,YO9>DL A61Q>OE3BCA,OM5CW,OK1FFD,DK2EA,OK1MP
A71EM>DL3DXX A61AH>OE6MBD,PA2V,DL7YS,DL3YEE LZ1JH>EA1 SM0>I0 RW6HJV/6>5B
16-1700 YU7>LA SQ2>I8 A61Q>DK7UY,G3NVO,G7KHF,G4FUF,DJ6MB,MW1MFY,DL4FCS
YL2>I3 UR,4X,YO9,YO5,YO2,YO3,YU1>DL SM7>I8 Z3>SP7 A61AH>S57RR UR>HB
T9>LA,ON,SM0,DL SQ9>4X CT3,SM0,LA>EI LA>I9 ES6>EA7 I0>OZ A71EM>DL7YS,G4FUF
LY>EA5 17-1800 9A,OY,LX,OD5SIX,LZ14X,T9,EH9>DL A45XR>I4EAT A61Q>DL3AMA
LX,ON>ER1 YO2,F>ON YU1>OH8 4X>OE3 PA>OK1 IZ1EPM>EA4 UR,PA>4X ZA>OZ SP5>I8
LY>I0 SP9>I2 PA,S5,LY>4X SP6>F F>SQ2,EA4 18-1900 SR9FHA>F
9A,T9,F,SV8,4X,CN8MC>DL EH3>SQ2,OK1 I0>LA F>OK1 9Y4AT>5T5SN HB>ER1 LZ1>SP7
ON>T9 YO7>PA SP7,OK1,S55ZRS, SP9> EA1 G>EA5 EH2>SP6 19-2000 SP6,UR,EH3,HB,F>CN
Z3>DL SP2>F(jt) G>4X SP2,SP6>EA1 PP5JD>SP6NVN,DG5YIL,F5HRY,G4PCI PY2NQ>DK5AI
PY1RO>F5HRY,ON4KST PP5AR>G4IGO,F5OQK 5T5SN>DK2EA TF3SIX>LA UR>I1 20-2100
JW9SIX>SM0 2233 UT5G>I3 23-2400 I3,GU>SM0 GB3LER>F

May 22 0011 G>OZ 0457 I0JX>LY 05-0600 I0JX,JY>5B 5B>9A OH1>OH3 UR>I1 LZ2CC,I8EMG,I9>SP6
9A>SM0 ES0SIX>YO7 IZ1EPM>SV1,SP8 ES5>T9 06-0700 UR>DL SV8>I5 9A>SM0 F>ER1
IK5ZUL>LY A45XR>G4RGK LY>I4 I9>SP6 ZA>SQ2 T9>OH3 UR,T9>DL DL,GB3BAA,PA,

PI7SIX,ON>ER1 ES5>OE4 UR>OK1 UT5G>DL I7,I8,UR>PA T9>OH3,SQ2 I8>SQ2,DL LZ1>OZ OD5SIX>SP9 OH1>OH3 07-0800 SM0>T9 I8>ON,PA G>SV8 SM0>I8 LY,4N>F 9A,Z3,IT9X>PA SR9FHA>F LZ3>OZ OZ,DL>I8 SV8>SP2,SP7 YO7,UR>ON 9H>DL SP2>F I8>DL,9A SM4,SM0>9A F>HA5 I7>LA IQ4AD>LY 08-0900 I8>ON LA>9A OK2>I9 I7>SM0 I9,YT4,IS0,SV8>DL GB3BAA>ER1 CN8MC>5T5SN YO5,YU7>PA SP9,LZ2CC>F I1>SP2 G>HA5 09-1000 I9,SV8,EH3,EH2,EH3,EH6,I6>DL F,IS0,G,I9>HA5 I2>SM0 ZA,EH2>HB SP6>EA7 OZ>I8 SM7>EA5 Z3>S5 EH3>PA,T9 SV3,LZ2CC,>F S5>I3,PA F>OM5 GB3LER>EA2 10-1100 G>9A,I6 I1>LA DL>I8 EH3>OZ F>LA,SP6,DL,OZ,I1 PA>EA2 GI>EI ZA>OK1 KP4EIT>F6HRP, DJ6RN,LX1JX EH2>DL GW>I2 S5>LA EH3>SP7 11-1200 WP4KJJ>DK2EA TZ0ML>PC5C EH4>SM6 EH5>EI G>I2 GU,G,HB0,LZ2CC,SV3,I7,SV2,F>DL KP4EIT>DK2EA,DL8OM SQ8>I9 PA>EA1 KP4TB>DL7QY I2>LA GB3LER,PI7SIX>F Z3>OK1 KP3A>PE1ZMS,DK7UY GM>9A OZ>F EH1>EI FM5JC>DL8PM,DK3EE 12-1300 S5>PA GU,F,GB3IOJ,I1>DL FM5JC>G4R GK, G4IFX,PE1MZS,G4JZF,G8BCG,DL8YHR CU3URA>PA F>ON,EI YO3>I OD5SIX>RN6,UR I0JX<ER1 SR9FHA>9H 13-1400 GU,I6,CU3URA,F,3A, I0,I1,I4>DL GM>I1 FM5JC>G8BCG KP4EIT>DF8AN,DL8PM,F6HRP DL>I8 OZ>9H GU>SP2,PA PA>I8,I4 ZA,CU3URA>PA 3A> OK1,SP7,OZ I9>SP5 14-1500 EI,GW,EH2,LZ3,3A,I5,I0JX,I6>DL 3A>SP9 G,GW>I2 I1>SP7 G>PA EH2>SQ2 PA>I4 A45XR>PA3EWP,G8BCG,RX3QFM,DK7UY,DL9USA EH3>SQ2 EH2>LA T7>PA,I4,DL G,DL>I1 YU6>PA EH3>CN T9>EI I1>SP4 SU1SN>SV1 UU5SIX>SP6 RW6>9H 15-1600 PA>I8 A45XR>DL8PM,PH7A,DL1EL,DH6JL,G0CHE,G7RAU UT5G,I5>DL SU1SK>SV1,G3LAS EI>F 5B>ER1 T9>PA GB3LER>EA2 EH3>CN A71EM>9H1YX,PE1MZS,CN8LI,IT9RZR YU1>EI A61Q>PA2V,MW1MFY OZ>I8,9H SV8>OZ YU1>DL 16-1700 LZ2,YO3KWJ,UR,T9,YO8>DL LZ2>OK1 ES0SIX>I9 EO5>I2 SV8>PA A61Q>G7RAU YL2>9H A45XR>9A8A,G0TSM,DL9NDC,9H1YZ T9>EI UR>I2,9A,I4,I5,F,ON SV7>SP2 YO8>I3 T9>PA F>EI 4X>9H OE3XLB>F YO8>OE6 CU3URA>PA A71EM>4Z5LA 17-1800 SV7,OD5SIX>DL F>ON 9A,YO5,YO7>F UR>I2,I4,9A LZ1>OZ 5B>DL,OE3 SP5>I8 LX>LZ2 LZ2>ON,DL Z3>HB,DL EI>EA4 YO8>S5,4X YO7>I2 YO5>I1 YO5>I9 EH3,EH7>EI I7>PA 18-1900 EH7>PA SV8,CT0SIX>DL EH7>ON I9>F I9,CN8MC>PA SV7>9A,SQ2 SV0>T9 OD5SIX>OE1 YO4>I8 EH7>CN 19-2000 IZ1EPM>CN OD5SIX>S5 VE1PZ>5B4FL,4Z5LA K1TOL>SV1DH 5B>YO5 OE6>DL K1SG>SV1DH 20-2100 SV1>SP9,OE1 4X>9A,I5 S5>4X VE3GIB>EI5FK EN50KIEV>A71EM SV7>I5 I8>I7 21-2200 K1TOL>EA1CCM,EI5FK,MM0AMW K2MUB>EI5FK 5T5SN>IT9GRR

May 23 05_0600_OD5SIX>I0_09_1000_OD5SIX_5B4CY>SV1_SP2>I5(jt) 1052_5B>IS0_11_1200_5B4CY>SP9 CN8MC<IS0 EH5>SV1 I1>YO7 OD5SIX>I0 12-1300 5B>I4,SP9,I0,I8,SP2,I5 UR>DL,OE3 13-1400 UU5SIX>SP6,SP9 UR>DL UT5G>OE3,SP6,HA1 14-1500 OE3XLB>EA7 I7,5B>DL UT5G.F,G,EH7>I9 EH6>SV1,OZ,DL I7>SP1 9H>OK2,OZ,DL G>I8 I0>EI 15-1600 T9,YO3KWJ,5B,Z3,EA6,LZ2,F,Z3,UT5G>DL I8,I6>SM0 Z3>OK1 YO8>I2 I1>SV8 5B>OE5,PA UR,I1,YO7,YO9>I9 F,Z3,I0>PA OZ>I0 F,5B>9A F>SP6 IO0>EI 9A>SP2,EA1 A45XR>DK2EA 16-1700 DL>EA1 I5>F A45XR>9A8A,DK1MAX, DJ4LK YU1,9A,OD5SIX,ON,UR,LZ1,LX>DL UT5G>IS0 EO5>9A LZ2>PA SP9,LX,DL,SP3>EA1 OK2>I4 5B>9A,I8,LZ2 HB>I9 Z3,YU7,HB>9A YU1,I9>F A71AM>A61Q I9>EA4 I8>EA4 Z3>I0 A45XR>IK4PLW YO7>I8 5B>I7 17-1800 YO7>F 5B>EI 9A0BHH>HB A45XR>G8BCG ,SP2MKO,IK5YJY SV2>I2 I3>SV1 OE5>HB OD5SIX>S5,DL I5>LZ2 S5>LA,F I0>PA SV9>F,PA 4X,UR,5B,LZ2,YO3KWJ,YU7>DL SP5,9A>HB OZ>LZ2 A71EM>DL3DXX,DK2EA,F6HRP 4X>LZ2 YO7>ON D4B>DL0RW,9A5ST,EA7RU,IW0FFK 5B>ON,LZ2 18-1900 5B,LZ2,4N>PA I9,4X,5B>DL LZ1>SM7 4X,UR>F 4X>ON,S5 LZ1KG,EH8,CT3,D4B>5T5SN 5T5SN>IW8RSB,CT3MD EH5>4X 19-2000 EH9>EH7 D4B,LZ1KG>5T5SN 4X>I0 LZ1JH>DL 20-2100 UT5G>I1 9H>LY JW9SIX,LA7SIX>SM0 LA7SIX>SM0 CU3URA>EA7 OH6,JW7SIX,JW9SIX>OH2 LA>SM0,OZ 21-2200 LA>SM7 GB3LER>F JX7SIX>ES1,SP2 LA>SP2 OH9SIX>LA LA>LY LY>OH6 LA7SIX>OZ 22-2300 GB3LER>LA JX7SIX,OH9SIX>OZ 23-2400 F>EI(jt)

May 24 00-0100 SO5>F(jt) 08-0900 LZ2CM>YO7 09-1000 G>I5(jt) 10-1100 CT0SIX>I5 I5>PA(jt) 5B>9A D4B>CT1GFK 11-1200 D4B>IW1AZJ CN8MC>I5,I0 CU3URA>F I0>I7 12-1300 F>EA1 CN8MC>I5,PA CT0SIX>PA,I5 14-1500 D4B>F8OP CN8MC>EA1 S5ZRS>EA7 15-1600 D4B>GW3MFY,G4PCI I0JX>EA1 IK5ZUL>EA1 SP8>SV1 UU5SIX>SP6 16-1700 LZ>9H

UU5SIX>I0 LZ1JH>I2 17-1800 A61Q>IK2GSO I9>F CU3URA>I9 4X>YO7 9H>F 18-1900 UR>SV8 OZ>PA(jt) 19-2000 CT3>EA6 OZ>PA(jt) S5>PA(jt) 20-2100 G>PA,ON CU3URA>EA4 G>S5 21-2200 CU3URA>EA7,EA4 CU3>CT 22-2300 CU3>EA7 23-2400 PA>F(jt)

May 25 0449 OH5RAC>SP6(sc+ms) 05-0600 SV1>9A,SP6 YO5>SV1 06-0700 YO5>OE3 LZ1>I9 JY>5B 5B>I4 I5>SP6 OE5>SP2 07-0800 SV8>I5,SP6 UT5G>I8 PA>S5(ms) HB9SIX>DL 9H>I1 10-1100 5B4CY>SP9 OE5>EI OD5SIX>SP9 1111 5B4CY,OD5SIX>SP9 12-1300 5B>DL LZ2CC,UU5SIX,UT5G>I0 IT9X>SP9 UR>I4,OZ 13-1400 UT5G>PZ LZ2,LZ3>PA I9>OE3 EH8>EH7,F,I9 GB3MCB>EI CU3URA>EA7 CN8MC>F JY>9H,YO7,SV8 14-1500 EH8>EA2,9A,I3 CT>EA5 CT,CT3,EH7,EA3VHF,ZB>9A OD5SIX>SV8,SV1 ZB,CN8MC>DL 4X4SIX>SV1 EH7>I5 EH9>I1 CT3>EA7,EA1 EH6>I1 15-1600 SV9>4X CN8MC>SP6 CT3>F,I1,EA1 CT,EH4>9A ZB>OE5 JY>YO3 A61Q>IG9GXW EH7>ON 4X,JY>ER1 EH6>PA,F ZB>I1,PA F,4X,I0,S5>EA7 IS0,I0JX,I8,IK5ZUL,I7>EA1 SV1>DL CN8MC>DL,PA GB3MCB>I0 16-1700 5T5DUB>DG5NEE,5B4FL CT>I1,I5,9A,I8,F CN,ZB>DL EH4,CN8MC>F IZ1EPM,GB3BAA,GB3MCB,I2,EH6,F,DL,I0>EA7 EH7,IS0,I9,I0,EH3>EA1 EH4>I1,I5,9A I9>4X EH8,EH4,EH7,EH5>PA D4B>IK2GSO 17-1800 D4B>ON7GB,DJ5JK,I4EAT,IW2NWS,EI5FK,G0GMS,F5SDD ZB>I1 CT>DL EH7>HA1,I8,I9 EH4>F G>EH7 I9>HA1 4X,CT3,I5>F YO8>I9 EH4>LX GW>EA7 I9>9A 5T5DUB>IW9CER 18-1900 5T5SN>DJ5JK,9H1TX,LZ5UV CN8MC,EH8>PA 9A>4X I0>EA1 D4B>G4PCI,EA6NB EH6>HB CT3>9H,S5,F LZ3>I9 I5,F>EA7 EH7>I8 19-2000 CN8MC,EH7>PA CN8MC,HB8SIX,EH7>DL CT,CN>I1 D4B>DL1YD,DL7QY,I2AND/9 CT>I4 EH9>DL,F,PA,S5 CU3URA>IS0 CT3>EA5 EH7, 20-2100 CN8MC>F,DL CN>F HB9SIX>DL CU3URA>EA7 F,EA7>I9(bs) 21-2200 CU3>EA7

May 26 0523 LZ2CM>YO7 0&-0900 JY>9A SP2>OZ(jt) 08-0900 PA>SP2(ms) OZ>I3(jt) F>I3(jt) EH3>I3(jt) 10-1100 CN8MC>I2,DL,F,CN EH8>DL 11-1200 EH7>OE5(t) GB3MCB,IK5ZUL,GB3BAA,I0JX>EA7 5T5DUB>G0JHC EH6>EI EH7>F EH8>S5 EH8,K1TOL>EA4EOZ,EA1EKV 12-1300 VO1ZA>PA2V CU3URA,F,CN8MC>EA1 I1,I3,I5>EA7 CN>F,I9 HB9SIX>DL ZB>I9 13-1400 F>EA9 CT3>EA7,EA4 I1>CT CN>F,PA,I1 KP4EIT,KD4ESV>EA7KW 14-1500 CN>EA6,F 15-1600 OD5SIX>9H,SP6 UU5SIX>SP2 CU3URA>EA1 ZB>EA7 16-1700 CT3>F,EA1,I9 SP2>F(jt) ZB>EA7 OD5SIX.5B4CY,4X>I9 SV1>SV8 9H>EA6 17-1800 I0JX>EA1 5B4CY,4X>SV1 IK5ZUL,OD5SIX,I0>EA1 4X>YO7 CT,CN>DL EH9,CT3>I9 CN,EH7,EH7,CT>PA CT>OZ EH9>F,ON I9>SV1 5T5SN>IK8BIZ,5B4FL 18-1900 F>OZ EH9,EH4,CN8MC>PA CT0SIX>DL 9H>SV3 CN>9A,I2 EH1>OZ,I9 RI>HB EI>I1,EH5 5T5SN>5B4FL,IW1AZJ,SV1IW,IW9HLM 9H,EH9>4X 19-2000 FM5JC>F5TND,G3SED,IZ1EPM,F5OQK,I4EAT,DK2EA,F8ZW 20-2100 FM5JC>F8OP I9>4X 21-2200 G>EA4 PA>I3(jt)

May 27 05-0600 OD5SIX>I0 5B4CY>I7 06-0700 A61AH,A61Q>5B4FL 07-0800 GB3BUX>PA A45XR,A71EM>5B4FL GW>F(jt) LZ2CM>YO7 08-0900 JX7SIX,EH3>OZ I0>YO7 F>EA8 I0JX>F EH8>SP6,DL EH7>PA 09-1000 GB3IOJ>9A I5,EH3>SP6(jt) JX7SIX>OZ 10-1100 GM>I3 9A1CAL>EI JX7SIX>PA 11-1200 JX7SUX>EI,DL CT0SIX>ON SR5SIX>EI S55ZRS>I0 GB3LER,GB3RMK>I4 G>EI EI>SP9 12-1300 EI>F,SP5,SP9,SP6 G>OE3,SP9 GM>I4 13-1400 G>SP6,OE3,HA1 EI>OE3,SP6 GB3LER>I0 GB3MCB>EA1 14-1500 G>YO7 GB3RMK,GB3LER>F CN8MC,EH7>PA IK5ZUL>OZ CT0SIX>DL 9H>HA1 GM>EA1 F>EI 15-1600 GM,SR5SIX,EH8>F I0>LA PI7SIX>OM5 OZ7IGY>I5 YO2,CT,EH8,LZ2CC>PA EH8,CT3>EA3 EH2>EH8 EH8>SP2 G>YO5,YO7 1627 9Ltv>SV1 17-1800 UT5G>OZ,PA OH9SIX>DL,SP6 LA7SIX>SP6 OH11>DL 18-1900 OH1>SP6,DL,SP7 OH5RAC,OH6>PA LZ2CC,OH3,OH6,OH9SIX,SM2,UR,SM3>DL YO3KWJ>OZ,DL UR>OZ LY>9A A45XR>SV1DH UR>I5 A61Q>DL6AMI SM3>ON 19-2000 A61Q>PF7M OH1>9A DL>SM0 4X,LA,LZ2CC>PA G>OH6,SM0 SV1>4X LA>DL GB3LER>SP8,SP7,SP9 GM,OY6SMC>SP2 LA>F EI>SM0 20-2100 CU8>CT SQ2,ES5>EI SU1SK>SP6GWB 21-2200 F>SP6(jt) G>SP6(jt)

May 28 05-0600 A61Q>5B4FL A45XR>IK0FTA,5B4FL,SV1EHP 06-0700 A71EM>A61Q I8>I0 OD5SIX>SV1 9H1SIX>EA5 07-0800 UK9AA>5B4FL EH1>I2 A61Q>SV5BYR,SV1DH, EA7KW OD,5B,4X>SV1 CN8MC,ZB2>ON EH7>5B,PA ZB2>I8 4L7AZ>5B4FL EH1>I2 08-0900 EH7>DL ZB2>PA 4X>YO7 TA2>9H F>EA5 CN8MC>DL,F,I1,PA EH1>I4,I1 A45XR>IK0FTA,IW9CER 09-1000 A45XR>EH7KW CT>I4,F SV5>9A A61Q>IW9CER F>CN,EA5 SV1>SV5 SU1SK>9H1TM,9A1Z,CN8LI,YO7VS SV1>SV5 EY8MM>5B4FL CT>LX CN8MC>EI LZ2>SV1 4X>I3 10-1100 4X>I0,YO7,I4 I8LPR>EY8MM SU1SK>SV1EN,SP6MLK CU3URA>EA7 OD5SIX>9A ZB,CT3>F SV5>I8 A61Q>EY8MM,S57RR SV1>SP2 YO8>LA SV8,SV2>SV5 A71EM>EY8MM,CN8MC>F I8>9A SV1>I4 A45XR>I4EAT LZ2CC>S5 5B>I5 11-1200 4X,LZ2>9A UR>I9,I4,DL,ON,9A 5B>I4 SV2>SP1 4X>OE5 A45XR>I4EAT,9A1CCY,DJ9YE, DL4FCS,9A4K,EY8MM LZ2>OE6 4X>9H,OE1: LZ2>SP9,DL,PA LZ1>PA LZ1>SP9 EY8MM>IW9CER,IK8BIZ,I4EAT,9H1YZ,9H1CG,IK1EGC,S57RR 12-1300 EY8MM>S59MA LZ2>PA,DL,SQ9,SP6 UR>9A,IS0,I9,I1,I8,I2 YO3>PA 4X>I2,DL LZ1>9A LZ2CC,SV5>OE5 YU1,5B4CY>SP6 I9>I0 CU3URA>EA9 OD5SIX>DL,SP6,OE5 YO3KWJ>OE5,DL ZC4>I0 13-1400 ZC4>HA4 5B4CY>OE5,9A A71EM>9A1Z,YU7EF,YO4REC UU5SIX>DL,SP2 LZ1JH>SP5 LZ2>OE5 UR>SP6,I3,YU7,OM5,HA1 4X>I8,SP5 UT5G>SP6,HA4,DL LZ1>OH2 A45XR>IK0FTA 14-1500 UR>DL,I9,SP7,OZ A45XR>DK2EA,G4IGO,I8LPR,G3IBI TA2>I0 YO4,OD5SIX>DL YU1,LZ3>DL 9H>PA UT5G>OM5,OZ CU3URA>I2 PA>I9 UU5SIX>DL 15-1600 LZ2>OH2 UR>OM5 5B>SP2,I1 OD5SIX>PA,SP7 Z3>I9 IS0>I0 SV8>DL,9A,CN IZ1EPM>CN 7X>DL S5>9H 16-1700 I5>ON 4X,IT9X>DL UU5SIX>OH2 SV1>9H 5B>CN,OH2 CN>F UT5G>OH1 5T5SN>ON5PU EH4>ON UU5SIX>SP6 5B>I9 17-1800 TA2>I2,CN,OM5 OH1>4X 5B>OE1 HB9SIX,I9>CN 5T5SN>DK2EA,PE2KW,ON5PU,IK0FTA EH2>DL,F GW>EA5 4X>DL,OH2,OH3 18-1900 5B>SP9,OH2 FJ5DX>EA7KW 5T5SN>PA2V,DG5YIL EH5>EH8 4X>LY 5B>OK1 EH8>ON,PA SP5,SP9>I9 EH8JFE>5T5SN 19-2000 YU1EO,YU7AZ,OE3XLB>4X JX7SIX>OH6,OH2,OH1,OH3 UU5SIX>OH2 20-2100 ES2>OH2 GB3LER,TF3SIX>LA OH3>OH2 JX7SIX>SM2,OH3,SM3 OH9SIX>SM3 21-2200 JW9SIX>OZ JX7SIX>EI

May 29 00-0100 OH9SIX>OH3 TF3SIX>EI VE8BY>MM0AMW 04-0500 OH5RAC>OH7 UU5SIX>SP6 05-0600 UU5SIX>SP6,S5 A45XR>5B4FL,SP6NVN OD5SIX,YO7>RX3 06-0700 UR>YO7 UK8OM>5B4FL,RX3QFM IS0>LZ1 A45XR>SP2YJR,9H9H 5B>4X,S5,I3 SV3,SV9>S5 SV1>I3 OH6>OH3 7X>I1,SV1,DL 07-0800 I7>I8,EA1,EA5 OD5SIX>9A I8>OZ I0JX,I9>EA1 UU5SIX>9A,RX3 JE1BMJ>5B4FL 9H>F,PA F,LZ2>I9 JM1DTF>5B4FL G>ON I9,I4>EA1 EH9>I2 A45XR>9A4K F>I8 LZ2>SP6,I9 08-0900 I5>9A(bs) JM1DTF>5B4FL UR>9A,SQ2,SP9 I9>I8 YO9,LZ1,LZ2,EH9,LZ5>I9 I8,I0>EA1 9H>DL UT5G,UU5SIX,EH1,EI>DL I5>EA2 CN8MC>F EH7>I3,DL A61Q>4Z5LA LY>SP5 I9>I1 EH7>HB FX4SIX,I9>EA7 09-1000 I4,I2,I3>EA1 EH7,LY,EH4,7X,CN8MC>DL F>EA7,EA8 7X>PA,EA9,F,I9 JE2XBY>IT9RZR EA7>OE5 4X,EH7>I9 5B>OH1,OH3 OH2>OH3 I5>EA1 4X>LY EH6>F EH5,CN>PA UR>YU7 CT>I5,I4 UR>SP6 10-1100 CN>F,DL 7X>I9,EA7,F,PA EH5>F,CN UA3,4X>YO4 4X>OH6 TA2>SQ9,4X UR>SP6,SV2,SP3,DL,OH2,OZ OD5SIX>SV1 CT0SIX,CN8MC>S5 I0>I9 ZC4>SV2 CN>DL UA2>OH3 11-1200 4X4SIX>LY UT1FA>EY8MM EY8MM>SP3RNZ,PA2M,HB9AUS UT5G>LY UR>DL,RX3,SP6,OK1,SP2,OZ,9H CN8MC>HB RU1A>9A 9H>DL,PA SP8>RX3 EH7>EA1,F LZ1,4X>OH3 ZC4>OM5,OK1,OH3 FX4SIX>CN 4X>OH2 CN>9A,DL,ON I9,CT>DL YO7>OH2 OZ>F 12-1300 UR>DL,SP6,ON,I9,9A 9H,CT,UT5G,I0,9H>DL TA2>S5,YO7,OM5,SP6,F CN8MC>HB K1TOL>CN8LI,EA7KW I3>I5 6M2NA>CN8LI S5>9A 9H>OZ CU3>I0 CN>S5 OZ>I8 K1SIX>CN8LI 13-1400 DL,PA>I5 UA3>SP6 I4>I2 UR>DL,I8,I7 VO1ZA>MW1MFY I5,I7,I0>EA4 I1>I2 I5,I7>F I0>PA G>I7 YO3KWJ>I1 CN8MC,I0JX,EH7>PA I7>I6 OD>SP6 9H>SP3 14-1500 W1RA>F6FHP EH33,I0,IS0>EA1 S5>I9 9H>9A W6JKV/5>EA7KW I5>EA1 UR>I7 CN>9H,PA FJ5DX>IK5MEN,IZ5EKV I7,9H>9A OD>SP2 ZC4,CN,S5,I8>DL A45XR>OK1MP, 9A3SM,MW1MFY,DK2EA K1SIX>EA7KW IS0>EA1 CT>PA I9>9A 9H>SP3 K7BV/1,VO1ZA>F6FHP SV3>YO7 G>F W1JJ>IK1EGC W1JR>EA7KW 15-1600 ZC4,SV8,EH1,SP9,F,EH8>DL I3,I2,LZ1>I9 TA2>I8 SV8>I4 A45XR>I5IHE,G4OBK K1VW>IS0GQX G>EA1,EA4,CN,CT PA>EA1,CN F>EH9 I2,9H>F VP9/N0JK>EA7KW GW,ON,DL,G>EA1 A71EM>G4FUF,9A2OM A61Q>F5JNX SP9,ES4>I9 NN1N>9H1XT 9H>CN SV8>S5 16-1700 K7BV/1>IK4ADE UR,PA>CN ZB,LZ1,F,OD5SIX,ZC4>DL EI>F 4X>OH3,SM0 SP9,I2,S5>I9 HB>LA A61Q>DK5WL

A71EM>PA2V ZC4>9A,I5 PA>EA7 CT3,7X>F 5B>OH2,OH3,OH4 EH3>EH1 SV9>9A,E,I3I
T7>9H,I4 SV3>I3,I4 EH7>I7 17-1800 EH7,ZC4,F,YO6,4X>DL CN>F,I1,LA,OH3 EH7>LA
G,EH3.ZB>EA1 UR,I3>CN IS0,ES4>EA5 4X>PA GW3JXN,DL8PM>A61Q A61Q>F6HRY 5B>I1
I8>OZ SM7>F 7X>ES6,OZ UR>EI LY>HB 18-1900 A45XR>DL8PM CT,I9,I6,EH1,CU3URA,LZ1,
SV9,SV3,4X>DL A61Q>G3IBI HB>SP9 CT>OH2 CN>SM0,I4,F EH7>OH2 ZB>OH3 F>SP2
YU7>EI LZ2,LY>I8 LX>SP9,OH6 LZ1>EA7 I9>OH6 TA2>I9 LY>EA5,I1 SV8,OE5>PA S5>I9
9H>I5 SV9>I0 CT0SIX,4X>F 19-2000 4X,EH6,SV8>F OE5>PA EH5,EH3>I9 I4>SV2 SV9>SP7
EH7,TA4>I0 EH5>HB,4X F,DL>I9 SV8>I8 SP2,OM3>CN CN8MC>DL F>EI DL>I5
9Q5AR>G4IGO(tep),G0JHC DL,G>SV1 20-2100 CN>HB 9Q5AR>SP6GWB EH1>PA
SV1,EH4,OK1,EH5,ZB>DL W4SO>MW1MFY,I4LCK,F6FHP N3DB>IK0FTA CT0SIX>LX 9H>9A
EH5>I8 21-2200 KC4PX>IK4JQO,I4LCK GB3BAA>I0 9H,I9,EH5,EH3>DL EH5>OE5 EA5>PA
DL>EI EH6>I5 EH1,EH6>9A GB3MCB>OZ EI>CT 22-2300 EH3>PA EH5>SP9 G,I4>CT
GB3IOJ>OZ GB3LER>F aurora 23-2400 CT0SIX>EI

May 30 04-0500 OD5SIX>I0 5B>I0 05-0600 5B>I5,SV1,OE1 GB3LER>I5,F G>5B 06-0700
5B>I0,EI,SP6,PA,SV1,I6,F F>OZ GM>DL,I5,I1 SV1>I6 G>I0,I1,SP6 I7>I5 OY6SMC,OZ6VHF>HB
EH6,I8>DL EH3>OZ 07-0800 YU1,LZ1>I9 GI,IZ1EPM>SP6 I8>SP6 DL>9A UR,I9,SP3,I0,GW>DL
OY6SMC>LX OZ6VHF>SP6 VO1ZA>F6FHP(0731),G0CHE UU5SIX,9H>9A VE9AA>F6FHP
CN>ON,DL,LA G,GW>OZ GB3MCB>PA 08-0900 LZ1JH>OE5 GM>SV1 I9>I6,9A G>DL,OE3
SP9,9H,PA,I9,OZ>I6 F,SV1,OE3XLB,SP8>PA PI7SIX>EI,OE3 F>OZ,SM5,PA K1TOL>I4EAT
I0,I2>SQ9 9A>I9 I9>LZ3,I0 09-1000 SP2>I6 G>OE3 I9>I2,LZ3 DL> I7,I9 I9>LZ2,SP6
GB3MCB>PA,OE5 YO9>I9 UR>I5 A61Q>IEA5FX,G0FYD G>SM7 EH2,GM>DL T9>I1 GW>PA
LZ2>SP6 10-1100 I9,GI>OK1 G>OZ GM,G>DL G>OH6,I4,EI GD>PA ES5>9A GI,GM,SQ3,EI,OY>
ON A61Q>LZ2HM,DF9OX T7>I9 11-1200 UY5YZ,I4WH>A61Q OM3>I9 A61Q>9A8A LZ2CC>F
YU1>PA GB3LER>EI,DL G>EI OY6SMC>DL OK1>ON 12-1300 DL,PA,SP1>EA1 OY6SMC>DL
OH2>I0 GB3LER,G>EA5 OH3>I0 I4>F I6>OH2 LA>EI LZ3,LA,LZ2,I7,T7>PA F>DL aurora 13-
1400 CO8LY>MW1MFY 14-1500 EH9>CN aurora 1757 I9>I8

May 31 0523 EX8MLT>5B4FL,SP9CCD I0>I7 EY8CQ>5B4FL UU5SIX,UT5G>DL 08-0900 EY8MM>5B4FL
A61Q>5B4FL UT5G>OZ 09-1000 4X4SIX>LZ2 10-1100 GB3BAA>F OD5SIX>I0 LZ3>5B
OM3>OE3 5B>I0,YO7 12-1300 CN8MC>I0 YO4>I9 13-1400 LZ1JH>I0 HB9SIX>DL(t) I0JX>OZ
UR>I5 LZ2CC,LZ2CM,LZ1JH>DL 5B4CY>I5 OD>I4 GD>9A T7,OD,SV9>DL I9,9H>9A I0>OH5
SV5>ON 14-1500 4X>ON LZ2>I9 YO3KWJ,T7,I4,5B,OD,LZ1>DL ZC4>F
SV9,F,UU5SIX,YO3KWJ>HA1 SV9>PA A45XR>DL7PR,DF9TF,G3HTA,OK1MG OK2,T7,4X>PA
S5>OZ DL,Z3,LY>HB DL8PM>A61Q A61Q>PA2V,PA2JWN,PA5M,MU0FAL 7>I2 OH1>OH3 15-
1600 A45XR>EA5 Z3>PA,SP1,9A,DL 4X,UR,OD,SP1,SP2,YL2>DL YU7,LA>I4 ZC4>OH3
F,LZ2>OH2 DL>PA ER1,LZ2>I9 LZ1JH,CN8MC>I0 TA1>SP9 S5>LA F>SM7 LA>I2 G,LZ2>I8 16-
1700 LZ2>I1 T7>SM4 SM7>ON SM3,LZ1>I4 SV3>OH2 F>OH5 LZ2CC,IT9X,I8EMG>EH5
UR,CU3URA,YU1,YO4>DL I9>OH5 YT1>9A,I8 7X,OK2>I8 I7>I3 OD5SIX,SV5>PA
A45XR>OH5LK I9>OH8 EY8MM>IS0GQX,T99C, DK1MAX, IK0FTA OM3>I0 5B4CY>SP9 17-1800
EY8MM>IW0FFK,EA5AGR,9A8A,SV1CER, F2JD,EA5RM,IW0FFK ES2>I3 4X>DL SM5CEU>
A61Q F> I0 LZ2>EH5 UR,OK1>I8 A61Q>DL8PM,G0CHE,G7RAU,G3NVO A45XR>OZ1BNN,
PA3GCV YO8,YT1>I8 UR,4X>DL ZA>I1 LZ3>PA CU3URA>EA7 SV1>OE3 4X>ON 18-1900
CU3>EA4 KP4TB>EA7KW 9Y4AT>EA7KW,EA4SC UT5G,5B4CY,UR>DL KP4EIT>CT1EPC
HI8ROX>EA7KW CU3>CT 9Z4BM>EA4SV LZ2CC>PA S5,LZ1,LZ2,YO7,TA2, YO8,UR>9A UR>F
4X>SP3 EY8MM>PC5C,9A7V LZ2>I3 WP3YM>EA7KW T9>SP5 LZ1>SP0 19-2000 YO9>I1
UR>EA5,I1 EH6>9A UT5G>SM0,PA YU1>LA OH2>I8 EY8MM>9A4K,9A3TN,F8OP,
IW2CAM,I7CSB 9Y4AT>CT1EPC GB3LER>SP9 HB>SM0 9H,OM3,F>OZ SR5SIX>EI LA>DL
PA>YO7 20-2100 F,HB>SM0 UR>I7,4X,EA5,I9,I8 LY>EI SO5>I1 9A>UR
KP4EIT>EA7KW,CT1EPC UT5G>PA G>EI 21-2200 UR>9A,I4,I5,I9,I2 9Y4AT>LY2BAW
TF3SIX>EI UU5SIX>I5 LZ3,YO3KWJ>OZ LZ2CC>DL LY>9H LZ2>I4 22-2300 LZ3>9A LY>9H

50MHz PROPAGATION REPORT FOR MAY 2005 BY SV1DH

1. Data for days, 1-4th Internet data only.
2. Relatively good days on: 1,13,15,16,22(+),28,29(+),31(+)
3. 48 MHz AF video (9L+3C) on: 15,16,27(all A-TEP) (R=10%)
4. 55 MHz AF video (5N) on: NIL
5. " 9Q on: 1,16 (E-TEP)
6. " 5T on: 16,19,20,28(2E)
7. " EH8 on: 16(2E)
8. " CT3 on: 19,26(2E)
9. " CN on: 19,28(2E)
10. " SU on: 22,28,29
11. " 7X on: 29
12. " EY on: 21,28,31(up 1930) (2E)
13. " A4 on: 15,27-29(2E)
14. " A6 on: 15(2E at 16z and 1F2 at 11z),21,24-28,31
15. " A7 on: 28
16. " HZ on: 28
17. " JY on: 15,18,19,25
18. " 4X on: 6,7,15,16,18,19,21,25-29,31
19. " OD on: 14,20,21,23,25-30
20. " 5B on: 6,7,20,21,23,26,28-30
21. " ZC4 on: 29
22. " W on: 22,29(W1,3,4,5 up 6Es? 10080Km!)
23. " VE on: 22(Nes)
24. " VP9 on: 29 (1530-1640 in-out) 229th DXCC entity wkd
25. " PY on: 16,20(TEP+Nes?)
26. " LU on: 16
27. " CX on: 16
28. " CT on: 20,29(2E)
29. " EH on: 1,13,17,19,20,23,29
30. " EH6 on: 17,19,23,25,29
31. " IS on: 7,19,28,29
32. " 9H on: 19,26,28
33. " I on: 1,6,7,13,18,19,20,22,23,25,26,28-31
34. " T7 on: 29
35. " F on: 1,6,18,20,29
36. " HB on: 19,29,30
37. " OE on: 1,13,16,20,22,29,30
38. " G on: 13,19,29,31
39. " GW on: 23,30(2E)
40. " GM on: 30(2E)
41. " GI on: 29(2E)
42. " EI on: 29(2E)
43. " PA on: 13,16,17,19,20,22,29-31
44. " ON on: 6,7,16,19,20,28,29
45. " LX on: 29,31
46. " OZ on: 6,16,19,28
47. " DL on: 1,6,13,16,19-23,25,28,29,31
48. " SP on: 1,6,13,15,16,19-22,25,28,29,31
49. " OK on: 13,15,16,19,20,22,29,31
50. " OM on: 13,19,20,22,31
51. " LY on: 21,28,31
52. " OH on: 29,31

53.	"	SM	on:	1,19,31
54.	"	LA	on:	22,31
55.	"	S5	on:	6,13,19,20,22,25,28,29,31
56.	"	9A	on:	13,20,22,28,29
57.	"	YU	on:	19,25
58.	"	UA	on:	16,20
59.	"	UR	on:	1,6,17,20-22,28,29,31
60.	"	ER	on:	22
61.	"	YO	on:	1,13,21,25,28,31
62.	"	LZ	on:	28,31
63.	"	SV5	on:	28(E, 420Km)

Special events on:

- 6 (5C+1M flares)
- 7 (2C+1M flares)
- 8 (0230 GM to W1 AuE)
- 9 (1545 EH7 to 5T/B)
- 10 (7C+1M flares)
- 11 (9C+2M flares+1000 A4 to VR2/B)
- 12 (14C+2M flares+1145 CT/B to W1, first transatlantic +1245 A4 to JR6+2100EH7 to VO1/B)
- 13 (2C+1M flares+0600 5B to EY+A6 2Es)
- 15 (9C+1M flares+06z k=9!+09z k=8+1015-1130 foF2>10, max 11.8Mhz, MUF=33Mhz+1030-1130 MUF to HZ>45Mhz+1100 A6 48Mhz video F2)
- 16 (7C+2M flares+1200 EI+G+PA to KP4+1515 9H to 5T+1815 CT+EH7 to LU)
- 17 (3C+1M flares+0000 GM to VE4/B AuE+1330-1530 5B to EY)
- 18 (0530 5B to EY+4L+ 1345 LZ to A4+ 1415 YU to A6)
- 19 (1915 G to A6 3Es)
- 20 (1800-1930 EU to PY TEP+Nes?)
- 21 (1845-1945 EU to PY)
- 22 (0615 G to A4 3Es+ 1015-1330 KP4 to N.EU+ 1145-1300 FM to N.EU+ 1330-1345 FJ+YV to N.EU+ 1400-1430 YU+G to A4+ 1815 YO to PY+ 1900 5B to VE+ 1915 SV1 to W1 without EU video and sigs!+2015 SV1 to W1+VE)
- 23 (1600-1800 N.EU to A4)
- 25 (2115 EH7 to W5)
- 26 (1145-1230 W.EU to W+VE+KP4 +1930 F+I+DL to FM)
- 27 (0730 5B to A4,6,7 1Es +1845 5B to CT3 3Es)
- 28 (0700 MUF to HZ>45Mhz 2Es +0745 EH7 to A6 3Es +0945 SV1 to 4X +1030 SV1 to I + SV1 to 9A all on 144Mhz Es +1845 EH7 to FM)
- 29 (0700-1000 A4+5B+IT to JA1,3 Nes +1200 W1 to CU+CN early +1430 I to FS +1515 SV1 to EA6 +1645 SV1 to HB on 144Mhz Es +2000 G to 9Q Es+TEP)
- 30 (0730 W.EU to VO/B+W very early!!+0930 G to A6 3Es)
- 31 (0400 JA3 to A6 48Mhz video +1425~1735 SV1 to 16 countries!!
<I+ON+PA+DL+OK+OM+SP+LY+UR+UA+OE+S5+9A+T9+YO+HA>
on 144Mhz 1Es +1640 SV1 to I4 on 144Mhz FAI +1830 EH7+CT to FS+HI+KP4 +2000 W4 to 5T/B +2100 LY to 9Y!)

What a month!!

- 65. DXCC entities heard/worked during May 2005 : 59! On 5 cont
- 66. DXCC entities heard/worked on 16th May 2005 : 15 on 4 cont.

73 COSTAS

The Americas

Auroral-Related Propagation

- May 1 0214 VE6(DO20)>W7(CN88 55a) 03-0400 VE6(DO33)>W7(CN88 58a) VE7FG>W7(CN88 57a) 04-0500 VE4VHF>W7(CN88) VE4VHF>W9(EN44 53a)
- May 8 00-0100 W7(CN87)>W7(CN88 59a) W7(DN36)>W7(CN88 59a) 01-0200 W7(DN48)>W7(CN88 59a) W7(DN36)>W7(CN88 59a) W2(FN21)>W8(EN80) W8>W3(55a) W8>W8 W7(DN17)>W7(CN88 57a) 02-0300 W7>W7 W8(EN71)>W8(EM89 57a) 03-0400 VE3(FN25)>W8(EM89 55a) VE3(FM29)>W2(FN25) VE6>W7(59a) 04-0500 W7>W7(mode?) KL7NO>W0(539 AE) N0UD>W0(52a) 1500 W7>W7
- May 9 0144 W9(EN45)>W9(EN44 51a) 23-2400 W8(FN84)>W9(EN53) VE6EMU>W7(CN88 51a)
- May 15 06-0700 K0GUV>W9(EN44 53a) VE4VHF>W9(EN44 55a) VE2YAT>W9(EN44 53a) VE3(EN29)>W9(EN44 59a) VE7>W9(EN44 59a) VE6EMU>W9(EN44 599) VE7FG>KL7R(559a) VE6>W9(59) 07-0800 W7(CN87)>W9(EN61)(mode?) VE4SPT>W9(EN44 559 Au/Es) W8>W9(EN44 55a) 0752 W7(CN85)>W9(EN61)(mode?) 08-0900 W2(FN32)>W9(EN61)(mode?) W0(DN78)>W9(EN61)(mode?) W4>W9(EN44 55a) VE7FG>W9(EN44) WB0RMO>W9(EN44 56a) K0GUV>W9(EN44 56a) 09-1000 W9>W5 W0(EN13)>W9(EN61) W0(EN13)>W9(EN44 59a) K9MU>W9(EN61) W8(EN84)>W9(EN61) 21-2200 W8(EN84)>W4(EN80) W2(FN21)>W8(EN82 55a 045) W2(FN21)>VE2(FN35 599) VE6EMU>W7(CN88 51AE) W8>W3(59a) W8>W1 W2>W1 22-2300 W2(FN21)>W1 (W1)FN53>W8(EN82 59a) W9>W1(mode?) W4(FM06)>W8(EN82 55a) W7(CN85)>W7(CN88 33a) VE7FG>W7(CN88 52a)
- May 16 02-0300 VE6(DO20)>W7(CN88 59a) W7(CN94)>W7(CN88 55a) W2(FM29)>W9(EN50 mode?) W1(FM31)>W9(EN50 mode?) W2(FN20)>W0(EN43 mode?) 03-0400 W2(FN30)>W9(EN44 mode?) K2ZD>W9(FN44 579) W1(FN53)>W9(EN50 mode?) W2(FN20)>W9(EN44 55) VE7(CO83)>W7(CN88 58a) VE6(DO33)>W7(CN88 58a) W4(FM07)>VE3(FN25 mode?) W1(FN42)>W9(EN50 mode?) W1(FN31)>W9(mode?) 04-0500 VE3(FN25)>W3(FM19) W1(FN41)>W9(EN50 mode?) W1(FN41)>W2(FN02 55) VE4VHF>W9(EN44 52a) W1(FN31)>W8(EN82 mode?) W1(FN42)>W8(EN82 mode?) 05-0600 VE4SPT>W7(CN88 53AE) VE8>W9(55) 0538 VE2>W3(439 AE)
- May 17 0356 VE6EMU>W7(CN88 57AE) reports in listing below 0300-0700 may have been auroral 0556 W0>W9(54a) 06-0700 W9>W9(55a) VE4ARM>W9(559a)
- May 20 08-0900 VA2MGL>W2(57a) K0KP>W2(57a)
- May 29 0552-8 VE6(DO33)>W7(CN88 55a) VE7(CO83)>W7(CN88 55a) 23-2400 W8>W1(55a) VE2>W1(56a) VE2>W9(mode?)
- May 30 00-0100 K0KP>W0(EN18) 01-0200 W0>W0 07-0800 VE6EMU>W7(CN88 53AE) VE7FG>W7(CN88 55a) 11-1200 W8>W1(57a) VE2>VE2(FN47) 1352 VE6EMU>W7(CN87)
- May 31 03-0400 VE8BY>W3(EN44 539 mode?) W7(CN88(>W7(DN05 35a)

Other Modes

In North America the sporadic-E season appears to have got under way about a week earlier than in Europe. This was particularly marked in respect of working contacts with the Caribbean - though one suspects that there was also an underlying increase in both activity and reporting. 1Es would account for a substantial proportion of the contacts but, as in Europe, 2xEs seems to have been fairly common, including several openings between KL7 and the southern 48 states, but inadequate information about the location of many stations makes it impossible to assess the full extent.

Contacts between the United States and South America were more numerous than in 2004. Those with the northern fringe of the continent are perhaps better understood in the context of Caribbean openings - that is, they are likely to have been due to multihop sporadic-E. However, the openings to Brazil, Argentina, Uruguay and Paraguay probably arose from a combination of Es and tep. Openings south of the Equator were reported on the 16th, 17th, 18th, 19th and 20th, compared with a single day in 2004, and while as usual there were no openings from Canada, the geographical spread of the openings appears to have been rather wider than in 2004. This also applies to contacts with YV, HP, FY and PZ, which were not reported at all in May 2004.

North America<>South America

	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	
								+			+		+	+		+	+	+		+		+		+					+		+	+

W/VE<>South America

FY 7 days 8(W3) 13(W3) 14(W1,W4) 16(W3) 17(W2,W3) 22(W1) 31(W2,W3)
 YV 6 days 11(W4) 17(W4,W0) 18(W2,W0) 22(W9) 24(W4,W0) 30(W3,W9)
 LU 4 days 16(W3) 17(W3,W4) 18(W1,W2,W3,W0) 20(W1)
 HP 3 days 10(W4) 17(W1,W4) 18(W3,W4,W8,W0)
 PZ 3 days 16(W3,W4) 17(W3,W4) 28(W0) CX 2 days 17(W3,W4) 18(W4,W5,W0)
 HK 2 days 17(W3,W4,W0) 18(W3) ZP 2 days 16(W3) 17(W3)
 OA 1 day 28(W4) PY 1 day 17(W2,W3,W4,W0)

Paths between North America and Africa were rather more frequent than in 2004, but this may well have been thanks to 5T5SN and D4B activity rather than improved propagation. Contacts were also reported between the African mainland and the Caribbean.

W/VE<>Africa

CU3 3 days 12(W2) 16(W2) 22(VE1,W4,W8) D4 2 days 22(W4) 23(W1,W2,W3,W4,VE1)
 5T 2 days 23(W1,W2,W3,W4) 24(W4) EH8 2 days 22(W2,W4,E5,W8) 29(W1,W3)
 CN 1 day 21(W0)

- May 1 00-0100 W4>W2,W3,W4 W3DOG>HI3TEJ 01-0200 W4>W9,W4 VE6EMU>W7 W3>W3 0214 VE6>W7 03-0400 aurora
- May 2 1244 W1>W9 2126 W8>W3 2355 W2>W3
- May 3 1238 W2>W3
- May 4 18-1900 W7>W7 W0>W6 19-2000 KA7BGR>W7 XE2ED,W6>W7 2200 KA7BGR>W7
- May 5 1454 W4>W5 16-1700 W6>W7 17-1800 W6>W7 48242(EU)>FM5JC
- May 6 0354 NM7D>W7 0407 XE2ED>W7 0512 VE7FG>W7 1342 W4>W5 1855 W8>W3
- May 7 1342 W1>W9 1540 W1>W8 16-1700 W7>W5 W7>W7 1930 VA2MGL>W2 2356 47.9(CE)>W4
- May 8 1154-5 W4>W8 12-1300 W5>W8(ms) W9>W9 1629 W9>W4 2058 VO1ZA>VE1 21-2200 KP4EIT,WP4KJJ>W3 FY1FL>N3DB WP4KJJ>N4CC 9Y4AT>N3DB,W1JJ FY7THF>N3DB W1>W3(bs) 22-2300 VO1ZA,VA2MGL,48242>W2 FY7THF>N3DB, KP4EIT>N4CC,N4HN 23-2400 VO1>W1,W3 V44KAI>FY1FL VE9,VE3>W9 VE1>VE3
- May 9 00-0100 W8,W9>VE9 VY2,VE1,VO1>W3 VY2,VE4VHF>W2 W7>W3(eme) W1>W9 VE9,VE1>W8 1246 VE4SPT>W9 1642-50 K0KP>W1 W9VW>W4 18-1900 W6>W6 C6AFP>W1 9Y4AT,CO8LY>N3DB 19-2000 W6>W5 23-2400 W4>W3
- May 10 00-0100 W4>W5 W8>W4 1247 W1>W1 1748 W4>KP4 18-1900 W2,W3>KP4 W3>W3 19-2000 KP4>W4,W1 2046 NP2L>W3 21-2200 KP4>W3,W4 22-2300 KP4>W4 W3>W1(bs) VP9GE>N4GM V44KAI>K4RX PJ2BVU>KK4SI 23-2400 KP4>W4 W4SO,KG4RWO>HP2AT VP9GE>N3DB,N4BAA,W3ARS PJ2BVU>K4RX HI8ROX>N4BAA
- May 11 00-0100 W4CHA>W3 VP9GE>N4NN HI8ROX>W4SO W4>KP4 01-0200 KP4>W4 XE1>W0 02-0300 XE1>W0 C6AFP>N3DB W1>W1 14-1500 1500 W6>W7(sc) 18-1900 W4>W7 XE2,W4,W9>W5 XE2,KP4,K5AB>W4 KD4NMI>W3 19-2000 W5>W3 W6>W5 C6AFP>W1 W0>W5 W4>W4,KP4 W5>W7,W4 XE2>W9 W8,W4>W3 W8>W1,W0 W5>W4 20-2100 W4,W3,VE4,W1,W2>W4 CO8LY>W8GG VE4,W6>W5 W7>W7 W3>W3 W4>KP4 21-2200 WA7X,W0MTK,W0IJR>W7 KP4>W4 W8>W3 VE3>KP4 22-2300 W4,VP9GE>KP4 YV4AB>W4SO FM5JC>W4SO 23-2400 KK4SI>FM5JC KP4>W5 FM5JC>W4SO
- May 12 00-0100 W4IH>FM5JC W3>W3 V44KAI>W4SO 11-1200 VO1ZA>W1,W2 48240>W2 CU3URA>K2MUB 12-1300 W6,W4>W4 13-1400 K9MU>W8 K5AB,KS5V,W5RP>W4 N0LL>W5 VE4VHF>W8,W7 W9>W0 14-1500 K0KP>W7 W4,W5>W3 VE1,W0>W4 WA1OJB>W3 W2>W0 15-1600 W5>W4,W9 KE4SIX>W0,W7 C6AFP>K2LZQ W8>W5 W4>W2 W7>W0 W5>W9 W9>W7 16-1700 W7,W0>W4 W0>W7,W8 W4>W2,W0 W5>W9,W3 17-1800 VE2>W4 WR9L>W9 CT1FFU>K2MUB,VE1ZZ W8>W2,W4 WR9L>W1 EH7RM>W1JJ,VE1ZZ W3>W9 CT1APE>VE1ZZ W9,W6>W4 18-1900 K0KP>W5 K0ETC>W2 W0MTK,W0IJR>W7 K0UO>W3 19-2000 W1,W0,W3>W7 W7>W3 K0ETC>W1 XE2>W0 VE2,W1,W0>W2 W8>VY2 C6AFP>K2LZQ W7>W6 20-2100 W1,W4,W5>W3 WB0RMO>W5 W4>W1 VE1>W8 W2,W7>W7 VE2>W3 W3,W8>VY2 XE2>W4 21-2200 K4AHO>W1 W4>W3 22-2300 W0,WR9L>W0 W5>W9 49.2(skew)(CE)>W3 23-2400 W5>W3 W6,K0EXC,W0IJR,K0EC>W9 W4>W1
- May 13 00-0100 K0EC,W0MTK>W9 W0,W9>W7 K5AB>W4 01-0200 W9,W4>W7 W8,W5>W4 W0>W5 W9>W0 19-2000 W4,W5>W5 W4>W3,W2 20-2100 K5AB>W2,W7 W5>W4 W2>W3 21-2200 FY7THF>N3DB W8>W8 W4>W0 W2>W5 22-2300 W4>W5 KE4SIX>W0

VP5VAC>AA4V,K4AR,AK3E,N3DB W5>W8,W2 C6AFP>AK3E W3>W3
W3DOG,W1,W5,W4,W8>W5 23-2400 W4CHA,KD4HLG>W0 W5>W2,W3 W1>W4 W5>VE3

May 14 00-0100 W5>W2,W4,W3 W5RP>W0 W4>W7 01-0200 W5>W3 W0>W5,W4 W3>W7,W2 W7>W4
W3>W2 K5RP,XE2>W5 02-0300 W2>W5 KD4HLG>W2 W5,W0>W3 93-0400 W1>W4 W4>W2 04-
0500 W5>W2 W9>W3 1058-9 W2,W4>W8 11-1200 W5>W8,W4 W4>W4 12-1300 W8,W5>W4 13-
1400 W5>W8,W2,W3 W1>W4 W4>W3,W7 14-1500 W7>W4 W4>W9 K0ETC>W4 W8,W5>W0 15-
1600 W3,W2>W1 W5>W0 W0>W7 16-1700 W0>W3 17-1800 W4,W8>W4 W4>W3 1938
48250(EA)>W4 20-2100 48242(CT)>W4 VO1>W1 21-2200 FY7THF>K4RX,W1RA W3,W2>W5
VE4VHF>W8 VE4>W4 VP5VAC>K4AR,K0HA VE2>W0 22-2300 W1>W9 W4>VE2,W9 KP4>W1
23-2400 WP4KJJ>W1,W3,W5 VP5VAC>AK3E W4,W1,W2>W4 W5>W5 HI8ROX>AK3E,W5KI
VE2DFO>FM5JC W6>W6

May 15 00-0100 9Y4AT>N3DB KP4TB>W4 W4>W5 W1>VE2 W2>W3 VP9GE>WZ8D 1248 K0KP>W0(sc)
1444 W3>W1 17-1800 W7>W6 FJ>FM 19-2000 W3>W3 W4>W2 M0BCG>W7GJ(eme) 20-2100
VA2YKT>VE2 21-2200 9Y4AT>VE1ZZ,W1RA W1>VE1 aurora 6Y5IC,VE1YX>FM5JC 22-2300
FM5JC>K1GUN,N4TSS KP3A>FM 9Y4AT>K1MS KP4>W4 W1>W3(qtf Caribbean)
FM1BY>VE9KAR 23-2400 9Z4FZ>K1GUN FM5JC>K3OO,W1ZC,N3DB PJ2BVU>VE9KAR
KP4>W1 9Y4AT>N3DB WA1T>FM5JC KP4>FG

May 16 00-0100 9Y4AT>VE1ZZ 01-0200 W7>W7 YV4>YV5 02-0300 W7>W7 W9>W1 VE2,VE3>W4 0451
W1>W8 1211 VE2>W8 13-1400 CO8LY>VE2QRA,W3UR 16-1700 W1>W1 W2>W3 17-1800
K4AHO>W1 1825 C6AFP>KB2WTB 4U1UN>W1,W2 4U1WB>W2 CU3URA>K2MUB 20-2100
LW3EX >K8LEE 9Y4AT>K2MUB,W1JJ W1>W9 21-2200 9Z4BM>W1JJ
FM5JC>N3DB,K2PLF,K2MUB 9Y4AT>K2LZQ W4>W9 LW3EX>W3UR 22-2300
FM5JC>W5KI,N3DB,K8LEE,KY5R,W4TJ,W3YY 9Y4AT>AK3E,K8LEE ZP6CW>N3DB W3>W8(sc)
W1>W1 9Z4BM>W3UR,K8KS,K4RX(sc),W5KI FY7THF>W3UR C6AFP>KO1H 23-2400
C6AFP>N1LDY 9Z4BM>FY1FL W4>W3 FM5JC>N4XD,N4AR,KR1ST/5,K8LEE,N4TL
FY1FL>W3UR PZ5RA>N3DB,KG4QMI,W4TJ,K3KO W4>W0 KP3A>W4,W5 9Y4AT>VE1ZZ
W4>W5 PJ2BVU>K4RX HI8ROX>KG4QMI XE1KK>HP2AT

May 17 00-0100 W4CHA,KD4ESV,K7BV/1>HP2AT HI8ROX>K4QMG,N4HN W4>W5 W9,W0>W3 01-
0200 W9>W1 VO1>VE3 VE4SPT>W9 VE2>W0 W3>W3 W4>W1 02-0300 VE2>W0 VE4>VE3 03-
0400 W7>W1(eme) VE7>W1 VE8BY,VE4SPT>W0 VE8>W3 KL7NO>W3UR VE4VHF>W1
W1>W0 VE8>W2 04-0500 AL7RT>W3UR W3>W0 W3UR>KL8DX VE2KYT>W0 VE7>W2
K3UL>NL7Z NL7Z>N3DB,NV8V,K2PS 05-0600 VE8BY>W9 AL7OC>W0 KL7NO>W0,W9
VE8NSD>W9 W0>W8 VE7>W0 KL7/KG0VL>W0 W1>W7 VE4SPT>W9 VE4VHF>W7 06-0700
NL7F>W0- AL7RT>W0 KL7HFQ>W0 W3,WR9L(T9),W1>W9 VE7>W3 W9>W0(skew) 07-0800
N0UD,K0GUV>W71246 VA2MGL>W1 18-1900 CO8LY>N4BAA,N3DB,KG4QMI 19-2000
9Y4AT>N3DB KP4EIT>W3 W4>WP4NIX 20-2100 W4>WP4NEG FY7THF>W3HH,K2MUB,AK3E
YV4AB>K0HA 9Y4AT>N4BAA,K2MUB,K2LZQ,AK3E PZ5RA>N3DB,K4CIA,WP4NIX
WB0RMO>W3 W3>WP4NEG N0LL>W3 LW3EX>N3DB,N4DB PP5AR>K0HA 21-2200
PP5AR>K2LZQ W4>WP4NEG KP4EOR,W4>W2 W4>W4 LU1DMA>W3UR,K4CIA
CX5CR>W3UR,K4MQG,WP4NEG LW3EX>N4BAA K5YY>FM5JC LU9AEA>N4BAA
FM5JC>W4RJ W5>W5 ZP6CW>W3UR CX3AN>N4BAA,N4XD W4IHI>FM5JC W4>W4
HI8ROX>W4RJ,K3IXD/5 22-2300 KP3A>W2 FM5JC>W4DTA.WP4NIX HI8ROX>WE2N
9Y4AT>K2LZQ,K2WA CX2AQ>AK3E ZF2BI>FM5JC,N3DB YV4YC>W4SO C6AFP>W4YOK
YV4DDK>FM5JC,KE4OYS TI2NA>W4SO KP4>W2 23-2400 YY5PER>K4RX
HI8ROX>KE4OYS,KR1ST/4 VP5VAC>N5BO,N2LZQ,K3IXD/4 W1>W4
HK3JRL>AK3E,W3UR,WA4NFO NP3CW>W5 YV4DYJ>KM0A,AK3E FM5JC>KY5N,HP2AT
XE1BEF,WD5K,W2ZI>FM5JC PJ2BVU>HP2AT,K0HA YV4YC>K0HA,K4RX 9Z4BM>W4SO
FJ5DX,FM5JC,KP4JRS>HP2AT

May 18 00-0100 9Y4AT>AK3E,N3DB,WZ8D W4>W5 YV5IAL>K0HA KP4>W4,W5 HK3JRL>AK3E,N3DB 9Z4BM>K2WE,K0HA,AK3E P43XE>KK4SI HP2AT>AD4EB,K0HA
K4CFS,W3DOG,K4DC,KG4PACK8LEE,K0VUY>HP2AT YY5PER>KP4JRS W4>W5
YV4DYJ>K4MQG,AA2DR KP3A>W0 FM5JC>W3UR,W5THT,W3ARS FG5FR>W8WK W5>W9
W4>W4(330miles) HP1DCP>N3DB 01-0200 9Y4AT>K0GU(3xEs),K0HA KP4>W5,W0 KP3A>W4
C6AFP>K0GU FG1GW>W5FKX FM5GU>K0GU FG5FR>K0HA,AA5AU KP3BH>W5 W3>W3
FM5JC>W3LPL ZF2BI>N5BO,W5FKX W5RP>W9 02-0300 VE8BY>W2 W4>W4 0937 13-1400
KD4NMI>W4 W5>W5 14-1500 W3>W3 14-1600 W5>W4 16-1700 C6AFP>K2MUB XE2>W5 17-
1800 N3LL,K4AHO,K45TQR>W3 W4>W2 C6AFP>W5DN KS5V,W5SIX>W6 NOLL>W5 W4>W1
18-1900 W4CGA>W3 K5AB>W6 W5SIX>W4 19-2000 W4>KP4,W3 WR9L>W3 9Y4AT>KY5R
W4>W1 KG4WW(Guantanamo)>W2 W4>W0 20-2100 LU9AEA>W2MMD,K1GUN W4>KP4
KP4>W0 YV4YC>N3DB LW3EX>N3DB,K1GUN,N0GZ W5>KP4 CX4CR>KY5R W1>W0
FM5JC>K7ZD,W5SL KG4WW>W3UR 21-2200 PP5AR>N4XD,W7RV LW3EX>K8WK/5
KG4WW>N4BH,N4UTE,W4TO,N4NN,K3KO W3,W5>KP4 C6AFP>K1AE KP3A>N4BH,N3DB
CX5CR>K5IX ZF2BI>K4UTE,K3O VP5VAC>N4LI W6,W5>W5 22-2300 XE1KK>W5
LW3EX>K0HA VP5VAC>W7RV,KE4OYS,AG4TO,N4BAA,N0JK HI8ROX>K3KO XE1>W0 W9>W5
LU5VV>N4NN KG4WW>K4DXA W6,W5>W7 W5>VE3 ZF2BI>K0HA,AG4TO VE5>W6 XE2>W7
ZF2BI>CX4CR XE1,KD4HLG>W0 KSD5V>W9 KP4>W0 23-2400 VE5>W6 W7>W5
XE2>W9,W0,W5 W0>W7 W6,W7>W4 PZ5RA>K0HA W4>W0,W7 W3>W6(2xEs) XE1,XE2>W5
W5>W9 XE2>XE1 W0>W7

May 19 00-0100 W4,W5>W7 W4>W5 W5>W6,W9 XE2>W0 W6>W4,W5,W8 ZF2BI>W1S W2>VE3
HI3TEJ>N2WB/4,CX4CR,AF7W/4,WQ5W,AE5B W0>W4,W5 KP4>W2 K0EC>W4 01-0200
W0>W7 W6,W7>W4 W5>W0,W6,W5,W9,W8 6Y5IC>K0HA,N2WB/4 W0>W6 HI3TEJ>N0JK,K0HA
6Y5RC>W3HH 02-0300 VE5>W7 W9,W4,W8,W0,W6>W5 W7,W2,W5,VE7>W7 K5AB>W7
KA7BGR>W0 HI8ROX>K0HA VE6ARC>W7 03-0400 VE7,W2,W5,W9>W7 W2>W5 W7>W0
W5>W6 W6>W7,W9 W0MTK>W7 04-0500 W5>W6 W6,W7,W0,W9>W7 05-0600 W0IJR>W6
W7>W7,W6 06-0700 0854 W5>W5 VE7>W6 21-2200 W6>W7 W3>W1 22-2300 W1>W0
KA7BGR>W7 23-2400 W7>W7 XE1KK>W5

May 20 00-0100 ZF2BI>N5BO,WA4JQS W4>W5 HI3TEJ>K0HA N4GRK>HI3TEJ 01-0200
ZF2BI>KN4F,K4WES,K0HA,K6SW,WA4NFO,W4GCB,K0HA XE1>W4 HI3NR>K0HA
HI3TEJ>K0HA,W4DUO,K5SW W4>W5 6Y5IC>K8WK,W4GCB XE2,XE1>W4 02-0300
ZF2BI>WA4NFO W4>W5 6Y5IC>K0HA,N4NN HI3TEJ>K4JAF HI3NR>N4NN HI8ROX>N4NN
1543 W5>W1 14-1500 CO8LY>N4WI CO8DM>KG4QMI 16-1700 K0ETC,W4>W2 17-1800
W4CGA>W7 W2>W5 18-1900 W4>W3,W1 1943 VP9GE>K1GUN 20-2100 KG4,XE2>W4
FM5JC>K2WE VP9GE>N2AU KB1LKB>FM5JC W5>W4 9Z4BM>K4AR LU9AEA>K1GUN 21-
2200 W9VW,W4,W3VD>W0 9Z4BM>KC2MHU W4>W1 W5>W9 W1>VE1,W1 NO3I>FM5JC 22-
2300 9Y4AT>K2MUB W1>W4 W6,K5AB>W9 W5RP>W3
K2MUB,PJ2BVU,CO8DM,W2GFF/4>FM5JC CO8DM>K4AR W7>W7,W6 ZF2BI>K4DJ W6>W4
W4>VE9 VP5VAC>K4AR W0>W5 23-2400 W4,W6,W0,W7>W4 W8>VE3 W7>W7,W6
KD4HLG>W0 VP5VAC>K9APW,K4AR XE1KK>W7 C6AFP>W8GF W4,W1>W9 CO8DM>K0HA

May 21 00-0100 KN9N,W0SF,ES6RQ>HI3TEJ HI3TEJ>K9APW,K0HA,K5WPN VP5VAC>N4CC
XE1>W3,W6,W3,W5,W2,W4 W6>W7,W8 W9>W9 W5>W6 KG4WW>W9,W0, W4>W5,W7
CO8DM>K0GU 01-0200 W9>W6 W4>W8 W5>W4,W6 XE2>W5,W3 XE1>W5,W7,W2
HI3TEJ>K0HA,K3IXD/4 K5AB,WA7X>W6 CO8DM>K6QG W5>W6 W4>W9,VE3 02-0300 W0>W5
W5>W6 XE2>W0 VP5VAC>K5IX,AA5AU,NX7U XE1,W7>W7 XE1>W0 CO8DM>K7ZD
HI3TEJ>K7ZD NP2L>W0,W5,W7 KP4,W7,W6>W5 XE1>W7 03-0400 W7>W0 W5>W6 XE2>W0
W4>W7(2x) XE1,W5>W5 04-0500 KS5V>W3 49750>FM5JC 19-2000 DK5AI>PY2XB 21-2200
K0ETC>W2 W2>W9 W9,K0KP,WA7X,W3,W2,VE2>W5 W1>W7 VE4>W9 W5>W1 W2>W7(2xEs)
W4>VE2 22-2300 VE2,W9,W7,W5,W1,W4>W9 W8,W2>W7 W0>W4,W5 VE4VHF,W0>W2
VE4>W8 CN8MC>K0HA XE2>W5 JX7SIX>K2MUB 23-2400 48250>FM5JC W0,VE2>W7
W9,XE2,W5>W9 K8UK,VE3,XE1>W5 W5>W1 W9>W3 W0>W4 W1>VE1 CO8DM>W3UR

May 22 00-0100 VE4VHF,W0>W4 W2,W0>W7 W7>W5 VP9GE>N4BAA W7>W5 KS5V,WR9L,W5HN>W0
03-0400 W7>W0 W6>W6,W5 1158 FM1PY>K4AR 12-1300 C6AFP>AK3E FM5JC>WZ8D W4>W4
9Y4AT>K2MUB W5>W5 GW3ORR>FM5JC W4>W2 13-1400 C6AFP>K4MWB W4>W2 W4>W9
YV4DDK>FM5JC PA0HIP,K3HXC>FM5JC FM5JC>K3HX W3DOG>W3 W4>W2 14-1500
CU3URA>VE1RG N4SC>FM5JC W1>W3 15-1600 W1>W3 W4>W5 W1>VE1 W3>W5 16-1700
W4>W3 17-1800 NOLL>W4 W5>W8 W9>W5 WB5LLI,XE2ED>W0 NOLL>W6 19-2000 W7>W7
VE1>W8 FM5JC>W5DN CU3EQ>FM5JC W4>W3 W5>W5 W4>W8 20-2100 VE2>VE3 E8>W4
W5>W0 W4,W6>W5 VO1ZA>W3 W9NX,KM0A>FM5JC VO1>W1,VE2 W5>W6 VE2>W1 21-2200
CU3EQ>W8WK,N4BAA,VA3KA W5>W6 ZF2AM>N5BO,W4TO EA7KW>W1RA FY1FL>K1TTT
MM0AMW,9Z4BM,KP4>W1TTT CO8DM>KN4QS,K4AU VP5VAC>N4BAA KP4,VE2>W4
W1>W8(bs) 5T5SN>VE1ZZ IT9GRR>YV4FJO 9Y4AT>W2AJM EH8BPX>K2MUB W4>W8,W9,W0
KP4>W1 ZF2BI>K4AU 22-2300 W4>W9 HI3TEJ>N4BAA,W3ARS,KU4YW,N4XD YV4DDK>W1JJ
VE1>KP4 EH8BPX>N4BAA,K8WK,N4NN,K5XX KP4>VY2 CO8DM>N4DB W4>W9 23-2400
49.2(CE)>W4 W4>W3,W5,W1 FY1FL>N3DB W1>W5 D4B>N4BAA

May 23 00-0100 D4B>N4NN,K4CIA W1>W8 VO1>W1 C6AFP>N4DB VE2>W0 VP5VAC>W4DR
9Y4AT>FY1FL 01-0200 W4>W5 W0MTK>W5 02-0300 W4,W5,W6>W6 W7>W4
W5,W6,VE2EP>W7 03-0400 VE8BY>VE6 W6>W6 W7>W5 VE2>W0 W6>W7 W0>VE3 04-0500
K5AB>W712-1300 C6AFP>W1JJ W3DOG>W7 VP9GE>W1JJ 13-1400 48242>W3 W4CHA>W2
W0>VE1 14-1500 W5SIX>W5 1650 NOLL>W7 20-2100 W3>W3 W5SIX>W4 KS5V,W4,W5>W7
WB5LLI>W7 21-2200 W5>W5,W7 W4,W0IJR>W7 5T5SN>N4BAA,K2PS,W1JJ D4B>N3DB,NA2P,
K3OO,N4BAA,K1CP,K2WE,AA2DR,K1GUN KG4WW>K2PS,KB3KAQ XE1>W6,W0 22-2300
5T5SN>K4CIA,W3JO,N2IC D4B>VE1ZZ KG4WW>K4RX,KG4QMI VP5VAC>K4JAF,N4HN
ZF2AM>N4HN,K8YC /4,K9HMB HI3TEJ>N4HN XE1>W5 VE4,W4>W7 W6>W5 XE2>W1,W0,W3
W5>W9 23-2400 W4>W5 W0,W4>W7 XE3>W5 KP4>W9,W1 W6>W4 W4>W2 W5>W3
ZF2AM>N2IC,K7ZD,W7RV,K7ZD,AA5KE W4>W3,W4 XE1>W2,W4,W5,W0 NM7D>W0

May 24 00-0100 XE3,VE4>W7 W8>KP4 WB5LLI,W1,W3,W4,W7,W8>W3 TG9AFX>K0HA,K4MM
VE5,VE4>W7 W4>VE3,W4 W5>W1,W5 XE1>W3 C6AFP>K1DG 01-0200 VE4,W0,W5>W7
W5>VE6 XE1>W2,W4 W5>VE6 C6AFP>W1ZC XE3>W5,W0 WB5LLI>W9 W2>W5 W8>W4 02-
0300 W5,W7>W5 W2,W5,W6,W7>W7 W4,W7>W4 C6AFP>N3DB 03-0400 W5,VE4>W7 04-0500
W9>W9 W7>W5 VE4>W7 05-0600 VE5>W7 W5>W5 11-1200 KP4>W4,W1 9Z4BM>W1JJ
CTtv>W4 12-1300 YV4AAB,NP2L,V44KAI,VP5VAC>K4MM P49MR>K4JAF W4>W5 W0>W9 13-
1400 P49MR>AG4TO,W3UR,N3DB,K5CM,K0HA W4,W7>W9 W5,W4>W4 14-1500 W0>W4,W7
YV4AB>K0HA W3>W8 W4>W5,W7 W5>W9 W7>W8 15-1600 W4,W7,W0,W9>W7 W3>W0
W5RP,XE2>W9 XE1,W5>W5 XE2>W0 WR9L,W3>W3 16-1700 W9VW>W7 K5AB>W4 W2>W2
W4>W0 CO8LY>K4JAF W3>W3 W7>W7 17-1800 W5,W0>W9 8R1WD>WP4NIX 20-2100
8P6RC>N4BAA 5T5SN>K4RX 21-2200 XE1>W5 48242,48250>FM5JC(skew 110) XE1>W7
W9,W0>W8 XE2>W7 XE3>W0 W5>W4 22-2300 W5>W4 W0,W3,K5AB>W3 XE2,CT1HZE>K5IX
K0HA>VE3 FM5JC>K5CM W4,XE1,W1>W5 W6>W3 23-2400 K5AB,KS5V,K0UO,W5HN>W4
XE1>W4,W3 W3>W5 C6AFP>K5IX 9Y4AT>N3DB FJ>FM K0KP>W0 K4QI>FM5JC
TG9AFX>N3DB ZF2AM>N5ZM

May 25 00-0100 ZF2AM>K9MHB KP4,XE1>W4 TG9AFX>W9RM,WQ5W,N4BAA W4>W2(2xEs) W0>W9
W3,W5>W3 VP9GE>KP2L,K5VIP HI3NR>K3OO FM5JC>K0HA XE3>W4,W3,W9,W0
XE1>W2,W4 01-0200 C6AFP>K5IX XE1>W9 W9>W5 W8>W4 02-0300 K0KP>W5 W5>W9
W4>W6(2xEs) 03-0400 K5AB,W5RP,W5HN>W3 W4>W5 04-0500 W9>W9 05-0600 W6>W7 17-
1800 W5>W5 VE4ARM>VE7 18-1900 W0>W7 1959 W5>W4 20-2100 W4>W1,W3,W0
WA1OJB>W3 21-2200 W2,W4,VE3UBL>W3 W4,KP4>W0 KS5V>W4 W4,W8>W1 22-2300
W4>W3,W1 W3,W9>W5 WR9L>W3 23-2400 W9>W5 HI8ROX>N3DB W1>W0 W9>W9 W4>W3

May 26 00-0100 VE2>W4 W2>W8 W5>W9 01-0200 KD4HLG>W0 W4>W4 0238 W9>W8 1149
48250,48242>W4 12-1300 VP9GE>W3RMM VE4VHF,C6AFP>W1JJ EA7KW>K4MM 14-1500

C6AFP>N3DB 9Y4AT>K1MS W8,W4>W3 15-1600 W7>W9 VA2MGL>W2 W4>W3,W2 VE1,W2>W9 VE6>W1 16-1700 W0>VE3,W1,W2,W3 W9>W3 W8,W9>W9 17-1800 W9,K0KP>W4 W0>W6,W3,W1 W3DOG>W9 18-1900 KS5V>W4 19-2000 DL1YD>FM5JC 20-2100 9A4W>WP4NIX V31RA>W6FC/4 W3>W3 TI5/N0KE>N3DB D4B>FM5JC W2>W0 VE1>W5 W5>W7 21-2200 XE2>W5,W0 VE9BEA>W3,W1 VO1,VE1>W3,W8 W9>W2,VY2 W3>W3 VE2>W8,W3 W5>W7 22-2300 W4>W1 VY2,VE2,VE1,VE9>W8 VE1,VE2YAT>W4 W1>VE3 VY2>W3 VE9,VE2>W2 VE2>W3,W0 23-2400 VE2>W4 W1,W3>W8 VE9,VY2,VE2>W3 W5>W6 VE2,W8>W2

May 27 00-0100 W1>W9 VE2,VE3>W4 W9>W2 VE2>W8,W3 01-0200 K0ETC>W3 W5,W0>W4 W1,W4,W8,W9>W7 W1,W3,W9>W9 VE2>W8,W3,W5 W9>W3 W8>W2,W3 W0,VE1>W5 W2>W8 02-0300 W9>W7,W9 W4>W3,W7 W1,W0,VE2,W9>W5 W1>W9,W5 W0,W8,W6,W1>W4 W7>W8 W8>W3,W0 W2>W7 W1>W9 W5>W6,W3,W0 VE2>W0 W6>W4 03-0400 W5>W3 W7>W8,W4 W1>W9 W1,W2,W6>W5 XE2>W0 W1,W2,W5,W9>W7 W2>W4 W1>W1,W9 04-0500 W1,W2,XE2>W9 W2>W3 W6>W5 W5>W7 W8>W6 05-0600 K5AB>W6 1131 VA2MGL>W2 12-1300 W3CCX,K2ZD,W3VD>W3 13-1400 WA1OJB>W5 1440 VP9GE>KY5R 18-1900 W3>W1 L0UO>W6 19-2000 W7>W6,W7 20-2100 W6>W7,W0 W7>W7 W0MTK>XE2 21-2200 W6,W7,XE2,XE1,W5>W7 W5SIX>W5,W6 XE2>W0 W6>W0 W9>W9 22-2300 W7,XER2>W7 W3>W5 K4AHO>W8 23-2400 K8UK,VE3UBL>W3 W6,W7,W0,W5>W7 W4>W2,W8 W1>W5 W6>W6 W4>VE1,W3 W9>VE1

May 28 00-0100 W4,W5>W9 W7,W0,W4>W7 WA7X>W6 W5>W2,VE3 W4>W0 W5RP,K5AB>W8 01-0200 K5AB,N0LL,K0UO>W3 W5,W0>W8 W4,N0LL>W7 W5>W0,VE3 W4,W0,W6>W4 W1>W1 W8>W8 02-0300 VE4VHF,K0GUV>W5 KS5V>W3 03-0400 W7>W5,W9 W9,N0LL>W7 W5HN>W3 W9>W9 04-0500 W5>W9,W5,W3 VE4VHF,VE8BY(2xEs),VE6EMU,VE6ARC>W0 W7>W4 W0>W7 VE6,W7>W5 05-0600 W7>W9,W5 K5AB,W5RP>W0 W5,VE5>W5 W0>W7 NM7D,WA7X>W9 06-0700 W7>W9,W0 W5>W5 14-1500 VE1>W3 W1>W4 1542 W8>W8 16-1700 W7,W0>W9 17-1800 VE1>W4,W9 W1>W1 18-1900 W1,VE1>W9 VE2>W3 EH7KW>FM5JC W0>W7 W1>W1 W5HN,W5RP>W7 19-2000 W2>W9 W6>W5 N0LL,W7,VE4ARM,VE4VHF>W7 XE2ED>W0 20-2100 W0>W7,W3 WR9L>W9 W7>W3 21-2200 XE2ED>W0 W6,W4>W4 22-2300 W6>W5 W9,W5,W6>W7 W8>W3 OA4B>K4CIA 23-2400 C6AFP>N5BO

May 29 00-0100 VE3>W5 W5>W6,W5 01-0200 W5>W6,W5 02-0300 W0IJR,K0EC>W5 W5HN>WE3 03-0400 W0>W5 W4>W6 W5,W4>W9 04-0500 K5AB>W0 W9>W9 1027 VA2MGL>W2 1140 W4>W2 12-1300 W4>W8 VO1ZA>VE1 W3>W3 WS4S,K4QI>FM5JC VO1>W1 13-1400 W3>W4 K5SW,W6IZT/4,VO1TJM>FM5JC VO1<>W1 VP5JM>K4AR,K5CM VO1ZA>W3 K0UO,C6AFP>WZ8D 14-1500 W4>W9 VE3>W5 EH7KW>K2MUB IOJX>K1VW,K2WE 15-1600 EH8BPX>WA1NYV CT1HZE>AE5B F4CPS>AG2A 16-1700 W0>W9 W8>W0 W5,W4>W5 17-1800 W4>W1 W0,W6>W9 W3VD>W3 18-1900 W5>W6 W9>W5 W4>W1 W3>W4 19-2000 KP3A>W8GG W4>W0 CO8DM>AA2DR KP4>W8 20-2100 K0UO>W7 9H1AW>N3DB VE2>W0 PJ2BVU>K2ZD 9H1TX>K3OO EH8BPX>W3UR VE1>W3 CO8DM>FM5JC IS0GQX>N3DB 21-2200 VO1>W8 YV4DYJ>AK3E,W9IMS W7>W0 EH8BPX>N3DB VE1>W4 22-2300 VP9/N0JK>K2MUB,K1VW,W2AJM YV4DYJ>K9HMB,K4CEB W4>W3 PJ2BVU>K9HMB,WX9C

May 30 02-0300 W7>W7 03-0400 W7>W7 12-1300 KP2BH>K1SG,W3UR FM5JC>W1JJ,W5KI W4>KP4 VE1RG,W4DR>FM5JC WA1NYV,K1DZS,N4DB,K8ROX,K2KJ,W4EJG>KP4 CO8LY>K4PI 13-1400 CO8LY>N4NN, W3GNQ,N4KZ NP3CW>W8 FM5JC>K8LEE, K4PI N3SBA,W3LPL,K4AR,K4QI>KP4 ZF1EJ>NS0I,KC2TN,N4BH,N4NN,N4KZ V44KAI>N4JJ W4>W4 14-1500 VP5JM>K4PI,2WB,W8GEX VP5JM>N3DB,W8GG, AB4GG CO8LY>KN4QS,W3UR,K3IXD C6ANU>W4RJ,N5UXT ZF1EJ>AK3E,AA4SC, K4KJZ,K3IXD,N5UXT W3>W3 W4>W5 15-1600 C6ANU>K4KJZ,N3NMH W7>W7 CO8LY>N4WI,N2WB/4 VP5JM>K0HA,KD5FEX 16-1700 VP5JM>KE4MBP CO8LY>N2WB/4 KG4WW(Guantanamo)>W4,W2, W5 W7>W0 TI8TBT>K4MM 17-1800 KG4WW>W3,W4 KP4>W2 18-1900 CO8LY>N3DB,N4NN,W3LPL W4>W3,W4,KP4,W5 19-2000 ZF1EJ>WQ5W,KD5FEX

W4>W3,W1,W4 VP5JM>K5UIC 20-2100 VP5JM>N4JF C6AFP>KZ5E W3DOG,W4>W3
 XE1KK>W5 K2ZD>W3 C6ANU>K3HX TG9AFX>WQ5W 21-2200 TG9AFX>KA5CJJ XE1,W5>W5
C6AFP>K5IX W5,XE2>W4 VP9/N0JK>N2IXX 22-2300 W4>W5 W2>W4
VP9/N0JK>N4DB/8,KG4QMI, K4KWK,W3UR,WA4NFO HI3TEJ>N4BAA 23-2400 W4>W5
V31RA>AA5AU,K8WK, WQ5W,KG9Z,N5BO,K0HA HI3TEJ>K3OO
VP9/N0JK>K4QI,N8BJQ,K3OO,W4TJ, KB3KAQ W9>W9 C6AFP>VE1RG

May 31 00-0100 VP9/N0JK>N2NRD,W4TO,KB2M,K1RA W7,W5>W5 C6AFP>W2AJM,W5DN W4>W3
V31RA>W1RA 01-0200 VP9/N0JK>N4DB/8,W8GEX,WZ8D W4,W1,W5>W5 W2,W4>W3
C6ANU>N0FW 02-0399 W4>W3,W9,W8 N3LL,W5>W3 W5>W4 VP9/N0JK>K5UR 03-0400
W4>W3,VE3,W8 W8>W8 W5>W3 W0>W4 W1>W5 0815 KE4SIX>W2 11-1200 VE3,W4CLM>W1
CO8LY>N3II W2,W3,VE2>W4 13-1400 W4>W2 W0>W7 W5>W9 W2,W7>W5 KG4WW>W4
CO8LY>AG4I W7>W6 KP4>W5 N0LL,WB5LLI>W7 15-1600 W6,W2,W7>W4 XE2>W0,W4,W9
W3>W5 W8>W2 16-1700 W4,W0>W7 W5>W4 W4>W3 17-1800 W4>W3 W0,W5,W4>W7
W5>W3,W5,W6 KP4>W4,W5 W7>W6 VE6>W5 18-1900 W6>W9 W4,W7>W7 VE7,W7>W5
P43JB>KE7V 19-2000 W0MTK,KA0CDN,VE5 CU3EM>WP4NIX W3>W5
P43JB>N4UM,NE0P,W4RJ,K5SWW W5>W3 5T5DUB>NA4M W4>W3 20-2100
FY7THF>K2MUB,W3JO YV4AB>K5CM W3,W4>W3 9Y4AT>WA1NYV P43JB>K0HA 21-2200
W4,W5>W5 W5>W8 FM5JC>W3UR KP4>W1 P43JB>AF9R,W5SL 48242,49740(EU)>FM5JC 22-
2300 HI8ROX>K5AB,W5DN,N4NN,W0VX,W5PF FG1GW>AK3E P43JB>K5AB,N3DB
9Y4AT>W3JO W0>W5 W5>W5,W9 KP3A>K5AB FM5JC>K1GUN W7>W5 23-2400 W0>W5
HI8ROX>AA5XE,KD4VRZ W7>W8 XE3>W4,W5 KP4>W5W3>W3
V31LZ>K4MS,K4BI,K4QI,K4MQG,N2WB/4 W0>W7,W9 W7>W6 W5>W7

Asia and Oceania

Japan

Japan<>Australia

VK2	1 day	14	VK6	12 days	3-6 8 -11 13-15 17
VK4	9 days	4-7 10 12 14 15 17	VK8	0 days	4 7-9
VK5	1 day 1	4			

Propagation between Australia and Japan was slightly down on 2004, with reports on thirteen days rather than 15. In neither year was ZL reported. In both years there was an abrupt cut-off, with no reports after the 17th this year and only one after the 20th in 2004.

The major departure from an essentially Pacific-centered range of reports was the opening to IT9, 9H, 5B and A45 on the 29th, which seems to have been among the better days almost everywhere - for no very obvious reason.

6m DX results in JA during May from JA1VOK

DATE	TIME(UTC)	STATIONS
5/2	0858-1010	KG6DX, VK6JQ
3	0818-1000	KG6DX, V73SIX/B, VK6JQ
4	0500-1000	DU1EV/B, FK8SIX/B, KG6DX, V73SIX/B, VK4,6RSX/b,8RAS/b
5	0545-1200	C21SIX/b, DU1IST,DU1EV/B, FK8SIX/B, JD1BIA, T88KL, V73SIX/B, VK4,6JQ,6RSX/b

6	0755-1100	C21SIX/b, DU1HBC,1IST,DU1EV/B, V73SIX/B, VK4,6JQ,6RSX/b
7	0710-1030	VK4APE,8RAS/b
8	0950-1030	VK6JQ,6RSX/b
9	0950-1020	VK6JQ,6RSX/b
10	0530-0900	VK4ABW,6JQ,6RSX/b
11	0040-1000	BD2LH,4SI,4XA, BX3/DJ3KR, HL, VK6RSX/b, VR2SIX/b
	2320-0400	BD4SI,4XA, HL
12	0801-0900	VK4ABW,4FNQ,8MS
13	0805-1100	HL, VK6RSX/b
14	0450-1000	BV2/JE1JKL,BV3FQ, FK8SIX/B, V73SIX/B, VK2FHN,YVG,RHV/b,VK4,VK5RO, ZBK,VF/b,6JQ,RO,RBU/bRPH/b,RSX/b,8RAS/b
15	0000-0500	BV4CT,50CRA, HL, V73SIX/B
	1000-1100	VK4FNQ,6JQ,6RSX/b
16	0150-0300	BX3/DJ3KR, VR2BG,XMT,SIX/b
17	0130-0150	BX3/DJ3KR
	0750-1500	BD4XA, HL, VK4,8RAS/b
18	0125-1000	BD4XA, HL, V73SIX/B, VR2BG,SIX/b
19	0100-1300	BD2LH,4SI,4XA,4SUG,7OH, BX3/DJ3KR, DU1EV/B, HL, KG6DX,VR2SIX/b
20	0100-1230	BD4XA,4SUG,5HAM, BX3/DJ3KR, DU1EV/B, HL, VR2BG,SIX/b
	2240-1300	BD4SI,4XA,4SUG,5HAM,BG4AHS, BV50CRA,BX3/DJ3KR, HL, VR2XMT,ZKK,SIX/b
22	0040-0630	BD4SI, BN0F,BV50CRA,BX2AB,BX3/DJ3KR, HL
	1400-1430	VR2SIX/b
	2245-1400	BD4SI,4XA, BN0F,BX3/DJ3KR, DU1EV/B, HL, VR2SIX/b
24	0230-0400	BD2LH, HL
	1120-1130	BD4XA
25	0030-0300	BD4SI, DU1EV/B, HL, VR2SIX/b
	0930-1200	BX3/DJ3KR, DU1EV/B, HL, VR2XMT,SIX/b
26	0135-1310	BD4SI,4SUG, BX3/DJ3KR, DU1EV/B, V73SIX/B
27	2350-0130	BV3FQ,50CRA,BX3/DJ3KR
28	0950-1300	BD5HAM, BX3/DJ3KR, VR2SIX/b
29	0220-1000	9V1CW, BD2LH,4SI,4XA,9BA, BN0F,BV9AA,BV50CRA,BX3/DJ3KR, JD1BKW/JD1, VR2SIX/b
	0710-1040	5B4FL, 9H1XT, A45XR, IT9RZR
30	0130-0400	BX3/DJ3KR, HL, VR2SIX/b

Elsewhere

May 5 1000 DU1HBC>VR2XMT

May 7 1050 6K2ABX>DS1OFE

May 10 0514 VK6RSX>HL12 1040 7J6CCU>HL1 16-1700 A45XR,A45WD>UK9AA UK9AA>EY8MM

May 11 0005 JA6YBR>HL1 JG1ZGW>HL1 0105 JE7YNQ>HL1 0207 DS2>HL1 0233 JA2IGY>HL1 1034
JA8>HL1 time? VR2SIX>A4

May 12 0039 JA6YBR>HL1 09-1000 A61AH>EY8MM 10-1100 A45XR,EY8CQ>EY8MM
EY8MM>A61Q,A61M

May 13 01-0200 JA8,JE7YNQ>HL1 0243 JG1GZW>HL1

May 14 0834 VK6>VK6

May 15 0810 VK2>VK3(cq A)

May 16 02-0300 BX3/DJ3KR>HL1,DS4 7J6CCU>HL1

May 17 0044 VR2XMT>BD7OH 0842 VK4FNQ>HL1

May 18 01-0200 JA2IGY,JA6YBR>HL1 02-0300 7J6CCU,DS5>HL1

May 19 1147 JA7>HL2 12-1300 BD4XA,BD4SUG>VR2 DS2>HL1 2241 JE7YNQ,JA8>HL2 2341 JA2IGY>HL1

May 20 01-0200 HL1>HL2 03-0400 7J6CCU>HL2 BX3/DJ3XR>HL4 1124 JE7YNQ,JA0>HL1

May 21 01-0200 BX3/DJ3KR>HL4 HL4>DS4 0237 DS4>HL1(sc) 0336 BX3/DJ3KR>HL1 0439 JA8>HL1,DS4 0939 JA6YBR>HL1 11-1200 BV50CRA>HL1 JA8>HL1

May 22 0146 BV>HL2 02-0300 BV>DS4 BX3/DJ3KR>HL2_04-0500 _BX3/DJ3KR_7J6CCU>HL1_0526 VK4>VK3

May 24 0153 JA8>DS4(Es)

May 25 01-0200 JA2IGY>HL1 0503 BX3/DJ3KR>HL1 0944 7J6CCU>DS4

May 27 23-2400 BV50CRA>DS4

May 29 00-0100 6N0>DS4 0248 JE7YNQ>DS4 0623 JA1>HL1 07-0800 DS4>HL1 08-0900 VR2ZXK>HL2 5B4FL>JG3LEB 9H1TX>JE2XBY 09-1000 A45XR>JF2AIA,JH7XRZ 1043 A45XR>JA0EKI

May 30 00-0100 JE7YNQ>HL1,DS4 02-0300 JA8,JA0>DS4

May 31 0738 ZC4CW>EY8MM 1810 LX1NO>EY8MM

Beacon News and 28 MHz Worldwide

Compilation and Commentary by G3USF

Beacon News

28001 IS0ATZ reported here with 5 watts in JN49HV (DJ7KG July)
28167.4 LU8DBJ reported by DJ7KG (July)
28191 LU7VCH in Rio Negro, Patagonia with 5 watts reported (G4TMV July)
28227.5 IZ3FZQ new beacon Near Rovigo (JN55VB) runs 5 watts to inverted Vee (IZ3FZQ July)
28239 IZ2DAY in JN45PM reported active again with 10 watts and GP (G0AEV, July)
50006 A7A now understood to be operational (August)
50056 HA5XXA in JN97MN new beacon running 5 watts to GP (HA5OV, Aug.)
50080 K0BUY - new beacon reported here from EM07(NSD7K July)
50080.9 AC7XP new beacon no further details (K0HA)
50087 RB3SIX reported in KO73EF (LA6PV Aug)

28 MHz Worldwide

In the Northern Hemisphere sporadic-E was the dominant mode, although in Europe, as at 50MHz it only became a consistent through-the-day feature in the second half of the month, being reported solidly in all time periods. It was even present on days as disturbed as the 8th, 15th and 30th. (DJ7KG reported DL0IGI auroral at 1404 on the 8th, while auroral contacts were reported fairly widely on the afternoon and early evening of the 30th. and SM2ZIY heard DL0IGI 539 during the later stages of the storm, presumably by AE at 0002 on the 29th. There were no auroral reports during the storm on the 15th - but SM2LIY reported OH9TEN auroral at 1546 on the 10th, which scarcely rated as an auroral day.) AA1TT in New Hampshire reported the VE4TEN and KA0PSE beacons auroral at 0420 on the 17th - another day that was not notably auroral.

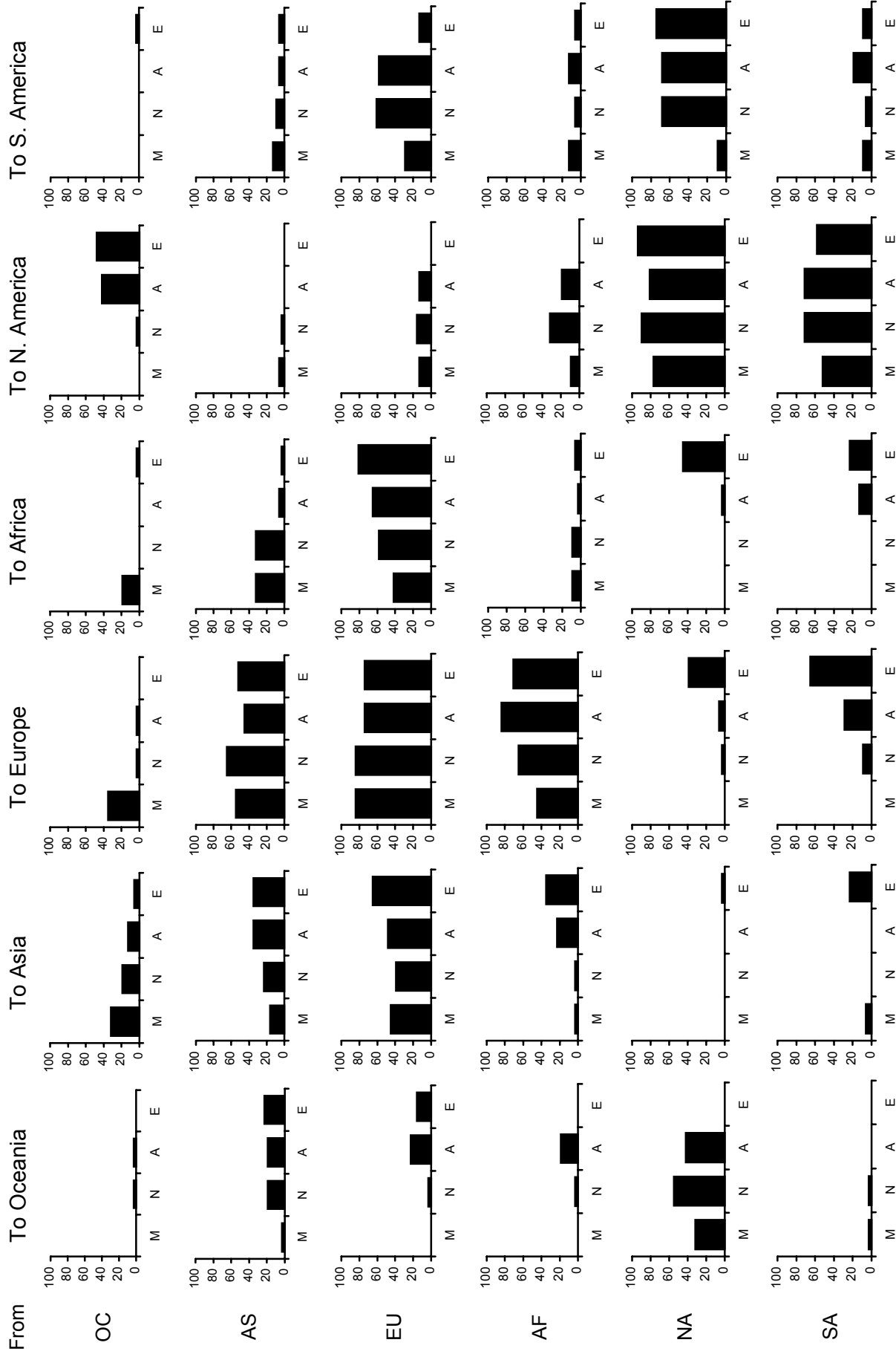
Paths between Europe and Africa held up well, with openings reported at some time on all days, although reliability during the daily time periods was down on 2004. However, decline was more marked with Europe<->South America, which opened on all days in 2004 but on only 20 days in 2005; the evening path was down from 84 per cent reliability to 65 per cent. However, there was a particularly good opening during the WPX contest up to 2233 on the 29th. Asia (mainly western Asia, although there were some openings as far east as Japan) provided contacts from Europe (but mostly southern and eastern areas) on 27 days - a surprising improvement on 2004. Openings between Europe and Oceania were almost all from the Mediterranean. So, too, were contacts with North America (mainly featuring Caribbean stations at the western end). In all, there were reports on twelve days. Several of these occurred during the WPX contest, when DF0CG worked N4BAA and K3DV between 1952 and 2002 on the 28th with an Africa beam heading, while CT1AOZ worked KE5CTY at 2050 and G4OBK contacted 9Y4W at 2052. Beam heading is not mentioned in those reports and they could have been due to multihop Es, of which little was explicitly reported.

Contacts within North/Central America were reported on all days, mainly by Es. South American paths were open at some time every day except the stormy 15th; the reliability at the main time periods was little different from 2004. North America to Asia was in practical terms unworkable, while there were only occasional reports between South America and Asia - though reports of the low-power LU1FHH beacon, long path, from the vigilant JG2TKH at 1322 on the 11th and 1217 on the 12th suggested that opportunities may have been missed.

Among other reports worth noting were 5Z4DZ working ZK1JD at 2345 on the 7th and VK9NS at 2350 on the 7th, long path; VK2UBF with W0PV/4 at 0542 on the 8th and ZL6QH working CT7B over the US at 2218 on the 28th. However irritating contests are to many operators, they at least stimulate contacts that many might have thought improbable during the lower years of the cycle - and with the solar flux below 100 for much of the month there could be little doubt that this was where we now were.

(Worldwide 28MHz graphs on following page)

28 MHz Worldwide - May 2005



Time bands: M=Morning, N=Noon, A=Afternoon, E=Evening - used for the "To" continent