THE SIX AND TEN REPORT

May 2004

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Analysis of 28 MHz reports from the UK

28 MHz reports and logs for May 2004 from G2AHU, G3IMW, G3USF, G4TMV, G4UPS, G0AEV, G0IHF and packet cluster reports. Compilation and commentary by G0AEV.

10m Sporadic E for UK stations in May 2004 appears, from counts of beacons, to have been better than usual for this time of the year. The average number of different beacons heard each day (in May) by sporadic E was 7.6, the maximum was 19 on the 29th and the minimum was 1 (which means that at least some sporadic E was reported on every day). Es was particularly good in the middle part of the month and again at the end of the month – the pattern of openings being identical to that described for 6m Es (see section 2 of this Report).

Sporadic E may have been the dominant propagation mode for UK 10m stations in May but there was F2 too. F2 was almost completely restricted to African and South American cicuits, and on those to the Middle East at the start of the month – although one reporter believes he heard ZL6B – presumably by long path – for the best DX.

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

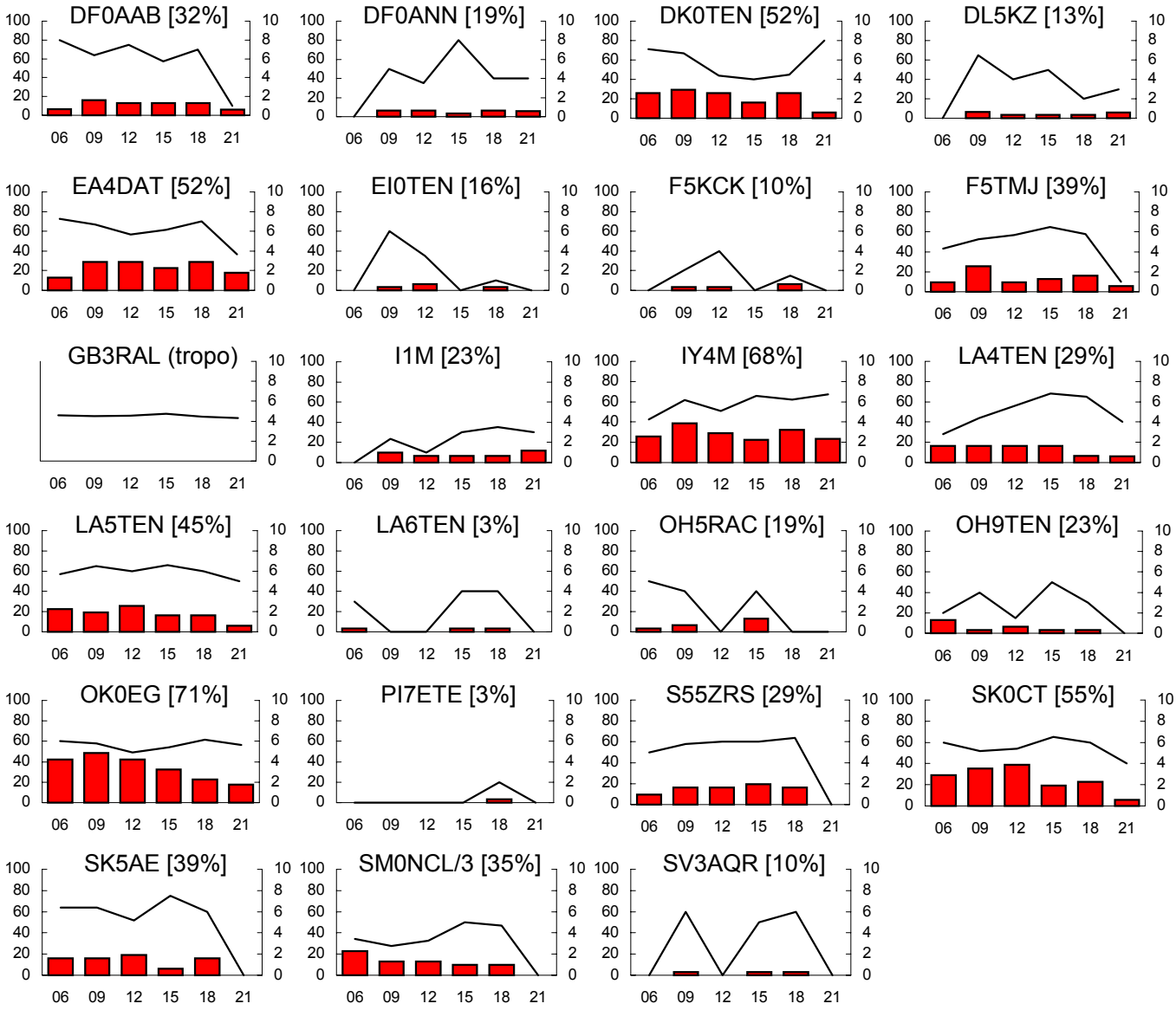
Propagation modes for European beacons.

Sporadic E was the propagation mode responsible for all the results from the beacons shown in the graphs on the following page (except for GB3RAL – heard via “tropo” at G0AEV). The stronger beacons exhibited daily reliabilities of greater than 50% - in other words they were reported on more than half of days in May. OK0EG was reported on 70% of days and had 3-hour reliability of around 50% in the 09z period – results that would not be out of place at mid-summer.

Almost all of the propagation was normal single-hop direct-path, but some Es backscatter was also present. Backscatter is included in the Es category for both graphs and area counts (as tabulated in Section 3). Ideally, I would prefer to deal with backscatter separately if it were not for the difficulty in discriminating between scatter signals and weak direct path signals in the absence of beam direction data. In some cases backscatter can be accurately inferred, for example when weak signals are detected from a higher-powered beacon that are too close for direct path propagation except under very short skip conditions. Short skip can usually be distinguished from backscatter by the very strong direct signals and from the rapid fading of these signals when path MUF boundaries are crossed. The prime candidate for Es backscatter is EI0TEN. This beacon is particularly useful as it provides a consistent 10m signal from a location west of Britain. Backscatter from EI0TEN indicates that there is E-layer ionisation over the eastern Atlantic, and is, I have found, a helpful indicator of possible transatlantic multihop Es openings. In the graphs, the results from EI0TEN and F5KCK are mainly backscatter with direct path short skip recorded on a couple of days. PI7ETE may have been short-skip despite the low signal strength.

There was a complete, but entirely expected, absence of F2 propagation (direct or scatter) within Europe. During the winter propagation from SV3AQR is by F2 but now this beacon can only be heard by sporadic E – presumably most frequently by a long single hop, although two shorter hops are also possible.

European Beacon Graphs.



European Beacon Notes.

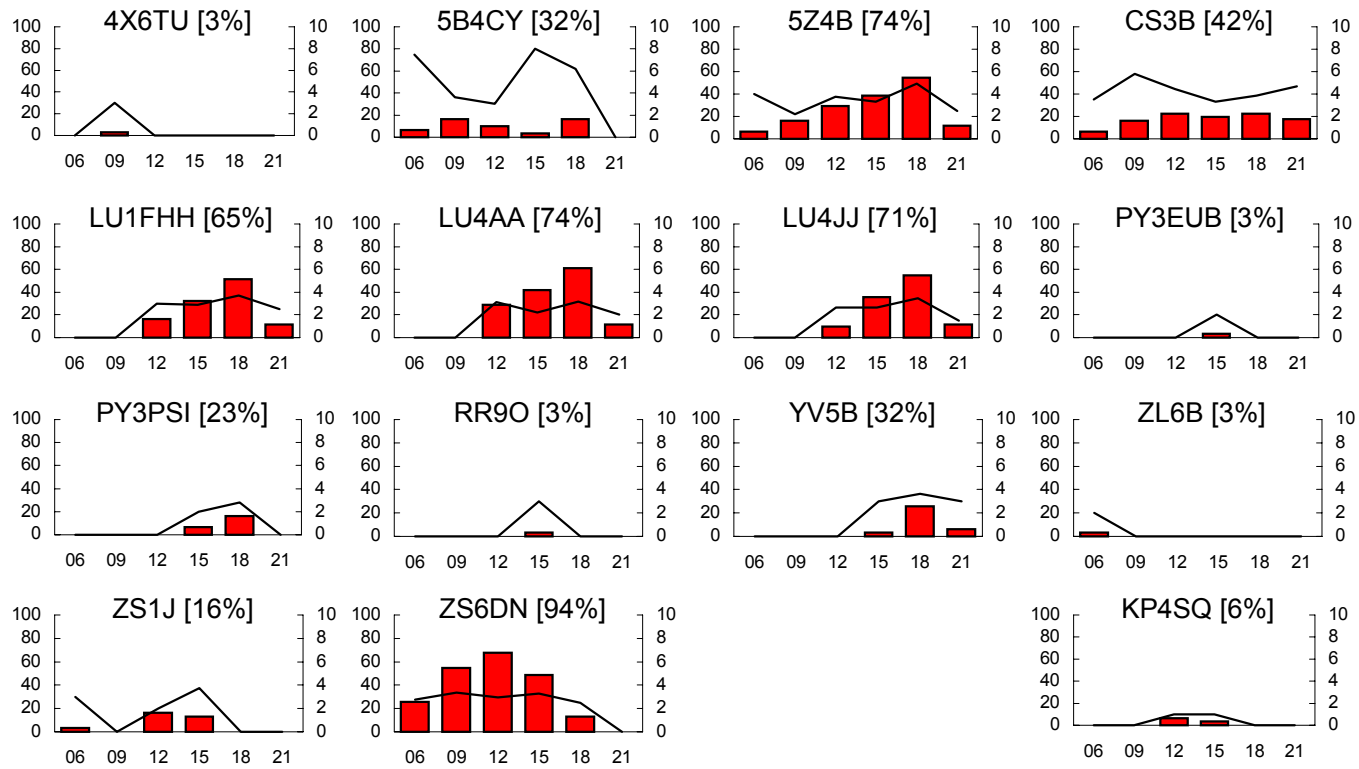
DL0IGI is, unfortunately, and for the moment, QRT. However, Germany is well served by other beacons - the four reported above plus DA5MBB, which I heard for the first time (on 28.702) in June. DA5MBB is an interesting beacon as it transmits SSB, CW and data in succession. Its messages are quite long and with the mode changes it may take some time to copy the callsign. It is also way outside of the normal beacon band and may be intermittent, so hearing this one is a bit of a challenge!

The new Spanish beacon EA4DAT is well placed to provide good results. It has been very consistent in June, on some days being audible almost continuously. The QRP/QRS Italian beacon IK1ZYW (28.322 MHz) has not been reported in the UK despite good propagation recorded by I1M and IY4M. Another new beacon from Italy was heard in June – IZ2DAY on 28.239 – but this also appears, on the evidence from the other Italian beacons, to be an intermittent operation.

LA6TEN was heard a few times in May. I've not heard this one in June, although OH9TEN has been. OH5RAC (28.2335.5) made its UK debut this month, joining the impressive array of other 10m beacons in Scandinavia. The only missing beacon from this area is the IARU/NCDXF beacon OH2B, which still has not gone back on the air.

Propagation to the Rest of the World

Beacon Graphs.



Suggested propagation modes.

5B4CY was heard by a mixture of F2 (mainly in the first week of the month) and double-hop sporadic E (mainly in the last week of the month) – the beacon was not heard between 10th and 21st. The single report of 4X6TU was on the 1st and was via F2. CS3B is a little difficult to characterise but is probably mostly sporadic E, especially later in the month. F2 is also possible. The reception of RR9O on 30th May is a rare example of a report of multi-hop Es to the East – rare because of a lack of beacons in the area of interest rather than any deficiency in propagation! KP4SQ – the only beacon heard from North America – may have been F2 or multi-hop Es. All the other beacons above were heard by normal F-layer propagation. Paths to southern African and southern South America continued to do well although reliabilities have dropped from last month and will drop further by mid-summer. The one report of ZL6B, if genuine, is presumed to have been by morning long path.

Beacon Notes.

4X6TU appears to have a problem – it should show results similar to those for 5B4CY. The PY beacons are probably intermittent but the 3 LU beacons LU4AA, LU21FHH and LU4JJ are continuous

10m DX in May 2004

The following list of DX countries worked or heard in the UK comes mainly from packet cluster spots (DX Summit: http://oh2aq.kolumbus.com/dxs/) and from Six and Ten reporters. The Middle East and North African Dx worked in the latter half of the month were via Es. The reports of W stations are more likely to be Es than F2 – although the dates don't match those for 6m transatlantic Es.

DX in May: 3B9, 4X, 7Q, A4, A6, CX, D4, EA8, FM, JY, KP2, KP4, LU, PY, TJ, TT, V5, VK(6), W1 (27th), W3 (21st), W4 (11th), YV, ZD9, ZS.

Analysis of 50 MHz reports from the UK

UK 50 MHz reports for May 2004 from G2ADR, G2AHU, G3HBR, G3IMW, G3USF, G4UPS and via packet cluster spots. Compilation and commentary by G0AEV.

Sporadic E made its expected significant impact this month. After many months of poor or absent propagation it makes a nice change to be able to report lots of activity. Opinions varied as to how good the start to the 2004 summer Es season really was. Later in this section is an analysis of the results from May 2004 compared with results from May in previous years from which I conclude this year has – so far – been one of the best.

Eric G2ADR writes, "Yes – not bad this month. However, having graduated at Dotheboy's Hall, I am now asking for double-hop, Es + extensions, and a dash of auroral E." Well – Eric managed at least one report of double hop with his report of 5B4 on 29th, so one of his wishes was answered. There were three reports of African DX by G stations this month (see later in this section), suggesting that Eric's second ambition was a possible, although difficult, proposition. But auroral E was not on offer – in fact there were no reports of any 6m aurora or auroral activity from UK stations on 6m in May 2004.

G3HBR reported that had "at last, something to report on six". However Brian though that "it really has been the worst Sporadic E season since I've been active on six, but at least there were a few interesting days in May … not much so far in June.

Sporadic E

The data in this section are derived from the compilation of just under 2000 sporadic E QSOs (and listener reports) to/from Britain – that's ten times the number for April. The only day without any sporadic E recorded at all was 22nd, but there were a number of other days when openings were fleeting and restricted to only one or two areas. As G3HBR says, "a good few of the openings were very short and localised - e.g. on the 12th stations were calling me as if I was the only G station on the band. At other times I could hear stations calling and working folk I couldn't hear. On one occasion a G about 400 yards from me and much lower down the hill, running just a dipole, was giving S9 to an OH who was inaudible with me and he had quite a long QSO with him. That's sporadic E!"

On the other hand, the average daily count of country areas heard/worked via Es for the whole month was 10.8 (cf. 1.7 in April). 20 or more countries were reported on 10th, 15th, 16th, and 30th with a maximum of 33 country/areas heard/worked on 29th - clearly the best day for Es in May. Ted G4UPS agrees that the "best day so far was on 29 May with an opening from 0743 to 2030 utc, mostly to the North. On the 9th there was a reasonably good opening to VE1, VO1 and W1 – which is quite early in the season for transatlantic multihop Es.

Sporadic E results below are in tables grouped by country area and 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.

	CN Morocco (52%)																			Portugal (39%)																		
D	7	11	12	13	14	15	16	17	23	24	25	26	27	28	29	30				7	10	11	12	15	16	17	18	26	27	29	30								
03																											7												
06												5			0																								
09			2	7							0			5	7	3														9								
12	9	5	6		9							0			0	0				9	5		7	9					5	0								
15		9					9		9		5	7		2		9					6	9		9	9	1		9	9		9							
18		5	7			7		5	5	5	9	0	5									9							9									
21					5						7	7																											

	CT3 (10%)	CU Azores (16%)	DL Germany (45%)	EA9 (10%)
D	11 15 23	15 23 25 29 30	1 6 10 11 12 13 15 16 17 18 25 29 30 31	23 25 30
03			9	
06			9 0 9 2	
09		9	9 5 3 9 0 9	0
12	0	5 3	7 6 0 6 9 9 9	
15	5 9	2 5 2	9 6 0 0 9 9 3 9 9	
18	9		9 7 9 9	9 9
21				

	EA Spain (48%)	EI (6%)	ES Estonia (23%)
D	7 10 11 12 14 15 16 20 21 23 25 26 27 29 30	10 29	8 11 15 17 23 29 30
06	9 9		7
09	0 9 9 6	2	9 9
12	9 9 9 9 0 9 5 6 9 6	0	9 9 9
15	9 9 0 9 9 9 7 9 9	9	0 0 9
18	9 9 9 9	3	9 9 8 7
21	9		

	F France (42%)	G-GM (16%)	HB Switzerland (29%)
D	6 10 11 12 15 16 17 18 21 23 27 29 30	6 10 17 29 30	6 15 16 17 18 26 27 29 30
03			9
06	9 9		9 9
09	9 9 9 9 9	9 7	0 0 9 9 9
12	9 9 0 9 9 7 6 9	9 9 9 9	9 9 6 9
15	0 9 9 9	9	7 0 9
18	0 0 9 9	9	7 5 0
21			

	HA Hungary RX (16%)	I/IS/IT Italy (71%)
D	15 25 26 28 29	1 2 3 5 6 9 10 11 12 14 15 16 17 18 20 21 25 26 27 28 29 30
03		9 9
06		0 7 9 9 7 5 9 9 9 0
09	5 9	9 9 3 9 9 9 9 9 5 9 9 9 9 9 0
12		9 0 9 9 5 3 9 9 9 9 0
15	9 9 9 9	9 9 9 5 5 9 7 5 5 0 9 9 9 9
18	9 0	5 9 9 9 9 9 9 9
21		1 9 9

	JW (6%)	LA Norway (29%)	LY Lithuania (26%)	LZ Bulgaria (29%)
D	29 31	6 8 12 15 16 17 29 30 31	8 11 14 15 16 17 23 29	10 11 12 13 15 16 25 26 27
03			9	9
06		0 7	9	0 0 0
09	7	9 0	5 9	9 0 9
12		9 9 9 9	9 9 9	0
15		9 9 9	0 9 9 9 7	5 5 9 0
18	9	9 9	9 5	5 5 6 0
21	9 7	9 6	0	5

	OD (10%)	OE Austria (39%)	OH Finland (36%)
D	10 26 28	2 6 12 13 15 16 17 18 25 27 29 31	6 8 10 11 15 16 17 23 28 29 30
06		9 9	
09	6	5 9 4 9 5	2 0 9 9
12	8 2	1 9 4 6 9	9 9 8 9
15		7 9	5 9 9 9 9 9
18		9	9 9 9 9
21			9 9

	OK/OM Czech and Slovak Republics (48%)																ON (6%)		OX (10%)			OY Faeroe Is (13%)				
D	1	6	10	11	12	15	16	17	19	21	25	26	27	28	29		29	30	9	29	30	10	16	29	30	
00																					5					
06																										
09	9					9		9							9	5							9	2		
12		9	5				1	7								0		0					9	5	9	
15		0	5	7	0				6	0	0	9	9									0	3			
18						7				9	7				9		9		5					9		
21																				5						

	OZ Denmark (23%)							PA (13%)				SM Sweden (32%)											SV Greece (19%)					
D	6	15	16	17	23	29	30	10	17	29	30	6	8	11	15	16	17	23	29	30	31		7	10	12	14	26	27
06		5													9	3				0	9						9	
09		9		9		6	9		5								9		9	7				2		3		
12	9		9	9	9		9	9	0		9	9	0	9		0	0	9	9	0				1			0	
15						9									3	9	9		9	0			7		3		0	5
18						9	9			9				9	6				9	7				4		6		9
21																												

	SP Poland (61%)																					TA (3%)	TF Iceland (16%)					
D	1	5	6	8	10	11	12	15	16	17	18	21	23	25	26	27	28	29	30			26	10	13	16	18	29	
03								9																				
06	9							9											9							9		
09	9		9	9	5			9		9	9		9					6	9									
12			9	9	7		5		9	9	6							9						8				
15		9	9		9		0	5	7						9	8	7	9				9	9		5			
18				5	9	7	7	9		9		9		0				7	7					1	0		9	
21						8		9																				

	UR Ukraine (36%)											VE (6%)		VE8 (3%)	W (3%)	YL Latvia (26%)							
D	1	2	10	11	15	16	23	25	26	27	29	9	16	29	9	2	10	14	15	17	23	29	31
06	0	9			0														9				5
09		7	9				7				7						0				9		
12				9		0	7					9	3		9	9							
15				0		4		0	7	9		5			6					0		9	
18					5								7					0					
21														9									

	YU/9A/S5/T9/Z3 Ex-Yugoslavia (68%)																					ZA Albania (13%)			
D	1	2	3	4	6	8	10	11	12	13	14	15	16	17	18	25	26	27	28	29	30	25	26	27	30
06	9	9										9	7	0							9		7		
09	9	0	0	9			9			9		9	9		8				7				9		
12		9			9		9	9	7				9				5	9			0			9	
15					9		8	9	9				9				9	9		9			9	3	9
18						5	7		9			9			7	7	9			9				4	
21											9					9						0			

	YO Romania (32%)										4X (6%)		5B Cyprus (13%)				9H Malta (36%)											
D	10	11	12	15	16	18	26	27	28	29	12	16	10	26	28	29	1	2	3	8	10	14	16	21	27	29	30	
06				9	0							5															9	
09	0			0		5			5	0				7	7	7			9			7				0		
12	7						0						0					9		0			6					
15		9	9					9			7						9			9								
18	9	9					0												9		9		9				0	
21																												

Sporadic E backscatter

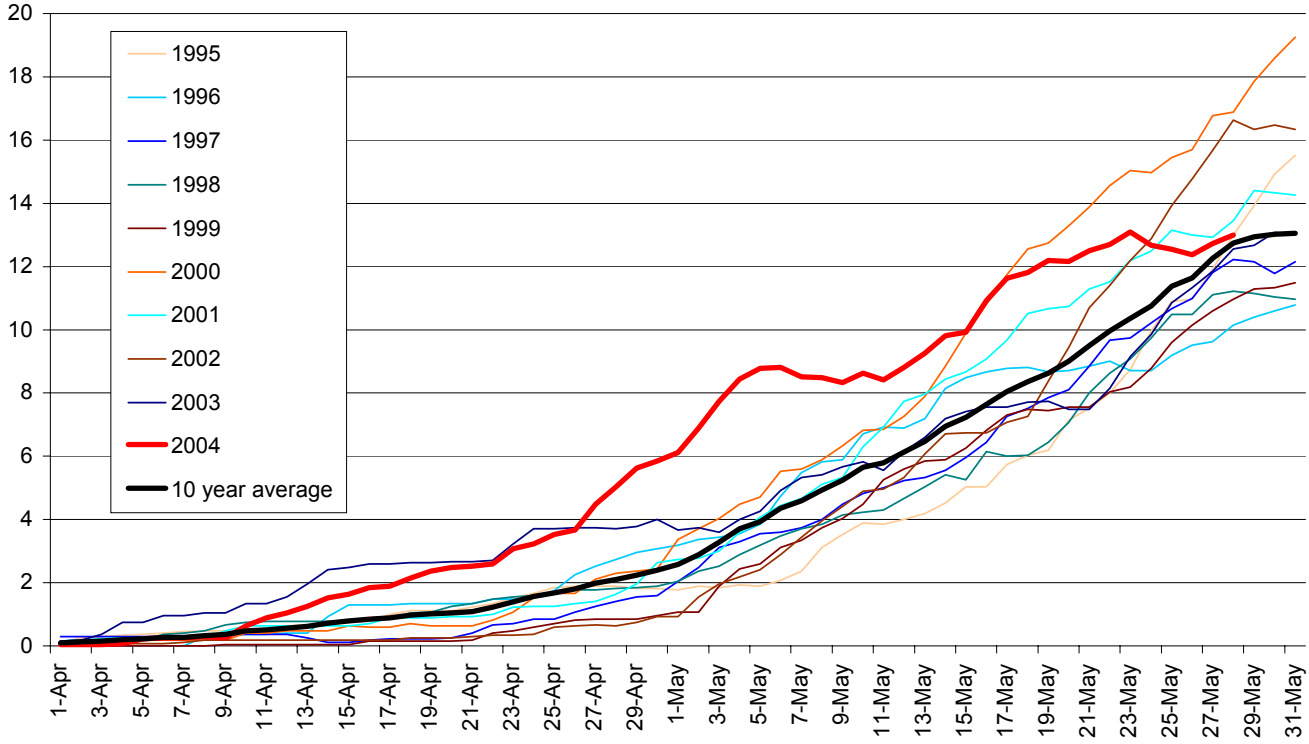
The presence of backscatter signals is another indicator of good conditions. Sporadic E backscatter was reported on 4 days, the best period being the day with the most Es areas reported – the 29th.

9th	1344	G0PQO (IO92) > ON4IQ (JO20) b/s
11th	1635	G3IMW > DL3GA 519 QTF 160
	1732	G0TSM > DK1EJA scatter QTF 200
29th	0951	GW3MFY > DK3EE 53/5 B/S
	1146	G4FUF > DK3EEloud dl/pa scatter QTF 220
	1152	G0TSM > G4DEZ 5/5 backscatter QTF 200
	1311	G8IZY > ON4IQ (JO20) backscatter
	1737	F8DBF (IN78) > G3WZT (IO90) 539 bs
30th	0742	ON7GB (JO21) > G7WAJ/P (JO01)

Start of the summer Sporadic E season

Just how good for sporadic E was May 2004 compared with previous years? The graph below shows 27-day moving averages of the daily country/area counts for April and May calculated from data in the *Six and Ten Report* from 1995 to date. The upper (red) thick line is the moving average data for 2004; the lower (black) thick line is the 10 year average, and the thin lines are traces for individual years. The graph shows that, based on our area counts, that there was "more" Es in early May than in the previous years. The best year for the latter half of the month was 2000.

50 MHz Es (27day moving averages) for the months of April and May



This analysis comes with some caveats. "Areas" counts are excellent for showing the distribution of Es activity over periods of several months but are not so good for comparing one year with another because the numbers of countries available is not the same year-on-year. Also over time different observers are involved, and in particular, we have relied more heavily on DX cluster spots in recent years. This in some part explains why the lines for the mid-1990s are generally lower than average. Despite these limitations the shape of each line is still a valid representation. The line for 2004 clearly shows a steep rise in Es activity in early May that is not seen in the lines for the other years.

DX (F2 and TEP) Propagation

As last month, we had three reports of DX from Southern Africa, and as was the case for the April openings, these occurred at the monthly peak of solar activity. The DX was reported on the 15th; solar flux and sunspot counts peaked on 16th. The 15th was also the best day for 10m F2 DX (as indicated from the results of 10m beacon monitoring). However, unlike the instances reported last month, the DX event on 15th May was contemporaneous with widespread sporadic E, including good openings to the south of the UK (for example to CT, EA and I). There is, therefore, little difficulty in categorising the 15th May paths to southern Africa as sporadic E linking to F2.

15th 1706 G0JHC > Z22JE 52
1707 G0JHC > 7Q7/B 419/519
1735 G8BCG > 7Q7SIX 599

Propagation Summary.

The tables below display total counts of country/areas heard/worked, a summary of the detailed tables in the previous sections. Table cells are highlighted (in yellow) when 10 or more country/areas were reported in any 3 hour period.

The first table shows that Sporadic E was concentrated in two periods – mid month (10th-17th) and again at the end of the month (26th-30th) – a roughly 2 week "periodicity" of better and poorer conditions. The second table (DX) has a single entry on the 15th, falling within the period of the first concentration of Es activity.

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
00																														1	
03															2			4								2					
06	4	3	1					1						1	13	5	3	3								5			7	8	3
09	5	2	3	1		2		1	1	7		3	5	3	14	4	11	5			1		6		1	4	3	9	20	13	2
12		4	1		1	12	3	5	2	16	5	8		2	7	14	11	1		1			7			8	7	1	17	10	
15	2				1	7	1		2	15	12	11			11	14	9		1	1	2		4		7	12	12	2	15	8	
18	1							3	1	6	8	7	1	3	13	2	3	2			6		2	1	7	7	6		19	8	
21											3	1		3	2										5	1			5		2

DX (F2/TEP +/- 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																															
09																															
12																															
15															2																
18																															
21																															

Aurora

For the first month in many years there were no auroras reported at 50 MHz. MM0AMW did spot Norwegian TV video on 48.256 MHz via aurora on 29th at 2224z, but this event did not translate to 50MHz

Tropospheric propagation

The following are reports where the propagation was indicated (or implied) as being “tropo”. None of these are long distance (> 500 km) – it usually takes a contest for these to surface! I have excluded from the spots listed below a GM to I JT6M contact described as “tropo”.

1st	09z	1048	G4OBK (IO94) >GW0GEI (IO73) 58 tropo
		1104	G7RAU (IO90) > DL8PM 559 tropo
12th	15z	1700	DG9YIH > G1YLE (JO02) tropo 53 421km
13th	09z	1016	G7RAU (IO90) > ON0SIX/B (JO20) 529 tropo
18th	18z	2055	G0CHE > F4THE JT6M QSO via tropo
23rd	12z	1311	EI7BMB > GW0OEV/P; GI6ATZ tropo
29th	09z	1112	G4UPS > GB3BUX 569

Meteor Scatter

Only a single “traditional mode” meteor scatter report this time. However, I am pleased to find that G0CHE has been including the (probable) propagation mechanism in his JT6M (and FSK441) spots - these include sporadic E and tropo as well as meteor scatter – so I am able to separate out include the JT6M MS spots in the listing below. The problem with most digital mode spots is the near impossibility of identifying from the spot alone what the propagation mode might be, especially during the sporadic E season.

7	0808	G0CHE	> OE5MPL JT6M QSO via MS
8	0942	G0CHE	> 9A8A JT6M QSO via MS
8	1335	G0CHE	> G4FUF heard JT6M via MS
8	1433	G0CHE	> MM0KSS JT6M QSO via MS
9	0915	G0CHE	> IW4DQY JT6M QSO via MS
9	0945	G0CHE	IW4DQY FSK441c QSO via MS
9	1034	G0CHE	I5MXX JT6M QSO via MS
15	1253	F5TND	GB3LER/B burst 448 (*not JT6M!)*
22	0751	G0CHE	IW5DHN JT6M QSO via MS
23	0821	G0CHE	MM5DWW JT6M QSO via MS

Solar and Geomagnetic Data for May 2004

Data supplied by G0CAS (Sun Mag[1]) and from Internet sources. Compilation by G0AEV.

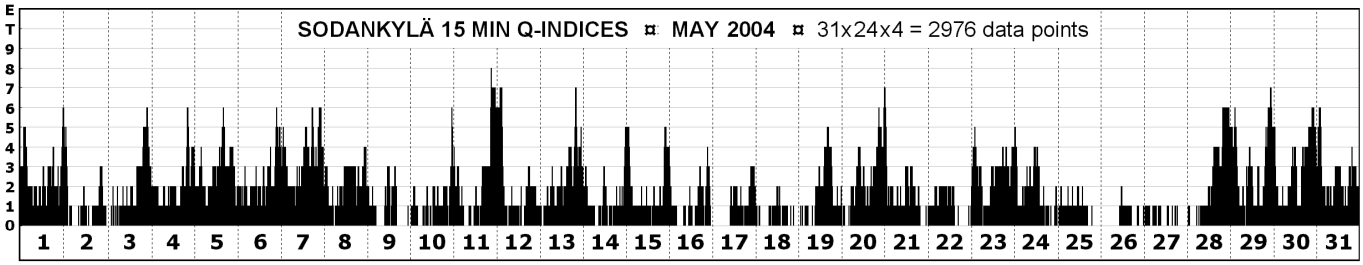
Sunspot numbers (SEC)	Mean 77.3	Max 148 (16th)	Min 30 (6th)
Solar Flux (28 MHz)	Mean 99.7	Max 118 (16th)	Min 85 (7th)

Solar data for May 2004 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 from Chilton in Oxfordshire were not available for May 2004 – but will be available again next month. SIDC spots are from SIDC, and other solar data from the joint USAF/NOAA daily summaries or directly from SEC.

Energetic Events

There were no M- or X-class x-ray events in May – the first month without such events since the climb out from the last solar minimum. The average background x-ray flux this month was only B2.5 units – however there's still a way to go before solar minimum when background X-ray flux will "bottom-out" at A1.0 units, i.e. more than an order of magnitude lower than the mean for May 2004.

Q-indices from Sodankylä, Finland (Thanks Vaïno, OH2LX)

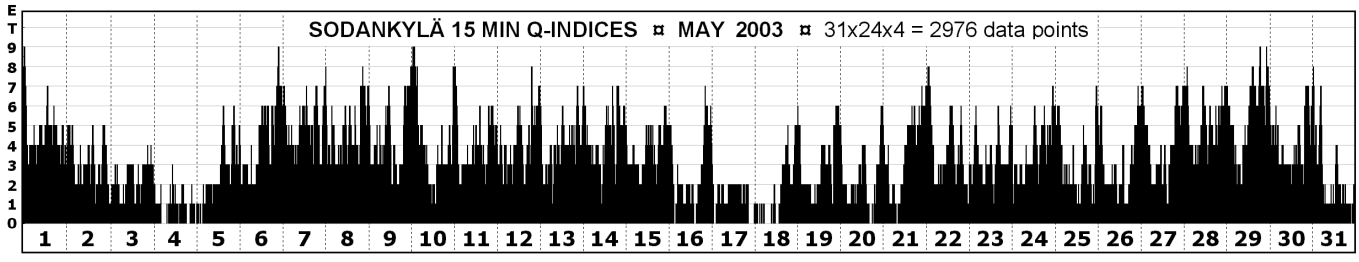


Finnish observatories in May 2004:

Monthly averages
Sodankylä: monthly Ak average = 15.6
Nurmijärvi: monthly Ak average = 9.4

Most disturbed day:
Sodankylä: 7 May, Ak = 35
Nurmijärvi: 29 May, Ak = 16

May 2004 was rather quiet magnetically, as the data above illustrates. One year ago in May 2003 conditions were very disturbed: Sodankyla monthly Ak average then was 45.3 and reached 129 on the most disturbed day, and the UK and planetary K indices were 5 or higher on 22 days (compared with 2 days this year). The Q-index graph for May 2003 is shown below.



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

K-indices.

There were just 2 disturbed days in May (12th and 20th) when one or more of the UK K indices or the planetary Kp index was 5, and none when the index was greater than 5. 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.

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	3	3	2	2	2	2	3	3	2	1	3	3	2	2	4	2	2	1	1	2	3	2	3	3	2	1	1	2	3	3	4
03	3	1	1	3	3	2	4	3	3	2	3	4	3	3	2	2	1	1	2	2	3	3	3	2	1	1	1	0	3	2	2
06	3	0	2	3	3	3	4	2	2	2	1	2	4	1	2	1	0	1	1	3	3	4	2	4	3	2	3	1	3	1	3
09	3	2	2	2	3	2	2	2	1	1	1	2	3	1	2	1	1	2	1	5	2	3	3	3	3	1	2	2	4	4	3
12	3	2	2	3	3	2	3	3	2	2	2	2	3	3	2	2	2	2	3	2	3	3	3	3	3	3	2	3	3	3	3
15	3	2	2	2	3	2	4	3	3	2	2	2	3	2	2	1	3	1	2	2	3	2	2	2	2	3	2	3	3	3	3
18	3	2	2	2	3	3	3	3	2	3	3	3	3	2	2	1	2	1	2	3	2	2	3	2	2	2	2	3	2	3	3
21	3	2	2	3	3	2	2	2	1	3	4	2	3	2	2	2	2	1	2	3	2	2	3	2	2	2	1	3	3	4	2
Σ	24	14	15	20	23	18	25	21	16	16	19	20	24	16	18	12	13	10	14	22	21	21	22	21	18	15	14	17	24	23	23

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	3	3	1	1	2	1	2	2	1	1	3	4	0	2	3	2	1	1	0	1	3	1	2	3	1	0	1	1	3	2	4
03	2	0	1	2	3	1	3	2	1	2	3	4	2	2	2	1	1	0	1	1	2	2	2	2	1	0	0	0	3	1	2
06	1	0	1	1	2	1	2	1	0	0	0	1	3	0	1	1	0	1	0	2	1	2	1	3	1	0	1	0	2	1	2
09	1	2	1	0	2	1	2	1	1	0	1	0	1	0	1	1	1	0	1	3	1	1	1	2	0	0	0	0	3	2	2
12	2	1	1	1	2	2	2	2	2	1	1	1	2	1	1	1	1	1	4	1	1	1	3	3	2	1	1	2	2	3	2
15	2	1	2	1	4	2	3	2	1	1	2	1	2	1	0	0	1	1	3	2	2	1	2	2	1	1	1	2	3	2	2
18	2	2	2	2	3	3	4	2	1	2	3	2	3	2	0	1	1	0	2	2	1	1	2	1	1	0	1	3	2	3	3
21	2	2	2	3	3	2	3	2	0	2	4	1	2	1	2	1	2	0	2	3	0	1	2	0	0	1	0	2	4	3	1
Σ	15	11	11	11	21	13	21	14	7	9	17	14	15	9	10	8	8	4	13	15	11	10	15	16	7	3	5	10	22	17	18

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	3	1	2	2	1	2	2	2	2	3	4	1	1	3	2	1	1	1	1	3	1	3	3	1	0	1	1	3	2	4
03	1	0	1	2	3	2	3	2	2	2	3	4	2	2	2	1	1	0	1	2	2	2	2	2	1	0	1	0	4	1	2
06	2	0	1	1	2	1	2	1	0	0	1	1	3	0	1	1	0	1	1	2	1	3	1	3	1	0	1	0	2	1	2
09	1	3	2	1	2	2	2	2	1	0	1	1	1	0	1	0	1	1	2	3	1	2	2	2	1	0	0	0	3	3	2
12	3	2	1	1	3	2	2	3	2	2	1	1	2	2	2	1	1	2	4	2	2	2	3	3	2	1	0	2	2	3	3
15	2	2	2	2	4	2	3	3	2	1	2	2	2	2	1	0	2	2	4	3	3	1	3	2	2	2	1	3	4	3	2
18	2	2	2	3	3	3	4	2	1	2	3	2	4	2	1	1	1	1	3	3	1	1	3	2	1	1	2	3	2	3	3
21	2	1	3	3	3	3	3	2	1	2	4	1	3	2	2	2	2	0	2	3	0	1	2	1	0	1	1	3	4	3	2
Σ	14	12	10	12	19	13	18	15	10	9	14	15	15	9	11	6	7	8	16	16	13	12	17	17	9	4	6	9	20	16	18

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	4	4	1	2	2	2	2	2	2	2	4	4	1	1	3	2	1	1	1	1	4	1	3	4	2	1	1	1	4	1	4
03	2	1	1	2	3	2	3	3	2	2	3	5	2	2	2	2	1	1	1	2	2	3	3	2	1	0	1	1	4	2	2
06	2	0	1	2	3	2	3	1	0	0	1	1	4	0	1	1	0	1	1	3	1	3	1	3	1	0	1	0	2	1	2
09	1	3	1	1	2	1	2	1	0	1	1	1	1	0	1	0	1	1	1	4	1	2	2	2	1	0	0	0	3	2	2
12	2	1	1	1	2	2	3	3	2	1	1	1	1	1	1	1	1	2	4	2	1	1	3	3	1	1	0	2	2	3	3
15	2	1	2	1	4	2	3	3	1	2	2	2	2	2	1	1	1	2	4	3	3	1	2	2	1	2	1	3	3	3	2
18	3	2	3	3	3	3	4	2	0	2	3	2	4	3	1	1	2	1	3	3	1	1	3	2	1	1	1	2	3	3	3
21	3	1	3	3	3	3	3	2	1	3	4	1	3	2	2	2	3	0	2	3	0	1	2	1	0	1	1	3	4	3	2
Σ	19	13	13	15	22	17	23	17	8	13	19	17	18	11	12	10	10	9	17	21	13	13	19	19	8	6	6	12	25	18	20

May	28 Areas		-- 50 Areas --				2800	- Spots -		Max			X-ray	Max foF2		Min foF2		-- Particle Fluences --		
2004	Es	F	Es	DX	A	AE	Flux	SEC	SIDC	Kp	Ap	Aa	b.gnd	MHz	Hour	MHz	Hour	2MEV Elec	1MEV Prot	10MEV Prot
01-May	2	4	7	0	0	0	94	65	44	3	13	22	A9.1	n.a.	n.a.	n.a.	n.a.	8.3E+05	1.8E+05	1.3E+04
02-May	4	3	6	0	0	0	98	41	28	3	6	13	B2.4	n.a.	n.a.	n.a.	n.a.	1.4E+06	1.6E+05	1.3E+04
03-May	7	6	3	0	0	0	91	50	32	2	7	15	B1.0	n.a.	n.a.	n.a.	n.a.	2.5E+06	1.7E+05	1.3E+04
04-May	4	8	1	0	0	0	87	63	33	3	10	18	A6.0	n.a.	n.a.	n.a.	n.a.	2.0E+06	2.1E+05	1.3E+04
05-May	2	0	2	0	0	0	89	47	29	3	13	29	A7.5	n.a.	n.a.	n.a.	n.a.	5.4E+06	2.9E+05	1.3E+04
06-May	12	2	13	0	0	0	86	30	20	3	8	17	A8.5	n.a.	n.a.	n.a.	n.a.	6.6E+06	1.8E+05	1.4E+04
07-May	3	6	4	0	0	0	85	34	16	4	17	30	A6.1	n.a.	n.a.	n.a.	n.a.	5.2E+07	4.0E+05	1.3E+04
08-May	3	3	8	0	0	0	87	37	17	3	10	19	A6.6	n.a.	n.a.	n.a.	n.a.	1.6E+08	3.5E+05	1.3E+04
09-May	2	5	4	0	0	0	93	57	24	3	6	10	B1.0	n.a.	n.a.	n.a.	n.a.	1.9E+08	2.4E+05	1.4E+04
10-May	15	6	22	0	0	0	93	55	29	3	7	11	A7.3	n.a.	n.a.	n.a.	n.a.	2.4E+08	2.2E+05	1.4E+04
11-May	10	6	15	0	0	0	90	46	25	4	10	21	A6.0	n.a.	n.a.	n.a.	n.a.	3.4E+07	2.4E+05	1.3E+04
12-May	11	5	16	0	0	0	99	83	40	4	11	22	A7.6	n.a.	n.a.	n.a.	n.a.	2.3E+06	1.7E+05	1.4E+04
13-May	1	3	6	0	0	0	101	107	37	4	13	24	B1.4	n.a.	n.a.	n.a.	n.a.	3.3E+06	2.5E+05	1.3E+04
14-May	4	4	8	0	0	0	110	98	54	3	8	10	B1.6	n.a.	n.a.	n.a.	n.a.	4.1E+06	1.7E+05	1.3E+04
15-May	19	5	25	2	0	0	115	117	58	4	9	11	B2.1	n.a.	n.a.	n.a.	n.a.	1.3E+06	1.2E+05	1.4E+04
16-May	10	5	24	0	0	0	118	148	73	2	4	8	B1.9	n.a.	n.a.	n.a.	n.a.	1.2E+06	1.1E+05	1.4E+04
17-May	11	6	19	0	0	0	111	147	69	3	5	8	B2.3	n.a.	n.a.	n.a.	n.a.	1.2E+06	1.2E+05	1.4E+04
18-May	8	2	10	0	0	0	108	91	60	2	4	7	B1.9	n.a.	n.a.	n.a.	n.a.	1.8E+06	1.3E+05	1.4E+04
19-May	1	6	1	0	0	0	109	87	58	3	6	19	B1.7	n.a.	n.a.	n.a.	n.a.	2.2E+06	1.3E+05	1.4E+04
20-May	2	2	2	0	0	0	105	109	59	5	13	25	B2.1	n.a.	n.a.	n.a.	n.a.	1.1E+06	2.0E+05	1.3E+04
21-May	8	6	6	0	0	0	107	82	52	3	10	14	B2.0	n.a.	n.a.	n.a.	n.a.	1.4E+06	2.0E+05	1.3E+04
22-May	5	7	0	0	0	0	102	79	47	4	11	14	B2.0	n.a.	n.a.	n.a.	n.a.	3.3E+06	2.1E+05	1.4E+04
23-May	11	6	14	0	0	0	104	127	59	3	12	20	B2.3	n.a.	n.a.	n.a.	n.a.	3.4E+06	2.6E+05	1.3E+04
24-May	2	5	1	0	0	0	105	118	62	4	11	22	B2.3	n.a.	n.a.	n.a.	n.a.	8.9E+06	4.7E+05	1.3E+04
25-May	11	8	14	0	0	0	102	101	55	3	8	8	B1.5	n.a.	n.a.	n.a.	n.a.	1.2E+07	2.0E+05	1.3E+04
26-May	11	6	18	0	0	0	103	89	43	3	6	6	B1.8	n.a.	n.a.	n.a.	n.a.	1.7E+07	2.3E+05	1.4E+04
27-May	7	6	16	0	0	0	102	62	32	3	6	5	B1.7	n.a.	n.a.	n.a.	n.a.	1.9E+07	3.1E+05	1.3E+04
28-May	7	5	10	0	0	0	102	52	30	3	9	15	B2.5	n.a.	n.a.	n.a.	n.a.	1.2E+07	2.4E+05	1.3E+04
29-May	19	2	33	0	0	0	101	57	31	4	14	30	B2.1	n.a.	n.a.	n.a.	n.a.	3.1E+06	2.0E+05	1.3E+04
30-May	14	3	22	0	0	0	100	64	35	4	13	22	B1.9	n.a.	n.a.	n.a.	n.a.	5.9E+06	1.9E+05	1.2E+04
31-May	11	3	6	0	0	0	95	54	34	4	14	23	B1.8	n.a.	n.a.	n.a.	n.a.	1.5E+07	2.5E+05	1.4E+04
Sum	237	144	336	2	0	0														
Average	7.6	4.6	10.8	0.1	0.0	0.0	99.7	77.3	41.5	3.3	9.5	16.7	B1.5	n.a.	n.a.	n.a.	n.a.	2.6E+07	2.2E+05	1.3E+04
Maximum	19	8	33	2	0	0	118	148	73	5	17	30	B2.5	n.a.	n.a.	n.a.	n.a.	2.4E+08	4.7E+05	1.4E+04
Minimum	1	0	0	0	0	0	85	30	16	2	4	5	A6.0	n.a.	n.a.	n.a.	n.a.	8.3E+05	1.1E+05	1.2E+04

50 MHz Outside Britain

Compilation and Commentary by G3USF

Europe

Auroral-Related Propagation

For much of the month the Ap index was in single figures, with 14 the highest planetary value registered. As OH2LX indicates, (thanks also to OH5IY for logs), the highest figure at the high-latitude observatory at Sodankyla was 35 on the 7th. So the modest listings below are no surprise. Even in OH5 events were few and brief and not always observed - an indication not that OH5IY's equipment was deficient but that that events tended to be localised or not to reach the higher frequencies at which his monitoring takes place. Events on the 29th and 31st have been placed tentatively in this section but the propagation modes are uncertain for at least some of these reports.

May 4 0410 OH9SIX>SM3(57a)

May 11 2200-10 Au>OH5IY

May 12 0230-50 Au>OH5 0300-20 Au>OH5 1933 JW7SIX>LA(519) 2029 JW7SIX>LA(AE) 21-2200 GB3LER>LA(JP99 519) JW9SIX>JO49 559)

May 15 49746(UA)>SM0(559 AE)

May 28 1737 OZ6VHF>LA(559) 20-2100 OZ6VHF>OZ(559) JW7SIX>SM2(599) 2217 OH9SIX>SM2(57a KP15)

May 29 2231 48260(LA)>SM0(59 AE) 23-2400 OY6SMC>SM0(mode?) VE8BY>MM0AMW,EI7IX (mode?) OX3VHF>EI(mode?)

May 31 21-2200 JW9SIX,JW7SIX>SM5,SM6 (mode?) 2210-2300 FMbc (88-97MHz TF)>OH1(AE) 2200 FMbc (UR,HA,YO)>OH9(AE??)

144MHz is outside our normal brief. However, it is worth noting auroral contacts by IK2YXK and IK2GSO with HB0/HA5OJ on 144MHz on April 3. The apparent backscatter area was in southern Germany around 49 degrees North, at a time when the main scattering area was somewhere north of 52 degrees North. This is illustrated and discussed by DF5AI at http://www.df5ai.net.

Note: For an interesting set of frames/movie of a CME penetrating the Earth's magnetic field and sparking aurora, together with some fine photos of the southerly aurora of November 2003 it is well worth a look: http://science.nasa.gov/headlines/y2003/05dec_dixieland.htm

Other Modes

Continental propagation was overwhelmingly by sporadic-E, though extended tropo was reported from time to time and there was some early morning meteor scatter. The tabulation below indicates, with a three-hour resolution, the pattern of Es occurrence (or, rather, reported occurrence) across the continent as a whole. It does not, of course, suggest that Es was available at all locations at these times. There was a natural tendency for Es MUFs to rise earlier to the East. And what could be worked depended not only on ionization but on activity. OX and TF apart, single-hop Es contacts are not available from the western edge of the continent, while the absence of Russian activity clearly limits what is workable in an easterly direction - though this year a couple of apparent Russians were active. The many appearances of Ukrainian callsigns in the detailed listings gives some indication of the possibilities.

That although there were a couple of days when what appears to have been Es was reported before 0500 UTC, ionization was usually intense enough for 50MHz Es before 0600UTC. However, after 0600 Es occurred right through to 1800 almost every day. Thereafter it became more patchy. There was only one day when signals clearly attributable to Es are known to have occurred after midnight UTC.

In the early days of the month relatively little was heard of the far north of Europe. But subsequently the lengthening periods during which the E-layer was illuminated meant more was heard of them - though very little was heard of SM3 contacts and not much more of SM2s in the far North, though there are active stations in both areas.

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

The detailed listings below show a number of days when reports were prolific, while on others they were very thin - May 19-21 being cases in point. Flux levels on May 19-21 were rather above the monthly average, while (despite a high-latitude K6 on the 20th) the geomagnetic field was at worst unsettled-to-active. Indeed, 'the numbers' do not seem significantly different on days giving rise to many more reports. This is no surprise. Overall, the continental experience seems consistent with G0AEV's graphic demonstration that this was an above average May, in part because the season started earlier than usual - witness the appearance of 144MHz Es at what appears to have been the earliest reported date, May 2nd.

Es was in all probability involved in some of the month's more interesting contacts. These included openings to A4 on the 1st (UR,LZ and YO) and 28th (DL,OZ,LZ,SP and SV); to A6 on the 28th (IT9) and PA to A7 (noted by SV1DH but otherwise unreported) on the 12th. All appear to be attributable to multihop Es - 3xEs in the latter case. (A contact between A4 and JA on the 18th is credited to 4xEs, a relative rarity.)

Westward, Es provided contacts with North America: VO to DL, EI, F, G and ON on the 9th and G on the 29th. The opening on the 9th also extended to VE1 (EA, EI, F, G), which was also worked from G on the 16th. W1 was worked from CT, EA, F, G and ON on the 9th) W2 was worked on the 9th (F, G) and 14th(CT) and W3 on the 9th(F) and 14th (EA). Finally, W4<>EA contacts were reported on the 14th. Reception of the VE8BY beacon in EI and GM on the 29th may have been due to AE. In summary, there was trans-Atlantic reception by Es in northern Europe on 3 days - May 9, 16 and 29 and in the Iberian Peninsula on May 9 and 14. During the opening on the afternoon of the 9th there were no other reports of Es in Europe, though whether this was because there was no propagation or because all interest was focussed on VE/VO/W1 is not known.

Unsurprisingly, contacts between southern Africa and Europe showed a further decline, with propagation into the Mediterranean on 6 days (2003 15) and into 'northern' Europe on 4 days (2003, 8). In both areas propagation favoured the more northerly countries at the southern end over ZS, with the principal mode probably tep. Openings further north were likely to have been tep assisted by Es at the northern end - though Costas, SV1DH, notes the 8th as the end of the tep season at his location.

Europe<>Southern Africa

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

	'Mediterranean'	'North'
9J	4 days 1 9 14 22	2 days 8(DL,PA) 14(DL,OE,OM,SP)
Z2	2 days 2 9	1 days 15(DL,G)
7Q	2 days 2 8	3 days 4(DL) 8(ON,PA) 15(G,OK)
ZS	1 day 2	
D2	1 day 14	1 day 14(DL)

May does not favour paths to west Africa and there were only two reports, both of TR0A, into the Mediterranean on the 7th and OZ and SP on the 25th. The only other report of Africa (apart from CN, CT2, CT3, EA8 and SO1MA, all within single-hop Es range) was ST, which was reported from I9 and I0 on the 28th.

The ZD8 beacon was heard in the Mediterranean and Iberia on the 7th and the Mediterranean only on the 16th. Reception of PY1RO in Sardinia on the 15th was the only report received of Europe being reached from the mainland of South America.

In the compilations that follow the callsigns given in full are either 'dx' or beacons - the latter to demonstrate that the path was sufficiently open for low-power working.

May 1 07-0800 5B>SV8,4X 5B>I0 08-0900 5B>I0,SV5 I9>5B IK5ZUL>OZ LA>I5,I2 I1>LA G>I8 09-1000 IS0,I0>5B GM,GW>DL GM>I3,I4,I8,S5 F>LA G>SQ2,ON GW,GB3MCB>SP6 FX4SIX>OZ I5>I8 10-1100 GB3MCB>DL F>OZ GM>I5 I5>PA 5B>4X 11-1200 9A1CAL>EI GB3BAA>PA(t) 5B>I0,I8,9A SP3>SP2 I9>I2 12-1300 5B>I7,I0,OE6,I4,I5,I8.I2 13-1400 5B>I2,I1,I8,SP6(ms) 4X,SV5>I5 SV1>I4,HB,I1 SV8>I2,HB 14-1500 SV1,5B>I4 YU1>EA2,I8 5B>9A,I8,I1 SV1>HB,I5 YO2,YO5>I8 15-1600 I9>EA2 16-1700 CT>I9 I9>EA7,I3,I4 I0>I8 EH1>I3 4N>YT8 YT4>EA1,F F>I8,I0 EH5>DL,SP7 17-1800 YU1>EA1 HB,I9>EA5 IS0,HB,DL>EA7 CT>OE6 DL>EA4,EH5 EH2>S5 I4>I1 9J2HK>9H 18-1900 5B>I2 S5>OE1,EA5

May 2 0638 SP2>SP6 07-0800 YT4,YO7>OZ UU5SIX,UT5G>DL YT4>IS0,OH2 UR>SP6 08-0900 UR>YO5,DL UT5G>SP1,OZ YO4>OZ YO7>9A GB3MCB>I5 T9>DL UR>9A,SP6,SQ2,OZ,SP1 YO4>SP1,SQ2 YO3KWJ>OZ UU5SIX>SP6 YO9,LZ1>OZ T9>SM3,OH2,LA UT5G>DL,PA 9A>OM5 I9>PA 09-1000 YO7,YU1>LA I9>DL UR>ON,DL,I8 HV0A>OH2 LY,YL3>I5 ES5>I8 T9>SP2 LZ5,YU7>LA LY>I2,I8 LZ2>OZ OH0>9A OH3>I5 YT4>ON 10-1100 YT4>OM5 S55ZRS>EA7I3>9A 13-1400 YT4>S5,PA,ON ZS6TWB>SV1 14-1500 3Ctv,5Ztv>SV1 I9>PA F>I9 16-1700 Z22JE>IK8DYD,9A5ST, EA6VQ, IT9IPQ, I8LPR,SV1VS CT0WW>I9 IK5ZUL,I0JX(t)>I9 I1>I5 4X>9H 7Q7SIX>EA6VQ 1831 JE2XBY>IW5DHN(eme)

Continental reports of Es at 144MHz. It is suggested this is the earliest date on which Es is known to have reached the 2-metre band. This event is charted and discussed at www.dk5ya.de/es-summary_04_may_02.htm, which can also be reached via www.df5ai.net. The 2-metre openings flagged here and below did not extend to the UK unless this is specifically mentioned.

May 3 07-0800 OH9SIX>SP6(ms) 08-0900 SV1SIX>I5 09-1000 G>S5,I8 9H1SIX>SP6 I9>OE6,SP9,9A,SQ6 10-1100 I9>S5,9A,OE6,DL,ON,I3 9H>9A,DL,F,PA CN>F 11-1200 9H>ON,PA I9,I0JX>F EH6>9A I8>F EH6>SQ9 SV1>I3,9A GB3BUX>I0 I0>PA 12-1300 G>I8 I0>ON,PA SV9,9H1SIX>OK1 PA>ON LX0SIX>DL(t) 9H,UI3>5B 1321 3Ctv,5Ztv>SV1 16-1700 G>LA UT5G>I0 17-1800 LZ2CC>I4 UR>9H,I9

May 4 0515 OH9SIX>SP6(ms) 08-0900 OK1,I5>ON 09-1000 SV1SIX>SP6 UT5G,UU5SIX>SM5 11-1200 OE5>EI,OZ YU1EO,UR>OH5 12-1300 SR9FHA,UR,OE3XLB>OH5 UT5G>LA 1309 OE5>DL 14-1500 G>I3 IK5ZUL>EI 15-1600 EA6,IS0>SV1 I8>PA,S5 SV3>EH3 I5>S5 16-1700 OM3>EA6 7Q7SIX>DL7QY SV1SIX>EA6 21-2200 GM>LA

May 5 05-0600 OH5RAC,OH5SIX>SP6 09-1000 LZ1>SM5 YU1>9A UU5SIX>OH5 1211 LZ3>OZ 13-1400 LY0SIX>I4,I5 G>F 14-1500 GB3LER>I4 9A1CAL>EI 15-1600 SR9FHA,OZ7IGY,DL,UT5G>EI EI,GM>SP2 9A>LA 1603 I3>EI

May 6 06-0700 OH9SIX,OH5RAC>SP6 0953ES1>EI 10-1100 OY6SMC,GB3LER>SP6 GB3MCB>OH6 11-1200 S5>SP6 GM,OY>I5 OZ>I2 12-1300 S5>OZ GM>I5 GB3LER>HB,I4,S5 EH6>HF2 G,GU>SP2 G>OZ 13-1400 GM>I4 G>OZ,OE5,LA DL,PA>I9 9H1SIX,S5,GB3MCB>DL IZ1EPM>LA OY>HB,I2,ON,I8 GB3LER>F PI7SIX>IS0 PA>I8 EH7>PA GM>S5,SM5 14-1500 G>OE5,9A,SP6 EH1>S5 F>SM5 LA>I1,EA7 FX4SIX>OZ SV1SIX>GM UR>ON G>SP6 15-1600 GM,GI>9A G,GI>DL LA,G>HB I9>PA,HB,S5 F>OZ,I0 9A1CAL,OE5>EI EI>SQ9 LA>I1 SM7>LZ5 EH2>LA GB3LER>I4 16-1700 EI>OK1,DL YU1>EA3 I8,I9,UU5SIX>DL LZ3,LZ1>EH3 I9>S5,9A EH2>OZ GM>F IS0>9A 9A1CAL>EI 3A>YO3 HB>I8 SV1SIX>I4 I8>I3,DL 9H>DL 17-1800 G>S5 LZ3>I2 SV8>HB I8>PA,DL SV1>I2 I9>9A,SP6,SP7 9A,LZ2>EH3 9H>F SV1SIX>F,I0 YU1`>I8 SV2>UR YU7>I9 18-1900 OM3,SP6,OE3XLB>I9

May 7 07-0800 OH5RAC,OH9SIX>SP6 08-0900 OE5>ON I5>9A,ON OZ>9A,ON 11-1200 SP1>OZ(t) EH7>PA 12-1300 GB3MCB>EA7 EH5>F 13-1400 CT>I4 F>ON UT5G>OZ,9H I8>SV5 OD5SIX>I0,I4 SV1SIX>I4 YU7>OH5 YO3KWJ>9H 5B4CY>OE6 14-1500 5B>OE6,I4,I5,9A UR>SM5 4X>I4,9A CN8MC>F SV1SIX>OE6,S5,ON,I2,DL OD5SIX>9A 9H1SIX>YO5 UT5G>IS0 15-1600 YO3KWJ,LZ2CM>IS0 SV9>DL,OE5 LZ2>I5,I0,I2,HB,SV1 LZ1>I2,I0,OE5,HB SV3>OK1 OD5SIX>S5,DL SV1>HB,DL,SP6 5B4CY>DL YO5>SV1 16-1700 LZ1>I5 9A>OE6 LZ2,YO9,UR>I0 SV8>DL UU5SIX>S5 LZ2>I2,I5,I1,S5 9H,S5,SV1SIX>DL UT5G>I4 UR>I0,S5,I8 SV1>SP2 SV3,SV8>OE5 SV3>SP2 YO7,YO3,YO6>I5 YO3>I0,I1,F 17-1800 9H>SP5 LZ2CM>DL LZ2>9A,I1,LX,ON Z3,LZ1,SV2>DL DL>ON UR>I4,I1,PA,9H,9A SV3>OZ SP5>I9 ZD8VHF>EA6FB,EA7KW,9H1YZ YO4>9A,SP6 YO8>I5,9A YO7>F,9A,I1 YO2>S5 I7>SP6 Z3>OE5 SM7>5B SV1>OZ LZ3>PA,OE5 3Ctv,TR0A>EA7KW 18-1900 LZ2>PA,F LZ1>HB YO7>OK1 SV3,I0,I9>DL ZD8VHF>IS0GQX SV1SIX,SV2>PA UT5G>9A YO5,YO6>I0 Z3>SQ9 I0>EA5 19-2000 SV5>EA5 SV1SIX>DL,SP9,I5 21-2200 9H>PA,DL

May 8 06-0700 YO4>I1,I2,I8 UT5G>I1 SV8>OK1,OE5 UR>9H,I2 SV1SIX>SQ6 07-0800 YO5>I2 YO4>I8 LZ1JH>SQ6 UR>I1 YO8,UR>I8 LZ1>OK1,9A YO3KWJ,LZ2.ON>DL YO4>OK1,DL SV1SIX,LZ1,YO9>OZ LZ3>OE6 UR>I2 UU5SIX>9A UT5G>ON LZ2>OK1 SV2>SM5 OY6SMC>LA 09-1000 9A,YO9>ON UT5G>DL,SM5 5B,F,G>9A I5>F SP8>OZ UR>LA G>I2,I3,9A 10-1100 YO7>I5 F>I3 OE6>9A S8>OH2 UR>9H,9A 11-1200 LA>9A,DL UT5G>I0,9A,I5,OH2 SP8>EI SK0>I2 S55ZRS>LA LY0SIX>EI GM>SP5,SP6 9A>LA 1130-1157 FMbc(UA,67-73MHz)>OH6(Es) 12-1300 LY>EI OY6SMC,OH5RAC>SP6 OH9SIX>SP9 S55ZRS>LA SR9FHA>OH6 ON0SIX>OH2 SM3>F 13-1400 OH5RAC,OH3>EI GB3LER>SP6 OH2>PA ON>DL 14-1500 OE5>S5 I9>I8 15-1600 9H>ON,HB,DL I9>ON I2>I5 16-1700 I9>DL F>I8 SV3>F 9H,I9>PA 9J2HK>DL1EJA,DL8HYR,PA3DOL,PE2PE,PA7FM,PC5C 7Q7SIX>ON4KST,PC5C 9H>F,ON 18-1900 9H>HB 19-2000 GB3LER>S5 GM>SP6,SQ9

May 9 0459 S55ZRS>OE6 06-0700 F>S5 SQ9>I1 08-0900 I3,F>I5 G>S5 09-1000 G>I4 I4>F 10-1100 F>DL,I5 GB3LER>I4 11-1200 CU3URA>EA1 CU3>EA7 12-1300 CU3>F 12-1300 VO1ZA>F6KHM,F4DXW 13-1400 VO1ZA>G4IGO,MW1MFY,2E1GOR DJ6MB,G0CHE,ON4KST,EI7IX W1JJ>ON4KST,EA7KW,CT1ILT,MM0AMW CU3URA>EA7 14-

1500 K1GUN>F4DXW,EA7KW,EA7RM VE1CSM>EI7IX,EA7KW,G0CHE,G8BCG,F6HRP VO1ZA>F6HRP,G4IGO CT3>F VE1SMU>EI7IX,EA7KW VE1VY>G8BCG W1AIM>EA7RM VE1YX>EI7IX 15-1600 K7BV/1>G0TSM VE1YX>DL8YHR,EA7RM,MM0AMW,OZ1DPR,MU0FAL WV1K>G0TSM K1GBX>G1AAR VE1SMU>EI7IX K1GUN>MW1MFY ON>F 16-1700 KB1EFS>ON4KST VE1YX>ON7GB 9J2HK>IS0GQX,9H1YZ,IK0FTA Z22JE>9H1YZ,IZ8EPY 9J2KC>IS0GQX,I8LPR 1744 CU3URA>F

May 10 07-0800 I0>OE5 08-0900 UR>SM5,5B UU5SIX>I0 09-1000 UU5SIX>9A UT5G>I0 UR>OZ,I4,9A,SM3,PA,SM5 OH5RAC>SP6 OK3>I5(ms) GB3LER>I2 OH6>SQ9 S55ZRS>EI ES5>I2,9A,SP9 ES4>9A OH3>OK2 LZ1>DL 0938-1027 FMbc(90MHz YO,S5,ER,LZ)>OH6(Es) 10-1100 ES5>9A OH3>SP6,SQ9 SV2>DL GM>I1 OH1>SP6 LZ1,LZ2CC,OD,YO3>PA UU5SIX>I4 4X>SM5,I2 UR,LZ1>OZ Z3>I2 ES2>9A,DL,I4 OH3>9A SM5>I0,9A OH4>9A UR>PA,DL YU1>LA YO2>SM3 5B>SP6 1044-1201 FMbc(87-92MHz, I,9A,T9,SV)>OH1(Es) 11-1200 OH2>I6,9A SM5>9A YO3>F YO8>5B LZ2CC,UR>DL YO5>OZ DL>9H Z3>DL UR>I6,DL OH3>I4,I2,9A 5B>OK1,9A,LA,PA ZA,SV8>PA ES5>I4 SP9>Z3 OH1,OH3,YL3,LY0SIX,OH5RAC,ES5>9A SV1SIX>SP6 ES4>I2 ZA,SP9>DL YO5>OZ 12-1300 LZ1,ZC4,UT5G,OD,4X,I9>DL SQ9>F,EI,ON I0>OE5 GW,SP2,SM0,OH3,LY>9A DL>SP2 YO5,LY>PA UR>DL,F,ON DL>I8 SO5>I4 YZ1>ON G>5B(2xEs) GW>I1 9A>HB LZ2>F 13-1400 9A>F,DL EI,SP2>I1 9H,EH1,EH7>PA DL>9A SV8>UR I0,OE5,OE6,EI>DL YU1>F EI,PA>I0 ON>OK2 ZC4>SP7 GU>I7 OZ,GM>EA7 I6>F G>I6,I0,PA IQ4AD>LA T9>OZ EH7,EH1>PA I5>SP2 14-1500 G,ON>9H GM>I1,EA1 F>ON YO7,GW>DL G,PA>EA1 EI,GB3LER>9A LY,OY>F LX0SIX>EI CT>ON EH4,GW,LZ3>PA UR>I9 I3>LA LA>I5 G>EA5 GW>I0 15-1600 GW,EI,I5,I8,EH1,I0JX,IS0,EH6>DL G,SP6>EA5 GM>9H CT>ON F>I9,9A GM,YU1>F GB3BUX>EA1 OY>9H EH2>SP9 I9>I2 16-1700 I9>HB,I2,I9,OE3 EI>LA PA>I0,I2 YU1,S5>9A I5>PA G>I8 EH3,EH6,I0>DL ON>I2 9A,OY,SV1>F SP4,F,SV1SIX>HB GM>EA2 Z3,ZA>I2 LZ2CC>I5 YU7>I0 17-1800 YO7,OH5>I0 SP8>OZ OH3>I5,9A,I2 SP6,SP2>I8 I5>OH6 I1>OH5 SM7>I2 SM0>9A ZA,YU6,9H>DL I9>OK1,OK2 I0>OH5 SV8>DL,I2 SV1SIX>S5,DL UR,SV2>PA OH5>I5 LY0SIX>HB YO5,OM8>LA OZ>I0 18-1900 I5>OH6 YO7>I0 IZ1EPM>OH5 0H>I2,DL I9>I2,I4,OH5 LZ3>F,I0 G>I8 UT5G>IS0,SV1 I0>PA,OZ SV3>DL,PA YZ1>F,I0 SV1SIX>I3 YO3KWJ>I0 OD5SIX>PA(2x) I8,LZ2CC>ON 19-2000 G>I4,I1 LZ2CC>EH3 I8,GB3MCB>9A SV1SIX>PA,DL I9>DL 9H>LA I0>OZ SV8>HB LZ0SIX>DL 20-2100 LZ2CC>IS0 IS0>DL 21-2200 F>9H 2245 CU7>D44TD

Es reported at 144MHz - www.df5ai.net

May 11 07-0800 UR,I9>5B SV1SIX>I0,9A OD5SIX>9A EH7,EH5>I4 I8>I0 ON0SIX>PA 08-0900 SP6>DL I4>I2 OD5SIX>OE6 UT5G>I0,9A UU5SIX>I4,9A 09-1000 UU5SIX>OE6 UR>I2,I5 UT5G>I4,9A T7>I5,UR 10-1100 UU5SIX>OK1,9A,DL UT5G,LZ1JH>DL YO3KWJ>SP2,DL LZ2CC>SP2 SV1SIX>DL,SP2 LZ1JH>SP6 LZ2>DL UR>I4,OK1 11-1200 UR>9A,DL LZ1,SP6,SV1SIX>DL YO7,LZ2>SM5 YO8>LZ,OZ 12-1300 YT1,YO9,LZ3>OZ OH3>YT8 I9>9H YO3KWJ>OH5 UT5G>DL,OZ,PA T7,LY,RU3>I4 I8>F UR>SM5,ON,PA,LA OH5>PA,I5 RU3>DL,PA 14-1500 GM>DL OH5SIX>9A OH5RAC,OH3>9A,SP6 LZ2>PA OZ7IGY>RU3 UT5G>LA ES5>I0,DL,9A SM5>I0 SR9FHA,CU3URA,SP9>EA7 RU3>PA UR>LA,OH6 Z3>LA SQ2>I3 EH6,OH1,UT5G>DL 1445-1750 FMbc(88-90MHz UA,YO,T9,UR,LZ)>OH6(Es) 15-1600 I5,CT,OH8,OH2,OH3>9A UR>DL,OZ,LA,SP2 9H1SIX>F RU3,EH7,CT,OH1,OH8,CT3>DL T7>I5 HA>OZ I0JX,I5>EH1 LA7SIX>SP6 YO5,YU1,LZ2CC>F OZ>OH6 CN8MC>EI 16-1700 EA7,EA6,EA7,EA4,F,OH1>DL UR>OZ,PA EH7,UR>F,OM3 EH2,F,SM7,SK0,OH6>9A EH6>OE5 GU>9H YO5>ON CT>F,I1,I5 OH5RAC>OE3 EO5,OM3>PA SM2>SP6 SM0>I3 EA5>OE3,OH,HB EH2>I5 OH2>I0 F>EA6 I2>OH2 OZ7IGY>RU3 17-1800 EA6,CT>HB LY>I5,DL SM2,OH3,CT>DL UR>OH2,DL,PA SM5,I0,EH3,EH5>9A OE1>OH2 DL,I2>EA1 OH1>S5 DL>EA5,EA7 EH2>I1 CT>SP5,OH5 EH7>EI UT5G>LA,ON CT0SIX>EI,DL LZ1,LZ2CC>OZ 1705-1810 FMbc(88-92MHz, YO,LZ,9A)>OH1(Es) 18-1900 S5>EA7 UR>OH1,OH6 UT5G>ON LY,CT,ES2>9A I3>EA7 EH1,EH2,CT,EO5,RU3>DL EH7>I1,I2 YO5,EO5CT>PA LY>OE1,I1,F,9A YU1>OZ SP8>OH5,PA OY>SP2 YL2>I1 YU1EO>LA I4>EH7 GI>EI SP4>9A,I1 19-2000 EH6>I2 OH5>OH2 EH2>ON,PA F>I0,I9 ES1,EH6>EI ES3,SM0,SP2>9A YO5>PA I8>LA G>CT SP4>I0 SP9>EA1 OE8>SP2 SQ5>I2 YT1>EA7 S01MA>OE5,PA CT,EH1>DL SP2>I8 I0JX>F SM0>I8 UT5G>SM0 SP5,SP8>I1 I5>LY EH1>S5

IQ4AD>LY 20-2100 OZ>DL CT>PA,F SQ2>ON I5MXX>LY SP2>I5 21-2200 ON0SIX,GB3MCB>I8 CT0SIX>DL PA>CT 23-2400 OH1SIX>DL,PA OH5RAC>PA GB3LER,F>F

Es opening at 144MHz

May 12 0538 OH5RAC>SP6 06-0700 OD5SIX,LZ2CC>I0 UU5SIX>9A 07-0800 UT5G>9A IQ4AD>SM5 SM5>I0 OD,ZC4>PA 08-0900 YO3KWJ,LZ2,LZ1JH>SP6 UT5G>ON,HB LZ2>SP2,EH3 G>ON 09-1000 F,GB3BAA>I0 LZ1,YO>OZ I7,LZ1>F UT5G,EI>DL EI>9A 10-1100 EI>9A 9H>DL UT5G>I5 4X>I0 G>I8 9H1SIX,I9,S5>9A 9A>F I9>DL 11-1200 I9>DL EH5>9A SV1SIX>4U I2>OZ,LA I8>I2 12-1300 EI>EA1 F>I8 GB3MCB>SP6,OE5 CN8MC>EI G,GW>9A,OE5,DL 13-1400 CN8MC,CT0SIX>F CN>EI DL>OE5 CU3URA>EA7 14-1500 CN>PA CT0SIX,C3URA>EI CU3>EA7 GW,YU1EO>PA YO7,LZ3,I5,9A>DL SP7>I5 15-1600 YT1>PA,ON F>ON S5>OE5 SV1SIX>SP6 4X,I0>DL 9A>OZ SP7>I5 LY0SIX>I4 EH6>SP2 4X>PA S5,OZ>I5 S5>EA7 9A,OD5SIX,OE6,YT1,S5>ON IS0>OZ HF3>EA3,I5 I8>DL G>9A I0>SM0 16-1700 9A>F,DL,EA5 3A>SP4 T9,S5,SP7>F PA>9A,I4 FX4SIX>SP5 I5>LA DL>I5 PA,GW,ON,F>9A 9H>HB F>SM0 G,F>OE3 I3,I4>DL LA>I2 17-1800 G>DL(t) OE1,F>PA EH2>EH1,SP6 9H>HB OZ,SM6>I2 EH3,F>DL CN8MC,CT0SIX,GI>I5 EH1>I8 G,GW,EH5>9A F>DL,SM5,OZ PA>I1 SR9FHA>EI EI>SP4 GB3LER>I4 18-1900 EH5>9A,PA CN,F,9H>DL CT>SV1,I1,DL,9A OE3,9A>OH5 PA,CN>ON SV1SIX>EA3 I8>PA 9H,EA4>I1 GW>SP4 CN,GB3LER,9H>F ES4>9A GB3BAA>I4 9A>EA1 YU1EO>SM5 19-2000 EH7>F,S5,I CN8MC>I4 CN>ON,I2,EH3,I5,I4 LZ2CM>SM5 I9>DL 20-2100 EH7>DL CN>EH3,DL EH5>9A G,I4>CN I0>I3,I8 2259 CU3URA>EA7

May 13 06-0700 CN>I0 07-0800 SK7SIX,CN8MC,SV1SIX>I0 08-0900 SV1SIX>I0,I2 SV9>I0,I2 4X>9A UR>4X OD5SIX>ER1 09-1000 LZ2CC,LZ1,LZ5>I0 SV9>I2,OM3,I0 I9>ER1 SV1SIX>SP6 T7>I2,SV2 10-1100 I0>OZ 9H1SIX,OD5SIX,I9>HA7 SV2>I3 I5>LZ2 UT5G>I0 I1>LZ5,LZ2 LZ2CC>4U LZ1>HB 11-1200 SV1SIX>DL,OE5 SV8>DL 12-1300 LZ1>DL YU2,LZ2CC>RN6 13-1400 YU1EO>RN6 LZ2CC>I5 15-1600 YU1EO,LZ2,YO3KWJ>OH5 SV1SIX>RN6 16-1700 OH5>9A SR9HFA,OE6>RU3 LZ2>OH5 UT5G>LA 4X>DL UR>SP2,OZ 17-1800 UR>OZ S55ZRS,OE3XLB>OH5 OH5,OH6>9A 18-1900 OH3>9A,HA7 UT5G>DL,S5 UU5SIX>DL OD5SIX>OZ 19-2000 4X>5B,SP4 5B>9H 20-2100 4X,5B>9H 4X>UR,OZ,I8,I9 TF3SIX>LA,SM6 21-2200 OD5SIX,SV5SIX>9H TF3SIX>LA 2211 UT5G>9H

May 14 05-0600 SV1SIX>F,SP6,SP2 9H1SIX>DL 06-0700 4X,EH3>9A YO3KWJ>I0 YO4>I7 SV1SIX>9A,OE5,DL LZ1JH>I1 9H1SIX,OE3XLB,IQ4AD,I9>SP6 LZ2CC>EH3,I5 ON>I9 I9>PA,DL LZ1>I5 3A>I8 4X>9H 07-0800 9H1SIX>OK1 I9>SP5,PA,OE1,SP9 EH7,EA5,SV8,OE6,I9>DL YO3KWJ>EH3 YO7>I8 4X,I0JX>F EH7>ON,PA 08-0900 I9>OK2,SP5,DL,PA,9A,ON CT>HB,I5 LZ2CC,I0,EH7,I8>F I8>HB I5>LZ1 SV3,I5,EH4>9A I0JX>EA1 SV3>I3 I0>SP2,SQ9 09-1000 F,LZ1,LZ2,I0,I5>9A LZ2,YZ1,9A>I2 4X>I0,F I8,I0,9A,LZ1,LZ3>DL I0>PA,OE5,OZ,SP2 I9>HB,OE6,OZ SV1SIX>SP6 YO3,9A,YU1>I0 EH4>I3 EH7>F LZ2>I3 10-1100 EH5,EH4,LZ1,LZ2,LZ3,EH3>9A T9,CN8MC>F PA>I8 SV1SIX>SP2,DL I0JX>OE5 YU7>I1 SV1SIX>OE5,DL 4U1ITU>9A,YU1,OM3,HB YO3KWJ>9A,4X T9>HB OD5SIX>ON SP9>I8 DL,HB>LZ5 I0>DL IK5ZUL,I5MXX>OE5 HB9SIX>EI OE5>LZ5 EI>I0 SV5SIX>SP6 UR>I4 LZ2>4X 11-1200 I8,LZ1>PA YO8,UR>4X I9>SP5 YU1EO,LZ2CC>OE5 LZ2>OE5,HB SP2>I8 EH5>ON I8,YO7,EH9,YO3KWJ>DL EH4>F LZ1JH>F,OE5 I5>YO8 CN>EA1,I1 I9,I2>UR EH9,CN>HB EH9>EA1 UT5G>I3 LZ2>ON G>I5 12-1300 LZ3,LZ2,SV2,SP9>DL 3A>I5,I1 GI>LZ3 F>CN,EA5,CN CN>ON EH9>PA I2>LZ2 EH7>HB CT>9A CU3URA>EA7 I9>F 13-1400 CN>F I0>S5 UT5G,S5,LZ2>I2 F>I9 ON>LZ2 14-1500 LZ2>DL I8>SM5 ES1,OH2>I5 SM0>I0,I8,9A ES0SIX,SM5>9A YU1>OZ YU1>LA CN8MC>F 15-1600 LA>LZ2 OH5SIX>9A,SP6 OM3>9A,S5,RU3 UT5G>OH2 RU3>S5 16-1700 UU5SIX>OH3,SM5 UR>DL,OE5,OH2,SP9,OK,OE3 S5>OE3 YO3KWJ,LZ2CC,YU1EO>RU3 I9>SP9 SV1SIX>DL,PA LZ2>I1,I2,I4 17-1800 UR>OK1,S5,SP6,9A,OE3,I5,OE5,I4,RU3,OK1,EA3 UT5G>RU3 UU5SIX>SP9,SP5 CU3URA>ON LZ1>PA,SP2 SV1SIX>DL LZ2,F>SP6 LZ2>HB LZ3>EH3 SP3,I9>SP6 9J2HK>DK5AI,SP6GWB,SP8AWL,OE5MPL UA4>I5,S5 RU3>I1 YO4>HB 18-1900 9J2HK>SP5XMU,DL9USA,OM3EY,9A4K UU5SIX>OE3,DL UR>I5,SV1,I4,I0,OZ EO5>9A,I0 OH3>9A UT5G,SV8>DL LZ3>EA3,HB OH7>OE3,OK1 SP4>SV1 CU3URA>F YO8>I0 SV1SIX>PA,SP6 SV1>SP2,SP6 CT0SIX>EI 19-2000 OH7>9H S5>9A,LZ5 LZ2>SM0

UR>I4,OZ,9A,ON,PA,LA,OK1 OH1SIX,OH9SIX>SP6 OH4>9A LZ2,UU5SIX>PA YO3KWJ,YO8,ZA>OZ OH5RAC>OE5 LZ3,Z3>I2 4X>PA,LY OH3,OH5SIX>OK1 EO5>SP2 D2PFN>DK5AI CN8MC>EI 20-2100 OH5SIX>9A OK2>OH8 D2PFN>9A T7>OH7 CT0SIX>EI EO5>DL,PA LZ1>SQ2 UR>LX,F,PA,OZ,DL,HB,9A OH3>SV1 LZ2>ON YO8,LY>PA CU3,SV1SIX,SV3>F YO7>LA LY,9H>9A 5B4CY,YO8>DL CU3URA>EA1 SM3>9H YU1>SM0 YO4>OE6 21-2200 UR,Z3,YO3,YO8,OH3>DL CU3>CT,I0 YO5>SM0 YU1>SP9,DL CT,CU3>F GB3LER>LY LZ2>I9 LZ2>OE5 CU3URA>EA7 EH4,CU2>CT SM2>9H UR>I1 SV2>PA K4QI,K3ISH>CT1FMX 22-2300 N2MB,N3II,K2MUB>CT1FMX LZ2>I5,I2,I1 LZ2CC>HB W2MMD>CT1FMX,EH5AGR,CT1DIN,CN8LI WZ1V>CN8LI UR>PA N3II>EA7KW CU3URA>EA5 GB3MCB>CN 23-2400 YO7>PA LZ2CC>I0 CU3URA>CT

Es reported at 144MHz

May 15 04-0500 GB3LER,OZ7IGY,ON0SIX,PI7SIX,GB3BAA,DL>LY OH9SIX>9A,SP9 OH5SIX>9A,SP9 05-0600 OH5SIX,OH9SIX>SP6 SM3,LY,OH8>9A OH3>I1 OH5RAC,OH5SIX>HB OM3,I2>OH6 OH3,GB3LER>SP9 LY>OZ OK2>SM6 0508-42 FMbc(88-101MHz I)>OH6(Es) 06-0700 S55ZRS>LA UT5G>DL LY>9H,SP6,I1,HB,F,3A YL2,OH5SIX,OH3>F LZ1,ES8,UR,I2,SM3>DL ON0SIX>SP2 OZ6VHF>9A,F GB3LER>9A LA>HB,9A 07-0800 F>SQ2,HA5 LY,ES8>ON LZ1>OK1,PA OH3>OH7 LA>9A,DL,I1 ON>OZ UT5G,UU5SIX,LA,OZ>HA5 YO5>I3 UR>I8,SP6 OH1,SP5>F OH3>DL G,OH3>9A LA>HA5,9A GB3LER,GB3MCB>OE3 GM>I1 SP5>ON S5>EI UR>SP6 SM5>F,ON,HA5 LY>EI,DL G>SP2 08-0900 OH6,OH4>HA5 SM5>I4 LA>I8,HA5 OH3>DL,9A SM3,LA,OZ>9A UR>OE3 9A,OH8,UU5SIX,OH0,SP5>DL SM3,ES1>OK1 YO3KWJ>F ES7,OH5RAC>OE5 T9,YO2,SM3>DL F>SP9 UR>PA,4X OH3>HA5 SP2>9A 09-1000 I8,SV8,YO7,YO3KWJ,YO5,YO4,OZ,YU1,LA,9A1CAL,LZ1,F,HB,I0JX>DL SM5>I1 I0>OK1 OH3>I1 SP5>PA OZ,OH0,SM0,OH1,ON>9A F>SP6,9A 9A>PA I0,ON>YO8 LA,LY,YU1EO,DL,YO5,YO7>F OH1SIX>OE5 SM5>SQ9 I1>HA5 OH9SIX>ON OM3>I1 09-1000 EH6,SP3>SP6 F>DL,CN,9A PA,G,GM,LY,F,DL>9A OZ>I0 LA,OM3>EA3 SP6>OK1 LA>F T9>OZ HB>EI UT5G>EA7 SP5,G,GM>I1 ON>I8,9H GI>DL OE3>ON GB3MCB>OE5 GB3BUX>I0 11-1200 SV5SIX,SV1SIX>SQ2 G>HB,I0,9A,I8 LZ1JH,LZ2CC>SP6 ZA,GB3MCB,EI,F,LZ1,LZ2>DLGB3BUX>HA5 F>OE8 EH3>HA5,OK1,9A EH2,EH6,UT5G,F,EH1,GI>9A I9>ON I0>F GM>EA1 OK1>SP9 LZ2>PA UT5G>SM5 OZ>LZ2 12-1300 UT5G>DL,HB,ON,SQ2,OH4 F,G>I0 UR,CT>OZ G>I1,PA GW,CU3URA,I4,I0JX,GB3LER,DL>F UR>DL,OK1,SM5 CT,EH2,YU1>PA YO4>ON,OH2 OH0>LZ1 13-1400 OH5SIX>HA5 UT5G>OZ GI>HB UR>OZ,I5 G>PA CT0SIX>EI 1433 W8FR>CN8TW(?) 16-1700 GB3LER>SP9 I4>9A,OE6 EI>OH2 OZ>I1 LY>EA2,F EH3>9A EH5,9H>PA GB3MCB>I0,OH1 I6,OZ>I0 DL>EA7 EH1>HB ON>I9 GD>OH1 I4,I9,OY6SMC>DL 7Q7SIX>DK2EA Z22JE>OK1FFD 17-1800 Z22JE>DK2EA,G0JHC 7Q7SIX>G0JHC GB3LER>DL 9H>OK1 I4>DL(t) LA,GB3LER>HA7 I9,YU1>F EH7,GI,GM,OY6SMC,CN8MC,OH5RAC>DL I3>EH5 GM>CT ON>CN HB,ES5>EA7 CT,YL2,YU1,LZ1>EA3 OH5SIX>HB,DL CN8MC>I0 SM3,SM0>9A OH5SIX,EH9>I0 7Q7SIX>G8BCG OH>I2 OH2>HB F>CN EH9>F OH3>HB ES5>DL,F CT>OZ I8>EA7 18-1900 EH9,ON,LY,ES5>DL GB3LER>9A 9A>EH5 9H>HA7,F EH7>F,OE5 CU3URA>EA7 S5>CT LX0SIX>LY EH9,EH7>HB SV1SIX,CT0SIX>I0 CT3>EA3 SM1>I5 OH1>F GB3LER>9A 19-2000 IZ1EPM>LA OY6SMC>9A,DL,HB S5>9A EH5>SP9 EH7,CT3,CN,SM0,SM6>F EI>SP2 GM>SP6 GB3LER,EI>DL CT3>ES2,SM5,ON PY1RO>IS0GQX 20-2100 EI>DL,OK2,SP9 GI,EI>I0 EI,OY6SMC>HB GB3MCB>9A F>OZ GM>DL,9A,I0,I5,I1 I5,LX0SIX(t)>PA PI7SIX>F G>I3 21-2200 G>I2 F>SP2,9A EI>I8 EH6>OZ,PA,DL I7>I8 GI>SP9 2245 I0>F

May 16 06-0700 G>DL LY>OH1 07-0800 OH5>YO7 S5>PA,I1(t) I5>I4 YO7>OH6 SV1SIX>HB SP8>9H UT5G>PA I9>SQ6 08-0900 YU1>SM0 OE3XLB>SM3 SV9>HB YL2>I5 LZ2,LZ1,YU7>DL I1>SP9 LZ2>OZ,PA IS0,OH5SIX,S5,I9,G>9A UR>OZ UR>SP2 G>4X UU5SIX>OK2 I8>HB 9A>ON I9,SQ9>F LX0SIX>EI 9A,ZA>PA SQ7>RN6 SV1SIX>I1 I8,I0>DL 09-1000 LZ2,OK1>SM3 9A>ON I8>DL,HB UT5G,G>9A UR>I1,SP6,SP5 S5,T9,I9>PA I9>I3 OZ>I8 F,I4,I7,S5,UR>DL UU5SIX>SP5 PA,I9,EH3,DL>I9 CU3URA,GB3LER>F EI>HB RA6>OK1 10-1100 I9>DL UR>OK1,9A,DL,OZ,SP6,9A,SP3,OE3 EH5,EH3>SP6 ON>I8 SP6>F EH5,UT5G>OK1 EI>HB,9A G>9H,I9 S5>EA7 11-1200 UR>S5,DL,OE6,SQ9,PA,SP6 UT5G>DL OY6SMC>F LZ2>OH2

SP1,SP7,SP8,I0>UR IQ4AD>EI S5>OH2 OE2>S5 1130 FMbc(88MHz TA)>OH1(Es) 12-1300 UR>SP9,LA,SP6,SP5,PA,DL LY>PA VO1ZA>G4IFX OE8>S5 OY6SMC>OH2 OK1>SQ9 CU3URA>EI 13-1400 GM>9A I2>I5 GB3BUX,EI>SP9 GB3MCB>SP2 SP6,CN8MC>EI SQ9>PA DL,SM7>F OZ6VHF>I0 I2>LA I5MXX,I0JX>OZ DL>I2,SM5 14-1500 DL,LA,SP1>F 9A>PA I1>LA ON0SIX>OZ GM,ON,OZ>9A GM,ON,OY6SMC,PA>DL EI,G>SP6 EI,G>OZ OY>DL,PA 15-1600 LA>HB OY>DL,PA,I4 SM0,SM7>ON EI>SQ5 FX4SIX>SM0 GM>9A,DL,SP9,HB G>CN,DL,CT,SP2 CN,F>DL DL>EA7 16-1700 GM>9A G>I5,SP6 GU>SP2 CT0SIX>I1 CN>DL,PA G>EA7 EH1>I5,EH7 I4>EI 17-1800 UR,YU1>LA G>I2 TF3SIX>EI,PA I4>OH4,OH6,OH2,ES2 OY6SMC>EI SQ5>DL OH6>I5 18-1900 VO1ZA>G4PCI,MW1MFY OH6,OH1>I5 LZ1,I3,YO2>OH6 TF3SIX>EI GW>ON VE1CSM>MW1MFY UT5G>OZ OH7>9A SM0>LZ1 19-2000 OH1,OH3>9A UR,YO3KWJ>OZ OH1,CU3URA>F ZD8VHF>9H1YZ UT5G>PA LY>F,PA DL>ES6 ES6>I1 20-2100 GW>9A EH1,ON,CT>PA LZ2>SM0 EH1>DL 2133 CU3URA>EA7

Es reported at 144MHz

May 17 06-0700 IK5ZUL,I0JX,I5MXX>LA 07-0800 I5>SM5 OD5SIX>UR LA>I0,I5 I0>DL IZ1EPM,IQ4AD>SM7 PA>9A YU1EO>PA OZ7IGY>I0 OZ6VHF>I0,I5 I5MXX>LA F>SP2 08-0900 UR>I0,CT G>9A LY0SIX>F SV1SIX>DL GB3LER>I5 09-1000 SP9>F UU5SIX>I0 SV1SIX>SP6 GB3LER>I5 YO3>I2 10-1100 OY6SMC,LZ1,LZ2,SV8>DL UU5SIX>I4,OE6 GB3LER>I4 GM>OE6,I0 SV8>OK2 SV5SIX>OE6 11-1200 OZ7IGY,GB3LER,GB3RMK>F G>HB GM>PA,9A F>SM5,OZ G,YO3KWJ,GW>DL LZ1>9H OZ6VHF>I0 GM>I2 EI>SP6 FX4SIX>OH5 12-1300 EI>OE3,DL,SP6,SP2 ON0SIX>OH5 13-1400 EI>OZ,SP2 OY6SMC>I2,F SM1,GB3LER>F F,GB3MCB>LA 14-1500 EI>LA,PA YU1>9H GI>DL,PA LA,GM,OY6SMC,G>F UT5G>DL GW>OZ 15-1600 GB3LER>F UT5G>PA,DL YO3KWJ>SP5 LZ2>SM5 LZ3>OZ YO3KWJ>SQ2 UR>DL SV9>I2 9H>UR LY0SIX>I4 CU3URA>EA7 SV1SIX>I0 16-1700 UR>I3,ON,DL SM0>PA,ON LA>DL,F 9A>OH5 YO7>LA,SM7,SM5 YO8>DL LX0SIX>LA SM7,LZ2CC>SP2 LY,OZ>EI UT5G>OE5,DL,9A,I4,PA SV1SIX>SP9 17-1800 UR>PA,F,I2,I4,9A,9H,I5 JW5SIX>LA LZ2>OZ SV3,GM,LZ3>DL YO3KWJ>DL,I3 LZ2CC,SV1SIX>SP6,I0 OH2>F SV9SIX>SP6 LZ5>SP9 YO8>DL,I2 18-1900 OD5SIX>9A,DL I9,SV1,SV2>SP6 SV3>SP2,SP9 UT5G>DL,I0,9H PA,OH5,LZ2,YO8,OH8>DL LY>9A YO3KWJ>PA SV9>I0 19-2000 9A>9H OH8>SP6,PA OH3>OE3 OH5SIX>OK1,SP6 OH9SIX,OH5RAC>SP6 ES2>PA 20-2100 GB3LER>SP6,SP9 OH6>F ES2>EI,F IQ4AD>LA SM3>SP9 LA>9A OH5>DL

May 18 05-0600 F>OZ 06-0700 UT5G>OZ,LA F>PA,DL,LA LX0SIX,GM>F UU5SIX>4X DL>ON,DL PI7SIX>F GB3BAA>I0 07-0800 UR>4X GB3MCB>I2 08-0900 IZ1EPM>EI 09-1000 GB3MCB>I6 SR5SIX>I5 I0>OZ,DL I5>DL 10-1100 I5>OZ I0>DL LA>F GB3LER,OZ>I0 SV1SIX>SP6 12-1300 CT0SIX>F 1348 CU3URA>F 14-1500 CU3URA>F 1543 CU3URA>EA7 18-1900 YT1>F I5,I0>PA 19-2000 I5>PA G>I1,I8,I5 EH3>DL 9A1CAL>F

May 19 04-0500 OH9SIX>SQ2 SQ2>OH8 OH5SIX>SP6 0653 GB3BAA>F 09-1000 YO3KWJ>OZ UT5G>DL 12-1300 YT1>9A(t) TA2>I9 13-1400 I8>I0 1956 LX0SIX>DL(t)

May 20 09-1000 YO3KWJ>OZ LY0SIX>I5 YU1EO>SM5 12-1300 HB9SIX,I5MXX>EI 13-1400 OY6SMC>F 1411 GM>EA1 16-1700 IK5ZUL>I0 1711 OH3>LA 1847 LX0SIX>DL(t)

May 21 09-1000 LZ1,YO,UR>A45XR GB3BUX>I0 10-1100 I9>DL 1129 I9>PA 15-1600 YT1>SP6 LX0SIX>DL 17-1800 I5MXX,HB9SIX>EI GB3LER>I4 GM>OK1 18-1900 GM>SP6,I5,EA2 9A1CAL,I0JX,IK5ZUL>EI GB3LER>EA3 I9,I0>ON EI>I5 9H>DL 19-2000 GW>I8 9H>EI,PA F>EI GM>EB1 EH2>SP6,DL 20-2100 EH2>I8,I0

May 22 06-0700 OH5RAC,OH5SIX>SP6 OD5SIX>SV 07-0800 9H>4X 4X>I9 08-0900 4X>I9 UU5SIX>OH1,OH2 UR>ES7,SM5 OH9SIX>SP8 09-1000 UU5SIX>ES7 UT5G>OH2 OH9SIX>SP8 UR>SM0,LA,SM5,OZ,SP2,LY,OH6,OH1 10-1100 UR>OZ,LA,SM5,SM0,SP2,SM6 OH6>SP8,SP9 5B>SM0 RA3>DL CU3>EH5 11-1200 CU3>OH5 OH5>YU7 YO7>SM0 UU5SIX>9A OH5SIX>OE2,HA5,9A,YU7,OE5 UR>LA,OZ,SM5 OH3>9A OH6>9A,YU7 OH5RAC>9A 12-1300 OH5SIX>SP9,OE3,SP6 OH5RAC,OH7>OE3 OD5SIX>SP9,SP5 UU5SIX>SP6,SP9,DL UR>SP3 SM7>OZ 13-1400 UU5SIX>SP2,SP5 UT5G>SP2 LX0SIX>DL(t) 15-1600 I9>EA5 I8>IS0 17-1800 9J2BO>IK0FTA EH5>9H 18-1900 9H>OK1,SP6 UR>OZ

May 23 07-0800 UU5SIX>OH1 5B>SV5 I5>I9 OH3>OH2 08-0900 LY>9H,I2,I1 UR>9A,SP1,SM7 OH5SIX>9A UT5G>OZ,SP6,DL,I5 9A,SV8>OH2 0853-57 FMbc (90MHz T9)>OH3(Es) 09-1000 LY>I1,I2,PA,SM2,DL,HA5 SP4>PA OH3>9A ES8>OK1 OH1>I3 OH3,OH6,OH1,T7>I5 OD>LA,9A,9H EU7,SP4,SP5>DL OE>SP2 SP9,YU7>LA UR>OZ,OK1,I5 YT1>SM5 OH5RAC>OK2 OH2,SM5>SP6 YL2>OK1 SP4>PA,ON 0935 FMbc (103MHz I)>OH2(Es) 0930-1258 FM bc (88-108MHz TA,SV,DL,I,T7)>OH1(Es) 10-1100 SM7,SP2, UU5SIX,OH5SIX,LY,OH3,SM3,SP2>DL OH6>I2,OK1 SM0,LY>PA SP4>PA,DL UR,YU7>LA LA>OE1,DL,SQ9 SM7>SP6 OH6>F,PA LY>OZ YL3>F,ON UT5G>9H LY>OZ UP>SP2 SM0>ON 11-1200 SM2,YL2,YL3,LA,OZ,UR>DL ES1,LA>OK1 SM0>PA,F,I5 UT5G>EI UR>OK1,SP6,I3,SP2,9A,HA6 SV1>I9 OH1>HB SV5>9H OH7>PA ES1>HB LY>ON UU5SIX>EI G>SP2 12-1300 5B4CY,LA,SM0>DL LA>ON,F,PA,SV1,9A SM0,GM>F UR>HA6,DL,SP4,I3,9A,S5,I5 CN8MC>I2 OH5SIX>PA,DL SM5>F LY>EI UT5G>SP2 9H>9A ES1>I8 13-1400 UT5G>DL,EI,SP4,OZ 9H>SV5 OH5SIX>DL UR>SP6,OE1 GW,GI>EI UU5SIX>SP2 YO4>PA LY>9A YO3KWJ>ON 1322 FMbc (89-92MHz TS)>OH2(Es) 14-1500 UR>DL,OZ,OK1 Z3>OZ 5B4CY>S5 5B>OE1,OM5,I9 CT>I3,I2 I3>I5 OD5SIX>I0 I9>LY SV5SIX>OE6 15-1600 5B>I3,I8 LZ1JH>DL I3>I5 OZ7IGY>RU3 UT5G>OH4 CU3URA>EA1 16-1700 CT3>F,EI CN8MC>EI UU5SIX>9H I5>I4 17-1800 3Ctv>SV1 SV1SIX>OK1,SP6,SP9 GB3MCB,EI>CN I3,I4>F 5B>OK2,SP6,HA1,OE1 SV3,OD5SIX>SP9 UT5G>I0 SP6>EA5 18-1900 CU3URA>F,EI,ON EH7,EH5>EI 4X,5B4CY,OD5SIX>9A CN8MC>F YO3KWJ>IS0 OE3XLB>4X G,OE8,I3>EA7 19-2000 4X,SV3>9A CU3>I4 YO3KWJ,5B>4X CN>EI,PA EH1>I1 G>PA SP7>SP2 I0>UR CT>I0 20-2100 5B>I1,I2 HB>9H,CN LZ2CC>EH3 GJ,I1,S5>EA7 SV3>F CT0SIX>EI 9H>DL,SP6,I2,I1 EH7>I0,DL SV1SIX>EA5,I1 21-2200 I9>I1 CN8MC>F EH5>I0,SV3 UT5G>I1 SV3>EH3 IS0>SV3 22-2300 UT5G,UU5SIX>HB LZ2CC>SP9 I9,UR.I4 23-2400 YO3KWJ>DL

Es event at 144MHz

May 24 06-0700 OH5RAC,OH5SIX>SP6 0728 OD5SIX>I9 09-1000 LZ2CM>OH5 UT5G>OZ,PA UU5SIX>OZ UR>DL YU1EO>OH5 10-1100 UU5SIX>DL 5B>I9 13-1400 CU3URA>EA7 I1>I9 OH5SIX>PA 14-1500 5B>EA7 EH6>OK2 15-1600 I9>F 16-1700 EH6>SV3 OJ0>I1 19-2000 S5>9A 9H>F,I1

May 25 0514 OH5SIX>SP6 0858 OZ7IGY>RU3 09-1000 9H1SIX>DL GB3MCB>CN CT0SIX>I0 CN8MC>I2 10-1100 4X>I0 SV1SIX>4X UU5SIX>OH5 11-1200 9H1SIX>OE6 CN8MC>I4 12-1300 IZ1EPM>CN CU3URA>EA7 CT3>EA2 F>CN EH7>9H 13-1400 SV1SIX>DL,OZ UU5SIX>I4,I5 OZ7IGY>OH5 UT5G>I5,RU3 LZ2CC,LZ1JH>DL LZ3>OZ 14-1500 UU5SIX>OH5,DL LZ1JH,LZ2CC,LZ3,YO4,YO3KWJ>DL I9,SV3>EA7 DL,LZ2CC>OZ LZ3>RU3 UT5G>I5 EH3>I9 SV1SIX>SP8 EH7>I7 ZB>I8 15-1600 EH7>I0,I5,I8 UR>F,I5 EH5,F>I9 ZA>EA7 YO3KWJ>DL,OZ YO8>DL,SP6,OK1 YU1>LA I9>I5,I2 UT5G>DL LZ2>SP6 TR0A>SP6 YO7>SQ2 SP3>SP6 SY8>I2 16-1700 ON>I9 UR>I4,9A I8>F SV1SIX>DL I9>DL,PA GB3MCB>I9 CU3URA>F,SV1,EI I7>EA3 ZA>EA3,EA7 EH7>I5,9A,I3,I4,I1 EH5>I5,I1,F,9A I0>I5 17-1800 I9>PA ON0SIX>IS0 EH5>9A SY8>UR EH5,I9,EI,CN8MC,F>DL UR>EA7 ZB>I2 SP8>F,OZ,SM G>SP6 EH7>I8 EH3>I5 EH5>HB,9A F>SM5 OH0>EA5 SV9SIX,I1>EH3 OZ,OJ0,ZA>F GI>HA1 I5,I0JX>EA1 I5MXX>F 18-1900 GM,OZ>9A ON>OZ EH7>ON,I1 UU5SIX>F SV2,YU1,ZA,I7,EI>DL SO5,SK6,YO7,CT0SIX>F SM7>EA3 YO4,S5,YU7,OK2,YO3KWJ>PA OZ,LA>LX I0>LY SM5>EA7 G>SO6 SM0,LA>HB YL3,OZ>9A OJ0>I1,I2 LA>I0 YO3KWJ>DL SP9>ON EH5>HA1 19-2000 EH5,ZA,YO3KWJ>DL I3,I4,LA,DL,OZ,UR,SM6>9A OZ>DL(t) EI,LY>EA7 CN>PA ON>SP9,EA7 G>OK1 OE3XLB>HA1(t) ZA>SP4 YU7,EH1,OM7,CT0SIX,G>PA S5,YL2,EH1>I0 CN>EI SP3>I3 OJ0>OH3 LZ2>SP6 20-2100 SV3,OD5SIX,F,EH9,LZ1JH,5B4CY>DL SV2>SP6 OJ0>OH5,SM3,OH7 ZA>LY LZ2>DL,OZ EH9>PA SV2>OZ,LY CT,S5,LA,UT5G>9A CN8MC>F UR>DL,I1,CT,9A HB>I2 SM6>I0 I8>LY ZA>I0,SP2 LZ3>OE3 CT>HB 21-2200 CT>HB,I0 CN>ON SV2>PA,OE1,PA CT0SIX>EI YZ1>SP2 ZA>OK1,SP2,OZ UR,SV1SIX>9A YT1>DL,PA LZ3>PA UR>I2 SP9,UR>I5 CU3,UT5G>CT I6>SP2 LZ2CC>PA I5>SP9 22-2300 SV1SIX>PA ZA>PA,DL IQ4AD,IZ1EPM>SP9 I5,I9>SP2 HB>I7 SP7,SP2,SP9 >I0 G>9A I7>PA 23-2400 I0>SP9 SP7>I0 I7>ON LZ1JH,SV1SIX>SP9

May 26 00-0100 YU1EO,F1GTU>SP9 I0JX>OZ 05-0600 UT5G>I0,SM5 SP7>I0 ZA>DL UU5SIX>9A SV1SIX>SP6 06-0700 OE3XLB,OD5SIX,I0>RN6 YO4,SR9FHA>I0 LZ1>I1 ZA,EH7>F I7>OK1

YO3KWJ>OH5 UU5SIX>HA1 ON0SIX,UT5G>F EH9,ZA,I9>DL F>I9 9H1SIX,UT5G>SP6 EH7>9A LX0SIX>EH3 3A>I2 I9>ON ZA>F 07-0800 I8,I0,I9,UR>OK1 EH7,DL>S5 F>I5 UR>9A,SP9 I5,OD5SIX,SV1SIX>SP9 OD5SIX>SP6 SV1SIX>F,I1 CN>I1 9H1SIX>F S55ZRS>OH5 EH7>HB ZA>F,I2,PA 4X>EA2 08-0900 GB3MCB>CN 4X>SP2,EH1,I7,I2,9A,DL,S5 I9>9A UT5G>DL 5B>EA2 ZA>I0,ON,I2,OZ,CT SV9,UR,I9>9A LZ2CC>OZ,DL UU5SIX>S5 LZ1JH>SP6 EA1>I7 9H1SIX>OK2 I9>HA5,EA1 5B>I2 I2>F 09-1000 I9>I0 4X>DL,ON Z3,LZ2,SV1SIX>DL LX>I7 5B>EA1 I9>HB,DL,PA ZA>I0,DL I2>OZ,SP9 I7,I8,I1>F CT3>I2 SV2>SP6 CN8MC>I5 10-1100 YO3>SK0 ZA>PA,DL Z3,I2,LZ2CC>DL 5B,LZ2>PA I2>OK2 CT,G,ON,EH7>I0 ZB>I2,I3 UT5G>9A EH7>SP9,SP6 SV2>EH3 1002-06 FMbc(101MHz UA)>OH3(Es) 11-1200 F,CT,UR,G,PI7SIX,EA9,ON0SIX,9H,ZA>I0 SV2>SQ2,DL CT>SP9,SP6 UR>OE6 SY8,ZA>DL S5>EA2 HB9SIX,YU1EO,OD5SIX>F DL,OZ>I8 F>9A 12-1300 CT>SP9,I7,EI CN8MC>SP9,SP6,EI SY8,I6>OZ I9>I8,I7 EH9>I5,SP5 EH7>SP9 CU3>I7 GB3MCB>CN 13-1400 EH5,F1GTU>SP9 I9>OE3 G,OZ>I7 SY8,9A>PA EH7,I0,I6,9H,IS0>DL S5>EH7 CT>F EH2>SP6 SQ9,EH1,OX>EA7 SM7>I5 14-1500 SY8,SV1,YU1,S5,YO7,I1>DL SV1>S5 I3>OZ GW,I9>9A,ON EH7,OM3>F IQ4AD>SP6 F1GTU>SP6,OK1 SP6,GB3MCB,GU>EA7 SP3>EA3 I0,9H,YT4>PA G>9A CN8MC>EI CT>EA2,SP6 15-1600 I0>PA F>SP9 UT5G>EA7 G>I5 SV1>I1 LX0SIX>DL(t) 16-1700 ZB>I1 SV1>OZ ZA>PA CT,CU3URA,SV1>F SV1SIX,SV4SIX,Z3,SV2,TA>DL UR>I5,SP6,OK1,DL RN6,LZ2>I5 GW>9A OJ0>LZ3 DL>RN6 DL>EH3 I5>PA SV1>HA1 17-1800 ZB>F,EI F>OK1 ZA,9A>ON G,EI>HA1 T9,I5>PA UT5G,YO8,SV1SIX,YT1,T9,Z3>DL LZ1>I1,9A DL>EA3 DL,SP5.SV1>I5 YU7>EI CT>SP5 ZA>PA CU3URA>9A 18-1900 UR>I1 YO6>HB CN8MC>F IS0,SP8>HB SV2,Z3,I8>PA ZA,T9,9A,SV2,Z3,LZ2,YU6,LZ1,YU1>DL PA>I1 9A>OZ GB3BAA,GB3IOJ>HA1 SP5>I2 ZA>OK1,ON EI>I3 YT1,I9>ON EH1>SP2 LY>I5 9H>OK1 EH3>SP7 19-2000 ZA>DL,F,HB SP2>EH1 LZ1,EI,>I2 YO7,LZ2CC>F I7>ON 9H>I9,ON I2>I8 I8>HB,PA,I0 2156 GB3MCB>CN

May 27 07-0800 CN8MC>I0 09-1000 UU5SIX>I0 09-1000 S55ZRS>EI G>I0 IZ3FZQ>EI 10-1100 G>I0 F>OZ,I1 EI>I2 11-1200 EI>HB F>9A,OZ EH2>PA LZ2>SP3 4X>OE6 HB>SP4 GM>F 9A>4X CN8MC>EI YO3KWJ>DL CT0SIX>EI 12-1300 LZ2,UT5G>DL YO3KWJ>DL,SP6 YO7>SP2 GB3LER>F ON>I7 I2>ON ZB>EI IS0>OK1 EI,UR>I5 UU5SIX>I0 LZ2CC>OZ UR>OM3 SV1SIX>SP6 ON>I9 G>I8 13-1400 YU1>SP2 ON>I0 9H,EH7,EH5,I2>PA CU3URA>I5 5B>OM5 ZA>F,PA SV1SIX>EI 9H,I9,YO6>DL UR>9A F,GB3IOJ,GB3MCB>I0 ON,GU>I8 DL,SP2>EH7 14-1500 IQ4AD,S55ZRS,YU6,F,ZA>F G,DL>EA7 IS0,EH3,9H,I2>DL DL>I7 ZA>EI CT0SIX,I0JX,I8,I9>PA EH2>SP6 I3>I9 EH5>SP9 EH3>SP3 F,EH7 HB,GW>9A PA>I7 DL>I8 15-1600 ZA,I1,9H,I0,I2>DL FX4SIX>OK2 EH3,F1GTU>SP9 HB,F,I1,SP3>SP6,DL,SP2 EH3>OZ OZ>I8 DL,SM7>I2 GW>OE3 S5>EA5 UR,SP3>F G>SV2 ZA,9A>PA 16-1700 I3>LA OE6,I0,I3>DL LZ2>HB 9A,ZA>ON PA,DL>9A YT1,ZA>PA ON0SIX,G>OE3 LA,DL>I3 PA>CT ZA>PA,DL LY>F SP3>HB LA>EH3 17-1800 CU3URA>F LZ1,YO3KWJ,YU1,YO7,YO6>PA LZ2,T9>DL 9A>LA YT4>OZ I5>LY ZA,YU7>OZ CU3URA,CT>ON UR>9A OZ6VHF>LA UU5SIX>9A,I1 UT5G>9A CU3>CT 19-2000 CT>PA,DL CU3>CT CT3>D44 I0JX>PA GB3MCB>CN 20-2100 I8>SP2,ON PA>I8 SP7>I5 ZA>F I9>DLYU1>I1

Es at 144MHz, including UK at 1512-1605UTC

May 28 0456 OH5RAC>SP6 05-0600 OH5RAC>SP6 OE3XLB>OH5 OZ7IGY>RU3 OH5RAC,OH5SIX>9A 06-0700 OZ>RU3 A45XR>OZ8ZS,OZ5AGJ,DL9USA OH5SIX,OH5RAC>OE3,HA1 YU1EO>SM5 UR>DL A61AJ>IT9RYH ES0SIX>OE3,HA1 07-0800 5B>UR OE6>SM6 UT5G>DL UR>DL YO5>LA 08-0900 UU5SIX>SP9,I0 SM1,UR>I0 OD5SIX>SV1 A45XR>LZ5UV,4Z5LA,SV1DH,SP2MKO A45WD>SP2MKO,SV1DH,SP5ANJ 4X>ST2DX SP8>PA 09-1000 I6,I0JX>SM5 UU5SIX,SV1SIX>SP6 SP9>PA GB3LER>OH5 OZ6VHF>OE6 UR,OZ>9A LA>DL,9A OM3,YO5>PA GB3BUX,UU5SIX>HA1 9A>DL SK0>I5 10-1100 ST2DX>T9CC,IW0EUI EH3>HA1 UT75G,UU5SIX,G>9A CT3>,SQ9,9A OZ,PI7SIX>I0 OE3XLB>LA I0>PA SV1>5B(very s4hort) CN8MC>F 11-1200 F>OE6,9A ON>SP2 EH7>I2 CN8MC>F,I1 OZ7IGY>EI OE6>EH3 5B4CY>F,SV1 12-1300 ED5>OE5 I0JX>EA5 HB9SIX>EA3 CU3URA>EA7 CT0SIX>EH1,I5,I7,I0 UT5G>LA GM>I0 13-1400 EH1>I0 S5,OE6>RU3 UT5G>SP6 UR>OZ,DL ,OK1 1342 FMbc(89MHz TA)>OH1(Es)14-1500 UR>OZ I0,I7,I8>EA7 CN8MC>F 15-1600 CN8MC>I5 16-1700 LZ2CC>DL CN8MC>EA3 UT5G>I1 1905 K1WHS>IW5DHN(eme)

May 29 05-0600 UT5G,LZ1JH,YO3KWJ>I0 06-0700 9H>SP9 OZ6VHF,UR>LA SV1SIX>I1,HB OH9SIX>SP5 UR>OZ 07-0800 OH6>SP9 9H>F UR>SM5,I2,OZ OE6,S5>I9 F>SP9 GB3LER>F I9>SP6 ZA>EA5,SP7 4X>OK1 UT5G>HB 9A>RU3 I9>HA1 08-0900 I9,4X,GI,GM,EI,LZ2>DL CT>PA GM>HB,F I9,GB3BAA,YO3KWJ>F CT0SIX,UR>I5 UU5SIX,I9>HA1 YU1>LA ZA>OK3,I1 EI>DL,PA,ON PA>CN 4X,OD5SIX>I1 I0JX>EA1 UR>I8 LX0SIX,GB3BAA>CN F>LA 09-1000 GM,5B>F S5,9H>LA UR,OZ,ZA,EH1>DL YO3KWJ,ON0SIX,GB3LER>EI GB3MCB>CN ZA,UR>OZ SV1>I3 CT>I5 YO6,CT>OH2 4X>I1 CT>YO5 9H,I2>ON GM,YT1,I6>EA1 EH3>9A,HA1,OE8 10-1100 ZA,GM>HB GW>SM5 9H,CT>ON DL,GM,S5,9A>EA1 EH3>SP9 CT>OK1,DL,EH1,SP6 G,LX0SIX,HB>LA I8>I2 SM7>EI EI,5B>SP9 OH9SIX>SP2 EH2>PA GW,EH1>DL GB3MCB>OZ S5>OE1 11-1200 G>DL GM>HB EH2>SP6,SP7,OZ,PA OY6SMC>F EH1>PA GM>I2 G>G(bs) 12-1300 LA,OZ,SM,GM>F EH1>PA G>CT,CN GM>I2 OH5SIX,GB3BAA,GI>SP9 EI>DL,PA OY>DL,HB GM>OK1 DL>ON(sc) GB3LER>OE2 F>SM0 FX4SIX>EI 13-1400 GM>HB,DL,SP7 EH1,CT,SM7,EH3>PA OK1>LA OH1>ON EI>I2 LX>OH6 OE3XLB>RN6 GW>LY GB3LER>EA1 14-1500 OY6SMC>SP6 PA7SIX,SV1SIX>EI EI>EB1,PA,I1 UT5G>9H SV1SIX>I1 G,OY>PA 15-1600 OY6SMC>DL,PA DL,HB>ON OK1>SP9 9H>OK1 SV3>I3 16-1700 SV1SIX>I5,SP6,SP9 LY0SIX,I1,DL>EI GB3LER>HB,SP8,EB1 F>LA GM>SP6 OY6SMC>HB,DL TF3SIX,LA7SIX>DL SV1>EH3 LA>CT,PA LA,EI>I5 GM,LA,9H>9A SM,OH>F G>SM5 17-1800 TF>PA,SP6,DL,SP9 SM0,ES2>ON OY6SMC>HA1,S5 LA,GB3LER>HA1 CT>SM5 UR>I5,HA1 GW>EH3 GM>SP6 I4>I0(short) SM5>I1 G>F I9>LZ2 YO7>DL GM>I5,HA6,DL LZ2>LA OJ0>EI UR>9A PA>OH3 1749-1800 FMbc(88-95MHz F)>OH3(Es) 18-1900 GM>HA6,DL,9A,HB OY>DL LA>OK1,PA,HB,ON UR>HB,I5 LA>ON,F,9A YL2>I8 ES4,SM6,LA>PA YO3KWJ,I5>EI LA,UR>OE6 F>OH6 JW7SIX>F 19-2000 OY6SMC>F,PA OH5SIX>PA ON0SIX>LA EI,GI,GM>DL GM>ON,PA GI,EI>SP2 JW7SIX>DL,EI,F OZ,TF>EA4 LA>EA2 GB3LER>F EI,GD>PA 20-2100 UT5G>I8,I0 GM,OH9SIX,OH8>PA SV1SIX,JW7SIX>DL EI>SP2 GM,GW>EI F>LA TF>OH3 21-2200 I9>SP7,SP2,SP9 SV1SIX>PA I5>I0 I0JX>SP9,DL 9H1SIX,I9>DL SP7,OZ>I0 I8>OZ 22-2300 OH9SIX,JW9SIX>SM5 LA7SIX>SP2 OH9SIX>SM7,LA,SM6 TF3SIX>EI LA7SIX>PA 23-2400 OH9>SM6 TF3SIX>EI VE6TA>IW5DHN(eme)

May 30 07-0800 UT5G>4X I0>OZ I3>SV5 G>ON I4>I1,9A EH7>DL 08-0900 EH7,S5,GB3LER>9A I7>CN I9>I1,HB CN>I8 S5>EA1 SV1SIX>I1 G>SM0 ZA,SV3>EA7 GB3LER>HB,DL I9>HB 9H>EA3,I1 G>I5 OY6SMC>9A,DL EH9,I4,GM>9A OZ>LA 9H,ZA>CN I9>IS0 G>SP7 GB3MCB>OZ 09-1000 GB3MCB,9H>CN EH7>PA OH5SIX>OE6 GM>HB I9>I1,ON,I2 EH9>I8,9A,I5 F>OH2 LY,SP3,I5,F>EI G>OZ 9H>ON GI>DL ZA>EA7 CN>9A EI,I4>I5 ZA>CN I8,I9>EA4 EI>I2,9A GU>SM5 10-1100 F>9A ZA>EA7 G>SP7,ON OYSMC,UT5G,GB3RMK,GB3LER,OY6,CT>DL LX0SIX,ON>LA CN>I8,EH6 I9>EH5,CN SM7,EH4,S5>EI CN8MC>I4 I0>CN EI>OZ 11-1200 F>OZ GI,EI,I3>SM0 9H>CN,EA7 I9>EA7 EI>DL OZ6VHF,OZ7IGY,LX0SIX>EI OD5SIX>I0,CN GI>HB EI>SP6,OH1 GB3LER>I1 OH5SIX>HB YO2>PA I4>SP6 CN8MC>I5 OY6SMC>DL 12-1300 OZ6VHF,LA,I9>EI GI>OZ ES2>EA7,DL GB3BAA>LA GB3MCB,I2,F,I9>CN OY6SMC>PA I7>I8 13-1400 OY6SMC>PA CN8MC>LY I4,I1>CN EH7>I5 CT0SIX,LA,OZ,LY,SM3,SM6>EI GB3MCB>LA GB3LER>PA,ON GI,GM>OZ I7>I8 OY6SMC>F,DL 14-1500 LA>EI I2,I4>CN OY6SMC>DL 16-1700 OH7>I5(eme) LZ2CM>F 17-1800 ZA>F I9>ON OH1SIX>EI LA>PA,F OE5>OK1 ON>SM2 EI>ES6 18-1900 OJ0>EI OY>SP2,SP6,SP7,OZ,OK1,DL G>9H LA,GM>SP7 G>LA,SM2 GB3LER>DL GI>ES6 GW>LA GM>OZ 19-2000 EH5>CN 20-2100 LA7SIX>OZ

May 31 0419 OH5SIX>SP6 0558 SM7>F 06-0700 OH9SIX>DL,SP6,OZ OH1SIX>DL OH5SIX>DL 07-0800 OH8,OH3>OZ DL>OH6 OH9SIX>LA OD5SIX>SV1 OH1SIX>DL DL>OH8 ON,OH5>PA SV8>5B 08-0900 GB3LER>DL,OE5 GM>SP6 09-1000 UU5SIX>OH5 10-1100 UR>OH5 I0JX,IK5ZUL>SV5 1231 G>F 13-1400 CU3>EA7 14-1500 LX>DL,PA OD5SIX>HA5,OE6 15-1600 LX,DL>PA 16-1700 UR>9A,I4 UU5SIX>OE6 UT5G>I5 17-1800 UR>SP7,I8,OH5,I0,I5 UU5SIX>SP2,I4 SV1SIX>SQ2 YO9>I0 18-1900 OH1,LA>LY ES6>OZ OH3>SP7,SP6 OZ7IGY>RU3 OH1>OH2 OH9SIX>SP6,SP9 OH5SIX>SP6)H3>5B UU5SIX>I5 LZ2CC>I1 OH8>SP8 19-2000 UR>LA OH3,OH5>DL LY>LA,OZ OH1>SP6 OH6>OH3 PA>LY 20-2100 LY>PA

50MHz PROPAGATION REPORT FOR MAY 2004 BY SV1DH

1. Data for all days (31)
2. Relatively good days on: 2,7,10,12,14,17,25,28,29
3. 48 MHz AF video (3C or 5Z) on: 2,3,23 (R=10%)
4. 55 MHz AF video (5N) on: NIL
5. Opening to ZS6 on: 2 (13-16z) (R=3%)
6. " to 7Q on: 2,8 (R=6%)
7. " to Z2 on: 2
8. " to ST on: 28 (2Es)
9. " to 4X on: 3,17,25,28,29,31
10. " to OD on: 12,23,28-31
11. " to 5B on: 28,29,31
12. " to A4 on: 28 (2Es)
13. " to CU on: 25,26(3Es)
14. " to CT on: 12,15,26,27(2Es)
15. " to EH on: 12,15,23,25-27,29
16. " to EH6 on: 4,12,29
17. " to F on: 1,6,10,14,15,25-27
18. " to I on: 1-3,6,7,10,11,13-17,23,26,27,29,30 (R=55%)
19. " to T7 on: 17
20. " to 9H on: 26
21. " to IS on: 4,12,15,17,26
22. " to EI on: 29 (2Es)
23. " to GM on: 29 (2Es)
24. " to GW on: 10,26
25. " to G on: 14,26
26. " to PA on: 10,14,17,25,29
27. " to ON on: 7,17
28. " to LX on: 10,14,26,29
29. " to OZ on: 8,10,14,23,25,26
30. " to DL on: 7,10,11,13-15,17,25-29
31. " to OE on: 7,11,13,14,25,26,29
32. " to HB on: 1,6,10,15,16,25-27,29
33. " to S5 on: 6,7,10,26,29
34. " to 9A on:2,3,7,11,14,25,26
35. " to YU on: 7,26
36. " to SM on: 14,23,25,26
37. " to LA on: 23(2Es)
38. " to OH on: 11(1+2Es)
39. " to OJ0 on: 26 (2Es?) 227th DXCC entity worked
40. " to ES on: 23
41. " to LY on: 14,26,29
42. " to SP on: 4,6,7,8,10,11,13-15,17,18,23,25-29,31(R=58%)
43. " to OK on: 7,23,25,26
44. " to OM on: 26
45. " to HA on: 13
46. " to YO on: 10,14
47. " to LZ on: 10
48. " to UA on: 13
49. " to UR on: 10,13,14,23,25,26,28,29

50. Special events on:
1 (1200 MUF to HZ>44Mhz)
2 (1230-1430 MUF to HZ>44Mhz)
7 (1715 EH6 to ZD8)
8 (End of TEP season)
9 (1345-1615 GW to W+VE, first of season)
12 (0800 PA to A7 3Es!)
15 (1700 G+OK to 7Q+Z2 TEP+Es; NIL SV)
16 (1930 9H to ZD8)
18 (1145 A4 to JA 4Es?)
18-22(NO Es)
21 (2352 M2.6 flare+0945 LZ to A4)
24 (1100-1245 foF2>10.4 / MUF=32Mhz at 1145+1930 CN to PY1)
25 (1530 OZ+SP to TR Es link)
28 (0615 OZ to A4 3Es+IT to A6 2Es+0830 YA to VK6)
29 (GW to VO1)

51. DXCC entities heard/worked during May 2004 : 45 on 3 cont
52. DXCC entities heard/worked on 29th May 2004 : 17 on 2 cont

73 COSTAS

The Americas

Auroral-Related Propagation.

May 7 0613 K9GUV>W9(EN44 51a)

Other Modes.

Apart from the trans-atlantic openings discussed earlier little of particular note was reported from the Americas - and indeed hardly anything was heard of South America. Contacts between North and South America appear to have been confined to HC into W2 on the 8th and LU into W6,W8 and W0 on the 28th. From Africa, there were reports of CN8 into W1,W2 and W3 on the 14th and of CT3 into W2 on the 14th. These were part of the wider opening into the Iberian countries on the same day. Reports of propagation from the US (but not VE) into the Caribbean and Central America were more numerous, some at least of them requiring 2x or even 3xEs. Within North America Es occurred on more or less a daily basis, with a few trans-continental openings. KL7 was into W6,W7 and VE6 on the 30th.

Almost overlooked: an unconfirmed report of K4EA working SX8A and 4X4BO on the 23rd .

May 1 0059 W3>W8(ms) 0306 VE4ARM>VE5 04-0500 W4>W1(ms) W3>W1 W8>W8 W9>W0(ms) 12-1300 W1,W8,W4(ms),W8>W1 W3,W0>W4 14-1500 W4>W9 W1>W1 W9,W4>W4 W6>W5 1556 W3>W4 1602 W0>W1 1727 W3>W0(ES+ms) 19-2000 KP4>W4,W3,W1 VP9GE>W3,W4 KP2>W1,W4 47.9(CE)>W4 20-2100 VP9GE>W2 W4>W5 VP9GE>W2,W1,W3,W5 21-2200 W4,W5>W5 VP9GE>W5,W2 W4,K5AB,W3>W4 2216 W4>W4

May 2 00-0100 KP4>W4 14-1500 W4>W1 W0>W9 CO2OJ>W4,W1 W4>W5,W3 W3>W5 15-1600 W4>W3,W4,W1,W2 48250>W2 K0KP>VE6(ms) N0UD,N8PUM>VE6 W2>W1 16-1700 W4>W1,W2 W3>W4 17-1800 47.9(CE)>W4 W3>W9(sc) 19-2000 K4TQR,W5,W3,W2>W1 W5>W3 20-2100 W4>W1 W2>W3 48.3(CE)W4 21-2200 K0KP,K9MU,W9JN>W4 22-2300 W4>W9 VE3>W2 W5>W3 K8PLF>W2 W1>W1

May 3 0049 N8PUM>VE6 0115 N8PUM>W4 02-0300 VE3,W8,K0KP>VE6 N8PUM>W3 03-0400 W3>VE6(2xEs) W8,W0>VE6 0457 N0LL>W3 N8PUM>W1 05-0600 W4,W5,W0>W2 0604 W0>W2 15-1600 W5>W9 W0>W8 W8,VE2>W5 16-1700 W8,W0>W5 W5GPM,N0LL>W3 W8>W0 W5>W8 17-1800 W5,N0LL>W1 W0>W4 18-1900 W0>W1,W3 W9,VE4VHF,K0GUV>W3 20-2100 W0>W3,W2 VE5,N0UD>W8 23-2400 C6AFP>W0 KA0CDN>W8

May 4 00-0100 W0>VE3,W3,W8,VE2 W9>W1 VE2>W4 W1>W3 01-0200 W8>W1 VE4>W5 W9>W4,W3,W0 W0>W8,W4,VE3 02-0300 W3>W3 W0>VE3,W9,W3,W8 03-0400 W0>W9 1236 W4>W3 14-1500 W7>W5 16-1700 W9>W9 20-2100 W1>W1 W0>W9

May 5 14-1500 W5>W2 15-1600 KA0CDN>W2 2209 W1>W1 2342 W4>W1

May 6 00-0100 W0>W4,W0 0120 W7>W2 02-0300 W8,W2>W2 03-0400 K0KP,N0UD,N8PUM,VE3>VE6 K0KP>W7 04-0500 W7>W2 KA0CDN>W7 14-1500 W2>W9 VE3>W415-1600 W1>W9 K0KP>W3 W9>VE9 N0LL>W0(t) 22-2300 W4>W5 2356 W2>W1

May 7 0408 W3>W4 1758 W8>W3 1814 W7>W7

May 8 1232 W4>W1 13-1400 HC2FQ>KB2WTB W4>W1 14-1500 W3,W4>W4 W4>W1 W9>W0 16-1700 W4>W5 N8PUM>W8 17-1800 W0>W6 W7>W7 18-1900 FY1FL,9Y4AT,HI8ROX>KP4 W2>W1 19-2000 HI8ROX,YV5OHW>KP4 FM5WD>YV5 FJ5DX>KP2 KP2BH>HI8ROX, YV5OHW 20-2100 P49MR,PJ2BR>KP4 XE1KK>XE2 2135 HI8ROX>YV5 FJ5DX>YV5 22-2300 W2,W3>W1 23-2400 W1,W2,W3,W8>W1 W3>W4 W5>W5 W7>W7 W4,W8>W8

May 9 00-0100 W1,W2>W2 W4>W4 01-0200 W5>W5 02-0300 W5>W5 W4>W4 W6>W6 03-0400 W8>W2 W5>W7 12-1300 W5>W3 W3>W1(ms) W1>W4 13-1400 EA7KW>K7BV/1 ON4IQ,CT1LTN>W1JJ 14-1500 F6KHM>K1GUN,W3MEL F5CT>K3OO VE6>W9(sc) G8BCG>K7BV/1,W1JJ F6CBH,G0CHE>K7BV/1 CT1DYX>K1GUN 15-1600 F6CBH>K3AX, N2WM(10w) M0CBM>K2ZD EAtv>W4 16-1700 ON4KST>K1GUN,K2MUB ON4IQ>K7BV/1, K1GUN,K2MUB,W3JO VO1ZA>VE9 GI6ATZ>K7BV/1 GD0TEP>K1GUN,K7BV/1 MM0AMW>K7BV/1,K2MUB 17-1800 W7>W7 1912 EAtv>W4 22-2300 K6FV>VE6 W0>W3 23-2400 W0>W2,W4 W5>W2,W3 W0>W3 W5GPM,K0UO>W1 VE3>W9,W5 W8>W4 W1>W0

May 10 00-0100 VE3,W5>W0,W4 W0,W3,W5>W3 W5,W9>W4 W4>W8 W1,N8PUM>W5 W5,W0>W2 KQ4E>W0 W9>W1 K0KP>W4 W5>VE3 01-0200 W8>W1,W5 W5>W0,W8,W2,W3 W9,K0KP>W5 W7>W8,W0,W2 WR9L>W0 W9,W4>W4 W5>VE3,W2,W8,W5 02-0300 W8>W3,W8 W5>W2,W4 W0>W4 W9,W0>W0 03-0400 W4>W5 W0>W4 14-1500 W1>W3 W0>W4 15-1600 W0,W4>W3 1633-40 W4>W3 VE3UBL>W4 17-1800 W9,VE3>W4 18-1900 W2>W3 W4>W4 19-2000 W4,W1>W1 W3VD>W5 W5>W1,W3 20-2100 W3,W4>W3 WB5LLI,C6AFP>W1 VE3>W4 W0,W2>W5 W4>W2,W5 21-2200 W9,W4>W1 K0KP,N8PUM, K0GUV>W2 VE2RCS>W0 VE1SMU>W3 W5GPM>W6 W6,W4>W2 VE1>W3,W0 W2,W3VD, W4,W6>W5 K0KP,W1,VO1>W1 VA2MGL>VE3 VE2>W9 22-2300 W5>W0 W4>W2,W9,W1 W7,W5,VP9GE>W5 VE2,VE3>W9 W0>W1,W2 W4>W4 W3>W3 VE2>W0 KP4>W3 23-2400 W4,W6,C6AFP>W5 W4,C6AFP,W6>W2 VE4,W0,N8PUM,W6>W3 VE2>W0 W0>W2

May 11 00-0100 W0>W0,W1,W2 W4>W5 C6AFP>W5 W5>W2 01-0200 W4,W2,XE1>W5 XE1KK>W4,W2,W0 02-0300 W4,XE1>W4 W7,W9,W0,VE4>W5 W0>VE3,W8 N8PUM>W5,W0 K8PLF,W0>W0 W4>VE9 W3HH,W9>W0 03-0400 W6>W8(2x) W7,W0>W5 W7>W0,W1,W9,W5 W4>VE9 W9>W1 VE4VHF>W3 W0>W0 W8,W0>W4 W5>W7 K0GUV>W3 W0,W6>W2 04-0500 W0,WA7X,N7LT,W6>W0 VE4ARM>W3 W7>W9 VE5>W5 13-1400 W1>W1 1529 CO8LY>W4 18-1900 VE4VHF>W2 CO8LY>W3 20-2100 W7>W7 21-2200 W4>W3 22-2300 9Y4AT>W3,W4 23-2400 W4>W4(bs) W4>W2 C6AFP>W3

May 12 00-0100 W4>W2 C6AFP>W1,W3 W2,W3,W4>W3 01-0200 W3>W3 W8,W4>W4 11-1200 K0ETC,W5GPM,W1>W1 W0>W2 K0UO>W2 12-1300 K0KP,W8>W4 W5>W1,W4,W2 VO1ZA>W1,W2 W9,W3>W5 13-1400 VO1ZA>W3 W0,W5>VE3 VE4VHF,W2>W4 WR9L,W8,W0>W5 W6,W5>W2 14-1500 VE3,W8,W9,W0>W5 W0>VE3 W9>W1 K9MU,K0KP>W2 N0LL>W8 W1>W4 15-1600 W9,K0KP>W5 W4>W6 VE1>W4,W5 KS5V,K0ETC,W8,W6>W0 16-1700 W5>W0 W0>W6,W1,W2 XE2>W7 N0LL>W4 W7>W5,W0,W4,W7 17-1800 W7>W4,W6

W4>W9 18-1900 W5,W0>W4 VE6ARC,W0>W6 W0>W7 19-2000 W0>W6 W7>W7 VE7FG>W6 20-2100 K0EC>W6 W7,XE2>W7 W0>W6,W7 21-2200 W5>W0 W7>W7 22-2300 W4>W0 W0,W4,W9>W5 23-2400 W4,W9,W0,W7>W5 W0>W4 W5>W8

May 13 00-0100 W5>W4 W0,W7>W3 W3,W7,W8>W5 W5>W0 W0>W3,W9 01-0200 W5>W8 KD4HLG,KE4SIX,KD4NMI,W9,N0LL,W7>W5 W7,W0>W4 W6>W0 02-0300 W7,W1>W5 W0,W7>W0 W0>W4 W5SIX,W5RP>W2 03-0400 W7>W2 W5>W7 0501 W0MTK>W5 1158 W4>W4 1324 W1>W8(sc) 1437 W4>W8(t) 15-1600 W8>VE3 W7>W7 16-1700 W5RP>W4 19-2000 KP4>W4 22-2300 FM5WE>PZ5RA W4>W8 23-2400 W4>W8,W4,W9 CO2OJ>W8 VE3>W4 W7,W0>W5

May 14 00-0100 W3,VE2>W4 W4,W3>W2 K5AB>W0 K0UO>VE3 W4,W5>W8 01-0200 W5>W3,VE3,W8 K0UO,XE2>W4 W5>W1,W2 W0,W8,W5>W8 02-0300 W5>W3 W8>W5 03-0400 K4TQR,K0ETC,W5GPM>W0 0432 K0KP>W0 13-14 W4>W4 14-1500 W4>W0 16-1700 WB5LII>W2 W4>W9,W0 17-1800 W3>W5 W8>W8 K8PLF>W5 18-1900 VE1>W3 W4>VE1 W3>W5 W5>W8 19-2000 W3,W8>VE1 K0UO>W8 9Y4AT>W1 20-2100 VE3>W4 FG5FR>VE1 W3>W0 W0>W2 21-2200 EH4EED>N3JPU,K2PS VE1>W8 W3>VE1 CT1EPC>W2YE,K2MUB CT3FT>W2YE CT1HZE>K2MUB CT1FMX>K3ISH 22-2300 YV3AB>NP3CW CT1HZE>N3II CT1FMX>K2MUB TG9AFX>K4RX CN8TW>W1RA V31MD>K4RX 23-2400 9Y4AT>HI8ROX CN8KD>N2NB,K2SIX,W3JO,N2MB CT1EAT>N3II V31MD>N4CC VO1>W3 KP4>KP2 W4>VE9 VE1>W3

May 15 00-0100 W9>W6 01-0200 W6>W7,W5 W5>W8 W2>W0 02-0300 W4,W6>W0 03-0400 W0>W4,W7,W6,W0 W7>W6,W7 W5>W7 13-1400 48242>W2 W5>W9 WB5LLI,K5AB>W4 14-1500 W0>W4 KS5V>W0,W5 W5>W6 W4,W5GPM,K0ETC>W7 15-1600 W4,W5>W7 W0>W5,W0,W6 VE4ARM>W4 16-1700 W5GPM>XE2,W6 W6>W7 W5>W5 16-1700 N0LL>W3 19-2000 W2>W1 20-2100 K0KP,W3>W0 21-2200 W2>W1 2238 48242>W2

May 16 1318 VE3>W8(t) 1732 W2>W3 18-1900 VE1>VE1 19-2000 W4>W4 2027 48242(CT),48250(EA)>W2

May 17 0032 W3>W0 0129 W0>W7 02-0300 W5>W5 1204 W5>W4 15-1600 W1,W2>W3 19-2000 W7>W7 KA0CDN>W6 20-2100 K0ETC>W3 W0,W7>W6 K5AB>W8 21-2200 W7>W6 K6FV>W0 WB5LLI>W8 23-2400 W7>W7 K0ETC,VE6ARC>W0

May 18 00-0100 VE6EMU,VE6ARC>W0 W7,W0>W7 W3,W9>W3 W9,W0>W1 6Y5/YO3YB>W4,W8 KP4,W8>W4 01-0200 W8>W5,W8 VE3>W4 W9,W0>W1 W4>W8 W1>W5 W7>W7,W5,W0 W9,W0>W3 02-0300 W4>W0 W5>W4 W4>W2,W4 W5>W3 W8>W8 0358 N0LL>W7 14-1500 48250(EA)>W2 16-1700 W0>W1 W7>W6 17-1800 W3,W7,W8>W5 W5>W2 18-1900 KD4NMI>W0 W8,W9>W5 K5AB,W5RP,W0>W8 19-2000 W3>W5 VE3>W0 W5RP,W5GPM>W8 K0UO>W3 20-2100 K5AB>W8 23-2400 K0KP,W3>W0 W4>W9 W2>W1

May 19 00-0100 W3>W0 W4>W5,W9 W5>W8 01-0200 W5>W8 W3>W3 W1>VE9 0250 W8>W8 04-0500 ZLtv>W6 1442 W1>W3 15-1600 W3>W3 W5>W8 WR9L,W9VW>W5 16-1700 W5>W8 K0HA>W4 2229 K7BV/1>W1

May 20 00-0100 K4TQR>W4 9Y4AT>FY1FL W3>W8 01-0200 W3>W1 1857 W7>W6 19-2000 W7,KA0CDN>W6 K6FV>W0 W7>W7 20-2100 W7,VE7>W6 21-2200 W5HN>W3 W4>W8 VE3,W0,W2>W4 22-2300 W5,W4,W3>W1 W4>W9,W8 W9>W9 VE2>W4 23-2400 W1>W3

May 21 0033 W3>W8 W5GPM,W0>W1 02-0300 K0UO,AC3A>W3 03-0400 W5>W6 W7>W5 0448 KL7NO>W7BA 12-1300 VP9GE>W1,W3 13-1400 VP9GE>W4,W8 W4>W1,VE1 14-1500 C6AFP>W1 W4>VE1,W1 W2>W4 15-1600 K4AHO,C6AFP>W9 W1,W3>W4 W6>W7 C6AFP>W1 16-1700 W4>W2 VP9GE>W2,W4,W3 W5>W5 KD4NMI>VE1 17-1800 W4>W1 18-1900 W4>W1 19-2000 W3>VY2 W4>W1 VE3UBL,W4,WA1OJB>W4 W4>W1 20-2100 VE2RCS,VE3UBL>W4 TI2NA>W4,W1 W4>VE1 W4CHA>W2 W3CCX,K8UK>W4 W1,K4AHO>W1 C6AFP,W4>W3 CO2OJ>W4,W1,W3 CO8DM>W3,W1 C6AFP>W8 21-2200 K4AHO>VE1 CO8DM>W3,W5 CO2OJ>VE1,W8,W4 W4>W2,W8 C6AFP>W1 VO1ZA>W1,W2 W4>W1,W9,W5 W4CHA>W8 EAtv>W8 22-2300 KS5V,W4>W4 W5>W3 C6AFP>W8 K4AHO>W1 23-2400 W9,W4>W5

May 22 00-0100 C6AFP>W8,W2 KE4SIX,K4AHO>W1 TI2NA>W4 01-0200 W6>W5 W7>W9 XE2>W7 02-0300 W7>W9,W0 04-0500 K0UO>W1 05-0600 W5HN,K0ETC,W5GPM>W3 1108 W1>W1 12-1300 W8>W4 W4>W5 13-1400 CO2OJ>W5,W4 K5AB,W7,KS5V>W4 P49MR>W4,W5,W1,W0 W5,W7>KP4 14-1500 W5>W4,KP4 W2>W1 CO2OJ>W4,KP4 C6AFP>W1 W4>W0 P49MR>W8 W8>W5 W1>KP4 V44KAI,TI2NA>W4 15-1600 P49MR>W3,W8,W1 K0EC>W4 W5,W7,KA0CDN,N0LL,W0MTK>W5 W9,W5RP,KS5V,W5SIX>W4 W4CHA>W8 C6AFP>W1,W8 16-1700 W0>W6,W5 W9,W7,W5RP>W4 XE2ED>W5 W5>W5,W7 W4>W7 17-1800 W5>W4,W5W0 C6AFP>W1 WB5LII>W0 K5AB,W5RP>W8 W5HN,K5AB>W9 18-1900 W5>W8,W9>W0,W5 W0>W7 W4>W0 W5SIX,W5RP,W7>W9 W0>VE6 19-2000 K0KP,W9JN>W5 W9>W7 K0UO>W9 N7LT>W5 20-2100 W0>W9 W6>W5 W4CHA,W5,W8,W1,W3>W1 W7>W9 W4,W1>W2 21-2200 WB5LLI,K4TQR>W1 C6AFP>W1,W3 W5>W3,W6 W4>W3,W2 W3,W8,KQ4E,W9>W5 W4CHA,W7>W0 W7>W4(2x) 22-2300 V44KAI>W4 W9,W4>W3 W4,W1>W2 C6AFP>W1,W3 W4>W1 23-2400 W8>W5 W4>W1,W3,W8 W3CCX,VE3>W4 C6AFP>W1 W5>W9 W0>W7

May 23 00-0100 W4>W3,W5 W7>W5,W0 W8>W8 W5>W5,W8 01-0200 N0LL>W6 K6TGG>LW9EOC W7>W7 02-0300 W5>W6 03-0400 W7>W7 0439 W6>W7 1206 W4>W4 13-1400 W5,CO2OJ>W5 VE2,W1>W2 V44KAI,W1,KP2L>W4 W9,W4>KP4 14-1500 KP4,PJ2BVU,KP2>W4 W2>W1 W4>W5 15-1600 P43JB,KP4,V44KAI,PJ2BR,HI8ROX, P49MR>W4 K0KP>VE6 XE2>W5 16-1700 V44KAI,P49MR,KP3,KP4>W4 W1>W1 HI8ROX>NP3 XE1KK>W7 17-1800 P43JB,KP4>W4 W7>W6 W1>W1 48242>W4 XE2>W5 18-1900 K0UO>XE2 W7,W0>W6 48242,48250>W2 19-2000 W4>W8 20-2100 FY1FL>NP3 W4>W8 22-2300 SX8A,4X4BO>K4EA(??) 23-2400 W4>W4

May 24 00-0100 W4>W3,W5,W4 C6AFP>W3,W4 W3>W3 01-0200 W4>W4,W5 WB5LLI>W0 02-0300 K0EC,W5,W4,W3,W7>W5 W3>W3 KA0CDN>W5 03-0400 W5>W4,W6 W7>W0,W9 W0,W7>W5 W0MTK,WA7X>W0 04-0500 W7>W5 13-1400 W1>W1 15-1600 K0HA>W6 W5>VE6 W2>W3 16-1700 KA7BGR>W0 W6>VE6 KA0CDN>W6 W7>W5,W6 17-1800 W7>W5 N7LT>W0,W5 18-1900 N7LT>W5 WA7X>W9,VE6 W9>W6 W7>W0 XE2ED>W7 19-2000 W3VD>W3 20-2100 N0UD,W0MTK>VE6 W7>W0 21-2200 FM7>YV4 23-2400 W4>W4 W5>W5

May 25 00-0100 K0KP>W0 VE4VHF>W5 K4TQR>W0 01-0200 W0>W0,W5 WR9L>W0 W5>8,W9 KE4SIX>W0 02-0300 K0HA>W3 VE4,W0>W7 W8>VE6,W4,W7 W6>W0 W7>W5 W9,W8,W0VE6 03-0400 W0,W9,K6FV>VE6 W5>W4 VE6>W7,W6 VE6ARC>W7,W0 K0UO>W4 04-0500 W4>W0 K0KP>VE6 VE6>W6 1344 K4AHO>W1 1411 K5AB>W0 15-1600 W4>W3,W2 K0HA>W7 W6>W5 16-1700 W0MTK,K0EC>W5 2256 VE1>W4 23-2400 W1,VE1,VE2RCS>W4 W4>VE9

May 26 00-0100 WA1OJB>W4 W4>VE9 01-0200 W9VW>W0 W6>W6 VE9>W4 W5>VE9 02-0300 K4AHO,W4CHA,K0KP>W3 W9,W5>W8 W4,W1>W9 W0>W5 W5,W7>W4 03-0400 W5RP,W7,XE2>W0 W6,W7>W5 W7>W4 VE6,N8PUM>W9 WZ8D,K0KP>VE6 04-0500 N8PUM,XE2,W5SIX>W0 VE6EMU,W0>W9 WB5LLI>VE6 13-1400 VE2>W4 14-1500 W1>W4,VE9 W1>W8 15-1600 W5>VE9 WR9L>W2 VE1>W8 17-1800 W7>W9,W8 VE1>W0(2x) W1>W9 18-1900 W7>W9 W8>W6 19-2000 W7>W9 21-2200 W5>W4,W3 W0>W4 22-2300 V31MD>W5,W0 TI2NA>W0 W4>W5,W0 W1>W1 KS5V,K5AB>W9 C6AFP>W3 23-2400 W1,W9>W9 W4>W3 W5>W4,W9 VE3>W5 C6AFP>W1,W0

May 27 00-0100 V31MD>W4,W1 W5>W1,W9,W3,W8 W0,W9>W4 W9AFB>W0 W6>W9 W7>W5,W3 W0,W3VD,W4>W0 KQ4E>W5 W4>W8 01-0200 K0UO,W5RP,W9>W9 W5,W0>W8 W0,W5>W4 W7>W5,W0,W9,W4 K0EC>W3 WR9L>W0 W5>W8,W3 W6,W5,W0>W5 02-0300 VE6EMU,W5,W8,KE4SIX>W8 W6,W0>W5 W9>W7 W4CHA>W0 W0>W6,W8 W7>W4,W5 03-0400 W0>W6,W9 W8>W8 W5SIX>W4 W5>W0 04-0500 W9,W0>W7 W6>VE6 05-0600 K6FV>VE6 1148 W5>W4 1350 W0>W7 14-1500 VE6EMU,VE6ARC>W0 15-1600 VE7FG>W0 W7>W9 VE4ARM>W0 16-1700 EuTV>W0 W4,W1>W0 49744/R1>W0 17-1800 W2>W1 18-1900 K6FV,VE4VHF>W0 W7>W1 19-2000 W1>W1 2151 W5RP>W9 23-2400 W6,AC3A>W3 W5HN,N0LL,W5RP>W8 W3>W2 W0>W5 K0HA,N0LL>W4 WB5LLI>W9

May 28 00-0100 W5>W8 N0LL>W4 W6,W9>W3 N8PUM>W0 VE3>W5 01-0200 W4>W0 W0>W3,W4 W5>W4 02-0300 W5>W4 W4>W0 W5>W1 0338 W0>W9 0408 WA7X>W9 1342 VA2MGL>W2 14-

1500 K5AB>W7 W0,W6>W5 W6>W9 15-1600 W5>W4 N8PUM>W5 16-1700 KS5V>W4 W5>W8 VE4VHF>W7 17-1800 K5AB>W4 W1>W1 18-1900 W5>W0,W4 19-2000 W5>W5 20-2100 KP4>W4 21-2200 W0>W7 W4>W0 W8>W5,W4 W5>W4 22-2300 W4,W5>W8 W4>W1,W8,W5 K4KWK>W0 FG1GW>W4 W9>W5 NP3CW>W4 23-2400 W4>NP3 W4CHA,K4AHO>W0 W5>W3,W4,W8 FY7THF>K0GU(3xEs),K4RX KP4>W0 V44KAI>K0GU(3xEs) W4,W5>W3 W5RP,K5AB>W8 W9,W2>W5

May 29 00-0100 W5,W8,W6,W0>W8 W9,K0OU>W3 W4,N8PUM>W5 W9>W0 W0>VE3 N0LL>W9 01-0200 KD4HLG>W0 W5>W4 W9>W1 W7>W5 02-0300 W1>W5 05-0600 W4>W1 K0UO>W0 W3>W7 0827 VA2MGL>K2MUB(early) 12-1300 W4,W5RP,K5AB,W0>W4 13-1400 K0UO>W4 W4>W1(ms) W3VD>W4 14-1500 W0,W9>W7 XE2ED>W5 W7>W9 15-1600 W0>W7 21-2200 9Y4AT>FY1FL22-2300 NP3CW>W4 9Y4AT>FY1FL 2338 TG9NX>W4

May 30 0108 48239>W2 02-0300 W6>W6 03-0400 W9>W9 XE2>W7,W0,W6 W7,W0>W6 K6FV,W0,W7>W0 04-0500 W7>W6 K6FV,XE2ED,VE7>W0 XE2>W1 VE4VHF>W7 K0C,K0KP> VE6 05-0600 W6>W7 NL7ZW,KL7/KG0VL, N8PUM, K6FV>VE6 KL7NO>KE7V,KG6I 1250 W1>W4(sc) 1427 W4>W1 1516 XE2>W5 16-1700 XE1>W5 K0KP>VE6 17-1800 W6>W0 W5>W5 W9>W0(sc) 18-1900 9Y4AT,PZ5RA>FY1FL 19-2000 PZ5RA>KP4 20-2100 W7,W6>W5 48.3(CE)>W4

May 31 0002 W8,W9>W4 1059 48242,48250>W2 1138 VA2MGL>W2 12-300 W1>W8(ms) W1>W9 13-1400 W1>W3 VP9GE>W2,W1 VE2>W3 W1>W2,W3,W4 W8>W1 14-1500 W1>W2,W3,W4,W9 W4CLM,KE4SIX>W9 W0,W1,VE3>W4 W8>W1 VE2>W2 15-1600 W0>W2 W3,W0,W9,W5>W1 VE3>W0 W4>W9 VE2,W0>W4 VE3UBL,W8>W5 N0LL,WR9L>W3 16-1700 W5,W0>W1 VE5>W8 W8>W5 W0>W4,W3 W5>W2,W3 KD4HLG>W4 N8PUM>W0 17-1800 VP9GE,W5>W2 W9>W5 W7>W3 W4>W9 W0>W3 N0LL,W1>W4 18-1900 W5>W1,W2 K0GUV,W6>W0 K0UO>W3 W9,W8,W2,W0>W4 19-2000 W5>W8,W1,W2,W3 VE1>W8 W7>W9 W8,K0UO>W2 W9JN>W0 W0,W5>W3 20-2100 W5,K0UO>W3 W9VW,K0KP,K0GUV>W0 VE4,N0UD,W5,W8>W5 W0>W4,W7 21-2200 W0>W3,W0,W4 N0UD,W8>W5 W7>W3 W3CCX,VE4VHF,VE4ARM>W0 K0UO>W2 22-2300 VE3>W0 W0>W2 N0LL,K0KP,VE4VHF>W4 K0UO,W0MTK>VE5 W7>W3(2x) VE3UBL>W0 W8>W5 23-2400 W7>W3 W9,W0>W5 W3>W3 KA0CDN,K0KP>W4 W1,W8>W7

Asia/Pacific

Japan

While this was a lean month by earlier standards, VK was worked or heard on no fewer than 15 days (though ZL not at all). Again, a substantial proportion of the reports related to beacons, suggesting that the VKs were either inactive or somnolent (though it must not be forgotten that some of the VK beacons are sited in areas with few resident amateurs, if any.

The highlights of the month, However, were a contact with A4 on the 18th, for which SV1DH suggests 4xEs and reception of KL7 and the K6FV beacon (which beams across the Pacific part of the time) on the 30th. JA1VOK notes a quiet month for sporadic E although there were fairly frequent reports of HL<>JA by this mode.

Japan<>Australia

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

Japan<>Australia

VK4	6 days 1 13 17 18 19 23
VK5	1 day 1
VK6	14 days1 3-8 10 13 14 17-20
VK8	1 day 1

6m DX results in JA during May from JA1VOK

DATE	TIME(UTC)	STATIONS
5/ 1	0620-0900	C21SIX/b, FK8CA,8SIX/B, V73SIX/B, VK4,5VF/b,6JJ,6RO, VK4KDD/6,6RBU/b,6RPH/b,6RSX/b,8GF,8RAS/b
3	0450-0610	V73SIX/B, VK6JQ
	0828-0830	HL1LTC
4	0620-0840	JD1BLK, VK6JQ,6RSX/b
5	0630-1010	BD4SDB, HL, VK6JQ,6RSX/b, XV3AA
6	0800-1000	HL1LTC, VK6RSX/b
7	0700-0730	VK6RSX/b
8	0750-0930	VK6JQ,6RSX/b
9	0500-0700	9M2TO/B, FK8SIX/B
10	0210-0830	BN0F, HL, VK6RSX/b
13	0540-0600	BD4SDB
	0900-1000	VK4ZJR,4RTL/b,6JQ,6RSX/b
14	0808-0830	KG6DX
	0930-1000	VK6JQ,6RSX/b
16	0800-1120	HL2NF, KH0/JJ1QKM, VR2XMT,SIX/b
17	0730-1000	KH0/JJ1QKM, KG6DX, VK4RTL/b,6RSX/b
	1220-1400	BG8ABU (JA7), HL1LTC,5BMX
18	0720-1300	DS5JQK, VK4RTL/b,6RSX/b
	1151-1210	A45XR (JA7)
19	1000-1130	BD4ACW, DS5JQK, VK4CXQ,4RTL/b,6RSX/b
20	0038-0040	BG9BA
	0705-0730	9M2TO/B
	0920-1030	VK6JQ,6RSX/b
21	0200-0600	BG9BA, JD1BKZ
23	0200-1400	BG9BA, C21SIX/b, HL, VK4RTL/b, VR2XMT
24	0250-0300	VR2XMT
	0900-1500	BD4SDB, DS1CCU,HL1LTC, VR2XMT,SIX/b, UA0CQ
25	0257-0330	BG9BA, HL1LTC
26	0335-0700	BD4SDB, HL
27	0200-0400	BN0F, VR2SIX/b
	0700-0800	BG9BA, HL1LTC, VR2SIX/b
28	0150-0200	BN0F
29	0110-0300	BV2B/1,BN0F, DU1/N6HPX
	0930-1030	BN0F,BV6JJ
30	0159-0530	BD4SDB, BN0F,BV3FQ,BX2AB,BX6AD
	0650-0710	KL7HBK, K6FV/B
31	0800-0910	C21SIX/b (JA8), KH0/JA3EGE

Elsewhere

May 1 06-0700 VK6JJ,FK8SIX,VK8RAS>HL1 07-0800 VK6RSX,VK8GF,VK4KDD/6>HL1 09-1000 VK4KDD/6>HL1

May 3 08-0900 JE7YNQ>HL1(Es) JA1>HL1,DS4

May 5 0431 JA6YBR>HL1(Es) 07-0800 JA2IGY>HL1

May 6 08-0900 JE7YNQ,JA1>HL1 0952 JA2IGY>HL1

May 7 0346 JE7YNQ>HL1 0956 JA8>HL1

May 10 0639 JG1ZGW,JA2,JA3,JA7>HL1(Es) JA8>DS4 0741 DS4>HL1(sc) JA>DS4

May 13 1009 VK6RSX>HL1

May 14 0808 JA2IGY>KG6DX

May 16 0431 JA6>HL2 0541 C21SIX>KG6DX

May 17 0735-6 JA8ZND,JA2IGY>KG6DX 1122 JA2IGY>HL1 12-1300 JE7YNQ>HL1 JA7>BG8ABU 1347 YB1MH>BG8ABU

May 18 00-0100 JA6YBR>HL1(Es) JA2IGY>HL1 0722 49750(UA)>VK2 1040 JE7YNQ>HL1(Es) 1113 JA8>HL1

May 19 0049-51 JA8,JE7YNQ>HL1(Es) 02-0300 JE7YNQ>DS4 JA2>HL1 1058 KG6DX>VR2

May 20 0025 JA2IGY>HL1 0226 JA1YZK>HL1(Es)

May 21 0529 VK6RSX>HL1

May 22 02-0300 ZLtv>VK3 JH8ZND,JW7YNQ>HL1

May 23 0042 BX2AB>VR2 01-0200 JA6YBR>BN0F VR2XMT,VR2BG>DS4 02-0300 BN0F>VR2 03-0400 VR2>DS4 04-0500 JE7YNQ>HL5 BN0F>HL1

May 24 10-1100 HL9>DS1 JE7YNQ>HL1(ES) 11-1200 JA7>HL1

May 26 0303 JE7YNQ,JH8ZND>HL1 HL1>HL2

May 27 0705 BG9BA>HL1,JA

May 28 0102 JE7YNQ>HL1

May 29 0256 BV3FQ>HL2 0319 BN0F>DS4 0636 JH8ZND>HL1(Es)

May 30 0640 JA8>HL1

Beacon News and 28 MHz Worldwide

Compilation and Commentary by G3USF

Beacon News

10140.015	PA1SDB qrss/qrpp beacon at Appingedam (JO83KH) with 140mw. Intermittent operation mainly weekends. (PA1SDB)
14318.159	PA1SDB slight frequency change. Intermittent operation mainly weekends (PA1SDB)
28204	KA9QMD Madison WI with Vertical antenna reported by NU4G and others (July)
29299	KF4MS resumed transmissions from new location in Crawfordville FL, running 5 watts to Ringo at 15 feet (KF4MS, July)
50020.2	IW9BDV new beacon (June) no further details, reported by SP9CCD
50039.5	VE4PL new beacon in EO11 (W0PB July)
50040	VE2YKT new beacon at Rapide-Blanc PQ (FN237LS) runs 500mw to 5-el Yagi (June)
50045	IK1AIL JN45HK reported by EI7IX (June). No further details
50063	K7UV Brigham City UT (DN31XM) new beacon in July running 5 watts to horizontal loop at 25' 24/7 (K7UV)
50069	W8GTX now 24/7 operation (W8GTX)
50075.8	OH5IY reports OH5SIX in irregular operation and off since May 1

28 MHz Worldwide

While some paths showed a continued decline from May 2003, the erosion tended to be less than in previous months, especially at optimum periods of the day. Thus, Europe<>South Africa and North<>South America, both retained over 80 per cent reliability at the peak period. However, North America<>Oceania declined more sharply, as did South America<>Asia. Yet JG2KTH reports LU4AA (100w) at 1309UTC on the 4th (when he was also hearing 5Z4B long-path), again on the 8th at 1424, the 9th at 1315, the 16th at 132 and the 19th at 1358 - all long path. JG2KTH also heard the lower-powered LU1FHH direct at 2235 on the 27th. In most of these instances no actual contacts were reported - a good example of how beacons can flag up unexpected openings even if the opportunity is not always taken up. Europe<>Asia and Europe<>Oceania were at best patchy and at worst vestigial. Even in better times these are difficult paths in May.

JG2TKH, clearly an assiduous beacon watcher, also reported 5Z4B at the early hour of 0403 on the 23rd and NP4A calling CQ Europe, and presumably beaming on Europe, at 2251 on the 17th.

While east-west paths were unquestionably poor, there were occasional openings. These included NQ4I<>IZ6BXV at 2121 on the 10th, followed between 2126 and 2155 by numerous contacts between FM/DL2AWG and I2, I5 and DL. A little later, IK4GRO worked AE5Q at 2217. The mode may have been multihop Es or, particularly in view of the relatively southerly paths, F2. In a further trans-Atlantic opening on the 11th G3SED worked N4QV at 2057 on the 11th, and IZ8DEP worked NQ4V at 2118 UTC. This was followed by another opening to the Caribbean around 2210. On the 14th, HA7UG reported FM/DL2AWG at 2122, whether by multihop Es or F2 is again unclear. And on the 16th he and IZ3EYZ and DD3DJ worked NP4A between 1713 and 1751. On the 21st, G0TSM worked K3ZO at 2013.

Europe<>South America and Europe<>Africa opened at some time every day. There were also contacts between North and South America on all days. These were the only 100 per cent routes. North America<>Oceania was the best of the rest, with openings on 23 days, followed by Asia<>Oceania with 20 days. Some results are doubtless bolstered by the WPX contest and excitement stirred by the 3B9FR and T88QQ operations.

Es was effectively the only mode for contacts within continents. This was particularly the case within Europe, where it was reported every day, though the 8th and 19th were sparse. Similarly contacts were reported within North America/Caribbean/Central America every day, though F2 may have come into play at times. The pattern was slightly patchier than in Europe - though operators may simply have not reported many routine intra-W contacts. This year, as last, reported contacts between Asian stations were surprisingly few, especially given the tendency for high foEs values to occur more frequently in the region around Japan.

(28 worldwide graphs on the following page)

28 MHz Worldwide - May 2004