THE SIX AND TEN REPORT

April 2005

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Analysis of 28 MHz reports from the UK

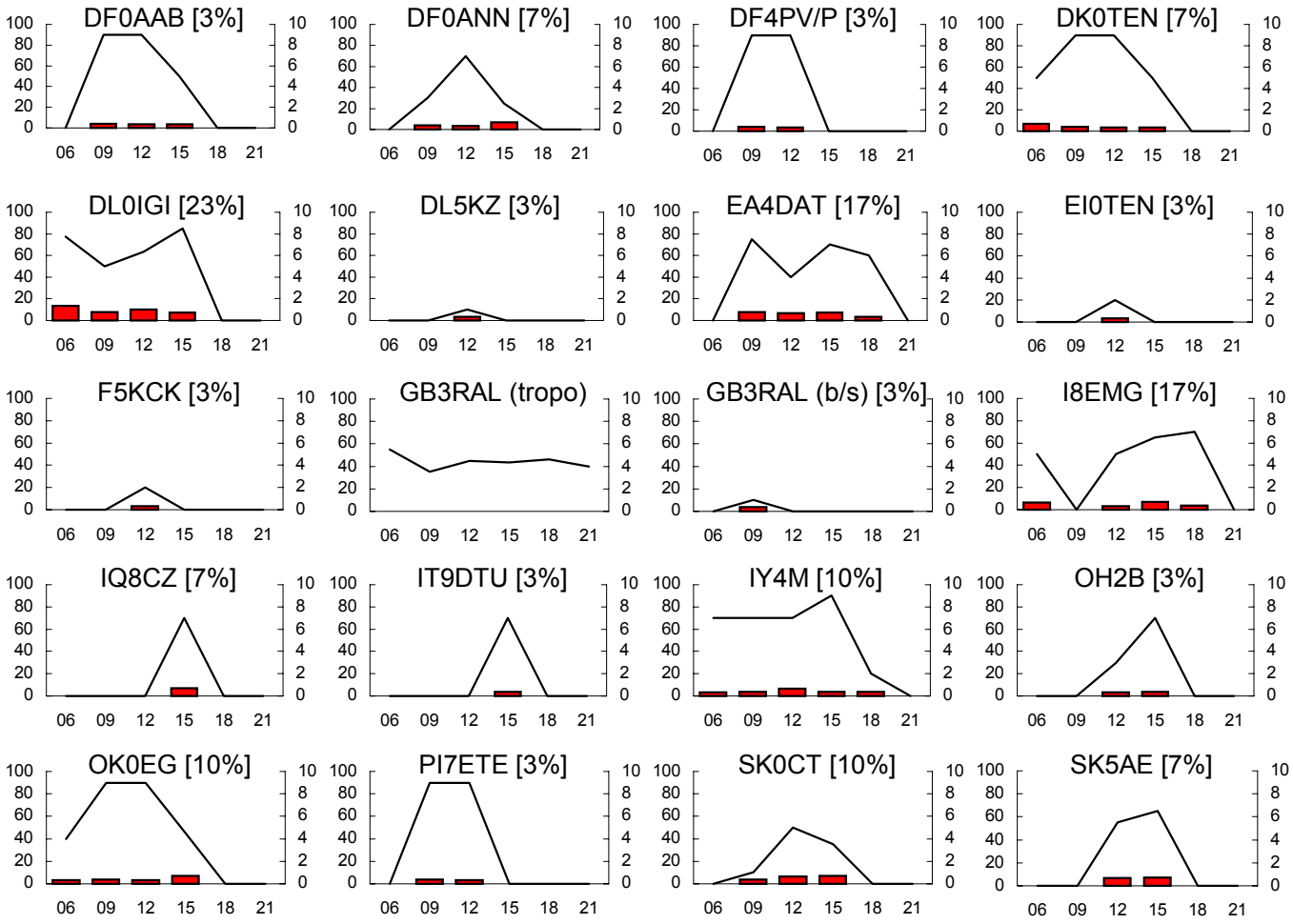
28 MHz reports and logs for April 2005 from G2AHU, G3HBR, G3IMW, G3USF, G4JCC, G4TMV, G4UPS, G0AEV, G0IHF and packet cluster reports. Compilation and commentary by G0AEV.

April saw a further decline in average solar activity but now working in concert with the seasonal post-equinox reduction in ionospheric conditions. As a result there were many days when F2 was really quite poor. On 2 days no 10m beacons were reported at all (except for local signals from GB3RAL), and on a number of other days the zero count was only avoided because one of our observers managed to catch a fleeting opening from either ZS6DN or one of the LU beacons. To put this into context, ZS6DN was heard on around three-quarters of April days, and 4X6TU on half. There were no beacon signals from North America, and none from equivalent locations to the east. F2 conditions picked up a little towards the end of the month but this improvement was eclipsed by the impressive return of summer Sporadic E. Es was reported on about every other day from mid-month onwards, but the mode exploded into life on 28th April with an extensive opening of a type normally only seen in mid-summer.

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 provided all the inter-European propagation presented in the beacon graphs on the previous page, with the exception of GB3RAL via tropo. There was no F2 to SV3AQR or elsewhere – minimum F-layer skip distances for UK stations now extending beyond the borders of Europe.

Most of the sporadic E reported was normal single hop direct path, although there were also a few reports of Es backscatter signals from EI0TEN, F5KCK and GB3RAL. Openings were infrequent but, when present, gave rise to strong signal strengths typical of the mode – hence the beacon graphs for Europe mostly show a pattern of high average signal strength and low reliability.

The major sporadic E opening of 28 April was quite remarkable, not just for the number and coverage of the beacons heard (the best total for any April day in the last 10 years) but for the intensity of ionisation. Ionisation levels were locally high enough for very short skip propagation on 6 and 10m and for propagation on 2m. On 10m, very short skip signals from PI7ETE were heard in western England, a relatively unusual event even in mid summer.

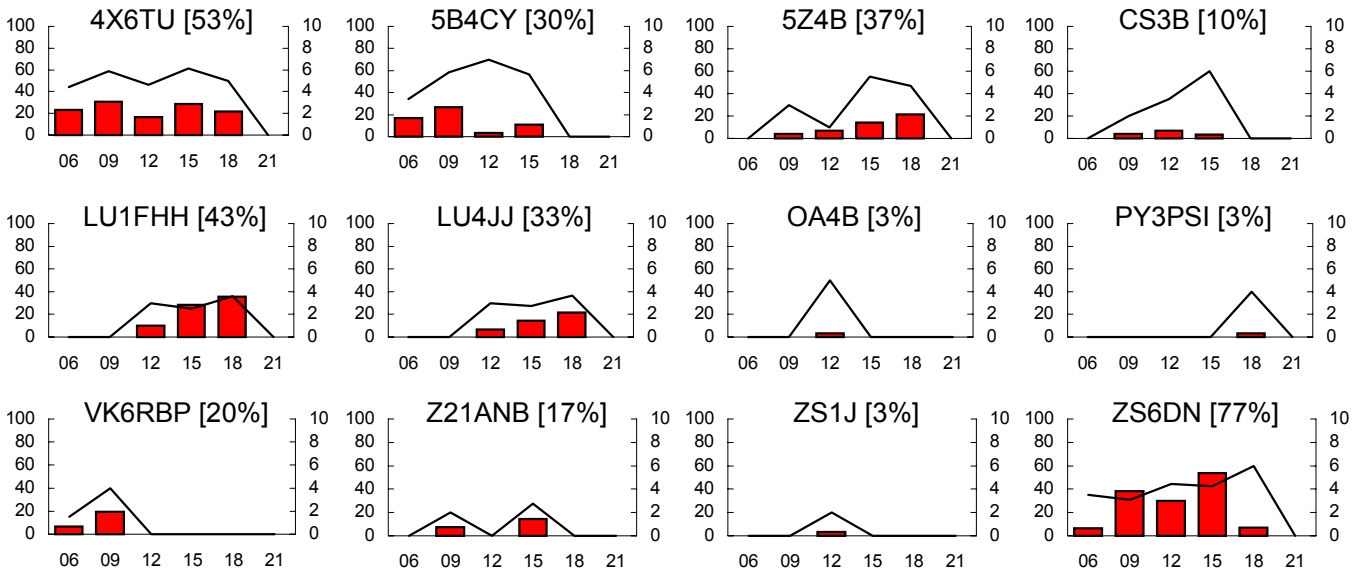
European Beacon Notes.

Of the new beacons recently activated in Europe, SK3GK on 28.201.5 appears to have stopped transmitting. LA5TEN has also gone off air leaving no active beacon in Norway, although Scandinavia generally is still well served with beacons with 3 in SM and 3 in OH. New Italian beacons IQ8CZ and I8EMG have been joined in May by IQ1SP on 28.219.5 – with 3w this beacon has been producing very good results – and IT9DTU (28.245). Listeners might also like to look out for the QRP beacons IK1ZYW (300mW) and IS0GSR (100mW) on frequencies close to 28.322 MHz. Both these have been heard quite well via Es at G0AEV in late May/early June.

The new beacon list continues: HA5BHA (28.225) has been heard periodically since mid-May. C30P (28.256) became active in the second week of June – this usefully fills a gap left by EA4DAT, which seems (early June) to have gone QRT. Finally, an old favourite YO2X has returned to service (28.240), although I have not seen this beacon reported by UK listeners yet. So – plenty to look out for!

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

Beacon Graphs.



Suggested propagation modes.

"Normal" direct F2 propagation is the suggested mode for all the results indicated for the beacons in the graphs overleaf. In the coming months there should chances of TEP, with or without the assistance of a sporadic E first hop, on long distance north-south paths. It is often difficult to distinguish these events from the more usual direct F2 – although time of day, presence of contemporary sporadic E, and characteristic fluttery signals can be diagnostic. Similarly, in May double hop sporadic E will begin to replace F2 on paths to the Middle East and elsewhere with the problem of differentiating between the alternative modes. In this case, 6m results can help identify some of the 2xEs events. It is possible that there could have been Es to 4X6TU, 5B4CY or CS3B in April but these, if present, would be minor components to a predominately F2 picture.

Beacon Notes.

G2AHU reports hearing OA4B again – this time at 13z on 12 April on 28 MHz, but this is the only report I have seen of OA4B. Perhaps the beacon is in an intermittent test mode? The lack of other reports from UK, Europe and North America suggests the beacon is not active. LU4AA is certainly QRT. 4S7B is active but with a poor signal to Europe, and is in any case unlikely to be heard at this time of year and stage of the solar cycle. 5Z4B sometime exhibits strange keying (due to dropouts in power output?). All other NCDXF/IARU beacon within range for 10m propagation to the UK are active.

ZS1J was reported once only in April, but its relatively poor performance relative to ZS6DN can be explained by the additional distance - the beacon is probably fully operational. The same can not be said of PY3PSI, which, if it is always on air, should be heard much more frequently. This beacon has a history of apparently intermittent operation.

10m DX in April 2005

The following list of DX countries worked or heard in the UK comes from packet cluster Spots (DX Summit: http://oh2aq.kolumbus.com/dxs/) and from the logs of Six and Ten reporters. These data reflect the significant change in F2 capacity described above.

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

DX in March for comparison: 3B8, 4L, 4X, 5B, 5N, 5T, 5Z, 7Q, 7X, 8P, 8Q, 8R, 9G, 9J, 9Y, A2, A6, A7, A9, CE, CP, CX, D2, EA8, FT/X, HZ, IH9, J7, J8, KP4, LU, OD, PY, SU, TA, TI, TO7C, TT, TZ, UN, V5, VE, VK(6), VQ, VR, VU, W, YB, YI, Z2, ZC, ZD7, ZD8, ZS.

Propagation to North America

No North American 10m beacons were reported heard in April, and packet cluster spots suggest that no contacts were made either. This is not surprising considering the low levels of solar activity and the time of year. Transatlantic F2 to/from Britain will be a rare event (if it occurs at all) during the solar minimum period - the next 2 to 3 years. The probabilities for F2 events are highest for November and February, but openings could occur during any of the winter months. During past solar minima, F2 openings have taken place as a result of enhancements following major "flare" activity.

Looking to the more immediate future, there are good chances of transatlantic propagation via sporadic E in June and July. It is quite usual to have a dozen or so reasonable multihop Es events where the propagation is strong enough for US and Canadian East Coast beacons to be audible in UK. Although this propagation may be heard during the morning or early afternoon, best chances are in mid to late evening, often at a time when propagation elsewhere has shut down.

Analysis of 50 MHz reports from the UK

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

Six emerged from the late winter doldrums – albeit slowly – with the return of sporadic E in the latter part of April. A reasonable early-season Es opening on 21st brought propagation to 9 countries including the Ukraine. But this was only the precursor to a major event a week later on 28th April when critical frequencies were high enough for short skip propagation within the UK and between the UK and the near Continent. The minimum skip distances worked on 28th could turn out to be short enough to challenge for the shortest of the summer – which is remarkable for an event so early in the summer season.

In addition to the "spectacular" event of 28th there were several rather more marginal openings within the second half of the month so that, in total, April 2005 appears as one of the better starts to a summer season in the last decade.

The presence of good sporadic E close to the equinox increases the chances of mixed mode DX openings – sporadic E + F-layer (which may or may not be TEP). This month, openings to TR and ZD8 were reported over a period of an hour or so on 19th April, and there was a lesser opening to TR on 26th. Elsewhere aurora activity was mediocre: auroral propagation in the UK was effectively restricted to GM stations. Tropo reports provided a mixed picture with most of the better results coming as a result of contest activity. There was, as is now the norm, plenty of JT6M meteor scatter activity.

Our regular contributors collectively sighed with relief that there was something to report at last. Ted G4UPS noted a "big improvement in April" while G2ADR declared "the long silence is broken"!

G3HBR's comprehensive report this month started "nothing doing until 21st when some Es on ten started me searching carefully on six. At first I could only hear loud 49.750 MHz TV buzz but then had a QSO with US5DZ and heard SP9EVP followed after a short while by a QSO with him. This opening didn't last long - but it was a start. On 26th I worked CT1JAD in what appeared to be a very selective opening. Over the next couple of hours I heard a few Gs (some quite near to me) work EHs from time to time but none were audible here. On 28th I was alerted by big signals from the DL beacons on ten. The MUF seemed to rise very rapidly and I heard very close signals from nearby Europe. I usually only hear JO31, 21 and 22 on tropo or scatter - PA7FM was a very short Es QSO for me (*334 km*). The opening was quite long lasting and widespread from EH, 9H round to OZ and LY. Not a lot since but it is still quite early in the season."

Sporadic E

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

	4X (3%)	9H (10%)	CN (7%)	CT (7%)	DL (10%)	EA Spain (13%)	EI (3%)	F France (3%)
D	27	18 26 28	19 26	19 26	21 24 28	19 26 28 30	28	28
06		0						
09	5	9			5 9	9 9		
12		9 9			9	9 5	0	9
15			7	4	9 9	9		
18		3	9	9		9 9		
21			5					

	Inter-UK (3%)	HB (3%)	I/IS/IT Italy (17%)	LA (3%)	LY (7%)	OE (10%)	OH (7%)	OK/M (7%)
D	28	28	18 21 26 28 30	28	27 28	21 25 28	27 28	21 28
06			9 9					
09	9	9	9 0	9	9	3 9	9	9
12	9		9 9 9			9	7	
15			9 0 9		8	9	0	9
18			9 7					
21								

	ON (3%)	OZ (3%)	PA (7%)	SM (7%)	SP (7%)	UR (3%)	YO (3%)	9A/S5/T9/YU/Z3 (7%)	ZB (3%)
D	28	28	21 28	27 28	21 28	21	21	21 28	26
06								9	
09	9	9	9	0 9	9			9	
12		9	0	9	9			9 9	
15			3		9	9	9	9	3
18									
21									

On 28th there were a number of reported short skip QSOs in the 300-350 Km range and many more at slightly longer distances. Most of these were between stations in southern G and DL, F, ON or PA, but also with some G to GM and GI. Based on available data from our correspondents' reports and the packet cluster, the "prize" for the shortest distance worked by sporadic E should be awarded for the contact between G4FUF (JO01GN) and GW8ASD (IO83LB). Spotted at 11.13z on 28th, this QSO was over a distance of only 295 Km!

Sporadic E backscatter

27th 09z 0944 9A8A (JN86) > G4FUF (JO01) 559 "heard.BS"

It is reasonable to be sceptical of backscatter reports like one above where the scatter propagation is between two widely separated stations, especially when there was direct path propagation over similar path lengths at around the same time. Generally backscatter works best when transmitter and receiver are relatively close together with the scatter point distant - there were no reports of this type for 27th April to suggest that backscatter was operating. If not back (or side) scatter, then perhaps the mode was forward scatter (i.e. scatter along a direct path, commonly referred to as "iono" scatter). There may be other explanations - I have heard of cases where a backscatter report actually meant that signals were coming off the back of the beam, which isn't the same thing at all! But it seems probable that in this case genuine scatter was detected from, and by, 2 well equipped stations – I suggest (side) scatter from a point in Scandinavia as this area was being worked via direct path sporadic E in the same time period. Beam heading data would be needed to determine if this is the correct interpretation.

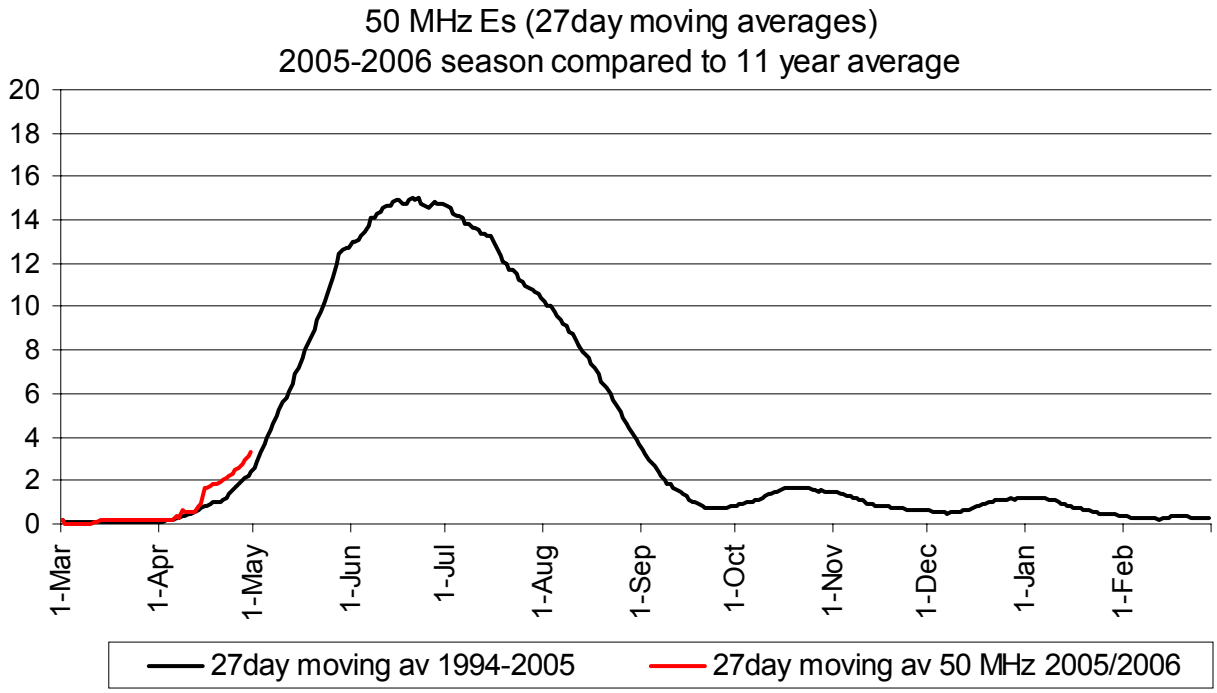
Es Propagation Summary.

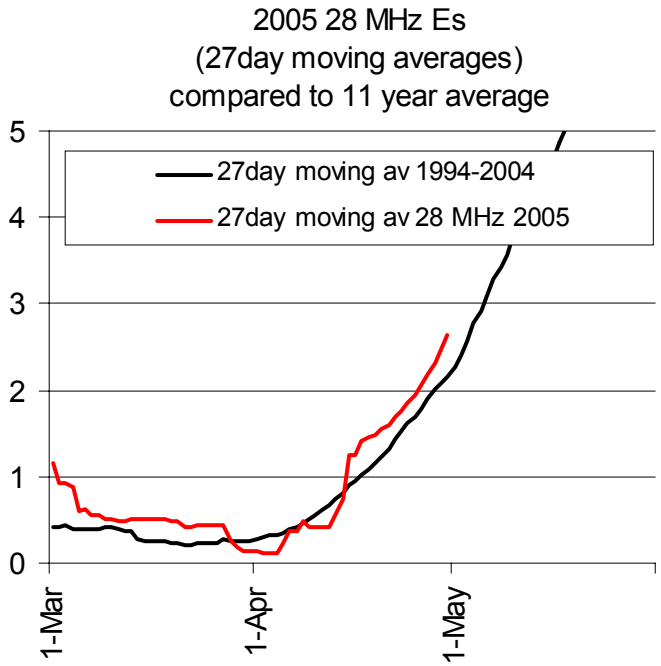
The table below displays total counts of country/areas heard/worked via sporadic E by UK amateurs, a summary of the detailed tables presented above.

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
06																												3		1
09																								1	1		3	16		2
12																					2					2	1	13		1
15																		1			9					4	1	3		
18																		2	3							2				
21																			1											

The graph below displays 27-day moving averages of the daily 6m country/area scores against a 10-year average of the same measure (see the May 2004 Six and Ten Report for a detailed discussion of the use of 27 day moving averages and their use in this graph). The data for March and April 2005 suggests a good start to the 2005 summer sporadic E season - but these are early days and data that I already have for May and early June suggest that the early summer months may turn out to be less promising than this start might imply.





The definition of the start of the summer sporadic E season is not easily distinguished in 6m data (as shown in the main graph above) because there is so little Es in March and early April. The situation is a little clearer on 10m where there is more data.

Opposite is a detailed extract of a graph showing 10m Es for 2005 compared to the 11 year 10m average (derived using 27 day moving averages in the same way as the 6m graph). This extract shows that the 11 year average annual Es minimum lies around 20th March. The 2005 minimum appears to be displaced a little later at around1st April. After this date activity rises rapidly with a trend that is similar to the line for 2005 6m Es and, like the 6m data, suggests that better than average conditions prevailed.

DX Propagation

Last month we had two marginal DX openings to report. The situation was a little better in April with propagation from southern England to central Africa recorded over a period of more than an hour on 19th. There was a similar, less reported opening on 26th. Beacons were heard but there were no QSOs.

Like the openings described for March, DX must have been available via a mixed mode making use of sporadic E to sporadic E to link into an F2 circuit. The location of the DX is not ideal for TEP *sensu stricto* so I'd suggest an F2 onward hop - but this is only speculation on my part.

19 1721 G4IGO > TR0A 559
19 1756 G4IGO > TR0A 559
19 1757 G4PCI > ZD8VHF 519
19 1759 G4IGO > ZD8VHF 599
19 1826 G4IGO > ZD8VHF "still 559-599"
26 1548 G4FUF >TR0A 559 "Es link"

Meteor Scatter

Once again, there was plenty of meteor scatter worked using the JT6M mode this month – it doesn't appear that the start of the summer sporadic E season has made a significant dent in activity levels (yet!). Most JT6M QSOs are completed via meteor scatter, although this is not always obvious from packet spot data. In the following analysis I have tried to differentiate between propagation modes. Tropo and Es contacts by JT6M, where identified, are excluded and reported in their respective section.

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

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MS QSOs	1						1		6	8		2			1	2	8	1		1	3	4	1	10	2	1			2	4
All JT6M	3	4			1	1	1	2	19	20		3	1		1	4	17	1	1	4	10	11	2	2	2	4	3		2	12

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

Note that the 22nd marks the peak of the April Lyrids shower. The activity on 24th was due to a contest. At other times, weekend days tend, as might be expected, to show higher levels of activity. A geographical breakdown by hour shows activity concentrated in the early to mid morning when random meteors are most common

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

Hour	QSOs	Countries	Hour	QSOs	Countries
06z	1	OE	15z	2	I, OE
07z	12	I, OE, S5	16z	0	
08z	10	HB, I, OE, S5, SM	17z	0	
09z	11	G/GM, I, OZ, S5	18z	1	I
10z	6	DL, I, PA, S5, SM	19z	1	I
11z	7	DL, F, I, OE, S5	20z	0	
12z	3	I, S5	21z	0	
13z	2	F, I	22z	1	OZ
14z	1	S5	23z	0	

Tropospheric propagation

A contest on the 24th showed, as most contest seem to do, that tropo propagation up to 500 km is usually available to stations with the right antennas and/or locations. Distances to 700 km are considerably less common but are within the "normal" range for SSB/CW "tropo" QSOs on 6m. Distances in excess of 700 km are very rare, troposcatter at these distances being limited by the ERP available to amateurs as well as "conditions". In the absence of ducts capable of supporting 50 MHz. 700 km is about as far as most stations might expect to get – that is until the advent of digital modes capable of "hearing" much weaker signals. This month George G4PCI reported a tropo QSO via JT6A with a station in Italy, certainly well in excess of 700 km! The question now is – what is the theoretical "likely" maximum tropo distances workable with digital modes, and – perhaps an equally important question – can one successfully differentiate between tropo and ionospheric scatter in such cases?

9th	1035	G4PCI > EI5FK 57 jt6m tropo
13th	1157	EI7BMB > GB3LER "in/out tropo"
24th	0956	DK2EA > G2KF/P IO70) "tropo / meteor scatter mix – heard"
	1010	G4PCI > GM8BAA "cq test" – presumably tropo
	1013-1021	PA7FM > many southern G station in contest
	1026	GM7PBB-@ G4KF/P io68 > io70 hrd strong at time 50158 T??
	1122-1139	EI5FK (JO51)> G2KF/P 55; DL8PM (JO32) > East G stations (contest)
28th	1054	G4UCJ (IO91) > PA7CG (JO21)
30th	1204	G4PCI, G0CHE > F6HRP 41-51 QSB
	1940	G4PCI> IW5DHN via JT6A -18dB " tropo QSO"

Aurora

Aurora were more or less restricted to "Scottish" type openings. No event really amounted to much, and no auroral E was reported.

4th	18z	1814	MM0AMW (IO75) > GB3LER 53A
5th	00z	0022	MM0AMW > OY6SMC 55A
	15z	1731	MM0CWJ > GB3LER "Aurora"
	18z	1839	MM5AHO > GB3LER "Aurora S3"
	21z	2309	MM0BSM (IO86) > GB3LER 52A
11th	21z	2138	MM0AMW > GB3LER 53A. also LA TV auroral.
12th	12z	1456	GM4JJJ > GB3LER 51A
	18z	1911	MM0CWJ > GB3LER "Aurora"
13th	12z	1421	G4FUF spots hearing 48239.6 video (JO79) via aurora at QTF 025
	15z	1559	LA2IM (JP43) > GB4LER 52A
		1628-1609	EI7BMB > GB3LER 41A; MM0AMW > OY6SMC 53A, GB3LER 55A
	18z	1854	MM0BSM > GB3LER 53A "and building"
	21z	2317	MM0BSM > GB3LER 52A "still"
29th	21z	2331	GM7PBB (IO68) > GB3LER 53A "just started"

EME

A select few continue to make 50 MHz moon-bounce contacts. Here are the EME offerings for April:

2nd	0944	G4RGK > K7BV –28 dB "European moonset"
9th	1842-1917	G4PCI> W7GJ –27 to –14 dB
10th	1323	M0BCG > K7BV –25 dB
	1941	G4PCI > W7GJ –27 dB
22nd	0216	W7GJ > GD0TEP
	0312	W7GJ > G4RGK
	0333	K7BV > GD0TEP

Solar and Geomagnetic Data for April 2005

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

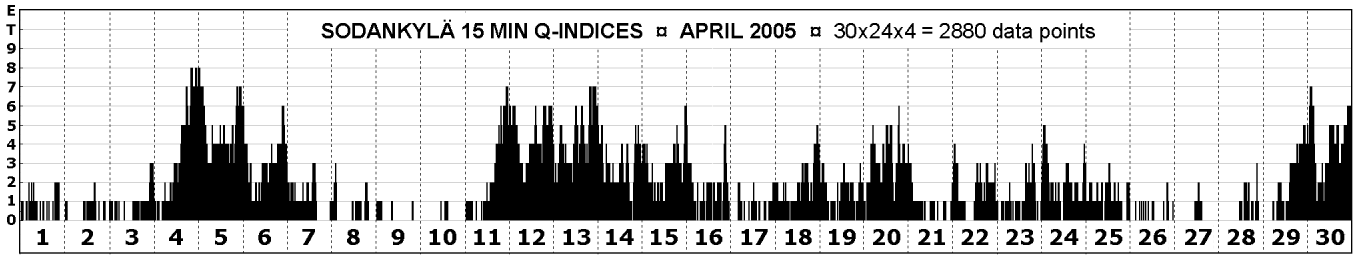
Sunspot numbers (SEC)	Mean 41.5	Max 71 (28th)	Min 0 (24th)
Solar Flux (28 MHz)	Mean 85.9	Max 106 (30th)	Min 77 (20th-22nd)

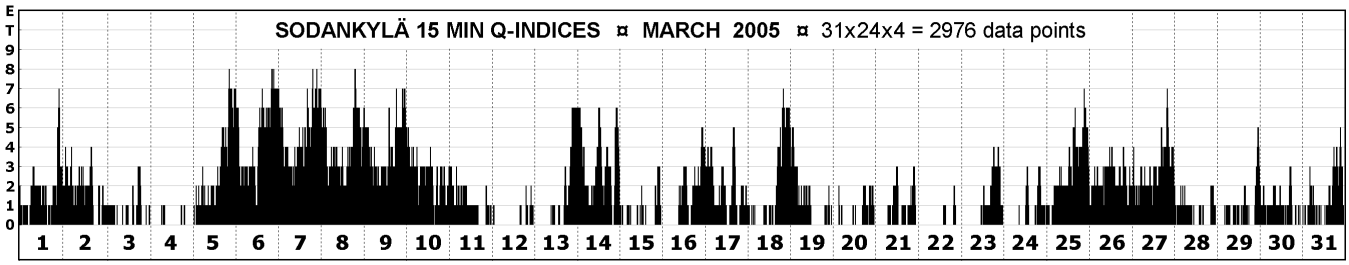
Solar data for April 2005 are presented in the table at the end of this section. Numbers in the 28 and 50 MHz columns of this table are the total daily "areas" worked/heard from the UK for each of several propagation modes and are a summary of the data presented in the first sections of this Report.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

Energetic Events.

There were no X-ray solar events of C, M or X class in April, the first month for which this has been true since the end of the previous solar minimum period.

Q-indices from Sodankylä, Finland (Thanks to OH2LX) – with March data below for comparison





Geomagnetic data from the Finnish observatories for April are:

Monthly averages
Sodankylä: monthly Ak average = 17.9 (19.4 in Feb)
Nurmijärvi: monthly Ak average = 10.0 (10.5 in Feb)

Most disturbed April days:
Sodankylä: 5th, Ak = 60 (Mar 7th Ak = 77)
Nurmijärvi: 12th, Ak = 29 (Mar 7th Ak = 35)

Geomagnetic activity in April was similar to that in February and March with moderate levels of disturbances. Lerwick K and Kp indices reach 7 on the 5th but no significant aurora ensued.

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

K-indices.

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

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
00	1	1	1	1	7	3	2	2	2	1	1	6	2	4	3	3	1	1	2	2	2	2	1	3	3	1	1	0	1	5
03	3	0	2	2	7	2	2	0	1	0	1	5	4	5	4	2	2	3	2	5	0	2	1	4	4	0	0	0	1	4
06	4	1	1	2	5	2	3	1	0	0	0	3	4	3	2	1	2	2	4	4	1	1	2	2	3	1	0	1	3	3
09	2	1	1	2	3	3	2	1	1	1	1	4	4	3	2	1	1	1	1	4	1	1	2	2	2	1	1	1	2	3
12	2	1	1	2	3	2	2	1	1	2	2	4	5	3	3	2	1	2	2	4	1	3	2	2	2	2	2	2	2	4
15	2	2	2	4	3	3	2	1	2	2	3	3	5	2	3	2	1	2	2	3	2	2	2	2	1	2	2	1	2	3
18	1	1	2	4	3	3	1	2	2	1	4	4	4	3	2	2	1	2	2	2	1	3	2	2	1	2	2	2	4	3
21	1	1	2	5	4	3	1	1	1	1	3	4	4	2	3	2	1	2	2	2	1	2	2	2	2	1	1	1	4	3
Σ	16	8	12	22	35	21	15	9	10	8	15	33	32	25	22	15	10	15	17	26	9	16	14	19	18	10	9	8	19	28

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
00	0	1	1	1	7	3	2	2	2	0	0	5	2	3	2	2	2	1	2	1	2	2	1	2	2	0	0	0	0	4
03	0	0	0	1	7	2	1	0	0	0	1	5	4	3	2	0	2	1	1	3	0	1	0	1	2	0	0	0	1	3
06	1	0	0	1	4	1	1	0	0	0	0	2	2	1	1	1	1	1	1	2	0	0	0	1	2	0	0	0	1	2
09	1	0	0	2	2	1	1	0	0	0	0	2	2	1	1	1	0	0	1	3	0	0	0	1	1	0	1	0	1	3
12	1	0	1	3	3	2	1	1	0	2	1	4	3	3	3	1	1	2	2	3	0	3	1	2	2	1	1	2	3	3
15	1	1	1	4	3	3	2	1	0	1	3	3	4	3	3	2	0	2	2	3	1	1	2	1	1	0	0	2	2	4
18	2	0	1	5	3	2	0	2	0	0	3	4	3	3	3	2	1	2	1	2	1	3	2	2	1	1	0	1	3	3
21	1	0	2	6	5	2	1	0	0	0	4	3	4	3	3	2	0	3	2	1	0	2	0	1	1	0	0	1	2	4
Σ	7	2	6	23	34	16	9	6	2	3	12	28	24	20	18	11	7	12	12	18	4	12	6	11	12	2	2	6	13	26

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
00	0	1	2	1	5	3	3	2	1	1	0	3	2	3	2	3	1	1	2	2	1	2	1	2	2	0	0	0	0	5
03	1	0	1	1	5	2	2	0	0	0	1	4	4	3	2	1	2	2	1	3	0	0	0	2	2	0	0	0	1	3
06	1	0	0	1	4	1	2	0	0	0	0	2	4	2	1	1	1	2	2	3	0	0	0	1	2	0	0	0	1	3
09	1	1	0	3	3	2	2	0	0	0	0	2	3	1	1	1	0	1	1	4	0	0	1	1	1	0	0	0	1	3
12	1	1	1	3	3	2	1	1	0	1	1	4	4	2	3	1	2	3	3	3	1	3	1	2	2	1	2	2	3	3
15	2	1	1	4	3	3	2	1	1	1	3	3	4	3	3	2	1	2	2	3	1	2	3	2	2	0	0	2	3	4
18	2	0	2	5	3	2	0	2	0	0	4	4	4	3	3	3	1	2	1	3	1	3	2	1	1	2	0	1	3	3
21	1	0	2	5	4	3	1	0	1	0	4	4	4	3	4	3	1	2	2	2	0	2	1	1	2	0	0	1	3	4
Σ	9	4	9	23	30	18	13	6	3	3	13	26	29	20	19	15	9	15	14	23	4	12	9	12	14	3	2	6	15	28

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
00	0	1	3	1	5	4	3	2	1	1	1	3	3	3	2	3	1	1	2	2	2	2	1	3	2	0	0	0	0	5
03	1	0	2	2	4	2	2	0	0	1	1	4	4	3	2	1	2	2	1	4	1	1	1	2	3	0	0	0	1	3
06	1	1	0	2	4	1	2	0	0	1	0	2	4	2	1	1	1	2	2	4	1	1	1	2	2	0	0	0	1	3
09	1	1	0	3	3	1	2	0	1	0	0	3	3	1	1	1	0	1	1	4	0	0	1	1	1	0	1	0	1	2
12	2	1	1	3	3	2	1	1	1	1	1	4	4	2	3	1	1	2	3	3	0	3	1	2	2	1	2	2	2	3
15	1	2	1	5	3	3	2	0	1	0	3	2	5	3	3	2	1	2	2	4	0	1	3	2	1	0	1	2	3	4
18	2	0	2	5	3	2	0	2	1	0	4	5	5	3	3	3	1	2	1	3	1	3	3	2	1	2	0	2	4	3
21	1	0	3	5	4	3	1	0	1	0	4	4	4	3	4	3	1	3	2	1	0	2	1	1	2	0	0	1	4	4
Σ	9	6	12	26	29	18	13	5	6	4	14	27	32	20	19	15	8	15	14	25	5	13	12	15	14	3	4	7	16	27

April	28 Areas		-- 50 Areas --				2800	- Spots -		Max			X-ray	Max foF2		Min foF2		-- Particle Fluences --		
2005	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-Apr	0	1	0	0	0	0	78	26	16	4	8	10	A2.5	6.2	17	3.3	03	4.9E+07	5.8E+05	1.4E+04
02-Apr	0	1	0	0	0	0	80	30	20	2	4	6	A3.4	6.4	17	3.1	23	6.7E+07	6.6E+05	1.5E+04
03-Apr	0	3	0	0	0	0	81	38	28	2	6	12	A3.2	6.8	19	2.7	04	1.7E+07	5.4E+05	1.5E+04
04-Apr	0	1	0	0	1	0	85	54	33	5	17	42	A6.6	5.8	18	2.5	05	7.6E+06	6.1E+05	1.4E+04
05-Apr	1	1	0	0	2	0	88	56	35	7	48	52	A7.1	4.6	18	2.1	05	9.8E+07	1.7E+06	1.4E+04
06-Apr	0	4	0	0	0	0	88	50	29	3	11	22	A7.8	6.5	11	2.5	01	3.6E+08	1.0E+06	1.4E+04
07-Apr	0	2	0	0	0	0	88	49	28	3	8	14	A6.9	6.0	17	3.1	05	6.4E+08	6.8E+05	1.4E+04
08-Apr	0	5	0	0	0	0	88	56	27	2	4	5	A6.1	6.6	19	3.2	05	8.6E+08	7.1E+05	1.4E+04
09-Apr	0	8	0	0	0	0	88	43	27	2	4	5	A8.5	6.7	10	3.5	04	1.4E+09	1.4E+06	1.4E+04
10-Apr	0	7	0	0	0	0	88	42	27	2	4	5	B1.0	6.7	11	3.3	04	5.5E+08	1.5E+06	1.5E+04
11-Apr	0	5	0	0	1	0	88	17	13	4	10	19	A9.2	7.3	17	3.3	04	1.0E+08	1.2E+06	1.5E+04
12-Apr	0	8	0	0	1	0	85	32	21	6	30	43	A6.9	6.6	14	2.6	04	7.0E+06	5.3E+05	1.5E+04
13-Apr	0	1	0	0	4	0	84	45	29	5	26	53	A4.6	5.8	19	2.3	05	9.1E+07	4.2E+06	1.5E+04
14-Apr	0	3	0	0	0	0	85	63	35	5	19	30	A5.4	6.0	18	n.a.	n.a.	2.7E+08	1.0E+06	1.5E+04
15-Apr	0	0	0	0	0	0	85	61	36	4	13	24	A5.3	5.5	17	2.3	03	5.5E+08	6.4E+05	1.4E+04
16-Apr	0	2	0	0	0	0	83	52	28	3	7	14	A5.5	6.3	17	3.1	04	6.2E+08	4.9E+05	1.5E+04
17-Apr	0	3	0	0	0	0	84	54	26	2	5	7	A5.5	6.8	17	3.0	04	1.0E+09	5.8E+05	1.4E+04
18-Apr	3	5	2	0	0	0	81	44	26	3	8	15	A4.8	7.4	19	3.1	04	4.2E+08	6.4E+05	1.5E+04
19-Apr	4	2	3	2	0	0	78	43	26	4	8	12	A3.5	6.0	16	2.9	04	6.8E+07	1.4E+06	1.5E+04
20-Apr	0	0	0	0	0	0	77	39	25	5	21	37	A2.5	5.2	16	2.7	05	5.8E+06	4.7E+05	1.4E+04
21-Apr	3	3	9	0	0	0	77	22	16	2	4	5	A1.5	6.9	20	2.1	04	4.3E+06	2.9E+05	1.5E+04
22-Apr	0	4	0	0	0	0	77	34	16	3	9	13	A2.6	6.4	18	n.a.	n.a.	1.0E+07	3.1E+05	1.4E+04
23-Apr	0	3	0	0	0	0	79	35	14	2	6	12	A5.5	n.a.	n.a.	n.a.	n.a.	7.6E+06	3.1E+05	1.4E+04
24-Apr	0	3	1	0	0	0	82	0	9	4	10	14	B1.1	n.a.	n.a.	n.a.	n.a.	6.3E+06	3.2E+05	1.4E+04
25-Apr	0	2	1	0	0	0	86	25	13	4	11	13	B1.0	n.a.	n.a.	n.a.	n.a.	2.2E+07	3.6E+05	1.5E+04
26-Apr	4	5	6	1	0	0	91	20	11	2	5	4	B1.1	n.a.	n.a.	n.a.	n.a.	3.6E+07	4.4E+05	1.4E+04
27-Apr	5	9	4	0	0	0	95	45	17	2	4	4	B1.2	n.a.	n.a.	n.a.	n.a.	4.5E+07	4.6E+05	1.5E+04
28-Apr	14	3	19	0	0	0	98	71	30	2	4	6	B1.3	6.6	18	3.1	04	4.6E+07	5.6E+05	1.5E+04
29-Apr	0	4	0	0	1	0	105	46	35	4	12	24	B1.2	7.6	20	2.9	04	5.8E+06	3.9E+05	1.4E+04
30-Apr	4	2	2	0	0	0	106	53	37	5	21	44	B1.6	5.5	18	3.0	04	1.6E+06	8.0E+05	1.4E+04
Sum	38	100	47	3	10	0														
Average	1.3	3.3	1.6	0.1	0.3	0.0	85.9	41.5	24.4	3.4	11.6	24.4	A7.0	6.3	17	2.9	05	2.5E+08	8.3E+05	1.4E+04
Maximum	14	9	19	2	4	0	106	71	37	7	48	37	B1.6	7.6	20	3.5	23	1.4E+09	4.2E+06	1.5E+04
Minimum	0	0	0	0	0	0	77	0	9	2	4	9	A1.5	4.6	10	2.1	23	1.6E+06	2.9E+05	1.4E+04

50 MHz Outside Britain

Compilation and Commentary by G3USF

Europe, Africa and the Middle East

Auroral-Related Propagation

Self-evidently a quiet month, with events reported on only seven days, including UK loggings, on only one of which was aurora noted below the GM-Baltic line - and very briefly at that.

Ap 4 1800-10 Au>OH5IY 2310-30 Au>OH5 2340-2400 AuFM>OH5

Ap 5 0010-0100 Au>OH5 0010-0100 AuFM>OH5 0250-0300 Au>OH5 0250-0300 AuFM>OH5

Ap 6 0106 49750>DL(57a)

Ap 12 0050-0130 Au>OH5

Ap 13 16-1700 GB3LER>EI(41a) OZ>SM5(55a) 2030-40 Au>OH5

Other Modes

At this stage of the cycle we cannot expect too much. Yet, there was DX outside Europe on fifteen days. Sadly, there was no one location which enjoyed an opening on every one of those days! As usual stations along the Mediterranean fared best. Openings to the Gulf States have never been all that frequent, though this is probably mainly because activity has usually been low. So the appearance of A4 and A6 this month was a trifle unusual, especially since there were two reports from operators well north of the Mediterranean, in OZ and SP. Sporadic-E looks the most likely mode, since by the end of the month that mode was becoming more available, especially in the more southern latitudes. The opening on the 26th, it should be noted, stretched right to the western end of the Mediterranean.

Europe<>Arabian Gulf

A4 1 day 29(SV)

A6 2 days 26(EA,I,IS,OZ,SV,S5,9A) 30(SP9,SV)

It was good to see that April produced some propagation into southern Africa, probably by tep, but the figures show a further decline. This year only ZS6 was reported, with no signals reaching northern Europe, if reports (or rather non-reports) are to be believed. In 2004 not only was ZS6 copied in the Mediterranean on13 days but several of the openings then were over a large area and were of considerable duration. 9J, 7Q and Z2 were also reported then, but not this year. West Africa also showed a decline. All reports of Gabon related to TR0A, so one surmises that amateur activity there is at a low ebb.
The bright spot is 9Q0AR, an active operator, who proved a path which has yet to be fully explored at 50MHz, since most 9Q operations have proved relatively short-lived.

Europe<>Africa

South

ZS6 3 days: 15(I8,I9) 21(I9,SV,9H) 28(I9)

West

TR 5 days: 2(I) 13(CT) 14(I9) 19(G) 21(I9) 26(G)
5T 1 day: 12(I0)

Central

9Q 5 days: 2(I9,SV) 24(9H,I9,SV) 25(I9) 26(I,I9,S5,SV,YO,9A) 30 (I,I9,SV)

North

SU 1 day:30(9H)

Paths to South America remained marginal, with EA/CT - more favourably located - as usual having most of the propagation.

Europe<>South America/Caribbean

PY 4 days: 2(CT,EA) 9(CT) 12(I) 13(I)
LU 2 days: 2(CT) 11(CT,EA)

FM 2 days: 6(EA) 12(EA)

ZD8VHF 0 days 8(I) 9(I9) 12(I9) 14(I9) 16(9H) 19(G,I,ON,PA)

The two openings between FM5JC and EA7KW were reported as scatter/skew, presumably from a point in the South Atlantic.

The path to ZD8 could well have been better than the table suggests because, on the 8th IG9/I2AND mentioned hearing the beacon 'as every night'

For much of the month reported contacts were scarce and very largely by way of JT6M (jt), which in the majority of cases probably means MS - the listing below uses (ms) only when that is specifically indicated by the reporter. Apart from occasional contacts sporadic-E became a growing factor from about the 19th - which happens to be a day when ZD8VHF signals reached Britain. The first really good day, with widespread Es was reported for a substantial period was the 26th, with strong openings continuing to the end of the month. This period also brought some of the best long-haul propagation. The 26th-28th were particularly quiet, geomagnetically, with Ap indices of 5, 4, and 4 respectively and the solar flux was recovering from a period in the high 70s and moving through the 90s to break above 100 again on the 29th

As usual in these listings callsigns are given in full for beacons and DX contacts.

Ap 1 0932 G>I3(jt) 1016 G>EI(jt) 11-1200 SP5>PA(jt) OZ>SP5(jt)

Ap 2 0956 G>S5 1225 9Ltv,3Ctv>SV1

Ap 3 no reports

Ap 4 no reports

Ap 5 0801 GW>OZ(jt)

Ap 6 16-1700 I5>I2 I1>I5 1711 HB9SIX>DL 1852 CU3URA>EA7

Ap 7 1145 GB3LER>F(ms) 1435 9Ltv>SV1 1615 9Ltv,3Ctv>SV1

Ap 8 1036 LZ2MC>YO7 2113 ZD8VHF>I2AND/9

Ap 9 08-0900 I2,OZ>S5(jt) 09-1000 G>F(jt) 10-1100 EI>F(jt) PA>S5(jt) OE5>EI(jt) LY>I4 13-1400 GD>I2(jt) 15-1600 I5MXX>S5 16-1700 I5>S5 22-2300 OZ>F(jt) ZD8VHF>I2AND/9

Ap 10 07-0800 G>9A(jt) 9A>OZ(jt) OZ>I4(ms) G>I4(jt) 0847 HB>I0(ms) 10-1100 G>SM5(jt) HB9SIX>DL SP5>SM5(jt) HB>I2(jt) 14-1500 SP0>DL,9A,I3,SP4 15-1600 I5>F(jt) 16-1700 F>I3(ms) 2155 JX7SIX>LA(mode?)

Ap 11 0629 I2>OZ(jt) 18-1900 LW3EX>EA7KW,CT1EFC

Ap 12 1657 I9>EA7 17-1800 I9>EA7,EA4 5T5DUB>IK0FTA EH7>I0 9H>EA7 18-1900 CN>I9 9H>EA7 PP5AR>IW0GXY 9H>EA4,EA5 GD>PA(jt)

Ap 13 1157 GB3LER>EI(t) 1641 I9>IS0

Ap 14 1650 ON>PA 17-1800 OZ>LA,PA S5>I5 I0>I9(t) SM3,OH0>SM0 OH0>ON 18-1900 OH2>SM3 LA>ON I3>I2 SM7>SM SM5>SM0 SK6>SM0 19-2000 OH0>SM3,LY,S5 SM3>OH8 20-2100 SK6>S5 21-2200 TR0A,ZD8VHF>I2AND/I9

Ap 15 0743 OE6>ON(t) 12-1300 ZS6NK>IW9GUR 13-1400 ZS6NK>IW9HLM,IZ7AUN 1845 I0>I5

Ap 16 0735 OK2>OZ(jt) 08-0900 I0,I2>F(jt) I0>I2(jt) 1000 G>I5(jt) 11-1200 I7>I0 12-1300 I5>I1 14-1500 HB>OZ(jt) I3>OZ(jt) I7>I9 I8>I7 15-1600 I8>S5 I8>I9 F>I5 16-1700 I8>F,I1 I2>I1 S5>I2

Ap 17 06-0700 ON>HB(jt) ON>S5(jt) ON>I3(jt) 07-0800 SM6>OH6,OH1 S5>OZ(jt) 0859 S5>I1 0941 I7>I0 10-1100 G>OE5(ms) OE5>SM5(jt) 1100 S5>I4 12-1300 OH0>SM0(jt) G>I5(ms) 1600 G>F(jt) 17-1800 SM0>SM5(jt) SM0>OZ(jt)

Ap 18 07-0800 OE5>I8(ms) 0852 OE5>EI(jt) 1436 S5>OZ(ms) 15-1600 HB9SIX>DL,EA1 16-1700 I9>I2 GB3MCB>I9(Es) 17-1800 EI>I8 TR0A>IK5YJY 19-2000 US5II,UX0QY>I9 9H>I9 20-2100 G>I9 F>I0 CN>EA7

Ap 19 0728 I5>OZ(Es) 1155 CN>I9 12-1300 EH5,CN,EH7,EH2>I9 CN>SV1 EH7,EH5>S5 EH5>I7 13-1400 CT0SIX>S5 CN>I7,I0,9A EH5>SV1,S5,I4 I9,9H>F GD>I2 14-1500 F>I9 TR0A>G4IGO 1757-9 ZD8VHF>G4PCI, G4IGO 18-1900 CN8MC>ON CT,EH7,EH4>DL ZD8VHF>PF7M EH4>I1,PA

F,I3,HB,I2>EA4 EH7>F EH2>I0 EA7>HB EH1>I8 I0JX,CU3>EA1 CU3>I0 CT>I4 19-2000 F>EH4 CT>F.I4,PA EH5>DL,EI EH4>EI,HB,I4 CN>DL,EI EA7>DL 20-2100 EH7>ON,PA CU3URA>EA7

Ap 20 0652 I2>OZ(jt) 09-1000 SP3>SP7 OH8>SM5(ms) 1040 S5>SM5(jt) 15-1600 S5>F(jt)

Ap 21 0004 EH7>LX 0246 K6MYC>IK5MEN(eme) 07-0800 I2>OZ(jt) S5>OZ(jt) OK2>I2(jt) 1055 G>I2(jt) I0>I5(ms) 11-1200 I0>SM5(jt) 13-1400 GB3BAA>I0 I7>PA 14-1500 I5>ON G>I7 GW>S5 F>OZ F>DL(Es) I1>OZ,DL I4>PA SP9>F PA>I0 F>SQ9 SP7,SP8>F I5>LA LA>I2 GM>I5 15-1600 OZ>I2 DL,LY0SIX>F GI>I3 F>SP2,SP5 OE6>EI G>SP9,OE5 I5,IT9X>OZ I1>SM7 ZS6TWB>I2AND/IG9,9H1TX TR0A>IG9/I2AND 16-1700 ZS6NK>IG9/I2AND,SV1CRX SP2,SP9>F F>I0 DL>OE5 17-1800 ZS6NK>IK5RLP ZS6TWB>SV1CER 19-2000 I2>I9 I0>ON(jt) 20-2100 I9>DL,I0,I2,PA F>I9 9H>I2 EH5>I0,I9 21-2200 OZ>SM5(jt)

Ap 22 0744 OE5>I0(jt) 08-0900 G>S5(jt) G>SM5(ms) 1322 GB3LER>F 1550 9Ltv>SV1 16-1700 I5>I0

Ap 23 0935 I2>I5 1039 LX>ON 1454 I0>S5(jt) 1559 9H>IS0 1658 9Ltv,3Ctv>SV1

Ap 24 07-0800 OE5>OZ(jt) OE5>I0(jt) 09-1000 GD>I0,I5 G>I0,DL 10-1100 G>PA,DL GD>PA,I5 11-1200 G>I0(ms) G>DL G>EI(t) GD>I2 1302 OH8>SM0 1431 OH8>OZ(ms) 1655 IS0>9H 17-1800 9Ltv>SV1 19-2000 9H1LE,IW9CTR>9Q0AR

Ap 25 0945 I0>I4 11-1200 G>OE5 12-1300 IK5ZUK>S5 S5>DL(ms) 9H>I9 13-1400 I0>I5,DL 14-1500 CN>I9 I5>I0 I0>I2 I4>I0 15-1600 I4>I5 WH7>I9 16-1700 EH7>I9 9H,I9>EA5 9H>EA4 ZB>I9 17-1800 I9,9H>EA5 I0>I5 EH7>I9 I9>I2 19-2000 IT9X>9Q0AR I5>I0

Ap 26 0558 5B>4X 06-0700 A61Q>5B4FL 07-0800 A61Q>4Z5LA,SV1CRX,IK0FTA,OZ3K 08-0900 S5>9A J0>DL S5>F(jt) 09-1000 LZ2CM>YO7 10-1100 A71EM>5B4FL 11-1200 A61Q>SV1EN I9>5B,EA7,SV1,YO7 12-1300 G>9H GB3MCB>I0 G>I9 PA>IS0 13-1400 F>9A I0,I6>EA5 F>I9 15-1600 CT>PA,ON TR0A>G4FUF G>I5 UU5SIX>9H 16-1700 LZ5>9H EH7>I9 4X>SV1 SV1SIX>SP9 I8EMG>ON A61Q>IS0GQX,EA6VQ UR>9H,SV3 SV9>I5,9A SV3>F,I2,DL SV1SIX>SP5 9H>DL 4X>EA6,S5 ON>I9 SV1>I5,F IS0,I9>SV1,IS0(T) ZA>9H EA6>SV1 SP3>SP6,SP7 I9>DL SV1>9A 17-1800 4X>S5,EA6,I2 SV1,SP8>9A I9>DL,PA I2,OM3,YO4,OE9>I9 G>EA5 IS0>9A ZA>I0 9H>I2 SV5>I5 S5,I0>I9 I1,I2,IQ4AD>EA1 SV8,LZ1>I8 9H>DL SV8>I5 LZ3,ON>EA5 I8EMG>F SV9>I5 9H>SQ6 18-1900 9H>ER1,DL EI>EA5 9A,I4,I5>EA1 EH5>PA SV1,SV9>ER1,I1,I2 I9>SP6 EH6,CT,9H>DL EH4,EH7>PA A61Q>9A5ST,S57RR F,ON>EA4 I9>SP7,9A SP9,I9>SP6 5B>S5 G>I4,I7 S5>IS0 I0>I8 TA2>9A 19-2000 TA2>9A EH6>DL UR>I8 9H>SQ9 G>EA5 SV9,SV1,I9,9H>ER1,EA6 YT5G>I4 9Q0AR>I7CSB,9A1Z,S57RR,YO5BIM,IG9/I2ADN CU3>EA4 EH8>EA5 SV1SIX>SP6,ER1 SV3>I1,SP9 EH8>EA7 20-2100 LZ1>I6 9Q0AR>9A8A,YO5BIM 3A>SV1 LZ1>I0,I6 LZ2,UU5SIX>4X I9>ER1 SV1SIX>9A,DL,I1,I0 LZ2>I0

Ap 27 08-0900 I7>4X OK1>EI 4X>I9,9H SV1SIX>I1,I0 YO5>9H I9>YO7 G>EI LZ2>I9 09-1000 LZ1JH>I0 LZ2>I9 SV1SIX>I4 4X,5B4CY>I0 SP9,4X>I9 UR>SM5 LZ1>SM6,OZ YZ1>PA 9H>I9 SV2>DL YO7>I9 G>9A SV1>OZ,9A YO3>DL,SP9 4X>I1,DL,9A SV5SIX>I1 10-1100 SV5SIX,I5,I9>I0 4X>I5,I0,9A,S5 UR,YO8,YO3,YO5>I5 SV1SIX>DL LZ1JH>I0 SQ5>I9 11-1200 YO3>ON,I0 YO7>I0 SV1SIX>OE5,PA SV3,UT5G,YO4>I0 SV3,SV1,LZ2>DL UR>I9 SV1>SP9,I0 LZ2>I5 I8,LZ1>SP9 SV3>I5,HA5 LZ2>9A G>SM5 YO3,UR>9A ON>LZ5 12-1300 SV1>DL,S5 UR>OH6,I4 LZ2>I0,ON LZ1,YO7>PA SV2>S5 YZ1>OZ,SP6,DL,SP7 4N,UT5G>DL 9H>I9 SP2>I7 S5>LZ5 LZ1>SP6 UR>SM3,I7,OH6,PA,OH7 SV1>ON YU1>PA 13-1400 UT5G>HB T9>DL,OZ LZ2>PA,DL,LA SM7>LZ5 UR>DL,I8,I5,PA,I4,SP6,SP9,9A,I7 UT7V>I8 OH6>ON 14-1500 GB3BAA>OH5 UT5G>SP9 UR,OH8>DL OH6>PA UR>9A 15-1600 OH9SIX>SP9,SP5 LZ2CM,SM7,YU1>OZ LY0SIX,OH5RAC>I5 UT5G>DL,PA,ON 9A>OH5 I7>OH2 16-1700 LZ1>LA,OZ OZ>RN6 YU1>LA OH5>I5 9Ltv,3Ctv>SV1 I0>OH5 OH9SIX>DL OH6>I8 UR>I9 17-1800 UU5SIX>I8 UR>9H,I9,I5,SV8,S5 LZ1JH,I7>EA6 SO5,SP8>I9 SV1SIX>DL,PA,I2 18-1900 9H,SV2>UR

UR>S5,I8,I5 5B4CY>SP9 I7>EA6 SP8>I9 YO4>I2,I5 9A>ER1 I7>OZ 19-2000 SV3>DL,SP6,SQ9 YO5>I9 LZ2>I4 UR>DL,I2 I8EMG,SV1SIX>OZ SP5>LZ2 LZ3,SV1SIX>F LZ1>I2,I5 20-2100 SV1SIX,LZ1>ON SP1,SP8,SP9,LY,DL,SP2>I9 UT5G>I4 SV3>SP2 OH7>OH3 I7>DL 9H>9A 21-2200 SV1SIX>ER1 LY>I9 SV3>DL I9>SP9,ER1,SP2 UT5G>I5 UT5G>I1 22-2300 SV8>SP9

Ap 28 06-0700 I9>SP6,OE6 07-0800 LZ1>EA5 I9>DL,I2 08-0900 GB3BUX>I3 I7>F,EA1 F>I0,9A I0,YU1>EI I0JX>EA1 I1>EA5 09-1000 EA1>SP6 S55ZRS,9A0BHH,YU7AZ>EI F>F,SP6,I4,I0 EI>OE3,I0 GW>S5 SP2,I3,YU1,DL,OZ,I3>EA1 EH3>OE5 I8>I0(bs) GB3MCB>DL 10-1100 LA,OZ>EA1 SV1SIX,F,EI,G,GM,GW>DL F>SM6 GM>I5 SP3>EI F>PA,LA OY6SMC>F GM>OE3 GW>SP9 G>PA,I4 GW>SP9 EH2>LA 11-1200 GM,OZ,SP3>EA1 GW>ON EI,GW,G,GI>DL GM,9H>I4 GJ,EA1>LA OZ,PA>EH5 8H>I0 GW>G(Es) G>PA,ON 3A>F,I9 I9>I0 12-1300 OZ>EA1 3A>9H I9>I5,OE5 EI,GU,GM,G>DL GM>9H SM7>EI EI>DL LZ1,YU1,I8,I9>EA5 EI>PA I0>I7 GW>I9 EH6>I8 GM,LA>EA1 F>YO7,I7 13-1400 17,I8>F 9H,IS0>HB I9,9H,GW>DL ON>I7 I6>EA1 YT1>EA4,F OZ7IGY>EI YU7,S5>EA4 IS0>I2 GM>I5 GU,IS0,F>PA S5>EA5 G>OE5,9A EH6>SP9 I5>EH5,EH7 G,EI>DL 14-1500 F>OZ EI>DL GB3BUX>SP9 GB3LER,F>9A GB3MCB>OZ HB,F>I5 EA3>OE6,OE3,DL SP3>EI F>I7,OE6 I4>LA 15-1600 I3>LA F>9A,I4,I5 EH2>SP9 SP6>EA5 EH6>OZ I0,I9>ON DL>F EH6,I0>DL EH3>9A ZS6NK>5B4FL I5>PA 16-1700 F>A ZS6NK>IW9HLM 9Ltv>SV1 17-1800 CN>I4,I5

Ap 29 07-0800 G>OE5,I5 14-1500 A45XR>5B4FL 15-1600 A45XR,A45WD>5B4FL 16-1700 5B>9H,SV1 A45XR>SV1EN I9,SV8>5B 4X>LZ2,I8,I9 4X>I9 17-1800 5B>LZ2,I7 GB3MCB>EI SV5SIX>5B 4X>SV1,YU7,ER1 5B>SV8 20-2100 SV1SIX,OE3XLB,I7,9A>4X 21-200 4X>I9,9A,I7,5B 9H,I9>RZ6 ZA>5B 22-2300 4X>I4 5B>I8,I7

Ap 30 05-0600 YZ7,4X,UU5SIX>5B 0657 HB9SIX>DL 07-0800 ON>I3(jt) EH6>OZ 4X>I9 I9>ON LX2>YO7 G>I2(jt) 08-0900 4X>SV1,ER1,I7,I9,9H SV5>5B,4X UU5SIX>LY G>IS0(jt) 09-1000 YU1>4X G>I2(jt) LZ1,LZ2,Z3,9H>5B 4X>YU1 10-1100 A61Q>4X,9H1TX,5B4FL PA>ON,EA5 UR>5B CN,EH7>PA CT>DL 11-1200 CT>DL,9A,I8,I5 G,DL>EA5 CN>4X,9A,DL I0,I5>EA1 EH1>9A HB,S5>CT SU1SK>9H1XT HB9SIX,F>EA5 EH4>DL,I5 12-1300 CN>DL G>EA5 CT0SIX>I5 A61Q>SP9DSD CT>I4,I% I0>I9 EA1>I0 13-1400 OZ6VHF>LA 1436 OK1>SP9 19-2000 UU5SIX>5B 9Q5AR>IG9/I2AND,IW3SQY,IT9TJH,SV1EHP 2145 OE>F

50MHz PROPAGATION REPORT FOR APRIL 2005 BY SV1DH

1. Data for 24 days, 9-10,16-21 and 29-30th Internet data only.
2. Relatively good days on: 2,21,26
3. 48 MHz AF video (9L+3C+5Z) on: 2,3,7,11-15,22-24,26-28 (R=70%)
4. 55 MHz AF video (5N) on: NIL
   All video openings A-TEP, plus E-TEP on 7

5.	Opening to	ZS6	on: 21(1600-1715)
6.	"	9Q	on: 2(1920),24(1930),26(1945),30(1930)
7.	"	A4	on: 29(2E)
8.	"	A6	on: 26(2E)
9.	"	4X	on: 26,29,30
10.	"	5B	on: 26,29
11.	"	EH	on: 26,28
12.	"	EH6	on: 26,28
13.	"	3A	on: 26,28
14.	"	IS	on: 26
15.	"	I	on: 26,27
16.	"	F	on: 26
17.	"	HB	on: 26

18. " OE on: 27
19. " PA on: 27
20. " ON on: 27
21. " OZ on: 27
22. " SM on: 27
23. " DL on: 26,27,28
24. " SP on: 26,27
25. " OK on: 26
26. " LY on: 27
27. " S5 on: 26,27
28. " 9A on: 26,27
29. " YU on: 26
30. " UA on: 26
31. " UR on: 26
32. " ER on: 26,27

33. Special events on:
2 (1615 I2 to TR/B+1815 EH7 to FM scatter+1915 EH7+CT to PY+1915 IT to 9Q+2030 CT to PY+LU)
6 (1815 EH7 to FM scatter+1845 EH7 to CU Es)
8 (2115 IH9 to ZD8/B)
9 (2230 IH9 to ZD8/B)
10 (FR to JA!!)
11 (1845 EH7+CT+CN to LU)
12 (0815-0900 foF2>10,max 10.5/MUF=35Mhz at 0845+1800 EH7 to FM scatter+I0 to PY5)
13 (1745 CT to TR/B+1930 I0 to PY5)
14 (2115 IH9 to ZD8/B+TR/B)
15 (1300 IT9 to ZS6)
16 (2115 9H to ZD8/B)
19 (1800-1945 G+ON+PA+I5 to ZD8/B Es+ETEP)
21 (1530-1715 5B+SV1+9H+IT9+I5 to ZS6+ 1545 IG9 to TR/B)
24 (Spotless sun, R=0!!)
26 (Es season starting early)
27 (0930 G to 4X, 2Es)
28 (1545 5B to ZS6)

34. DXCC entities heard/worked during Apr 2005 : 28 on 3 cont
35. DXCC entities heard/worked on 26th Apr 2005 : 20 on 3 cont.

73 COSTAS

The Americas

Auroral-Related Propagation

This was one of those relatively infrequent months when more auroral days were reported in North America than in Europe. Note contacts between KL7 and the W7 and W9. One appears to have involved auroral E; the mode in the other instance is uncertain

Ap 5 00-0100 W7(DN62)>W7(CN88 57a) 01-0200 W0(EN35)>W0(EN36) W7(CN88)>W7(DN16) W3>W0(59a) 02-0300 VE6(DO20)>W7(CN88 57a) 03-0400 VE7(CO88)>W7(CN88 55a) W9(EN44)>W0 VE2>W9(EN44 Au/Es) 0408 N0UD>W9(EN44 55a) 05-0600 AL7RT>W9(EN44 55) KL7/KG0VL>W7(mode?) 2254 VE4ARM>W9(EN44 52a) 23-2400 N0UD>W9

Ap 11 22-2300 K0KP>W0(EN18) VE4ARM>W9(EN44) 23-2400 VE6EMU>W7(CN88) K0KP>VE2(41a FN07) VE3UBL>VE2(41a FN07) W8(EN84)>W0(EN18 52a)

Ap 12 00-0100 VE7FG>W7(CN88 57a) VE6EMU>W7(CN88 59a) 01-0200 VE6ARC>W7(CN88 51a) W7(DN17)>W7(CN88 59a) W7(DN05)>W7(CN88 55a) 02-0300 W7(CN84)>W7(CN88 59a) 03-0400 VE7,W7>W7(mode) VE7(CO70)>W7(CN88 59a) W7(CN87)>W7(CN88) VE6>W7(mode?)

Ap 13 2330 K0KP>W9(EN44 54a)

Ap 14 0218 VE7FG>W7(CN88 51a)

Ap 15 0200 VE6EMU>W7(CN88 41a)

Ap 20 0526-30 VE6EMU>W7(CN88 56a) VE8BY>W7(CN88 51a)

Ap 21 2257 K0KP>W0(EN18 52a)

Other Modes

April was a relatively lean month for the US and Canada - indeed no DX contacts were reported from Canada at all. There were scattered contacts between the US (mainly W4) and several countries in South America, spread over six days. Contacts between Caribbean or Meso American countries with South America declined sharply, compared with March, though they were not greatly different from the previous April. The only known opening between South America and Africa (apart from CN and CT3) was 9Q0AR working into PY. Unlike March there were no openings reported between the Caribbean and Africa.

Within the US and Canada there were few indications, if any, of early Es.

Contacts Between North and South America

PY 2 days 6(W4,W9,W0) 12(W5)	LU 1 day 8(W3)	CE 1 day 8(W3)
HP 2 days 3(W4) 21(W4	FY 1 day: 9(W4)	HK 2 days 21(W4)

Ap 1 23-1400 W9,W0>W8 W4>W1,W3

Ap 2 00-0100 W3>W3

Ap 3 22-2300 TI2NA>K4RX K4RX>HP2AT 23-2400 TG9AFX>K4RX,N4CC TI2tv>W4 HP1AC>K4RX W0>W9

Ap 4 0312 VE7>W7 1134 W9>W4 1244 W5>W9(sc)

Ap 5 00-0100 W3>W9 HR1CP>W5AFD W4UDH,K4KJZ,K5WBX,WA5KBH>HR1CP W7,VE3>W0 OA4B>PY2QC aurora 0241 W5>W5 22-2300 TI2NA>WA8JOC(Es)

Ap 6 01-0200 W4>W0,W8 K5AB,N0LL,W9,W4>W4 W4CHA,XE2OR>W8 W3>W3 02-0300 W4>W5,W4 03-0400 W0>W7 W4>W9,W0 W7>W7 WB5LLI>W0 W4CHA,W5>W9 04-0500 XE2>W0,W9 W4>W9 05-0600 W5,W7>W5 18-1900 48242>FM5JC(skew) EA7KW>FM5JC(skew) 22-2300 W0VUY,W9IXV,WA4CQG,K4RX,N4NN>PP5AR 47.9(CE),TI2tv,W4>W4 6Y5RC>K4RX

Ap 7 00-0100 W4>W5 0113 W2>W3 0458 W7>W7 14-1500 W9VW>W4 W0>W9(sc) 2036 WA7X>W7 2202 50.750>W4(qtf 135)

Ap 8 20-2100 49.2(CE),LU7YS,LU8YD,XQ3SIX>N3DB KP4EIT>W4 23-2400 N3DB>FM5JC KL7GLK/3,FM5JC>W3UR

Ap 9 00-0100 FM5JC>N4NN,K8LEE,K4CEB TI8CBT>N4GM,N4UM,W3URN4NN,N4BAA W4SO>HP2AT N4BAA,AA4M>FM5JC 01-0200 K4NYT,K4RX>FM5JC FM5JC>N4GM,W4SO KP4>W4 02-0300 KP4>W4 1150 W1>W1 12-1300 KP4EIT,FY7THF>K4RX W8>W3 13-1400 50.750>W4 1418 W8>W8 1539 ON4IQ>KE7V(eme) W4>W8

Ap 10 0214 W5<>W4 2046 KP2>KP4 aurora 2357 W8>W3

Ap 11 0008 W2>W3

Ap 12 0213 W4>W4 1231 KD4NMI>W5 1857 PP5AR>K5YY

Ap 13 00-0100 W3>W3 1935 IW0GXY>PP5AR 2206 45.92>E4

Ap 14 00-0100 S3,W4>W4 21-2200 LU7YZ>KP4YN KP4TB>PP5AR PP5AR>KP4TB L50HR>WP4NEG,WP4NIX,WP3YM LW3EWZ>WP4NEG,WP3YM 22-2300 XE1KW>PP5AR W4>W3 23-2400 YV4AB,YV4DDK>FM5JC

Ap 15 0016 FM5JC>YV1DIG 01-0200 TI2SW>KE4WBO TG9NX>K5VIP/4 N4UM>HP2AT 02-0300 TG9NX>N4NN W4>W3 22-2300 W4SO>FM5JC

Ap 16 1250 VE2>W5 13-1400 W5>W4 1538 48250(EA)>W2 1621 48250,48242>FM5JC 21-2200 W3>W4 FG>FM

Ap 17 03-0400 W0>W8 W8>W9 1250 W8>W3 13-1400 W3>W3 VE2>W4(ms) 2122 48250>W2

Ap 18 0142 IK5MEN>W7GJ(eme)

Ap 19 1222 W4>W4(ms)

Ap 20 0248 W4>W8 15-1600 W1>W2 21-2200 W1>W1 49.2>W3

Ap 21 0356 VE3>VE3 21-2200 KP4>W4 KP4>FM W1>W1 22-2300 W4,W2>KP4 KP4>W1 W4,W1>W4 23-2400 P49MR>K1GUN FM,PJ>HP2 HK1XX>N4NN P43JB>W1RA,K9MU,K4JAF,WZ1V V44KAI>FY1FL KI4CYB>HP2AT P49MR>WE2N W4>W4 N4CC>HP2AT

Ap 22 00-0100 P43JB>WI1S,N9IW,N4BAA,N8IE,N3LL P49MR>K5VIP,N3LL C5AFP>WZ8D 01-0200 P49MR>WZ8D W4>W4 02-0300 P49MR>W4SO GD0TEP>W7GJ(eme) 0312 G4RGK>W7GJ(eme) 0333 G4RGK>K7BV/1(eme) 1338 W8>W5 1410 W2>W5(sc) 2258 KP4>W4 23-2400 KP4>W4 V44KAI,W4>W4 W2>W4 FM5JC>W4SO

Ap 23 00-0100 W4>KP4 V44KAI>W4SO 0106 KP4>W4 15-1600 W8>W1 48242,49750>FM 1634 W5>W5(jt) 22-2300 W2>W2 KP2>FM

Ap 24 0008 WA7X>W7 1543 48242>W2 1734 W3>W4 19-2000 W1>W3 9Q0AR>PP5AR 21-2200 W3>W3

Ap 25 0430 W6>VE6(eme) 0742 VE7>W7

Ap 26 no reports

Ap 27 1538 W7>W5 16-1700 W7>W0 W3>W3 W7>W5 17-1800 W1>W3 W0>W5 18-1900 W0>W5 W1>W2 1957 K0ETC>W7 2006 W0>W7 2132 W1>W2

Ap 28 14-1500 W3,W5>W5 21-2200 W0>W1 W9>W4

Ap 29 18-1900 W3VD>W3 19-2000 W6>W7 W6,XE2ED>W7

Ap 30 1248 W4>W8 13-1400 W4>W8 1402 W7>W1 1609 W5>W8 W3>W1 1722 W1>W1 21-2200 KP4>W4 W8,W2>W4 W4>W9,W1 C6AFP>N4DB 22-2300 W4>W9,W4,W3 23-2400 W4>W8,W4,W2,W3,W5 N3LL>W3

Asia/Pacific

Japan

There were two notable features of propagation for JA. The first was the contact between FR1AN and several of the JA call areas on the 10th, a day when the geomagnetic field was quiet but the solar flux was a mere 88. The second was the consistency with which paths between parts of JA and VK were open.

	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
VK	+		+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+			+
ZL						+								+																

Japan<>VK/ZL

VK3 2 days 7 18
VK4 16 days 1 6 8 10-14 17 18 20-22 24 25 30
VK6 21 days 1 3 4 6-15 18-21 23 24 26 27
VK8 0 days 3 6 9 10 11 14 18 19 26

As the tables above indicate, propagation was reported on 25 days, albeit mostly to the relatively easier call areas in Australia. The missing days are slightly intriguing: the 5th was the most disturbed day of the month but there were no obvious distinguishing figures for the other days. It is interesting to note that VK4 and VK6 were available even on the 20th, which was geomagnetically unsettled and had a solar flux of only 77 - indeed there was propagation on all four days when the flux was in the 70s.

6m DX results in JA during April from JA1VOK

DATE	TIME(UTC)	
4/1	0340-0730	FK8SIX/B, KG6DX, VK4,6RSX/b
3	0250-1000	FK8SIX/B, VK6RSX/b,8RAS/b
4	0510-0600	VK6RSX/b
6	0320-1300	C21SIX/b, DX0K, FK8SIX/B, V73SIX/B, VK4,6RSX/b,8MS,8RAS/b, ZL3NE/1
7	0310-0510	FK8SIX/B, V73SIX/B, VK3DUT,3SIX,6RSX/b
8	0455-0945	DU1EV/B, DX0K, HL5BMX, VK4,6RSX/b
9	0345-0800	C21SIX/b, FK8SIX/B, V73SIX/B, VK6RSX/b,8RAS/b
10	0550-1330	DU1EV/B, DX0K, FK8SIX/B, HL, V73SIX/B, VK4,6JQ,6RSX/b, VK8RAS/b, YB1MH,1EHR,YC1NZ
	1000-1020	**FR1AN** (**JA2-6**)
11	0350-0730	FK8SIX/B, VK4,6RSX/b,8GF,8RAS/b
	1200-1210	VK8MS
12	0450-1030	BD4SI, DU1EV/B, DX0K, FK8SIX/B, HL, VK4ABW,6JQ,6RSX/b
13	0250-1000	DU1EV/B, FK8SIX/B, V73SIX/B, VK4,6,8RAS/b
14	0630-1050	BD4SI, FK8SIX/B, VK4,6JQ,6RSX/b,8RAS/b, ZL3NE/1,4AAA
15	0612-1050	DU1EV,DU1EV/B, HL, T88EM, VK6JQ
16	0544-1030	V73SIX/B, VK4, VR2XMT,SIX/b
17	0500-0600	C21SIX/b, FK8SIX/B, V73SIX/B, VK4RTL/b
18	0530-1030	DU1HBC,DU1EV/B, FK8SIX/B, V73SIX/B, VK3DUT,VK4,6JQ,6RSX/b, VK8RAS/b
19	0530-0730	V73SIX/B, VK6RSX/b,8RAS/b
20	0700-1030	DU1EV/B, VK4WS,6JQ,6RSX/b
21	0430-1100	DU1EV,1HBC,DU1EV/B, VK4,6JQ,6RSX/b, XV3AA
22	0750-0830	V73SIX/B, VK4ABW
23	0600-1230	C21SIX/b, JD1BIA, V73SIX/B, VK6RSX/b, VR2XMT
24	0100-1200	BD4SI,7OH, BV3FQ,BV50CRA, HL1LTC, V73SIX/B, VK4,6JQ,6RSX/b
25	0400-1300	VK4ABW,6RSX/b,8RAS/b, VR2XLN,SIX/b
26	0530-1030	DU1HBC,DU1/GM4COK,DU1EV/B, VK6RSX/b,8RAS/b
27	0530-0600	VK6RSX/b
29	0555-0610	HL2IPL
30	0700-0800	FK8SIX/B, VK4ABP/b

Elsewhere

Lots of VK reports from JA - but where are the reports from VK?

Ap 4 0507 VK6RSX>HL1
Ap 6 10-1100 DX0K>HL4XM,HL4CEL
Ap 7 0503-6 JA2>VK3 0553 49752(UA0)>VK3
Ap 10 1315 YB1HER>BD7OH
Ap 11 15-1600 VK4RO,VK6RSX>HL1
Ap 12 0851 DX0K>HL1
Ap 13 0645 VK4ABW>HL1 0747 VK6RSX>HL1 0748 VK4CXQ>HL4 0934 VK4FNQ>HL2
Ap 14 1048 VK6JQ>HL1
Ap 15 11-1200 HL2,JA6>HL1
Ap 19 0543 VK6RSX>HL1
Ap 21 0432 VK6RSX>HL1
Ap 24 0122 JA1>BD7 0333-52 JA6YBR>HL1 0506 JA1ZYK>HL1
Ap 25 0344 JA1ZYK>HL1 04-0500 C21SIX>VK4 0646 VK6RSX>HL1
Ap 26 0637 VK6RSX>HL1

Beacon News and 28 MHz Worldwide

Compilation and Commentary by G3USF

Beacon News

10121, 18082 or 18084.5 DS50DNO/b reported on these frequencies; no further information (May-June)

28191 LU7VCH FF60LW with 5 watts to vertical. New. (WJ5O June)
28192 LU3DBJ GF05UG with 5 watts to vertical at 6m. Permanent or another occasional visitor? No further details (G0AEV June)
28204 N0WY Plattsmouth NE (EN21BA) 3 watts to Vertical (N0WY)
28206.6 W8NGA Grove City OH (EM89KV) 5 watts to 1/4 Vert (K0HA June)
28234.5 W1FVB change of callsign for KB1KDC and change of location to Whitefield NH (FN44EJ) (W1FVB)
28252 KC4YUV temp QRT (KC4YUV June)
28253.1 I5IJF/b reported here (June). No further information
28256 C30P heard with 10 watts to vertical from JN02SM. This beacon was originally intended as a temporary operation but it may become permanent. Email ara.andorra.ad (June)
28272.5 K5BTV moved to Cumming GA (EM74) (K5BTV June)

50006 A71A in Doha (LL55SH) about to become operational with 8 watts of a1 to J-Pole (IW3FZQ, July)
50021 ER3SIX KN47JG running 10 watts to GP (IW0GPN July)
50021 UN1SIX reported to have resumed operation (EX8MLE)
50030 WP4MZA running 10 watts to vertical from FK78DI (WP4MZA, July)
50063 KF4ODI Newbern TN (EM56) runs 10 watts to doublr-stacked halos at 40 feet (KF4ODI, June)
50070 WA7ACO reported here by K0HA (July)
50072 W0MU in Montana reported by W0MU; no further details (July)
50073 K4YKZ (EM85) reported here, no further information (VE1YX, June)
50074 FG1JD reported his beacon here but no further information (June)
50075.3 LW2ETU Avellaneda BA (GF05TI) runs 1w to GP (LW2ETU June)

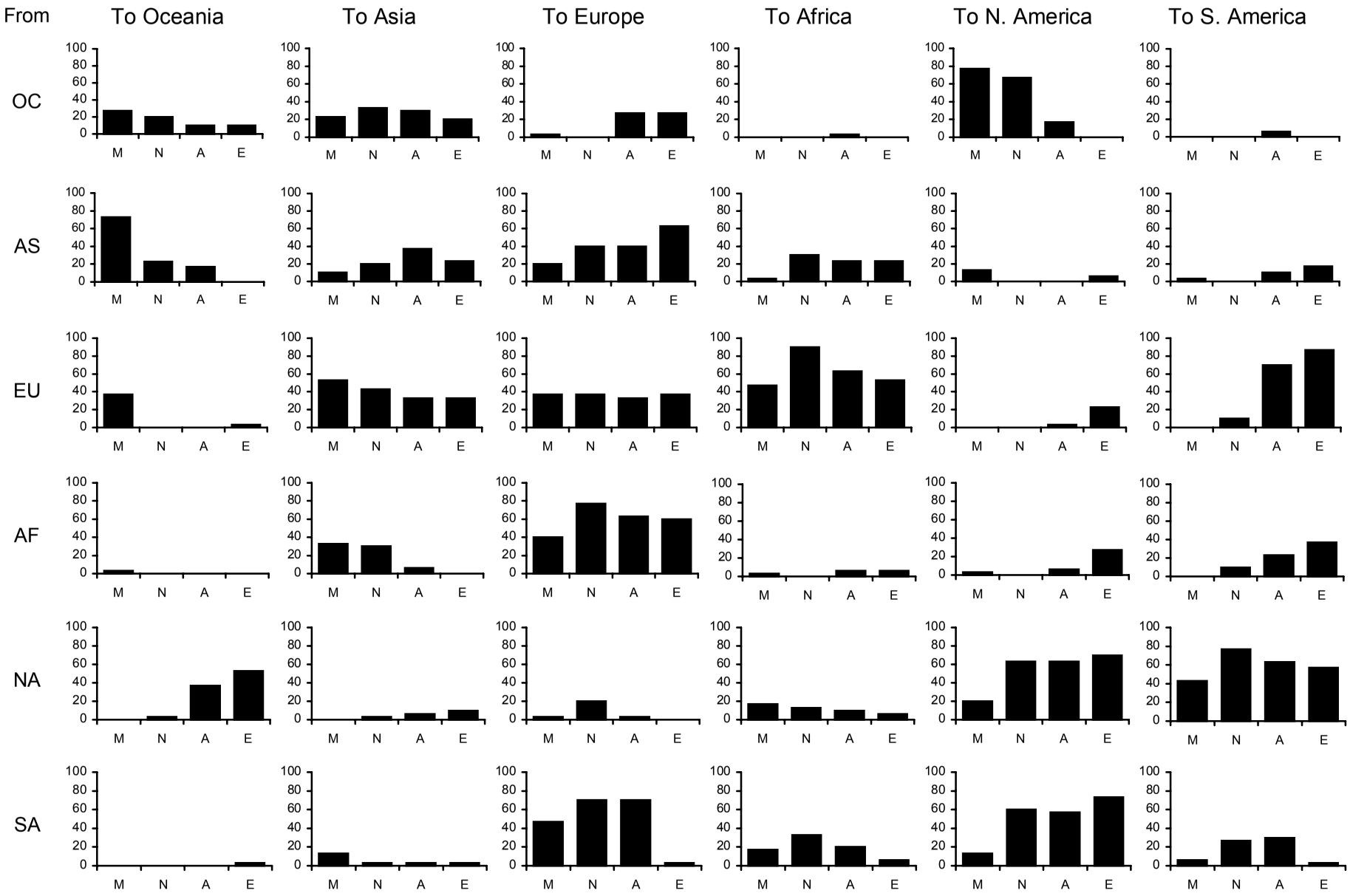
28 MHz Worldwide

As G0AEV has already shown April was in most respects an unremarkable month, though the wider continental basis used here results in a rather more optimistic picture. Thus, UK monitoring of ZS6DN, the most consistent African beacon, showed a 77% daily reliability. A continental-wide perspective shows signals were recorded between Europe and Africa every day except the 3rd and 5th, with the noon period alone achieving 90 per cent. These were, admittedly, the best results. Again, however, LU1FHH into the UK achieved a creditable 43% - a creditable figure for a low-power transmission. Continent to continent reliability was 87% during the European evening. Further afield, Oceania<>Europe achieved 40%, almost all in the morning and into Central and Eastern Europe. Asia which, like South America, was weakest at the start of the month, actually attained 73% daily reliability, though none of the time periods was particularly consistent. Propagation within Europe, which improved in the second half of the month with the arrival of increased sporadic-E, was reported on 20 days, though with no particular consistency in timing. Openings to North America were, as G0AEV has already reported, were apparently non-existent for UK operators, but there were scattered evening openings, mostly in the evenings and mostly with the Caribbean, for operators in more favoured southern latitudes.

Openings between North and South America were reported on all days except the 1st and 6th. As was to be expected, this was the most consistent DX path. North America<>Oceania had some propagation on 21 days but paths to Africa (10 days) and Asia (6 days) remained occasional and problematic. Contacts within North/Central America were recorded on every day except the 1st, 5th and 12th. Africa<>South America, which tends to be under-reported, was nevertheless known to have been open on 15 days, while there were Asia<>Oceania reports on 22 days - which is actually a poorer return than we know of at 50MHz - cue for a reminder that the graphs that follow chart only reported propagation; reality can only have been better!

Finally, to note as better-than-usual: JF2TKH<>K4FA at 2330 on the 9th with a skewed heading, ZR1VN<>W7WA at 0704 on the 24th, long path, KP4SQ copied by F8IJV at 1838 on the 27th on 29MHz FM, LU4CN heard by JK2TKN at 1319 on the 30th, long path. And SV1BSX heard the OK0EG and DL0IGI beacons at 2222-4 on the 27th.

28 MHz Worldwide - April 2005



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