THE SIX AND TEN REPORT

January 2005

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Analysis of 28 MHz reports from the UK

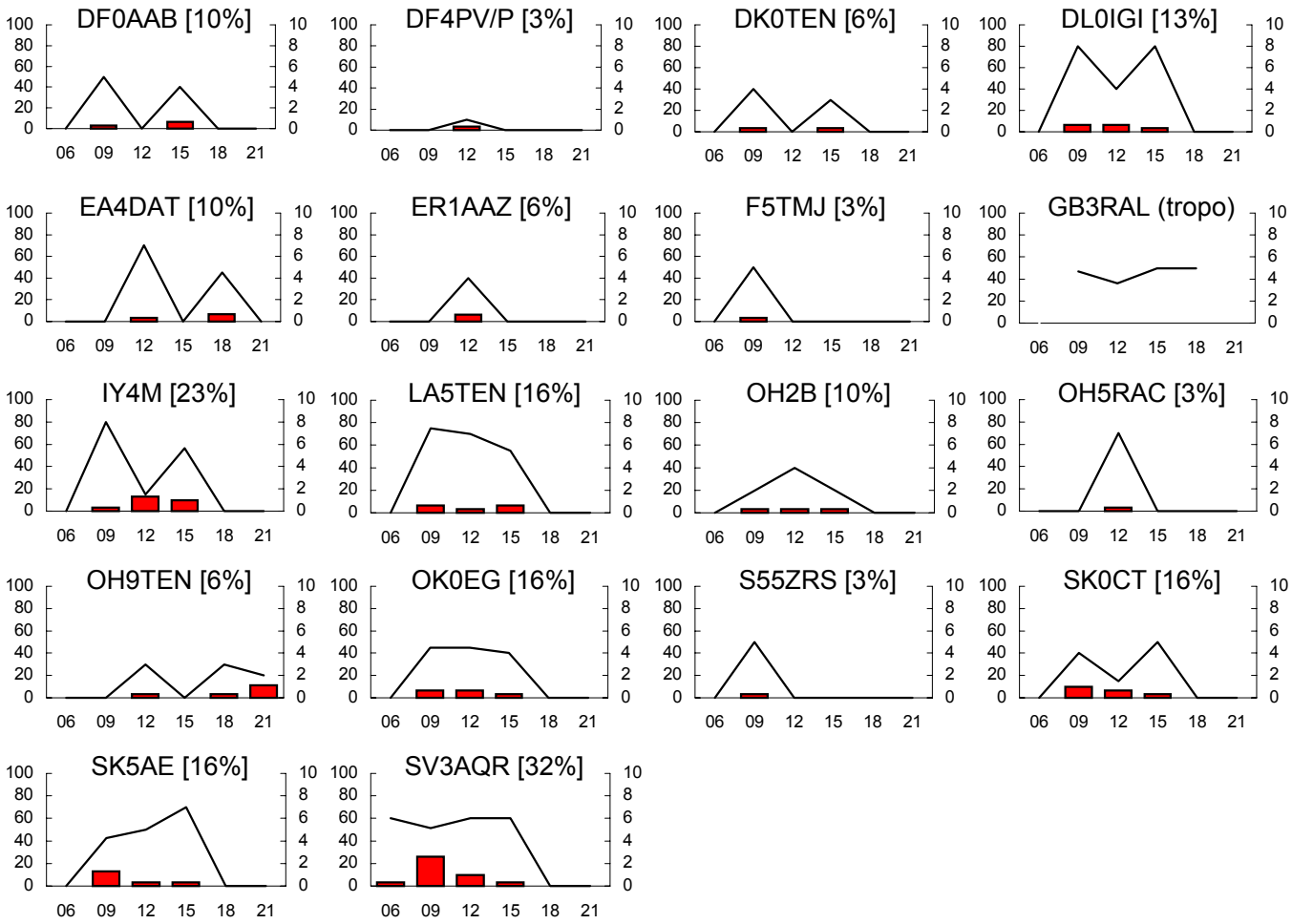
28 MHz reports and logs for January 2005 from G2AHU, G3HBR, G3IMW, G3USF, G4UPS, G0AEV, G0DVY, G0IHF, GM4WJA, 2U0GSY and packet cluster reports. Compilation and commentary by G0AEV.

The New Year brought no excitement for 10m operators. F-layer propagation was rather muted with reduced reliability on the bread-and-butter DX paths to Africa, southern South America and Western Australia. This situation was due to lower solar activity and to the influence of a moderate number of geomagnetic disturbances. As a consequence there were virtually no 10m openings to North America. Europe, however, was available through a series of useful winter sporadic E openings – an Es event was recorded by beacon monitors on more than 50% of days in January. A few UK stations found good aurora and auroral E conditions in the evening of 21st, including some unusual mixed mode contacts (as described in the last part of this section of the Report.)

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.

ER1AAZ and SV3AQR were heard by a single F-layer hop. GB3RAL was heard via tropospheric modes at G0AEV. All the other beacons reported on the previous page were heard by direct E-layer propagation. Nearly all of the E-layer openings were sporadic E but the results for OH9TEN also include a little auroral E in the late evening period. No backscatter was reported.

European Beacon Notes.

EI0TEN was not heard in January: a probable reason comes from Cormac EI4HQ who says that a fault developed in EI0TEN at some point since late November. The beacon was last heard in the UK in early December so presumably the fault developed after this. Transmissions continued, but were substantially weaker than 'spec'. The problem was fixed at the start of March the beacon is now back at full strength of 25w.

GB3RAL suffered several periods of outages and/or very low power output during January. Lack of results for the 06 and 21z periods in January's graph for this beacon is due to these outages. The problem – intermittent at first – resulted in GB3RAL going off the air for all of February.

There was a single report of S55ZRS heard during a sporadic E opening on 3rd January when beacons in DL, I and OK were also heard. S55ZRS was thought not to be operational on 28 MHz but the beacon status may have changed. However, there have been no other reports of S55ZRS in subsequent openings and it may also be that the beacon was incorrectly logged.

Two new European beacons became operational in February – SK3GK on 28201.5 and IQ8CZ on 28230. Both were heard in February in the UK and will feature in next month's beacon graphs.

10m DX in January 2005

The following list of DX countries worked or heard from the UK comes from packet cluster spots (DX Summit: http://oh2aq.kolumbus.com/dxs/) and from logs of Six and Ten reporters.

DX in January: 4L, 5B, 8P, 9G, 9J, A6, CX, EA8, EA9, FR, KP4, LU, UA9/0, UN, VE, VK, VQ, VU, W, XE

DX in December for comparison: 4X, 5T, 5U, 8P, 9G, A9, CN, CT3, CE, CX, EA8, EK, FR, HI, KP2, KP4, LU, PJ2, PY, SU, TA, UA9/0, V5, VE, VK, VP8, VR, VU, W, XE, Z2, ZC4, ZF, ZL, ZP, ZS.

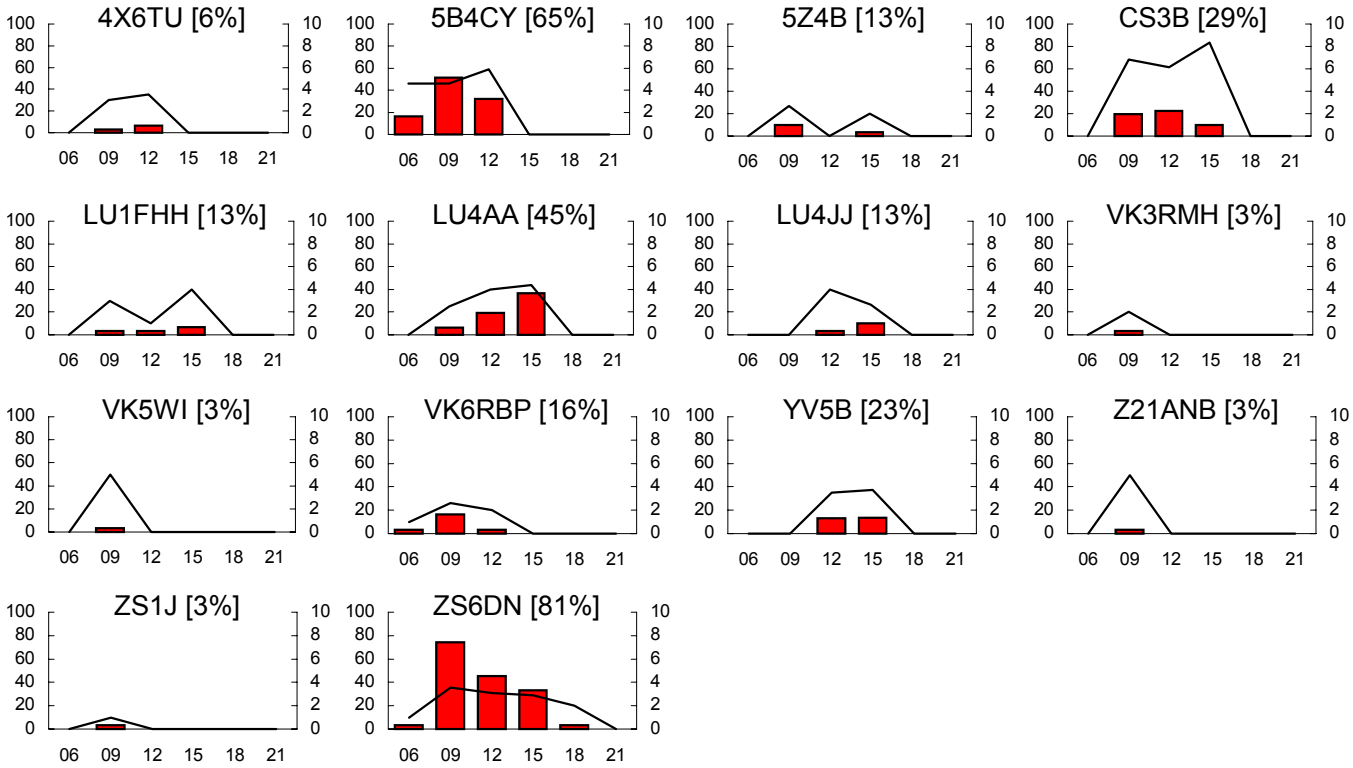
The number of DX countries reported in this section has been decreasing since October. The numbers are October – 116, November – 76, December – 36, January – 20. One would expect to see a slight increase in these numbers in February and March due to the proximity of these months to the Equinox, assuming that ionospheric conditions continue to deteriorate only slowly.

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

Suggested propagation modes.

Graphs showing the results of monitoring of beacons other than those in North America and Europe are shown on the next page. These results are due to direct path F2 propagation, predominantly on southward directed paths. ZS6DN continued to be the most reliable beacon while 5B4CY at 1 hop distance from the UK did fairly well. Beacons in Australia were heard. However, generally, all results were poorer than any month since last summer, and the results for VK6RBP and those in LU were particularly poorer than we have come to expect.

Beacon Graphs – Rest of the World.



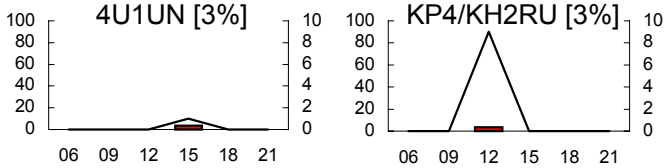
Beacon Notes.

4X6TU was off the air for repairs until the end of January when the beacon returned to service – it was first heard again in the UK on 30th. Of the NCDXF/IARU beacons within monitoring range on 10m from the UK only OA4B is now absent. Other beacons reported above are believed to have been fully operational all month – although short outage periods may have occurred and not been recognised.

Propagation to North America

North American signals were virtually absent from the 10m band this month. Only 2 beacons were heard – the QRO IARU/NCDXF beacon 4U1UN, and a new beacon from Puerto Rico KP4/KH2RU (28.243), which has an advantageous location in the Caribbean.

There was a little more propagation to USA in February than in January, and I expect a similar picture in March. However, we are close to the point at which F-layer paths between North America and NW Europe will remain closed for the period of the solar minimum. There will be chance openings during this period (for example, during pre-auroral enhancements) but these opportunities will be far and few between. Summer sporadic E will be the best bet for 10m transatlantic QSOs for the next 3 or 4 years.



The following discussion on auroral propagation includes an interesting and unusual GM-XE contact:

Auroral Propagation on 28 MHz

To complete the picture of auroral activity discussed in Section 2 (UK 50 MHz analysis), I think it instructive to see how 28 MHz behaved in the events of 21st November. For this we are lucky to have the following from GM4WJA who writes that the auroral activity this month included "a couple of surprises on the 21st". John was called by RN9FAV on 10m during the height of the aurora on 6m, and just after the end of a period of auroral E on 6. John says "we both exchanged auroral reports but probably the real mode was Auroral E". I presume there was an auroral tone, in which case a mixed mode of aurora backscatter plus auroral E would seem likely. The distance of this contact precludes aurora backscatter on its own and is too long for a single direct E-layer hop too. Later on John worked XE1KK. "XE1KK was a genuine 59 with no distortion on his audio. He was just as surprised when I called him and it took him a few overs to get my prefix as he couldn't believe the band was open between us. He was beaming to Japan and was the same signal strength with me between 270-360 degrees. Some very weak North American accents were also heard at this time but not strong enough to get calls." This later instance was during a late phase of 6m aurora and again shortly after some 6m auroral E reports by G stations with JW and OH9. The 6m openings indicate auroral E was available in a northerly direction and makes a transpolar auroral E + F2 mixed mode a good candidate for John's contact with Mexico.

The following is the log extract from GM4WJA (IO87), all SSB on 10m, with my notes in italics

21st	2022	RN9FAV 57a/55a	(3392+/- km)	*(mixed mode aurora + auroral E?)*
	2024	SM3TLG (JP81) 59/59	(1204+/- km)	|
	2026	SM2HTM (KP07) 57/59+	(1636+/- km)	| *(auroral E)*
	2030	SM2EKN 59/59+	(1650+/- km)	|
	2031	RW1AU 57a/59a	(1915+/- km)	
	2034	RW3AY 55a/57a	(2451+/- km)	
	2035	SM5ERK 58a/59a	(1210+/- km)	
	2036	SM0ZAL 55a/58	(1317+/- km)	
	2039	M0CCQ IO82NW 53a/57a	(514 km)	
	2041	SM3IEK JP82MO 57/59+	(1235 km)	|
	2043	SM3MRM 57/59+	(1151+/- km)	|
	2045	OH7MBZ 57/59	(1765+/- km)	| *(auroral E)*
	2046	OH2TP (KP20) 59/59	(1567+/- km)	|
	2048	SA5ACR 59/57	(1210+/- km)	|
	2257	XE1KK (EK09) 59/59	(8532+/- km)	*(mixed mode – transpolar auroral E + F2?)*
	2316	LA5WNA 55a/55a	(829+/- km)	

Analysis of 50 MHz reports from the UK

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

January was a lot better than December for 6m operators - though this says little as December was rather poor. There was considerably more sporadic E in early 2005 than in late 2004 and although conditions were far from outstanding, the net number of Es openings for this winter season was slightly higher than average. Digital mode meteor scatter (mostly JT6M) continued to claim a significant proportion of activity (if packet cluster spots are a reliable guide) and these modes seem largely to have replaced "classic" meteor scatter and tropospheric working at times when Es is absent. A large number of small aurora provided QSO opportunities for GM stations: the aurora on 21st was more widespread and all parts of the UK experienced aurora together with some auroral E propagation to Scandinavia.

Sporadic E

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.

	9H (3%)	CN (6%)	CT (3%)	DL (6%)	EA (10%)	F (10%)	G-GM (3%)	HB (6%)
D	8	8 11	8	2 5	8 17 19	3 8 19	9	9 19
06								
09						0		9
12				9			9	
15		5 6		9	5			
18	7		3		5 1	6 9		9
21					9	9		

	I/IS/IT Italy (23%)	LA (3%)	OE (3%)	OH (3%)	OY (3%)	OZ (3%)	SM (6%)	SP (10%)
D	2 3 8 11 13 19 24	5	2	2 5	9	5	3 5	2 5 24
06								
09	0 3							5
12	9 0		6	0	9		5	0
15	2 9	8		9		9	9	8 0
18	9 9							
21	9							

	UR (3%)	YU/9A/S5/T9/Z3 Ex-Yugoslavia (19%)
D	2	3 4 11 13 19 24
06		
09		9 9
12	0	9
15		9 4
18		9 9
21		

Winter Sporadic E on 6m was very poor in December, but improved significantly in January when 18 country/areas were available in openings on 11 days. Most of the Es openings were in the first half of the month with the best days being 2nd, 5th, and 8th January.

Es Backscatter.

The Es event of 5th January may have been strong enough for Es backscatter propagation. At 1606 on 5th DK1MAX spotted G0JHC with an attached comment "sounds like scatter" – however there were other G-DL QSOs in the same opening that were direct path, and this spot may have been the same. An interesting and unusual auroral E backscatter report is included with the auroral E reports below.

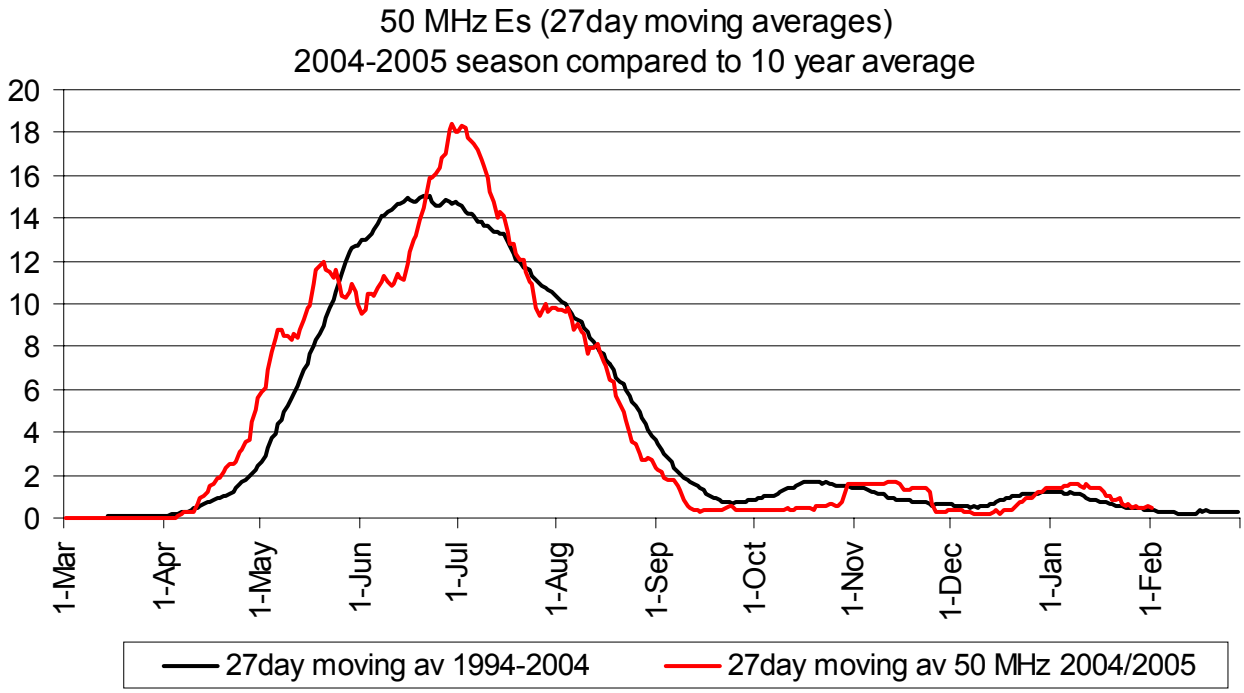
Es Propagation Summary.

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	31
06																															
09		1	2						1															3							
12		5	3					1	2																						
15		1		1	6			2			3		1																		
18								4					2				1		4												
21																			2												

The graph below shows the progress of sporadic E in 2004-2005 (up to and including data for January 2005) compared with mean activity over the preceding 10 years. This graph displays 27-day moving averages of the daily 6m country/area scores against a 10-year average of the same measure. Details of how this graph is derived were given in the May 2004 Six and Ten 2004 Report.



The version of this graph shown in the December 6&10 Report showed virtually no winter sporadic E, just the hint of a peak developing at the end of January. A strange "peak" in November, in part due to "aurora-related" Es, was interpreted as displaced activity more normally seen in late October but was clearly not part of the Winter season. With the inclusion of January data, the winter season peak is now defined with a high on 7th January (28 MHz data shows the winter Es high at 4th January), and with an amplitude greater than the 10-year average form winter Es. It seems that both autumnal and winter Es "seasons" were later than normal.

Tropospheric propagation

One again there was very little interest in working (or perhaps just in reporting) contacts via tropospheric modes. The paltry list below clearly does not reflect the true potential for distance-working using "tropo" on Six but is the best I can offer from reports received.

15 0800 G4UPS reports GB3BUX unusually strong at 569
21 1653 2E1FUF IO93) > GM4NFC 57

In previous years, when interest in "tropo" modes was higher, it was established than well-apportioned stations could make contacts via troposcatter over path lengths of 700 km or so under reasonable conditions. Troposcatter under the best conditions and with the best stations might expect to do better than 700 km but few authentic troposcatter contacts appear to exceed this. Claims of 1000 km plus tropo contacts could often be explained as mis-identified MS or ionoscatter, although one could never be sure of the interpretation one way or the other. Tropo ducting should, in theory at least, extend the "maximum" workable distances considerably. However ducts capable of supporting 50 MHz signals appear to be rare: I have not come across seen any instances of DX worked on Six by UK stations via unambiguous tropo ducting.

With the advent of cheap and effective low-signal working using digital modes such as JT6M it may now be possible to explore and extend the practical limits of "tropo" working. Mode identification will remain a problem in many cases and this problem is only likely to be resolved with the accumulation of a body of evidence. Single (isolated) reports are always going to be difficult to interpret. It is quite difficult for anyone to tell from personal experience alone the mode of propagation without the supporting evidence of other QSOs and weather, ionospheric, and time-date data.

In last November's 6&10 Report I made special mention of the tropo QSOs that Ken G4IGO had with OE5MPL on 14 November because these QSOs were in excess of the usual maximum tropo distances for 6m. I thought that these QSOs were achieved using digital modes and suggested that because of the distance involved they may not have been entirely tropo. Ken kindly provided the following additional data:

"Re my QSOs with Peter OE5MPL on the 14th November - I had several and I think that they were all via tropo - yes there were some MS enhancement as well. I listened to Peter for a long time - over an hour - as he was working others on MS with WSJT. When I got his attention we went to CW and had a 529/539 CW QSO. He stayed in for at least another 30 minutes. I also had the German TV in on tropo, which is not normal at all. So I am happy that it was tropo. As you are aware, I have been on 50 for a long time and do know what most of the modes are like."

Ken notes that the use of digital modes is proving what has been known for years: that there is almost constant propagation by MS to middle Europe. Perhaps tropo, too, can be explored more fully.

Meteor Scatter

A significant number of January reports were for meteor scatter via JT6M. The list on the following page gives the number of QSOs per hour period summed for the entire month based on counts of JT6M heard/worked reports – but only those JT6M reports where the propagation mode could be determined positively. A significant number of JT6M reports had to be discarded because it was possible, from the data available, that the mode might have been tropo or Es. Spots that represent schedules, self-spots and general talk-back were, of course, also discarded.

The analysis shows that most activity was in mid morning (1000-1100), much as we have seen previously, but this time there was no corresponding peak in activity in the evening. I reamain of the opinion that theses data represent times of most amateur activity not times when propagation is best.

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

Hour	QSOs	Countries	Hour	QSOs	Countries
02z	2	I, SM	16z	4	CT, I, OH, S5
09z	1	SM	17z	2	I, OE
10z	7	I, LA, OZ	18z	0	
11z	11	I, OE, S5, SM	19z	1	CT
12z	4	I, S5	20z	4	LX, OZ, S5
13z	4	I, LX, S5	21z	2	I, UR
14z	0		22z	2	CT, I
15z	5	EA, HB, I, OZ	23z	1	OZ

The second table lists the number of MS QSOs by day (using the same data as before). The peak day for MS contacts was the 3rd, the peak of the Quadrantids meteror shower. The number of random MS contacts made at other times are again mainly a function of amateur activity, and in particular the activity by amateurs that report the propagation mode when spotting their successful JT6M contacts.

Table of MS QSOs (mostly via JT6M) in January by day

The Quadrantids shower peak on 3rd January is highlighted

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

Aurora

GM4WJA's report this month mentions the plentiful aurora activity available to Scottish stations in January. The 21st was obviously the big event of the month. John writes "the aurora that night was very strong with lots of reports of a large visual display - but nothing here as it was very cloudy. Not much activity on 6m but at times the GB3BUX/B beacon was 59A when the northerly beacons such as GB3LER/B was barely audible, which suggests the auroral oval came down south quite a bit."

John made some interesting aurora and auroral E contacts on 10m during the events of the 21st – these included possible aurora + auroral E and auroral E + F2 mixed mode contacts, as described in Section 1 (UK 28 MHz analysis).

1st	18z		Aurora in early evening reported by GM4WJA
2nd	15z	1555	GI6ATZ (IO74) > GM0HBF 55A
		1628	MM0BSM (IO86) > GB3LER 51A
		1721	GM4NFC > GB3LER 59A
	18z		GM4WJA has aurora "all evening"
3rd	00z	0030-0035	MM0AMW (IO75) > GB3LER 54A, OY6SMC 52A. No aurora at GI4FUE.
	15z	1642	MM0CWJ > GB3LER 53A
	18z		Aurora extends to mid-evening at GM4WJA
4th	18z	1838	MM0CWJ > GB3LER 52A
7th	15z	1755	MM0CWJ > GB3LER 54A
	21z	2148-2150	GM7PBB (IO68) > GB3LER 57A, OY6SMC 53A
		2242	G7RAU (IO90) > GM4DZX (IO89) 59A
		2306-2339	MM0AMW (IO75) > TF3SIX 54A, GM4WJA 59A
10th	21z	2130	MM0CWJ > GB3LER 53A. Aurora mid to late evening at GM4WJA.
12th	18z	1822-1844	MM0CWJ and GM8LFB report GB3LER auroral
16th	21z	2152-2204	MM0AMW > GB3LER 55A; GM8LFB (IO88) > OY6SMC 51A
		2220-2240	MM0AMW > OY6SMC 53A; GM4DZX (IO89) > GB3LER "fully auroral"

17th	12z	1218	GM8LFB > GB3LER “weak aurora starting”.
		1544	LA2IM > GB3LER 52A
		1642 & 1708	EI7BMB > MM0BSM 51A; G0PQO (IO92) >MM0BSM
		1725-1730	G4WJS (IO91) > GM4ISM 55A QTF 340; G3NVO > LA2PKA 55A
		1730-1752	Many G > GM; also EI7BMB > MM0AMW 59A, G8PL 51A
		1755	All aurora signals suddenly gone at G3IMW (IO80)
	18z	1810 & 1822	GM8LFB (IO88) > GB3BUX 51A; MM0AMW > LA5UF (*auroral?*)
		1900	MM0BSM IO86) > GB3LER 53A
			Aurora was in “all evening” at GM4WJA
18th	00z	0000-0050	MM0BSM > GB3LER 55A, OY6SMC 51A; G4FVP > GB3LER 53A QTF 000
		0157	MM0AMW (IO75) > TF3SIX 53A
	18z	1922	GM8LFB > GB3LER “auroral”
	21z	2130	G7RAU spots 49.76 video “auroral building” QTF 050
19th	00z	0126	MM0BSM > GB3LER 52A
		1215	GM4NFC (IO75) > GB3LER 52A
	18z		GM4WJA “aurora in early evening”
20th	15z	1618	MM0AMW > GB3LER 53A
21st	15z	1734	GM8LFB > GB3LER 52A
	18z	1830-1846	GM >GB3LER; EI7BMB > GM; G4PCI (IO91) > EI7BMB, G, GI, GM.
		1913-1930	G4PCI > GI6ATZ 59A; EI7BMB >GI6ATZ 59A
		1930-2000	G > EI, GI; GM > EI, GI, GM. MM0BSM > LA8HGA (*aurora or auroral E?*)
			G4BYG reports visual aurora in IO93
		2000-2100	G > EI, ES6RQ (KO28), F, GM, PA; GM > GM, PA; GI4OWA > OY9JD
	21z	2100-2141	G2ADR > GM; G4IGO > GB3MCB 56A, GB3BAA 52A
		2229-2236	MM0BSM > GB3LER 53A, MM0AMW 55A; G4UCJ (IO91) > GM ‘very weak’
		2253	MM0BSM > G4WJS 55A
		2300-2305	MM0BSM> GM4DZX 52A, MM0CWJ 52A; G0CHE > MM0AMW 52A
		2330-2357	Gs (IO90, IO91) > ES6RQ (KO28) 55A QTF 035-040; MM0AMW > G4WJS
22nd	00z	0112-0133	MM0BSM > GB3LER 52A ‘starting again’; MM0AMW > OY6SMC 54A
	18z	1922	MM0CWJ > GB3LER (aurora)
23rd	15z	1658	GM8LFB > GB3LER ‘going auroral’
	18z		GM4WJA reports aurora in early evening as well as the late afternoon.
29th	18z	1940	MM0AMW > GB3LER 55A
	21z	2242-2307	LA2IM (JP43) > GB3LER 53A; MM0AMW > OY6SMC 53A

Auroral E

Most of the Auroral E contacts reported this month were associated with the aurora event of the 21st. There was no clear Harang discontinuity in this event and the auroral E was only generally times between early and late phases. On 10m auroral E was considerably more extensive and extended much later in the evening than available on 6m.

12th	18z	2021	GM8LFB (IO88) > JW9SIX 539
13th	00z	0038-0042	GM8LFB > TF3SIX 559, OH9SIX 599
21st	15z	1746	G4FUF > OH9SIX 559 flutter
	18z	1839-1900	GM8LFB > JW9SIX 539; G4PCI > OH9SIX 599, G4PCI > TF3SIX 589
		1900-1922	southern G > JW9SIX , LA, OH9SIX, OY6SMC all 559-599
		1906	DK3EE > G4DEZ “auroral E backscatter”
	21z	2235-2238	G4IGO > JW9SIX 559; G7RAU > OH9SIX 599

Solar and Geomagnetic Data for January 2005

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

Sunspot numbers (SEC)	Mean 52.0	Max 109 (18th)	Min 14 (6th)
Solar Flux (28 MHz)	Mean 102.4	Max 145 (15th)	Min 83 (6th)

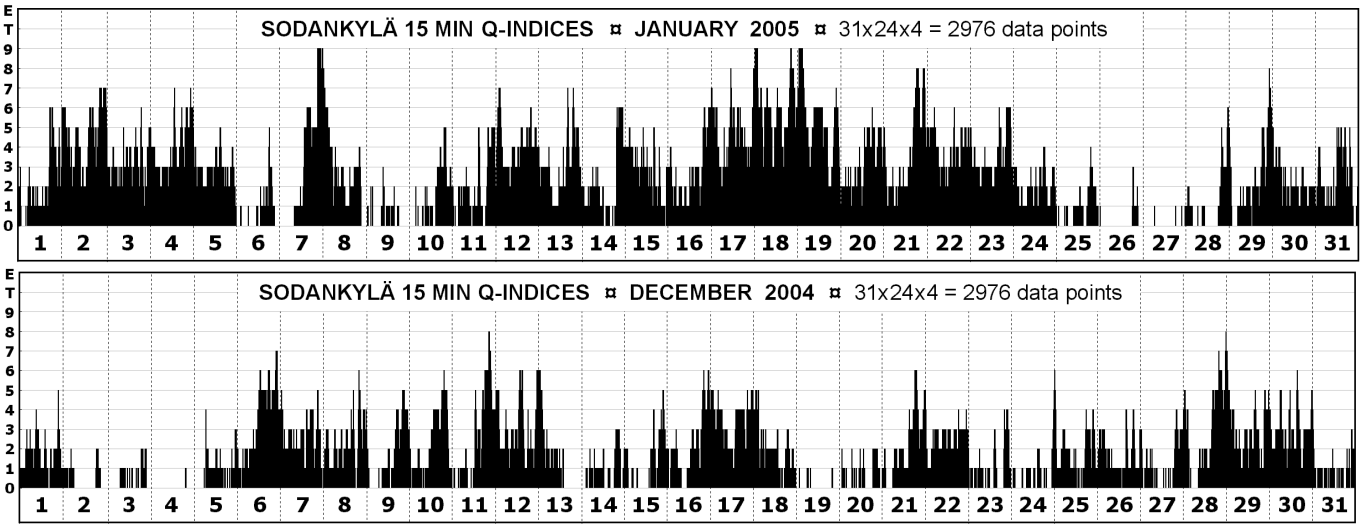
Solar data for January 2005 are presented in the table at the end of this section. Numbers in the 28 and 50 MHz columns of this table are the total daily "areas" worked/heard from the UK for each of several propagation modes and are a summary of the data presented in the first sections of this Report. 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 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. Energetic solar events (M or X class) are listed below.

1st	0001-0039	**X1.7**	15th	0022-0102	X1.2 1b	18th	1123-1159	M1.6,
9th	0825-0909	M2.4 1n		0409-0422	M1.3 2n		1538-1559	M4.6 2n
14th	1353-1445	M1.8 Sf		0426-0436	M8.4 2n	19th	0658-0755	M6.7 2n
	1602-1614	M1.0,		0554-0717	M8.6 Sf		0803-0840	**X1.3**
	1753-1803	M1.5		1141-1150	M1.2 Sf		1019-1029	M2.7 1n,
				1408-1439	M3.2 Sf		1532-1548	M1.6 2f
			16th	2155-2222	M2.4 1n	20th	0636-0726	X7.1 2b
			17th	0310-0332	M2.6	21st	1010-1019	M1.7
				0659-1007	**X3.8** 2f		1347-1410	M1.2

.

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



A comparison between the Q index graphs form OH2LX for January and December shows that January was a much more active month. Geomagnetic data from the Finnish observatories for January are:

Monthly averages

Sodankylä: monthly Ak average = 35.5 (16.6 in Dec)
Nurmijärvi: monthly Ak average = 23.4 (10.3 in Dec)

Most disturbed January days:

Sodankylä: 18th, Ak = 143 (Dec 28th Ak = 47)
Nurmijärvi: 21st, Ak = 118 (Dec 12th Ak = 25)

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

K-indices.

The following four tables present the Kp index (from SEC) and the Lerwick ("KL"), Eskdalemuir ("KE"), and Hartland ("KH") K-indices (from the British Geological Survey). Each table is set out with the day of the month in the top row followed by rows containing the K-values or each 3-hour period. The bottom row of each table is the sum of the K-values for the day. Pale (yellow) shading indicates K = 5, darker (grey) when K > 5. There were 18 days in January when either the planetary Kp index or the UK K indices reached 5 or more. The UK observatories recorded K of 5 or more on 14 days.

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	1	4	4	4	5	2	1	6	1	1	1	4	2	2	3	2	5	6	6	2	3	5	4	2	1	1	0	2	3	3	3
03	4	4	4	4	4	0	0	6	1	1	4	5	4	2	6	2	4	5	6	1	1	6	4	1	0	1	0	2	2	4	2
06	3	5	3	3	5	0	0	3	0	1	4	3	2	2	4	2	3	7	6	1	3	3	3	1	1	0	0	1	3	3	3
09	2	4	3	4	4	0	1	4	3	1	2	5	2	1	3	2	7	5	7	2	2	3	3	2	1	1	0	0	4	4	4
12	3	3	5	4	3	0	6	3	1	2	2	5	3	1	3	3	7	6	6	4	2	3	3	2	1	1	1	1	3	3	5
15	3	5	4	4	3	1	6	3	1	2	3	3	3	1	3	3	7	6	4	4	8	3	4	2	1	1	2	1	3	2	4
18	4	3	3	3	1	3	4	2	1	2	2	3	3	4	3	2	5	4	3	3	8	4	3	2	2	1	1	3	4	2	3
21	3	5	2	3	2	1	7	2	1	2	3	3	3	4	2	3	3	5	4	3	6	3	2	1	1	1	1	2	4	2	1
Σ	23	33	28	29	27	7	25	29	9	12	21	31	22	17	27	19	41	44	42	20	33	30	26	13	8	7	5	12	26	23	25

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	1	3	3	4	3	2	0	6	0	0	1	3	2	2	3	2	4	6	6	2	3	6	3	3	1	1	0	1	3	4	3
03	2	4	3	3	2	0	0	5	0	0	1	4	2	1	3	1	3	4	5	1	1	5	3	1	0	0	0	1	1	3	2
06	2	3	1	2	2	0	0	3	0	0	2	2	2	2	2	1	3	6	5	1	1	3	2	1	1	0	0	0	2	2	2
09	1	2	2	2	2	0	1	3	2	1	1	3	1	1	2	1	4	4	4	2	2	2	2	1	1	0	0	0	2	2	2
12	2	2	3	4	3	1	3	2	1	1	1	3	1	1	2	2	4	4	4	3	2	3	2	2	0	0	0	0	2	2	4
15	3	5	3	4	3	0	4	1	0	2	3	4	3	1	3	2	7	4	4	4	6	3	4	3	0	0	0	0	2	2	4
18	5	2	4	3	2	3	4	1	0	2	2	4	4	5	3	2	6	4	2	3	9	4	3	2	2	1	0	3	4	1	3
21	2	5	1	3	2	1	7	2	0	3	4	3	2	5	0	4	3	5	3	3	7	3	3	1	1	1	0	2	4	1	0
Σ	18	26	20	25	19	7	19	23	3	9	15	26	17	18	18	15	34	37	33	19	31	29	22	14	6	3	0	7	20	17	20

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	1	4	3	4	4	2	0	6	0	0	2	4	2	2	4	3	4	5	5	2	3	5	3	3	1	1	0	2	3	4	3
03	3	4	3	3	3	0	0	4	0	1	2	4	2	2	3	2	3	5	5	2	1	4	3	1	0	0	0	1	1	4	2
06	3	4	2	3	3	0	0	3	0	0	3	3	2	2	3	2	3	6	5	2	2	3	2	1	1	0	0	0	2	2	2
09	2	3	3	2	2	0	1	3	3	1	2	3	2	1	3	2	4	4	4	3	2	2	2	2	1	0	0	1	3	3	3
12	3	3	3	4	3	0	4	3	1	1	1	4	2	1	3	3	5	4	5	3	2	3	3	3	1	1	0	0	3	3	4
15	3	5	4	4	3	0	5	2	0	2	3	4	4	1	3	3	5	4	4	4	6	3	4	3	1	0	0	0	3	3	4
18	4	3	4	4	2	3	4	2	1	2	2	4	4	5	3	2	4	5	2	4	7	4	3	3	2	1	1	3	4	2	3
21	4	5	2	3	3	1	7	2	0	3	4	3	3	5	1	3	4	5	3	3	9	3	4	2	1	1	1	3	5	1	0
Σ	23	31	24	27	23	6	21	25	5	10	19	29	21	19	23	20	32	38	33	23	32	27	24	18	8	4	2	10	24	22	21

Hartland K (SW England)

KH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
00	1	4	3	4	4	2	0	6	1	1	2	4	2	3	4	3	5	6	5	2	3	4	3	3	1	1	1	2	4	4	3
03	3	4	4	4	3	0	0	4	0	1	2	5	3	2	4	2	4	5	5	2	1	5	3	1	0	1	0	1	1	4	2
06	3	4	2	2	3	0	0	3	0	1	3	3	2	3	3	2	3	6	6	2	2	3	2	2	1	0	0	1	2	2	3
09	2	3	3	2	3	0	2	3	2	1	2	4	2	2	3	3	5	4	4	3	2	2	2	2	1	1	0	1	4	3	3
12	3	3	3	4	3	1	5	3	1	1	2	4	2	1	3	3	6	5	4	3	2	3	3	3	1	1	0	1	3	3	4
15	3	6	4	4	4	1	5	2	0	2	4	4	4	1	3	3	6	5	4	5	6	3	4	4	1	1	0	1	3	3	4
18	5	3	4	4	2	3	4	2	1	3	2	5	4	5	3	3	5	5	2	3	6	5	3	3	2	1	1	3	5	2	3
21	4	5	3	3	3	1	7	2	0	3	5	3	4	5	1	3	4	6	3	4	7	3	4	2	1	1	1	3	5	2	1
Σ	24	32	26	27	25	8	23	25	5	13	22	32	23	22	24	22	38	42	33	24	29	28	24	20	8	7	3	13	27	23	23

January	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-Jan	1	3	0	0	0	0	99	51	8	4	15	38	B1.3	n.a.	n.a	n.a.	n.a	2.5E+07	7.4E+05	1.3E+04
02-Jan	4	3	6	0	2	0	100	52	0	5	33	62	B1.9	6.3	13	2.0	05	1.2E+07	5.3E+06	1.4E+04
03-Jan	6	4	4	0	2	0	94	43	8	5	22	39	B1.4	7.1	14	n.a.	n.a	1.6E+08	4.4E+06	1.3E+04
04-Jan	0	2	1	0	1	0	88	30	0	4	23	38	A8.3	6.6	14	2.0	05	5.3E+08	4.8E+06	1.1E+04
05-Jan	6	2	6	0	0	0	88	15	0	5	21	30	A5.0	7.2	13	2.0	06	9.2E+08	3.8E+06	1.1E+04
06-Jan	3	2	0	0	0	0	83	14	0	3	4	9	A4.7	6.7	13	2.4	06	9.1E+08	2.3E+06	1.1E+04
07-Jan	2	0	0	0	4	0	84	22	0	7	37	65	A6.5	7.3	13	2.4	05	4.1E+08	4.1E+06	1.2E+04
08-Jan	4	3	6	0	0	0	89	34	10	6	30	60	A7.3	4.5	13	n.a.	n.a	4.3E+06	1.8E+06	1.1E+04
09-Jan	1	2	3	0	0	0	88	28	14	3	4	11	A9.5	5.7	13	n.a.	n.a	2.8E+06	1.3E+06	1.3E+04
10-Jan	0	6	0	0	1	0	90	40	19	2	6	15	A7.9	6.6	12	1.8	05	6.5E+06	1.5E+06	1.4E+04
11-Jan	4	4	3	0	0	0	94	25	15	4	14	29	A8.6	7.0	12	1.8	07	1.4E+07	1.7E+06	1.4E+04
12-Jan	1	6	0	0	1	1	102	58	18	5	30	60	B1.6	8.8	12	n.a.	n.a	1.2E+07	2.0E+06	1.4E+04
13-Jan	1	4	2	0	0	2	116	77	20	4	13	29	B2.6	7.8	14	1.9	06	1.8E+08	2.0E+06	1.4E+04
14-Jan	2	3	0	0	0	0	130	65	28	4	12	29	B7.3	7.0	14	2.0	06	2.5E+08	2.2E+06	1.5E+04
15-Jan	0	6	0	0	0	0	145	100	30	6	22	35	C1.6	7.1	15	1.9	06	8.1E+07	5.8E+06	2.7E+05
16-Jan	0	7	0	0	2	0	145	99	30	3	12	30	C1.6	7.4	13	2.1	05	2.2E+08	1.4E+08	1.3E+07
17-Jan	2	8	1	0	4	0	138	107	26	7	63	91	C1.5	n.a.	n.a	n.a.	n.a	1.4E+07	6.2E+08	1.1E+08
18-Jan	0	8	0	0	4	0	124	109	23	7	72	118	B7.1	8.8	12	2.0	05	2.0E+08	5.5E+08	9.4E+07
19-Jan	0	1	4	0	1	0	133	66	12	7	62	66	B6.8	5.7	16	n.a.	n.a	4.4E+08	1.1E+08	8.2E+06
20-Jan	0	1	0	0	1	0	123	61	12	4	12	33	B8.7	5.9	14	n.a.	n.a	1.1E+09	1.4E+08	5.2E+07
21-Jan	0	4	0	0	8	5	114	69	20	8	61	82	B6.2	7.1	15	n.a.	n.a	9.4E+08	2.8E+08	1.2E+07
22-Jan	1	2	0	0	2	0	102	60	22	6	28	46	B3.0	5.6	14	1.8	01	1.1E+07	2.8E+07	1.4E+06
23-Jan	0	2	0	0	1	0	96	40	18	4	17	33	B1.5	6.7	14	n.a.	n.a	5.2E+08	8.4E+06	2.2E+05
24-Jan	3	3	3	0	0	0	95	42	19	2	6	22	A9.3	n.a.	n.a	n.a.	n.a	1.2E+09	3.0E+06	7.0E+04
25-Jan	5	6	0	0	0	0	94	56	24	2	4	9	A8.6	7.0	11	n.a.	n.a	1.2E+09	2.1E+06	4.0E+04
26-Jan	0	2	0	0	0	0	89	46	15	1	4	7	A8.7	6.6	13	2.2	06	9.6E+08	1.6E+06	3.1E+04
27-Jan	0	1	0	0	0	0	87	43	12	2	3	6	A5.6	7.7	11	2.0	06	8.2E+08	3.9E+06	2.7E+04
28-Jan	0	3	0	0	0	0	85	43	12	3	6	13	A4.7	7.0	12	2.2	06	5.9E+07	3.6E+06	3.8E+04
29-Jan	0	5	0	0	2	0	86	30	11	4	20	43	A4.4	7.2	09	2.5	07	5.9E+06	2.1E+06	4.6E+04
30-Jan	0	5	0	0	0	0	86	38	22	4	16	29	A4.6	6.7	11	n.a.	n.a	2.8E+07	1.7E+06	3.8E+04
31-Jan	1	5	0	0	0	0	86	49	23	5	19	31	A4.4	8.0	14	1.9	05	6.0E+07	7.7E+06	2.8E+04
Sum	47	113	39	0	36	8														
Average	1.5	3.6	1.3	0.0	1.2	0.3	102.4	52.0	15.2	4.4	22.3	39.0	B1.3	6.9	13	2.1	05	3.6E+08	6.3E+07	9.4E+06
Maximum	6	8	6	0	8	5	145	109	30	8	72	118	B2.8	8.8	16	2.5	07	1.2E+09	6.2E+08	1.1E+08
Minimum	0	0	0	0	0	0	83	14	0	1	3	6	A5.2	4.5	09	1.8	01	2.8E+06	7.4E+05	1.1E+04

50 MHz Outside Britain

Compilation and Commentary by G3USF

Europe

Auroral-Related Modes

While auroral activity was reported on no fewer than 24 days it was reported from south of the Baltic/Scotland line on only four, the 7th (very briefly), the 17th 18th, (again briefly) and 21st. The paucity of reports for the 18th - the most disturbed day of the month with an Ap of 72 - is possibly due to the fact that the disturbance was greatest during 'unsocial' hours. Overall, the spectacular visual displays that were widely reported and illustrated in the April *RadCom* were not matched in radio terms. Were it not for our indefatigable OH colleagues, notably OH5IY and OH2LX, this would be a meagre list. What a pity that nowadays nobody in the UK appears to be maintaining a comparable constant watch: probably a good many events are missed here, especially after midnight. Auroral-E was noted during several openings, again including reception of high-latitude beacons.

Jan 1 1840-50 AuFM>OH5IY

Jan 2 1530-50 Au>OH5IY 1600-30 Au>OH5 1640-1720 Au>OH5 1740-50 Au>OH5

Jan 3 20-2100 JW5SIX>LA(JP99) JW7SIX>SM2(569 AE)

Jan 4 1430-1500 Au>OH5 1640-50 Au>OH5 1730-1900 Au>OH5 2000-2400 Au>OH5 2115-2215 E2(ER,YO)>OH5(AE?)

Jan 6 1944 OH9SIX>SM2(57a)

Jan 7 1440-1640 Au>OH5 1500-1620 AuFM>OH5 16-1700 49750>OZ(58a) OH2(KP10)>SM2(59a) 1710-2010 Au>OH5 1800-10 AuFM>OH5 1930-40 AuFM>OH5 2145-2205 55-67MHz(UA)>OH2(AE?) 2147 49750>SM0(599AE) 2150-2200 Au>OH5 22-2300 LA>OZ 23-2400 OH2>SM5(55a) DL>SM5(55a) SM5(JO99)>SP2(JO94 54a) SM0(JO89)>SP2(JO94 010) SM5>OZ(52a 015) 2220-50 Au>OH5 2230-40 AuFM>OH5 23-2400 Au>OH5 2330-50 AuFM>OH5

Jan 8 0010-20 Au>OH5 0040-0210 Au>OH5 0100-10 AuFM>OH5 0300-10 AuFM>OH5

Jan 10 2030-2100 Au>OH5

Jan 11 2100-10 Au>OH5

Jan 12 0330-40 Au>OH5 1520-40 Au>OH5 1810-40 Au>OH5 1930-2010 AU>OH5 2030-50 Au>OH5

Jan 13 1640-1700 Au>OH5 20-2100 OH0(JP90)>LY(KO25 559) OH0(KP00)>LY(KO25 55a) OH3(KP20)>LY(KO25) OH5(KP30)>LY(KO25)

Jan 14 1950-2010 AuFM>OH5 2020=2100 AuFM>OH5 2030-40 Au>OH5 2230-50 AuFM>OH5 2300-10 AuFM>OH5 2320-2400 AuFM>OH5

Jan 16 2016 LAtv>SM0 59a)

Jan 17 0000-10 Au>OH5 0110-20 Au>OH5 1130-1220 Au>OH5 1146 49750>OZ 1240-1300 Au>OH5 1320-40 Au>OH5 1510-1620 Au>OH5 16-1700 OZ>OZ(55a) LA(JO49)>OZ(JO55 55a) OH3(KP20)>OZ(JO55 57a) GM>EI(51a) LA>SP6(JO81 55a) SM4>LA(56a) SM7(JO65)>DL(JN69 52a 010) LY0SIX>OZ(52a) SM6(JO65)>PA(JO22 59a) OZ>PA LA(JO59)>SP2 1650-1730 Au>OH517-1800 GM>EI(59a) JW5SIX>SM2(599 AE) JW9SIX>SM3(JP82 599 AE) G>EI(51a) LA(JO59)>OZ(JO55 55a) OH3>DL 1740-50 Au>OH5 18-1900 OY(IP62)>DL OY(IP62)>OZ(JO55 57a) ES6(KO28)>DL OY>SM0(52a) JW9SIX>LA(JO59 559) 19-2000 SP2(JO94)>LY(KO25 579) OH9(KP24)>LY(KO25 mode?) JW9SIX>OH5(KP30 599 AE) JW5SIX>OH5(KP30 569 AE) JW9SIX>SM0(549) JW5SIX>SM0(539)1910-30 Au>OH5 20-2100 JW7SIX>LA(JO59 529) JW9SIX>LA(JO49 559) 2255 JW5SIX>LA(JP99 519)

Jan 18 0020-0220 Au>OH5 0430-40 Au>OH5 1330-1410 Au>OH5 1240-50 AuFM>OH5 14-1500 SM5>OZ(55a) 1420-1540 Au>OH5 1650-1700 Au>OH5 1720-30 Au>OH5 1840-50 Au>OH5 2010-20 Au>OH5 2040-50 Au>OH5 2100-10 50-62MHz(LA)>OH2(AE?) 2120-2200 Au>OH5 2120-30 AuFM>OH5 2140-50 AuFM>OH5 2210-40 Au>OH5 2220-30 AuFM>OH5

Jan 19 0110-0220 Au>OH5 0150-0210 AuFM>OH5 0230-0420 Au>OH5 1010-20 Au>OH5 1100-1450 Au>OH5 1240-50 AuFM>OH5 13-1400 OZ>SM0(55a) OZ>LA(JO59 55a) 1610-30 Au>OH5 1640-1700 Au>OH5 1840-50 Au>OH5 1920-2010 Au>OH5 2110-20 Au>OH5

Jan 20 1550-1600 Au>OH5 1850-1900 Au>OH5

Jan 21 17-1800 48/49MHztv>SM0(58a) OH9SIX>SM3(JP82 57a) 1750-1840 Au>OH5 1845-1915 60-70MHz(UA)>OH2(AE) 18-1900 GB3LER>EI(51A) OH9SIX>EI(599 AE) OY6SMC>LA(JP99 529) 19-2000 1900-10 Au>OH5 G>DL(AE b/s) OH9SIX>DL(JN58 579 AE) LA>LA(JP99 51a) GI>EI(59a) OH3>LY(KO25) OH9SIX>LA(JP99 52a) OY>LA(JP99 52a) 1920-50 Au>OH5 20-2100 ES6>LY(KO25) OH9SIX>ON(JO20 mode?) G>F(57a) ES6>SP6(JO80 52a 030) ES6>DL(JO53 59a) LY>SM0(55a) 2010-30 Au>OH5 21-2200 LA>OZ(59a) OH9SIX>PA(559) DL>OZ(59a) LA>SP2,OH1 2220-2330 Au>OH5 2220-2310 AuFM>OH5 23-2400 OZ>OZ(57a) OH3>SP2(mode?) 2320-30 AuFM>OH5

Jan 22 0110-0210 Au>OH5 0220-30 Au>OH5 0250-0330 Au>OH5 1540-1600 Au>OH5

Jan 23 15-1600 JW7SIX>SM2(579 AE) JW5SIX>SM2(579 AE) JW5SIX>LA(JP99 579) 1604 JW9SIX>LA(JP99) 1610-20 Au>OH5 1630-50 Au>OH5 1700-10 Au>OH5 1743 OY6SMC>LA(JP99 529) 2110-2205 50MHz(UA)>OH2(AE?) 2116 LA7SIX>LA(JO4(539)

Jan 24 1720-30 Au>OH5

Jan 28 2000-20 Au>OH5

Jan 29 1840-50 Au>OH5 2220-2330 Au>OH5

Jan 31 1459 OH3(KP20)>SM5(JO99 55a)

Other Modes

As Costas, SV1DH, says, 'Another poor month' - though he did at least capture West African video on seven days. Activity levels were at times very low, though stimulated briefly by the NAC activity periods and the ARI contest. And there were signs that, when openings did occur, operators tended to return to the band to exploit them, notably for sporadic-E events which occurred on around 10 days, giving activity something of a post-Christmas fillip.

While most of these openings appear to have been brief, a few ranged rather wider and were more sustained, notably on the 13th, 19th and 24th. These events do not necessarily show up prominently in the listings, which omit contacts reported by UK operators, analyzed earlier by G0AEV, and multiple contacts between the same areas within the hourly time-frame.

The only reports of greater note involving Europe were on the 18th, when FJ5DX was worked from Portugal. One would like to see independent confirmation of the claimed contact between Poland and Puerto Rico on the same evening. However, there is no reason to doubt D4B's contacts into the Caribbean on three success days at the end of month.

Operators' growing dependence on JT6M (jt) for contacts was increasingly apparent. The mode was probably MS in the great majority of these cases but this is only flagged (ms) when specifically indicated by the reporter.

Jan 1 1056 G>OE5(jt) 11-1200 I0>OZ(jt) PA>I5(jt) 1549 UR>OZ 16-1700 UT5G>PA I5>I1(jt) 17-1800 PI7SIX>DL(t) 18-1900 OH6>SM5(jt)

Jan 2 10-1100 SM4>SM5(jt) I4>I5 SM4>OE5(jt) OE5>SM5(jt) G>I5(jt) OH1>SM5(jt) 49750>SM5 12-1300 GM>OE5(Es) OY6SMC>DL 13-1400 UR>I3(jt) I4>I3 14-1500 UR>PA SP8,UR>PA 15-1600 SP8>PA 21-2200 OH9SIX,JW5SIX>SM3(mode?) 22-2300 I3>ON(jt)

Jan 3 0850 I3>PA,HB(jt) 10-1100 G,HB,I3>SM5(jt) 12-1300 G>I3,I4,I5 I5,YU1>DL SM7>PA 1455 SM5>PA(jt) 15-1600 OH6>SM5(jt) 17-1800 I2>PA(jt) GD>OE5(jt) G>I2(jt) I0>OE5(jt) 20-2100 OE5>SM5(jt) SM5>PA(jt) OE5>OZ(jt) OE5>OH6(jt) 2227 OZ>S5(jt) 2325 I8>I9

Jan 4 1105 I3>SM5(jt) 1658 GB3LER>9A

Jan 5 15-1600 F>I4(ms/Es) OZ>F LA>PA 16-1700 OY6SMC,GB3LER>DL(Es) G>DL GB3RMK>DL(Es) GB3LER>F GI>OZ S5>DL(t) G>SM3 GM>SQ2 G>LA 17-1800 GM>SQ2 GB3BUX>LA 1932 PA>SM5(jt)

Jan 6 0855 I2>EA7(jt) 09-1000 I0>EA7(jt) I5>I2 I4>I1 G>EA7(jt) 10-1100 I4>I0 OZ7IGY>I9 1000-1130 55-88MHz(DL,I)>OH2(Es?)

Jan 7 1051-4 UU5SIX,UT5G>9A 13-1400 UU5SIX>Z3 I1,I3>S5 14-1500 I0>S5 16-1700 OK1,G>9A(jt)

Jan 8 09-1000 UU5SIX>9A I0>DL(ms) I4>9A UT5G>Z3 I2>I1 UR>SV1(Es) 10-1100 I2,I4>I1 I4>OZ(ms) I0>S5 11-1200 IS0>I0 I4>I2 I0>S5 12-1300 I4>I7 G>I4 I0>I1 14-1500 I1>I9(ms) I9>I4 15-1600 I4>I0 I0,I2,I4>I1 18-1900 EA6>EA5 GB3LER>F

Jan 9 1116 I5>I1 12-1300 G>EA7(jt) 1721 I8>I5

Jan 10 17-1800 9H>I2,I8,IS0 F>9H

Jan 11 1529 HB9SIX>DL(t) 1559 GB3LER>I4(Es/MS) 17-1800 GB3MCB>CN CN8MC>F GB3LER>S5(Es) 19-2000 PA>DL

Jan 12 1616 JW5SIX>LA(JP99 529 mode?)

Jan 13 1145 F>OZ 16-1700 G,I0>I5 OZ7IGY>EA3 1215-20 E2>OH2(ES?) 1515-1650 E2(HB,DL)>OH2(Es) 17-1800 GB3BAA>I5 G>I2,I8(Es) 18-1900 G>I1,I4,I5(Es) 19-2000 SM5>SM0 OH0>S5 20-2100 aurora OH0,SM6>S5 OH0,OH6>LY2 I5>S5

Jan 14 2126 W7GJ>OZ(eme)

Jan 15 11-1200 G>I1

Jan 16 0805-10 E2>OH2(Es?) 1032 HB9SIX>DL 11-1200 PA>I2(ms) HB>OZ(jt) 1253 G>I2(jt) 1556 F>I1(jt) 1922 K0GU>I5(eme) 20-2100 aurora

Jan 17 aurora 2159 I9>I1

Jan 18 1753 KP4SQ>SQ2CDC(?) 1852-1904 FJ5DX>CT1FMX

Jan 19 20-2100 G>I5,I2(Es) I0>OZ(Es) FX4SIX>SP9 I4>EI GB3MCB,GW>9A GI>I7 21-2200 TF>SP6,SP9 G,GB3LER>F GI>I1,I2 G>EA4,IZ1EPM I1>EI GI>HB

Jan 20 no reports

Jan 21 15-1600 G>I5(jt) aurora

Jan 22 12-1300 SP8>I2(jt) 15-1600 G>HB(jt) I0>PA(jt)

Jan 23 1154 G>I0(ms/Es) aurora 2100 CT>F(jt)

Jan 24 1958 S5>PA(jt)

Jan 25 23-2400 FY7THF,9Y4AT>D4B

Jan 26 00-0100 9Y4AT,FY7THF,OA4B>D4B

Jan 27 1045-50 E2>OH2(Es?) 22-2300 FY1FL>D4B

Jan 28 1505-10 E2(HB?)>OH2(Es?)

Jan 29 no reports

Jan 30 10-1100 I5>I0(jt) 1256 G>S5(jt) 2247 GB3LER>F

Jan 31 1841 OE5>SM5(jt)

50MHz PROPAGATION REPORT FOR JANUARY 2005 BY SV1DH

1. Data for all days (31)
2. Relatively good days on: -
3. 48 MHz AF video (9L+3C) on: 15,16,19,23,26,28,30 (R=23%)
4. 55 MHz AF video (5N) on: NIL
5. Opening to UR on: 8(E)
6. Special events on:
   - 1 (0031 X1.7 flare!!)
   - 8 (2230 W5 to ZL3)
   - 9 (0851 M2.4 flare+1545 W1 to 48Mhz EU video+1815 ZL2 to XE1/B)
   - 10 (1730 ZL2 to XE1/B)
   - 14 (28C+5M flares, up M1.9 at 2126, highest flare count in a day+ C2 Xray bgn)
   - 15 (17C+7M+2X, 0043 X1.2+0433 M8.4+0638 M8.6+2302 X2.6 flares+ C1 Xray bgn+0930-1000 foF2>10, max 10.7/MUF=37Mhz at 0945)
   - 16 (7C+2M, 0232 M2.0+2203M2.4 flares)

17 (4C+2M+1X, 0321 M2.6+0658 M1.8+0952 X3.8!! flares, C1 Xray bgn)
18 (12C+2M, 1015-1215 foF2>10, max 11.4/ MUF=41Mhz at 1145+1830 CT to FJ)
19 (8C+3M+1X, 0731 M6.7+0822 X1.3 flares)
20 (5C+1X, 0701 X7.1 flare+proton steam at speed of light!! +1000-1045 foF2>10, max 11.3 / MUF=41Mhz at 1030)
21 (1000-1030 foF2>10, max 10.8 / MUF=35 at 1015+ 1911 OZ to W1 via AU-E skewed)
23 (0151 M1.0 flare)
Weak sigs from 9L and 3C TV stations.
9L tx now on 48250.1Khz and 3C tx still freq. dispersed around 48250Khz

Another poor month!

7. DXCC entities heard/worked during Jan 2005 : 1 on 1 cont
8. DXCC entities heard/worked on 8th Jan 2005 : 1 on 1 cont.

73 COSTAS

The Americas

Auroral-Related Modes

Another month when the aurora occurred more favourably for North American operating hours, though none of the openings moved very far south. However, there was a notable contact between OZ1DJJ and K1TOL at 1911 on the 21st which is being credited to AE.

Jan 2 0157-8 W0(EN17)>W0(EN36) VE4>W0(EN36) 0244 VE4ARM>W9(EN44 51a) 0325 K9MU>VE6(539a) 0438-51 VE8BY>W9(EN44 519) VE8BY>VE6(579a) 0504 VE4ARM>VE5(519a)

Jan 4 0134-6 VE4ARM>W9(EN44 52a) K0KP>W9(EN44 53a)

Jan 7 22-2300 W8>W3(FM29 58a) K0KP>W3(54a) 23-2400 K0KP>W2 W8>W9(EN44 59a) N0UD>W9(EN44 57a) K0GUV>W9(EN44) VE2(FN46)>VY2(FN86 mode?) W8>W1(mode?) VE4VHF>W1(54a) W0(EN47)>W2(FN12 58a) VE2(FN07)>VY2(FN86)

Jan 8 00-0100 K0KP>W0(DN70 59a) VE3UBL>W9(FN44 53a) W1(FN41)>W0(EN34 mode?) VE2(FN48)>VE9(FN65) 01-0200 VE4VHF>W1(AE) VE3>W8(mode?) W2>W8(55a) VE2(FN07)>VE3 W8(EN73)>W9(EN83) 02-0300 W0(EM09)>W0(EN10) 03-0400 KL7/KG0VL>VE6(AE DO33 59a) KL7NO>VE6

Jan 11 0506 K0KP>W9(EN44 53a)

Jan 12 02-0300 VE4ARM,VE4VHF>W9(53a EN44) W9(EN54)>W9(EN44 52a) K0KP>VE6(mode?) VE4(EN19)>W9(EN44 57a) VE7>W7(55a) W0(EN35)>W9(EN44 57a) 03-0400 K0KP>W9(EN44 59a) VE6>VE6(53a) N0UD>W9(EN44 55a) N8PUM>VE5(mode?) 03-0400 K0GUV>W9(EN44 55a) W0(EN35)>W9(EN44 55a) W0(EN35)>W8(EN82 55a) VE4VHF>VE6(DO33 55a) N0UD>VE6(DO33 55a) W7(CN88)>VE6(DO33 55a) VE6(DO21)>W7(CN88 57a)

Jan 17 02-0300 W7>VE6(53a) VE4ARM>W9(55a) VE8NSD(DP20)>VE6(DO33) 03-0400 KG0VL/KL7>VE6(DO33 55a)

Jan 18 00-0100 W8>W9(55a) K0GUV>W9(EN44 53a) W1(FN43)>VE2(FN46 41a) VE3(FN07)>W1(FN43 57a) VE2>W1(57a 035) VE2(FN25)>W3(FN25) 01-0200 VE2(FN25)>W3(FM29) N0UD>W0(DN70 51a) VE5(DO61)>W7(CN88 59+) OX3VHF>VE1(FN65) VE2(FN08)>VE2(FN35 55a) W7(CN85)>W7(CN88 58a) W0(EN43)>W2(57a) 02-0300 VE8BY>VE6(DO33 53a) W7(DN47)>VE6(DO33 53a) VE6(DO30)>VE5 04-0500 VE4SPT>W7(57 AE CN88) W7(CN85)>W7(CN88 59a) 0746 W7(CN86)>W7(CN88 59a) 1440 VE6ARC(DO05)>W7(CN88 55a)

Jan 19 00-0100 VE3(FN02)>W2(FN04 599 mode?) 01-0200 VE6EMU>W7(CN88 53a) VE6ARC>W7(CN88 51a) 0526 VE6EMU>W7(CN88 59+) VE4SPT>W7(51 AE)

Jan 21 1859 W7(CN88)>W7(DN41) 19-2000 1911 OZ1DJJ>K1TOL(AE) W7(CN88)>W7(DN26) VE3(FN13)>W1(FN42) 21-2200 VE2(FN47)>VE1 VE1(FN43)>VE1(FN74) W1(FN46)>VE2(FN34 55a) 22-2300 W3>W1(56a) VE3(FN04)>W9(EN52) W8(EN76)>W9(EN52) W0(EN26)>W9(EN52(W1(FN53)>W9(EN53) W1(FN53)>VE1(FN84 57a) 23-2400 W1>W2(au/bs)

Jan 22 00-0100 W8>W1(55a) K0KP>W1(53a) 01-0200 W9(EM58)>W9(EN52) W0(EN26)>W9(EN52) W8>W9(EN52) W7(CN88)>W7(DN36 33a) VW2(FN07)>W8(EN82) VE2>W1(57a)

Other Modes

As in December, reports from the Americas were more substantial than those from Europe. The FJ<>CT and XE<>GM contacts have already been mentioned and EU video was copied in W1 on the 9th.

Westward, and we have contacts between W5OZI and 3 ZLs during a brief opening on the 23rd and further loggings of the XE1KK beacon in ZL2 on the 9th and 10th. This was much in line with January 2004. However, unlike January 2004, there were no reports of KH6 working into the US or Mexico.

There were no reports of propagation between the US and South America but the Caribbean continued at its recent relatively high level of activity and contacts between the Caribbean and (mostly sub-equatorial) South America are known to have been made on at least 17 days, compared with a single day last year. The mode in the great majority of these cases appears to have been evening-type tep, which tends not to reach the US (apart from southern Florida) unless relayed by another mode. It is unclear how far the increase in reports reflects 'propagation' and how far activity levels or reporting patterns; my guess is that an 'FM5JC effect' could be at work here. But that is doubtless not the whole story.

Caribbean<>South America

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

Caribbean<>South America

CE	3 days	6 17 25	PY	15 days	5 7 9 12-18 23-27
CX	2 days	6 9	OA	4 days	5 6 9 24
LU	4 days	7 9 23 24	ZP	2 days	26 29

Sporadic-E looks to have occurred on several days, but specific attributions were tantalisingly rare. This was most obvious during contest on the weekend of the 22nd-23rd.

Jan 1 0426 W3>W6 0551 VE4SPT>W0 1108 F6FHP>W7(eme) 14-1500 W1>W1(ms?) W9,W8>W0 15-1600 W1>W4,W1 16-1700 W4>W4 W8>W8 17-1800 W4>W3,W8 W9>W9 K4AHO>W2 1908 W9>W9 20-2100 W4>W3 2223 VE1>W9 23-2400 W4>W3

Jan 2 14-1500 W8>W3(Es) W8>W3(t) 16-1700 W3,W9>W4 W0>W3 W4>W2 17-1800 K0EC>W9 V44KAI>W4(ms)

Jan 3 00-0100 W3>W3 W4CBX>W4 1155 W3>W1(sc) 12-1300 W5>W5 1326 W3>W1 1452 W3>W4 1622-9 W1>W4,W9 1946 W7>W7

Jan 4 0340 VE3>W8(mode?) 1258 W1>W4(sc) 1312 W4>W4(sc) 20-2100 VE1>W3,W4 WA1OJB>W3 21-2200 VE9,W3>W4 VO1,W2>W3 VE1>W2,W3,W9 VO1>W4 22-2300 W1>W9 W1,W2,W3,W4,W8>VE1 VE2>W4 23-2400 W1,W2>W4 W9>W3 W9VW>W2 K0KP>W3

Jan 5 0031 FJ5DX>PY4OY OA4B>FM5JC

Jan 6 0032 CE3RR>FM5JC 02-0300 OA4B,CX1AO>FM5JC 04-0500 W9>W0 W0>W4(Es)

Jan 7 01-0200 W4>W3 VP9GE>W3 02-0300 VP9GE>W3 0342 W8>W3(jt) 23-2400 W8>W1 W0>W7 LU1DMA>FM5JC PY2SFY>FM5JC

Jan 8 00-0100 aurora W4>W4 W4>W8 01-0200 W8>W4 W4>W4 0408 VE3UBL>W2 13-1400 W4,W3>W4 14-1500 W4>W1 15-1600 W2,W8>W8 16-1700 W2>W0 17-1800 W2>W9,W0 W0>W0 2236-2249 ZL3NW,ZL3TPY,ZL3AAU>W5OZI(Es assisted)

Jan 9 0141 PY2CDS>FM5JC 02-0300 CW5R>FM5JC 02-0300 LU1FA,PY4OY,OA4B>FM5JC FM5JC>PU2WDX,PY3KN CW5R>PU2WDX 12-1300 VE1>VE3 W1,VE1>W4 13-1400 VE1,W1>W8 W4,VE1>W4 14-1500 VE1>W4 W0>W9(sc) 15-1600 W2>W8 W4>VE9 W1>W9 W8,W2>W1 VE1>W4 48240>W4(065) 2153 VE9>W4 22-2300 W1,VE1>W4 W4>VE9 CW5R>FM5JC

Jan 10 1240 W3DOG>W3 21-2200 VO1>W1 2200 VO1>W2

Jan 11 0110 W4>W4(t) 02-0300 VE1>W4 J69EN>FM5JC

Jan 11 1330-6 W4>VE2 W0>W1 14-1500 VE2>W4 W1>W3,W5 15-1600 W8,W7>W5 16-1700 W5>W9 WB5LLI>W3 W3>W9 1757 W7>W5 18-1900 W0>W8 K0KP>W0 19-2000 KA0CDN>W9 W4>W0 20-2100 K5AB,W5RP>W9 W4,W9VW,W8>W0 K0UO>W4 W6>W4 21-2200 W8,VE1>W0 KA0CDN,W5,W9,W1>W4 VE1>W1 VO1>W2,W4 W5,VE9BEA,W1>W3 W3,W4,W2>VE9 22-2300 W4,W5,W3,W2>VE9 W1,W6,VE3>W2 W4>W3 W3>VY2 W4>W1 VE1>W4 23-2400 W4>VE9

Jan 12 00-0100 KA0CDN>W4 W0>W8 K0KP>W5 01-0200 PY1RO>FM5JC W0MTK,K6FV>W7 W5SIX>W9 W0>W5 02-0300 aurora 2328 PY2OE>FM5JC

Jan 13 00-0100 PY1RO,PY2OE>FM5JC W4>W4 1239 W1>W1

Jan 14 0104 9Y4AT>PY2OC 1653 W2>W9 2339 PY2DCS>FM5JC

Jan 15 00-0100 FJ5DX>PY2YP,PY3KN 1315 W4>W4

Jan 16 0124-6 PJ2BVU,HK2SAN>PY4OY 02-0300 P49T>PY1RO W3>W2 W6>W5 1357 W4>W1 17-1800 W8>W9 2043 J69EN>FM5JC

Jan 17 00-0100 W3>W8 01-0200 CE3BJS>FM5JC W1>VE2 0254 W4>W7 03-0400 aurora VE2>W1(mode?) FJ5DX>PY5EW OA4B>YV1DIG 9Y4AT,YV4AB,V44KAI>PY5EW

Jan 18 aurora 0122 PY2NQ>FM5JC

Jan 19 2334 M0BCG>W7(eme)

Jan 20 0031 W4>W4 1219 VE4VHF>W4 1314 VE4ARM>W9(Es?) 1730 W4>W4 19-2000 48250,48242>FM5JC(sc)

Jan 21 00-0100 W0>W7 W7>W5 W8,W5>W5 01-0200 W6,W7>W5 aurora 2151 KG4SB>FM5JC 22-2300 NP3CW,NP4K>FM5JC(bs) 2300 FJ5DX,FG5FR>FM5JC aurora

Jan 22 00-0100 aurora W1>W3 W8>W9(mode?) 01-0200 W8>W9(mode?) 02-0300 W4>W3 W5>W4 W4>W9 W7>W9(Es) W4>W0 W3>W3 W8>W4 W0>W5 03-0400 W5>W3 W9VW>W0(Es) 04-0500 W2,W8,VE3>W2 W4>VE3,W3 W8,W4>W4 WA4NJP>PY1RO(eme) WR9L>W0 KE4SIX>W0 05-0600 W4>W4 W8>VE3 13-1400 W4>W4,W2 14-1500 W4>VE3 W4>W4(ms) W4>W4(t) 1732 W4>W1 18-1900 W4,W1>W1 19-2000 W1>W4,W1,W9 W4>W2,W3 W8>W8 W9>W4 W2>W0 20-2100 W1,W2>W1 W3,W8,W2,W1>W0 W8,W5>W5 W1,W8>W3 W1>W4 21-2200 W3>W9 W2>W0 W3,W2,W1>W3 W2,W1>W1 22-2300 W1,W2>W2 W1,W2,W3>W3 W8>W9 W2>W0 23-2400 W3>W1 W1>W4 W6>W6 W3>W0 W8>W4

Jan 23 00-0100 LU2DPW>FM5JC W8>W0 01-0200 PJ2BVU>PY4OY W7>W0(sc) W0>W0(t) W6>W0 PP5BJ>FM5JC W5>W0 02-0300 W3,W7>W0 W2>W1 9Y4AT,YV4AB>PY5EW 03-0400 W5,W2>W0 0436 W8>W0 05-0600 W2>W4 W1>W3 W3>W0,W3 13-1400 W1>W8 W2,W3,W8>W0 14-1500 KP4>KP2 VE3>VE3 15-1600 W8,W3>W0 W2>W1 16-1700 W7>W5 W2>W1 W2>W0 17-1800 W1>W1 W3,W2>W0 W5>W8(ms),W5 W4>W2 18-1900 W3>W8 W2,W3,W8>W0 W2>W1 19-2000 W1>W9 W3,W8,W0,W6>W0 W1>W1 20-2100 W4,W5,W0,W3>W0 W2>VY2 21-2200 W1>VY2 W8,W7>W5 W9,W2,W8>W0 TG9ANF>LU7YZ 22-2300 W2,W3>W0 W1>W8 23-2400 W3>W9(sc) W1>W1 W3>W4 LU7YZ>FM5JC W8>W2

Jan 24 01-0200 W1>W8 W4>W2 PJ2BVU>PY4OY WP4KJJ>PY5EW 02-0300 W3>W1 W4,W8>W8 W4>W4 W7>W7 W3>VE3 03-0400 W3,W0>W4 W2,W3>W0 W4>W2 2046 W0>W3(ms) 2257 LU5VV>FM5JC 2314 OA4B>FM5JC

Jan 25 00-0100 FY7THF>PY5EW KP4YI>PY4OY 01-0200 9Z4FZ>PY4OY,PP5JD,PT7VB CE4BJS,PT7VB>FM5JC 1508 W2>W4(sc) 1621 W2>W1 1731 W9>W9 2024 W7>W7(sc)

Jan 26 0011 PY3KN>FM5JC 0101 PJ2BVU>PY5EW 2038 PY9>PY5 2225 D4B>FM5JC 2348 ZP5PT>FM5JC

Jan 27 00-0100 WP4KJJ>PY3KN 01-0200 WP4KJJ>PY2EX 9Y4AT,TI2NA>PY5EW 02-0300 WP4KJJ>PY5EW 0638 ST2RS>W7GJ(eme)

Jan 28 no reports

Jan 29 0118-9 9Y4AT,YV4AB>ZP6CW 1317 W4>W4 1602 W1>W8(ms) 2027 W1>W9

Jan 30 0018 OA4B>FY1FL 0122 W3>W4 W8>W4(ms)

Jan 31 no reports

Asia/Pacific

Japan

JA1VOK's report speaks for itself this month - though, that said, it covers a greater number of relatively distant contacts than were reported in Europe.

6m DX results in JA during January from JA1VOK

DATE	TIME(UTC)	STATIONS
1/ 1	0815-0910	DU1EV/B
3	0050-0100	DU1EV/B
6	0810-0900	DX1F,DU1EV/B
8	0200-0230	VR2SIX/b
9	0330-0430	FK8SIX/B, ZL1AVO,3NE/1,2TPY,4AAA (JA2-3)
10	0456-0500	VK3DUT
14	0454-0500	VK2DN (JA2-3)
19	0415-0500	DU1EV/B
20	0540-0600	DU1EV/B
22	0045-0130	DU1EV/B
23	0340-0430	FK8SIX/B
24	0410-0430	FK8SIX/B (JA7)

Elsewhere

Most reports reflect the southern summer sporadic-E season.

Jan 1 00-0100 VK4>ZL2 0450-0500 VK1,VK2,VK3>VK3(Es) 22-2300 VK4RTL>VK3 23-2400 VK4ABP,VK8RAS>VK3

Jan 2 01-0200 VK8RAS.VK3 49745(UA0)>VK3(Es/F) 0317 VK8RAS>VK3

Jan 5 0150 VK5>ZL2 0327 VK2>ZL3 0923 VK3>ZL2 22-2300 VK3>ZL2

Jan 7 0026 VK4>ZL2 0342 FK8SIX>ZL2

Jan 8 06-0700 VK3>ZL2 VK4RTL>VK3 2050 ZL3>ZL2 21-2200 ZL1,VK2,VK3>ZL3 22-2300 ZL1,ZL3>ZL2(ES)

Jan 9 02-0300 VK4>ZL3 0924 VK4>ZL2 2122 ZL4>ZL3

Jan 10 0242 VK7>ZL3 06-0700 FK8SIX,C21SIX,VK4RTL(ES)>VK3 08-0900 FK8SIX,VK4RGG,VK8RAS,ZLSIX>VK3 09-1000 ZL3SIX,VK8RAS,ZL2MHF>VK3 FK8SIX,VK5>ZL2

Jan 11 0256 VK4>VK2 07-0800 FK8SIX,VK2,VK3>ZL2 03-0400 FK8SIX,VK8RAS>VK3

Jan 12 06-0700 VK6RPH>VK3 08-0900 9M,HStv>VK3 VK8RAS,VK6RSX>VK3(Eslink) 0916 VK6RSX>VK3

Jan 13 0241 VK8RAS>VK3(fl)

Jan 15 0614 VK8RAS>VK3

Jan 16 0507 FK8SIX>VK3 2258 VK2>ZL3

Jan 18 0051 ZL4>ZL3(v short Es) 0150 VK2>ZL3,ZL4 0457 49750(UA0 PN72)>VK3 05-0600 VK2>VK3(Es)

Jan 20 0456 VK6RPH>VK3

Jan 26 0007 ZLtv>VK3 03-0400 VK2RHV,VK4RGG>VK3

Beacon News and 28 MHz Worldwide

Compilation and Commentary by G3USF

Beacon News

3.5	A beacon is planned for SP2.
3525	PA0CW reported here. No further details. (PE1HWO March)
14102	CX9AU reported by CX2DDP as running 2 watts. No further info. (March)
28195	LU4EG reported here by DJ7KG (Jan.) - Let's hope it is not just another intermittent LU!
28224.7	HA5BHA JN79PL 5 watts to omni (reported earlier at 28222.5) (HA5BHA Feb.)
28227.5	IQ3RO or IW3FZQ testing occasionally, awaiting authorization (IW3FZQ March)
28260	AA9L reported here from South Milwaukee (WI) EN62BV with A90 vertical at 60 feet agl (HP1AC/AA9L Jan)
50003	VE2TH Quebec City (FN46HT) running 3 watts to NE/SW dipole at 25 feet 24/7 (VE2TH March)
50006	PY0FF returned to activity with new power supply. Antenna is a Ringo (PY1RO March)
50019	HB9DUC running 2 watts from JN36HM reported by an SWL (March)
50024	ZP5AA active now with 3 watts to 5-el beaming USA (ZP6CW March)
50027	IW3GXW reported here. Status unknown (March)
50028	5T5DUB in Nouachott (IK28AC) became active in March (5T5SN)
50047	JW7SIX went QRT in January with damaged antenna (SM0KAK)
50057	IT9X JM78SG now operational with 10 watts of a1a to 4.2dB Omnidirectional loop (IW9CER March)
50061	K9MU Chippewa Falls WI now runs 25 watts to omnidirectional loop at 40 feet (K9MU March)
50075	K6WL Near San Francisco (CM97) running 40 watts to omni. New beacon operating irregular hours (K6WL March)
50075.3	LW2ETU (GF05TI) reported here (FM5JC Feb.)
50082	UT7UV/A new beacon from KO40VK runs 10 watts to 1/4 GP (UT7UV March)

28 MHz Worldwide

As one might expect, as solar decline continues east-west paths show the greatest attrition. So, in January 2004, Asia was reported into Europe every day but one. This year we have reports on 19 days. North and Central America reached Europe on 24 days in 2004; we know of only 9 days this year - mostly along the Mediterranean. North America worked into Asia on four days in 2005, 9 in 2004. And so on. This follows the pattern already noted by G0AEV in respect of particular beacons. Some of this decline may be attributable to reduced activity; anecdotally, many operators appear to have left the band. Some, of course, reflected the relatively high frequency of geomagnetic disturbances. .

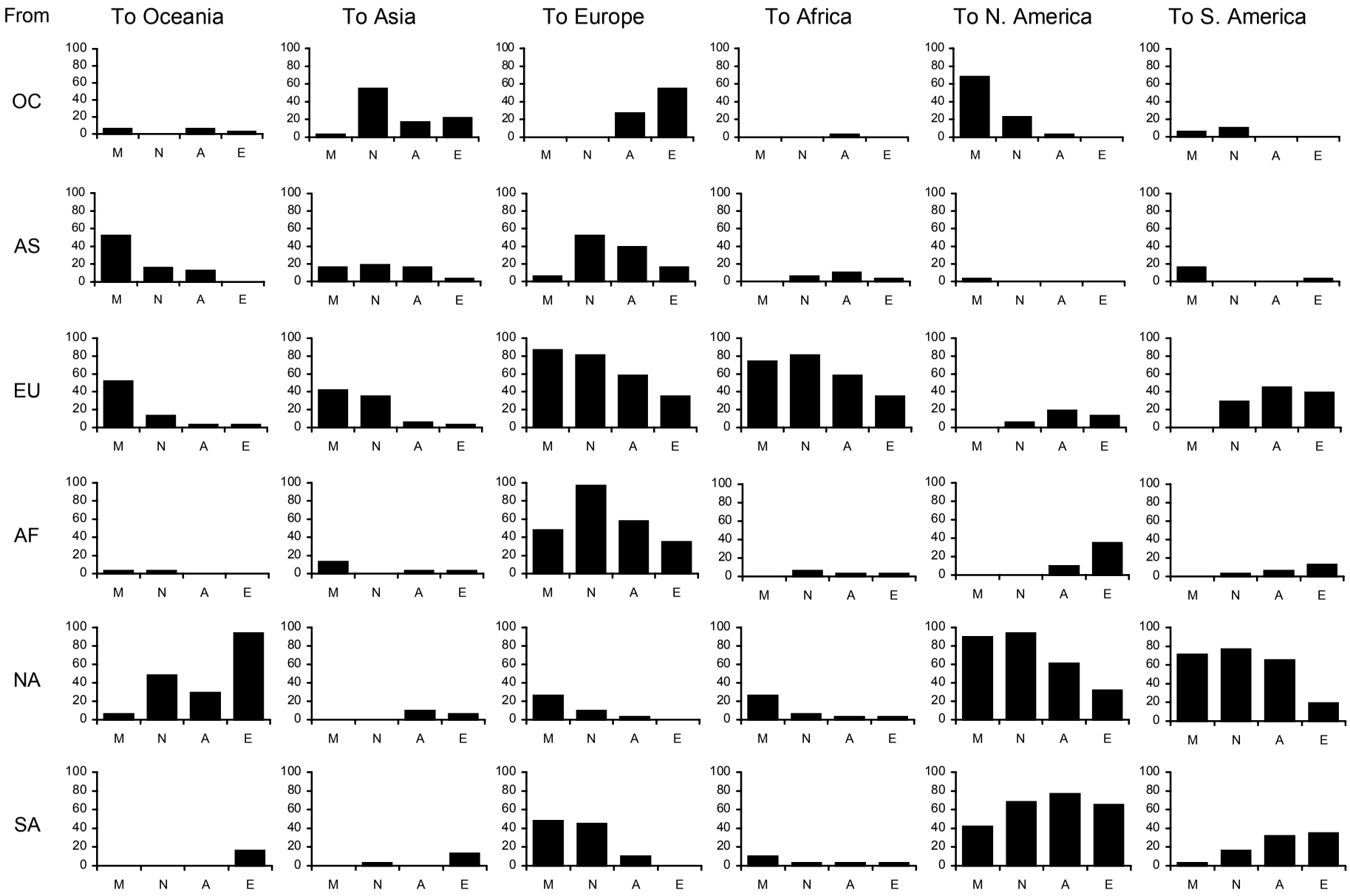
Yet the picture is certainly not entirely bleak. The morning path to Oceania was actually slightly improved (possibly due to the greater reliability of VK6RBP, which was fairly frequently into Central Europe. Western Europe had such openings less frequently - though VK3,4,5 and 6 were all readily workable from the UK in a good opening on New Year's Day. And, on the 29th, DK1MAX reported VK6RBP 599 on 'a dead band'. There's a moral there! Africa was copied in Europe every day, as in 2004, though results for the separate periods of the day were slightly down. South America was workable on 21 days - a poorer result than in 2004, for which exact figures were not to hand. Finally, there was propagation within Europe, whether by F2, backscatter, Es or aurora, every day but the 9th - little different from 2004. Backscatter was observed on most days. There were several good openings by Es, in particular the afternoon of the 17th and the evening of the 19th. Auroral or Auroral-E was reported on the evening of the 7th, when SM2CEW heard OH5NQ 56a, who went on to work the States. He noted Russian taxis at 2205 followed by RN9FAV - these being non-auroral. From 2210 there were many reports, some 'a' and others AE, involving stations in SM2,SM6,PA,SP5 and DL. The last report was at 2331. On the 11th DJ7KG reported SK5AE by AE at 1442. And, during the much larger event on the 21st there was auroral working (includingt AE) between 2012 and 2346 extending to F,G,GM,SM,EI,PA,OH,TF,OZ,LA and OE, and including GM4WJA's interesting log, discussed earlier.

Contacts within North/Central America were reported on all days, as in 2004, and between North/Central America and South America on every day except the 4th, one day less than in 2004. So the possibilities, albeit fairly run-of-the-mill, were there for operators who persevered.

Non-standard reports during the month included W8EH copying SM2CEW at 1856 on the 1st and IK2WYI working VK8BBS at 1505 on the 2nd. While the geomagnetic disturbance was under way on the 21st, a strong late opening was reported right across North America with the last signals on the West Coast at 0600 on the 22nd. CS3B was copied in southern Texas by WJ5O at around 2030, while JH7RTQ copied KH6WO at 2320 and VE3FGU heard ZL6B, JA2IGY and KH6WO at 2259. Again, this meshes with GM4WJA's report and possibly has causes similar to those giving rise to the 144MHz event on 10 November 2004 discussed in an earlier 6and10.

VE3FGU also reported the restored Adelaide Island beacon at 2057 as having been in for no less than seven hours on the 27th

28 MHz Worldwide - January 2005



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