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Analysis of 28 MHz reports from the UK

28 MHz reports and logs for February 2005 from 2U0GSY, G2AHU, G3HBR, G3IMW, G3USF, G3YBT, G4TMV, G4UPS, G0AEV, G0DVY, G0IHF, GM4WJA and packet cluster reports. Compilation and commentary by G0AEV.

February included several marginal band openings to North America, and one good opening reminiscent of the good times of a few years back. Sporadic E was more in evidence than usually seen in February. The 16th was the best day for 10m propagation for UK observers – particularly because of the good opening to North America in the afternoon, but there was also F2 propagation in the morning to the east, including to eastern VK, and sporadic E to many parts of Europe. The transatlantic F2 opening was followed by aurora on 6m suggesting that the good propagation was in part due to pre-auroral enhancement.

Robert G0DVY kindly provided his beacon log for 16th. Robert's station in JO03CH comprises a Kenwood RX to a vertical and FT757 to a 2 and 3 element monoband yagis plus preamps. (The station with the vertical is a quarter mile from the main station, set up by Robert to listen for phase changes

- 10:00 Notice band in good condition lot of short skip and some long. 5B4CY S3, VK5WI S6
- 11:00 5B4CY S4, DK0TEN S9, DF0AAB S4, DL0IGI S9, IY4M S9
- 12:00 DL0IGI S6, DF0CN S4 (28.173), SK0CT S8, F5TMJ S3, SK5AE S4, LU1FHH S2
- 13:30 SK5AE S4, SK0CT S2, KP3/KH2RU S3, KD4MZM S3, WN2A S4, VE9BEA S3, LU4JJ S4, LU1FHH S1, OK0EG S9 ++
- 15:00 OK0EG S4, DL0IGI S2, KA1EKS S5, K4DPC S2, VE9BEA S2, VEICBZ S4, VE1XWG S1 (28.271), WN2A S2, K4AIS S3, N4HLF S2, K5AB S3, WJ5O S3, KD4MZM S5, W2IK S2, KF4MS S3, W4TIY S4, KG4WBH S3, N1ME S5, LU1FHH S3, ND4Z S4, W4JPL S2, KP3FT S4, KC8COM, KG2GL S5, W8EH S4, W3VD S3, K4UKB S3, AB8Z S6, N9AVY S6
- 16:00 K4AIS S6, N4HLF S6, W4JPL S1, N1ME S1, VE9BEA S1, ND4Z S4, KD4MZM S3, KA1EKS S3, N3NIA, VA2MGL, KB1KDC, K5BTV Marginal copy, LU1FHH S4, KA9SZX S1
- 17:00 K4JDR S2, N2JNT S3, AB8Z S4, N4HLF S6, K4AIS S5, K5AB S2, WN2A S6, W4TIY S5
- 17:30 all 1700 Signals went up by Several S points. Some phase change in tone
- 18:00 Most signals have gone quite faint. WN2A S2, N4HLF S2. Gone by 18:30

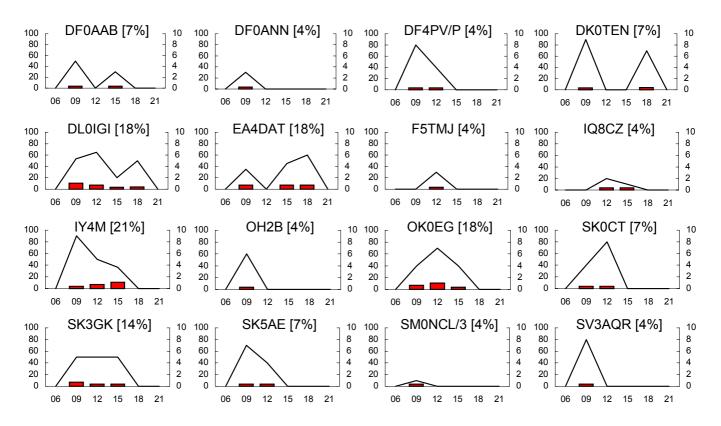
Robert was not able to check any of the project beacons on 28.200 it was a big Surprise to hear so many beacons at this stage of the cycle, There was a lot of QSB. Signals came up and went back into the noise, with a big surge at 17:30.

Brian G3HBR also used beacon reception to indicates reasonable conditions on several days, including the late opening to North America on 16th and similar conditions occurred on 19th/20th (contest weekend) . On 19th Brian could just hear VY2ZM, plus OK and OM stations who were audible via a scatter mode plus meteor bursts most of the day. On 20th the same OK and OM stations were audible all day and W3LPL, KC1XX and K1XM were audible for a lot of the day also sounding like scatter signals. Eventually the band opened properly with a lot of W/VE available though nothing further west than Texas and Arkansa. It does show what big USA stations can do even under poor conditions.

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.

All the beacons shown in the graphs were heard by sporadic E with the exception of SV3AQR, which was heard by direct F2. There was no (obvious) backscatter included in the results this month.

European Beacon Notes.

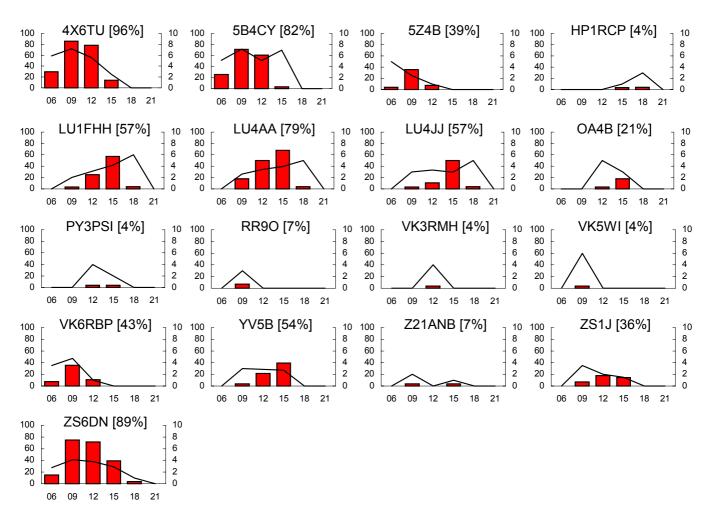
Two new European beacons were heard in February: IQ8CZ on 28.230 (JM38) and SK3GK on 28.201.5 (JP80) – both appear to be full time beacons and should be heard easily during the summer Es season. GB3RAL was off the air for all of February - it returned to service in March but developed further problems later: this beacon is showing its age.

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

Suggested propagation modes.

Normal F2 propagation was responsible for all the results presented in the graphs on the next page. Generally, beacon results suggested conditions were rather better than some people thought. The single hop paths to 4X and 5B, and the multi-hop paths to southern Africa (ZS6DN) and southern South America (LU4AA) all showed high daily reliabilities. Outside of this "core" area, VK6RBP and YV5B both posted good results being heard on around half of days. There was a little propagation on some of the more difficult paths to eastern VK and to RR9O – but in case we get carried away, this was all fairly marginal stuff. The mainstays of 10m F2 propagation (to Africa and South America) were more or less as expected for this time of year and sunspot cycle.

Beacon Graphs.



Beacon Notes.

OA4B was reported on several days (as shown in the graphs above), and there was a report of this beacon on 20m from outside the UK. However, most observers who regularly listen to the IARU beacons reported nothing from OA4B. As this beacon has been QRT for some years and NCDXF have not indicated any change in status, I am of the opinion that the reports are probably mis-loggings.

10m DX in February 2005

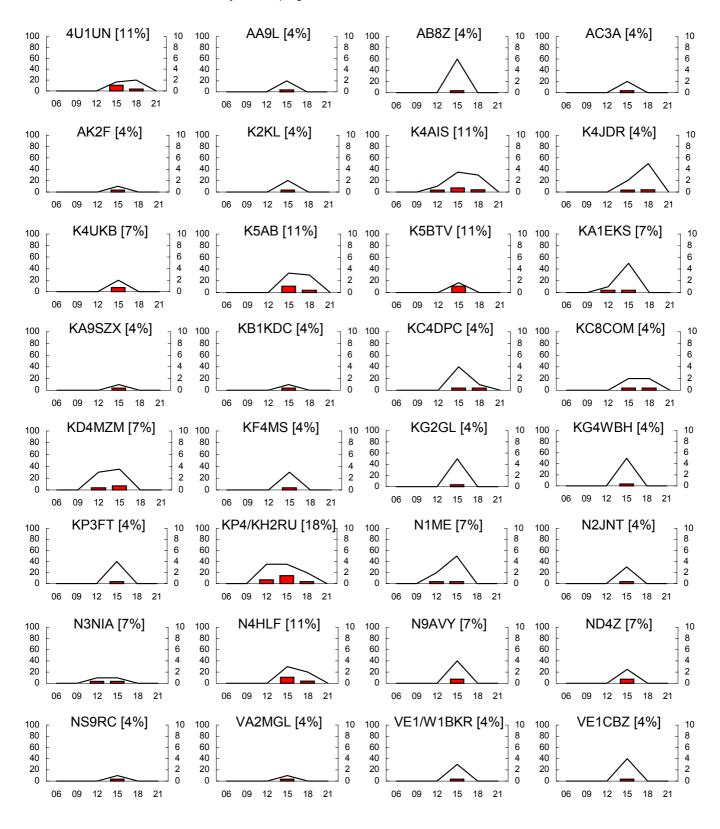
The following list of DX countries worked or heard in the UK comes from packet cluster Spots (DX Summit: <u>http://oh2aq.kolumbus.com/dxs/</u>) and from the logs of Six and Ten reporters. The 46 DX countries (outside of Europe) heard/worked in February represent a big improvement on the January totals. This improvement is due almost entirely to seasonal effects: solar activity remained low and little changed from January

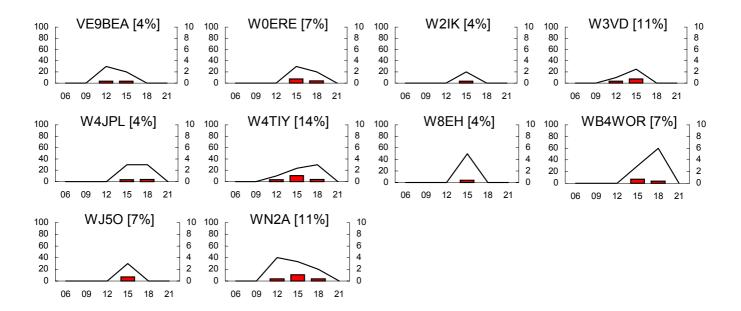
<u>DX in February</u>: 3B8, 3B9, 4X, 5B, 5R, 5T, 6Y, 7Q, 9J, 9K, 9Y, A4, C6, CO, CT3, CX, D2, D4, EA8, HC, HS, HZ, J2, LU, OA, P4, PY, SU, T5, TA, TI, UA, UA9/0, UN, V2, V4, V5, VK, VQ, W, XU, XW, YA, YB, ZC, ZS.

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

Propagation to North America

42 different beacons from North America were logged by 6&10 observers this month. As indicated in the introduction, this fine haul was biased by the results from one exceptional day, February 16th. 26 of the beacons reported here were only heard on one day. However, some propagation to North America was identified on 9 days. The most reliable beacon – and with the most favourable geographical location – was KP4/KH2RU, heard on 5 days. Propagation was confined to the eastern half of the continent.





Analysis of 50 MHz reports from the UK

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

February provided snippets of propagation via sporadic E and aurora but not enough to make this month memorable for anything except for the dominance of white noise in most 6m receivers. It is probably of little consolation that sporadic E was a bit better than average. Openings only numbered 3 but the event on 16th was quite reasonable for winter Es event with one observer hearing 4X via a double hop. For the JT6M user, there was the usual meteor scatter, with "tropo" also available via this mode, but there were no outstanding events. It hardly needs saying that DX propagation was absent!

Our regular contributors all found conditions very poor:

- G2ADR had "no log as such" for us this month, but Eric did write about hearing YU on 13th Feb in one of the rare February Es openings his only observation this time round. Eric "lives (perhaps naively) in hope of better results to come".
- G3HBR experienced a very quiet month with just the one QSO to report (an Italian via Es). Brian takes a positive view that "at least that shows there was some propagation about "
- G3IMW notes that solar activity has been falling and results sparse. Jeremy heard nothing of note on 50 MHz, not even an aurora.
- G4UPS thinks "things can only get better!" Ted had no 6m reports for February, and he says this is the longest period that he can remember without any kind of activity at all on 6m. Ted also noted how conditions on the HF bands have been particularly poor.

As I write these words in early April the start of the summer Es season is within range, so I am sure better results are on the way.

Sporadic E.

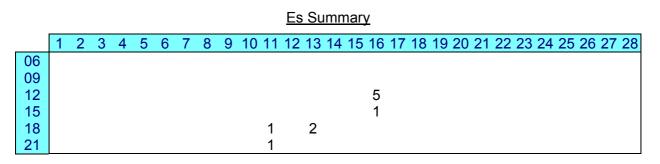
Sporadic E results below are in tables grouped by country area and ordered alphabetically by country prefix. Percentages following the country name are the daily reliability values (the number of days when propagation was reported). The first row of each table, "D" is the day of the month, subsequent 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.

	4X (3%)	CT (3%)	l (7%)	LY (3%)	OH (3%)	9A/S5 Ex-Yugoslavia (10%)
D	16	11	13 16	16	16	11 13 16
06						
09						
12	5		7	0	3	6
15						0
18			9			7 9
21		5				

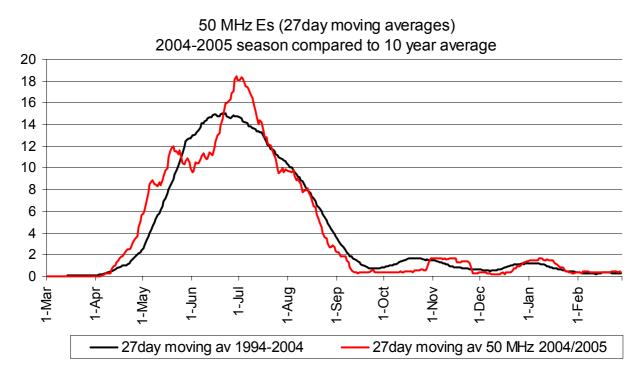
Six metre sporadic E on 3 days hardly ranks as exceptional, but the event in the 12z period of 16th is worthy of note. Not only was there propagation to both the northeast (LY and OH) and southeast (I, S5, 9A) but a double hop to 4X was present at 13.34 as reported by G4FUF. Interestingly, the Es event was followed by an aurora some 4 hours later. On 10m, sporadic E was more extensive but to the same general areas as seem on sic. The 10m Es was followed by good F2 propagation to North America (perhaps in part due to a pre-auroral enhancement).

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.



The graph below shows the progress of sporadic E for the year March 2004 – February 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.



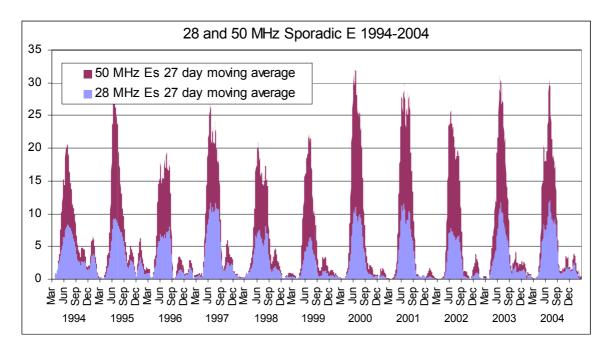
The following is a summary of the notes that accompanied this graph each month as it developed. This text will appear in a short article in next issue of *Six News*.

The 10-year average line (in black) shows clearly the slightly skewed distribution of the summer season, the well-known winter season and the much less well-known autumnal season. The second line representing the 2004 season suggests there was more propagation than average in April through to mid May but with a marked drop followed this encouraging start. By early June 2004 conditions were poorer than in any of the preceding 10 years - much as 6m operators lamented at the time. A sharp rise to the end of June extended into early July and this period included the seasonal peak around 1st July – later than the usual mid-June. Mediocre conditions followed and the rest of the season was slightly poorer than average. The 2004 summer season can be summarised as:

May – good; June – poor; July – good; August – average.

Perhaps more interesting is the distribution of sporadic E during the rest of the year. A small peak of activity often appears in late October but in 2004 the summer season ended with a rather flat "tail" followed by a strange looking peak in November, quite unlike the 10-year average. The shape of the 2004 curve is due in part to the unusual "aurora-related" (but not auroral E) event on 10 November, but it is important to note that Es occurred at 50 MHz on more than just this one day. The November propagation may include displaced activity more normally seen in late October. It was clearly not part of the discrete winter season that peaked on 7th January. It seems that both autumnal and winter Es "seasons" were later than normal.

The *Six News* article included the graph below, which shows 11 years of Es country/area data for 10 and 6m as presented in these pages. Like most studies of sporadic E, these data shown no significant correlation between the solar cycle and the overall "amount" of Es. However, there does appear to be a relationship between year and the ratio of summer to autumnal and winter Es: there is relatively more autumnal and winter Sporadic E in the solar minimum years. This may have something to do with the geomagnetic cycle - there is more autumn/winter sporadic E in years with fewest magnetic disturbances. If the pattern is genuine, we might expect to see relatively good Es in late 2005.



Meteor Scatter

Once again, MS via JT6M provided more activity than all other modes put together. Most JT6M QSOs were completed via meteor scatter, but JT6M was also used to good effect with EME, "tropo" and sporadic E. An few spots indicated JT6M by "ionospheric scatter" – this could be E-scatter but is perhaps most likely to be the "steady" ionisation sometimes accompanying meteor scatter. For the analysis here, only contacts explicitly or implicitly identified as by MS are included.

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

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
MS QSOs	0	0	2	0	3	0	0	0	0	0	0	2	2	0	0	0	2	1	2	3	0	0	1	1	1	2	9	1
All JT6M	0	0	4	1	4	10	0	2	1	2	0	6	3	0	5	1	3	2	12	26	6	9	3	1	6	6	27	3

The peak on 27th does not appear to represent good conditions but weekend activity. Although 27th is within the period of the Delta-Leonids (15 February to March 10), this shower peaks on 24th February, and in any case it is a shower with very low meteor rates.

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

<u>Hour</u>	<u>QSOs</u>	<u>Countries</u>	<u>Hour</u>	<u>QSOs</u>	<u>Countries</u>
05z	5	9A, HB, I, OE, SM	16z	1	S5
09z	11	I, OE, S5	17z	2	OE, OK
10z	5	I, OE	18z	0	
11z	2	I, LX	19z	2	I
12z	2	S5, SP	20z	1	OZ
13z	0		21z	1	OZ
14z	1	I	22z	0	
15z	1	F	23z	0	

The table of number of MS and JT6M reports by day shows that weekend days control the number of QSOs. I suspect, as noted before, that the diurnal distribution of contacts probably also reflects human rather than propagation activity.

Aurora

Aurora were confined to northern UK stations. The events of the 7th and 16th were the best of the bunch. GM4WJA reported hearing aurora all evening of 7th with the GB3BUX beacon stronger than GB3LER, but John only heard local GM's.

7 th	18z	1831	MM0CWJ (IO67) > GB3LER "aurora"
		1916-1934	GB3LER < G4VCJ 41A, MM0BSM (IO86) 57A, G7HEJ (IO83) 59A.
	21z	2101-2116	SM3GSK > GB3LER 57A; MM0BSM > GB3LER 55A
		2309	GM8LFB (IO88) > GB3LER 53A "still auroral"
8 th	15z	1726	MM0CWJ (IO67) > GB3LER "aurora"
16 th	15z	1713-1729	GB3LER < GM8LFB 55A, LA6PV 53A, EI7BMB 31A, LA2IM (JP43) 53A.
		1757	MM0AMW > GM4DZX "aurora"
18 th	00z	0105-0110	GM7PBB (IO68) >GB3LER 59A, OY6SMC 53A, GB3BUX 53A
		0220-0243	GM8LFB (IO88) > GB3LER "weak aurora", OY6SMC 52a
19 th	18z	1806	GM7PBB > GB3LER 52A QTF 020
20 th	18z	1941	GM8LFB > GB3LER "weak aurora"
		2042	GM7PBB > GB3LER 53A
25^{th}	18z		GM4WJA notes aurora in the early evening

Auroral E

Only one auroral E report this month:

18th 00z 0254 GM8LFB > OH9SIX "in/out - auroral E

Tropospheric propagation

All 4 "tropo" reports (gleaned from packet cluster data) are for JT6M contacts – these are for the most part contacts that would not be particularly special if completed by SSB so they were presumably not too difficult to complete via JT6M.

6835PA2DB > G3UYM51 tropo6858PA2DB > G4PCI "Nice tropo and MS"171716G0CHE > F5TNDjt6m qso via tropo201238G0CHE > PE1MZSjt6m qso via tropo.

Solar and Geomagnetic Data for February 2005

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

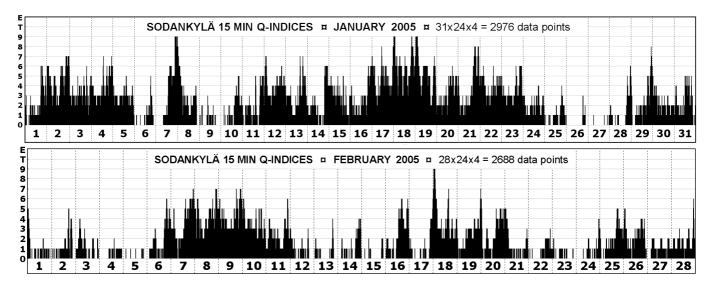
Sunspot numbers (SEC)	Mean 48.8	Max 109 (18 th)	Min 11 (28 th)
Solar Flux (28 MHz)	Mean 102.3	Max 145 (15 th)	Min 75 (28 th)

Solar data for February 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. Still life in the sun yet: 5 X-class x-ray events this month.

14 th	1353-1445	M1.8 Sf		1408-1439	M3.2 Sf,	19 th	0658-0755	M6.7 2n
	1602-1614	M1.0		2225-2331	X2.6 3b		0803-0840	X1.3
	1753-1803	M1.5	16 th	0754-0802	C4.4		1019-1029	M2.7 1n,
15 th	0022-0102	X1.2 1b		2155-2222	M2.4 1n		1532-1548	M1.6 2f
	0409-0422	M1.3 2n	17 th	0310-0332	M2.6	20 th	0636-0726	X7.1 2b
	0426-0436	M8.4 2n		1659-1007	X3.8 2f			
	0554-0717	M8.6 Sf	18 th	1123-1159	M1.6			
	1141-1150	M1.2 Sf		1538-1559	M4.6 2n			
				1856-1909	C4.2 1f			

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



Geomagnetic data from the Finnish observatories for February are:

Monthly averages

Sodankylä:	monthly Ak average = 17.7	(35.5 in Jan)
Nurmijärvi:	monthly Ak average = 10.5	(23.4 in Jan)

Most disturbe	<u>ed February days:</u>
Sodankylä:	8^{th} , Ak = 52 (Jan 18^{\text{th}} Ak = 243)
Nurmijärvi:	7^{th} , Ak = 31 (Jan 21^{\text{st}} Ak = 118)

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

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. The planetary Kp index showed far more disturbed conditions than any of the 3 UK K indices (Kp > 5 on 8 days, UK observatories K > 5 on 4 days).

Planetary K (Kp)

KΡ	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
00	3	1	1	0	1	2	3	4	3	4	1	4	2	2	3	2	5	6	6	2	3	1	1	0	1	2	0	1
03	0	1	4	0	1	2	3	6	4	4	4	5	4	2	6	2	4	5	6	1	3	1	1	0	1	2	2	3
06	1	3	3	0	1	4	2	4	5	3	4	3	2	2	4	2	3	7	6	1	1	0	2	1	2	2	3	3
09	2	2	1	1	0	1	3	3	4	3	2	5	2	1	3	2	7	5	7	2	2	0	1	1	2	3	1	3
12	1	2	1	2	1	1	5	4	4	4	2	5	3	1	3	3	7	6	6	4	1	1	1	3	2	3	3	3
15	2	2	2	1	0	1	4	4	3	2	3	3	3	1	3	3	7	6	4	4	2	2	2	1	3	3	2	3
18	2	3	1	1	1	2	5	4	3	3	2	3	3	4	3	2	5	4	3	3	1	2	1	2	3	2	2	1
21	2	1	1	1	1	3	5	4	3	2	3	3	3	4	2	3	3	5	4	3	2	1	1	2	2	2	1	4
Σ	13	15	14	6	6	16	30	33	29	25	21	31	22	17	27	19	41	44	42	20	15	8	10	10	16	19	14	21

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
00	2	0	2	0	0	0	2	3	3	3	2	1	1	0	1	2	1	7	1	4	3	0	1	0	0	3	0	2
03	0	1	3	0	0	2	2	4	3	2	2	1	0	2	0	1	1	5	1	2	2	0	0	0	1	1	2	1
06	0	1	2	0	0	2	2	2	3	2	2	1	0	0	0	0	0	3	2	2	0	0	1	1	1	2	1	2
09	1	1	1	1	0	1	2	2	3	2	2	0	0	1	0	1	1	1	2	0	0	0	0	1	1	2	1	2
12	1	1	1	1	1	1	3	2	3	3	2	1	0	1	0	2	1	3	3	1	1	1	1	2	1	2	2	2
15	1	3	1	1	0	1	3	3	3	3	0	0	0	0	0	3	1	3	3	3	0	1	0	1	3	2	1	2
18	0	3	1	1	0	3	5	5	4	4	3	1	2	2	2	3	0	2	3	3	0	1	1	1	3	2	1	2
21	0	1	1	1	0	3	5	4	4	2	3	0	0	2	1	4	2	2	3	4	2	1	0	1	1	2	1	3
Σ	5	11	12	5	1	13	24	25	26	21	16	5	3	8	4	16	7	26	18	19	8	4	4	7	11	16	9	16

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
00	3	0	2	0	0	0	3	3	3	3	3	2	1	1	0	3	1	6	1	4	3	0	2	0	1	3	0	2
03	0	2	4	0	0	2	3	4	4	3	2	2	0	2	0	1	1	3	1	3	2	1	0	0	1	2	2	2
06	0	1	2	0	1	2	2	3	4	3	2	1	0	1	1	1	0	3	2	3	0	0	1	1	2	2	2	2
09	1	1	2	1	0	1	2	3	4	3	3	0	0	1	0	1	1	2	3	0	1	0	1	1	2	2	1	3
12	1	2	1	1	1	1	4	3	3	4	2	1	0	1	0	3	1	3	3	1	1	1	1	3	2	3	3	3
15	1	3	1	1	0	2	3	4	3	3	1	1	0	0	0	3	1	3	3	3	0	2	0	1	3	2	2	2
18	0	3	1	1	0	3	5	5	3	4	3	2	2	2	2	4	1	2	3	3	0	1	1	1	3	2	2	3
21	1	0	1	1	0	3	5	4	4	3	3	0	0	2	1	3	4	2	3	4	2	1	1	2	2	2	1	3
Σ	7	12	14	5	2	14	27	29	28	26	19	9	3	10	4	19	10	24	19	21	9	6	7	9	16	18	13	20

Hartland K (SW England)

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

ł	10MEV Prot	1.9E+04	1.9E+04	1.8E+04	1.6E+04	1.5E+04	1.6E+04	1.5E+04	1.4E+04	1.4E+04	1.3E+04	1.4E+04	1.4E+04	1.4E+04	1.5E+04	2.7E+05	1.3E+07	1.1E+08	9.4E+07	8.2E+06	5.2E+07	1.3E+04	1.3E+04	1.4E+04	1.4E+04	1.4E+04	1.4E+04	1.4E+04	1.3E+04		9.9E+06	1.1E+08	1.3E+04
	1MEV Prot 10MEV	1.3E+06	2.1E+06	2.0E+06	9.9E+05	1.8E+06	1.5E+06	1.5E+06	4.7E+06	5.2E+06	6.3E+06	1.7E+06	2.0E+06	2.0E+06	2.2E+06	5.8E+06	1.4E+08	6.2E+08	5.5E+08	1.1E+08	1.4E+08	2.7E+05	3.2E+05	3.5E+05	5.0E+05	3.9E+05	3.0E+05	3.7E+05	4.0E+05		5.7E+07	6.2E+08	2.7E+05
•	2MEV Elec	9.5E+07	1.5E+08	1.0E+08	1.0E+08	1.3E+08	1.5E+07	3.0E+06	9.8E+07	3.4E+08	4.7E+08	1.4E+07	1.2E+07	1.8E+08	2.5E+08	8.1E+07	2.2E+08	1.4E+07	2.0E+08	4.4E+08	1.1E+09	3.9E+07	6.9E+07	9.9E+07	7.3E+07	7.5E+06	3.8E+06	8.3E+06	8.7E+06		1.5E+08	1.1E+09	3.0E+06
oF2	Hour	07	00	00	90	90	05	05	90	n.a.	05	n.a.	n.a.	n.a.	90	90	90	90	05	00	02	90	n.a.	90	90	90	05	n.a.	00		05	07	00
Min foF2	MHz	2.4	2.3	2.1	2.4	2.6	2.2	2.4	2.0	n.a.	1.9	n.a.	n.a.	n.a.	2.5	2.9	3.3	3.0	2.1	2.1	2.1	2.2	n.a.	2.3	2.9	з.1	3.1	n.a.	1.8		2.4	3.3	1.8
foF2	Hour	10	12	15	12	13	10	13	13	12	13	16	n.a.	n.a.	16	1 4	16	7	13	7	17	12	n.a.	10	5	13	13	15	14		13	17	10
Max f	MHz	6.7	7.0	7.4	6.6	6.4	6.6	7.7	7.3	7.3	6.9	7.2	n.a.	n.a.	8.1	7.8	8.5	7.7	7.6	7.5	7.2	7.8	n.a.	7.2	7.4	8.0	7.1	7.2	6.3		7.3	8.5	6.3
X-ray	b.gnd	A4.0	A4.5	A7.6	B1.3	B2.1	B1.8	B2.2	B2.0	B1.9	32.1	A8.6	B1.6	B2.6	B7.3	C1.6	C1.6	C1.5	B7.1	B6.8	B8.7	A9.9	<u>3</u> 1.1	B1.1	A6.4	A2.1	A1.4	A1.7	A1.5		B3.6		A1.4
	Aa b		15 /		റ				52	44		24				8		_	51	31	29	10	10	10	13				24 /		21.6		9
	Ap	9	ω	ω	ო	4	6	23	34	25	17	4	30	13	12	22	12	63	72	62	12	ω	4	4	5	ი	6	ω	12		18.1	72	ო
Max	Кp	3	ო	4	2	-	4	2	9	2	4	4	2 2	4	4	9	ო	7	2	2	4	ო	2	2	ო	ო	ო	ო	4		4.0	2	-
	SIDC	19	17	7	15	16	38	38	35	39	48	52	56	48	48	52	45	43	37	31	22	20	20	16	7	15	ω	ω	7		29.1	56	7
<u> </u>	\mathbf{O}	27	28	23	22	22	47	32	33	60		25	28			00	66	107	60	36	61	33	23	5	17	15	27	5	11		48.8 2	109	7
2800	Elux	84	82	òó	õ	ð	6	10	10	109	-	ð	10	-	13	4	4	13	12	13	47	ð	6	85	8	2	7	76	7!		102.3	145	75
ł	AE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	~	0	0	0	0	0	0	0	0	0	0	~	0. 0	~	0
50 Areas	A	0	0	0	0	0	0	ო	~	0	0	0	0	0	0	0	ო	0	ო	~	-	0	0	0	0	0	0	0	0	12	0.4	ო	0
- 50	DX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0
	Es	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	6	0.3	S	0
28 Areas	ш	2	2	ო	2	~	ო	2	∞	S	9	4	18	15	20	ი	52	∞	10	ი	10	~	თ	9	7	თ	13	ω	4	271	9.7	52	~
28 /	Es	0	0	0	0	0	0	0	~	4	0	2	0	0	-	2	ω	~	~	ω	0	2	0	~	0	~	0	~	0	33	1.2	∞	0
February	2005	01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb	Sum	Average	Maximum	Minimum

Section 3, Solar and geomagnetic data, page 3 of 3

The Six and Ten Report, February 2004

50 MHz Outside Britain

Compilation and Commentary by G3USF

Continental Europe and Africa

Auroral-Related Propagation

Twelve days on which auroral propagation was reported, but only one when it is known to have reached south, and then only briefly. Even at more northern latitudes most of the openings were fairly brief and weak; after all, the most disturbed days at Sodankyla (the 8th) and Nurmij (the 7th) were, respectively, Ap 31 and Ap52. According to SV1DH, GB3LER was reported in W1 at 0200 on the 18th by auroral E. This is a little surprising since there were no other indication of a large-scale event, though played rather larger in North America than in Europe and AE was reported within the US around that time.

The OH results - for which we are as usual indebted to OH5IY/OH2LX - may be slightly depressed because, SK4MPI, which OH5IY monitors on a 24-hour basis, was off the air from the 4th and the 16th. Monitoring for auroral FM at 88.7 and 107.9 MHz continued normally.

- Feb 2 1610-30 Au>OH5IY 1710-20 AU>OH5 1830-50 Au>OH5
- Feb 7 2101 GB3LER>SM3(57a)
- <u>Feb 8</u> 1810-20 AuFM>OH5IY 1830-40 AuFM>OH5 1900-50 AuFM>OH5 2100-10 AuFM>OH5 2126 OH9SIX>SM5(JO99 53a 010)
- <u>Feb 9</u> 0100-10 AuFM>OH5 1810-20 AuFM>OH5 1830-40 AuFM>OH5 1900-50 AuFM>OH5 2100-10 AuFM>OH5
- Feb 10 18-1900 OH9,OH7>OH8 OH0>OH5(55a) OH8>OH5(56a)
- Feb 12 1811 49750>SM2(59)
- Feb 16
 1352 49750>OH6(KP02 55a) 1610-20 AuFM>OH5 1630-1700 Au>OH5 1630-1710 AuFM>OH5

 17-1800 LA>OH1(59a) GB3LER>LA(53a) OH1(KP10)>LA(55a) GB3LER>EI(31a) LA>OZ(JO59

 55a) SM0>LA(55a) LA>OH6(57a) LY>OH6(59a) 1807 OH8(KP24)>OH6(55a)
- Feb 18 0120-30 AuFM>OH5 0140-0230 AuFM>OH5 1431 49750>OH6(KP02 55a) 1450-1550 Au>OH5
- Feb 19 2050-2100 Au>OH5 2140-50 Au>OH5 2240-50 Au>OH5
- Feb 20 2000-40 Au>OH5 2020-40 AuFM>OH5
- Feb 22 1730 49750UAtv>SM0(55a)
- Feb 25 see G0AEV's analysis

Other Modes.

For most of Europe another thin month with nothing that could remotely be called DX, and indeed little of anything outside local activity, apart from the occasional short sporadic-E opening - notably on the 13th. We learn from SV1DH of a G<>4X contact on the 16th, the propagation mode being uncertain even though Es seems the most plausible possibility even though there was little sign of it elsewhere. Most reports were of JT6M contacts, the majority apparently involving Es, with some probably attributable to tropo. Only those marked as ms by the reporter are denoted by (ms). As usual beacon callsigns are given in full as an indication of propagation with relatively low levels of erp.

Exceptions to these general comments were confined to the Mediterranean - although, even there, not all parts of it. SV1DH, one of our most active and acute operators notes 'another poor month' - although his log does include West African tv on eight days. The fortunate operators with more exotic amateur signals to report came from the Central Mediterranean and points west.

So, we have ZS6DN into I4 on the 8th and ZS6TWB into EA6 on the 26th, and 7Q7SIX into EA6 on the 8th. Tep is the assumed propagation mode. S9 was worked from CT on the 21st and the TR0A beacon was also reported in CT on the same day.

ZD8VHF was the only DX station heard with any frequency. It was reported in EA4 and 9H on the 8th (a relatively good day), CT on the 12th, 9H on the 13th, F and EA7 on the 23rd and into CT on February 14,15,16,17,18,20,22 and 24, presumably again by tep. The only reported contact between Europe and the mainland of South America was between CT and PY1 on the 11th. However, CN was heard or worked in PY on February 10,11, 12,15, 16 and 19, again presumably via tep.

While West Africa scarcely penetrated into Europe, the TR beacon was heard by FM5JC on the 16th, 18th and 27th and D4B copied the FY7 beacon and FM5JC on the 1st and heard FY7THF again on the 22nd. D4B also contacted LU and Y on the 2nd. Meanwhile, 5T5SN also copied FY7THF on the 5th and 24th, when he also copied 9Y4AT and FM5JC. With the 5T5DUB becoming operational in the course of April we may hope to learn more about this little explored path. As things stand there look to be interesting possibilities here. The CT3 beacon was copied in PY on the 16th.

- Feb 1 23-2400 FY7THF,FM5JC>D4B
- Feb 2 no reports
- Feb 3 no reports
- Feb 4 1445 HB9SIX>DL(t)
- Feb 5 2221 FY7THF>5T5SN
- Feb 6 G>PA(t) 1052 OE5>I0(jt) 1835 G>DL(jt)
- <u>Feb 7</u> 49750>G(060 Es)

- <u>Feb 8</u> 11-1200 <u>ZS6DN</u>>IW4BET S5>PA(jt) 1757 I0>S5(t) 1937 <u>7Q7SIX</u>>EA6VQ 2040 <u>ZD8VHF</u>>EA4SV 2107 <u>ZD8VHF</u>>9H1YZ
- Feb 9 1104 48239.2>G(030 Es)
- <u>Feb 10</u> 1324 9Ltv>SV1 1755 9A0BHH>S5(t) 18-1900 S5>I0 I5>I2 SM3>SM5 I0>I5 S5>I1 19-2000 OH0>S5 G>OZ(jt) 20-2100 S5>I1 S5>OZ(jt) G>PA 21-2200 I4>I2 OH0>S5 21-2200 OH6>OZ
- Feb 11 no reports
- Feb 12 09-1000 SM7>S5(jt) SV1>5B(sc) 11-1200 G>I3(jt) 1609 9Ltv,3Ctv>SV1
- <u>Feb 13</u> 1107 I3>PA(jt) 14-1500 S5>PA(jt) LX>ON 15-1600 CT>I5(jt) UT5G>I0(Es) 16-1700 I9>9H YO3KWJ>I0 SV1SIX>SP6 ZA>YO5 UT5G>I8 9A0BHH>LZ1 YO4>I5 17-1800 YO4>I4 UT5G>I8 YO3KWJ>I8 18-1900 S5>EI,PA I5>PA OZ6VHF>I5 GB3MCB>9A G>S5 19-2000 EH5>SP2(Es),DL G,GM>I8(Es) I8>PA ON>I8 20-2100 I0JX>PA YU1>F 21-2200 I0,I8>LX 2206 <u>ZD8VHF</u>>9H1YZ
- Feb 14 1558 4X>5B
- Feb 15 0844 49750>G(Es) 0931 49750>G 1335 I7>I9 2051 G>OZ
- Feb 16 1238 GB3LER>I4(ms/es) 15-1600 CN8MC>F CT0SIX>I5 1643 I3>I5 aurora
- Feb 17 13-1400 49760,49752.9>G(sc 120) 16-1700 G>F(jt)
- Feb 18 0159 GB3LER>F(mode?)
- Feb 19 1013 GM>HB(jt) G>PA 1644 SM7>OH7(jt) 2028 I3>EI
- Feb 20 0917 G>I2(jt) 10-1100 I3>PA(jt) 1228 G>LX(jt)
- Feb 21 1002 GW>ON(jt) 1807 S92RI>CT1AXS
- <u>Feb 22</u> 1033 49750tv>G(060 Es) 11-1200 OE5>I5(jt) 1257 9Ltv>SV1 1515 GW>DL(jt) 2026 G>OZ(jt) 2241 <u>FY7THF>D4B</u>
- Feb 23 1140 49750>G 20-2100 ZD8VHF>EA7KW,F6FHP
- Feb 24 00-0100 FY7THF,FM5JC>5T5SN 0102 9Y4AT>5T5SN
- Feb 25 1036 OE5>PA(jt) 1356 48240/250,49740/750>G
- Feb 26 0815 G>9A(ms) OK1>9A 0951 SP5>OH6(jt) 1626 ZS6TWB>EA6VQ
- <u>Feb 27</u> 07-0800 G>DL(jt) 0853 G>I4(jt) 0947 G>I3(jt) 1047 GW>T9(jt) 12-1300 G>LX(jt) 48250>G(180 Es) 1337 9Ltv>SV1 1748 G>OE5(jt)
- Feb 28 1638 9Ltv>SV1 17-1800 EH8>EH7

50MHz PROPAGATION REPORT FOR FEBRUARY 2005 BY SV1DH

- 1. Data for 20 days, Internet data 1-8th.
- 2. Relatively good days on: 12
- 3. 48 MHz AF video (9L+3C) on: 9,10,11,12,16,22,27,28 (all A-TEP) (R=38%)
- 4. 55 MHz AF video (5N) on: NIL
- 5.
 Opening to
 5B
 on: 12(B)

 6.
 "
 SP
 on: 13(F)
- 6. "SP on: 13(E)7. Special events on:
- 8 (0730-0745 foF2>10, max 10.2/ MUF=36Mhz at 0730+1930 EA6 to
 30/D + 0400 OL + + 7D0/D + 0000 EUT + 7D0/D
- 7Q/B+2100 9H to ZD8/B+2200 EH7 to ZD8/B)
- 9 (1415 W4 on 10m)
- 10 (2300 CN to PY1)
- 11 (1630 W4 on 10m+2130 CT to ZD8/B+2200 CN to PY1+2215 ZL3 to XE1/B+2230 CT to PY1)
- 12 (2230 CT to ZD8/B+2315 CN to PY1)
- 13 (2200 9H+CT to ZD8/B)
- 14 (2115 CT to ZD8/B)
- 15 (2100 CT to ZD8/B+2300 CN to PY1)
- 16 (1330 G to 4X 2Es or 1F2?+G to A6 48Mhz video+1800! W4 on 10m + 2130 CT to ZD8/B +2200 CN to PY1)
- 17 (2130 CT to ZD8/B)
- 18 (0200 W1 to GB3LER/B AuE+2045 CT to ZD8/B)
- 19 (0800 AS+OC+AF on 10m+1101 M3.3 flare+2010 CN to PY1)
- 20 (2145 CT to ZD8/B)
- 21 (1800 CT to S9+1830 EH7 to TR/B+2115 CT to ZD8/B)
- 22 (2115 CT to ZD8/B)
- 23 (2030 F+EH7 toZD8/B)
- 24 (2030 CT to ZD8/B)
- 26 (1630 EH6 to ZS6TWB/B)

Another poor month!!

- 8. DXCC entities heard/worked during Feb 2005 : 2 on 2 cont
- 9. DXCC entities heard/worked on 12thFeb 2005 : 1 on 1 cont.

73 COSTAS

The Americas

Auroral-Related Propagation

- Feb 3 04-0500 VE4ARM>W9(52a) W(DN17)>W7(CN88 33a) VE7(CO70)>W7(CN88 55)
- Feb 6 __06-0700 VE6EMU>W7(57a) VE7FG>W7(52a)
- Feb 7
 0252 VE6EMU>W7(CN88 51a) 03-0400 VE7FG>W7(CN88 51a) W0(EN17)>W9(54a)

 VE4VHF>W9(EN44 53a) N0UD>W9(EN44 52a) 22-2300 N8PUM>W9(EN44 53a)

 K0GUV>W9(EN44 54a) W8>W9(EN44 59a)
- Feb 8 02-0300 VE6EMU>W7(CN88 52a) VE6(DO20)>W7(CN88 57a)
- Feb 17 23-2400 VE4ARM>W9(EN44 53a)

 Feb 18
 00-0100 VE2(FN07)>W8(EN84 57a) W0(EN24)>W9(EN44 55a) W0(EN42)>VE2(FN07 55a)

 VE2(FN07)>W9(EN44 55a) W0(EN34)>W9(EN44 55a) W0(EN33)>W9(EN44 55a) 01-0200

 W0(EN18)>W8(EN82 55a) W3(FM28)>W8(EN82 55a) W2(FN21)>W8(EN82) WR9L>W9(EN44 53a) W9JN>W9(EN44 54a) 02-0300 W8(EN73)>W9(EM69 55a) VA2MGL>W9(EN44 559 AE)

 VE8BY>W9(EN44 559 AE) K0KP>W0(DN70) W9(EM79)>W9(EM69) 03-0400 VE8BY>VE2(FN07 57a)

Other Modes

This was another good month for tep between South America and the Caribbean, extending briefly to W4 on the 27th - a day when there were no Caribbean contacts. While K4RX is within possible tep range it may be that this particular contact was Es assisted. There were also a couple of openings between Caribbean countries and the northern fringe of South America, where tep would not have been involved. Levels of Caribbean and Central American activity remained buoyant with XE, FM, FJ, 9Y, V4, PJ, J6 and KP4 featuring in the logs.

ſ	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
	+				+	+				+	+	+	+	+	+	+	+	+	+	+	+			+			+	

		Caribbean<>So	outh Ame	rica	
CE CX FY HK	3 days 1 day 1 day 1 day 1 day	16 18 20 20 26 20	LU OA PY	6 days 3 days 16 days	12 14 16 19 20 24 13 17 18 1 5 6 10 11-21 24
ZD8	5 days	12 16 21 23 27	PY0Z	2 days	17 21

Other reports from the region include ZLtv into W4 on the 19th and weak European video into FM on the 11th.

Within the US there was occasional Es, but not on the scale of January.

- <u>Feb 1</u> 01-0200 W5>W3(jt) PY9MP>FY1FL <u>D4B>FY1FL</u> 22-2300 W0>W9 23-2400 <u>D4B>FM5JC,ZP6CW</u> <u>9Y4AT</u>>PY2NQ
- Feb 2 00-0100 D4B>PY2NQ,LU2NI 0124 OA4B>FY1FL 1650 JM1SZY>NL7Z(eme)
- Feb 3 no reports
- Feb 4 no reports
- Feb 5 0008 PP5BJ>FM5JC 0138 W4>W3 13-1400 W4>W4 14-1500 W2,W3,W4>W4
- Feb 6 0021 LU>LU 0251-9 OA4B>FY1FL 9Y4AT>PY5EW 0300-1 YV4AB,V44KAI>PY5EW
- Feb 7 no reports
- Feb 8 0115 W8>W8

The Six and Ten Report, February 2005

- Feb 9 0114 W4>W4
- <u>Feb 10</u> 0022 <u>PY1LB</u>>FM5JC 0157 PJ2BVU><u>PY1NB</u> 1544-5 WP4O,W1>W1 W4>W1 16-1700 K2ZD,VE3UBL>W3 W4CHA,K4AHO>VE3 WP4O>W4 N3LL>W5 W4>W3 W5>W4 17-1800 W4>W9,W4 <u>C6AGN</u>>N0JK 18-1900 OZ4VV>W1JJ(eme) G4IGO>W7GJ(eme) 2200 W7>W7 2307 <u>CN8MC</u>>PY1RO
- <u>Feb 11</u> 00-0100 <u>FJ5DX</u>>PY1NB PY2,ZP6CW>PR7 01-0200 FY7THF, LU1DMA,LU8DCH, PY1NB>YV5 02-0300 XW2YW>PT7 0454 W9>W9 22-2300 <u>CN8MC,CT1HZE</u>>PY1RO
- Feb 12
 00-0100 ZD8I>WP4NIX,FM5JC FM5JC>,YV5SSB,PY5IP PY2CDS>WP4NIX PY1,PY2>YV5

 PJ2BVU>PY5IP 01-0200 W4,W5>W3 03-0400 KS5V,W7>W7 04-0500 W5>W6,W7 KS5V>W6 (Es opening) 0527 W5>W5 13-1400 W4>W4 14-1500 W4>W9 ,W4 VE3>W4 1923-32 W4>W3 W5>W7 21-2200 LW3DRH,LU5EG>WP4NEG 2207 XE1MEX>PY3KN 2318-42 CN8MC>PY1RO N7LT>W5
- Feb 13
 00-0100 K4TQR,K4KWK>W0
 PY1UNU,PY1RO
 PWP4NIX
 01-0200 W9>W0
 PJ2BVU
 PP5NE

 W6>W5 02-0300 W4,W6>W5 W7>W7
 03-0400 W6>W7 04-0500 W6,W7>W7
 OA4B
 FM5JC

 WA6LIE>W7 1350 W1>W4(ms)
 14-1500 W3>W4 W4,W5>W8
 15-1600 W3,W8>W4 W1>W8
 16-1700 W8>W3(sc)
 17-1800 W5>W1(eme)
 W3>W9
 2355 W3>W3
- <u>Feb 14</u> 00-0100 N1TTK/KP4><u>PY5IP,PY3KN</u> KP4SDN><u>ZZ1JDR</u> 01-0200 W2,W8>W9(Es) W3DOG>W9 1338 W5>W3 2140 <u>LU3DHH</u>>WP4NEG
- <u>Feb 15</u> 0054 <u>9Z4FZ</u>>PY2EX 01-0200 <u>9Y4FZ</u>>PY4OY PZ5RA>PY4OY OA4B,<u>9Y4AT,V44KAI,TI2NA</u>>PY2EX FM5JC><u>PY2OC,LU</u> PJ2BVU><u>PY2EX</u> 2016 ZS6LEE>W7GJ,W1JJ(eme) 22-2300 SV8CS>W7GJ(eme) 2256 <u>CN8MC</u>>PY1RO 2358 <u>VP5/NW5E</u>>K4RX(Es0
- Feb 16
 00-0100 ZD8VHF,PY2SFY,LU1DMA>FM5JC 01-0200

 CE3RR,LU2BN,LU8DCH,OA4B,LU7HC
 FM5JC G4DEZ>W7GJ(eme) 0326 W0>W8 22-2300

 CN8MC
 PY1RO TR0A,48250(?9L),ZD8VHF>FM5JC 23-2400 CU3URA

 PR7>PU2
 PR7>PU2
- <u>Feb 17</u> 01-0200 <u>OA4B</u>>FM5JC <u>9Y4NG</u>>PP5JD 02-0300 W2>W1 J68LP<u>>ZP6CW,PP5JD</u> <u>PJ2BVU,J68RS</u>>PP5JD 2152-8 J68RS,J69AC>FM5JC 2350-2 <u>PY0ZFO,ZD8VHF</u>>FM5JC
- Feb 18
 00-0100
 PY3DU,LU1DMA>FM5JC 01-0200 W3>W3
 OA4B,CE3RR,PY4OY>FM5JC

 PJ2BVU
 PU2WDX 12-1300 W5>W4,W8 W8>W8 VE3>W4 13-1400 WB0RMO,W2,W5,W8>W4

 W3>W0 W4>W9
 14-1500 W4>W8 15-1600 W7>W5,W0 16-1700 K0UO>W7 W6>W5 22-2300

 TR0A>FM5JC XE1>W5
- Feb 19
 14-1500 S8>W4(ms) K4RX>FM5JC 2012 CN8MC>PY1RO EUtv>PY1 21-2200 W4CHA>W5

 W5>W5,W3 22-2300 W4,W5>W2 W4>W3,W2 W5>W7
 3Ctv,49.2(CEbc),LU1DMA,PY3KN,LU7YZ,FJ5DX>FM5JC W0>W3 XE2>W0 23-2400

 ZS6NK>W7GJ(eme) ZLtv>K4RX XE2>W5,W7,W0,W8 W4>W3 W7>W4(sc) W4>W4,W1
- Feb 20
 00-0100 LW2ETU,CE3RR,CX9AE,J68RS>FM5JC J68RS>PY4OY
 01-0200

 P49MR,9Y4ATYV4AB,<u>>PY2NQ</u>
 W4CHA>W3 02-0300 <u>TI2NA,J68RS</u>>PY2NQ 1616 W1>W4(sc)

 1742 VE3>W2 19-2000 W5>W4 <u>HK3BZO</u>>WP4NIX 20-2100 W0>W2,W4 21-2200 WB5LII>W4,W9

 W4>W4,W9,W1 W5,WR9L,W3>W5 W3,K8UK>W4 W5>W2 22-2300 N0LL>W4 W5,W4>W9

 W3>W3 W6>XE2 W4>W5 23-2400 W5>W9,W4 W4>W8,W9 W8,W4>W5 W3>W8 K5AB>W3

- Feb 21
 00-0100 W4,W5>W9 W4CHA,K4AHO,W5HN>W3 J68RS>FM5JC W4>W2 01-0200

 C6AFP>N3LL,K5IX W4>W5,W3 K5AB>W3HH ZP6CW>PR7AR 0348 K5AB>W0(Es) 1852

 W1>W3(t) 19-2000 W4>W4 W2>W1 ZD8VHF

 PY0ZFO
- Feb 22 01-0200 W5>W7 20-2100 VE1>W9 KP4HI>W4 W1>W9 2340 PY2PR>WP4NIX
- <u>Feb 23</u> 02-0300 W6>W6 W5>W0(Es) K0UO,W5>W4 N0LL>W5 0314 W0>W5 0423 <u>J69EN</u>>WA1T 15-1600 W4CHA>W1 W4>W3,W0 16-1700 W4,XE2>W0 17-1800 W4,W5>W5 2318 <u>ZD8VHF</u>>FM5JC
- <u>Feb 24</u> 00-0100 <u>PT7VB</u>,J69EN>FM5JC PT7>PY2 W3>W1(t) 01-0200 <u>LU8EMH</u>>FM5JC <u>PJ2BVU</u>>PU2WDX 0336 K5GW>W7GJ(eme) 0526 OH6FY>W7GJ(eme) 2104 W3>W4 2314 W4>W4
- Feb 25 0710 VE7>W7
- Feb 26 1307 W4>W4 1404 W1>W4(sc) 1848 FJ5DX>FM5JC 2156 FY7THF>FM5JC
- Feb 27
 05-0600 K5GL,K1RQG>W7GJ(eme) 16-1700 W7>W7 1734 VE3>W2 2228-42 49.2(CE)>W4 2306-7

 Provide a construction of the stress of the
- Feb 28 no reports

Asia and the Pacific

Japan.

While Japan had a quiet month rather more was reported than in January: In particular, VK was reported on ten days, compared with only two the previous month (but fifteen in February 2004). All call areas were reported apart from VK1. However, ZL3 was heard on a single day - the 27th.

Japan<>Australia

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

		Japan<>Austral	ia		
VK2	2 days	11 27	VK5	1 day	11
VK3	1 day	16	VK6	2 days	20
VK4	9 days	1-13 17 19 20 25-27	VK7	1 day	27
	2		VK8	2 days	16 17

6m DX results in JA during February from JA1VOK

DATE TIME(UTC) STATIONS

- 2/9 0430-0530 DU1EV/B
- 0330-0530 FK8SIX/B, VK2DN,2YO,2BPL,4CY,4WS,4AFL,4RGG/b,5UBC 11 0620-0630 XV3AA (JA3-6)
- 12 0350-0615 C21SIX/b (JA7), FK8SIX/B, VK4NW,4JSR
- 0625-0730 FK1TK,8SIX/B, VK4WS,4AFL 13
- 0830-0900 DU1EV/B
- 16 0650-0920 VK3BQS,3DUT,8RAS/b
- 1140-1200 VK6RSX/b (JA3-6)
- 0640-0825 VK4ABW,4FNQ,4ABP/b,8RAS/b 17
- 0100-0200 V73NS,V73SIX/B (JA7) 18
- 19 0330-0420 C21SIX/b, FK8SIX/B, V73SIX/B, VK4WS,4RGG/b
- 20 0340-0500 FK8SIX/B, V73SIX/B, VK4JH,4WS
- 0845-1000 N7ET/DU7, VK6RSX/b
- 25 0415-0530 FK8SIX/B, VK4NW,4WS,4AFL,4APG,4FNQ,4JIN,4YRS,4RGG/b
- 26 0434-0520 VK4WS,4RGG/b 27 0315-0430 FK8SIX/B, VK2BHO,2FHN,4WS,4AHW,7ZOO,7RST/b, ZL3NE/1
- 28 0405-0430 FK8SIX/B

Elsewhere.

With the southern hemisphere sporadic-E season apparently over Oceania appeared to have slumped back into somnolence. With one exception: another of those interesting reports of the XE1KK beacon being heard in ZL3 was logged on the 11th - though not fed into the DX cluster. Yet another reminder that, valuable thought it is, the cluster is unable to provide a total view of what is happening.

Feb 2 06-0700 VK7ZOO,VK2XQ,VK2ARA>ZL3JT

Beacon News and 28 MHz Worldwide

Compilation and Commentary by G3USF

Beacon News

1843	N6NKS/b reported with 4 watts from DM16 but status unknown (W4EF April)
7012	DS50DNO reported (N6KD April) No further information
28203.9	N0WY new beacon from Nebraska (EN21HA) (K0HA April)
28225	N7JS Ogden Utah (DN41BE) running under 1 watt to Vertical a1a 24/7(N7JS April)
28240.6	YO2IS Tisoara (KN05PS) 3 watts to indoor GP returned to service (April)
28244	IT9DTV reported here with 10 watts to GP from Messina (JM78SD) (DL8WX April)
28253	KG4YUV Crandall GA (EM74) new beacon with 4 watts to A99 a1a 24/7 (KG4YUV April)
28256	C30P JN02SM 5 watts to Vertical a1a in temporary operation (April)
28274.3	W4NTI reported by HP1AC (March)
28295	KD1ZX Central Falls RI (FN41HV) new beacon runs 4 watts to vertical 24/7 (KD1ZX
	April)
28322.1	ISOGSR reported with 1 watt QRS from JM49JN (DL8WX April)
50034	T94FC in JN93ET. New beacon (T94FC May)
50036.6	7J6CCU reported by JG3LEB. Nothing further known (May)
50038	LU5EGY new beacon from GF05 (Buenos Aires) 15 watts to GP 24/7 (LU5EGY April)
50053	XE3RCM reported operational again from EL50 (LW3EX April)
50075	K6WL reported with 40 watts from near San Francisco (CM97) (K6WL March)

28 MHz Worldwide

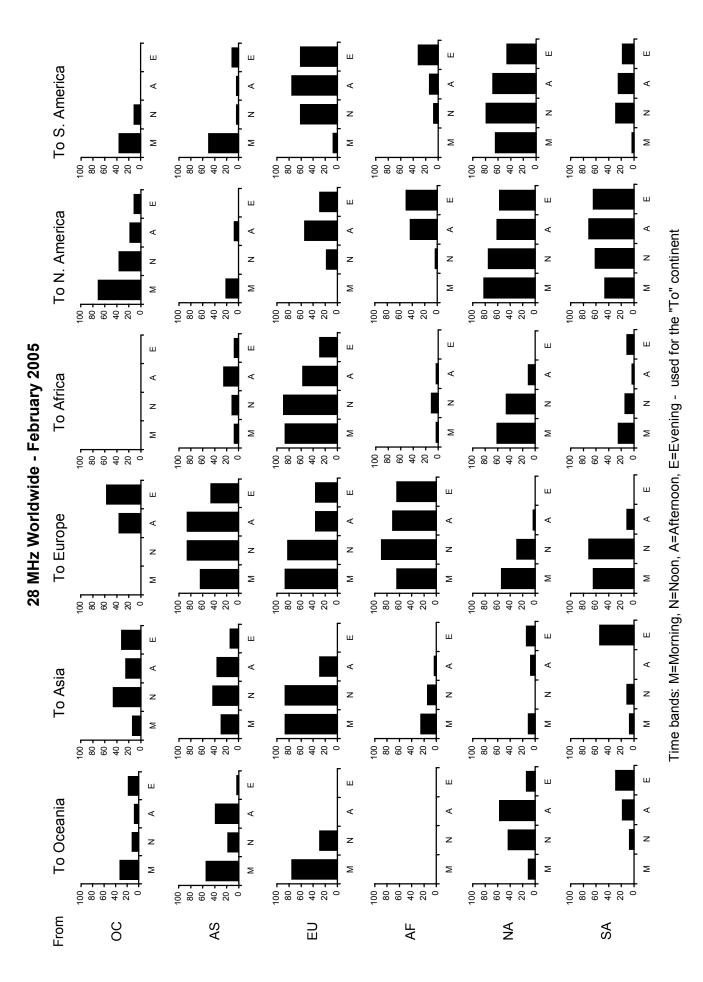
Not the best of months but by no means a hopeless or fruitless one, though a good many operators would need some persuading otherwise. Thus there openings between Europe and Africa every day except the 3rd and 4th which, in part with the 5th, was the poorest period of the month. (This was doubtless mainly due to low flux levels, even though the geomagnetic field was almost inactive.) Indeed, the overall outcome for Europe<>Africa proved to be slightly better than in February 2004. Again, parts of Asia were also workable from some point or other in Europe every day except the 5th and the overall outcome was little different from 2004. Even Oceania was available on 22 days - though much more from Central and Southern than Western Europe. However, strong VK signals were noted in the UK after 0900 the 13th. DK1RWS reported VK7JCR long path at 0922 on the 28th. Within Europe propagation was reported on 25 days, usually by backscatter, occasionally by aurora or auroral E. - On the 2nd OH3YI was reported auroral by SM2LIY and OH1TN after 1850 and SM2LIY copied OH9TEN auroral at 2200 on the 7th.

There was particularly good Es across much of Europe on the afternoon of the 14th, and on the 16th, as discussed earlier by G0AEV. On the 12th Es was sufficiently intense for working between F and DL, apparently by full Es reflection rather than backscatter and DL<>YO was reported at 1452 on the 12th. Unsurprisingly, there was little or no F2 working within the continent. However, South America, generally considered a relatively 'easy' route from Europe, was well down on 2004, with no reports at all from anywhere in Europe for the first five days - though the band opened in that direction every day thereafter!

North America was markedly poorer, though signals were reported on sixteen days, with signals reported as late as 2016 during the ARRL contest. At the other end of the day SN5N reported K3LR at the early hour of 1117 on the 19th. By contrast, the first six days of the month were all blank.

Propagation within North America (including Central America and the Caribbean) was reported on 25 days, though the reliability of the different time periods was down n 2004. There was a strong Es opening affecting most of the US and southern Canada on the evening of the 21st, lasting until the relatively late hour of 0250UTC South America was reported on 24 days, with reliability down on 2004. Oceania was worked on 22 days, Africa on 17 but Asia on a mere 8 days, well down on the previous February. The evening path from South America to Asia showed a severe decline - though a notable opening between LU and JA was reported on the evening of the 13th, continuing until 0020 LU time. Africa was reported rather more frequently from South America - possibly a reflection of activity rather than propagation.

As always there were reports that did not quite fit the general patterns. These included W6WX and KH6WO weak with an 'auroral sound' copied by KH6AP at 1000Z (midnight local time) on the 7th. KH6WO is about 100 miles from KH6WO. This was about the time when a geomagnetic disturbance began. Also worthy of note: UA6OSK to VE7NBQ at 2309 on the 9th, VU2PCD to F8DGY at 1400 on the 13th, a little late in the day or the season and stage of the cycle, PY2XB to JA3AFJ at 0851 (0551 in PY) on the 16th and XW3DT to PU2WDX at 0602 on the 26th.



Section 5, Beacon news and 28MHz worldwide, page 3 of 3