THE SIX AND TEN REPORT

February 2004

Editors. Martin Harrison G3USF and Steve Reed G0AEV

Analysis of 28 MHz reports from the UK

28 MHz reports and logs for February 2004 from G2AHU, G3IMW, G3USF, G3YBT, G0AEV, G0IHF and packet cluster reports. Compilation and commentary by G0AEV.

The international Sunspot number for February was slightly higher than for January but other indices of solar activity (solar flux and sunspot counts) for continued the gentle downward trend that has prevailed since the excitement of the upward “blip” last autumn. However, seasonal trends in the ionosphere (related to proximity to the spring equinox) more than offset the monthly decline in solar activity and an increase in F2 DX was seen (or rather, heard) in the UK from January to February. Parts of the world heard/worked on 10m in the UK in February included eastern Canada and USA, Central America and the Caribbean, South America, Africa, Australia, SE Asia, India, the Middle East and southern Asiatic Russia. There was at least one report of signals from Japan and one from New Zealand. Of course, propagation to most of these areas was very limited and reliable communications were restricted to Africa, southern South America and the Middle East.

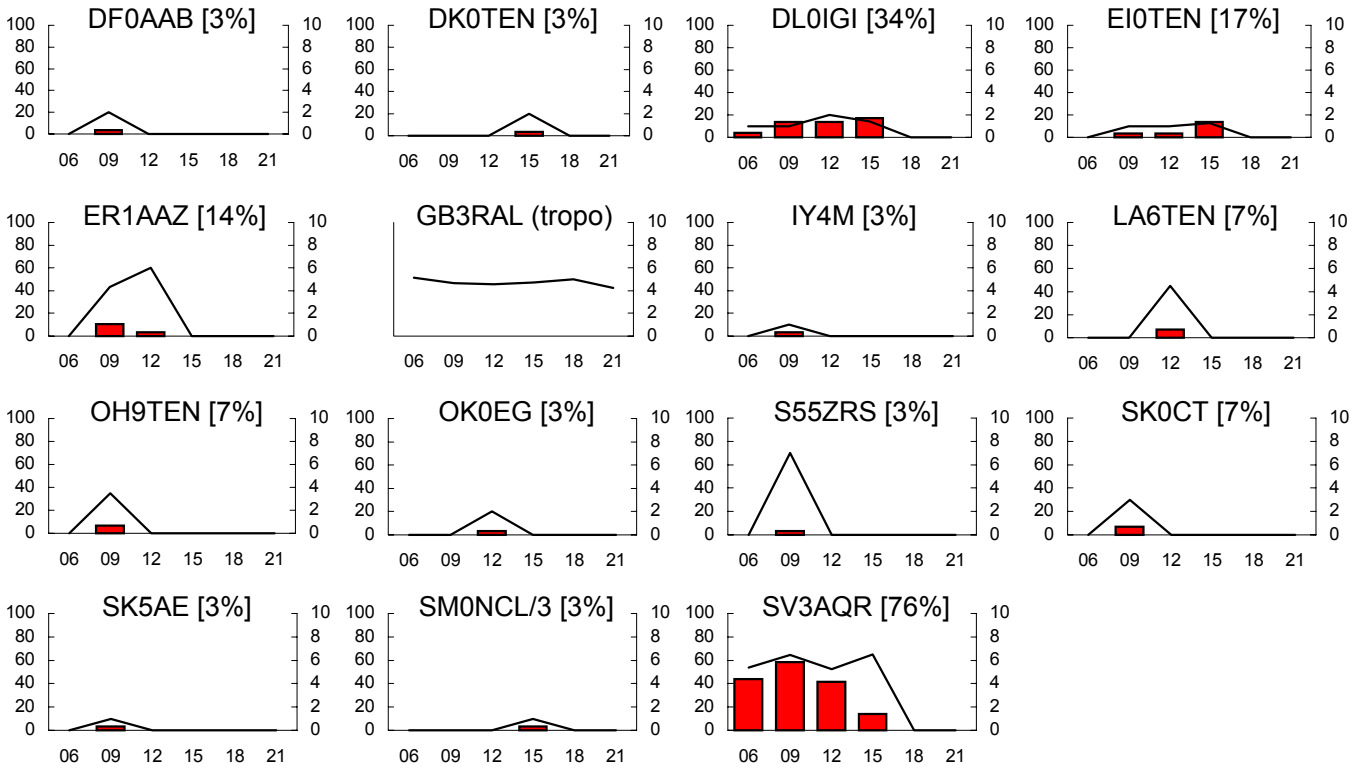
Inter-European propagation was poor this month. Backscatter is now generally too weak for reliable communications, though this mode was still responsible for some traffic within Europe. F2 was available between the extremities of the continent, which, for the UK, comprise northern Scandinavia, western Russia, and the Ukraine through to Greece. Only the southern paths to Greece were reliable. Sporadic E was detected on only a few occasions and contributed little to the overall picture.

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

European Beacon Graphs.



European Beacon Notes.

The new Spanish beacon EA4DAT (28.263) was heard in continental Europe but was not reported in the UK until mid-March. The replacement OH2B beacon rig is in Finland but is not yet active, presumably because the search for a new and secure site is still being sought. The absence of results for LA4TEN (and the lack of signals heard at G0AEV in March) suggest this beacon may be off-air - it's QRO transmissions can normally be heard *via* backscatter under even moderately poor conditions.

Propagation modes for European beacons.

There was very little in the way of sporadic E propagation - only one event (on 9th) of any consequence - but without sporadic E there would have been no results for IY4M, OK0EG, S55ZRS and for some of the Swedish beacons. Direct F2 propagation to SV3AQR was reported on three-quarters of days, about the same proportion as in January: similar propagation to the east and north (as indicated by ER1AAZ, LA6TEN and OH9TEN) was considerably less reliable. The northern circuits had ceased to operate by month-end, while the circuit to SV3AQR was still available into early March. There is unlikely to be further inter-European F2 propagation until winter 2004/2005, by which time reduced solar activity will mean the mode will be less reliable.

Backscatter was present but weak with little change on the previous month. The high power DL0IGI beacon was heard on 34% of days, mostly by backscatter, which compares favourably with the 29% in January. Backscatter was also reported on a number of occasions from the relatively close EI0TEN, but results for other beacons were very sparse. In many cases backscatter propagation may well be present, even from lower erp beacons, but at signal strengths below those audible at average stations. As usual, the reports above of GB3RAL above are those obtained via "tropo" at G0AEV.

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

Suggested propagation modes.

All the data shown in the graphs on the next page are the result of normal F-layer propagation.

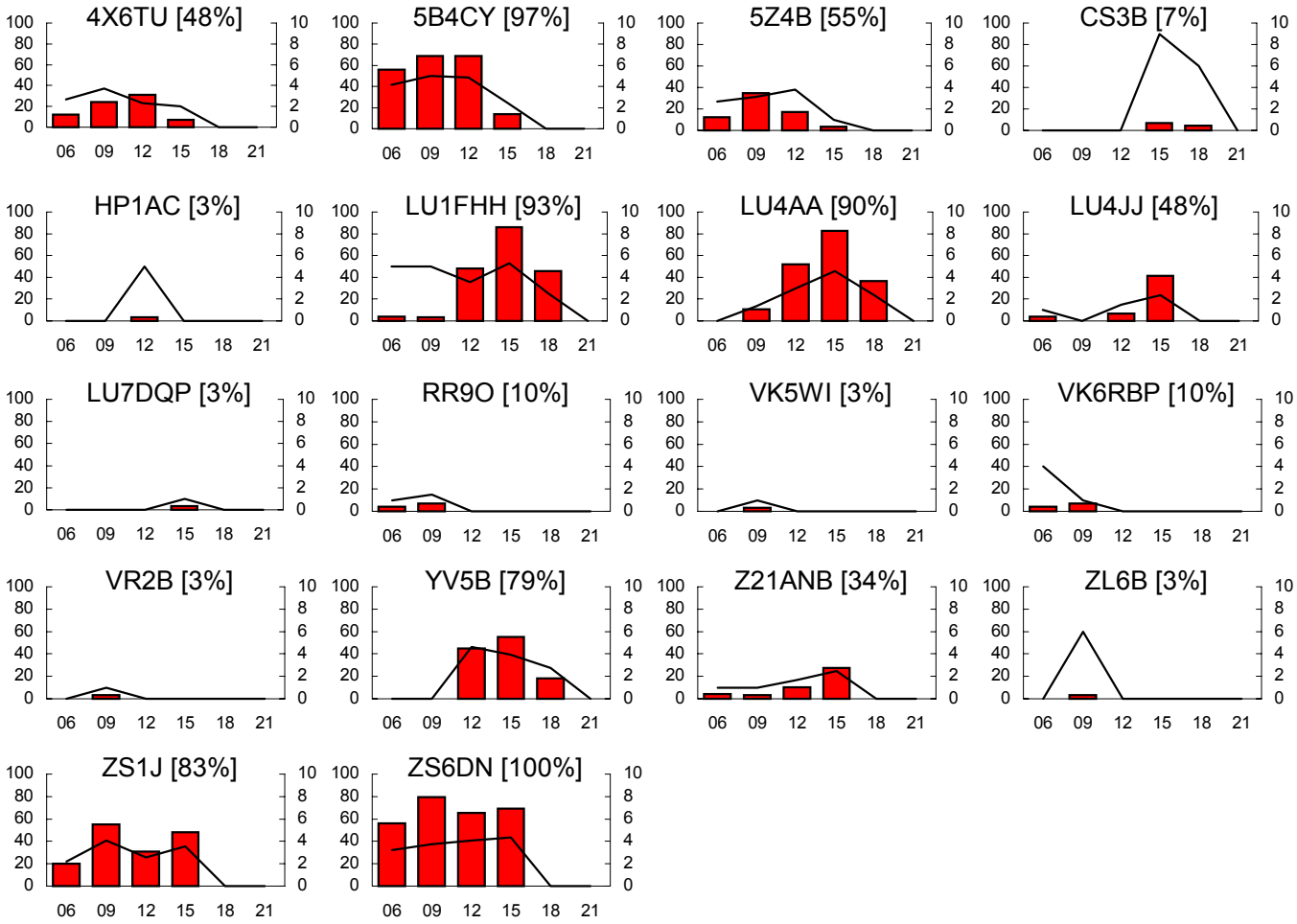
Despite the general feeling that propagation has been poor, the results of Six and Ten beacon monitoring suggests that the 10m bad is still capable, at this time of the year, of almost world-wide coverage. However, there is big difference in availability between the usual, commonplace and reliable “southward” propagation and the infrequent or rare openings in other directions.

The normally reliable paths to the south – for example, to South Africa and Argentina - and the single-hop circuits to the Middle East all showed good levels of reliability. ZS6DN was heard on every day in February, while LU4AA, LU1FHHH and 5B4CY all had daily reliabilities of more 90%. Even the peak 3-hour reliability values of these beacons were high at between 60 and 80%. These levels are not much poorer than those seen a few years ago.

However, propagation was certainly poor on other circuits. It was encouraging to see reports of beacons in Australia, New Zealand and Hong Kong this time, but these reports represent isolated openings, a mere vestige of what was available at solar peak. For example, once commonly heard beacons RR9O to the west and HP1AC to the east were reported on only a few days in February 2004.

Beacon Notes. CS3B was QRT for nearly all of February returning to service in the last few days of the month. VK6RPB was heard on several days, and elsewhere in Europe it has also been reported quite often. These results are a significant improvement on those seen for many months – they are now more or less in line with the expected levels for propagation to Western Australia. This change in performance may reflect improvements at the beacon site rather than represent any propagation reasons.

Beacon Graphs.



10m DX in February 2004

The following list of DX countries worked or heard in the UK comes mainly from packet cluster spots (DX Summit: http://oh2aq.kolumbus.com/dxs/) with a small (but valuable!) contribution from Six and Ten reporters.

DX in February: 3B8, 3B9, 3DA0, 4S, 4X, 5B, 5N, 5V, 5Z, 6Y, 8R, 9G, 9J, 9K, 9Y, A4, A6, CE, CN, CO, CP, CX, D4, EA8, FG, FM, HC, HH, HP, HR, IH9, J7, JA, KP2, KP4, LU, OA, OD, PJ2, PY, TA, TR, UA9/0, V2, V3, V5, VE, VK, VP2E, VP8, VP9, VQ, VR, VU, W, XE, YV, ZS

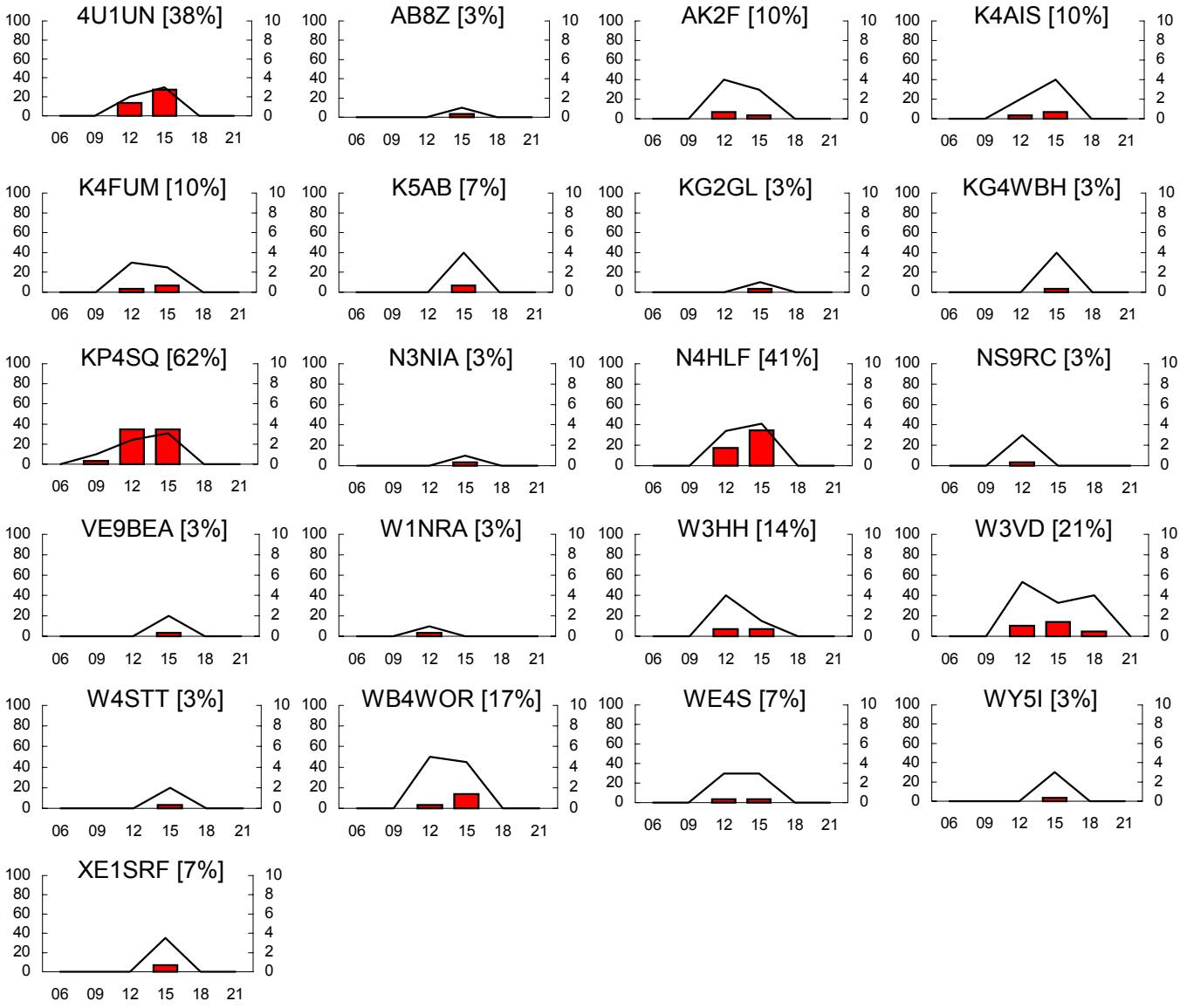
Propagation to North America

Suggested propagation modes.

Propagation to North America was via normal F2, but was restricted to the East Coast and to Southeast USA (and into Mexico). Openings to eastern Canada were virtually non-existent indicating a marked deterioration in northerly path reliability – under only slightly better conditions the VE1-3 and VE9 beacons would be expected to perform as well as those in the SE United States.

The results from the new KP4SQ beacon heard on two-thirds of days in February, usefully demonstrates the advantage that Caribbean stations have over their northern neighbours. N4HLF in another well-placed location (Florida) also returned good results, as did the QRO NCDXF beacon 4U1UN.

North American Beacon Graphs



Beacon Notes.

As mentioned in the last Report, it is difficult to use beacon monitoring from the UK to provide any kind of sensible indications of beacon activity in the USA and Canada. Furthermore, beacon monitoring will become impossible as we move towards summer and loose all F2 propagation to the States (The date of the last opening will be brought forward compared to recent years - perhaps late March or early April - because ionospheric conditions are now poorer). However, there is multi-hop sporadic E to look out for in mid-summer and it might therefore be of interest to note any new US or Canadian beacons within Es range. The following 2 beacons fall into the right category but are almost certainly running insufficient power for Es indicators.

K3NG 150 mW 28.2915 (Pennsylvania)
ND4Z 3 watts 28.2933 (South Carolina)

Analysis of 50 MHz reports from the UK

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

I am a little lost for words! Propagation to, from and within the UK on 50 MHz has been, with a few exceptions, appalling. I am not alone in thinking this – most of our regular contributors filed zero returns for February. G2ADR had nothing to report despite daily monitoring of the band, but Eric suggests we all keep trying to catch at least one mode of propagation on Six. Jeremy G3IMW was at home most of the month but did not hear anything noteworthy on 50 MHz. Another dedicated listener with a nil report was G4UPS. Ted writes "not a peep heard on 6m, not even a G or GW station! I have not experienced a complete month without a contact on 6m since I worked from ZD8TC in 1981." G3HBR was saved from sending in a blank log by the aurora on 11th - Brian kept a receiver running all day on '110 and he looked at the cluster via the internet from time to time but finding the aurora was the sum of his efforts.

Auroras apart, the only area of successful activity was the growing interest and activity with in digital modes, and in particular JT6M, where the propagation mode is scatter via random meteors (although "tropo", weak sporadic E and EME are also used). The long running skeds between SM7AED and G4UPS showed that meteor scatter could be used reliably using CW-proficient amateur stations without using high speed morse or other techniques. In this context the successful propagation of JT6M signals is not in itself surprising. However, the advent of such techniques has broadened the scope and greatly improved the success rate of MS communications. For a 6m population with recent experience of working DX at solar maximum looking for something else of a challenge on six, JT6M is an obvious choice. The downside of focusing activity in such a way is that the traditional mode segments of the band have become deserted. Without activity (which means someone calling "CQ" now and again) we may be missing openings.

From the perspective of year-on-year records of propagation based on amateur activity, a concentration of effort on JT6M *et al* may introduce bias. Continued monitoring of the band and reporting of openings by Six and Ten members is therefore useful and important work.

DX (F2 and TEP) Propagation

For the third month running no 50 MHz DX openings of any sort were reported.

Sporadic E

February is often poor for sporadic E, but there are usually a few openings that make up the "tail" of the winter Es season. February 2004 was particularly poor with only one event recorded, as detailed below:

9th 0957 G3SVD reported strong in-band video
1232 G4FUF > UT5G/B 559 by Es

As the only instance on 6m was G <> UR, at more or less maximum E-layer single hop skip distance, the layer MUF only just reached 50 MHz. There was contemporaneous and rather more widespread propagation on 10m.

The situation in the United States for February was rather different with 4 significant Es openings reported involving East Coast stations. The openings lasted for several hours and double-hop propagation was achieved during at least one event. This is in marked contrast to the European experience and begs the question "why?"

Tropospheric propagation

Even in the face of nil E and F layer propagation it doesn't appear that there's much appetite for exploiting the band for its tropospheric propagation potential. If the packet spot data are to be believed, contests seem to provide the only stimulus to work "tropo".

14	1100	PA0O	GB3BUX	"529 IO93 & LX0SIX ON0SIX PI7SIX"
24	2032	G7RAU	G3TCT	"59 io90>io91tg ctest tropo"
24	2049	G7RAU	G6HOU	"59 io90>io91 ctest tropo"
24	2050	G7RAU	G3MEH	"59 io90>io91 ctest tropo"

Meteor Scatter

There were JT6M spots/reports on nearly every day, frequently in the evening periods (presumably people at home after work) and not particularly in the early mornings when meteor flux peaks. Clearly the mode does make efficient use of the available reflections and the JT6M data are showing activity rather than propagation information.

As noted in the introduction to this section of the Report, the SM7AED-G4UPS skeds and various other studies have showed that 50 MHz meteor scatter using CW can be a reliable means of communication. But "traditional mode" meteor scatter QSOs were again thin on the ground this month. The only relevant spots for February were from F4JVG (JN16), propagation mode uncertain but assumed to be MS by G0AEV.

15th	1127	F4JVG > GB3LER 519
22nd	1217	F4JVG > GB beacons "MS?"

Aurora

There was one reasonable aurora on 11th, but little else – geomagnetically the month was rather quiet with fewer and shorter disturbed periods than in the recent past. Interestingly propagation on 11th seemed to favour paths between southern England and Scandinavia, with relatively little inter-UK traffic and none between GM and Scandinavia – at least that was the picture as put together from reports received.

11th	15z	1549	LA1TV (JO49) hears GB3LER 55a
		1606-1648	LA1TV > GM3UA 55a; Heard in G - EI7BMB 55a, OZ7SM 57a
		1712 1800	Many G > Scandinavia (all aurora,- no auroral E)
			G3NVO (IO91) > SM5BMB (JO99) 55a
			G4RGK (IO91) > LA8BCA (JP41) 55a, SM7FJE 57a
			G4PCI (IO91) > GM4WJA 55a, EI7BMB
			G0CHE (IO90) >OH3XA 53a, GM7PBB 55a
			G3HBR (IO91) > LA1TV 55a, OH3XA (KP21) 55a, LA7VH (JO59) 58a, OZ4LP (JO59) 54a
	18z	1800-1805	G4PCI> GI0BFD 55a; G4IGO > OH3XA 52a
12th	15z	1614	MM0BSM > GB3LER 55a

Solar and Geomagnetic Data for July 2003

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

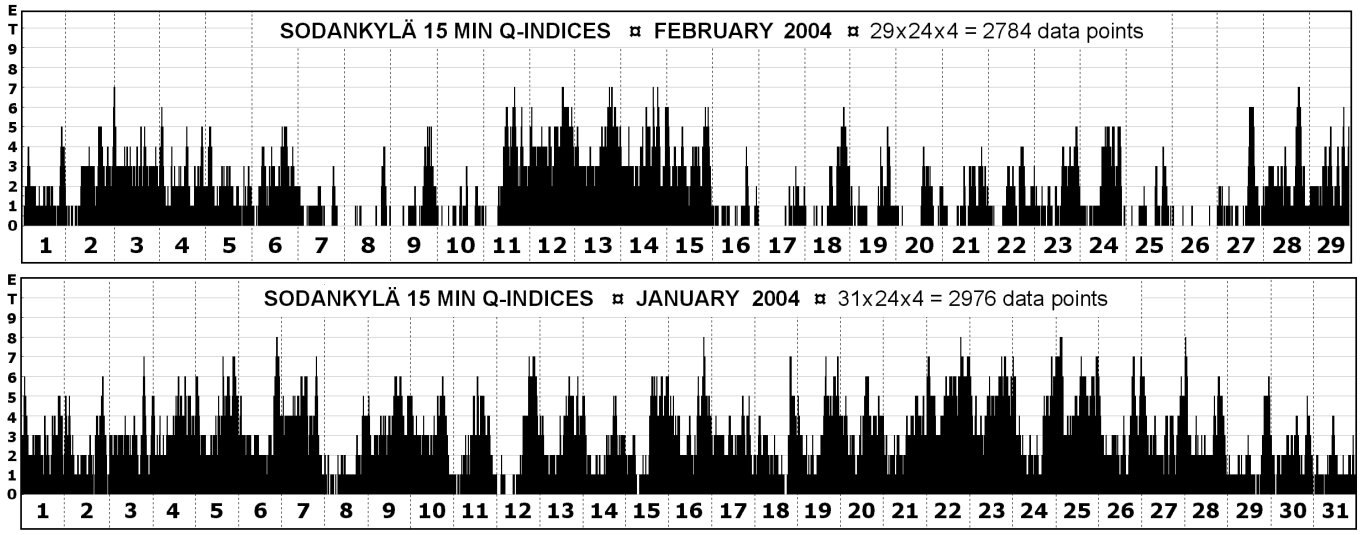
Sunspot numbers (SEC)	Mean 75.6	Max 109 (5th)	Min 22 (17th)
Solar Flux (28 MHz)	Mean 107.0	Max 122 (27th)	Min 95 (20th)

Solar data for February 2004 are presented in the table at the end of this section. Numbers in the 28 and 50 MHz columns of this table are the total daily "areas" worked/heard from the UK, 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 and Aurora. F2 critical frequencies are from Chilton in Oxfordshire (unfortunately this data was not available for much of February 2004), SIDC spots from SIDC, and other solar data from the joint USAF/NOAA daily summaries or directly from SEC.

Energetic Events (Flares of M and X class). There were 12 M-class x-ray events last month but only 2 this – another indicator of lower solar activity in February

8th	2024-2102	M1.2 SF
26th	2214-2239	M5.7

Q-indices from Sodankylä, Finland (Thanks OH2LX)



Vaino OH2LX's data from Finland for February (upper graph) shows that disturbed geomagnetic activity was restricted to periods at the start and end of the month, and - the most disturbed part of the month - in the period 11-15 February. For comparison, the Q-indices for January (lower graph) show a moderately disturbed field all month.

Finnish observatories in February 2004:

Monthly averages	Most disturbed day:
Sodankylä: monthly Ak average = 19.7	Sodankylä: 12 Feb, Ak = 56
Nurmijärvi: monthly Ak average = 13.1	Nurmijärvi: 11 Feb, Ak = 57

Global and UK views on geomagnetic activity are given in the K-index tabulations on the following page

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

K-indices.

There were 7 disturbed days in February when the UK K index or Kp was 5 or greater- a considerable reduction on the 21 disturbed days seen in January. The following four tables present the planetary 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 shading indicates K = 5, darker grey shading indicates K > 5.

Planetary K (Kp)

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

Lerwick K (Shetlands)

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
00	2	1	4	3	3	2	2	0	0	1	1	3	4	2	3	3	1	2	3	0	2	2	1	3	2	2	1	1	1
03	3	1	2	1	2	3	1	0	0	0	0	3	3	2	4	0	1	0	1	1	1	0	1	2	1	1	3	2	2
06	2	3	2	2	2	4	1	0	1	0	0	4	2	2	3	0	0	0	1	0	0	0	1	1	0	0	1	2	1
09	0	2	2	2	2	3	1	0	0	1	1	3	2	2	3	1	0	0	1	0	1	1	2	1	1	0	1	2	4
12	1	2	2	2	1	2	1	0	2	1	3	3	3	2	2	0	0	1	0	0	2	2	2	1	1	1	1	2	4
15	1	4	4	2	2	4	0	0	2	2	7	4	3	4	3	0	0	2	1	1	1	1	2	2	0	0	1	2	2
18	2	2	2	3	2	4	2	0	2	1	6	5	3	4	3	2	1	2	2	2	3	2	2	3	2	0	4	4	3
21	3	4	2	3	3	2	0	3	3	1	2	3	4	4	3	1	1	2	3	0	2	2	3	3	3	0	3	4	5
Σ	14	19	20	18	17	24	8	3	10	7	20	28	24	22	24	7	4	9	12	4	12	10	14	16	10	4	15	19	22

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
00	2	1	4	4	3	2	2	0	0	2	2	3	4	2	3	3	1	2	3	1	2	2	2	3	3	1	0	1	2
03	3	1	3	1	2	3	1	0	0	0	0	3	3	2	4	1	1	1	2	2	1	0	1	2	1	1	3	3	3
06	2	3	3	2	2	4	2	0	1	1	0	4	2	2	3	1	0	0	2	0	0	1	1	1	0	0	1	3	2
09	1	3	2	2	2	4	1	1	1	1	2	3	3	3	4	1	0	0	1	0	1	1	2	1	1	0	2	3	4
12	2	3	3	2	2	3	2	0	2	1	4	3	3	3	2	1	0	0	1	0	2	3	2	2	2	1	2	2	4
15	2	4	4	2	2	4	1	1	2	2	6	4	4	4	4	0	1	3	1	1	1	2	2	2	1	0	1	3	3
18	2	2	3	3	2	4	2	1	3	0	4	5	4	4	3	2	2	3	2	2	3	3	2	3	2	1	4	4	3
21	3	4	2	3	3	2	1	3	2	2	2	3	4	4	3	1	1	2	3	1	2	2	3	3	3	0	3	4	5
Σ	17	21	24	19	18	26	12	6	11	9	20	28	27	24	26	10	6	11	15	7	12	14	15	17	13	4	16	23	26

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
00	2	1	4	4	3	2	2	0	1	2	2	3	4	3	4	4	2	2	3	1	3	2	2	3	3	1	0	2	2
03	3	1	3	2	3	3	1	0	0	1	1	3	3	2	4	1	1	1	2	2	1	0	2	2	1	1	4	3	3
06	2	4	3	2	3	4	2	0	1	1	1	4	2	2	3	1	0	1	1	1	0	1	1	2	1	0	2	3	2
09	1	3	2	3	3	4	2	1	1	2	2	3	3	3	4	2	0	1	1	1	1	2	2	1	1	1	2	3	5
12	2	3	3	2	2	3	2	1	2	1	4	3	3	3	1	1	1	1	1	1	2	2	2	1	2	1	2	2	4
15	2	5	4	3	2	4	1	1	2	3	6	4	3	4	4	1	1	3	1	2	2	2	2	2	1	1	2	3	3
18	2	2	3	3	3	4	2	1	4	1	5	5	4	4	3	2	2	3	2	2	3	3	3	4	2	1	4	4	4
21	4	4	3	4	3	2	1	3	2	2	2	3	4	4	3	1	1	2	3	2	3	3	3	4	3	0	4	4	5
Σ	18	23	25	23	22	26	13	7	13	13	23	28	26	25	26	13	8	14	14	12	15	15	17	19	14	6	20	24	28

February	28 Areas		-- 50 Areas --				2800	- Spots -		Max			X-ray	Max foF2		Min foF2		-- Particle Fluences --		
2003	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-Feb	0	10	0	0	0	0	97	57	43	3	11	20	B1.3	n.a.	n.a.	n.a.	n.a.	5.3E+07	8.2E+05	1.1E+04
02-Feb	0	10	0	0	0	0	102	106	64	5	21	33	B1.6	n.a.	n.a.	n.a.	n.a.	5.5E+07	1.0E+06	1.2E+04
03-Feb	0	9	0	0	0	0	99	103	63	4	17	39	B1.5	n.a.	n.a.	n.a.	n.a.	7.1E+07	1.0E+06	1.2E+04
04-Feb	0	11	0	0	0	0	101	85	60	4	15	28	B2.3	9.4	11	2.5	01	1.6E+08	1.6E+06	1.2E+04
05-Feb	0	11	0	0	0	0	106	109	66	4	14	25	B1.6	8.2	13	1.7	04	2.4E+08	1.3E+06	1.4E+04
06-Feb	0	8	0	0	0	0	107	98	51	5	21	36	B1.5	8.6	13	2.3	06	2.0E+08	1.4E+06	1.3E+04
07-Feb	0	9	0	0	0	0	111	92	40	3	11	14	B2.1	8.5	11	2.3	05	2.0E+08	1.0E+06	1.2E+04
08-Feb	0	14	0	0	0	0	116	74	45	3	8	9	B3.0	8.3	12	2.5	05	2.5E+08	9.2E+05	1.2E+04
09-Feb	4	13	0	0	0	0	118	81	48	3	8	16	B3.0	8.3	12	2.1	06	1.1E+08	7.7E+05	1.3E+04
10-Feb	0	18	0	0	0	0	117	78	48	3	9	13	B2.0	8.7	13	2.8	06	1.9E+07	4.0E+05	1.4E+04
11-Feb	1	15	0	0	7	0	114	91	44	6	26	44	B1.9	8.9	15	3.1	22	1.0E+07	6.1E+05	1.4E+04
12-Feb	0	7	0	0	1	0	112	65	48	5	28	47	B1.9	7.9	17	2.3	06	1.4E+07	1.6E+06	1.4E+04
13-Feb	0	11	0	0	0	0	108	71	48	4	21	37	B1.7	7.9	15	1.8	05	3.2E+08	2.8E+06	1.3E+04
14-Feb	0	10	0	0	0	0	104	64	38	4	18	34	B1.3	8.2	14	2.0	06	5.0E+08	1.7E+06	1.2E+04
15-Feb	0	8	0	0	0	0	102	75	50	5	18	39	B1.1	7.1	13	1.7	04	6.7E+08	1.4E+06	1.3E+04
16-Feb	0	4	1	0	0	0	99	81	41	3	7	14	A9.0	n.a.	n.a.	n.a.	n.a.	1.3E+09	1.2E+06	1.3E+04
17-Feb	0	11	0	0	0	0	102	22	18	2	5	8	A9.2	n.a.	n.a.	n.a.	n.a.	1.4E+09	6.9E+05	1.3E+04
18-Feb	0	16	0	0	0	0	98	23	22	3	8	14	A9.4	n.a.	n.a.	n.a.	n.a.	1.7E+09	6.8E+05	1.3E+04
19-Feb	0	9	0	0	0	0	96	33	20	3	5	15	B1.0	n.a.	n.a.	n.a.	n.a.	3.3E+08	5.1E+05	1.3E+04
20-Feb	0	11	0	0	0	0	95	34	26	2	4	9	A8.3	n.a.	n.a.	n.a.	n.a.	6.1E+08	6.3E+05	1.4E+04
21-Feb	1	19	0	0	0	0	98	52	30	3	7	16	A8.9	n.a.	n.a.	n.a.	n.a.	1.4E+08	7.6E+05	1.4E+04
22-Feb	0	21	0	0	0	0	104	58	30	3	8	19	B1.6	n.a.	n.a.	n.a.	n.a.	3.3E+07	5.0E+05	1.4E+04
23-Feb	0	9	0	0	0	0	104	68	55	3	8	16	B1.4	n.a.	n.a.	n.a.	n.a.	1.9E+07	3.6E+05	1.3E+04
24-Feb	0	13	0	0	0	0	106	85	47	3	11	26	B1.2	n.a.	n.a.	n.a.	n.a.	3.4E+07	4.6E+05	1.4E+04
25-Feb	0	8	0	0	0	0	119	107	53	3	8	13	B3.0	n.a.	n.a.	n.a.	n.a.	5.5E+06	3.1E+05	1.2E+04
26-Feb	0	9	0	0	0	0	121	105	53	3	5	6	B2.5	n.a.	n.a.	n.a.	n.a.	1.1E+07	3.7E+05	1.3E+04
27-Feb	0	11	0	0	0	0	122	90	67	4	11	26	B2.0	n.a.	n.a.	n.a.	n.a.	7.7E+06	5.5E+05	1.3E+04
28-Feb	0	18	0	0	0	0	116	104	66	5	20	34	B2.0	n.a.	n.a.	n.a.	n.a.	3.6E+06	5.4E+05	1.2E+04
29-Feb	0	10	0	0	0	0	110	81	50	5	21	45	B1.6	6.9	15	2.3	06	2.0E+07	1.9E+06	1.2E+04
Sum	6	333	1	0	8	0														
Average	0.2	11.5	0.0	0.0	0.3	0.0	107.0	75.6	46.0	3.7	12.9	24.0	B1.7	8.2	13	2.3	04	2.9E+08	9.6E+05	1.3E+04
Maximum	4	21	1	0	7	0	122	109	67	6	28	47	B3.0	9.4	17	3.1	06	1.7E+09	2.8E+06	1.4E+04
Minimum	0	4	0	0	0	0	95	22	18	2	4	6	A8.3	6.9	11	1.7	22	3.6E+06	3.1E+05	1.1E+04

50 MHz Outside Britain

Compilation and Commentary by G3USF

Europe

Auroral-Related Propagation

Although February had its fair share of disturbed days the average daily Ap was slightly down on January. So, too, was the incidence of aurora, with continental reports on twelve days, compared with 00 in January. The 11th was the only day with propagation reported outside the Scotland/Scandinavia line. Thanks as always to OH5IY and OH2LX for the high-latitude data.

Feb 2 1648 49750>OH6 (KP02 55a) 1726 49750>SM5(56a)

Feb 3 1640-50 Au>OH5IY 1850-1900 Au>OH5

Feb 4 1730-40 Au>OH5

Feb 6 2152 JX7SIX>OH6 (mode?) 2313 JX7SIX>SM5(579)

Feb 9 1920-40 Au>OH5

Feb 11 1330-1700 Au>OH5 1444 49750>SM5(56a) 15-1600 SM5>LA(JO49 59a) OZ6VHF>LA(JO49 55a) GB3LER>LA(JO49 55a) ES8>LA(JO49 55a) 16-1700 GM>LA(JO49 55a) OZ(JO54)>DL(JO42 59a) OZ(JO57)>SP2(JO94 57a 040) OZ(JO57)>ON(55a) ES5(KO38)>SP2(JO94 030) OZ(JO57)>SP6(JO80 55a) SM4(JP61)>SP2(JO94 57a 030) SM7(JO76)>ON(JO20 55a) 17-1800 OZ(JO56)>ON(JO20 54a) SM4>SP2 SM0>SP2 OH3(KP21)>DL(JO51 56a) SM7(JO76)>SM0(JO99) SM7(JO65)>DL(JN59 55a) SM7>LA(JO59 53a) OZ>LA SM7(JO76)>SP2(JO94 55a 020) 1750-1830 Au>OH5 18-1900 OH8>SP2 OH3>SP4(53a) LA(JO59)>DL(JO31 41a) 2210-30 Au>OH5 2217 OH9SIX>SP6(JO80 mode?)

Feb 12 300-20 Au>OH5 1530-1620 Au>OH5 1615 LA>OZ(55a) 1954-6 JW5RIA>OH5,SM3(mode?) 20-2100 JW5RIA>LA(JO49 559)

Feb 13 0030-40 Au>OH5 1550-1610 Au>OH5 1750-1830 Au>OH5 2120-50 Au>OH5 2148 49750>SM5(55a)

Feb 14 1322 49750>OH6(KP02 53a) 1450-1500 Au>OH5 1710-30 Au>OH5 1740-50 Au>OH5 1850-1900 Au>OH5 2148 OH9SIX>SM2(57a)

Feb 15 1032 49750(StPetersburg)>SM0(53a)

Feb 24 18-1900 OZ>LA(57a) 1849 LA>PA(55a) 19-2000 LA>PA(51a)

Feb 28 21-2200 OH9SIX>SM2(59a) OH3>SM2(57a)

VE8–Europe - VY0AAA

On a number of occasions over the past few years we have noted reception in Europe of the VE8BY beacon, usually in an auroral context. Ray Perrin, VE3FN/VY0AAA, picked up a mention in the December 2003 report, on which he offered comments and further information, inserted here in edited form. Most of what he says is not specifically about aurora, but provides an instructive insight into why VE8 two-ways are so rare on Six and, more generally, on operating in circumstances so radically moved from those the great majority of us experience.

'First, you are correct that the old Northwest Territories (NWT -- VE8) was very large -- the entire Canadian arctic except for Yukon. However, when the new territory of Nunavut was created in April 1999, the new prefix VY0 was assigned to it. Nunavut is essentially the eastern half of the old NWT. So theoretically VE8BY should change its prefix (to VY0) as it is located in Iqaluit -- the capital of Nunavut. Actually, I would guess that Iqaluit (Frobisher Bay) is probably the closest to Europe of any community in the Canadian arctic.'

'Over the past few years I have made quite a few business trips to Iqaluit -- the QTH of VE8BY. As each trip typically lasted around 10 days, and as I was able to stay in a "staff house" (typically a unit in a small row house or an apartment) instead of a hotel, operating ham radio was feasible. I enjoyed it as something to do during my spare time -- especially on weekends. At first I operated as VE3FN / VY0 and I lugged an old Drake TR-4C with me. My major interests are VHF / UHF weak-signal operating and collecting and restoring old tube radios. At the time, I didn't have a solid-state HF radio so I had to take the Drake.'

'My antenna for HF was typically a trap dipole (40 thru 10 meters) thrown out the bedroom window with the other end tied to a rock on the ground. Iqaluit is located way north of the tree line so one can't look to mother nature to provide a convenient support for an antenna! Later, I borrowed an old rig for 6 meters and made a few QSOs on 6 with a dipole mounted on my porch. I stayed in several different places and each had its challenges for erecting antennas. Iqaluit is quite hilly and some of the places from which I operated were quite a bit higher than the antenna of VE8BY. Anyway, I got tired of lugging all this stuff, so in the summer of 2001, I bought a used Icom IC-736 that gives 100 W out on HF plus 6 meters. It also has a built-in power supply and antenna tuner, so it's a good travel radio. I also applied for a VY0 call and was assigned VY0AAA.

On my last few trips, I have given 6 meters a priority. My antennas for 6 meters were very simple. I had a dipole made from 2 telescopic antennas that I could mount on a porch or outside support. I also had a wire dipole I could string parallel to the HF dipole. I worked many stations in North America using these simple antennas. In Feb 2002, I worked SP2NA on F layer using the wire dipole.'

'My last trip to Iqaluit was over a year ago -- November 2002. On that trip I brought along a homebrew 2 element beam for 6 meters. It was constructed with 4 telescopic elements mounted on a 4 foot wooden boom. I also brought along a 4 element beam for 2 meters and an Icom 275H giving me 100 watts. I have never heard anything on 2 meters. BTW, I also took the small 2 meter beam on a couple of previous trips, but I just had 3 Watts from an Icom IC-202. This last trip (and the one before it) were especially challenging (for antennas) as I stayed in an apartment that did not have an outside balcony or porch on which I could mount antennas. Fortunately, the apartment was on the third (top) floor of a timber building. I created a 16 foot aluminum mast from 4 pieces of aluminum tubing. I was able to sit the base on the windowsill and hold it against the side of the building with a rope. It was high enough so that the 2 beams were above the flat roof.'

'I worked OX3SA on Auroral E. I also worked into VE6 on auroral E. BTW, the evening I worked VE6 (a Saturday), I was hearing beacons in VE6, VE4 and W0 for about 3 hours, but I was only able to dig up one QSO! At noon the next day (Sunday) the band opened briefly on F layer to
southern Florida -- about 3000 miles.'

'Except for a few QSOs on F-layer, all my contacts appear to have been on Auroral E [to be expected at that latitude and that season. As I recall, this was around the time when we were still hearing transpolar signals between northern Europe and the West Coast G3USF]. The signals were not distorted as they would have been on straight aurora. I would typically wait for a day when the K index went up to 5 and the band would often open in the evening -- especially in the summer. I spent 2 weeks in Iqaluit in the summer of 2001 -- last week in July and first week in August. I made plenty of QSOs on 6 meters. About 40% of the evenings, I heard the OX3SIX beacon (used to be on 50.012 or so, but is now QRT, I believe) for about 45 minutes at 0000Z. It would roll in on Auroral E -- no distortion. I always called CQ when I heard the beacon, but no QSOs. I later received a report from a station in northern Scotland saying he thought he had heard me. It is likely he did as I was calling CQ at the time.'

'As far as local (Iqaluit) permanent operators are concerned, Larry VY0HL is the only one I know who can get on 6 meters. He also runs VE8BY. He has a small tower and a small antenna -- a VHF log periodic, I believe.' But he is not often on when Six is really open. 'Too bad as although I have given a VY0 QSO (on 6 meters) to many others, I still haven't worked VY0 from my home in VE3 (Ottawa).'

'I hope to return to Iqaluit, but I have no idea if business will take me there again. I enjoyed operating ham radio there and 6 meters is certainly fascinating when operating from the center of the auroral zone. And who knows if 2 meters might open on auroral E?'

Many thanks, Ray. Wonder whether that northern GM was our veteran reporter GM4MWA?

Other Modes

Outside the Mediterranean countries there was almost no propagation worthy of note and the scanty crop of reports included a mere handful identifying ms or tropo as the propagation mode and none referred to as sporadic-E. A couple of reports on the better days specified backscatter. On three days there were no reports from any continental location. Activity levels were low and most reports came from a few stalwarts who persevered, or related to contest activity. 'JT6M' received many mentions, rarely with a suggestion of a propagation mode, but in many cases looking as if ms was involved.

Such bright spots as there were came from along the Mediterranean, where there were signs of seasonal change and the occasional return of tep. There were good openings to ZS6 on the afternoon of the 16th and 29th. The opening appears to have reached OZ on the 16th - the sole DX report north of the Mediterranean this month - and to have extended right along the Mediterranean on the 29th. This compares with propagation from southern Africa on 19 days in February 2003, when there was also one report from the north.

The north had no propagation with West Africa (3 days in 2003) and the only amateur signals from the region came from TR0A, reported from the Mediterranean (mainly EA) on 6 days (2,9,11,14,21,29) and S9TX, heard in EA and 9H on the 29th. This compares with 12 days in 2003 and 18 in 2002. However 3Ctv was reported on at least 21 days. Even allowing for power differentials this suggests that the decline in propagation may not have been quite as severe as the bald figures suggest; activity appears to have been low, especially at the African end.

PY1RO, reported by EA7KW on the 16th was the only known opening to mainland South America. This compares with 9 days in 2003 and 18 in 2002. However, the ZD8VHF beacon was copied in EA on the 10th, 17th-22nd, 27th and 28th. It was heard there on only three days in 2003.

As usual, callsigns are given in full if they relate to beacons or DX contacts.

Feb 1 09-1000 OK1>OZ I3>OK1 OZ>F 10-1100 OE5,I3>F 1258 F>S5 13-1400 3Ctv>SV1 F>S5 1457 LA>F

Feb 2 1551 I4>I1 16-1700 I4>I1 3Ctv>SV1 17-1800 TR0A>EA7KW F>EA7(bs) 2135 I5>I8 2224 I5>I0

Feb 3 1701 3Ctv>EA7 1958 I5>I0

Feb 4 no reports

Feb 5 no reports

Feb 6 1456 3Ctv>SV1

Feb 7 07-0800 UAtv>OZ UT5G>SM5 08-0900 UU5G,UU5SIX>OZ 1155 S5>F

Feb 8 09-1000 S5,I4>OE5 1520 TR0A>EA7KW 2136 JE1BMJ>IW5DHN(eme)

Feb 9 1327 5Ztv>SV1 2139 GM>SM0

Feb 10 22-2300 I3>OZ ZD8VHF>EA7KW

Feb 11 2059 HB9SIX>F

Feb 12 no reports

Feb 13 1436 3Ctv,5Ztv>SV1 15-1600 GM>OZ

Feb 14 0858 S5>I0 09-1000 S5>I4 OE5>F 10-1100 HB9SIX,LX0SIX>DL(t) 1058 OZ7IGY>PA 11-1200 GM>F 1220 I2>S5 1439 3Ctv>SV1 15-1600 OK1>LA 16-1700 GD>F(ms) 1711 3Ctv,TR0A>EA7KW 2303 GD>SM0(mode?)

Feb 15 0816 OK1>F 09-1000 OK1,EA6,LA,GM>F S5>9A 10-1100 I2>S5 11-1200 GB3LER>F SM0>SM5 1343 3Ctv>EA7 1402 3Ctv,5Ztv>SV1 1635 ON>F

Feb 16 11-1200 ZS6WB,ZS6AXT>5B4FL 12-1300 ZS6TWB>SV1DH,IK0FTA ZS6WB>5B4FL 13-1400 ZS6WB>OZ3K 1459 ZS6NK>5B4FL 1637 ZS6NK>9H1PA 2138 PY1RO>EA7KW

Feb 17 1302 3Ctv>SV1 1616 HB9SIX>DL(t) 2154 ZD8VHF>EA7KW

Feb 18 2029-2047 ZD8VHF>EA7KW,9H1YZ 2217 FY7THF>5T5SN 2238 ZD8VHF>EH5AGR

Feb 19 LX0SIX>DL(t) 1320 3Ctv>SV1 16-1700 I5>SP6,I4(bs) 2126 ZD8VHF>EA7KW 2226 YU7>OZ 2303 OE5>ON

Feb 20 1653 OK1>F 1904 SV2ASP/A>SV1 2220 ZD8VHF>EA7KW

Feb 21 0731 OK1>LA 08-0900 EH6,OE5,OZ>F 09-1000 GM>F OE3XLB>SP6 1017 OZ>F 12-1300 G,GM>F 13-1400 F>OZ 1644 ON>LA 1740 TR0A>EA7KW 2121 ZD8VHF>EA7KW

Feb 22 0839 F>S5 0905 F>S5 13-1400 S5>I1 FX4SIX>I3 14-1500 I0,I3>S5 1646 I4>I5 2051 ZD8VHF>EA7KW

Feb 23 10-1100 YU8,ON>PA

Feb 24 0951 OE3XLB>SP6 1553 3Ctv>SV1 1711 I9>9H 18-1900 S5>I0,I5 I0>I5 aurora 19-2000 I4>I0 S5>I5 SK7>OZ OE5>I4 20-2100 OZ>SM6 I0,I1,S5>I5 SM0>SM3 21-2200 S5>I2 OH3>OZ(sc) SM0>SM3 S5>I2 OH6>SM0 OZ,SM6>DL SM6>S5 22-2300 S5>SM0,OZ

Feb 25 1626 3Ctv>SV1 1856 ON0SIX>PA

Feb 26 1550 3Ctv>SV1

Feb 27 0638 EPtv>SP6 1052 OE3XLB>OE6 2059 ZD8VHF>EA7

Feb 28 08-0900 LA,OZ,OK1>F 09-1000 I4>OH2(ms) 16-1700 LX0SIX>F(t) 3Ctv>SV1 2248 ZD8VHF>EA7KW

Feb 29 08-0900 OZ,LA>F OK1>OZ OE5>S5,OZ 09-1000 LA>OE5 GM>DL 10-1100 OZ>F 12-1300 ZS6NK>IK0FTA,9H1TX,9A1Z,EA6VQ ZS6TWB>EA6VQ,IK0FTA ZS6DN>IK0FTA ZS6WB>9A1Z 13-1400 ZS6WB>9H1YZ,9H1TX ZS6AXT>9H1YZ ZS6/KC4XX>5B8AV 14-1500 ZS6WB>5B8AV ZS6NK>IT9PBR ZS6TWB>9H1XT,SV1DH 9H>9A 3Ctv,5Ztv>SV1 15-1600 5B>SV1 ZS6WB>5B8AV,SV1DH SV8>9H 16-1700 G>F S9TX>9H1YZ,EA7KW,9H1TX TR8CA>9H1YZ,IZ8DEO,SV1DH,EA5RM,9H1YZ TR0A>EA7KW,F6FHP EH7KW,F6FPH,IH9GPI,9H1YZ,EH6VQ>S9TX GM>F

50 MHz Propagation Report – SV1DH

1. Data for 26 days, ND for 21-23rd
2. Relatively good days on: 11,16,29(+)
3. 48 MHz AF video (3C+5Z) on: 1,2,5,6,9,10,11,13-20,24-29 (R=81%)
4. 55 MHz AF video (5N) on: NIL
5. Opening to ZS6 on: 16,29 (R=8%)
6. " to TR on: 11,29 (R=8%)
7. " to 5B on: 29(B)
8. " to 9H on: 29(B)
9. " to SV2/A on: 20(T)

10. Special events on:
 2 (0900-0945 foF2>10, max 11.0 / MUF=39Mhz at 0915)
 6 (0930-1015 foF2>10, max 10.1 / MUF=35Mhz at 1000)
 8 (2051 M1.2 flare+ 1600 W5 on 10m)
 9 (1230 5Z video on 48Mhz, first of season)
 10 (2230 EH7 to ZD8/B)
 12 (0945-1045 foF2>10, max 10.9 / MUF=37Mhz at 1015)
 13 (1600-1700 ZS6 to 4X+5B)
 14 (1715 EH7 to TR)
 16 (0815-0830 foF2>10, max 10.3 / MUF=38Mhz at 0815)
 17 (2200 EH7 to ZD8)
 18 (2030 9H+EH7 to ZD8)
 19 (2130 EH7 to ZD8)
 26 (0203 X1.1+ 2230 M5.7 flares)
 28 (2245 EH7 to ZD8)
 29 (2115 CN to PY1)

11. DXCC entities heard/worked during February 2004 : 5 on 3 cont
12. DXCC entities heard/worked on 29th February 2004 : 4 on 3 cont.

The Americas

Auroral-Related Propagation

Feb 15 0348 K0KP>W9(EN44 53a) 0413 VE4ARM>W9(EN44 51a)

Other Modes

February seems not to favour openings between North and South America; the only contacts reported were LU to W3 on the 14th and OC3I (Peru) to W4 and W5 on the 15th - a similar result to 2003. However, working between stations in South America and the Caribbean or Central America were more frequent, being reported on 13 days (10-12 16 18-21 23-26 and 29). VP9, VP5, C6 and FS were worked from the US. ZLtv was copied on the 4th and 14th but no stations in Oceania or Asia were reported. A scattering of loggings mention sporadic-E, but one suspects it was somewhat more widespread than the occasional references might indicate.

Feb 1 1528 W6>W5 16-1700 XE2HWB>W0 W4>W4(t/ms) W6>W5,W0 18-1900 VE7>W7 21-2200 W5VAS>W3 W5>W4 W3HH,WA8RC>XE2 W4CHA,W8>W0 W5>W2,W8,W0 22-2300 W5>W1 W4>W0,W5 W3VD,W2,W8>W4 23-2400 W4>W8,W0

Feb 2 00-0100 W3,W4>W8 0347 W7>W5 1758 W5>W1 2352 XE2>W0

Feb 3 00-0100 XE2>W0 W5>W7 W8>W5 01-0200 XE2,W6,W7>W5 XE2>W0 02-0300 XE2ED>W5 XE1KK>W0 0328 XE1>W5 0450 W5>W5 21-2200 K4AHO>W3 22-2300 VP9DUB>W3 W4CHA>W1 23-2400 C6AGN>W8 W4CHA>W1 W4>W3

Feb 4 00-0100 C6ANM,C6AFP>W1 W4>W4,W2,W8 W8>W5,W9 02-0300 W5VAS>W1 W8>W0 W4,W5>W3 W4>W4,W0 03-0400 W4>W3,W9,W0 W5>W4,W3 C6AGN>W1,W9 C6ANM>W1 XE2ED>W0 04-0500 W4>W0 XE2>W6 W5>W8 W3>W1 0527 W3>W0 20-2100 W5VAS>W0 W9>W5

Feb 5 180-1900 W3VD,KL7GLK/3>W0 K0ETC>W3

Feb 6 0340 W7>W7 0440 KA7BGR>W6 1949 W6>W6 2257 XF1K>KP4

Feb 7 01-0200 W5VAS>W3,W4 KP4>W4 W4>W0 02-0300 W6>W4 W4>W5 0408 W1>W4 15-1600 W3>W9 16-1700 W9>W1 2245 W9,W0>W0 23-2400 ZLtv>W4 W5>W3 ZF1K>W5 W5HN>W0 W0>W8 K8PLF,W9>W0 VP9GE>W5

Feb 8 00-0100 XE1KK>W3 W9,XE1>W4 W4,W8,K9MU>W0 W0>W5 01-0200 K0UO>W2 W3,W8>W0 XE1>W5,W9 02-0300 W7,W5>W0 03-0400 W7,W0,W4>W0 04-0500 VE4VHF,VE5>W5 K0ETC>W0 K0KP>W5 15-1600 W4>W0 1716 W0>W0(Es) 2054 VE1>W8 2115 W8>W8

Feb 9 0151 W5>W5 23-2400 W0>W4,W5 W5>W3 K0UO,K0ETC>W3 W4,W9>W9

Feb 10 00-0100 W4>W0,W9 W0>W3,W5 01-0200 W9>W4 02-0300 W0,W4,W5,W3>W4 W5VAS>W3 1450 W5>W4 15-1600 W5>W4 W5HN>W3 1632 W5VAS>W3 17-1800 W4>W4,W3 W4CHA>W0 1820 W4>W1 2356 WP4F,YV4AB,9Y4AT,V44KAI>PY1

Feb 11 0020 FJ5DX>PY5 2008 XE1KK>W7

Feb 12 0342 C6APX>W4 12-1300 VE1>W4 13-1400 K4AHO>W1 14-1500 KE4SIX,W4CHA,K4AHO>W1 VE2>W4 15-1600 KD4HLG>W1 W2,W3,W4 W4>VE1 16-700 VE2>W4 W2,VE2>W8 VE1,W2>W4,W8 W3,W4>VE3 17-1800 W1,VE1,W2,VE2,W4, W8,W9, W5>W4 W9>W3 18-1900 W2,W9,W8>W4 K0ETC>W3 W4>W1 20-2100 W1,W9,W0,W8>W4 21-2200 W0>W4 W2>W0 W5,W9>W3 2351 9Y4AT,J39JQ>PY1 PY1RO>YV1DIG

Feb 13 2341 XE1KK>W4

Feb 14 0010 XE1KK>W4 04-0500 W4>W8 XE2HWB>W5 18-1900 W7>W0,W5 19-2000 WA7X>W5 VP9GE>W4 20-2100 48242(CT)>W4 W6>W5 21-2200 W6,W7>W5 KG6JAI>W5 XE2ED>W5 22-2300 K4AHO>W1 VP9DUB>W3 23-2400 W4>VE9 LU8DIO,LW3DX>W3TC

Feb 15 00-0100 C6AFP>W3 W4>W1,VE9 01-0200 W6,W5>W5 0212 XE2>W5 15-1600 W4>W4(ms) W4>W8(ms) 16-1700 VP9GE>W4 C6AFP,W4>W5 W4>W5 17-1800 W5>W5 W3,W0>W4 1810 W5>W4 19-2000 XE3>W5 20-2100 OC3I>AA5XE,AB5A,W5ZN 2105 OC3I>NW5E/4 2255 W5>W4

Feb 16 00-0100 J6/WA1T>PP5NW,PY2SP FJ5DX>PP5NW 01-0200 CX4CR>WP4NIX J68AR,J73CCM>PY2SP FG5GP,FJ5DX,WP3HV>PY3OG 18-1900 K0KP>W0(Es) N8PUM>W0(Es) K9MU,W7>W0 1905-6 W0>W9 21-2200 CN8MC>PY1RO 22-2300 WR9L>W4,W1 W1>W9(Es) 23-2400 W1,W2>W9 W4>W1 W2>W4 W1>W1 VE3>W4

Feb 17 00-0100 W0>W4 W4,W9>W1 W8,W9>W2 W3>W0 01-0200 W3>W0 K4TQR>W0(Es) W0>W5,W1,W4 VE2>W4 W4>VE3 02-0300 W9>W4 W3>W9 K4TQR,K0ETC,W5>W0 1907 VP9DUB>VE1

Feb 18 00-0100 FJ5DX>PP5JD J6/WA1T>PY1RO W8>W9 1740 W1>VE9(bs) 2222 EAtv,CN8MC>PY1RO

Feb 19 00-0100 9Y4AT>PP5JD FM5WD>PY5KD,PU2WDX 01-0200 YV5MM>PU2WDX 0240 J69EN>PP5JD FS/W3ARS>W3 0347 W6>W0

Feb 20 0124 W5>W4 23-2400 9Y4AT>PY3OG PY2CDS,PY2TC,PY2AIM, LU8DIO,CX2IY, PY1WAG>WP4NEG WP4NEG>PY3OG

Feb 21 2321 LU8EMH>FG1GW

Feb 22 no reports

Feb 23 0119 W4>W8 23-2400 W1>W1 PP5WAS,PY1WMJ,CX2BBR,ZP5CGL>WP4NEG PY5ZAS>WP4NEG,WP4NIX FM5WD,P43L,WP4NEG>PP5NW ZP5CGL>WP4NIX WP4NEG>PY2NW

Feb 24 00-0100 W5>W5 PS7>PP5 FJ5DX>PY2NW 2320 W1>W3

Feb 25 02-0300 W4>W4,W0 W0>W8 0240 W9>W3 0316 W0>W5 1532 VE3>KP4 2357 PY4AJ>WP4NEG

Feb 26 00-0100 W4>W1 PY1NB,LU2DKX,PY1BQ,CX7BJ,PY2MEM,LU6QI>WP4NEG VP5/K7BV>W4 01-0200 LU8EMH>WP4NEG WP4NEG,9Z4BM>PY2NQ PP5>PY8 PY8>PY2 PJ2BE>PY2KX 15-1600 VP5FKU>W4 VP5/K7BV>W3,W4

Feb 27 01-0200 VP5/K7BV>W4 0244 VP5/K7BV>W4 0300 W4>W5 15-1600 VP5/K7BV>W4 19-2000 VP5/K7BV>W4

Feb 28 14-1500 VP5/K7BV>W4(sc) W5>W5 W8>W4(ms) 1515 W5>W5 18-1900 W8>W4(Es) 2218 VP5/K7BV>W4(sc)

Feb 29 0343 W0>W9 1554 W5>W5 16-1700 VP5/K7BV>W4 17-1800 VP5/K7BV>W4 1922 VP5/K7BV>W4 2011 VP5/K7BV>W4 2111 CN8MC>PY1RO 22-2300 VP5/K7BV, NP4P>PY3OG KL7GLK/3>W2 23-2400 6Y5IC>PY3OG VP5/K7BV>W4

Asia/Pacific

Japan

Australia<>Japan

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

Paths between Japan and Australia remained reasonably good, with openings on 15 days - well down on 2003(24 days) and 2002(22). As usual, though, openings were spread unevenly, with VK8 in the lead with 10 days (1-3, 15, 19-21, 21, 25, 28, 29), VK6 (4,6,15,19,25,28,29) and VK4 also with propagation on seven days (15, 17, 20, 25-28). More difficult, VK3 was reported from Japan on three days (2,3,22) and VK5(28) and VK7(22) on a single day. ZL beacons were reported on the 4th and 15th, but no contacts appear to have been made (2003 8 days, 2002 5).

6m DX results in JA – JA1VOK

6m DX results in JA during February from JA1VOK

DATE	TIME(UTC)	STATIONS	
1	0540-0550	VK8RAS/b	
2	0655-0720	VK3DUT,8GF,8RAS/b	
3	0445-0600	DU1EV/B, VK3XQ,3DUT,8RAS/b	0940-0945 VK6BE (JA6)
4	0450-0500	ZL1VHF/b (JA7)	
6	0620-0640	FK8SIX/B	1130-1150 VK6RSX/b
10	0520-1000	9M2TO/B, DU1EV/B	
11	1254-1322	N7ET/DU7	
12	0615-0630	DU1EV/B	
15	0220-0230	ZL1VHF/b	0550-0715 9M2TO/B, VK8RAS/b
	1105-1250	DU1EV/B,N7ET/DU7, FK8SIX/B, VK4RTL/b,6RSX/b,8MS	
17	0530-0700	FK8CA,8SIX/B, VK4PU,4AHW,4RGG/b	
19	0730-0800	VK6RSX/b,8GF,8RAS/b	
20	0903-0930	VK4AHW,4BL	1230-1245 VK8RAS/b
21	0620-0630	VK8RAS/b	1215-1230 9M6/JA1CJP (JA3-6)
22	0120-0130	V73SIX/B (JA7)	0510-0630 VK3DUT,3SIX,7RST/b
23	0500-0510	DU1EV/B (JA7)	
25	0630-0830	9M2TO/B, VK4AN,4JOO,6RSX/b,8RAS/b	
26	0445-0600	VK4NW,4PU,4BLK,4FNQ	
27	0430-0440	VK4RGG/b (JA7)	0730-0745 9M2TO/B (JA2)
28	0430-0630	9M2TO/B, FK8SIX/B, V73SIX/B, VK4ID,4TU,4AHW,4APG,4BLK, VK4FNQ,4JSR,4YRS,4ABP/b,4RGG/b,5VF/b,8RAS/b	
	0940-1030	VK6RSX/b	1149-1155 VK8MS
29	0530-0545	VK8RAS/b	1100-1210 VK6RSX/b,8MS

Elsewhere

Interesting that although, as noted above, VK was reported from JA on 13 days, there was not a single JA report from VK. This looks like a mix of low activity at the southern end (a fair proportion of the Japanese reports related to beacons) and reluctance to reach for the keyboard at the southern end.

Feb 3 0327 VK6RPH>VK5 0334 VK6>VK5

Feb 4 2254 VK4>VK5

Feb 15 0622 VK8RAS>HL1

Feb 20 05-0600 VK6,VK7>VK5

Feb 25 06-0700 VK8RAS,VK4AN>HL1LTC

Feb 28 05-0600 VK4JSR>DS4,DS5 VK4BLK,VK4AHW>HL1 0600 VK4APG>HL1

Beacon News and 28 MHz Worldwide

Compilation and Commentary by G3USF

Beacon News

14195 IT9RYH reported as new beacon for propagation studies. Nothing further known.
28247 N7HFK Ogden Utah running 0.5w to Vertical 24/7 (N7HFK)
28249.5, 21393.5 PY3PSI reported to have been re-activated
28291.5 K3NG new beacon in Eastern Pennsylvania (FN20EV) running 150mw (K3NG)
28280.7 W8EH (EM79) reported here.
28293.3 ND4Z relocated to Gilbert SC (EM94) to run 3 watts to vertical (ND4Z)
50063 new beacon LY0SIX runs 7 watts to 6-el beaming 250 from KO24PS (LY2MW)
50069 W8GTX Howell MI (EN82) running 3 watts to 1/4 vertical at 25ft. new beacon (April). Antenna is temporary (W8GTX)

28 MHz Worldwide

Inevitably these remarks become a commentary on the decline of cycle 23. Comparing this month with last year, the stronger or easier or timeslots were holding up quite well; decline was much more evident over the more difficult paths and at offpeak hours, with higher latitude stations in both northern and western hemispheres having a progressively thinner time. So Europe worked into Asia every day in February 2003 and every day but the 4th this year - but while the morning path remained almost 100 per cent, noontime propagation was down from 96 per cent to 59 per cent. Evening propagation had disappeared and there were now far fewer openings to the Far East (JA,HL,VR etc). However, there are always exceptions and from a high latitude OH1DD, reported JA5JWQ, HL2FDW and VR2 around 0815 on the 8th (one of the better days, with a strong opening to North America following in the afternoon). ON<>JA was reported at 0924 on the 11th, with G0WRE contacting 4S7SW on the 25th. Again, South America was worked from Europe every day, as in 2003. However, it was received before 1130UTC on only two days compared with ten in 2003, but in the afternoon the fall was only from 100 per cent to 93 per cent. And so on.

Africa was worked from Europe every day, as in 2003, and North America on every day except the 2nd and 29th, compared with every day in 2003. Openings on the afternoons of the 9th, 11th, 21st and 22nd were particularly strong and fairly widespread. However, Europe<>Oceania dropped from every day but one in 2003 to 13 days this year, mostly from southern and eastern Europe (DD3SJ reported ZK3SB on 29MHz FM at 2033 on the 26th). Curiously, results for South America<>Asia during the South American evening were actually better than in 2003, with openings reported on 25 days compared with 20 a year earlier. A significant fraction of the reports from Japan (their morning) related to a low-power beacon, LU1FHH. However, propagation at the other time periods had virtually disappeared.

North America reported signals from Oceania on 26 days, but the more difficult path to Asia was reported on only 16 days. At the Asian end these openings were almost entirely confined to local morning. Africa was workable from North America at some time or other (mainly during American mornings or around mid-day) on 21 days, compared with all but one day in 2003. There was particularly good propagation during the North American afternoon and evening on the 21st. The easier North<>South America path was workable every day, but evening reliability fell from 82 per cent reliability to 45 per cent. Contacts were made within North America on all days, as they were within Europe on every day except the 17th. There were a few backscatter reports within Europe, particularly on the evening of the 28th, but when comparison is made with G0AEV's earlier data one suspects a fair amount was missed or passed unreported. Sporadic-E reports remained sparse.

Among the less usual reports were IK1SOW<>W6IHG at 1524 on the 11th - the west coast path was now quite difficult - if this was, indeed, a 'genuine' Californian. GU0SUP reported KA4RRU at 1830 on the 14th - a time when the band was usually closed over that path. SM2EKM worked NQ4I and K8EJ at 2109 and 2116 respectively on the 22nd in one of those openings that appear to be a north-Sweden specialty. By contrast LU7DF<>EA3DUF at 0613 on the 19th was unusually early. Also noted are auroral contacts around Scandinavia on the evening of the 5th, skewed paths between JA3YBK and K7PI at 0057 on the 21st and NF4A and JA3YBK at 2239 on the 21st, with signals apparently scattered from somewhere in the southern Pacific. Finally, PY2TO reported 9K2HN at 2217 on the 29th.

28MHz World wide graphs are on the following page:

28 MHz Worldwide - February 2004