# THE SIX AND TEN REPORT

# August 2004




**Editors. Martin Harrison G3USF and Steve Reed G0AEV**

# Analysis of 28 MHz reports from the UK

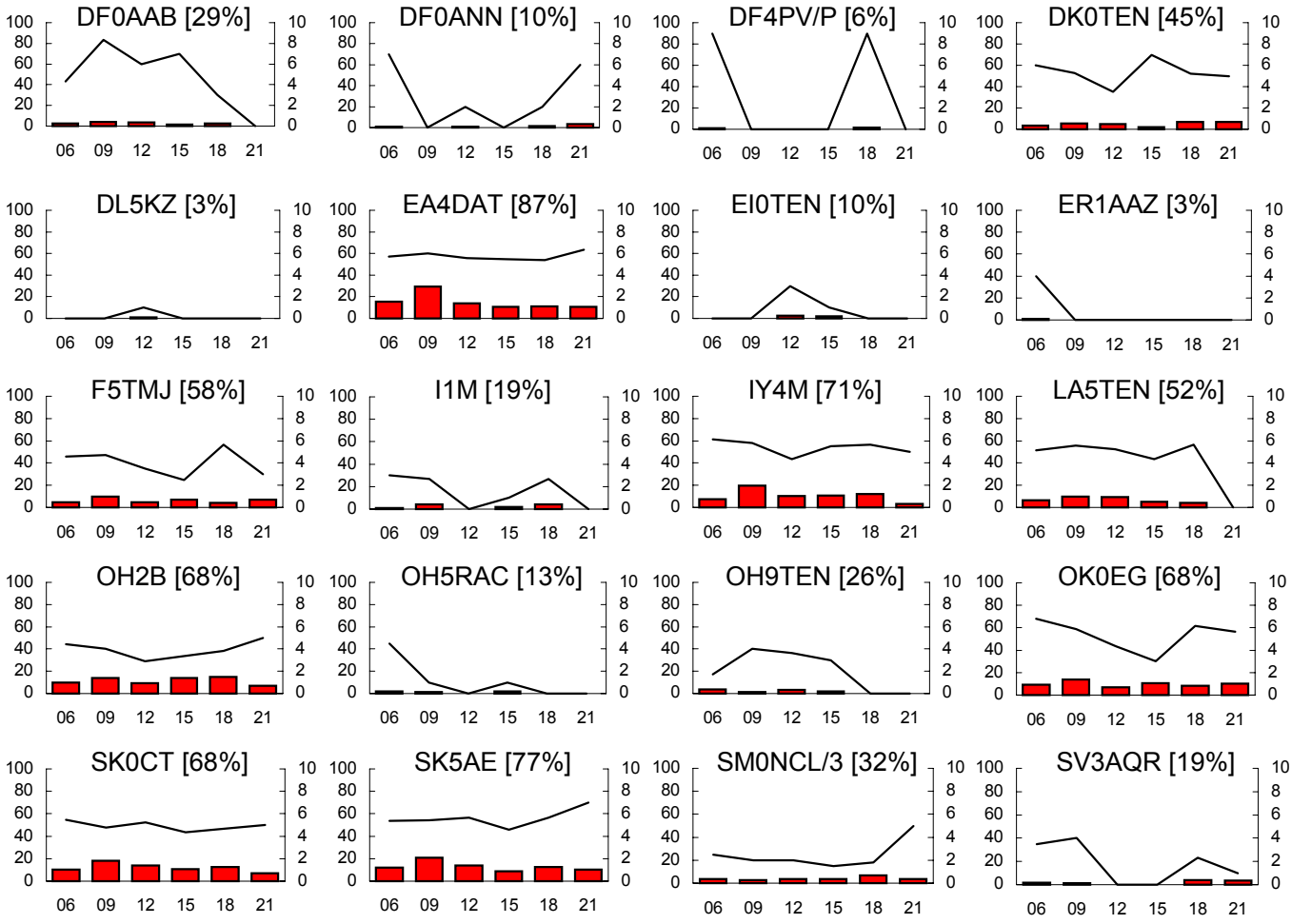
28 MHz reports and logs for August 2004 from G2AHU, G3IMW, G3USF, G4UPS, G0AEV, G0IHF and packet cluster reports. Compilation and commentary by G0AEV.

Summer sporadic E (Es) provided the mainstay for most 10m operators, although F2 continued to provide openings to southern Africa and South America on about half of days. At the start of the month, Es reliability was similar in extend to that seen for much of the mid-summer period and there were openings to W/VE and to the Middle East but conditions gradually deteriorated and by the start of September openings were very noticeable less extensive. On 31st, according to the results of monitoring 10m beacons, there was no Es propagation at all.

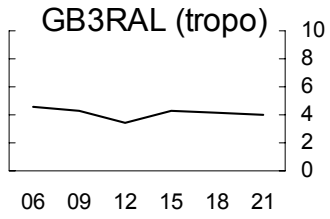
## Beacon graphs legend

Legend for all beacon graphs in this section: - graph bars (left Y-axis): beacon reliability as the percentage of days a beacon was heard by any UK observer within each time band. Graph lines (right Y-axis): signal strength as the average of the daily maximum signal reported by any observer in each time band. Time band codes (X-axis): 6=0600-0900, 9=0900-1200, 12=1200-1500, etc. Callsigns are followed by daily reliability figures, the percentage of days per month when the beacon was reported.

## European Propagation / Beacons

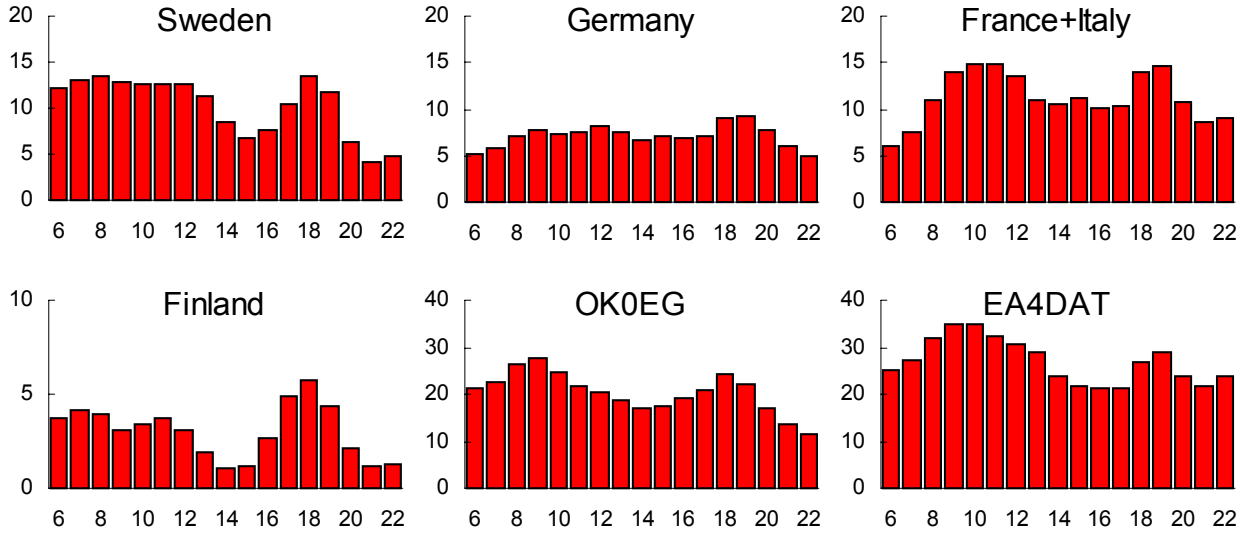


Propagation modes for European beacons.




Sporadic E propagation accounts for all of the results of the beacons shown on the previous page, except perhaps some E-backscatter from EI0TEN. There was no direct or scatter F-layer propagation within Europe Average signal strength via "tropo" from GB3RAL (IO91IN), as recorded at G0AEV (IO81WL) is shown in the adjacent chart – no reliability figures are shown as this beacon is audible at all times.

The graphs of the beacons that were heard frequently by sporadic E (e.g. EA4DAT, IY4M, OH2B, OK0EG, SK0CT, SK5AE) show little difference in average reliability in the 3-hour time periods between 06 and 21z, apart from a slight enhancement commonly seen in the 09z period. Signal strength is more variable and no consistent trends are apparent. Those beacons heard infrequently produce "spikey" graphs from which no sensible trends of any kind can be deduced. A better view of the diurnal Es trends can be obtained by examining averages for the 4 months of the Es summer season (May-August), breaking down the results by hour instead of 3-hour time bands, and only using beacons reported frequently and regularly. The results of this exercise are shown below. The graphs plot the average reliability (percentage of days heard within each hour) against hour. Some smoothing has been applied.




The Sweden graph comprises averages of SK0CT, SK5AE and SM0NCL/3. Germany is an average of DF0AAB, DF0ANN and DK0TEN. DL5KZ was not reported as often enough to be included while DA5MMB and DF4PV/P were heard infrequently at the start and end respectively of the Es season and are unrepresentative. France+Italy is illustrated by the beacons F5TMJ. IY4M and I1M, but F5KCK is excluded from the average as it is mostly heard by backscatter and IZ2DAY because it was short-lived. Finland is represented by OH2B, OH5RAC and OH9TEN. Note OH2B was only active in August.

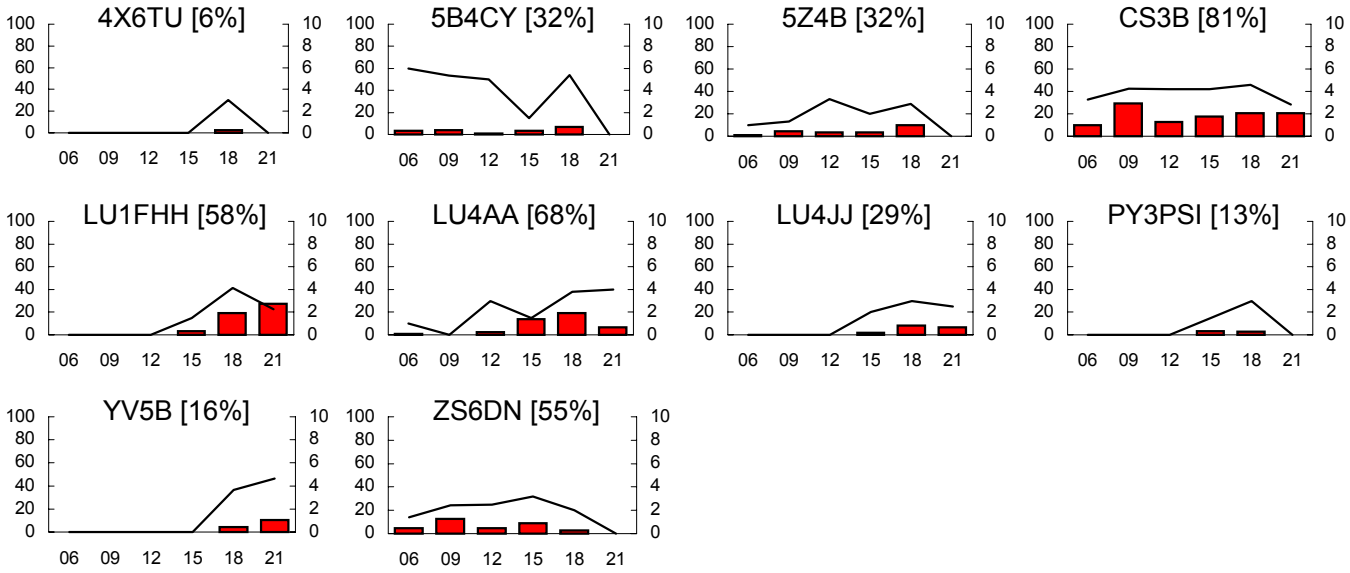
All the graphs show a form of the "classic" bimodal diurnal distribution of sporadic E with peaks at mid-morning and early evening, but the shapes of the distributions differ. The Scandinavian beacons indicate a broad morning "high" and a narrow but quite sharp evening peak. This might have something to do with the northerly latitude of the paths. Auroral E peaks in late evening and is probably not a contributor to these data. The graph for OK0EG is a "text book" example, but the average for the nearby beacons in Germany is almost flat. On southern paths to Italy, France and Spain the classic distribution is again apparent but the peak times are shifted later in the day by about an hour when compared to OK0EG – presumably a function of longitude.

European Beacon Notes.

OH2B returned to service in August. OH2LX reports that the QTH is Lohja but, for obvious reasons considering the history of theft of this beacon, the operators wish to keep the exact location secret. New beacon DF4PV/P appeared on 28.173 during August.

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

Beacon Graphs.




Suggested propagation modes.

DX conditions, as illustrated by the above graphs, were quite poor in August. Sporadic E was responsible for most of the propagation to 5B4CY, 4X6TU and probably most of the propagation to CS3B. All other beacons reported were by normal F-layer propagation – no TEP was reported. The daily reliabilities on the best paths of 55% for ZS6DN and 68% for LU4AA are the lowest since before the recent solar maximum. However, it is worth emphasising that beacons are still indicating propagation on more than half of days, and amateurs trying to make QSOs could probably do better than these numbers suggest

Beacon Notes.

There were 2 reports of 4X6TU, so this beacon was active in August although with a very poor signal. NCDXF confirm that the beacon is now off-air for repairs. ZS1J was last reported on 26th July and it has not been reported since and is now probably off-air. Other beacons known to off include OA4B.

## 10m DX in August 2004

The following list of DX countries worked or heard in the UK comes mainly from packet cluster spots (DX Summit: http://oh2aq.kolumbus.com/dxs/) and from Six and Ten reporters. The countries heard in the North Africa and continental North America are via Es. Middle East and Caribbean stations could have been by Es or F2. Using the number of countries worked there was a small improvement in DX in August compared with July.

DX in August: 5U, 7P, 7Q, CE, D4, EA8, KP2, KP4, LU, PY, UA9/0, VE, W, YI, YV, YV0, Antarctica.

DX in July (for comparison): 4J, 7X, CE, CE0Z, CT3, EA8, FY, IH9, KP4, LU, P4, PY, TU, VE, W

## Propagation to North America

There were no reports of any North American beacons this month, although a few QSOs were made on both six and ten metres.

# Analysis of 50 MHz reports from the UK

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

Apart from some decent activity in the first week, August proved a rather average end-of-season month. The first week included several weak trans-Atlantic Es events and several days when propagation levels resembled those seen at mid-summer. The best days for Es was probably the 8th. But overall, the expected downward trend in Es activity with time was very apparent, and in the latter part of the month there were a number of days when there was no, or only very little, 50 MHz sporadic E. The 31st was the poorest day when no Es was reported on either 6 or 10m (due in large part to geomagnetic disturbances.

Our reporters all noted the seasonal reduction in sporadic E. G2ADR writes "Alas! Only one page (*of loggings*) this month", but Eric did manage to hear sporadic E signals on 18 days in August, which isn't too bad. G3HBR also thought that "6m certainly quietened down in August." Brian also noted good MS reflections during the Perseid meteor shower and a "decent aurora" on 30th".

## 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 (6%) | 5B (10%) | 7X (3%) | 9H (6%) | CN Morocco (35%) | CU Azores (10%) |
|---|---|---|---|---|---|---|
| D | 2 9 | 6 8 9 | 1 | 2 8 | 1 2 3 4 5 6 8 10 12 14 23 | 2 6 7 |
| 06 | 0 | 9 5 | | | 5 | 2 |
| 09 | | | | | 9 8 0 9 9 7 5 | 2 1 |
| 12 | | | 0 | | 9 7 8 7 | 0 |
| 15 | 9 | 3 | | 0 | 9 6 3 | 7 |
| 18 | | | | 5 | 9 9 0 | 9 7 |
| 21 | | | | | 0 | |

| | CT Portugal (29%) | CT3 (3%) | DL Germany (23%) | EA9 Ceuta/Melilla (16%) |
|---|---|---|---|---|
| D | 1 2 6 7 12 14 15 25 26 | 5 | 4 5 8 11 16 23 25 | 2 3 4 7 8 |
| 06 | 7 | | | |
| 09 | 5 9 4 5 | 0 | 5 0 9 0 | 0 5 0 |
| 12 | 9 5 0 | | 9 9 | 0 0 |
| 15 | 5 5 | | | |
| 18 | 7 9 5 | | 5 9 | 0 |
| 21 | | | 4 | |

| | EA Spain (39%) | ES Estonia (16%) | F (10%) | G-GM (6%) | HB (10%) |
|---|---|---|---|---|---|
| D | 1 2 6 7 8 9 12 14 16 17 24 26 | 7 8 11 19 23 | 3 4 25 | 4 27 | 2 11 25 |
| 00 | | 0 | | | |
| 06 | 0 | 0 | | | |
| 09 | 7 7 9 8 9 9 9 | 9 | | | 9 |
| 12 | 6 8 0 5 | | 0 | 9 9 | |
| 15 | 5 | 0 | | | 9 |
| 18 | 9 0 7 9 | 9 9 | 0 9 | | 6 9 |
| 21 | 8 6 | | | | |

| | I/IS/IT Italy (68%) | | | | | | | | | | | | | | | | | | | | | LA Norway (29%) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 9 | 11 | 12 | 15 | 16 | 17 | 19 | 20 | 23 | 24 | 25 | 26 | 29 | 30 | 4 | 5 | 7 | 8 | 11 | 18 | 23 | 27 | 28 | |
| 00 | | | | | | | | | | | | | | | | | | | | | | | | | 0 | | | | | | |
| 06 | | | | | | | 9 | | | | | | 9 | | | | | | 3 | | | | | | | | | | | | |
| 09 | 5 | | 9 | 9 | 9 | | 9 | 9 | 0 | | 5 | | 0 | | | | 3 | | 9 | 0 | 9 | 0 | | | 5 | | | | 9 | | |
| 12 | 9 | | | | | | | 7 | | 9 | | 9 | | 6 | 9 | | | | | | 9 | 0 | 0 | | | | | | | | |
| 15 | | 7 | | 5 | | 0 | | 6 | | 7 | | 9 | | | | | | 9 | | | | | | 9 | | 0 | | | | | |
| 18 | | 9 | | | | 0 | 3 | | | 9 | | | | | | 0 | 4 | 9 | | | | | | 7 | | | 9 | | | | 7 |
| 21 | | | | | | | 0 | | | | | | | | | 7 | | 0 | | | | 9 | | 0 | | | | 4 | | | |

| | LY Lithuania (26%) | | | | | | | | LZ (10%) | | | OD (10%) | | | OE Austria (13%) | | | | OK/OM (13%) | | | | OY 10% | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 4 | 5 | 11 | 16 | 19 | 25 | 26 | 28 | 2 | 12 | 30 | 1 | 6 | 9 | 4 | 11 | 16 | 25 | 2 | 4 | 8 | 25 | 4 | 7 | 11 |
| 06 | | | | | | | 9 | 5 | | | | 9 | 5 | 7 | | | | | | | 8 | | | | |
| 09 | | 9 | 9 | | | | | | | | 7 | | | | 6 | 9 | | | | 9 | | | | | |
| 12 | 7 | | | 6 | | | | | | | | | | | | | | | | 4 | | | 7 | 1 | |
| 15 | | | | | | 9 | | | 0 | | | | | | | | 9 | 0 | | | | | 8 | | 7 |
| 18 | | | | | 5 | | | | | 9 | | | | | | | | 7 | 9 | | | 9 | | | |
| 21 | | | | | | | | | | | | | | | | | | 6 | | | | | | | |

| | OH Finland (39%) | | | | | | | | | | | | OZ (10%) | | | PA (13%) | | | | SM Sweden (26%) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 5 | 7 | 8 | 9 | 11 | 12 | 16 | 19 | 20 | 23 | 24 | 27 | 4 | 25 | 26 | 5 | 9 | 11 | 16 | 4 | 5 | 7 | 8 | 11 | 16 | 19 | 25 | |
| 00 | | | | | | | | | | | | | | | | | | | | | | | 0 | | | | | |
| 06 | 9 | | | | 9 | | | 9 | | | | | | | 5 | | 0 | | | | | | | | | | | |
| 09 | 1 | | 9 | 9 | 0 | | | | 5 | | | 5 | | 0 | | 9 | | | | 9 | 9 | | | | | 0 | 3 | |
| 12 | 9 | | 5 | | 9 | | 9 | | | | | | 9 | | | | | 5 | 0 | 0 | 9 | | | 0 | 0 | | | |
| 15 | 5 | 1 | 9 | | 9 | | | | | | | | | | | | | | | 0 | | | | 0 | | | | |
| 18 | | 9 | | | | 5 | | | | 9 | 0 | | | | | | | | | | | | | | | | | |
| 21 | | 0 | | | | | | | | 5 | 5 | | | | | | | | | | | 5 | | | | | | |

| | SP Poland (32%) | | | | | | | | | | SV (10%) | | | TF Iceland (23%) | | | | | | | UR (13%) | | | | VE (10% | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 2 | 3 | 4 | 8 | 11 | 12 | 15 | 23 | 25 | 26 | 2 | 8 | 9 | 2 | 4 | 5 | 7 | 9 | 10 | 25 | 8 | 19 | 23 | 25 | 2 | 4 | 7 | |
| 06 | | | 9 | 6 | | | | | | 6 | | | 2 | | | | | | | | | | | | | | | |
| 09 | | | 9 | | 9 | | | | | 9 | | 0 | | | | | | | | | | | | | | | | |
| 12 | | 7 | 9 | | | | | | | | | | | | 9 | | 5 | | | | | | | | 1 | 3 | | |
| 15 | 9 | | 5 | | | | | | 5 | | 5 | | | | 4 | | 8 | 7 | | 7 | 0 | 8 | | | | | 3 | |
| 18 | | | | | | 9 | | 9 | 9 | | | 9 | | | 3 | | 9 | | | 7 | | | 0 | 7 | 5 | | | |
| 21 | | | | | | | 9 | | | | | | | 9 | 0 | 3 | | | 0 | | | | | | | | | |

| | VE8 (3%) | W (3%) | YL (3%) | YO Romania 16% | | | | | YU/9A/S5/T9/Z3 Ex-Yugoslavia (48%) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | 6 | 6 | 8 | 1 | 2 | 3 | 16 | 19 | 1 | 2 | 3 | 4 | 8 | 9 | 11 | 12 | 15 | 16 | 19 | 23 | 24 | 25 | 30 | |
| 06 | 2 | | | | | | | | | | | | | 9 | | | | | | | | | | |
| 09 | | | 0 | 0 | | | | | 6 | | | 8 | 0 | | | | | | | | | | | |
| 12 | | | | | | | | | | | 5 | 0 | | | | | 5 | | 0 | | | | 4 | |
| 15 | | 1 | | | | | 7 | 9 | | 9 | | | | | 9 | | | 9 | 9 | | | 9 | | |
| 18 | | | | | 7 | 9 | | | | 9 | 0 | | 9 | | | 9 | | 6 | 6 | 0 | 7 | 9 | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | 9 | | |

| | ZA (3%) | ZB Gibraltar (6%) | |
|---|---|---|---|
| D | 2 | 5 8 | |
| 06 | | | |
| 09 | | 0 0 | |
| 12 | | | |
| 15 | | | |
| 18 | 0 | | |
| 21 | | | |

## Sporadic E backscatter

Reports described as backscatter (i.e. sporadic E backscatter) are listed below. These scatter openings occurred at times when direct path Es was also good.

2 2030 G8BCG > MW1MFY 53 bs QTF 270
4 1432 PA4PA > MU0FAL 559 QTF 030
4 1438 EI7IX > GB3MCB 419 QTF 045
4 2157 EI7IX > G4IGO 41 bs
11 0905 G4FUF > LA5SAA (JO29) “scatter” 539
11 1203 PA0KDV (JO33) > G0CDA (IO83) backscatter

## DX (F2 and TEP) Propagation

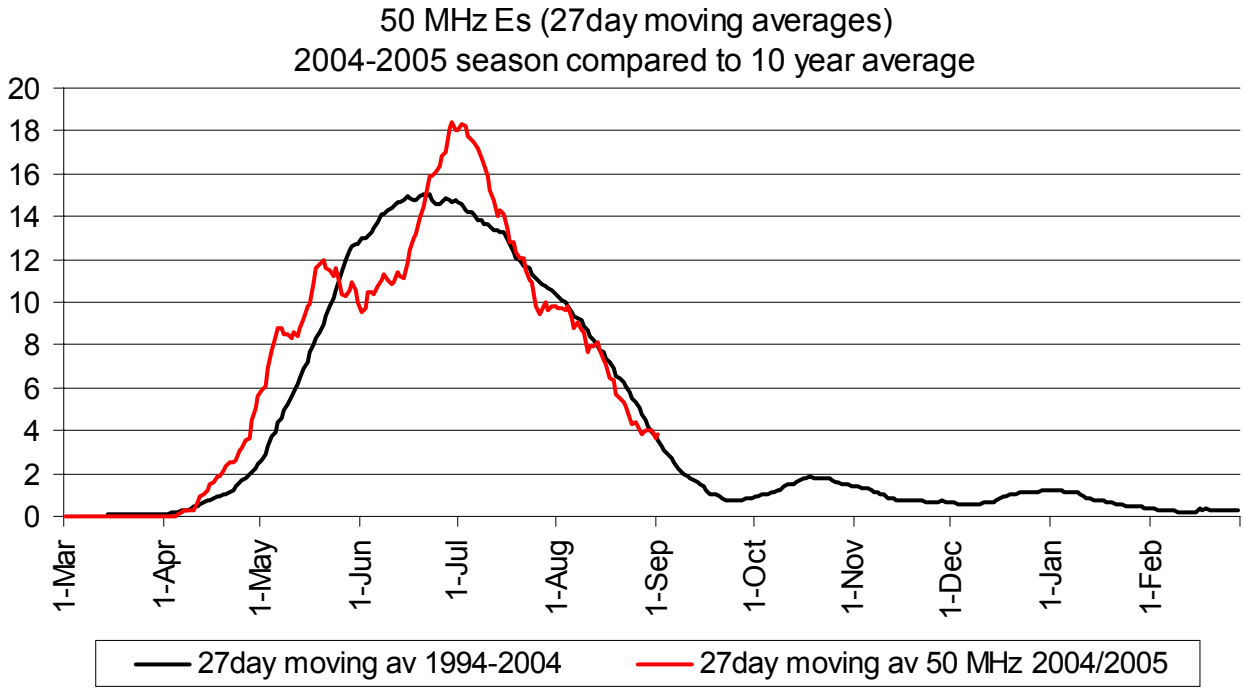
There were no reports of “F2/TEP DX” this month. All contacts made with stations outside of Europe were by sporadic E.

## Es Propagation Summary.

The chart showing trends of Es activity for 2004 first presented in the June 2004 6&10 Report is shown below extended with data for August. To recap: the graph displays 27-day moving averages of the daily 6m country/area scores with a 10-year average of the same measure. Based on this comparison, 6m sporadic E in August 2004 was average to slightly poorer than average. The early July peak in Es activity is clear, as are the relatively poor conditions in early June. The 2004 summer Es season can be summarised as:

- May – good,
- June – poor,
- July – good,
- August – average.

The next point of interest is to see how the “autumn peak” is represented this year.



The table below displays total counts of country/areas heard/worked via sporadic E by UK stations, a summary of the detailed tables in the previous section. Table cells are highlighted (in yellow) when 10 or more country/areas were reported by direct path Es in any 3-hour period. Good days for sporadic E are concentrated in the early part of the month, which is not unexpected as late August represents the tail of the summer seasonal activity. Best days were 2nd (18 country/areas worked/heard), 4th (17 country/areas) and 8th (18 country/areas). Conditions deteriorated from the middle of the month onwards. However there was still some good Es about in the last week, especially on 25th.

Es Summary

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00 | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | |
| 03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 06 | 3 | 1 | | 1 | 1 | 4 | | 2 | 6 | 1 | 2 | | | | | | 1 | | | | | | | | | 4 | | 1 | | | |
| 09 | 4 | 4 | 3 | 6 | 8 | | 4 | 10 | 3 | | 8 | | | 3 | 2 | 1 | 2 | | 1 | 1 | | | | 1 | 3 | 4 | 2 | | 1 | 2 | |
| 12 | 5 | 4 | 2 | 14 | 3 | | 2 | 3 | 1 | | 3 | 3 | | 1 | 2 | 7 | | | 2 | 1 | | | | | | | | | | 2 | |
| 15 | 1 | 6 | | 5 | 1 | 5 | 4 | 4 | 2 | | 5 | 2 | | 1 | | 4 | | | 4 | | | | 1 | | 7 | | | | | | |
| 18 | | 14 | 2 | 1 | | 5 | 4 | 4 | | | | 5 | | | | 2 | | 1 | 2 | | | | 7 | 4 | 11 | | | 1 | | | |
| 21 | | 3 | | 2 | 1 | | 3 | 1 | | | | | | | 1 | | | | | | | | 4 | 2 | 3 | | | | | | |

## Aurora

July produced many aurora, several of which were quite significant events, that broke a run of several months of relatively quiet conditions. August seems to have marked a return towards quieter magnetic conditions. There were a number of radio aurora in August but only one of these (on 30th) was of any size – the others were minor "Scottish type"

| | | |
|---|---|---|
| 6th | 2357 | MM0AMW > GB3LER 55a QTF 330 |
| 9th | 2329 | EI7IX > GB3LER 52a |
| 10th | 1659 | LA8HGA (JO58) > GB3LER "weak aurora in and out" |
| | 1741 | EI7IX > GB3LER 51a "constant tone" |
| 11th | 0939 | G0GMS > GD0TEP "tone A" (*but not very likely to be aurora – low K indices*) |
| 20th | 1618 | EI7IX > GB3LER 31a |
| 30th | 1420-1432 | GM8LFB > OY6SMC 51a, GB3LER 52a; EI7IX > GB3LER 51a |
| | 15z period | G2ADR reports GM and SM via aurora |
| | 1519-1600 | Many G <> GM QSOs, only other report: PF7M (JO22) > GM4ILS (IO87) 56a |
| | 1600-1640 | More G <> GM, EI7IX (IO53) > GM6YQA (IO76), G4ASR > GM4WMM QTF 005 |
| | 1705-1740 | Some inter-UK contacts plus G4DIZ 55a < SM0BSO (JO99), OZ1MES (JO47), G4UPS (IO80) > DL1EJA (JO31) 33a, G4IFX (IO91) > DL1EJA 57a QTF 040 PE1MZS (JO21) > MM0CWJ (IO67) 57a, LA6PV > G4DEZ 55a, EI7IX > GB3MCB |
| | 1833-1836 | G4PCI > GM4NFC 55a, EI2JD 53a, G4ASR (IO81) > EI2JD (IO63) 55a QTF 010. |

## Auroral E

In the early hours of 11th there was some aurora reported in North America, and at 0940 there was a single report in the UK of auroral tone signals. K indices were generally low over this period, which throws some suspicion on the UK aurora, especially considering the time of day. In the same way the two reports of auroral E below, and especially the "auroral E backscatter" (which would seem to require high auroral E ionisation to be effective) look unlikely. I suspect ordinary Es is a more reasonable explanation for these. There was Es from G to OH a little later on 11th

11 0831 G4FUF > OH9SIX 599 "AuE"
11 0909 G4FUF > MUF "AuE backscatter" QTF 025

## Tropospheric propagation

There were lots of "tropo" reports this time but few that represented significant distances. Following are the best of the bunch – either because of the distance covered or because the reported has noted that conditions were particularly good. There appear to be no particular patterns in these data

3 1641 G0CHE (IO90) > F5GTR (IN96) JT6M tropo QSO.
5 0700 G4UPS/P (IO92) > GB3MCB 449
5 1015 G4PCI(IO91) > EI2JD 51
5 2222 MU0FAL > GB3MCB 599 "great tropo"
6 0640 G4UPS/P (IO92) > GB3MCB 339
6 1757 G4PCI > EI3IO
7 1434 GW3MFY IO81) > GB3IOJ 539 (*presumed tropo*)
8 0444 F6KHM > GB3MCB s9+ "fb tropo"
8 0710 G4UPS/P (IO92) > GB3MCB 449
9 1817 M0DIT (IO93) > GM4NFC (IO75) 57
10 0640 G4UPS/P (IO92) > GB3MCB 339
10 1923 PI4KGL > G1YLE (JO02) 57
11 0630 G4UPS/P (IO92) > GB3MCB 339
24 2014 PE1DUG (JO23) > GX7VHF (JO01)
25 0106 GM8LFB > GB3LER

## Meteor Scatter

The Perseid meteor shower peaked on 12th August. G3HBR described this year's shower as producing "good MS reflections, judging by 48250 and 49750 video, but there was not very much activity on the band. Outside of the Perseids, Brian heard "a really nice long random burst from I0JX/B on 26 Aug when the signal appeared with a good ringing note and just gently faded down over a minute or so."

Unlike most major showers, the Perseids occurs during the sporadic E season and two modes (Es and MS) can occur simultaneously to the confusion of operators and data compilers alike. This appeared to be the case this year! Confusion can be generated when meteor reflections are so frequent that they overlap and MS signals may then sound like Es. It is also possible that ionisation resulting from a high meteor flux may in some way add to the sporadic E ionisation sufficiently to elevate the layer critical frequency – a phenomenon discussed in these pages before but which, to my knowledge, remains unproven. If this does occur,

In the afternoon and evening of 12th there was clearly much good propagation, but how much of this was sporadic E and how much was meteor scatter depends on whom you believe! Where operators have indicated the propagation mode I have accepted their interpretation as correct. Where no mode was indicated I have made my own judgment based on the evidence from other QSOs. The evidence supplied by operators would imply that certain areas were worked from the UK by both Es and MS at roughly the same time, which I suspect indicates that the propagation actually present was of the difficult to categorise type. Unfortunately I was not QRV so an unable to cast a deciding vote!

It is a pity that the meteor scatter signal strength – burst length reporting convention (as used at 2m, for example) seems to have fallen into disuse on 6m as this would help discriminate between Es and MS

On the following page are those reports that were indicated as being via meteor scatter. This list includes some JT6M QSOs where MS was the reported propagation mode. Although the JT6M mode was designed specifically for working 6m MS, the mode is used to work other weak signal modes (and sometime strong Es signals too!) so, unfortunately, use of the transmission mode is not diagnostic of the propagation mode.

4 2117 LB6YD (JO59) > GB3MCB “long bursts”
6 2120 F5TND (IN96) > GB3LER “in/out” (*presumed MS*)
10 2056 G4IGO (IO80) > DF9OX “tropo and MS”
2115 G0CHE (IO90) > SM7FJE JT6M QSO via MS
11 1923 G0CHE > SP6NVN/3 JT6M QSO via MS
1926 SP6NVN > G4IGO 27/27
1957 G0GMS > DF9OX via MS
2159 MU0FAL > DF9OX “great pings”
12 0900 F1NNI (IN88) > MM0DQP JT6M MS
1006 G0CHE > F1JG JT6M QSO via MS
1129 G0CHE > PA0KDV JT6M QSO via MS
1255 9A8A > G4IGO “great reflections”
1503 G3HBR > IQ4AD/B 559 MS
1533 G3HBR > OM5CW 579 MS
1717 G0CHE > SM7FJE JT6M MS
1911 G3HBR > S59MA 559 MS
1912 G3HBR > OK2BZQ 599 MS
1917 G3HBR > OM3HA 559 MS
1928 G3HBR > IZ0KNQ/P 57 MS
1938 G3HBR > S51IV 579 MS
1947 G3HBR > OK1BMW 599 MS
1958 G0CHE > OK1DDO (JO60) 59 jo60>io90 MS
2047 GM4NFC > GM4NFC MS (SSB)
2157 MU0FAL > DF9OX
2226 MU0FAL > DF9OX 599 MS
13 1341 G0CHE > EI5FK JT6M MS QSO
1433 G0CHE > IW5DHN JT6M MS
2256 G0CHE > SO5AS JT6M MS QSO
14 2221 G4IGO > I5MXX “many strong bursts”
15 0821 G0CHE > SM6NZV JT6M MS QSO
16 1742 G4IGO > SK7NM FB MS QSO
21 1205 G4IGO > OZ1DJJ MS QSO
1900 G0CHE > GD0TEP JT6M MS
2024 G4IGO > HB9QQ “fb MS QSO”
22 0937 HB9QQ > G4PCI 26 via JT6M
26 0917 G3HBR > I0JX 579 ?MS

# Solar and Geomagnetic Data for August 2004

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

| | | | |
|---|---|---|---|
| Sunspot numbers (SEC) | Mean 69.5 | Max 160 (13th) | Min 11 (31st) |
| Solar Flux (28 MHz) | Mean 110.1 | Max 149 (13-14th) | Min 83 (1st) |

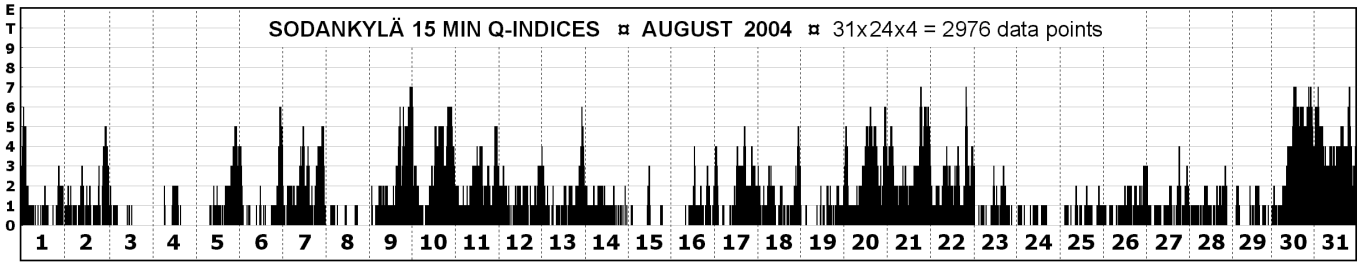
Solar data for August 2004 are presented in the table at the end of this section. Numbers in the 28 and 50 MHz columns of this table are the total daily "areas" worked/heard from the UK for each of several propagation modes and are a summary of the data presented in the first sections of this Report. On 28 MHz "areas" refer to the number of beacons reported via Es and F-layer; on 50 MHz the number of countries via Es, F-layer, Aurora and Auroral E. F2 critical frequencies from Chilton in Oxfordshire. SIDC spots are from SIDC, and other solar data from the joint USAF/NOAA daily summaries or directly from SEC.

## Energetic Events.

Solar X-ray events of M or X class recorded during the month included another two X-class flares

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 12th | 0438-0520 | M1.2 1f | | 1331-1350 | M5.6 2n | 17th | 0459-0514 | M1.1 Sf |
| 13th | 0636-0738 | M1.2 1f | | 1809-1832 | M1.3 | | 1926-1948 | M2.4 |
| | 1202-1212 | M1.1 1f | | 2009-2059 | M1.3 | | 2112-2139 | M1.8 |
| | 1807-1815 | **X1.0** 1n | 15th | 0445-0522 | M1.2 Sf | | 2212-2237 | M1.3 |
| | 2314-2346 | M3.0 | | 0554-0604 | M1.2 Sf | 18th | 1729-1754 | **X1.8** Sf |
| | 2346-2354 | M2.8 Sf | | 1123-1148 | M2.6 2f | 19th | 0635-0718 | M3.0 |
| 14th | 0410-0417 | M2.4 Sf | | 1234-1243 | M9.4 1n | | 1329-1416 | M2.1 |
| | 0536-0552 | M7.4 2n | | 1837-1850 | M1.2 | 31st | 0524-0547 | M1.4 |
| | 0751-0759 | M2.3 1f | 16th | 0331-0415 | M1.1 Sf | . | | |
| | 0952-1017 | M3.2 1f | | 2229-2252 | M1.1 1f | | | |

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




The Q-index graph above shows that the month was largely quiet with the principal unsettled periods being 9th-13th, 20th-22nd, and 30th-31st. Only the last of these produced widespread radio aurora at UK latitudes. Particularly quiet days were 3rd, 4th, 15th and 24th.

Geomagnetic data from Finnish observatories in August 2004:

| Monthly averages for August: | | Most disturbed August day: | |
|---|---|---|---|
| Sodankylä: | monthly Ak average = 15.3 (28.7 in July) | Sodankylä: | 31st, Ak = 51 (203 on July 27th) |
| Nurmijärvi: | monthly Ak average = 9.7 (26.4 in July) | Nurmijärvi: | 30th, Ak = 45 (255 on July 27th) |

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

## K-indices.

The following four tables present the Kp index (from SEC) and the Lerwick ("KL"), Eskdalemuir ("KE"), and Hartland ("KH") K-indices (from the British Geological Survey). Each table is set out with the day of the month in the top row followed by rows containing the K-values or each 3-hour period. The bottom row of each table is the sum of the K-values for the day. Pale (yellow) shading indicates K = 5, darker grey shading K > 5. There were 7 disturbed days in August when one or more of the UK K indices or the planetary Kp index was 5 or higher.

Planetary K (Kp)

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

Lerwick K (Shetlands)

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

Eskdalemuir K (southern Scotland)

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

Hartland K (SW England)

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

| August | 28 Areas | | -- 50 Areas -- | | | | 2800 | - Spots - | | Max | | | X-ray | Max foF2 | | Min foF2 | | -- Particle Fluences -- | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2004 | Es | F | Es | DX | A | AE | Flux | SEC | SIDC | Kp | Ap | Aa | b.gnd | MHz | Hour | MHz | Hour | 2MEV Elec | 1MEV Prot | 10MEV Prot |
| 01-Aug | 12 | 3 | 8 | 0 | 0 | 0 | 83 | 40 | 23 | 3 | 8 | 13 | A9.1 | 5.7 | 21 | 3.0 | 04 | 3.1E+08 | 1.1E+07 | 1.8E+05 |
| 02-Aug | 12 | 4 | 18 | 0 | 0 | 0 | 85 | 39 | 28 | 3 | 8 | 10 | A6.6 | 7.0 | 20 | 3.1 | 03 | 9.6E+08 | 1.3E+07 | 1.0E+05 |
| 03-Aug | 11 | 1 | 7 | 0 | 0 | 0 | 88 | 52 | 30 | 2 | 5 | 4 | A8.5 | 5.9 | 20 | 3.6 | 03 | 3.7E+08 | 4.3E+06 | 1.6E+04 |
| 04-Aug | 9 | 0 | 17 | 0 | 0 | 0 | 85 | 62 | 33 | 2 | 4 | 5 | A7.0 | 8.3 | 10 | 3.6 | 03 | 1.0E+09 | 8.0E+06 | 1.4E+04 |
| 05-Aug | 10 | 0 | 11 | 0 | 0 | 0 | 89 | 36 | 21 | 3 | 7 | 9 | B1.0 | 6.7 | 09 | 3.6 | 03 | 4.1E+08 | 6.3E+06 | 1.4E+04 |
| 06-Aug | 9 | 1 | 9 | 0 | 1 | 0 | 91 | 52 | 33 | 3 | 7 | 12 | B1.1 | 5.9 | 21 | 3.2 | 04 | 2.7E+07 | 3.6E+06 | 1.3E+04 |
| 07-Aug | 10 | 0 | 11 | 0 | 0 | 0 | 95 | 71 | 44 | 5 | 20 | 30 | B1.2 | 7.0 | 11 | 3.6 | 05 | 5.1E+06 | 8.5E+05 | 1.3E+04 |
| 08-Aug | 20 | 2 | 18 | 0 | 0 | 0 | 105 | 77 | 39 | 2 | 5 | 6 | B2.3 | 6.8 | 20 | 3.0 | 04 | 2.7E+06 | 2.6E+05 | 1.4E+04 |
| 09-Aug | 8 | 2 | 10 | 0 | 1 | 0 | 114 | 101 | 50 | 4 | 13 | 24 | B3.8 | 6.6 | 20 | 3.1 | 04 | 5.3E+06 | 5.6E+05 | 1.4E+04 |
| 10-Aug | 2 | 4 | 2 | 0 | 2 | 0 | 121 | 93 | 58 | 4 | 14 | 25 | B3.3 | n.a. | n.a. | n.a. | n.a. | 4.0E+06 | 7.8E+05 | 1.4E+04 |
| 11-Aug | 10 | 4 | 13 | 0 | 1 | 0 | 131 | 115 | 63 | 4 | 13 | 20 | B4.9 | 7.1 | 21 | 2.7 | 04 | 1.0E+08 | 6.3E+05 | 1.5E+04 |
| 12-Aug | 12 | 2 | 8 | 0 | 0 | 0 | 147 | 140 | 68 | 3 | 9 | 12 | B6.9 | 6.6 | 20 | 3.7 | 04 | 1.7E+08 | 6.2E+05 | 1.4E+04 |
| 13-Aug | 4 | 6 | 0 | 0 | 0 | 0 | 149 | 160 | 76 | 3 | 9 | 12 | B6.8 | 7.1 | 20 | 3.7 | 04 | 2.2E+08 | 5.6E+05 | 1.5E+04 |
| 14-Aug | 6 | 1 | 3 | 0 | 0 | 0 | 149 | 111 | 68 | 3 | 9 | 13 | C2.0 | 6.6 | 20 | 3.9 | 04 | 3.5E+07 | 1.5E+06 | 1.7E+04 |
| 15-Aug | 12 | 2 | 4 | 0 | 0 | 0 | 139 | 98 | 61 | 3 | 7 | 5 | B7.0 | 7.5 | 20 | 3.9 | 04 | 3.8E+07 | 8.1E+05 | 1.5E+04 |
| 16-Aug | 10 | 4 | 10 | 0 | 0 | 0 | 134 | 68 | 54 | 3 | 8 | 9 | B5.6 | 7.9 | 20 | 4.1 | 04 | 4.9E+07 | 9.9E+05 | 1.5E+04 |
| 17-Aug | 13 | 6 | 2 | 0 | 0 | 0 | 135 | 63 | 44 | 4 | 11 | 22 | B8.7 | 8.4 | 19 | 4.3 | 04 | 8.4E+06 | 7.6E+05 | 1.4E+04 |
| 18-Aug | 6 | 3 | 1 | 0 | 0 | 0 | 140 | 53 | 41 | 4 | 13 | 16 | B9.2 | 6.9 | 20 | 3.7 | 04 | 1.4E+06 | 2.0E+05 | 1.4E+04 |
| 19-Aug | 9 | 2 | 8 | 0 | 0 | 0 | 121 | 60 | 36 | 3 | 7 | 8 | B9.7 | 7.4 | 21 | 3.9 | 04 | 2.1E+06 | 3.0E+05 | 1.6E+04 |
| 20-Aug | 11 | 6 | 2 | 0 | 1 | 0 | 121 | 85 | 50 | 4 | 14 | 29 | B3.2 | 7.2 | 19 | 3.7 | 04 | 1.7E+06 | 3.9E+05 | 1.6E+04 |
| 21-Aug | 5 | 3 | 0 | 0 | 0 | 0 | 120 | 88 | 57 | 4 | 17 | 31 | B2.3 | 7.6 | 11 | 2.7 | 04 | 4.6E+06 | 4.7E+05 | 1.4E+04 |
| 22-Aug | 4 | 2 | 0 | 0 | 0 | 0 | 115 | 102 | 66 | 4 | 13 | 26 | B1.9 | 7.5 | 11 | 3.2 | 05 | 4.4E+07 | 5.8E+05 | 1.3E+04 |
| 23-Aug | 9 | 1 | 9 | 0 | 0 | 0 | 110 | 93 | 56 | 3 | 7 | 9 | B1.6 | 7.1 | 19 | 3.2 | 04 | 1.3E+08 | 3.7E+05 | 1.3E+04 |
| 24-Aug | 10 | 5 | 4 | 0 | 0 | 0 | 105 | 55 | 38 | 2 | 5 | 7 | B1.7 | 6.9 | 19 | 3.7 | 04 | 1.7E+08 | 3.1E+05 | 1.3E+04 |
| 25-Aug | 13 | 3 | 14 | 0 | 0 | 0 | 100 | 60 | 31 | 3 | 7 | 7 | B1.4 | 7.1 | 20 | 3.2 | 03 | 9.2E+07 | 3.7E+05 | 1.4E+04 |
| 26-Aug | 11 | 4 | 6 | 0 | 0 | 0 | 98 | 44 | 24 | 3 | 7 | 8 | B1.5 | 7.0 | 20 | 3.7 | 04 | 6.8E+07 | 4.4E+05 | 1.4E+04 |
| 27-Aug | 6 | 4 | 3 | 0 | 0 | 0 | 91 | 33 | 21 | 3 | 8 | 9 | B1.0 | 7.3 | 20 | 3.7 | 04 | 2.5E+07 | 3.2E+05 | 1.4E+04 |
| 28-Aug | 9 | 6 | 2 | 0 | 0 | 0 | 87 | 28 | 20 | 4 | 12 | 15 | A7.1 | 7.5 | 19 | 3.7 | 04 | 4.3E+07 | 3.8E+05 | 1.5E+04 |
| 29-Aug | 5 | 1 | 1 | 0 | 0 | 0 | 86 | 36 | 16 | 3 | 8 | 11 | A5.8 | 7.9 | 19 | 3.8 | 04 | 4.6E+07 | 5.5E+05 | 1.4E+04 |
| 30-Aug | 5 | 2 | 3 | 0 | 9 | 0 | 90 | 30 | 10 | 5 | 34 | 57 | B1.3 | 6.8 | 10 | 3.1 | 23 | 4.2E+06 | 1.6E+06 | 1.4E+04 |
| 31-Aug | 0 | 1 | 0 | 0 | 0 | 0 | 88 | 11 | 9 | 6 | 28 | 39 | B2.0 | 5.1 | 14 | 2.1 | 04 | 4.4E+06 | 3.3E+05 | 1.4E+04 |
| Sum | 273 | 85 | 204 | 0 | 15 | 0 | | | | | | | | | | | | | | |
| Average | 8.8 | 2.7 | 6.6 | 0.0 | 0.5 | 0.0 | 110.1 | 69.5 | 40.9 | 3.4 | 10.9 | 16.2 | B3.7 | 7.0 | 18 | 3.5 | 04 | 1.4E+08 | 2.0E+06 | 2.2E+04 |
| Maximum | 20 | 6 | 18 | 0 | 9 | 0 | 149 | 160 | 76 | 6 | 34 | 57 | C2.0 | 8.4 | 21 | 4.3 | 05 | 1.0E+09 | 1.3E+07 | 1.8E+05 |
| Minimum | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 11 | 9 | 2 | 4 | 4 | A5.8 | 5.1 | 09 | 2.1 | 23 | 1.4E+06 | 2.0E+05 | 1.3E+04 |

# 50 MHz Outside Britain

Compilation and Commentary by G3USF

## Europe

### Auroral-Related Propagation

As G0AEV has shown, geomagnetic activity, with a daily average of Ak15.3 at Sodankyla compared with 28.7 in July (or an Ap of 10.9 against 21.0), was well down this month. The 30th was the only day when significant auroral activity was reported south of the Baltic-GM line, with the southerly limit briefly at JO22 (roughly 52 degrees North). The detailed listing includes a larger than usual crop of uncertain modes. This reflects the number of reports from very high latitudes (eg JP99, which is the Tromso area) of T9 transmissions, mostly from beacons. Circumstantially, AE appears the more likely mode but when unaccompanied by an 'a' event one cannot be certain. On the other hand, some entries in the 'other modes' list could conceivably be attributable to AE….

The SK4MPI beacon returned to service on August 11. Thanks as usual to our Finnish colleagues for their data. This month even they appear to have had a fairly thin time!

Aug 4 22-2300 DL>DL(JO30 55a 330)

Aug 9 2329 GB3LER>EI(52a)

Aug 10 1357 49750>SM2 16-1700 LA(JO58)>LA(52a) GB3LER>LA(JO58) 1741 GB3LER>EI(51a)

Aug 20 0200-10 AuFM>OH5IY 0540-0600 AuFM>OH5

Aug 22 1915 JW7SIX>LA(529 JP99 AE?) 21-2200 JW9SIX>SM0(559 AE) JW7SIX>SM0(529 AE) JW7SIX>SM2(599 AE)

Aug 26 2039 JW7SIX>SM0(JO89 559)(mode?)

Aug 27 1846 JW7SIX>LA(519 JP99)(mode?) 1951-4 JW9SIX>SM0(539 JO89)(mode?) JW7SIX>SM0(419 JO89)(mode?) 2135 JW9SIX>LA(JP99 569)(mode?) 22-2300 LA>LA(t9 mode?)

Aug 28 0901-33 TF3SIX>LA(549 JP99)(mode?) 1956 JW9SIX>OZ(JO47 559)(mode?) 20-2100 LA7SIX>SM0(429 JO89)(mode?) OY6SMC>LA(JP99 529)(mode?) GB3LER>LA(JP99 549)(mode?) JW9SIX>SM0(JO89 539)(mode?)

Aug 30 0340-50 AuFM>OH5 0640-50 AuFM>OH5 1250-1630 Au>OH5 1310-1630 AuFM>OH5 14-1500 GB3LER>EI(51a) DL>OZ(559/55a) OZ(JO65)>OZ(JO47 59a) SM5(JO99)>DL(JO53) 15-1600 SM5(JO99)>DL(JO53) OH7(KP52)>DL(JO53) OH7(KP52)>SM5(JO99) GM(IO87)>PA(JO22 56a) 16-1700 GM(IO76)>EI(IO53) SM0(JO89)>OZ(JO47 55a) ES2(KO29)>DL(JO53) SM7(JO65)>DL LA(JO59)>DL(JO53) LA(JP32)>OZ(JO47) 17-1800 SM5(JO99)>SP2(JO94 54a) OH1(KP10)>SP2)JO94) DL(JO31)>OZ(JO55) G(JO03)>SM0(JO99 53a) OH4(KP20)>OZ(JO55) GM(IO67)>PA(JO21 57a) G>LA(55a) GB3MCB>EI(IO53 51a) 1940-50 Au>OH5 2040-50 Au>OH5 2210-20 Au>OH5 2230-2310 Au>OH5 2230-50 AuFM>OH5

Aug 31 0040-0230 Au>OH5 0240-0300 Au>OH5 2015 TF3SIX>LA(JP99 419)(mode?)

## Other Modes

The month's listings have a distinct end-of-season flavour, despite brighter interludes, notably on the 6th. To the East, apart from 4X and OD, there was an isolated report, of YK being worked from I8 on the 15th. Southward, ST was reported from Italy on the 10th, with ZS6 into SV on the 30th (SV1DH's only DX contact of the month), Z2 into I8 on the 24th and TR0A was heard in EA7 on the 26th.

Westward, the VO1ZA beacon was received in Italy on the 1st, EI,F,G and I on the 2nd, G only on the 4th and F and G on the 6th. VE1 was worked from CT, also on the 6th, the best day of the month. The 6th also had the only good opening from W1, which was copied in I, IS0 and PA, though there was a single report from YU1 on the 4th. However, the most interesting report on the 6th was MM0AMW's reception of the VE8BY beacon at an unusually early hour for trans-Atlantic propagation. As usual there was no VE8 activity for reasons that have been outlined on numerous previous occasions. Finally for North America, W4s were worked from EA on the 8th.

To the South, the ZD8VHF beacon was reported in EA on the 19th and 30th (while Northern Europe was working aurora) and in 9H on the 20th.

These bits and pieces apart - no clear patterns of propagation were evident. Most continental working was attributable to sporadic-E. The table below shows the time-periods when we can be reasonably sure of the presence of Es - not always easy because, as G0AEV has already observed, Es and ms are at times all too easily confused, and so, too, is auroral-E. So the table should be seen as a best estimate. As, the detailed listings confirm, Es was reported every day except the 31st. The month started strongly, although Es was now almost entirely confined to periods after 0600. As it proceeded there were fewer late evening openings. By contrast, the three hours before noon held up well. The 10th and 21st-22nd were poor days, as was the 29th; geomagnetic activity was a bit above average on all but the last of these. On the other hand, the highest daily Ap index was the 7th, which was one of the better days for Es.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 00-03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 03-06 | + | | | | | | + | | | | + | | | | | | | | | | | | | | | | | | | | |
| 06-09 | + | + | + | + | + | + | + | + | + | | + | + | + | | | | + | + | + | + | + | + | | | + | + | | | + | + | |
| 09-12 | + | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | | + | |
| 12-15 | + | + | + | + | + | + | + | + | + | | + | + | | | + | + | + | | + | + | | | + | + | | + | + | + | + | + | |
| 15-18 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | + | + | + | + | | | | + | + | + | | | | | | |
| 18-21 | + | + | + | + | + | + | + | + | | | + | + | + | | | | | + | + | | | | + | + | + | | + | + | | | |
| 21-24 | + | + | | + | + | | + | + | | | + | + | + | | | | | | | | | | + | + | + | | | | | | |

+++ Call signs in full indicate either DX or beacons - as an indicator of the path being open to low-power working. Where (jt) follows an entry this indicates use of JT6M, frequently - but not invariably - indicating meteor scatter working, notably of course during the Perseids..

Aug 1 04-0500 UR>4X UU5SIX>DL 0502 UR>4X 06-0700 UU5SIX>9A,SP6 OD5SIX>9A,SP6 UR>9H SV1SIX>LY LZ2,YO4>9A I0>ER3 LZ2>SP7 07-0800 YO7>OM5 SV2>SP6 9A,ZA>ER3 YO4>S5 LZ1,SV8>SP7 LY>OZ SV5>SP7,SP5,OK1,SP6 SV1SIX>F LZ2>9A,HB ZA>PA SV8>I3 OD>9A SV0>9A,SP7 SV3,LZ2,LX0SIX(t)>DL 08-0900 LZ2,YO3,YT1>F I7,I9,T9,ZA>DL OD>9A SV3,ZA>PA LZ3>I3 I8>SP3 I7>EH3 SV1SIX>ER3,I0 9A>I5 LZ2>I2 4N>EH3,I5 T9>ON,I2 09-1000 YU6,SR5SIX>I2 SV1SIX>DL,EH3 I8,9A,YO7>DL I4>SP7 T9,CN>HB I7>PA,DL YU1>I4,PA T9>OZ,DL LY0SIX,LZ1>F 9A0BHH>I5 I3,IZ1EPM,IQ4AD,EA3VHF>9A 10-1100 T9>HB CN>SQ4 HB>SP2 I7>PA EA5SIX>SP6 LA>DL,I5 I4>9A(t) C3>9H,DL SP1>F PA>I8 I8>DL CT3>9A 11-1200 EH8>EI,I9 CU3URA,SR5SIX,I0>F GB3LER>I3 S5,UU5SIX,UT5G>DL GU>I0 9A>EI CU3>EA7 7X>OZ 12-1300 CU3>F,9A,I9,EH3 EH8,I0JX>F ON0SIX,PI7SIX,OZ7IGY>EA3 SV1SIX>SP7

GB3BUX>I0 CU3URA>EA7 DL>HA1 7X>DL,CT EH3>OZ 13-1400 GB3BAA>EA3 GM>CT EH1>I3 EA5SIX>PA I0JX>EI,DL GB3BUX,SV1SIX>I0 14-1500 CN8MC,I8,EH2,EH1>PA EA5SIX,IQ4AD,F>EI CT0SIX,EH1,LX0SIX>DL 15-1600 G>F 1656 UU5SIX>SP6 18-1900 OZ6VHF>LA SV1SIX>SP6 DL>PA 19-2000 SV1SIX>SP6,DL LX0SIX>F(t) YO3KWJ,EA5SIX(t)>EA3 ZA>SP6 20-2100 ZA>DL OH9SIX>LA SV1SIX>F,EA3 21-2200 DL>EI

Aug 2 08-0900 OY6SMC>DL CN8MC,EH5,EH7,YZ1,EH1>PA CT0SIX>I1,PA LZ1>I0 OH9SIX>SP2 09-1000 CN>PA OH9SIX,OH1SIX,OH5>DL SV1SIX>EA3 F,OH5RAC,SR9FHA>SP9 10-1100 I0,OH5,OM3,OH1SIX>PA OH2>DL OH9SIX,OH1SIX>HB CU3URA>EA7 CN8MC,CT0SIX>I0 11-1200 GB3MCB,CN8MC>EI 1356 I5>F 14-1500 CN>EA7 VO1ZA>EI5FK,GW3LEW CU3URA>EI 15-1600 VO1ZA>F6HRP SV1SIX>DL,F 16-1700 CU3URA,CN8MC>ON I9>PA SV1SIX,LX0SIX,LZ5,Z3>I0 OD5SIX>F I0>SP6,ER1,YU7 17-1800 4X>PA,F,DL YT1>I1 ON>I0 LA>HB,9A UT5G>EH3 SP1>ER1 EH5,YZ1,LZ2,EH5,I8,9A0BHH,I5,I0JX>DL 9A1CAL>EI CT,SP2>I2 I0,I6>PA I0>SP6 EA1>I1 18-1900 ZA>I0,DL,OZ I0>SM5 G>EA7 9A,EH3>SM7 I8,YZ1>DL I7>PA HB>LA GB3MCB>EA5 SP2>I3 GI>I2 I0>SP9 CU3URA>EI EH9>ON,HB DL>I0 CT>OZ LZ2CC>HB 19-2000 EH4>SP2 EH6>PA,EI G>9A EH3>SP9 PA>EA5 SV3>I3 YT1>I2 CN8MC,CU3URA>PA LX0SIX,F>DL GB3MCB>EA5 EH1>DL,PA,SO2,I2 VO1ZA>G8BCG CN>I2 20-2100 LA,G>EI CN>OZ EH1>PA,DL,OZ F,EH5,EH7>DL GB3MCB,GW>EA5 VO1ZA>G4PCI,F6HRP,IK1EGC CN8MC>PA GB3LER,OY6SMC>EH3 JW9SIX>LA,OH5 21-2200 CU3URA>EH3 JW7VW>LA,SM0, JW9SIX>SM0 CU3URA>EA7 22-2300 LA7SIX>OZ,SM0,LA OH8>LA 23-2400 OH8>SM0

Aug 3 06-0700 OZ6VHF>LA SV1SIX>SP2 9A1CAL>EH3 07-0800 YU1EO>EH3 5B4CY,UT5G, UU5SIX>SP9 08-0900 CT0SIX>PA I0>EA1 09-1000 EH9>I4,9A F,CU3URA,SV8>9A CN>I4 SV1SIX,F1GTU>SP9 LX0SIX>PA CT0SIX>I8 10-1100 UT5G>LA CU3URA>I5,9A,I0 SV8,YU6,LZ2,T9>PA 11-1200 SV1SIX>SP2 CU3URA>I1,EA7 5B4CY,SV1SIX>SP9 YT1>DL 12-1300 PA,UT5G,UU5SIX>9A SV1SIX>PA,SP6 LZ2>PA 13-1400 LA,OZ6VHF>9A SV1SIX>OK1 OE6>LA F>I5 14-1500 OE8,YO7>LA GB3LER>SP9 OH5>DL UU5SIX,I0JX,IZ1EPM ,I5MXX,IK5ZUL>SP9 15-1600 UT5G,I0JX>OZ S5>SP6,OM5 YZ1>LA 16-1700 YU1,YU7>LA G>F 18-1900 OH9SIX>LA 19-2000 GB3LER>F TF3SIX>LA UU5SIX>SP2 20-2100 OZ7IGY,SR5SIX,DL(ms)>EI SV1>DL 2112 DL(ms)>SM5

Aug 4 07-0800 SV1SIX>SP2 OH9SIX>SP2,OZ YU1EO>OZ YZ1>LA OE3XLB>9A 08-0900 UR>9H 9A>SM0 YO2>LA SM2>OZ,DL OZ6VHF>I3 OH9SIX>PA ES1>I1 SP2>SM5 SR9FHA>EI 09-1000 GM,OZ6VHF>I1 F,9A,ON,OZ>LA LA>PA,I1 S5,GM,GI>9A S5>EI 10-1100 S5,9A,F,GB3MCB, LZ3,YU1>SM0 GB3LER>I0,SP6 UU5SIX>SP6,9A OZ,UR,GM,SM3>9A UR>DL UT5G>I4 11-1200 TF3SIX>PA UR>DL,I0,9A,ON,PA,S5 SM7>9A 4X>OZ OH2>I2,9A OH5,OH2>I0 SM0>DL 12-1300 SR5SIX>LA,I5 UR,SP5>PA LA,OZ6VHF>9A LA,ES4,ES5>I2 PA>SP3 OH3,OZ>OE3 UR,OH2>DL GM>SP6,SP7 OZ7IGY>EI 13-1400 GB3MCB,GB3IOJ,S5>OZ LA,OZ>SP9 I4>SQ4 SM7,GM>DL F>SM0 LY0SIX,SR5SIX>PA VO1ZA>G3NVO,G4PCI 14-1500 PA,SP8,G>DL IQ4AD,G>SM0 LA>EI,I0,I1 G>LA OY6SMC>EA1 GM>9A GU,GB3MCB>PA I2>OH1 PA>ON 15-1600 OY6SMC>F SM7>HB GM>SP6 IK5ZUL>OZ OZ7IGY>EI 16-1700 EI>LA 17-1800 GB3IOJ>I0 18-1900 UT5G>I0 FX4SIX,OZ6VHF 1908 CN8MC>I5 20-2100 TF3SIX,OY6SMC>PA SM7,G>EI 22-2300 EI>OZ LA>EI OY6SMC>PA aurora N3DB>DF9OX K3TKJ>DL8PM(559) I4>LA

Aug 5 08-0900 UT5G>I1 YO3KWJ>9H SV1SIX>EH3,I0 IS0,LZ1>F I9>PA I9>I2 CN8MC>I0 9H>DL 09-1000 SM1>EI YO3KWJ>I2 GM>I3 9A>I2,DL GW>SM0 I0>EA1,SP7 OD5SIX,CT0SIX>I5 I9,GM>DL CN,9H>PA CT3>EA7 OD>9A,F,I8,SP8 CN>I1 I5>OK2,EA5 SM3>PA 10-1100 CN>I2,S5,DL,I3,PA,I4 SM7>EI SM5>I8 EH7>S5 GM,OH1SIX>PA OD5SIX>9A SV1SIX>EH3 GW>SM0 OD,PA>I0 OH9SIX>ON 11-1200 CN>I4,HB LA7SIX>DL,SK7 GB3LER,OY6SMC>DL OH9SIX>SP2,PA 9H>PA OD5SIX>OE6 SP8>I0,SP3 5B4CY>9A UU5SIX>9H CN8MC>EA5 SM2>OZ UR,9A>I0 OH8>EI IK5ZUL>F 12-1300 I0JX,I5MXX,IQ4AD,CN>F LA>DL,PA UT5G>I1,OZ SP8>9A OH8>EI 13-1400 SP8>SP9 LA7SIX>OZ,PA LZ1>DL GM>OH6,SM0 UT5G>PA,I0 YO4,LA>DL UR>ON 14-1500 UR,SV2>DL ZA>SP6 ZA>SP9 OH1>S5,9A YO8>I1 15-

1600 YO3KWJ>PA SP8>SP3 UT5G>DL 16-1700 SP8>SP6 18-1900 OZ6VHF>LA 20-2100 OH5SIX>I5 I5>LA 21-2200 JW7SIX>SM0,LA JW9SIX>SM0,LA,SM7,OH3 OH9SIX>LA 22-2300 LA>SM0 TF3SIX>LA 23-2400 LA>I4 OZ6VHF,IK5ZUL>LA

Aug 6 07-0800 UU5SIX>I0 9H1SIX>OE5 08-0900 GW,TF3SIX,CU3URA,IQ4AD>EI OH9SIX>SP6,I0 VE8BY>MM0AMW SR9FHA>I1 EI,SV1SIX>I5 5B,OD5SIX,4X>9A SP6>SP9 I6>I2 PA>DL 09-1000 OD5SIX,SV1SIX>I0 10-1100 9H1SIX>EH3 11-1200 CN>I1 OH1>DL CN8MC>I5 OD5SIX>9A 12-1300 SV1SIX>I1,SP6,I9 SV5SIX>I5,I9 I9>I5 CN>9A,9H 15-1600 OZ7IGY>LA 16-1700 CN8MC,SV1>I1 S55ZRS>I9 9H1SIX>DL,SP6 I9,SV1SIX>SP6 OK1>I9 ON0SIX>I0 17-1800 YU7>I9 I9>I5,HB,I1 CT0SIX,9A>PA SV1,I>SP6 9H1SIX>OE5,9A EA3,I0,I9,SV1SIX>9A I0>I1 IS0>PA K1GUN>IS0GQX 18-1900 I5>I9 EH6>9A K1TOL>PA2V,IK0FTA OK1,S5>EA5 I9>I1,I5,I2 9H>I1,HB EH6>HB EH7>I1 F>I2(short) EA3>I1(short) F>I1(very short) 19-2000 EH1,I0>F CU3URA>I5,I0 CN>PA,DL,SP7,I2 EA3VHF>I4 CT,CN>9A EH7>PA 20-2100 IQ4AD>EA5 CN>I4,DL,OK1,HB EH7>PA OZ>LA 21-2200 CN>F,ON,I1 CU3URA>F GB3LER>F VE1YX>CT1EPC 22-2300 VE1YX>CN8LI VE1ZZ>CT1EPC VO1ZA>F5TND

Aug 7 05-0600 4X>9A 06-0700 YO3KWJ,UT5G>9H 07-0800 UU5SIX,UT5G,EH3>9A S5>OM5 SV1SIX>I1,SP6 08-0900 LZ2>I1 SV1SIX>I1,SP6 UR>9A UT5G>I0 09-1000 ON0SIX>CT SV>PA,DL,SP6 YO3>PA SV1SIX,EH9,I5>DL 10-1100 EH4>DL 4N1SIX,LZ2CM>I4 HB>I9 CT0SIX,EH4>PA EH4>DL G>EA5 11-1200 EH5>EI 1255 SP1>PA 13-1400 SP1>DL 14-1500 TF3SIX>PA,DL 16-1700 3A>SP6,I0(t) TF3SIX>EI OY6SMC>PA OH9SIX>DL,PA,SP6,UR EM0>UR LA7SIX>PA 17-1800 JW9SIX,OH8>PA OH5RAC>SP6 EM0>UR OY6SMC>PA OX3VHF>PA VO1ZA>G4FUF SM2>SP2 TF3SIX,OH9SIX>PA LA7SIX>ON 18-1900 OY6SMC>ON,PA OX3VHF,LA,OH7>PA OH1SIX>SP6 TF>DL,LA UR>I1,PA,9A,SM6,SM2 OH5RAC>DL 19-2000 OH1>PA,9A,OM5 OH7>DL,OM5 TF>EI,SP2,UR,LA OH3>DL,9A,EI OY>LA OH8>DL OH9SIX>DL,I9 OY6SMC,YO3KWJ>DL 20-2100 ON>OM5,DL OH9SIX,LA>DL TF3SIX>PA 21-2200 GM>OH2 JW7SIX>LA GB3MCB>SM0 22-2300 S55ZRS,SM0,OE3XLB,9A0BHH,OZ6VHF>LA SM0>EI OY6SMC>OZ 2335 GB3MCB>LA

Aug 8 00-0100 LAtv>G DL>SP9(ms) OH3>F DL>F(ms) 06-0700 SP9>I1 UT5G,UU5SIX>SP2 07-0800 LZ,YO>ES8 I8,IK5ZUL>PA PA>I0 YO8,YO3>LA SQ9>OZ UR>9A,DL SP6>EI GB3MCB>I4 LA>SM0 08-0900 9A,OZ,EH3>LA UR>I4,9A,DL,ON UT5G>DL ES2,S5>9A I5,OE4,S5>EI F>SM0 LZ1>OZ SV1SIX>I0 YO3>PA YO7>ON 09-1000 GB3MCB>EA5 UR,SO8>9A EH5>PA,DL SV1>OZ UR>DL,SP2,PA,SP6,9A,OZ YO8>LA UT5G>I3 CN>PA,F I4>PA ES5>S5 EH4>I1 10-1100 UR>I1,PA SM3,CN,UR,EH3,EH4,EH1,CT,OH3>DL YO3>9A CT0SIX>I5 SM2>OZ,DL CN8MC>I5,F OH9SIX>DL,PA,EA7 EH5>PA EH4>I1 OH1>EI 11-1200 SM2,LA>DL LA7SIX>SM7,OZ C3>9H,I9,EI,EA7 SM2>SM6 9H>I9 EH4,CT>I8 OH9SIX>OZ OH6>LA TF3SIX>OZ CN,EH9>I2 12-1300 OE5>EA5 C3>EA1,I1,I5 EH5>9A UR>EA7,CT,DL,I1 I0>SP6 TF3SIX>PA 9H>I9 G,UT5G>DL LZ1>OZ SP7>I1 OH9>DL,OZ,PA IS0>ON EH9>OE3,DL 13-1400 SO8>DL,9A,I1 UR>DL,ON ES0SIX>9A UT5G>PA YO2,YO7>ON CU3URA>EA7 SR5SIX,ES0SIX,SM0>I8 T9>SM0 LZ2>OZ I2,EH7>I1 I8>SQ2 CU3>CT 14-1500 AC4TO,K4RX>EA7RM F>9H I9>DL I7>F CT0SIX,I2>PA LZ4>5B 15-1600 OH9SIX>DL,SP6 9H>PA S55ZRS>F OD5SIX,UT5G,F>9A OH9>OE5 OH1SIX>DL 16-1700 OH1SIX,ES0SIX,F,EH1>9A UT5G>I8,DL 5B>DL,OZ,9A 4X,OD5SIX>DL I9>F,ON LY0SIX>DL 9A>SM0 UR>OZ,I8,9H,DL,F YO3KWJ>I8 OH9>I0 5B4CY>DL,9A 17-1800 LZ1>OZ,SP6 UR>I5,I1,ON SR5SIX>I5 4X,5B4CY,LZ2,T9,YO2>DL Z3>SP6 I2,9A>EB1 YO8>DL,EB1,I8 CU3URA>F 4X>PA,SP9,OE5 LZ2,DL,YO8>9A,ON SV1>SP6 LZ2>OE5 YO2>SM0,DL UT5G>DL 5B4CY>PA 18-1900 UR>F OD5SIX,LX,LZ1,LZ2,YT1>ON I0>OH3 SP8>ER1 I0>SP9 SV2>SP7,PA,LA OH9SIX>I0 YO8>I1,EB1 OY6SMC,I0,SV1,SV3,4X>DL 4X>9A SV1,OD5SIX>PA YO7,SV1,LZ2,SV3>I1 I8>SP7 19-2000 I8>SP9 EH6>OM5 GB3MCB>DL SV1SIX>PA,I0 EA3VHF,GB3IOJ,GB3MCB,S5>9A 9H>9A,S5,I9 I3>I9 20-2100 I1,I5>I9 21-2200 YT1>CT3 OH9>SM5

Aug 9 06-0700 YO3KWJ,LY>I1 SV1SIX>OE6 UU5SIX>SP6 07-0800 UT5G,YU1,9A0BHH,YO8, GM>PA I0JX>OZ I3>DL G>9A I0>I8 SV1SIX>I1 YO3KWJ>PA 08-0900 OH9SIX>EA5 OD>I5,PA,I8 LZ2CM,YU1EO,I0JX,I8>PA UU5SIX>DL 4X>I8 09-1000 I5MXX>OK1 9A,IK5ZUL>PA OZ>IS0 F>9A IS0>PA 1051 GB3MCB>I4 11-1200 EH1>F HB>EI(bs) I2>EI,9H G>I2 9H>I1 12-1300 GU>I2,I5 EH5>PA EI>I5 13-1400 EI>I2 1439 ON0SIX>EH3 15-1600 GU>IS0 TF>DL,F,PA 17-1800 GB3MCB,GB3IOJ,I6>I4 I6>I3 18-1900 I6>I3,I1 19-2000 I6>I8,I2 20-2100 OH9>OZ 21-2200 OH9>OH6

Aug 10 07-0800 OE3XLB>S5 aurora 1535 SM7>OE5 17-1800 I6>I4 ST2SA>!K8DYD 19-2000 G>PA 20-2100 PA>ON OH9SIX>LA 21-2200 SM7>I5 22-2300 LA>OZ

Aug 11 05-0600 UT5G>LA 06-0700 UR>LA,OZ LA>OZ OH9SIX,ES4>9A 07-0800 UR,SM5,YO8,SP9>LA OH5RAC>LZ1 OH5>SP6,ON,SP9 ES5>PA,SP9 08-0900 OH9SIX>ON UR,YU1,OK2>LA OH5RAC>SP9,ON,SP6,I1,OE6,OE5 OZ6VHF>OE5 OE6>OH6 OH1SIX>DL LA>OE6 ES5>I1,PA OH3>I1 OH5>PA 09-1000 OH5>OK1 EI>SP9 OH9>ON,PA S5,I3>LA ES5,OH8>PA OH3>DL OH1>OK1 10-1100 SM3>9A,SP6 LY0SIX,OH5,ES0>PA ES5>ON,DL LA,OH5,OZ,ES0,ES4, OH3>DL OH9,OZ>9A 11-1200 OH7,SM0,OH9SIX,OH5,SM3,LA>DL GM>I5 SM1,ES5,SM7,OH5 >PA LA>SP9,9A,HB,I2,OE3,SP6 GM>HB 12-1300 OH9>OZ,DL,OK1 G,EI>PA(bs) LA>OZ,PA SM3,OH8>DL OH6,OH8,SM3,OH9SIX>PA EI>SP6 F,SM3,OH8>OZ 13-1400 LA>PA OH9>ON OH4>OH3 15-1600 SR9FHA>PA SP9>SP6 LX0SIX>SP9 16-1700 OZ6VHF>I4 LA>I5 SM5>SP6 OH9>PA 17-1800 OH9>PA,I2 LA,OZ6VHF>I2 OZ2VHF,LA>I3 OZ>I5 OK2>SP6 19-2000 G>SP6 F>OK2,SP6 GD>OZ 20-2100 OK2>I5 G>SP6 21-2200 LA>SM5,SQ5(ms) SM7>OZ LA>PA 22-2300 I0>9A

Aug 12 06-0700 OH9SIX>SP2 LA>OZ 07-0800 SM7>DL G>F UT5G>SP6,PA LZ9>SM5 OM3>PA UU5SIX>SP6 09-1000 GM>F(ms) UR>PA YO3KWJ>SP2 F>SM5 LZ1>DL PA>SM5(ms) 10-1100 SM5>PA(ms) UT5G,YT1,F>PA G>OZ(ms) LZ2,YZ1>OZ I7>SM5 11-1200 YZ1>SM7 UT5G>PA G>PA(ms) PA>OZ 12-1300 G>SM2 EI>PA(ms) G>9A(ms) 13-1400 PA,G>9A OZ>PA(ms) 17-1800 UU5SIX>OK1 9H>IS0 LZ2,YT1,LZ1>PA LA,SO5>I5 9A>ON SM3>PA(ms) UT5G>I1 18-1900 SM7(ms/t) 5B4CY,OD5SIX,SV2,YU1EO,I7,T9>PA SP6,I0>SQ9 PA>9A LY>OH1 G,SM7>I8 I0>OZ,SP6 F>OZ GD,G>SP6 EO6>I2,9A EH3>S5 19-2000 S5>PA G>SP6,I8 EH3>SP9,I1,9A H5>OK1 EH1>I8 20-2100 EH5>OZ,DL 22-2300 I5>LX,OZ>I5(ms) 23-2400 DL>EI(ms)

Aug 13 08-0900 5B4CY>9A 9A>4X 09-1000 G,SP3>SP6 SV1SIX>I1 10-1100 I6>I0 12-1300 OH7>PA(ms) 1651 CN8MC>EH3,I5 9H>EH3 I0>I2 18-1900 CU3URA>EA7 CN8MC>EH3 CT3>EA5 20-2100 LZ9>YU1 21-2200 SM5>DL OZ>SM5 22-2300 SM5>DL

Aug 14 09-1000 I5>PA(ms) 10-1100 CN8MC>EI G>PA,EI EI>OE5(ms) 11-1200 PA>EI 1546 EH5>EH5 1631 EH4>9A 1741 I5>PA(ms) 1957 OH7>SM5(ms) 2011 OH7>OZ(ms) 22-2300 SO5,G>I5(ms)

Aug 15 07-0800 S5>I0 I0>I8 S5>I3,SP6 08-0900 GM>OZ 09-1000 S5>I5,I1 S5,GB3MCB>I3 EI>PA 11-1200 S5>I3 CT>PA CT0SIX>F G>9A ON0SIX>DL(t) 12-1300 9A>PA OH1>OZ(ms) 13-1400 CN8MC,OY6SMC>F 14-1500 OY6SMC,CN8MC>F 1721 YK1AO>IK8DYD(?)

Aug 16 0952 OH9SIX>ER1 10-1100 I5MXX,OH1SIX>ER1 OH2>PA EH9,CN8MC>I1 F>9H OH1>ON,PA 11-1200 OH5SIX>PA OH7>DL,PA,9A OH8,OH4,OH5RAC,OH6>9A OZ7IGY>EI OH5SIX>DL,SP6 OH5RAC>ER1 OH9SIX>SP6 12-1300 GM,OH5>DL EI>PA,OZ,DL EH5>I2 OH5SIX,GM>PA UR>EI OY6SMC>F OH9SIX>SP6 13-1400 CN8MC>F OH5>PA OH5SIX>DL OH9SIX>DL,SP6 OY6SMC>DL,OE5,SP6 ON0SIX>9A 14-1500 OY6SMC>PA OH9SIX>SP6 G,OZ7IGY>I5 SP6>SP2 SM5>EI DL,G>I8 15-1600 G,ON>9A G>I4 F,I0,I1,I5>OZ YU1>ON 16-1700 OZ,LA>I5 S5>OE6 I5>LA PA>OE6 9A,YU1>PA 17-1800 YU1>PA I0JX>OZ FX4SIX>SP9 2019 GM>PA

Aug 17 07-0800 SV1SIX>I3 OK1>EA5 S5>F 09-1000 EH2,9A>I3 EH9,EH4>I5 IS0>F EH5>PA,DL EH4>PA EH1>I4 10-1100 GB3MCB>I5 9A,CN8MC>I3 I3>9H CT0SIX>I8 11-1200 IK5ZUL>EI 12-1300 EH9,F(t)>I1 EH7>9H 1318 CU3URA>EA7 1538 OD5SIX>I2 1618 IK5ZUL>I2 17-1800 3Ctv>EA7,G

Aug 18 0844 UAtv>EI 0903 YU1>9A 10-1100 SV1SIX,9A>I4 UT5G>I0 11-1200 I0,OH9SIX>ER1 UU5SIX>I4 UT5G>I5 SV1SIX>I3 16-1700 OH5SIX,OH5RAC>9A 1825 9A>I3 20-2100 LZ3>OZ DL>EI OZ>I8 I8>PA I9>OZ,LY

Aug 19 0608 UU5SIX>9A 0759 9A>RK3 08-0900 UT5G>PA,I5,I3,SP6 UU5SIX>RK3 YO3KWJ>F UR>DL,9A,I9 SR5SIX,LY0SIX>F 09-1000 UR,SP9,OY6SMC,YO7>PA OH0>I0 SM0>I2 SM5>I3 UR,YO2>I5 UT5G>F,PA YO7,LY>F GM,I5>SM5 OH1SIX,OH0,SM5>EI 10-1100 LZ3>I2 UT5G,TF3SIX>PA YO7>I8,OZ UR>ON,DL OH5>I4 SV8>DL ES1>I4,9A SP7>9H 12-1300 OH5RAC>ER1 TF3SIX>EI LZ1>HB PI7SIX>I8 I0JX>OZ 13-1400 OZ7IGY,PA,ON>I8 EI,F>9A I8>DL PA>I7 SR5SIX>EI F>9A OZ>I0 14-1500 GM>I8 DL>I0 PA>I7 GB3IOJ>9A OZ7IGY,OZ6VHF>I5 LA>I5 I8,I0,I5>DL T8>OZ SR5SIX>I2 15-1600 YO7>DL UU5SIX>OZ SM1>I8 OH5>LZ2 UR>SP6,DL,SP9 ES4>I2 16-1700 ES4>LZ3 OH0>I5,S5,I0 UR>9A,OK1, OZ,DL,SP6,SP7,SP9 IT5G>PA YU1EO>OZ 9A0BHH>9A SM0>I8 ES5>I2,LZ2 SM7>LZ2 SP4>F I0>LA LY>S5 IS0>I5 9A>DL,PA OH5SIX>ON 17-1800 SM7,HF1,DL,SP1,OZ, LY,SM0,SP5>I8 9A,UR,OH5,SP9>DL ES5>PA,I8 IS0>SP2 SP4>I2 OH5>I5 I0>SM0 YU1>DL,OZ UR>PA,I4 I1>SP9 I9>OZ SP2>SP7 LZ2,OM3,UR>PA SM0>I8 I9>SM0 18-1900 LY>I3 I8>SM5 YO5>DL,PA,ON YZ1,9A,T9,LZ2>PA SR5SIX>EA6 SP1>I8 YO3KWJ>DL EH6>SP9 9A>I2 I9>ON 19-2000 I9>PA ,I2,SP7 UR>I1 47.9(CE)>EA7 2146 ZD8VHF>EA7KW

Aug 20 0752 4X>YO5 09-1000 4X,OD5SIX>9A CN8MC>EI 1236 EA3VHF>9A 13-1400 I9>PA,I3 EH1DVY>I3 14-1500 I0JX>CN GB3MCB>I0 16-1700 GB3LER>EI 2041 CU3URA>EA8 2141 JW7SIX>LA

Aug 21 08-0900 S5,9A0BHH>EA7 CT0SIX,S5>I5 09-1000 G>S5 UT5G>I5 10-1100 EH7,CT0SIX>I0,I4 EH7>OE5 CN8MC>I0 19-2000 G>DL,HB(ms) 21-2200 G>SQ4(ms)

Aug 22 0712 UT5G>PA 0937 G>HB(ms)

Aug 23 09-1000 UR>SM5,DL SM0>UR OH5>PA OH6>SP1 10-1100 OH5RAC>PA UR>SP7, SM7,DL,OK1 OH9SIX,OH8,OH6>DL OH5>OZ OH9SIX>OE5,OK1 YO8>SM7 11-1200 LA7SIX>DL 12-1300 SR9FHA>EI IK5ZUL>I8 SM0>9A 16-1700 UT5G>SM0LA>UR 17-1800 UR,YO8,YO3KWJ,LZ1>SM0 GB3MCB>CN YU1>OH6 UR>SP6 OH5>OE5,I4 SM3,SM0>ER1 UU5SIX>OZ 18-1900 UR>OZ,PA OH5SIX>I4,I0,PA SP7>PA DL>SP3 G,FX4SIX>OH1 S5>OH6 LA>ER1 9A0BHH>OZ LY0SIX,ES1>I1 OH5RAC>PA OY6SMC>SP2 19-2000 9A,OE3XLB,S5,I4>SM0 UT5G>I1 UR,SQ9>EI I0>OZ,OH1 OZ,SM7>I8 GM>9A S5,I4>OH1 G>SQ4,SP3 F>CN I6>LA I3>SM7 20-2100 GM>I2 UR>EI I4,I0>SM7 LA>I8 OZ>I1 UT5G>DL 21-2200 I9>PA EI>DL 22-2300 DL,SV1SIX,IQ4AD>EI EH2>DL

Aug 24 09-1000 UU5SIX>DL,SP6 UR>9A 10-1100 GB3MCB,GB3BUX>I0 1117 UR>I4 13-1400 FX4SIX>EI CT0SIX>CN 1433 LZ2>4X 16-1700 I0JX>CN UT5G>I4 17-1800 S5,SV1SIX>I5 S5>I3 OZ>PA SV8>I2,I1 IS0(t),I5>I8 I7>OZ,PA I0>ER1 18-1900 SV8>I0,I8 I8>PA YU1>4X OZ>DL Z22JE>IK4DRY I0>OZ S5>CN,EI 19-2000 I5>SM6,LA LA,OZ,OH0>F S5>I2 G>EH3 EH3>EH5 20-2100 OH0>PA G>PA,EA7 S5>EI GW>I2

Aug 25 0755 SV1SIX>EH3 0904 SV1SIX>I3 10-1100 OZ7IGY,OH2>EI GM>DL 15-1600 9A1CAL,S55ZRS>F GB3BUX>I3 F>9A LA>EA3 16-1700 GB3IOJ>9A I9,I0>PA EH5>EH3 GW>9A 9A0BHH,OE3XLB,YT1>F SR9FHA>EH3 9H>HB EA3VHF>SV1 17-1800 9H1SIX,G,GM,I8>I2 I2>OZ 9H>I3 TF3SIX,9A1CAL>EI 9A,GB3MCB,GB3BUX,SV1SIX,UU5SIX,F>LY EI>I2 GM>S5

UT5G,F>OZ GI>I3 SV3>9H 18-1900 SP4>F I5>SM0 18-1900 G>T9,SP6 GM,LA>F UR>F,PA I0>LA OH5,YO3KWJ>PA EI>9A GM,EI>I4 F>SP6,PA G>HB,DL LA>SQ6 19-2000 EI>DL OH5SIX,YU1,T9>PA TF3SIX>EI G>SQ4 21-2200 9A0BHH,9A1CAL,OE5,HB9SIX>EI GB3RMK,GB3LER>I1 22-2300 EI,GD,GB3MCB>9A EI>OE5

Aug 26 07-0800 F1GTU>SQ2 GM>I3 08-0900 LZ1>I1 I1>SM6 OZ6VHF>EH3 GM>I0 UT5G>DL 09-1000 OY6SMC>F GB3MCB>I1 YO3KWJ>PA LY0SIX>I4 10-1100 I5>SQ4 LY0SIX>I4 11-1200 FX4SIX>SP8 I0JX,I8>OZ EH3>EI LY0SIX>I0 12-1300 LA>I0 EH1DVY>EI YO3KWJ>PA 1832 TR0A>EA7KW

Aug 27 11-1200 SV1SIX>EH3 OZ7IGY>EI 12-1300 YO3KWJ>PA EI>OZ CN>I9 UT5G>I5 13-1400 EA3VHF>9H 9H1SIX>EH3 1438 OH8>SP6 19-2000 9H>I2,OZ,I4 I8>I2

Aug 28 0933 I5>9A 11-1200 UT5G,UU5SIX>9H 18-1900 YU1>OZ,SM0 LY0SIX>I4 DL>SM5(ms)

Aug 29 08-0900 UT5G>4X I3>I0 I4>DL(t),I0 10-1100 I0>I8 12-1300 UU5SIX>OE3 UT5G>S5 I7>I8 1744 3Ctv>EA7 1907 SM7>OZ

Aug 30 0653 SV1SIX>SP2 07-0800 UU5SIX>I1,9A 9H1SIX>SP2 UT5G>I4 UR,YO3KWJ>I2 08-0900 SV1SIX>I2 I9>SP7 LZ2CM>EA3 09-1000 YU1EO,9A0BHH,I5MXX,YO7>EH3 10-1100 EH1DVY>I4,9A LZ>I0 LY0SIX>I4 11-1200 EA3VHF>9A I8>PA SR9FHA>EH3 12-1300 I8>DL,SM7 EH3,SR5SIX>SP2 SR9FHA>EH3 aurora 2115 ZD8VHF>EA7KW

Aug 31 1709 3Ctv>EA7 1812 G>S5(ms)

**50MHz PROPAGATION REPORT FOR AUGUST 2004 BY SV1DH**

1. Data for all days (31), 6-9th internet data
2. Relatively good days on: 1,3,5,9,25
3. 48 MHz AF video (3C) on: 31
4. 55 MHz AF video (5N) on: NIL
5. Opening to ZS6 on: 30
6. " to OD on: 5
7. " to 5B on: 5
8. " to EH on: 1,2,5,25,27
9. " to F on: 1,21,25
10. " to I on: 1-3,5-9,13,17,18,30 (R=45%)
11. " to 9H on: 19
12. " to OY on: 5(2Es)
13. " to EI on: 23(2Es)
14. " to G on: 9,25
15. " to PA on: 3,5,7,8,12
16. " to OZ on: 3
17. " to DL on: 1,3,5,7
18. " to OE on: 5,9
19. " to S5 on: 1
20. " to 9A on: 6
21. " to SM on: 16
22. " to ES on: 3
23. " to LY on: 1
24. " to SP on: 1,3-9,19,30 (R=32%)

25. " to OK on: 3,5,8
26. " to YO on: 3(Sc),5
27. " to ER on: 1
28. " to UR on: 4,5,13

29. Special events on:
1 (2045 I2+F to VO1)
3 (0915 9A to CU)
12 (11C+1M flares)
13 (6C+4M+1X flares; 1812 **X1.0**; SSN=160)
14 (4C+7M flares; C2 Xbgn)
15 (8C+5M flares)
16 (11C+2M flares)
17 (10C+4M flares)
18 (12C+1X flares;1740 **X1.8**; C1 Xbgn)
19 (9C+2M flares+1930 EH7 to CEMuzak+2145 EH7 to ZD8/B)
20 (2145 9H to ZD8)
26 (1830 EH7 to TR/B)
30 (1100 foF2>10, MUF>31Mhz short, 2115 EH7 to ZD8)
31 (1700 3C video, signal dispersed and unstable, due to parasitic osc., new AF video carrier 48248.6 kHz)
Early end of main Es season on 10th.

30. DXCC entities heard/worked during Aug 2004 : 24 on 3 cont
31. DXCC entities heard/worked on 5th Aug 2004 : 12 on 2 cont

73 COSTAS

## The Americas

### Auroral-Related Propagation

Aug 7 11-1200 VE4ARM>W9(57a) 12-1300 VE5(DN59)>W9(EN44 55a) VE5(DN59)>VE6(DO33 59a)

Aug 1 0148 VE8BY>VE6(539a DO33)

Aug 21 0706 VE4ARM>W9(EN44 55a)

Aug 30 20-2100 VE2(FN37)>W3 VE2(FN37)>VE1(FN74) W2(FN43)>VE1(FN74) W1(FN42)>VE1(FN74) W2(FN20)>VE1(FN74) 21-2200 VE3(FN14)>VE1(FN74) VE2(FN35)>VE1(FN74) VE3(FN25)>VE1(FN74) VE3(FN25)>VE1(FN74) VE3(FN02)>VE1(FN74) VE3>VE2 VE1(FN84)>VE1(FN74) W8(EN66)>W9(EN44 57a) W2>W2(56a) VE3>W2(55a) VO1(GN08)>VE1(FN74) W1(FN54)>VE1(FN74) 22-2300 W2(FN30)>VE1(FN74) VE3>W2(55a) W9(EN84)>VE1(FN74) W2(FN0)>VY2(FN86) VY2(FN65)>VE9(FN86) VY2(FN86)>VE1(FN74) 23-2400 VE9(FN65)>VE1(FN74) W8(EN82)>VE1(FN74) 23-2400 W2(FN34)>VE9(FN65) W0(EN27)>W8(EN82) VE3(FN14)>W9 W1(FN31)>W8 W9>W8(EN82) W9>VE9(51a) W1>W3(57a)

Aug 31 00-0100 OX3VHF>VE1(FN65) K0KP>W9(EN61) 02-0300 VE8BY>W9(59au/AE) N8PUM>W9 0428 VE8BY>VE6(53a DO33)

## Other Modes

Apart from the European contacts reported in the preceding section, it was a disappointing month for DX working. As the detailed listings show, there were frequent openings between to the Caribbean, presumably attributable to sporadic-E, mainly from states east of the Mississippi. These included the YV0D expedition, worked on the 2nd from W4 and, more extensively on the 3rd from W4,W5,W8 and W0. (Every effort has been made to assign stations to their correct call area, but the occasional out-of-area call may have slipped through.) Further afield, LU was claimed from W8 on the 4th, Morocco from VE1 on the 6th, and KL7 from Alaska on the 2nd.

Reports of any kind dropped off sharply after about the first ten days, doubtless in large measure reflecting the decreasing incidence of Es and the associated fall-off in activity, but also due to a reluctance among many operators to report routine contacts. The picture was probably not quite as poverty-stricken as the postings suggest! However, the decline in Es appears to have been greater than in Europe.

Unlike Europe, there was little apparent use of JT6M and very few ms contacts were reported.

Aug 1 00-0100 W8,VE2>W4 01-0200 W4>W0 W2,W4,K0KP>W5 02-0300 W9,VE3,W7>W5 W0>W4 03-0400 W6,W7>W7 W6>W0 13-1400 W4>W2 VP9KK>N2NRD,AD1C VP9GE>W1MU 9Y4AT>W1MU K0KP>W5 W4>W2 14-1500 VP9GE>VE2DC W4CHA>W2 W3>W3 W0IJR>W9 15-1600 W0>W4,W3,W0,W2 K5AB>W0 K0ETC,W5GPM>W4 17-1800 VE3>W5 K0ETC,KE4SIX>W0 W7>W7 18-1900 W6>W7 10-2000 W0>W8 21-2200 VE3>W4 23-2400 W0>W1,W2 VP9GE>K3OO

Aug 2 00-0100 W8>W0 W0>W5,VE2 W9>W4 VE4>W56 W9JN>W0 01-0200 W8>W0 VE4>W0,W5 W7>W7 K6FV,VE5>W0 W8>W3 W5GPM,VE5>W3 02-0300 VE4>W5 K0KP>VE6 W7>W6 W5>W4 0319 KL0RG>W6 1251 YV0D>YV5 14-1500 W4>W4 17-1800 YV0D>W4DTA 2256 P43L>NW5E/4 23-2400 YV0D>N4IS,NL7AU/4,PY8AZT,W4DUP,W4TO,K4MQG,KO4JRS, KO4BB,W1RA

Aug 3 00-0100 YV0D>K3JT,W3UR,VA6SZ,K4RX,W4TJ,WP4NIX,W4DTA P43L>W4GDC 01-0200 YV0D>W4GDC 14-1500 K0KP,W3>W1 W2>W4 15-1600 YV0D>K0HA,N0JK/5,K8WW W5>W5 16-1700 KD4HLG>W5 YV0D>KP2BH 1720 K5AB>W9 2353 N0LL>W2

Aug 4 1436 9Y4AT>N3DB 15-1600 C6AFP,9Y4AT>N3DB 16-1700 C6AFP>K2MUB,K1GUN 17-1800 9Y4AT>W1JJ FG5FU>N3DB,W8LU V44KAI>N3DB VP9GE>WP3 18-1900 W8,W7>W5 9Y4AT>K8KS,K2MUB,AA2AE W4,W9>W2 VE2,W2>W3 9Y4TL>K1GUN 19-2000 FG5FU>K1GUN.K8KS 9Y4TL>AA2AE,N2AU,K4MQG W7>W5 VE3,W1>KP4 K0KP,VE2>W4 W1>W0 VP9GE>K8KS XE2>W5 KP4>W8 V44KAI>VE3FGU 9Y4AT>AA2AE 20-2100 W8>KP4 LU9EHF>K8WW 9Y4AT>K8WW W4>W2,W3 9Y4TL>W2KKZ,KB2WTB,VE1CSM VO1,W1,VE2>W3 W3>W8 FG5FU>KB2WTB,VE3TMG W8,WA1OJB,VE2>W2 21-2200 NP3CW>N8CJK FG5FU>VE3CRU,N8UUP,K8WW VE1,VY2,W1,VE2,VO1,W4>W3 KP2>W2,VE1 VE2>W2 PJ2MI>N2AU KP4>W3 22-2300 W4,VE3,VE1>KP4 W0,VE9>W2 VY2>W3 KP4,W1>W0 W7>W5 W8,W3>VE1 YU1EU>W1RA 23-2400 VA2MGL,VA2YKT,VE9>W8 W9,W0>W3 VE1MR W8>W2,W9 W7>VE3 VE9,W9,VE1>W0 W6,W7,W9,W2,XE2>W5 W1>W9,W0 XE2>W2,W3 K0UO,K0KP,W9AFB,W9JN,W8>W2 NP3CW>W4 W6>W9

Aug 5 00-0100 W7,W9,W6,W5>W5 W1>W9,W0 W9AFB>W2 W2,W9,W0>W3 W6,VE4ARM,W9>W8 VA2MGL,VA2YKT>W2 W1,W2,W3>W9 W7>W8,W9,W2,W3 VE1>W7 VE1>W0(2xEs) W5>W0 W8>W4 01-0200 XE2>W4,W5 W6,W7>W5 W1>W2,W6,W8,W9,W0(2xEs) VY2,VE2YAT,VE9>W3 W0>W4,W7 VE2,W7,W8>W8 W9>W9 W9>VE1 02-0300 W6>W9 WA7X,W6>W5 W1,VE2,W9,W3>W8 W1,XE2>W0 W5,W0>W1 W1>W2 XE2,W8>W3 W5,XE1,W0>W7 W9>VE9 03-0400 W9,W0>W3 XE1,XE2,W7>W6 W7>W7 W0>W9 W2>W9 XE2,W6>W5 W5>W1 W9>W4 04-0500 W0>W4,W3 VE4VHF>W7 W6,W7>W3 0507 XE2>W6 1044 VO1ZA>W2 12-1300 N0LL>W1 13-1400 K0KP>VE6 W0>W1 14-1500 W5,N8PUM>W4 VE3,VE5>W8 N0LL>VE6

W3>VE6,W5 W8>VE6 W3,W4>W5 VE4VHF>VE3 15-1600 W8>VE6,W9 W3,W4,W8>W5 W1>W0 W2>W4 VE5>W3 16-1700 W1>W1 VE5,VE4>W4,W9 W0>W9 W2,VE3,W8>W5 17-1800 W5>W3 VE6,W0>W9 VE4VHF>W4 K0UO>W2 18-1900 W0>W4,W8 1928 VE5>W3 2053 KA7BGR>XE2 21-2200 XE2>W7 W3>W3 2354 W6>W5

Aug 6 13-1400 W3>W4 OX3VHF>K1GUN W5>W3 14-1500 W5HN,K0UO>W3 1822 EAtv>W0 21-2200 W0>W2,VE3,W3 N8PUM>W4 VE3>W0 K0KP>W2,W3 VE4VHF>W2 22-2300 W9>W1,W3 VE4VHF>W2 W0>W2,W3 CN8KD>VE1ZZ VE3>W4 23-2400 VE4>W1,W2 W4>VE3

Aug 7 00-0100 W9>W4 W8,W5>W5 W5>W2 01-0200 N0LL,W5>W3 0957 48250>W2 aurora 1252 C6AFP>W4TJ 13-1400 K2ZD,W4>W4 W4>W1 14-1500 W4>W1 W8>W4 W5>W7 1533 YS1YS>K8WK,K2MUB 16-1700 YS1YS>K4RX,K2MUB 17-1800 K5AB>W4 2054 VY2>W4 21-2200 VO1ZA,VE1SMU>W3 VE1>W2,W4 23-2400 VE1>W3 W1,VE1SMU,W4>W4

Aug 8 00-0100 VE2YKT>W4 W2>W2 01-0200 VE1,VE3,W2,W3>W4 02-0300 K0KP,W9>W4 W5>W1 03-0400 K5AB>W8 W4,W2>W5 W5>W9 VE7>W6 04-0500 K0ETC>W3 W5>W2,W9 KS5V,W5RP>W8 W7>W7 K4TQR>W0 VE8BY,K0KP,N0UD>VE6 K4AHO,W4CHA>W8 W5RP>W9 0510 KD4HLG>W0 11-1200 VA2MGL>W2 W4>W1 12-1300 W4CHA,K4AHO,C6AFP>AK3E W1,W3,VO1ZA>W4 13-1400 48250(EA)>W4 W5,VO1ZA>W4 CO2OJ>W4SO W5>W1 EH7RM>K4RX W5>W3 W4>W2 14-1500 VP5VAC>K2LZQ,K0HA,AA2DR W4>W2,W3 HI3TEJ>AK3E,W3UR,K3OO,K4UTE 48242>W2 C6AFP>K0HA EAtv>W4 W9>W9 15-1600 VP5VAC>K2QPN VP9GE>K4UTE W7>W0 CTtv>W7 HI3TEJ>K4RX,KB2WTB,W1MU,W4HY,KB9JCW W4CHA>W2 6Y5IC>K4JAF,KO4BB W4>W1,W3 C6AFP>WQ5W 16-1700 W5>W4

Aug 9 0059 VE5>W9 0121 W9>W9 13-1400 K0EC>W9 2120 VP5/K7BV>NW5E/4 2224 VP5/K7BV>K4RX(ms)

Aug 10 0206 W0>W4(ms) 0526 VE8BY>VE6 10-1100 VP5/K7BV>K4RX 11-1200 VP5/K7BV>K4MM,N3II,N3DB,K4MQG,W4IR 12-1300 VP5/K7BV>K4MM,W1MU,N3DB, 13-1400 VP5/K7BV>NW5E/4,N4GM,W4GF 1735 K0KP>W9 2000 VP5/K7BV>K4CIA 2220 VP5/K7BV>K4RX

Aug 11 1249 W3>W1 13-1400 W1>W1 W1,W8(sc)>W3 VE5,K0KP>VE6 14-1500 VP5/K7BV>K0HA,W3JO,K2JF,K8WK 15-1600 W4>W4 VP5/K7BV>K4CIA,K4JAF,ND0J 16-1700 W8>W5 W5>W0 VP5/K7BV>K0HA,W9SE 17-1800 VP5/K7BV>W9RPM,N0JK,N3II,K0VM,N3DB,AF9R 18-1900 VP5/K7BV W3JO,W3BW,N8UUP,K4MWB,K8YC K0KP>VE6 20-2100 N0UD,VE5>VE6 W4CBX>W0 W0>W5 22-2300 VP5/K7BV>K4RX(ms)

Aug 12 0121 K0KP>VE6(ms) 03-0400 W1>W9(ms),W0 W9>W9 04-0500 W1>W1 05-0600 W3>W2 VE2>W3(sc) 0658 W7>W7 1343 W1>W9 1419 W4>W1(sc) 1503 W1>W4 1652 VP5/K7BV>W1JJ 9Y4AT>FY1FL 1932 VE4>W7

Aug 13 0330 W0>W4 11-1200 W5>W4(ms) 13-1400 W3<W4(ms) VP5/K7BV>NW5E/4 14-1500 K0UO,W5HN,K5AB>W3 W0>W3

Aug 14 0108 W1>W3 1358 W1>W9 14-1500 W1,W2,W3>VY2 W2>W1 1515 W9>W9

Aug 15 14-1500 W3,W1>W9 VE2YKT>W1 W9VW,W0>VE1 15-1600 VP5/K7BV>W4TRH KD4HLG>W0 W8>W5 1647 W5>W9 18-1900 W4>W3 21-2200 N8PUM>W0 W4>W4

Aug 16 03-0400 W0>W2 VE2>W0

Aug 17 16-1700 W4>W8

Aug 18 1359 W4>W3 14-1500 W4>W2,W3 W3>W3 15-1600 W4>W3 1617 VP5JM>K3KO 2322 W9>W0

Aug 19 no reports

Aug 20 0044-0128 W9>W9 1756 OH7PI>W1JJ(eme)

Aug 21 01-0200 VE4VHF(Es),VE4ARM,K0GUV,K6FV(Es)>W0 1224 W8>W4(ms) 18-1900 VE1>VY2 VO1>W3 VA2MGL>W3 VE9>W9 1912 VE3>VY2 2242 VE1>W4 23-2400 VE2>W4 VP9GE>K2MUB,VE2DC WA1OJB,VE1SMU,VE9BEA>W4

Aug 22 00-0100 W1,VE1,VE2,N3LL>W4 W3CCX>W2 01-0200 WB5LLI,W4>W8 W1,W2>W4 W0>W2 1400 W4>W4 1527 W2>W9

Aug 23 0306 W0>W3

Aug 24 0014 W4>W4 0146 VE2>W4 16-1700 W4CHA,K4AHO>W3 KD4HLG>W9 2242 48.3(CE)>W4

Aug 25 13-1400 W8>W5 VP9GE>K1GUN 14-1500 K0UO>W4 W5AB,W5HB,W5RP>W4 W5,W0>W3 N8PUM,N3LL>W5 15-1600 W5,K0UO>W4 WB5LLI,W0>W3 W3>W5 W1,W8,KE4SIX,KD4HLG>W0 16-1700 W4>W3 17-1800 W4CHA>W3 W5>W2 22-2300 W7>W5 23-2400 VE4VHF>W7 VE6>W0 W7>W5

Aug 26 0012 WA7X>W0 0135 W6>W5 11-1200 W1>W1(t) VE2>W4 12-1300 VE1,W1,W2>W4 VE1,VE2>W3 W1>W2 13-1400 W2,W4,VE1,VO1,VA2MGL>W4 W4>W2 14-1500 VE2,VE3>W0 W5>W8 15-1600 K0GUV,VE1SMU>W3 22-2300 W4>W4 48.3(CE)>W4

Aug 27 1520 W4>W3

Aug 28 0041 W3>W4 1236 W9>W4 15-1600 W4,W8(sc)>W4 2036 W4>W4

Aug 29 1238 W1>W4(sc) 1326 W1>W4(ms)

Aug 30 aurora 23-2400 WA1OJB>W4 W8>W9

Aug 31 15-1600 W4>W4 19-2000 W1,VE2>W4 VE1>W8 20-2100 VE2>W4 W8>W3 21-2200 VE1>W4,W0 W9>W2 W1>W9 VE2>W3 WA1OJB>W0 22-2300 W1>W0 K0KP,VE2,VE4VHF>W3 W1,VE1>W9 23-2400 W9>VE2 W0>W3

## Asia/Pacific

### Japan

JA1VOK's report records a patchy month, with several days when no signals were reported from outside JA and most reports relating to stations within Asia. The exceptions were VK4, reported on the 16th and VK6 on the 15th, 16th, 18th, 22nd, 23rd, 24th and 27th. It is notable that all but one of these reports was of a beacon. Even allowing for the great distances between some of the VK beacons from real live operators, it looks as if few of the latter are following the band closely nowadays.

**6m DX results in JA during August (JA1VOK)**

| DATE | TIME(UTC) | STATIONS |
|---|---|---|
| 8/ 1 | 0910-1000 | DU1EV/B, VR2XMT |
| 2 | 0920-1000 | 9M2TO/B, 6K2DHP, VR2SIX/b |
| | 1445-1530 | VR2SIX/b |
| 3 | 0600-0800 | 9M2TO/B, DU1EV/B, VR2SIX/b |
| 4 | 1000-1100 | DS1MFC, JD1BKW/JD1, VR2SIX/b |
| 5 | 0050-0500 | VR2XLN,SIX/b |
| 7 | 0840-1200 | DU1EV/B, 6L0NJ/4, VR2SIX/b |
| | 2330-0000 | VR2SIX/b |
| 8 | 0230-0530 | BG7IFT, BN0F |
| 9 | 0930-1100 | BD4SXA, DS1GQS,HL1JV |
| 14 | 0130-0230 | DS4EOI, VR2SIX/b |
| 15 | 0830-1030 | HL4ACE, VK6RSX/b |
| | 1435-1450 | YC1MH |
| 16 | 0830-1030 | VK4CXQ,4ABP/b,6RSX/b |
| 17 | 0900-0930 | 9M2TO/B |
| 18 | 0750-0900 | VK6RSX/b |
| 19 | 0850-1030 | BV4CT, DU1EV/B |
| 20 | 0313-0320 | DS1MFC |
| | 1015-1130 | VK6RSX/b |
| 22 | 0400-0600 | BV4CT, DU1EV/B, JD1BKW/JD1 |
| | 0830-1100 | BV4CT, DS1CUI,2VOB, VK6RSX/b |
| 23 | 0630-0700 | DU1EV/B |
| | 0950-1030 | VK6RSX/b |
| 24 | 1055-1100 | VK6JQ |
| 25 | 1016-1030 | BD4SDB |
| 27 | 1030-1230 | BD4SDB, VK6JQ,8MS |

## Elsewhere

The brevity of this section speaks for itself, and surely confirms earlier comments about somnolence in VK. A61AH's report of the Lebanon beacon is the highlight. But was this really the only such opening in the entire month?

Aug 3 0804 JA6YBR>DS1
Aug 6 1000 OD5SIX>A61AH
Aug 7 05-0600 JE7YNQ,BN1F>DS1 06-0700 KG6DX>DS1
Aug 14 0256 JA1>DS4

# Beacon News and 28 MHz Worldwide

Compilation and Commentary by G3USF

## Beacon News

Because of the time lag in publication items may be posted here before the formal date of this Report.

| | |
|---|---|
| 3530 | DK2CF QRSS/QRP may be temporary (Oct.) |
| 5290 | GB0WES (Cumbria) and GB3ORK(Orkney) transmit sequential to GB3RAL (GB2RS) (Oct.) |
| 7033.1 | DL4DSS qrp beacon in JN57DC a1a/psk test or permanent? (Oct) |
| 10141.85 | IK3NWX Rovigo (JN55VB) currently testing with 2 watts (G4TMV)(Oct.) |
| 14100-28200 | OH2B now at Lohja (KP20). Exact site not disclosed for security reasons (OH2LX) |
| 28178 | NP4AE reported here (Oct.), no further information |
| 28214 | K0HA (EN10) testing beaming 030 for northern Europe, temporary and intermittent (K0HA) (Oct) |
| 28234.5 | KB1KDC power now 500mw (KB1KDC)(Oct.) |
| 28268.9 | AA1TT Claremont NH (FN33) reported here with 5 watts (Oct.) |
| 28279.7 | KK0CQ Devil's Lake ND(EN08NC) new beacon (Oct.) |
| 28280.1 | KC9CNK Madison WI (EN53) new beacon (Oct.) |
| 28284.8 | WD8AQS new frequency (K0HA)(Oct.) |
| 28186 | NU4G has moved to this new frequency (NU4G)(Oct.) |
| 28705 | new frequency for DA5MMB (Oct.) |
| 50006 | PY0FF now operating 24/7 again with 30 watts to vertical (PY1RO) |
| 50059.8 | W4CBX (EM86) new beacon (Aug)(K0HA) |
| 50080 | VE3RCN Kingston ON (FN14TH) new beacon runs intermittently with between 3 and 50 watts into 5-element with varying beam headings. (VE3RCN) |
| 50065+/- | N9TNY running 2 watts from Geneva IL (EN51UV) into J-Pole at 50'. 3-minute cycle (VE2PIJ)(Oct) |

## 28 MHz Worldwide

While sporadic-E was declining across the northern hemisphere on 50MHz, it held up well in Europe on 28MHz, reported during all four sections of the day at 84 per cent or better. The 10th was the only really poor day - for no obvious reason. By contrast, in North America no period of the day exceeded 80 per cent and there were no reports of propagation within the North/Central American region on the 16th and 28th, while the 10th was also poor there, again for no obvious reason. If Es were human one would be tempted to say it can be arbitrary and capricious. Another way of expressing it would be to say we have still much to learn about Es, even if the basic mechanisms appear to be well understood. Little Es was reported on the 30th too, but that was the month's most disturbed day, so no puzzlement there!

Propagation between Europe and Africa, predominantly by F2 but doubtless helped on its way by Es on occasion, was reported ever day except the 3rd, with Europe's mornings and evenings the most consistent periods of the day, doubtless because absorption was high around mid-day and in the afternoons. Absorption was no less a factor in Europe<>South America working, with the European evenings producing the greatest consistency. This path is known to have opened on all days except the 5th, 18th, 24th and 31st. North Americans reported working into South America on 24 days, with local noon the most favoured time and into Africa on ten days.

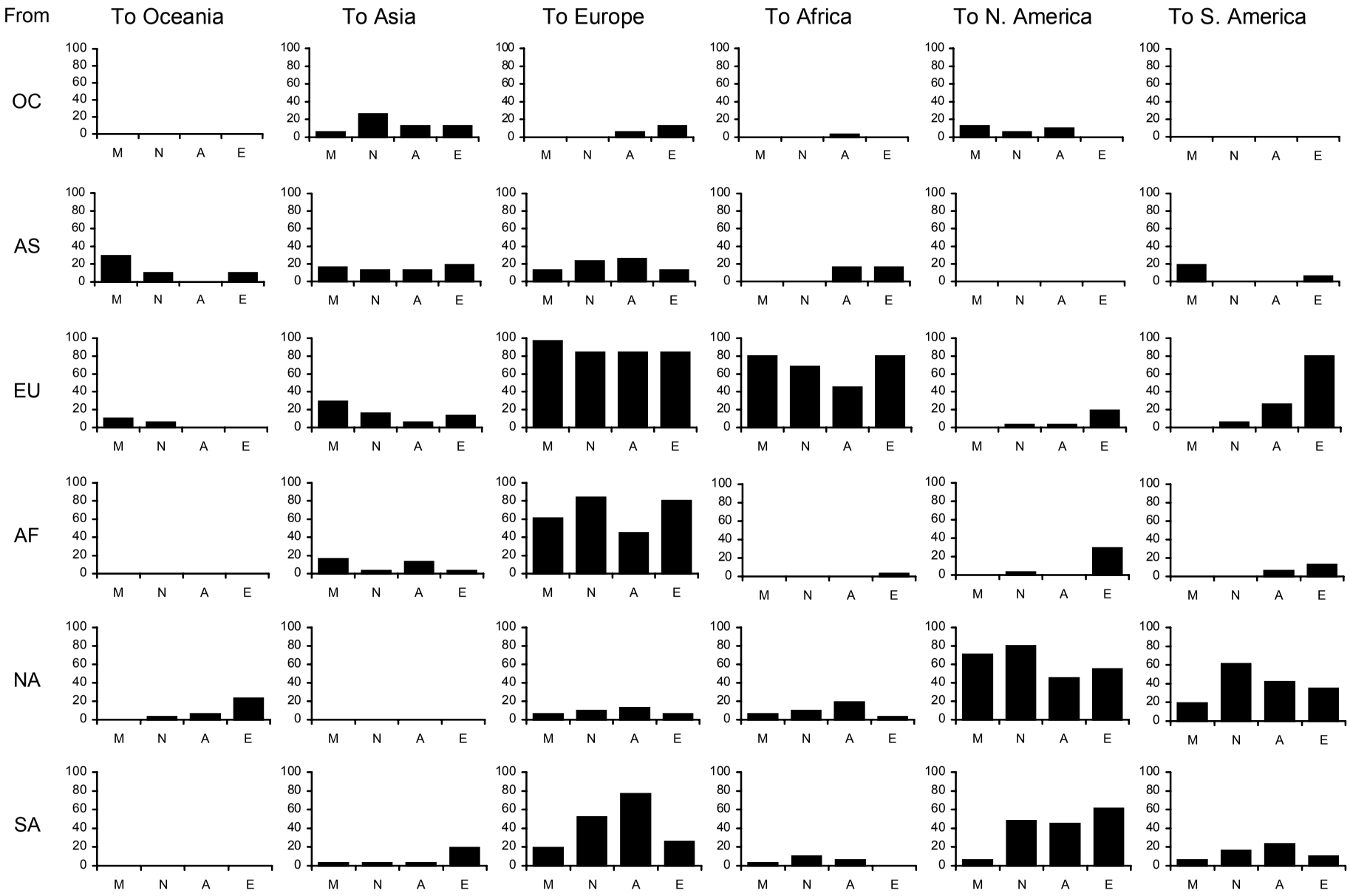
By contrast, the principal east-west paths opened infrequently and scrappily. Europe reported Asia on only twelve days. These included a morning (UT) opening into JA on the 15th. North America was reported into Europe on seven days, mainly in the evening and mainly into the Mediterranean. The 14th produced the greatest number of reports - unsurprisingly during the WAE contest, when the East Coast was worked around 1245UTC and again at various times between 2045 and 2200. This period extended to parts of northern Europe. While multi-hop Es looked the more likely mode one report suggested scatter from a 240 degree heading. There were no reports of contacts between North or Central America and Japan. Propagation between Europe and Oceania was reported on only four days. However, Oceania was worked from North America on ten days.

None of the other paths reported significant levels of propagation.

During the afternoon (UT) of the 30th there was extensive working between SM, OH and OY, as aurora happily coincided with a contest, and there was also one reported contact between SM and UA9, all apparently attributable to auroral E.

(Worldwide graphic data on the following page)

## 28 MHz Worldwide - August 2004




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