
VHF/UHF – An Expanding World

David Smith VK3HZ
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Weak Signal

David Smith - VK3HZ

During the month of May, some heightened solar activity resulted in auroral openings in the south of the country.

Thanks to Tony VK3CAT in Melbourne for the following report:

“Sunday 15th June from 0700z 0817z. The Space Weather forecast was for possible auroras following a CME event. At 5 pm local time (0700z), the Wagga Wagga TV video carrier on 46.240 MHz was received with heavy AU distortion. For the first time ZL TV video on 45.250 MHz was also received with AU distortion and ZL TV audio on 50.750 MHz was received with severe distortion. As I have never logged ZL TV in an AU event, it may be possible that there were also some local mid-year Es around as well providing the link.

The first station worked was Karl VK2GKA on 144.100 CW RST 55A. Ron VK2BHO was worked on 50.120 CW RST 52A. Other stations worked on six metres were Norm VK3DUT at Lakes Entrance and Kevin VK3WN at Ballarat.

Further 2 metre contacts were on SSB with Peter VK5ZLX, Colin VK5DK, Karl VK2GKA and a CW / SSB contact with Trevor VK5NC. Towards the end of my operating time - had to cook the BBQ - Doppler shift on 2 metres was close to 2 KHz whilst the maximum Doppler shift on 6 metres was several hundred Hz.

It was nice to hear some CW operation on both 2 & 6 metres. CW operation was much easier and quicker than the SSB mode with operating speed only at about 15 WPM.”

Ed VK3BG from KooNooMoo on the bank of the Murray River reports:

“Between 0712Z and 0839Z, I worked VK3KAI, VK5ZLX, VK3ZYC, VK1ZQR, VK3KEG, VK3DUT, VK3BBB, VK5NC and VK3ZQB. All the signals were around S9 or better, readability 4, peaking 150 true from here. There were other VK2, 3, & 5 stations also that I did not work, as well as some CW.

It affected HF as well, signals on 40 m were very fluttery around 0730z when I worked my mate Ron, VK4BRG/P west of Charleville, but nothing was heard from him on 6 m at that time.

The Aurora reappeared around 0700z on Mon but no one worked from here.”

Peter VK3KAI in Churchill reports working VK3ZQB, VK3KEG, VK3BG, VK5ZLX, VK2GKA and VK5NC. Also heard were VK3BJM and VK3ZYC. Surprisingly Jim VK3ZYC, a relative neighbour, was not audible direct, only via Au - too much dirt in the way.

Trevor VK5NC reports going portable to the local hilltop in Mt Gambier. There he worked VK5ZLX, VK2GKA, VK3ZYC, VK3DUT, VK3KAI, VK3CAT, VK3BG and VK3BBB. Activity was a bit scarce. Most signals were very strong and some a little difficult to copy.

Other activity for the month included some tropo enhancement from VK3 to VK5, thanks to the good weather and a number of slow-moving high pressure cells passing across the area. A small group of operators seem to be consistently present at the VK5 end of the contacts. Brian VK5UBC in Gawler, Garry VK5ZK in Goolwa,

John VK5PO in Eden Valley and Peter VK5ZLX in Angaston all put good signals into Melbourne and further afield. Signals should improve following work currently in progress on antenna systems. We managed to capture a photo of Peter, John and Brian, operating from an impressive location in the Barossa Valley area.



Aircraft Enhancement

Several years ago, Barry VK3BJM moved from his Melbourne location to a country site near Kyneton. He has been re-building his station and sent the following report on his findings working the morning aircraft enhancement net from his new location.

“ A couple of interesting AE contacts in the last couple of months from near Kyneton.

Way back on February 26th, at 2126z, I worked Kerry VK2BXT (Campden) with 41 - 52 reports exchanged. On April 9th, at 2256z, I worked Bill VK2ZZF (Cherrybrook - near Pennant Hills in Sydney) with 51 - 55 reports exchanged. On May 6th, at 2225z, I (just) managed to work John VK2TK (Wentworth Falls) 51 - 51 reports exchanged. On June 3rd at 2256z I worked Brian VK2BX (Gerroa - on the NSW coast between Kiama and Nowra) with 51 - 53 reports exchanged. Very pleased to have worked Brian, considering his location cannot be ideal for shooting in my direction. I've worked Guy VK2KU (Marulan) at times of 2157z and 2149z (during Daylight Saving) this year.

I work, reasonably regularly, Karl VK2GKA (Mittagong) and I thought I'd look back through the log since I fired up here near Kyneton in October 2003. I found I have worked Karl 41 times over the 20 months, and 11 of those contacts have been made in the 10-minute window between 2250z and 2300z (2150 and 2200z during Daylight Saving). 10 contacts have been completed between 2235 and 2245, and 9 contacts between 2210 and 2220. Four contacts were made in the 4-minute window either side of 2225z.

It's fairly obvious that there are a couple of hotspots for AE between Sydney and Kyneton, and the ten-minute window between 2250 and 2300z seems to be the pick of them. My belief is that it is aircraft flying between Melbourne and Brisbane that are best positioned to provide this path, and slight adjustments to the time window would provide similar contacts for other stations in Central Victoria with a reasonable operating location and take-off to the NE. I'm not convinced that I get much assistance from the Melbourne-to-Sydney aircraft, when working into the Sydney area - though they provide plenty of assistance when working the area between Canberra and Nimmitabel.

I haven't gone through the many contacts I had with Gordon VK2ZAB before he closed operations, but I think I should, to help clarify the pattern."

GippsTech 2005

Hopefully this magazine will be out before the weekend of July 9th and 10th when GippsTech 2005 is due to be held at Churchill in southeast Victoria. GippsTech is an event not to be missed by the serious weak signal operator.

So far, the list of presentations on offer include:

Calculating Troposcatter Losses - Rex VK7MO

Lightning - Effects of a Near Strike - Guy VK2KU

More Ideas and Measurements of Elevated Ducts - Andrew VK3KAQ

Noise figure measurements over the years - Chris VK5MC

High stability crystal ovens based on zero temperature gradient - Rex VK7MO

Modification of the FT847 to eliminate frequency drift - Joe VK7JG

Small Station EME - David VK3HZ.

The new modulation scheme: COFDM, and it's application in Digital TV, Digital Radio Broadcasting, and digital voice on amateur radio - Glen VK2JPR

A 3-phase noise blanker - Glen VK2JPR

Simple VHF S-Meter Calibrator - Neil VK2EI

Frequency Measurement using Modern Transceivers - Neil VK2EI

An outline of recent projects using PICs: repeater controller, Wx station data converter & dish direction controller - John VK5DJ.

Recent advances in optical communications. Chris Long

Myth Busters regarding High power permits. Doug VK3UM

For more information, steer your browser to <http://www.qsl.net/vk3bez/>

Please send any Weak Signal reports to David VK3HZ at ...

The Magic Band – 6 m DX

Brian Cleland – VK5UBC

The month of May produced many good sporadic E openings. There were several openings down the eastern coast and from VK5 to VK4 & 2 as well as openings from ZL to VK2, 3 & 4.

From VK5 openings occurred on the following days during May:

2nd to VK4

6th to VK6

10th to central coast VK2

12th to southern VK4

13th to southern VK4 and VK7

21st from far north Queensland to south of Sydney

22nd to northern VK4,

24th to VK8 (Alice Springs beacon)

29th to north coast VK2, southern VK4 and VK8 (Alice Springs beacon)

The weekend of the 21st/22nd May was exceptional with the band being open for several hours on both days. Brian VK5UBC worked 21 different stations from far north Queensland to south of Sydney on these days. As well as these contacts the FK8 beacon was up to S9 on the 21st with FK8HA heard calling CQ and on the 22nd the C21 beacon from Nauru was up to S3 for over an hour.

Norm VK3DUT also reports good conditions on the 22nd May into VK4 as well as both the FK8 & C21 beacons being audible. On the same day Norm also worked Rod ZL3NW. During an Aurora opening on the 15th May Norm reports hearing the ZL3 beacon but despite many calls did not hear any ZL's. The VK7RST beacon was heard in Adelaide during the same opening.

The 14th May also produced an excellent opening from VK5 to JA. Col VK5RO and Steve VK5ZBK worked several JA stations with signals up to S9 over a 2-hour period. The logger indicates that the JA's also worked into VK2 on the same day

John VK4FNQ from Charters Towers reports working many VK2, 3 & 5 stations on the 21st, 22nd & 23rd May as well as Rod ZL3NW and Murray ZL3MH. John also reports working JA's on the 14th, 15th & 17th May along with the South Korean stations HL3IUA & DS1GQS.

Congratulations go to Joe VK7JG at Launceston who completed a 6m EME contact with ON4IQ Belgium over a distance of 17,011 km, which is believed to be an Australian record.

If you want to know what's happening on 6 m, try accessing this site <http://www.qsl.net/vk4cp/clusters.htm> which will allow you to view 3 clusters/loggers.

Please remember to send any 6 m DX information to Brian VK5UBC at ... I can only report what I know.

2 m & 70 cm FM DX

Leigh Rainbird - VK2KRR

Not a great deal to report on for the month of May. From about the first week into May I began dismantling my 2 & 70 FM arrays for maintenance, so I have not been active on the bands to note down any conditions or contacts worthy of mention, so am relying on other input.

First duct opening of the month occurred in the evening of 1/5 and morning of 2/5. After 7.30 PM I found the Adelaide Crafers repeater 147.000 at 764 Km and worked Mark VK5AVQ and Greg VK5THA.

An interesting twist after 11 PM, rarely heard here, the Broken Hill repeater on 147.000 was coming through at a good 5/8 signal at 638 Km. I was lucky to catch up with Paul VK2YVG from Broken Hill on their repeater.

Around midnight and back into the Crafers repeater, Rob VK5MM was about, and some rare DX from Kangaroo Island with Bill VK5ACY putting in a good signal.

Thanks to John VK3HJW for the following, which occurred on the 6/5. John was able to work Brian VK5UBC at Gawler via the Mt Macedon repeater 147.250. John also mentions hearing John VK5PO at Eden Valley also on Mt Macedon. Andrew VK3FIX was heard working into the Mt Barrow repeater 147.000, VK7RAA, and was speaking with Karl VK7HDX.

Please remember to send through any 2 & 70 FM DX reports to Leigh VK2KRR at ...