

Ham Hum

July 2014



The official newsletter of
The Hamilton Amateur Radio Club (Inc.)
Branch 12 of NZART - ZL1UX
Active in Hamilton since 1923



Next Meeting :
Annual Club Dinner

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From the Editor

Hamilton Amateur
Radio Club

MARKET DAY

Saturday

August 9th, 2014

Waikato Table Tennis
Stadium

Edgecumbe Street

Vendors from 8.00 am

Buyers from 10.00 am

Table space at \$20 per metre pre-paid

\$25 per metre on the day

All enquiries to: Market Day,

Hamilton Amateur Radio Club,

PO Box 606, Hamilton

E-mail: harcmday@nzart.org.nz

Web: http://zl1ux.org.nz/market_day.html

**Next Committee Meetings -
2nd July & 6th August**

The K7RA Solar Update

06/20/2014

The daily sunspot number rose dramatically this week on June 13 when it increased to 276, but two days later it was back below 100. The resulting weekly average for June 12-18 (141) was actually down 2.3 points from the previous seven days. Average daily solar flux was down 11.7 points to 134.7.

Predicted solar flux has weakened lately, and for the near term flux values are predicted at 105 on June 20-22, 100 on June 23-24, back to 105 on June 25-27, 120 on June 28 through July 6, 115 on July 7-12, and peaking at 130 on July 13-19. ARRL Field Day is June 28-29, when predicted flux values are 120. This is the highest predicted flux value for those two days since May 25, when it was also 120.

Predicted planetary A index is 5 on June 20-21, 8 on June 22, 5 on June 23-25, 8 on June 26, 5 on June 27 through July 10, 8 on July 11, 5 on July 12, then 10, 8, 8 on July 13-15, 5 on July 16-21 and 8 on July 22-23.

OK1HH predicts geomagnetic conditions will be quiet to unsettled June 20, mostly quiet June 21, quiet to unsettled June 22, mostly quiet June 23, quiet to unsettled June 24-25, quiet to active June 26, active to disturbed June 27, quiet June 28-30, quiet to active July 1, quiet July 2-3, mostly quiet July 4-5, active to disturbed July 6, quiet to active July 7-8, quiet July 9, mostly quiet July 10, quiet to unsettled July 11, quiet July 12, quiet to unsettled July 13, quiet to active July 14-15, and active to disturbed July 16.

Scott Bidstrup, TI3/W7RI, shared an article from Scientific American by Clara Moskowitz, positing that perhaps the current solar cycle is not so terribly weak, but that we've become accustomed to stronger cycles in the second half of the twentieth century.

<http://www.scientificamerican.com/podcast/episode/strange-solar-cycle/>

Scott also shared some observations on June 16 about recent on-air conditions from his location in Costa Rica. Scott writes, "Sadly, propagation here in the low latitudes has really been in the doldrums over the last week or so. Ten meters has barely been open on the good days, and so little PSK activity, I've given up on it on ten and have been spending more time on 15 and even 20 lately - conditions not unlike the last solar minimum. Even the 10 meter FM repeaters, normally a daily phenomenon here, have been weak or absent. On looking at the data this morning, I see the 304a index is declining again, back down to only 14 points above the typical solar minimum. Except for two small regions, as I write this, there's nothing at all on the STEREO B image showing what's about to rotate into view on the solar

disk

"The lower solar activity has greatly improved gray line DXing on 75 meters, though, and HP3AK and W9UCW have been having a grand time working VKs, ZLs and the odd JA now and again every morning at their local sunrise - for about the last week, the best DXing conditions in a really long time. Sadly, the atmospheric noise has been pretty high lately too, approaching the seasonal maximum here, so that's tempered the fun a bit. HP3AK did manage to complete a contact with a VK on 160m, about a week ago.

"Six meters has been all but dead since I last wrote; one brief opening between Costa Rica and the Leeward Islands several days ago, and that's been about it - KP4EIT was heard for about 20 minutes and an HI8 beacon for about half an hour, neither were ever strong enough to work. I did hear some mixed SSB on 50.110 for about a minute once last week. That's been about it. It's all been frustrating enough to make me want to go to work on that EME array I've been threatening for years."

Scott mentioned the 304a index, which is referenced on Scott's page at <http://www.bidstrup.com/w7ri-hf-radio-propagation.htm>. "The 304A Index is the relative strength of total solar ultraviolet radiation at a wavelength of 304 angstroms, emitted primarily by ionized helium in the sun's photosphere. It is solar radiation in this frequency band that is directly responsible for about half of all the ionization of the F2 layer, the ionosphere layer of greatest significance to us." (paraphrased).

Ted Leaf notes that his call sign is K6HI, not K8HI as reported in last week's bulletin. I thought I'd messed up, but then noted that the email I was referencing was signed K8HI. At any rate, he is on the west coast of Hawaii, the Big Island, and not to be confused with KH6HI, who is on Oahu, also in the state of Hawaii.

This weekend is the All Asian DX CW Contest. For details, see https://www.jarl.org/English/4_Library/A-4-3_Contests/2014AA_rule.htm.

And of course, ARRL Field Day, easily the most popular on-air activity, is next weekend!

For more information concerning radio propagation, see the ARRL Technical Information Service at <http://arrl.org/propagation-of-rf-signals>. For an explanation of the numbers used in this bulletin, see <http://arrl.org/the-sun-the-earth-the-ionosphere>. An archive of past propagation bulletins is at <http://arrl.org/w1aw-bulletins-archive-propagation>. More good information and tutorials on propagation are at <http://k9la.us/>.

Monthly propagation charts between four USA regions and twelve overseas locations are at <http://arrl.org/propagation>.

Instructions for starting or ending email distribution of ARRL bulletins are at <http://arrl.org/bulletins>.

Sunspot numbers for June 12 through 18 were 196, 276, 159, 80, 81, 87, and 108, with a mean of 141. 10.7 cm flux was 174.5, 152.7, 143.5, 130.2, 116.8, 114.3, and 110.8, with a mean of 134.7. Estimated planetary A indices were 4, 5, 8, 5, 5, 8, and 16, with a mean of 7.3. Estimated mid-latitude A indices were 5, 6, 8, 9, 7, 9, and 13, with a mean of 8.1.

Huntingdon UK CB radio user almost electrocuted after lightning bolt strikes aerial

{While I don't normally provide articles on CB, the message here is important to Amateur Radio as well—Editor}

A Huntingdon CB radio enthusiast was moments away from being electrocuted when a lightning bolt hit his aerial and blew up his equipment.

Robin Tester, of Bliss Close, Hinchingsbrooke, told *The Hunts Post* he had been chatting to friends over the radio at about 11 pm last Monday evening (June 9) when a thunderstorm neared the town. He turned off his radio and got himself a cup of coffee.

The 51-year-old then used his radio to warn a friend of the impending storm, turned the set off again and within moments the lightning bolt had struck the aerial in his garden, about two metres away from his house.

"It happened on the second flash of lightning. There was a loud bang and then the wire in my room and radio were on fire," Mr Tester said. "I threw my coffee over the set and unplugged the radio from the wall. If it happened when I was us-



ing the radio, I'm sure it would have been the end of me.

He added: "It destroyed the radio, the microphone and parts of the aerial. There was a lightning arrester plug on the aerial which should have stopped it, but that was destroyed too.

"Luckily the wire travels underground between the aerial and the house so it has earthed some of the flash. If it hadn't, it would have been worse.

"The wire got so hot that it has even burnt a hole in the air vent it travels through to get into the flat.

"If I didn't have my coffee to hand then the fire could have spread and the whole flat could have gone up."

Mr Tester said he has had to replace his radio and the wire, as well as parts of the aerial which snapped when it was struck.

In July last year, four homes in St Neots and a lorry near Cambourne were struck by lightning.

-Hunts Post

Successful launch of amateur radio satellite payloads

On Thursday, June 19, 2014 at 19:11:11 UT a Dnepr rocket carrying 37 satellites, 12 of which had amateur radio payloads, was launched from Dombrovsky near Yasny in the Russian Federation

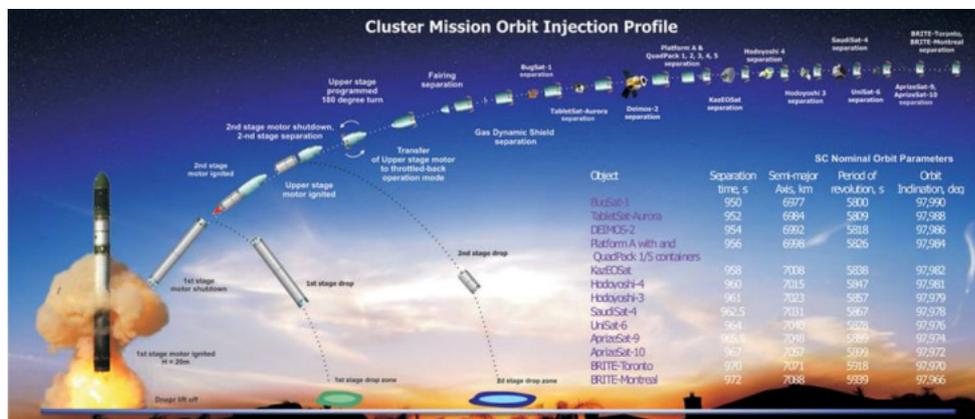
33 satellites were deployed, the remaining four, Tigrisat, Lemur 1, ANTELSat and AeroCube 6, are being carried by the microsatellite UniSat-6 and should be deployed on Friday, June 20.

In the hours immediately after launch signals were reported from POPSAT, QB50p1, QB50p2, UniSat-6, BugSat-1, NanosatC-BR1 and Duchifat-1.

The two QB50 precursor Cubesats on the launch carry amateur radio transponders. They were deployed at 19:32 UT and CW signals from both were received shortly after by **Andre Van Deventer ZS2BK** in Port Elizabeth, South Africa. **Brian Best ZS5SB** also reported receiving QB50p1.

Richard Dailey N8UX in Kentucky, USA, made use of the Southampton University Wireless Society (SUWS) WebSDR to receive the QB50P2 beacon when the satellite was in range of the UK.

The details of the initial 145 MHz CW transmission format for both QB50p1, and its near twin QB50p2, is at <http://www.isispace.nl/HAM/qb50p.html>



QB50p1 carries the FUNcube-3 400 mW inverting linear 435/145 MHz transponder provided by AMSAT-NL.

- 145.815 MHz BPSK telemetry
- FUNcube inverting 400 mW SSB/CW transponder
- 435.035-435.065 MHz Uplink LSB
- 145.935-145.965 MHz Downlink USB

QB50p2 carries a 435/145 MHz FM transponder and FX25 data transmitter from AMSAT-F.

- 145.880 MHz BPSK telemetry
- 145.840 MHz 9600 bps FSK FX25

It is expected that both these transponder payloads will be activated after the science missions have been completed.

QB50 precursor amateur radio operator page
<http://www.isispace.nl/HAM/qb50p.html>

Frequencies of the amateur radio satellites at
<http://r4uab.ru/?p=6393>

AMSAT-UK <http://amsat-uk.org/>

Cook Island Amateur (Ham) radio operators

For most people, if they have vaguest idea of what an Amateur, or “Ham” Radio operator is, they associate them with the first communications out of any disaster area.

While it is true that, when all other communications are down, ham radio operators invariably provide the emergency communications from a hurricane, earthquake or other disaster regions – there is much more to the hobby than that.

Starting over a century ago, enthusiastic hobbyists started “playing around” with the new-fangled radio popularised by Marconi. As more and more hobbyists became involved, the professional radio and telegraph operators of the day insultingly referred to them as a bunch of “hams” – the name has stuck to this day, but the hobby as evolved.

Today, Amateur Radio Operators, “Hams” are on the cutting edge of communications using the latest technology to communicate across the country or across the world. They use voice, Morse code, and a whole range of data modes. They communicate by bouncing signals off the ionosphere, off the moon, or by using orbital satellites built by hams and launched during international space programmes. They still provide emergency communications for disasters large and small, and are often on hand to provide public service communications ranging from communications in a bike race, to tracking the yachties traversing the Pacific on the Pacific Seafarers’ Net.

Although there are millions of hams around the world, there are only seven in the Cook Islands – one in Tongareva, one on Aitutaki, and five on Rarotonga. Of the seven, only four are active – all on Rarotonga – yet those four hams have probably done as much to raise global awareness of the Cook Islands as a “destination” as all the commercial publicity!

How, you may ask! Three ways: most importantly they talk to people – thousands and thousands of them -- all over the world; they send out postcards to confirm those chats; and they maintain web pages.

So how much impact do they have? The Cook Island Tourism Corporation has had

over 60,000 ‘likes’ on their Facebook page in the last two years.

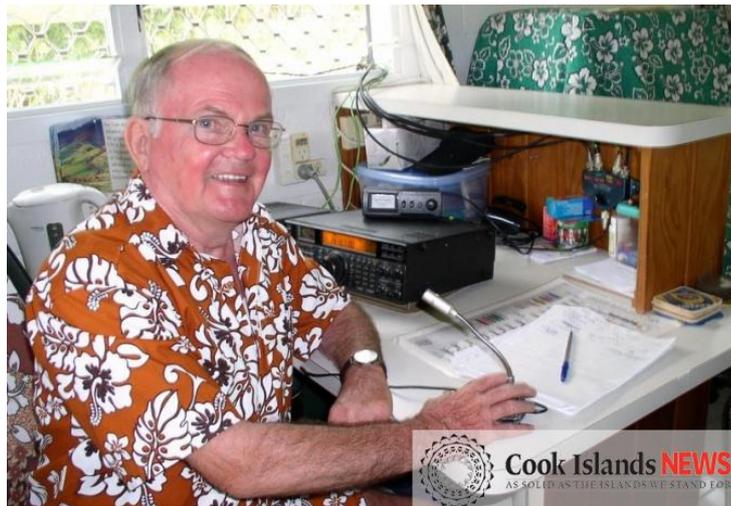
Andy Duncan, call sign E51AND, a ham living in Inave has had a web page up for only nine months and has 45,000 hits; Jim Ditchburn in Tupapa, E51JD has 221,420 hits; and Victor Rivera E51CG has had an astounding 1.3 million hits on his web pages.

In May 2013 and April 2014 the American Radio Relay League published articles in their journal ‘QST’ about ham radio in the Cook Islands – millions of people world-wide receive that magazine, and in April 2014 an article was published in ‘CQ Ham Radio’ magazine in Japan reaching millions of Japanese. This publicity brings people here to holiday, and to operate their radio from a very ‘rare’ location. Last week two hams from the US flew home after two weeks here, this week a German ham arrives, and later in the week four Japanese hams will be here operating their radios from the KiiKii Motel – a favourite spot for visiting hams.

So when you drive by Victor’s Computers opposite the airport and wonder about the tower and funny looking aerials he has in his yard, or drive through Muri and wonder about the big ‘upside down’ umbrella frame at Bob Walkers house, or pass by Jim Ditchburn’s place in Tupapa and see all that aluminium sticking up in the air, or by Andy Duncan’s place inland of the backroad by Cook Island Divers to see ‘the biggest TV antenna you ever saw’ – remember, these are the unsung ambassadors of the Cook Islands, talking to people all over the world, and with collectively over one and a half million hits on their web pages – Oh! – and if a cyclone, tsunami or other disaster takes out all commercial communications – they will be the first voices the outside world will hear...

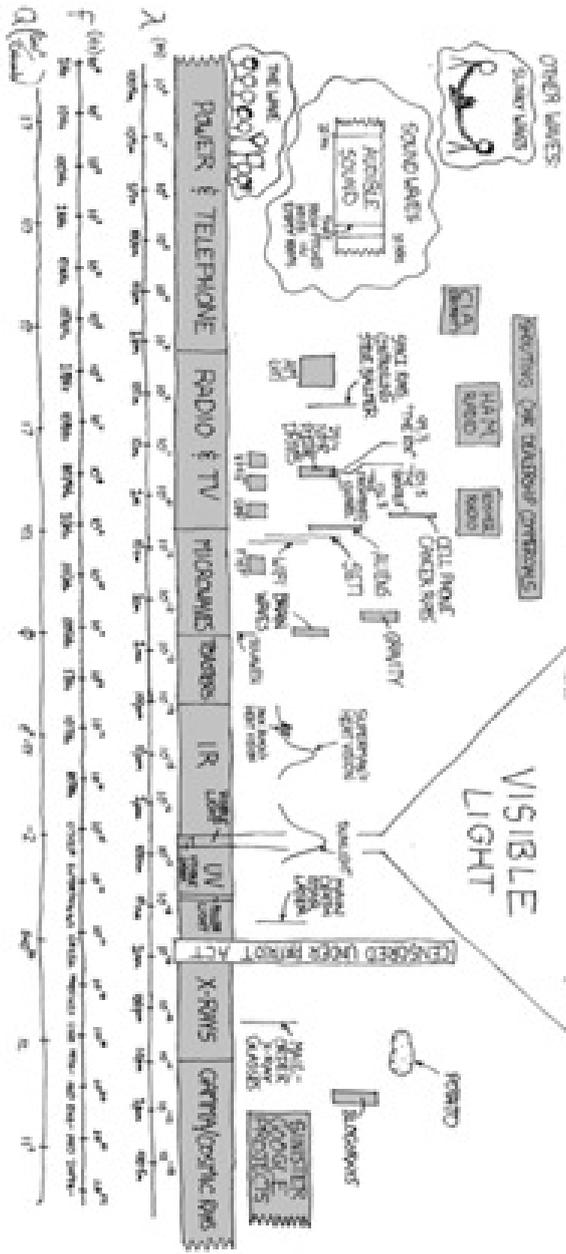
-Cook Island News

Jim Ditchburn
E51JD



THE ELECTROMAGNETIC SPECTRUM

THESE WAVES TRAVEL THROUGH THE ELECTROMAGNETIC FIELD THEY WERE FORMERLY CARRIED BY THE ETHER, WHICH WAS DISPROVED IN 1897 DUE TO BUDDGET CUTS.



Upcoming Happenings & Events

<i>Date</i>	<i>Happenings & Events</i>
1st July	VHF Net, 146.525 MHz, 20:00
4th July	NZART HQ-Infoline
5-6 July	NZART Memorial Contest
7th July	HF Net, 3.575 MHz, 19:30
8th July	VHF Net, 146.525 MHz, 20:00
12-13 July	IARU HF Championship Contest
14th July	HF Net, 3.575 MHz, 19:30
15th July	VHF Net, 146.525 MHz, 20:00
16th July	Club Annual Dinner
18th July	NZART HQ-Infoline
21st July	HF Net, 3.575 MHz, 19:30
22nd July	VHF Net, 146.525 MHz, 20:00
26-27 July	RSGB IOTA Contest
27th July	NZART Official Broadcast
28th July	HF Net, 3.575 MHz, 19:30
29th July	VHF Net, 146.525 MHz, 20:00

2-3 August—NZART Brass Monkey Contest
8th August—NZART HQ-Infoline
9th August—Annual Hamilton Market Day
22nd August—NZART HQ-Infoline
31st August—NZART Official Broadcast
4-5 October—NZART Microwave Contest
2nd November—NZART Straight Key Night
6-7 December—NZART Field Day Contest
28 Feb/1 Mar 2015—NZART Jock White Memorial Field Days
30-31 May 2015—NZART AGM & Conference

For more information on any of the above please contact myself or any committee member.

AREC Event Operators Page

WRC Rally NZ/ Possum Bourne Rally	June 2014	Organiser : ZL1BNQ
Please contact the Section Leader with your team information and he will pass it on to Auckland.		

NZW SRA Bridge to Bridge Water-Ski Race	Nov 30—Dec 1 2014	Organiser : ZL2MGS
<u>Position</u>	<u>Saturday Operator</u>	<u>Sunday Operator</u>
Base		
Start Boat		
Rescue Boat		
X-Band		
A.	Ngaruawahia/ Taupiri	
	Start/Finish at Point	
B.	Ngaruawahia Ramp	
C.	Ngaruawahia W/S	
D.	Horotiu	
E.	Pukete Ramp	
F.	Days Park	
G.	Fairfield Bridge	
H.	Malcolm St	
I.	Narows	
J.	Field Days	
K.	Between Pipe and F/Days	
L.	High Level Bridge	

Kairangi Hill Climb	September 2014		Organiser : ZL1IC
<u>Position</u>	<u>Operator</u>		
Start			
1. First bend			
2. Intermediate bend			
3. Top of hill			
4. Paddock			
5. Hall corner			
6. Above hairpin			
Finish			
Colville Connection	February 2015		Organiser : ZL1PK
<u>Position</u>	<u>Primary Operator</u>	<u>Secondary Operator</u>	<u>Other Operator</u>
Base			
Stony Bay			
Fletcher Bay			
Hill 1			
Hill 2			
Fantail Bay			
Ridge/Waikawau			

For Details about and to help with these events, contact the person indicated as the organiser for the event. See Page 1 for their contact information.

Club Information



Contacts :-

Business Meeting: 1930 First Wednesday of each month except January
88 Seddon Road, Hamilton

General Meeting: 1930 Third Wednesday of each month (except Jan)
88 Seddon Road, Hamilton

Homepage: <http://www.z1lux.org.nz>
eMail: branch.12@nzart.org.nz

HF Net: 3.575MHz LSB 1930 Mondays
VHF Net: 146.525MHz simplex 2000 Tuesdays

2m Repeater: 145.325MHz -600kHz split
STSP 146.675MHz -600kHz split
Repeaters: 438.725MHz -5 MHz split
ATV Repeater: Off air pending channel changes

Cover Photo: Found at <http://hamcrazy.com> via Pinterest.

Sender	Hamilton Amateur Radio Club (Inc) PO Box 606 Hamilton 3240
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