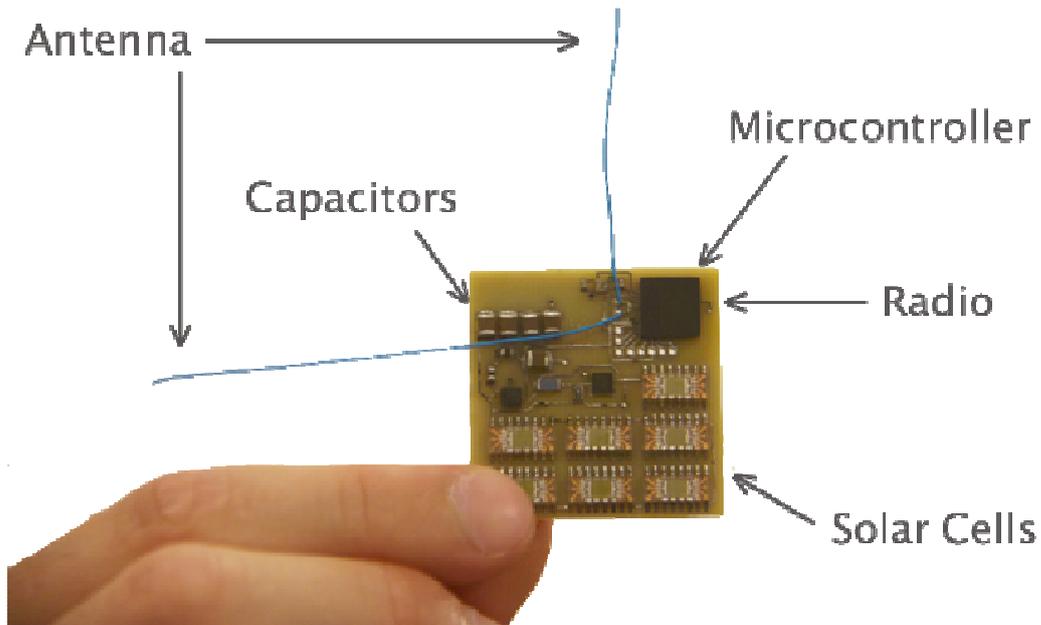


Ham Hum

April 2014



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



Next Meeting :
Waterview Tunnel—Les ZL1KF

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Contact Details

Patron:			
Russell Richardson	ZL1RWR		
President:			
"Jono" Jonassen	ZL1UPJ		z1lux@nzart.org.nz
Vice Presidents:			
Gary Lodge	ZL1GA		
Gavin Petrie	ZL1GWP	843 0326	z1gwp@nzart.org.nz
Secretary:			
Phil King	ZL1PK	847 1320	z1pk@nzart.org.nz
AREC Section Leader:			
Mike Sanders	ZL2MGS	855 1612	z2mgs@nzart.org.nz
Deputy Section Leaders:			
"Jono" Jonassen	ZL1UPJ		z1upj@nzart.org.nz
Phil King	ZL1PK	847 1320	z1pk@nzart.org.nz
Treasurer:			
Tom Powell	ZL1TJA	834 3461	z1tja@nzart.org.nz
Committee:			
Colin McEwen	ZL2CMC		
Kevin Murphy	ZL1UJG		
Mike Sanders	ZL2MGS	855 1612	z2mgs@nzart.org.nz
Robin Holdsworth	ZL1IC	855 4786	
Terry O'Loan	ZL1TNO		
Ham Hum Editor:			
David King	ZL1DGK	579 9930	z1dgg@nzart.org.nz
Ham Hum Printer:			
John Nicholson	ZL1AUB	855 5435	
ATV Co-ordinators:			
Phil King	ZL1PK	847 1320	z1pk@nzart.org.nz
Robin Holdsworth	ZL1IC	855 4786	
Market Day Co-ordinator:			harcmday@nzart.org.nz
Robin Holdsworth	ZL1IC	855 4786	
Webmaster:			
Gavin Petrie	ZL1GWP	843 0326	z1gwp@nzart.org.nz
BBS Team:			
Phil King (sysop)	ZL1PK	847 1320	z1pk@nzart.org.nz
Alan Wallace	ZL1AMW	843 3738	z1amw@nzart.org.nz
Doug Faulkner	ZL4FS	855 1214	
Gavin Petrie	ZL1GWP	843 0326	z1gwp@nzart.org.nz
Club Custodian:			
Currently vacant			
Equipment Officer/Quartermaster:			
Colin McEwen	ZL2CMC	849 2492	
QSL Manager:			
Sutton Burtenshaw	ZL4QJ	856 3832	suttonb@slingshot.co.nz
Net Controllers:			
80m net—Phil King	ZL1PK	847 1320	z1pk@nzart.org.nz
2m net—Phil King	ZL1PK	847 1320	z1pk@nzart.org.nz
NZART Examiners:	ZL1IC, ZL1PK & ZL1TJA		

From the Editor

The AGM has been and gone. Very little change to the list opposite.

At the next General Meeting on 16th April Les Cole (ZL1KF) will talk about the Waterview Tunnel. Should be an interesting talk.

You might not realise that Ham Hum is created using A5 sized paper templates. This is so that printing hard copies onto A4 paper to create a booklet is relatively easy. However, as more and more people move to the electronic version I'm thinking that it wont be very far off before I create Ham Hum in A4 format in order to create a PDF file for viewing This is still way off, but is something I've been thinking about.

**Next Committee Meetings -
2nd April & 7th May**

SB PROP ARL ARLP013 ARLP013 Propagation de K7RA

Solar activity increased over the past week, with average daily sunspot numbers rising from 129 to 135.6, while average solar flux increased by nearly 13 points to 154.3. This compares the recent March 20-26 period with the previous seven days, March 13-19.

The latest predicted solar flux from the current 45 day forecast has 10.7 cm flux values at 145 on March 28-29, 140 on March 30 through April 2, 135 on April 3-4, 150 and 155 on April 5-6, 160 on April 7-8, then 155, 150, 145 and 140 on April 9-12, 145 on April 13-14, 150 on April 15-17 and 145 on April 18. Solar flux peaks at 160 on April 22 and again on May 4-5.

Predicted planetary A index is 5 on March 28 through April 8, 10 on April 9, 5 on April 10-16, then 8, 7,7, 10 and 8 on April 17-21, then 5 until April 25, when for three days the planetary index is 8, on April 26-28.

OK1HH believes that the geomagnetic field will be quiet to active on March 28, mostly quiet March 29-30, quiet to unsettled March 31, quiet to active April 1, quiet April 2-7, quiet to active April 8, mostly quiet April 9, quiet to unsettled April 10-11, quiet April 12, quiet to unsettled April 13, mostly quiet April 14-15, quiet on April 16, quiet to active April 17, mostly quiet April 18-19, quiet to active April 20-21, and quiet April 22.

OK1HH says we may see enhanced solar wind on April 8, 11, 13-14 and 20-21.

OK1HH also sent along some photos from the first day of Spring, and they can be seen at, <https://www.dropbox.com/sh/36kbsqzou1tdbd/ATLb7dVOu3> . You can see the Ondrejov Observatory and an interesting sculpture (images 2-5) which catches the sunlight at local noon on both the Autumnal and Vernal equinox and also the Winter and Summer solstice. I believe images 7 and 8 were photographed from the observatory deck shown in image 9. OK1HH says the observatory is a 10 minute walk from his home. It has a Facebook page at <https://www.facebook.com/AstronomickyUstav> .

Concerning the sculpture, OK1HH wrote, "Sculpture has one vertical and three horizontal cut notches. In places where they intersect, sunbeam penetrates the holes in the intersection when the astronomical equinox and the summer and winter solstice around local noon. Sunbeam penetrated on 20-21 March 2014 around 12:07 CET."

Jon Jones, N0JK is in Oahu this week, and says he worked VK, ZL, FK and 5W on 6 meter trans-equatorial propagation.

Bill Billingsly, N5IR of Sanger, Texas sent a report about his experiences on 17 meters on March 23. He writes, "I rarely work SSB, but saw HB9CVQ spotted on 18.143 MHz. I have worked Andy many times on CW, so I called him. We had a continuous SSB QSO from 2151Z to 2334Z. Andy was running a KW into a 3-el SteppIR at 60 ft and his signal was mostly 59+15 with two short dips to 56. I was running 200 watts into a 2-el Yagi at 70 ft. I received about the same reports.

"I had to quit for dinner and didn't return until 0029Z. HB9CVQ was still there at 57. I moved down to 17 meters CW and worked 8Q7TS over the pole. He was 579 here in NTX. I went back to HB9CVQ at 0050Z and he was 59+15 again. I had just a little gray light left outside. I called him again and he gave me a 58. Andy mentioned that the band had taken one big dip after our earlier QSO, but soon recovered. He had been going strong since I left for dinner.

"Happy days are here again!"

Don't forget the CQ World Wide WPX SSB Contest this weekend. The CW portion is on May 24-25. See <http://www.cqwp.com/> for details. HF propagation should be good.

If you would like to make a comment or have a tip for our readers, email the author at,

k7ra@arrl.net.

For more information concerning radio propagation, see the ARRL Technical Information Service web page 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>.

Sunspot numbers for March 20 through 26 were 137, 125, 159, 159, 132, 114, and 123, with a mean of 135.6. 10.7 cm flux was 151.3, 152.6, 154.9, 157, 158.6, 152.8, and 153.2, with a mean of 154.3. Estimated planetary A indices were 6, 10, 6, 6, 5, 8, and 9, with a mean of 7.1. Estimated mid-latitude A indices were 4, 10, 7, 7, 4, 7, and 7, with a mean of 6.6.

Two Geostationary Ham Radio Transponders

AMSAT-DL President, **Peter Guelzow DB2OS**, has confirmed there will be two amateur radio transponders on the Geostationary **Es'hail 2** satellite planned to launch at the end of 2016

Peter Guelzow DB2OS has provided the following information:

Es'HailSat-2 will carry two geostationary "Phase 4" amateur radio transponders !!

As a result of a concept proposed by the Qatar Amateur Radio Society, Es'Hailsat, the Qatar Satellite Company, have announced that their new, geostationary, Es'HailSat-2 communications spacecraft will provide transponders for use by radio amateurs. The spacecraft is expected to be ready for launch by the end of 2016.

Es'HailSat-2 will provide a 250 kHz linear transponder intended for conventional analogue (e.g. SSB / CW) operations in addition to another transponder which will have an 8 MHz bandwidth. The latter transponder is intended for experimental digital modulation schemes and DVB amateur television.

Precise uplink and downlink frequencies remain to be finalized but the uplinks will be in the 2.400-2.450 GHz and the downlinks in the 10.450-10.500 GHz amateur satellite service allocations.

Both transponders will have broad beam antennas to provide full coverage over about 1/3rd of the earth's surface. Precise operational plans will be finalised over the coming months but it is anticipated that only quite simple ground equipment will be required to use this satellite.

A team of amateurs, led by Peter Guelzow DB2OS (President of AMSAT-DL) are providing technical support to this ground breaking



project which is expected to provide an exciting new phase of activity for radio amateurs for the 21st century.

Es'hailSat announces tender process for Es'hail 2
<http://www.qatarchronicle.com/science-and-technology/49977/eshailsat-announces-tender-process-for-eshail-2/>

Es'hailSat – the Qatar Satellite Company
<https://www.facebook.com/EshailSat>

Presentation by Peter Guelzow DB2OS, President of AMSAT-DL, at the 2013 AMSAT-UK Colloquium
<http://www.batc.tv/streams/amsat1306>

AMSAT Deutschland
<https://www.facebook.com/amsat.deutschland>

Sunspots and solar activity

The connection between solar activity and the earth's climate is an area of ongoing and sometimes controversial research.

A sunspot is a relatively dark, sharply defined region on the solar disc – marked by an umbra (dark area), which is 2000 degrees Celsius cooler than the effective photosphere temperature.

The average diameter of a sunspot is 4000 km, but can exceed 200,000km.

The NASA Solar Physics website (and other websites, such as the Royal Observatory of Belgium), includes information on sunspot numbers, the Maunder Minimum, and sunspot cycle predictions.

The sunspot index is updated monthly and available from 1749. The last time the monthly sunspot number was above 100 for any significant period of time was September 2002 when the value was 109.6 and the last time the value was above 200 was in August 1990 when the value was 200.3.

Reading University's professor of Space Environmental Physics Mike Lockwood thinks the current period of solar activity is likely to become the first "grand solar minimum" for four centuries.

During a grand minimum, the normal 11-year solar cycle is suppressed and the sun has virtually no sunspots for several decades.

Lockwood thinks there is now a 25 per cent chance of a repetition of the last grand minimum, the late 17th Century Maunder Minimum, when there were no sunspots for 70 years.

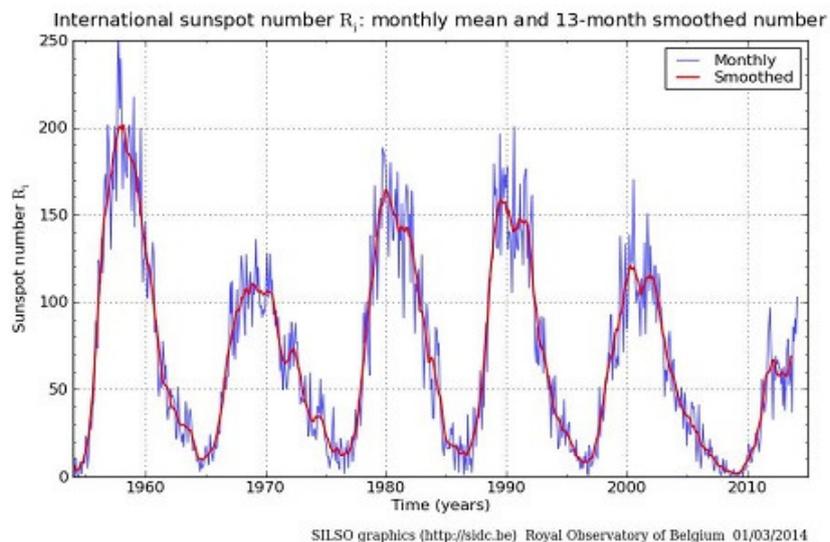
But Mike says we should not expect a new grand minimum to bring on a new little ice age. There may, however, still be noticeable consequences. For instance, long-term cold winters in the UK are common when solar activity is low. And less solar activity can slow the jet stream, triggering a suite of interlinked extreme weather events.

There have been 24 grand solar minima in the last 10,000 years. Their history is reconstructed by looking for isotopes like carbon-14 that cosmic rays generate in the atmosphere.

The recent decline in solar activity may have helped cause the current 'hiatus' in the pace of global warming.

The chart (from the Royal Observatory of Belgium) below shows the monthly (and 13-month smoothed number) values of the sunspot number since 1955.

See more at: <http://www.sunlive.co.nz/blogs/6167-sunspots-and-solar-activity.html#sthash.S4ExhbjC.dpuf>





The future of Morse Code

On Wednesday, April 23, the **Royal Union of Belgian Radio Amateurs (UBA)**, in collaboration with ETWIE, are holding an meeting to think about the future of the **Morse code**

A Google English translation of the UBA post reads:

The roundtable starts at 7pm in the Lamot conference centre in Mechelen and is open to anyone in any way concerned with or interested in the use of Morse code.

Morse code was very important for the development of modern communication techniques. But even now, the Morse code used worldwide by a relatively large group of people who want to get in touch. For some time, a working group within the UBA has lead a project on the recognition of Morse code as intangible heritage, with the intention of not letting go, and to pass on to the younger generations. A concrete short-term objective is therefore the recognition of Morse code on the Inventory of Intangible Cultural Heritage City.

In the context of this heritage operation around the morse code UBA want the widest possible group of interested people involved. Do you have experience with the use of Morse code? You think it is important not to lose the morse code lost? Will you come to think about how we can pass on to future generations? If you are using Morse code then you are certainly welcome at the meeting on April 23 in Mechelen.

The program that evening are include:

- a presentation on the significance of the morse code by Frans Verheyden, ON5GO
- an overview of the operation of the UBA heritage by Jacques Verleijen ON4AVJ

But of course we want to especially like to listen to your ideas and experiences. Are you actively example, a user of the Morse code and give you training to young people? Do you have ideas to maintain a partnership with a school in your neighborhood? Morse code up to date Do you know of research on Morse code? Everything can be discussed! Your input will it shape the acknowledgment file for inventory intangible heritage.

Finally, the new brochure "Limitless, with dots and stripes' is proposed, on the occasion of Heritage Day on Sunday, April 27. At Heritage UBA organizes numerous places in Flanders activities around the morse code.

All interested parties are welcome on Wednesday, April 23 at 19h in Congress and Heritage Lamot (Van Beethoven 8-10, 2800 Mechelen). Please confirm your presence just because there is a snack and a drink provided through this link

http://www.eventbrite.co.uk/e/tickets-morse-als-immaterieel-cultureel-erfgoed-11053095105&usg=ALkJrhilDJn_5KGBz7k0sDtixK6QV70zA

UBA in Google English

<http://tinyurl.com/BelgiumUBA>

ETWIE – Center of Expertise for Technical, Scientific and Industrial Heritage

<http://www.etwie.be/etwie-english>



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of
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It serves you at
local, national and international
levels.

*It deserves our full support
if we are to continue to have
the frequencies and operating privileges
we currently enjoy.*

**The Association
is what you and I make it.**

2nd May—NZART HQ-Infoline
11th May—REG junk sale
16th May—NZART HQ-Infoline
17-18 May—NZART Sangster Shield
21st May—Club General Meeting
25th May—NZART Official Broadcast
1st June—NZART Conference Broadcast
6th June—NZART HQ-Infoline
7-8 June—NZART Hibernation Contest
20th June—NZART HQ-Infoline
29th June—NZART Official Broadcast
5-6 July—NZART Memorial Contest
2-3 August—NZART Brass Monkey Contest
9th August—Annual Hamilton Market Day
4-5 October—NZART Microwave Contest
2nd November—NZART Straight Key Night
6-7 December—NZART Field Day Contest

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.		

NZWSRA 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.z1ux.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: Sprite Spacecraft. http://www.spacecraftresearch.com/MII/MII_overview.html

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