

# Ham Hum

May 2017



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



## Next Meeting

17th May : 7pm

## Remit night/Social gathering

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Currently vacant

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**NZART Examiners:** ZL1IC, ZL1PK & ZL1TJA

## **From the Editor**

Please bring your Break-In to the next meeting (17th May) as remits will be discussed. You will find the remits on page 25 of the March/April Break-In.

Enclosed is a membership form so you can join or renew your membership. If you don't want to tear out the page, just ask the secretary at the next meeting for a blank form. And yes, that means your 2017 subscriptions are due.

At the meeting on the 19th April we had a visit from JA3UOQ. Professor Yonosuke Harada MEng who attended the meeting to meet the local members. Yonosuke was attending an ISO/IEC SC27 meeting at Waikato University in his capacity as a Professor at IISEC and as co-editor of international standard ISO/IEC 27021.

We had a very interesting social meeting with him. He is active on HF only using a loop antenna.

## **SB PROP ARL ARLP018 ARLP018 Propagation de K7RA**

Each of the weekly solar and geomagnetic indicators that we track were lower this week. Average daily sunspot number dropped 10.6 points to 25.1, and average daily solar flux was 4.5 points lower than the previous week at 76.9.

It is comforting to see though that we have not witnessed a day with 0 sunspots since April 17. Average planetary and mid-latitude A index were both 5.6, down from the previous week which had planetary A index at 26.4 and mid-latitude at 18.4.

The A index is expected to remain quiet until May 17-20.

As of Thursday night, May 4, the predicted solar flux is 76 on May 5-8, 74 on May 9-12, 75 on May 13-14, 80 on May 15-18, 85 on May 19-21, 80 on May 22-23, 77 on May 24-27, 75 on May 28-30, 73 on May 31 through June 8, 75 on June 9-10, 80 on June 11-14, 85 on June 15-16, and 88 on June 17.

Predicted planetary A index is 5 and 8 on May 5-6, 5 on May 7-9, then 8, 5, 8, 8, 5, and 8 on May 10-15, then 15, 30 and 25 on May 16-18, then 45, 50, 15, 10 and 8 on May 19-23, then 5 on May 24-27, then 12 and 8 on May 28-29, 5 on May 30 through June 1, 8 on June 2-4, and 5 on June 5-10, then 8, 15, 30, 25, 45 and 50 on June 11-16.

Also related to planetary A index is the OK1HH bulletin from the Czech Propagation Interest Group:

"Geomagnetic field will be:

Quiet on May 10, 14-15,

Mostly quiet on May 9, 13, 16, 25-30

Quiet to unsettled May 5-6, 22-24, 31

Quiet to active on May 7-8, 11-12, 19-21

Active to disturbed on May 17-18

"Amplifications of the solar wind from coronal holes are expected on May (5-9,) 16-19, (20).

"Remark: - Parenthesis means lower probability of activity enhancement and/or lower reliability of prediction."

Remember, you can get a new and revised 45-day forecast for solar flux and planetary A index daily, usually after 2100 UTC from NOAA at, <ftp://ftp.swpc.noaa.gov/pub/forecasts/45DF/> .

Dr. Tamitha Skov released a new space weather video commentary yesterday:

<http://bit.ly/2pdyRv7> .

Bob Kile, W7RH of Las Vegas, Nevada noticed a nice sporadic-E 6 meter opening on May 3:

"Spring is here and so was the first sporadic-E propagation on 6m for the season. There were openings on 6m from the SW to mid-west on May 2nd and 3rd. I happened to be listening on May 3rd when the band opened up at about 00:00 to the mid-west. Beacons were copied in Colorado, Oklahoma, Texas and Kansas. I could not hear the guys in California but a few in southern Arizona could be heard at times.

"Stations worked were in West Texas, Wyoming, Idaho and Colorado. Of special note two stations in Cheyenne, WY WY7HR and WY7KY were solid copy for several hours when the band finally closed about 0200 UTC."

Bob at his home QTH is using a 3 element Yagi on 6 meters mounted low on his patio. But I think more interesting is his HF remote base station literally in the middle of nowhere in the Northern Arizona desert, a good distance northeast of Seligman, and approximately 240 miles from Bob's home in Las Vegas.

You can check his QRZ.com listing or <http://w7rh.net> for a deeper rundown.

If you would like to make a comment or have a tip for our readers, email the author at [k7ra@arrl.net](mailto: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 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 April 27 through May 3, 2017 were 23, 35, 34, 33, 11, 25, and 15, with a mean of 25.1. 10.7 cm flux was 78.2, 78, 77, 77.4, 75.3, 77.2, and 74.9, with a mean of 76.9. Estimated planetary A indices were 7, 6, 6, 6, 5, 5, and 4, with a mean of 5.6. Estimated mid-latitude A indices were 10, 6, 6, 6, 5, 4, and 2, with a mean of 5.6.

## **2017 NZART Annual Conference**

**To be hosted by the Rotorua Amateur Radio Club (RARC)**

**Queens' Birthday Weekend – June 3rd & 4th 2017**

**Venue will be at the 'SUDIMA HOTEL'**

**1000 Eruera Street, Rotorua 3010.**

**Phone 0800 Sudima (0800 783 462) or (07)348 1174.**

**Email: [reservations@sudimarotorua.co.nz](mailto:reservations@sudimarotorua.co.nz)**

**Web: [www.sudimahotels.com](http://www.sudimahotels.com)**

**BOOK EARLY and QUOTE: "NZART QBW 2017 Conference"**

**GOOD RATES have been negotiated to stay at this venue:**

**Standard Rooms: \$120 for single/twin share, or \$150 including full breakfast.**

**Superior Rooms: \$140 for single/twin share, or \$170 including full breakfast.**

**As well as their fine conference facilities, this venue features:**

**Lakefront location, Naturally heated pool and spas,**

**24 hour guest service, Hangi and Maori cultural show'**

**Wifi available, Adjacent to the famous Polynesian Spa,**

**Free onsite parking, Walking distance to City Centre,**

**Restaurant and Bar on site.**

**For further information, or if you would like to host a seminar,**

**Please contact: Ted ZL1MG or Margaret ZL1MB,**

**Phone (07)345 9687 or email: [tedmarg@clear.net.nz](mailto:tedmarg@clear.net.nz)**

**<http://www.hamradio.co.nz/>**

## Smart meters - friend or foe?

*{This is published as a subject to be aware of rather than scared of. My understanding is that the vast majority of Smart Meters in NZ are 1-way using cellphone or WiFi frequencies.—Editor}*

Your smart meter could be hacked, your energy held to ransom, its usage monitored to determine the best time to rob your house, or even used by advertisers to determine your favourite TV show.

Director of the Centre for Internet Safety at the University of Canberra Nigel Phair has warned Australian consumers aren't aware of the risks associated with their smart meters.

There are two types of smart meters, 'one-way' or 'two-way' meters: one way meters simply transmit data back to utility companies.

Two-way meters can be updated to inform savvy consumers on fee changes or allow power companies to cut services at a moment's notice.

Mr Phair said two-way meters had less secure data connections, allowing would-be criminals to hack in.

ActewAGL said there were 3225 two-way smart meters in the ACT, and also that there were no Australian or global standards on security and privacy regarding smart meters and called for more stringent digital security standards.

- Canberra Times, WIA

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## And now for something completely different – well almost.

Whilst surfing the web etc. for information on various subjects, I ran across a pile of information on the very first microprocessor, the Intel 4004 and its 35th Anniversary, all about the first 4 bit micro that was originally designed exclusively to power the Busicom 141-PF printing calculator. The designers later convincing Intel management that this device should be sold widely as a general purpose device.



See <http://www.intel.com/content/www/us/en/history/museum-story-of-intel-4004.html>

Or [https://www.youtube.com/watch?v=hugZii\\_eX30](https://www.youtube.com/watch?v=hugZii_eX30) for a talk by Federico Faggin at UC Berkeley 19/02/2014 "Microelectronics & Microprocessors: The Early Years", around 1969.

Whilst browsing around this subject, and calculators etc., I found 3 interesting video's on the early days of the Japanese electronics industry, starting shortly after the war. It's rather interesting seeing where Sharp, Sony, & Casio etc. came from, and how little they had.

Whilst watching the third about the calculator wars, I had to pause it and go diving through my collections to dig up my 'Casio Mini' that apparently created quite a stir in its day for being so incredibly cheap.

A Videohistory of Japan's Electronic Industry

Birth of The Transistor: A video history of Japan's electronic industry. (Part 1)

<https://www.youtube.com/watch?v=ihkRwArnc1k>

Circuits in stone: A video history of Japan's electronic industry (Part 2)

<https://www.youtube.com/watch?v=uGRNXmWng3M>

The Calculator Wars: A video history of Japan's electronic industry (Part 3)

<https://www.youtube.com/watch?v=ansXGewduN4&t=12s>

VK3TGX





**HAMILTON AMATEUR RADIO CLUB  
 NZART BRANCH 12  
 MEMBERSHIP APPLICATION**

\*NAME: .....

\*ADDRESS: .....

.....

\*CITY: ..... \*POSTCODE: .....

HOME PHONE: ..... EMAIL: .....

MOBILE PHONE: ..... CALLSIGN: .....

NZART Member NZART Member Number .....

Affiliated to Branch: ..... \*Branch 12 member since: .....

\* Required by Incorporated Society Act 1908

**2017 ANNUAL SUBSCRIPTION**

- Member/Associate Member \$41.00
- Family/Club Member \$51.00
- Unwaged Member \$36.00

Payment herewith  Cash  Cheque  Direct Debit  
 Club bank a/c 03-1555-0064133-00

Magazine (HamHum) delivery Email only

I agree to observe the Amateur's Code, and abide by the constitution of the Club.

Date ..... Signature .....

OFFICE USE	Receipt No.
Approved by Committee .....	Class of Member T/NT/A .....
Notified in HamHum .....	

Post or Deliver this form to: The Secretary, Hamilton Amateur Radio Club (Inc),  
 PO Box 606, Hamilton 3240

## Bouvet Island DXpedition

The Bouvet Island DXpedition team (3Y0Z), is pleased to make an important announcement about our transportation plans to Bouvet Island.

From the beginning, we have worked with Nigel Jolly to secure safe, reliable, and affordable transportation to Bouvet. We both have struggled with the costs involved in getting Nigel's ship and a helicopter from New Zealand to the tip of South America to begin the voyage to Bouvet.

Together, we have been working to find alternatives while Nigel's vessel, the Claymore II stood ready for our use if we could not find a suitable alternative. We are announcing today that we have found an alternate vessel that eliminates the repositioning costs and at the same time adds additional margins of safety for our team.

DAP, a Chilean maritime and aviation company that took some of us to Peter I in 2006, recently acquired a vessel that is perfect for our DXpedition to Bouvet. This company also has a fleet of 16 helicopters.

Bob, K4UEE, and George, N4GRN, have just returned from Punta Arenas, Chile, where they inspected the vessel, the helicopters and discussed our requirements with DAP. Nigel Jolly supplied us with a checklist to be used while inspecting DAP's vessel and helicopter capabilities.

Based on our observations, and our discussions, and based on DAP's reputation and our personal history with DAP; we feel we have found a sound alternative and optimum means of transportation to Bouvet. DAP's ship is somewhat larger than Nigel's vessel, and they have offered us two helicopters instead of only one. They are both medium duty, twin engine BO-105 helicopters. We will also have two pilots and mechanics with years of Antarctic flying experience.

The ship is being re-fitted with a hanger to house those two helicopters during transit and poor weather conditions..

The vessel's Captain and crew have sailed the vessel for many years and have been retained by DAP. Interestingly, one of the crew members that will accompany us to Bouvet is Alejo Contreras Staeding. He is a well known Antarctic explorer, guide, glaciologist and adventurer. We met him in 2006 on the way to Peter I. We are extremely pleased to have him join us.

We have signed a Letter of Intent (LOI) with DAP and a formal contract is being drafted. We will review that contract with Nigel, and expect to sign it soon. This is an important step, as the new vessel and the capabilities of DAP will fully complement our team.

This is a winning partnership that helps assure not only safety for our team, but an

excellent chance of a very successful DXpedition under the extreme circumstances we are expecting.

Our departure will be approximately mid-January, 2018, possibly sailing to Bouvet from King George Island. We expect 9-11 day voyage to Bouvet.

When the weather allows, we will land on the island by helicopter. Our first priority will be to inspect the terrain, select a site clear of crevasses and establish our shelters stocked with emergency supplies.

Once secured, we will bring the rest of our equipment ashore and commence radio operations as soon as possible.

We expect to be at Bouvet for 21 days, and allowing for weather, hope to be on the air for 14-16 days.

This is likely the most expensive DXpedition ever attempted and the operating team has committed to fund up to 50% of the costs. We are hopeful the DX community will fund the remainder. You may follow our planning progress and see our fund-raising results on our website [www.bouvetdx.org](http://www.bouvetdx.org).

73,

**Ralph-K0IR**

**Bob-K4UEE**

**Erling-LA6VM**



## Tropo Scatter communications

Tropo Scatter could provide almost daily contacts countrywide on VHF. Propagation via the Tropo Scatter mode is possible almost daily across most of South Africa.

Tropo Scatter is not weather related, unlike Tropo Enhancement and Tropo Ducting, but is caused by dust particles, moisture and turbulence in the atmosphere.

Unfortunately, Tropo Scatter communication comes at a price of running 400 up to 1 000 Watts of power with high gain horizontal Yagi beam antennae and sensitive receivers.

The advantage is reliable communications daily on VHF and UHF over distances up to 1 000 km, while the disadvantage is signals of low level and deep QSB cycles.

Diversity reception and computer correction has been successfully applied to commercial and military communications to provide constant signals. The 144 and 432 MHz bands could be the most practical for radio amateurs beaming just above the horizon.

It only requires a few dedicated and well-equipped amateurs to explore this type of propagation and they could also use EME equipment.

Division 4 is centrally situated and could become the hub of this type of activity in South Africa.

[The South African Radio League](#)

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## AMSAT Sweden celebrates 35 years

**AMSAT-SM** (Sweden) has been active in 35 years 2017.

AMSAT-SM was founded April 24th 1982 by a group of Swedish hams.

The first AMSAT-SM president was SM5IXE Thomas Johansson.

One AMSAT-SM's objectives is to inform Swedish hams about the fun with amateur satellites! Not many SM hams are active via satellite at the moment. With the help of their Swedish webpage and HF-net it is hoped that more Swedish hams should be using amateur satellites.

The AMSAT-SM annual meeting is held every spring.

Some weeks on Sundays we have a HF-net on 80 meters with lots of news about satellites and space.

Today AMSAT-SM has aprox. 200 members and we have an active news feed via web, Twitter and Youtube. So, we are still alive and kicking!

<http://www.amsat.se/english-info/>  
[https://twitter.com/amsat\\_sm](https://twitter.com/amsat_sm)  
<https://www.youtube.com/AMSATSM>

Lars, SM0TGU



# AMSAT-SM



The NZART logo is a diamond-shaped emblem with a black background and white text and symbols. At the top is 'NZ', followed by a radio antenna symbol, then 'ART' in large letters, and 'T' at the bottom. A vertical line with a small circle in the middle runs through the center of the letters.

There is only one  
**NEW ZEALAND ASSOCIATION  
of  
RADIO TRANSMITTERS.**

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.**

## Upcoming Happenings & Events

<i>Date</i>	<i>Happenings &amp; Events</i>
1st May	HF Net, 3.575 MHz, 19:30
2nd May	VHF Net, 146.525 MHz, 20:00
<b>5th May</b>	<b>NZART HQ Infoline</b>
8th May	HF Net, 3.575 MHz, 19:30
9th May	VHF Net, 146.525 MHz, 20:00
15th May	HF Net, 3.575 MHz, 19:30
16th May	VHF Net, 146.525 MHz, 20:00
<b>17th May</b>	<b>General Meeting</b>
<b>19th May</b>	<b>NZART HQ Infoline</b>
<b>20-21 May</b>	<b>NZART Sangster Shield Contest</b>
22nd May	HF Net, 3.575 MHz, 19:30
23rd May	VHF Net, 146.525 MHz, 20:00
<b>28th May</b>	<b>NZART Official Broadcast</b>
29th May	HF Net, 3.575 MHz, 19:30
30th May	VHF Net, 146.525 MHz, 20:00

**3rd June—NZART Conference—Rotorua**  
**10-11 June—NZART Hibernation Contest**  
**16th June—NZART HQ Infoline**  
**21st June—General Meeting**  
**25th June—NZART Official Broadcast**  
**7th July—NZART HQ Infoline**  
**21st July—NZART HQ Infoline**  
**30th July—NZART Official Broadcast**  
**5-6 August—NZART Brass Monkey Contest**  
**7-8 October—NZART Microwave Contest**  
**2-3 December—NZART Field Day Contest**

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

### 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.zl1ux.org.nz>  
**eMail:** [branch.12@nzart.org.nz](mailto: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: A collection of AMSAT organizations around the world. Found at AMSAT India.*

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