



# Next General Meeting

Due to Good Friday being Friday the 3rd

The next monthly meeting is on Friday the 10th April

Doors Open 7.30pm

Ern Rose Memorial Pavilion, Seaver Grove, Reservoir

## Last months Annual General Meeting

The nomination results and appointments are as listed;

### Executive Committee Position

President

Vice President

Secretary

Treasurer

### Person

Frank VK3OP

John VK3FEZZ

Frank VK3ZO

Rod VK3FAB

### Committee Position

Committee #1

Committee #2

Committee #3

Committee #4

### Person

John VK3FMPB

Greg VK3CN

Vacant

Vacant

### Other Positions

Radio Officer

Webmaster

Magazine Editor

QSL Card Manager

### Person

Frank VK3OP

Rod VK3FAB

Vacant

Vacant

# Strongest geomagnetic storm of Solar Cycle 24

It seems the luck of the Irish was with sky watchers and VHF amateur radio operators on St. Patrick's day. The event occurred following a coronal mass ejection (CME) impact on March 15th, 2015. On March 15th, sunspot number 2297 which had previously produced a number of moderate M-Class solar flares and one X-Class event, produced a long duration C9 solar flare at 02:13 UTC. C-Flares do not typically grab much in the way of attention, the magnetic characteristics of the eruption caused a partial halo coronal mass ejection (CME) to be flung into space and appeared to have somewhat of an Earth directed component. A minor impact past our planet was predicted for late on Tuesday, March 17, 2015.

On March 16th, Energetic proton levels streaming past our planet were on a gradual rise, an early indication that an interplanetary shock wave was on course with our planet.

At 04:05 UTC on March 17th, an earlier than expected shock passage was detected by the ACE spacecraft. Solar wind speeds as measured by ACE increased to above 500 km/s, while the Bz component of the interplanetary magnetic field (IMF) was initially pointing north, a condition known to suppress geomagnetic activity.

Half an hour later at 04:35 UTC, a geomagnetic sudden impulse measuring 54nT was recorded by the USGS ground based magnetometer in Boulder, Colorado. This signalled the moment the interplanetary shock wave (coronal mass ejection) swept past our planet.

Initially conditions did not look favourable, however the Bz/IMF component soon began to point sharply south for long periods (-23nT peak). This allowed an energetic solar wind to interact with our geomagnetic field, thus leading to what has been called the St. Patrick's Day Storm of 2015.

Over 24 hours of storming, a majority of which was above moderate levels, led to incredible aurora displays at middle to high latitudes.

Ham Radio Operators located across northern areas of Europe and North America utilized geomagnetic activity enhancements which are known to reflect signals in the very high frequency (VHF) radio spectrum. VK3s and VK5s were working VK7s on Auroral backscatter on 6 metres with plenty of traffic on VK Logger at the time showing the amount of activity. One of the VK stations reporting that he had been detecting the Auroral activity for at least 16 hours straight!

Auroral backscatter can be a very interesting mode to work. The signals are generally quite distorted with a distinct "buzzing" sound all over them, and can show dramatically different beam headings to the expected path.

My first VK1 contact on 6 metres was made via Auroral backscatter, I had to beam South at the Aurora for the signal to bounce back over the top of me into VK1, when I turned the beam directly at VK1 the signal totally disappeared, rotating back to the south and the signal came up again. At the same time as I was working the VK1, ZL television and beacons could be heard on similar beam headings to the south, with the same characteristic "buzzing" all over them. It was a real education and a lot of fun!

Because of the long duration of the event, sky watchers from Europe, Canada, northern areas of the USA, were able to witness some of the best displays of Aurora Borealis in years. At the other end of the globe observers in New Zealand and Australia were able to witness some of the best visual displays of Aurora Australis in years.



Aurora Borealis in Northern Swedish Lapland in January 2014. Photo by Frank VK3OP

The visual Aurora are caused when electrically charged electrons and protons accelerate down the Earth's magnetic field lines, which get more concentrated near the magnetic poles. The charged particles then collide with neutral atoms in the upper atmosphere — usually about 100 kilometres above the Earth. These collisions cause the neutral atoms to fluoresce, emitting light at many different wavelengths. The most common aurora colours are red and green, caused by the fluorescence of oxygen atoms, while nitrogen atoms can throw bluish-purple colours. Typically observers need to be at quite high latitudes around the 65 to 70 degree region to see the visual Aurora.

## **GENERAL NEWS ITEMS**

### **ANZAC DAY 2015 PORTABLE AT BALLARAT**

The Victorian Ballarat Showgrounds will again be a focal point for radio amateurs to commemorate ANZAC Day, which this year is the 100th anniversary of the Gallipoli landing. Organiser Johnno Karr VK3FMPB wants to hear from volunteers with portable stations to operate on the afternoon of Saturday, April the 25th. The event, now in its second year, will honour our heroes through a show of mateship and enjoyment.

To volunteer or for more details please contact VK3FMPB on air or email to [johnkarr@bigpond.net.au](mailto:johnkarr@bigpond.net.au)

### **THE EMDRC HAMFEST 2015**

Location: Great Ryrie Primary School  
Address: 51A Great Ryrie Street, Heathmont  
Date: Sunday 29th March 2015  
Time: Doors open 10 am (setup available from 8 am)  
Entry: \$6pp including one Raffle ticket and bottomless tea&coffee (kids 12 and under free)  
Breakfast and morning tea available at the famous BBQ  
Email [vk3er@emdr.com.au](mailto:vk3er@emdr.com.au) to book a table

## UPCOMING EVENT DATES

**March 29**

VK3 EMDRC Hamfest

**April 25**

VK3 ANZAC Day Radio Afternoon Ballarat Showgrounds (vk3fmpb)

**July 11-12**

VK3 GippsTech 2015

**July 25th**

ALARA 40th Birthday Celebration  
The Novotel Hotel 285 Springvale Road Glen Waverley Victoria  
At 12 Noon

## Payment of Membership Fees

Members have the option to pay their membership fees via internet banking and direct deposit, details:

Bank Name: Bendigo Bank  
BSB Number: 633-000  
Account Number: 139996052  
Account Name: Western and Northern Suburbs Amateur Radio Club

Please quote your callsign and "renewal" as the reference.  
Annual membership fees: Full - \$25.00 Concession - \$15.00 Family - \$40.00

When paying by internet banking or direct deposit, please email our Treasurer, Rod, and he will confirm receipt of your payment. Alternatively, you can send us a money order or cheque made out to "Western and Northern Suburbs Amateur Radio Club" to WANSARC, PO Box 336, Reservoir VIC 3073. Membership fees can be paid in cash, cheque or money order at our monthly meetings. Please note, we do not have EFTPOS facilities. Rod can be contacted at [treasurer@wansarc.org.au](mailto:treasurer@wansarc.org.au)

## VK1WIA ~ ARV WEEKLY BROADCAST

SUNDAY 9:30am

Melbourne 147.175 VK3REC Olinda, Mt Dandenong - EMDRC  
Mildura - Sunraysia 146.800

SUNDAY 10:30am and 8:00pm Melbourne  
VK3BWI - Amateur Radio Victoria Network

3.615

7.158

10.130

147.250 VK3RMM Mt Macedon

146.700 VK3RML Ferny Creek

146.825 VK3RPL Portland

439.800 VK3RMU Mt St Leonard

SUNDAY 10:30am Bairnsdale  
146.900 MHz EGARC IRLP Node 6008

SUNDAY 11:00am Ballarat (Ben Nevis)  
147.000 VK3RWA

SUNDAY 7:30pm Shepparton  
146.650 VK3RGV Node 6992 Mt Wombat.

WEDNESDAY 8:00pm Bairnsdale  
146.900 MHz EGARC IRLP Node 6008

# WANSARC NET

Tuesday Night  
8pm Check In

# VK3AWS

# 146.450MHz FM Simplex

## WANSARC VK3AWS

**PRESIDENT:** Frank Petrowitz

VK3OP

[president@wansarc.org.au](mailto:president@wansarc.org.au)

**SECRETARY:** Frank Benotto

VK3ZO

[secretary@wansarc.org.au](mailto:secretary@wansarc.org.au)

**TREASURER:** Rod Tacey

VK3FAB

[treasurer@wansarc.org.au](mailto:treasurer@wansarc.org.au)

**INFORMATION:**

[info@wansarc.org.au](mailto:info@wansarc.org.au)

All correspondence to be addressed to the **SECRETARY: PO Box 336, RESERVOIR 3073**

### WANSARC CLUB PROFILE

#### History

The Western and Northern Suburbs Amateur Radio Club (**WANSARC**) was first formed in 1969 and since then has served the needs and interests of amateur radio operators, short wave listeners and those interested in hobby radio and electronics. The club is not gender specific, having both female and male members. Members come from all walks of life with a mix of experience, young and mature, novice and technical. The most important aspect of the club is the willingness of all members to share their knowledge for the benefit of others. Members mainly reside in the west and north of Melbourne; however membership is encouraged from all interested. **WANSARC** is an affiliated club of **The Wireless Institute of Australia**.

#### Meetings

Meetings held at the **Ern Rose Memorial Pavilion, SEAVER GROVE, RESERVOIR** (Melway Map 18 D5) on the **1st Friday of each month** (excluding January) commencing at **7.30pm local time**. Talk in on **146.450MHz FM**—call club station **VK3AWS**.

#### Benefits

Free technology and related presentations, sponsored construction activities, discounted (and sometimes free) equipment, network of likeminded radio and electronics enthusiasts, excellent club facilities and environment plus an informative monthly newsletter for members to post articles, news, classifieds for all radio, test equipment, etc, featuring Amateur Radio news from WANSARC, ARV, WIA, ACMA, Melbourne Clubs, VK and Worldwide.

#### Club Nets

**146.450MHz FM** each Tuesday evening commencing 8.00pm local time. Net Control Station - VK3AWS

**Website:** [www.wansarc.org.au](http://www.wansarc.org.au)

**Postal:** **WANSARC PO Box 336 RESERVOIR 3073**

***A proud tradition of supporting hobby radio and electronics enthusiasts since 1969***

All editors' comments and other opinions in submitted articles may not always represent the opinions of the committee or the members of **WANSARC**, but are published in the spirit in which they were submitted; in any case anything stated is to promote interest and active discussion on club activities and the promotion of Amateur Radio in general. Contributions to **WANSARC** are always welcome from any part of the world. Email attachments of Word™, Plain Text, Excel™, PDF™ and JPG are all acceptable.

You can either post material to the Post Office Box address at the top of this page, or email your submission to the editor direct at [magazine@wansarc.org.au](mailto:magazine@wansarc.org.au)

Email attachments not to exceed 5 Mb in file size. Attachments of (or thought to be) executable code or virulently affected emails will not be opened.

Other persons or radio clubs may edit or copy out such as they like from the magazine but a reference to **WANSARC** is appreciated, except copyrighted (©) material or as otherwise indicated. Other articles that are credited to outside sources should be asked for their permission if they are used.

While we strive to be accurate, no responsibility taken for errors, omissions, or other perceived deficiencies, in respect of information contained in technical or other articles.

Any dates, times and locations given for upcoming events should always be checked with a reliable source closer to the event – coming up on the **WANSARC Tuesday evening NET on 146.450 MHz** starting at **8:00 pm Local** is recommended to discuss and confirm information and any dates.

The club website has current information on planned events and scheduled meeting dates. WANSARC News written with Word™ 2007, published with Adobe Acrobat™ 10.

You can get the WIA News sent to your inbox each week by simply clicking a link and entering your email address found at [www.wia.org.au](http://www.wia.org.au). The links for either text email or MP3 voice files are there as well as Podcasts and Twitter. This service is FREE.