

In the news from Amateur Radio New South Wales for this week;

Later in this bulletin, we have a summary of on-air activities from both Sydney, and across New South Wales. We would welcome any updates from club and groups; simply email news@arnsw.org.au – we don't need full items, just the details of the activity and contacts.

General enquires can be directed to the ARNSW office via email, to office@arnsw.org.au, or by leaving a phone message on 02 9444 0123.

Tonight, we welcome listeners on the EchoLink "HAM" conference, and the Australian & New Zealand EchoLink Network. Callbacks will also be taken after tonight's bulletin; our thanks to John VK3HJQ, and the Australian & New Zealand EchoLink Network team, for making this relay available.

Weekly Solar and Geophysical Report

For the period of the 31st of May to the 6th of June.

First, the summary of activity;

Dates across the columns are	31 st	1 st	2 nd	3 rd	4 th	5 th	6 th
10cm Flux	179	179	180	186	192	195	191
Fredericksburg A-Index	14	6	5	13	8	10	7
Australian A-Index	7	1	1	4	3	4	2 estimated
T index	122	113	109	122	121	128	133

Solar activity reached R3 on the 31st, with one M1.0 flare and an X 1.1 at 2203UTC; R3 again on the 1st of June, with one M-class and one X1-class flare; R1 on the 2nd with two M-class flares; R1 on the 3rd with 4 M-class flares; R1 on the 4th and 5th, each with one M-class flare; and R2 on the 6th, with an M6.1 flare.

Geomagnetic activity observed in the Australian region was low to moderate, remaining below warning threshold.

Ionospheric F2 critical frequencies in Southern Australia remained mostly near predicted monthly values. Depressed periods were observed on the 2nd, with 20% depressions during local night, and on the 6th, with depressions during local night up to 15%.

The forecast, issued on the 7th of June, through until the 13th;

Solar activity is expected to be at R1 with a chance of R2 activity.

Geomagnetic activity is expected to be at low to moderate levels.

Maximum usable frequencies are likely to be near predicted monthly values, however shortwave fadeouts are possible.

Data courtesy of the Australian Space Weather Forecasting Centre.

Space Weather Summary for May 2024

Compiled with data from the Australian Space Weather Forecasting Centre

Solar activity in May was predominately at R1 to R3 levels; 122 flares were at R1 and R2 levels, with 21 reaching R3. The largest flare for the month was an X8.7 on the 14th of May, which was the largest flare of this solar cycle so far. Active regions AR3663, AR3664 which then returned to be numbered AR3691 and AR3697 respectively were the main sources of the high flare activity observed this month.

Several CMEs were observed over the month, including multiple CMEs that were significantly Earth-directed. Four significant CMEs were associated with X-class flares produced by AR3664. These induced strongly elevated solar wind conditions, with the solar wind speed peaking at 1005 km/s on the 12th of May. These flares also were associated with solar radiation storms, at S1 levels from the 10th to the 16th, with S2 periods on the 10th, 11th and 14th.

Geomagnetic conditions were mostly quiet, though there were some significant events; the largest was on the 10th and 11th of May, which was a planetary G5-level geomagnetic storm. This was caused by the arrival of the four halo CMEs associated with X-class flares from AR3664.

The initial CME front arrived at Earth 29 minutes after reaching satellites at L1, with a moderate sudden impulse detected by Australian region magnetometers at 1706UT on 10-May. The peak global disturbance reached -412 nanoTesla on the 11th; similar in magnitude to the 2003 Halloween storm, which reached -383 nanoTesla. The total storm duration was approximately 37 hours.

The Australian region observed G3 geomagnetic conditions on the 10th, G4 on the 11th, and G2 on the 12th. Auroral sightings were made from all Australian states, including as far north as Queensland. G1 geomagnetic conditions were also observed in the Australian region on the 2nd of May due to a CME arrival.

Ionospheric conditions for HF radio communications were significantly degraded following the geomagnetic activity on the 11th of May, with Australian MUF depressed up to 55% during local daylight hours; however, MUFs were generally enhanced during local night hours of this storm period.

Southern region MUFs were depressed by 15-35% over 03-04 May following geomagnetic activity on the 2nd, Shortwave fadeouts impacting lower HF frequencies were frequently observed during May.

Spread-F was frequently observed throughout the month during local night hours in the southern Australian region. Frequent brief periods of ionospheric scintillation were observed throughout the month at Darwin, Weipa and Niue.

Australian T-index average for the month was 121.

[Play File: 15-E-ID2.wav]

Foundations of Amateur Radio

This series, written and produced by Onno VK6FLAB, continues a weekly examination, of the building blocks of Amateur Radio.

[Play File: 16-FOAR181.wav]

Duration: 6m42s

In: Morse code is a...

Out: ...I'm Onno VK6FLAB

For more information about this series, including audio, transcripts and other useful amateur radio resources, Onno's website is; vk6flab.com; and you can contact Onno by email, to cq@vk6flab.com.

Club News

We start this week with news from the Oxley Region Amateur Radio Club; and today was the second day of the Club's 48th Annual Field Day at the Wauchope Showground Hall. The Field Day Dinner was in the function room at the Port Macquarie Golf Club last night, Saturday the 8th of June.

We will have a full report on the Field Day, in next week's news.

The Club's May Coffee Morning is on at 10am this coming Thursday, the 13th of June, at Brooklyn's Burger Bar, Thrumster.

The next Foundation Licence training and assessment weekend will be held as soon as sufficient candidates have registered. Candidates for the Foundation Licence and for assessments for all grades of licence should register their interest via the contact form on the Club website.

There are two club nets each week; the mid-week net from 7:30pm on Thursday nights, and the weekend net at 9am Sunday mornings. Both are on the VK2RPM 2 metre repeater, 146.7MHz with a 91.5Hz sub-audible tone for access, and on EchoLink as VK2RPM-R. Members and visitors are encouraged to participate in the club on air nets as often as possible.

For more information about the Oxley Region Amateur Radio Club, visit the website at orarc.org. The site contains a wealth of Amateur Radio items in addition to club information. The May 2024 issue of the club's bimonthly newsletter "Oxtales" is now online, and past issues are available on the website as well. The club is also on Facebook; just search for Oxley Region Amateur Radio Club.

*From Henry VK2ZHE
For the Oxley Region Amateur Radio Club.*

[Play File: 17-E-ID3.wav]

Central Coast Amateur Radio Club

The Kariong club rooms are open on Saturdays from 10:30am. As always, members and visitors are most welcome.

At VK2RAG Somersby, the 6-metre, D-Star, Rad-Net DMR and 2m EchoLink, 70cm and 23cm service, are all fully operational. The WICEN UHF repeater is operating on MMDVM, and after some arcane parameter changes, Analogue FM, P25 and DMR are now, fully operational.

The Club's Weekly net is on Thursday Nights at 8pm. It's on the VK2RAG 2 metre repeater – 146.725MHz with a 91.5Hz sub-audible tone, and on the CCARCNSW and HAM EchoLink conferences. It is also live video-streamed on the club's Facebook page.

You can find out more about the CCARC, including information on upcoming social events and all the details we can't tell you about here; on the web at ccarc.org.au – by phone, 02 43402500 – or social media, search Central Coast Amateur Radio Club; remember to “like” to follow for updates.

73 Alan VK2MG

Publicity Officer, Central Coast Amateur Radio Club.

Hornsby and Districts Amateur Radio Club

The next mid-monthly meeting of the club is on this coming Tuesday the 11th of June, at the clubhouse of the Hornsby-Manly Rifle Club. Starting at 8pm, It's an informal meeting, so bring a show-and-tell item – or just bring yourself – for some good conversation in a very comfortable environment.

The Club has an excellent repeater facility at Storey Park in Hornsby, that hoses the 2m FM repeater along with a new multi-mode digital repeater on 70cm on 439.975MHz. In recent months, much work has been going on to update the equipment, including the installation of a solar power system.

At the June monthly meeting, Steve VK2AAV will talk about new solar system and Rob VK2DIO will talk about the new repeater equipment. The meeting will be at Mount Colah Community Centre on Tuesday the 25th of June, starting at 8pm.

And, don't forget to save the date, for the second annual "Christmas in July with HADARC". From noon on Sunday the 14th of July, at Magpies in Waitara, this promises to be another enjoyable lunch and afternoon with club members.

For more information on all club activities, visit the website, at hadarc.org.au.

Steve VK2AAV

For the Hornsby and Districts Amateur Radio Club.

[ID4 and Activities on the air]

[Play File: 18-E-ID4-AOTA5.wav]

Duration: 5m31s

In: [IDENT 4]

Out: ...the office phone, 02 9444 0123.

[Transcript]

I'm Mathew VK2YAP.... And I'm Stuart VK2BMX.

It's time for your quick trip around the bands for this week, with; activities on the air.

Daily;

Manly-Warringah "early bird" net, 6:30am on or near 3690kHz LSB; if that's too early, the "morning" net is from 8am on or near 7189kHz.

Amateur Radio Central West Group lunchtime net; 1pm on VK2RCW.

Mondays;

Westlakes ARC net 9:30am on 40 metres, 7115kHz, VK2ATZ Portable.

Great Lakes Radio Club net 7pm on VK2RGL; 147.1MHz with 91.5Hz tone, EchoLink VK2RGL-R.

Hunter Radio Group VK2AWX News 7:30pm, on 146.975MHz.

The **Blue Mountains ARC** D MR Net at 7:30pm on Brandmeister 50520, hosted by Ben VK2AFK.

Amateur Radio Central West Group net at 8pm on VK2RCW.

Lightning Net 8pm on 1860kHz, net control Steve VK2STG.

HADARC net 8pm on VK2RNS, 147.25MHz

Waverley ARS net 8pm on VK2RBV, 438.1125MHz with 91.5Hz tone. Activities online and on air; see website.

Tuesdays;

National VKDMR Net: starts at 7:30pm on Talkgroup 505.

Blue Mountains ARC net from 8pm, 3543kHz.

St George ARS digital net, 8pm on 146.8MHz

Illawarra ARS 80m net at 8:30pm, 3666kHz.

[...continues]

Wednesdays;

Westlakes ARC net 9:30am on 7115kHz. 2 Metre nets throughout the week, see website for details.

Hunter Radio Group net 7:30pm, on 146.975MHz and EchoLink node 1474.

Armidale ARC net 7:30pm on 3633kHz.

HADARC 8pm on 3608.5kHz

Blue Mountains ARC 8pm on VK2RBM, 147.05MHz, 123Hz tone.

Amateur Radio Central West Group from 8pm on 3653kHz.

Thursdays;

Illawarra ARS net 12pm; VK2RMP 146.850 and VK2RUW on 146.675.

Fishers Ghost ARC net 7:30pm on VK2RFG, 438.65MHz with -7MHz offset and 91.5Hz tone; also, on EchoLink.

Oxley Region ARC 7:30pm on VK2RPM 146.7Mhz with 91.5Hz tone.

St George ARS 8pm, VK2RLE 146.8MHz.

The **CCARC weekly net** from 8pm on VK2RAG, 146.725MHz with 91.5Hz tone, and EchoLink.

Fridays;

Morning tea with HADARC 9am on 7106kHz.

Westlakes 9:30am on 7115kHz.

Amateur Radio Central West Group at 8pm, VK2RCW.

Saturdays;

Westlakes Stone the Crows net; 6am on 3588kHz.

Illawarra ARS net 9:30am on VK2RMP and VK2RUW.

Snowy Mountains ARC net 7:30pm on Southeast network; VK2RFS 146.75MHz, VK2RSE 147.375, VK3RDH 146.625, and EchoLink.

Sundays;

Westlakes DMR Net from 8:00am, usually on Talkgroup 3802.

Oxley Region ARC from 9am, VK2RPM.

WICEN NSW nets; 6pm on Chatswood 2m or Kurrajong 70cm repeater, 6:30pm on DMR or HF, and 6:45pm on P25. Check website for details.

*Don't forget to get your activities on the air here... send us through the details of your activity!
Email the details, to news@arnsw.org.au... or leave a message on the office phone, 02 9444 0123.*
