

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

The final ARNSW Trash & Treasure for this year is on Sunday the 27<sup>th</sup> of November.

The 2017 ARNSW magnetic calendar will be posted out to financial members before the end of the year. You can always check on your membership status by an email, to [membership@arnsw.org.au](mailto:membership@arnsw.org.au).

Later this week, further upgrades are taking place at the VK2WI Dural site - entry to the site is restricted during work on the entry apron between the street and the gates. The gutter dip is being removed, so those with lowered cars will no longer scrape on entry. This will also make it easier for those attending Trash & Treasure days to park inside, rather than along the narrow shoulder of Quarry Road.

Here is a question for the contest and event operators to check back in the logs - In 1992 there were a number of events to commemorate 150 years of the establishment of the City of Sydney, which was officially incorporated as a city in 1842. Special callsign VI 150 SYD was made available for various Amateurs to operate on a roster basis.

The ARRL DXCC Awards coordinator has received a claim for an award which includes an entry for a contact with VI150SYD, which was apparently made on the 21<sup>st</sup> August 1992 at 1056 UTC. We know it is a long shot, but the ARRL have asked for a copy of the log entry - that's at 1056 UTC on the 21<sup>st</sup> August 1992, and other entries up to 15 minutes either side of that time. While operations is mentioned in the VK2WI News archives, no details could be found in Amateur Radio magazine about this operation.

So we would appreciate any details you have on this special event operation – please let us know here at the office – call or leave a message on 02 9651 1490, or email [office@arnsw.org.au](mailto:office@arnsw.org.au).

## **ARNSW Radio Homebrew and Experimenters Group**

The monthly net for the Radio Homebrew and Experimenters Group is on this is Tuesday evening the 15<sup>th</sup>. The net starts at 8:00pm on the Dural 2 metre

repeater, 147.0MHz and then at about 8:30pm will transfer over to HF. Depending upon conditions, the net may be on either 80m or 40m.

The 80m frequency will be 3686.4 kHz and the 40m frequency will be 7159kHz – both of which are cheap crystal frequencies. As well as store bought equipment, participants are encouraged to use homebrewed equipment on AM, DSB or SSB.

The next bi-monthly meeting of the group is on Sunday the 27th, after the next Trash and Treasure. It's at the usual location – here at VK2WI, 63 Quarry Rd Dural.

This month, Alex Stewart VK2PSF will be giving a presentation on Remote radio operation. The presentation will cover the solution currently implemented at Waverley for remote radio operation. How the solution evolved and some of the options that were investigated along with a look at the limitations in the options. A live demonstration will be included.

The meeting will start with the usual "Show and Tell" segment where members of the audience get up to show some project that they have been working on. There will also be some discussion on the Homebrew Challenge for January – build something in a Christmas Biscuit Tin – only one rule – no 240 Volts AC.

All are welcome – noon on Sunday the 27th of November at 63 Quarry Rd Dural.

*Peter VK2EMU*

*Coordinator ARNSW Radio Homebrew and Experimenters Group*

## **Weekly Solar and Geophysical Report**

For the period of the 4<sup>th</sup> to the 10<sup>th</sup> of November.  
First, the summary;

| Dates across the columns are | 4 <sup>th</sup> | 5 <sup>th</sup> | 6 <sup>th</sup> | 7 <sup>th</sup> | 8 <sup>th</sup> | 9 <sup>th</sup> | 10 <sup>th</sup> |
|------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 10cm flux                    | 77              | 77              | 76              | 77              | 77              | 80              | 80               |
| Fredericksburg Index (Afr)   | 3               | 2               | 4               | 2               | 2               | 5               | 14 estimated     |
| Australian Index (Aaus)      | 2               | 2               | 4               | 3               | 2               | 5               | 14 estimated     |
| T index                      | -13             | 3               | 10              | 11              | 11              | 11              | 12               |

Solar flare activity was very low all week.

Geomagnetic activity observed for the Australian region, was quiet from the 4<sup>th</sup> to the 8<sup>th</sup>, quiet to unsettled on the 9<sup>th</sup> and quiet to active on the 10<sup>th</sup>.

F2 critical frequencies in the southern Australian region started out depressed 25% local day and 15% local night on the 4<sup>th</sup>. Daytime on the 5<sup>th</sup> improved to near predicted monthly values, but night remained depressed 15%. From the 6<sup>th</sup> to the 8<sup>th</sup>, frequencies remained near predicted monthly values. On the 9<sup>th</sup>, depressions of 15% were observed during the day, with night returning to near predicted values, then on the 10<sup>th</sup> daytime remained near predicted, with depressions of 20% during local night.

Now, the forecast for the 11<sup>th</sup> to the 17<sup>th</sup> of November.

Solar flare activity should be very low to low.

Geomagnetic activity is expected to reach minor storm levels on the 11<sup>th</sup> and 12<sup>th</sup>, but be quiet to unsettled on other days.

Maximum Usable Frequencies are likely to be depressed 20 to 30% between the 11<sup>th</sup> and 13<sup>th</sup>, before recovering to near predicted monthly values.

*Data courtesy of Space Weather Services.*

## Space Weather Summary for October 2016

*Compiled with data courtesy of Space Weather Services*

Solar Activity remained at very low to low levels throughout October, with no significant X-class flares observed. There were also no Proton events – so a fairly quiet month.

Turning to the Ionosphere, and the deepest ionospheric depression for the month was observed on 14 October, following a prolonged negative period of the Bz component of the interplanetary magnetic field.

Later in the month, a broad period of lower than normal MUFs was observed between 26-28 October, in association with coronal hole induced geomagnetic activity.

That Geomagnetic activity reached its height on the 25<sup>th</sup>, with a local A-index of 28. This activity was associated with the Earth's entry into a high-speed solar wind stream, induced by a recurrent positive polarity coronal hole. An Auroral observation was reported on 25<sup>th</sup> October, at 22:50 local time from Hobart, Tasmania associated with this activity.

Earlier in the month, on the 13<sup>th</sup>, there was a sustained southerly Bz component of the interplanetary magnetic field. It was most likely associated with the arrival of a faint halo CME first observed in LASCO imagery on the 9<sup>th</sup>, due to an erupting filament observed in the northeast quadrant of the solar disc.

Speaking of an Auroral observation, here's a bit more about how Aurorae are formed. They occur in the Earth's upper atmosphere, when high energy charged particles from the Sun, enter the magnetosphere of the Earth. This is most likely during a Coronal Mass Ejection or CME. They are seen mostly at high or polar latitudes, but can be seen at middle latitudes when a really large solar event occurs.

Following A CME, there is often a major geomagnetic disturbance or "storm", creating an opening for particles from the Sun to enter the Earth's magnetosphere. Also, the speed and density of the solar wind - the flow of particles outward from the Sun - is particularly high.

Within the magnetosphere, particles interact with the Earth's magnetic field, spiralling around field lines and following them towards the poles. Since the geomagnetic field lines converge toward the poles, the energetic particles also converge towards the poles and are drawn downward into the ionosphere. There, at around 100 kilometres from the Earth's surface, they strike the molecules and atoms of air and cause them to radiate light, creating the beautiful colours of the aurora.

The Earth's magnetic field is also varying in composition and changing patterns, causing variation in the speed and character of the incoming solar particles. Winds blow through the ionosphere, where the light emitting atoms are, causing them to shift in the waves and ripples seen in auroral displays.

For more information on space weather, and some beautiful aurora pictures, visit the Space Weather Services website, at [www.sws.bom.gov.au](http://www.sws.bom.gov.au).

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## **ARRL DX news**

MADAGASCAR, 5R. Eric, F6ICX is active as 5R8IC from Saint Marie Island, IOTA AF-090, until February 4, 2017. Activity is holiday style on 40 to 10 metres using mainly CW with some SSB, RTTY and PSK63. QSL to home call.

UGANDA, 5X. Alan, G3XAQ will be active as 5X1XA from Kampala until November 28. Activity is on the HF bands using CW. This includes an entry in the upcoming CQ World Wide DX CW contest. QSL via G3SWH.

KENYA, 5Z. Tom, DJ6TF and Reiner, DL7KL will be active as 5Z4/DJ6TF and 5Z4/DL7KL, respectively, from Diani Beach from November 15 to December 1. Activity will be on 80 to 10 metres using CW and SSB. QSL to home calls.

SENEGAL, 6W. A group of amateurs are active as 6V1IS/p from Ngor and Goree Islands, IOTA AF-045, until November 16, as part of a humanitarian expedition. They are also active as 6V1IS from Dakar. Activity is on the HF bands. QSL via IK7JWX.

OMAN, A4. Omani amateur radio operators can sign their A4 calls with /46 until November 30 in celebration of the 46th anniversary of the independence of Oman.

PHILIPPINES, DU. Tom, KC0W is active as 4I7COW from Manila until November 22. Activity is primarily on 160 metres. QSL direct to home call.

PALESTINE, E4. Chris, PA2CHR and Jos, PA3FYC will be active as E44CM from Jericho from November 15 to 24. Activity will be on 2 metres and 70cm using EME. QSL direct to PA3FYC.

FERNANDO DE NORONHA, PY0F. Martin, LU9EFO is active as PY0F/LU9EFO until November 14. Activity is on the HF bands using SSB. QSL direct to F4HBW.

WEST KIRIBATI [kir-uh-BAS], T30. Operators JA1JQY, JA1KJW, JA3MCA and JA8VA are active as T30JY, T30KJ, T30MA and T30VE, respectively, from Tarawa, IOTA OC-017, until November 16. Activity is on 160 to 10 metres using CW, SSB and RTTY. QSL to homecalls.

CENTRAL AFRICA, TL. Ken, LA7GIA is active as TL8AO from Bangui until November 22. Activity is on 80 to 10 metres using CW. QSL via M0OXO.

UKRAINE, UR. Special event station EO30UC is active until November 29 to commemorate 30 years since the Chernobyl nuclear power plant disaster. QSL via operators' instructions.

ST. KITTS AND NEVIS, V4. John, W5JON will be active as V47JA from Calypso Bay, St. Kitts, IOTA NA-104, from November 15 to December 15. Activity will be on 160 to 10 metres, including 60 metres, using SSB. QSL direct to home call.

MICRONESIA, V6. Kay, JH3AZC and Matu, JA5EEU are active as V6EME from Pohnpei Island, IOTA OC-010, until November 16. Activity is on 2 metres EME. QSL direct to JH3AZC. In addition, Michael, DF8AN is active as V63AJ from Yap Island, IOTA OC-012, until November 16. Activity is on the HF bands using CW, RTTY and PSK. QSL to home call.

ANTARCTICA. Alan, MW0YCC is active as VP8DPJ from the Rothera Research Station on Adelaide Island, IOTA AN-001, until April 2018 while on work assignment. QSL via operator's instructions.

INDONESIA, YB. Operators Burkhard, DL3KZA and Amiruddin, YB9IPY are active as YB8/DL3KZA from Selayar Island, IOTA OC-236, until November 14. Activity is on 40 to 10 metres using CW and SSB. QSL via DL3KZA.

CAYMAN ISLANDS, ZF. Stan, K5GO is active as ZF9CW from Cayman Brac until December 4. Activity is on 160 to 10 metres using mainly CW. QSL via K0DEQ.

THIS WEEKEND ON THE RADIO. The Worked All Europe RTTY DX Contest, 10-10 International Fall Digital Contest, Japan International Phone DX Contest, NCCC RTTY Sprint, QRP CW Fox Hunt, NCCC CW Sprint, OK/OM CW DX Contest, SKCC Weekend CW Sprintathon, Kentucky QSO Party and the CQ-WE Contest are all scheduled for this weekend.

The Phone Fray, CWops Mini-CWT CW Test and QRP CW Fox Hunt are scheduled for November 16.

The ARRL National Parks on the Air event continues throughout 2016 to mark the 100th anniversary of the United States' National Park Service.

## WICEN News

WICEN members are invited to a BWRS briefing night covering the current status of the research into, and search for VH-MDX. The briefing will be at 7pm on Friday 25<sup>th</sup> November at BWRS HQ, 4 Learmonth Street, Rooty Hill. Please RSVP to WICEN Operations.

Coming up is a WICEN Day, on the 4<sup>th</sup> of December here at VK2WI Dural.

WICEN will hold a practice net starting at 1930 on Monday, 5 December, trying several different systems:

At 1930 on the following linked repeaters: Chatswood 2m, Kurrajong 70cm, and Berowra 70cm.

At 1945 a simplex net on 147.500, with net control at La Perouse in Sydney.  
At 2000 on HF, on 3610 kHz +/- QRM, hopefully allowing both local and distant stations to join.

The WICEN New South Wales website, at [nsw.wicen.org.au](http://nsw.wicen.org.au) - includes contact details, a webform, which is typically the best way to ask questions; and membership information.

WICEN has a twitter account: @wicennsw. Facebook users will find the official WICEN NSW page, and an informal national WICEN group.

WICEN ACT is part of the Canberra Region Amateur Radio Club, supporting events in the ACT and Capital Country. The website is [crarc.ampr.org](http://crarc.ampr.org).  
Coming up on the 3<sup>rd</sup> of December is the BMSC Rallye des Femme, a car rally for lady drivers.

WICEN Victoria's next event is the Australian 4 Day Enduro. Its a motorcycling event at Mansfield, on this Tuesday, November 15. Their website is [vic.wicen.org.au](http://vic.wicen.org.au).

*Submitted by Julian VK2YJS  
on behalf of the WICEN NSW State Management Committee.*

## Club News

We start this week with news from the Oxley Region Amateur Radio Club.

The next meeting of the Club is the Friday night gathering, at 7pm on the 18<sup>th</sup> of November, in the SES Building, Central Road Port Macquarie.

On the afternoon of Saturday the 26<sup>th</sup> of November, club station VK2BOR will operate portable from North Brother Mountain in the Spring VHF UHF Field Day. VK2BOR will have horizontal gain antennas on 6 and 2 metres as well as on 70 and 23 centimetres. North Brother Mountain is a proven VHF DX location with unobstructed coastal outlooks to both the north and south.

Candidates for the Foundation, Standard and Advanced Licences should contact the club via PO Box 712 Port Macquarie NSW 2444 as soon as possible. The Advanced Licence classes are already underway on Friday nights. The next training course and assessments for the Foundation licence will run as soon as sufficient candidates have registered.

The club conducts two nets each week; the mid-week net starts at 7:30pm on Thursday nights, and the weekend net takes place from 9am on Sunday mornings. Both nets are on the VK2RPM 2 metre repeater, 146.7MHz. This repeater requires a 91.5Hz CTCSS tone for access.

Visitors are always made very welcome at monthly general meetings, at 2pm on the first Saturday of the month, as well as at Friday night gatherings, at 7pm on the third Friday of the month. The venue for all club meetings is the SES Building in Port Macquarie.

For more information about the Oxley Region Amateur Radio Club, visit the website at [orarc.org](http://orarc.org). There you will find a wealth of Amateur Radio items in addition to club information.

The September 2016 web edition of the club's bimonthly newsletter "Oxtales", along with past issues, are available on the website. The November 2016 issue of Oxtales is a little later than usual, look for it during the coming week.

*Submitted by Henry VK2ZHE  
for the Oxley Region Amateur Radio Club.*

## Hunter Radio Group

Monthly meetings of the Hunter Radio Group are held on the second Friday of each month except December and January.

So instead of a meeting, the Group's Christmas 'do' will be on Thursday, December the 8<sup>th</sup>, at the Windale /Gateshead Bowling Club, starting at 6pm. Please contact Len 02 49577785 to let him know the numbers attending.

The Group's weekly Monday night broadcasts are at 7:30pm, through the 2 metre repeater VK2RNC on 146.9MHz and 438.025MHz; listen out for VK2AWX.

The Hunter Radio Group operates three repeaters at Mount Sugarloaf, west of Newcastle. They operate on VHF 146.9MHz, 146.975MHz with EchoLink, UHF on 438.025MHz as well as a 6 metre beacon on 50.288MHz.

*Charlie VK2CLH for Rodney VK2CN secretary*

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## **Illawarra Amateur Radio Society**

The society meets on the second Tuesday of each month, the next meeting is on the 13<sup>th</sup> of December. The general meeting starts at 7:30pm, directly following the Society's Committee Meeting at 6:30pm.

The December meeting is the Society's Annual Christmas dinner. After the conclusion of the business part of the meeting, lots of pre-ordered food will be delivered and enjoyed by all attending. It is free of charge, so why not take the opportunity to have a fun night, meet some good people, while filling your stomach with some fantastic food.

There will also be a raffle on the night, for the chance to win an excellent Kyoritsu 6141 professional Test Kit, consisting of a Digital Multimeter, 400 amp Clamp Meter and a 1000 volt Insulation Tester, all contained within a hard carry case.

Meetings are held at the Coniston Community Hall located in Bridge Street Coniston, which is just a little south of the CBD of Wollongong. The hall is located right next door to the Coniston Railway Station, so access to meetings by train is very easy.

Listeners are also reminded that VK2WI News broadcasts are relayed through three of the Illawarra Amateur Radio Society's repeaters; VK2RUW on 146.675MHz located south of Wollongong at Knights Hill, serving southern Wollongong, the Shoalhaven and the Southern Highlands; and VK2RMP on both 53.650MHz and 146.850MHz located north of Wollongong at Maddens Plains, covering Wollongong and southern parts of Sydney.

If you're interested in having a bit of a chinwag on Saturday mornings, Steve VK2BGL runs a very popular net on the 6850 and 6675 repeaters starting at 9.30am. As these repeaters are connected to Echolink, the Net gets call-ins from all over Australia as well as many different other countries. So put the time in your diary & call-in next Saturday morning on the 6850 and 6675 repeaters or on Echolink via VK2MT-R and VK2BGL-R.

Also, the Society is currently trialling a Yaesu Fusion C4FM repeater on VK2RMP 438.725MHz at Maddens Plains. The 70cm repeater operates with the usual 5MHz negative offset, with a 123Hz CTCSS access tone necessary for FM users.

The repeater is operating in Auto Mode - so analogue FM transmissions are retransmitted in FM, while digital C4FM signals are retransmitted in C4FM. Any users of this new digital mode are invited to make use of this UHF repeater on 8725.

So don't forget, for a great evening of good food and radio fun, come along to the Illawarra Amateur Radio Society's Christmas meeting at 7:30pm on December the 13th at the Coniston Community Hall.

*Submitted by Rob VK2MT*

*Publicity Officer for the Illawarra Amateur Radio Society*

## **Westlakes Amateur Radio Club**

Since weather events were unkind on the Club's recent field day, with the event being nearly washed out, the Club is holding a car boot sale.

Its on Saturday the 19<sup>th</sup> of November at the now dried out club grounds, in york street, Teralba.

The sale is a chance to sell your unwanted gear and get some cash for more radio gear for Christmas... Theres going to be a BBQ with hot and cold drinks available as well.

No cost to set up but bring your own table.

Hope to see you there,

*Barrie VK2QG*

*Vice President, Westlakes Amateur Radio Club.*

## **Waverley Amateur Radio Society**

The next meeting of the club is this coming Wednesday, November 16th, at the usual venue - in the Scout hall, in Vickery Avenue at Rose Bay, right behind the Rose Bay RSL Club.

At this meeting our guest lecturer will be Robert Brand, VK2URB, talking about underground communications especially as it applies to road tunnels. He may also mention some interesting up-coming projects. As usual there will be a show and tell segment as well as general discussion over a cuppa afterwards.

The December meeting, on the 21st, will be dedicated to the annual club Christmas Party in the Rose Bay RSL next door to the club. Further details will be available shortly from the organiser Al, VK2OK, including costs etc. Everyone is invited to attend so bring the family along.

The next "Shack night", is on Wednesday, December 7th, commencing at 7:30pm, a good time to bring along that new rig or to get some help to program it or learn how to use it or test it on the club's antennae.

On most Tuesdays there is a working bee at the clubhouse from around 10am to 4pm. A quick call on the Paddington 2 metre repeater (147.025, +600kHz, 91.5Hz CTCSS) to make sure that someone will be there or to get the coffee on, is recommended.

The space project group meets twice monthly on Tuesday evening. The next evening is due to be on Tuesday, November 22nd, from 7:00pm to about 10:00pm although occasionally these get cancelled at the last minute if insufficient members are able to attend. Call on the Paddington 2m repeater beforehand to make sure it is on.

The next Project Day is scheduled for Saturday December 3rd commencing around 1:30pm usually running through to about 4:30 or 5:00pm.

The club runs a weekly net every Monday evening, commencing at 8pm on our VK2RBV Fusion repeater in FM mode on 438.1125MHz, minus 5.4MHz offset and 91.5Hz CTCSS tone. A listening watch is still kept on the Paddington 2m repeater as well.

Skip's Morse sessions are continuing on Thursday evenings, initially on 20m, around 14.020MHz, from 2000 to about 2015, then moving to the Paddington 70cm repeater (438.575, -5MHz offset, 91.5Hz CTCSS) using AFSK. Some of the Morse team are also doing some practice at other times at the club.

The club runs regular Foundation course and assessment weekends. The next scheduled Foundation course and upgrade assessments run by the club will most likely be in February next year although the dates have not yet been set. To book and reserve your place, see our website, under Education and Training, for details.

Waverley's clubhouse is located in the Scout Hall in Vickery Avenue, Rose Bay with parking available in the grounds. Visitors are always welcome at any of the club's activities.

There is full information about the club on its regularly updated website at [vk2bv.org](http://vk2bv.org). It includes the capability to renew membership, purchase items such as Powerpole kits or book and pay for courses or assessments, online. There is also an enquiry form on the webpage.

*73 from Eric VK2VE  
Broadcast Publicity Officer*

## **St. George Amateur Radio Society**

The St. George Amateur Radio Society would like to announce the installation of a DMR repeater in the Sutherland Shire.

The VK2RLE UHF 70cm repeater has been recently upgraded to use the open Digital Mobile Radio format, a standard as defined by the European Telecommunications Standards Institute (ETSI). The frequency remains the same 438.425 MHz with a minus 5 MHz transmit offset.

What is DMR? - DMR uses Time Division Multiple Access (TDMA) to provide two 30ms "slots" per 12.5 kHz radio channel. Each time slot can carry independent voice conversations - this means the VK2RLE DMR repeater provides two simultaneous voice channels.

DMR provides better noise rejection and weak signal performance than analogue systems by using advanced Forward Error Correction (FEC) and codecs to remove noise and reconstruct signals that would otherwise be lost.

*Peter VK2EMU*

*For the St. George Amateur Radio Society.*

## Hornsby and Districts Amateur Radio Club

The last Tuesday evening meeting for the year is on Tuesday, November 22<sup>nd</sup> at the Mount Colah Community Centre, in Pierre Close, Mount Colah – just opposite the Mount Colah Railway Station.

The Club's Christmas lunch will be at noon on Saturday, 10th of December at "Magpies", with bookings required. While this is opposite Waitara Railway Station, buses will be operating between Hornsby and Wynyard.

The club runs three nets each week; Monday nights at 8pm on the VK2RNS 2 metre repeater starting at 8pm; Wednesday evenings on 3608.5 kHz, also from 8; And Morning Tea with HADARC – is on or near 7104kHz from 9:00 am on Fridays.

HADARC's website is at: [www.hadarc.org.au](http://www.hadarc.org.au). The club has a group on Facebook. which can be found by searching for VK2MA. The Club's twitter feed is @VK2MA. You can also see it on the web, at [twitter.com/VK2MA](https://twitter.com/VK2MA).

*Submitted by Julian VK2YJS.*

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## **Summary of coming events;**

### **November**

ARNSW Homebrew group net on the 15<sup>th</sup>  
Manly-Warringah lecture night on the 16<sup>th</sup>  
Foundation course weekend at ARNSW on 19<sup>th</sup> and 20<sup>th</sup>  
Westlakes ARC Car boot sale on the 19<sup>th</sup>  
HADARC General Meeting on the 22<sup>nd</sup>  
The CQ Worldwide CW contest is on the 26<sup>th</sup> and 27<sup>th</sup>  
Trash & Treasure at ARNSW Dural on the 27<sup>th</sup>.

### **December**

WICEN Day at VK2WI on the 4<sup>th</sup>  
St George Amateur Radio Society AGM and BBQ on the 7<sup>th</sup>  
Hunter Radio Group Christmas 'do' on the 8<sup>th</sup>  
Illawarra ARS Meeting on the 13<sup>th</sup>  
ARNSW Homebrew group net on the 20<sup>th</sup>  
Waverley ARS Christmas party on the 21<sup>st</sup>  
...and Christmas Day is the 25<sup>th</sup>