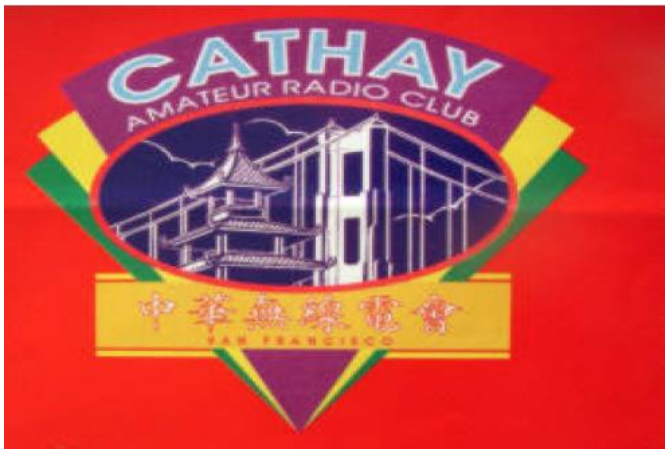


# Cathay January 2022

*www.cathayradio.org*

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**Editor:** Rodney Yee, *KJ6DZI* - **email:** rodyee2000@yahoo.com
**Treasurer:** Vince Chinn aka Mingie, *W6EE* - **email:** vince@vincechinncpa.com
**Web Master:** Edison Fong – *WB6IQN* - **email:** edison_fong@hotmail.com
**Mission:** The Cathay Amateur Radio Club is basically an active social club of Ham Radio Operators and their spouses. We support local community requests for HAM emergency communications. Several of us are trained in CPR/ First Aid and are involved with community disaster preparedness.

**Monday Night Net Time:** 9 PM Local Time/PST, Repeater: WB6TCS - RX 147.210, TX 147.810, Offset +0.6 MHz, CTCSS/Tone PL100 Hz

Please note: Repeater: N6MNV UHF 442.700 Mhz, Offset +5MHz, CTCSS/Tone PL 173.8 Hz in South San Francisco is cross linked every Monday Night Net at 9 p.m. to WB6TCS 2-meter repeater.

The CARC Monday night net is the best way to find out the latest club news. All check-ins are welcome.

**Message from the President:** George Chong, *W6BUR*

Hello CARC Members and Friends;

I hope you all had a very Happy New Year Celebration with your family members.

Many thanks to Mr. Denis L. Moore – WB6TCS for the use of his repeater for our CARC Monday Night Net.

I wish to thank our CARC members that set aside their valuable time to participate in our Monday night's nets.

Chinese New Year for 2022 is on Tuesday, February 1, 2022 and it will be the Year of the Tiger.

Due to the latest spreading of the COVID-19 Omicron variant, the CARC will not be hosting a Chinese New Year Luncheon to ensure the safety of our members.
I know many of you will be disappointed as I am with this announcement but there may be other opportunities throughout the year to host other CARC events.

**Chat sub s'em to all you CARC members! - George W6BUR**.

**Tech Article Introduction:**

This month's tech article: Mysterious radio waves coming from the heart of the Milky Way baffle astronomers.

The radio signals emanating from the mysterious object does not conform to what was initially to believe to be a spinning dead star known as a pulsar. The unusual object has been named after its coordinates: ASKAP J173608.2-321635.

Please read the latest press release from the University of Sydney, Australia that is located in the Tech Article Section of this newsletter.

## Public Service Announcements

**HAM CRAM / HAM Licensing**

For upcoming HAM Licensing locations please refer to:
http://www.arrl.org/find-an-amateur-radio-license-exam-session

**Auxiliary Communications Service (ACS)**

The Auxiliary Communications Service (ACS) is a unit of trained professionals who supply communications support to the agencies of the City and County of San Francisco, particularly during major events/incidents. ACS goals are the support of gathering and distribution of information necessary to respond to and recover from a disaster.

The ACS Net begins at 1930 hours (7:30 p.m. PT) local time each Thursday evening, on the WA6GG repeater at 442.050 MHz, positive offset, tone 127.3 Hz. The purpose of this net is to practice Net Control skills, practice checking in with deployment status in a formal net, and to share information regarding upcoming ACS events. Guests are welcome to check in. ACS members perform Net Control duty on a regular basis

On the second Thursday of each month, the net is conducted in simplex mode on the output frequency of the WA6GG repeater, 442.050 MHz no offset, tone 127.3 Hz.

ACS holds its General Meetings on the third Tuesday of each month from 1900 hours to 2100 hours local time. Currently meeting are exclusively conducted over Zoom during the COVID-19 pandemic, ACS looks forward to meeting in person again as soon as possible.

Upcoming meeting dates in 2022 are:

- January 18, 2022
- February 15, 2022
- March 15, 2022
- April 19, 2022

Location of in person future ACS meetings are yet to be determined as the regular location is under reconstruction until January 2023. All interested persons are welcome to attend. For further information, contact Corey Siegel KJ6LDJ <kj6ldj@gmail.com>.

For more information, please attend an ACS meeting, check in on the ACS radio net, or call 415-558-2717.

**Free Disaster Preparedness Classes In San Francisco – NERT Taught by San Francisco Fire Department (SFFD).**

**http://sf-fire.org/calendar-special-events**

**+ TBD**

Spring into Readiness!
This Virtual Drill will take place from 9am-12pm with virtual skill rotations and words from some special guests!

Invitation and sign-up coming next week!

**+ Recertifications** - Coming Soon!

Now that San Francisco has entered the Red Tier for COVID-19 Transmission (see https://covid19.ca.gov/safer-economy/#county-status for more details), we are working to schedule recertification trainings for NERTs who were current as of December 2019 or later. Stay tuned for details and times over the next month! jl(At this time, all class 5&6 recerts will take place outdoors only, at the SFFD Division of Training at 19th St & Folsom St in the Mission.)

***SFFD DOT** is the Fire Department Division of Training. All participants walking, biking or driving **enter through the driveway gate on 19th St.** between Folsom and Shotwell. Parking is allowed along the back toward the cinderblock wall.

Visit ***www.sfgov.org/sffdnert*** to learn more about the training, other locations, and register on line. Upcoming Special NERT Events.

**San Francisco Police Department: Auxiliary Law Enforcement Response Team (ALERT)**

The Auxiliary Law Enforcement Response Team (ALERT) is a citizen disaster preparedness program designed. The ALERT program is for volunteers 16 years of age or older, who live, work, or attend high school in San Francisco.

Graduates of the San Francisco Police Activities League (P.A.L) Law Enforcement Cadet Academy are also eligible to join.

ALERT volunteers will no longer need to complete the Fire Department's Neighborhood Emergency Response Team (NERT) (www.sfgov.org/sfnert) training and then graduate into two 8 hour Police Department course specifically designed for ALERT team members.

ALERT members will work closely with full-time and/or Reserve Police Officers in the event they are deployed after a disaster. The Basic ALERT volunteer will have no law enforcement powers other than those available to all citizens.

**SFPD ALERT Training (New Members)**

The next SFPD ALERT training class has been scheduled for: TBD

* Class date indicated are only for new members

IMPORTANT- All participants must complete the background interview process in order to be eligible to attend the ALERT training class.

Eligible ALERT participants may register for a training class by contacting the ALERT Program Coordinator, Marina at sfpdalert@sfgov.org, or by telephone at 415-401-4615.

**SFPD ALERT Practice/Training Drill**

All active/trained ALERT members are asked to join us for our next training drill, via scheduled for on

TBD

For more information on the San Francisco Police Department ALERT Program, email us at sfpdalert@sfgov.org, or call Lt. Marina Chacon (SFPD Ret.), SFPD ALERT Program Coordinator, at (415) 401-4615.

For additional information on the web please refer to:
https://sfgov.org/policecommission/alert

# Tech Article

THE UNIVERSITY OF SYDNEY

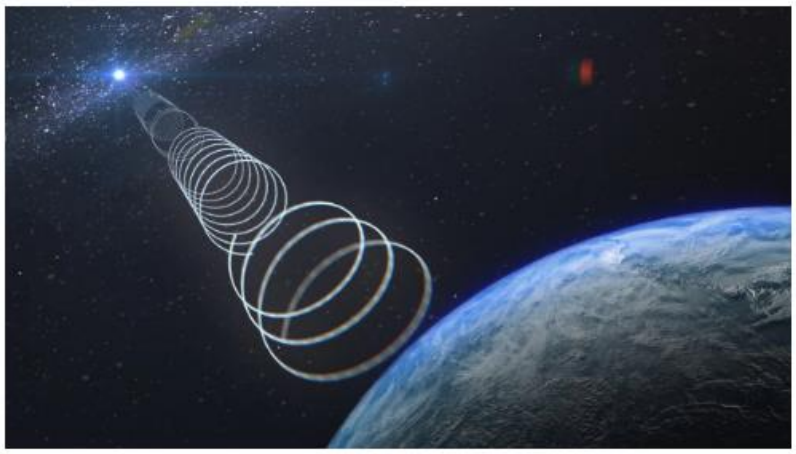
## Strange radio waves emerge from direction of the galactic centre

Date: 12 October 2021

A signal from deep in the Milky Way is tantalising scientists

Strange radio waves emerge from direction of the galactic centre - The University of Sydney

International student Ziteng Wang detected unusual signals from deep in the heart of the Milky Way using CSIRO's ASKAP radio telescope. Now astronomers are on the search for more evidence of what type object could be emitting them.



**Signals from ASKAP J173608.2-321635 deep inside the Milky Way**

Artist's impression of ASKAP J173608.2-321635 by Sebastian Zentilomo.

Astronomers have discovered unusual signals coming from the direction of the Milky Way's centre. The radio waves fit no currently understood pattern of variable radio source and could suggest a new class of stellar object.

"The strangest property of this new signal is that it is has a very high polarization. This means its light oscillates in only one direction, but that direction rotates with time," said Ziteng Wang, lead author of the new study and a PhD student in the School of Physics at the University of Sydney.

"The brightness of the object also varies dramatically, by a factor of 100, and the signal switches on and off apparently at random. We've never seen anything like it."

Lead author and PhD student ZIteng Wang from the School of Physics.

Many types of stars emit variable light across the electromagnetic spectrum. With tremendous advances in radio astronomy, the study of variable or transient objects in radio waves is a huge field of study helping us to reveal the secrets of the Universe. Pulsars, supernovae, flaring stars and fast radio bursts are all types of astronomical objects whose brightness varies.

“At first we thought it could be a pulsar – a very dense type of spinning dead star – or else a type of star that emits huge solar flares. But the signals from this new source don’t match what we expect from these types of celestial objects,” Mr Wang said.

The discovery of the object has been published today in the *Astrophysical Journal*.

Mr Wang and an international team, including scientists from Australia’s national science agency CSIRO, Germany, the United States, Canada, South Africa, Spain and France discovered the object using the CSIRO's ASKAP radio telescope in Western Australia. Follow-up observations were with the South African Radio Astronomy Observatory’s MeerKAT telescope.

Mr Wang’s PhD supervisor is Professor Tara Murphy also from the Sydney Institute for Astronomy and the School of Physics.

Professor Murphy said: “We have been surveying the sky with ASKAP to find unusual new objects with a project known as Variables and Slow Transients (VAST), throughout 2020 and 2021.”

“Looking towards the centre of the Galaxy, we found ASKAP J173608.2-321635, named after its coordinates. This object was unique in that it started out invisible, became bright, faded away and then reappeared. This behaviour was extraordinary.”

After detecting six radio signals from the source over nine months in 2020, the astronomers tried to find the object in visual light. They found nothing.

They turned to the Parkes radio telescope and again failed to detect the source.

Professor Tara Murphy from the School of Physics and Sydney Institute for Astronomy.

Professor Murphy said: “We then tried the more sensitive MeerKAT radio telescope in South Africa. Because the signal was intermittent, we observed it for 15 minutes every few weeks, hoping that we would see it again.

“Luckily, the signal returned, but we found that the behaviour of the source was dramatically different – the source disappeared in a single day, even though it had lasted for weeks in our previous ASKAP observations.”

However, this further discovery did not reveal much more about the secrets of this transient radio source.

“The information we do have has some parallels with another emerging class of mysterious objects known as Galactic Centre Radio Transients, including one dubbed the ‘cosmic burper’,” said Mr Wang’s co-supervisor, Professor David Kaplan from the University of Wisconsin-Milwaukee.

Professor David Kaplan from the University of Wisconsin-Milwaukee.

“While our new object, ASKAP J173608.2-321635, does share some properties with GCRTs there are also differences. And we don’t really understand those sources, anyway, so this adds to the mystery.”

The scientists plan to keep a close eye on the object to look for more clues as to what it might be.

“Within the next decade, the transcontinental Square Kilometre Array (SKA) radio telescope will come online. It will be able to make sensitive maps of the sky every day,” Professor Murphy said. “We expect the power of this telescope will help us solve mysteries such as this latest discovery, but it will also open vast new swathes of the cosmos to exploration in the radio spectrum.”

**Declaration**

Researchers received funding and support from the following bodies: Australian Research Council, US National Science Foundation, European Research Council, Natural Sciences and Engineering Research Council of Canada and the Sydney Informatics Hub at the University of Sydney.

The ASKAP radio telescope is part of the Australia Telescope National Facility which is managed by CSIRO. Operation of ASKAP is funded by the Australian Government with support from the National Collaborative Research Infrastructure Strategy. The MeerKAT telescope is operated by the South African Radio Astronomy Observatory, which is a facility of the National Research Foundation, an agency of the Department of Science and Innovation.

The researchers gratefully acknowledge the Wajarri Yamatji as traditional owners of the Murchison Radio-astronomy Observatory site, on which ASKAP is located.