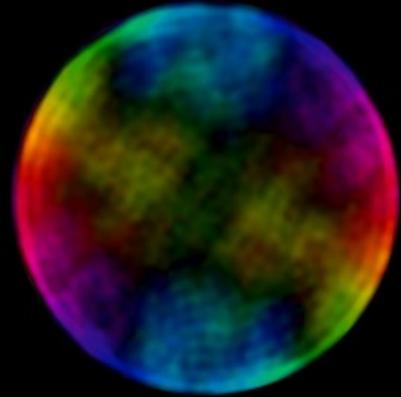




# The first 2000 ADAPs – the ATNF Daily Astronomy Picture

Philip Edwards | 3 November 2022

**16th of September 2020**



**A Lunar Soap Bubble  
by Emil Lenc**



# Australia Telescope National Facility (ATNF)



ASKAP radio telescope  
Wajarri country



Australia  
Telescope  
Compact Array  
(ATCA)  
Gomeri country



Parkes radio  
telescope,  
Murriyang  
Wiradjuri country

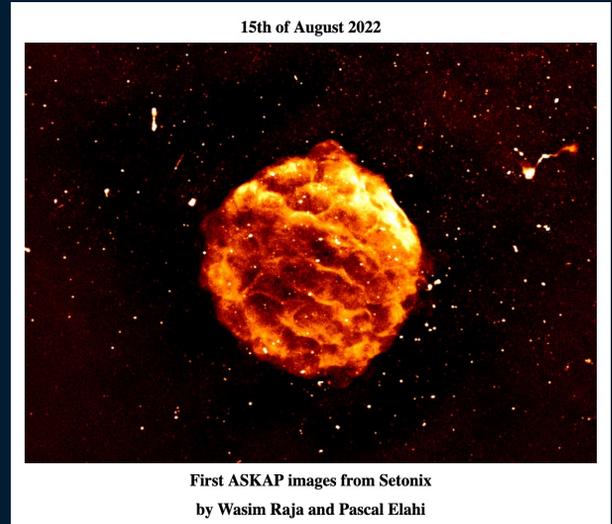


Mopra radio  
telescope – part of  
the Long Baseline  
Array  
Gamilaroi country



# Overview

- History and inspiration
- Subjects and Audience
- Examples
- Google analytics
- Usage and Feedback
- Lessons learned



<https://www.atnf.csiro.au/ATNF-DailyImage>

# ATNF Daily Astronomy Picture

20th of May 2022



## Wintry Canberra mornings

A common piece of advice to travellers in Australia is "Don't book a morning flight to Canberra in winter", as flights can be re-directed if the airport is fogged in. The image of the Canberra Deep Space Communication Complex (CDSCC) at Tidbinbilla, from a [youtube video by Richard Stephenson](#), shows one such morning, just over a year ago. However, Richard notes that 10 minutes after the video was taken, the wind picked up and the fog dissipated!



# History and Inspiration

- Created in Dec 2014 by Baerbel Koribalski and Simon Johnston
- Inspired by
  - NASA's Astronomy Picture of the Day (APOD) and
  - ASTRON/JIVE Daily Image
- Published Monday—Friday (~250 per year) since 2016
- Over 2000 ADAPs now published – all are archived

12th of July 2022



ATCA joey

# Astronomy Picture of the Day

[Discover the cosmos!](#) Each day a different image or photograph of our fascinating universe is featured, along with a brief explanation written by a professional astronomer.

2022 October 31



**LDN 43: The Cosmic Bat Nebula**

**Image Credit & Copyright:** [Mark Hanson](#) and [Mike Selby](#); **Text:** [Michelle Thaller \(NASA's GSFC\)](#)

**Explanation:** What is the most spook-tacular nebula in the galaxy? One contender is LDN 43, which bears an astonishing resemblance to a vast cosmic [bat flying](#) amongst the stars on a dark [Halloween](#) night. Located about 1400 [light years](#) away in the constellation [Ophiuchus](#), this [molecular](#) cloud is dense enough to [block light](#) not only from background stars, but from wisps of gas lit up by the nearby [reflection nebula LBN 7](#). Far from being a harbinger of death, this 12-light year-long filament of gas and [dust](#) is actually a [stellar nursery](#). Glowing with [eerie](#) light, the bat is lit up from inside by [dense gaseous knots](#) that have just formed [young stars](#).

**Celebrate:** [Halloween With NASA Online](#)

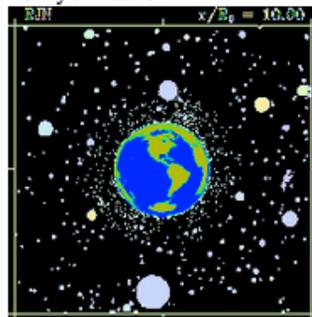
**Tomorrow's picture:** massive stars

# Astronomy Picture of the Day

The sky is filled with breathtaking pictures, many of which are available on the World Wide Web. Each day we feature a different picture of some part of our fascinating universe, along with a brief explanation written by a professional astronomer.

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Today's Picture:



## Explanation:

If the Earth could somehow be transformed to the ultra-high density of a [neutron star](#), it might appear as it does in the above computer generated figure. Due to the very strong gravitational field, the neutron star distorts light from the background sky greatly. If you look closely, two images of the constellation Orion are visible. The gravity of this particular neutron star is so great that no part of the neutron star is blocked from view - light is pulled around by gravity even from the back of the neutron star.

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We keep an [archive](#) file.

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Astronomy Picture of the Day is brought to you by [Robert Nemiroff](#) and [Jerry Bonnell](#). Original material on this page is copyrighted to Robert Nemiroff and Jerry Bonnell.

## Daily Image

24-12-2020

[Previous](#) [Next](#)

[Click here or on the picture for a full size image.](#)

### Solargraph at the Dwingeloo Telescope

**Submitter:** Tammo Jan Dijkema

**Description:** This image shows a solargraph taken from July till December 2020. It was created with a pinhole camera, in this case a tin can, with a tiny hole in it, with a piece of photo paper inside. I tied this can to one of the dead trees in the garden in July, and took it down on December 21, winter solstice. (It would have been better to start the exposure at summer solstice on June 21, however getting MT permission to put up a camera took a bit longer than expected.)

The trails across the image show the path of the Sun; the high trails are the path in the summer and the low ones in the winter.

This image also shows that the telescope has not moved a lot in the past year. That is of course unfortunate, but I trust that when covid is behind us also the telescope will start moving more often.

Making a solargraph camera is quite easy and cheap, instructions can be found [here](#) . I used a [ready made tin can](#) with photo paper inside.



# Subjects and Audience

- Content includes
  - science & engineering results
  - recent publications
  - pictures of our telescope
  - conferences
  - weekly ATNF colloquium
  - welcome new staff, ...
- The audience includes our community of users and staff, but is open to all

10th of March 2022



ASKAP looking up





# Breakdown for 2021

Topic	Number	%age
Science result/paper	82	33%
Picture of telescope	33	13%
People	28	11%
History	27	11%
Colloquium	22	9%
ASKAP update/SKA Contact/Conversation	21	8%
Conference/event/award	16	6%
Other	24	9%



# ATNF Daily Astronomy Picture

19th of April 2022



## 50th Anniversary of Apollo 16

Apollo 16, the fifth mission to land astronauts on the moon, launched 50 years ago, on April 16, 1972. The mission was crewed by Commander John Young, Lunar Module Pilot Charles Duke and Command Module Pilot Ken Mattingly, who decided to name the Command Module Casper and the Lunar Module Orion. The mission was supported by Australian facilities, though with most televised activities taking place during the US daytime, Honeysuckle Creek mostly tracked during astronaut sleep periods. Parkes was on standby for the mission, and was called upon while there were some problems in lunar orbit. [This essay by Hamish Lindsay](#), on the Honeysuckle Creek website, reviews the mission timeline in detail. The image above shows the Command Module, Casper, and the Earth as viewed from the Lunar Module, Orion. (Image credit: NASA/[Honeysuckle Creek website](#)).



# ATNF Daily Astronomy Picture

9th of May 2022



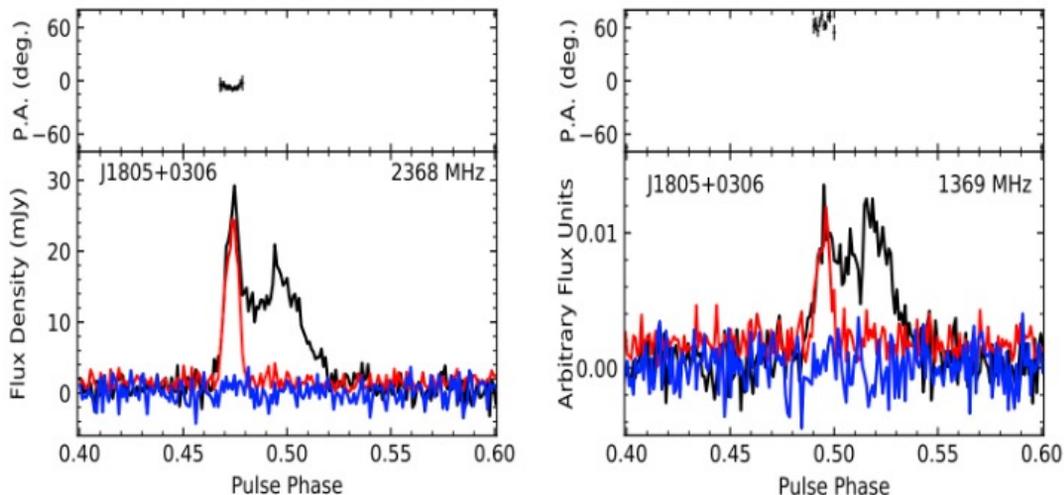
**Parkes Elvis Festival 2022**

The [Parkes Elvis Festival](#) was held this year in late April. Normally held in the second week in January, to coincide with Elvis Presley's birthday, COVID restrictions resulted in the event being delayed this year. In recent years, a photo-shoot has been held for the media at the Parkes Observatory, and this year was no exception. The image above shows the reigning International Ultimate Elvis Tribute Artist Champion, Taylor Rodriguez, demonstrating how he won his title. (Image credit: John Sarkissian)



# ATNF Daily Astronomy Picture

26th of May 2022



## Pulsar observations at Parkes

by Zhou et al.

[Zhou et al. present](#) the first flux density measurements, spectral indices, pulse profiles, and correlations of the spectral index with pulsar parameters for 19 pulsars employing the Ultra-Wideband Low (UWL) receiver on the Parkes radiotelescope, Murrumbidgee. The figure above shows polarization profiles at 2368 MHz and 1369 MHz for PSR J1805+0306. The total intensity is shown in black, linearly-polarization, and circular-polarization are shown in red and blue respectively. At both frequencies, the profiles show two components with the leading part of the profile having relatively high fractional linear polarization, whereas the trailing part of the profile is essentially unpolarized, providing hints about pulsar emission mechanisms.



# ATNF Daily Astronomy Picture

27th of May 2022



**Standing in the middle of AAVS2**

SKAO Director General Phil Diamond visited the MRO on a recent visit to Australia and took the above photo from the middle of the Aperture Array Verification System 2. AAVS2, located at the Murchison Radio-astronomy Observatory, is a testbed to evaluate the performance of antennas before construction of the full SKA-Low commences. AAVS2 is an array of 256 SKALA4.1 antennas distributed in a semi-random (but carefully chosen!) layout over a circular station area, with maximum spacing of 38 metres. The SKALA4.1 antenna is of dual linear polarisation and all antennas in the station have the X polarisation oriented E-W and Y polarisation oriented N-S. [A previous ADAP has shown the array elements pictured from above.](#) (Image credit: Phil Diamond)



# ATNF Daily Astronomy Picture

1st of June 2022



Science has given me answers, helped me ask new questions and given me the opportunity to ‘explore’ our Galaxy.”

PROF NAOMI MCCLURE-GRIFFITHS FAA  
AUSTRALIAN NATIONAL UNIVERSITY

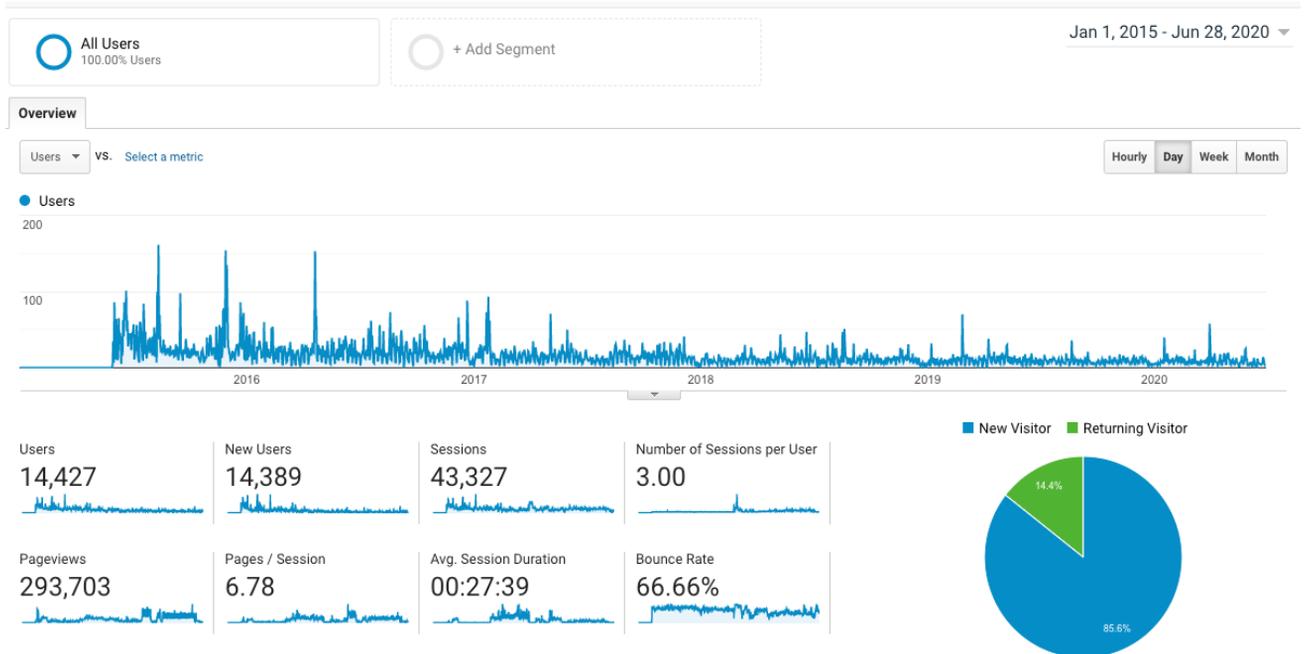
The graphic features a circular portrait of Prof Naomi McClure-Griffiths on the left. The background is a dark blue gradient with faint, light-colored patterns resembling a galaxy or nebula. The quote is written in large, white, sans-serif font. Below the quote, the name and affiliation are listed in a smaller, white, sans-serif font.

## Naomi McClure-Griffiths elected to Australian Academy of Science

Each year the Australian Academy of Science elects up to 24 new Fellows. Incoming President of the AAS, Professor Chennupati Jagadish noted, "Fellows of the Australian Academy of Science are among the nation's most distinguished scientists, elected by their peers for ground-breaking research and contributions that have had clear impact." One of the new fellows elected this year is long-time ATNF telescope user and former [Bolton Fellow](#), Naomi McClure-Griffiths. [Naomi's citation reads:](#) "Naomi McClure-Griffiths is Australia's pre-eminent expert on the atomic hydrogen gas distribution and evolution in our galaxy, the Milky Way, and its neighbours, the Magellanic Clouds. She has made seminal contributions to our understanding of atomic gas and magnetism within these galaxies through leadership of high-fidelity observational surveys undertaken with Australia's radio telescope facilities. Her work includes the discovery of a new spiral arm within the Milky Way, the first detection of neutral gas out-flowing from the nucleus of the Milky Way, and the pioneering demonstration of the importance of magnetic fields in the flow of matter into the Galactic disk." (Image credit: Australian Academy of Science)

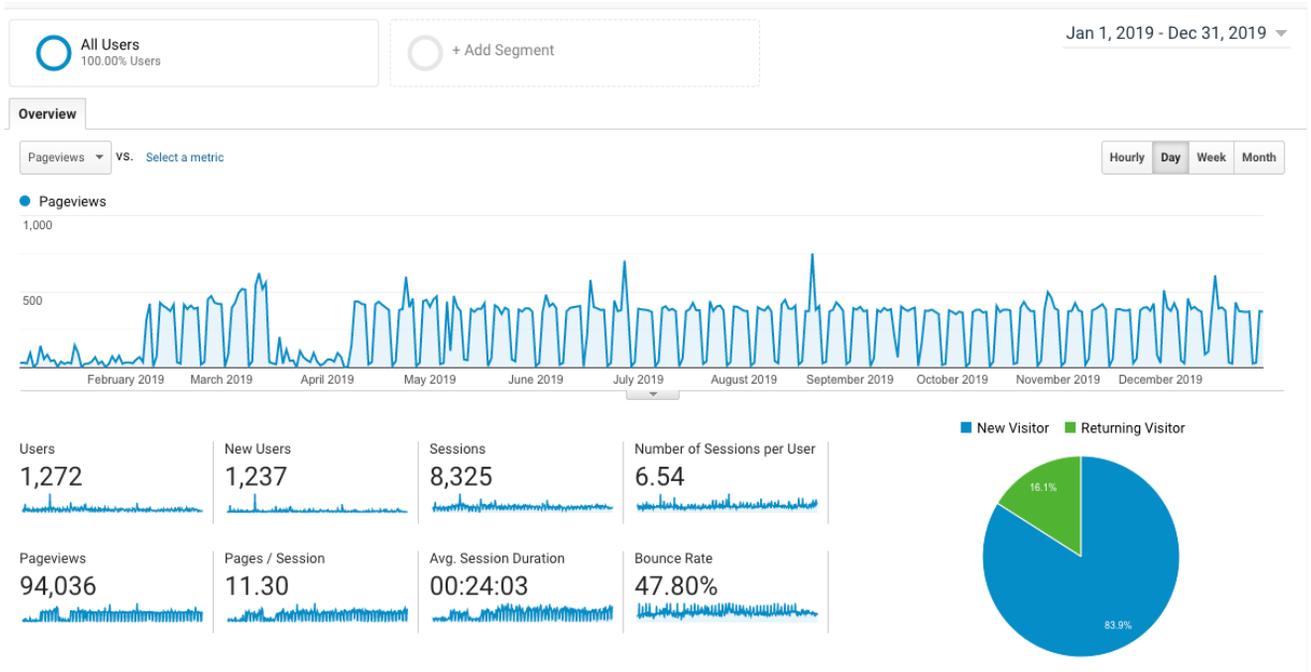


# Google analytics 2015—2020





# Google analytics 2019





# Distribution of users 2019 (top 85%)

Country	Users	% Users
1.  Australia	634	 48.51%
2.  United States	174	 13.31%
3.  United Kingdom	53	 4.06%
4.  China	52	 3.98%
5.  Germany	47	 3.60%
6.  Argentina	38	 2.91%
7.  Netherlands	34	 2.60%
8.  Canada	28	 2.14%
9.  India	24	 1.84%
10. (not set)	24	 1.84%

# Usage and Feedback

- Physical newsletter => Digital platforms
  - Continuing connection with community
  - Resource for internal & external comms
- “The ATNF Daily Picture is how I try to keep up with what's going on in Oz.”
- “I continue to be an assiduous reader of this page; it's how I keep up with developments at ATNF.”
- “... you have absolutely *made my day* with this link.”

21st of July 2022



**Virtual Solar System**

# Lessons Learned

- Useful archive:
  - ATNF activity range
    - Research
    - Events
    - Engineering & upgrades
  - Timeline of activities
- Long descriptions easier than short
- Too much vs not enough content
- Glitches can happen...
- Good outreach experience for ECRs

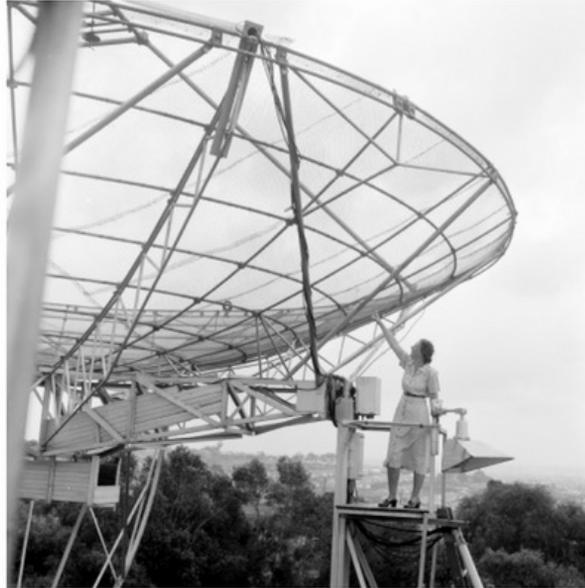
Feedback is always welcome!





# ATNF Daily Astronomy Picture

9th of March 2021



**International Women's Day: Mary Stahr Carpenter**

With yesterday marking International Women's Day, today we recall the work of American astronomer Martha Stahr Carpenter. In her first year of college, Carpenter took an astronomy course given by Leah Allen, and recalled that "it suddenly dawned on me that I could actually become an astronomer." Carpenter was inspired by Allen to become a member of American Association of Variable Star Observers (AAVSO), later going on to serve as president for three terms.



# ATNF Daily Astronomy Picture

20th of April 2018



## The Roulettes fly by Parkes

Yesterday's ADAP showed the the Royal Australian Air Force's aerobatic display team, [the Roulettes](#), in the background with the Parkes telescope in the foreground: today's ADAP has the opposite perspective, with the Roulettes in the foreground and the Dish in the background! (Image credit: [the Roulettes facebook page](#))



# ATNF Daily Astronomy Picture

30th of August 2019



**Reflections on Parkes Open Day**

The Parkes Observatory held Open Days to commemorate the 50th anniversary of the Apollo 11 moonwalk last month, with similar events also held at the Canberra Deep Space Communication Complex (CDSCC) at Tidbinbilla, and at the Honeysuckle Creek tracking station site. Participants included the young and old, amateur astronomers, interested by-passers, locals, and those from far afield. Some perhaps had stars in their eyes, and as the image above shows, one had telescopes in her glasses! (Image credit: Kate Cranney)



# ATNF Daily Astronomy Picture

23rd of March 2018



## Looking up at Parkes

We are so used to see pictures of the Parkes telescope from above, one can be forgiven for thinking this is an artist's impression of the sky rendered on the surface of the Dish. It was, however, taken by Tim Ruckley during a maintenance period at Parkes in 2002. The view is looking up through an access hatch in the surface of the Parkes Radio Telescope. The cover on the base of the focus cabin has been removed for maintenance.



## In conclusion

- The ATNF Daily Astronomy Picture is still going strong
- <https://www.atnf.csiro.au/ATNF-DailyImage>
  - Why not make it your default screen when opening a new tab?
- Your contributions welcomed!
  - Simply send me an email

*With thanks to Emil Lenc, Wasim Raja, John Sarkissian, Richard Stephenson, Rachel Rayner, Gabby Russell, Phil Diamond, Vince McIntyre, @CanberraDSN, Baerbel Koribalski, honeysucklecreek.net, Australian Academy of Science, & CAP conference organisers*

# Thank you

**Space and Astronomy**

Philip Edwards  
ATNF Daily Astronomy Picture curator

+61 2 9372 4717  
philip.edwards@csiro.au  
www.atnf.csiro.au

