



ATNF Science

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Australia's National Science Agency



Picture credit: Michael Reay

Outline

- The COVID era
- Staff changes
- Publications
- Recent science highlights
- ATNF Science Strategy
- Vacation students
- Acknowledgements and Impact tracking
- Call for Proposals
- ATNF website refresh

Impact of COVID

- ATUC encouraged keeping community informed
- CSIRO has allowed extensions of post-doc fellowships that were nearing completion
- CSIRO staff surveys have confirmed WFH and travel restrictions have been isolating
- While no visitors allowed at CSIRO sites, all observing and training has been done remotely
- CSIRO sites now open again, including for visitors
- CASS telescopes have continued operations throughout

Impact of COVID

ACKNOWLEDGEMENTS

The authors wish to thank the ATCA staff for the support in carrying out the observations during the current health emergency.

Staff changes

ATNF Science has recently farewelled

- Catherine Hale
- Karen Lee-Waddell
- Andrew Cameron

and welcomed

- Suk Yee Yong
- Andrew Zic (hosted by Macquarie)
- Jo Dawson (Joint Appointment with Macquarie)

Congratulations to

- Shi Dai

Publications from ATNF telescopes

NUMBER OF PUBLICATIONS

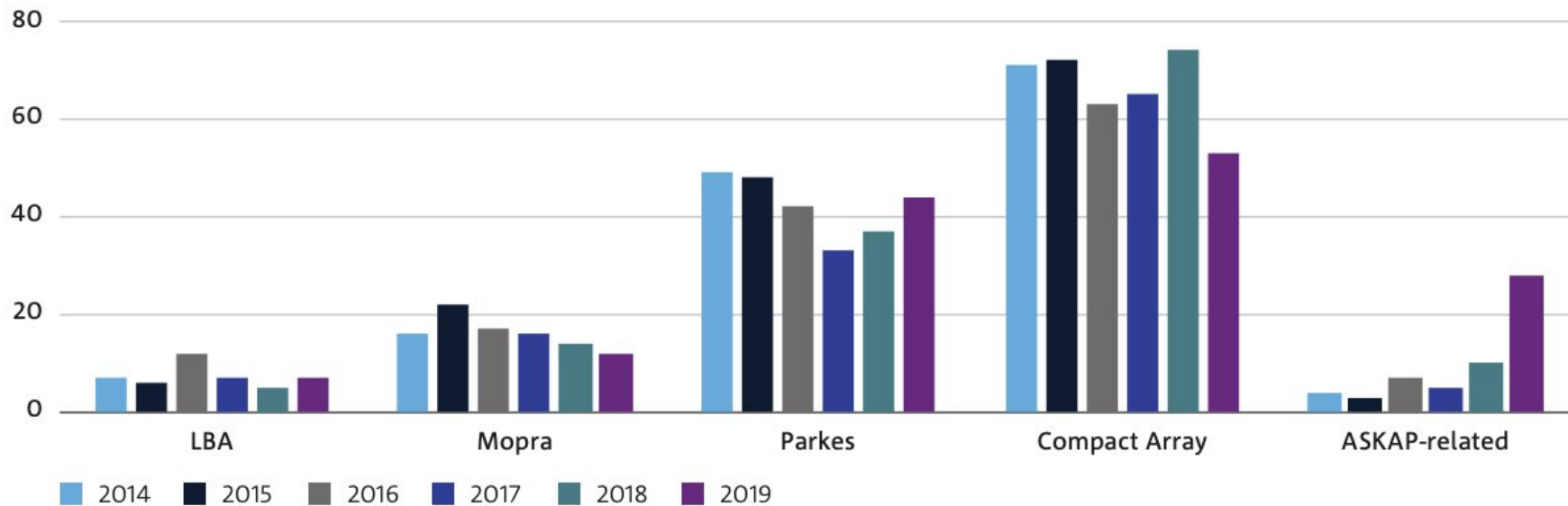
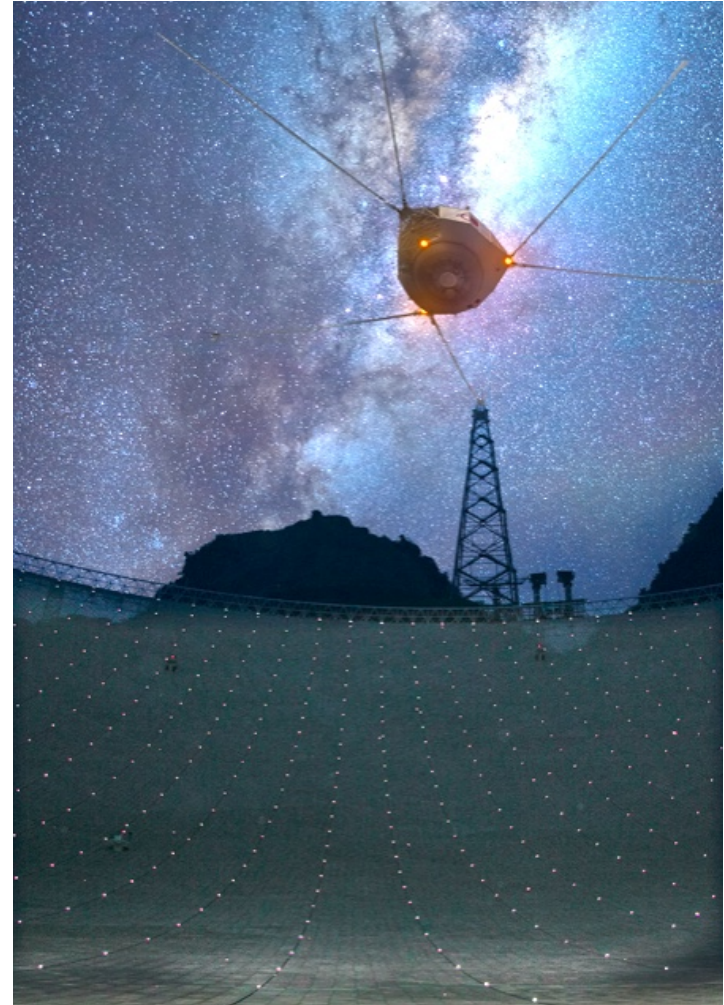


Figure 10: Publications in refereed journals that include data from ATNF telescopes grouped by telescope. A few papers with data from more than one instrument are counted more than once.

FAST Fast Radio Bursts

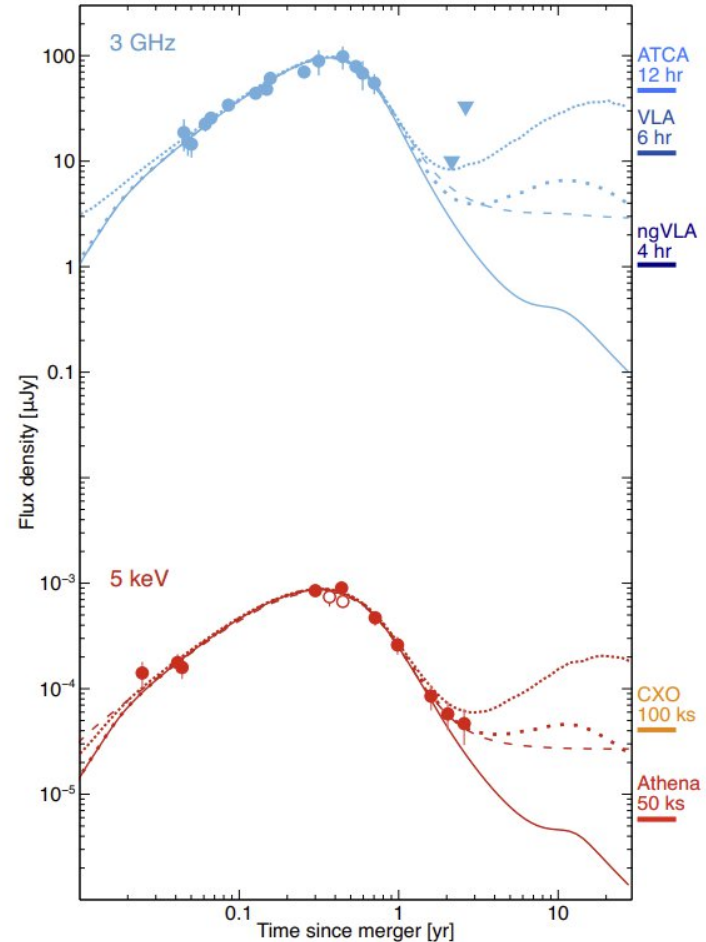
Discovery that a Parkes-detected FRB is a repeating source, with multiple FRBs detected (by CSIRO-built multi-beam receiver)

Luo et al. 2020, *Nature*, 586, 693

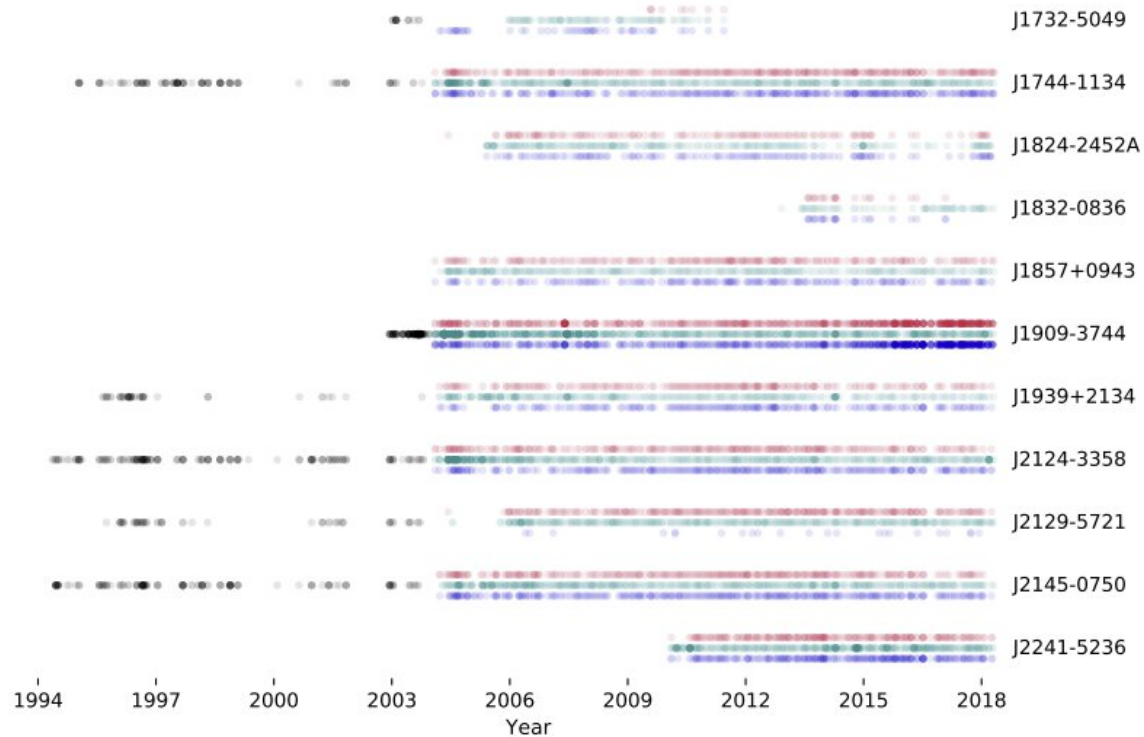


ATCA – Troja et al.

Follow-up of GW 170817 at radio wavelengths and X-ray energies, with models for the relativistic jet (solid line), the kilonova afterglow (dotted lines), and the remnant neutron star (dashed line).

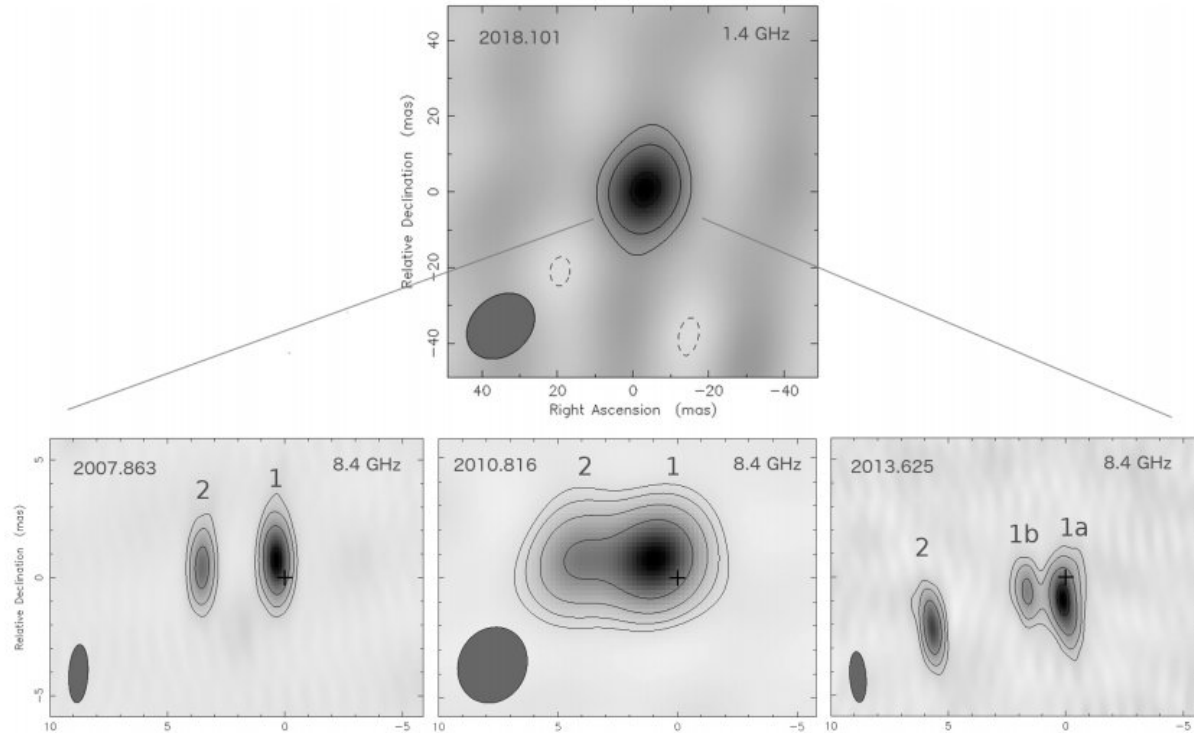


Parkes – Kerr et al.



The Parkes Pulsar Timing Array project: second data release

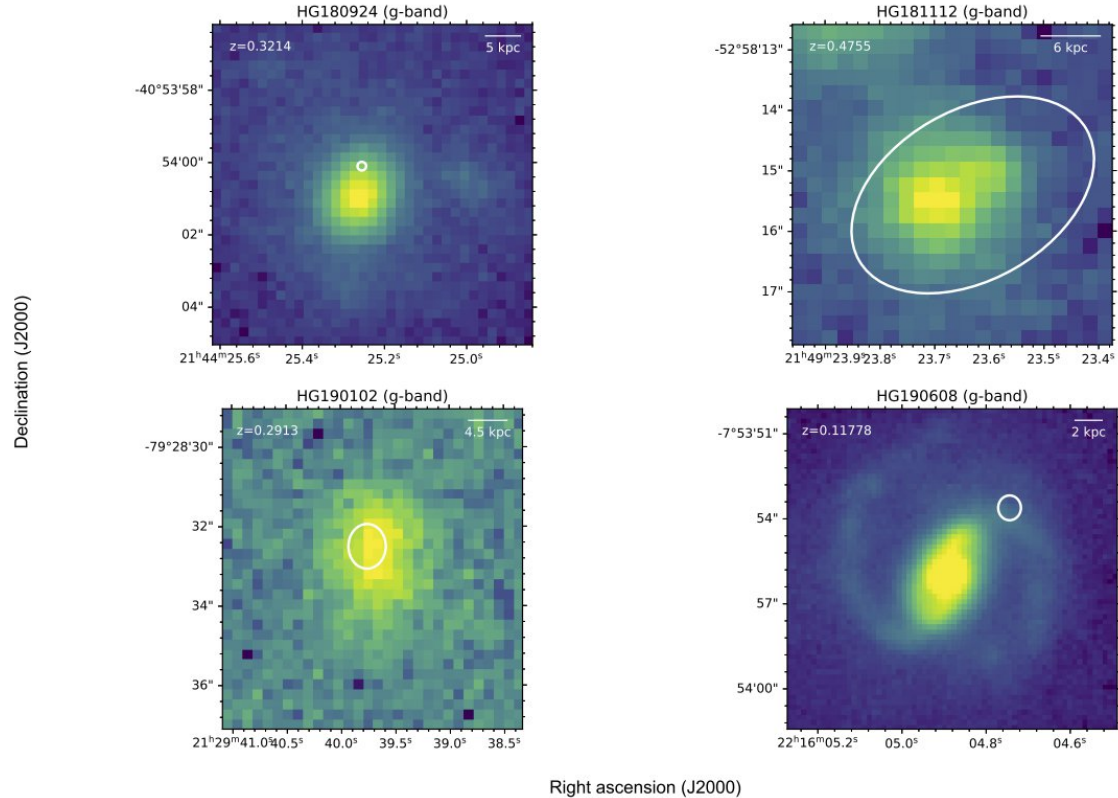
LBA – Climent et al.



The milliarcsecond-scale radio structure of AB Doradus A

ASKAP – Bhandari et al.

The Host Galaxies and Progenitors of Fast Radio Bursts Localized with ASKAP



ASKAP

ASKAP Publications

This page lists papers that report the results of observations made with ASKAP antennas or describe the array's capabilities, or planned Survey Science Projects. The link to each paper is to the ADS (SAO/NASA Astrophysics Data System) page from which the paper or its preprint can usually be accessed.

100. Wang, Z., et al., 2020, PASA, submitted
[*The capability of the Australian Square Kilometre Array Pathfinder to detect prompt radio bursts from neutron star mergers*](#)
99. Kumar, P., et al., 2020, MNRAS Letters, in press
[*Extremely band-limited repetition from a fast radio burst source*](#)
98. Bhandari, S., et al., 2020, ApJL, 901, L20
[*Limits on precursor and afterglow radio emission from a fast radio burst in a star-forming galaxy*](#)
97. McConnell, D., et al., 2020 PASA, in press
The Rapid ASKAP Continuum Survey I: Design and First Results
96. Hotan, A., et al., 2020, PASA, submitted
Australian Square Kilometre Array Pathfinder: I. System Description
95. Norris, R.P., et al., 2020, submitted
[*Unexpected Circular Radio Objects at High Galactic Latitude*](#)
94. Sadler, E.M., et al., 2020, MNRAS, 499, 4293
[*A successful search for intervening 21 cm HI absorption in galaxies at \$0.4 < z < 1.0\$ with the Australian Square Kilometre Array Pathfinder \(ASKAP\)*](#)

ASKAP papers in PASA will be part of a Collection

The ATNF Science program



Currently 22 science staff (20.8 FTE), including two CSIRO Science Leaders, plus 12 postdoc researchers (including 3 ATNF Bolton Fellows)

ATNF Science Strategy

The next five years will see significant changes in the Australian radio astronomy landscape

By 2026:

- ASKAP's initial 5-year Survey Science projects nearing completion
- At least two years of science programs completed with Parkes CryoPAF and ATCA BIGCAT [ATCA/Parkes operations after 2025 subject to funding]
- MWA Phase III ramping up (precursor to SKA1-LOW)
- First phase of SKA Regional Centres operational
- SKA construction continuing, and KSP teams being formed
- Other southern hemisphere facilities under construction or being upgraded (ALMA, MeerKAT, ELT, LSST..)

We therefore see the need for a well-defined strategy for future ATNF Science research priorities and their alignment with other CASS programs



Vacation students

- 16 students (9 female, 7 male)
- Projects across astronomy (7), engineering (7) and Earth observation (2)
- Based at Marsfield, Kensington, Tidbinbilla and Dutton Park
- ATCA observing trip planned for east coast students



Vacation students 2019/20

Acknowledgements and Impact Tracking

- ATNF has standard acknowledgement text to be included in publications
 - <https://www.atnf.csiro.au/research/publications/Acknowledgements.html>
 - Compliance is good, but could be improved
- CASS sits within DNFC (Digital, National Facilities, and Collections), which is looking at a unified approach to impact tracking
 - Global Research Identifier Database (GRID)
 - Open Researcher and Contributor ID (ORCID)



Call for Proposals

- Call for Proposals for 2021APR was released on Monday
- As for 2020OCT, the surnames of the proposal team will be placed at the end of the proposal
- Proposers asked not to list their team members in the scientific justification
- PIs will be asked to give permission for the anonymised proposal outcomes to be used in the study
- Proposal deadline for 2021APR will be Tuesday Dec 15, 5pm AEDT

ATNF website refresh

- The ATNF website, www.atnf.csiro.au, will undergo a refresh to focus on the needs of ATNF users
- More public-facing materials will be moved to research.csiro.au or csiro.au
- All pages should have an owner and state when last updated or reviewed
- Suggestions from ATUC (and users more generally) on what ATNF user needs could be better met by the website are welcome!



Thank you

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Image credit: ABC Central West: Hugh Hogan