



ATNF Science

Picture credit: Brett Hiscock

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CSIRO ASTRONOMY & SPACE SCIENCE
www.csiro.au



Outline

- ATUC Science Day
- The user community
- Proposal pressure and time allocation
- LBA + EVN proposal review
- Arrivals and departures, and positions vacant
- Business Unit review
- Highest impact papers with CASS coauthors, 2015/16/17
- ATNF student co-supervision
- Radio School and Data Reduction Workshop
- Other highlights
- ADAPs

ATUC Science Day

Good to hear updates from the ATCA Legacy Projects and the ASKAP Early Science teams. Action items include:

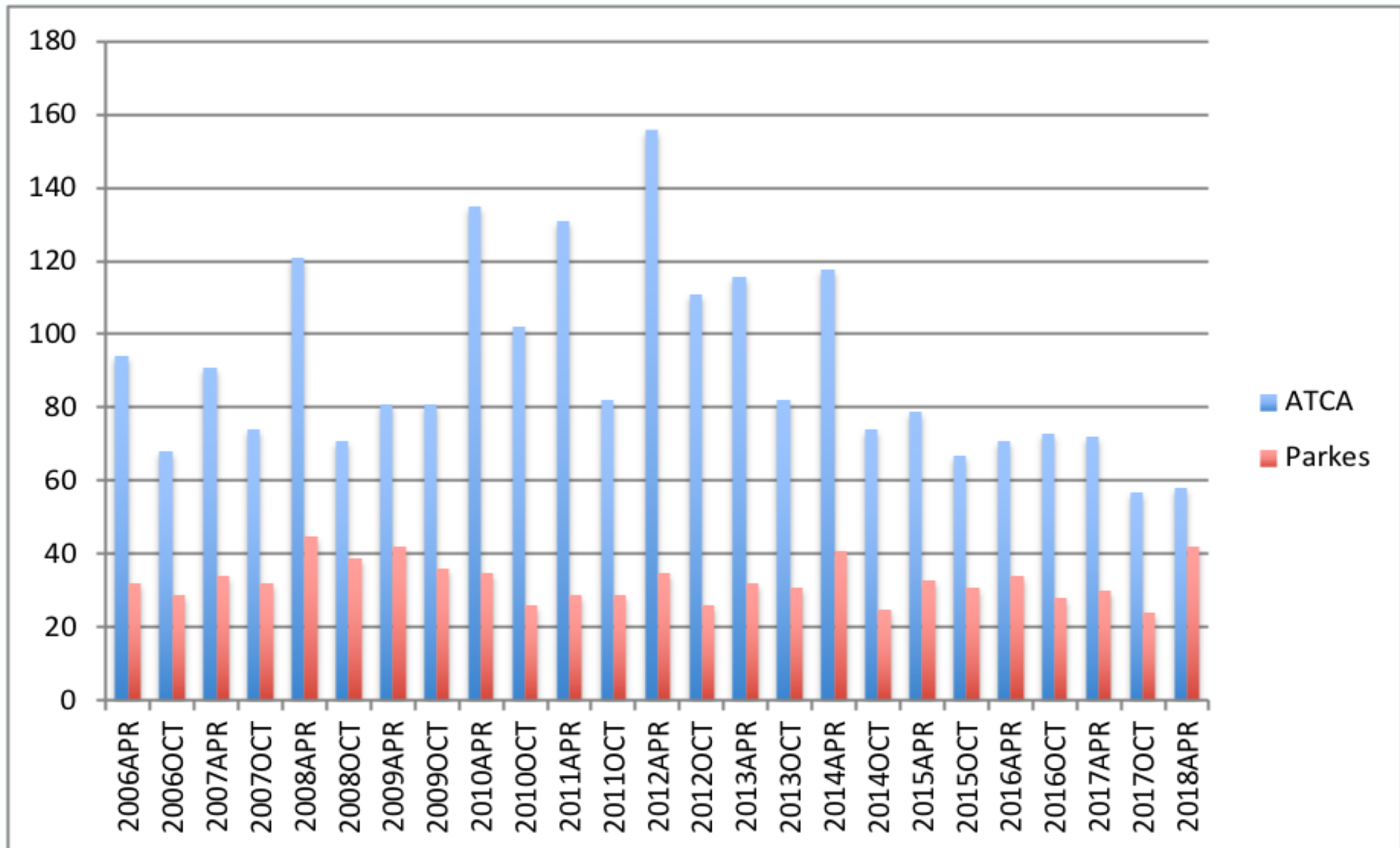
- Clarification of what computing (processing, storage, archiving) options CASS is able to provide
- Further consideration of remote training, or training by designated trainers (in each Legacy Project?)
- Clarification of expectations about unattended observing (noting the new sec 3.5 of ATCA user guide covers this)
- Frustration with CABB block drop-outs...
- Further discussion at next ASKAP SSP Pls meeting on June 18th about continuation of Early Science to end of this year and pilot studies to be commenced with ASKAP-36 in 2019 in lead up to major review of SSPs

2018APR proposers by Country (top 88%)

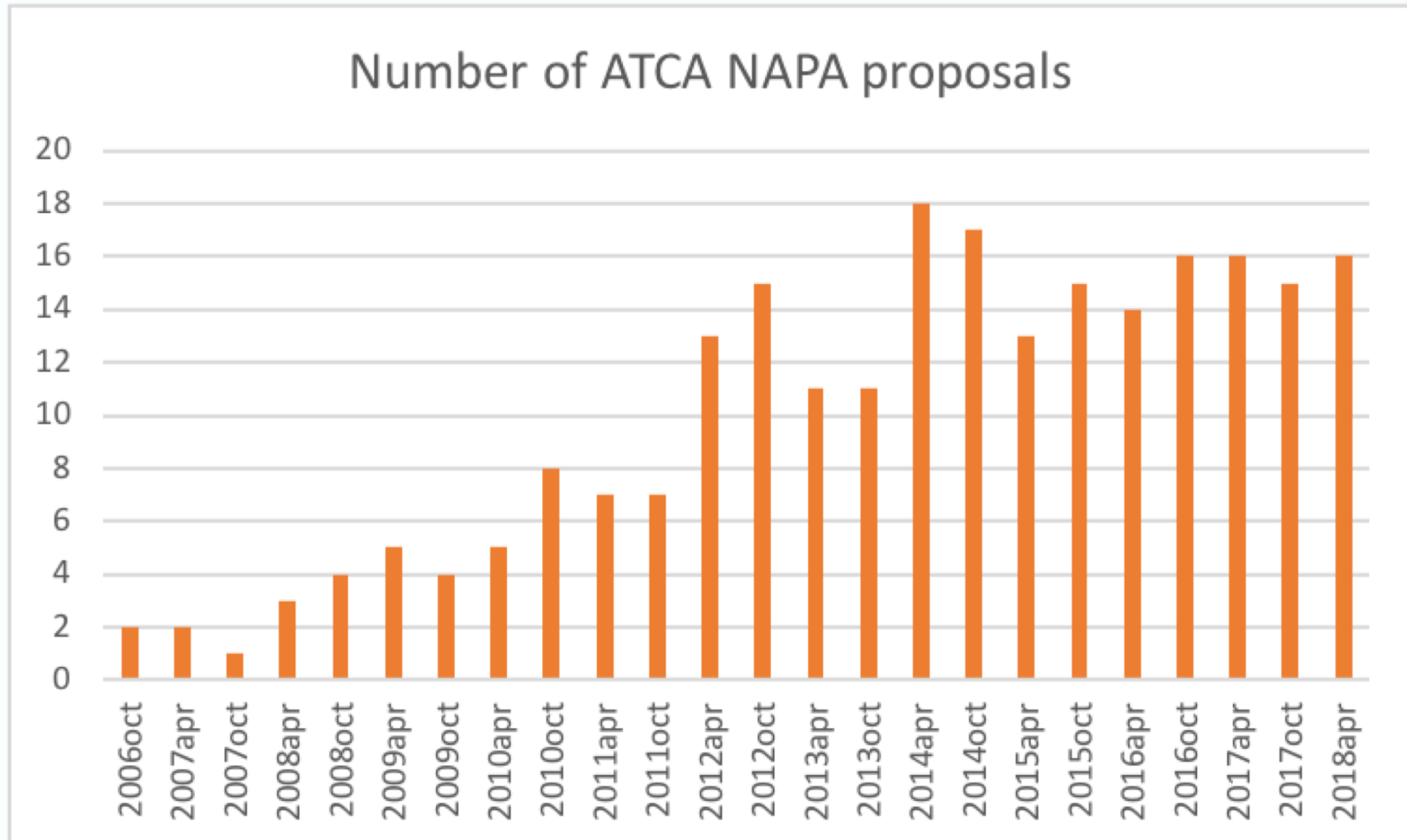
Country	Users	% of total
Australia	186	31%
United States	96	16%
Italy	47	8%
United Kingdom	42	7%
Germany	36	6%
China	36	6%
Netherlands	31	5%
France	16	3%
Canada	13	2%
Spain	12	2%
Japan	12	2%

A total of 600 proposers for 2018APR, from 33 countries

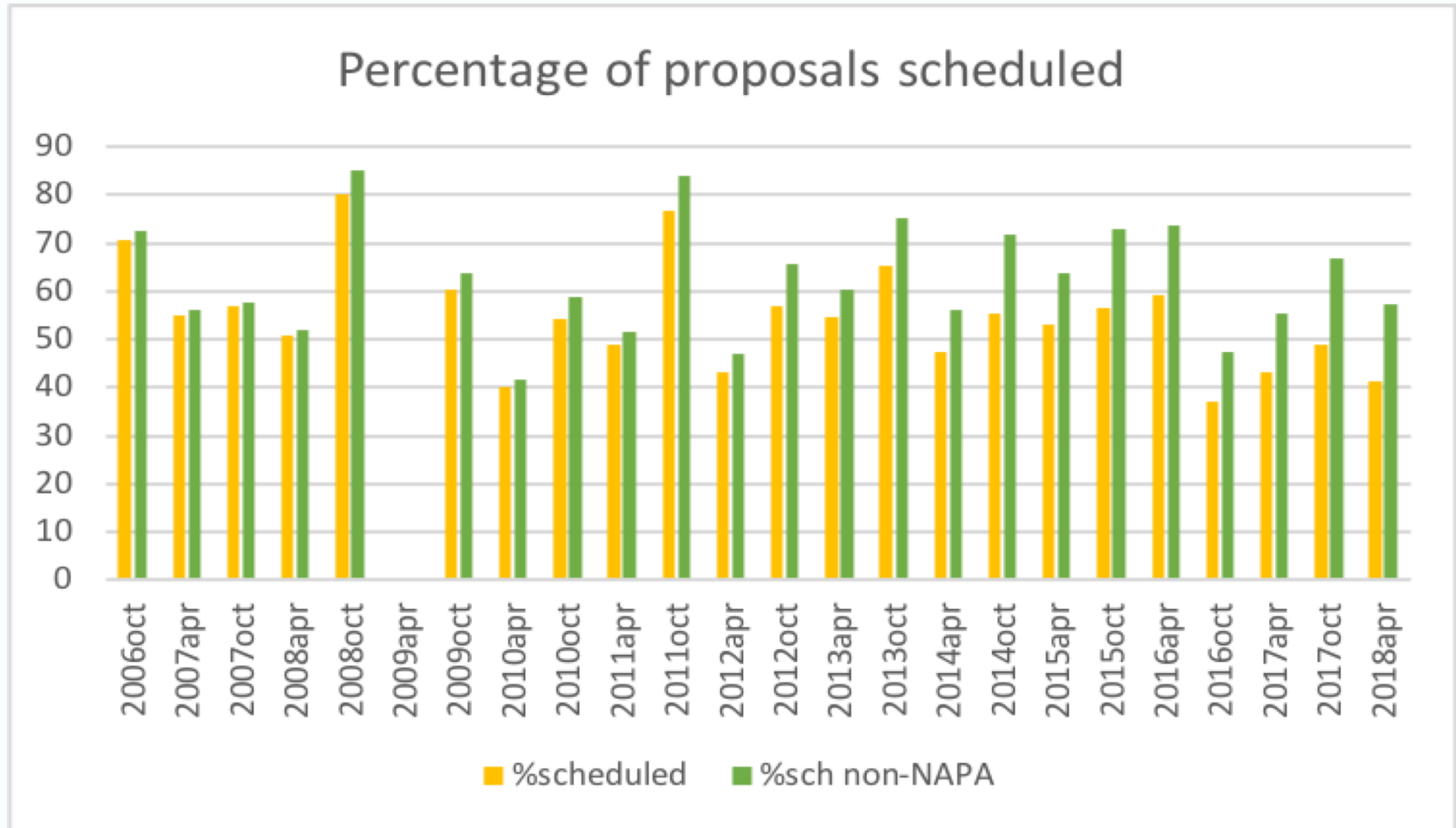
Proposal submissions by semester



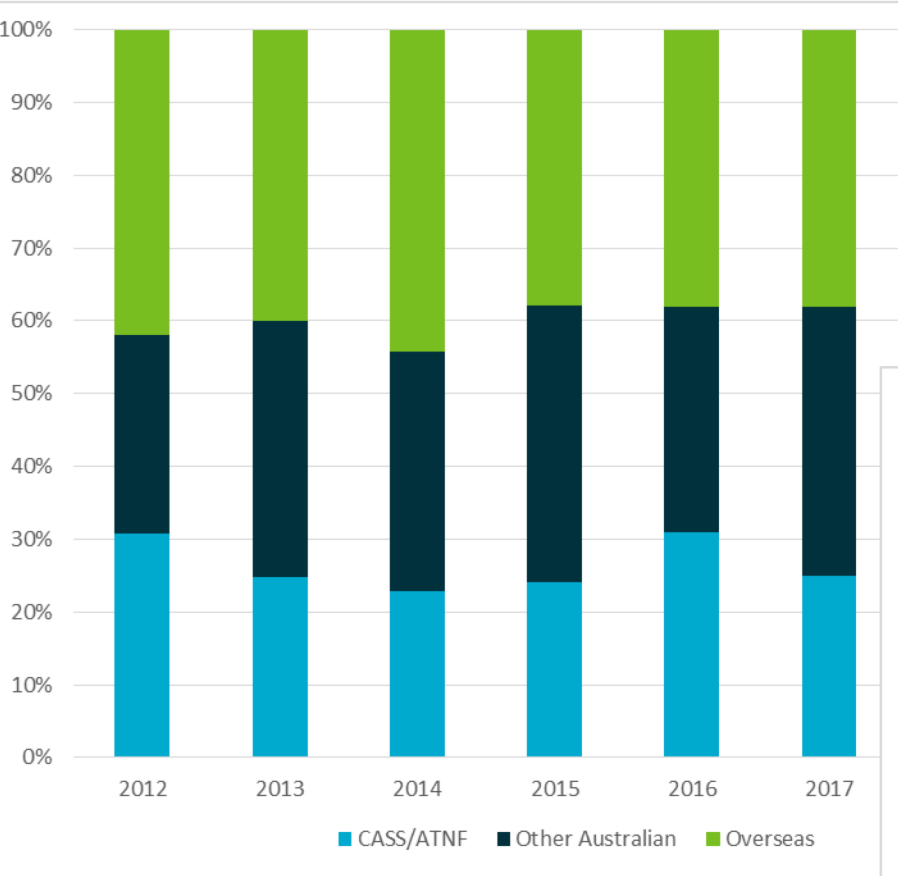
ATCA NAPA proposals



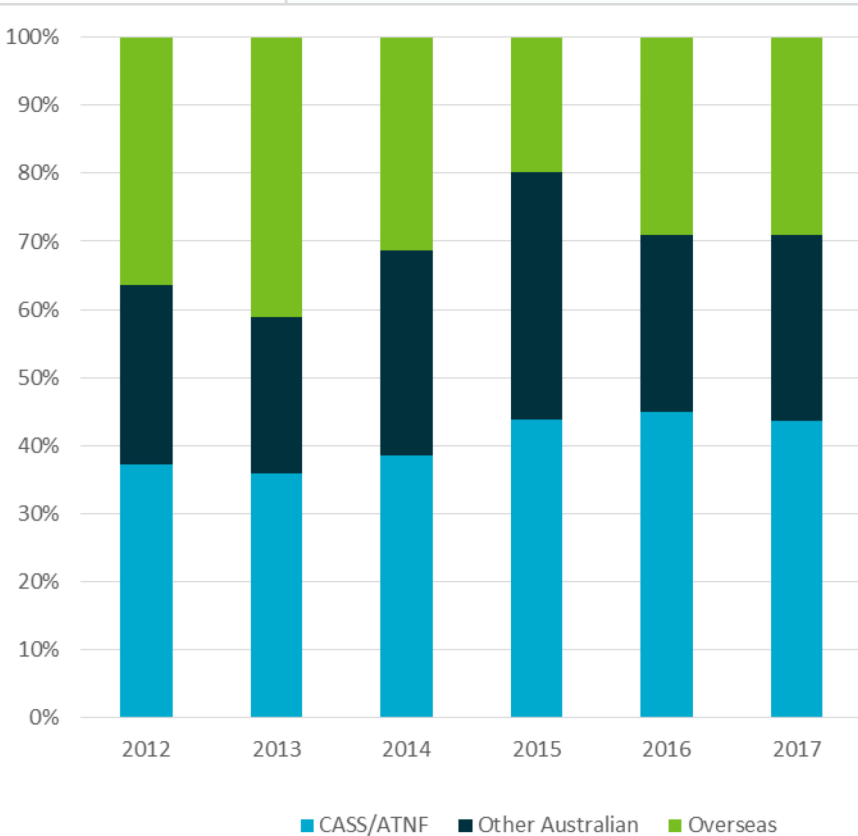
What percentage of ATCA proposals are allocated (at least some) observing time?



Parkes time allocation by all investigators

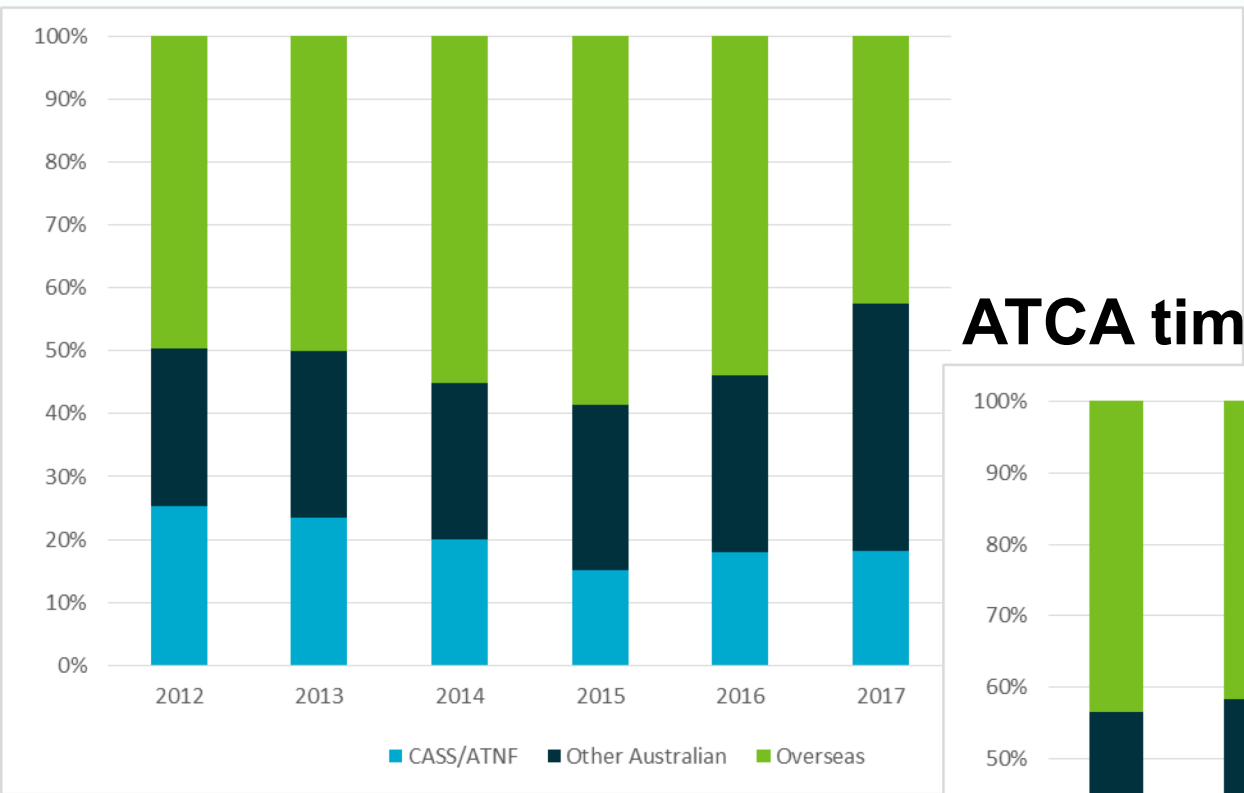


Parkes time allocation by PI

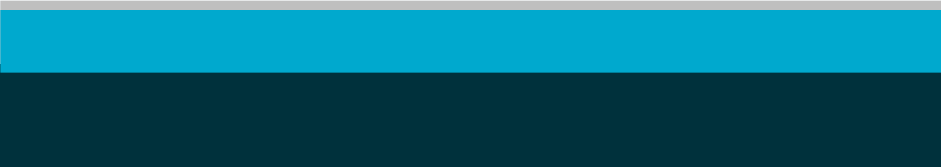


CASS staff “over-represented” as PIs on Parkes projects: Levels relatively steady from year to year

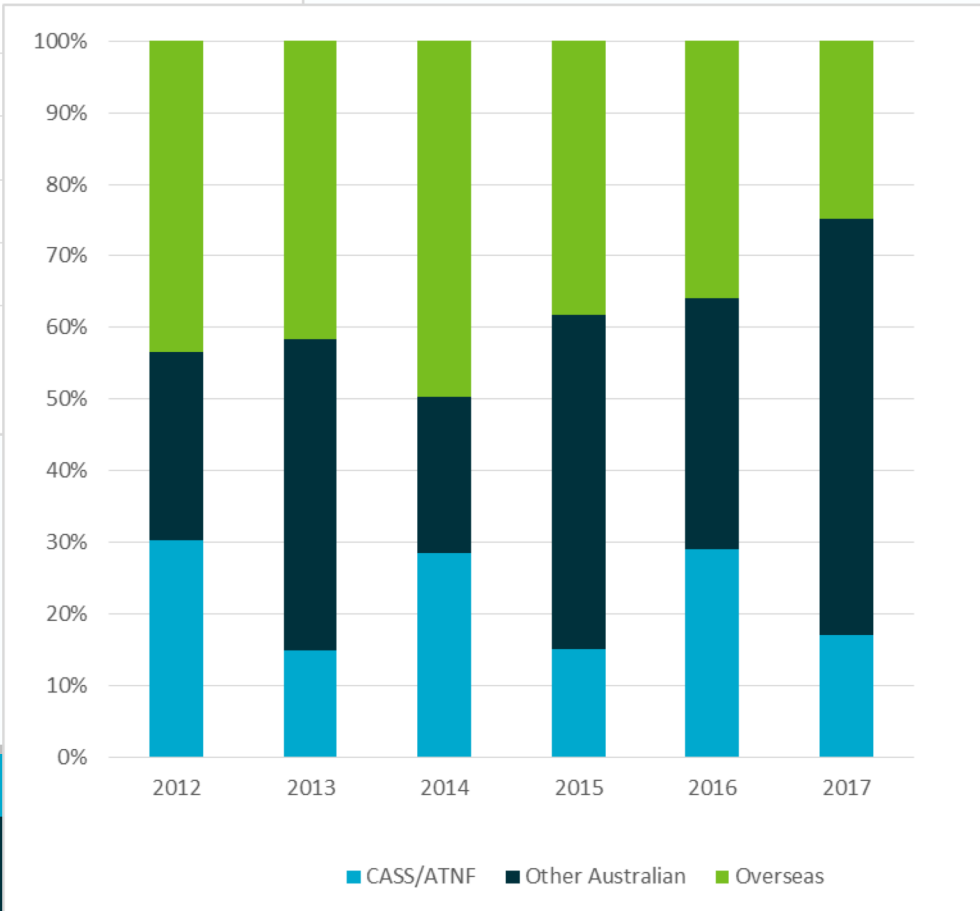
ATCA time allocation by all investigators



Increase in “other Australian” involvement in 2017 most likely due to ATCA Legacy Projects



ATCA time allocation by PI



LBA + EVN proposal review

- Can we adopt a single proposal for “global” VLBI experiments? Currently it is possible to submit a “global” proposal (EVN+VLBA) which is reviewed by a single TAC.
- LBA Lead Scientist believes this is probably only a few experiments per year and is a reasonable approach: does ATUC agree?
- The exact policy might be something like:
 - time comes out of existing LBA observing day
 - final decision on whether or not to schedule is a CASS decision, based on logistics, TAC grade etc (as for normal LBA observations) - possibly only a subset of LBA available
 - need to formulate clear delineation of what we are willing and able to do (e.g. will not ship Mark5 disk packs to correlator)

Arrivals and departures

ATNF Science has recently farewelled

- Ryan Shannon
- Helga Denes
- Jordan Collier

and has welcomed

- Jane Kaczmarek
- Andrew Cameron
- Tim Galvin
- Shivani Bhandari
- Elizabeth Mahony
- Emil Lenc
- Andrew O'Brien

Positions vacant

We have two 3-year term postdoctoral positions and one indefinite telescope operator/support position currently open:

- CSIRO Postdoctoral Fellowship in low-frequency radio astronomy and cosmology: <https://jobs.csiro.au/job/Various-CSIRO-Postdoctoral-Fellowship-in-low-frequency-radio-astronomy-and-cosmology/478383600/>
- CSIRO Postdoctoral Fellowship in Dark Magnetism with ASKAP: <https://jobs.csiro.au/job/Sydney%2C-NSW-CSIRO-Postdoctoral-Fellowship-in-Dark-Magnetism/478363200/>
- CSIRO National Facility Scientific Operations Officer: <https://jobs.csiro.au/job/Negotiable-National-Facility-Scientific-Operations-Officer/476924300/>

ATNF Science assessed by BU review

Benchmark

- Pulsars
- Fast Radio Bursts
- Magnetism and polarimetry

Strong

- Galactic astrophysics
- Extragalactic star formation and gas evolution
- AGN feedback and evolution

Most highly cited papers with CASS co-authors

2015	2016	2017
4 x MWA	4 x FRB Parkes/ATCA	5 x GW ATCA/ASKAP/Parkes
3 x FRB Parkes	2 x pulsars Parkes	1 x FRB ASKAP
1 x pulsars/GW Parkes	1 x GW ASKAP	1 x Ne model Parkes
1 x ATLAS 3D	1 x AGN/PeV neutrino LBA	1 x MWA GLEAM
1 x VLA-HI	1 x molecular clouds Mopra	1 x LOFAR 2m survey
	1 x Fermi SNR catalog	1 x VLA-COSMOS

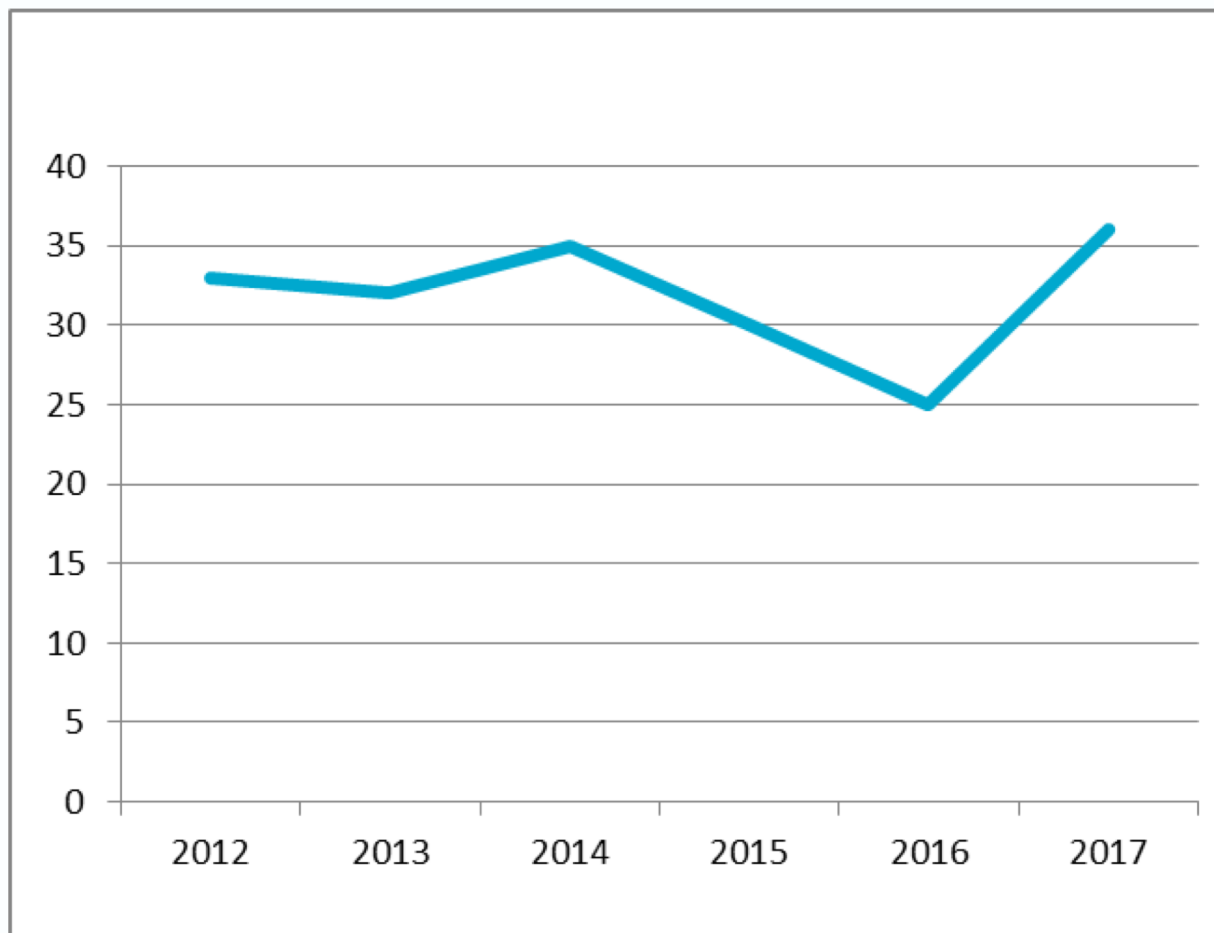
FRB = SRF!



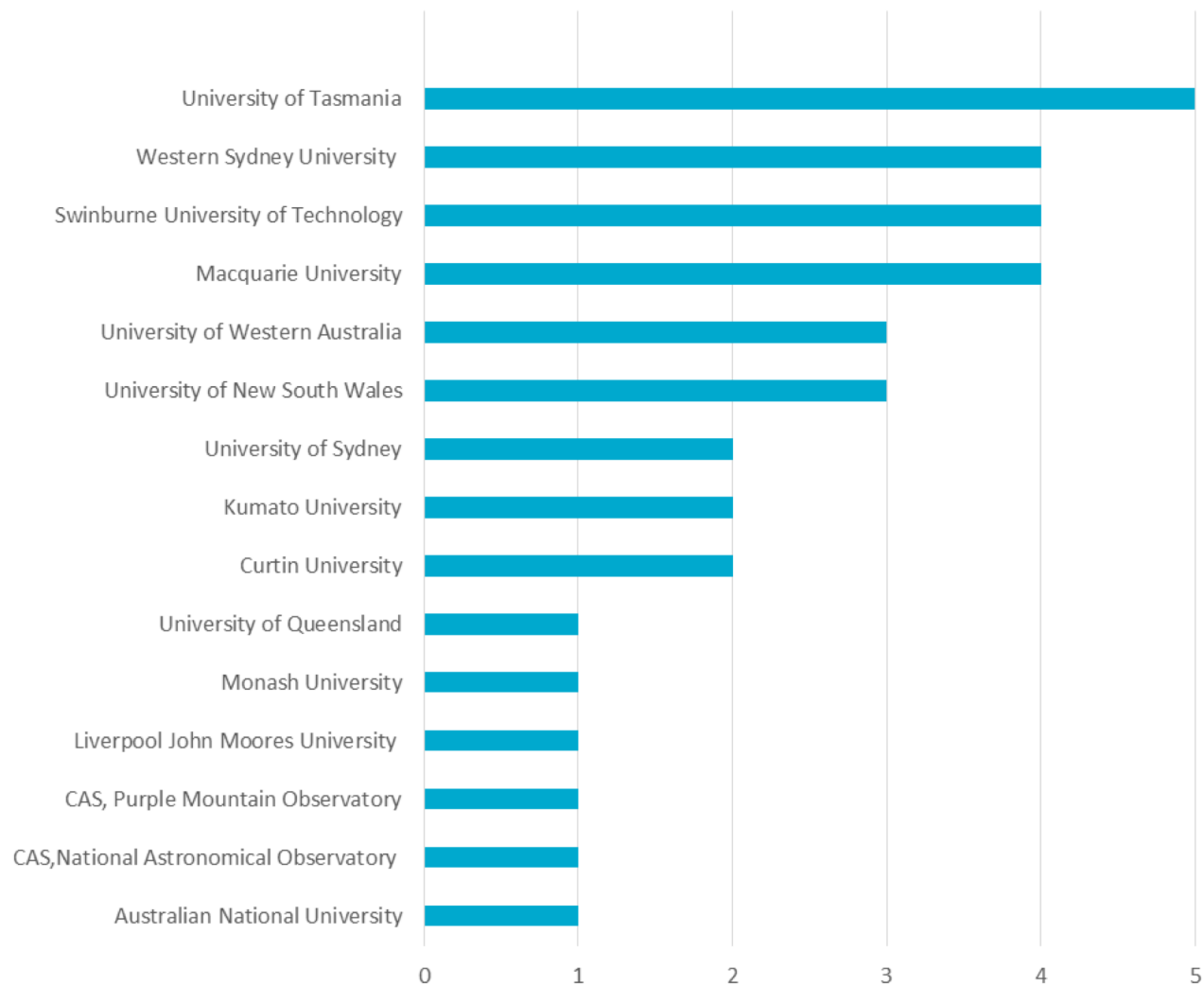
Emily Petroff (1990)
Sterrenkunde
Snelle radioflitsen
ASTRON

Snelle radioflitsen zijn heldere, krachtige flitsen van radiostraling die maar enkele milliseconden duren. De eerste flits is pas zeer recent ontdekt, in 2007. En sindsdien zijn er slechts zo'n vijftig waargenomen. **Emily Petroff** probeert meer flitsen te vinden en te achterhalen waar ze vandaan komen. [Lees verder...](#)

Postgraduate students affiliated with CASS



Postgraduate students by institution



Student program

- ~32 students from Australian and international universities
- Lisa Harvey-Smith is the new ATNF student co-ordinator
- Dealing with changes to CSIRO bureaucracy in how students are recognized and line managed
- Will be keeping more regular contact with co-supervised students, University co-supervisors, and ATNF co-supervisors
- Tweaking existing arrangements re funding and accommodation
- HR will be rolling out buddy and mentor programs for new starters
- Have started conducting exit interviews with staff, postdocs and students

Radio School and Data Reduction Workshop



- 2018 Radio School to be held 1—6 Oct in Geraldton
<https://www.icrar.org/conferences/radio-school-2018/>
- Data reduction workshop to be held 6—10 August
<http://www.atnf.csiro.au/research/workshops/2018/DataReduction>

Vacation students 2017/18



Stargazing Live



Great public engagement, with 2,000,000+ classifications on the citizen science project, 50,000+ attendees at the star parties, and more than 500,000 people tuning in to the shows each night on TV and iview.

ADAPs

- ATNF used to produce a newsletter for the user community three times a year (then two, then one, then ...)
<https://www.atnf.csiro.au/news/newsletter/index.html>
- The ATNF Daily Astronomy Picture (ADAP) webpage, based on the Astronomy Picture of the Day webpage, was set up by Baerbel Koribalski in late 2014, and has become an important means of showcasing events, results, and images of our facilities and people.
- The next few slides show a selection of ADAPs from this year, taken from the ADAP archive
<http://www.atnf.csiro.au/ATNF-DailyImage/archive.html>
- The URL for today's ADAP is
<http://www.atnf.csiro.au/ATNF-DailyImage/>

ATNF Daily Astronomy Picture

23rd of January 2018

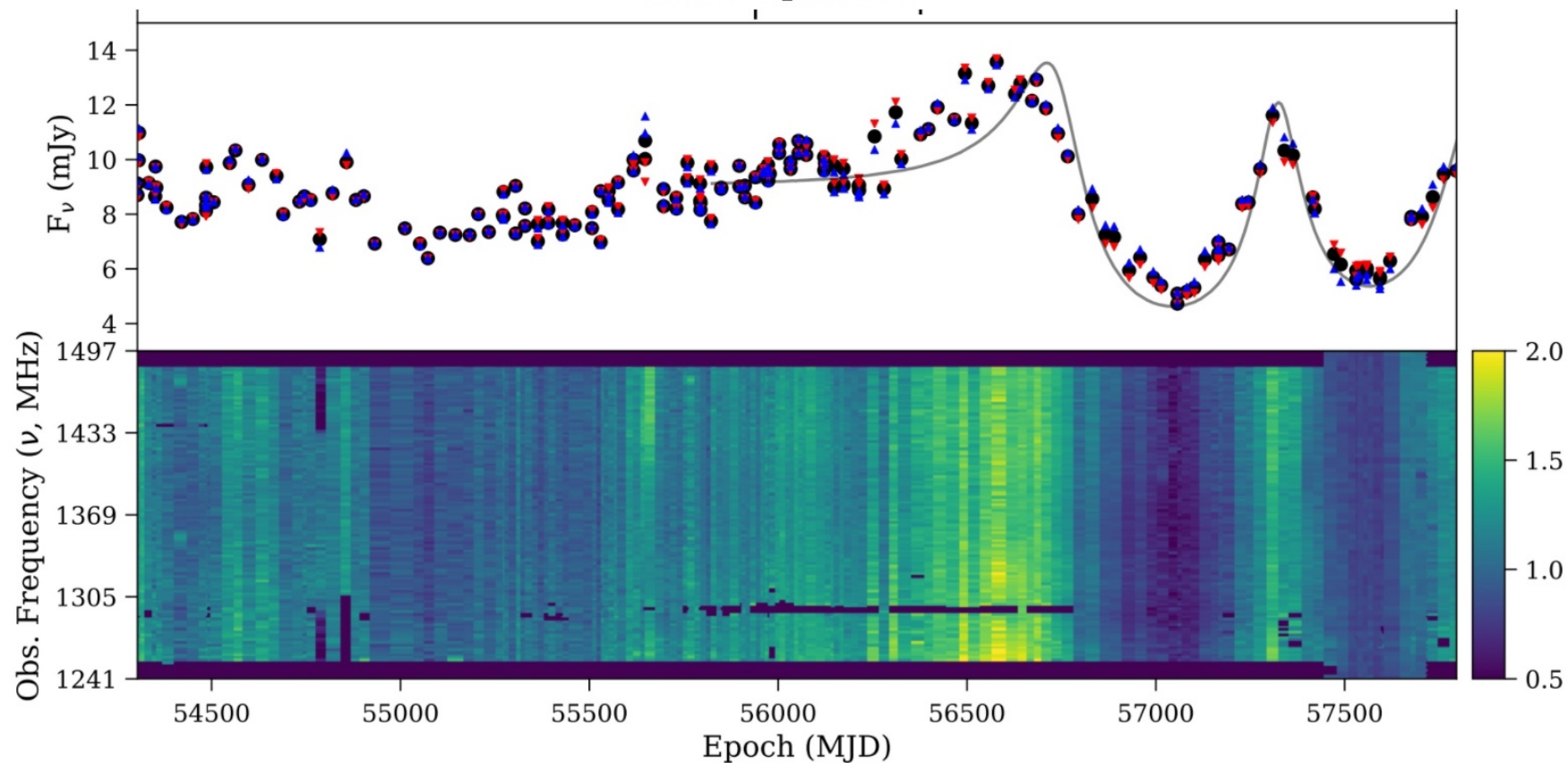


Parkes Elvis Festival

One of the main events of the Parkes Elvis Festival is the Parade and, as illustrated above, Parkes Observatory staff are regular participants. (Image credit: John Sarkissian)

ATNF Daily Astronomy Picture

13th of April 2018



Extreme Scattering Events in pulsar light-curves

ATNF Daily Astronomy Picture

20th of April 2018

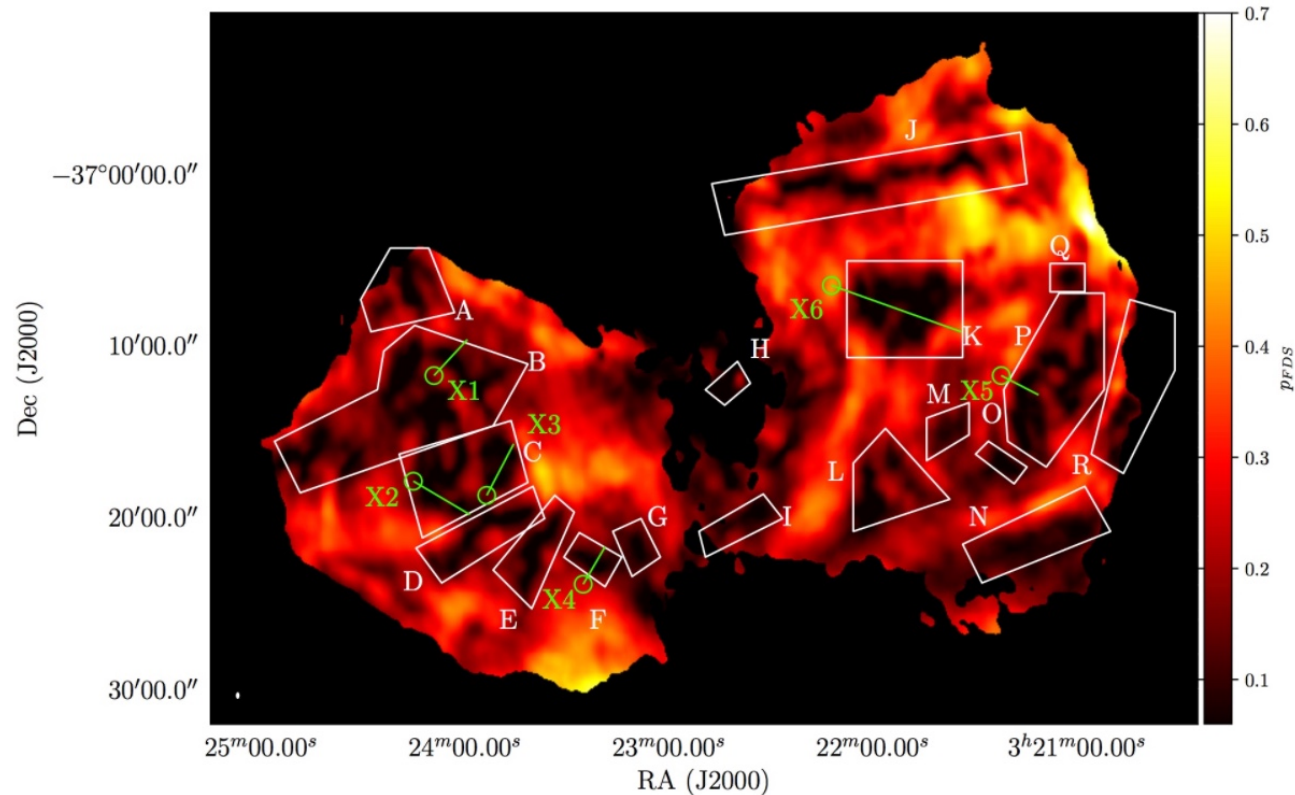


The Roulettes fly by Parkes

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

26th of April 2018



Low polarisation patches in Fornax A

Anderson et al. have presented observations of the polarized radio emission from the nearby radio galaxy Fornax A, using data from the Australia Telescope Compact Array (ATCA). Due to its relatively closeness (18 megaparsecs, about 60 million light years), a 32-point mosaic was needed to image the full extent of the radio galaxy.

ATNF Daily Astronomy Picture

10th of May 2018



Letter of Intent signing with NARIT

Yesterday, a signing ceremony was held at Marsfield with a visiting delegation from the National Astronomical Research Institute of Thailand (NARIT). NARIT has been funded to construct a 40 m radio telescope, and the Letter of Intent recognises the possibilities for collaboration in areas of mutual interest and benefit to both sides.

Call for Proposals

Call for Proposals for 2018OCT was released in mid-May:

<http://www.atnf.csiro.au/observers/apply/avail.html>

Proposal deadline is 5pm AEST Friday June 15th.

TAC procedures are outlined at www.atnf.csiro.au/management/tac/

We ask users to include their proposal codes in their publications.

We acknowledge the Wajarri Yamatji people as the traditional owners of the Murchison Radio Observatory site.

Thank you

ATNF Science

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Sydney's Vivid festival is now on!