

ATNF Operations

ATUC October 2019

John Reynolds

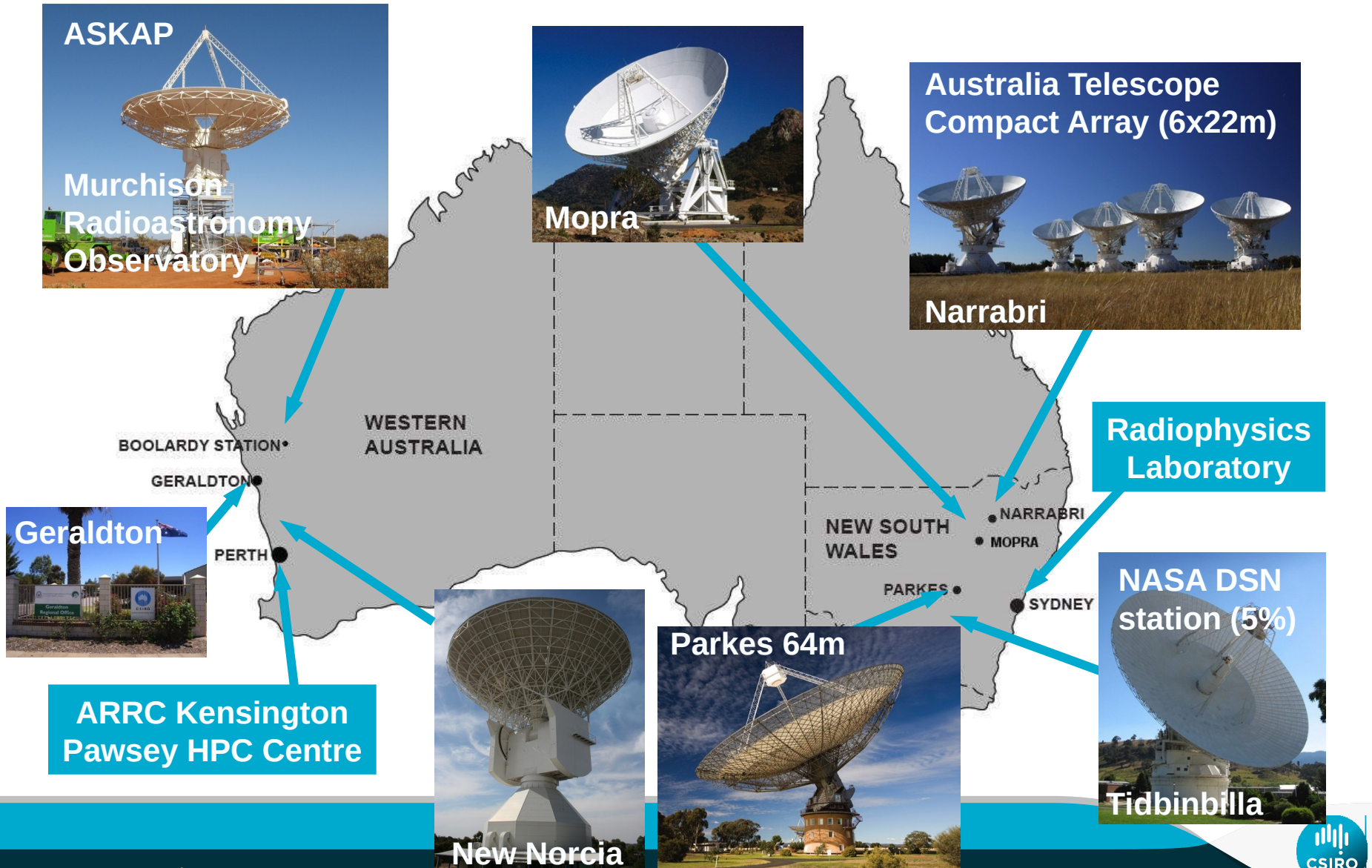


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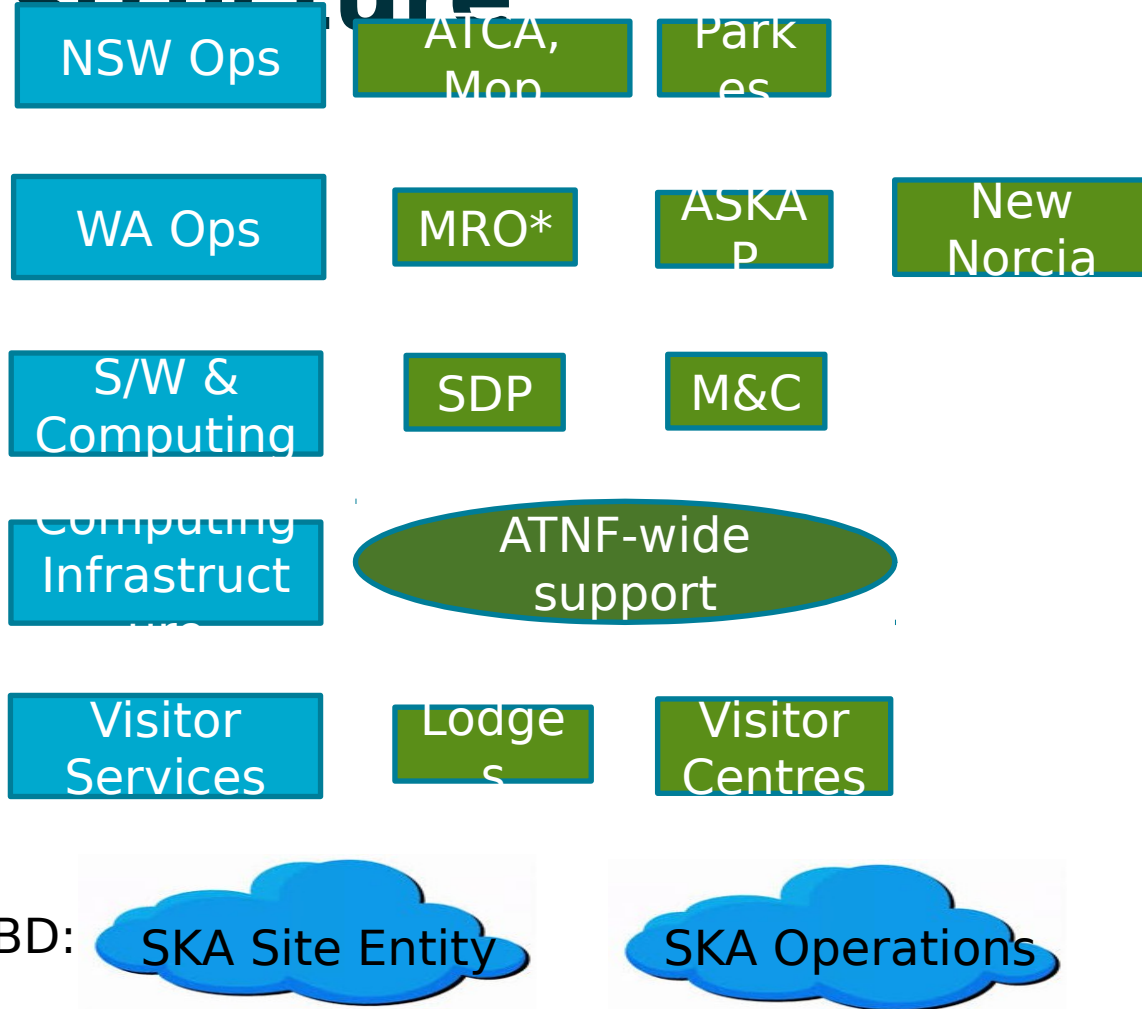


- **Staff changes**
- **Highlights**
- **KPIs**
- **Feedback**
- **Data Archiving (Minh)**
- **Pawsey Update**
- **Narrabri accommodation**
- **Decadal Plan: Mid-Term Review**

The ATNF at a glance



Operations Program - overall structure



Welcome:
New Norcia staff

Farewell & Thanks:
John Bateman (ATCA)



Welcome the New Norcia team



Michael Mladineo, senior electrical controls technician
Cliff Shaw, senior digital electronics technician
Craig Tobin, senior electrical mechanical technician
Suzy Jackson, site leader
Todd Ryan, senior radio frequency technician
John Spade, electronics technician
Colin Cassidy, senior technical administration officer.

Recent highlights



28 Jun 2019

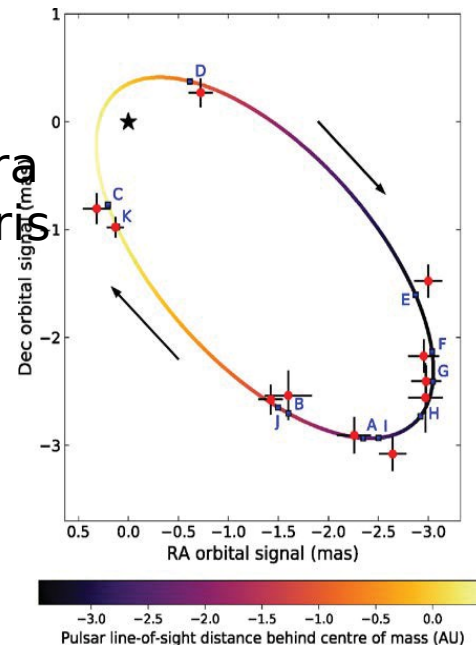
[Astronomers make history in a split second](#)



Parkes update:
Jimi

LBA & Mopra
update: Chris

ASKAP update:
Aidan



ATCA update: Jamie

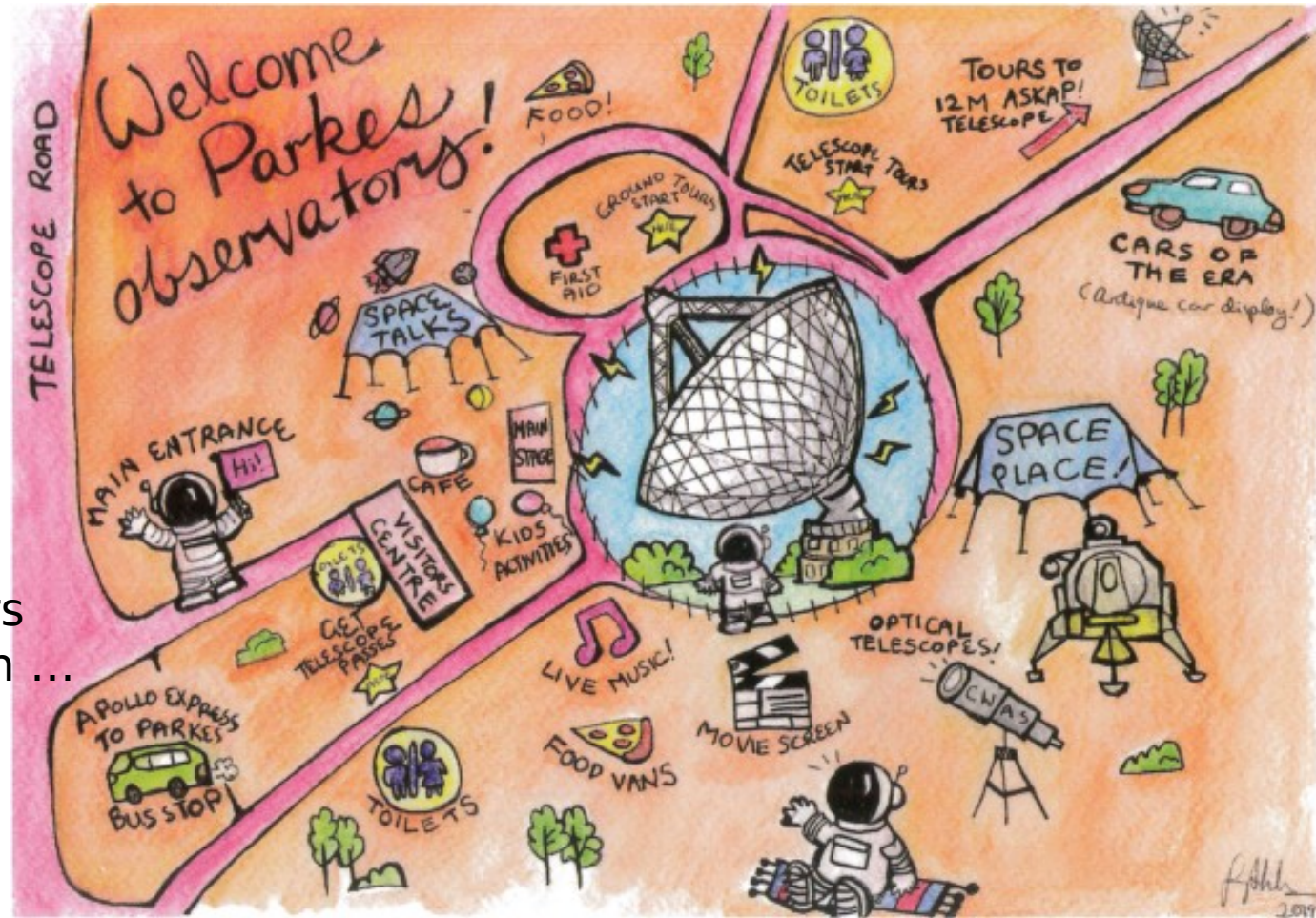
Parkes Open Weekend 20-21

July

>20,000 visitors!

Minister for Science
Deputy PM
Andy Thomas
US Ambassador &
Consul General
CSIRO CEO

~100 CSIRO volunteers
OzGrav, BL, Questacon ...
Parkes Shire, SES



KPIs: Telescope usage

Period: 2018Apr+2018Oct	Parkes	ATCA
Successful observing time	77.0 %	77.4 %
Maintenance time	17.3 %	15.1 %
Time lost to equipment failure	1.2 %	1.4 %
Time lost to weather	4.3 %	0.9 %
Idle time	0.3 %	5.1 %

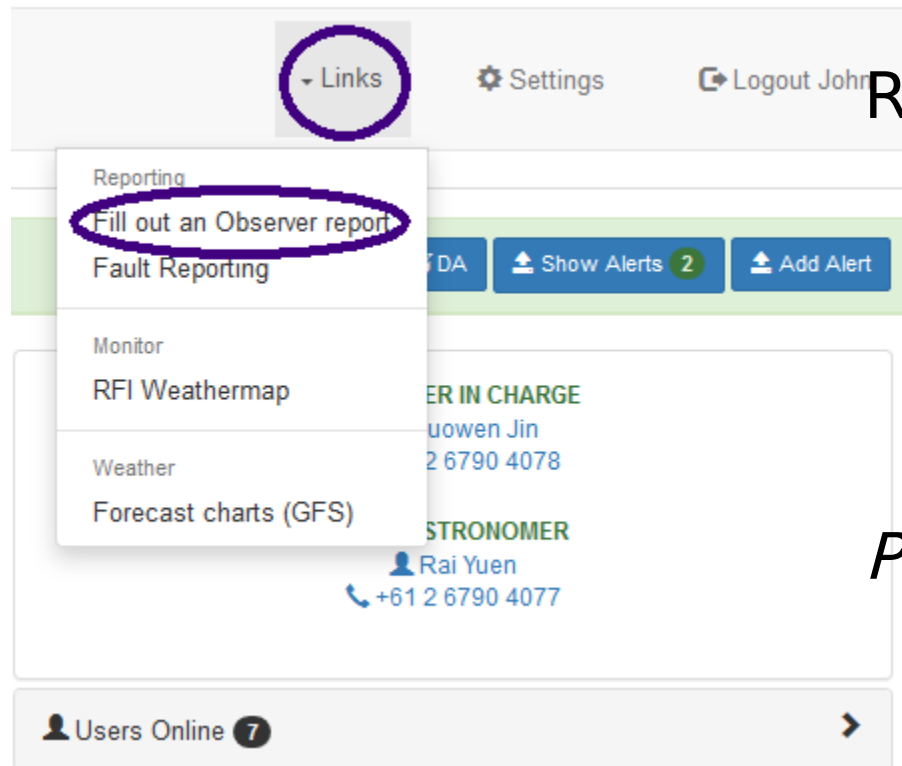


SKAP KPIs now in place:

30% successful observing time in 2019/20, increasing by 10% p.a. to 70%

5% time lost to equipment failure during scheduled observing

User Feedback

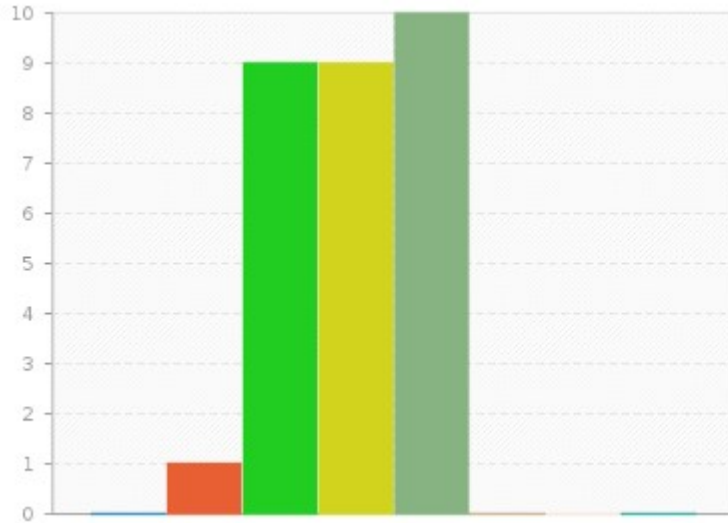


Responses for last 12 months

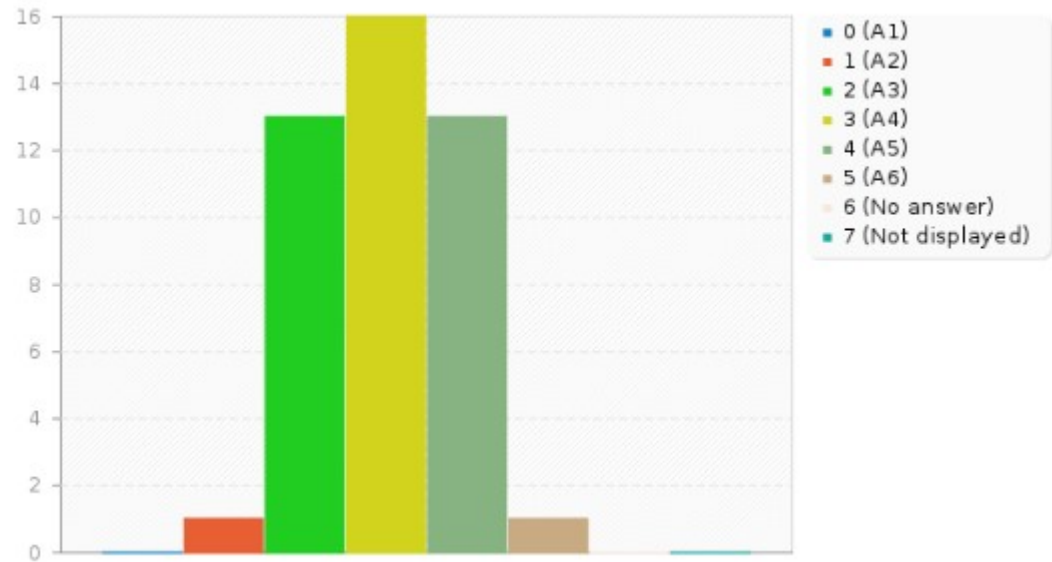
29 (32) Parkes
44 (24) ATCA

Prodding still required!

User Feedback - Monitor & Alerts

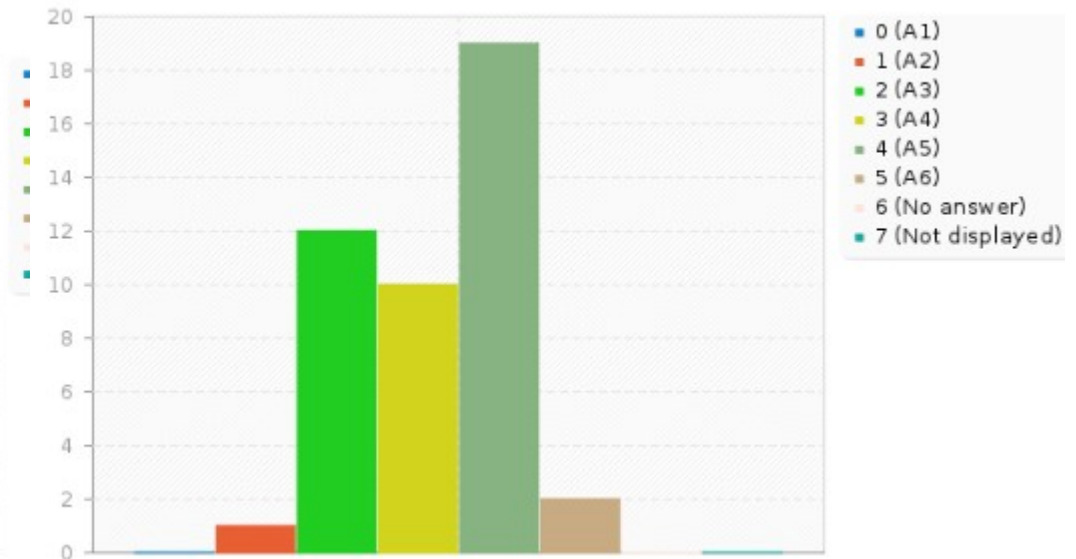
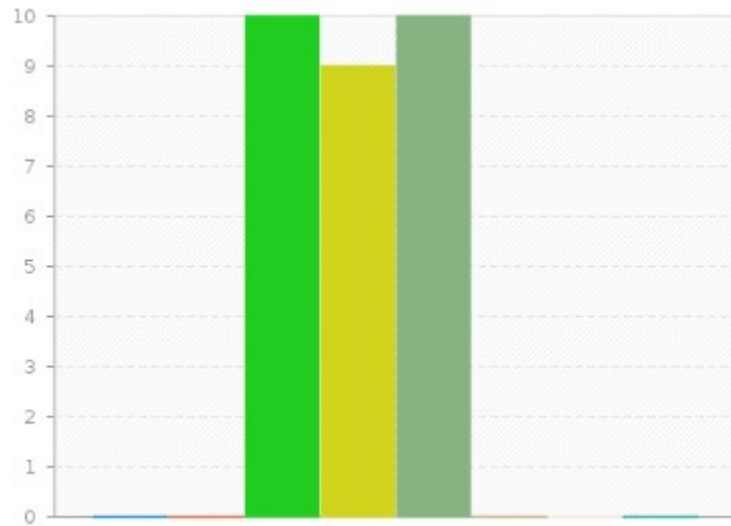


PSRMON, FROG latency
(slow network?)



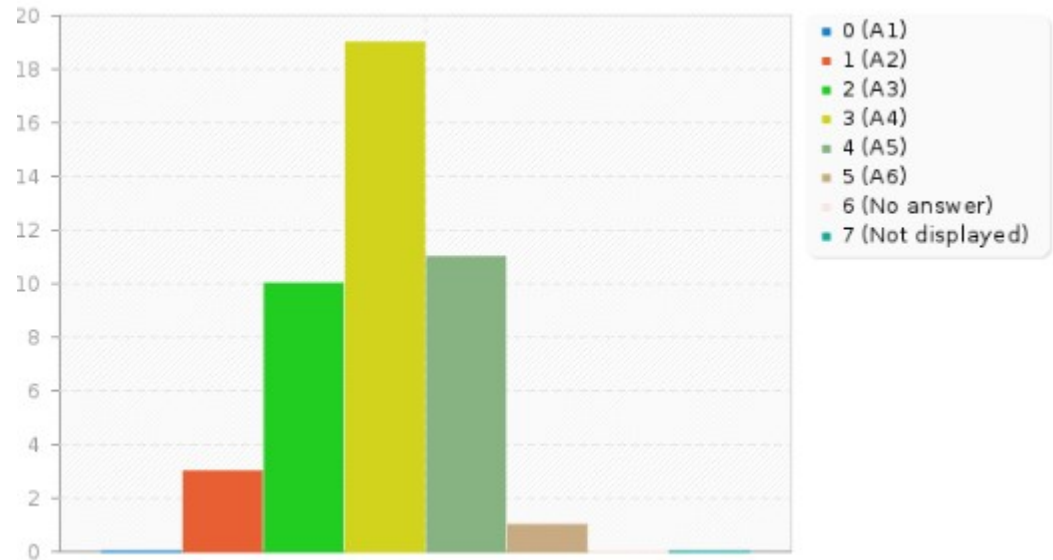
Better warning of CABB block failures
Portal can "go quiet" after dropout

User Feedback - VNC sessions & stability



Stability problems with Ubuntu VNC client

User Feedback - Web pages



“lots of old pages”

CASDA (from Minh Huynh)

Many new datasets, including:

- GAMA G23 full ASKAP 36 dish continuum survey
- WALLABY ES user uploads: Kleiner et al. (IC 5201) , For et al. (LGG 351)
- LIGO follow-up survey
- EMU pilot survey
- Other pilot surveys to come soon

Development in last 6 months:

- UI enhancements (e.g. cutout tools)
- New python scripts to generate sub-cubes of large cubes (under testing)
- ***Astroquery*** (part of ***astropy***) now has a CASDA module (search for data now, download in future)
- Virtual Observatory (VO) enhancements and upgrades
- All-Sky Virtual Observatory (ASVO): Can now login to CASDA with AAO Data Central credentials
- Ongoing load testing

ATOA (from Minh Huynh)

ATOA User Survey in May/June 2019:

- 47/650 users responded (about 7%)
- 43/47 (91%) used web UI, 3/47 (6%) used VO services
- 41/43 (95%) were able to complete the ATOA task they set out to do
- 22/43 (51%) used rsync/scp from ATNF servers (Kaputar)

Takeaways:

- Users want a way to download larger datasets (> 200 GB, and large N of files)
- Not many people use VO - educate and train users?
- Users still scp/rsync from Kaputar before data goes into ATOA *

Options:

- Status quo at Marsfield but expand storage
- Move ATOA into commercial cloud
- Move ATOA to a box/VM at Pawsey
- Move ATOA into DAP (similar to Parkes Pulsar archive)
- Move ATOA into CASDA

Pawsey Refresh Project - ASKAP Ops Update

- **New high-speed storage for ASKAP operations**
installed and operating (“/askapbuffer” ~3.7 PB)
- **ASKAP Ingest Nodes** - medium-size procurement
 - Requirements paper submitted to User and Technical Reference Group and have been endorsed – next steps is to develop the Statement of Requirements (SoR) and going to market in Q1 2020
- **Pawsey Supercomputing System (PSS)** – big procurement
 - This new Supercomputing System will replace and expand Galaxy & Magnus capacity & capability
 - SoR were presented to the Technical Reference Group for discussion
 - ASKAP requirements are reasonably satisfied within the SoR
 - Going to market in November 2019 after procurement board signs off
 - To be delivered in two phases: Phase 1 = ASKAP operations + equivalent of Magnus capacity + decommissioning of Galaxy & Magnus, Phase 2 = additional capacity & capability
 - Estimated delivery of Phase 1 to users (incl. ASKAP) by Q2 2021

Visitors Guide to the Narrabri Observatory

Please note that while fully-supported observing is now available only from the Science Operations Centre in Marsfield, Sydney, experienced observers who are qualified for remote observing are very welcome to stay on site during their observations. Further details of the on-site accommodation are given below. If you require any further information, please contact accommodation@atnf.csiro.au.



New ATNF Reservation & Induction System

ATNF Reservation System

Welcome to the ATNF Reservation System

If you have not logged into this system before,
please create a new account.

For help please email accommodation@atnf.csiro.au

Email:

Password:

Log In

[Forgotten your password?](#)

[Create an account](#)



Decadal plan for Australian astronomy 2016–2025: Mid-term review



Background

[Australia in the era of global astronomy: The decadal plan for Australian astronomy 2016–2025](#) was published in July 2015 and presents the strategic vision for Australian astronomy for the next decade.

The plan is based on the reports of 11 working groups, comprising over 150 astronomers, engineers and educators from over 30 Australian institutions across all states and the ACT, in a process run by the Academy's National Committee for Astronomy during 2014 and 2015.

The document follows on from the success of the committee's 2006 plan, *New horizons: a decadal plan for Australian astronomy 2006–15*. This publication was highly influential in presenting the community's vision to stakeholders outside the research sector, including key stakeholder the Australian Government and industrial and research partners nationally and internationally.

[The National Committee for Astronomy](#) is undertaking a review of the plan in 2019–20. The committee will consult widely with the Australian astronomy community and expect to launch the report in July 2020.

MTR timescale

Aug-Oct 2019	White papers developed, workshops
Sep-Oct 2019	Town Hall meetings
Nov-Feb 2020	Mid-term Review draft prepared
Mar-Jun 2020	Community consultation
Jul 2020	Mid-term review finalised by the NCA

“Town Halls” this week at U.Tas. (Thu) and U.Syd. (Fri)

Solicited white papers

- [AAT/SSO](#)
- [Data and HPC](#)
- [ESO and ELTS \(including optical instrumentation\)](#)
- [Gravitational waves](#)
- [Multi-messenger/high-energy](#)
- [SKA and pathfinders \(including radio instrumentation\)](#)
- [Space](#)



SKA and Pathfinders white paper

Recommendations:

- Existing RA facilities be supported to end of decade (2025)
 - This requires support for important upgrades (e.g. BIGCAT)
 - Unique capabilities include follow-up of Pathfinder discoveries
- Access required to large optical telescopes (e.g. ESO membership)
- Radio instrumentation program essential, requires support
- Data and processing centres required to exploit current facilities, support SKA
- Astronomy community needs to foster stable career pathways, ahead of SKA

Facility operating costs

Telescope / facility	Upgrade investment (M\$) [†]	Operating cost p.a. (M\$)
ASKAP	1.7 (Coherent FRB search)	7.5 (5.7) [*] + 3.5 (MRO)
ATCA	1.6 (BIGCAT 4 GHz)	4.7 (3.0) [*]
	2.8 (BIGCAT 8 GHz)	
LBA	-	0.35
MWA	0.96 (Correlator)	1.8 [‡]
	7.0 (Receiver upgrade and expansion)	
Parkes	1.7 (UWH)	3.8 (2.4) [*]
	3.5 (CryoPAF)	
UTMOST	3.0 (100% UTMOST-2D)	0.4 (UTMOST)
		0.45 (100% UTMOST-2D)
Total	22.26	22.1

Table 1. Expected radio telescope upgrade investments and operating costs per annum.

[†] Upgrade investment costs include FTE contributions where appropriate.

^{*} ATNF operations costs are provided both as total costs, as well as direct costs without overheads (in brackets).

[‡] MWA operations costs are provided as the desired Australian contribution from NCRIS funding (55%); the remainder of the operations costs are funded by international partners.

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

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