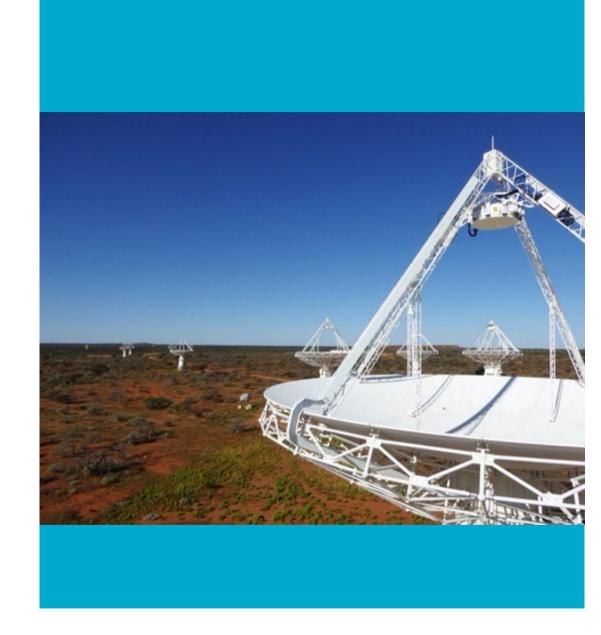


ATNF Data Archives

For ATUC

Minh Huynh | Oct 2022

Australia's National Science Agency





Recent CASDA Developments

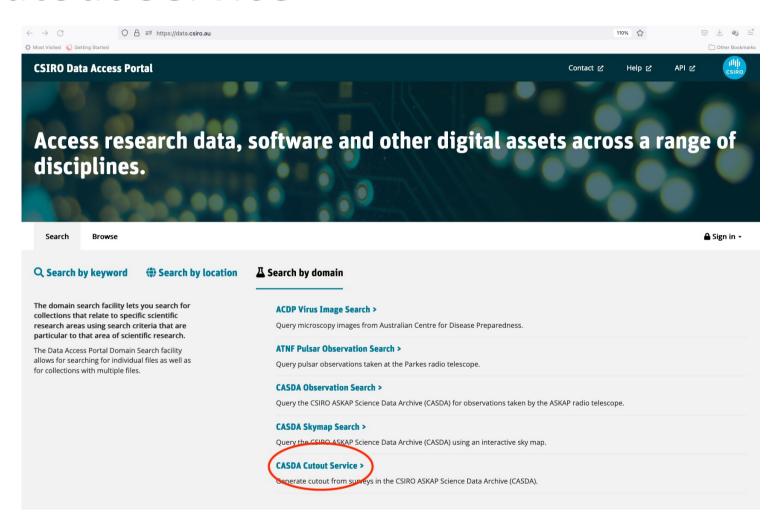
- Server Migration
 - Database moved to new NIMBUS virtual machines
 - Move Data Access and VO Tools to new NIMBUS virtual machines
- New UI cutout service for curated survey data (beginning with RACS)
 - Added support for Simple Image Access 1 VO protocol (SIA1, previously only SIA2)
- Observation search cutout service
 - fix error when creating cutout from a cone search result
 - update to take RA, Dec and cutout radius (not box corners)
- Provide extra metadata to DataCite when registering DOI



New Cutout Service

data.csiro.au

• Search by Domain

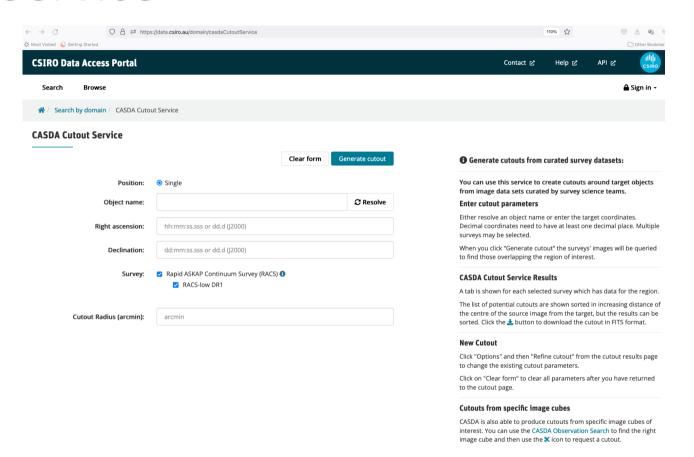




New Cutout Service

Serves curated survey data:

- RACS-Low currently
- Other survey datasets to be added in consultation with AKSAP SSTs





Future CASDA Work: Big Ticket Items

- Migrate deposit modules to new servers
- UI-UX refresh (analysis project underway)
- Installation and integration with CARTA (proof of concept begun)
- ATOA analysis and migration to CASDA (start analysis Q4 2022, development in 2023)



Future CASDA Work: Other Requests

- Delete function for deposits before data is released (nearly complete)
- Improve validation workflow (analysis underway)
- Custom DOIs
- Derived data/L7: Ability to deposit FITS tables and other file types
- UI search: show integration time and ability to filter by Stokes/pol



Parkes Pulsar DAP

- UX/UI usability study of Pulsar domain also underway
- Move to S3+tape storage planned
 - Better access to data across collections
 - Accommodate large UWL+CryoPAF data rates
 - Question of what to archive with CryoPAF? (max data rates of up to ~9TB/hour in extreme search mode)



ATOA

- BIGCAT and CryoPAF will increase data rates in 2023+
 - ATCA BIGCAT up to 0.5 PB per year, nominal max rate 100Mb/sec
 - Parkes UWL and CryoPAF continuum/spectral data 50 to 100 TB(?) per year
 - UWL is currently ~20 TB per semester
- BIGCAT data format: ALMA Science Data Model (ASDM) is likely
 - Easily imported into CASA
 - Will need a module to import into MIRIAD
 - Support both CASA and MIRIAD reduction
- Plan to migrate to CASDA in late 2023



Thank you

CSIRO Astronomy and Space Science

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ATOA Metrics

Volume of data in ATOA+

0.49 PB

No. of queries received by ATOA*

540 searches per month in Apr

Requests successfully delivered*

4200, 4.3 TB per month

⁺ As at Nov 30 2022

^{*} For Q2 2022



Parkes Pulsar DAP Metrics

Volume of data in DAP⁺

3.4 PB

No. of queries received by DAP*

520 search sessions per month

Requests successfully delivered*

13 TB per month

^{*} For Q3 2022

⁺ as of 30 Sep 2022



CASDA Metrics

Volume of data in CASDA#

2.7 PB

No. of queries received by CASDA*+

~644 web sessions, ~115,000 VO queries per month

Requests successfully delivered*

~31,000, ~61 TB per month

At 30 Sep 2022

+ VO includes aggregators and HIPS sessions

^{*} For Q3 2022