



Parkes Telescope Data Access: Pulsar Data

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This document describes the ways in which pulsar data taken by the Parkes radio telescope can be accessed.

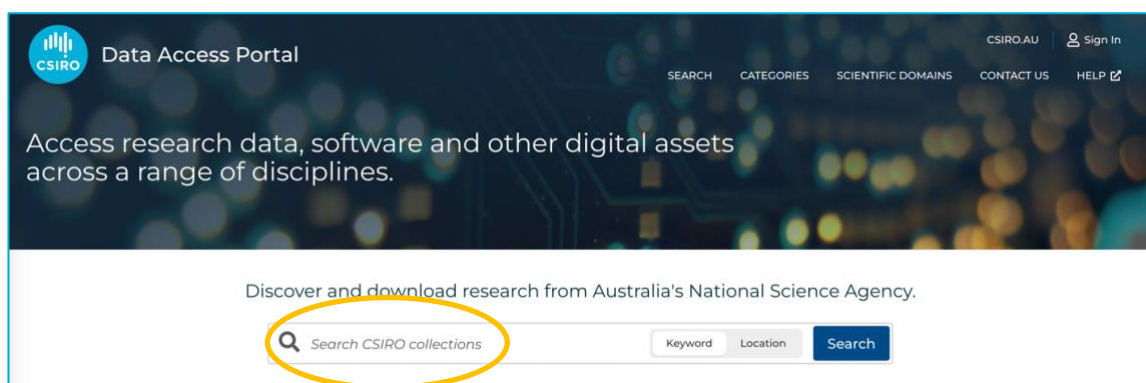
Pulsar data: Accessing data from CSIRO's Data Access Portal (DAP)

CSIRO's DAP is the most comprehensive archive for Parkes pulsar data available globally, with a volume of ~4 Petabytes and containing observations dating from the early 1990's to today.

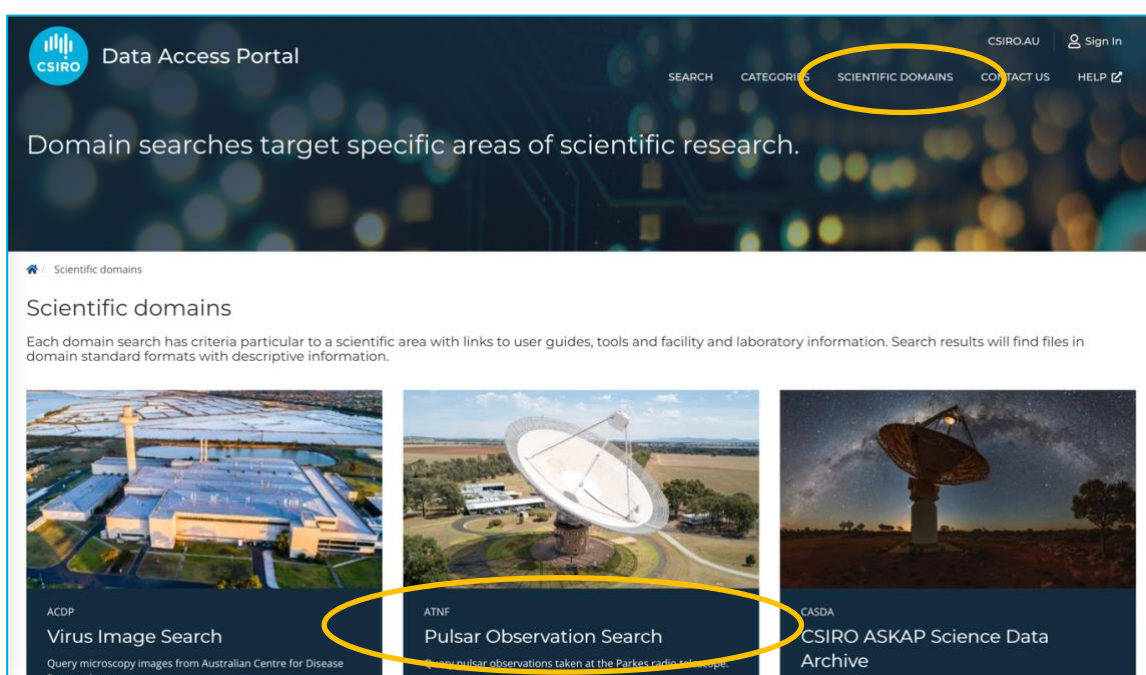
The preferred method for pulsar data access given the large volumes is via an S3 endpoint. A step-by-step guide on how to access data from an S3 endpoint is presented here.

STEP 1: Conduct a search query

- Navigate to <https://data.csiro.au>
- Search for your data either:
 - a) by conducting a keyword search, for example by Project ID:



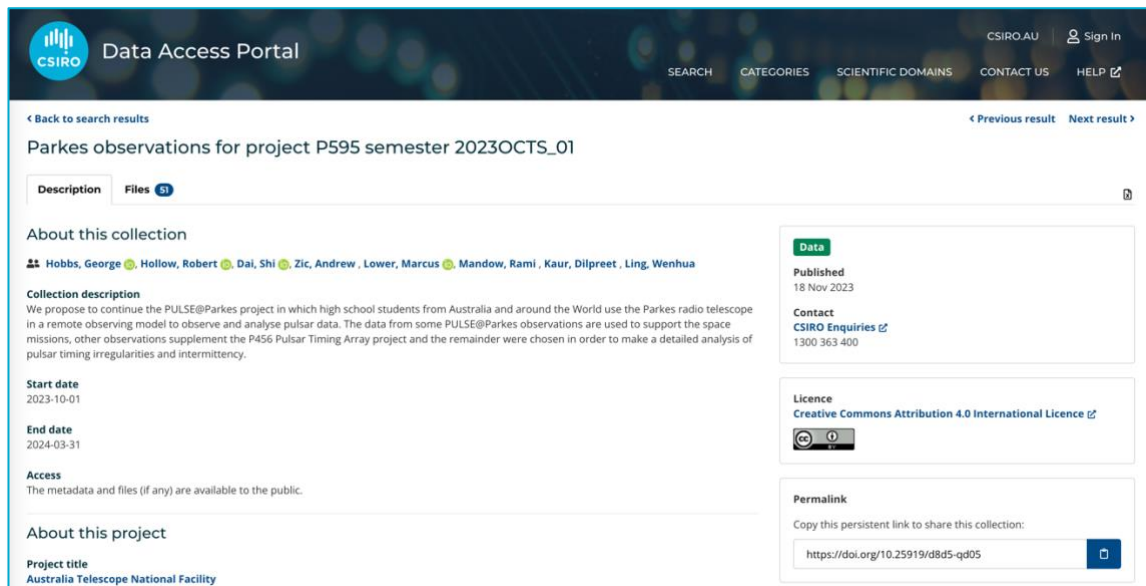
Or b), by conducting a specific 'ATNF Pulsar Observation Search', for example by source name, position, MJD, backend or filename:



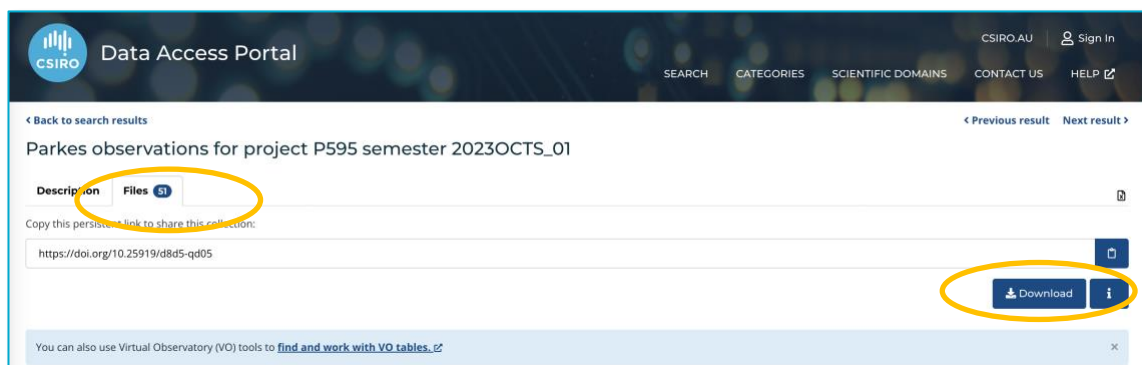
STEP 2: Request access to a data collection

Please note: if your data are spread across multiple collections, you currently need to request each collection separately.

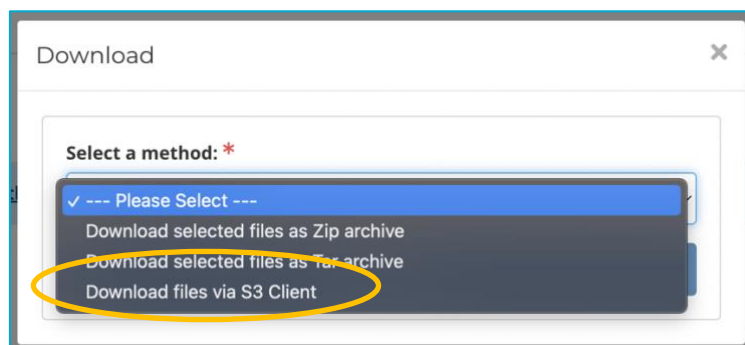
In the following example, the keyword search query for Project ID 'P595' returned a list of 187 collections, and the '2023APRS_01' collection was selected:



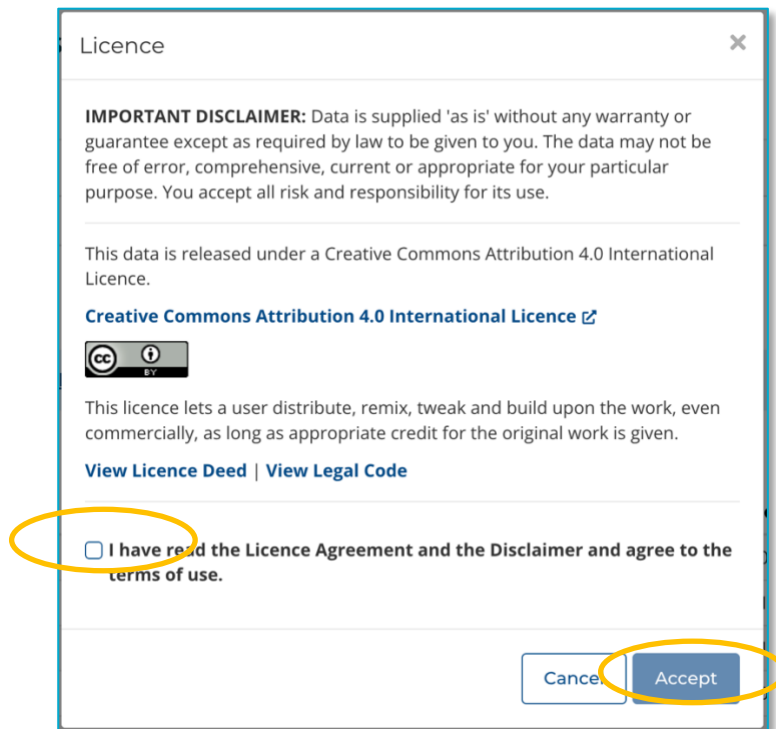
- In the example above, P595 collections are not embargoed, so anyone has access. If you are on the OPAL proposal for an embargoed collection, log in with your OPAL credentials to request the collection.
- Click the 'Files' tab and then 'Download':



- Select 'Download files via S3 Client', enter your email address and click 'Request files':



- Agree to the licence conditions:




A dialog box titled "Licence" with a close button (X) in the top right corner. The content includes an "IMPORTANT DISCLAIMER" about data being supplied 'as is' without warranty. It states the data is released under a Creative Commons Attribution 4.0 International Licence, accompanied by the CC BY logo. Below this, it explains that the licence allows distribution, remixing, and building upon the work, provided credit is given. There are links for "View Licence Deed" and "View Legal Code". A checkbox, which is circled in yellow, is labeled "I have read the Licence Agreement and the Disclaimer and agree to the terms of use." At the bottom right, there are two buttons: "Cancel" and "Accept", with the "Accept" button also circled in yellow.

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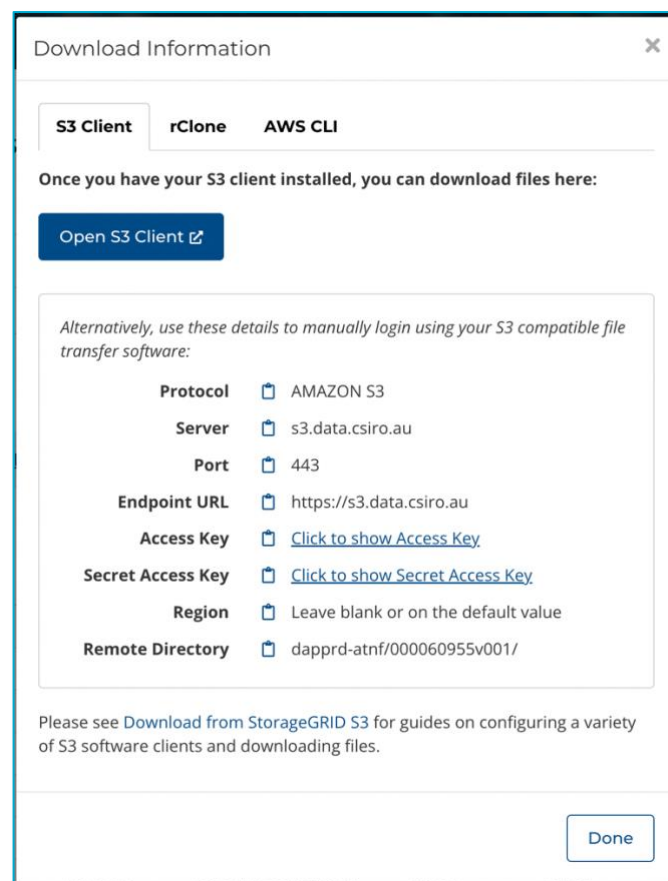
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Cancel Accept

On receipt of the request, you will see this pop-up dialogue where you can choose your S3 client and receive relevant help information:



A dialog box titled "Download Information" with a close button (X) in the top right corner. It has three tabs: "S3 Client" (selected), "rClone", and "AWS CLI". Below the tabs, it says "Once you have your S3 client installed, you can download files here:" followed by a blue button labeled "Open S3 Client". Below this, it says "Alternatively, use these details to manually login using your S3 compatible file transfer software:". A table follows with configuration details for S3. At the bottom, it says "Please see Download from StorageGRID S3 for guides on configuring a variety of S3 software clients and downloading files." and a "Done" button.









Download Information

S3 Client rClone AWS CLI

Once you have your S3 client installed, you can download files here:

[Open S3 Client](#)

Alternatively, use these details to manually login using your S3 compatible file transfer software:

Protocol	 AMAZON S3
Server	 s3.data.csiro.au
Port	 443
Endpoint URL	 https://s3.data.csiro.au
Access Key	 Click to show Access Key
Secret Access Key	 Click to show Secret Access Key
Region	 Leave blank or on the default value
Remote Directory	 dapprd-atnf/000060955v001/

Please see [Download from StorageGRID S3](#) for guides on configuring a variety of S3 software clients and downloading files.

Done

STEP 3: Download your data

- Choose from the selection of S3 clients as shown above, and follow the instructions supplied, and/or refer to the guide for further information.

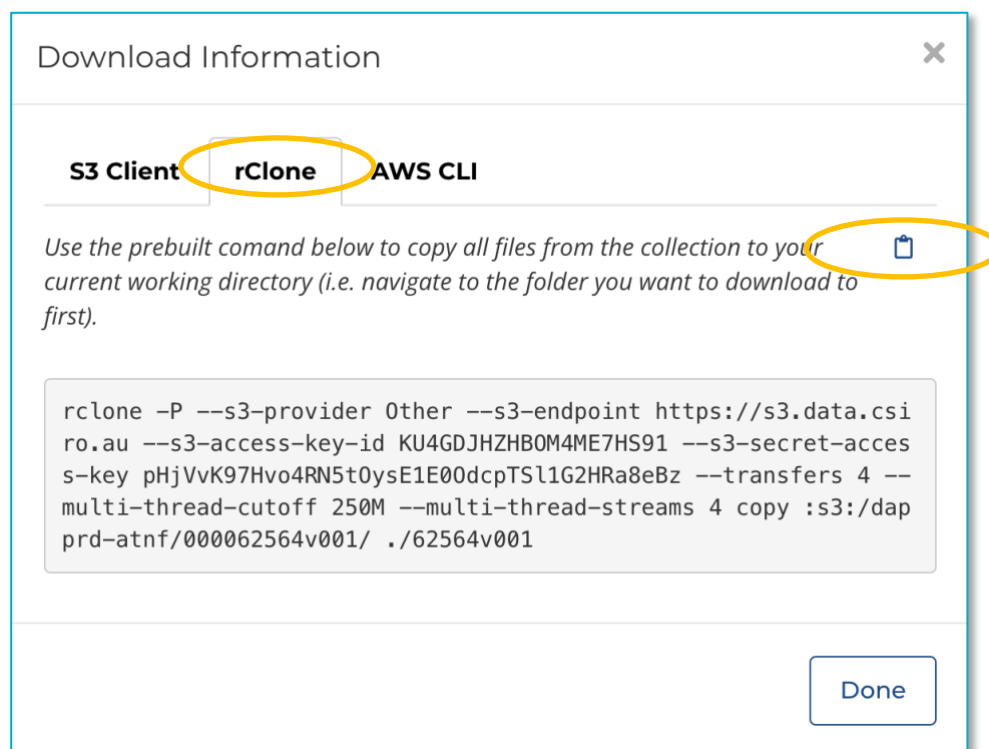
ATNF Computer Account Holders

An ATNF computer account holder can download data using *rclone* to pre-booked disk space on an ATNF machine.

- Log on to host *venice*, then a processing machine (e.g. *cetus*)
- Check for booked disk space with:

```
bookings -u your_ident
```

- To request disk space, please email bookings@atnf.csiro.au with your requirements
- Once you have been allocated disk space, data can be downloaded by copying the *rclone* command specified in the pop-up dialogue 'rClone' tab, and then pasting it into your terminal:



```
cetus-113% rclone -P --s3-provider Other --s3-endpoint https://s3.data.csiro.au --s3-access-key-id KU4GDJHZHBOM4ME7HS91 --s3-secret-access-key pHjVvK97Hvo4RN5t0ysE1E00dcpTS1G2HRa8eBz --transfers 4 --multi-thread-cutoff 250M --multi-thread-streams 4 copy :s3:/dapprd-atnf/000062564v001/ ./62564v001
2024/05/24 07:21:32 NOTICE: Config file "/u/too043/.config/rclone/rclone.conf" not found - using defaults
Transferred: 37.036M / 1.507 TBytes, 0%, 39.947 MBytes/s, ETA 10h59m12s
Transferred: 5 / 166, 3%
Elapsed time: 1.0s
Transferring:
* data/raw/uwl_240422_025110.cf: 3% /130.737M, 0/s, -
* data/raw/uwl_240422_025257.rf: 1% /967.220M, 0/s, -
* data/raw/uwl_240424_045217.cf: 10% /78.459M, 0/s, -
* data/raw/uwl_240424_045350.rf: 5% /130.748M, 0/s, -^C
```

Command-line data access tools

The ATNF provides data query and access tools – use of these is the preferred method for accessing large data volumes and/or retrieving a sub-set of observations.

On ATNF servers, the following tools are available:

- `dap-query.sh` - query the DAP database
- `get-dap-psr-data.sh` - download unembargoed DAP data specified by a `dap-query.sh` result set
- `get-dap-psr-collection.sh` - download embargoed/unembargoed DAP collections or specify files to download

Need help with data access?

Information about the ATNF Data Archives is available at:

<https://www.atnf.csiro.au/observers/data/index.html>

Contact ATNF data support at:

atnf-datasup@csiro.au

Please contact Lawrence.Toomey@csiro.au for further information.