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)

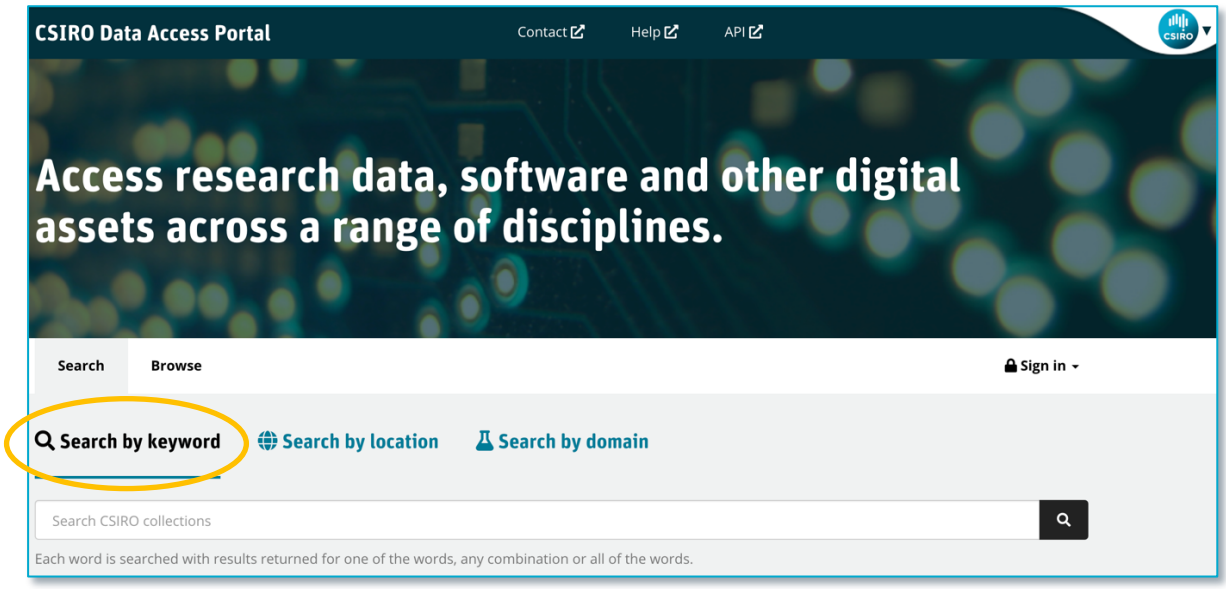
CSIRO's DAP is the most comprehensive archive for Parkes pulsar data available globally, with a volume of ~2 Petabytes and containing observations dating from the early 1990's to today.

The preferred method for pulsar data access given the large volumes is via a WebDAV end-point. A step-by-step guide on how to access data from a WebDAV end-point is presented here.

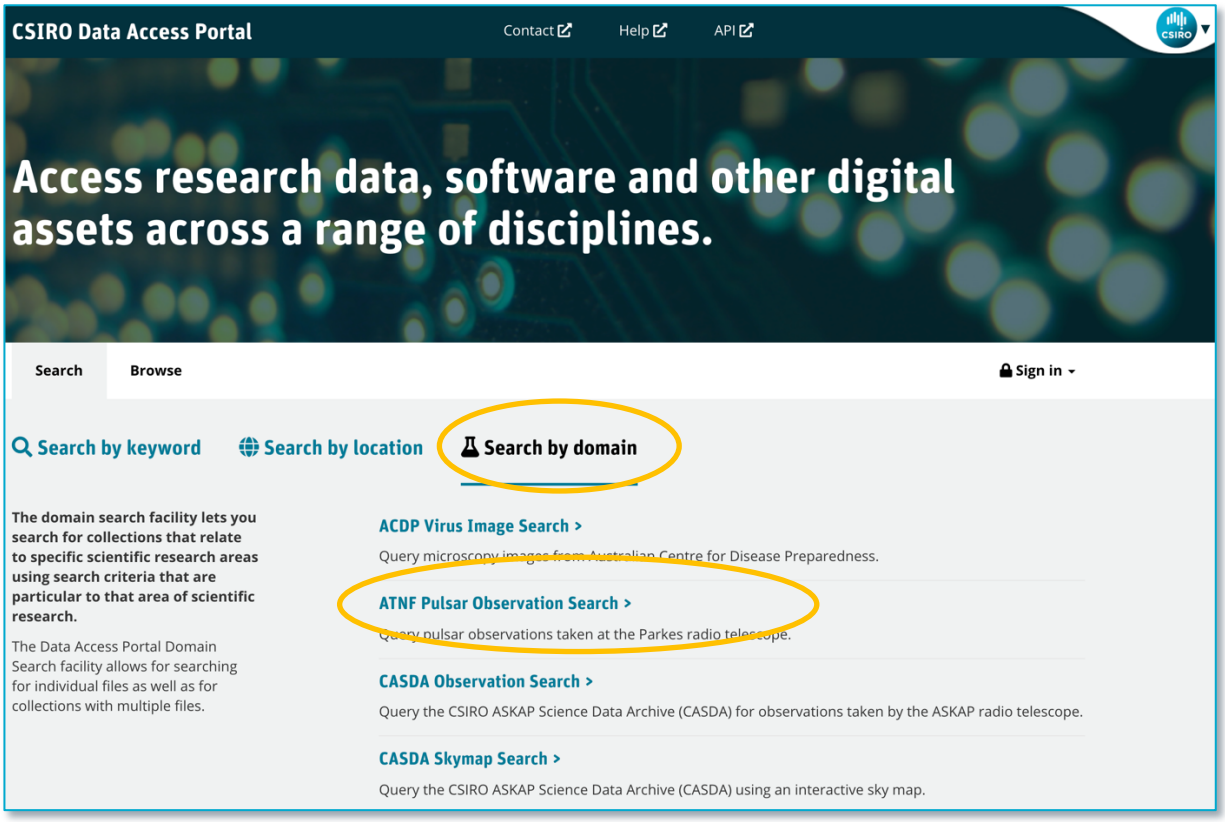
STEP 1: Conduct a search query

- Navigate to https://data.csiro.au
- Search for your data either:

  a) by conducting a keyword search, for example by Project ID:



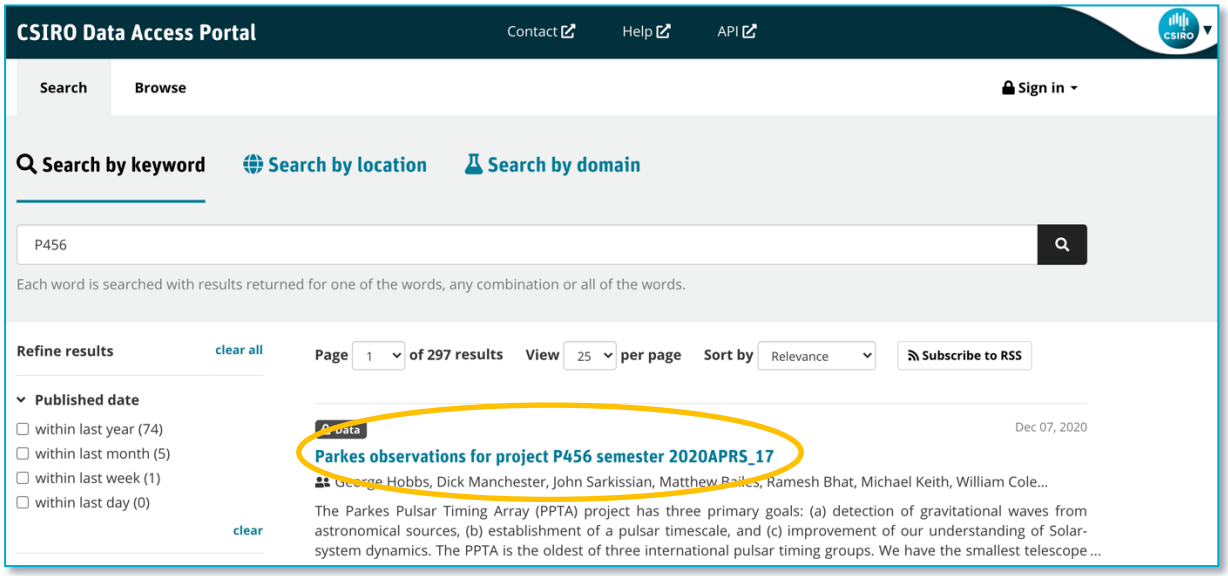
Or b), by conducting a specific 'ATNF Pulsar Observation Search', for example by source name, position, MJD, backend or filename:

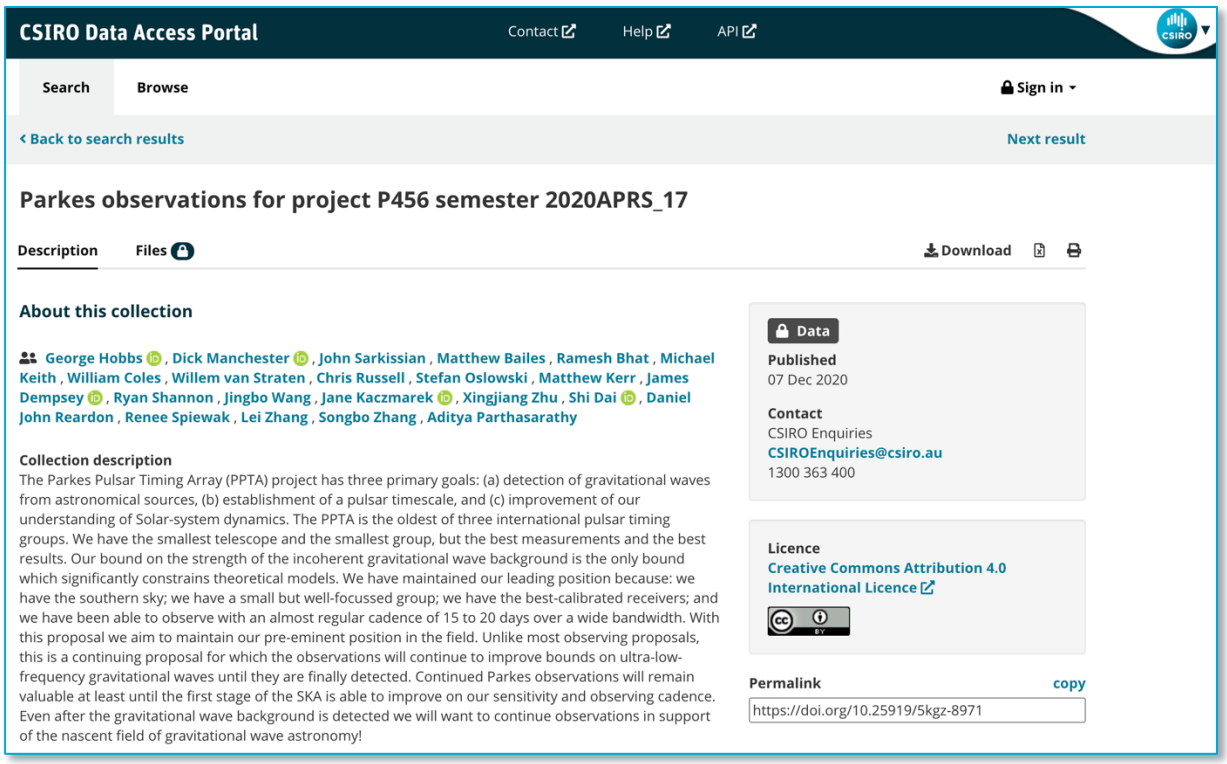


STEP 2: Request access to a data collection

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

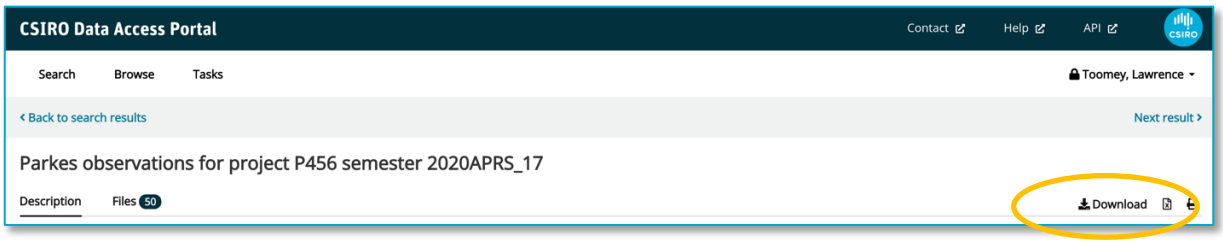
In the following example, the keyword search query for Project ID 'P456' returned a list of 297 collections, and the '2020APRS_17' collection was selected:



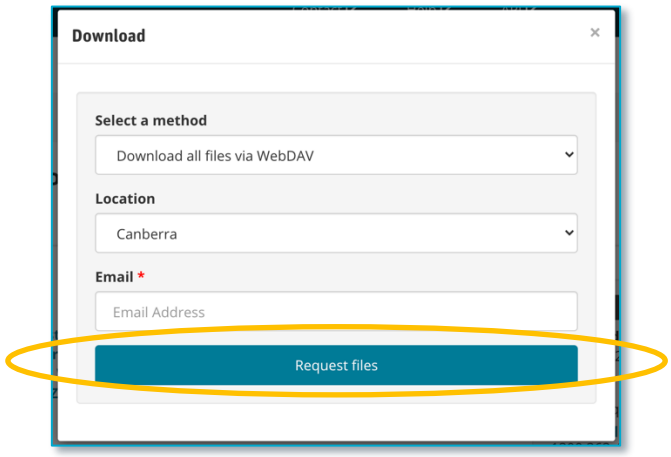


- Log in with your OPAL credentials in order to request the collection:

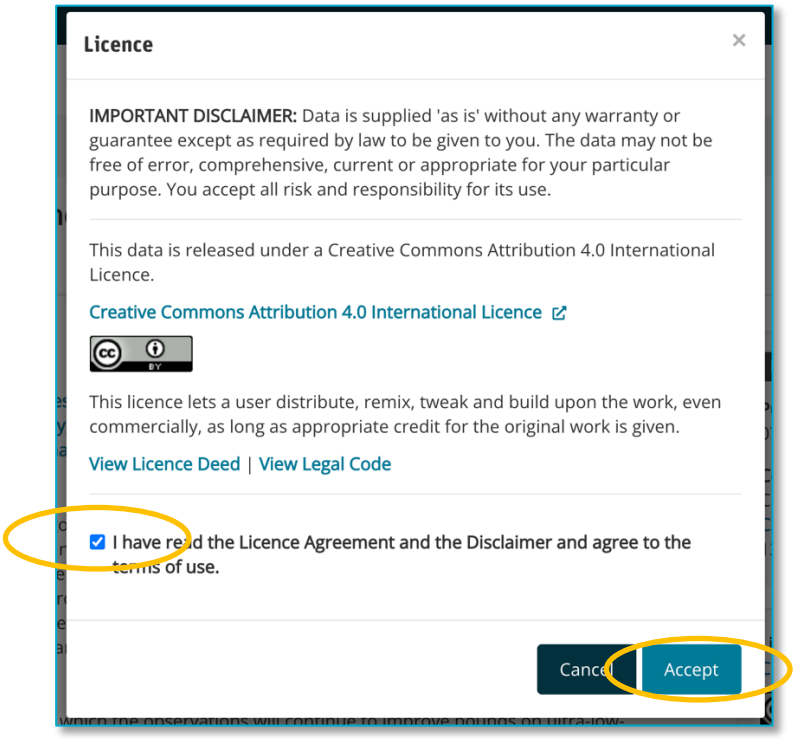
- Click 'Download' and choose from a list of download methods:



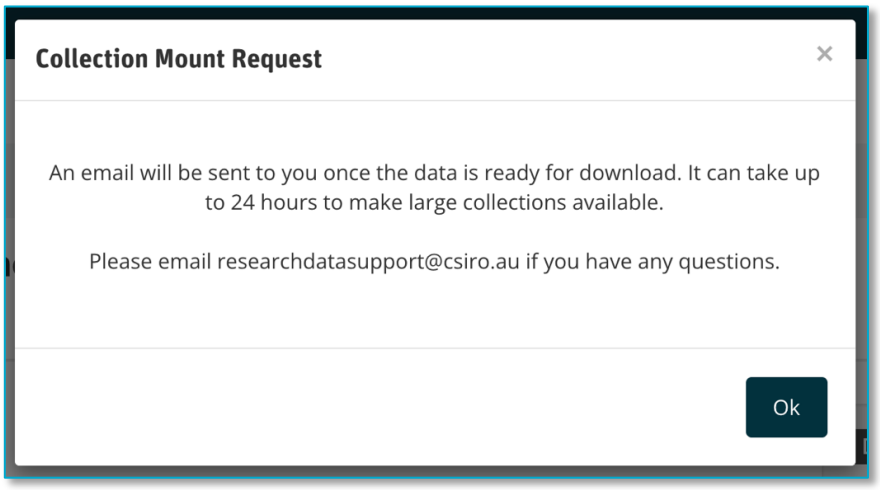
- Select 'Download all files via WebDAV', enter your email address and click 'Request files':



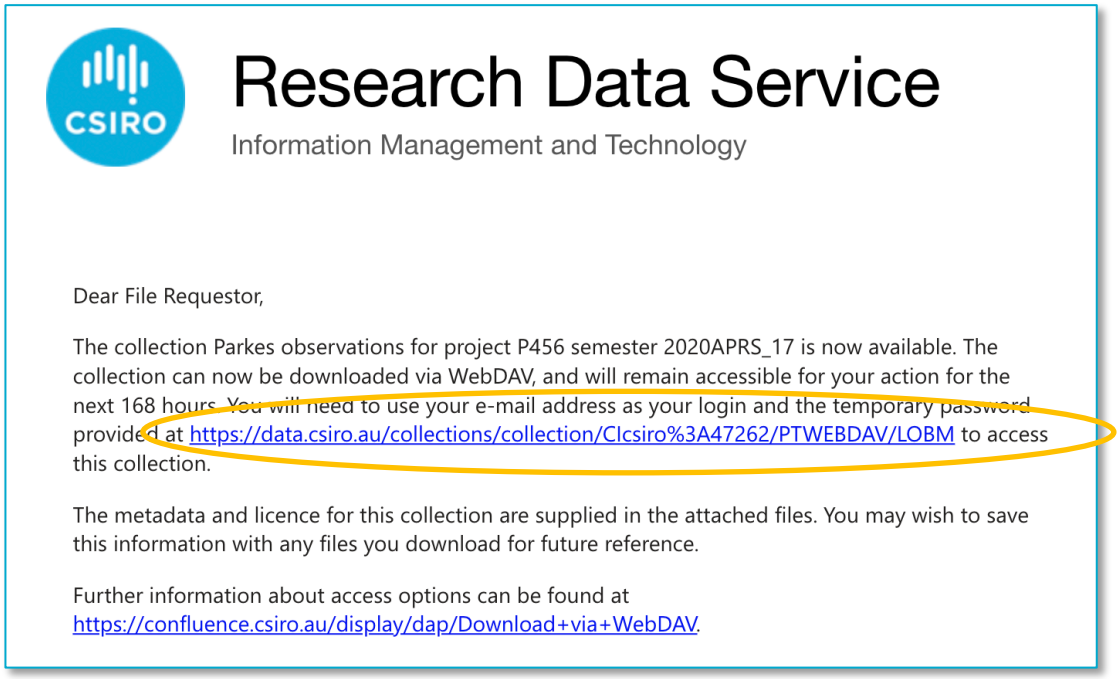
- Agree to the licence conditions:



On receipt of the request you will see this pop-up dialogue:



- You will receive a confirmation email similar to the one below once the collection becomes available:



Research Data Service

Information Management and Technology

Dear File Requestor,

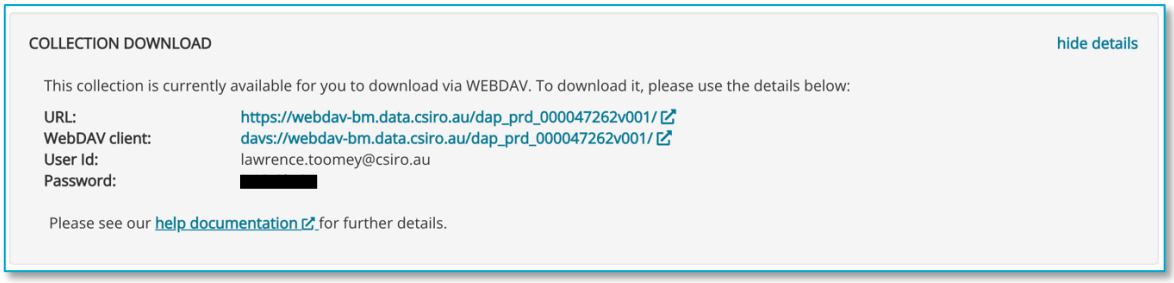
The collection Parkes observations for project P456 semester 2020APRS_17 is now available. The collection can now be downloaded via WebDAV, and will remain accessible for your action for the next 168 hours. You will need to use your e-mail address as your login and the temporary password provided at https://data.csiro.au/collections/collection/CIcsiro%3A47262/PTWEBDAV/LOBM to access this collection.

The metadata and licence for this collection are supplied in the attached files. You may wish to save this information with any files you download for future reference.

Further information about access options can be found at https://confluence.csiro.au/display/dap/Download+via+WebDAV.

STEP 3: Download your data

- Click on the link in the confirmation email above and you should be taken to a page where you can receive your credentials, for example



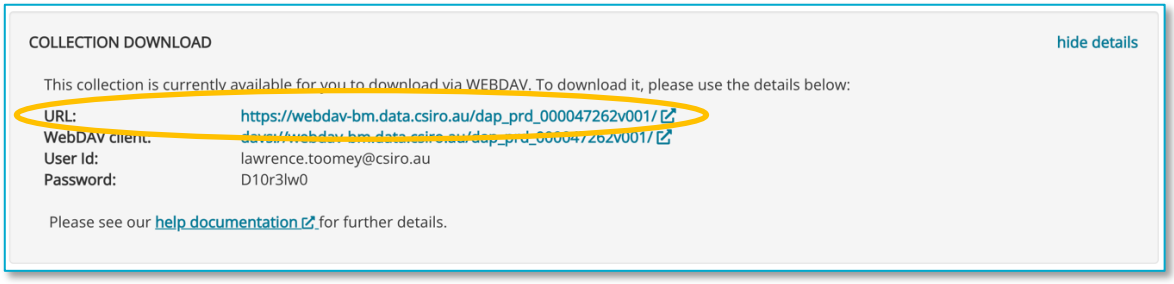
COLLECTION DOWNLOAD hide details

This collection is currently available for you to download via WEBDAV. To download it, please use the details below:

URL: https://webdav-bm.data.csiro.au/dap_prd_000047262v001/
WebDAV client: davs://webdav-bm.data.csiro.au/dap_prd_000047262v001/
User Id: lawrence.toomey@csiro.au
Password: [redacted]

Please see our help documentation for further details.

- If you wish to download one or two files, click on the URL and enter your credentials:



COLLECTION DOWNLOAD hide details

This collection is currently available for you to download via WEBDAV. To download it, please use the details below:

URL: https://webdav-bm.data.csiro.au/dap_prd_000047262v001/
WebDAV client: davs://webdav-bm.data.csiro.au/dap_prd_000047262v001/
User Id: lawrence.toomey@csiro.au
Password: D10r3lw0

Please see our help documentation for further details.

- For bulk download of large collections via WebDAV, please contact Lawrence.Toomey@csiro.au for the *get-dap-collection.sh* script – this is the preferred option for data retrieval as explained in 'ATNF Computer Account Holders' below.

ATNF Computer Account Holders

An ATNF computer account holder can download data using the *get-dap-collection.sh* script to 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
- If you wish to use your NEXUS credentials, configure your ~/.netrc file, adding the following lines where <pass> is your NEXUS password:

```
machine webdav-cl.data.csiro.au login <your_ident> password <pass>
machine webdav-bm.data.csiro.au login <your_ident> password <pass>
```

- Set the permissions correctly on the ~/.netrc file:

```
chmod 600 ~/.netrc
```

- Run the download script with the following arguments if you requested a collection with your NEXUS credentials:

```
get-dap-collection.sh --url https://webdav-
cl.data.csiro.au/dap_prd_NNNNNNNNNvNNN --user your_ident --destdir
/path/to/your_data_destination
```

Alternatively, run the following command if you requested a collection with your OPAL credentials, where 'your_email_address' is as stated on the DAP confirmation email:

```
get-dap-collection.sh --url https://webdav-
cl.data.csiro.au/dap_prd_NNNNNNNNNvNNN --user your_email_address --destdir
/path/to/your_data_destination
```

You will be prompted for the password provided in the DAP confirmation email.

An ATNF computer account holder can also access a selection of data available from the ATNF pulsar data archive.

- Available archives are:

```
$CASPSR*
$DFB*
$UWL*
```

- Processing can be conducted directly on ATNF machines, or data can be copied to your institution

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.