

CEDA Sentinel ARD data access

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Today talk

1. CEDA Overview

2. API access

3. JASMIN and JASMIN notebooks



CEDA overview

Who are CEDA?

- Part of UKRI
- Part of STFC RAL Space, but provide the Earth Observation and Atmospheric Science data centres for NERC.
- The CEDA mission is - To provide data and information services for environmental science.
- The CEDA team is roughly 30 staff. Split between data scientists and developers.
- CEDA store over 15PB of archived data which is in ~292 million data files.
- CEDA have over 66,000 registered data users.



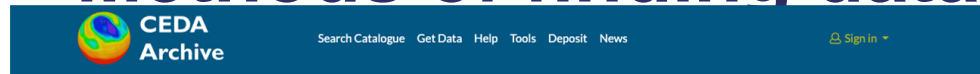
Searching for data at CEDA

Methods of finding data at CEDA

- CEDA have many different methods of finding data:
 - CEDA Catalogue (<https://catalogue.ceda.ac.uk/>)
 - Data browser (<http://data.ceda.ac.uk/>) - Earth observation datasets can be found under the NEODC directory.
 - CEDA Satellite data finder (<http://geo-search.ceda.ac.uk/>)
 - Elasticsearch interface - ceda-eo index(<https://help.ceda.ac.uk/article/4694-ceda-elasticsearch>)
- CEDA provide different ways to download/access the data:
 - OpenDAP behind the Data browser
 - FTP
 - Direct access using JASMIN.

Searching for data at CEDA

Methods of finding data at CEDA



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archive	Description	Size	Actions
5 dirs 0 files			
badc			
bodc			
neodc			
ngdc			
obs4MIPs			



Data browser: <http://data.ceda.ac.uk/>

Index of /

Name	Size	Date Modified
badc/		9/18/20, 10:41:00 AM
neodc/		9/17/20, 4:45:00 PM
requests/		9/21/20, 5:03:00 PM
sparc/		4/29/20, 2:55:00 PM
welcome.msg	402 B	6/16/20, 12:10:00 PM

FTP: <ftp://ftp.ceda.ac.uk/>



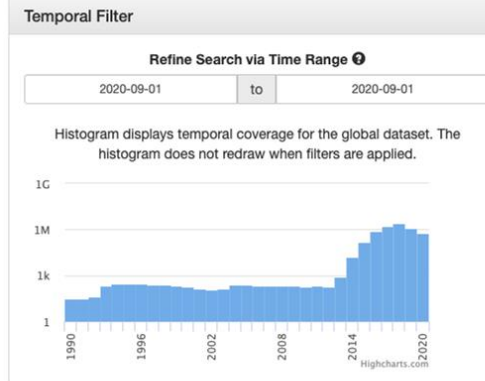
CEDA Satellite Data Finder

[Collapse Header](#)

Only the first 1000 results will be plotted on the map with most recent on top.

[Help](#) [Tutorial](#) [Feedback](#)

Click an item to expand the panel.

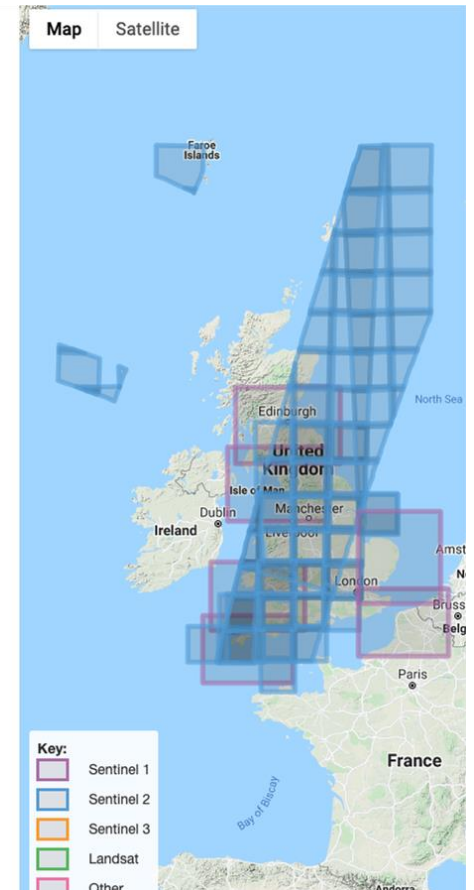


Change Map Centre

Rectangle Search

Satellite Filter

[Apply Filters](#) [Clear Filters](#)

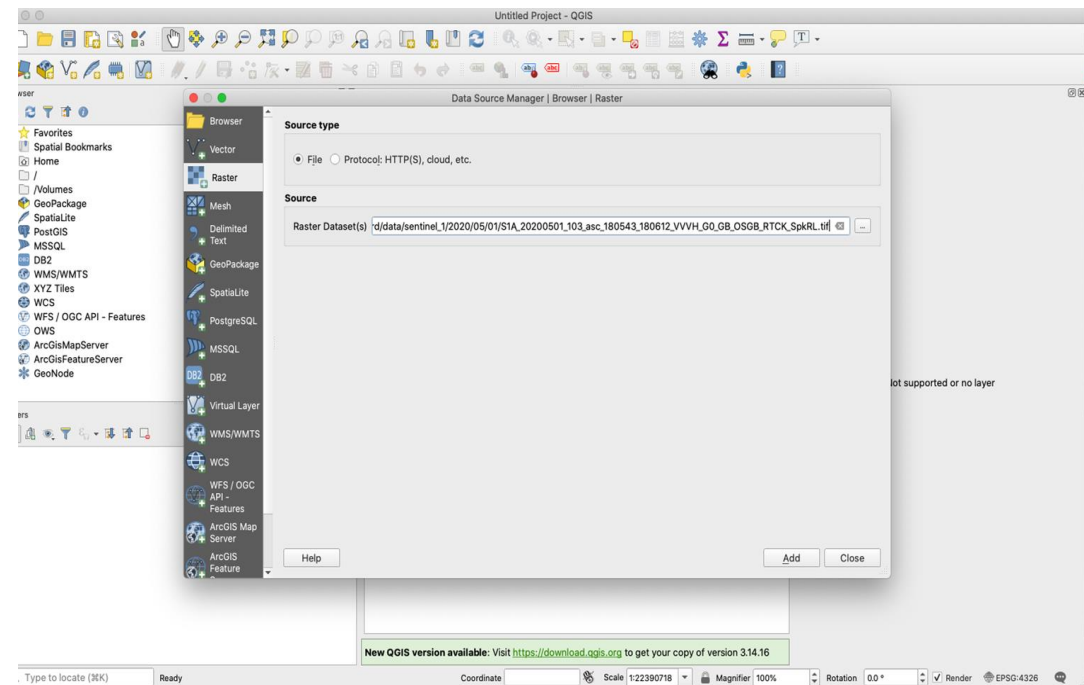


Satellite data finder: <http://geo-search.ceda.ac.uk/>

API data access

CEDA ARD data can be accessed directly via OpenDAP

- Data can be accessed directly using the OpenDAP servers.
- Can be pulled directly into GIS software using 'vsicurl'.
- Similar to access via cloud computing.
- `/vsicurl/http://dap.ceda.ac.uk/neodc/sentinel_ard/data/...`
- Tested using QGIS, gdal and tuiview.



JASMIN access

CEDA data can be accessed directly using JASMIN

- JASMIN is a 'super-data-cluster' which delivers infrastructure for large scale data analysis and is administered by CEDA.
- JASMIN in total has 44PB storage capacity.
- JASMIN provides direct access to the CEDA archive for data processing.
- Scientific analysis data servers to run and test data processing.
- LOTUS: batch processing cluster running almost 8000 cores.



JASMIN webpage: <http://jasmin.ac.uk/>
JASMIN help pages: <https://help.jasmin.ac.uk/>
JASMIN helpdesk: support@jasmin.ac.uk

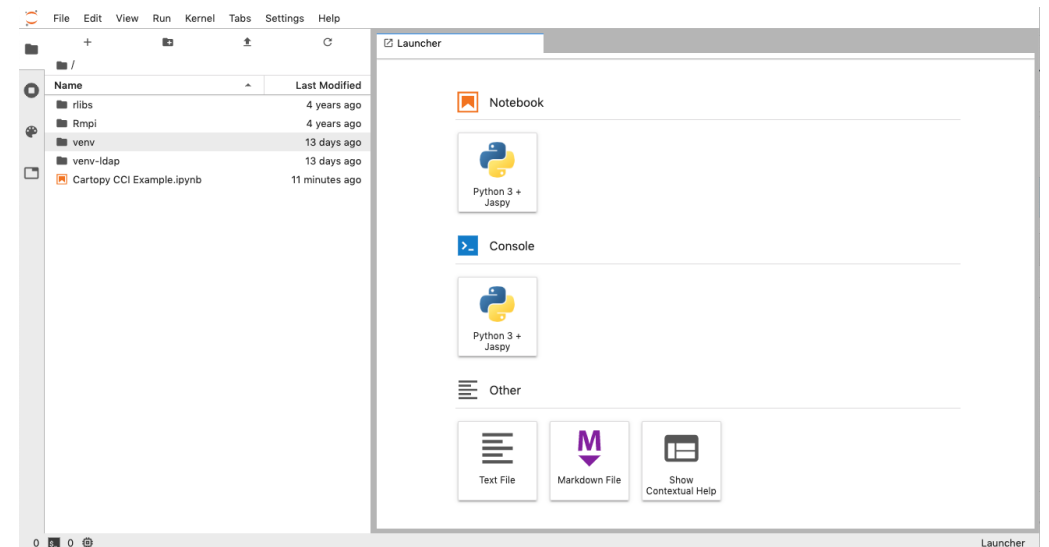


Credit: STFC

JASMIN Notebook service

Accessing ARD data via JASMIN notebook service.

- New in 2020
- Anyone with JASMIN access can use the JASMIN notebook service
- Has direct read access the CEDA archive
- Allows you to run Python notebooks.
- You can bring previously written notebooks or write new ones from scratch.
- Some examples of notebooks can be found here:
<https://github.com/cedadev/ceda-notebooks>
- ARD examples will be added soon!



Helpful links

CEDA help pages: <https://help.ceda.ac.uk/>

JASMIN help pages:

<https://help.jasmin.ac.uk/>

JASMIN: support@jasmin.ac.uk

CEDA: support@ceda.ac.uk

Twitter - @cedanews

Website - www.ceda.ac.uk

