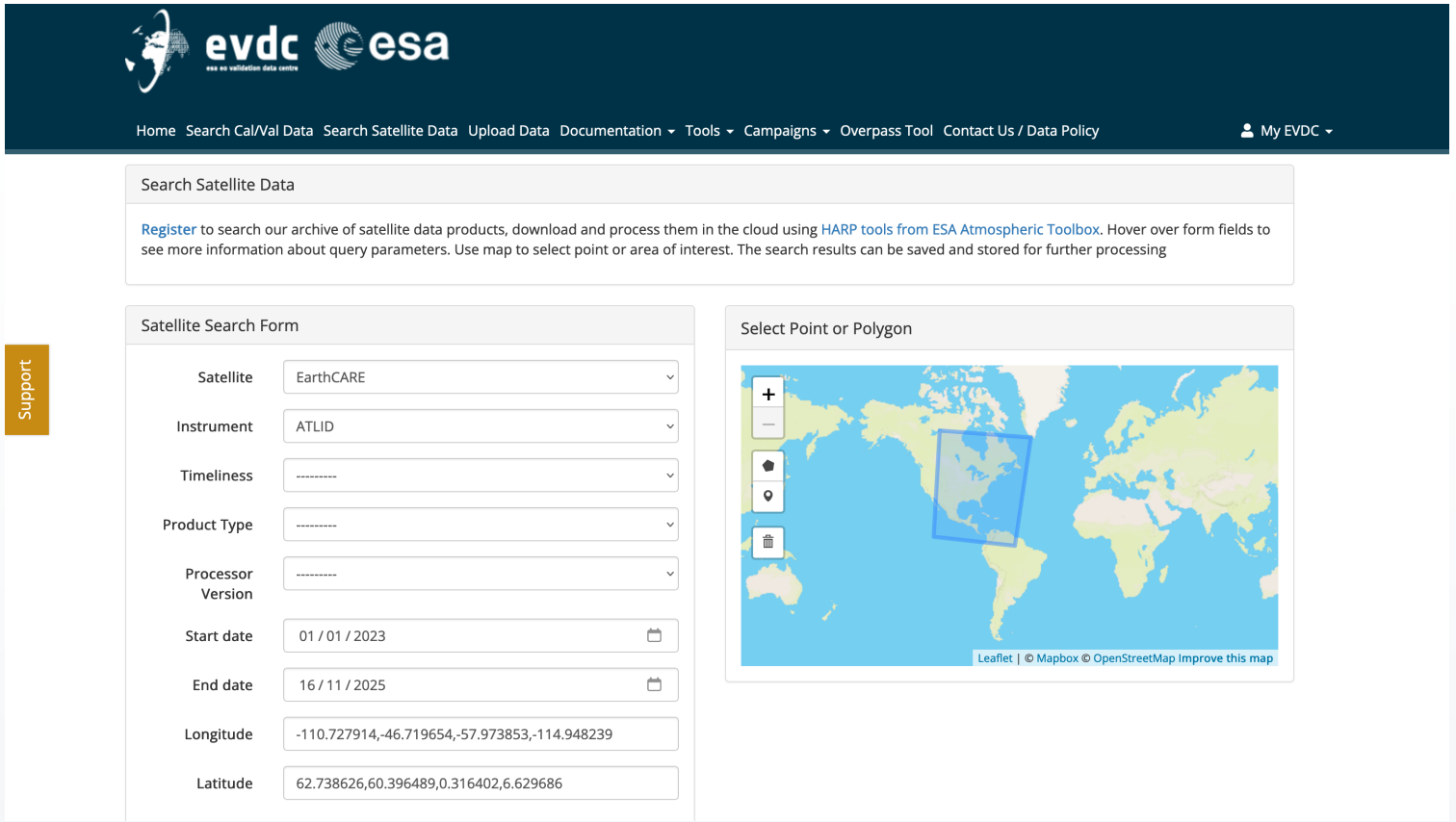
EVDC – Satellite data archive

Available atmospheric mission data (approx 500TB)

- Sentinel 5P
- Aeolus
- MIPAS (Envisat)
- **EarhCARE (foreseen for E2)**
- **Test EarthCARE products ingested and indexed**

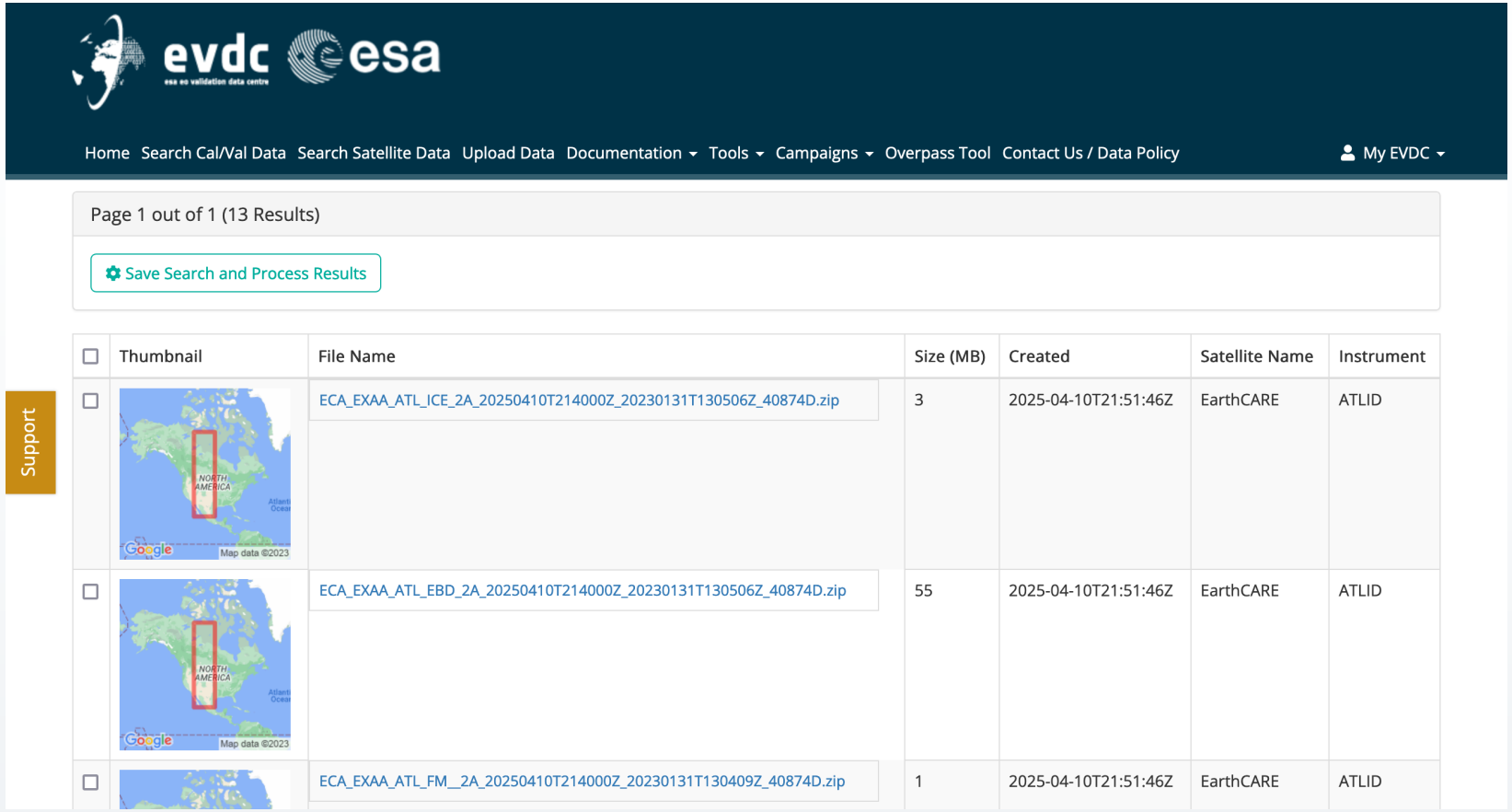
Access

- **https://evdc.esa.int**
- **Registration required (NILU u/p is sufficient)**



EVDC – Satellite data search engine/catalogue

- **Product ingestion and indexing services**
- **Fast, enterprise grade search engine (Solr)**
- **Spatial search functionalities**



EVDC – Satellite data search engine/catalogue

evdc esa
esa eo validation data centre

Home Search Cal/Val Data Search Satellite Data Upload Data Documentation Tools Campaigns Overpass Tool Contact Us / Data Policy My EVDC

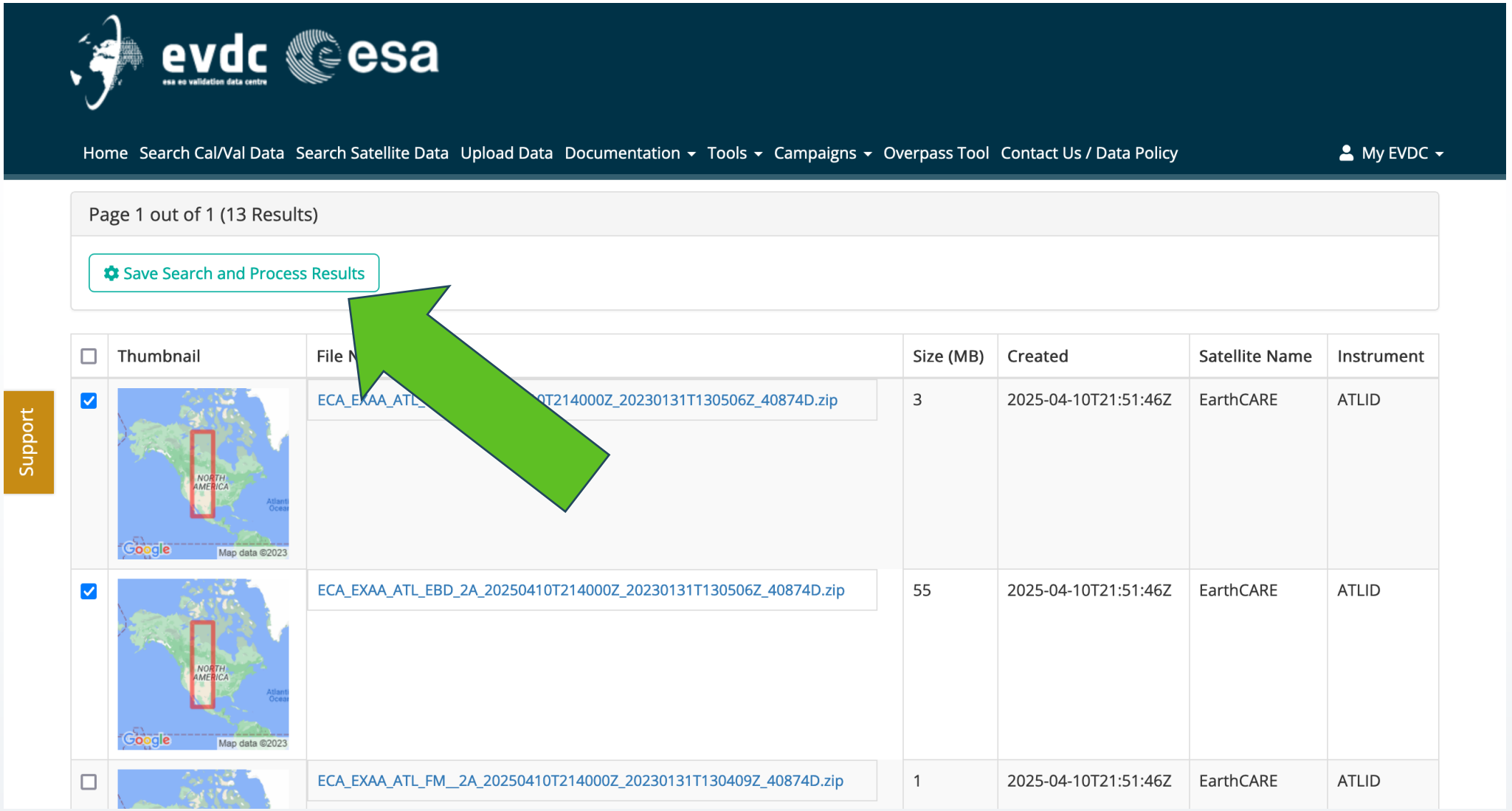
Page 1 out of 1 (13 Results)

Save Search and Process Results

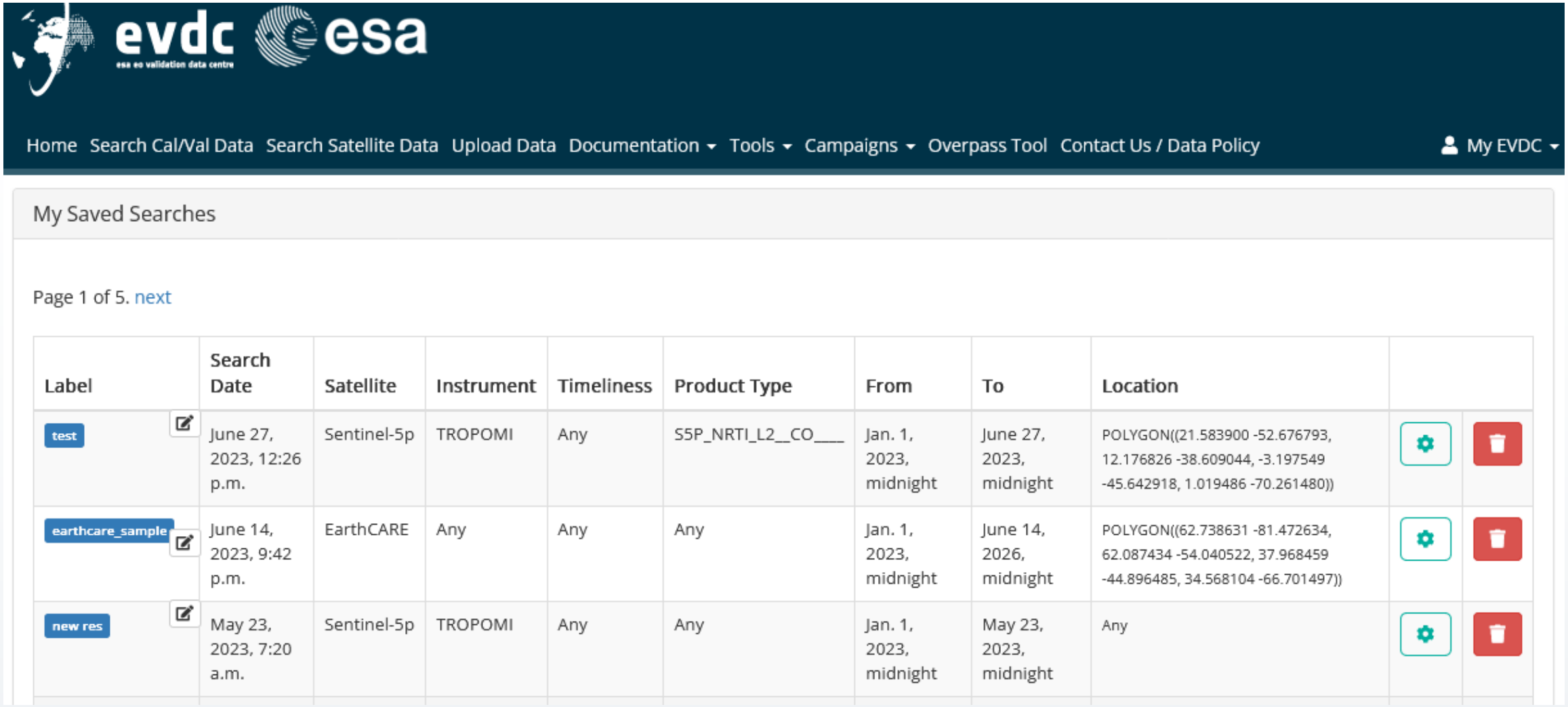
Support

	Thumbnail	File Name	Size (MB)	Created	Satellite Name	Instrument
☑		_2A_20250410T214000Z_20230131T130506Z_40874D.zip	3	2025-04-10T21:51:46Z	EarthCARE	ATLID
☑		ECA_EXAA_ATL_EBD_2A_20250410T214000Z_20230131T130506Z_40874D.zip	55	2025-04-10T21:51:46Z	EarthCARE	ATLID
☐		ECA_EXAA_ATL_FM__2A_20250410T214000Z_20230131T130409Z_40874D.zip	1	2025-04-10T21:51:46Z	EarthCARE	ATLID

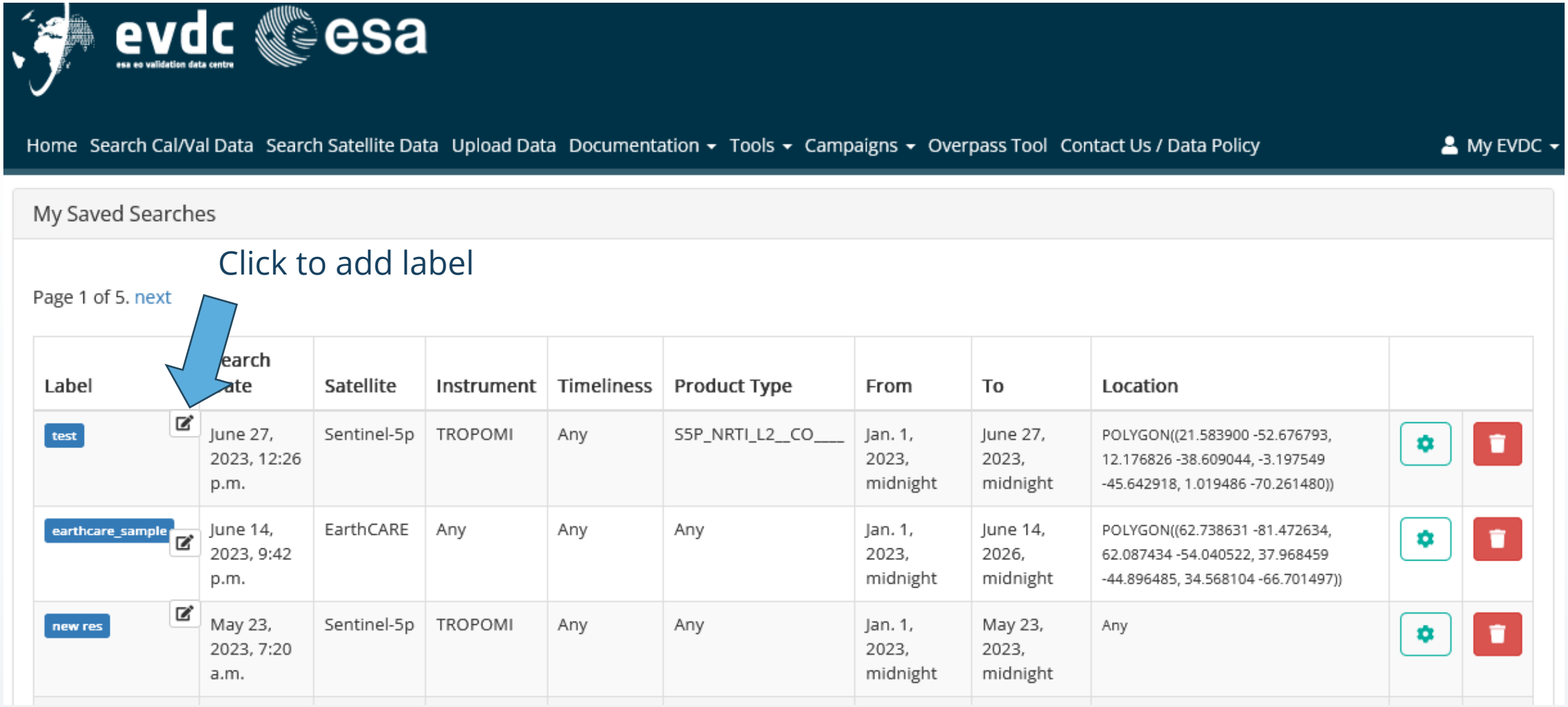
EVDC – Satellite data search engine/catalogue



EVDC – Satellite data search UI

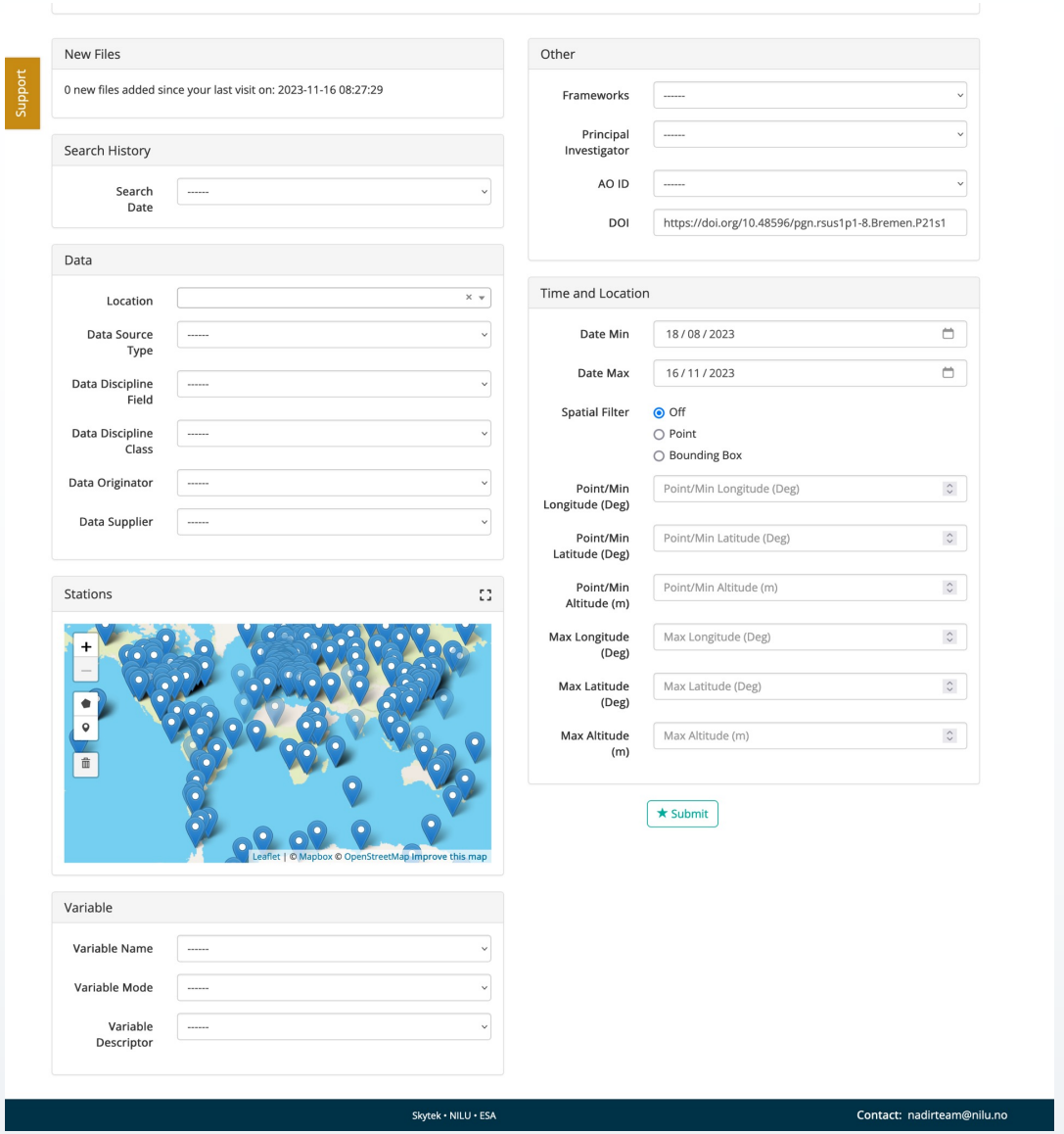


EVDC – Satellite data search UI



EVDC – Correlative data search UI

Advanced search tools for correlative products.



EVDC – Correlative data search UI

EVDC – Correlative data search UI

Search Results (74)

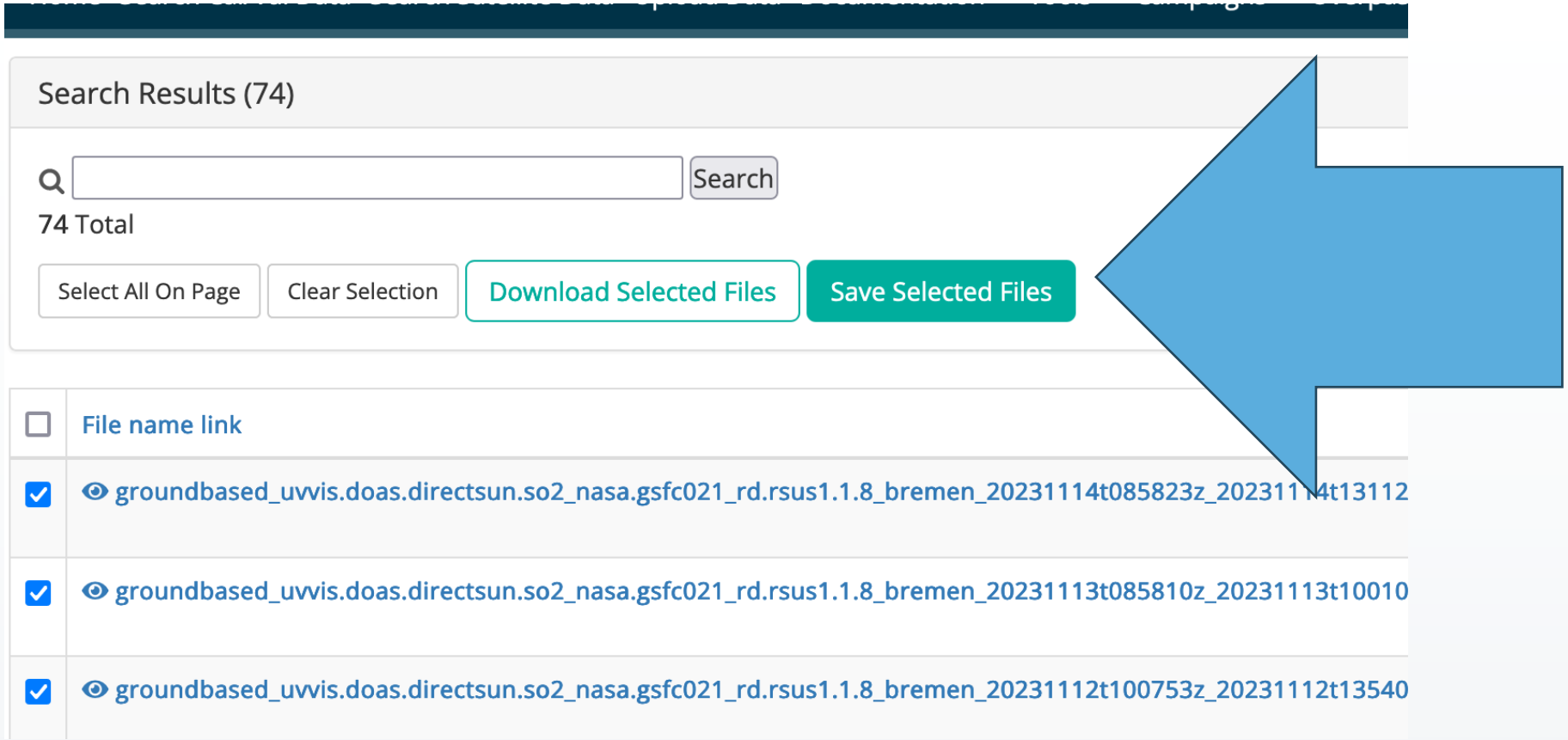
Search

74 Total

Select All On Page | Clear Selection | Download Selected Files | Save Selected Files

File name link	File Size	Submission date	PI	Campaign
groundbased_uvvis.doas.directsun.so2_nasa.gsfc021_rd.rsus1.1.8_bremen_20231114t085823z_20231114t131123z_001.h5	43 kB	2023-11-15 00:01:04.000	Andre Seyler	AVDC, EVDC, PGN
groundbased_uvvis.doas.directsun.so2_nasa.gsfc021_rd.rsus1.1.8_bremen_20231113t085810z_20231113t100102z_001.h5	43 kB	2023-11-13 23:57:35.000	Andre Seyler	AVDC, EVDC, PGN
groundbased_uvvis.doas.directsun.so2_nasa.gsfc021_rd.rsus1.1.8_bremen_20231112t100753z_20231112t135400z_001.h5	43 kB	2023-11-12 23:53:40.000	Andre Seyler	AVDC, EVDC, PGN
groundbased_uvvis.doas.directsun.so2_nasa.gsfc021_rd.rsus1.1.8_bremen_20231111t120921z_20231111t121012z_001.h5	43 kB	2023-11-11 23:24:53.000	Andre Seyler	AVDC, EVDC, PGN
groundbased_uvvis.doas.directsun.so2_nasa.gsfc021_rd.rsus1.1.8_bremen_20231110t101808z_20231110t133547z_001.h5	43 kB	2023-11-10	Andre	AVDC, EVDC

EVDC – Correlative data search UI



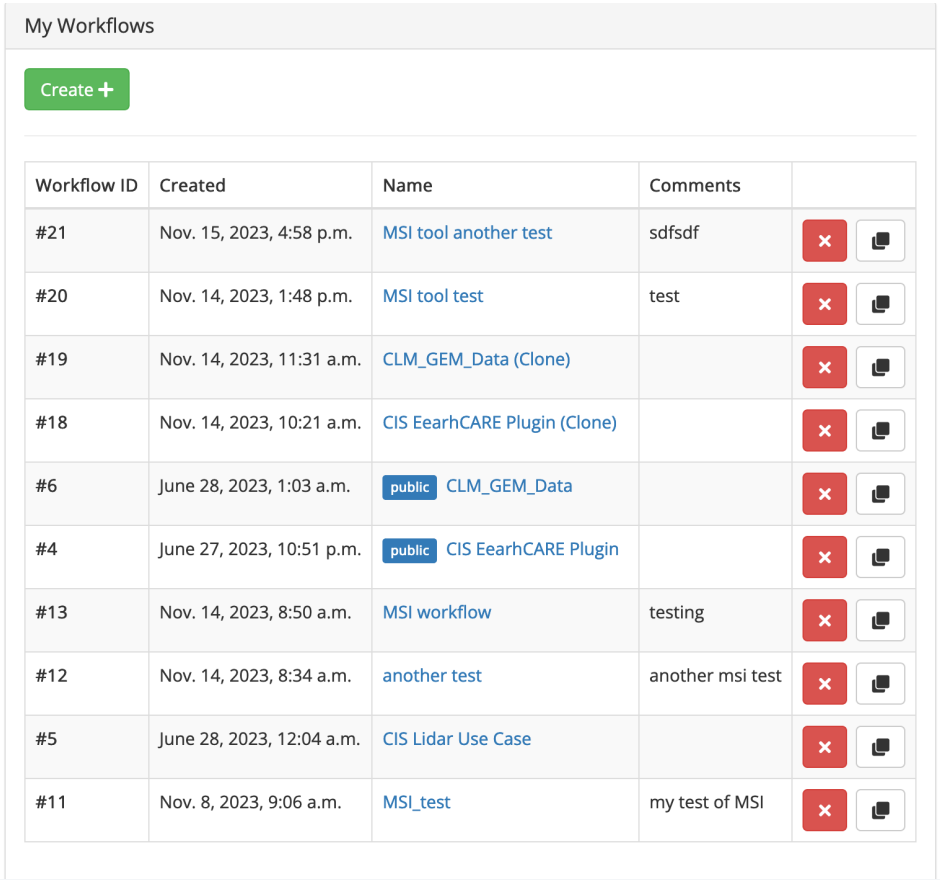
EVDC – Correlative data search UI

Label and organize data

My Saved Cal/Val Searches

Label	Variable Na		ation	Data Source Type	From	To		
search-1506	Any		[]	Any	Aug. 18, 2023, midnight	Nov. 16, 2023, midnight		
search-1504	Any	EVDC	[]	Any	Nov. 1, 2023, midnight	Nov. 14, 2023, midnight		
	Any	EVDC	[]	Any	May 12, 2023, midnight	June 10, 2023, midnight		
search-1503	Any	EVDC	[]	Any	Oct. 9, 2023, midnight	Nov. 7, 2023, midnight		
search-1502	N2O.COLUMN	Any	[]	Any	March 12, 2002, midnight	June 10, 2023, midnight		

EVDC – Processing Workflows

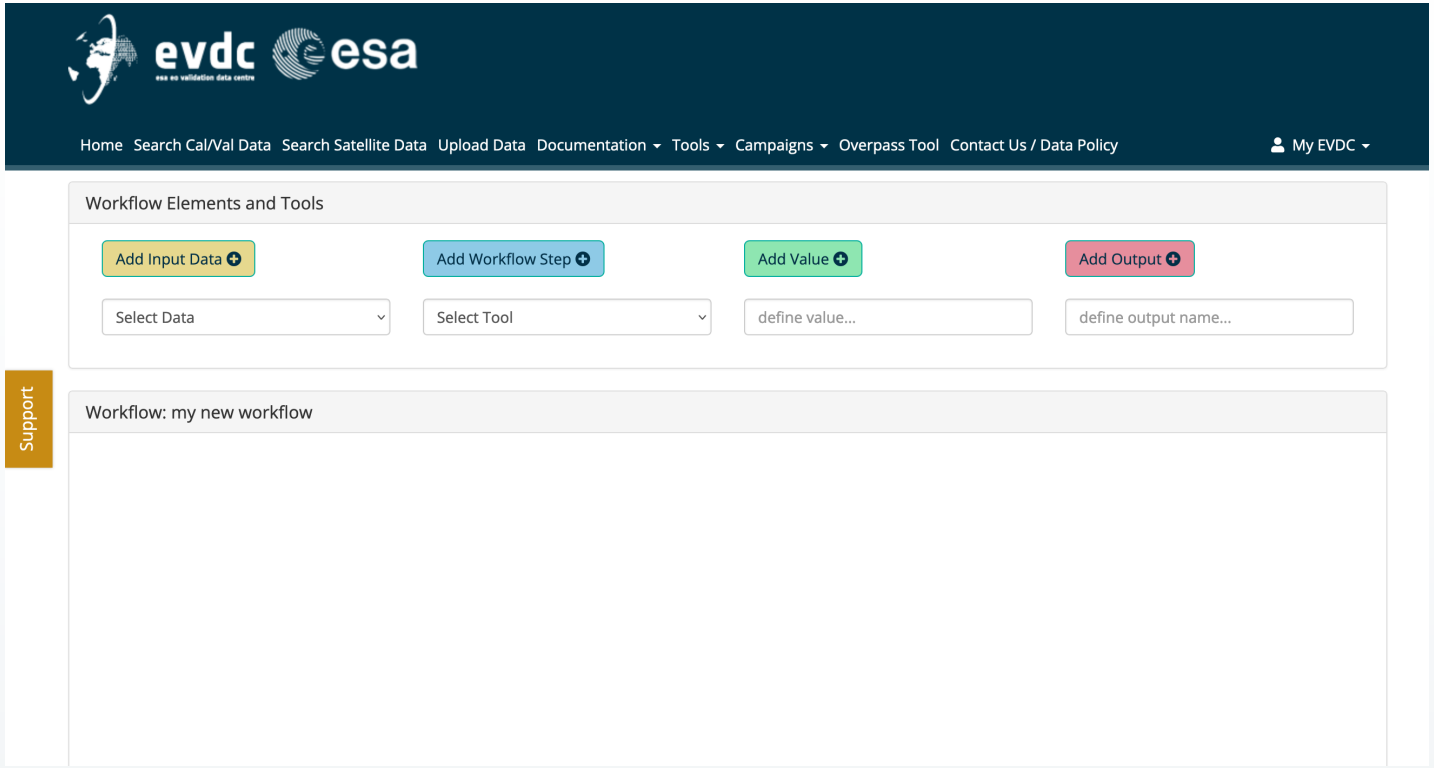


Support

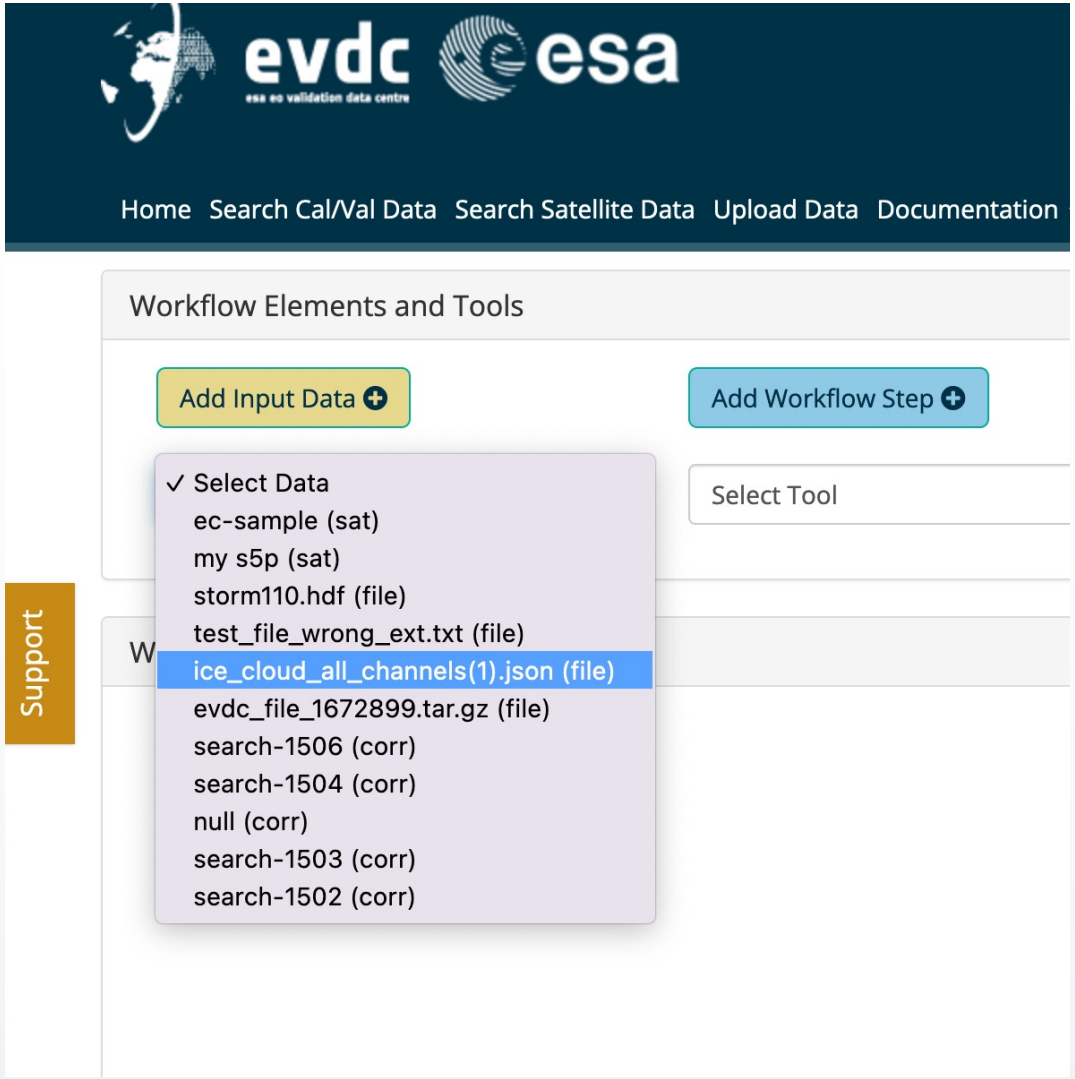
- ✓ Resuse
- ✓ Clone
- ✓ Share
- ✓ Publish

Encourage collaboration and standardization of processing workflows and data visualisations

EVDC – Processing Workflows



EVDC – Processing Workflows

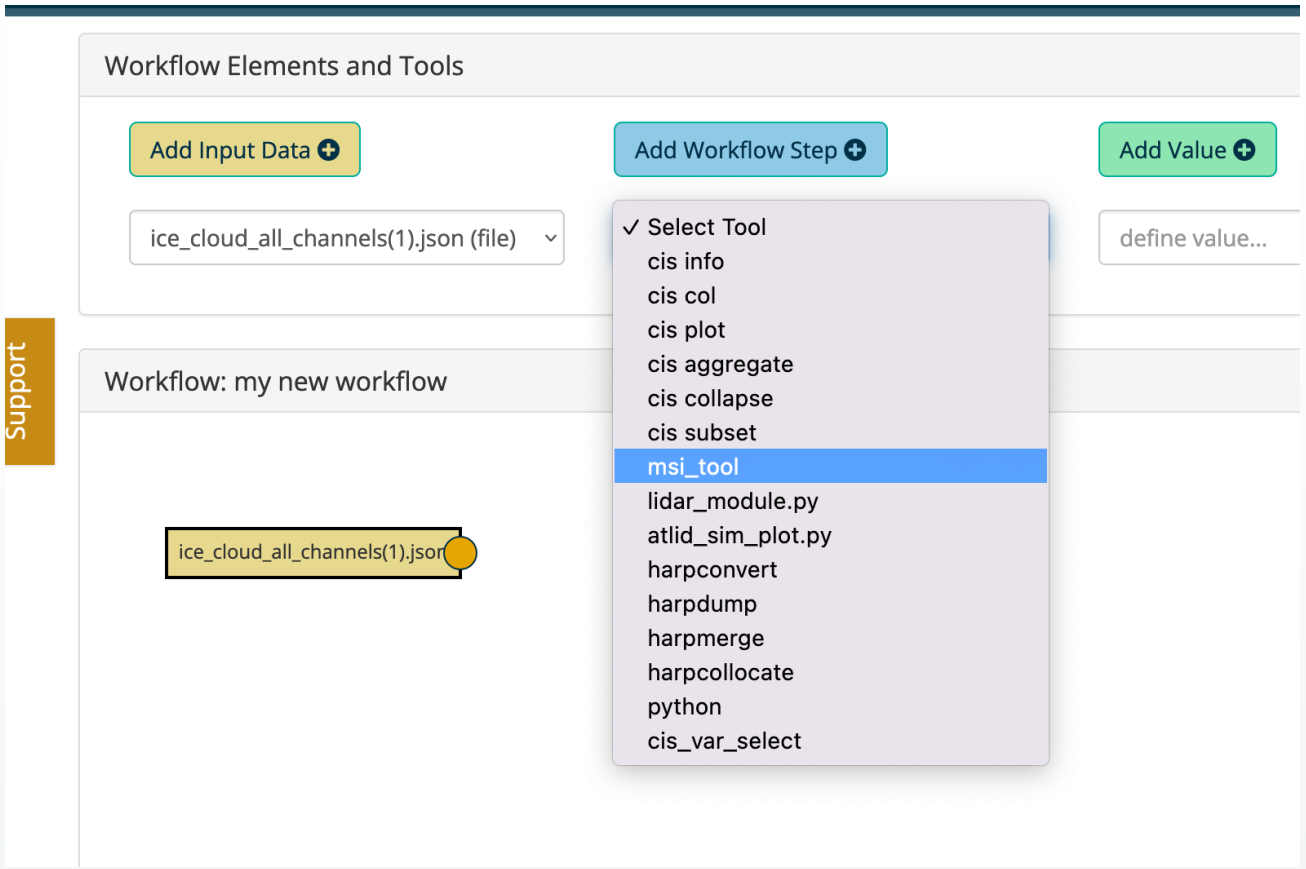


Use

1. Saved Satellite Product searches
2. Saved correlative searches
3. Manually uploaded config files

as workflow inputs

EVDC – Processing Workflows

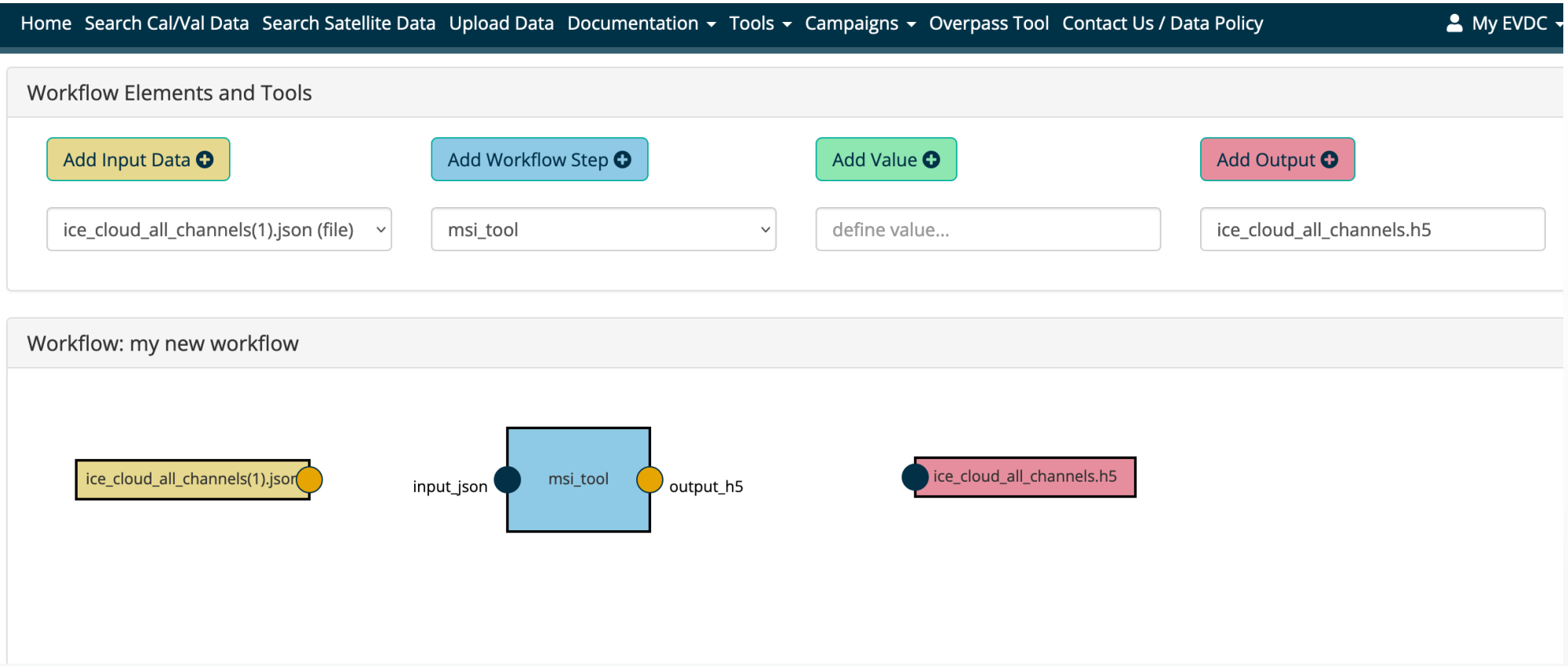


Add Workflow Steps

Command line tools
EarthCARE Tools integrated

- MSI Tool
- Lidar Tool (CLS)
- Radar Tool
- CIS with EarthCARE product readers

EVDC – Processing Workflows



Define Outputs

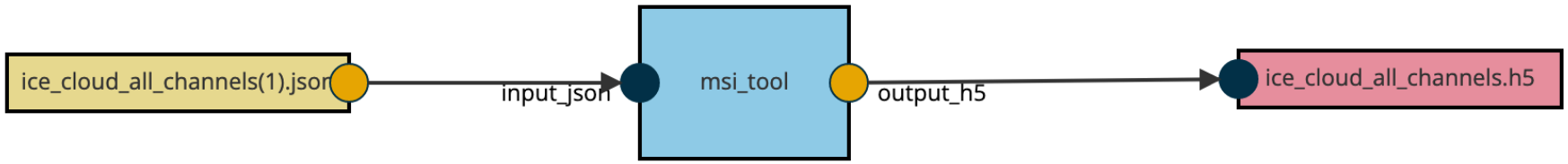
EVDC – Processing Workflows

Workflow Elements and Tools

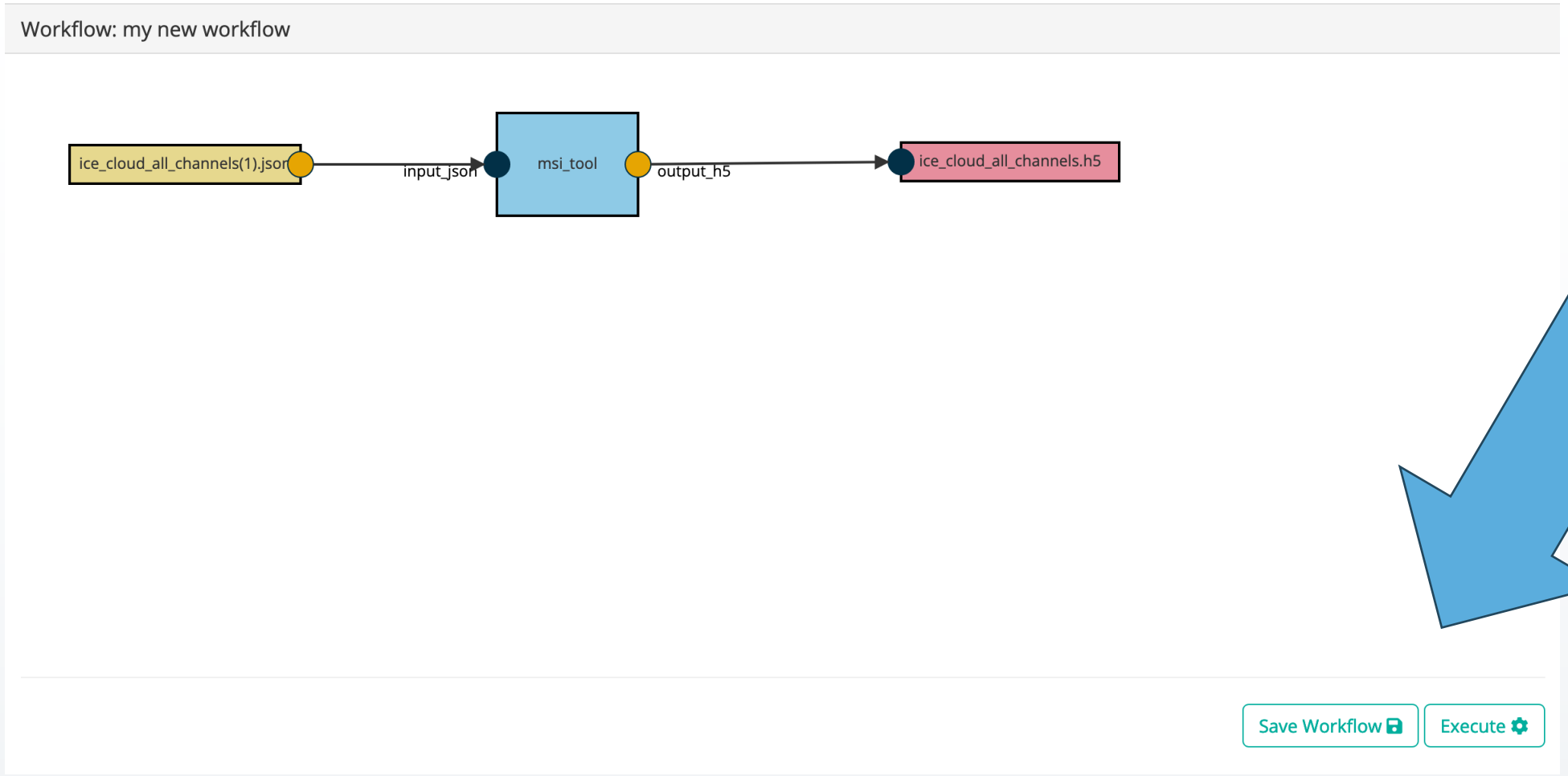
Add Input Data ⊕ | Add Workflow Step ⊕ | Add Value ⊕ | Add Output ⊕

ice_cloud_all_channels(1).json (file) | msi_tool | define value... | ice_cloud_all_channels.h5

Workflow: my new workflow



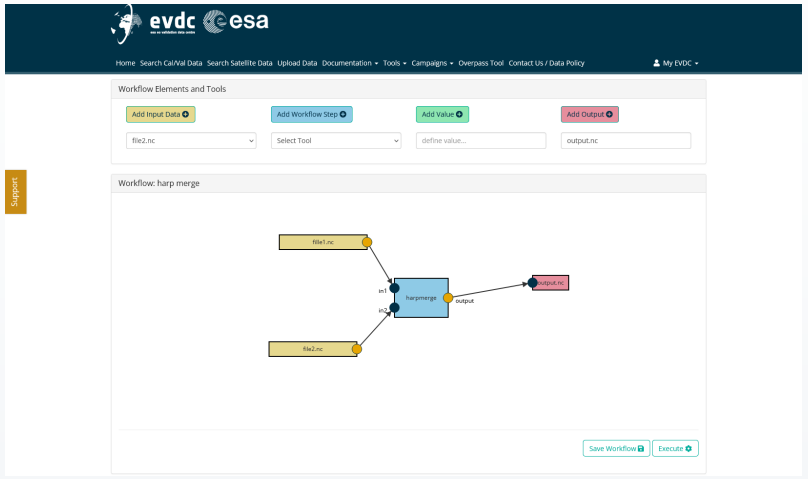
EVDC – Processing Workflows



Save and Execute

EVDC Processing System - Backend Infrastructure

Processing infrastructure




```
#!/usr/bin/env cwl-runner

cwlVersion: v1.2
# This CommandLineTool executes the linux "harpmerge" command-
line tool.

class: CommandLineTool
baseCommand: harpmerge

inputs:
 in1:
   type: File
   inputBinding:
     position: 1
 in2:
   type: File
   inputBinding:
     position: 2
 out:
   type: string
   inputBinding:
     position: 3
outputs:
 results:
   outputBinding:
     glob: '*.nc'
     outputEval: $(self.path.replace(/.nc$/, '/output.nc'))
   type: File
hints:
 DockerRequirement:
   dockerPull: evdc2harp
requirements:
 EnvVarRequirement:
   envDef:
     PATH: usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
 ResourceRequirement: {}
 InlineJavascriptRequirement: {}

stdout: output/files/output.txt
```

COMMON WORKFLOW LANGUAGE

API

CWL Runner

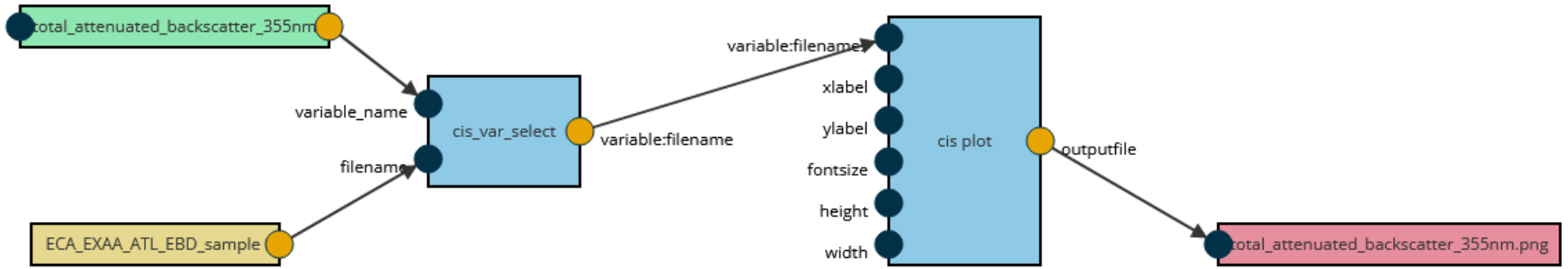
CIS Tool. EarthCARE plugin (reader)

Workflow Elements and Tools

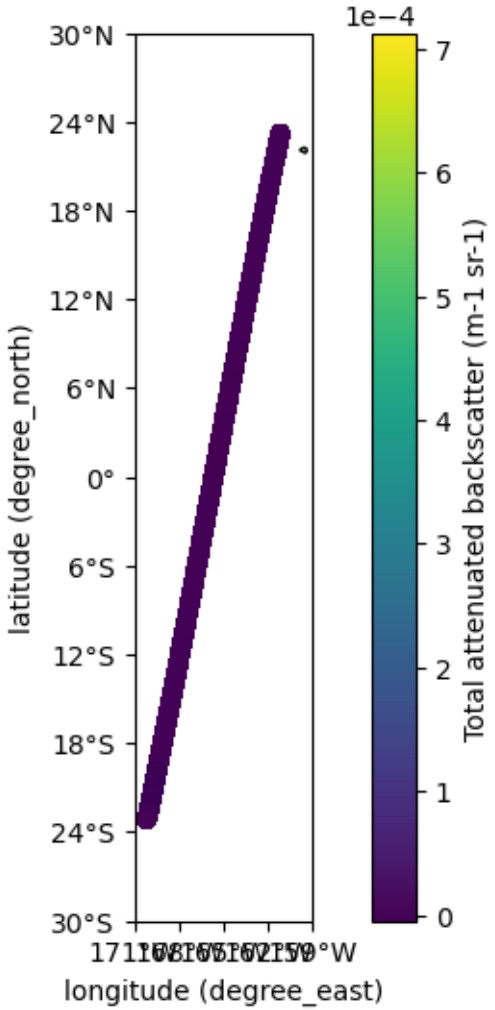
Add Input Data | Add Workflow Step | Add Value | Add Output

Select Data | cis_var_select | total_attenuated_backscatter_355nm | l_attenuated_backscatter_355nm.png

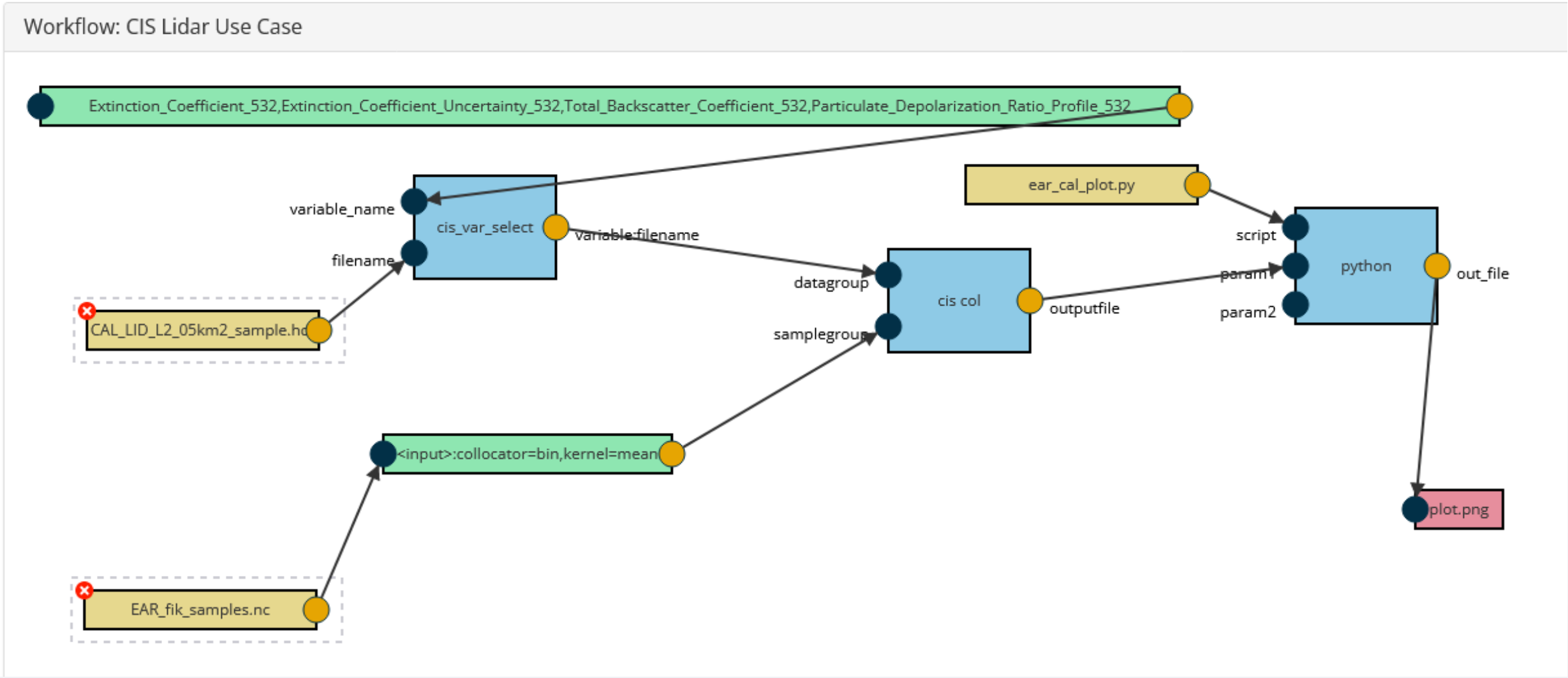
Workflow: CIS EearhCARE Plugin



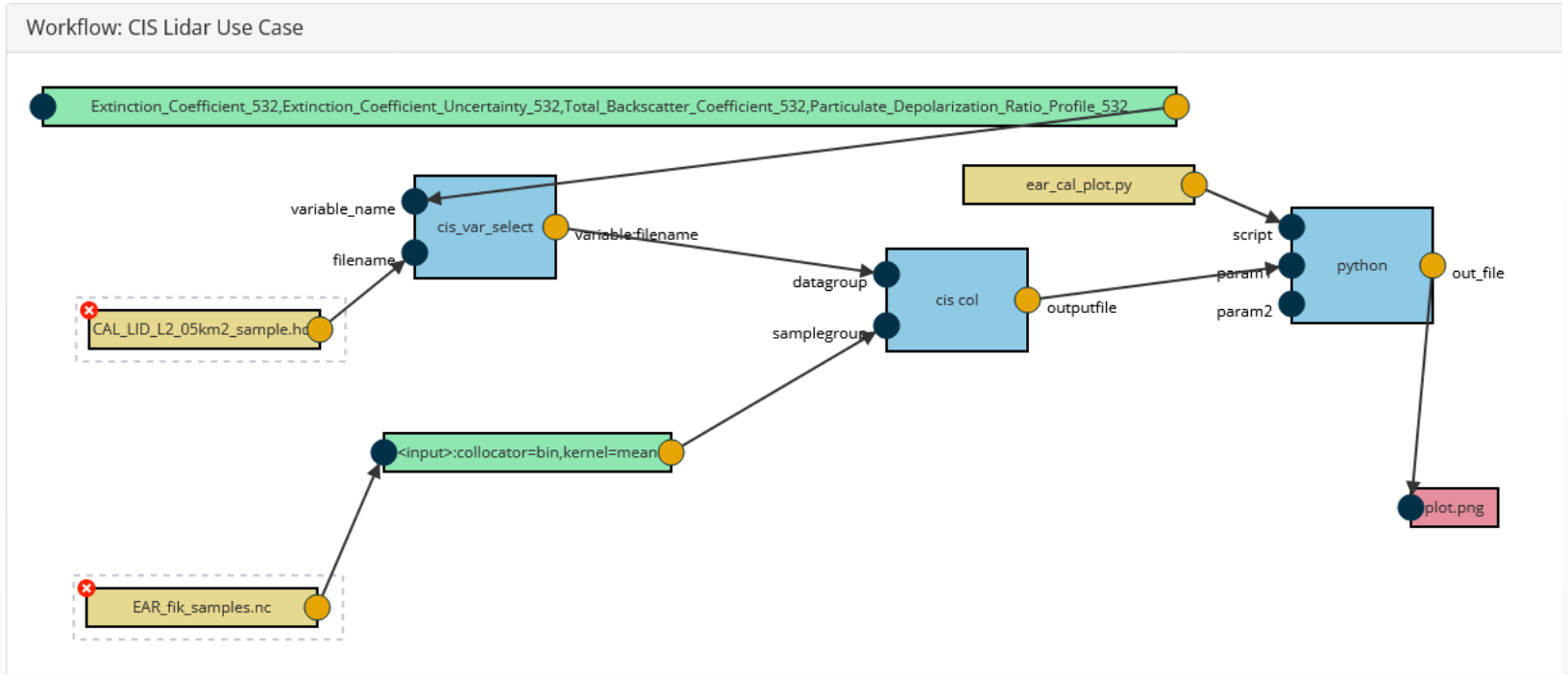
CIS Tool. EarthCARE plugin (reader)

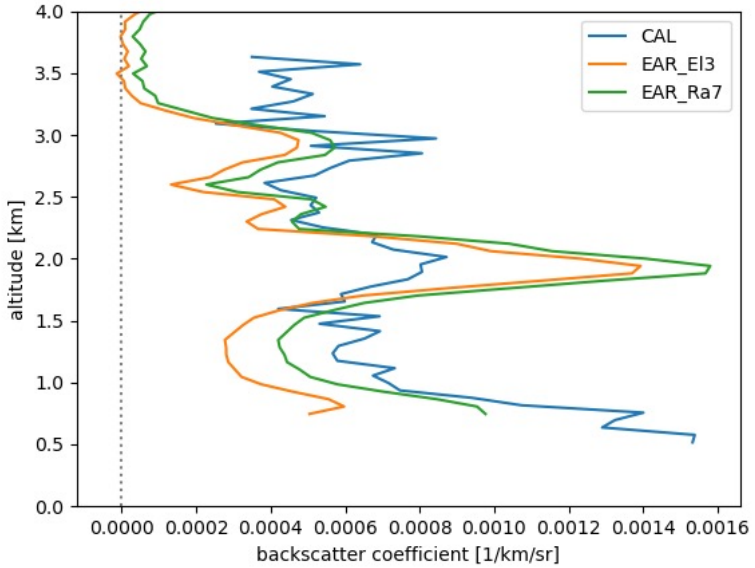


CIS Tool. More practical use case

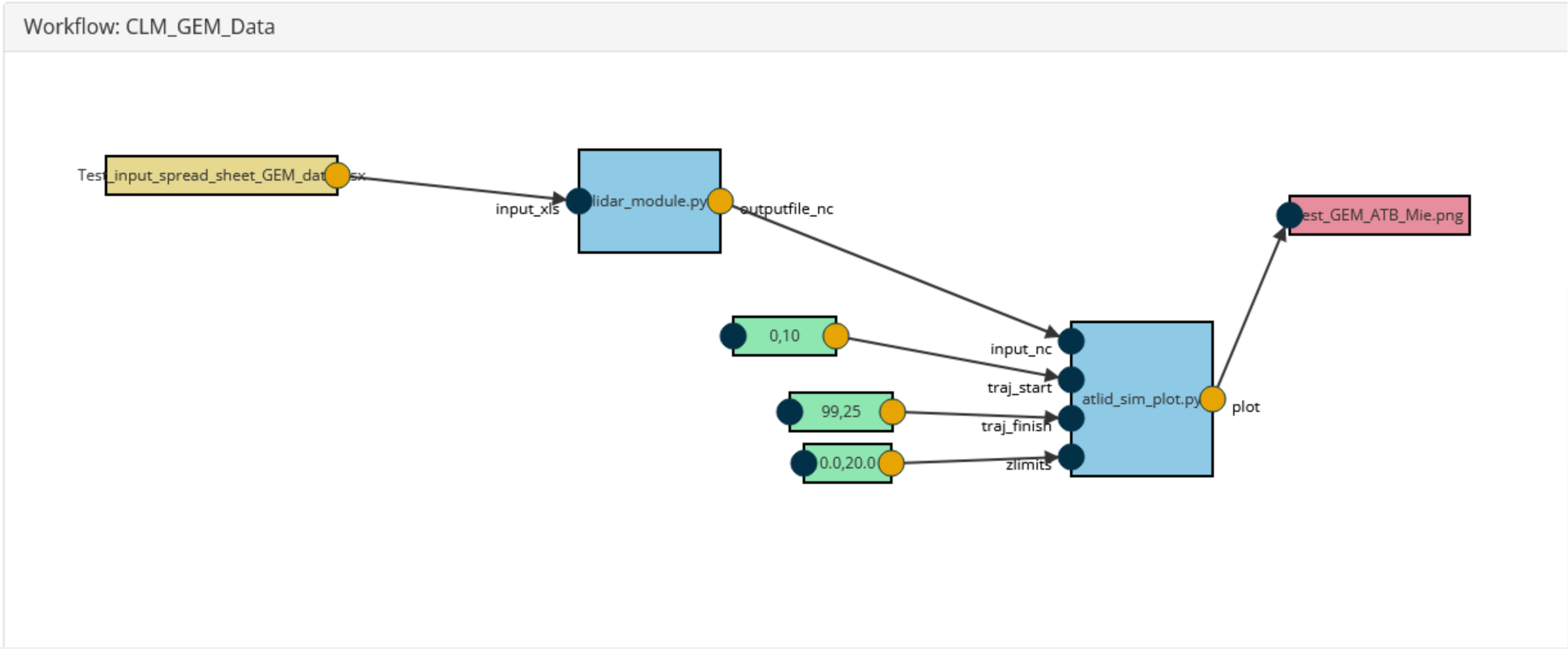


CIS Tool. More practical use case

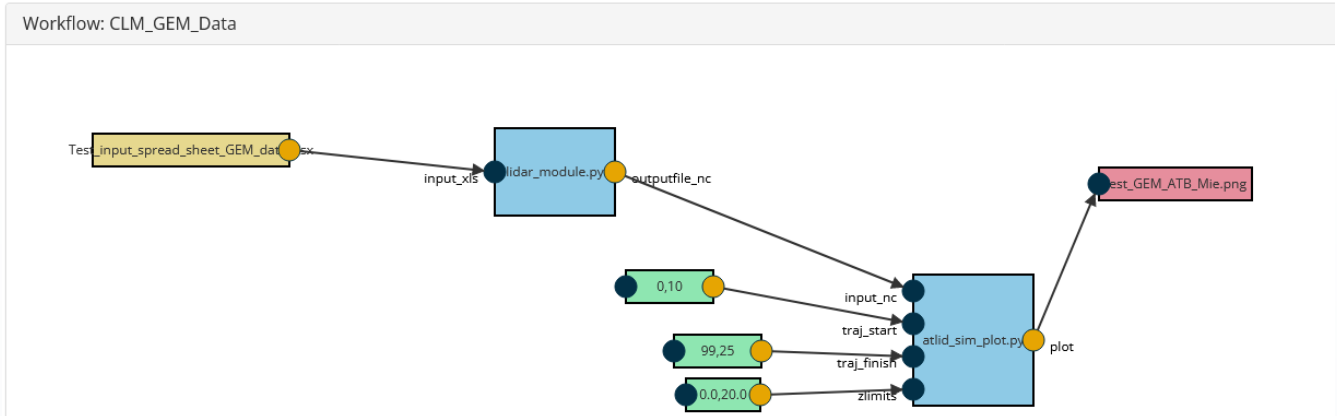


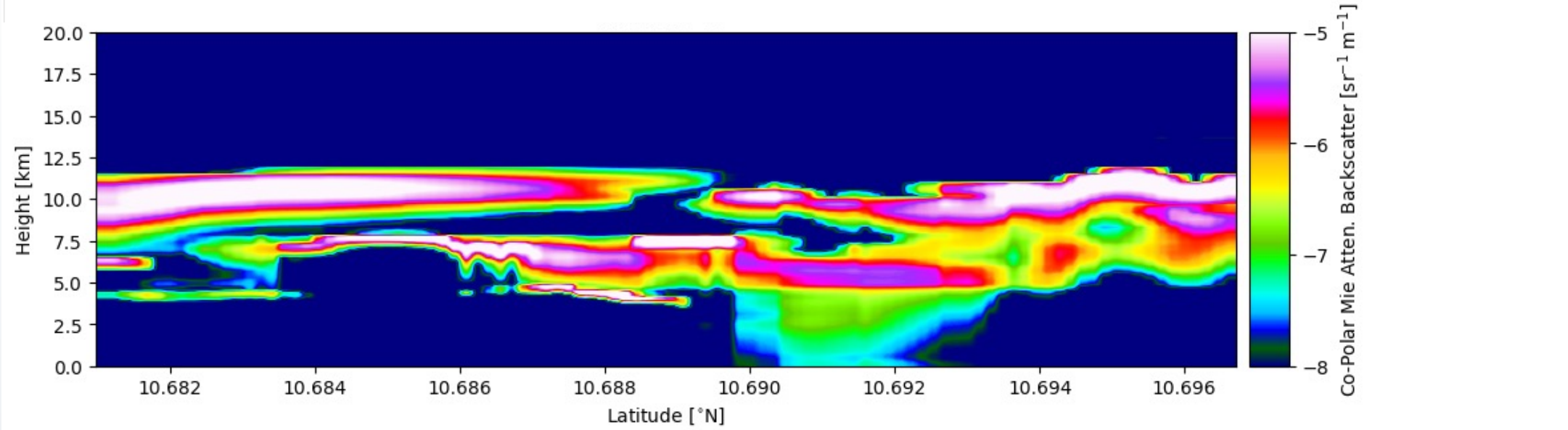


CLM. Lidar Tool Example



CLM. Lidar Tool Example

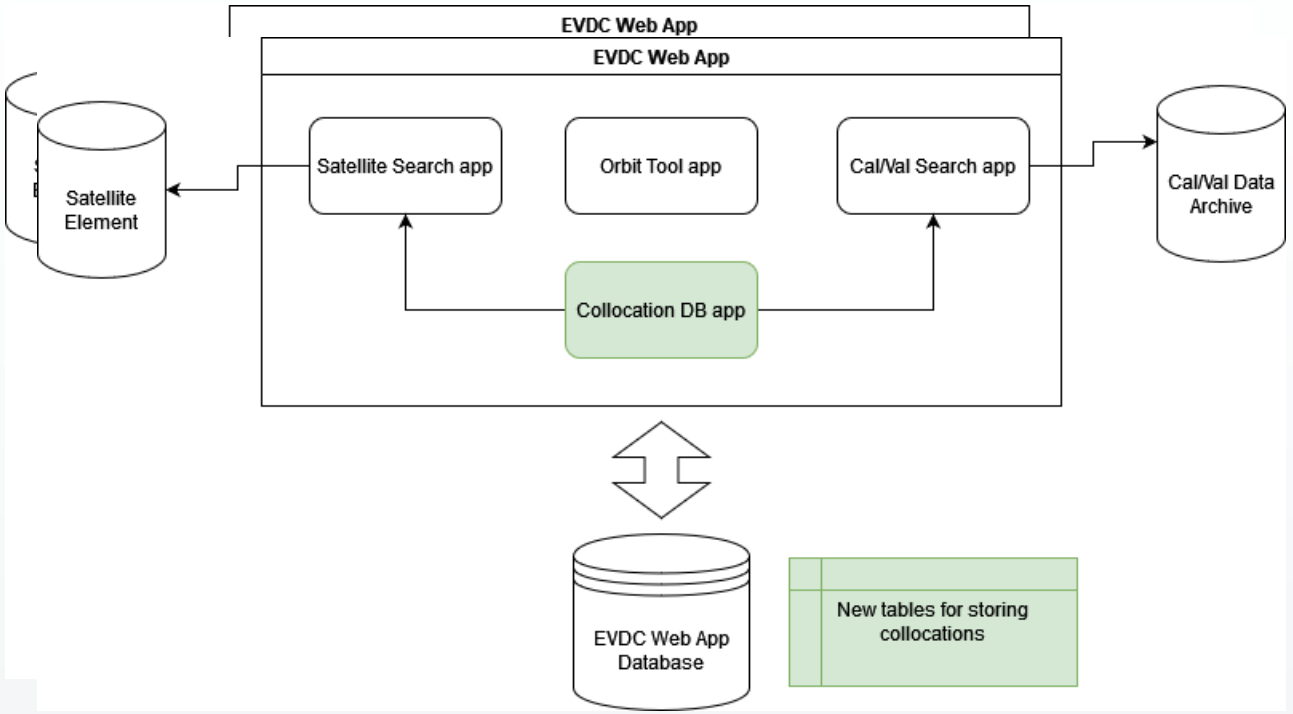




EVDC Collocation Database

The Goal:

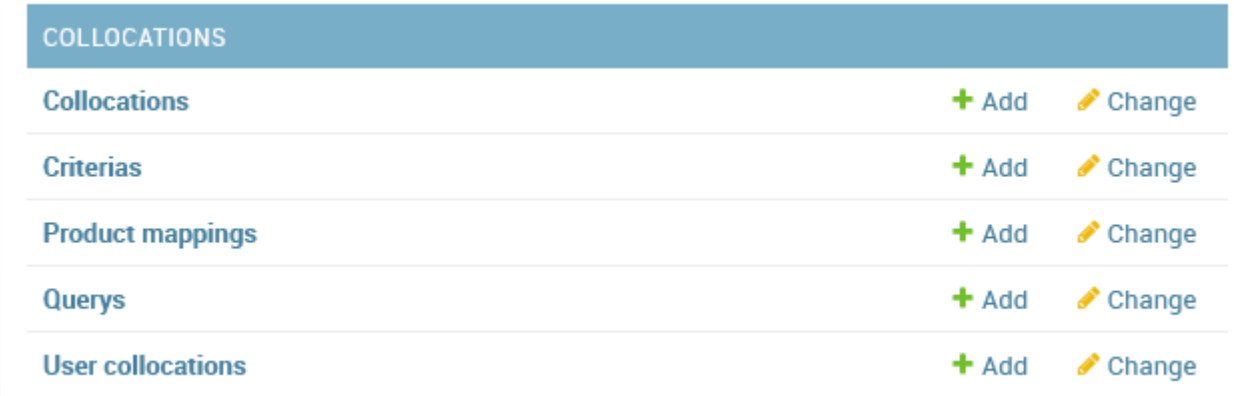
- Automate the collection of broad collocations between satellite and correlative products
- Provide users with tools to interact with the archive of pre-collocated data
- Allow automated data deliveries based on custom (narrower) collocation criteria

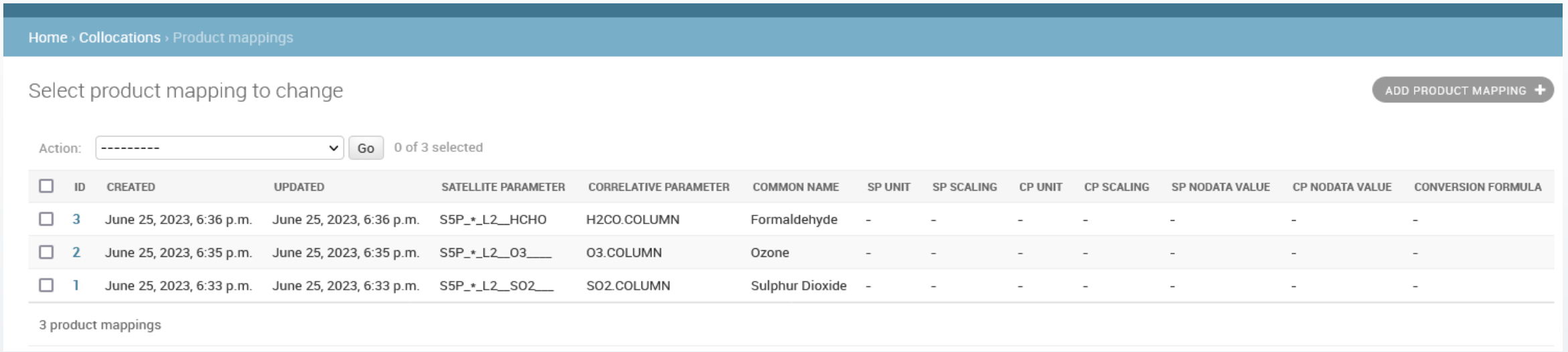


EVDC Collocation Database

Configuration. Variable mapping

- Manual config for referencing satellite product variables to correlative variables
- Common naming (preferred standard?)
- Possible to configure more detailed mapping details (units, scaling, conversion formulas

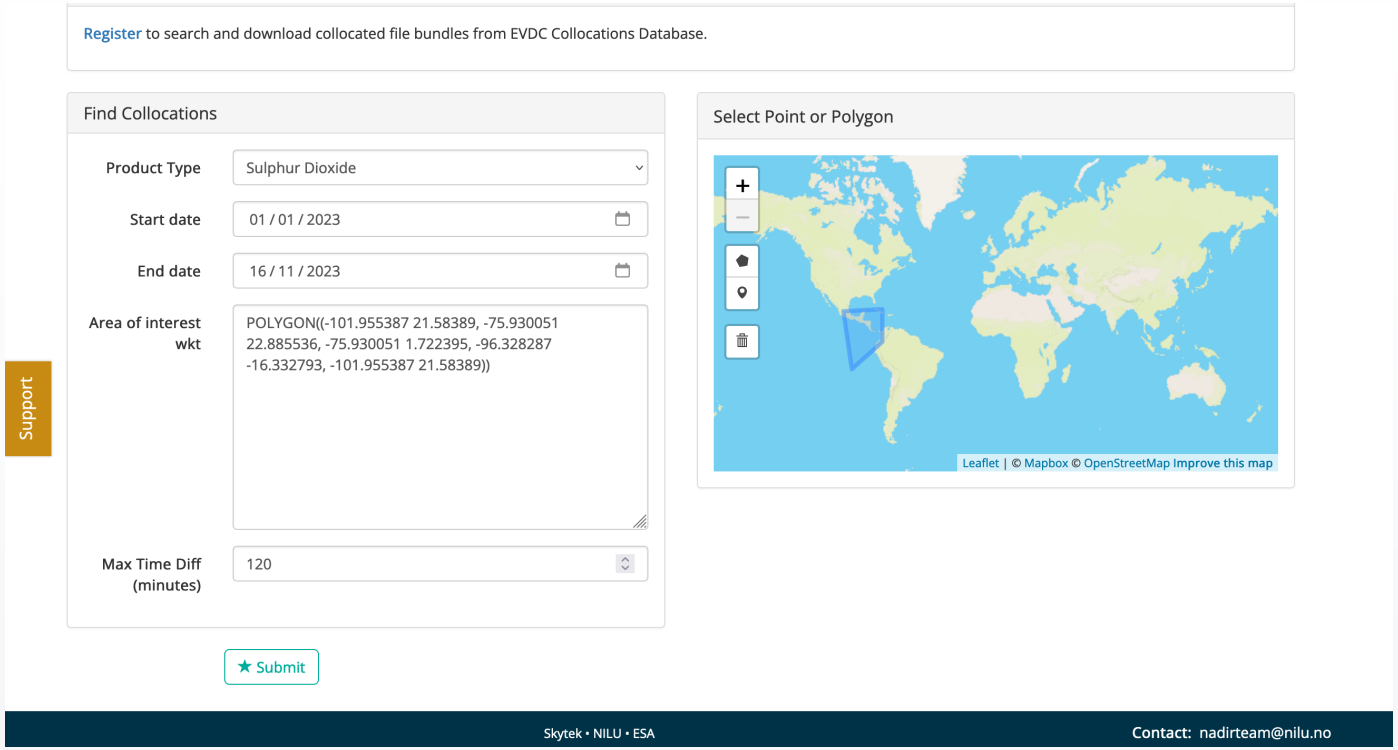




EVDC Collocation Database

Basic Query Form:

- Simple search based on spatiotemporal criteria and collocated variable selection
- Advanced search will also be provided (detail metadata fields, calculated statistics etc)



EVDC Collocation Database

Example search results