



Sentinel Planned Acquisition View Tutorial



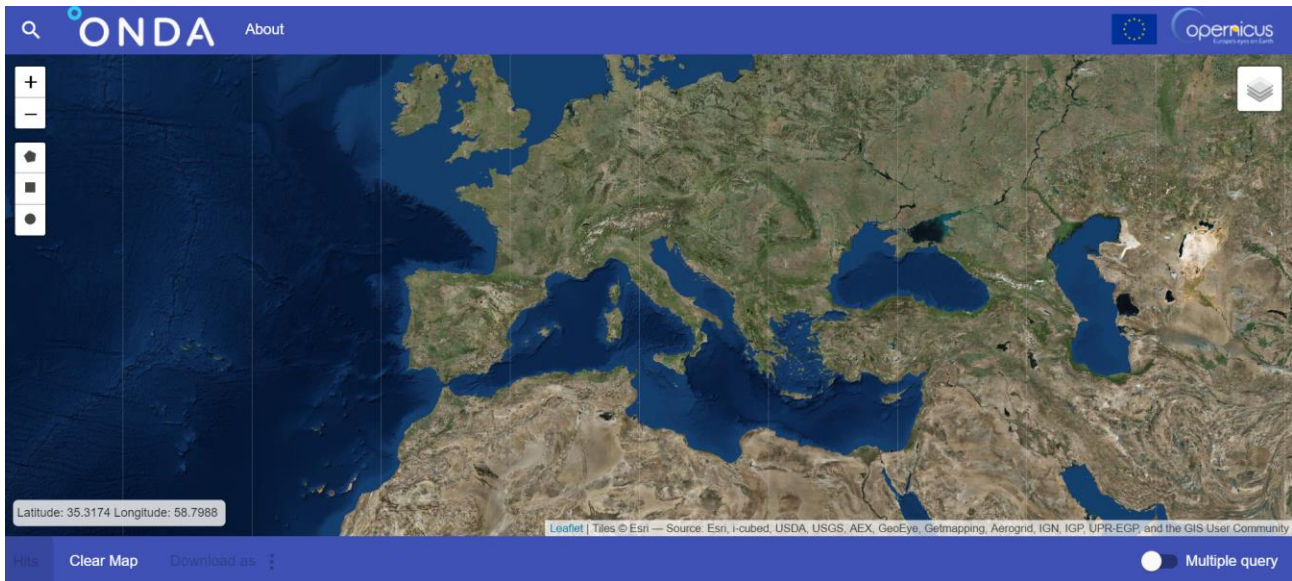
Table of Contents

| | |
|---------------------------------------|----|
| 1. Introduction..... | 2 |
| 2. Map..... | 3 |
| 2.1. Background..... | 3 |
| 2.2. Zoom..... | 3 |
| 3. Queries | 4 |
| 3.1. Global query | 4 |
| 3.2. Query area selection..... | 4 |
| 3.3. Search form | 6 |
| 3.4. Query results | 9 |
| 3.5. Query results colour coding..... | 10 |
| 3.6. Multiple queries..... | 10 |
| 3.7. Download the query results | 11 |

1. Introduction

The Sentinel Planned Acquisition View (SPAVi) - is the ONDA tool for the visualisation of tracks and planned acquisitions for Sentinel-1.

To access the tool, open a web browser and navigate to <http://planned.onda-dias.eu>



2. Map

2.1. Background

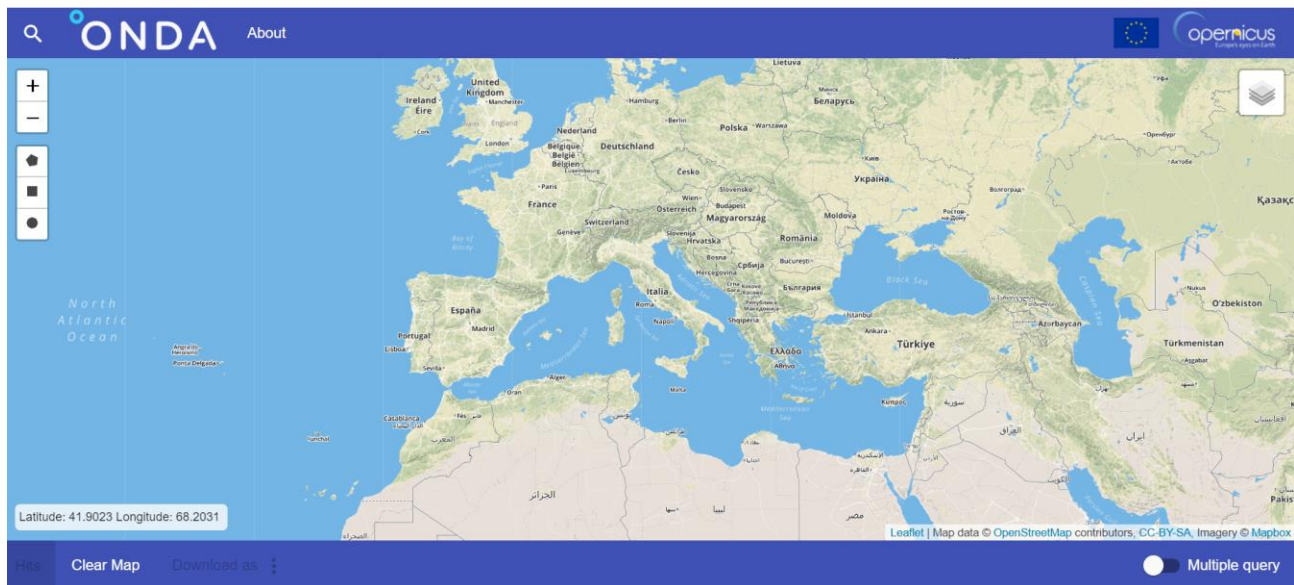


You can change the type of background map by clicking on the tile layers icon on the upper right corner and choose amongst:

- Satellite Maps
- Street Maps
- Wikimedia Maps
- Dark Maps

The Satellite Maps layer is shown by default when opening the tool.

An example of selection of Street Maps is shown below:



2.2. Zoom

You can zoom in and out the map by clicking the + and – signs on the left column:

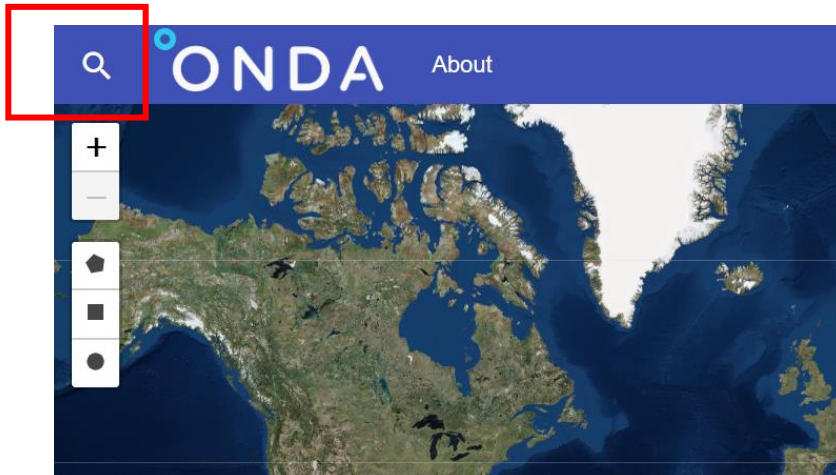


3. Queries

Users are able to perform queries either on the global map or for a specific area, and to refine their search criteria on the Search form.

3.1. Global query

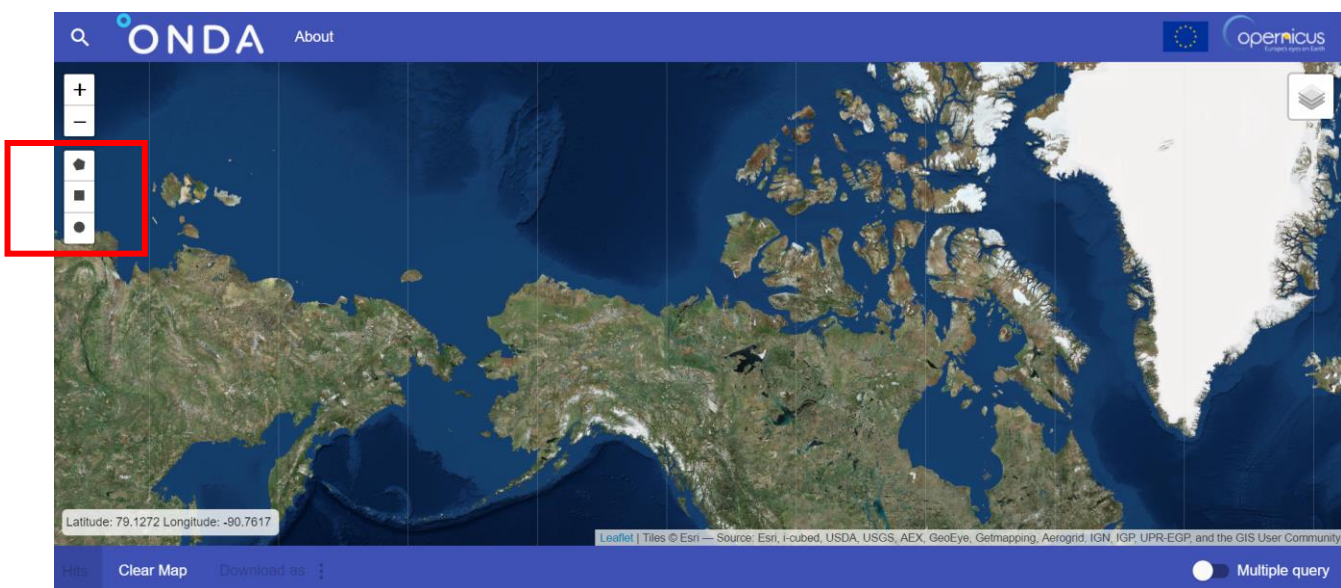
If you wish to get results on the whole world map, click the magnifying lens on the top left corner to open the Search form (then proceed to step 3.3)



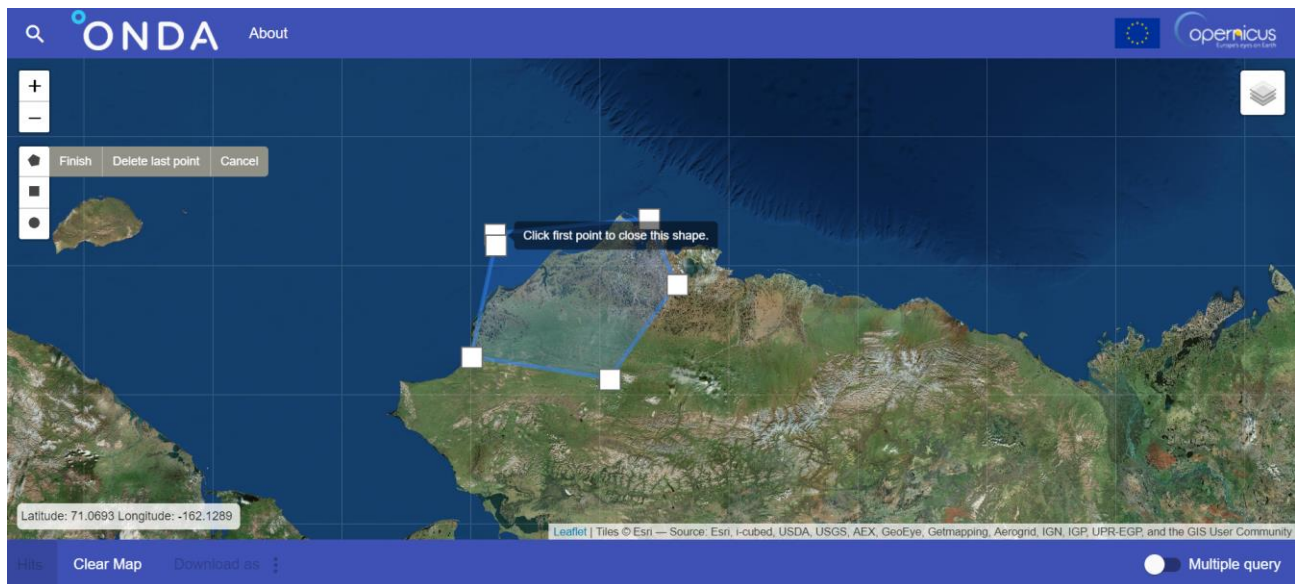
3.2. Query area selection

If you wish to display results relevant to a selected area:

1. Choose a shape amongst **polygon**, **rectangle** and **circle** on the left column



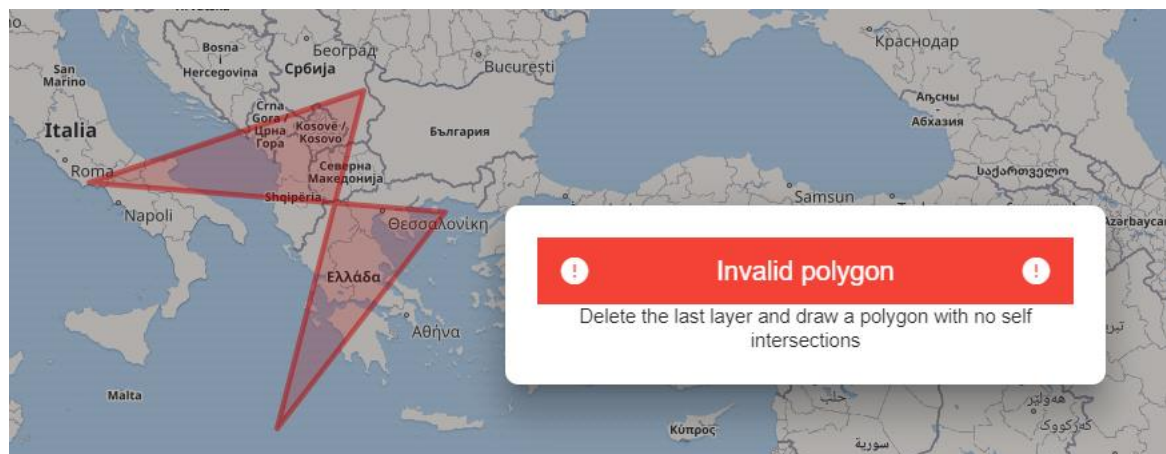
2. Draw a shape on the map



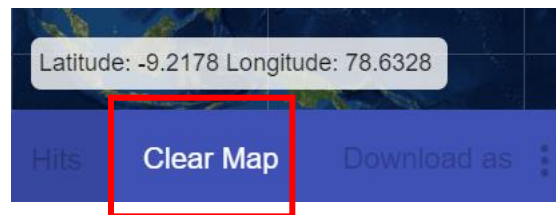
While drawing the shape, you can double-check the real-time information about the area size, shown in hectares (ha).



Invalid polygon drawings are not allowed and are detected by the tool with an error message:



To cancel the shape (or shapes) already drawn, click **Clear Map** from the bottom navigation menu:

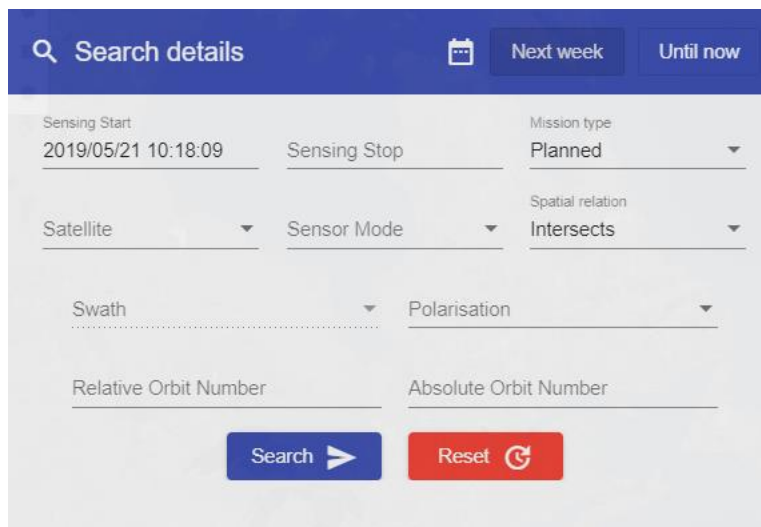


When drawing the shape, the Search form is automatically opened: proceed to step **3.3 – Search form**.

3.3. Search form

Users are able to define a series of search criteria on the Search form.

Click each field to edit. If you hover with the mouse on certain fields, additional information about the field is displayed for help.



The screenshot shows the 'Search details' form with the following fields and options:

- Sensing Start:** 2019/05/21 10:18:09
- Sensing Stop:** (empty)
- Mission type:** Planned (dropdown)
- Satellite:** (dropdown)
- Sensor Mode:** (dropdown)
- Spatial relation:** Intersects (dropdown)
- Swath:** (dropdown)
- Polarisation:** (dropdown)
- Relative Orbit Number:** (input field)
- Absolute Orbit Number:** (input field)
- Buttons:** Search (blue), Reset (red)
- Filters:** Next week, Until now

3.3.1. Sensing Start

Select a date from the calendar and edit the time (in UTC) to specify the sensing start date.

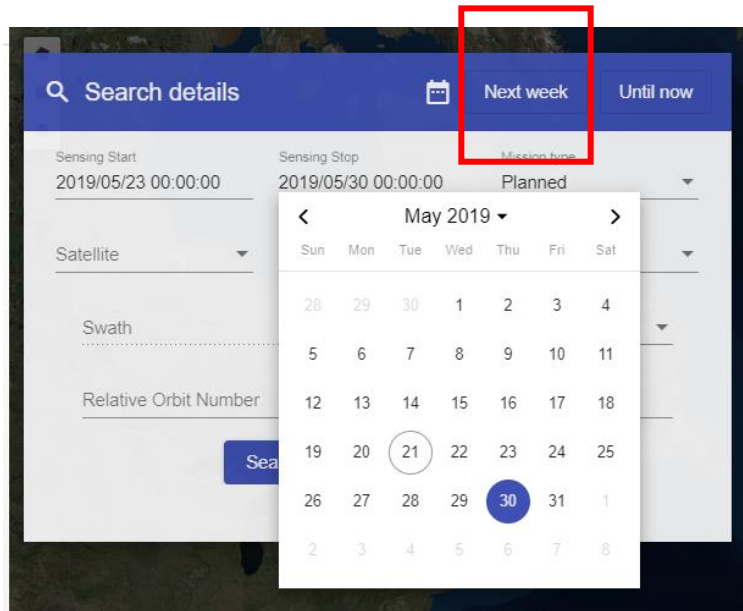
This selection will produce all results whose acquisition start time takes place concurrently or after this value.

3.3.2. Sensing Stop

Select a date from the calendar and edit the time (in UTC) to specify the sensing stop date.

This selection will produce all results whose acquisition start time takes place before this value.

You are able to select the option **Next week** on top of the Search form to have the Sensing Start and Stop fields automatically filled in for the forthcoming week.



3.3.3. Mission Type

- **Planned**
A search for Planned acquisitions shows on the map all trajectories that are scheduled for acquisition for a given period in the future, which is selected by the user.
The Planned option is selected by default on the search form.
When selecting Planned, you can also edit the Sensor Mode, Swath and Polarisation fields.
- **Tracks**
A search for Tracks displays on the map all future satellite ground tracks.
- **All**
Select this option to perform a search on both Tracks and Planned acquisitions

3.3.4. Spatial relation

Choose what geometric relation should be respected between the drawn shape and the planned acquisitions / tracks shapes, amongst:

- **Intersects:** it returns results whose area intersects the query area
- **Within:** it returns results whose area is fully within the query area
- **Contains:** it returns results whose area contains the whole query area

3.3.5. Satellite

Select the mission: Sentinel-1A or Sentinel-1B or All

3.3.6. Sensor Mode

When choosing Mission type = Planned, you are able to select the sensor mode as follows:

- **IW:** Interferometric Wide swath – higher resolution but narrower images
- **EW:** Extra Wide swath – lower resolution but wider images
- **SM** – Strip Map
- **All** – to select all of the above options at the same time

3.3.7. Swath

When choosing Mission type = Planned, you are able to select the Swath option from the drop-down menu, which only applies to SM Sensor Mode.

3.3.8. Polarisation

When choosing Mission type = Planned, you are able to select the Polarisation option from the drop-down menu list.

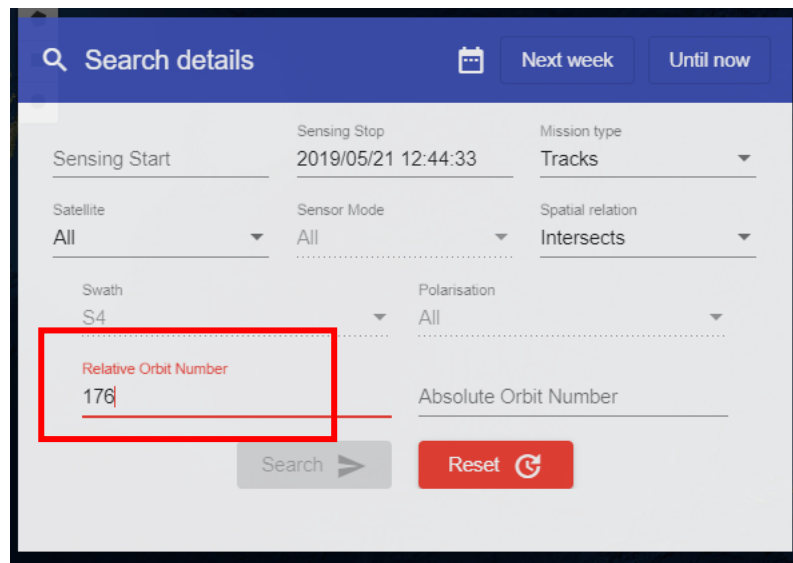
3.3.9. Relative Orbit Number

Insert the number of the Relative Orbit Number, from 1 to 175, you wish to get the results for.

3.3.10. Absolute Orbit Number

Insert the number of the Absolute Orbit Number you wish to get the results for.

The search form is reactive: it gets invalidated as soon as an invalid field is detected.

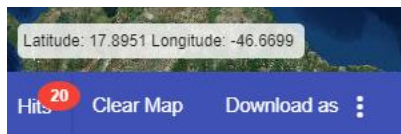


The screenshot shows a web interface for searching satellite data. The form is titled "Search details" and has a blue header bar. Below the header, there are several input fields and buttons. The "Relative Orbit Number" field is highlighted with a red box and contains the value "176". The "Search" button is disabled, and the "Reset" button is visible. The form is reactive, meaning it gets invalidated as soon as an invalid field is detected.

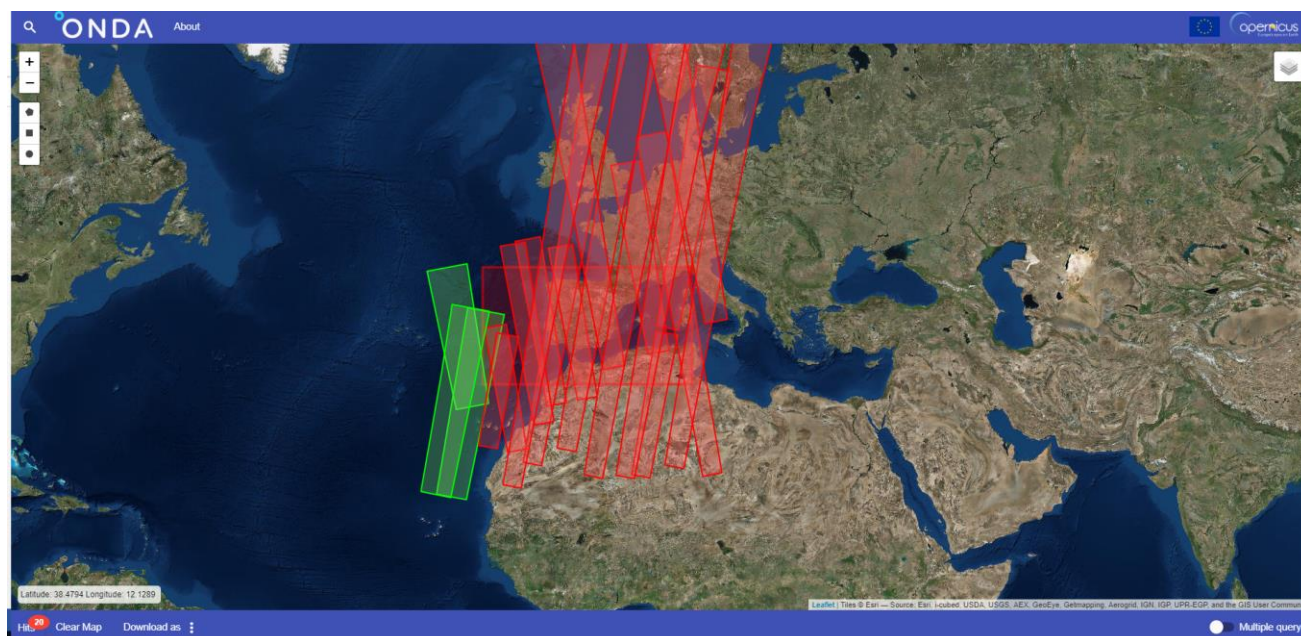
3.4. Query results

After filling in the above fields as applicable, click the **Search** blue button.

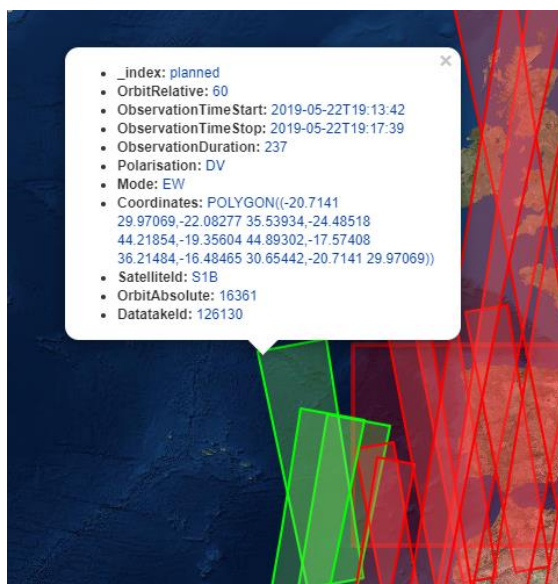
The number of available results is displayed on the bottom bar, in the Hits section:



The query results are displayed on the map:



Click on any of the track or planned acquisition to get more detailed information, including the geographical coordinates:



3.5. Query results colour coding

In the query results, the colours assigned to the strips depend on the Sensor Mode selection (see **3.3.6 Sensor Mode**), as follows:

- Planned acquisitions in **IW** mode are shown in **red**
- Planned acquisitions in **EW** mode are shown in **green**
- Planned acquisitions in **SM** mode are shown in **grey**

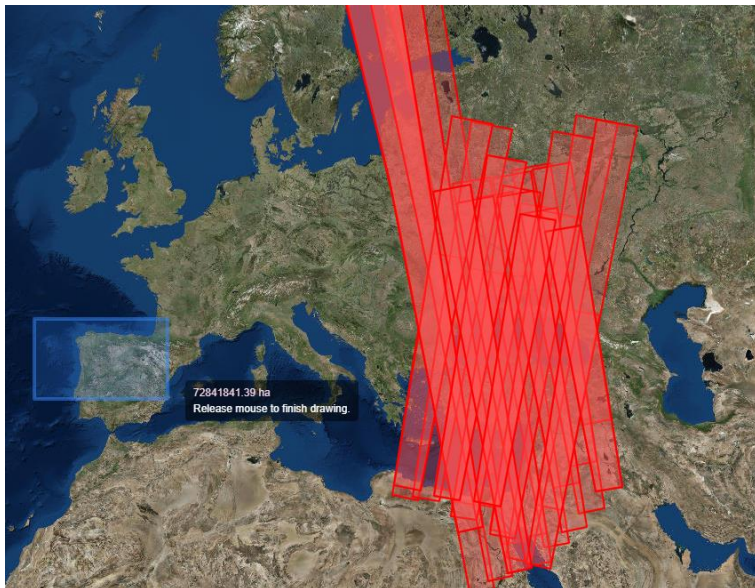
3.6. Multiple queries

You are able to perform multiple geographical queries.

Activate the Multiple query option first, on the bottom right-end corner of the SPAVi tool:

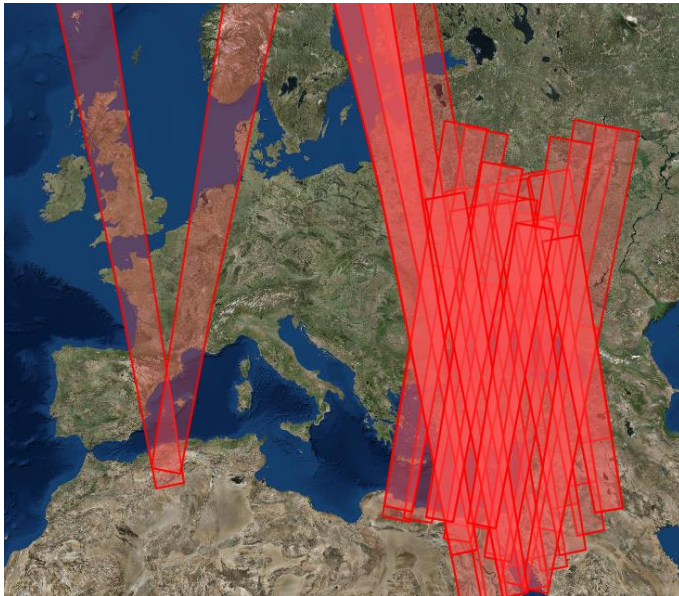


Without clearing your first query results or the map, draw another shape:



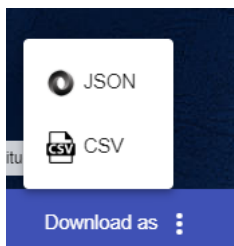
Then submit the form again.

The tool allows overlapping multiple queries even if the first queried results have been plotted already.



3.7. Download the query results

- Display the query results on your map
- Select the **Download as** link from the bottom navigation bar:



- Select either **JSON** or **CSV** as download formats
Please note that the CSV format can only be applied for either tracks or planned acquisitions (not both types selected at the same time).