Getting Started with INTEGRAL OSA in ESA Datalabs

Overview

This is a quick start guide to using ESA Datalab to process INTEGRAL data with data selection in ISLA.

Prerequisites

- You must have a Datalabs account on datalabs.esa.int
- You must have a Cosmos account to download or send data from isla.esac.esa.int

Key Features

There are two options for running OSA in EDL. Only the JupyterLab option can be linked from ISLA.

1. INTEGRAL OSA JL: JupyterLab for processing via scripts or notebooks using the MMODA framework.
2. INTEGRAL OSA VNC: VNC environment for data processing using the X11-based OSA GUI.

Quick Start

1. **Log in to datalabs.esa.int**
2. **Start the OSA JL datalab**
   - Click on the little beaker icon in the top right menu bar
   - Click on `+ Launch new`
   - Type `integral` and you should see the available datalabs
   - Click on the `INTEGRAL OSA JL` and wait for it to be ready
3. **Select the data via ISLA**
   - Open another tab in the browser and navigate to isla.esac.esa.int
   - Sign in using your Cosmos account
   - Click on `Search` and perform your search
   - Select the data you want to process using the checkboxes in the results table
   - Click on the cloud icon left of the table `Send current search to ESA Datalabs`
4. **Link to EDL**
   - Navigate to the EDL browser tab and copy the datalab ID shown in the last part of the URL: for example, `566b8892ee42a468` in `https://datalabs.esa.int/datalab-viewer/566b8892ee42a468`.
   - Navigate back to the ISLA tab and paste the datalab ID into the dialog box.
   - Click the button `Open ESA Datalabs`
   - The code block contains the query to fetch the selected data.
5. **Setup your analysis environment**
   - Launch a Termimal and type `cd`
   - Navigate to `my_workspace` by typing `cd my_workspace`
   - Copy the contents of OSA support: `cp -r /data/osa_support_datalabs/* .`
   - Cleanup your local copy: `rm -fr .git latest-pull.log`
   - You can now explore the contents, use, modify, and launch the provided scripts and notebooks from here.
6. **Navigate and explore**
   - You can navigate using both the file browser and the Terminal CLI. The root level directory will contain at least:
     - `data` where volumes are mounted
     - `my_workspace` where you work from
     - `team_workspaces` where you collaborate with others
   - If you `cd /data` or double-click on `data`, you will see the read-only shared volumes that should include:
     - `esdc_datalabs_assets` contains the ESDC notebook templates.
     - `int_data_datalabs` contains the INTEGRAL data.
     - `osa_support_datalabs` contains user support material: scripts, notebooks, CLI tools, and docs.

Support & Resources

- More details in the ISLA Tutorials and support through the Helpdesk