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An Interactive GUI for BALTO in a Jupyter Notebook

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This repository creates a GUI (graphical user interface) for the BALTO (Brokered Alignment of Long-Tail Observations) project. BALTO is funded by the NSF EarthCube program. The GUI aims to provide a simplified and customizable method for users to access data sets of interest on servers that support the OpenDAP data access protocol. This interactive GUI runs within a Jupyter notebook and uses the Python packages: ipywidgets (for widget controls), ipyleaflet (for interactive maps) and pydap (an OpenDAP client). The Python source code to create the GUI and to process events is in a module called balto_gui.py that must be found in the same directory as this Jupyter notebook. Python source code for visualization of downloaded data is given in a module called **balto_plot.py**. This GUI consists of mulitiple panels, and supports both a **tab-style** and an **accordion-style**, which allows you to switch between GUI panels without scrolling in the notebook. You can run the notebook in a browser window without installing anything on your computer, using something called Binder. Look for the Binder icon below and a link labeled "Launch Binder". This sets up a server in the cloud that has all the required dependencies and lets you run the notebook on that server. (Sometimes this takes a while, however.) To run this Jupyter notebook without Binder, it is recommended to install Python 3.7 from an Anaconda distribution and to then create a conda environment called **balto**. Simple instructions for how to create a conda environment and install the software are given in Appendix 1 of version 2 (v2) of the notebook.

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