STREAM Workshop Guide

NASA GSFC

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I. Querying

- 1. Access the tile search page here or use the calendar icon in the nav bar
- 2. In another tab, open the eatlas reference map used for locating tile IDs
- 3. Locate the tile ID(s) for your area of interest
 - i. The eatlas is preconfigured with the Sentinel 2 and Landsat 8/9 grids, so toggle the overlays depending on which satellite you are searching
 - ii. The tile ID for S2 is just what appears on eatlas, with optional lead T
 - Ex. 18SUJ or T18SUJ for a tile in Chesapeake Bay
 - iii. The tile ID for L8/9 is the RowPath padded to 3 digits each
 - Ex. Row 43 Path 13 would be searched via STREAM as 043013
- 4. Search for a tile ID on the tile search page of STREAM
- 5. Click on one of the results to be taken to the archive page for download, or take note of the date of the result to find on the interactive map
- 6. At this time, coverage results for Landsat may be less consistent than Sentinel due to issues downloading large amounts of data from USGS

II. Interactive Map

- 1. Navigate to the interactive map here
- 2. Choose the satellite, product, and date before hitting "Set Layer"
- 3. Pan and Zoom to your area(s) of interest
 - i. Note that due to the orbital tracks taken by the satellites, data for some water bodies may be split between different dates
- 4. Use the dual-slider bar to set the minimum and maximum product values for the color mapping

i. You may need to pan or zoom to get the color update to take effect

Hover pixels to get a readout of their product value, latitude, and longitude
III. Archive

- 1. Navigate to the archive <u>here</u> or via clicking one of the results from the query section
- 2. Folders are in a year > day of year > scene ID structure
 - i. Scene IDs starting with LC08 or LC09 are Landsat
 - ii. Scene IDs starting with S2 are Sentinel 2
- 3. The tile ID is listed next to the scene ID for ease of location via Ctrl-F
 - i. The page is also sorted by tile ID
- 4. The lowest level directory (scene ID) contains download links for the individual product maps as well as a tar.gz for all maps
 - i. These product maps are geo-referenced raster files called gtifs
 - ii. Easy to view or interact with in free software like QGIS
 - iii. These gtifs are at 30m or 20m pixel resolution

IV. RESTful API

- 1. OpenAPI docs available here
- 2. If scripting, it will be necessary to create token via the earthdata page
 - i. More instructions can be found here
- 3. Useful for querying data we have available and downloading product maps
- 4. Possible to create your own WMTS maps and overlays using our API endpoints