

# LP DAAC GEDI Finder Service

User Guide Version 1.0

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## Background

The Global Ecosystem Dynamics Investigation (GEDI) instrument aboard the International Space Station (ISS) is collecting light detection and ranging (lidar) full waveform observations at the highest resolution and sampling density of any space-borne lidar instrument to date. On January 21<sup>st</sup>, 2020 the LP DAAC released the following GEDI data products to the public: Level 1B Geolocated Waveform Data ([GEDI01\\_B](#)), Level 2A Elevation and Height Metrics Data ([GEDI02\\_A](#)), and Level 2B Canopy Cover and Vertical Profile Metrics Data ([GEDI02\\_B](#)). GEDI files (granules) are split into full ISS orbits, making it challenging to identify intersecting observations for smaller regions of interest. The GEDI Finder service allows users to spatially query the GEDI archive by submitting a bounding box region of interest and being returned a list of GEDI granules intersecting the region of interest.

## Service URL

The GEDI Finder service is a publicly available web service that aids GEDI users in finding the exact granule(s) that contain data for their region of interest. The landing page to the service is below.

Landing page: <https://lpdaacsvc.cr.usgs.gov/services/gedifinder>

The GEDI Finder service landing page describes the parameters that are needed to find the granules that contain data within the user's region of interest. It also includes examples for how to call the web service successfully.

## How to Use the Service

Version 1.0 of the GEDI Finder service can only be used to identify the granules – with their HTTPS URL for where they can be downloaded from the LP DAAC Data Pool – that intersect with the bounding box supplied in the ***bbox*** parameter. Additional filtering or subsetting are not supported at this time.

The service has four parameters. These are ***product***, ***version***, ***bbox***, and ***output***. The following describes the behavior and requirements for each parameter.

1. The ***product*** parameter has three available options. The options correspond to the product short names for each GEDI data product. The options are:
  - a. GEDI01\_B
  - b. GEDI02\_A
  - c. GEDI02\_B

**Please note**, only a single product can be specified per use/request. Also, the service will default to GEDI01\_B if the product parameter is not explicitly specified.

2. The ***version*** parameter has only a single option, i.e. 001, which is defaulted to if the user does not specify this parameter.
3. The ***bbox*** parameter is the only parameter without a default input. The input for this parameter is the upper-left and lower-right corner coordinates – in comma-separated latitude/longitude order – for the bounding box of the user's region of interest. The examples below are both valid inputs for the ***bbox*** parameter.

**Example 1:** `bbox=42.0,-100,40.0,-96.0`

**Example 2:** `bbox=[42.0,-100,40.0,-96.0]`

**Example 3:** `bbox=42.0, -100, 42,-100` (to search by specific lat/lon point of interest)

**Please note**, this parameter requires users input. Failure to enter the require values will result in an error message.

4. The **output** parameter has two options. Results from the service can be returned in json format or as html. The service will return results as json by default. The example below demonstrates how to specify that the result be returned as html.

Example: output=html

The following describes a simple workflow for generating a comma-separated (.csv) file containing the URLs to the GEDI granules that intersect with a region of interest. In this example the user is interested in finding all the GEDI02\_B granules that intersect with a small region within the South American country of Chile (bbox=-40.9218,-73.7731,-42.0248,-71.7736).

1. Construct the GEDI Finder service URL. Add the URL to a web browser and hit enter/return.

URL: [https://lpdaacsvc.cr.usgs.gov/services/gedifinder?  
product=GEDI02\\_B&  
version=001&  
bbox=-40.9218,-73.7731,-42.0248,-71.7736&  
output=html](https://lpdaacsvc.cr.usgs.gov/services/gedifinder?product=GEDI02_B&version=001&bbox=-40.9218,-73.7731,-42.0248,-71.7736&output=html)

returns:

[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.04.20/GEDI02\\_B\\_2019110232351\\_O02005\\_T03190\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.04.20/GEDI02_B_2019110232351_O02005_T03190_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.06.10/GEDI02\\_B\\_2019161105226\\_O02789\\_T01986\\_02\\_001\\_02.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.06.10/GEDI02_B_2019161105226_O02789_T01986_02_001_02.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.06.05/GEDI02\\_B\\_2019156053758\\_O02708\\_T05623\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.06.05/GEDI02_B_2019156053758_O02708_T05623_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.05.11/GEDI02\\_B\\_2019131151552\\_O02326\\_T04001\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.05.11/GEDI02_B_2019131151552_O02326_T04001_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.05.26/GEDI02\\_B\\_2019146164739\\_O02560\\_T04067\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.05.26/GEDI02_B_2019146164739_O02560_T04067_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.05.29/GEDI02\\_B\\_2019149081120\\_O02601\\_T02884\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.05.29/GEDI02_B_2019149081120_O02601_T02884_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.04.18/GEDI02\\_B\\_2019108080338\\_O01964\\_T05337\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.04.18/GEDI02_B_2019108080338_O01964_T05337_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.06.09/GEDI02\\_B\\_2019160035701\\_O02769\\_T03848\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.06.09/GEDI02_B_2019160035701_O02769_T03848_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.05.18/GEDI02\\_B\\_2019138123250\\_O02433\\_T05271\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.05.18/GEDI02_B_2019138123250_O02433_T05271_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.05.04/GEDI02\\_B\\_2019124175844\\_O02219\\_T01308\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.05.04/GEDI02_B_2019124175844_O02219_T01308_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.05.30/GEDI02\\_B\\_2019150150647\\_O02621\\_T05291\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.05.30/GEDI02_B_2019150150647_O02621_T05291_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.05.25/GEDI02\\_B\\_2019145095211\\_O02540\\_T03236\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.05.25/GEDI02_B_2019145095211_O02540_T03236_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.05.12/GEDI02\\_B\\_2019132220932\\_O02346\\_T05138\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.05.12/GEDI02_B_2019132220932_O02346_T05138_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.04.29/GEDI02\\_B\\_2019119033506\\_O02132\\_T02751\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.04.29/GEDI02_B_2019119033506_O02132_T02751_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.04.22/GEDI02\\_B\\_2019112061736\\_O02025\\_T00058\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.04.22/GEDI02_B_2019112061736_O02025_T00058_02_001_01.h5)  
[https://e4ftl01.cr.usgs.gov/GEDI/GEDI02\\_B.001/2019.04.27/GEDI02\\_B\\_2019117204122\\_O02112\\_T01614\\_02\\_001\\_01.h5](https://e4ftl01.cr.usgs.gov/GEDI/GEDI02_B.001/2019.04.27/GEDI02_B_2019117204122_O02112_T01614_02_001_01.h5)

2. Open a text editor.
3. Highlight all the items in the html output in the browser screen.
4. Copy the highlighted items and paste them into the text editor.
5. With the items in the text editor, save as .csv.

All items returned by the service are active URL links and can be download individually from the browser. Saving all the links to a .csv file allows users to automate the downloading of the GEDI files as .csv files can easily be leverage by download utilities like [wget](#) and [curl](#) as well as from scripting languages like Python and R. For additional information, check out the How to Download LP DAAC Data Python and R Data Prep Scripts from the LP DAAC website: <https://lpdaac.usgs.gov/tools/data-prep-scripts/>.

## Contact Information

Questions or feedback related to the GEIDI Finder Service can be directed to LP DAAC User Services:

LP DAAC User Services

(605)-594-6116

1-866-573-3222

[LPDAAC@usgs.gov](mailto:LPDAAC@usgs.gov)

Available M-F 8 am to 4 pm (Central U.S. time)