

ICESat-2 Data Access & Services

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Data Support Specialist, User Services
NASA National Snow and Ice Data Center DAAC

March 16, 2021

Data Discovery and Access Scenarios

Scenario 1: I want to visualize ICESat-2 elevation data over a very specific time and area of interest prior to download.

Scenario 2: I want to access and customize (subset and/or reformat) a bulk data order.

Scenario 3: I want to do all of this programmatically, so I can access and analyze data in the same Python-based workflow.



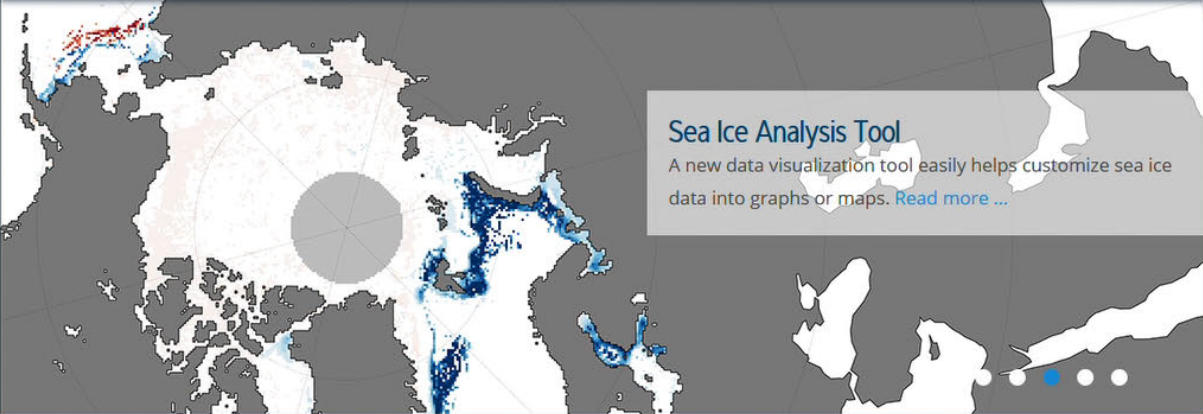
National Snow and Ice Data Center | National Snow and Ice Data Center | OpenAltimetry ICESat-2 | OpenAltimetry ICESat

https://nsidc.org

NSIDC National Snow & Ice Data Center

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SEARCH Web pages



Sea Ice Analysis Tool
A new data visualization tool easily helps customize sea ice data into graphs or maps. [Read more ...](#)




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Support



ICESat-2 Data Sets at NSIDC | National Snow and Ice Data Center | OpenAltimetry ICESat-2

https://nsidc.org/data/icesat-2/data-sets

ICESat/GLAS Data
IceBridge Data

ATL02	ATLAS/ICESat-2 L1B Converted Telemetry Data, Version 3	GLOBAL	2018/10/13 to present	Not applicable	Not applicable	Engineering Telemetry Ancillary Data
ATL03	ATLAS/ICESat-2 L2A Global Geolocated Photon Data, Version 3	GLOBAL	2018/10/13 to present	70 cm	91 day	TERRAIN ELEVATION
ATL04	ATLAS/ICESat-2 L2A Normalized Relative Backscatter Profiles, Version 3	GLOBAL	2018/10/13 to present	280 m	91 day	LIDAR BACKSCATTER
ATL06	ATLAS/ICESat-2 L3A Land Ice Height, Version 3	GLOBAL	2018/10/14 to present	20 m	91 day	GLACIER ELEVATION/ICE SHEET ELEVATION
ATL07	ATLAS/ICESat-2 L3A Sea Ice Height, Version 3	NORTHERN HEMISPHERE SOUTHERN HEMISPHERE	2018/10/14 to present	Varies	91 day	SEA ICE ELEVATION
ATL08	ATLAS/ICESat-2 L3A Land and Vegetation Height, Version 3	GLOBAL	2018/10/14 to present	Varies	91 day	Canopy Height, TERRAIN ELEVATION
ATL09	ATLAS/ICESat-2 L3A Calibrated Backscatter Profiles and Atmospheric Layer Characteristics, Version 3	GLOBAL	2018/10/13 to present	280 m	91 day	CLOUD PROPERTIES, LIDAR BACKSCATTER
ATL10	ATLAS/ICESat-2 L3A Sea Ice Freeboard, Version 3	NORTHERN HEMISPHERE SOUTHERN HEMISPHERE	2018/10/14 to present	Varies	91 day	FREEBOARD

Support



ATLAS/ICESat-2 L3A Land and ... | National Snow and Ice Data C... | OpenAltimetry ICESat-2 | OpenAltimetry ICESat

https://nsidc.org/data/ATL08/versions/3

National Snow & Ice Data Center

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On Wednesday, March 3rd from 9:00 a.m. to 1:00 p.m. (USA Mountain Time), the following data collections may not be available due to planned system maintenance: AMSR-E, Aquarius, High Mountain Asia, IceBridge, ICESat/GLAS, ICESat-2, MeAsURES, MODIS, NISE, SMAP, SnowEx, and VIIRS.

For a list of known issues with this product, see the Known Issues document under the Technical References tab.

Selected granules for ATL03 and associated products (ATL04, ATL06, ATL07, ATL08, ATL09, ATL10, ATL12, ATL13) have been recalled and will be released at a later time. For a list of recalled data, see the 'Retracted Data File List' document under Technical References.

Mailing List Print

Data Set ID: ATL08

ATLAS/ICESat-2 L3A Land and Vegetation Height, Version 3

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This is the most recent version of these data.

Version Summary: [See more](#)

Overview **Download Data** Citing These Data User Guide Technical References Support


Service

Login to Earthdata Other Access Options

Filter by date: From 10/14/2018 To 03/02/2021

Filter spatially by bounding box: W -107.64 S 38.26 E -104.38 N 41.09

Filter spatially by drawing a bounding box or polygon:
Note: Blue-green overlay shows the dataset coverage, unless it is global.



10 files selected (~680 MB) *0531*

File Name	Size (MB)	Start Time	End Time
ATL08_20201028230327_05310906_003_01.h5	81.4	2020-10-28 23:03:27	2020-10-28 23:11:58
ATL08_20200730032339_05310806_003_01.h5	71.3	2020-07-30 03:23:38	2020-07-30 03:32:09
ATL08_20200430074350_05310706_003_02.h5	88.4	2020-04-30 07:43:57	2020-04-30 07:52:20
ATL08_20200130120405_05310606_003_01.h5	45.0	2020-01-30 12:06:35	2020-01-30 12:12:35
ATL08_20191031162419_05310506_003_01.h5	95.3	2019-10-31 16:24:19	2019-10-31 16:32:49
ATL08_20190801204424_05310406_003_01.h5	56.2	2019-08-01 20:44:24	2019-08-01 20:50:00

Support



ATLAS/ICESat-2 L3A Land and Ice Data > National Snow and Ice Data Center > OpenAltimetry ICESat-2 > OpenAltimetry ICESat

https://nsidc.org/data/ATL08/versions/3

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Parameter(s):	LANDSCAPE > Canopy Height LANDSCAPE > TERRAIN ELEVATION	Data Format(s):	HDF5
Spatial Coverage:	N: 90, S: -90, E: 180, W: -180	Platform(s):	ICESat-2
Spatial Resolution:	Varies	Sensor(s):	ATLAS
Temporal Coverage:	14 October 2018 to present	Version(s):	V3
Temporal Resolution:	91 day	Metadata XML:	View Metadata Record
Data Contributor(s):	Amy Neuenschwander, Katherine Pitts, Benjamin Jelley, John Robbins, Brad Klotz, Sorin Popescu, Ross Nelson, David Harding, Dylan Pederson		

Geographic Coverage

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https://nsidc.org/data/ATL08/versions/3

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As a condition of using these data, you must cite the use of this data set using the following citation. For more information, see our [Use and Copyright](#) Web page.

Neuenschwander, A. L., K. L. Pitts, B. P. Jelley, J. Robbins, B. Klotz, S. C. Popescu, R. F. Nelson, D. Harding, D. Pederson, and R. Sheridan. 2020. *ATLAS/ICESat-2 L3A Land and Vegetation Height, Version 3*. [Indicate subset used]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. doi: <https://doi.org/10.5067/ATLAS/ATL08.003>. [Date Accessed].

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https://nsidc.org/data/ATL08/versions/3?qt-data_set_tabs=3#qt-data_set_tabs



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USER GUIDE: ATLAS/ICESat-2 L3A Land and Vegetation Height, Version 3

Track—an imaginary line halfway between the actual location of the left and right beams (see figures 1 and 2). Pair tracks are approximately 3 km apart in the across-track direction.

The beams within each pair have different transmit energies—so-called weak and strong beams—with an energy ratio between them of approximately 1.4. The mapping between the strong and weak beams of ATLAS, and their relative position on the ground, depends on the orientation (yaw) of the ICESat-2 observatory, which is changed approximately twice per year to maximize solar illumination of the solar panels. The forward orientation corresponds to ATLAS traveling along the +x coordinate in the ATLAS instrument reference frame (see Figure 1). In this orientation, the weak beams lead the strong beams and a weak beam is on the left edge of the beam pattern. In the backward orientation, ATLAS travels along the -x coordinate, in the instrument reference frame, with the strong beams leading the weak beams and a strong beam on the left edge of the beam pattern (see Figure 2). The first yaw flip was performed on December 26, 2018, placing the spacecraft into the backward orientation. ATL08 reports the spacecraft orientation in the `sc_orient` parameter stored in the `/orbit_info/` data group (see Section 1.2.4 Data Groups). In addition, the current spacecraft orientation, as well as a history of previous yaw flips, is available in the ICESat-2 Major Activities tracking document (.xlsx).

The Reference Ground Track (RGT) refers to the imaginary track on Earth at which a specified unit vector within the observatory is pointed. Onboard software aims the laser beams so that the RGT is always between ground tracks 2L and 2R (i.e. coincident with Pair Track 2). The ICESat-2 mission acquires data along 1,387 different RGTs. Each RGT is targeted in the polar regions once every 91 days (i.e. the satellite has a 91-day repeat cycle) to allow elevation changes to be detected. Cycle numbers track the number of 91-day periods that have elapsed since the ICESat-2 observatory entered the science orbit. RGTs are uniquely identified, for example in ATL08 file names, by appending the two-digit cycle number (cc) to the RGT number, e.g. 0001cc to 1,387cc.

Under normal operating conditions, no data are collected along the RGT; however, during spacecraft slews, or off-pointing, some ground tracks may intersect the RGT. Off-pointing refers to a series of plans over the mid-latitudes that have been designed to facilitate a global ground and canopy height data product with approximately 2 km track spacing. Off-pointing began on 1 August 2019 with RGT 518, after the ATLAS/ICESat-2 Precision Pointing Determination (PPD) and Precision Orbit Determination (POD) solutions had been adequately resolved and the instrument had pointed directly at the reference ground track for a full 91 days (1,387 orbits).

Users should note that between 14 October 2018 and 30 March 2019 the spacecraft pointing control was not yet optimized. As such, ICESat-2 data acquired during that time do not lie along the nominal RGTs, but are offset at some distance from the RGTs. Although not along the RGT, the geolocation information for these data is not degraded.

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ATLAS/ICESat-2 L3A Land and \ X | National Snow and Ice Data C X | OpenAltimetry ICESat-2 X | OpenAltimetry ICESat X +

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Warning Selected granules for ATL03 and associated products (ATL04, ATL06, ATL07, ATL08, ATL09, ATL10, ATL12, ATL13) have been recalled and will be released at a later time. For a list of recalled data, see the 'Retracted Data File List' document under Technical References.

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- ICESat-2 Major Activities (includes yaw flips), 13 January 2021
- Data Product Algorithm Theoretical Basis Document (ATBD for ATL08 | V03)
- ATL08 Data Dictionary (V03)
- ATL08 Known Issues (V03)
- ATL03/ICESat-2 Data Gaps for V03 (applies to all ICESat-2 products) - last updated 26 February 2020
- Retracted Data File List - 07 December 2020

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SMAP, SnowEx, and VIIRS.

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Filter by date: From 10/14/2018 To 03/02/2021

Filter spatially by bounding box: W -180 S -90 E 180 N 90

Filter spatially by drawing a bounding box or polygon:
Note: Blue-green overlay shows the dataset coverage, unless it is global.

566 files selected (~17 GB) *0531*

File Name	Size (MB)	Start Time	End Time
ATL08_20201110053154_07180911_003_01.h5	98.7	2020-11-10 05:31:53	2020-11-10 05:37:37
ATL08_20201030053115_05500911_003_01.h5	112.8	2020-10-30 05:31:14	2020-10-30 05:36:30
ATL08_20201029200531_05440911_003_01.h5	85.8	2020-10-29 20:05:30	2020-10-29 20:11:14
ATL08_20201029005317_05320908_003_01.h5	3.3	2020-10-29 00:58:49	2020-10-29 00:59:06
ATL08_20201028235910_05310914_003_01.h5	3.0	2020-10-29 00:01:45	2020-10-29 00:02:03
ATL08_20201028234527_05310912_003_01.h5	53.0	2020-10-28 23:45:27	2020-10-28 23:48:31
ATL08_20201028233944_05310911_003_01.h5	106.2	2020-10-28 23:39:44	2020-10-28 23:45:28
ATL08_20201028233203_05310910_003_01.h5	21.5	2020-10-28 23:38:13	2020-10-28 23:39:45
ATL08_20201028231157_05310907_003_01.h5	12.1	2020-10-28 23:11:57	2020-10-28 23:16:37
ATL08_20201028230327_05310906_003_01.h5	81.4	2020-10-28 23:03:27	2020-10-28 23:11:57

Support



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Filter spatially by drawing a bounding box or polygon:
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ATL08_20201029200531_05440911_003_01.h5	85.8	2020-10-29 20:05:30	2020-10-29 20:11:14
ATL08_20201029005317_05320908_003_01.h5	3.3	2020-10-29 00:58:49	2020-10-29 00:59:06
ATL08_20201028235910_05310914_003_01.h5	3.0	2020-10-29 00:01:45	2020-10-29 00:02:03
ATL08_20201028234527_05310912_003_01.h5	53.0	2020-10-28 23:45:27	2020-10-28 23:48:31
ATL08_20201028233944_05310911_003_01.h5	106.2	2020-10-28 23:39:44	2020-10-28 23:45:28
ATL08_20201028233203_05310910_003_01.h5	21.5	2020-10-28 23:38:13	2020-10-28 23:39:45
ATL08_20201028231157_05310907_003_01.h5	12.1	2020-10-28 23:11:57	2020-10-28 23:16:37
ATL08_20201028230327_05310906_003_01.h5	81.4	2020-10-28 23:03:27	2020-10-28 23:11:57

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https://openaltimetry.org/data/icesat2/

OPENALTIMETRY MENU

0.01%

ATL06
ATL07
ATL08
ATL10
ATL12
ATL13
Product info

November 2020

Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Zoom in to view more data segments and select area of interest for creating elevation profiles.
Select ATLAS products to view on upper right.

5000 km 2020-11-11
Lat: 24.6094, Lon: 26.3672

NASA



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OPENALTIMETRY MENU

- ATL06
- ATL07
- ATL08
- ATL10
- ATL12
- ATL13
- Product info

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November 2020

Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Zoom in to view more data segments and select area of interest for creating elevation profiles.
Select ATLAS products to view on upper right.

5000 km 2020-11-11

Lat: 60.4688, Lon: 79.8047



OpenAltimetry ICESat-2 OpenAltimetry ICESat +

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OPENALTIMETRY MENU

+ SELECT REGION

12.5%

SEARCH

< Input map extents and center

Search by name (e.g. City, Country)

Zoom to bounding extents

Lower-left: Lon: Lat:

Upper-right: Lon: Lat:

[Update map](#)

[Get current map extents & center](#)

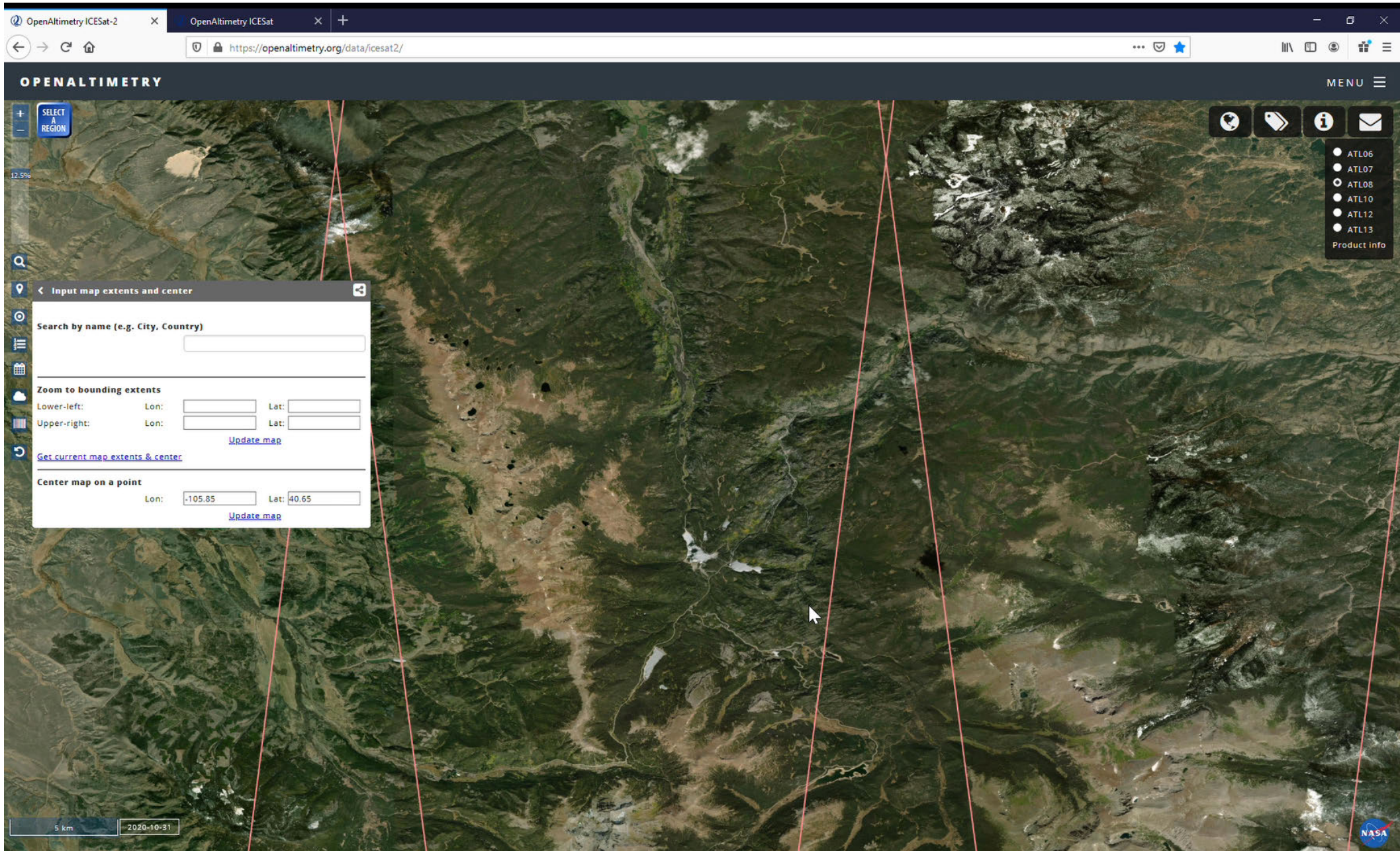
Center map on a point

Lon: Lat:

[Update map](#)

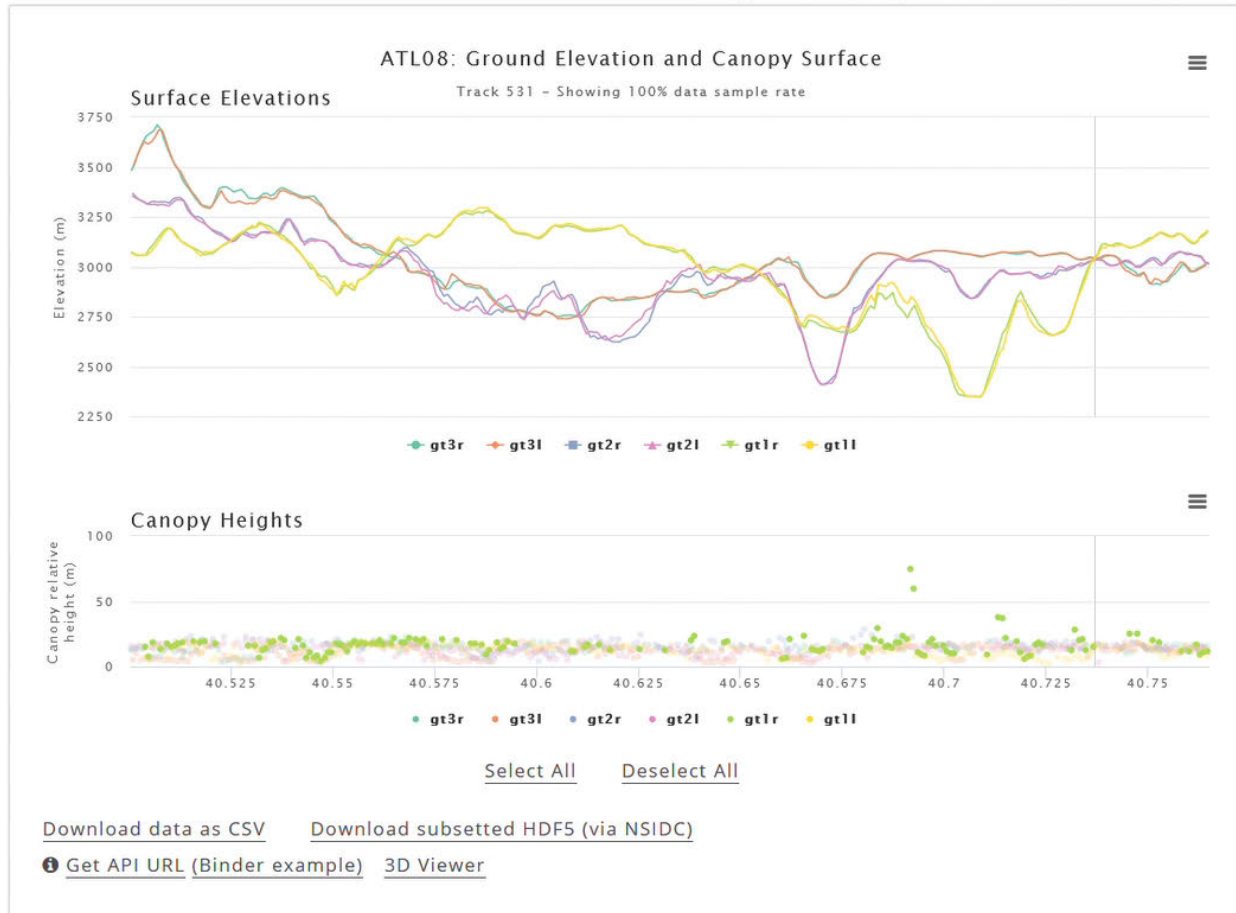
- ATL06
- ATL07
- ATL08
- ATL10
- ATL12
- ATL13
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5 km 2020-10-31



ELEVATION PROFILE ATL03 PHOTON HEIGHTS

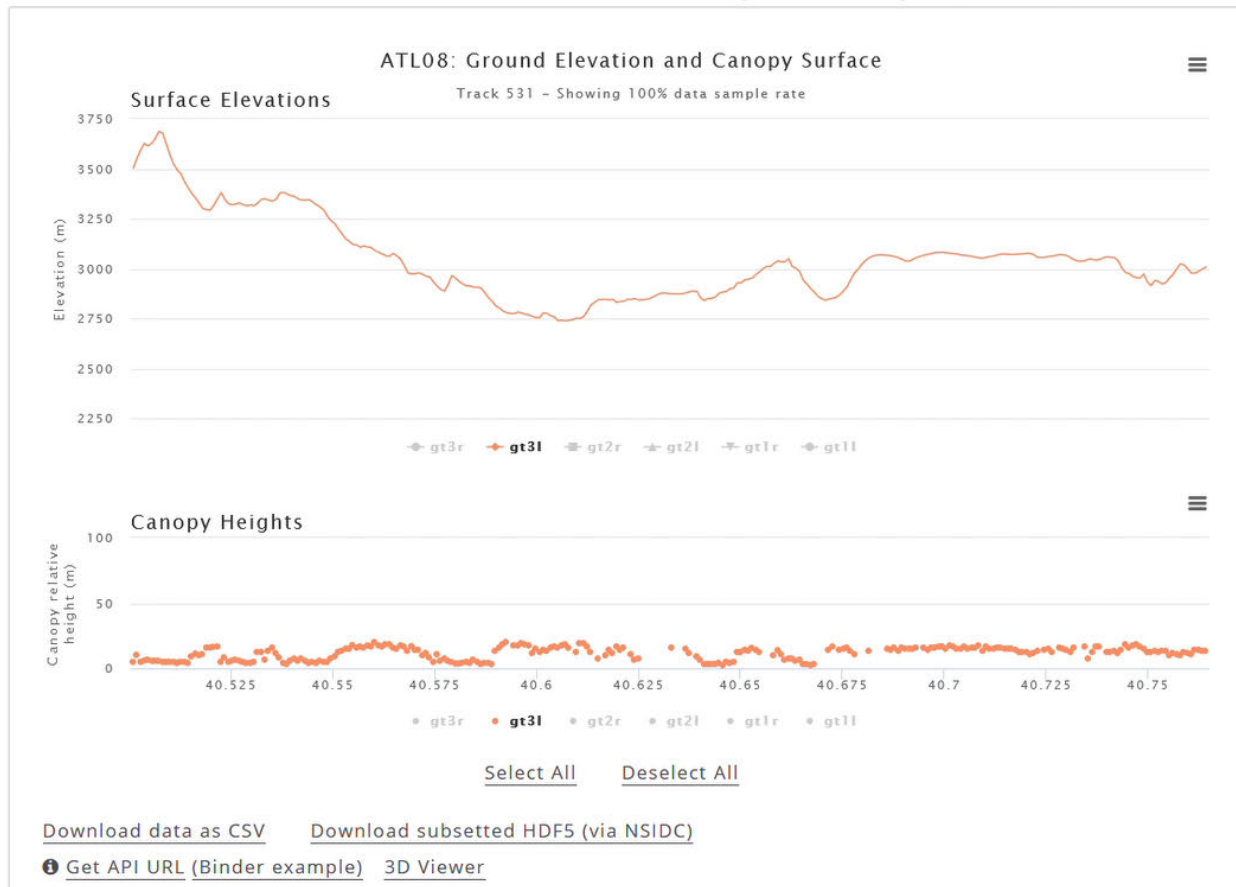
Drag zoom on the plots below to view more detail.



Date: [2018-11-02](#) | [2019-02-01](#) | [2019-05-03](#) | [2019-08-01](#) | [2019-10-31](#) | [2020-01-30](#) | [2020-04-30](#) | [2020-07-30](#) | [2020-10-28](#) | [2020-10-29](#)

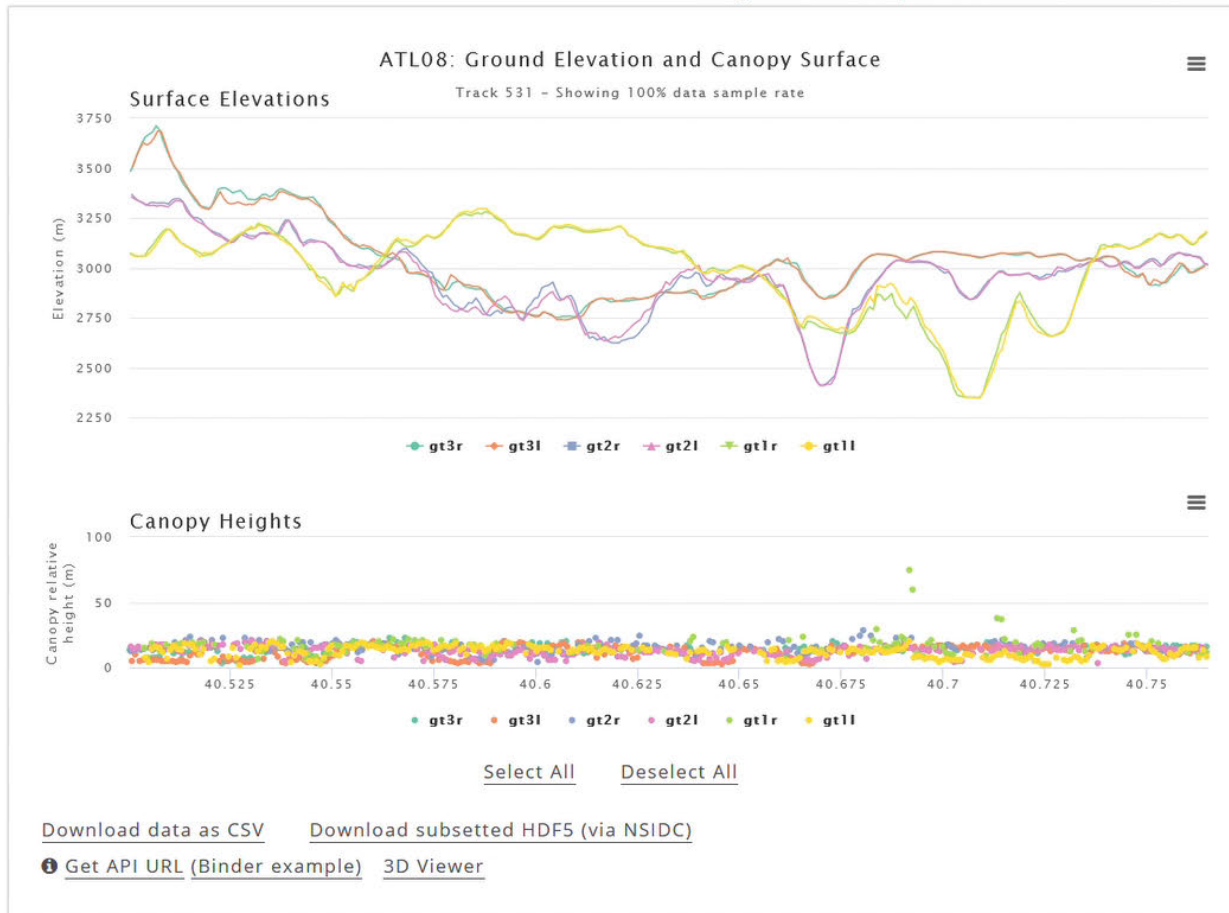
ELEVATION PROFILE | ATL03 PHOTON HEIGHTS

Drag zoom on the plots below to view more detail.



ELEVATION PROFILE ATL03 PHOTON HEIGHTS

Drag zoom on the plots below to view more detail.



Excel spreadsheet showing data for 'h_canopy_uncertainty'. The spreadsheet has columns A through M. The data includes segment IDs, coordinates, and various canopy metrics.

segment_id	segment	longitude	latitude	h_te_best	h_te_unc	h_canopy	h_canopy_uncertainty	track_id	beam	file_name
1	775687	775691	-105.821	40.75381	2923.693	41.69689	12.73462	55.878815	531 gt3r	processed_ATL08_20201028230
2	775692	775696	-105.821	40.75291	2910.845	21.56973	14.29811	29.688202	531 gt3r	processed_ATL08_20201028230
3	775697	775701	-105.821	40.75201	2915.783	43.50781	14.96314	51.66225	531 gt3r	processed_ATL08_20201028230
4	775702	775706	-105.821	40.75111	2911.842	36.39536	12.71021	50.341843	531 gt3r	processed_ATL08_20201028230
5	775707	775711	-105.821	40.75021	2915.361	23.72511	13.98486	30.838808	531 gt3r	processed_ATL08_20201028230
6	775712	775716	-105.822	40.74932	2960.833	24.91552	16.05444	32.527348	531 gt3r	processed_ATL08_20201028230
7	775717	775721	-105.822	40.74842	2968.337	17.26026			531 gt3r	processed_ATL08_20201028230
8	775722	775726	-105.822	40.74752	2957.655	18.85006			531 gt3r	processed_ATL08_20201028230
9	775727	775731	-105.822	40.74662	2978.269	35.42798			531 gt3r	processed_ATL08_20201028230
10	775732	775736	-105.822	40.74572	2986.238	25.31112	11.25317	34.39861	531 gt3r	processed_ATL08_20201028230
11	775737	775741	-105.822	40.74482	2998.795	33.70071	10.44898	45.726315	531 gt3r	processed_ATL08_20201028230
12	775742	775746	-105.822	40.74393	3013.688	45.00288	12.33081	60.197376	531 gt3r	processed_ATL08_20201028230
13	775747	775751	-105.822	40.74303	3037.979	23.5532			531 gt3r	processed_ATL08_20201028230
14	775752	775756	-105.823	40.74213	3050.661	17.83988			531 gt3r	processed_ATL08_20201028230
15	775757	775761	-105.823	40.74123	3055.314	16.69658			531 gt3r	processed_ATL08_20201028230
16	775762	775766	-105.823	40.74033	3054.7	15.5856			531 gt3r	processed_ATL08_20201028230
17	775767	775771	-105.823	40.73943	3053.286	18.84598			531 gt3r	processed_ATL08_20201028230
18	775772	775776	-105.823	40.73854	3042.291	19.88903	15.80811	27.824842	531 gt3r	processed_ATL08_20201028230
19	775777	775781	-105.823	40.73764	3033.967	25.71967	17.49561	34.98949	531 gt3r	processed_ATL08_20201028230
20	775782	775786	-105.823	40.73674	3037.948	21.86233			531 gt3r	processed_ATL08_20201028230
21	775787	775791	-105.823	40.73584	3045.108	23.06864			531 gt3r	processed_ATL08_20201028230
22	775792	775796	-105.823	40.73494	3040.05	17.88343	16.69165	24.343435	531 gt3r	processed_ATL08_20201028230
23	775797	775801	-105.824	40.73404	3035.489	12.14196	15.30957	17.009188	531 gt3r	processed_ATL08_20201028230
24	775802	775806	-105.824	40.73315	3035.07	10.61248			531 gt3r	processed_ATL08_20201028230
25	775807	775811	-105.824	40.73225	3038.816	16.87958			531 gt3r	processed_ATL08_20201028230
26	775812	775816	-105.824	40.73135	3049.651	16.84736			531 gt3r	processed_ATL08_20201028230
27	775817	775821	-105.824	40.73045	3060.087	17.4867	13.4104	24.212337	531 gt3r	processed_ATL08_20201028230
28	775822	775826	-105.824	40.72955	3064.879	13.93405			531 gt3r	processed_ATL08_20201028230
29	775827	775831	-105.824	40.72865	3066.406	16.66365			531 gt3r	processed_ATL08_20201028230
30	775832	775836	-105.824	40.72776	3063.608	18.6809			531 gt3r	processed_ATL08_20201028230
31	775837	775841	-105.824	40.72686	3061.407	18.78264	15.40161	25.521767	531 gt3r	processed_ATL08_20201028230
32	775842	775846	-105.825	40.72596	3059.957	19.36622	15.29492	26.769176	531 gt3r	processed_ATL08_20201028230
33	775847	775851	-105.825	40.72506	3057.649	20.38428	16.51245	27.770195	531 gt3r	processed_ATL08_20201028230
34	775852	775856	-105.825	40.72416	3054.024	15.42391	15.52881	21.222025	531 gt3r	processed_ATL08_20201028230
35	775857	775861	-105.825	40.72327	3052.612	20.08527	11.30762	28.273638	531 gt3r	processed_ATL08_20201028230
36	775862	775866	-105.825	40.72237	3059.544	23.17621			531 gt3r	processed_ATL08_20201028230
37	775867	775871	-105.825	40.72147	3069.888	23.08039			531 gt3r	processed_ATL08_20201028230
38	775872	775876	-105.825	40.72057	3074.085	18.29498			531 gt3r	processed_ATL08_20201028230
39	775877	775881	-105.825	40.71967	3069.216	17.34256	13.36304	24.293106	531 gt3r	processed_ATL08_20201028230
40	775882	775886	-105.825	40.71877	3065.005	17.611	11.76636	24.689991	531 gt3r	processed_ATL08_20201028230
41	775887	775891	-105.826	40.71788	3062.335	16.92092	13.40747	23.461857	531 gt3r	processed_ATL08_20201028230
42	775892	775896	-105.826	40.71698	3064.566	16.38661			531 gt3r	processed_ATL08_20201028230
43	775897	775901	-105.826	40.71608	3067.648	16.06103	17.57959	21.62873	531 gt3r	processed_ATL08_20201028230
44	775902	775906	-105.826	40.71518	3070.64	18.83978	16.45581	25.906124	531 gt3r	processed_ATL08_20201028230
45	775907	775911	-105.826	40.71428	3071.378	15.7509	13.40137	21.869532	531 gt3r	processed_ATL08_20201028230
46										

QGIS interface showing the 'processed_ATL08_20201028230027_05310906_003.h5' dataset. The 'h_canopy' variable is selected, and its metadata is displayed in the right-hand panel.

Variable "h_canopy"

In file
 "processed_ATL08_20201028230327_05310906_003.h5"

Variable full name: gt3r/land_segments/canopy/h_canopy

```
float h_canopy(delta_time=272);
: FillValue = 3.4028235E30f; // float
: coordinates = "../delta_time ../latitude
: description = "98% height of all the ind.
: long_name = "height canopy";
: source = "Land ATBD section 4.12";
: units = "meters";
: ChunkSizes = 10000U; // uint
```



Data Access: Open Altimetry

More in-depth OA tutorials:

Open Altimetry: Advanced Discovery, Processing & Visualization Services for ICESat & ICESat-2 Data

<https://www.youtube.com/watch?v=ZanKXh1oQYc>

NSIDC Open Altimetry Tutorial for Trees Around the GLOBE Student Research Campaign

https://www.youtube.com/watch?v=_kTgFeK42c8&t=1055s



NASA | National Snow and Ice Data Center | <https://nsidc.org/data/atl08>

ATLAS/ICESat-2 L3A Land and Vegetation Height, Version 3

This data set (ATL08) contains along-track heights above the WGS84 ellipsoid (ITRF2014 reference frame) for the ground and canopy surface more than 100 signal photons. The data were acquired by the Advanced Topographic Laser Altimeter System (ATLAS) instrument on board the ICESat-2 satellite.

This is the most recent version of these data.

Version Summary: [See more](#)


Overview | **Download Data** | Citing These Data | User Guide | Technical References | Support

Filter by date: From To

Filter spatially by bounding box: W S E N

Filter spatially by drawing a bounding box or polygon:

Note: Blue-green overlay shows the dataset coverage, unless it is global.



Other Access Options

[Download Via HTTPS](#): An Earthdata Login account is required to access these data.

- if you are not currently logged in to Earthdata, you will be prompted to do so.
- [You may register for an Earthdata Login](#) if you do not have an account.

Once you have logged in, you will be able to click and download files via a Web browser. There are also options for downloading via a command line or client. For more detailed instructions, please see [Options Available for Bulk Downloading Data from HTTPS with Earthdata Login](#).

[Earthdata Search](#): This application allows you to search, visualize, and access data across thousands of Earth science data sets. Additional customization services are available for select data sets, including subsetting, reformatting, and reprojection.

[OpenAltimetry](#): This application allows users to quickly visualize and access ICESat and ICESat-2 data using a map-based interface. Create and inspect elevation profiles for an area of interest and download the data.

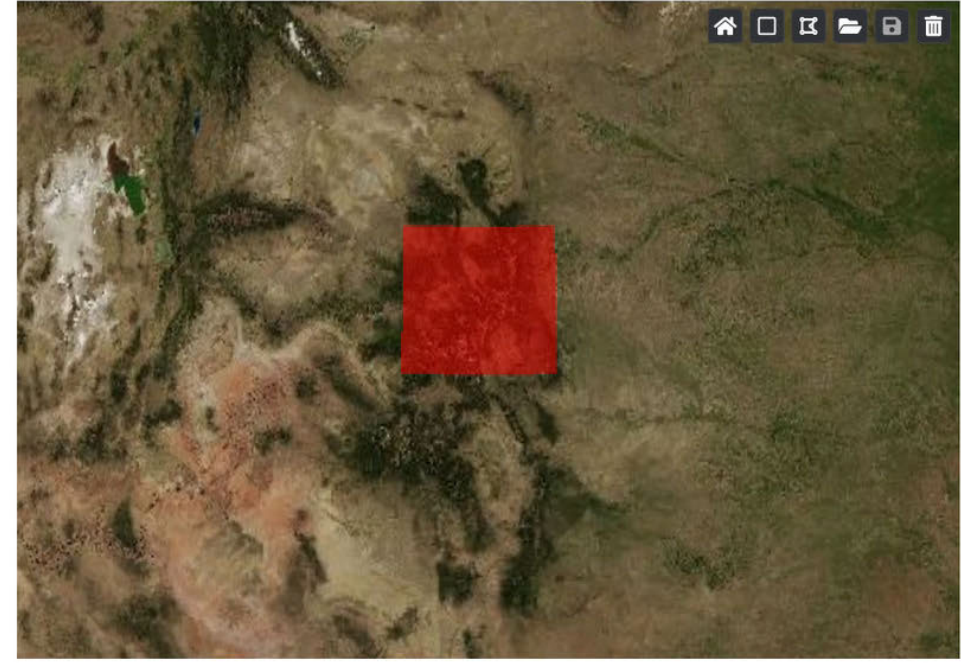
[Support](#)



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Filter by date: From To
 Filter spatially by bounding box: W S E N
 Filter spatially by drawing a bounding box or polygon:
 Note: Blue-green overlay shows the dataset coverage, unless it is global.



205 files selected (~14 GB)

File Name	Size (MB)	Start Time	End Time
ATL08_20201107103056_06760902_003_01.h5	45.9	2020-11-07 10:30:56	2020-11-07 10:39:26
ATL08_20201105224645_06530906_003_01.h5	66.4	2020-11-05 22:48:06	2020-11-05 22:55:16
ATL08_20201103103916_06150902_003_01.h5	98.4	2020-11-03 10:39:16	2020-11-03 10:47:35
ATL08_20201101225507_05920906_003_01.h5	104.7	2020-11-01 22:55:27	2020-11-01 23:03:37
ATL08_20201030104737_05540902_003_01.h5	66.4	2020-10-30 10:48:23	2020-10-30 10:55:55
ATL08_20201028230327_05310906_003_01.h5	81.4	2020-10-28 23:03:27	2020-10-28 23:11:58
ATL08_20201026105555_04930902_003_01.h5	25.9	2020-10-26 10:55:55	2020-10-26 11:04:26
ATL08_20201024231144_04700906_003_01.h5	43.7	2020-10-24 23:11:44	2020-10-24 23:20:15
ATL08_20201020232006_04090906_003_01.h5	52.4	2020-10-20 23:20:22	2020-10-20 23:28:35
ATL08_20201009115452_02340902_003_01.h5	61.3	2020-10-09 11:54:51	2020-10-09 12:02:55
ATL08_20201005120310_01730902_003_01.h5	73.0	2020-10-05 12:03:10	2020-10-05 12:11:31
ATL08_20201004001859_01500906_003_01.h5	83.4	2020-10-04 00:20:02	2020-10-04 00:27:29
ATL08_20201001121134_01120902_003_01.h5	79.9	2020-10-01 12:12:13	2020-10-01 12:19:56
ATL08_20200930002721_00890906_003_01.h5	84.1	2020-09-30 00:27:43	2020-09-30 00:35:51

205 files selected (~14 GB)

Download Script Order Files Large/Custom Order

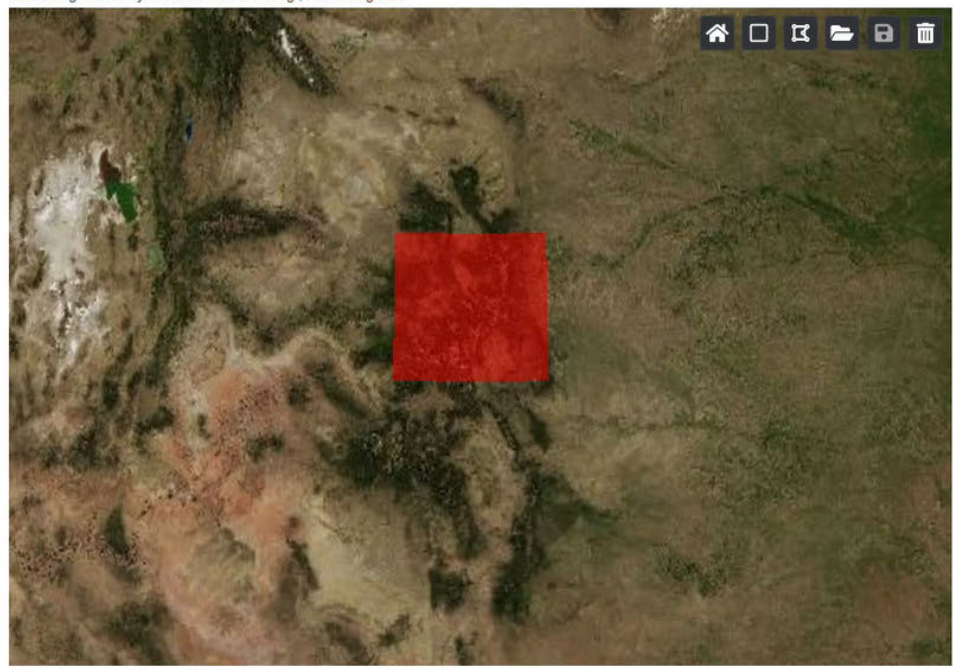
Support



Overview **Download Data** Citing These Data User Guide Technical References Support

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Filter by date: From To
 Filter spatially by bounding box: W S E N
 Filter spatially by drawing a bounding box or polygon:
 Note: Blue-green overlay shows the dataset coverage, unless it is global.



10 files selected (~680 MB)

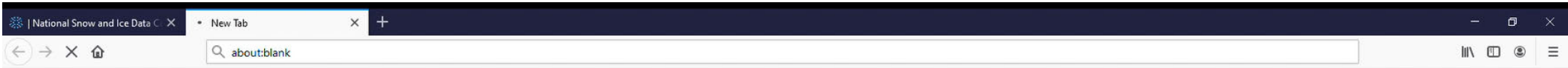
File Name	Size (MB)	Start Time	End Time
ATL08_20201028230327_05310906_003_01.h5	81.4	2020-10-28 23:03:27	2020-10-28 23:11:58
ATL08_20200730032339_05310806_003_01.h5	71.3	2020-07-30 03:23:38	2020-07-30 03:32:09
ATL08_20200430074350_05310706_003_02.h5	88.4	2020-04-30 07:43:57	2020-04-30 07:52:20
ATL08_20200130120405_05310606_003_01.h5	45.0	2020-01-30 12:06:35	2020-01-30 12:12:35
ATL08_20191031162419_05310506_003_01.h5	95.3	2019-10-31 16:24:19	2019-10-31 16:32:49
ATL08_20190801204424_05310406_003_01.h5	56.2	2019-08-01 20:44:24	2019-08-01 20:52:54
ATL08_20190531234041_09730306_003_01.h5	90.5	2019-05-31 23:40:41	2019-05-31 23:49:11
ATL08_20190503010443_05310306_003_01.h5	42.5	2019-05-03 01:04:44	2019-05-03 01:13:13
ATL08_20190201052506_05310206_003_01.h5	64.5	2019-02-01 05:25:06	2019-02-01 05:33:36
ATL08_20181102094511_05310106_003_01.h5	45.5	2018-11-02 09:45:13	2018-11-02 09:53:44

10 files selected (~680 MB)

Download Script Order Files Large/Custom Order

Support





search.earthdata.nasa.gov

NASA's Applied Remote Sensing Training Program



National Snow and Ice Data Center | Earthdata Search

https://search.earthdata.nasa.gov/projects?p=C1706334301-NSIDC_ECSIC1706334301-NSIDC_ECS&pg[1][v]=t&pg[1][qt]=2018-10-14T00%3A00%3A00.000Z%2C2021-03-08T17%3A50%3A49.513Z&pg...

EARTHDATA Find a DAAC

EARTHDATA SEARCH Back to Search Nicholas

Untitled Project 10 Granules 1 Collection 680.6 MB

ATLAS/ICESat-2 L3A Land and Vegetation Height V003
10 Granules Est. Size 680.6 MB Edit Options

ATLAS/ICESat-2 L3A Land and Vegetation Height V003

Edit Options

1 Select a data access method
The selected access method will determine which customization and output options are available.

2 Configure data customization options
Edit the options below to configure the customization and output options for the selected data product.

Select a data access method for each collection in your project before downloading.

Download Data Collection 1 of 1 Done

MONTH

ATLAS/ICESat-2 L3A Land and Vegetation Height V003

Apr May Jun Jul Aug Sep Oct Nov Dec Jan 2021 Feb Mar

v1.139.8 • NASA Official: Stephen Berrick • FOIA • NASA Privacy Policy • USA.gov

Earthdata Access: A Section 508 accessible alternative



Download Status

This page will automatically update as your orders are processed. The Download Status page can be accessed later by visiting <https://search.earthdata.nasa.gov/downloads/1520741634> or the [Download Status and History](#) page.

ATLAS/ICESat-2 L3A Land and Vegetation Height V003

Status	Access Method	Granules
● Complete (100%) 1/1 orders complete	ESI	10 Granules

Your orders are done processing and are available for download.

[Download Links](#) | [Order Status](#)

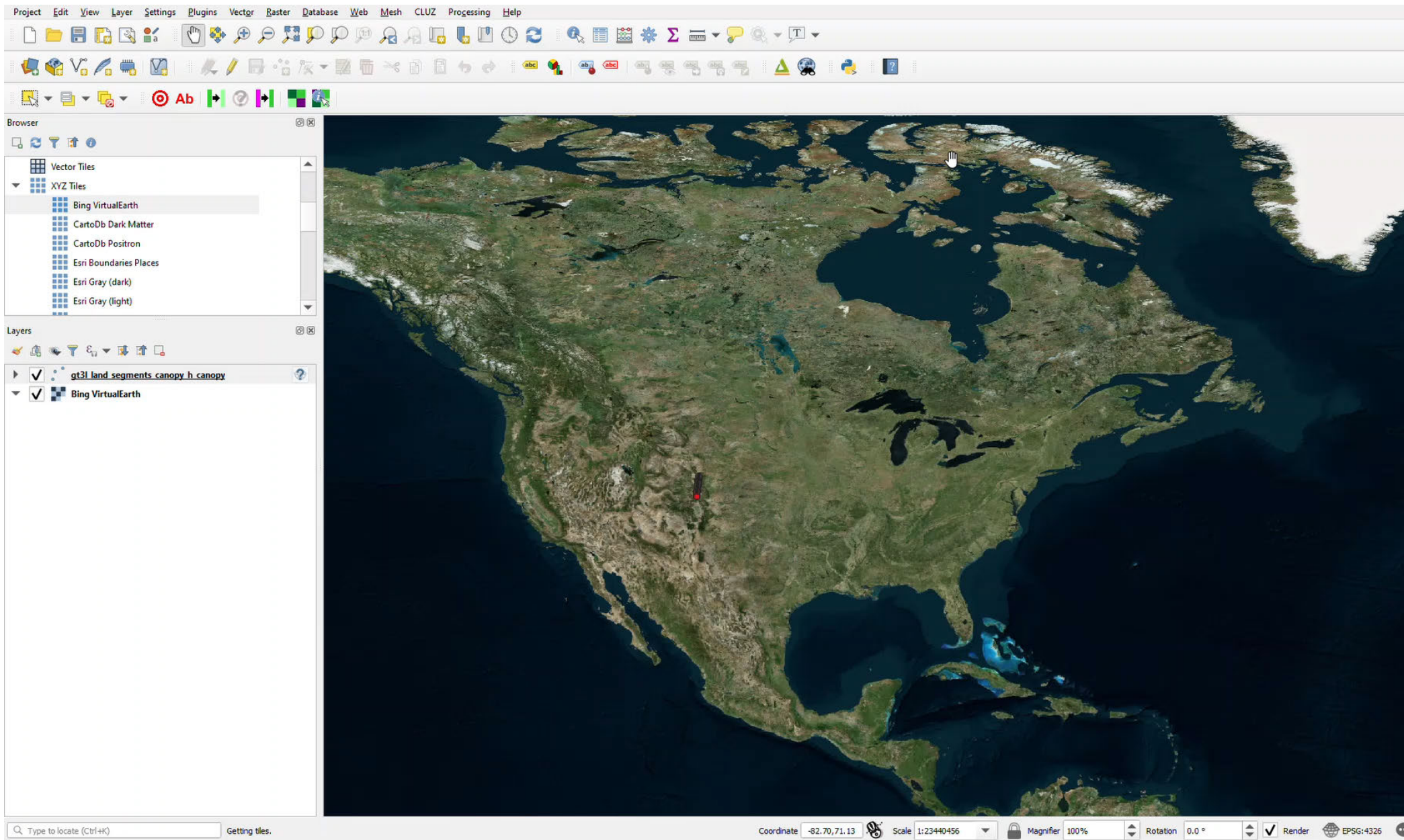
Retrieved 2 links for 10 granules.

<https://n5eil02u.ecs.nsidc.org/esir/5000001002013.html>
<https://n5eil02u.ecs.nsidc.org/esir/5000001002013.zip>

[Expand](#)

Additional Resources and Documentation





ICESat-2 | National Snow and Ice Data Center

https://nsidc.org/data/icesat-2

EARTHDATA Other DAACs

NSIDC National Snow & Ice Data Center

DATA RESEARCH NEWS ABOUT

SEARCH Web pages

NASA Distributed Active Archive Center (DAAC) at NSIDC

ICESat-2

The Ice, Cloud, and land Elevation Satellite-2, or ICESat-2, is measuring the height of a changing Earth one laser pulse at a time, 10,000 laser pulses per second. Launched on September 15, 2018, ICESat-2 will allow scientists to monitor the elevation of ice sheets, glaciers, sea ice, and more—all in unprecedented detail.

ICESat-2 Elevates Our View of Earth

- Overview
- ICESat-2 Data Sets
- Product Descriptions
 - Level-1
 - Level-2
 - Level-3A
 - Level-3B
- Tools
- Knowledge Base
- ICESat/GLAS Data
- IceBridge Data



News

05 May 2020
ICESat-2 Version 3 data are now available. To receive updates about ICESat-2 data, sign up for our [ICESat-2 mailing list](#).



ICESat-2 Data at NSIDC DAAC

ICESat-2 collects elevation data over all surfaces spanning the world's frozen regions, forests, lakes, urban areas, and more. These data are downlinked to Earth, reformatted, checked for quality, repackaged into scientific data sets, and delivered to the NSIDC DAAC for distribution and archive.

[Learn more about all the ICESat-2 data sets at the NSIDC DAAC.](#)



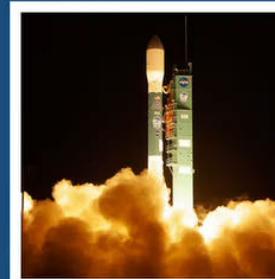
The Mission

Our planet's frozen and icy areas, known as the cryosphere, are a key focus of NASA Earth science research. ICESat-2 will help scientists investigate why, and how much, the cryosphere is changing as the climate warms. The satellite will also measure heights across Earth's temperate and tropical regions and take stock of vegetation in forests worldwide.



ICESat and Operation IceBridge

From 2003 to 2009, the ICESat mission obtained elevation data over ice sheets, information about clouds in polar regions, and topography and vegetation data around the globe. Following ICESat, NASA began Operation IceBridge, a series of airborne campaigns to measure changes to polar land and sea ice and provide continuity between ICESat and ICESat-2. The



Launch Details

ICESat-2 lifted off from Space Launch Complex 2 at Vandenberg Air Force Base on September 15, 2018 at 6:02 AM (PT), on board United Launch Alliance's final Delta II rocket.

[ICESat-2 Successfully Launched on Final Flight of Delta II Rocket](#)

Support



Tools and Services

API and Jupyter Notebooks

<https://nsidc.org/support/tool/icesat-2-tools-and-services>



.circeci	fix circeci	6 months ago
binder	testing different postBuild configurations	last month
notebooks	improve iceflow notebook	6 days ago
.gitignore	update gitignore	last month
Dockerfile	major refactoring for valkyrie	4 months ago
LICENSE	Initial commit	11 months ago
README.md	update itslive notebook	4 months ago
docker-compose.dev.yml	Add docker-compose files and update README	5 months ago
docker-compose.yml	Add docker-compose files and update README	5 months ago

README.md

NSIDC-Data-Tutorials

launch binder

PASSED

Data Access and Service API	The NSIDC DAAC's Application Programming Interface, or API, provides spatial and temporal filtering as well as customization options as a single access command, without the need to script against our data directory structure.	API	Visit the page What subsetting and reformatting services are available for ICESat-2 data? for details on subsetting and reformatting services available for each ICESat-2 data set.	NSIDC DAAC
ICESat-2 Hackweek Jupyter Notebook Tutorials	A Github repository of Jupyter Notebook tutorials presented during the ICESat-2 HackWeek at the University of Washington on June 17-21, 2019.	Downloadable tool	Python-based guidance on access, reading, plotting, and exploration of ICESat-2 cryospheric data.	ICESat-2 Hackweek, hosted by the University of Washington with support from NASA's Cryospheric Sciences Program
NSIDC DAAC Data Access Jupyter Notebook	A Jupyter notebook exploring data coverage, size, and customization service availability along with direct data download utilizing the NSIDC DAAC's access and service API.	Downloadable tool	Visit the page What subsetting and reformatting services are available for ICESat-2 data? for details on subsetting and reformatting services available for each ICESat-2 data set.	NSIDC DAAC

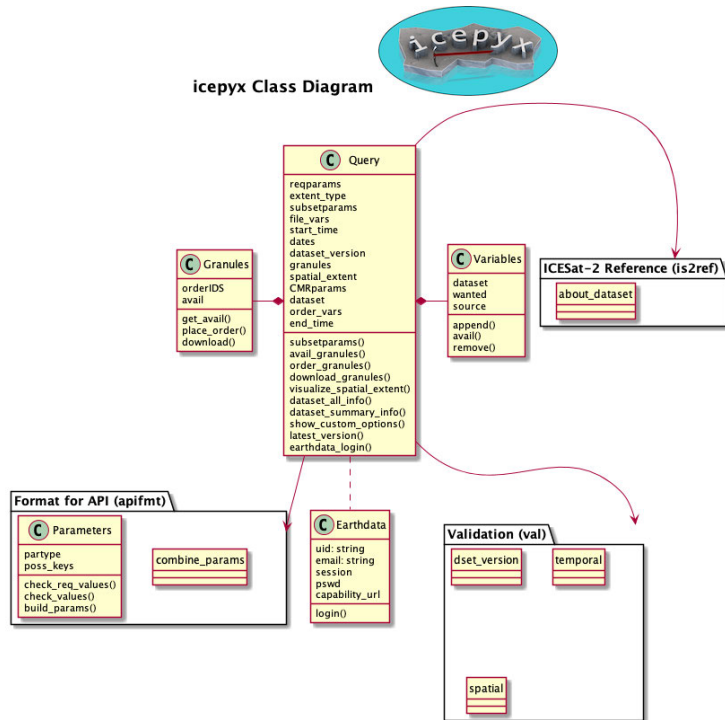


Tools and Services

icepyx software and community

<https://nsidc.org/support/tool/icesat-2-tools-and-services>

<https://github.com/icesat2py/icepyx>



icepyx

A python software library for obtaining and working with ICESat-2 data.

A shared library of resources - including existing resources, new code, tutorials, and use-cases/examples - that simplify the process of querying, obtaining, analyzing, and manipulating ICESat-2 datasets to enable scientific discovery. Developed and maintained by a community composed of ICESat-2 data users, developers, scientists, and students.

Downloadable tool, Python library, Jupyter Notebook

Access and reformat data through the NSIDC API

Github and documentation



Tools and Services: Data Visualization

HDFView

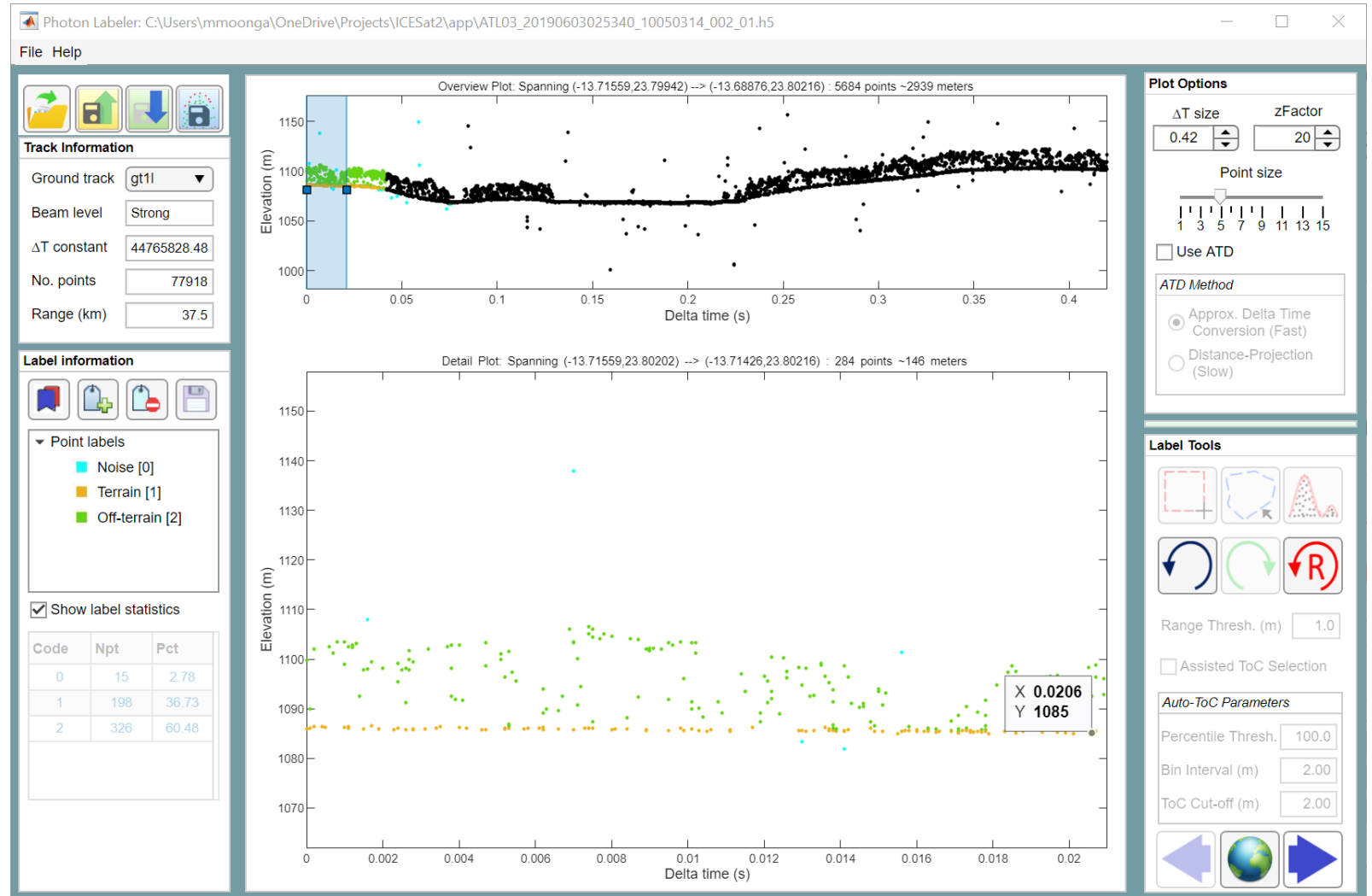
<https://www.hdfgroup.org/downloads/hdfview>



Tools and Services: Data Visualization

PhotonLabeler

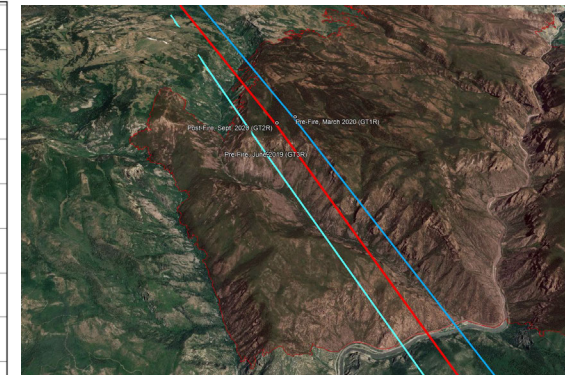
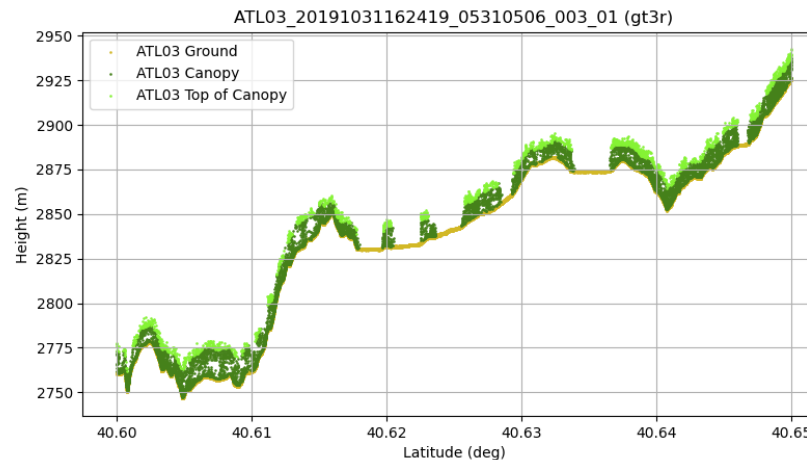
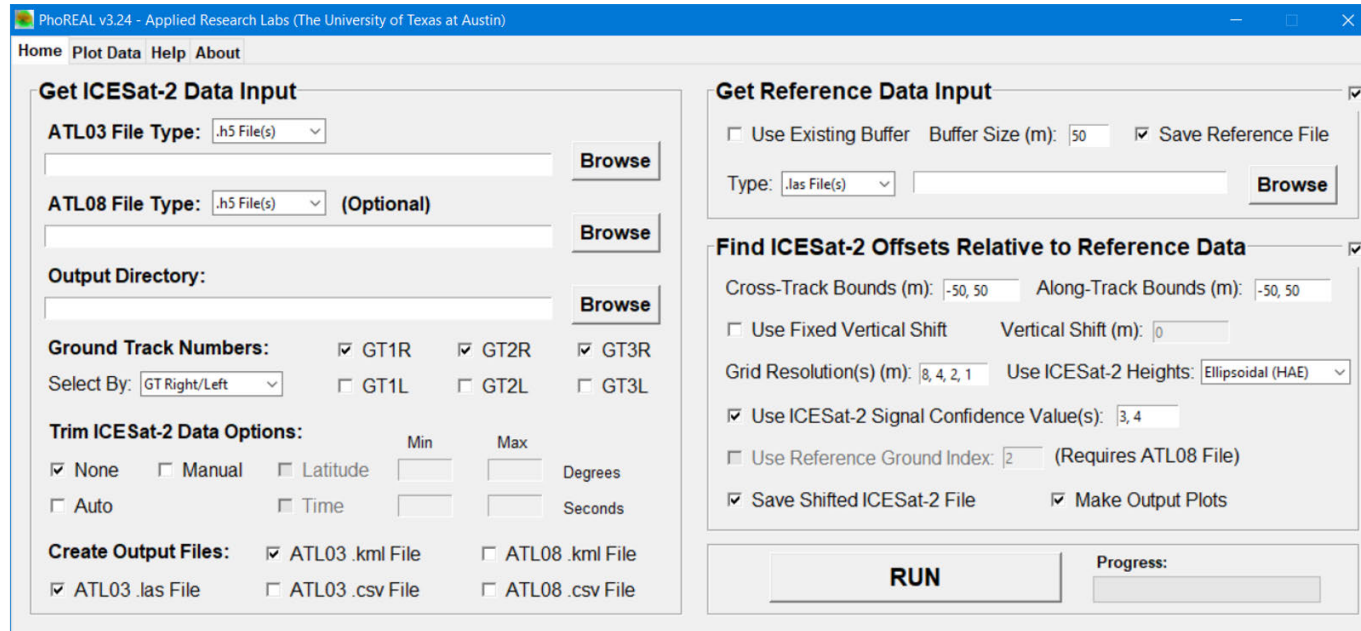
<https://github.com/Oht0nger/PhoLabeler>



Tools and Services: Data Visualization

PhoREAL

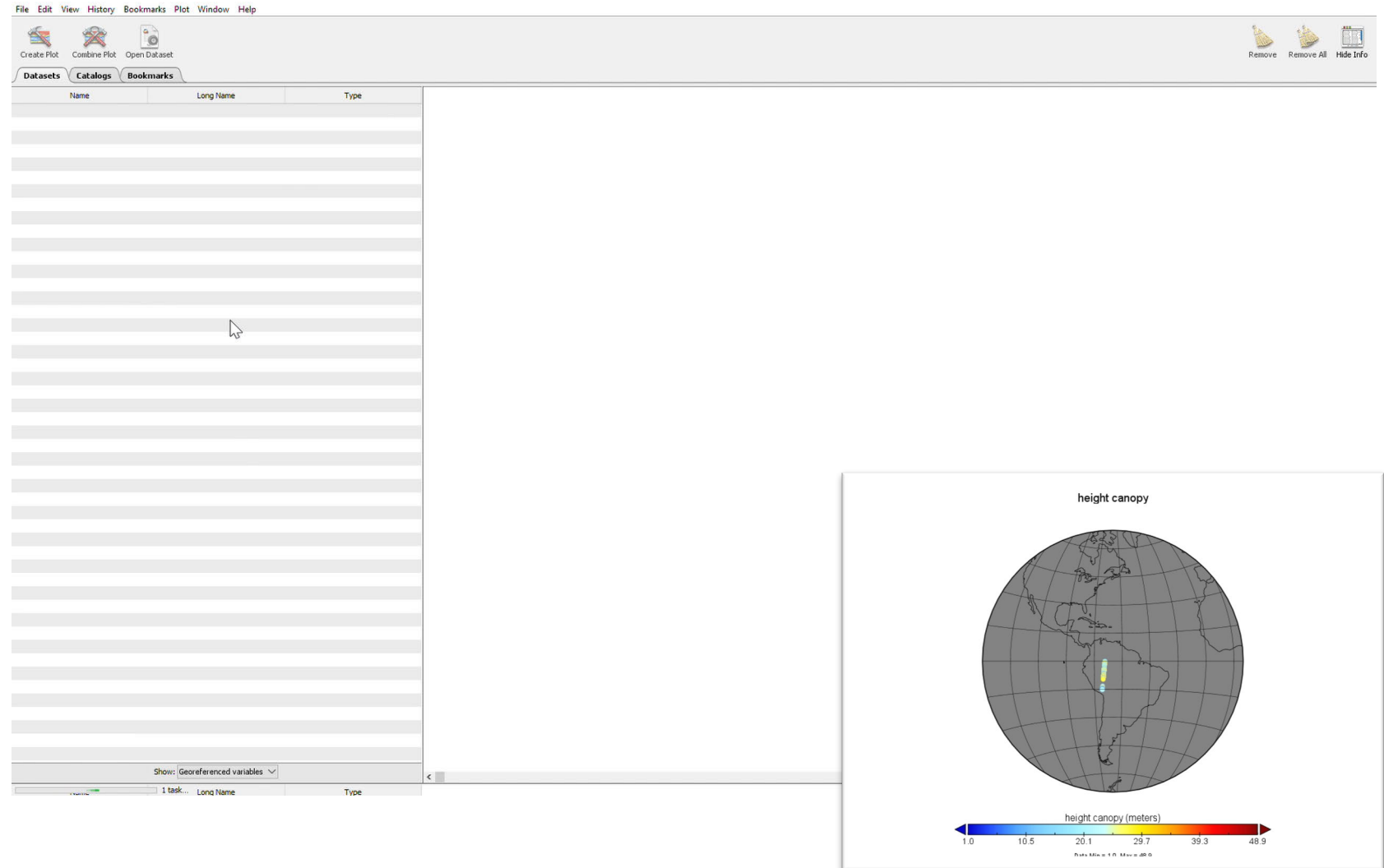
<https://github.com/icesat-2UT/PhoREAL>



Tools and Services: Data Visualization

Panoply

<https://www.giss.nasa.gov/tools/panoply>

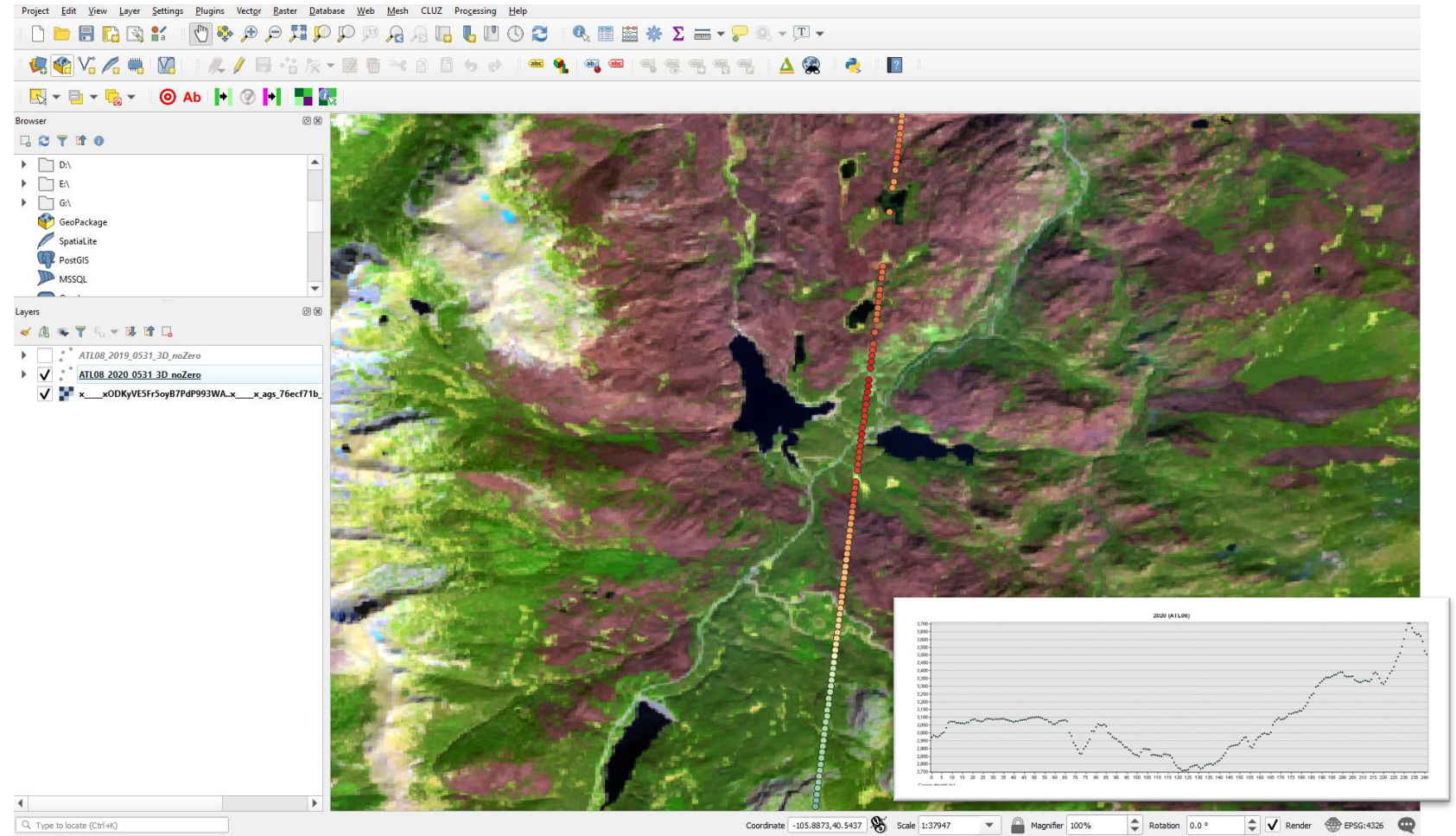


Tools and Services: Data Visualization

Shapefile Reformatting

NASA Earthdata Search

<https://search.earthdata.nasa.gov/search>





Visit the **NSIDC DAAC** website for access to
ICESat-2 data and documentation

<https://nsidc.org/daac>

<https://nsidc.org/data/icesat-2>

Contact NSIDC User Services at nsidc@nsidc.org

ICESat-2 Technical Specifications

<https://icesat-2.gsfc.nasa.gov/science/specs>





Thank You!

