

ICESat-2: Servicios y Acceso a Datos

Nicholas Kotlinski,
Especialista en Soporte de Datos, Servicio al Usuario
NASA National Snow and Ice Data Center DAAC

16 de Marzo 2021

Descubrimiento y Acceso a Datos

Primer Caso: Quiero visualizar los datos de elevación de ICESat-2 durante un tiempo y un área de interés muy específicos antes de descargarlos.

Segundo Caso: Quiero acceder y personalizar (subconjunto y / o reformatear) un pedido de datos masivo.

Tercer Caso: Quiero hacer todo esto con un programa, para poder acceder y analizar datos en el mismo flujo de trabajo basado en Python.



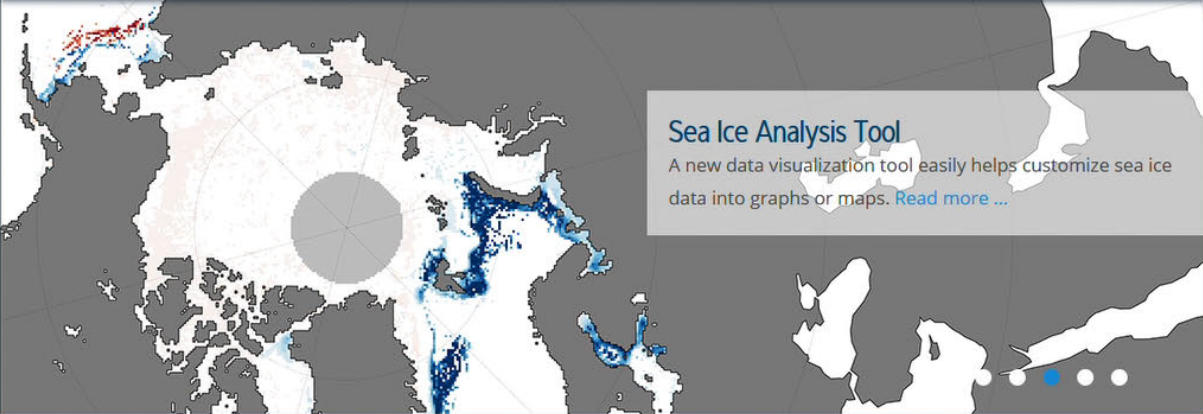
National Snow and Ice Data Center | National Snow and Ice Data Center | OpenAltimetry ICESat-2 | OpenAltimetry ICESat

https://nsidc.org

NSIDC National Snow & Ice Data Center

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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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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



⚠ 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](#).

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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.

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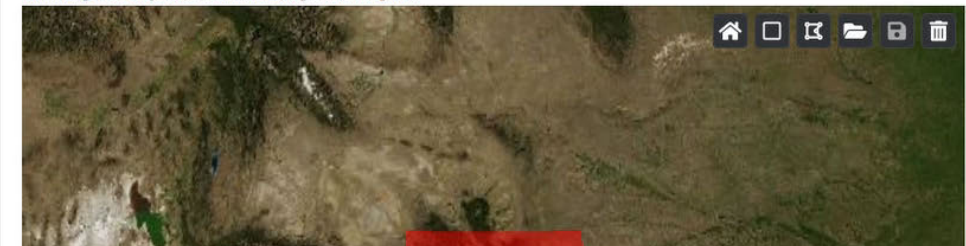
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Filter by date: From To

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 20:50:00

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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	<h3>Geographic Coverage</h3>
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			

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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. Jellely, 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 Vegetation Height, Version 3 | National Snow and Ice Data Center | OpenAltimetry ICESat-2

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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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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

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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

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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

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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: 60.4688, Lon: 79.8047

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← Input map extents and center

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Lon: Lat:

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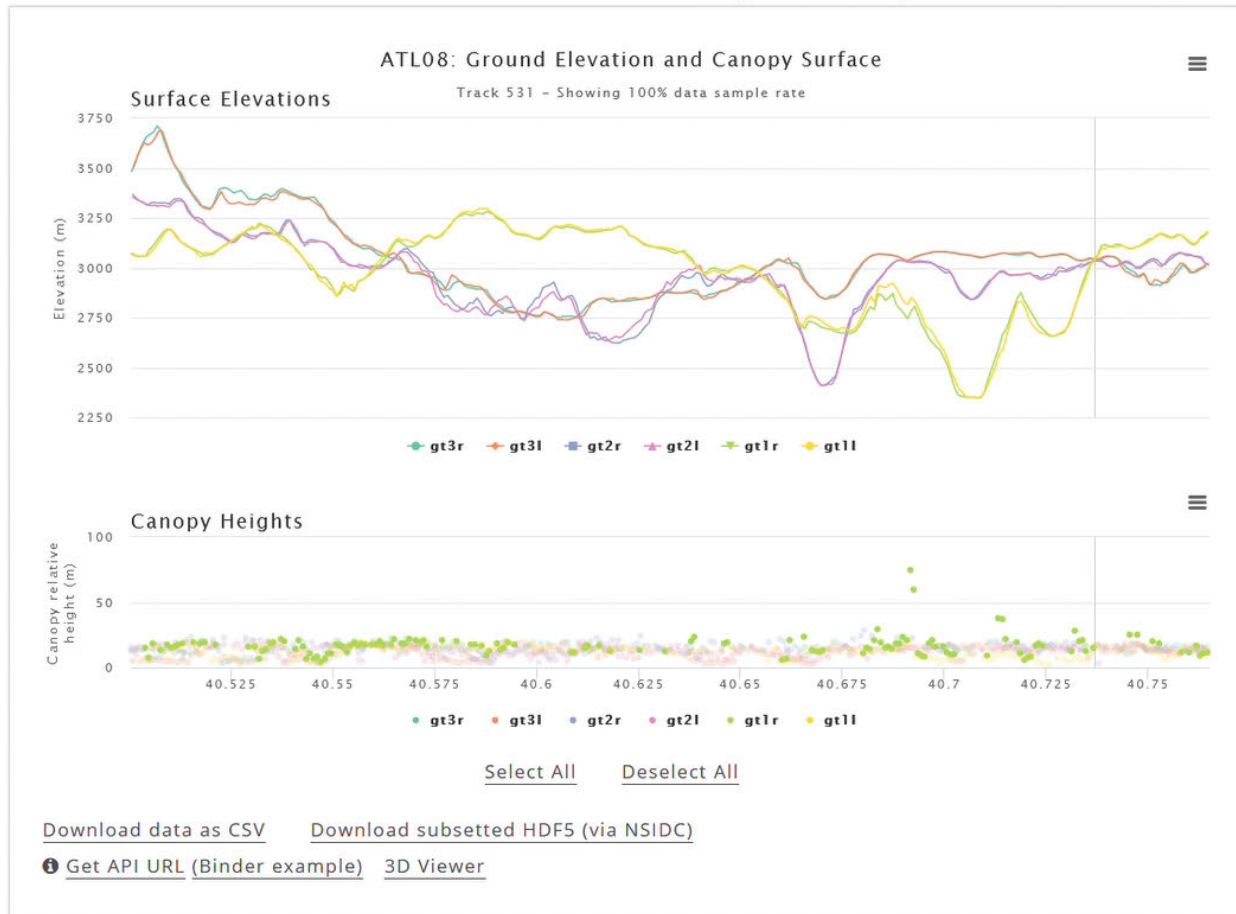
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5 km 2020-10-31



ELEVATION PROFILE ATL03 PHOTON HEIGHTS

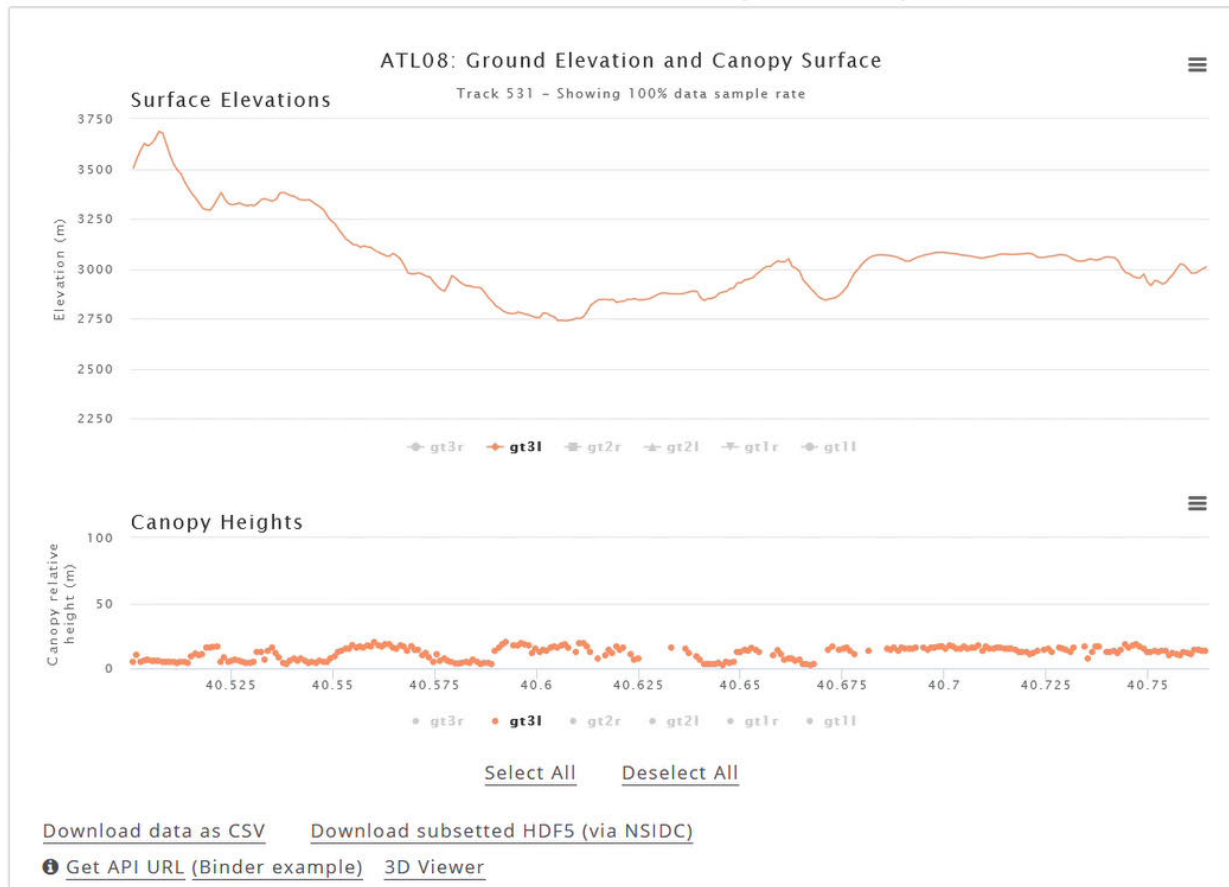
Drag zoom on the plots below to view more detail.



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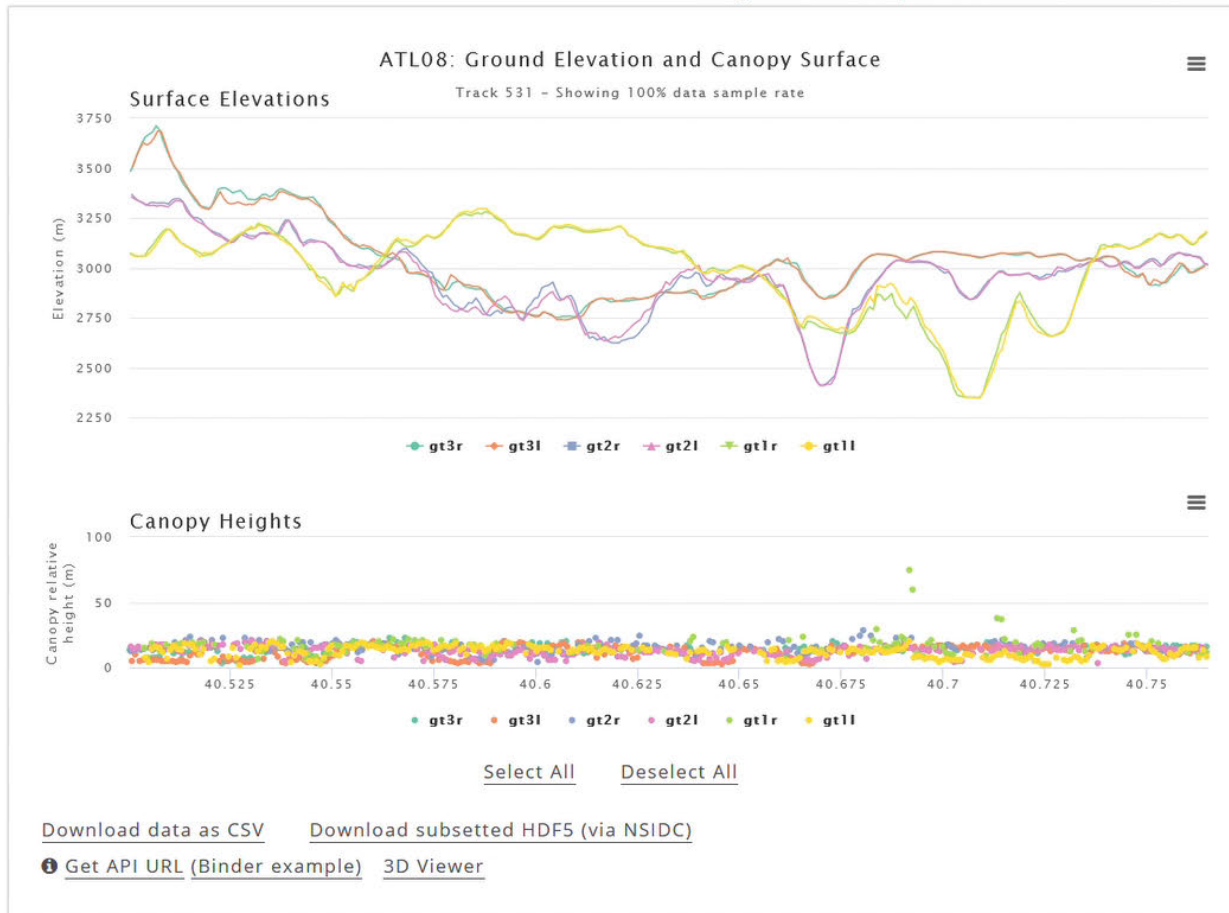
ELEVATION PROFILE | ATL03 PHOTON HEIGHTS

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.



elev_2020-10-28_t531_161522006359.csv - Excel

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H1 h_canopy_uncertainty

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	segment_id	segment	longitude	latitude	h_te_best	h_te_unc	h_canopy	h_canopy_uncertainty	track_id	beam	file_name		
2	775687	775691	-105.821	40.75381	2923.693	41.69689	12.73462	55.878815	531	gt3r	processed_ATL08_20201028230		
3	775692	775696	-105.821	40.75291	2910.845	21.56973	14.29811	29.688202	531	gt3r	processed_ATL08_20201028231		
4	775697	775701	-105.821	40.75201	2915.783	43.50781	14.96314	51.66225	531	gt3r	processed_ATL08_20201028232		
5	775702	775706	-105.821	40.75111	2911.842	36.39536	12.71021	50.341843	531	gt3r	processed_ATL08_20201028233		
6	775707	775711	-105.821	40.75021	2915.361	23.72511	13.98486	30.838808	531	gt3r	processed_ATL08_20201028234		
7	775712	775716	-105.822	40.74932	2960.833	24.91552	16.05444	32.527348	531	gt3r	processed_ATL08_20201028235		
8	775717	775721	-105.822	40.74842	2968.337	17.26026			531	gt3r	processed_ATL08_20201028236		
9	775722	775726	-105.822	40.74752	2957.655	18.85006			531	gt3r	processed_ATL08_20201028237		
10	775727	775731	-105.822	40.74662	2978.269	35.42798			531	gt3r	processed_ATL08_20201028238		
11	775732	775736	-105.822	40.74572	2986.238	25.31112	11.25317	34.39861	531	gt3r	processed_ATL08_20201028239		
12	775737	775741	-105.822	40.74482	2998.795	33.70071	10.44898	45.726315	531	gt3r	processed_ATL08_20201028240		
13	775742	775746	-105.822	40.74393	3013.688	45.00288	12.33081	60.197376	531	gt3r	processed_ATL08_20201028241		
14	775747	775751	-105.822	40.74303	3037.979	23.5532			531	gt3r	processed_ATL08_20201028242		
15	775752	775756	-105.823	40.74213	3050.661	17.83988			531	gt3r	processed_ATL08_20201028243		
16	775757	775761	-105.823	40.74123	3055.314	16.69658			531	gt3r	processed_ATL08_20201028244		
17	775762	775766	-105.823	40.74033	3054.7	15.5856			531	gt3r	processed_ATL08_20201028245		
18	775767	775771	-105.823	40.73943	3053.286	18.84598			531	gt3r	processed_ATL08_20201028246		
19	775772	775776	-105.823	40.73854	3042.291	19.88903	15.80811	27.824842	531	gt3r	processed_ATL08_20201028247		
20	775777	775781	-105.823	40.73764	3033.967	25.71967	17.49561	34.98949	531	gt3r	processed_ATL08_20201028248		
21	775782	775786	-105.823	40.73674	3037.948	21.86233			531	gt3r	processed_ATL08_20201028249		
22	775787	775791	-105.823	40.73584	3045.108	23.06864			531	gt3r	processed_ATL08_20201028250		
23	775792	775796	-105.823	40.73494	3040.05	17.88343	16.69165	24.343435	531	gt3r	processed_ATL08_20201028251		
24	775797	775801	-105.824	40.73404	3035.489	12.14196	15.30957	17.009188	531	gt3r	processed_ATL08_20201028252		
25	775802	775806	-105.824	40.73315	3035.07	10.61248			531	gt3r	processed_ATL08_20201028253		
26	775807	775811	-105.824	40.73225	3038.816	16.87958			531	gt3r	processed_ATL08_20201028254		
27	775812	775816	-105.824	40.73135	3049.651	16.84736			531	gt3r	processed_ATL08_20201028255		
28	775817	775821	-105.824	40.73045	3060.087	17.4867	13.4104	24.212337	531	gt3r	processed_ATL08_20201028256		
29	775822	775826	-105.824	40.72955	3064.879	13.93405			531	gt3r	processed_ATL08_20201028257		
30	775827	775831	-105.824	40.72865	3066.406	16.66365			531	gt3r	processed_ATL08_20201028258		
31	775832	775836	-105.824	40.72776	3063.608	18.6809			531	gt3r	processed_ATL08_20201028259		
32	775837	775841	-105.824	40.72686	3061.407	18.78264	15.40161	25.521767	531	gt3r	processed_ATL08_20201028260		
33	775842	775846	-105.825	40.72596	3059.957	19.36622	15.29492	26.769176	531	gt3r	processed_ATL08_20201028261		
34	775847	775851	-105.825	40.72506	3057.649	20.38428	16.51245	27.770195	531	gt3r	processed_ATL08_20201028262		
35	775852	775856	-105.825	40.72416	3054.024	15.42391	15.52881	21.222025	531	gt3r	processed_ATL08_20201028263		
36	775857	775861	-105.825	40.72327	3052.612	20.08527	11.30762	28.273638	531	gt3r	processed_ATL08_20201028264		
37	775862	775866	-105.825	40.72237	3059.544	23.17621			531	gt3r	processed_ATL08_20201028265		
38	775867	775871	-105.825	40.72147	3069.888	23.08039			531	gt3r	processed_ATL08_20201028266		
39	775872	775876	-105.825	40.72057	3074.085	18.29498			531	gt3r	processed_ATL08_20201028267		
40	775877	775881	-105.825	40.71967	3069.216	17.34256	13.36304	24.293106	531	gt3r	processed_ATL08_20201028268		
41	775882	775886	-105.825	40.71877	3065.005	17.611	11.76636	24.689991	531	gt3r	processed_ATL08_20201028269		
42	775887	775891	-105.826	40.71788	3062.335	16.92092	13.40747	23.461857	531	gt3r	processed_ATL08_20201028270		
43	775892	775896	-105.826	40.71698	3064.566	16.38661			531	gt3r	processed_ATL08_20201028271		
44	775897	775901	-105.826	40.71608	3067.648	16.06103	17.57959	21.62873	531	gt3r	processed_ATL08_20201028272		
45	775902	775906	-105.826	40.71518	3070.64	18.83978	16.45581	25.906124	531	gt3r	processed_ATL08_20201028273		
46	775907	775911	-105.826	40.71428	3071.378	15.7509	13.40137	21.869532	531	gt3r	processed_ATL08_20201028274		

elev_2020-10-28_t531_1615220066

Ready Display Settings 100%

File Edit View History Bookmarks Plot Window Help

Create Plot Combine Plot Open Dataset

Remove Remove All Hide Info

Datasets Catalogs Bookmarks

Name	Long Name	Type
processed_ATL08_20201028230...	SET_BY_META	Local File
ancillary_data	ancillary_data	—
ds_geosegments	Geosegments	1D
ds_metrics	Metrics	1D
ds_surf_type	Surface Type Dimension Sc...	1D
gt1l	gt1l	—
gt1r	gt1r	—
gt2l	gt2l	—
gt2r	gt2r	—
gt3l	gt3l	—
gt3r	gt3r	—
land_segments	gt3r/	—
asr	apparent surface reflectance	GeoTraj
atlas_pa	atlas pointing angle	GeoTraj
beam_azimuth	beam azimuth	GeoTraj
beam_coelev	beam co-elevation	GeoTraj
brightness_flag	brightness flag	GeoTraj
canopy	gt3r/land_segments/	—
canopy_flag	canopy flag	GeoTraj
canopy_h_metrics	canopy height metrics	1D
canopy_h_metrics...	canopy absolute height me...	1D
canopy_openness	canopy openness	GeoTraj
canopy_rh_conf	canopy relative height con...	GeoTraj
centroid_height	centroid height	GeoTraj
h_canopy	height canopy	GeoTraj
h_canopy_abs	absolute segment canopy ...	GeoTraj
h_canopy_quad	canopy quadratic mean	GeoTraj
h_canopy_uncert...	segment canopy height un...	GeoTraj
h_dif_canopy	canopy diff to median height	GeoTraj
h_max_canopy	maximum canopy height	GeoTraj
h_max_canopy_abs	absolute maximum canopy ...	GeoTraj
h_mean_canopy	mean canopy height	GeoTraj
h_mean_canopy...	absolute mean canopy height	GeoTraj
h_median_canopy	median canopy height	GeoTraj
h_median_canopy...	absolute segment median ...	GeoTraj
h_min_canopy	minimum canopy height	GeoTraj
h_min_canopy_abs	absolute minimum canopy ...	GeoTraj
landsat_flag	landsat flag	GeoTraj
landsat_perc	landsat percentage canopy	GeoTraj
n_ca_photons	number canopy photons	GeoTraj
n_toc_photons	number top of canopy pho...	GeoTraj
subset_can_flag	subset canopy flag	1D
toc_roughness	top of canopy roughness	GeoTraj
cloud_flag_atm	cloud flag atm	GeoTraj
cloud_fold_flag	cloud folding flag	GeoTraj
delta_time	mean pass time	1D
delta_time_beg	delta time begin	GeoTraj
delta_time_end	delta time end	GeoTraj

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 = 3.4028235E38f; // 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
```

Show: All variables



Acceso a Datos: Open Altimetry

Tutoriales más Detallados de Open Altimetry:

Open Altimetry: Servicios avanzados de descubrimiento, procesamiento y visualización de datos ICESat-1 e ICESat-2

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

Tutorial de Open Altimetry del NSIDC sobre Arboles Alrededor del Mundo - Una Campaña de Investigación Estudiantil del Programa GLOBE

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.

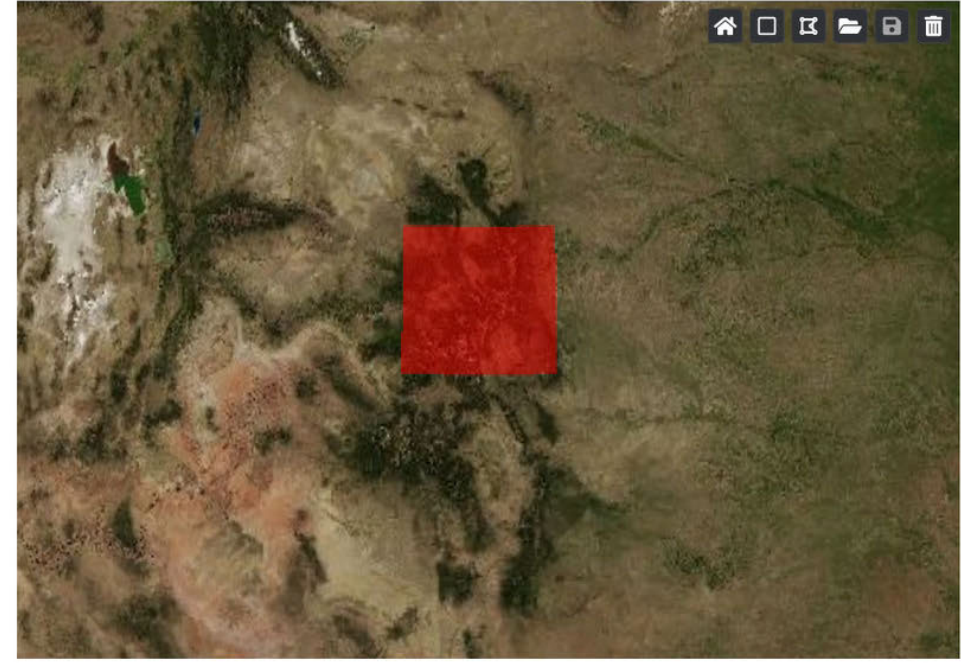
Support



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

Login to Earthdata Other Access Options

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

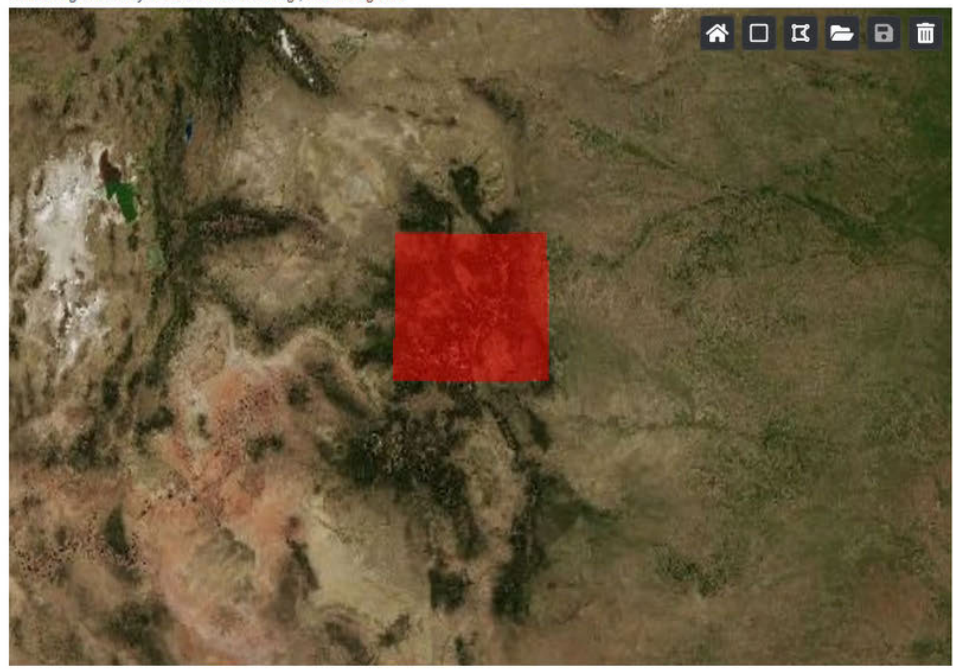


Overview **Download Data** Citing These Data User Guide Technical References Support



Login to Earthdata Other Access Options

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)

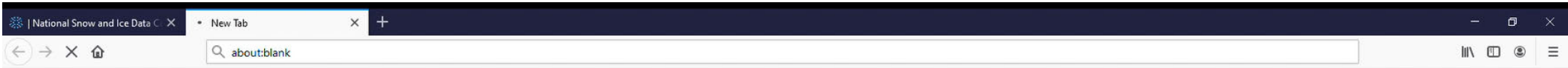
File Name	Size (MB)	Start Time	End Time
ATL08_20201028230327_05310906_003_01.h5	81.4	2020-10-28 23:03:27	2020-10-28 23:11:58
ATL08_20200730032339_05310806_003_01.h5	71.3	2020-07-30 03:23:38	2020-07-30 03:32:09
ATL08_20200430074350_05310706_003_02.h5	88.4	2020-04-30 07:43:57	2020-04-30 07:52:20
ATL08_20200130120405_05310606_003_01.h5	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)

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Support





search.earthdata.nasa.gov

NASA's Applied Remote Sensing Training Program



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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](#)

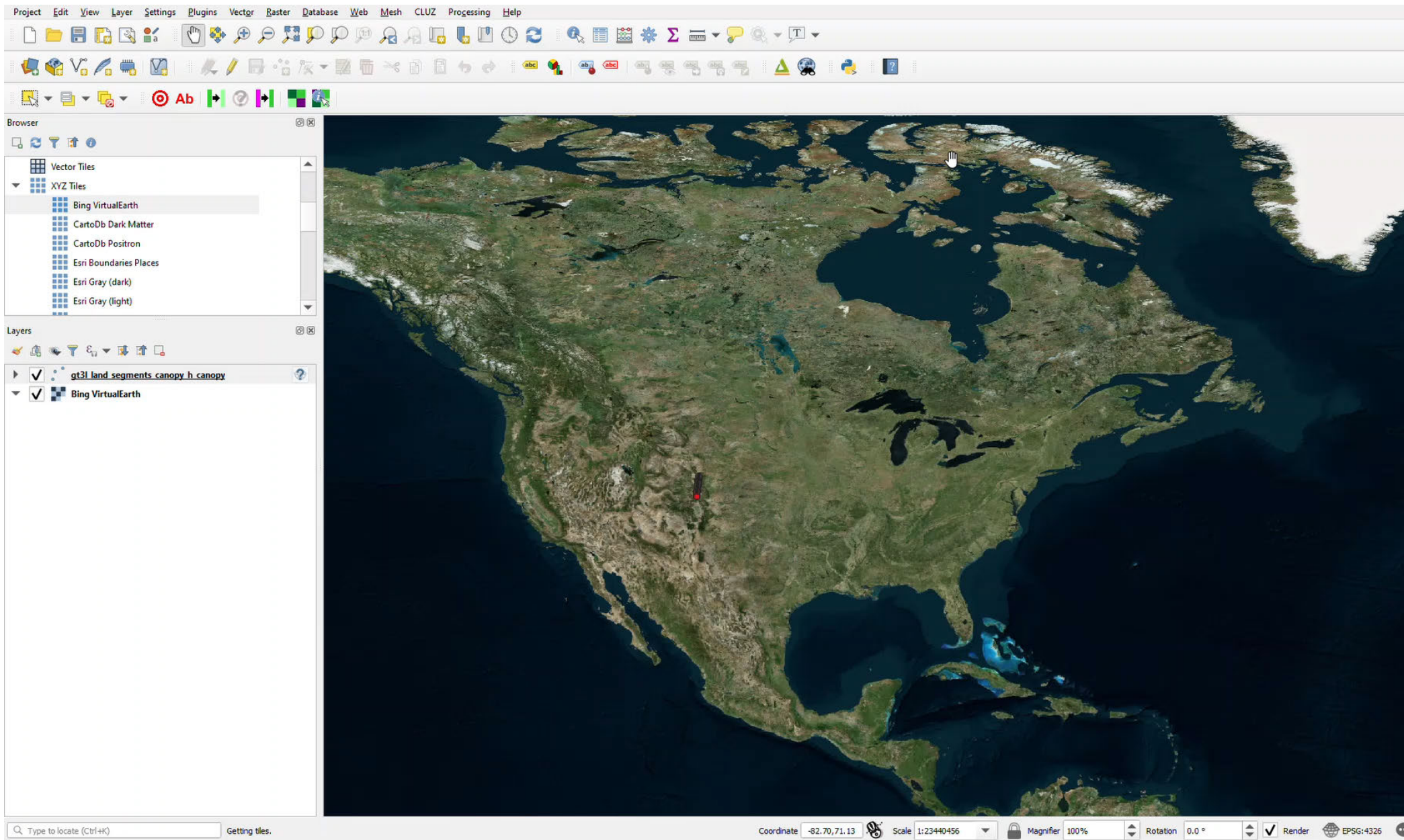
Retrieved 2 links for 10 granules.

<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.](#)



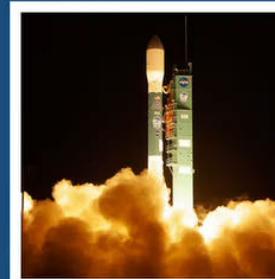
The Mission

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



Herramientas y Servicios

API and Jupyter Notebooks

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



.circleci	fix circleci	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

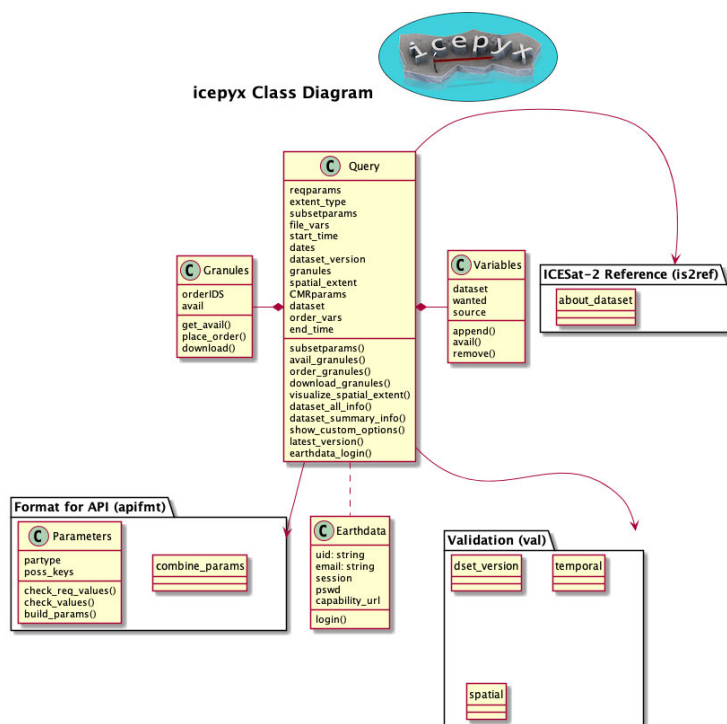


Herramientas y Servicios

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



Herramientas y Servicios: Visualización de Datos

HDFView

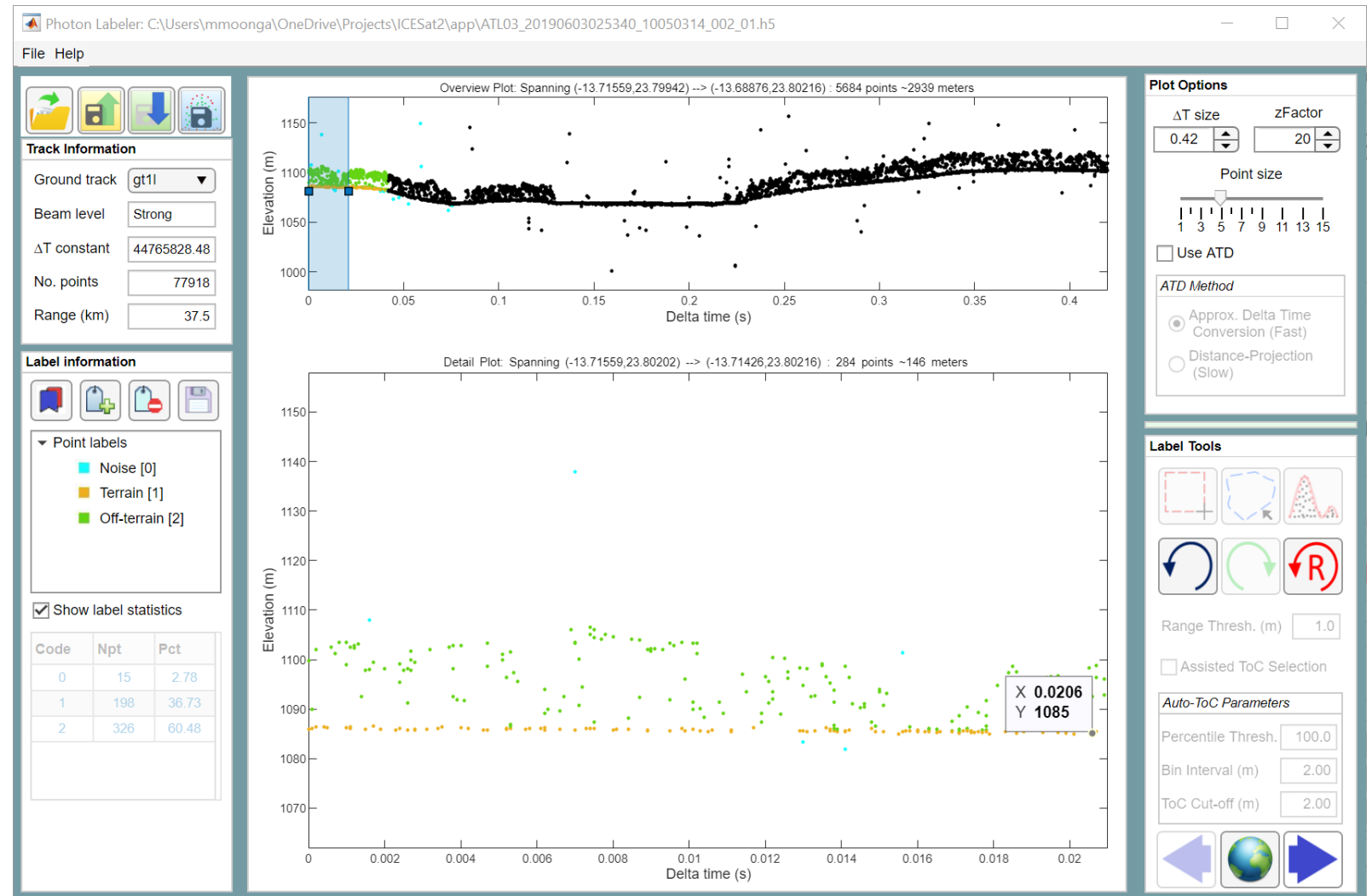
<https://www.hdfgroup.org/downloads/hdfview>



Herramientas y Servicios: Visualización de Datos

PhotonLabeler

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



Herramientas y Servicios: Visualización de Datos

PhoREAL

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

PhoREAL v3.24 - Applied Research Labs (The University of Texas at Austin)

Home Plot Data Help About

Get ICESat-2 Data Input

ATL03 File Type: .h5 File(s)

ATL08 File Type: .h5 File(s) (Optional)

Output Directory:

Ground Track Numbers: GT1R GT2R GT3R
Select By: GT Right/Left GT1L GT2L GT3L

Trim ICESat-2 Data Options:

None Manual Latitude Min Max Degrees
 Auto Time Seconds

Create Output Files: ATL03 .kml File ATL08 .kml File
 ATL03 .las File ATL03 .csv File ATL08 .csv File

Get Reference Data Input

Use Existing Buffer Buffer Size (m): 50 Save Reference File

Type: .las File(s)

Find ICESat-2 Offsets Relative to Reference Data

Cross-Track Bounds (m): -50, 50 Along-Track Bounds (m): -50, 50

Use Fixed Vertical Shift Vertical Shift (m): 0

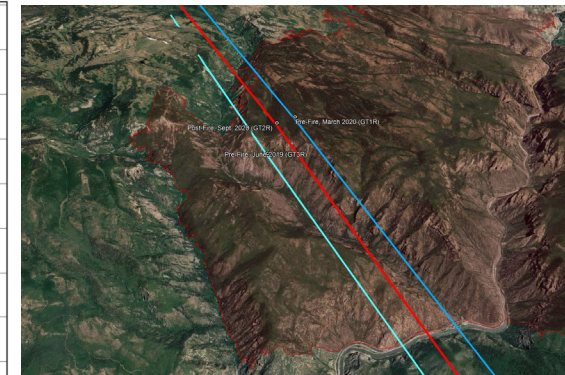
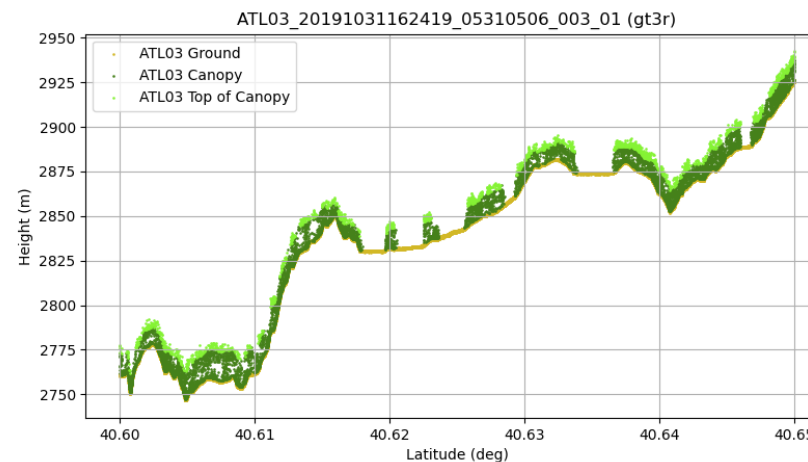
Grid Resolution(s) (m): 8, 4, 2, 1 Use ICESat-2 Heights: Ellipsoidal (HAE)

Use ICESat-2 Signal Confidence Value(s): 3, 4

Use Reference Ground Index: 2 (Requires ATL08 File)

Save Shifted ICESat-2 File Make Output Plots

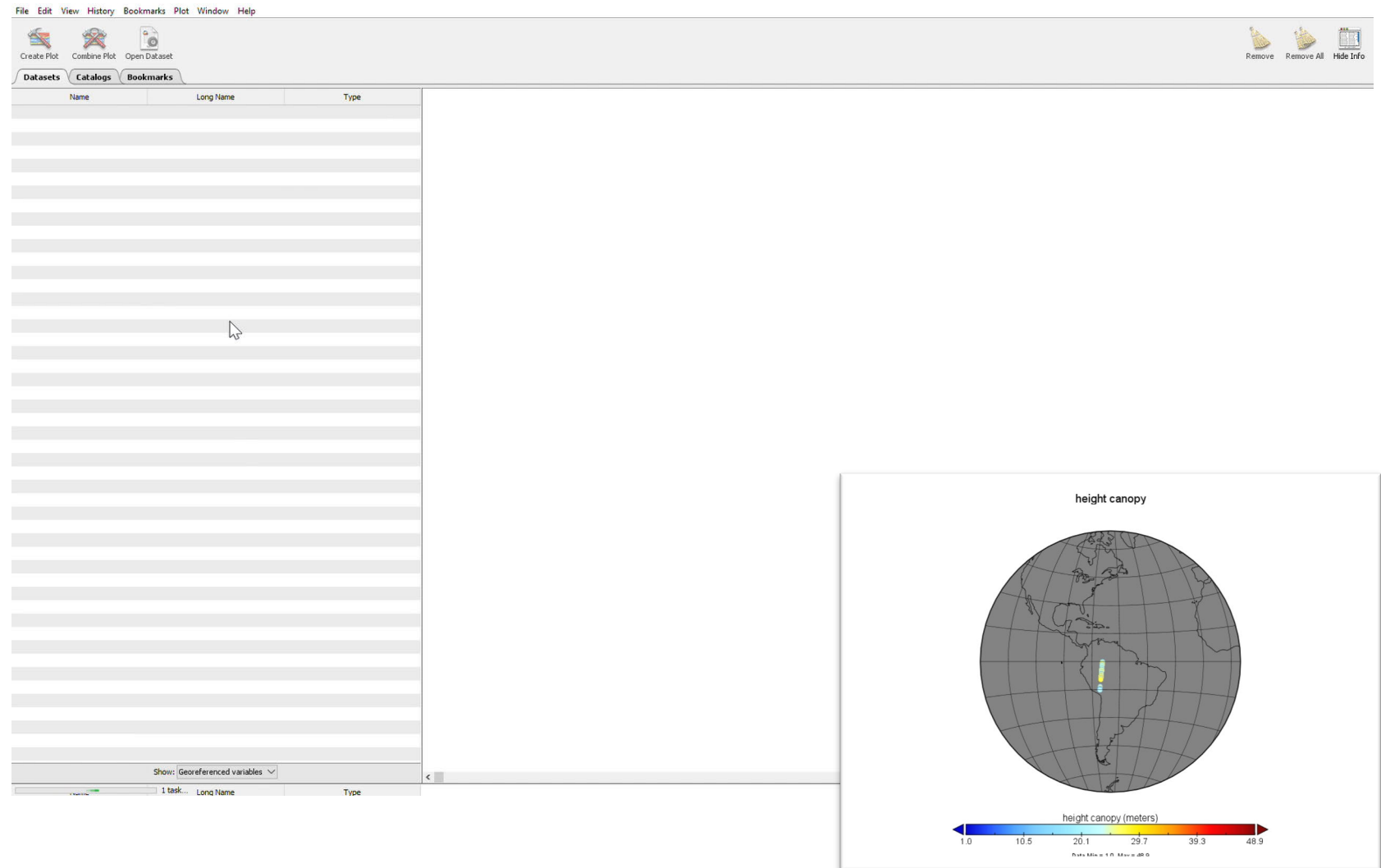
Progress:



Herramientas y Servicios: Visualización de Datos

Panoply

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

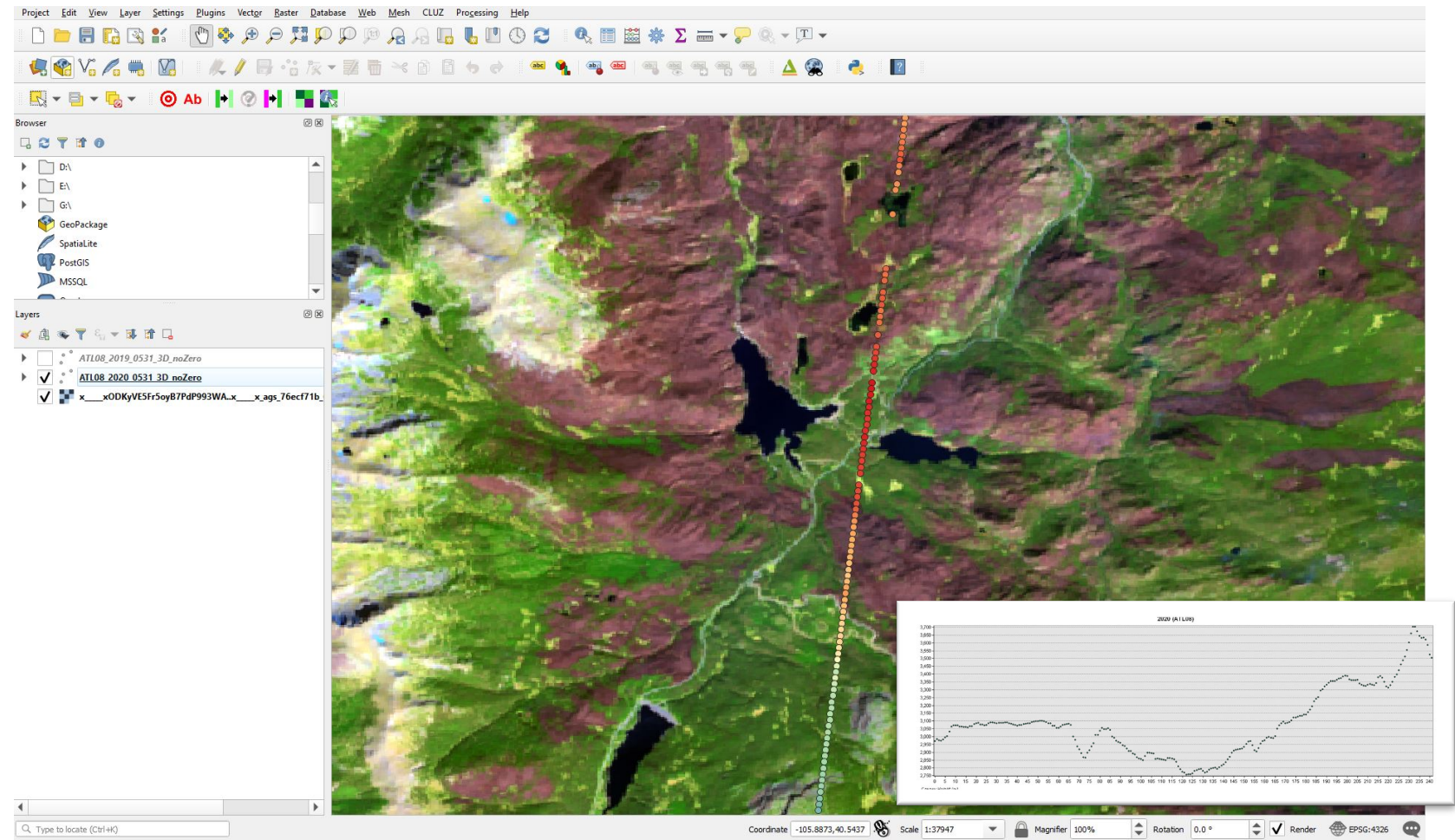


Herramientas y Servicios: Visualización de Datos

Reformateo a Shapefiles

NASA Earthdata Search

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





Visite la pagina web del **NSIDC DAAC** para acceder datos y documentación de ICESat-2

<https://nsidc.org/daac>

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

Contacte los Servicios al Usuario del NSIDC nsidc@nsidc.org

Especificaciones Tecnicas de ICESat-2

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





Gracias!

