

Description of Special Request ICESat/GLAS Files

Data from the ICESat/GLAS Data Subsetter is referred to as special request data. The data package you receive from the subsetter will contain a combination of various file types. The name for each file type begins with a special 2- or 3-character prefix, followed by the product identification number (01-15). You only need files beginning with GLA, which are the data files. All file types are described in Table 1. Details about each file type are available in Tables 3-6.

Table 1. All File Type Descriptions

Prefix	Description
GLA	The data file in scaled integer binary format. File naming convention is described in Table 2.
BNA BNL	The bin file lists the geographic bins that the product traverses and the unique index numbers within the product that go through that bin. One bin file is required for each product. BNA is for altimetry data; BNL is for atmosphere (lidar) data. See BN file byte description in Table 3.
GRA GRL	The georeference file allows direct access to the start of each bin in the bin file. One georeference file is required for each bin file. GRA is for altimetry data; GRL is for atmosphere (lidar) data. See GR file byte description in Table 4.
PS	The pass file lists the passes present in the product file. One pass file is required for each product file. See PS file byte description in Table 5.
UR	The unique index file correlates the physical data record numbers with the unique index numbers in a product file. One unique index file is required for each product file. See UR file byte description in Table 6.

The file naming convention for data files (GLA*) is illustrated in the following example and described in Table 2:

GLA07_03022023_r1069_428_L1.P0195_01_00

Table 2. GLA Data File Naming Convention

LA07	Product ID
03022023	Date (yymmddhh) of the beginning of the first granule that is used to create the subset
r1069	Special request number (r indicates this is a special request)
428	YXX release number See ICESat/GLAS YXX Release Numbers for more information about the release number in file names.
L1	Laser identifier (laser 1 in this example)
P0195	Unique product set ID number
01	"Part number" of file so multiple files can be created if a single file will exceed the 2 GB file size limit
00	Version of this file (starting with 00)

Table 3. Bin Table (BN) File Type Descriptions

Bytes	Type of variable	Description
1-4	I*4	Georeference bin number
5-15	Char*11	Pass ID (prkkccctttt)
16	Char*1	Spare byte so next integer will start on 4 byte boundary
17-20	I*4	Unique record index of first record on this pass that traverses this bin
21-24	I*4	Unique record index of the last record on this pass that traverses this bin

Table 4. Georeference Table (GR) File Type Description

Bytes	Type of variable	Description
1-4	I*4	Georeference bin number
5-8	I*4	Beginning data record number within the bin/ table for this bin
9-12	I*4	Ending data record number within the bin table for this bin

Table 5. Pass Table (PS) File Type Description

Bytes	Type of variable	Description
1-4	I*4	Reference orbit designator - prkk
5-8	I*4	Cycle number - ccc
9-12	I*4	Track number - tttt
13-16	I*4	Beginning unique record number of a contiguous span of data
17-20	I*4	Ending unique record number of a contiguous span of data

The Unique Record Index Table (UR) file type is described in Table 6.

NOTE: References to GLAS binary product names GLA01 to GLA15 refer to original GLAS binary data and are retained here for informational and provenance purposes. Access to GLAS binary data was removed 01 August, 2017. All GLAS data are available in HDF5 format, products GLAH01 to GLAH15.

Table 6. Unique Record Index Table (UR) File Type Description

Bytes	Type of variable	Description
1-4	I*4	Beginning unique record number
5-8	I*4	Ending unique record number,
9-16	R*8	UTC time of the beginning unique record number in seconds relative to noon, January 1, 2000
17-20	I*4	The data record number within this file that corresponds to the beginning unique record number – the first data record is number 1 (header records do not affect this number)
21-24	I*4	Waveform record mode (for GLA01 only)