ATL19 Product Data Dictionary

Date Generated : 2022-08-08T12:47:39

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description	(Attribute)	The ATL19 product contains S	ea Surface Height (SSH) of	the mid latitudes, northern and southern polar regions based on 1 month of data coverage (for ATL23 - based on 3		
level	(Attribute)	L3B				
short_name	(Attribute)	ATL19				
title	(Attribute)	SET_BY_META				
Group: /	, , , , , , , , , , , , , , , , , , , ,		ea Surface Height (SSH) of	the mid latitudes, northern and southern polar regions based on 1 month of data coverage (for ATL23 - based on 3		
Conventions	(Attribute)	CF-1.6				
citation	(Attribute)	SET_BY_META				
contributor_name	(Attribute)		neumann@nasa.gov). Thors	ten Markus (thorsten.markus@nasa.gov), Suneel Bhardwaj (suneel.bhardwaj@nasa.gov) David W Hancock III (da		
contributor_role	(Attribute)	Instrument Engineer, Investiga				
creator_name	(Attribute)	SET_BY_META	tor, i imolpie investigator, Di	and Froducti, Data Froducti		
date_created	(Attribute)	SET_BY_PGE				
		UTC				
date_type	(Attribute)					
geospatial_lat_max	(Attribute)	0.0				
geospatial_lat_min	(Attribute)	0.0				
geospatial_lat_units	(Attribute)	degrees_north				
geospatial_lon_max	(Attribute)	0.0				
geospatial_lon_min	(Attribute)	0.0				
geospatial_lon_units	(Attribute)	degrees_east				
granule_type	(Attribute)	ATL19				
hdfversion	(Attribute)	SET_BY_PGE				
history	(Attribute)	SET_BY_PGE				
identifier_file_uuid	(Attribute)	SET_BY_PGE				
identifier_product_doi	(Attribute)	10.5067/ATLAS/ATL19.001				
identifier_product_doi_authority	(Attribute)	http://dx.doi.org				
identifier_product_format_version	(Attribute)	SET_BY_PGE				
identifier_product_type	(Attribute)	ATL19				
institution	(Attribute)	SET_BY_META				
instrument	(Attribute)	SET_BY_META				
keywords	(Attribute)	SET_BY_META				
keywords_vocabulary	(Attribute)	SET BY META				
license	(Attribute)	Data may not be reproduced of NASA/GSFC.	Data may not be reproduced or distributed without including the citation for this product included in this metadata. Data may not be distributed in an altered form without the v			
naming_authority	(Attribute)	http://dx.doi.org				
platform	(Attribute)	SET_BY_META				
processing_level	(Attribute)	L3B				
project	(Attribute)	SET_BY_META				
publisher_email	(Attribute)	SET_BY_META				
publisher_name	(Attribute)	SET_BY_META				
publisher_url	(Attribute)	SET_BY_META				
references	(Attribute)	SET_BY_META				
source	(Attribute)	SET_BY_META				
spatial_coverage_type	(Attribute)	Horizontal				
standard name vocabulary	(Attribute)	CF-1.6				
summary	(Attribute)	SET_BY_META				
time_coverage_duration	(Attribute)	SET BY PGE				
time_coverage_end	(Attribute)	SET_BY_PGE				
time_coverage_end time coverage start	(Attribute)	SET_BY_PGE SET BY PGE		_		
	(Attribute)	CCSDS UTC-A		_		
time_type Label	Datatype(Dims)	long_name	units	description		
(Layout)	Fillvalue	standard_name		·		
delta_time_beg COMPACT	DOUBLE(1) INVALID_R8B	Beginning elapsed GPS seconds None	seconds	Beginning elapsed GPS seconds (Source: Ocean ATBD)		
delta_time_end COMPACT	DOUBLE(1) INVALID_R8B	Ending elapsed GPS seconds None	seconds	Ending elapsed GPS seconds (Source: Ocean ATBD)		
ds_hist_bincenters CHUNKED	DOUBLE(:)	DOT histogram bincenters grid_dot	meters	Grid dimension for dot_hist_grid (Source: Ocean ATBD)		
axis	(Attribute)	grid_dot				
grid_mapping	(Attribute)	crs				
ds_surf_type COMPACT	INTEGER(5)	Surface Type Dimension Scale surf_type	1	Dimension scale indexing the surface type array. Index=1 corresponds to Land; index = 2 corresponds to Ocean; Index=5 corresponds to InlandWater (Source: ATL19 ATBD); (Meanings: [1 2 3 4 5]) (Values: ['land', 'ocean', 'seaice', 'landice', 'inland water'])		
axis	(Attribute)	surf_type	l	The state of the s		
grid_mapping	(Attribute)	crs				
Group: /ancillary_data	(aito)		to the data product. This ma	y include product characteristics, instrument characteristics and/or processing constants.		
Label	Datatype(Dims)	long_name	units	description		
(Layout) atlas_sdp_gps_epoch	Fillvalue DOUBLE(1)	standard_name ATLAS Epoch Offset	seconds since 1980-01-	Number of GPS seconds between the GPS epoch (1980-01-06T00:00:00.000000Z UTC) and the ATLAS Standar		
COMPACT	, ,	None	06T00:00:00.000000Z	this value to delta time parameters to compute full gps_seconds (relative to the GPS epoch) for each data point. (Source: Operations)		

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control CONTIGUOUS	STRING(1)	Control File None	1	PGE-specific control file used to generate this granule. To re-use, replace breaks (BR) with linefeeds. (Source: Operations)
data_end_utc COMPACT	STRING(1)	End UTC Time of Granule (CCSDS-A, Actual) None	1	UTC (in CCSDS-A format) of the last data point within the granule. (Source: Derived)
data_start_utc COMPACT	STRING(1)	Start UTC Time of Granule (CCSDS-A, Actual) None	1	UTC (in CCSDS-A format) of the first data point within the granule. (Source: Derived)
end_cycle COMPACT	INTEGER(1)	Ending Cycle None	1	The ending cycle number associated with the data contained within this granule. The cycle number is the counter (Source: Derived)
end_delta_time COMPACT	DOUBLE(1)	ATLAS End Time (Actual) time	seconds since 2018-01- 01	Number of GPS seconds since the ATLAS SDP epoch at the last data point in the file. The ATLAS Standard Data /ancillary_data/atlas_sdp_gps_epoch as the number of GPS seconds between the GPS epoch (1980-01-06T00:0 contained within atlas_sdp_gps_epoch to delta time parameters, the time in gps_seconds relative to the GPS epo (Source: Derived)
end_geoseg COMPACT	INTEGER(1)	Ending Geolocation Segment None	1	The ending geolocation segment number associated with the data contained within this granule. ICESat granule (the geolocation process, a geolocation segment is created approximately every 20m from the start of the orbit to beams and provide a common segment length for the L2 and higher products. The geolocation segment indices of Earth. The geolocation segment indices on ATL01 and ATL02 are only approximate because beams have not bee (Source: Derived)
end_gpssow COMPACT	DOUBLE(1)	Ending GPS SOW of Granule (Actual) None	seconds	GPS seconds-of-week of the last data point in the granule. (Source: Derived)
end_gpsweek COMPACT	INTEGER(1)	Ending GPSWeek of Granule (Actual) None	weeks from 1980-01-06	GPS week number of the last data point in the granule. (Source: Derived)
end_orbit COMPACT	INTEGER(1)	Ending Orbit Number None	1	The ending orbit number associated with the data contained within this granule. The orbit number increments eac (Source: Derived)
end_region COMPACT	INTEGER(1)	Ending Region None	1	The ending product-specific region number associated with the data contained within this granule. ICESat-2 data within a specific region are the same for ATL01 and ATL02. ATL03 regions differ slightly because of different geold The region indices for other products are completely independent. (Source: Derived)
end_rgt COMPACT	INTEGER(1)	Ending Reference Groundtrack None	1	The ending reference groundtrack (RGT) number associated with the data contained within this granule. There ar reference groundtrack increments each time the spacecraft completes a full orbit of the Earth and resets to 1 eac (Source: Derived)
granule_end_utc COMPACT	STRING(1)	End UTC Time of Granule (CCSDS-A, Requested) None	1	Requested end time (in UTC CCSDS-A) of this granule. (Source: Derived)
granule_start_utc COMPACT	STRING(1)	Start UTC Time of Granule (CCSDS-A, Requested) None	1	Requested start time (in UTC CCSDS-A) of this granule. (Source: Derived)
qa_at_interval COMPACT	DOUBLE(1)	QA Along-Track Interval None	1	Statistics time interval for along-track QA data. (Source: control)
release COMPACT	STRING(1)	Release Number None	1	Release number of the granule. The release number is incremented when the software or ancillary data used to c (Source: Operations)
start_cycle COMPACT	INTEGER(1)	Starting Cycle None	1	The starting cycle number associated with the data contained within this granule. The cycle number is the counte (Source: Derived)
start_delta_time COMPACT	DOUBLE(1)	ATLAS Start Time (Actual) time	seconds since 2018-01- 01	Number of GPS seconds since the ATLAS SDP epoch at the first data point in the file. The ATLAS Standard Data /ancillary_data/astlas_sdp_gps_epoch as the number of GPS seconds between the GPS epoch (1980-01-06T00:0 contained within atlas_sdp_gps_epoch to delta time parameters, the time in gps_seconds relative to the GPS epc (Source: Derived)
start_geoseg COMPACT	INTEGER(1)	Starting Geolocation Segment None	1	The starting geolocation segment number associated with the data contained within this granule. ICESat granule the geolocation process, a geolocation segment is created approximately every 20m from the start of the orbit to 1 beams and provide a common segment length for the L2 and higher products. The geolocation segment indices of Earth. The geolocation segment indices on ATL01 and ATL02 are only approximate because beams have not bee (Source: Derived)
start_gpssow COMPACT	DOUBLE(1)	Start GPS SOW of Granule (Actual) None	seconds	GPS seconds-of-week of the first data point in the granule. (Source: Derived)
start_gpsweek COMPACT	INTEGER(1)	Start GPSWeek of Granule (Actual) None	weeks from 1980-01-06	GPS week number of the first data point in the granule. (Source: Derived)
start_orbit COMPACT	INTEGER(1)	Starting Orbit Number None	1	The starting orbit number associated with the data contained within this granule. The orbit number increments ea (Source: Derived)
start_region COMPACT	INTEGER(1)	Starting Region None	1	The starting product-specific region number associated with the data contained within this granule. ICESat-2 data within a specific region are the same for ATL01 and ATL02. ATL03 regions differ slightly because of different geole The region indices for other products are completely independent. (Source: Derived)
start_rgt COMPACT	INTEGER(1)	Starting Reference Groundtrack None	1	The starting reference groundtrack (RGT) number associated with the data contained within this granule. There a reference groundtrack increments each time the spacecraft completes a full orbit of the Earth and resets to 1 eac (Source: Derived)
version COMPACT	STRING(1)	Version None	1	Version number of this granule within the release. It is a sequential number corresponding to the number of times (Source: Operations)
Group: /ancillary_data/ocean Label	Datatype(Dims)	Contains general ancillary para long name	units	description
(Layout) 9ctr COMPACT	Fillvalue INTEGER(1)	standard_name Use cell and surrounding 8 cells	1	Process data within the grid cell and the surrounding 8 grid cells. 1=true (default), 0=false (Source: Ocean ATBD); (Meanings: [1 0]) (Values: [*true*, *false*])
grid_lat_size	DOUBLE(1)	None Latitude Grid Cell Size	degrees north	(Source: Ocean Arbb); (Meanings: [1 0]) (Values: [true , raise]) The size, in degrees, of each latitude step.
COMPACT grid Ion size	DOUBLE(1)	None Longitude Grid Cell Size	degrees east	The size, in degrees, of each radiude step. (Source: Operations) The size, in degrees, of each longitude step.
COMPACT grid_xy_size	DOUBLE(1)	None X and Y Grid Cell Size	meters	The size, in meters, of each x or y step.
COMPACT hist bin size	DOUBLE(1)	None Histogram Bin Size	meters	Dot histogram bin size in meters.
COMPACT hist bot	DOUBLE(1)	None Histogram Bottom	meters	Bottom (minimum height) of histograms.
COMPACT hist nbins	INTEGER(1)	None Number of histogram bins.	counts	Number of bins in each histogram.
COMPACT hist_top	DOUBLE(1)	None Histogram Top	meters	(Source: Derived) Top (maximum height) of histograms.
COMPACT midlat max avgcntr uncrtn	DOUBLE(1)	None Max midlat dot avgcntr	meters	(Source: Operations) Set midlat dot avgcntr and midlat ssb avgcntr invalid if midlat dot avgcntr uncrtn is greater than this.
COMPACT	(*)	uncertaintity None		(Source: Ocean ATBD)

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midlat_max_dfwcntr_uncrtn COMPACT	DOUBLE(1)	Max midlat_dot_dfwcntr uncertaintity None	meters	Set midlat_dot_dfwcntr and midlat_ssb_avgcntr invalid if midlat_dot_dfwcntr_uncrtn is greater than this. (Source: Ocean ATBD)
min_n_ocsegs COMPACT	INTEGER_8(1)	Min ocean segments for processing None	1	Process data if it contains data from a number of ocean segments greater than or equal to this. (Source: Ocean ATBD)
min_n_ocsegs4cntr COMPACT	INTEGER_8(1)	Min ocean segments for calculating center values None	1	Interpolate data to the center of a grid cell if it contains data from a number of ocean segments greater than or eq (Source: Ocean ATBD)
min_n_orbits COMPACT	INTEGER(1)	Min orbits for processing None	1	Process data for center values if it contains data from a number of orbits greater than or equal to this. (Source: Ocean ATBD)
npolar_max_avgcntr_uncrtn COMPACT	DOUBLE(1)	Max npolar_dot_avgcntr uncertaintity None	meters	Set npolar_dot_avgcntr and npolar_ssb_avgcntr invalid if npolar_dot_avgcntr_uncrtn is greater than this. (Source: Ocean ATBD)
npolar_max_dfwcntr_uncrtn COMPACT	DOUBLE(1)	Max npolar_dot_dfwcntr uncertaintity None	meters	Set npolar_dot_dfwcntr and npolar_ssb_dfwcntr invalid if npolar_dot_dfwcntr_uncrtn is greater than this. (Source: Ocean ATBD)
ocscan_time1 COMPACT	DOUBLE(1)	Ocean scan time None	seconds	If control podppd_edit =0 then before ocscan_time1 ATL19 uses ATL12 ocean segments with podppd_flag_seg = podppd_flag_seg = 0. Ocscan_time1 is in GPS seconds since the ATLAS Standard Data Products (SDP) epoch (/ancillary_data/atlas_sdp_gps_epoch as the number of GPS seconds between the GPS epoch (1980-01-06100:0 contained within atlas_sdp_gps_epoch to ocscan_time1, the time in gps_seconds relative to the GPS epoch can (Source: Operations)
podppd_edit COMPACT	INTEGER_1(1)	podppd_edit None	1	Control to filter use of ATL12 ocean segments based on ATL12 podppd_flag_seg values. 0 - use podppd = 0 and use only podppd = 0; 2 - use both podppd = 0 and 4 (Source: Control File Override); (Meanings: [0 1 2]) (Values: ['use_0_4_before_ocscan_time1', 'use_only_0', '
spolar_max_avgcntr_uncrtn COMPACT	DOUBLE(1)	Max spolar_dot_avgcntr uncertaintity None	meters	Set spolar_dot_avgcntr and spolar_ssb_avgcntr invalid if spolar_dot_avgcntr_uncrtn is greater than this. (Source: Ocean ATBD)
spolar_max_dfwcntr_uncrtn COMPACT	DOUBLE(1)	Max spolar_dot_dfwcntr uncertaintity None	meters	Set spolar_dot_dfwcntr and spolar_ssb_dfwcntr invalid if spolar_dot_dfwcntr_uncrtn is greater than this. (Source: Ocean ATBD)
use_all_beams COMPACT	INTEGER_1(1)	use_all_beams None	1	0 - Use only strong beams; 1 - use all beams. (Source: Control File Override); (Meanings: [0 1]) (Values: ['use_3_strong_beams', 'use_all_6_beams'])
Group: /mid_latitude	•	This group contains the mid_la	atitude grids.	
Label (Layout)	Datatype(Dims) Fillvalue	long_name standard_name	units	description
a_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Planar fit a coefficient None	meters/degree	The a coefficient of the planar fit used to compute dot_avgcntr_albm values. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	L	
a_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	Degrees of freedom planar fit a coefficient None	meters/degree	The a coefficient of the planar fit used to compute dot_dfwcntr_albm values. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	l .	
b_avg	DOUBLE(:,:)	Planar fit b coefficient	meters/degree	The b coefficient of the planar fit used to compute dot_avgcntr_albm values.
CHUNKED	INVALID_R8B	None		(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	T	
b_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	Degrees of freedom planar fit b coefficient None	meters/degree	The b coefficient of the planar fit used to compute dot_dfwcntr_albm values. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	L	
c_avg CHUNKED	DOUBLE(:,:) INVALID R8B	Planar fit c coefficient None	meters	The c coefficient of the planar fit used to compute dot_avgcntr_albm values. (Source: Ocean ATBD)
grid mapping	(Attribute)	crs	I	
c_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	Degrees of freedom planar fit c coefficient None	meters	The c coefficient of the planar fit used to compute dot_dfwcntr_albm values. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	•	
crs COMPACT	INTEGER_1(1)	Coordinate Reference System None	1	Coordinate Reference System (Source: Ocean ATBD)
crs_wkt	(Attribute)			VGS]],AUTHORITY["EPSG","6326"]],PRIMEM["Greenwich",0,AUTHORITY["EPSG","8901"]],UNIT["degree",0.0174532
grid_mapping_name	(Attribute)	latitude_longitude		
inverse_flattening	(Attribute)	298.257223563 0.0		
longitude_of_prime_meridian	(Attribute)		±no dofo	
proj4text	(Attribute)	+proj=longlat +datum=WGS84 6378137.0	THO_uels	
semi_major_axis	(Attribute)	urn:ogc:def:crs:EPSG::4326		
delta_time_beg COMPACT	DOUBLE(1) INVALID_R8B	Beginning elapsed GPS seconds	seconds	Beginning elapsed GPS seconds for the month of mid_latitude data (Source: Ocean ATBD)
delta_time_end COMPACT	DOUBLE(1) INVALID_R8B	None Ending elapsed GPS seconds	seconds	Ending elapsed GPS seconds for the month of mid_latitude data (Source: Ocean ATBD)
depth_avg_albm CHUNKED	FLOAT(:,:) INVALID_R4B	Mean ocean depth None	meters	All beam average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
depth_dfw_albm CHUNKED	FLOAT(:,:) INVALID_R4B	Degrees of freedom (DOF) weighted mean ocean depth None	meters	All beam degrees of freedom (DOF) weighted average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dof_albm	DOUBLE(:,:)	Total degrees of freedom	counts	All beam total of ocean segment degrees of freedom
CHUNKED	(Attributo)	None	l	(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs Mean DOT	meters	All hearn average of ATI 12 ocean segments dynamic ocean tanography (DOT) within each cell and
dot_avg_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	None	meters	All beam average of ATL12 ocean segments dynamic ocean topography (DOT) within each cell grid (Source: Ocean ATBD)
grid_mapping	(Attribute)	Uncertainty of many DOT	matara	All beam unactainty of many accordance TOOT
dot_avg_uncrtn_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Uncertainty of mean DOT None	meters	All beam uncertainty of mean ocean segment DOT (Source: Ocean ATBD)

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grid_mapping	(Attribute)	crs:		
dot_avgcntr CHUNKED	DOUBLE(:,:) INVALID R8B	Mean DOT at cell center None	meters	Simple all-beam average of ATL12 ocean segments dynamic ocean topography interpolated to center of grid cell (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	L	<u>'</u>
dot_avgcntr_uncrtn CHUNKED	DOUBLE(:,:) INVALID_R8B	Uncertainty of mean DOT center None	meters	All beam uncertainty of ocean segment dynamic ocean topography (DOT) interpolated to center of grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	L	<u> </u>
dot_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean DOT None	meters	All beam DOF-weighted average of ATL12 ocean segments DOT within each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	•	
dot_dfw_uncrtn_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Uncertainty of DOF-weighted DOT None	meters	All beam uncertainty of DOF-weighted average of ocean segment DOT (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	L	<u> </u>
dot_dfwcntr CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF weighted mean DOT at cell center None	meters	Degree of freedom weighted all-beam average dynamic ocean topography interpolated to center of grid cell base (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_hist_albm CHUNKED	FLOAT(:,:,:) INVALID_R4B	All beam aggregate PDF of photon heights None	1/meter	All beam aggregate probability density function of all surface photon DOT for all the ocean segments in the grid c scale /ds_hist_bincenters. The latitude and longitude of each grid cell are provided in/mid_latitude/gridcntr_lat and (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	L	<u>'</u>
dot_sigma_avg_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean DOT sigma None	meters	All beam simple average of ocean segment standard deviation of dynamic ocean topography (DOT). (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	•	
dot_sigma_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean DOT sigma None	meters	All beam DOF-weighted average of ocean segment standard deviation of DOT (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		1
geoid_avg_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean geoid height None	meters	All beam average of ocean segment mean tide system geoid height. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
geoid_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean geoid height None	meters	All beam DOF-weighted average of ocean segment mean tide system geoid height. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
gridcntr_lat CHUNKED	DOUBLE(:,:)	Grid cell center latitude None	degrees_north	Defined center latitude for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
gridcntr_lon CHUNKED	DOUBLE(:,:)	Grid cell center longitude None	degrees_east	Defined center longitude for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		[Journal of Contain Harry
ice_conc_albm CHUNKED	FLOAT(:,:)	Mean ice concentration None	1	All beam average of ice concentration. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	I.	
landmask CHUNKED	INTEGER(:,:)	Ocean landmask None	1	Ocean landmask. 0=land, 1=ocean. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
lat_avg_albm CHUNKED	DOUBLE(:,:) INVALID R8B	Mean latitude None	degrees_north	All beam average of ocean segment latitude. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
lat_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean latitudes None	degrees_north	All beam DOF-weighted average of ocean segment latitude. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		1
latitude	DOUBLE(:)	Grid cell center latitudes	degrees_north	Grid cell center latitudes (dimension scale)
CHUNKED axis	(Attribute)	latitude Y	l	(Source: Ocean ATBD)
length_dfw_albm CHUNKED	FLOAT(:,:) INVALID_R4B	DOF-weighted mean ocean segment length None	meters	All beam DOF-weighted average of ocean segment lengths. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	I	<u> </u>
length_sum_albm CHUNKED	FLOAT(:,:) INVALID_R4B	Sum of ocean segment lengths None	meters	All beam sum of ocean segment lengths. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		1
lon_avg_albm	DOUBLE(:,:)	Mean longitude	degrees_east	All beam average of ocean segment longitude.
CHUNKED grid_mapping	(Attribute)	None	l	(Source: Ocean ATBD)
lon_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean grid longitude	degrees_east	All beam DOF-weighted average of ocean segment longitude. (Source: Ocean ATBD)
., .	(411	None		
grid_mapping Iongitude	(Attribute) DOUBLE(:)	crs Grid cell center longitude	degrees east	Grid cell center longitudes (dimension scale)
CHUNKED	DOUBLE(.)	longitude	ucgiees_east	(Source: Ocean ATBD)
axis	(Attribute)	Х	<u> </u>	
n_ph_srfc_albm CHUNKED	INTEGER(:,:)	Number of surface photons None	counts	All beam sum of ocean segment number of surface reflected photons. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	Т.	Time and the second
n_phs_ttl_albm CHUNKED	INTEGER(:,:)	Number of total photons None	counts	All beam sum of ocean segment total number of photons. (Source: Ocean ATBD)
grid_mapping	(Attribute)	Number of eacen assements	Lacunto	All beam number of each comments
n_segs_albm CHUNKED	INTEGER(:,:)	Number of ocean segments None	counts	All beam number of ocean segments. (Source: Ocean ATBD)
				

grid_mapping	(Attribute)	crs		
podppd_flag_prcnt_albm CHUNKED	FLOAT(:,:) INVALID_R4B	Percent segments used with podppd_flag=0 None	1	All beam percent of ATL12 segments used that had podppd_flag_seg=0 for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
r_noise_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Rate of noise photons per meter None	1/meter	All beam rate of noise photons per meter. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	•	
r_srfc_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Rate of surface photons per meter None	1/meter	All beam rate of surface photons per meter. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
sea_ice_flag CHUNKED	INTEGER(:,:) INVALID I4B	Sea ice flag None	counts	TBD (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		P '
ssb_avg_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean sea state bias None	meters	All beam average of ocean segment sea state bias (SSB). (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	•	
ssb_avgcntr CHUNKED	DOUBLE(:,:) INVALID_R8B	Sea state bias at cell center None	meters	All beam estimate of sea state bias (SSB) at center of each grid cell for dot_avgcntr. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	1	
ssb_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean sea state bias None	meters	All beam DOF-weighted average of ocean segment sea state bias. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	•	
ssb_dfwcntr CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted sea state bias at cell center None	meters	All beam estimate of sea state bias at center of grid cell for dot_dfwcntr. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	1	1
surf_prcnt_avg_albm CHUNKED	FLOAT(:,:,:) INVALID_R4B	Mean surface type None	1	All beam average of the percentage of each surface type. Map order: land, ocean, sea ice, ice sheet, inland wate (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
surf_prcnt_dfw_albm CHUNKED	FLOAT(:,:,:) INVALID_R4B	DOF-weighted mean surface type None	1	All beam DOF-weighted average of the percentage of each surface type. Map order: land, ocean, sea ice, ice she (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	•	
swh_avg_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean significant waveheight None	meters	All beam mean of the ocean segment significant wave heights. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
swh_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean significant wave height None	meters	All beam DOF-weighted average of ocean segment significant wave height. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	I.	
grid_mapping Group: /mid_latitude/beam_x	(Attribute)		eams 1, 3, and 5 (strong bea	ms), and beams 2, 4, and 6 (weak beams).
	(Attribute) Datatype(Dims) Fillvalue		eams 1, 3, and 5 (strong bea	ims), and beams 2, 4, and 6 (weak beams). description
Group: /mid_latitude/beam_x Label	Datatype(Dims)	This group contains data for be		
Group: /mid_latitude/beam_x Label (Layout) depth avg	Datatype(Dims) Fillvalue FLOAT(:,:)	This group contains data for be long_name standard_name Mean ocean depth	units	description Average of ocean segment ocean depth for each grid cell.
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED	Datatype(Dims) Fillvalue FLOAT(:,:) INVALID_R4B	This group contains data for be long_name standard_name Mean ocean depth None	units	description Average of ocean segment ocean depth for each grid cell.
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw	Datatype(Dims) Fillvalue FLOAT(:.:) INVALID_R4B (Attribute) FLOAT(:,:)	This group contains data for be long_name standard_name Mean ocean depth None Crs Degrees of freedom (DOF) weighted mean ocean depth	units	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth.
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED	Datatype(Dims) Fillvalue FLOAT(:.:) INVALID_R4B (Attribute) FLOAT(:.:) INVALID_R4B	This group contains data for be long_name standard_name Mean ocean depth None Crs Degrees of freedom (DOF) weighted mean ocean depth None	units	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth.
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof	Datatype(Dims) Fillvalue FLOAT(:,:) INVALID_R4B (Attribute) FLOAT(:,:) INVALID_R4B (Attribute) DOUBLE(:,:) INVALID_R8B (Attribute)	This group contains data for be long_name standard_name Mean ocean depth None crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs	meters meters meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD)
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED	Datatype(Dims) Fillvalue FLOAT(:) INVALID_R4B (Attribute) FLOAT(:) INVALID_R4B (Attribute) DOUBLE(:.:) INVALID_R8B (Attribute) DOUBLE(:.:) INVALID_R8B	This group contains data for be long_name standard_name Mean ocean depth None Crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None	units meters meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD)
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED grid_mapping dof CHUNKED grid_mapping dot_avg CHUNKED grid_mapping	Datatype(Dims) Fillvalue FLOAT(:) INVALID_R4B (Attribute) FLOAT(:) INVALID_R4B (Attribute) DOUBLE(:.:) INVALID_R8B (Attribute) DOUBLE(:.:) INVALID_R8B (Attribute)	This group contains data for be long_name standard_name Mean ocean depth None Crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None crs	meters meters meters meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD)
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED grid_mapping dof_avg CHUNKED grid_mapping dot_avg CHUNKED grid_mapping dot_avg CHUNKED grid_mapping	Datatype(Dims) Fillvalue FLOAT(;;) INVALID_R4B (Attribute) FLOAT(;;) INVALID_R4B (Attribute) DOUBLE(;;) INVALID_R8B (Attribute) DOUBLE(;;) INVALID_R8B (Attribute) DOUBLE(;;) INVALID_R8B	This group contains data for be long_name standard_name Mean ocean depth None crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom none crs Mean DOT None Crs Uncertainty of mean DOT None	meters meters meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam.
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED grid_mapping dof_avapping dot_avapg CHUNKED grid_mapping dot_avay_uncrth CHUNKED grid_mapping dot_avay_uncrth CHUNKED grid_mapping	Datatype(Dims) Fillvalue FLOAT(;;) INVALID_R4B (Attribute) FLOAT(;;) INVALID_R4B (Attribute) DOUBLE(;;) INVALID_R8B (Attribute) DOUBLE(;;) INVALID_R8B (Attribute) DOUBLE(;;) INVALID_R8B (Attribute) DOUBLE(;;) INVALID_R8B (Attribute)	This group contains data for be long_name standard_name Mean ocean depth None crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None crs Uncertainty of mean DOT None crs	units meters meters meters meters meters meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of mean ocean segment DOT (Source: Ocean ATBD)
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Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED grid_mapping dot_avg CHUNKED grid_mapping dot_avg uncth CHUNKED grid_mapping dot_avg_uncth CHUNKED grid_mapping dot_avg_uncth CHUNKED grid_mapping dot_dot_dot dot dot dfw	Datatype(Dims) Fillvalue FLOAT(:.:) INVALID_R4B (Attribute) FLOAT(:.:) INVALID_R4B (Attribute) DOUBLE(:.:) INVALID_R8B (Attribute) DOUBLE(:::) INVALID_R8B (Attribute) DOUBLE(:::) INVALID_R8B (Attribute) DOUBLE(:::) INVALID_R8B (Attribute) DOUBLE(:::) DOUBLE(:::) INVALID_R8B	This group contains data for be long name standard_name Mean ocean depth None crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None crs Uncertainty of mean DOT None crs DOF-weighted mean DOT	units meters meters meters meters meters meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of mean ocean segment DOT (Source: Ocean ATBD) DOF-weighted average of ATL12 ocean segments DOT within each grid cell for one beam.
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED grid_mapping dot_avg CHUNKED Grid_mapping dot_avg CHUNKED grid_mapping dot_avg CHUNKED grid_mapping dot_avg uncrtn CHUNKED grid_mapping dot_dtavg_uncrtn CHUNKED grid_mapping dot_dtavg_uncrtn CHUNKED grid_mapping dot_dfw CHUNKED	Datatype(Dims) Fillvalue FLOAT(;;;) INVALID_R4B (Attribute) FLOAT(;;) INVALID_R4B (Attribute) DOUBLE(;;;) INVALID_R8B	This group contains data for be long name standard_name Mean ocean depth None crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None crs Uncertainty of mean DOT None crs DOF-weighted mean DOT None	units meters meters meters meters meters meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of mean ocean segment DOT (Source: Ocean ATBD) DOF-weighted average of ATL12 ocean segments DOT within each grid cell for one beam.
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED grid_mapping dot_avg CHUNKED grid_mapping dot_avg Uncrtn CHUNKED grid_mapping dot_avg_uncrtn CHUNKED grid_mapping dot_avg_uncrtn CHUNKED grid_mapping dot_avg_uncrtn CHUNKED grid_mapping dot_dfw CHUNKED grid_mapping dot_dfw CHUNKED grid_mapping dot_dfw uncrtn CHUNKED grid_mapping	Datatype(Dims) Fillvalue FLOAT(;;) INVALID_R4B (Attribute) FLOAT(;;) INVALID_R4B (Attribute) DOUBLE(;;) INVALID_R8B	This group contains data for be long_name standard_name Mean ocean depth None crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None crs Uncertainty of mean DOT None crs DOF-weighted mean DOT None crs Uncertainty of DOF-weighted DOT None crs Uncertainty of DOF-weighted DOT None crs Crs Crs Crs Crs Crs Crs Crs	meters meters meters meters meters meters meters meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of mean ocean segment DOT (Source: Ocean ATBD) DOF-weighted average of ATL12 ocean segments DOT within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of DOF-weighted average of ocean segment DOT (Source: Ocean ATBD)
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Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED grid_mapping dot_avg CHUNKED grid_mapping dot_avg CHUNKED grid_mapping dot_avg.uncrtn CHUNKED grid_mapping dot_to_way_uncrtn CHUNKED grid_mapping dot_dfw CHUNKED grid_mapping dot_dfw CHUNKED grid_mapping dot_dfw CHUNKED grid_mapping dot_dfw_uncrtn CHUNKED grid_mapping dot_dfw_uncrtn CHUNKED grid_mapping dot_dfw_uncrtn CHUNKED grid_mapping dot_kurt_avg	Datatype(Dims) Fillvalue FLOAT(:) INVALID_R4B (Attribute) FLOAT(:) INVALID_R4B (Attribute) DOUBLE(:.:) INVALID_R8B	This group contains data for be long_name standard_name Mean ocean depth None Crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None crs Uncertainty of mean DOT None crs DOF-weighted mean DOT None crs Uncertainty of DOF-weighted DOT None crs Uncertainty of DOF-weighted DOT None crs Uncertainty of DOF-weighted DOT None crs Mean DOT None crs Mean DOT Kurtosis	meters meters meters meters meters meters meters meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of mean ocean segment DOT (Source: Ocean ATBD) DOF-weighted average of ATL12 ocean segments DOT within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of DOF-weighted average of ocean segment DOT (Source: Ocean ATBD) Average of ocean ATBD)
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Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED grid_mapping dot_avg CHUNKED grid_mapping dot_avg CHUNKED grid_mapping dot_avg.unertn CHUNKED grid_mapping dot_dfw CHUNKED grid_mapping dot_kurt_avg CHUNKED grid_mapping dot_kurt_dfw CHUNKED grid_mapping dot_kurt_dfw CHUNKED grid_mapping dot_sigma_avg CHUNKED	Datatype(Dims) Fillvalue FLOAT(:.:) INVALID_R4B (Attribute) FLOAT(:.:) INVALID_R4B (Attribute) DOUBLE(:.:) INVALID_R8B	This group contains data for be long_name standard_name Mean ocean depth None crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None crs Uncertainty of mean DOT None crs Uncertainty of DOF-weighted DOT None crs Uncertainty of DOF-weighted DOT None crs Uncertainty of DOF-weighted DOT None crs DOF-weighted mean DOT None crs Mean DOT kurtosis None crs DOF-weighted mean DOT kurtosis None crs Mean DOT sigma None	meters meters meters meters meters meters meters 1	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of mean ocean segment DOT (Source: Ocean ATBD) DOF-weighted average of ATL12 ocean segments DOT within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of DOF-weighted average of ocean segment DOT (Source: Ocean ATBD) Average of ocean ATBD) Average of ocean segment excess kurtosis of the dynamic ocean topography (DOT) (Source: Ocean ATBD) Kurtosis of the dynamic ocean topography (DOT) as a degree-of-freedom weighted average of kurtosis of DOT of (Source: Ocean ATBD)
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof CHUNKED grid_mapping dot_avg CHÜNKED grid_mapping dot_avg CHÜNKED grid_mapping dot_avg_uncrtn CHÜNKED grid_mapping dot_dfw CHÜNKED grid_mapping dot_dfw CHÜNKED grid_mapping dot_dfw_uncrtn CHÜNKED grid_mapping dot_dfw_uncrtn CHÜNKED grid_mapping dot_dfw_uncrtn CHÜNKED grid_mapping dot_dfw_uncrtn CHÜNKED grid_mapping dot_kurt_avg CHÜNKED grid_mapping dot_kurt_dfw CHÜNKED grid_mapping dot_kurt_dfw CHÜNKED grid_mapping dot_kurt_dfw CHÜNKED grid_mapping dot_sigma_avg	Datatype(Dims) Fillvalue FLOAT(:.:) INVALID_R4B (Attribute) FLOAT(:.:) INVALID_R4B (Attribute) DOUBLE(:.:) INVALID_R8B	This group contains data for be long_name standard_name Mean ocean depth None crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None crs Uncertainty of mean DOT None crs Uncertainty of DOF-weighted DOT None crs Uncertainty of DOF-weighted DOT None crs Uncertainty of DOF-weighted DOT None crs Mean DOT kurtosis None crs Mean DOT kurtosis None crs Mean DOT sigma None crs Mean DOT sigma None crs DOF-weighted mean DOT kurtosis None crs Mean DOT sigma None crs	meters meters meters meters meters meters meters 1	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of mean ocean segment DOT (Source: Ocean ATBD) DOF-weighted average of ATL12 ocean segments DOT within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of DOF-weighted average of ocean segment DOT (Source: Ocean ATBD) Average of ocean segment excess kurtosis of the dynamic ocean topography (DOT) (Source: Ocean ATBD) Kurtosis of the dynamic ocean topography (DOT) as a degree-of-freedom weighted average of kurtosis of DOT of (Source: Ocean ATBD)
Group: /mid_latitude/beam_x Label (Layout) depth_avg CHUNKED grid_mapping depth_dfw CHUNKED grid_mapping dof_cHUNKED grid_mapping dot_avg CHUNKED grid_mapping dot_avg_uncrtn CHUNKED grid_mapping dot_afw CHUNKED grid_mapping dot_dfw CHUNKED grid_mapping dot_surt_avg CHUNKED grid_mapping dot_surt_avg CHUNKED grid_mapping dot_surt_avg CHUNKED grid_mapping dot_surt_afw CHUNKED grid_mapping dot_surt_afw CHUNKED grid_mapping dot_sigma_avg CHUNKED	Datatype(Dims) Fillvalue FLOAT(:.:) INVALID_R4B (Attribute) FLOAT(:.:) INVALID_R4B (Attribute) DOUBLE(:.:) INVALID_R8B	This group contains data for be long_name standard_name Mean ocean depth None crs Degrees of freedom (DOF) weighted mean ocean depth None crs Total degrees of freedom None crs Mean DOT None crs Uncertainty of mean DOT None crs DOF-weighted mean DOT None crs DOF-weighted mean DOT None crs Mean DOT None crs DOF-weighted mean DOT None crs Mean DOT kurtosis None crs DOF-weighted mean DOT kurtosis None crs Mean DOT sigma None crs Mean DOT sigma None crs DOF-weighted mean DOT crs	meters meters meters meters meters meters meters 1 1 meters	description Average of ocean segment ocean depth for each grid cell. (Source: Ocean ATBD) Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) Beam total of ocean segment degrees of freedom (Source: Ocean ATBD) Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of mean ocean segment DOT (Source: Ocean ATBD) DOF-weighted average of ATL12 ocean segments DOT within each grid cell for one beam. (Source: Ocean ATBD) Uncertainty of DOF-weighted average of ocean segment DOT (Source: Ocean ATBD) Uncertainty of DOF-weighted average of ocean segment DOT (Source: Ocean ATBD) Average of ocean segment excess kurtosis of the dynamic ocean topography (DOT) (Source: Ocean ATBD) Kurtosis of the dynamic ocean topography (DOT) as a degree-of-freedom weighted average of kurtosis of DOT of (Source: Ocean ATBD) Simple average of ocean segment standard deviation of dynamic ocean topography (DOT) (Source: Ocean ATBD)

dot skow sva	DOLIBLE/: :\	Moon DOT alsours	1	Average of econo comment eleganoes of the dimensio secon tenegraphy (DOT)
dot_skew_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean DOT skewness None	1	Average of ocean segment skewness of the dynamic ocean topography (DOT) (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_skew_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean DOT skewness None	1	Skewness of the dynamic ocean topography (DOT) as a degree-of-freedom weighted average of skewness of DC (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
geoid_avg CHUNKED	DOUBLE(:,:) INVALID R8B	Mean geoid height None	meters	Average of ocean segment mean tide system geoid height (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		[Journal of Control of
geoid_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean geoid height None	meters	DOF-weighted average of ocean segment mean tide system geoid height (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
ice_conc CHUNKED	FLOAT(:,:)	Mean ice concentration None	1	Average of ice concentration. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		P -
lat_avg CHUNKED	DOUBLE(:,:) INVALID R8B	Mean latitudes None	degrees_north	Average of ocean segment latitude (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		Γ ,
lat_dfw	DOUBLE(:,:)	DOF-weighted mean latitude	degrees_north	DOF-weighted average of ocean segment latitude
CHUNKED	(Attribute)	None crs		(Source: Ocean ATBD)
grid_mapping length dfw	FLOAT(:,:)	DOF weighted mean of	meters	DOF-weighted average of ocean segment length.
CHŪNKED	INVALID_R4B	ocean segment lengths None	metors	(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	motors	Sum of accord cogment lengths for each grid call
length_sum CHUNKED	FLOAT(:,:) INVALID_R4B	Sum of ocean segment lengths None	meters	Sum of ocean segment lengths for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	Ι, .	L , , , , , , , ,
lon_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean longitudes None	degrees_east	Average of ocean segment longitude. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
lon_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean longitude None	degrees_east	DOF-weighted average of ocean segment longitude. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
n_ph_srfc CHUNKED	INTEGER(:,:)	Number of surface photons None	counts	Sum of ocean segment number of surface reflected photons (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		(Source: Ocean ATBD)
n_phs_ttl	INTEGER(:,:)	Number of total photons	counts	Sum of ocean segment total number of photons
CHUNKED grid_mapping	(Attribute)	None crs		(Source: Ocean ATBD)
n_segs CHUNKED	INTEGER(:,:)	Number of ocean segments None	counts	Number of ocean segments (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
podppd_flag_prcnt CHUNKED	FLOAT(:,:) INVALID_R4B	Percent segments used with podppd_flag=0 None	1	Percent of ATL12 segments used that had podppd_flag_seg=0 for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
r_noise CHUNKED	DOUBLE(:,:) INVALID_R8B	Rate of noise photons per meter None	1/meter	Rate of noise photons per meter (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
r_srfc CHUNKED	DOUBLE(:,:) INVALID_R8B	Rate of surface photons per meter None	meters	Rate of surface photons per meter (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
ssb_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean sea state bias None	meters	Average of ocean segment sea state bias (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	1	1
ssb_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean sea state bias None	meters	DOF-weighted average of ocean segment sea state bias (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
surf_prcnt_avg CHUNKED	FLOAT(:,:,:) INVALID_R4B	Mean surface type None	1	Average of the percentage of each surface type. Map order: land, ocean, sea ice, ice sheet, inland water (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
surf_prcnt_dfw CHUNKED	FLOAT(:,:,:) INVALID_R4B	DOF-weighted mean surface type None	1	DOF-weighted average of the percentage of each surface type. Map order: land, ocean, sea ice, ice sheet, inland (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
swh_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean significant wave height None	meters	Mean of the ocean segment significant wave height (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	1	<u>'</u>
swh_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean significant wave heights None	meters	DOF-weighted average of ocean segment significant wave height (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	1	1
Group: /orbit_info		Contains orbit information.		
data_rate	(Attribute)	Varies. Data are only provided	when one of the stored valu	es (besides time) changes.
Label (Layout)	Datatype(Dims) Fillvalue	long_name standard name	units	description
()(<u> </u>	<u>L</u>

CHUNKED INTEGER_1() According Note Longitude INTEGER_1() Cycle Number CHUNKED DOUBLE() According Note Longitude Note Longitude Note CHUNKED DOUBLE() According Note Longitude Note CHUNKED NOTE CREATER CHUNKED DOUBLE() NOTE CREATER NOTE CR	20/20, 0.07 1 101				- To Troud Data Blottonary
CHARGO DOMESTOR DOMESTOR		DOUBLE(:)	Time		The time, in seconds since the ATLAS SDP GPS Epoch, at which the ascending node crosses the equator. The A /ancillary_data/atlas_sdp_gps_epoch as the number of GPS seconds between the GPS epoch (1980-01-06T00:C contained within atlas_sdp_gps_epoch to delta time parameters, the time in gps_seconds relative to the GPS epo (Source: POD/PPD)
Continued Internal Internal Continued Internal Cont		INTEGER_1(:)		1	
Columbia		DOUBLE(:)		degrees_east	
Scrott CillusCip NTESER_11) Second CillusCip Nove State CillusCip		UINT_2_LE(:)		1	
Constitution Cons	rgt CHUNKED	INTEGER_2(:)		1	
Colluncial Contained in the contained and a second place are replaced and an accept give array because and bedvalor from a contained and a second place are replaced and an accept give area possess, and bedvalor from a contained and accept give area possess, and bedvalor from a contained and accept give area possess, and bedvalor from a contained give and accept give area possess, and bedvalor from a contained give and accept give area possess, and bedvalor from a contained give and accept give accept give and accept give and accept give accept gin		INTEGER_1(:)		1	
Early Particular Particul		DOUBLE(:)	Orientation Change		The time of the last spacecraft orientation change between forward, backward and transitional flight modes, expr considered to be flying forward when the weak beams are leading the strong beams; and backward when the str transition while it is maneuvering between the two orientations. Science quality is potentially degraded while in tris defined within /ancillary_data/atlas_sdp_gps_epoch as the number of GPS seconds between the GPS epoch (adding the offset contained within atlas_sdp_gps_epoch to delta time parameters, the time in gps_seconds relating (Source: POD/PPD)
Elegand Pilloda Strick (Communication Security Colors (Communication Security Colors (Colors	Group: /quality_assessment		Contains quality assessment d	ata. This may include QA co	punters, QA along-track data and/or QA summary data.
COMPACT Name NTEGER(1) Counter Feature Reason 1 Fig. printeding genute faulture reason Parts faulture reason P				units	description
Coliferent Nome Source Operations Sour	qa_granule_fail_reason		Granule Failure Reason	1	Flag indicating granule failure reason. 0=no failure; 1=processing error; 2=Insufficient output data was generated (Source: Operations); (Meanings: [0 1 2 3 4 5]) (Values: ['no_failure', 'PROCESS_ERROR', 'INSUFFICIENT_OU'
District		INTEGER(1)		1	Flag indicating granule quality. 0=granule passes automatic QA. 1=granule fails automatic QA. (Source: Operations): (Meanings: [0 11) (Values: I'PASS', "FAIL")
Claybook Filtwater Street Stree	L			rids, and will be instantiated	
CHUNKED NNALID, R88 None Source Cosen ATBD)			long_name standard_name	units	description
Post Continue Co	a_avg CHUNKED	DOUBLE(:,:)		meters/meter	
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CRUMKED NAVALID_FR88 None (Source: Ocean ATBD)	<u> </u>	· /			
City CHUNKED RNALLD F88b RNAL				meters/meter	
GHUNKED INVALID_R8B b coefficient (Source: Ocean ATBD) grid_mapping (Attribute) cr GNUNCED (NAULD_R8B b) grid_mapping (Attribute) cr GHUNKED (GHUNKED (GHUNKED) cr GHUNKED (GHUNKED (GHUNKED (GHUNKED) cr GHUNKED (GHUNKED (GHUNKED (GHUNKED) cr GHUNKED (GHUNKED (GHUNKED) cr GHUNKED (GHUNKED (GHUNKED) cr GHUNK			crs		
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COMPACT INTEGER_1(1) INTEGER			c coefficient	meters	
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proj4text (Attribute) SET_BY_PGE semi_major_axis (Attribute) 6378273.0 srid (Attribute) SET_BY_PGE standard_parallel (Attribute) SET_BY_PGE standard_parallel (Attribute) SET_BY_PGE delta_time_beg COMPACT DOUBLE(1) Beginning elapsed GPS seconds (Source: Ocean ATBD) delta_time_end COMPACT DOUBLE(1) Ending elapsed GPS seconds (Source: Ocean ATBD) delta_time_end COMPACT DOUBLE(1) Ending elapsed GPS seconds (Source: Ocean ATBD) depth_avg_albm CHUNKED FLOAT(::) None depth_dfw_albm CHUNKED FLOAT(::) Degrees of freedom (DOF) weighted mean depth None depth_dfw_albm CHUNKED (Attribute) crs depth_dfw_albm CHUNKED (Attribute) crs dof_albm CHUNKED DOUBLE(::) Total degrees of freedom None CHUNKED None CHUNK		•	0.0		
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DOUBLE(1) INVALID_R8B Seconds		· /			
COMPACT INVALID_R8B seconds None DOUBLE(1) Ending elapsed GPS seconds None Ending elapsed GPS seconds (Source: Ocean ATBD) Elaptic Gear ATBD) Ending elapsed GPS seconds (Source: Ocean ATBD) Elaptic Gear ATBD) Ending elapsed GPS seconds (Source: Ocean ATBD) Elaptic Gear ATBD) Elaptic Gear ATBD Elaptic Gea	delta_time_beg	DOUBLE(1)	Beginning elapsed GPS	seconds	
COMPACT INVALID_R8B seconds None (Source: Ocean ATBD) depth_avg_albm CHUNKED INVALID_R4B None meters All beam average of ocean segment ocean depth. (Source: Ocean ATBD) grid_mapping (Attribute) crs depth_dfw_albm CHUNKED INVALID_R4B Degrees of freedom (DOF) weighted mean depth None (Source: Ocean ATBD) grid_mapping (Attribute) crs All beam degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) grid_mapping (Attribute) crs dof_albm CHUNKED DOUBLE(:;:) Total degrees of freedom None Counts All beam total of degrees of ocean segment freedom in the grid cell (Source: Ocean ATBD)	COMPACT		seconds None	seconds	,
CHUNKED INVALID_R4B None (Source: Ocean ATBD) grid_mapping (Attribute) crs depth_dfw_albm CHUNKED FLOAT(:;) INVALID_R4B weighted mean depth None (Source: Ocean ATBD) grid_mapping (Attribute) crs grid_mapping (Attribute) crs dof_albm CHUNKED DOUBLE(:;) INVALID_R8B None (Source: Ocean ATBD) All beam degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) All beam total of degrees of ocean segment freedom in the grid cell (Source: Ocean ATBD)	COMPACT	INVALID_R8B	seconds None		(Source: Ocean ATBD)
depth_dfw_albm CHUNKED FLOAT(:;) INVALID_R4B Degrees of freedom (DOF) weighted mean depth None All beam degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD) All beam total of degrees of ocean segment freedom in the grid cell (Source: Ocean ATBD)		FLOAT(:,:) INVALID_R4B		meters	
CHUNKED INVALID_R4B weighted mean depth None (Source: Ocean ATBD) grid_mapping (Attribute) dof_albm CHÜNKED DOUBLE(:,:) INVALID_R8B None Counts (Source: Ocean ATBD) All beam total of degrees of ocean segment freedom in the grid cell (Source: Ocean ATBD)	•				Luci de la companya d
dof_albm CHÜNKED DOUBLE(;,;) INVALID_R8B None Counts All beam total of degrees of ocean segment freedom in the grid cell (Source: Ocean ATBD)	CHUNKED	INVALID_R4B	weighted mean depth None	meters	
CHŪNKED INVALID_R8B None (Source: Ocean ATBD)	-	•		- -	All bear data of decrease of construction does in the construction of the construction
grid_mapping (Attribute) crs				counts	
Landard Company of the company of th		•			
dot_avg_albm	dot_avg_albm CHUNKED	DOUBLE(:,:) INVALID_R8B		meters	All beam average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell. (Source: Ocean ATBD)

				E 10 1 10 duoi Buta Biotionary
grid_mapping	(Attribute)	crs		
dot_avg_uncrtn_albm CHUNKED	DOUBLE(:,:) INVALID R8B	Uncertainty of mean DOT None	meters	All beam uncertainty of mean ocean segment DOT (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_avgcntr	DOUBLE(:,:)	Mean DOT at cell center	meters	Simple all-beam average of ATL12 ocean segments dynamic ocean topography interpolated to center of grid cell
CHUNKED grid_mapping	(Attribute)	None		(Source: Ocean ATBD)
dot_avgcntr_uncrtn	DOUBLE(:,:)	Uncertainty of mean DOT	meters	All beam uncertainty of ocean segment dynamic ocean topography (DOT) interpolated to center of grid cell.
CHUNKED	INVALID_R8B	center None		(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	T	
dot_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean DOT None	meters	All beam DOF-weighted all beam average of ATL12 ocean segments DOT within each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_dfw_uncrtn_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Uncertaintity of DOF- weighted DOT None	meters	All beam uncertainty of DOF-weighted average of ocean segment DOT (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_dfwcntr	DOUBLE(:,:)	DOF-weighted mean DOT at	meters	Degree of freedom weighted all-beam average dynamic ocean topography interpolated to center of grid cell base
CHUNKED	INVALID_R8B	cell center None		(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_hist_albm CHUNKED	FLOAT(:,:,:) INVALID_R4B	Aggregate PDF of photon heights None	1/meter	All beam aggregate probability density function of all surface photon DOT for all the ocean segments in the grid c scale /ds_hist_bincenters. The x and y are provided in dimension scale /north or south_polar/ids_grid_x and ds_g south_polar/gridcntr_lat and /north or south_polar/gridcntr_lon. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	<u> </u>	
dot_sigma_avg_albm CHŪNKED	DOUBLE(:,:) INVALID_R8B	Mean DOT sigma None	meters	All beam simple average of ocean segment standard deviation of dynamic ocean topography (DOT). (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	Γ .	F
dot_sigma_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean DOT sigma None	meters	All beam DOF-weighted average of ocean segment standard deviation of DOT (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
ds_grid_x CHUNKED	DOUBLE(:)	Gridded X dimension scale projection_x_coordinate	meters	Center of grid cell X values (Source: Ocean ATBD)
axis	(Attribute)	X		novator. Godan (1855)
ds_grid_y	DOUBLE(:)	Gridded Y dimension scale	meters	Center of grid cell Y values
CHÚNKÉD	(4) 1 ()	projection_y_coordinate Y		(Source: Ocean ATBD)
geoid_avg_albm	(Attribute) DOUBLE(:,:)	Mean geoid height	meters	All beam average of ocean segment mean tide system geoid height.
CHUNKED	INVALID_R8B	None	meters	(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	I	
geoid_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF weighted mean geoid height None	meters	All beam DOF-weighted average of ocean segment mean tide system geoid height. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
gridcntr_lat CHUNKED	DOUBLE(:,:) INVALID R8B	Grid cell center latitude None	degrees_north	Defined center latitude for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		Γ ,
gridcntr_lon	DOUBLE(:,:)	Grid cell center longitude	degrees_east	Defined center longitude for each grid cell.
CHUNKED grid_mapping	(Attribute)	crs		(Source: Ocean ATBD)
ice_conc_albm	FLOAT(:,:)	Mean ice concentration	1	All beam average of ice concentration.
CHUNKED	, ,	None		(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	Γ.	
landmask CHUNKED	INTEGER(:,:)	Ocean landmask None	1	Ocean landmask. 0=land, 1=ocean. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
lat_avg_albm CHUNKED	DOUBLE(:,:) INVALID R8B	Mean latitude None	degrees_north	All beam average of ocean segment latitudes. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	1	<u>'</u>
lat_dfw_albm	DOUBLE(:,:)	DOF weighted mean latitude	degrees_north	All beam DOF-weighted average of ocean segment latitude.
CHUNKED	(Attribute)	None	<u> </u>	(Source: Ocean ATBD)
grid_mapping length_dfw_albm	(Attribute) FLOAT(:,:)	DOF-weighted mean ocean	meters	All beam DOF-weighted average of ocean segment lengths.
CHUNKED	INVALID_R4B	segment length None	meters	(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	Г.	Lun.
length_sum_albm CHUNKED	FLOAT(:,:) INVALID_R4B	Sum of ocean segment lengths None	meters	All beam sum of ocean segment lengths. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
lon_avg_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean longitude None	degrees_east	All beam average of ocean segment longitude. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		<u>.</u>
lon_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF weighted mean longitude None	degrees_east	All beam DOF-weighted average of ocean segment longitude. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	I	I
n_ph_srfc_albm CHUNKED	INTEGER(:,:)	Number of surface photons None	counts	All beam sum of ocean segment number of surface reflected photons. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
n_phs_ttl_albm CHUNKED	INTEGER(:,:)	Number of total photons None	counts	All beam sum of ocean segment total number of photons. (Source: Ocean ATBD)
	1	1	L	I' '

grid_mapping	(Attribute)	crs	I	
n_segs_albm CHUNKED	INTEGER(:,:)	Number of ocean segments None	counts	All beam number of ocean segments for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		,
podppd_flag_prcnt_albm CHUNKED	FLOAT(:,:) INVALID_R4B	Percent segments used with podppd_flag=0 None	1	All beam percent of ATL12 segments used that had podppd_flag_seg=0 for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		,
r_noise_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Rate of noise photons per meter None	1/meter	All beam rate of noise photons per meter (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
r_srfc_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Rate of surface photons per meter None	meters	All beam rate of surface photons per meter (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
sea_ice_flag CHUNKED	INTEGER(:,:) INVALID I4B	Sea ice flag None	counts	TBD (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		(Course. Ocean AIDD)
ssb_avg_albm	DOUBLE(:,:)	Mean sea state bias	meters	All beam simple average of ocean segment sea state bias.
CHUNKED	INVALID_R8B	None		(Source: Ocean ATBD)
grid_mapping ssb avgcntr	(Attribute) DOUBLE(:,:)	crs Sea state bias at cell center	meters	All beam estimate of sea state bias at center of each grid cell for dot_avgcntr.
CHUNKED	INVALID_R8B	None		(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	T .	In a second
ssb_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean sea state bias None	meters	All beam DOF-weighted average of ocean segment sea state bias (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	T	
ssb_dfwcntr CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted sea state bias at cell center None	meters	All beam estimate of sea state bias at center of grid cell for dot_dfwcntr. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
surf_prcnt_avg_albm CHUNKED	FLOAT(:,:,:) INVALID R4B	Mean surface type None	1	All beam average of the percentage of each surface type. Map order: land, ocean, sea ice, ice sheet, inland wate (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
surf_prcnt_dfw_albm CHUNKED	FLOAT(:,:,:) INVALID_R4B	DOF-weighted mean surface type None	1	All beam DOF-weighted average of the percentage of each surface type. Map order: land, ocean, sea ice, ice she (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
swh_avg_albm	DOUBLE(:,:)	Mean significant wave height	meters	All beam average of the ocean segment significant wave height.
CHUNKED grid_mapping	(Attribute)	None crs		(Source: Ocean ATBD)
swh_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean significant wave height None	meters	All beam DOF-weighted average of ocean segment significant wave height. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
x_avg_albm	DOUBLE(:,:)	Mean x	meters	All beam average of ocean segment x
CHUNKED	INVALID_R8B	None		(Source: Ocean ATBD)
grid_mapping x_dfw_albm	(Attribute) DOUBLE(:,:)	DOF-weighted mean x	meters	All beam DOF-weighted average of ocean segment x
CHUNKED	INVALID_R8B	None	etc.e	(Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	meters	All bases and a second a second and a second
y_avg_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean y None	meters	All beam average of ocean segment y (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	Г	
y_dfw_albm CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean y None	meters	All beam DOF-weighted average of ocean segment y (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
Group: /x_polar/beam_x		This group contains data for be		ams), and beams 2, 4, and 6 (weak beams).
Label (Layout)	Datatype(Dims) Fillvalue	long_name standard_name	units	description
depth_avg CHUNKED	FLOAT(:,:) INVALID_R4B	Mean ocean depth None	meters	Average of ocean segment ocean depth. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	I	
depth_dfw CHUNKED	FLOAT(:,:) INVALID_R4B	Degrees of freedom (DOF) weighted mean ocean depth None	meters	Degrees of freedom (DOF) weighted average of ocean segment ocean depth. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dof CHUNKED	DOUBLE(:,:) INVALID_R8B	Total DOF None	counts	Beam total of ocean segment degrees of freedom (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_avg CHUNKED	DOUBLE(:,:) INVALID R8B	Mean DOT None	meters	Average of ATL12 ocean segments dynamic ocean topography (DOT) within each grid cell for one beam. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	<u> </u>	1(
dot_avg_uncrtn	DOUBLE(:,:)	Uncertainty of mean DOT	meters	Uncertainty of mean ocean segment DOT
CHÜNKED grid_mapping	(Attribute)	None	<u> </u>	(Source: Ocean ATBD)
dot dfw	DOUBLE(:,:)	DOF-weighted mean DOT	meters	DOF-weighted average of ATL12 ocean segments DOT within each grid cell for one beam.
CHUNKED grid_mapping	INVALID_R8B (Attribute)	None		(Source: Ocean ATBD)
dot_dfw_uncrtn	DOUBLE(:,:)	Uncertainty of DOF-weighted	meters	Uncertainty of DOF-weighted average of ocean segment DOT
CHŪNKĒD	INVALID_R8B	DOT None		(Source: Öcean ATBD)

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grid_mapping	(Attribute)	crs		
dot_kurt_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean DOT kurtosis None	1	Average of ocean segment excess kurtosis of the dynamic ocean topography (DOT) for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_kurt_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean DOT kurtosis None	1	Kurtosis of the dynamic ocean topography (DOT) as a degree-of-freedom weighted average of kurtosis of DOT of (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_sigma_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean DOT sigma None	meters	Average of ocean segment standard deviation of dynamic ocean topography (DOT). (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_sigma_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean DOT sigma None	meters	DOF-weighted average of ocean segment standard deviation of DOT. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	Г.	I
dot_skew_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean DOT skewness None	1	Average of ocean segment skewness of the dynamic ocean topography (DOT) for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
dot_skew_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean DOT skewness None	1	Skewness of the dynamic ocean topography (DOT) as a degree-of-freedom weighted average of skewness of DC (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs	-	I
geoid_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean geoid height None	meters	Average of ocean segment mean tide system geoid height for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
geoid_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean geoid height None	meters	DOF-weighted average of ocean segment mean tide system geoid height. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
ice_conc CHUNKED	FLOAT(:,:)	Mean ice concentration None	1	Average of ice concentration. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
lat_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean latitude None	degrees_north	Average of ocean segment latitude (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
lat_dfw CHUNKED	DOUBLE(:,:) INVALID R8B	DOF-weighted mean latitude None	degrees_north	DOF-weighted average of ocean segment latitude. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		Γ /
length_dfw CHUNKED	FLOAT(:,:) INVALID_R4B	DOF-weighted mean ocean segment lengths None	meters	DOF-weighted average of ocean segment length. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
length_sum CHUNKED	FLOAT(:,:) INVALID_R4B	Sum of ocean segment lengths None	meters	Sum of ocean segment lengths for each grid cell. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
lon_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean longitude None	degrees_east	Average of ocean segment longitude. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
lon_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean longitude None	degrees_east	DOF-weighted average of ocean segment longitude. (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
n_ph_srfc CHUNKED	INTEGER(:,:)	Number of surface photons None	counts	Sum of ocean segment number of surface reflected photons. (Source: Ocean ATBD)
grid_mapping n phs ttl	(Attribute) INTEGER(:,:)	crs Number of total photons	counts	Sum of ocean segment total number of photons.
CHUNKED	` '	None	Counts	(Source: Ocean ATBD)
grid_mapping	(Attribute) INTEGER(:,:)	crs Number of ocean segments	counts	Number of ocean segments for each grid cell.
n_segs CHUNKED	,	None	554110	(Source: Ocean ATBD)
grid_mapping	(Attribute)	Crs Percent segments used with	1	Percent of ATL12 segments used that had podppd flag_seg=0 for each grid cell.
podppd_flag_prent CHUNKED	FLOAT(:,:) INVALID_R4B	Percent segments used with podppd_flag=0 None	1	Percent of ATL12 segments used that had podppd_flag_seg=0 for each grid cell. (Source: Ocean ATBD)
grid_mapping r noise	(Attribute)	crs Rate of noise photons per	1/meter	Rate of noise photons per meter
CHUNKED	DOUBLE(:,:) INVALID_R8B	meter None	i/meter	(Source: Ocean ATBD)
grid_mapping r srfc	(Attribute) DOUBLE(:,:)	crs Rate of surface photons per	meters	Rate of surface photons per meter
r sric CHUNKED	INVALID_R8B	meter None	meters	Kate of surface protoris per meter (Source: Ocean ATBD)
grid_mapping ssb avq	(Attribute) DOUBLE(:,:)	crs Mean sea state bias	meters	Average of ocean segment sea state bias
ssb_avg CHUNKED	INVALID_R8B	None	meters	Average of ocean segment sea state bias (Source: Ocean ATBD)
grid_mapping	(Attribute)	Crs	matara	DOT unighted purpose of account or most occupant to a state him.
ssb_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean sea state bias None	meters	DOF-weighted average of ocean segment sea state bias (Source: Ocean ATBD)
and the second s	(Attribute)	crs		
grid_mapping	FLOAT(:: \	Moon ourfe +	4	Cimple average of the percentage of on-t
grid_mapping surf_prcnt_avg CHUNKED	FLOAT(:,:,:) INVALID_R4B	Mean surface type None	1	Simple averages of the percentages of each surface type for each grid cell. Map order: land, ocean, sea ice, ice s (Source: Ocean ATBD)

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surf_prcnt_dfw CHUNKED	FLOAT(:,:,:) INVALID_R4B	DOF Weighted surface type average None	1	DOF-weighted average of the percentages of each surface type for each grid cell. Map order: land, ocean, sea ici (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
swh_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean significant wave height None	meters	Mean of the ocean segment significant wave height (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
swh_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF-weighted mean significant waveheights None	meters	DOF-weighted average of ocean segment significant wave height (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
x_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean x None	meters	Average of ocean segment x (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
x_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF wt'd mean x None	meters	Degrees of freedom (DOF) weighted average of ocean segment x (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
y_avg CHUNKED	DOUBLE(:,:) INVALID_R8B	Mean y None	meters	Average of ocean segment y (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		
y_dfw CHUNKED	DOUBLE(:,:) INVALID_R8B	DOF wt'd mean y None	meters	Degrees of freedom (DOF) weighted average of ocean segment y (Source: Ocean ATBD)
grid_mapping	(Attribute)	crs		