



# Introduction to ERDDAP

NOAA PolarWatch Sea Ice Course

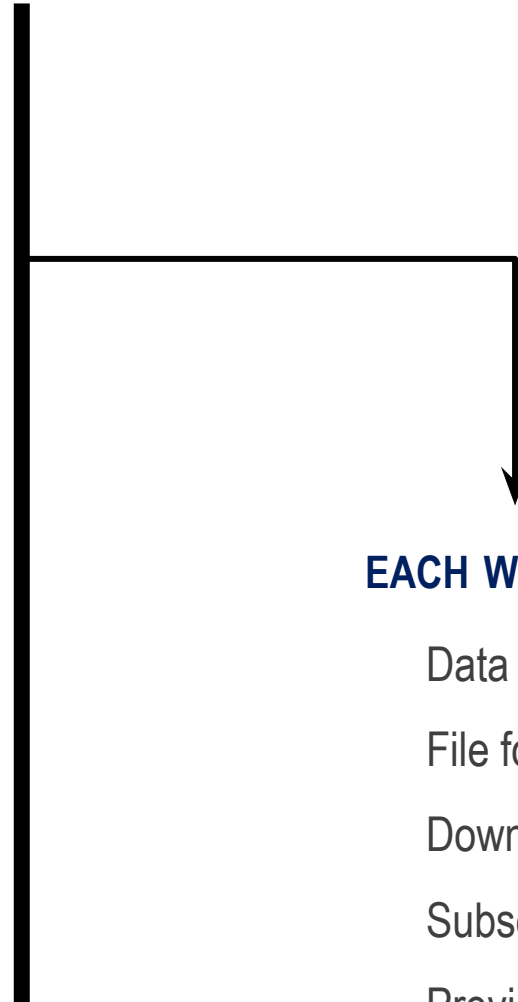
Last Updated: 10/16/2024



# Accessing satellite data can be challenging

## A SHORT LIST OF DATA SERVERS

NOAA CoastWatch Central Operations  
NOAA Center for Satellite Applications and Res.  
NOAA Office of Satellite and Products  
NOAA National Centers for Environmental Info.  
NOAA Comprehensive Large Array-data  
Stewardship System (CLASS)  
NASA Jet Propulsion Laboratory PO.DAAC  
NASA Ocean Biology (OB.DAAC)  
NASA Goddard Space Flight Center  
European Space Agency  
EUMETSAT  
Japan Aerospace Exploration Agency



## EACH WITH ITS OWN

Data products  
File formats  
Download protocols  
Subsetting abilities  
Previewing abilities



# ERDDAP<sup>1</sup> – designed to make data access easier

## DATA AGGREGATION

## DATA DISTRIBUTION

### LOCAL STORAGE

Internal Servers

Database

RAID

### REMOTE SERVERS

NSIDC

NCEI

JPL PO.DAAC

NESDIS STAR

ERDDAP

Automated Scripts

Web-Based Applications

Download By Hand

Software Applications



ERDDAP provides a simple, consistent way to:

- Subset datasets temporally and spatially
- Distribute both gridded and non-gridded (tabular) data
- Download data in > 30 formats
- Data requests defined within URLs, allowing:
  - Access data within analysis tools (R, Matlab, python)
  - Machine-to-machine data exchange

Over 85 ERDDAPs exist worldwide

Over a dozen different ERDDAPs in NOAA

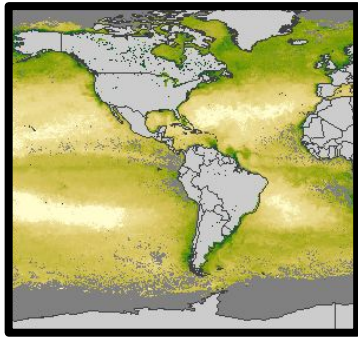
ERDDAP is one of the recommended data servers in NOAA's Data Access Procedural Directive

Search for data across multiple ERDDAPs at [erddap.com](http://erddap.com)

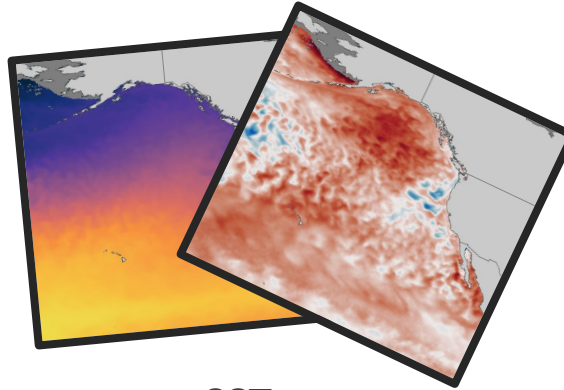
<sup>1</sup>ERDDAP was developed at NOAA/NMFS/SWFSC/ERD by Bob Simons



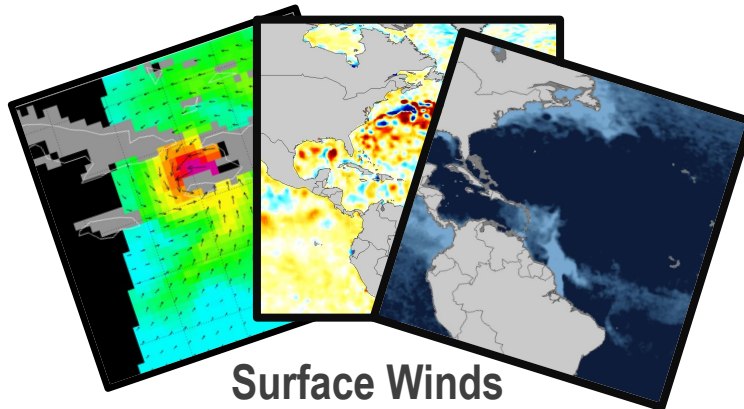
# NOAA/ERD ERDDAP contains > 1000 satellite datasets



**Chlorophyll  
Primary Productivity**



**SST  
SST Anomaly**



**Surface Winds  
Sea Surface Salinity  
Sea Surface Height and Anomaly**

**0.5 – 1 million data requests per day**

- Daily, weekly, and monthly composites
- Blended products
- Interpolated products (gap free)
- All level 3 or 4 products (i.e. on a regular XY grid)

This ERDDAP is maintained jointly by the [SWFSC Environmental Research Division](#) and the [West Coast Node\(WCN\)](#) of NOAA's [CoastWatch](#) program



# ERD ERDDAP data catalog has >400 non-satellite datasets

## **In Situ Measurements**

- Animal Telemetry Network
- ARGO floats
- TAO/TRITON, RAMA, & PIRATA Buoys
- IOOS In Situ Sensors
- Glider Data
- Global Temperature and Salinity Profile Programme
- HF Radar Currents
- GLOBEC Northeast Pacific
- NOAA CO-OPS Sensors
- NDBC buoys

## **Field Sampling**

- CalCOFI
- California Fish Landings
- Farallon Island Seabirds
- NWFSC Habitat Use
- SWFSC Rockfish

## **Underway Data**

- NOAA Vessels
- UNOLS Vessels

## **Models, Climatologies**


- OSCAR Sea Surface Velocity
- SODA Model

## **Models, Climatologies (cont.)**

- NOAA Coastal Relief Model
- NOAA RTOFS Forecast Model
- NOAA RTOFS Nowcast Model
- NOAA World Ocean Atlas
- NOAA Seafloor Topography
- SWFSC Upwelling Index
- Navy NAVGEM Model
- Navy NOGAPS Model
- NCEP/NCAR Reanalysis
- USGS Topography
- NASA/NOAA CCMP Wind Atlas
- Navy HYCOM Model
- Navy FNMOC Forecast Model



# The ERDDAP interface is functionally beautiful

 **ERDDAP**  
Easier access to scientific data

**ERDDAP > List of All Datasets**

1392 matching datasets, listed in alphabetical order. View page: 1 (current) 2 .

Grid DAP Data	Sub-set	Table DAP Data	Make A Graph	W M S	Source Data Files	Access-ible	Title	Sum-mary	FGDC, ISO, Metadata	Back-ground Info	RSS	E mail	Institution	Dataset ID
	set	data	graph			public	* The List of All Active Datasets in this ERDDAP *		M	background			NOAA NMFS SWFSC E...	allDatasets
data			graph			public	AMSRE Model Output, obs4MIPs NASA-JPL, Global, 1 Degree, 2002-2010, Monthly		F I M	background			Remote Sensing Sy...	jplAmsreSstMon
data			graph	M		public	AMSRE Model Output, obs4MIPs NASA-JPL, Global, 1 Degree, 2002-2010, Monthly, Lon+/-180		F I M	background			Remote Sensing Sy...	jplAmsreSstMon_LonPM180
		data	graph		files	public	AN EXPERIMENTAL DATASET: Underway Sea Surface Temperature and Salinity Aboard the Oleander, 2007-2010		F I M	background			NOAA OAR AOML	nodcPJJU
	set	data	graph			public	Animal Telemetry Network (ATN)		F I M	background			Animal Telemetry ...	gtoppAT
data			graph	M		public	Aquarius Sea Surface Salinity, L3 SMI, Version 5, 1.0°, Global, 2011-2015, 3-Month		F I M	background			NASA/GSFC OBPG	jplAquariusSSS3MonthV5
data			graph	M		public	Aquarius Sea Surface Salinity, L3 SMI, Version 5, 1.0°, Global, 2011-2015, 7-Day		F I M	background			NASA/GSFC OBPG	jplAquariusSSS7DayV5
data			graph	M		public	Aquarius Sea Surface Salinity, L3 SMI, Version 5, 1.0°, Global, 2011-2015, Daily		F I M	background			NASA/GSFC OBPG	jplAquariusSSSDailyV5
data			graph	M		public	Aquarius Sea Surface Salinity, L3 SMI, Version 5, 1.0°, Global, 2011-2015, Monthly		F I M	background			NASA/GSFC OBPG	jplAquariusSSSMonthlyV5
data			graph		files	public	Audio data from a local source.		M	background			???	testGridWav
	set	data	graph		files	public	Audio data from a local source.		M	background			???	testTableWav
data			graph	M		public	AVHRR Pathfinder Version 5.3 L3-Collated (L3C) SST, Global, 0.0417°, 1981-present, Daytime (1 Day Composite)		F I M	background			NCEI	nceiPH53sst1day
data			graph	M		public	AVHRR Pathfinder Version 5.3 L3-Collated (L3C) SST, Global, 0.0417°, 1981-present, Nighttime (1 Day Composite)		F I M	background			NCEI	nceiPH53sstn1day
data			graph			public	AVISO Model Output, obs4MIPs NASA-JPL, Global, 1 Degree, 1992-2010, Monthly		F I M	background			Centre National d...	jplAvisoSshMon
data			graph	M		public	AVISO Model Output, obs4MIPs NASA-JPL, Global, 1 Degree, 1992-2010, Monthly, Lon+/-180		F I M	background			Centre National d...	jplAvisoSshMon_LonPM180
data			graph	M	files	public	C-HARM 1-Day Advanced Forecast: Pseudo-Nitzschia, cellular domoic acid, and particulate domoic acid probability, California and Southern Oregon coast		F I M	background			UCSC, UCSD	charmForecast1day
data			graph	M	files	public	C-HARM 2-Day Advanced Forecast: Pseudo-Nitzschia, cellular domoic acid, and particulate domoic acid probability, California and Southern Oregon coast		F I M	background			UCSC, UCSD	charmForecast2day
data			graph	M	files	public	C-HARM 3-Day Advanced Forecast: Pseudo-Nitzschia, cellular domoic acid, and particulate domoic acid probability, California and Southern Oregon coast		F I M	background			UCSC, UCSD	charmForecast3day
data			graph	M	files	public	C-HARM Nowcast: Pseudo-Nitzschia, cellular domoic acid, and particulate domoic acid probability, California and Southern Oregon coast		F I M	background			UCSC, UCSD	charmForecast0day
	set	data	graph			public	CalCOFI Continuous Underway Fish-Egg Sampler		F I M	background			NOAA SWFSC	erdCalCOFIcufes
	set	data	graph			public	CalCOFI Cruises		M	background			NOAA SWFSC	erdCalCOFicruises



# Online interface to create custom graphs

## Graph Type:

- Maps (surface)
- Time-series (lines)
- Hovmöller (surface)
- Vectors (vectors)

## Color:

Choose variable in dataset

## Scale:

Choose linear or log

## Color Bar:

Choose from > 40 color palettes

## File Type:

Choose from > 40 file formats  
(data and graphics)

The screenshot shows the ERDDAP web interface for creating a graph. The header includes the NOAA logo and the text "ERDDAP Easier access to scientific data". The main heading is "ERDDAP > griddap > Make A Graph".

Dataset Title: **NOAA Coral Reef Watch Operational Daily Near-Real-Time Global 5-km Satellite Coral Bleaching Monitoring Products** (with RSS icon)

Institution: National Oceanic and Atmospheric Administration (NOAA) (Dataset ID: NOAA\_DHW)

Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Data Access Form](#)

**Graph Type:** surface (dropdown menu)

**X Axis:** longitude (dropdown menu)

**Y Axis:** latitude (dropdown menu)

**Color:** CRW\_SST (dropdown menu)

**Dimensions:**

- time (UTC):** specify just 1 value → 2020-02-10T12:00:00Z
- latitude (degrees\_north):** 89.975 to -89.975
- longitude (degrees\_east):** -179.975 to 179.975

**Graph Settings:**

- Color Bar:** (dropdown menu)
- Continuity:** (dropdown menu)
- Scale:** (dropdown menu)
- Minimum:** (input field)
- Maximum:** (input field)
- N Sections:** (dropdown menu)
- Draw land mask:** (checkbox)
- Y Axis Minimum:** (input field)
- Maximum:** (input field)
- Ascending:** (checkbox)

**Redraw the Graph** (Please be patient. It may take a while to get the data.)

Optional:  
Then set the File Type: .htmlTable (File Type information)  
and [Download the Data or an Image](#)  
or view the URL: [https://coastwatch.pfeg.noaa.gov/erddap/griddap/NOAA\\_DHW.htmlTable?CRW\\_](https://coastwatch.pfeg.noaa.gov/erddap/griddap/NOAA_DHW.htmlTable?CRW_)  
(Documentation / Bypass this form)

**Click on the map to specify a new center point.**

**Zoom:** Data Out 8x Out 2x Out In In 2x In 8x

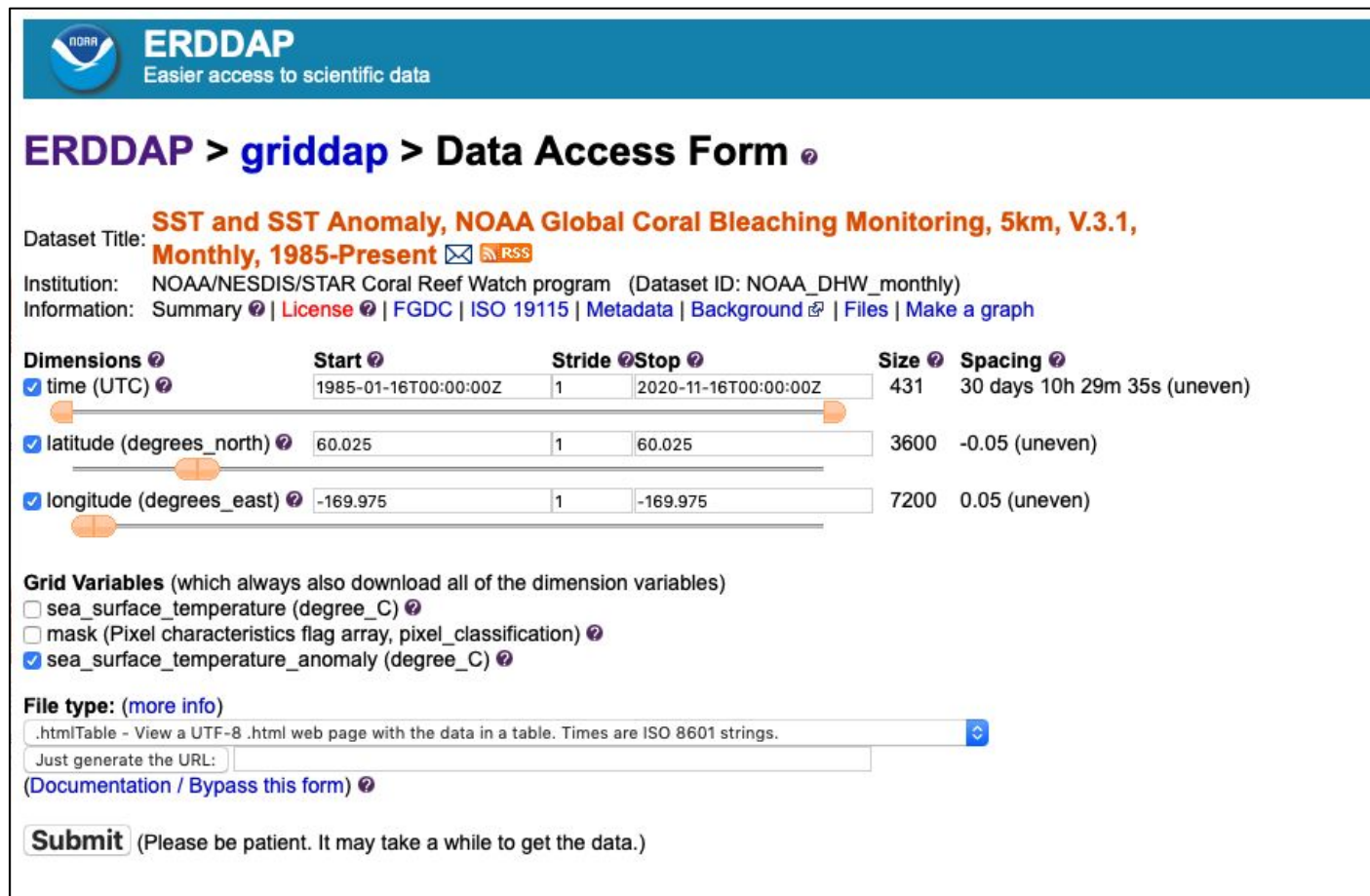
The map displays a global view of sea surface temperature (SST) data. The color scale ranges from -2 (purple) to 34 (red) degrees Celsius. The map shows higher temperatures in the tropics and lower temperatures in the poles. The x-axis represents longitude from -135° to 135°, and the y-axis represents latitude from -45° to 45°.

**sea surface temperature (Celsius)**  
NOAA Coral Reef Watch Operational Daily Near-Real-Time Global 5-km Satellite Coral Bleaching Monitoring Products (2020-02-10T12:00:00Z)  
Data courtesy of National Oceanic and Atmospheric Administration (NOAA)

# Online interface to download data

Color  
File

.asc - View OPeNDAP-style ISO-8859-1 comma-separated  
.csv - Download a ISO-8859-1 comma-separated  
.csvp - Download a ISO-8859-1 .csv file with line  
.csv0 - Download a ISO-8859-1 .csv file without c  
.das - View the dataset's metadata via an ISO-885  
.dds - View the dataset's structure via an ISO-885  
.dods - OPeNDAP clients use this to download the  
.esriAscii - Download an ISO-8859-1 ESRI ASCII fi  
.fgdc - View the dataset's UTF-8 FGDC .xml meta  
.graph - View a Make A Graph web page.  
.help - View a web page with a description of grid  
.html - View an OPeNDAP-style HTML Data Acces  
.htmlTable - View a UTF-8 .html web page with th  
.iso19115 - View the dataset's ISO 19115-2/19139  
.itx - Download an ISO-8859-1 Igor Text File. Each  
.json - View a table-like UTF-8 JSON file (missing  
.jsonCSV1 - View a UTF-8 JSON Lines CSV file wi  
.jsonCSV - View a UTF-8 JSON Lines CSV file wit  
.jsonKVP - View a UTF-8 JSON Lines file with Key  
.mat - Download a MATLAB binary file.  
.nc - Download a NetCDF-3 binary file with COARI  
.ncHeader - View the UTF-8 header (the metadata  
.ncml - View the dataset's structure and metadata  
.nccsv - Download a NetCDF-3-like 7-bit ASCII NC  
.nccsvMetadata - View the dataset's metadata as  
.ncoJson - Download a UTF-8 NCO lvl=2 JSON fil  
.odvTxt - Download time,lat,lon,otherVariables as  
.timeGaps - View a UTF-8 list of gaps in the time  
.tsv - Download a ISO-8859-1 tab-separated text  
.tsvp - Download a ISO-8859-1 .tsv file with line 1



**ERDDAP**  
Easier access to scientific data

## ERDDAP > griddap > Data Access Form

Dataset Title: **SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, 5km, V.3.1, Monthly, 1985-Present** [✉](#) [RSS](#)

Institution: NOAA/NESDIS/STAR Coral Reef Watch program (Dataset ID: NOAA\_DHW\_monthly)  
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Files](#) | [Make a graph](#)

Dimensions	Start	Stride	Stop	Size	Spacing
<input checked="" type="checkbox"/> time (UTC)	1985-01-16T00:00:00Z	1	2020-11-16T00:00:00Z	431	30 days 10h 29m 35s (uneven)
<input checked="" type="checkbox"/> latitude (degrees_north)	60.025	1	60.025	3600	-0.05 (uneven)
<input checked="" type="checkbox"/> longitude (degrees_east)	-169.975	1	-169.975	7200	0.05 (uneven)

**Grid Variables** (which always also download all of the dimension variables)

- sea\_surface\_temperature (degree\_C)
- mask (Pixel characteristics flag array, pixel\_classification)
- sea\_surface\_temperature\_anomaly (degree\_C)

**File type:** [\(more info\)](#)

[↓](#)

Just generate the URL:

[\(Documentation / Bypass this form\)](#)

**Submit** (Please be patient. It may take a while to get the data.)





# Deconstructing an ERDDAP data request URL

[nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[\(2019-01-01\)\]\[\[\]\]](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[(2019-01-01)][[]])

## Example of a URL data request

Base URL: <https://polarwatch.noaa.gov/erddap/griddap/>

Dataset ID: [nsidcG02202v4nh1day](#)

File Type: [.largePng](#) (.nc, .mat, .json, .geotif, .kml, .csv, .graph, .html...)

Data Request Begins ?

Variable: [cdr\\_seaice\\_conc](#)

Time range: [\[\(2019-01-01\)\]](#)

Latitude Range: [\[\]](#) (empty square brackets returns all values)

Longitude Range: [\[\]](#) (empty square brackets returns all values)

<https://polarwatch.noaa.gov/erddap/griddap/>

[https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[\(2019-01-01\)\]\[\[\]\]](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[(2019-01-01)][[]])



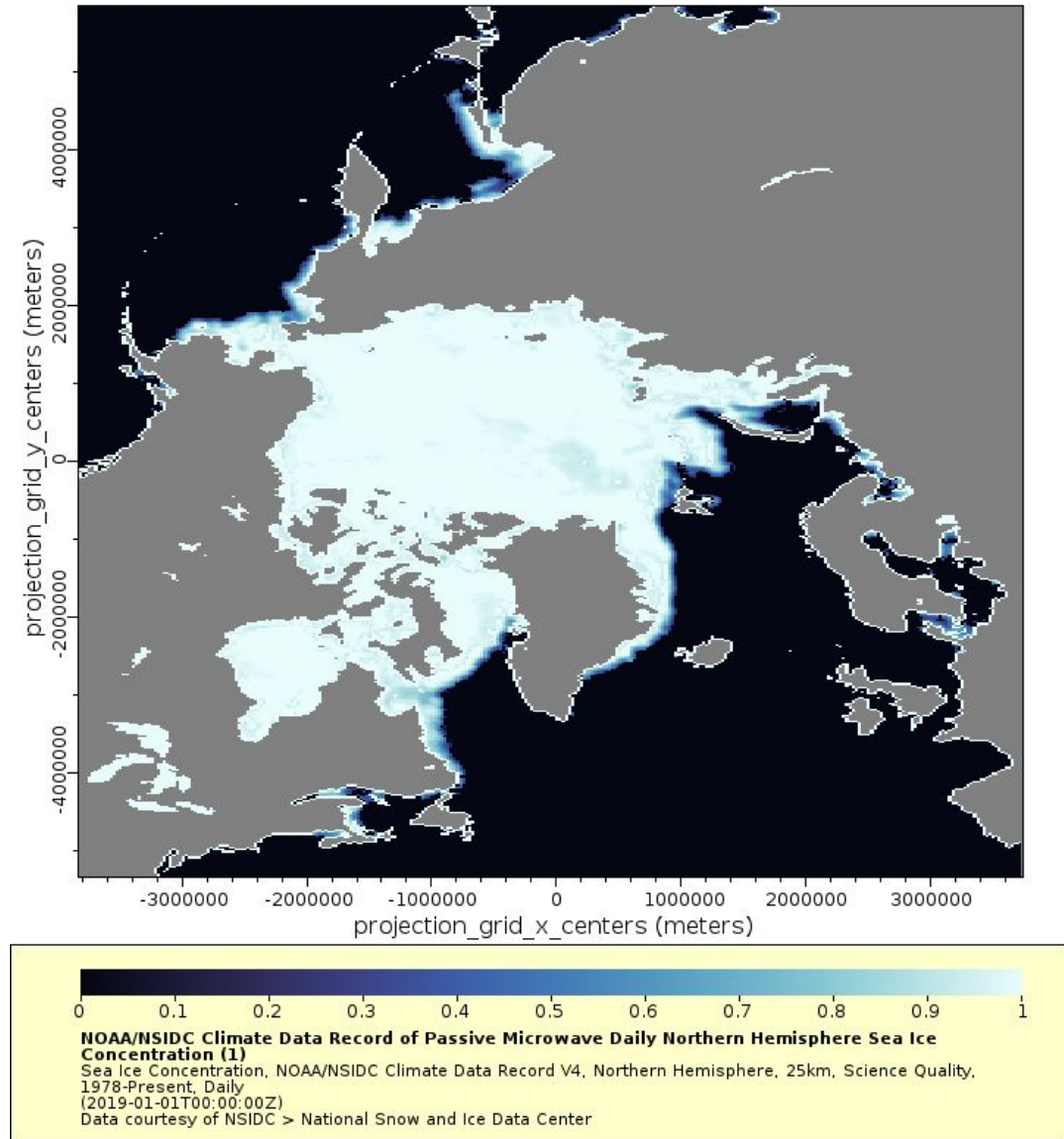
This URL:

[https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[\(2019-01-01\)\]\[\[\]\]](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[(2019-01-01)][[]])

Produces this figure 

Note:

You can download the data in a netCDF file by changing .largePng to .nc in the URL

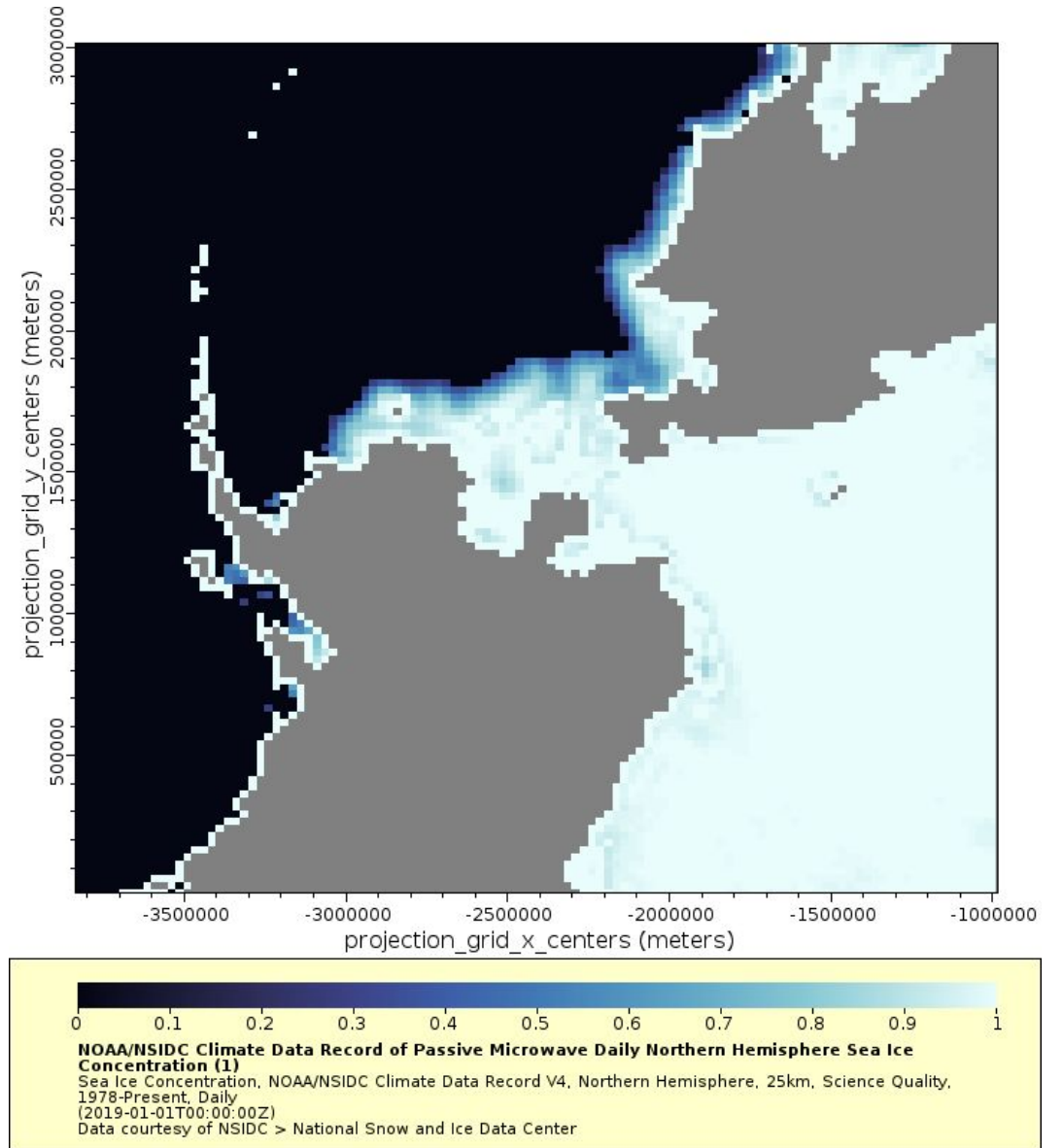


This URL:

[https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[\(2019-01-01\)\]\[\(3000000\):\(0\)\]\[\(-3837500\):\(-1000000\)\]](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[(2019-01-01)][(3000000):(0)][(-3837500):(-1000000)])

Produces this figure 

Spatially subset to just look at the region around the Bering Strait



# Create a 2D timeseries:

[https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[\(2019-01-01\)\]\[\(3000000\):\(0\)\]\[\(-3837500\):\(-1000000\)\]](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[(2019-01-01)][(3000000):(0)][(-3837500):(-1000000)])

Next we will examine the temporal evolution of sea ice by making a Hovmöller diagram, a hybrid map with time on one axis, and latitude or longitude on the other. We will make a slice through  $y=150,000$

We can do this by setting the y-axis to time on the “Make a Graph” page:

ERDDAP > griddap > Make A Graph

Dataset Title: **Sea Ice Concentration, NOAA/NSIDC Climate Data Record V4, 25km, Science Quality, 1978-Present, Daily**

Institution: NSIDC > National Snow and Ice Data Center (Dataset ID: nsidcG02202v4nh1day)

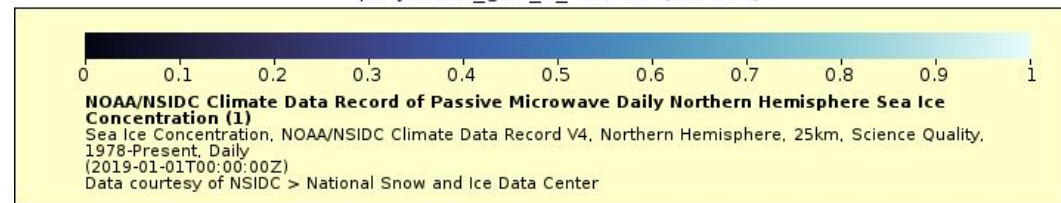
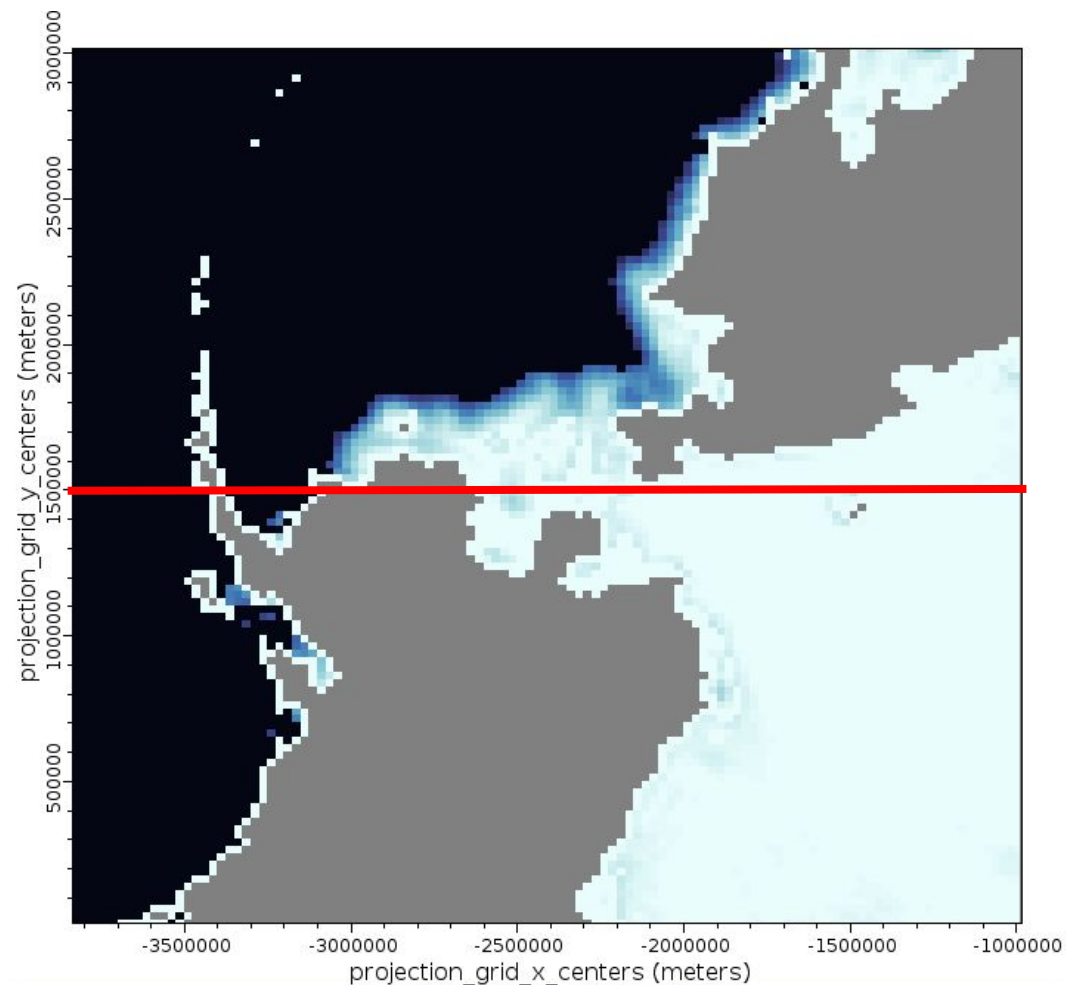
Information: Summary | License | Metadata | Background | Data Access Form | Files

Graph Type: surface

X Axis: xgrid

Y Axis: time

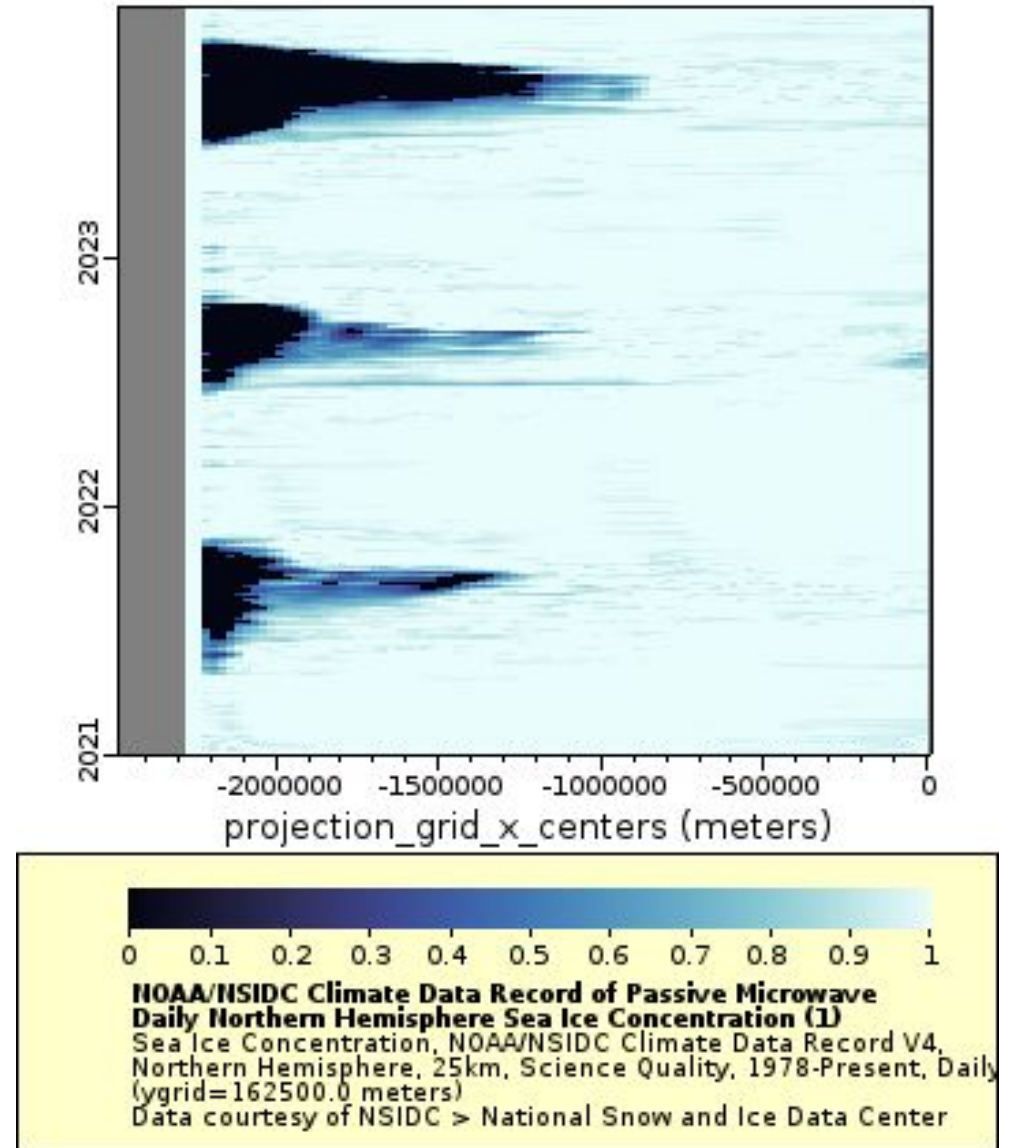
Color: cdr\_seaice\_conc



# Generate a Hovmöller diagram

[https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[\(2021-01-01\):\(2024-01-01\)\]\[\(162500.0\)\]\[\(-2487500.0\):\(12500.0\)\]&.draw=surface&.vars=xgrid|time|cdr\\_seaice\\_conc](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[(2021-01-01):(2024-01-01)][(162500.0)][(-2487500.0):(12500.0)]&.draw=surface&.vars=xgrid|time|cdr_seaice_conc)

Produces this figure 

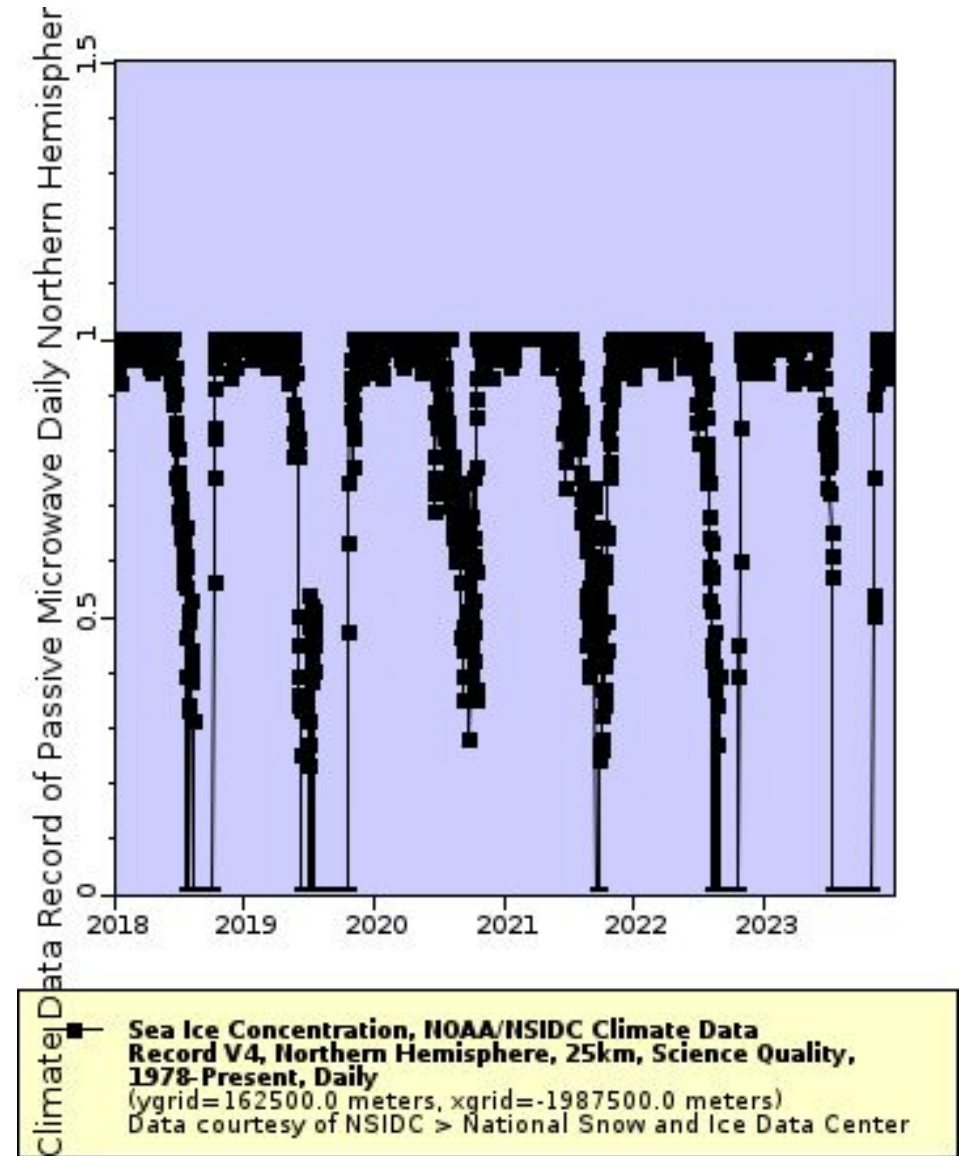


# Generate a Timeseries

[https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.graph?cdr\\_seaice\\_conc\[\(2018-01-01\):\(2024-01-01\)\]\[\(160000\)\]\[\(-2000000\)\]&.draw=linesAndMarkers&.vars=time|cdr\\_seaice\\_conc](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.graph?cdr_seaice_conc[(2018-01-01):(2024-01-01)][(160000)][(-2000000)]&.draw=linesAndMarkers&.vars=time|cdr_seaice_conc)

Produces this figure 

Select 'linesAndMarkers' under Graph Type on the Make a Graph page (.graph) to create a timeseries at any point in the dataset



# Access tabular data like BGC-Argo Float data

Map of all BGC-Argo floats since 2017-01-01 in the Southern Ocean around South America. Float profiles are colored by date.

[https://polarwatch.noaa.gov/erddap/taledap/SOCCOM\\_BGC\\_Argo.graph](https://polarwatch.noaa.gov/erddap/taledap/SOCCOM_BGC_Argo.graph)

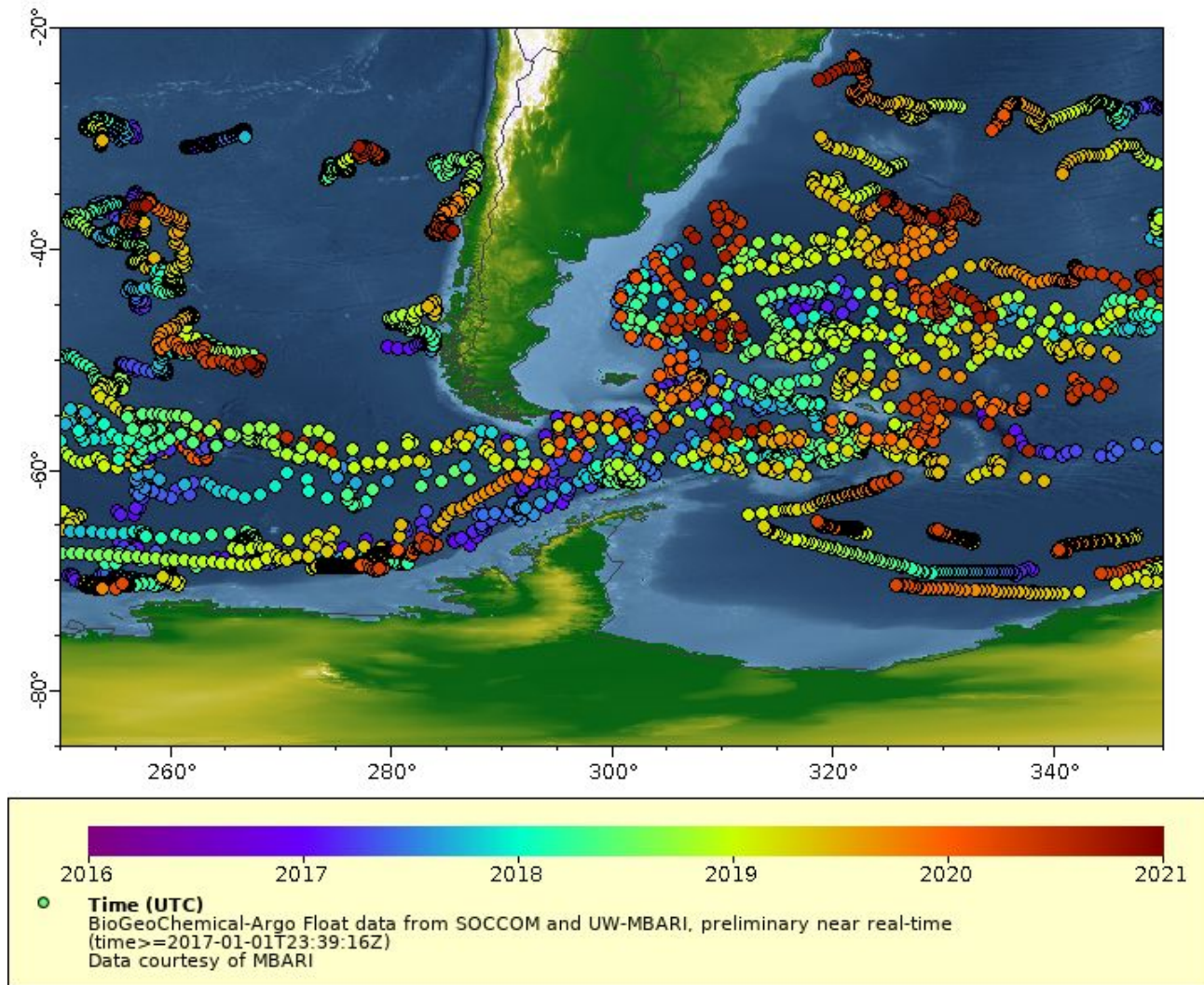
**Graph Type:** markers

**X Axis:** longitude

**Y Axis:** latitude

**Color:** time

Constraints	Optional Constraint #1	Optional Constraint #2
time	>= 2017-01-01T23:39:16Z	<=
latitude	>= -85	< -20
longitude	>= 250	<= 350
	>=	<=
	>=	<=

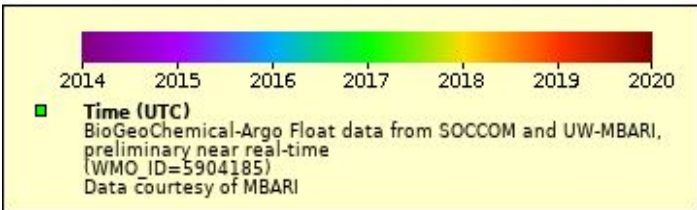
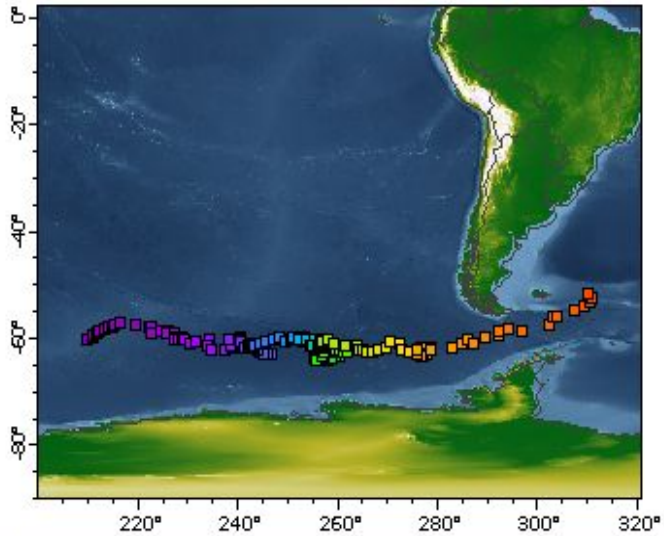


# Visualizations of tabular data

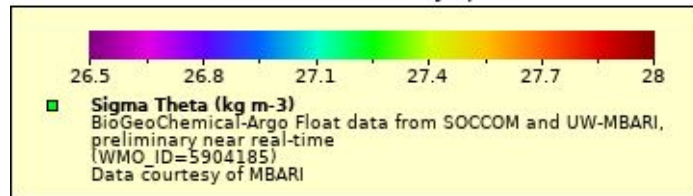
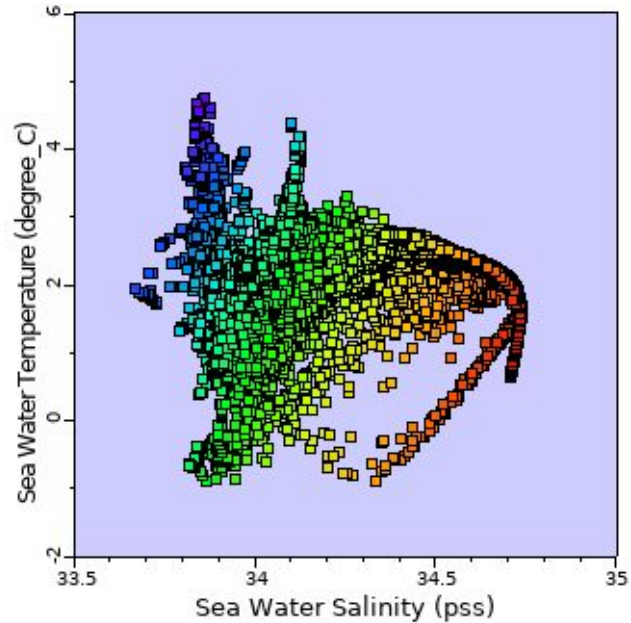
[https://polarwatch.noaa.gov/erddap/taledap/SOCCOM\\_BGC\\_Argo.graph](https://polarwatch.noaa.gov/erddap/taledap/SOCCOM_BGC_Argo.graph)

Float WMO\_ID = 5904185

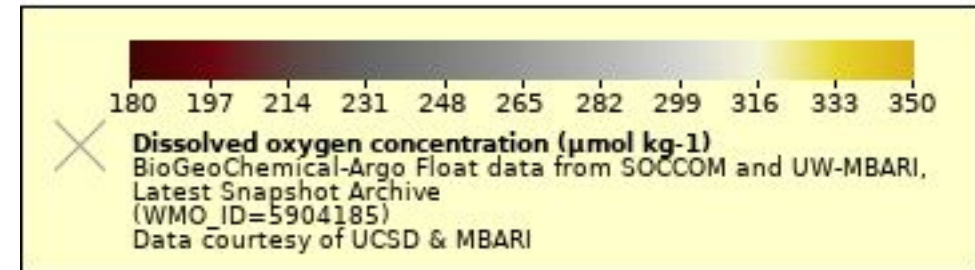
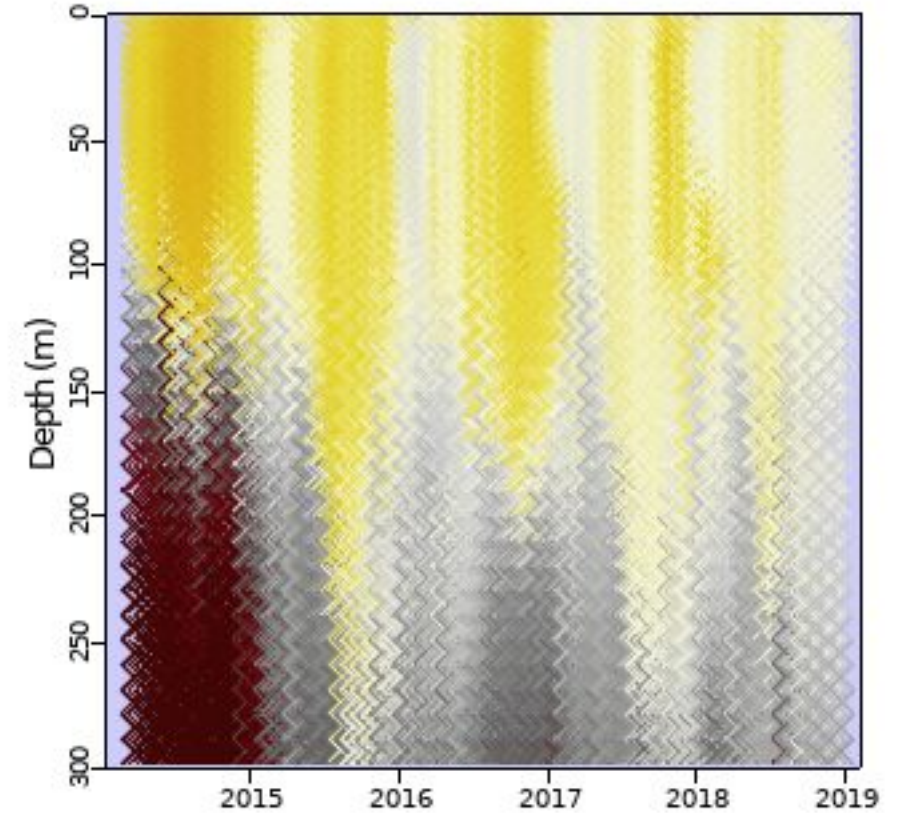
Map of float trajectory



Temperature-Salinity Diagram



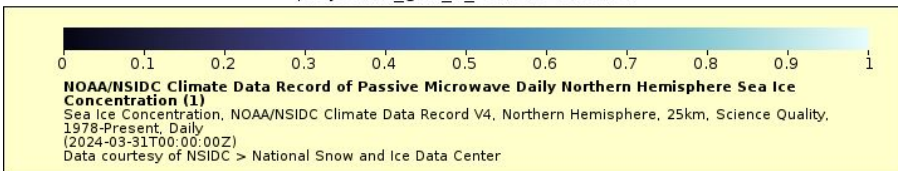
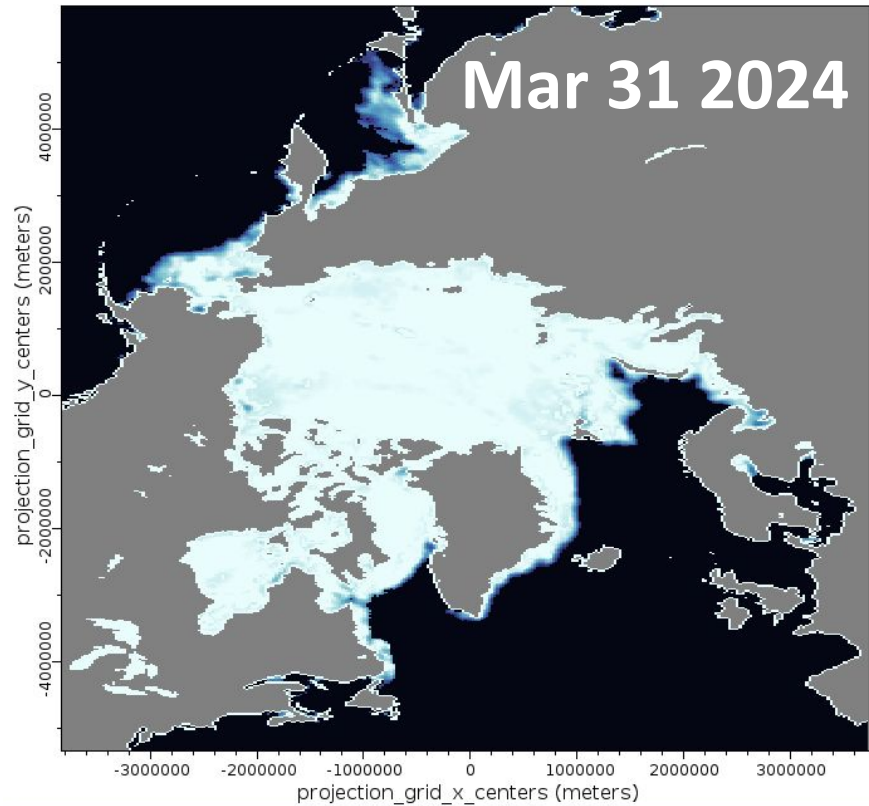
Oxygen Section for 0-350 m depth



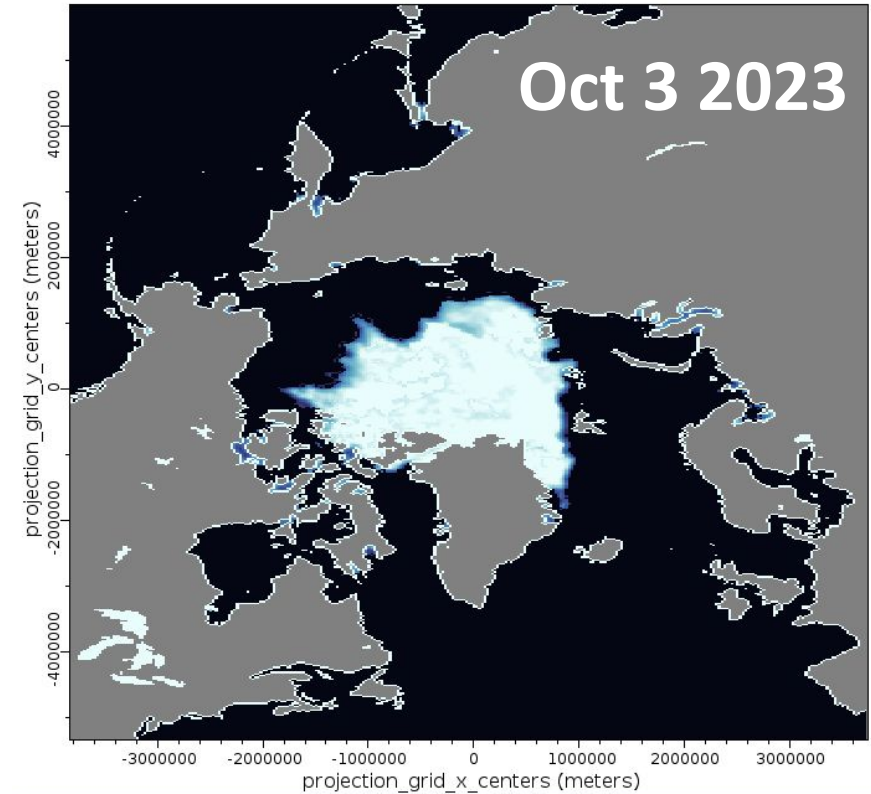


# “Last” Data

[https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[last\]\[\]\[\]](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[last][][])



[https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[last-180\]\[\]\[\]](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[last-180][][])



# Deconstructing an ERDDAP data request URL

[nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[\(2019-01-01\)\]\[\[\]\]](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[(2019-01-01)][[]])

## Example of a URL data request

Base URL: <https://polarwatch.noaa.gov/erddap/griddap/>

Dataset ID: [nsidcG02202v4nh1day](#)

File Type: [.largePng](#) (.nc, .mat, .json, .geotif, .kml, .csv, .graph, .html...)

Data Request Begins ?

Variable: [cdr\\_seaice\\_conc](#)

Time range: [\[\(2019-01-01\)\]](#)

Latitude Range: [\[\]](#) (empty square brackets returns all values)

Longitude Range: [\[\]](#) (empty square brackets returns all values)

<https://polarwatch.noaa.gov/erddap/griddap/>

[https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr\\_seaice\\_conc\[\(2019-01-01\)\]\[\[\]\]](https://polarwatch.noaa.gov/erddap/griddap/nsidcG02202v4nh1day.largePng?cdr_seaice_conc[(2019-01-01)][[]])



# Data Access Form

[https://coastwatch.pfeg.noaa.gov/erddap/griddap/NOAA\\_DHW\\_monthly.html?sea\\_surface\\_temperature\\_anomaly](https://coastwatch.pfeg.noaa.gov/erddap/griddap/NOAA_DHW_monthly.html?sea_surface_temperature_anomaly)



## ERDDAP > griddap > Data Access Form

Dataset Title: **SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, 5km, V.3.1, Monthly, 1985-Present** [✉](#) [RSS](#)

Institution: NOAA/NESDIS/STAR Coral Reef Watch program (Dataset ID: NOAA\_DHW\_monthly)

Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Files](#) | [Make a graph](#)

Dimensions	Start	Stride	Stop	Size	Spacing
<input checked="" type="checkbox"/> time (UTC)	2018-11-16T00:00:00Z	1	2018-11-16T00:00:00Z	431	30 days 10h 29m 35s (uneven)
<input checked="" type="checkbox"/> latitude (degrees_north)	70.025	1	-10.025	3600	-0.05 (uneven)
<input checked="" type="checkbox"/> longitude (degrees_east)	-179.975	1	-100.025	7200	0.05 (uneven)

**Grid Variables** (which always also download all of the dimension variables)

- sea\_surface\_temperature (degree\_C)
- mask (Pixel characteristics flag array, pixel\_classification)
- sea\_surface\_temperature\_anomaly (degree\_C)

File type: [\(more info\)](#)

htmlTable - View a URL .html web page with the data in a table. Times are ISO 8601 strings.

Just generate the URL:

[\(Documentation / Bypass this form\)](#)

**Submit** (Please be patient. It may take a while to get the data.)



# Online “Introduction to ERDDAP” provided by NOAA CoastWatch

## Online ERDDAP tutorial

- Developed by CoastWatch West Coast Node for the NOAA satellite course
- <https://github.com/coastwatch-training/CoastWatch-Tutorials/tree/main/ERDDAP-basics>
- Walks users through using ERDDAP
- Demonstrates visualizing both gridded and tabular datasets
- Shows how to subset and download datasets in a variety of different formats

### Introduction

Updated March, 2024

#### What is ERDDAP

For many users, obtaining the ocean satellite data they need requires downloading data from several data providers, each with its own file formats, download protocols, subset abilities, and preview abilities.

A short list of ocean satellite data providers

- Jet Propulsion Laboratory PO.DAAC
- Ocean Biology (OB.DAAC)
- Goddard Space Flight Center
- Center for Satellite Applications and Research
- CoastWatch Central Operations
- Office of Satellite and Products
- National Centers for Environmental Information
- Comprehensive Large Array-data Stewardship System
- European Space Agency
- Japan Aerospace Exploration Agency

The goal behind ERDDAP is to make it easier for you to get scientific data. To accomplish that goal, ERDDAP acts as a middleman, selectively channeling datasets from remote and local data sources to a single data portal. With ERDDAP as the single-source portal, you have access to a simple, consistent way to download subsets of gridded and tabular scientific datasets in common file formats, with options and make graphs and maps.

**Data Sources**

**Local**

**Remote**

PML

NODC

NESDIS STAR

NASA PO.DAAC

**ERDDAP**

**Data Users**

Web-based Applications

Automated Scripts

Download By Hand

MATLAB

python

ArcGIS

R

**Features of ERDDAP**

- Data in the common file format of your choice. ERDDAP offers all data as .html table, ESRI .asc and .csv, Google Earth .kml, OPeNDAP binary, .mat, .nc, ODV .txt, .csv, .tsv, .json, and .xhtml

<https://github.com/coastwatch-training/CoastWatch-Tutorials/tree/main/ERDDAP-basics>



We will be using Slido to interact with participants:

Go to [www.slido.com](https://www.slido.com)

#seaice

