

GLODAPv2.2023 ODV Collection

Global Ocean Data Analysis Project version 2.2023 (GLODAPv2.2023) (NCEI Accession 0283442)

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PACKAGE DESCRIPTION: This NCEI Accession consists of the GLODAPv2.2023 data product composed of data from 1108 scientific cruises covering the global ocean between 1972 and 2021. It includes full depth discrete bottle measurements of salinity, oxygen, nitrate, silicate, phosphate, dissolved inorganic carbon (TCO₂), total alkalinity (TAlk), CO₂ fugacity (fCO₂), pH, chlorofluorocarbons (CFC-11, CFC-12, CFC-113,

and CCl₄), SF₆, and various isotopes and organic compounds. It was created by appending data from 23 cruises to GLODAPv2.2022 (Lauvset et al., 2022, NCEI Accession 0257247). The data for salinity, oxygen, nitrate, silicate, phosphate, TCO₂, TALK, pH, CFC-11, CFC-12, CFC-113, CCl₄, and SF₆ were subjected to primary and secondary quality control. Severe biases in these data have been corrected for, and outliers removed. However, differences in data related to any known or likely time trends or variations have not been corrected for. These data are believed to be accurate to 0.005 in salinity, 1% in oxygen, 2% in nitrate, 2% in silicate, 2% in phosphate, 4 μmol kg⁻¹ in TCO₂, 4 μmol kg⁻¹ in TALK, and for the halogenated transient tracers and SF₆: 5%.

CITE AS: Lauvset, Siv K.; Lange, Nico; Tanhua, Toste; Bittig, Henry C.; Olsen, Are; Kozyr, Alex; Álvarez, Marta; Azetsu-Scott, Kumiko; Becker, Susan; Brown, Peter J.; Carter, Brendan R.; Cotrim da Cunha, Leticia; Feely, Richard A.; Hoppema, Mario; Humphreys, Matthew P.; Ishii, Masao; Jeansson, Emil; Jones, Steve D.; Lo Monaco, Claire; Murata, Akihiko; Müller, Jens Daniel; Pérez, Fiz F.; Schirnick, Carsten; Steinfeldt, Reiner; Suzuki, Toru; Tilbrook, Bronte; Ulfsbo, Adam; Velo, Antón; Woosley, Ryan J.; Key, Robert M. (2022). Global Ocean Data Analysis Project version 2.2023 (GLODAPv2.2023) (NCEI Accession 0283442). [indicate subset used]. NOAA National Centers for Environmental Information. Dataset. Accessed [date].

ODV collection created by Reiner Schlitzer, Alfred Wegener Institute, Bremerhaven on October 24, 2023 using basin-wide files obtained from GEOMAR. The collection contains data for 45 variables at 63,402 stations as shown in the map below. Data availability (in %) by variable is summarized in Table 1.

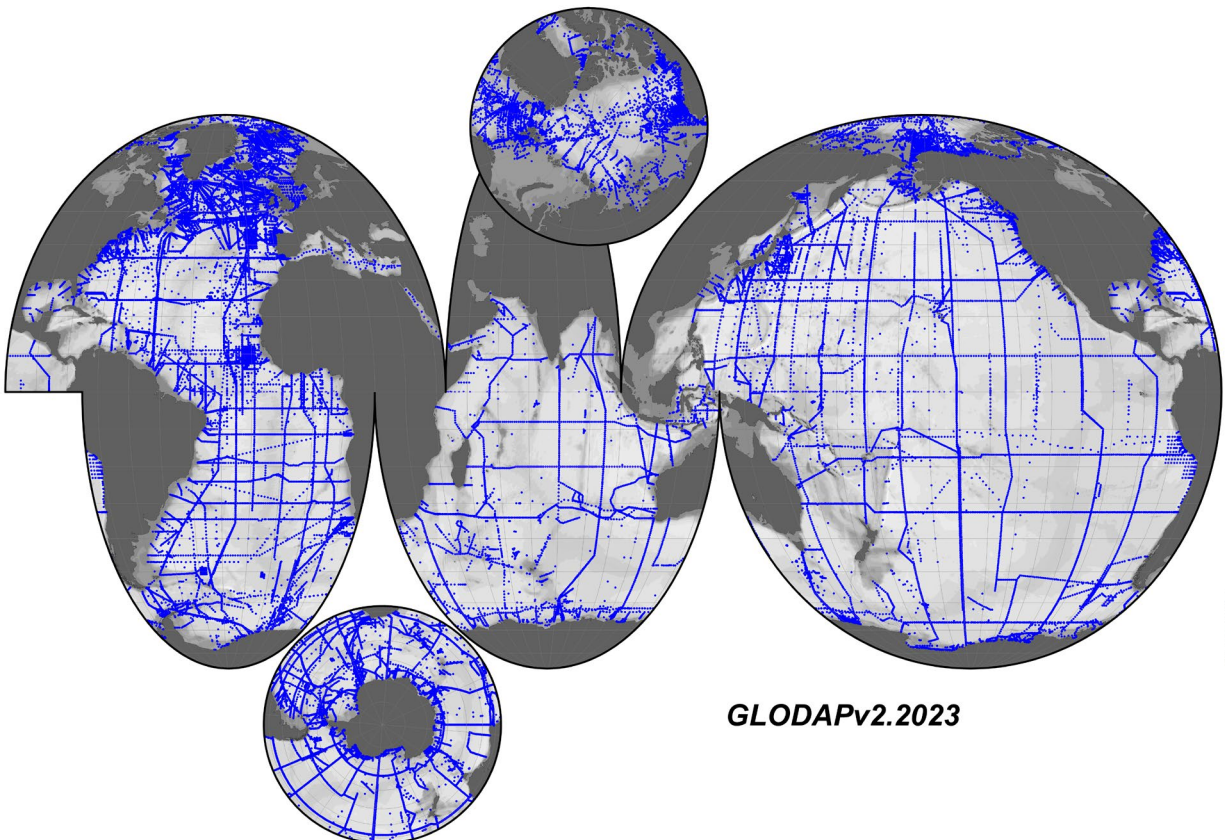


Figure 1: GLODAPv2.2023 station map.

Table 1: Data availability (in %) by variable.

1:	PRESSURE [DBAR]	100
2:	DEPTH [M]	100
3:	TEMPERATURE [DEG C]	99
4:	SALNTY [PSS-78]	98
5:	OXYGEN [UMOL/KG]	89
6:	PHSPHT [UMOL/KG]	76
7:	SILCAT [UMOL/KG]	80
8:	NITRAT [UMOL/KG]	80
9:	NITRIT [UMOL/KG]	58
10:	ALKALI [UMOL/KG]	35
11:	TCARBN [UMOL/KG]	39
12:	CFC-11 [PMOL/KG]	27
13:	CFC-12 [PMOL/KG]	29
14:	CFC-113 [PMOL/KG]	8
15:	CCL4 [PMOL/KG]	3
16:	SF6 [FMOL/KG]	7
17:	DELC13 [/MILLE]	2
18:	DELC14 [/MILLE]	3
19:	TRITUM [TU]	2
20:	DELHE3 [PERCNT]	3
21:	HELIUM [NMOL/KG]	2
22:	NEON [NMOL/KG]	1
23:	O18/O16 [/MILLE]	1

24:	TOC [UMOL/KG]	0.3
25:	DOC [UMOL/KG]	4
26:	DON [UMOL/KG]	0.1
27:	TDN [UMOL/KG]	2
28:	CHLORA [UG/KG]	3
29:	pHT [p=0,T=25,S]	34
30:	pHT [p,T,S]	34
31:	THETA [DEG C]	97
32:	SIGMA0 [KG/M**3]	97
33:	SIGMA1 [KG/M**3]	97
34:	SIGMA2 [KG/M**3]	97
35:	SIGMA3 [KG/M**3]	97
36:	SIGMA4 [KG/M**3]	97
37:	NEUTRAL DENSITY [KG/M**3]	86
38:	AOU [UMOL/KG]	84
39:	pCFC-11 [PPTV]	27
40:	pCFC-12 [PPTV]	28
41:	pCFC-113 [PPTV]	8
42:	pCCL4 [PPTV]	3
43:	pSF6 [PPTV]	7
44:	CASTNO	100
45:	BOTTLENO	100

Metadata and Data

In addition to the standard metadata, the collection has a *Cruise Metadata* meta variable containing a link to additional cruise metadata (Figure 2) for the current station. Clicking on the value opens the cruise metadata file in the web browser (Figure 3). You find details about the cruise, such as cruise dates, ship name and names of chief scientist as well as lead PIs for various groups of measurements. In addition, you also find links to references associated with this cruise (*Refs*), the cruise report and original data file of the cruise (*Data Files*), the OCADS metadata page of the cruise (*Metadata*), and the QC Details and Adjustments page of the cruise (*QC Details*). An example adjustments page is shown in Fig. 4 below.

Where available, 1- σ error data are included with the actual data (Figure 2). These error values are available for plotting via the *Metadata > Data Error Value* derived variable. QC flag values are shown when hovering the mouse over one of the ⓘ symbols or variable names.

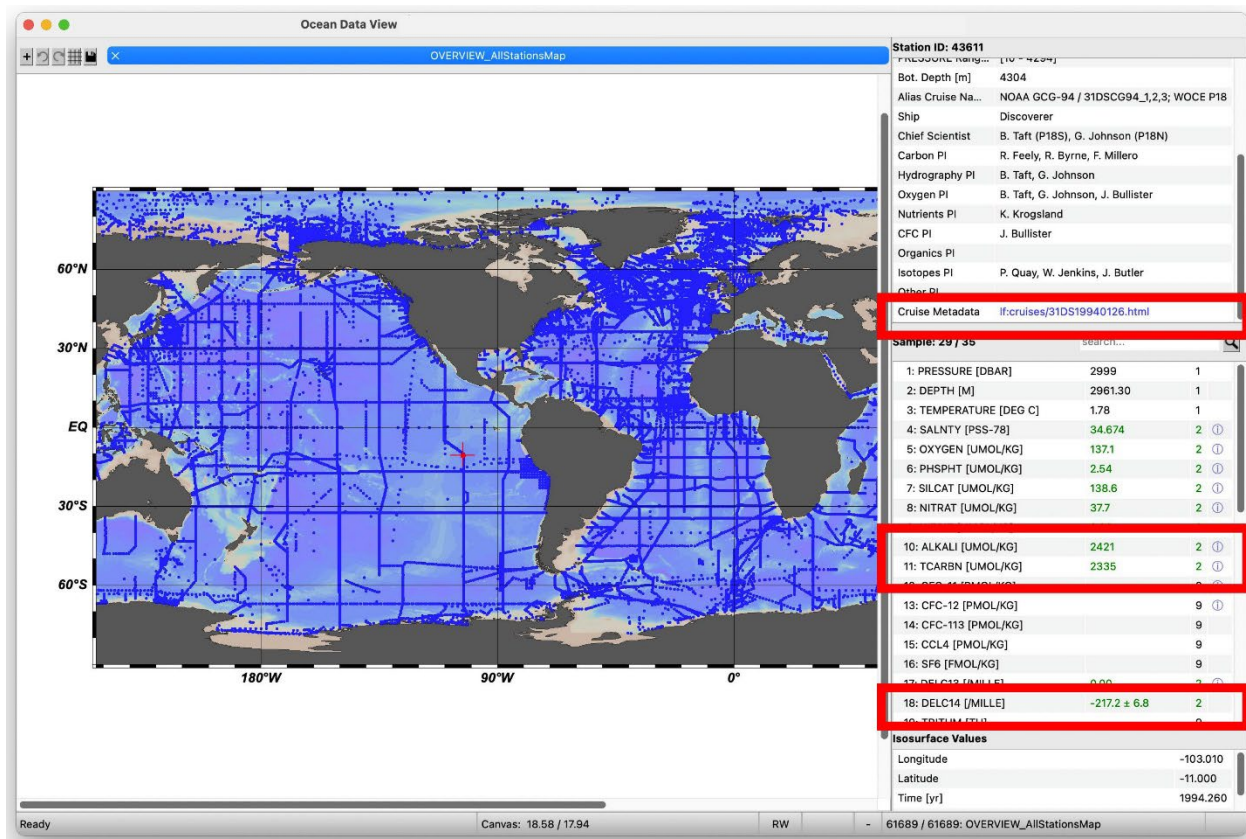


Figure 2: GLODAPv2.2023 metadata, data error and QC flag support.

31DS19940126

EXPCODE:	31DS19940126
Alias:	NOAA GCG-94 / 31DSCG94_1,2,3; WOCE P18
Consists of (Legs):	31DS19940126
Station Range:	
Region:	Pacific
Dates:	01/26/1994-04/27/1994
Ship:	Discoverer
Chief Scientist:	B. Taft (P18S), G. Johnson (P18N)
Carbon PI:	R. Feely, R. Byrne, F. Millero
Hydrography (T, S) PI:	B. Taft, G. Johnson
Oxygen PI:	B. Taft, G. Johnson, J. Bullister
Nutrients PI:	K. Kroglund
CFC (CFC-11, CFC-12, CFC-113, CCL4, SF6) PI:	J. Bullister
Organics (DOC, TDN, POC, PON) PI:	
Isotopes (C14, C13, H3, He3, He, Neon, 18O, Ba) PI:	P. Quay, W. Jenkins, J. Butler
Other PI:	
Measurements in Dataset:	CTDTMP, CTDSAL, SALNTY, CTDOXY, OXYGEN, SILCAT, NITRAT, NITRIT, PHSPHT, CFC-11, CFC-12, RITUM, HELIUM, DELHE3, DELC14, DELC13, TCARB, FCO2, FCO2TMP, ALKALI, PH_TOT, PHTEMP, THETA, TRITER
Cruise Data References:	
Data Files:	Data Files
Metadata Report:	Metadata
QC Details and Adjustments:	QC Details

Figure 3: Example cruise metadata.

GLODAPv2 :: GLODAPv2 :: All Regions :: Adjustments

GLODAPv2 @ CDIAC | Comments | Documentation, Downloads, misc. Uploads | Filter by Dataset: ALL GLODAPv2 DATASETS | GLODAPv2 (NEW) | PACIFICA | CARINA | DISMISSED

Showing ADJUSTMENT values for cruise: 74AB20050501 | Back to Adjustments List | List related X-overs

Cruise: 74AB20050501 (dataset: CARBOOCEAN) Stations: [1-16] [17-43] [44-144] Cruise Info Edit Adjustment Values

Synonyms (including errata!) for this cruise: 36 N section; 74AB20050501; 36 N section;

Stations:	[1-16]	[17-43]	[44-144]
Calculated carbon parameter:	pH		
Salinity [+]	0.0	0	0.0
CTD-Sal. [+] slope/intercept - action [ID]	-999.0	-999 / / -999 - # 3	-999.0
TCO ₂ [+]	0.0	0	0.0
Alkalinity [+]	0.0	0	0.0
pH [+]	-999.0	-999	-999.0
Nitrate [x]	0.975	0.975	0.975
Phosphate [x]	0.97	0.97	0.97
Silicate [x]	0.92	0.92	0.92
Oxygen [x]	0.94	0.94	1.0
CTD-Oxyg. [x] slope/intercept - action [ID]	-999.0	-999 / / -999 - # 3	-999.0
CFC12 [x]	-999.0	-999	-999.0
CFC11 [x]	-999.0	-999	-999.0
CFC113 [x]	-999.0	-999	-999.0
CCI4 [x]	-999.0	-999	-999.0

i The selected Calculated Carbon Parameter will be exported as is and displayed in red with subscript "c", e.g. -0.123456!
 No data available? Insert -999
 No suggestion for adjustment possible? Insert -888
 To calibrate CTDsal use:
 $CTDsal_calibrated = (CTDsal - CTDsal_intercept) / CTDsal_slope$
 To calibrate CTDoxy use:
 $CTDoxy_calibrated = (CTDoxy - CTDoxy_intercept) / CTDoxy_slope$

Save adjustment values

Cruise Info

Regions for which cruise is relevant: **AO**

Selected region(s) for this cruise: Atlantic Ocean

Save cruise region

Annotations for this cruise in GLODAPv2:

View 0 annotation(s) (Lists all annotations)

Status of this cruise:

Cruise is a core cruise reference - CARINA ID: 164 Save cruise status

Files For Cruise

Plot files re. Cruise: - no files! -

Data files re. Cruise: - no files! -

Plot files re. Cluster: - no files! -

Comments re. this cruise

View 16 comment(s) (Lists all comments)

Autogenerated CTD salinity and CTD oxygen update - (current GLODAPv2/CARBOOCEAN comment)

Automated update! This overwrites adjustment values (and flags) of CTDoxy and CTDsal with the values from BOTSsal and BOToxy for every cruise, unless CTDsal (or CTDoxy) is not present or bad.
 Salinity action ID:3; no CTD salinity data. Setting CTD salinity offset to -999, QC flag removed.
 Oxygen action ID:3; no CTD oxygen data. Setting CTD oxygen offset to -999, QC flag removed.

Posted by svheuven@gmail.com on 2015-02-19 09:22:24 UTC - Edit - Delete

Autogenerated CTD salinity and CTD oxygen update - (current GLODAPv2/CARBOOCEAN comment)

Automated update! This overwrites adjustment values (and flags) of CTDoxy and CTDsal with the values from BOTSsal and BOToxy for every cruise, unless CTDsal (or CTDoxy) is not present or bad.
 Salinity action ID:3; no CTD salinity data. Setting CTD salinity offset to -999, QC flag removed.
 Oxygen action ID:3; no CTD oxygen data. Setting CTD oxygen offset to -999, QC flag removed.

Figure 4: Example data adjustments page.