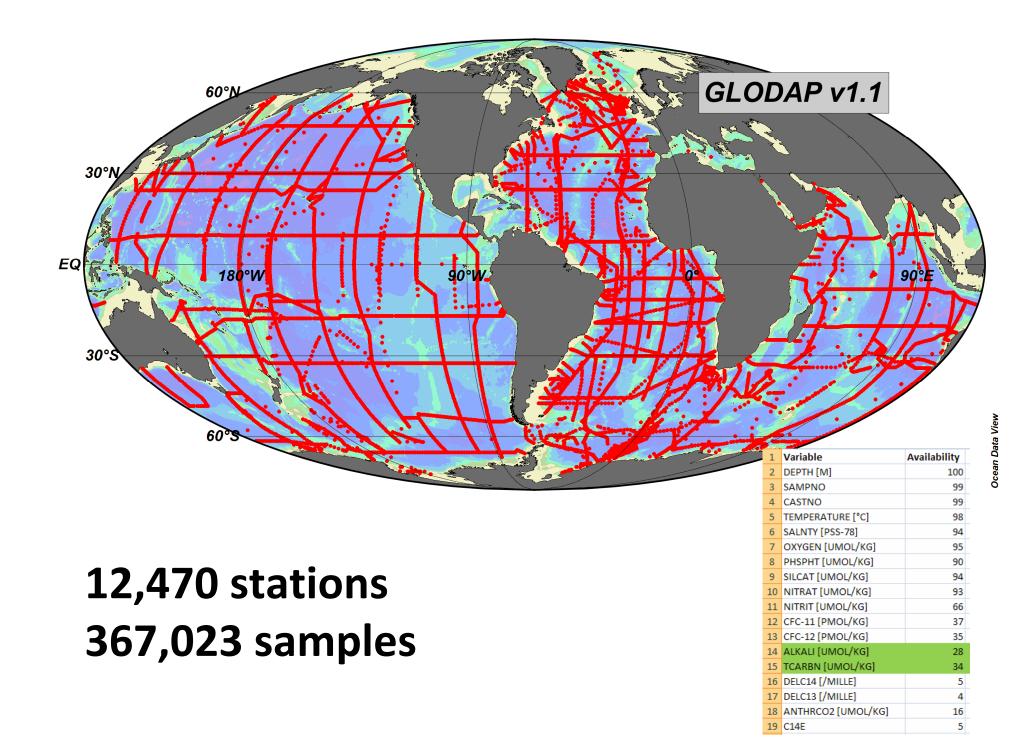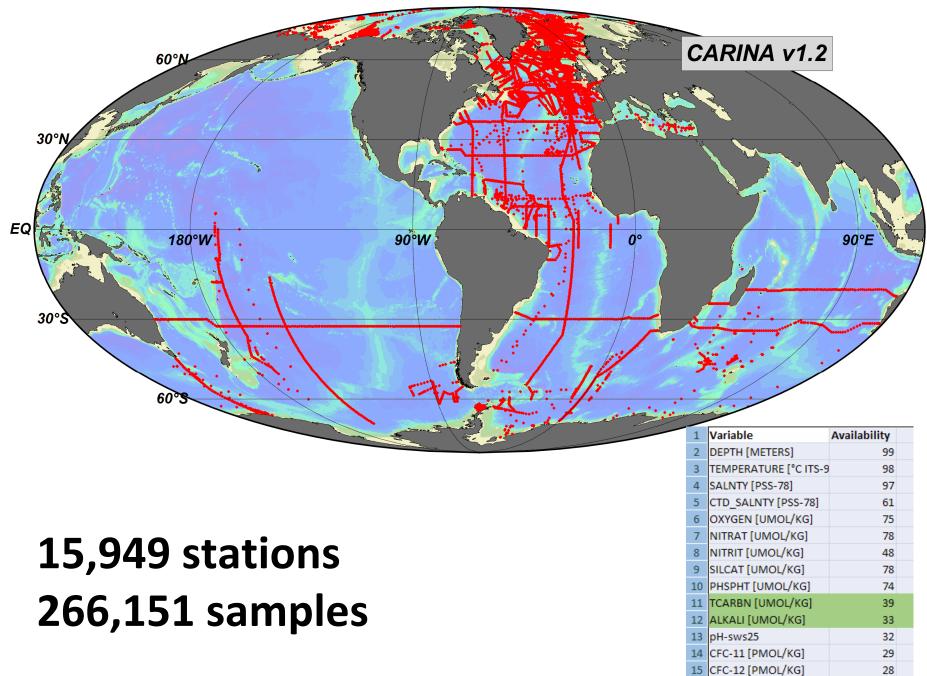# OA Course Ocean Data View

Objective: Use GLODAP and CARINA datasets to address OA science questions.

What you learn:

- **Large publicly available OA-related datasets exist**
- **Basic ODV operation**
- **Calculation of derived carbon parameters**
- **Creation of various plot types**
- **Import of own data into ODV**

GLODAP v1.1

12,470 stations
367,023 samples

Ocean Data View

	Variable	Availability
1		
2	DEPTH [M]	100
3	SAMPNO	99
4	CASTNO	99
5	TEMPERATURE [°C]	98
6	SALNTY [PSS-78]	94
7	OXYGEN [UMOL/KG]	95
8	PHSPHT [UMOL/KG]	90
9	SILCAT [UMOL/KG]	94
10	NITRAT [UMOL/KG]	93
11	NITRIT [UMOL/KG]	66
12	CFC-11 [PMOL/KG]	37
13	CFC-12 [PMOL/KG]	35
14	ALKALI [UMOL/KG]	28
15	TCARBN [UMOL/KG]	34
16	DELC14 [/MILLE]	5
17	DELC13 [/MILLE]	4
18	ANTHRCO2 [UMOL/KG]	16
19	C14E	5

CARINA v1.2

Ocean Data View

15,949 stations

266,151 samples

	Variable	Availability
1	Variable	Availability
2	DEPTH [METERS]	99
3	TEMPERATURE [°C ITS-9	98
4	SALNTY [PSS-78]	97
5	CTD_SALNTY [PSS-78]	61
6	OXYGEN [UMOL/KG]	75
7	NITRAT [UMOL/KG]	78
8	NITRIT [UMOL/KG]	48
9	SILCAT [UMOL/KG]	78
10	PHSPHT [UMOL/KG]	74
11	TCARBN [UMOL/KG]	39
12	ALKALI [UMOL/KG]	33
13	pH-sws25	32
14	CFC-11 [PMOL/KG]	29
15	CFC-12 [PMOL/KG]	28
16	CFC113 [PMOL/KG]	13
17	CCL4 [PMOL/KG]	8

Guided Exercises:

- General operation
- Produce DIC and Alkalinity sections (A16S)
- Calculate OA-related derived variables
- Produce Ω and pCO2 sections (A16S)
- Produce Ω and pCO2 maps on depth or density surfaces

Exercises:

- Open the CARINA database and produce CO3-- and HCO2- sections (choose your favourite cruise)
- Open the GLODAP database and produce a map of ΩA on the isopycnal $\sigma 0 = 27.0$.
- Open the GLODAP database and produce a map of the depth with $\Omega A = 1$.