

GOMECC Cruise Readme File

Cruise Information:

The NOAA Ship RONALD H. BROWN departed Galveston, Texas on July 10, 2007 and arrived in Boston, Massachusetts on August 4, 2007.

Project Information:

This project is in support of the North American Carbon Program (NACP) and represents a collaboration between the Atlantic Oceanographic and Meteorological Laboratory (AOML) of NOAA, the Earth System Research Laboratory (ESRL) of NOAA, the University of Miami's Rosenstiel School of Marine and Atmospheric Science (RSMAS), the University of South Florida, the University of Georgia, the University of New Hampshire, Texas A&M University, the University of Colorado, the University of Southern Mississippi, Loyola College of Maryland, and Lamont-Doherty Earth Observatory.

A full description of the cruise including cruise report and data can be found at <http://www.aoml.noaa.gov/ocd/gcc/GOMECC/>.

Scientists responsible for the technical quality of the datasets with the parameters in parentheses:

Rik Wanninkhof (Total inorganic carbon CO₂ (DIC), fugacity of CO₂ (fCO₂))
NOAA/AOML/Ocean Chemistry Division

Jia-Zhong Zhang (Nutrients)
NOAA/AOML/Ocean Chemistry Division

Molly Baringer (CTD)
NOAA/AOML/Physical Oceanography Division

Chris Langdon (Oxygen)
RSMAS

Wei-Jun Cai (Total alkalinity)
William Miller (photochemistry)
University of Georgia

Joe Salisbury (DOC/Chl/color)
Doug van der Mark
University of New Hampshire

Robert Byrne (UW pH, profiling pH)
University of South Florida

Chris Fairall (Micromet fluxes)
NOAA/ESRL

Detlev Helmig (Ozone fluxes)
University of Colorado

Steven Lohrenz (Pigments)
University of Southern Mississippi

Shari Yvon-Lewis (HCFC)
Texas A&M Univeristy

Elizabeth Dahl (Alkyl nitrate)
Loyola University

Wade McGillis (Air-Sea Carbon fluxes)
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List of variables included in the GOMECC bottle dataset:

COLUMN	HEADER	EXPLANATION
1.	STNNBR	Station Number
2.	CastNo	Cast Number
3.	SampNo	Sample Number
4.	BTLNBR	Bottle Number
5.	BTLNBR_FLAG_W	Bottle Flag - WOCE
6.	DATE	MM/DD/YYYY
7.	TIME	HH:MM
8.	LAT	Latitude in decimal degrees (negative values are in the southern hemisphere).
9.	LONG	Longitude in decimal degrees (negative values are in the western latitudes).
10.	BOTDEPTH	Bottom depth - meters
11.	DEPTH	Meters
12.	CTDPRS	CTD Pressure - dbars
13.	CTDTMP	CTD Temperature - ITS-90
14.	CTDSAL	CTD Salinity - PSS-78
15.	Corrected CTDSAL	Corrected CTD Salinity - PSS-78
16.	CTDOXY	CTD Oxygen - UMOL/KG
17.	Corrected CTDOXY	Corrected CTD Oxygen - UMOL/KG

18.	THETA	Degrees Celsius
19.	SALNTY	Salinity - PSS-78
20.	SALNTY_FLAG_W	Salinity Flag - WOCE
21.	OXYGEN	UMOL/KG
22.	OXYGEN_FLAG_W	Oxygen Flag - WOCE
23.	SILCAT	Silicate - UMOL/KG
24.	SILCAT_FLAG_W	Silicate Flag - WOCE
25.	NITRAT	Nitrate - UMOL/KG
26.	NITRAT_FLAG_W	Nitrate Flag - WOCE
27.	NITRIT	Nitrite - UMOL/KG
28.	NITRIT_FLAG_W	Nitrite Flag - WOCE
29.	PHSPHT	Phosphate - UMOL/KG
30.	PHSPHT_FLAG_W	Phosphate Flag - WOCE
31.	AMMNIA	Ammonia - UMOL/KG
32.	AMMNIA_FLAG_W	Ammonia Flag - WOCE
33.	CFC-11	PMOL/KG
34.	CFC-11_FLAG_W	CFC-11 Flag - WOCE
35.	CFC-12	PMOL/KG
36.	CFC-12_FLAG_W	CFC-12 Flag - WOCE
37.	CFC-113	PMOL/KG
38.	CFC-113_FLAG_W	CFC-113 Flag - WOCE
39.	TCARBN	Total Carbon - UMOL/KG
40.	TCARBN_FLAG_W	Total Carbon Flag - WOCE
41.	ALKALI	Alkalinity - UMOL/KG
42.	ALKALI_FLAG_W	Alkalinity Flag - WOCE
43.	FCO2_20	UATM@20
44.	FCO2_20_FLAG_W	FCO2_20 Flag - WOCE
45.	DOC	UMOL/L
46.	DOC_FLAG_W	DOC Flag - WOCE

Post-Cruise Updates/Changes:

March 22, 2008 - Merged Joe Salisbury's bottle DOC data into the master Data file. Duplicates were averaged with a WOCE QC flag of 6. Sample number RB22 20070716 3-1 was missing the bottle number in UNH log file; this sample was not merged into the data file. Posted the updated master data file along with the original DOC data on the GOMECC data web page.

March 27, 2008 - Merged the bottom depths into the master data file.

April 24, 2008 - Per Xinping Hu's request changed TALK for sample number 6801 from 2751.87 to 2263.33.

December 4, 2008 - Received and merged the nutrient bottle update into the GOMECC Bottle data file.

July 15, 2010 - Received and merged the final nutrient bottle data into the GOMECC Bottle data files GOMECCMasterBottle.xls and GOMECCMasterBottle.csv. Posted the updated files on the GOMECC data web page.

September 8, 2010 - Added two data columns of corrected CTD salinity (column 15) and CTD oxygen (column 17) into the GOMECC Bottle data files GOMECCMasterBottle.xls and GOMECCMasterBottle.csv. The corrections are based on a fitting procedure between CTD-O2 trace and the bottle salinity and bottle oxygen values. All of the O2 sensor data from CTD profiles on the website <http://www.aoml.noaa.gov/ocd/gcc/GOMECC/data.php> (CTD data files) have this correction applied as well. Corrected values were not reported (-9) when bottle oxygen or salinity data were not measured. For station 26, duplicate CTD data (bottles #2&3) were corrected.

February 9, 2011 - Merged the updated discrete fCO₂ and associated flag into GOMECCMasterBottle.xls and GOMECCMasterBottle.csv and posted the updated files on the GOMECC data web page.

February 11, 2011 - Merged the final nutrient and ammonia data and QC flags (GOMECC07_final nutrient data-3.xls) into GOMECCMasterBottle.xls and GOMECCMasterBottle.csv and posted the updated files on the GOMECC data web page.

February 18, 2011 - Received and merged the final CFC data into GOMECCMasterBottle.xls and GOMECCMasterBottle.csv and posted the updated files on the GOMECC data web page.