

## Data Format Key

### Definition of Variables for Ocean Acidification Research Cruises, 2011

#### General

Variable	Definition	Units
Cruise ID	USGS Field Activity identification number	
Date.UTC	Date in Coordinated Universal Time (UTC) format	MM/DD/YY; UTC
Time.UTC	Time of data collection UTC	HH:MM UTC, 24-hour format
Date.EDT/EST	Date of data collection	MM/DD/YY; (Ship Time – East Coast)
Time.EDT/EST	Time of data collection	HH:MM; 24-hour format (Ship Time – East Coast)
Latitude	Latitude	decimal degrees (WGS84)
Longitude	Longitude	decimal degrees (WGS84)
Temp.C	Water temperature	degrees Celsius (°C)
Flag	Viability of Sample	1: Good, 2: Not available (avoid using), 3: Bad (avoid using), 4: Interpolated/Last good value

#### Discrete Water Samples

Variable	Definition	Units
Sample	Sample identification number	
Depth.m	depth at which sample was collected	meters (m)
Sal.ppt	Water salinity	parts per thousand (PPT)
TCO2	Total carbon dioxide	micromole per kilogram (μmol/kg)
TA	Total alkalinity (micromole per kilogram seawater)	micromole per kilogram (μmol/kg seawater)
Notes	description, concerns, viability of samples or environment	

#### Sonde

Variable	Definition	Units
Sp_Cond	Specific conductivity	microsiemens per centimeter (μS/cm)
pH	measure of acidity or alkalinity	
ODO	Optical dissolved oxygen	percent (%)
Chlorophyll	water chlorophyll	micrograms per liter (μg/L)

#### Aft Systems

Variable	Definition	Units
pCO2	partial pressure of carbon dioxide	parts per million (ppm)
pH	measure of acidity or alkalinity	
Ship_Sal_PSU	Salinity recorded by ship	practical salinity units (PSU)

#### Navigation

Variable	Definition	Units
WXTP_Ta	Weather Transmitter Port_ Air Temperature	degrees Celsius (°C)
WXTS_Ta	Weather Transmitter Starboard_ Air Temperature	degrees Celsius (°C)
WXTP_Pa	Weather Transmitter Port_ Air Pressure	hectopascal (hPa)
WXTS_Pa	Weather Transmitter Starboard_ Air Pressure	hectopascal (hPa)
TSG_COND	Thermosalinograph_Conductivity	siemens per meter (S/m)
dec_lat	Decimal Degrees_Latitude	decimal degrees
dec_lon	Decimal Degrees_Longitude	decimal degrees
Depth	Depth under keel	meters (m)
COG	Course Over Ground	degrees
SOG	Speed Over Ground	knots (kt)
WXTP_Rc	Weather Transmitter Port_ Rain Accumulation	millimeters since last reset
WXTS_Rc	Weather Transmitter Starboard_ Rain Accumulation	millimeters since last reset
WXTP_Ri	Weather Transmitter Port_ Rain Intensity	millimeters per hour (mm/hr)
WXTS_Ri	Weather Transmitter Starboard_ Rain Intensity	millimeters per hour (mm/hr)
WXTP_Ua	Weather Transmitter Port_ Relative Humidity	percent (%)
WXTS_Ua	Weather Transmitter Starboard_ Relative Humidity	percent (%)
WXTP_Dm	Weather Transmitter Port_ Wind Direction Average	degrees
WXTS_Dm	Weather Transmitter Starboard_ Wind Direction Average	degrees
WXTP_Sm	Weather Transmitter Port_ Wind Speed Average	meters per second (m/s)
WXTS_Sm	Weather Transmitter Starboard_ Wind Speed Average	meters per second (m/s)
TSG_SALPSU	Thermosalinograph_Salinity (Practical Salinity Units)	practical salinity units (psu)
HDT	Ship's Heading	degrees
TSG_TEMP1	Thermosalinograph_Temperature 1	degrees Celsius (°C)
TSG_TEMP2	Thermosalinograph_Temperature 2	degrees Celsius (°C)
WXTP_TD	Weather Transmitter Port_ True Wind Direction	degrees
WXTS_TD	Weather Transmitter Starboard_ True Wind Direction	degrees
WXTP_TS	Weather Transmitter Port_ True Wind Speed	meters per second (m/s)
WXTS_TS	Weather Transmitter Starboard_ True Wind Speed	meters per second (m/s)
TSG_WETFL	Thermosalinograph_Wetlabs Fluorometer	milligrams per cubic meter (mg/m <sup>3</sup> )