

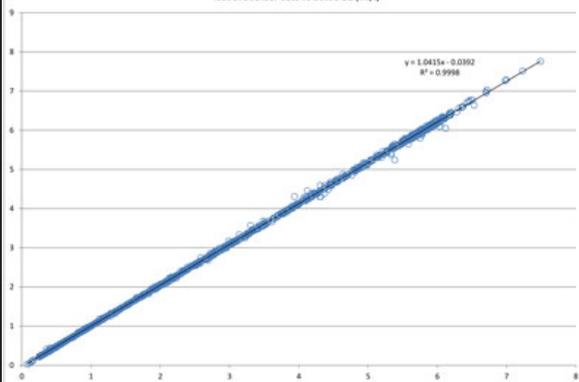
1304SH CTD Processing Summary (</cruises/2013-cruises/calcofi-1304sh/522-1304sh-ctd-processing-summary.html>)

Parent Category: 2013 Cruises (</cruises/2013-cruises.html>)
 Category: CalCOFI 1304SH (</cruises/2013-cruises/calcofi-1304sh.html>)
 Last Updated: 10 March 2017

CTD Processing Summary CalCOFI 1304SH CTD Data Final

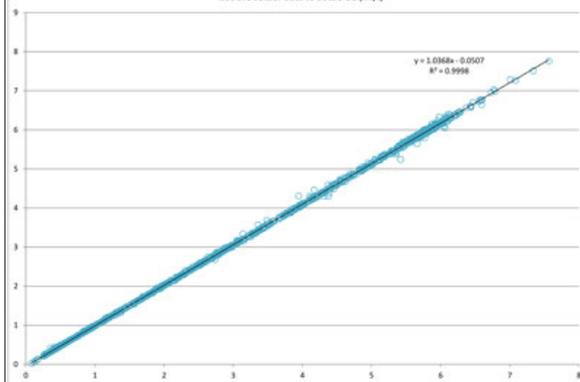
Download 1304SH CTD raw cast files zipped (http://cappuccino.ucsd.edu/downloads/2013/20-1304SH_CTDCast.zip)	Download 1304SH FinalQC CTD + bottle data (http://cappuccino.ucsd.edu/downloads/2013/20-1304SH_CTDFinalQC.zip)	
General CTD Notes - data acquisition notes, logistics, processing - see below		
CTD sensor corrections derived by comparing 4 secs of CTD sensor data (prior to bottle closure) to bottle samples		
Dual T, S, & O2	Primary Sensor	Secondary Sensor
Salinity offset (bottle - CTD salinity; > 350m only; Seabird SBE4)	0.00469	0.00103
Oxygen ml/L (dual Seabird SBE43)	$y = 1.0415x - 0.0392$ $R^2 = 0.9998$	$y = 1.0368x - 0.0507$ $R^2 = 0.9998$
Oxygen umoles/Kg (dual Seabird SBE43)	$y = 1.0417x - 1.7066$ $R^2 = 0.9998$	$y = 1.037x - 2.2099$ $R^2 = 0.9998$
Single sensors	Linear	Power (Polynomial was similar to linear reg)
Nitrate - ISUS 4sec ave voltage vs Bottle Nitrate (Satlantic MBARI-ISUS v2)	$y = 28.229x - 8.4322$ $R^2 = 0.9896$	
Fluorometer - linear & power regressions	$y = 8.3501x - 0.2678$ $R^2 = 0.8724$	$y = 10.417x^{1.4264}$ $R^2 = 0.9029$

CalCOFI 1304SH: CTD Primary Oxygen vs Bottle Oxygen
4sec ave sensor data vs bottle O2 (ml/l)



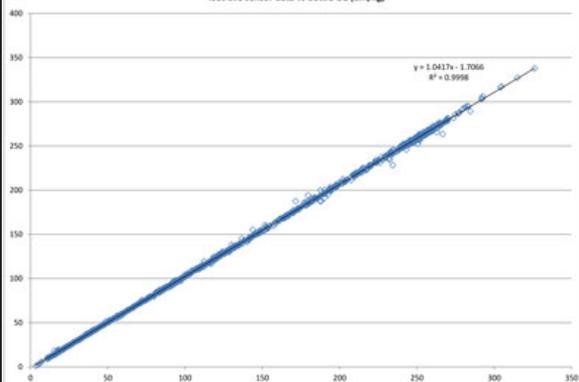
(http://cappuccino.ucsd.edu/downloads/2013/1304SH/1304SH_Ox1MLvsOxBML400.jpg)

CalCOFI 1304SH: CTD Secondary Oxygen vs Bottle Oxygen
4sec ave sensor data vs bottle O2 (ml/l)



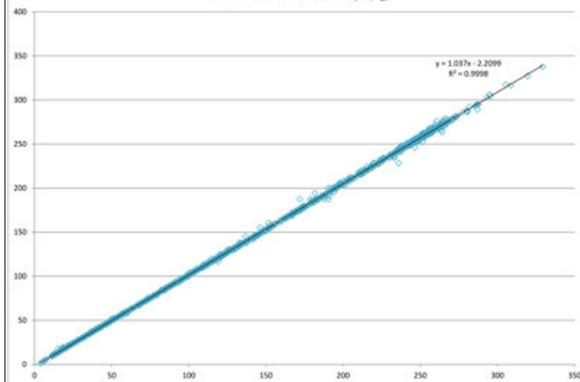
(http://cappuccino.ucsd.edu/downloads/2013/1304SH/1304SH_Ox2MLvsOxBML.jpg)

CalCOFI 1304SH: CTD Primary Oxygen vs Bottle Oxygen
4sec ave sensor data vs bottle O2 (um/kg)



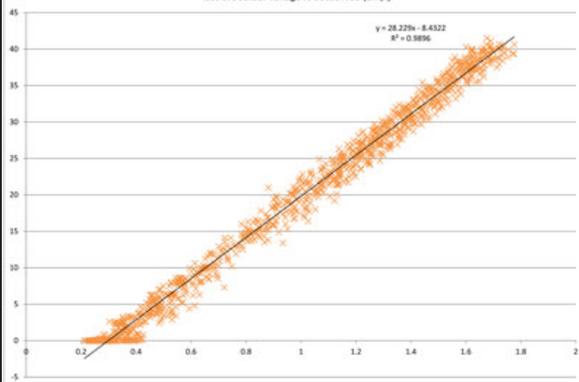
(http://cappuccino.ucsd.edu/downloads/2013/1304SH/1304SH_Ox1UMvsOxBUM.jpg)

CalCOFI 1304SH: CTD Secondary Oxygen vs Bottle Oxygen
4sec ave sensor data vs bottle O2 (um/kg)



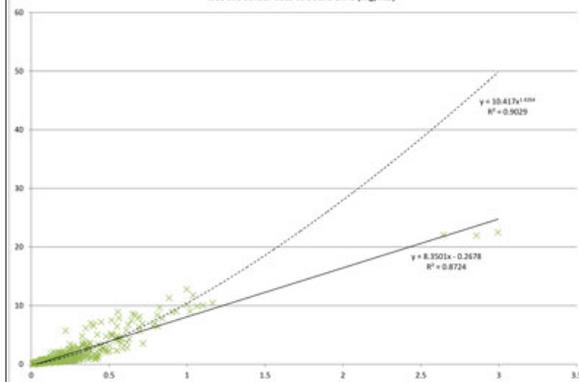
(http://cappuccino.ucsd.edu/downloads/2013/1304SH/1304SH_Ox2UMvsOxBUM.jpg)

CalCOFI 1304SH: ISUS Voltage vs Bottle Nitrate
4sec ave sensor voltage vs bottle NO3 (uM/l)



(http://cappuccino.ucsd.edu/downloads/2013/1304SH/1304SH_ISUSVvsNO3.jpg)

CalCOFI 1304SH: Fluorometer Voltage vs Bottle Chlorophyll
4sec ave sensor data vs bottle chl-a (mg/m3)



(http://cappuccino.ucsd.edu/downloads/2013/1304SH/1304SH_FIVvsChla.jpg)

General notes: This is the final CTD Processing Summary from 1304SH cruise

Please note that these data files are FINAL, bottle-corrected CTD data files.

Final CTD data are available after all CalCOFI 1304SH bottle data have been thoroughly point-checked.

1304SH_CTDFinalQC.zip is distributed along with raw, unprocessed cast files.

Eighty CTD stations were occupied 06 - 30 Apr 2013 on NOAA RV Bell M Shimada. Please refer to the 1304SH cruise summary, & CTD hdr files for sensors-measurements collected and Seasoft modules applied. CTD data have been processed using Seabird's data processing suite, following their recommended methods for the SBE911+. Bottle corrected data are also included which improves the oxygen (SBE43) data quality, estimate nitrate data using ISUS measurements, & estimated chlorophyll from fluorometer voltages.

Other sensors such as transmissometer are included but data quality control steps are not performed. Please refer to the metadata folder for bottle vs CTD sensor comparisons, regression coefficients and combined up and downcast csvs.

Please also note that these data were reprocessed in 2017 to update the final data format, adding data quality code columns.

2017 reprocessing added data-quality code columns and data codes on bad or missing data ("9") or questionable data ("8"). Data values should not have changed from the previously published final CTD data. But the column number on updated CTD.csvs has changed from 65 to 82. Refer to the CTD.csv data format webpage: 65-column index (<http://calcofi.org/data/data-formats/607-ctd-csv-format-65cols.html>); 82-column index (<http://calcofi.org/data/data-formats/577-ctd-csv-format-qc.html>)

JRW 15Feb2017