0911NH CTD Processing Summary

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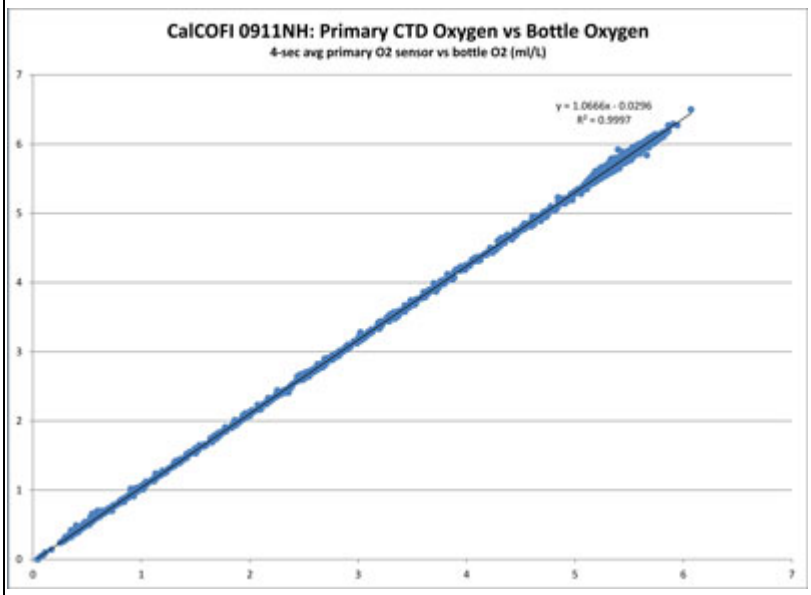
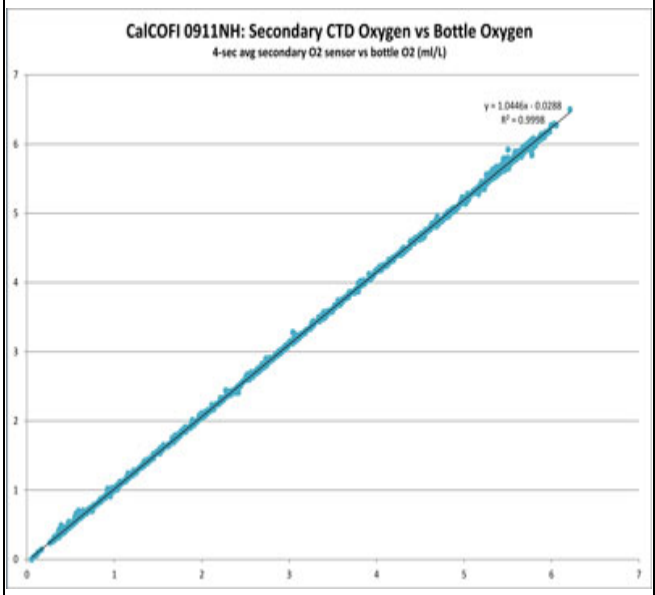
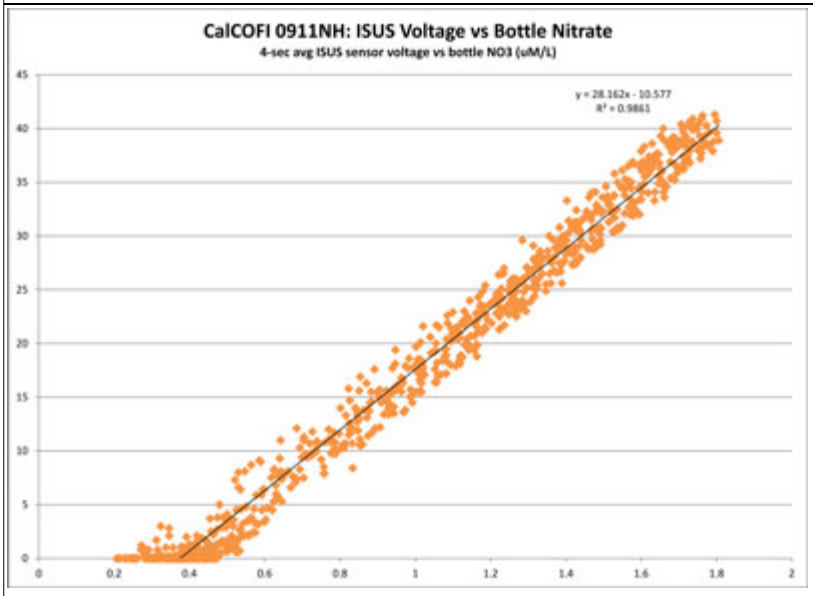
Last Updated: 06 February 2018

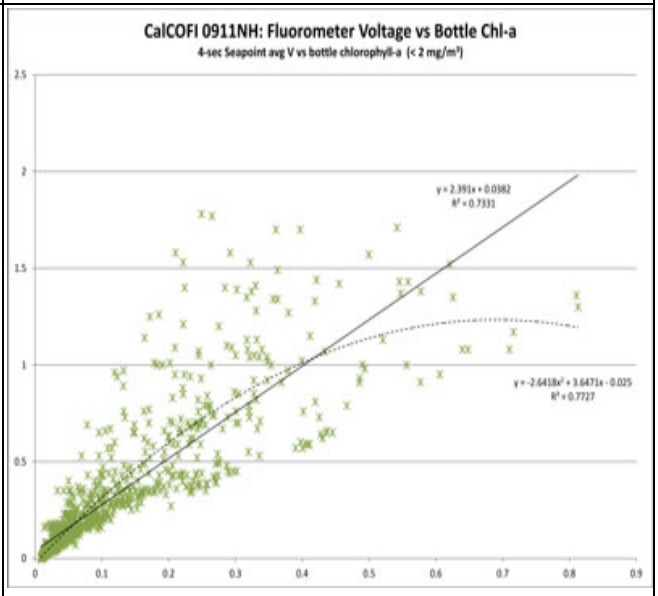
CTD Processing Summary CalCOFI 0911NH CTD Final Data (reprocessed/reformatted 02/2018)		
Download 0911NH CTD raw cast files zipped (http://cappuccino.ucsd.edu/downloads/2009/20-0911NH_CTDCast.zip)		Download 0911NH FinalQC CTD + bottle data (http://cappuccino.ucsd.edu/downloads/2009/20-0911NH_CTDFinalQC.zip)
General CTD Notes - data acquisition cast notes, logistics, processing notes are listed 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)	0.0011	0.0016
Oxygen (ml/L; dual Seabird SBE43)	y = 1.0666x - 0.0296 R^2 = 0.9997	y = 1.0446x - 0.0288 R^2 = 0.9998
Oxygen (umol/Kg; dual Seabird SBE43)	y = 1.0666x - 1.2901 R^2 = 0.9997	y = 1.0446x - 1.2586 R^2 = 0.9998
Single sensors		
Nitrate - ISUS 4sec ave voltage vs Bottle Nitrate (Satlantic MBARI-ISUS v2)	y = 28.387x -10.892 R^2 = 0.9921	Please note the ISUS had serious undetermined issues so many casts do not have ISUS estimated nitrate data.
Fluorometer - linear & polynomial regressions	y = 2.391x + 0.0382 R^2 = 0.7331	y = -2.6418x2 + 3.6471x - 0.025 R^2 = 0.7727
 (http://cappuccino.ucsd.edu/downloads/2009/0911NH/0911NH_Ox1MLvsOxBML.jpg)		 (http://cappuccino.ucsd.edu/downloads/2009/0911NH/0911NH_Ox2MLvsOxBML.jpg)

(http://cappuccino.ucsd.edu/downloads/2009/0911NH/0911NH_Ox1UMvsOxBUM.jpg)

(http://cappuccino.ucsd.edu/downloads/2009/0911NH/0911NH_Ox2UMvsOxBUM.jpg)



(http://cappuccino.ucsd.edu/downloads/2009/0911NH/0911NH_ISUSVvsNO3.jpg)



(http://cappuccino.ucsd.edu/downloads/2009/0911NH/0911NH_FlVvsChla.jpg)

General notes:

CalCOFI 0911NM 6 - 23 Nov 2009

The fall 2009 CalCOFI started off smoothly and we remained ahead of station schedule until sailing into some high winds and large swells near San Nicolas Island. The weather continued to deteriorate until we made it back inshore on line 83. Just in time to head back out into more bad weather once again. At this point we were still on schedule, having to cancel the nets on a few stations. Not until approaching 77.55 did we have to cancel all operations due to another bout of increasing winds and swell. Despite all the bad weather, we managed to get all 75 CTD casts in our station plan.

Channel	Sensor
1. Frequency	Temperature
2. Frequency	Conductivity
3. Frequency	Pressure, Digiquartz with TC
4. Frequency	Temperature, 2
5. Frequency	Conductivity, 2
6. A/D voltage 0	Transmissometer, Chelsea/Seatech/Wetlab
7. A/D voltage 1	Fluorometer, Seapoint
8. A/D voltage 2	Altimeter
9. A/D voltage 3	PAR/Irradiance, Biospherical/Licor
10. A/D voltage 4	User Polynomial
11. A/D voltage 5	Oxygen, SBE 43
12. A/D voltage 6	Oxygen, SBE 43, 2
13. A/D voltage 7	pH
14. SPAR voltage	Unavailable
15. SPAR voltage	SPAR/Surface Irradiance

SIO-CalCOFI's new (Aug 2009; "Walter") Seabird 911+ with 24-10L bottle, aluminum rosette was deployed on each CTD station. Standard sensor configuration consists of: 2-SBE 3plus Temperature, 2-SBE 4 Conductivity, 2-SBE 43 Dissolved Oxygen plumbed in parallel with 2-3000rpm pumps. Additional sensors include Seapoint Fluorometer, Wetlabs C-Star 25cm Transmissometer (mislabeled Chelsea/Seatech in .con file; coefficients are correct), MBARI-ISUS v2 Nitrate sensor, Datasonics Altimeter, Biospherical QSP-200L PAR, SBE 18 pH. There was a notation re the altimeter cabling, having to switch cabling to accomodate the pH sensor.

There were no sensors changed during this cruise but the ISUS had persistent problems with substantial drop-outs. On the two 3500mm deep casts (sta 90.100 & 80.100), the ISUS, ISUS battery, PAR, & pH sensors were removed since they are not rated greater than 1000m. Note that JRW was off this cruise so MGS was primary CTD manager.

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