0610RR CTD Processing Summary

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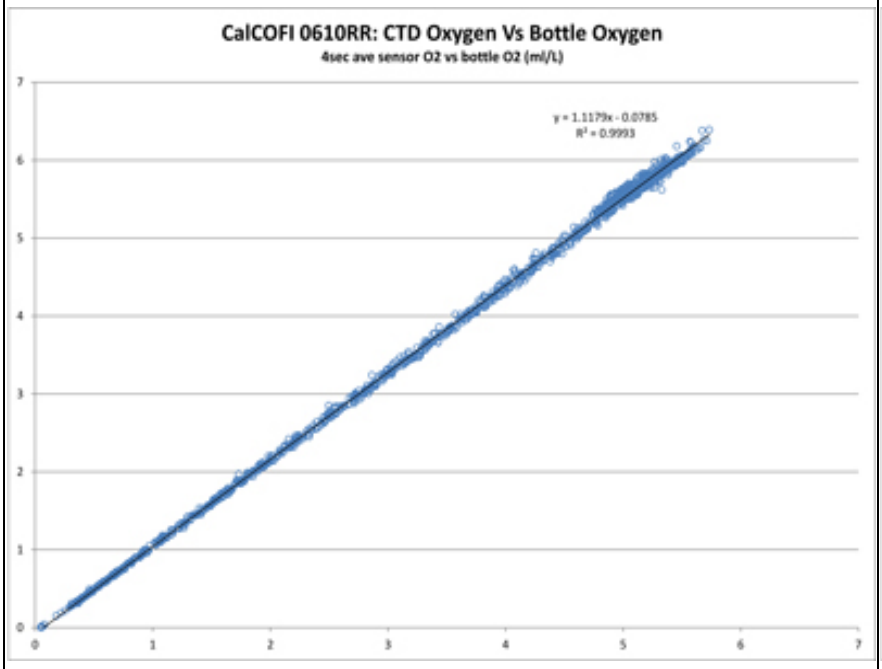
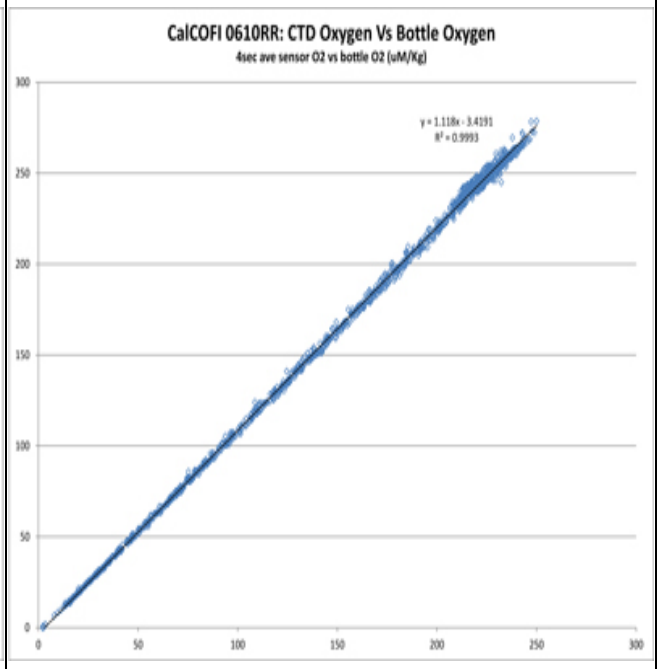
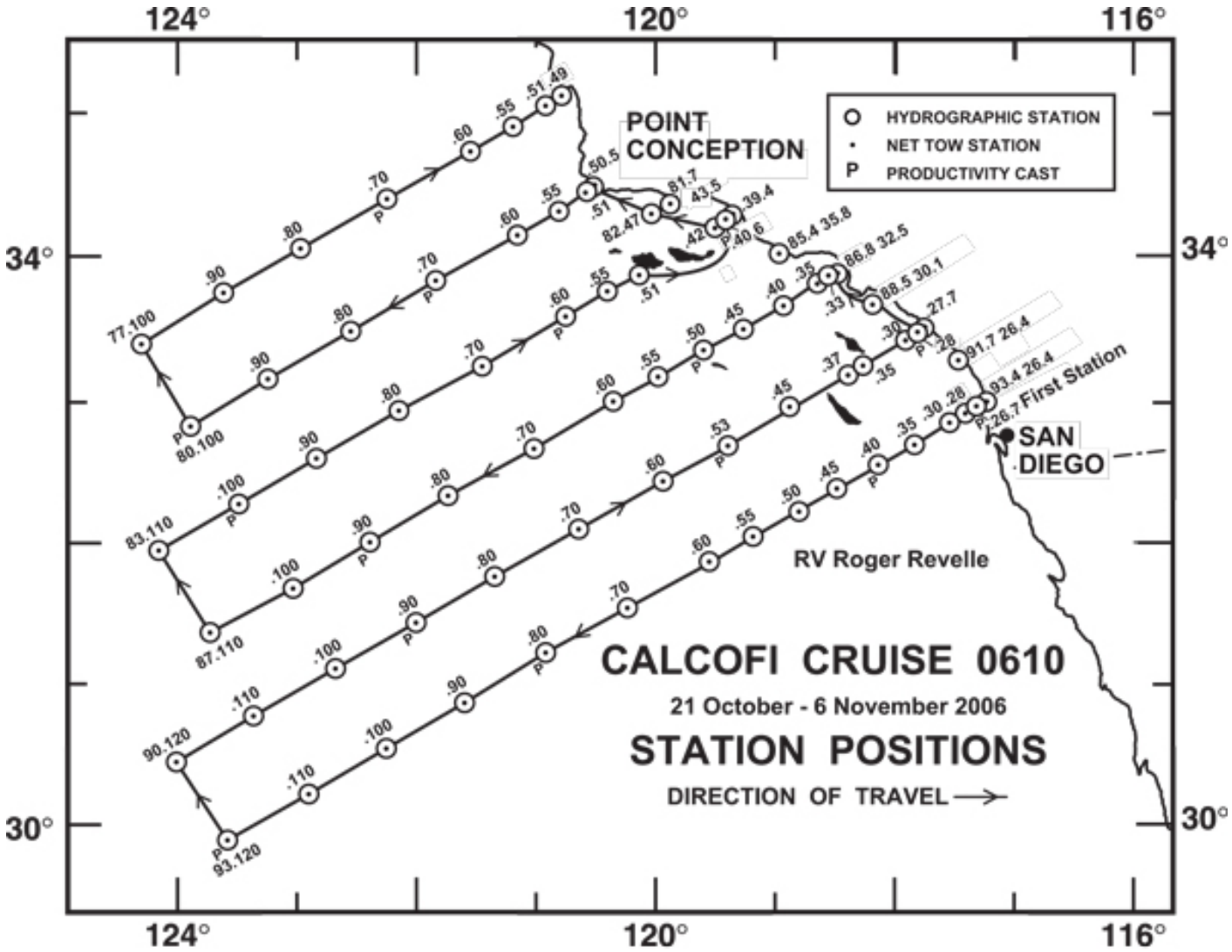
Last Updated: 24 January 2019

CTD Processing Summary CalCOFI 0610RR CTD Final Data (reprocessed/reformatted 01/2019)		
Download 0610RR CTD raw cast files zipped (http://cappuccino.ucsd.edu/downloads/2006/20-0610RR_CTDCast.zip)		Download 0610RR FinalQC CTD + bottle data (http://cappuccino.ucsd.edu/downloads/2006/20-0610RR_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	Primary Sensor	Secondary Sensor
Temperature, dual SBE3	No offset or correction	No offset or correction
Salinity offset (bottle - CTD salinity; > 350m only; Seabird SBE4; fliers excluded)	0.0001	-0.0017
Single sensors - note only one CTD O2 sensor	ml/L	uM/Kg
Oxygen (ml/L & uM/Kg; single Seabird SBE43)	y = 1.1179x - 0.0785 R² = 0.9993	y = 1.118x - 3.4191 R² = 0.9993
Nitrate - Satlantic MBARI-ISUS (SN#111 v2)	y = 30.27x - 11.578 R² = 0.977	
Seapoint Fluorometer - linear & polynomial regressions	y = 3.5642x - 0.1694 R² = 0.7932	y = 0.9656x2 + 2.1597x - 0.0152 R² = 0.851
 (http://cappuccino.ucsd.edu/downloads/2006/0610RR/0610RR_Ox1MLvsOxBML.jpg)		 (http://cappuccino.ucsd.edu/downloads/2006/0610RR/0610RR_Ox1UMvsOxBUM.jpg)

(http://cappuccino.ucsd.edu/downloads/2006/0610RR/0610RR_ISUSVvsNO3.jpg)	(http://cappuccino.ucsd.edu/downloads/2006/0610RR/0610RR_FlVvsChla.jpg)

General notes: Station Pattern & Cruise Track



CalCOFI 0610RR • 21 Oct - 06 Nov 2006 • SIO RV Roger Revelle • San Diego to San Diego

Cruise and CTD Data Processing Notes

CalCOFI 0610RR on SIO RV Roger Revelle successfully occupied 75 of 75 scheduled stations. An extra Goericke student cast to 1025m was performed on station 067 80.100. No seawater samples were collected by SIO-CalCOFI. All 24-10L bottles were closed at 1000m. No acoustic calbration was performed in San Diego Bay so day 1's primary productivity experiment was performed on the 1st station 93.3 26.7..

Seabird 911+ configuration:
Primary Temperature (#1322), Conductivity (#2206), and O2 sensor (#680), pumped (#55060); Secondary Temperature (#6049), Conductivity (#722) pumped (#52236); Wetlabs (CST-490DR) 25cm transmissometer (mislabeled Chelsea/Seatech in con; new M & B calculated during 2019 reporcessing); Seapoint chlorophyll fluorometer (SCF2483 @10x); Benthos/Datasonics Altimeter (#46604); MBARI-ISUS v2 (#111); remote PAR (#4544), surface PAR (SN 6369). (Freq0=T0; Freq1=C0; Freq2=Pr; Freq3=T1; Freq4=C1; V0=Trans; V1=Fl; V2=ISUS; V3=open; V4=O21; V5=open; V6=Altimeter; V7-Remote PAR)

Voltage	Sensor
V0	Trans
V1	Fluor
V2	ISUS
V3	
V4	O2
V5	
V6	Altimeter
V7	Remote PAR

CalCOFI 0610RR CTD Data Processing & Console Ops Notes

Removed salt fliers on both primary & secondary comparisons.

A deep CTD casts to 1025m was performed at sta 80.0 100.0 Cast 567 this cruise. All 24 10L bottles were tripped at 1000m, no seawater samples collected for regular analysis.

Only one O2 sensor was deployed and a SBE11v1 Deck Unit - requiring Align-CTD offset of secondary conductivity (0.073sec) was used.

General Notes: We started data acquisition on deck BEFORE deploying and 10m soak. It is necessary to run Loopedit to remove the noisy data from 0-10m "2-minute" soak before returning back to surface. Some shallow casts (002, 003, 030, 032, 053, 054, 057, 058, 075) were not loopedited since it eliminated too much data. These casts were manually scanned for the appropriate number of scans to skip then binavg.
Cast 002 - had no 10m soak so data acquisition was not started right away.
Cast 003 - 19359 scans were skipped when binavg, no loopedit
Cast 030 - 11960 scans were skipped when binavg, no loopedit
Cast 032 - 11235 scans were skipped when binavg, no loopedit
Cast 053 - 15884 scans were skipped when binavg, no loopedit
Cast 054 - 36660 scans were skipped when binavg, no loopedit
Cast 057 - 7410 scans were skipped when binavg, no loopedit
Cast 058 - 12270 scans were skipped when binavg, no loopedit
Cast 075 - 14425 scans were skipped when binavg, no loopedit

CTD Setup:

Transmissometer important note:
V0 - Tr (CST490DR), new M & B were calculated from the min/max voltages in air from the 8 deck tests.
Min voltage = 0.0611, Max voltage changed but highest (Deck001) was 4.7534
(Deck013 = 4.7521; 021 = 4.7399; 043 = 4.7143; 048 = 4.6581; 055 = 4.703; 067 = 4.6923; 071 = 4.6923)
M & B in the individual .con files were from last cruise so a new .con file (0610UseForAllTr.xmlcon) was used on all stations since no sensors were changed during the cruise.

V1 - Seapoint Fluorometer set at 10x
V2 - ISUS Nitrate Sensor
V3 - open
V4 - SBE43 Oxygen Sensor (only one deployed pre-2009)
V5 - open
V6 - Benthos/Datasonic Altimeter
V7 - PAR
V15 - SPAR
Sensors: T1 - SN1324; T2 - SN6049; C1 - SN2206; C2 - SN722; O2 - SN680; PAR - 4544; SPAR - SN6369

Casts 034 - 039 hdr & dat had wrong station number 86.8 should be 86.7, corrected in both locations, archived, & posted
Cast 036 - Santa Monica Basin station, plotted to 800m
Cast 537 - student cast to 1025m, no bottles, plotted cruise_corr O2, estChl, & estNO3

Quality Coded Casts:
Cast 008U - ISUS data from 270-320 -99'd in the asc file so the regression could do an estimated ISUS NO3
Cast 011UD - all ISUS data QC'd "9" (bad)
Cast 027U - ISU data from 0-125m QC'd "9"

Cast 028UD - all ISUS data "9"

Cast 039D - ISUS data 0-13m "9"

Cast 043D - ISUS data 0-70m "8"

Cast 043U - all ISUS data "9"

Cast 044UD - all ISUS data "9"

Cast 048D - ISUS data 139-268m "9"

Cast 048U - all ISUS data "9"

Cast 066UD - all ISUS data "9"

Cast 067UD - all ISUS data "9"

JRW 01/24/2019