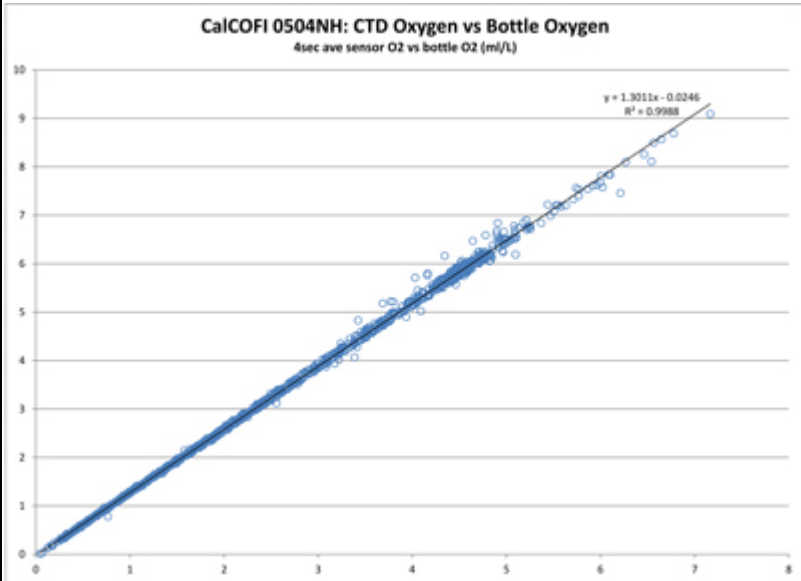
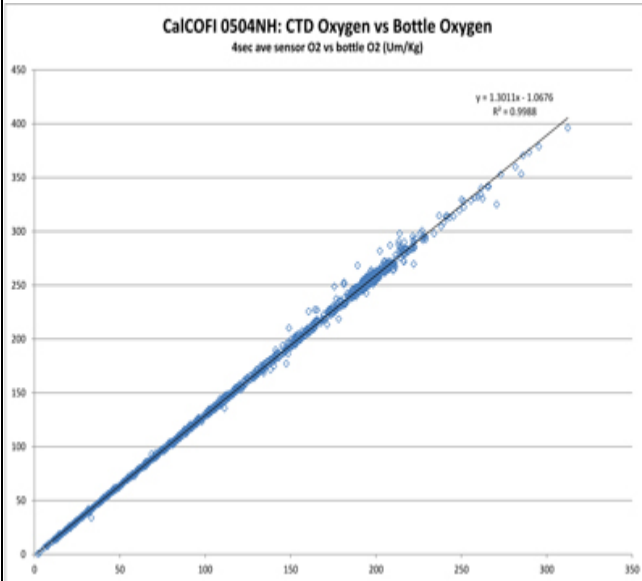


0504NH CTD Processing Summary

Parent Category: Older Cruises (/cruises/older-cruises.html)

Category: 2005 Cruises (/cruises/older-cruises/186-2005-cruises.html)

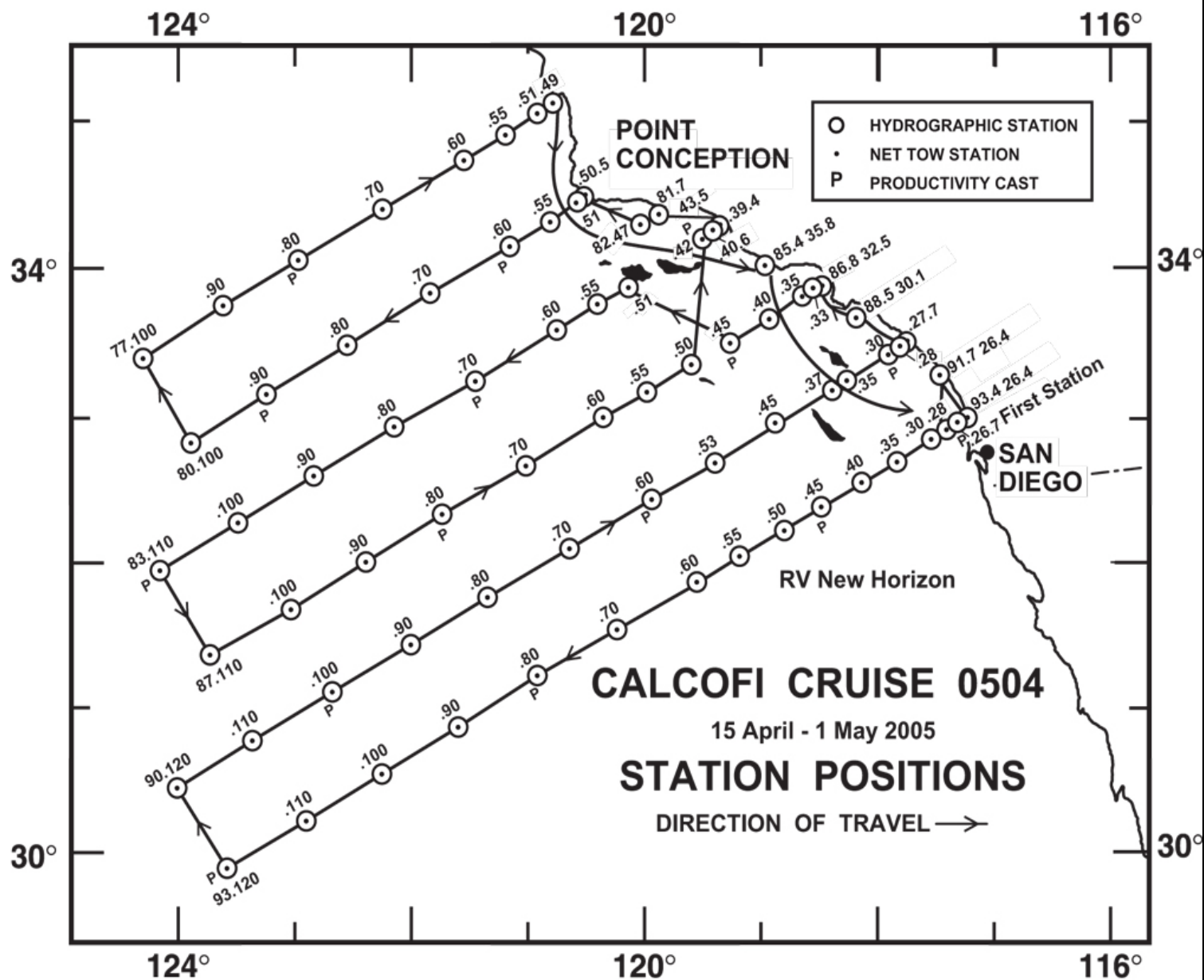
📅 Last Updated: 19 March 2019

CTD Processing Summary CalCOFI 0504NH CTD Final Data (reprocessed/reformatted 03/2019)		
Download 0504NH CTD raw cast files zipped (http://cappuccino.ucsd.edu/downloads/2005/20-0504NH_CTDcast.zip)		Download 0504NH FinalQC CTD + bottle data (http://cappuccino.ucsd.edu/downloads/2005/20-0504NH_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)	-0.0042	-0.0038
Single sensors - note only one CTD O2 sensor		
	ml/L	uM/Kg
Oxygen (ml/L & uM/Kg; single Seabird SBE43)	$y = 1.3011x - 0.0246$ $R^2 = 0.9988$	$y = 1.3011x - 1.0676$ $R^2 = 0.9988$
Satlantic MBARI-ISUS (SN#919) deployed	$y = 26.868x - 4.8887$ $R^2 = 0.9972$	
SCUFA Fluorometer - linear & polynomial regressions	$y = 12.978x - 0.1243$ $R^2 = 0.6663$	
		
http://cappuccino.ucsd.edu/downloads/2005/0504NH/0504NH_Ox1MLvsOxBML.jpg		http://cappuccino.ucsd.edu/downloads/2005/0504NH/0504NH_Ox1UMvsOxBUM.jpg

(http://cappuccino.ucsd.edu/downloads/2005/0504NH/0504NH_ISUSVvsNO3.jpg)

(http://cappuccino.ucsd.edu/downloads/2005/0504NH/0504NH_SCUFAFIVvsChla.jpg)

General notes: Station Pattern & Cruise Track



(https://cappuccino.ucsd.edu/downloads/2005/0504NH/0504NH_CruiseTrack.jpg)

CalCOFI 0504NH • 15 Apr - 01 May 2005 • SIO RV New Horizon • San Diego to San Diego

CalCOFI 0504NH occupied 75 of 75 scheduled stations. Primary sensor data were pretty clean but there were issues with the secondary conductivity sensor from surface to ~75m on many casts. ISUS batteries were swapped after every 3 casts since charging the battery on the rosette was not implimented yet. A Seapoint fluorometer was tested on the 1st three stations, Casts 001-003 on voltage 2, the ISUS channel. The SCUFA flurometer was used for all 75 stations and performed well. Oddly, the Altimeter on V6 and PAR on V7 were misidentified on several casts (001-009, 041-046; Par = V6, Alt=V7). These sensors were not changed so the .con files are incorrect. The voltage header in the .asc files were correctly labeled but caution should be used if CTD data is reprocessed for PAR.

All casts had the SCUFA fluorometer. Please refer to each casts hdr file for specific module settings and order of application.

All other CTD sensors were not changed during the cruise.

Seabird 911+ configuration:

Primary Temperature (#2533), Conductivity (#2206), and O2 sensor (#680), pumped (#55060); Secondary Temperature (#1324), Conductivity (#722) pumped (#52236); Wetlabs (CST-490DR) 25cm transmissometer (misabeled Chelsea/Seatech in con; used original calculated M & B); SCUFA fluorometer used on all casts; Benthos/Datasonics Altimeter (#46604); MBARI-ISUS v2 (#919) Nitrate sensor; 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	SCUFA Fluor
V2	Seapoint Fluor (casts 001-003)/ISUS
V3	
V4	O2
V5	
V6	Altimeter
V7	Remote PAR

CalCOFI 0504NH CTD Data Processing & Console Ops Notes

Removed salt fliers on both primary & secondary comparisons. Original data processor was MGS, but some additional O2 & NO3 "flier" data points were removed by JRW in 2019 reprocessing.

Deepest CTD cast was 691m at sta 86.7 40.0 Cast 036, Santa Monica Basin.

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 AFTER deploying and 2 minutes @10m soak. Loopedit & Wildedit were applied to all casts.

CTD Setup:

V0 - Tr (CST490DR), original M & B calculated pre-cast 1 were used

V1 - SCUFA Fluorometer

V2 - ISUS Nitrate Sensor, battery powered; Seapoint Fluorometer (Casts 001-003)

V3 - open

V4 - SBE43 Oxygen Sensor (only one O2 sensor deployed pre-2009)

V5 - open

V6 - Benthos/Datasonic Altimeter (mislabelled PAR on casts 001-009, 041-046 in CTD .con files)

V7 - PAR (mislabelled ALT on casts 001-009, 041-046 in CTD .con files)

V15 - SPAR

Sensors: T1 - SN2533; T2 - SN1324; C1 - SN2206; C2 - SN722; O2 - SN680; PAR - 4544; SPAR - SN6369

Reprocessing in 2019 used new final .asc files to merge with bottle data. New .asc files were generated with wfilter applied to ISUS & other CTD sensors. With the continual problem with secondary salinity near surface on almost all casts, derived data such as density (sigma-theta) which rely on salinity, are also bad. Using primary sensor data is recommended.

Other cast issues noted during processing:

Mislabel line.sta in .hdrs:

Casts had integer Line.Sta but there did not appear to be any mislabeled station this cruise (or they were corrected when found).

Data issues:

No ISUS data collected on Casts: 001, 002, 006, 008, 009, 013, 015, 017, 030, 035, 037, 043, 044, 046, 054-057, 064

Almost all casts had bad secondary conductivity data in the upper 70m, stabilizing deeper. Use primary salinities for shallow values.

JRW 03/19/2019