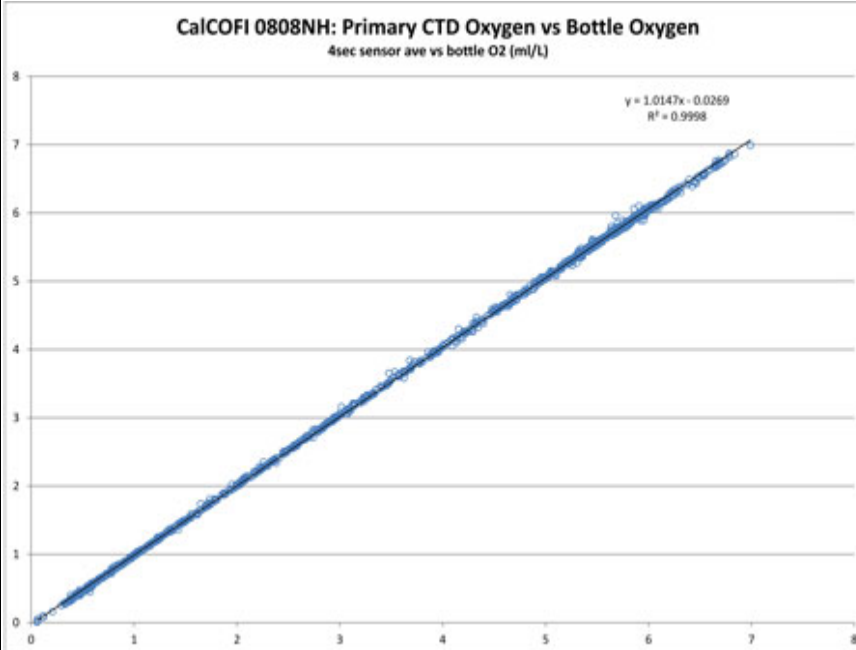
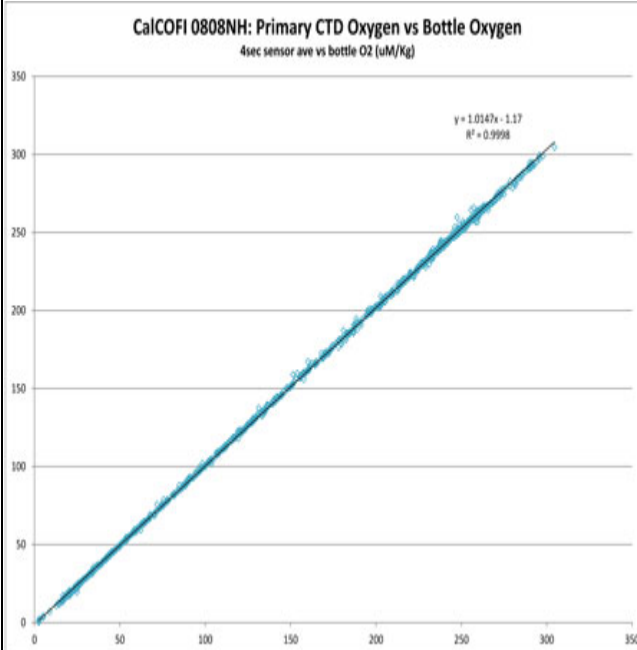


## 0808NH CTD Processing Summary

Parent Category: 2008 Cruises (/cruises/older-cruises/2008.html)

Category: CalCOFI 0808NH (/cruises/older-cruises/2008/231-calcofi-0808nh.html)

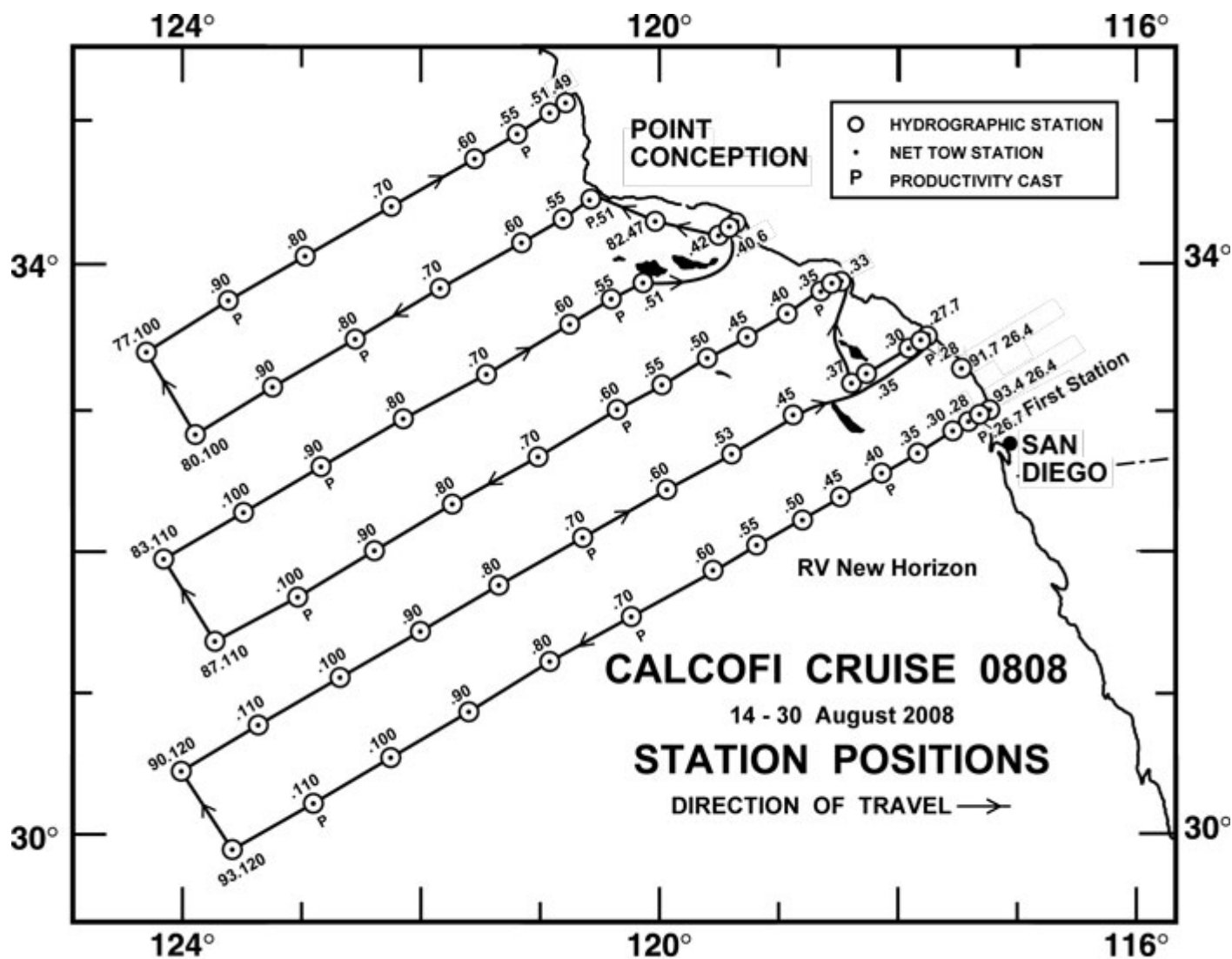
Last Updated: 29 August 2018

CTD Processing Summary CalCOFI 0808NH CTD Final Data (reprocessed/reformatted 08/2018)		
Download 0808NH CTD raw cast files zipped ( <a href="http://cappuccino.ucsd.edu/downloads/2008/20-0808NH_CTDcast.zip">http://cappuccino.ucsd.edu/downloads/2008/20-0808NH_CTDcast.zip</a> )		Download 0808NH FinalQC CTD + bottle data ( <a href="http://cappuccino.ucsd.edu/downloads/2008/20-0808NH_CTDFinalQC.zip">http://cappuccino.ucsd.edu/downloads/2008/20-0808NH_CTDFinalQC.zip</a> )
<b>General CTD Notes</b> - 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)	0.0015	0.0005
Single sensors - note only one CTD O2 sensor	ml/L	uM/Kg
Oxygen (ml/L & uM/Kg; single Seabird SBE43)	$y = 1.0147x - 0.0269$ $R^2 = 0.9998$	$y = 1.0147x - 1.17$ $R^2 = 0.9998$
Nitrate - Satlantic MBARI-ISUS (SN 111)	$y = 31.365x - 4.3094$ $R^2 = 0.9888$	
Seapoint Fluorometer - linear & polynomial regressions	$y = 2.8655x - 0.0503$ $R^2 = 0.6624$	$y = -0.2902x^2 + 3.1225x - 0.0717$ $R^2 = 0.6641$
		
( <a href="http://cappuccino.ucsd.edu/downloads/2008/0808NH/0808NH_Ox1MLvsOxBML.jpg">http://cappuccino.ucsd.edu/downloads/2008/0808NH/0808NH_Ox1MLvsOxBML.jpg</a> )		( <a href="http://cappuccino.ucsd.edu/downloads/2008/0808NH/0808NH_Ox1UMvsOxBUM.jpg">http://cappuccino.ucsd.edu/downloads/2008/0808NH/0808NH_Ox1UMvsOxBUM.jpg</a> )

([http://cappuccino.ucsd.edu/downloads/2008/0808NH/0808NH\\_ISUSVvsNO3.jpg](http://cappuccino.ucsd.edu/downloads/2008/0808NH/0808NH_ISUSVvsNO3.jpg))

([http://cappuccino.ucsd.edu/downloads/2008/0808NH/0808NH\\_FIVvsChla.jpg](http://cappuccino.ucsd.edu/downloads/2008/0808NH/0808NH_FIVvsChla.jpg))

## General notes: Station Pattern & Cruise Track



**CalCOFI 00808NH • 14 - 30 Aug 2008 • SIO RV New Horizon • San Diego to San Diego**

## Cruise and CTD Data Processing Notes

CalCOFI 0808NH on SIO RV New Horizon successfully occupied 69 of 75 scheduled stations. RV New Horizon sailed to from sta 90.45 to the Dana Point prodo station 90.28. After SCCOOS 90.0 27.7, we worked our way west back out to 90.37 before heading north to line 86.7. Due to a lack of shiptime six SCCOOS stations, 88.5 31.4, 86.8 32.5, 85.4 35.8, 83.3 39.4, 81.7 43.5, 80.0 50.5 were dropped.

## Seabird 911+ configuration:

Primary Temperature (#1324), Conductivity (#042206), and O2 sensor (#430680), pumped (#55060); Secondary Temperature (#1045), Conductivity (#722) pumped (#52236); Wetlabs (CST-479DR) 25cm transmissometer (mislabelled Chelsea/Seatech in con); Seapoint chlorophyll fluorometer (SCF2483 @10x); Benthos/Datasonics Altimeter (#46604); MBARI-ISUS v2 (#111); remote PAR (#4544), no surface PAR was installed.

(Freq0=T0; Freq1=C0; Freq2=Pr; Freq3=T1; Freq4=C1; V0=Trans; V1=Fl; V2=ISUS; V3=open; V4=O21; V5=open; V6=Alt; V7-PAR)

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

## Logistics:

We completed (all) 66 standard stations and only 3 of 9 SCCOOS stations before transiting home to offload in San Diego.

## CalCOFI 0808NH CTD Data Processing & Console Ops Notes

Removed salt fliers on both primary & secondary comparisons.

### **No deep CTD casts (>515m) were performed this cruise**

Only one O2 sensor was deployed, no ISUS, no Surface PAR, no pH. These were purchased in mid-2009 and first deployed on CalCOFI 0907M2 when a new 911+ system was bought.

V2 Deck unit was also purchased at that time so this cruise was on V1 Deck Unit - requiring Align-CTD offset of secondary conductivity (0.073sec).

Scientific Report for SIO Weekly Log (<http://calcofi.org/cruises/older-cruises/2008/231-calcofi-0808nh/81-0808nh-scientific-report.html>):

Briefly, hydrographic data indicates distinctly a strong California Current (CC) as indicated by surface temp (-1 to -1.8) and salinity (-0.1 to -0.35) anomalies and the location is confirmed by 100m Temp. The CC is strongest 200 to 300 miles off the coast from Pt. Conception and San Diego respectively. The flow is potentially divided into two bands or a filament jetting toward the coast outside the Channel Islands. Zooplankton tows have been reported to be about average with higher than average amounts of phytoplankton (as determined by color and consistency) in the area of the California Current. The Davidson counter current also appears anomalously strong with 10m Temp of +2 deg C common both within 20-40 miles of the coast of San Diego and between 100 and 160 miles off. This warm water appears to be a lack of upwelling as seen by the prevalent -0.2 salinity anomalies at 10 meter and is seen over a wide area the Southern California Bight. I have personal knowledge of a strong migration of pelagic fishes in those areas this year. Chlorophyll values very near shore off San Diego are 5-6 ug/liter and the highest seen so far including stations near L.A., Santa Barbara and Pt. Conception which were 2-3 ug/liter at the highest.

Original hdr file requiring correction - cast 061 was mislabeled Cruise NH0808 so was edited 0808.:

## CalCOFI 0808NH CTD Cast & Data Processing Notes

Overall, the majority of issues with sensor data was with the ISUS Nitrate sensor. Powering the sensor requires connecting a 12v external battery pack. At this time, CalCOFI was using a battery pack for three casts (~3hrs) then replacing the pack with

a fresh pack. There were also some cabling issue that was resolved early in the cruise by replacing a faulty battery cable.

Casts with no ISUS data: 005U, 007UD, 009UD, 010UD, 011UD, 012UD, 013U, 016U, 024UD, 030UD, 034UD, 035U, 054U

Casts with partial ISUS profile data: 005D, 013D, 016D, 020UD, 024D, 035D, 054D

Dave Munro was conducting a productivity experiment which required additional seawater so extra surface or 10m bottles were closed on many casts this cruise.

Cast 001: bottle #9 mistripped, no sample

Cast 002: extra bottles tripped at surface to test carousel and mistrip #9 from last station

Cast 004: bottle #9 did not close again

Cast 005: trigger #9 replaced; ISUS stopped logging on downcast ~490m, no upcast ISUS data

Cast 009: no ISUS data, battery?

Cast 010: new battery but still no ISUS data - bad cable?

Casts 011-012: still no ISUS data, plugged in

Cast 013: new ISUS battery, work on downcast to 310m, nothing deeper or on upcast

Cast 014-015: ISUS worked down & upcast

Cast 016: ISUS worked on downcast to 230m

Casts 017-019: ISUS worked fine

Cast 019: salinity differs a bit on upcast from downcast

Cast 020: ISUS worked on downcast to 385m, & on upcast 222m-0m

Casts 021-023: ISUS worked fine

Cast 024: ISUS worked on downcast to 484m, no upcast data

Casts 025-029: ISUS worked okay

Cast 030: no ISUS data

Cast 031: do over, odd message "FFFFFFF unsupported modem message" in file acquisition box; first cast to ~280m then back to surface and restarted, resent to 515m without issue; ISUS worked fine

Casts 032-033: ISUS worked fine

Cast 034: Santa Monica Basin station; battery dead, no ISUS data

Cast 035: ISUS data on downcast to 75m

Cast 036: Rosette frame cracked post-cast (while on deck); ISUS okay

Casts 037-038: ISUS looks okay

Cast 038: lanyard #21 broke, possible mistrip at 8m, 23 bottle prodo cast

Casts 039-040: ISUS okay; rough seas

Cast 041: salinity inversion noted; O2 lower at surface than 50m; ISUS okay

Casts 042-043: ISUS good, battery swapping working better

Cast 044: didn't start archiving, brought back to surface then data archiving started

Cast 045: ISUS Okay

Casts 046-047: bottle #10 mistripping, lowered bottle and shortened lanyard after cast 047

Cast 048: ISUS okay

Cast 049: CTD yo-yo'd @120m, went back to 140m for mkr

Cast 050: bottle #10 seems okay now

Cast 051-053: ISUS okay

Cast 054: Santa Barbara Basin station, ISUS on downcast to 543m, but lost the rest

Casts 055-064: ISUS okay, moderate-heavy seas

Cast 065: ISUS okay; big rolls, slow cast with some pauses on up & downcast for big swells

Cast 066-069: ISUS okay

Note: continual problems with powering the ISUS resulted in a new protocol. The ISUS battery was charged after every deep cast without removing it from the rosette. A long charging cable was rigged so it was not necessary to swap the heavy batteries. Occasional venting of charging gases were necessary by unplugging the battery case at least once a day.

JRW 08/28/2018