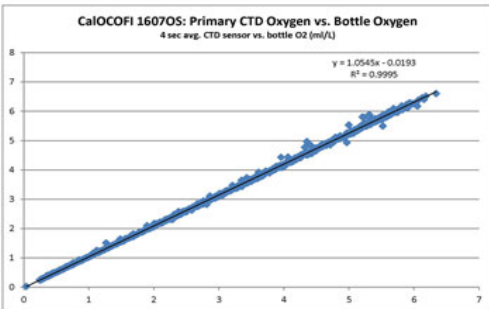
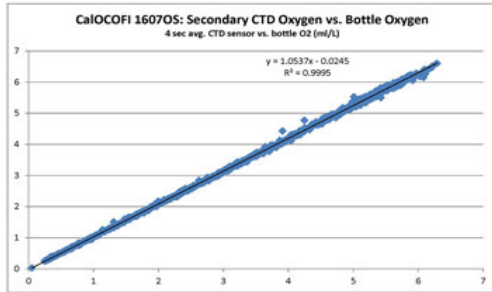
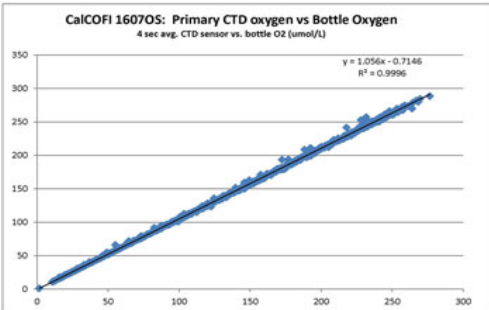
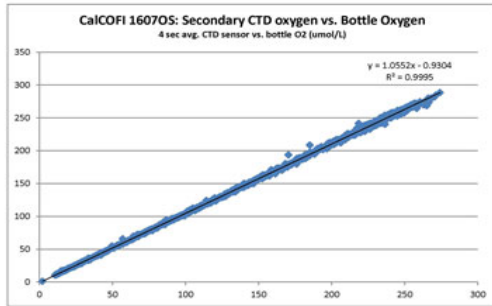
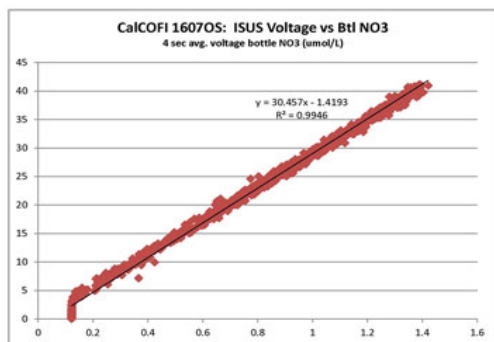
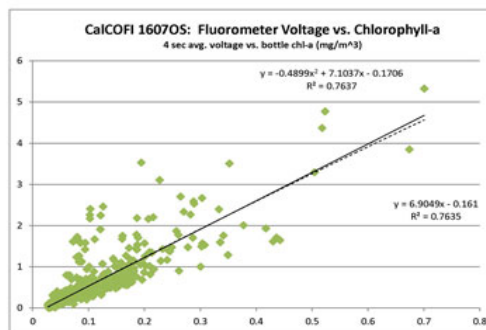


Parent Category: 2016 Cruises (/cruises/249-2016-cruises.html)
Category: CalCOFI 1607OS (/cruises/2016-cruises/calcofi-1607os.html)
📅 Last Updated: 21 September 2017

| CTD Processing Summary CalCOFI 1607OS CTD Final Data | | |
|---|--|---|
| Download 1607OS CTD raw cast files zipped (http://cappuccino.ucsd.edu/downloads/2016/20-1607OS_CTDCast.zip) | Download 1607 FinalQC CTD + bottle data (http://cappuccino.ucsd.edu/downloads/2016/20-1607OS_CTDFinalQC.zip) | |
| General CTD Notes - data acquisition notes, logistics, processing - see below. Please note that these regressions are generated from Final CTD vs bottle data and have gone through SIO-CalCOFI's strict data processing and point-checking protocol. CTD temperatures and salinities may not have changed from preliminary data but oxygen, estimated chlorophyll-a, estimated nitrate may change significantly after point-checking. Questionable or mistrip bottle data are removed from these comparisons but may be visible on the CTD.csv plots. For this cruise and future cruises, both primary & secondary sensor profiles vs bottle data will be generated and archived in the downloadable CTD+Bottle data files (http://cappuccino.ucsd.edu/downloads/2016/20-1607OS_CTDFinalQC.zip). These plots are under the "csv-plots\Primary" & "csv-plots\Secondary" subdirectories. CTD sensor corrections derived by comparing CTD sensor data, 4sec average prior to bottle closure, to bottle samples | | |
| Dual T, S, & O2 | Primary Sensor | Secondary Sensor |
| Salinity offset (bottle - CTD salinity; > 350m only; Seabird SBE4) | -0.0016 | 0.0053 |
| Oxygen ml/L (dual Seabird SBE43) | y = 1.0545x - 0.0193 R ² = 0.9995 | y = 1.0537x - 0.0245 R ² = 0.9995 |
| Oxygen umol/Kg (dual Seabird SBE43) | y = 1.056x - 0.7146 R ² = 0.9996 | y = 1.0552x - 0.9304 R ² = 0.9995 |
| Single sensors | Linear | Polynomial |
| Nitrate - ISUS 4sec ave voltage vs Bottle Nitrate (Satlantic MBARI-ISUS v2) | y = 30.457x - 1.4193 R ² = 0.9946 | |
| Fluorometer - linear & polynomial regressions | y = 6.9049x - 0.161 R ² = 0.7635 | y = -0.4899x ² + 7.1037x - 0.1706 R ² = 0.7637 |
| <div><div></div><div></div></div> <div>(http://cappuccino.ucsd.edu/downloads/2016/1607OS/final/1607OS_Ox1MLvsOxBML.jpg)</div> <div>(http://cappuccino.ucsd.edu/downloads/2016/1607OS/final/1607OS_Ox2MLvsOxBML.jpg)</div> | | |
| <div><div></div><div></div></div> <div>(http://cappuccino.ucsd.edu/downloads/2016/1607OS/final/1607OS_Ox1UMvsOxBUM.jpg)</div> <div>(http://cappuccino.ucsd.edu/downloads/2016/1607OS/final/1607OS_Ox2UMvsOxBUM.jpg)</div> | | |



(http://cappuccino.ucsd.edu/downloads/2016/1607OS/final/1607OS_ISUSVvsNO3.jpg)



(http://cappuccino.ucsd.edu/downloads/2016/1607OS/final/1607OS_FIVvsChla.jpg)

General notes: These are cast & final CTD Processing Notes from 1607OS cruise

CTD Notes or CalCOFI 16070S

Standard configuration for Seabird 911+: dual T,S,O2 pumped sensor arrays; one Wet-Labs ECO-FL fluorometer; one 25cm Wetlabs 440nm transmissometer; Benthos altimeter; SBE18 pH sensor; Biospherical surface and remote PAR; Seabird remote depth readout box; Satlantic MBARI-ISUS v2 & battery; SBE32 carousel. All casts were performed on SIO-CalCOFI's SBE11 deck unit, Windows 7 64-bit Asus blade PC using primary com port for data, USB-Serial dongle for carousel. 24-10L PVC no-metal, productivity clean bottles with silicone o-rings.

RV Ocean Starr has 0.350 coaxial conductive wire, single core with copper shield twisted together into the ground connection. SIO-CalCOFI performed the termination and it worked for all casts. The only issue with the CTD wire was a persistent "spring-like" twist that would coil tightly when slack above the cable grip. Otherwise, winch operations and wire condition were fine throughout the cruise. The hydraulic trolley hoses suffered from cracking that caused fluid leakage onto the CTD-rosette twice early in the cruise. Also, at least one trolley wheel was frozen and did not roll but slide when moving the CTD in & outboard. During rough weather recoveries the upper ring was damaged as the rosette collided with the J-Frame. Also a narrow bend may have been caused by striking the trawl stancion just inboard and aft of the CTD-recovery area.

AB & winch operator Armando performed every CTD & net winch operation.

Remote depth readout required +2m to hit the target depth ie 102m to get 100m

Cast notes:

Cast 001-002 - no problems noted on either shallow cast but no ISUS data collected. The battery was connected but no power. Both power cable and battery were swapped.

Cast 003 - bottom valves leaking on #1 & #3 - replaced

Cast 004 - mistakenly reset the computer time so the local time is wrong for the 1st part of the cast. GPS time is unaffected and correct. Bottle #7 switched postcast.

Cast 005 - short winch speed up during the downcast between 50-70m, winch operator did not wait till 100m to speed up to 60m/min. Replaced #19 bottom valve

Cast 006-007 - no issues noted

Cast 008 - hydraulic fluid leaked all over the CTD-rosette, crew cleaned up pretty thoroughly but still some slippery patches on-deck and on instruments (transmissometer).

Cast 009 - moderate seas, some wire angle and rolls; CTD still oily from last sta trolley leak.

Cast 010 - moderate seas, chl max from 0-25m, slowed descent to ~55m/min

Cast 011-013 - nothing noted

Cast 014 - used safety harnesses during recovery, some good rolls, moderate seas

Cast 015-016 - nothing noted

Cast 017 - marginally type 2, added a 10m bottle for NCOG

Cast 018 - nothing noted

Cast 019 - early 0730 prodo station

Cast 020-023 - nothing of note

Cast 024 - restarted the cast after 120m due to primary salinity problem, probably biofouling. Fixed itself during the return to surface - both primary and secondary salinities agreed upon return. Data saved as 1607024b then data acquisition was restarted. 2nd cast the salinities were still disagreeing by ~0.04 during the downcast between 40-100m. Primary salinity "squirrely" from ~50-30m on upcast. Perhaps a layer of doliolids or ??? Spike in fluorometer at ~100m when the winch speed increased.

Cast 025 - Short 30m yoyoing w/o data logging at the start to check the current (bridge request). CTD sensor plumbing flushed thoroughly pre-cast (actually right after last cast) with hose then DI. Fluorometer cable was secured with an add'l cable tie to stabilize it because last cast was spikey. Only 3 NCOG bottles since the chl max was at 10m.

Cast 026-028 - nothing noted

Cast 029 - shallow thermocline

Cast 030 - Sunset sta off Dana Pt, calm, whales around the area

Cast 031 - went down to 17m FAST, reminded to keep it 30m/min when under 100m

Cast 032-035 - nothing noted

Cast 036 - bottle #10 mistripped

Cast 037 - bottle #12 swapped, top cracked

Cast 038 - Late evening San Nicolas Is shallow sta; lots of red crabs near surface during the CTD cast

Cast 039 - file mislabeled 29 not 39 upon start, fixed post-cast then backed up. Probably from switching seasoft setup files from shallow to 550m

Cast 040-041 - nothing noted

Cast 042 - lots of "swerves" in profiles particularly O2 and salinity, =stratification

Cast 043 - extra LTER bottle at surface

Cast 044 - DA & NCOG: #13 & #24 DA, #1, 8, 14, 23 NCOG

Cast 045 - nothing noted

Cast 046 - Velellas in abundance upon sta arrival and CTD startdown

Cast 047 - no notes

Cast 048 - bottle #18 no closure, trigger tripped but did not throw 100% - serviced

Cast 049 - moderate seas; #18 appears to close fine

Cast 050 - cold, windy, moderate seas; #16 & 21 = DA (Domoic Acid) samples

Cast 051-052 - nothing noted

Cast 053 - data acquisition not started, return to surface, acquisition started. Shallow cast

Cast 054-057 - nothing noteworthy

Cast 058 - extra marker at 565m so no marker at 480 to "even up" - edited for CESL

Cast 059 - nothing noted

Cast 060 - omit bottle #6, console ops bottle numbering jumps from 5 to 7

Cast 061 - nothing noted but cast 060 & 061 were rough, sta 80.51 & 80.55

Cast 062 - after 26 hour weather delay, sta 80.60, rough but improving, Bongo only

Cast 063-064 - no notes but rough seas

Cast 065 - rough but workable, CTD & Bongo only; DIC/DA sta;

Cast 066 - no notes

Cast 067 - extra marker @ 21/22 - fixed marker and regenerated CESL log

Cast 068 - last cast because of long transit to SD; still moderate-rough seas; windy, cold, grey evening