UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

# data report

**CalCOFI Cruise 1011**
**28 October – 12 November 2010**

**CC Reference 12-01**
**17 January 2012**

**UNIVERSITY OF CALIFORNIA, SAN DIEGO**

**SCRIPPS INSTITUTION OF OCEANOGRAPHY**

**LA JOLLA, CALIFORNIA 92093-0227**

# PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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## INTRODUCTION

The data presented in this report were collected during cruise 1011* of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *New Horizon* of Scripps Institution of Oceanography, University of California, San Diego. The CalCOFI program was organized in the late 1940's to study the causes of variations in population size of fishes of importance to the State of California. It is carried out by NOAA's National Marine Fisheries Service Southwest Fisheries Science Center, the California Department of Fish and Game, and the Integrative Oceanography Division (IOD) at Scripps Institution of Oceanography (SIO). IOD contributes to this program by investigations of the physical, chemical and biological structure of the California Current. Data from the cruises were collected and processed by personnel of the Integrative Oceanography Division and the Southwest Fisheries Science Center. SIO staff members from the Ocean Data Facility participate in the chemical analysis of nutrient samples at sea. CalCOFI data presented in this report and collected on previous cruises can be accessed at http://www.calcofi.org.

## STANDARD PROCEDURES

### *CTD/Rosette Cast Data*

A Sea-Bird Electronics, Inc., Conductivity-Temperature-Depth (CTD) instrument (Seabird 911, Serial number 1049) with a rosette was deployed at each station on these cruises. The rosette was equipped with 24 ten-liter plastic (PVC) bottles equipped with epoxy-coated springs and Viton O-rings. Each CTD/rosette cast usually sampled 20 depths to a maximum sampling depth of 525 meters, bottom depth permitting. Occasional stations have multiple bottles tripped at the same depth to provide more water for ancillary programs. The sample spacing was designed to sample depth intervals as close as 10 meters around the sharp upper thermocline features such as the chlorophyll, oxygen, nitrite maxima and the shallow salinity minimum. Salinity, oxygen and nutrients were determined at sea for all depths sampled. Chlorophyll-*a* and phaeopigments were determined at sea on samples from the top 200 meters, bottom depth permitting.

Pressures and temperatures assigned to the water sample data were derived from the CTD signals recorded just prior to the bottle trip. Pressures have been converted to depths by the Saunders (1981) pressure-to-depth conversion technique. CTD temperatures reported with the bottle data have been rounded to the nearest hundredth of a degree Celsius.

Salinity samples were collected from all rosette bottles and analyzed at sea using a Guildline model 8410 Portasal salinometer. Salinity samples were drawn into 200 ml Kimax high-alumina borosilicate bottles that were rinsed three times with sample prior to filling. The results were compared with the CTD salinity to verify that the rosette bottle did not mis-trip or leak. The salinometer was standardized before and after each group of samples with standardized seawater. Periodic checks on the conductivity of the standardized seawater were made by comparison with IAPSO Standard Seawater batch P149. Salinity values were calculated using the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and are reported to three decimal places, provided that accepted standards were met.

Dissolved oxygen analyses were performed with an Ocean Data Facility of Scripps Institution of Oceanography designed automated oxygen titrator using photometric end-point detection based on the absorption of 365nm wavelength ultra-violet light. A computer using PC software controlled the titration of the samples and the data logging. The method used a modified-Winkler titration following the technique of Carpenter (1965) with modifications by Culberson (1991), but with higher concentrations of thiosulfate solution (50 g/l). Standard KIO3

* The first two digits represent the year and the last digits the month of the cruise.

solutions prepared ashore were run at the beginning of each run. Reagent and sea water blanks were determined to account for presence of oxidizing or reducing materials.

Nutrient samples were analyzed at sea by the Scripps Ocean Data Facility for dissolved silicate, phosphate, nitrate, nitrite, and ammonium using procedures similar to those described in Gordon et al. (1993) and Koroleff (1969, 1970). Samples were collected in 45 ml high-density polypropylene screw-capped tubes which were acid washed and rinsed with sample three times prior to filling. Daily standardizations and drift corrections were accomplished by running freshly prepared mid-range standards at the beginning and end of each group of samples. Samples not analyzed immediately after collection were refrigerated and run the following day. In addition to daily standardizations, periodic full calibrations were performed with sets of six different concentration standards.

Samples for chlorophyll-*a* and phaeopigments were collected in calibrated 138 ml polyethylene bottles and filtered onto Whatman GF/F filters. The pigments were extracted in cold 90% acetone (Venrick and Hayward, 1984) for a minimum of 24 hours. Chlorophyll a and phaeopigment concentrations were determined from fluorescence readings before and after acidification with a Turner Designs Fluorometer Model 10-AU-005-CE (Yentsch and Menzel, 1963; Holm-Hansen *et al*., 1965).

Evaluation of the water sample data involved comparisons with the CTD data, adjacent stations and consideration of the variation of a property as a function of density or depth and the relationships with other properties (Klein, 1973). Precision estimates for routine analyses were made on CalCOFI cruise 9003 and are reported in SIO Ref. 91-4.

*Primary Productivity Sampling*

Primary productivity samples were taken each day shortly before local apparent noon (LAN). Primary production was estimated from $^{14}C$ uptake using a simulated *in situ* technique. Light penetration was estimated from the Secchi depth (assuming that the 1% light level is three times the Secchi depth). The depths with ambient light intensities corresponding to light levels simulated by the on-deck incubators were identified and sampled on the rosette up-cast. Occasionally an extra bottle or two were tripped in addition to the usual 20 levels sampled in the combined rosette-productivity cast in order to maintain the normal sampling depth resolution. Triplicate samples (two light and one dark control) were drawn from each productivity sample depth into 250 ml polycarbonate incubation bottles. Samples were inoculated with 50.64 µCi of $^{14}C$ as $NaHCO_3$ (200µl of stock solution) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al*., 1982). Samples were incubated from LAN to civil twilight in seawater-cooled incubators with neutral-density screens which simulate *in situ* light levels. At the end of the incubation, the samples were filtered onto Millipore HA filters and placed in scintillation vials. One half ml of 10% HCl was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation cocktail were added to each sample and the samples were returned to SIO where the radioactivity was determined with a scintillation counter. Salinity, oxygen, nutrients, chlorophyll-*a* and phaeopigments were determined from all rosette productivity bottles.

*Macrozooplankton Net Tows*

Macrozooplankton was sampled with a 71 cm mouth diameter paired net (bongo net) equipped with 0.505mm plankton mesh. Bottom depth permitting, the nets were towed obliquely from 210 meters to the surface. The tow time for a standard tow was 21.5 minutes. Volumes filtered were determined from flowmeter readings and the mouth area of the net. Only one sample of each pair was retained and preserved. The biomass, as wet displacement volume, after removal of large (>5 ml) organisms, was determined in the laboratory ashore. These procedures are summarized in greater detail in Kramer *et al*. (1972).

*Ancillary Programs*

Several ancillary programs produced data on these cruises that are not presented in this report. These programs include:

1) *Underway Data*: Continuous near surface measurements of temperature, salinity and *in vivo* chlorophyll fluorescence were recorded from seawater pumped through the ship's uncontaminated seawater system. Water was drawn from a depth of approximately 3 meters. The data were logged in one-minute averages using a Sea-Bird Electronics, Inc., SBE 45 MicroTSG Thermosalinograph and a Wetlabs Wetstar fluorometer.

2) *ADCP*. Continuous profiles of ocean currents and acoustic backscatter between 20 and 500 meters deep were measured along the shiptrack from a hull-mounted 150 kHz Acoustic Doppler Current Profiler (ADCP). The ADCP data were averaged over 3-minute intervals. Sixty 8-meter depth bins were recorded. (T. Chereskin, SIO)

3) *California Current Ecosystem Long Term Ecological Research Program*: The CCE-LTER program augments standard CalCOFI measurements to further characterize the lower trophic levels as well as the carbon system. These additional samples, taken at all CalCOFI stations, are for measurements of particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen, taxon-specific phytoplankton pigments, flow-cytometric counts of bacteria and picoautotrophs, microscopic counts of nano- microplankton, determination of mesozooplankton size structure using a Laser Optical Plankton Counter, and mesozooplankton community structure. (M. Ohman, SIO)

4) *SCCOOS Nearshore Observations*: The objective of these observations is to extend CalCOFI time series to the nearshore. Nearshore observations consist of 9 stations at the ends and interspersed with current CalCOFI lines on the 20 m isobath with a standard set of CalCOFI observations. (R. Goericke, SIO)

5) *Inorganic Carbon System*: The CalCOFI group collected samples for the characterization of the inorganic carbon system at selected locations along the cruise track. Total inorganic carbon and alkalinity will be measured which will allow the calculation of pH and $pCO_2$. The objectives of these measurements are first the long-term characterization of the inorganic carbon system and its response to changing ocean climate and second measurements of pH in the coastal zone in order to monitor the impact of 'corrosive' waters on benthic ecosystems in the Southern California Bight. (R. Goericke, SIO)

6) *Marine mammal observations*. During daylight transits, visual line-transect surveys were conducted by marine mammal observers focusing on cetaceans. Acoustic line-transect surveys were performed using a towed hydrophone array which consists of multiple hydrophone elements that sample sounds up to 100 kHz allowing for localization of calling animals. Acoustic monitoring also takes place on individual stations using sonobuoys. (J. Hildebrand, SIO)

7) *Lagrangian Drifter Buoys*. Surface Velocity Program (SVP) drifters, drogued at 15 meters depth, were deployed at 7 stations. The drifter observations of position and SST approximately every hour following the 15-meter currents supplement Eulerian current profiles. This will provide new insight into the connection between continental shelf flows and the larger scale California Current located further offshore. Drifter pairs were deployed at 6 of the 7 stations to assess the relative motion of drifter pairs which gives an understanding of energy as a function of spatial scale. Drifter tracks are displayed in near real-time on the web (http://www.icess.ucsb.edu/drifter/realtime-SVP/index.php). (C. Ohlmann, UCSB)

8) *Nitrate isotope:* Seawater samples are acquired using the CTD-rosette and shipped frozen to Princeton University. The nitrogen and oxygen isotopic composition of nitrate is measured using strains of denitrifying bacteria that reduce nitrate to N2O. (P. Rafter, Princeton University).

9) *Micronekton trawling*: A Matsuda-Oozeki-Hu trawl (MOHT) with 5 $m^2$ mouth opening and 1.77 mm mesh is used to sample the micronekton (krill, small pelagic fishes, squids, etc) within the epipelagic (upper 200 m) and mesopelagic (200 - 500 m) depth horizons. The samples provide size- and species composition data on the pelagic community, which is combined with Ek-60 multi-frequency acoustic data to estimate the distribution and abundance of the micronekton. (T. Koslow, SIO)

## TABULATED DATA

### *CTD/Rosette Cast Data*

The time reported is the Coordinated Universal Time (UTC) of the first rosette bottle trip on the up cast. The rosette bottles tripped on the up cast are reported as cast 2, where cast 1 is considered to be the down CTD profile. The sample number reported is the cast number followed by a two-digit rosette bottle number. Bottom depths, determined acoustically, have been corrected using British Admiralty Tables (Carter, 1980) and are reported in meters. Weather conditions have been coded using WMO code 4501. Secchi depths are reported for most daylight stations.

Data values from discreet sampled CTD rosette were interpolated and are reported for standard depths. Interpolated or extrapolated standard level data are noted by the footnote "ISL" printed after the depth. Multiple bottles tripped at the same depth to provide water for ancillary programs are not used in the calculation of standard depth data. Density-related parameters have been calculated from the International Equation of State of Seawater 1980 (UNESCO, 1981b). Computed values of potential temperature, sigma-theta, specific volume anomaly (SVA), and dynamic height or geopotential anomaly are included with both observed and interpolated standard depth levels.

On stations where primary productivity samples were drawn a footnote appears after each productivity depth sampled. The corresponding primary productivity data are reported in a separate section following the tabulated rosette cast data.

### *Primary Productivity Data*

In addition to the normal hydrographic data that are reported in the rosette cast data section, the tabulated data include: the *in situ* light levels at which the samples were collected, the uptake from each of the replicate light bottles, uptake 1 and uptake 2 (which have been corrected for dark uptake by subtracting the dark value), the mean of the two uptake values and the dark uptake. The uptake values are totals for the incubation period. Also shown are the times of LAN, civil twilight, and the value of the mean uptake integrated from the surface to the deepest sample, assuming the shallowest value continues to the surface and that negative values (when dark uptake exceeds light uptake) are zero. The uptake data are reported to two significant digits (values <1.00) or one decimal (values >1.00). Incubation time, LAN, and civil twilight are given in local Pacific Standard Time (PST); to convert to UTC, add eight hours to the PST time. Incubation light intensities are listed in a footnote at the bottom of each page.

### *Macrozooplankton Data*

Macrozooplankton biomass volumes are tabulated as total biomass volume ($cm^3/1000m^3$ strained) and as the total volume minus the volume of larger organisms under the heading "Small." Tow times are given in local PST (+8) time.

## FOOTNOTES

In addition to footnotes, special notations are used without footnotes because the meaning is always the same:

D: CTD salinity value listed in place of normal shipboard salinity analysis.
ISL: After a depth value indicates that this is an interpolated or extrapolated standard level.
U: Uncertain value. Values which are not used in interpolation because they seem to be in error without apparent reason.

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FIGURES

Cruise 1011

1. CalCOFI Cruise 1011 track and station positions.

2. Horizontal distribution of dynamic height anomaly (0 over 500m). In areas shallower than 500 m, the dynamic heights were extrapolated on the basis of the offshore deeper steric height as described in Reid and Mantyla (1976).

3. Horizontal distributions at 10 meters: A) chlorophyll-*a*; B) potential density; C) temperature; and D) salinity.

4. Horizontal distributions at 200 meters: A) dynamic height anomaly (200 over 500 m); B) potential density; C) temperature; and D) salinity.

5. Sections along CalCOFI line 90 (vertical exaggeration, 1000): A) potential density; B) temperature; C) salinity; D) silicate; E) nitrate; F) phosphate; G) chlorophyll-*a*; H) oxygen saturation; I) oxygen; J) nitrite; and K) phaeopigments.

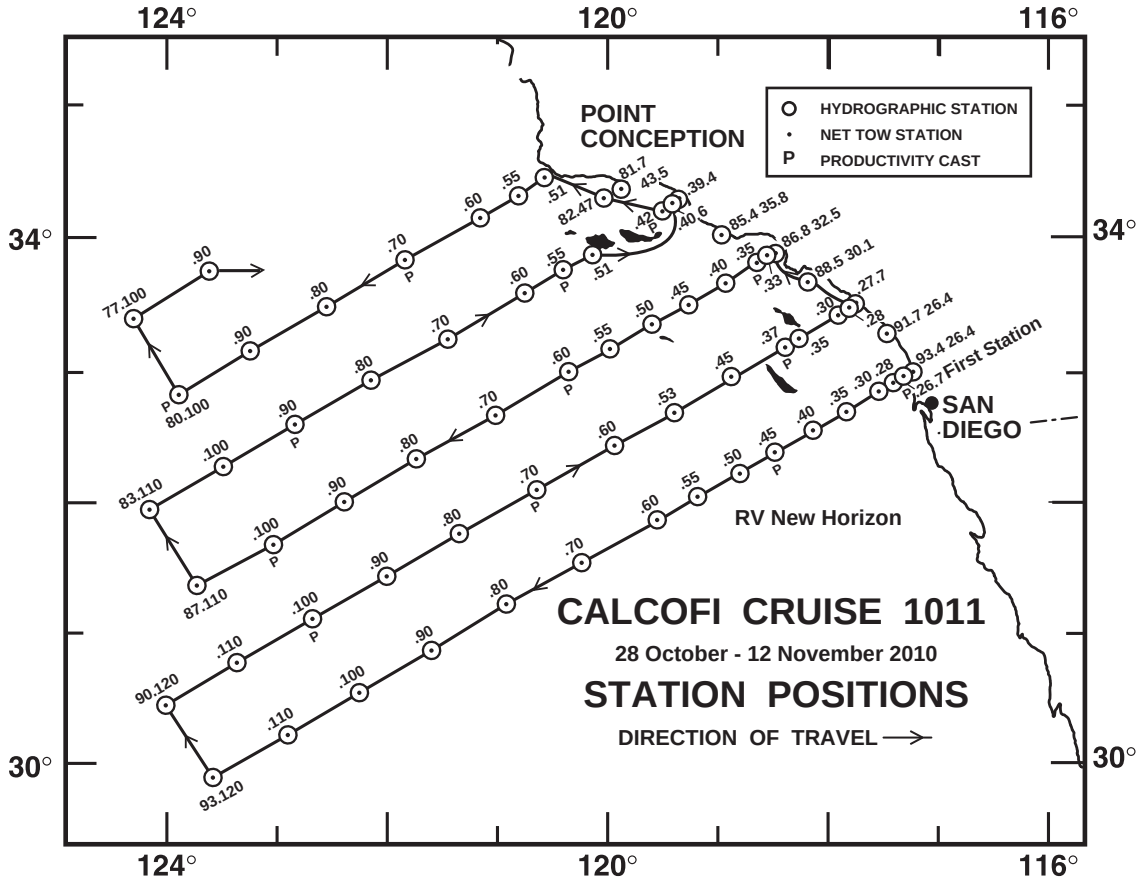


FIGURE 1

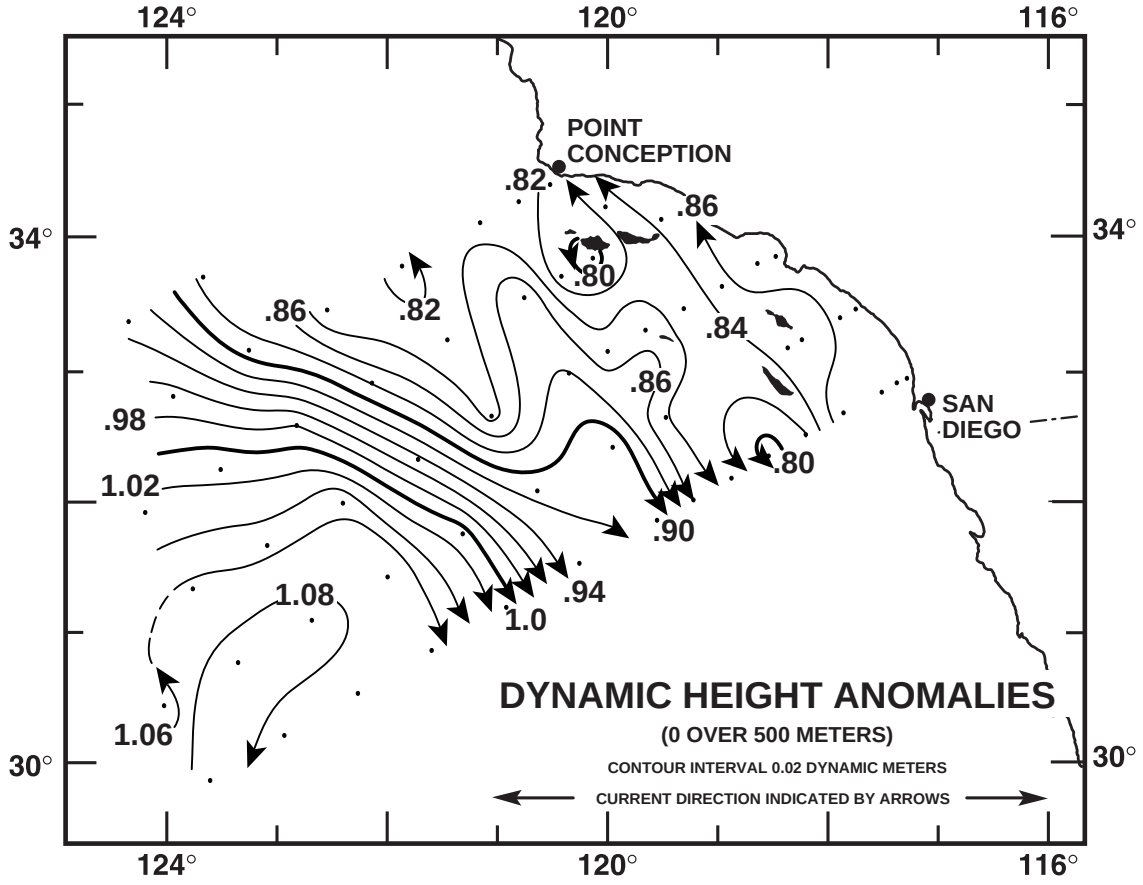


FIGURE 2

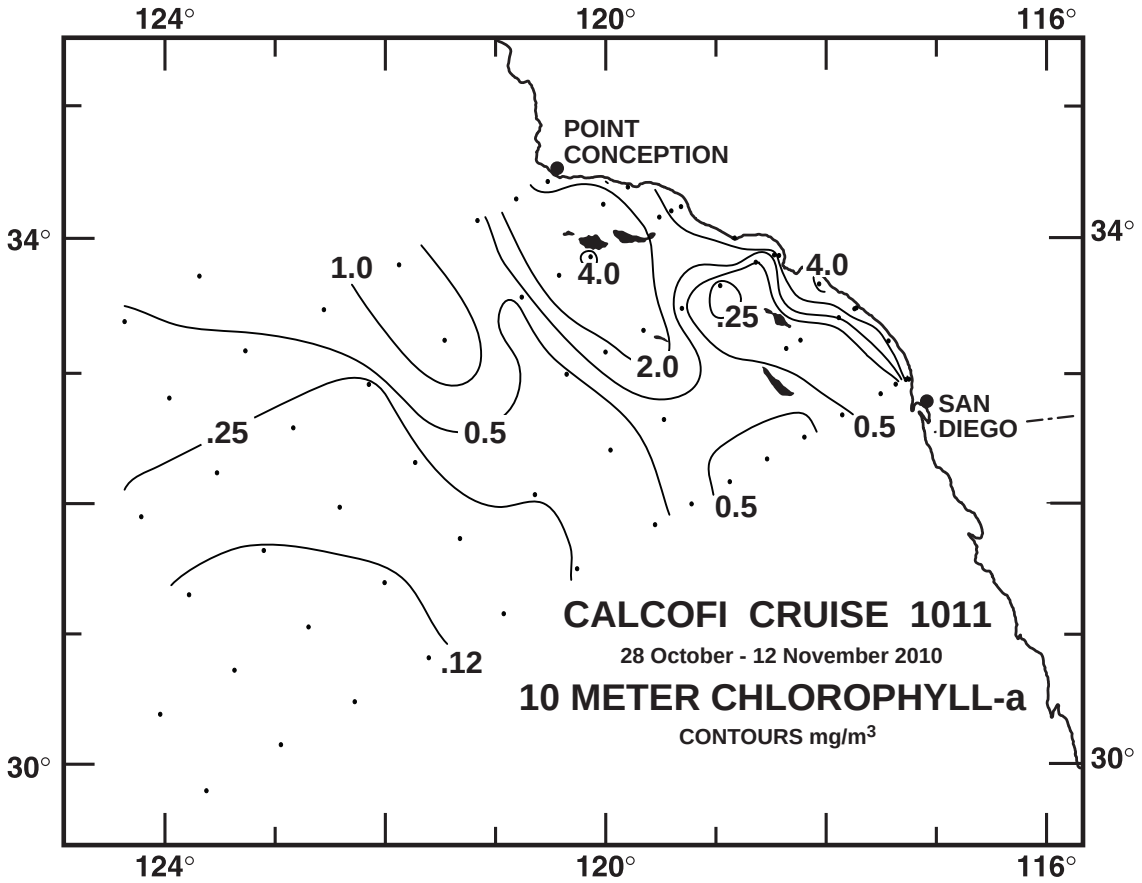


FIGURE 3A

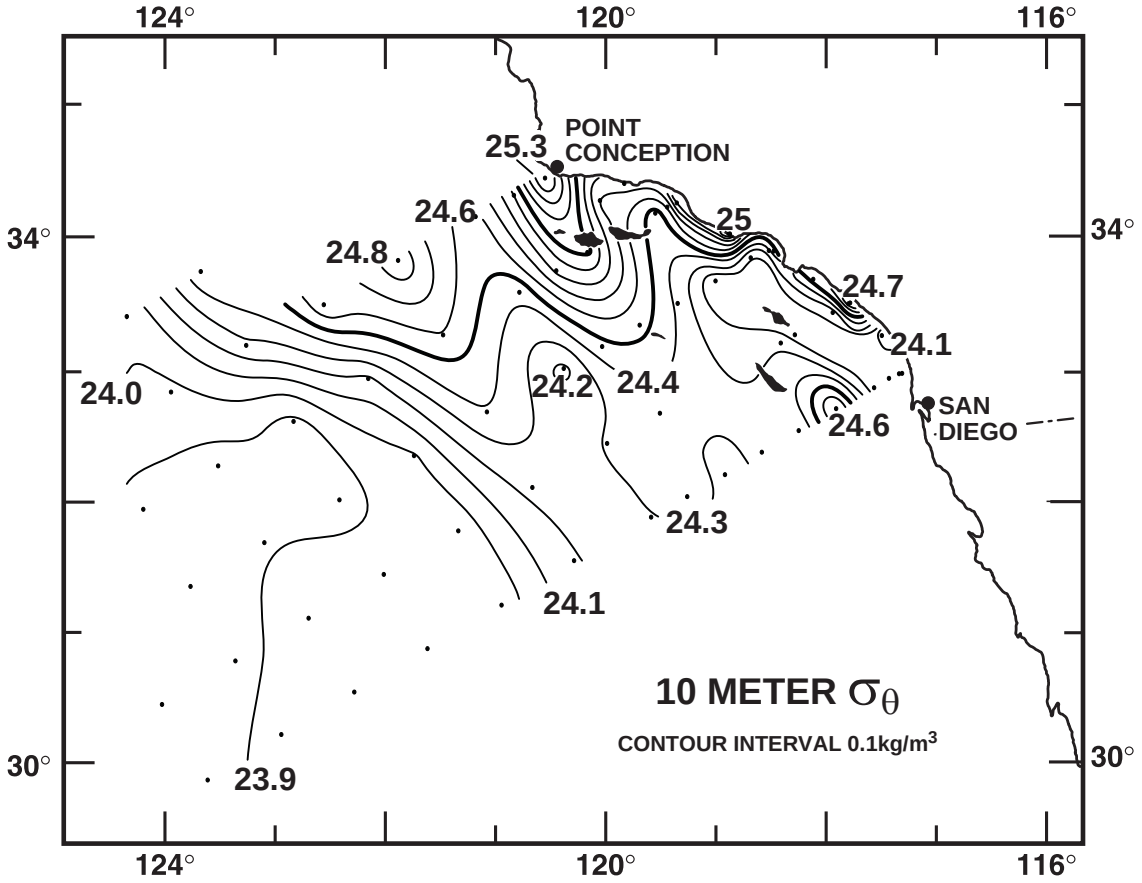


FIGURE 3B

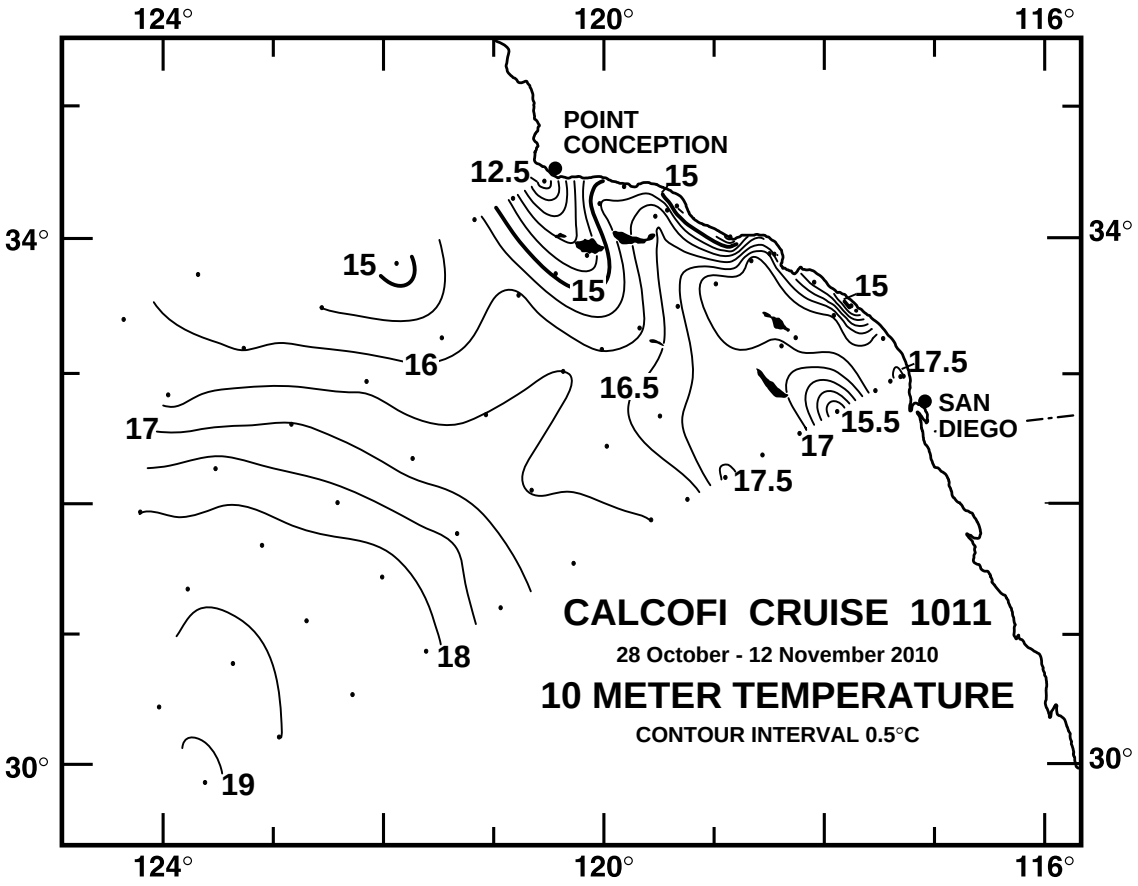


FIGURE 3C

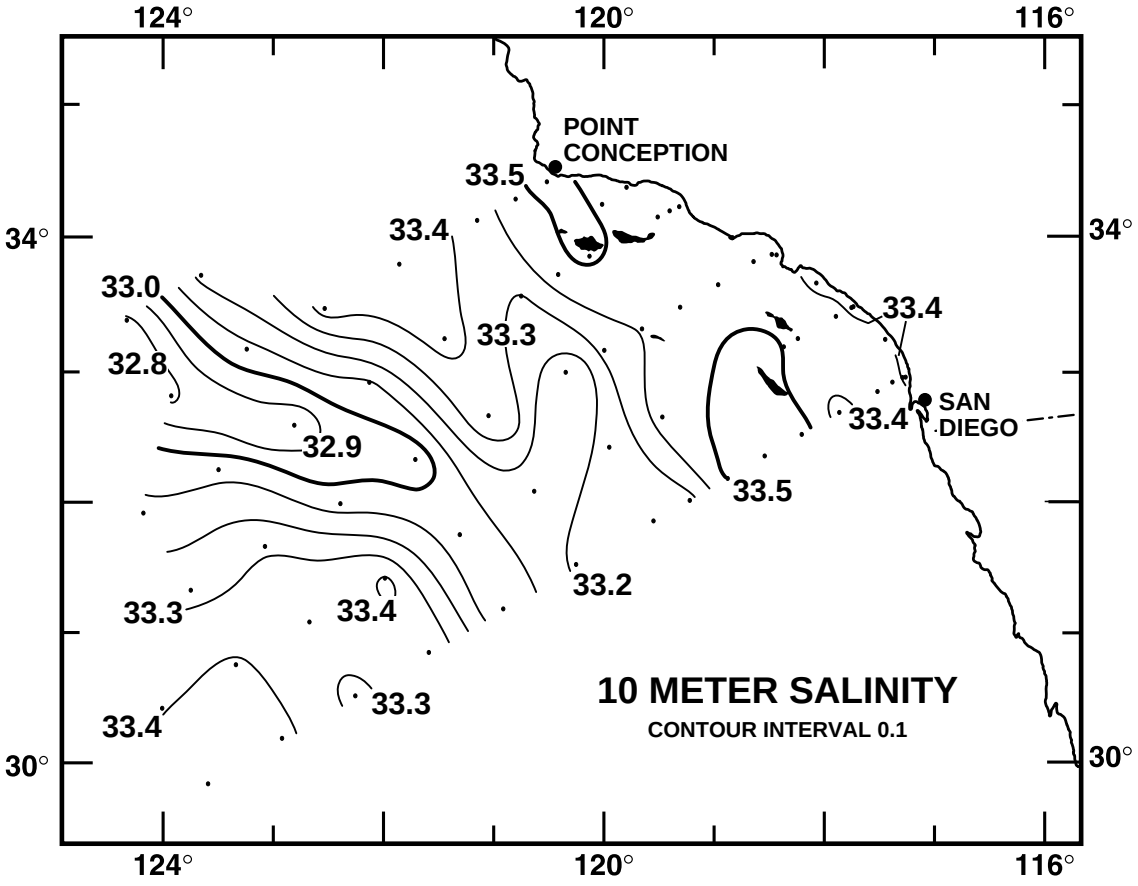


FIGURE 3D

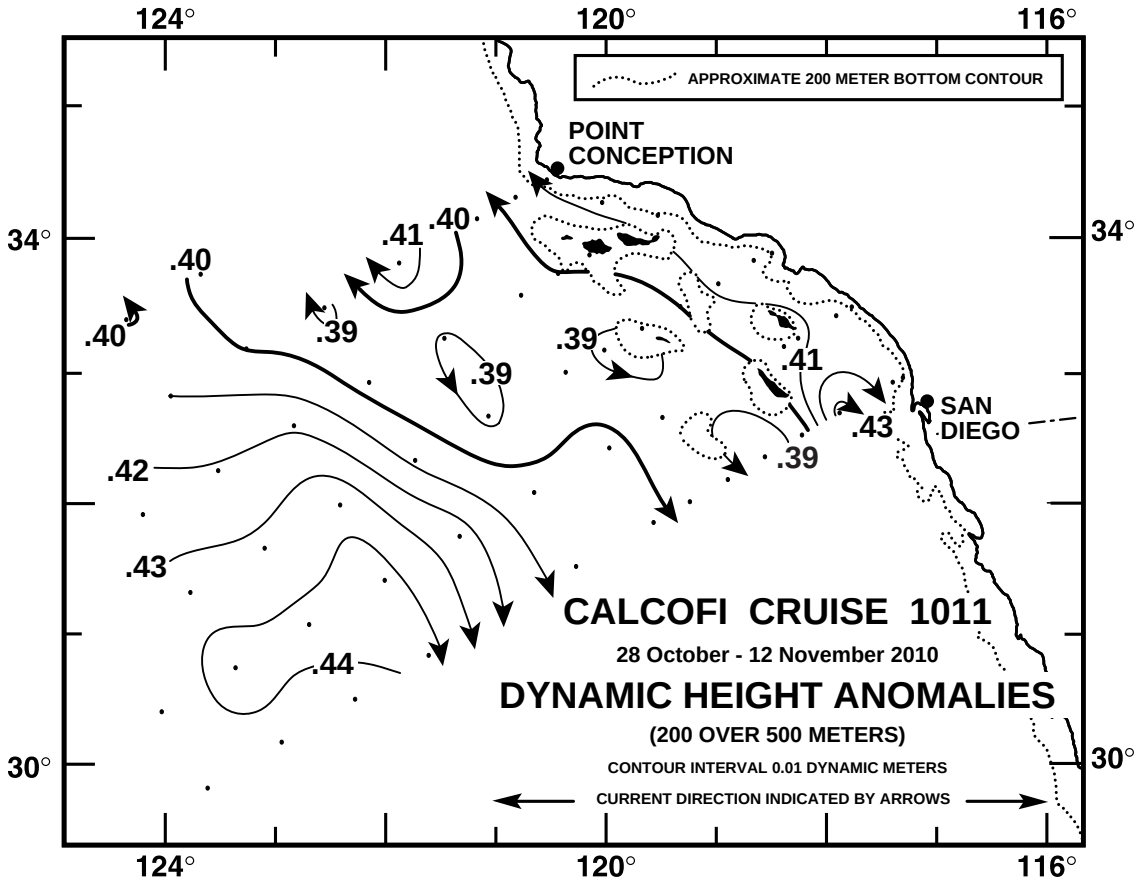


FIGURE 4A

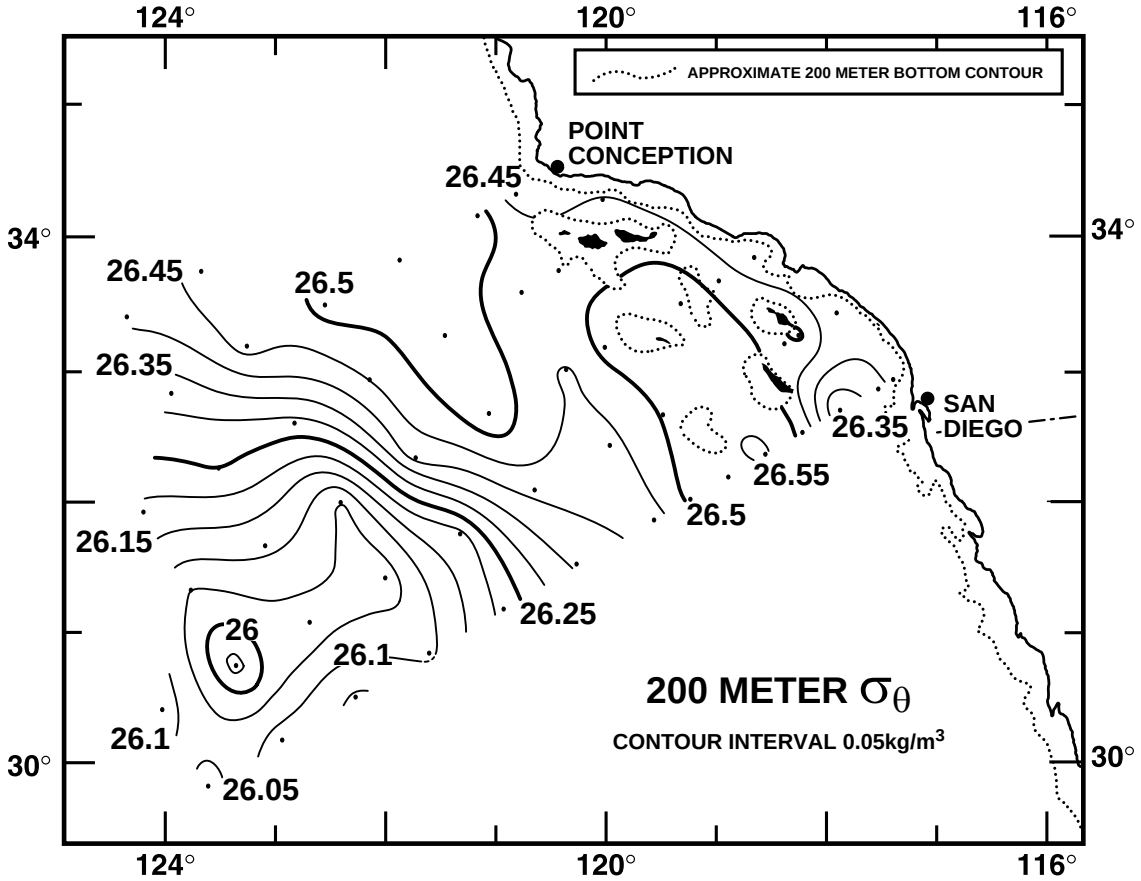


FIGURE 4B

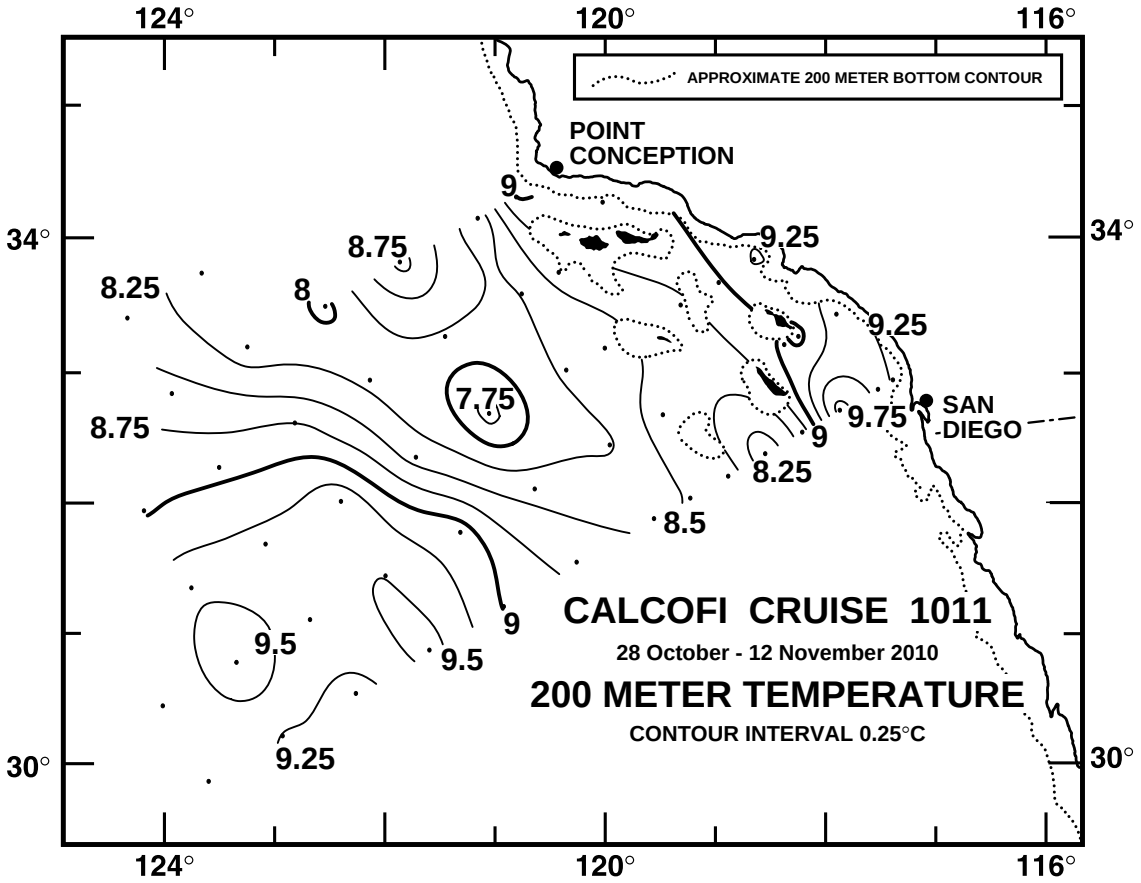


FIGURE 4C

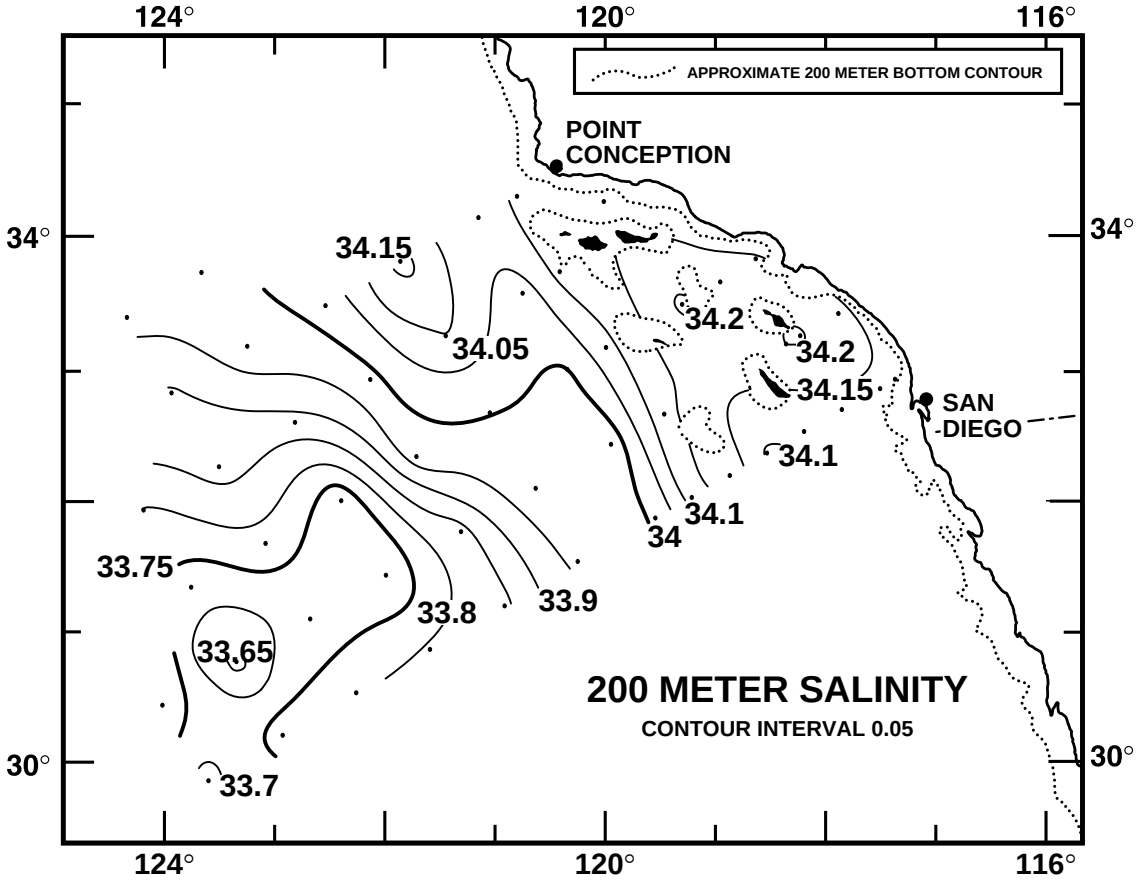


FIGURE 4D

# CALCOFI CRUISE 1011

**1 - 4 November 2010**

## POTENTIAL DENSITY ($\sigma_\theta$) ALONG CALCOFI LINE 90

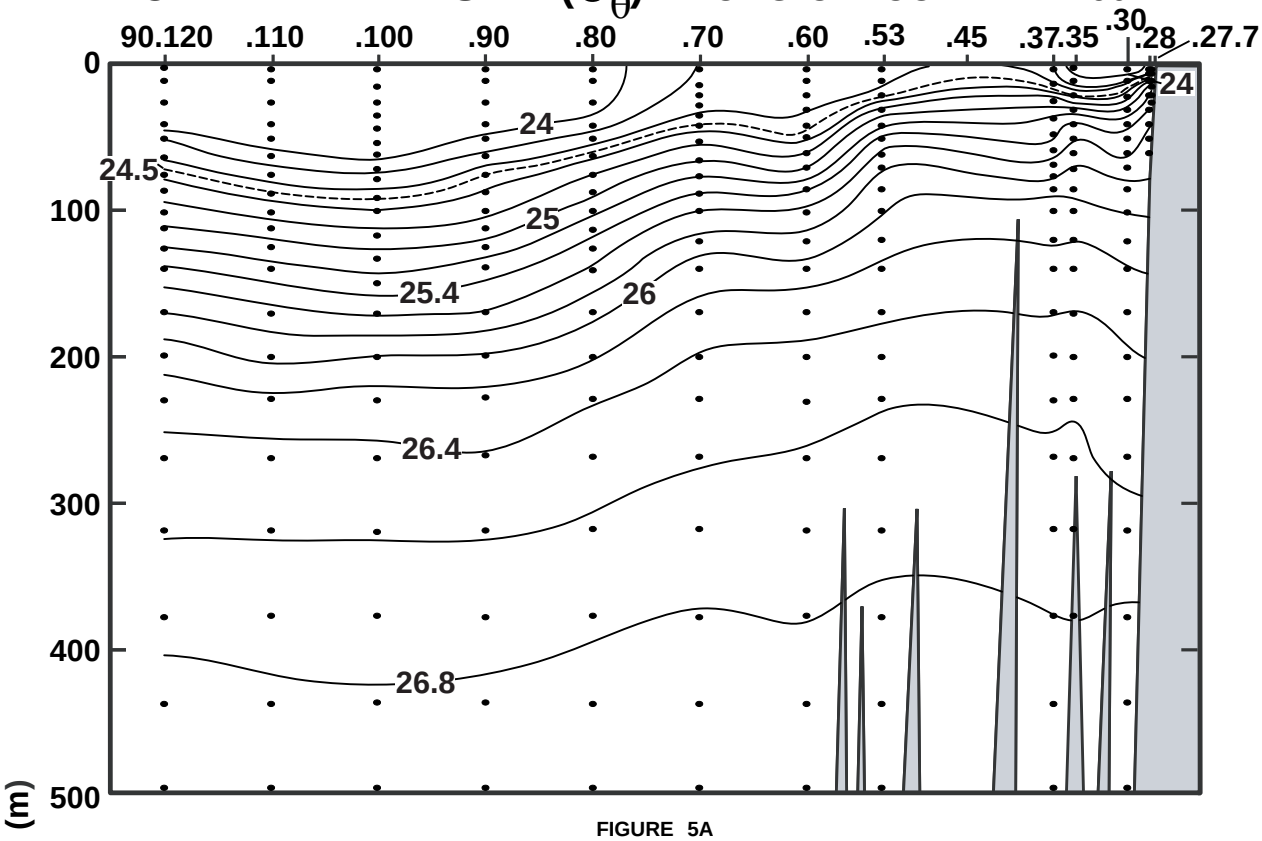


FIGURE 5A

## TEMPERATURE ( °C) ALONG CALCOFI LINE 90

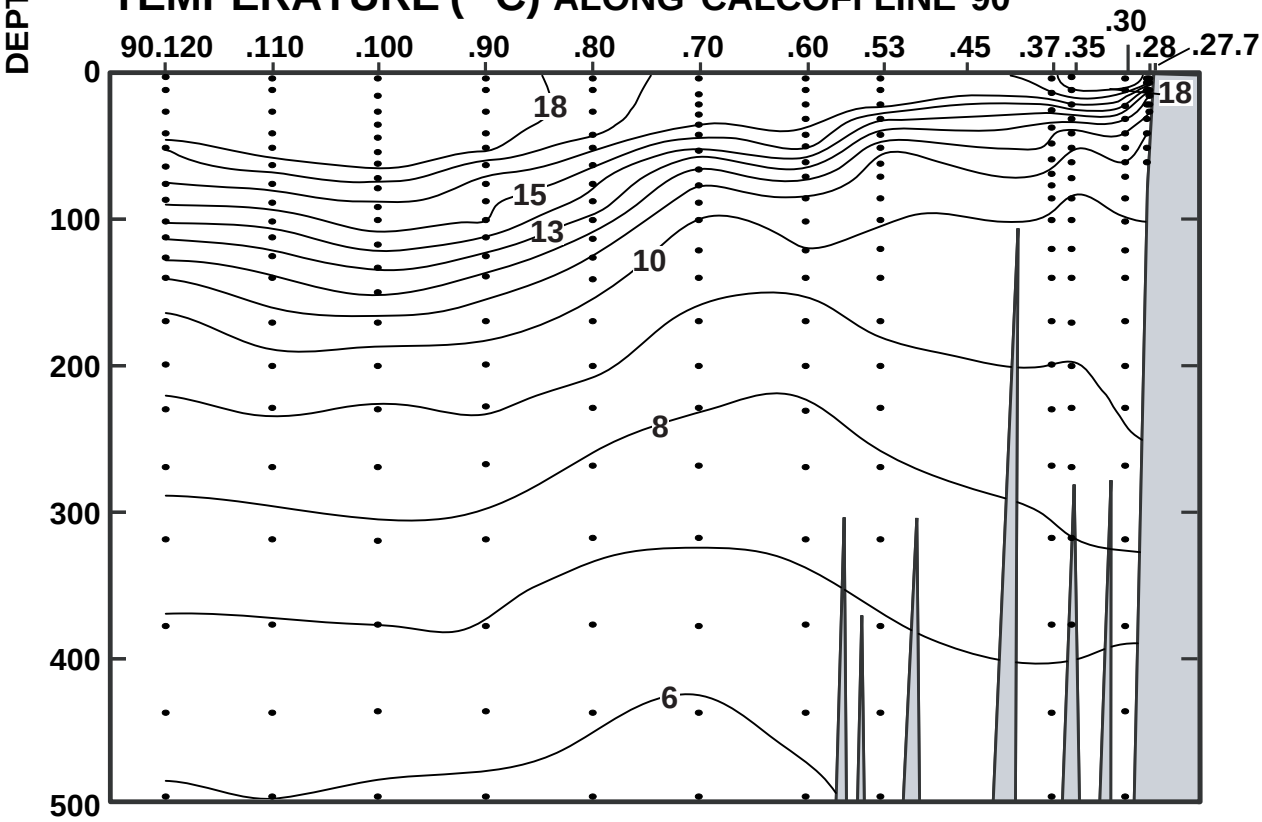


FIGURE 5B

# CALCOFI CRUISE 1011

**1- 4 November 2010**

## SALINITY ALONG CALCOFI LINE 90

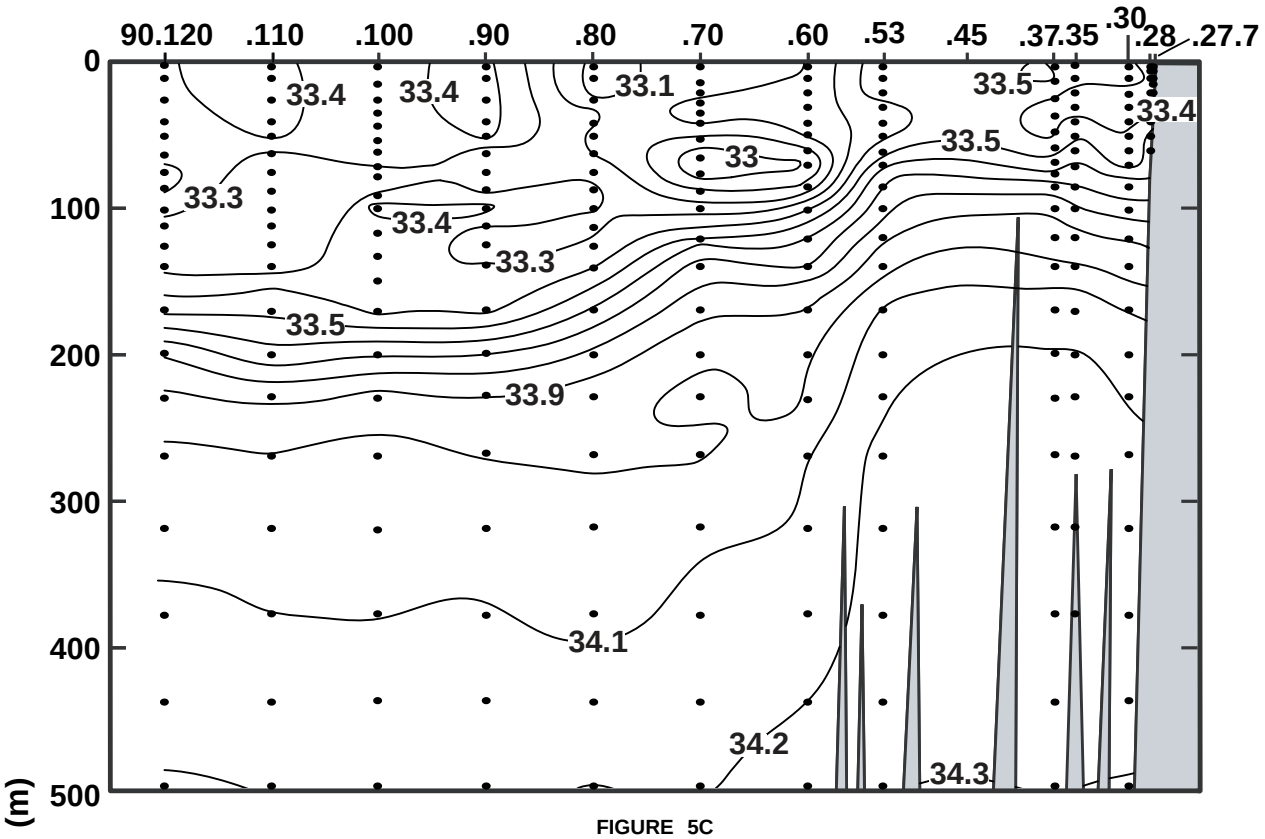


FIGURE 5C

## SILICATE (μM/L) ALONG CALCOFI LINE 90

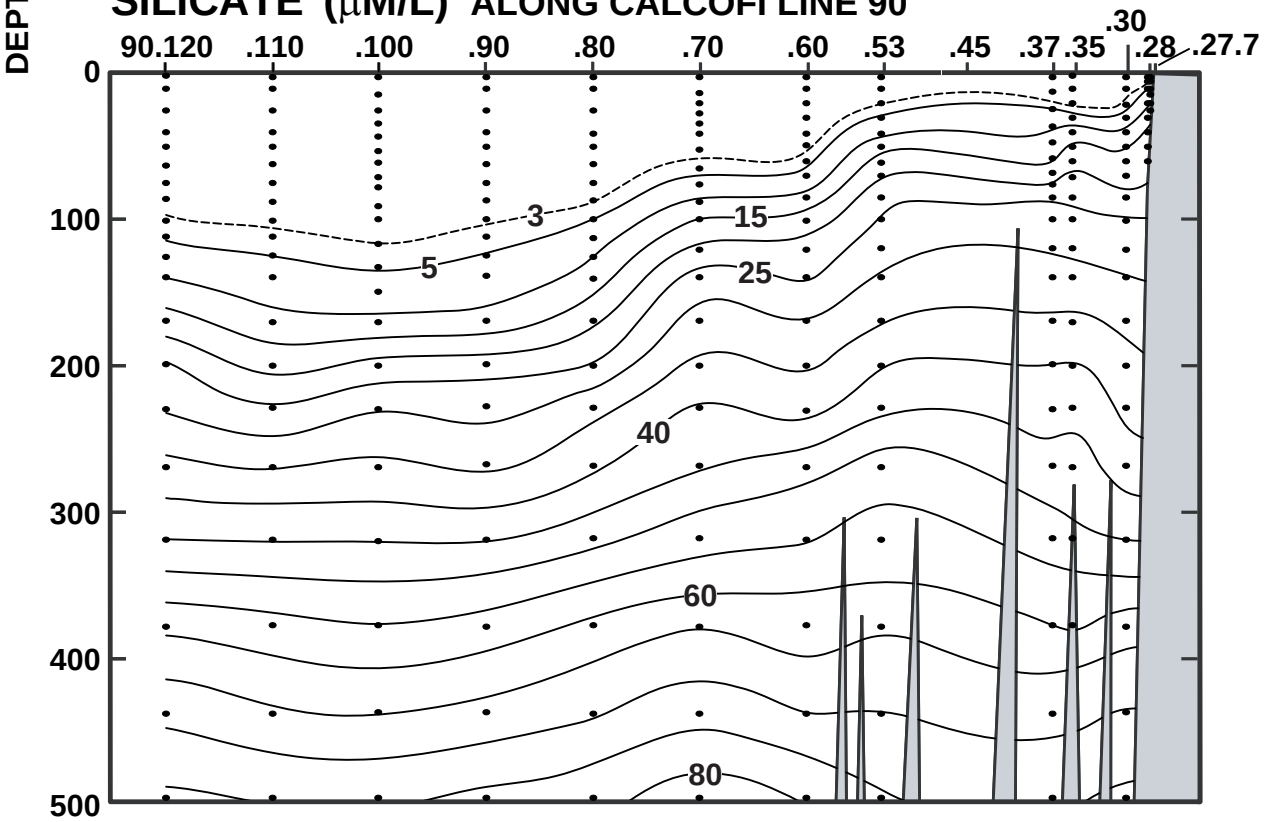


FIGURE 5D

# CALCOFI CRUISE 1011

**1 - 4 November 2010**

## NITRATE (μM/L) ALONG CALCOFI LINE 90

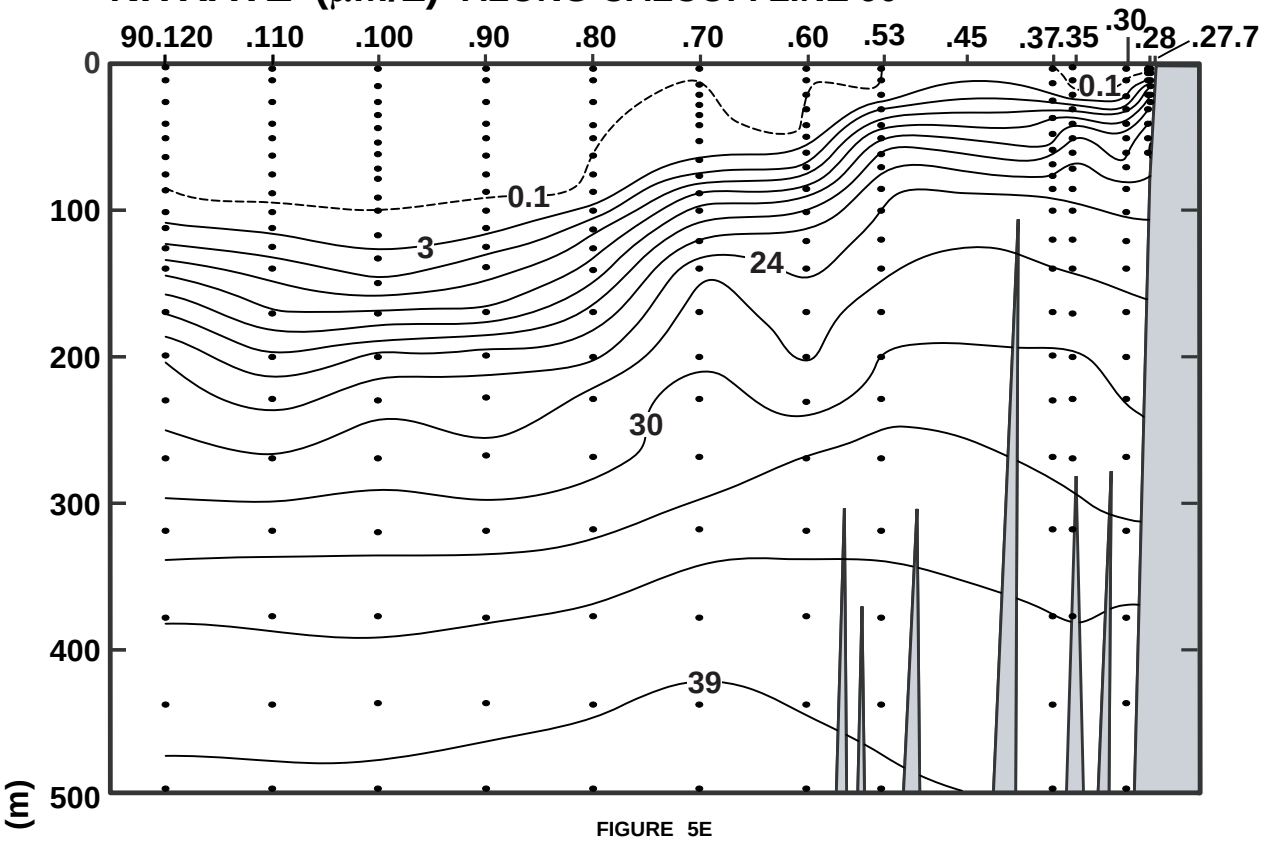


FIGURE 5E

## PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

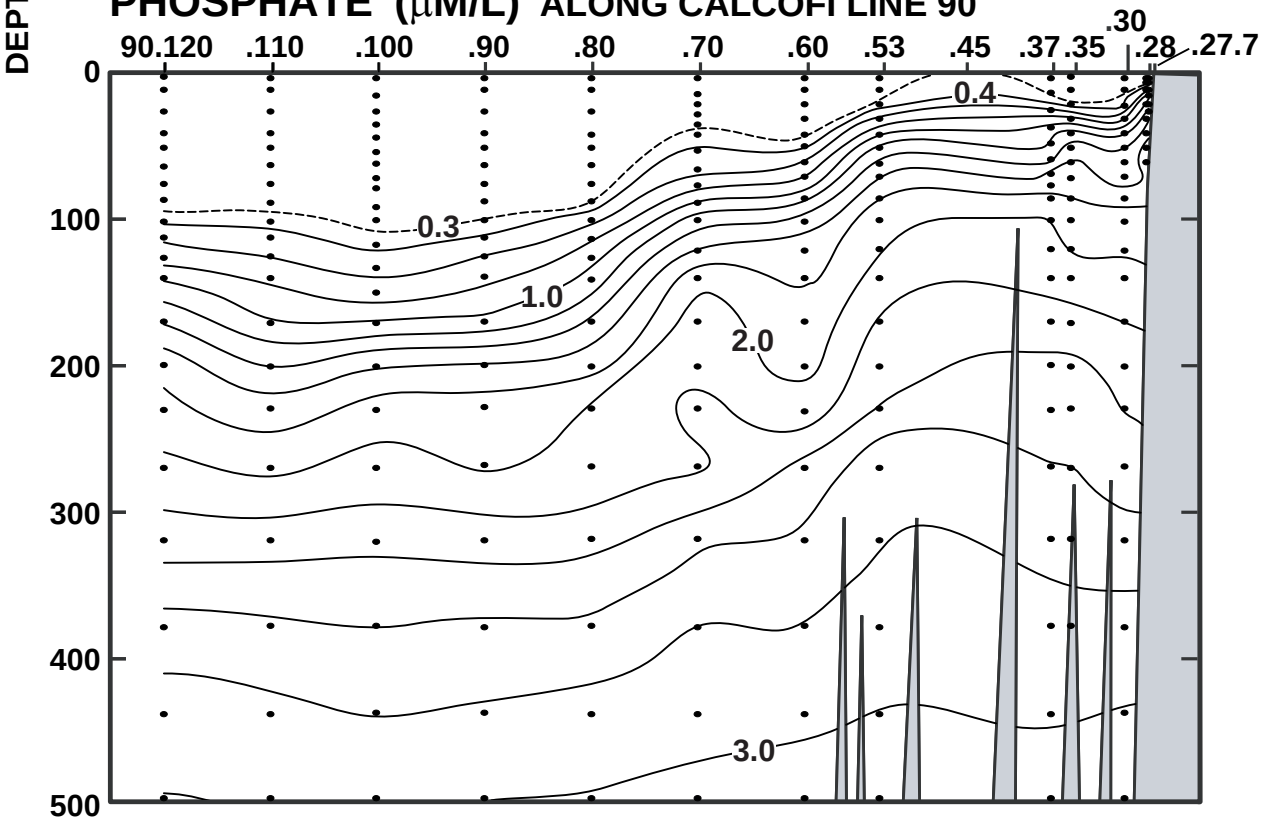


FIGURE 5F

# CALCOFI CRUISE 1011

**1 - 4 November 2010**

## CHLOROPHYLL-a (μg/L) ALONG CALCOFI LINE 90

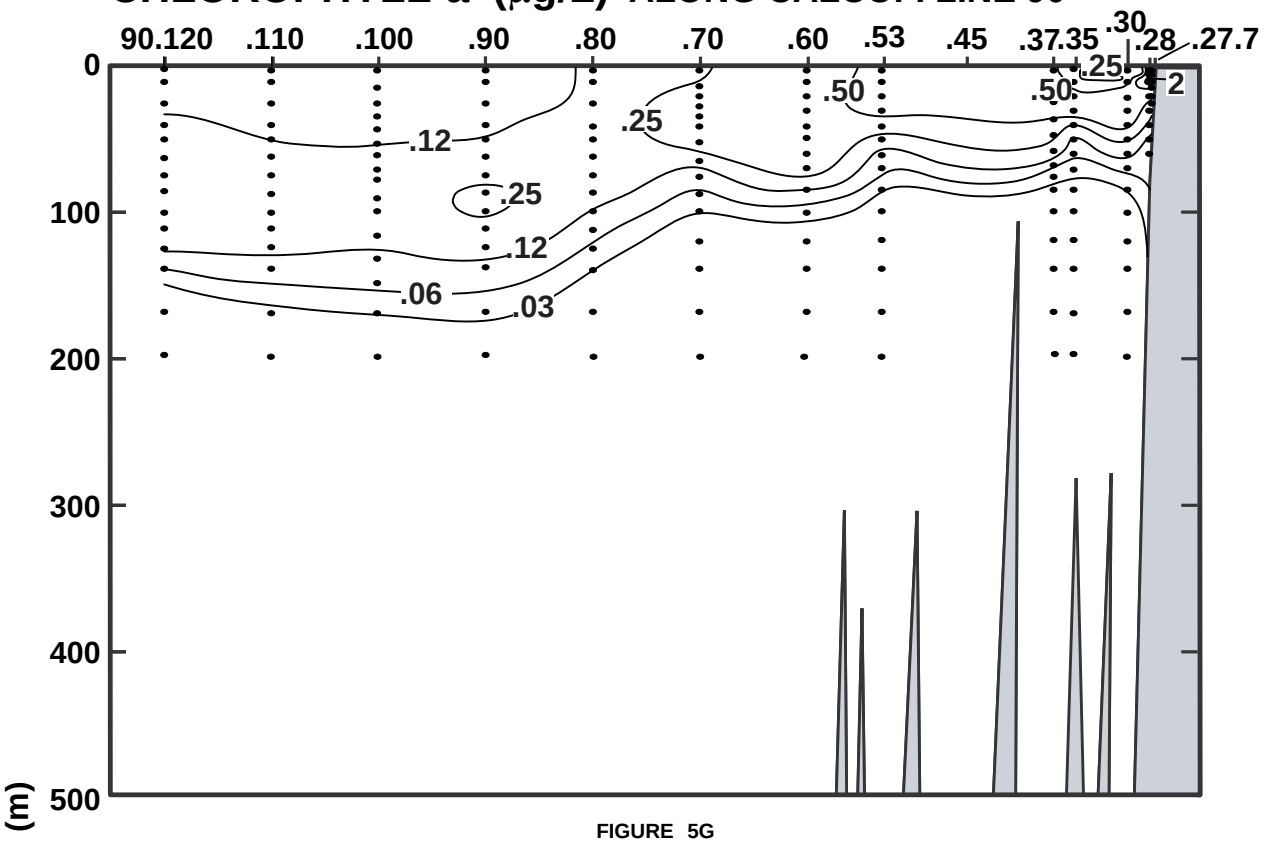


FIGURE 5G

## OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

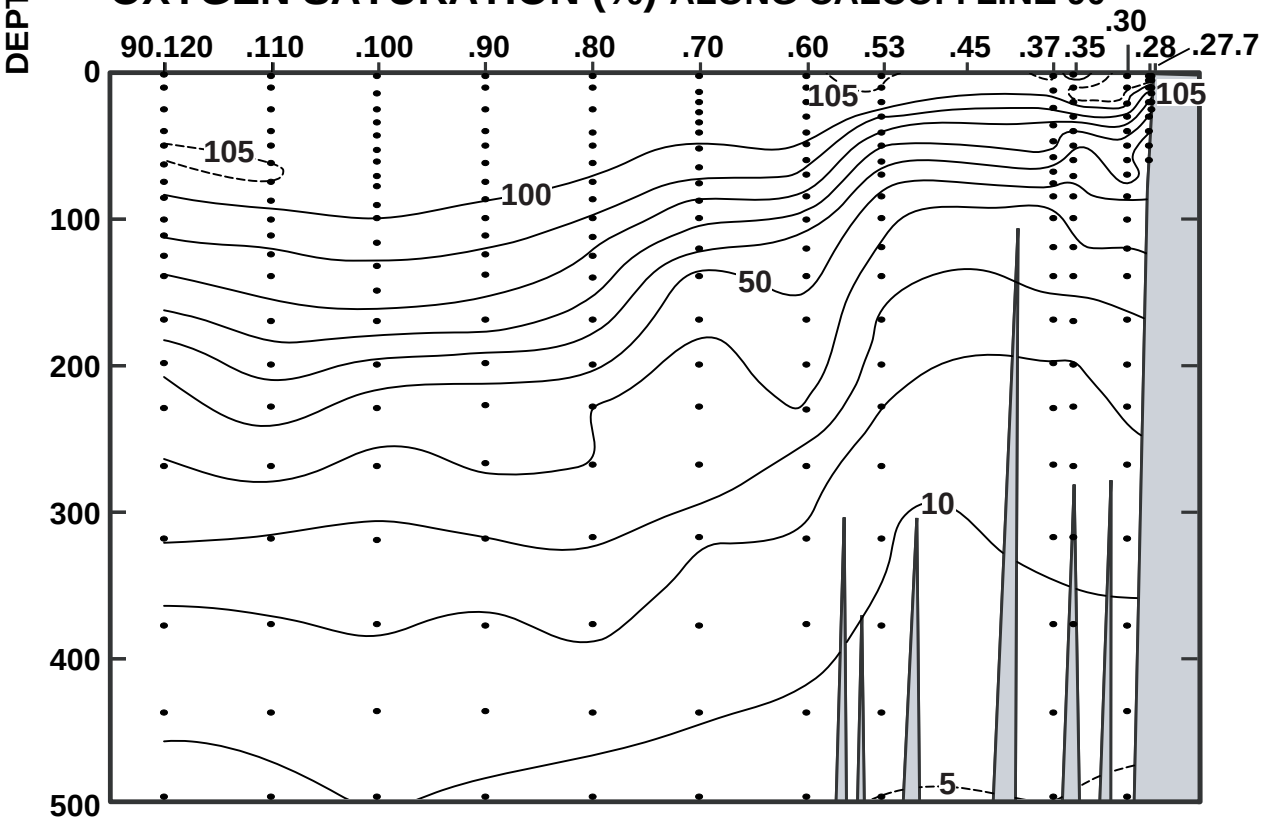


FIGURE 5H

# CALCOFI CRUISE 1011

**1 - 4 Novebmer 2010**

## OXYGEN (mL/L) ALONG CALCOFI LINE 90

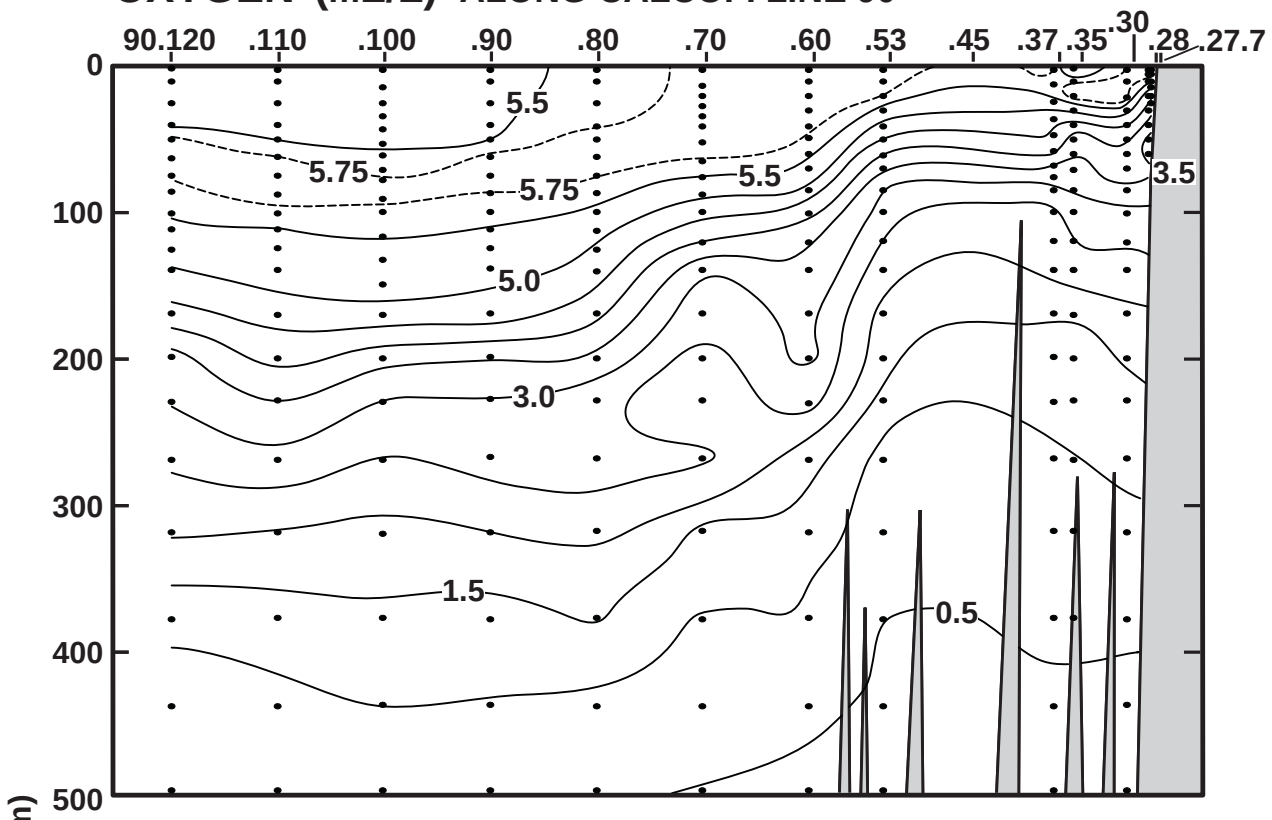


FIGURE 5I

## NITRITE (μM/L) ALONG CALCOFI LINE 90

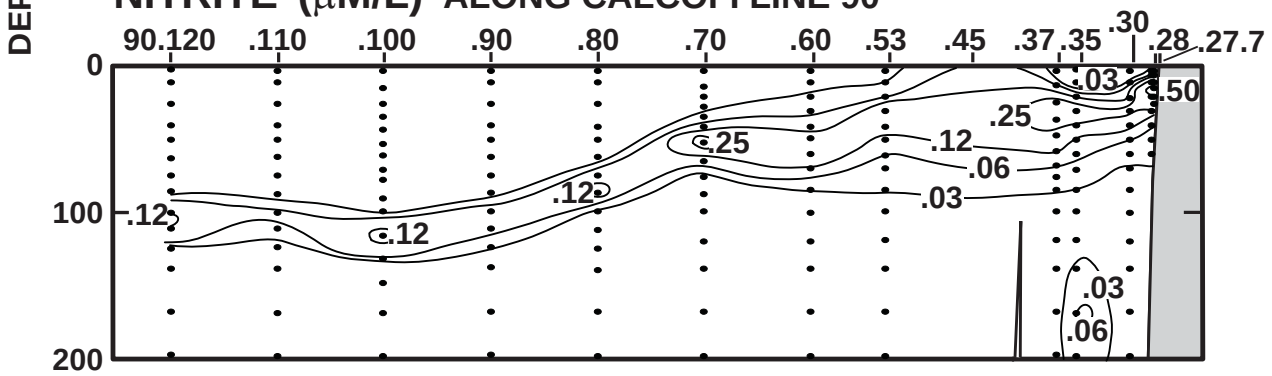


FIGURE 5J

## PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

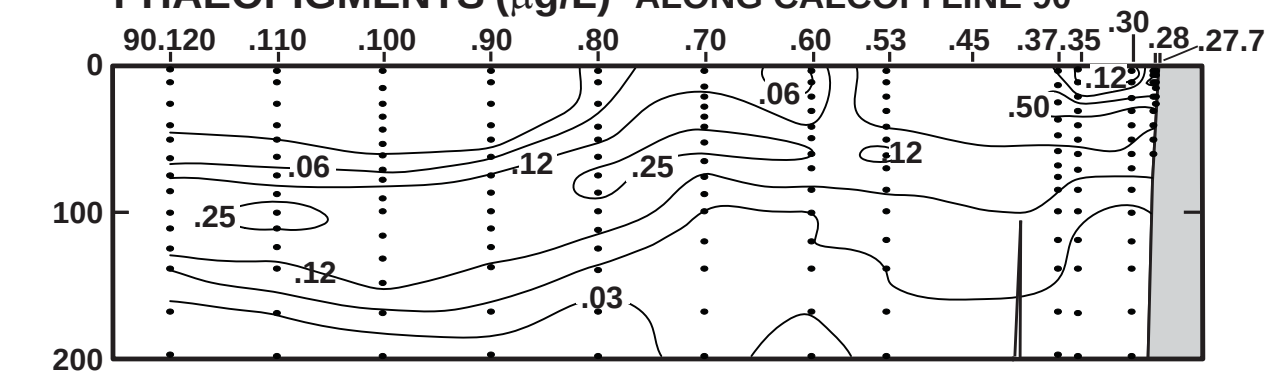


FIGURE 5K

PERSONNEL

CalCOFI Cruise 1011

SHIP'S CAPTAIN

David Murline, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

| | |
|---|---|
| Wilkinson, James R. (Chief Scientist) | Programmer Analyst, SIO |
| Abramenkoff, Dimitry | Fishery Biologist, NMFS |
| Allen, Caitlin | SIO |
| Bonito, Lindsay | Volunteer, SIO |
| Breese, Dawn | Bird Observer, FIAER |
| Camacho-Wiley Dominique | Marine Mammal Observer, MPL |
| Dovel, Shonna | Staff Research Associate, SIO |
| Faber, David | Staff Research Associate, SIO |
| Hays, Amy | Fishery Biologist, NMFS |
| Liu, Jian | Staff Research Associate, SIO |
| Miller, Melissa | Staff Research Associate, SIO |
| Overcash, Bryan | Staff Research Associate, SIO |
| Roadman, Megan | Staff Research Associate, SIO |
| Roache, Lauren | Staff Research Associate, MPL |
| Rodgers-Wolgast, Jennifer | Staff Research Associate, SIO |
| Sayre, Colin | Volunteer, SIO |
| Susner, Grant M. | Staff Research Associate, SIO |
| Whitaker, Katherine | Marine Mammal Observer, MPL |

San Diego to San Diego, California, 28 Oct. – 15 Nov., 2010

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 76.7 90.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 43.9 N | 123 39.0 W | 12/11/10 | 0905 UTC | 4198 m | 310 20 kn | | | 1027.9 mb | 15.2 C | 13.0 C | | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.57 | 15.57 | 33.233 | 24.486 | 343.7 | 0.000 | 5.83 | 102.6 | 1.6 | 0.32 | 0.8 | 0.07 | 0.08 | 0.58 | 0.20 | 0 | |
| 2 | 15.57 | 15.57 | 33.233 | 24.486 | 343.8 | 0.007 | 5.83 | 102.6 | 1.6 | 0.32 | 0.8 | 0.07 | 0.08 | 0.58 | 0.20 | 2 | 220 |
| 10 | 15.57 | 15.57 | 33.232 | 24.485 | 344.1 | 0.034 | 5.84 | 102.7 | 1.6 | 0.33 | 0.8 | 0.07 | 0.10 | 0.68 | 0.12 | 10 | 219 |
| 20 | 15.57 | 15.57 | 33.233 | 24.486 | 344.3 | 0.069 | 5.82 | 102.4 | 1.5 | 0.32 | 0.8 | 0.07 | 0.10 | 0.61 | 0.17 | 20 | 218 |
| 30 ISL | 15.52 D | 15.52 | 33.233 D | 24.498 | 343.5 | 0.103 | 5.82 | 102.3 | 1.4 | 0.34 | 0.8 | 0.07 | 0.10 | 0.63 | 0.17 | 30 | |
| 31 | 15.53 | 15.53 | 33.235 | 24.497 | 343.6 | 0.107 | 5.82 | 102.3 | 1.4 | 0.34 | 0.8 | 0.07 | 0.10 | 0.63 | 0.17 | 31 | 217 |
| 40 | 13.33 | 13.32 | 33.086 | 24.847 | 310.5 | 0.136 | 5.77 | 96.9 | 2.9 | 0.58 | 3.4 | 0.43 | 0.21 | 0.53 | 0.34 | 40 | 216 |
| 50 ISL | 12.75 D | 12.74 | 33.133 D | 24.998 | 296.3 | 0.166 | 5.52 | 91.6 | 4.2 | 0.75 | 6.4 | 0.48 | 0.10 | 0.36 | 0.35 | 50 | |
| 51 | 12.81 | 12.80 | 33.138 | 24.990 | 297.1 | 0.169 | 5.49 | 91.2 | 4.4 | 0.76 | 6.7 | 0.49 | 0.08 | 0.34 | 0.35 | 51 | 215 |
| 60 | 11.89 | 11.88 | 33.093 | 25.131 | 283.8 | 0.196 | 5.30 | 86.3 | 6.5 | 0.88 | 9.2 | 0.03 | 0.05 | 0.24 | 0.22 | 60 | 214 |
| 71 | 10.84 | 10.83 | 33.105 | 25.330 | 265.0 | 0.226 | 5.12 | 81.5 | 9.9 | 1.05 | 12.1 | 0.02 | 0.05 | 0.14 | 0.12 | 71 | 213 |
| 75 ISL | 10.45 D | 10.44 | 33.128 D | 25.416 | 256.8 | 0.236 | 4.87 | 76.9 | 12.0 | 1.18 | 14.3 | 0.02 | 0.04 | 0.11 | 0.10 | 75 | |
| 85 | 10.20 | 10.19 | 33.413 | 25.681 | 231.9 | 0.261 | 4.21 | 66.2 | 17.2 | 1.50 | 19.6 | 0.01 | 0.00 | 0.04 | 0.07 | 85 | 212 |
| 100 | 9.24 | 9.23 | 33.498 | 25.906 | 210.6 | 0.294 | 3.92 | 60.4 | 21.2 | 1.60 | 21.7 | 0.00 | 0.00 | 0.01 | 0.05 | 100 | 211 |
| 120 | 9.25 | 9.24 | 33.681 | 26.048 | 197.6 | 0.335 | 3.24 | 50.0 | 26.1 | 1.87 | 25.8 | 0.01 | 0.00 | 0.01 | 0.04 | 121 | 210 |
| 125 ISL | 9.23 D | 9.22 | 33.733 D | 26.092 | 193.5 | 0.344 | 3.09 | 47.7 | 27.0 | 1.91 | 26.5 | 0.01 | 0.00 | 0.01 | 0.04 | 126 | |
| 140 | 9.08 | 9.06 | 33.800 | 26.168 | 186.5 | 0.373 | 2.75 | 42.3 | 29.2 | 2.00 | 27.8 | 0.00 | 0.00 | 0.01 | 0.03 | 141 | 209 |
| 150 ISL | 8.86 D | 8.84 | 33.861 D | 26.251 | 178.8 | 0.391 | 2.73 | 41.8 | 30.8 | 2.00 | 28.1 | 0.00 | 0.02 | 0.01 | 0.03 | 151 | |
| 171 | 8.31 | 8.29 | 33.919 | 26.381 | 166.7 | 0.427 | 2.69 | 40.7 | 33.7 | 2.01 | 28.6 | 0.00 | 0.05 | 0.00 | 0.03 | 172 | 208 |
| 200 | 8.03 | 8.01 | 33.983 | 26.474 | 158.3 | 0.475 | 2.74 | 41.2 | 36.0 | 2.00 | 28.6 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | 207 |
| 231 | 7.77 | 7.75 | 34.014 | 26.537 | 152.8 | 0.523 | 2.30 | 34.4 | 41.0 | 2.17 | 30.7 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 7.64 D | 7.62 | 34.054 D | 26.587 | 148.3 | 0.551 | 1.90 | 28.3 | 44.5 | 2.31 | 32.4 | 0.00 | 0.00 | | | 251 | |
| 271 | 7.50 | 7.47 | 34.072 | 26.622 | 145.3 | 0.582 | 1.50 | 22.3 | 48.3 | 2.46 | 34.2 | 0.00 | 0.00 | | | 273 | 205 |
| 300 ISL | 7.05 D | 7.02 | 34.069 D | 26.683 | 139.8 | 0.623 | 1.42 | 20.9 | 52.3 | 2.53 | 35.3 | 0.00 | 0.00 | | | 302 | |
| 320 | 6.87 | 6.84 | 34.068 | 26.707 | 137.7 | 0.651 | 1.37 D | 20.1 D | 55.0 | 2.56 | 35.8 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 6.12 | 6.09 | 34.089 | 26.822 | 127.1 | 0.732 | 1.06 | 15.3 | 66.1 | 2.74 | 38.6 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 5.87 D | 5.84 | 34.088 D | 26.853 | 124.2 | 0.756 | 1.02 | 14.6 | 69.0 | 2.77 | 39.1 | 0.00 | 0.00 | | | 403 | |
| 440 | 5.55 | 5.51 | 34.097 | 26.899 | 120.0 | 0.805 | 0.92 | 13.1 | 74.8 | 2.84 | 40.1 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 5.24 D | 5.20 | 34.167 D | 26.992 | 111.7 | 0.874 | 0.57 | 8.0 | 84.1 | 2.98 | 41.7 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.15 | 5.11 | 34.183 | 27.015 | 109.6 | 0.892 | 0.48 | 6.8 | 86.6 | 3.02 | 42.1 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 76.7 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 23.3 N | 124 19.3 W | 12/11/10 | 0230 UTC | 4564 m | 310 21 kn | 340 07 09 | 1 | 1025.8 mb | 17.0 C | 13.0 C | | 4/8 | ST |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.14 | 16.14 | 32.768 | 24.001 | 390.0 | 0.000 | 5.81 | 103.1 | 0.5 | 0.29 | 0.0 | 0.00 | 0.17 | 0.43 | 0.13 | 0 | |
| 2 | 16.14 | 16.14 | 32.768 | 24.001 | 390.1 | 0.008 | 5.81 | 103.1 | 0.5 | 0.29 | 0.0 | 0.00 | 0.17 | 0.43 | 0.13 | 2 | 220 |
| 10 | 16.15 | 16.15 | 32.769 | 23.999 | 390.4 | 0.039 | 5.79 | 102.7 | 0.5 | 0.28 | 0.0 | 0.00 | 0.15 | 0.44 | 0.13 | 10 | 219 |
| 20 | 16.15 | 16.15 | 32.771 | 24.001 | 390.5 | 0.078 | 5.80 | 102.9 | 0.5 | 0.28 | 0.0 | 0.00 | 0.11 | 0.44 | 0.14 | 20 | 218 |
| 30 ISL | 15.64 D | 15.64 | 32.912 D | 24.224 | 369.6 | 0.116 | 5.89 | 103.5 | 1.4 | 0.32 | 0.1 | 0.01 | 0.17 | 0.74 | 0.32 | 30 | |
| 31 | 15.64 | 15.64 | 32.922 | 24.232 | 368.9 | 0.120 | 5.90 | 103.7 | 1.5 | 0.32 | 0.1 | 0.01 | 0.18 | 0.76 | 0.34 | 31 | 217 |
| 40 | 14.20 | 14.19 | 32.863 | 24.496 | 343.9 | 0.152 | 5.91 | 100.9 | 2.3 | 0.45 | 1.0 | 0.14 | 0.35 | 0.40 | 0.31 | 40 | 216 |
| 50 ISL | 13.13 D | 13.12 | 32.818 D | 24.679 | 326.6 | 0.185 | 5.96 | 99.5 | 2.4 | 0.42 | 0.8 | 0.21 | 0.16 | 0.31 | 0.27 | 50 | |
| 51 | 13.14 | 13.13 | 32.813 | 24.673 | 327.2 | 0.189 | 5.96 | 99.5 | 2.4 | 0.42 | 0.8 | 0.21 | 0.14 | 0.30 | 0.27 | 51 | 215 |
| 60 | 12.93 | 12.92 | 32.824 | 24.724 | 322.7 | 0.218 | 5.93 | 98.6 | 2.5 | 0.44 | 0.9 | 0.23 | 0.10 | 0.26 | 0.23 | 60 | 214 |
| 69 | 12.18 | 12.17 | 32.818 | 24.863 | 309.5 | 0.246 | 5.88 | 96.2 | 3.1 | 0.51 | 2.4 | 0.02 | 0.10 | 0.19 | 0.21 | 69 | 213 |
| 75 ISL | 11.75 D | 11.74 | 32.861 D | 24.977 | 298.8 | 0.265 | 5.85 | 94.9 | 3.4 | 0.53 | 3.0 | 0.02 | 0.09 | 0.14 | 0.17 | 75 | |
| 85 | 11.18 | 11.17 | 32.905 | 25.115 | 285.8 | 0.294 | 5.71 | 91.5 | 4.4 | 0.61 | 4.5 | 0.01 | 0.08 | 0.06 | 0.09 | 85 | 212 |
| 100 | 10.55 | 10.54 | 33.104 | 25.381 | 260.8 | 0.335 | 5.15 | 81.5 | 8.8 | 0.93 | 10.4 | 0.01 | 0.08 | 0.03 | 0.06 | 100 | 211 |
| 120 | 9.56 | 9.55 | 33.290 | 25.692 | 231.4 | 0.384 | 4.61 | 71.5 | 15.2 | 1.29 | 16.6 | 0.00 | 0.08 | 0.02 | 0.03 | 121 | 210 |
| 125 ISL | 9.22 D | 9.21 | 33.429 D | 25.856 | 215.9 | 0.395 | 4.38 | 67.4 | 17.5 | 1.40 | 18.4 | 0.00 | 0.08 | 0.02 | 0.03 | 126 | |
| 141 | 8.91 | 8.89 | 33.637 | 26.068 | 196.0 | 0.428 | 3.62 | 55.4 | 24.7 | 1.72 | 23.7 | 0.00 | 0.07 | 0.01 | 0.02 | 142 | 209 |
| 150 ISL | 8.91 D | 8.89 | 33.737 D | 26.146 | 188.8 | 0.445 | 3.31 | 50.7 | 27.1 | 1.82 | 25.4 | 0.00 | 0.06 | 0.01 | 0.02 | 151 | |
| 170 | 8.71 | 8.69 | 33.845 | 26.262 | 178.1 | 0.482 | 2.85 | 43.5 | 30.5 | 1.95 | 27.4 | 0.00 | 0.05 | 0.00 | 0.02 | 171 | 208 |
| 200 | 8.35 | 8.33 | 33.968 | 26.414 | 164.1 | 0.533 | 2.68 | 40.6 | 34.2 | 1.99 | 28.2 | 0.00 | 0.04 | 0.00 | 0.01 | 201 | 207 |
| 230 | 7.86 | 7.84 | 33.991 | 26.506 | 155.8 | 0.581 | 2.69 | 40.3 | 38.2 | 2.02 | 29.1 | 0.00 | 0.05 | | | 231 | 206 |
| 250 ISL | 7.59 D | 7.57 | 34.008 D | 26.558 | 151.0 | 0.612 | 2.45 | 36.5 | 42.1 | 2.14 | 30.6 | 0.00 | 0.07 | | | 251 | |
| 271 | 7.28 | 7.25 | 34.021 | 26.613 | 146.0 | 0.643 | 2.11 | 31.2 | 46.7 | 2.29 | 32.5 | 0.00 | 0.09 | | | 273 | 205 |
| 300 ISL | 6.87 D | 6.84 | 34.036 D | 26.681 | 139.7 | 0.685 | 1.74 | 25.5 | 52.9 | 2.45 | 34.6 | 0.00 | 0.04 | | | 302 | |
| 320 | 6.68 | 6.65 | 34.055 | 26.722 | 136.1 | 0.712 | 1.51 | 22.0 | 57.1 | 2.54 | 35.8 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 6.03 | 6.00 | 34.088 | 26.833 | 126.0 | 0.792 | 1.06 | 15.2 | 68.0 | 2.77 | 38.6 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 5.91 D | 5.88 | 34.104 D | 26.860 | 123.5 | 0.816 | 0.90 | 12.9 | 70.8 | 2.83 | 39.1 | 0.00 | 0.00 | | | 403 | |
| 441 | 5.74 | 5.70 | 34.166 | 26.931 | 117.3 | 0.865 | 0.60 | 8.6 | 76.9 | 2.95 | 40.3 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.40 D | 5.36 | 34.221 D | 27.016 | 109.6 | 0.932 | 0.48 | 6.8 | | | | | | | | 503 | |
| 515 | 5.36 | 5.32 | 34.232 D | 27.030 | 108.5 | 0.949 | 0.45 D | 6.4 D | | | | | | | | 519 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 80.0 51.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 26.8 N | 120 31.3 W | 10/11/10 | 0222 UTC | 78 m | 260 20 kn | | | 1015.8 mb | 13.8 C | 11.5 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 12.11 | 12.11 | 33.535 | 25.431 | 253.8 | 0.000 | 4.11 | 67.5 | 15.3 | 1.40 | 15.6 | 0.29 | 0.20 | 1.09 | 0.52 | 0 | |
| 2 | 12.11 | 12.11 | 33.535 | 25.431 | 253.8 | 0.005 | 4.11 | 67.5 | 15.3 | 1.40 | 15.6 | 0.29 | 0.20 | 1.09 | 0.52 | 2 | 209 |
| 5 | 12.10 | 12.10 | 33.536 | 25.434 | 253.6 | 0.013 | 4.09 | 67.1 | 15.2 | 1.40 | 15.5 | 0.29 | 0.22 | 1.26 | 0.44 | 5 | 208 |
| 10 ISL | 12.04 D | 12.04 | 33.538 D | 25.447 | 252.5 | 0.025 | 4.07 | 66.7 | 15.2 | 1.42 | 15.7 | 0.29 | 0.20 | 1.28 | 0.43 | 10 | |
| 11 | 12.07 | 12.07 | 33.546 | 25.448 | 252.5 | 0.028 | 4.06 | 66.6 | 15.2 | 1.42 | 15.7 | 0.29 | 0.20 | 1.28 | 0.43 | 11 | 207 |
| 20 | 11.53 | 11.53 | 33.577 | 25.572 | 240.8 | 0.050 | 3.50 | 56.7 | 18.2 | 1.59 | 18.2 | 0.22 | 0.12 | 0.80 | 0.46 | 20 | 206 |
| 30 | 10.56 | 10.56 | 33.669 | 25.818 | 217.7 | 0.073 | 2.80 | 44.5 | 23.1 | 1.85 | 22.4 | 0.06 | 0.07 | 0.30 | 0.28 | 30 | 205 |
| 41 | 10.27 | 10.27 | 33.771 | 25.948 | 205.6 | 0.096 | 2.56 | 40.4 | 26.3 | 1.96 | 24.1 | 0.06 | 0.00 | 0.24 | 0.24 | 41 | 204 |
| 50 | 10.26 | 10.25 | 33.772 | 25.950 | 205.5 | 0.115 | 2.45 | 38.7 | 26.7 | 1.98 | 24.2 | 0.06 | 0.07 | 0.23 | 0.26 | 50 | 203 |
| 61 | 10.10 | 10.09 | 33.839 | 26.030 | 198.2 | 0.137 | 2.26 | 35.6 | 29.0 | 2.06 | 25.1 | 0.08 | 0.00 | 0.21 | 0.34 | 61 | 202 |
| 70 | 10.04 | 10.03 | 33.868 | 26.063 | 195.3 | 0.155 | 2.15 | 33.8 | 30.2 | 2.11 | 25.7 | 0.08 | 0.10 | 0.23 | 0.46 | 70 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 80.0 55.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 18.9 N | 120 48.3 W | 10/11/10 | 0549 UTC | 833 m | 280 24 kn | | | 1017.0 mb | 14.3 C | 12.0 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 14.34 | 14.34 | 33.412 | 24.890 | 305.3 | 0.000 | 5.67 | 97.4 | 2.5 | 0.58 | 3.4 | 0.13 | 0.43 | 2.96 | 0.73 | 0 | |
| 2 | 14.34 | 14.34 | 33.412 | 24.890 | 305.3 | 0.006 | 5.67 | 97.4 | 2.5 | 0.58 | 3.4 | 0.13 | 0.43 | 2.96 | 0.73 | 2 | 221 |
| 10 | 14.35 | 14.35 | 33.416 | 24.891 | 305.4 | 0.031 | 5.67 | 97.4 | 2.4 | 0.57 | 3.3 | 0.13 | 0.37 | 3.04 | 0.87 | 10 | 219 |
| 10 | 14.34 | 14.34 | 33.412 | 24.890 | 305.5 | 0.031 | 5.67 | 97.4 | | | | | | | | 10 | 220 |
| 20 | 14.34 | 14.34 | 33.415 | 24.893 | 305.6 | 0.061 | 5.66 | 97.2 | 2.4 | 0.57 | 3.4 | 0.13 | 0.47 | 3.00 | 0.75 | 20 | 218 |
| 30 ISL | 14.07 D | 14.07 | 33.406 D | 24.943 | 301.1 | 0.091 | 5.54 | 94.6 | 3.0 | 0.64 | 4.2 | 0.15 | 0.42 | 2.72 | 0.87 | 30 | |
| 31 | 14.09 | 14.09 | 33.403 | 24.936 | 301.7 | 0.094 | 5.53 | 94.5 | 3.1 | 0.65 | 4.3 | 0.16 | 0.42 | 2.69 | 0.88 | 31 | 217 |
| 40 | 12.93 | 12.92 | 33.366 | 25.143 | 282.3 | 0.121 | 4.99 | 83.2 | 6.8 | 0.98 | 8.6 | 0.25 | 0.63 | 1.53 | 0.58 | 40 | 216 |
| 50 ISL | 11.11 D | 11.10 | 33.262 D | 25.404 | 257.5 | 0.148 | 4.70 | 75.4 | 11.5 | 1.22 | 14.0 | 0.11 | 0.11 | 0.42 | 0.27 | 50 | |
| 51 | 11.11 | 11.10 | 33.259 | 25.402 | 257.7 | 0.150 | 4.67 | 74.9 | 12.1 | 1.25 | 14.6 | 0.09 | 0.05 | 0.34 | 0.24 | 51 | 215 |
| 60 | 10.09 | 10.08 | 33.471 | 25.745 | 225.3 | 0.172 | 4.01 | 63.0 | 19.4 | 1.60 | 20.7 | 0.02 | 0.00 | 0.07 | 0.14 | 60 | 214 |
| 70 | 9.73 | 9.72 | 33.567 | 25.880 | 212.6 | 0.194 | 3.68 | 57.4 | 22.6 | 1.72 | 22.9 | 0.01 | 0.00 | 0.04 | 0.10 | 70 | 213 |
| 75 ISL | 9.67 D | 9.66 | 33.583 D | 25.902 | 210.5 | 0.204 | 3.63 | 56.5 | 23.1 | 1.74 | 23.2 | 0.01 | 0.00 | 0.03 | 0.10 | 75 | |
| 85 | 9.61 | 9.60 | 33.600 | 25.926 | 208.5 | 0.225 | 3.56 | 55.4 | 23.7 | 1.78 | 23.6 | 0.01 | 0.00 | 0.03 | 0.09 | 85 | 212 |
| 100 | 9.26 | 9.25 | 33.733 | 26.087 | 193.5 | 0.256 | 3.11 | 48.0 | 27.7 | 1.93 | 26.1 | 0.00 | 0.00 | 0.01 | 0.08 | 101 | 211 |
| 120 | 9.48 | 9.47 | 33.879 | 26.166 | 186.5 | 0.294 | 2.58 | 40.1 | 29.0 | 1.98 | 26.1 | 0.00 | 0.00 | 0.01 | 0.08 | 121 | 210 |
| 125 ISL | 9.61 D | 9.60 | 33.933 D | 26.187 | 184.6 | 0.303 | 2.40 | 37.4 | 29.9 | 2.03 | 26.5 | 0.00 | 0.00 | 0.01 | 0.08 | 126 | |
| 140 | 9.48 | 9.46 | 34.021 | 26.277 | 176.4 | 0.330 | 1.96 | 30.5 | 32.7 | 2.16 | 27.7 | 0.00 | 0.00 | 0.01 | 0.07 | 141 | 209 |
| 150 ISL | 9.37 D | 9.35 | 34.032 D | 26.304 | 174.0 | 0.347 | 2.04 | 31.6 | 33.3 | 2.15 | 28.0 | 0.00 | 0.00 | 0.01 | 0.07 | 151 | |
| 170 | 8.81 | 8.79 | 33.992 | 26.362 | 168.7 | 0.382 | 2.30 | 35.2 | 34.0 | 2.11 | 28.4 | 0.00 | 0.00 | 0.01 | 0.06 | 171 | 208 |
| 199 | 8.98 | 8.96 | 34.102 | 26.422 | 163.7 | 0.430 | 1.76 | 27.1 | 36.9 | 2.28 | 29.4 | 0.00 | 0.00 | 0.00 | 0.06 | 200 | 207 |
| 200 ISL | 9.03 D | 9.01 | 34.116 D | 26.425 | 163.4 | 0.432 | 1.74 | 26.8 | 37.0 | 2.29 | 29.4 | 0.00 | 0.00 | | | 201 | |
| 230 | 8.74 | 8.72 | 34.171 | 26.514 | 155.5 | 0.479 | 1.33 | 20.3 | 41.2 | 2.43 | 31.0 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.36 D | 8.33 | 34.194 D | 26.591 | 148.4 | 0.510 | 1.15 | 17.4 | 44.3 | 2.51 | 32.0 | 0.00 | 0.00 | | | 252 | |
| 270 | 8.21 | 8.18 | 34.205 | 26.623 | 145.7 | 0.539 | 1.06 | 16.0 | 47.4 | 2.58 | 32.9 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.80 D | 7.77 | 34.209 D | 26.687 | 139.9 | 0.582 | 1.15 | 17.2 | 51.6 | 2.63 | 34.3 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.36 | 7.33 | 34.157 | 26.709 | 137.8 | 0.610 | 1.21 | 17.9 | 54.3 | 2.66 | 35.2 | 0.00 | 0.00 | | | 322 | 204 |
| 382 | 6.87 | 6.83 | 34.206 | 26.816 | 128.3 | 0.692 | 0.74 | 10.8 | 62.7 | 2.82 | 37.1 | 0.00 | 0.00 | | | 385 | 203 |
| 400 ISL | 6.86 D | 6.82 | 34.241 D | 26.845 | 125.9 | 0.715 | 0.66 | 9.7 | 64.9 | 2.86 | 37.6 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.42 | 6.38 | 34.230 | 26.896 | 121.3 | 0.766 | 0.53 | 7.7 | 69.8 | 2.93 | 38.6 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 6.05 D | 6.01 | 34.253 D | 26.962 | 115.5 | 0.836 | 0.40 | 5.8 | 76.1 | 3.02 | 39.7 | 0.00 | 0.00 | | | 504 | |
| 517 | 6.03 | 5.98 | 34.279 | 26.985 | 113.5 | 0.855 | 0.36 | 5.2 | 77.9 | 3.05 | 40.0 | 0.00 | 0.00 | | | 521 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 80.0 60.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 9.1 N | 121 9.2 W | 10/11/10 | 0947 UTC | 2227 m | 250 17 kn | | | 1016.5 mb | 15.0 C | 13.8 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.70 | 15.70 | 33.392 | 24.579 | 334.8 | 0.000 | 5.70 | 100.6 | 1.5 | 0.31 | 1.0 | 0.10 | 0.18 | 0.55 | 0.16 | 0 | |
| 2 | 15.70 | 15.70 | 33.392 | 24.579 | 334.9 | 0.007 | 5.70 | 100.6 | 1.5 | 0.31 | 1.0 | 0.10 | 0.18 | 0.55 | 0.16 | 2 | 220 |
| 10 | 15.70 | 15.70 | 33.391 | 24.579 | 335.2 | 0.034 | 5.70 | 100.6 | 1.5 | 0.30 | 1.0 | 0.10 | 0.16 | 0.49 | 0.20 | 10 | 219 |
| 20 | 15.70 | 15.70 | 33.392 | 24.580 | 335.4 | 0.067 | 5.69 | 100.4 | 1.4 | 0.30 | 1.0 | 0.10 | 0.19 | 0.59 | 0.13 | 20 | 218 |
| 30 | 15.53 | 15.53 | 33.393 | 24.619 | 332.0 | 0.100 | 5.63 | 99.0 | 1.8 | 0.34 | 1.6 | 0.13 | 0.18 | 0.57 | 0.15 | 30 | 217 |
| 40 | 12.42 | 12.41 | 33.429 | 25.291 | 268.1 | 0.130 | 4.55 | 75.1 | 9.2 | 1.09 | 12.4 | 0.27 | 0.14 | 0.41 | 0.33 | 40 | 216 |
| 50 | 11.41 | 11.40 | 33.400 | 25.457 | 252.5 | 0.156 | 4.29 | 69.3 | 12.1 | 1.28 | 15.4 | 0.12 | 0.07 | 0.24 | 0.23 | 50 | 215 |
| 60 | 10.57 | 10.56 | 33.474 | 25.665 | 232.9 | 0.181 | 3.93 | 62.4 | 17.0 | 1.52 | 19.4 | 0.04 | 0.04 | 0.15 | 0.13 | 60 | 214 |
| 71 | 10.20 | 10.19 | 33.544 | 25.783 | 221.9 | 0.206 | 3.55 | 55.9 | 19.7 | 1.66 | 21.5 | 0.02 | 0.05 | 0.06 | 0.12 | 71 | 213 |
| 75 ISL | 10.07 D | 10.06 | 33.609 D | 25.856 | 215.0 | 0.214 | 3.37 | 52.9 | 21.2 | 1.73 | 22.5 | 0.02 | 0.05 | 0.05 | 0.11 | 75 | |
| 85 | 9.75 | 9.74 | 33.715 | 25.992 | 202.2 | 0.235 | 3.00 | 46.8 | 24.7 | 1.87 | 24.6 | 0.02 | 0.04 | 0.03 | 0.09 | 85 | 212 |
| 100 ISL | 9.40 D | 9.39 | 33.776 D | 26.098 | 192.5 | 0.265 | 2.91 | 45.1 | 26.7 | 1.90 | 25.4 | 0.01 | 0.00 | 0.01 | 0.08 | 101 | |
| 101 | 9.38 | 9.37 | 33.782 | 26.106 | 191.7 | 0.267 | 2.91 | 45.1 | 26.8 | 1.90 | 25.4 | 0.01 | 0.00 | 0.01 | 0.08 | 102 | 211 |
| 120 | 9.27 | 9.26 | 33.937 | 26.245 | 178.9 | 0.302 | 2.33 | 36.0 | 30.8 | 2.06 | 27.3 | 0.01 | 0.00 | 0.01 | 0.07 | 121 | 210 |
| 125 ISL | 9.30 D | 9.29 | 33.993 D | 26.284 | 175.3 | 0.311 | 2.20 | 34.1 | 31.7 | 2.10 | 27.6 | 0.01 | 0.00 | 0.01 | 0.07 | 126 | |
| 141 | 9.20 | 9.18 | 34.040 | 26.337 | 170.6 | 0.339 | 1.91 | 29.5 | 33.9 | 2.19 | 28.4 | 0.00 | 0.00 | 0.01 | 0.06 | 142 | 209 |
| 150 ISL | 9.17 D | 9.15 | 34.055 D | 26.354 | 169.2 | 0.354 | 1.94 | 30.0 | 34.5 | 2.19 | 28.8 | 0.00 | 0.00 | 0.01 | 0.05 | 151 | |
| 170 | 8.72 | 8.70 | 34.035 | 26.410 | 164.1 | 0.387 | 2.00 | 30.6 | 35.8 | 2.20 | 29.6 | 0.01 | 0.00 | 0.00 | 0.04 | 171 | 208 |
| 200 ISL | 8.07 D | 8.05 | 34.054 D | 26.524 | 153.6 | 0.435 | 1.92 | 28.9 | 40.5 | 2.27 | 31.1 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | |
| 201 | 8.08 | 8.06 | 34.049 | 26.518 | 154.2 | 0.436 | 1.92 | 28.9 | 40.7 | 2.27 | 31.2 | 0.00 | 0.00 | 0.00 | 0.04 | 202 | 207 |
| 231 | 7.87 | 7.85 | 34.080 | 26.574 | 149.4 | 0.482 | 1.65 | 24.7 | 44.2 | 2.38 | 32.6 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 7.76 D | 7.74 | 34.092 D | 26.600 | 147.2 | 0.510 | 1.50 | 22.4 | 46.7 | 2.45 | 33.4 | 0.00 | 0.00 | | | 252 | |
| 270 | 7.57 | 7.54 | 34.119 | 26.649 | 142.8 | 0.539 | 1.34 | 20.0 | 49.5 | 2.53 | 34.1 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.32 D | 7.29 | 34.160 D | 26.717 | 136.7 | 0.581 | 1.02 | 15.1 | 54.3 | 2.65 | 35.2 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.24 | 7.21 | 34.188 | 26.750 | 133.8 | 0.608 | 0.83 | 12.3 | 57.5 | 2.73 | 35.9 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 6.39 | 6.36 | 34.155 | 26.839 | 125.7 | 0.687 | 0.78 | 11.3 | 66.4 | 2.85 | 38.3 | 0.00 | 0.00 | | | 384 | 203 |
| 400 ISL | 6.24 D | 6.20 | 34.172 D | 26.873 | 122.7 | 0.711 | 0.72 | 10.4 | 68.7 | 2.89 | 38.8 | 0.00 | 0.00 | | | 403 | |
| 440 | 6.04 | 6.00 | 34.188 | 26.911 | 119.4 | 0.759 | 0.58 | 8.3 | 73.1 | 2.96 | 39.5 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 5.81 D | 5.77 | 34.248 D | 26.988 | 112.8 | 0.829 | 0.41 | 5.9 | 79.5 | 3.04 | 40.4 | 0.00 | 0.00 | | | 504 | |
| 516 | 5.69 | 5.65 | 34.252 | 27.006 | 111.2 | 0.847 | 0.37 | 5.3 | 81.2 | 3.06 | 40.7 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 80.0 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 49.0 N | 121 51.4 W | 10/11/10 | 1738 UTC | 3648 m | 260 16 kn | 310 05 06 | 0 | 1018.3 mb | 16.2 C | 13.8 C | 11m | 0/8 | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 14.62 | 14.62 | 33.491 | 24.891 | 305.1 | 0.000 | 5.74 | 99.2 | 2.2 | 0.46 | 3.5 | 0.15 | 0.12 | 1.24 | 0.47 | 0 | |
| 2 A | 14.62 | 14.62 | 33.491 D | 24.891 | 305.2 | 0.006 | 5.74 | 99.2 | 2.2 | 0.46 | 3.5 | 0.15 | 0.12 | 1.24 | 0.47 | 2 | 222 |
| 8 A | 14.62 | 14.62 | 33.491 | 24.892 | 305.3 | 0.024 | 5.79 | 100.1 | 2.1 | 0.47 | 3.5 | 0.15 | 0.14 | 1.28 | 0.48 | 8 | 221 |
| 10 ISL | 14.62 D | 14.62 | 33.491 D | 24.892 | 305.4 | 0.031 | 5.78 | 99.9 | 2.1 | 0.47 | 3.5 | 0.15 | 0.14 | 1.28 | 0.48 | 10 | |
| 16 A | 14.60 | 14.60 | 33.491 | 24.896 | 305.1 | 0.049 | 5.73 | 99.0 | 2.0 | 0.46 | 3.5 | 0.15 | 0.15 | 1.30 | 0.48 | 16 | 220 |
| 20 ISL | 14.59 D | 14.59 | 33.491 D | 24.898 | 305.0 | 0.061 | 5.70 | 98.5 | 2.2 | 0.48 | 3.7 | 0.16 | 0.16 | 1.22 | 0.46 | 20 | |
| 23 A | 14.53 | 14.53 | 33.491 | 24.911 | 303.9 | 0.070 | 5.68 | 98.0 | 2.4 | 0.49 | 3.9 | 0.16 | 0.16 | 1.16 | 0.45 | 23 | 219 |
| 30 A | 11.22 | 11.22 | 33.442 | 25.524 | 245.6 | 0.089 | 4.16 | 66.9 | 14.4 | 1.43 | 17.8 | 0.15 | 0.00 | 0.23 | 0.23 | 30 | 218 |
| 37 | 10.31 | 10.31 | 33.475 | 25.710 | 228.1 | 0.106 | 3.99 | 63.0 | 18.3 | 1.58 | 20.5 | 0.07 | 0.00 | 0.10 | 0.12 | 37 | 217 |
| 45 A | 10.04 | 10.03 | 33.586 | 25.842 | 215.6 | 0.124 | 3.50 | 54.9 | 21.2 | 1.72 | 22.6 | 0.05 | 0.00 | 0.06 | 0.10 | 45 | 216 |
| 50 ISL | 10.00 D | 9.99 | 33.692 D | 25.932 | 207.2 | 0.134 | 3.22 | 50.5 | 22.7 | 1.81 | 23.8 | 0.04 | 0.00 | 0.05 | 0.11 | 50 | |
| 52 | 10.00 | 9.99 | 33.689 | 25.930 | 207.5 | 0.138 | 3.11 | 48.8 | 23.2 | 1.85 | 24.2 | 0.04 | 0.00 | 0.05 | 0.11 | 52 | 215 |
| 60 | 9.85 | 9.84 | 33.772 | 26.020 | 199.1 | 0.155 | 2.67 | 41.8 | 25.2 | 1.95 | 25.5 | 0.03 | 0.00 | 0.03 | 0.10 | 60 | 214 |
| 70 | 9.67 | 9.66 | 33.879 | 26.134 | 188.5 | 0.174 | 2.31 | 36.0 | 28.0 | 2.06 | 26.8 | 0.02 | 0.00 | 0.01 | 0.10 | 70 | 213 |
| 75 ISL | 9.61 D | 9.60 | 33.911 D | 26.168 | 185.3 | 0.183 | 2.19 | 34.1 | 29.0 | 2.10 | 27.2 | 0.02 | 0.00 | 0.00 | 0.10 | 75 | |
| 85 | 9.53 | 9.52 | 33.968 | 26.226 | 180.0 | 0.202 | 2.04 | 31.7 | 30.4 | 2.14 | 27.8 | 0.02 | 0.00 | 0.00 | 0.09 | 85 | 212 |
| 100 | 9.29 | 9.28 | 34.007 | 26.296 | 173.6 | 0.228 | 2.05 | 31.7 | 32.0 | 2.16 | 28.2 | 0.02 | 0.00 | 0.00 | 0.08 | 101 | 211 |
| 119 | 9.27 | 9.26 | 34.072 | 26.351 | 168.9 | 0.261 | 1.78 | 27.5 | 34.0 | 2.24 | 28.9 | 0.01 | 0.00 | 0.00 | 0.06 | 120 | 210 |
| 125 ISL | 9.27 D | 9.26 | 34.076 D | 26.354 | 168.7 | 0.271 | 1.72 | 26.6 | 34.5 | 2.26 | 29.1 | 0.01 | 0.00 | 0.00 | 0.06 | 126 | |
| 140 | 9.18 | 9.16 | 34.108 | 26.394 | 165.2 | 0.296 | 1.61 | 24.9 | 35.7 | 2.31 | 29.6 | 0.01 | 0.00 | 0.00 | 0.06 | 141 | 209 |
| 150 ISL | 9.13 D | 9.11 | 34.113 D | 26.406 | 164.3 | 0.312 | 1.54 | 23.8 | 36.5 | 2.34 | 29.9 | 0.01 | 0.00 | 0.00 | 0.06 | 151 | |
| 169 | 9.00 | 8.98 | 34.138 | 26.446 | 160.7 | 0.343 | 1.42 | 21.9 | 38.0 | 2.40 | 30.5 | 0.01 | 0.00 | 0.00 | 0.06 | 170 | 208 |
| 200 | 8.83 | 8.81 | 34.174 | 26.502 | 156.1 | 0.392 | 1.27 | 19.5 | 40.3 | 2.45 | 31.2 | 0.01 | 0.00 | 0.01 | 0.04 | 201 | 207 |
| 230 | 8.63 | 8.61 | 34.196 | 26.551 | 151.9 | 0.439 | 1.10 | 16.8 | 42.8 | 2.53 | 32.0 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.46 D | 8.43 | 34.211 D | 26.589 | 148.6 | 0.469 | 1.01 | 15.4 | 44.6 | 2.58 | 32.5 | 0.00 | 0.00 | | | 252 | |
| 270 | 8.36 | 8.33 | 34.213 | 26.606 | 147.3 | 0.498 | 0.94 | 14.3 | | | | | | | | 272 | 205 |
| 300 ISL | 8.14 D | 8.11 | 34.225 D | 26.649 | 143.7 | 0.542 | 0.87 | 13.1 | 49.1 | 2.67 | 33.8 | 0.00 | 0.00 | | | 302 | |
| 320 | 8.00 | 7.97 | 34.228 | 26.673 | 141.7 | 0.570 | 0.84 D | 12.6 D | 50.9 | 2.70 | 34.3 | 0.00 | 0.00 | | | 322 | 204 |
| 380 | 7.54 | 7.50 | 34.229 | 26.741 | 136.0 | 0.654 | 0.72 | 10.7 | 55.4 | 2.77 | 35.5 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 7.39 D | 7.35 | 34.232 D | 26.765 | 133.9 | 0.681 | 0.68 | 10.1 | 57.2 | 2.80 | 35.9 | 0.00 | 0.00 | | | 403 | |
| 440 | 7.11 | 7.07 | 34.235 | 26.807 | 130.4 | 0.734 | 0.61 | 9.0 | 60.8 | 2.86 | 36.8 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 6.82 D | 6.77 | 34.262 D | 26.869 | 125.2 | 0.810 | 0.54 | 7.9 | 65.9 | 2.93 | 37.8 | 0.00 | 0.00 | | | 504 | |
| 517 | 6.66 | 6.61 | 34.249 | 26.880 | 124.2 | 0.831 | 0.52 | 7.6 | 67.3 | 2.95 | 38.1 | 0.00 | 0.00 | | | 521 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 80.0 80.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 28.7 N | 122 31.9 W | 11/11/10 | 0031 UTC | 3986 m | 280 16 kn | 320 09 09 | 1 | 1018.2 mb | 15.8 C | 13.0 C | | 6/8 | SC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.39 | 15.39 | 33.450 | 24.693 | 324.0 | 0.000 | 5.84 | 102.5 | 0.9 | 0.28 | 1.6 | 0.12 | 0.16 | 0.81 | 0.21 | 0 | |
| 2 | 15.39 | 15.39 | 33.450 | 24.693 | 324.1 | 0.006 | 5.84 | 102.5 | 0.9 | 0.28 | 1.6 | 0.12 | 0.16 | 0.81 | 0.21 | 2 | 220 |
| 10 | 15.40 | 15.40 | 33.450 | 24.691 | 324.5 | 0.032 | 5.85 | 102.7 | 0.9 | 0.29 | 1.6 | 0.12 | 0.16 | 0.76 | 0.21 | 10 | 219 |
| 20 | 15.38 | 15.38 | 33.450 | 24.695 | 324.4 | 0.065 | 5.84 | 102.5 | 0.8 | 0.29 | 1.6 | 0.12 | 0.15 | 0.83 | 0.24 | 20 | 218 |
| 30 ISL | 14.10 D | 14.10 | 33.401 D | 24.932 | 302.1 | 0.096 | 5.36 | 91.6 | 3.6 | 0.56 | 6.3 | 0.14 | 0.10 | 0.64 | 0.43 | 30 | |
| 31 | 14.01 | 14.01 | 33.396 | 24.947 | 300.7 | 0.099 | 5.30 | 90.4 | | | | | | 0.61 | 0.44 | 31 | 217 |
| 40 | 12.03 | 12.02 | 33.256 | 25.231 | 273.8 | 0.125 | 4.80 | 78.5 | 7.4 | 0.90 | 11.8 | 0.15 | 0.07 | 0.23 | 0.26 | 40 | 216 |
| 50 ISL | 11.34 D | 11.33 | 33.269 D | 25.368 | 260.9 | 0.152 | 4.62 | 74.5 | 10.1 | 1.10 | 14.3 | 0.03 | 0.10 | 0.15 | 0.17 | 50 | |
| 51 | 11.35 | 11.34 | 33.269 | 25.366 | 261.1 | 0.154 | 4.62 | 74.5 | 10.4 | 1.11 | 14.5 | 0.02 | 0.10 | 0.14 | 0.16 | 51 | 215 |
| 60 | 10.05 | 10.04 | 33.216 | 25.552 | 243.5 | 0.177 | 4.65 | 72.8 | 14.2 | 1.17 | 15.9 | 0.02 | 0.10 | 0.06 | 0.07 | 60 | 214 |
| 70 | 9.65 | 9.64 | 33.345 | 25.719 | 227.8 | 0.201 | 4.29 | 66.7 | 17.6 | 1.31 | 19.0 | 0.01 | 0.05 | 0.03 | 0.05 | 70 | 213 |
| 75 ISL | 9.50 D | 9.49 | 33.432 D | 25.812 | 219.1 | 0.212 | 4.10 | 63.5 | 19.6 | 1.40 | 20.5 | 0.01 | 0.05 | 0.02 | 0.05 | 75 | |
| 84 | 9.26 | 9.25 | 33.523 | 25.922 | 208.8 | 0.231 | 3.81 | 58.8 | 22.8 | 1.54 | 22.8 | 0.00 | 0.05 | 0.01 | 0.04 | 84 | 212 |
| 100 | 8.96 | 8.95 | 33.642 | 26.063 | 195.7 | 0.263 | 3.52 | 54.0 | 25.9 | 1.63 | 24.7 | 0.00 | 0.06 | 0.01 | 0.03 | 101 | 211 |
| 120 | 8.83 | 8.82 | 33.821 | 26.224 | 180.8 | 0.301 | 3.18 | 48.7 | 27.6 | 1.65 | 25.6 | 0.00 | 0.00 | 0.00 | 0.03 | 121 | 210 |
| 125 ISL | 8.79 D | 8.78 | 33.876 D | 26.273 | 176.2 | 0.310 | 3.03 | 46.3 | 28.6 | 1.69 | 26.2 | 0.00 | 0.01 | 0.00 | 0.03 | 126 | |
| 141 | 8.69 | 8.68 | 33.928 | 26.330 | 171.1 | 0.338 | 2.57 | 39.2 | 32.1 | 1.81 | 28.2 | 0.00 | 0.05 | 0.00 | 0.03 | 142 | 209 |
| 150 ISL | 8.55 D | 8.53 | 33.969 D | 26.384 | 166.1 | 0.353 | 2.44 | 37.1 | 33.5 | 1.85 | 28.8 | 0.00 | 0.04 | 0.00 | 0.03 | 151 | |
| 170 | 8.30 | 8.28 | 34.015 | 26.458 | 159.4 | 0.386 | 2.28 | 34.5 | 36.1 | 1.90 | 29.6 | 0.00 | 0.00 | 0.00 | 0.03 | 171 | 208 |
| 200 | 7.92 | 7.90 | 34.023 | 26.521 | 153.8 | 0.433 | 2.15 | 32.3 | 40.1 | 1.97 | 30.8 | 0.00 | 0.00 | 0.01 | 0.02 | 201 | 207 |
| 230 | 7.63 | 7.61 | 34.054 | 26.589 | 147.8 | 0.478 | 1.81 | 27.0 | 45.0 | 2.09 | 32.5 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 7.43 D | 7.41 | 34.078 D | 26.636 | 143.6 | 0.507 | 1.59 | 23.6 | 48.1 | 2.18 | 33.6 | 0.00 | 0.00 | | | 252 | |
| 270 | 7.29 | 7.26 | 34.095 | 26.669 | 140.7 | 0.535 | 1.38 | 20.4 | 51.1 | 2.26 | 34.6 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.05 D | 7.02 | 34.118 D | 26.721 | 136.1 | 0.577 | 1.15 | 16.9 | 55.6 | 2.36 | 35.8 | 0.00 | 0.00 | | | 302 | |
| 321 | 6.82 | 6.79 | 34.126 | 26.759 | 132.7 | 0.605 | 1.01 | 14.8 | 58.8 | 2.43 | 36.6 | 0.00 | 0.00 | | | 323 | 204 |
| 380 | 6.32 | 6.29 | 34.183 | 26.871 | 122.7 | 0.680 | 0.64 | 9.3 | 68.2 | 2.59 | 38.5 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.22 D | 6.18 | 34.192 D | 26.891 | 120.9 | 0.705 | 0.57 | 8.2 | 70.3 | 2.62 | 38.9 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.01 | 5.97 | 34.219 | 26.939 | 116.7 | 0.753 | 0.46 | 6.6 | 74.1 | 2.67 | 39.6 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.63 D | 5.59 | 34.254 D | 27.014 | 110.0 | 0.820 | 0.33 | 4.7 | 81.1 | 2.73 | 40.6 | 0.00 | 0.00 | | | 503 | |
| 517 | 5.58 | 5.54 | 34.275 | 27.037 | 108.1 | 0.839 | 0.29 | 4.1 | 83.1 | 2.75 | 40.9 | 0.00 | 0.00 | | | 521 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 80.0 90.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 10.0 N | 123 14.2 W | 11/11/10 | 0928 UTC | 3943 m | 280 26 kn | | | 1020.0 mb | 15.8 C | 12.8 C | | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.96 | 15.96 | 33.076 | 24.278 | 363.5 | 0.000 | 5.78 | 102.4 | 1.2 | 0.28 | 0.1 | 0.02 | 0.17 | 0.37 | 0.13 | 0 | |
| 2 | 15.96 | 15.96 | 33.076 | 24.278 | 363.6 | 0.007 | 5.78 | 102.4 | 1.2 | 0.28 | 0.1 | 0.02 | 0.17 | 0.37 | 0.13 | 2 | 224 |
| 10 ISL | 15.96 D | 15.96 | 33.076 D | 24.278 | 363.8 | 0.036 | 5.79 | 102.5 | 1.1 | 0.28 | 0.1 | 0.02 | 0.16 | 0.42 | 0.16 | 10 | |
| 11 | 15.95 | 15.95 | 33.076 | 24.281 | 363.6 | 0.040 | 5.79 | 102.5 | 1.1 | 0.28 | 0.1 | 0.02 | 0.16 | 0.43 | 0.16 | 11 | 223 |
| 20 | 15.97 | 15.97 | 33.075 | 24.276 | 364.4 | 0.073 | 5.79 | 102.6 | 1.1 | 0.27 | 0.1 | 0.02 | 0.14 | 0.38 | 0.13 | 20 | 222 |
| 30 | 14.37 | 14.37 | 33.025 | 24.586 | 335.1 | 0.108 | 6.02 | 103.2 | 1.8 | 0.49 | 2.1 | 0.27 | 0.26 | 1.40 | 0.47 | 30 | 221 |
| 41 | 14.41 | 14.40 | 33.276 | 24.771 | 317.7 | 0.144 | 5.71 | 98.1 | 2.4 | 0.58 | 3.2 | 0.38 | 0.59 | 0.47 | 0.31 | 41 | 220 |
| 50 | 12.02 | 12.01 | 33.000 | 25.034 | 292.8 | 0.171 | 5.67 | 92.6 | 4.4 | 0.69 | 5.4 | 0.31 | 0.09 | 0.27 | 0.21 | 50 | 219 |
| 61 | 11.01 | 11.00 | 32.878 | 25.123 | 284.4 | 0.203 | 5.68 | 90.7 | 5.2 | 0.69 | 5.6 | 0.02 | 0.10 | 0.18 | 0.13 | 61 | 218 |
| 72 | 10.68 | 10.67 | 33.070 | 25.331 | 264.9 | 0.233 | 5.28 | 83.8 | 10.0 | 1.00 | 11.2 | 0.01 | 0.10 | 0.07 | 0.10 | 72 | 217 |
| 75 ISL | 10.69 D | 10.68 | 33.087 D | 25.343 | 263.9 | 0.241 | 5.24 | 83.2 | 10.5 | 1.03 | 11.8 | 0.01 | 0.10 | 0.07 | 0.09 | 75 | |
| 86 | 10.36 | 10.35 | 33.153 | 25.451 | 253.7 | 0.269 | 5.10 | 80.4 | 12.2 | 1.12 | 13.2 | 0.01 | 0.10 | 0.05 | 0.07 | 86 | 216 |
| 100 ISL | 9.40 D | 9.39 | 33.333 D | 25.751 | 225.3 | 0.303 | 4.57 | 70.6 | 17.6 | 1.41 | 18.0 | 0.00 | 0.09 | 0.02 | 0.04 | 100 | |
| 101 | 9.38 | 9.37 | 33.340 | 25.760 | 224.5 | 0.305 | 4.52 | 69.8 | 18.0 | 1.43 | 18.4 | 0.00 | 0.09 | 0.02 | 0.04 | 101 | 215 |
| 121 | 8.98 | 8.97 | 33.618 | 26.042 | 198.1 | 0.348 | 3.65 | 56.0 | 24.2 | 1.71 | 23.3 | 0.01 | 0.09 | 0.01 | 0.04 | 122 | 214 |
| 125 ISL | 8.97 D | 8.96 | 33.651 D | 26.069 | 195.6 | 0.355 | 3.51 | 53.8 | 25.3 | 1.75 | 24.0 | 0.01 | 0.08 | 0.01 | 0.04 | 126 | |
| 140 | 8.79 | 8.78 | 33.820 | 26.230 | 180.6 | 0.384 | 3.04 | 46.5 | 29.0 | 1.90 | 26.4 | 0.00 | 0.05 | 0.00 | 0.04 | 141 | 213 |
| 150 ISL | 8.70 D | 8.68 | 33.853 D | 26.270 | 177.0 | 0.401 | 2.62 | 40.0 | 31.4 | 2.01 | 27.8 | 0.00 | 0.03 | 0.00 | 0.04 | 151 | |
| 171 | 8.77 | 8.75 | 34.007 | 26.380 | 167.0 | 0.438 | 1.94 | 29.7 | 35.6 | 2.18 | 30.0 | 0.00 | 0.00 | 0.00 | 0.04 | 172 | 212 |
| 200 ISL | 8.07 D | 8.05 | 33.989 D | 26.473 | 158.5 | 0.485 | 2.20 | 33.1 | 38.2 | 2.18 | 30.4 | 0.00 | 0.07 | 0.00 | 0.03 | 201 | |
| 202 | 8.06 | 8.04 | 33.989 | 26.474 | 158.4 | 0.488 | 2.23 | 33.6 | 38.4 | 2.18 | 30.4 | 0.00 | 0.08 | 0.00 | 0.03 | 203 | 211 |
| 228 | 7.72 | 7.70 | 34.013 | 26.543 | 152.1 | 0.528 | 2.03 | 30.3 | 42.2 | 2.27 | 31.9 | 0.00 | 0.07 | | | 229 | 210 |
| 250 ISL | 7.27 D | 7.25 | 33.995 D | 26.593 | 147.5 | 0.561 | 1.97 | 29.1 | 45.8 | 2.32 | 32.9 | 0.00 | 0.06 | | | 251 | |
| 270 | 7.01 | 6.98 | 34.004 | 26.636 | 143.6 | 0.590 | 1.92 | 28.2 | 49.1 | 2.37 | 33.8 | 0.00 | 0.05 | | | 272 | 209 |
| 300 ISL | 6.87 D | 6.84 | 34.055 D | 26.696 | 138.3 | 0.633 | 1.64 | 24.0 | 54.2 | 2.49 | 35.5 | 0.00 | 0.02 | | | 302 | |
| 321 | 6.55 | 6.52 | 34.038 | 26.726 | 135.6 | 0.661 | 1.41 | 20.5 | 57.5 | 2.58 | 36.6 | 0.00 | 0.00 | | | 323 | 208 |
| 380 | 6.31 | 6.28 | 34.098 | 26.805 | 128.8 | 0.739 | 1.01 | 14.6 | 64.3 | 2.76 | 38.2 | 0.00 | 0.05 | | | 382 | 207 |
| 400 ISL | 6.17 D | 6.13 | 34.115 D | 26.836 | 126.0 | 0.765 | 0.91 | 13.1 | 67.3 | 2.80 | 38.7 | 0.00 | 0.04 | | | 403 | |
| 441 | 5.81 | 5.77 | 34.135 | 26.898 | 120.4 | 0.815 | 0.74 | 10.6 | 73.7 | 2.88 | 39.6 | 0.00 | 0.00 | | | 444 | 206 |
| 500 ISL | 5.40 D | 5.36 | 34.192 D | 26.993 | 111.8 | 0.884 | 0.51 | 7.2 | 82.7 | 2.99 | 41.1 | 0.00 | 0.00 | | | 503 | |
| 520 | 5.26 | 5.22 | 34.196 | 27.013 | 110.0 | 0.906 | 0.44 | 6.2 | 85.6 | 3.03 | 41.6 | 0.00 | 0.00 | | | 524 | 205 |
| 600 CSL | 4.85 | 4.80 | 34.268 | 27.118 | 100.5 | 0.925 | | | | | | | | | | 604 | 200 |
| 700 CSL | 4.49 | 4.44 | 34.337 | 27.213 | 92.1 | 1.022 | | | | | | | | | | 705 | 200 |
| 800 CSL | 4.17 | 4.11 | 34.393 | 27.292 | 85.1 | 1.110 | | | | | | | | | | 806 | 200 |
| 900 CSL | 3.94 | 3.87 | 34.443 | 27.356 | 79.6 | 1.193 | | | | | | | | | | 907 | 200 |
| 1000 CSL | 3.67 | 3.60 | 34.475 | 27.409 | 74.9 | 1.270 | | | | | | | | | | 1009 | 200 |
| 1100 CSL | 3.46 | 3.38 | 34.497 | 27.448 | 71.6 | 1.343 | | | | | | | | | | 1110 | 200 |
| 1200 CSL | 3.24 | 3.15 | 34.515 | 27.484 | 68.4 | 1.413 | | | | | | | | | | 1211 | 200 |
| 1251 | 3.15 | 3.06 | 34.525 | 27.500 | 67.0 | 1.448 | 0.83 | 11.1 | 138.1 | 3.08 | 43.5 | 0.00 | 0.00 | | | 1263 | 204 |
| 1300 CSL | 3.07 | 2.98 | 34.534 | 27.515 | 65.7 | 1.480 | | | | | | | | | | 1312 | 200 |
| 1400 CSL | 2.87 | 2.77 | 34.548 | 27.545 | 62.9 | 1.544 | | | | | | | | | | 1413 | 200 |
| 1500 CSL | 2.72 | 2.61 | 34.564 | 27.572 | 60.6 | 1.606 | | | | | | | | | | 1515 | 200 |
| 1600 CSL | 2.56 | 2.45 | 34.577 | 27.596 | 58.3 | 1.666 | | | | | | | | | | 1616 | 200 |
| 1800 CSL | 2.29 | 2.16 | 34.600 | 27.638 | 54.4 | 1.778 | | | | | | | | | | 1819 | 200 |
| 2000 CSL | 2.07 | 1.93 | 34.620 | 27.673 | 51.2 | 1.884 | | | | | | | | | | 2022 | 200 |
| 2011 | 2.06 | 1.92 | 34.620 | 27.674 | 51.1 | 1.890 | 1.80 | 23.5 | 162.9 | 2.85 | 41.4 | 0.00 | 0.05 | | | 2033 | 203 |
| 2200 CSL | 1.92 | 1.77 | 34.633 | 27.696 | 49.2 | 1.984 | | | | | | | | | | 2226 | 200 |
| 2400 CSL | 1.82 | 1.65 | 34.642 | 27.712 | 48.0 | 2.082 | | | | | | | | | | 2429 | 200 |
| 2600 CSL | 1.74 | 1.55 | 34.651 | 27.726 | 47.0 | 2.177 | | | | | | | | | | 2633 | 200 |
| 2754 | 1.68 | 1.48 | 34.652 | 27.732 | 46.7 | 2.249 | 2.48 | 32.0 | 168.7 | 2.70 | 39.4 | 0.00 | 0.00 | | | 2790 | 202 |
| 2800 CSL | 1.67 | 1.46 | 34.657 | 27.738 | 46.3 | 2.270 | | | | | | | | | | 2837 | 200 |
| 3000 CSL | 1.61 | 1.39 | 34.663 | 27.748 | 45.7 | 2.362 | | | | | | | | | | 3041 | 200 |
| 3200 CSL | 1.56 | 1.32 | 34.667 | 27.756 | 45.3 | 2.453 | | | | | | | | | | 3245 | 200 |
| 3400 CSL | 1.53 | 1.27 | 34.671 | 27.763 | 45.1 | 2.543 | | | | | | | | | | 3450 | 200 |
| 3510 | 1.52 | 1.25 | 34.679 | 27.771 | 44.7 | 2.593 | 2.91 | 37.3 | 170.8 | 2.60 | 38.2 | 0.00 | 0.00 | | | 3562 | 201 |
| 3600 CSL | 1.51 | 1.23 | 34.676 | 27.770 | 45.0 | 2.633 | | | | | | | | | | 3654 | 200 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 80.0 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 48.6 N | 123 55.2 W | 11/11/10 | 1810 UTC | 4096 m | 300 23 kn | 340 07 06 | 1 | 1024.8 mb | 16.9 C | 14.8 C | 17m | 4/8 | AC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.27 | 16.27 | 32.774 | 23.976 | 392.4 | 0.000 | 5.78 | 102.8 | 0.9 | 0.27 | 0.0 | 0.00 | 0.00 | 0.37 | 0.17 | 0 | |
| 2 A | 16.27 | 16.27 | 32.774 | 23.976 | 392.4 | 0.008 | 5.78 | 102.8 | 0.9 | 0.27 | 0.0 | 0.00 | 0.00 | 0.37 | 0.17 | 2 | 220 |
| 10 ISL | 16.26 D | 16.26 | 32.774 D | 23.978 | 392.4 | 0.039 | 5.76 | 102.4 | 0.9 | 0.27 | 0.0 | 0.00 | 0.00 | 0.37 | 0.16 | 10 | |
| 12 A | 16.26 | 16.26 | 32.778 | 23.982 | 392.2 | 0.047 | 5.75 | 102.3 | 0.9 | 0.27 | 0.0 | 0.00 | 0.00 | 0.37 | 0.16 | 12 | 219 |
| 20 ISL | 16.26 D | 16.26 | 32.776 D | 23.980 | 392.6 | 0.078 | 5.75 | 102.3 | 0.9 | 0.28 | 0.0 | 0.00 | 0.00 | 0.36 | 0.16 | 20 | |
| 26 A | 16.26 | 16.26 | 32.777 | 23.981 | 392.7 | 0.102 | 5.75 | 102.3 | 0.9 | 0.28 | 0.0 | 0.00 | 0.00 | 0.36 | 0.17 | 26 | 218 |
| 30 ISL | 16.26 D | 16.26 | 32.779 D | 23.983 | 392.6 | 0.118 | 5.77 | 102.6 | 0.9 | 0.28 | 0.0 | 0.00 | 0.00 | 0.37 | 0.17 | 30 | |
| 36 A | 16.23 | 16.22 | 32.782 | 23.992 | 391.9 | 0.141 | 5.80 | 103.1 | 0.9 | 0.27 | 0.0 | 0.00 | 0.00 | 0.38 | 0.17 | 36 | 217 |
| 47 A | 15.89 | 15.88 | 32.809 | 24.090 | 382.9 | 0.184 | 5.84 | 103.1 | 0.9 | 0.29 | 0.0 | 0.00 | 0.00 | 0.47 | 0.24 | 47 | 216 |
| 50 ISL | 15.30 D | 15.29 | 32.830 D | 24.237 | 369.0 | 0.195 | 5.89 | 102.8 | 1.2 | 0.30 | 0.1 | 0.00 | 0.03 | 0.46 | 0.28 | 50 | |
| 58 | 14.38 | 14.37 | 32.872 | 24.466 | 347.2 | 0.224 | 5.99 | 102.6 | 2.1 | 0.35 | 0.5 | 0.03 | 0.08 | 0.44 | 0.35 | 58 | 215 |
| 67 A | 12.87 | 12.86 | 32.948 | 24.831 | 312.6 | 0.254 | 5.82 | 96.7 | 2.9 | 0.42 | 1.4 | 0.08 | 0.00 | 0.18 | 0.22 | 67 | 214 |
| 75 ISL | 12.51 D | 12.50 | 33.027 D | 24.963 | 300.3 | 0.278 | 5.66 | 93.4 | 3.2 | 0.45 | 2.1 | 0.04 | 0.00 | 0.15 | 0.16 | 75 | |
| 76 | 12.51 | 12.50 | 33.034 | 24.968 | 299.8 | 0.281 | 5.64 | 93.0 | 3.3 | 0.45 | 2.2 | 0.03 | 0.00 | 0.15 | 0.16 | 76 | 213 |
| 85 | 11.96 | 11.95 | 33.050 | 25.085 | 288.8 | 0.308 | 5.50 | 89.7 | 4.4 | 0.55 | 4.1 | 0.01 | 0.00 | 0.10 | 0.14 | 85 | 212 |
| 100 ISL | 10.87 D | 10.86 | 33.081 D | 25.307 | 267.8 | 0.349 | 5.27 | 84.0 | 8.3 | 0.85 | 9.0 | 0.00 | 0.00 | 0.04 | 0.06 | 100 | |
| 101 | 10.83 | 10.82 | 33.080 | 25.313 | 267.3 | 0.352 | 5.25 | 83.6 | 8.6 | 0.87 | 9.4 | 0.00 | 0.00 | 0.04 | 0.06 | 101 | 211 |
| 119 | 9.67 | 9.66 | 33.232 | 25.629 | 237.4 | 0.397 | 4.79 | 74.4 | 14.3 | 1.21 | 15.1 | 0.00 | 0.00 | 0.02 | 0.04 | 120 | 210 |
| 125 ISL | 9.61 D | 9.60 | 33.255 D | 25.657 | 234.9 | 0.412 | 4.61 | 71.5 | 16.2 | 1.31 | 16.8 | 0.00 | 0.00 | 0.02 | 0.04 | 126 | |
| 139 | 9.22 | 9.20 | 33.423 | 25.851 | 216.6 | 0.443 | 4.19 | 64.5 | 20.3 | 1.53 | 20.4 | 0.00 | 0.00 | 0.01 | 0.04 | 140 | 209 |
| 150 ISL | 9.35 D | 9.33 | 33.688 D | 26.038 | 199.2 | 0.466 | 3.86 | 59.7 | 23.6 | 1.67 | 22.7 | 0.00 | 0.00 | 0.01 | 0.04 | 151 | |
| 170 | 8.63 | 8.61 | 33.763 | 26.210 | 183.0 | 0.504 | 3.40 | 51.8 | 28.3 | 1.82 | 25.3 | 0.00 | 0.00 | 0.00 | 0.03 | 171 | 208 |
| 200 | 8.59 | 8.57 | 33.891 | 26.317 | 173.4 | 0.558 | 3.32 | 50.5 | 29.2 | 1.80 | 25.3 | 0.00 | 0.00 | 0.00 | 0.03 | 201 | 207 |
| 231 | 8.16 | 8.14 | 33.983 | 26.455 | 160.7 | 0.609 | 2.63 | 39.7 | 36.2 | 2.03 | 28.9 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 7.81 D | 7.79 | 33.994 D | 26.516 | 155.2 | 0.639 | 2.34 | 35.0 | 40.4 | 2.15 | 30.7 | 0.00 | 0.00 | | | 251 | |
| 270 | 7.47 | 7.44 | 34.007 | 26.575 | 149.7 | 0.670 | 2.10 | 31.2 | 44.6 | 2.27 | 32.3 | 0.00 | 0.00 | | | 271 | 205 |
| 300 ISL | 7.11 D | 7.08 | 34.034 D | 26.647 | 143.2 | 0.714 | 1.78 | 26.2 | 50.3 | 2.41 | 34.2 | 0.00 | 0.00 | | | 302 | |
| 319 | 6.85 | 6.82 | 34.030 | 26.679 | 140.2 | 0.741 | 1.60 | 23.4 | 53.8 | 2.49 | 35.3 | 0.00 | 0.00 | | | 321 | 204 |
| 380 | 6.13 | 6.10 | 34.063 | 26.800 | 129.1 | 0.823 | 1.12 | 16.1 | 65.8 | 2.74 | 38.6 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 5.93 D | 5.90 | 34.064 D | 26.826 | 126.7 | 0.849 | 1.01 | 14.5 | 68.8 | 2.80 | 39.1 | 0.00 | 0.00 | | | 402 | |
| 440 | 5.75 | 5.71 | 34.123 | 26.896 | 120.6 | 0.898 | 0.81 | 11.6 | 74.3 | 2.89 | 39.9 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 5.45 D | 5.41 | 34.202 D | 26.995 | 111.7 | 0.968 | 0.50 | 7.1 | 82.3 | 3.02 | 41.1 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.42 | 5.38 | 34.206 | 27.002 | 111.2 | 0.985 | 0.42 | 5.9 | 84.4 | 3.05 | 41.4 | 0.00 | 0.00 | | | 519 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 81.7 43.5

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 24.3 N | 119 48.1 W | 09/11/10 | 1921 UTC | 21 m | 130 06 kn | 270 01 05 | 0 | 1016.8 mb | 16.4 C | 13.0 C | | 0/8 | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.39 | 15.39 | 33.475 | 24.712 | 322.2 | 0.000 | 5.44 | 95.5 | 4.2 | 0.59 | 1.4 | 0.26 | 0.69 | 2.18 | 0.49 | 0 | |
| 2 | 15.39 | 15.39 | 33.475 | 24.712 | 322.3 | 0.006 | 5.44 | 95.5 | 4.2 | 0.59 | 1.4 | 0.26 | 0.69 | 2.18 | 0.49 | 2 | 204 |
| 5 | 15.30 | 15.30 | 33.463 | 24.723 | 321.3 | 0.016 | 5.25 | 92.0 | 5.3 | 0.66 | 2.0 | 0.36 | 0.93 | 1.36 | 0.61 | 5 | 203 |
| 10 | 14.99 | 14.99 | 33.458 | 24.787 | 315.4 | 0.032 | 4.91 | 85.5 | 7.1 | 0.82 | 3.0 | 0.49 | 1.36 | 1.10 | 0.69 | 10 | 202 |
| 16 | 14.77 | 14.77 | 33.458 | 24.834 | 311.0 | 0.051 | 4.71 | 81.6 | 8.7 | 0.93 | 3.8 | 0.59 | 1.66 | 0.92 | 0.87 | 16 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 81.8 46.9

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 16.5 N | 120 1.4 W | 09/11/10 | 2121 UTC | 580 m | 230 06 kn | 260 03 07 | 1 | 1015.1 mb | 16.8 C | 14.0 C | 6m | 2/8 | CI |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.74 | 15.74 | 33.492 | 24.647 | 328.4 | 0.000 | 5.91 | 104.5 | 1.0 | 0.31 | 0.8 | 0.06 | 0.13 | 3.17 | 0.66 | 0 | |
| 1 A | 15.74 | 15.74 | 33.492 | 24.647 | 328.4 | 0.003 | 5.91 | 104.5 | 1.0 | 0.31 | 0.8 | 0.06 | 0.13 | 3.17 | 0.66 | 1 | 224 |
| 10 | 15.62 | 15.62 | 33.486 | 24.670 | 326.5 | 0.033 | 5.92 | 104.4 | 0.8 | 0.31 | 0.8 | 0.06 | 0.11 | 3.35 | 0.77 | 10 | 223 |
| 20 | 12.34 | 12.34 | 33.471 | 25.338 | 263.1 | 0.062 | 4.10 | 67.6 | 11.0 | 1.31 | 14.0 | 0.47 | 0.15 | 2.67 | 0.82 | 20 | 222 |
| 30 | 11.73 | 11.73 | 33.438 | 25.428 | 254.8 | 0.088 | 4.21 | 68.5 | 11.5 | 1.29 | 14.9 | 0.20 | 0.09 | 0.82 | 0.37 | 30 | 221 |
| 40 | 11.56 | 11.55 | 33.582 | 25.571 | 241.4 | 0.113 | 3.34 | 54.2 | 20.6 | 1.61 | 18.4 | 0.26 | 0.05 | 1.80 | 0.77 | 40 | 220 |
| 50 | 10.83 | 10.82 | 33.610 | 25.725 | 227.0 | 0.136 | 3.14 | 50.2 | 20.3 | 1.73 | 20.8 | 0.07 | 0.06 | 1.20 | 0.51 | 50 | 219 |
| 60 | 10.50 | 10.49 | 33.637 | 25.804 | 219.7 | 0.159 | 2.98 | 47.3 | 21.6 | 1.78 | 22.0 | 0.04 | 0.06 | 0.57 | 0.28 | 60 | 218 |
| 70 | 10.30 | 10.29 | 33.702 | 25.889 | 211.8 | 0.180 | 2.75 | 43.4 | 23.6 | 1.87 | 23.2 | 0.02 | 0.00 | 0.38 | 0.23 | 70 | 217 |
| 75 ISL | 10.25 D | 10.24 | 33.737 D | 25.925 | 208.5 | 0.191 | 2.68 | 42.3 | 24.4 | 1.90 | 23.7 | 0.02 | 0.00 | 0.33 | 0.23 | 75 | |
| 85 | 10.08 | 10.07 | 33.779 | 25.987 | 202.8 | 0.211 | 2.60 | 40.9 | 25.7 | 1.93 | 24.4 | 0.02 | 0.00 | 0.27 | 0.22 | 85 | 216 |
| 100 | 9.79 | 9.78 | 33.830 | 26.076 | 194.6 | 0.241 | 2.60 | 40.6 | 26.8 | 1.94 | 25.1 | 0.01 | 0.00 | 0.14 | 0.15 | 101 | 215 |
| 121 | 9.67 | 9.66 | 33.915 | 26.163 | 186.8 | 0.281 | 2.36 | 36.8 | 28.7 | 2.01 | 26.1 | 0.01 | 0.00 | 0.09 | 0.12 | 122 | 214 |
| 125 ISL | 9.63 D | 9.62 | 33.914 D | 26.168 | 186.4 | 0.289 | 2.26 | 35.2 | 29.4 | 2.04 | 26.3 | 0.01 | 0.00 | 0.09 | 0.12 | 126 | |
| 140 | 9.71 | 9.69 | 34.009 | 26.230 | 180.9 | 0.316 | 1.85 | 28.9 | 32.2 | 2.18 | 27.3 | 0.02 | 0.00 | 0.08 | 0.13 | 141 | 213 |
| 150 ISL | 9.62 D | 9.60 | 34.025 D | 26.257 | 178.5 | 0.334 | 1.68 | 26.2 | 33.9 | 2.24 | 27.9 | 0.02 | 0.00 | 0.07 | 0.15 | 151 | |
| 170 | 9.41 | 9.39 | 34.100 | 26.351 | 170.0 | 0.369 | 1.47 | 22.8 | 36.9 | 2.32 | 29.0 | 0.01 | 0.00 | 0.06 | 0.17 | 171 | 212 |
| 200 ISL | 9.00 D | 8.98 | 34.147 D | 26.454 | 160.7 | 0.419 | 1.35 | 20.8 | 40.5 | 2.41 | 30.2 | 0.01 | 0.00 | 0.02 | 0.09 | 201 | |
| 201 | 9.00 | 8.98 | 34.153 | 26.459 | 160.2 | 0.420 | 1.34 | 20.6 | 40.6 | 2.41 | 30.2 | 0.01 | 0.00 | 0.02 | 0.09 | 202 | 211 |
| 230 | 8.69 | 8.67 | 34.187 | 26.534 | 153.5 | 0.466 | 0.73 | 11.2 | 47.9 | 2.69 | 32.5 | 0.00 | 0.00 | | | 231 | 210 |
| 250 ISL | 8.36 D | 8.33 | 34.195 D | 26.592 | 148.3 | 0.496 | 0.56 | 8.5 | 51.7 | 2.80 | 33.7 | 0.00 | 0.00 | | | 252 | |
| 270 | 8.13 | 8.10 | 34.205 | 26.635 | 144.5 | 0.525 | 0.49 | 7.4 | 54.6 | 2.86 | 34.5 | 0.00 | 0.00 | | | 272 | 209 |
| 300 ISL | 7.91 D | 7.88 | 34.202 D | 26.665 | 142.0 | 0.568 | 0.40 | 6.0 | 57.6 | 2.93 | 34.8 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.82 | 7.79 | 34.212 | 26.687 | 140.3 | 0.596 | 0.37 | 5.5 | 59.4 | 2.97 | 35.0 | 0.00 | 0.00 | | | 322 | 208 |
| 379 | 7.30 | 7.26 | 34.225 | 26.772 | 132.8 | 0.677 | 0.26 | 3.8 | 68.3 | 3.08 | 35.2 | 0.00 | 0.00 | | | 382 | 207 |
| 400 ISL | 7.20 D | 7.16 | 34.221 D | 26.783 | 132.0 | 0.705 | 0.25 | 3.7 | 71.5 | 3.12 | 34.8 | 0.00 | 0.00 | | | 403 | |
| 440 | 6.76 | 6.72 | 34.234 | 26.854 | 125.6 | 0.756 | 0.20 | 2.9 | 80.0 | 3.25 | 34.1 | 0.00 | 0.00 | | | 443 | 206 |
| 481 | 6.62 | 6.58 | 34.254 | 26.889 | 122.8 | 0.807 | 0.01 | 0.1 | 95.0 | 3.52 | 29.0 | 0.00 | 0.00 | | | 484 | 205 |
| 500 ISL | 6.59 D | 6.54 | 34.247 D | 26.887 | 123.2 | 0.831 | 0.00 | 0.0 | 98.5 | 3.58 | 27.4 | 0.08 | 0.00 | | | 504 | |
| 515 | 6.58 | 6.53 | 34.258 | 26.898 | 122.4 | 0.849 | 0.00 | 0.0 | 101.6 | 3.63 | 25.5 | 0.21 | 0.00 | | | 519 | 204 |
| 533 | 6.55 | 6.50 | 34.259 | 26.903 | 122.2 | 0.871 | 0.00 | 0.0 | 108.5 | 4.03 | 20.8 | 0.47 | 0.09 | | | 537 | 203 |
| 561 | 6.42 | 6.37 | 34.251 | 26.914 | 121.4 | 0.905 | 0.12 | 1.7 | 99.1 | 3.79 | 26.8 | 0.05 | 0.00 | | | 565 | 202 |
| 566 | 6.40 | 6.35 | 34.252 | 26.917 | 121.1 | 0.911 | 0.12 | 1.7 | 98.1 | 3.71 | 27.6 | 0.12 | 0.00 | | | 570 | 201 |

A) SANTA BARBARA BASIN STATION.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 39.4

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 15.4 N | 119 19.5 W | 09/11/10 | 1222 UTC | 22 m | 330 02 kn | | | 1015.0 mb | 16.9 C | 13.8 C | | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.52 | 15.52 | 33.455 | 24.668 | 326.4 | 0.000 | 5.40 | 95.0 | 4.6 | 0.69 | 1.5 | 0.19 | 0.93 | 3.06 | 1.31 | 0 | |
| 2 | 15.52 | 15.52 | 33.455 | 24.668 | 326.5 | 0.007 | 5.40 | 95.0 | 4.6 | 0.69 | 1.5 | 0.19 | 0.93 | 3.06 | 1.31 | 2 | 205 |
| 5 | 14.81 | 14.81 | 33.447 | 24.817 | 312.4 | 0.016 | 5.12 | 88.8 | 6.4 | 0.91 | 3.0 | 0.27 | 1.13 | 2.38 | 1.41 | 5 | 204 |
| 10 | 14.17 | 14.17 | 33.438 | 24.946 | 300.2 | 0.031 | 4.68 | 80.1 | 10.0 | 1.28 | 5.9 | 0.39 | 1.53 | 1.75 | 1.47 | 10 | 202 |
| 10 | 14.18 | 14.18 | 33.438 | 24.944 | 300.4 | 0.031 | | | | | | | | | | 10 | 203 |
| 15 | 13.62 | 13.62 | 33.439 | 25.060 | 289.5 | 0.046 | 4.58 | 77.5 | 11.1 | 1.32 | 7.5 | 0.41 | 1.37 | 1.46 | 1.40 | 15 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 40.6

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 13.5 N | 119 24.7 W | 09/11/10 | 1322 UTC | 36 m | 050 07 kn | | | 1015.2 mb | 14.9 C | 11.5 C | | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.83 | 15.83 | 33.459 | 24.602 | 332.7 | 0.000 | 5.69 | 100.8 | 2.0 | 0.40 | 1.0 | 0.12 | 0.24 | 2.82 | 1.23 | 0 | |
| 1 | 15.83 | 15.83 | 33.459 | 24.602 | 332.7 | 0.003 | 5.69 | 100.8 | 2.0 | 0.40 | 1.0 | 0.12 | 0.24 | 2.82 | 1.23 | 1 | 206 |
| 5 | 15.82 | 15.82 | 33.459 | 24.604 | 332.6 | 0.017 | 5.71 | 101.1 | 1.9 | 0.40 | 1.0 | 0.11 | 0.24 | 2.78 | 1.16 | 5 | 205 |
| 10 | 15.82 | 15.82 | 33.460 | 24.605 | 332.7 | 0.033 | 5.70 | 100.9 | 1.9 | 0.38 | 1.0 | 0.12 | 0.24 | 2.71 | 1.22 | 10 | 203 |
| 10 | 15.82 | 15.82 | 33.463 | 24.607 | 332.5 | 0.033 | | | | | | | | | | 10 | 204 |
| 20 | 14.44 | 14.44 | 33.442 | 24.892 | 305.6 | 0.065 | 4.73 | 81.4 | 8.6 | 0.91 | 6.2 | 0.88 | 0.56 | 1.44 | 0.83 | 20 | 202 |
| 25 | 12.50 | 12.50 | 33.424 | 25.271 | 269.6 | 0.080 | 4.53 | 74.9 | 9.8 | 1.18 | 11.9 | 0.45 | 0.15 | 1.28 | 0.61 | 25 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 42.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 10.7 N | 119 31.2 W | 09/11/10 | 1608 UTC | 163 m | 050 08 kn | 270 02 05 | 0 | 1016.7 mb | 16.0 C | 11.7 C | 12m | 0/8 | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.56 | 16.56 | 33.480 | 24.451 | 347.0 | 0.000 | 5.85 | 105.1 | 0.0 | 0.23 | 0.0 | 0.01 | 0.06 | 1.56 | 0.46 | 0 | |
| 2 A | 16.56 | 16.56 | 33.480 | 24.452 | 347.1 | 0.007 | 5.85 | 105.1 | 0.0 | 0.23 | 0.0 | 0.01 | 0.06 | 1.56 | 0.46 | 2 | 215 |
| 8 A | 16.56 | 16.56 | 33.482 | 24.453 | 347.1 | 0.028 | 5.86 | 105.3 | 0.0 | 0.23 | 0.0 | 0.01 | 0.00 | 1.54 | 0.41 | 8 | 213 |
| 8 | 16.56 | 16.56 | 33.481 | 24.453 | 347.2 | 0.028 | | | | | | | | | | 8 | 214 |
| 10 ISL | 16.56 D | 16.56 | 33.471 D | 24.445 | 348.0 | 0.035 | 5.85 | 105.1 | 0.2 | 0.25 | 0.2 | 0.01 | 0.02 | 1.73 | 0.42 | 10 | |
| 17 A | 16.21 | 16.21 | 33.475 | 24.529 | 340.2 | 0.059 | 5.80 | 103.5 | 0.8 | 0.33 | 0.7 | 0.02 | 0.07 | 2.55 | 0.59 | 17 | 212 |
| 20 ISL | 15.29 D | 15.29 | 33.461 D | 24.724 | 321.7 | 0.069 | 5.41 | 94.8 | 3.7 | 0.59 | 3.8 | 0.09 | 0.16 | 2.76 | 0.78 | 20 | |
| 25 A | 13.15 | 13.15 | 33.470 | 25.179 | 278.4 | 0.084 | 4.74 | 79.5 | 8.5 | 1.01 | 9.3 | 0.21 | 0.27 | 3.11 | 1.00 | 25 | 211 |
| 30 ISL | 12.61 D | 12.61 | 33.447 D | 25.268 | 270.1 | 0.097 | 4.63 | 76.7 | 9.7 | 1.09 | 11.3 | 0.25 | 0.19 | 2.06 | 0.79 | 30 | |
| 33 A | 12.26 | 12.26 | 33.431 | 25.323 | 264.9 | 0.105 | 4.56 | 75.0 | 9.9 | 1.13 | 12.0 | 0.28 | 0.12 | 1.31 | 0.59 | 33 | 210 |
| 40 | 11.49 | 11.49 | 33.384 | 25.430 | 254.8 | 0.124 | 4.40 | 71.2 | 11.8 | 1.27 | 14.3 | 0.17 | 0.05 | 0.57 | 0.28 | 40 | 209 |
| 48 A | 11.17 | 11.16 | 33.414 | 25.512 | 247.2 | 0.144 | 4.20 | 67.5 | 13.7 | 1.36 | 15.9 | 0.12 | 0.00 | 0.36 | 0.21 | 48 | 208 |
| 50 ISL | 11.04 D | 11.03 | 33.441 D | 25.556 | 243.0 | 0.149 | 4.05 | 64.9 | 14.9 | 1.42 | 16.7 | 0.12 | 0.00 | 0.36 | 0.20 | 50 | |
| 54 | 10.88 | 10.87 | 33.537 | 25.659 | 233.3 | 0.158 | 3.75 | 59.9 | 17.3 | 1.54 | 18.5 | 0.12 | 0.00 | 0.33 | 0.19 | 54 | 207 |
| 60 | 10.31 | 10.30 | 33.566 | 25.781 | 221.8 | 0.172 | 3.55 | 56.0 | 19.3 | 1.64 | 20.5 | 0.05 | 0.00 | 0.09 | 0.15 | 60 | 206 |
| 70 | 10.22 | 10.21 | 33.631 | 25.848 | 215.7 | 0.194 | 3.21 | 50.6 | 21.7 | 1.77 | 22.0 | 0.03 | 0.00 | 0.06 | 0.10 | 70 | 205 |
| 75 ISL | 10.24 D | 10.23 | 33.666 D | 25.871 | 213.6 | 0.204 | 3.00 | 47.3 | 23.3 | 1.85 | 22.9 | 0.03 | 0.00 | 0.04 | 0.10 | 75 | |
| 85 | 10.10 | 10.09 | 33.804 | 26.003 | 201.3 | 0.225 | 2.59 | 40.8 | 26.4 | 1.99 | 24.6 | 0.02 | 0.00 | 0.02 | 0.09 | 85 | 204 |
| 100 | 9.89 | 9.88 | 33.918 | 26.128 | 189.7 | 0.255 | 2.21 | 34.6 | 29.2 | 2.09 | 25.8 | 0.03 | 0.00 | 0.02 | 0.08 | 101 | 203 |
| 120 | 9.65 | 9.64 | 34.019 | 26.247 | 178.8 | 0.291 | 1.96 | 30.6 | 31.7 | 2.18 | 27.0 | 0.03 | 0.00 | 0.01 | 0.08 | 121 | 202 |
| 125 ISL | 9.64 D | 9.63 | 34.026 D | 26.254 | 178.2 | 0.300 | 1.91 | 29.8 | 32.4 | 2.20 | 27.4 | 0.03 | 0.00 | 0.01 | 0.08 | 126 | |
| 141 | 9.40 | 9.38 | 34.093 | 26.346 | 169.8 | 0.328 | 1.76 | 27.3 | 34.8 | 2.28 | 28.5 | 0.03 | 0.00 | 0.01 | 0.08 | 142 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 51.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 52.7 N | 120 8.2 W | 08/11/10 | 2336 UTC | 104 m | 250 29 kn | 300 08 07 | 0 | 1015.0 mb | 15.0 C | 12.0 C | | 0/8 | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 14.02 | 14.02 | 33.513 | 25.035 | 291.5 | 0.000 | 5.29 | 90.3 | 6.5 | 0.81 | 6.7 | 0.14 | 0.25 | 4.24 | 0.60 | 0 | |
| 2 | 14.02 | 14.02 | 33.513 | 25.035 | 291.5 | 0.006 | 5.29 | 90.3 | 6.5 | 0.81 | 6.7 | 0.14 | 0.25 | 4.24 | 0.60 | 2 | 213 |
| 10 | 14.05 | 14.05 | 33.516 | 25.031 | 292.1 | 0.029 | 5.28 | 90.2 | 6.2 | 0.79 | 6.5 | 0.14 | 0.31 | 4.17 | 0.73 | 10 | 211 |
| 10 | 14.03 | 14.03 | 33.521 | 25.039 | 291.3 | 0.029 | | | | | | | | | | 10 | 212 |
| 20 ISL | 13.62 D | 13.62 | 33.495 D | 25.104 | 285.5 | 0.058 | 5.07 | 85.9 | 7.0 | 0.88 | 8.0 | 0.17 | 0.24 | 3.91 | 1.01 | 20 | |
| 21 | 13.59 | 13.59 | 33.497 | 25.111 | 284.8 | 0.061 | 5.04 | 85.3 | 7.1 | 0.90 | 8.3 | 0.17 | 0.23 | 3.88 | 1.03 | 21 | 210 |
| 30 | 12.95 | 12.95 | 33.489 | 25.234 | 273.3 | 0.086 | 4.69 | 78.3 | 9.1 | 1.11 | 11.1 | 0.20 | 0.27 | 3.56 | 0.90 | 30 | 209 |
| 40 | 11.59 | 11.58 | 33.547 | 25.539 | 244.5 | 0.112 | 3.93 | 63.8 | 14.7 | 1.46 | 16.9 | 0.19 | 0.00 | 1.89 | 0.69 | 40 | 208 |
| 50 ISL | 10.23 D | 10.22 | 33.705 D | 25.903 | 210.0 | 0.135 | 3.15 | 49.7 | 22.2 | 1.78 | 22.3 | 0.08 | 0.00 | 0.41 | 0.38 | 50 | |
| 51 | 10.25 | 10.24 | 33.670 | 25.872 | 212.9 | 0.137 | 3.09 | 48.8 | 22.9 | 1.81 | 22.7 | 0.07 | 0.00 | 0.30 | 0.35 | 51 | 207 |
| 60 | 10.12 | 10.11 | 33.731 | 25.942 | 206.5 | 0.156 | 2.86 | 45.0 | 25.0 | 1.88 | 23.5 | 0.08 | 0.00 | 0.23 | 0.31 | 60 | 206 |
| 70 | 10.16 | 10.15 | 33.736 | 25.940 | 207.0 | 0.176 | 2.86 | 45.1 | 24.7 | 1.88 | 23.3 | 0.08 | 0.00 | 0.25 | 0.34 | 70 | 205 |
| 75 ISL | 10.14 D | 10.13 | 33.731 D | 25.939 | 207.1 | 0.187 | 2.78 | 43.8 | 25.5 | 1.91 | 23.7 | 0.07 | 0.00 | 0.22 | 0.33 | 75 | |
| 86 | 9.89 | 9.88 | 33.805 | 26.039 | 197.8 | 0.209 | 2.62 | 41.0 | 27.2 | 1.97 | 24.7 | 0.06 | 0.00 | 0.15 | 0.31 | 86 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 55.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 44.3 N | 120 25.2 W | 08/11/10 | 1912 UTC | 1174 m | 260 24 kn | 250 06 07 | 1 | 1018.0 mb | 16.1 C | 13.0 C | 5m | 1/8 | SC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.05 | 15.05 | 33.484 | 24.793 | 314.5 | 0.000 | 5.99 | 104.4 | 0.9 | 0.38 | 1.7 | 0.06 | 0.23 | 3.52 | 1.11 | 0 | |
| 2 A | 15.05 | 15.05 | 33.484 | 24.793 | 314.5 | 0.006 | 5.99 | 104.4 | 0.9 | 0.38 | 1.7 | 0.06 | 0.23 | 3.52 | 1.11 | 2 | 224 |
| 3 A | 15.05 | 15.05 | 33.483 | 24.793 | 314.6 | 0.009 | 5.95 | 103.7 | 0.8 | 0.38 | 1.8 | 0.06 | 0.22 | 3.42 | 1.21 | 3 | 223 |
| 8 A | 15.00 | 15.00 | 33.484 | 24.804 | 313.6 | 0.025 | 5.93 | 103.3 | 0.9 | 0.43 | 1.9 | 0.06 | 0.25 | 3.47 | 1.13 | 8 | 222 |
| 10 ISL | 14.89 D | 14.89 | 33.483 D | 24.827 | 311.5 | 0.031 | 5.91 | 102.7 | 1.1 | 0.43 | 2.1 | 0.06 | 0.24 | 3.72 | 1.13 | 10 | |
| 11 A | 14.89 | 14.89 | 33.488 | 24.831 | 311.1 | 0.035 | 5.90 | 102.5 | 1.2 | 0.43 | 2.3 | 0.06 | 0.24 | 3.86 | 1.13 | 11 | 220 |
| 11 | 14.91 | 14.91 | 33.483 | 24.823 | 311.9 | 0.035 | | | | | | | | | | 11 | 221 |
| 15 A | 14.26 | 14.26 | 33.489 | 24.966 | 298.4 | 0.047 | 5.56 | 95.4 | 3.4 | 0.62 | 4.8 | 0.09 | 0.25 | 4.18 | 1.29 | 15 | 219 |
| 20 ISL | 12.92 D | 12.92 | 33.511 D | 25.256 | 270.9 | 0.061 | 4.91 | 82.0 | 7.9 | 0.99 | 9.7 | 0.16 | 0.33 | 4.58 | 1.39 | 20 | |
| 21 A | 12.95 | 12.95 | 33.515 | 25.254 | 271.2 | 0.064 | 4.79 | 80.0 | 8.8 | 1.06 | 10.6 | 0.17 | 0.35 | 4.62 | 1.40 | 21 | 218 |
| 30 | 12.39 | 12.39 | 33.524 | 25.370 | 260.4 | 0.088 | 4.45 | 73.5 | 11.4 | 1.22 | 13.1 | 0.20 | 0.27 | 3.69 | 1.41 | 30 | 217 |
| 40 | 11.70 | 11.69 | 33.549 | 25.520 | 246.3 | 0.113 | 4.08 | 66.4 | 14.3 | 1.41 | 16.1 | 0.22 | 0.16 | 2.16 | 1.00 | 40 | 216 |
| 50 | 11.44 | 11.43 | 33.571 | 25.585 | 240.4 | 0.137 | 3.90 | 63.1 | 16.0 | 1.48 | 17.5 | 0.20 | 0.13 | 1.70 | 0.79 | 50 | 215 |
| 59 | 10.42 | 10.41 | 33.658 | 25.834 | 216.8 | 0.158 | 3.28 | 51.9 | 21.6 | 1.74 | 22.1 | 0.10 | 0.00 | 0.70 | 0.43 | 59 | 214 |
| 70 | 10.09 | 10.08 | 33.712 | 25.933 | 207.6 | 0.181 | 3.07 | 48.3 | 23.9 | 1.85 | 23.6 | 0.06 | 0.00 | 0.47 | 0.31 | 70 | 213 |
| 75 ISL | 9.87 D | 9.86 | 33.760 D | 26.007 | 200.6 | 0.191 | 2.97 | 46.5 | 24.9 | 1.88 | 24.2 | 0.05 | 0.00 | 0.40 | 0.29 | 75 | |
| 85 | 9.74 | 9.73 | 33.796 | 26.057 | 196.1 | 0.211 | 2.76 | 43.1 | 26.8 | 1.94 | 25.2 | 0.04 | 0.00 | 0.30 | 0.25 | 85 | 212 |
| 100 | 9.44 | 9.43 | 33.905 | 26.192 | 183.5 | 0.240 | 2.40 | 37.2 | 30.2 | 2.07 | 26.8 | 0.03 | 0.00 | 0.22 | 0.16 | 101 | 211 |
| 120 | 9.27 | 9.26 | 33.984 | 26.282 | 175.4 | 0.276 | 2.14 | 33.1 | 32.8 | 2.15 | 27.9 | 0.03 | 0.00 | 0.12 | 0.14 | 121 | 210 |
| 125 ISL | 9.19 D | 9.18 | 34.023 D | 26.325 | 171.4 | 0.284 | 2.09 | 32.3 | 33.3 | 2.17 | 28.2 | 0.03 | 0.00 | 0.09 | 0.13 | 126 | |
| 140 | 9.08 | 9.06 | 34.033 | 26.351 | 169.2 | 0.310 | 1.99 | 30.7 | 34.8 | 2.22 | 28.8 | 0.02 | 0.00 | 0.02 | 0.09 | 141 | 209 |
| 150 ISL | 8.91 D | 8.89 | 34.049 D | 26.391 | 165.6 | 0.327 | 1.98 | 30.4 | 35.5 | 2.23 | 29.0 | 0.02 | 0.00 | 0.02 | 0.07 | 151 | |
| 170 | 8.76 | 8.74 | 34.044 | 26.410 | 164.1 | 0.359 | 1.97 | 30.1 | 37.1 | 2.24 | 29.4 | 0.03 | 0.00 | 0.01 | 0.06 | 171 | 208 |
| 200 | 8.63 | 8.61 | 34.118 | 26.489 | 157.2 | 0.408 | 1.61 | 24.6 | 40.6 | 2.38 | 30.7 | 0.05 | 0.00 | 0.01 | 0.07 | 201 | 207 |
| 230 | 8.42 | 8.40 | 34.149 | 26.546 | 152.2 | 0.454 | 1.39 | 21.1 | 43.8 | 2.46 | 31.7 | 0.05 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.29 D | 8.26 | 34.207 D | 26.612 | 146.4 | 0.484 | 1.30 | 19.7 | 46.1 | 2.51 | 32.5 | 0.03 | 0.00 | | | 252 | |
| 270 | 7.94 | 7.91 | 34.163 | 26.630 | 144.8 | 0.513 | 1.21 | 18.2 | 48.7 | 2.57 | 33.4 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.76 D | 7.73 | 34.202 D | 26.687 | 139.8 | 0.556 | 0.99 | 14.8 | 53.4 | 2.68 | 34.7 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.49 | 7.46 | 34.211 | 26.733 | 135.6 | 0.583 | 0.84 D | 12.5 D | 56.6 | 2.75 | 35.5 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 6.95 | 6.91 | 34.230 | 26.824 | 127.6 | 0.664 | 0.63 | 9.3 | 63.9 | 2.87 | 37.3 | 0.00 | 0.00 | | | 384 | 203 |
| 400 ISL | 6.87 D | 6.83 | 34.250 D | 26.851 | 125.3 | 0.688 | 0.57 | 8.4 | 66.4 | 2.91 | 37.8 | 0.00 | 0.00 | | | 403 | |
| 442 | 6.49 | 6.45 | 34.255 | 26.906 | 120.4 | 0.739 | 0.47 | 6.8 | 71.4 | 2.99 | 38.8 | 0.00 | 0.00 | | | 445 | 202 |
| 500 ISL | 6.18 D | 6.14 | 34.275 D | 26.963 | 115.6 | 0.808 | 0.40 | 5.8 | 75.9 | 3.04 | 39.7 | 0.00 | 0.00 | | | 504 | |
| 516 | 6.15 | 6.10 | 34.273 | 26.965 | 115.6 | 0.826 | 0.38 | 5.5 | 77.1 | 3.06 | 40.0 | 0.00 | 0.00 | | | 520 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 60.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 34.4 N | 120 45.3 W | 08/11/10 | 1404 UTC | 1410 m | 270 16 kn | 300 06 06 | 1 | 1016.8 mb | 15.4 C | 13.3 C | | 4/8 | SC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.07 | 16.07 | 33.296 | 24.422 | 349.8 | 0.000 | 5.75 | 102.2 | 1.6 | 0.29 | 0.3 | 0.05 | 0.12 | 0.40 | 0.16 | 0 | |
| 2 | 16.07 | 16.07 | 33.296 | 24.422 | 349.9 | 0.007 | 5.75 | 102.2 | 1.6 | 0.29 | 0.3 | 0.05 | 0.12 | 0.40 | 0.16 | 2 | 221 |
| 10 | 16.07 | 16.07 | 33.292 | 24.420 | 350.4 | 0.035 | 5.74 | 102.0 | 1.6 | 0.28 | 0.3 | 0.05 | 0.10 | 0.43 | 0.14 | 10 | 219 |
| 10 | 16.08 | 16.08 | 33.292 | 24.417 | 350.6 | 0.035 | | | | | | | | | | 10 | 220 |
| 20 | 16.06 | 16.06 | 33.292 | 24.422 | 350.4 | 0.070 | 5.74 | 102.0 | 1.4 | 0.29 | 0.4 | 0.06 | 0.10 | 0.42 | 0.16 | 20 | 218 |
| 30 | 15.95 | 15.95 | 33.288 | 24.444 | 348.7 | 0.105 | 5.72 | 101.4 | 1.5 | 0.32 | 0.5 | 0.08 | 0.08 | 0.45 | 0.17 | 30 | 217 |
| 40 | 13.77 | 13.76 | 33.115 | 24.780 | 316.8 | 0.138 | 5.51 | 93.4 | 3.2 | 0.55 | 3.5 | 0.25 | 0.09 | 0.39 | 0.27 | 40 | 216 |
| 50 | 13.48 | 13.47 | 33.088 | 24.818 | 313.4 | 0.170 | 5.48 | 92.3 | 3.6 | 0.59 | 4.1 | 0.24 | 0.08 | 0.40 | 0.22 | 50 | 215 |
| 60 | 11.72 | 11.71 | 33.076 | 25.149 | 282.1 | 0.200 | 5.13 | 83.2 | 7.7 | 0.93 | 9.5 | 0.02 | 0.05 | 0.23 | 0.17 | 60 | 214 |
| 70 | 10.99 | 10.98 | 33.210 | 25.385 | 259.7 | 0.227 | 4.83 | 77.2 | 11.4 | 1.16 | 13.6 | 0.01 | 0.05 | 0.08 | 0.13 | 70 | 213 |
| 75 ISL | 10.80 D | 10.79 | 33.226 D | 25.432 | 255.4 | 0.240 | 4.76 | 75.8 | 12.5 | 1.22 | 14.7 | 0.01 | 0.05 | 0.07 | 0.12 | 75 | |
| 85 | 10.45 | 10.44 | 33.301 | 25.551 | 244.2 | 0.265 | 4.56 | 72.1 | 14.5 | 1.34 | 16.5 | 0.01 | 0.06 | 0.05 | 0.10 | 85 | 212 |
| 100 | 10.13 | 10.12 | 33.522 | 25.778 | 222.9 | 0.300 | 3.79 | 59.6 | 20.1 | 1.66 | 21.4 | 0.01 | 0.05 | 0.02 | 0.09 | 100 | 211 |
| 120 | 9.52 | 9.51 | 33.627 | 25.962 | 205.8 | 0.342 | 3.50 | 54.3 | 23.6 | 1.78 | 23.7 | 0.00 | 0.00 | 0.01 | 0.05 | 121 | 210 |
| 125 ISL | 9.25 D | 9.24 | 33.679 D | 26.046 | 197.8 | 0.353 | 3.39 | 52.3 | 24.7 | 1.82 | 24.3 | 0.00 | 0.02 | 0.01 | 0.05 | 126 | |
| 140 | 9.02 | 9.00 | 33.786 | 26.167 | 186.6 | 0.381 | 3.12 | 47.9 | 27.9 | 1.90 | 25.9 | 0.00 | 0.08 | 0.01 | 0.05 | 141 | 209 |
| 150 ISL | 8.76 D | 8.74 | 33.889 D | 26.289 | 175.2 | 0.399 | 3.18 | 48.6 | 28.8 | 1.88 | 25.8 | 0.00 | 0.06 | 0.01 | 0.04 | 151 | |
| 170 | 8.48 | 8.46 | 33.943 | 26.375 | 167.4 | 0.434 | 3.24 | 49.2 | 30.6 | 1.85 | 25.5 | 0.00 | 0.00 | 0.00 | 0.03 | 171 | 208 |
| 200 | 8.25 | 8.23 | 34.028 | 26.476 | 158.2 | 0.483 | 2.25 | 34.0 | 37.9 | 2.18 | 29.5 | 0.00 | 0.00 | 0.00 | 0.03 | 201 | 207 |
| 230 | 7.75 | 7.73 | 34.031 | 26.553 | 151.2 | 0.529 | 2.17 | 32.4 | 42.6 | 2.25 | 31.0 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 7.55 D | 7.53 | 34.049 D | 26.596 | 147.4 | 0.559 | 1.83 | 27.2 | 46.0 | 2.38 | 32.5 | 0.00 | 0.00 | | | 251 | |
| 270 | 7.53 | 7.50 | 34.093 | 26.634 | 144.2 | 0.588 | 1.46 | 21.7 | 49.3 | 2.52 | 33.9 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.14 D | 7.11 | 34.108 D | 26.701 | 138.1 | 0.630 | 1.22 | 18.0 | 53.9 | 2.63 | 35.2 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.01 | 6.98 | 34.125 | 26.733 | 135.4 | 0.659 | 1.12 | 16.5 | 56.9 | 2.69 | 35.9 | 0.00 | 0.00 | | | 323 | 204 |
| 382 | 6.58 | 6.55 | 34.174 | 26.830 | 126.8 | 0.739 | 0.79 | 11.5 | 64.8 | 2.86 | 37.6 | 0.00 | 0.00 | | | 384 | 203 |
| 400 ISL | 6.42 D | 6.38 | 34.184 D | 26.859 | 124.2 | 0.762 | 0.72 | 10.4 | 66.8 | 2.90 | 38.0 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.19 | 6.15 | 34.200 | 26.901 | 120.5 | 0.812 | 0.58 | 8.4 | 71.4 | 2.98 | 38.8 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.77 D | 5.73 | 34.261 D | 27.003 | 111.3 | 0.880 | 0.38 | 5.4 | 80.1 | 3.09 | 40.3 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.66 | 5.62 | 34.281 | 27.032 | 108.6 | 0.898 | 0.32 | 4.6 | 82.5 | 3.12 | 40.7 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 14.8 N | 121 26.9 W | 08/11/10 | 0721 UTC | 3806 m | 260 12 kn | | | 1018.2 mb | 16.0 C | 14.0 C | | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.79 | 15.79 | 33.431 | 24.589 | 333.9 | 0.000 | 6.04 | 106.8 | 0.0 | 0.22 | 0.1 | 0.02 | 0.09 | 1.75 | 0.36 | 0 | |
| 2 | 15.79 | 15.79 | 33.431 | 24.589 | 334.0 | 0.007 | 6.04 | 106.8 | 0.0 | 0.22 | 0.1 | 0.02 | 0.09 | 1.75 | 0.36 | 2 | 221 |
| 10 ISL | 15.76 D | 15.76 | 33.432 D | 24.597 | 333.5 | 0.033 | 6.05 | 107.0 | 0.2 | 0.22 | 0.1 | 0.02 | 0.05 | 1.78 | 0.38 | 10 | |
| 11 | 15.74 | 15.74 | 33.433 | 24.602 | 333.0 | 0.037 | 6.05 | 106.9 | 0.2 | 0.22 | 0.1 | 0.02 | 0.05 | 1.79 | 0.38 | 11 | 219 |
| 11 | 15.77 | 15.77 | 33.432 | 24.595 | 333.7 | 0.037 | | | | | | | | | | 11 | 220 |
| 20 | 15.68 | 15.68 | 33.435 | 24.617 | 331.8 | 0.067 | 6.05 | 106.8 | 0.2 | 0.23 | 0.2 | 0.02 | 0.15 | 1.89 | 0.52 | 20 | 218 |
| 30 ISL | 15.20 D | 15.20 | 33.421 D | 24.713 | 323.0 | 0.099 | 5.89 | 103.0 | 0.8 | 0.37 | 0.9 | 0.06 | 0.52 | 2.51 | 0.91 | 30 | |
| 31 | 15.21 | 15.21 | 33.423 | 24.712 | 323.1 | 0.103 | 5.87 | 102.6 | 0.9 | 0.38 | 1.0 | 0.06 | 0.54 | 2.57 | 0.93 | 31 | 217 |
| 40 | 13.27 | 13.26 | 33.397 | 25.099 | 286.4 | 0.130 | 4.92 | 82.7 | 6.3 | 0.91 | 9.3 | 0.37 | 0.25 | 0.27 | 0.41 | 40 | 216 |
| 50 ISL | 11.80 D | 11.79 | 33.397 D | 25.383 | 259.5 | 0.157 | 4.44 | 72.3 | 10.6 | 1.22 | 14.4 | 0.09 | 0.01 | 0.14 | 0.25 | 50 | |
| 51 | 11.89 | 11.88 | 33.400 | 25.369 | 260.9 | 0.160 | 4.40 | 71.8 | 11.0 | 1.24 | 14.8 | 0.05 | 0.00 | 0.13 | 0.25 | 51 | 215 |
| 61 | 10.66 | 10.65 | 33.476 | 25.651 | 234.3 | 0.185 | 3.80 | 60.4 | 17.2 | 1.58 | 19.9 | 0.01 | 0.00 | 0.06 | 0.20 | 61 | 214 |
| 71 | 10.27 | 10.26 | 33.597 | 25.813 | 219.1 | 0.207 | 3.46 | 54.6 | 21.1 | 1.72 | 22.3 | 0.02 | 0.00 | 0.04 | 0.15 | 71 | 213 |
| 75 ISL | 10.17 D | 10.16 | 33.633 D | 25.858 | 214.9 | 0.216 | 3.40 | 53.5 | 22.1 | 1.75 | 23.0 | 0.02 | 0.00 | 0.04 | 0.14 | 75 | |
| 85 | 9.80 | 9.79 | 33.652 | 25.935 | 207.7 | 0.237 | 3.27 | 51.1 | 24.4 | 1.82 | 24.3 | 0.02 | 0.00 | 0.03 | 0.11 | 85 | 212 |
| 100 ISL | 9.38 D | 9.37 | 33.836 D | 26.148 | 187.7 | 0.267 | 2.74 | 42.4 | 28.6 | 1.96 | 26.3 | 0.02 | 0.00 | 0.02 | 0.08 | 100 | |
| 101 | 9.39 | 9.38 | 33.834 | 26.145 | 188.0 | 0.269 | 2.70 | 41.8 | 28.9 | 1.97 | 26.4 | 0.02 | 0.00 | 0.02 | 0.08 | 102 | 211 |
| 120 | 9.00 | 8.99 | 33.932 | 26.284 | 175.1 | 0.303 | 2.47 | 38.0 | 32.4 | 2.04 | 27.7 | 0.01 | 0.00 | 0.01 | 0.07 | 121 | 210 |
| 125 ISL | 8.93 D | 8.92 | 33.956 D | 26.314 | 172.4 | 0.312 | 2.42 | 37.1 | 33.2 | 2.06 | 28.0 | 0.01 | 0.00 | 0.01 | 0.07 | 126 | |
| 140 | 8.71 | 8.70 | 33.988 | 26.374 | 166.9 | 0.337 | 2.27 | 34.7 | 35.4 | 2.13 | 28.9 | 0.01 | 0.00 | 0.01 | 0.06 | 141 | 209 |
| 150 ISL | 8.64 D | 8.62 | 34.010 D | 26.402 | 164.4 | 0.354 | 2.21 | 33.7 | 36.2 | 2.15 | 29.1 | 0.01 | 0.00 | 0.01 | 0.06 | 151 | |
| 170 | 8.53 | 8.51 | 34.037 | 26.441 | 161.1 | 0.386 | 2.07 | 31.5 | 37.8 | 2.19 | 29.6 | 0.01 | 0.00 | 0.00 | 0.05 | 171 | 208 |
| 200 | 8.21 | 8.19 | 34.100 | 26.539 | 152.3 | 0.434 | 1.68 | 25.4 | 43.0 | 2.35 | 31.5 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | 207 |
| 230 | 8.00 | 7.98 | 34.151 | 26.611 | 145.9 | 0.478 | 1.26 | 19.0 | 47.7 | 2.52 | 33.2 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 7.65 D | 7.63 | 34.157 D | 26.667 | 140.8 | 0.507 | 1.14 | 17.0 | 50.1 | 2.58 | 34.0 | 0.00 | 0.00 | | | 251 | |
| 270 | 7.58 | 7.55 | 34.161 | 26.680 | 139.8 | 0.535 | 1.06 | 15.8 | 52.5 | 2.63 | 34.7 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.31 D | 7.28 | 34.176 D | 26.731 | 135.4 | 0.576 | 0.89 | 13.2 | 56.9 | 2.71 | 35.7 | 0.00 | 0.00 | | | 302 | |
| 322 | 7.10 | 7.07 | 34.193 | 26.774 | 131.5 | 0.606 | 0.78 | 11.5 | 60.2 | 2.77 | 36.4 | 0.00 | 0.00 | | | 324 | 204 |
| 381 | 6.62 | 6.59 | 34.208 | 26.851 | 124.8 | 0.681 | 0.65 | 9.5 | 67.0 | 2.88 | 37.8 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.51 D | 6.47 | 34.213 D | 26.870 | 123.2 | 0.705 | 0.60 | 8.7 | 69.3 | 2.91 | 38.3 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.18 | 6.14 | 34.227 | 26.924 | 118.4 | 0.754 | 0.49 | 7.1 | 74.2 | 2.98 | 39.3 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.86 D | 5.82 | 34.274 D | 27.002 | 111.5 | 0.822 | 0.37 | 5.3 | 80.7 | 3.06 | 40.3 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.75 | 5.71 | 34.270 | 27.013 | 110.6 | 0.840 | 0.34 | 4.9 | 82.5 | 3.08 | 40.6 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 80.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 54.8 N | 122 7.7 W | 08/11/10 | 0041 UTC | 4183 m | 200 05 kn | 220 04 08 | 1 | 1018.5 mb | 17.3 C | 16.0 C | | 7/8 | SC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.44 | 16.44 | 33.082 | 24.173 | 373.5 | 0.000 | 5.78 | 103.4 | 2.0 | 0.26 | 0.0 | 0.00 | 0.17 | 0.23 | 0.04 | 0 | |
| 2 | 16.44 | 16.44 | 33.082 | 24.173 | 373.6 | 0.007 | 5.78 | 103.4 | 2.0 | 0.26 | 0.0 | 0.00 | 0.17 | 0.23 | 0.04 | 2 | 221 |
| 10 | 16.43 | 16.43 | 33.082 | 24.176 | 373.6 | 0.037 | 5.78 | 103.3 | 2.0 | 0.26 | 0.0 | 0.00 | 0.23 | 0.23 | 0.04 | 10 | 219 |
| 10 | 16.44 | 16.44 | 33.082 | 24.174 | 373.8 | 0.037 | | | | | | | | | | 10 | 220 |
| 20 | 16.31 | 16.31 | 33.109 | 24.225 | 369.3 | 0.075 | 5.78 | 103.1 | 1.8 | 0.25 | 0.0 | 0.00 | 0.13 | 0.30 | 0.07 | 20 | 218 |
| 30 | 13.28 | 13.28 | 32.910 | 24.720 | 322.2 | 0.109 | 6.00 | 100.5 | 3.1 | 0.43 | 1.1 | 0.17 | 0.23 | 0.41 | 0.29 | 30 | 217 |
| 40 | 12.83 | 12.82 | 33.039 | 24.909 | 304.5 | 0.140 | 5.71 | 94.8 | 3.9 | 0.58 | 3.5 | 0.51 | 0.18 | 0.36 | 0.35 | 40 | 216 |
| 50 | 12.24 | 12.23 | 32.997 | 24.990 | 297.0 | 0.170 | 5.63 | 92.3 | 4.5 | 0.61 | 4.4 | 0.30 | 0.06 | 0.29 | 0.28 | 50 | 215 |
| 60 | 11.82 | 11.81 | 33.065 | 25.122 | 284.6 | 0.200 | 5.35 | 87.0 | 7.4 | 0.87 | 8.9 | 0.04 | 0.05 | 0.23 | 0.20 | 60 | 214 |
| 70 | 10.69 | 10.68 | 33.159 | 25.399 | 258.4 | 0.227 | 4.91 | 78.0 | 11.9 | 1.15 | 13.7 | 0.02 | 0.06 | 0.09 | 0.14 | 70 | 213 |
| 75 ISL | 10.27 D | 10.26 | 33.215 D | 25.515 | 247.4 | 0.239 | 4.75 | 74.8 | 13.6 | 1.24 | 15.3 | 0.01 | 0.06 | 0.07 | 0.11 | 75 | |
| 86 | 9.69 | 9.68 | 33.317 | 25.691 | 230.8 | 0.266 | 4.39 | 68.3 | 16.9 | 1.42 | 18.2 | 0.01 | 0.05 | 0.03 | 0.06 | 86 | 212 |
| 100 | 9.60 | 9.59 | 33.528 | 25.871 | 214.0 | 0.297 | 3.74 | 58.1 | 21.9 | 1.69 | 22.6 | 0.01 | 0.00 | 0.02 | 0.05 | 100 | 211 |
| 120 | 9.19 | 9.18 | 33.630 | 26.018 | 200.4 | 0.338 | 3.48 | 53.6 | 24.8 | 1.79 | 24.3 | 0.00 | 0.00 | 0.01 | 0.05 | 121 | 210 |
| 125 ISL | 9.11 D | 9.10 | 33.674 D | 26.065 | 196.0 | 0.348 | 3.29 | 50.6 | 26.2 | 1.85 | 25.2 | 0.00 | 0.00 | 0.01 | 0.05 | 126 | |
| 140 | 9.04 | 9.02 | 33.809 | 26.182 | 185.2 | 0.377 | 2.73 | 42.0 | 30.4 | 2.03 | 27.9 | 0.00 | 0.00 | 0.01 | 0.04 | 141 | 209 |
| 150 ISL | 8.94 D | 8.92 | 33.885 D | 26.257 | 178.2 | 0.395 | 2.64 | 40.5 | 32.0 | 2.05 | 28.2 | 0.00 | 0.00 | 0.01 | 0.04 | 151 | |
| 171 | 8.59 | 8.57 | 33.921 | 26.340 | 170.7 | 0.432 | 2.46 | 37.5 | 33.9 | 2.09 | 28.9 | 0.00 | 0.00 | 0.00 | 0.03 | 172 | 208 |
| 200 | 8.19 | 8.17 | 33.983 | 26.450 | 160.6 | 0.480 | 2.86 | 43.2 | 35.1 | 1.98 | 27.7 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | 207 |
| 230 | 7.68 | 7.66 | 33.998 | 26.537 | 152.7 | 0.527 | 2.64 | 39.4 | 40.4 | 2.09 | 29.7 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 7.58 D | 7.56 | 34.037 D | 26.583 | 148.7 | 0.557 | 2.33 | 34.7 | 44.5 | 2.22 | 31.4 | 0.00 | 0.04 | | | 251 | |
| 271 | 7.21 | 7.18 | 34.029 | 26.629 | 144.5 | 0.588 | 1.96 | 28.9 | 48.7 | 2.37 | 33.2 | 0.00 | 0.07 | | | 273 | 205 |
| 300 ISL | 7.28 D | 7.25 | 34.106 D | 26.680 | 140.2 | 0.629 | 1.49 | 22.0 | 53.6 | 2.54 | 35.1 | 0.00 | 0.04 | | | 302 | |
| 321 | 6.93 | 6.90 | 34.110 | 26.732 | 135.4 | 0.658 | 1.19 | 17.5 | 56.9 | 2.64 | 36.2 | 0.00 | 0.00 | | | 323 | 204 |
| 381 | 6.46 | 6.43 | 34.156 | 26.831 | 126.5 | 0.736 | 0.75 | 10.9 | 66.0 | 2.85 | 38.4 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.37 D | 6.33 | 34.191 D | 26.871 | 123.0 | 0.760 | 0.65 | 9.4 | 69.0 | 2.90 | 38.9 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.02 | 5.98 | 34.217 | 26.936 | 117.0 | 0.809 | 0.48 | 6.9 | 75.1 | 2.99 | 39.8 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.63 D | 5.59 | 34.252 D | 27.013 | 110.2 | 0.876 | 0.34 | 4.8 | 82.5 | 3.09 | 40.8 | 0.00 | 0.00 | | | 503 | |
| 515 | 5.56 | 5.52 | 34.267 | 27.033 | 108.4 | 0.893 | 0.30 | 4.3 | 84.4 | 3.11 | 41.1 | 0.00 | 0.00 | | | 519 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 90.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 35.1 N | 122 48.4 W | 07/11/10 | 1915 UTC | 4507 m | 170 06 kn | 310 05 07 | 1 | 1021.4 mb | 19.4 C | 16.7 C | 25m | 6/8 | AS |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.09 | 17.09 | 32.819 | 23.821 | 407.1 | 0.000 | 5.67 | 102.5 | 1.9 | 0.28 | 0.1 | 0.00 | | 0.20 | 0.07 | 0 | |
| 1 A | 17.09 | 17.09 | 32.819 | 23.821 | 407.2 | 0.004 | 5.67 | 102.5 | 1.9 | 0.28 | 0.1 | 0.00 | | 0.20 | 0.07 | 1 | 222 |
| 9 | 17.08 | 17.08 | 32.817 | 23.822 | 407.3 | 0.037 | 5.65 | 102.1 | 1.8 | 0.28 | 0.0 | 0.00 | 0.00 | 0.20 | 0.06 | 9 | 220 |
| 9 | 17.08 | 17.08 | 32.825 | 23.828 | 406.7 | 0.037 | | | | | | | | | | 9 | 221 |
| 10 ISL | 17.05 D | 17.05 | 32.817 D | 23.829 | 406.7 | 0.041 | 5.65 | 102.1 | 1.8 | 0.28 | 0.0 | 0.00 | 0.00 | 0.20 | 0.06 | 10 | |
| 17 A | 16.99 | 16.99 | 32.818 | 23.844 | 405.5 | 0.069 | 5.69 | 102.7 | 1.8 | 0.27 | 0.0 | 0.00 | 0.00 | 0.20 | 0.07 | 17 | 219 |
| 20 ISL | 16.89 D | 16.89 | 32.817 D | 23.867 | 403.4 | 0.081 | 5.72 | 103.0 | 1.8 | 0.28 | 0.0 | 0.00 | 0.00 | 0.24 | 0.09 | 20 | |
| 26 | 16.45 | 16.45 | 32.857 | 23.999 | 390.9 | 0.105 | 5.80 | 103.6 | 1.9 | 0.29 | 0.0 | 0.00 | 0.00 | 0.31 | 0.15 | 26 | 218 |
| 30 ISL | 16.14 D | 16.14 | 32.908 D | 24.109 | 380.6 | 0.121 | 5.88 | 104.4 | 1.9 | 0.29 | 0.0 | 0.00 | 0.00 | 0.32 | 0.18 | 30 | |
| 35 A | 15.62 | 15.61 | 32.929 | 24.242 | 368.0 | 0.139 | 5.97 | 104.9 | 1.9 | 0.28 | 0.0 | 0.00 | 0.00 | 0.33 | 0.23 | 35 | 217 |
| 45 | 14.63 | 14.62 | 32.947 | 24.471 | 346.5 | 0.175 | 6.02 | 103.7 | 2.2 | 0.29 | 0.0 | 0.00 | 0.00 | 0.40 | 0.37 | 45 | 216 |
| 50 ISL | 13.98 D | 13.97 | 32.992 D | 24.642 | 330.3 | 0.192 | 5.96 | 101.4 | 2.7 | 0.37 | 0.8 | 0.08 | 0.19 | 0.36 | 0.35 | 50 | |
| 53 A | 13.87 | 13.86 | 32.998 | 24.669 | 327.7 | 0.202 | 5.92 | 100.4 | 2.9 | 0.41 | 1.2 | 0.14 | 0.29 | 0.32 | 0.33 | 53 | 215 |
| 60 | 13.51 | 13.50 | 33.001 | 24.745 | 320.7 | 0.224 | 5.86 | 98.7 | 2.9 | 0.40 | 1.0 | 0.21 | 0.21 | 0.26 | 0.29 | 60 | 214 |
| 69 A | 13.00 | 12.99 | 32.972 | 24.825 | 313.3 | 0.253 | 5.82 | 97.0 | 3.0 | 0.41 | 1.2 | 0.23 | 0.04 | 0.20 | 0.24 | 69 | 213 |
| 75 ISL | 12.77 D | 12.76 | 32.956 D | 24.857 | 310.3 | 0.272 | 5.77 | 95.7 | 3.2 | 0.43 | 1.6 | 0.17 | 0.02 | 0.17 | 0.21 | 75 | |
| 84 | 12.45 | 12.44 | 32.995 | 24.950 | 301.7 | 0.299 | 5.69 | 93.7 | 3.6 | 0.45 | 2.2 | 0.05 | 0.00 | 0.12 | 0.16 | 84 | 212 |
| 100 A | 11.14 | 11.13 | 32.988 | 25.187 | 279.3 | 0.346 | 5.55 | 88.9 | 6.9 | 0.75 | 7.1 | 0.01 | 0.05 | 0.06 | 0.09 | 100 | 211 |
| 121 | 10.13 | 10.12 | 33.229 | 25.550 | 245.0 | 0.401 | 4.95 | 77.7 | 11.5 | 1.04 | 12.7 | 0.00 | 0.00 | 0.03 | 0.07 | 122 | 210 |
| 125 ISL | 9.73 D | 9.72 | 33.301 D | 25.673 | 233.4 | 0.410 | 4.82 | 75.0 | 12.8 | 1.12 | 14.0 | 0.00 | 0.00 | 0.03 | 0.06 | 126 | |
| 140 | 9.53 | 9.51 | 33.468 | 25.836 | 218.1 | 0.444 | 4.35 | 67.4 | 17.8 | 1.39 | 18.5 | 0.00 | 0.00 | 0.01 | 0.03 | 141 | 209 |
| 150 ISL | 9.40 D | 9.38 | 33.532 D | 25.908 | 211.5 | 0.466 | 4.10 | 63.4 | 20.3 | 1.51 | 20.4 | 0.00 | 0.00 | 0.00 | 0.03 | 151 | |
| 170 | 9.09 | 9.07 | 33.695 | 26.085 | 195.0 | 0.506 | 3.70 | 56.9 | 24.3 | 1.67 | 23.1 | 0.00 | 0.00 | 0.00 | 0.02 | 171 | 208 |
| 200 ISL | 8.74 D | 8.72 | 33.877 D | 26.283 | 176.7 | 0.562 | 3.21 | 49.0 | 29.2 | 1.84 | 25.8 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | |
| 201 | 8.74 | 8.72 | 33.878 | 26.284 | 176.6 | 0.564 | 3.20 | 48.9 | 29.3 | 1.84 | 25.9 | 0.00 | 0.00 | 0.00 | 0.02 | 202 | 207 |
| 229 | 8.29 | 8.27 | 33.921 | 26.387 | 167.2 | 0.612 | 2.83 | 42.8 | 34.0 | 2.00 | 28.2 | 0.00 | 0.00 | | | 230 | 206 |
| 250 ISL | 8.15 D | 8.12 | 34.018 D | 26.484 | 158.3 | 0.646 | 2.48 | 37.4 | 38.2 | 2.12 | 30.0 | 0.00 | 0.00 | | | 251 | |
| 270 | 7.74 | 7.71 | 34.007 | 26.536 | 153.5 | 0.677 | 2.17 | 32.4 | 42.2 | 2.23 | 31.5 | 0.00 | 0.00 | | | 271 | 205 |
| 300 ISL | 7.01 D | 6.98 | 33.976 D | 26.615 | 146.1 | 0.722 | 1.98 | 29.1 | 47.5 | 2.34 | 33.0 | 0.00 | 0.00 | | | 302 | |
| 320 | 6.95 | 6.92 | 34.015 | 26.654 | 142.7 | 0.751 | 1.89 | 27.7 | 50.9 | 2.41 | 33.8 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 6.33 | 6.30 | 34.066 | 26.777 | 131.5 | 0.835 | 1.36 | 19.7 | 62.3 | 2.65 | 36.9 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.29 D | 6.25 | 34.102 D | 26.811 | 128.5 | 0.860 | 1.15 | 16.6 | 64.9 | 2.74 | 37.6 | 0.00 | 0.00 | | | 402 | |
| 440 | 6.12 | 6.08 | 34.153 | 26.873 | 123.1 | 0.910 | 0.75 | 10.8 | 70.4 | 2.90 | 38.8 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 5.25 D | 5.21 | 34.132 D | 26.963 | 114.4 | 0.981 | 0.62 | 8.7 | 82.4 | 3.00 | 40.8 | 0.00 | 0.00 | | | 503 | |
| 515 | 5.22 | 5.18 | 34.165 | 26.993 | 111.7 | 0.998 | 0.59 | 8.3 | 85.4 | 3.02 | 41.3 | 0.00 | 0.00 | | | 518 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 14.7 N | 123 29.5 W | 07/11/10 | 1311 UTC | 4168 m | 230 08 kn | | | 1020.5 mb | 17.0 C | 14.5 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.77 | 17.77 | 33.069 | 23.850 | 404.3 | 0.000 | 5.53 | 101.5 | 2.2 | 0.25 | 0.0 | 0.00 | 0.10 | 0.17 | 0.03 | 0 | |
| 2 | 17.77 | 17.77 | 33.069 | 23.851 | 404.4 | 0.008 | 5.53 | 101.5 | 2.2 | 0.25 | 0.0 | 0.00 | 0.10 | 0.17 | 0.03 | 2 | 221 |
| 10 | 17.78 | 17.78 | 33.068 | 23.848 | 404.9 | 0.040 | 5.55 | 101.9 | 2.8 | 0.25 | 0.0 | 0.00 | 0.06 | 0.17 | 0.03 | 10 | 219 |
| 10 | 17.78 | 17.78 | 33.068 | 23.848 | 404.9 | 0.040 | | | | | | | | | | 10 | 220 |
| 20 ISL | 17.79 D | 17.79 | 33.069 D | 23.846 | 405.4 | 0.081 | 5.54 | 101.7 | 3.1 | 0.25 | 0.0 | 0.00 | 0.07 | 0.19 | 0.02 | 20 | |
| 25 | 17.79 | 17.79 | 33.070 | 23.847 | 405.5 | 0.101 | 5.53 | 101.5 | 3.1 | 0.25 | 0.0 | 0.00 | 0.07 | 0.20 | 0.02 | 25 | 218 |
| 30 ISL | 17.79 D | 17.78 | 33.069 D | 23.847 | 405.7 | 0.122 | 5.53 | 101.5 | 3.2 | 0.25 | 0.0 | 0.00 | 0.07 | 0.19 | 0.03 | 30 | |
| 40 | 17.78 | 17.77 | 33.068 | 23.849 | 405.8 | 0.162 | 5.52 | 101.3 | 3.4 | 0.25 | 0.0 | 0.00 | 0.06 | 0.18 | 0.04 | 40 | 217 |
| 50 | 16.69 | 16.68 | 33.045 | 24.089 | 383.2 | 0.202 | 5.86 | 105.3 | 3.8 | 0.26 | 0.0 | 0.00 | 0.08 | 0.29 | 0.12 | 50 | 216 |
| 62 | 15.35 | 15.34 | 33.191 | 24.504 | 343.9 | 0.245 | 5.95 | 104.2 | 4.2 | 0.26 | 0.2 | 0.01 | 0.09 | 0.34 | 0.14 | 62 | 215 |
| 75 | 14.09 | 14.08 | 33.130 | 24.727 | 322.9 | 0.289 | 5.96 | 101.7 | 4.7 | 0.26 | 0.0 | 0.00 | 0.09 | 0.24 | 0.10 | 75 | 214 |
| 87 | 13.61 | 13.60 | 33.205 | 24.883 | 308.3 | 0.326 | 5.75 | 97.2 | 5.5 | 0.31 | 0.7 | 0.08 | 0.06 | 0.23 | 0.12 | 87 | 213 |
| 100 | 12.49 | 12.48 | 33.092 | 25.018 | 295.7 | 0.366 | 5.54 | 91.4 | 7.1 | 0.52 | 3.7 | 0.02 | 0.05 | 0.14 | 0.11 | 100 | 212 |
| 112 | 11.62 | 11.61 | 33.078 | 25.170 | 281.3 | 0.400 | 5.35 | 86.6 | 9.8 | 0.75 | 7.4 | 0.00 | 0.08 | 0.07 | 0.07 | 112 | 211 |
| 125 ISL | 10.78 D | 10.77 | 33.222 D | 25.433 | 256.4 | 0.435 | 5.06 | 80.5 | 13.3 | 0.97 | 11.3 | 0.00 | 0.05 | 0.04 | 0.06 | 126 | |
| 126 | 10.75 | 10.73 | 33.224 | 25.440 | 255.8 | 0.438 | 5.04 | 80.2 | 13.5 | 0.98 | 11.5 | 0.00 | 0.05 | 0.04 | 0.06 | 127 | 210 |
| 140 | 10.24 | 10.22 | 33.295 | 25.583 | 242.3 | 0.473 | 4.93 | 77.6 | 15.2 | 1.05 | 12.8 | 0.00 | 0.00 | 0.02 | 0.05 | 141 | 209 |
| 150 ISL | 9.52 D | 9.50 | 33.425 D | 25.805 | 221.3 | 0.496 | 4.55 | 70.5 | 16.8 | 1.12 | 14.2 | 0.00 | 0.00 | 0.01 | 0.04 | 151 | |
| 171 | 9.23 | 9.21 | 33.602 | 25.990 | 204.1 | 0.540 | 3.73 | 57.5 | | | | | | 0.00 | 0.03 | 172 | 208 |
| 200 ISL | 8.91 D | 8.89 | 33.872 D | 26.253 | 179.6 | 0.596 | 3.71 | 56.9 | 28.0 | 1.60 | 22.5 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | |
| 202 | 8.95 | 8.93 | 33.857 | 26.235 | 181.4 | 0.600 | 3.71 | 56.9 | 28.5 | 1.62 | 22.9 | 0.00 | 0.00 | 0.00 | 0.02 | 203 | 207 |
| 231 | 8.30 | 8.28 | 33.973 | 26.426 | 163.5 | 0.650 | 2.93 | 44.3 | 36.6 | 1.92 | 27.2 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 7.93 D | 7.90 | 33.990 D | 26.495 | 157.2 | 0.680 | 2.75 | 41.3 | 39.9 | 2.01 | 28.6 | 0.00 | 0.00 | | | 251 | |
| 271 | 7.71 | 7.68 | 33.996 | 26.532 | 153.9 | 0.713 | 2.64 | 39.4 | 43.0 | 2.08 | 29.7 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.22 D | 7.19 | 34.009 D | 26.612 | 146.5 | 0.756 | 2.31 | 34.1 | 48.9 | 2.25 | 32.0 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.02 | 6.99 | 34.023 | 26.651 | 143.0 | 0.785 | 2.06 | 30.3 | 53.0 | 2.37 | 33.6 | 0.00 | 0.00 | | | 322 | 204 |
| 380 | 6.37 | 6.34 | 34.050 | 26.759 | 133.2 | 0.868 | 1.48 | 21.4 | 62.9 | 2.60 | 36.6 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.17 D | 6.13 | 34.064 D | 26.796 | 129.8 | 0.895 | 1.31 | 18.9 | 66.4 | 2.68 | 37.5 | 0.00 | 0.02 | | | 402 | |
| 440 | 5.82 | 5.78 | 34.091 | 26.862 | 123.8 | 0.945 | 1.01 | 14.4 | 73.3 | 2.83 | 39.1 | 0.00 | 0.05 | | | 443 | 202 |
| 500 ISL | 5.45 D | 5.41 | 34.148 D | 26.952 | 115.7 | 1.017 | 0.73 | 10.3 | 81.7 | 2.94 | 40.7 | 0.00 | 0.01 | | | 503 | |
| 516 | 5.28 | 5.24 | 34.146 | 26.971 | 113.9 | 1.036 | 0.65 | 9.2 | 84.0 | 2.97 | 41.1 | 0.00 | 0.00 | | | 519 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 110.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 54.8 N | 124 10.3 W | 07/11/10 | 0657 UTC | 4197 m | 260 14 kn | | | 1021.0 mb | 17.2 C | 14.8 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.02 | 18.02 | 33.121 | 23.830 | 406.3 | 0.000 | 5.50 | 101.4 | 1.9 | 0.25 | 0.0 | 0.00 | 0.04 | 0.11 | 0.03 | 0 | |
| 2 | 18.02 | 18.02 | 33.121 | 23.830 | 406.4 | 0.008 | 5.50 | 101.4 | 1.9 | 0.25 | 0.0 | 0.00 | 0.04 | 0.11 | 0.03 | 2 | 221 |
| 10 | 18.02 | 18.02 | 33.121 | 23.830 | 406.6 | 0.041 | 5.51 | 101.6 | 1.8 | 0.24 | 0.0 | 0.00 | 0.07 | 0.11 | 0.03 | 10 | 219 |
| 10 | 18.02 | 18.02 | 33.123 | 23.832 | 406.5 | 0.041 | | | | | | | | | | 10 | 220 |
| 20 ISL | 18.03 D | 18.03 | 33.120 D | 23.827 | 407.2 | 0.081 | 5.50 | 101.4 | 1.7 | 0.24 | 0.0 | 0.00 | 0.06 | 0.12 | 0.02 | 20 | |
| 25 | 18.03 | 18.03 | 33.124 | 23.831 | 407.1 | 0.102 | 5.50 | 101.5 | 1.6 | 0.24 | 0.0 | 0.00 | 0.04 | 0.13 | 0.02 | 25 | 218 |
| 30 ISL | 18.04 D | 18.03 | 33.123 D | 23.828 | 407.5 | 0.122 | 5.50 | 101.5 | 1.6 | 0.24 | 0.0 | 0.00 | 0.03 | 0.13 | 0.02 | 30 | |
| 41 | 18.07 | 18.06 | 33.147 | 23.839 | 406.8 | 0.167 | 5.50 | 101.5 | 1.6 | 0.23 | 0.0 | 0.00 | 0.00 | 0.12 | 0.03 | 41 | 217 |
| 49 | 18.08 | 18.07 | 33.152 | 23.841 | 406.9 | 0.199 | 5.50 | 101.6 | 1.8 | 0.23 | 0.0 | 0.00 | 0.05 | 0.15 | 0.03 | 49 | 216 |
| 50 ISL | 17.65 D | 17.64 | 33.169 D | 23.958 | 395.8 | 0.203 | 5.54 | 101.5 | 1.8 | 0.23 | 0.0 | 0.00 | 0.05 | 0.16 | 0.03 | 50 | |
| 62 | 15.61 | 15.60 | 33.081 | 24.362 | 357.4 | 0.249 | 6.01 | 105.7 | 2.0 | 0.24 | 0.0 | 0.00 | 0.00 | 0.23 | 0.05 | 62 | 215 |
| 74 | 14.02 | 14.01 | 33.043 | 24.674 | 327.9 | 0.290 | 5.96 | 101.5 | 2.1 | 0.28 | 0.0 | 0.00 | 0.05 | 0.25 | 0.15 | 74 | 214 |
| 75 ISL | 13.93 D | 13.92 | 33.033 D | 24.685 | 326.9 | 0.293 | 5.96 | 101.3 | 2.1 | 0.28 | 0.0 | 0.00 | 0.05 | 0.26 | 0.15 | 75 | |
| 87 | 13.57 | 13.56 | 33.068 | 24.786 | 317.6 | 0.332 | 5.91 | 99.7 | 2.4 | 0.29 | 0.0 | 0.02 | 0.05 | 0.32 | 0.11 | 87 | 213 |
| 100 | 12.58 | 12.57 | 33.060 | 24.975 | 299.7 | 0.372 | 5.65 | 93.4 | 3.2 | 0.41 | 1.8 | 0.03 | 0.04 | 0.20 | 0.16 | 100 | 212 |
| 113 | 11.76 | 11.75 | 33.067 | 25.136 | 284.6 | 0.410 | 5.44 | 88.3 | 4.7 | 0.60 | 4.8 | 0.01 | 0.00 | 0.13 | 0.12 | 113 | 211 |
| 125 | 10.83 | 10.82 | 33.127 | 25.350 | 264.3 | 0.443 | 5.17 | 82.3 | 8.0 | 0.85 | 9.2 | 0.00 | 0.00 | 0.07 | 0.10 | 126 | 210 |
| 139 | 10.26 | 10.24 | 33.206 | 25.510 | 249.2 | 0.479 | 5.00 | 78.7 | 10.6 | 1.01 | 12.0 | 0.00 | 0.00 | 0.05 | 0.07 | 140 | 209 |
| 150 ISL | 10.11 D | 10.09 | 33.426 D | 25.708 | 230.7 | 0.505 | 4.73 | 74.3 | 13.8 | 1.18 | 14.9 | 0.00 | 0.00 | 0.03 | 0.05 | 151 | |
| 171 | 9.29 | 9.27 | 33.522 | 25.918 | 210.9 | 0.551 | 4.11 | 63.4 | 20.2 | 1.51 | 20.3 | 0.00 | 0.00 | 0.01 | 0.02 | 172 | 208 |
| 200 | 8.97 | 8.95 | 33.795 | 26.183 | 186.3 | 0.609 | 3.37 | 51.7 | 26.8 | 1.79 | 24.6 | 0.00 | 0.00 | 0.00 | 0.03 | 201 | 207 |
| 230 | 8.48 | 8.46 | 33.931 | 26.366 | 169.3 | 0.662 | 2.99 | 45.4 | 31.9 | 1.91 | 27.0 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.01 D | 7.98 | 33.949 D | 26.451 | 161.4 | 0.695 | 2.68 | 40.3 | 36.1 | 2.03 | 28.7 | 0.00 | 0.00 | | | 251 | |
| 270 | 7.83 | 7.80 | 34.006 | 26.522 | 154.9 | 0.727 | 2.39 | 35.8 | 40.5 | 2.15 | 30.2 | 0.00 | 0.00 | | | 271 | 205 |
| 300 ISL | 7.47 D | 7.44 | 34.035 D | 26.597 | 148.1 | 0.772 | 2.15 | 31.9 | 46.0 | 2.28 | 32.0 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.05 | 7.02 | 34.018 | 26.643 | 143.8 | 0.802 | 2.03 | 29.8 | 49.5 | 2.35 | 33.0 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 6.32 | 6.29 | 34.045 | 26.762 | 132.9 | 0.886 | 1.48 | 21.4 | 61.3 | 2.63 | 36.4 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.17 D | 6.13 | 34.059 D | 26.792 | 130.2 | 0.911 | 1.35 | 19.4 | 64.1 | 2.69 | 37.1 | 0.00 | 0.00 | | | 402 | |
| 440 | 5.91 | 5.87 | 34.083 | 26.844 | 125.6 | 0.962 | 1.10 | 15.7 | 69.7 | 2.80 | 38.4 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 5.46 D | 5.42 | 34.126 D | 26.934 | 117.4 | 1.035 | 0.78 | 11.1 | 79.0 | 2.95 | 40.2 | 0.00 | 0.00 | | | 503 | |
| 515 | 5.37 | 5.33 | 34.135 | 26.952 | 115.8 | 1.053 | 0.70 | 9.9 | 81.3 | 2.99 | 40.6 | 0.00 | 0.00 | | | 518 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 85.4 35.8

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 1.2 N | 118 50.6 W | 09/11/10 | 0828 UTC | 22 m | 270 08 kn | | | 1014.5 mb | 16.0 C | 14.0 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 14.07 | 14.07 | 33.413 | 24.947 | 299.8 | 0.000 | 5.29 | 90.4 | 4.7 | 0.75 | 5.6 | 0.24 | 0.37 | 3.48 | 0.59 | 0 | |
| 1 | 14.07 | 14.07 | 33.413 | 24.947 | 299.8 | 0.003 | 5.29 | 90.4 | 4.7 | 0.75 | 5.6 | 0.24 | 0.37 | 3.48 | 0.59 | 1 | 205 |
| 5 | 13.91 | 13.91 | 33.411 | 24.979 | 296.9 | 0.015 | 5.30 | 90.2 | 4.8 | 0.76 | 5.6 | 0.24 | 0.39 | 3.34 | 0.75 | 5 | 204 |
| 10 | 13.63 | 13.63 | 33.394 | 25.023 | 292.8 | 0.030 | 5.14 | 87.0 | 5.7 | 0.84 | 6.7 | 0.28 | 0.30 | 2.85 | 0.64 | 10 | 202 |
| 10 | 13.64 | 13.64 | 33.403 | 25.028 | 292.4 | 0.030 | | | | | | | | | | 10 | 203 |
| 15 | 13.45 | 13.45 | 33.390 | 25.057 | 289.8 | 0.044 | 5.03 | 84.8 | 6.6 | 0.91 | 7.8 | 0.33 | 0.28 | 2.60 | 0.73 | 15 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 33.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 53.5 N | 118 29.3 W | 04/11/10 | 1432 UTC | 59 m | 160 03 kn | 230 01 06 | 1 | 1014.1 mb | 19.7 C | 17.0 C | 13m | 4/8 | CI |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.33 | 17.33 | 33.471 | 24.264 | 364.9 | 0.000 | 5.95 | 108.5 | 0.0 | 0.21 | 0.0 | 0.00 | 0.00 | 0.68 | 0.18 | 0 | |
| 2 | 17.33 | 17.33 | 33.471 | 24.264 | 364.9 | 0.007 | 5.95 | 108.5 | 0.0 | 0.21 | 0.0 | 0.00 | 0.00 | 0.68 | 0.18 | 2 | 208 |
| 5 | 17.32 | 17.32 | 33.471 | 24.266 | 364.8 | 0.018 | 5.95 | 108.5 | 0.1 | 0.20 | 0.0 | 0.00 | 0.00 | 0.68 | 0.16 | 5 | 207 |
| 10 | 17.18 | 17.18 | 33.470 | 24.299 | 361.9 | 0.036 | 5.93 | 107.8 | 0.2 | 0.21 | 0.0 | 0.00 | 0.00 | 0.65 | 0.17 | 10 | 205 |
| 11 | 17.22 | 17.22 | 33.470 | 24.290 | 362.8 | 0.040 | | | | | | | | | | 11 | 206 |
| 20 ISL | 13.07 D | 13.07 | 33.376 D | 25.122 | 283.7 | 0.069 | 5.48 | 91.7 | 3.8 | 0.63 | 5.3 | 0.30 | 0.06 | 0.81 | 0.47 | 20 | |
| 21 | 13.79 | 13.79 | 33.372 | 24.974 | 297.9 | 0.072 | 5.41 | 91.9 | 4.4 | 0.69 | 6.1 | 0.33 | 0.07 | 0.82 | 0.50 | 21 | 204 |
| 30 | 12.04 | 12.04 | 33.364 | 25.312 | 265.8 | 0.097 | 4.56 | 74.6 | 10.7 | 1.19 | 13.3 | 0.33 | 1.21 | 0.57 | 0.52 | 30 | 203 |
| 41 | 11.56 | 11.55 | 33.431 | 25.454 | 252.6 | 0.126 | 3.75 | 60.8 | 15.0 | 1.45 | 18.6 | 0.45 | 0.00 | 0.19 | 0.22 | 41 | 202 |
| 50 | 10.94 | 10.93 | 33.516 | 25.632 | 235.8 | 0.148 | 3.22 | 51.5 | 20.1 | 1.70 | 20.2 | 0.24 | 0.22 | 0.14 | 0.29 | 50 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 35.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 50.2 N | 118 39.2 W | 04/11/10 | 1809 UTC | 660 m | 050 06 kn | 270 02 07 | 1 | 1014.9 mb | 21.9 C | 19.0 C | 19m | 3/8 | CI |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.12 | 18.12 | 33.496 | 24.092 | 381.3 | 0.000 | 5.77 | 106.9 | 1.9 | 0.21 | 0.0 | 0.00 | 0.06 | 0.45 | 0.10 | 0 | |
| 2 A | 18.12 | 18.12 | 33.496 | 24.092 | 381.3 | 0.008 | 5.77 | 106.9 | 1.9 | 0.21 | 0.0 | 0.00 | 0.06 | 0.45 | 0.10 | 2 | 223 |
| 10 ISL | 17.94 D | 17.94 | 33.494 D | 24.135 | 377.5 | 0.038 | 5.78 | 106.7 | 1.8 | 0.21 | 0.0 | 0.00 | 0.07 | 0.35 | 0.10 | 10 | |
| 13 A | 17.79 | 17.79 | 33.496 | 24.173 | 374.0 | 0.049 | 5.78 | 106.4 | 1.8 | 0.21 | 0.0 | 0.00 | 0.07 | 0.31 | 0.10 | 13 | 221 |
| 13 | 17.78 | 17.78 | 33.491 | 24.172 | 374.1 | 0.049 | | | | | | | | | | 13 | 222 |
| 20 | 17.72 | 17.72 | 33.497 | 24.191 | 372.5 | 0.075 | 5.79 | 106.4 | 1.7 | 0.21 | 0.0 | 0.00 | 0.07 | 0.34 | 0.13 | 20 | 220 |
| 27 A | 15.38 | 15.38 | 33.431 | 24.681 | 326.0 | 0.100 | 5.92 | 103.9 | 2.9 | 0.39 | 1.1 | 0.07 | 0.12 | 1.50 | 0.71 | 27 | 219 |
| 30 ISL | 13.99 D | 13.99 | 33.385 D | 24.943 | 301.1 | 0.109 | 5.64 | 96.2 | 4.0 | 0.58 | 3.9 | 0.24 | 0.11 | 1.24 | 0.62 | 30 | |
| 34 | 13.34 | 13.34 | 33.347 | 25.046 | 291.3 | 0.121 | 5.19 | 87.3 | 5.8 | 0.83 | 8.0 | 0.43 | 0.10 | 0.70 | 0.40 | 34 | 218 |
| 40 A | 12.19 | 12.18 | 33.325 | 25.254 | 271.6 | 0.138 | 4.85 | 79.6 | 8.6 | 1.03 | 11.3 | 0.25 | 0.11 | 0.47 | 0.27 | 40 | 217 |
| 50 ISL | 11.19 D | 11.18 | 33.368 D | 25.472 | 251.0 | 0.164 | 4.41 | 70.9 | 12.7 | 1.28 | 15.5 | 0.08 | 0.05 | 0.27 | 0.14 | 50 | |
| 52 A | 11.09 | 11.08 | 33.389 | 25.507 | 247.8 | 0.169 | 4.34 | 69.6 | 13.4 | 1.32 | 16.1 | 0.06 | 0.04 | 0.25 | 0.13 | 52 | 216 |
| 64 | 10.71 | 10.70 | 33.473 | 25.640 | 235.4 | 0.198 | 3.90 | 62.1 | 16.6 | 1.51 | 18.6 | 0.03 | 0.06 | 0.14 | 0.11 | 64 | 215 |
| 75 ISL | 10.38 D | 10.37 | 33.589 D | 25.787 | 221.6 | 0.223 | 3.31 | 52.3 | 20.6 | 1.71 | 21.5 | 0.03 | 0.00 | 0.06 | 0.12 | 75 | |
| 76 A | 10.39 | 10.38 | 33.606 | 25.799 | 220.5 | 0.225 | 3.25 | 51.4 | 21.0 | 1.73 | 21.8 | 0.03 | 0.00 | 0.05 | 0.12 | 76 | 214 |
| 88 | 10.35 | 10.34 | 33.712 | 25.889 | 212.2 | 0.251 | 2.63 | 41.6 | 24.5 | 1.92 | 23.9 | 0.02 | 0.25 | 0.02 | 0.09 | 88 | 213 |
| 100 | 10.12 | 10.11 | 33.803 | 25.999 | 202.0 | 0.276 | 2.49 | 39.2 | 26.7 | 1.98 | 24.7 | 0.01 | 0.00 | 0.01 | 0.06 | 100 | 212 |
| 120 | 9.94 | 9.93 | 33.936 | 26.134 | 189.6 | 0.315 | 2.16 | 33.9 | 29.7 | 2.10 | 25.9 | 0.01 | 0.00 | 0.01 | 0.06 | 121 | 211 |
| 125 ISL | 9.91 D | 9.90 | 33.960 D | 26.158 | 187.4 | 0.325 | 2.12 | 33.3 | 30.1 | 2.11 | 26.1 | 0.01 | 0.00 | 0.01 | 0.06 | 126 | |
| 140 | 9.81 | 9.79 | 34.002 | 26.208 | 183.0 | 0.353 | 2.02 | 31.6 | 31.2 | 2.13 | 26.6 | 0.00 | 0.00 | 0.01 | 0.06 | 141 | 210 |
| 150 ISL | 9.74 D | 9.72 | 34.059 D | 26.264 | 177.9 | 0.371 | 1.93 | 30.2 | 32.0 | 2.16 | 27.0 | 0.00 | 0.00 | 0.01 | 0.06 | 151 | |
| 170 | 9.56 | 9.54 | 34.107 | 26.332 | 171.8 | 0.406 | 1.77 | 27.6 | 33.8 | 2.24 | 27.8 | 0.00 | 0.00 | 0.01 | 0.05 | 171 | 209 |
| 200 | 9.28 | 9.26 | 34.155 | 26.415 | 164.4 | 0.456 | 1.60 | 24.8 | 36.6 | 2.32 | 29.0 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | 208 |
| 230 | 8.89 | 8.87 | 34.196 | 26.510 | 155.9 | 0.504 | 1.26 | 19.3 | 41.3 | 2.45 | 30.8 | 0.01 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.72 D | 8.69 | 34.212 D | 26.550 | 152.5 | 0.535 | 1.18 | 18.0 | 43.2 | 2.51 | 31.4 | 0.01 | 0.00 | | | 251 | |
| 270 | 8.55 | 8.52 | 34.218 | 26.581 | 149.8 | 0.565 | 1.13 | 17.2 | 44.7 | 2.55 | 31.8 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 8.30 D | 8.27 | 34.230 D | 26.629 | 145.7 | 0.610 | 0.98 | 14.8 | 47.9 | 2.61 | 32.7 | 0.00 | 0.00 | | | 302 | |
| 321 | 8.11 | 8.08 | 34.237 | 26.663 | 142.7 | 0.640 | 0.87 | 13.1 | 50.3 | 2.66 | 33.4 | 0.00 | 0.00 | | | 323 | 204 |
| 380 | 7.61 | 7.57 | 34.255 | 26.752 | 135.1 | 0.722 | 0.69 | 10.3 | 57.3 | 2.82 | 34.9 | 0.01 | 0.06 | | | 382 | 203 |
| 400 ISL | 7.37 D | 7.33 | 34.261 D | 26.791 | 131.5 | 0.748 | 0.63 | 9.3 | 60.4 | 2.87 | 35.6 | 0.01 | 0.04 | | | 403 | |
| 440 | 6.94 | 6.90 | 34.272 | 26.859 | 125.2 | 0.800 | 0.50 | 7.3 | 66.9 | 2.95 | 36.8 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 6.41 D | 6.36 | 34.302 D | 26.954 | 116.6 | 0.872 | 0.34 | 4.9 | 76.1 | 3.08 | 37.9 | 0.00 | 0.00 | | | 503 | |
| 516 | 6.29 | 6.24 | 34.311 | 26.977 | 114.6 | 0.891 | 0.30 | 4.3 | 78.5 | 3.11 | 38.2 | 0.00 | 0.00 | | | 520 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 40.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 39.6 N | 118 58.4 W | 04/11/10 | 2129 UTC | 789 m | 130 05 kn | 250 02 07 | 1 | 1012.8 mb | 22.8 C | 19.8 C | 17m | 4/8 | AS |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.19 | 18.19 | 33.479 | 24.062 | 384.1 | 0.000 | 5.71 | 105.9 | 1.2 | 0.21 | 0.0 | 0.00 | 0.28 | 0.36 | 0.31 | 0 | |
| 2 | 18.19 | 18.19 | 33.479 | 24.062 | 384.2 | 0.008 | 5.71 | 105.9 | 1.2 | 0.21 | 0.0 | 0.00 | 0.28 | 0.36 | 0.31 | 2 | 224 |
| 10 | 18.03 | 18.03 | 33.477 | 24.100 | 380.9 | 0.038 | 5.73 | 105.9 | 1.4 | 0.24 | 0.0 | 0.00 | 0.47 | 0.15 | 0.20 | 10 | 223 |
| 20 | 17.47 | 17.47 | 33.478 | 24.237 | 368.2 | 0.076 | 5.88 | 107.5 | 0.7 | 0.21 | 0.0 | 0.00 | 0.30 | 0.08 | 0.15 | 20 | 222 |
| 30 ISL | 13.06 D | 13.06 | 33.282 D | 25.052 | 290.7 | 0.109 | 5.30 | 88.6 | 5.2 | 0.76 | 7.0 | 0.43 | 0.16 | 0.04 | 0.11 | 30 | |
| 31 | 13.12 | 13.12 | 33.290 | 25.046 | 291.2 | 0.112 | 5.22 | 87.4 | 5.8 | 0.83 | 7.9 | 0.46 | 0.15 | 0.04 | 0.11 | 31 | 221 |
| 41 | 11.57 | 11.56 | 33.371 | 25.405 | 257.2 | 0.139 | 4.50 | 72.9 | 11.4 | 1.20 | 14.2 | 0.12 | 0.26 | 0.04 | 0.32 | 41 | 220 |
| 50 | 10.82 | 10.81 | 33.466 | 25.615 | 237.5 | 0.161 | 3.98 | 63.5 | 15.8 | 1.45 | 18.1 | 0.03 | 0.10 | 0.02 | 0.08 | 50 | 219 |
| 60 | 10.39 | 10.38 | 33.542 | 25.749 | 224.9 | 0.184 | 3.66 | 57.9 | 18.3 | 1.59 | 20.2 | 0.02 | 0.18 | 0.01 | 0.07 | 60 | 218 |
| 70 | 10.13 | 10.12 | 33.637 | 25.867 | 213.8 | 0.206 | 3.30 | 51.9 | 21.1 | 1.71 | 22.2 | 0.01 | 0.06 | 0.01 | 0.06 | 70 | 217 |
| 75 ISL | 10.12 D | 10.11 | 33.639 D | 25.871 | 213.6 | 0.217 | 3.22 | 50.6 | 22.0 | 1.74 | 22.7 | 0.01 | 0.06 | 0.01 | 0.06 | 75 | |
| 85 | 9.91 | 9.90 | 33.722 | 25.971 | 204.3 | 0.238 | 3.10 | 48.6 | 23.5 | 1.79 | 23.4 | 0.01 | 0.05 | 0.01 | 0.05 | 85 | 216 |
| 100 ISL | 9.78 D | 9.77 | 33.823 D | 26.072 | 195.0 | 0.268 | 2.80 | 43.8 | 25.8 | 1.89 | 24.4 | 0.01 | 0.12 | 0.00 | 0.04 | 101 | |
| 101 | 9.79 | 9.78 | 33.815 | 26.064 | 195.8 | 0.270 | 2.78 | 43.5 | 26.0 | 1.90 | 24.5 | 0.01 | 0.12 | 0.00 | 0.04 | 102 | 215 |
| 120 | 9.83 | 9.82 | 33.962 | 26.173 | 185.9 | 0.306 | 2.15 | 33.7 | 29.8 | 2.09 | 26.3 | 0.01 | 0.00 | 0.00 | 0.04 | 121 | 214 |
| 125 ISL | 9.78 D | 9.77 | 34.006 D | 26.215 | 181.9 | 0.315 | 2.12 | 33.2 | 30.5 | 2.11 | 26.6 | 0.01 | 0.00 | 0.00 | 0.04 | 126 | |
| 140 | 9.55 | 9.53 | 34.042 | 26.282 | 175.9 | 0.342 | 2.02 | 31.5 | 32.1 | 2.14 | 27.1 | 0.01 | 0.00 | 0.01 | 0.04 | 141 | 213 |
| 150 ISL | 9.54 D | 9.52 | 34.079 D | 26.313 | 173.2 | 0.360 | 1.98 | 30.8 | 32.9 | 2.16 | 27.4 | 0.01 | 0.02 | 0.01 | 0.04 | 151 | |
| 170 | 9.29 | 9.27 | 34.101 | 26.371 | 168.0 | 0.394 | 1.87 | 29.0 | 34.7 | 2.21 | 28.1 | 0.01 | 0.06 | 0.00 | 0.04 | 171 | 212 |
| 200 | 8.97 | 8.95 | 34.169 | 26.476 | 158.6 | 0.443 | 1.50 | 23.1 | 39.0 | 2.36 | 29.7 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | 211 |
| 231 | 8.82 | 8.80 | 34.225 | 26.544 | 152.7 | 0.491 | 1.25 | 19.2 | 41.7 | 2.46 | 30.8 | 0.00 | 0.00 | | | 232 | 210 |
| 250 ISL | 8.72 D | 8.69 | 34.221 D | 26.557 | 151.8 | 0.520 | 1.16 | 17.7 | 43.0 | 2.50 | 31.3 | 0.00 | 0.03 | | | 251 | |
| 270 | 8.57 | 8.54 | 34.231 | 26.588 | 149.1 | 0.550 | 1.09 | 16.6 | 44.3 | 2.54 | 31.7 | 0.00 | 0.05 | | | 272 | 209 |
| 300 ISL | 8.40 D | 8.37 | 34.239 D | 26.621 | 146.5 | 0.594 | 0.98 | 14.9 | 46.8 | 2.60 | 32.4 | 0.00 | 0.03 | | | 302 | |
| 321 | 8.22 | 8.19 | 34.249 | 26.656 | 143.4 | 0.625 | 0.90 | 13.6 | 49.0 | 2.65 | 33.0 | 0.00 | 0.00 | | | 323 | 208 |
| 381 | 7.42 | 7.38 | 34.258 | 26.781 | 132.1 | 0.707 | 0.62 | 9.2 | 59.1 | 2.82 | 35.6 | 0.01 | 0.00 | | | 383 | 207 |
| 400 ISL | 7.12 D | 7.08 | 34.265 D | 26.829 | 127.7 | 0.732 | 0.57 | 8.4 | 61.7 | 2.86 | 36.2 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.91 | 6.87 | 34.271 | 26.863 | 124.9 | 0.783 | 0.50 | 7.3 | 66.5 | 2.94 | 37.2 | 0.00 | 0.00 | | | 443 | 206 |
| 500 ISL | 6.57 D | 6.52 | 34.288 D | 26.922 | 119.9 | 0.856 | 0.44 | 6.4 | 71.9 | 3.02 | 38.0 | 0.00 | 0.04 | | | 503 | |
| 516 | 6.49 | 6.44 | 34.293 | 26.937 | 118.6 | 0.875 | 0.42 | 6.1 | 73.4 | 3.04 | 38.2 | 0.00 | 0.05 | | | 520 | 205 |
| 600 ISL | 5.83 D | 5.78 | 34.339 D | 27.058 | 107.5 | 0.970 | 0.25 | 3.6 | 85.3 | 3.16 | 39.7 | 0.00 | 0.01 | | | 604 | |
| 607 | 5.80 | 5.75 | 34.342 | 27.064 | 107.0 | 0.978 | 0.24 | 3.4 | 86.3 | 3.17 | 39.8 | 0.00 | 0.00 | | | 611 | 204 |
| 691 | 5.46 | 5.40 | 34.378 | 27.135 | 101.0 | 1.065 | 0.18 | 2.6 | 96.3 | 3.23 | 39.9 | 0.00 | 0.00 | | | 696 | 203 |
| 700 ISL | 5.44 D | 5.38 | 34.378 D | 27.138 | 100.8 | 1.074 | 0.18 | 2.6 | 97.3 | 3.24 | 39.8 | 0.00 | 0.00 | | | 705 | |
| 776 | 5.26 | 5.19 | 34.393 | 27.172 | 98.3 | 1.150 | 0.14 | 2.0 | 102.9 | 3.28 | 38.9 | 0.01 | 0.00 | | | 782 | 202 |
| 780 | 5.24 | 5.17 | 34.396 | 27.176 | 97.8 | 1.154 | 0.15 | 2.1 | 103.0 | 3.27 | 39.2 | 0.01 | 0.00 | | | 786 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 45.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 29.3 N | 119 19.0 W | 05/11/10 | 0148 UTC | 1641 m | 230 05 kn | | | 1012.0 mb | 19.8 C | 17.3 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.43 | 17.43 | 33.495 | 24.258 | 365.4 | 0.000 | 5.81 | 106.2 | 1.9 | 0.26 | 0.2 | 0.02 | 0.21 | 0.48 | 0.19 | 0 | |
| 2 | 17.43 | 17.43 | 33.495 | 24.258 | 365.5 | 0.007 | 5.81 | 106.2 | 1.9 | 0.26 | 0.2 | 0.02 | 0.21 | 0.48 | 0.19 | 2 | 221 |
| 10 | 16.90 | 16.90 | 33.494 | 24.383 | 353.8 | 0.036 | 5.82 | 105.3 | 2.0 | 0.27 | 0.3 | 0.03 | 0.15 | 0.43 | 0.31 | 10 | 219 |
| 10 | 16.93 | 16.93 | 33.493 | 24.376 | 354.6 | 0.036 | | | | | | | | | | 10 | 220 |
| 20 | 15.65 | 15.65 | 33.475 | 24.655 | 328.3 | 0.070 | 5.74 | 101.3 | 2.3 | 0.41 | 2.3 | 0.08 | 0.17 | 2.65 | 0.97 | 20 | 218 |
| 30 | 14.51 | 14.51 | 33.484 | 24.910 | 304.2 | 0.102 | 5.24 | 90.4 | 5.3 | 0.71 | 6.4 | 0.16 | 0.28 | 2.96 | 0.94 | 30 | 217 |
| 40 | 11.66 | 11.65 | 33.496 | 25.486 | 249.5 | 0.130 | 4.11 | 66.8 | 14.0 | 1.34 | 16.1 | 0.23 | 0.12 | 0.38 | 0.32 | 40 | 216 |
| 50 | 10.57 | 10.56 | 33.559 | 25.731 | 226.4 | 0.153 | 3.66 | 58.1 | 18.6 | 1.57 | 20.0 | 0.09 | 0.07 | 0.09 | 0.12 | 50 | 215 |
| 61 | 10.32 | 10.31 | 33.655 | 25.849 | 215.4 | 0.178 | 3.25 | 51.4 | 21.7 | 1.72 | 22.2 | 0.06 | 0.00 | 0.05 | 0.12 | 61 | 214 |
| 70 | 9.90 | 9.89 | 33.720 | 25.971 | 204.0 | 0.196 | 3.03 | 47.5 | 24.5 | 1.82 | 23.8 | 0.03 | 0.00 | 0.04 | 0.12 | 70 | 213 |
| 75 ISL | 9.87 D | 9.86 | 33.757 D | 26.005 | 200.8 | 0.207 | 2.89 | 45.2 | 25.8 | 1.87 | 24.5 | 0.03 | 0.02 | 0.03 | 0.10 | 75 | |
| 85 | 9.60 | 9.59 | 33.855 | 26.126 | 189.5 | 0.226 | 2.60 | 40.5 | 28.2 | 1.97 | 25.7 | 0.02 | 0.06 | 0.02 | 0.07 | 85 | 212 |
| 100 | 9.46 | 9.45 | 33.970 | 26.240 | 179.0 | 0.254 | 2.25 | 34.9 | 31.1 | 2.08 | 26.8 | 0.02 | 0.06 | 0.03 | 0.08 | 101 | 211 |
| 120 | 9.33 | 9.32 | 34.021 | 26.301 | 173.6 | 0.289 | 2.11 | 32.7 | 32.5 | 2.13 | 27.4 | 0.01 | 0.00 | 0.01 | 0.06 | 121 | 210 |
| 125 ISL | 9.32 D | 9.31 | 34.036 D | 26.314 | 172.4 | 0.298 | 2.06 | 31.9 | 33.1 | 2.15 | 27.6 | 0.01 | 0.00 | 0.01 | 0.05 | 126 | |
| 140 | 9.11 | 9.09 | 34.088 | 26.389 | 165.6 | 0.323 | 1.89 | 29.1 | 35.2 | 2.21 | 28.4 | 0.01 | 0.00 | 0.01 | 0.04 | 141 | 209 |
| 150 ISL | 9.07 D | 9.05 | 34.107 D | 26.411 | 163.8 | 0.340 | 1.80 | 27.7 | 36.5 | 2.25 | 28.9 | 0.01 | 0.00 | 0.01 | 0.04 | 151 | |
| 170 | 8.78 | 8.76 | 34.137 | 26.480 | 157.5 | 0.372 | 1.62 | 24.8 | 39.1 | 2.33 | 29.8 | 0.01 | 0.00 | 0.01 | 0.04 | 171 | 208 |
| 200 | 8.69 | 8.67 | 34.211 | 26.553 | 151.2 | 0.418 | 1.19 | 18.2 | 42.5 | 2.48 | 31.0 | 0.00 | 0.07 | 0.01 | 0.04 | 201 | 207 |
| 230 | 8.46 | 8.44 | 34.235 | 26.608 | 146.5 | 0.463 | 1.04 | 15.8 | 45.8 | 2.55 | 32.1 | 0.01 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.23 D | 8.20 | 34.230 D | 26.639 | 143.8 | 0.492 | 0.97 | 14.7 | 47.8 | 2.60 | 32.7 | 0.01 | 0.00 | | | 252 | |
| 270 | 8.09 | 8.06 | 34.242 | 26.669 | 141.2 | 0.520 | 0.92 | 13.9 | 49.7 | 2.64 | 33.2 | 0.01 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.90 D | 7.87 | 34.244 D | 26.700 | 138.7 | 0.562 | 0.83 | 12.5 | 51.7 | 2.70 | 33.8 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.81 | 7.78 | 34.250 | 26.718 | 137.3 | 0.591 | 0.77 D | 11.5 D | 53.2 | 2.74 | 34.2 | 0.00 | 0.00 | | | 323 | 204 |
| 380 | 7.31 | 7.27 | 34.258 | 26.797 | 130.6 | 0.670 | 0.61 | 9.0 | 59.8 | 2.84 | 35.8 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 7.10 D | 7.06 | 34.274 D | 26.839 | 126.7 | 0.696 | 0.56 | 8.3 | 62.0 | 2.88 | 36.3 | 0.00 | 0.00 | | | 403 | |
| 440 | 6.84 | 6.80 | 34.276 | 26.876 | 123.6 | 0.746 | 0.46 | 6.7 | 66.5 | 2.95 | 37.2 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 6.42 D | 6.37 | 34.291 D | 26.944 | 117.6 | 0.818 | 0.36 | 5.2 | 73.0 | 3.03 | 38.5 | 0.00 | 0.00 | | | 503 | |
| 515 | 6.32 | 6.27 | 34.297 | 26.962 | 116.0 | 0.836 | 0.33 | 4.8 | 74.6 | 3.05 | 38.8 | 0.00 | 0.00 | | | 519 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 50.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 19.3 N | 119 39.7 W | 05/11/10 | 0636 UTC | 81 m | 230 07 kn | | | 1013.2 mb | 16.6 C | 15.3 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 15.93 | 15.93 | 33.398 | 24.532 | 339.3 | 0.000 | 6.28 | 111.4 | 0.0 | 0.19 | 0.0 | 0.00 | 0.00 | 2.93 | 0.86 | 0 | |
| 2 | 15.93 | 15.93 | 33.398 | 24.532 | 339.4 | 0.007 | 6.28 | 111.4 | 0.0 | 0.19 | 0.0 | 0.00 | 0.00 | 2.93 | 0.86 | 2 | 210 |
| 5 | 15.93 | 15.93 | 33.407 | 24.539 | 338.8 | 0.017 | 6.29 | 111.6 | 0.0 | 0.19 | 0.0 | 0.00 | 0.00 | 3.34 | 0.58 | 5 | 209 |
| 10 | 15.91 | 15.91 | 33.400 | 24.539 | 339.0 | 0.034 | 6.29 | 111.5 | 0.0 | 0.19 | 0.0 | 0.01 | 0.00 | 3.59 | 0.46 | 10 | 207 |
| 10 | 15.89 | 15.89 | 33.403 | 24.545 | 338.4 | 0.034 | | | | | | | | | | 10 | 208 |
| 20 | 15.67 | 15.67 | 33.405 | 24.597 | 333.8 | 0.068 | 6.32 | 111.5 | 0.2 | 0.20 | 0.0 | 0.01 | 0.00 | 5.03 | 0.11 | 20 | 206 |
| 30 | 15.45 | 15.45 | 33.420 | 24.657 | 328.3 | 0.101 | 6.30 | 110.7 | 0.0 | 0.22 | 0.0 | 0.01 | 0.00 | 4.52 | 1.51 | 30 | 205 |
| 41 | 14.13 | 14.12 | 33.464 | 24.975 | 298.3 | 0.135 | 5.16 | 88.3 | 5.6 | 0.77 | 5.8 | 0.23 | 0.74 | 4.97 | 1.02 | 41 | 204 |
| 50 | 11.28 | 11.27 | 33.209 | 25.333 | 264.3 | 0.160 | 4.84 | 77.9 | 10.5 | 1.12 | 12.6 | 0.09 | 0.00 | 1.46 | 0.58 | 50 | 203 |
| 60 | 9.83 | 9.82 | 33.479 | 25.794 | 220.5 | 0.185 | 3.97 | 62.0 | 20.3 | 1.60 | 20.8 | 0.05 | 0.00 | 0.19 | 0.24 | 60 | 202 |
| 70 | 9.70 | 9.69 | 33.551 | 25.872 | 213.3 | 0.206 | 3.71 | 57.8 | 22.4 | 1.70 | 22.1 | 0.05 | 0.00 | 0.21 | 0.26 | 70 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 55.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 9.5 N | 120 0.2 W | 05/11/10 | 1020 UTC | 1202 m | 260 06 kn | | | 1012.3 mb | 14.0 C | 13.3 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.03 | 16.03 | 33.323 | 24.452 | 347.0 | 0.000 | 5.92 | 105.2 | 1.2 | 0.28 | 0.1 | 0.03 | 0.05 | 1.22 | 0.11 | 0 | |
| 2 | 16.03 | 16.03 | 33.323 | 24.452 | 347.0 | 0.007 | 5.92 | 105.2 | 1.2 | 0.28 | 0.1 | 0.03 | 0.05 | 1.22 | 0.11 | 2 | 222 |
| 10 | 15.97 | 15.97 | 33.324 | 24.467 | 345.9 | 0.035 | 5.96 | 105.7 | 0.9 | 0.26 | 0.1 | 0.03 | 0.07 | 1.44 | 0.34 | 10 | 220 |
| 10 | 16.01 | 16.01 | 33.320 | 24.455 | 347.0 | 0.035 | | | | | | | | | | 10 | 221 |
| 20 | 15.54 | 15.54 | 33.316 | 24.557 | 337.6 | 0.069 | 5.81 | 102.2 | 0.7 | 0.34 | 0.6 | 0.07 | 0.19 | 1.77 | 0.49 | 20 | 219 |
| 25 | 14.98 | 14.98 | 33.277 | 24.650 | 328.9 | 0.086 | 5.63 | 97.9 | 1.2 | 0.46 | 1.7 | 0.14 | 0.34 | 1.74 | 0.74 | 25 | 218 |
| 30 | 13.84 | 13.84 | 33.149 | 24.792 | 315.5 | 0.102 | 5.48 | 93.0 | 3.3 | 0.57 | 3.7 | 0.20 | 0.18 | 0.87 | 0.51 | 30 | 217 |
| 41 | 11.77 | 11.76 | 33.038 | 25.110 | 285.3 | 0.135 | 5.24 | 85.1 | 7.2 | 0.87 | 8.5 | 0.04 | 0.00 | 0.26 | 0.17 | 41 | 216 |
| 50 | 11.28 | 11.27 | 33.077 | 25.230 | 274.1 | 0.160 | 5.12 | 82.3 | 9.0 | 0.98 | 10.4 | 0.02 | 0.00 | 0.16 | 0.18 | 50 | 215 |
| 60 | 10.85 | 10.84 | 33.145 | 25.359 | 261.9 | 0.187 | 4.93 | 78.5 | 11.2 | 1.12 | 12.7 | 0.02 | 0.00 | 0.10 | 0.10 | 60 | 214 |
| 71 | 10.22 | 10.21 | 33.258 | 25.557 | 243.4 | 0.214 | 4.65 | 73.1 | 14.6 | 1.31 | 15.9 | 0.01 | 0.05 | 0.04 | 0.07 | 71 | 213 |
| 75 ISL | 10.11 D | 10.10 | 33.302 D | 25.609 | 238.4 | 0.224 | 4.53 | 71.1 | 15.5 | 1.38 | 17.0 | 0.01 | 0.04 | 0.04 | 0.07 | 75 | |
| 86 | 10.25 | 10.24 | 33.437 | 25.691 | 230.9 | 0.250 | 4.16 | 65.5 | 18.1 | 1.56 | 19.8 | 0.01 | 0.00 | 0.03 | 0.07 | 86 | 212 |
| 100 | 9.53 | 9.52 | 33.592 | 25.933 | 208.2 | 0.281 | 3.64 | 56.5 | 23.1 | 1.77 | 23.3 | 0.01 | 0.00 | 0.01 | 0.05 | 100 | 211 |
| 120 | 9.09 | 9.08 | 33.751 | 26.128 | 189.9 | 0.320 | 3.19 | 49.1 | 26.8 | 1.88 | 25.4 | 0.00 | 0.00 | 0.00 | 0.04 | 121 | 210 |
| 125 ISL | 9.04 D | 9.03 | 33.784 D | 26.162 | 186.8 | 0.330 | 3.15 | 48.4 | 27.5 | 1.89 | 25.6 | 0.00 | 0.00 | 0.00 | 0.04 | 126 | |
| 140 | 8.75 | 8.74 | 33.892 | 26.292 | 174.7 | 0.357 | 3.08 | 47.1 | 29.5 | 1.90 | 25.9 | 0.00 | 0.00 | 0.00 | 0.04 | 141 | 209 |
| 150 ISL | 8.64 D | 8.62 | 33.923 D | 26.334 | 170.9 | 0.374 | 3.05 | 46.5 | 30.7 | 1.92 | 26.2 | 0.00 | 0.00 | 0.00 | 0.04 | 151 | |
| 170 | 8.40 | 8.38 | 33.978 | 26.414 | 163.6 | 0.408 | 2.85 | 43.2 | 33.4 | 1.96 | 27.1 | 0.00 | 0.00 | 0.00 | 0.03 | 171 | 208 |
| 200 ISL | 8.27 D | 8.25 | 34.084 D | 26.517 | 154.3 | 0.455 | 1.92 | 29.1 | 40.0 | 2.29 | 30.4 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | |
| 201 | 8.27 | 8.25 | 34.079 | 26.514 | 154.7 | 0.457 | 1.89 | 28.6 | 40.2 | 2.30 | 30.5 | 0.00 | 0.00 | 0.00 | 0.04 | 202 | 207 |
| 231 | 7.85 | 7.83 | 34.095 | 26.589 | 147.9 | 0.502 | 1.65 | 24.7 | 45.0 | 2.42 | 32.0 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 7.85 D | 7.83 | 34.155 D | 26.636 | 143.8 | 0.530 | 1.43 | 21.4 | 48.1 | 2.51 | 33.0 | 0.00 | 0.00 | | | 251 | |
| 270 | 7.47 | 7.44 | 34.135 | 26.676 | 140.2 | 0.558 | 1.22 | 18.1 | 51.4 | 2.60 | 34.0 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.04 D | 7.01 | 34.141 D | 26.741 | 134.3 | 0.600 | 1.07 | 15.7 | 56.2 | 2.71 | 35.4 | 0.00 | 0.00 | | | 302 | |
| 321 | 6.86 | 6.83 | 34.147 | 26.770 | 131.7 | 0.628 | 1.00 D | 14.6 D | 59.4 | 2.78 | 36.2 | 0.00 | 0.00 | | | 323 | 204 |
| 380 | 6.42 | 6.39 | 34.203 | 26.873 | 122.5 | 0.703 | 0.63 | 9.1 | 68.0 | 2.93 | 37.8 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.28 D | 6.24 | 34.207 D | 26.895 | 120.6 | 0.727 | 0.57 | 8.2 | 69.9 | 2.96 | 38.2 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.14 | 6.10 | 34.235 | 26.936 | 117.3 | 0.776 | 0.48 | 6.9 | 73.2 | 3.02 | 38.8 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.93 D | 5.89 | 34.289 D | 27.005 | 111.3 | 0.843 | 0.35 | 5.0 | 78.2 | 3.10 | 39.6 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.86 | 5.82 | 34.294 | 27.018 | 110.2 | 0.861 | 0.31 | 4.4 | 79.6 | 3.12 | 39.8 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 60.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 59.4 N | 120 21.1 W | 05/11/10 | 1606 UTC | 721 m | 090 01 kn | 280 04 09 | 1 | 1013.1 mb | 14.5 C | 13.9 C | 22m | 7/8 | SC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.54 | 16.54 | 33.107 | 24.170 | 373.9 | 0.000 | 5.75 | 103.0 | 1.7 | 0.26 | 0.0 | 0.00 | 0.08 | 0.25 | 0.08 | 0 | |
| 2 A | 16.54 | 16.54 | 33.107 | 24.170 | 373.9 | 0.007 | 5.75 | 103.0 | 1.7 | 0.26 | 0.0 | 0.00 | 0.08 | 0.25 | 0.08 | 2 | 223 |
| 8 | 16.54 | 16.54 | 33.106 | 24.169 | 374.2 | 0.030 | 5.75 | 103.0 | 1.7 | 0.26 | 0.0 | 0.00 | 0.06 | 0.25 | 0.08 | 8 | 221 |
| 8 | 16.54 | 16.54 | 33.107 | 24.170 | 374.1 | 0.030 | | | | | | | | | | 8 | 222 |
| 10 ISL | 16.54 D | 16.54 | 33.104 D | 24.168 | 374.4 | 0.037 | 5.76 | 103.2 | 1.7 | 0.26 | 0.0 | 0.00 | 0.06 | 0.25 | 0.08 | 10 | |
| 15 A | 16.52 | 16.52 | 33.114 | 24.180 | 373.4 | 0.056 | 5.77 | 103.4 | 1.7 | 0.26 | 0.0 | 0.00 | 0.07 | 0.27 | 0.08 | 15 | 220 |
| 20 ISL | 15.98 D | 15.98 | 33.170 D | 24.346 | 357.7 | 0.074 | 5.86 | 103.9 | 1.7 | 0.27 | 0.2 | 0.01 | 0.09 | 0.32 | 0.10 | 20 | |
| 23 | 15.81 | 15.81 | 33.185 | 24.396 | 353.0 | 0.085 | 5.90 | 104.2 | 1.7 | 0.27 | 0.3 | 0.02 | 0.11 | 0.35 | 0.13 | 23 | 219 |
| 30 A | 15.22 | 15.22 | 33.207 | 24.544 | 339.1 | 0.109 | 5.85 | 102.2 | 1.7 | 0.31 | 0.7 | 0.07 | 0.34 | 0.40 | 0.22 | 30 | 218 |
| 38 | 14.13 | 14.12 | 33.116 | 24.706 | 323.8 | 0.136 | 5.76 | 98.3 | 2.2 | 0.41 | 1.2 | 0.27 | 0.49 | 0.35 | 0.25 | 38 | 217 |
| 46 A | 12.53 | 12.52 | 32.941 | 24.891 | 306.3 | 0.161 | 5.65 | 93.2 | 3.7 | 0.52 | 3.0 | 0.08 | 0.06 | 0.32 | 0.24 | 46 | 216 |
| 50 ISL | 12.42 D | 12.41 | 32.936 D | 24.909 | 304.7 | 0.173 | 5.65 | 93.0 | 3.6 | 0.54 | 3.2 | 0.07 | 0.03 | 0.29 | 0.21 | 50 | |
| 53 | 12.30 | 12.29 | 32.934 | 24.930 | 302.8 | 0.182 | 5.65 | 92.7 | 3.6 | 0.55 | 3.3 | 0.06 | 0.00 | 0.27 | 0.18 | 53 | 215 |
| 60 A | 12.02 | 12.01 | 32.937 | 24.985 | 297.6 | 0.203 | 5.59 | 91.2 | 4.2 | 0.59 | 4.1 | 0.05 | 0.00 | 0.23 | 0.15 | 60 | 214 |
| 74 | 11.16 | 11.15 | 33.052 | 25.232 | 274.4 | 0.243 | 5.22 | 83.7 | 8.6 | 0.93 | 10.0 | 0.02 | 0.00 | 0.07 | 0.12 | 74 | 213 |
| 75 ISL | 10.76 D | 10.75 | 33.096 D | 25.337 | 264.4 | 0.246 | 5.19 | 82.5 | 9.0 | 0.96 | 10.4 | 0.02 | 0.00 | 0.06 | 0.12 | 75 | |
| 88 A | 10.03 | 10.02 | 33.227 | 25.565 | 242.9 | 0.279 | 4.70 | 73.6 | 14.1 | 1.27 | 15.6 | 0.01 | 0.00 | 0.02 | 0.06 | 88 | 212 |
| 100 ISL | 9.44 D | 9.43 | 33.436 D | 25.825 | 218.3 | 0.307 | 4.19 | 64.8 | 19.0 | 1.51 | 19.6 | 0.01 | 0.00 | 0.01 | 0.05 | 100 | |
| 104 | 9.36 | 9.35 | 33.491 | 25.881 | 213.1 | 0.315 | 4.03 | 62.3 | 20.4 | 1.57 | 20.7 | 0.01 | 0.00 | 0.01 | 0.05 | 104 | 211 |
| 120 | 9.18 | 9.17 | 33.641 | 26.028 | 199.5 | 0.348 | 3.63 | 55.9 | 23.4 | 1.70 | 22.8 | 0.00 | 0.00 | 0.00 | 0.04 | 121 | 210 |
| 125 ISL | 9.17 D | 9.16 | 33.656 D | 26.041 | 198.3 | 0.358 | 3.54 | 54.5 | 24.2 | 1.72 | 23.3 | 0.00 | 0.00 | 0.00 | 0.04 | 126 | |
| 140 | 8.99 | 8.97 | 33.824 | 26.202 | 183.3 | 0.387 | 3.27 | 50.2 | 26.6 | 1.79 | 24.6 | 0.00 | 0.00 | 0.00 | 0.04 | 141 | 209 |
| 150 ISL | 8.86 D | 8.84 | 33.858 D | 26.249 | 179.0 | 0.405 | 2.97 | 45.5 | 28.9 | 1.90 | 26.1 | 0.00 | 0.00 | 0.00 | 0.04 | 151 | |
| 171 | 8.63 | 8.61 | 33.948 | 26.355 | 169.2 | 0.442 | 2.39 | 36.4 | 33.4 | 2.11 | 28.9 | 0.00 | 0.00 | 0.00 | 0.04 | 172 | 208 |
| 200 ISL | 8.30 D | 8.28 | 33.997 D | 26.445 | 161.2 | 0.490 | 2.23 | 33.7 | 36.0 | 2.16 | 29.8 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | |
| 202 | 8.31 | 8.29 | 33.996 | 26.442 | 161.5 | 0.493 | 2.23 | 33.8 | 36.2 | 2.16 | 29.8 | 0.00 | 0.00 | 0.00 | 0.04 | 203 | 207 |
| 230 | 7.90 | 7.88 | 34.033 | 26.533 | 153.2 | 0.537 | 2.00 | 30.0 | 41.1 | 2.28 | 31.2 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 7.50 D | 7.48 | 34.022 D | 26.582 | 148.7 | 0.567 | 1.87 | 27.8 | 44.8 | 2.36 | 32.1 | 0.00 | 0.00 | | | 251 | |
| 271 | 7.28 | 7.25 | 34.057 | 26.641 | 143.4 | 0.598 | 1.75 | 25.9 | 48.6 | 2.43 | 33.1 | 0.00 | 0.00 | | | 273 | 205 |
| 300 ISL | 6.98 D | 6.95 | 34.068 D | 26.691 | 138.9 | 0.639 | 1.60 | 23.5 | 53.5 | 2.54 | 34.5 | 0.00 | 0.00 | | | 302 | |
| 320 | 6.63 | 6.60 | 34.076 | 26.745 | 133.9 | 0.666 | 1.47 | 21.4 | 56.6 | 2.61 | 35.5 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 6.51 | 6.48 | 34.169 | 26.835 | 126.2 | 0.745 | 0.74 | 10.8 | 64.8 | 2.86 | 37.7 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.16 D | 6.12 | 34.195 D | 26.901 | 119.9 | 0.769 | 0.62 | 8.9 | 68.2 | 2.92 | 38.2 | 0.00 | 0.00 | | | 403 | |
| 441 | 5.94 | 5.90 | 34.231 | 26.958 | 115.0 | 0.817 | 0.45 | 6.5 | 75.4 | 3.03 | 39.3 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.49 D | 5.45 | 34.273 D | 27.046 | 106.9 | 0.882 | 0.32 | 4.5 | 82.6 | 3.12 | 40.6 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.45 | 5.41 | 34.278 | 27.055 | 106.2 | 0.899 | 0.29 | 4.1 | 84.6 | 3.14 | 41.0 | 0.00 | 0.00 | | | 520 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 39.5 N | 121 3.0 W | 05/11/10 | 2311 UTC | 3691 m | 230 04 kn | 310 03 08 | 1 | 1011.8 mb | 16.0 C | 14.4 C | 12m | 7/8 | ST |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.70 | 16.70 | 33.401 | 24.358 | 355.9 | 0.000 | 5.77 | 103.9 | 1.4 | 0.23 | 0.3 | 0.04 | 0.14 | 0.47 | 0.18 | 0 | |
| 2 | 16.70 | 16.70 | 33.401 | 24.358 | 355.9 | 0.007 | 5.77 | 103.9 | 1.4 | 0.23 | 0.3 | 0.04 | 0.14 | 0.47 | 0.18 | 2 | 221 |
| 10 | 16.53 | 16.53 | 33.405 | 24.401 | 352.1 | 0.035 | 5.77 | 103.6 | 1.3 | 0.23 | 0.3 | 0.04 | 0.15 | 0.51 | 0.21 | 10 | 219 |
| 10 | 16.53 | 16.53 | 33.402 | 24.399 | 352.4 | 0.035 | | | | | | | | | | 10 | 220 |
| 20 | 16.35 | 16.35 | 33.410 | 24.447 | 348.1 | 0.070 | 5.72 | 102.3 | 1.2 | 0.25 | 0.6 | 0.06 | 0.33 | 0.63 | 0.30 | 20 | 218 |
| 30 | 14.78 | 14.78 | 33.359 | 24.756 | 318.9 | 0.104 | 5.48 | 94.9 | 2.8 | 0.55 | 4.3 | 0.42 | 0.34 | 0.68 | 0.46 | 30 | 217 |
| 40 | 12.46 | 12.45 | 33.263 | 25.154 | 281.1 | 0.134 | 5.02 | 82.9 | 7.4 | 0.98 | 11.0 | 0.13 | 0.06 | 0.38 | 0.38 | 40 | 216 |
| 50 | 10.50 | 10.49 | 33.140 | 25.416 | 256.3 | 0.161 | 4.90 | 77.5 | 11.3 | 1.15 | 13.1 | 0.03 | 0.05 | 0.13 | 0.15 | 50 | 215 |
| 60 | 10.29 | 10.28 | 33.267 | 25.552 | 243.6 | 0.186 | 4.58 | 72.1 | 14.9 | 1.35 | 16.8 | 0.02 | 0.00 | 0.08 | 0.11 | 60 | 214 |
| 70 | 10.10 | 10.09 | 33.410 | 25.695 | 230.1 | 0.209 | 4.20 | 65.9 | 18.4 | 1.56 | 20.2 | 0.02 | 0.00 | 0.04 | 0.09 | 70 | 213 |
| 75 ISL | 9.96 D | 9.95 | 33.469 D | 25.765 | 223.6 | 0.221 | 4.04 | 63.3 | 19.6 | 1.63 | 21.3 | 0.02 | 0.00 | 0.03 | 0.08 | 75 | |
| 85 | 9.75 | 9.74 | 33.547 | 25.861 | 214.7 | 0.243 | 3.74 | 58.3 | 21.8 | 1.73 | 22.9 | 0.01 | 0.00 | 0.02 | 0.06 | 85 | 212 |
| 100 ISL | 9.29 D | 9.28 | 33.700 D | 26.056 | 196.4 | 0.273 | 3.25 | 50.2 | 25.7 | 1.89 | 25.5 | 0.01 | 0.09 | 0.01 | 0.05 | 100 | |
| 101 | 9.32 | 9.31 | 33.695 | 26.047 | 197.3 | 0.275 | 3.22 | 49.8 | 25.9 | 1.90 | 25.6 | 0.01 | 0.10 | 0.01 | 0.05 | 101 | 211 |
| 120 | 8.97 | 8.96 | 33.821 | 26.202 | 182.9 | 0.312 | 2.94 | 45.1 | 28.9 | 1.98 | 27.0 | 0.00 | 0.00 | 0.00 | 0.04 | 121 | 210 |
| 125 ISL | 8.95 D | 8.94 | 33.826 D | 26.209 | 182.3 | 0.321 | 2.82 | 43.3 | 29.6 | 2.01 | 27.4 | 0.00 | 0.00 | 0.00 | 0.04 | 126 | |
| 140 | 8.80 | 8.79 | 33.906 | 26.296 | 174.4 | 0.347 | 2.54 | 38.9 | 31.3 | 2.07 | 28.2 | 0.00 | 0.00 | 0.00 | 0.04 | 141 | 209 |
| 150 ISL | 8.65 D | 8.63 | 33.932 D | 26.339 | 170.4 | 0.365 | 2.70 | 41.2 | 31.9 | 2.02 | 27.8 | 0.00 | 0.00 | 0.00 | 0.03 | 151 | |
| 170 | 8.10 | 8.08 | 33.965 | 26.449 | 160.2 | 0.398 | 3.09 | 46.5 | 33.4 | 1.93 | 27.0 | 0.01 | 0.00 | 0.00 | 0.02 | 171 | 208 |
| 200 | 7.62 | 7.60 | 33.999 | 26.546 | 151.3 | 0.444 | 2.66 | 39.6 | 39.7 | 2.11 | 29.3 | 0.01 | 0.00 | 0.00 | 0.01 | 201 | 207 |
| 230 | 7.27 | 7.25 | 34.018 | 26.611 | 145.5 | 0.489 | 2.15 | 31.8 | 45.7 | 2.31 | 32.1 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 7.10 D | 7.08 | 34.026 D | 26.641 | 142.9 | 0.518 | 1.95 | 28.7 | 48.6 | 2.40 | 33.2 | 0.00 | 0.00 | | | 251 | |
| 270 | 6.94 | 6.91 | 34.039 | 26.674 | 140.0 | 0.546 | 1.80 | 26.4 | 51.1 | 2.47 | 34.1 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 6.72 D | 6.69 | 34.060 D | 26.720 | 136.0 | 0.587 | 1.58 | 23.1 | 55.5 | 2.58 | 35.5 | 0.00 | 0.00 | | | 302 | |
| 321 | 6.51 | 6.48 | 34.067 | 26.754 | 133.0 | 0.616 | 1.42 | 20.6 | 58.6 | 2.66 | 36.4 | 0.00 | 0.00 | | | 323 | 204 |
| 380 | 6.22 | 6.19 | 34.165 | 26.869 | 122.7 | 0.691 | 0.75 | 10.8 | 67.6 | 2.90 | 38.7 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.16 D | 6.12 | 34.190 D | 26.897 | 120.3 | 0.715 | 0.63 | 9.1 | 69.9 | 2.95 | 39.1 | 0.00 | 0.00 | | | 403 | |
| 441 | 5.94 | 5.90 | 34.214 | 26.944 | 116.2 | 0.764 | 0.49 | 7.0 | 74.2 | 3.03 | 39.6 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.65 D | 5.61 | 34.250 D | 27.009 | 110.6 | 0.831 | 0.36 | 5.1 | 80.3 | 3.10 | 40.5 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.57 | 5.53 | 34.258 | 27.025 | 109.2 | 0.848 | 0.33 | 4.7 | 81.9 | 3.12 | 40.8 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 80.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 19.4 N | 121 42.7 W | 06/11/10 | 0513 UTC | 4051 m | 150 04 kn | | | 1013.0 mb | 16.0 C | 14.1 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.92 | 16.92 | 32.950 | 23.961 | 393.8 | 0.000 | 5.71 | 103.0 | 2.2 | 0.27 | 0.0 | 0.00 | 0.11 | 0.18 | 0.04 | 0 | |
| 2 | 16.92 | 16.92 | 32.950 | 23.961 | 393.8 | 0.008 | 5.71 | 103.0 | 2.2 | 0.27 | 0.0 | 0.00 | 0.11 | 0.18 | 0.04 | 2 | 221 |
| 10 | 16.73 | 16.73 | 32.927 | 23.988 | 391.5 | 0.039 | 5.72 | 102.8 | 2.1 | 0.27 | 0.0 | 0.00 | 0.05 | 0.22 | 0.04 | 10 | 219 |
| 10 | 16.73 | 16.73 | 32.925 | 23.986 | 391.7 | 0.039 | | | | | | | | | | 10 | 220 |
| 20 | 16.57 | 16.57 | 32.935 | 24.031 | 387.7 | 0.078 | 5.75 | 103.0 | 2.1 | 0.27 | 0.0 | 0.00 | 0.08 | 0.25 | 0.06 | 20 | 218 |
| 30 | 16.17 | 16.17 | 32.990 | 24.166 | 375.2 | 0.116 | 5.87 | 104.3 | 2.0 | 0.28 | 0.0 | 0.00 | 0.08 | 0.34 | 0.10 | 30 | 217 |
| 40 | 14.27 | 14.26 | 32.911 | 24.519 | 341.7 | 0.152 | 6.06 | 103.6 | 2.3 | 0.30 | 0.0 | 0.00 | 0.05 | 0.43 | 0.27 | 40 | 216 |
| 50 | 13.34 | 13.33 | 32.918 | 24.715 | 323.3 | 0.185 | 5.93 | 99.5 | 2.8 | 0.37 | 0.5 | 0.14 | 0.08 | 0.43 | 0.29 | 50 | 215 |
| 60 | 12.73 | 12.72 | 32.922 | 24.838 | 311.7 | 0.217 | 5.78 | 95.7 | 3.3 | 0.45 | 1.6 | 0.21 | 0.05 | 0.35 | 0.23 | 60 | 214 |
| 70 | 12.34 | 12.33 | 32.951 | 24.936 | 302.6 | 0.248 | 5.70 | 93.6 | 3.7 | 0.48 | 2.4 | 0.04 | 0.00 | 0.22 | 0.13 | 70 | 213 |
| 75 ISL | 12.19 D | 12.18 | 32.962 D | 24.973 | 299.2 | 0.263 | 5.61 | 91.9 | 3.9 | 0.50 | 2.9 | 0.04 | 0.04 | 0.17 | 0.13 | 75 | |
| 86 | 11.87 | 11.86 | 33.086 | 25.130 | 284.5 | 0.295 | 5.38 | 87.6 | 5.4 | 0.62 | 5.2 | 0.03 | 0.13 | 0.10 | 0.12 | 86 | 212 |
| 100 | 10.35 | 10.34 | 33.079 | 25.395 | 259.3 | 0.333 | 5.07 | 79.9 | 10.4 | 1.02 | 11.5 | 0.01 | 0.00 | 0.06 | 0.07 | 100 | 211 |
| 120 | 9.66 | 9.65 | 33.342 | 25.716 | 229.1 | 0.382 | 4.53 | 70.4 | 16.1 | 1.32 | 16.9 | 0.00 | 0.00 | 0.02 | 0.04 | 121 | 210 |
| 125 ISL | 9.63 D | 9.62 | 33.379 D | 25.750 | 226.0 | 0.393 | 4.38 | 68.0 | 17.6 | 1.40 | 18.2 | 0.00 | 0.00 | 0.02 | 0.04 | 126 | |
| 140 | 9.28 | 9.26 | 33.526 | 25.922 | 209.9 | 0.426 | 3.92 | 60.5 | 21.9 | 1.63 | 21.7 | 0.00 | 0.00 | 0.01 | 0.03 | 141 | 209 |
| 150 ISL | 9.16 D | 9.14 | 33.649 D | 26.038 | 199.1 | 0.447 | 3.55 | 54.7 | 24.7 | 1.77 | 23.8 | 0.00 | 0.00 | 0.01 | 0.03 | 151 | |
| 170 | 8.98 | 8.96 | 33.784 | 26.172 | 186.7 | 0.485 | 2.98 | 45.7 | 29.3 | 1.96 | 26.8 | 0.00 | 0.00 | 0.00 | 0.03 | 171 | 208 |
| 200 | 8.35 | 8.33 | 33.981 | 26.424 | 163.1 | 0.538 | 3.04 | 46.0 | 32.9 | 1.90 | 26.4 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | 207 |
| 230 | 8.10 | 8.08 | 33.989 | 26.469 | 159.4 | 0.586 | 2.93 | 44.1 | 35.8 | 1.95 | 27.4 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 7.77 D | 7.75 | 34.015 D | 26.538 | 153.0 | 0.617 | 2.59 | 38.7 | 39.8 | 2.09 | 29.2 | 0.00 | 0.00 | | | 251 | |
| 271 | 7.52 | 7.49 | 34.033 | 26.588 | 148.5 | 0.649 | 2.16 | 32.1 | 44.9 | 2.26 | 31.4 | 0.00 | 0.00 | | | 273 | 205 |
| 300 ISL | 7.08 D | 7.05 | 34.054 D | 26.667 | 141.3 | 0.691 | 1.72 | 25.3 | 51.8 | 2.46 | 34.1 | 0.00 | 0.00 | | | 302 | |
| 320 | 6.82 | 6.79 | 34.062 | 26.709 | 137.4 | 0.719 | 1.46 | 21.4 | 56.2 | 2.58 | 35.6 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 6.48 | 6.45 | 34.130 | 26.808 | 128.7 | 0.800 | 0.90 | 13.1 | 64.6 | 2.81 | 37.8 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.30 D | 6.26 | 34.119 D | 26.823 | 127.4 | 0.824 | 0.81 | 11.7 | 66.6 | 2.85 | 38.2 | 0.00 | 0.00 | | | 402 | |
| 441 | 6.17 | 6.13 | 34.170 | 26.880 | 122.5 | 0.876 | 0.68 | 9.8 | 71.0 | 2.93 | 38.8 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.75 D | 5.71 | 34.240 D | 26.989 | 112.6 | 0.945 | 0.42 | 6.0 | 79.9 | 3.05 | 40.3 | 0.00 | 0.00 | | | 503 | |
| 517 | 5.67 | 5.63 | 34.254 | 27.010 | 110.8 | 0.964 | 0.35 | 5.0 | 82.5 | 3.09 | 40.7 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 90.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 59.1 N | 122 23.4 W | 06/11/10 | 1124 UTC | 4098 m | 210 14 kn | | | 1012.5 mb | 16.0 C | 14.9 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.64 | 17.64 | 33.038 | 23.858 | 403.6 | 0.000 | 5.56 | 101.7 | 1.9 | 0.26 | 0.0 | 0.00 | 0.08 | 0.18 | 0.02 | 0 | |
| 2 | 17.64 | 17.64 | 33.038 | 23.858 | 403.7 | 0.008 | 5.56 | 101.7 | 1.9 | 0.26 | 0.0 | 0.00 | 0.08 | 0.18 | 0.02 | 2 | 221 |
| 10 | 17.69 | 17.69 | 33.047 | 23.853 | 404.4 | 0.040 | 5.55 | 101.7 | 1.9 | 0.26 | 0.0 | 0.00 | 0.06 | 0.17 | 0.02 | 10 | 219 |
| 10 | 17.68 | 17.68 | 33.047 | 23.856 | 404.1 | 0.040 | | | | | | | | | | 10 | 220 |
| 20 ISL | 18.25 D | 18.25 | 33.238 D | 23.864 | 403.7 | 0.081 | 5.48 | 101.6 | 2.0 | 0.25 | 0.0 | 0.00 | 0.07 | 0.14 | 0.03 | 20 | |
| 25 | 18.34 | 18.34 | 33.281 | 23.875 | 402.9 | 0.101 | 5.45 | 101.2 | 2.0 | 0.24 | 0.0 | 0.00 | 0.07 | 0.13 | 0.04 | 25 | 218 |
| 30 ISL | 18.40 D | 18.39 | 33.302 D | 23.876 | 402.9 | 0.121 | 5.45 | 101.3 | 2.0 | 0.24 | 0.0 | 0.00 | 0.09 | 0.14 | 0.04 | 30 | |
| 40 | 18.48 | 18.47 | 33.339 | 23.885 | 402.4 | 0.161 | 5.44 | 101.3 | 1.9 | 0.23 | 0.0 | 0.00 | 0.11 | 0.16 | 0.03 | 40 | 217 |
| 50 | 16.74 | 16.73 | 33.209 | 24.204 | 372.3 | 0.200 | 5.83 | 104.9 | 2.0 | 0.24 | 0.0 | 0.00 | 0.08 | 0.19 | 0.09 | 50 | 216 |
| 62 | 16.52 | 16.51 | 33.400 | 24.401 | 353.8 | 0.244 | 5.84 | 104.8 | 1.9 | 0.20 | 0.0 | 0.00 | 0.08 | 0.21 | 0.08 | 62 | 215 |
| 75 | 15.35 | 15.34 | 33.313 | 24.599 | 335.3 | 0.288 | 5.81 | 101.8 | 2.0 | 0.24 | 0.0 | 0.00 | 0.09 | 0.28 | 0.16 | 75 | 214 |
| 87 | 14.64 | 14.63 | 33.344 | 24.776 | 318.6 | 0.328 | 5.68 | 98.1 | 2.5 | 0.29 | 0.2 | 0.06 | 0.07 | 0.28 | 0.19 | 87 | 213 |
| 100 | 13.95 | 13.94 | 33.331 | 24.911 | 306.0 | 0.368 | 5.51 | 93.8 | 3.2 | 0.38 | 1.3 | 0.08 | 0.09 | 0.24 | 0.21 | 100 | 212 |
| 112 | 13.09 | 13.07 | 33.290 | 25.054 | 292.6 | 0.404 | 5.38 | 90.0 | 4.2 | 0.51 | 3.4 | 0.03 | 0.08 | 0.24 | 0.16 | 112 | 211 |
| 125 | 12.02 | 12.00 | 33.273 | 25.248 | 274.3 | 0.441 | 5.19 | 84.8 | 6.2 | 0.70 | 6.7 | 0.01 | 0.08 | 0.12 | 0.24 | 126 | 210 |
| 140 | 11.27 | 11.25 | 33.311 | 25.416 | 258.6 | 0.481 | 5.01 | 80.6 | 8.4 | 0.85 | 9.4 | 0.00 | 0.06 | 0.10 | 0.09 | 141 | 209 |
| 150 ISL | 10.84 D | 10.82 | 33.350 D | 25.523 | 248.5 | 0.506 | 4.86 | 77.5 | 10.2 | 0.97 | 11.4 | 0.00 | 0.06 | 0.07 | 0.07 | 151 | |
| 170 | 10.17 | 10.15 | 33.452 | 25.718 | 230.2 | 0.554 | 4.52 | 71.1 | 14.1 | 1.20 | 15.3 | 0.00 | 0.06 | 0.02 | 0.03 | 171 | 208 |
| 200 ISL | 9.43 D | 9.41 | 33.707 D | 26.041 | 200.0 | 0.619 | 4.03 | 62.4 | 20.0 | 1.47 | 19.8 | 0.00 | 0.04 | 0.00 | 0.03 | 201 | |
| 201 | 9.44 | 9.42 | 33.697 | 26.031 | 200.9 | 0.621 | 4.01 | 62.1 | 20.2 | 1.48 | 19.9 | 0.00 | 0.04 | 0.00 | 0.03 | 202 | 207 |
| 230 | 8.89 | 8.87 | 33.902 | 26.280 | 177.7 | 0.676 | 3.68 | 56.4 | 26.0 | 1.62 | 22.9 | 0.00 | 0.05 | | | 231 | 206 |
| 250 ISL | 8.55 D | 8.52 | 33.957 D | 26.376 | 168.8 | 0.710 | 3.14 | 47.8 | 30.8 | 1.82 | 25.7 | 0.00 | 0.05 | | | 251 | |
| 271 | 8.30 | 8.27 | 34.013 | 26.458 | 161.3 | 0.745 | 2.53 | 38.3 | 35.9 | 2.05 | 28.5 | 0.00 | 0.04 | | | 272 | 205 |
| 300 ISL | 7.82 D | 7.79 | 34.048 D | 26.557 | 152.1 | 0.790 | 2.06 | 30.8 | 42.4 | 2.24 | 31.1 | 0.00 | 0.04 | | | 302 | |
| 319 | 7.61 | 7.58 | 34.068 | 26.604 | 147.9 | 0.819 | 1.83 | 27.3 | 46.3 | 2.34 | 32.4 | 0.00 | 0.04 | | | 321 | 204 |
| 381 | 6.96 | 6.92 | 34.123 | 26.739 | 135.7 | 0.907 | 1.18 | 17.3 | 57.1 | 2.64 | 35.8 | 0.00 | 0.04 | | | 383 | 203 |
| 400 ISL | 6.77 D | 6.73 | 34.129 D | 26.769 | 132.9 | 0.932 | 1.06 | 15.5 | 60.1 | 2.70 | 36.5 | 0.00 | 0.04 | | | 402 | |
| 441 | 6.38 | 6.34 | 34.151 | 26.838 | 126.6 | 0.986 | 0.87 | 12.6 | 66.5 | 2.81 | 37.9 | 0.00 | 0.04 | | | 444 | 202 |
| 500 ISL | 5.77 D | 5.73 | 34.179 D | 26.938 | 117.4 | 1.058 | 0.64 | 9.1 | 76.5 | 2.96 | 39.8 | 0.00 | 0.01 | | | 503 | |
| 519 | 5.65 | 5.61 | 34.186 | 26.958 | 115.6 | 1.080 | 0.56 | 8.0 | 79.7 | 3.01 | 40.4 | 0.00 | 0.00 | | | 522 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 39.5 N | 123 4.3 W | 06/11/10 | 1736 UTC | 4144 m | 240 14 kn | 270 05 06 | 1 | 1016.7 mb | 19.0 C | 16.0 C | 35m | 3/8 | AC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.32 | 18.32 | 33.296 | 23.890 | 400.5 | 0.000 | 5.47 | 101.6 | 2.2 | 0.25 | 0.0 | 0.00 | 0.00 | 0.12 | 0.03 | 0 | |
| 2 A | 18.32 | 18.32 | 33.296 | 23.890 | 400.6 | 0.008 | 5.47 | 101.6 | 2.2 | 0.25 | 0.0 | 0.00 | 0.00 | 0.12 | 0.03 | 2 | 223 |
| 10 ISL | 18.30 D | 18.30 | 33.294 D | 23.894 | 400.5 | 0.040 | 5.48 | 101.7 | 2.2 | 0.26 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 10 | |
| 14 | 18.30 | 18.30 | 33.296 | 23.896 | 400.5 | 0.056 | 5.49 | 101.9 | 2.2 | 0.26 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 14 | 221 |
| 14 | 18.30 | 18.30 | 33.294 | 23.894 | 400.6 | 0.056 | | | | | | | | | | 14 | 222 |
| 20 ISL | 18.30 D | 18.30 | 33.293 D | 23.893 | 400.9 | 0.080 | 5.48 | 101.7 | 2.1 | 0.25 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 20 | |
| 24 A | 18.29 | 18.29 | 33.305 | 23.905 | 399.9 | 0.096 | 5.48 | 101.7 | 2.1 | 0.24 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 24 | 220 |
| 30 ISL | 18.30 D | 18.29 | 33.293 D | 23.894 | 401.2 | 0.120 | 5.49 | 101.9 | 2.0 | 0.24 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 30 | |
| 33 | 18.30 | 18.29 | 33.295 | 23.896 | 401.2 | 0.132 | 5.50 | 102.1 | 2.0 | 0.24 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 33 | 219 |
| 42 | 18.28 | 18.27 | 33.296 | 23.902 | 400.9 | 0.168 | 5.48 | 101.7 | 2.0 | 0.25 | 0.0 | 0.00 | 0.00 | 0.13 | 0.04 | 42 | 218 |
| 50 A | 17.41 | 17.40 | 33.252 | 24.079 | 384.2 | 0.200 | 5.77 | 105.2 | 2.2 | 0.24 | 0.0 | 0.00 | 0.00 | 0.18 | 0.07 | 50 | 217 |
| 62 | 16.80 | 16.79 | 33.409 | 24.344 | 359.3 | 0.244 | 5.83 | 105.2 | 2.2 | 0.20 | 0.0 | 0.00 | 0.00 | 0.19 | 0.09 | 62 | 216 |
| 74 A | 15.80 | 15.79 | 33.370 | 24.542 | 340.7 | 0.286 | 5.87 | 103.8 | 2.3 | 0.22 | 0.0 | 0.00 | 0.07 | 0.22 | 0.14 | 74 | 215 |
| 75 ISL | 15.66 D | 15.65 | 33.368 D | 24.572 | 337.8 | 0.290 | 5.86 | 103.3 | 2.3 | 0.22 | 0.0 | 0.00 | 0.07 | 0.22 | 0.14 | 75 | |
| 86 | 15.33 | 15.32 | 33.397 | 24.668 | 329.0 | 0.326 | 5.79 | 101.4 | 2.4 | 0.21 | 0.0 | 0.00 | 0.00 | 0.21 | 0.16 | 86 | 214 |
| 96 A | 14.58 | 14.57 | 33.336 | 24.783 | 318.2 | 0.359 | 5.75 | 99.2 | 2.5 | 0.26 | 0.1 | 0.05 | 0.00 | 0.21 | 0.19 | 96 | 213 |
| 100 ISL | 14.17 D | 14.16 | 33.327 D | 24.863 | 310.7 | 0.371 | 5.66 | 96.8 | 2.9 | 0.34 | 1.0 | 0.05 | 0.00 | 0.20 | 0.21 | 100 | |
| 111 | 12.91 | 12.90 | 33.193 | 25.015 | 296.3 | 0.405 | 5.39 | 89.7 | 4.5 | 0.60 | 4.5 | 0.04 | 0.00 | 0.16 | 0.25 | 111 | 212 |
| 125 ISL | 11.63 D | 11.61 | 33.216 D | 25.276 | 271.5 | 0.444 | 5.19 | 84.1 | 7.2 | 0.81 | 8.2 | 0.01 | 0.00 | 0.09 | 0.14 | 126 | |
| 126 | 11.62 | 11.60 | 33.214 | 25.276 | 271.5 | 0.447 | 5.18 | 83.9 | 7.4 | 0.82 | 8.4 | 0.01 | 0.00 | 0.09 | 0.13 | 127 | 211 |
| 140 A | 10.75 | 10.73 | 33.266 | 25.473 | 253.0 | 0.484 | 4.91 | 78.1 | 10.5 | 1.02 | 11.9 | 0.00 | 0.00 | 0.05 | 0.07 | 141 | 210 |
| 150 ISL | 10.34 D | 10.32 | 33.333 D | 25.596 | 241.4 | 0.509 | 4.71 | 74.3 | 12.4 | 1.14 | 13.9 | 0.00 | 0.00 | 0.04 | 0.05 | 151 | |
| 156 | 10.27 | 10.25 | 33.350 | 25.621 | 239.1 | 0.523 | 4.59 | 72.3 | 13.6 | 1.21 | 15.1 | 0.00 | 0.00 | 0.03 | 0.05 | 157 | 209 |
| 170 | 9.89 | 9.87 | 33.477 | 25.785 | 223.7 | 0.555 | 4.26 | 66.6 | 16.7 | 1.37 | 17.9 | 0.00 | 0.00 | 0.01 | 0.03 | 171 | 208 |
| 200 | 9.35 | 9.33 | 33.783 | 26.113 | 193.1 | 0.618 | 3.31 | 51.2 | 25.1 | 1.74 | 23.9 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | 207 |
| 230 | 8.77 | 8.75 | 33.939 | 26.328 | 173.1 | 0.673 | 2.96 | 45.2 | 29.8 | 1.87 | 26.2 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.46 D | 8.43 | 33.972 D | 26.401 | 166.3 | 0.707 | 2.76 | 41.9 | 33.2 | 1.96 | 27.5 | 0.00 | 0.00 | | | 251 | |
| 270 | 8.20 | 8.17 | 34.016 | 26.476 | 159.5 | 0.739 | 2.54 | 38.3 | 36.9 | 2.06 | 28.9 | 0.00 | 0.00 | | | 271 | 205 |
| 300 ISL | 7.81 D | 7.78 | 34.051 D | 26.561 | 151.8 | 0.786 | 2.07 | 31.0 | 43.0 | 2.25 | 31.3 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.52 | 7.49 | 34.071 | 26.619 | 146.4 | 0.816 | 1.75 | 26.0 | 47.2 | 2.38 | 32.9 | 0.00 | 0.00 | | | 322 | 204 |
| 380 | 6.75 | 6.71 | 34.107 | 26.754 | 134.0 | 0.900 | 1.17 | 17.1 | 59.1 | 2.66 | 36.7 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.43 D | 6.39 | 34.104 D | 26.794 | 130.2 | 0.926 | 1.03 | 14.9 | 62.2 | 2.73 | 37.4 | 0.00 | 0.00 | | | 402 | |
| 441 | 6.26 | 6.22 | 34.155 | 26.857 | 124.8 | 0.979 | 0.81 | 11.7 | 68.0 | 2.85 | 38.6 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.90 D | 5.86 | 34.214 D | 26.950 | 116.5 | 1.050 | 0.55 | 7.9 | 76.6 | 3.00 | 40.1 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.79 | 5.75 | 34.223 | 26.971 | 114.6 | 1.068 | 0.48 | 6.9 | 78.9 | 3.04 | 40.5 | 0.00 | 0.00 | | | 519 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 110.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 19.4 N | 123 44.6 W | 06/11/10 | 2333 UTC | 4022 m | 260 14 kn | 320 06 09 | 1 | 1017.6 mb | 18.8 C | 16.0 C | 23m | 3/8 | SC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.47 | 18.47 | 33.271 | 23.834 | 405.9 | 0.000 | 5.46 | 101.7 | 1.9 | 0.25 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 0 | |
| 2 | 18.47 | 18.47 | 33.271 | 23.834 | 406.0 | 0.008 | 5.46 | 101.7 | 1.9 | 0.25 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 2 | 221 |
| 10 | 18.43 | 18.43 | 33.265 | 23.840 | 405.7 | 0.041 | 5.47 | 101.8 | 2.0 | 0.25 | 0.0 | 0.00 | 0.00 | 0.10 | 0.02 | 10 | 219 |
| 10 | 18.42 | 18.42 | 33.262 | 23.840 | 405.7 | 0.041 | | | | | | | | | | 10 | 220 |
| 20 ISL | 18.31 D | 18.31 | 33.254 D | 23.861 | 404.0 | 0.081 | 5.48 | 101.7 | 2.1 | 0.24 | 0.0 | 0.00 | 0.00 | 0.11 | 0.02 | 20 | |
| 25 | 18.32 | 18.32 | 33.256 | 23.860 | 404.2 | 0.101 | 5.48 | 101.7 | 2.1 | 0.24 | 0.0 | 0.00 | 0.00 | 0.12 | 0.03 | 25 | 218 |
| 30 ISL | 18.32 D | 18.31 | 33.263 D | 23.866 | 403.9 | 0.121 | 5.48 | 101.7 | 2.1 | 0.24 | 0.0 | 0.00 | 0.00 | 0.13 | 0.03 | 30 | |
| 40 | 18.33 | 18.32 | 33.277 | 23.875 | 403.4 | 0.162 | 5.49 | 101.9 | 2.1 | 0.24 | 0.0 | 0.00 | 0.00 | 0.15 | 0.04 | 40 | 217 |
| 50 ISL | 17.21 D | 17.20 | 33.098 D | 24.008 | 390.9 | 0.202 | 5.70 | 103.5 | 2.1 | 0.26 | 0.0 | 0.00 | 0.00 | 0.21 | 0.08 | 50 | |
| 51 | 17.33 | 17.32 | 33.114 | 23.992 | 392.5 | 0.205 | 5.72 | 104.1 | 2.1 | 0.26 | 0.0 | 0.00 | 0.00 | 0.22 | 0.09 | 51 | 216 |
| 63 | 16.27 | 16.26 | 33.149 | 24.266 | 366.7 | 0.251 | 5.91 | 105.3 | 2.1 | 0.26 | 0.0 | 0.00 | 0.00 | 0.29 | 0.14 | 63 | 215 |
| 75 ISL | 16.19 D | 16.18 | 33.429 D | 24.500 | 344.8 | 0.294 | 5.86 | 104.5 | 2.1 | 0.20 | 0.0 | 0.00 | 0.05 | 0.24 | 0.12 | 75 | |
| 76 | 16.23 | 16.22 | 33.427 | 24.489 | 345.9 | 0.297 | 5.86 | 104.5 | 2.1 | 0.19 | 0.0 | 0.00 | 0.05 | 0.23 | 0.12 | 76 | 214 |
| 89 | 15.64 | 15.63 | 33.494 | 24.674 | 328.6 | 0.341 | 5.69 | 100.4 | 2.1 | 0.21 | 0.0 | 0.00 | 0.00 | 0.19 | 0.21 | 89 | 213 |
| 100 ISL | 14.33 D | 14.32 | 33.333 D | 24.834 | 313.5 | 0.376 | 5.62 | 96.4 | 2.7 | 0.31 | 0.5 | 0.07 | 0.08 | 0.20 | 0.23 | 100 | |
| 101 | 14.35 | 14.34 | 33.345 | 24.839 | 313.0 | 0.379 | 5.61 | 96.3 | 2.8 | 0.32 | 0.6 | 0.08 | 0.09 | 0.20 | 0.23 | 101 | 212 |
| 114 | 13.42 | 13.40 | 33.347 | 25.032 | 294.8 | 0.419 | 5.41 | 91.1 | 4.0 | 0.45 | 2.7 | 0.03 | 0.00 | 0.15 | 0.25 | 114 | 211 |
| 125 | 12.62 | 12.60 | 33.348 | 25.192 | 279.8 | 0.451 | 5.30 | 87.8 | 5.1 | 0.57 | 4.8 | 0.01 | 0.00 | 0.10 | 0.19 | 125 | 210 |
| 141 | 11.78 | 11.76 | 33.342 | 25.347 | 265.3 | 0.494 | 5.16 | 84.0 | 7.0 | 0.72 | 7.4 | 0.01 | 0.00 | 0.07 | 0.13 | 142 | 209 |
| 150 ISL | 11.16 D | 11.14 | 33.366 D | 25.478 | 252.8 | 0.517 | 5.02 | 80.6 | 8.8 | 0.85 | 9.5 | 0.01 | 0.02 | 0.05 | 0.09 | 151 | |
| 170 | 10.19 | 10.17 | 33.465 | 25.725 | 229.5 | 0.566 | 4.61 | 72.5 | 13.7 | 1.16 | 14.6 | 0.00 | 0.07 | 0.02 | 0.03 | 171 | 208 |
| 200 | 9.44 | 9.42 | 33.718 | 26.048 | 199.3 | 0.630 | 3.85 | 59.7 | 21.5 | 1.53 | 20.7 | 0.00 | 0.00 | 0.00 | 0.01 | 201 | 207 |
| 230 | 8.74 | 8.72 | 33.927 | 26.323 | 173.5 | 0.686 | 3.28 | 50.1 | 29.0 | 1.78 | 24.8 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.44 D | 8.41 | 33.972 D | 26.405 | 166.0 | 0.720 | 3.06 | 46.4 | 32.5 | 1.88 | 26.3 | 0.00 | 0.00 | | | 251 | |
| 271 | 8.15 | 8.12 | 33.997 | 26.468 | 160.2 | 0.754 | 2.86 | 43.1 | 35.7 | 1.97 | 27.6 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.61 D | 7.58 | 34.024 D | 26.569 | 150.9 | 0.799 | 2.48 | 36.9 | 41.2 | 2.15 | 30.0 | 0.00 | 0.00 | | | 302 | |
| 322 | 7.47 | 7.44 | 34.043 | 26.604 | 147.8 | 0.832 | 2.16 | 32.1 | 45.6 | 2.29 | 31.8 | 0.00 | 0.00 | | | 324 | 204 |
| 381 | 6.83 | 6.79 | 34.104 | 26.741 | 135.3 | 0.916 | 1.25 | 18.3 | 58.0 | 2.64 | 36.0 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.56 D | 6.52 | 34.124 D | 26.793 | 130.5 | 0.941 | 1.06 | 15.4 | 61.8 | 2.72 | 37.0 | 0.00 | 0.00 | | | 402 | |
| 441 | 6.23 | 6.19 | 34.159 | 26.864 | 124.1 | 0.993 | 0.78 | 11.3 | 69.2 | 2.87 | 38.6 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.82 D | 5.78 | 34.194 D | 26.944 | 116.9 | 1.064 | 0.56 | 8.0 | 77.6 | 3.00 | 40.1 | 0.00 | 0.00 | | | 503 | |
| 517 | 5.68 | 5.64 | 34.218 | 26.980 | 113.6 | 1.084 | 0.50 | 7.1 | 80.0 | 3.04 | 40.5 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.8 32.5

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 53.3 N | 118 26.7 W | 04/11/10 | 1333 UTC | 30 m | 340 05 kn | | | 1013.7 mb | 23.0 C | 15.8 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.46 | 17.46 | 33.471 | 24.233 | 367.8 | 0.000 | 6.11 | 111.7 | 0.0 | 0.16 | 0.0 | 0.00 | 0.06 | 1.38 | 0.28 | 0 | |
| 1 | 17.46 | 17.46 | 33.471 | 24.233 | 367.9 | 0.004 | 6.11 | 111.7 | 0.0 | 0.16 | 0.0 | 0.00 | 0.06 | 1.38 | 0.28 | 1 | 205 |
| 5 | 17.17 | 17.17 | 33.470 | 24.301 | 361.5 | 0.018 | 6.17 | 112.2 | 0.0 | 0.15 | 0.0 | 0.00 | 0.04 | 1.43 | 0.24 | 5 | 204 |
| 10 | 16.01 | 16.01 | 33.446 | 24.551 | 337.8 | 0.036 | 6.01 | 106.8 | 0.4 | 0.29 | 0.4 | 0.04 | 0.35 | 3.95 | 0.50 | 10 | 203 |
| 15 | 15.64 | 15.64 | 33.452 | 24.639 | 329.6 | 0.052 | 5.73 | 101.1 | 1.7 | 0.44 | 1.9 | 0.15 | 0.53 | 6.56 | 0.56 | 15 | 202 |
| 20 | 14.71 | 14.71 | 33.428 | 24.824 | 312.1 | 0.068 | 5.25 | 90.9 | 4.6 | 0.70 | 4.7 | 0.39 | 1.03 | 5.35 | 0.90 | 20 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 88.5 30.1

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 40.4 N | 118 5.1 W | 04/11/10 | 1000 UTC | 21 m | 270 04 kn | | | 1013.8 mb | 19.3 C | 16.3 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.41 | 17.41 | 33.151 | 24.000 | 390.1 | 0.000 | 6.09 | 111.0 | 6.0 | 0.37 | 0.3 | 0.08 | 0.20 | 6.47 | 1.30 | 0 | |
| 2 | 17.41 | 17.41 | 33.151 | 24.000 | 390.2 | 0.008 | 6.09 | 111.0 | 6.0 | 0.37 | 0.3 | 0.08 | 0.20 | 6.47 | 1.30 | 2 | 204 |
| 5 | 16.54 | 16.54 | 33.328 | 24.340 | 357.8 | 0.019 | 5.92 | 106.2 | 3.3 | 0.29 | 0.3 | 0.05 | 0.23 | 6.76 | 1.60 | 5 | 203 |
| 10 ISL | 15.71 D | 15.71 | 33.357 D | 24.550 | 337.9 | 0.036 | 5.37 | 94.8 | 5.3 | 0.55 | 1.3 | 0.18 | 0.89 | 4.07 | 1.40 | 10 | |
| 11 | 15.81 | 15.81 | 33.378 | 24.544 | 338.5 | 0.040 | 5.20 | 92.0 | 5.7 | 0.60 | 1.5 | 0.21 | 1.06 | 3.33 | 1.38 | 11 | 202 |
| 14 | 13.97 | 13.97 | 33.377 | 24.940 | 300.8 | 0.049 | 4.45 | 75.8 | 10.8 | 1.19 | 7.7 | 0.85 | 1.41 | 1.79 | 1.83 | 14 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 27.7

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 29.5 N | 117 45.0 W | 04/11/10 | 0534 UTC | 33 m | 260 03 kn | | | 1014.4 mb | 21.4 C | 17.1 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.33 | 17.33 | 33.327 | 24.153 | 375.4 | 0.000 | 5.99 | 109.1 | 2.7 | 0.23 | 0.2 | 0.05 | 0.16 | 1.82 | 0.71 | 0 | |
| 2 | 17.33 | 17.33 | 33.327 | 24.154 | 375.5 | 0.008 | 5.99 | 109.1 | 2.7 | 0.23 | 0.2 | 0.05 | 0.16 | 1.82 | 0.71 | 2 | 206 |
| 5 | 16.91 | 16.91 | 33.332 | 24.257 | 365.7 | 0.019 | 5.87 | 106.1 | 3.2 | 0.28 | 0.5 | 0.08 | 0.23 | 2.90 | 0.59 | 5 | 205 |
| 10 | 14.26 | 14.26 | 33.365 | 24.870 | 307.4 | 0.035 | 5.52 | 94.6 | 5.3 | 0.59 | 3.5 | 0.38 | 0.47 | 3.26 | 0.69 | 10 | 204 |
| 14 | 12.84 | 12.84 | 33.360 | 25.155 | 280.4 | 0.047 | 5.00 | 83.2 | 8.0 | 0.95 | 9.3 | 0.83 | 0.21 | 1.03 | 0.26 | 14 | 203 |
| 20 | 12.32 | 12.32 | 33.363 | 25.258 | 270.7 | 0.064 | 4.65 | 76.6 | 9.7 | 1.10 | 11.9 | 0.39 | 0.14 | 0.57 | 0.42 | 20 | 202 |
| 25 | 12.12 | 12.12 | 33.380 | 25.310 | 265.9 | 0.077 | 4.36 | 71.5 | 12.0 | 1.27 | 13.1 | 0.51 | 0.35 | 0.40 | 0.68 | 25 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 28.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 29.1 N | 117 46.0 W | 04/11/10 | 0634 UTC | 66 m | 100 01 kn | | | 1014.4 mb | 21.1 C | 17.0 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.29 | 18.29 | 33.302 | 23.902 | 399.4 | 0.000 | 6.08 | 112.8 | 2.1 | 0.15 | 0.0 | 0.00 | 0.05 | 0.90 | 0.33 | 0 | |
| 2 | 18.29 | 18.29 | 33.302 | 23.902 | 399.5 | 0.008 | 6.08 | 112.8 | 2.1 | 0.15 | 0.0 | 0.00 | 0.05 | 0.90 | 0.33 | 2 | 208 |
| 5 | 17.53 | 17.53 | 33.380 | 24.147 | 376.2 | 0.020 | 5.99 | 109.6 | 1.9 | 0.18 | 0.0 | 0.00 | 0.05 | 0.72 | 0.25 | 5 | 207 |
| 10 | 14.83 | 14.83 | 33.368 | 24.752 | 318.7 | 0.037 | 5.73 | 99.4 | 4.8 | 0.48 | 2.2 | 0.26 | 0.07 | 2.96 | 0.88 | 10 | 206 |
| 20 | 12.36 | 12.36 | 33.365 | 25.252 | 271.3 | 0.066 | 4.63 | 76.3 | 9.6 | 1.11 | 11.8 | 0.55 | 0.07 | 0.55 | 0.38 | 20 | 205 |
| 30 | 11.51 | 11.51 | 33.397 | 25.436 | 254.0 | 0.093 | 4.18 | 67.7 | 13.3 | 1.36 | 15.6 | 0.13 | 0.18 | 0.23 | 0.31 | 30 | 204 |
| 40 | 10.93 | 10.93 | 33.460 | 25.590 | 239.6 | 0.117 | 3.76 | 60.1 | 16.7 | 1.52 | 18.4 | 0.03 | 0.00 | 0.15 | 0.21 | 40 | 203 |
| 50 | 10.65 | 10.64 | 33.540 | 25.702 | 229.1 | 0.141 | 3.31 | 52.6 | 19.9 | 1.71 | 20.7 | 0.04 | 0.11 | 0.07 | 0.22 | 50 | 202 |
| 60 | 10.58 | 10.57 | 33.561 | 25.731 | 226.6 | 0.164 | 3.25 | 51.6 | 20.6 | 1.73 | 21.3 | 0.04 | 0.00 | 0.06 | 0.18 | 60 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 30.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 25.1 N | 117 54.5 W | 04/11/10 | 0134 UTC | 620 m | 290 07 kn | 310 01 07 | 1 | 1013.3 mb | 20.2 C | 18.0 C | | 1/8 | CS |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.79 | 18.79 | 33.452 | 23.892 | 400.3 | 0.000 | 5.72 | 107.3 | 1.8 | 0.19 | 0.0 | 0.00 | 0.10 | 0.39 | 0.10 | 0 | |
| 2 | 18.79 | 18.79 | 33.452 | 23.893 | 400.4 | 0.008 | 5.72 | 107.3 | 1.8 | 0.19 | 0.0 | 0.00 | 0.10 | 0.39 | 0.10 | 2 | 220 |
| 10 | 17.68 | 17.68 | 33.476 | 24.184 | 372.8 | 0.039 | 5.82 | 106.9 | 1.6 | 0.19 | 0.0 | 0.00 | 0.10 | 0.28 | 0.10 | 10 | 219 |
| 20 ISL | 15.10 D | 15.10 | 33.337 D | 24.670 | 326.8 | 0.074 | 5.95 | 103.7 | 2.7 | 0.35 | 1.5 | 0.09 | 0.15 | 0.94 | 0.47 | 20 | |
| 21 | 15.12 | 15.12 | 33.353 | 24.678 | 326.1 | 0.077 | 5.96 | 104.0 | 2.9 | 0.38 | 1.6 | 0.11 | 0.15 | 1.01 | 0.51 | 21 | 218 |
| 30 | 13.04 | 13.04 | 33.278 | 25.052 | 290.6 | 0.105 | 5.29 | 88.4 | 6.4 | 0.76 | 7.0 | 0.31 | 0.11 | 0.85 | 0.49 | 30 | 217 |
| 40 | 12.18 | 12.17 | 33.353 | 25.278 | 269.4 | 0.133 | 4.59 | 75.3 | 10.5 | 1.12 | 12.4 | 0.16 | 0.06 | 0.65 | 0.47 | 40 | 216 |
| 50 | 11.39 | 11.38 | 33.404 | 25.464 | 251.8 | 0.159 | 4.09 | 66.0 | 14.3 | 1.37 | 16.1 | 0.04 | 0.07 | 0.29 | 0.26 | 50 | 215 |
| 60 | 11.13 | 11.12 | 33.409 | 25.515 | 247.2 | 0.184 | 3.96 | 63.6 | 15.8 | 1.43 | 17.0 | 0.03 | 0.08 | 0.15 | 0.24 | 60 | 214 |
| 70 | 10.45 | 10.44 | 33.436 | 25.656 | 233.9 | 0.208 | 4.09 | 64.7 | 16.5 | 1.45 | 18.3 | 0.03 | 0.05 | 0.08 | 0.15 | 70 | 213 |
| 75 ISL | 10.44 D | 10.43 | 33.578 D | 25.769 | 223.4 | 0.219 | 3.83 | 60.6 | 18.2 | 1.55 | 19.6 | 0.02 | 0.05 | 0.06 | 0.12 | 75 | |
| 85 | 10.26 | 10.25 | 33.625 | 25.836 | 217.1 | 0.241 | 3.19 | 50.3 | 22.2 | 1.76 | 22.1 | 0.01 | 0.05 | 0.03 | 0.08 | 85 | 212 |
| 100 ISL | 9.97 D | 9.96 | 33.750 D | 25.983 | 203.5 | 0.273 | 2.93 | 46.0 | 25.3 | 1.86 | 23.5 | 0.01 | 0.06 | 0.01 | 0.05 | 100 | |
| 101 | 9.96 | 9.95 | 33.758 | 25.991 | 202.7 | 0.275 | 2.92 | 45.8 | 25.4 | 1.86 | 23.6 | 0.01 | 0.06 | 0.01 | 0.05 | 102 | 211 |
| 121 | 9.68 | 9.67 | 33.888 | 26.140 | 189.0 | 0.314 | 2.54 | 39.6 | 28.7 | 1.98 | 25.5 | 0.01 | 0.07 | 0.01 | 0.04 | 122 | 210 |
| 125 ISL | 9.70 D | 9.69 | 33.921 D | 26.162 | 187.0 | 0.322 | 2.49 | 38.9 | 29.0 | 2.00 | 25.7 | 0.01 | 0.06 | 0.01 | 0.04 | 126 | |
| 140 | 9.62 | 9.60 | 33.956 | 26.203 | 183.4 | 0.349 | 2.34 | 36.5 | 30.1 | 2.05 | 26.1 | 0.00 | 0.00 | 0.01 | 0.05 | 141 | 209 |
| 150 ISL | 9.52 D | 9.50 | 33.996 D | 26.251 | 179.0 | 0.368 | 2.18 | 33.9 | 31.2 | 2.10 | 26.6 | 0.00 | 0.00 | 0.01 | 0.04 | 151 | |
| 170 | 9.50 | 9.48 | 34.093 | 26.331 | 171.9 | 0.403 | 1.86 | 28.9 | 33.4 | 2.19 | 27.7 | 0.00 | 0.00 | 0.00 | 0.03 | 171 | 208 |
| 200 ISL | 9.35 D | 9.33 | 34.168 D | 26.414 | 164.6 | 0.453 | 1.58 | 24.5 | 36.2 | 2.31 | 28.8 | 0.00 | 0.00 | 0.00 | 0.03 | 201 | |
| 201 | 9.36 | 9.34 | 34.170 | 26.414 | 164.6 | 0.455 | 1.57 | 24.4 | 36.3 | 2.31 | 28.8 | 0.00 | 0.00 | 0.00 | 0.03 | 202 | 207 |
| 230 | 9.11 | 9.08 | 34.193 | 26.473 | 159.5 | 0.502 | 1.39 | 21.4 | 38.8 | 2.39 | 29.8 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.97 D | 8.94 | 34.208 D | 26.507 | 156.6 | 0.533 | 1.27 | 19.5 | 40.5 | 2.44 | 30.5 | 0.00 | 0.00 | | | 251 | |
| 270 | 8.78 | 8.75 | 34.218 | 26.545 | 153.3 | 0.564 | 1.15 | 17.6 | 42.5 | 2.50 | 31.2 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 8.43 D | 8.40 | 34.233 D | 26.612 | 147.4 | 0.610 | 0.97 | 14.7 | 46.5 | 2.60 | 32.4 | 0.01 | 0.03 | | | 302 | |
| 321 | 8.11 | 8.08 | 34.243 | 26.668 | 142.3 | 0.640 | 0.85 | 12.8 | 50.0 | 2.68 | 33.4 | 0.01 | 0.06 | | | 323 | 204 |
| 381 | 7.08 | 7.04 | 34.264 | 26.833 | 126.9 | 0.721 | 0.57 | 8.4 | 63.0 | 2.91 | 36.6 | 0.00 | 0.07 | | | 383 | 203 |
| 400 ISL | 6.93 D | 6.89 | 34.268 D | 26.857 | 124.8 | 0.745 | 0.51 | 7.5 | 65.7 | 2.95 | 37.1 | 0.00 | 0.05 | | | 403 | |
| 440 | 6.64 | 6.60 | 34.281 | 26.907 | 120.5 | 0.794 | 0.40 | 5.8 | 70.4 | 3.01 | 37.8 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 6.23 D | 6.19 | 34.304 D | 26.979 | 114.1 | 0.864 | 0.30 | 4.3 | 76.6 | 3.09 | 39.0 | 0.00 | 0.00 | | | 503 | |
| 515 | 6.17 | 6.12 | 34.313 | 26.994 | 112.8 | 0.881 | 0.28 | 4.0 | 78.2 | 3.11 | 39.3 | 0.00 | 0.00 | | | 519 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 35.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 14.9 N | 118 15.1 W | 03/11/10 | 2113 UTC | 395 m | 220 12 kn | 260 01 06 | 1 | 1014.1 mb | 23.2 C | 20.2 C | 14m | 1/8 | CS |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.79 | 18.79 | 33.458 | 23.897 | 399.9 | 0.000 | 5.02 | 94.1 | 1.6 | 0.19 | 0.0 | 0.00 | 0.08 | 0.28 | 0.10 | 0 | |
| 1 | 18.79 | 18.79 | 33.458 | 23.897 | 399.9 | 0.004 | 5.02 | 94.1 | 1.6 | 0.19 | 0.0 | 0.00 | 0.08 | 0.28 | 0.10 | 1 | 219 |
| 10 | 18.03 | 18.03 | 33.457 | 24.085 | 382.3 | 0.039 | 5.70 | 105.4 | 1.6 | 0.19 | 0.0 | 0.00 | 0.04 | 0.29 | 0.10 | 10 | 217 |
| 10 | 18.02 | 18.02 | 33.457 | 24.087 | 382.1 | 0.039 | | | | | | | | | | 10 | 218 |
| 20 | 16.11 | 16.11 | 33.327 | 24.438 | 349.0 | 0.076 | 5.95 | 105.9 | 1.9 | 0.28 | 0.4 | 0.07 | 0.04 | 0.60 | 0.24 | 20 | 216 |
| 30 | 13.16 | 13.16 | 33.388 | 25.114 | 284.7 | 0.107 | 5.09 | 85.3 | 7.1 | 0.90 | 8.7 | 0.42 | 0.25 | 0.72 | 0.57 | 30 | 215 |
| 40 | 11.57 | 11.56 | 33.432 | 25.453 | 252.7 | 0.134 | 4.23 | 68.6 | 12.7 | 1.31 | 15.1 | 0.21 | 0.19 | 0.17 | 0.27 | 40 | 214 |
| 50 | 10.92 | 10.91 | 33.517 | 25.636 | 235.4 | 0.159 | 3.66 | 58.5 | 16.9 | 1.54 | 18.9 | 0.09 | 0.05 | 0.09 | 0.33 | 50 | 213 |
| 60 | 10.62 | 10.61 | 33.560 | 25.723 | 227.4 | 0.182 | 3.46 | 55.0 | 18.8 | 1.63 | 20.3 | 0.07 | 0.04 | 0.06 | 0.18 | 60 | 212 |
| 71 | 10.30 | 10.29 | 33.634 | 25.836 | 216.8 | 0.206 | 3.15 | 49.7 | 21.7 | 1.76 | 22.1 | 0.06 | 0.13 | 0.04 | 0.15 | 71 | 211 |
| 75 ISL | 10.12 D | 10.11 | 33.662 D | 25.889 | 211.9 | 0.215 | 3.13 | 49.2 | 22.3 | 1.77 | 22.5 | 0.05 | 0.10 | 0.03 | 0.13 | 75 | |
| 85 | 9.92 | 9.91 | 33.707 | 25.958 | 205.5 | 0.236 | 3.10 | 48.6 | 23.5 | 1.79 | 23.2 | 0.03 | 0.00 | 0.02 | 0.08 | 85 | 210 |
| 100 | 9.81 | 9.80 | 33.805 | 26.053 | 196.8 | 0.266 | 2.77 | 43.3 | 26.2 | 1.90 | 24.4 | 0.03 | 0.00 | 0.01 | 0.08 | 101 | 209 |
| 120 | 9.47 | 9.46 | 33.926 | 26.204 | 182.8 | 0.304 | 2.55 | 39.6 | 29.0 | 1.98 | 25.9 | 0.03 | 0.00 | 0.00 | 0.04 | 121 | 208 |
| 125 ISL | 9.45 D | 9.44 | 33.938 D | 26.217 | 181.7 | 0.313 | 2.48 | 38.5 | 29.6 | 2.00 | 26.1 | 0.03 | 0.00 | 0.00 | 0.04 | 126 | |
| 140 | 9.45 | 9.43 | 34.010 | 26.273 | 176.7 | 0.340 | 2.23 | 34.6 | 31.3 | 2.09 | 26.8 | 0.04 | 0.00 | 0.00 | 0.04 | 141 | 207 |
| 150 ISL | 9.43 D | 9.41 | 34.085 D | 26.335 | 171.0 | 0.357 | 1.98 | 30.8 | 33.0 | 2.17 | 27.5 | 0.05 | 0.00 | 0.00 | 0.04 | 151 | |
| 171 | 9.27 | 9.25 | 34.164 | 26.423 | 163.1 | 0.392 | 1.49 | 23.1 | 36.9 | 2.33 | 29.0 | 0.08 | 0.00 | 0.00 | 0.04 | 172 | 206 |
| 200 ISL | 8.91 D | 8.89 | 34.206 D | 26.514 | 154.9 | 0.438 | 1.27 | 19.5 | 40.9 | 2.45 | 30.4 | 0.07 | 0.00 | 0.00 | 0.05 | 201 | |
| 201 | 8.91 | 8.89 | 34.205 | 26.514 | 155.0 | 0.440 | 1.27 | 19.5 | 41.0 | 2.45 | 30.4 | 0.07 | 0.00 | 0.00 | 0.05 | 202 | 205 |
| 230 | 8.60 | 8.58 | 34.231 | 26.583 | 148.9 | 0.484 | 1.09 | 16.6 | 44.4 | 2.54 | 31.5 | 0.01 | 0.00 | | | 231 | 204 |
| 250 ISL | 8.39 D | 8.36 | 34.235 D | 26.619 | 145.8 | 0.514 | 1.01 | 15.3 | 46.1 | 2.58 | 32.1 | 0.01 | 0.00 | | | 251 | |
| 271 | 8.31 | 8.28 | 34.238 | 26.633 | 144.7 | 0.544 | 0.95 | 14.4 | 47.6 | 2.61 | 32.6 | 0.01 | 0.00 | | | 273 | 203 |
| 300 ISL | 8.15 D | 8.12 | 34.241 D | 26.660 | 142.6 | 0.586 | 0.86 | 13.0 | 49.5 | 2.66 | 33.2 | 0.01 | 0.00 | | | 302 | |
| 320 | 8.01 | 7.98 | 34.247 | 26.686 | 140.5 | 0.614 | 0.80 | 12.0 | 51.0 | 2.69 | 33.6 | 0.01 | 0.00 | | | 322 | 202 |
| 380 | 7.37 | 7.33 | 34.257 | 26.787 | 131.5 | 0.696 | 0.66 | 9.8 | 58.9 | 2.82 | 35.6 | 0.01 | 0.00 | | | 382 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 37.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 11.1 N | 118 22.8 W | 03/11/10 | 1815 UTC | 1180 m | 150 05 kn | 250 02 05 | 0 | 1016.2 mb | 20.5 C | 19.2 C | 17m | 0/8 |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.62 | 17.62 | 33.497 | 24.214 | 369.6 | 0.000 | 5.76 | 105.7 | 1.5 | 0.22 | 0.1 | 0.02 | 0.06 | 0.56 | 0.23 | 0 | |
| 2 A | 17.62 | 17.62 | 33.497 | 24.214 | 369.7 | 0.007 | 5.76 | 105.7 | 1.5 | 0.22 | 0.1 | 0.02 | 0.06 | 0.56 | 0.23 | 2 | 220 |
| 10 ISL | 17.29 D | 17.29 | 33.503 D | 24.298 | 361.9 | 0.037 | 5.73 | 104.4 | 1.7 | 0.26 | 0.5 | 0.04 | 0.09 | 0.77 | 0.32 | 10 | |
| 12 A | 16.92 | 16.92 | 33.497 | 24.381 | 354.1 | 0.044 | 5.72 | 103.5 | 1.8 | 0.27 | 0.6 | 0.05 | 0.10 | 0.83 | 0.36 | 12 | 219 |
| 20 ISL | 15.01 D | 15.01 | 33.449 D | 24.776 | 316.8 | 0.071 | 5.47 | 95.3 | 3.7 | 0.52 | 3.7 | 0.23 | 0.10 | 0.82 | 0.50 | 20 | |
| 24 A | 14.25 | 14.25 | 33.376 | 24.881 | 306.7 | 0.083 | 5.30 | 90.9 | 5.0 | 0.67 | 5.8 | 0.32 | 0.10 | 0.81 | 0.54 | 24 | 218 |
| 30 ISL | 13.49 D | 13.49 | 33.367 D | 25.031 | 292.6 | 0.101 | 4.97 | 83.9 | 7.5 | 0.89 | 9.1 | 0.31 | 0.09 | 0.65 | 0.48 | 30 | |
| 36 A | 12.32 | 12.32 | 33.363 | 25.259 | 271.1 | 0.118 | 4.66 | 76.7 | 9.7 | 1.08 | 11.9 | 0.30 | 0.08 | 0.47 | 0.38 | 36 | 217 |
| 47 A | 11.98 | 11.97 | 33.390 | 25.344 | 263.2 | 0.147 | 4.47 | 73.1 | 11.2 | 1.19 | 13.5 | 0.23 | 0.00 | 0.31 | 0.32 | 47 | 216 |
| 50 ISL | 11.82 D | 11.81 | 33.399 D | 25.381 | 259.7 | 0.155 | 4.41 | 71.9 | 11.7 | 1.22 | 14.0 | 0.20 | 0.00 | 0.27 | 0.28 | 50 | |
| 58 | 11.46 | 11.45 | 33.426 | 25.469 | 251.6 | 0.176 | 4.15 | 67.1 | 13.6 | 1.34 | 15.9 | 0.13 | 0.00 | 0.17 | 0.19 | 58 | 215 |
| 68 A | 10.81 | 10.80 | 33.553 | 25.684 | 231.2 | 0.200 | 3.53 | 56.3 | 18.2 | 1.59 | 19.6 | 0.04 | 0.00 | 0.07 | 0.14 | 68 | 214 |
| 75 ISL | 10.69 D | 10.68 | 33.602 D | 25.744 | 225.8 | 0.216 | 3.32 | 52.9 | 19.6 | 1.66 | 20.7 | 0.04 | 0.00 | 0.05 | 0.15 | 75 | |
| 76 | 10.67 | 10.66 | 33.606 | 25.750 | 225.1 | 0.218 | 3.29 | 52.4 | 19.8 | 1.67 | 20.8 | 0.04 | 0.00 | 0.05 | 0.15 | 76 | 213 |
| 85 | 10.17 | 10.16 | 33.760 | 25.957 | 205.7 | 0.237 | 2.73 | 43.0 | 24.5 | 1.88 | 23.7 | 0.03 | 0.00 | 0.02 | 0.13 | 85 | 212 |
| 100 | 9.98 | 9.97 | 33.880 | 26.083 | 194.0 | 0.267 | 2.35 | 36.9 | 27.6 | 2.01 | 25.4 | 0.02 | 0.00 | 0.01 | 0.11 | 100 | 211 |
| 120 | 9.73 | 9.72 | 33.958 | 26.186 | 184.6 | 0.305 | 2.24 | 35.0 | 29.6 | 2.06 | 26.3 | 0.01 | 0.00 | 0.01 | 0.09 | 121 | 210 |
| 125 ISL | 9.62 D | 9.61 | 33.952 D | 26.200 | 183.4 | 0.315 | 2.23 | 34.8 | 30.1 | 2.07 | 26.5 | 0.01 | 0.00 | 0.01 | 0.09 | 126 | |
| 140 | 9.44 | 9.42 | 34.022 | 26.284 | 175.7 | 0.341 | 2.16 | 33.5 | 31.7 | 2.11 | 27.0 | 0.01 | 0.00 | 0.01 | 0.07 | 141 | 209 |
| 150 ISL | 9.40 D | 9.38 | 34.053 D | 26.315 | 172.9 | 0.359 | 2.00 | 31.0 | 32.9 | 2.17 | 27.4 | 0.01 | 0.00 | 0.01 | 0.06 | 151 | |
| 170 | 9.46 | 9.44 | 34.152 | 26.383 | 166.9 | 0.393 | 1.62 | 25.2 | 35.4 | 2.29 | 28.4 | 0.00 | 0.00 | 0.00 | 0.04 | 171 | 208 |
| 200 | 9.04 | 9.02 | 34.201 | 26.490 | 157.3 | 0.441 | 1.30 | 20.0 | 39.7 | 2.42 | 30.1 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | 207 |
| 231 | 8.74 | 8.72 | 34.224 | 26.556 | 151.5 | 0.489 | 1.16 | 17.8 | 42.9 | 2.51 | 31.2 | 0.01 | 0.00 | | | 232 | 206 |
| 250 ISL | 8.60 D | 8.57 | 34.236 D | 26.587 | 148.9 | 0.518 | 1.06 | 16.2 | 44.6 | 2.55 | 31.8 | 0.01 | 0.00 | | | 251 | |
| 270 | 8.41 | 8.38 | 34.238 | 26.618 | 146.2 | 0.547 | 0.96 | 14.6 | 46.5 | 2.60 | 32.4 | 0.01 | 0.00 | | | 272 | 205 |
| 300 ISL | 8.04 D | 8.01 | 34.246 D | 26.681 | 140.6 | 0.590 | 0.86 | 13.0 | 50.1 | 2.68 | 33.5 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.89 | 7.86 | 34.258 | 26.712 | 137.9 | 0.618 | 0.80 | 12.0 | 52.7 | 2.74 | 34.2 | 0.00 | 0.00 | | | 322 | 204 |
| 380 | 7.25 | 7.21 | 34.263 | 26.809 | 129.3 | 0.698 | 0.58 | 8.6 | 60.4 | 2.87 | 36.2 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 7.08 D | 7.04 | 34.261 D | 26.831 | 127.4 | 0.724 | 0.54 | 8.0 | 62.9 | 2.91 | 36.8 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.71 | 6.67 | 34.273 | 26.891 | 122.0 | 0.775 | 0.48 | 7.0 | 67.7 | 2.98 | 37.9 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 6.37 D | 6.32 | 34.297 D | 26.956 | 116.5 | 0.846 | 0.35 | 5.1 | 73.4 | 3.05 | 38.8 | 0.00 | 0.00 | | | 503 | |
| 516 | 6.30 | 6.25 | 34.307 | 26.973 | 115.0 | 0.864 | 0.31 | 4.5 | 75.0 | 3.07 | 39.1 | 0.00 | 0.00 | | | 520 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 53.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 38.9 N | 119 28.7 W | 03/11/10 | 0851 UTC | 1319 m | 230 09 kn | | | 1015.9 mb | 17.8 C | 16.4 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.88 | 16.88 | 33.468 | 24.368 | 355.0 | 0.000 | 5.82 | 105.2 | 1.5 | 0.26 | 0.1 | 0.02 | 0.11 | 0.58 | 0.39 | 0 | |
| 2 | 16.88 | 16.88 | 33.468 | 24.368 | 355.0 | 0.007 | 5.82 | 105.2 | 1.5 | 0.26 | 0.1 | 0.02 | 0.11 | 0.58 | 0.39 | 2 | 220 |
| 10 | 16.87 | 16.87 | 33.468 | 24.370 | 355.1 | 0.036 | 5.81 | 105.0 | 1.6 | 0.26 | 0.1 | 0.03 | 0.13 | 0.63 | 0.31 | 10 | 219 |
| 20 | 16.70 | 16.70 | 33.473 | 24.414 | 351.2 | 0.071 | 5.79 | 104.3 | 2.0 | 0.28 | 0.2 | 0.04 | 0.13 | 0.65 | 0.37 | 20 | 218 |
| 30 | 14.05 | 14.05 | 33.345 | 24.900 | 305.2 | 0.104 | 5.23 | 89.3 | 5.6 | 0.71 | 6.3 | 0.24 | 0.13 | 0.55 | 0.41 | 30 | 217 |
| 41 | 12.60 | 12.59 | 33.321 | 25.172 | 279.5 | 0.136 | 4.84 | 80.1 | 8.9 | 0.99 | 10.6 | 0.21 | 0.00 | 0.38 | 0.25 | 41 | 216 |
| 50 | 11.26 | 11.25 | 33.381 | 25.470 | 251.3 | 0.160 | 4.35 | 70.0 | 13.7 | 1.30 | 15.5 | 0.07 | 0.00 | 0.17 | 0.14 | 50 | 215 |
| 61 | 10.59 | 10.58 | 33.476 | 25.663 | 233.1 | 0.186 | 3.94 | 62.6 | 17.3 | 1.49 | 18.6 | 0.04 | 0.00 | 0.08 | 0.10 | 61 | 214 |
| 70 | 10.50 | 10.49 | 33.562 | 25.746 | 225.4 | 0.207 | 3.60 | 57.1 | 19.4 | 1.61 | 20.1 | 0.05 | 0.00 | 0.07 | 0.13 | 70 | 213 |
| 75 ISL | 10.25 D | 10.24 | 33.663 D | 25.867 | 214.0 | 0.218 | 3.36 | 53.0 | 21.0 | 1.69 | 21.2 | 0.04 | 0.00 | 0.06 | 0.13 | 75 | |
| 85 | 10.14 | 10.13 | 33.715 | 25.927 | 208.5 | 0.239 | 2.94 | 46.3 | 24.0 | 1.84 | 23.2 | 0.03 | 0.00 | 0.03 | 0.13 | 85 | 212 |
| 100 | 10.07 | 10.06 | 33.774 | 25.985 | 203.3 | 0.270 | 2.69 | 42.3 | 25.4 | 1.91 | 24.1 | 0.03 | 0.00 | 0.02 | 0.09 | 100 | 211 |
| 120 | 9.76 | 9.75 | 33.870 | 26.113 | 191.6 | 0.309 | 2.50 | 39.1 | 28.1 | 1.99 | 25.3 | 0.03 | 0.00 | 0.01 | 0.07 | 121 | 210 |
| 125 ISL | 9.65 D | 9.64 | 33.910 D | 26.162 | 187.0 | 0.319 | 2.44 | 38.0 | 28.7 | 2.01 | 25.6 | 0.03 | 0.00 | 0.01 | 0.07 | 126 | |
| 140 | 9.51 | 9.49 | 33.972 | 26.234 | 180.5 | 0.346 | 2.24 | 34.8 | 30.6 | 2.09 | 26.6 | 0.02 | 0.00 | 0.01 | 0.06 | 141 | 209 |
| 150 ISL | 9.21 D | 9.19 | 34.008 D | 26.311 | 173.3 | 0.364 | 2.10 | 32.4 | 31.9 | 2.14 | 27.2 | 0.02 | 0.00 | 0.01 | 0.06 | 151 | |
| 170 | 9.25 | 9.23 | 34.100 | 26.377 | 167.5 | 0.398 | 1.84 | 28.5 | 34.7 | 2.24 | 28.3 | 0.01 | 0.00 | 0.01 | 0.05 | 171 | 208 |
| 200 ISL | 8.66 D | 8.64 | 34.141 D | 26.503 | 155.9 | 0.447 | 1.62 | 24.7 | 39.9 | 2.36 | 30.1 | 0.02 | 0.00 | 0.00 | 0.04 | 201 | |
| 201 | 8.67 | 8.65 | 34.140 | 26.500 | 156.2 | 0.448 | 1.61 | 24.6 | 40.1 | 2.36 | 30.2 | 0.02 | 0.00 | 0.00 | 0.04 | 202 | 207 |
| 230 | 8.38 | 8.36 | 34.188 D | 26.583 | 148.8 | 0.493 | 1.25 D | 19.0 D | | | | | | | | 231 | 206 |
| 250 ISL | 8.19 D | 8.16 | 34.207 D | 26.627 | 144.9 | 0.522 | 1.03 | 15.6 | 48.9 | 2.61 | 33.1 | 0.08 | 0.00 | | | 251 | |
| 271 | 7.85 | 7.82 | 34.234 | 26.699 | 138.3 | 0.552 | 0.85 | 12.7 | 52.2 | 2.71 | 34.1 | 0.09 | 0.00 | | | 273 | 205 |
| 300 ISL | 7.48 D | 7.45 | 34.239 D | 26.756 | 133.1 | 0.591 | 0.74 | 11.0 | 55.4 | 2.77 | 35.0 | 0.05 | 0.00 | | | 302 | |
| 321 | 7.43 | 7.40 | 34.243 | 26.767 | 132.4 | 0.619 | 0.69 | 10.2 | 57.5 | 2.80 | 35.5 | 0.02 | 0.00 | | | 323 | 204 |
| 381 | 6.94 | 6.90 | 34.265 | 26.853 | 124.9 | 0.696 | 0.50 | 7.3 | 64.6 | 2.93 | 37.1 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.80 D | 6.76 | 34.267 D | 26.874 | 123.1 | 0.720 | 0.46 | 6.7 | 66.5 | 2.96 | 37.5 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.55 | 6.51 | 34.277 | 26.916 | 119.6 | 0.769 | 0.40 | 5.8 | 70.3 | 3.01 | 38.3 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 6.25 D | 6.21 | 34.296 D | 26.970 | 115.0 | 0.839 | 0.34 | 4.9 | 75.5 | 3.07 | 39.3 | 0.00 | 0.00 | | | 503 | |
| 515 | 6.15 | 6.10 | 34.301 | 26.987 | 113.5 | 0.856 | 0.32 | 4.6 | 76.8 | 3.09 | 39.5 | 0.00 | 0.00 | | | 519 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 60.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 25.0 N | 119 57.5 W | 03/11/10 | 0200 UTC | 896 m | 240 08 kn | | | 1017.0 mb | 17.4 C | 16.0 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.36 | 16.36 | 33.198 | 24.281 | 363.3 | 0.000 | 5.83 | 104.2 | 1.7 | 0.30 | 0.1 | 0.03 | 0.07 | 0.29 | 0.06 | 0 | |
| 2 | 16.36 | 16.36 | 33.198 | 24.281 | 363.3 | 0.007 | 5.83 | 104.2 | 1.7 | 0.30 | 0.1 | 0.03 | 0.07 | 0.29 | 0.06 | 2 | 220 |
| 10 | 16.31 | 16.31 | 33.220 | 24.310 | 360.8 | 0.036 | 5.84 | 104.2 | 1.6 | 0.28 | 0.1 | 0.03 | 0.07 | 0.27 | 0.05 | 10 | 219 |
| 20 | 16.17 | 16.17 | 33.255 | 24.369 | 355.5 | 0.072 | 5.84 | 104.0 | 1.6 | 0.28 | 0.1 | 0.03 | 0.07 | 0.44 | 0.07 | 20 | 218 |
| 30 | 16.16 | 16.16 | 33.260 | 24.375 | 355.2 | 0.108 | 5.82 | 103.6 | 1.6 | 0.28 | 0.1 | 0.04 | 0.13 | 0.42 | 0.09 | 30 | 217 |
| 41 | 15.89 | 15.88 | 33.271 | 24.445 | 348.9 | 0.146 | 5.78 | 102.3 | 1.6 | 0.30 | 0.3 | 0.08 | 0.11 | 0.44 | 0.12 | 41 | 216 |
| 49 | 15.48 | 15.47 | 33.231 | 24.506 | 343.4 | 0.174 | 5.73 | 100.6 | 1.8 | 0.36 | 0.7 | 0.17 | 0.20 | 0.41 | 0.15 | 49 | 215 |
| 50 ISL | 15.16 D | 15.15 | 33.215 D | 24.564 | 337.8 | 0.177 | 5.71 | 99.6 | 2.0 | 0.38 | 1.0 | 0.19 | 0.19 | 0.42 | 0.16 | 50 | |
| 60 | 13.51 | 13.50 | 33.078 | 24.805 | 315.0 | 0.210 | 5.47 | 92.2 | 4.0 | 0.63 | 4.3 | 0.29 | 0.04 | 0.47 | 0.26 | 60 | 214 |
| 70 | 12.34 | 12.33 | 32.994 | 24.969 | 299.5 | 0.241 | 5.38 | 88.4 | 6.0 | 0.76 | 6.5 | 0.08 | 0.00 | 0.34 | 0.25 | 70 | 213 |
| 75 ISL | 11.89 D | 11.88 | 33.043 D | 25.092 | 287.8 | 0.255 | 5.26 | 85.6 | 7.7 | 0.88 | 8.5 | 0.06 | 0.00 | 0.25 | 0.20 | 75 | |
| 85 | 10.82 | 10.81 | 33.133 | 25.356 | 262.8 | 0.283 | 4.92 | 78.3 | 11.7 | 1.14 | 13.0 | 0.02 | 0.00 | 0.10 | 0.09 | 85 | 212 |
| 100 ISL | 10.29 D | 10.28 | 33.397 D | 25.654 | 234.8 | 0.320 | 4.22 | 66.5 | 17.0 | 1.46 | 18.1 | 0.02 | 0.00 | 0.04 | 0.06 | 100 | |
| 101 | 10.30 | 10.29 | 33.398 | 25.653 | 234.9 | 0.323 | 4.17 | 65.7 | 17.3 | 1.48 | 18.4 | 0.02 | 0.00 | 0.04 | 0.06 | 101 | 211 |
| 121 | 10.06 | 10.05 | 33.608 | 25.858 | 215.9 | 0.368 | 3.45 | 54.2 | 21.9 | 1.72 | 22.0 | 0.01 | 0.00 | 0.02 | 0.06 | 122 | 210 |
| 125 ISL | 9.73 D | 9.72 | 33.633 D | 25.932 | 208.8 | 0.376 | 3.45 | 53.8 | 22.5 | 1.73 | 22.3 | 0.01 | 0.00 | 0.02 | 0.06 | 126 | |
| 140 | 9.39 | 9.37 | 33.688 | 26.031 | 199.6 | 0.407 | 3.45 | 53.4 | 24.4 | 1.76 | 23.3 | 0.01 | 0.00 | 0.01 | 0.04 | 141 | 209 |
| 150 ISL | 9.02 D | 9.00 | 33.809 D | 26.185 | 185.1 | 0.426 | 3.31 | 50.9 | 26.3 | 1.81 | 24.3 | 0.01 | 0.00 | 0.01 | 0.04 | 151 | |
| 170 | 8.79 | 8.77 | 33.900 | 26.293 | 175.2 | 0.462 | 3.04 | 46.5 | 30.1 | 1.89 | 26.0 | 0.00 | 0.00 | 0.00 | 0.03 | 171 | 208 |
| 200 ISL | 8.22 D | 8.20 | 33.965 D | 26.432 | 162.4 | 0.513 | 3.14 | 47.4 | 33.8 | 1.90 | 26.6 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | |
| 201 | 8.16 | 8.14 | 33.972 | 26.446 | 161.0 | 0.514 | 3.14 | 47.4 | 33.9 | 1.90 | 26.6 | 0.00 | 0.00 | 0.00 | 0.02 | 202 | 207 |
| 232 | 7.91 | 7.89 | 33.998 | 26.504 | 156.0 | 0.564 | 2.69 | 40.3 | 38.4 | 2.08 | 28.8 | 0.00 | 0.05 | | | 233 | 206 |
| 250 ISL | 7.62 D | 7.60 | 34.020 D | 26.563 | 150.5 | 0.591 | 2.18 | 32.5 | 42.8 | 2.26 | 30.9 | 0.00 | 0.03 | | | 251 | |
| 271 | 7.58 | 7.55 | 34.082 | 26.618 | 145.7 | 0.622 | 1.61 | 24.0 | 48.0 | 2.46 | 33.2 | 0.00 | 0.00 | | | 273 | 205 |
| 300 ISL | 7.29 D | 7.26 | 34.098 D | 26.672 | 140.9 | 0.664 | 1.43 | 21.2 | 52.2 | 2.58 | 34.6 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.12 | 7.09 | 34.107 | 26.703 | 138.2 | 0.693 | 1.30 | 19.2 | 54.5 | 2.62 | 35.1 | 0.00 | 0.00 | | | 323 | 204 |
| 380 | 6.63 | 6.60 | 34.127 | 26.786 | 130.9 | 0.772 | 1.00 | 14.6 | 62.2 | 2.79 | 37.2 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.40 D | 6.36 | 34.144 D | 26.830 | 126.9 | 0.798 | 0.87 | 12.6 | 64.6 | 2.85 | 37.8 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.27 | 6.23 | 34.197 | 26.889 | 121.8 | 0.849 | 0.62 | 9.0 | 69.9 | 2.96 | 38.8 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.78 D | 5.74 | 34.248 D | 26.991 | 112.4 | 0.918 | 0.41 | 5.9 | 79.2 | 3.08 | 40.2 | 0.00 | 0.00 | | | 503 | |
| 517 | 5.69 | 5.65 | 34.253 | 27.007 | 111.1 | 0.937 | 0.35 | 5.0 | 81.9 | 3.12 | 40.6 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 4.8 N | 120 38.2 W | 02/11/10 | 1933 UTC | 3823 m | 250 13 kn | 290 03 06 | 0 | 1019.9 mb | 19.8 C | 17.0 C | 19m | 0/8 |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.55 | 16.55 | 33.161 | 24.209 | 370.1 | 0.000 | 5.83 | 104.5 | 1.6 | 0.27 | 0.1 | 0.01 | 0.39 | 0.24 | 0.08 | 0 | |
| 2 A | 16.55 | 16.55 | 33.161 | 24.209 | 370.2 | 0.007 | 5.83 | 104.5 | 1.6 | 0.27 | 0.1 | 0.01 | 0.39 | 0.24 | 0.08 | 2 | 221 |
| 10 ISL | 16.45 D | 16.45 | 33.160 D | 24.231 | 368.3 | 0.037 | 5.80 | 103.8 | 1.8 | 0.27 | 0.1 | 0.01 | 0.31 | 0.25 | 0.10 | 10 | |
| 13 A | 16.44 | 16.44 | 33.161 | 24.235 | 368.1 | 0.048 | 5.79 | 103.6 | 1.9 | 0.27 | 0.1 | 0.01 | 0.28 | 0.26 | 0.11 | 13 | 222 |
| 20 | 16.34 | 16.34 | 33.181 | 24.273 | 364.6 | 0.074 | 5.80 | 103.6 | 1.6 | 0.27 | 0.2 | 0.01 | 0.27 | 0.31 | 0.13 | 20 | 219 |
| 27 A | 16.09 | 16.09 | 33.220 | 24.360 | 356.6 | 0.099 | 5.84 | 103.8 | 1.4 | 0.28 | 0.3 | 0.02 | 0.30 | 0.38 | 0.17 | 27 | 218 |
| 30 ISL | 16.13 D | 16.13 | 33.267 D | 24.387 | 354.1 | 0.110 | 5.82 | 103.5 | 1.4 | 0.28 | 0.4 | 0.03 | 0.34 | 0.38 | 0.19 | 30 | |
| 34 | 16.11 | 16.10 | 33.292 | 24.411 | 351.9 | 0.124 | 5.81 | 103.3 | 1.4 | 0.28 | 0.5 | 0.04 | 0.39 | 0.39 | 0.22 | 34 | 217 |
| 41 A | 15.43 | 15.42 | 33.201 | 24.494 | 344.3 | 0.148 | 5.89 | 103.3 | 1.8 | 0.33 | 0.6 | 0.07 | 0.32 | 0.42 | 0.24 | 41 | 216 |
| 50 ISL | 14.01 D | 14.00 | 33.116 D | 24.732 | 321.7 | 0.178 | 5.84 | 99.5 | 2.3 | 0.41 | 1.2 | 0.26 | 0.44 | 0.35 | 0.34 | 50 | |
| 52 A | 13.47 | 13.46 | 33.065 | 24.802 | 315.0 | 0.184 | 5.82 | 98.0 | 2.5 | 0.43 | 1.4 | 0.29 | 0.46 | 0.32 | 0.35 | 52 | 215 |
| 65 | 11.79 | 11.78 | 32.931 | 25.024 | 294.1 | 0.224 | 5.73 | 93.0 | 4.1 | 0.53 | 3.2 | 0.05 | 0.04 | 0.14 | 0.18 | 65 | 214 |
| 75 ISL | 11.01 D | 11.00 | 32.954 D | 25.183 | 279.1 | 0.253 | 5.54 | 88.5 | 6.1 | 0.71 | 6.2 | 0.02 | 0.06 | 0.08 | 0.11 | 75 | |
| 76 A | 11.00 | 10.99 | 32.956 | 25.186 | 278.8 | 0.255 | 5.51 | 88.0 | 6.4 | 0.73 | 6.6 | 0.02 | 0.06 | 0.08 | 0.11 | 76 | 213 |
| 88 | 10.35 | 10.34 | 33.123 | 25.429 | 255.8 | 0.287 | 5.01 | 78.9 | 11.0 | 1.06 | 12.3 | 0.02 | 0.00 | 0.05 | 0.07 | 88 | 212 |
| 100 | 9.95 | 9.94 | 33.259 | 25.603 | 239.5 | 0.317 | 4.63 | 72.4 | 15.3 | 1.32 | 16.4 | 0.01 | 0.05 | 0.03 | 0.06 | 100 | 211 |
| 121 | 9.41 | 9.40 | 33.494 | 25.876 | 213.9 | 0.365 | 3.99 | 61.7 | 21.6 | 1.63 | 21.5 | 0.01 | 0.00 | 0.01 | 0.03 | 122 | 210 |
| 125 ISL | 9.40 D | 9.39 | 33.614 D | 25.971 | 205.0 | 0.373 | 3.78 | 58.5 | 22.9 | 1.70 | 22.5 | 0.01 | 0.00 | 0.01 | 0.04 | 126 | |
| 140 | 9.29 | 9.27 | 33.743 | 26.090 | 194.0 | 0.403 | 3.05 | 47.1 | 27.3 | 1.93 | 26.0 | 0.00 | 0.00 | 0.01 | 0.06 | 141 | 209 |
| 150 ISL | 9.17 D | 9.15 | 33.787 D | 26.144 | 189.0 | 0.422 | 2.85 | 43.9 | 29.3 | 2.00 | 27.1 | 0.00 | 0.00 | 0.01 | 0.06 | 151 | |
| 170 | 8.79 | 8.77 | 33.877 | 26.275 | 176.9 | 0.459 | 2.68 | 41.0 | 32.4 | 2.06 | 28.3 | 0.00 | 0.00 | 0.00 | 0.04 | 171 | 208 |
| 200 ISL | 8.41 D | 8.39 | 33.988 D | 26.421 | 163.5 | 0.510 | 2.29 | 34.7 | 36.5 | 2.16 | 29.9 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | |
| 201 | 8.41 | 8.39 | 33.988 | 26.421 | 163.5 | 0.512 | 2.28 | 34.6 | 36.6 | 2.16 | 29.9 | 0.00 | 0.00 | 0.00 | 0.04 | 202 | 207 |
| 230 | 8.12 | 8.10 | 34.026 | 26.495 | 156.9 | 0.558 | 2.00 | 30.1 | 40.8 | 2.27 | 31.3 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 7.53 D | 7.51 | 33.996 D | 26.557 | 151.1 | 0.589 | 2.32 | 34.5 | 42.5 | 2.21 | 30.8 | 0.00 | 0.00 | | | 251 | |
| 270 | 7.31 | 7.28 | 33.995 | 26.588 | 148.4 | 0.619 | 2.61 | 38.6 | 44.3 | 2.17 | 30.5 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.14 D | 7.11 | 34.028 D | 26.638 | 144.0 | 0.663 | 1.96 | 28.9 | 50.1 | 2.39 | 33.1 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.07 | 7.04 | 34.095 | 26.701 | 138.4 | 0.691 | 1.39 D | 20.5 D | 54.5 | 2.58 | 35.2 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 6.47 | 6.44 | 34.140 | 26.817 | 127.8 | 0.772 | 0.93 | 13.5 | 64.9 | 2.81 | 37.7 | 0.00 | 0.08 | | | 383 | 203 |
| 400 ISL | 6.14 D | 6.10 | 34.114 D | 26.839 | 125.7 | 0.796 | 0.86 | 12.4 | 67.8 | 2.85 | 38.3 | 0.00 | 0.06 | | | 403 | |
| 441 | 5.91 | 5.87 | 34.157 | 26.903 | 120.1 | 0.847 | 0.73 | 10.5 | 74.0 | 2.93 | 39.6 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.42 D | 5.38 | 34.192 D | 26.991 | 112.0 | 0.915 | 0.48 | 6.8 | 84.1 | 3.06 | 41.2 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.32 | 5.28 | 34.214 | 27.020 | 109.3 | 0.933 | 0.41 | 5.8 | 86.8 | 3.10 | 41.6 | 0.00 | 0.00 | | | 519 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 80.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 44.9 N | 121 18.6 W | 02/11/10 | 1301 UTC | 3607 m | 270 18 kn | | | 1020.2 mb | 17.6 C | 15.5 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.48 | 17.48 | 33.076 | 23.925 | 397.2 | 0.000 | 5.58 | 101.8 | 2.1 | 0.25 | 0.0 | 0.00 | 0.07 | 0.13 | 0.04 | 0 | |
| 2 | 17.48 | 17.48 | 33.076 | 23.925 | 397.2 | 0.008 | 5.58 | 101.8 | 2.1 | 0.25 | 0.0 | 0.00 | 0.07 | 0.13 | 0.04 | 2 | 221 |
| 10 | 17.48 | 17.48 | 33.069 | 23.920 | 398.0 | 0.040 | 5.57 | 101.6 | 2.1 | 0.25 | 0.0 | 0.00 | 0.04 | 0.13 | 0.04 | 10 | 219 |
| 20 ISL | 17.56 D | 17.56 | 33.091 D | 23.919 | 398.5 | 0.080 | 5.57 | 101.8 | 2.0 | 0.26 | 0.0 | 0.00 | 0.04 | 0.13 | 0.04 | 20 | |
| 25 | 17.54 | 17.54 | 33.081 | 23.916 | 398.9 | 0.100 | 5.57 | 101.8 | 2.0 | 0.26 | 0.0 | 0.00 | 0.04 | 0.13 | 0.04 | 25 | 218 |
| 30 ISL | 17.88 D | 17.87 | 33.214 D | 23.936 | 397.2 | 0.119 | 5.59 | 102.9 | 2.0 | 0.25 | 0.0 | 0.00 | 0.04 | 0.15 | 0.05 | 30 | |
| 41 | 17.12 | 17.11 | 33.202 | 24.109 | 381.0 | 0.162 | 5.71 | 103.5 | 2.1 | 0.25 | 0.0 | 0.00 | 0.04 | 0.19 | 0.08 | 41 | 217 |
| 50 | 16.13 | 16.12 | 33.183 | 24.324 | 360.8 | 0.196 | 5.94 | 105.6 | 2.2 | 0.27 | 0.0 | 0.00 | 0.00 | 0.16 | 0.09 | 50 | 216 |
| 62 | 15.14 | 15.13 | 33.195 | 24.553 | 339.2 | 0.238 | 5.89 | 102.7 | 2.4 | 0.28 | 0.0 | 0.00 | 0.00 | 0.20 | 0.20 | 62 | 215 |
| 75 | 14.10 | 14.09 | 33.276 | 24.837 | 312.4 | 0.280 | 5.74 | 98.0 | 2.8 | 0.29 | 0.5 | 0.10 | 0.00 | 0.20 | 0.27 | 75 | 214 |
| 87 | 13.82 | 13.81 | 33.320 | 24.929 | 304.0 | 0.317 | 5.73 | 97.3 | 2.7 | 0.27 | 0.3 | 0.15 | 0.00 | 0.19 | 0.28 | 87 | 213 |
| 100 | 12.67 | 12.66 | 33.304 | 25.147 | 283.4 | 0.355 | 5.38 | 89.2 | 4.7 | 0.53 | 4.2 | 0.02 | 0.00 | 0.10 | 0.17 | 100 | 212 |
| 113 | 11.55 | 11.54 | 33.284 | 25.343 | 264.9 | 0.391 | 5.10 | 82.6 | 7.9 | 0.80 | 8.5 | 0.01 | 0.00 | 0.08 | 0.13 | 113 | 211 |
| 125 ISL | 10.85 D | 10.83 | 33.315 D | 25.493 | 250.7 | 0.422 | 4.96 | 79.1 | 9.7 | 0.93 | 10.6 | 0.00 | 0.00 | 0.05 | 0.09 | 126 | |
| 126 | 10.90 | 10.88 | 33.316 | 25.485 | 251.5 | 0.424 | 4.95 | 79.0 | 9.8 | 0.94 | 10.7 | 0.00 | 0.00 | 0.05 | 0.09 | 127 | 210 |
| 141 | 10.43 | 10.41 | 33.399 | 25.632 | 237.8 | 0.461 | 4.74 | 74.9 | 12.4 | 1.08 | 13.2 | 0.00 | 0.00 | 0.03 | 0.05 | 142 | 209 |
| 150 ISL | 10.09 D | 10.07 | 33.470 D | 25.745 | 227.1 | 0.482 | 4.57 | 71.7 | 14.3 | 1.18 | 14.9 | 0.00 | 0.00 | 0.02 | 0.04 | 151 | |
| 170 | 9.69 | 9.67 | 33.617 | 25.927 | 210.2 | 0.526 | 4.14 | 64.5 | 18.8 | 1.42 | 18.7 | 0.00 | 0.00 | 0.01 | 0.02 | 171 | 208 |
| 200 ISL | 9.16 D | 9.14 | 33.828 D | 26.179 | 186.8 | 0.585 | 3.44 | 53.0 | 25.0 | 1.71 | 23.3 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | |
| 201 | 9.20 | 9.18 | 33.820 | 26.166 | 188.0 | 0.587 | 3.42 | 52.8 | 25.2 | 1.72 | 23.4 | 0.00 | 0.00 | 0.00 | 0.02 | 202 | 207 |
| 230 | 8.52 | 8.50 | 33.960 | 26.383 | 167.8 | 0.639 | 2.63 | 40.0 | 33.7 | 2.03 | 28.3 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.18 D | 8.15 | 33.995 D | 26.462 | 160.5 | 0.671 | 2.65 | 40.0 | 36.7 | 2.05 | 28.8 | 0.00 | 0.00 | | | 251 | |
| 270 | 7.80 | 7.77 | 33.995 | 26.518 | 155.3 | 0.703 | 2.67 | 39.9 | 39.0 | 2.08 | 29.2 | 0.00 | 0.00 | | | 271 | 205 |
| 300 ISL | 7.38 D | 7.35 | 34.006 D | 26.587 | 149.0 | 0.749 | 2.43 | 36.0 | 44.4 | 2.21 | 30.9 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.18 | 7.15 | 34.012 | 26.620 | 146.1 | 0.778 | 2.20 | 32.4 | 48.5 | 2.31 | 32.3 | 0.00 | 0.00 | | | 322 | 204 |
| 380 | 6.31 | 6.28 | 34.043 | 26.761 | 132.9 | 0.862 | 1.55 | 22.4 | 61.3 | 2.62 | 36.4 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.37 D | 6.33 | 34.103 D | 26.801 | 129.5 | 0.888 | 1.31 | 19.0 | 64.2 | 2.71 | 37.3 | 0.00 | 0.00 | | | 402 | |
| 441 | 6.10 | 6.06 | 34.129 | 26.857 | 124.6 | 0.940 | 0.87 | 12.5 | 69.3 | 2.87 | 38.7 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.81 D | 5.77 | 34.203 D | 26.952 | 116.1 | 1.011 | 0.57 | 8.1 | 77.5 | 3.01 | 40.1 | 0.00 | 0.00 | | | 503 | |
| 515 | 5.69 | 5.65 | 34.204 | 26.968 | 114.7 | 1.028 | 0.50 | 7.1 | 79.6 | 3.05 | 40.4 | 0.00 | 0.00 | | | 518 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 90.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 24.9 N | 121 59.2 W | 02/11/10 | 0330 UTC | 3924 m | 290 15 kn | | | 1021.0 mb | 18.0 C | 16.0 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.39 | 18.39 | 33.422 | 23.969 | 393.0 | 0.000 | 5.43 | 101.0 | 2.1 | 0.24 | 0.0 | 0.00 | 0.07 | 0.10 | 0.02 | 0 | |
| 2 | 18.39 | 18.39 | 33.422 | 23.969 | 393.1 | 0.008 | 5.43 | 101.0 | 2.1 | 0.24 | 0.0 | 0.00 | 0.07 | 0.10 | 0.02 | 2 | 224 |
| 10 | 18.39 | 18.39 | 33.421 | 23.969 | 393.4 | 0.039 | 5.47 | 101.8 | 2.2 | 0.23 | 0.0 | 0.00 | 0.05 | 0.11 | 0.01 | 10 | 223 |
| 20 ISL | 18.40 D | 18.40 | 33.420 D | 23.966 | 394.0 | 0.079 | 5.46 | 101.6 | 2.1 | 0.23 | 0.0 | 0.00 | 0.05 | 0.11 | 0.01 | 20 | |
| 25 | 18.40 | 18.40 | 33.421 | 23.967 | 394.1 | 0.098 | 5.45 | 101.4 | 2.1 | 0.23 | 0.0 | 0.00 | 0.05 | 0.11 | 0.01 | 25 | 222 |
| 30 ISL | 18.40 D | 18.39 | 33.420 D | 23.966 | 394.3 | 0.118 | 5.45 | 101.4 | 2.1 | 0.23 | 0.0 | 0.00 | 0.05 | 0.11 | 0.01 | 30 | |
| 40 | 18.39 | 18.38 | 33.420 | 23.969 | 394.4 | 0.158 | 5.46 | 101.6 | 2.2 | 0.24 | 0.0 | 0.00 | 0.04 | 0.11 | 0.01 | 40 | 221 |
| 50 | 18.39 | 18.38 | 33.421 | 23.970 | 394.6 | 0.197 | 5.46 | 101.6 | 2.1 | 0.23 | 0.0 | 0.00 | 0.08 | 0.11 | 0.01 | 50 | 220 |
| 62 | 16.44 | 16.43 | 33.233 | 24.292 | 364.2 | 0.243 | 5.88 | 105.2 | 2.1 | 0.25 | 0.0 | 0.00 | 0.05 | 0.18 | 0.05 | 62 | 219 |
| 75 | 15.62 | 15.61 | 33.278 | 24.512 | 343.6 | 0.289 | 5.81 | 102.3 | 2.1 | 0.25 | 0.0 | 0.00 | 0.05 | 0.19 | 0.13 | 75 | 218 |
| 87 | 15.13 | 15.12 | 33.267 | 24.612 | 334.4 | 0.329 | 5.75 | 100.3 | 2.4 | 0.28 | 0.0 | 0.00 | 0.00 | 0.30 | 0.16 | 87 | 217 |
| 100 | 15.09 | 15.07 | 33.436 | 24.751 | 321.5 | 0.372 | 5.55 | 96.8 | 2.7 | 0.29 | 0.4 | 0.11 | 0.00 | 0.26 | 0.18 | 100 | 216 |
| 112 | 13.93 | 13.91 | 33.293 | 24.887 | 308.8 | 0.410 | 5.49 | 93.4 | 3.6 | 0.42 | 2.1 | 0.08 | 0.00 | 0.23 | 0.22 | 112 | 215 |
| 125 | 12.70 | 12.68 | 33.225 | 25.081 | 290.4 | 0.449 | 5.34 | 88.5 | 5.3 | 0.62 | 5.2 | 0.01 | 0.00 | 0.15 | 0.16 | 125 | 214 |
| 139 | 11.85 | 11.83 | 33.314 | 25.312 | 268.6 | 0.488 | 5.13 | 83.6 | 7.2 | 0.75 | 7.7 | 0.00 | 0.00 | 0.10 | 0.11 | 140 | 213 |
| 150 ISL | 11.15 D | 11.13 | 33.314 D | 25.440 | 256.5 | 0.517 | 5.05 | 81.1 | 8.3 | 0.84 | 9.2 | 0.00 | 0.04 | 0.07 | 0.08 | 151 | |
| 170 | 10.51 | 10.49 | 33.374 | 25.599 | 241.6 | 0.566 | 4.79 | 75.8 | 11.5 | 1.05 | 12.7 | 0.00 | 0.10 | 0.04 | 0.05 | 171 | 212 |
| 200 | 9.50 | 9.48 | 33.695 | 26.020 | 201.9 | 0.633 | 3.54 | 54.9 | 22.9 | 1.65 | 22.4 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | 211 |
| 229 | 9.09 | 9.07 | 33.895 | 26.243 | 181.3 | 0.688 | 3.00 | 46.2 | 28.2 | 1.86 | 25.3 | 0.00 | 0.00 | | | 230 | 210 |
| 250 ISL | 8.80 D | 8.77 | 33.959 D | 26.339 | 172.4 | 0.726 | 2.84 | 43.4 | 31.0 | 1.92 | 26.5 | 0.00 | 0.00 | | | 251 | |
| 269 | 8.57 | 8.54 | 33.992 | 26.401 | 166.8 | 0.758 | 2.73 | 41.6 | 33.6 | 1.97 | 27.4 | 0.00 | 0.00 | | | 270 | 209 |
| 300 ISL | 8.01 D | 7.98 | 34.033 D | 26.518 | 156.0 | 0.808 | 2.31 | 34.7 | 40.0 | 2.16 | 30.0 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.70 | 7.67 | 34.056 | 26.581 | 150.1 | 0.840 | 1.99 | 29.7 | 44.7 | 2.31 | 31.8 | 0.00 | 0.00 | | | 323 | 208 |
| 381 | 6.99 | 6.95 | 34.117 | 26.730 | 136.6 | 0.926 | 1.21 | 17.8 | 57.0 | 2.65 | 35.9 | 0.00 | 0.00 | | | 383 | 207 |
| 400 ISL | 6.80 D | 6.76 | 34.129 D | 26.765 | 133.3 | 0.952 | 1.09 | 15.9 | 60.4 | 2.72 | 36.8 | 0.00 | 0.00 | | | 402 | |
| 440 | 6.42 | 6.38 | 34.151 D | 26.833 | 127.2 | 1.004 | 0.93 D | 13.5 D | | | | | | | | 443 | 206 |
| 500 ISL | 5.86 D | 5.82 | 34.191 D | 26.937 | 117.6 | 1.077 | 0.62 | 8.9 | 76.5 | 3.00 | 40.1 | 0.00 | 0.00 | | | 503 | |
| 513 | 5.74 | 5.70 | 34.193 | 26.953 | 116.1 | 1.092 | 0.55 | 7.8 | 78.4 | 3.02 | 40.4 | 0.00 | 0.00 | | | 516 | 205 |
| 600 CSL | 5.25 | 5.20 | 34.259 | 27.065 | 106.1 | 1.189 | | | | | | | | | | 604 | 200 |
| 700 CSL | 4.88 | 4.82 | 34.329 | 27.164 | 97.4 | 1.291 | | | | | | | | | | 705 | 200 |
| 800 CSL | 4.55 | 4.49 | 34.390 | 27.249 | 89.9 | 1.384 | | | | | | | | | | 806 | 200 |
| 900 CSL | 4.20 | 4.13 | 34.433 | 27.322 | 83.4 | 1.471 | | | | | | | | | | 907 | 200 |
| 1000 CSL | 3.92 | 3.84 | 34.464 | 27.376 | 78.7 | 1.552 | | | | | | | | | | 1008 | 200 |
| 1100 CSL | 3.64 | 3.56 | 34.493 | 27.427 | 74.0 | 1.628 | | | | | | | | | | 1109 | 200 |
| 1200 CSL | 3.41 | 3.32 | 34.511 | 27.465 | 70.7 | 1.701 | | | | | | | | | | 1210 | 200 |
| 1300 CSL | 3.21 | 3.12 | 34.529 | 27.499 | 67.7 | 1.770 | | | | | | | | | | 1312 | 200 |
| 1400 CSL | 3.00 | 2.90 | 34.544 | 27.530 | 64.8 | 1.836 | | | | | | | | | | 1413 | 200 |
| 1500 CSL | 2.81 | 2.70 | 34.560 | 27.561 | 62.0 | 1.900 | | | | | | | | | | 1514 | 200 |
| 1600 CSL | 2.65 | 2.54 | 34.573 | 27.585 | 59.7 | 1.960 | | | | | | | | | | 1616 | 200 |
| 1800 CSL | 2.32 | 2.19 | 34.601 | 27.636 | 54.7 | 2.075 | | | | | | | | | | 1819 | 200 |
| 2000 CSL | 2.09 | 1.95 | 34.620 | 27.671 | 51.4 | 2.181 | | | | | | | | | | 2022 | 200 |
| 2002 | 2.10 | 1.96 | 34.620 | 27.670 | 51.5 | 2.182 | 1.81 | 23.6 | 163.4 | 2.93 | 41.3 | 0.00 | 0.00 | | | 2024 | 204 |
| 2200 CSL | 1.93 | 1.78 | 34.636 | 27.698 | 49.1 | 2.282 | | | | | | | | | | 2225 | 200 |
| 2400 CSL | 1.83 | 1.66 | 34.646 | 27.714 | 47.8 | 2.378 | | | | | | | | | | 2428 | 200 |
| 2600 CSL | 1.73 | 1.54 | 34.654 | 27.729 | 46.7 | 2.473 | | | | | | | | | | 2632 | 200 |
| 2800 CSL | 1.66 | 1.46 | 34.660 | 27.741 | 45.9 | 2.566 | | | | | | | | | | 2836 | 200 |
| 3000 CSL | 1.60 | 1.38 | 34.666 | 27.751 | 45.3 | 2.657 | | | | | | | | | | 3040 | 200 |
| 3200 CSL | 1.57 | 1.33 | 34.669 | 27.757 | 45.3 | 2.747 | | | | | | | | | | 3244 | 200 |
| 3400 CSL | 1.54 | 1.28 | 34.673 | 27.764 | 45.1 | 2.838 | | | | | | | | | | 3449 | 200 |
| 3504 | 1.53 | 1.26 | 34.681 | 27.771 | 44.7 | 2.885 | 2.94 | 37.7 | 171.7 | 2.67 | 38.3 | 0.00 | 0.00 | | | 3555 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 4.8 N | 122 40.2 W | 01/11/10 | 1946 UTC | 3960 m | 280 17 kn | 340 03 04 | 1 | 1023.6 mb | 19.0 C | 16.7 C | 37m | 2/8 | AC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.35 | 18.35 | 33.346 | 23.921 | 397.6 | 0.000 | 5.46 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.02 | 0.08 | 0.02 | 0 | |
| 2 A | 18.35 | 18.35 | 33.346 | 23.921 | 397.7 | 0.008 | 5.46 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.02 | 0.08 | 0.02 | 2 | 222 |
| 10 ISL | 18.36 D | 18.36 | 33.348 D | 23.920 | 398.0 | 0.040 | 5.47 | 101.7 | 1.9 | 0.26 | 0.0 | 0.00 | 0.03 | 0.08 | 0.01 | 10 | |
| 14 | 18.36 | 18.36 | 33.348 | 23.920 | 398.1 | 0.056 | 5.47 | 101.7 | 1.9 | 0.27 | 0.0 | 0.00 | 0.03 | 0.08 | 0.01 | 14 | 221 |
| 20 ISL | 18.36 D | 18.36 | 33.356 D | 23.927 | 397.7 | 0.080 | 5.48 | 101.9 | 1.8 | 0.25 | 0.0 | 0.00 | 0.03 | 0.09 | 0.01 | 20 | |
| 25 A | 18.34 | 18.34 | 33.359 | 23.934 | 397.2 | 0.099 | 5.49 | 102.0 | 1.8 | 0.24 | 0.0 | 0.00 | 0.03 | 0.09 | 0.01 | 25 | 220 |
| 30 ISL | 18.33 D | 18.32 | 33.356 D | 23.935 | 397.3 | 0.119 | 5.48 | 101.8 | 1.8 | 0.24 | 0.0 | 0.00 | 0.03 | 0.09 | 0.01 | 30 | |
| 34 | 18.32 | 18.31 | 33.368 | 23.947 | 396.3 | 0.135 | 5.47 | 101.6 | 1.9 | 0.25 | 0.0 | 0.00 | 0.03 | 0.09 | 0.01 | 34 | 219 |
| 43 | 18.21 | 18.20 | 33.326 | 23.942 | 397.1 | 0.171 | 5.48 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.02 | 0.11 | 0.02 | 43 | 218 |
| 50 ISL | 18.27 D | 18.26 | 33.348 D | 23.944 | 397.1 | 0.199 | 5.47 | 101.5 | 2.0 | 0.23 | 0.0 | 0.00 | 0.02 | 0.11 | 0.01 | 50 | |
| 53 A | 18.27 | 18.26 | 33.354 | 23.949 | 396.8 | 0.211 | 5.47 | 101.5 | 2.0 | 0.23 | 0.0 | 0.00 | 0.02 | 0.11 | 0.01 | 53 | 217 |
| 61 | 18.27 | 18.26 | 33.360 | 23.954 | 396.6 | 0.242 | 5.48 | 101.7 | 2.0 | 0.24 | 0.0 | 0.00 | 0.01 | 0.13 | 0.03 | 61 | 216 |
| 71 | 17.62 | 17.61 | 33.308 | 24.073 | 385.6 | 0.281 | 5.60 | 102.6 | 2.0 | 0.23 | 0.0 | 0.00 | 0.02 | 0.17 | 0.05 | 71 | 215 |
| 75 ISL | 16.50 D | 16.49 | 33.248 D | 24.290 | 364.8 | 0.296 | 5.72 | 102.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.06 | 0.17 | 0.07 | 75 | |
| 78 A | 16.43 | 16.42 | 33.246 | 24.305 | 363.5 | 0.307 | 5.80 | 103.8 | 2.0 | 0.24 | 0.0 | 0.00 | 0.08 | 0.17 | 0.09 | 78 | 214 |
| 91 | 15.80 | 15.79 | 33.308 | 24.495 | 345.7 | 0.353 | 5.82 | 102.9 | 1.9 | 0.23 | 0.0 | 0.00 | 0.03 | 0.18 | 0.18 | 91 | 213 |
| 100 A | 15.74 | 15.72 | 33.434 | 24.606 | 335.4 | 0.384 | 5.67 | 100.2 | 2.1 | 0.27 | 0.0 | 0.02 | 0.05 | 0.19 | 0.22 | 100 | 212 |
| 117 | 14.25 | 14.23 | 33.371 | 24.880 | 309.6 | 0.439 | 5.54 | 94.9 | 3.0 | 0.34 | 1.0 | 0.16 | 0.03 | 0.16 | 0.24 | 117 | 211 |
| 125 ISL | 13.87 D | 13.85 | 33.373 D | 24.961 | 302.0 | 0.463 | 5.40 | 91.8 | 3.9 | 0.44 | 2.6 | 0.10 | 0.03 | 0.12 | 0.20 | 125 | |
| 133 | 13.06 | 13.04 | 33.365 | 25.119 | 287.1 | 0.487 | 5.27 | 88.1 | 4.9 | 0.55 | 4.4 | 0.02 | 0.03 | 0.09 | 0.16 | 134 | 210 |
| 150 A | 12.28 | 12.26 | 33.334 | 25.247 | 275.1 | 0.535 | 5.21 | 85.7 | 6.2 | 0.68 | 6.5 | 0.02 | 0.03 | 0.07 | 0.14 | 151 | 209 |
| 171 | 10.65 | 10.63 | 33.379 | 25.579 | 243.6 | 0.589 | 4.80 | 76.2 | 11.4 | 1.04 | 12.6 | 0.01 | 0.03 | 0.03 | 0.05 | 172 | 208 |
| 200 ISL | 9.48 D | 9.46 | 33.701 D | 26.028 | 201.2 | 0.654 | 3.69 | 57.2 | 21.8 | 1.60 | 21.6 | 0.00 | 0.01 | 0.00 | 0.01 | 201 | |
| 201 | 9.48 | 9.46 | 33.702 | 26.029 | 201.1 | 0.656 | 3.65 | 56.6 | 22.2 | 1.62 | 21.9 | 0.00 | 0.01 | 0.00 | 0.01 | 202 | 207 |
| 231 | 8.89 | 8.87 | 33.940 | 26.310 | 174.9 | 0.712 | 2.93 | 44.9 | 29.8 | 1.89 | 26.1 | 0.00 | 0.01 | | | 232 | 206 |
| 250 ISL | 8.70 D | 8.67 | 33.990 D | 26.379 | 168.6 | 0.745 | 2.68 | 40.9 | 33.2 | 1.99 | 27.5 | 0.00 | 0.01 | | | 251 | |
| 271 | 8.36 | 8.33 | 34.023 | 26.457 | 161.4 | 0.779 | 2.47 | 37.4 | 36.4 | 2.08 | 28.7 | 0.00 | 0.02 | | | 272 | 205 |
| 300 ISL | 8.06 D | 8.03 | 34.067 D | 26.537 | 154.2 | 0.825 | 2.09 | 31.5 | 41.3 | 2.24 | 30.6 | 0.00 | 0.02 | | | 302 | |
| 322 | 7.86 | 7.83 | 34.093 | 26.587 | 149.7 | 0.859 | 1.83 D | 27.4 D | 45.0 | 2.36 | 32.0 | 0.00 | 0.02 | | | 324 | 204 |
| 380 | 6.98 | 6.94 | 34.085 | 26.706 | 138.8 | 0.942 | 1.44 | 21.1 | 55.1 | 2.59 | 35.3 | 0.00 | 0.01 | | | 382 | 203 |
| 400 ISL | 6.88 D | 6.84 | 34.126 D | 26.752 | 134.7 | 0.970 | 1.29 | 18.9 | 58.3 | 2.66 | 36.2 | 0.00 | 0.02 | | | 402 | |
| 440 | 6.45 | 6.41 | 34.136 | 26.818 | 128.7 | 1.022 | 1.02 | 14.8 | 64.6 | 2.79 | 37.7 | 0.00 | 0.05 | | | 443 | 202 |
| 500 ISL | 5.87 D | 5.83 | 34.175 D | 26.923 | 119.0 | 1.097 | 0.74 | 10.6 | 73.8 | 2.93 | 39.5 | 0.00 | 0.01 | | | 503 | |
| 516 | 5.82 | 5.78 | 34.183 | 26.935 | 117.9 | 1.116 | 0.66 | 9.4 | 76.2 | 2.97 | 40.0 | 0.00 | 0.00 | | | 519 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 110.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 45.2 N | 123 20.1 W | 01/11/10 | 1257 UTC | 4039 m | 290 17 kn | | | 1022.8 mb | 18.1 C | 15.4 C | | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.79 | 18.79 | 33.417 | 23.866 | 402.9 | 0.000 | 5.41 | 101.4 | 2.1 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 0 | |
| 2 | 18.79 | 18.79 | 33.417 | 23.866 | 402.9 | 0.008 | 5.41 | 101.4 | 2.1 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 2 | 221 |
| 10 | 18.80 | 18.80 | 33.417 | 23.864 | 403.4 | 0.040 | 5.42 | 101.6 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 10 | 220 |
| 20 ISL | 18.80 D | 18.80 | 33.416 D | 23.863 | 403.8 | 0.081 | 5.41 | 101.4 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 20 | |
| 25 | 18.80 | 18.80 | 33.418 | 23.865 | 403.8 | 0.101 | 5.41 | 101.4 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 25 | 219 |
| 30 ISL | 18.81 D | 18.80 | 33.418 D | 23.863 | 404.2 | 0.121 | 5.41 | 101.5 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 30 | |
| 40 | 18.80 | 18.79 | 33.422 | 23.869 | 404.0 | 0.161 | 5.42 | 101.6 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 40 | 218 |
| 50 | 18.79 | 18.78 | 33.426 | 23.875 | 403.8 | 0.202 | 5.41 | 101.4 | 2.0 | 0.24 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 50 | 217 |
| 62 | 17.43 | 17.42 | 33.280 | 24.096 | 383.0 | 0.249 | 5.77 | 105.3 | 2.2 | 0.23 | 0.0 | 0.00 | 0.00 | 0.17 | 0.05 | 62 | 216 |
| 75 | 16.27 | 16.26 | 33.237 | 24.334 | 360.6 | 0.297 | 5.90 | 105.2 | 2.2 | 0.23 | 0.0 | 0.00 | 0.00 | 0.17 | 0.07 | 75 | 215 |
| 88 | 15.39 | 15.38 | 33.213 | 24.513 | 343.8 | 0.343 | 5.81 | 101.8 | 2.1 | 0.27 | 0.0 | 0.00 | 0.00 | 0.18 | 0.15 | 88 | 214 |
| 100 ISL | 14.38 D | 14.37 | 33.199 D | 24.720 | 324.3 | 0.383 | 5.71 | 98.0 | 2.5 | 0.33 | 0.2 | 0.07 | 0.00 | 0.25 | 0.37 | 100 | |
| 101 | 14.42 | 14.41 | 33.200 | 24.712 | 325.1 | 0.387 | 5.70 | 97.9 | 2.6 | 0.34 | 0.2 | 0.07 | 0.00 | 0.25 | 0.38 | 101 | 213 |
| 112 | 13.45 | 13.43 | 33.212 | 24.922 | 305.3 | 0.421 | 5.47 | 92.1 | 3.8 | 0.48 | 2.6 | 0.04 | 0.00 | 0.18 | 0.25 | 112 | 212 |
| 125 | 12.78 | 12.76 | 33.215 | 25.057 | 292.6 | 0.460 | 5.35 | 88.8 | 4.9 | 0.59 | 4.5 | 0.02 | 0.00 | 0.14 | 0.16 | 125 | 211 |
| 140 | 11.72 | 11.70 | 33.225 | 25.267 | 272.8 | 0.502 | 5.21 | 84.6 | 7.2 | 0.77 | 7.7 | 0.01 | 0.00 | 0.09 | 0.10 | 141 | 210 |
| 150 ISL | 11.45 D | 11.43 | 33.380 D | 25.437 | 256.8 | 0.529 | 5.08 | 82.1 | 8.4 | 0.85 | 9.2 | 0.01 | 0.00 | 0.06 | 0.07 | 151 | |
| 171 | 10.680 | 10.660 | 33.483 | 25.655 | 236.4 | 0.581 | 4.75 | 75.5 | 11.4 | 1.01 | 12.3 | 0.00 | 0.00 | 0.02 | 0.03 | 172 | 208 |
| 171 | 10.63 | 10.61 | 33.483 | 25.664 | 235.5 | 0.581 | 4.74 | 75.3 | 11.6 | 1.02 | 12.6 | 0.00 | 0.00 | 0.02 | 0.03 | 172 | 209 |
| 200 ISL | 9.76 D | 9.74 | 33.628 D | 25.925 | 211.1 | 0.645 | 4.20 | 65.5 | 17.8 | 1.37 | 18.1 | 0.00 | 0.00 | 0.01 | 0.02 | 201 | |
| 201 | 9.74 | 9.72 | 33.629 | 25.929 | 210.7 | 0.648 | 4.18 | 65.2 | 18.1 | 1.38 | 18.3 | 0.00 | 0.00 | 0.01 | 0.02 | 202 | 207 |
| 230 | 9.15 | 9.12 | 33.872 | 26.215 | 183.9 | 0.705 | 3.52 | 54.2 | 25.3 | 1.67 | 22.9 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.74 D | 8.71 | 33.965 D | 26.353 | 171.1 | 0.740 | 3.19 | 48.7 | 30.0 | 1.82 | 25.2 | 0.00 | 0.00 | | | 251 | |
| 271 | 8.33 | 8.30 | 34.001 | 26.444 | 162.6 | 0.775 | 2.88 | 43.6 | 34.6 | 1.95 | 27.2 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.98 D | 7.95 | 34.040 D | 26.528 | 155.0 | 0.821 | 2.34 | 35.2 | 40.5 | 2.16 | 29.9 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.72 | 7.69 | 34.061 | 26.582 | 150.1 | 0.853 | 1.97 | 29.4 | 44.7 | 2.31 | 31.7 | 0.00 | 0.00 | | | 323 | 204 |
| 380 | 6.92 | 6.88 | 34.099 | 26.725 | 136.9 | 0.938 | 1.31 | 19.2 | 56.7 | 2.63 | 35.6 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.82 D | 6.78 | 34.123 D | 26.758 | 134.1 | 0.965 | 1.13 | 16.5 | 59.8 | 2.71 | 36.4 | 0.00 | 0.00 | | | 402 | |
| 441 | 6.48 | 6.44 | 34.157 | 26.830 | 127.5 | 1.019 | 0.84 | 12.2 | 65.5 | 2.85 | 37.8 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 6.01 D | 5.97 | 34.195 D | 26.921 | 119.3 | 1.092 | 0.58 | 8.3 | 74.4 | 2.97 | 39.5 | 0.00 | 0.00 | | | 503 | |
| 517 | 5.86 | 5.82 | 34.207 | 26.949 | 116.7 | 1.112 | 0.51 | 7.3 | 77.0 | 3.01 | 40.0 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 120.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 25.2 N | 124 0.1 W | 01/11/10 | 0631 UTC | 4261 m | 310 03 kn | | | 1023.7 mb | 18.0 C | 15.9 C | | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.88 | 18.88 | 33.396 | 23.827 | 406.5 | 0.000 | 5.42 | 101.8 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.08 | 0.02 | 0 | |
| 1 | 18.88 | 18.88 | 33.396 | 23.827 | 406.6 | 0.004 | 5.42 | 101.8 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.08 | 0.02 | 1 | 220 |
| 10 | 18.89 | 18.89 | 33.395 | 23.824 | 407.2 | 0.041 | 5.42 | 101.8 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.11 | 0.01 | 10 | 219 |
| 20 ISL | 18.89 D | 18.89 | 33.393 D | 23.823 | 407.6 | 0.081 | 5.42 | 101.8 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.10 | 0.02 | 20 | |
| 25 | 18.88 | 18.88 | 33.392 | 23.825 | 407.6 | 0.102 | 5.42 | 101.8 | 2.0 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 25 | 218 |
| 30 ISL | 18.88 D | 18.87 | 33.391 D | 23.825 | 407.9 | 0.122 | 5.42 | 101.8 | 2.0 | 0.23 | 0.0 | 0.00 | 0.02 | 0.11 | 0.02 | 30 | |
| 40 | 18.81 | 18.80 | 33.385 | 23.838 | 407.0 | 0.163 | 5.43 | 101.8 | 2.1 | 0.23 | 0.0 | 0.00 | 0.05 | 0.15 | 0.01 | 40 | 217 |
| 50 | 16.99 | 16.98 | 33.302 | 24.217 | 371.1 | 0.202 | 5.85 | 105.9 | 2.1 | 0.22 | 0.0 | 0.00 | 0.00 | 0.15 | 0.05 | 50 | 216 |
| 63 | 16.49 | 16.48 | 33.350 | 24.370 | 356.8 | 0.249 | 5.84 | 104.7 | 2.1 | 0.20 | 0.0 | 0.00 | 0.00 | 0.18 | 0.04 | 63 | 215 |
| 75 | 15.97 | 15.96 | 33.448 | 24.564 | 338.6 | 0.291 | 5.77 | 102.4 | 2.1 | 0.19 | 0.0 | 0.00 | 0.00 | 0.23 | 0.10 | 75 | 214 |
| 86 | 15.27 | 15.26 | 33.415 | 24.695 | 326.5 | 0.327 | 5.68 | 99.4 | 2.3 | 0.24 | 0.1 | 0.01 | 0.27 | 0.23 | 0.21 | 86 | 213 |
| 100 ISL | 14.14 D | 14.13 | 33.348 D | 24.885 | 308.6 | 0.372 | 5.55 | 94.9 | 3.2 | 0.35 | 1.1 | 0.12 | 0.02 | 0.21 | 0.21 | 100 | |
| 101 | 14.16 | 14.15 | 33.349 | 24.882 | 308.9 | 0.375 | 5.54 | 94.8 | 3.3 | 0.36 | 1.2 | 0.13 | 0.00 | 0.21 | 0.21 | 101 | 212 |
| 112 | 13.06 | 13.04 | 33.235 | 25.018 | 296.1 | 0.408 | 5.41 | 90.4 | 4.7 | 0.57 | 3.9 | 0.12 | 0.00 | 0.17 | 0.25 | 112 | 211 |
| 125 ISL | 12.17 D | 12.15 | 33.254 D | 25.205 | 278.4 | 0.446 | 5.25 | 86.1 | 6.2 | 0.69 | 6.4 | 0.02 | 0.00 | 0.13 | 0.16 | 125 | |
| 126 | 12.19 | 12.17 | 33.257 | 25.203 | 278.6 | 0.448 | 5.24 | 86.0 | 6.3 | 0.70 | 6.6 | 0.01 | 0.00 | 0.13 | 0.15 | 126 | 210 |
| 140 | 11.03 | 11.01 | 33.276 | 25.431 | 257.0 | 0.486 | 4.96 | 79.4 | 9.9 | 0.97 | 10.8 | 0.00 | 0.00 | 0.06 | 0.06 | 141 | 209 |
| 150 ISL | 10.50 D | 10.48 | 33.333 D | 25.569 | 244.0 | 0.511 | 4.77 | 75.5 | 12.3 | 1.12 | 13.3 | 0.00 | 0.00 | 0.03 | 0.05 | 151 | |
| 170 | 9.80 | 9.78 | 33.470 | 25.794 | 222.8 | 0.558 | 4.31 | 67.2 | 17.3 | 1.38 | 17.8 | 0.00 | 0.00 | 0.01 | 0.02 | 171 | 208 |
| 200 | 9.28 | 9.26 | 33.791 | 26.131 | 191.4 | 0.620 | 3.30 | 51.0 | 25.5 | 1.76 | 23.8 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | 207 |
| 231 | 8.86 | 8.84 | 33.924 | 26.302 | 175.6 | 0.677 | 3.03 | 46.4 | 29.6 | 1.86 | 25.6 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 8.59 D | 8.56 | 33.983 D | 26.390 | 167.5 | 0.709 | 2.82 | 42.9 | 32.8 | 1.95 | 26.9 | 0.00 | 0.00 | | | 251 | |
| 271 | 8.30 | 8.27 | 34.014 | 26.459 | 161.2 | 0.744 | 2.58 | 39.0 | 36.5 | 2.06 | 28.3 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.86 D | 7.83 | 34.049 D | 26.552 | 152.6 | 0.789 | 2.29 | 34.3 | 41.3 | 2.20 | 30.1 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.68 | 7.65 | 34.056 | 26.584 | 149.9 | 0.821 | 2.06 | 30.7 | 45.0 | 2.30 | 31.5 | 0.00 | 0.00 | | | 323 | 204 |
| 381 | 6.89 | 6.85 | 34.129 | 26.753 | 134.3 | 0.906 | 1.16 | 17.0 | 58.9 | 2.68 | 35.8 | 0.00 | 0.05 | | | 383 | 203 |
| 400 ISL | 6.72 D | 6.68 | 34.145 D | 26.788 | 131.1 | 0.931 | 1.00 | 14.6 | 62.4 | 2.76 | 36.7 | 0.00 | 0.05 | | | 402 | |
| 441 | 6.30 | 6.26 | 34.170 | 26.864 | 124.2 | 0.984 | 0.77 | 11.1 | 69.0 | 2.89 | 38.2 | 0.00 | 0.05 | | | 444 | 202 |
| 500 ISL | 5.91 D | 5.87 | 34.209 D | 26.945 | 117.0 | 1.055 | 0.54 | 7.7 | 76.2 | 3.01 | 39.6 | 0.00 | 0.01 | | | 503 | |
| 517 | 5.81 | 5.77 | 34.223 | 26.968 | 114.9 | 1.075 | 0.48 | 6.9 | 78.3 | 3.04 | 40.0 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 91.7 26.4

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 14.5 N | 117 27.7 W | 28/10/10 | 2244 UTC | 24 m | 210 06 kn | 260 01 08 | 1 | 1015.4 mb | 20.3 C | 17.9 C | | 3/8 | CS |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.50 | 18.50 | 33.427 | 23.946 | 395.2 | 0.000 | 5.93 | 110.6 | 1.7 | 0.16 | 0.0 | 0.00 | 0.00 | 1.09 | 0.34 | 0 | |
| 1 | 18.50 | 18.50 | 33.427 | 23.946 | 395.3 | 0.004 | 5.93 | 110.6 | 1.7 | 0.16 | 0.0 | 0.00 | 0.00 | 1.09 | 0.34 | 1 | 204 |
| 5 | 18.55 | 18.55 | 33.428 | 23.934 | 396.5 | 0.020 | 5.93 | 110.7 | 1.7 | 0.17 | 0.0 | 0.00 | 0.00 | 1.42 | 0.29 | 5 | 203 |
| 10 | 18.05 | 18.05 | 33.419 | 24.051 | 385.5 | 0.039 | 6.05 | 111.8 | 2.1 | 0.21 | 0.0 | 0.02 | 0.05 | 1.71 | 0.73 | 10 | 202 |
| 19 | 15.02 | 15.02 | 33.393 | 24.730 | 321.0 | 0.071 | 5.57 | 97.0 | 4.8 | 0.58 | 2.0 | 0.15 | 0.31 | 2.25 | 1.21 | 19 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 26.7

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 57.0 N | 117 18.3 W | 28/10/10 | 1818 UTC | 72 m | 280 02 kn | 310 01 08 | 1 | 1017.0 mb | 21.1 C | 16.9 C | 20m | 3/8 | CC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.57 | 18.57 | 33.476 | 23.966 | 393.3 | 0.000 | 5.65 | 105.5 | 1.8 | 0.21 | 0.0 | 0.00 | 0.10 | 0.34 | 0.13 | 0 | |
| 2 A | 18.57 | 18.57 | 33.476 | 23.966 | 393.4 | 0.008 | 5.65 | 105.5 | 1.8 | 0.21 | 0.0 | 0.00 | 0.10 | 0.34 | 0.13 | 2 | 210 |
| 8 | 18.00 | 18.00 | 33.483 | 24.112 | 379.7 | 0.031 | 5.73 | 105.9 | 1.8 | 0.24 | 0.0 | 0.00 | 0.73 | 0.33 | 0.15 | 8 | 209 |
| 10 ISL | 16.94 D | 16.94 | 33.436 D | 24.330 | 359.0 | 0.038 | 5.93 | 107.3 | 2.1 | 0.27 | 0.2 | 0.02 | 0.55 | 0.91 | 0.36 | 10 | |
| 14 A | 14.95 | 14.95 | 33.362 | 24.721 | 321.7 | 0.052 | 6.21 | 108.0 | 3.1 | 0.37 | 0.7 | 0.05 | 0.12 | 1.97 | 0.76 | 14 | 208 |
| 20 ISL | 13.27 D | 13.27 | 33.310 D | 25.031 | 292.3 | 0.070 | 5.56 | 93.4 | 5.6 | 0.75 | 5.6 | 0.33 | 0.33 | 1.26 | 0.59 | 20 | |
| 21 | 13.21 | 13.21 | 33.310 | 25.043 | 291.2 | 0.073 | 5.42 | 90.9 | 6.0 | 0.81 | 6.5 | 0.38 | 0.38 | 1.05 | 0.56 | 21 | 207 |
| 28 A | 12.54 | 12.54 | 33.323 | 25.185 | 277.9 | 0.093 | 5.14 | 85.0 | 7.1 | 0.93 | 8.7 | 0.48 | 0.00 | 0.71 | 0.51 | 28 | 206 |
| 30 ISL | 12.30 D | 12.30 | 33.330 D | 25.237 | 273.0 | 0.099 | 5.04 | 82.9 | 7.7 | 0.98 | 9.6 | 0.41 | 0.00 | 0.62 | 0.47 | 30 | |
| 36 | 11.78 | 11.78 | 33.362 | 25.360 | 261.5 | 0.115 | 4.66 | 75.9 | 10.2 | 1.17 | 12.7 | 0.19 | 0.00 | 0.39 | 0.34 | 36 | 205 |
| 42 A | 11.21 | 11.20 | 33.422 | 25.511 | 247.2 | 0.130 | 4.18 | 67.2 | 13.9 | 1.40 | 16.1 | 0.18 | 0.00 | 0.20 | 0.24 | 42 | 204 |
| 48 | 11.07 | 11.06 | 33.450 | 25.558 | 242.8 | 0.145 | 3.88 | 62.2 | 16.3 | 1.51 | 17.7 | 0.13 | 0.05 | 0.12 | 0.23 | 48 | 203 |
| 50 ISL | 10.98 D | 10.97 | 33.456 D | 25.578 | 240.9 | 0.150 | 3.75 | 60.0 | 17.2 | 1.56 | 18.3 | 0.12 | 0.04 | 0.10 | 0.22 | 50 | |
| 55 A | 10.79 | 10.78 | 33.520 | 25.662 | 233.1 | 0.162 | 3.44 | 54.9 | 19.3 | 1.67 | 19.8 | 0.09 | 0.00 | 0.08 | 0.18 | 55 | 202 |
| 66 | 10.53 | 10.52 | 33.582 | 25.756 | 224.4 | 0.187 | 3.16 | 50.1 | 21.6 | 1.78 | 21.3 | 0.07 | 0.00 | 0.05 | 0.15 | 66 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 28.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 54.9 N | 117 23.8 W | 29/10/10 | 0124 UTC | 643 m | 060 03 kn | 270 01 08 | 1 | 1015.5 mb | 20.4 C | 17.9 C | | 5/8 | CS |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.816 | 18.816 | 33.464 | 23.895 | 400.1 | 0.000 | 5.65 | 106.0 | 2.1 | 0.28 | 0.0 | 0.00 | 0.13 | 0.22 | 0.07 | 0 | |
| 2 | 18.816 | 18.816 | 33.464 | 23.895 | 400.1 | 0.008 | 5.65 | 106.0 | 2.1 | 0.28 | 0.0 | 0.00 | 0.13 | 0.22 | 0.07 | 2 | 220 |
| 10 | 17.94 | 17.94 | 33.454 | 24.104 | 380.4 | 0.039 | 5.88 | 108.5 | 2.2 | 0.29 | 0.0 | 0.00 | 0.07 | 0.28 | 0.17 | 10 | 219 |
| 20 | 13.667 | 13.664 | 33.400 | 25.021 | 293.4 | 0.073 | 6.09 | 103.2 | 5.0 | 0.64 | 3.7 | 0.03 | 0.22 | 1.24 | 1.18 | 20 | 218 |
| 30 ISL | 12.05 D | 12.05 | 33.357 D | 25.305 | 266.5 | 0.101 | 4.97 | 81.4 | 9.1 | 1.10 | 10.8 | 0.24 | 0.20 | 0.99 | 0.52 | 30 | |
| 31 | 12.03 | 12.03 | 33.359 | 25.310 | 266.0 | 0.104 | 4.84 | 79.2 | 9.5 | 1.14 | 11.5 | 0.26 | 0.20 | 0.96 | 0.42 | 31 | 217 |
| 41 | 11.43 | 11.42 | 33.400 | 25.454 | 252.6 | 0.130 | 4.34 | 70.1 | 12.4 | 1.37 | 14.9 | 0.06 | 0.00 | 0.35 | 0.26 | 41 | 216 |
| 50 | 11.22 | 11.21 | 33.473 | 25.549 | 243.8 | 0.152 | 4.01 | 64.5 | 13.9 | 1.48 | 16.3 | 0.15 | 0.06 | 0.29 | 0.26 | 50 | 215 |
| 61 | 10.60 | 10.59 | 33.456 | 25.646 | 234.8 | 0.178 | 3.99 | 63.3 | 16.1 | 1.56 | 17.9 | 0.02 | 0.00 | 0.14 | 0.17 | 61 | 214 |
| 71 | 10.17 | 10.16 | 33.510 | 25.762 | 223.9 | 0.201 | 3.85 | 60.6 | 18.9 | 1.66 | 19.9 | 0.01 | 0.00 | 0.04 | 0.07 | 71 | 213 |
| 75 ISL | 9.93 D | 9.92 | 33.566 D | 25.846 | 216.0 | 0.210 | 3.76 | 58.9 | 19.8 | 1.70 | 20.5 | 0.01 | 0.01 | 0.03 | 0.06 | 75 | |
| 85 | 9.91 | 9.90 | 33.620 | 25.892 | 211.8 | 0.231 | 3.48 | 54.5 | 21.7 | 1.79 | 21.8 | 0.00 | 0.05 | 0.02 | 0.05 | 85 | 212 |
| 100 ISL | 9.87 D | 9.86 | 33.741 D | 25.993 | 202.5 | 0.262 | 3.06 | 47.9 | 24.4 | 1.91 | 23.3 | 0.00 | 0.12 | 0.01 | 0.05 | 101 | |
| 101 | 9.85 | 9.84 | 33.730 | 25.988 | 203.0 | 0.264 | 3.03 | 47.4 | 24.6 | 1.92 | 23.4 | 0.00 | 0.12 | 0.01 | 0.05 | 102 | 211 |
| 120 | 9.93 | 9.92 | 33.907 | 26.113 | 191.6 | 0.302 | 2.26 | 35.5 | 29.1 | 2.15 | 25.3 | 0.00 | 0.12 | 0.01 | 0.04 | 121 | 210 |
| 125 ISL | 9.89 D | 9.88 | 33.927 D | 26.135 | 189.6 | 0.311 | 2.28 | 35.7 | 29.2 | 2.14 | 25.5 | 0.00 | 0.09 | 0.01 | 0.04 | 126 | |
| 141 | 9.61 | 9.59 | 33.946 | 26.197 | 184.0 | 0.341 | 2.36 | 36.8 | 29.7 | 2.12 | 25.9 | 0.00 | 0.00 | 0.00 | 0.04 | 142 | 209 |
| 150 ISL | 9.34 D | 9.32 | 33.976 D | 26.265 | 177.7 | 0.358 | 2.33 | 36.1 | 30.4 | 2.14 | 26.3 | 0.00 | 0.01 | 0.00 | 0.04 | 151 | |
| 170 | 9.29 | 9.27 | 34.037 | 26.321 | 172.8 | 0.393 | 2.16 | 33.4 | 32.5 | 2.22 | 27.2 | 0.00 | 0.05 | 0.00 | 0.03 | 171 | 208 |
| 200 ISL | 9.22 D | 9.20 | 34.147 D | 26.419 | 164.1 | 0.443 | 1.72 | 26.6 | 36.0 | 2.37 | 28.5 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | |
| 201 | 9.21 | 9.19 | 34.139 | 26.414 | 164.5 | 0.445 | 1.70 | 26.3 | 36.1 | 2.37 | 28.5 | 0.00 | 0.00 | 0.00 | 0.04 | 202 | 207 |
| 230 | 9.12 | 9.09 | 34.195 | 26.473 | 159.5 | 0.492 | 1.39 | 21.5 | 38.8 | 2.48 | 29.6 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.96 D | 8.93 | 34.216 D | 26.515 | 155.9 | 0.523 | 1.24 | 19.1 | 40.8 | 2.51 | 30.3 | 0.00 | 0.00 | | | 251 | |
| 271 | 8.69 | 8.66 | 34.237 | 26.574 | 150.5 | 0.555 | 1.13 | 17.3 | 43.3 | 2.52 | 31.0 | 0.00 | 0.00 | | | 273 | 205 |
| 300 ISL | 8.14 D | 8.11 | 34.220 D | 26.645 | 144.1 | 0.598 | 1.06 | 16.0 | 47.7 | 2.57 | 32.4 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.88 | 7.85 | 34.213 | 26.678 | 141.1 | 0.627 | 1.01 | 15.2 | 50.9 | 2.62 | 33.3 | 0.01 | 0.00 | | | 322 | 204 |
| 381 | 7.47 | 7.43 | 34.270 | 26.783 | 132.0 | 0.710 | 0.62 | 9.2 | 58.2 | 2.82 | 35.2 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 7.18 D | 7.14 | 34.270 D | 26.824 | 128.1 | 0.735 | 0.55 | 8.1 | 61.2 | 2.84 | 35.9 | 0.00 | 0.02 | | | 403 | |
| 440 | 6.76 | 6.72 | 34.276 | 26.887 | 122.5 | 0.785 | 0.45 | 6.6 | 67.7 | 2.89 | 37.4 | 0.00 | 0.05 | | | 443 | 202 |
| 500 ISL | 6.23 D | 6.19 | 34.303 D | 26.978 | 114.2 | 0.856 | 0.31 | 4.5 | 76.7 | 3.24 | 39.1 | 0.00 | 0.01 | | | 503 | |
| 516 | 6.07 | 6.02 | 34.314 | 27.008 | 111.5 | 0.874 | 0.27 | 3.9 | 79.1 | 3.33 | 39.5 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 30.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 50.6 N | 117 31.9 W | 29/10/10 | 0525 UTC | 862 m | 050 04 kn | | | 1017.1 mb | 19.3 C | 17.8 C | | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.43 | 18.43 | 33.489 | 24.010 | 389.1 | 0.000 | 5.63 | 104.9 | 1.8 | 0.22 | 0.0 | 0.00 | 0.00 | 0.26 | 0.09 | 0 | |
| 2 | 18.43 | 18.43 | 33.489 | 24.010 | 389.1 | 0.008 | 5.63 | 104.9 | 1.8 | 0.22 | 0.0 | 0.00 | 0.00 | 0.26 | 0.09 | 2 | 220 |
| 10 | 17.92 | 17.92 | 33.482 | 24.131 | 377.9 | 0.038 | 5.79 | 106.8 | 2.0 | 0.23 | 0.0 | 0.00 | 0.06 | 0.32 | 0.17 | 10 | 219 |
| 20 | 15.74 | 15.74 | 33.479 | 24.638 | 329.9 | 0.074 | 5.98 | 105.7 | 3.7 | 0.44 | 1.5 | 0.03 | 0.04 | 1.86 | 1.47 | 20 | 218 |
| 30 | 13.88 | 13.88 | 33.325 | 24.919 | 303.3 | 0.106 | 5.58 | 94.9 | 4.3 | 0.65 | 4.8 | 0.29 | 0.11 | 1.30 | 0.76 | 30 | 217 |
| 40 | 12.43 | 12.42 | 33.368 | 25.241 | 272.8 | 0.134 | 5.03 | 83.0 | 8.2 | 1.00 | 10.2 | 0.24 | 0.05 | 0.90 | 0.63 | 40 | 216 |
| 50 | 11.21 | 11.20 | 33.406 | 25.498 | 248.6 | 0.160 | 4.27 | 68.7 | 13.4 | 1.37 | 15.9 | 0.06 | 0.00 | 0.26 | 0.21 | 50 | 215 |
| 60 | 10.51 | 10.50 | 33.486 | 25.684 | 231.0 | 0.184 | 3.94 | 62.4 | 17.5 | 1.55 | 18.7 | 0.02 | 0.00 | 0.07 | 0.09 | 60 | 214 |
| 71 | 10.18 | 10.17 | 33.602 | 25.832 | 217.2 | 0.209 | 3.47 | 54.6 | 21.0 | 1.70 | 21.0 | 0.02 | 0.00 | 0.02 | 0.08 | 71 | 213 |
| 75 ISL | 10.18 D | 10.17 | 33.659 D | 25.876 | 213.1 | 0.218 | 3.23 | 50.9 | 22.5 | 1.78 | 21.8 | 0.02 | 0.05 | 0.02 | 0.07 | 75 | |
| 85 | 10.18 | 10.17 | 33.729 | 25.931 | 208.1 | 0.239 | 2.72 | 42.9 | 25.7 | 1.95 | 23.5 | 0.02 | 0.16 | 0.02 | 0.06 | 85 | 212 |
| 100 | 9.96 | 9.95 | 33.809 | 26.031 | 198.9 | 0.269 | 2.62 | 41.1 | 27.1 | 1.99 | 24.3 | 0.01 | 0.04 | 0.01 | 0.06 | 100 | 211 |
| 120 | 10.17 | 10.16 | 33.964 | 26.117 | 191.3 | 0.308 | 1.90 | 30.0 | 31.0 | 2.20 | 25.7 | 0.01 | 0.00 | 0.01 | 0.09 | 121 | 210 |
| 125 ISL | 10.14 D | 10.13 | 33.976 D | 26.131 | 190.0 | 0.318 | 1.89 | 29.8 | 31.1 | 2.20 | 25.9 | 0.01 | 0.00 | 0.01 | 0.08 | 126 | |
| 141 | 10.05 | 10.03 | 34.015 | 26.177 | 186.0 | 0.348 | 1.86 | 29.3 | 31.4 | 2.21 | 26.3 | 0.01 | 0.00 | 0.00 | 0.04 | 142 | 209 |
| 150 ISL | 9.98 D | 9.96 | 34.035 D | 26.205 | 183.5 | 0.364 | 1.82 | 28.6 | 31.8 | 2.23 | 26.6 | 0.01 | 0.00 | 0.00 | 0.04 | 151 | |
| 171 | 9.83 | 9.81 | 34.091 | 26.274 | 177.4 | 0.402 | 1.73 | 27.1 | 33.0 | 2.28 | 27.2 | 0.01 | 0.00 | 0.00 | 0.03 | 172 | 208 |
| 200 ISL | 9.43 D | 9.41 | 34.139 D | 26.379 | 168.0 | 0.452 | 1.62 | 25.2 | 35.2 | 2.33 | 28.4 | 0.01 | 0.00 | 0.00 | 0.04 | 201 | |
| 201 | 9.44 | 9.42 | 34.138 | 26.376 | 168.3 | 0.454 | 1.62 | 25.2 | 35.3 | 2.33 | 28.4 | 0.01 | 0.00 | 0.00 | 0.04 | 202 | 207 |
| 231 | 8.98 | 8.95 | 34.134 | 26.448 | 161.9 | 0.504 | 1.75 | 26.9 | 37.4 | 2.33 | 29.2 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 9.01 D | 8.98 | 34.210 D | 26.503 | 157.1 | 0.534 | 1.50 | 23.1 | 39.5 | 2.42 | 30.0 | 0.00 | 0.00 | | | 251 | |
| 271 | 8.82 | 8.79 | 34.227 | 26.546 | 153.3 | 0.567 | 1.16 | 17.8 | 42.1 | 2.55 | 31.0 | 0.01 | 0.00 | | | 273 | 205 |
| 300 ISL | 8.39 D | 8.36 | 34.204 D | 26.595 | 149.0 | 0.610 | 0.96 | 14.6 | 45.5 | 2.65 | 32.1 | 0.01 | 0.00 | | | 302 | |
| 321 | 8.30 | 8.27 | 34.254 | 26.648 | 144.3 | 0.641 | 0.87 | 13.2 | 48.2 | 2.70 | 32.8 | 0.01 | 0.00 | | | 323 | 204 |
| 381 | 7.52 | 7.48 | 34.263 | 26.771 | 133.2 | 0.724 | 0.65 | 9.7 | 57.4 | 2.87 | 35.2 | 0.00 | 0.09 | | | 383 | 203 |
| 400 ISL | 7.34 D | 7.30 | 34.262 D | 26.796 | 131.0 | 0.749 | 0.59 | 8.7 | 60.0 | 2.92 | 35.9 | 0.00 | 0.10 | | | 403 | |
| 441 | 6.84 | 6.80 | 34.274 | 26.875 | 123.7 | 0.802 | 0.46 | 6.7 | 65.8 | 3.02 | 37.3 | 0.00 | 0.12 | | | 444 | 202 |
| 500 ISL | 6.21 D | 6.17 | 34.303 D | 26.981 | 113.9 | 0.872 | 0.32 | 4.6 | 75.2 | 3.13 | 38.8 | 0.01 | 0.03 | | | 503 | |
| 516 | 6.14 | 6.09 | 34.312 | 26.997 | 112.5 | 0.890 | 0.28 | 4.0 | 77.8 | 3.16 | 39.2 | 0.01 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 35.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 41.0 N | 117 52.6 W | 29/10/10 | 0922 UTC | 632 m | 170 04 kn | | | 1016.3 mb | 18.9 C | 16.3 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.38 | 18.38 | 33.460 | 24.001 | 390.0 | 0.000 | 5.70 | 106.1 | 2.1 | 0.23 | 0.0 | 0.00 | 0.00 | 0.29 | 0.07 | 0 | |
| 2 | 18.38 | 18.38 | 33.460 | 24.001 | 390.1 | 0.008 | 5.70 | 106.1 | 2.1 | 0.23 | 0.0 | 0.00 | 0.00 | 0.29 | 0.07 | 2 | 220 |
| 10 | 14.85 | 14.85 | 33.355 D | 24.737 | 320.1 | 0.036 | 5.98 | 103.8 | 2.5 | 0.39 | 1.4 | 0.11 | 0.05 | 0.67 | 0.31 | 10 | 219 |
| 20 | 12.69 | 12.69 | 33.311 | 25.147 | 281.4 | 0.066 | 5.19 | 86.1 | 6.9 | 0.93 | 8.8 | 0.28 | 0.04 | 1.00 | 0.42 | 20 | 218 |
| 30 | 12.02 | 12.02 | 33.414 | 25.355 | 261.8 | 0.093 | 4.81 | 78.7 | 9.6 | 1.11 | 11.8 | 0.23 | 0.07 | 1.08 | 0.60 | 30 | 217 |
| 40 | 11.23 | 11.23 | 33.425 | 25.509 | 247.3 | 0.119 | 4.23 | 68.1 | 13.3 | 1.38 | 15.9 | 0.08 | 0.00 | 0.90 | 0.27 | 40 | 216 |
| 50 | 10.88 | 10.87 | 33.517 | 25.644 | 234.7 | 0.143 | 3.61 | 57.7 | 17.0 | 1.61 | 19.1 | 0.03 | 0.00 | 0.28 | 0.25 | 50 | 215 |
| 60 | 10.54 | 10.53 | 33.550 | 25.729 | 226.8 | 0.166 | 3.46 | 54.9 | 19.1 | 1.70 | 20.3 | 0.01 | 0.00 | 0.13 | 0.13 | 60 | 214 |
| 71 | 10.36 | 10.35 | 33.611 D | 25.808 | 219.5 | 0.191 | 3.22 D | 50.9 D | 21.3 | 1.81 | 21.6 | 0.01 | 0.00 | 0.04 | 0.09 | 71 | 213 |
| 75 ISL | 10.34 D | 10.33 | 33.617 D | 25.816 | 218.8 | 0.199 | 3.13 | 49.5 | 21.7 | 1.84 | 22.0 | 0.01 | 0.00 | 0.04 | 0.09 | 75 | |
| 86 | 10.34 | 10.33 | 33.659 | 25.849 | 216.0 | 0.223 | 2.86 | 45.2 | 23.0 | 1.91 | 22.9 | 0.01 | 0.00 | 0.04 | 0.09 | 86 | 212 |
| 100 ISL | 10.22 D | 10.21 | 33.795 D | 25.976 | 204.2 | 0.253 | 2.44 | 38.5 | 26.3 | 2.04 | 24.3 | 0.01 | 0.00 | 0.01 | 0.06 | 101 | |
| 101 | 10.22 | 10.21 | 33.793 | 25.975 | 204.4 | 0.255 | 2.41 | 38.0 | 26.5 | 2.05 | 24.4 | 0.01 | 0.00 | 0.01 | 0.06 | 102 | 211 |
| 121 | 10.18 | 10.17 | 33.936 | 26.093 | 193.5 | 0.295 | 1.96 | 30.9 | 29.3 | 2.19 | 25.9 | 0.00 | 0.00 | 0.00 | 0.05 | 122 | 210 |
| 125 ISL | 10.16 D | 10.15 | 33.955 D | 26.112 | 191.9 | 0.302 | 1.93 | 30.4 | 29.7 | 2.20 | 26.0 | 0.00 | 0.00 | 0.00 | 0.05 | 126 | |
| 140 | 10.12 | 10.10 | 33.997 | 26.151 | 188.4 | 0.331 | 1.87 | 29.5 | 30.7 | 2.22 | 26.2 | 0.00 | 0.00 | 0.00 | 0.04 | 141 | 209 |
| 150 ISL | 10.12 D | 10.10 | 34.017 D | 26.167 | 187.2 | 0.350 | 1.82 | 28.7 | 31.0 | 2.23 | 26.4 | 0.00 | 0.00 | 0.00 | 0.04 | 151 | |
| 170 | 10.07 | 10.05 | 34.055 | 26.206 | 183.9 | 0.387 | 1.71 | 26.9 | 31.3 | 2.26 | 26.8 | 0.00 | 0.00 | 0.00 | 0.04 | 171 | 208 |
| 200 | 9.88 | 9.86 | 34.125 | 26.293 | 176.3 | 0.441 | 1.57 | 24.6 | 32.2 | 2.32 | 27.7 | 0.00 | 0.00 | 0.00 | 0.04 | 201 | 207 |
| 231 | 9.65 | 9.62 | 34.183 | 26.377 | 168.9 | 0.494 | 1.41 | 22.0 | 34.2 | 2.38 | 28.5 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 9.44 D | 9.41 | 34.205 D | 26.429 | 164.2 | 0.526 | 1.36 | 21.1 | 36.1 | 2.42 | 29.3 | 0.00 | 0.00 | | | 251 | |
| 270 | 9.08 | 9.05 | 34.210 | 26.492 | 158.6 | 0.558 | 1.30 | 20.0 | 38.3 | 2.47 | 30.2 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 8.74 D | 8.71 | 34.229 D | 26.561 | 152.4 | 0.605 | 1.14 | 17.4 | 41.5 | 2.55 | 31.3 | 0.00 | 0.00 | | | 302 | |
| 321 | 8.57 | 8.54 | 34.243 | 26.598 | 149.2 | 0.636 | 1.02 | 15.5 | 43.9 | 2.61 | 32.0 | 0.00 | 0.00 | | | 323 | 204 |
| 382 | 7.79 | 7.75 | 34.260 | 26.729 | 137.3 | 0.724 | 0.72 | 10.8 | 52.6 | 2.80 | 34.7 | 0.00 | 0.00 | | | 384 | 203 |
| 400 ISL | 7.61 D | 7.57 | 34.262 D | 26.757 | 134.9 | 0.748 | 0.67 | 10.0 | 54.6 | 2.84 | 35.3 | 0.00 | 0.00 | | | 403 | |
| 441 | 7.23 | 7.19 | 34.268 | 26.816 | 129.6 | 0.803 | 0.56 | 8.3 | 59.2 | 2.92 | 36.4 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 6.52 D | 6.47 | 34.290 D | 26.931 | 119.0 | 0.876 | 0.39 | 5.7 | 68.2 | 3.05 | 38.4 | 0.00 | 0.00 | | | 503 | |
| 516 | 6.42 | 6.37 | 34.298 | 26.950 | 117.3 | 0.895 | 0.34 | 4.9 | 70.6 | 3.08 | 39.0 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 40.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 30.9 N | 118 13.0 W | 29/10/10 | 1333 UTC | 1635 m | 290 04 kn | | | 1015.3 mb | 17.4 C | 16.1 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.55 | 17.55 | 33.549 | 24.271 | 364.2 | 0.000 | 5.70 | 104.4 | 1.0 | 0.24 | 0.0 | 0.00 | 0.00 | 0.42 | 0.24 | 0 | |
| 2 | 17.55 | 17.55 | 33.549 | 24.271 | 364.3 | 0.007 | 5.70 | 104.4 | 1.0 | 0.24 | 0.0 | 0.00 | 0.00 | 0.42 | 0.24 | 2 | 221 |
| 10 | 17.44 | 17.44 | 33.550 | 24.299 | 361.9 | 0.036 | 5.71 | 104.4 | 1.1 | 0.23 | 0.0 | 0.00 | 0.00 | 0.43 | 0.25 | 10 | 219 |
| 10 | 17.45 | 17.45 | 33.549 | 24.295 | 362.2 | 0.036 | | | | | | | | | | 10 | 220 |
| 20 | 15.35 | 15.35 | 33.485 | 24.729 | 321.2 | 0.071 | 5.63 | 98.7 | 2.7 | 0.53 | 3.6 | 0.12 | 0.10 | 0.99 | 0.98 | 20 | 218 |
| 30 | 13.33 | 13.33 | 33.449 | 25.127 | 283.5 | 0.101 | 4.81 | 80.9 | 7.3 | 1.02 | 9.8 | 0.43 | 0.79 | 0.59 | 0.57 | 30 | 217 |
| 40 | 12.29 | 12.28 | 33.463 | 25.342 | 263.3 | 0.128 | 4.39 | 72.3 | 10.8 | 1.24 | 13.4 | 0.32 | 0.23 | 0.29 | 0.35 | 40 | 216 |
| 50 | 10.79 | 10.78 | 33.522 | 25.663 | 232.8 | 0.153 | 3.75 | 59.8 | 17.5 | 1.59 | 19.4 | 0.04 | 0.00 | 0.11 | 0.17 | 50 | 215 |
| 60 | 10.48 | 10.47 | 33.559 | 25.747 | 225.1 | 0.176 | 3.64 | 57.7 | 19.2 | 1.65 | 20.7 | 0.03 | 0.00 | 0.08 | 0.14 | 60 | 214 |
| 70 | 10.04 | 10.03 | 33.633 | 25.880 | 212.6 | 0.198 | 3.33 | 52.3 | 22.1 | 1.78 | 22.7 | 0.02 | 0.00 | 0.04 | 0.10 | 70 | 213 |
| 75 ISL | 9.80 D | 9.79 | 33.728 D | 25.994 | 201.9 | 0.208 | 3.21 | 50.2 | 23.2 | 1.82 | 23.5 | 0.02 | 0.00 | 0.04 | 0.08 | 75 | |
| 85 | 9.66 | 9.65 | 33.757 | 26.040 | 197.7 | 0.228 | 3.00 | 46.7 | 25.1 | 1.89 | 24.7 | 0.01 | 0.00 | 0.03 | 0.06 | 85 | 212 |
| 100 | 9.36 | 9.35 | 33.842 | 26.156 | 187.0 | 0.257 | 2.72 | 42.1 | 28.2 | 1.97 | 26.2 | 0.00 | 0.00 | 0.01 | 0.06 | 101 | 211 |
| 120 | 9.15 | 9.14 | 33.924 | 26.254 | 178.0 | 0.293 | 2.46 | 37.9 | 30.4 | 2.08 | 27.4 | 0.00 | 0.00 | 0.01 | 0.05 | 121 | 210 |
| 125 ISL | 9.23 D | 9.22 | 33.979 D | 26.284 | 175.3 | 0.302 | 2.35 | 36.3 | 31.2 | 2.11 | 27.6 | 0.00 | 0.00 | 0.01 | 0.04 | 126 | |
| 140 | 9.22 | 9.20 | 34.057 | 26.347 | 169.6 | 0.328 | 2.06 | 31.8 | 33.5 | 2.18 | 27.9 | 0.00 | 0.00 | 0.00 | 0.03 | 141 | 209 |
| 150 ISL | 9.03 D | 9.01 | 34.048 D | 26.371 | 167.5 | 0.345 | 2.06 | 31.7 | 34.4 | 2.20 | 28.1 | 0.00 | 0.03 | 0.00 | 0.03 | 151 | |
| 171 | 8.83 | 8.81 | 34.078 | 26.426 | 162.6 | 0.380 | 2.06 | 31.6 | 35.9 | 2.24 | 28.7 | 0.00 | 0.09 | 0.00 | 0.02 | 172 | 208 |
| 200 ISL | 8.62 D | 8.60 | 34.118 D | 26.491 | 157.0 | 0.426 | 1.76 | 26.8 | 38.4 | 2.35 | 30.1 | 0.00 | 0.00 | 0.00 | 0.03 | 201 | |
| 201 | 8.63 | 8.61 | 34.118 | 26.489 | 157.2 | 0.427 | 1.75 | 26.7 | 38.5 | 2.35 | 30.2 | 0.00 | 0.00 | 0.00 | 0.03 | 202 | 207 |
| 230 | 8.44 | 8.42 | 34.202 | 26.585 | 148.6 | 0.472 | 1.24 | 18.8 | 44.4 | 2.54 | 31.8 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.21 D | 8.18 | 34.228 D | 26.640 | 143.6 | 0.501 | 0.98 | 14.8 | 47.6 | 2.65 | 32.8 | 0.00 | 0.00 | | | 251 | |
| 271 | 8.05 | 8.02 | 34.255 | 26.686 | 139.6 | 0.531 | 0.80 | 12.1 | 50.6 | 2.74 | 33.7 | 0.00 | 0.00 | | | 273 | 205 |
| 300 ISL | 7.54 D | 7.51 | 34.224 D | 26.736 | 135.1 | 0.571 | 0.80 | 11.9 | 54.3 | 2.79 | 34.7 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.43 | 7.40 | 34.235 | 26.761 | 133.0 | 0.597 | 0.80 | 11.9 | 56.6 | 2.81 | 35.3 | 0.00 | 0.00 | | | 322 | 204 |
| 381 | 7.06 | 7.02 | 34.249 | 26.824 | 127.7 | 0.677 | 0.61 | 9.0 | 62.0 | 2.89 | 36.6 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.89 D | 6.85 | 34.258 D | 26.855 | 125.0 | 0.701 | 0.54 | 7.9 | 64.5 | 2.94 | 37.1 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.56 | 6.52 | 34.279 | 26.916 | 119.5 | 0.751 | 0.41 | 6.0 | 70.1 | 3.04 | 38.3 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 6.01 D | 5.97 | 34.297 D | 27.002 | 111.7 | 0.819 | 0.31 | 4.5 | 77.2 | 3.16 | 39.7 | 0.00 | 0.00 | | | 503 | |
| 515 | 6.00 | 5.95 | 34.304 | 27.009 | 111.3 | 0.836 | 0.29 | 4.2 | 79.0 | 3.19 | 40.1 | 0.00 | 0.00 | | | 519 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 45.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 21.0 N | 118 33.1 W | 29/10/10 | 1750 UTC | 1315 m | 070 06 kn | 280 03 10 | 1 | 1015.5 mb | 18.8 C | 17.1 C | 12m | 5/8 | AS |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.34 | 17.34 | 33.541 | 24.315 | 360.0 | 0.000 | 5.69 | 103.8 | 1.8 | 0.29 | 0.2 | 0.02 | 0.07 | 0.66 | 0.19 | 0 | |
| 1 A | 17.34 | 17.34 | 33.541 | 24.315 | 360.0 | 0.004 | 5.69 | 103.8 | 1.8 | 0.29 | 0.2 | 0.02 | 0.07 | 0.66 | 0.19 | 1 | 223 |
| 8 A | 17.23 | 17.23 | 33.538 | 24.339 | 358.0 | 0.029 | 5.70 | 103.8 | 1.9 | 0.27 | 0.2 | 0.02 | 0.03 | 0.67 | 0.22 | 8 | 222 |
| 10 ISL | 17.16 D | 17.16 | 33.535 D | 24.354 | 356.7 | 0.036 | 5.69 | 103.5 | 2.0 | 0.29 | 0.4 | 0.03 | 0.03 | 0.68 | 0.25 | 10 | |
| 17 A | 16.67 | 16.67 | 33.534 | 24.468 | 346.0 | 0.060 | 5.58 | 100.5 | 2.4 | 0.35 | 1.1 | 0.05 | 0.07 | 0.72 | 0.35 | 17 | 221 |
| 20 ISL | 15.68 D | 15.68 | 33.525 D | 24.687 | 325.2 | 0.071 | 5.49 | 97.0 | 3.1 | 0.42 | 2.1 | 0.09 | 0.10 | 0.71 | 0.38 | 20 | |
| 25 A | 15.32 | 15.32 | 33.533 | 24.773 | 317.2 | 0.087 | 5.23 | 91.7 | 5.1 | 0.61 | 5.0 | 0.16 | 0.13 | 0.68 | 0.41 | 25 | 220 |
| 30 ISL | 12.87 D | 12.87 | 33.527 D | 25.279 | 269.0 | 0.101 | 4.71 | 78.5 | 9.0 | 0.97 | 10.3 | 0.26 | 0.09 | 0.62 | 0.40 | 30 | |
| 33 A | 12.47 | 12.47 | 33.535 | 25.363 | 261.1 | 0.109 | 4.38 | 72.4 | 11.6 | 1.19 | 13.7 | 0.29 | 0.05 | 0.56 | 0.39 | 33 | 219 |
| 40 | 11.24 | 11.24 | 33.585 | 25.632 | 235.6 | 0.127 | 3.82 | 61.6 | 16.3 | 1.51 | 18.6 | 0.06 | 0.00 | 0.30 | 0.25 | 40 | 218 |
| 40 | 11.240 | 11.235 | 33.582 | 25.630 | 235.8 | 0.127 | 3.80 | 61.2 | 16.3 | 1.51 | 18.7 | 0.06 | 0.00 | 0.30 | 0.24 | 40 | 217 |
| 47 A | 10.73 | 10.72 | 33.624 | 25.753 | 224.2 | 0.143 | 3.58 | 57.1 | 19.0 | 1.63 | 20.8 | 0.03 | 0.00 | 0.22 | 0.18 | 47 | 216 |
| 50 ISL | 10.57 D | 10.56 | 33.644 D | 25.797 | 220.1 | 0.149 | 3.51 | 55.8 | 19.8 | 1.67 | 21.3 | 0.03 | 0.00 | 0.19 | 0.15 | 50 | |
| 54 | 10.37 | 10.36 | 33.655 | 25.840 | 216.1 | 0.158 | 3.41 | 53.9 | 20.9 | 1.72 | 21.9 | 0.03 | 0.00 | 0.15 | 0.12 | 54 | 215 |
| 60 | 10.01 | 10.00 | 33.694 | 25.932 | 207.4 | 0.171 | 3.22 | 50.5 | 23.1 | 1.80 | 23.3 | 0.02 | 0.00 | 0.09 | 0.10 | 60 | 214 |
| 70 | 9.49 | 9.48 | 33.774 | 26.081 | 193.5 | 0.191 | 2.94 | 45.6 | 26.5 | 1.91 | 25.2 | 0.01 | 0.00 | 0.02 | 0.05 | 70 | 213 |
| 75 ISL | 9.36 D | 9.35 | 33.828 D | 26.144 | 187.5 | 0.200 | 2.83 | 43.8 | 27.7 | 1.95 | 25.8 | 0.01 | 0.00 | 0.02 | 0.05 | 75 | |
| 85 | 9.20 | 9.19 | 33.870 | 26.203 | 182.1 | 0.219 | 2.66 | 41.1 | 29.6 | 2.00 | 26.7 | 0.00 | 0.00 | 0.01 | 0.05 | 85 | 212 |
| 100 | 8.98 | 8.97 | 33.925 | 26.281 | 175.0 | 0.246 | 2.57 | 39.5 | 31.5 | 2.03 | 27.3 | 0.00 | 0.09 | 0.01 | 0.04 | 101 | 211 |
| 120 | 8.84 | 8.83 | 33.977 | 26.345 | 169.3 | 0.280 | 2.35 | 36.0 | 33.7 | 2.12 | 28.3 | 0.00 | 0.00 | 0.01 | 0.03 | 121 | 210 |
| 125 ISL | 8.81 D | 8.80 | 33.992 D | 26.361 | 167.9 | 0.288 | 2.28 | 34.9 | 34.2 | 2.14 | 28.6 | 0.00 | 0.00 | 0.01 | 0.03 | 126 | |
| 140 | 8.73 | 8.72 | 34.025 | 26.400 | 164.5 | 0.313 | 2.08 | 31.8 | 35.8 | 2.20 | 29.4 | 0.00 | 0.00 | 0.00 | 0.04 | 141 | 209 |
| 150 ISL | 8.62 D | 8.60 | 34.045 D | 26.433 | 161.5 | 0.330 | 2.01 | 30.6 | 36.9 | 2.23 | 29.8 | 0.00 | 0.00 | 0.00 | 0.04 | 151 | |
| 171 | 8.42 | 8.40 | 34.058 | 26.474 | 158.0 | 0.363 | 1.92 | 29.1 | 39.4 | 2.28 | 30.5 | 0.00 | 0.00 | 0.00 | 0.03 | 172 | 208 |
| 200 | 8.03 | 8.01 | 34.091 | 26.559 | 150.3 | 0.408 | 1.72 | 25.9 | 43.9 | 2.39 | 31.8 | 0.00 | 0.00 | 0.00 | 0.03 | 201 | 207 |
| 230 | 7.71 | 7.69 | 34.139 | 26.644 | 142.7 | 0.452 | 1.34 | 20.0 | 49.6 | 2.56 | 33.5 | 0.00 | 0.13 | | | 231 | 206 |
| 250 ISL | 7.85 D | 7.82 | 34.218 D | 26.686 | 139.1 | 0.480 | 1.06 | 15.9 | 51.9 | 2.66 | 34.0 | 0.00 | 0.08 | | | 252 | |
| 270 | 7.76 | 7.73 | 34.244 | 26.720 | 136.2 | 0.508 | 0.83 | 12.4 | 53.6 | 2.74 | 34.2 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.60 D | 7.57 | 34.263 D | 26.758 | 133.0 | 0.548 | 0.71 | 10.6 | 56.3 | 2.81 | 34.8 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.46 | 7.43 | 34.274 | 26.787 | 130.5 | 0.576 | 0.68 | 10.1 | 58.3 | 2.85 | 35.3 | 0.00 | 0.00 | | | 323 | 204 |
| 381 | 6.93 | 6.89 | 34.283 | 26.869 | 123.4 | 0.652 | 0.46 | 6.8 | 65.4 | 2.98 | 37.1 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.75 D | 6.71 | 34.282 D | 26.892 | 121.3 | 0.675 | 0.43 | 6.3 | 67.9 | 3.01 | 37.7 | 0.00 | 0.00 | | | 403 | |
| 440 | 6.40 | 6.36 | 34.287 | 26.943 | 116.8 | 0.723 | 0.39 | 5.7 | 73.0 | 3.06 | 38.8 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 6.07 D | 6.03 | 34.313 D | 27.007 | 111.3 | 0.791 | 0.30 | 4.3 | 79.5 | 3.13 | 40.0 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.95 | 5.90 | 34.326 | 27.032 | 109.0 | 0.809 | 0.27 | 3.9 | 81.2 | 3.15 | 40.3 | 0.00 | 0.00 | | | 520 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 50.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 10.7 N | 118 53.2 W | 29/10/10 | 2209 UTC | 1457 m | 210 07 kn | 230 03 08 | 1 | 1013.8 mb | 17.4 C | 15.4 C | 14m | 5/8 | CS |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.752 | 17.752 | 33.526 | 24.205 | 370.5 | 0.000 | 5.68 | 104.5 | 1.8 | 0.29 | 0.3 | 0.02 | 0.14 | 0.39 | 0.13 | 0 | |
| 1 | 17.752 | 17.752 | 33.526 | 24.205 | 370.6 | 0.004 | 5.68 | 104.5 | 1.8 | 0.29 | 0.3 | 0.02 | 0.14 | 0.39 | 0.13 | 1 | 221 |
| 10 | 17.64 | 17.64 | 33.511 | 24.221 | 369.4 | 0.037 | 5.67 | 104.1 | 1.8 | 0.29 | 0.3 | 0.01 | 0.08 | 0.32 | 0.15 | 10 | 220 |
| 20 | 17.32 | 17.32 | 33.549 | 24.327 | 359.6 | 0.073 | 5.62 | 102.5 | 1.9 | 0.30 | 0.4 | 0.02 | 0.07 | 0.56 | 0.31 | 20 | 219 |
| 30 ISL | 16.63 D | 16.63 | 33.510 D | 24.459 | 347.2 | 0.109 | 5.54 | 99.7 | 2.9 | 0.46 | 2.4 | 0.10 | 0.13 | 0.60 | 0.50 | 30 | |
| 31 | 16.05 | 16.05 | 33.492 | 24.578 | 335.9 | 0.112 | 5.53 | 98.4 | 3.0 | 0.48 | 2.6 | 0.12 | 0.13 | 0.60 | 0.51 | 31 | 218 |
| 40 | 12.62 | 12.61 | 33.396 | 25.227 | 274.3 | 0.140 | 4.83 | 80.1 | 8.8 | 1.06 | 11.1 | 0.40 | 0.06 | 0.19 | 0.19 | 40 | 217 |
| 50 ISL | 11.13 D | 11.12 | 33.494 D | 25.581 | 240.7 | 0.165 | 4.11 | 66.0 | 15.1 | 1.45 | 17.2 | 0.12 | 0.05 | 0.16 | 0.16 | 50 | |
| 51 | 11.11 | 11.10 | 33.493 | 25.584 | 240.4 | 0.168 | 4.06 | 65.2 | 15.6 | 1.47 | 17.6 | 0.08 | 0.05 | 0.16 | 0.16 | 51 | 216 |
| 61 | 10.94 | 10.93 | 33.512 | 25.629 | 236.3 | 0.192 | 3.94 | 63.0 | 16.4 | 1.51 | 18.2 | 0.06 | 0.08 | 0.09 | 0.11 | 61 | 215 |
| 70 | 10.20 | 10.19 | 33.643 | 25.860 | 214.5 | 0.212 | 3.43 | 54.0 | 21.4 | 1.74 | 22.1 | 0.02 | 0.06 | 0.03 | 0.05 | 70 | 214 |
| 75 ISL | 9.98 D | 9.97 | 33.693 D | 25.937 | 207.3 | 0.222 | 3.27 | 51.3 | 22.9 | 1.81 | 23.1 | 0.02 | 0.04 | 0.02 | 0.05 | 75 | |
| 85 | 9.74 | 9.73 | 33.747 | 26.019 | 199.7 | 0.243 | 3.07 | 47.9 | 24.9 | 1.89 | 24.1 | 0.01 | 0.00 | 0.01 | 0.05 | 85 | 213 |
| 100 ISL | 9.38 D | 9.37 | 33.865 D | 26.171 | 185.6 | 0.272 | 2.75 | 42.6 | 28.2 | 1.99 | 25.9 | 0.00 | 0.25 | 0.01 | 0.05 | 100 | |
| 101 | 9.39 | 9.38 | 33.864 | 26.168 | 185.8 | 0.274 | 2.73 | 42.3 | 28.4 | 2.00 | 26.0 | 0.00 | 0.26 | 0.01 | 0.05 | 101 | 212 |
| 120 | 9.29 | 9.28 | 33.980 | 26.275 | 176.0 | 0.308 | 2.30 | 35.6 | 31.6 | 2.13 | 27.2 | 0.00 | 0.00 | 0.01 | 0.05 | 121 | 211 |
| 125 ISL | 9.26 D | 9.25 | 33.977 D | 26.278 | 175.9 | 0.317 | 2.25 | 34.8 | 32.2 | 2.15 | 27.4 | 0.00 | 0.00 | 0.01 | 0.05 | 126 | |
| 140 | 9.00 | 8.98 | 34.034 | 26.364 | 167.9 | 0.343 | 2.18 | 33.5 | 34.0 | 2.18 | 28.1 | 0.00 | 0.00 | 0.00 | 0.04 | 141 | 210 |
| 150 ISL | 8.91 D | 8.89 | 34.067 D | 26.405 | 164.3 | 0.359 | 2.20 | 33.8 | 35.2 | 2.19 | 28.5 | 0.00 | 0.03 | 0.00 | 0.04 | 151 | |
| 170 | 8.41 | 8.39 | 34.050 | 26.469 | 158.4 | 0.391 | 2.24 | 34.0 | 37.8 | 2.23 | 29.2 | 0.00 | 0.08 | 0.00 | 0.04 | 171 | 209 |
| 200 | 8.65 | 8.63 | 34.191 | 26.543 | 152.1 | 0.438 | 1.36 | 20.8 | 42.5 | 2.50 | 30.9 | 0.00 | 0.00 | 0.00 | 0.03 | 201 | 208 |
| 230 | 8.37 | 8.35 | 34.217 | 26.607 | 146.5 | 0.483 | 1.13 | 17.1 | 45.9 | 2.60 | 32.0 | 0.00 | 0.00 | | | 231 | 207 |
| 250 ISL | 8.24 D | 8.21 | 34.235 D | 26.641 | 143.6 | 0.512 | 1.02 | 15.4 | 47.5 | 2.65 | 32.5 | 0.00 | 0.00 | | | 251 | |
| 271 | 8.10 | 8.07 | 34.236 | 26.663 | 141.8 | 0.542 | 0.95 | 14.3 | 49.4 | 2.69 | 33.0 | 0.00 | 0.00 | | | 273 | 206 |
| 300 ISL | 7.63 D | 7.60 | 34.224 D | 26.723 | 136.3 | 0.582 | 0.93 | 13.9 | 53.9 | 2.75 | 34.5 | 0.00 | 0.00 | | | 302 | |
| 322 | 7.23 | 7.20 | 34.195 | 26.757 | 133.2 | 0.612 | 0.92 | 13.6 | 57.4 | 2.79 | 35.6 | 0.00 | 0.00 | | | 324 | 205 |
| 381 | 6.99 | 6.95 | 34.259 | 26.842 | 126.0 | 0.688 | 0.59 | 8.7 | 62.9 | 2.93 | 36.8 | 0.00 | 0.00 | | | 383 | 204 |
| 400 ISL | 6.82 D | 6.78 | 34.257 D | 26.863 | 124.1 | 0.712 | 0.54 | 7.9 | 65.0 | 2.96 | 37.2 | 0.00 | 0.00 | | | 403 | |
| 442 | 6.52 | 6.48 | 34.278 | 26.920 | 119.1 | 0.763 | 0.46 | 6.7 | 69.8 | 3.03 | 38.2 | 0.00 | 0.00 | | | 445 | 203 |
| 500 ISL | 6.21 D | 6.17 | 34.305 D | 26.983 | 113.8 | 0.831 | 0.34 | 4.9 | 75.8 | 3.11 | 39.2 | 0.00 | 0.00 | | | 503 | |
| 518 | 6.13 | 6.08 | 34.324 | 27.008 | 111.5 | 0.851 | 0.30 | 4.3 | 77.7 | 3.14 | 39.5 | 0.00 | 0.00 | | | 522 | 202 |
| 518 | 6.128 | 6.082 | 34.314 | 27.000 | 112.2 | 0.851 | 0.30 | 4.3 | 77.6 | 3.15 | 39.4 | 0.00 | 0.00 | | | 522 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 55.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 0.6 N | 119 13.8 W | 30/10/10 | 0224 UTC | 1592 m | 110 03 kn | | | 1013.6 mb | 16.4 C | 15.0 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.44 | 16.44 | 33.253 | 24.305 | 361.0 | 0.000 | 5.80 | 103.8 | 1.7 | 0.31 | 0.2 | 0.04 | 0.06 | 0.56 | 0.11 | 0 | |
| 2 | 16.44 | 16.44 | 33.253 | 24.305 | 361.0 | 0.007 | 5.80 | 103.8 | 1.7 | 0.31 | 0.2 | 0.04 | 0.06 | 0.56 | 0.11 | 2 | 221 |
| 10 | 15.94 | 15.94 | 33.267 | 24.430 | 349.4 | 0.036 | 5.82 | 103.2 | 1.8 | 0.31 | 0.4 | 0.09 | 0.12 | 0.72 | 0.17 | 10 | 219 |
| 10 | 15.95 | 15.95 | 33.266 | 24.427 | 349.7 | 0.036 | | | | | | | | | | 10 | 220 |
| 19 | 15.56 | 15.56 | 33.265 | 24.513 | 341.7 | 0.067 | 5.77 | 101.5 | 1.7 | 0.35 | 0.9 | 0.17 | 0.05 | 0.91 | 0.30 | 19 | 218 |
| 20 ISL | 15.53 D | 15.53 | 33.264 D | 24.519 | 341.2 | 0.070 | 5.77 | 101.4 | 1.6 | 0.35 | 0.9 | 0.16 | 0.06 | 1.09 | 0.36 | 20 | |
| 30 ISL | 15.34 D | 15.34 | 33.314 D | 24.600 | 333.8 | 0.104 | 5.77 | 101.1 | 0.7 | 0.38 | 1.0 | 0.10 | 0.13 | 2.25 | 0.80 | 30 | |
| 31 | 15.37 | 15.37 | 33.322 | 24.599 | 333.9 | 0.107 | 5.77 | 101.1 | 0.6 | 0.38 | 1.0 | 0.09 | 0.14 | 2.30 | 0.82 | 31 | 217 |
| 40 | 14.11 | 14.10 | 33.232 | 24.800 | 314.9 | 0.136 | 5.35 | 91.4 | 3.4 | 0.64 | 4.8 | 0.63 | 0.00 | 0.37 | 0.23 | 40 | 216 |
| 50 | 11.81 | 11.80 | 32.986 | 25.062 | 290.1 | 0.167 | 5.35 | 86.9 | 6.6 | 0.81 | 7.2 | 0.03 | 0.00 | 0.15 | 0.13 | 50 | 215 |
| 59 | 10.99 | 10.98 | 33.052 | 25.262 | 271.2 | 0.192 | 5.12 | 81.8 | 9.9 | 1.02 | 10.9 | 0.01 | 0.05 | 0.06 | 0.09 | 59 | 214 |
| 69 | 10.22 | 10.21 | 33.214 | 25.522 | 246.6 | 0.218 | 4.78 | 75.1 | 13.6 | 1.25 | 14.7 | 0.00 | 0.00 | 0.04 | 0.08 | 69 | 213 |
| 75 ISL | 10.07 D | 10.06 | 33.267 D | 25.589 | 240.4 | 0.232 | 4.54 | 71.2 | 15.9 | 1.37 | 16.9 | 0.00 | 0.00 | 0.03 | 0.06 | 75 | |
| 85 | 9.68 | 9.67 | 33.440 | 25.789 | 221.5 | 0.256 | 4.20 | 65.3 | 19.0 | 1.51 | 19.6 | 0.00 | 0.00 | 0.02 | 0.04 | 85 | 212 |
| 100 | 9.57 | 9.56 | 33.524 | 25.873 | 213.8 | 0.288 | 4.10 | 63.7 | 19.8 | 1.52 | 19.9 | 0.00 | 0.00 | 0.01 | 0.05 | 100 | 211 |
| 120 | 9.17 | 9.16 | 33.758 | 26.121 | 190.6 | 0.329 | 3.50 | 53.9 | 24.9 | 1.75 | 23.3 | 0.00 | 0.00 | 0.00 | 0.03 | 121 | 210 |
| 125 ISL | 9.16 D | 9.15 | 33.768 D | 26.130 | 189.8 | 0.338 | 3.40 | 52.4 | 25.8 | 1.79 | 23.9 | 0.00 | 0.00 | 0.00 | 0.03 | 126 | |
| 140 | 9.01 | 8.99 | 33.861 | 26.227 | 180.9 | 0.366 | 3.08 | 47.3 | 28.4 | 1.89 | 25.4 | 0.00 | 0.00 | 0.00 | 0.03 | 141 | 209 |
| 150 ISL | 8.83 D | 8.81 | 33.953 D | 26.328 | 171.5 | 0.384 | 2.74 | 42.0 | 31.1 | 2.00 | 26.7 | 0.00 | 0.00 | 0.00 | 0.03 | 151 | |
| 171 | 8.69 | 8.67 | 34.059 | 26.433 | 161.9 | 0.419 | 2.06 | 31.5 | 36.7 | 2.22 | 29.2 | 0.00 | 0.00 | 0.00 | 0.03 | 172 | 208 |
| 200 ISL | 8.51 D | 8.49 | 34.124 D | 26.512 | 154.9 | 0.465 | 1.72 | 26.2 | 40.5 | 2.35 | 30.5 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | |
| 201 | 8.50 | 8.48 | 34.122 | 26.512 | 154.9 | 0.466 | 1.71 | 26.0 | 40.6 | 2.35 | 30.5 | 0.00 | 0.00 | 0.00 | 0.02 | 202 | 207 |
| 231 | 7.98 | 7.96 | 34.120 | 26.589 | 148.0 | 0.512 | 1.53 | 23.0 | 45.6 | 2.46 | 32.4 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 7.89 D | 7.86 | 34.172 D | 26.644 | 143.1 | 0.539 | 1.30 | 19.5 | 48.4 | 2.55 | 33.2 | 0.00 | 0.00 | | | 251 | |
| 270 | 7.76 | 7.73 | 34.203 | 26.687 | 139.3 | 0.567 | 1.06 | 15.9 | 51.2 | 2.64 | 33.9 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.49 D | 7.46 | 34.209 D | 26.731 | 135.5 | 0.609 | 0.85 | 12.6 | 55.1 | 2.74 | 35.0 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.34 | 7.31 | 34.229 | 26.769 | 132.2 | 0.635 | 0.76 | 11.3 | 57.6 | 2.79 | 35.6 | 0.00 | 0.00 | | | 322 | 204 |
| 380 | 6.85 | 6.81 | 34.253 | 26.856 | 124.5 | 0.712 | 0.54 | 7.9 | 65.0 | 2.93 | 37.3 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.71 D | 6.67 | 34.264 D | 26.884 | 122.1 | 0.737 | 0.49 | 7.2 | 67.2 | 2.97 | 37.8 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.46 | 6.42 | 34.276 | 26.927 | 118.4 | 0.786 | 0.40 | 5.8 | 71.4 | 3.03 | 38.6 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 6.16 D | 6.12 | 34.298 D | 26.983 | 113.6 | 0.855 | 0.32 | 4.6 | 76.4 | 3.09 | 39.5 | 0.00 | 0.00 | | | 503 | |
| 516 | 6.11 | 6.06 | 34.308 | 26.998 | 112.4 | 0.873 | 0.30 | 4.3 | 77.8 | 3.11 | 39.7 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 60.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 51.2 N | 119 33.5 W | 30/10/10 | 0751 UTC | 2200 m | 170 10 kn | | | 1014.4 mb | 17.2 C | 16.1 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.51 | 16.51 | 33.236 | 24.276 | 363.8 | 0.000 | 5.78 | 103.6 | 1.7 | 0.33 | 0.0 | 0.01 | 0.00 | 0.36 | 0.07 | 0 | |
| 2 | 16.51 | 16.51 | 33.236 | 24.276 | 363.8 | 0.007 | 5.78 | 103.6 | 1.7 | 0.33 | 0.0 | 0.01 | 0.00 | 0.36 | 0.07 | 2 | 220 |
| 10 | 16.51 | 16.51 | 33.236 | 24.276 | 364.1 | 0.036 | 5.75 | 103.1 | 1.6 | 0.33 | 0.0 | 0.01 | 0.00 | 0.35 | 0.07 | 10 | 219 |
| 19 | 16.27 | 16.27 | 33.230 | 24.327 | 359.5 | 0.069 | 5.77 | 102.9 | 1.5 | 0.35 | 0.0 | 0.01 | 0.00 | 0.45 | 0.10 | 19 | 218 |
| 20 ISL | 16.26 D | 16.26 | 33.228 D | 24.328 | 359.5 | 0.073 | 5.77 | 102.9 | 1.5 | 0.35 | 0.0 | 0.01 | 0.00 | 0.46 | 0.11 | 20 | |
| 30 | 16.23 | 16.23 | 33.228 | 24.335 | 359.1 | 0.108 | 5.74 | 102.3 | 1.5 | 0.36 | 0.1 | 0.02 | 0.00 | 0.53 | 0.20 | 30 | 217 |
| 40 | 14.41 | 14.40 | 33.087 | 24.625 | 331.6 | 0.143 | 5.79 | 99.4 | 2.4 | 0.46 | 0.7 | 0.20 | 0.30 | 0.49 | 0.27 | 40 | 216 |
| 50 | 13.03 | 13.02 | 32.931 | 24.786 | 316.4 | 0.175 | 5.67 | 94.5 | 3.7 | 0.58 | 2.5 | 0.27 | 0.00 | 0.47 | 0.28 | 50 | 215 |
| 60 | 12.67 | 12.66 | 32.952 | 24.873 | 308.4 | 0.207 | 5.55 | 91.8 | 4.4 | 0.65 | 4.0 | 0.08 | 0.00 | 0.36 | 0.29 | 60 | 214 |
| 71 | 11.89 | 11.88 | 33.028 | 25.081 | 288.8 | 0.239 | 5.34 | 86.9 | 7.0 | 0.83 | 7.6 | 0.01 | 0.00 | 0.14 | 0.14 | 71 | 213 |
| 75 ISL | 11.67 D | 11.66 | 33.051 D | 25.139 | 283.3 | 0.251 | 5.29 | 85.7 | 7.7 | 0.88 | 8.5 | 0.01 | 0.00 | 0.12 | 0.13 | 75 | |
| 85 | 11.02 | 11.01 | 33.106 | 25.300 | 268.2 | 0.279 | 5.14 | 82.2 | 9.4 | 1.01 | 10.6 | 0.01 | 0.00 | 0.08 | 0.11 | 85 | 212 |
| 100 ISL | 10.28 D | 10.27 | 33.324 D | 25.598 | 240.0 | 0.317 | 4.70 | 74.0 | 13.8 | 1.27 | 15.0 | 0.00 | 0.00 | 0.03 | 0.06 | 100 | |
| 101 | 10.27 | 10.26 | 33.328 | 25.603 | 239.6 | 0.319 | 4.67 | 73.5 | 14.1 | 1.29 | 15.3 | 0.00 | 0.00 | 0.03 | 0.06 | 101 | 211 |
| 120 | 9.64 | 9.63 | 33.543 | 25.877 | 213.9 | 0.362 | 3.99 | 62.1 | 19.8 | 1.57 | 20.3 | 0.00 | 0.00 | 0.01 | 0.04 | 121 | 210 |
| 125 ISL | 9.45 D | 9.44 | 33.621 D | 25.969 | 205.2 | 0.373 | 3.84 | 59.5 | 21.2 | 1.63 | 21.2 | 0.00 | 0.00 | 0.01 | 0.04 | 126 | |
| 140 | 9.19 | 9.17 | 33.767 | 26.125 | 190.6 | 0.402 | 3.46 | 53.3 | 25.2 | 1.77 | 23.3 | 0.00 | 0.00 | 0.00 | 0.04 | 141 | 209 |
| 150 ISL | 8.94 D | 8.92 | 33.854 D | 26.233 | 180.5 | 0.421 | 3.24 | 49.7 | 27.3 | 1.85 | 24.5 | 0.00 | 0.00 | 0.00 | 0.03 | 151 | |
| 170 | 8.78 | 8.76 | 33.920 | 26.310 | 173.6 | 0.456 | 2.87 | 43.9 | 31.0 | 1.97 | 26.4 | 0.00 | 0.00 | 0.00 | 0.02 | 171 | 208 |
| 200 | 8.45 | 8.43 | 34.007 | 26.430 | 162.7 | 0.507 | 2.44 | 37.1 | 35.9 | 2.13 | 28.4 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | 207 |
| 230 | 8.23 | 8.21 | 34.032 | 26.483 | 158.1 | 0.555 | 2.26 | 34.1 | 38.5 | 2.19 | 29.6 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 7.99 D | 7.96 | 34.084 D | 26.560 | 151.1 | 0.586 | 2.00 | 30.1 | 42.0 | 2.30 | 31.0 | 0.00 | 0.00 | | | 251 | |
| 271 | 7.74 | 7.71 | 34.079 | 26.593 | 148.2 | 0.617 | 1.70 | 25.4 | 46.1 | 2.44 | 32.5 | 0.00 | 0.00 | | | 273 | 205 |
| 300 ISL | 7.66 D | 7.63 | 34.130 D | 26.645 | 143.7 | 0.660 | 1.37 | 20.4 | 50.6 | 2.57 | 33.8 | 0.00 | 0.00 | | | 302 | |
| 322 | 7.46 | 7.43 | 34.164 | 26.701 | 138.7 | 0.691 | 1.14 | 16.9 | 53.7 | 2.66 | 34.5 | 0.00 | 0.00 | | | 324 | 204 |
| 380 | 7.12 | 7.08 | 34.240 | 26.809 | 129.2 | 0.768 | 0.64 | 9.4 | 61.2 | 2.91 | 36.3 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 7.01 D | 6.97 | 34.251 D | 26.833 | 127.2 | 0.794 | 0.55 | 8.1 | 63.9 | 2.96 | 36.9 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.62 | 6.58 | 34.273 | 26.903 | 120.8 | 0.845 | 0.44 | 6.4 | 69.4 | 3.03 | 37.9 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 6.20 D | 6.16 | 34.301 D | 26.981 | 113.9 | 0.914 | 0.33 | 4.8 | 77.1 | 3.10 | 38.5 | 0.00 | 0.00 | | | 503 | |
| 515 | 6.10 | 6.05 | 34.304 | 26.996 | 112.6 | 0.931 | 0.30 | 4.3 | 79.1 | 3.12 | 38.6 | 0.00 | 0.00 | | | 518 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 31.2 N | 120 15.5 W | 30/10/10 | 1716 UTC | 3942 m | 150 02 kn | 270 08 10 | 1 | 1017.7 mb | 18.1 C | 16.7 C | 22m | 1/8 | NS |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 16.98 | 16.98 | 33.223 | 24.156 | 375.1 | 0.000 | 5.73 | 103.6 | 1.8 | 0.29 | 0.0 | 0.02 | 0.00 | 0.25 | 0.09 | 0 | |
| 2 A | 16.98 | 16.98 | 33.223 | 24.156 | 375.2 | 0.008 | 5.73 | 103.6 | 1.8 | 0.29 | 0.0 | 0.02 | 0.00 | 0.25 | 0.09 | 2 | 223 |
| 8 | 16.84 | 16.84 | 33.222 | 24.189 | 372.3 | 0.030 | 5.71 | 103.0 | 1.9 | 0.29 | 0.0 | 0.02 | 0.00 | 0.25 | 0.09 | 8 | 222 |
| 10 ISL | 16.83 D | 16.83 | 33.221 D | 24.190 | 372.2 | 0.037 | 5.71 | 103.0 | 1.8 | 0.29 | 0.0 | 0.01 | 0.00 | 0.25 | 0.09 | 10 | |
| 15 A | 16.73 | 16.73 | 33.221 | 24.214 | 370.2 | 0.056 | 5.73 | 103.1 | 1.6 | 0.29 | 0.0 | 0.00 | 0.00 | 0.28 | 0.11 | 15 | 221 |
| 20 ISL | 16.56 D | 16.56 | 33.221 D | 24.253 | 366.6 | 0.074 | 5.75 | 103.1 | 1.7 | 0.29 | 0.0 | 0.00 | 0.00 | 0.34 | 0.16 | 20 | |
| 23 | 16.51 | 16.51 | 33.219 | 24.263 | 365.7 | 0.085 | 5.76 | 103.2 | 1.7 | 0.29 | 0.0 | 0.00 | 0.00 | 0.38 | 0.20 | 23 | 220 |
| 23 | 16.512 | 16.508 | 33.219 | 24.263 | 365.7 | 0.085 | 5.77 | 103.4 | 1.7 | 0.28 | 0.0 | 0.00 | 0.00 | 0.37 | 0.18 | 23 | 219 |
| 30 ISL | 16.47 D | 16.47 | 33.218 D | 24.272 | 365.1 | 0.111 | 5.73 | 102.6 | 1.9 | 0.30 | 0.0 | 0.01 | 0.00 | 0.48 | 0.27 | 30 | |
| 31 A | 16.47 | 16.47 | 33.221 | 24.274 | 364.9 | 0.115 | 5.73 | 102.6 | 1.9 | 0.30 | 0.0 | 0.01 | 0.00 | 0.49 | 0.28 | 31 | 218 |
| 38 | 16.42 | 16.41 | 33.217 | 24.283 | 364.3 | 0.140 | 5.73 | 102.5 | 1.9 | 0.30 | 0.0 | 0.02 | 0.00 | 0.48 | 0.28 | 38 | 217 |
| 46 A | 14.91 | 14.90 | 33.080 | 24.514 | 342.5 | 0.168 | 5.79 | 100.4 | 2.5 | 0.40 | 0.4 | 0.14 | 0.20 | 0.48 | 0.39 | 46 | 216 |
| 50 ISL | 13.51 D | 13.50 | 33.001 D | 24.745 | 320.4 | 0.182 | 5.70 | 96.0 | 3.4 | 0.54 | 2.1 | 0.39 | 0.07 | 0.38 | 0.39 | 50 | |
| 52 | 13.27 | 13.26 | 32.973 | 24.771 | 317.9 | 0.188 | 5.64 | 94.5 | 3.9 | 0.61 | 3.1 | 0.48 | 0.00 | 0.32 | 0.39 | 52 | 215 |
| 60 A | 12.64 | 12.63 | 32.983 | 24.903 | 305.5 | 0.213 | 5.46 | 90.3 | 5.2 | 0.71 | 5.4 | 0.05 | 0.00 | 0.22 | 0.31 | 60 | 214 |
| 74 | 11.72 | 11.71 | 33.011 | 25.099 | 287.1 | 0.254 | 5.28 | 85.6 | 7.3 | 0.88 | 8.3 | 0.03 | 0.00 | 0.12 | 0.17 | 74 | 213 |
| 75 ISL | 11.52 D | 11.51 | 33.035 D | 25.154 | 281.9 | 0.257 | 5.27 | 85.1 | 7.5 | 0.89 | 8.5 | 0.03 | 0.00 | 0.11 | 0.16 | 75 | |
| 88 A | 11.01 | 11.00 | 33.127 | 25.318 | 266.6 | 0.293 | 5.04 | 80.6 | 10.5 | 1.07 | 11.7 | 0.03 | 0.00 | 0.05 | 0.10 | 88 | 212 |
| 100 ISL | 10.55 D | 10.54 | 33.266 D | 25.507 | 248.8 | 0.324 | 4.75 | 75.2 | 13.8 | 1.23 | 14.6 | 0.02 | 0.00 | 0.03 | 0.07 | 100 | |
| 104 | 10.23 | 10.22 | 33.346 | 25.624 | 237.7 | 0.334 | 4.65 | 73.2 | 14.8 | 1.28 | 15.5 | 0.02 | 0.00 | 0.03 | 0.07 | 104 | 211 |
| 120 | 9.92 | 9.91 | 33.450 | 25.758 | 225.2 | 0.371 | 4.35 | 68.0 | 17.2 | 1.39 | 17.7 | 0.02 | 0.00 | 0.02 | 0.05 | 121 | 210 |
| 125 ISL | 9.88 D | 9.87 | 33.544 D | 25.838 | 217.8 | 0.382 | 4.20 | 65.7 | 18.5 | 1.45 | 18.7 | 0.02 | 0.00 | 0.01 | 0.04 | 126 | |
| 140 | 9.40 | 9.38 | 33.664 | 26.011 | 201.5 | 0.413 | 3.73 | 57.7 | 22.6 | 1.66 | 21.8 | 0.02 | 0.00 | 0.00 | 0.03 | 141 | 209 |
| 150 ISL | 9.24 D | 9.22 | 33.745 D | 26.100 | 193.2 | 0.433 | 3.43 | 52.9 | 25.3 | 1.77 | 23.5 | 0.02 | 0.00 | 0.00 | 0.03 | 151 | |
| 170 | 8.96 | 8.94 | 33.892 | 26.260 | 178.4 | 0.470 | 2.94 | 45.1 | 29.7 | 1.93 | 26.0 | 0.02 | 0.00 | 0.00 | 0.02 | 171 | 208 |
| 200 | 8.68 | 8.66 | 33.961 | 26.358 | 169.6 | 0.522 | 2.69 | 41.0 | 32.7 | 2.02 | 27.5 | 0.03 | 0.00 | 0.00 | 0.03 | 201 | 207 |
| 231 | 8.19 | 8.17 | 34.022 | 26.481 | 158.3 | 0.573 | 2.39 | 36.1 | 38.1 | 2.17 | 29.4 | 0.03 | 0.00 | | | 232 | 206 |
| 250 ISL | 7.90 D | 7.87 | 34.048 D | 26.545 | 152.5 | 0.603 | 2.05 | 30.7 | 42.6 | 2.32 | 31.1 | 0.03 | 0.00 | | | 251 | |
| 270 | 7.73 | 7.70 | 34.095 | 26.607 | 146.8 | 0.632 | 1.69 | 25.3 | 47.3 | 2.47 | 32.9 | 0.03 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.34 D | 7.31 | 34.109 D | 26.674 | 140.8 | 0.676 | 1.35 | 20.0 | 52.3 | 2.61 | 34.4 | 0.02 | 0.00 | | | 302 | |
| 320 | 7.22 | 7.19 | 34.134 | 26.711 | 137.6 | 0.703 | 1.19 | 17.6 | 55.3 | 2.67 | 35.2 | 0.02 | 0.00 | | | 322 | 204 |
| 381 | 6.50 | 6.47 | 34.159 | 26.828 | 126.8 | 0.784 | 0.86 | 12.5 | 65.8 | 2.85 | 37.9 | 0.02 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.34 D | 6.30 | 34.181 D | 26.867 | 123.3 | 0.808 | 0.76 | 11.0 | 69.1 | 2.90 | 38.7 | 0.02 | 0.00 | | | 402 | |
| 441 | 5.92 | 5.88 | 34.191 | 26.928 | 117.7 | 0.857 | 0.58 | 8.3 | 75.5 | 3.00 | 40.0 | 0.02 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.76 D | 5.72 | 34.258 D | 27.002 | 111.4 | 0.925 | 0.42 | 6.0 | 81.0 | 3.09 | 40.8 | 0.02 | 0.00 | | | 503 | |
| 517 | 5.70 | 5.66 | 34.262 | 27.012 | 110.5 | 0.944 | 0.38 | 5.4 | 82.6 | 3.12 | 41.0 | 0.02 | 0.00 | | | 520 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 80.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 10.8 N | 120 55.0 W | 30/10/10 | 2230 UTC | 3852 m | 220 04 kn | 300 06 08 | 1 | 1017.3 mb | 19.0 C | 16.2 C | 27m | 2/8 | SC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 17.45 | 17.45 | 32.986 | 23.864 | 403.1 | 0.000 | 5.67 | 103.3 | 2.1 | 0.29 | 0.0 | 0.00 | 0.05 | 0.15 | 0.03 | 0 | |
| 2 | 17.45 | 17.45 | 32.986 | 23.864 | 403.1 | 0.008 | 5.67 | 103.3 | 2.1 | 0.29 | 0.0 | 0.00 | 0.05 | 0.15 | 0.03 | 2 | 221 |
| 10 ISL | 17.16 D | 17.16 | 32.985 D | 23.932 | 396.9 | 0.040 | 5.68 | 102.9 | 2.3 | 0.28 | 0.0 | 0.00 | 0.04 | 0.16 | 0.03 | 10 | |
| 11 | 17.15 | 17.15 | 32.995 | 23.942 | 395.9 | 0.044 | 5.68 | 102.9 | 2.3 | 0.28 | 0.0 | 0.00 | 0.04 | 0.16 | 0.03 | 11 | 219 |
| 20 | 16.94 | 16.94 | 32.986 | 23.985 | 392.2 | 0.079 | 5.71 | 103.0 | 2.3 | 0.29 | 0.0 | 0.00 | 0.04 | 0.16 | 0.04 | 20 | 218 |
| 30 | 16.73 | 16.73 | 33.001 | 24.046 | 386.7 | 0.118 | 5.76 | 103.5 | 2.4 | 0.29 | 0.0 | 0.00 | 0.10 | 0.24 | 0.07 | 30 | 217 |
| 41 | 16.32 | 16.31 | 33.019 | 24.154 | 376.7 | 0.160 | 5.81 | 103.6 | 2.3 | 0.30 | 0.0 | 0.00 | 0.12 | 0.30 | 0.14 | 41 | 216 |
| 50 ISL | 16.18 D | 16.17 | 33.052 D | 24.212 | 371.5 | 0.194 | 5.82 | 103.5 | 2.2 | 0.32 | 0.1 | 0.00 | 0.24 | 0.28 | 0.14 | 50 | |
| 51 | 16.16 | 16.15 | 33.044 | 24.210 | 371.6 | 0.198 | 5.82 | D103.5 D | 2.2 | 0.32 | 0.1 | 0.00 | 0.25 | 0.28 | 0.14 | 51 | 215 |
| 60 | 15.41 | 15.40 | 33.025 | 24.363 | 357.3 | 0.231 | 5.90 | 103.3 | 2.4 | 0.34 | 0.2 | 0.02 | 0.27 | 0.30 | 0.20 | 60 | 214 |
| 70 | 14.56 | 14.55 | 33.123 D | 24.622 | 332.8 | 0.265 | 5.95 | 102.5 | 2.5 | 0.35 | 0.1 | 0.03 | 0.09 | 0.28 | 0.25 | 70 | 213 |
| 75 ISL | 15.17 D | 15.16 | 33.245 D | 24.585 | 336.5 | 0.282 | 5.88 | 102.6 | 2.6 | 0.32 | 0.1 | 0.03 | 0.04 | 0.27 | 0.28 | 75 | |
| 85 | 14.85 | 14.84 | 33.357 | 24.741 | 321.9 | 0.315 | 5.69 | 98.7 | 2.7 | 0.28 | 0.1 | 0.02 | 0.00 | 0.25 | 0.31 | 85 | 212 |
| 100 | 13.29 | 13.28 | 33.222 D | 24.961 | 301.2 | 0.361 | 5.61 | 94.2 | 3.7 | 0.42 | 1.9 | 0.06 | 0.00 | 0.15 | 0.21 | 100 | 211 |
| 120 | 12.13 | 12.11 | 33.253 | 25.211 | 277.7 | 0.419 | 5.25 | 86.0 | 6.2 | 0.70 | 6.1 | 0.02 | 0.00 | 0.10 | 0.19 | 120 | 210 |
| 125 ISL | 11.45 D | 11.43 | 33.255 D | 25.339 | 265.5 | 0.433 | 5.16 | 83.3 | 7.4 | 0.79 | 7.7 | 0.01 | 0.00 | 0.08 | 0.16 | 126 | |
| 141 | 10.423 | 10.406 | 33.333 | 25.582 | 242.5 | 0.474 | 4.84 | 76.5 | 12.1 | 1.10 | 13.0 | 0.00 | 0.00 | 0.03 | 0.06 | 142 | 209 |
| 150 ISL | 10.07 D | 10.05 | 33.398 D | 25.693 | 232.1 | 0.495 | 4.57 | 71.7 | 14.9 | 1.25 | 15.6 | 0.00 | 0.00 | 0.02 | 0.04 | 151 | |
| 171 | 9.50 | 9.48 | 33.676 | 26.005 | 202.8 | 0.541 | 3.94 | 61.1 | 21.1 | 1.54 | 20.5 | 0.00 | 0.00 | 0.00 | 0.01 | 172 | 208 |
| 200 ISL | 8.98 D | 8.96 | 33.838 D | 26.215 | 183.2 | 0.597 | 3.35 | 51.4 | 27.5 | 1.79 | 24.6 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | |
| 201 | 8.97 | 8.95 | 33.845 | 26.222 | 182.6 | 0.598 | 3.34 | 51.3 | 27.7 | 1.80 | 24.7 | 0.00 | 0.00 | 0.00 | 0.02 | 202 | 207 |
| 231 | 8.44 | 8.42 | 33.957 | 26.393 | 166.8 | 0.651 | 3.17 | 48.1 | 32.1 | 1.88 | 26.2 | 0.00 | 0.00 | | | 232 | 206 |
| 250 ISL | 8.11 D | 8.08 | 33.996 D | 26.473 | 159.4 | 0.682 | 2.79 | 42.0 | 36.4 | 2.03 | 28.2 | 0.00 | 0.00 | | | 251 | |
| 271 | 7.88 | 7.85 | 34.027 | 26.532 | 154.1 | 0.715 | 2.30 | 34.5 | 41.6 | 2.22 | 30.6 | 0.00 | 0.00 | | | 272 | 205 |
| 300 ISL | 7.48 D | 7.45 | 34.062 D | 26.617 | 146.2 | 0.758 | 1.83 | 27.2 | 48.1 | 2.41 | 33.0 | 0.00 | 0.00 | | | 302 | |
| 319 | 7.31 | 7.28 | 34.084 | 26.659 | 142.5 | 0.786 | 1.57 | 23.2 | 51.9 | 2.51 | 34.3 | 0.00 | 0.00 | | | 321 | 204 |
| 381 | 6.89 | 6.85 | 34.152 | 26.771 | 132.6 | 0.871 | 0.95 | 13.9 | 61.3 | 2.78 | 37.0 | 0.00 | 0.00 | | | 383 | 203 |
| 400 ISL | 6.75 D | 6.71 | 34.175 D | 26.808 | 129.2 | 0.896 | 0.81 | 11.8 | 64.7 | 2.85 | 37.8 | 0.00 | 0.00 | | | 402 | |
| 442 | 6.23 | 6.19 | 34.196 | 26.893 | 121.3 | 0.948 | 0.58 | 8.4 | 72.1 | 2.98 | 39.3 | 0.00 | 0.00 | | | 445 | 202 |
| 500 ISL | 5.87 D | 5.83 | 34.232 D | 26.968 | 114.7 | 1.017 | 0.46 | 6.6 | 79.1 | 3.07 | 40.5 | 0.00 | 0.00 | | | 503 | |
| 517 | 5.77 | 5.73 | 34.230 | 26.979 | 113.8 | 1.036 | 0.42 | 6.0 | 81.1 | 3.09 | 40.8 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 90.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 50.8 N | 121 35.4 W | 31/10/10 | 0424 UTC | 4096 m | 270 01 kn | | | 1019.6 mb | 18.3 C | 15.8 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.55 | 18.55 | 33.398 | 23.911 | 398.5 | 0.000 | 5.45 | 101.7 | 2.2 | 0.24 | 0.0 | 0.00 | 0.05 | 0.09 | 0.00 | 0 | |
| 2 | 18.55 | 18.55 | 33.398 | 23.911 | 398.6 | 0.008 | 5.45 | 101.7 | 2.2 | 0.24 | 0.0 | 0.00 | 0.05 | 0.09 | 0.00 | 2 | 221 |
| 9 | 18.48 | 18.48 | 33.397 | 23.928 | 397.2 | 0.036 | 5.46 | 101.8 | 2.2 | 0.24 | 0.0 | 0.00 | 0.37 | 0.08 | 0.01 | 9 | 220 |
| 10 ISL | 18.22 D | 18.22 | 33.389 D | 23.986 | 391.7 | 0.040 | 5.46 | 101.2 | 2.2 | 0.24 | 0.0 | 0.00 | 0.36 | 0.08 | 0.01 | 10 | |
| 20 ISL | 18.19 D | 18.19 | 33.388 D | 23.993 | 391.4 | 0.079 | 5.47 | 101.4 | 2.2 | 0.24 | 0.0 | 0.00 | 0.18 | 0.09 | 0.01 | 20 | |
| 25 | 18.18 | 18.18 | 33.391 | 23.998 | 391.1 | 0.098 | 5.47 | 101.3 | 2.2 | 0.24 | 0.0 | 0.00 | 0.00 | 0.10 | 0.01 | 25 | 219 |
| 30 ISL | 18.18 D | 18.17 | 33.388 D | 23.996 | 391.5 | 0.118 | 5.47 | 101.3 | 2.2 | 0.24 | 0.0 | 0.00 | 0.00 | 0.10 | 0.01 | 30 | |
| 40 | 18.17 | 18.16 | 33.389 | 24.000 | 391.5 | 0.157 | 5.47 | 101.3 | 2.2 | 0.24 | 0.0 | 0.00 | 0.00 | 0.10 | 0.02 | 40 | 218 |
| 50 | 18.16 | 18.15 | 33.389 | 24.003 | 391.6 | 0.196 | 5.47 | 101.3 | 2.0 | 0.24 | 0.0 | 0.00 | 0.00 | 0.12 | 0.02 | 50 | 217 |
| 62 | 17.66 | 17.65 | 33.362 | 24.104 | 382.3 | 0.243 | 5.60 | 102.7 | 2.0 | 0.24 | 0.0 | 0.00 | 0.00 | 0.21 | 0.05 | 62 | 216 |
| 75 | 15.85 | 15.84 | 33.264 | 24.450 | 349.5 | 0.290 | 5.79 | 102.4 | 2.1 | 0.25 | 0.0 | 0.00 | 0.00 | 0.19 | 0.09 | 75 | 215 |
| 87 | 15.38 | 15.37 | 33.284 | 24.570 | 338.4 | 0.332 | 5.81 | 101.8 | 2.2 | 0.25 | 0.0 | 0.00 | 0.00 | 0.25 | 0.19 | 87 | 214 |
| 100 | 14.79 | 14.78 | 33.294 | 24.706 | 325.7 | 0.375 | 5.73 | 99.2 | 2.5 | 0.26 | 0.1 | 0.04 | 0.00 | 0.27 | 0.31 | 100 | 213 |
| 112 | 14.20 | 14.18 | 33.294 | 24.831 | 314.1 | 0.413 | 5.66 | 96.9 | 2.9 | 0.31 | 0.3 | 0.12 | 0.00 | 0.25 | 0.25 | 112 | 212 |
| 125 | 13.00 | 12.98 | 33.278 | 25.063 | 292.1 | 0.453 | 5.44 | 90.8 | 4.5 | 0.49 | 3.2 | 0.03 | 0.00 | 0.16 | 0.20 | 125 | 211 |
| 138 | 11.386 | 11.369 | 33.266 | 25.360 | 263.9 | 0.489 | 5.00 | 80.6 | 9.1 | 0.92 | 10.0 | 0.00 | 0.00 | 0.09 | 0.09 | 139 | 209 |
| 138 | 11.39 | 11.37 | 33.264 | 25.357 | 264.1 | 0.489 | 5.02 | 81.0 | 9.0 | 0.91 | 9.9 | 0.00 | 0.00 | 0.10 | 0.08 | 139 | 210 |
| 150 ISL | 10.75 D | 10.73 | 33.332 D | 25.525 | 248.3 | 0.519 | 4.67 | 74.3 | 12.2 | 1.16 | 13.8 | 0.00 | 0.00 | 0.05 | 0.06 | 151 | |
| 170 | 10.19 | 10.17 | 33.470 | 25.729 | 229.2 | 0.567 | 4.08 | 64.2 | 16.9 | 1.44 | 18.1 | 0.00 | 0.00 | 0.01 | 0.02 | 171 | 208 |
| 200 | 9.63 | 9.61 | 33.808 | 26.087 | 195.7 | 0.631 | 2.77 | 43.1 | 26.5 | 1.91 | 25.0 | 0.00 | 0.09 | 0.00 | 0.02 | 201 | 207 |
| 230 | 9.17 | 9.14 | 33.939 | 26.265 | 179.3 | 0.687 | 2.40 | 37.0 | 31.1 | 2.05 | 27.2 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.73 D | 8.70 | 33.970 D | 26.359 | 170.5 | 0.722 | 2.56 | 39.1 | 32.7 | 2.03 | 27.3 | 0.00 | 0.00 | | | 251 | |
| 270 | 8.37 | 8.34 | 33.989 | 26.429 | 164.1 | 0.756 | 2.75 | 41.7 | 34.4 | 2.00 | 27.4 | 0.00 | 0.00 | | | 271 | 205 |
| 300 ISL | 7.87 D | 7.84 | 34.016 D | 26.525 | 155.2 | 0.804 | 2.43 | 36.4 | 40.1 | 2.16 | 29.6 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.58 | 7.55 | 34.035 | 26.582 | 150.0 | 0.836 | 2.08 | 31.0 | 44.7 | 2.31 | 31.5 | 0.00 | 0.00 | | | 323 | 204 |
| 381 | 7.08 | 7.04 | 34.113 | 26.714 | 138.1 | 0.922 | 1.29 | 19.0 | 55.1 | 2.64 | 35.1 | 0.00 | 0.05 | | | 383 | 203 |
| 400 ISL | 6.97 D | 6.93 | 34.127 D | 26.740 | 135.8 | 0.948 | 1.13 | 16.6 | 58.1 | 2.71 | 35.9 | 0.00 | 0.04 | | | 402 | |
| 440 | 6.54 | 6.50 | 34.153 | 26.819 | 128.6 | 1.001 | 0.88 | 12.8 | 64.3 | 2.84 | 37.4 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 5.99 D | 5.95 | 34.183 D | 26.914 | 119.9 | 1.075 | 0.63 | 9.0 | 73.1 | 2.98 | 39.2 | 0.00 | 0.00 | | | 503 | |
| 515 | 5.91 | 5.87 | 34.189 | 26.929 | 118.6 | 1.093 | 0.57 | 8.2 | 75.3 | 3.01 | 39.6 | 0.00 | 0.00 | | | 518 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 30.9 N | 122 15.3 W | 31/10/10 | 1028 UTC | 4162 m | 190 02 kn | | | 1020.1 mb | 18.0 C | 16.0 C | | |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.24 | 18.24 | 33.274 | 23.893 | 400.3 | 0.000 | 5.48 | 101.6 | 2.5 | 0.24 | 0.0 | 0.00 | 0.07 | 0.10 | 0.02 | 0 | |
| 2 | 18.24 | 18.24 | 33.274 | 23.893 | 400.3 | 0.008 | 5.48 | 101.6 | 2.5 | 0.24 | 0.0 | 0.00 | 0.07 | 0.10 | 0.02 | 2 | 221 |
| 10 | 18.15 | 18.15 | 33.267 | 23.910 | 399.0 | 0.040 | 5.49 | 101.6 | 2.5 | 0.24 | 0.0 | 0.00 | 0.05 | 0.10 | 0.02 | 10 | 220 |
| 20 ISL | 18.12 D | 18.12 | 33.266 D | 23.917 | 398.7 | 0.080 | 5.48 | 101.3 | 2.5 | 0.24 | 0.0 | 0.00 | 0.04 | 0.10 | 0.03 | 20 | |
| 25 | 18.12 | 18.12 | 33.267 | 23.918 | 398.7 | 0.100 | 5.48 | 101.3 | 2.5 | 0.24 | 0.0 | 0.00 | 0.04 | 0.10 | 0.03 | 25 | 219 |
| 30 ISL | 18.12 D | 18.11 | 33.267 D | 23.918 | 398.9 | 0.120 | 5.48 | 101.3 | 2.5 | 0.25 | 0.0 | 0.00 | 0.05 | 0.10 | 0.03 | 30 | |
| 41 | 18.10 | 18.09 | 33.268 | 23.924 | 398.7 | 0.164 | 5.48 | 101.3 | 2.4 | 0.26 | 0.0 | 0.00 | 0.06 | 0.13 | 0.03 | 41 | 218 |
| 50 ISL | 17.07 D | 17.06 | 33.245 D | 24.154 | 377.0 | 0.199 | 5.71 | 103.5 | 2.3 | 0.25 | 0.0 | 0.00 | 0.00 | 0.18 | 0.07 | 50 | |
| 51 | 17.07 | 17.06 | 33.247 | 24.156 | 376.9 | 0.202 | 5.74 | 104.0 | 2.3 | 0.25 | 0.0 | 0.00 | 0.00 | 0.19 A | 0.07 A | 51 | 217 |
| 62 | 16.11 | 16.10 | 33.245 | 24.376 | 356.2 | 0.243 | 5.87 | 104.4 | 2.3 | 0.25 | 0.0 | 0.00 | 0.05 | 0.18 | 0.09 | 62 | 216 |
| 75 | 15.48 | 15.47 | 33.276 | 24.541 | 340.8 | 0.288 | 5.79 | 101.7 | 2.3 | 0.28 | 0.0 | 0.00 | 0.04 | 0.22 | 0.19 | 75 | 215 |
| 88 | 14.97 | 14.96 | 33.260 | 24.641 | 331.6 | 0.332 | 5.71 | 99.2 | 2.6 | 0.30 | 0.1 | 0.03 | 0.08 | 0.24 | 0.18 | 88 | 214 |
| 100 ISL | 13.89 D | 13.88 | 33.193 D | 24.817 | 315.0 | 0.370 | 5.65 | 96.0 | 2.7 | 0.30 | 0.1 | 0.03 | 0.06 | 0.19 | 0.19 | 100 | |
| 101 | 14.00 | 13.99 | 33.194 | 24.795 | 317.1 | 0.374 | 5.64 | 96.1 | 2.7 | 0.30 | 0.1 | 0.03 | 0.06 | 0.19 | 0.19 | 101 | 213 |
| 113 | 13.15 | 13.13 | 33.221 | 24.989 | 298.9 | 0.411 | 5.42 | 90.7 | 4.7 | 0.56 | 3.8 | 0.04 | 0.00 | 0.19 | 0.14 | 113 | 212 |
| 125 | 12.42 | 12.40 | 33.222 | 25.132 | 285.4 | 0.446 | 5.28 | 87.0 | 6.0 | 0.69 | 5.9 | 0.01 | 0.05 | 0.11 | 0.16 | 125 | 211 |
| 140 | 11.28 | 11.26 | 33.250 | 25.366 | 263.2 | 0.487 | 5.08 | 81.7 | 8.7 | 0.88 | 9.5 | 0.00 | 0.00 | 0.06 | 0.09 | 141 | 210 |
| 150 ISL | 10.89 D | 10.87 | 33.285 D | 25.463 | 254.1 | 0.513 | 4.85 | 77.4 | 11.3 | 1.04 | 12.3 | 0.00 | 0.00 | 0.04 | 0.06 | 151 | |
| 170 | 9.83 | 9.81 | 33.474 | 25.792 | 223.0 | 0.560 | 4.30 | 67.1 | 17.1 | 1.36 | 17.6 | 0.00 | 0.00 | 0.01 | 0.03 | 171 | 209 |
| 200 ISL | 9.14 D | 9.12 | 33.795 D | 26.156 | 188.9 | 0.622 | 3.57 | 55.0 | 24.8 | 1.68 | 23.0 | 0.00 | 0.00 | 0.00 | 0.01 | 201 | |
| 201 | 9.13 | 9.11 | 33.770 | 26.138 | 190.6 | 0.624 | 3.55 | 54.7 | 25.0 | 1.69 | 23.1 | 0.00 | 0.00 | 0.00 | 0.01 | 202 | 208 |
| 230 | 8.80 | 8.78 | 33.925 | 26.312 | 174.6 | 0.677 | 3.08 | 47.1 | 30.3 | 1.86 | 25.7 | 0.00 | 0.00 | 0.00 | 0.01 | 231 | 207 |
| 250 ISL | 8.53 D | 8.50 | 33.961 D | 26.382 | 168.2 | 0.711 | 2.75 | 41.8 | 33.6 | 1.98 | 27.2 | 0.00 | 0.00 | | | 251 | |
| 270 | 8.38 | 8.35 | 34.028 | 26.458 | 161.3 | 0.744 | 2.42 | 36.7 | 37.0 | 2.10 | 28.7 | 0.00 | 0.00 | | | 271 | 206 |
| 300 ISL | 7.93 D | 7.90 | 34.062 D | 26.552 | 152.7 | 0.791 | 1.97 | 29.6 | 42.9 | 2.29 | 31.1 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.768 | 7.736 | 34.093 | 26.600 | 148.4 | 0.823 | 1.70 | 25.4 | 47.1 | 2.42 | 32.7 | 0.00 | 0.00 | | | 323 | 204 |
| 321 | 7.77 | 7.74 | 34.091 | 26.599 | 148.6 | 0.823 | 1.64 | 24.5 | 46.9 | 2.43 | 32.7 | 0.00 | 0.00 | | | 323 | 205 |
| 380 | 7.01 | 6.97 | 34.121 | 26.730 | 136.5 | 0.907 | 1.20 | 17.6 | 57.1 | 2.65 | 35.6 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.75 D | 6.71 | 34.133 D | 26.775 | 132.4 | 0.934 | 1.05 | 15.3 | 60.6 | 2.72 | 36.5 | 0.00 | 0.00 | | | 402 | |
| 441 | 6.40 | 6.36 | 34.161 | 26.844 | 126.2 | 0.987 | 0.80 | 11.6 | 67.4 | 2.86 | 38.1 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.93 D | 5.89 | 34.206 D | 26.940 | 117.4 | 1.059 | 0.56 | 8.0 | 75.9 | 2.98 | 39.7 | 0.00 | 0.00 | | | 503 | |
| 517 | 5.86 | 5.82 | 34.219 | 26.959 | 115.8 | 1.079 | 0.49 | 7.0 | 78.4 | 3.02 | 40.1 | 0.00 | 0.00 | | | 520 | 201 |

A) FIRST FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 110.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 11.4 N | 122 55.1 W | 31/10/10 | 1723 UTC | 4113 m | 230 05 kn | 280 05 10 | 1 | 1022.2 mb | 19.8 C | 16.8 C | 49m | 3/8 | SC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.63 | 18.63 | 33.433 | 23.918 | 397.9 | 0.000 | 5.39 | 100.8 | 2.0 | 0.24 | 0.1 | 0.00 | 0.08 | 0.08 | 0.02 | 0 | |
| 2 | 18.63 | 18.63 | 33.433 | 23.918 | 397.9 | 0.008 | 5.39 | 100.8 | 2.0 | 0.24 | 0.1 | 0.00 | 0.08 | 0.08 | 0.02 | 2 | 224 |
| 3 A | 18.61 | 18.61 | 33.434 | 23.924 | 397.4 | 0.012 | 5.45 | 101.8 | 2.2 | 0.25 | 0.0 | 0.00 | 0.08 | 0.08 | 0.02 | 3 | 223 |
| 10 | 18.53 | 18.53 | 33.427 | 23.939 | 396.3 | 0.040 | 5.43 | 101.3 | 2.0 | 0.24 | 0.0 | 0.00 | 0.05 | 0.08 | 0.03 | 10 | 222 |
| 18 | 18.47 | 18.47 | 33.420 | 23.948 | 395.6 | 0.071 | 5.45 | 101.6 | 2.0 | 0.25 | 0.0 | 0.00 | 0.04 | 0.10 | 0.03 | 18 | 221 |
| 20 ISL | 18.47 D | 18.47 | 33.417 D | 23.946 | 395.9 | 0.079 | 5.45 | 101.6 | 2.0 | 0.25 | 0.0 | 0.00 | 0.04 | 0.10 | 0.03 | 20 | |
| 30 ISL | 18.45 D | 18.44 | 33.416 D | 23.951 | 395.8 | 0.119 | 5.45 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.05 | 0.10 | 0.04 | 30 | |
| 35 A | 18.45 | 18.44 | 33.417 | 23.952 | 395.9 | 0.139 | 5.45 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.05 | 0.10 | 0.04 | 35 | 220 |
| 46 | 18.44 | 18.43 | 33.415 | 23.953 | 396.1 | 0.182 | 5.45 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.07 | 0.15 | 0.07 | 46 | 219 |
| 50 ISL | 18.26 D | 18.25 | 33.387 D | 23.977 | 394.0 | 0.198 | 5.48 | 101.7 | 2.0 | 0.24 | 0.0 | 0.00 | 0.07 | 0.15 | 0.08 | 50 | |
| 59 | 17.76 | 17.75 | 33.336 | 24.060 | 386.4 | 0.233 | 5.55 | 102.0 | 2.1 | 0.25 | 0.0 | 0.00 | 0.05 | 0.16 | 0.12 | 59 | 218 |
| 69 A | 16.02 | 16.01 | 33.216 | 24.375 | 356.5 | 0.270 | 5.86 | 104.0 | 2.2 | 0.25 | 0.0 | 0.00 | 0.04 | 0.18 | 0.19 | 69 | 217 |
| 75 ISL | 15.52 D | 15.51 | 33.251 D | 24.513 | 343.4 | 0.291 | 5.84 | 102.6 | 2.4 | 0.25 | 0.0 | 0.00 | 0.02 | 0.20 | 0.25 | 75 | |
| 81 | 15.31 | 15.30 | 33.260 | 24.567 | 338.5 | 0.312 | 5.82 | 101.8 | 2.5 | 0.25 | 0.0 | 0.00 | 0.00 | 0.22 | 0.31 | 81 | 216 |
| 93 | 14.77 | 14.76 | 33.254 | 24.679 | 328.1 | 0.352 | 5.80 | 100.4 | 2.5 | 0.27 | 0.0 | 0.03 | 0.07 | 0.24 | 0.34 | 93 | 215 |
| 100 ISL | 14.64 D | 14.63 | 33.282 D | 24.729 | 323.5 | 0.375 | 5.76 | 99.4 | 2.6 | 0.28 | 0.1 | 0.08 | 0.03 | 0.20 | 0.26 | 100 | |
| 105 A | 14.55 | 14.53 | 33.283 | 24.749 | 321.8 | 0.391 | 5.73 | 98.7 | 2.7 | 0.28 | 0.1 | 0.12 | 0.00 | 0.16 | 0.19 | 105 | 214 |
| 114 | 14.19 | 14.17 | 33.364 | 24.888 | 308.8 | 0.419 | 5.65 | 96.7 | 2.9 | 0.29 | 0.5 | 0.22 | 0.05 | 0.10 | 0.15 | 114 | 213 |
| 124 | 13.526 | 13.509 | 33.374 | 25.032 | 295.2 | 0.449 | 5.48 | 92.5 | 3.7 | 0.39 | 2.1 | 0.04 | 0.00 | 0.08 | 0.13 | 124 | 212 |
| 125 ISL | 13.29 D | 13.27 | 33.359 D | 25.068 | 291.7 | 0.452 | 5.47 | 91.9 | 3.8 | 0.40 | 2.2 | 0.04 | 0.00 | 0.08 | 0.12 | 125 | |
| 134 A | 13.06 | 13.04 | 33.332 | 25.093 | 289.5 | 0.478 | 5.40 | 90.3 | 4.6 | 0.49 | 3.6 | 0.01 | 0.00 | 0.04 | 0.07 | 135 | 211 |
| 150 ISL | 11.21 D | 11.19 | 33.273 D | 25.397 | 260.5 | 0.522 | 5.14 | 82.6 | 7.7 | 0.79 | 8.3 | 0.00 | 0.00 | 0.01 | 0.03 | 151 | |
| 155 | 11.057 | 11.038 | 33.281 | 25.431 | 257.4 | 0.535 | 5.02 | 80.4 | 9.1 | 0.90 | 10.1 | 0.00 | 0.00 | 0.01 | 0.03 | 156 | 210 |
| 176 | 9.864 | 9.844 | 33.504 | 25.810 | 221.4 | 0.586 | 4.26 | 66.6 | 17.3 | 1.38 | 18.0 | 0.00 | 0.00 | 0.00 | 0.02 | 177 | 209 |
| 197 A | 9.32 | 9.30 | 33.755 | 26.096 | 194.6 | 0.629 | 3.68 | 56.9 | 23.2 | 1.62 | 21.9 | 0.00 | 0.00 | 0.00 | 0.02 | 198 | 208 |
| 200 ISL | 9.24 D | 9.22 | 33.783 D | 26.131 | 191.3 | 0.635 | 3.63 | 56.0 | 23.8 | 1.64 | 22.3 | 0.00 | 0.00 | | | 201 | |
| 214 | 9.07 | 9.05 | 33.848 | 26.209 | 184.1 | 0.661 | 3.42 | 52.6 | 26.3 | 1.74 | 23.8 | 0.00 | 0.00 | | | 215 | 207 |
| 230 | 8.75 | 8.73 | 33.935 | 26.328 | 173.1 | 0.690 | 3.09 | 47.2 | 30.2 | 1.86 | 25.7 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.38 D | 8.35 | 33.994 D | 26.431 | 163.5 | 0.724 | 2.81 | 42.6 | 34.1 | 1.98 | 27.4 | 0.00 | 0.00 | | | 251 | |
| 270 | 8.17 | 8.14 | 34.012 | 26.477 | 159.4 | 0.756 | 2.59 | 39.1 | 37.5 | 2.08 | 28.7 | 0.00 | 0.00 | | | 271 | 205 |
| 300 ISL | 7.70 D | 7.67 | 34.045 D | 26.572 | 150.6 | 0.802 | 2.19 | 32.7 | 43.2 | 2.25 | 31.0 | 0.00 | 0.00 | | | 302 | |
| 319 | 7.56 | 7.53 | 34.060 | 26.604 | 147.8 | 0.831 | 1.94 | 28.9 | 46.7 | 2.35 | 32.4 | 0.00 | 0.00 | | | 321 | 204 |
| 379 | 6.94 | 6.90 | 34.113 | 26.733 | 136.1 | 0.916 | 1.27 | 18.6 | 57.0 | 2.64 | 35.7 | 0.00 | 0.00 | | | 381 | 203 |
| 400 ISL | 6.79 D | 6.75 | 34.125 D | 26.763 | 133.5 | 0.944 | 1.12 | 16.4 | 60.4 | 2.71 | 36.5 | 0.00 | 0.00 | | | 402 | |
| 440 | 6.35 | 6.31 | 34.145 | 26.838 | 126.7 | 0.996 | 0.90 | 13.0 | 66.8 | 2.83 | 37.9 | 0.00 | 0.00 | | | 443 | 202 |
| 500 ISL | 5.86 D | 5.82 | 34.185 D | 26.932 | 118.1 | 1.070 | 0.65 | 9.3 | 75.8 | 2.98 | 39.6 | 0.00 | 0.00 | | | 503 | |
| 516 | 5.74 | 5.70 | 34.198 | 26.957 | 115.8 | 1.088 | 0.58 | 8.3 | 78.2 | 3.02 | 40.1 | 0.00 | 0.00 | | | 519 | 201 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 120.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 50.5 N | 123 35.2 W | 01/11/10 | 0032 UTC | 4068 m | 310 06 kn | 310 05 07 | 1 | 1021.2 mb | 18.3 C | 16.2 C | 26m | 4/8 | SC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 19.39 | 19.39 | 33.515 | 23.788 | 410.2 | 0.000 | 5.38 | 102.1 | 2.1 | 0.23 | 0.0 | 0.00 | 0.00 | 0.07 | 0.02 | 0 | |
| 2 | 19.39 | 19.39 | 33.515 | 23.789 | 410.3 | 0.008 | 5.38 | 102.1 | 2.1 | 0.23 | 0.0 | 0.00 | 0.00 | 0.07 | 0.02 | 2 | 220 |
| 10 ISL | 19.30 D | 19.30 | 33.496 D | 23.797 | 409.7 | 0.041 | 5.40 | 102.3 | 2.4 | 0.23 | 0.0 | 0.00 | 0.00 | 0.07 | 0.01 | 10 | |
| 11 | 19.29 | 19.29 | 33.488 | 23.794 | 410.1 | 0.045 | 5.40 | 102.2 | 2.5 | 0.23 | 0.0 | 0.00 | 0.00 | 0.07 | 0.01 | 11 | 219 |
| 20 ISL | 19.09 D | 19.09 | 33.476 D | 23.836 | 406.4 | 0.082 | 5.39 | 101.7 | 2.4 | 0.23 | 0.0 | 0.00 | 0.00 | 0.08 | 0.01 | 20 | |
| 25 | 19.14 | 19.14 | 33.500 | 23.842 | 406.0 | 0.102 | 5.39 | 101.8 | 2.3 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.01 | 25 | 218 |
| 30 ISL | 19.31 D | 19.30 | 33.569 D | 23.852 | 405.3 | 0.122 | 5.38 | 101.9 | 2.3 | 0.23 | 0.0 | 0.00 | 0.00 | 0.09 | 0.01 | 30 | |
| 41 | 19.33 | 19.32 | 33.584 | 23.858 | 405.1 | 0.167 | 5.37 | 101.8 | 2.2 | 0.22 | 0.0 | 0.00 | 0.00 | 0.09 | 0.01 | 41 | 217 |
| 50 | 19.31 | 19.30 | 33.587 | 23.866 | 404.7 | 0.203 | 5.37 | 101.8 | 2.3 | 0.22 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 50 | 216 |
| 62 | 17.83 | 17.82 | 33.393 | 24.087 | 383.9 | 0.251 | 5.66 | 104.2 | 2.3 | 0.22 | 0.0 | 0.00 | 0.00 | 0.15 | 0.01 | 62 | 215 |
| 75 ISL | 16.73 D | 16.72 | 33.342 D | 24.309 | 363.1 | 0.299 | 5.84 | 105.2 | 2.2 | 0.22 | 0.0 | 0.00 | 0.00 | 0.16 | 0.05 | 75 | |
| 76 | 16.58 | 16.57 | 33.344 | 24.345 | 359.6 | 0.303 | 5.85 | 105.0 | 2.2 | 0.22 | 0.0 | 0.00 | 0.00 | 0.16 | 0.05 | 76 | 214 |
| 88 | 16.06 | 16.05 | 33.404 | 24.511 | 344.2 | 0.345 | 5.82 | 103.5 | 2.4 | 0.21 | 0.0 | 0.00 | 0.00 | 0.24 | 0.05 | 88 | 213 |
| 100 | 15.64 | 15.62 | 33.408 | 24.608 | 335.2 | 0.386 | 5.73 | 101.0 | 2.6 | 0.22 | 0.0 | 0.00 | 0.00 | 0.23 | 0.15 | 100 | 212 |
| 112 | 15.16 | 15.14 | 33.380 | 24.693 | 327.4 | 0.426 | 5.69 | 99.3 | 2.6 | 0.26 | 0.1 | 0.03 | 0.00 | 0.26 | 0.23 | 112 | 211 |
| 125 | 13.76 | 13.74 | 33.286 | 24.917 | 306.2 | 0.467 | 5.51 | 93.4 | 3.6 | 0.44 | 2.3 | 0.06 | 0.00 | 0.22 | 0.22 | 125 | 210 |
| 140 | 12.10 | 12.08 | 33.257 | 25.221 | 277.3 | 0.511 | 5.24 | 85.8 | 6.3 | 0.72 | 6.9 | 0.01 | 0.00 | 0.10 | 0.10 | 141 | 209 |
| 150 ISL | 11.25 D | 11.23 | 33.294 D | 25.406 | 259.7 | 0.537 | 5.01 | 80.6 | 8.9 | 0.92 | 10.1 | 0.01 | 0.00 | 0.06 | 0.08 | 151 | |
| 170 | 10.20 | 10.18 | 33.376 | 25.654 | 236.3 | 0.587 | 4.51 | 70.9 | 14.5 | 1.27 | 15.9 | 0.00 | 0.00 | 0.02 | 0.03 | 171 | 208 |
| 200 ISL | 9.40 D | 9.38 | 33.669 D | 26.016 | 202.3 | 0.653 | 3.81 | 59.0 | 21.8 | 1.58 | 21.3 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | |
| 201 | 9.42 | 9.40 | 33.660 | 26.006 | 203.3 | 0.655 | 3.79 | 58.7 | 22.0 | 1.59 | 21.4 | 0.00 | 0.00 | 0.00 | 0.02 | 202 | 207 |
| 230 | 8.95 | 8.93 | 33.855 | 26.234 | 182.1 | 0.711 | 3.34 | 51.2 | 27.2 | 1.75 | 24.3 | 0.00 | 0.00 | | | 231 | 206 |
| 250 ISL | 8.53 D | 8.50 | 33.971 D | 26.390 | 167.4 | 0.746 | 2.91 | 44.3 | 32.5 | 1.92 | 26.8 | 0.00 | 0.00 | | | 251 | |
| 270 | 8.12 | 8.09 | 34.012 | 26.484 | 158.7 | 0.778 | 2.49 | 37.5 | 37.8 | 2.10 | 29.2 | 0.00 | 0.00 | | | 271 | 205 |
| 300 ISL | 7.76 D | 7.73 | 34.039 D | 26.559 | 151.9 | 0.825 | 2.16 | 32.3 | 43.3 | 2.26 | 31.3 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.52 | 7.49 | 34.054 | 26.605 | 147.7 | 0.855 | 2.00 | 29.7 | 46.4 | 2.34 | 32.3 | 0.00 | 0.00 | | | 322 | 204 |
| 380 | 6.95 | 6.91 | 34.098 | 26.720 | 137.4 | 0.940 | 1.42 | 20.8 | 56.0 | 2.60 | 35.1 | 0.00 | 0.00 | | | 382 | 203 |
| 400 ISL | 6.67 D | 6.63 | 34.102 D | 26.761 | 133.6 | 0.968 | 1.26 | 18.4 | 59.2 | 2.68 | 36.0 | 0.00 | 0.00 | | | 402 | |
| 441 | 6.40 | 6.36 | 34.141 | 26.828 | 127.6 | 1.021 | 0.96 | 13.9 | 65.9 | 2.82 | 37.7 | 0.00 | 0.00 | | | 444 | 202 |
| 500 ISL | 5.84 D | 5.80 | 34.196 D | 26.943 | 117.0 | 1.093 | 0.63 | 9.0 | 76.3 | 2.99 | 39.7 | 0.00 | 0.00 | | | 503 | |
| 517 | 5.75 | 5.71 | 34.208 | 26.964 | 115.2 | 1.113 | 0.53 | 7.6 | 79.3 | 3.04 | 40.3 | 0.00 | 0.00 | | | 520 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 57.2 N | 117 16.7 W | 28/10/10 | 1954 UTC | 15 m | 040 01 kn | 140 01 07 | 1 | 1016.6 mb | 21.0 C | 17.1 C | | 2/8 | CC |

| DEPTH m | TEMP DEG C | POT TEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | NH4 uM/l | CHL-A ug/l | PHAEO ug/l | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 ISL | 18.11 | 18.11 | 33.313 | 23.955 | 394.4 | 0.000 | 6.07 | 112.3 | 2.1 | 0.19 | 0.0 | 0.01 | 0.06 | 4.02 | 0.82 | 0 | |
| 1 | 18.11 | 18.11 | 33.313 | 23.955 | 394.4 | 0.004 | 6.07 | 112.3 | 2.1 | 0.19 | 0.0 | 0.01 | 0.06 | 4.02 | 0.82 | 1 | 204 |
| 5 | 18.01 | 18.01 | 33.329 | 23.991 | 391.0 | 0.020 | 6.03 | D111.3 D | 2.5 | 0.24 | 0.1 | 0.05 | 0.08 | 4.55 | 1.26 | 5 | 203 |
| 10 | 17.52 | 17.52 | 33.336 | 24.115 | 379.4 | 0.039 | 5.72 | 104.6 | 3.0 | 0.31 | 0.3 | 0.08 | 0.11 | 4.73 | 1.24 | 10 | 202 |
| 15 | 16.98 | 16.98 | 33.352 | 24.256 | 366.1 | 0.058 | 5.53 | 100.1 | 3.7 | 0.40 | 1.1 | 0.15 | 0.36 | 4.05 | 1.00 | 15 | 201 |

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 80.0 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 33 49.0 N | 121 51.4 W | 10/11/10 | 1738 UTC | 11 m | 1150 - 1740 PST | 1151 PST | 1740 PST | 403.8 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 14.62 | 33.491 D | 24.891 | 5.74 D | 99.2 D | 2.2 | 0.46 | 3.5 | 0.15 | 1.24 | 0.47 | 76. A | 18.6 | 18.7 | 18.6 | 0.13 |
| 8 | 14.62 | 33.491 | 24.892 | 5.79 | 100.1 | 2.1 | 0.47 | 3.5 | 0.15 | 1.28 | 0.48 | 33. | 22.9 | 24.0 | 23.5 | 0.12 |
| 16 | 14.60 | 33.491 | 24.896 | 5.73 | 99.0 | 2.0 | 0.46 | 3.5 | 0.15 | 1.30 | 0.48 | 11. | 13.0 | 13.3 | 13.1 | 0.11 |
| 23 | 14.53 | 33.491 | 24.911 | 5.68 | 98.0 | 2.4 | 0.49 | 3.9 | 0.16 | 1.16 | 0.45 | 4.0 | 5.5 | 6.4 | 5.9 | 0.10 |
| 30 | 11.22 | 33.442 | 25.524 | 4.16 | 66.9 | 14.4 | 1.43 | 17.8 | 0.15 | 0.23 | 0.23 | 1.5 | 0.57 | 0.53 | 0.55 | 0.05 |
| 37 | 10.31 | 33.475 | 25.710 | 3.99 | 63.0 | 18.3 | 1.58 | 20.5 | 0.07 | 0.10 | 0.12 | | | | | |
| 45 | 10.04 | 33.586 | 25.842 | 3.50 | 54.9 | 21.2 | 1.72 | 22.6 | 0.05 | 0.06 | 0.10 | 0.19 | 0.11 | 0.07 | 0.09 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 80.0 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 32 48.6 N | 123 55.2 W | 11/11/10 | 1810 UTC | 17 m | 1200 - 1740 PST | 1200 PST | 1740 PST | 164.6 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 16.27 | 32.774 | 23.976 | 5.78 | 102.8 | 0.9 | 0.27 | 0.0 | 0.00 | 0.37 | 0.17 | 83. A | 0.64 | 0.69 | 0.67 | 0.05 |
| 12 | 16.26 | 32.778 | 23.982 | 5.75 | 102.3 | 0.9 | 0.27 | 0.0 | 0.00 | 0.37 | 0.16 | 34. | 5.8 | 5.3 | 5.6 | 0.05 |
| 26 | 16.26 | 32.777 | 23.981 | 5.75 | 102.3 | 0.9 | 0.28 | 0.0 | 0.00 | 0.36 | 0.17 | 9.6 | 4.2 | 3.9 | 4.1 | 0.03 |
| 36 | 16.23 | 32.782 | 23.992 | 5.80 | 103.1 | 0.9 | 0.27 | 0.0 | 0.00 | 0.38 | 0.17 | 3.9 | 2.3 | 2.2 | 2.3 | 0.04 |
| 47 | 15.89 | 32.809 | 24.090 | 5.84 | 103.1 | 0.9 | 0.29 | 0.0 | 0.00 | 0.47 | 0.24 | 1.4 | 1.3 | 1.2 | 1.2 | 0.03 |
| 58 | 14.38 | 32.872 | 24.466 | 5.99 | 102.6 | 2.1 | 0.35 | 0.5 | 0.03 | 0.44 | 0.35 | | | | | |
| 67 | 12.87 | 32.948 | 24.831 | 5.82 | 96.7 | 2.9 | 0.42 | 1.4 | 0.08 | 0.18 | 0.22 | 0.24 | 0.07 | 0.09 | 0.08 | 0.01 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 42.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 34 10.7 N | 119 31.2 W | 09/11/10 | 1608 UTC | 12 m | 1142 - 1730 PST | 1142 PST | 1727 PST | 680.4 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 16.56 | 33.480 | 24.452 | 5.85 | 105.1 | 0.0 | 0.23 | 0.0 | 0.01 | 1.56 | 0.46 | 77. A | 12.5 | 12.4 | 12.4 | 0.12 |
| 8 | 16.56 | 33.482 | 24.453 | 5.86 | 105.3 | 0.0 | 0.23 | 0.0 | 0.01 | 1.54 | 0.41 | 36. | 29.4 | 29.6 | 29.5 | 0.10 |
| 17 | 16.21 | 33.475 | 24.529 | 5.80 | 103.5 | 0.8 | 0.33 | 0.7 | 0.02 | 2.55 | 0.59 | 11. | 28.4 | 28.6 | 28.5 | 0.15 |
| 25 | 13.15 | 33.470 | 25.179 | 4.74 | 79.5 | 8.5 | 1.01 | 9.3 | 0.21 | 3.11 | 1.00 | 4.1 | 13.6 | 14.0 | 13.8 | 0.11 |
| 33 | 12.26 | 33.431 | 25.323 | 4.56 | 75.0 | 9.9 | 1.13 | 12.0 | 0.28 | 1.31 | 0.59 | 1.5 | 4.1 | 3.6 | 3.8 | 0.06 |
| 40 | 11.49 | 33.384 | 25.430 | 4.40 | 71.2 | 11.8 | 1.27 | 14.3 | 0.17 | 0.57 | 0.28 | | | | | |
| 48 | 11.17 | 33.414 | 25.512 | 4.20 | 67.5 | 13.7 | 1.36 | 15.9 | 0.12 | 0.36 | 0.21 | 0.22 | 0.10 | 0.09 | 0.10 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 55.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 33 44.3 N | 120 25.2 W | 08/11/10 | 1912 UTC | 5 m | 1213 - 1725 PST | 1145 PST | 1725 PST | 426.0 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 15.05 | 33.484 | 24.793 | 5.99 | 104.4 | 0.9 | 0.38 | 1.7 | 0.06 | 3.52 | 1.11 | 54. A | 29.4 | 30.2 | 29.8 | 0.25 |
| 3 | 15.05 | 33.483 | 24.793 | 5.95 | 103.7 | 0.8 | 0.38 | 1.8 | 0.06 | 3.42 | 1.21 | 40. | 45.5 | 41.3 | 43.4 | 0.19 |
| 8 | 15.00 | 33.484 | 24.804 | 5.93 | 103.3 | 0.9 | 0.43 | 1.9 | 0.06 | 3.47 | 1.13 | 8.6 | 31.0 | 32.0 | 31.5 | 0.19 |
| 11 | 14.89 | 33.488 | 24.831 | 5.90 | 102.5 | 1.2 | 0.43 | 2.3 | 0.06 | 3.86 | 1.13 | 3.4 | 17.9 | 15.1 | 16.5 | 0.18 |
| 15 | 14.26 | 33.489 | 24.966 | 5.56 | 95.4 | 3.4 | 0.62 | 4.8 | 0.09 | 4.18 | 1.29 | 1.00 | 6.8 | 7.5 | 7.2 | 0.14 |
| 21 | 12.95 | 33.515 | 25.254 | 4.79 | 80.0 | 8.8 | 1.06 | 10.6 | 0.17 | 4.62 | 1.40 | 0.16 | 0.50 | 0.56 | 0.53 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 83.3 90.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 32 35.1 N | 122 48.4 W | 07/11/10 | 1915 UTC | 25 m | 1213 - 1734 PST | 1155 PST | 1734 PST | 196.5 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17.09 | 32.819 | 23.821 | 5.67 | 102.5 | 1.9 | 0.28 | 0.1 | 0.00 | 0.20 | 0.07 | 94. A | 3.7 | 3.6 | 3.6 | 0.06 |
| 9 | 17.08 | 32.817 | 23.822 | 5.65 | 102.1 | 1.8 | 0.28 | 0.0 | 0.00 | 0.20 | 0.06 | | | | | |
| 17 | 16.99 | 32.818 | 23.844 | 5.69 | 102.7 | 1.8 | 0.27 | 0.0 | 0.00 | 0.20 | 0.07 | 35. | 3.6 | 3.8 | 3.7 | 0.08 |
| 26 | 16.45 | 32.857 | 23.999 | 5.80 | 103.6 | 1.9 | 0.29 | 0.0 | 0.00 | 0.31 | 0.15 | | | | | |
| 35 | 15.62 | 32.929 | 24.242 | 5.97 | 104.9 | 1.9 | 0.28 | 0.0 | 0.00 | 0.33 | 0.23 | 12. | 3.1 | 3.0 | 3.0 | 0.08 |
| 45 | 14.63 | 32.947 | 24.471 | 6.02 | 103.7 | 2.2 | 0.29 | 0.0 | 0.00 | 0.40 | 0.37 | | | | | |
| 53 | 13.87 | 32.998 | 24.669 | 5.92 | 100.4 | 2.9 | 0.41 | 1.2 | 0.14 | 0.32 | 0.33 | 3.9 | 1.8 | 2.1 | 2.0 | 0.03 |
| 60 | 13.51 | 33.001 | 24.745 | 5.86 | 98.7 | 2.9 | 0.40 | 1.0 | 0.21 | 0.26 | 0.29 | | | | | |
| 69 | 13.00 | 32.972 | 24.825 | 5.82 | 97.0 | 3.0 | 0.41 | 1.2 | 0.23 | 0.20 | 0.24 | 1.4 | 0.53 | 0.55 | 0.54 | 0.01 |
| 84 | 12.45 | 32.995 | 24.950 | 5.69 | 93.7 | 3.6 | 0.45 | 2.2 | 0.05 | 0.12 | 0.16 | | | | | |
| 100 | 11.14 | 32.988 | 25.187 | 5.55 | 88.9 | 6.9 | 0.75 | 7.1 | 0.01 | 0.06 | 0.09 | 0.22 | 0.03 | 0.04 | 0.03 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 35.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 33 50.2 N | 118 39.2 W | 04/11/10 | 1809 UTC | 19 m | 1138 - 1728 PST | 1138 PST | 1728 PST | 696.3 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 18.12 | 33.496 | 24.092 | 5.77 | 106.9 | 1.9 | 0.21 | 0.0 | 0.00 | 0.45 | 0.10 | 85. A | 16.2 | 16.1 | 16.2 | 0.17 |
| 13 | 17.79 | 33.496 | 24.173 | 5.78 | 106.4 | 1.8 | 0.21 | 0.0 | 0.00 | 0.31 | 0.10 | 35. | 12.3 | 11.3 | 11.8 | 0.17 |
| 20 | 17.72 | 33.497 | 24.191 | 5.79 | 106.4 | 1.7 | 0.21 | 0.0 | 0.00 | 0.34 | 0.13 | | | | | |
| 27 | 15.38 | 33.431 | 24.681 | 5.92 | 103.9 | 2.9 | 0.39 | 1.1 | 0.07 | 1.50 | 0.71 | 11. | 28.9 | 27.3 | 28.1 | 0.12 |
| 34 | 13.34 | 33.347 | 25.046 | 5.19 | 87.3 | 5.8 | 0.83 | 8.0 | 0.43 | 0.70 | 0.40 | | | | | |
| 40 | 12.19 | 33.325 | 25.254 | 4.85 | 79.6 | 8.6 | 1.03 | 11.3 | 0.25 | 0.47 | 0.27 | 3.9 | 2.5 | 3.0 | 2.7 | 0.03 |
| 52 | 11.09 | 33.389 | 25.507 | 4.34 | 69.6 | 13.4 | 1.32 | 16.1 | 0.06 | 0.25 | 0.13 | 1.5 | 0.78 | 0.72 | 0.75 | 0.01 |
| 64 | 10.71 | 33.473 | 25.640 | 3.90 | 62.1 | 16.6 | 1.51 | 18.6 | 0.03 | 0.14 | 0.11 | | | | | |
| 76 | 10.39 | 33.606 | 25.799 | 3.25 | 51.4 | 21.0 | 1.73 | 21.8 | 0.03 | 0.05 | 0.12 | 0.22 | 0.05 | 0.06 | 0.06 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 60.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 32 59.4 N | 120 21.1 W | 05/11/10 | 1606 UTC | 22 m | 1145 - 1739 PST | 1145 PST | 1739 PST | 233.8 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 16.54 | 33.107 | 24.170 | 5.75 | 103.0 | 1.7 | 0.26 | 0.0 | 0.00 | 0.25 | 0.08 | 87. A | 4.5 | 4.6 | 4.6 | 0.04 |
| 8 | 16.54 | 33.106 | 24.169 | 5.75 | 103.0 | 1.7 | 0.26 | 0.0 | 0.00 | 0.25 | 0.08 | | | | | |
| 15 | 16.52 | 33.114 | 24.180 | 5.77 | 103.4 | 1.7 | 0.26 | 0.0 | 0.00 | 0.27 | 0.08 | 35. | 5.4 | 5.9 | 5.7 | 0.07 |
| 23 | 15.81 | 33.185 | 24.396 | 5.90 | 104.2 | 1.7 | 0.27 | 0.3 | 0.02 | 0.35 | 0.13 | | | | | |
| 30 | 15.22 | 33.207 | 24.544 | 5.85 | 102.2 | 1.7 | 0.31 | 0.7 | 0.07 | 0.40 | 0.22 | 12. | 5.1 | 5.3 | 5.2 | 0.02 |
| 38 | 14.13 | 33.116 | 24.706 | 5.76 | 98.3 | 2.2 | 0.41 | 1.2 | 0.27 | 0.35 | 0.25 | | | | | |
| 46 | 12.53 | 32.941 | 24.891 | 5.65 | 93.2 | 3.7 | 0.52 | 3.0 | 0.08 | 0.32 | 0.24 | 4.0 | 1.4 | 1.6 | 1.5 | 0.01 |
| 53 | 12.30 | 32.934 | 24.930 | 5.65 | 92.7 | 3.6 | 0.55 | 3.3 | 0.06 | 0.27 | 0.18 | | | | | |
| 60 | 12.02 | 32.937 | 24.985 | 5.59 | 91.2 | 4.2 | 0.59 | 4.1 | 0.05 | 0.23 | 0.15 | 1.5 | 0.57 | 0.51 | 0.54 | 0.01 |
| 74 | 11.16 | 33.052 | 25.232 | 5.22 | 83.7 | 8.6 | 0.93 | 10.0 | 0.02 | 0.07 | 0.12 | | | | | |
| 88 | 10.03 | 33.227 | 25.565 | 4.70 | 73.6 | 14.1 | 1.27 | 15.6 | 0.01 | 0.02 | 0.06 | 0.22 | 0.04 | 0.03 | 0.03 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 86.7 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 31 39.5 N | 123 4.3 W | 06/11/10 | 1736 UTC | 35 m | 1156 - 1745 PST | 1156 PST | 1747 PST | 166.8 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 18.32 | 33.296 | 23.890 | 5.47 | 101.6 | 2.2 | 0.25 | 0.0 | 0.00 | 0.12 | 0.03 | 92. A | 1.5 | 1.5 | 1.5 | 0.04 |
| 14 | 18.30 | 33.296 | 23.896 | 5.49 | 101.9 | 2.2 | 0.26 | 0.0 | 0.00 | 0.11 | 0.03 | | | | | |
| 24 | 18.29 | 33.305 | 23.905 | 5.48 | 101.7 | 2.1 | 0.24 | 0.0 | 0.00 | 0.11 | 0.03 | 35. | 1.9 | 2.1 | 2.0 | 0.04 |
| 33 | 18.30 | 33.295 | 23.896 | 5.50 | 102.1 | 2.0 | 0.24 | 0.0 | 0.00 | 0.11 | 0.03 | | | | | |
| 42 | 18.28 | 33.296 | 23.902 | 5.48 | 101.7 | 2.0 | 0.25 | 0.0 | 0.00 | 0.13 | 0.04 | | | | | |
| 50 | 17.41 | 33.252 | 24.079 | 5.77 | 105.2 | 2.2 | 0.24 | 0.0 | 0.00 | 0.18 | 0.07 | 11. | 1.7 | 2.0 | 1.8 | 0.02 |
| 62 | 16.80 | 33.409 | 24.344 | 5.83 | 105.2 | 2.2 | 0.20 | 0.0 | 0.00 | 0.19 | 0.09 | | | | | |
| 74 | 15.80 | 33.370 | 24.542 | 5.87 | 103.8 | 2.3 | 0.22 | 0.0 | 0.00 | 0.22 | 0.14 | 3.9 | 1.1 | 1.0 | 1.1 | 0.01 |
| 86 | 15.33 | 33.397 | 24.668 | 5.79 | 101.4 | 2.4 | 0.21 | 0.0 | 0.00 | 0.21 | 0.16 | | | | | |
| 96 | 14.58 | 33.336 | 24.783 | 5.75 | 99.2 | 2.5 | 0.26 | 0.1 | 0.05 | 0.21 | 0.19 | 1.5 | 0.83 | 0.82 | 0.82 | 0.00 |
| 111 | 12.91 | 33.193 | 25.015 | 5.39 | 89.7 | 4.5 | 0.60 | 4.5 | 0.04 | 0.16 | 0.25 | | | | | |
| 126 | 11.62 | 33.214 | 25.276 | 5.18 | 83.9 | 7.4 | 0.82 | 8.4 | 0.01 | 0.09 | 0.13 | | | | | |
| 140 | 10.75 | 33.266 | 25.473 | 4.91 | 78.1 | 10.5 | 1.02 | 11.9 | 0.00 | 0.05 | 0.07 | 0.22 | 0.04 | 0.13 | 0.09 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 37.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 33 11.1 N | 118 22.8 W | 03/11/10 | 1815 UTC | 17 m | 1135 - 1725 PST | 1137 PST | 1724 PST | 729.9 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 17.62 | 33.497 | 24.214 | 5.76 | 105.7 | 1.5 | 0.22 | 0.1 | 0.02 | 0.56 | 0.23 | 83. A | 22.6 | 23.3 | 23.0 | 0.19 |
| 12 | 16.92 | 33.497 | 24.381 | 5.72 | 103.5 | 1.8 | 0.27 | 0.6 | 0.05 | 0.83 | 0.36 | 34. | 31.1 | 33.5 | 32.3 | 0.15 |
| 24 | 14.25 | 33.376 | 24.881 | 5.30 | 90.9 | 5.0 | 0.67 | 5.8 | 0.32 | 0.81 | 0.54 | 11. | 13.2 | 12.5 | 12.9 | 0.12 |
| 36 | 12.32 | 33.363 | 25.259 | 4.66 | 76.7 | 9.7 | 1.08 | 11.9 | 0.30 | 0.47 | 0.38 | 3.9 | 3.0 | 3.7 | 3.4 | 0.06 |
| 47 | 11.98 | 33.390 | 25.344 | 4.47 | 73.1 | 11.2 | 1.19 | 13.5 | 0.23 | 0.31 | 0.32 | 1.4 | 1.2 | 1.2 | 1.2 | 0.03 |
| 58 | 11.46 | 33.426 | 25.469 | 4.15 | 67.1 | 13.6 | 1.34 | 15.9 | 0.13 | 0.17 | 0.19 | | | | | |
| 68 | 10.81 | 33.553 | 25.684 | 3.53 | 56.3 | 18.2 | 1.59 | 19.6 | 0.04 | 0.07 | 0.14 | 0.22 | 0.04 | 0.05 | 0.05 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 32 4.8 N | 120 38.2 W | 02/11/10 | 1933 UTC | 19 m | 1240 - 1732 PST | 1146 PST | 1726 PST | 200.8 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 16.55 | 33.161 | 24.209 | 5.83 | 104.5 | 1.6 | 0.27 | 0.1 | 0.01 | 0.24 | 0.08 | 85. A | 3.7 | 3.8 | 3.7 | 0.05 |
| 13 | 16.44 | 33.161 | 24.235 | 5.79 | 103.6 | 1.9 | 0.27 | 0.1 | 0.01 | 0.26 | 0.11 | 35. | 5.4 | 5.3 | 5.3 | 0.07 |
| 20 | 16.34 | 33.181 | 24.273 | 5.80 | 103.6 | 1.6 | 0.27 | 0.2 | 0.01 | 0.31 | 0.13 | | | | | |
| 27 | 16.09 | 33.220 | 24.360 | 5.84 | 103.8 | 1.4 | 0.28 | 0.3 | 0.02 | 0.38 | 0.17 | 11. | 4.3 | 4.1 | 4.2 | 0.05 |
| 34 | 16.11 | 33.292 | 24.411 | 5.81 | 103.3 | 1.4 | 0.28 | 0.5 | 0.04 | 0.39 | 0.22 | | | | | |
| 41 | 15.43 | 33.201 | 24.494 | 5.89 | 103.3 | 1.8 | 0.33 | 0.6 | 0.07 | 0.42 | 0.24 | 3.6 | 2.4 | 2.5 | 2.4 | 0.04 |
| 52 | 13.47 | 33.065 | 24.802 | 5.82 | 98.0 | 2.5 | 0.43 | 1.4 | 0.29 | 0.32 | 0.35 | 1.5 | 0.99 | 1.0 | 1.0 | 0.02 |
| 65 | 11.79 | 32.931 | 25.024 | 5.73 | 93.0 | 4.1 | 0.53 | 3.2 | 0.05 | 0.14 | 0.18 | | | | | |
| 76 | 11.00 | 32.956 | 25.186 | 5.51 | 88.0 | 6.4 | 0.73 | 6.6 | 0.02 | 0.08 | 0.11 | 0.22 | 0.03 | 0.04 | 0.04 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 90.0 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 31 4.8 N | 122 40.2 W | 01/11/10 | 1946 UTC | 37 m | 1245 - 1742 PST | 1154 PST | 1741 PST | 102.4 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 18.35 | 33.346 | 23.921 | 5.46 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.08 | 0.02 | 92. A | 0.91 | 0.95 | 0.93 | 0.05 |
| 14 | 18.36 | 33.348 | 23.920 | 5.47 | 101.7 | 1.9 | 0.27 | 0.0 | 0.00 | 0.08 | 0.01 | | | | | |
| 25 | 18.34 | 33.359 | 23.934 | 5.49 | 102.0 | 1.8 | 0.24 | 0.0 | 0.00 | 0.09 | 0.01 | 35. | 1.1 | 1.3 | 1.2 | 0.06 |
| 34 | 18.32 | 33.368 | 23.947 | 5.47 | 101.6 | 1.9 | 0.25 | 0.0 | 0.00 | 0.09 | 0.01 | | | | | |
| 43 | 18.21 | 33.326 | 23.942 | 5.48 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.11 | 0.02 | | | | | |
| 53 | 18.27 | 33.354 | 23.949 | 5.47 | 101.5 | 2.0 | 0.23 | 0.0 | 0.00 | 0.11 | 0.01 | 11. | 0.76 | 0.80 | 0.78 | 0.06 |
| 61 | 18.27 | 33.360 | 23.954 | 5.48 | 101.7 | 2.0 | 0.24 | 0.0 | 0.00 | 0.13 | 0.03 | | | | | |
| 71 | 17.62 | 33.308 | 24.073 | 5.60 | 102.6 | 2.0 | 0.23 | 0.0 | 0.00 | 0.17 | 0.05 | | | | | |
| 78 | 16.43 | 33.246 | 24.305 | 5.80 | 103.8 | 2.0 | 0.24 | 0.0 | 0.00 | 0.17 | 0.09 | 3.9 | 0.65 | 0.74 | 0.70 | 0.04 |
| 91 | 15.80 | 33.308 | 24.495 | 5.82 | 102.9 | 1.9 | 0.23 | 0.0 | 0.00 | 0.18 | 0.18 | | | | | |
| 100 | 15.74 | 33.434 | 24.606 | 5.67 | 100.2 | 2.1 | 0.27 | 0.0 | 0.02 | 0.19 | 0.22 | 1.6 | 0.61 | 0.55 | 0.58 | 0.01 |
| 117 | 14.25 | 33.371 | 24.880 | 5.54 | 94.9 | 3.0 | 0.34 | 1.0 | 0.16 | 0.16 | 0.24 | | | | | |
| 133 | 13.06 | 33.365 | 25.119 | 5.27 | 88.1 | 4.9 | 0.55 | 4.4 | 0.02 | 0.09 | 0.16 | | | | | |
| 150 | 12.28 | 33.334 | 25.247 | 5.21 | 85.7 | 6.2 | 0.68 | 6.5 | 0.02 | 0.07 | 0.14 | 0.20 | 0.05 | 0.05 | 0.05 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 26.7

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 32 57.0 N | 117 18.3 W | 28/10/10 | 1818 UTC | 20 m | 1137 - 1730 PST | 1133 PST | 1727 PST | 985.5 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 18.57 | 33.476 | 23.966 | 5.65 | 105.5 | 1.8 | 0.21 | 0.0 | 0.00 | 0.34 | 0.13 | 86. A | 12.2 | 12.1 | 12.1 | 0.25 |
| 8 | 18.00 | 33.483 | 24.112 | 5.73 | 105.9 | 1.8 | 0.24 | 0.0 | 0.00 | 0.33 | 0.15 | | | | | |
| 14 | 14.95 | 33.362 | 24.721 | 6.21 | 108.0 | 3.1 | 0.37 | 0.7 | 0.05 | 1.97 | 0.76 | 34. | 54.7 | 57.6 | 56.2 | 0.27 |
| 21 | 13.21 | 33.310 | 25.043 | 5.42 | 90.9 | 6.0 | 0.81 | 6.5 | 0.38 | 1.05 | 0.56 | | | | | |
| 28 | 12.54 | 33.323 | 25.185 | 5.14 | 85.0 | 7.1 | 0.93 | 8.7 | 0.48 | 0.71 | 0.51 | 12. | 10.4 | 9.8 | 10.1 | 0.08 |
| 36 | 11.78 | 33.362 | 25.360 | 4.66 | 75.9 | 10.2 | 1.17 | 12.7 | 0.19 | 0.39 | 0.34 | | | | | |
| 42 | 11.21 | 33.422 | 25.511 | 4.18 | 67.2 | 13.9 | 1.40 | 16.1 | 0.18 | 0.20 | 0.24 | 4.0 | 1.1 | 1.0 | 1.1 | 0.21 |
| 48 | 11.07 | 33.450 | 25.558 | 3.88 | 62.2 | 16.3 | 1.51 | 17.7 | 0.13 | 0.12 | 0.23 | | | | | |
| 55 | 10.79 | 33.520 | 25.662 | 3.44 | 54.9 | 19.3 | 1.67 | 19.8 | 0.09 | 0.08 | 0.18 | 1.5 | 0.29 | 0.27 | 0.28 | 0.02 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 45.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 32 21.0 N | 118 33.1 W | 29/10/10 | 1750 UTC | 12 m | 1140 - 1736 PST | 1138 PST | 1736 PST | 431.9 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17.34 | 33.541 | 24.315 | 5.69 | 103.8 | 1.8 | 0.29 | 0.2 | 0.02 | 0.66 | 0.19 | 88. A | 17.5 | 16.8 | 17.1 | 0.13 |
| 8 | 17.23 | 33.538 | 24.339 | 5.70 | 103.8 | 1.9 | 0.27 | 0.2 | 0.02 | 0.67 | 0.22 | 36. | 19.2 | 20.0 | 19.6 | 0.60 |
| 17 | 16.67 | 33.534 | 24.468 | 5.58 | 100.5 | 2.4 | 0.35 | 1.1 | 0.05 | 0.72 | 0.35 | 11. | 12.1 | 13.9 | 13.0 | 0.09 |
| 25 | 15.32 | 33.533 | 24.773 | 5.23 | 91.7 | 5.1 | 0.61 | 5.0 | 0.16 | 0.68 | 0.41 | 4.1 | 7.0 | 6.1 | 6.6 | 0.06 |
| 33 | 12.47 | 33.535 | 25.363 | 4.38 | 72.4 | 11.6 | 1.19 | 13.7 | 0.29 | 0.56 | 0.39 | 1.5 | 3.0 | 3.2 | 3.1 | 0.03 |
| 40 | 11.24 | 33.585 | 25.632 | 3.82 | 61.6 | 16.3 | 1.51 | 18.6 | 0.06 | 0.30 | 0.25 | | | | | |
| 47 | 10.73 | 33.624 | 25.753 | 3.58 | 57.1 | 19.0 | 1.63 | 20.8 | 0.03 | 0.22 | 0.18 | 0.24 | 0.15 | 0.07 | 0.11 | 0.01 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 31 31.2 N | 120 15.5 W | 30/10/10 | 1716 UTC | 22 m | 1145 - 1747 PST | 1145 PST | 1747 PST | 351.3 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 16.98 | 33.223 | 24.156 | 5.73 | 103.6 | 1.8 | 0.29 | 0.0 | 0.02 | 0.25 | 0.09 | 87. A | 4.4 | 4.4 | 4.4 | 0.07 |
| 8 | 16.84 | 33.222 | 24.189 | 5.71 | 103.0 | 1.9 | 0.29 | 0.0 | 0.02 | 0.25 | 0.09 | | | | | |
| 15 | 16.73 | 33.221 | 24.214 | 5.73 | 103.1 | 1.6 | 0.29 | 0.0 | 0.00 | 0.28 | 0.11 | 35. | 7.6 | 6.2 | 6.9 | 0.09 |
| 23 | 16.51 | 33.219 | 24.263 | 5.76 | 103.2 | 1.7 | 0.29 | 0.0 | 0.00 | 0.38 | 0.20 | | | | | |
| 31 | 16.47 | 33.221 | 24.274 | 5.73 | 102.6 | 1.9 | 0.30 | 0.0 | 0.01 | 0.49 | 0.28 | 11. | 8.4 | 7.7 | 8.1 | 0.04 |
| 38 | 16.42 | 33.217 | 24.283 | 5.73 | 102.5 | 1.9 | 0.30 | 0.0 | 0.02 | 0.48 | 0.28 | | | | | |
| 46 | 14.91 | 33.080 | 24.514 | 5.79 | 100.4 | 2.5 | 0.40 | 0.4 | 0.14 | 0.48 | 0.39 | 4.0 | 4.5 | 4.1 | 4.3 | 0.01 |
| 52 | 13.27 | 32.973 | 24.771 | 5.64 | 94.5 | 3.9 | 0.61 | 3.1 | 0.48 | 0.32 | 0.39 | | | | | |
| 60 | 12.64 | 32.983 | 24.903 | 5.46 | 90.3 | 5.2 | 0.71 | 5.4 | 0.05 | 0.22 | 0.31 | 1.5 | 1.2 | 1.2 | 1.2 | 0.01 |
| 74 | 11.72 | 33.011 | 25.099 | 5.28 | 85.6 | 7.3 | 0.88 | 8.3 | 0.03 | 0.12 | 0.17 | | | | | |
| 88 | 11.01 | 33.127 | 25.318 | 5.04 | 80.6 | 10.5 | 1.07 | 11.7 | 0.03 | 0.05 | 0.10 | 0.22 | 0.06 | 0.05 | 0.05 | 0.00 |

RV NEW HORIZON CALCOFI CRUISE 1011 STATION 93.3 110.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE |
|---|---|---|---|---|---|---|---|---|
| 30 11.4 N | 122 55.1 W | 31/10/10 | 1723 UTC | 49 m | 1155 - 1754 PST | 1155 PST | 1754 PST | 209.9 mg C/m2 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/l | OXY PCT | SIO3 uM/l | PO4 uM/l | NO3 uM/l | NO2 uM/l | CHL-A ug/l | PHAEO ug/l | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 18.63 | 33.433 | 23.918 | 5.39 | 100.8 | 2.0 | 0.24 | 0.1 | 0.00 | 0.08 | 0.02 | | | | | |
| 3 | 18.61 | 33.434 | 23.924 | 5.45 | 101.8 | 2.2 | 0.25 | 0.0 | 0.00 | 0.08 | 0.02 | 91. | 1.8 | 1.8 | 1.8 | 0.02 |
| 10 | 18.53 | 33.427 | 23.939 | 5.43 | 101.3 | 2.0 | 0.24 | 0.0 | 0.00 | 0.08 | 0.03 | | | | | |
| 18 | 18.47 | 33.420 | 23.948 | 5.45 | 101.6 | 2.0 | 0.25 | 0.0 | 0.00 | 0.10 | 0.03 | | | | | |
| 35 | 18.45 | 33.417 | 23.952 | 5.45 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.10 | 0.04 | 33. | 1.9 | 1.9 | 1.9 | 0.05 |
| 46 | 18.44 | 33.415 | 23.953 | 5.45 | 101.5 | 2.0 | 0.24 | 0.0 | 0.00 | 0.15 | 0.07 | | | | | |
| 59 | 17.76 | 33.336 | 24.060 | 5.55 | 102.0 | 2.1 | 0.25 | 0.0 | 0.00 | 0.16 | 0.12 | | | | | |
| 69 | 16.02 | 33.216 | 24.375 | 5.86 | 104.0 | 2.2 | 0.25 | 0.0 | 0.00 | 0.18 | 0.19 | 12. | 1.6 | 1.6 | 1.6 | 0.03 |
| 81 | 15.31 | 33.260 | 24.567 | 5.82 | 101.8 | 2.5 | 0.25 | 0.0 | 0.00 | 0.22 | 0.31 | | | | | |
| 93 | 14.77 | 33.254 | 24.679 | 5.80 | 100.4 | 2.5 | 0.27 | 0.0 | 0.03 | 0.24 | 0.34 | | | | | |
| 105 | 14.55 | 33.283 | 24.749 | 5.73 | 98.7 | 2.7 | 0.28 | 0.1 | 0.12 | 0.16 | 0.19 | 3.7 | 1.5 | 1.4 | 1.5 | 0.02 |
| 114 | 14.19 | 33.364 | 24.888 | 5.65 | 96.7 | 2.9 | 0.29 | 0.5 | 0.22 | 0.10 | 0.15 | | | | | |
| 124 | 13.526 | 33.374 | 25.032 | 5.48 | 92.5 | 3.7 | 0.39 | 2.1 | 0.04 | 0.08 | 0.13 | | | | | |
| 134 | 13.06 | 33.332 | 25.093 | 5.40 | 90.3 | 4.6 | 0.49 | 3.6 | 0.01 | 0.04 | 0.07 | 1.5 | 0.29 | 0.28 | 0.29 | 0.00 |
| 155 | 11.057 | 33.281 | 25.431 | 5.02 | 80.4 | 9.1 | 0.90 | 10.1 | 0.00 | 0.01 | 0.03 | | | | | |
| 176 | 9.864 | 33.504 | 25.810 | 4.26 | 66.6 | 17.3 | 1.38 | 18.0 | 0.00 | 0.00 | 0.02 | | | | | |
| 197 | 9.32 | 33.755 | 26.096 | 3.68 | 56.9 | 23.2 | 1.62 | 21.9 | 0.00 | 0.00 | 0.02 | 0.21 | 0.01 | 0.01 | 0.01 | 0.00 |

A) INCUBATION LIGHT INTENSITIES WERE 92, 35, 11, 3.9, 1.5, 0.21 PERCENT RESPECTIVELY.

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

| Line | Sta. | Latitude N | Longitude W | Date Mo/Day | Time (PST) Start | Time (PST) End | Water Volume Strained ($m^3$) | Max. Tow Depth (m) | Volume per 1000 $m^3$ Strained Total ($cm^3$) | Volume per 1000 $m^3$ Strained Small ($cm^3$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 93.3 | 26.7 | 32 57.4 | 117 18.3 | 10/28 | 1116 | 1121 | 119 | 41 | 25 | 25 |
| 93.4 | 26.4 | 32 57.2 | 117 16.7 | 10/28 | 1214 | 1216 | 64 | 11 | 16 | 16 |
| 91.7 | 26.4 | 33 14.5 | 117 27.7 | 10/28 | 1455 | 1457 | 56 | 12 | 18 | 18 |
| 93.3 | 28.0 | 32 54.9 | 117 23.8 | 10/28 | 1903 | 1924 | 469 | 205 | 66 | 66 |
| 93.3 | 30.0 | 32 50.7 | 117 31.8 | 10/28 | 2242 | 2304 | 448 | 210 | 116 | 116 |
| 93.3 | 35.0 | 32 41.1 | 117 52.2 | 10/29 | 0234 | 0257 | 467 | 209 | 77 | 77 |
| 93.3 | 40.0 | 32 30.8 | 118 12.7 | 10/29 | 0654 | 0716 | 463 | 211 | 35 | 35 |
| 93.3 | 45.0 | 32 20.9 | 118 33.2 | 10/29 | 1100 | 1123 | 460 | 210 | 33 | 33 |
| 93.3 | 50.0 | 32 10.8 | 118 53.4 | 10/29 | 1526 | 1549 | 471 | 215 | 38 | 38 |
| 93.3 | 55.0 | 32 00.7 | 119 13.8 | 10/29 | 1933 | 1955 | 459 | 218 | 375 | 39 |
| 93.3 | 60.0 | 31 51.1 | 119 33.6 | 10/30 | 0128 | 0151 | 487 | 212 | 57 | 57 |
| 93.3 | 70.0 | 31 30.3 | 120 13.7 | 10/30 | 0818 | 0840 | 476 | 206 | 17 | 17 |
| 93.3 | 80.0 | 31 10.9 | 120 55.0 | 10/30 | 1534 | 1557 | 513 | 204 | 27 | 27 |
| 93.3 | 90.0 | 30 50.8 | 121 35.6 | 10/30 | 2134 | 2157 | 496 | 207 | 20 | 20 |
| 93.3 | 100.0 | 30 30.9 | 122 15.2 | 10/31 | 0331 | 0353 | 522 | 211 | 25 | 25 |
| 93.3 | 110.0 | 30 11.3 | 122 55.1 | 10/31 | 0821 | 0843 | 466 | 206 | 24 | 24 |
| 93.3 | 120.0 | 29 50.6 | 123 35.1 | 10/31 | 1740 | 1801 | 483 | 206 | 17 | 17 |
| 90.0 | 120.0 | 30 25.1 | 123 59.9 | 11/01 | 0001 | 0023 | 468 | 207 | 26 | 26 |
| 90.0 | 110.0 | 30 44.9 | 123 19.9 | 11/01 | 0624 | 0646 | 486 | 211 | 14 | 14 |
| 90.0 | 100.0 | 31 05.1 | 122 39.7 | 11/01 | 1305 | 1327 | 475 | 212 | 8 | 8 |
| 90.0 | 90.0 | 31 24.9 | 121 58.7 | 11/01 | 2201 | 2223 | 475 | 213 | 19 | 19 |
| 90.0 | 80.0 | 31 44.8 | 121 18.7 | 11/02 | 0626 | 0647 | 459 | 213 | 7 | 7 |
| 90.0 | 70.0 | 32 05.0 | 120 38.2 | 11/02 | 1258 | 1320 | 455 | 211 | 62 | 62 |
| 90.0 | 60.0 | 32 25.0 | 119 57.5 | 11/02 | 1934 | 1956 | 476 | 206 | 946 | 236 |
| 90.0 | 53.0 | 32 39.0 | 119 28.6 | 11/03 | 0215 | 0238 | 481 | 212 | 69 | 69 |
| 90.0 | 37.0 | 33 11.1 | 118 23.2 | 11/03 | 1139 | 1202 | 446 | 212 | 61 | 61 |
| 90.0 | 35.0 | 33 15.0 | 118 15.1 | 11/03 | 1428 | 1451 | 454 | 206 | 53 | 53 |
| 90.0 | 30.0 | 33 25.1 | 117 54.3 | 11/03 | 1903 | 1924 | 448 | 201 | 60 | 60 |
| 90.0 | 27.7 | 33 29.5 | 117 45.0 | 11/03 | 2151 | 2154 | 74 | 24 | 40 | 40 |
| 90.0 | 28.0 | 33 29.1 | 117 46.0 | 11/03 | 2330 | 2344 | 304 | 119 | 165 | 165 |
| 88.5 | 30.1 | 33 40.2 | 118 04.9 | 11/04 | 0212 | 0214 | 53 | 12 | 75 | 75 |
| 86.8 | 32.5 | 33 53.2 | 118 26.8 | 11/04 | 0551 | 0553 | 55 | 11 | 18 | 18 |
| 86.7 | 33.0 | 33 53.5 | 118 29.3 | 11/04 | 0724 | 0729 | 104 | 40 | 97 | 97 |
| 86.7 | 35.0 | 33 49.3 | 118 37.8 | 11/04 | 0909 | 0931 | 447 | 211 | 52 | 52 |
| 86.7 | 40.0 | 33 39.5 | 118 58.3 | 11/04 | 1458 | 1520 | 448 | 211 | 58 | 58 |
| 86.7 | 45.0 | 33 29.3 | 119 19.0 | 11/04 | 1917 | 1940 | 505 | 226 | 93 | 93 |
| 86.7 | 50.0 | 33 19.4 | 119 39.8 | 11/04 | 2340 | 2347 | 145 | 49 | 83 | 83 |
| 86.7 | 55.0 | 33 09.4 | 120 00.1 | 11/05 | 0342 | 0405 | 472 | 203 | 53 | 53 |
| 86.7 | 60.0 | 32 59.4 | 120 21.0 | 11/05 | 0658 | 0719 | 438 | 204 | 30 | 30 |
| 86.7 | 70.0 | 32 39.5 | 121 02.9 | 11/05 | 1631 | 1652 | 460 | 201 | 30 | 30 |
| 86.7 | 80.0 | 32 19.4 | 121 42.8 | 11/05 | 2219 | 2241 | 429 | 212 | 63 | 47 |
| 86.7 | 90.0 | 31 59.3 | 122 23.6 | 11/06 | 0431 | 0453 | 497 | 209 | 28 | 28 |
| 86.7 | 100.0 | 31 39.5 | 123 04.1 | 11/06 | 1042 | 1105 | 495 | 208 | 20 | 20 |
| 86.7 | 110.0 | 31 19.5 | 123 44.5 | 11/06 | 1653 | 1716 | 506 | 205 | 12 | 12 |
| 83.3 | 110.0 | 31 54.7 | 124 10.2 | 11/07 | 0011 | 0034 | 485 | 211 | 21 | 21 |
| 83.3 | 100.0 | 32 14.6 | 123 29.5 | 11/07 | 0612 | 0633 | 467 | 211 | 15 | 15 |
| 83.3 | 90.0 | 32 34.7 | 122 48.8 | 11/07 | 1208 | 1230 | 525 | 207 | 23 | 23 |
| 83.3 | 80.0 | 32 54.7 | 122 08.0 | 11/07 | 1748 | 1812 | 528 | 207 | 87 | 87 |
| 83.3 | 70.0 | 33 14.7 | 121 26.7 | 11/08 | 0050 | 0112 | 466 | 209 | 129 | 129 |
| 83.3 | 60.0 | 33 34.6 | 120 45.1 | 11/08 | 0734 | 0755 | 467 | 202 | 266 | 266 |
| 83.3 | 55.0 | 33 44.6 | 120 24.6 | 11/08 | 1240 | 1303 | 486 | 211 | 62 | 62 |
| 85.4 | 35.8 | 34 01.2 | 118 50.6 | 11/09 | 0041 | 0043 | 58 | 12 | 35 | 35 |
| 83.3 | 39.4 | 34 15.4 | 119 19.4 | 11/09 | 0435 | 0437 | 56 | 13 | 36 | 36 |
| 83.3 | 40.6 | 34 13.5 | 119 24.6 | 11/09 | 0605 | 0608 | 68 | 24 | 15 | 15 |
| 83.3 | 42.0 | 34 10.7 | 119 30.9 | 11/09 | 0647 | 0657 | 207 | 70 | 58 | 58 |
| 81.7 | 43.5 | 34 24.6 | 119 48.1 | 11/09 | 1133 | 1135 | 47 | 14 | 21 | 21 |
| 81.8 | 46.9 | 34 16.6 | 120 01.2 | 11/09 | 1448 | 1511 | 465 | 214 | 56 | 56 |
| 80.0 | 51.0 | 34 26.8 | 120 31.3 | 11/09 | 1919 | 1927 | 174 | 54 | 52 | 52 |
| 80.0 | 60.0 | 34 09.0 | 121 08.9 | 11/10 | 0312 | 0335 | 505 | 208 | 141 | 89 |
| 80.0 | 70.0 | 33 49.0 | 121 51.4 | 11/10 | 0750 | 0812 | 441 | 217 | 95 | 84 |
| 80.0 | 80.0 | 33 28.8 | 122 31.7 | 11/10 | 1745 | 1806 | 464 | 210 | 1359 | 110 |
| 80.0 | 100.0 | 32 49.0 | 123 54.3 | 11/11 | 0905 | 0928 | 474 | 218 | 84 | 19 |
| 76.7 | 100.0 | 33 23.3 | 124 19.4 | 11/11 | 1941 | 2006 | 539 | 217 | 306 | 32 |
| 76.7 | 90.0 | 33 43.6 | 123 38.7 | 11/12 | 0156 | 0219 | 527 | 208 | 103 | 103 |
| 76.7 | 80.0 | 34 03.4 | 122 56.9 | 11/12 | 0728 | 0750 | 496 | 207 | 375 | 93 |