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**Oceanographic data collected in the Straits of Florida at 27°N during the year 2003,
including the estimated Florida Current transport**

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March 31, 2017

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Research

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Abstract

This report summarizes the Florida Current data collected along 27°N during calendar year 2003 as part of the NOAA-funded Western Boundary Time Series project. This includes the daily Florida Current volume transport values estimated from one-minute voltage data on an out-of-service telephone cable, as well as observations collected on cruises on R/V Walton Smith (i.e. full-water-column conductivity-temperature-depth, CTD, and shipboard and lowered acoustic Doppler current profiler, SADCP and LADCP, profiles). The report also includes dropsonde and expendable bathythermograph (XBT) data collected on small boat cruises. The data presented herein are in final processed and quality controlled form. The report also documents where the electronic files for these data can be obtained.

1 Introduction

The Florida Current is perhaps one of the most well observed oceanic flows in the world. This warm surface current flows northward through the Straits of Florida from the Gulf of Mexico to 27°N, where it exits the Straits and becomes the Gulf Stream. Along the way the Florida Current forms both the western boundary current of the subtropical gyre and the upper limb of the Meridional Overturning Circulation. Modern observation of the Florida Current at 27°N began in 1982, when the National Oceanic and Atmospheric Administration (NOAA) began funding a project to measure the volume transport and hydrographic structure of the flow between Florida and Grand Bahama Island. The project changed names several times over the next 20 years, and since the year 2000 the Florida Current observations have been a component of the Western Boundary Time Series (WBTS) project, with funding from the NOAA Climate Program Office - Climate Observations Division. The nominal locations where data are collected are shown in Figure 1 and Table 1.

This data report details all of the WBTS observations collected in the Florida Current over the calendar year. These data come in two categories:

1. Continuous time series observations made via an unused submarine telephone cable.
2. Ship-based observations made several times per year on either research vessels or small chartered boats.

Data presented in this report are organized by collection platform - either cable, research vessel, or small charter boat. Data are reported both graphically and via tables; a later section in the report provides web links to the electronic data files themselves. Further information about these data can be obtained either on the project web page (www.aoml.noaa.gov/phod/floridacurrent/) or from the contact personnel listed on that web page.

| Station | Latitude | Longitude | Depth |
|---------|-------------|-------------|-------|
| 0 | 27°00.00' N | 79°55.80' W | 139 |
| 1 | 27°00.00' N | 79°52.00' W | 261 |
| 2 | 27°00.00' N | 79°47.00' W | 389 |
| 3 | 27°00.00' N | 79°41.00' W | 540 |
| 4 | 27°00.00' N | 79°37.00' W | 661 |
| 5 | 27°00.00' N | 79°30.00' W | 783 |
| 6 | 27°00.00' N | 79°23.00' W | 708 |
| 7 | 27°00.00' N | 79°17.00' W | 624 |
| 8 | 27°00.00' N | 79°12.00' W | 485 |

Table 1: Nominal locations and depths (m) for the dropsonde/XBT and CTD/LADCP data collected in the Straits of Florida.

1.1 Continuous observations

Basic electromagnetic theory indicates that when charged particles move through a magnetic field, an electric field is created perpendicular to the motion of the particles. The continuous measurements of the Florida Current volume transport made as part of the WBTS project take advantage of this basic physics, as the charged salt ions in seawater move northward in the Florida Current through the magnetic field of the Earth and create an east-west electric field. This electric field can be measured as a voltage on an out-of-use submarine telephone cable between Florida and Grand Bahama Island (see Figure 1). The technique used to estimate transport from voltage will be briefly presented in Section 2.

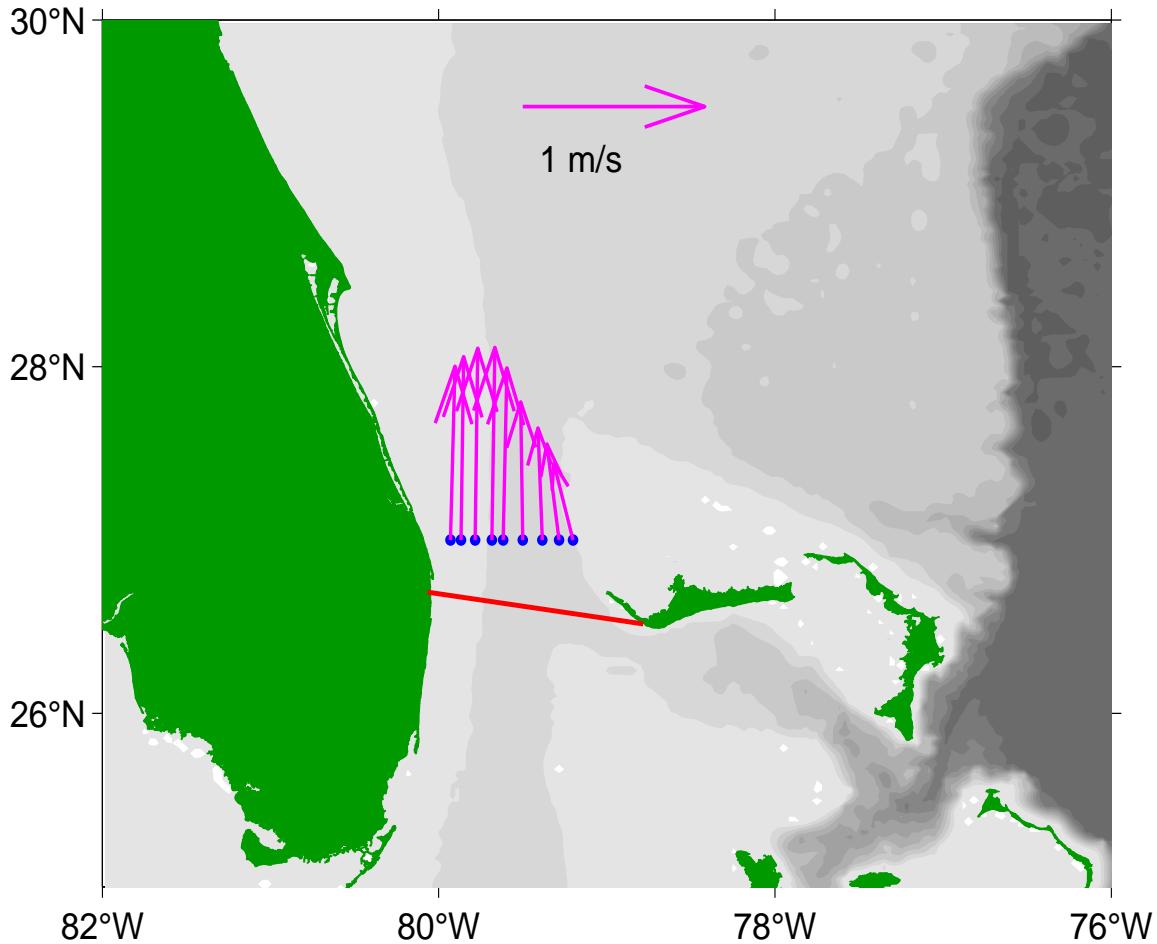


Figure 1: Map of the Straits of Florida study area. Blue dots indicate the locations of dropsonde, XBT and CTD/LADCP stations. Red line shows the approximate location of the telephone cable used for the voltage measurements. Magenta vectors illustrate the time mean vertically-averaged horizontal velocities from all dropsonde data collected between 1994 and 2014 to indicate observation locations relative to the Florida Current position.

1.2 Shipboard measurements

Ship sections collected in the Straits of Florida along 27°N as part of the WBTS project are used to calibrate the cable observations, and they also collect additional data sets that provide information about water properties and the velocity structure. Data are collected at nine stations along 27°N, and the same nine stations have been in use since the mid-1980s (see Figure 1 and Table 1). Two different types of ship sections are collected as part of the WBTS project: CTD/LADCP sections are collected via the R/V Walton Smith, and dropsonde/XBT sections are collected via small chartered boats. For more detail on how the data collected in these sections are used to calculate volume transport, please see Garcia and Meinen (2014).

2 Cable observations

As discussed in the Introduction, voltages induced on a submarine cable by the Florida Current have been shown to be proportional to the total current transport. These voltages are calibrated into volume transport using calibration coefficients originally derived in comparison to ship sections in the 1980s (e.g. Larsen and Sanford, 1985; Larsen, 1992), and the resulting calibrated volume transports are routinely verified by regular ship sections collected each year (see next section). Voltages are measured on the cable each minute by a voltmeter and computer; these voltages are then processed with a low-pass filter (2nd order Butterworth, passed both forward and backward to eliminate phase shifting) with a 3-day cut-off period to remove ionospheric noise from the record. The resulting volume transports are reported in units of Sverdrups ($1 \text{ Sv} = 10^6 \text{ m}^3 \text{ s}^{-1}$). For further details on the cable observations and processing, please see Meinen et al., (2010).

Cable voltages have been monitored and daily total transport values obtained since 1982. A table listing the daily cable transport values is presented in Appendix A. The annual time series is presented graphically as Figure 2, with the estimated 'error bar' on each daily value indicated by the gray shading. Details on the estimation of the volume transport accuracy, i.e. the 'error bar', can be found in Garcia and Meinen (2014).

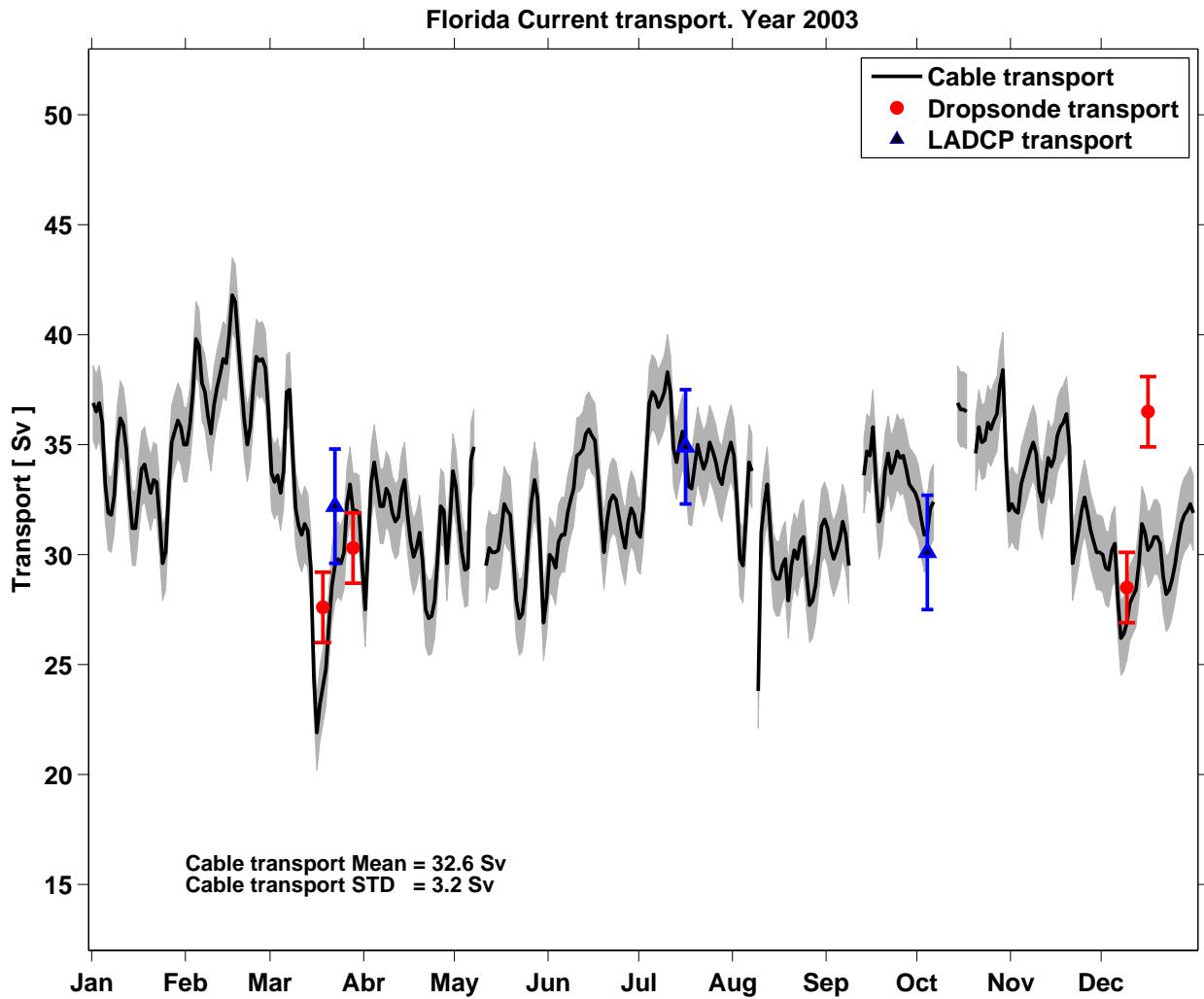


Figure 2: Observed Florida Current volume transports measured by cable voltage (black line), dropsonde sections (red dots) and LADCP sections (blue triangles). For each measurement system the estimated error bar is also shown. The annual mean and standard deviation (STD) from the cable voltage estimates are shown in the figure at lower left.

3 Dropsonde - XBT cruises

This section presents data collected on small boat charter cruises performed during the calendar year in the Straits of Florida at 27°N. These cruises involve the collection of measurements of vertically-averaged horizontal velocity, using dropsonde floats, and temperature profiles, using expendable bathythermographs (XBTs).

A dropsonde is a free-falling float that is deployed from a boat. Once deployed, it sinks to the bottom, drops a weight, and then rises back to the surface under its own buoyancy. Knowing the initial and final position of the dropsonde on the ocean surface at the start and end of the cast, and the elapsed time to complete the cast, it is possible to calculate the vertically-averaged horizontal velocity as the total distance traveled divided by the time required for the cast. For more detail on how the data are collected and used to estimate the volume transport of the Florida Current, please see Garcia and Meinen (2014).

The dates of the dropsonde/XBT cruises during the year, and the resulting estimated transports values, are shown in Table 2. The transport values are also plotted in Figure 2, where the corresponding error bars, as estimated by Garcia and Meinen (2014), are also shown. The individual dropsonde velocity measurements are listed in table form in Appendix B.

The XBT probes are launched at each of the same nine stations to obtain temperature profiles through the full water column (because the maximum depth along 27°N is roughly 750 m). Plots of the XBT temperature sections are shown in Figure 3 . The temperature profile data, organized by cruise, are shown in tabular form in Appendix C. Methods for the XBT processing and quality control can be found in Daneshzadeh et al. (1994).

| Cruise No. | Year | Month | Day | Hour mean | Transport | Transport detided |
|------------|------|-------|-----|-----------|-----------|-------------------|
| 1 | 2003 | 3 | 18 | 15 | 27.1 | 27.6 |
| 2 | 2003 | 3 | 28 | 17 | 30.0 | 30.3 |
| 3 | 2003 | 7 | 3 | 16 | NaN | NaN |
| 4 | 2003 | 12 | 9 | 15 | 26.0 | 28.5 |
| 5 | 2003 | 12 | 16 | 15 | 36.5 | 36.5 |

Table 2: Dropsonde/XBT cruise information: cruise number, cruise date, and transport values estimated with and without the tide signals. NaN indicates insufficient data to estimate transport.

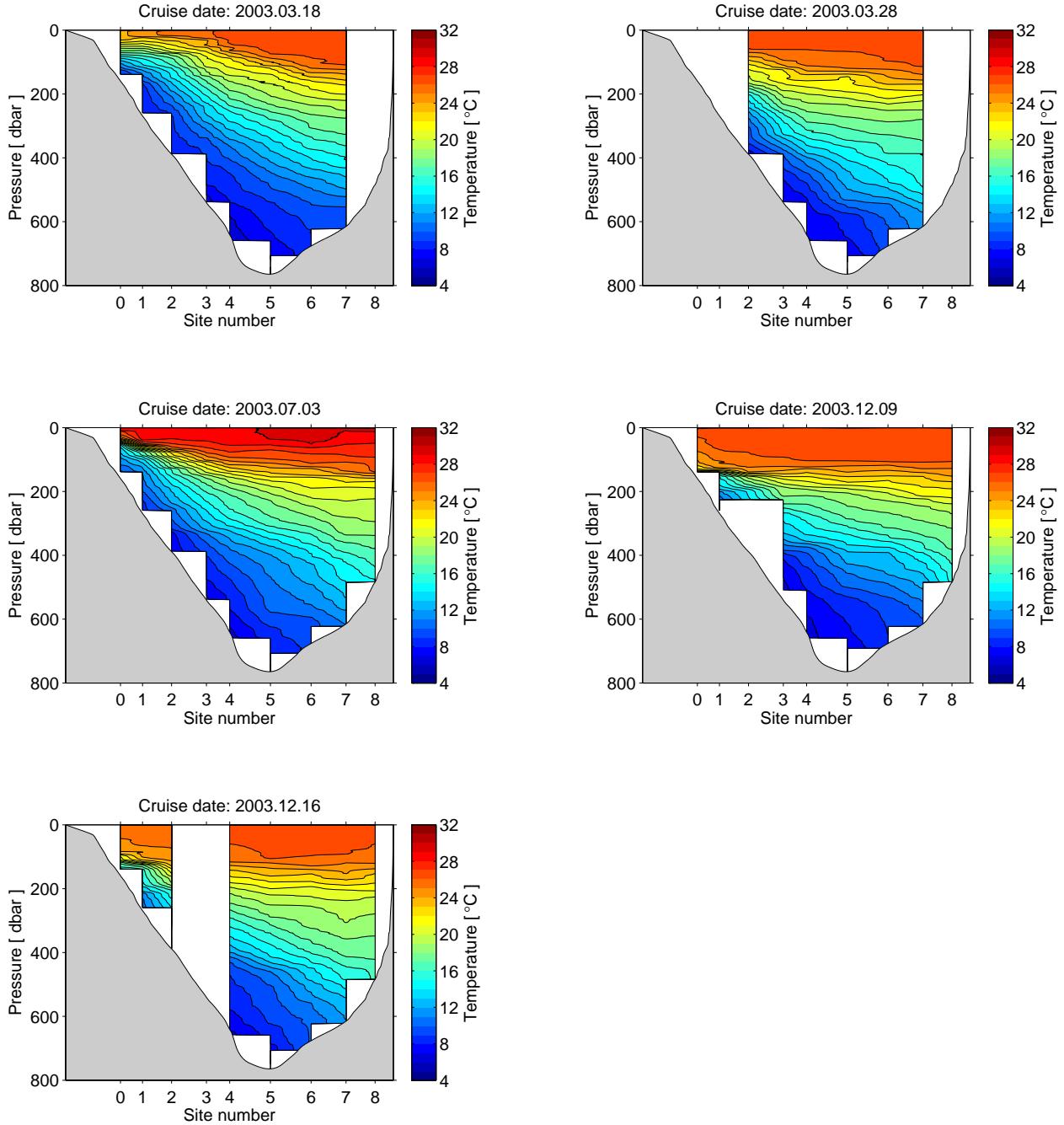


Figure 3: Temperature sections measured with XBT on the indicated dates. Date format is year, month, and day.

4 CTD - LADCP - SADCP cruises

This section includes data from cruises on the R/V Walton Smith. Each cruise collects CTD/LADCP profiles at the nine stations given in Table 1. Transports from these cruises are estimated by first vertically-averaging the LADCP profiles, and the resulting vertical mean velocities are horizontally-integrated in the same manner as the dropsonde observations - see Garcia and Meinen (2014) for more detail.

The cruise dates and the estimated section transports, are shown in Table 3, and are plotted in Figure 2 with the corresponding error bars. For each cruise the horizontal vertically-mean LADCP velocity measurements are listed in Appendix D.

Vertical property sections (temperature, salinity, dissolved oxygen, zonal and meridional velocity) for each cruise are shown in the figures in this section of the report, beginning with Figure 4. Tables listing the data profiles for each station on each cruise are presented in Appendix E. Details of the processing and quality control of the CTD data follow the methods shown in Hooper and Baringer (2015). The LADCP processing incorporates CTD and SADCP data when possible and follows the methods presented in Visbeck (2002) and Thurnherr (2010); the SADCP processing used the methods shown in Firing et al. (2012).

| Cruise ID | Year | Month | Day | Hour mean | Transport | Transport detided |
|-----------|------|-------|-----|-----------|-----------|-------------------|
| ws0307 | 2003 | 3 | 22 | 16 | 32.3 | 32.2 |
| ws0320 | 2003 | 7 | 16 | 14 | 34.8 | 34.9 |
| ws0327 | 2003 | 10 | 4 | 7 | 29.8 | 30.1 |

Table 3: CTD/LADCP/SADCP cruise information: cruise identification, cruise date, and transport values estimated using LADCP data, with and without the tide signals. Values of NaN indicate transport can not be estimated.

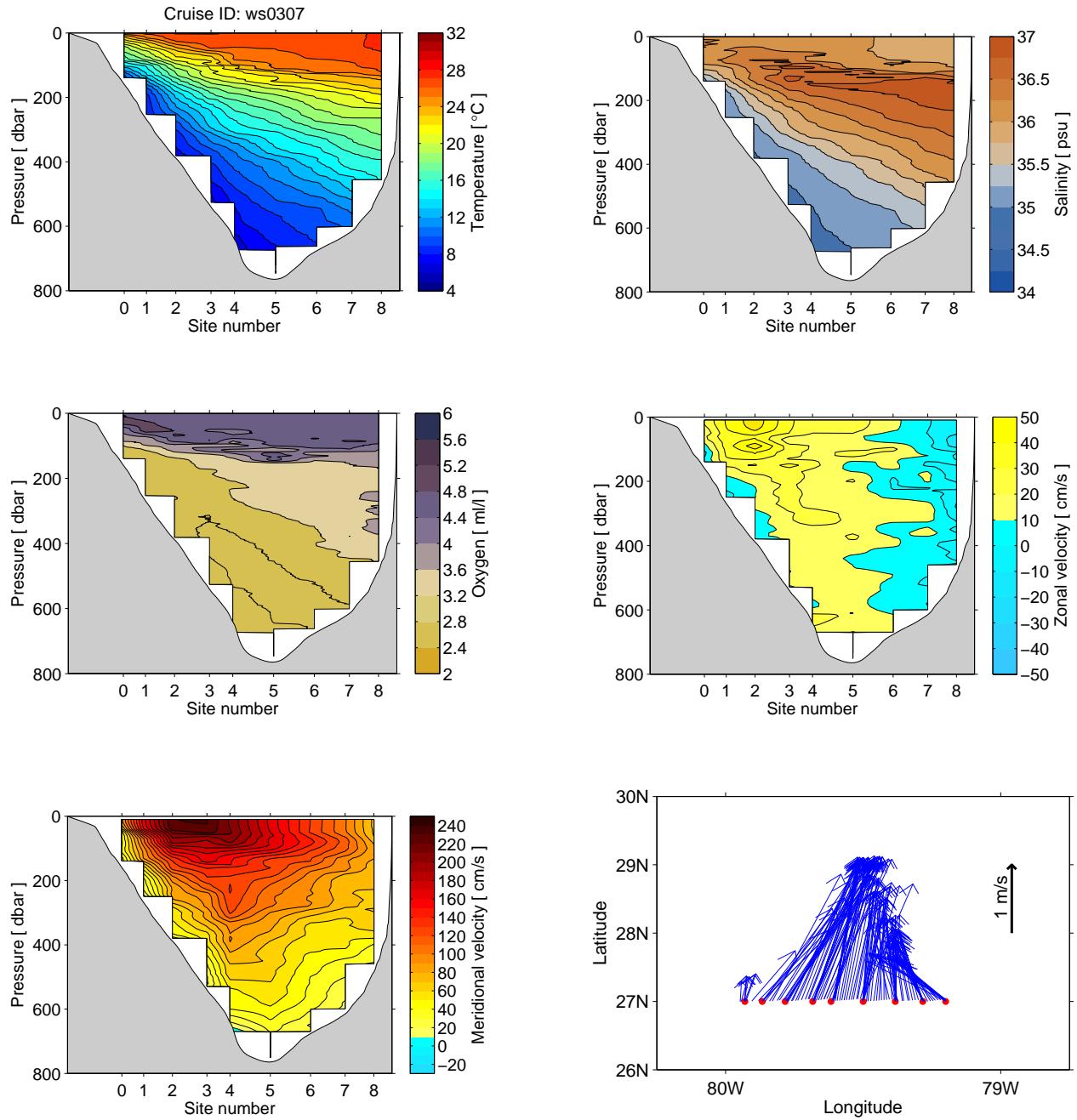


Figure 4: Sections of temperature, salinity, dissolved oxygen (all from CTD), velocity profile (LADCP) and vector velocity map at 50m (SADCP) collected by research vessel. Cruise ID noted above the temperature panel; cruise date are shown in Table 3.

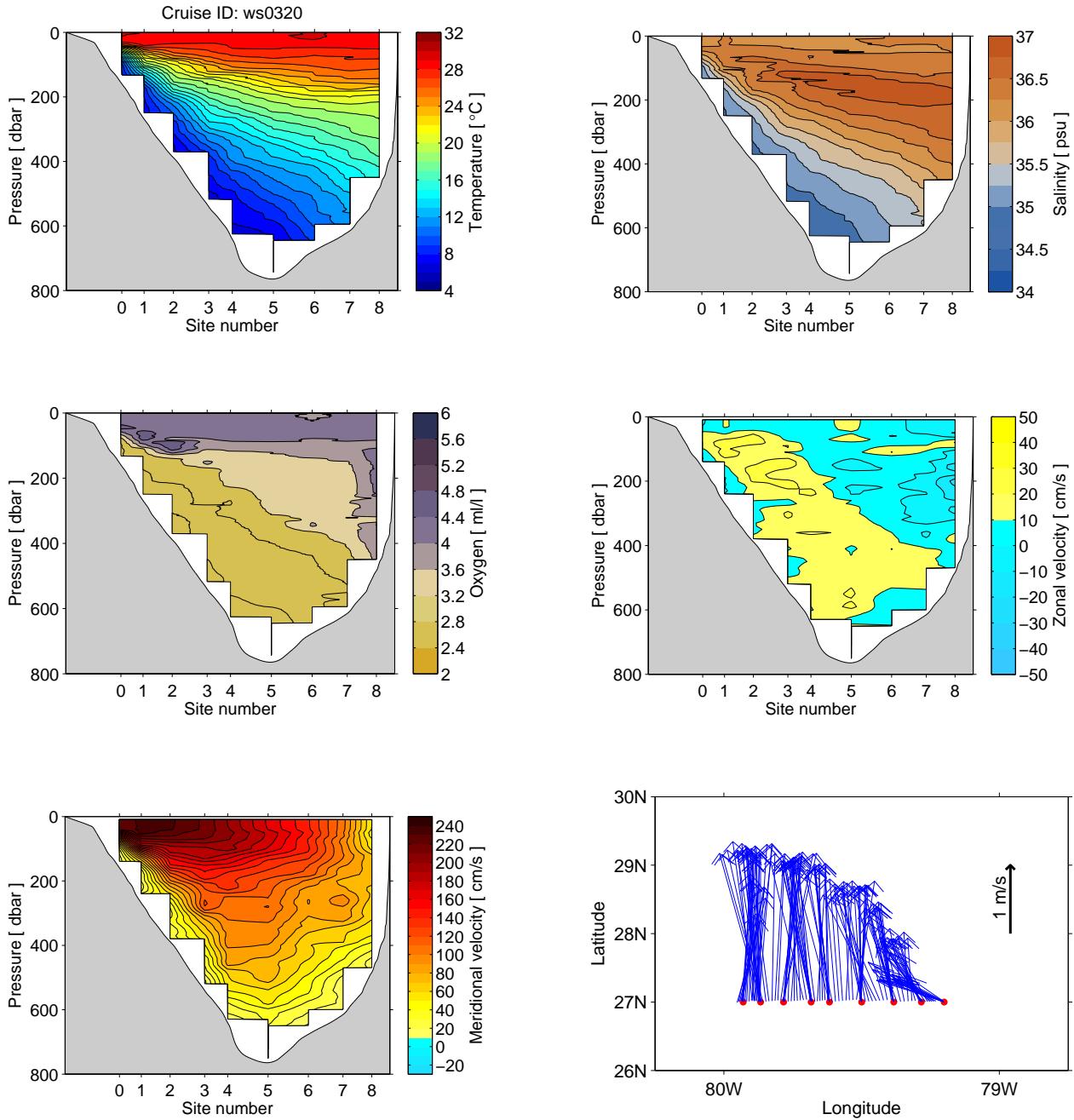


Figure 5: Same as Figure 4 for the data collected on the cruise ID indicated above the temperature panel.

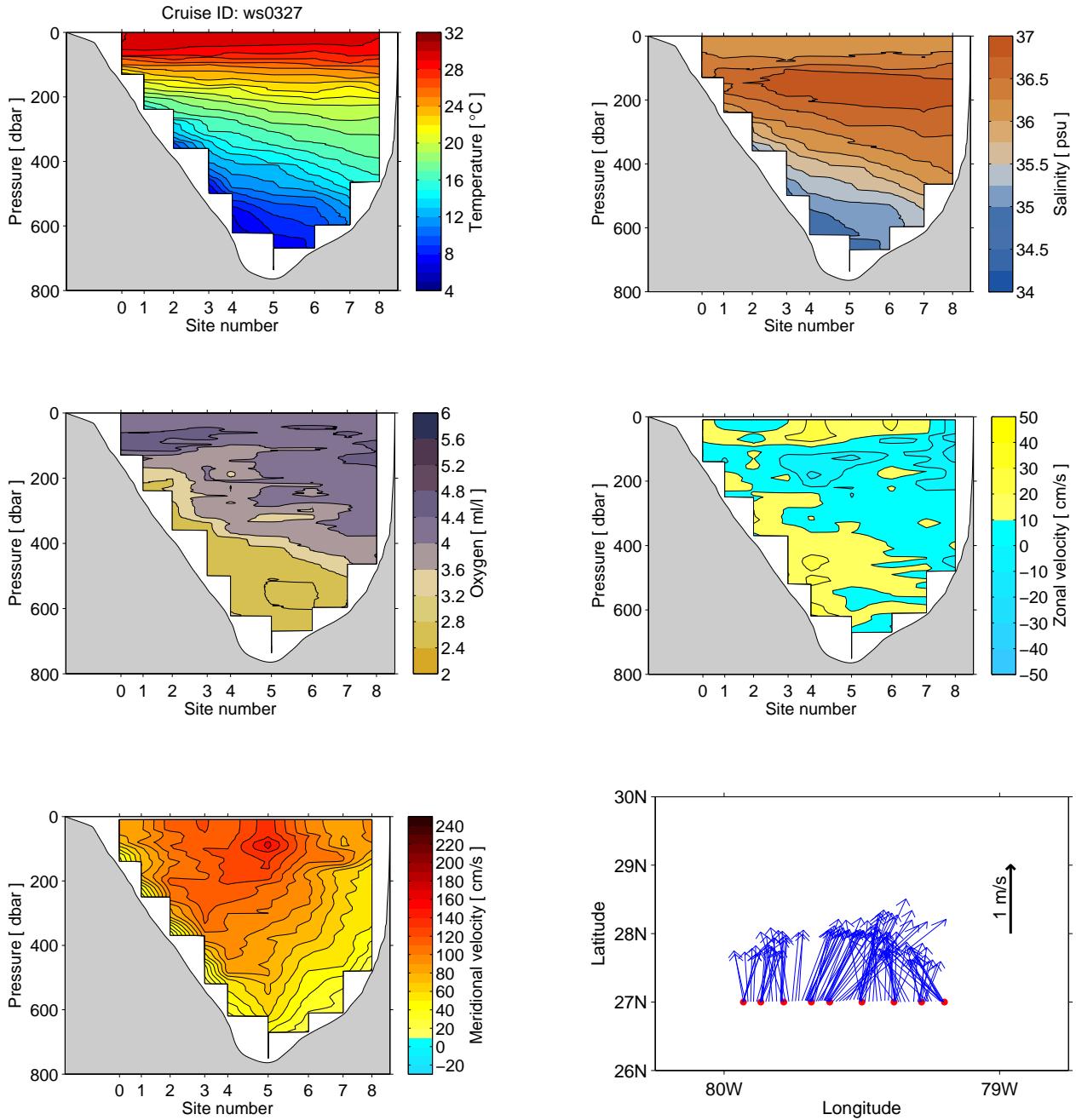


Figure 6: Same as Figure 4 for the data collected on the cruise ID indicated above the temperature panel.

5 Issues during the year

This section of the report is designed to list any issues or problems with the data collection during this calendar year which may affect data quality. This information is provided so that users of the data are aware of any limitations or issues with the data. In most years, data from all of these systems is collected successfully with few or no problems, so in most cases this section will be brief. The section is organized following the same order of data systems as in the body of the report.

5.1 Cable observations

The cable voltage recording system failed during three days in May, one day in August, four days in September, and nine days in October. As a result, for the following dates there are no cable transport estimates: May 8-10; August 8; September 9-12; October 7-13; and October 18-19. Data are available for all other days throughout the year.

Note that during 2000-2005, a fairly primitive voltage recording system was used for the cable. Data quality from this system was good, but not as good as the subsequent systems used from January 1, 2006 and beyond.

5.2 Dropsonde - XBT cruises

Several problems arose during the year involving both the dropsonde and XBT systems.

During the cruise of July 3, the dropsonde instrument was lost, and no transport estimate is available for that section. Also, during the two cruises in December, the dropsonde instrument failed at one station in each cruise; transport was calculated for both cruises.

The XBT system failed at three stations during the cruise of March 28, and no data were collected at those sites. During the cruises of March 18 and December 16, the XBT system failed at one station each, and no data were collected at those stations. Also, during the cruise of December 9, the XBT system failed at one station before the probe reached the bottom.

5.3 CTD - LADCP - SADCP cruises

During 2003, standard SADCP data collection methods included the use of a 150 kHz RDI Ocean Surveyor SADCP (OS150), which continuously measured near-surface currents to a depth of 200 meters. For LADCP, a single downward-facing 300 kHz RDI Workhorse (WH300) was deployed at each of the 9 historical stations across the Florida Straits.

The following LADCP casts were found to exceed a 30 degree wire angle at some point during their deployment: cruise ws0307 stations 3 and 4; and cruise ws0320 stations 0-3. As a result, velocity profiles for these casts may not accurately represent the true ocean velocity. These profiles should

be used with caution. All other LADCP and SADCP data were found to be suitable for scientific analysis.

No usable oxygen bottle sample data were collected for calibration of the electronic sensor data for the ws0320 cruise. For the ws0327 cruise, no bottle sample data for salinity or dissolved oxygen were collected. An approximate calibration of the electronic sensor data was applied using bottle sample observations from a former cruise (for ws0320) or from a later cruise (for ws0327) where the same electronic sensors had been used. These profiles should be used with caution.

6 Data availability

The electronic files for the data presented in this report can be obtained from the following sources:

Raw 1-minute voltage data can be obtained from the NOAA National Centers for Environmental Information (NCEI - formerly the NOAA National Oceanographic Data Center). See this web address (<http://accession.nodc.noaa.gov/0088016>).

The processed daily cable transports, and the dropsonde and LADCP section transports, can be obtained from the project web page (www.aoml.noaa.gov/phod/floridacurrent). See the “Data Access” subpage.

The processed CTD profile, LADCP profile, and SADCP profile data sets can be obtained from the WBTS project web page (www.aoml.noaa.gov/phod/wbts/) under the “Data and Results” subpage. The raw dropsonde observations and the XBT profiles at full vertical resolution can be found via the same page.

Other raw data are available upon request - please email/call the contact people listed on the www.aoml.noaa.gov/phod/floridacurrent web page.

7 Acknowledgements

The authors wish to sincerely thank the many people who have helped to collect the data presented in this report. Special thanks go to the engineers who have maintained the cable recording system (Doug Anderson, David Bitterman, and Ulises Rivero). Thanks also to Batelco for allowing the recording system to be housed in their facility on Grand Bahama Island. Great appreciation also to the scientists, engineers and technicians who participated in the small charter boat dropsonde/XBT cruises (Craig Engler, Benjamin Kates, Jeff Kelley, and Ulises Rivero) and in the R/V Walton Smith CTD/LADCP/SADCP cruises (Robert Birch, Libby Johns, Benjamin Kates, Nelson Melo, Grant Rawson, Jessica Redman, and Ulises Rivero). And many thanks to the fine captains and crews of the vessels used to collect this data. Finally, the authors also want to express their thanks to the technical support staff at AOML who have aided in the processing of these data including George Berberian, Yeun-Ho Daneshzadeh, and Chris Duncombe Rae. The collection and processing of the data in this report was supported by the NOAA Climate Program Office - Climate Observations Division and the NOAA Atlantic Oceanographic and Meteorological Laboratory.

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Appendix A:

Daily Florida Current transport data

| Day | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 36.9 | 35.0 | 33.7 | 27.5 | 33.1 | 30.0 | 30.8 | 34.5 | 31.2 | 32.4 | 32.3 | 30.0 |
| 2 | 36.5 | 35.9 | 33.3 | 30.5 | 31.5 | 29.8 | 32.1 | 32.5 | 30.3 | 31.6 | 32.0 | 29.4 |
| 3 | 36.9 | 37.4 | 33.6 | 33.3 | 30.1 | 29.4 | 34.5 | 29.8 | 29.8 | 30.9 | 31.9 | 29.3 |
| 4 | 36.0 | 39.8 | 32.8 | 34.2 | 29.3 | 30.6 | 36.9 | 29.5 | 30.2 | 31.0 | 33.2 | 30.2 |
| 5 | 33.2 | 39.5 | 33.8 | 33.2 | 29.4 | 30.9 | 37.4 | 31.7 | 30.7 | 32.1 | 33.7 | 30.5 |
| 6 | 31.9 | 37.8 | 37.4 | 32.2 | 34.3 | 30.9 | 37.2 | 34.2 | 31.5 | 32.4 | 34.2 | 28.0 |
| 7 | 31.8 | 37.4 | 37.5 | 32.2 | 34.9 | 31.9 | 36.7 | 33.8 | 30.9 | NaN | 34.7 | 26.2 |
| 8 | 32.7 | 36.3 | 34.6 | 33.0 | NaN | 32.5 | 37.0 | NaN | 29.5 | NaN | 35.1 | 26.4 |
| 9 | 35.1 | 35.5 | 32.1 | 32.7 | NaN | 33.0 | 37.4 | 23.8 | NaN | NaN | 34.6 | 26.9 |
| 10 | 36.2 | 36.8 | 31.3 | 31.9 | NaN | 34.5 | 38.3 | 31.0 | NaN | NaN | 32.9 | 27.8 |
| 11 | 35.9 | 37.6 | 30.9 | 31.5 | 29.5 | 34.6 | 37.4 | 32.3 | NaN | NaN | 32.4 | 28.1 |
| 12 | 34.8 | 38.2 | 31.4 | 31.7 | 30.3 | 34.8 | 34.8 | 33.2 | NaN | NaN | 33.4 | 28.4 |
| 13 | 32.7 | 38.9 | 31.1 | 32.9 | 30.1 | 35.5 | 34.2 | 31.2 | 33.6 | NaN | 34.4 | 29.6 |
| 14 | 31.2 | 38.7 | 29.4 | 33.4 | 30.1 | 35.7 | 35.0 | 29.3 | 34.7 | 36.9 | 34.0 | 31.4 |
| 15 | 31.2 | 40.0 | 24.4 | 31.8 | 30.2 | 35.4 | 35.6 | 28.9 | 34.5 | 36.6 | 34.4 | 31.0 |
| 16 | 32.6 | 41.8 | 21.9 | 30.6 | 31.1 | 35.2 | 35.0 | 28.9 | 35.8 | 36.6 | 35.4 | 30.2 |
| 17 | 33.9 | 41.5 | 23.2 | 29.9 | 32.3 | 33.6 | 33.1 | 29.5 | 33.3 | 36.5 | 35.8 | 30.4 |
| 18 | 34.1 | 39.6 | 24.0 | 30.3 | 32.0 | 31.7 | 33.0 | 29.8 | 31.5 | NaN | 36.0 | 30.8 |
| 19 | 33.4 | 37.8 | 24.8 | 31.0 | 31.8 | 30.1 | 34.0 | 27.9 | 32.1 | NaN | 36.4 | 30.8 |
| 20 | 32.8 | 36.1 | 26.8 | 29.7 | 29.9 | 31.5 | 35.0 | 29.5 | 33.8 | 34.6 | 34.9 | 30.5 |
| 21 | 33.4 | 35.0 | 28.6 | 27.5 | 27.9 | 32.4 | 34.4 | 30.2 | 34.6 | 35.8 | 29.6 | 29.0 |
| 22 | 33.3 | 35.8 | 29.5 | 27.1 | 27.1 | 32.7 | 33.9 | 29.8 | 33.7 | 35.1 | 30.3 | 28.2 |
| 23 | 31.6 | 37.7 | 29.8 | 27.2 | 27.3 | 32.5 | 34.3 | 30.6 | 34.1 | 35.2 | 31.1 | 28.4 |
| 24 | 29.6 | 39.0 | 29.6 | 27.9 | 28.5 | 31.7 | 35.1 | 30.8 | 34.7 | 36.0 | 32.0 | 28.9 |
| 25 | 30.1 | 38.8 | 30.1 | 29.9 | 30.7 | 30.9 | 34.7 | 29.1 | 34.4 | 35.7 | 32.6 | 29.6 |
| 26 | 32.9 | 38.9 | 32.3 | 32.2 | 32.4 | 30.3 | 34.2 | 27.7 | 34.5 | 36.1 | 31.9 | 30.6 |
| 27 | 35.1 | 38.5 | 33.2 | 32.0 | 33.4 | 31.5 | 33.5 | 27.9 | 33.9 | 36.4 | 31.1 | 31.4 |
| 28 | 35.6 | 36.4 | 32.0 | 29.6 | 32.6 | 32.1 | 33.2 | 28.6 | 33.2 | 37.7 | 30.6 | 31.8 |
| 29 | 36.1 | — | 32.0 | 31.5 | 29.9 | 31.8 | 34.0 | 29.9 | 33.0 | 38.4 | 30.1 | 32.0 |
| 30 | 35.8 | — | 31.9 | 33.8 | 26.9 | 31.0 | 34.6 | 31.3 | 32.8 | 34.4 | 30.1 | 32.3 |
| 31 | 35.0 | — | 29.5 | — | 28.0 | — | 35.1 | 31.6 | — | 32.0 | — | 31.9 |

Table 4: Florida Current daily transport estimated using voltage measurements on a telephone cable. Units are Sverdrups ($1 \text{ Sv} = 10^6 \text{ m}^3 \text{ s}^{-1}$). NaN values indicate no data is available on that day; dashes indicate that day does not exist in that month/year. Table oriented such that each row is the day of the month and each column is the month.

Appendix B:

Dropsonde vertical mean velocities

| Sta | Deployed | | | Surfaced | | | Mean Velocities | |
|-------------------------|---------------|----------|---------|---------------|----------|---------|-----------------|-----------|
| | Time (GMT) | Lon | Lat | Time (GMT) | Lon | Lat | U cm/s | V cm/s |
| Cruise date: 2003.03.18 | | | | | | | | |
| 0 | 12: 0:10 | -79.9298 | 26.9994 | 12: 5:36 | -79.9295 | 26.9994 | 7.58 | -0.49 |
| 1 | 12:21: 3 | -79.8664 | 26.9996 | 12:30:45 | -79.8661 | 27.0021 | 4.96 | 47.28 |
| 2 | 12:48:26 | -79.7830 | 27.0004 | 13: 2:10 | -79.7826 | 27.0056 | 2.65 | 69.48 |
| 3 | 13:30:54 | -79.6834 | 27.0008 | 13:49:58 | -79.6827 | 27.0098 | 6.02 | 86.17 |
| 4 | 14: 7:29 | -79.6169 | 27.0004 | 14:31:27 | -79.6164 | 27.0105 | 4.07 | 76.14 |
| 5 | 14:59:25 | -79.5002 | 27.0002 | 15:25:57 | -79.4999 | 27.0101 | 1.65 | 68.58 |
| 6 | 15:49:57 | -79.3832 | 27.0002 | 16:13:33 | -79.3834 | 27.0080 | -1.68 | 60.01 |
| 7 | 16:34:31 | -79.2833 | 27.0001 | 16:58: 3 | -79.2837 | 27.0066 | -3.36 | 49.72 |
| 8 | 17:17:37 | -79.2003 | 26.9997 | 17:36:15 | -79.2019 | 27.0052 | -14.13 | 53.55 |
| Cruise date: 2003.03.28 | | | | | | | | |
| 0 | 20: 8:27 | -79.9301 | 27.0010 | 20:16:27 | -79.9304 | 27.0054 | -5.44 | 101.38 |
| 1 | 19:40: 9 | -79.8669 | 27.0006 | 19:53:15 | -79.8671 | 27.0071 | -3.39 | 89.28 |
| 2 | 19: 2:33 | -79.7831 | 27.0018 | 19:21:51 | -79.7832 | 27.0116 | -0.85 | 92.01 |
| 3 | 18:15: 0 | -79.6827 | 27.0010 | 18:41:28 | -79.6825 | 27.0132 | 1.06 | 84.07 |
| 4 | 17:25:25 | -79.6169 | 27.0000 | 17:56:45 | -79.6165 | 27.0135 | 1.96 | 78.82 |
| 5 | 16:21:57 | -79.5002 | 27.0011 | 16:59:27 | -79.5003 | 27.0171 | -0.05 | 78.05 |
| 6 | 15:25: 0 | -79.3839 | 27.0010 | 15:58:46 | -79.3843 | 27.0119 | -1.80 | 59.01 |
| 7 | 14:34:49 | -79.2837 | 27.0006 | 15: 5:39 | -79.2847 | 27.0082 | -5.25 | 45.66 |
| 8 | 13:42:39 | -79.2007 | 27.0004 | 14:16: 9 | -79.2025 | 27.0061 | -8.38 | 31.71 |
| Cruise date: 2003.12.09 | | | | | | | | |
| 0 | 12:20: 6 | -79.9304 | 26.9984 | 12:32:21 | -79.9311 | 27.0007 | -9.90 | 34.96 |
| 1 | 12:54:15 | -79.8667 | 26.9993 | 13: 4: 9 | -79.8670 | 27.0022 | -4.07 | 52.46 |
| 2 | — | — | — | — | — | — | NaN | NaN |
| 3 | 14: 4:16 | -79.6836 | 26.9992 | 14:24:33 | -79.6836 | 27.0082 | 0.39 | 81.05 |
| 4 | 14:43:41 | -79.6170 | 26.9998 | 15: 6:51 | -79.6165 | 27.0102 | 4.20 | 82.60 |
| 5 | 15:34:33 | -79.5004 | 26.9997 | 16: 1:33 | -79.5002 | 27.0098 | 1.78 | 68.20 |
| 6 | 16:30:14 | -79.3836 | 26.9996 | 16:54:21 | -79.3837 | 27.0061 | -0.21 | 49.51 |
| 7 | 17:18:30 | -79.2837 | 26.9993 | 17:41:51 | -79.2843 | 27.0039 | -3.80 | 35.52 |
| 8 | 18: 1:17 | -79.1999 | 27.0000 | 18:18:45 | -79.2015 | 27.0045 | -15.28 | 47.32 |

Table 5: Tables of dropsonde floats measurements made during the cruises on the indicated dates. Station numbers in left column are as shown in Table 1. Tables include information on where the dropsonde floats were deployed, where they surfaced, and the resulting estimated zonal (U) and meridional (V) vertically averaged velocity. NaN indicates no observation at that station.

| Sta | Deployed | | | Surfaced | | | Mean Velocities | |
|-------------------------|---------------|----------|---------|---------------|----------|---------|-----------------|-----------|
| | Time (GMT) | Lon | Lat | Time (GMT) | Lon | Lat | U cm/s | V cm/s |
| Cruise date: 2003.12.16 | | | | | | | | |
| 0 | 12:14:38 | -79.9312 | 27.0019 | 12:20: 0 | -79.9314 | 27.0044 | -4.86 | 85.50 |
| 1 | 12:38: 5 | -79.8671 | 26.9995 | 12:47:33 | -79.8676 | 27.0039 | -8.81 | 85.76 |
| 2 | 13: 6:55 | -79.7836 | 27.0002 | 13:21: 3 | -79.7845 | 27.0092 | -10.36 | 116.10 |
| 3 | 13:45:16 | -79.6835 | 27.0005 | 14: 4:51 | -79.6847 | 27.0143 | -9.37 | 128.78 |
| 4 | 14:24:40 | -79.6170 | 27.0001 | 14:47:44 | -79.6180 | 27.0144 | -6.60 | 113.30 |
| 5 | 15:14:59 | -79.5001 | 27.0003 | 15:42:45 | -79.5005 | 27.0137 | -2.26 | 87.74 |
| 6 | 16: 7:44 | -79.3833 | 26.9999 | 16:33: 3 | -79.3836 | 27.0084 | -1.87 | 62.44 |
| 7 | — | — | — | — | — | — | NaN | NaN |
| 8 | 17:35:53 | -79.2001 | 26.9995 | 17:52: 9 | -79.2013 | 27.0032 | -12.14 | 42.09 |

Table 6: Same as Table 5 for dropsonde measurements during the cruises on the indicated dates.

Appendix C:

XBT temperature profiles

| Cruise date: 2003.03.18 | | | | | | | | | |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Depth | Sta. 0 | Sta. 1 | Sta. 2 | Sta. 3 | Sta. 4 | Sta. 5 | Sta. 6 | Sta. 7 | Sta. 8 |
| 0 | 23.06 | 23.51 | 24.86 | 25.50 | 25.44 | 25.36 | 26.36 | 25.75 | NaN |
| 10 | 23.66 | 24.70 | 25.31 | 25.85 | 26.37 | 26.71 | 26.89 | 26.88 | NaN |
| 20 | 23.65 | 24.21 | 24.20 | 25.75 | 26.38 | 26.70 | 26.88 | 26.85 | NaN |
| 30 | 23.30 | 22.33 | 23.40 | 24.12 | 26.24 | 26.79 | 26.89 | 26.85 | NaN |
| 40 | 21.78 | 21.05 | 22.59 | 23.93 | 26.10 | 26.69 | 26.89 | 26.87 | NaN |
| 50 | 20.04 | 20.05 | 21.65 | 23.79 | 25.45 | 26.67 | 26.75 | 26.79 | NaN |
| 60 | 18.39 | 18.33 | 20.98 | 22.54 | 24.88 | 26.40 | 26.44 | 26.68 | NaN |
| 70 | 17.15 | 17.26 | 19.84 | 21.85 | 24.03 | 26.10 | 26.32 | 26.54 | NaN |
| 80 | 15.25 | 16.04 | 17.87 | 21.23 | 23.14 | 25.74 | 26.06 | 26.33 | NaN |
| 90 | 13.69 | 14.97 | 16.82 | 20.89 | 21.89 | 24.86 | 25.93 | 26.29 | NaN |
| 100 | 12.55 | 14.26 | 16.49 | 20.55 | 21.49 | 23.85 | 25.83 | 26.30 | NaN |
| 110 | 11.63 | 13.83 | 15.93 | 20.35 | 21.20 | 23.40 | 25.53 | 25.96 | NaN |
| 120 | 10.69 | 12.63 | 14.97 | 19.36 | 20.87 | 22.00 | 24.96 | 25.23 | NaN |
| 130 | 9.19 | 11.70 | 14.40 | 19.01 | 20.54 | 21.45 | 24.37 | 24.53 | NaN |
| 140 | — | 11.00 | 14.17 | 18.74 | 20.18 | 20.84 | 23.63 | 23.72 | NaN |
| 150 | — | 10.32 | 14.02 | 17.53 | 19.53 | 20.56 | 22.72 | 23.34 | NaN |
| 160 | — | 9.85 | 13.28 | 16.97 | 19.07 | 20.41 | 21.98 | 22.83 | NaN |
| 170 | — | 8.89 | 12.83 | 16.64 | 18.65 | 19.80 | 21.43 | 22.15 | NaN |
| 180 | — | 8.54 | 12.45 | 16.08 | 18.40 | 19.45 | 21.07 | 21.86 | NaN |
| 190 | — | 8.36 | 12.12 | 15.65 | 17.96 | 19.33 | 20.75 | 21.72 | NaN |
| 200 | — | 8.33 | 11.38 | 15.32 | 17.34 | 19.15 | 20.38 | 21.16 | NaN |
| 210 | — | 8.23 | 10.92 | 14.78 | 17.16 | 18.84 | 19.99 | 20.51 | NaN |
| 220 | — | 8.22 | 10.72 | 14.53 | 16.67 | 18.51 | 19.63 | 20.02 | NaN |
| 230 | — | 8.16 | 10.28 | 13.82 | 16.31 | 18.15 | 19.20 | 19.64 | NaN |
| 240 | — | 8.08 | 9.89 | 13.28 | 15.83 | 17.85 | 18.79 | 19.16 | NaN |
| 250 | — | 8.08 | 9.53 | 13.25 | 15.17 | 17.19 | 18.58 | 19.09 | NaN |
| 260 | — | 8.06 | 9.11 | 13.17 | 14.78 | 16.76 | 18.23 | 18.70 | NaN |
| 270 | — | — | 8.88 | 12.81 | 14.39 | 16.26 | 17.73 | 18.30 | NaN |
| 280 | — | — | 8.80 | 12.51 | 14.21 | 16.02 | 17.45 | 17.90 | NaN |
| 290 | — | — | 8.80 | 11.92 | 13.77 | 15.52 | 17.19 | 17.88 | NaN |
| 300 | — | — | 8.79 | 11.41 | 13.48 | 15.29 | 17.11 | 17.82 | NaN |
| 350 | — | — | 8.49 | 9.67 | 11.55 | 13.76 | 15.66 | 16.19 | NaN |
| 400 | — | — | — | 9.01 | 10.14 | 12.31 | 14.05 | 15.04 | NaN |
| 450 | — | — | — | 8.60 | 8.96 | 10.85 | 12.49 | 13.13 | NaN |
| 500 | — | — | — | 7.54 | 8.60 | 9.88 | 10.94 | 11.93 | — |
| 550 | — | — | — | — | 7.77 | 8.81 | 9.97 | 10.10 | — |
| 600 | — | — | — | — | 6.78 | 8.36 | 9.18 | 9.50 | — |
| 650 | — | — | — | — | 6.37 | 7.89 | 8.92 | — | — |
| 700 | — | — | — | — | — | 7.18 | 8.59 | — | — |
| 750 | — | — | — | — | — | 6.69 | — | — | — |

Table 7: Expendable bathythermograph (XBT) temperature profile data collected during the cruise on the date indicated at the top. Left column indicates the estimated depth in meters from the fall rate. Temperature units are degrees Celsius. NaN indicates missing values due to instrument failure, and dashes indicates depths below bottom for each station.

| Cruise date: 2003.03.28 | | | | | | | | | |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Depth | Sta. 0 | Sta. 1 | Sta. 2 | Sta. 3 | Sta. 4 | Sta. 5 | Sta. 6 | Sta. 7 | Sta. 8 |
| 0 | NaN | NaN | 25.81 | 26.29 | 26.73 | 25.98 | 25.92 | 25.89 | NaN |
| 10 | NaN | NaN | 26.12 | 26.38 | 26.26 | 26.47 | 26.79 | 26.87 | NaN |
| 20 | NaN | NaN | 26.16 | 26.35 | 26.23 | 26.41 | 26.78 | 26.87 | NaN |
| 30 | NaN | NaN | 26.15 | 26.33 | 26.24 | 26.40 | 26.78 | 26.87 | NaN |
| 40 | NaN | NaN | 26.16 | 26.27 | 26.22 | 26.39 | 26.77 | 26.86 | NaN |
| 50 | NaN | NaN | 26.11 | 26.27 | 26.02 | 26.39 | 26.77 | 26.86 | NaN |
| 60 | NaN | NaN | 25.98 | 26.14 | 26.00 | 26.24 | 26.55 | 26.87 | NaN |
| 70 | NaN | NaN | 24.99 | 25.45 | 25.95 | 25.79 | 26.39 | 26.88 | NaN |
| 80 | NaN | NaN | 24.29 | 25.37 | 25.82 | 25.49 | 26.21 | 26.86 | NaN |
| 90 | NaN | NaN | 23.08 | 25.26 | 25.65 | 25.23 | 26.09 | 26.86 | NaN |
| 100 | NaN | NaN | 22.38 | 24.51 | 25.37 | 25.16 | 25.79 | 26.36 | NaN |
| 110 | NaN | NaN | 21.67 | 23.99 | 25.10 | 25.20 | 25.60 | 26.18 | NaN |
| 120 | NaN | NaN | 21.19 | 22.85 | 24.42 | 24.97 | 25.22 | 25.83 | NaN |
| 130 | NaN | NaN | 20.72 | 21.87 | 23.92 | 23.89 | 24.51 | 25.32 | NaN |
| 140 | – | NaN | 20.17 | 21.73 | 22.95 | 22.62 | 24.16 | 24.99 | NaN |
| 150 | – | NaN | 19.92 | 21.88 | 22.57 | 21.87 | 23.91 | 24.52 | NaN |
| 160 | – | NaN | 19.59 | 21.52 | 21.94 | 21.61 | 23.67 | 23.54 | NaN |
| 170 | – | NaN | 18.74 | 20.94 | 21.54 | 21.77 | 22.99 | 22.90 | NaN |
| 180 | – | NaN | 17.54 | 20.51 | 20.91 | 21.47 | 22.20 | 22.35 | NaN |
| 190 | – | NaN | 16.23 | 19.89 | 20.53 | 21.13 | 21.85 | 21.89 | NaN |
| 200 | – | NaN | 15.33 | 19.39 | 20.01 | 20.50 | 21.53 | 21.10 | NaN |
| 210 | – | NaN | 14.47 | 19.00 | 19.47 | 20.21 | 21.25 | 20.59 | NaN |
| 220 | – | NaN | 14.12 | 18.45 | 19.17 | 19.80 | 20.55 | 20.00 | NaN |
| 230 | – | NaN | 13.34 | 18.11 | 18.89 | 19.26 | 20.05 | 19.73 | NaN |
| 240 | – | NaN | 13.20 | 17.58 | 18.51 | 18.79 | 19.57 | 19.49 | NaN |
| 250 | – | NaN | 12.46 | 16.95 | 18.14 | 18.50 | 19.09 | 18.96 | NaN |
| 260 | – | NaN | 11.79 | 16.09 | 17.84 | 18.33 | 18.68 | 18.65 | NaN |
| 270 | – | – | 11.46 | 15.72 | 17.53 | 18.08 | 18.42 | 18.25 | NaN |
| 280 | – | – | 10.82 | 15.27 | 17.20 | 17.73 | 18.27 | 17.98 | NaN |
| 290 | – | – | 10.62 | 14.93 | 16.88 | 17.45 | 17.92 | 17.88 | NaN |
| 300 | – | – | 10.18 | 14.54 | 16.37 | 17.19 | 17.65 | 17.64 | NaN |
| 350 | – | – | 9.24 | 12.30 | 14.27 | 15.74 | 16.37 | 16.97 | NaN |
| 400 | – | – | – | 9.85 | 11.88 | 14.23 | 15.48 | 15.98 | NaN |
| 450 | – | – | – | 8.39 | 9.85 | 12.87 | 14.29 | 15.37 | NaN |
| 500 | – | – | – | 7.50 | 8.73 | 11.92 | 12.90 | 14.78 | – |
| 550 | – | – | – | – | 7.76 | 10.08 | 10.78 | 12.72 | – |
| 600 | – | – | – | – | 7.38 | 8.22 | 10.12 | 11.73 | – |
| 650 | – | – | – | – | 6.95 | 7.99 | 9.58 | – | – |
| 700 | – | – | – | – | – | 7.14 | 9.44 | – | – |
| 750 | – | – | – | – | – | 6.94 | – | – | – |

Table 8: Same as Table 7 for the cruise on the indicated date.

| Cruise date: 2003.07.03 | | | | | | | | | |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Depth | Sta. 0 | Sta. 1 | Sta. 2 | Sta. 3 | Sta. 4 | Sta. 5 | Sta. 6 | Sta. 7 | Sta. 8 |
| 0 | 28.42 | 28.25 | 27.85 | 27.69 | 28.36 | 28.24 | 27.84 | 27.64 | 26.68 |
| 10 | 27.78 | 28.67 | 28.64 | 28.76 | 28.86 | 29.06 | 29.13 | 29.00 | 29.10 |
| 20 | 26.22 | 28.62 | 28.60 | 28.75 | 28.84 | 29.06 | 29.09 | 28.98 | 28.61 |
| 30 | 24.72 | 28.62 | 28.60 | 28.74 | 28.81 | 29.02 | 29.10 | 28.95 | 28.24 |
| 40 | 21.87 | 27.80 | 27.58 | 28.40 | 28.77 | 28.91 | 29.06 | 28.93 | 28.21 |
| 50 | 16.75 | 25.98 | 27.00 | 27.60 | 28.33 | 28.14 | 29.02 | 28.25 | 27.91 |
| 60 | 14.11 | 21.77 | 26.10 | 27.14 | 27.93 | 27.58 | 28.31 | 27.69 | 27.65 |
| 70 | 13.26 | 18.58 | 24.17 | 26.61 | 27.37 | 26.98 | 27.65 | 27.30 | 27.58 |
| 80 | 13.01 | 16.42 | 22.08 | 25.93 | 26.80 | 26.53 | 27.20 | 27.04 | 27.44 |
| 90 | 12.34 | 15.31 | 21.29 | 24.98 | 26.24 | 26.28 | 26.62 | 26.95 | 27.15 |
| 100 | 11.59 | 13.82 | 19.84 | 24.27 | 25.50 | 25.91 | 26.26 | 26.75 | 26.75 |
| 110 | 11.32 | 13.02 | 18.53 | 22.40 | 24.65 | 25.14 | 26.07 | 25.85 | 26.39 |
| 120 | 10.54 | 12.24 | 17.91 | 21.61 | 23.56 | 24.18 | 25.52 | 25.45 | 26.18 |
| 130 | 10.02 | 11.87 | 16.12 | 20.77 | 22.67 | 23.85 | 23.78 | 25.34 | 26.16 |
| 140 | — | 11.45 | 15.93 | 20.05 | 21.57 | 23.04 | 23.29 | 24.50 | 25.77 |
| 150 | — | 10.91 | 15.27 | 18.70 | 20.53 | 22.34 | 22.86 | 23.32 | 24.48 |
| 160 | — | 10.86 | 14.76 | 17.91 | 19.51 | 21.81 | 21.49 | 22.49 | 22.59 |
| 170 | — | 10.68 | 14.31 | 17.47 | 19.07 | 20.79 | 21.38 | 22.03 | 21.93 |
| 180 | — | 10.58 | 13.93 | 16.91 | 18.48 | 20.19 | 21.28 | 21.43 | 21.55 |
| 190 | — | 10.27 | 13.22 | 16.61 | 17.95 | 19.60 | 20.98 | 20.86 | 20.98 |
| 200 | — | 9.96 | 13.03 | 16.07 | 17.38 | 19.27 | 20.79 | 20.60 | 20.91 |
| 210 | — | 9.59 | 12.77 | 15.60 | 17.01 | 18.87 | 20.42 | 20.29 | 20.59 |
| 220 | — | 9.31 | 12.46 | 15.34 | 16.65 | 18.42 | 20.00 | 20.10 | 20.06 |
| 230 | — | 8.90 | 12.22 | 15.07 | 16.47 | 17.96 | 19.70 | 20.01 | 19.83 |
| 240 | — | 8.68 | 11.73 | 14.73 | 16.40 | 17.85 | 19.31 | 19.94 | 19.67 |
| 250 | — | 8.68 | 11.06 | 14.47 | 16.12 | 17.56 | 18.87 | 19.84 | 19.43 |
| 260 | — | 8.59 | 10.55 | 13.99 | 15.85 | 17.37 | 18.55 | 19.80 | 19.40 |
| 270 | — | — | 10.39 | 13.81 | 15.55 | 17.25 | 18.20 | 19.67 | 19.37 |
| 280 | — | — | 10.18 | 13.49 | 15.23 | 16.98 | 17.96 | 19.06 | 19.31 |
| 290 | — | — | 9.91 | 13.21 | 14.81 | 16.80 | 17.72 | 18.77 | 19.19 |
| 300 | — | — | 9.68 | 12.79 | 14.31 | 16.45 | 17.36 | 18.56 | 18.62 |
| 350 | — | — | 7.47 | 10.36 | 11.98 | 13.92 | 15.55 | 17.68 | 17.69 |
| 400 | — | — | — | 9.03 | 10.51 | 11.93 | 13.95 | 15.77 | 16.51 |
| 450 | — | — | — | 8.25 | 9.52 | 11.26 | 12.70 | 14.55 | 15.54 |
| 500 | — | — | — | 7.57 | 8.70 | 10.76 | 11.80 | 13.52 | — |
| 550 | — | — | — | — | 8.06 | 10.37 | 11.13 | 12.48 | — |
| 600 | — | — | — | — | 7.45 | 9.60 | 9.87 | 11.39 | — |
| 650 | — | — | — | — | 6.72 | 8.75 | 9.61 | — | — |
| 700 | — | — | — | — | — | 8.12 | 9.31 | — | — |
| 750 | — | — | — | — | — | 7.19 | — | — | — |

Table 9: Same as Table 7 for the cruise on the indicated date.

| Cruise date: 2003.12.09 | | | | | | | | | |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Depth | Sta. 0 | Sta. 1 | Sta. 2 | Sta. 3 | Sta. 4 | Sta. 5 | Sta. 6 | Sta. 7 | Sta. 8 |
| 0 | 24.52 | 25.44 | 25.11 | 25.38 | 26.11 | 24.45 | 25.93 | 26.12 | 24.74 |
| 10 | 26.04 | 26.41 | 26.59 | 26.80 | 26.86 | 26.78 | 26.83 | 26.78 | 26.69 |
| 20 | 26.03 | 26.41 | 26.60 | 26.79 | 26.84 | 26.78 | 26.82 | 26.76 | 26.68 |
| 30 | 25.98 | 26.38 | 26.59 | 26.79 | 26.85 | 26.77 | 26.82 | 26.77 | 26.70 |
| 40 | 25.78 | 26.33 | 26.59 | 26.80 | 26.85 | 26.77 | 26.83 | 26.77 | 26.70 |
| 50 | 25.80 | 26.24 | 26.58 | 26.80 | 26.85 | 26.78 | 26.82 | 26.77 | 26.70 |
| 60 | 25.66 | 26.16 | 26.50 | 26.79 | 26.86 | 26.78 | 26.83 | 26.78 | 26.70 |
| 70 | 25.39 | 25.98 | 26.33 | 26.78 | 26.84 | 26.78 | 26.82 | 26.77 | 26.69 |
| 80 | 24.70 | 25.89 | 25.97 | 26.73 | 26.84 | 26.78 | 26.83 | 26.76 | 26.52 |
| 90 | 24.49 | 25.50 | 25.80 | 26.33 | 26.85 | 26.78 | 26.82 | 26.75 | 26.28 |
| 100 | 24.19 | 25.38 | 25.58 | 25.55 | 26.45 | 26.26 | 26.53 | 26.72 | 26.32 |
| 110 | 23.90 | 25.02 | 25.51 | 25.37 | 25.55 | 25.90 | 25.79 | 25.78 | 25.80 |
| 120 | 22.85 | 24.75 | 25.14 | 25.17 | 25.23 | 25.00 | 24.88 | 25.49 | 25.34 |
| 130 | 21.92 | 22.71 | 24.37 | 24.48 | 23.78 | 24.40 | 24.20 | 24.91 | 24.91 |
| 140 | — | 19.16 | 23.75 | 23.49 | 23.02 | 23.97 | 23.46 | 24.17 | 24.74 |
| 150 | — | 15.83 | 20.97 | 22.49 | 22.46 | 23.30 | 23.03 | 23.27 | 24.18 |
| 160 | — | 14.87 | 18.83 | 21.15 | 21.64 | 22.53 | 22.21 | 22.88 | 23.54 |
| 170 | — | 14.13 | 17.78 | 20.53 | 20.90 | 22.02 | 21.92 | 22.71 | 22.98 |
| 180 | — | 13.96 | 16.83 | 19.68 | 20.31 | 21.09 | 21.70 | 22.08 | 22.38 |
| 190 | — | 13.21 | 15.42 | 18.82 | 19.37 | 20.06 | 20.95 | 21.95 | 22.02 |
| 200 | — | 12.06 | 14.23 | 18.63 | 18.79 | 19.36 | 20.25 | 21.76 | 21.55 |
| 210 | — | 11.23 | 14.09 | 18.31 | 18.23 | 18.81 | 19.83 | 21.34 | 21.35 |
| 220 | — | 10.71 | 13.91 | 17.69 | 17.62 | 18.49 | 19.45 | 20.50 | 21.01 |
| 230 | — | 10.44 | NaN | 17.34 | 17.42 | 18.23 | 18.98 | 19.58 | 20.87 |
| 240 | — | 10.22 | NaN | 16.92 | 17.00 | 18.07 | 18.52 | 19.25 | 19.85 |
| 250 | — | 10.12 | NaN | 16.20 | 16.68 | 17.86 | 18.42 | 18.77 | 19.67 |
| 260 | — | 10.06 | NaN | 15.62 | 16.32 | 17.74 | 18.17 | 18.70 | 19.26 |
| 270 | — | — | NaN | 14.61 | 15.91 | 17.43 | 17.94 | 18.50 | 19.01 |
| 280 | — | — | NaN | 14.23 | 15.44 | 17.16 | 17.71 | 18.23 | 18.66 |
| 290 | — | — | NaN | 14.04 | 15.11 | 16.87 | 17.60 | 18.06 | 18.49 |
| 300 | — | — | NaN | 13.93 | 14.93 | 16.44 | 17.34 | 17.85 | 18.27 |
| 350 | — | — | NaN | 11.98 | 13.37 | 14.43 | 15.52 | 16.44 | 17.58 |
| 400 | — | — | — | 8.61 | 9.77 | 12.52 | 12.79 | 14.67 | 16.67 |
| 450 | — | — | — | 7.18 | 8.67 | 11.13 | 12.10 | 13.20 | 15.54 |
| 500 | — | — | — | 6.71 | 8.11 | 10.03 | 10.69 | 12.17 | — |
| 550 | — | — | — | — | 7.39 | 8.61 | 9.41 | 10.82 | — |
| 600 | — | — | — | — | 6.84 | 8.10 | 9.16 | 9.97 | — |
| 650 | — | — | — | — | 6.70 | 7.77 | 8.97 | — | — |
| 700 | — | — | — | — | — | 7.51 | NaN | — | — |
| 750 | — | — | — | — | — | 7.12 | — | — | — |

Table 10: Same as Table 7 for the cruise on the indicated date.

| Cruise date: 2003.12.16 | | | | | | | | | |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Depth | Sta. 0 | Sta. 1 | Sta. 2 | Sta. 3 | Sta. 4 | Sta. 5 | Sta. 6 | Sta. 7 | Sta. 8 |
| 0 | 24.97 | 24.71 | 24.87 | NaN | 25.81 | 25.52 | 25.50 | 25.82 | 25.78 |
| 10 | 25.80 | 25.55 | 25.39 | NaN | 26.48 | 26.38 | 26.49 | 26.50 | 26.46 |
| 20 | 25.68 | 25.55 | 25.38 | NaN | 26.48 | 26.38 | 26.48 | 26.49 | 26.45 |
| 30 | 25.24 | 25.55 | 25.36 | NaN | 26.45 | 26.38 | 26.48 | 26.49 | 26.45 |
| 40 | 25.04 | 25.38 | 25.33 | NaN | 26.41 | 26.39 | 26.48 | 26.50 | 26.29 |
| 50 | 24.65 | 25.42 | 25.32 | NaN | 26.22 | 26.38 | 26.48 | 26.50 | 26.15 |
| 60 | 24.52 | 25.33 | 25.33 | NaN | 26.00 | 26.38 | 26.48 | 26.48 | 26.02 |
| 70 | 24.41 | 24.87 | 25.04 | NaN | 25.75 | 26.38 | 26.44 | 26.32 | 25.92 |
| 80 | 24.15 | 24.27 | 24.88 | NaN | 25.50 | 26.33 | 26.22 | 26.04 | 25.86 |
| 90 | 23.53 | 24.13 | 24.79 | NaN | 25.17 | 26.25 | 26.11 | 26.02 | 25.81 |
| 100 | 20.96 | 24.06 | 24.91 | NaN | 25.10 | 26.19 | 25.88 | 25.43 | 25.53 |
| 110 | 20.33 | 23.10 | 24.22 | NaN | 25.29 | 25.82 | 25.73 | 25.33 | 25.26 |
| 120 | 17.43 | 20.23 | 23.64 | NaN | 24.61 | 24.98 | 25.46 | 24.99 | 25.03 |
| 130 | 16.20 | 17.26 | 22.90 | NaN | 23.76 | 24.47 | 24.98 | 24.75 | 24.49 |
| 140 | — | 15.76 | 21.88 | NaN | 23.22 | 23.78 | 23.98 | 24.24 | 23.81 |
| 150 | — | 15.47 | 21.13 | NaN | 22.64 | 23.35 | 23.42 | 24.05 | 23.32 |
| 160 | — | 15.37 | 20.26 | NaN | 22.01 | 23.04 | 22.73 | 23.93 | 22.54 |
| 170 | — | 15.16 | 19.35 | NaN | 21.59 | 22.30 | 22.36 | 23.20 | 22.49 |
| 180 | — | 14.92 | 19.08 | NaN | 21.07 | 21.96 | 21.92 | 22.71 | 22.28 |
| 190 | — | 14.59 | 17.98 | NaN | 20.33 | 21.39 | 21.21 | 21.97 | 21.61 |
| 200 | — | 13.42 | 16.68 | NaN | 19.79 | 21.00 | 20.80 | 21.35 | 21.38 |
| 210 | — | 12.70 | 15.70 | NaN | 19.25 | 20.45 | 20.54 | 20.83 | 20.75 |
| 220 | — | 11.38 | 15.38 | NaN | 18.88 | 19.95 | 20.11 | 20.58 | 20.05 |
| 230 | — | 11.12 | 15.07 | NaN | 18.57 | 19.72 | 19.91 | 20.26 | 19.83 |
| 240 | — | 10.77 | 14.67 | NaN | 18.23 | 19.29 | 19.59 | 19.85 | 19.68 |
| 250 | — | 10.69 | 14.29 | NaN | 17.82 | 19.06 | 19.11 | 19.56 | 19.45 |
| 260 | — | 10.50 | 13.96 | NaN | 17.34 | 18.72 | 18.87 | 19.49 | 19.33 |
| 270 | — | — | 13.70 | NaN | 16.89 | 18.45 | 18.72 | 19.39 | 19.15 |
| 280 | — | — | 12.83 | NaN | 16.53 | 18.21 | 18.52 | 19.18 | 18.98 |
| 290 | — | — | 11.68 | NaN | 16.04 | 17.90 | 18.48 | 19.14 | 18.75 |
| 300 | — | — | 11.18 | NaN | 15.72 | 17.25 | 18.41 | 19.05 | 18.60 |
| 350 | — | — | 8.47 | NaN | 13.99 | 15.75 | 17.59 | 18.11 | 17.95 |
| 400 | — | — | — | NaN | 11.95 | 14.33 | 16.04 | 17.30 | 17.28 |
| 450 | — | — | — | NaN | 9.35 | 11.72 | 13.81 | 15.84 | 16.16 |
| 500 | — | — | — | NaN | 8.80 | 10.11 | 12.48 | 14.33 | — |
| 550 | — | — | — | — | 8.24 | 9.65 | 11.49 | 12.98 | — |
| 600 | — | — | — | — | 7.64 | 9.25 | 10.47 | 12.10 | — |
| 650 | — | — | — | — | 6.77 | 8.50 | 10.11 | — | — |
| 700 | — | — | — | — | — | 7.55 | 10.11 | — | — |
| 750 | — | — | — | — | — | 6.96 | — | — | — |

Table 11: Same as Table 7 for the cruise on the indicated date.

Appendix D:

LADCP vertical mean velocities

| Sta | Deployed | | | Surfaced | | | Mean Velocities | |
|-------------------------|---------------|----------|---------|---------------|----------|---------|-----------------|-----------|
| | Time (GMT) | Lon | Lat | Time (GMT) | Lon | Lat | U cm/s | V cm/s |
| Cruise date: 2003.03.22 | | | | | | | | |
| 0 | 22:20: 9 | -79.9307 | 27.0005 | 22:28:16 | -79.9301 | 27.0046 | -0.11 | 39.68 |
| 1 | 21:27: 2 | -79.8664 | 27.0036 | 21:42:17 | -79.8650 | 27.0136 | 12.78 | 71.67 |
| 2 | 20: 9: 4 | -79.7807 | 27.0046 | 20:29:21 | -79.7768 | 27.0238 | 13.72 | 105.60 |
| 3 | 18:17:45 | -79.6819 | 27.0061 | 18:46:28 | -79.6772 | 27.0363 | 9.64 | 95.68 |
| 4 | 16:35:45 | -79.6102 | 27.0123 | 17:10:38 | -79.6040 | 27.0459 | 7.42 | 94.96 |
| 5 | 14:31:37 | -79.5006 | 27.0065 | 15: 9:42 | -79.4972 | 27.0382 | 4.55 | 75.89 |
| 6 | 12:36:19 | -79.3826 | 27.0038 | 13:15:21 | -79.3791 | 27.0340 | -0.85 | 62.88 |
| 7 | 11: 2:31 | -79.2816 | 27.0046 | 11:38:42 | -79.2833 | 27.0260 | -4.38 | 54.08 |
| 8 | 9: 9:24 | -79.2009 | 27.0062 | 9:38:17 | -79.2020 | 27.0183 | -14.14 | 54.24 |
| Cruise date: 2003.07.16 | | | | | | | | |
| 0 | 19:57: 9 | -79.9312 | 27.0048 | 20: 7:12 | -79.9331 | 27.0148 | -3.61 | 100.40 |
| 1 | 18:58: 0 | -79.8694 | 27.0075 | 19:15: 9 | -79.8719 | 27.0250 | 0.91 | 103.13 |
| 2 | 16:24:11 | -79.7840 | 27.0058 | 16:43:36 | -79.7844 | 27.0259 | 3.98 | 102.34 |
| 3 | 15: 3:14 | -79.6833 | 27.0062 | 15:30:52 | -79.6842 | 27.0333 | 3.34 | 102.62 |
| 4 | 13:50:37 | -79.6170 | 27.0059 | 14:20: 5 | -79.6179 | 27.0326 | 2.85 | 99.28 |
| 5 | 12:18:24 | -79.5006 | 27.0057 | 12:56: 3 | -79.5029 | 27.0365 | 0.65 | 81.76 |
| 6 | 10:51:33 | -79.3841 | 27.0047 | 11:25:12 | -79.3866 | 27.0294 | -2.83 | 69.36 |
| 7 | 9:35:20 | -79.2835 | 27.0037 | 10: 4:35 | -79.2874 | 27.0210 | -6.40 | 55.99 |
| 8 | 8:18:18 | -79.2018 | 27.0031 | 8:42: 3 | -79.2045 | 27.0150 | -11.51 | 44.29 |
| Cruise date: 2003.10.04 | | | | | | | | |
| 0 | 11:41: 9 | -79.9301 | 27.0015 | 11:48:52 | -79.9312 | 27.0031 | -0.26 | 53.01 |
| 1 | 10:51:13 | -79.8672 | 27.0015 | 11: 4: 3 | -79.8694 | 27.0037 | -1.03 | 60.70 |
| 2 | 9:47:19 | -79.7863 | 27.0011 | 10: 7:38 | -79.7940 | 27.0094 | 0.84 | 80.71 |
| 3 | 8:25:17 | -79.6863 | 27.0020 | 8:57:40 | -79.7010 | 27.0197 | 0.45 | 84.22 |
| 4 | 6:56:59 | -79.6195 | 27.0024 | 7:33:58 | -79.6349 | 27.0222 | 2.72 | 84.30 |
| 5 | 5:22:10 | -79.5023 | 27.0042 | 6: 3:56 | -79.5105 | 27.0346 | -1.78 | 80.23 |
| 6 | 3:51:15 | -79.3822 | 27.0048 | 4:23: 9 | -79.3759 | 27.0245 | -1.70 | 60.75 |
| 7 | 2:31:29 | -79.2850 | 27.0010 | 3: 0:51 | -79.2955 | 27.0059 | -3.52 | 49.85 |
| 8 | 1:10:13 | -79.2038 | 27.0019 | 1:36:46 | -79.2147 | 27.0135 | -11.44 | 47.06 |

Table 12: Tables of vertically averaged velocity determined from lowered acoustic Doppler current profiler (LADCP) data collected during the indicated dates (see Table 3). Station numbers in left column are as shown in Table 1. Tables include information on where the LADCP cast was started ("Deployed"), where it ended ("Surfaced"), and the resulting estimated zonal (U) and meridional (V) vertically average velocity.

Appendix E:

CTD and LADCP profiles

| Cruise ID: ws0307. Station: 0 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 25.16 | 36.12 | 4.79 | NaN | NaN |
| 10 | 23.48 | 36.28 | 4.82 | 11.6 | 77.7 |
| 20 | 22.18 | 36.26 | 4.95 | 10.9 | 75.6 |
| 30 | 20.68 | 36.24 | 4.92 | 8.1 | 67.8 |
| 40 | 19.22 | 36.20 | 4.51 | 4.3 | 57.8 |
| 50 | 18.44 | 36.18 | 4.13 | 2.1 | 36.3 |
| 60 | 17.95 | 36.14 | 4.02 | 7.7 | 30.3 |
| 70 | 17.01 | 36.08 | 3.88 | 7.1 | 31.4 |
| 80 | 16.70 | 36.06 | 3.69 | 0.5 | 28.4 |
| 90 | 15.17 | 35.90 | 3.51 | -3.9 | 29.2 |
| 100 | 14.22 | 35.80 | 3.20 | -6.8 | 32.8 |
| 110 | 12.44 | 35.56 | 2.99 | -13.0 | 32.1 |
| 120 | 11.52 | 35.44 | 2.94 | -11.5 | 24.4 |
| 130 | 9.97 | 35.23 | 2.88 | -7.9 | 16.3 |
| 140 | 9.54 | 35.17 | 2.84 | -10.6 | 15.3 |

Table 13: Profiles of temperature, salinity, dissolved oxygen, zonal (U) and meridional (V) velocity observed during the cruise ID and station indicated with the combined CTD and LADCP. NaN indicates missing values.

| Cruise ID: ws0307. Station: 1 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 26.14 | 36.19 | 4.56 | NaN | NaN |
| 10 | 25.40 | 36.21 | 4.62 | 31.1 | 156.4 |
| 20 | 24.10 | 36.18 | 4.73 | 30.9 | 155.9 |
| 30 | 22.57 | 36.19 | 4.93 | 30.2 | 153.9 |
| 40 | 21.77 | 36.24 | 4.98 | 29.2 | 149.7 |
| 50 | 20.64 | 36.15 | 5.02 | 27.4 | 130.9 |
| 60 | 19.64 | 36.19 | 4.65 | 28.2 | 112.9 |
| 70 | 19.15 | 36.27 | 4.11 | 25.6 | 99.1 |
| 80 | 18.37 | 36.27 | 3.71 | 24.3 | 97.6 |
| 90 | 16.81 | 36.05 | 3.65 | 24.7 | 92.2 |
| 100 | 15.26 | 35.88 | 3.55 | 22.7 | 86.6 |
| 110 | 14.87 | 35.86 | 3.25 | 22.1 | 82.4 |
| 120 | 14.32 | 35.85 | 3.06 | 21.1 | 82.2 |
| 130 | 13.91 | 35.80 | 2.98 | 19.0 | 81.2 |
| 140 | 12.87 | 35.63 | 2.98 | 17.4 | 71.3 |
| 150 | 11.74 | 35.47 | 2.96 | 12.1 | 55.9 |
| 160 | 10.91 | 35.36 | 2.89 | 7.4 | 44.7 |
| 170 | 9.94 | 35.22 | 2.85 | 4.7 | 37.3 |
| 180 | 9.14 | 35.12 | 2.84 | 1.1 | 28.9 |
| 190 | 8.94 | 35.10 | 2.83 | -2.3 | 21.5 |
| 200 | 8.55 | 35.05 | 2.82 | -5.6 | 15.5 |
| 210 | 8.45 | 35.04 | 2.82 | -6.9 | 14.8 |
| 220 | 8.40 | 35.03 | 2.82 | -8.1 | 11.8 |
| 230 | 8.35 | 35.03 | 2.82 | -10.3 | 9.7 |
| 240 | 8.32 | 35.03 | 2.83 | -13.4 | 4.0 |
| 250 | 8.31 | 35.03 | 2.82 | -13.3 | -4.6 |

Table 14: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0307. Station: 2 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 27.04 | 36.14 | 4.42 | NaN | NaN |
| 10 | 26.62 | 36.14 | 4.47 | 46.2 | 219.9 |
| 20 | 26.51 | 36.13 | 4.48 | 45.9 | 219.7 |
| 30 | 25.77 | 36.19 | 4.51 | 44.6 | 218.6 |
| 40 | 24.39 | 36.33 | 4.63 | 41.4 | 215.1 |
| 50 | 23.45 | 36.40 | 4.77 | 33.5 | 202.6 |
| 60 | 22.61 | 36.49 | 4.79 | 28.4 | 194.6 |
| 70 | 22.13 | 36.49 | 4.80 | 31.0 | 188.9 |
| 80 | 21.53 | 36.47 | 4.62 | 38.6 | 184.5 |
| 90 | 20.60 | 36.46 | 4.22 | 46.6 | 173.6 |
| 100 | 19.57 | 36.39 | 3.93 | 39.9 | 157.3 |
| 110 | 18.91 | 36.34 | 3.75 | 30.7 | 150.3 |
| 120 | 18.16 | 36.32 | 3.56 | 29.0 | 138.4 |
| 130 | 17.88 | 36.36 | 3.33 | 23.2 | 127.0 |
| 140 | 16.99 | 36.26 | 3.14 | 11.2 | 119.5 |
| 150 | 16.46 | 36.18 | 3.06 | 9.3 | 117.5 |
| 160 | 15.69 | 36.06 | 3.04 | 14.6 | 115.2 |
| 170 | 14.82 | 35.92 | 3.02 | 14.5 | 106.5 |
| 180 | 14.19 | 35.82 | 3.03 | 8.4 | 95.7 |
| 190 | 13.40 | 35.71 | 2.97 | 5.5 | 87.2 |
| 200 | 13.10 | 35.68 | 2.91 | 4.1 | 82.8 |
| 210 | 12.71 | 35.62 | 2.88 | 0.9 | 77.2 |
| 220 | 12.11 | 35.52 | 2.87 | -0.3 | 72.1 |
| 230 | 11.95 | 35.50 | 2.85 | -0.9 | 71.1 |
| 240 | 11.50 | 35.43 | 2.84 | -0.2 | 73.6 |
| 250 | 10.95 | 35.35 | 2.81 | -0.2 | 72.1 |
| 260 | 10.59 | 35.30 | 2.79 | 2.2 | 69.0 |
| 270 | 10.14 | 35.25 | 2.80 | 4.6 | 60.8 |
| 280 | 9.54 | 35.18 | 2.82 | 2.8 | 51.3 |
| 290 | 9.31 | 35.15 | 2.82 | -0.6 | 45.1 |
| 300 | 8.97 | 35.11 | 2.81 | -4.0 | 41.4 |
| 350 | 8.07 | 35.01 | 2.84 | -4.6 | 32.8 |

Table 15: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0307. Station: 3 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 27.08 | 36.13 | 4.44 | NaN | NaN |
| 10 | 26.78 | 36.11 | 4.47 | 21.9 | 220.5 |
| 20 | 26.63 | 36.10 | 4.50 | 21.8 | 220.3 |
| 30 | 26.39 | 36.12 | 4.50 | 21.3 | 219.4 |
| 40 | 26.31 | 36.16 | 4.49 | 20.6 | 217.6 |
| 50 | 25.72 | 36.36 | 4.39 | 19.8 | 215.0 |
| 60 | 24.36 | 36.35 | 4.63 | 10.6 | 193.4 |
| 70 | 23.21 | 36.49 | 4.77 | 3.5 | 182.0 |
| 80 | 22.62 | 36.52 | 4.79 | 6.6 | 177.6 |
| 90 | 21.97 | 36.50 | 4.68 | 14.3 | 174.8 |
| 100 | 22.22 | 36.82 | 3.66 | 16.2 | 169.4 |
| 110 | 21.08 | 36.54 | 4.21 | 13.7 | 164.4 |
| 120 | 20.70 | 36.60 | 3.92 | 13.1 | 157.8 |
| 130 | 20.84 | 36.80 | 3.44 | 9.0 | 156.8 |
| 140 | 20.24 | 36.75 | 3.39 | 15.3 | 155.9 |
| 150 | 19.35 | 36.63 | 3.36 | 24.2 | 138.6 |
| 160 | 18.85 | 36.56 | 3.32 | 18.5 | 131.5 |
| 170 | 17.95 | 36.41 | 3.27 | 14.2 | 125.9 |
| 180 | 17.26 | 36.33 | 3.12 | 15.2 | 121.9 |
| 190 | 16.88 | 36.27 | 3.16 | 15.0 | 119.8 |
| 200 | 16.49 | 36.21 | 3.10 | 16.5 | 116.4 |
| 210 | 15.56 | 36.07 | 2.99 | 13.1 | 108.9 |
| 220 | 15.19 | 36.01 | 2.98 | 14.6 | 105.8 |
| 230 | 14.67 | 35.93 | 2.96 | 19.1 | 98.3 |
| 240 | 14.10 | 35.83 | 2.92 | 19.2 | 87.1 |
| 250 | 13.93 | 35.81 | 2.90 | 14.5 | 83.7 |
| 260 | 13.69 | 35.77 | 2.89 | 13.4 | 82.8 |
| 270 | 13.60 | 35.76 | 2.87 | 13.5 | 82.8 |
| 280 | 13.48 | 35.73 | 2.87 | 12.0 | 82.5 |
| 290 | 13.20 | 35.69 | 2.86 | 11.0 | 77.5 |
| 300 | 12.77 | 35.63 | 2.83 | 8.6 | 72.9 |
| 350 | 10.43 | 35.28 | 2.78 | 2.8 | 57.5 |
| 400 | 9.02 | 35.10 | 2.77 | 4.8 | 41.2 |
| 450 | 8.17 | 35.01 | 2.81 | 1.3 | 22.4 |
| 500 | 6.97 | 34.94 | 3.00 | 2.4 | 8.7 |

Table 16: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0307. Station: 4 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 26.83 | 36.09 | 4.50 | NaN | NaN |
| 10 | 26.67 | 36.09 | 4.50 | 12.2 | 198.3 |
| 20 | 26.60 | 36.08 | 4.50 | 12.3 | 198.5 |
| 30 | 26.45 | 36.08 | 4.51 | 12.6 | 199.2 |
| 40 | 26.38 | 36.16 | 4.49 | 13.2 | 200.2 |
| 50 | 25.82 | 36.28 | 4.38 | 10.0 | 201.5 |
| 60 | 25.57 | 36.31 | 4.27 | 6.2 | 198.3 |
| 70 | 25.10 | 36.17 | 4.44 | 5.4 | 196.1 |
| 80 | 25.15 | 36.34 | 4.24 | 6.0 | 192.2 |
| 90 | 24.67 | 36.64 | 3.86 | 9.2 | 182.3 |
| 100 | 23.60 | 36.75 | 3.73 | 8.6 | 167.3 |
| 110 | 22.96 | 36.83 | 4.09 | 6.8 | 157.5 |
| 120 | 21.71 | 36.65 | 4.07 | 7.0 | 149.0 |
| 130 | 21.31 | 36.71 | 3.71 | 8.5 | 142.2 |
| 140 | 20.97 | 36.74 | 3.54 | 12.1 | 141.1 |
| 150 | 20.45 | 36.77 | 3.36 | 13.4 | 140.7 |
| 160 | 19.36 | 36.64 | 3.32 | 10.2 | 128.5 |
| 170 | 18.95 | 36.60 | 3.38 | 6.1 | 123.8 |
| 180 | 18.63 | 36.56 | 3.37 | 7.1 | 121.4 |
| 190 | 17.84 | 36.43 | 3.37 | 7.2 | 119.3 |
| 200 | 17.48 | 36.37 | 3.26 | 3.7 | 118.1 |
| 210 | 16.89 | 36.28 | 3.17 | 2.9 | 120.0 |
| 220 | 16.61 | 36.23 | 3.07 | 1.7 | 120.5 |
| 230 | 16.36 | 36.20 | 3.11 | 1.1 | 121.0 |
| 240 | 16.03 | 36.15 | 3.24 | 2.7 | 119.9 |
| 250 | 15.71 | 36.10 | 3.24 | 5.0 | 118.7 |
| 260 | 15.47 | 36.06 | 3.21 | 5.2 | 117.4 |
| 270 | 15.04 | 35.99 | 3.18 | 6.2 | 115.7 |
| 280 | 14.89 | 35.96 | 3.16 | 8.6 | 114.2 |
| 290 | 14.70 | 35.93 | 3.14 | 11.3 | 113.8 |
| 300 | 14.47 | 35.89 | 3.11 | 15.0 | 111.3 |
| 350 | 11.68 | 35.45 | 2.83 | 4.5 | 82.0 |
| 400 | 10.43 | 35.26 | 2.75 | 6.3 | 76.7 |
| 450 | 9.54 | 35.14 | 2.74 | 6.8 | 63.9 |
| 500 | 8.63 | 35.04 | 2.74 | 7.8 | 53.5 |
| 550 | 7.94 | 34.99 | 2.82 | 3.3 | 35.6 |
| 600 | 7.63 | 34.97 | 2.87 | 2.2 | 29.9 |
| 650 | 6.69 | 34.93 | 3.06 | 10.0 | 4.6 |

Table 17: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0307. Station: 5 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 26.84 | 36.06 | 4.47 | NaN | NaN |
| 10 | 26.74 | 36.06 | 4.49 | 15.4 | 156.9 |
| 20 | 26.73 | 36.06 | 4.50 | 15.2 | 157.0 |
| 30 | 26.72 | 36.06 | 4.50 | 14.3 | 157.6 |
| 40 | 26.36 | 36.04 | 4.52 | 12.9 | 158.4 |
| 50 | 26.00 | 36.07 | 4.53 | 10.3 | 160.2 |
| 60 | 25.71 | 36.08 | 4.55 | 3.4 | 163.1 |
| 70 | 25.44 | 36.09 | 4.57 | 3.4 | 158.4 |
| 80 | 25.39 | 36.13 | 4.58 | 4.3 | 158.2 |
| 90 | 25.22 | 36.15 | 4.53 | 6.3 | 159.3 |
| 100 | 25.27 | 36.29 | 4.43 | 7.9 | 155.5 |
| 110 | 25.05 | 36.76 | 3.80 | 12.5 | 145.4 |
| 120 | 23.16 | 36.49 | 4.30 | 12.4 | 132.6 |
| 130 | 22.55 | 36.59 | 4.61 | 5.7 | 121.5 |
| 140 | 21.92 | 36.51 | 4.57 | -1.8 | 115.4 |
| 150 | 22.19 | 36.89 | 3.86 | -4.2 | 116.0 |
| 160 | 21.27 | 36.84 | 3.42 | -3.4 | 120.1 |
| 170 | 20.38 | 36.73 | 3.34 | -0.0 | 118.3 |
| 180 | 19.66 | 36.68 | 3.28 | 4.5 | 115.7 |
| 190 | 19.07 | 36.62 | 3.36 | 9.3 | 109.4 |
| 200 | 18.51 | 36.55 | 3.53 | 11.3 | 104.7 |
| 210 | 18.24 | 36.52 | 3.52 | 6.7 | 100.7 |
| 220 | 17.89 | 36.46 | 3.49 | 5.9 | 98.1 |
| 230 | 17.49 | 36.39 | 3.45 | 6.0 | 95.0 |
| 240 | 17.11 | 36.33 | 3.41 | 8.3 | 93.4 |
| 250 | 16.75 | 36.27 | 3.38 | 7.8 | 91.4 |
| 260 | 16.59 | 36.25 | 3.35 | 6.2 | 91.3 |
| 270 | 16.31 | 36.20 | 3.33 | 4.9 | 91.7 |
| 280 | 16.14 | 36.17 | 3.30 | 4.6 | 90.6 |
| 290 | 15.74 | 36.11 | 3.26 | 6.0 | 85.1 |
| 300 | 15.34 | 36.04 | 3.23 | 7.1 | 79.7 |
| 350 | 14.12 | 35.83 | 3.08 | 8.5 | 71.1 |
| 400 | 11.84 | 35.47 | 2.85 | 3.6 | 57.3 |
| 450 | 11.22 | 35.37 | 2.81 | -1.0 | 59.1 |
| 500 | 10.25 | 35.24 | 2.77 | 4.0 | 52.0 |
| 550 | 9.32 | 35.11 | 2.76 | 8.7 | 49.6 |
| 600 | 8.73 | 35.06 | 2.78 | 7.8 | 37.0 |
| 650 | 8.21 | 35.01 | 2.82 | 4.7 | 25.1 |
| 700 | 7.49 | 34.96 | 2.91 | -3.3 | 18.6 |
| 750 | NaN | NaN | NaN | -13.5 | 0.8 |

Table 18: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0307. Station: 6 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 26.86 | 35.95 | 4.51 | NaN | NaN |
| 10 | 26.87 | 35.95 | 4.52 | 2.9 | 119.6 |
| 20 | 26.87 | 35.95 | 4.52 | 2.8 | 119.6 |
| 30 | 26.87 | 35.95 | 4.52 | 2.4 | 119.4 |
| 40 | 26.87 | 35.95 | 4.53 | 1.6 | 118.9 |
| 50 | 26.82 | 35.95 | 4.53 | -3.4 | 118.6 |
| 60 | 26.50 | 35.95 | 4.53 | -9.3 | 125.3 |
| 70 | 26.37 | 35.99 | 4.43 | -7.6 | 130.6 |
| 80 | 26.08 | 36.00 | 4.40 | -0.3 | 133.2 |
| 90 | 25.51 | 36.00 | 4.58 | 7.8 | 130.2 |
| 100 | 25.19 | 36.06 | 4.52 | 12.4 | 123.9 |
| 110 | 25.24 | 36.28 | 4.19 | 8.7 | 118.7 |
| 120 | 25.34 | 36.61 | 3.92 | 4.4 | 116.6 |
| 130 | 23.43 | 36.53 | 4.14 | 1.1 | 111.2 |
| 140 | 23.61 | 36.82 | 3.68 | 1.5 | 110.0 |
| 150 | 22.72 | 36.83 | 3.56 | 2.8 | 103.3 |
| 160 | 21.79 | 36.80 | 3.44 | 1.3 | 95.5 |
| 170 | 21.39 | 36.80 | 3.46 | -2.7 | 90.6 |
| 180 | 20.86 | 36.77 | 3.45 | -7.2 | 87.2 |
| 190 | 20.42 | 36.73 | 3.44 | -10.7 | 85.6 |
| 200 | 20.04 | 36.69 | 3.45 | -12.0 | 83.6 |
| 210 | 19.61 | 36.64 | 3.44 | -11.0 | 81.7 |
| 220 | 19.42 | 36.62 | 3.46 | -10.9 | 80.9 |
| 230 | 19.20 | 36.60 | 3.46 | -9.1 | 79.9 |
| 240 | 18.86 | 36.55 | 3.46 | -5.5 | 81.4 |
| 250 | 18.80 | 36.54 | 3.47 | -2.9 | 79.0 |
| 260 | 18.47 | 36.50 | 3.46 | 4.2 | 78.8 |
| 270 | 18.15 | 36.46 | 3.47 | 8.5 | 80.7 |
| 280 | 17.72 | 36.40 | 3.46 | 9.2 | 79.2 |
| 290 | 17.28 | 36.33 | 3.46 | 9.8 | 70.0 |
| 300 | 16.95 | 36.28 | 3.43 | 9.3 | 64.6 |
| 350 | 15.10 | 35.99 | 3.20 | -6.4 | 46.1 |
| 400 | 13.91 | 35.82 | 3.19 | 1.6 | 41.3 |
| 450 | 12.57 | 35.59 | 2.92 | -4.4 | 35.5 |
| 500 | 11.21 | 35.39 | 2.83 | -0.1 | 29.8 |
| 550 | 9.79 | 35.22 | 2.79 | -6.9 | 27.0 |
| 600 | 9.44 | 35.17 | 2.78 | -5.2 | 21.1 |
| 650 | 8.97 | 35.11 | 2.79 | 5.5 | 8.7 |

Table 19: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0307. Station: 7 | | | | | |
|-------------------------------|---------------------------|---------------------|--------------------|---------------------|---------------------|
| Pressure [db] | Temperature [deg. C] | Salinity [psu] | Oxygen [ml/l] | U speed [cm/s] | V speed [cm/s] |
| 1 | 26.96 | 35.98 | 4.49 | NaN | NaN |
| 10 | 26.96 | 35.98 | 4.52 | -9.8 | 91.2 |
| 20 | 26.97 | 35.98 | 4.52 | -9.8 | 91.2 |
| 30 | 26.97 | 35.98 | 4.52 | -9.8 | 91.1 |
| 40 | 26.97 | 35.98 | 4.51 | -9.9 | 91.0 |
| 50 | 26.94 | 35.97 | 4.50 | -10.2 | 92.0 |
| 60 | 26.82 | 35.97 | 4.51 | -9.2 | 97.0 |
| 70 | 26.61 | 35.96 | 4.46 | -6.4 | 103.7 |
| 80 | 26.36 | 35.99 | 4.50 | -5.4 | 105.5 |
| 90 | 26.03 | 36.04 | 4.45 | -7.9 | 103.7 |
| 100 | 25.93 | 36.03 | 4.47 | -7.6 | 103.6 |
| 110 | 25.78 | 36.17 | 4.40 | -3.6 | 99.6 |
| 120 | 25.29 | 36.63 | 3.84 | 0.1 | 93.4 |
| 130 | 24.37 | 36.78 | 3.74 | -3.4 | 83.5 |
| 140 | 23.73 | 36.83 | 3.64 | -10.9 | 81.4 |
| 150 | 23.32 | 36.87 | 3.60 | -11.9 | 82.5 |
| 160 | 22.97 | 36.88 | 3.58 | -5.7 | 83.4 |
| 170 | 22.52 | 36.88 | 3.54 | 0.1 | 80.4 |
| 180 | 21.72 | 36.85 | 3.47 | 2.8 | 69.9 |
| 190 | 21.16 | 36.81 | 3.43 | 1.9 | 64.7 |
| 200 | 20.87 | 36.80 | 3.35 | 1.3 | 61.2 |
| 210 | 20.71 | 36.78 | 3.35 | -3.5 | 61.9 |
| 220 | 20.42 | 36.75 | 3.38 | -10.2 | 62.4 |
| 230 | 20.01 | 36.71 | 3.43 | -9.7 | 61.7 |
| 240 | 19.74 | 36.68 | 3.41 | -4.8 | 62.0 |
| 250 | 19.27 | 36.63 | 3.46 | -4.9 | 64.7 |
| 260 | 19.25 | 36.62 | 3.45 | -2.1 | 65.6 |
| 270 | 18.68 | 36.56 | 3.52 | 2.9 | 63.0 |
| 280 | 18.42 | 36.53 | 3.53 | 5.3 | 61.4 |
| 290 | 17.85 | 36.44 | 3.46 | 6.1 | 57.8 |
| 300 | 17.60 | 36.40 | 3.43 | 4.9 | 53.3 |
| 350 | 16.70 | 36.27 | 3.47 | 2.7 | 47.3 |
| 400 | 15.65 | 36.12 | 3.47 | -7.7 | 41.9 |
| 450 | 13.89 | 35.83 | 3.11 | -7.8 | 27.6 |
| 500 | 12.75 | 35.64 | 2.94 | -11.0 | 20.2 |
| 550 | 11.16 | 35.42 | 2.84 | -4.5 | 11.7 |
| 600 | 10.25 | 35.30 | 2.79 | -1.1 | 7.3 |

Table 20: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0307. Station: 8 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 27.04 | 35.98 | 4.49 | NaN | NaN |
| 10 | 27.04 | 35.98 | 4.50 | -11.8 | 57.4 |
| 20 | 27.04 | 35.98 | 4.50 | -11.8 | 57.4 |
| 30 | 27.05 | 35.98 | 4.51 | -12.1 | 57.2 |
| 40 | 27.04 | 35.98 | 4.51 | -13.9 | 58.3 |
| 50 | 27.03 | 35.97 | 4.51 | -17.9 | 58.5 |
| 60 | 27.00 | 35.97 | 4.50 | -23.5 | 59.3 |
| 70 | 26.86 | 35.97 | 4.50 | -27.2 | 62.8 |
| 80 | 26.63 | 35.96 | 4.46 | -26.7 | 67.5 |
| 90 | 26.46 | 35.98 | 4.40 | -24.4 | 70.7 |
| 100 | 26.36 | 36.07 | 4.33 | -15.5 | 72.9 |
| 110 | 26.09 | 36.36 | 4.04 | -9.1 | 71.3 |
| 120 | 26.03 | 36.42 | 3.96 | -11.4 | 69.7 |
| 130 | 25.48 | 36.63 | 3.85 | -10.5 | 70.9 |
| 140 | 24.15 | 36.74 | 3.82 | -8.5 | 67.7 |
| 150 | 23.94 | 36.79 | 3.83 | -10.0 | 65.4 |
| 160 | 23.50 | 36.86 | 3.66 | -18.0 | 65.0 |
| 170 | 23.31 | 36.88 | 3.60 | -19.5 | 62.0 |
| 180 | 22.70 | 36.88 | 3.54 | -18.0 | 60.0 |
| 190 | 22.09 | 36.89 | 3.50 | -17.8 | 63.4 |
| 200 | 21.73 | 36.87 | 3.46 | -11.0 | 66.5 |
| 210 | 21.41 | 36.85 | 3.43 | -7.8 | 69.8 |
| 220 | 21.02 | 36.82 | 3.41 | -7.9 | 67.0 |
| 230 | 20.39 | 36.77 | 3.46 | -11.5 | 58.0 |
| 240 | 19.56 | 36.70 | 3.60 | -14.1 | 54.1 |
| 250 | 19.40 | 36.68 | 3.82 | -16.5 | 54.9 |
| 260 | 19.21 | 36.66 | 3.86 | -17.2 | 56.8 |
| 270 | 18.91 | 36.62 | 3.61 | -20.3 | 56.9 |
| 280 | 18.83 | 36.61 | 3.55 | -21.2 | 58.1 |
| 290 | 18.65 | 36.58 | 3.61 | -17.9 | 60.9 |
| 300 | 18.38 | 36.55 | 3.73 | -17.3 | 59.7 |
| 350 | 17.43 | 36.42 | 3.74 | -13.7 | 53.4 |
| 400 | 15.84 | 36.16 | 3.36 | -14.7 | 29.3 |
| 450 | 15.19 | 36.05 | 3.23 | -9.4 | 22.7 |

Table 21: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0320. Station: 0 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 29.62 | 36.03 | 4.02 | NaN | NaN |
| 10 | 29.06 | 36.08 | 4.05 | -11.4 | 216.7 |
| 20 | 28.88 | 36.20 | 4.07 | -11.1 | 216.7 |
| 30 | 28.18 | 36.17 | 4.16 | -9.7 | 215.8 |
| 40 | 25.88 | 36.28 | 4.52 | -7.3 | 213.6 |
| 50 | 20.00 | 36.16 | 4.33 | 4.3 | 173.2 |
| 60 | 17.40 | 35.95 | 3.92 | 6.5 | 131.6 |
| 70 | 14.61 | 35.74 | 3.44 | 5.0 | 91.8 |
| 80 | 12.26 | 35.53 | 3.05 | 3.6 | 59.2 |
| 90 | 10.18 | 35.30 | 2.87 | 4.0 | 36.2 |
| 100 | 8.68 | 35.11 | 2.74 | -0.6 | 21.5 |
| 110 | 8.27 | 35.06 | 2.76 | -5.4 | 12.5 |
| 120 | 8.09 | 35.04 | 2.75 | -9.5 | 8.3 |
| 130 | 7.86 | 35.02 | 2.77 | -10.5 | 4.4 |
| 140 | NaN | NaN | NaN | -8.4 | 4.3 |

Table 22: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0320. Station: 1 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 28.82 | 36.27 | 4.05 | NaN | NaN |
| 10 | 28.71 | 36.27 | 4.07 | 0.8 | 221.2 |
| 20 | 28.67 | 36.27 | 4.08 | 0.8 | 221.1 |
| 30 | 28.60 | 36.26 | 4.08 | 0.7 | 221.0 |
| 40 | 28.15 | 36.28 | 4.16 | -1.0 | 222.4 |
| 50 | 26.21 | 36.47 | 4.25 | -2.2 | 225.3 |
| 60 | 24.07 | 36.39 | 4.58 | 3.1 | 211.9 |
| 70 | 22.06 | 36.42 | 4.55 | 10.0 | 198.3 |
| 80 | 20.68 | 36.37 | 4.57 | 16.5 | 184.1 |
| 90 | 19.76 | 36.31 | 4.23 | 14.8 | 167.5 |
| 100 | 18.18 | 36.20 | 3.86 | 12.1 | 137.9 |
| 110 | 16.11 | 36.07 | 3.20 | 16.1 | 108.9 |
| 120 | 14.54 | 35.85 | 3.10 | 14.2 | 85.8 |
| 130 | 13.30 | 35.69 | 3.05 | 8.5 | 66.2 |
| 140 | 12.07 | 35.53 | 3.02 | 5.1 | 52.0 |
| 150 | 11.04 | 35.40 | 2.95 | 0.3 | 38.7 |
| 160 | 9.98 | 35.27 | 2.89 | -2.8 | 24.4 |
| 170 | 9.02 | 35.16 | 2.83 | -4.6 | 14.5 |
| 180 | 8.32 | 35.07 | 2.77 | -7.2 | 10.4 |
| 190 | 8.21 | 35.05 | 2.76 | -11.0 | 11.3 |
| 200 | 7.99 | 35.03 | 2.77 | -10.2 | 10.7 |
| 210 | 7.84 | 35.01 | 2.78 | -10.8 | 5.7 |
| 220 | 7.74 | 35.00 | 2.78 | -10.1 | 5.1 |
| 230 | 7.58 | 34.98 | 2.79 | -11.7 | 8.8 |
| 240 | 7.52 | 34.97 | 2.78 | -9.5 | 22.1 |
| 250 | 7.52 | 34.97 | 2.78 | NaN | NaN |

Table 23: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0320. Station: 2 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 28.76 | 36.19 | 4.03 | NaN | NaN |
| 10 | 28.70 | 36.20 | 4.05 | -4.2 | 222.1 |
| 20 | 28.59 | 36.20 | 4.06 | -4.1 | 222.0 |
| 30 | 28.50 | 36.27 | 4.07 | -3.8 | 221.7 |
| 40 | 27.42 | 36.34 | 4.13 | -2.6 | 220.9 |
| 50 | 26.86 | 36.41 | 4.09 | 8.3 | 214.3 |
| 60 | 26.20 | 36.47 | 4.10 | 12.8 | 210.6 |
| 70 | 25.16 | 36.56 | 4.04 | 15.2 | 203.2 |
| 80 | 23.90 | 36.59 | 3.80 | 14.2 | 189.5 |
| 90 | 21.76 | 36.30 | 4.75 | 8.0 | 181.1 |
| 100 | 20.91 | 36.29 | 4.66 | 1.4 | 175.8 |
| 110 | 20.43 | 36.33 | 4.59 | 4.5 | 171.8 |
| 120 | 19.88 | 36.41 | 4.19 | 5.2 | 160.7 |
| 130 | 19.13 | 36.39 | 3.51 | 7.4 | 148.9 |
| 140 | 18.76 | 36.47 | 3.18 | 7.7 | 143.7 |
| 150 | 18.18 | 36.43 | 3.02 | 9.9 | 139.6 |
| 160 | 17.22 | 36.31 | 3.00 | 15.1 | 128.8 |
| 170 | 16.55 | 36.23 | 2.99 | 15.3 | 116.0 |
| 180 | 15.66 | 36.09 | 2.96 | 13.5 | 104.6 |
| 190 | 14.42 | 35.87 | 2.92 | 12.8 | 95.4 |
| 200 | 13.21 | 35.69 | 2.88 | 11.8 | 88.3 |
| 210 | 12.23 | 35.55 | 2.83 | 4.9 | 75.8 |
| 220 | 11.31 | 35.43 | 2.77 | 2.9 | 67.1 |
| 230 | 10.83 | 35.36 | 2.74 | 4.6 | 58.2 |
| 240 | 10.36 | 35.30 | 2.71 | 5.2 | 48.3 |
| 250 | 10.04 | 35.25 | 2.70 | 5.3 | 42.5 |
| 260 | 9.57 | 35.20 | 2.70 | 0.2 | 32.8 |
| 270 | 9.33 | 35.17 | 2.71 | -1.7 | 27.3 |
| 280 | 8.49 | 35.09 | 2.77 | -1.6 | 20.8 |
| 290 | 8.38 | 35.08 | 2.79 | -1.9 | 17.8 |
| 300 | 8.34 | 35.08 | 2.80 | -4.1 | 15.6 |
| 350 | 6.99 | 34.95 | 2.92 | -2.0 | 10.6 |

Table 24: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0320. Station: 3 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 28.84 | 36.21 | 4.01 | NaN | NaN |
| 10 | 28.80 | 36.20 | 4.02 | -5.5 | 207.6 |
| 20 | 28.70 | 36.20 | 4.04 | -5.5 | 207.7 |
| 30 | 28.53 | 36.20 | 4.05 | -5.7 | 207.7 |
| 40 | 27.71 | 36.26 | 4.14 | -5.8 | 207.7 |
| 50 | 27.32 | 36.34 | 4.16 | -8.8 | 203.6 |
| 60 | 26.91 | 36.37 | 4.08 | -4.0 | 203.9 |
| 70 | 26.45 | 36.45 | 4.09 | -2.4 | 199.6 |
| 80 | 25.77 | 36.51 | 3.98 | 2.0 | 192.2 |
| 90 | 25.07 | 36.65 | 3.79 | 10.3 | 183.8 |
| 100 | 23.93 | 36.68 | 3.61 | 9.8 | 177.0 |
| 110 | 23.38 | 36.78 | 3.72 | -0.5 | 176.8 |
| 120 | 23.16 | 36.90 | 3.43 | 2.2 | 177.9 |
| 130 | 21.93 | 36.78 | 3.39 | 10.6 | 171.5 |
| 140 | 20.81 | 36.67 | 3.38 | 17.0 | 160.0 |
| 150 | 19.30 | 36.33 | 3.67 | 16.4 | 151.2 |
| 160 | 19.15 | 36.42 | 3.54 | 10.8 | 144.4 |
| 170 | 18.69 | 36.45 | 3.14 | 5.9 | 140.2 |
| 180 | 18.07 | 36.41 | 2.97 | 3.6 | 139.3 |
| 190 | 17.66 | 36.38 | 2.97 | 6.6 | 135.6 |
| 200 | 17.12 | 36.30 | 2.95 | 11.9 | 124.7 |
| 210 | 16.65 | 36.24 | 2.93 | 14.3 | 115.1 |
| 220 | 16.05 | 36.15 | 2.88 | 11.4 | 111.3 |
| 230 | 15.57 | 36.08 | 2.90 | 8.0 | 108.4 |
| 240 | 15.21 | 36.02 | 2.89 | 7.1 | 106.5 |
| 250 | 14.91 | 35.98 | 2.88 | 1.6 | 106.9 |
| 260 | 14.54 | 35.92 | 2.88 | -0.9 | 110.3 |
| 270 | 14.30 | 35.88 | 2.86 | -2.3 | 111.9 |
| 280 | 13.76 | 35.79 | 2.82 | 2.2 | 109.6 |
| 290 | 13.25 | 35.71 | 2.77 | 8.6 | 101.4 |
| 300 | 12.80 | 35.64 | 2.76 | 11.9 | 88.2 |
| 350 | 10.17 | 35.26 | 2.68 | 6.0 | 56.6 |
| 400 | 8.16 | 35.01 | 2.67 | 0.7 | 38.6 |
| 450 | 7.73 | 35.00 | 2.80 | -6.2 | 20.5 |
| 500 | 6.64 | 34.92 | 2.95 | 1.3 | 4.1 |

Table 25: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0320. Station: 4 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 28.89 | 36.20 | 4.04 | NaN | NaN |
| 10 | 28.85 | 36.20 | 4.06 | -2.7 | 189.5 |
| 20 | 28.79 | 36.22 | 4.07 | -2.7 | 189.6 |
| 30 | 28.30 | 36.20 | 4.09 | -2.7 | 190.1 |
| 40 | 28.08 | 36.23 | 4.16 | -2.8 | 191.7 |
| 50 | 27.98 | 36.27 | 4.16 | -5.5 | 194.5 |
| 60 | 27.62 | 36.27 | 4.16 | -6.1 | 192.4 |
| 70 | 27.06 | 36.26 | 4.19 | -3.9 | 191.3 |
| 80 | 26.64 | 36.29 | 4.13 | -2.6 | 185.4 |
| 90 | 25.94 | 36.52 | 3.99 | -6.9 | 183.0 |
| 100 | 25.48 | 36.56 | 3.79 | -5.0 | 186.1 |
| 110 | 24.86 | 36.71 | 3.68 | -1.8 | 176.3 |
| 120 | 23.86 | 36.82 | 3.55 | -3.2 | 166.9 |
| 130 | 22.29 | 36.82 | 3.44 | -4.3 | 160.5 |
| 140 | 21.21 | 36.66 | 3.57 | -2.8 | 154.9 |
| 150 | 20.73 | 36.79 | 3.34 | -1.4 | 147.6 |
| 160 | 19.91 | 36.72 | 3.31 | 0.0 | 138.3 |
| 170 | 19.35 | 36.66 | 3.32 | 0.6 | 131.2 |
| 180 | 18.84 | 36.61 | 3.36 | 1.0 | 127.0 |
| 190 | 18.56 | 36.57 | 3.41 | 3.0 | 123.6 |
| 200 | 18.16 | 36.51 | 3.42 | 4.1 | 122.9 |
| 210 | 17.73 | 36.44 | 3.34 | 4.0 | 125.3 |
| 220 | 17.59 | 36.42 | 3.35 | 8.5 | 125.8 |
| 230 | 16.81 | 36.28 | 3.14 | 12.0 | 118.8 |
| 240 | 16.43 | 36.21 | 3.00 | 13.0 | 108.2 |
| 250 | 15.99 | 36.14 | 2.92 | 7.6 | 98.8 |
| 260 | 15.40 | 36.05 | 2.88 | 4.9 | 97.2 |
| 270 | 14.65 | 35.93 | 2.79 | 3.9 | 95.2 |
| 280 | 14.35 | 35.88 | 2.79 | 2.1 | 94.1 |
| 290 | 13.93 | 35.82 | 2.83 | 0.6 | 92.6 |
| 300 | 13.70 | 35.78 | 2.85 | 1.6 | 92.2 |
| 350 | 11.99 | 35.50 | 2.74 | 7.3 | 86.4 |
| 400 | 10.96 | 35.34 | 2.68 | 9.2 | 83.7 |
| 450 | 9.14 | 35.11 | 2.63 | 1.3 | 75.0 |
| 500 | 7.82 | 34.97 | 2.70 | 4.5 | 49.4 |
| 550 | 7.37 | 34.94 | 2.77 | 3.5 | 35.9 |
| 600 | 6.88 | 34.94 | 2.95 | -0.5 | 14.7 |

Table 26: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0320. Station: 5 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 28.89 | 36.14 | 4.06 | NaN | NaN |
| 10 | 28.97 | 36.25 | 4.03 | 2.0 | 158.0 |
| 20 | 28.92 | 36.24 | 4.04 | 2.0 | 158.1 |
| 30 | 28.86 | 36.24 | 4.05 | 1.8 | 158.6 |
| 40 | 28.22 | 36.24 | 4.11 | 1.4 | 159.6 |
| 50 | 28.10 | 36.26 | 4.15 | -0.9 | 167.5 |
| 60 | 27.92 | 36.28 | 4.15 | 2.2 | 167.9 |
| 70 | 27.55 | 36.31 | 4.12 | 4.9 | 166.6 |
| 80 | 27.03 | 36.37 | 4.09 | -0.9 | 164.6 |
| 90 | 26.40 | 36.43 | 3.93 | -5.5 | 161.4 |
| 100 | 25.88 | 36.51 | 3.87 | -6.1 | 158.6 |
| 110 | 25.36 | 36.64 | 3.73 | -3.8 | 151.0 |
| 120 | 24.32 | 36.74 | 3.62 | -5.7 | 141.7 |
| 130 | 24.00 | 36.88 | 3.58 | -9.8 | 133.0 |
| 140 | 23.36 | 36.88 | 3.51 | -13.2 | 126.7 |
| 150 | 22.74 | 36.86 | 3.43 | -17.8 | 124.8 |
| 160 | 22.23 | 36.85 | 3.46 | -15.8 | 121.7 |
| 170 | 21.33 | 36.75 | 3.46 | -8.2 | 118.5 |
| 180 | 20.91 | 36.81 | 3.42 | -3.9 | 115.4 |
| 190 | 20.19 | 36.74 | 3.33 | -1.8 | 111.3 |
| 200 | 19.69 | 36.70 | 3.34 | -4.2 | 106.8 |
| 210 | 19.24 | 36.65 | 3.37 | -9.3 | 104.7 |
| 220 | 18.80 | 36.60 | 3.40 | -13.2 | 103.7 |
| 230 | 18.60 | 36.57 | 3.41 | -10.8 | 103.1 |
| 240 | 18.25 | 36.52 | 3.41 | -10.4 | 102.2 |
| 250 | 17.76 | 36.44 | 3.41 | -6.0 | 100.2 |
| 260 | 17.36 | 36.38 | 3.38 | -0.0 | 99.6 |
| 270 | 17.02 | 36.32 | 3.34 | -0.6 | 98.5 |
| 280 | 16.68 | 36.27 | 3.35 | 1.6 | 100.6 |
| 290 | 16.32 | 36.21 | 3.30 | 2.0 | 98.4 |
| 300 | 15.96 | 36.15 | 3.26 | 2.0 | 94.9 |
| 350 | 13.76 | 35.78 | 2.94 | 8.7 | 85.2 |
| 400 | 12.48 | 35.58 | 2.80 | 0.1 | 78.8 |
| 450 | 11.15 | 35.37 | 2.69 | 1.9 | 64.6 |
| 500 | 10.04 | 35.22 | 2.65 | 7.5 | 65.5 |
| 550 | 8.59 | 35.04 | 2.66 | 11.6 | 45.8 |
| 600 | 7.45 | 34.96 | 2.83 | 7.8 | 27.9 |
| 650 | 6.94 | 34.93 | 2.93 | 0.9 | 19.8 |
| 700 | 6.92 | 34.92 | 2.94 | 3.3 | 13.6 |
| 750 | NaN | NaN | NaN | -11.9 | 4.4 |

Table 27: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0320. Station: 6 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 29.05 | 36.27 | 3.99 | NaN | NaN |
| 10 | 29.05 | 36.27 | 3.98 | -6.9 | 131.2 |
| 20 | 29.04 | 36.26 | 3.99 | -6.9 | 131.3 |
| 30 | 28.82 | 36.25 | 4.02 | -7.0 | 131.5 |
| 40 | 28.48 | 36.24 | 4.08 | -7.0 | 132.1 |
| 50 | 27.54 | 36.24 | 4.12 | -6.9 | 136.2 |
| 60 | 27.14 | 36.29 | 4.09 | -10.7 | 133.8 |
| 70 | 27.03 | 36.30 | 4.03 | -5.6 | 129.4 |
| 80 | 26.72 | 36.33 | 3.97 | -2.0 | 129.3 |
| 90 | 26.40 | 36.33 | 3.96 | -0.1 | 130.6 |
| 100 | 26.09 | 36.42 | 3.85 | 7.2 | 131.3 |
| 110 | 25.85 | 36.47 | 3.81 | 10.2 | 129.7 |
| 120 | 25.41 | 36.58 | 3.74 | 0.6 | 123.5 |
| 130 | 25.00 | 36.68 | 3.63 | -5.5 | 120.5 |
| 140 | 24.14 | 36.79 | 3.55 | -3.2 | 116.2 |
| 150 | 24.07 | 36.81 | 3.53 | -3.4 | 110.7 |
| 160 | 23.63 | 36.86 | 3.48 | -8.2 | 109.2 |
| 170 | 22.31 | 36.88 | 3.42 | -10.0 | 108.7 |
| 180 | 22.18 | 36.88 | 3.38 | -5.1 | 106.1 |
| 190 | 21.65 | 36.87 | 3.36 | -4.5 | 95.3 |
| 200 | 20.72 | 36.81 | 3.33 | -7.7 | 87.5 |
| 210 | 19.93 | 36.73 | 3.35 | -9.1 | 84.8 |
| 220 | 19.62 | 36.69 | 3.35 | -9.0 | 78.8 |
| 230 | 19.42 | 36.67 | 3.37 | -8.0 | 73.5 |
| 240 | 18.77 | 36.59 | 3.41 | -8.5 | 73.4 |
| 250 | 18.45 | 36.55 | 3.42 | -7.6 | 72.6 |
| 260 | 18.27 | 36.52 | 3.43 | -7.7 | 69.3 |
| 270 | 17.89 | 36.46 | 3.41 | -7.5 | 69.5 |
| 280 | 17.53 | 36.41 | 3.41 | -6.4 | 71.9 |
| 290 | 17.17 | 36.35 | 3.37 | -6.8 | 72.9 |
| 300 | 16.86 | 36.30 | 3.36 | -8.0 | 72.4 |
| 350 | 15.66 | 36.13 | 3.56 | -1.6 | 63.5 |
| 400 | 13.60 | 35.76 | 2.97 | 4.0 | 50.8 |
| 450 | 12.15 | 35.53 | 2.78 | 5.4 | 48.4 |
| 500 | 11.21 | 35.38 | 2.72 | 3.5 | 36.0 |
| 550 | 10.90 | 35.33 | 2.69 | -5.0 | 29.8 |
| 600 | 10.08 | 35.22 | 2.66 | -7.8 | 12.0 |
| 650 | NaN | NaN | NaN | 0.3 | -2.3 |

Table 28: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0320. Station: 7 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 28.89 | 36.28 | 4.02 | NaN | NaN |
| 10 | 28.89 | 36.29 | 4.02 | -14.5 | 94.1 |
| 20 | 28.76 | 36.27 | 4.04 | -14.4 | 94.0 |
| 30 | 28.46 | 36.23 | 4.08 | -14.2 | 93.8 |
| 40 | 28.31 | 36.23 | 4.10 | -14.0 | 93.5 |
| 50 | 27.92 | 36.23 | 4.11 | -12.4 | 91.6 |
| 60 | 27.55 | 36.30 | 4.09 | -5.5 | 92.9 |
| 70 | 27.38 | 36.37 | 4.05 | -6.0 | 87.2 |
| 80 | 27.05 | 36.36 | 4.02 | -3.1 | 85.5 |
| 90 | 26.58 | 36.34 | 3.98 | 0.4 | 88.0 |
| 100 | 26.50 | 36.38 | 3.91 | 2.3 | 89.0 |
| 110 | 26.25 | 36.43 | 3.83 | -1.4 | 89.6 |
| 120 | 25.88 | 36.48 | 3.80 | -4.0 | 91.1 |
| 130 | 25.76 | 36.54 | 3.77 | -7.6 | 89.8 |
| 140 | 25.19 | 36.62 | 3.68 | -9.5 | 86.9 |
| 150 | 24.35 | 36.78 | 3.57 | -5.1 | 83.0 |
| 160 | 23.80 | 36.85 | 3.51 | -1.4 | 75.9 |
| 170 | 23.62 | 36.87 | 3.49 | -6.2 | 73.4 |
| 180 | 22.38 | 36.89 | 3.44 | -12.6 | 74.4 |
| 190 | 21.32 | 36.84 | 3.38 | -12.3 | 71.6 |
| 200 | 21.01 | 36.83 | 3.35 | -12.5 | 66.0 |
| 210 | 20.78 | 36.82 | 3.34 | -13.8 | 67.6 |
| 220 | 20.16 | 36.75 | 3.36 | -13.0 | 71.2 |
| 230 | 19.83 | 36.72 | 3.35 | -10.5 | 73.3 |
| 240 | 19.55 | 36.69 | 3.37 | -9.5 | 78.9 |
| 250 | 19.03 | 36.62 | 3.39 | -13.4 | 82.8 |
| 260 | 18.71 | 36.59 | 3.48 | -16.5 | 86.9 |
| 270 | 18.63 | 36.58 | 3.58 | -16.1 | 85.5 |
| 280 | 18.41 | 36.54 | 3.49 | -15.0 | 79.4 |
| 290 | 18.16 | 36.50 | 3.47 | -14.9 | 76.7 |
| 300 | 18.00 | 36.48 | 3.50 | -13.6 | 78.0 |
| 350 | 16.33 | 36.21 | 3.33 | -7.6 | 54.6 |
| 400 | 15.54 | 36.08 | 3.23 | -2.2 | 41.6 |
| 450 | 14.32 | 35.87 | 3.05 | 1.5 | 27.7 |
| 500 | 12.79 | 35.62 | 2.89 | 0.0 | 7.4 |
| 550 | 12.15 | 35.54 | 2.79 | -3.3 | 5.4 |
| 600 | NaN | NaN | NaN | -9.0 | -1.3 |

Table 29: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0320. Station: 8 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 28.76 | 36.27 | 4.06 | NaN | NaN |
| 10 | 28.77 | 36.27 | 4.06 | -11.1 | 40.0 |
| 20 | 28.77 | 36.27 | 4.07 | -11.1 | 40.0 |
| 30 | 28.77 | 36.27 | 4.07 | -11.5 | 40.0 |
| 40 | 28.73 | 36.26 | 4.07 | -12.9 | 39.3 |
| 50 | 28.54 | 36.25 | 4.10 | -21.0 | 33.6 |
| 60 | 27.48 | 36.33 | 4.08 | -15.2 | 35.5 |
| 70 | 27.46 | 36.38 | 4.05 | -0.7 | 41.0 |
| 80 | 27.23 | 36.40 | 4.05 | 10.4 | 43.8 |
| 90 | 26.66 | 36.35 | 3.95 | 6.8 | 43.6 |
| 100 | 26.41 | 36.40 | 3.92 | -6.4 | 47.3 |
| 110 | 26.22 | 36.45 | 4.06 | -16.3 | 54.4 |
| 120 | 25.80 | 36.53 | 4.17 | -12.4 | 62.1 |
| 130 | 25.34 | 36.60 | 4.17 | -11.3 | 62.6 |
| 140 | 25.12 | 36.64 | 4.17 | -14.8 | 61.5 |
| 150 | 24.61 | 36.69 | 4.11 | -25.4 | 63.1 |
| 160 | 24.05 | 36.73 | 4.07 | -27.4 | 67.1 |
| 170 | 22.71 | 36.79 | 4.06 | -18.4 | 68.1 |
| 180 | 22.02 | 36.81 | 4.13 | -18.4 | 66.7 |
| 190 | 21.14 | 36.79 | 4.14 | -28.7 | 61.2 |
| 200 | 20.70 | 36.77 | 4.16 | -33.9 | 60.1 |
| 210 | 20.40 | 36.75 | 4.16 | -31.8 | 61.2 |
| 220 | 19.78 | 36.71 | 4.09 | -27.9 | 57.8 |
| 230 | 19.73 | 36.70 | 4.08 | -26.9 | 57.3 |
| 240 | 19.66 | 36.70 | 4.08 | -26.1 | 58.6 |
| 250 | 19.30 | 36.67 | 4.08 | -24.1 | 58.2 |
| 260 | 19.07 | 36.63 | 3.69 | -19.7 | 56.0 |
| 270 | 19.00 | 36.63 | 3.75 | -16.7 | 53.1 |
| 280 | 18.95 | 36.62 | 3.79 | -9.1 | 52.6 |
| 290 | 18.75 | 36.60 | 3.76 | -8.6 | 52.1 |
| 300 | 18.65 | 36.59 | 3.93 | -9.9 | 50.7 |
| 350 | 17.71 | 36.47 | 3.97 | -6.1 | 44.0 |
| 400 | 16.33 | 36.26 | 3.84 | -2.1 | 24.5 |
| 450 | 15.62 | 36.14 | 3.69 | -2.2 | 5.4 |

Table 30: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0327. Station: 0 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 28.94 | 36.01 | 4.36 | NaN | NaN |
| 10 | 28.95 | 36.02 | 4.37 | 3.3 | 74.4 |
| 20 | 28.95 | 36.02 | 4.37 | 3.2 | 74.1 |
| 30 | 29.01 | 36.04 | 4.36 | 3.1 | 73.0 |
| 40 | 29.12 | 36.11 | 4.37 | 3.1 | 71.6 |
| 50 | 29.01 | 36.24 | 4.38 | 5.9 | 71.2 |
| 60 | 28.80 | 36.29 | 4.40 | 4.4 | 69.4 |
| 70 | 28.36 | 36.31 | 4.45 | 2.8 | 64.8 |
| 80 | 26.22 | 36.45 | 4.53 | -0.7 | 60.4 |
| 90 | 25.79 | 36.49 | 4.47 | -4.5 | 53.0 |
| 100 | 25.15 | 36.49 | 4.57 | -4.4 | 41.8 |
| 110 | 23.57 | 36.43 | 4.40 | -7.5 | 33.8 |
| 120 | 22.58 | 36.38 | 4.17 | -7.7 | 21.3 |
| 130 | 21.25 | 36.42 | 3.94 | -4.1 | 17.7 |
| 140 | NaN | NaN | NaN | -0.6 | 15.5 |

Table 31: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0327. Station: 1 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 29.25 | 36.13 | 4.34 | NaN | NaN |
| 10 | 29.26 | 36.13 | 4.35 | -3.0 | 77.9 |
| 20 | 29.26 | 36.13 | 4.35 | -2.7 | 78.0 |
| 30 | 29.26 | 36.13 | 4.35 | -1.8 | 78.2 |
| 40 | 29.25 | 36.13 | 4.35 | 0.0 | 78.5 |
| 50 | 29.12 | 36.13 | 4.37 | 6.8 | 74.4 |
| 60 | 28.85 | 36.22 | 4.41 | 8.6 | 72.2 |
| 70 | 28.40 | 36.26 | 4.43 | 4.1 | 78.4 |
| 80 | 26.84 | 36.33 | 4.57 | 5.2 | 84.1 |
| 90 | 25.93 | 36.45 | 4.59 | -1.7 | 75.1 |
| 100 | 25.19 | 36.50 | 4.54 | -7.5 | 67.2 |
| 110 | 24.19 | 36.55 | 4.55 | -6.4 | 65.5 |
| 120 | 23.36 | 36.57 | 4.24 | -8.3 | 61.8 |
| 130 | 22.79 | 36.59 | 4.02 | -10.6 | 62.0 |
| 140 | 22.12 | 36.54 | 4.03 | -11.5 | 60.6 |
| 150 | 21.21 | 36.42 | 3.86 | -8.3 | 59.5 |
| 160 | 20.59 | 36.43 | 3.80 | -4.6 | 61.2 |
| 170 | 20.19 | 36.47 | 3.57 | -0.2 | 66.1 |
| 180 | 19.45 | 36.49 | 3.37 | 3.3 | 70.6 |
| 190 | 18.68 | 36.41 | 3.35 | 3.3 | 66.0 |
| 200 | 17.99 | 36.36 | 3.28 | 4.3 | 55.3 |
| 210 | 17.19 | 36.24 | 3.21 | 8.0 | 42.7 |
| 220 | 16.49 | 36.12 | 3.19 | 7.5 | 30.3 |
| 230 | 15.76 | 36.03 | 3.13 | 0.6 | 24.0 |
| 240 | NaN | NaN | NaN | -5.8 | 17.5 |
| 250 | NaN | NaN | NaN | -5.4 | 10.4 |

Table 32: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0327. Station: 2 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 29.07 | 36.06 | 4.33 | NaN | NaN |
| 10 | 29.07 | 36.06 | 4.36 | -5.9 | 105.6 |
| 20 | 29.07 | 36.06 | 4.36 | -5.8 | 105.6 |
| 30 | 29.08 | 36.06 | 4.36 | -5.5 | 105.5 |
| 40 | 29.09 | 36.06 | 4.36 | -5.0 | 105.3 |
| 50 | 29.06 | 36.17 | 4.37 | 0.9 | 95.8 |
| 60 | 28.89 | 36.22 | 4.41 | -4.4 | 95.8 |
| 70 | 28.01 | 36.31 | 4.45 | -5.6 | 96.6 |
| 80 | 27.26 | 36.38 | 4.36 | -0.3 | 97.6 |
| 90 | 26.64 | 36.43 | 4.28 | 0.8 | 99.9 |
| 100 | 25.48 | 36.45 | 4.56 | -1.9 | 98.8 |
| 110 | 24.39 | 36.53 | 4.54 | 1.8 | 91.5 |
| 120 | 24.01 | 36.64 | 4.17 | 1.9 | 92.5 |
| 130 | 23.68 | 36.71 | 3.96 | 0.2 | 91.4 |
| 140 | 22.74 | 36.66 | 3.94 | 1.4 | 85.4 |
| 150 | 21.80 | 36.68 | 3.71 | 3.0 | 87.6 |
| 160 | 21.31 | 36.66 | 3.69 | 1.6 | 91.6 |
| 170 | 20.93 | 36.64 | 3.60 | -2.8 | 91.2 |
| 180 | 20.41 | 36.63 | 3.47 | -3.6 | 92.6 |
| 190 | 19.45 | 36.55 | 3.30 | -2.0 | 99.8 |
| 200 | 18.61 | 36.46 | 3.23 | -3.2 | 104.1 |
| 210 | 18.01 | 36.40 | 3.19 | -0.4 | 100.7 |
| 220 | 17.86 | 36.39 | 3.18 | -0.3 | 96.9 |
| 230 | 17.47 | 36.34 | 3.22 | -0.2 | 93.3 |
| 240 | 17.29 | 36.32 | 3.24 | 0.5 | 90.1 |
| 250 | 16.80 | 36.25 | 3.26 | -0.6 | 91.9 |
| 260 | 16.43 | 36.20 | 3.25 | -0.3 | 90.7 |
| 270 | 15.20 | 36.00 | 3.23 | 1.2 | 82.2 |
| 280 | 13.94 | 35.81 | 3.10 | 6.2 | 71.8 |
| 290 | 13.47 | 35.74 | 3.05 | 10.1 | 68.5 |
| 300 | 13.40 | 35.73 | 3.05 | 10.2 | 67.5 |
| 350 | 9.50 | 35.19 | 2.90 | 1.9 | 16.1 |

Table 33: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0327. Station: 3 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 29.34 | 36.15 | 4.32 | NaN | NaN |
| 10 | 29.34 | 36.15 | 4.34 | -0.1 | 111.4 |
| 20 | 29.34 | 36.15 | 4.33 | 0.1 | 111.4 |
| 30 | 29.34 | 36.15 | 4.34 | 1.1 | 111.2 |
| 40 | 29.28 | 36.15 | 4.34 | 2.5 | 110.8 |
| 50 | 28.46 | 36.19 | 4.45 | 5.2 | 110.0 |
| 60 | 28.24 | 36.22 | 4.41 | 11.5 | 106.1 |
| 70 | 28.12 | 36.24 | 4.40 | 10.7 | 106.4 |
| 80 | 26.53 | 36.25 | 4.50 | 4.4 | 104.6 |
| 90 | 26.45 | 36.45 | 4.22 | -2.6 | 106.7 |
| 100 | 24.98 | 36.61 | 4.28 | -5.6 | 110.6 |
| 110 | 24.63 | 36.77 | 3.79 | -6.0 | 109.4 |
| 120 | 23.97 | 36.79 | 3.78 | -11.6 | 108.7 |
| 130 | 23.69 | 36.85 | 3.73 | -13.4 | 104.8 |
| 140 | 23.27 | 36.89 | 3.72 | -13.6 | 102.2 |
| 150 | 22.87 | 36.90 | 3.78 | -13.7 | 102.8 |
| 160 | 22.26 | 36.90 | 3.98 | -11.1 | 102.9 |
| 170 | 21.49 | 36.86 | 4.07 | -8.0 | 101.9 |
| 180 | 20.65 | 36.80 | 4.04 | 0.3 | 96.8 |
| 190 | 20.01 | 36.74 | 4.04 | 2.0 | 96.8 |
| 200 | 19.58 | 36.69 | 4.07 | -0.2 | 102.4 |
| 210 | 18.94 | 36.60 | 3.85 | -4.4 | 104.6 |
| 220 | 18.44 | 36.54 | 3.91 | -3.2 | 104.7 |
| 230 | 18.23 | 36.51 | 3.94 | -1.3 | 107.1 |
| 240 | 17.87 | 36.46 | 3.92 | 0.7 | 108.9 |
| 250 | 17.55 | 36.39 | 3.63 | 1.5 | 109.0 |
| 260 | 17.14 | 36.36 | 3.83 | 3.7 | 106.8 |
| 270 | 16.51 | 36.27 | 3.88 | 1.7 | 105.5 |
| 280 | 16.44 | 36.26 | 3.97 | 0.4 | 105.0 |
| 290 | 16.13 | 36.21 | 3.91 | -1.7 | 103.8 |
| 300 | 16.08 | 36.20 | 3.91 | -1.6 | 102.3 |
| 350 | 13.63 | 35.74 | 3.05 | 8.2 | 93.9 |
| 400 | 12.20 | 35.53 | 2.96 | 8.9 | 69.7 |
| 450 | 9.51 | 35.20 | 2.94 | 3.6 | 30.4 |
| 500 | 6.86 | 34.93 | 3.18 | 0.2 | 8.6 |

Table 34: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0327. Station: 4 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 29.31 | 36.22 | 4.33 | NaN | NaN |
| 10 | 29.32 | 36.22 | 4.36 | 12.7 | 102.7 |
| 20 | 29.32 | 36.22 | 4.35 | 12.8 | 102.7 |
| 30 | 29.32 | 36.22 | 4.37 | 13.0 | 102.8 |
| 40 | 29.18 | 36.22 | 4.36 | 13.2 | 103.0 |
| 50 | 28.86 | 36.23 | 4.38 | 13.6 | 103.3 |
| 60 | 28.23 | 36.22 | 4.44 | 17.0 | 105.2 |
| 70 | 27.84 | 36.29 | 4.36 | 15.5 | 105.1 |
| 80 | 27.20 | 36.34 | 4.25 | 7.7 | 106.5 |
| 90 | 26.21 | 36.51 | 4.09 | 1.7 | 108.5 |
| 100 | 25.38 | 36.68 | 3.94 | -2.3 | 109.9 |
| 110 | 24.63 | 36.76 | 3.84 | -5.4 | 112.8 |
| 120 | 24.07 | 36.85 | 3.84 | -10.8 | 112.6 |
| 130 | 23.61 | 36.89 | 3.74 | -16.1 | 111.1 |
| 140 | 23.22 | 36.90 | 3.74 | -17.2 | 111.6 |
| 150 | 22.62 | 36.89 | 3.80 | -16.3 | 114.5 |
| 160 | 22.04 | 36.87 | 3.68 | -15.3 | 113.9 |
| 170 | 20.92 | 36.80 | 3.87 | -20.1 | 111.9 |
| 180 | 20.54 | 36.77 | 3.58 | -24.8 | 113.2 |
| 190 | 20.23 | 36.74 | 3.53 | -21.7 | 116.7 |
| 200 | 20.03 | 36.74 | 3.69 | -16.1 | 114.8 |
| 210 | 19.58 | 36.69 | 4.08 | -13.0 | 110.2 |
| 220 | 18.98 | 36.59 | 3.63 | -9.1 | 108.2 |
| 230 | 18.52 | 36.53 | 3.59 | -3.7 | 108.8 |
| 240 | 18.16 | 36.48 | 3.60 | 2.4 | 109.1 |
| 250 | 17.89 | 36.44 | 3.63 | 2.8 | 106.9 |
| 260 | 17.52 | 36.40 | 3.73 | 1.9 | 102.7 |
| 270 | 17.09 | 36.32 | 3.64 | 3.3 | 99.1 |
| 280 | 16.77 | 36.30 | 3.67 | 1.1 | 94.0 |
| 290 | 16.60 | 36.27 | 3.86 | -3.0 | 92.2 |
| 300 | 16.18 | 36.21 | 3.84 | -3.2 | 90.1 |
| 350 | 15.08 | 36.04 | 3.77 | -2.6 | 90.1 |
| 400 | 12.95 | 35.63 | 2.99 | 4.6 | 85.8 |
| 450 | 11.74 | 35.44 | 2.90 | 14.2 | 77.6 |
| 500 | 9.79 | 35.20 | 2.84 | 12.9 | 54.9 |
| 550 | 7.52 | 34.97 | 3.02 | 3.1 | 36.9 |
| 600 | 6.71 | 34.91 | 3.15 | 15.7 | 21.6 |

Table 35: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0327. Station: 5 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 29.27 | 36.18 | 4.32 | NaN | NaN |
| 10 | 29.27 | 36.19 | 4.34 | 4.8 | 126.7 |
| 20 | 29.27 | 36.19 | 4.34 | 4.8 | 126.7 |
| 30 | 29.27 | 36.19 | 4.35 | 5.2 | 126.9 |
| 40 | 28.95 | 36.24 | 4.38 | 5.6 | 127.1 |
| 50 | 28.81 | 36.24 | 4.37 | 6.1 | 127.3 |
| 60 | 28.40 | 36.25 | 4.38 | 5.7 | 129.0 |
| 70 | 27.89 | 36.27 | 4.36 | -0.2 | 132.8 |
| 80 | 27.23 | 36.37 | 4.37 | -2.3 | 142.2 |
| 90 | 26.25 | 36.49 | 4.16 | -8.0 | 143.3 |
| 100 | 25.70 | 36.59 | 4.02 | -5.4 | 140.2 |
| 110 | 25.08 | 36.70 | 3.98 | -11.2 | 130.4 |
| 120 | 24.60 | 36.80 | 4.05 | -20.6 | 125.4 |
| 130 | 24.10 | 36.83 | 4.14 | -23.8 | 123.0 |
| 140 | 23.64 | 36.89 | 4.19 | -17.5 | 120.8 |
| 150 | 23.37 | 36.92 | 4.20 | -11.3 | 120.7 |
| 160 | 22.80 | 36.95 | 4.20 | -9.8 | 121.4 |
| 170 | 22.39 | 36.95 | 4.17 | -7.6 | 116.1 |
| 180 | 22.05 | 36.96 | 4.21 | -5.6 | 113.5 |
| 190 | 21.61 | 36.93 | 4.19 | -4.4 | 112.8 |
| 200 | 20.54 | 36.81 | 3.97 | -3.4 | 108.1 |
| 210 | 20.29 | 36.79 | 4.08 | -5.7 | 99.3 |
| 220 | 19.92 | 36.73 | 3.96 | -10.7 | 96.2 |
| 230 | 19.53 | 36.70 | 4.10 | -9.1 | 97.1 |
| 240 | 19.15 | 36.66 | 4.14 | -10.4 | 96.2 |
| 250 | 18.84 | 36.62 | 4.15 | -10.1 | 94.1 |
| 260 | 18.57 | 36.59 | 4.23 | -7.0 | 90.9 |
| 270 | 18.33 | 36.56 | 4.23 | -7.9 | 90.9 |
| 280 | 18.09 | 36.52 | 4.21 | -7.8 | 91.2 |
| 290 | 17.54 | 36.40 | 3.81 | -6.7 | 89.2 |
| 300 | 17.25 | 36.35 | 3.62 | -8.0 | 90.1 |
| 350 | 15.95 | 36.17 | 3.89 | 1.2 | 78.5 |
| 400 | 14.23 | 35.88 | 3.47 | 8.9 | 73.3 |
| 450 | 12.22 | 35.53 | 2.92 | 4.6 | 69.8 |
| 500 | 11.15 | 35.36 | 2.83 | 6.0 | 69.1 |
| 550 | 9.50 | 35.13 | 2.76 | -2.6 | 61.1 |
| 600 | 8.32 | 35.01 | 2.81 | -1.1 | 53.7 |
| 650 | 7.12 | 34.91 | 2.99 | 0.8 | 34.9 |
| 700 | 6.68 | 34.91 | 3.15 | -4.5 | 27.8 |
| 750 | NaN | NaN | NaN | -4.3 | 22.4 |

Table 36: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0327. Station: 6 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 29.33 | 36.14 | 4.33 | NaN | NaN |
| 10 | 29.33 | 36.15 | 4.35 | 11.5 | 86.4 |
| 20 | 29.14 | 36.17 | 4.39 | 11.5 | 86.5 |
| 30 | 29.11 | 36.17 | 4.39 | 11.1 | 87.0 |
| 40 | 28.66 | 36.18 | 4.43 | 10.4 | 87.8 |
| 50 | 28.09 | 36.25 | 4.42 | 9.4 | 88.7 |
| 60 | 27.91 | 36.27 | 4.35 | -5.5 | 100.6 |
| 70 | 27.29 | 36.33 | 4.24 | -14.0 | 98.5 |
| 80 | 27.03 | 36.36 | 4.18 | -13.4 | 96.7 |
| 90 | 26.52 | 36.40 | 4.14 | -1.2 | 96.7 |
| 100 | 26.04 | 36.47 | 4.03 | -0.8 | 96.7 |
| 110 | 25.15 | 36.63 | 3.99 | -8.8 | 98.5 |
| 120 | 24.54 | 36.75 | 4.01 | -9.0 | 96.9 |
| 130 | 24.09 | 36.81 | 4.06 | -6.4 | 93.5 |
| 140 | 23.71 | 36.87 | 4.13 | -3.5 | 91.6 |
| 150 | 23.46 | 36.89 | 4.13 | -1.4 | 86.3 |
| 160 | 22.91 | 36.93 | 4.13 | 2.2 | 82.6 |
| 170 | 22.59 | 36.94 | 4.14 | 3.8 | 78.9 |
| 180 | 22.13 | 36.95 | 4.15 | 3.1 | 75.5 |
| 190 | 21.85 | 36.93 | 4.14 | 1.2 | 76.6 |
| 200 | 21.18 | 36.88 | 4.10 | -2.3 | 81.7 |
| 210 | 20.88 | 36.84 | 4.06 | -1.6 | 80.9 |
| 220 | 20.38 | 36.79 | 3.92 | 1.4 | 82.4 |
| 230 | 19.73 | 36.71 | 4.04 | 0.5 | 82.6 |
| 240 | 19.56 | 36.68 | 3.95 | -2.9 | 82.8 |
| 250 | 19.14 | 36.63 | 3.86 | -6.0 | 80.5 |
| 260 | 18.93 | 36.62 | 4.05 | -4.9 | 81.4 |
| 270 | 18.80 | 36.60 | 4.10 | -2.5 | 81.1 |
| 280 | 18.35 | 36.50 | 3.71 | -3.2 | 77.3 |
| 290 | 18.04 | 36.46 | 3.60 | -8.1 | 73.8 |
| 300 | 17.83 | 36.43 | 3.59 | -8.0 | 71.6 |
| 350 | 16.73 | 36.29 | 3.81 | -6.4 | 66.2 |
| 400 | 15.17 | 36.04 | 3.69 | -1.1 | 54.8 |
| 450 | 13.66 | 35.77 | 3.30 | 0.5 | 44.1 |
| 500 | 11.59 | 35.42 | 2.89 | 0.5 | 34.9 |
| 550 | 9.85 | 35.18 | 2.78 | 0.1 | 30.6 |
| 600 | 9.05 | 35.09 | 2.79 | 4.9 | 21.1 |
| 650 | 8.24 | 35.03 | 2.93 | -10.6 | 12.5 |

Table 37: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0327. Station: 7 | | | | | |
|-------------------------------|---------------------------|---------------------|--------------------|---------------------|---------------------|
| Pressure [db] | Temperature [deg. C] | Salinity [psu] | Oxygen [ml/l] | U speed [cm/s] | V speed [cm/s] |
| 1 | 29.08 | 36.22 | 4.36 | NaN | NaN |
| 10 | 29.08 | 36.22 | 4.37 | 2.5 | 70.9 |
| 20 | 29.08 | 36.23 | 4.38 | 2.5 | 71.0 |
| 30 | 29.08 | 36.24 | 4.37 | 2.2 | 71.2 |
| 40 | 29.07 | 36.24 | 4.37 | 1.8 | 71.4 |
| 50 | 28.95 | 36.25 | 4.39 | 1.1 | 71.8 |
| 60 | 28.58 | 36.26 | 4.42 | -7.9 | 70.0 |
| 70 | 28.09 | 36.27 | 4.41 | -8.5 | 68.1 |
| 80 | 27.59 | 36.28 | 4.39 | -8.0 | 68.5 |
| 90 | 27.42 | 36.38 | 4.34 | -6.9 | 68.5 |
| 100 | 26.59 | 36.47 | 4.21 | -8.0 | 78.8 |
| 110 | 25.33 | 36.62 | 4.03 | -12.3 | 88.3 |
| 120 | 24.67 | 36.72 | 4.16 | -11.6 | 89.4 |
| 130 | 24.44 | 36.75 | 4.43 | -7.1 | 91.2 |
| 140 | 24.08 | 36.77 | 4.49 | -10.1 | 89.6 |
| 150 | 23.19 | 36.81 | 4.41 | -15.2 | 79.1 |
| 160 | 22.13 | 36.86 | 4.21 | -8.0 | 64.7 |
| 170 | 21.81 | 36.85 | 4.08 | -0.0 | 53.3 |
| 180 | 21.49 | 36.84 | 4.11 | -2.0 | 53.3 |
| 190 | 21.32 | 36.83 | 4.24 | -7.3 | 55.4 |
| 200 | 20.96 | 36.85 | 4.09 | -13.1 | 53.2 |
| 210 | 20.40 | 36.80 | 4.15 | -13.7 | 54.4 |
| 220 | 20.17 | 36.78 | 4.19 | -11.7 | 55.9 |
| 230 | 19.93 | 36.76 | 4.19 | -9.8 | 55.4 |
| 240 | 19.85 | 36.75 | 4.20 | -7.0 | 51.4 |
| 250 | 19.56 | 36.70 | 4.17 | -6.0 | 50.9 |
| 260 | 19.40 | 36.69 | 4.18 | -6.9 | 51.9 |
| 270 | 19.23 | 36.66 | 4.17 | -8.2 | 52.6 |
| 280 | 18.66 | 36.57 | 4.06 | -5.0 | 52.7 |
| 290 | 18.44 | 36.55 | 3.97 | -4.1 | 52.7 |
| 300 | 18.23 | 36.52 | 3.98 | -3.5 | 51.1 |
| 350 | 17.41 | 36.41 | 4.13 | -0.7 | 49.7 |
| 400 | 16.32 | 36.23 | 3.91 | -6.6 | 47.2 |
| 450 | 15.22 | 36.04 | 3.59 | -1.4 | 44.2 |
| 500 | 13.42 | 35.73 | 3.24 | -0.3 | 27.9 |
| 550 | 11.89 | 35.48 | 2.94 | 3.5 | 16.0 |
| 600 | NaN | NaN | NaN | 0.3 | 16.6 |

Table 38: Same as Table 13 for the cruise ID and the station number indicated.

| Cruise ID: ws0327. Station: 8 | | | | | |
|-------------------------------|-------------|----------|----------|----------|----------|
| Pressure | Temperature | Salinity | Oxygen | U speed | V speed |
| [db] | [deg. C] | [psu] | [ml/l] | [cm/s] | [cm/s] |
| 1 | 29.05 | 36.20 | 4.33 | NaN | NaN |
| 10 | 29.06 | 36.21 | 4.34 | -17.0 | 84.2 |
| 20 | 28.99 | 36.23 | 4.36 | -17.0 | 84.1 |
| 30 | 28.97 | 36.23 | 4.36 | -16.8 | 83.7 |
| 40 | 28.91 | 36.23 | 4.36 | -16.6 | 83.2 |
| 50 | 28.83 | 36.25 | 4.36 | -16.7 | 82.3 |
| 60 | 28.47 | 36.33 | 4.36 | -29.3 | 85.4 |
| 70 | 28.02 | 36.34 | 4.33 | -28.0 | 83.9 |
| 80 | 27.12 | 36.43 | 4.35 | -19.5 | 80.2 |
| 90 | 26.45 | 36.57 | 4.51 | -20.8 | 75.6 |
| 100 | 26.34 | 36.60 | 4.53 | -25.0 | 71.2 |
| 110 | 25.85 | 36.62 | 4.49 | -25.9 | 68.3 |
| 120 | 25.56 | 36.65 | 4.42 | -25.3 | 64.5 |
| 130 | 24.78 | 36.72 | 4.43 | -24.6 | 60.6 |
| 140 | 23.98 | 36.77 | 4.43 | -21.0 | 53.1 |
| 150 | 23.43 | 36.80 | 4.49 | -13.4 | 48.4 |
| 160 | 23.20 | 36.82 | 4.45 | -12.8 | 45.3 |
| 170 | 22.57 | 36.83 | 4.34 | -14.7 | 47.0 |
| 180 | 22.22 | 36.84 | 4.25 | -14.0 | 47.2 |
| 190 | 21.75 | 36.85 | 4.16 | -12.0 | 45.4 |
| 200 | 21.13 | 36.81 | 4.34 | -12.6 | 40.9 |
| 210 | 20.66 | 36.78 | 4.26 | -13.9 | 42.3 |
| 220 | 20.15 | 36.74 | 4.15 | -11.7 | 43.4 |
| 230 | 19.84 | 36.71 | 4.20 | -9.2 | 43.2 |
| 240 | 19.38 | 36.67 | 4.34 | -7.5 | 41.6 |
| 250 | 19.34 | 36.68 | 4.22 | -3.7 | 40.3 |
| 260 | 19.06 | 36.64 | 4.16 | -4.6 | 40.8 |
| 270 | 18.75 | 36.60 | 4.19 | -7.0 | 41.4 |
| 280 | 18.61 | 36.59 | 4.16 | -4.5 | 44.3 |
| 290 | 18.56 | 36.58 | 4.16 | -4.5 | 44.2 |
| 300 | 18.52 | 36.57 | 4.17 | -5.7 | 43.5 |
| 350 | 17.70 | 36.45 | 4.10 | -2.8 | 38.9 |
| 400 | 16.79 | 36.31 | 3.96 | 1.8 | 27.0 |
| 450 | 15.79 | 36.15 | 3.94 | -17.0 | 14.0 |

Table 39: Same as Table 13 for the cruise ID and the station number indicated.

