NOAA Data Report, OAR AOML - 68

Oceanographic data collected in the Straits of Florida at 27°N during the year 2005, including the estimated Florida Current transport

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Date:
March 14, 2017

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noaa

National Oceanic and Atmospheric Administration / **Office of Oceanic and Atmospheric Research**

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Abstract

This report summarizes the Florida Current data collected along 27°N during calendar year 2005 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.

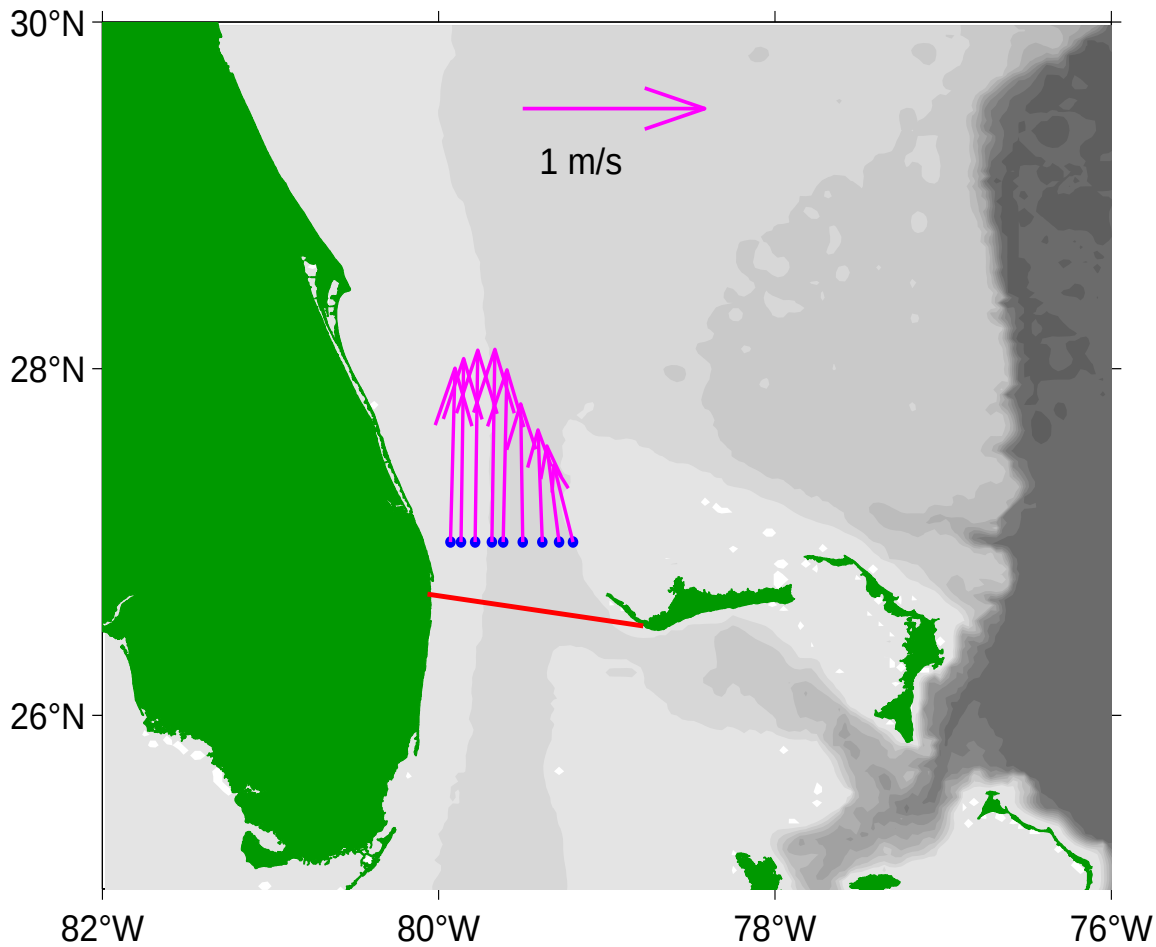

Figure 1: Map of the Straits of Florida study area. Blue dots indicate the locations of dropsonde, XBT and CTD/LADCP stations. Red line shows the approximate location of the telephone cable used for the voltage measurements. Magenta vectors illustrate the time mean vertically-averaged horizontal velocities 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 Sv = 10^6 m^3 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).

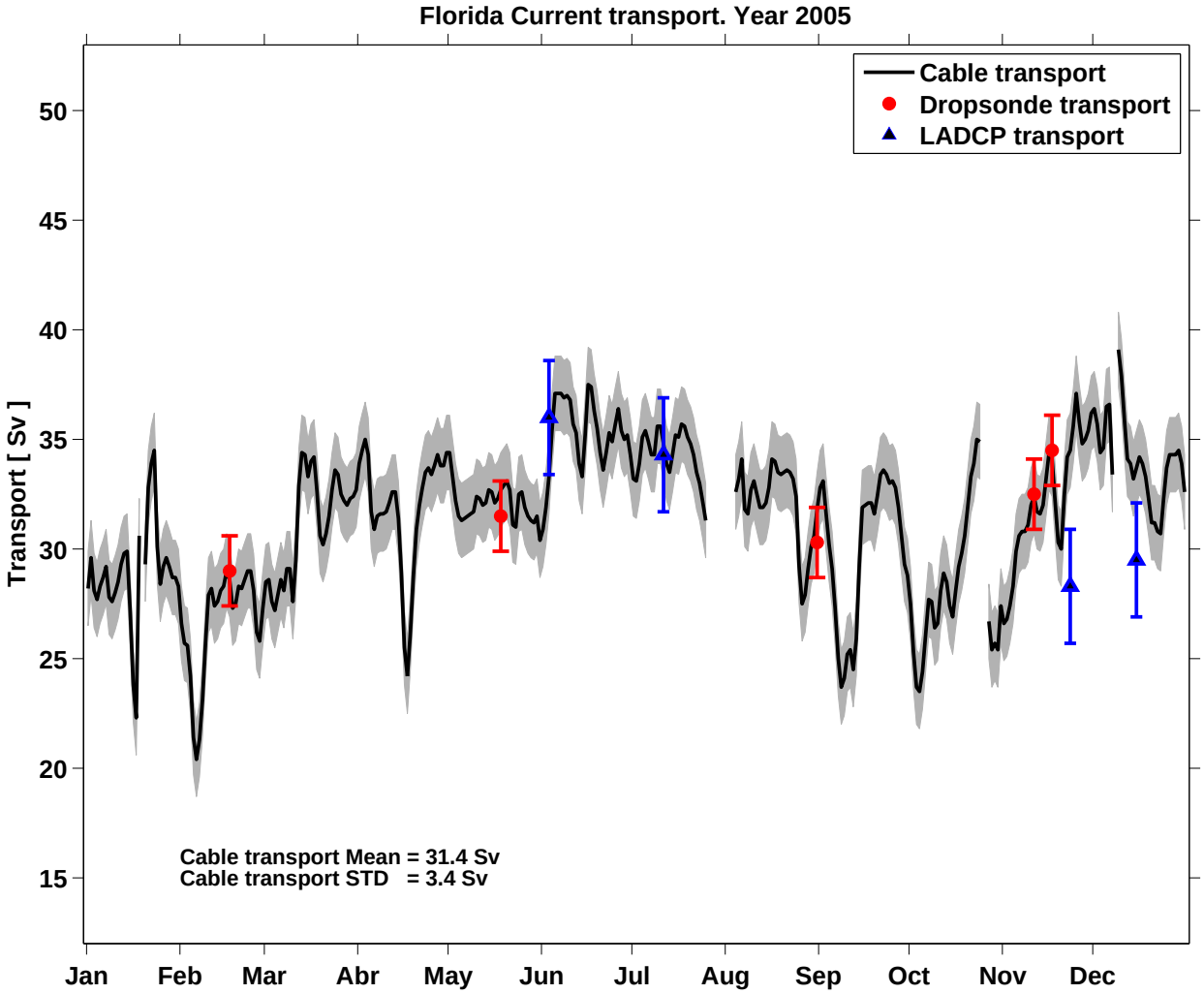

Figure 2: Observed Florida Current volume transports measured by cable voltage (black line), dropsonde sections (red dots) and LADCP sections (blue triangles). For each measurement system the estimated error bar is also shown. The annual mean and standard deviation (STD) from the cable voltage estimates 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	2005	2	17	14	27.5	29.0
2	2005	5	18	14	32.5	31.5
3	2005	8	31	14	31.8	30.3
4	2005	11	11	15	32.9	32.5
5	2005	11	17	15	31.9	34.5

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

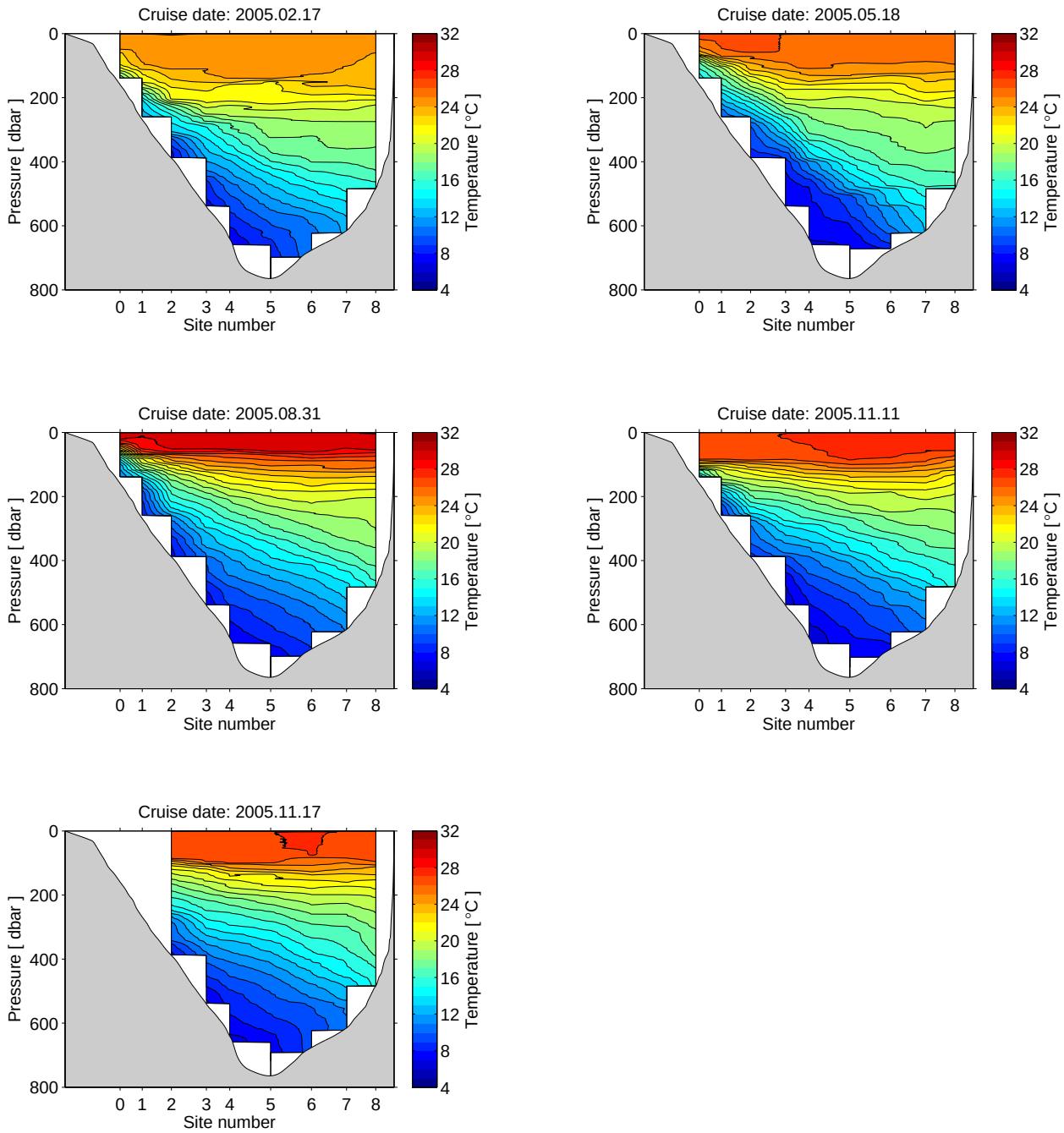

Figure 3: Temperature sections measured with XBT on the indicated dates. Date format is year, month, and day.

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
ws0512	2005	6	3	12	36.0	36.0
ws0516	2005	7	11	13	33.9	34.3
ws0526	2005	11	23	6	28.6	28.3
ws0531	2005	12	15	13	30.2	29.5

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.

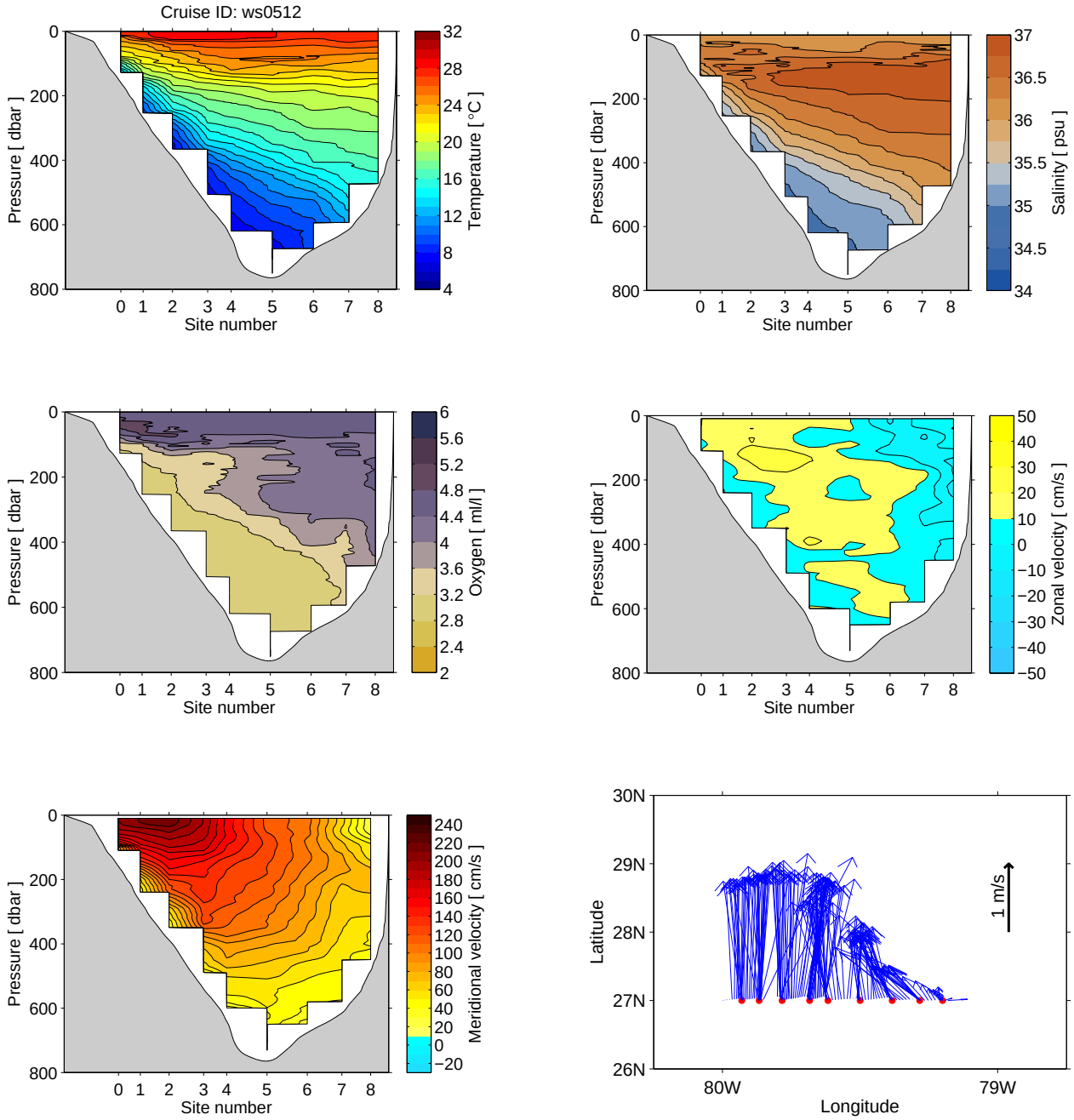

Figure 4: Sections of temperature, salinity, dissolved oxygen (all from CTD), velocity profile (LADCP) and vector velocity map at 50m (SADCP) collected by research vessel. Cruise ID noted above the temperature panel; cruise date are shown in Table 3.

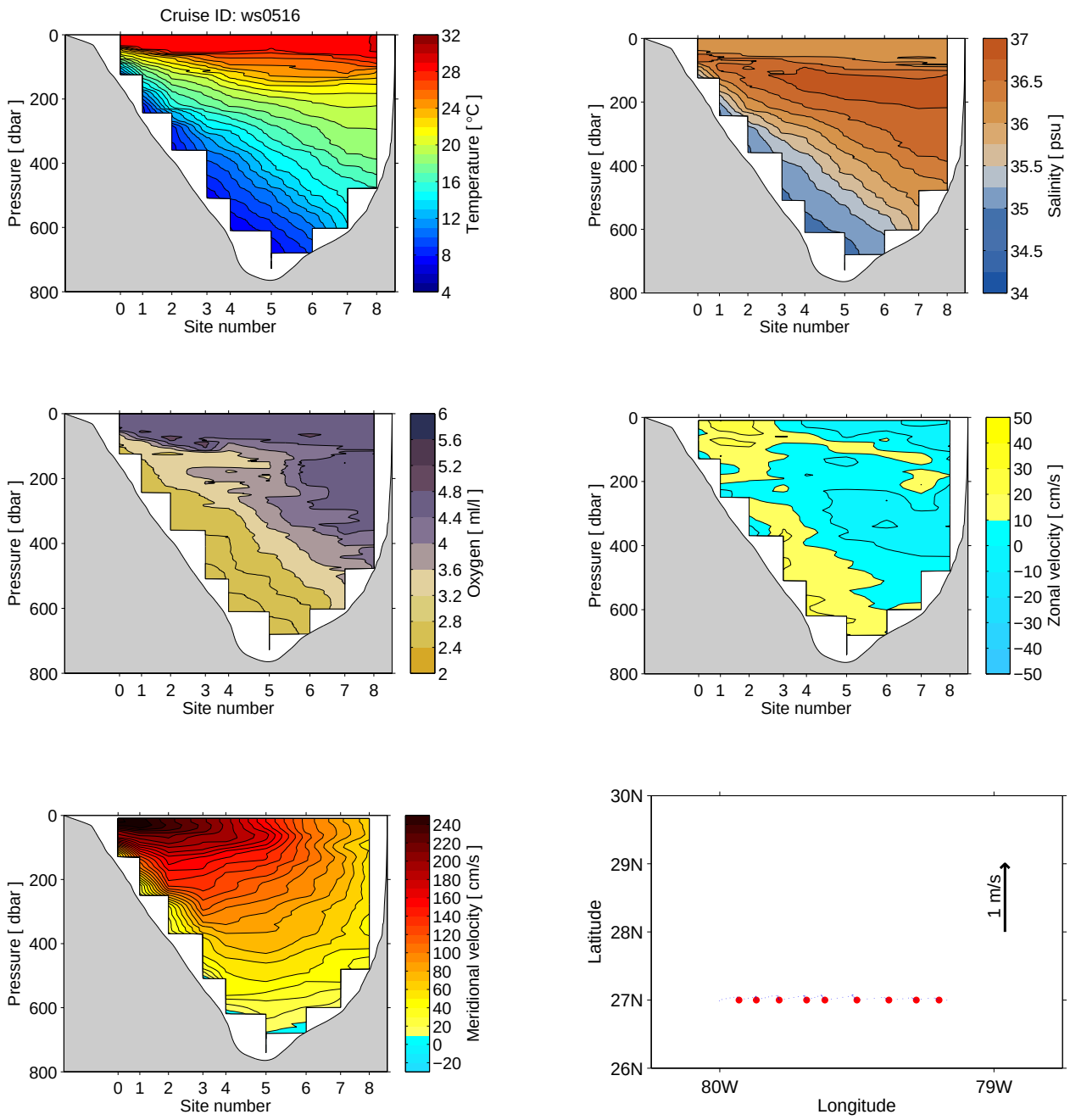

Figure 5: Same as Figure 4 for the data collected on the cruise ID indicated above the temperature panel.

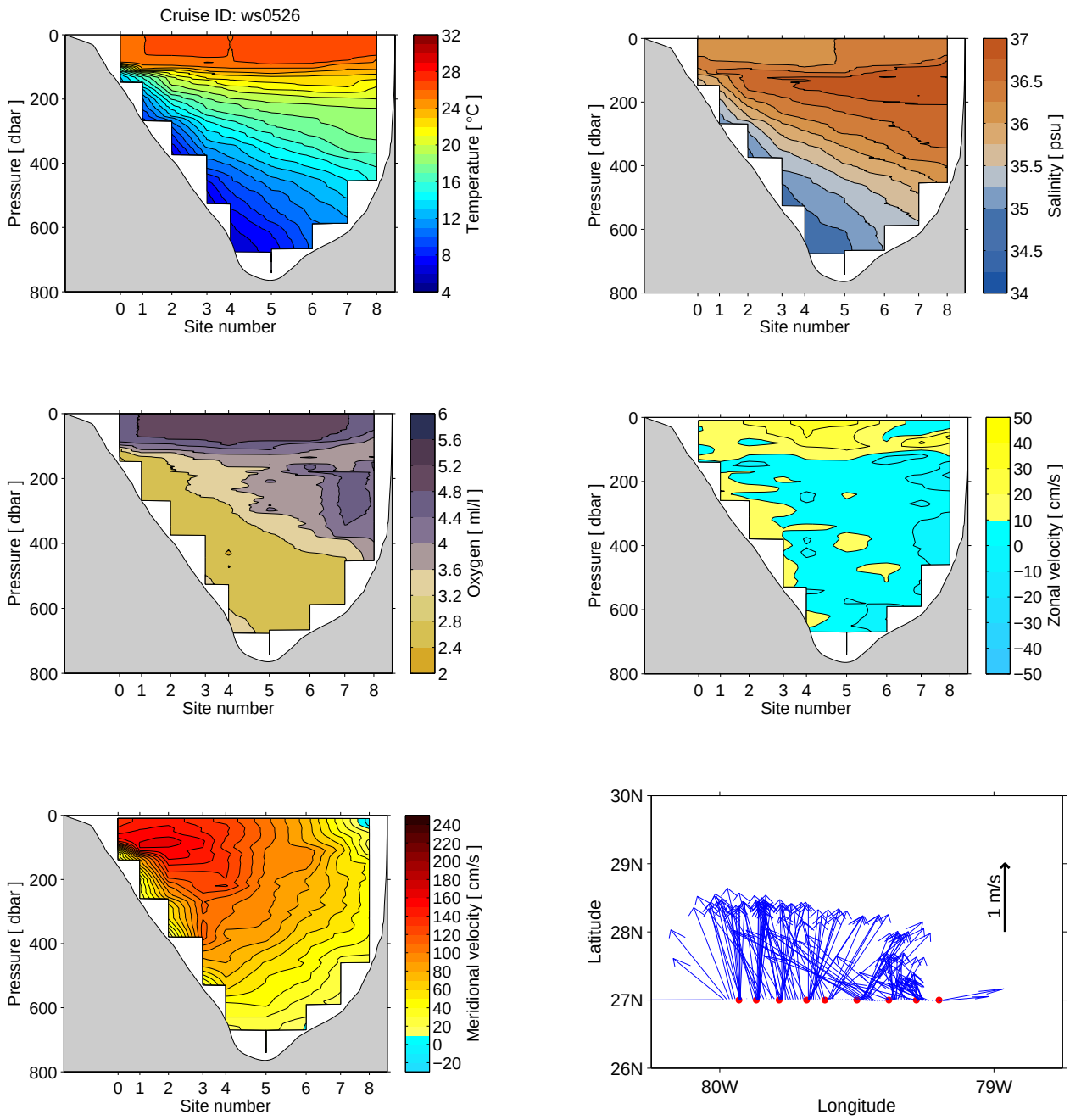

Figure 6: Same as Figure 4 for the data collected on the cruise ID indicated above the temperature panel.

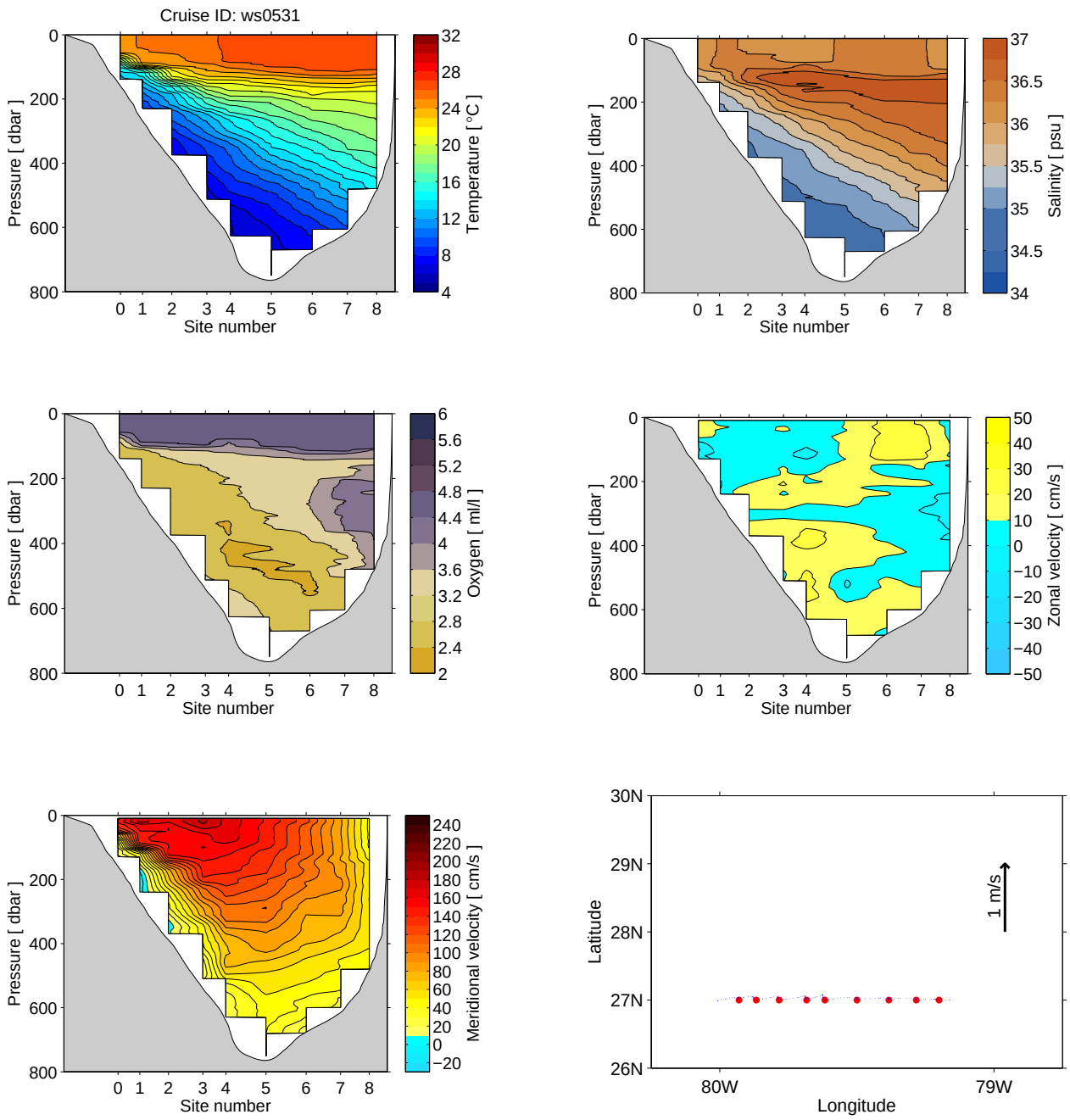

Figure 7: Same as Figure 4 for the data collected on the cruise ID indicated above the temperature panel.

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 suffered several short-term failures during this year: January 19; July 26-August 3; October 25-26; and December 8. As a result, on those dates no estimates for the Florida Current volume transport are available from the cable. 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

No problems arose during the year involving the dropsonde system.

Only one problem arose during the year involving the XBT systems. During the cruise of November 17, the XBT system failed during two stations and no data were collected at those sites.

5.3 CTD - LADCP - SADCP cruises

During this year, LADCP data collected from all four cruises were found to be suitable for scientific analysis (see note below regarding the ws0531 cruise). During ws0512, a hybrid LADCP configuration was utilized, with a downward-facing broadband 150 kHz ADCP and an upward facing 300 kHz ADCP. The remaining three cruises all employed a dual 300 kHz LADCP configuration.

Several problems arose during the year involving the SADCP systems (which also impact the LADCP data). On the ws0516 cruise, the ship's OS75 SADCP was not working, so no data were collected with that instrument. However, the ships BB600 SADCP was working, providing data in the upper few meters, and these data were used to process the LADCP measurements in place of the OS75 data. During the ws0531 cruise, the ship's OS75 SADCP was unusable due to equipment failures. No SADCP data were used in the processing of the LADCP data for this cruise.

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, Humberto Guarin, 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 (Pedro DiNezio, Craig Engler, and Ulises Rivero) and in the R/V Walton Smith CTD/LADCP/SADCP cruises (Lew Gramer, Nelson Melo, Grant Rawson, Jessica Redman, and Andy Stefanick). 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 and Yeun-Ho Daneshzadeh. 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	28.2	26.6	28.5	33.9	34.4	30.9	33.2	NaN	32.8	27.5	26.6	36.4
2	29.6	25.7	28.6	34.5	33.3	31.9	33.1	NaN	33.1	25.3	26.8	35.7
3	28.1	25.6	27.6	35.0	32.2	33.3	33.9	NaN	31.6	23.7	27.4	34.4
4	27.7	24.2	27.2	34.3	31.5	35.4	35.1	32.6	30.2	23.5	28.3	34.6
5	28.3	21.4	27.9	31.7	31.3	37.1	35.4	33.2	29.1	24.4	29.9	36.5
6	28.7	20.4	28.6	30.9	31.4	37.1	34.9	34.1	27.3	26.1	30.6	36.6
7	29.2	21.3	28.1	31.5	31.5	37.1	34.3	31.8	25.0	27.7	30.8	33.4
8	27.8	23.1	29.1	31.6	31.6	36.9	34.3	31.6	23.7	27.6	30.8	NaN
9	27.6	25.7	29.1	31.6	31.7	37.0	35.6	32.7	24.1	26.4	31.1	39.1
10	28.0	27.9	27.6	31.7	32.4	36.8	35.6	33.1	25.2	26.6	32.0	37.9
11	28.5	28.2	29.5	32.1	32.3	35.7	34.8	32.5	25.4	28.1	32.4	35.9
12	29.3	27.4	32.9	32.6	32.0	35.3	33.9	31.9	24.5	28.9	31.7	34.1
13	29.8	27.6	34.4	32.6	32.1	33.9	33.5	31.9	25.9	28.5	31.6	33.9
14	29.9	28.1	34.3	31.4	32.7	33.3	34.3	32.1	29.3	27.4	32.0	33.2
15	27.1	28.3	33.3	28.9	32.6	35.2	35.2	32.8	31.9	26.9	33.2	33.7
16	23.8	29.0	34.0	25.5	32.1	37.5	35.1	34.1	32.0	28.1	34.4	34.2
17	22.3	28.6	34.2	24.2	32.3	37.4	35.7	34.0	32.1	29.2	34.1	33.9
18	30.6	27.3	32.6	26.2	32.7	36.3	35.6	33.5	32.1	29.8	32.2	33.3
19	NaN	27.5	30.6	28.8	32.9	35.5	35.1	33.4	31.6	30.6	30.3	32.3
20	29.3	28.3	30.2	30.9	33.1	34.4	34.8	33.5	32.4	31.9	30.0	31.2
21	32.8	28.2	30.7	32.0	32.7	33.6	34.3	33.6	33.4	33.3	32.4	31.2
22	33.9	28.6	31.5	32.8	31.1	34.4	33.5	33.5	33.6	33.9	34.2	30.8
23	34.5	29.0	32.7	33.5	31.0	35.3	33.0	33.2	33.4	35.0	34.5	30.7
24	30.1	29.0	33.6	33.7	32.5	34.9	32.2	32.4	33.0	34.9	35.6	32.3
25	28.4	28.1	33.4	33.4	32.6	35.7	31.3	29.2	33.1	NaN	37.1	33.7
26	29.2	26.2	32.5	33.8	31.9	36.4	NaN	27.5	32.8	NaN	35.8	34.3
27	29.6	25.8	32.2	34.3	31.5	35.4	NaN	27.9	31.9	26.7	34.8	34.3
28	29.2	27.3	32.0	33.8	31.3	35.0	NaN	29.1	30.6	25.4	35.0	34.3
29	28.7	–	32.3	33.8	31.2	35.2	NaN	30.1	29.3	25.7	35.4	34.5
30	28.7	–	32.4	34.4	31.5	34.3	NaN	30.6	28.8	25.4	36.2	33.9
31	28.3	–	32.7	–	30.4	–	NaN	31.8	–	27.4	–	32.6

Table 4: Florida Current daily transport estimated using voltage measurements on a telephone cable. Units are Sverdrups (1 Sv = 10^6 m^3 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: 2005.02.17								
0	12: 0:50	-79.9301	27.0001	12: 6:18	-79.9301	27.0036	1.69	117.04
1	12:21:22	-79.8669	26.9994	12:31: 9	-79.8671	27.0045	-2.52	96.02
2	12:48:56	-79.7835	26.9999	13: 2:51	-79.7836	27.0072	-1.82	97.30
3	13:23:24	-79.6835	26.9999	13:42:21	-79.6838	27.0100	-2.69	98.58
4	13:58:45	-79.6170	26.9998	14:22:27	-79.6168	27.0099	1.30	78.39
5	14:44:29	-79.5006	26.9990	15:11:27	-79.5010	27.0074	-2.37	56.86
6	15:33:30	-79.3833	26.9999	15:58:45	-79.3838	27.0053	-3.18	40.03
7	16:19:52	-79.2832	26.9994	16:42: 9	-79.2837	27.0036	-3.58	35.26
8	16:58:52	-79.2000	26.9998	17:16:21	-79.2008	27.0031	-8.48	36.15
Cruise date: 2005.05.18								
0	11: 8:19	-79.9298	27.0003	11:14:57	-79.9297	27.0028	5.44	68.52
1	11:31: 6	-79.8666	26.9995	11:42:51	-79.8664	27.0046	3.56	78.97
2	12: 3: 5	-79.7832	26.9994	12:20:27	-79.7826	27.0070	5.93	79.26
3	12:45:32	-79.6833	27.0002	13: 9:15	-79.6832	27.0116	0.27	87.99
4	13:25:30	-79.6166	27.0001	13:54:15	-79.6157	27.0151	5.51	95.86
5	14:17:54	-79.4999	26.9993	14:51:21	-79.4998	27.0162	0.39	93.53
6	15:16:30	-79.3838	26.9997	15:46: 9	-79.3850	27.0106	-7.35	67.99
7	16: 9:39	-79.2833	26.9998	16:35:51	-79.2846	27.0066	-7.54	48.42
8	16:54:52	-79.2002	26.9998	17:15: 9	-79.2015	27.0040	-9.78	38.77
Cruise date: 2005.08.31								
0	11:13:31	-79.9306	27.0012	11:19:49	-79.9308	27.0029	-5.26	47.83
1	11:37:54	-79.8668	27.0005	11:49: 9	-79.8667	27.0061	0.34	91.82
2	12:10:26	-79.7833	27.0005	12:26:15	-79.7832	27.0095	0.30	104.79
3	12:48:54	-79.6832	27.0004	13:10:27	-79.6826	27.0114	4.55	94.13
4	13:28:10	-79.6167	27.0004	13:54: 3	-79.6159	27.0127	4.51	87.08
5	14:19:56	-79.4999	27.0006	14:50:50	-79.4996	27.0130	1.39	73.70
6	15:15:26	-79.3834	26.9999	15:43:44	-79.3831	27.0100	1.68	66.18
7	16: 5:59	-79.2832	27.0001	16:31:27	-79.2838	27.0078	-3.70	55.56
8	16:51:23	-79.2000	27.0002	17:10:26	-79.2007	27.0044	-6.33	41.28

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: 2005.11.11								
0	12: 0: 2	-79.9307	27.0002	12: 6:22	-79.9307	27.0032	-0.39	87.46
1	12:22:44	-79.8667	26.9997	12:33:51	-79.8663	27.0058	4.74	100.34
2	12:52:25	-79.7834	26.9999	13: 8:33	-79.7831	27.0085	2.85	97.38
3	13:30:18	-79.6836	26.9996	13:52:27	-79.6834	27.0122	1.55	104.21
4	14:10:10	-79.6166	27.0000	14:36:39	-79.6162	27.0132	2.99	91.91
5	15: 4:13	-79.4999	26.9998	15:35:21	-79.5002	27.0124	-1.22	74.53
6	16: 1:32	-79.3834	26.9994	16:29:45	-79.3846	27.0090	-6.90	63.20
7	17:23:39	-79.2833	27.0000	17:49: 9	-79.2847	27.0072	-9.07	53.07
8	18: 8:52	-79.1999	26.9999	18:28:45	-79.2015	27.0047	-13.30	45.66
Cruise date: 2005.11.17								
0	12: 7:46	-79.9292	27.0006	12:14:20	-79.9293	27.0043	-2.60	103.15
1	12:31:34	-79.8668	27.0004	12:42:39	-79.8662	27.0071	8.50	111.35
2	13: 1:32	-79.7833	26.9998	13:17:45	-79.7829	27.0085	3.72	98.93
3	13:38:29	-79.6834	27.0000	14: 0:57	-79.6829	27.0125	4.46	104.20
4	14:16:31	-79.6169	27.0001	14:43:21	-79.6163	27.0131	3.74	89.39
5	15: 7:51	-79.4999	27.0004	15:39:15	-79.4998	27.0121	1.03	68.40
6	16: 2:55	-79.3834	27.0001	16:31:33	-79.3838	27.0089	-2.18	56.15
7	16:51:59	-79.2834	27.0001	17:17:20	-79.2842	27.0066	-5.05	47.72
8	17:35:11	-79.2002	27.0002	17:54:56	-79.2019	27.0052	-13.54	46.63

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

Appendix C:

XBT temperature profiles

Cruise date: 2005.02.17									
Depth	Sta. 0	Sta. 1	Sta. 2	Sta. 3	Sta. 4	Sta. 5	Sta. 6	Sta. 7	Sta. 8
0	23.84	23.78	23.26	24.20	24.06	24.33	24.23	24.15	24.05
10	24.21	24.37	24.28	24.45	24.43	24.46	24.61	24.52	24.41
20	24.24	24.37	24.39	24.45	24.43	24.43	24.60	24.51	24.35
30	24.41	24.37	24.40	24.45	24.43	24.43	24.60	24.51	24.31
40	24.29	24.38	24.41	24.44	24.43	24.38	24.61	24.50	24.30
50	23.69	24.41	24.40	24.46	24.43	24.36	24.59	24.50	24.25
60	22.91	24.49	24.41	24.46	24.43	24.35	24.52	24.46	24.00
70	22.60	24.44	24.41	24.46	24.41	24.37	24.44	24.36	23.83
80	22.45	24.20	24.45	24.47	24.38	24.37	24.38	24.33	23.72
90	22.26	23.99	24.51	24.56	24.43	24.36	24.36	24.23	23.50
100	21.77	23.72	24.45	24.27	24.32	24.36	24.34	24.05	23.42
110	20.58	23.32	24.05	24.01	24.32	24.37	24.28	23.93	23.40
120	19.21	22.25	23.63	24.02	24.20	24.38	24.24	23.85	23.41
130	17.97	21.82	23.34	23.94	24.11	24.30	23.90	23.67	23.36
140	–	21.43	23.09	23.71	23.92	24.01	23.83	23.41	23.30
150	–	21.13	22.71	23.21	23.34	21.94	22.92	23.15	23.25
160	–	19.73	22.41	22.68	21.94	21.65	23.23	23.01	23.20
170	–	18.60	21.91	22.28	21.47	21.63	22.89	22.73	23.12
180	–	17.29	21.56	21.97	21.72	21.75	22.65	22.43	22.57
190	–	15.85	21.35	21.77	21.44	21.32	22.06	21.95	22.13
200	–	14.94	21.24	21.44	21.40	21.28	21.44	21.32	21.73
210	–	13.77	20.19	21.18	21.04	21.26	21.10	21.01	20.58
220	–	13.27	18.15	20.62	20.46	20.98	20.67	20.69	20.10
230	–	13.06	16.80	20.12	19.50	20.42	20.16	20.39	19.66
240	–	12.87	15.92	19.60	19.72	19.94	19.80	19.85	19.61
250	–	12.51	15.17	19.13	19.17	19.37	19.42	19.37	19.49
260	–	11.86	14.60	17.64	18.83	19.17	19.24	19.32	19.47
270	–	–	14.25	17.28	17.93	18.93	19.07	19.14	19.14
280	–	–	13.93	16.15	17.03	18.70	18.93	18.77	18.94
290	–	–	13.64	15.11	16.84	18.58	18.51	18.43	18.85
300	–	–	13.33	14.81	16.62	18.38	18.22	18.35	18.72
350	–	–	8.96	13.32	14.87	17.46	17.85	18.22	18.03
400	–	–	–	11.92	12.83	15.92	17.02	17.01	17.47
450	–	–	–	9.20	11.57	13.62	15.43	15.85	16.36
500	–	–	–	8.37	10.08	12.37	13.80	14.85	–
550	–	–	–	–	9.15	11.00	12.19	13.51	–
600	–	–	–	–	8.07	9.94	10.94	12.28	–
650	–	–	–	–	7.29	8.86	10.72	–	–
700	–	–	–	–	–	8.33	NaN	–	–
750	–	–	–	–	–	7.41	–	–	–

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: 2005.05.18									
Depth	Sta. 0	Sta. 1	Sta. 2	Sta. 3	Sta. 4	Sta. 5	Sta. 6	Sta. 7	Sta. 8
0	26.13	26.39	26.32	26.12	26.31	26.17	26.12	26.12	26.05
10	26.02	26.20	26.19	25.97	25.87	25.83	25.88	25.92	25.99
20	25.92	26.18	26.19	25.96	25.86	25.81	25.83	25.91	25.94
30	25.41	26.19	26.19	25.96	25.86	25.79	25.82	25.89	25.94
40	24.98	26.05	26.19	25.96	25.85	25.77	25.85	25.88	25.91
50	24.40	25.95	26.19	25.96	25.86	25.75	25.80	25.86	25.90
60	23.40	25.64	25.85	25.96	25.73	25.65	25.78	25.79	25.83
70	21.04	25.13	25.07	25.88	25.70	25.59	25.51	25.72	25.37
80	18.77	23.34	24.82	25.45	25.54	25.30	25.25	25.40	25.27
90	16.94	21.83	24.25	25.07	25.38	25.07	25.11	24.84	25.12
100	16.26	20.31	23.49	24.88	25.28	24.81	24.84	24.59	24.67
110	15.92	18.59	23.35	24.45	24.92	24.80	24.53	24.54	24.41
120	15.16	17.97	22.37	23.62	24.36	24.57	24.18	24.24	23.90
130	14.77	17.58	21.58	23.25	24.02	24.02	23.20	23.67	23.45
140	–	16.87	20.55	22.85	23.46	23.09	22.27	23.13	23.16
150	–	16.20	19.97	22.46	23.00	22.37	22.25	23.01	22.95
160	–	15.85	19.27	21.52	22.04	21.51	21.42	22.78	22.69
170	–	15.33	18.54	21.33	21.48	21.13	21.25	22.65	22.49
180	–	14.34	17.81	20.82	20.66	20.79	20.87	22.32	21.95
190	–	13.54	16.90	20.30	20.82	20.43	20.69	21.59	21.35
200	–	13.06	16.14	20.00	20.25	19.86	20.37	21.40	21.01
210	–	12.67	15.40	19.44	19.59	19.51	20.12	21.06	20.68
220	–	11.89	14.51	18.81	19.28	19.41	19.66	20.12	20.19
230	–	11.41	14.07	18.07	19.02	19.24	19.48	19.93	20.04
240	–	10.72	13.41	17.69	18.69	18.82	19.24	19.57	19.69
250	–	10.57	12.66	17.05	18.28	18.70	19.14	19.24	19.45
260	–	9.99	12.11	16.08	18.00	18.62	19.09	19.20	19.26
270	–	–	11.51	15.38	17.85	18.61	18.84	19.17	19.03
280	–	–	10.45	15.00	17.72	18.46	18.77	19.04	18.86
290	–	–	9.95	14.49	17.54	18.10	18.54	19.02	18.78
300	–	–	9.64	14.08	17.40	17.99	18.27	18.95	18.61
350	–	–	9.11	11.17	14.73	16.94	17.91	18.35	18.05
400	–	–	–	8.52	11.44	15.23	17.16	17.36	17.70
450	–	–	–	7.72	9.35	13.55	15.63	16.73	16.48
500	–	–	–	7.60	7.89	10.63	13.50	15.28	–
550	–	–	–	–	7.51	9.11	11.76	13.99	–
600	–	–	–	–	7.29	7.95	11.05	13.16	–
650	–	–	–	–	6.81	7.24	9.33	–	–
700	–	–	–	–	–	6.84	NaN	–	–
750	–	–	–	–	–	6.59	–	–	–

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

Cruise date: 2005.08.31									
Depth	Sta. 0	Sta. 1	Sta. 2	Sta. 3	Sta. 4	Sta. 5	Sta. 6	Sta. 7	Sta. 8
0	28.58	28.65	28.84	29.15	28.76	28.85	29.03	29.46	28.89
10	29.24	29.00	29.38	29.48	29.57	29.60	29.75	29.95	29.99
20	29.03	28.91	29.20	29.28	29.51	29.57	29.74	29.94	29.98
30	27.45	28.85	29.14	29.24	29.40	29.63	29.74	29.85	29.89
40	24.78	28.84	29.11	29.22	29.32	29.59	29.70	29.66	29.86
50	22.69	28.22	29.04	29.06	29.07	29.53	29.68	28.91	29.52
60	19.66	26.85	28.27	28.25	27.65	28.88	29.03	28.28	28.18
70	17.20	23.69	25.87	26.53	26.56	27.08	27.83	27.73	27.51
80	15.44	21.67	24.73	25.48	25.88	26.37	27.04	26.66	26.62
90	14.08	20.53	23.89	24.79	25.48	25.79	25.70	25.96	25.96
100	12.80	19.37	22.14	24.13	24.32	25.38	25.17	25.44	25.28
110	12.17	17.98	21.38	23.54	23.80	24.56	24.76	25.52	24.97
120	11.70	16.31	20.10	22.56	23.02	23.92	24.14	24.15	24.19
130	11.33	14.93	19.45	21.41	22.24	23.36	23.71	23.41	23.56
140	–	14.06	18.63	20.65	21.84	22.70	23.06	23.12	22.51
150	–	12.67	17.83	20.26	21.62	22.20	22.61	22.67	22.45
160	–	11.68	17.25	19.68	20.96	21.67	22.14	21.91	21.89
170	–	10.89	16.89	19.26	20.31	21.33	21.93	21.68	21.70
180	–	9.97	16.47	18.42	19.75	20.95	21.39	21.09	20.69
190	–	9.40	16.04	17.86	19.36	20.49	20.85	20.61	20.60
200	–	9.31	15.75	17.35	18.84	20.00	20.59	20.10	20.32
210	–	9.22	15.44	16.81	18.09	19.76	20.32	19.98	19.91
220	–	8.73	14.74	16.43	17.91	19.45	20.02	19.60	19.78
230	–	8.60	14.33	16.10	17.49	19.00	19.64	19.41	19.57
240	–	8.52	13.74	15.68	17.14	18.66	19.47	19.26	19.54
250	–	8.43	12.84	15.39	16.80	18.23	19.02	19.22	19.36
260	–	8.31	11.90	15.16	16.51	17.80	18.87	19.09	19.23
270	–	–	11.25	14.66	16.08	17.56	18.62	18.86	19.15
280	–	–	10.58	14.61	15.71	17.39	18.34	18.74	19.10
290	–	–	10.16	14.31	15.22	17.07	18.07	18.66	19.08
300	–	–	9.93	13.68	14.90	16.84	17.87	18.64	19.00
350	–	–	8.05	12.51	13.30	14.85	16.61	17.56	18.30
400	–	–	–	10.28	11.79	13.61	14.82	16.44	17.49
450	–	–	–	9.53	10.86	12.04	13.22	14.54	16.38
500	–	–	–	7.84	9.55	10.78	12.04	13.29	–
550	–	–	–	–	8.76	9.58	10.85	12.19	–
600	–	–	–	–	7.84	9.04	10.06	11.18	–
650	–	–	–	–	7.20	8.20	9.29	–	–
700	–	–	–	–	–	7.37	NaN	–	–
750	–	–	–	–	–	6.93	–	–	–

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

Cruise date: 2005.11.11									
Depth	Sta. 0	Sta. 1	Sta. 2	Sta. 3	Sta. 4	Sta. 5	Sta. 6	Sta. 7	Sta. 8
0	25.72	26.14	25.77	26.55	25.89	26.35	26.32	26.44	25.78
10	26.68	26.50	26.93	27.02	27.12	27.32	27.17	27.18	27.28
20	26.67	26.51	26.94	26.98	27.13	27.31	27.16	27.17	27.27
30	26.68	26.51	26.94	26.93	27.11	27.32	27.16	27.15	27.27
40	26.68	26.51	26.92	26.90	26.99	27.32	27.16	27.14	27.23
50	26.68	26.37	26.67	26.89	26.94	27.32	27.17	27.07	27.18
60	26.68	26.48	26.64	26.86	26.77	27.32	27.17	27.00	26.92
70	26.54	26.51	26.64	26.75	26.73	27.32	27.14	26.67	26.41
80	26.22	26.27	26.58	26.36	26.64	27.10	26.96	26.28	25.54
90	24.60	25.03	25.26	25.29	25.95	26.89	26.49	26.03	24.53
100	22.70	22.53	23.67	24.36	24.88	26.00	25.94	25.18	24.26
110	19.56	21.31	22.80	23.61	24.47	25.28	25.23	24.53	23.83
120	16.32	20.09	21.70	22.87	23.63	24.21	24.42	23.75	22.48
130	15.48	19.82	20.93	22.19	22.79	23.26	23.64	23.40	22.09
140	–	19.32	20.45	21.33	22.15	23.00	22.90	22.91	21.34
150	–	18.44	19.72	20.39	21.14	22.07	22.23	22.42	21.20
160	–	17.22	19.07	19.81	20.69	21.44	21.84	21.74	20.93
170	–	15.19	18.81	19.22	20.27	20.94	21.74	21.54	20.68
180	–	13.89	18.16	18.58	19.42	20.54	20.59	20.99	20.25
190	–	12.60	17.36	18.09	18.92	19.98	19.89	20.64	20.06
200	–	12.09	16.95	17.69	18.47	19.68	19.85	20.21	19.86
210	–	11.04	16.50	17.29	18.14	19.42	19.60	19.97	19.62
220	–	10.13	15.90	16.79	17.77	19.15	19.36	19.61	19.41
230	–	9.48	15.28	16.39	17.23	18.71	19.35	19.35	19.24
240	–	9.05	14.65	16.04	17.02	18.29	19.34	18.89	19.08
250	–	8.83	14.19	15.76	16.53	17.98	18.71	18.75	19.01
260	–	8.70	13.02	15.63	16.24	17.35	18.24	18.66	18.82
270	–	–	12.25	15.33	15.93	16.82	18.15	18.56	18.69
280	–	–	11.37	14.71	15.46	16.53	17.92	18.36	18.61
290	–	–	11.01	14.19	14.46	16.33	17.86	18.06	18.57
300	–	–	10.78	13.81	14.11	16.15	17.59	17.82	18.45
350	–	–	9.89	11.84	12.31	14.17	15.74	17.00	17.36
400	–	–	–	9.54	10.68	12.37	14.83	15.56	16.40
450	–	–	–	7.37	9.69	11.10	13.07	14.79	15.67
500	–	–	–	6.82	8.54	9.85	11.37	12.60	–
550	–	–	–	–	7.73	8.90	10.08	11.63	–
600	–	–	–	–	6.94	8.45	9.63	10.67	–
650	–	–	–	–	6.30	7.82	8.05	–	–
700	–	–	–	–	–	7.17	7.64	–	–
750	–	–	–	–	–	6.93	–	–	–

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

Cruise date: 2005.11.17									
Depth	Sta. 0	Sta. 1	Sta. 2	Sta. 3	Sta. 4	Sta. 5	Sta. 6	Sta. 7	Sta. 8
0	NaN	NaN	25.77	26.35	25.97	26.28	25.86	26.06	26.16
10	NaN	NaN	26.80	26.91	26.94	26.99	27.08	26.88	26.73
20	NaN	NaN	26.77	26.92	26.95	26.97	27.07	26.86	26.71
30	NaN	NaN	26.68	26.92	26.95	26.97	27.06	26.86	26.71
40	NaN	NaN	26.63	26.93	26.95	26.96	27.06	26.84	26.69
50	NaN	NaN	26.49	26.73	26.95	26.96	27.07	26.68	26.68
60	NaN	NaN	26.19	26.39	26.61	26.71	27.08	26.58	26.68
70	NaN	NaN	26.12	26.27	26.20	26.21	27.08	26.55	26.63
80	NaN	NaN	26.12	26.16	26.17	26.18	26.42	26.32	26.66
90	NaN	NaN	25.02	26.16	26.16	26.17	25.70	25.67	26.27
100	NaN	NaN	23.16	25.27	26.07	25.95	25.29	24.94	25.72
110	NaN	NaN	21.80	23.29	24.37	24.61	24.82	24.47	24.64
120	NaN	NaN	20.98	21.87	23.67	24.06	24.32	23.91	23.76
130	NaN	NaN	20.10	21.24	22.34	22.65	23.61	23.36	23.32
140	–	NaN	19.66	20.59	22.03	21.85	22.96	22.64	22.84
150	–	NaN	19.03	20.14	21.44	21.93	22.22	22.29	22.18
160	–	NaN	18.44	19.67	20.52	21.50	21.61	22.01	21.55
170	–	NaN	17.76	19.11	20.22	21.12	21.37	21.17	21.28
180	–	NaN	17.40	18.73	19.83	20.44	20.93	20.55	21.04
190	–	NaN	16.84	18.17	19.29	19.91	20.35	20.26	20.80
200	–	NaN	16.43	17.72	18.34	19.29	19.97	19.83	20.18
210	–	NaN	15.78	17.37	17.84	18.77	19.70	19.36	19.90
220	–	NaN	15.33	16.76	17.34	18.37	19.25	19.15	19.85
230	–	NaN	15.07	16.50	17.04	17.96	19.02	18.88	19.71
240	–	NaN	14.47	16.22	16.71	17.60	18.64	18.72	19.27
250	–	NaN	13.84	15.85	16.32	17.11	18.30	18.35	19.05
260	–	NaN	12.68	15.55	15.82	16.67	17.98	18.00	18.91
270	–	–	11.86	15.22	15.54	16.41	17.69	17.77	18.77
280	–	–	11.11	14.87	15.29	16.13	17.47	17.64	18.48
290	–	–	10.67	14.35	15.10	15.67	17.02	17.25	18.29
300	–	–	10.49	14.11	14.73	15.28	16.85	16.91	18.19
350	–	–	9.21	12.07	12.67	13.63	15.57	16.16	17.56
400	–	–	–	10.54	11.25	12.36	14.23	15.25	16.60
450	–	–	–	9.03	10.08	10.96	12.87	14.34	15.69
500	–	–	–	7.42	8.89	10.04	11.44	12.64	–
550	–	–	–	–	8.25	9.29	10.01	11.28	–
600	–	–	–	–	7.67	8.60	9.42	10.74	–
650	–	–	–	–	6.52	7.72	9.40	–	–
700	–	–	–	–	–	7.32	NaN	–	–
750	–	–	–	–	–	6.82	–	–	–

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: 2005.06.03								
0	20: 8:10	-79.9309	27.0083	20:18:46	-79.9314	27.0209	-0.10	151.44
1	18:17:28	-79.8625	27.0090	18:34: 1	-79.8615	27.0260	1.47	123.32
2	15:32: 3	-79.7849	27.0058	15:55:47	-79.7885	27.0332	2.95	125.11
3	13: 3:22	-79.6842	27.0043	13:32:58	-79.6894	27.0324	3.59	117.35
4	10:46:53	-79.6186	27.0083	11:21:29	-79.6242	27.0384	1.97	96.25
5	8:59:26	-79.5022	27.0037	9:37:33	-79.5095	27.0286	0.26	76.04
6	7:11:35	-79.3865	27.0116	7:48:31	-79.3941	27.0399	-0.85	65.25
7	5:36: 1	-79.2831	27.0037	6: 7:23	-79.2860	27.0204	-7.08	51.71
8	4: 7:14	-79.2036	27.0018	4:33: 5	-79.2101	27.0061	-13.55	43.74
Cruise date: 2005.07.11								
0	21: 8: 2	-79.9333	27.0096	21:20:25	-79.9343	27.0247	-0.72	156.94
1	19: 9:26	-79.8677	27.0082	19:30:40	-79.8674	27.0323	3.45	124.34
2	17: 5:58	-79.7845	27.0058	17:31:24	-79.7860	27.0340	1.96	119.18
3	14:19:12	-79.6852	27.0051	14:50: 5	-79.6889	27.0358	3.36	106.30
4	12: 5:57	-79.6189	27.0063	12:40:22	-79.6243	27.0390	-0.03	90.71
5	9:29:25	-79.5031	27.0067	10:11: 3	-79.5103	27.0399	-2.77	69.31
6	7:56: 3	-79.3866	27.0048	8:34:24	-79.3982	27.0315	-6.36	58.73
7	6:26: 9	-79.2870	27.0063	7: 0:51	-79.2980	27.0279	-5.74	51.63
8	5: 8:21	-79.2077	27.0070	5:34:55	-79.2126	27.0233	-11.69	42.74
Cruise date: 2005.11.23								
0	13:13: 3	-79.9284	27.0018	13:23:46	-79.9251	27.0046	-0.67	90.84
1	11:34:42	-79.8631	27.0033	11:48:46	-79.8596	27.0061	2.70	83.11
2	10: 2:13	-79.7798	27.0050	10:22:34	-79.7717	27.0138	1.84	95.08
3	8:21:12	-79.6771	27.0042	8:44:32	-79.6701	27.0119	2.38	101.99
4	6:26: 6	-79.6085	27.0049	6:59:22	-79.5900	27.0172	-1.06	82.13
5	3:30:52	-79.4858	27.0083	4: 9: 1	-79.4611	27.0245	-1.07	60.88
6	0:49:34	-79.3736	27.0031	1:26: 4	-79.3542	27.0114	-4.72	49.80
7	22:53:31	-79.2729	26.9982	23:26:39	-79.2617	26.9982	-7.25	35.31
8	20:32:10	-79.1945	26.9955	20:58:53	-79.1866	26.9899	-8.11	23.52

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.

Sta	Deployed			Surfaced			Mean Velocities	
	Time (GMT)	Lon	Lat	Time (GMT)	Lon	Lat	U cm/s	V cm/s
Cruise date: 2005.12.15								
0	19:49:52	-79.9307	27.0075	20: 5: 5	-79.9324	27.0235	-5.64	57.03
1	18: 2: 6	-79.8722	27.0072	18:27:51	-79.8768	27.0340	-5.02	59.00
2	16:16:47	-79.7854	27.0079	16:42:36	-79.7886	27.0344	-1.38	72.50
3	14:12:13	-79.6853	27.0084	14:44: 5	-79.6879	27.0395	1.07	85.64
4	11:54:52	-79.6193	27.0094	12:31:30	-79.6241	27.0468	2.72	89.05
5	10: 5:27	-79.5019	27.0062	10:48:42	-79.5004	27.0341	2.24	78.75
6	8:21:41	-79.3844	27.0046	9: 3: 0	-79.3821	27.0272	2.79	66.18
7	6:34:21	-79.2846	27.0030	7:12:25	-79.2847	27.0189	-0.20	58.89
8	5:27:32	-79.2053	27.0029	5:57:24	-79.2165	27.0112	-6.89	37.31

Table 13: Same as Table 12 for LADCP data collected on the indicated dates.

Appendix E:

CTD and LADCP profiles

Cruise ID: ws0512. Station: 0					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	27.80	36.05	4.52	NaN	NaN
10	27.32	36.14	4.60	-0.3	190.3
20	24.45	36.14	4.87	-0.2	189.9
30	24.09	36.25	4.82	-0.1	188.1
40	23.47	36.29	4.90	0.6	182.9
50	22.73	36.39	4.84	1.0	176.3
60	22.03	36.44	4.72	1.2	169.2
70	21.43	36.45	4.41	0.3	157.6
80	20.47	36.43	3.99	-1.0	141.6
90	18.38	36.22	3.80	-2.2	123.9
100	16.57	36.06	3.48	-0.4	74.4
110	15.28	35.94	3.29	0.0	71.8
120	13.72	35.77	3.11	NaN	NaN

Table 14: 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: ws0512. Station: 1					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	27.92	36.02	4.53	NaN	NaN
10	27.91	36.03	4.55	9.4	200.8
20	27.58	36.14	4.59	9.4	200.9
30	25.19	36.22	4.83	8.7	198.1
40	24.13	36.33	4.81	5.5	189.3
50	23.40	36.28	4.90	4.6	182.1
60	22.90	36.39	4.88	4.9	177.1
70	22.42	36.40	4.84	5.9	171.2
80	21.92	36.46	4.54	4.4	167.4
90	21.32	36.50	4.26	5.4	161.0
100	21.23	36.69	3.56	4.6	151.8
110	20.05	36.53	3.44	3.7	142.8
120	19.54	36.48	3.37	3.7	136.1
130	18.94	36.44	3.32	1.9	130.2
140	18.28	36.39	3.29	-0.7	123.0
150	16.88	36.19	3.21	-3.3	111.1
160	15.32	35.97	3.16	-6.1	98.1
170	14.09	35.81	3.09	-8.4	83.6
180	13.20	35.70	3.05	-7.1	72.4
190	12.71	35.63	3.04	-3.1	60.0
200	12.07	35.54	3.01	-2.7	48.6
210	11.56	35.47	2.99	-3.8	46.3
220	10.75	35.36	3.00	-1.9	39.5
230	10.08	35.27	2.97	0.2	34.3
240	9.90	35.25	2.97	0.2	34.1
250	9.55	35.21	2.98	NaN	NaN

Table 15: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0512. Station: 2					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.37	36.18	4.50	NaN	NaN
10	28.37	36.18	4.51	8.9	207.5
20	28.36	36.18	4.51	8.9	207.5
30	27.01	36.37	4.64	6.2	204.7
40	26.12	36.45	4.51	-0.4	196.4
50	25.20	36.55	4.37	2.1	191.5
60	24.94	36.65	4.22	7.7	188.1
70	23.36	36.27	4.90	10.5	182.3
80	23.25	36.46	4.74	10.3	178.4
90	22.65	36.45	4.72	9.5	175.9
100	22.50	36.56	4.35	12.0	170.3
110	21.70	36.53	4.17	14.6	164.1
120	21.29	36.55	3.99	16.6	158.1
130	20.32	36.44	3.71	15.1	153.4
140	19.96	36.53	3.46	11.9	149.6
150	19.47	36.57	3.30	9.9	146.9
160	19.15	36.59	3.39	9.0	143.2
170	18.69	36.51	3.40	9.0	138.9
180	18.05	36.43	3.29	7.4	134.4
190	17.58	36.35	3.19	6.0	126.4
200	16.77	36.23	3.17	2.2	120.1
210	16.37	36.18	3.14	-3.8	113.5
220	15.96	36.12	3.15	-6.9	108.4
230	15.41	36.04	3.13	-5.6	108.7
240	14.97	35.97	3.11	-4.2	102.7
250	13.86	35.81	3.10	-3.2	93.3
260	12.82	35.65	3.07	-3.4	82.6
270	12.11	35.55	3.03	-3.4	75.0
280	11.30	35.43	2.99	-3.8	66.5
290	10.48	35.32	2.98	-5.0	54.4
300	10.01	35.26	2.97	-6.3	49.8
350	7.64	34.96	3.01	-6.3	32.0

Table 16: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0512. Station: 3					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.29	36.23	4.51	NaN	NaN
10	28.29	36.23	4.51	1.6	179.0
20	28.29	36.23	4.52	1.5	179.7
30	27.12	36.20	4.71	3.3	178.7
40	26.65	36.30	4.66	8.7	176.5
50	25.99	36.34	4.58	7.4	175.7
60	25.38	36.31	4.60	4.2	174.4
70	25.43	36.56	4.37	3.6	171.3
80	24.68	36.51	4.40	3.4	169.1
90	24.45	36.57	4.40	4.6	167.5
100	24.17	36.75	3.99	7.9	164.8
110	23.10	36.67	4.34	11.4	160.2
120	22.86	36.87	3.69	14.7	152.1
130	22.09	36.90	3.52	17.1	146.0
140	21.51	36.89	3.57	18.1	140.9
150	20.80	36.82	3.56	16.8	137.1
160	20.07	36.74	3.62	15.2	134.1
170	19.51	36.67	3.55	11.9	131.9
180	19.21	36.63	3.51	8.4	132.5
190	18.68	36.57	3.53	6.8	131.1
200	18.26	36.49	3.47	6.8	127.6
210	18.03	36.46	3.53	5.1	126.2
220	17.70	36.41	3.54	3.4	125.9
230	17.35	36.37	3.59	3.3	127.3
240	17.10	36.33	3.60	3.3	127.9
250	16.80	36.28	3.58	5.1	127.6
260	16.58	36.25	3.51	4.9	124.9
270	16.29	36.20	3.47	3.3	121.0
280	16.11	36.17	3.45	-0.2	117.1
290	15.66	36.09	3.37	-0.9	115.4
300	15.20	36.01	3.33	-0.6	114.5
350	13.37	35.71	2.98	10.7	102.7
400	10.27	35.27	2.89	-5.3	65.8
450	8.42	35.02	2.88	-8.0	53.3
500	7.54	34.95	3.00	NaN	NaN

Table 17: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0512. Station: 4					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.26	36.19	4.50	NaN	NaN
10	28.27	36.19	4.51	2.2	147.0
20	28.27	36.19	4.52	2.2	147.0
30	27.15	36.21	4.66	2.0	146.4
40	26.33	36.22	4.69	-1.3	146.0
50	26.05	36.29	4.66	-5.6	147.1
60	25.70	36.31	4.58	-9.5	148.8
70	25.61	36.46	4.42	-8.9	147.4
80	25.29	36.60	4.26	-6.6	145.1
90	24.87	36.57	4.31	-3.2	140.9
100	24.52	36.57	4.37	0.5	139.0
110	24.33	36.84	3.93	4.8	137.6
120	24.01	36.94	3.70	8.4	134.3
130	23.12	36.94	3.63	10.5	130.3
140	22.09	36.89	3.56	10.7	125.0
150	21.25	36.84	3.56	8.6	122.8
160	20.72	36.79	3.55	6.5	121.3
170	19.85	36.70	3.57	4.8	120.0
180	19.32	36.65	3.61	4.4	119.2
190	19.04	36.62	3.61	4.3	118.1
200	18.69	36.57	3.63	4.7	116.6
210	18.31	36.52	3.65	3.2	115.9
220	18.06	36.48	3.66	2.3	115.3
230	17.82	36.45	3.66	2.2	114.1
240	17.64	36.42	3.65	2.6	113.3
250	17.53	36.40	3.65	2.0	112.1
260	17.26	36.36	3.63	2.0	112.6
270	16.82	36.28	3.59	2.2	114.0
280	16.63	36.25	3.54	4.9	110.2
290	16.29	36.19	3.47	6.1	107.7
300	15.89	36.12	3.44	6.5	104.9
350	13.86	35.79	3.07	4.0	99.0
400	11.98	35.49	2.89	12.0	78.7
450	10.08	35.22	2.84	-1.4	68.8
500	9.00	35.08	2.85	-0.6	51.1
550	8.07	34.98	2.91	-3.9	41.8
600	7.54	34.95	3.00	1.7	10.4

Table 18: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0512. Station: 5					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.06	36.14	4.52	NaN	NaN
10	28.06	36.14	4.53	0.5	106.5
20	27.99	36.14	4.54	0.4	106.5
30	26.98	36.18	4.69	1.4	106.6
40	26.62	36.18	4.71	1.4	107.2
50	25.90	36.19	4.73	-0.4	108.9
60	25.71	36.28	4.63	-2.8	111.8
70	25.60	36.51	4.38	-2.1	114.7
80	24.90	36.56	4.26	0.3	116.6
90	25.32	36.94	4.47	3.3	117.5
100	24.39	36.90	4.33	0.3	116.4
110	23.80	36.81	3.96	-2.4	114.7
120	23.49	36.83	3.83	-2.5	114.0
130	23.10	36.92	3.80	-0.7	113.2
140	22.79	36.92	4.07	2.5	112.2
150	21.83	36.88	3.87	4.3	110.7
160	21.17	36.85	3.87	3.7	109.9
170	20.49	36.78	3.75	2.3	109.9
180	20.25	36.76	3.68	1.2	110.3
190	19.97	36.74	3.77	-0.7	109.3
200	19.62	36.71	4.17	-2.7	108.1
210	19.31	36.66	4.03	-2.7	105.3
220	18.99	36.64	4.00	-2.9	103.8
230	18.28	36.54	4.11	-2.9	104.7
240	18.20	36.54	4.11	-2.9	104.5
250	17.93	36.50	4.14	-3.1	102.3
260	17.77	36.48	4.13	-0.9	99.0
270	17.68	36.46	4.11	1.4	96.2
280	17.46	36.42	4.05	1.9	94.3
290	17.17	36.38	4.01	2.3	93.7
300	16.93	36.34	3.99	3.0	92.8
350	15.99	36.14	3.45	7.8	89.7
400	13.92	35.80	3.18	-1.2	70.9
450	11.94	35.49	2.97	-0.1	61.5
500	10.89	35.33	2.89	3.6	54.1
550	9.61	35.15	2.81	-1.7	41.7
600	8.75	35.05	2.85	-0.8	39.8
650	7.86	34.97	2.94	-7.0	36.3
700	7.05	34.92	3.06	0.3	31.9
750	6.50	34.91	3.27	NaN	NaN

Table 19: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0512. Station: 6					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	27.45	36.19	4.56	NaN	NaN
10	27.45	36.19	4.57	-21.4	94.6
20	27.35	36.23	4.58	-21.5	94.7
30	26.70	36.30	4.63	-19.4	93.8
40	26.03	36.34	4.69	-14.1	93.0
50	25.61	36.37	4.72	-10.3	94.3
60	25.43	36.41	4.73	-8.1	94.0
70	25.18	36.44	4.72	-8.7	89.9
80	25.05	36.68	4.41	-9.7	87.9
90	24.78	36.70	4.26	-10.3	88.7
100	24.30	36.83	4.30	-13.0	89.7
110	23.89	36.89	4.22	-14.2	90.9
120	22.90	36.96	4.18	-11.3	92.4
130	22.46	36.95	4.16	-5.9	92.6
140	21.79	36.92	4.15	-1.0	92.2
150	21.58	36.90	4.17	1.4	90.5
160	21.13	36.86	4.11	3.3	89.2
170	20.52	36.80	4.11	4.3	87.3
180	20.07	36.76	4.13	6.2	85.7
190	19.85	36.74	4.14	8.5	84.5
200	19.70	36.72	4.15	9.0	83.2
210	19.51	36.70	4.17	8.5	81.0
220	19.36	36.68	4.18	8.0	79.0
230	19.25	36.67	4.20	6.6	78.6
240	19.16	36.66	4.19	5.0	78.6
250	18.81	36.62	4.17	2.8	78.2
260	18.71	36.61	4.19	1.1	77.4
270	18.52	36.58	4.18	0.5	76.2
280	18.40	36.57	4.18	0.4	75.8
290	18.33	36.55	4.17	0.7	76.2
300	18.05	36.51	4.16	0.5	76.0
350	16.56	36.27	3.87	0.0	69.4
400	16.07	36.19	3.77	1.9	65.4
450	13.82	35.78	3.18	-0.8	51.1
500	11.92	35.48	2.91	-2.6	41.2
550	10.46	35.27	2.86	4.8	35.3
600	9.72	35.18	2.84	7.4	27.9
650	9.45	35.20	3.07	-0.7	15.5

Table 20: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0512. Station: 7					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	27.73	36.17	4.55	NaN	NaN
10	27.73	36.17	4.55	-3.1	54.1
20	27.67	36.22	4.57	-3.1	54.0
30	27.17	36.25	4.62	-4.2	52.7
40	26.84	36.28	4.65	-10.1	49.4
50	26.17	36.25	4.69	-16.2	48.1
60	25.58	36.54	4.42	-20.9	50.3
70	25.06	36.58	4.41	-21.6	54.7
80	24.69	36.62	4.34	-18.0	59.5
90	24.46	36.76	4.22	-13.7	62.1
100	23.80	36.77	4.53	-11.4	63.3
110	23.56	36.93	4.25	-10.8	65.2
120	23.15	36.92	4.48	-12.2	70.2
130	22.92	36.95	4.48	-13.2	71.6
140	22.26	36.93	4.14	-13.1	72.3
150	22.09	36.93	4.17	-11.1	72.8
160	21.42	36.88	4.14	-6.4	73.3
170	21.22	36.87	4.12	0.0	73.7
180	20.68	36.82	4.10	3.0	70.9
190	20.46	36.81	4.05	2.0	67.3
200	20.11	36.77	4.11	-0.0	64.0
210	19.57	36.71	4.16	-1.4	60.7
220	19.30	36.68	4.21	-2.6	58.7
230	19.08	36.65	4.23	-2.2	57.5
240	18.92	36.63	4.18	-3.7	56.9
250	18.56	36.59	4.19	-3.8	55.7
260	18.38	36.56	4.18	-3.7	54.1
270	18.37	36.56	4.18	-4.3	52.9
280	18.16	36.53	4.17	-6.4	52.4
290	18.04	36.52	4.16	-9.0	52.2
300	18.04	36.52	4.15	-11.1	51.9
350	17.25	36.35	3.59	-8.7	50.5
400	16.26	36.19	3.53	-6.1	46.3
450	15.44	36.09	3.63	-5.2	43.4
500	14.34	35.91	3.49	-3.4	35.4
550	13.27	35.72	3.26	-6.4	34.5

Table 21: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0512. Station: 8					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	27.70	36.16	4.53	NaN	NaN
10	27.71	36.17	4.55	-2.9	12.1
20	27.67	36.21	4.57	-3.1	10.7
30	26.88	36.23	4.65	-1.2	11.1
40	26.48	36.22	4.68	0.7	10.1
50	25.91	36.27	4.67	-2.3	13.6
60	25.41	36.45	4.46	-5.3	18.8
70	24.69	36.58	4.26	-5.4	25.8
80	24.33	36.81	4.23	-5.1	33.7
90	23.60	36.94	4.25	-5.3	41.3
100	23.56	36.95	4.24	-8.7	43.4
110	23.37	36.95	4.23	-13.7	42.8
120	23.24	36.95	4.28	-15.8	43.4
130	22.93	36.94	4.29	-19.7	45.7
140	22.45	36.93	4.40	-23.4	49.3
150	21.69	36.88	4.56	-21.8	54.6
160	21.16	36.84	4.53	-20.5	58.8
170	20.87	36.82	4.44	-21.1	61.7
180	20.65	36.80	4.42	-20.5	62.8
190	20.45	36.78	4.55	-19.7	64.3
200	20.34	36.77	4.51	-20.1	65.3
210	20.13	36.75	4.49	-22.9	64.7
220	19.99	36.73	4.51	-25.1	64.9
230	19.91	36.72	4.46	-24.1	64.3
240	19.78	36.71	4.41	-23.0	61.0
250	19.41	36.67	4.36	-21.1	56.5
260	19.18	36.64	4.29	-16.8	54.2
270	18.97	36.62	4.31	-13.6	56.8
280	18.68	36.59	4.33	-15.5	59.2
290	18.56	36.58	4.39	-16.0	59.2
300	18.42	36.56	4.38	-15.5	56.3
350	17.50	36.43	4.19	-6.0	41.3
400	16.82	36.32	4.15	-12.9	37.9
450	15.58	36.12	3.97	-17.6	32.1

Table 22: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0516. Station: 0					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.34	36.07	4.57	NaN	NaN
10	28.27	36.08	4.59	2.0	252.0
20	28.23	36.08	4.60	2.2	251.6
30	28.16	36.07	4.60	3.6	243.2
40	25.56	36.37	4.76	-2.6	221.6
50	22.67	36.52	4.66	-2.7	197.1
60	20.94	36.56	3.77	1.6	188.9
70	19.60	36.52	3.38	4.5	178.7
80	17.37	36.22	3.33	1.5	150.4
90	14.87	35.89	3.28	1.8	118.7
100	13.67	35.72	3.19	2.4	87.6
110	12.13	35.53	3.13	-3.0	66.3
120	10.69	35.35	3.08	-8.9	45.5
130	NaN	NaN	NaN	-11.9	38.6

Table 23: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0516. Station: 1					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.39	36.02	4.59	NaN	NaN
10	28.49	36.10	4.58	20.3	243.5
20	28.42	36.12	4.58	16.5	246.8
30	28.40	36.12	4.58	15.0	248.7
40	28.39	36.11	4.58	12.3	240.2
50	25.19	36.47	4.73	4.0	217.4
60	23.01	36.50	4.74	6.8	203.6
70	21.90	36.49	4.52	15.1	192.6
80	20.96	36.53	3.99	12.2	184.3
90	20.05	36.57	3.32	8.8	174.1
100	18.76	36.52	3.30	8.2	158.2
110	17.76	36.40	3.36	9.0	142.6
120	17.01	36.28	3.30	10.1	128.5
130	16.66	36.23	3.26	9.7	117.0
140	15.55	36.05	3.21	3.8	105.2
150	14.67	35.91	3.14	-5.8	96.8
160	14.07	35.81	3.09	-9.4	92.4
170	13.08	35.66	3.07	-4.9	83.4
180	11.52	35.46	3.01	1.3	69.5
190	10.88	35.38	2.99	3.9	54.5
200	10.04	35.27	2.98	2.5	42.1
210	9.23	35.17	2.98	-1.0	26.0
220	8.13	35.03	2.98	-5.2	12.8
230	7.68	34.98	2.97	-14.1	13.3
240	7.64	34.97	2.96	-16.2	12.8
250	NaN	NaN	NaN	-16.4	2.4

Table 24: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0516. Station: 2					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.60	36.14	4.54	NaN	NaN
10	28.57	36.14	4.55	12.2	223.8
20	28.55	36.14	4.56	12.2	224.0
30	28.54	36.14	4.56	11.3	228.1
40	28.54	36.14	4.56	13.4	226.6
50	28.33	36.18	4.58	14.4	216.5
60	26.36	36.36	4.68	6.8	203.1
70	23.42	36.50	4.86	5.0	200.3
80	22.68	36.48	4.87	12.4	196.5
90	21.87	36.49	4.53	11.1	188.7
100	21.03	36.52	4.02	5.6	179.9
110	20.36	36.56	3.46	4.8	173.5
120	19.70	36.55	3.19	6.8	167.8
130	19.18	36.60	3.39	8.7	157.5
140	18.75	36.55	3.42	6.9	153.6
150	18.19	36.48	3.50	6.3	151.3
160	17.78	36.42	3.50	4.9	147.6
170	17.36	36.36	3.41	2.8	140.7
180	16.82	36.28	3.44	1.7	136.6
190	16.42	36.21	3.35	0.9	136.5
200	15.99	36.14	3.34	-0.3	131.4
210	15.78	36.11	3.29	-4.9	127.0
220	15.44	36.05	3.26	-7.9	121.0
230	14.58	35.91	3.16	-3.4	109.4
240	12.67	35.62	3.05	-1.0	92.6
250	12.02	35.54	3.00	0.1	76.9
260	11.78	35.51	2.99	2.1	62.9
270	10.97	35.39	2.99	3.4	46.5
280	9.35	35.16	2.95	2.9	31.5
290	8.37	35.03	2.90	2.3	24.1
300	8.28	35.03	2.89	1.2	23.2
350	7.60	34.97	2.97	-14.2	16.1

Table 25: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0516. Station: 3					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.58	36.13	4.54	NaN	NaN
10	28.57	36.13	4.55	-4.1	202.4
20	28.57	36.13	4.55	-4.1	202.5
30	28.57	36.13	4.55	-2.3	207.2
40	28.57	36.13	4.55	-1.3	206.9
50	28.54	36.13	4.56	3.8	202.5
60	26.80	36.31	4.66	11.0	189.6
70	25.86	36.51	4.42	5.0	181.5
80	24.89	36.66	4.38	-0.0	180.8
90	23.87	36.61	4.93	-5.5	178.8
100	22.97	36.51	4.86	-6.1	174.0
110	21.88	36.46	4.71	-2.2	168.1
120	21.37	36.83	3.56	2.2	158.9
130	20.32	36.75	3.41	0.1	149.4
140	19.82	36.71	3.52	-5.3	144.5
150	19.40	36.63	3.46	-4.9	142.2
160	19.06	36.61	3.54	-2.9	141.1
170	18.71	36.59	3.77	-2.6	139.3
180	18.22	36.52	3.78	-1.4	134.1
190	18.01	36.49	3.79	0.2	128.6
200	17.67	36.42	3.60	-0.7	126.3
210	17.43	36.38	3.60	-0.1	126.0
220	17.10	36.32	3.56	2.9	123.9
230	16.44	36.21	3.38	1.6	121.8
240	15.96	36.13	3.29	-4.0	118.8
250	15.50	36.06	3.24	-5.4	115.6
260	15.08	35.99	3.20	-4.5	111.9
270	14.59	35.91	3.11	-0.4	107.9
280	14.19	35.84	3.21	2.1	106.0
290	13.90	35.80	3.16	3.6	104.1
300	13.42	35.72	3.13	5.7	97.0
350	11.22	35.38	2.84	10.5	65.5
400	9.74	35.18	2.76	4.7	42.9
450	8.46	35.03	2.77	12.5	35.5
500	7.24	34.96	3.02	6.9	-0.5

Table 26: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0516. Station: 4					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.75	36.09	4.52	NaN	NaN
10	28.75	36.09	4.52	-11.6	185.5
20	28.75	36.09	4.52	-11.6	185.5
30	28.75	36.09	4.52	-10.3	187.4
40	28.75	36.09	4.52	-7.8	186.8
50	28.23	36.17	4.56	0.7	185.4
60	27.05	36.32	4.66	5.2	185.4
70	26.28	36.44	4.42	5.2	187.0
80	25.74	36.54	4.33	0.9	182.0
90	25.21	36.73	4.02	-6.8	172.7
100	24.53	36.87	3.84	-8.4	163.6
110	23.56	36.90	3.65	-7.9	150.9
120	22.41	36.88	3.53	-7.9	143.2
130	22.27	36.93	3.56	-8.3	141.0
140	21.65	36.90	3.53	-8.2	135.7
150	20.81	36.83	3.60	-6.6	130.2
160	20.52	36.80	3.57	-6.0	128.5
170	19.84	36.72	3.62	-8.6	123.4
180	19.44	36.67	3.58	-10.7	119.2
190	19.01	36.63	3.66	-8.2	118.0
200	18.76	36.59	3.75	-3.6	115.6
210	18.30	36.51	3.60	-6.3	114.6
220	18.13	36.48	3.55	-9.8	116.1
230	17.64	36.42	3.56	-8.2	114.6
240	16.96	36.31	3.61	-4.9	109.8
250	16.27	36.19	3.52	-4.1	105.6
260	15.96	36.14	3.46	-1.2	100.7
270	15.48	36.06	3.45	-1.5	97.5
280	14.95	35.97	3.34	-3.5	92.3
290	14.47	35.89	3.24	-5.2	89.3
300	13.96	35.81	3.11	-4.3	85.9
350	12.58	35.59	2.87	2.7	76.6
400	10.59	35.29	2.78	-0.2	62.2
450	9.75	35.17	2.76	3.9	48.1
500	9.06	35.09	2.76	5.9	38.8
550	8.01	34.98	2.79	8.1	37.3
600	6.98	34.92	3.02	10.8	2.9

Table 27: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0516. Station: 5					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.78	36.06	4.48	NaN	NaN
10	28.79	36.06	4.50	-12.2	139.9
20	28.79	36.06	4.51	-12.2	140.0
30	28.79	36.06	4.52	-11.6	145.1
40	28.18	36.14	4.56	-11.2	148.5
50	27.63	36.17	4.66	-12.3	158.1
60	26.70	36.24	4.71	-11.8	163.9
70	26.31	36.30	4.58	-5.7	162.2
80	25.77	36.41	4.39	3.5	158.1
90	25.29	36.48	4.35	6.3	151.7
100	24.74	36.53	4.27	6.6	143.0
110	24.60	36.69	4.12	2.7	134.5
120	24.13	36.85	3.83	-8.8	130.4
130	23.81	36.93	3.74	-12.3	131.2
140	23.20	36.95	3.63	-11.9	129.4
150	22.61	36.95	3.59	-10.7	122.1
160	21.79	36.91	3.57	-8.4	117.5
170	21.27	36.84	3.62	-4.6	118.0
180	20.60	36.79	3.70	-6.2	115.4
190	20.12	36.75	3.61	-6.8	109.5
200	19.63	36.70	3.59	-6.9	104.0
210	19.26	36.65	3.61	-6.0	98.7
220	18.81	36.59	3.66	-7.9	96.4
230	18.45	36.54	3.71	-12.4	96.1
240	18.17	36.50	3.66	-14.6	96.5
250	18.02	36.48	3.66	-14.7	93.5
260	17.62	36.44	4.05	-14.8	90.9
270	17.36	36.41	4.02	-15.1	87.2
280	17.05	36.35	3.96	-14.9	84.8
290	16.75	36.30	3.88	-17.1	83.7
300	16.54	36.27	3.84	-14.0	81.1
350	15.25	36.05	3.64	-10.0	71.9
400	13.97	35.84	3.37	-6.6	67.9
450	12.37	35.57	3.08	1.2	53.0
500	10.82	35.32	2.81	3.1	44.7
550	9.96	35.20	2.76	1.8	30.5
600	8.78	35.05	2.76	1.9	16.3
650	7.58	34.94	2.87	7.8	2.3
700	6.78	34.92	3.05	14.0	-11.6

Table 28: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0516. Station: 6					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.78	36.07	4.52	NaN	NaN
10	28.78	36.07	4.52	-14.5	95.8
20	28.79	36.07	4.52	-14.5	95.8
30	28.79	36.07	4.52	-11.2	95.8
40	28.79	36.07	4.53	-10.6	95.8
50	28.79	36.07	4.53	-8.0	97.2
60	27.44	36.16	4.67	-1.2	103.4
70	26.28	36.20	4.82	1.3	104.6
80	25.83	36.26	4.69	-1.5	101.5
90	25.42	36.39	4.47	-3.1	99.0
100	25.25	36.55	4.31	-2.0	99.2
110	24.93	36.62	4.20	2.3	102.9
120	24.59	36.75	4.23	1.8	103.0
130	24.21	36.84	4.23	-1.7	101.3
140	23.60	36.89	4.25	-5.2	101.2
150	22.70	36.91	4.66	-5.7	96.7
160	21.97	36.89	4.57	-2.8	91.1
170	21.51	36.86	4.63	-2.5	89.8
180	21.20	36.83	4.55	-8.8	87.9
190	20.63	36.79	4.67	-8.6	85.8
200	20.28	36.77	4.64	-6.7	83.5
210	20.01	36.74	4.61	-6.2	83.6
220	19.84	36.72	4.47	-7.7	83.7
230	19.55	36.68	4.15	-10.1	85.1
240	19.35	36.66	4.11	-15.0	84.2
250	19.14	36.64	4.10	-19.1	82.6
260	18.76	36.60	4.15	-20.1	76.2
270	18.49	36.57	4.41	-18.5	71.9
280	18.15	36.53	4.37	-17.7	68.3
290	17.83	36.49	4.40	-14.5	65.7
300	17.76	36.48	4.36	-13.9	63.3
350	16.94	36.33	4.01	-11.2	66.2
400	15.59	36.12	3.72	-11.2	56.1
450	14.89	36.00	3.59	-6.2	46.3
500	13.91	35.84	3.43	-1.4	37.2
550	12.26	35.55	2.97	-7.4	22.8
600	10.81	35.31	2.80	-0.1	9.1
650	9.70	35.16	2.75	3.4	-1.3

Table 29: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0516. Station: 7					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	28.81	36.05	4.50	NaN	NaN
10	28.81	36.05	4.51	-3.9	71.8
20	28.81	36.05	4.52	-4.0	71.7
30	28.71	36.06	4.54	-11.9	75.8
40	28.71	36.08	4.54	-16.0	77.3
50	28.74	36.13	4.55	-14.7	77.6
60	28.62	36.38	4.59	-13.1	76.9
70	27.52	36.23	4.66	-17.8	74.1
80	26.61	36.26	4.61	-13.6	68.9
90	25.91	36.30	4.65	-9.2	63.1
100	25.69	36.51	4.41	-6.3	61.6
110	25.15	36.59	4.43	-0.4	65.0
120	25.04	36.65	4.43	2.9	71.1
130	24.04	36.78	4.48	7.4	75.5
140	22.84	36.90	4.72	3.5	74.6
150	22.08	36.89	4.80	-1.0	71.8
160	21.69	36.88	4.75	-0.5	72.6
170	21.30	36.85	4.75	2.9	73.9
180	21.05	36.84	4.74	2.7	74.1
190	20.89	36.82	4.69	2.6	71.2
200	20.60	36.79	4.67	7.1	68.4
210	20.27	36.76	4.66	10.1	67.9
220	20.16	36.75	4.65	8.6	67.0
230	19.91	36.73	4.65	3.1	65.5
240	19.77	36.72	4.64	-0.9	63.8
250	19.60	36.70	4.66	-1.7	63.7
260	19.50	36.69	4.67	-3.5	62.3
270	19.38	36.68	4.67	-6.3	58.6
280	19.22	36.66	4.66	-6.9	57.2
290	19.02	36.64	4.63	-9.0	57.6
300	18.84	36.60	4.25	-13.9	56.1
350	18.29	36.56	4.52	-10.5	50.7
400	17.43	36.41	4.04	-16.9	47.6
450	15.88	36.16	3.85	-7.3	33.4
500	15.33	36.07	3.65	-1.1	32.6
550	14.56	35.94	3.53	-7.2	16.1
600	14.01	35.86	3.51	5.2	6.7

Table 30: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0516. Station: 8					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	29.04	36.08	4.52	NaN	NaN
10	29.06	36.09	4.53	-10.7	54.0
20	29.06	36.09	4.53	-10.7	54.0
30	29.07	36.10	4.54	-16.7	55.3
40	29.08	36.10	4.54	-19.0	54.9
50	29.08	36.11	4.54	-18.1	56.4
60	28.76	36.15	4.55	-12.3	56.9
70	28.23	36.15	4.59	-11.3	54.2
80	27.64	36.16	4.70	-17.9	47.6
90	26.82	36.28	4.68	-20.6	43.1
100	25.96	36.48	4.58	-15.0	45.9
110	24.60	36.72	4.42	-7.7	49.6
120	23.89	36.78	4.76	-9.6	48.3
130	23.18	36.87	4.77	-12.2	47.6
140	22.83	36.91	4.69	-6.3	45.3
150	22.30	36.90	4.69	-4.8	42.9
160	21.63	36.88	4.76	-4.6	43.9
170	21.42	36.86	4.76	-1.8	43.2
180	21.11	36.84	4.74	0.3	44.0
190	20.84	36.82	4.73	-0.8	45.9
200	20.50	36.78	4.67	-5.7	45.8
210	20.31	36.77	4.67	-10.3	44.0
220	20.02	36.74	4.66	-12.9	43.3
230	19.81	36.71	4.46	-16.1	44.5
240	19.63	36.70	4.52	-19.3	44.6
250	19.59	36.70	4.52	-19.6	45.3
260	19.42	36.68	4.51	-17.6	46.3
270	19.32	36.67	4.60	-14.6	44.7
280	19.16	36.65	4.63	-12.0	43.4
290	19.03	36.64	4.63	-11.0	42.8
300	18.97	36.63	4.61	-12.4	41.0
350	18.51	36.58	4.61	-12.4	34.6
400	17.66	36.44	4.04	-18.2	45.1
450	16.51	36.26	4.07	-5.6	25.8

Table 31: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0526. Station: 0					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	25.90	36.22	4.71	NaN	NaN
10	25.89	36.22	4.71	3.2	123.2
20	25.89	36.22	4.71	2.9	123.4
30	25.91	36.23	4.72	-0.6	127.6
40	25.91	36.23	4.72	-0.4	131.2
50	25.91	36.24	4.71	0.5	136.9
60	25.90	36.27	4.71	1.7	140.9
70	25.86	36.28	4.71	4.0	141.0
80	25.73	36.30	4.57	2.5	132.1
90	23.73	36.32	4.32	-3.0	106.1
100	19.07	36.14	3.63	-8.7	61.8
110	16.67	36.01	3.12	-6.5	24.0
120	14.59	35.84	2.95	1.4	6.9
130	13.33	35.71	2.81	0.6	14.6
140	12.79	35.64	2.76	-7.3	2.1

Table 32: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0526. Station: 1					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	25.97	36.21	4.81	NaN	NaN
10	25.98	36.21	4.81	4.9	133.4
20	25.97	36.21	4.82	4.9	133.4
30	25.98	36.22	4.81	2.9	137.8
40	25.98	36.22	4.82	1.5	139.0
50	25.98	36.22	4.82	2.2	141.6
60	25.98	36.22	4.82	3.3	143.6
70	25.95	36.24	4.82	5.0	147.3
80	25.75	36.27	4.74	4.9	149.2
90	25.22	36.41	4.46	3.1	151.5
100	24.44	36.57	4.22	3.3	150.6
110	22.64	36.53	4.05	3.4	140.4
120	18.36	36.08	3.63	8.0	111.3
130	16.56	36.02	3.28	5.2	80.5
140	15.62	35.98	3.03	-1.5	67.3
150	14.77	35.89	2.95	-7.7	63.3
160	14.03	35.78	2.94	-4.2	56.3
170	13.01	35.64	2.93	-0.4	43.3
180	12.45	35.58	2.88	1.1	35.4
190	11.75	35.49	2.88	2.0	26.7
200	10.90	35.39	2.84	4.3	17.2
210	10.66	35.36	2.83	3.6	19.3
220	10.47	35.33	2.81	1.5	16.0
230	10.09	35.28	2.81	-0.4	15.7
240	9.44	35.20	2.82	2.5	17.0
250	9.18	35.17	2.82	8.6	12.3
260	9.01	35.15	2.82	8.2	11.6

Table 33: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0526. Station: 2					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.23	36.19	4.83	NaN	NaN
10	26.23	36.19	4.85	11.4	136.4
20	26.24	36.19	4.84	11.3	136.4
30	26.24	36.19	4.85	8.3	139.6
40	26.24	36.19	4.85	7.5	142.1
50	26.23	36.19	4.85	7.3	141.8
60	26.15	36.19	4.85	3.5	144.8
70	25.72	36.17	4.83	-2.1	152.3
80	25.76	36.29	4.71	-3.4	154.9
90	25.10	36.42	4.48	0.5	154.4
100	24.37	36.57	4.30	3.8	149.4
110	22.57	36.59	4.08	2.2	145.6
120	21.28	36.60	3.61	-0.9	148.0
130	20.45	36.64	3.44	-3.1	145.1
140	19.62	36.59	3.24	-13.4	137.9
150	19.42	36.57	3.23	-13.1	132.1
160	18.77	36.51	3.21	-4.8	128.1
170	18.19	36.44	3.20	1.1	123.8
180	17.68	36.37	3.18	-2.1	118.1
190	16.63	36.22	3.15	-5.0	113.9
200	16.20	36.16	3.14	-3.7	107.2
210	15.40	36.03	3.07	0.3	97.3
220	14.88	35.95	3.03	4.3	90.9
230	14.25	35.85	3.01	2.6	83.2
240	13.69	35.78	2.99	-4.3	79.4
250	13.23	35.72	2.98	-1.4	75.8
260	11.78	35.50	2.99	2.1	65.4
270	11.05	35.41	2.94	4.2	54.5
280	10.45	35.34	2.94	4.3	47.9
290	9.86	35.26	2.94	3.9	42.0
300	9.50	35.22	2.94	0.7	42.1
350	7.49	34.98	3.01	8.3	21.2

Table 34: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0526. Station: 3					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.28	36.17	4.87	NaN	NaN
10	26.30	36.18	4.88	15.9	122.5
20	26.29	36.18	4.88	15.9	122.5
30	26.29	36.18	4.89	12.0	127.2
40	26.29	36.18	4.88	12.4	129.5
50	26.29	36.18	4.89	12.6	129.3
60	26.29	36.19	4.89	10.9	132.8
70	26.04	36.21	4.84	3.7	137.9
80	25.76	36.19	4.82	0.5	141.8
90	25.84	36.28	4.61	2.9	140.8
100	25.11	36.50	4.50	4.0	140.1
110	24.18	36.66	4.14	3.2	135.0
120	22.73	36.62	4.09	-3.3	135.1
130	22.38	36.75	3.84	-5.4	136.3
140	21.13	36.63	3.79	-5.7	135.9
150	20.47	36.66	3.42	-7.9	130.1
160	19.77	36.59	3.30	-8.6	126.3
170	19.47	36.58	3.28	-6.4	122.1
180	18.91	36.53	3.27	-2.3	117.6
190	18.39	36.47	3.23	1.9	115.3
200	17.88	36.41	3.25	0.9	115.3
210	17.51	36.37	3.33	-1.9	116.1
220	17.19	36.33	3.36	-0.6	117.9
230	17.00	36.30	3.46	-0.6	116.7
240	16.54	36.22	3.38	-0.8	110.9
250	16.06	36.14	3.28	-3.4	107.9
260	15.45	36.05	3.14	-3.3	104.0
270	14.97	35.97	3.08	-0.0	100.5
280	14.58	35.91	2.95	3.0	102.6
290	14.26	35.86	2.93	4.0	101.7
300	13.87	35.79	2.95	2.9	101.6
350	12.07	35.52	2.95	0.3	104.0
400	10.48	35.29	2.83	5.7	94.4
450	8.05	35.02	3.00	5.3	69.5
500	6.74	34.93	3.22	4.4	37.9

Table 35: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0526. Station: 4					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	25.96	36.22	4.92	NaN	NaN
10	25.96	36.22	4.91	29.1	117.1
20	26.00	36.22	4.91	29.0	117.1
30	25.99	36.22	4.92	23.1	120.8
40	26.00	36.22	4.92	21.1	122.3
50	25.97	36.21	4.92	21.1	121.2
60	25.97	36.21	4.93	20.3	121.8
70	25.96	36.21	4.93	19.7	119.3
80	25.95	36.22	4.93	18.7	118.5
90	25.84	36.25	4.88	11.4	115.3
100	25.50	36.39	4.64	3.3	114.8
110	24.59	36.66	4.31	1.1	119.8
120	23.54	36.67	4.10	2.4	124.8
130	22.76	36.75	3.87	0.3	122.5
140	22.06	36.79	3.81	-2.1	121.4
150	21.73	36.85	3.68	-2.5	122.4
160	20.78	36.76	3.67	-4.1	122.4
170	20.09	36.67	3.47	-8.5	122.0
180	19.85	36.66	3.45	-9.2	121.2
190	19.20	36.56	3.32	-6.4	120.8
200	18.85	36.53	3.36	-0.3	119.7
210	18.32	36.47	3.39	-0.0	117.2
220	17.83	36.42	3.42	-7.7	121.7
230	17.76	36.42	3.53	-9.2	113.6
240	17.38	36.35	3.54	-13.5	106.6
250	16.90	36.28	3.35	-12.4	101.9
260	16.40	36.20	3.30	-12.0	95.6
270	15.83	36.11	3.27	-8.8	93.5
280	15.48	36.05	3.19	-5.2	91.7
290	15.13	36.00	3.14	-3.1	91.7
300	14.62	35.91	3.11	-4.0	92.4
350	12.60	35.60	2.94	1.5	81.6
400	11.25	35.39	2.89	-8.9	78.1
450	9.90	35.20	2.83	-7.5	72.4
500	8.82	35.06	2.88	-4.9	61.6
550	7.68	34.96	2.96	-10.7	48.0
600	6.83	34.92	3.20	-0.2	27.0
650	6.28	34.91	3.42	2.9	11.6

Table 36: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0526. Station: 5					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.52	36.26	4.83	NaN	NaN
10	26.55	36.26	4.84	25.2	93.2
20	26.56	36.26	4.83	25.1	93.3
30	26.56	36.26	4.84	17.6	94.7
40	26.56	36.26	4.85	13.7	96.3
50	26.55	36.26	4.84	12.9	96.5
60	26.56	36.26	4.85	12.5	96.8
70	26.56	36.26	4.84	12.8	96.7
80	26.55	36.26	4.85	14.4	94.9
90	26.06	36.40	4.54	14.1	92.5
100	25.58	36.45	4.44	10.5	90.3
110	24.88	36.58	4.42	8.2	89.2
120	24.09	36.71	4.16	6.6	88.7
130	23.00	36.85	3.86	2.7	88.0
140	22.28	36.90	3.74	-4.1	89.1
150	21.83	36.88	3.62	-8.8	88.6
160	21.50	36.86	3.61	-7.4	87.7
170	21.10	36.83	3.61	-7.2	87.6
180	20.31	36.75	3.81	-7.8	88.6
190	19.63	36.68	3.89	-8.2	86.9
200	19.35	36.66	3.92	-5.8	83.4
210	19.09	36.63	4.07	-4.8	82.7
220	18.53	36.55	3.79	-4.3	84.8
230	18.26	36.51	3.78	-1.5	83.3
240	18.07	36.48	3.79	1.9	82.9
250	17.76	36.43	3.72	0.7	83.3
260	17.47	36.40	3.66	-1.0	84.7
270	17.25	36.36	3.80	-0.7	83.0
280	17.11	36.36	3.93	-0.8	82.6
290	16.84	36.32	4.01	-2.5	81.7
300	16.45	36.24	4.03	-3.4	81.2
350	14.84	35.95	3.31	-1.5	79.3
400	13.38	35.71	3.07	4.6	67.5
450	11.80	35.47	2.99	-3.0	52.3
500	10.40	35.26	2.91	-4.3	40.6
550	9.77	35.17	2.88	-7.9	35.6
600	8.44	35.01	2.91	-2.9	28.7
650	7.59	34.95	2.99	-9.4	17.3
700	7.11	34.94	3.11	-6.5	13.7

Table 37: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0526. Station: 6					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.53	36.29	4.94	NaN	NaN
10	26.56	36.29	4.95	6.7	65.3
20	26.56	36.29	4.95	6.6	65.3
30	26.56	36.29	4.95	2.5	66.5
40	26.56	36.29	4.95	0.8	66.9
50	26.56	36.29	4.95	-0.6	66.6
60	26.56	36.29	4.96	-1.4	66.7
70	26.56	36.29	4.96	-1.3	66.9
80	26.55	36.30	4.96	1.1	67.9
90	25.90	36.62	4.42	6.9	71.9
100	25.29	36.71	4.22	5.4	80.5
110	24.24	36.92	4.06	0.2	87.0
120	23.48	36.96	3.96	-9.1	88.8
130	22.97	36.93	3.91	-13.6	87.3
140	22.55	36.93	3.88	-13.5	88.4
150	22.46	36.91	3.82	-8.6	86.2
160	21.81	36.95	4.50	-4.4	82.1
170	21.21	36.92	4.48	-4.5	79.3
180	20.90	36.87	4.40	-6.8	75.0
190	20.23	36.83	4.05	-6.2	72.0
200	19.66	36.73	3.65	-3.9	69.7
210	19.24	36.67	3.66	-5.1	69.7
220	18.93	36.63	3.87	-5.6	71.0
230	18.68	36.60	3.71	-4.9	71.8
240	18.50	36.57	3.72	-5.6	68.2
250	18.34	36.54	3.73	-6.3	66.4
260	17.92	36.49	3.73	-6.9	65.8
270	17.85	36.47	3.71	-7.8	66.5
280	17.60	36.43	3.70	-5.8	67.1
290	17.40	36.40	3.68	-6.2	65.3
300	17.28	36.38	3.73	-9.1	60.6
350	15.96	36.21	3.71	-3.2	53.5
400	14.34	35.90	3.34	-4.1	43.8
450	12.74	35.67	3.11	-2.5	37.0
500	11.97	35.50	3.02	0.3	32.5
550	11.25	35.40	2.96	-4.1	22.7
600	10.73	35.32	2.93	-16.3	12.7
650	10.30	35.27	2.95	-15.1	-0.3

Table 38: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0526. Station: 7					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.39	36.32	4.82	NaN	NaN
10	26.38	36.33	4.82	-5.4	23.0
20	26.39	36.33	4.82	-5.5	23.0
30	26.40	36.33	4.82	-8.0	25.8
40	26.40	36.33	4.82	-8.2	26.4
50	26.40	36.34	4.79	-5.6	29.3
60	26.38	36.36	4.76	3.9	34.1
70	26.26	36.43	4.63	18.6	41.7
80	25.89	36.57	4.46	21.7	45.4
90	25.06	36.79	4.15	14.0	49.5
100	24.24	36.89	3.94	1.7	54.7
110	23.95	36.87	3.89	-7.2	56.4
120	23.28	36.92	3.85	-13.2	51.3
130	22.77	36.97	3.79	-9.0	47.4
140	22.38	36.91	3.76	-4.9	45.1
150	22.31	36.89	3.76	-1.8	44.9
160	22.10	36.90	3.75	-1.0	45.9
170	21.71	36.90	3.83	-4.3	46.3
180	21.10	37.00	4.41	-10.8	48.4
190	20.29	36.81	4.54	-13.3	53.6
200	19.82	36.77	4.48	-13.6	55.0
210	19.42	36.72	4.55	-9.6	55.1
220	19.15	36.69	4.54	-8.9	54.9
230	18.95	36.66	4.54	-7.6	52.8
240	18.86	36.63	4.54	-7.8	53.5
250	18.76	36.63	4.53	-8.7	53.6
260	18.65	36.61	4.54	-10.2	51.3
270	18.53	36.61	4.55	-11.1	51.0
280	18.42	36.59	4.60	-9.8	54.6
290	18.20	36.57	4.52	-8.5	52.4
300	18.05	36.54	4.49	-7.4	50.8
350	17.34	36.44	4.31	-12.1	47.5
400	15.57	36.13	3.47	-11.8	33.9
450	14.09	35.85	3.16	-8.3	18.1
500	13.18	35.72	3.08	-9.0	14.0
550	12.21	35.54	2.96	-11.2	10.2

Table 39: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0526. Station: 8					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.43	36.31	4.65	NaN	NaN
10	26.44	36.31	4.65	-1.0	-15.3
20	26.44	36.31	4.65	-1.0	-15.3
30	26.44	36.32	4.65	-2.4	-12.5
40	26.29	36.42	4.48	2.6	-1.5
50	26.20	36.47	4.40	15.0	7.7
60	26.05	36.54	4.27	22.6	12.9
70	25.55	36.73	4.15	19.2	11.8
80	24.95	36.79	3.92	10.0	6.7
90	24.44	36.85	3.86	6.3	4.5
100	24.33	36.87	3.76	3.9	7.2
110	23.98	36.86	3.71	3.2	10.0
120	23.47	36.92	3.66	1.0	15.7
130	22.51	36.98	3.67	-7.1	26.8
140	21.90	36.95	3.80	-11.0	30.8
150	21.32	36.88	4.44	-15.1	39.3
160	21.06	36.87	4.44	-14.6	38.7
170	20.73	36.85	4.41	-19.7	38.7
180	20.44	36.85	4.38	-23.1	37.2
190	20.26	36.78	4.37	-20.0	37.9
200	19.98	36.78	4.37	-18.7	37.9
210	19.62	36.74	4.36	-18.8	32.6
220	19.20	36.73	4.34	-16.5	33.5
230	18.97	36.65	4.34	-9.3	32.4
240	18.90	36.65	4.37	-7.5	33.1
250	18.72	36.63	4.38	-5.1	33.3
260	18.65	36.61	4.38	-7.8	34.5
270	18.61	36.60	4.38	-7.5	34.7
280	18.58	36.60	4.38	-9.4	34.2
290	18.56	36.60	4.38	-8.5	32.6
300	18.49	36.59	4.37	-11.2	34.6
350	17.56	36.48	4.23	-13.5	31.2
400	16.27	36.26	3.99	-12.4	27.3
450	15.41	36.10	3.84	-17.6	18.0

Table 40: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0531. Station: 0					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	24.62	36.08	4.68	NaN	NaN
10	24.62	36.08	4.67	4.8	126.3
20	24.63	36.08	4.67	8.7	132.4
30	24.62	36.07	4.67	7.0	123.3
40	24.57	36.06	4.65	3.6	117.2
50	24.50	36.05	4.62	7.0	100.7
60	22.59	36.10	4.14	3.7	53.7
70	20.52	36.13	3.75	-6.5	43.1
80	18.17	36.10	3.34	-12.7	22.3
90	16.44	36.05	3.10	-17.5	12.6
100	15.15	35.95	3.00	-21.1	10.5
110	14.11	35.82	2.93	-19.6	-1.0
120	13.36	35.73	2.89	-12.9	5.0
130	12.92	35.67	2.87	-17.8	-4.8
140	NaN	NaN	NaN	NaN	NaN

Table 41: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0531. Station: 1					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	25.16	36.27	4.67	NaN	NaN
10	25.15	36.27	4.66	-2.6	164.0
20	25.15	36.27	4.66	-2.6	164.0
30	25.15	36.28	4.66	1.5	145.1
40	25.14	36.28	4.65	-1.1	143.0
50	24.91	36.30	4.68	-2.1	139.6
60	24.89	36.31	4.66	-2.0	137.9
70	24.78	36.31	4.65	-2.2	138.6
80	24.69	36.36	4.60	-3.2	138.0
90	23.35	36.33	4.29	-3.2	125.4
100	20.34	36.17	3.94	-4.6	97.7
110	16.30	35.97	3.24	-6.0	52.8
120	14.37	35.84	3.00	-2.5	29.1
130	14.02	35.83	2.97	-4.8	22.5
140	13.17	35.71	2.92	-7.2	18.1
150	12.65	35.63	2.92	-6.7	10.3
160	12.09	35.56	2.89	-6.8	4.2
170	11.53	35.47	2.85	-5.1	-5.8
180	10.99	35.39	2.83	-5.0	-11.7
190	10.68	35.35	2.84	-8.1	-15.2
200	10.35	35.32	2.89	-10.4	-17.0
210	9.43	35.19	2.88	-10.6	-18.2
220	9.40	35.18	2.86	-10.4	-16.9
230	9.39	35.18	2.85	-6.6	-15.1
240	NaN	NaN	NaN	-7.9	-14.8

Table 42: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0531. Station: 2					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	25.42	36.24	4.65	NaN	NaN
10	25.43	36.24	4.64	-2.7	150.6
20	25.43	36.24	4.64	-2.7	150.6
30	25.41	36.23	4.64	-3.4	145.1
40	25.35	36.24	4.63	-4.1	139.9
50	25.33	36.27	4.62	-5.4	140.0
60	24.98	36.29	4.64	-5.8	141.8
70	24.79	36.30	4.65	-4.8	143.3
80	24.71	36.40	4.57	-5.6	143.0
90	24.36	36.46	4.42	-8.9	140.2
100	23.36	36.52	4.06	-9.7	139.9
110	22.08	36.58	3.61	-5.7	143.4
120	21.44	36.69	3.41	-4.5	143.3
130	20.95	36.66	3.32	-4.7	133.7
140	19.52	36.47	3.19	-5.6	118.3
150	17.41	36.15	3.13	-7.6	96.8
160	15.58	35.96	3.04	-7.3	82.5
170	14.71	35.86	2.96	-9.1	67.3
180	13.72	35.78	2.96	-8.0	63.0
190	12.78	35.64	2.88	-5.2	59.4
200	12.56	35.61	2.86	-2.1	57.0
210	12.37	35.58	2.85	1.4	53.2
220	11.91	35.51	2.87	7.1	47.6
230	11.20	35.42	2.85	8.6	39.4
240	10.45	35.32	2.86	9.5	32.7
250	10.16	35.29	2.88	7.4	27.6
260	10.09	35.28	2.88	1.9	24.4
270	9.86	35.27	2.92	4.1	20.1
280	9.47	35.23	2.98	2.9	18.1
290	9.03	35.17	3.00	-1.5	18.1
300	8.70	35.13	3.01	-3.9	12.5
350	7.42	34.96	3.02	8.6	-6.7

Table 43: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0531. Station: 3					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	25.80	36.21	4.59	NaN	NaN
10	25.80	36.21	4.60	-2.8	172.7
20	25.80	36.21	4.59	-2.8	172.7
30	25.80	36.21	4.59	0.9	168.5
40	25.73	36.22	4.60	1.3	161.5
50	25.61	36.24	4.61	-2.0	153.5
60	25.57	36.23	4.61	-5.8	147.5
70	25.49	36.24	4.60	-6.0	145.4
80	25.43	36.27	4.59	-7.4	146.5
90	24.97	36.39	4.48	-7.3	148.6
100	24.32	36.62	4.25	-3.6	150.4
110	24.10	36.82	3.77	-5.6	149.0
120	23.75	36.90	3.59	-7.5	148.3
130	22.97	36.92	3.51	-5.7	145.3
140	22.01	36.88	3.46	-3.2	140.7
150	21.05	36.74	3.38	-0.5	137.8
160	20.09	36.62	3.23	1.3	134.1
170	19.15	36.56	3.17	0.8	133.0
180	18.21	36.44	3.09	0.9	132.4
190	17.62	36.37	3.05	4.7	130.9
200	16.57	36.23	3.08	10.0	127.5
210	16.25	36.18	3.10	11.5	117.3
220	15.78	36.10	3.08	5.7	105.0
230	15.01	35.97	3.04	-0.2	97.5
240	13.57	35.73	2.97	-1.2	95.2
250	12.81	35.64	2.90	2.6	92.2
260	12.40	35.58	2.87	6.1	87.8
270	12.04	35.52	2.83	5.5	80.8
280	11.78	35.49	2.83	2.5	74.4
290	11.43	35.43	2.82	-0.8	69.7
300	11.24	35.41	2.80	-2.2	67.9
350	9.24	35.16	2.86	0.2	36.2
400	8.47	35.07	2.92	7.6	29.4
450	7.32	34.97	3.09	5.5	7.9
500	6.63	34.93	3.22	-1.1	2.7

Table 44: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0531. Station: 4					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.20	36.20	4.55	NaN	NaN
10	26.22	36.19	4.55	-7.9	156.9
20	26.23	36.20	4.55	-7.9	156.9
30	26.22	36.19	4.55	-4.4	157.5
40	26.23	36.20	4.54	-3.2	156.6
50	26.23	36.20	4.54	-2.9	156.4
60	26.24	36.20	4.53	-2.3	156.2
70	26.24	36.20	4.52	-3.7	157.0
80	26.30	36.49	4.17	-5.8	154.2
90	25.88	36.62	3.97	-9.3	148.1
100	25.25	36.70	3.90	-11.4	146.5
110	24.38	36.86	3.73	-15.5	144.5
120	23.57	36.88	3.59	-13.5	142.0
130	23.10	36.93	3.53	-10.0	138.1
140	22.22	36.80	3.50	-8.6	136.7
150	21.24	36.77	3.40	-7.0	136.9
160	20.52	36.76	3.35	-6.2	134.8
170	20.24	36.75	3.39	-4.6	135.4
180	19.67	36.67	3.37	0.1	130.7
190	19.09	36.57	3.29	-0.5	125.7
200	18.41	36.49	3.20	-1.7	124.0
210	17.70	36.39	3.22	1.0	124.1
220	16.96	36.28	3.15	2.0	120.3
230	16.42	36.21	3.09	3.7	116.4
240	16.15	36.17	3.06	4.7	112.6
250	15.32	36.03	3.11	4.9	111.3
260	14.46	35.89	3.02	3.5	107.0
270	14.01	35.83	2.97	-0.5	102.4
280	13.82	35.80	2.93	-3.5	99.2
290	13.61	35.76	2.90	-5.1	96.9
300	13.18	35.69	2.86	-6.1	95.8
350	10.35	35.26	2.78	11.1	80.1
400	9.83	35.19	2.78	12.6	60.5
450	8.83	35.08	2.77	2.6	63.7
500	7.88	35.00	2.89	13.2	47.2
550	6.47	34.92	3.29	16.7	19.9
600	5.94	34.92	3.54	3.9	16.0

Table 45: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0531. Station: 5					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.09	36.27	4.57	NaN	NaN
10	26.11	36.27	4.57	0.5	138.7
20	26.11	36.27	4.57	0.5	138.7
30	26.11	36.27	4.57	0.6	136.6
40	26.11	36.27	4.56	-0.1	135.8
50	26.11	36.27	4.56	0.5	136.6
60	26.11	36.27	4.56	1.4	137.0
70	26.11	36.27	4.56	1.6	135.9
80	26.12	36.27	4.55	1.3	136.9
90	26.12	36.27	4.55	2.4	136.4
100	26.01	36.37	4.49	3.0	133.3
110	25.40	36.67	3.92	4.2	127.1
120	24.50	36.75	3.79	2.4	125.5
130	23.57	36.83	3.63	0.2	125.1
140	22.83	36.90	3.53	2.4	125.3
150	22.21	36.89	3.51	5.9	124.7
160	21.20	36.76	3.44	8.4	122.8
170	20.41	36.70	3.36	9.7	121.3
180	19.95	36.68	3.35	9.1	120.4
190	19.25	36.60	3.25	7.2	115.4
200	18.62	36.53	3.37	2.7	110.7
210	18.10	36.46	3.31	0.3	110.8
220	17.87	36.45	3.47	0.8	108.6
230	17.63	36.42	3.52	1.3	106.9
240	17.35	36.37	3.52	0.2	106.3
250	17.13	36.34	3.50	1.0	104.6
260	16.38	36.22	3.47	1.8	100.8
270	16.04	36.17	3.46	1.7	98.5
280	15.87	36.14	3.45	-0.0	99.5
290	15.57	36.09	3.44	-2.2	100.3
300	15.22	36.02	3.27	-1.7	97.6
350	14.00	35.82	3.19	6.2	85.1
400	12.00	35.51	2.82	4.7	77.4
450	10.33	35.26	2.81	7.6	61.6
500	8.64	35.05	2.79	-8.2	46.9
550	7.81	34.97	2.90	-6.3	42.5
600	7.06	34.93	3.07	2.5	34.4
650	6.72	34.92	3.18	5.9	32.3
700	6.53	34.92	3.24	7.4	29.4
750	NaN	NaN	NaN	6.2	12.5

Table 46: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0531. Station: 6					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.08	36.26	4.61	NaN	NaN
10	26.11	36.26	4.61	13.0	113.8
20	26.11	36.26	4.61	13.0	113.8
30	26.11	36.26	4.60	15.5	106.7
40	26.11	36.26	4.58	13.3	104.8
50	26.12	36.26	4.58	11.7	104.4
60	26.12	36.26	4.57	13.0	104.7
70	26.12	36.26	4.58	13.8	105.4
80	26.12	36.26	4.57	13.5	104.9
90	26.12	36.26	4.57	13.9	104.9
100	26.11	36.27	4.56	14.2	106.2
110	26.11	36.28	4.56	13.8	106.6
120	25.58	36.53	4.16	15.5	106.9
130	24.67	36.74	3.83	13.9	102.3
140	23.76	36.89	3.62	4.8	97.0
150	23.05	36.92	3.53	-3.5	94.2
160	22.10	36.90	3.46	-5.8	95.9
170	21.79	36.88	3.43	-4.4	98.8
180	21.18	36.84	3.42	-1.1	97.9
190	20.84	36.81	3.42	2.4	96.0
200	19.98	36.72	3.44	3.3	92.2
210	19.69	36.69	3.45	0.5	89.0
220	19.41	36.66	3.46	-1.4	90.2
230	19.08	36.62	3.51	-0.2	88.4
240	18.73	36.58	3.55	1.0	85.9
250	18.46	36.54	3.57	-1.2	82.7
260	18.25	36.52	3.59	-2.9	80.0
270	17.87	36.46	3.60	-3.9	77.9
280	17.55	36.41	3.61	-4.4	75.3
290	17.36	36.38	3.59	-2.1	74.2
300	16.95	36.31	3.56	-2.5	71.9
350	15.30	36.04	3.35	-2.5	67.8
400	13.78	35.78	3.11	2.1	60.4
450	12.14	35.52	2.89	-2.9	48.9
500	10.90	35.34	2.77	0.5	43.5
550	9.60	35.16	2.78	4.8	33.7
600	8.32	35.01	2.86	7.3	28.9
650	7.92	34.98	2.91	2.1	14.2

Table 47: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0531. Station: 7					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.13	36.26	4.56	NaN	NaN
10	26.15	36.26	4.56	9.3	71.9
20	26.16	36.26	4.56	9.3	71.9
30	26.16	36.26	4.56	11.1	72.1
40	26.16	36.26	4.55	12.5	70.8
50	26.16	36.26	4.55	13.0	70.6
60	26.16	36.26	4.55	14.3	70.5
70	26.16	36.26	4.55	14.3	71.5
80	26.16	36.26	4.54	14.1	71.8
90	26.17	36.26	4.55	14.4	72.7
100	26.17	36.26	4.54	14.0	72.6
110	26.17	36.26	4.53	11.7	72.6
120	25.65	36.51	4.12	13.5	72.9
130	24.53	36.78	3.87	10.5	69.8
140	23.70	36.89	3.60	2.0	69.6
150	23.16	36.91	3.55	1.9	75.8
160	22.30	36.89	3.52	0.9	76.4
170	21.31	36.84	3.54	-6.7	75.9
180	20.77	36.80	3.44	-8.7	76.5
190	20.36	36.76	3.44	-2.7	78.0
200	20.08	36.75	3.82	2.6	81.6
210	19.81	36.72	4.09	2.0	83.1
220	19.65	36.71	4.14	-1.7	83.0
230	19.29	36.67	4.23	-5.2	81.0
240	19.04	36.64	4.24	-7.6	78.0
250	18.85	36.62	4.26	-6.9	76.3
260	18.77	36.61	4.23	-5.1	77.9
270	18.51	36.57	3.99	-4.7	77.4
280	18.25	36.54	4.05	-9.3	73.1
290	18.12	36.52	4.11	-10.6	72.3
300	17.88	36.50	4.16	-9.4	73.1
350	17.07	36.37	4.02	-4.8	63.6
400	15.46	36.06	3.33	-7.0	52.7
450	13.92	35.83	3.31	-4.8	39.6
500	12.63	35.63	3.54	-6.1	35.6
550	11.08	35.38	2.87	4.4	29.1
600	10.01	35.25	2.95	-0.2	16.7

Table 48: Same as Table 14 for the cruise ID and the station number indicated.

Cruise ID: ws0531. Station: 8					
Pressure	Temperature	Salinity	Oxygen	U speed	V speed
[db]	[deg. C]	[psu]	[ml/l]	[cm/s]	[cm/s]
1	26.13	36.23	4.54	NaN	NaN
10	26.14	36.23	4.53	-5.3	27.4
20	26.15	36.23	4.53	-5.3	27.4
30	26.15	36.23	4.52	-2.6	27.1
40	26.16	36.23	4.52	-2.5	27.1
50	26.15	36.23	4.52	-2.7	27.8
60	26.16	36.23	4.52	-2.0	28.2
70	26.16	36.23	4.52	-0.9	27.5
80	26.17	36.24	4.50	-0.1	29.0
90	26.18	36.24	4.50	1.2	28.0
100	26.16	36.26	4.45	2.0	28.8
110	25.69	36.55	4.20	-0.5	32.5
120	25.04	36.67	3.85	-1.4	34.5
130	24.66	36.78	3.76	3.5	35.7
140	23.57	36.88	3.59	-4.9	39.5
150	22.47	36.90	3.48	-12.3	44.1
160	21.71	36.85	3.69	-7.4	43.8
170	21.42	36.84	3.68	-6.3	43.6
180	20.77	36.80	3.86	-4.7	43.7
190	20.53	36.78	3.93	-4.9	42.9
200	20.52	36.78	3.95	-6.8	40.2
210	20.17	36.75	4.00	-2.9	39.8
220	19.91	36.73	4.07	-4.2	41.2
230	19.91	36.73	4.13	-7.6	40.7
240	19.46	36.66	3.85	-11.7	40.5
250	19.22	36.65	4.01	-13.7	40.9
260	19.01	36.63	4.06	-13.6	39.6
270	18.85	36.61	4.15	-16.3	39.9
280	18.78	36.61	4.15	-17.1	42.7
290	18.76	36.61	4.28	-15.1	42.3
300	18.49	36.57	4.27	-12.7	41.5
350	17.49	36.43	4.09	-10.1	43.4
400	16.49	36.26	3.99	-7.4	41.5
450	14.77	35.99	3.81	-7.8	31.5

Table 49: Same as Table 14 for the cruise ID and the station number indicated.

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