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HYDROGRAPHIC MEASUREMENTS COLLECTED ABOARD THE UNOLS SHIP R/V ENDEAVOR, 24 SEPTEMBER - 10 OCTOBER 2012: WESTERN BOUNDARY TIME SERIES CRUISE EN-517 (AB1209)

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February 2014

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The findings and conclusion on this report are those of the authors and do not necessarily represent the views of the funding agency.

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Abstract

This report summarizes the September 24 - October 10, 2012 cruise on the UNOLS ship Endeavor involving full-water-column CTD and lowered ADCP profiles, along with shipboard ADCP profiles, conducted within the Florida Straits and east of Abaco Island, Bahamas. At each station, a package consisting of a Seabird Electronics Model 9/11+ CTD O2 system, an RDI 150 kHz Workhorse Lowered Acoustic Doppler Current Profiler, a RDI 300 kHz Workhorse Lowered Acoustic Doppler Current Profiler, and 24 10-liter Niskin bottles, was to be lowered to the bottom. This report includes a description of the calibrations procedures and profiles of pressure, salinity (conductivity), temperature, and dissolved oxygen concentration. Water samples were also collected at various depths and analyzed for salinity and oxygen concentration to aid with CTD calibration. A total of 45 CTD-O2/LADCP stations were occupied. PIES/CPIES data were downloaded from 6 sites. There were two unsuccessful recoveries of PIES (sites C and E), a canceled deployment (site E), and a successful deployment of a PIES (site C). Mooring operations include recovery and redeployment of three tall moorings with a mixture of microcats and current meters, and two bottom landers instrumented with bottom pressure recorders. As part of NOAA contribution to the Global Surface Drifter Program, 10 surface velocity drifters equipped with sea-surface temperature sensors were deployed.

1 Introduction

The Abaco time series began in August 1984 when NOAA extended its Straits of Florida program to include measurements of western boundary current transports and water mass properties east of Abaco, the Bahamas. Since 1986, 41 hydrographic sections have been completed east of Abaco, most including direct velocity observations by Pegasus and/or Lowered Acoustic Doppler Current Profiler (LADCP). Transient tracer (CFC) measurements have been made on 8 of these sections. Current meter arrays were also maintained from April 1986 to April 1997. A new international program funded by the United Kingdom's Rapid Climate Change Program and the United States National Science Foundation began in March 2004 and is currently scheduled to end in 2021. Included in this program is a new deployment of current meter moorings along the Abaco section (the UK segment of the program continues with moorings across to the east edge of the Atlantic basin). Independently, the National Oceanic and Atmospheric Administration began a monitoring program in September 2004 utilizing inverted echo sounder moorings (some including bottom pressure measurements and near-bottom current meters) along the Abaco section. All of these programs are collaborating with scientific analysis and logistics including ship time.

The repeated hydrographic and tracer sampling at Abaco has established a high-resolution record of water mass properties in the Deep Western Boundary Current (DWBC) at 26°N, which for temperature and salinity can be reasonably constructed back to about 1985 (Vaughan and Molinari, 1997; Molinari et al., 1998). Events such as the intense convection period in the Labrador Sea and renewal of classical Labrador Sea Water in the 1980's are clearly reflected in the cooling and freshening of the DWBC waters off Abaco, and the arrival of a strong CFC pulse, approximately 10 years later (e.g. van Sebille et al., 2011). This program is unique in that it is not just a single time series site, but instead is a section from which transport can be directly calculated, of which very few are available in the ocean that approach a decade or more in length.

To achieve the goals of NOAA's strategic plan in terms of understanding the Atlantic Ocean's role in decadal and longer time scale climate variability, these continued time series observations at Abaco are seen as serving three main purposes:

1. Monitoring of the DWBC for watermass and transport signatures related to changes in the strengths and regions of high latitude water mass formation in the North Atlantic. Monitoring watermass properties in the DWBC at key locations is one part of an effort to track decadal changes in large-scale watermass properties.

2. Serving as a western boundary endpoint of a subtropical Meridional Overturning Circulation (MOC) heat flux monitoring system designed to measure the interior dynamic height difference across the Atlantic basin and the associated baroclinic heat transport.

3. Monitoring the intensity of the Antilles current as an index (together with the Florida Current) of inter-annual variability in the strength of the subtropical gyre. Variations in the strength of the subtropical gyre in relation to the North Atlantic Oscillation

(NAO) has been proposed as an important mechanism in the atmosphere-ocean feedback within coupled models (e.g. Latif and Barnett, 1996).

A hydrographic survey consisting of a repeat LADCP/CTD/rosette section in the western North Atlantic was carried out in September-October 2012 (Figure 1 and Table 2). The R/V Endeavor departed Ft. Lauderdale, FL on 24 September 2012. A total of 45 LADCP/CTD/Rosette stations were occupied, and ten surface drifters were deployed. Water samples (up to 24 for each station), LADCP, CTD data were collected on each cast to within 20 m of the bottom. Salinity and dissolved oxygen samples were analyzed from every bottle sampled on the rosette. Mooring operations included recovery and redeployment of three tall moorings with a mixture of microcats and current meters, and two bottom landers instrumented with bottom pressure recorders. As part of NOAA's contribution to the Global Surface Drifter Program, ten surface velocity drifters equipped with sea-surface temperature sensors were deployed. The cruise ended in Ft. Lauderdale, FL. on October 10, 2012.

Table 1: Cruise participants of R/V Endeavor Cruise AB1209, September 24–October 10, 2012.

Name	Responsibility	Affiliation	Nationality
Bill Johns	Principal Investigator, Chief Scientist	RSMAS/ U. Miami	USA
Christopher Meinen	IES Co-Chief Scientist	NOAA/ AOML	USA
Renellys Perez	Scientist	UM/CIMAS	USA
Andrew Stefanick	Salinity analysis, CTD operations	NOAA/AOML	USA
Kyle Seaton	Oxygen analysis	UM/CIMAS,	USA
Pedro Pena	Salinity analysis, IES operations	NOAA/AOML	USA
James Hooper	CTD processing	UM/CIMAS	USA
Adam Houk	LADCP processing	UM/RSMAS	USA
Athanasia Papapostolout	CTD watch	RSMAS/ U. Miami	
Jian Zhao	CTD watch	RSMAS/ U. Miami	
Mark Graham	Moorings	RSMAS/ U. Miami	
Robert Jones	Moorings	RSMAS/ U. Miami	

Table 2: Abaco Cruise – CTD Cast Summary

Station	Date	Time (GMT)	Latitude	Longitude	Depth
1	09/25/2012	02:45	26.072N	78.853W	292
2	09/25/2012	05:00	26.169N	78.803W	439
3	09/25/2012	06:52	26.251N	78.766W	505
4	09/25/2012	08:46	26.318N	78.716W	656
5	09/25/2012	10:57	26.435N	78.671W	749
6	09/25/2012	23:35	25.955N	76.903W	4417
7	09/26/2012	04:31	25.946N	76.884W	4340
8	09/26/2012	11:19	26.525N	76.885W	449
9	09/26/2012	13:06	26.515N	76.831W	1120
10	09/26/2012	16:17	26.487N	76.748W	3842
11	09/26/2012	20:55	26.500N	76.667W	4600
12	09/27/2012	01:37	26.488N	76.566W	4894
13	09/27/2012	06:24	26.499N	76.483W	4914
14	09/27/2012	11:26	26.500N	76.357W	4914
15	09/27/2012	16:16	26.499N	76.224W	4880
16	09/27/2012	21:04	26.495N	76.095W	4864
17	09/28/2012	02:18	26.490N	75.908W	4805
18	09/28/2012	07:07	26.499N	75.701W	4754
19	09/28/2012	11:53	26.505N	75.501W	4749
20	09/28/2012	16:41	26.506N	75.293W	4696
21	09/28/2012	21:29	26.504N	75.069W	4664
22	09/29/2012	02:16	26.507N	74.793W	4591
23	09/29/2012	07:11	26.508N	74.505W	4550
24	09/29/2012	12:05	26.500N	74.233W	4596
25	09/29/2012	17:46	26.504N	73.855W	4800
26	09/29/2012	22:58	26.508N	73.492W	4976
27	09/30/2012	04:24	26.504N	73.125W	5126
28	09/30/2012	10:15	26.516N	72.765W	5205
29	09/30/2012	16:06	26.521N	72.382W	5269
30	09/30/2012	22:00	26.506N	71.974W	5373
31	10/01/2012	04:16	26.508N	71.501W	5508
32	10/01/2012	11:04	26.499N	71.000W	5575
33	10/01/2012	17:35	26.497N	70.490W	5579
34	10/02/2012	00:04	26.502N	69.997W	5576
35	10/05/2012	05:42	26.484N	76.107W	4866
36	10/07/2012	04:42	26.475N	76.480W	4878
37	10/09/2012	11:25	27.004N	79.199W	461
38	10/09/2012	12:42	27.012N	79.281W	590
39	10/09/2012	14:09	27.019N	79.382W	666
40	10/09/2012	15:47	27.032N	79.503W	735
41	10/09/2012	17:33	27.018N	79.615W	633
42	10/09/2012	18:49	27.014N	79.682W	513
43	10/09/2012	21:07	27.021N	79.786W	351
44	10/09/2012	22:49	27.018N	79.863W	246
45	10/10/2012	00:09	27.011N	79.927W	129

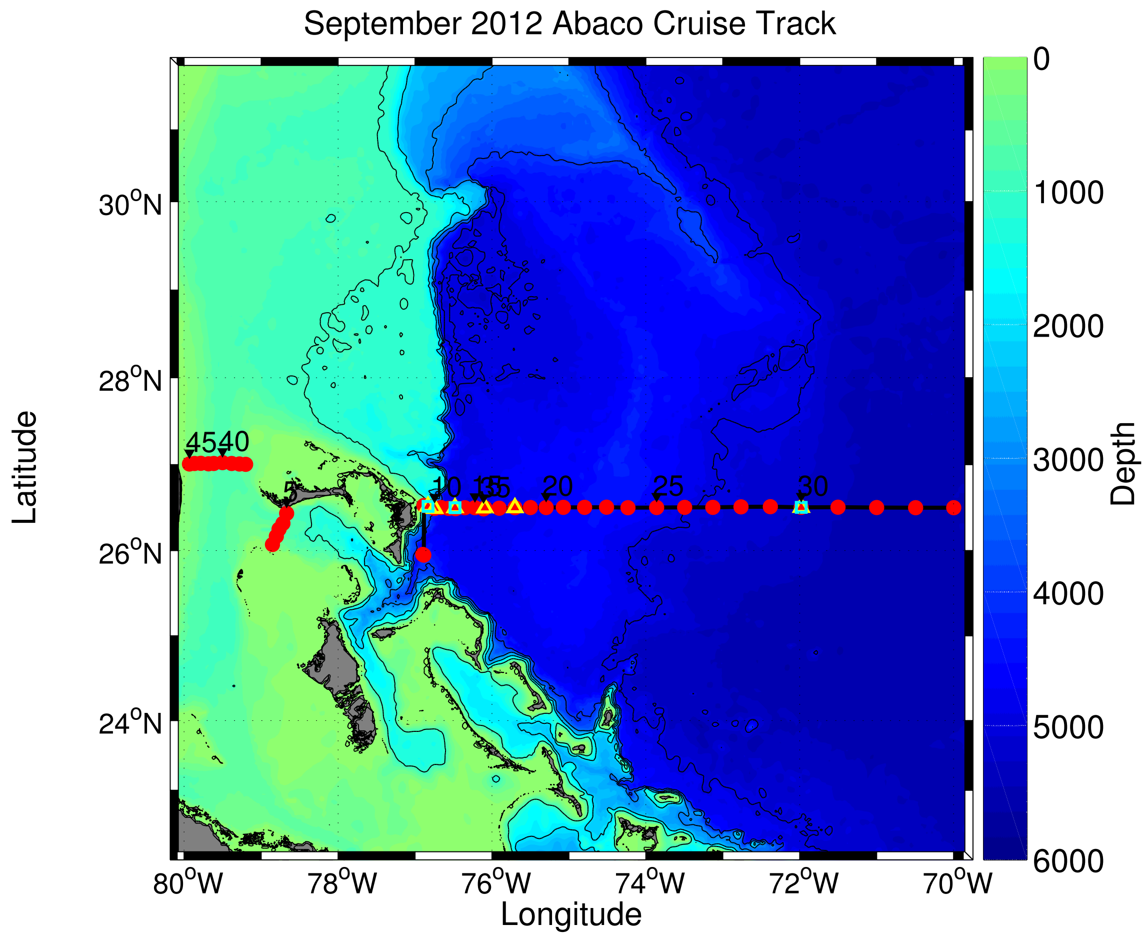

Figure 1: Abaco CTD station locations. The landmasses are shaded and the bathymetry is contoured at 1000 m intervals. The red dots are the CTD stations, the cyan squares are the mooring operations, and the yellow triangles are the IES operations.

2 Cruise Narrative

The following section is a personal communication of Bill Johns. The cruise departed from Port Everglades (Ft. Lauderdale), FL on September 24 at 1100 local time. The ship arrived off Bimini at 1600 local and a small boat was sent in to complete Bahamian clearance check in, which was finished by 1800 local. Two surface drifters were launched on Sept. 24th, one about midway across the Florida Current and another on the east side off the Florida Current shortly after leaving Bimini. The CTD/LADCP section across Northwest Providence Channel (stations 1 to 5) was accomplished with both CTD and LADCP systems functioning well. The NOAA/AOML CTD/LADCP system was used, with a hybrid 150/300 kHz LADCP system using a 300 kHz Workhorse ADCP looking upward from the CTD frame and a 150 kHz ADCP looking downward. On this cruise we tested the new 150 kHz ADCPs recently purchased from Teledyne-RDI for LADCP operations, one belonging to NOAA/AOML and one belonging to the RSMAS OTECH group. This cruise was also the first test of a new CTD frame designed by AOML that allows easier removal of the downward looking 150 kHz ADCP for trouble-shooting or change out. It proved to work very well and is a great improvement.

Once in deep water east of Abaco, 2 deep "cal-dip" CTD stations (Stations 6 and 7) were done to obtain in-situ calibration data for all the Seabird microcat instruments to be deployed on the moorings. As usual for these casts, the outer ring of Niskin bottles was removed and small airplane straps were put on the frame that the microcats could be clamped onto.

Following this, the Abaco 26.5°N CTDO2/LADCP section was commenced on September 26th, and completed on October 1st (stations 8 to 34). Eight surface drifters were launched along the section, in pairs of two, near longitudes 76°W, 74°W, 72°W, and 70°W. The Abaco section was stopped one station short, at 70°W, in order to be on station at the first mooring site at first light on Oct. 2 to begin the mooring operations.

During the NW Providence section, the secondary conductivity sensor was changed after station 1 because it was giving bad readings. Later, during the Abaco section, the secondary temperature and conductivity sensors were both changed out after station 34 because the temperature sensor was offset by about 0.002°C from the primary sensor, as well as from climatological deep Abaco hydrography, and the conductivity sensor was having occasional data dropouts and spikes. Otherwise the CTD operations went very smoothly.

All planned mooring operations (Tables 4 and 5) were successfully completed between Oct. 2 – Oct. 8, working from east to west across the array. For the tall moorings (WB3 and WB5), the approach used was to recover the old mooring on one day, and deploy the replacement mooring the next day, with bottom lander recoveries and deployments fit in between. The mooring operations all went relatively smoothly with the exception of the recovery of WB3 (M403), which was not sighted after surfacing and had to be chased down using sporadic transpond replies from the acoustic releases. It was eventually found 1.7 nmi to the south of the mooring site, a full 2.5 hours after release from the bottom. ARGO transmissions later confirmed that it had surfaced more than a mile to the south of the bottom location. It was also determined from the mooring instruments, after recovery, that the mooring was in an extreme blow-over state at the time of release, and the surface components could have been displaced almost a mile south of the anchor location when released. A significant, and continuing, problem with regard to all mooring recoveries is the failure of the radio beacons on the mooring top floats. Not a single radio beacon was heard on any of the tall mooring or bottom landers. For the tall moorings the main failure mode is the pressure switch in the end cap on the Novatech radio beacons, which fails to activate after long submersions, and this has been a frequent problem in the past. Even the new Novatech combo radio/strobe units had the same failure mode. Both bottom landers failed, which use a RSMAS-designed radio/strobe inside a 10" glass sphere, one by flooding and the other by an apparent implosion. The sphere was missing but shredded remnants of steel bands and webbing around the float were still attached to the recovery line. Hopefully these problems will be solved with the new style Novatech radios and strobes that are activated by a seawater contact (resistance) switch when surfacing. Two sets of these new units were tried out on this cruise on the redeployed bottom landers.

On mooring WB3, two individual glass spheres on different chains had imploded, and on WB5 the microcat at 600m had clearly been the victim of shark bite (its sensor guard had been ripped off and numerous teeth scrapes were visible on the titanium housing). Otherwise the moorings came up in good shape.

During the breaks in the mooring work, several PIES operations were conducted, including 3 attempted PIES recoveries, 2 redeployments, and acoustic data telemetry at several sites (Table 3). Additional CTD casts (stations 35 and 36) were also conducted to provide post-deployment CTD data for the PIES sites and post-recovery cal-dip data for the microcats retrieved from the two tall moorings. The new RSMAS 150 kHz LADCP was also swapped in for these casts to evaluate its deep water performance.

The final CTD/LADCP section across the Straits of Florida at 27°N was completed at 1950 local time on Oct 9th. The ship arrived at the Port Everglades sea buoy at approximately 0400 local Oct 10th. Berthed by 0900. The cruise was very successful and all planned operations were accomplished except for the final offshore CTD station on the Abaco line, and the loss of two PIES that either did not surface after their attempted release or could not be found on the surface.

Specific summaries of the various data collected include:

1. A single Guildline Autosal, model 8400B, provided by the R/V Endeavor was used and functioned normally during the cruise. Standard water vial 154 was used.

2. The Oxygen titrations were done using the AOML amperometric titration system. No problems were reported.

3. LADCP measurements were taken using a RDI 150 kHz ADCP (PHOD) down-looking for stations 1-34 and the RDI 150 kHz ADCP (RSMAS) for stations 35-45. The CTD

frame was equipped with an upward looking 300 kHz ADCP (s/n 14442).

4. A Wet Labs fluorometer was interfaced on the CTD, but not processed. Raw fluorometry voltages were passed through the processing to 1 db averages.

5. A total of 10 surface drifters were deployed throughout the cruise.

3 Inverted Echo-Sounder Operations

NOAA/AOML maintains a line of pressure-equipped inverted echo sounders (PIES) along 26°30' N as part of its Western Boundary Time Series program. An inverted echo sounder consists mainly of a transducer, which can produce sound waves and hear sound waves, and a precise clock. The inverted echo sounders used here at AOML send out a series of 24 – 10kHz or 12kHz sound pulses each hour. These pulses reflect when they hit the ocean surface, and 1 – 8 seconds later the IES records the precise amount of time between when each pulse is sent out and when the pulse is heard returning to the IES. The median value of the 24 pulses is then taken as the travel time for that hour (multiple pulses are needed to average out the changes in travel time due to waves at the ocean surface and other sources of noise). Because the speed of sound in seawater is dependent on temperature, as the water temperatures above the IES change over time the travel time measurement of the IES changes. The travel time measurement of the IES is combined with other ocean measurements of temperature and salinity in order to estimate full-water-column profiles of temperature, salinity, and density. The result is a time series of profiles of these quantities at each IES site.

Regular maintenance of the PIES array was performed on the cruise. This maintenance consisted of acoustic download of the last 8 months of data as well as recovery and deployment of selected instruments that have either developed problems or have reached the end of their battery life. The operations involving PIES during the cruise are summarized in Table 3.

Table 3: Inverted echo-sounder locations and operations.

IES Site	Type	Latitude	Longitude	Date	Operation	Result
A	PIES	026°31.0′ N	076°49.90′ W	10/7-8/12	Telemetry & Deployment	100% success
A2	CPIES	026°30.0′ N	076°44.60′ W	10/6/12	Telemetry	100% success
B	PIES	026°29.5′ N	076°28.20′ W	10/6/12	Telemetry	100% success
C	PIES	026°30.1′ N	076°05.30′ W	10/5/12	Telemetry & Deployment	Deployment successful, recovery unsuccessful
D	PIES	026°30.0′ N	075°42.20′ W	10/4/12	Telemetry	100% success
E	PIES	026°30.0′ N	071°59.95′ W	10/2/12	Telemetry & Deployment	Deployment canceled, recovery unsuccessful

4 Mooring Operations

Five subsurface moorings were successfully recovered from the locations listed in Table 4. These moorings contained a mixture of current meters, Acoustic Doppler Current Profilers (ADCPs), and temperature/salinity recorders. Sites with an "L" in their name represent bottom lander moorings which contained only precision bottom pressure sensors.

Five moorings (3 taut-wire moorings and 2 bottom landers) were deployed at the locations listed in Table 5. Acoustic surveying of the on-bottom position of all moorings was successfully completed after each mooring deployment.

Table 4: Summary of mooring recovery operations.

Mooring Site	Mooring Number	Latitude (N)	Longitude (W)	Depth	Date of Recovery
WB0	M402	26° 30.39'	76° 50.47'	1005	10/07/2012
WB3	M403	26° 29.40'	76° 29.87'	4840	10/05/2012
WB5	M405	26° 29.48'	71° 59.07'	5298	10/02/2012
WBL3	M404	26° 29.09'	76° 29.72'	4843	10/06/2012
WBL5	M306	26° 30.06'	71° 59.18'	5295	10/02/2012

Table 5: Summary of mooring deployment operations.

Mooring Site	Mooring Number	Latitude (N)	Longitude (W)	Depth	Date of Deployment
WB0	M414	26° 30.49'	76° 50.50'	1005	10/08/2012
WB3	M415	26° 29.50'	76° 29.75'	4840	10/06/2012
WB5	M417	26° 30.01'	71° 58.59'	5298	10/03/2012
WBL3	M416	26° 29.27'	76° 29.39'	4843	10/07/2012
WBL5	M418	26° 29.68'	71° 58.71'	5295	10/04/2012

5 Standards and Pre-Cruise Calibrations

The CTD/O2 system is a real-time data acquisition system with the data from a Sea-Bird Electronics, Inc. (SBE) 9plus underwater unit transmitted via a conducting cable to a SBE 11plus deck unit. The serial data from the underwater unit is sent to the deck unit in RS-232 NRZ format. The deck unit decodes the serial data and sends it to a personal computer for display and storage in a disk file using Sea-Bird Seasave software (version 7.21b).

The SBE 911plus system transmits data from primary and auxiliary sensors in the form of binary numbers equivalent to the frequency or voltage outputs from those sensors. These are referred to as the raw data. The SBE software performs the calculations required to convert raw data to engineering units.

The SBE 911plus system is electrically and mechanically compatible with the standard, unmodified carousel water sampler, also made by Sea-Bird Electronics, Inc. A modem and carousel interface allows the 911plus system to control the operations of the carousel directly without interrupting the flow of data from the CTD.

The SBE 911plus underwater unit is configured with dual standard modular temperature (SBE 3 plus) and conductivity (SBE 4) sensors, which are mounted near the lower end cap. The conductivity cell entrance is co-planar with the tip of the temperature sensor probe. The pressure sensor is mounted inside the underwater unit main housing. A centrifugal pump module flushes water through sensor tubing at a constant rate independent of the CTD's motion to improve dynamic performance. Dual dissolved oxygen sensors (SBE 43) are added to the pumped sensor configuration following the temperature-conductivity (TC) pair (Table 6).

Table 6: Equipment used during ABACO-12/09

Instrument	SN	Stations	Use	Pre-Cruise Calibration	Comment
Sea-Bird SBE 32 24-palce Carousel Water Sampler	3261831 - 0824	1-45			
Sea-Bird SBE9plus CTD	1035	1-45		3/18/11	
Paroscientific Dgiquartz Pressure Sensor	119631	1-45		3/18/11	
Sea-Bird SBE3plus Temperature Sensor	4799	1-45	Primary	08/15/12	
Sea-Bird SBE3plus Temperature Sensor	5140	1-34	Secondary	8/15/12	Had pressure dependence
Sea-Bird SBE3plus Temperature Sensor	1692	35-45	Secondary	8/15/12	
Sea-Bird SBE4C Conductivity Sensor	3854	1-45	Primary	0815/12	
Sea-Bird SBE4C Conductivity Sensor	2973	1	Secondary	08/15/12	
Sea-Bird SBE4C Conductivity Sensor	3861	2-34	Secondary	08/15/12	
Sea-Bird SBE4C Conductivity Sensor	1335	35-45	Secondary	08/15/12	
Sea-Bird SBE43 Dissolved Oxygen Sensor	1348	1-24	Primary	07/03/12	Noisy below 1000 meters
Sea-Bird SBE43 Dissolved Oxygen Sensor	2082	25-45	Primary	05/01/12	
Sea-Bird SBE43 Dissolved Oxygen Sensor	2082	1-15	Secondary	05/01/12	
Sea-Bird SBE43 Dissolved Oxygen Sensor	1266	16-45	Secondary	2/1/12	
Fluorometer	472	1-45			
Sea-Bird SBE5T Pump	1211	1-42	Primary		Pump slow
Sea-Bird SBE5T Pump	1027	43-45	Primary		working ok
Sea-Bird SBE5T Pump	5416	1-15	Secondary		Swapped out, but ok
Sea-Bird SBE5T Pump	1072	16-45	Secondary		working ok
Simrad 807 Altimeter		1-45	range - 280m		4.8 scale
RDI LADCP - 150 kHz Broad Band	18145 (PhOD)	1-34	Downward		Swapped to test other 150
RDI LADCP - 150 kHz Broad Band	18144 (RSMAS)	35-45	Downward		
RDI LADCP - 300 kHz Workhorse	14442	1-45	Upward		

5.1 Conductivity

The flow-through conductivity-sensing element is a glass tube (cell) with three platinum electrodes (Seabird model SBE 4). The resistance measured between the center electrode and the end electrode pair is determined by the cell geometry and the specific conductance of the fluid within the cell, and controls the output frequency of a Wein Bridge circuit. The sensor has a frequency output of approximately 3 to 12 kHz corresponding to conductivity from 0 to 7 Siemens/meter (0 to 70 mmho/cm). The SBE 4 has a typical accuracy/stability of ± 0.0003 S·m^{-1}/month and resolution of 0.00004 S·m^{-1} at 24 scans per second.

Four conductivity sensors were used during ABACO-12/09, serial numbers (s/n) 3845, 2973, 3861, and 1335. Pre-cruise sensor calibrations were performed at Sea-Bird Electronics, Inc. in Bellevue, Washington during August 2012. The coefficients shown in Table 7 were entered into Seasave using the configuration file.

Conductivity calibration certificates show an equation containing the appropriate pressure-dependent correction term to account for the effect of hydrostatic loading (pressure) on the conductivity cell:

$$C\ (Siemens/meter) = \frac{(g + h * f^2 + i * f^3 + j * f^4)}{[10 * (1 + c_{t_{cor}} * t + c_{p_{cor}} * p)]}$$

where g, h, i, j, $c_{t_{cor}}$, and $c_{p_{cor}}$ are the calibrations coefficients shown above, f is the instrument frequency (kHz), t is the water temperature (degrees Celsius), and p is the water pressure (dbar). SEASAVE® automatically implements this equation.

Table 7: Calibration coefficients for the conductivity sensors.

s/n 3845 August 5, 2012	s/n 2973 August 5, 2012	s/n 3861 August 5, 2012	s/n 1335 August 5, 2012
g = -1.04180580e+01	g = -9.95815409e+00	g = -1.02390722e+01	g = -3.97252295e+00
h = 1.58388002e+00	h = 1.34553276e+00	h = 1.36104375e+00	h = 5.02171854e+01
i = -1.61611232e-03	i = 1.99576704e-04	i = -6.41445745e-04	i = -6.88403428e-05
j = 2.16737512e-04	j = 5.89193996e-05	j = 1.17030313e-04	j = 3.17265022e-05
CPcor = -9.5700e-08	CPcor = -9.5700e-08	CPcor = -9.5700e-08	CPcor = -9.5700e-08
CTcor = 3.2500e-06	CTcor = 3.2500e-06	CTcor = 3.2500e-06	CTcor = 3.2500e-06

5.2 Temperature

The temperature-sensing element is a glass-coated thermistor bead, pressure protected by a stainless steel tube. The sensor output frequency ranges from 5–13 kHz corresponding to temperatures from -5 to 35°C. The output frequency is inversely proportional to the square root of the thermistor resistance, which controls the output of a patented Wien Bridge circuit. The thermistor resistance is exponentially related to temperature. The SBE 3 thermometer has a typical accuracy/stability of ±0.004°C per year and resolution of 0.0003°C at 24 samples per second. The SBE 3 thermometer has a fast response time of 0.070 seconds.

Three temperature sensors (SBE 3plus) were used during ABACO-12/09, serial numbers (s/n) 5233, 5239 and 5237. Pre-cruise sensor calibrations were performed at Sea-Bird Electronics, Inc. in Bellevue, Washington during August 2012. The following (Table 8) coefficients were entered into SEASAVE® using the configuration file. SEASAVE® automatically implements the equation below and converts between ITS-90 and IPTS-68 temperature scales as desired. The Temperature (ITS-90) is computed from g, h, i, j and f_0 and f is the instrument frequency (kHz) coefficients as follows:

$$T\ (^\circ C) = \frac{1}{\left\{g + h * \left[\ln\left(\frac{f_0}{f}\right)\right] + i * \left[\ln^2\left(\frac{f_0}{f}\right)\right] + j * \left[\ln^3\left(\frac{f_0}{f}\right)\right]\right\}} - 273.15$$

Table 8: Calibration coefficients for the temperature sensors.

s/n 4799 August 15, 2012	s/n 5140 August 15, 2012	s/n 1692 August 15, 2012
g = 4.36404612e-03	g = 4.36479183e-03	g = 4.80163861e-03
h = 6.37109658e-04	h = 6.41256361e-04	h = 6.71534623e-04
i = 2.09497057e-05	i = 2.24826612e-05	i = 2.53969191e-05
j = 1.76655570e-06	j = 2.11896591e-06	j = 1.98975248e-06
f_0 = 1000.0	f_0 = 1000.0	f_0 = 1000.0

5.3 Pressure

The Paroscientific series 4000 Digiquartz high pressure transducer uses a quartz crystal resonator whose frequency of oscillation varies with pressure induced stress measuring changes in pressure as small as 0.01 parts per million with an absolute range of 0 to 10,000 psia (0 to 6885 dbar). Repeatability, hysteresis and pressure conformance are 0.002% of full-scale. The nominal pressure frequency (0 to full scale) is 34 to 38 kHz. The nominal temperature frequency is 172 kHz ± 50 ppm/°C.

The pressure sensor utilized during ABACO-12/09 was s/n 1035. Pre-cruise sensor calibrations were performed at Sea-Bird Electronics, Inc. in Bellevue, Washington on March 18, 2011. The following coefficient (Table 9) were entered into SEASAVE® using the configuration file:

Pressure coefficients are first formulated into:

$$\begin{aligned} c &= c_1 + c_2 * U + c_3 * U^2 \\ d &= d_1 + d_2 * U \\ t_0 &= t_1 + t_2 * U + t_3 * U^2 + t_4 * U^3 + t_5 * U^4 \end{aligned}$$

where U is temperature in degrees Celsius. Pressure is computed according to:

$$P\ (psia) = c * \left(1 - \frac{t_0^2}{t}\right) * \left[1 - d * \left(1 - \frac{t_0^2}{t}\right)\right]$$

where t is pressure period (μs). SEASAVE® automatically implements this equation.

Table 9: Calibration coefficients for the pressure sensor.

s/n 1035 March 18, 2011
c_1 = -4.373825e+04
c_2 = 4.277260e-01
c_3 = 1.413200e-02
d_1 = 3.420800e-02
d_2 = 0.000000e+00
t_1 = 2.988725e+01
t_2 = -1.949980e-04
t_3 = 4.187800e-06
t_4 = 4.590370e-09
t_5 = 0.000000e+00
Slope = 1.00001000
Offset = -0.04860
AD590M = 1.279900e-02
AD590B = -9.386550e+00

5.4 Dissolved Oxygen

The SBE 43 dissolved oxygen sensor uses a membrane polarographic oxygen detector (MPOD). Oxygen sensors determine the dissolved oxygen concentration by counting the number of oxygen molecules per second (flux) that diffuse through a membrane. By knowing the flux of oxygen and the geometry of the diffusion path, the concentration of oxygen can be computed. The permeability of the membrane to oxygen is a function of temperature and ambient pressure. In order to minimize the errors in the oxygen measurement due to the temperature differences between the water and the oxygen sensor, a temperature compensation is calculated using a temperature measured near the active surface of the sensor. The interface electronics output voltages proportional to the temperature-compensated oxygen current. Initial computation of dissolved oxygen in engineering units is done in the software. The range for dissolved oxygen is 120% of surface saturation in all natural waters, fresh and salt, and the nominal accuracy is 2% of saturation.

Under extreme pressure, changes can occur in gas permeable Teflon membranes that affect their permeability characteristics. Some of these changes (plasticization and amorphous/crystalinity ratios) have long time constants and depend on the sensor's time-pressure history. These slow processes result in hysteresis in long, deep casts. The hysteresis correction algorithm operates through the entire data profile and corrects the oxygen voltage values for changes in membrane permeability as pressure varies. At each measurement, the correction to the membrane permeability is calculated based on the current pressure and how long the sensor spent at previous pressures.

Sea-Bird has implemented an optional hysteresis correction for dissolved oxygen data. The correction algorithm requires a continuous time series of data, with no temporal data gaps (although a continuous time series is necessary, a constant sampling interval is not required). Prior to processing, do not remove any data from the downcast or upcast (if to be used), other than a surface soak at the beginning of the downcast.

Oxygen sensors 1348, 2082, and 1266 were used during ABACO-12/09. The following oxygen coefficients (Table 10) were entered into SEASAVE® using the configuration file:

Table 10: Calibration coefficients for the dissolved oxygen sensors.

s/n 1348 July 03, 2012	s/n 2082 May 01, 2012	s/n 1266 April 10, 2012
Soc = 0.55143	Soc = 0.42233	Soc = 0.53435
Voffset = -0.5114	Voffset = -0.5233	Voffset = -0.5402
Tau20 = 1.34	Tau20 = 1.470	Tau20 = 1.23
A = -3.6914e-03	A = -2.8059e-03	A = -3.3869e-03
B = 1.7009e-04	B = 1.4396e-04	B = 8.5060e-05
C = -3.0484e-06	C = -2.0227e-06	C = -1.5406e-06
$E_{nominal}$ = 0.036	$E_{nominal}$ = 0.036	

The use of these constants in linear equations of the form $I = mV + b$ and $T = kV + c$ yield sensor membrane current and temperature (with maximum error of about 0.5 °C) as a function of sensor output voltage.

Dissolved oxygen concentration is calculated according to:

$$O\ (ml/l) = \{Soc * (V + V_{offset} + tau(T,S) * \frac{\delta v}{\delta t}) + p1 * station\}$$
$$*(1.0 + A * T + B * T^2 + C * T^3) * OXSAT(T,S) * e^{E*(\frac{P}{K})}$$

where Soc, V_{offset}, tau, A, B, C, E and $p1$ are the calibration coefficients shown above and V is the instrument voltage (V). T, S and P are the temperature, salinity and pressure measured by the CTD. K is the temperature in the absolute scale (K), $\delta v/\delta t$ is the oxygen voltage time derivative, *station* is the station number, and $OXSAT$ is the oxygen saturation value calculated according to (Weiss, 1970):

$$OXSAT(\theta, S) = \exp\left\{A_1 + A_2 * \left(\frac{100}{\theta}\right) + A_3 * \ln\left(\frac{\theta}{100}\right) + A_4 * \left(\frac{\theta}{100}\right) + S * \left[B_1 + B_2 * \left(\frac{\theta}{100}\right) + B_3 * \left(\frac{\theta}{100}\right)^2\right]\right\}$$

where θ is the absolute temperature (K); and

$$\begin{array}{rlrl} A_1 = & -173.4292 & B_1 = & -0.033096 \\ A_2 = & 249.6339 & B_2 = & 0.014259 \\ A_3 = & 143.3483 & B_3 = & -0.00170 \\ A_4 = & -21.8492. & & \end{array}$$

SEASAVE® automatically implements this equation.

The hysteresis correction is calculated, using the oxygen voltages, with the following algorithm:

$$D = 1 + H_1 * (e^{\left(\frac{P(i)}{H2}\right)} - 1)$$

$$C = e(-1 * \left(\frac{Time(i) - Time(i-1))}{H3}\right)$$

$$O_V(i) = O_{volt}(i) + V_{offset}$$

$$O_{newvolts}(i) = a * \frac{a}{D}$$

$$O_{finalvolts}(i) = O_{newvolts}(i) - V_{offset}$$

Where:

i = indexing variable (must be a continuous time series to work; can be performed on bin averaged data), where i = 1:end (end is largest data index point plus 1).
$P(i)$ = pressure (decibars) at index point i .
$Time(i)$ = time (seconds) from start of index point i.
$O_{volt}(i)$ = SBE 43 oxygen voltage output directly from sensor, with no calibration or hysteresis corrections, at index point i.
V_{offset} = correction for an electronic offset that is applied to voltage output of sensor. V_{offset} correction is always negative (see factory calibration sheet for this coefficient). V_{offset} is added to raw voltages prior to hysteresis correction. At end of hysteresis corrections, V_{offset} is removed prior to data conversion using SBE 43 calibration equation (see $O_{finalvolts}(i)$).
$O_V(i)$ = dissolved oxygen voltage value with V_{offset} correction (made prior to hysteresis correction) at index point i.
D and C are temporary variables used to simplify expression in processing loop.
$H1$ = amplitude of hysteresis correction function. Default = -0.033, range = -0.02 to -0.05 (varies from sensor to sensor).
$H2$ = function constant or curvature function for hysteresis. Default = 5000.

$H3$ = time constant for hysteresis (seconds). Default = 1450, range = 1200 to 2000 (varies from sensor to sensor).
$O_{newvolts}(i)$ = hysteresis-corrected oxygen value at index point i.
$O_{finalvolts}(i)$ = hysteresis-corrected oxygen value at index point i with V_{offset} removed.

This step is necessary prior to computing oxygen concentration using SBE 43 calibration equation.

5.5 Fluorometer

The fluorometer is an optical sensor used to detect chlorophyll-a fluorescence. The fluorescence signal is an indicator of concentrations of chlorophyll and an active phytoplankton biomass. This allows for the tracking of the abundance and variability of biology in the water column. The fluorometer data collected is not processed, but raw voltages are passed through the Seabird Data Processing program. The raw voltages are not displayed here, but are available as part of the 1db pressure averaged data.

6 Data Acquisition

CTD/rosette casts were performed with a package consisting of a 24-place, 10-liter rosette frame (AOML's green frame), a 24-place water sampler (SBE32) and 24, 10-liter Bullister-style bottles. This package was deployed on all stations/casts. Underwater electronic components consisted of a Sea-Bird Electronics (SBE) 9 plus CTD with dual pumps and the following sensors: dual temperature (SBE3), dual conductivity (SBE4), dual dissolved oxygen (SBE43), and a Simrad 807 altimeter. The other underwater electronic components consisted of two RDI LADCPs and a Wet Labs ECO fluorometer.

The CTD's supplied a standard Sea-Bird format data stream at a data rate of 24 frames/second. The SBE9 plus CTD was connected to the SBE32 24-place pylon providing for single-conductor sea cable operation. Power to the SBE9 plus CTD, SBE32 pylon, auxiliary sensors, and altimeter was provided through the sea cable from the SBE911plus deck unit in the computer lab. The rosette system was suspended from a UNOLS-standard three-conductor 0.322" electro-mechanical sea cable.

The CTD was mounted vertically attached to the bottom center of the rosette frame. All SBE4 conductivity and SBE3 temperature sensors and their respective pumps were mounted vertically as recommended by SBE outboard of the CTD. The CTD was outfitted with dual pumps. Primary temperature, conductivity, and dissolved oxygen were plumbed on one pump circuit and secondary temperature, conductivity, and dissolved oxygen on the other. Pump exhausts were attached to outside corners of the CTD cage and directed downward. The altimeter was mounted on the inside of a support strut adjacent to the bottom frame ring. The LADCP's were vertically mounted inside the bottle rings with one 150 kHz pointing down, the other 300 kHz transducer pointing up. The R/V Endeavor's aft CTD winch was used with the 24-place 10-liter rosette for all station/casts.

O-rings were changed as necessary and bottle maintenance was performed each day to insure proper closure and sealing. Valves were inspected for leaks and repaired or replaced as needed.

6.1 System Problems

- Station 1: Secondary conductivity, S/N 2973, failed at the bottom of the cast, $\sim$ 300 m of depth. The new secondary conductivity sensor is S/N 3861.

- Station 8: The lanyards were lined up wrong with 24 as '1'. We only sampled bottles 1 - 8. Therefore, the bottom bottle, 24, was not sampled.

- The secondary oxygen started to look noisy once the deep stations started (>1500m) and progressively got worse through station 15. The secondary pump (S/N 5416) and oxygen sensor (S/N 2082) were swapped out before station 16. This did not correct the issue. Next the secondary oxygen cable was swapped out. However, this still did not correct the noise issue. The sensors ended up being in the opposite channels of the normal orientation. This caused the primary oxygen sensor to be plotted on the secondary plot window and vise versa. As a result the secondary oxygen was actually the good sensory, while the primary (being plotted on the secondary plot window) was the noisy sensor.

- Station 25 we replaced the primary oxygen sensor, S/N 1348, with the original secondary oxygen sensor, S/N 2082.

- The secondary conductivity sensor continued to be problematic. Finished the Abaco line and replaced S/N 3861 with S/N 1335 for station 35 onward.

- Swapped the secondary temperature S/N 5140 for S/N 1692 for station 35. This was done to trouble shoot the T-difference offset. The secondary temperature sensor had a drift +0.002 (shifting warm in the deep water) relative to the primary temperature at depths > 2000m.

6.2 Data Acquisition

The CTD data acquisition system consisted of an SBE-11plus (V1) deck unit and a networked generic PC workstation running Windows 2000. SBE Seasave software version 7.21b was used for data acquisition and to close bottles on the rosette.

The console watch initiated CTD deployments after the ship stopped on station. The watch maintained a console operations log containing a description of each deployment, a record of every attempt to close a bottle and any pertinent comments.

The deck watch leader directed the winch operator to raise the package, the J-boom and rosette were extended outboard, and the package quickly lowered into the water and submerged to 10 meters of wire out. No tag lines were necessary for either deployments or recoveries during this cruise. The CTD sensor pumps were configured with a 60 second startup delay. The CTD console operator waited for the CTD sensor pumps to turn on, waited an additional 60 seconds for sensors to stabilize (all together about 2 minutes), then directed the winch operator to bring the package close to the surface, pause for typically 10 seconds, hitting ”Mark Scan” and begin the descent. The profiling rate was no more than 30 m/min to 50 m, no more than 45 m/min to 200 m, and no more than 60 m/min deeper than 200 m depending on sea cable tension and the sea state.

The console watch monitored the progress of the deployment and quality of the CTD data through interactive graphics and operational displays. Additionally, the watch created a sample log for the deployment that would be later used to record the correspondence between rosette bottles and analytical samples taken. The altimeter channel, CTD pressure, wire-out and bathymetric depth were all monitored to determine the distance of the package from the bottom, usually allowing a safe approach to within 20 m.

On the up cast, the winch operator was directed to stop at each bottle trip depth. The CTD console operator waited 30 seconds before tripping a bottle using a ”point and click” graphical trip button. The data acquisition system responded with trip confirmation messages and the corresponding CTD data in a rosette bottle trip window on the display. All tripping attempts were noted on the console log. The console watch then directed the winch operator to raise the package up to the next bottle trip location.

After the last bottle was tripped, the console watch directed the deck watch to bring the rosette on deck. Once on deck, the console watch terminated the data acquisition, turned off the deck unit, and assisted with rosette sampling.

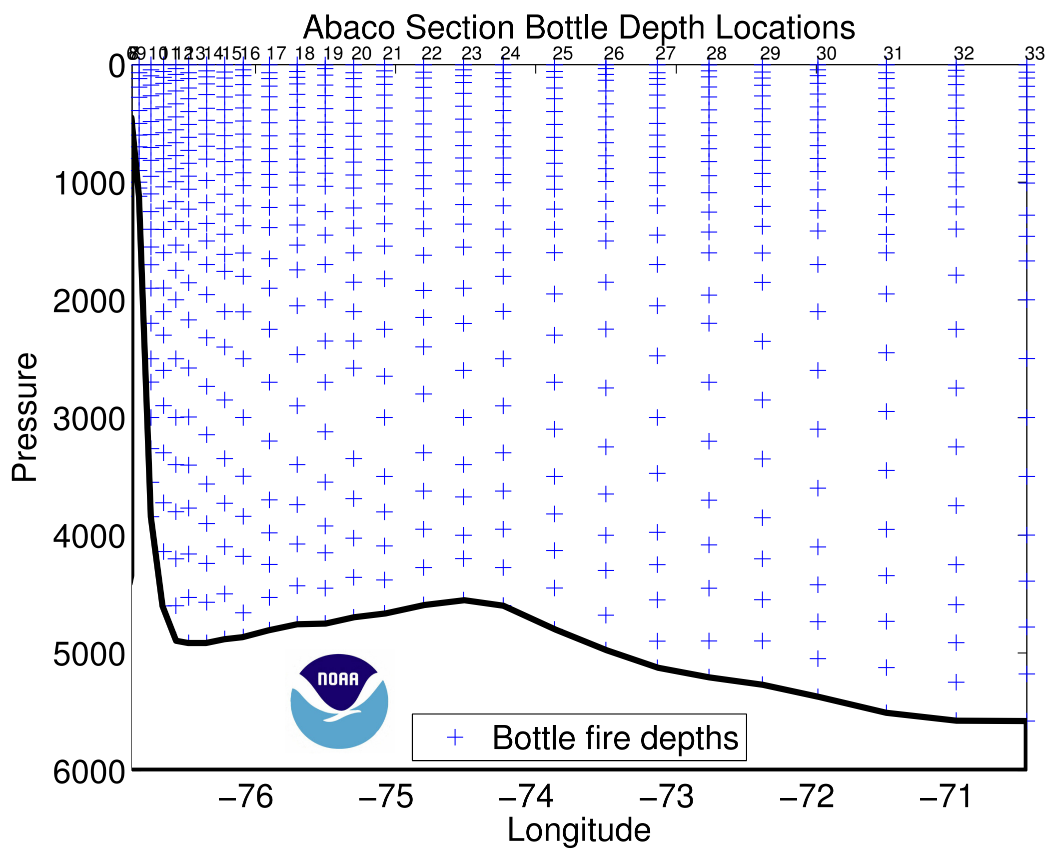

Figure 2: Bottle locations for 26.5°N Deep Western Boundary Current section east of Abaco Island.

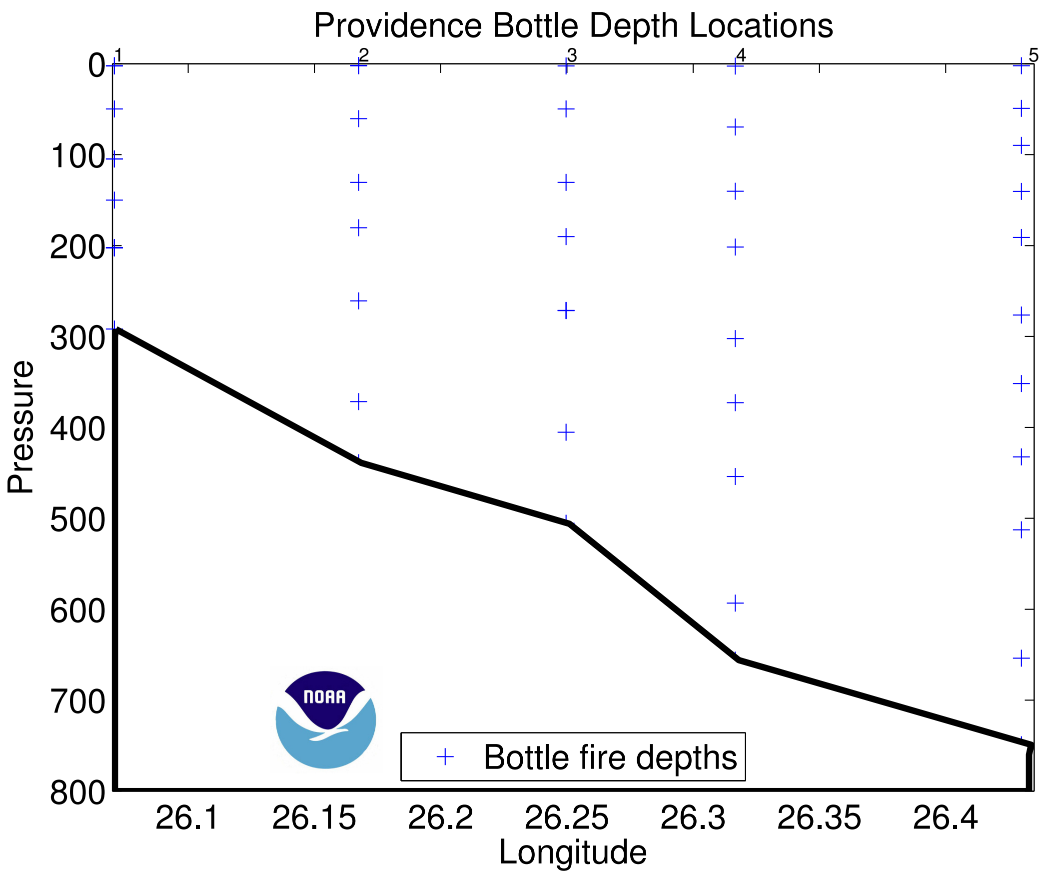

Figure 3: Bottle locations for along the Northwest Providence Channel section.

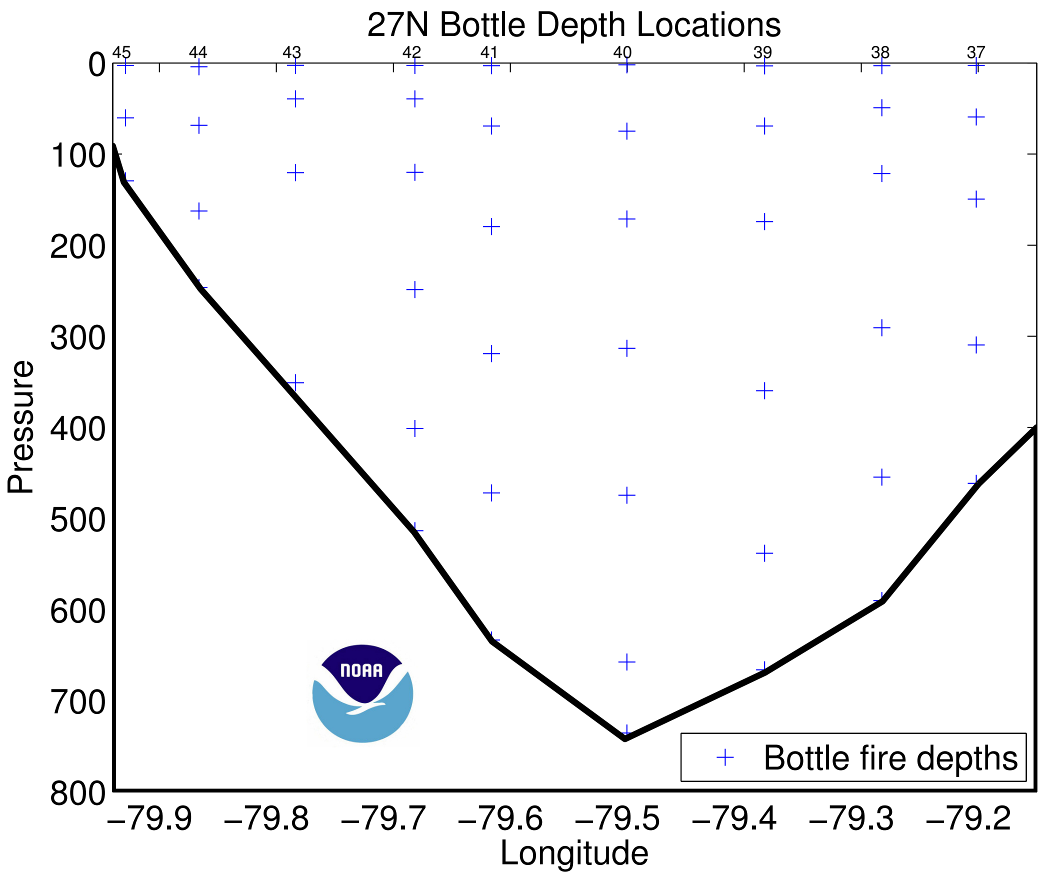

Figure 4: Bottle locations for 27°N section in the Florida Straits.

6.3 Shipboard CTD Data Processing

Shipboard CTD data processing was performed automatically at the end of each deployment using SEABIRD SBE Data Processing version 7.21f and AOML Matlab processing software. The raw CTD data and bottle trips acquired by SBE Seasave on the Windows 2000 workstation were copied onto the CTD-PROC workstation, and processed to a 1-dbar series and a 1-second time series. Bottle trip values were extracted and a 1-decibar (dbar) down cast pressure series created.

Raw data are acquired from the instruments and are stored unmodified. The conversion module DATCNV uses the instrument configuration and pre-cruise factory calibration coefficients to create a converted engineering unit data file that is utilized by all SBEDataProc® post processing modules. Unless otherwise noted, all calibration parameters given are factory default values recommended by Sea Bird Electronics, Inc. The following is the SBEDataProc® processing module sequence and specifications for primary calibrated data (1 dbar averages) uses the following routines in order for reduction of CTD/O2 data from this cruise:

1. DATCNV converts raw data into engineering units and creates a .ROS bottle file. Both down and up casts were processed for scan, elapsed time(s), depth, pressure, t0 ITS-90 C, t1 ITS-90 C, c0 S/cm, c1 S/cm, salinity (PSU), salinity 2 (PSU), oxygen voltage V, oxygen 2 voltage V, altimeter, optical sensor, oxygen umol/kg, oxygen 2 umol/kg, oxygen mll/l, oxygen 2 ml/l, oxygen dv/dt, oxygen dv/dt 2, latitude, and longitude. MARKSCAN was used to determine the number of scans acquired on deck and while priming the system to exclude these scans from processing.

2. ALIGNCTD aligns temperature, conductivity, and oxygen measurements in time relative to pressure to ensure that derived parameters are made using measurements from the same parcel of water. Secondary conductivity and oxygen were automatically advanced by 0.063 seconds.

3. BOTTLESUM creates a summary of the bottle data. Bottle position, date, and time were output automatically. Pressure, temperature, conductivity, salinity, oxygen voltage and preliminary oxygen values were averaged over a 5 second interval.

4. WILDEDIT computes the standard deviation of 100 point bins, and then makes two passes through the data. The first pass flags points that differ from the mean by more than 2 standard deviations. A new standard deviation is computed excluding the flagged points and the second pass marks bad values greater than 20 standard deviations from the mean. For this data set, data were kept within a distance of 100 of the mean (i.e., all data).

5. FILTER applies a low pass filter to pressure with a time constant of 0.15 seconds. In order to produce zero phase (no time shift), the filter is first run forward through the file and then run backwards through the file.

6. CELLTM uses a recursive filter to remove conductivity cell thermal mass effects from measured conductivity. In areas with steep temperature gradients the thermal mass correction is on the order of 0.005 PSS-78. In other areas the correction is negligible. The value used for the thermal anomaly amplitude (alpha) was 0.03°C. The value used for the thermal anomaly time constant (1/beta) was 7.0°C.

7. LOOPEDIT removes scans associated with pressure slowdowns and reversals. If the CTD velocity is less than 0.25 m/s or the pressure is not greater than the previous maximum scan, the scan is omitted.

8. DERIVE uses 1 dbar averaged pressure, temperature, and conductivity to compute primary and secondary salinities. Oxygen voltage is used to calculate oxygen concentrations.

9. BINAVG averages the data into 1 dbar bins. Each bin is centered on an integer pressure value, e.g., the 1 dbar bin averages scans where pressure is between 0.5 dbar and 1.5 dbar. There is no surface bin. The number of points averaged in each bin is included in the data file.

10. STRIP removes the computed oxygen variable.

11. TRANS converts the binary data file into ASCII format.

12. SPLIT separates the cast into upcast and downcast values.

Package slowdowns and reversals owing to ship roll can move mixed water in tow to in front of the CTD sensors and create artificial density inversions and other artifacts. In addition to Seasoft module LOOPEDIT, a program computes values of density locally referenced between every 1 dbar of pressure to compute N^2 and linearly interpolates temperature, conductivity, and oxygen voltage over those records where N^2 is less than or equal to -1 x 10^{-5} s^{-2}. These data were retained but flagged as questionable in the final WOCE formatted files.

Final calibrations are applied to delooped data files. ITS-90 temperature, salinity, and oxygen are computed, and WOCE quality flags are created.

CTD data were examined at the completion of each deployment for clean corrected sensor response and any calibration shifts. As bottle salinity and oxygen results became available, they were used to refine shipboard conductivity and oxygen sensor calibrations.

A total of 45 casts were processed.

6.4 CTD Calibration Procedures

Laboratory calibrations of the CTD pressure, temperature, conductivity, and oxygen sensors were all performed at SBE. The calibration dates are listed in Table 6.

Secondary temperature, conductivity and dissolved oxygen (T2, C2 and DO2) sensors served as calibration checks for the reported primary sensors. During the cruise, it was determined that the primary sensors behaved more stably during the cruise.

In-situ salinity and dissolved O2 check samples collected during each cast were used to calibrate the conductivity and dissolved O2 sensors.

There were 5 sets of sensor combinations (not including pump replacements) used during the cruise as listed in Table 17.

6.4.1 Salinity Analysis

A single Guildline Autosal, model 8400B, located in the forward starboard lab room, was used for all salinity measurements. The autosal used was provided by the R/V Endeavor. The salinometer readings were logged on a computer using Ocean Scientific International's logging hardware and software. The Autosal's water bath temperature was set to 24°C, which the Autosal is designed to automatically maintain. Typically the salinity room should be maintained to just below 24°C, to help further stabilize reading values and improve accuracy. However, the laboratory was unable to be kept at a constant temperature throughout the cruise. The appropriate temperature was only maintained during the evening through the early morning. The A/C system could not maintain the desired temperature during the daylight hours. Salinity analyses were performed after samples had equilibrated to laboratory temperature, usually at least 12 hours after collection. The salinometer was standardized for each group of samples analyzed (usually 2 casts) using two bottles of standard seawater: one at the beginning and end of each set of measurements, flushing 6 times before each standard run. The salinometer output was logged to a computer file. The software prompted the analyst to flush the instrument's cell and change samples when appropriate. For each sample, the salinometer cell was initially flushed at least 3 times before a set of conductivity ratio readings were taken.

IAPSO Standard Seawater Batch P-154 was used to standardize all casts (Table 11).

Table 11: Nominal values for the batches of IAPSO standard seawater.

P-154
Use By: October 2014
K15: 0.99990
Salinity: 34.996

The salinity samples were collected in 200 *ml* Kimax high-alumina borosilicate bottles that had been rinsed at least three times with sample water prior to filling. The bottles were sealed with custom-made plastic insert thimbles and Nalgene screw caps. This assembly provides very low container dissolution and sample evaporation. Prior to sample collection, inserts were inspected for proper fit and loose inserts replaced to insure an airtight seal. Laboratory temperature was also monitored electronically throughout the cruise. PSS-78 salinity [UNES81] was calculated for each sample from the measured conductivity ratios. The offset between the initial standard seawater value and its reference value was applied to each sample. Then the difference (if any) between the initial and final vials of standard seawater was applied to each sample as a linear function of elapsed run time. The corrected salinity data was then incorporated into the cruise database. When duplicate measurements were deemed to have been collected and run properly, they were averaged and submitted with a quality flag of 6.The total number of salinity samples collected from the rosette was 813 including the duplicate samples. Approximately 30 vials of standard seawater were used.

The running standard calibration values are shown in Figure 5. Through the course of the 17 day cruise, the autosal standards changed by 0.0002 in conductivity ratio (about 0.008 in salinity). The precision of the salinity measurements during the cruise were estimated by using the duplicate samples. From the 63 duplicate samples (Table 12), which corresponds to 7.7% of the total samples collected during this cruise, the average residual for the duplicates was -0.0002 PSU with and standard deviation of 0.0008 PSU (Figure 6).

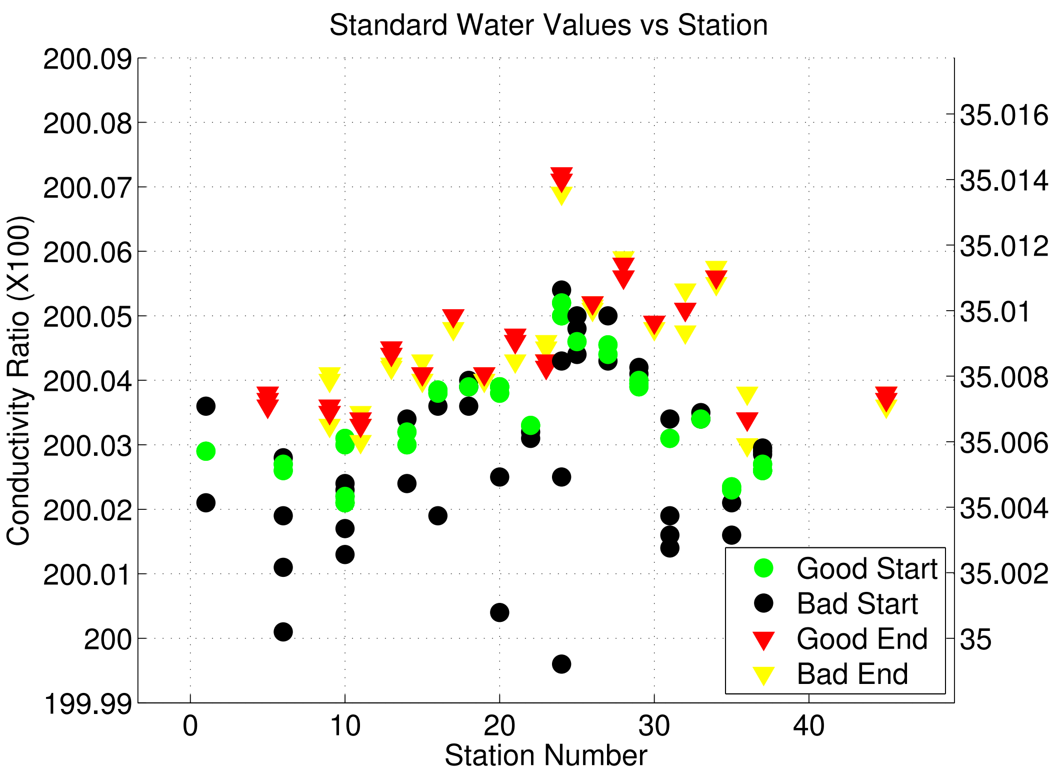

Figure 5: Standard vial calibrations throughout the cruise.

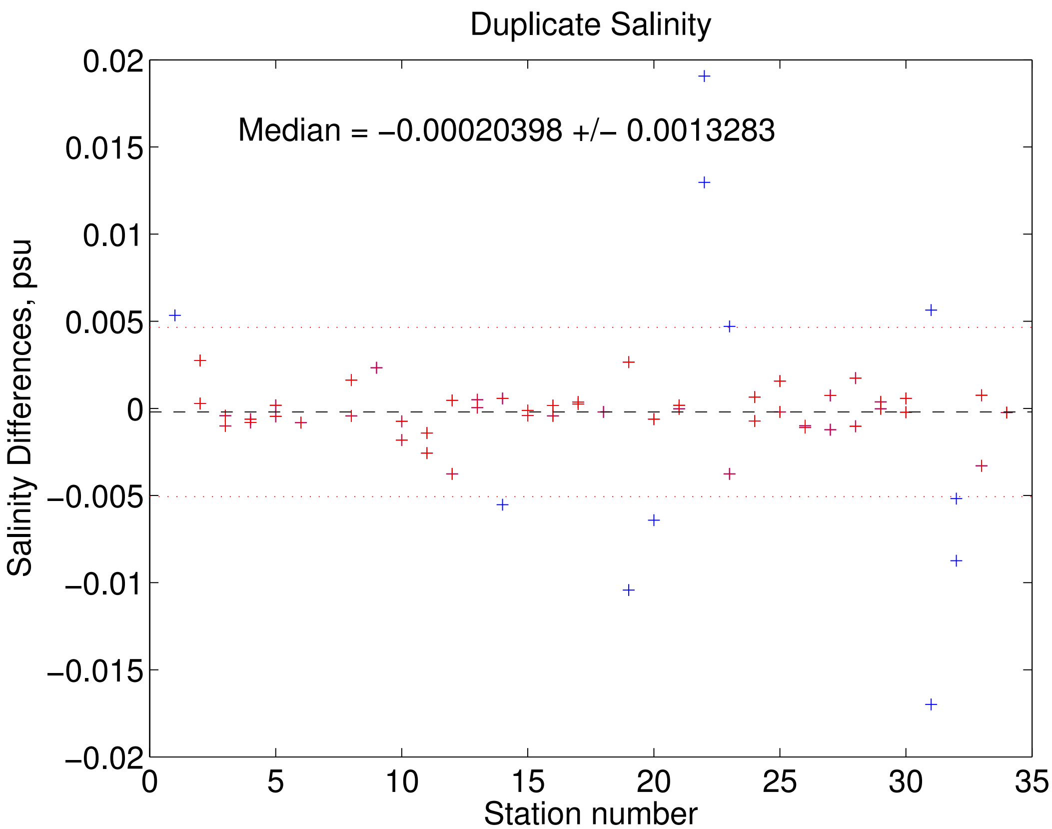

Figure 6: Salinity residuals of the duplicate samples.

Table 12: Duplicate salinity samples collected during the ABACO cruise.

Station	Niskin	Salinity1	Salinity2	Differences
1	12	36.826	36.831	-0.005
2	6	36.684	36.687	-0.003
2	15	36.125	36.126	-0.000
3	3	36.272	36.272	0.000
3	14	36.782	36.781	0.001
4	1	35.472	35.471	0.001
4	4	36.408	36.408	0.001
5	2	35.527	35.526	0.000
5	5	36.480	36.480	-0.000
6	13	34.989	34.988	0.001
8	2	36.606	36.608	-0.002
8	5	36.795	36.795	0.000
9	3	35.069	35.071	-0.002
10	6	34.947	34.946	0.001
10	12	35.000	34.998	0.002
11	1	34.888	34.886	0.003
11	9	34.961	34.960	0.001
12	5	34.911	34.912	-0.000
12	9	34.967	34.963	0.004
13	1	34.875	34.876	-0.000
13	3	34.895	34.895	-0.000
14	3	34.898	34.893	0.006
14	6	34.921	34.921	-0.001
15	12	35.006	35.006	0.000
15	18	36.413	36.412	0.000
16	7	34.945	34.945	-0.000
16	15	35.359	35.358	0.000
17	3	34.888	34.889	-0.000
17	10	34.967	34.967	-0.000
18	4	34.898	34.898	0.000
18	11	35.023	35.022	0.000
19	3	34.898	34.888	0.010
19	10	34.982	34.985	-0.003
20	5	34.910	34.903	0.006
20	19	36.542	36.541	0.001
21	3	34.888	34.888	0.000
21	21	36.646	36.646	-0.000
22	4	34.900	34.913	-0.013
22	10	34.984	35.003	-0.019
23	3	34.890	34.894	-0.005
23	13	35.084	35.081	0.004
24	5	34.914	34.913	0.001
24	12	35.057	35.058	-0.001
25	4	34.897	34.896	0.000
25	8	34.958	34.960	-0.002
26	1	34.870	34.869	0.001
26	21	36.640	36.639	0.001
27	3	34.889	34.890	-0.001
27	8	34.955	34.954	0.001
28	3	34.889	34.891	-0.002
28	11	35.014	35.013	0.001
29	5	34.901	34.901	-0.000
29	13	35.082	35.082	0.000
30	12	35.065	35.065	-0.001
30	20	36.632	36.632	0.000
31	1	34.870	34.853	0.017
31	8	34.951	34.957	-0.006
32	3	34.888	34.883	0.005
32	11	35.054	35.045	0.009
33	3	34.889	34.886	0.003
33	21	36.599	36.600	-0.001
34	6	34.912	34.912	0.000
34	15	35.262	35.262	0.000

6.4.2 Oxygen Analysis

Dissolved oxygen analyses were performed with an automated titrator using amperometric end-point detection (Langdon, 2010). Sample titration, data logging, and graphical display were performed with a PC running a LabView program written by Ulises Rivero of AOML. Thiosulfate was dispensed by a 2 *ml* Gilmont syringe driven with a stepper motor controlled by the titrator. Tests in the lab were performed to confirm that the precision and accuracy of the volume dispensed were comparable or superior to the Dosimat 665. The whole-bottle titration technique of Carpenter (1965), with modifications by Culberson et al. (1991), was used. Four replicate 10 *ml* iodate standards were run every 3-4 days. The reagent blank determined as the difference between V1 and V2, the volumes of thiosulfate required to titrate 1-*ml* aliquots of the iodate standard, was determined five times during the cruise. This method was found during pre-cruise testing to produce a more reproducible blank value than the value determined as the intercept of a standard curve.

Dissolved oxygen samples were drawn from Niskin bottles into calibrated 125-150 *ml* iodine titration flasks using silicon tubing. Bottles were rinsed three times and filled from the bottom, overflowing three volumes while taking care not to entrain any bubbles. The CTD temperatures were used to calculate *umol/kg* concentrations. 1 *ml* of MnCl2 and 1 *ml* of NaOH/NaI were added immediately after drawing the sample was concluded using a ThermoScientific REPIPET II. The flasks were then stoppered and shaken well. Deionized water (DIW) was added to the neck of each flask to create a water seal. The total number of oxygen samples collected from the rosette was 757 including the duplicate samples. The samples were stored in the lab in plastic totes at room temperature for 1.5 hours before analysis. The data were incorporated into the cruise database shortly after analysis. Thiosulfate normality was calculated at the laboratory temperature for each run.

The dispenser used for the standard solution (SOCOREX Calibrex 520) and the burette were calibrated gravimetrically just before the cruise. Oxygen flask volumes were determined gravimetrically with degassed deionized water at AOML. The correction for buoyancy was applied.

The precision of the oxygen measurements during the cruise were estimated by using the duplicate samples. From the 56 duplicate samples (Table 13), which corresponds to 7.3% of the total samples collected during this cruise, the average residual for the duplicates was -0.042 *umol/kg* with and standard deviation of 0.34 *umol/kg* (Figure 7).

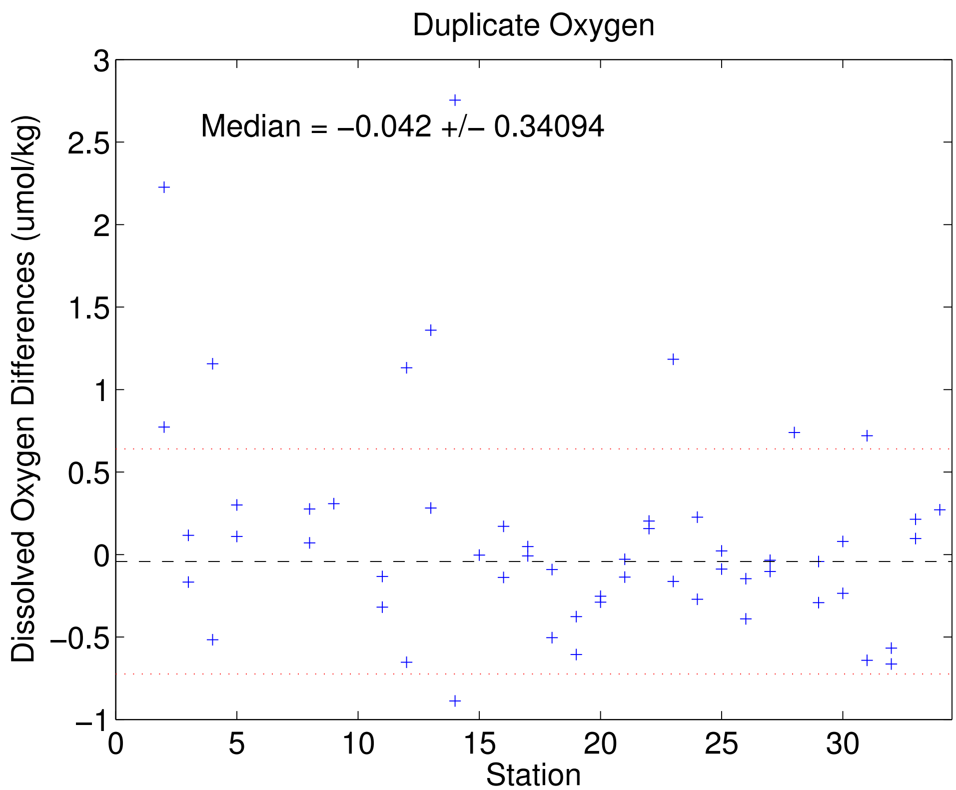

Figure 7: Oxygen residuals of the duplicate samples .

Table 13: Duplicate dissolved oxygen samples collected during the ABACO cruise (values in $umol/kg$).

Station	Niskin	Oxygen1	Oxygen2	Differences
2	8	202.2	202.9	-0.773
2	15	201.0	203.2	-2.226
3	1	163.5	163.3	0.167
3	14	205.8	206.0	-0.116
4	2	150.5	151.7	-1.156
4	6	198.6	198.0	0.517
5	1	149.4	149.7	-0.300
5	4	185.2	185.3	-0.110
8	1	200.7	201.0	-0.276
8	4	199.3	199.3	-0.071
9	2	233.4	233.7	-0.308
11	6	273.7	273.6	0.133
11	11	267.7	267.4	0.319
12	6	277.6	278.7	-1.132
12	15	148.6	148.0	0.653
13	2	273.9	275.3	-1.360
13	5	279.1	279.4	-0.282
14	4	276.1	278.9	-2.754
14	10	273.9	273.0	0.888
15	9	271.9	271.9	0.003
16	10	269.3	269.5	-0.171
16	17	172.7	172.6	0.139
17	2	272.8	272.8	0.008
17	5	277.9	278.0	-0.048
18	3	275.0	274.9	0.091
18	10	263.0	262.4	0.504
19	3	274.3	273.9	0.376
19	13	194.9	194.3	0.606
20	4	276.4	276.1	0.289
20	18	193.7	193.4	0.253
21	2	271.2	271.1	0.029
21	6	277.3	277.1	0.137
22	2	270.0	270.2	-0.203
22	9	271.6	271.8	-0.157
23	1	263.6	263.4	0.163
23	9	271.7	272.9	-1.184
24	3	275.4	275.2	0.271
24	7	270.5	270.7	-0.226
25	3	274.0	273.9	0.088
25	12	243.7	243.7	-0.022
26	14	162.7	162.3	0.390
26	15	146.9	146.7	0.147
27	1	261.0	260.9	0.103
27	9	270.8	270.8	0.035
28	4	275.3	276.0	-0.740
29	5	276.6	276.5	0.042
29	8	270.6	270.3	0.292
30	2	267.8	267.6	0.235
30	5	275.3	275.4	-0.079
31	4	273.4	272.7	0.641
31	10	261.4	262.1	-0.720
32	1	258.0	257.4	0.567
32	11	251.3	250.6	0.664
33	2	267.5	267.6	-0.097
33	11	255.6	255.8	-0.214
34	1	256.6	256.8	-0.271

7 Post-Cruise Calibrations

Post cruise sensor calibrations were done at Sea-Bird Electronics, Inc. (Table 14–16). Secondary temperature, conductivity and dissolved oxygen sensors served as calibration checks for the reported primary sensors.

In-situ salinity and dissolved oxygen samples collected during each cast were used to calibrate the conductivity and dissolved oxygen sensors.

Several sensor combinations were used during the cruise as listed in Table 17 . Primary TC pair T4799/C3854 was selected for final data reduction. Two oxygen sensors were used for the final data reduction, s/n 1348 and s/n 2082. In addition to the Seasave processing modules, a group of Matlab script files called AOML/CTDCAL Toolbox were used. These scripts were based on earlier work of different groups as well as in modern statistical tools. They cover all the steps of the CTD data processing from the preliminary comparisons between sensors or bottle samples to data reductions and final sensors calibrations.

Table 14: Post–Calibration coefficients for the conductivity sensors.

s/n 3854 October 26, 2012	s/n 2973 October 26, 2012	s/n 3861 October 26, 2012
g = -1.04185497e+01	g = -9.96027889e+00	g = -1.02421212e+01
h = 1.58391373e+00	h = 1.34616352e+00	h = 1.36188614e+00
i = -1.61309395e-03	i = 5.85658920e-05	i = -8.27337587e-04
j = 2.17652702e-04	j = 6.74097241e-05	j = 1.27736198e-04
CPcor = -9.5700e-08	CPcor = -9.5700e-08	CPcor = -9.5700e-08
CTcor = 3.2500e-06	CTcor = 3.2500e-06	CTcor = 3.2500e-06

Table 15: Post–Calibration coefficients for the temperature sensors.

s/n 4799 October 27, 2012	s/n 5140 October 27, 2012	s/n 1692 October 27, 2012
g = 4.36402402e-03	g = 4.36477740e-03	g = 4.80182570e-03
h = 6.37080523e-04	h = 6.41228274e-04	h = 6.71808457e-04
i = 2.09292929e-05	i = 2.24638617e-05	i = 2.55249450e-05
j = 1.76092472e-06	j = 2.11508151e-06	j = 2.00931191e-06
f_0 = 1000.0	f_0 = 1000.0	f_0 = 1000.0

Table 16: Post–Calibration coefficients for the dissolved oxygen sensors.

s/n 2082 May 01, 2012	s/n 1348 July 03, 2012	s/n 1266 April 10, 2012
Soc = 0.4233	Soc = 0.5514	Soc = 0.5343
Voffset = -0.5233	Voffset = -0.5114	Voffset = -0.5402
Tau20 = 1.47	Tau20 = 1.34	Tau20 = 1.23
A = -2.8059e-03	A = -3.6914e-03	A = -3.3869e-03
B = 1.4396e-04	B = 1.7009e-04	B = 8.5060e-05
C = -2.0227e-06	C = -3.0484e-06	C = -1.5406e-06
$E_{nominal}$ = 0.036	$E_{nominal}$ = 0.036	$E_{nominal}$ = 0.036

Table 17: Various sensors configurations used during the ABACO – 12/09 cruise.

Station	Temperature		Conductivity		Oxygen		CTD	Pumps	
	Primary	Secondary	Primary	Secondary	Primary	Secondary		Primary	Secondary
1	4799	5140	3845	2973	1348	2082	0824	1211	5416
2–15	4799	5140	3845	3861	1348	2082	0824	1211	5416
16–24	4799	5140	3845	3861	1348	1266	0824	1211	1072
25–34	4799	5140	3845	3861	2082	1266	0824	1211	1072
35–42	4799	1692	3845	1335	2082	1266	0824	1211	1072
43–45	4799	1692	3845	1335	2082	1266	0824	1027	1072

7.1 CTD Data Processing

By using the post cruise sensors calibrations; time drifts were estimated for the temperature and conductivity sensors (for estimated time drifts see the appropriate sections below). The processing module sequence used at sea is done again to include the time drifts as well the pressure correction. After this step the following Matlab scripts based on PMEL programs are applied to the CTD data:

- FILL_SURFACE was used to copy the first good value of salinity, potential temperature, oxygen and oxygen current back to the surface. The program then calculated temperature and conductivity, and zeroed doc/dt of oxygen current for those records.

- DESPIKE1 removed spikes from primary oxygen current and oxygen temperature data, as well as removing spikes from the primary conductivity sensor. Data were linearly interpolated over de-spiked records. Conductivity was back calculated, and sigma-theta and potential temperature were recomputed for the interpolated records.

- DESPIKE2 removed spikes from secondary sensors in the same method as DESPIKE1.

- Package slowdown and reversals due to ship roll can move mixed water in tow in front of the CTD sensors. This mixture can create artificial density inversions and other artifacts. In addition to the SEASOFT module LOOPEDIT, DELOOP, computes values of density locally referenced between every 1 dbar of pressure to compute N^2 = (-g/p) (dp/dz) and linearly interpolated measured parameters over those records where $N^2 \leq$ -1.0 e -05 s^{-2}.

7.2 CTD Pressure

Pressure sensor calibration coefficients derived from the pre-cruise calibrations were applied to raw pressure data during each cast. Residual pressure offsets (the difference between the first and last submerged pressures) were examined to check for calibration shifts (see Figure 8 and Table 18). On deck pressures before the start of each cast was recorded and is plotted in Figure 8. The on deck pressure before and after the cast were stable at 0.89$\pm$ 0.084 db and 0.81 $\pm$ 0.18 db, respectively. There is a noticeable shift with the end on deck pressure at station 36. This corresponds to the change in station depths; station 0-34 were deep CTD casts; Station 35 and onwards were all less than 850 m. It is clear that the pressure offset needs to be corrected before final calibration of the data is complete. This was accomplished by applying an offset of 0.89 dbar to the configuration file.

Near surface pressure values (which is taken as the near-surface pressure at the markscan and the last fired bottle pressure) showed larger variability, but no remarkable trends over the cruise (3.62 $\pm$ 0.44 db before and 3.41 $\pm$ 0.41 db after).

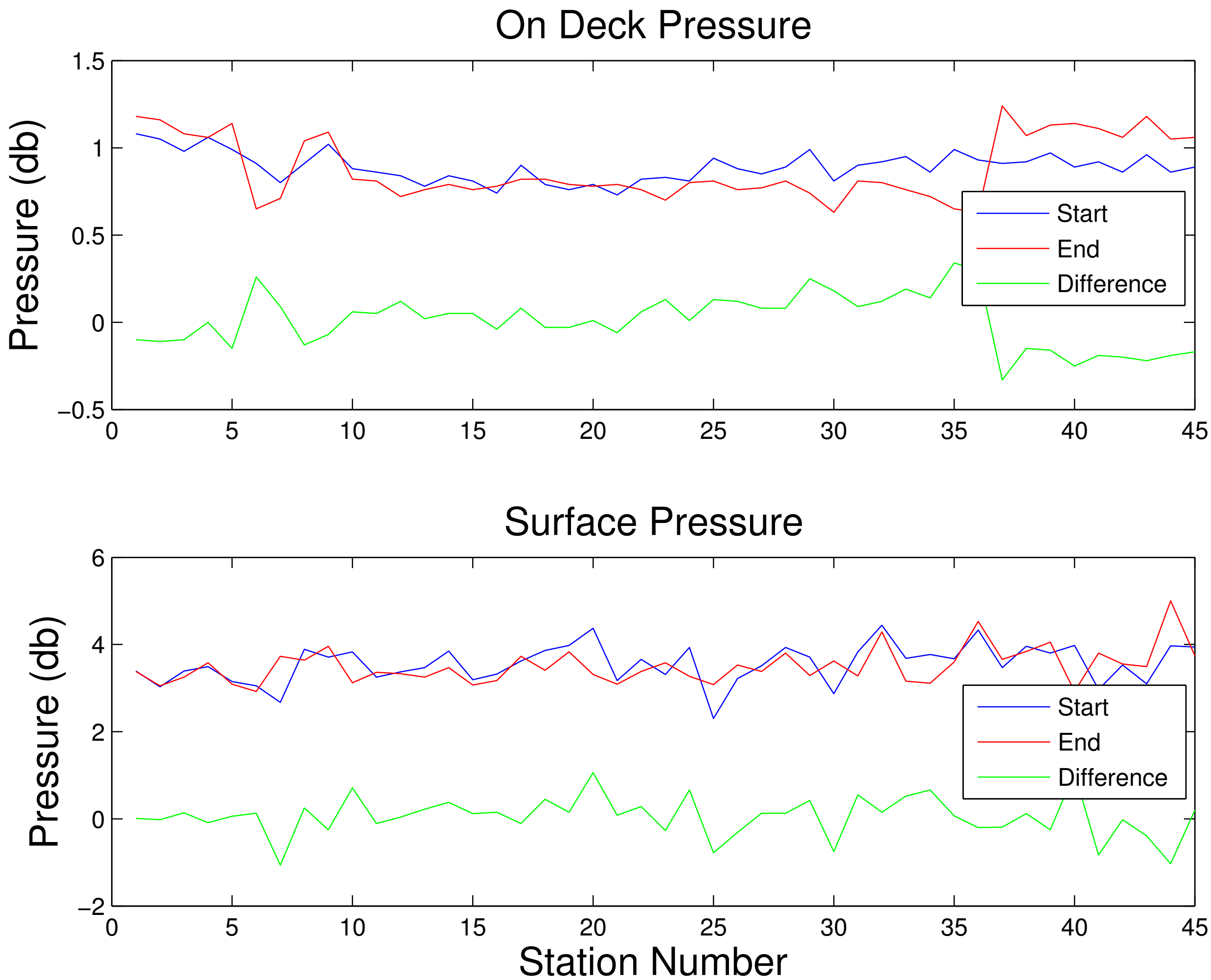

Figure 8: Pressure differences vs. station number. Top panel are the pressures measured on deck before the cast (blue),at the end of the upcast (red) and their respective difference (green) . Bottom panel are the sea surface pressure values measured at the start of the downcast (blue), at the end of the upcast (red) and their respective difference (green).

Table 18: Near surface Pressure values and scan number used to remove surface soak and on-deck values.

Station	Markscan	Deck Prs Start	Deck Prs End	Sfc Prs Start	Sfc Prs End
1	9890	1.0800	1.1800	3.3900	3.3800
2	12881	1.0500	1.1600	3.0300	3.0500
3	9941	0.9800	1.0800	3.3900	3.2500
4	15353	1.0600	1.0600	3.4900	3.5800
5	15337	0.9900	1.1400	3.1500	3.0900
6	13511	0.9100	0.6500	3.0500	2.9200
7	14843	0.8000	0.7100	2.6700	3.7300
8	11575	0.9100	1.0400	3.8900	3.6400
9	9611	1.0200	1.0900	3.7100	3.9600
10	16872	0.8800	0.8200	3.8300	3.1200
11	9638	0.8600	0.8100	3.2500	3.3600
12	11033	0.8400	0.7200	3.3700	3.3300
13	6109	0.7800	0.7600	3.4700	3.2500
14	5800	0.8400	0.7900	3.8500	3.4700
15	10337	0.8100	0.7600	3.1900	3.0700
16	9703	0.7400	0.7800	3.3200	3.1700
17	10590	0.9000	0.8200	3.6200	3.7300
18	8920	0.7900	0.8200	3.8600	3.4100
19	12652	0.7600	0.7900	3.9800	3.8300
20	11033	0.7900	0.7800	4.3700	3.3100
21	11840	0.7300	0.7900	3.1700	3.0900
22	8912	0.8200	0.7600	3.6600	3.3800
23	9336	0.8300	0.7000	3.3100	3.5800
24	9983	0.8100	0.8000	3.9300	3.2700
25	8836	0.9400	0.8100	2.3000	3.0800
26	9697	0.8800	0.7600	3.2200	3.5300
27	11088	0.8500	0.7700	3.5100	3.3800
28	12625	0.8900	0.8100	3.9300	3.8000
29	8047	0.9900	0.7400	3.7100	3.2900
30	5829	0.8100	0.6300	2.8700	3.6200
31	11051	0.9000	0.8100	3.8300	3.2800
32	11699	0.9200	0.8000	4.4400	4.2900
33	7384	0.9500	0.7600	3.6800	3.1600
34	11116	0.8600	0.7200	3.7700	3.1100
35	12671	0.9900	0.6500	3.6700	3.6000
36	12039	0.9300	0.6300	4.3300	4.5300
37	7835	0.9100	1.2400	3.4700	3.6600
38	6778	0.9200	1.0700	3.9600	3.8400
39	8567	0.9700	1.1300	3.8000	4.0500
40	6590	0.8900	1.1400	3.9800	2.9200
41	11897	0.9200	1.1100	2.9700	3.8000
42	9989	0.8600	1.0600	3.5300	3.5500
43	23088	0.9600	1.1800	3.1000	3.4900
44	20232	0.8600	1.0500	3.9700	5.0000
45	23482	0.8900	1.0600	3.9400	3.7400

7.3 CTD Temperature

Temperature sensor calibration coefficients derived from the pre-cruise calibrations were applied to raw primary and secondary temperature data during each cast. Data accuracy, reproducibility and stability was examined by tabulating the difference between the two different temperature sensors over a range of pressures (bottle trip locations) for each cast. These comparisons are summarized in Figure 9, which shows a median temperature difference between the two sensors of -0.0008 °C and a standard deviation of 0.0011 °C.

There was an offset of ≈ 0.002°C between the primary and secondary temperature sensors below 5000 meters (blue profile in Figure 10). The secondary temperature sensor, s/n 5140, was removed after station 34 and replaced with, s/n 1692. The temperature sensor differences improved to less than 0.001°C (red profile in Figure 10). A best fit was done for stations 1-34 and it was shown that the secondary sensor, s/n 5140, has a pressure dependent slope offset of -5.3533 · 10-7. The primary sensor was used for the final data values.

Following Seabird application note No. 31, a linear offset drift is applied between the pre-cruise calibration and the pos-cruise calibration value. The corrected temperature and offset are computed according to:

$$T_{cor} = slope * T_{CTD} + offset$$

and

$$offset = b * (residual/n)$$

where T_{cor} is the corrected temperature, the slope is taken to be 1, T_{CTD} is the sensor temperature, b is number of days between pre-cruise calibration and the cast to be corrected, n is the number of days between pre- and post-cruise calibrations, and *residual* is the residual from the post-calibration sheet (Sea-Bird Electronics, Inc., 2010).

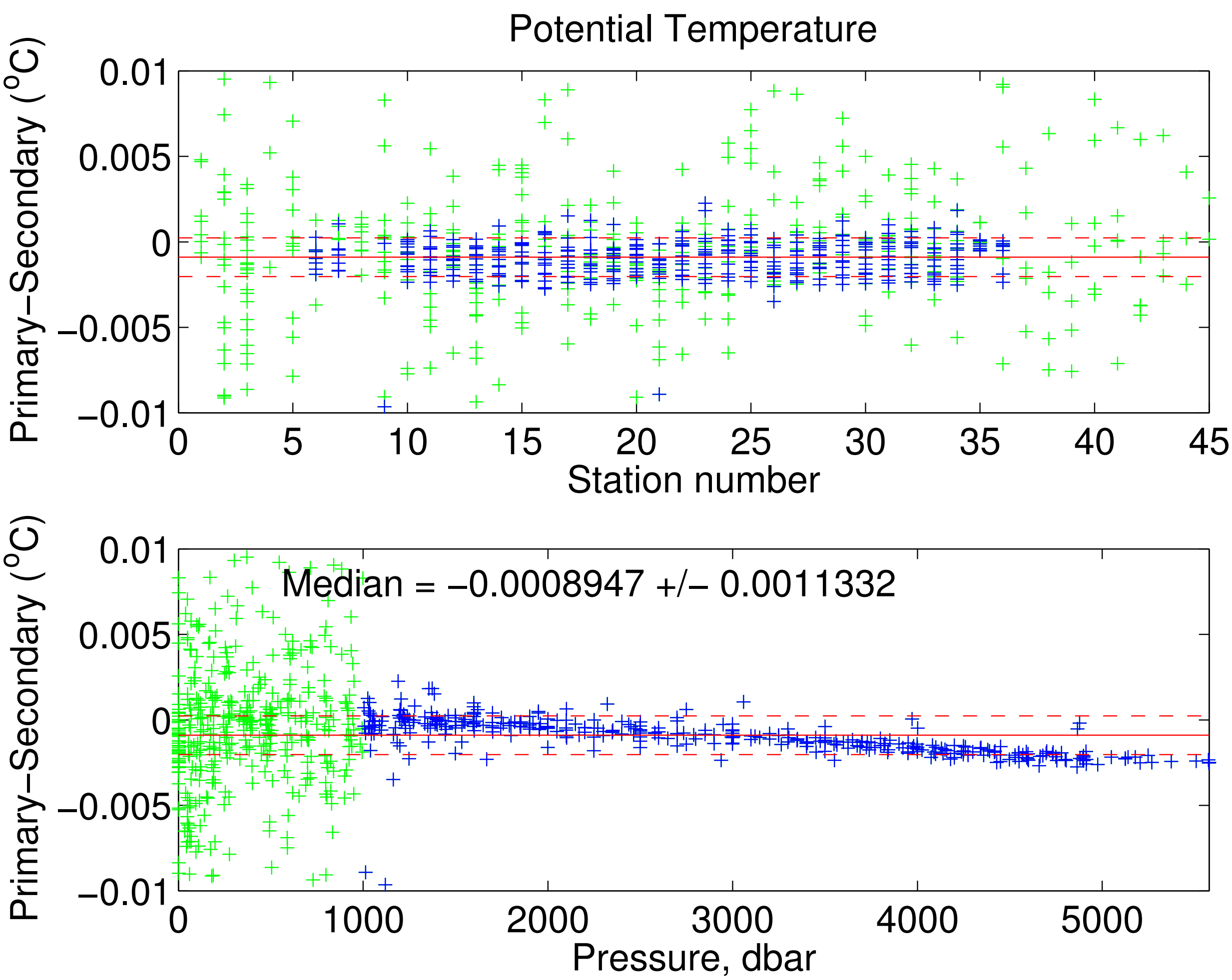

Figure 9: Temperature differences (after corrections) between sensors by station number (top) and pressure (bottom). The green represents the surface data down to 1000 db. The blue represents data below 1000 db. The red solid line represents the median with the red dashed representing the standard deviation (same for top and bottom).

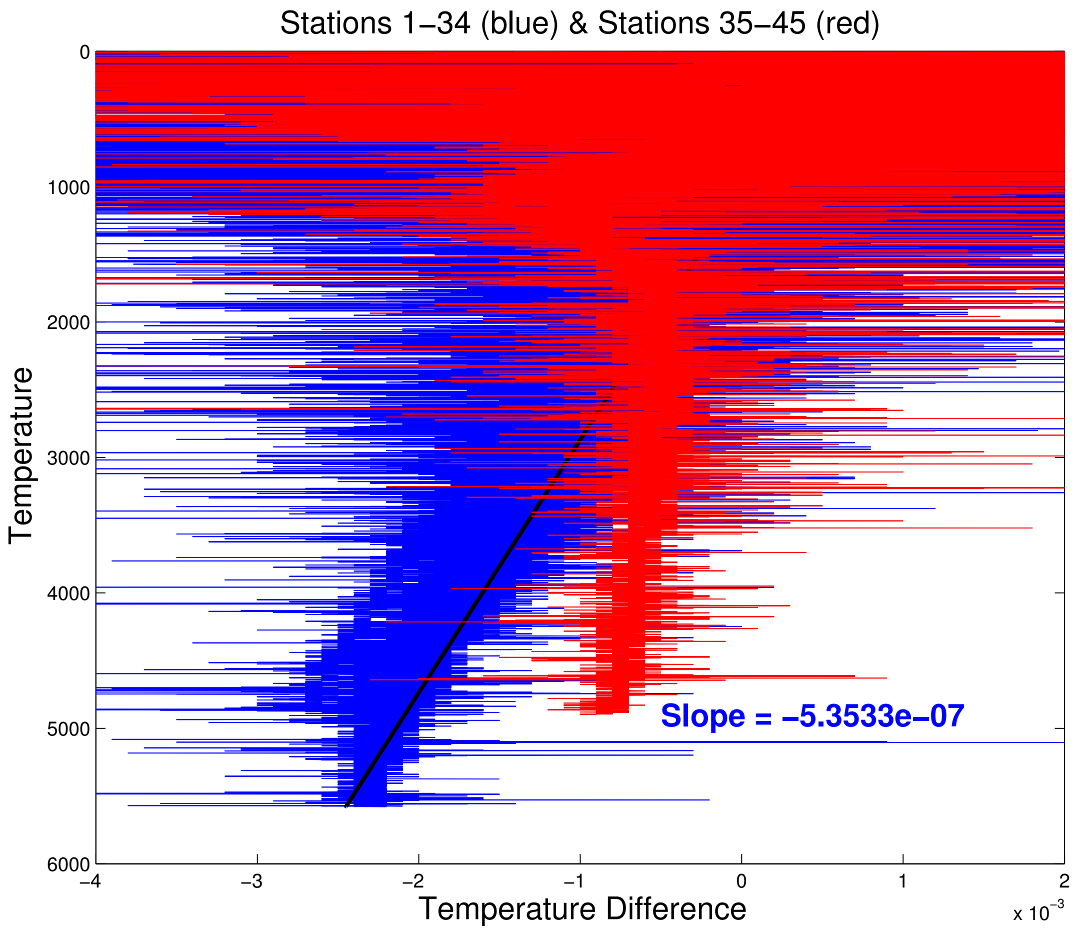

Figure 10: Temperature differences between sensors after sensor swap The blue profile represents stations 1-34 and shows an offset of approximately .002. The black line represents the best fit. The red profile is for stations 35-45 after the secondary temperature sensor was replaced.

7.4 Conductivity

Conductivity sensor calibration coefficients derived from the pre-cruise calibrations were applied to raw primary and secondary conductivities. Comparisons between the primary and secondary sensors and between each of the sensors to conductivity calculated from bottle salinities were used to derive conductivity corrections. Uncorrected C1-C2 are shown in Figure 11 to help identify sensor drift. Several conductivity sensor sets were used throughout the cruise. The secondary conductivity sensors, s/n 2973 and s/n 3861, failed during the cruise. Conductivity sensor, s/n 1335, was used to finish the cruise. The sensors show a median difference of 0.0001 S/m and a standard deviation of 0.000091 S/m. Both sensors showed reasonable values for the residuals. The primary sensor exhibited the lowest residuals when compared to the bottle data and was used for all the final data values (Figure 12).

Despite the large variability of the data in the first 5 stations and the last 9 stations, the bottle values are kept in the database and used for the final calibration. Note also that these CTD stations were in the Northwest Providence Channel and Florida Straits where bottom depths do not exceed 800 m. The AOML/CTDCAL Toolbox automatically applies a quality control to the data based on comparison with a normal distribution. After these procedures 624 data points (88.53 %) were used in the final calculations.

In order to calibrate the CTD conductivity data against the sample conductivity we assume a constant additive correction (offset), multiplicative correction (slope), time drift correction (represented by station number) and where needed, a linear pressure-dependent term. A non-linear function is used to derive these coefficients and are applied to

$$C_{new} = [m * C_{CTD} + (p_1 * station) + b + pcor * P]$$

with

$$m = 0.9999742$$
$$p_1 = 2.520664e\text{-}05$$
$$b = 0.0022292$$
$$pcor = -1.375640e\text{-}07$$

where C_{bottle} is bottle conductivity (S/m), C_{CTD} is pre-cruise calibrated CTD conductivity (S/m), m is the conductivity slope, b is the offset (S/m), P is the pressure, $pcor$ is the pressure correction coefficient, $station$ is the station number and p_1 is the polynomial coefficient. The fit is also weighted in such way that the final solution is preferentially forced to fit the data below a specified depth, in this case 1000 dbar.

The coefficients estimated by the equation above were then applied to the CTD conductivities and the final results (Figure 13 to Figure 16) show a residual of -3.1 · 10-4 psu (-3.9 · 10-4 psu for the data below 1000 dbar) and a standard deviation of 0.0029 psu (0.0017 psu for the data below 1000 dbar). Also 64.7% of the residuals for the data are within the confidence limits determined by the WOCE (± 0.002 psu) and this number increase to 78.4%

if we consider only the data below 1000 dbar.

A final verification about the quality of the data was made by comparing the results of this cruise with some historical data (Figure 17 and Figure 18). Water mass properties are very stable, specially for deeper layers of the ocean, that way by comparing these values we can have a very good estimative of the quality of these data.

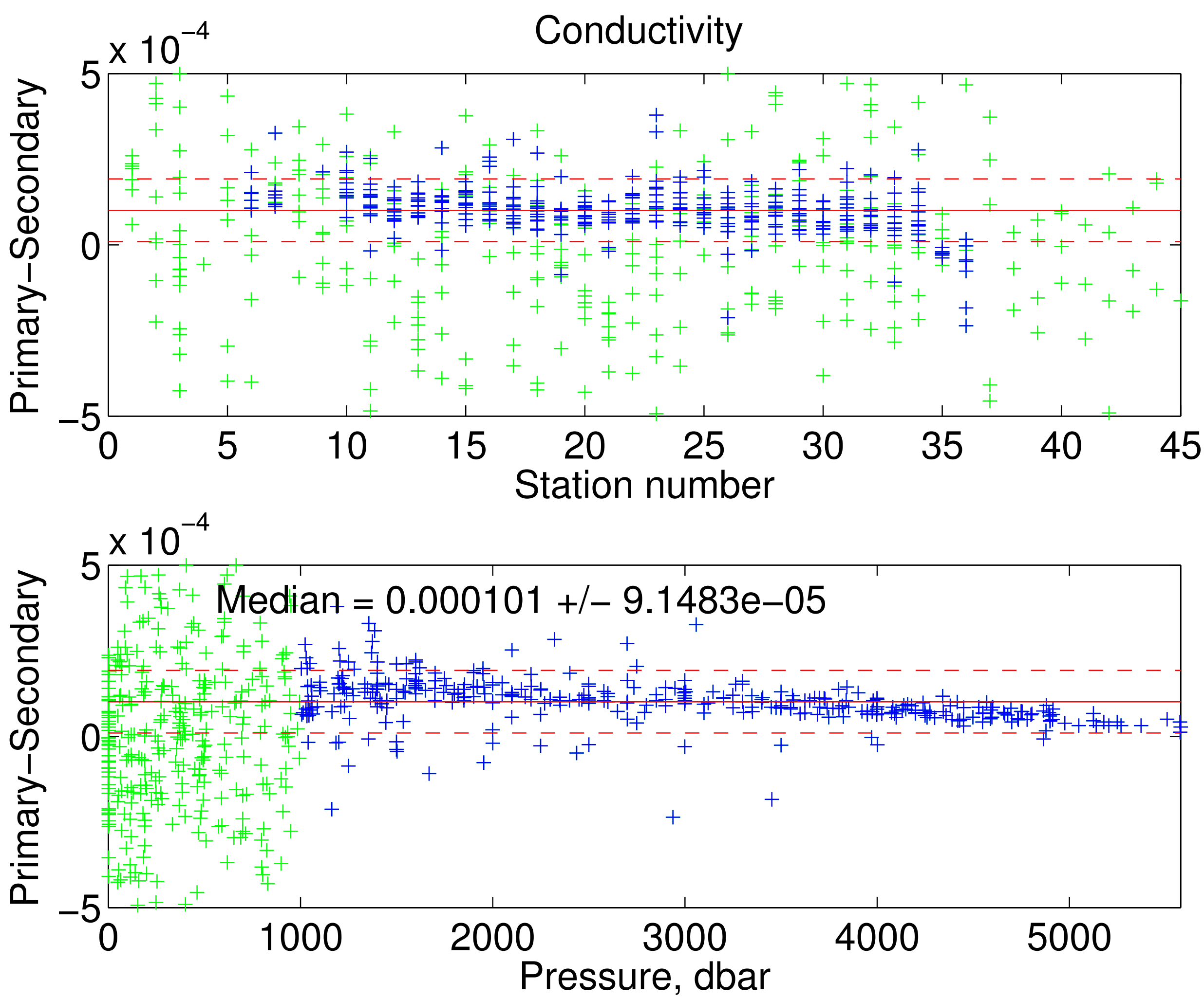

Figure 11: Conductivity (S/m) differences between sensors by station (top) and pressure (bottom). The red solid line represents the median with the red dashed representing the standard deviation.

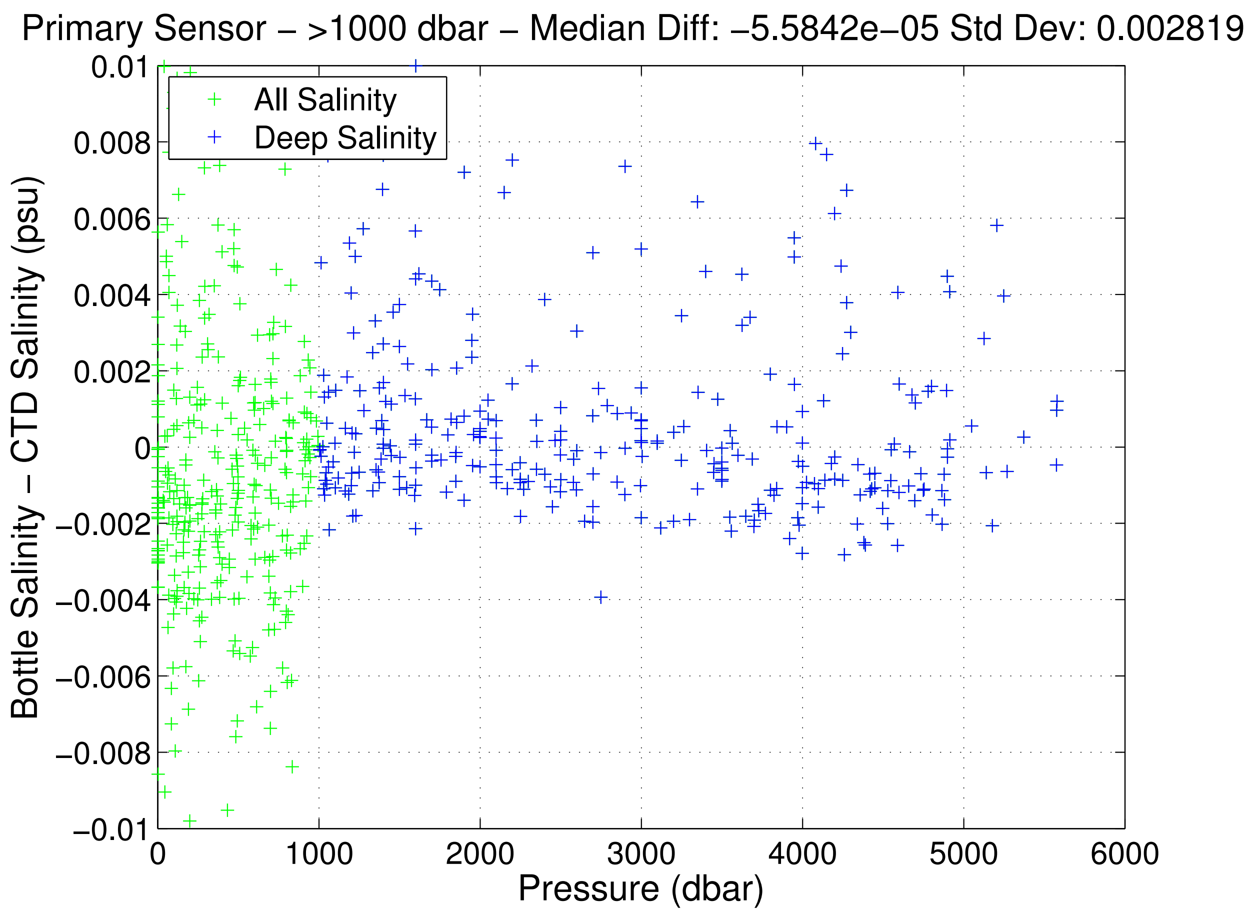

Figure 12: Bottle and uncalibrated secondary CTD salinity differences plotted against pressure. The green crosses represent all data points and the blue are the data points below 1000 dbar. The median was calculated using only the data below 1000 dbar.

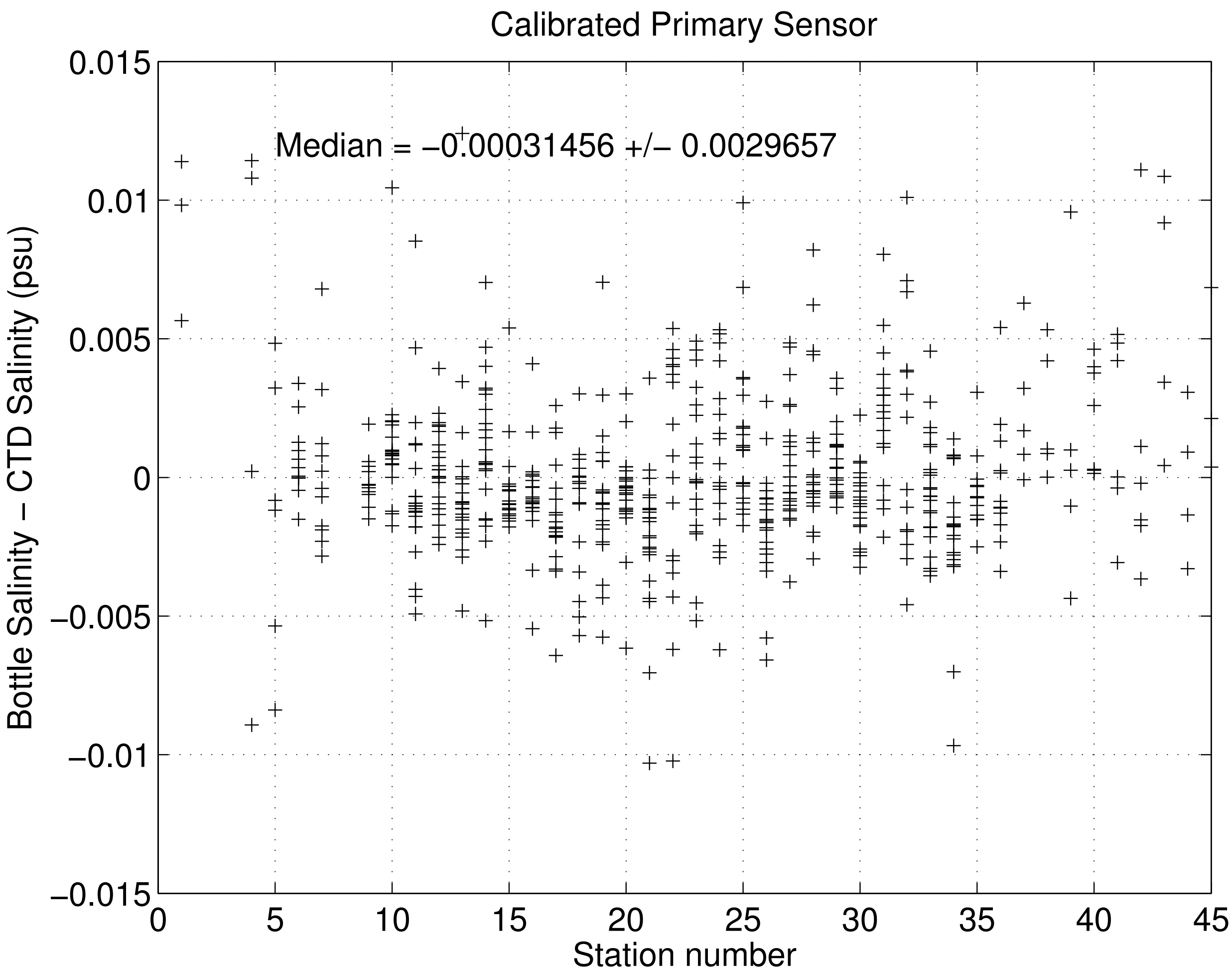

Figure 13: Bottle and calibrated secondary CTD salinity differences plotted vs. station.

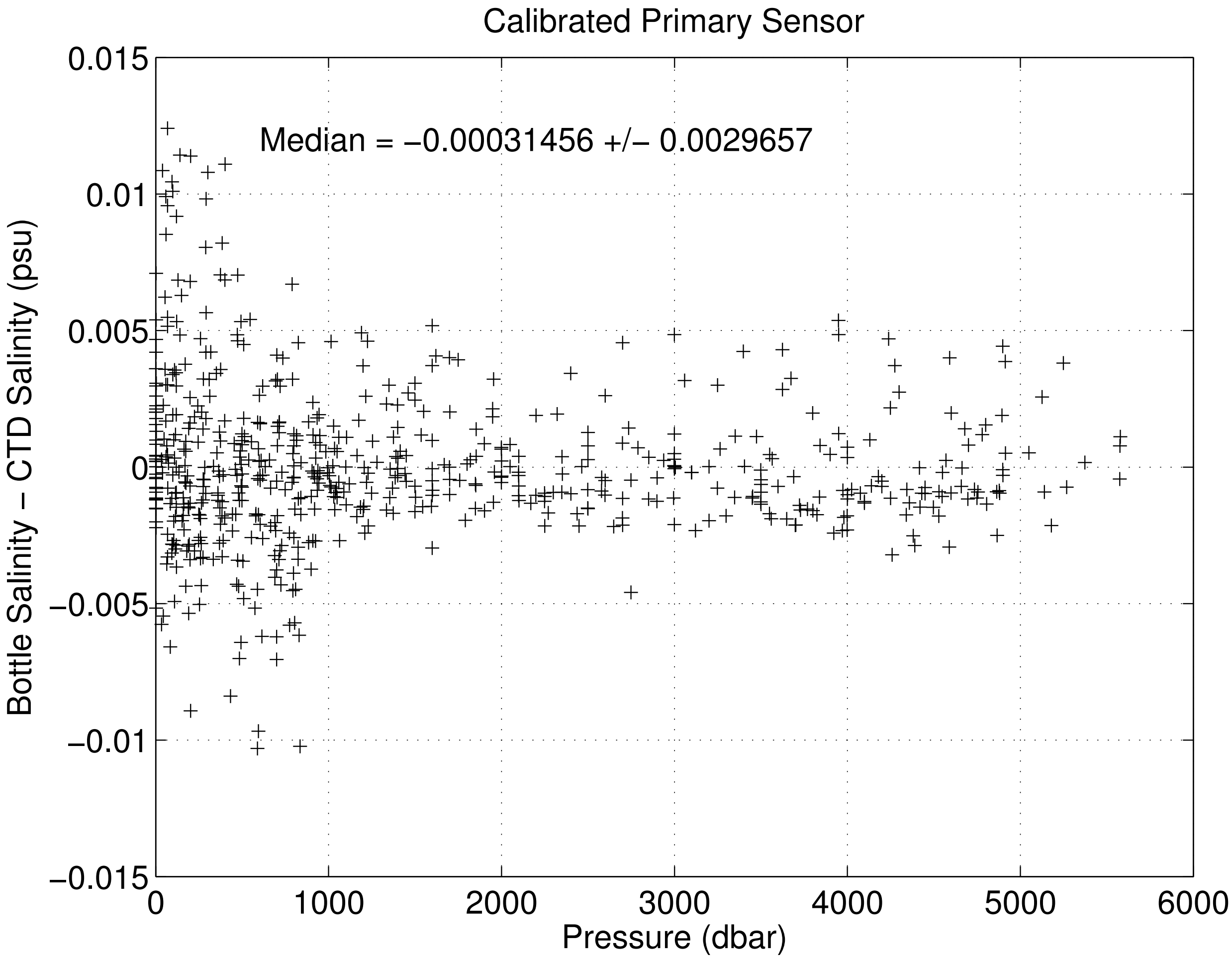

Figure 14: Bottle and calibrated secondary CTD salinity differences plotted vs. pressure.

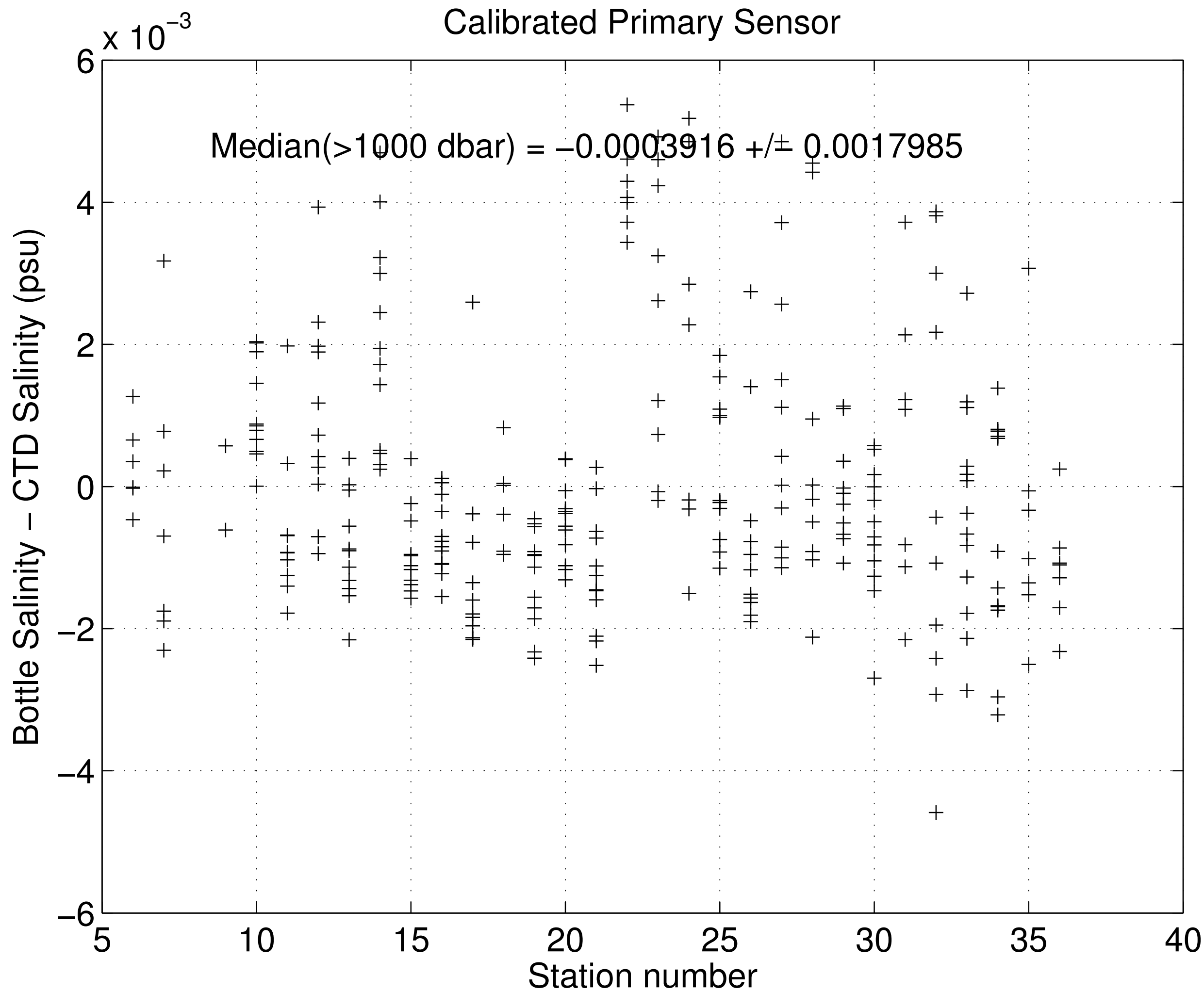

Figure 15: Bottle and calibrated secondary CTD salinity differences plotted vs. station below 1000 dbar.

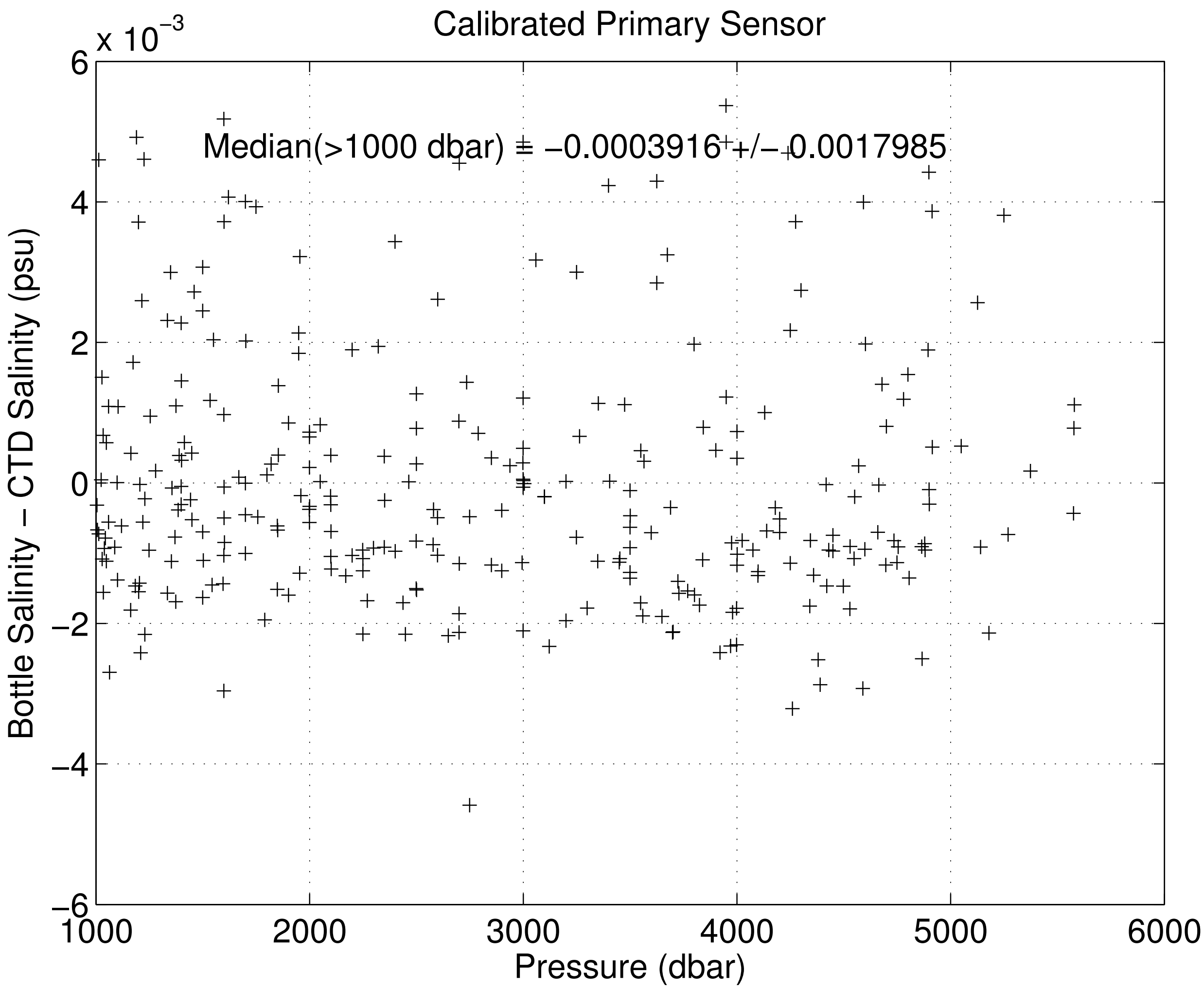

Figure 16: Bottle and calibrated secondary CTD salinity differences plotted vs. pressure below 1000 dbar.

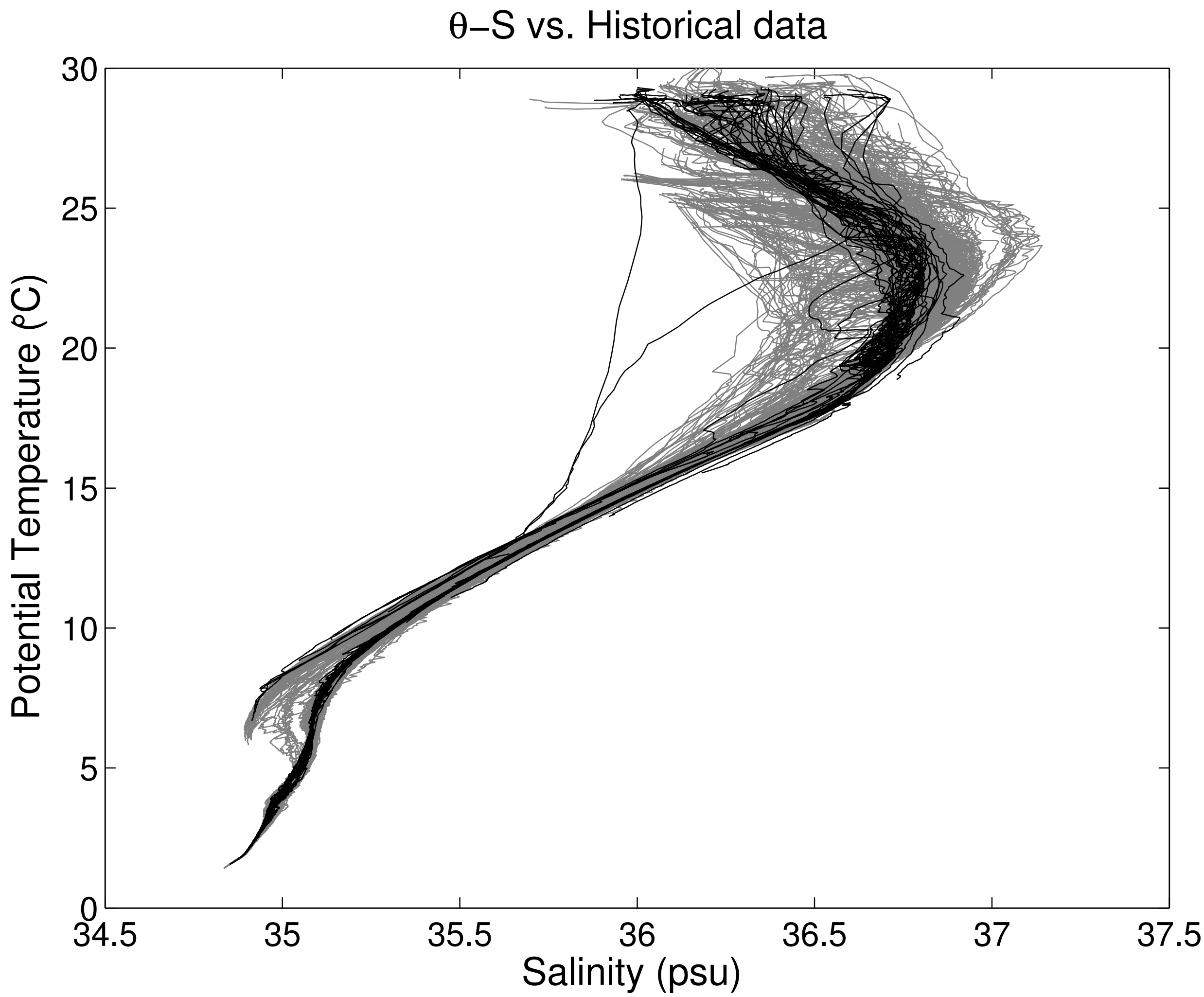

Figure 17: Potential Temperature - Salinity diagram for all stations. The solid black lines are the data collected during this cruise; the solid gray lines are data from the historical database.

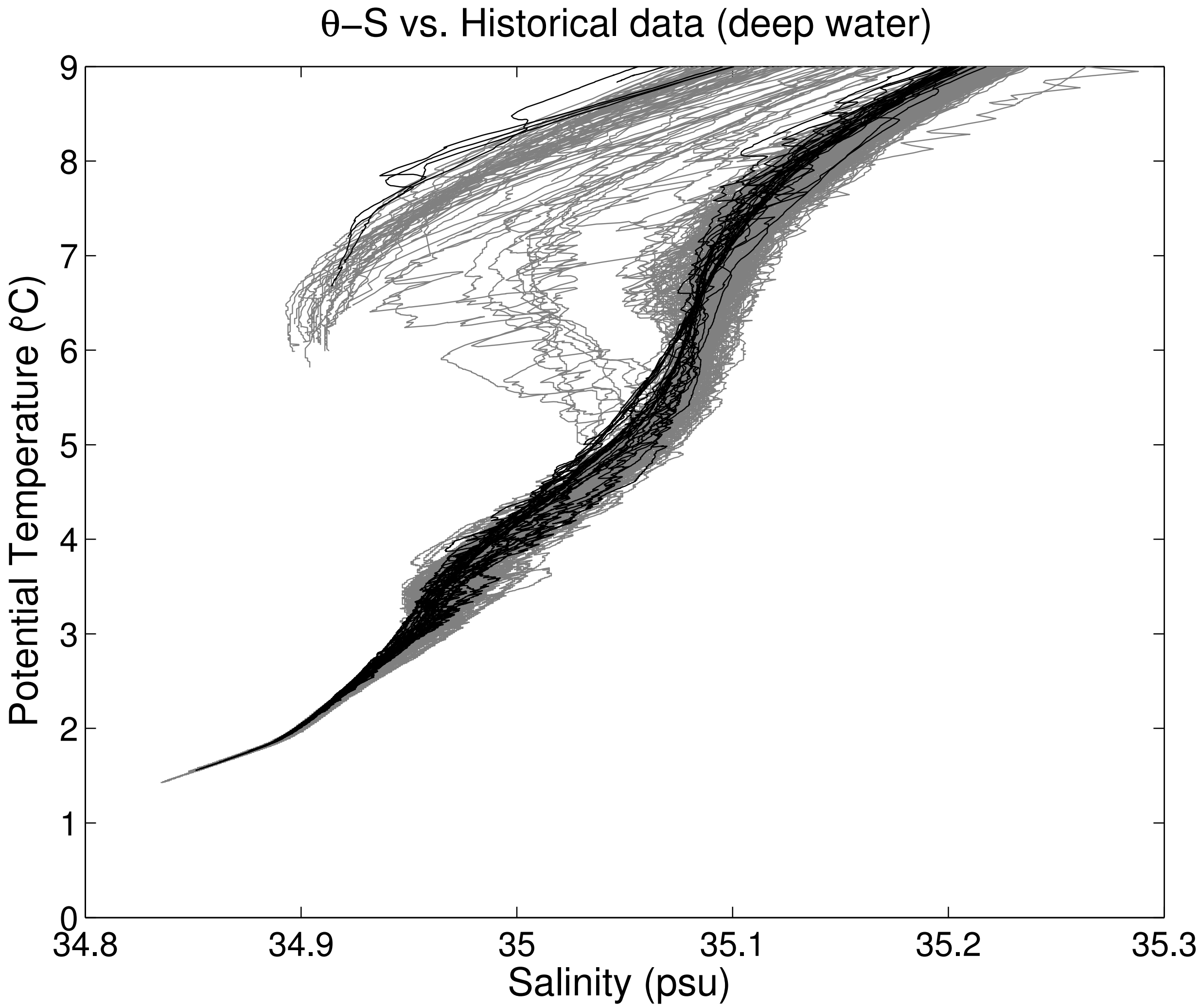

Figure 18: Potential Temperature - Salinity diagram for all stations. The solid black lines are the data collected during this cruise; the solid gray lines are data from the historical database.

7.5 Dissolved Oxygen

Two SBE43 dissolved O_2 (DO) sensors were used on this leg (Table 6). Due to a hysteresis problem with the oxygen sensors the DO sensors were calibrated to dissolved O2 check samples by matching the up cast bottle trips to down cast CTD data along neutral density surfaces, calculating CTD dissolved O_2, and then minimizing the residuals using a non-linear least-squares fitting procedure.

The algorithm used for converting oxygen sensor current and probe temperature measurements as described, requires a non-linear least squares regression technique in order to determine the best fit coefficients of the model for oxygen sensor behavior to the water sample observations. A Matlab® sub-routine called `oxfit.m` from the AOML CTD/CAL TOOLBOX performs a non-linear least squares regression using the Gauss-Newton algorithm with Levenberg-Marquardt modifications for global convergence. This algorithm is independent of the first coefficients guess and demonstrates excellent convergence. This `oxfit.m` routine includes an optional time drift term (related with the station number), allowing all stations to be calibrated without breaking into discrete groupings. The Owens and Millard (1985) algorithm was modified as follows:

$$O\ (ml/l) = \{Soc * (V + V_{offset} + tau(T,S) * \frac{\delta v}{\delta t}) + p1 * station\}$$
$$*(1.0 + A * T + B * T^2 + C * T^3) * OXSAT(T,S) * e^{E*(\frac{P}{K})}$$

with

Stations	S/N 1348 1-24	S/N 2082 25-36	S/N 2082 37-45
Soc	0.5776891	0.4573395	0.4304260
V_offset	-0.5003239	-0.5175889	-0.4526652
tau	2.55	1.42	-1.62
A	-0.0052753	-0.0075493	0.0027892
B	0.0002606	0.0004301	-0.0002774
C	-0.0000041	-0.0000071	0.0000071
E	0.0374000	0.0368820	0.0383719
$p1$	0.0000559	0.000138	-0.000692

where Soc, tau, V_{offset}, A, B, C, E and $p1$ are the calibration coefficients shown above and V is the instrument voltage (V). T, S and P are the temperature, salinity and pressure measured by the CTD. K is the temperature in the absolute scale, *station* is the station number, and $OXSAT$ is the oxygen saturation (see section 5.4 Dissolved Oxygen).

A comparison between the primary and secondary sensors (Figure 19) and between each of the sensors to bottle oxygen (Figure 20 & Figure 21) were evaluated and the primary sensor was chosen. The sensors show a median difference of -3.96 $umol/kg$ and a standard deviation of 4.56 $umol/kg$.

Again, the variability in the differences is very noticeable between the data in the first 5 stations and the last 9 stations and the rest of the stations (Figure 20), which corresponds to the Florida Straits and Northwest Providence Channel (where bottom depths do not exceed 800 m), although we decided not to divide them into a second group for separate analysis. However, because two different primary oxygen sensors were used, two sets of coefficients were calculated and applied to each sensor. The coefficients for oxygen sensor 1348 were applied to stations 1-24 and the coefficients for oxygen sensor 2082 were applied to stations 25-45. Also, analogous to the conductivity, AOML/CTDCAL Toolbox automatically applies a quality control to the data based on comparison with a normal distribution. After these procedures 618 data points (88.15%) were used in the final calculations.

By minimizing the differences between the oxygen samples and the CTD oxygen estimated from the equation described in this section, the new coefficients above were calculated and then applied to the CTD original data (Figure 22 to Figure 25). The residual is -0.005 $umol/kg$ (0.03 $umol/kg$ for the data below 1000 dbar) and the standard deviation 1.26 $umol/kg$ (0.88 $umol/kg$ for the data below 1000 dbar). Also 94.0% of the residuals for the data are within the confidence limits determined by the WOCE (± 1% of the dissolved oxygen measured) and this number increase to 98.1% if we consider only the data below 1000 dbar.

A final verification about the quality of the data, like in the salinity data, was made by comparing the results of this cruise with some historical data available at the location of the Abaco section and the other sections. Again by investigating water mass properties, particularly for deeper layers of the ocean, we can have an estimative of the quality of these data.

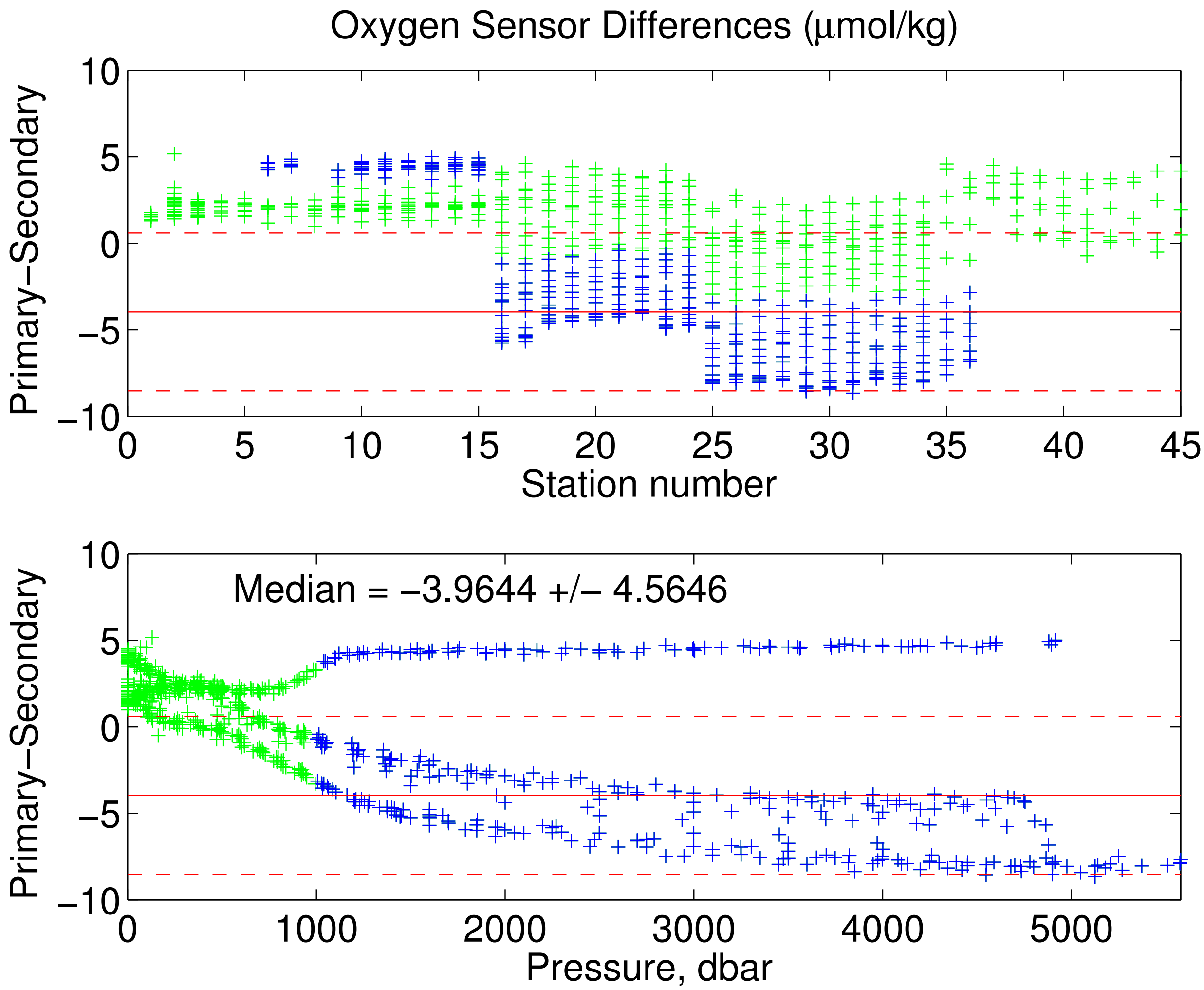

Figure 19: Dissolved oxygen differences between sensors by station (top) and by pressure (bottom). Sensor changes at station 15 and 24. The red solid line represents the median with the red dashed representing the standard deviation.

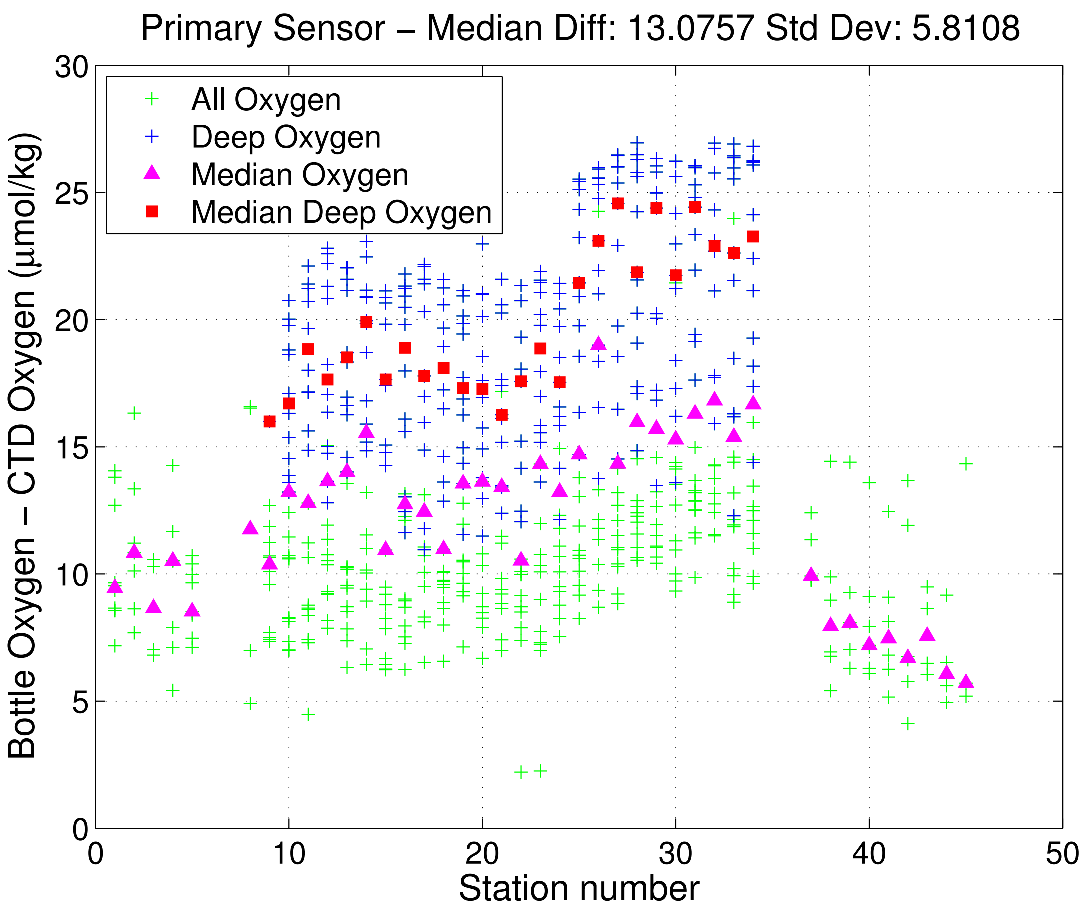

Figure 20: Bottle and uncalibrated primary CTD oxygen differences plotted against station number. The green crosses represent all data points and the blue are the data points below 1000 dbar. The median was calculated using only the data below 1000 dbar.

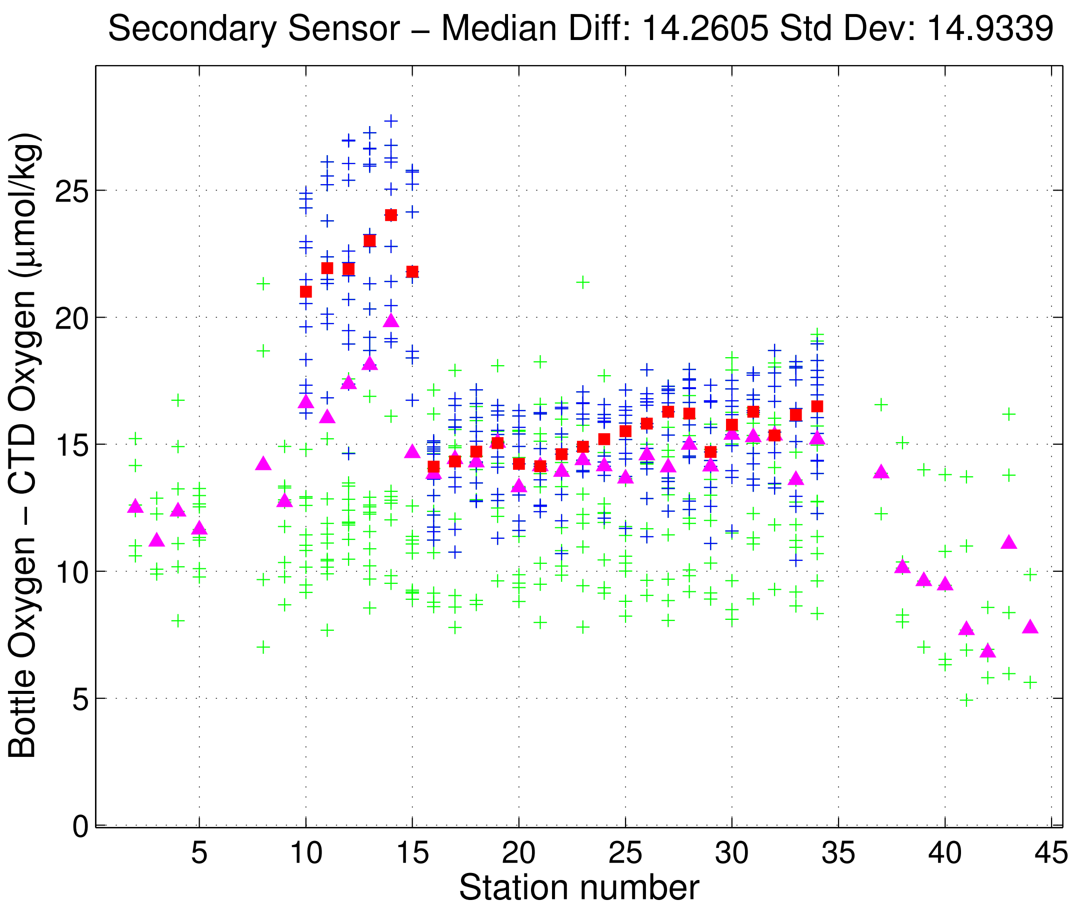

Figure 21: Bottle and uncalibrated secondary CTD oxygen differences plotted against station number. Sensor changes at station 15 and 24. The green crosses represent all data points and the blue are the data points below 1000 dbar. The median was calculated using only the data below 1000 dbar.

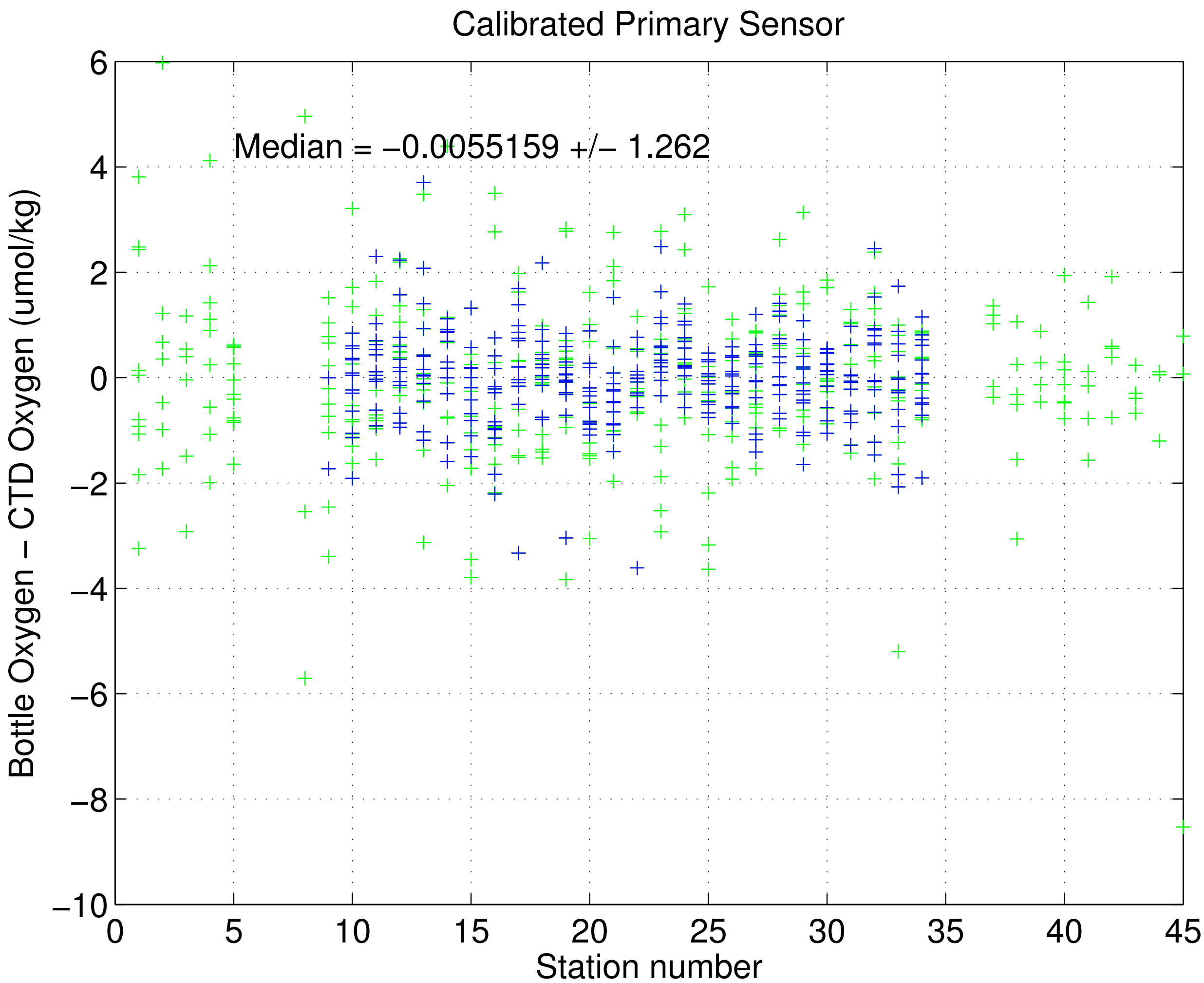

Figure 22: Bottle and calibrated secondary CTD oxygen differences plotted vs. station.

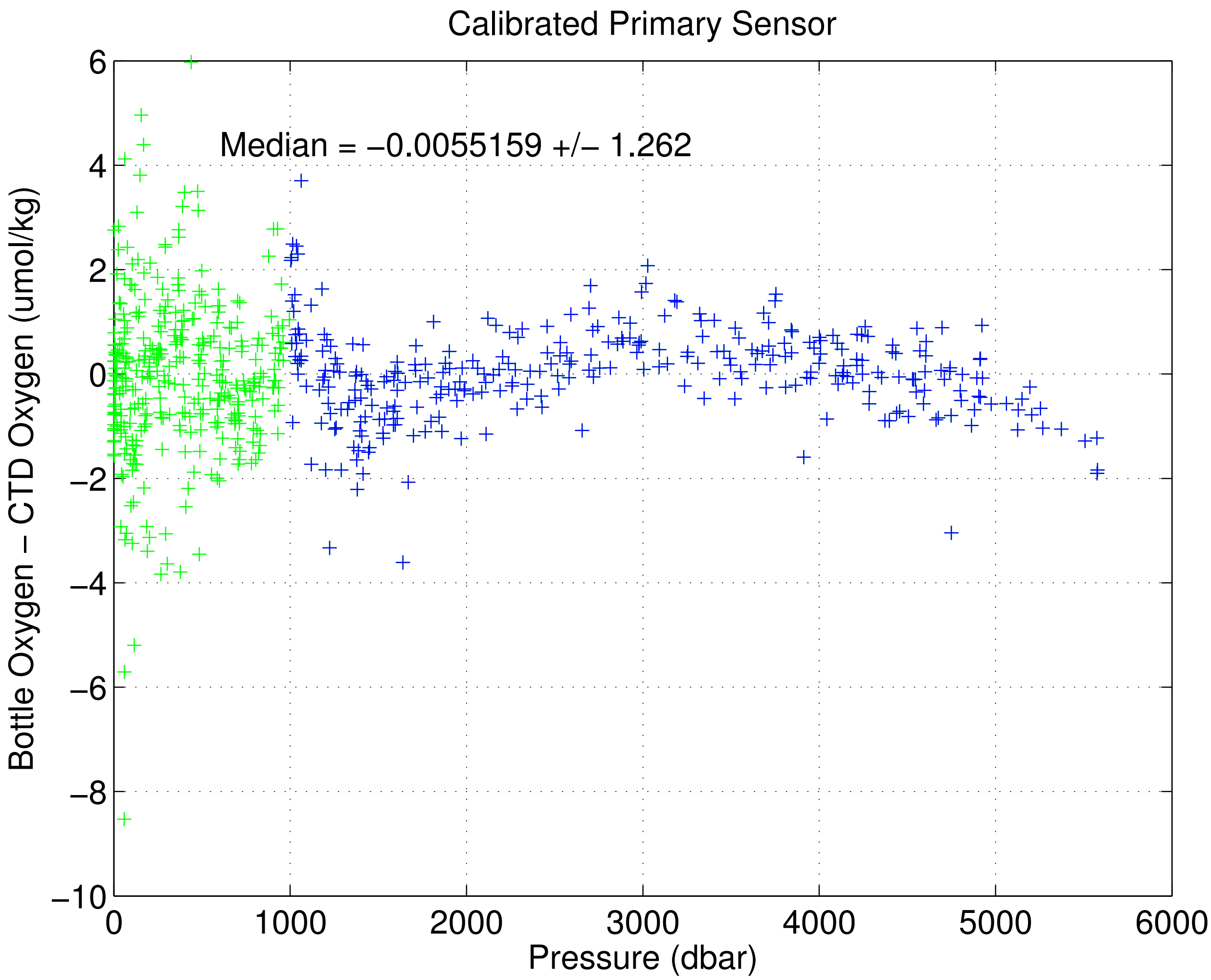

Figure 23: Bottle and calibrated secondary CTD oxygen differences plotted vs. pressure.

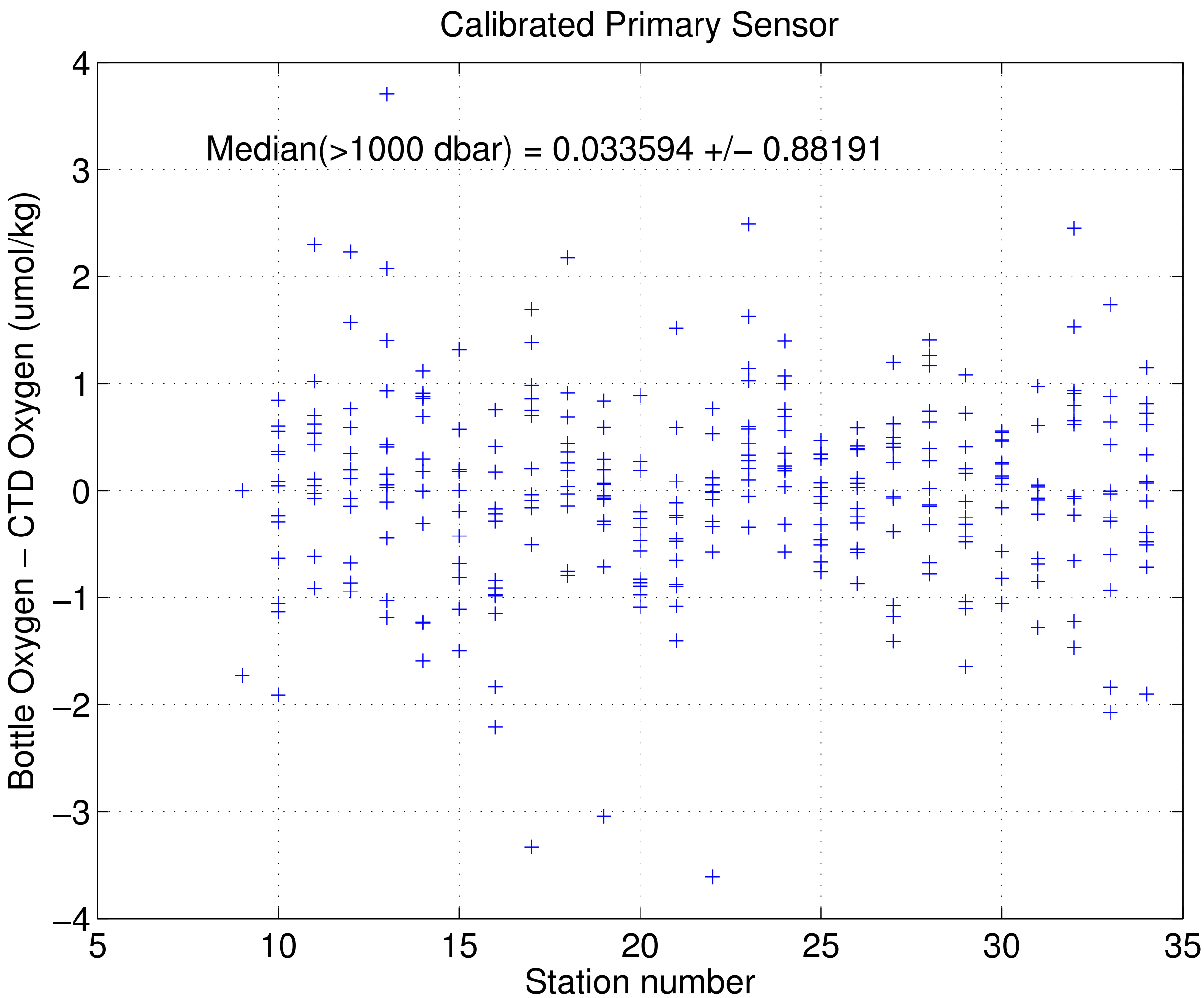

Figure 24: Bottle and calibrated secondary CTD oxygen differences plotted vs. station below 1000 dbar.

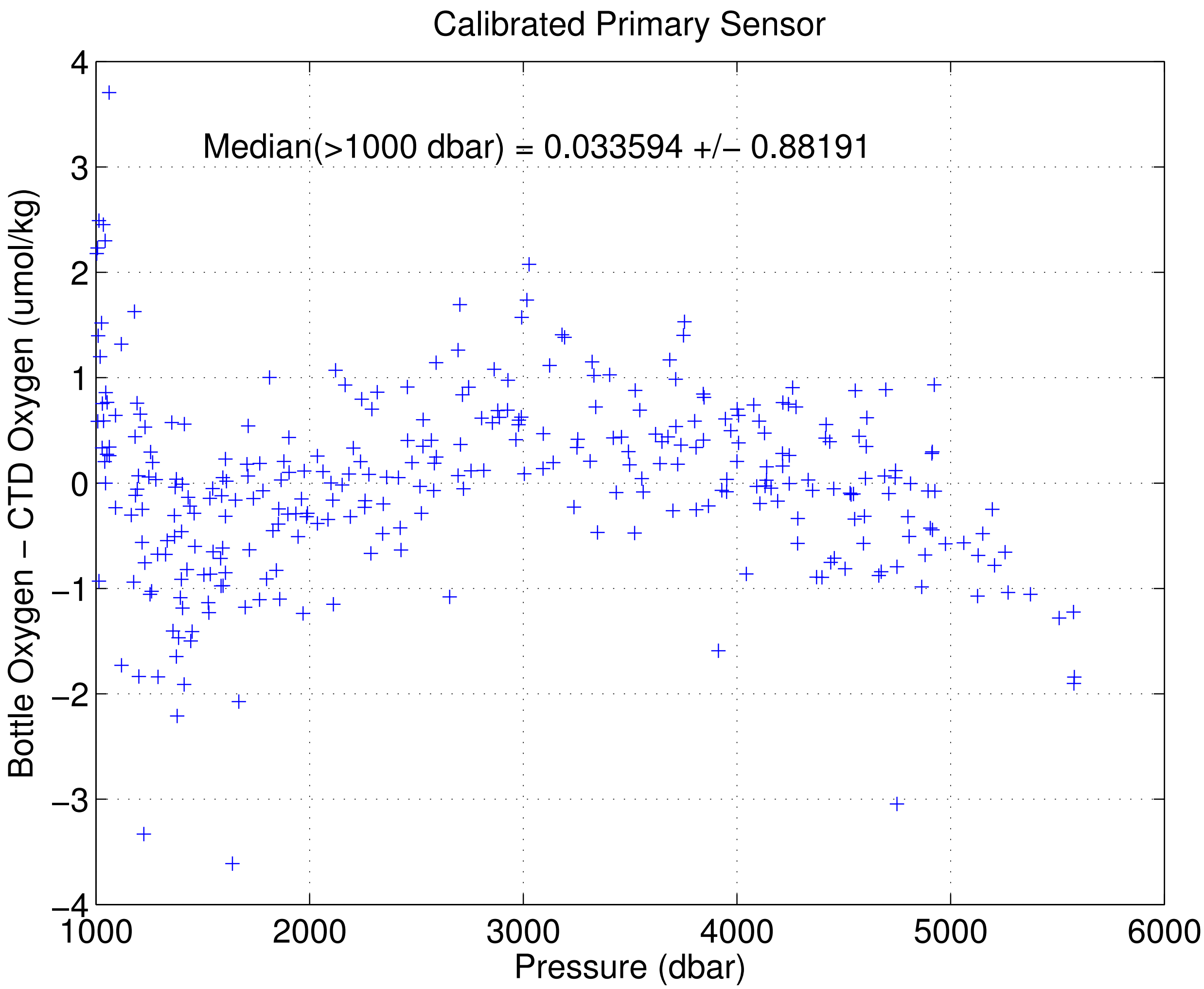

Figure 25: Bottle and calibrated secondary CTD oxygen differences plotted vs. pressure below 1000 dbar.

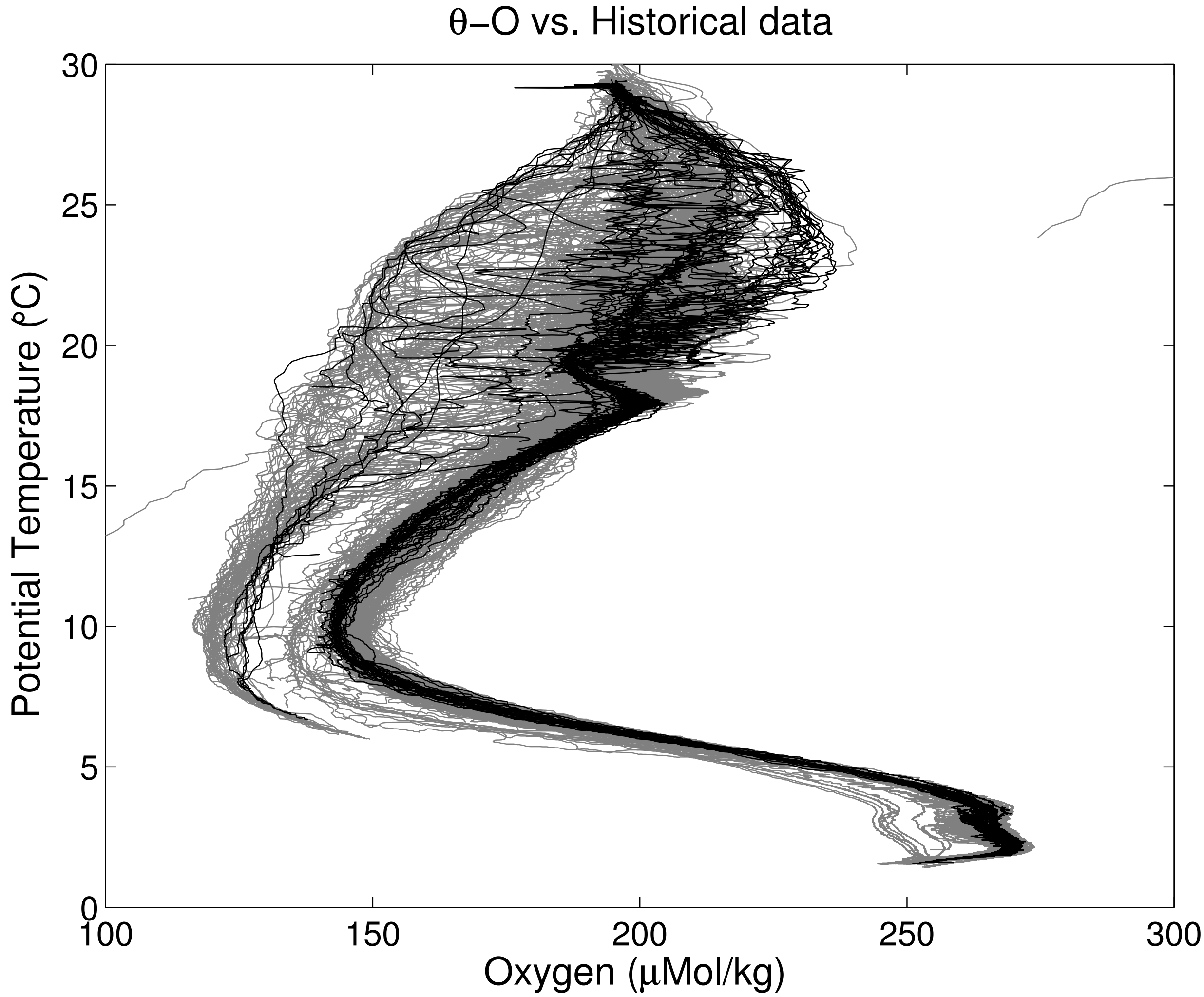

Figure 26: Potential Temperature - Oxygen diagram for all stations. The solid black lines are the data collected during this cruise; the solid gray lines are data from the historical database.

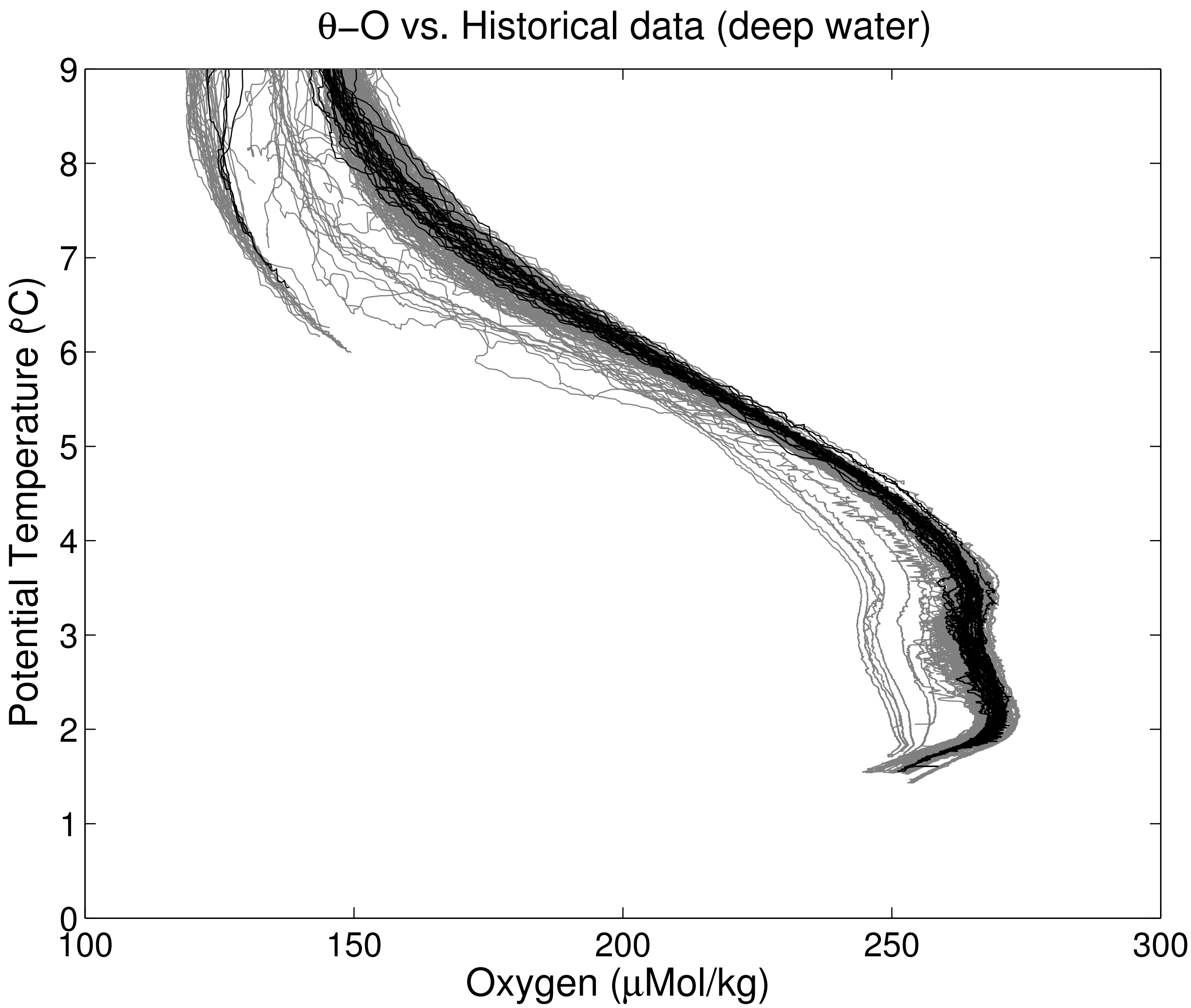

Figure 27: Potential Temperature - Oxygen diagram for all stations. The solid black lines are the data collected during this cruise; the solid gray lines are data from the historical database.

8 Final CTD Data Presentation

The final calibrated data files were used to produce the tables and station profile plots presented in Appendix A for each CTD station. The table on the top is in "standard depths" followed by the a table of the bottle trip depths. The corresponding profile plot is shown on the following page. Niskin bottle depths are presented on the right side of the profile plot. Bottle salinity and oxygen values are plotted as points in the three smaller plots.

Vertical sections of potential temperature, CTD salinity, neutral density, and CTD oxygen are contoured with pressure as the vertical axis. For the Abaco section (Figure 28 to Figure 31) and the Florida Current sections (Figure 32 to Figure 35) longitude is used as the horizontal axis. For the Northwest Providence Channel sections latitude is used as horizontal axis (Figure 36 to Figure 39).

Post-cruise calibrations were applied to CTD data associated with bottle data using Matlab sub-routines (`apply_calibration.m`). WOCE quality flags were appended to bottle data records. "Bad values" (WOCE quality control value = 4) were flagged if the bottle samples failed the initial quality control and were not used for the calibration (which meant they typically fell outside 2.57 standard deviations of the difference between samples and uncalibrated CTD values). A second pass is applied, using the value of 2.5 times the standard deviation of the difference between calibrated CTD values and bottle samples, where bottle values may be flagged as "bad values" or as questionable (WOCE quality control value = 3).

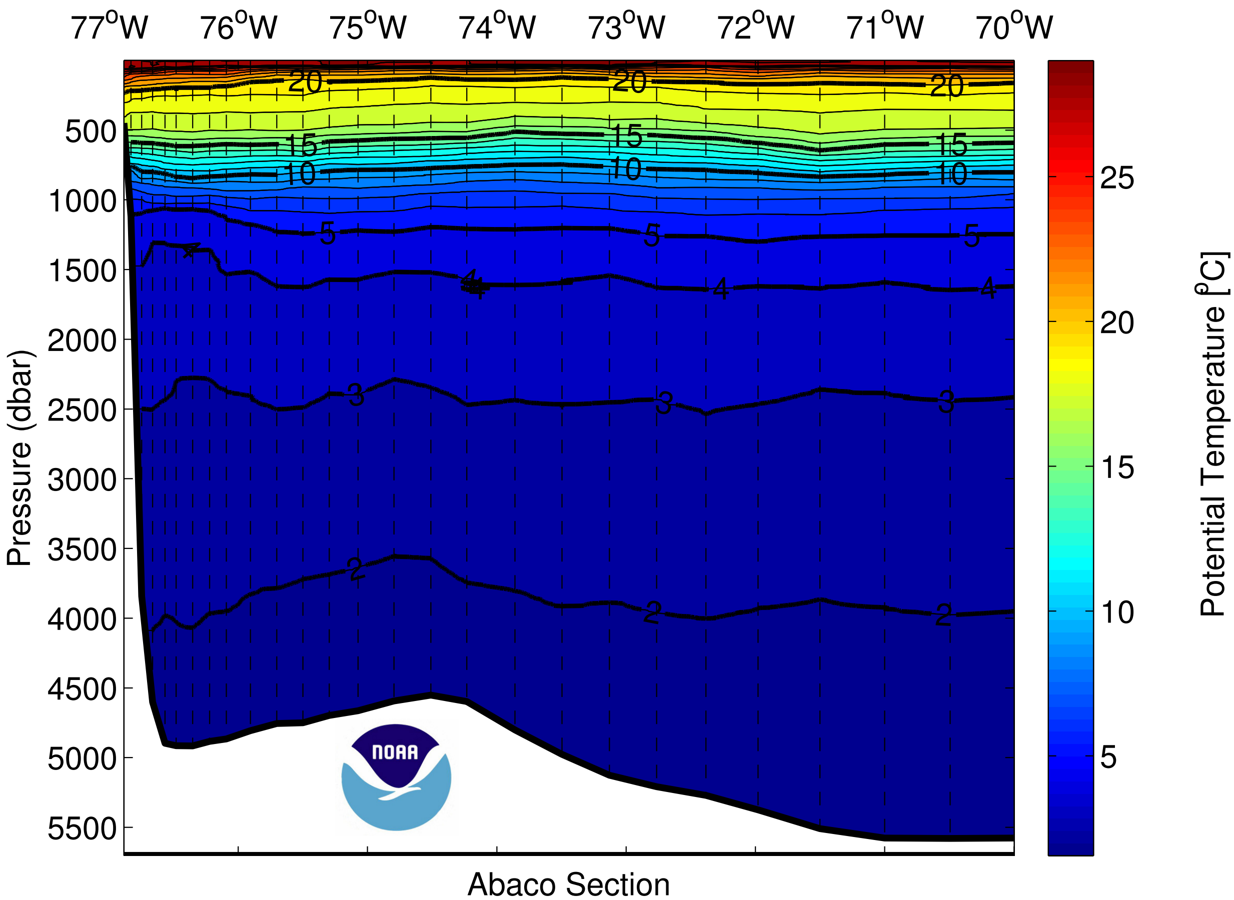

Figure 28: Potential Temperature (°C) section for the Abaco Section. Contour intervals are 1°C. Dashed vertical lines are the CTD station locations.

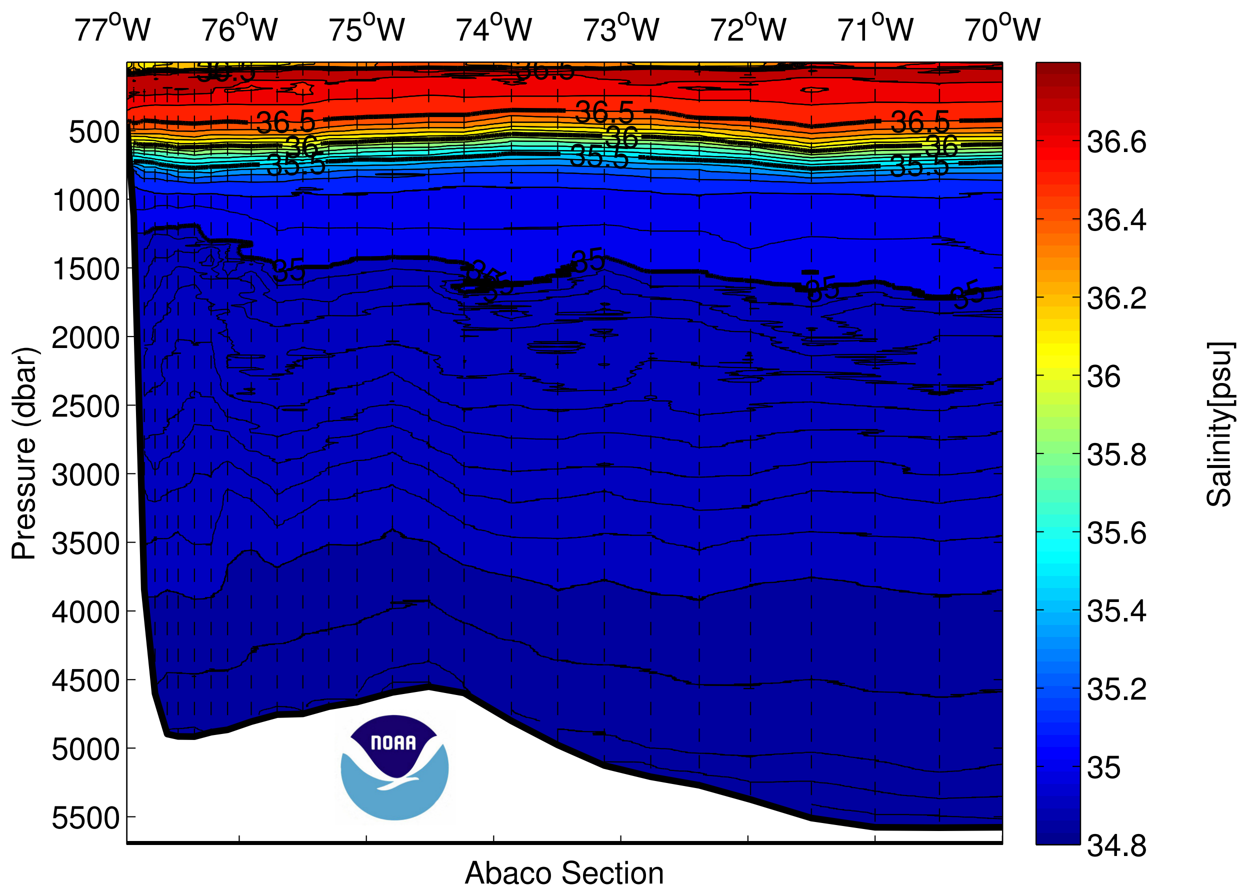

Figure 29: Salinity (PSS 78) section for the Abaco section. Contour intervals are 0.1. Dashed vertical lines are the CTD station locations.

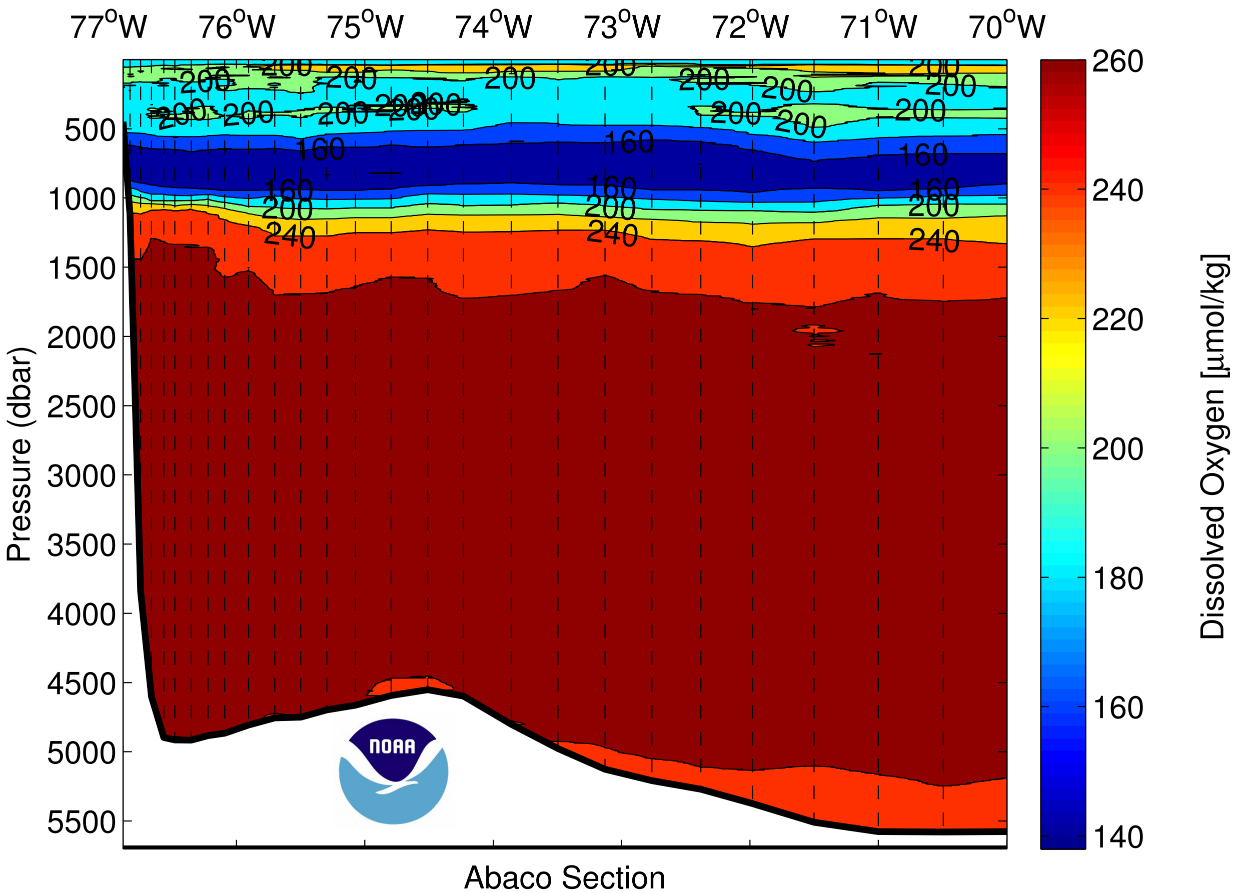

Figure 30: Dissolved Oxygen ($umol/kg$) section for the Abaco Section. Contour intervals are 10 $umol/kg$. Dashed vertical lines are the CTD station locations.

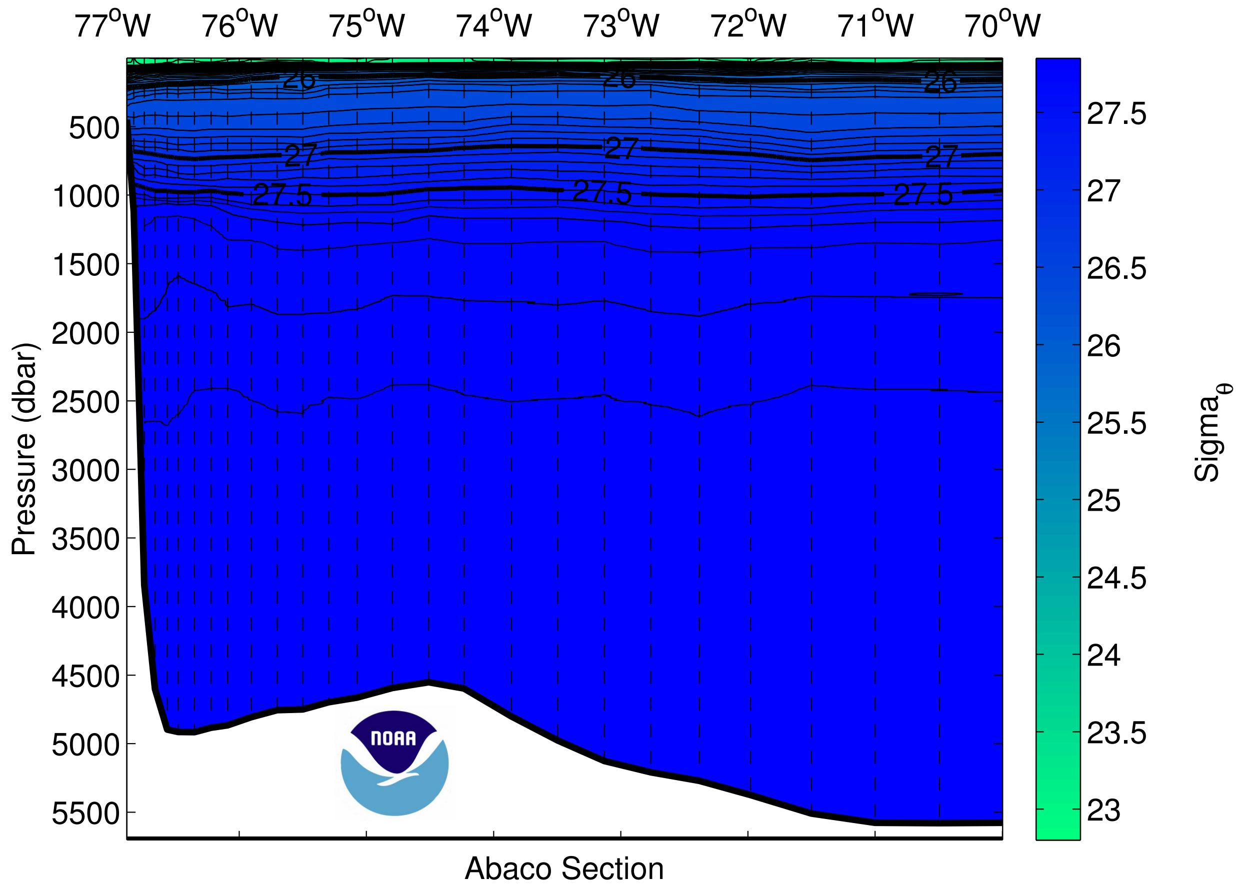

Figure 31: Potential density (kg/m^3) section for the Abaco Section. Contour intervals are 0.1 kg/m^3 for density values greater than 27.5 kg/m^3 and 0.05 kg/m^3 below 27.5 kg/m^3. Dashed vertical lines are the CTD station locations.

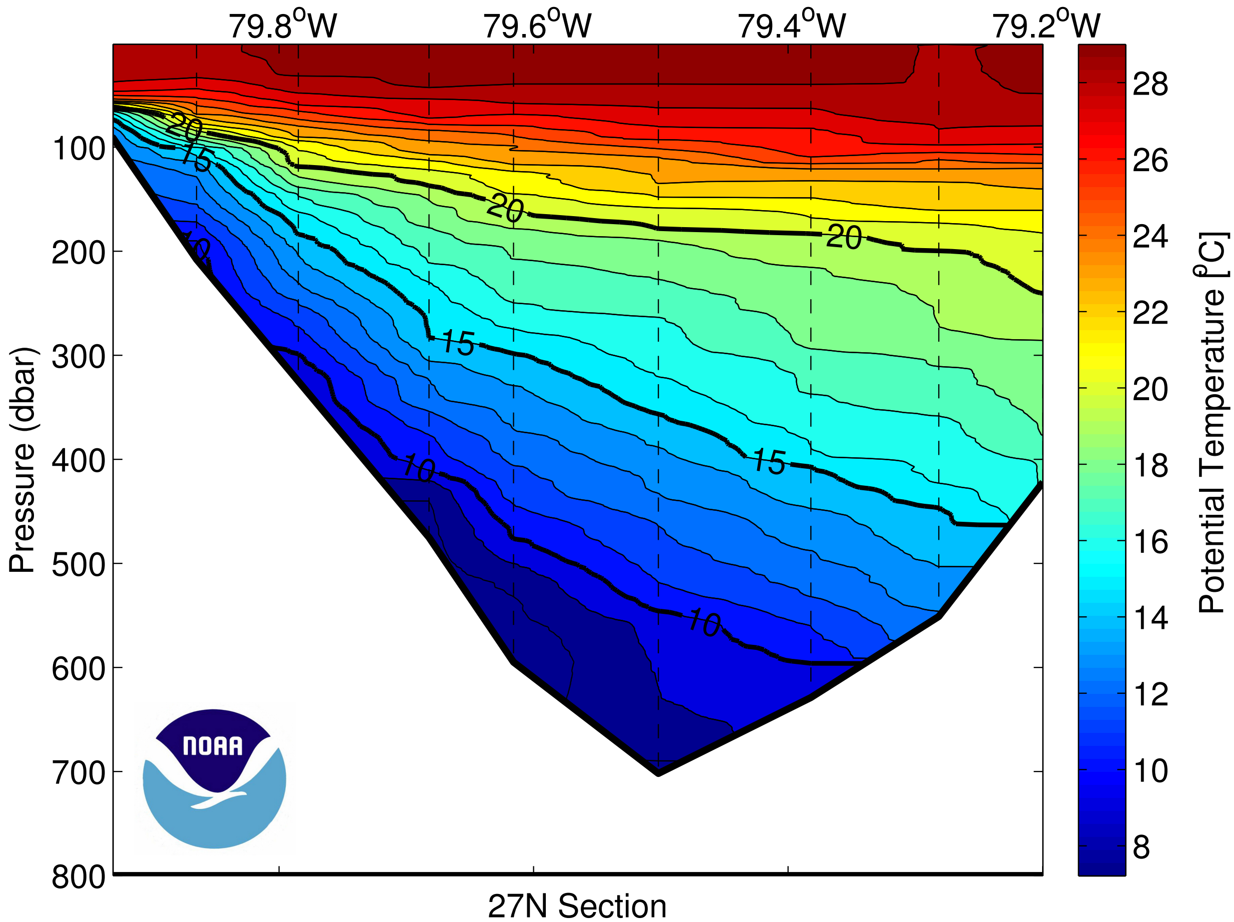

Figure 32: Potential Temperature (°C) section for the Florida Current North section. Contour intervals are 1°C. Dashed vertical lines are the CTD station locations.

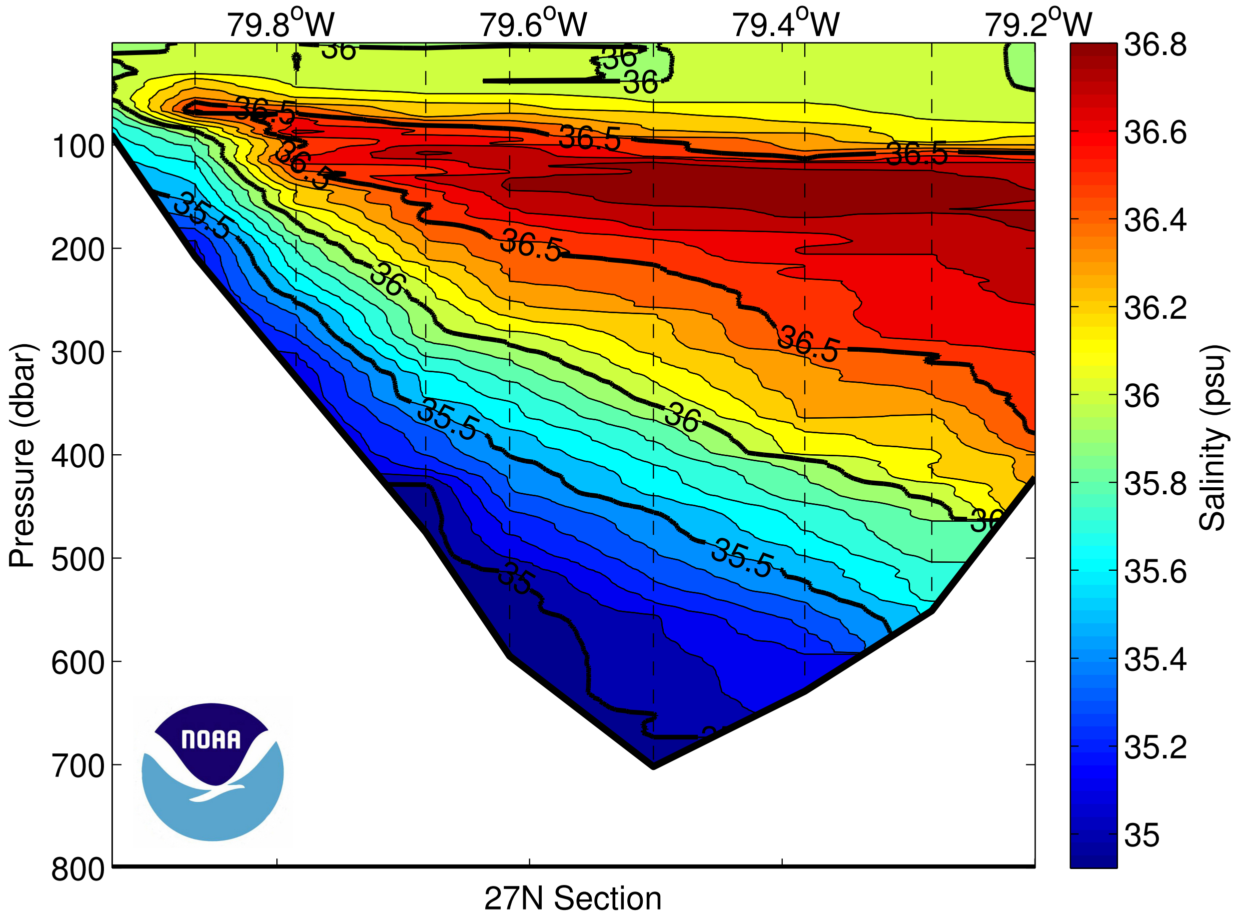

Figure 33: Salinity (PSS 78) section for the Florida Current North section. Contour intervals are 0.1. Dashed vertical lines are the CTD station locations.

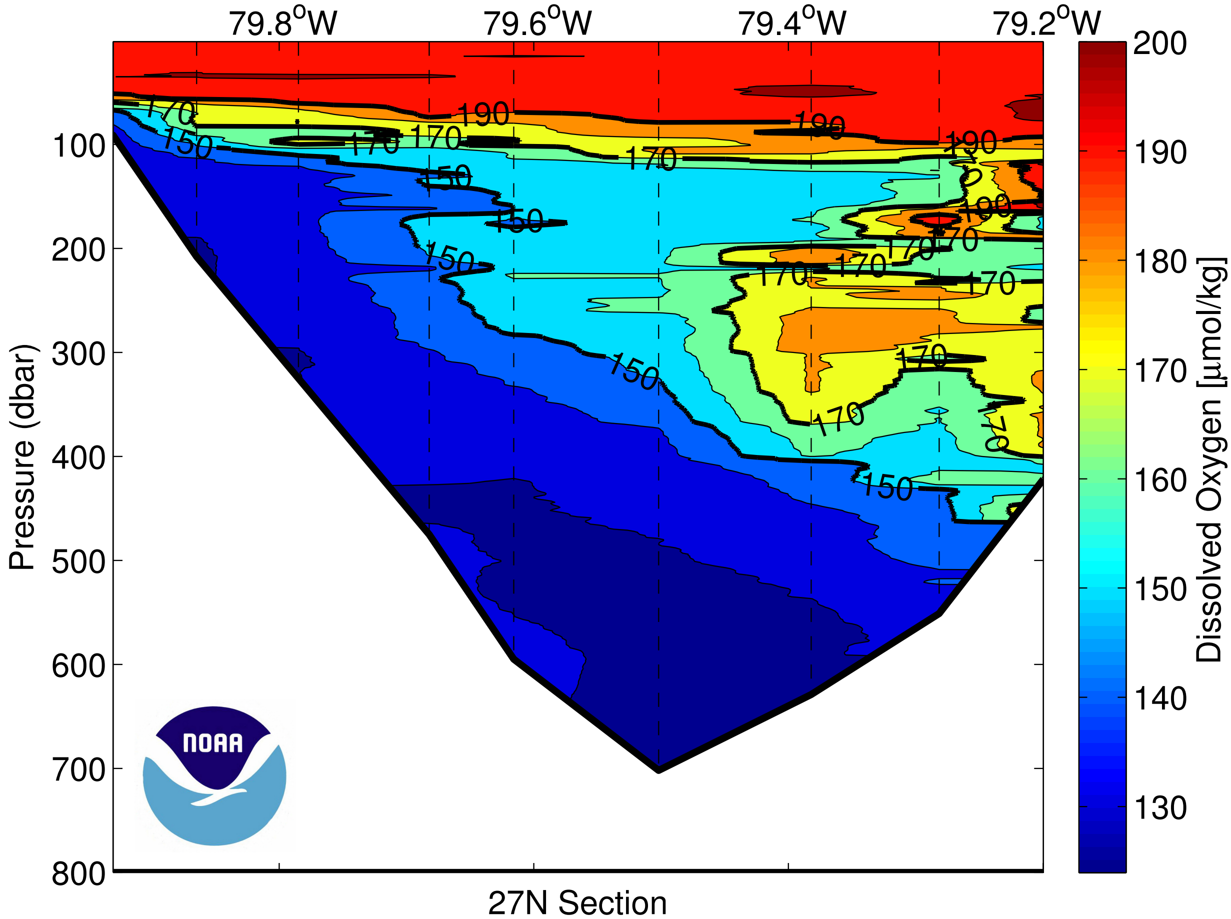

Figure 34: Dissolved Oxygen ($umol/kg$) section for the Florida Current North section. Contour intervals are 10 $umol/kg$. Dashed vertical lines are the CTD station locations.

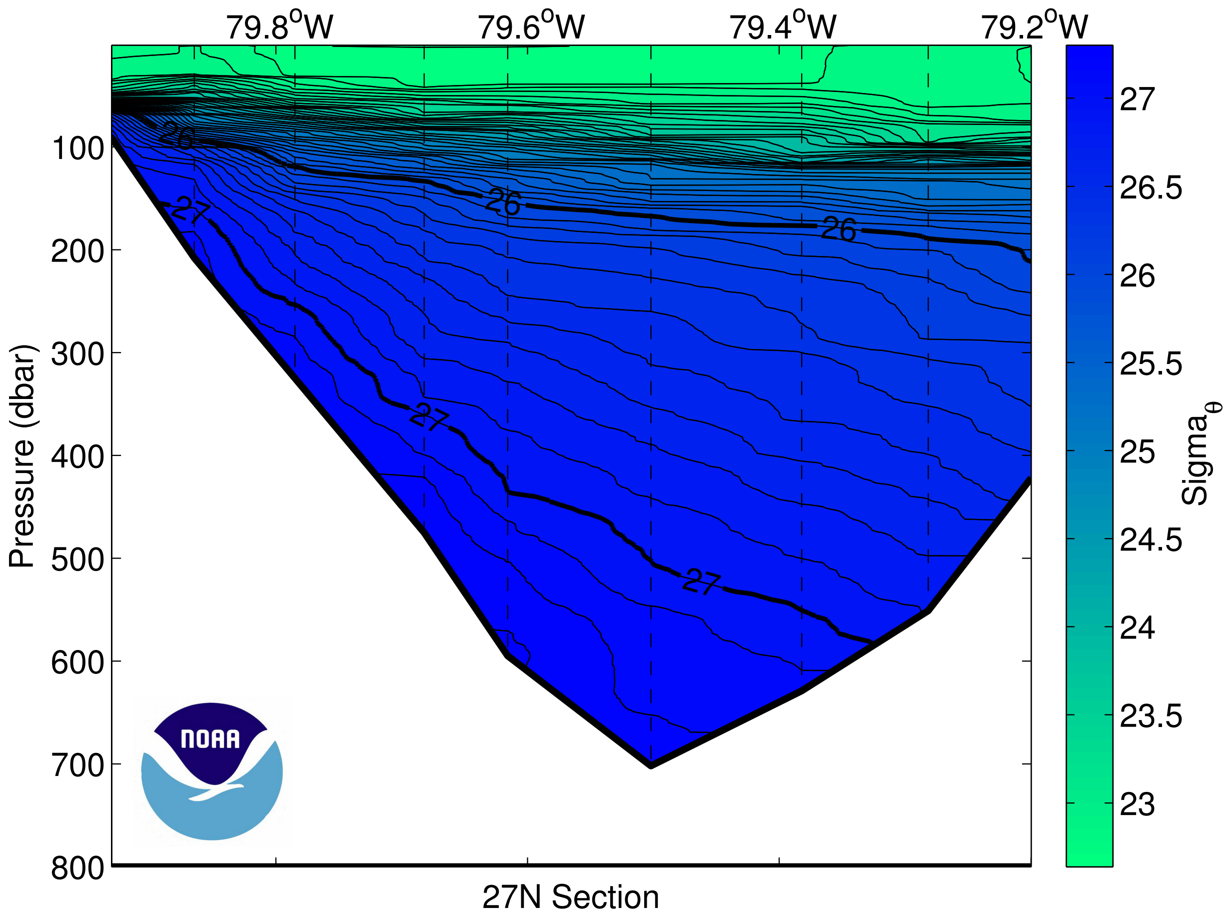

Figure 35: Potential density (kg/m^3) section for the Florida Current North section. Contour intervals are 0.1 kg/m^3. Dashed vertical lines are the CTD station locations.

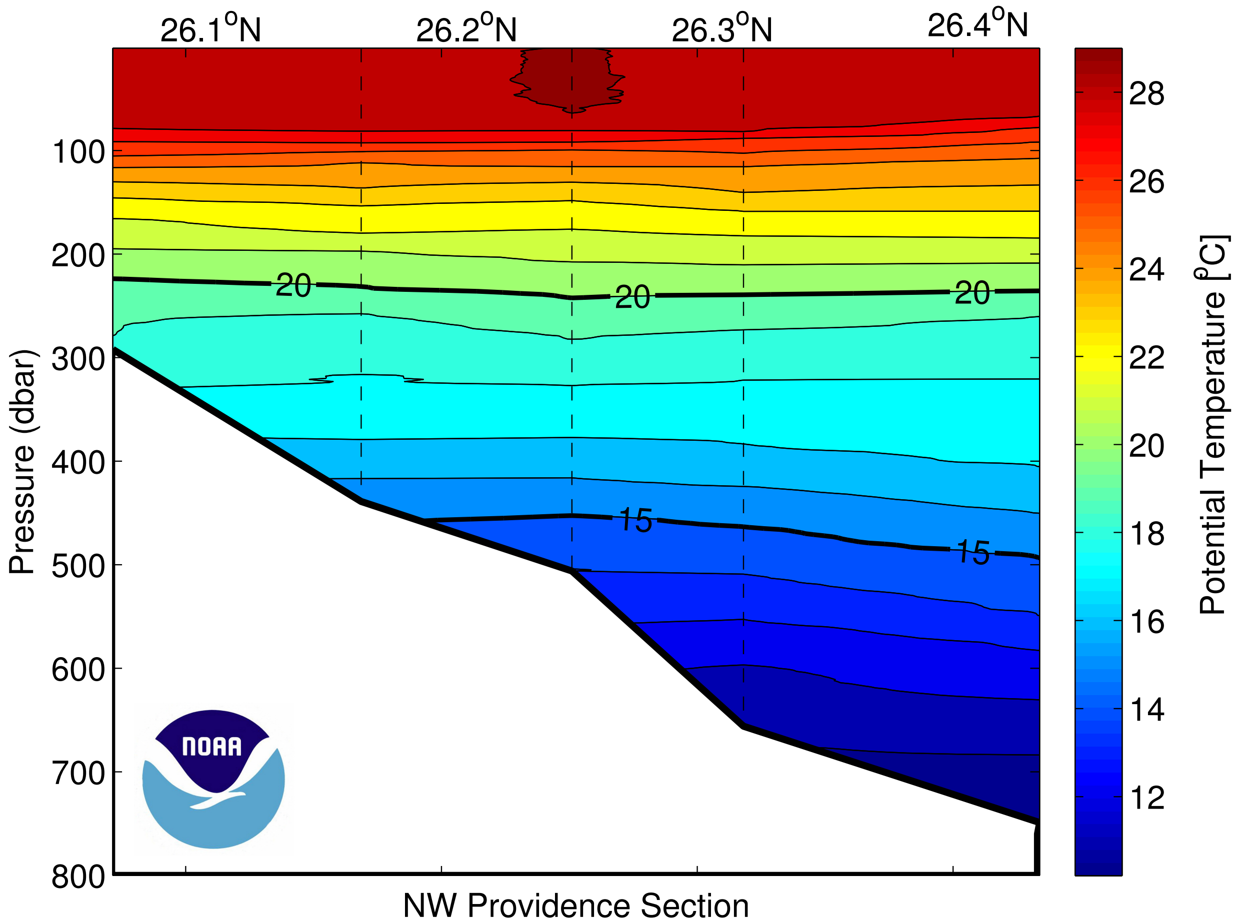

Figure 36: Potential Temperature (°C) section for the Northwest Providence Channel section. Contour intervals are 1°C. Dashed vertical lines are the CTD station locations.

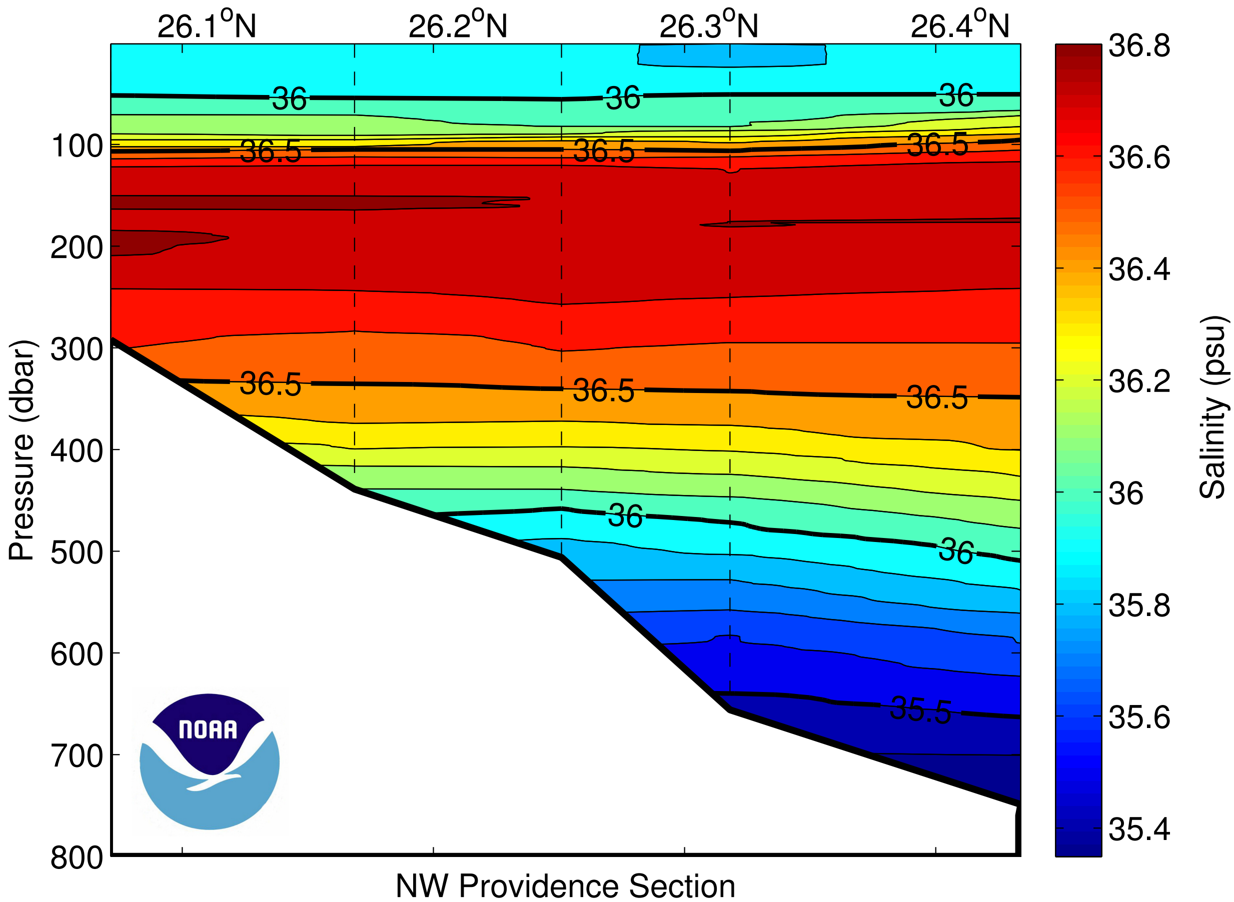

Figure 37: Salinity (PSS 78) section for the Northwest Providence Channel section. Contour intervals are 0.1. Dashed vertical lines are the CTD station locations.

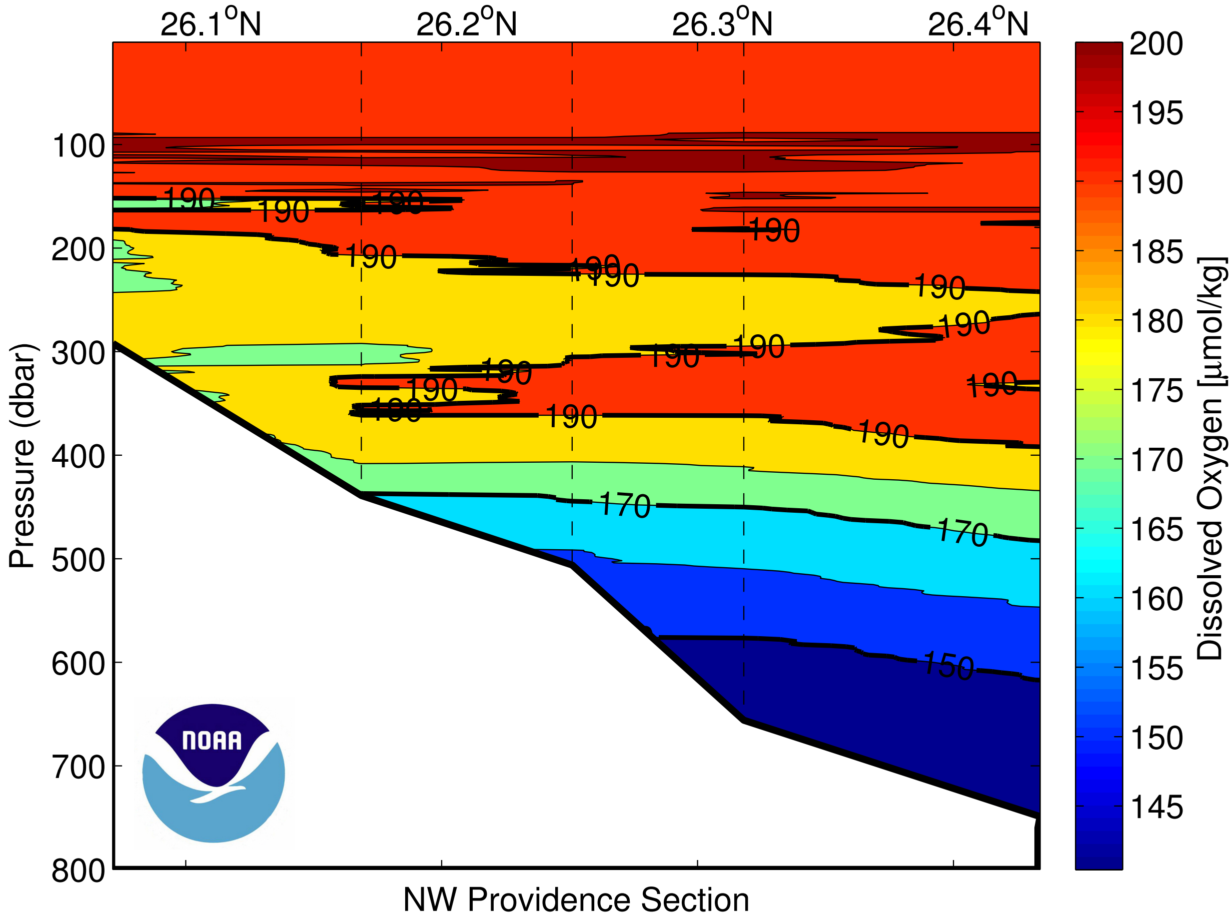

Figure 38: Dissolved Oxygen ($umol/kg$) section for the Northwest Providence Channel section. Contour intervals are 10 $umol/kg$. Dashed vertical lines are the CTD station locations.

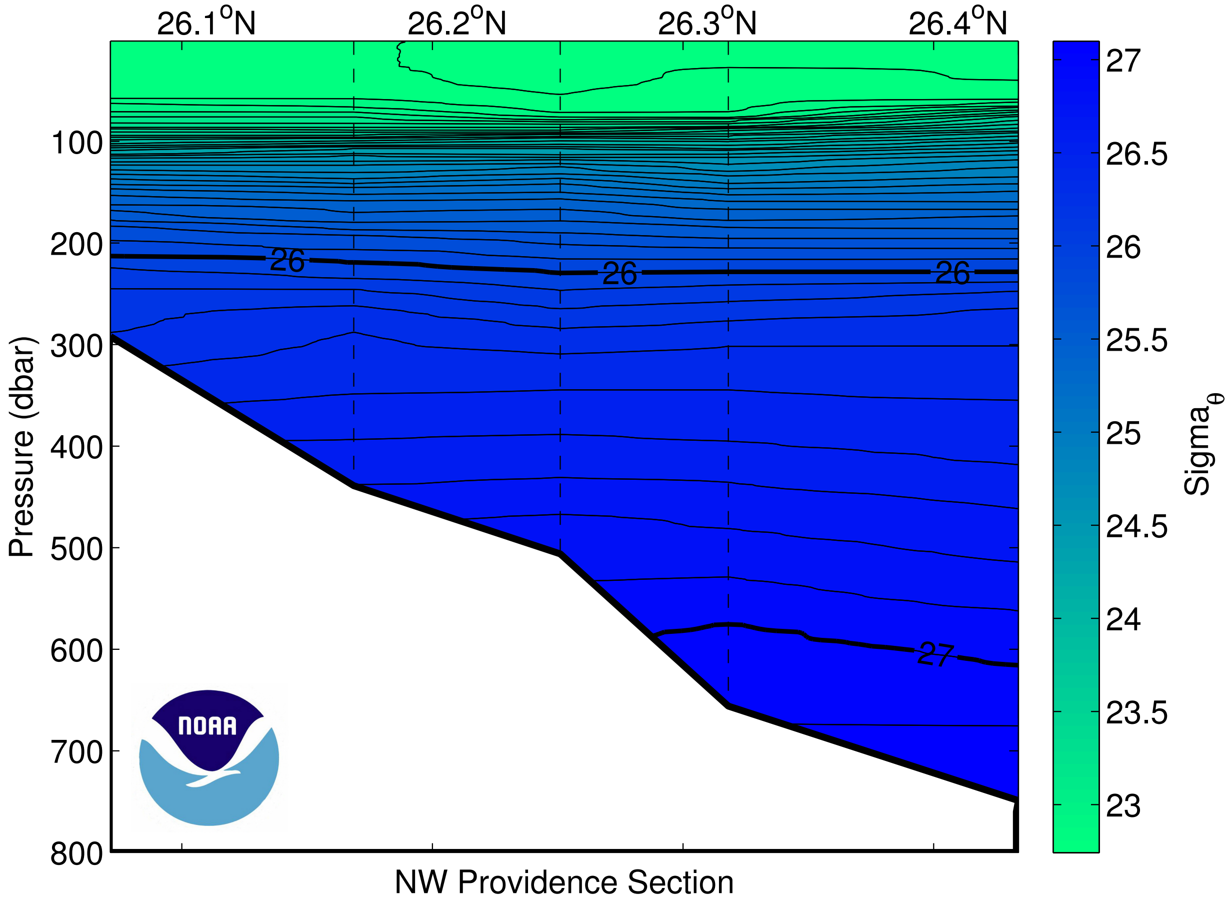

Figure 39: Potential density (kg/m^3) section for the Northwest Providence Channel section. Contour intervals are 0.1 kg/m^3. Dashed vertical lines are the CTD station locations.

9 Acknowledgements

The successful completion of the cruise relied on dedicated assistance from many individuals on shore and on the UNOLS ship Endeavor. Funded investigators in the project and members of the Western Boundary Time Series, and the RAPID/MOC programs were instrumental in planning and executing the cruise. The participants in the cruise showed dedication and camaraderie during their 17 days at sea. Officers and crew of the Endeavor exhibited a high degree of professionalism and assistance to accomplish the mission and to make us feel at home during the voyage.

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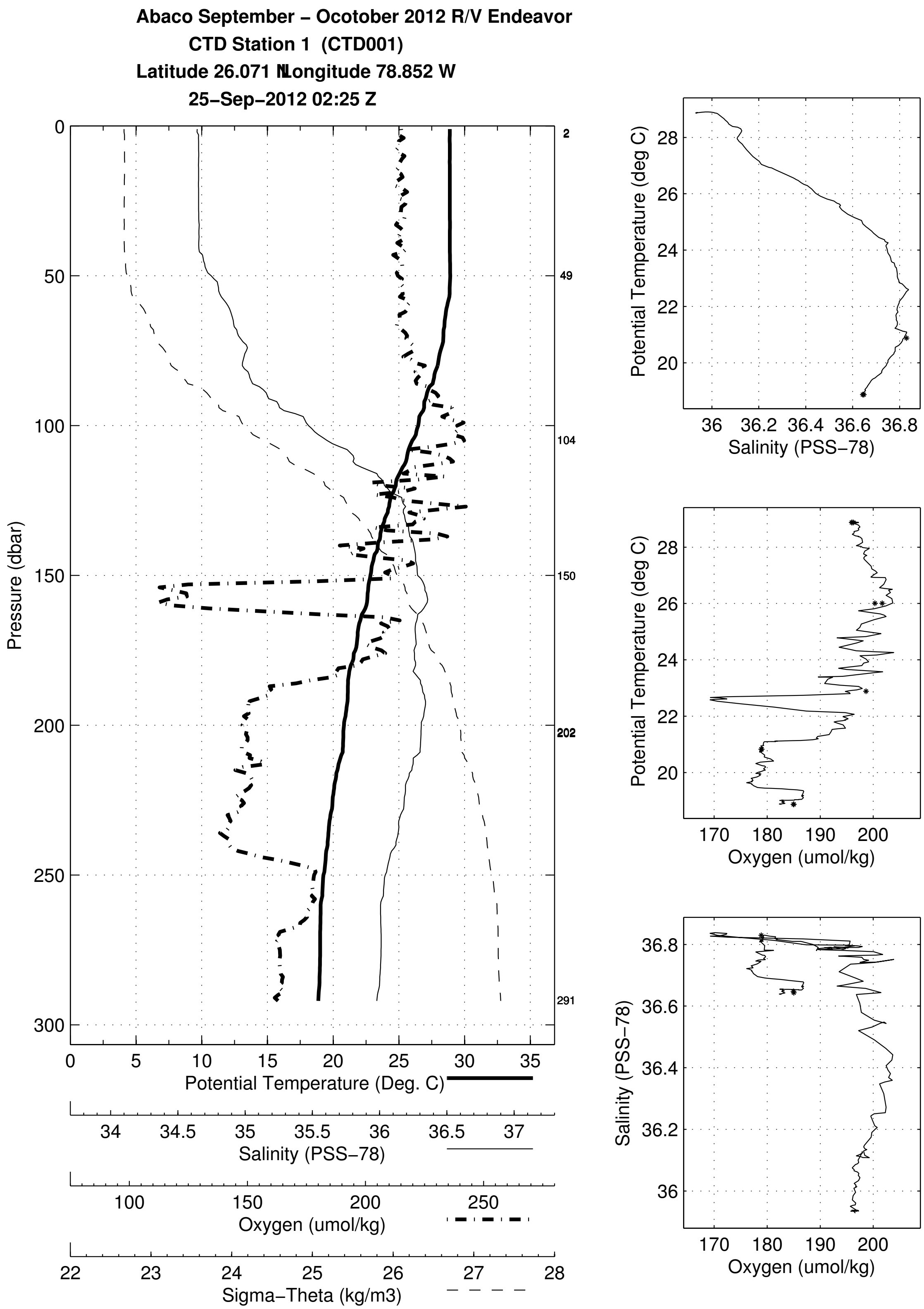
A Hydrographic - CTD Data

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 1 (CTD001)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.870	28.870	35.930	196.6	0.005	22.806
10	28.872	28.869	35.935	196.9	0.050	22.810
20	28.880	28.875	35.935	195.9	0.101	22.808
30	28.887	28.879	35.936	197.0	0.151	22.807
50	28.917	28.905	35.985	196.2	0.252	22.836
75	28.186	28.168	36.124	198.0	0.375	23.185
100	26.496	26.474	36.368	202.9	0.484	23.917
125	24.350	24.323	36.737	196.8	0.573	24.860
150	22.872	22.841	36.799	195.5	0.646	25.345
200	20.857	20.818	36.813	178.6	0.765	25.925
250	19.309	19.263	36.671	186.7	0.865	26.231

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
292	1	18.922	18.870	36.643	185.0
292	2	18.923	18.871	36.648	185.0
292	3	18.922	19.194	−999.000	−999.0
292	4	18.922	19.194	−999.000	−999.0
202	5	20.917	20.878	36.831	179.0
202	6	20.916	20.877	36.829	178.9
203	7	20.917	21.087	−999.000	−999.0
203	8	20.917	21.087	−999.000	−999.0
150	9	22.923	23.034	−999.000	−999.0
150	10	22.928	23.040	−999.000	−999.0
150	11	22.928	23.040	−999.000	−999.0
150	12	22.930	22.899	36.826	198.6
105	13	26.025	26.001	36.521	200.3
105	14	26.024	26.000	36.509	201.7
105	15	26.023	26.085	−999.000	−999.0
105	16	26.022	26.084	−999.000	−999.0
50	17	28.899	28.887	36.683	185.9
50	18	28.896	28.884	36.014	196.2
50	19	28.895	28.917	−999.000	−999.0
50	20	28.901	28.923	−999.000	−999.0
2	21	28.860	28.861	−999.000	−999.0
2	22	28.859	28.859	35.977	195.9
2	23	28.858	28.857	35.980	196.0
2	24	28.858	28.859	−999.000	−999.0

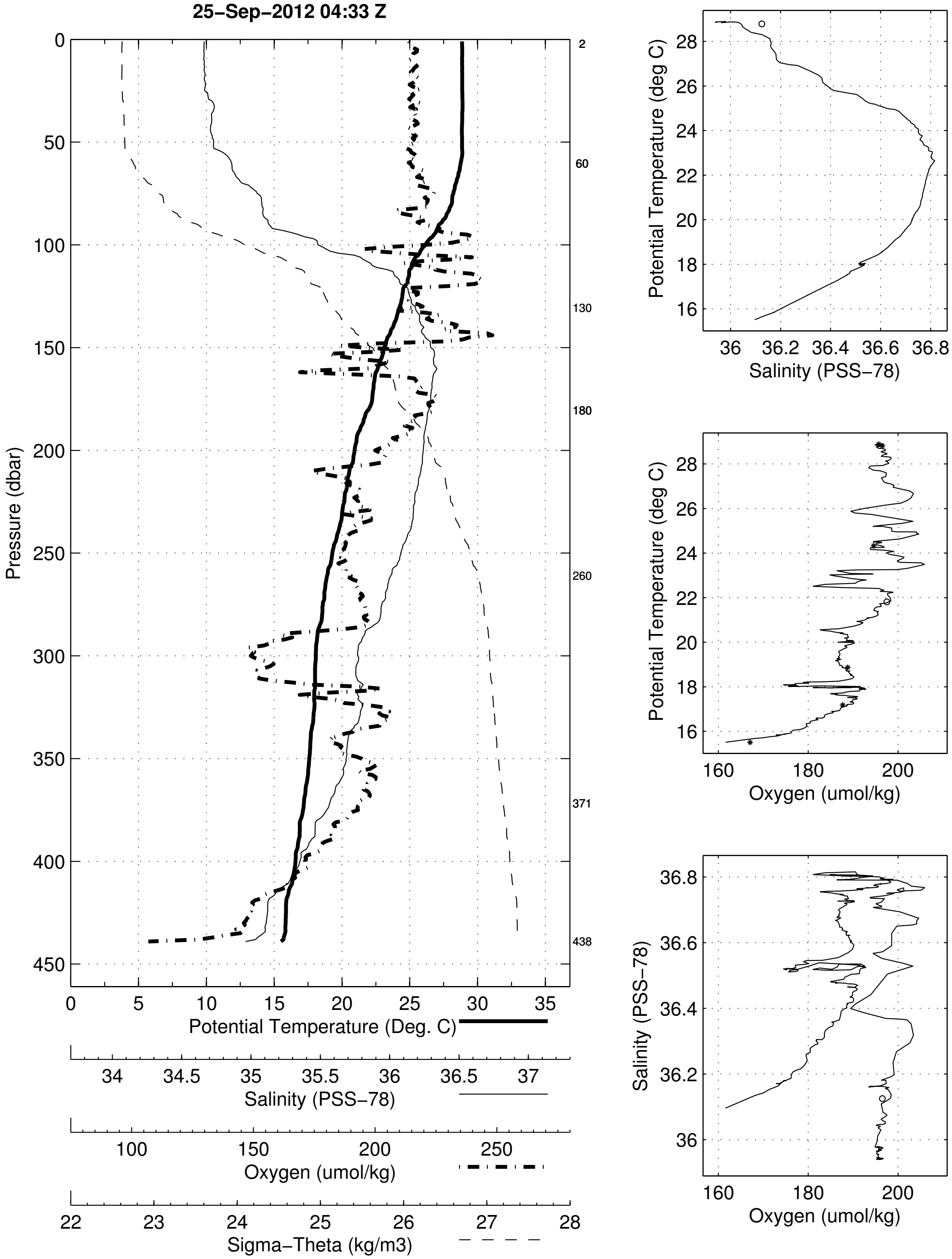

Abaco September - Ocotober 2012 R/V Endeavor
CTD Station 1 (CTD001)
Latitude 26.071 N Longitude 78.852 W
25-Sep-2012 02:25 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS-78)
Oxygen (umol/kg)
Sigma-Theta (kg/m3)
2
49
104
150
202
291
Potential Temperature (deg C)
Salinity (PSS-78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS-78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 2 (CTD002)

Pressure dbar	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}	DynHt m^2·s^{-2}	SigT kg·m^{-3}
1	28.858	28.858	35.941	195.1	0.005	22.819
10	28.862	28.860	35.940	195.2	0.050	22.817
20	28.875	28.870	35.943	196.1	0.101	22.816
30	28.899	28.892	35.970	195.7	0.151	22.829
50	28.872	28.860	35.977	196.3	0.252	22.845
75	28.235	28.217	36.141	198.4	0.374	23.182
100	26.180	26.157	36.369	197.3	0.484	24.017
125	24.477	24.450	36.714	195.7	0.571	24.804
150	23.118	23.087	36.793	189.4	0.645	25.269
200	20.970	20.931	36.764	190.8	0.770	25.857
250	19.342	19.296	36.681	186.9	0.872	26.230
300	18.130	18.078	36.519	174.8	0.961	26.417
400	16.639	16.573	36.301	181.8	1.125	26.615

Pressure dbar	Niskin	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}
439	1	15.573	15.503	36.173	167.1
439	2	15.579	16.057	−999.000	−999.0
372	3	17.218	17.156	36.427	187.7
372	4	17.244	17.620	−999.000	−999.0
372	5	17.244	17.620	−999.000	−999.0
261	6	18.955	18.908	36.684	188.8
261	7	18.974	19.217	−999.000	−999.0
180	8	21.864	21.828	36.835	197.5
180	9	21.894	22.037	−999.000	−999.0
180	10	21.872	22.015	−999.000	−999.0
180	11	21.874	22.017	−999.000	−999.0
180	12	21.874	22.017	−999.000	−999.0
131	13	24.269	24.357	−999.000	−999.0
131	14	24.303	24.275	36.798	194.6
60	15	28.801	28.786	36.125	196.5
60	16	28.801	28.828	−999.000	−999.0
60	17	28.798	28.826	−999.000	−999.0
60	18	28.799	28.826	−999.000	−999.0
60	19	28.798	28.825	−999.000	−999.0
2	20	28.858	28.858	36.008	195.7
2	21	28.859	28.860	−999.000	−999.0
2	22	28.855	28.856	−999.000	−999.0
2	23	28.852	28.853	−999.000	−999.0
2	24	28.856	28.857	−999.000	−999.0

Abaco September - Ocotober 2012 R/V Endeavor
CTD Station 2 (CTD002)
Latitude 26.169 N Longitude 78.802 W
25-Sep-2012 04:33 Z

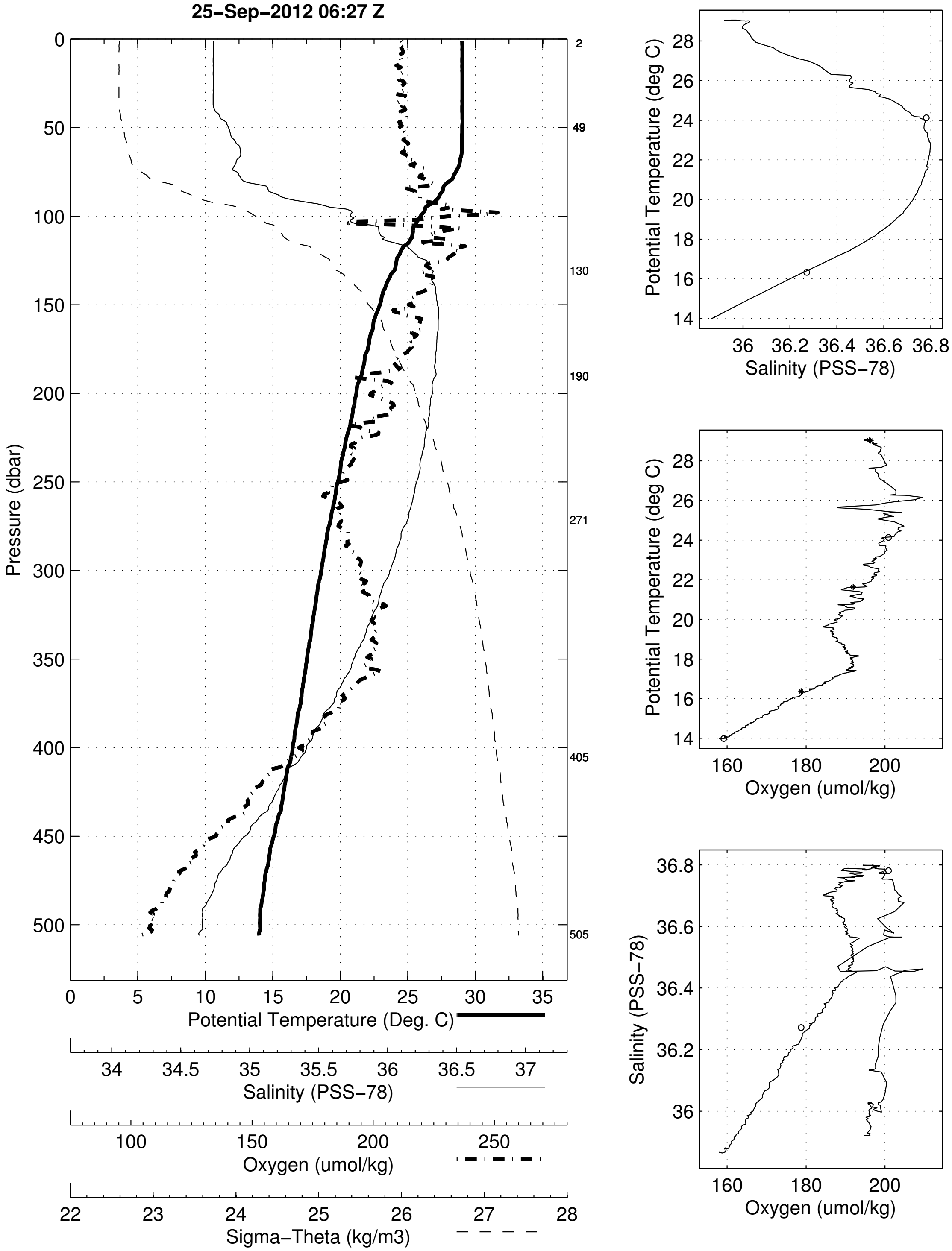


Abaco September - Ocotober 2012 R/V Endeavor CTD Station 3 (CTD003)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.021	29.021	35.921	195.6	0.005	22.749
10	29.043	29.040	35.921	195.8	0.051	22.742
20	29.044	29.040	35.921	195.4	0.102	22.742
30	29.050	29.043	35.921	195.2	0.153	22.741
50	29.048	29.036	35.980	195.2	0.255	22.788
75	28.576	28.558	36.012	198.9	0.381	22.972
100	25.964	25.941	36.455	202.5	0.491	24.150
125	24.194	24.168	36.752	201.9	0.577	24.918
150	22.968	22.937	36.793	196.7	0.649	25.312
200	21.232	21.193	36.774	191.2	0.772	25.792
250	19.864	19.818	36.713	187.1	0.879	26.118
300	18.643	18.590	36.610	189.5	0.972	26.357
400	16.540	16.474	36.284	180.9	1.137	26.626
500	14.134	14.060	35.879	159.5	1.280	26.854

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
505	1	14.063	13.988	35.924	159.1
505	2	14.060	14.646	−999.000	−999.0
405	3	16.392	16.326	36.272	178.8
405	4	16.395	16.821	−999.000	−999.0
405	5	16.395	16.822	−999.000	−999.0
271	6	19.425	19.672	−999.000	−999.0
271	7	19.420	19.667	−999.000	−999.0
190	8	21.662	21.625	36.812	191.9
190	9	21.659	21.812	−999.000	−999.0
190	10	21.659	21.811	−999.000	−999.0
190	11	21.659	21.812	−999.000	−999.0
190	12	21.658	21.810	−999.000	−999.0
131	13	24.059	24.149	−999.000	−999.0
131	14	24.155	24.127	36.781	200.9
50	15	29.027	29.015	36.034	196.4
50	16	29.025	29.047	−999.000	−999.0
50	17	29.023	29.045	−999.000	−999.0
50	18	29.025	29.047	−999.000	−999.0
50	19	29.027	29.049	−999.000	−999.0
2	20	29.019	29.018	35.936	196.0
2	21	29.019	29.020	−999.000	−999.0
2	22	29.019	29.020	−999.000	−999.0
2	23	29.019	29.020	−999.000	−999.0
2	24	29.018	29.019	−999.000	−999.0

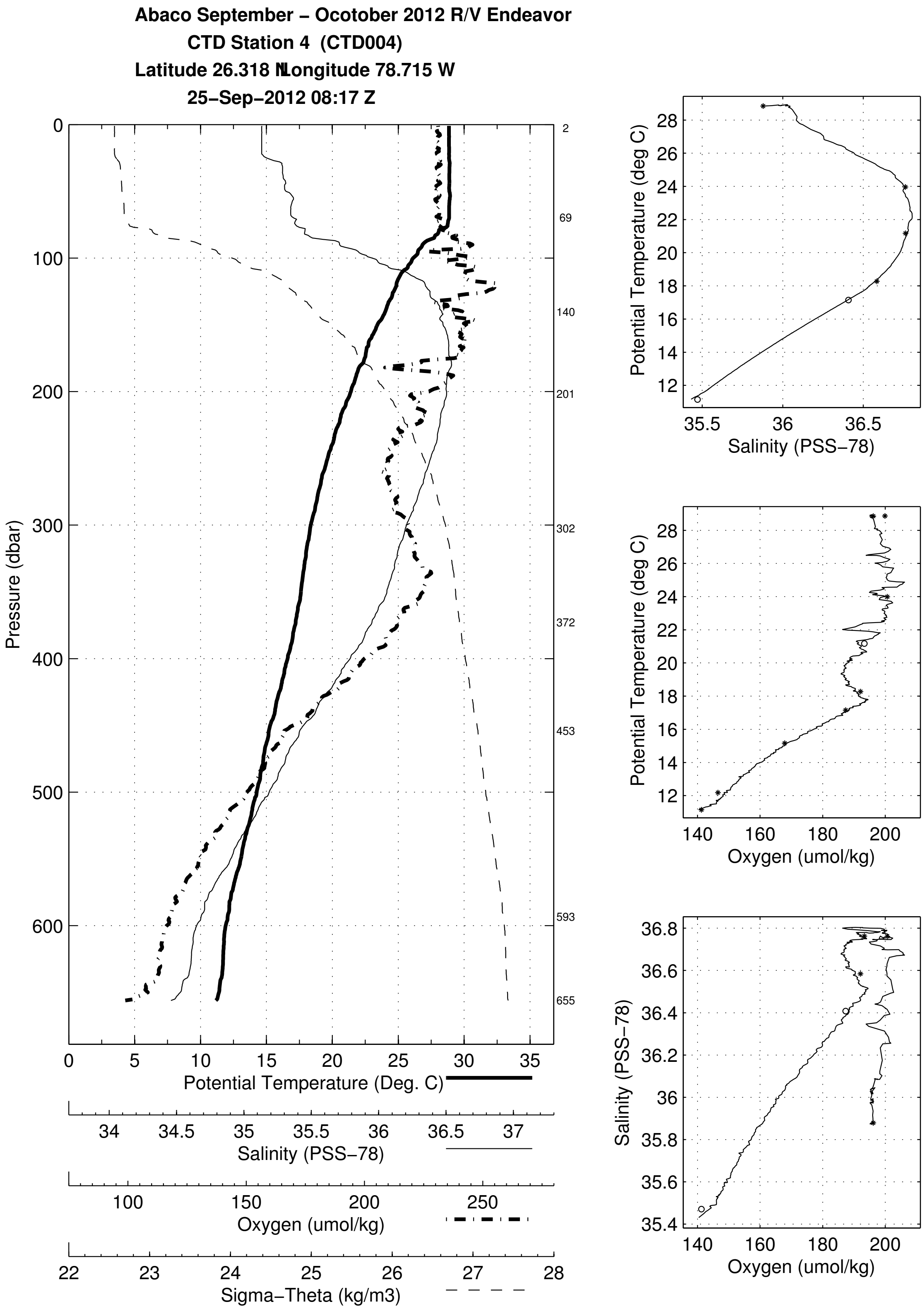
Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 3 (CTD003)
Latitude 26.251 N Longitude 78.766 W
25–Sep–2012 06:27 Z



Abaco September - Ocotober 2012 R/V Endeavor CTD Station 4 (CTD004)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.853	28.853	35.876	195.7	0.005	22.771
10	28.853	28.850	35.875	195.6	0.051	22.771
20	28.859	28.854	35.875	195.9	0.102	22.770
30	28.901	28.894	35.973	196.2	0.152	22.831
50	28.889	28.877	35.994	195.4	0.253	22.852
75	28.762	28.744	36.041	195.6	0.378	22.931
100	26.153	26.131	36.416	200.6	0.487	24.061
125	24.682	24.655	36.699	204.3	0.575	24.731
150	23.451	23.420	36.762	200.7	0.652	25.148
200	21.441	21.402	36.779	194.1	0.780	25.738
250	19.678	19.631	36.701	186.8	0.886	26.157
300	18.411	18.358	36.583	190.5	0.978	26.395
400	16.671	16.605	36.307	182.7	1.143	26.612
500	14.337	14.262	35.912	161.9	1.288	26.836
600	11.987	11.907	35.557	147.7	1.414	27.040

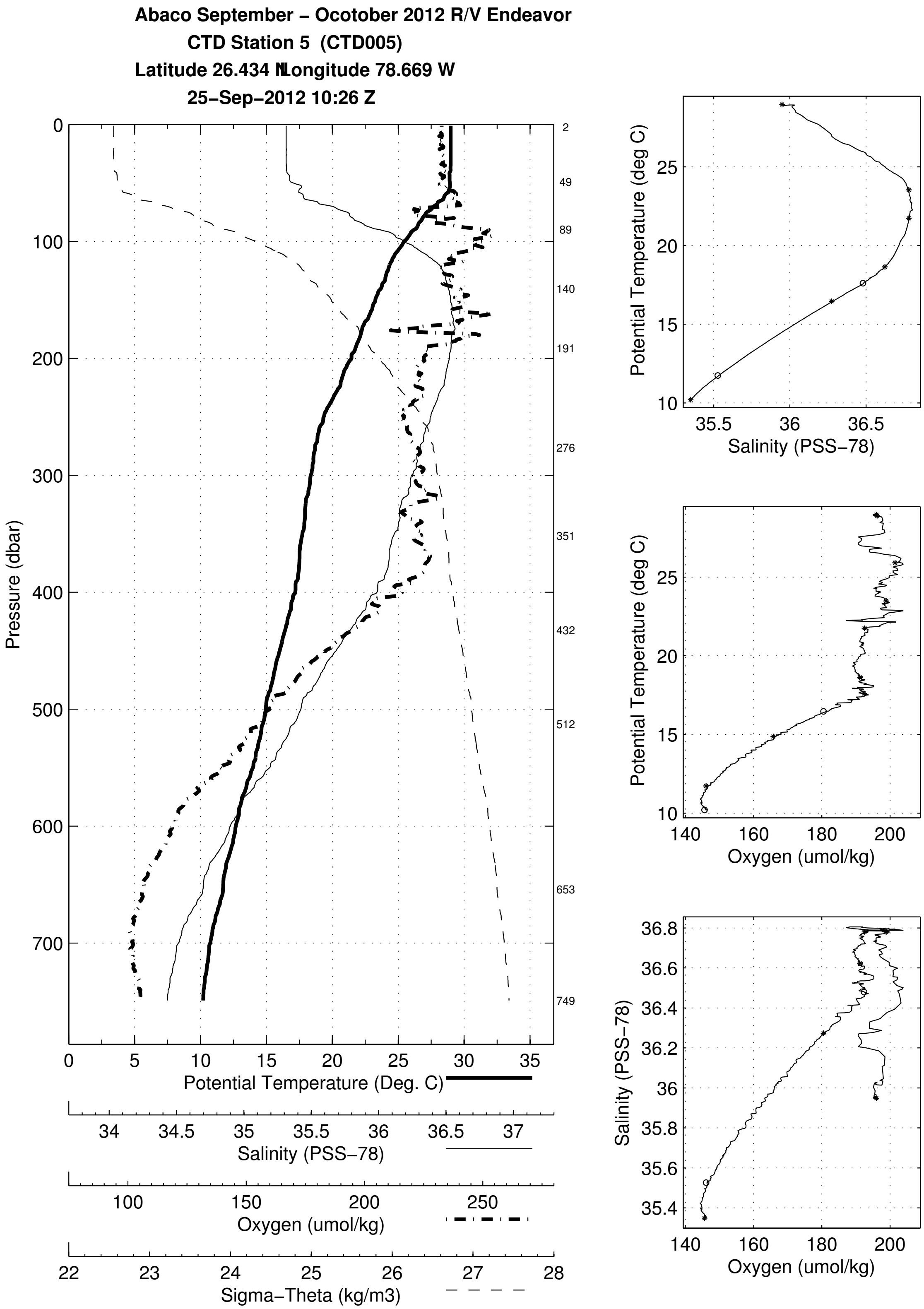
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
656	1	11.231	11.147	35.471	141.3
593	2	12.244	12.164	35.609	146.5
454	3	15.251	15.180	36.075	167.9
373	4	17.204	17.141	36.408	187.3
302	5	18.326	18.273	36.584	192.1
202	6	21.206	21.167	36.762	193.3
140	7	23.992	23.963	36.761	200.6
70	8	28.913	28.896	36.076	199.9
3	9	28.841	28.840	35.879	196.1


Abaco September - Ocotober 2012 R/V Endeavor
CTD Station 4 (CTD004)
Latitude 26.318 N Longitude 78.715 W
25-Sep-2012 08:17 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS-78)
Oxygen (umol/kg)
Sigma-Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS-78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS-78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 5 (CTD005)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.975	28.975	35.951	195.5	0.005	22.786
10	28.982	28.979	35.950	195.0	0.051	22.785
20	28.983	28.978	35.951	195.7	0.101	22.785
30	28.983	28.976	35.950	195.6	0.152	22.786
50	28.932	28.920	35.986	195.6	0.253	22.831
75	27.176	27.159	36.261	190.7	0.373	23.617
100	25.447	25.425	36.554	202.3	0.471	24.385
125	24.235	24.208	36.744	195.8	0.554	24.900
150	23.294	23.263	36.783	198.5	0.628	25.210
200	21.494	21.454	36.777	192.5	0.756	25.722
250	19.390	19.344	36.681	189.3	0.861	26.217
300	18.408	18.355	36.586	190.8	0.951	26.398
400	17.248	17.180	36.410	189.0	1.118	26.553
500	15.029	14.952	36.024	167.2	1.269	26.773
600	12.763	12.680	35.667	151.3	1.403	26.974
700	10.820	10.732	35.405	144.8	1.520	27.139

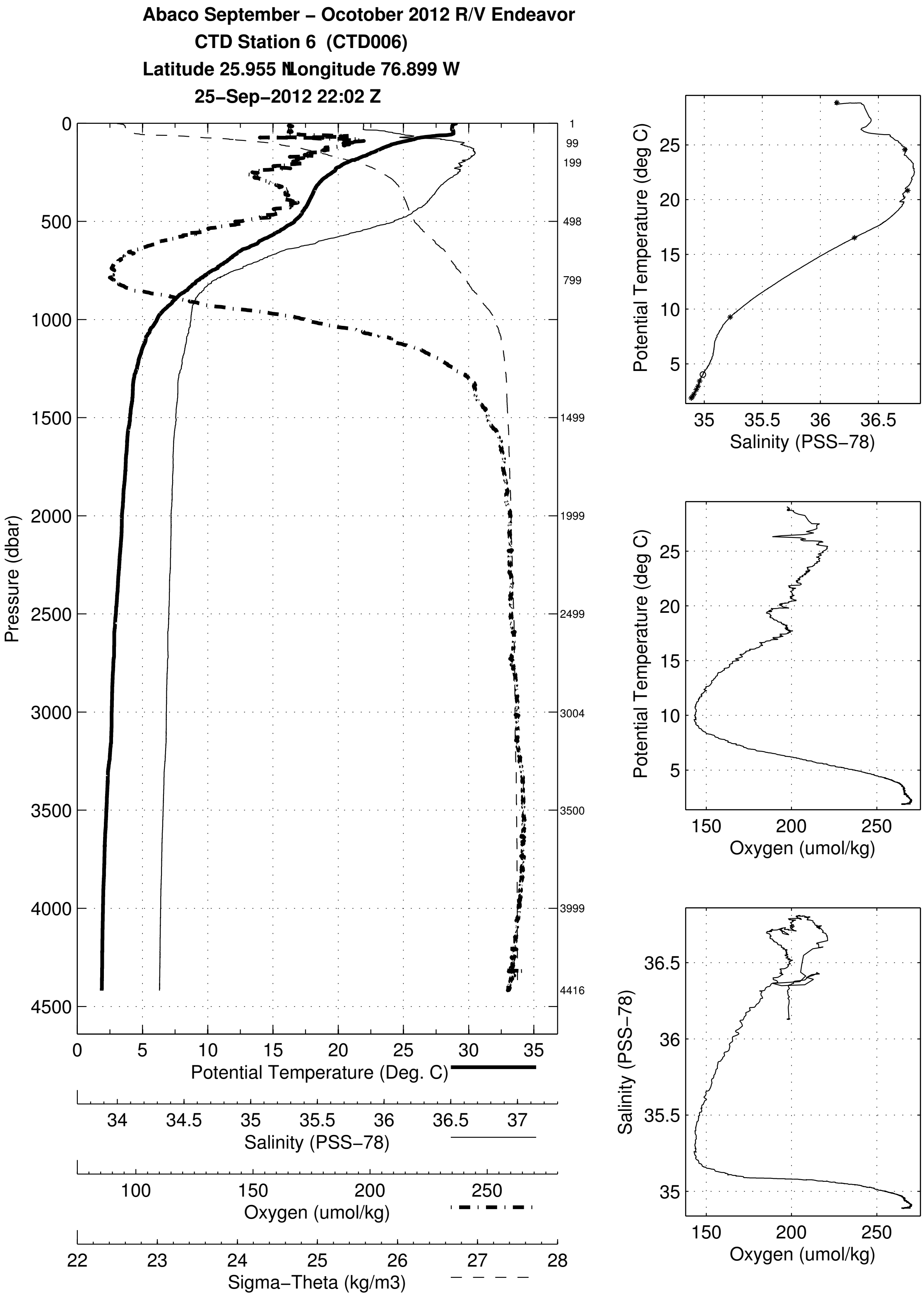
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
749	1	10.298	10.206	35.348	145.6
654	2	11.830	11.744	35.527	146.1
513	3	14.951	14.872	36.001	165.8
432	4	16.531	16.460	36.273	180.5
352	5	17.666	17.605	36.480	192.4
276	6	18.693	18.644	36.623	191.1
191	7	21.763	21.725	36.780	192.5
141	8	23.566	23.536	36.781	198.9
90	9	25.923	25.903	36.504	201.5
49	10	28.933	28.921	36.006	196.2
2	11	28.956	28.956	35.948	196.0


Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 5 (CTD005)
Latitude 26.434 N Longitude 78.669 W
25–Sep–2012 10:26 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS–78)
Oxygen (umol/kg)
Sigma–Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS–78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS–78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 6 (CTD006)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.035	29.035	36.131	197.8	0.005	22.902
10	28.780	28.778	36.130	198.2	0.049	22.987
20	28.741	28.736	36.129	198.2	0.098	23.000
30	28.719	28.712	36.128	198.3	0.146	23.007
50	28.841	28.829	36.313	197.6	0.243	23.108
75	26.113	26.096	36.414	208.3	0.352	24.070
100	24.561	24.540	36.742	215.8	0.439	24.799
125	23.477	23.451	36.788	209.5	0.514	25.159
150	22.614	22.584	36.809	205.1	0.583	25.427
200	20.736	20.698	36.727	200.2	0.702	25.892
250	19.594	19.548	36.703	186.6	0.804	26.181
300	18.646	18.593	36.625	191.9	0.895	26.368
400	17.815	17.746	36.521	197.9	1.066	26.500
500	16.733	16.650	36.315	182.2	1.230	26.608
600	14.063	13.974	35.862	158.8	1.380	26.859
700	11.608	11.516	35.495	145.6	1.506	27.066
800	9.350	9.257	35.222	143.8	1.614	27.250
900	7.509	7.417	35.105	165.5	1.703	27.442
1000	6.197	6.104	35.080	202.9	1.774	27.602
1100	5.346	5.250	35.053	229.3	1.832	27.688
1200	4.829	4.728	35.027	244.0	1.884	27.728
1300	4.441	4.335	35.003	253.2	1.934	27.753
1400	4.342	4.228	34.998	255.6	1.982	27.761
1500	4.166	4.044	34.987	259.3	2.030	27.771
1750	3.845	3.703	34.972	263.8	2.147	27.794
2000	3.584	3.423	34.959	266.0	2.263	27.812
2500	3.162	2.959	34.946	266.2	2.491	27.846
3000	2.887	2.639	34.930	268.2	2.714	27.862
3500	2.525	2.232	34.911	270.2	2.936	27.881
4000	2.315	1.972	34.895	268.9	3.153	27.890

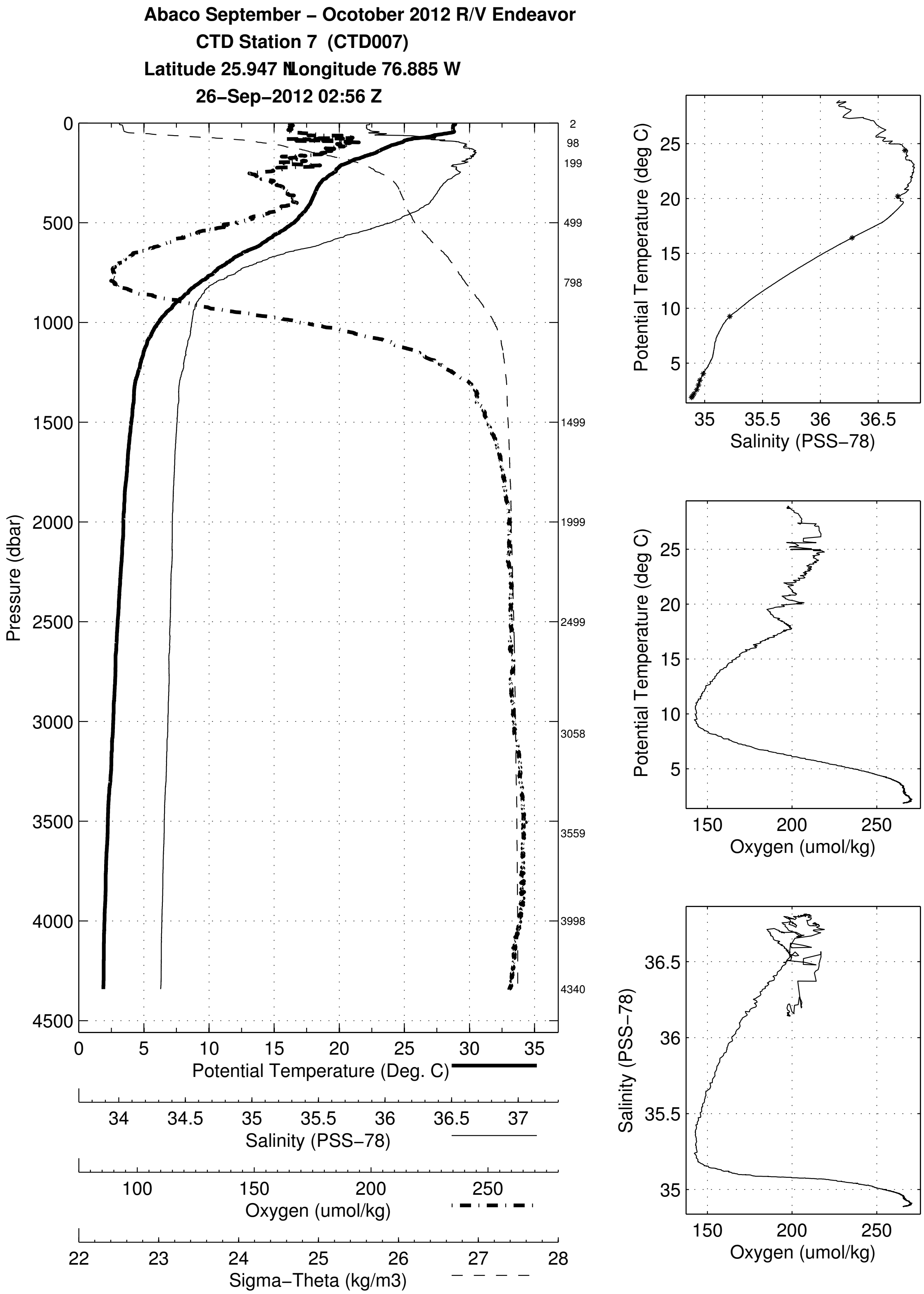
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4417	2	2.268	1.877	34.888	−999.0
4000	4	2.319	1.976	34.896	−999.0
3500	6	2.523	2.230	34.910	−999.0
3005	8	2.890	2.642	34.930	−999.0
2500	10	3.159	2.957	34.947	−999.0
1999	12	3.587	3.426	34.960	−999.0
1499	13	4.150	4.028	34.988	−999.0
799	15	9.359	9.267	35.223	−999.0
499	17	16.604	16.522	36.294	−999.0
199	19	20.880	20.842	36.753	−999.0
99	21	24.590	24.569	36.728	−999.0
2	23	28.860	28.860	36.141	−999.0


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 6 (CTD006)
Latitude 25.955 N Longitude 76.899 W
25−Sep−2012 22:02 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 7 (CTD007)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.922	28.922	36.166	197.3	0.005	22.966
10	28.775	28.773	36.144	198.1	0.049	22.999
20	28.742	28.737	36.145	198.4	0.097	23.012
30	28.737	28.730	36.148	198.1	0.146	23.017
50	28.419	28.407	36.163	201.1	0.243	23.135
75	26.152	26.136	36.548	217.0	0.349	24.159
100	24.639	24.618	36.728	214.4	0.435	24.764
125	23.546	23.520	36.744	209.5	0.511	25.105
150	22.791	22.760	36.810	207.3	0.580	25.377
200	20.653	20.615	36.745	195.5	0.699	25.928
250	19.578	19.532	36.713	185.4	0.800	26.193
300	18.621	18.568	36.621	192.0	0.891	26.371
400	17.871	17.802	36.530	199.8	1.063	26.494
500	16.600	16.517	36.290	181.4	1.226	26.620
600	14.228	14.138	35.887	159.6	1.375	26.844
700	11.452	11.361	35.474	145.4	1.502	27.078
800	9.366	9.274	35.221	143.5	1.609	27.246
900	7.552	7.460	35.108	165.3	1.699	27.438
1000	6.195	6.102	35.078	200.6	1.770	27.601
1100	5.348	5.252	35.054	229.1	1.828	27.688
1200	4.859	4.757	35.030	243.0	1.880	27.727
1300	4.439	4.332	35.003	253.1	1.930	27.753
1400	4.328	4.213	34.998	255.5	1.978	27.762
1500	4.154	4.032	34.988	258.9	2.025	27.773
1750	3.830	3.689	34.972	263.6	2.142	27.796
2000	3.589	3.428	34.960	265.8	2.257	27.812
2500	3.191	2.988	34.946	266.2	2.487	27.843
3000	2.892	2.644	34.932	267.0	2.711	27.863
3500	2.519	2.226	34.910	270.0	2.933	27.881
4000	2.319	1.975	34.896	268.7	3.150	27.890

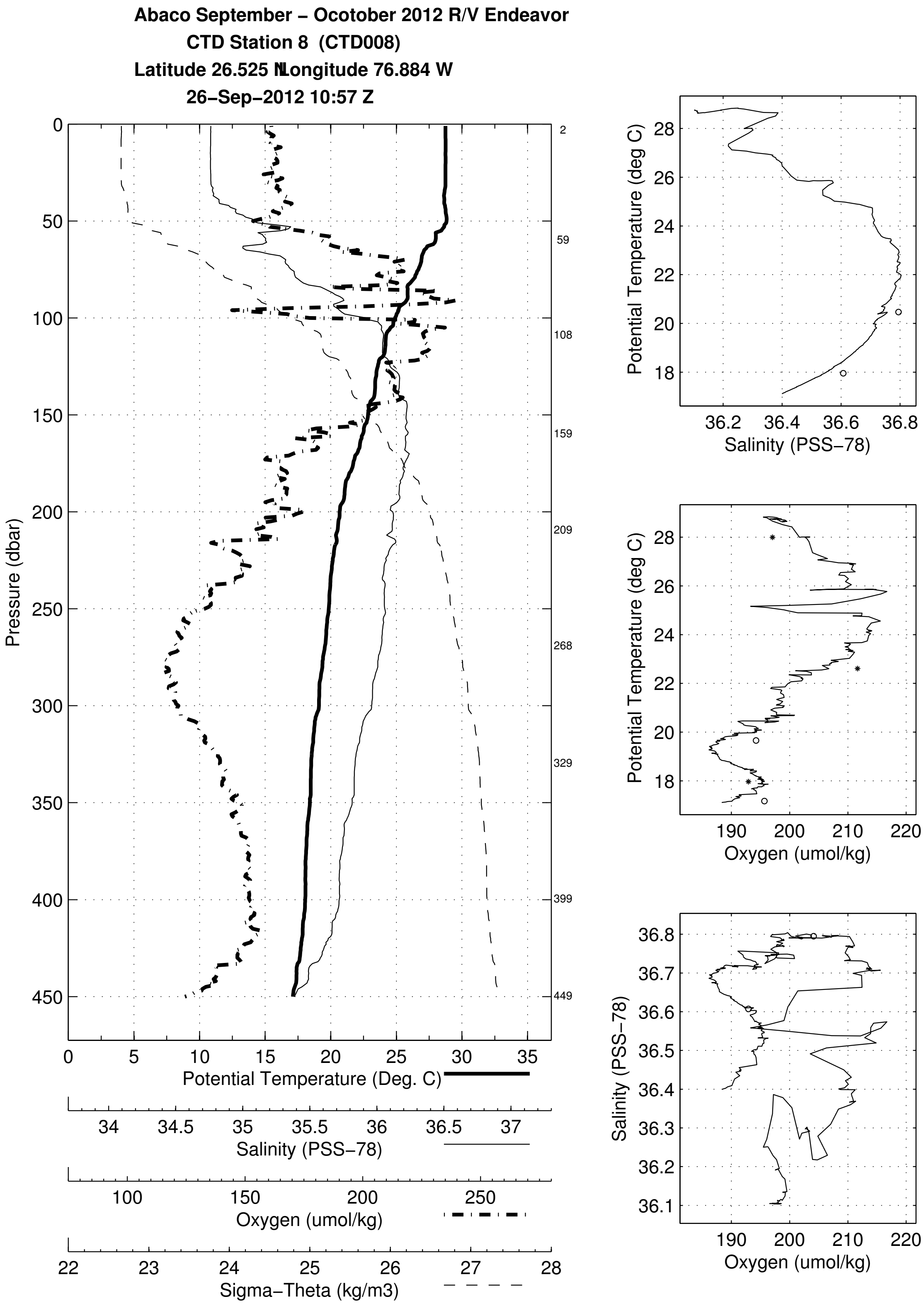
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4340	2	2.264	1.883	34.887	−999.0
3998	4	2.321	1.978	34.893	−999.0
3559	6	2.507	2.208	34.907	−999.0
3059	8	2.831	2.578	34.932	−999.0
2499	10	3.209	3.005	34.947	−999.0
2000	12	3.596	3.434	34.960	−999.0
1500	13	4.169	4.046	34.988	−999.0
799	15	9.343	9.251	35.217	−999.0
500	17	16.504	16.421	36.275	−999.0
200	19	20.250	20.213	36.668	−999.0
99	21	24.400	24.379	36.730	−999.0
3	23	28.785	28.787	−999.000	−999.0


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 7 (CTD007)
Latitude 25.947 N Longitude 76.885 W
26−Sep−2012 02:56 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
2
98
199
499
798
1499
1999
2499
3058
3559
3998
4340
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 8 (CTD008)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.743	28.743	36.105	197.4	0.005	22.980
10	28.753	28.750	36.104	197.3	0.049	22.977
20	28.753	28.748	36.104	198.0	0.098	22.978
30	28.751	28.744	36.106	197.0	0.146	22.980
50	28.839	28.826	36.250	195.5	0.243	23.062
75	26.705	26.688	36.388	210.6	0.353	23.864
100	24.921	24.899	36.654	201.4	0.446	24.623
125	23.610	23.583	36.736	210.3	0.524	25.080
150	22.871	22.840	36.793	207.1	0.594	25.341
200	20.714	20.676	36.746	200.7	0.714	25.912
250	19.887	19.841	36.718	190.4	0.817	26.115
300	19.149	19.094	36.672	187.7	0.913	26.275
400	18.118	18.048	36.557	195.1	1.088	26.453

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
449	1	17.245	17.169	36.542	195.7
399	2	18.023	17.953	36.607	192.9
329	3	18.522	18.464	36.710	187.4
269	4	19.699	19.649	36.748	194.2
209	5	20.507	20.467	36.795	204.1
159	6	22.657	22.624	36.723	211.7
109	7	24.221	24.198	36.323	200.5
60	8	27.949	27.935	36.098	197.0
3	9	28.740	28.741	−999.000	−999.0

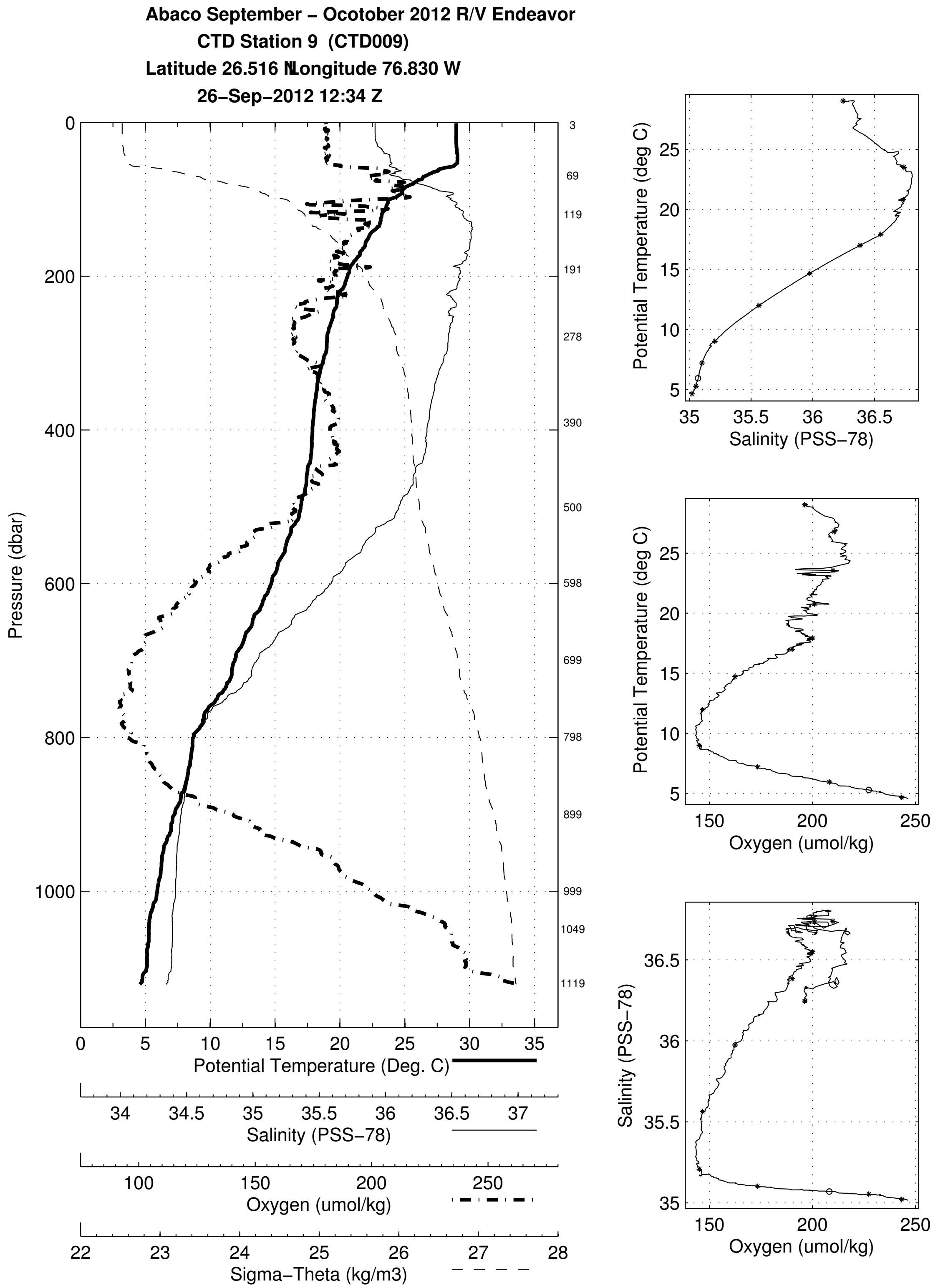


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 8 (CTD008)
Latitude 26.525 N Longitude 76.884 W
26−Sep−2012 10:57 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 9 (CTD009)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.966	28.966	36.238	196.6	0.005	23.006
10	28.968	28.966	36.238	197.2	0.049	23.006
20	28.964	28.959	36.239	196.5	0.097	23.008
30	28.982	28.975	36.252	197.3	0.146	23.013
50	29.068	29.056	36.326	196.7	0.243	23.041
75	26.044	26.027	36.443	209.9	0.352	24.114
100	23.839	23.818	36.676	209.2	0.437	24.965
125	23.166	23.141	36.761	199.6	0.509	25.229
150	22.241	22.211	36.800	202.3	0.575	25.526
200	20.628	20.589	36.728	198.8	0.691	25.922
250	19.528	19.482	36.671	192.5	0.793	26.173
300	18.968	18.914	36.656	188.5	0.885	26.309
400	17.950	17.880	36.541	197.6	1.058	26.483
500	17.060	16.976	36.377	188.2	1.225	26.577
600	14.807	14.715	35.980	162.9	1.379	26.791
700	11.974	11.880	35.547	146.4	1.511	27.037
800	8.781	8.692	35.168	145.3	1.619	27.299
900	7.323	7.232	35.104	172.6	1.706	27.468
1000	6.015	5.923	35.071	208.4	1.773	27.619
1100	5.180	5.085	35.046	232.9	1.828	27.702

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
1120	1	4.754	4.661	35.022	243.3
1049	2	5.382	5.290	35.054	227.3
999	3	6.039	5.947	35.070	208.2
900	4	7.309	7.218	35.102	173.5
799	5	9.125	9.034	35.207	145.1
699	6	12.100	12.006	35.564	146.7
599	7	14.772	14.680	35.974	162.4
500	8	17.092	17.007	36.383	190.2
390	9	18.005	17.937	36.550	200.0
278	10	19.073	19.331	−999.000	−999.0
191	11	20.859	20.822	36.733	201.0
119	12	23.542	23.517	36.737	210.0
69	13	26.843	26.827	36.356	210.5
3	14	29.036	29.035	36.245	196.2

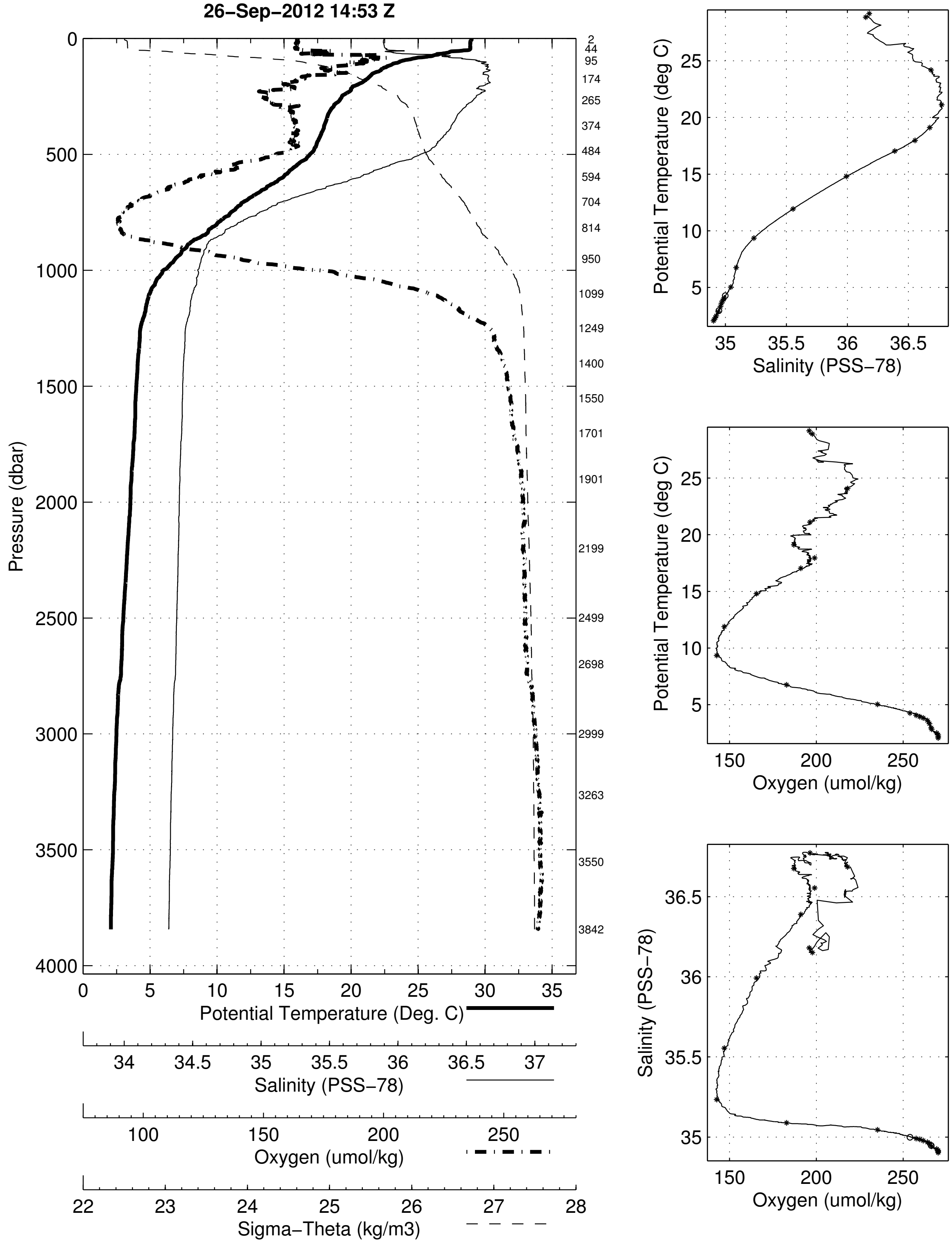

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 9 (CTD009)
Latitude 26.516 N Longitude 76.830 W
26−Sep−2012 12:34 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 10 (CTD010)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.998	28.998	36.157	196.7	0.005	22.934
10	28.907	28.905	36.153	196.2	0.049	22.962
20	28.897	28.892	36.156	196.3	0.098	22.968
30	28.899	28.891	36.158	196.7	0.147	22.970
50	28.722	28.710	36.191	199.0	0.245	23.056
75	26.097	26.080	36.545	216.8	0.350	24.174
100	23.657	23.636	36.744	217.9	0.432	25.070
125	22.534	22.508	36.762	207.7	0.501	25.412
150	21.658	21.628	36.738	207.6	0.564	25.643
200	20.493	20.455	36.750	194.0	0.677	25.975
250	19.358	19.312	36.696	187.3	0.776	26.237
300	18.622	18.569	36.623	192.2	0.867	26.373
400	17.931	17.861	36.532	196.7	1.038	26.481
500	17.005	16.921	36.369	190.3	1.204	26.585
600	14.985	14.892	36.010	167.4	1.358	26.775
700	12.223	12.128	35.583	149.0	1.492	27.017
800	10.088	9.991	35.301	142.2	1.606	27.188
900	7.829	7.735	35.122	161.8	1.701	27.410
1000	6.060	5.968	35.070	203.6	1.774	27.612
1100	5.070	4.976	35.042	236.4	1.830	27.711
1200	4.634	4.535	35.017	248.6	1.880	27.742
1300	4.333	4.228	34.996	256.4	1.927	27.759
1400	4.188	4.075	34.987	259.3	1.974	27.768
1500	4.094	3.972	34.983	260.6	2.021	27.775
1750	3.895	3.753	34.971	263.2	2.139	27.789
2000	3.692	3.529	34.963	265.0	2.257	27.805
2500	3.203	2.999	34.948	265.8	2.489	27.844
3000	2.732	2.487	34.924	268.7	2.710	27.871
3500	2.523	2.230	34.911	270.2	2.925	27.881

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
3842	1	2.397	2.069	34.902	270.1
3550	2	2.494	2.197	34.909	270.2
3263	3	2.601	2.332	34.917	270.2
2999	4	2.743	2.498	34.925	269.3
2699	5	3.066	2.845	34.942	266.5
2499	6	3.159	2.956	34.947	266.2
2199	7	3.504	3.325	34.960	265.1
1901	8	3.766	3.611	34.967	264.0
1701	9	3.963	3.824	34.977	261.6
1550	10	4.081	3.955	34.985	259.6
1400	11	4.193	4.080	34.991	257.5
1250	12	4.373	4.272	34.999	254.0
1099	13	5.122	5.027	35.045	235.2
950	14	6.839	6.746	35.089	182.9
815	15	9.450	9.356	35.234	142.7
705	16	12.026	11.931	35.555	147.0
595	17	14.886	14.794	35.993	165.6
484	18	17.117	17.036	36.389	191.1
375	19	18.035	17.970	36.555	199.0
265	20	19.153	19.105	36.676	187.1
174	21	21.158	21.124	36.773	196.3
95	22	24.206	24.186	36.687	218.0
44	23	28.852	28.842	36.152	197.7
2	24	29.171	29.170	36.180	195.9

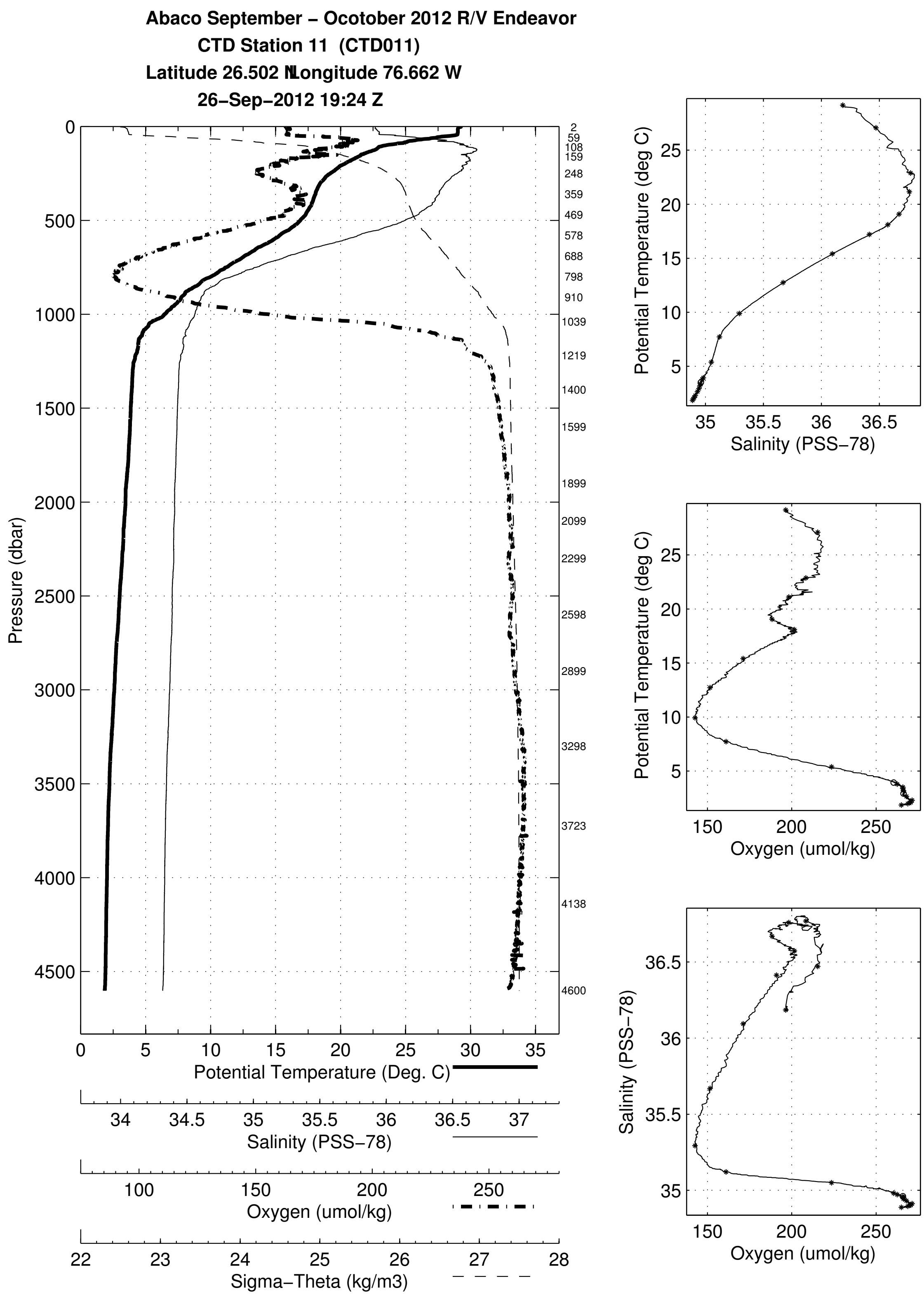
Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 10 (CTD010)
Latitude 26.492 N Longitude 76.746 W
26–Sep–2012 14:53 Z



Abaco September - Ocotober 2012 R/V Endeavor CTD Station 11 (CTD011)

Pressure dbar	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}	DynHt m^2·s^{-2}	SigT kg·m^{-3}
1	29.268	29.268	36.184	196.3	0.005	22.863
10	29.050	29.047	36.182	197.2	0.049	22.936
20	29.022	29.017	36.194	197.1	0.099	22.955
30	29.024	29.017	36.207	196.9	0.148	22.965
50	28.378	28.366	36.342	201.0	0.245	23.283
75	25.600	25.583	36.599	217.5	0.346	24.371
100	23.483	23.462	36.728	215.1	0.427	25.110
125	22.651	22.625	36.801	205.3	0.494	25.409
150	21.574	21.545	36.708	209.5	0.557	25.644
200	20.300	20.262	36.741	193.9	0.668	26.020
250	19.241	19.195	36.682	187.2	0.765	26.257
300	18.502	18.449	36.611	196.1	0.855	26.394
400	17.918	17.849	36.542	202.4	1.025	26.492
500	16.980	16.896	36.364	189.7	1.191	26.587
600	14.984	14.891	36.009	168.0	1.345	26.774
700	12.506	12.410	35.623	150.0	1.480	26.993
800	10.105	10.009	35.305	143.2	1.596	27.189
900	7.980	7.885	35.130	158.8	1.690	27.393
1000	6.524	6.428	35.082	191.0	1.767	27.561
1100	4.839	4.747	35.024	242.2	1.824	27.723
1200	4.441	4.343	35.007	253.8	1.872	27.755
1300	4.105	4.001	34.985	260.5	1.917	27.774
1400	4.043	3.932	34.981	261.3	1.963	27.778
1500	3.971	3.851	34.976	262.6	2.008	27.783
1750	3.830	3.688	34.968	264.2	2.124	27.793
2000	3.612	3.451	34.959	265.7	2.240	27.810
2500	3.205	3.001	34.944	266.9	2.470	27.840
3000	2.837	2.589	34.929	267.9	2.693	27.866
3500	2.509	2.216	34.910	269.3	2.911	27.882
4000	2.370	2.026	34.899	269.2	3.129	27.889
4500	2.311	1.910	34.891	266.8	3.354	27.892

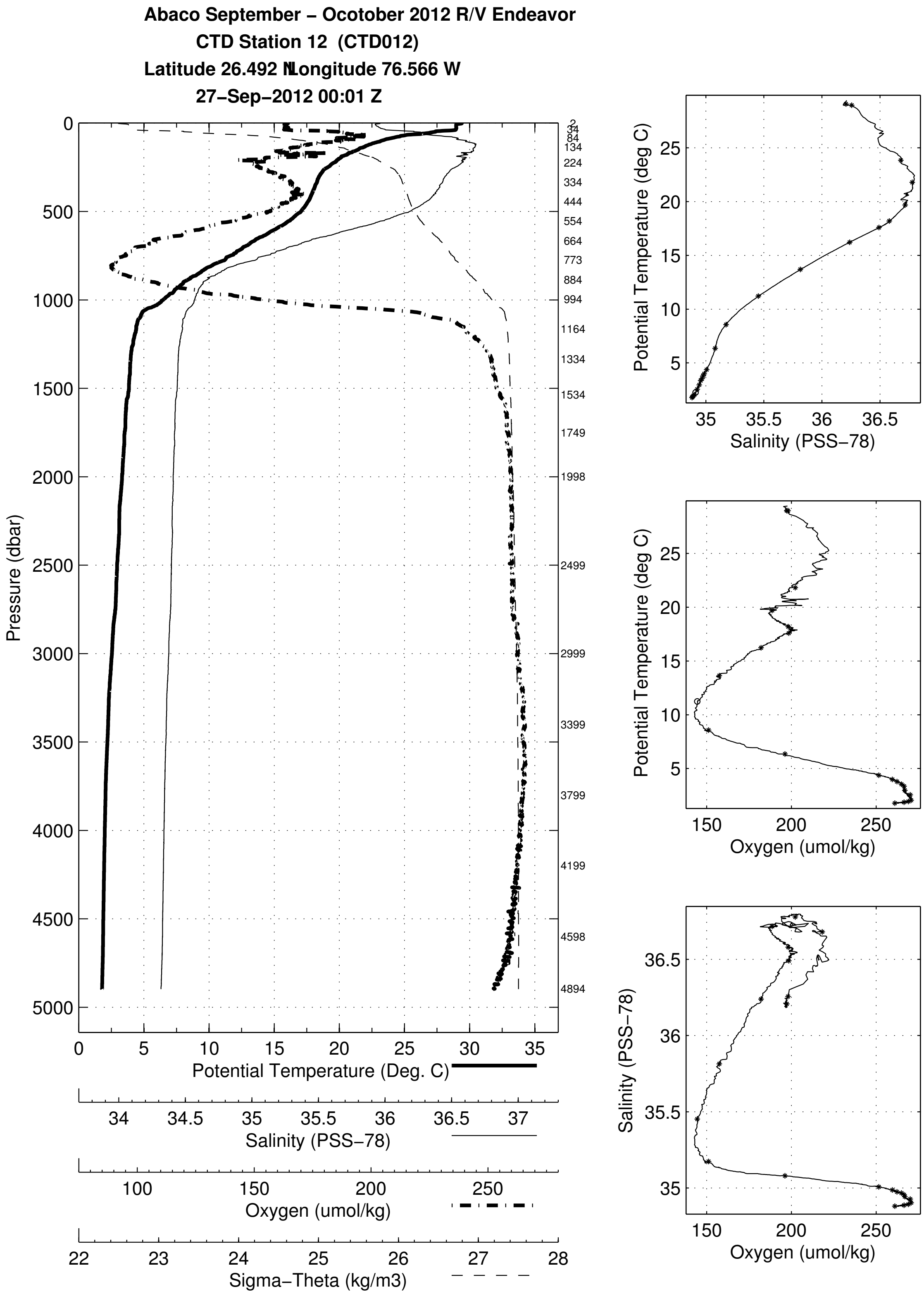
Pressure dbar	Niskin	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}
4601	1	2.268	1.856	34.888	265.0
4139	2	2.348	1.988	34.896	268.8
3724	3	2.424	2.109	34.902	270.6
3299	4	2.575	2.303	34.912	271.3
2899	5	2.896	2.658	34.931	267.9
2598	6	3.154	2.941	34.944	266.2
2299	7	3.381	3.194	34.953	266.2
2100	8	3.559	3.388	34.956	265.8
1899	9	3.659	3.506	34.961	265.8
1599	10	3.926	3.798	34.972	262.5
1401	11	4.046	3.934	34.981	260.3
1220	12	4.318	6.239	−999.000	−999.0
1040	13	5.489	5.397	35.050	223.6
910	14	7.823	7.728	35.121	161.1
799	15	9.991	9.895	35.293	142.6
689	16	12.850	12.754	35.669	151.6
579	17	15.496	15.405	36.094	171.1
469	18	17.283	17.204	36.413	190.9
360	19	18.159	18.096	36.573	201.5
248	20	19.135	19.090	36.669	188.3
159	21	21.186	21.155	36.758	198.2
109	22	22.914	22.891	36.769	208.4
60	23	27.085	27.071	36.471	215.4
3	24	29.165	29.165	36.185	196.4


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 11 (CTD011)
Latitude 26.502 N Longitude 76.662 W
26−Sep−2012 19:24 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 12 (CTD012)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.398	29.398	36.207	197.3	0.005	22.836
10	28.971	28.969	36.185	196.5	0.049	22.965
20	28.974	28.969	36.201	196.9	0.098	22.977
30	28.977	28.969	36.216	197.3	0.147	22.988
50	27.303	27.291	36.440	212.4	0.240	23.709
75	24.679	24.663	36.604	218.3	0.333	24.657
100	23.258	23.238	36.739	214.1	0.409	25.184
125	22.221	22.196	36.794	202.7	0.475	25.526
150	21.477	21.447	36.780	197.6	0.535	25.726
200	20.055	20.018	36.726	190.3	0.642	26.074
250	19.151	19.106	36.671	188.7	0.738	26.272
300	18.512	18.458	36.611	196.1	0.827	26.391
400	17.969	17.899	36.549	202.8	0.999	26.484
500	17.126	17.042	36.392	191.8	1.165	26.573
600	15.193	15.100	36.043	170.7	1.322	26.754
700	12.749	12.652	35.658	151.2	1.459	26.973
800	10.428	10.330	35.343	143.2	1.579	27.162
900	8.123	8.027	35.135	156.3	1.677	27.376
1000	6.571	6.475	35.083	190.8	1.755	27.556
1100	4.784	4.693	35.021	243.0	1.812	27.727
1200	4.384	4.287	35.001	254.5	1.859	27.756
1300	4.124	4.021	34.986	259.6	1.905	27.773
1400	4.046	3.934	34.982	260.9	1.950	27.779
1500	3.968	3.848	34.978	262.0	1.996	27.784
1750	3.659	3.520	34.962	265.4	2.108	27.805
2000	3.477	3.317	34.953	266.7	2.221	27.818
2500	3.146	2.943	34.942	266.8	2.445	27.844
3000	2.791	2.545	34.926	268.4	2.667	27.867
3500	2.490	2.198	34.909	270.3	2.883	27.883
4000	2.338	1.994	34.897	269.1	3.099	27.890
4500	2.283	1.882	34.889	266.4	3.322	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4894	1	2.232	1.785	34.881	261.0
4599	2	2.279	1.867	34.887	266.5
4199	3	2.312	1.946	34.893	269.0
3800	4	2.376	2.054	34.902	270.6
3399	5	2.529	2.246	34.911	−999.0
3000	6	2.798	2.552	34.927	270.1
2500	7	3.165	2.962	34.943	266.9
1999	8	3.514	3.353	34.955	266.5
1749	9	3.686	3.547	34.967	264.9
1535	10	3.912	3.790	34.975	262.3
1334	11	4.094	3.988	34.986	259.6
1164	12	4.466	4.372	35.007	251.5
995	13	6.444	6.350	35.080	196.2
884	14	8.664	8.566	35.174	151.1
774	15	11.306	11.206	35.452	144.4
665	16	13.784	13.687	35.814	157.5
554	17	16.302	16.211	36.239	182.1
444	18	17.664	17.588	36.491	198.5
334	19	18.251	18.192	36.580	198.1
224	20	19.722	19.681	36.716	188.6
135	21	21.811	21.785	36.778	202.3
84	22	23.864	23.846	36.680	218.2
34	23	28.972	28.964	36.256	198.0
2	24	29.069	29.068	36.207	197.2



Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 12 (CTD012)
Latitude 26.492 N Longitude 76.566 W
27−Sep−2012 00:01 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 13 (CTD013)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.187	29.187	36.258	196.2	0.005	22.946
10	28.961	28.959	36.216	196.5	0.049	22.992
20	28.915	28.911	36.217	196.5	0.098	23.009
30	28.921	28.914	36.227	196.7	0.146	23.014
50	27.560	27.548	36.265	208.7	0.242	23.494
75	24.161	24.145	36.684	219.0	0.334	24.874
100	22.920	22.899	36.736	212.1	0.407	25.280
125	22.144	22.119	36.780	203.8	0.471	25.537
150	21.352	21.323	36.768	200.3	0.531	25.752
200	19.970	19.933	36.687	196.9	0.639	26.067
250	19.196	19.151	36.674	188.0	0.735	26.262
300	18.529	18.475	36.613	195.4	0.824	26.389
400	17.969	17.900	36.549	202.0	0.995	26.484
500	17.225	17.140	36.410	191.6	1.162	26.563
600	15.430	15.336	36.085	172.1	1.320	26.734
700	12.950	12.851	35.688	153.1	1.460	26.956
800	10.903	10.802	35.401	143.1	1.582	27.124
900	8.336	8.239	35.147	152.7	1.684	27.353
1000	6.620	6.524	35.083	188.5	1.763	27.550
1100	4.617	4.527	35.012	244.3	1.820	27.739
1200	4.380	4.283	35.000	253.3	1.867	27.756
1300	4.168	4.064	34.989	258.0	1.914	27.770
1400	3.968	3.857	34.979	261.8	1.959	27.784
1500	3.778	3.660	34.967	264.4	2.003	27.795
1750	3.542	3.404	34.957	266.4	2.113	27.812
2000	3.373	3.215	34.952	266.5	2.222	27.827
2500	3.129	2.927	34.941	267.0	2.441	27.845
3000	2.752	2.506	34.925	268.5	2.661	27.870
3500	2.484	2.192	34.908	270.9	2.876	27.882
4000	2.347	2.003	34.897	269.5	3.093	27.889
4500	2.283	1.883	34.889	266.4	3.317	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4914	1	2.217	1.768	34.875	259.5
4529	2	2.282	1.878	34.888	266.5
4159	3	2.341	1.979	34.895	269.3
3769	4	2.413	2.093	34.901	271.8
3405	5	2.521	2.238	34.911	271.7
2995	6	2.727	2.483	34.922	270.5
2578	7	3.093	2.883	34.939	267.5
2169	8	3.251	3.079	34.947	267.5
1854	9	3.466	3.320	34.954	266.7
1595	10	3.701	3.576	34.961	265.4
1399	11	3.951	3.841	34.977	260.9
1229	12	4.285	4.186	34.993	254.7
1059	13	5.402	5.309	35.045	226.0
949	14	7.363	7.266	35.099	170.1
839	15	9.892	9.792	35.281	142.4
729	16	12.536	12.435	35.624	149.0
619	17	15.069	14.973	36.021	168.0
509	18	16.958	16.873	36.355	189.2
399	19	17.976	17.906	36.550	204.9
289	20	18.641	18.590	36.622	194.0
199	21	20.002	19.965	36.713	193.4
119	22	22.098	22.075	36.786	202.9
69	23	24.920	24.905	36.560	220.8
2	24	28.996	28.996	36.231	197.1

Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 13 (CTD013)
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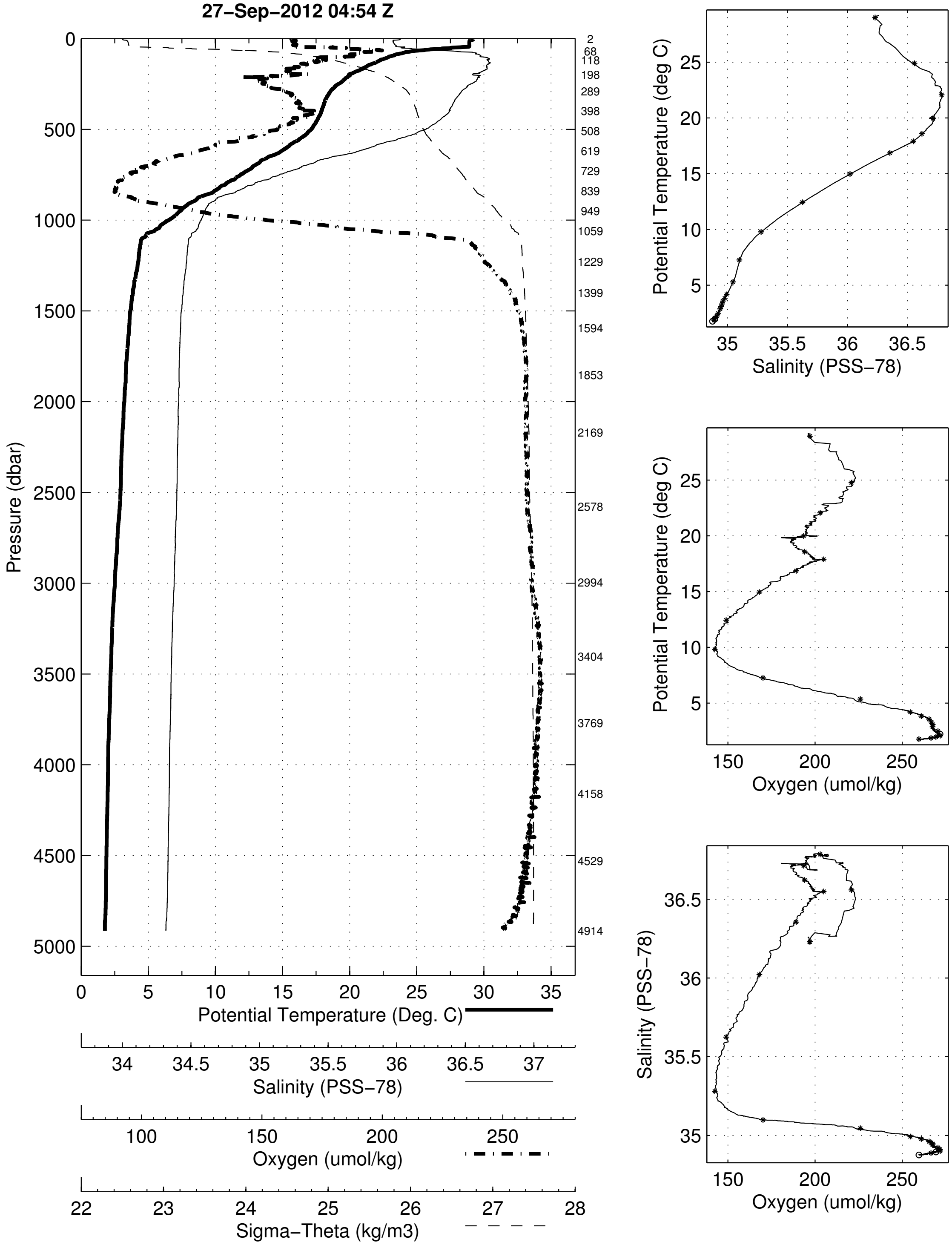
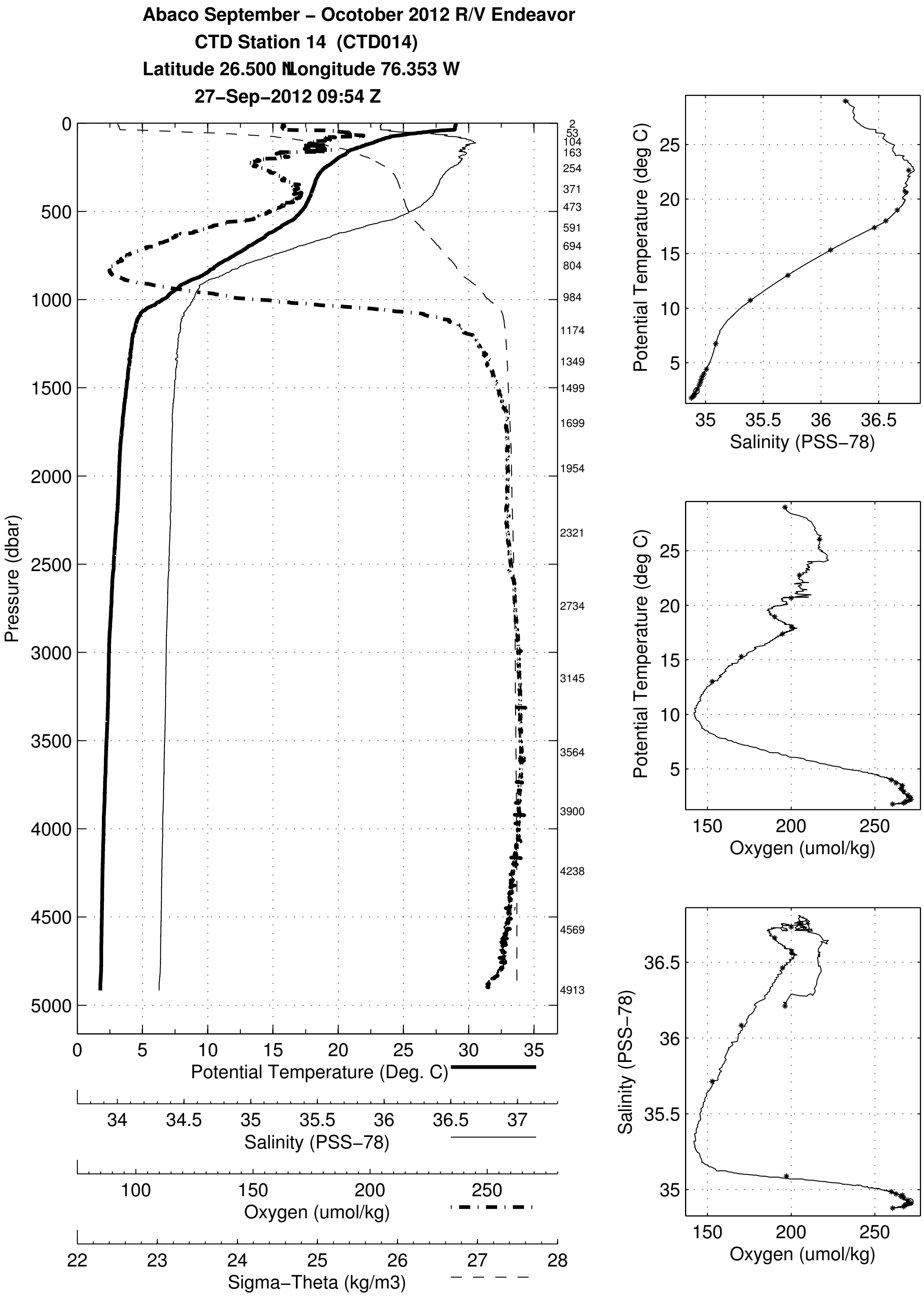
27–Sep–2012 04:54 Z



Abaco September - Ocotober 2012 R/V Endeavor CTD Station 14 (CTD014)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.017	29.017	36.235	196.2	0.005	22.986
10	29.017	29.015	36.234	196.3	0.049	22.986
20	28.963	28.958	36.227	196.3	0.097	23.000
30	28.957	28.950	36.232	196.9	0.146	23.006
50	26.734	26.722	36.352	215.2	0.237	23.825
75	23.995	23.979	36.643	219.4	0.325	24.892
100	23.014	22.993	36.785	209.2	0.397	25.290
125	22.076	22.051	36.767	206.3	0.462	25.547
150	21.069	21.040	36.715	203.7	0.521	25.789
200	19.990	19.953	36.726	194.1	0.627	26.092
250	19.084	19.039	36.666	189.2	0.723	26.285
300	18.489	18.436	36.608	195.2	0.811	26.395
400	17.986	17.916	36.550	200.4	0.982	26.480
500	17.254	17.169	36.415	192.1	1.150	26.560
600	15.385	15.291	36.075	172.2	1.308	26.736
700	13.175	13.076	35.719	155.3	1.449	26.935
800	10.916	10.815	35.404	143.5	1.572	27.124
900	8.564	8.465	35.161	150.2	1.676	27.329
1000	6.591	6.495	35.082	187.7	1.756	27.552
1100	4.787	4.696	35.019	244.6	1.813	27.725
1200	4.344	4.248	34.996	255.6	1.861	27.757
1300	4.189	4.085	34.985	259.2	1.907	27.766
1400	4.024	3.912	34.979	261.6	1.953	27.779
1500	3.891	3.772	34.971	263.5	1.999	27.787
1750	3.539	3.401	34.957	266.5	2.110	27.812
2000	3.354	3.197	34.951	266.4	2.218	27.828
2500	2.997	2.797	34.937	267.6	2.435	27.853
3000	2.672	2.428	34.920	270.1	2.648	27.872
3500	2.537	2.243	34.911	270.6	2.864	27.880
4000	2.366	2.022	34.899	270.1	3.084	27.889
4500	2.287	1.886	34.890	266.7	3.308	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4914	1	2.222	1.772	34.878	260.6
4570	2	2.278	1.869	34.888	267.1
4239	3	2.309	1.939	34.898	268.0
3901	4	2.386	2.052	34.901	268.6
3565	5	2.519	2.219	34.910	271.6
3146	6	2.661	2.403	34.921	271.3
2735	7	2.818	2.599	34.929	269.7
2321	8	3.136	2.951	34.946	267.3
1954	9	3.368	3.215	34.955	265.5
1699	10	3.600	3.466	34.963	266.4
1499	11	3.838	3.720	34.972	262.7
1350	12	4.090	3.982	34.986	259.8
1174	13	4.501	4.405	35.008	313.3
985	14	6.835	6.739	35.089	197.2
804	15	10.813	10.712	35.387	126.3
694	16	13.111	13.012	35.714	152.9
591	17	15.431	15.338	36.083	170.2
474	18	17.466	17.385	36.462	194.9
372	19	18.077	18.012	36.561	200.3
254	20	19.036	18.990	36.660	190.2
164	21	20.658	20.627	36.732	200.0
104	22	22.649	22.628	36.759	205.0
54	23	26.079	26.067	36.476	217.0
3	24	28.984	28.983	36.211	196.4

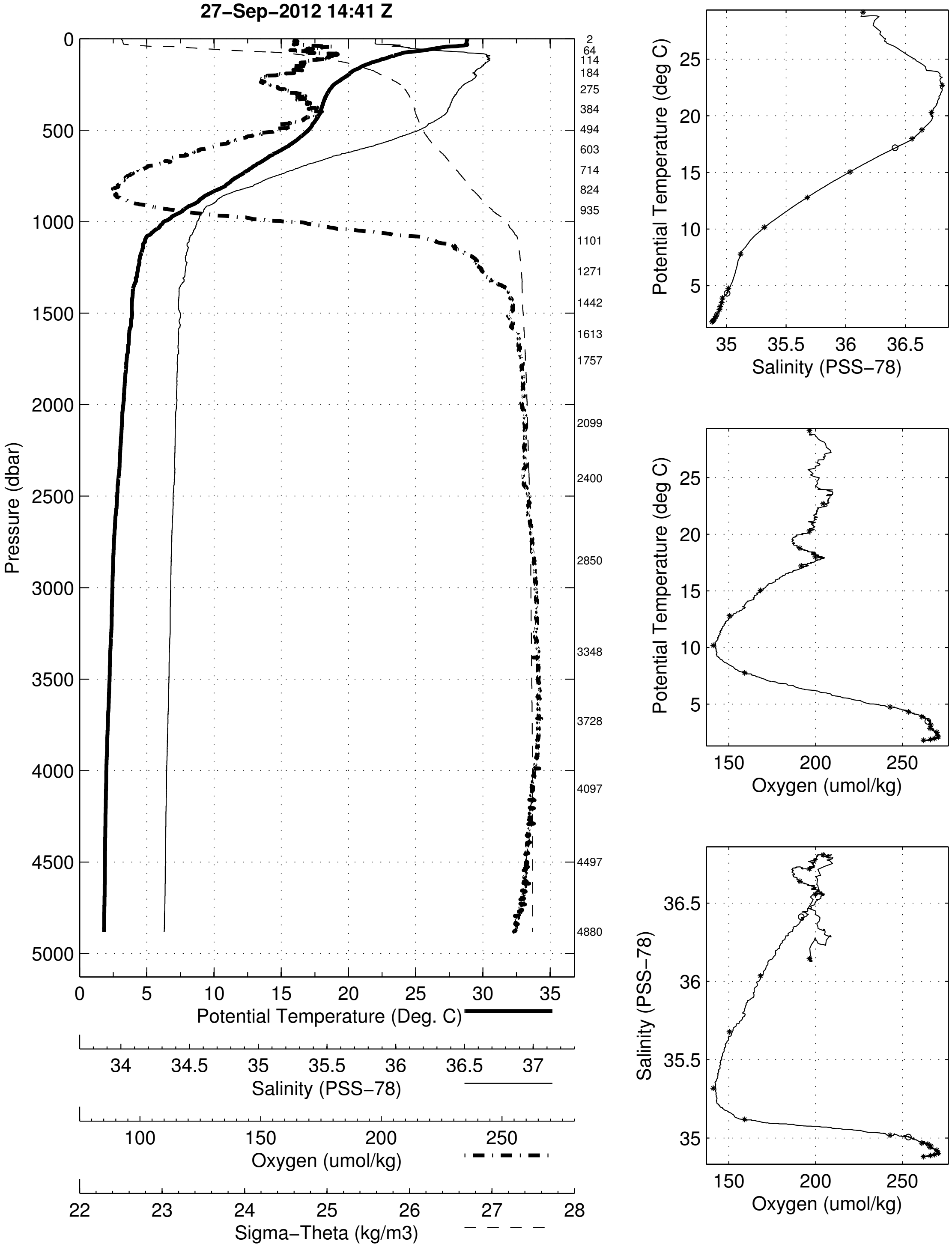

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 14 (CTD014)
Latitude 26.500 N Longitude 76.353 W
27−Sep−2012 09:54 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Oxygen (umol/kg)
Potential Temperature (deg C)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 15 (CTD015)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.848	28.847	36.133	197.0	0.005	22.966
10	28.800	28.798	36.131	197.0	0.049	22.981
20	28.790	28.785	36.130	197.5	0.098	22.985
30	28.786	28.779	36.144	197.5	0.146	22.998
50	26.751	26.740	36.331	205.0	0.237	23.804
75	24.252	24.236	36.668	199.8	0.328	24.834
100	23.044	23.024	36.793	206.8	0.400	25.287
125	22.014	21.989	36.795	200.6	0.465	25.586
150	21.065	21.036	36.759	199.6	0.523	25.824
200	19.991	19.954	36.731	191.1	0.627	26.095
250	18.991	18.946	36.657	189.2	0.722	26.303
300	18.487	18.434	36.611	198.4	0.810	26.398
400	17.980	17.910	36.555	204.8	0.981	26.486
500	17.097	17.013	36.387	191.4	1.147	26.576
600	15.303	15.209	36.063	169.9	1.304	26.745
700	12.984	12.886	35.692	152.4	1.443	26.952
800	10.983	10.881	35.413	143.6	1.565	27.119
900	8.720	8.620	35.174	148.7	1.668	27.315
1000	6.349	6.255	35.076	194.9	1.748	27.580
1100	4.964	4.871	35.030	239.0	1.805	27.714
1200	4.572	4.474	35.008	251.2	1.855	27.742
1300	4.357	4.251	35.002	254.5	1.903	27.761
1400	4.061	3.949	34.970	261.7	1.949	27.768
1500	4.027	3.906	34.978	261.8	1.996	27.778
1750	3.643	3.504	34.960	265.2	2.110	27.805
2000	3.410	3.251	34.956	265.4	2.220	27.826
2500	2.994	2.794	34.935	267.6	2.438	27.852
3000	2.683	2.439	34.920	269.6	2.650	27.872
3500	2.527	2.234	34.911	270.4	2.866	27.881
4000	2.331	1.988	34.897	269.3	3.083	27.890
4500	2.288	1.888	34.890	267.1	3.306	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4880	1	2.256	1.810	34.881	262.0
4497	2	2.287	1.887	34.888	266.1
4098	3	2.318	1.964	34.894	268.5
3728	4	2.422	2.107	34.902	270.6
3348	5	2.571	2.293	34.912	294.5
2850	6	2.732	2.503	34.922	269.7
2401	7	3.062	2.870	34.941	265.8
2100	8	3.315	3.148	34.949	266.2
1758	9	3.630	3.491	34.960	264.5
1613	10	3.828	6.347	−999.000	−999.0
1443	11	4.010	3.895	34.967	261.1
1272	12	4.432	4.328	35.006	253.4
1102	13	4.850	4.758	35.017	242.9
935	14	7.873	7.775	35.119	159.1
825	15	10.259	10.159	35.318	141.0
715	16	12.886	12.786	35.678	150.4
604	17	15.134	15.040	36.036	168.3
494	18	17.256	17.172	36.412	191.7
384	19	18.050	17.983	36.556	199.8
275	20	18.808	18.758	36.638	191.0
184	21	20.333	20.298	36.718	196.5
115	22	22.719	22.695	36.808	204.3
64	23	25.310	25.350	−999.000	−999.0
2	24	29.139	29.139	36.145	196.4

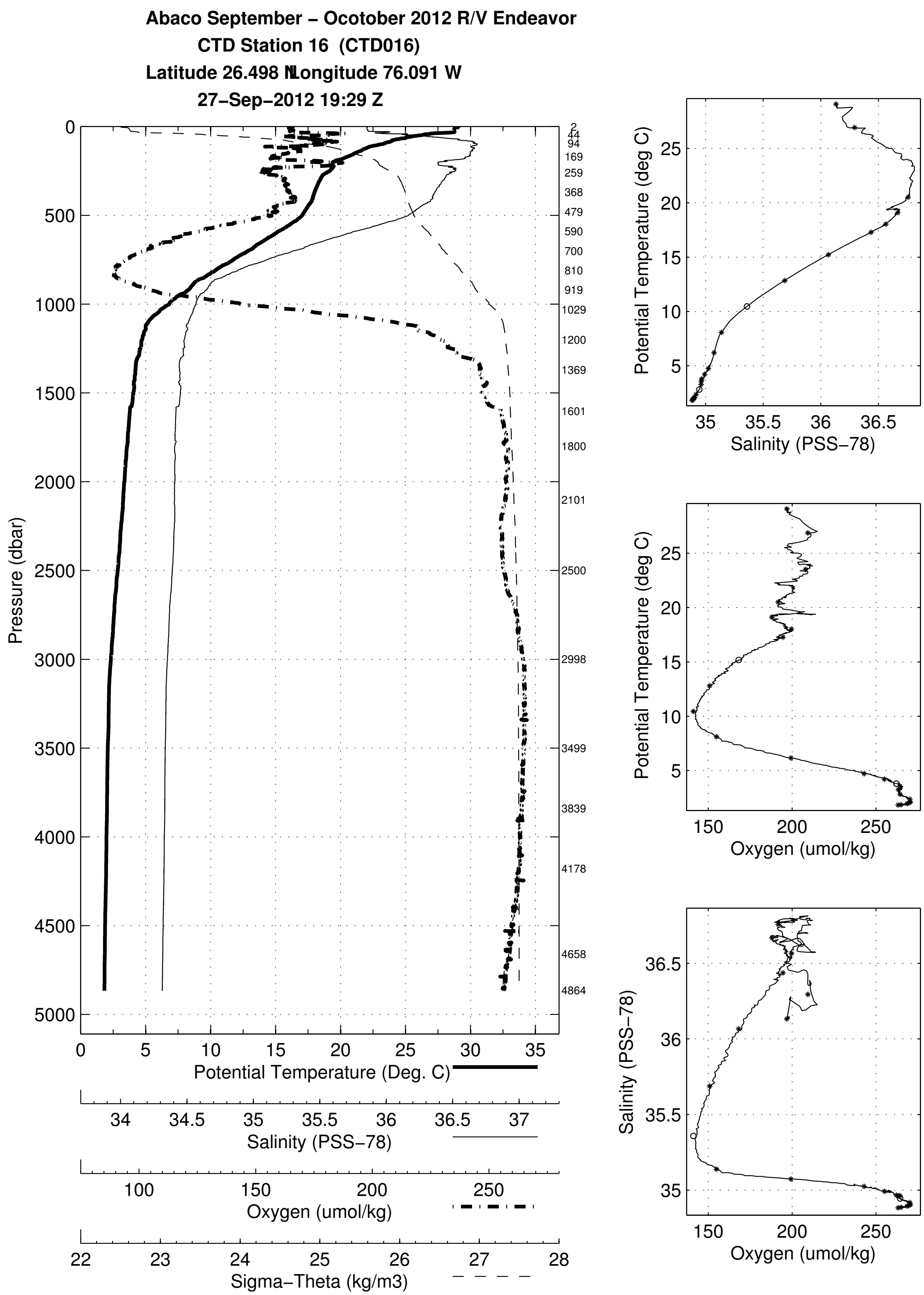
Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 15 (CTD015)
Latitude 26.500 N Longitude 76.222 W
27–Sep–2012 14:41 Z



Abaco September - Ocotober 2012 R/V Endeavor CTD Station 16 (CTD016)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.079	29.079	36.137	198.2	0.005	22.891
10	28.782	28.779	36.138	197.6	0.049	22.993
20	28.752	28.748	36.143	197.8	0.098	23.007
30	28.789	28.782	36.276	199.3	0.146	23.096
50	26.126	26.115	36.457	206.8	0.231	24.097
75	24.181	24.165	36.693	203.2	0.317	24.875
100	23.106	23.085	36.812	208.0	0.389	25.284
125	21.884	21.859	36.791	200.8	0.453	25.619
150	21.154	21.124	36.771	196.6	0.511	25.809
200	19.454	19.418	36.577	204.1	0.615	26.119
250	19.209	19.164	36.678	187.2	0.711	26.262
300	18.494	18.441	36.610	195.4	0.800	26.395
400	17.934	17.864	36.538	198.1	0.971	26.484
500	17.126	17.042	36.392	190.0	1.137	26.573
600	15.156	15.063	36.037	166.4	1.294	26.758
700	12.974	12.875	35.689	151.7	1.432	26.952
800	10.635	10.535	35.368	143.4	1.553	27.146
900	8.618	8.519	35.168	150.2	1.654	27.326
1000	6.918	6.820	35.091	182.1	1.736	27.515
1100	5.288	5.192	35.043	229.4	1.799	27.687
1200	4.834	4.733	35.019	244.5	1.851	27.721
1300	4.500	4.393	35.002	251.8	1.901	27.746
1400	4.292	4.177	34.991	257.0	1.949	27.760
1500	4.185	4.063	34.995	257.7	1.997	27.776
1750	3.774	3.634	34.963	264.8	2.114	27.794
2000	3.529	3.368	34.961	265.0	2.228	27.819
2500	3.053	2.852	34.945	264.4	2.448	27.855
3000	2.567	2.326	34.915	270.2	2.659	27.877
3500	2.377	2.088	34.902	270.3	2.865	27.886
4000	2.331	1.987	34.896	269.3	3.079	27.890
4500	2.281	1.880	34.889	266.6	3.302	27.892

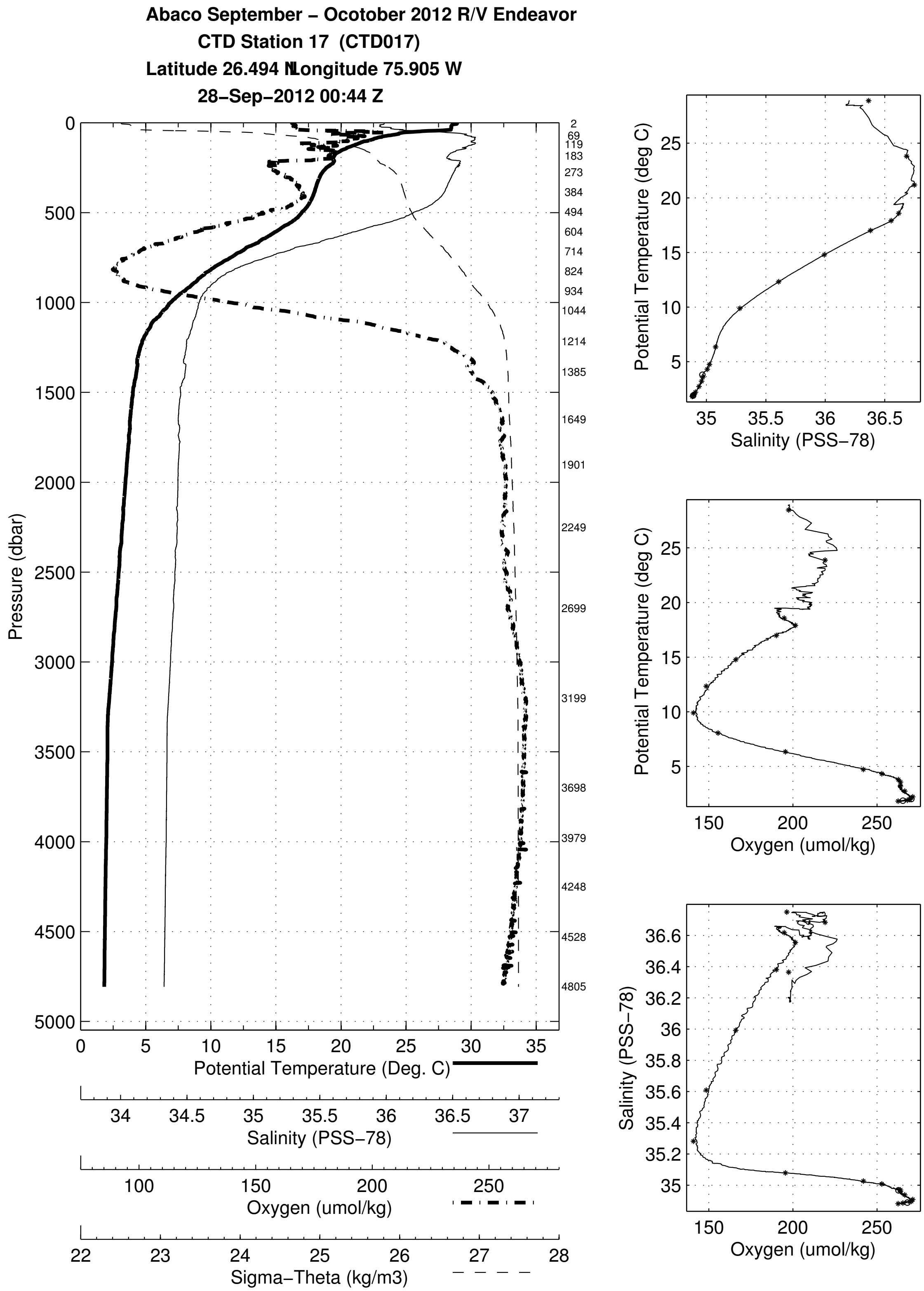
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4864	1	2.276	1.831	34.883	263.1
4659	2	2.277	1.858	34.886	264.8
4179	3	2.323	1.959	34.894	268.5
3839	4	2.354	2.028	34.898	269.4
3499	5	2.380	2.091	34.902	270.4
2999	6	2.611	2.369	34.918	270.1
2500	7	3.025	2.825	34.945	264.3
2101	8	3.453	3.284	34.961	263.4
1800	9	3.731	3.587	34.963	264.1
1602	10	3.923	3.794	34.967	262.1
1370	11	4.331	4.219	34.992	255.0
1200	12	4.860	4.758	35.025	243.0
1030	13	6.297	6.200	35.073	199.3
919	14	8.180	8.081	35.138	154.9
810	15	10.560	10.459	35.359	141.1
701	16	12.935	12.837	35.687	150.9
590	17	15.315	15.222	36.067	168.1
479	18	17.366	17.284	36.437	194.6
369	19	18.105	18.040	36.565	199.6
259	20	19.144	19.097	36.669	187.9
170	21	20.548	20.515	36.758	191.7
94	22	23.568	23.548	36.817	208.0
44	23	26.938	26.928	36.294	209.4
2	24	29.070	29.070	36.133	196.8


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 16 (CTD016)
Latitude 26.498 N Longitude 76.091 W
27−Sep−2012 19:29 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 17 (CTD017)

Pressure dbar	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen $\mu mol \cdot kg^{-1}$	DynHt $m^2 \cdot s^{-2}$	SigT $kg \cdot m^{-3}$
1	28.919	28.918	36.203	197.5	0.005	22.995
10	28.595	28.593	36.192	198.1	0.048	23.095
20	28.468	28.463	36.174	198.0	0.096	23.125
30	28.470	28.463	36.242	198.6	0.143	23.176
50	25.654	25.643	36.525	219.8	0.230	24.296
75	23.312	23.296	36.727	220.2	0.309	25.157
100	22.069	22.049	36.731	214.6	0.375	25.520
125	21.047	21.023	36.719	203.7	0.434	25.797
150	20.161	20.133	36.654	205.8	0.487	25.988
200	19.434	19.397	36.593	209.6	0.587	26.136
250	18.931	18.886	36.633	192.1	0.682	26.300
300	18.437	18.384	36.606	196.3	0.770	26.406
400	17.955	17.885	36.552	201.1	0.940	26.490
500	17.057	16.973	36.377	188.1	1.106	26.578
600	15.222	15.129	36.050	169.0	1.263	26.753
700	12.763	12.666	35.659	151.6	1.401	26.971
800	10.414	10.315	35.340	142.4	1.519	27.163
900	8.645	8.545	35.166	148.5	1.620	27.321
1000	7.011	6.912	35.092	178.3	1.704	27.504
1100	5.724	5.625	35.059	214.8	1.771	27.647
1200	4.943	4.841	35.028	240.0	1.826	27.716
1300	4.509	4.401	35.005	252.0	1.876	27.747
1400	4.374	4.258	35.007	254.1	1.925	27.764
1500	4.128	4.006	34.981	259.9	1.973	27.771
1750	3.844	3.702	34.969	263.3	2.091	27.793
2000	3.602	3.440	34.966	264.1	2.206	27.816
2500	3.126	2.924	34.947	264.2	2.431	27.850
3000	2.659	2.416	34.921	268.4	2.646	27.874
3500	2.347	2.059	34.900	270.0	2.852	27.887
4000	2.312	1.969	34.895	268.9	3.064	27.890
4500	2.265	1.865	34.888	265.8	3.286	27.892

Pressure dbar	Niskin	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen $\mu mol \cdot kg^{-1}$
4805	1	2.256	1.819	34.881	262.6
4528	2	2.262	1.859	34.885	265.4
4248	3	2.278	1.907	34.888	268.0
3979	4	2.312	1.971	34.893	269.5
3699	5	2.329	2.019	34.896	270.4
3200	6	2.472	2.212	34.908	271.2
2700	7	2.951	2.733	34.938	266.5
2250	8	3.390	3.208	34.960	263.9
1901	9	3.732	3.578	34.969	263.9
1650	10	3.933	3.799	34.967	262.8
1385	11	4.423	4.309	35.008	252.8
1215	12	4.843	4.740	35.026	241.9
1044	13	6.445	6.345	35.078	195.6
935	14	8.106	8.006	35.141	155.5
824	15	9.980	9.881	35.281	140.8
715	16	12.419	12.321	35.608	148.5
605	17	14.884	14.791	35.992	166.0
494	18	17.093	17.009	36.380	190.2
384	19	17.981	17.914	36.555	201.5
274	20	18.629	18.580	36.618	194.8
184	21	19.538	19.705	−999.000	−999.0
120	22	21.206	21.183	36.750	196.4
69	23	23.827	23.813	36.684	219.1
3	24	28.896	28.896	36.364	197.5

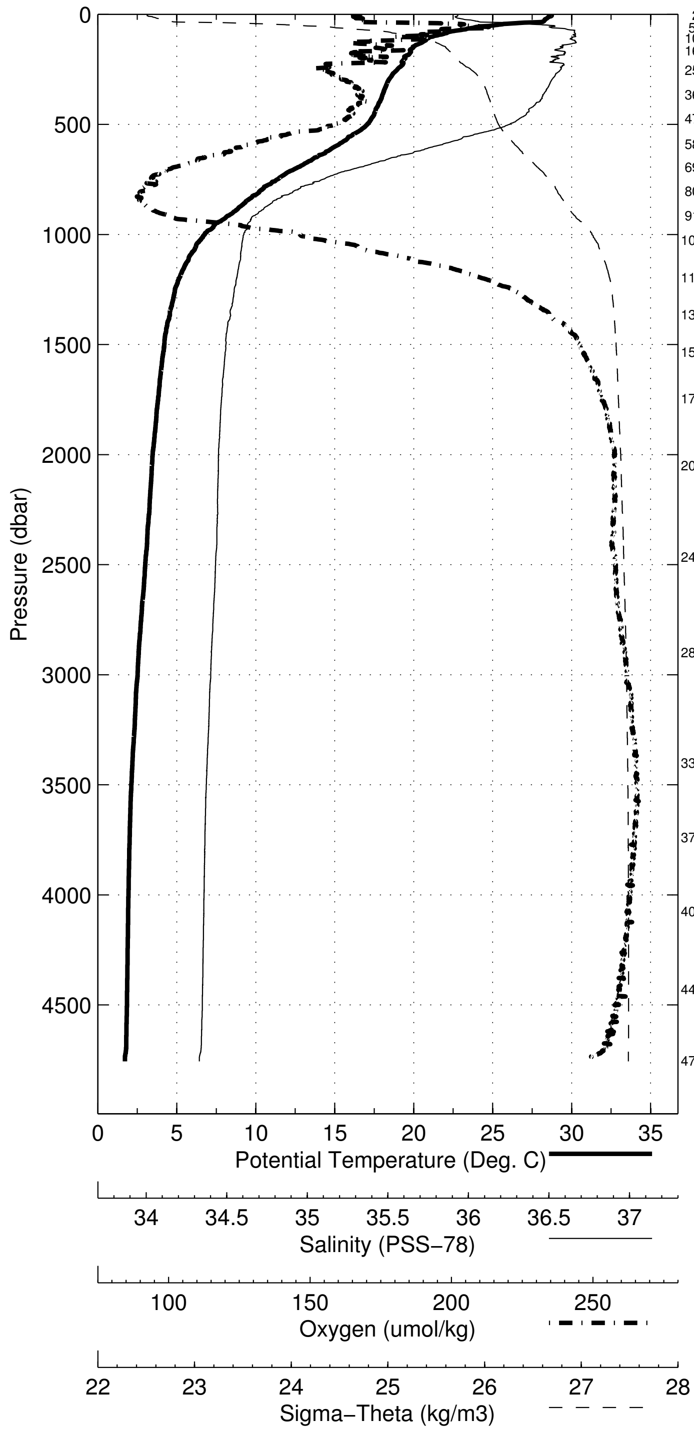

Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 17 (CTD017)
Latitude 26.494 N Longitude 75.905 W
28–Sep–2012 00:44 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS–78)
Oxygen (umol/kg)
Sigma–Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS–78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS–78)
Oxygen (umol/kg)

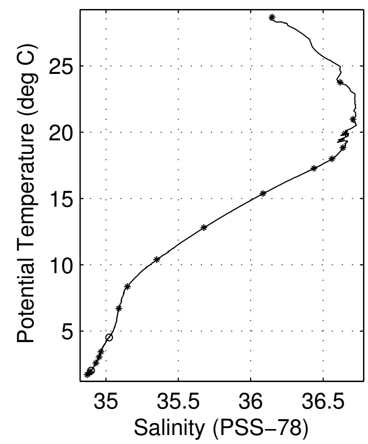
Abaco September - Ocotober 2012 R/V Endeavor CTD Station 18 (CTD018)

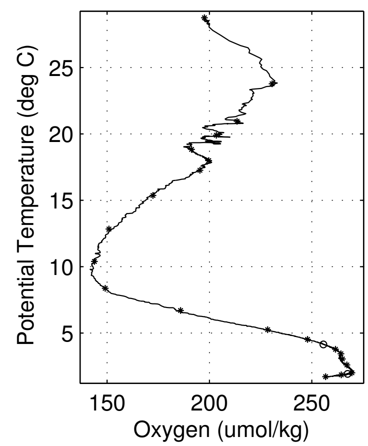
Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.740	28.740	36.145	197.1	0.005	23.011
10	28.624	28.622	36.137	197.9	0.048	23.045
20	28.409	28.404	36.160	199.1	0.096	23.134
30	28.250	28.243	36.232	199.7	0.143	23.242
50	25.081	25.070	36.601	225.0	0.223	24.530
75	22.616	22.601	36.719	220.9	0.298	25.353
100	21.265	21.245	36.726	209.3	0.359	25.741
125	20.623	20.599	36.726	197.8	0.414	25.918
150	19.998	19.970	36.662	204.9	0.466	26.038
200	19.510	19.473	36.645	198.5	0.564	26.156
250	19.013	18.968	36.652	189.0	0.659	26.293
300	18.452	18.399	36.606	195.5	0.747	26.403
400	17.879	17.810	36.534	200.5	0.917	26.495
500	17.155	17.071	36.400	191.9	1.083	26.572
600	15.119	15.026	36.028	169.0	1.240	26.759
700	12.639	12.542	35.641	150.7	1.377	26.981
800	10.406	10.308	35.343	144.2	1.493	27.166
900	8.661	8.562	35.163	147.3	1.595	27.316
1000	6.867	6.769	35.091	183.6	1.677	27.522
1100	5.897	5.797	35.075	209.6	1.743	27.638
1200	5.240	5.135	35.054	230.6	1.800	27.702
1300	4.860	4.749	35.037	242.0	1.852	27.733
1400	4.526	4.409	35.012	250.5	1.903	27.751
1500	4.332	4.208	35.002	254.8	1.952	27.766
1750	3.961	3.818	34.981	261.2	2.072	27.790
2000	3.633	3.470	34.966	264.1	2.189	27.813
2500	3.208	3.004	34.951	264.3	2.418	27.846
3000	2.762	2.516	34.927	267.3	2.638	27.871
3500	2.415	2.125	34.905	269.8	2.851	27.886
4000	2.282	1.940	34.894	268.0	3.064	27.892
4500	2.244	1.845	34.886	265.1	3.284	27.893

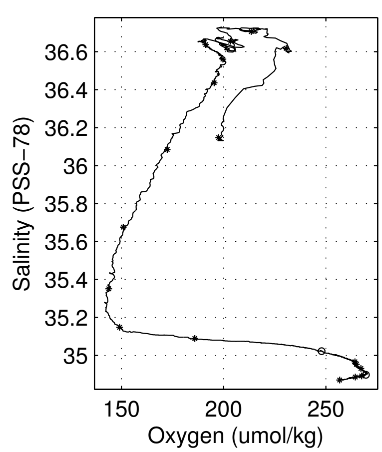
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4755	1	2.145	1.718	34.870	256.7
4429	2	2.245	1.854	34.886	264.4
4074	3	2.273	1.922	34.892	267.5
3739	4	2.334	2.019	34.898	269.5
3400	5	2.465	7.431	−999.000	−999.0
2900	6	2.838	2.601	34.931	267.1
2464	7	3.248	3.047	34.953	264.9
2049	8	3.609	3.443	34.966	264.2
1745	9	3.930	3.788	34.989	261.5
1534	10	4.283	4.157	35.011	255.6
1363	11	4.637	4.523	35.022	247.9
1195	12	5.350	5.244	35.069	228.4
1025	13	6.815	6.714	35.089	185.9
915	14	8.464	8.364	35.148	149.1
804	15	10.493	10.394	35.351	143.9
694	16	12.902	12.804	35.676	150.9
589	17	15.476	15.383	36.085	172.4
474	18	17.354	17.273	36.437	195.3
364	19	18.047	17.983	36.560	199.6
254	20	18.876	18.830	36.637	191.3
164	21	19.944	19.914	36.655	203.3
109	22	20.994	20.973	36.706	213.5
59	23	23.778	23.766	36.618	230.6
3	24	28.680	28.680	36.147	197.5

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 18 (CTD018)
Latitude 26.500 N Longitude 75.702 W
28−Sep−2012 05:39 Z





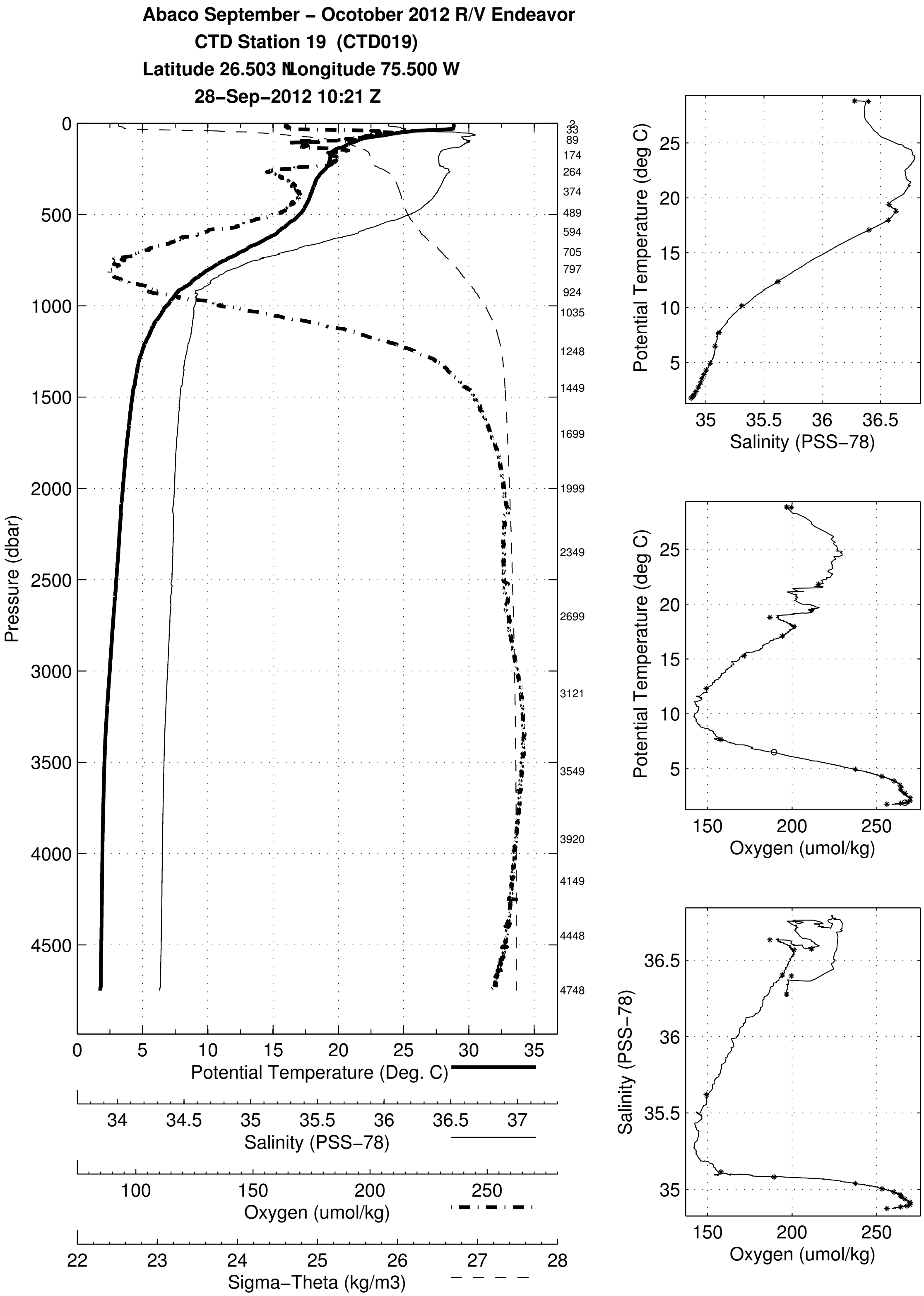




Abaco September - Ocotober 2012 R/V Endeavor CTD Station 19 (CTD019)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.834	28.834	36.265	196.5	0.005	23.070
10	28.840	28.838	36.265	196.7	0.048	23.069
20	28.835	28.830	36.312	197.4	0.096	23.106
30	28.782	28.775	36.362	197.9	0.143	23.162
50	24.853	24.842	36.686	228.8	0.222	24.664
75	22.515	22.499	36.709	222.9	0.295	25.375
100	21.363	21.343	36.757	201.2	0.355	25.737
125	20.528	20.505	36.709	202.0	0.410	25.930
150	19.695	19.667	36.593	215.7	0.461	26.066
200	19.389	19.353	36.571	211.8	0.559	26.131
250	19.073	19.028	36.628	198.7	0.655	26.259
300	18.436	18.383	36.606	195.8	0.744	26.407
400	17.901	17.832	36.543	201.0	0.914	26.497
500	17.084	17.000	36.389	193.6	1.080	26.581
600	15.430	15.335	36.084	171.3	1.237	26.733
700	12.770	12.672	35.663	153.1	1.376	26.973
800	10.177	10.080	35.313	143.3	1.492	27.183
900	8.280	8.182	35.144	154.2	1.590	27.359
1000	6.947	6.848	35.088	176.3	1.671	27.509
1100	5.984	5.883	35.074	207.7	1.738	27.626
1200	5.331	5.225	35.053	228.6	1.796	27.691
1300	4.844	4.733	35.028	242.7	1.850	27.729
1400	4.578	4.461	35.016	249.6	1.901	27.749
1500	4.342	4.218	34.999	255.1	1.950	27.763
1750	3.945	3.802	34.978	261.4	2.071	27.789
2000	3.650	3.488	34.965	264.2	2.188	27.810
2500	3.193	2.990	34.951	264.1	2.417	27.847
3000	2.731	2.486	34.924	268.0	2.637	27.870
3500	2.372	2.083	34.902	269.9	2.847	27.887
4000	2.268	1.926	34.892	267.4	3.058	27.891
4500	2.240	1.841	34.885	264.5	3.279	27.892

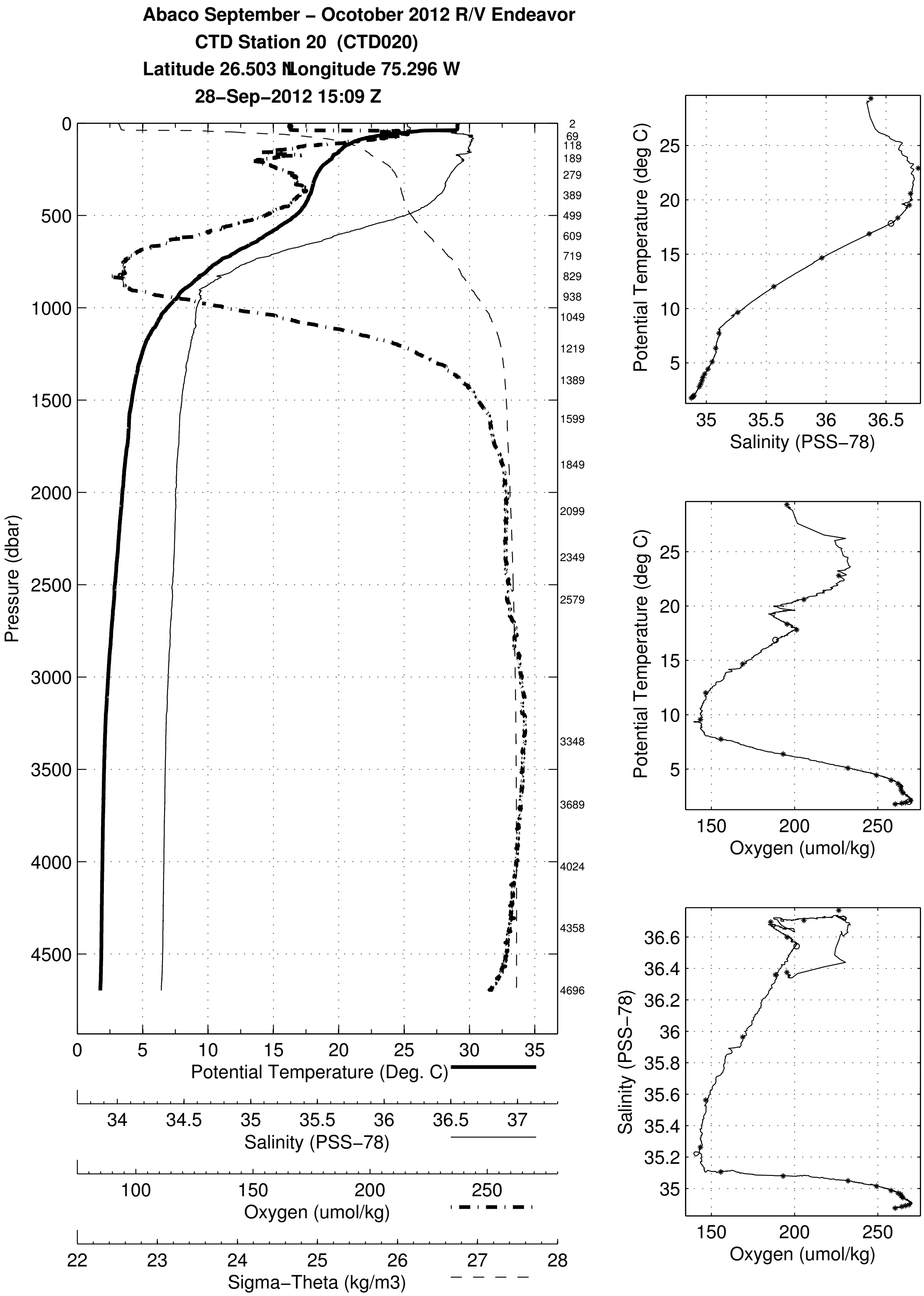
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4749	1	2.187	1.760	34.874	256.0
4449	2	2.243	1.849	34.885	264.2
4149	3	2.257	1.899	34.898	266.7
3921	4	2.276	1.943	34.891	267.9
3549	5	2.352	2.058	34.899	269.6
3121	6	2.605	2.351	34.914	269.7
2699	7	2.980	2.761	34.936	266.7
2349	8	3.332	3.141	34.954	264.2
1999	9	3.670	3.508	34.965	263.8
1700	10	4.016	3.877	34.982	260.3
1449	11	4.421	4.300	35.004	253.2
1249	12	5.043	4.935	35.038	237.5
1035	13	6.586	6.486	35.079	189.4
924	14	7.822	7.725	35.114	157.9
797	15	10.272	10.175	35.308	122.2
705	16	12.466	12.369	35.620	149.3
594	17	15.359	15.265	36.086	171.8
490	18	17.155	17.072	36.403	194.3
374	19	18.019	17.954	36.568	201.2
264	20	18.840	18.792	36.634	186.9
174	21	19.450	19.418	36.573	211.4
89	22	21.859	21.841	36.735	215.5
34	23	28.786	28.778	36.397	199.5
3	24	28.834	28.833	36.278	196.8


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 19 (CTD019)
Latitude 26.503 N Longitude 75.500 W
28−Sep−2012 10:21 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 20 (CTD020)

Pressure dbar	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}	DynHt m^2·s^{-2}	SigT kg·m^{-3}
1	29.130	29.130	36.343	196.2	0.005	23.029
10	29.082	29.079	36.342	196.2	0.048	23.046
20	29.080	29.075	36.348	196.2	0.096	23.051
30	29.079	29.072	36.360	196.4	0.145	23.062
50	25.263	25.252	36.635	228.0	0.228	24.500
75	22.433	22.418	36.710	229.9	0.301	25.399
100	21.211	21.191	36.723	215.2	0.361	25.754
125	20.461	20.438	36.710	200.5	0.416	25.949
150	20.088	20.060	36.708	192.0	0.467	26.049
200	19.324	19.287	36.665	187.8	0.564	26.220
250	18.604	18.560	36.620	193.4	0.654	26.373
300	18.227	18.175	36.582	198.7	0.740	26.441
400	17.769	17.700	36.516	198.6	0.908	26.508
500	16.782	16.699	36.329	188.5	1.072	26.607
600	14.641	14.550	35.944	168.8	1.224	26.799
700	12.194	12.100	35.579	148.2	1.357	27.020
800	10.034	9.938	35.302	144.1	1.469	27.199
900	8.251	8.154	35.109	146.1	1.567	27.336
1000	6.993	6.894	35.087	176.2	1.649	27.502
1100	6.073	5.970	35.082	206.7	1.717	27.622
1200	5.275	5.170	35.052	230.3	1.775	27.696
1300	4.843	4.732	35.028	242.7	1.828	27.728
1400	4.542	4.425	35.014	250.8	1.878	27.752
1500	4.302	4.178	34.999	255.7	1.927	27.767
1750	3.965	3.822	34.980	260.9	2.047	27.789
2000	3.612	3.450	34.963	264.8	2.164	27.812
2500	3.075	2.873	34.943	265.3	2.389	27.851
3000	2.605	2.363	34.918	269.2	2.602	27.876
3500	2.340	2.051	34.901	269.5	2.808	27.888
4000	2.266	1.924	34.893	267.6	3.018	27.892
4500	2.234	1.835	34.885	264.4	3.238	27.892

Pressure dbar	Niskin	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}
4696	1	2.191	1.769	34.876	260.5
4358	2	2.239	1.856	34.885	264.3
4024	3	2.262	1.918	34.891	266.6
3689	4	2.305	1.997	34.897	268.7
3349	5	2.384	2.111	34.910	269.8
2580	6	3.017	2.809	34.942	265.0
2349	7	3.259	3.069	34.954	264.0
2099	8	3.537	3.367	34.963	263.8
1850	9	3.806	3.656	34.971	262.2
1600	10	4.111	3.981	34.987	258.0
1390	11	4.550	4.433	35.015	249.3
1220	12	5.203	5.096	35.049	232.1
1049	13	6.445	6.345	35.079	193.2
938	14	7.825	7.726	35.106	155.6
829	15	9.738	9.640	35.263	143.4
719	16	12.108	12.011	35.563	146.6
610	17	14.760	14.666	35.963	168.8
499	18	16.961	16.877	36.359	188.5
389	19	17.897	17.829	36.541	201.2
279	20	18.397	18.347	36.598	195.5
189	21	19.555	19.520	36.695	185.7
119	22	20.610	20.587	36.705	205.6
69	23	22.937	22.923	36.770	226.5
2	24	29.336	29.335	36.374	195.4



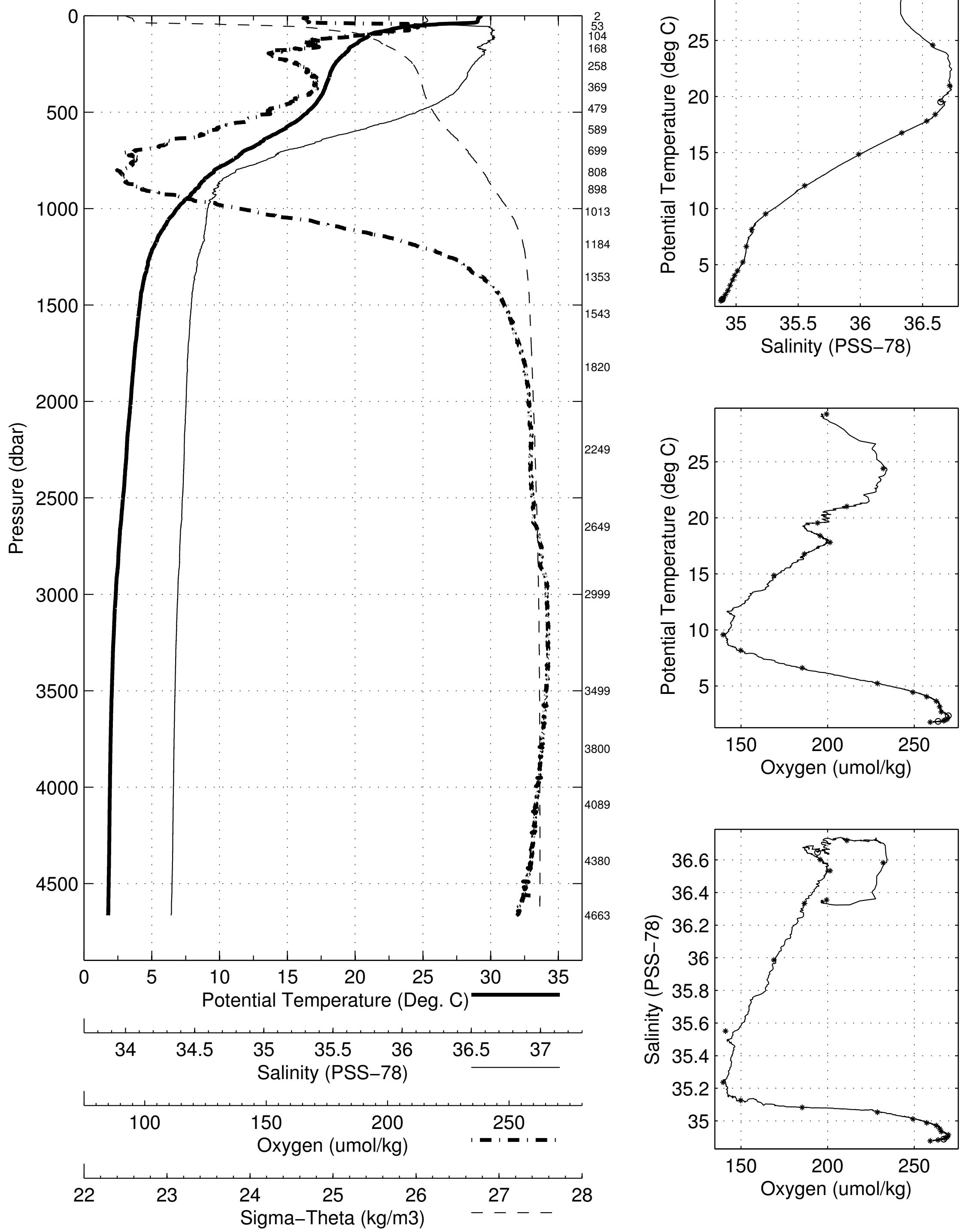
Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 20 (CTD020)
Latitude 26.503 N Longitude 75.296 W
28−Sep−2012 15:09 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 21 (CTD021)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.296	29.295	36.340	196.4	0.005	22.971
10	29.155	29.153	36.339	196.9	0.049	23.019
20	29.071	29.067	36.349	196.9	0.097	23.055
30	29.035	29.028	36.347	197.1	0.145	23.067
50	24.807	24.796	36.553	231.6	0.229	24.578
75	22.458	22.443	36.735	227.9	0.300	25.411
100	21.063	21.043	36.718	214.5	0.359	25.791
125	20.524	20.501	36.719	198.6	0.414	25.939
150	19.999	19.971	36.664	201.1	0.465	26.039
200	19.261	19.225	36.677	186.1	0.561	26.246
250	18.571	18.527	36.617	194.1	0.650	26.379
300	18.201	18.148	36.580	197.4	0.736	26.446
400	17.691	17.622	36.503	198.3	0.903	26.517
500	16.569	16.487	36.288	184.3	1.065	26.625
600	14.525	14.435	35.928	168.2	1.216	26.811
700	11.917	11.823	35.528	145.4	1.348	27.034
800	9.733	9.638	35.252	140.2	1.460	27.210
900	8.332	8.234	35.127	147.4	1.557	27.338
1000	6.959	6.860	35.087	176.4	1.639	27.507
1100	5.992	5.890	35.074	208.0	1.706	27.625
1200	5.239	5.134	35.051	231.2	1.764	27.700
1300	4.790	4.680	35.027	244.8	1.816	27.733
1400	4.449	4.333	35.005	253.3	1.866	27.755
1500	4.249	4.126	34.994	256.9	1.914	27.768
1750	3.880	3.738	34.974	262.1	2.033	27.793
2000	3.610	3.448	34.964	264.3	2.149	27.814
2500	3.077	2.876	34.943	265.6	2.373	27.851
3000	2.586	2.345	34.916	269.7	2.586	27.876
3500	2.344	2.056	34.901	269.5	2.792	27.888
4000	2.254	1.913	34.891	267.3	3.001	27.892
4500	2.220	1.822	34.883	263.4	3.221	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4663	1	2.193	1.776	34.878	259.3
4380	2	2.232	1.847	34.883	263.8
4090	3	2.247	1.895	34.888	267.0
3801	4	2.273	1.953	34.893	267.7
3500	5	2.337	2.049	34.900	269.0
3000	6	2.587	2.345	34.914	269.7
2649	7	2.909	2.696	34.934	265.6
2249	8	3.330	3.149	34.952	264.7
1820	9	3.794	3.647	34.971	262.8
1544	10	4.166	4.040	34.988	257.3
1354	11	4.563	4.450	35.012	249.3
1184	12	5.329	5.225	35.053	228.8
1014	13	6.708	6.610	35.083	185.3
899	14	8.232	8.136	35.125	149.8
809	15	9.622	9.527	35.237	139.7
699	16	12.131	12.037	35.551	141.1
589	17	14.934	14.843	35.987	168.9
480	18	16.843	16.763	36.334	186.6
369	19	17.882	17.818	36.534	201.4
259	20	18.448	18.402	36.602	195.7
169	21	19.543	19.512	36.646	194.2
104	22	20.995	20.975	36.719	211.1
54	23	24.601	24.590	36.583	232.1
2	24	29.241	29.241	36.354	199.4

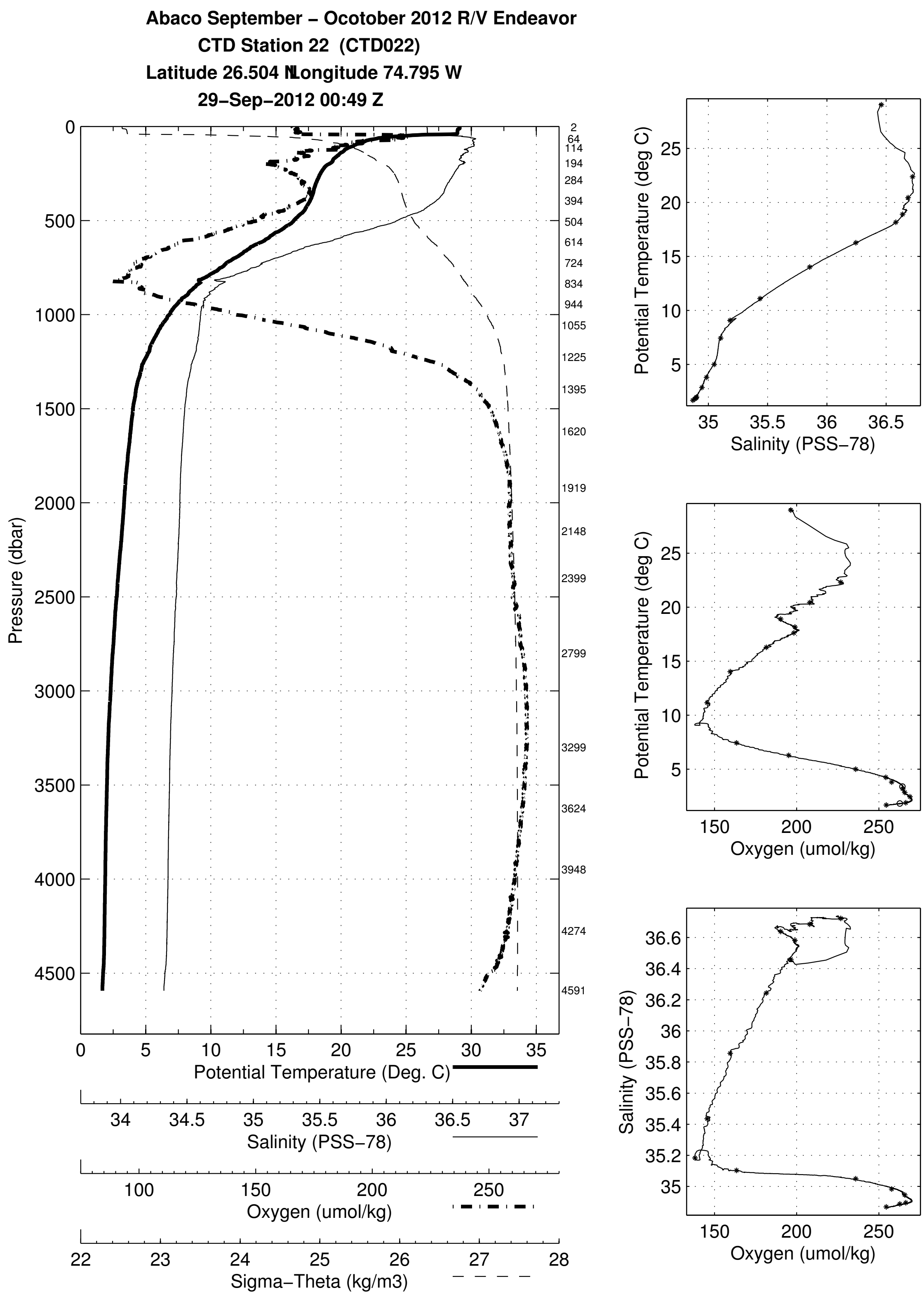
Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 21 (CTD021)
Latitude 26.503 N Longitude 75.072 W
28−Sep−2012 19:58 Z



Abaco September - Ocotober 2012 R/V Endeavor CTD Station 22 (CTD022)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.114	29.114	36.446	195.3	0.005	23.112
10	29.113	29.110	36.446	196.4	0.048	23.113
20	28.957	28.952	36.448	197.2	0.095	23.167
30	28.947	28.939	36.448	197.9	0.142	23.172
50	24.833	24.822	36.623	229.6	0.227	24.623
75	21.951	21.936	36.721	219.8	0.295	25.544
100	21.005	20.986	36.727	210.8	0.353	25.813
125	20.305	20.281	36.687	203.8	0.407	25.974
150	19.860	19.833	36.665	198.7	0.458	26.077
200	19.080	19.044	36.658	187.4	0.553	26.277
250	18.464	18.420	36.608	195.3	0.640	26.399
300	18.129	18.076	36.571	198.8	0.725	26.457
400	17.642	17.573	36.494	197.8	0.891	26.522
500	16.455	16.373	36.267	184.2	1.053	26.636
600	14.286	14.197	35.889	164.5	1.202	26.832
700	11.868	11.775	35.531	148.7	1.332	27.045
800	9.746	9.651	35.260	142.6	1.443	27.214
900	8.164	8.068	35.127	152.1	1.538	27.364
1000	6.897	6.799	35.086	177.2	1.617	27.514
1100	5.963	5.862	35.075	207.2	1.684	27.630
1200	5.328	5.222	35.056	229.0	1.742	27.693
1300	4.728	4.618	35.024	245.7	1.794	27.738
1400	4.358	4.243	35.002	254.3	1.843	27.762
1500	4.141	4.019	34.990	258.5	1.891	27.776
1750	3.760	3.620	34.971	263.3	2.007	27.802
2000	3.498	3.338	34.962	264.6	2.119	27.823
2500	2.969	2.770	34.940	265.4	2.337	27.858
3000	2.546	2.305	34.914	269.7	2.545	27.878
3500	2.306	2.019	34.899	269.3	2.748	27.889
4000	2.225	1.885	34.890	266.1	2.956	27.892
4500	2.116	1.721	34.871	258.3	3.174	27.891

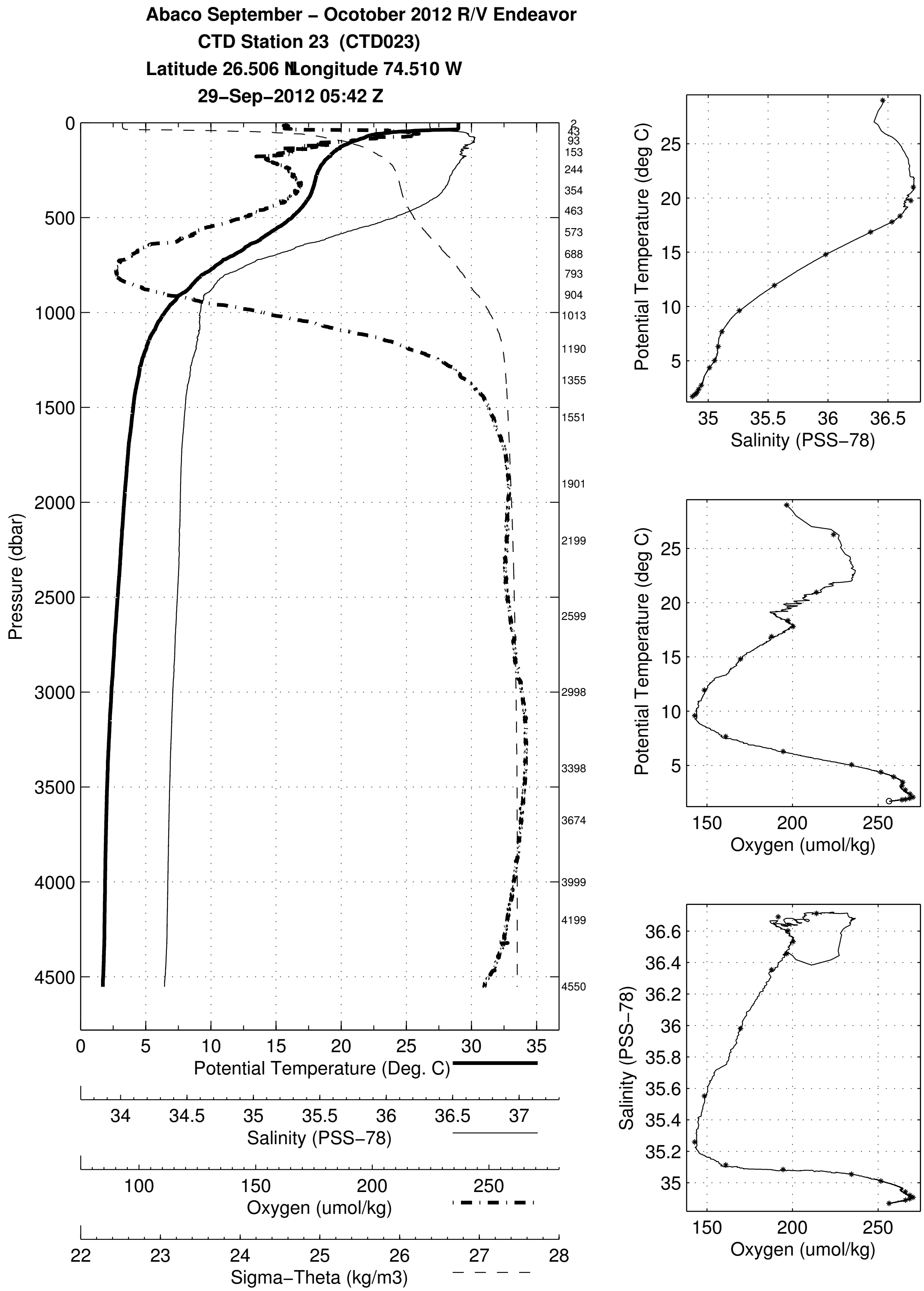
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4591	1	2.077	1.672	34.869	254.6
4274	2	2.197	1.826	34.888	262.7
3949	3	2.232	1.897	34.896	266.4
3624	4	2.278	1.978	34.900	−999.0
3299	5	2.373	7.235	−999.000	−999.0
2800	6	2.665	2.442	34.952	269.0
2400	7	3.048	2.857	34.946	265.7
2149	8	3.343	3.171	34.961	264.5
1919	9	3.547	3.393	34.978	264.3
1620	10	3.933	3.803	34.984	257.8
1395	11	4.350	4.236	35.008	254.3
1225	12	5.108	5.002	35.049	235.9
1055	13	6.359	6.259	35.086	195.1
945	14	7.537	7.440	35.104	163.4
835	15	9.169	9.074	35.183	138.1
724	16	11.190	11.097	35.436	145.5
614	17	14.105	14.014	35.855	159.6
505	18	16.352	16.270	36.244	181.5
394	19	17.691	17.623	36.517	198.3
285	20	18.218	18.168	36.582	198.9
194	21	18.944	18.909	36.639	190.3
114	22	20.460	20.439	36.685	207.9
64	23	22.390	22.377	36.723	226.8
3	24	29.060	29.059	36.460	196.4


Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 22 (CTD022)
Latitude 26.504 N Longitude 74.795 W
29–Sep–2012 00:49 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS–78)
Oxygen (umol/kg)
Sigma–Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS–78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS–78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 23 (CTD023)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	$\mu mol \cdot kg^{-1}$	$m^2 \cdot s^{-2}$	$kg \cdot m^{-3}$
1	29.002	29.002	36.450	195.8	0.005	23.153
10	29.001	28.998	36.450	196.1	0.047	23.154
20	29.006	29.001	36.450	195.4	0.094	23.153
30	28.993	28.985	36.455	195.5	0.141	23.162
50	23.884	23.874	36.652	233.2	0.220	24.931
75	21.876	21.861	36.712	227.7	0.286	25.558
100	20.853	20.834	36.706	211.4	0.344	25.839
125	20.009	19.986	36.653	202.6	0.397	26.027
150	19.538	19.511	36.635	198.5	0.446	26.139
200	18.758	18.723	36.630	191.0	0.538	26.339
250	18.302	18.258	36.590	196.1	0.624	26.426
300	18.075	18.023	36.566	199.2	0.707	26.467
400	17.522	17.453	36.469	196.5	0.873	26.533
500	16.295	16.213	36.238	183.4	1.033	26.651
600	14.173	14.084	35.869	165.8	1.181	26.841
700	11.777	11.684	35.520	148.7	1.309	27.053
800	9.430	9.337	35.231	143.9	1.418	27.244
900	7.875	7.781	35.116	158.4	1.510	27.398
1000	6.545	6.449	35.081	189.1	1.585	27.558
1100	5.684	5.585	35.072	215.4	1.648	27.662
1200	5.072	4.969	35.053	235.1	1.702	27.721
1300	4.642	4.534	35.025	247.8	1.752	27.748
1400	4.364	4.249	35.005	254.0	1.801	27.764
1500	4.158	4.036	34.992	257.8	1.848	27.776
1750	3.769	3.629	34.971	263.3	1.964	27.801
2000	3.493	3.333	34.962	264.2	2.077	27.823
2500	3.039	2.839	34.945	264.0	2.296	27.856
3000	2.595	2.353	34.918	268.2	2.507	27.877
3500	2.317	2.029	34.900	269.0	2.713	27.889
4000	2.214	1.874	34.889	265.7	2.921	27.892
4500	2.120	1.725	34.872	258.3	3.137	27.891

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	$\mu mol \cdot kg^{-1}$
4550	1	2.103	1.702	34.869	256.3
4199	2	2.196	1.834	34.891	263.9
4000	3	2.217	1.877	34.890	265.9
3674	4	2.270	1.964	34.899	268.4
3399	5	2.360	2.082	34.907	270.4
2999	6	2.616	2.374	34.921	268.6
2600	7	2.952	2.743	34.943	265.9
2200	8	3.306	3.130	34.964	263.9
1901	9	3.597	3.445	34.972	264.4
1551	10	4.077	3.951	34.997	259.0
1356	11	4.472	4.360	35.011	251.6
1190	12	5.124	5.021	35.054	234.4
1014	13	6.412	6.316	35.084	194.5
904	14	7.773	7.679	35.114	161.0
794	15	9.713	9.619	35.260	142.8
689	16	12.029	11.937	35.552	148.5
574	17	14.887	14.799	35.981	169.6
463	18	16.938	16.861	36.355	187.8
354	19	17.860	17.799	36.534	200.3
244	20	18.383	18.340	36.602	197.3
153	21	19.788	19.760	36.691	191.6
94	22	21.019	21.001	36.712	213.9
44	23	26.492	26.482	36.461	224.0
3	24	29.000	28.999	36.457	196.7



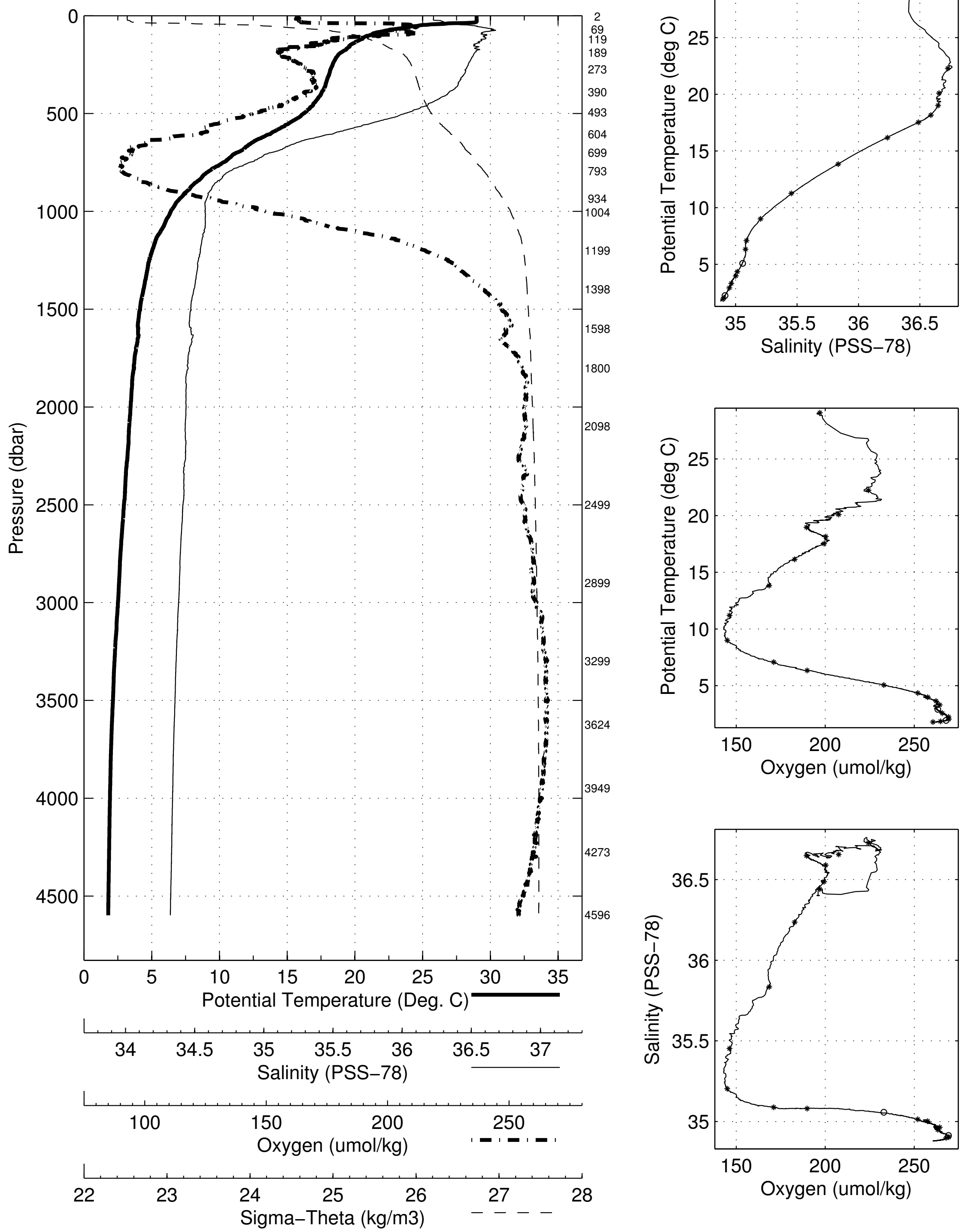
Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 23 (CTD023)
Latitude 26.506 N Longitude 74.510 W
29−Sep−2012 05:42 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
2
43
93
153
244
354
463
573
688
793
904
1013
1190
1355
1551
1901
2199
2599
2998
3398
3674
3999
4199
4550
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 24 (CTD024)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	$\mu mol \cdot kg^{-1}$	$m^2 \cdot s^{-2}$	$kg \cdot m^{-3}$
1	28.977	28.977	36.403	195.8	0.005	23.126
10	28.985	28.983	36.403	195.9	0.047	23.123
20	28.987	28.982	36.402	196.4	0.095	23.123
30	28.988	28.980	36.457	196.5	0.142	23.165
50	24.727	24.717	36.631	229.0	0.223	24.661
75	22.394	22.378	36.762	223.1	0.295	25.450
100	21.113	21.093	36.710	218.0	0.355	25.771
125	20.360	20.336	36.681	207.3	0.409	25.955
150	19.698	19.670	36.641	201.4	0.459	26.101
200	18.799	18.763	36.634	191.2	0.552	26.331
250	18.398	18.354	36.603	196.5	0.638	26.412
300	18.144	18.092	36.579	200.5	0.723	26.459
400	17.565	17.497	36.483	198.9	0.889	26.533
500	16.287	16.206	36.236	183.1	1.049	26.651
600	13.912	13.824	35.829	167.2	1.196	26.866
700	11.353	11.262	35.459	146.7	1.321	27.085
800	9.193	9.102	35.211	144.4	1.427	27.267
900	7.641	7.548	35.105	160.6	1.516	27.424
1000	6.505	6.409	35.080	186.5	1.590	27.563
1100	5.769	5.669	35.077	212.9	1.653	27.655
1200	5.141	5.037	35.054	233.5	1.708	27.714
1300	4.787	4.677	35.035	243.8	1.760	27.740
1400	4.503	4.386	35.015	250.3	1.809	27.757
1500	4.255	4.132	34.997	256.3	1.858	27.770
1750	3.877	3.735	34.981	260.9	1.976	27.799
2000	3.600	3.439	34.970	262.9	2.091	27.819
2500	3.155	2.952	34.953	262.3	2.315	27.852
3000	2.753	2.508	34.927	266.3	2.532	27.871
3500	2.428	2.137	34.906	269.4	2.745	27.885
4000	2.258	1.917	34.892	267.9	2.957	27.892
4500	2.203	1.805	34.881	262.4	3.175	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	$\mu mol \cdot kg^{-1}$
4597	1	2.202	1.793	34.892	260.6
4274	2	2.225	1.853	34.893	264.7
3949	3	2.267	1.931	34.898	267.8
3624	4	2.353	2.051	34.904	269.4
3299	5	2.513	2.242	34.913	269.2
2899	6	2.802	2.566	34.938	265.8
2499	7	3.123	2.920	34.949	263.2
2099	8	3.483	3.314	34.964	264.3
1800	9	3.794	3.648	34.985	262.2
1599	10	4.115	3.984	35.001	257.6
1399	11	4.462	4.346	35.013	251.9
1199	12	5.185	5.081	35.057	232.9
1005	13	6.431	6.336	35.080	189.8
934	14	7.188	7.094	35.088	171.0
794	15	9.105	9.015	35.203	145.0
700	16	11.353	11.263	35.453	146.2
604	17	13.927	13.838	35.835	168.5
494	18	16.252	16.171	36.236	182.8
391	19	17.601	17.534	36.487	199.3
274	20	18.209	18.161	36.590	200.3
189	21	19.045	19.011	36.648	189.5
119	22	20.120	20.097	36.656	207.5
69	23	22.307	22.294	36.728	224.3
3	24	29.073	29.072	36.441	197.0

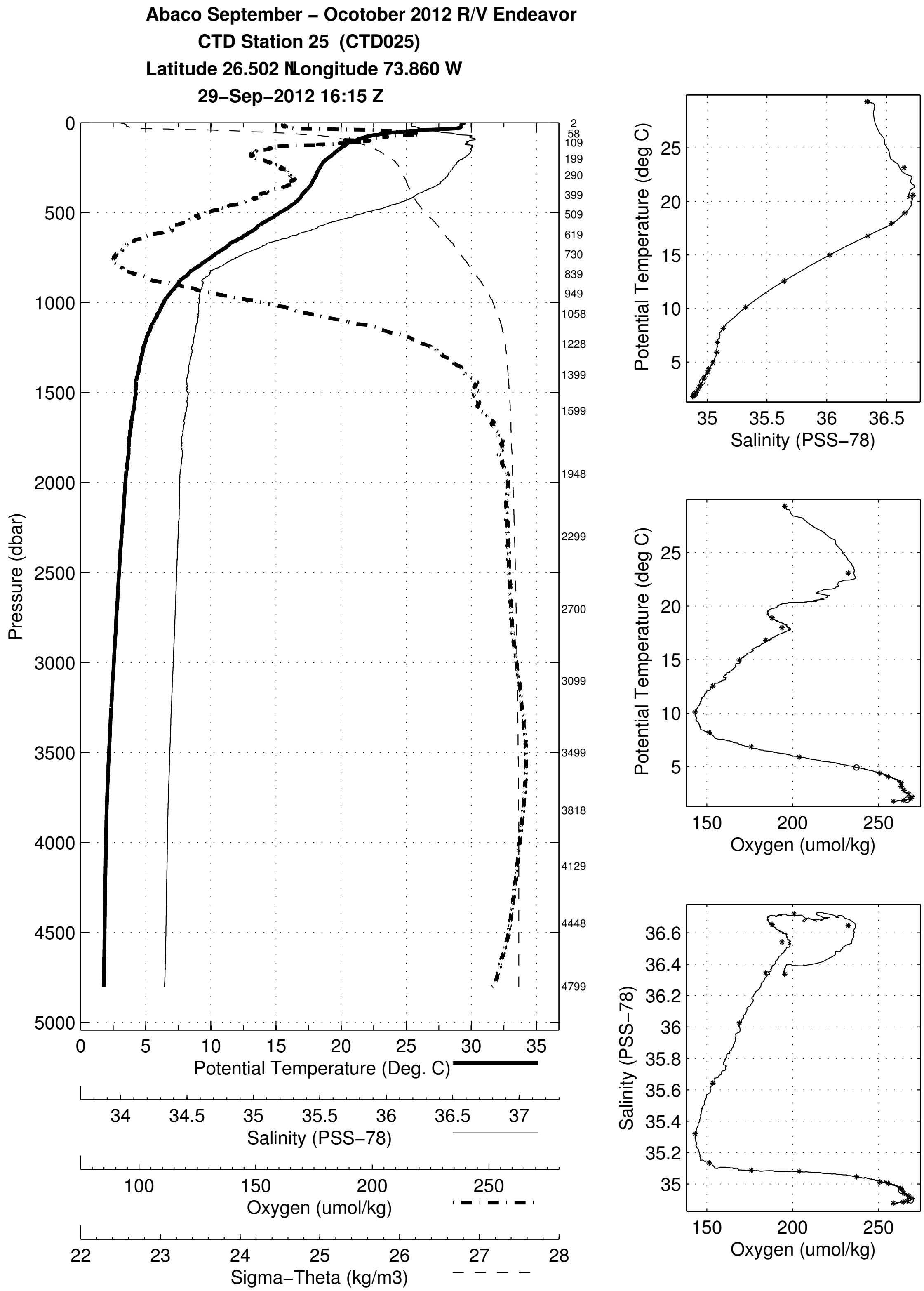
Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 24 (CTD024)
Latitude 26.500 N Longitude 74.233 W
29–Sep–2012 10:38 Z



Abaco September - Ocotober 2012 R/V Endeavor CTD Station 25 (CTD025)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.445	29.445	36.358	194.6	0.005	22.934
10	29.239	29.237	36.349	195.3	0.049	22.998
20	29.226	29.221	36.358	195.2	0.097	23.009
30	28.990	28.982	36.400	198.1	0.146	23.121
50	24.773	24.762	36.516	230.3	0.225	24.560
75	22.092	22.077	36.707	226.3	0.296	25.493
100	21.016	20.997	36.697	221.5	0.355	25.787
125	20.354	20.330	36.711	198.7	0.408	25.979
150	19.835	19.807	36.710	189.5	0.458	26.118
200	18.965	18.929	36.656	187.3	0.551	26.306
250	18.406	18.362	36.599	194.6	0.638	26.407
300	18.067	18.015	36.560	197.1	0.723	26.464
400	17.069	17.002	36.380	187.6	0.887	26.574
500	15.359	15.281	36.071	171.3	1.041	26.736
600	13.290	13.204	35.740	160.8	1.179	26.925
700	11.106	11.017	35.431	146.5	1.300	27.108
800	9.060	8.970	35.205	145.3	1.403	27.283
900	7.498	7.406	35.105	162.5	1.490	27.444
1000	6.479	6.384	35.084	188.5	1.563	27.569
1100	5.741	5.642	35.075	213.5	1.625	27.657
1200	5.153	5.049	35.052	234.4	1.681	27.711
1300	4.775	4.665	35.034	244.4	1.732	27.741
1400	4.486	4.369	35.015	251.1	1.782	27.758
1500	4.339	4.215	35.015	254.1	1.830	27.775
1750	3.875	3.734	34.979	261.9	1.948	27.797
2000	3.595	3.434	34.968	263.8	2.063	27.818
2500	3.151	2.948	34.950	263.9	2.287	27.850
3000	2.794	2.548	34.929	266.3	2.507	27.869
3500	2.462	2.171	34.909	269.2	2.722	27.885
4000	2.284	1.942	34.894	267.3	2.936	27.891
4500	2.239	1.840	34.885	263.9	3.156	27.892

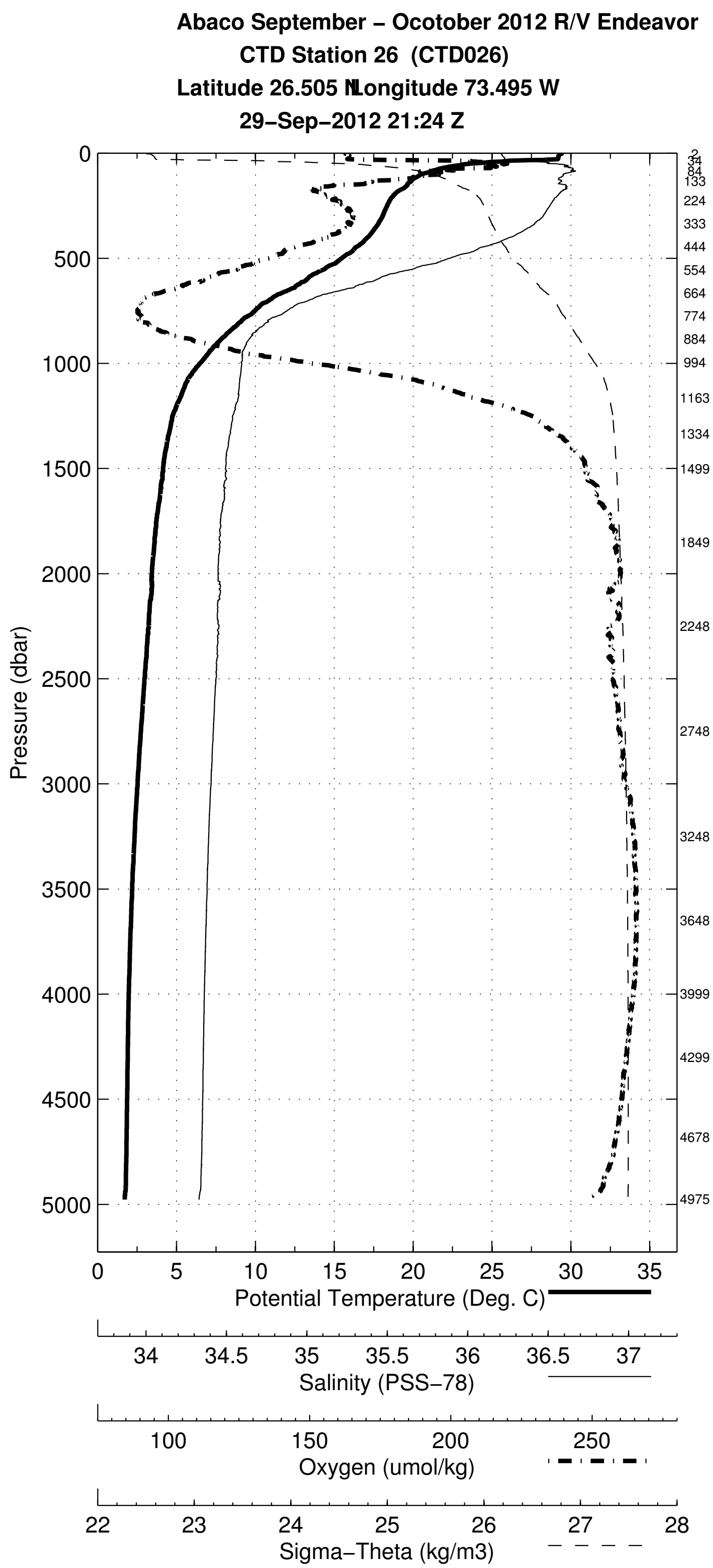
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4800	1	2.199	1.765	34.878	258.6
4449	2	2.241	1.848	34.885	264.4
4130	3	2.270	1.913	34.893	266.6
3819	4	2.323	2.000	34.897	268.7
3500	5	2.471	2.179	34.908	269.5
3099	6	2.714	2.459	34.924	267.6
2700	7	3.006	2.786	34.941	264.9
2299	8	3.337	3.151	34.959	263.2
1949	9	3.652	3.494	34.972	263.0
1599	10	4.177	4.045	35.004	255.7
1399	11	4.479	4.362	35.013	250.8
1229	12	5.024	4.918	35.047	237.1
1059	13	6.015	5.917	35.081	203.8
949	14	6.918	6.825	35.086	175.9
839	15	8.237	8.147	35.134	151.3
730	16	10.198	10.110	35.321	143.2
619	17	12.641	12.555	35.643	153.5
509	18	15.074	14.995	36.026	169.0
400	19	16.843	16.776	36.344	184.2
290	20	17.996	17.946	36.542	193.8
200	21	18.947	18.911	36.653	188.0
109	22	20.599	20.578	36.720	200.8
59	23	23.162	23.150	36.646	232.4
2	24	29.315	29.315	36.336	195.3

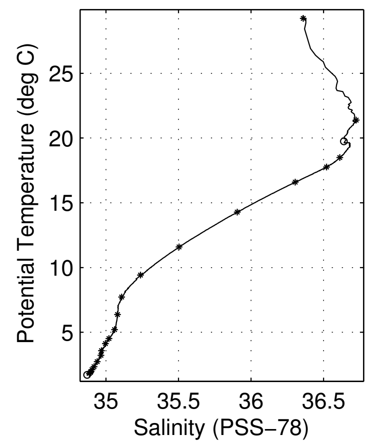

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 25 (CTD025)
Latitude 26.502 N Longitude 73.860 W
29−Sep−2012 16:15 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

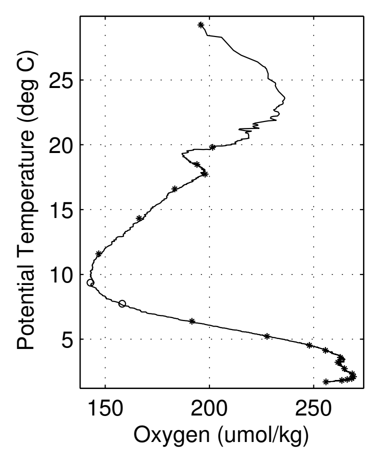
Abaco September - Ocotober 2012 R/V Endeavor CTD Station 26 (CTD026)

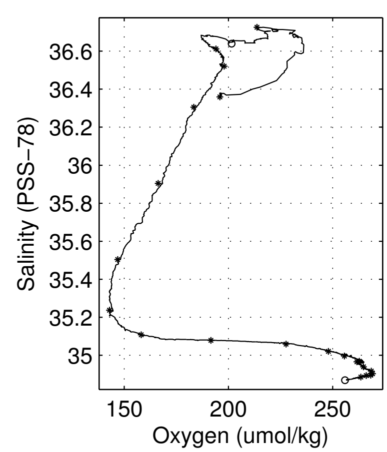
Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.421	29.421	36.358	195.4	0.005	22.942
10	29.251	29.248	36.365	196.4	0.049	23.005
20	29.208	29.203	36.374	196.2	0.097	23.028
30	28.884	28.877	36.377	197.8	0.145	23.140
50	23.594	23.583	36.633	236.1	0.218	25.002
75	21.623	21.608	36.715	220.9	0.283	25.632
100	20.573	20.554	36.665	218.9	0.340	25.884
125	19.982	19.959	36.642	207.9	0.392	26.026
150	19.674	19.646	36.677	194.5	0.441	26.135
200	18.820	18.784	36.641	190.2	0.533	26.332
250	18.395	18.351	36.599	194.9	0.619	26.410
300	18.111	18.059	36.566	197.8	0.704	26.457
400	17.188	17.120	36.404	191.1	0.868	26.564
500	15.547	15.468	36.104	176.0	1.023	26.719
600	13.335	13.250	35.746	159.6	1.163	26.920
700	10.951	10.863	35.411	144.3	1.284	27.120
800	9.202	9.110	35.211	143.1	1.387	27.266
900	7.706	7.613	35.105	158.6	1.477	27.414
1000	6.572	6.476	35.080	186.4	1.552	27.554
1100	5.655	5.556	35.069	217.7	1.615	27.663
1200	5.108	5.004	35.050	235.0	1.670	27.714
1300	4.732	4.623	35.029	246.1	1.721	27.742
1400	4.464	4.348	35.012	252.4	1.770	27.759
1500	4.267	4.143	35.001	256.3	1.818	27.772
1750	3.867	3.725	34.977	262.5	1.936	27.796
2000	3.595	3.433	34.964	264.8	2.052	27.815
2500	3.176	2.972	34.954	262.5	2.277	27.851
3000	2.776	2.530	34.929	265.6	2.497	27.871
3500	2.479	2.188	34.910	268.7	2.712	27.884
4000	2.313	1.970	34.896	267.9	2.927	27.891
4500	2.266	1.866	34.888	265.0	3.149	27.893

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4976	1	2.172	1.716	34.869	256.0
4679	2	2.254	1.832	34.886	263.5
4299	3	2.274	1.897	34.893	266.1
3999	4	2.314	1.971	34.895	268.3
3649	5	2.426	2.119	34.904	269.2
3249	6	2.608	2.340	34.917	268.6
2749	7	2.960	2.736	34.940	264.8
2249	8	3.408	3.226	34.966	261.7
1849	9	3.738	3.588	34.969	262.8
1500	10	4.246	4.123	34.997	255.6
1334	11	4.624	4.513	35.020	248.0
1163	12	5.316	5.214	35.059	227.7
994	13	6.469	6.374	35.079	191.6
884	14	7.815	7.722	35.108	158.2
774	15	9.505	9.415	35.237	142.9
665	16	11.673	11.586	35.503	146.9
554	17	14.370	14.287	35.904	166.3
444	18	16.676	16.602	36.305	183.4
334	19	17.818	17.760	36.521	198.0
224	20	18.539	18.499	36.611	194.0
134	21	19.775	19.750	36.640	201.6
85	22	21.402	21.385	36.725	213.7
34	23	27.223	27.215	36.435	221.1
3	24	29.234	29.234	36.359	195.9


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 26 (CTD026)
Latitude 26.505 N Longitude 73.495 W
29−Sep−2012 21:24 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)


Potential Temperature (deg C)
Salinity (PSS−78)

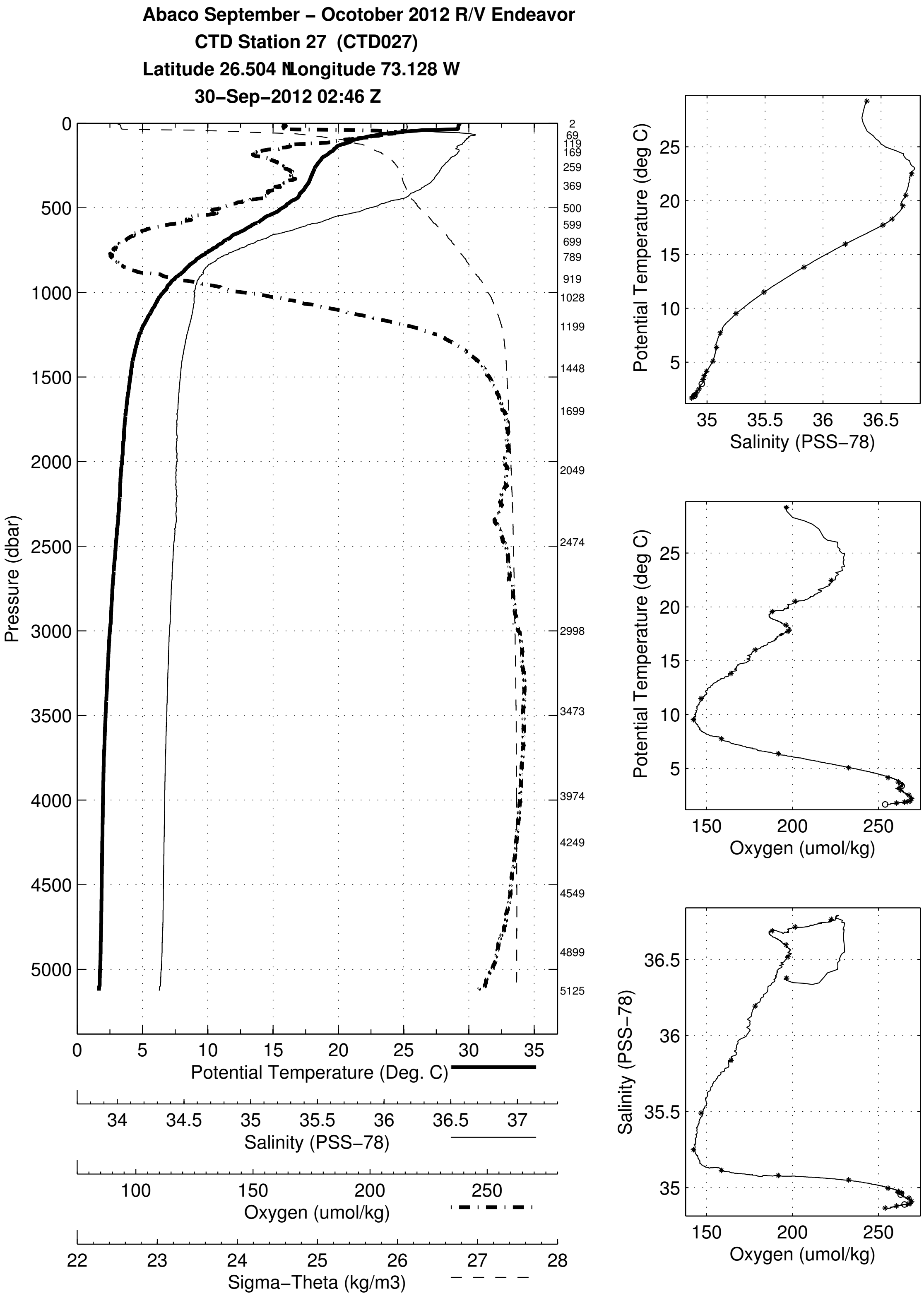

Potential Temperature (deg C)
Oxygen (umol/kg)


Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 27 (CTD027)

Pressure dbar	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}	DynHt m^2·s^{-2}	SigT kg·m^{-3}
1	29.285	29.285	36.370	195.3	0.005	22.997
10	29.212	29.210	36.372	195.8	0.049	23.024
20	29.194	29.189	36.373	195.6	0.097	23.032
30	29.181	29.173	36.372	195.8	0.145	23.037
50	25.064	25.054	36.531	228.3	0.229	24.482
75	22.496	22.481	36.757	223.1	0.302	25.417
100	21.156	21.136	36.730	212.9	0.362	25.774
125	20.290	20.266	36.705	199.5	0.416	25.992
150	19.707	19.680	36.670	194.4	0.466	26.121
200	18.859	18.824	36.645	189.3	0.559	26.324
250	18.364	18.320	36.595	195.9	0.645	26.414
300	18.047	17.995	36.557	198.5	0.729	26.467
400	17.324	17.256	36.430	191.2	0.894	26.550
500	15.800	15.721	36.147	176.3	1.052	26.695
600	13.509	13.423	35.770	160.5	1.193	26.904
700	11.286	11.196	35.454	146.3	1.316	27.093
800	9.273	9.181	35.219	143.9	1.422	27.260
900	7.859	7.765	35.118	158.8	1.514	27.402
1000	6.686	6.589	35.080	183.2	1.590	27.538
1100	5.849	5.749	35.068	211.5	1.655	27.639
1200	5.131	5.027	35.045	234.3	1.711	27.708
1300	4.678	4.569	35.021	247.6	1.763	27.741
1400	4.370	4.255	35.002	254.6	1.812	27.761
1500	4.190	4.067	34.991	258.5	1.860	27.772
1750	3.812	3.671	34.972	263.6	1.977	27.798
2000	3.582	3.421	34.970	262.8	2.091	27.821
2500	3.146	2.944	34.951	263.8	2.314	27.851
3000	2.741	2.496	34.925	267.3	2.532	27.871
3500	2.460	2.169	34.908	268.9	2.746	27.884
4000	2.315	1.972	34.896	267.9	2.961	27.891
4500	2.271	1.871	34.888	265.1	3.183	27.892
5000	2.217	1.758	34.876	259.4	3.415	27.892

Pressure dbar	Niskin	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}
5125	1	2.133	1.660	34.866	253.9
4900	2	2.230	1.782	34.879	260.5
4549	3	2.270	1.864	34.890	265.1
4249	4	2.289	1.918	34.891	267.0
3974	5	2.318	1.978	34.896	268.5
3474	6	2.481	2.192	34.911	269.3
2999	7	2.758	2.512	34.932	267.8
2474	8	3.195	2.994	34.955	262.9
2050	9	3.534	3.368	34.965	263.5
1700	10	3.886	3.749	34.975	261.6
1449	11	4.266	4.147	34.996	255.6
1200	12	5.179	5.074	35.050	232.7
1029	13	6.468	6.370	35.080	191.7
919	14	7.814	7.718	35.113	158.6
790	15	9.598	9.505	35.249	142.3
699	16	11.594	11.503	35.490	146.8
599	17	13.902	13.814	35.836	164.2
500	18	16.047	15.967	36.193	178.3
369	19	17.790	17.726	36.517	197.4
259	20	18.342	18.296	36.596	196.2
169	21	19.561	19.530	36.688	188.2
120	22	20.517	20.495	36.713	201.6
70	23	22.512	22.498	36.764	222.6
2	24	29.251	29.250	36.377	196.5


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 27 (CTD027)
Latitude 26.504 N Longitude 73.128 W
30−Sep−2012 02:46 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
2
69
119
169
259
369
500
599
699
789
919
1028
1199
1448
1699
2049
2474
2998
3473
3974
4249
4549
4899
5125
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 28 (CTD028)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.047	29.047	36.230	195.7	0.005	22.972
10	29.044	29.042	36.233	196.4	0.049	22.976
20	28.992	28.987	36.260	196.3	0.097	23.014
30	27.292	27.285	36.323	211.7	0.144	23.623
50	24.153	24.143	36.698	216.4	0.214	24.885
75	22.714	22.698	36.776	210.8	0.286	25.369
100	21.732	21.712	36.752	210.9	0.349	25.631
125	20.765	20.741	36.727	202.9	0.406	25.880
150	20.113	20.085	36.725	191.6	0.458	26.056
200	18.920	18.884	36.652	190.1	0.552	26.314
250	18.367	18.323	36.599	196.7	0.638	26.416
300	18.068	18.015	36.559	196.5	0.722	26.463
400	17.321	17.253	36.430	192.6	0.887	26.551
500	15.881	15.801	36.163	175.5	1.045	26.688
600	13.608	13.521	35.787	156.6	1.187	26.896
700	11.621	11.529	35.497	145.3	1.313	27.065
800	9.737	9.642	35.264	141.7	1.423	27.219
900	8.225	8.128	35.140	152.8	1.518	27.364
1000	6.961	6.862	35.086	176.2	1.599	27.506
1100	6.002	5.900	35.074	207.7	1.667	27.624
1200	5.347	5.241	35.057	228.6	1.725	27.692
1300	4.971	4.859	35.036	240.1	1.779	27.720
1400	4.617	4.499	35.018	249.3	1.831	27.747
1500	4.373	4.249	35.004	254.4	1.880	27.763
1750	3.910	3.767	34.973	262.6	2.001	27.789
2000	3.610	3.449	34.963	264.9	2.117	27.813
2500	3.144	2.942	34.947	265.0	2.344	27.849
3000	2.800	2.554	34.929	266.5	2.564	27.869
3500	2.472	2.180	34.909	268.7	2.779	27.884
4000	2.331	1.988	34.897	268.0	2.995	27.890
4500	2.277	1.877	34.889	265.5	3.217	27.893
5000	2.250	1.789	34.880	261.5	3.450	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
5205	1	2.175	1.690	34.873	255.0
4898	2	2.261	1.813	34.887	262.9
4450	3	2.284	1.889	34.890	266.2
4082	4	2.317	1.965	34.904	268.1
3701	5	2.418	2.105	34.903	269.9
3200	6	2.668	2.403	34.921	268.9
2700	7	3.004	2.784	34.946	265.1
2199	8	3.460	3.282	34.957	264.7
1959	9	3.643	3.485	34.963	264.8
1600	10	4.165	4.033	34.991	258.3
1423	11	4.519	4.400	35.013	251.3
1254	12	5.010	4.902	35.040	238.4
1088	13	6.075	5.974	35.074	205.5
944	14	7.413	7.317	35.095	165.8
824	15	9.064	8.970	35.198	145.4
715	16	11.383	11.291	35.467	145.7
605	17	13.805	13.717	35.817	158.0
494	18	16.181	16.101	36.216	178.5
384	19	17.624	17.558	36.497	197.2
275	20	18.240	18.192	36.580	196.9
191	21	19.367	19.332	36.692	185.5
104	22	21.585	21.565	36.742	209.4
54	23	23.856	23.845	36.741	214.5
3	24	29.025	29.025	36.233	196.5

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 28 (CTD028)
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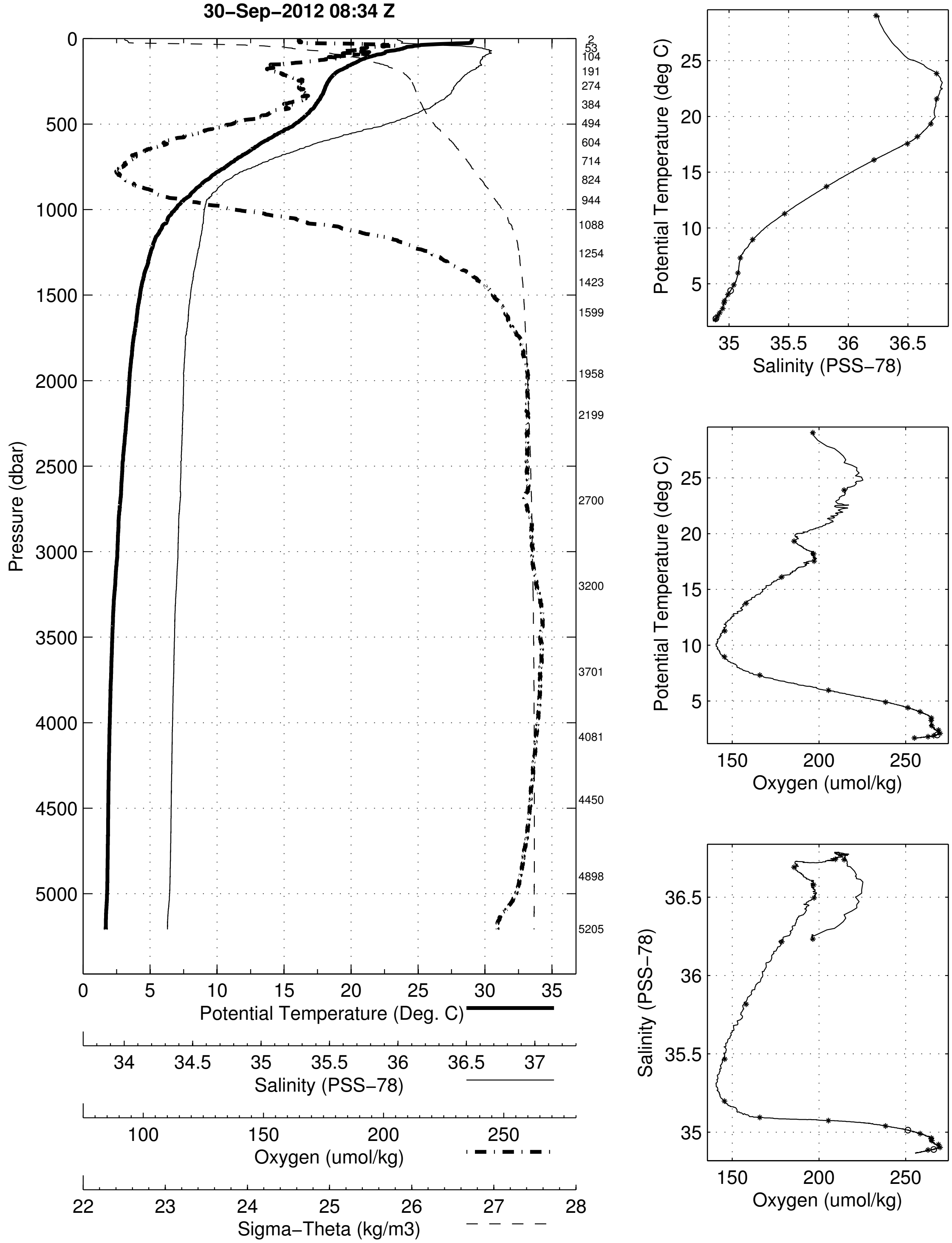
30−Sep−2012 08:34 Z

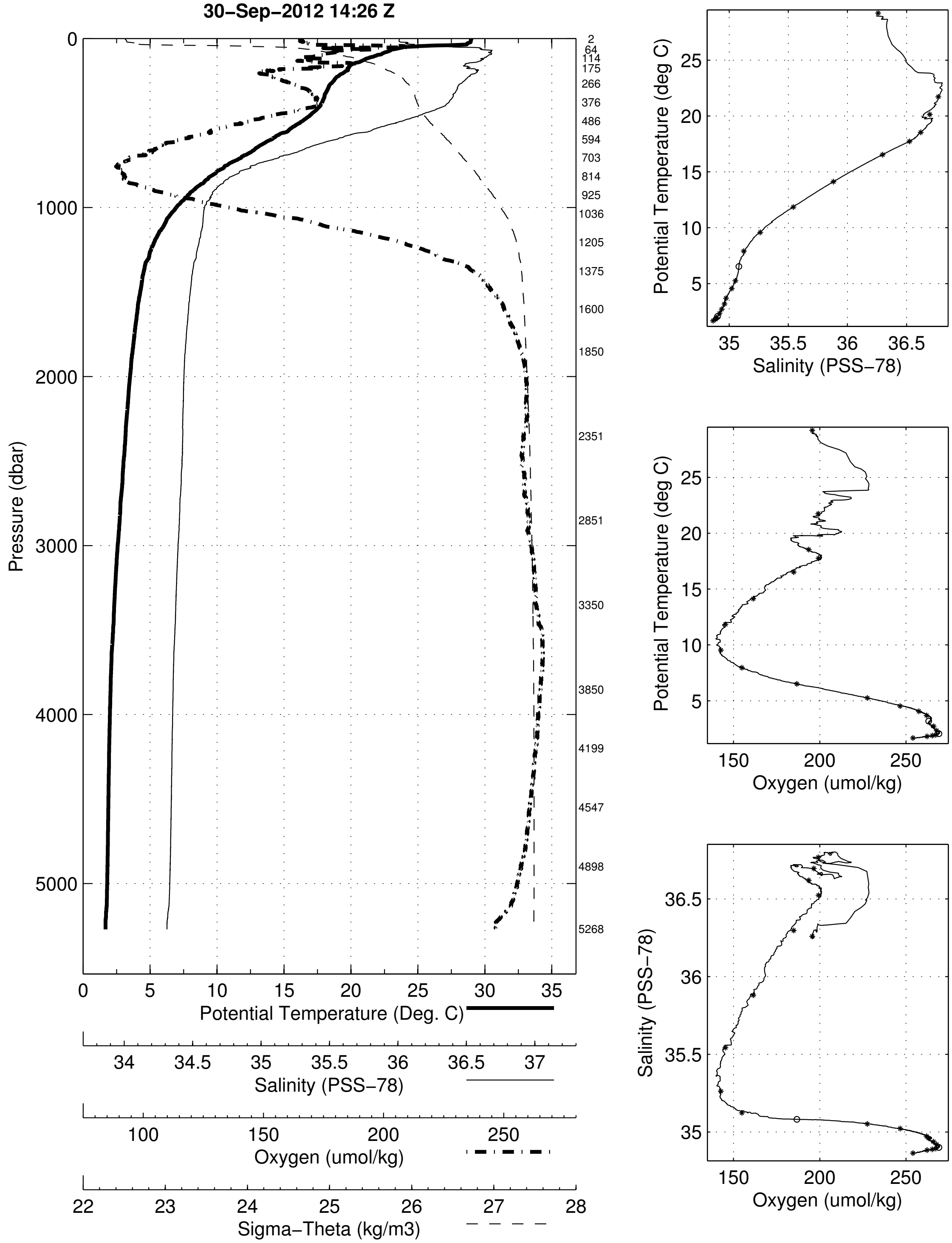


Abaco September - Ocotober 2012 R/V Endeavor CTD Station 29 (CTD029)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.005	29.005	36.251	195.6	0.005	23.002
10	28.953	28.950	36.248	196.1	0.048	23.018
20	28.943	28.938	36.255	196.4	0.097	23.027
30	28.683	28.676	36.290	198.1	0.145	23.141
50	24.055	24.045	36.571	228.0	0.225	24.818
75	22.862	22.847	36.796	207.2	0.296	25.341
100	21.927	21.907	36.779	201.4	0.359	25.596
125	21.021	20.997	36.744	198.2	0.417	25.823
150	20.162	20.133	36.643	212.6	0.470	25.980
200	19.527	19.490	36.710	183.5	0.569	26.201
250	18.755	18.710	36.637	190.3	0.660	26.347
300	18.308	18.255	36.593	197.7	0.747	26.429
400	17.748	17.679	36.516	200.7	0.915	26.513
500	16.251	16.170	36.228	178.0	1.076	26.653
600	14.056	13.967	35.857	159.0	1.222	26.856
700	11.934	11.840	35.535	144.3	1.351	27.036
800	9.920	9.824	35.286	142.0	1.463	27.205
900	8.298	8.201	35.145	151.4	1.559	27.358
1000	7.055	6.955	35.089	174.0	1.641	27.495
1100	6.178	6.075	35.077	201.7	1.710	27.604
1200	5.455	5.348	35.057	225.3	1.770	27.679
1300	5.002	4.890	35.038	238.5	1.825	27.718
1400	4.578	4.461	35.014	250.2	1.876	27.747
1500	4.387	4.263	35.003	254.6	1.926	27.761
1750	3.977	3.834	34.980	261.1	2.047	27.788
2000	3.667	3.504	34.965	264.4	2.165	27.809
2500	3.225	3.021	34.954	263.4	2.394	27.847
3000	2.828	2.581	34.931	265.9	2.618	27.868
3500	2.537	2.244	34.912	269.1	2.836	27.882
4000	2.346	2.002	34.898	267.9	3.053	27.890
4500	2.293	1.892	34.891	265.7	3.277	27.893
5000	2.260	1.799	34.881	261.6	3.511	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
5268	1	2.161	1.669	34.864	254.0
4899	2	2.269	1.820	34.883	262.2
4547	3	2.291	1.884	34.889	265.3
4199	4	2.311	1.945	34.894	267.3
3851	5	2.384	2.056	34.901	269.1
3351	6	2.612	2.333	34.919	267.8
2851	7	2.949	2.714	34.937	266.0
2352	8	3.376	3.184	34.960	263.1
1851	9	3.837	3.686	34.973	262.0
1601	10	4.177	4.045	35.000	257.4
1375	11	4.670	4.554	35.022	246.6
1206	12	5.352	5.245	35.052	227.6
1037	13	6.623	6.522	35.082	186.7
926	14	8.000	7.902	35.124	154.9
815	15	9.672	9.577	35.262	142.6
704	16	11.946	11.852	35.543	145.3
595	17	14.206	14.117	35.881	161.4
486	18	16.621	16.541	36.297	184.9
376	19	17.798	17.733	36.524	199.3
267	20	18.578	18.531	36.620	193.6
176	21	20.181	20.148	36.696	196.6
115	22	21.737	21.714	36.768	199.1
64	23	23.661	23.707	−999.000	−999.0
2	24	29.214	29.213	36.260	195.6

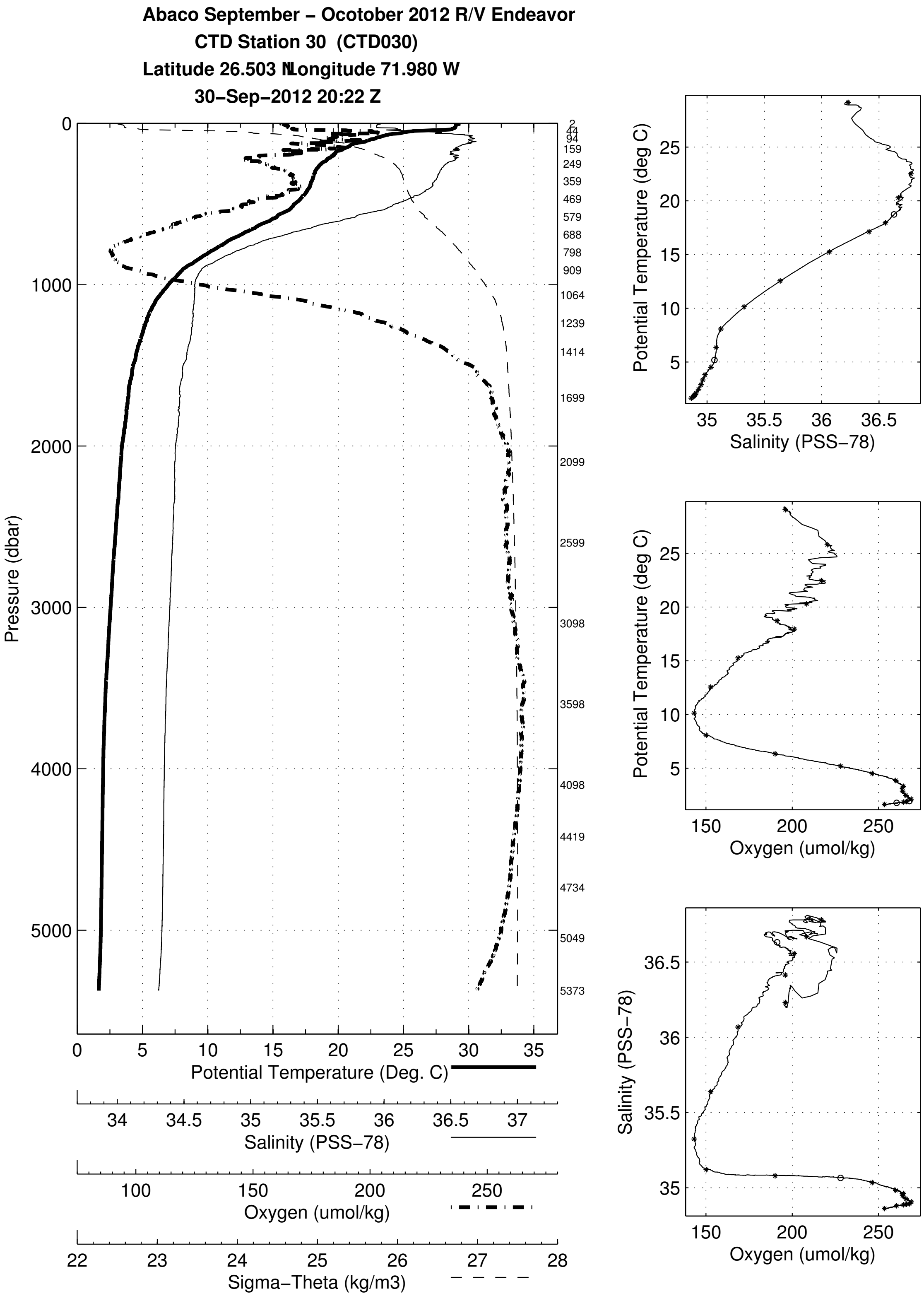
Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 29 (CTD029)
Latitude 26.511 N Longitude 72.382 W
30−Sep−2012 14:26 Z



Abaco September - Ocotober 2012 R/V Endeavor CTD Station 30 (CTD030)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	$\mu mol \cdot kg^{-1}$	$m^2 \cdot s^{-2}$	$kg \cdot m^{-3}$
1	29.316	29.316	36.230	195.0	0.005	22.881
10	29.057	29.055	36.202	196.6	0.049	22.949
20	28.993	28.988	36.200	196.6	0.098	22.970
30	28.897	28.890	36.316	198.6	0.147	23.090
50	25.645	25.634	36.455	222.1	0.235	24.245
75	23.620	23.604	36.773	214.4	0.316	25.102
100	22.498	22.478	36.762	213.5	0.384	25.422
125	21.355	21.330	36.778	198.4	0.445	25.757
150	20.673	20.644	36.687	213.9	0.501	25.876
200	19.688	19.651	36.700	188.8	0.603	26.152
250	18.775	18.731	36.633	190.0	0.695	26.339
300	18.291	18.238	36.589	197.0	0.781	26.430
400	17.831	17.762	36.529	200.8	0.950	26.503
500	16.738	16.655	36.314	185.7	1.114	26.606
600	14.919	14.827	35.990	166.4	1.268	26.774
700	12.430	12.334	35.610	152.1	1.403	26.998
800	10.201	10.103	35.322	143.5	1.518	27.186
900	8.276	8.179	35.130	149.1	1.616	27.349
1000	7.078	6.978	35.083	170.6	1.699	27.488
1100	6.118	6.016	35.079	202.2	1.768	27.613
1200	5.517	5.409	35.073	220.8	1.828	27.684
1300	5.114	5.001	35.063	233.5	1.883	27.725
1400	4.735	4.616	35.041	245.1	1.934	27.752
1500	4.401	4.276	35.012	252.8	1.984	27.766
1750	3.978	3.835	34.990	259.7	2.103	27.796
2000	3.583	3.422	34.965	264.0	2.219	27.817
2500	3.166	2.963	34.950	263.8	2.445	27.849
3000	2.799	2.553	34.930	265.1	2.665	27.870
3500	2.468	2.176	34.908	268.8	2.881	27.884
4000	2.331	1.987	34.897	267.8	3.097	27.890
4500	2.300	1.899	34.891	265.5	3.320	27.892
5000	2.271	1.809	34.882	262.1	3.555	27.892

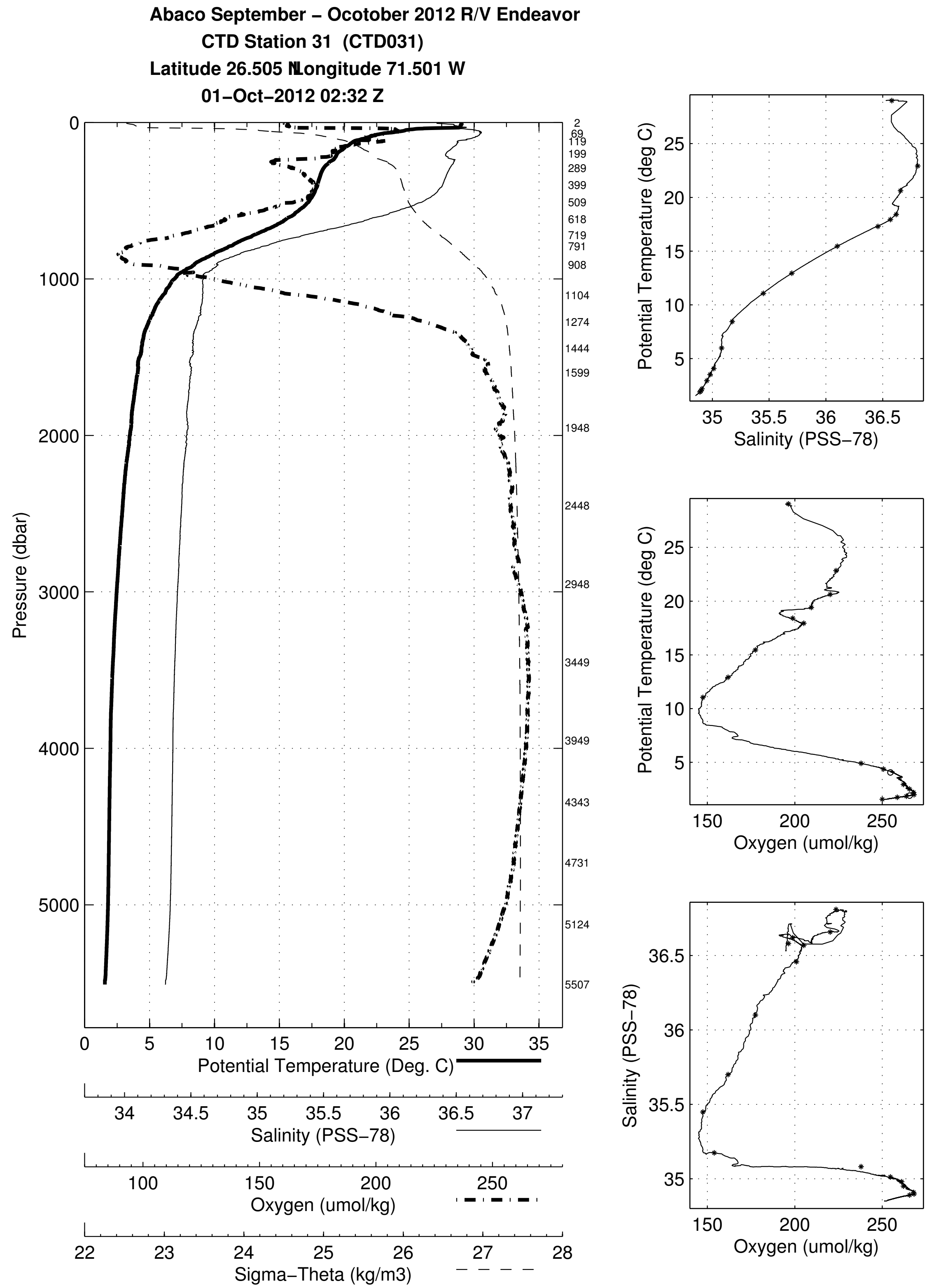
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	$\mu mol \cdot kg^{-1}$
5373	1	2.152	1.647	34.862	253.5
5049	2	2.260	1.793	34.881	260.4
4734	3	2.289	1.859	34.886	264.4
4420	4	2.306	1.914	34.891	266.3
4099	5	2.315	1.960	34.894	267.9
3599	6	2.433	2.132	34.906	269.0
3099	7	2.738	2.483	34.926	265.9
2599	8	3.100	2.888	34.947	263.9
2099	9	3.505	3.335	34.962	264.4
1699	10	3.966	3.828	34.982	259.9
1414	11	4.638	4.518	35.034	246.4
1239	12	5.301	5.192	35.065	228.0
1064	13	6.462	6.360	35.079	190.0
909	14	8.179	8.081	35.120	150.2
799	15	10.238	10.140	35.324	143.3
689	16	12.658	12.562	35.639	152.7
579	17	15.349	15.258	36.068	168.6
470	18	17.202	17.122	36.414	196.0
360	19	18.019	17.956	36.556	201.2
250	20	18.784	18.740	36.632	191.3
159	21	20.318	20.288	36.668	208.3
95	22	22.527	22.508	36.780	216.8
45	23	26.372	26.362	36.405	220.3
3	24	29.148	29.148	36.231	196.0


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 30 (CTD030)
Latitude 26.503 N Longitude 71.980 W
30−Sep−2012 20:22 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 31 (CTD031)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.017	29.017	36.535	194.8	0.005	23.211
10	29.043	29.041	36.599	195.7	0.046	23.252
20	28.960	28.955	36.645	196.2	0.092	23.315
30	28.933	28.926	36.710	196.6	0.138	23.374
50	24.706	24.695	36.774	228.3	0.212	24.775
75	22.701	22.686	36.797	223.6	0.284	25.388
100	21.645	21.625	36.751	218.0	0.345	25.654
125	20.686	20.662	36.660	222.3	0.402	25.851
150	20.290	20.262	36.644	213.4	0.456	25.946
200	19.486	19.449	36.588	209.5	0.557	26.119
250	18.934	18.890	36.638	191.3	0.652	26.302
300	18.402	18.349	36.607	198.6	0.740	26.416
400	17.999	17.929	36.566	204.3	0.910	26.490
500	17.399	17.314	36.455	199.4	1.077	26.556
600	16.004	15.907	36.182	179.8	1.238	26.679
700	13.691	13.589	35.794	166.6	1.385	26.887
800	11.100	10.998	35.435	147.3	1.510	27.115
900	8.640	8.540	35.171	148.9	1.613	27.325
1000	7.029	6.930	35.087	173.8	1.696	27.497
1100	6.165	6.062	35.079	198.2	1.765	27.608
1200	5.444	5.337	35.068	223.2	1.824	27.689
1300	4.914	4.803	35.041	240.6	1.878	27.731
1400	4.587	4.469	35.023	249.7	1.928	27.754
1500	4.341	4.217	35.010	253.5	1.977	27.771
1750	3.948	3.805	34.994	259.1	2.095	27.802
2000	3.635	3.473	34.982	259.6	2.210	27.826
2500	3.083	2.882	34.948	263.2	2.430	27.855
3000	2.706	2.462	34.925	266.0	2.645	27.873
3500	2.437	2.146	34.907	268.3	2.857	27.885
4000	2.324	1.981	34.897	267.6	3.071	27.891
4500	2.287	1.886	34.890	265.0	3.294	27.893
5000	2.259	1.798	34.881	261.4	3.528	27.892
5500	2.076	1.557	34.851	251.5	3.769	27.887

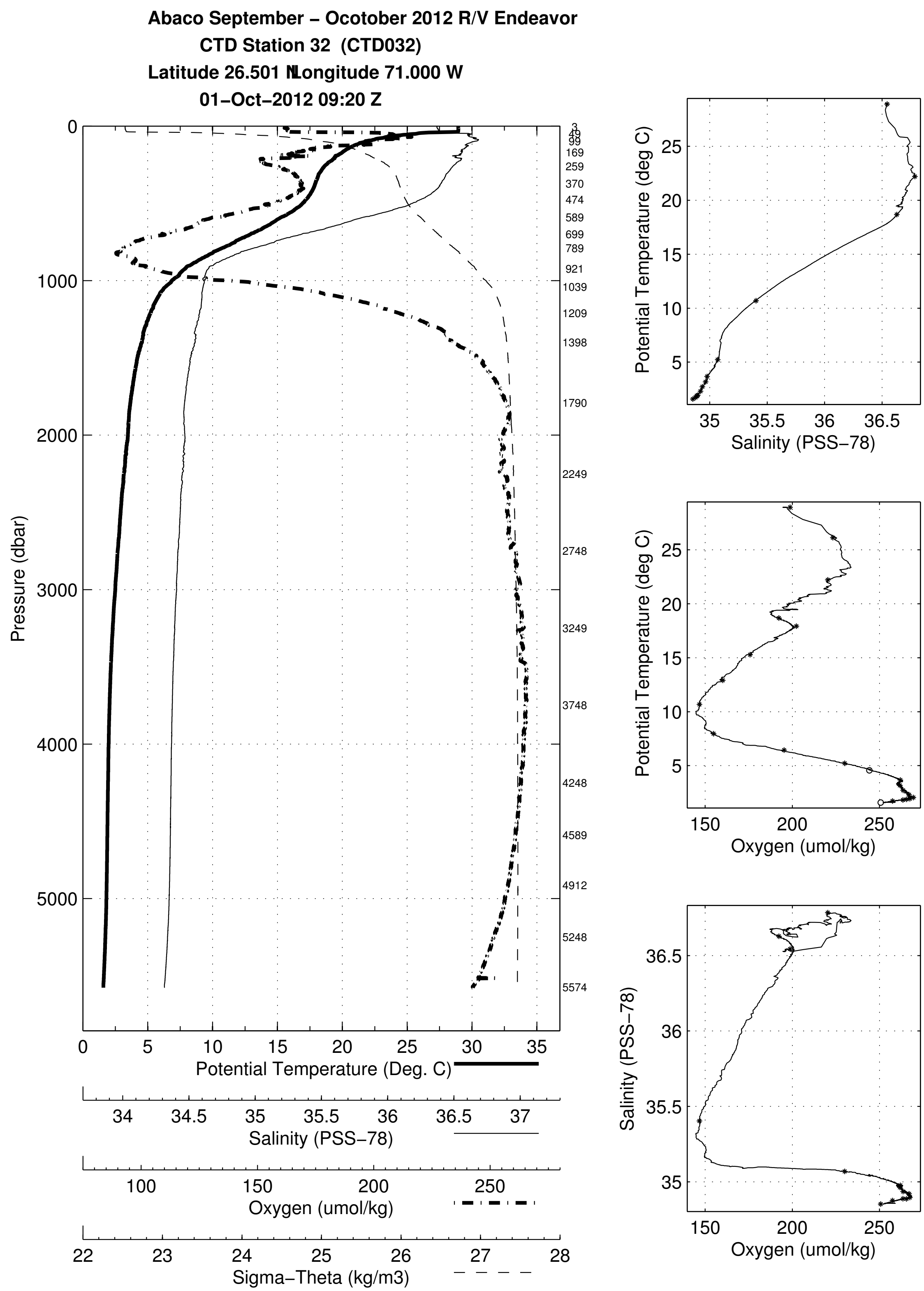
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
5508	1	2.077	1.557	34.870	250.0
5124	2	2.232	1.756	34.883	258.6
4732	3	2.278	1.849	34.902	263.8
4344	4	2.295	1.912	34.891	265.7
3949	5	2.330	1.992	34.899	268.2
3449	6	2.476	2.189	34.909	268.0
2948	7	2.764	2.523	34.940	265.6
2449	8	3.151	2.953	34.951	262.2
1949	9	3.678	3.520	34.981	261.1
1599	10	4.205	4.073	35.013	254.7
1444	11	4.487	4.367	35.030	250.7
1275	12	5.010	4.900	35.052	237.9
1104	13	6.095	5.992	35.082	237.9
909	14	8.546	8.446	35.175	153.9
792	15	11.180	11.078	35.449	147.4
719	16	13.042	12.940	35.700	161.8
619	17	15.546	15.448	36.100	177.5
510	18	17.385	17.298	36.458	201.0
400	19	18.007	17.938	36.568	205.2
290	20	18.459	18.408	36.620	198.8
200	21	19.450	19.414	36.599	209.4
120	22	20.642	20.619	36.658	220.3
69	23	22.943	22.928	36.809	223.6
3	24	28.997	28.997	36.581	196.3


Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 31 (CTD031)
Latitude 26.505 N Longitude 71.501 W
01–Oct–2012 02:32 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS–78)
Oxygen (umol/kg)
Sigma–Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS–78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS–78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 32 (CTD032)

Pressure dbar	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}	DynHt m^2·s^{-2}	SigT kg·m^{-3}
1	28.937	28.937	36.528	195.5	0.005	23.233
10	28.946	28.943	36.528	195.5	0.046	23.231
20	28.954	28.949	36.534	196.2	0.093	23.233
30	28.946	28.939	36.541	195.8	0.139	23.242
50	25.649	25.638	36.732	226.9	0.221	24.454
75	23.194	23.179	36.761	228.3	0.297	25.218
100	21.903	21.884	36.753	221.7	0.361	25.583
125	20.948	20.924	36.719	216.0	0.419	25.824
150	20.347	20.318	36.682	204.1	0.473	25.960
200	19.487	19.451	36.646	198.3	0.573	26.163
250	18.796	18.752	36.636	190.7	0.665	26.336
300	18.329	18.276	36.595	197.8	0.752	26.425
400	17.860	17.791	36.535	200.1	0.921	26.500
500	17.030	16.946	36.376	191.4	1.086	26.584
600	15.174	15.081	36.040	172.7	1.242	26.756
700	13.009	12.911	35.693	159.2	1.382	26.948
800	10.555	10.456	35.368	146.8	1.501	27.160
900	8.392	8.294	35.155	151.4	1.601	27.351
1000	6.972	6.873	35.095	179.0	1.682	27.511
1100	5.943	5.842	35.084	211.2	1.748	27.640
1200	5.364	5.258	35.071	228.2	1.805	27.701
1300	4.908	4.796	35.048	241.0	1.858	27.737
1400	4.657	4.539	35.042	245.8	1.908	27.761
1500	4.321	4.198	35.013	253.6	1.956	27.776
1750	3.850	3.708	34.981	261.6	2.073	27.801
2000	3.630	3.468	34.979	261.1	2.187	27.824
2500	3.109	2.907	34.951	262.6	2.409	27.854
3000	2.739	2.494	34.929	265.1	2.625	27.873
3500	2.447	2.156	34.908	268.1	2.837	27.886
4000	2.326	1.983	34.897	267.5	3.052	27.891
4500	2.295	1.895	34.891	265.6	3.275	27.892
5000	2.273	1.811	34.883	261.9	3.509	27.893
5500	2.135	1.614	34.859	254.1	3.752	27.888

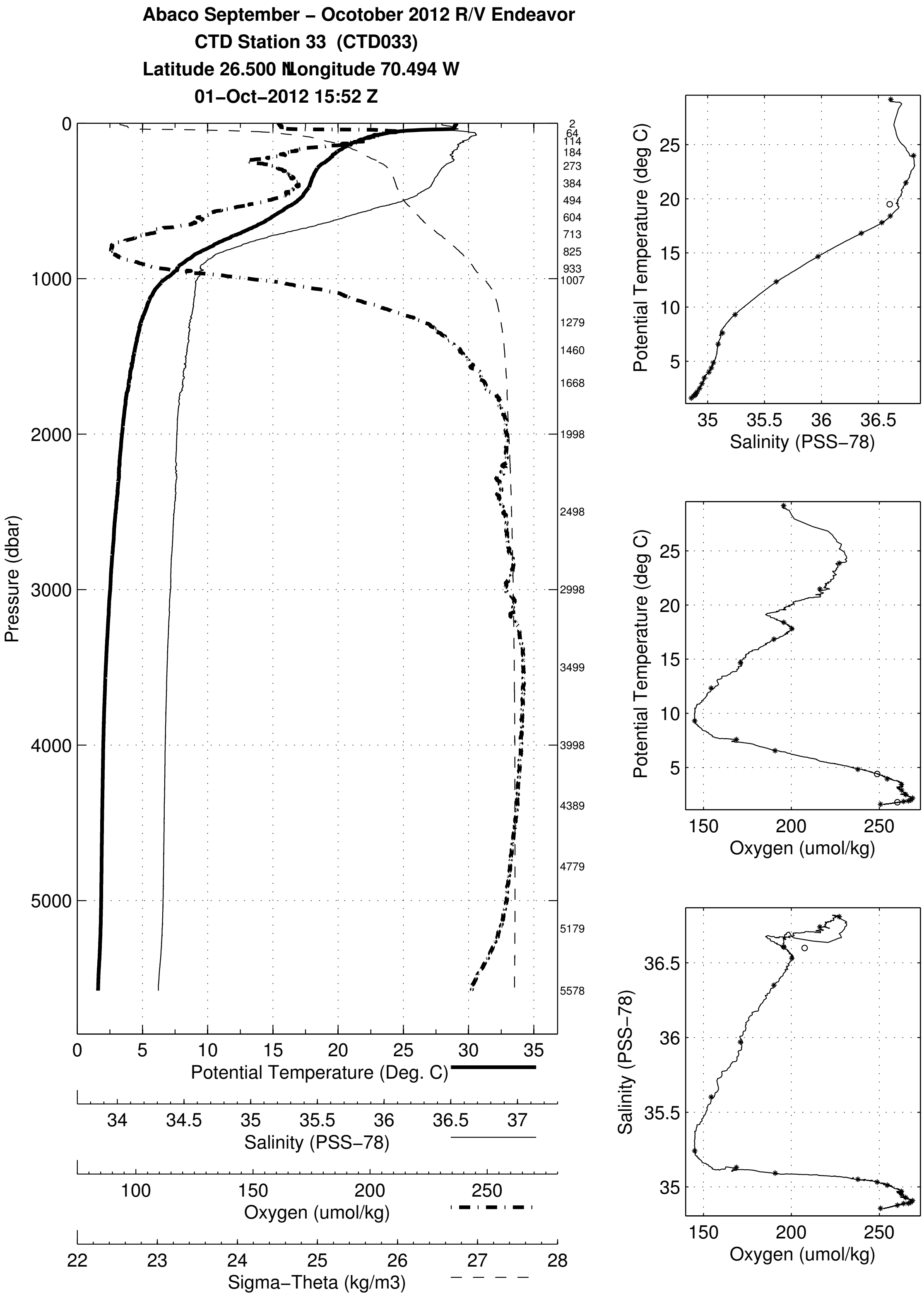
Pressure dbar	Niskin	Temp90 °C	PoTemp90 °C	Salinity PSS-78	Oxygen μmol·kg^{-1}
5575	1	2.106	1.576	34.853	250.7
5249	2	2.219	1.728	34.876	257.5
4913	3	2.281	1.830	34.888	263.5
4589	4	2.294	1.882	34.887	265.5
4249	5	2.310	1.938	34.896	267.5
3748	6	2.372	2.056	34.935	269.4
3250	7	2.577	2.310	34.920	267.0
2749	8	2.943	2.720	34.936	263.6
2250	9	3.352	3.170	34.964	261.7
1790	10	3.816	3.671	34.977	262.0
1399	11	4.711	4.593	35.054	244.2
1210	12	5.339	5.233	35.069	230.0
1040	13	6.529	6.429	35.110	195.2
922	14	8.045	7.947	35.138	154.8
789	15	10.791	10.692	35.403	146.8
699	16	12.994	12.895	35.705	160.1
589	17	15.409	15.316	36.111	175.8
475	18	17.351	17.270	36.454	240.1
370	19	17.993	17.929	36.572	202.3
260	20	18.734	18.688	36.628	192.3
170	21	20.153	20.303	−999.000	−999.0
99	22	22.226	22.206	36.785	220.3
49	23	26.609	26.598	36.647	223.2
3	24	28.922	28.922	36.543	198.7


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 32 (CTD032)
Latitude 26.501 N Longitude 71.000 W
01−Oct−2012 09:20 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 33 (CTD033)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.059	29.059	36.605	195.0	0.005	23.250
10	29.012	29.009	36.606	195.2	0.046	23.268
20	28.925	28.920	36.661	195.7	0.092	23.339
30	28.935	28.927	36.686	196.2	0.137	23.355
50	24.911	24.900	36.725	230.0	0.217	24.676
75	23.129	23.114	36.818	223.4	0.290	25.280
100	22.010	21.991	36.773	219.2	0.354	25.568
125	21.181	21.157	36.723	217.4	0.413	25.763
150	20.612	20.583	36.708	207.9	0.468	25.909
200	19.660	19.623	36.661	195.6	0.570	26.129
250	19.047	19.002	36.662	186.8	0.665	26.292
300	18.377	18.324	36.597	196.1	0.753	26.415
400	17.887	17.818	36.539	200.3	0.922	26.497
500	16.949	16.866	36.362	191.0	1.087	26.592
600	15.043	14.950	36.015	172.2	1.241	26.766
700	12.755	12.658	35.652	158.5	1.379	26.967
800	10.186	10.089	35.327	145.2	1.496	27.192
900	8.187	8.091	35.138	153.4	1.592	27.368
1000	6.870	6.772	35.097	186.1	1.672	27.527
1100	5.874	5.773	35.081	213.7	1.737	27.646
1200	5.349	5.243	35.069	227.9	1.793	27.701
1300	4.927	4.816	35.047	240.3	1.846	27.734
1400	4.682	4.563	35.044	245.4	1.897	27.760
1500	4.410	4.285	35.023	251.0	1.945	27.774
1750	3.922	3.779	34.989	260.2	2.063	27.801
2000	3.591	3.429	34.969	263.1	2.178	27.820
2500	3.152	2.950	34.954	262.3	2.401	27.853
3000	2.768	2.522	34.931	262.4	2.618	27.873
3500	2.478	2.186	34.910	268.1	2.833	27.884
4000	2.336	1.993	34.898	267.4	3.049	27.891
4500	2.306	1.904	34.892	265.7	3.273	27.892
5000	2.292	1.830	34.885	263.2	3.508	27.893
5500	2.144	1.623	34.860	254.0	3.752	27.888

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
5578	1	2.126	1.595	34.857	250.7
5179	2	2.269	1.784	34.877	260.3
4780	3	2.296	1.861	34.889	263.8
4390	4	2.306	1.918	34.890	266.5
3998	5	2.338	1.994	34.897	267.9
3500	6	2.467	2.176	34.908	268.9
2999	7	2.749	2.504	34.929	265.0
2499	8	3.125	2.923	34.950	262.7
1999	9	3.613	3.451	34.971	262.6
1669	10	4.121	3.984	35.012	254.5
1460	11	4.504	4.382	35.032	248.8
1280	12	4.968	4.859	35.051	237.8
1007	13	6.677	6.579	35.093	190.8
934	14	7.696	7.599	35.130	168.7
825	15	9.392	9.296	35.241	145.0
713	16	12.433	12.335	35.603	154.4
604	17	14.757	14.665	35.970	171.0
494	18	16.896	16.813	36.351	190.1
385	19	17.864	17.797	36.531	200.3
274	20	18.460	18.411	36.605	195.7
185	21	19.527	19.493	36.600	207.5
114	22	21.507	21.485	36.741	216.2
64	23	24.007	23.993	36.810	227.2
2	24	29.175	29.175	36.609	195.6

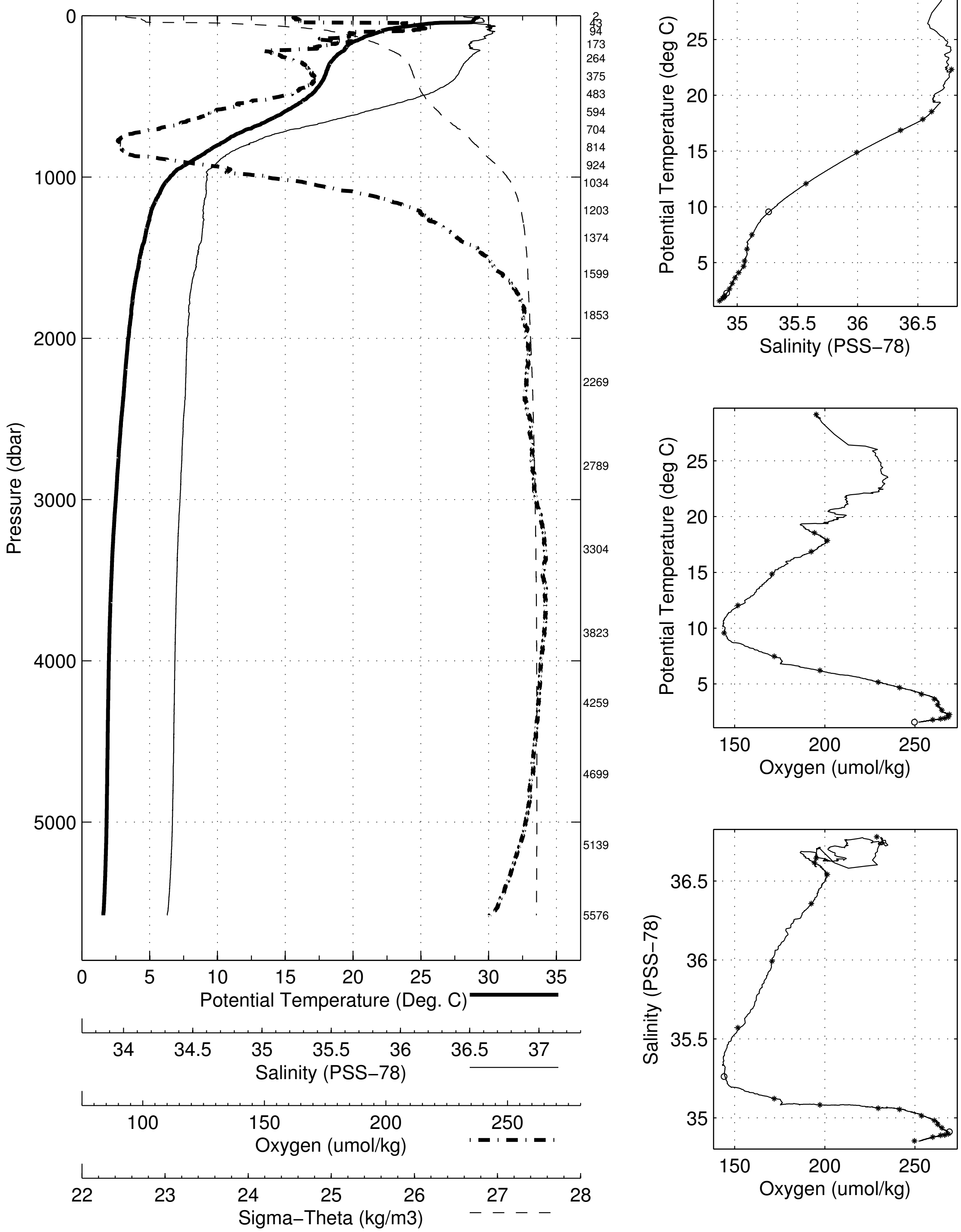

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 33 (CTD033)
Latitude 26.500 N Longitude 70.494 W
01−Oct−2012 15:52 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 34 (CTD034)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.229	29.229	36.591	194.5	0.005	23.182
10	29.198	29.196	36.619	194.7	0.047	23.214
20	28.955	28.950	36.705	196.0	0.092	23.362
30	28.869	28.862	36.712	196.7	0.137	23.396
50	25.486	25.475	36.675	228.0	0.220	24.462
75	23.176	23.161	36.750	232.0	0.297	25.215
100	21.973	21.954	36.762	214.1	0.362	25.570
125	21.072	21.048	36.723	211.4	0.420	25.794
150	20.397	20.369	36.685	204.0	0.474	25.949
200	19.486	19.450	36.636	200.0	0.575	26.155
250	18.806	18.761	36.638	191.2	0.667	26.335
300	18.300	18.248	36.590	198.1	0.754	26.428
400	17.843	17.773	36.531	200.6	0.923	26.501
500	16.806	16.723	36.336	191.0	1.087	26.606
600	14.934	14.842	35.997	170.8	1.241	26.776
700	12.486	12.390	35.616	155.6	1.377	26.992
800	10.162	10.065	35.324	144.5	1.491	27.194
900	8.219	8.122	35.156	160.7	1.588	27.378
1000	6.594	6.498	35.085	186.5	1.665	27.554
1100	5.850	5.749	35.083	213.6	1.728	27.650
1200	5.256	5.151	35.064	229.8	1.784	27.708
1300	4.956	4.844	35.062	237.5	1.836	27.743
1400	4.705	4.586	35.052	243.9	1.886	27.764
1500	4.384	4.259	35.026	251.5	1.934	27.780
1750	3.892	3.750	34.985	260.9	2.051	27.800
2000	3.578	3.417	34.969	263.0	2.166	27.820
2500	3.105	2.903	34.948	263.6	2.388	27.852
3000	2.741	2.496	34.928	265.6	2.604	27.873
3500	2.455	2.164	34.908	267.7	2.818	27.885
4000	2.330	1.986	34.898	266.9	3.033	27.891
4500	2.297	1.896	34.891	265.1	3.256	27.893
5000	2.279	1.817	34.883	262.4	3.490	27.892
5500	2.156	1.634	34.861	254.8	3.734	27.889

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
5576	1	2.103	1.573	34.853	249.7
5140	2	2.261	1.782	34.878	259.9
4700	3	2.292	1.867	34.889	264.3
4259	4	2.308	1.935	34.891	266.6
3824	5	2.353	2.029	34.899	268.5
3304	6	2.529	2.257	34.912	269.1
2789	7	2.875	2.649	34.937	265.0
2270	8	3.322	3.139	34.959	262.7
1854	9	3.785	3.635	34.983	260.8
1599	10	4.228	4.096	35.013	253.6
1374	11	4.784	4.667	35.054	241.5
1204	12	5.255	5.149	35.061	229.7
1034	13	6.298	6.201	35.082	197.3
925	14	7.588	7.493	35.122	171.9
814	15	9.646	9.550	35.262	144.1
704	16	12.173	12.078	35.571	151.7
594	17	14.962	14.870	35.992	170.6
484	18	16.947	16.866	36.356	192.5
375	19	17.921	17.855	36.542	201.3
264	20	18.583	18.536	36.615	194.2
174	21	19.865	20.021	−999.000	−999.0
94	22	22.333	22.314	36.779	228.9
44	23	27.096	27.086	36.637	213.9
2	24	29.105	29.104	36.645	195.2

Abaco September – Ocotober 2012 R/V Endeavor
CTD Station 34 (CTD034)
Latitude 26.501 N Longitude 69.999 W
01–Oct–2012 22:19 Z

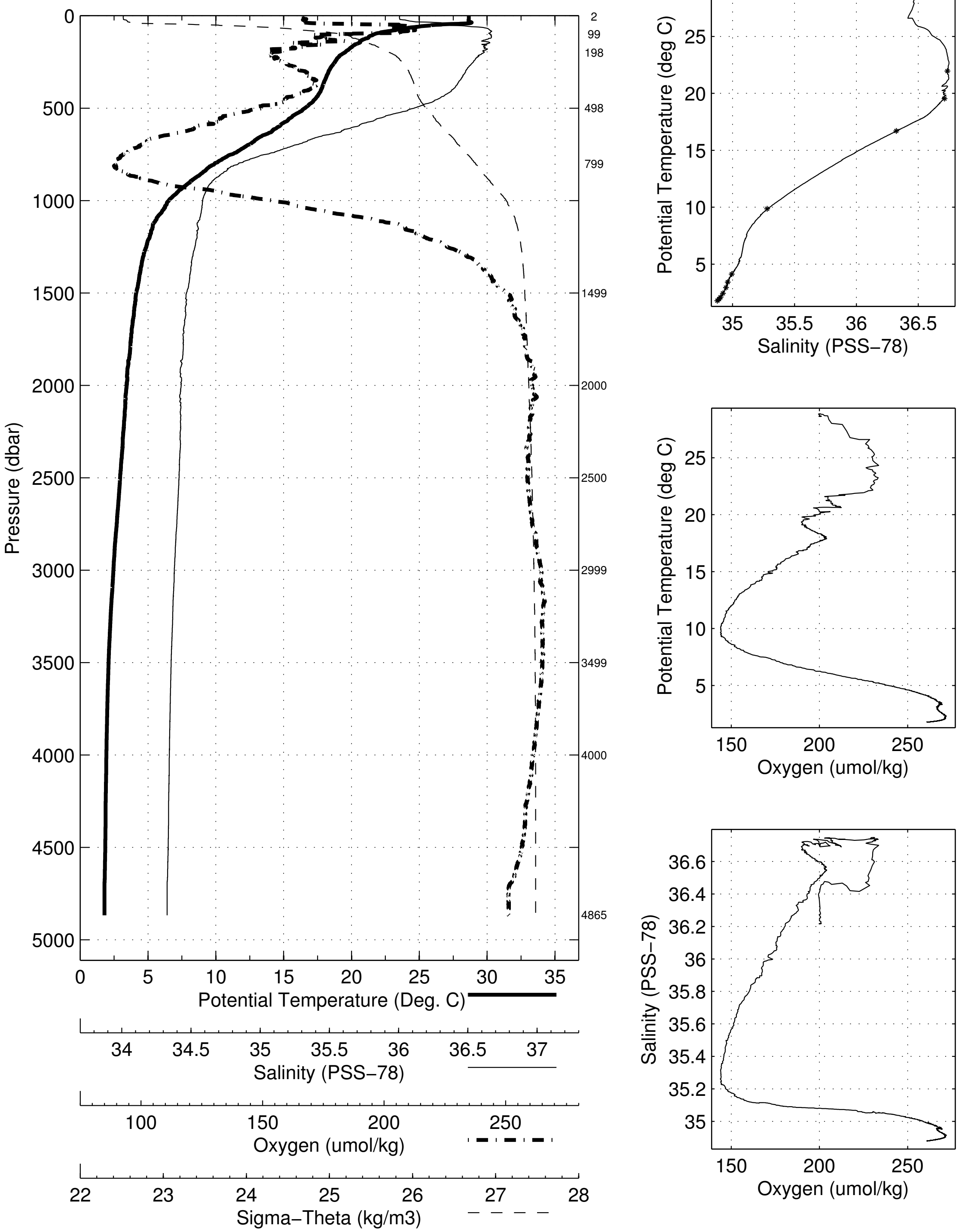


Abaco September - Ocotober 2012 R/V Endeavor CTD Station 35 (CTD035)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.649	28.649	36.218	200.0	0.005	23.096
10	28.651	28.648	36.216	200.7	0.048	23.095
20	28.651	28.646	36.219	200.8	0.095	23.098
30	28.665	28.658	36.286	200.5	0.143	23.144
50	26.089	26.077	36.477	227.6	0.232	24.124
75	23.387	23.371	36.734	231.8	0.312	25.141
100	21.691	21.671	36.736	211.0	0.377	25.630
125	21.024	21.000	36.728	207.5	0.434	25.810
150	20.481	20.453	36.727	199.3	0.489	25.958
200	19.523	19.487	36.702	190.8	0.588	26.196
250	18.833	18.788	36.642	193.8	0.679	26.331
300	18.372	18.319	36.597	200.7	0.766	26.416
400	17.835	17.766	36.522	201.8	0.935	26.497
500	16.647	16.564	36.301	188.0	1.100	26.617
600	14.727	14.636	35.965	168.2	1.251	26.796
700	12.433	12.337	35.613	151.8	1.385	27.000
800	10.015	9.919	35.291	144.1	1.500	27.194
900	8.190	8.093	35.137	156.3	1.597	27.367
1000	6.618	6.521	35.085	191.1	1.674	27.551
1100	5.727	5.628	35.068	220.4	1.738	27.654
1200	5.220	5.115	35.052	236.5	1.794	27.703
1300	4.787	4.677	35.029	248.5	1.846	27.735
1400	4.493	4.377	35.011	255.7	1.896	27.754
1500	4.250	4.127	34.991	260.6	1.945	27.766
1750	3.881	3.740	34.973	266.0	2.064	27.791
2000	3.590	3.428	34.961	268.1	2.180	27.813
2500	3.145	2.942	34.948	266.7	2.406	27.849
3000	2.690	2.446	34.921	270.9	2.624	27.872
3500	2.384	2.095	34.903	271.1	2.834	27.886
4000	2.272	1.930	34.893	268.5	3.045	27.891
4500	2.247	1.848	34.886	265.1	3.266	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4866	2	2.238	1.794	34.877	−999.0
4001	4	2.270	1.928	34.891	−999.0
3500	6	2.386	2.096	34.902	−999.0
2999	8	2.689	2.445	34.922	−999.0
2500	10	3.144	2.942	34.947	−999.0
2000	12	3.585	3.424	34.961	−999.0
1500	13	4.246	4.123	34.994	−999.0
800	15	9.956	9.860	35.279	−999.0
499	17	16.775	16.692	36.322	−999.0
199	19	19.579	19.543	36.712	−999.0
99	21	21.977	21.958	36.735	−999.0
3	23	28.614	28.614	36.234	−999.0

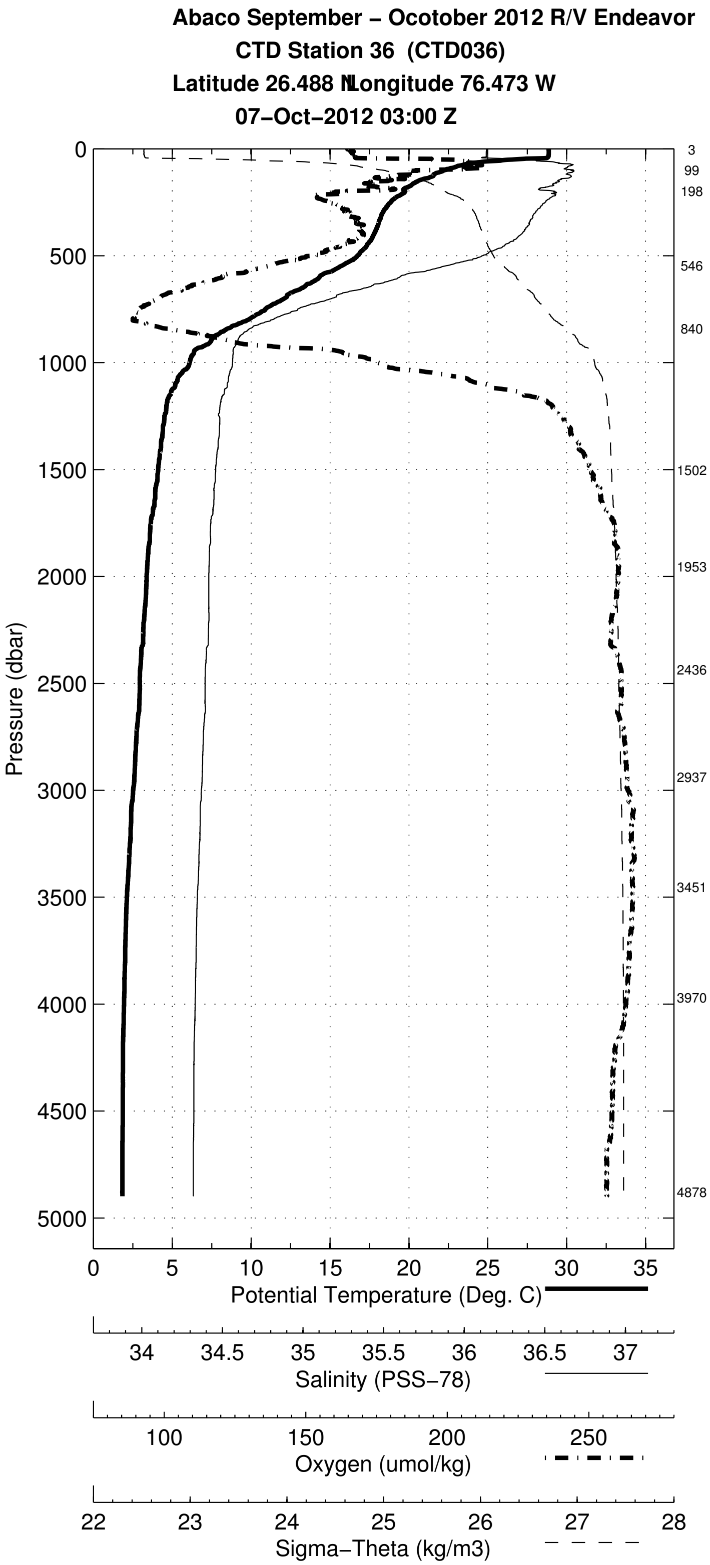
Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 35 (CTD035)
Latitude 26.486 N Longitude 76.109 W
05−Oct−2012 04:01 Z

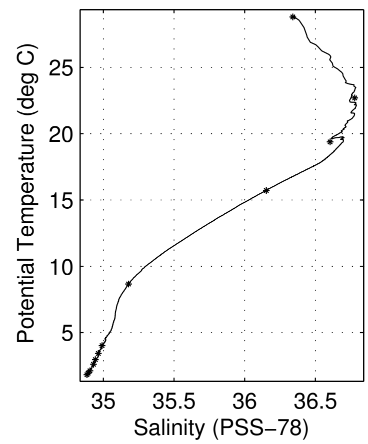


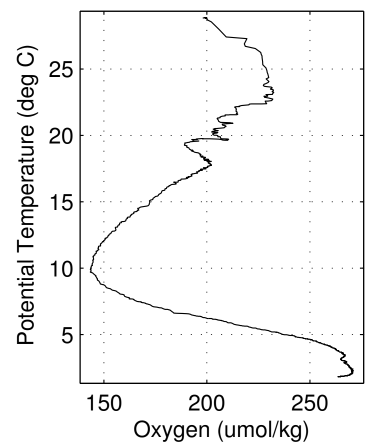
Abaco September - Ocotober 2012 R/V Endeavor CTD Station 36 (CTD036)

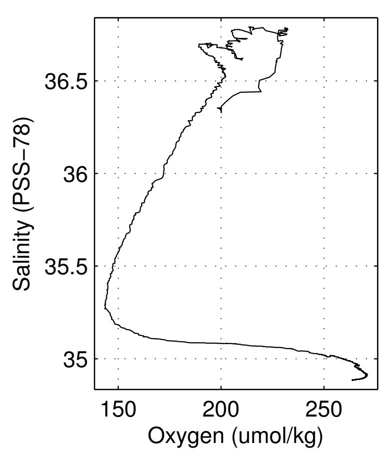
Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.855	28.854	36.354	198.0	0.005	23.130
10	28.866	28.863	36.353	198.9	0.047	23.126
20	28.865	28.861	36.352	199.2	0.095	23.127
30	28.857	28.849	36.352	199.1	0.142	23.130
50	26.560	26.549	36.520	223.5	0.233	24.008
75	23.470	23.455	36.784	232.2	0.314	25.154
100	22.272	22.252	36.783	216.6	0.381	25.502
125	21.581	21.557	36.776	209.5	0.441	25.692
150	20.616	20.588	36.715	208.4	0.497	25.913
200	19.782	19.745	36.695	195.0	0.599	26.123
250	18.893	18.848	36.647	192.7	0.692	26.320
300	18.377	18.324	36.596	198.9	0.780	26.414
400	17.850	17.781	36.527	202.1	0.950	26.497
500	16.812	16.729	36.331	189.6	1.114	26.601
600	14.419	14.329	35.918	166.2	1.266	26.827
700	12.196	12.101	35.578	150.1	1.397	27.018
800	9.891	9.795	35.275	143.8	1.510	27.202
900	7.536	7.444	35.108	168.1	1.599	27.441
1000	6.182	6.089	35.081	205.8	1.668	27.605
1100	5.294	5.198	35.055	233.0	1.725	27.695
1200	4.736	4.635	35.018	250.1	1.777	27.732
1300	4.511	4.404	35.015	254.4	1.826	27.755
1400	4.394	4.279	35.008	257.1	1.874	27.763
1500	4.231	4.108	34.997	260.0	1.922	27.772
1750	3.781	3.640	34.972	265.8	2.039	27.801
2000	3.540	3.380	34.962	266.9	2.153	27.819
2500	3.145	2.942	34.944	267.6	2.377	27.845
3000	2.764	2.518	34.925	269.4	2.598	27.868
3500	2.413	2.123	34.905	270.6	2.812	27.886
4000	2.283	1.940	34.894	268.8	3.025	27.892
4500	2.264	1.864	34.887	265.3	3.245	27.892

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
4878	2	2.281	1.835	34.883	−999.0
3970	4	2.278	1.940	34.891	−999.0
3452	6	2.416	2.131	34.904	−999.0
2937	8	2.864	2.623	34.930	−999.0
2437	10	3.163	2.966	34.943	−999.0
1953	12	3.593	3.436	34.964	−999.0
1502	13	4.146	4.023	34.991	−999.0
840	15	8.768	8.675	35.178	−999.0
546	17	15.805	15.717	36.154	−999.0
199	19	19.428	19.392	36.605	−999.0
99	21	22.722	22.701	36.779	−999.0
4	23	28.818	28.817	36.341	−999.0


Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 36 (CTD036)
Latitude 26.488 N Longitude 76.473 W
07−Oct−2012 03:00 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
3
99
198
546
840
1502
1953
2436
2937
3451
3970
4878


Potential Temperature (deg C)
Salinity (PSS−78)


Potential Temperature (deg C)
Oxygen (umol/kg)

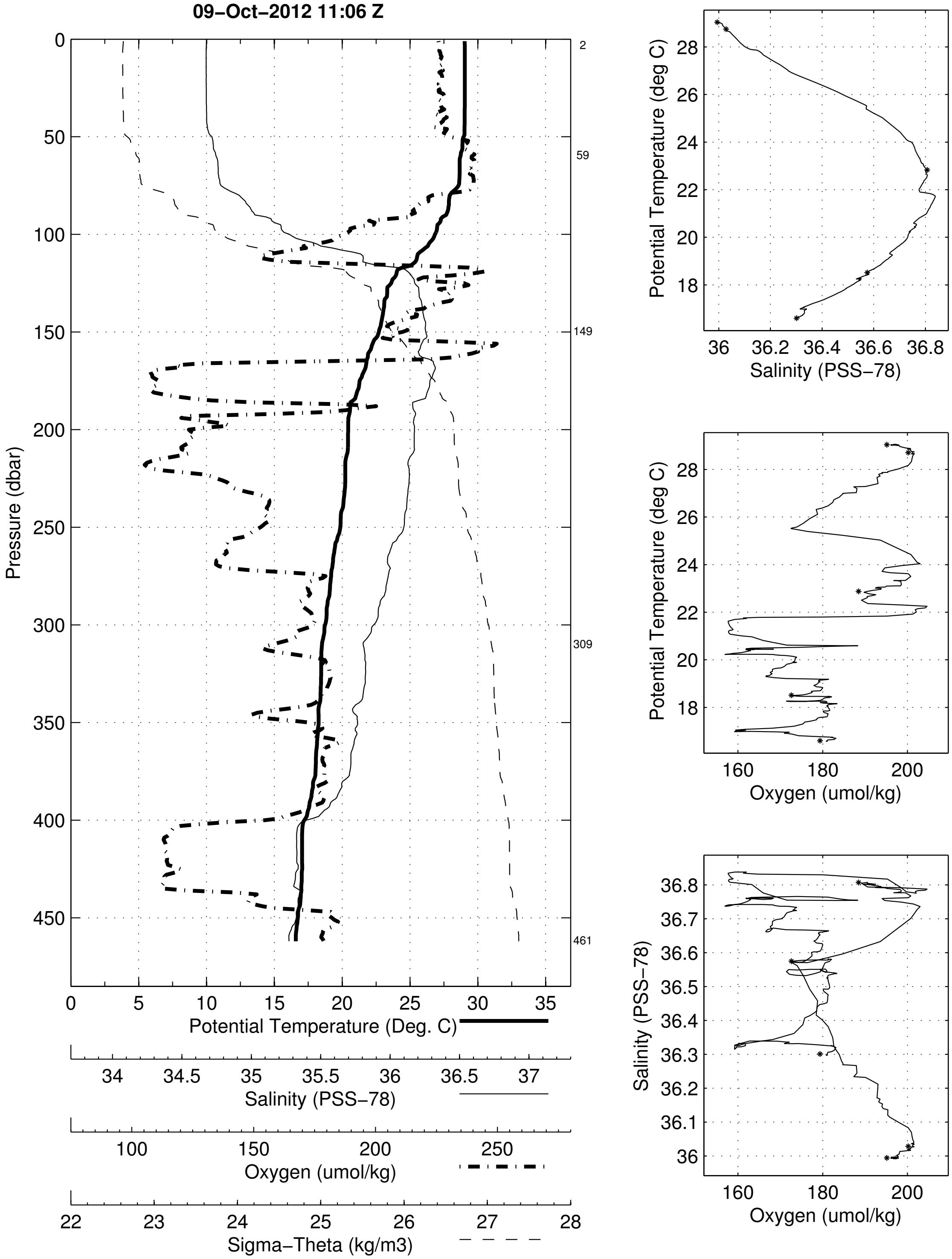

Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 37 (CTD037)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.031	29.030	35.993	196.7	0.005	22.800
10	29.048	29.045	35.992	197.0	0.051	22.794
20	29.048	29.043	35.992	197.2	0.101	22.795
30	29.048	29.040	35.993	196.9	0.152	22.796
50	28.974	28.962	36.014	198.2	0.253	22.838
75	28.602	28.584	36.047	201.3	0.377	22.989
100	26.856	26.833	36.300	183.9	0.489	23.751
125	23.647	23.620	36.763	200.2	0.577	25.089
150	22.735	22.704	36.803	191.8	0.646	25.388
200	20.478	20.440	36.761	162.9	0.761	25.988
250	19.904	19.858	36.722	172.6	0.863	26.114
300	18.792	18.738	36.610	179.7	0.957	26.320
400	17.277	17.210	36.362	173.2	1.132	26.509

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
461	1	16.676	16.599	36.301	179.4
310	2	18.575	18.520	36.575	172.6
149	3	22.862	22.832	36.807	188.5
59	4	28.763	28.748	36.028	200.2
3	5	29.038	29.037	35.994	195.2

Abaco September - Ocotober 2012 R/V Endeavor
CTD Station 37 (CTD037)
Latitude 27.003 N Longitude 79.200 W
09-Oct-2012 11:06 Z

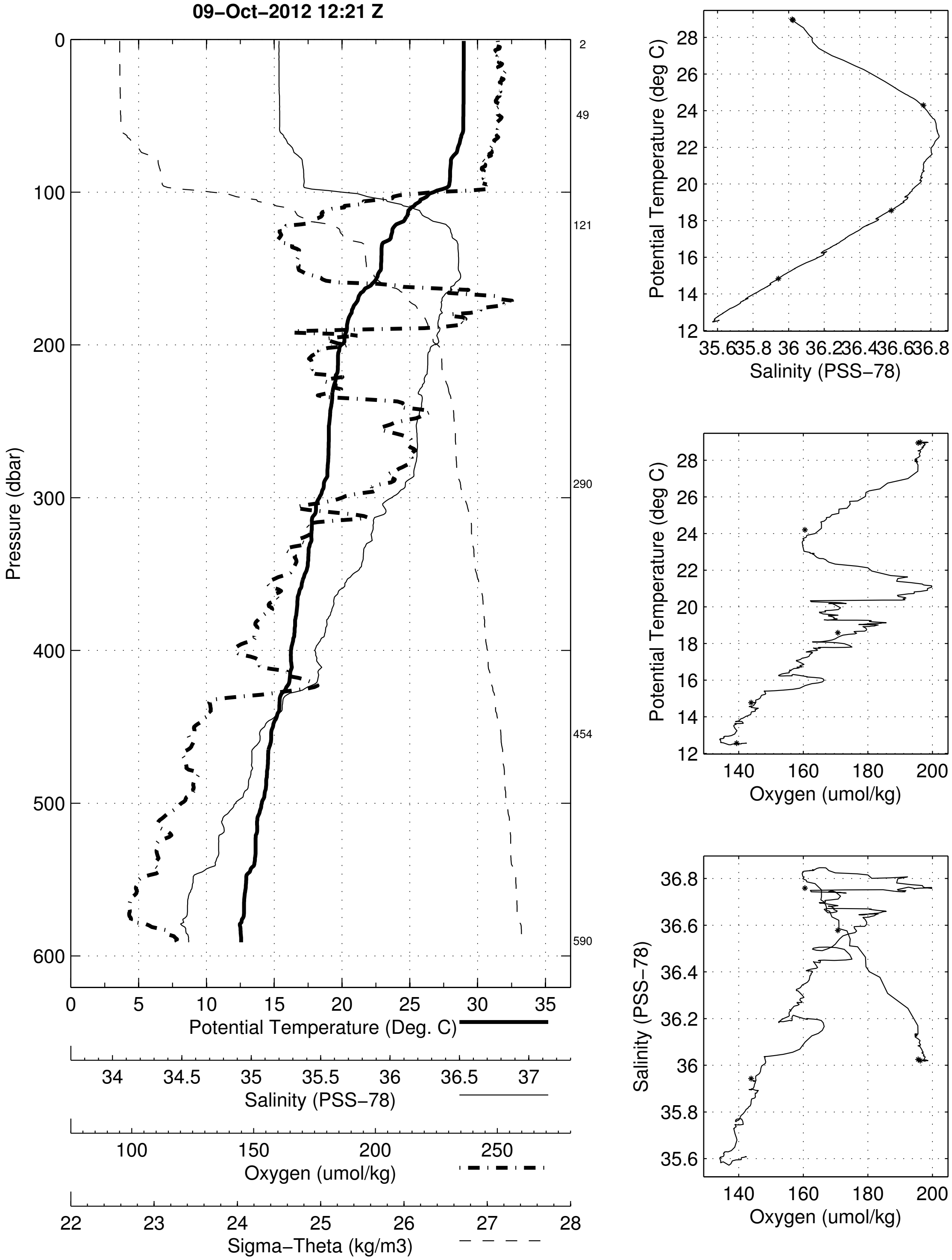


Abaco September - Ocotober 2012 R/V Endeavor CTD Station 38 (CTD038)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.974	28.974	36.020	197.4	0.005	22.839
10	28.977	28.975	36.019	197.8	0.050	22.838
20	28.976	28.971	36.020	197.7	0.100	22.840
30	28.972	28.965	36.020	197.6	0.150	22.842
50	28.959	28.947	36.023	197.7	0.251	22.850
75	28.369	28.351	36.097	195.9	0.375	23.104
100	26.777	26.754	36.308	186.1	0.490	23.782
125	23.731	23.705	36.800	160.0	0.575	25.093
150	22.902	22.871	36.836	163.2	0.644	25.364
200	19.981	19.944	36.725	171.6	0.756	26.093
250	19.119	19.073	36.649	180.7	0.851	26.263
300	18.381	18.328	36.532	170.6	0.943	26.364
400	16.300	16.235	36.183	152.5	1.108	26.603
500	14.159	14.085	35.822	143.1	1.255	26.805

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
590	1	12.634	12.553	35.621	139.4
455	2	14.897	14.828	35.943	143.8
291	3	18.604	18.552	36.578	170.7
121	4	24.318	24.292	36.759	160.5
49	5	28.951	28.939	36.025	195.6
3	6	28.977	28.976	36.020	196.2

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 38 (CTD038)
Latitude 27.008 N Longitude 79.282 W
09−Oct−2012 12:21 Z

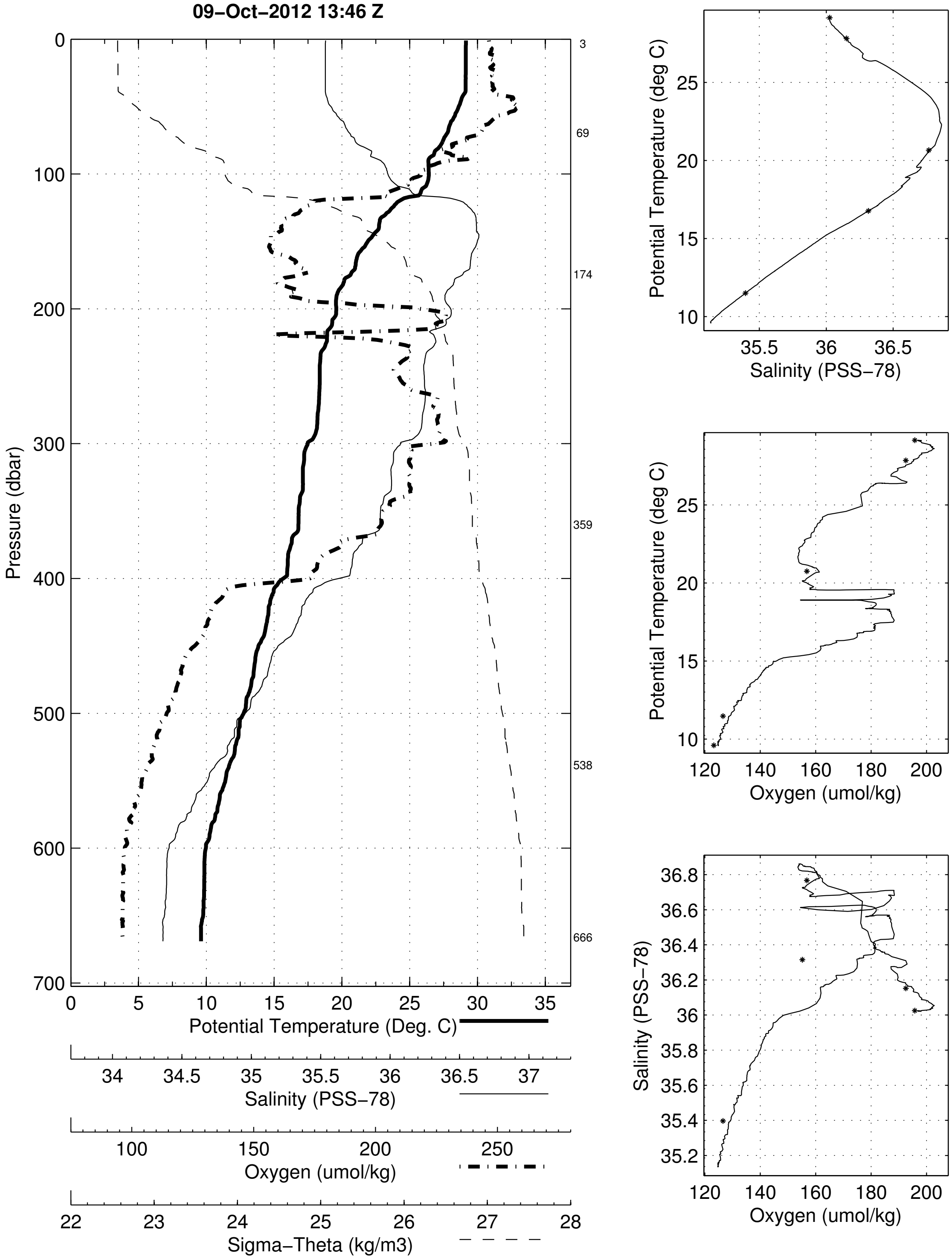


Abaco September - Ocotober 2012 R/V Endeavor CTD Station 39 (CTD039)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.138	29.138	36.024	196.7	0.005	22.787
10	29.132	29.129	36.024	196.9	0.051	22.789
20	29.130	29.125	36.024	197.4	0.101	22.791
30	29.131	29.124	36.024	197.7	0.152	22.791
50	28.625	28.613	36.054	202.8	0.252	22.985
75	27.480	27.463	36.185	192.2	0.369	23.461
100	26.426	26.403	36.365	183.4	0.472	23.936
125	23.735	23.708	36.810	160.4	0.562	25.099
150	21.935	21.905	36.852	153.8	0.628	25.653
200	19.620	19.583	36.707	183.3	0.732	26.175
250	18.406	18.362	36.563	179.0	0.822	26.379
300	17.524	17.473	36.433	186.2	0.908	26.500
400	15.737	15.674	36.096	161.6	1.065	26.666
500	12.810	12.741	35.586	133.5	1.202	26.899
600	10.030	9.959	35.171	125.2	1.322	27.092

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
666	1	9.679	9.602	35.148	123.2
538	2	11.570	11.500	35.397	126.6
360	3	16.825	16.765	36.315	155.2
174	4	20.687	20.654	36.767	156.8
69	5	27.838	27.822	36.152	192.5
3	6	29.148	29.148	36.025	195.8

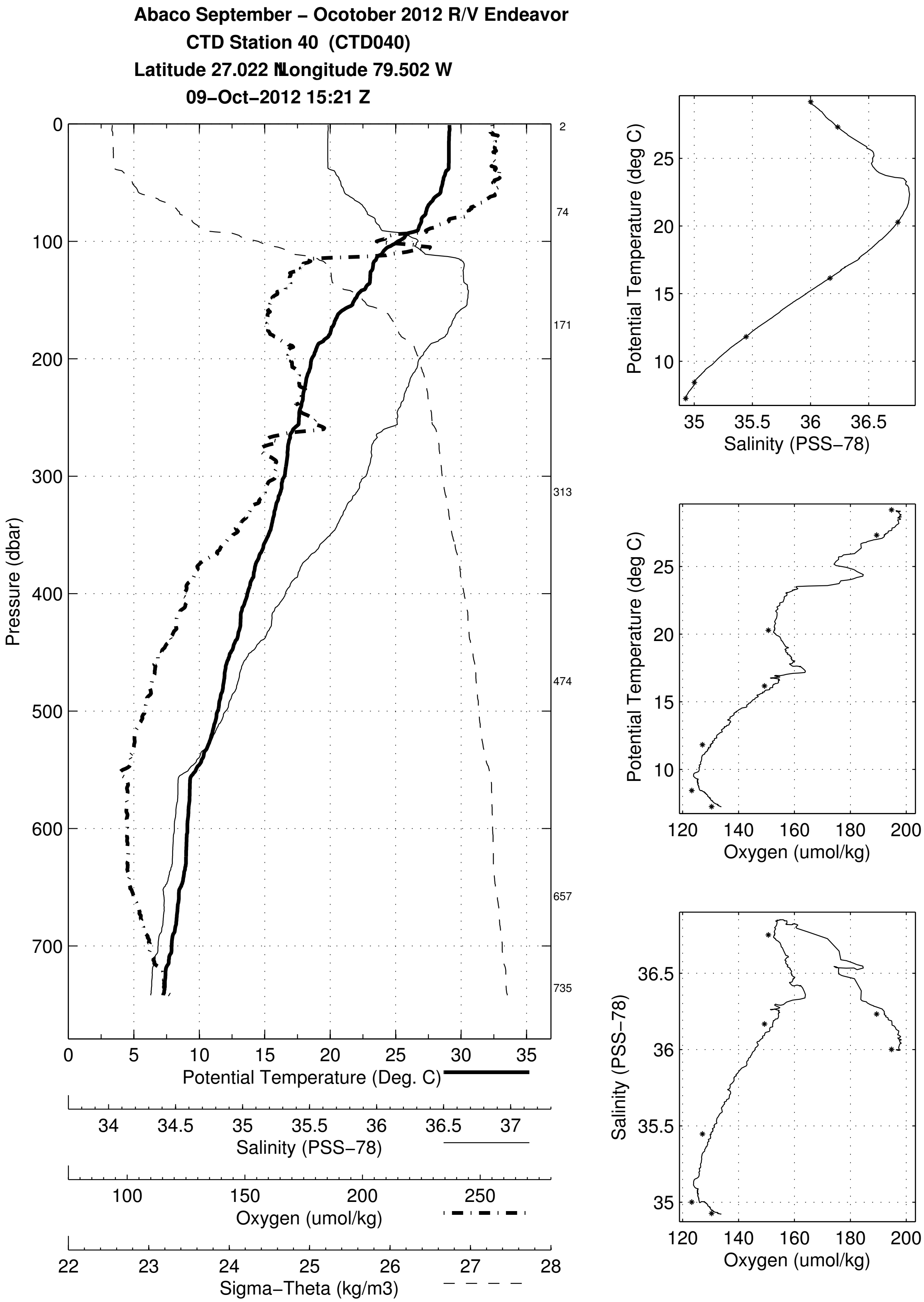
Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 39 (CTD039)
Latitude 27.014 N Longitude 79.382 W
09−Oct−2012 13:46 Z



Abaco September - Ocotober 2012 R/V Endeavor CTD Station 40 (CTD040)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.106	29.106	35.999	196.8	0.005	22.779
10	29.086	29.084	35.997	197.9	0.051	22.785
20	29.072	29.067	35.997	197.3	0.101	22.790
30	29.068	29.060	35.997	197.1	0.152	22.792
50	28.595	28.583	36.076	196.9	0.252	23.011
75	27.323	27.305	36.235	192.2	0.368	23.550
100	25.190	25.168	36.545	174.1	0.468	24.458
125	23.195	23.169	36.818	159.0	0.544	25.264
150	21.889	21.859	36.844	154.1	0.609	25.659
200	18.631	18.596	36.553	157.7	0.710	26.312
250	17.666	17.623	36.421	161.4	0.795	26.454
300	16.560	16.511	36.228	154.3	0.875	26.573
400	13.734	13.677	35.739	136.2	1.020	26.827
500	11.465	11.400	35.377	129.0	1.145	26.996
600	9.160	9.093	35.065	125.3	1.254	27.155
700	7.965	7.892	34.967	129.7	1.354	27.264

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
736	1	7.325	7.252	34.926	130.4
658	2	8.502	8.431	35.000	123.3
474	3	11.876	11.813	35.447	127.1
313	4	16.203	16.152	36.167	149.3
171	5	20.310	20.278	36.750	150.6
75	6	27.332	27.315	36.233	189.4
2	7	29.179	29.178	36.001	194.7

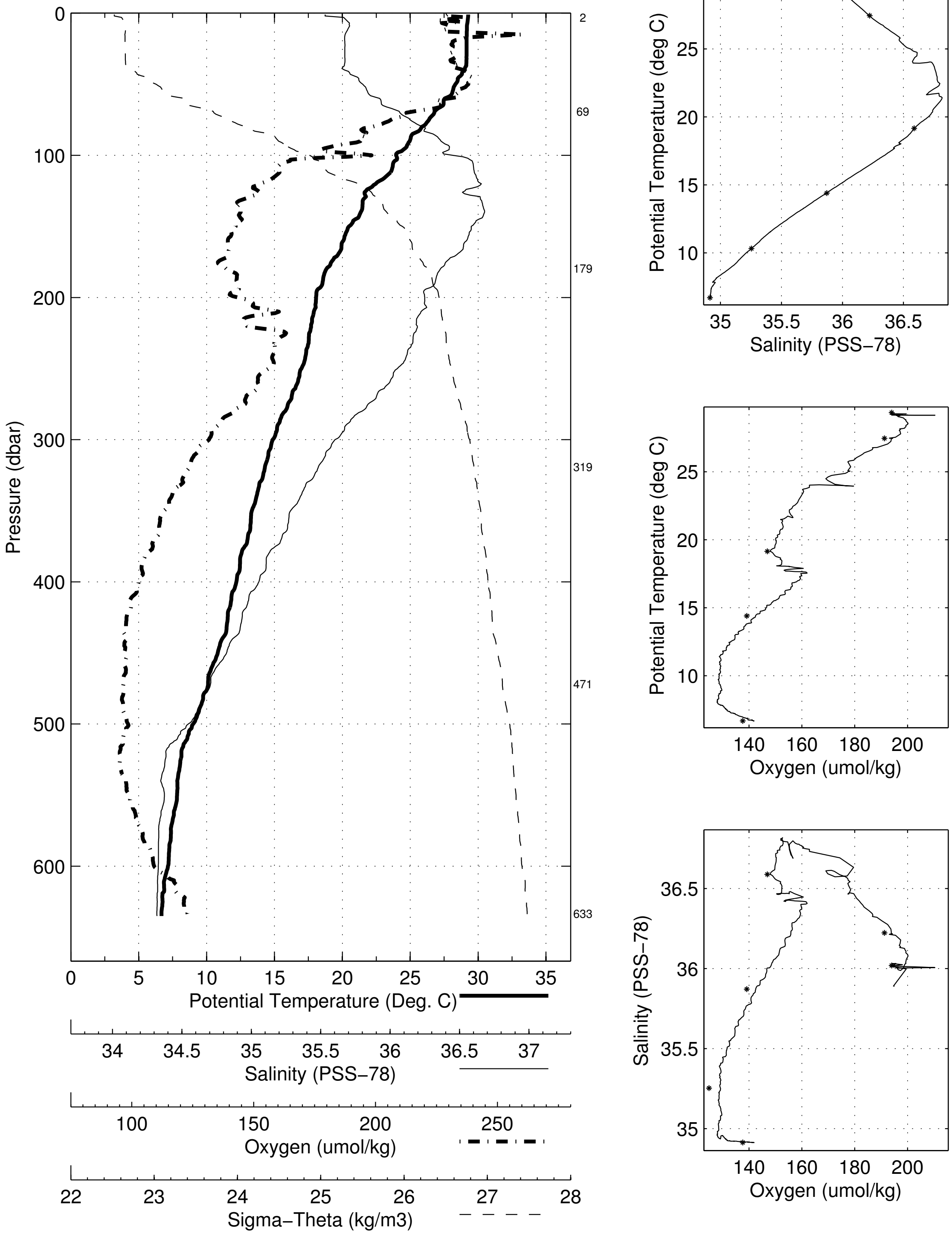

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 40 (CTD040)
Latitude 27.022 N Longitude 79.502 W
09−Oct−2012 15:21 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS−78)
Oxygen (umol/kg)
Sigma−Theta (kg/m3)
2
74
171
313
474
657
735
Potential Temperature (deg C)
Salinity (PSS−78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS−78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 41 (CTD041)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.273	29.272	35.891	195.0	0.005	22.641
10	29.181	29.178	36.028	195.3	0.051	22.776
20	29.163	29.158	36.005	196.1	0.102	22.765
30	29.156	29.148	36.005	196.1	0.153	22.769
50	28.333	28.321	36.110	199.4	0.252	23.124
75	26.401	26.384	36.384	183.5	0.362	23.957
100	23.978	23.957	36.632	179.5	0.450	24.890
125	21.775	21.750	36.703	156.3	0.520	25.583
150	20.519	20.491	36.739	151.7	0.577	25.957
200	18.105	18.070	36.469	152.2	0.671	26.381
250	17.029	16.987	36.310	158.4	0.754	26.523
300	14.914	14.868	35.948	146.2	0.829	26.732
400	12.250	12.196	35.505	131.7	0.959	26.944
500	9.066	9.010	35.096	129.6	1.069	27.192
600	7.215	7.156	34.922	134.9	1.159	27.335

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
633	1	6.773	6.713	34.914	137.6
472	2	10.381	10.324	35.254	124.9
319	3	14.451	14.404	35.872	139.1
180	4	19.201	19.169	36.588	146.9
69	5	27.469	27.453	36.223	191.2
3	6	29.349	29.349	36.018	194.0

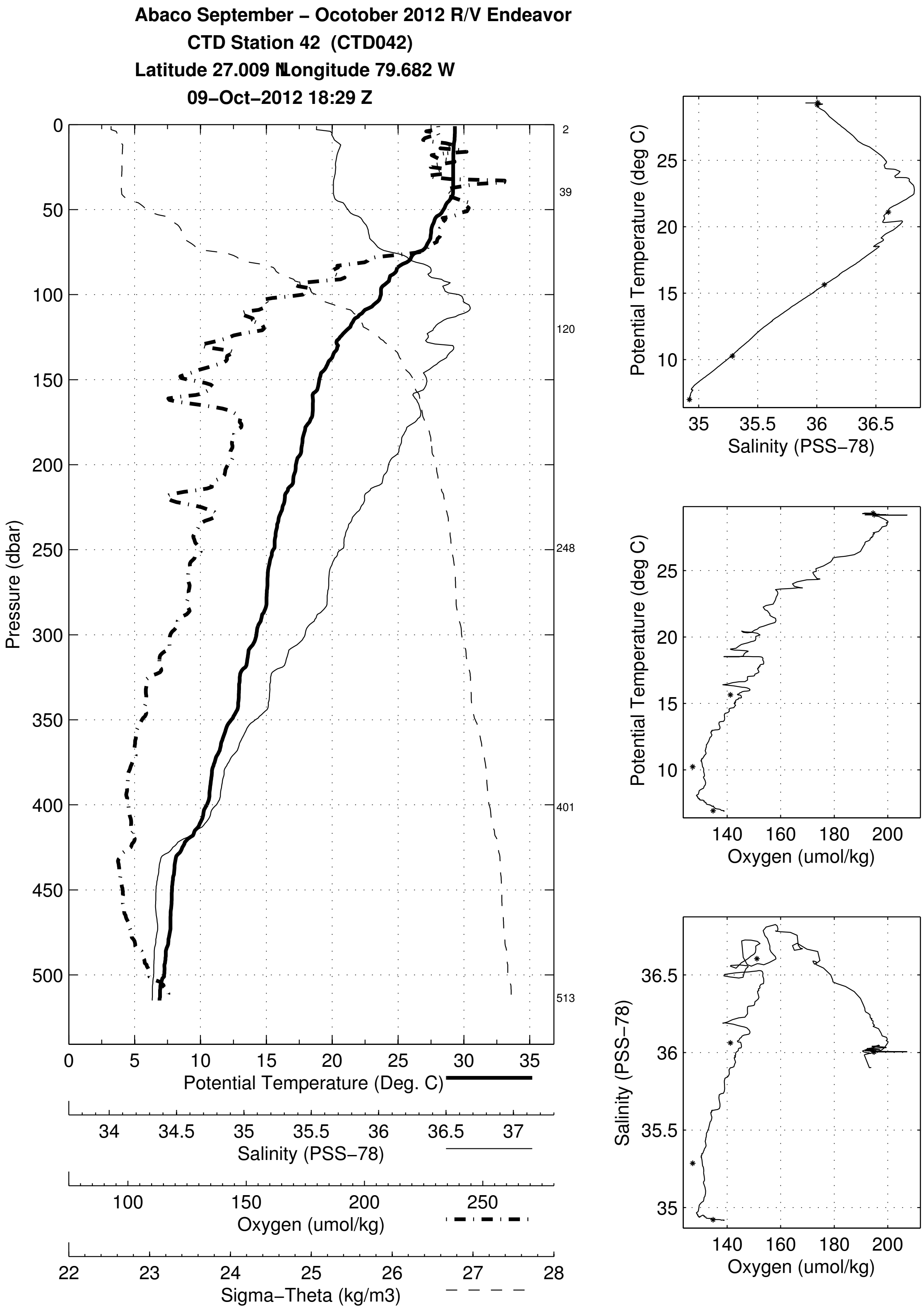
Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 41 (CTD041)
Latitude 27.012 N Longitude 79.616 W
09−Oct−2012 17:09 Z



Abaco September - Ocotober 2012 R/V Endeavor CTD Station 42 (CTD042)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.317	29.316	35.903	193.6	0.005	22.636
10	29.270	29.267	36.023	192.5	0.052	22.742
20	29.199	29.195	36.022	193.7	0.102	22.766
30	29.192	29.185	36.012	191.6	0.153	22.762
50	28.457	28.445	36.092	199.7	0.254	23.069
75	26.455	26.438	36.348	189.8	0.365	23.913
100	23.723	23.702	36.756	166.2	0.449	25.060
125	20.617	20.593	36.573	151.3	0.512	25.803
150	19.045	19.018	36.563	142.8	0.562	26.211
200	17.279	17.245	36.334	150.9	0.649	26.479
250	15.569	15.530	36.050	145.3	0.725	26.663
300	14.293	14.248	35.834	139.2	0.795	26.779
400	10.540	10.491	35.303	130.7	0.914	27.103
500	7.292	7.243	34.927	134.9	1.005	27.327

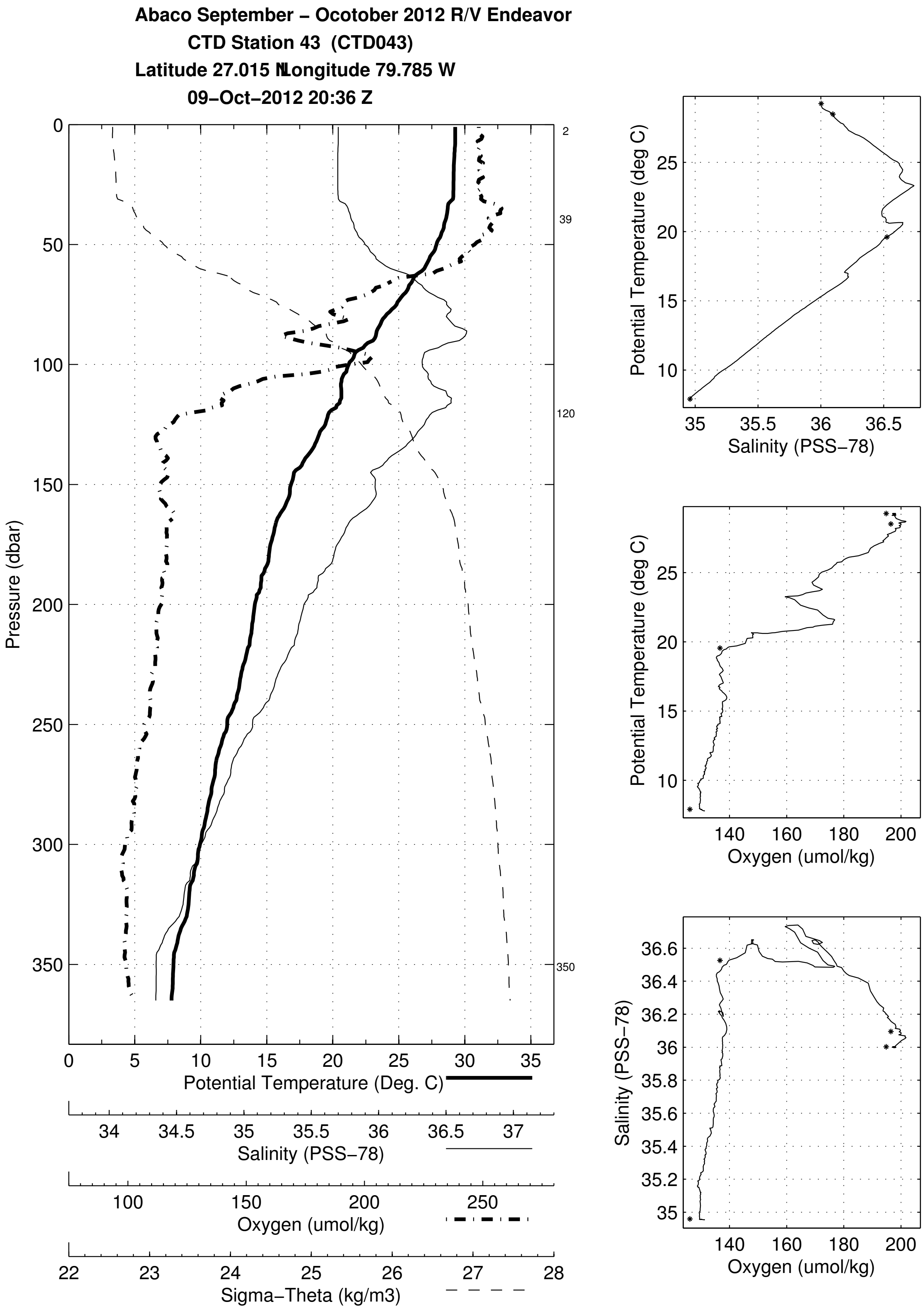
Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
513	1	7.052	7.003	34.922	134.8
401	2	10.323	10.274	35.286	127.1
249	3	15.678	15.639	36.063	141.2
120	4	21.132	21.108	36.605	151.1
39	5	29.182	29.172	36.004	194.9
3	6	29.339	29.338	36.007	194.5


Abaco September - Ocotober 2012 R/V Endeavor
CTD Station 42 (CTD042)
Latitude 27.009 N Longitude 79.682 W
09-Oct-2012 18:29 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS-78)
Oxygen (umol/kg)
Sigma-Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS-78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS-78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 43 (CTD043)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	29.268	29.267	36.002	197.4	0.005	22.727
10	29.239	29.237	36.000	197.4	0.051	22.735
20	29.163	29.158	36.000	198.0	0.102	22.762
30	29.135	29.127	36.002	197.9	0.153	22.774
50	27.869	27.857	36.157	196.5	0.249	23.312
75	24.842	24.826	36.624	171.3	0.349	24.622
100	21.223	21.204	36.485	172.6	0.419	25.569
125	19.455	19.432	36.497	138.1	0.474	26.053
150	16.861	16.836	36.214	136.3	0.519	26.486
200	14.120	14.091	35.805	136.5	0.590	26.790
250	12.033	12.000	35.510	133.2	0.652	26.985
300	9.975	9.940	35.214	129.5	0.704	27.129

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
351	1	7.941	7.905	34.959	126.1
120	2	19.625	19.603	36.526	136.6
39	3	28.492	28.482	36.096	196.5
3	4	29.245	29.244	36.002	194.8

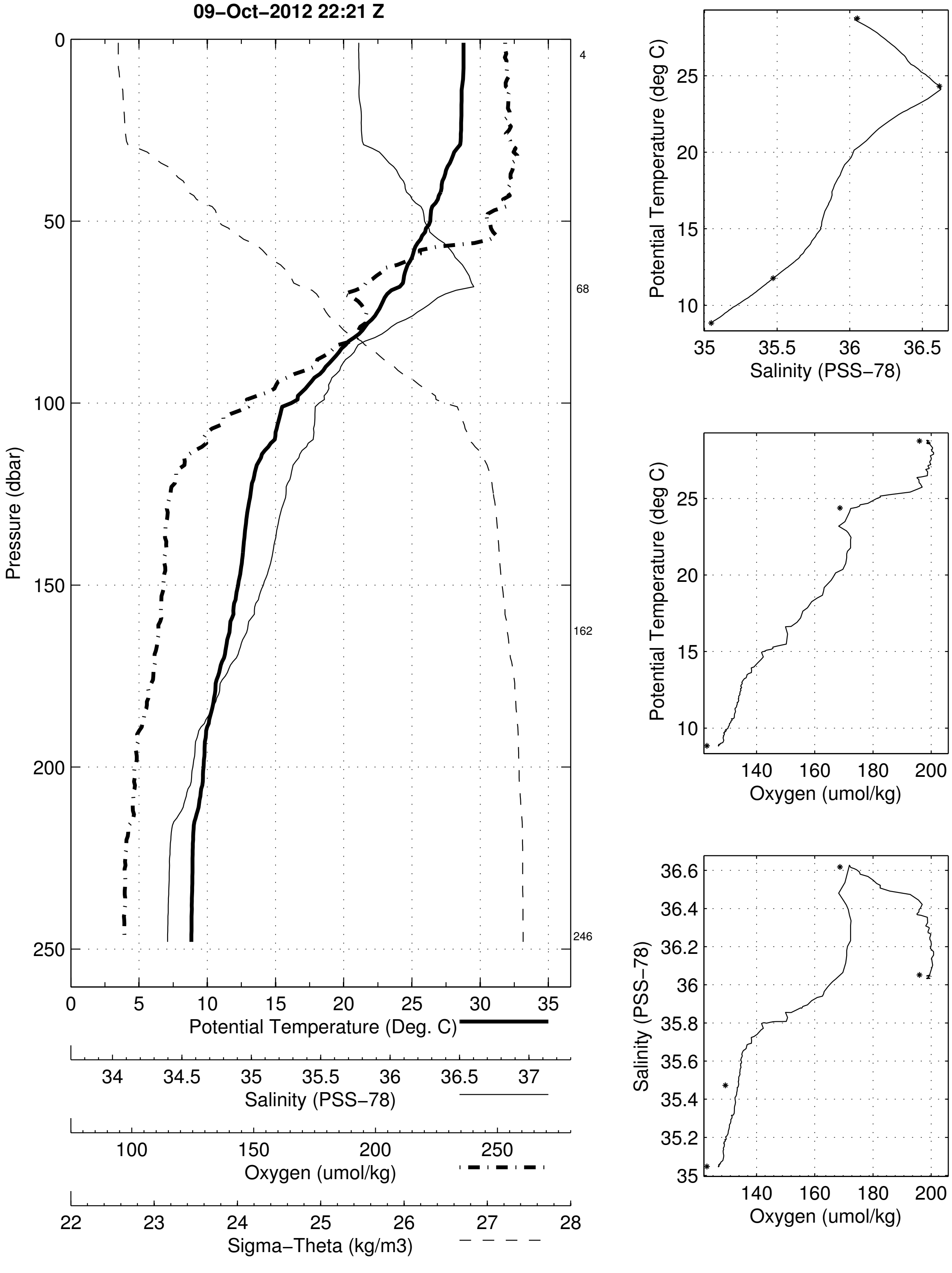

Abaco September - Ocotober 2012 R/V Endeavor
CTD Station 43 (CTD043)
Latitude 27.015 N Longitude 79.785 W
09-Oct-2012 20:36 Z
Pressure (dbar)
Potential Temperature (Deg. C)
Salinity (PSS-78)
Oxygen (umol/kg)
Sigma-Theta (kg/m3)
Potential Temperature (deg C)
Salinity (PSS-78)
Potential Temperature (deg C)
Oxygen (umol/kg)
Salinity (PSS-78)
Oxygen (umol/kg)

Abaco September - Ocotober 2012 R/V Endeavor CTD Station 44 (CTD044)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.784	28.784	36.033	198.5	0.005	22.912
10	28.759	28.757	36.036	199.3	0.049	22.924
20	28.632	28.627	36.046	199.4	0.098	22.974
30	28.316	28.308	36.103	200.5	0.147	23.123
50	26.351	26.340	36.373	195.2	0.233	23.963
75	22.477	22.461	36.336	172.5	0.316	25.102
100	16.169	16.153	35.828	150.7	0.373	26.350
125	13.191	13.173	35.657	135.6	0.408	26.867
150	12.282	12.262	35.540	134.2	0.437	26.958
200	9.751	9.728	35.176	128.9	0.488	27.136

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
246	1	8.869	8.842	35.047	122.9
163	2	11.792	11.771	35.473	129.3
69	3	24.334	24.319	36.617	168.7
4	4	28.748	28.747	36.052	196.0

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 44 (CTD044)
Latitude 27.013 NLongitude 79.865 W
09−Oct−2012 22:21 Z

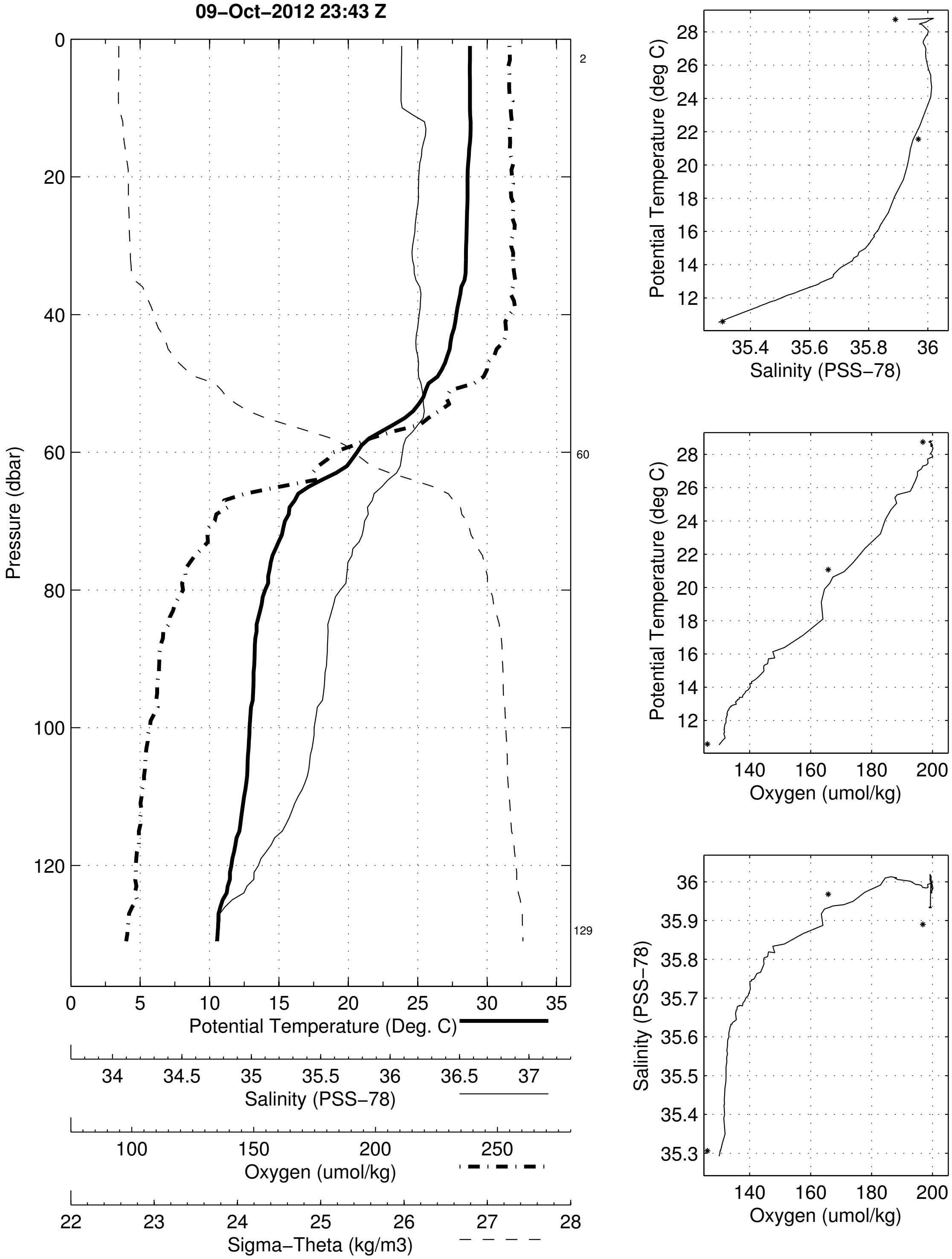


Abaco September - Ocotober 2012 R/V Endeavor CTD Station 45 (CTD045)

Pressure	Temp90	PoTemp90	Salinity	Oxygen	DynHt	SigT
dbar	°C	°C	PSS-78	μmol·kg^{-1}	m^2·s^{-2}	kg·m^{-3}
1	28.760	28.760	35.935	199.1	0.005	22.847
10	28.766	28.764	35.937	199.3	0.050	22.847
20	28.597	28.592	35.994	199.5	0.100	22.947
30	28.497	28.490	35.973	199.4	0.149	22.965
50	25.794	25.783	36.002	192.7	0.241	23.857
75	14.552	14.540	35.763	142.3	0.302	26.661
100	12.897	12.883	35.633	134.2	0.333	26.907
125	10.965	10.950	35.350	131.9	0.361	27.057

Pressure	Niskin	Temp90	PoTemp90	Salinity	Oxygen
dbar		°C	°C	PSS-78	μmol·kg^{-1}
129	1	10.599	10.583	35.306	126.1
60	2	21.565	21.553	35.968	165.7
3	3	28.751	28.750	35.890	196.8

Abaco September − Ocotober 2012 R/V Endeavor
CTD Station 45 (CTD045)
Latitude 27.007 NLongitude 79.930 W
09−Oct−2012 23:43 Z



B WOCE Summary File

Table 19: Abaco Cruise – WOCE Summary File

SHIP/CRS EXPOCODE	WOCE SECT	STN	CAST	CAST TYPE	CAST DATE	UTC TIME	EVENT CODE	LAT	LON	NAV	UNC DPH	HT ABV BTM	WIRE OUT	MAX PRS	NO. BTLS	PARA-METERS
WBTSEN	AB1209	1	1	ROS	09252012	0225	BE	26.071N	78.852W	GPS						
WBTSEN	AB1209	1	1	ROS	09252012	0225	BO	26.072N	78.853W	GPS	290	19	289	292	24	1,2
WBTSEN	AB1209	1	1	ROS	09252012	0309	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	2	1	ROS	09252012	0433	BE	26.168N	78.802W	GPS						
WBTSEN	AB1209	2	1	ROS	09252012	0433	BO	26.169N	78.803W	GPS	436	19	436	439	24	1,2
WBTSEN	AB1209	2	1	ROS	09252012	0526	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	3	1	ROS	09252012	0627	BE	26.251N	78.766W	GPS						
WBTSEN	AB1209	3	1	ROS	09252012	0627	BO	26.251N	78.766W	GPS	501	22	506	506	24	1,2
WBTSEN	AB1209	3	1	ROS	09252012	0718	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	4	1	ROS	09252012	0817	BE	26.318N	78.715W	GPS						
WBTSEN	AB1209	4	1	ROS	09252012	0817	BO	26.318N	78.716W	GPS	651	17	651	656	9	1,2
WBTSEN	AB1209	4	1	ROS	09252012	0917	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	5	1	ROS	09252012	1026	BE	26.433N	78.668W	GPS						
WBTSEN	AB1209	5	1	ROS	09252012	1026	BO	26.434N	78.670W	GPS	743	18	749	749	11	1,2
WBTSEN	AB1209	5	1	ROS	09252012	1135	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	6	1	ROS	09252012	2202	BE	25.955N	76.895W	GPS						
WBTSEN	AB1209	6	1	ROS	09252012	2202	BO	25.955N	76.902W	GPS	4343	19	4418	4419	12	1,2
WBTSEN	AB1209	6	1	ROS	09262012	0210	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	7	1	ROS	09262012	0256	BE	25.949N	76.886W	GPS						
WBTSEN	AB1209	7	1	ROS	09262012	0256	BO	25.946N	76.884W	GPS	4269	25	4339	4341	12	1,2
WBTSEN	AB1209	7	1	ROS	09262012	0702	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	8	1	ROS	09262012	1057	BE	26.526N	76.883W	GPS						
WBTSEN	AB1209	8	1	ROS	09262012	1057	BO	26.525N	76.885W	GPS	446	16	449	450	9	1,2
WBTSEN	AB1209	8	1	ROS	09262012	1146	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	9	1	ROS	09262012	1234	BE	26.516N	76.829W	GPS						
WBTSEN	AB1209	9	1	ROS	09262012	1234	BO	26.515N	76.831W	GPS	1109	22	1120	1121	14	1,2
WBTSEN	AB1209	9	1	ROS	09262012	1404	EN	-999.000N	-999.000W	GPS						

WBTSEN	AB1209	10	1	ROS	09262012	1453	BE	26.497N	76.745W	GPS							
WBTSEN	AB1209	10	1	ROS	09262012	1453	BO	26.488N	76.748W	GPS	3783	34		3843	3843	24	1,2
WBTSEN	AB1209	10	1	ROS	09262012	1808	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	11	1	ROS	09262012	1924	BE	26.502N	76.657W	GPS							
WBTSEN	AB1209	11	1	ROS	09262012	1924	BO	26.500N	76.667W	GPS	4522	32		4602	4602	24	1,2
WBTSEN	AB1209	11	1	ROS	09262012	2249	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	12	1	ROS	09272012	0001	BE	26.498N	76.566W	GPS							
WBTSEN	AB1209	12	1	ROS	09272012	0001	BO	26.488N	76.566W	GPS	4807	146		4894	4897	24	1,2
WBTSEN	AB1209	12	1	ROS	09272012	0349	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	13	1	ROS	09272012	0454	BE	26.500N	76.477W	GPS							
WBTSEN	AB1209	13	1	ROS	09272012	0454	BO	26.499N	76.483W	GPS	4827	19		4913	4915	24	1,2
WBTSEN	AB1209	13	1	ROS	09272012	0832	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	14	1	ROS	09272012	0954	BE	26.500N	76.348W	GPS							
WBTSEN	AB1209	14	1	ROS	09272012	0954	BO	26.500N	76.357W	GPS	4826	25		4915	4916	24	1,2
WBTSEN	AB1209	14	1	ROS	09272012	1335	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	15	1	ROS	09272012	1441	BE	26.501N	76.219W	GPS							
WBTSEN	AB1209	15	1	ROS	09272012	1441	BO	26.499N	76.224W	GPS	4794	21		4881	4883	24	1,2
WBTSEN	AB1209	15	1	ROS	09272012	1821	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	16	1	ROS	09272012	1929	BE	26.501N	76.087W	GPS							
WBTSEN	AB1209	16	1	ROS	09272012	1929	BO	26.496N	76.095W	GPS	4778	24		4865	4866	24	1,2
WBTSEN	AB1209	16	1	ROS	09272012	2305	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	17	1	ROS	09282012	0044	BE	26.497N	75.900W	GPS							
WBTSEN	AB1209	17	1	ROS	09282012	0044	BO	26.490N	75.908W	GPS	4721	23		4807	4807	24	1,2
WBTSEN	AB1209	17	1	ROS	09282012	0424	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	18	1	ROS	09282012	0539	BE	26.501N	75.702W	GPS							
WBTSEN	AB1209	18	1	ROS	09282012	0539	BO	26.499N	75.701W	GPS	4671	19		4755	4756	24	1,2
WBTSEN	AB1209	18	1	ROS	09282012	0908	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	19	1	ROS	09282012	1021	BE	26.501N	75.499W	GPS							
WBTSEN	AB1209	19	1	ROS	09282012	1021	BO	26.505N	75.501W	GPS	4666	21		4779	4750	24	1,2
WBTSEN	AB1209	19	1	ROS	09282012	1401	EN	-999.000N	-999.000W	GPS							

WBTSEN	AB1209	20	1	ROS	09282012	1509	BE	26.501N	75.297W	GPS						
WBTSEN	AB1209	20	1	ROS	09282012	1509	BO	26.506N	75.294W	GPS	4615	20	4698	4697	24	1,2
WBTSEN	AB1209	20	1	ROS	09282012	1846	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	21	1	ROS	09282012	1958	BE	26.501N	75.078W	GPS						
WBTSEN	AB1209	21	1	ROS	09282012	1958	BO	26.504N	75.069W	GPS	4583	23	4664	4664	24	1,2
WBTSEN	AB1209	21	1	ROS	09282012	2322	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	22	1	ROS	09292012	0049	BE	26.501N	74.798W	GPS						
WBTSEN	AB1209	22	1	ROS	09292012	0049	BO	26.507N	74.794W	GPS	4513	23	4592	4593	24	1,2
WBTSEN	AB1209	22	1	ROS	09292012	0416	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	23	1	ROS	09292012	0542	BE	26.503N	74.515W	GPS						
WBTSEN	AB1209	23	1	ROS	09292012	0542	BO	26.508N	74.505W	GPS	4473	20	4551	4552	24	1,2
WBTSEN	AB1209	23	1	ROS	09292012	0911	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	24	1	ROS	09292012	1038	BE	26.500N	74.232W	GPS						
WBTSEN	AB1209	24	1	ROS	09292012	1038	BO	26.500N	74.233W	GPS	4518	23	4597	4598	24	1,2
WBTSEN	AB1209	24	1	ROS	09292012	1422	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	25	1	ROS	09292012	1615	BE	26.501N	73.866W	GPS						
WBTSEN	AB1209	25	1	ROS	09292012	1615	BO	26.504N	73.855W	GPS	4715	21	4801	4801	24	1,2
WBTSEN	AB1209	25	1	ROS	09292012	1942	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	26	1	ROS	09292012	2124	BE	26.501N	73.500W	GPS						
WBTSEN	AB1209	26	1	ROS	09292012	2124	BO	26.507N	73.492W	GPS	4886	20	4977	4977	24	1,2
WBTSEN	AB1209	26	1	ROS	09302012	0101	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	27	1	ROS	09302012	0246	BE	26.502N	73.132W	GPS						
WBTSEN	AB1209	27	1	ROS	09302012	0246	BO	26.504N	73.125W	GPS	5032	20	5126	5126	24	1,2
WBTSEN	AB1209	27	1	ROS	09302012	0642	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	28	1	ROS	09302012	0834	BE	26.503N	72.765W	GPS						
WBTSEN	AB1209	28	1	ROS	09302012	0834	BO	26.516N	72.765W	GPS	5109	24	5207	5208	24	1,2
WBTSEN	AB1209	28	1	ROS	09302012	1224	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	29	1	ROS	09302012	1426	BE	26.502N	72.383W	GPS						
WBTSEN	AB1209	29	1	ROS	09302012	1426	BO	26.520N	72.382W	GPS	5170	27	5171	5271	24	1,2

WBTSEN	AB1209	29	1	ROS	09302012	1813	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	30	1	ROS	09302012	2022	BE	26.501N	71.988W	GPS							
WBTSEN	AB1209	30	1	ROS	09302012	2022	BO	26.506N	71.974W	GPS	5272	21		5378	5374	24	1,2
WBTSEN	AB1209	30	1	ROS	10012012	0008	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	31	1	ROS	10012012	0232	BE	26.501N	71.499W	GPS							
WBTSEN	AB1209	31	1	ROS	10012012	0232	BO	26.508N	71.501W	GPS	5403	19		5508	5509	24	1,2
WBTSEN	AB1209	31	1	ROS	10012012	0634	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	32	1	ROS	10012012	0920	BE	26.503N	71.002W	GPS							
WBTSEN	AB1209	32	1	ROS	10012012	0920	BO	26.499N	71.000W	GPS	5467	21		5575	5576	24	1,2
WBTSEN	AB1209	32	1	ROS	10012012	1316	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	33	1	ROS	10012012	1552	BE	26.502N	70.499W	GPS							
WBTSEN	AB1209	33	1	ROS	10012012	1552	BO	26.497N	70.490W	GPS	5471	20		5579	5579	24	1,2
WBTSEN	AB1209	33	1	ROS	10012012	1948	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	34	1	ROS	10012012	2219	BE	26.502N	70.002W	GPS							
WBTSEN	AB1209	34	1	ROS	10012012	2219	BO	26.502N	69.997W	GPS	5469	23		5577	5577	24	1,2
WBTSEN	AB1209	34	1	ROS	10022012	0221	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	35	1	ROS	10052012	0401	BE	26.488N	76.110W	GPS							
WBTSEN	AB1209	35	1	ROS	10052012	0401	BO	26.484N	76.108W	GPS	4780	23		4866	4867	12	1,2
WBTSEN	AB1209	35	1	ROS	10052012	0818	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	36	1	ROS	10072012	0300	BE	26.490N	76.474W	GPS							
WBTSEN	AB1209	36	1	ROS	10072012	0300	BO	26.476N	76.478W	GPS	4791	46		4894	4898	12	1,2
WBTSEN	AB1209	36	1	ROS	10072012	0719	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	37	1	ROS	10092012	1106	BE	27.003N	79.200W	GPS							
WBTSEN	AB1209	37	1	ROS	10092012	1106	BO	27.004N	79.199W	GPS	458	19		462	462	5	1,2
WBTSEN	AB1209	37	1	ROS	10092012	1143	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	38	1	ROS	10092012	1221	BE	27.004N	79.283W	GPS							
WBTSEN	AB1209	38	1	ROS	10092012	1221	BO	27.011N	79.281W	GPS	585	23		591	591	6	1,2
WBTSEN	AB1209	38	1	ROS	10092012	1303	EN	-999.000N	-999.000W	GPS							
WBTSEN	AB1209	39	1	ROS	10092012	1346	BE	27.008N	79.383W	GPS							

WBTSEN	AB1209	39	1	ROS	10092012	1346	BO	27.019N	79.382W	GPS	661	24	663	669	6	1,2
WBTSEN	AB1209	39	1	ROS	10092012	1432	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	40	1	ROS	10092012	1521	BE	27.013N	79.501W	GPS						
WBTSEN	AB1209	40	1	ROS	10092012	1521	BO	27.031N	79.503W	GPS	729	24	737	742	7	1,2
WBTSEN	AB1209	40	1	ROS	10092012	1613	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	41	1	ROS	10092012	1709	BE	27.008N	79.616W	GPS						
WBTSEN	AB1209	41	1	ROS	10092012	1709	BO	27.017N	79.615W	GPS	628	24	635	635	6	1,2
WBTSEN	AB1209	41	1	ROS	10092012	1756	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	42	1	ROS	10092012	1829	BE	27.006N	79.682W	GPS						
WBTSEN	AB1209	42	1	ROS	10092012	1829	BO	27.013N	79.682W	GPS	509	26	514	515	6	1,2
WBTSEN	AB1209	42	1	ROS	10092012	1909	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	43	1	ROS	10092012	2036	BE	27.011N	79.784W	GPS						
WBTSEN	AB1209	43	1	ROS	10092012	2036	BO	27.020N	79.785W	GPS	348	37	363	365	4	1,2
WBTSEN	AB1209	43	1	ROS	10092012	2129	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	44	1	ROS	10092012	2221	BE	27.010N	79.865W	GPS						
WBTSEN	AB1209	44	1	ROS	10092012	2221	BO	27.018N	79.863W	GPS	245	26	246	248	4	1,2
WBTSEN	AB1209	44	1	ROS	10092012	2303	EN	-999.000N	-999.000W	GPS						
WBTSEN	AB1209	45	1	ROS	10092012	2343	BE	27.004N	79.932W	GPS						
WBTSEN	AB1209	45	1	ROS	10092012	2343	BO	27.011N	79.927W	GPS	129	271	130	131	3	1,2
WBTSEN	AB1209	45	1	ROS	10102012	0020	EN	-999.000N	-999.000W	GPS						

Table 20: Station Comments

Station	Comment
1	niskin 9,11,21 leaking bottom, 10 leaking top
2	niskin 13 leaky bottom O-ring, leaky petcock
3	niskin 13 leaky bottom O-ring
4	niskin 5 leaky bottom O-ring
5	
6	niskins 1,3,5,7,9,11,14,16,18,20,22,24 removed
7	niskins 1,3,5,7,9,11,14,16,18,20,22,24 removed
8	lanyard strung wrong. niskin 24 strung as niskin 1
9	niskin 10 leaky bottom O-ring
10	
11	lanyard caught bottom O-ring niskin 12 (no sample)
12	
13	
14	
15	niskin 10,23 leaking, 9 lanyard caught in bottom
16	
17	niskin 21 leaky bottom, bumped during recovery
18	niskin 5 leaky bottom
19	
20	
21	
22	niskin 5 leaky bottom, 16 leaky petcock
23	niskin 16 leaky petcock
24	niskin 16 leaky petcock
25	
26	
27	
28	
29	niskin 23 leaking, no sample
30	niskin 21 possible leaker
31	
32	niskin 21 leaky bottom
33	
34	niskin 21 possible leaker
35	niskins 1,3,5,7,9,11,14,16,18,20,22,24 removed
36	niskins 1,3,5,7,9,11,14,16,18,20,22,24 removed
37	
38	
39	
40	
41	
42	
43	
44	
45	

C WOCE Bottle Summary File

Table 21: Abaco Cruise – WOCE Bottle Summary File

SHIP/CRS EXPOCODE	WOCE SECT	STN	CAST	BTL#	BTL# Flag	DATE	UTC TIME	LAT	LON	DEPTH	CTD PRS	CTD TMP	CTD SAL	SAL FLAG	BTL SAL	SAL FLAG	CTD OXY	OXY FLAG	BTL OXY	OXY FLAG
WBTSEN	AB1209	1	1	1	2	20120925	0245	26.071N	78.851W	290	292	18.922	36.638	2	36.643	2	182.6	2	185.0	2
WBTSEN	AB1209	1	1	2	2	20120925	0245	26.071N	78.851W	290	292	18.923	36.638	2	36.648	2	182.5	2	185.0	2
WBTSEN	AB1209	1	1	3	2	20120925	0245	26.071N	78.851W	290	292	18.922	36.637	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	4	2	20120925	0245	26.071N	78.851W	290	292	18.922	36.637	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	5	2	20120925	0245	26.071N	78.851W	201	202	20.917	36.817	2	36.831	4	178.8	2	179.0	2
WBTSEN	AB1209	1	1	6	2	20120925	0245	26.071N	78.851W	201	202	20.916	36.818	2	36.829	2	178.8	2	178.9	2
WBTSEN	AB1209	1	1	7	2	20120925	0245	26.071N	78.851W	201	203	20.917	36.817	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	8	2	20120925	0245	26.071N	78.851W	201	203	20.917	36.818	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	9	2	20120925	0245	26.071N	78.851W	149	150	22.923	36.795	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	10	2	20120925	0245	26.071N	78.851W	149	150	22.928	36.795	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	11	2	20120925	0245	26.071N	78.851W	149	150	22.928	36.796	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	12	2	20120925	0245	26.071N	78.851W	149	150	22.930	36.796	2	36.826	4	194.8	2	198.6	2
WBTSEN	AB1209	1	1	13	2	20120925	0245	26.071N	78.851W	104	105	26.025	36.444	2	36.521	4	203.5	2	200.3	2
WBTSEN	AB1209	1	1	14	2	20120925	0245	26.071N	78.851W	104	105	26.024	36.444	2	36.509	4	203.5	2	201.7	2
WBTSEN	AB1209	1	1	15	2	20120925	0245	26.071N	78.851W	104	105	26.023	36.445	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	16	2	20120925	0245	26.071N	78.851W	104	105	26.022	36.445	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	17	2	20120925	0245	26.071N	78.851W	49	50	28.899	35.953	2	36.683	4	185.9	2	185.9	4
WBTSEN	AB1209	1	1	18	2	20120925	0245	26.071N	78.851W	49	50	28.896	35.949	2	36.014	4	197.0	2	196.2	2
WBTSEN	AB1209	1	1	19	2	20120925	0245	26.071N	78.851W	50	50	28.895	35.948	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	20	2	20120925	0245	26.071N	78.851W	50	50	28.901	35.953	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	21	2	20120925	0245	26.071N	78.851W	2	2	28.860	35.938	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	1	1	22	2	20120925	0245	26.071N	78.851W	2	2	28.859	35.938	2	35.977	4	197.0	2	195.9	2
WBTSEN	AB1209	1	1	23	2	20120925	0245	26.071N	78.851W	2	2	28.858	35.938	2	35.980	4	196.9	2	196.0	2
WBTSEN	AB1209	1	1	24	2	20120925	0245	26.071N	78.851W	2	2	28.858	35.938	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	1	2	20120925	0500	26.168N	78.802W	436	439	15.573	36.095	2	36.173	4	161.1	2	167.1	2
WBTSEN	AB1209	2	1	2	2	20120925	0500	26.168N	78.802W	436	439	15.579	36.097	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	3	2	20120925	0500	26.168N	78.802W	369	372	17.218	36.404	2	36.427	4	188.7	2	187.7	2
WBTSEN	AB1209	2	1	4	2	20120925	0500	26.168N	78.802W	369	372	17.244	36.409	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	5	2	20120925	0500	26.168N	78.802W	369	372	17.244	36.409	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	6	2	20120925	0500	26.168N	78.802W	259	261	18.955	36.641	2	36.684	4	187.6	2	188.8	2
WBTSEN	AB1209	2	1	7	2	20120925	0500	26.168N	78.802W	259	261	18.974	36.644	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	8	2	20120925	0500	26.168N	78.802W	179	180	21.864	36.780	2	36.835	4	198.0	2	197.5	6
WBTSEN	AB1209	2	1	9	2	20120925	0500	26.168N	78.802W	179	180	21.894	36.782	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	10	2	20120925	0500	26.168N	78.802W	179	180	21.872	36.783	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	11	2	20120925	0500	26.168N	78.802W	179	180	21.874	36.783	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	12	2	20120925	0500	26.168N	78.802W	179	180	21.874	36.783	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	13	2	20120925	0500	26.168N	78.802W	130	131	24.269	36.722	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	14	2	20120925	0500	26.168N	78.802W	130	131	24.303	36.719	2	36.798	4	196.3	2	194.6	2
WBTSEN	AB1209	2	1	15	2	20120925	0500	26.168N	78.802W	60	60	28.801	36.041	2	36.125	4	195.8	2	196.5	2
WBTSEN	AB1209	2	1	16	2	20120925	0500	26.168N	78.802W	60	60	28.801	36.041	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	17	2	20120925	0500	26.168N	78.802W	60	60	28.798	36.041	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	18	2	20120925	0500	26.168N	78.802W	60	60	28.799	36.041	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	19	2	20120925	0500	26.168N	78.802W	60	60	28.798	36.041	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	20	2	20120925	0500	26.168N	78.802W	2	2	28.858	35.951	2	36.008	4	195.4	2	195.7	2
WBTSEN	AB1209	2	1	21	2	20120925	0500	26.168N	78.802W	2	2	28.859	35.951	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	22	2	20120925	0500	26.168N	78.802W	2	2	28.855	35.951	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	23	2	20120925	0500	26.168N	78.802W	2	2	28.852	35.952	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	2	1	24	2	20120925	0500	26.168N	78.802W	2	2	28.856	35.951	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	1	2	20120925	0652	26.250N	78.767W	501	505	14.063	35.864	2	35.924	4	158.6	2	159.1	6
WBTSEN	AB1209	3	1	2	2	20120925	0652	26.250N	78.767W	501	505	14.060	35.863	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	3	2	20120925	0652	26.250N	78.767W	402	405	16.392	36.255	2	36.272	4	180.3	2	178.8	2
WBTSEN	AB1209	3	1	4	2	20120925	0652	26.250N	78.767W	402	405	16.395	36.256	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	5	2	20120925	0652	26.250N	78.767W	402	405	16.395	36.257	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	6	2	20120925	0652	26.250N	78.767W	269	271	19.425	36.687	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	7	2	20120925	0652	26.250N	78.767W	270	271	19.420	36.686	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	8	2	20120925	0652	26.250N	78.767W	189	190	21.662	36.785	2	36.812	4	194.9	2	191.9	2
WBTSEN	AB1209	3	1	9	2	20120925	0652	26.250N	78.767W	189	190	21.659	36.786	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	10	2	20120925	0652	26.250N	78.767W	189	190	21.659	36.786	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	11	2	20120925	0652	26.250N	78.767W	189	190	21.659	36.786	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	12	2	20120925	0652	26.250N	78.767W	189	190	21.658	36.786	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	13	2	20120925	0652	26.250N	78.767W	130	131	24.059	36.741	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	14	2	20120925	0652	26.250N	78.767W	130	131	24.155	36.734	2	36.781	4	199.7	2	200.9	6

WBTSEN	AB1209	3	1	15	2	20120925	0652	26.250N	78.767W	49	50	29.027	35.990	2	36.034	4	196.0	2	196.4	2
WBTSEN	AB1209	3	1	16	2	20120925	0652	26.250N	78.767W	50	50	29.025	35.990	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	17	2	20120925	0652	26.250N	78.767W	49	50	29.023	35.990	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	18	2	20120925	0652	26.250N	78.767W	49	50	29.025	35.990	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	19	2	20120925	0652	26.250N	78.767W	49	50	29.027	35.990	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	20	2	20120925	0652	26.250N	78.767W	2	2	29.019	35.912	2	35.936	4	196.1	2	196.0	2
WBTSEN	AB1209	3	1	21	2	20120925	0652	26.250N	78.767W	2	2	29.019	35.912	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	22	2	20120925	0652	26.250N	78.767W	2	2	29.019	35.912	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	23	2	20120925	0652	26.250N	78.767W	2	2	29.019	35.912	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	3	1	24	2	20120925	0652	26.250N	78.767W	2	2	29.018	35.912	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	1	2	20120925	0846	26.317N	78.715W	651	656	11.231	35.428	2	35.471	4	140.4	2	141.3	2
WBTSEN	AB1209	4	1	2	2	20120925	0846	26.317N	78.715W	589	593	12.244	35.590	2	35.609	4	148.5	2	146.5	2
WBTSEN	AB1209	4	1	3	2	20120925	0846	26.317N	78.715W	450	454	15.251	36.059	2	36.075	4	168.4	2	167.9	2
WBTSEN	AB1209	4	1	4	2	20120925	0846	26.317N	78.715W	370	373	17.204	36.401	2	36.408	6	188.4	2	187.3	2
WBTSEN	AB1209	4	1	5	2	20120925	0846	26.317N	78.715W	300	302	18.326	36.573	2	36.584	2	190.7	2	192.1	2
WBTSEN	AB1209	4	1	6	2	20120925	0846	26.317N	78.715W	200	202	21.206	36.771	2	36.762	2	191.2	2	193.3	6
WBTSEN	AB1209	4	1	7	2	20120925	0846	26.317N	78.715W	139	140	23.992	36.750	2	36.761	2	199.5	2	200.6	2
WBTSEN	AB1209	4	1	8	2	20120925	0846	26.317N	78.715W	69	70	28.913	36.034	2	36.076	4	195.8	2	199.9	2
WBTSEN	AB1209	4	1	9	2	20120925	0846	26.317N	78.715W	3	3	28.841	35.879	2	35.879	2	195.9	2	196.1	2
WBTSEN	AB1209	4	1	10	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	11	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	12	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	13	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	14	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	15	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	16	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	17	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	18	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	19	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	20	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	21	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	22	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	23	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	4	1	24	2	20120925	0846	26.317N	78.715W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	1	2	20120925	1057	26.430N	78.668W	743	749	10.298	35.349	2	35.348	2	145.9	2	145.6	6
WBTSEN	AB1209	5	1	2	2	20120925	1057	26.430N	78.668W	649	654	11.830	35.534	2	35.527	6	146.5	2	146.1	2
WBTSEN	AB1209	5	1	3	2	20120925	1057	26.430N	78.668W	509	513	14.951	36.011	2	36.001	4	166.5	2	165.8	2
WBTSEN	AB1209	5	1	4	2	20120925	1057	26.430N	78.668W	429	432	16.531	36.282	2	36.273	2	181.3	2	180.5	6
WBTSEN	AB1209	5	1	5	2	20120925	1057	26.430N	78.668W	349	352	17.666	36.481	2	36.480	6	191.8	2	192.4	2
WBTSEN	AB1209	5	1	6	2	20120925	1057	26.430N	78.668W	274	276	18.693	36.620	2	36.623	2	191.9	2	191.1	2
WBTSEN	AB1209	5	1	7	2	20120925	1057	26.430N	78.668W	190	191	21.763	36.786	2	36.780	2	192.6	2	192.5	2
WBTSEN	AB1209	5	1	8	2	20120925	1057	26.430N	78.668W	140	141	23.566	36.776	2	36.781	2	198.6	2	198.9	2
WBTSEN	AB1209	5	1	9	2	20120925	1057	26.430N	78.668W	89	90	25.923	36.455	2	36.504	4	203.1	2	201.5	2
WBTSEN	AB1209	5	1	10	2	20120925	1057	26.430N	78.668W	49	49	28.933	35.983	2	36.006	4	195.6	2	196.2	2
WBTSEN	AB1209	5	1	11	2	20120925	1057	26.430N	78.668W	2	2	28.956	35.949	2	35.948	2	195.4	2	196.0	2
WBTSEN	AB1209	5	1	12	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	13	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	14	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	15	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	16	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	17	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	18	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	19	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	20	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	21	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	22	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	23	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	5	1	24	2	20120925	1057	26.430N	78.668W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	1	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	2	2	20120925	2335	25.954N	76.894W	4343	4417	2.268	34.888	2	34.888	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	3	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	4	2	20120925	2335	25.954N	76.894W	3937	4000	2.319	34.896	2	34.896	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	5	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	6	2	20120925	2335	25.954N	76.894W	3449	3500	2.523	34.910	2	34.910	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	7	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	8	2	20120925	2335	25.954N	76.894W	2964	3005	2.890	34.930	2	34.930	2	-999.0	9	-999.0	9

WBTSEN	AB1209	6	1	9	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	10	2	20120925	2335	25.954N	76.894W	2469	2500	3.159	34.945	2	34.947	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	11	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	12	2	20120925	2335	25.954N	76.894W	1977	1999	3.587	34.959	2	34.960	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	13	2	20120925	2335	25.954N	76.894W	1484	1499	4.150	34.988	2	34.988	6	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	14	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	15	2	20120925	2335	25.954N	76.894W	793	799	9.359	35.222	2	35.223	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	16	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	17	2	20120925	2335	25.954N	76.894W	495	499	16.604	36.293	2	36.294	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	18	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	19	2	20120925	2335	25.954N	76.894W	198	199	20.880	36.750	2	36.753	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	20	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	21	2	20120925	2335	25.954N	76.894W	99	99	24.590	36.724	2	36.728	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	22	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	23	2	20120925	2335	25.954N	76.894W	2	2	28.860	36.143	2	36.141	2	-999.0	9	-999.0	9
WBTSEN	AB1209	6	1	24	2	20120925	2335	25.954N	76.894W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	1	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	2	2	20120926	0431	25.950N	76.887W	4269	4340	2.264	34.889	2	34.887	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	3	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	4	2	20120926	0431	25.950N	76.887W	3935	3998	2.321	34.896	2	34.893	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	5	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	6	2	20120926	0431	25.950N	76.887W	3506	3559	2.507	34.909	2	34.907	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	7	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	8	2	20120926	0431	25.950N	76.887W	3017	3059	2.831	34.929	2	34.932	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	9	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	10	2	20120926	0431	25.950N	76.887W	2468	2499	3.209	34.947	2	34.947	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	11	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	12	2	20120926	0431	25.950N	76.887W	1977	2000	3.596	34.959	2	34.960	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	13	2	20120926	0431	25.950N	76.887W	1485	1500	4.169	34.989	2	34.988	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	14	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	15	2	20120926	0431	25.950N	76.887W	792	799	9.343	35.218	2	35.217	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	16	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	17	2	20120926	0431	25.950N	76.887W	496	500	16.504	36.273	2	36.275	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	18	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	19	2	20120926	0431	25.950N	76.887W	198	200	20.250	36.662	2	36.668	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	20	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	21	2	20120926	0431	25.950N	76.887W	98	99	24.400	36.733	2	36.730	2	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	22	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	23	2	20120926	0431	25.950N	76.887W	3	3	28.785	36.180	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	7	1	24	2	20120926	0431	25.950N	76.887W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	1	2	20120926	1119	26.525N	76.882W	446	449	17.245	36.409	2	36.542	4	179.7	2	195.7	4
WBTSEN	AB1209	8	1	2	2	20120926	1119	26.525N	76.882W	396	399	18.023	36.542	2	36.607	4	195.5	2	192.9	2
WBTSEN	AB1209	8	1	3	2	20120926	1119	26.525N	76.882W	327	329	18.522	36.606	2	36.710	4	182.8	2	187.4	4
WBTSEN	AB1209	8	1	4	2	20120926	1119	26.525N	76.882W	267	269	19.699	36.710	2	36.748	4	178.6	2	194.2	4
WBTSEN	AB1209	8	1	5	2	20120926	1119	26.525N	76.882W	208	209	20.507	36.750	2	36.795	4	186.8	2	204.1	4
WBTSEN	AB1209	8	1	6	2	20120926	1119	26.525N	76.882W	158	159	22.657	36.791	2	36.723	4	206.7	2	211.7	2
WBTSEN	AB1209	8	1	7	2	20120926	1119	26.525N	76.882W	108	109	24.221	36.722	2	36.323	4	202.9	2	200.5	4
WBTSEN	AB1209	8	1	8	2	20120926	1119	26.525N	76.882W	59	60	27.949	36.326	2	36.098	4	202.8	2	197.0	2
WBTSEN	AB1209	8	1	9	2	20120926	1119	26.525N	76.882W	3	3	28.740	36.097	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	10	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	11	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	12	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	13	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	14	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	15	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	16	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	17	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	18	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	19	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	20	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	21	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	22	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	23	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	8	1	24	2	20120926	1119	26.525N	76.882W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	1	2	20120926	1306	26.517N	76.829W	1109	1120	4.754	35.022	2	35.022	2	245.0	2	243.3	2
WBTSEN	AB1209	9	1	2	2	20120926	1306	26.517N	76.829W	1040	1049	5.382	35.053	2	35.054	2	227.3	2	227.3	6

WBTSEN	AB1209	9	1	3	2	20120926	1306	26.517N	76.829W	990	999	6.039	35.071	2	35.070	6	207.2	2	208.2	2
WBTSEN	AB1209	9	1	4	2	20120926	1306	26.517N	76.829W	892	900	7.309	35.103	2	35.102	2	172.7	2	173.5	2
WBTSEN	AB1209	9	1	5	2	20120926	1306	26.517N	76.829W	792	799	9.125	35.208	2	35.207	2	146.2	2	145.1	2
WBTSEN	AB1209	9	1	6	2	20120926	1306	26.517N	76.829W	693	699	12.100	35.564	2	35.564	2	146.9	2	146.7	2
WBTSEN	AB1209	9	1	7	2	20120926	1306	26.517N	76.829W	594	599	14.772	35.974	2	35.974	2	162.9	2	162.4	2
WBTSEN	AB1209	9	1	8	2	20120926	1306	26.517N	76.829W	496	500	17.092	36.383	2	36.383	2	188.7	2	190.2	2
WBTSEN	AB1209	9	1	9	2	20120926	1306	26.517N	76.829W	387	390	18.005	36.551	2	36.550	2	199.4	2	200.0	2
WBTSEN	AB1209	9	1	10	2	20120926	1306	26.517N	76.829W	276	278	19.073	36.664	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	11	2	20120926	1306	26.517N	76.829W	190	191	20.859	36.734	2	36.733	2	204.4	2	201.0	2
WBTSEN	AB1209	9	1	12	2	20120926	1306	26.517N	76.829W	118	119	23.542	36.735	2	36.737	2	212.5	2	210.0	2
WBTSEN	AB1209	9	1	13	2	20120926	1306	26.517N	76.829W	69	69	26.843	36.341	2	36.356	4	210.3	2	210.5	2
WBTSEN	AB1209	9	1	14	2	20120926	1306	26.517N	76.829W	3	3	29.036	36.245	2	36.245	2	196.9	2	196.2	2
WBTSEN	AB1209	9	1	15	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	16	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	17	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	18	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	19	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	20	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	21	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	22	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	23	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	9	1	24	2	20120926	1306	26.517N	76.829W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	10	1	1	2	20120926	1617	26.499N	76.745W	3783	3842	2.397	34.902	2	34.902	2	269.3	2	270.1	2
WBTSEN	AB1209	10	1	2	2	20120926	1617	26.499N	76.745W	3498	3550	2.494	34.909	2	34.909	2	270.2	2	270.2	2
WBTSEN	AB1209	10	1	3	2	20120926	1617	26.499N	76.745W	3217	3263	2.601	34.916	2	34.917	2	269.9	2	270.2	2
WBTSEN	AB1209	10	1	4	2	20120926	1617	26.499N	76.745W	2959	2999	2.743	34.925	2	34.925	2	268.8	2	269.3	2
WBTSEN	AB1209	10	1	5	2	20120926	1617	26.499N	76.745W	2664	2699	3.066	34.941	2	34.942	2	266.1	2	266.5	2
WBTSEN	AB1209	10	1	6	2	20120926	1617	26.499N	76.745W	2468	2499	3.159	34.946	2	34.947	6	265.6	2	266.2	2
WBTSEN	AB1209	10	1	7	2	20120926	1617	26.499N	76.745W	2174	2199	3.504	34.958	2	34.960	2	265.1	2	265.1	2
WBTSEN	AB1209	10	1	8	2	20120926	1617	26.499N	76.745W	1880	1901	3.766	34.967	2	34.967	2	264.3	2	264.0	2
WBTSEN	AB1209	10	1	9	2	20120926	1617	26.499N	76.745W	1683	1701	3.963	34.975	2	34.977	2	262.2	2	261.6	2
WBTSEN	AB1209	10	1	10	2	20120926	1617	26.499N	76.745W	1535	1550	4.081	34.983	2	34.985	2	260.7	2	259.6	2
WBTSEN	AB1209	10	1	11	2	20120926	1617	26.499N	76.745W	1386	1400	4.193	34.989	2	34.991	2	259.4	2	257.5	2
WBTSEN	AB1209	10	1	12	2	20120926	1617	26.499N	76.745W	1238	1250	4.373	34.999	2	34.999	6	255.0	2	254.0	2
WBTSEN	AB1209	10	1	13	2	20120926	1617	26.499N	76.745W	1089	1099	5.122	35.045	2	35.045	2	235.5	2	235.2	2
WBTSEN	AB1209	10	1	14	2	20120926	1617	26.499N	76.745W	942	950	6.839	35.088	2	35.089	2	182.6	2	182.9	2
WBTSEN	AB1209	10	1	15	2	20120926	1617	26.499N	76.745W	808	815	9.450	35.233	2	35.234	2	143.8	2	142.7	2
WBTSEN	AB1209	10	1	16	2	20120926	1617	26.499N	76.745W	699	705	12.026	35.555	2	35.555	2	147.5	2	147.0	2
WBTSEN	AB1209	10	1	17	2	20120926	1617	26.499N	76.745W	590	595	14.886	35.994	2	35.993	2	167.2	2	165.6	2
WBTSEN	AB1209	10	1	18	2	20120926	1617	26.499N	76.745W	480	484	17.117	36.390	2	36.389	2	192.1	2	191.1	2
WBTSEN	AB1209	10	1	19	2	20120926	1617	26.499N	76.745W	372	375	18.035	36.554	2	36.555	2	195.8	2	199.0	2
WBTSEN	AB1209	10	1	20	2	20120926	1617	26.499N	76.745W	263	265	19.153	36.677	2	36.676	2	187.9	2	187.1	2
WBTSEN	AB1209	10	1	21	2	20120926	1617	26.499N	76.745W	173	174	21.158	36.772	2	36.773	2	197.1	2	196.3	2
WBTSEN	AB1209	10	1	22	2	20120926	1617	26.499N	76.745W	94	95	24.206	36.676	2	36.687	2	216.3	2	218.0	2
WBTSEN	AB1209	10	1	23	2	20120926	1617	26.499N	76.745W	44	44	28.852	36.150	2	36.152	2	196.4	2	197.7	2
WBTSEN	AB1209	10	1	24	2	20120926	1617	26.499N	76.745W	2	2	29.171	36.178	2	36.180	2	197.2	2	195.9	2
WBTSEN	AB1209	11	1	1	2	20120926	2055	26.502N	76.655W	4522	4601	2.268	34.886	2	34.888	2	264.9	2	265.0	2
WBTSEN	AB1209	11	1	2	2	20120926	2055	26.502N	76.655W	4072	4139	2.348	34.896	2	34.896	2	268.8	2	268.8	2
WBTSEN	AB1209	11	1	3	2	20120926	2055	26.502N	76.655W	3667	3724	2.424	34.904	2	34.902	2	270.1	2	270.6	2
WBTSEN	AB1209	11	1	4	2	20120926	2055	26.502N	76.655W	3252	3299	2.575	34.914	2	34.912	2	270.3	2	271.3	2
WBTSEN	AB1209	11	1	5	2	20120926	2055	26.502N	76.655W	2860	2899	2.896	34.933	2	34.931	2	267.3	2	267.9	2
WBTSEN	AB1209	11	1	6	2	20120926	2055	26.502N	76.655W	2566	2598	3.154	34.945	2	34.944	2	266.3	2	266.2	6
WBTSEN	AB1209	11	1	7	2	20120926	2055	26.502N	76.655W	2272	2299	3.381	34.954	2	34.953	2	265.5	2	266.2	2
WBTSEN	AB1209	11	1	8	2	20120926	2055	26.502N	76.655W	2076	2100	3.559	34.957	2	34.956	2	265.7	2	265.8	2
WBTSEN	AB1209	11	1	9	2	20120926	2055	26.502N	76.655W	1878	1899	3.659	34.961	2	34.961	6	265.4	2	265.8	2
WBTSEN	AB1209	11	1	10	2	20120926	2055	26.502N	76.655W	1583	1599	3.926	34.973	2	34.972	2	263.1	2	262.5	2
WBTSEN	AB1209	11	1	11	2	20120926	2055	26.502N	76.655W	1387	1401	4.046	34.981	2	34.981	2	261.3	2	260.3	6
WBTSEN	AB1209	11	1	12	2	20120926	2055	26.502N	76.655W	1208	1220	4.318	34.996	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	11	1	13	2	20120926	2055	26.502N	76.655W	1030	1040	5.489	35.051	2	35.050	2	221.3	2	223.6	2
WBTSEN	AB1209	11	1	14	2	20120926	2055	26.502N	76.655W	902	910	7.823	35.119	2	35.121	2	161.8	2	161.1	2
WBTSEN	AB1209	11	1	15	2	20120926	2055	26.502N	76.655W	792	799	9.991	35.292	2	35.293	2	143.4	2	142.6	2
WBTSEN	AB1209	11	1	16	2	20120926	2055	26.502N	76.655W	683	689	12.850	35.673	2	35.669	2	152.4	2	151.6	2
WBTSEN	AB1209	11	1	17	2	20120926	2055	26.502N	76.655W	574	579	15.496	36.095	2	36.094	2	172.1	2	171.1	2
WBTSEN	AB1209	11	1	18	2	20120926	2055	26.502N	76.655W	465	469	17.283	36.418	2	36.413	2	186.1	2	190.9	4
WBTSEN	AB1209	11	1	19	2	20120926	2055	26.502N	76.655W	357	360	18.159	36.574	2	36.573	2	200.3	2	201.5	2
WBTSEN	AB1209	11	1	20	2	20120926	2055	26.502N	76.655W	247	248	19.135	36.672	2	36.669	2	188.5	2	188.3	2

WBTSEN	AB1209	11	1	21	2	20120926	2055	26.502N	76.655W	158	159	21.186	36.760	2	36.758	2	197.5	2	198.2	2
WBTSEN	AB1209	11	1	22	2	20120926	2055	26.502N	76.655W	108	109	22.914	36.774	2	36.769	2	209.9	2	208.4	2
WBTSEN	AB1209	11	1	23	2	20120926	2055	26.502N	76.655W	59	60	27.085	36.462	2	36.471	2	213.6	2	215.4	2
WBTSEN	AB1209	11	1	24	2	20120926	2055	26.502N	76.655W	3	3	29.165	36.180	2	36.185	2	197.3	2	196.4	2
WBTSEN	AB1209	12	1	1	2	20120927	0137	26.499N	76.567W	4807	4894	2.232	34.879	2	34.881	2	261.1	2	261.0	2
WBTSEN	AB1209	12	1	2	2	20120927	0137	26.499N	76.567W	4520	4599	2.279	34.888	2	34.887	2	266.2	2	266.5	2
WBTSEN	AB1209	12	1	3	2	20120927	0137	26.499N	76.567W	4131	4199	2.312	34.894	2	34.893	2	268.3	2	269.0	2
WBTSEN	AB1209	12	1	4	2	20120927	0137	26.499N	76.567W	3741	3800	2.376	34.900	2	34.902	2	270.0	2	270.6	2
WBTSEN	AB1209	12	1	5	2	20120927	0137	26.499N	76.567W	3350	3399	2.529	34.911	2	34.911	6	-999.0	9	-999.0	9
WBTSEN	AB1209	12	1	6	2	20120927	0137	26.499N	76.567W	2959	3000	2.798	34.927	2	34.927	2	268.5	2	270.1	2
WBTSEN	AB1209	12	1	7	2	20120927	0137	26.499N	76.567W	2469	2500	3.165	34.943	2	34.943	2	266.8	2	266.9	2
WBTSEN	AB1209	12	1	8	2	20120927	0137	26.499N	76.567W	1976	1999	3.514	34.955	2	34.955	2	266.3	2	266.5	2
WBTSEN	AB1209	12	1	9	2	20120927	0137	26.499N	76.567W	1730	1749	3.686	34.963	2	34.967	2	265.1	2	264.9	2
WBTSEN	AB1209	12	1	10	2	20120927	0137	26.499N	76.567W	1519	1535	3.912	34.973	2	34.975	2	263.2	2	262.3	2
WBTSEN	AB1209	12	1	11	2	20120927	0137	26.499N	76.567W	1321	1334	4.094	34.984	2	34.986	2	260.3	2	259.6	2
WBTSEN	AB1209	12	1	12	2	20120927	0137	26.499N	76.567W	1153	1164	4.466	35.006	2	35.007	2	252.5	2	251.5	2
WBTSEN	AB1209	12	1	13	2	20120927	0137	26.499N	76.567W	986	995	6.444	35.080	2	35.080	2	194.0	2	196.2	2
WBTSEN	AB1209	12	1	14	2	20120927	0137	26.499N	76.567W	877	884	8.664	35.172	2	35.174	2	148.8	2	151.1	2
WBTSEN	AB1209	12	1	15	2	20120927	0137	26.499N	76.567W	767	774	11.306	35.455	2	35.452	2	144.7	2	144.4	6
WBTSEN	AB1209	12	1	16	2	20120927	0137	26.499N	76.567W	659	665	13.784	35.816	2	35.814	2	157.0	2	157.5	2
WBTSEN	AB1209	12	1	17	2	20120927	0137	26.499N	76.567W	550	554	16.302	36.238	2	36.239	2	181.5	2	182.1	2
WBTSEN	AB1209	12	1	18	2	20120927	0137	26.499N	76.567W	441	444	17.664	36.493	2	36.491	2	197.4	2	198.5	2
WBTSEN	AB1209	12	1	19	2	20120927	0137	26.499N	76.567W	332	334	18.251	36.580	2	36.580	2	198.3	2	198.1	2
WBTSEN	AB1209	12	1	20	2	20120927	0137	26.499N	76.567W	223	224	19.722	36.714	2	36.716	2	188.2	2	188.6	2
WBTSEN	AB1209	12	1	21	2	20120927	0137	26.499N	76.567W	134	135	21.811	36.778	2	36.778	2	200.1	2	202.3	2
WBTSEN	AB1209	12	1	22	2	20120927	0137	26.499N	76.567W	83	84	23.864	36.681	2	36.680	2	202.5	2	218.2	4
WBTSEN	AB1209	12	1	23	2	20120927	0137	26.499N	76.567W	34	34	28.972	36.256	2	36.256	2	196.6	2	198.0	2
WBTSEN	AB1209	12	1	24	2	20120927	0137	26.499N	76.567W	2	2	29.069	36.208	2	36.207	2	196.9	2	197.2	2
WBTSEN	AB1209	13	1	1	2	20120927	0624	26.500N	76.477W	4827	4914	2.217	34.877	2	34.875	6	260.0	2	259.5	2
WBTSEN	AB1209	13	1	2	2	20120927	0624	26.500N	76.477W	4452	4529	2.282	34.889	2	34.888	2	266.6	2	266.5	2
WBTSEN	AB1209	13	1	3	2	20120927	0624	26.500N	76.477W	4092	4159	2.341	34.896	2	34.895	6	269.1	2	269.3	2
WBTSEN	AB1209	13	1	4	2	20120927	0624	26.500N	76.477W	3712	3769	2.413	34.903	2	34.901	2	270.4	2	271.8	2
WBTSEN	AB1209	13	1	5	2	20120927	0624	26.500N	76.477W	3355	3405	2.521	34.910	2	34.911	2	271.2	2	271.7	6
WBTSEN	AB1209	13	1	6	2	20120927	0624	26.500N	76.477W	2954	2995	2.727	34.923	2	34.922	2	268.5	2	270.5	2
WBTSEN	AB1209	13	1	7	2	20120927	0624	26.500N	76.477W	2546	2578	3.093	34.940	2	34.939	2	267.1	2	267.5	2
WBTSEN	AB1209	13	1	8	2	20120927	0624	26.500N	76.477W	2144	2169	3.251	34.948	2	34.947	2	266.6	2	267.5	2
WBTSEN	AB1209	13	1	9	2	20120927	0624	26.500N	76.477W	1833	1854	3.466	34.954	2	34.954	2	266.7	2	266.7	2
WBTSEN	AB1209	13	1	10	2	20120927	0624	26.500N	76.477W	1578	1595	3.701	34.963	2	34.961	2	265.3	2	265.4	2
WBTSEN	AB1209	13	1	11	2	20120927	0624	26.500N	76.477W	1386	1399	3.951	34.977	2	34.977	2	262.1	2	260.9	2
WBTSEN	AB1209	13	1	12	2	20120927	0624	26.500N	76.477W	1218	1229	4.285	34.995	2	34.993	2	255.7	2	254.7	2
WBTSEN	AB1209	13	1	13	2	20120927	0624	26.500N	76.477W	1050	1059	5.402	35.046	2	35.045	2	222.2	2	226.0	2
WBTSEN	AB1209	13	1	14	2	20120927	0624	26.500N	76.477W	941	949	7.363	35.099	2	35.099	2	169.2	2	170.1	2
WBTSEN	AB1209	13	1	15	2	20120927	0624	26.500N	76.477W	832	839	9.892	35.282	2	35.281	2	142.9	2	142.4	2
WBTSEN	AB1209	13	1	16	2	20120927	0624	26.500N	76.477W	723	729	12.536	35.627	2	35.624	2	148.6	2	149.0	2
WBTSEN	AB1209	13	1	17	2	20120927	0624	26.500N	76.477W	614	619	15.069	36.024	2	36.021	2	168.0	2	168.0	2
WBTSEN	AB1209	13	1	18	2	20120927	0624	26.500N	76.477W	505	509	16.958	36.359	2	36.355	2	187.9	2	189.2	2
WBTSEN	AB1209	13	1	19	2	20120927	0624	26.500N	76.477W	396	399	17.976	36.552	2	36.550	2	201.4	2	204.9	2
WBTSEN	AB1209	13	1	20	2	20120927	0624	26.500N	76.477W	287	289	18.641	36.623	2	36.622	2	194.1	2	194.0	2
WBTSEN	AB1209	13	1	21	2	20120927	0624	26.500N	76.477W	198	199	20.002	36.711	2	36.713	2	196.6	2	193.4	2
WBTSEN	AB1209	13	1	22	2	20120927	0624	26.500N	76.477W	118	119	22.098	36.782	2	36.786	2	204.3	2	202.9	2
WBTSEN	AB1209	13	1	23	2	20120927	0624	26.500N	76.477W	68	69	24.920	36.547	2	36.560	2	221.1	2	220.8	2
WBTSEN	AB1209	13	1	24	2	20120927	0624	26.500N	76.477W	2	2	28.996	36.233	2	36.231	2	197.1	2	197.1	2
WBTSEN	AB1209	14	1	1	2	20120927	1126	26.499N	76.347W	4826	4914	2.222	34.877	2	34.878	2	260.3	2	260.6	2
WBTSEN	AB1209	14	1	2	2	20120927	1126	26.499N	76.347W	4492	4570	2.278	34.888	2	34.888	2	266.2	2	267.1	2
WBTSEN	AB1209	14	1	3	2	20120927	1126	26.499N	76.347W	4169	4239	2.309	34.893	2	34.898	2	268.0	2	268.0	2
WBTSEN	AB1209	14	1	4	2	20120927	1126	26.499N	76.347W	3840	3901	2.386	34.901	2	34.901	2	270.2	2	268.6	2
WBTSEN	AB1209	14	1	5	2	20120927	1126	26.499N	76.347W	3512	3565	2.519	34.909	2	34.910	2	270.9	2	271.6	2
WBTSEN	AB1209	14	1	6	2	20120927	1126	26.499N	76.347W	3102	3146	2.661	34.919	2	34.921	6	270.1	2	271.3	2
WBTSEN	AB1209	14	1	7	2	20120927	1126	26.499N	76.347W	2700	2735	2.818	34.928	2	34.929	2	268.8	2	269.7	2
WBTSEN	AB1209	14	1	8	2	20120927	1126	26.499N	76.347W	2293	2321	3.136	34.944	2	34.946	2	266.4	2	267.3	2
WBTSEN	AB1209	14	1	9	2	20120927	1126	26.499N	76.347W	1933	1954	3.368	34.952	2	34.955	2	266.8	2	265.5	2
WBTSEN	AB1209	14	1	10	2	20120927	1126	26.499N	76.347W	1681	1699	3.600	34.959	2	34.963	2	266.3	2	266.4	2
WBTSEN	AB1209	14	1	11	2	20120927	1126	26.499N	76.347W	1484	1499	3.838	34.969	2	34.972	2	263.9	2	262.7	2
WBTSEN	AB1209	14	1	12	2	20120927	1126	26.499N	76.347W	1336	1350	4.090	34.983	2	34.986	2	260.1	2	259.8	2
WBTSEN	AB1209	14	1	13	2	20120927	1126	26.499N	76.347W	1163	1174	4.501	35.007	2	35.008	2	237.7	2	313.3	4
WBTSEN	AB1209	14	1	14	2	20120927	1126	26.499N	76.347W	976	985	6.835	35.088	2	35.089	2	171.8	2	197.2	4

WBTSEN	AB1209	14	1	15	2	20120927	1126	26.499N	76.347W	798	804	10.813	35.389	2	35.387	2	135.5	2	126.3	4
WBTSEN	AB1209	14	1	16	2	20120927	1126	26.499N	76.347W	689	694	13.111	35.710	2	35.714	2	153.6	2	152.9	2
WBTSEN	AB1209	14	1	17	2	20120927	1126	26.499N	76.347W	587	591	15.431	36.083	2	36.083	2	172.3	2	170.2	2
WBTSEN	AB1209	14	1	18	2	20120927	1126	26.499N	76.347W	470	474	17.466	36.455	2	36.462	2	195.0	2	194.9	2
WBTSEN	AB1209	14	1	19	2	20120927	1126	26.499N	76.347W	369	372	18.077	36.563	2	36.561	2	199.6	2	200.3	2
WBTSEN	AB1209	14	1	20	2	20120927	1126	26.499N	76.347W	253	254	19.036	36.662	2	36.660	2	189.3	2	190.2	2
WBTSEN	AB1209	14	1	21	2	20120927	1126	26.499N	76.347W	163	164	20.658	36.734	2	36.732	2	195.6	2	200.0	2
WBTSEN	AB1209	14	1	22	2	20120927	1126	26.499N	76.347W	104	104	22.649	36.758	2	36.759	2	205.3	2	205.0	2
WBTSEN	AB1209	14	1	23	2	20120927	1126	26.499N	76.347W	53	54	26.079	36.489	2	36.476	4	215.8	2	217.0	2
WBTSEN	AB1209	14	1	24	2	20120927	1126	26.499N	76.347W	3	3	28.984	36.216	2	36.211	2	197.1	2	196.4	2
WBTSEN	AB1209	15	1	1	2	20120927	1616	26.500N	76.219W	4794	4880	2.256	34.882	2	34.881	2	262.7	2	262.0	2
WBTSEN	AB1209	15	1	2	2	20120927	1616	26.500N	76.219W	4421	4497	2.287	34.889	2	34.888	2	266.9	2	266.1	2
WBTSEN	AB1209	15	1	3	2	20120927	1616	26.500N	76.219W	4032	4098	2.318	34.895	2	34.894	2	268.7	2	268.5	2
WBTSEN	AB1209	15	1	4	2	20120927	1616	26.500N	76.219W	3672	3728	2.422	34.904	2	34.902	2	270.4	2	270.6	2
WBTSEN	AB1209	15	1	5	2	20120927	1616	26.500N	76.219W	3300	3348	2.571	34.913	2	34.912	2	251.1	2	294.5	4
WBTSEN	AB1209	15	1	6	2	20120927	1616	26.500N	76.219W	2813	2850	2.732	34.923	2	34.922	2	269.2	2	269.7	2
WBTSEN	AB1209	15	1	7	2	20120927	1616	26.500N	76.219W	2372	2401	3.062	34.942	2	34.941	2	266.2	2	265.8	2
WBTSEN	AB1209	15	1	8	2	20120927	1616	26.500N	76.219W	2075	2100	3.315	34.948	2	34.949	2	266.2	2	266.2	2
WBTSEN	AB1209	15	1	9	2	20120927	1616	26.500N	76.219W	1739	1758	3.630	34.961	2	34.960	2	265.6	2	264.5	6
WBTSEN	AB1209	15	1	10	2	20120927	1616	26.500N	76.219W	1597	1613	3.828	34.965	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	15	1	11	2	20120927	1616	26.500N	76.219W	1428	1443	4.010	34.967	2	34.967	2	262.6	2	261.1	2
WBTSEN	AB1209	15	1	12	2	20120927	1616	26.500N	76.219W	1259	1272	4.432	35.007	2	35.006	6	253.2	2	253.4	2
WBTSEN	AB1209	15	1	13	2	20120927	1616	26.500N	76.219W	1091	1102	4.850	35.018	2	35.017	2	241.5	2	242.9	2
WBTSEN	AB1209	15	1	14	2	20120927	1616	26.500N	76.219W	927	935	7.873	35.120	2	35.119	2	159.3	2	159.1	2
WBTSEN	AB1209	15	1	15	2	20120927	1616	26.500N	76.219W	818	825	10.259	35.319	2	35.318	2	142.4	2	141.0	2
WBTSEN	AB1209	15	1	16	2	20120927	1616	26.500N	76.219W	709	715	12.886	35.677	2	35.678	2	152.1	2	150.4	2
WBTSEN	AB1209	15	1	17	2	20120927	1616	26.500N	76.219W	599	604	15.134	36.036	2	36.036	2	168.0	2	168.3	2
WBTSEN	AB1209	15	1	18	2	20120927	1616	26.500N	76.219W	491	494	17.256	36.415	2	36.412	6	195.1	2	191.7	2
WBTSEN	AB1209	15	1	19	2	20120927	1616	26.500N	76.219W	381	384	18.050	36.557	2	36.556	2	203.6	2	199.8	2
WBTSEN	AB1209	15	1	20	2	20120927	1616	26.500N	76.219W	273	275	18.808	36.639	2	36.638	2	191.7	2	191.0	2
WBTSEN	AB1209	15	1	21	2	20120927	1616	26.500N	76.219W	183	184	20.333	36.719	2	36.718	2	196.0	2	196.5	2
WBTSEN	AB1209	15	1	22	2	20120927	1616	26.500N	76.219W	114	115	22.719	36.809	2	36.808	2	206.0	2	204.3	2
WBTSEN	AB1209	15	1	23	2	20120927	1616	26.500N	76.219W	64	64	25.310	36.538	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	15	1	24	2	20120927	1616	26.500N	76.219W	2	2	29.139	36.140	2	36.145	2	197.5	2	196.4	2
WBTSEN	AB1209	16	1	1	2	20120927	2104	26.501N	76.087W	4778	4864	2.276	34.884	2	34.883	2	264.1	2	263.1	2
WBTSEN	AB1209	16	1	2	2	20120927	2104	26.501N	76.087W	4578	4659	2.277	34.887	2	34.886	2	265.7	2	264.8	2
WBTSEN	AB1209	16	1	3	2	20120927	2104	26.501N	76.087W	4111	4179	2.323	34.895	2	34.894	2	268.7	2	268.5	2
WBTSEN	AB1209	16	1	4	2	20120927	2104	26.501N	76.087W	3780	3839	2.354	34.899	2	34.898	2	269.7	2	269.4	2
WBTSEN	AB1209	16	1	5	2	20120927	2104	26.501N	76.087W	3448	3499	2.380	34.902	2	34.902	2	270.3	2	270.4	2
WBTSEN	AB1209	16	1	6	2	20120927	2104	26.501N	76.087W	2958	2999	2.611	34.918	2	34.918	2	269.7	2	270.1	2
WBTSEN	AB1209	16	1	7	2	20120927	2104	26.501N	76.087W	2469	2500	3.025	34.945	2	34.945	6	264.6	2	264.3	2
WBTSEN	AB1209	16	1	8	2	20120927	2104	26.501N	76.087W	2077	2101	3.453	34.963	2	34.961	2	264.5	2	263.4	2
WBTSEN	AB1209	16	1	9	2	20120927	2104	26.501N	76.087W	1781	1800	3.731	34.963	2	34.963	2	265.0	2	264.1	2
WBTSEN	AB1209	16	1	10	2	20120927	2104	26.501N	76.087W	1585	1602	3.923	34.968	2	34.967	2	263.1	2	262.1	6
WBTSEN	AB1209	16	1	11	2	20120927	2104	26.501N	76.087W	1356	1370	4.331	34.993	2	34.992	2	257.2	2	255.0	2
WBTSEN	AB1209	16	1	12	2	20120927	2104	26.501N	76.087W	1189	1200	4.860	35.026	2	35.025	2	244.8	2	243.0	2
WBTSEN	AB1209	16	1	13	2	20120927	2104	26.501N	76.087W	1020	1030	6.297	35.075	2	35.073	2	198.5	2	199.3	2
WBTSEN	AB1209	16	1	14	2	20120927	2104	26.501N	76.087W	911	919	8.180	35.139	2	35.138	2	156.0	2	154.9	2
WBTSEN	AB1209	16	1	15	2	20120927	2104	26.501N	76.087W	804	810	10.560	35.357	2	35.359	6	142.7	2	141.1	2
WBTSEN	AB1209	16	1	16	2	20120927	2104	26.501N	76.087W	695	701	12.935	35.683	2	35.687	2	151.5	2	150.9	2
WBTSEN	AB1209	16	1	17	2	20120927	2104	26.501N	76.087W	586	590	15.315	36.065	2	36.067	2	169.1	2	168.1	6
WBTSEN	AB1209	16	1	18	2	20120927	2104	26.501N	76.087W	476	479	17.366	36.438	2	36.437	2	191.1	2	194.6	2
WBTSEN	AB1209	16	1	19	2	20120927	2104	26.501N	76.087W	366	369	18.105	36.565	2	36.565	2	196.8	2	199.6	2
WBTSEN	AB1209	16	1	20	2	20120927	2104	26.501N	76.087W	257	259	19.144	36.672	2	36.669	2	187.7	2	187.9	2
WBTSEN	AB1209	16	1	21	2	20120927	2104	26.501N	76.087W	168	170	20.548	36.758	2	36.758	2	193.9	2	191.7	2
WBTSEN	AB1209	16	1	22	2	20120927	2104	26.501N	76.087W	94	94	23.568	36.802	2	36.817	4	209.0	2	208.0	2
WBTSEN	AB1209	16	1	23	2	20120927	2104	26.501N	76.087W	44	44	26.938	36.299	2	36.294	2	210.5	2	209.4	2
WBTSEN	AB1209	16	1	24	2	20120927	2104	26.501N	76.087W	2	2	29.070	36.133	2	36.133	2	198.1	2	196.8	2
WBTSEN	AB1209	17	1	1	2	20120928	0218	26.497N	75.900W	4721	4805	2.256	34.883	2	34.881	2	263.1	2	262.6	2
WBTSEN	AB1209	17	1	2	2	20120928	0218	26.497N	75.900W	4452	4528	2.262	34.887	2	34.885	2	265.5	2	265.4	6
WBTSEN	AB1209	17	1	3	2	20120928	0218	26.497N	75.900W	4179	4248	2.278	34.891	2	34.888	6	267.2	2	268.0	2
WBTSEN	AB1209	17	1	4	2	20120928	0218	26.497N	75.900W	3916	3979	2.312	34.895	2	34.893	2	268.8	2	269.5	2
WBTSEN	AB1209	17	1	5	2	20120928	0218	26.497N	75.900W	3643	3699	2.329	34.898	2	34.896	2	269.4	2	270.4	6
WBTSEN	AB1209	17	1	6	2	20120928	0218	26.497N	75.900W	3155	3200	2.472	34.910	2	34.908	2	269.8	2	271.2	2
WBTSEN	AB1209	17	1	7	2	20120928	0218	26.497N	75.900W	2665	2700	2.951	34.940	2	34.938	2	264.8	2	266.5	2
WBTSEN	AB1209	17	1	8	2	20120928	0218	26.497N	75.900W	2223	2250	3.390	34.962	2	34.960	2	263.7	2	263.9	2

WBTSEN	AB1209	17	1	9	2	20120928	0218	26.497N	75.900W	1880	1901	3.732	34.971	2	34.969	2	263.7	2	263.9	2
WBTSEN	AB1209	17	1	10	2	20120928	0218	26.497N	75.900W	1633	1650	3.933	34.969	2	34.967	6	262.9	2	262.8	2
WBTSEN	AB1209	17	1	11	2	20120928	0218	26.497N	75.900W	1372	1385	4.423	35.008	2	35.008	2	252.9	2	252.8	2
WBTSEN	AB1209	17	1	12	2	20120928	0218	26.497N	75.900W	1203	1215	4.843	35.023	2	35.026	2	245.2	2	241.9	2
WBTSEN	AB1209	17	1	13	2	20120928	0218	26.497N	75.900W	1035	1044	6.445	35.079	2	35.078	2	194.7	2	195.6	2
WBTSEN	AB1209	17	1	14	2	20120928	0218	26.497N	75.900W	927	935	8.106	35.128	2	35.141	4	156.1	2	155.5	2
WBTSEN	AB1209	17	1	15	2	20120928	0218	26.497N	75.900W	817	824	9.980	35.285	2	35.281	2	142.3	2	140.8	2
WBTSEN	AB1209	17	1	16	2	20120928	0218	26.497N	75.900W	709	715	12.419	35.607	2	35.608	2	149.9	2	148.5	2
WBTSEN	AB1209	17	1	17	2	20120928	0218	26.497N	75.900W	600	605	14.884	35.994	2	35.992	2	166.2	2	166.0	2
WBTSEN	AB1209	17	1	18	2	20120928	0218	26.497N	75.900W	490	494	17.093	36.386	2	36.380	2	188.2	2	190.2	2
WBTSEN	AB1209	17	1	19	2	20120928	0218	26.497N	75.900W	381	384	17.981	36.556	2	36.555	2	201.2	2	201.5	2
WBTSEN	AB1209	17	1	20	2	20120928	0218	26.497N	75.900W	272	274	18.629	36.621	2	36.618	2	193.2	2	194.8	2
WBTSEN	AB1209	17	1	21	2	20120928	0218	26.497N	75.900W	183	184	19.538	36.589	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	17	1	22	2	20120928	0218	26.497N	75.900W	119	120	21.206	36.753	2	36.750	2	193.9	2	196.4	4
WBTSEN	AB1209	17	1	23	2	20120928	0218	26.497N	75.900W	69	69	23.827	36.683	2	36.684	2	218.8	2	219.1	2
WBTSEN	AB1209	17	1	24	2	20120928	0218	26.497N	75.900W	3	3	28.896	36.362	2	36.364	2	198.5	2	197.5	2
WBTSEN	AB1209	18	1	1	2	20120928	0707	26.500N	75.703W	4671	4755	2.145	34.871	2	34.870	2	257.5	2	256.7	2
WBTSEN	AB1209	18	1	2	2	20120928	0707	26.500N	75.703W	4355	4429	2.245	34.887	2	34.886	2	265.2	2	264.4	2
WBTSEN	AB1209	18	1	3	2	20120928	0707	26.500N	75.703W	4009	4074	2.273	34.893	2	34.892	2	267.5	2	267.5	6
WBTSEN	AB1209	18	1	4	2	20120928	0707	26.500N	75.703W	3682	3739	2.334	34.899	2	34.898	6	269.2	2	269.5	2
WBTSEN	AB1209	18	1	5	2	20120928	0707	26.500N	75.703W	3350	3400	2.465	34.907	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	18	1	6	2	20120928	0707	26.500N	75.703W	2861	2900	2.838	34.932	2	34.931	2	266.4	2	267.1	2
WBTSEN	AB1209	18	1	7	2	20120928	0707	26.500N	75.703W	2434	2464	3.248	34.953	2	34.953	2	264.0	2	264.9	2
WBTSEN	AB1209	18	1	8	2	20120928	0707	26.500N	75.703W	2026	2049	3.609	34.965	2	34.966	2	264.0	2	264.2	2
WBTSEN	AB1209	18	1	9	2	20120928	0707	26.500N	75.703W	1726	1745	3.930	34.977	2	34.989	4	261.3	2	261.5	2
WBTSEN	AB1209	18	1	10	2	20120928	0707	26.500N	75.703W	1519	1534	4.283	34.998	2	35.011	4	255.7	2	255.6	6
WBTSEN	AB1209	18	1	11	2	20120928	0707	26.500N	75.703W	1350	1363	4.637	35.022	2	35.022	6	247.8	2	247.9	2
WBTSEN	AB1209	18	1	12	2	20120928	0707	26.500N	75.703W	1184	1195	5.350	35.056	2	35.069	4	228.0	2	228.4	2
WBTSEN	AB1209	18	1	13	2	20120928	0707	26.500N	75.703W	1016	1025	6.815	35.089	2	35.089	2	183.8	2	185.9	2
WBTSEN	AB1209	18	1	14	2	20120928	0707	26.500N	75.703W	907	915	8.464	35.149	2	35.148	2	149.2	2	149.1	2
WBTSEN	AB1209	18	1	15	2	20120928	0707	26.500N	75.703W	797	804	10.493	35.356	2	35.351	2	144.0	2	143.9	2
WBTSEN	AB1209	18	1	16	2	20120928	0707	26.500N	75.703W	689	694	12.902	35.678	2	35.676	2	152.3	2	150.9	2
WBTSEN	AB1209	18	1	17	2	20120928	0707	26.500N	75.703W	584	589	15.476	36.089	2	36.085	2	171.5	2	172.4	2
WBTSEN	AB1209	18	1	18	2	20120928	0707	26.500N	75.703W	470	474	17.354	36.440	2	36.437	2	195.1	2	195.3	2
WBTSEN	AB1209	18	1	19	2	20120928	0707	26.500N	75.703W	362	364	18.047	36.561	2	36.560	2	199.3	2	199.6	2
WBTSEN	AB1209	18	1	20	2	20120928	0707	26.500N	75.703W	252	254	18.876	36.642	2	36.637	2	190.8	2	191.3	2
WBTSEN	AB1209	18	1	21	2	20120928	0707	26.500N	75.703W	163	164	19.944	36.655	2	36.655	2	204.4	2	203.3	2
WBTSEN	AB1209	18	1	22	2	20120928	0707	26.500N	75.703W	108	109	20.994	36.706	2	36.706	2	214.9	2	213.5	2
WBTSEN	AB1209	18	1	23	2	20120928	0707	26.500N	75.703W	59	59	23.778	36.615	2	36.618	2	232.2	2	230.6	2
WBTSEN	AB1209	18	1	24	2	20120928	0707	26.500N	75.703W	3	3	28.680	36.147	2	36.147	2	197.5	2	197.5	2
WBTSEN	AB1209	19	1	1	2	20120928	1153	26.501N	75.502W	4666	4749	2.187	34.875	2	34.874	2	259.1	2	256.0	2
WBTSEN	AB1209	19	1	2	2	20120928	1153	26.501N	75.502W	4374	4449	2.243	34.886	2	34.885	2	264.9	2	264.2	2
WBTSEN	AB1209	19	1	3	2	20120928	1153	26.501N	75.502W	4082	4149	2.257	34.889	2	34.898	4	266.7	2	266.7	6
WBTSEN	AB1209	19	1	4	2	20120928	1153	26.501N	75.502W	3860	3921	2.276	34.893	2	34.891	2	268.0	2	267.9	2
WBTSEN	AB1209	19	1	5	2	20120928	1153	26.501N	75.502W	3497	3549	2.352	34.901	2	34.899	2	269.7	2	269.6	2
WBTSEN	AB1209	19	1	6	2	20120928	1153	26.501N	75.502W	3078	3121	2.605	34.917	2	34.914	2	269.5	2	269.7	2
WBTSEN	AB1209	19	1	7	2	20120928	1153	26.501N	75.502W	2665	2699	2.980	34.938	2	34.936	2	265.9	2	266.7	2
WBTSEN	AB1209	19	1	8	2	20120928	1153	26.501N	75.502W	2321	2349	3.332	34.955	2	34.954	2	264.2	2	264.2	2
WBTSEN	AB1209	19	1	9	2	20120928	1153	26.501N	75.502W	1977	1999	3.670	34.966	2	34.965	2	264.1	2	263.8	2
WBTSEN	AB1209	19	1	10	2	20120928	1153	26.501N	75.502W	1682	1700	4.016	34.982	2	34.982	2	260.2	2	260.3	2
WBTSEN	AB1209	19	1	11	2	20120928	1153	26.501N	75.502W	1435	1449	4.421	35.004	2	35.004	2	253.5	2	253.2	2
WBTSEN	AB1209	19	1	12	2	20120928	1153	26.501N	75.502W	1237	1249	5.043	35.039	2	35.038	2	237.2	2	237.5	2
WBTSEN	AB1209	19	1	13	2	20120928	1153	26.501N	75.502W	1026	1035	6.586	35.081	2	35.079	2	188.8	2	189.4	6
WBTSEN	AB1209	19	1	14	2	20120928	1153	26.501N	75.502W	916	924	7.822	35.113	2	35.114	2	155.2	2	157.9	2
WBTSEN	AB1209	19	1	15	2	20120928	1153	26.501N	75.502W	791	797	10.272	35.312	2	35.308	2	136.7	2	122.2	4
WBTSEN	AB1209	19	1	16	2	20120928	1153	26.501N	75.502W	699	705	12.466	35.619	2	35.620	2	150.2	2	149.3	2
WBTSEN	AB1209	19	1	17	2	20120928	1153	26.501N	75.502W	590	594	15.359	36.070	2	36.086	4	171.3	2	171.8	2
WBTSEN	AB1209	19	1	18	2	20120928	1153	26.501N	75.502W	486	490	17.155	36.402	2	36.403	2	193.9	2	194.3	2
WBTSEN	AB1209	19	1	19	2	20120928	1153	26.501N	75.502W	371	374	18.019	36.561	2	36.568	2	200.5	2	201.2	2
WBTSEN	AB1209	19	1	20	2	20120928	1153	26.501N	75.502W	262	264	18.840	36.638	2	36.634	2	190.7	2	186.9	2
WBTSEN	AB1209	19	1	21	2	20120928	1153	26.501N	75.502W	173	174	19.450	36.573	2	36.573	2	211.0	2	211.4	2
WBTSEN	AB1209	19	1	22	2	20120928	1153	26.501N	75.502W	89	89	21.859	36.720	2	36.735	4	215.3	2	215.5	2
WBTSEN	AB1209	19	1	23	2	20120928	1153	26.501N	75.502W	34	34	28.786	36.403	2	36.397	2	196.7	2	199.5	2
WBTSEN	AB1209	19	1	24	2	20120928	1153	26.501N	75.502W	3	3	28.834	36.275	2	36.278	2	197.5	2	196.8	2
WBTSEN	AB1209	20	1	1	2	20120928	1641	26.500N	75.299W	4615	4696	2.191	34.877	2	34.876	2	259.6	2	260.5	2
WBTSEN	AB1209	20	1	2	2	20120928	1641	26.500N	75.299W	4286	4358	2.239	34.887	2	34.885	2	265.2	2	264.3	2

WBTSEN	AB1209	20	1	3	2	20120928	1641	26.500N	75.299W	3960	4024	2.262	34.892	2	34.891	2	267.4	2	266.6	2
WBTSEN	AB1209	20	1	4	2	20120928	1641	26.500N	75.299W	3634	3689	2.305	34.898	2	34.897	2	269.0	2	268.7	6
WBTSEN	AB1209	20	1	5	2	20120928	1641	26.500N	75.299W	3301	3349	2.384	34.902	2	34.910	4	270.2	2	269.8	2
WBTSEN	AB1209	20	1	6	2	20120928	1641	26.500N	75.299W	2547	2580	3.017	34.943	2	34.942	2	264.8	2	265.0	2
WBTSEN	AB1209	20	1	7	2	20120928	1641	26.500N	75.299W	2321	2349	3.259	34.954	2	34.954	2	264.2	2	264.0	2
WBTSEN	AB1209	20	1	8	2	20120928	1641	26.500N	75.299W	2075	2099	3.537	34.964	2	34.963	2	264.1	2	263.8	2
WBTSEN	AB1209	20	1	9	2	20120928	1641	26.500N	75.299W	1829	1850	3.806	34.971	2	34.971	2	263.0	2	262.2	2
WBTSEN	AB1209	20	1	10	2	20120928	1641	26.500N	75.299W	1583	1600	4.111	34.987	2	34.987	2	259.0	2	258.0	2
WBTSEN	AB1209	20	1	11	2	20120928	1641	26.500N	75.299W	1376	1390	4.550	35.014	2	35.015	2	250.4	2	249.3	2
WBTSEN	AB1209	20	1	12	2	20120928	1641	26.500N	75.299W	1208	1220	5.203	35.049	2	35.049	2	232.6	2	232.1	2
WBTSEN	AB1209	20	1	13	2	20120928	1641	26.500N	75.299W	1040	1049	6.445	35.080	2	35.079	2	192.9	2	193.2	2
WBTSEN	AB1209	20	1	14	2	20120928	1641	26.500N	75.299W	930	938	7.825	35.106	2	35.106	2	155.3	2	155.6	2
WBTSEN	AB1209	20	1	15	2	20120928	1641	26.500N	75.299W	822	829	9.738	35.269	2	35.263	2	142.8	2	143.4	2
WBTSEN	AB1209	20	1	16	2	20120928	1641	26.500N	75.299W	713	719	12.108	35.566	2	35.563	2	147.8	2	146.6	2
WBTSEN	AB1209	20	1	17	2	20120928	1641	26.500N	75.299W	605	610	14.760	35.963	2	35.963	2	169.3	2	168.8	2
WBTSEN	AB1209	20	1	18	2	20120928	1641	26.500N	75.299W	495	499	16.961	36.361	2	36.359	2	190.0	2	188.5	6
WBTSEN	AB1209	20	1	19	2	20120928	1641	26.500N	75.299W	386	389	17.897	36.542	2	36.541	6	200.2	2	201.2	2
WBTSEN	AB1209	20	1	20	2	20120928	1641	26.500N	75.299W	277	279	18.397	36.599	2	36.598	2	196.9	2	195.5	2
WBTSEN	AB1209	20	1	21	2	20120928	1641	26.500N	75.299W	188	189	19.555	36.697	2	36.695	2	181.1	2	185.7	4
WBTSEN	AB1209	20	1	22	2	20120928	1641	26.500N	75.299W	118	119	20.610	36.705	2	36.705	2	204.0	2	205.6	2
WBTSEN	AB1209	20	1	23	2	20120928	1641	26.500N	75.299W	69	69	22.937	36.767	2	36.770	2	229.6	2	226.5	2
WBTSEN	AB1209	20	1	24	2	20120928	1641	26.500N	75.299W	2	2	29.336	36.372	2	36.374	2	196.9	2	195.4	2
WBTSEN	AB1209	21	1	1	2	20120928	2129	26.501N	75.079W	4583	4663	2.193	34.878	2	34.878	2	260.2	2	259.3	2
WBTSEN	AB1209	21	1	2	2	20120928	2129	26.501N	75.079W	4307	4380	2.232	34.886	2	34.883	2	264.7	2	263.8	6
WBTSEN	AB1209	21	1	3	2	20120928	2129	26.501N	75.079W	4024	4090	2.247	34.890	2	34.888	6	266.4	2	267.0	2
WBTSEN	AB1209	21	1	4	2	20120928	2129	26.501N	75.079W	3742	3801	2.273	34.894	2	34.893	2	268.0	2	267.7	2
WBTSEN	AB1209	21	1	5	2	20120928	2129	26.501N	75.079W	3449	3500	2.337	34.900	2	34.900	2	269.5	2	269.0	2
WBTSEN	AB1209	21	1	6	2	20120928	2129	26.501N	75.079W	2959	3000	2.587	34.917	2	34.914	2	269.6	2	269.7	6
WBTSEN	AB1209	21	1	7	2	20120928	2129	26.501N	75.079W	2615	2649	2.909	34.936	2	34.934	2	266.7	2	265.6	2
WBTSEN	AB1209	21	1	8	2	20120928	2129	26.501N	75.079W	2223	2249	3.330	34.953	2	34.952	2	264.9	2	264.7	2
WBTSEN	AB1209	21	1	9	2	20120928	2129	26.501N	75.079W	1800	1820	3.794	34.971	2	34.971	2	263.2	2	262.8	2
WBTSEN	AB1209	21	1	10	2	20120928	2129	26.501N	75.079W	1528	1544	4.166	34.990	2	34.988	2	257.9	2	257.3	2
WBTSEN	AB1209	21	1	11	2	20120928	2129	26.501N	75.079W	1340	1354	4.563	35.013	2	35.012	2	250.7	2	249.3	2
WBTSEN	AB1209	21	1	12	2	20120928	2129	26.501N	75.079W	1173	1184	5.329	35.055	2	35.053	2	228.9	2	228.8	2
WBTSEN	AB1209	21	1	13	2	20120928	2129	26.501N	75.079W	1005	1014	6.708	35.083	2	35.083	2	183.8	2	185.3	2
WBTSEN	AB1209	21	1	14	2	20120928	2129	26.501N	75.079W	891	899	8.232	35.129	2	35.125	2	149.7	2	149.8	2
WBTSEN	AB1209	21	1	15	2	20120928	2129	26.501N	75.079W	802	809	9.622	35.241	2	35.237	2	140.7	2	139.7	2
WBTSEN	AB1209	21	1	16	2	20120928	2129	26.501N	75.079W	693	699	12.131	35.558	2	35.551	2	140.0	2	141.1	4
WBTSEN	AB1209	21	1	17	2	20120928	2129	26.501N	75.079W	585	589	14.934	35.997	2	35.987	2	169.9	2	168.9	2
WBTSEN	AB1209	21	1	18	2	20120928	2129	26.501N	75.079W	476	480	16.843	36.338	2	36.334	2	186.0	2	186.6	2
WBTSEN	AB1209	21	1	19	2	20120928	2129	26.501N	75.079W	366	369	17.882	36.537	2	36.534	2	199.6	2	201.4	2
WBTSEN	AB1209	21	1	20	2	20120928	2129	26.501N	75.079W	257	259	18.448	36.605	2	36.602	2	196.1	2	195.7	2
WBTSEN	AB1209	21	1	21	2	20120928	2129	26.501N	75.079W	168	169	19.543	36.651	2	36.646	6	195.2	2	194.2	2
WBTSEN	AB1209	21	1	22	2	20120928	2129	26.501N	75.079W	103	104	20.995	36.721	2	36.719	2	209.0	2	211.1	2
WBTSEN	AB1209	21	1	23	2	20120928	2129	26.501N	75.079W	54	54	24.601	36.579	2	36.583	2	234.1	2	232.1	2
WBTSEN	AB1209	21	1	24	2	20120928	2129	26.501N	75.079W	2	2	29.241	36.355	2	36.354	2	196.6	2	199.4	2
WBTSEN	AB1209	22	1	1	2	20120929	0216	26.500N	74.800W	4513	4591	2.077	34.865	2	34.869	2	255.1	2	254.6	2
WBTSEN	AB1209	22	1	2	2	20120929	0216	26.500N	74.800W	4204	4274	2.197	34.884	2	34.888	2	263.1	2	262.7	6
WBTSEN	AB1209	22	1	3	2	20120929	0216	26.500N	74.800W	3887	3949	2.232	34.891	2	34.896	2	266.4	2	266.4	2
WBTSEN	AB1209	22	1	4	2	20120929	0216	26.500N	74.800W	3570	3624	2.278	34.896	2	34.900	2	-999.0	9	-999.0	9
WBTSEN	AB1209	22	1	5	2	20120929	0216	26.500N	74.800W	3252	3299	2.373	34.902	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	22	1	6	2	20120929	0216	26.500N	74.800W	2763	2800	2.665	34.919	2	34.952	4	268.8	2	269.0	2
WBTSEN	AB1209	22	1	7	2	20120929	0216	26.500N	74.800W	2370	2400	3.048	34.943	2	34.946	2	265.7	2	265.7	2
WBTSEN	AB1209	22	1	8	2	20120929	0216	26.500N	74.800W	2124	2149	3.343	34.953	2	34.961	4	264.5	2	264.5	2
WBTSEN	AB1209	22	1	9	2	20120929	0216	26.500N	74.800W	1898	1919	3.547	34.960	2	34.978	4	264.6	2	264.3	6
WBTSEN	AB1209	22	1	10	2	20120929	0216	26.500N	74.800W	1603	1620	3.933	34.980	2	34.984	2	261.4	2	257.8	2
WBTSEN	AB1209	22	1	11	2	20120929	0216	26.500N	74.800W	1381	1395	4.350	34.999	2	35.008	4	254.3	2	254.3	2
WBTSEN	AB1209	22	1	12	2	20120929	0216	26.500N	74.800W	1214	1225	5.108	35.045	2	35.049	2	235.3	2	235.9	2
WBTSEN	AB1209	22	1	13	2	20120929	0216	26.500N	74.800W	1046	1055	6.359	35.077	2	35.086	4	194.3	2	195.1	2
WBTSEN	AB1209	22	1	14	2	20120929	0216	26.500N	74.800W	936	945	7.537	35.102	2	35.104	2	162.9	2	163.4	2
WBTSEN	AB1209	22	1	15	2	20120929	0216	26.500N	74.800W	828	835	9.169	35.194	2	35.183	2	135.1	2	138.1	4
WBTSEN	AB1209	22	1	16	2	20120929	0216	26.500N	74.800W	718	724	11.190	35.440	2	35.436	2	144.9	2	145.5	2
WBTSEN	AB1209	22	1	17	2	20120929	0216	26.500N	74.800W	609	614	14.105	35.862	2	35.855	2	159.9	2	159.6	2
WBTSEN	AB1209	22	1	18	2	20120929	0216	26.500N	74.800W	501	505	16.352	36.247	2	36.244	2	182.2	2	181.5	2
WBTSEN	AB1209	22	1	19	2	20120929	0216	26.500N	74.800W	391	394	17.691	36.501	2	36.517	4	198.5	2	198.3	2
WBTSEN	AB1209	22	1	20	2	20120929	0216	26.500N	74.800W	282	285	18.218	36.582	2	36.582	2	197.7	2	198.9	2

WBTSEN	AB1209	22	1	21	2	20120929	0216	26.500N	74.800W	193	194	18.944	36.642	2	36.639	2	189.7	2	190.3	2
WBTSEN	AB1209	22	1	22	2	20120929	0216	26.500N	74.800W	113	114	20.460	36.688	2	36.685	2	208.6	2	207.9	2
WBTSEN	AB1209	22	1	23	2	20120929	0216	26.500N	74.800W	64	64	22.390	36.722	2	36.723	2	226.9	2	226.8	2
WBTSEN	AB1209	22	1	24	2	20120929	0216	26.500N	74.800W	3	3	29.060	36.461	2	36.460	2	196.6	2	196.4	2
WBTSEN	AB1209	23	1	1	2	20120929	0711	26.502N	74.516W	4473	4550	2.103	34.869	2	34.869	2	256.7	2	256.3	6
WBTSEN	AB1209	23	1	2	2	20120929	0711	26.502N	74.516W	4131	4199	2.196	34.883	2	34.891	4	263.7	2	263.9	2
WBTSEN	AB1209	23	1	3	2	20120929	0711	26.502N	74.516W	3936	4000	2.217	34.889	2	34.890	2	265.7	2	265.9	2
WBTSEN	AB1209	23	1	4	2	20120929	0711	26.502N	74.516W	3619	3674	2.270	34.896	2	34.899	2	267.9	2	268.4	2
WBTSEN	AB1209	23	1	5	2	20120929	0711	26.502N	74.516W	3350	3399	2.360	34.903	2	34.907	2	269.4	2	270.4	2
WBTSEN	AB1209	23	1	6	2	20120929	0711	26.502N	74.516W	2958	2999	2.616	34.919	2	34.921	2	268.0	2	268.6	2
WBTSEN	AB1209	23	1	7	2	20120929	0711	26.502N	74.516W	2567	2600	2.952	34.940	2	34.943	2	264.7	2	265.9	2
WBTSEN	AB1209	23	1	8	2	20120929	0711	26.502N	74.516W	2174	2200	3.306	34.955	2	34.964	4	263.6	2	263.9	2
WBTSEN	AB1209	23	1	9	2	20120929	0711	26.502N	74.516W	1880	1901	3.597	34.963	2	34.972	4	264.3	2	264.4	2
WBTSEN	AB1209	23	1	10	2	20120929	0711	26.502N	74.516W	1536	1551	4.077	34.985	2	34.997	4	259.1	2	259.0	2
WBTSEN	AB1209	23	1	11	2	20120929	0711	26.502N	74.516W	1343	1356	4.472	35.011	2	35.011	2	251.1	2	251.6	2
WBTSEN	AB1209	23	1	12	2	20120929	0711	26.502N	74.516W	1179	1190	5.124	35.049	2	35.054	2	232.8	2	234.4	2
WBTSEN	AB1209	23	1	13	2	20120929	0711	26.502N	74.516W	1005	1014	6.412	35.080	2	35.084	2	192.0	2	194.5	2
WBTSEN	AB1209	23	1	14	2	20120929	0711	26.502N	74.516W	897	904	7.773	35.114	2	35.114	2	158.2	2	161.0	2
WBTSEN	AB1209	23	1	15	2	20120929	0711	26.502N	74.516W	787	794	9.713	35.264	2	35.260	2	144.1	2	142.8	2
WBTSEN	AB1209	23	1	16	2	20120929	0711	26.502N	74.516W	683	689	12.029	35.554	2	35.552	2	149.4	2	148.5	2
WBTSEN	AB1209	23	1	17	2	20120929	0711	26.502N	74.516W	569	574	14.887	35.986	2	35.981	2	168.9	2	169.6	2
WBTSEN	AB1209	23	1	18	2	20120929	0711	26.502N	74.516W	460	463	16.938	36.356	2	36.355	2	189.7	2	187.8	2
WBTSEN	AB1209	23	1	19	2	20120929	0711	26.502N	74.516W	352	354	17.860	36.533	2	36.534	2	199.8	2	200.3	2
WBTSEN	AB1209	23	1	20	2	20120929	0711	26.502N	74.516W	242	244	18.383	36.600	2	36.602	2	197.1	2	197.3	2
WBTSEN	AB1209	23	1	21	2	20120929	0711	26.502N	74.516W	152	153	19.788	36.693	2	36.691	2	189.1	2	191.6	4
WBTSEN	AB1209	23	1	22	2	20120929	0711	26.502N	74.516W	93	94	21.019	36.713	2	36.712	2	216.5	2	213.9	2
WBTSEN	AB1209	23	1	23	2	20120929	0711	26.502N	74.516W	44	44	26.492	36.433	2	36.461	4	226.9	2	224.0	2
WBTSEN	AB1209	23	1	24	2	20120929	0711	26.502N	74.516W	3	3	29.000	36.458	2	36.457	2	196.2	2	196.7	2
WBTSEN	AB1209	24	1	1	2	20120929	1205	26.500N	74.233W	4518	4597	2.202	34.878	2	34.892	4	260.9	2	260.6	2
WBTSEN	AB1209	24	1	2	2	20120929	1205	26.500N	74.233W	4204	4274	2.225	34.885	2	34.893	4	265.3	2	264.7	2
WBTSEN	AB1209	24	1	3	2	20120929	1205	26.500N	74.233W	3887	3949	2.267	34.893	2	34.898	2	267.8	2	267.8	6
WBTSEN	AB1209	24	1	4	2	20120929	1205	26.500N	74.233W	3570	3624	2.353	34.901	2	34.904	2	269.2	2	269.4	2
WBTSEN	AB1209	24	1	5	2	20120929	1205	26.500N	74.233W	3252	3299	2.513	34.912	2	34.913	6	269.0	2	269.2	2
WBTSEN	AB1209	24	1	6	2	20120929	1205	26.500N	74.233W	2861	2899	2.802	34.929	2	34.938	4	265.1	2	265.8	2
WBTSEN	AB1209	24	1	7	2	20120929	1205	26.500N	74.233W	2468	2499	3.123	34.950	2	34.949	2	262.9	2	263.2	6
WBTSEN	AB1209	24	1	8	2	20120929	1205	26.500N	74.233W	2075	2099	3.483	34.965	2	34.964	2	263.2	2	264.3	2
WBTSEN	AB1209	24	1	9	2	20120929	1205	26.500N	74.233W	1781	1800	3.794	34.973	2	34.985	4	261.2	2	262.2	2
WBTSEN	AB1209	24	1	10	2	20120929	1205	26.500N	74.233W	1582	1599	4.115	34.996	2	35.001	2	257.3	2	257.6	2
WBTSEN	AB1209	24	1	11	2	20120929	1205	26.500N	74.233W	1385	1399	4.462	35.011	2	35.013	2	251.4	2	251.9	2
WBTSEN	AB1209	24	1	12	2	20120929	1205	26.500N	74.233W	1188	1199	5.185	35.055	2	35.057	6	232.1	2	232.9	2
WBTSEN	AB1209	24	1	13	2	20120929	1205	26.500N	74.233W	996	1005	6.431	35.080	2	35.080	2	188.4	2	189.8	2
WBTSEN	AB1209	24	1	14	2	20120929	1205	26.500N	74.233W	926	934	7.188	35.089	2	35.088	2	170.3	2	171.0	2
WBTSEN	AB1209	24	1	15	2	20120929	1205	26.500N	74.233W	787	794	9.105	35.203	2	35.203	2	144.7	2	145.0	2
WBTSEN	AB1209	24	1	16	2	20120929	1205	26.500N	74.233W	694	700	11.353	35.459	2	35.453	2	146.5	2	146.2	2
WBTSEN	AB1209	24	1	17	2	20120929	1205	26.500N	74.233W	600	604	13.927	35.833	2	35.835	2	167.2	2	168.5	2
WBTSEN	AB1209	24	1	18	2	20120929	1205	26.500N	74.233W	490	494	16.252	36.231	2	36.236	2	182.2	2	182.8	2
WBTSEN	AB1209	24	1	19	2	20120929	1205	26.500N	74.233W	388	391	17.601	36.490	2	36.487	2	198.1	2	199.3	2
WBTSEN	AB1209	24	1	20	2	20120929	1205	26.500N	74.233W	272	274	18.209	36.588	2	36.590	2	200.3	2	200.3	2
WBTSEN	AB1209	24	1	21	2	20120929	1205	26.500N	74.233W	188	189	19.045	36.651	2	36.648	2	190.2	2	189.5	2
WBTSEN	AB1209	24	1	22	2	20120929	1205	26.500N	74.233W	118	119	20.120	36.657	2	36.656	2	204.4	2	207.5	2
WBTSEN	AB1209	24	1	23	2	20120929	1205	26.500N	74.233W	69	69	22.307	36.730	2	36.728	2	221.8	2	224.3	2
WBTSEN	AB1209	24	1	24	2	20120929	1205	26.500N	74.233W	3	3	29.073	36.437	2	36.441	2	196.7	2	197.0	2
WBTSEN	AB1209	25	1	1	2	20120929	1746	26.501N	73.867W	4715	4800	2.199	34.877	2	34.878	2	258.9	2	258.6	2
WBTSEN	AB1209	25	1	2	2	20120929	1746	26.501N	73.867W	4374	4449	2.241	34.886	2	34.885	2	264.4	2	264.4	2
WBTSEN	AB1209	25	1	3	2	20120929	1746	26.501N	73.867W	4063	4130	2.270	34.892	2	34.893	2	266.5	2	266.6	6
WBTSEN	AB1209	25	1	4	2	20120929	1746	26.501N	73.867W	3760	3819	2.323	34.898	2	34.897	6	268.4	2	268.7	2
WBTSEN	AB1209	25	1	5	2	20120929	1746	26.501N	73.867W	3448	3500	2.471	34.909	2	34.908	2	269.2	2	269.5	2
WBTSEN	AB1209	25	1	6	2	20120929	1746	26.501N	73.867W	3057	3099	2.714	34.924	2	34.924	2	267.2	2	267.6	2
WBTSEN	AB1209	25	1	7	2	20120929	1746	26.501N	73.867W	2665	2700	3.006	34.942	2	34.941	2	264.8	2	264.9	2
WBTSEN	AB1209	25	1	8	2	20120929	1746	26.501N	73.867W	2272	2299	3.337	34.959	2	34.959	6	263.9	2	263.2	2
WBTSEN	AB1209	25	1	9	2	20120929	1746	26.501N	73.867W	1927	1949	3.652	34.970	2	34.972	2	263.5	2	263.0	2
WBTSEN	AB1209	25	1	10	2	20120929	1746	26.501N	73.867W	1583	1599	4.177	35.003	2	35.004	2	255.8	2	255.7	2
WBTSEN	AB1209	25	1	11	2	20120929	1746	26.501N	73.867W	1386	1399	4.479	35.013	2	35.013	2	251.3	2	250.8	2
WBTSEN	AB1209	25	1	12	2	20120929	1746	26.501N	73.867W	1217	1229	5.024	35.047	2	35.047	2	237.9	2	237.1	6
WBTSEN	AB1209	25	1	13	2	20120929	1746	26.501N	73.867W	1049	1059	6.015	35.080	2	35.081	2	203.4	2	203.8	2
WBTSEN	AB1209	25	1	14	2	20120929	1746	26.501N	73.867W	941	949	6.918	35.085	2	35.086	2	174.2	2	175.9	2

WBTSEN	AB1209	25	1	15	2	20120929	1746	26.501N	73.867W	832	839	8.237	35.136	2	35.134	2	151.4	2	151.3	2
WBTSEN	AB1209	25	1	16	2	20120929	1746	26.501N	73.867W	724	730	10.198	35.321	2	35.321	2	143.5	2	143.2	2
WBTSEN	AB1209	25	1	17	2	20120929	1746	26.501N	73.867W	614	619	12.641	35.640	2	35.643	2	154.0	2	153.5	2
WBTSEN	AB1209	25	1	18	2	20120929	1746	26.501N	73.867W	505	509	15.074	36.024	2	36.026	2	169.0	2	169.0	2
WBTSEN	AB1209	25	1	19	2	20120929	1746	26.501N	73.867W	397	400	16.843	36.337	2	36.344	2	186.4	2	184.2	2
WBTSEN	AB1209	25	1	20	2	20120929	1746	26.501N	73.867W	288	290	17.996	36.541	2	36.542	2	197.4	2	193.8	2
WBTSEN	AB1209	25	1	21	2	20120929	1746	26.501N	73.867W	198	200	18.947	36.654	2	36.653	2	187.7	2	188.0	2
WBTSEN	AB1209	25	1	22	2	20120929	1746	26.501N	73.867W	109	109	20.599	36.717	2	36.720	2	200.1	2	200.8	4
WBTSEN	AB1209	25	1	23	2	20120929	1746	26.501N	73.867W	59	59	23.162	36.636	2	36.646	2	235.6	2	232.4	2
WBTSEN	AB1209	25	1	24	2	20120929	1746	26.501N	73.867W	2	2	29.315	36.333	2	36.336	2	196.4	2	195.3	2
WBTSEN	AB1209	26	1	1	2	20120929	2258	26.500N	73.501W	4886	4976	2.172	34.871	2	34.869	6	256.5	2	256.0	2
WBTSEN	AB1209	26	1	2	2	20120929	2258	26.500N	73.501W	4598	4679	2.254	34.885	2	34.886	2	263.4	2	263.5	2
WBTSEN	AB1209	26	1	3	2	20120929	2258	26.500N	73.501W	4228	4299	2.274	34.891	2	34.893	2	266.1	2	266.1	2
WBTSEN	AB1209	26	1	4	2	20120929	2258	26.500N	73.501W	3936	3999	2.314	34.896	2	34.895	2	267.9	2	268.3	2
WBTSEN	AB1209	26	1	5	2	20120929	2258	26.500N	73.501W	3594	3649	2.426	34.906	2	34.904	2	268.8	2	269.2	2
WBTSEN	AB1209	26	1	6	2	20120929	2258	26.500N	73.501W	3203	3249	2.608	34.918	2	34.917	2	268.2	2	268.6	2
WBTSEN	AB1209	26	1	7	2	20120929	2258	26.500N	73.501W	2713	2749	2.960	34.940	2	34.940	2	264.7	2	264.8	2
WBTSEN	AB1209	26	1	8	2	20120929	2258	26.500N	73.501W	2222	2249	3.408	34.967	2	34.966	2	261.8	2	261.7	2
WBTSEN	AB1209	26	1	9	2	20120929	2258	26.500N	73.501W	1829	1849	3.738	34.970	2	34.969	2	263.1	2	262.8	2
WBTSEN	AB1209	26	1	10	2	20120929	2258	26.500N	73.501W	1485	1500	4.246	34.998	2	34.997	2	256.5	2	255.6	2
WBTSEN	AB1209	26	1	11	2	20120929	2258	26.500N	73.501W	1321	1334	4.624	35.022	2	35.020	2	248.6	2	248.0	2
WBTSEN	AB1209	26	1	12	2	20120929	2258	26.500N	73.501W	1152	1163	5.316	35.061	2	35.059	2	228.0	2	227.7	2
WBTSEN	AB1209	26	1	13	2	20120929	2258	26.500N	73.501W	985	994	6.469	35.079	2	35.079	2	191.0	2	191.6	2
WBTSEN	AB1209	26	1	14	2	20120929	2258	26.500N	73.501W	877	884	7.815	35.110	2	35.108	2	157.1	2	158.2	6
WBTSEN	AB1209	26	1	15	2	20120929	2258	26.500N	73.501W	768	774	9.505	35.243	2	35.237	2	144.6	2	142.9	6
WBTSEN	AB1209	26	1	16	2	20120929	2258	26.500N	73.501W	659	665	11.673	35.504	2	35.503	2	147.7	2	146.9	2
WBTSEN	AB1209	26	1	17	2	20120929	2258	26.500N	73.501W	550	554	14.370	35.907	2	35.904	2	168.2	2	166.3	2
WBTSEN	AB1209	26	1	18	2	20120929	2258	26.500N	73.501W	441	444	16.676	36.307	2	36.305	2	184.5	2	183.4	2
WBTSEN	AB1209	26	1	19	2	20120929	2258	26.500N	73.501W	331	334	17.818	36.524	2	36.521	2	197.2	2	198.0	2
WBTSEN	AB1209	26	1	20	2	20120929	2258	26.500N	73.501W	223	224	18.539	36.615	2	36.611	2	193.7	2	194.0	2
WBTSEN	AB1209	26	1	21	2	20120929	2258	26.500N	73.501W	133	134	19.775	36.640	2	36.640	6	202.2	2	201.6	2
WBTSEN	AB1209	26	1	22	2	20120929	2258	26.500N	73.501W	84	85	21.402	36.732	2	36.725	2	209.6	2	213.7	4
WBTSEN	AB1209	26	1	23	2	20120929	2258	26.500N	73.501W	34	34	27.223	36.381	2	36.435	4	199.1	2	221.1	4
WBTSEN	AB1209	26	1	24	2	20120929	2258	26.500N	73.501W	3	3	29.234	36.360	2	36.359	2	196.2	2	195.9	2
WBTSEN	AB1209	27	1	1	2	20120930	0424	26.500N	73.134W	5032	5125	2.133	34.864	2	34.866	2	255.0	2	253.9	6
WBTSEN	AB1209	27	1	2	2	20120930	0424	26.500N	73.134W	4812	4900	2.230	34.879	2	34.879	2	260.5	2	260.5	2
WBTSEN	AB1209	27	1	3	2	20120930	0424	26.500N	73.134W	4472	4549	2.270	34.888	2	34.890	6	264.7	2	265.1	2
WBTSEN	AB1209	27	1	4	2	20120930	0424	26.500N	73.134W	4180	4249	2.289	34.892	2	34.891	2	266.7	2	267.0	2
WBTSEN	AB1209	27	1	5	2	20120930	0424	26.500N	73.134W	3912	3974	2.318	34.897	2	34.896	2	268.0	2	268.5	2
WBTSEN	AB1209	27	1	6	2	20120930	0424	26.500N	73.134W	3423	3474	2.481	34.910	2	34.911	2	268.9	2	269.3	2
WBTSEN	AB1209	27	1	7	2	20120930	0424	26.500N	73.134W	2958	2999	2.758	34.927	2	34.932	2	267.1	2	267.8	2
WBTSEN	AB1209	27	1	8	2	20120930	0424	26.500N	73.134W	2444	2474	3.195	34.955	2	34.955	6	262.5	2	262.9	2
WBTSEN	AB1209	27	1	9	2	20120930	0424	26.500N	73.134W	2026	2050	3.534	34.965	2	34.965	2	263.9	2	263.5	6
WBTSEN	AB1209	27	1	10	2	20120930	0424	26.500N	73.134W	1682	1700	3.886	34.976	2	34.975	2	262.7	2	261.6	2
WBTSEN	AB1209	27	1	11	2	20120930	0424	26.500N	73.134W	1434	1449	4.266	34.996	2	34.996	2	257.0	2	255.6	2
WBTSEN	AB1209	27	1	12	2	20120930	0424	26.500N	73.134W	1188	1200	5.179	35.047	2	35.050	2	232.7	2	232.7	2
WBTSEN	AB1209	27	1	13	2	20120930	0424	26.500N	73.134W	1020	1029	6.468	35.079	2	35.080	2	190.5	2	191.7	2
WBTSEN	AB1209	27	1	14	2	20120930	0424	26.500N	73.134W	911	919	7.814	35.115	2	35.113	2	158.9	2	158.6	2
WBTSEN	AB1209	27	1	15	2	20120930	0424	26.500N	73.134W	783	790	9.598	35.250	2	35.249	2	142.8	2	142.3	2
WBTSEN	AB1209	27	1	16	2	20120930	0424	26.500N	73.134W	693	699	11.594	35.493	2	35.490	2	147.7	2	146.8	2
WBTSEN	AB1209	27	1	17	2	20120930	0424	26.500N	73.134W	595	599	13.902	35.833	2	35.836	2	164.9	2	164.2	2
WBTSEN	AB1209	27	1	18	2	20120930	0424	26.500N	73.134W	496	500	16.047	36.192	2	36.193	2	178.1	2	178.3	2
WBTSEN	AB1209	27	1	19	2	20120930	0424	26.500N	73.134W	366	369	17.790	36.515	2	36.517	2	196.5	2	197.4	2
WBTSEN	AB1209	27	1	20	2	20120930	0424	26.500N	73.134W	257	259	18.342	36.592	2	36.596	2	195.8	2	196.2	2
WBTSEN	AB1209	27	1	21	2	20120930	0424	26.500N	73.134W	168	169	19.561	36.689	2	36.688	2	188.8	2	188.2	2
WBTSEN	AB1209	27	1	22	2	20120930	0424	26.500N	73.134W	119	120	20.517	36.714	2	36.713	2	203.3	2	201.6	2
WBTSEN	AB1209	27	1	23	2	20120930	0424	26.500N	73.134W	69	70	22.512	36.764	2	36.764	2	221.7	2	222.6	2
WBTSEN	AB1209	27	1	24	2	20120930	0424	26.500N	73.134W	2	2	29.251	36.378	2	36.377	2	196.1	2	196.5	2
WBTSEN	AB1209	28	1	1	2	20120930	1015	26.500N	72.766W	5109	5205	2.175	34.866	2	34.873	4	255.8	2	255.0	2
WBTSEN	AB1209	28	1	2	2	20120930	1015	26.500N	72.766W	4811	4898	2.261	34.883	2	34.887	2	262.6	2	262.9	2
WBTSEN	AB1209	28	1	3	2	20120930	1015	26.500N	72.766W	4376	4450	2.284	34.890	2	34.890	6	265.8	2	266.2	2
WBTSEN	AB1209	28	1	4	2	20120930	1015	26.500N	72.766W	4016	4082	2.317	34.894	2	34.904	4	267.4	2	268.1	6
WBTSEN	AB1209	28	1	5	2	20120930	1015	26.500N	72.766W	3645	3701	2.418	34.905	2	34.903	2	268.7	2	269.9	2
WBTSEN	AB1209	28	1	6	2	20120930	1015	26.500N	72.766W	3155	3200	2.668	34.921	2	34.921	2	267.5	2	268.9	2
WBTSEN	AB1209	28	1	7	2	20120930	1015	26.500N	72.766W	2665	2700	3.004	34.942	2	34.946	2	263.8	2	265.1	2
WBTSEN	AB1209	28	1	8	2	20120930	1015	26.500N	72.766W	2173	2199	3.460	34.959	2	34.957	2	265.0	2	264.7	2

WBTSEN	AB1209	28	1	9	2	20120930	1015	26.500N	72.766W	1937	1959	3.643	34.963	2	34.963	2	264.9	2	264.8	2
WBTSEN	AB1209	28	1	10	2	20120930	1015	26.500N	72.766W	1583	1600	4.165	34.992	2	34.991	2	258.3	2	258.3	2
WBTSEN	AB1209	28	1	11	2	20120930	1015	26.500N	72.766W	1409	1423	4.519	35.013	2	35.013	6	251.4	2	251.3	2
WBTSEN	AB1209	28	1	12	2	20120930	1015	26.500N	72.766W	1242	1254	5.010	35.039	2	35.040	2	239.1	2	238.4	2
WBTSEN	AB1209	28	1	13	2	20120930	1015	26.500N	72.766W	1078	1088	6.075	35.075	2	35.074	2	204.8	2	205.5	2
WBTSEN	AB1209	28	1	14	2	20120930	1015	26.500N	72.766W	936	944	7.413	35.095	2	35.095	2	165.2	2	165.8	2
WBTSEN	AB1209	28	1	15	2	20120930	1015	26.500N	72.766W	817	824	9.064	35.201	2	35.198	2	144.9	2	145.4	2
WBTSEN	AB1209	28	1	16	2	20120930	1015	26.500N	72.766W	709	715	11.383	35.465	2	35.467	2	144.3	2	145.7	2
WBTSEN	AB1209	28	1	17	2	20120930	1015	26.500N	72.766W	600	605	13.805	35.818	2	35.817	2	156.8	2	158.0	2
WBTSEN	AB1209	28	1	18	2	20120930	1015	26.500N	72.766W	490	494	16.181	36.216	2	36.216	2	176.9	2	178.5	2
WBTSEN	AB1209	28	1	19	2	20120930	1015	26.500N	72.766W	382	384	17.624	36.488	2	36.497	2	194.5	2	197.2	2
WBTSEN	AB1209	28	1	20	2	20120930	1015	26.500N	72.766W	273	275	18.240	36.580	2	36.580	2	196.1	2	196.9	2
WBTSEN	AB1209	28	1	21	2	20120930	1015	26.500N	72.766W	190	191	19.367	36.691	2	36.692	2	186.5	2	185.5	2
WBTSEN	AB1209	28	1	22	2	20120930	1015	26.500N	72.766W	104	104	21.585	36.744	2	36.742	2	193.7	2	209.4	4
WBTSEN	AB1209	28	1	23	2	20120930	1015	26.500N	72.766W	54	54	23.856	36.734	2	36.741	2	215.5	2	214.5	2
WBTSEN	AB1209	28	1	24	2	20120930	1015	26.500N	72.766W	3	3	29.025	36.234	2	36.233	2	195.9	2	196.5	2
WBTSEN	AB1209	29	1	1	2	20120930	1606	26.501N	72.384W	5170	5268	2.161	34.865	2	34.864	2	255.1	2	254.0	2
WBTSEN	AB1209	29	1	2	2	20120930	1606	26.501N	72.384W	4811	4899	2.269	34.883	2	34.883	2	262.6	2	262.2	2
WBTSEN	AB1209	29	1	3	2	20120930	1606	26.501N	72.384W	4470	4547	2.291	34.890	2	34.889	2	265.4	2	265.3	2
WBTSEN	AB1209	29	1	4	2	20120930	1606	26.501N	72.384W	4131	4199	2.311	34.894	2	34.894	2	267.1	2	267.3	2
WBTSEN	AB1209	29	1	5	2	20120930	1606	26.501N	72.384W	3791	3851	2.384	34.902	2	34.901	6	268.7	2	269.1	6
WBTSEN	AB1209	29	1	6	2	20120930	1606	26.501N	72.384W	3303	3351	2.612	34.918	2	34.919	2	267.1	2	267.8	2
WBTSEN	AB1209	29	1	7	2	20120930	1606	26.501N	72.384W	2813	2851	2.949	34.937	2	34.937	2	264.9	2	266.0	2
WBTSEN	AB1209	29	1	8	2	20120930	1606	26.501N	72.384W	2323	2352	3.376	34.960	2	34.960	2	263.6	2	263.1	6
WBTSEN	AB1209	29	1	9	2	20120930	1606	26.501N	72.384W	1831	1851	3.837	34.974	2	34.973	2	263.1	2	262.0	2
WBTSEN	AB1209	29	1	10	2	20120930	1606	26.501N	72.384W	1584	1601	4.177	34.988	2	35.000	4	257.7	2	257.4	2
WBTSEN	AB1209	29	1	11	2	20120930	1606	26.501N	72.384W	1362	1375	4.670	35.021	2	35.022	2	248.3	2	246.6	2
WBTSEN	AB1209	29	1	12	2	20120930	1606	26.501N	72.384W	1194	1206	5.352	35.052	2	35.052	2	227.9	2	227.6	2
WBTSEN	AB1209	29	1	13	2	20120930	1606	26.501N	72.384W	1027	1037	6.623	35.081	2	35.082	6	186.5	2	186.7	2
WBTSEN	AB1209	29	1	14	2	20120930	1606	26.501N	72.384W	918	926	8.000	35.123	2	35.124	2	155.0	2	154.9	2
WBTSEN	AB1209	29	1	15	2	20120930	1606	26.501N	72.384W	808	815	9.672	35.261	2	35.262	2	142.1	2	142.6	2
WBTSEN	AB1209	29	1	16	2	20120930	1606	26.501N	72.384W	698	704	11.946	35.540	2	35.543	2	143.9	2	145.3	2
WBTSEN	AB1209	29	1	17	2	20120930	1606	26.501N	72.384W	590	595	14.206	35.880	2	35.881	2	159.8	2	161.4	2
WBTSEN	AB1209	29	1	18	2	20120930	1606	26.501N	72.384W	482	486	16.621	36.297	2	36.297	2	181.8	2	184.9	2
WBTSEN	AB1209	29	1	19	2	20120930	1606	26.501N	72.384W	374	376	17.798	36.521	2	36.524	2	200.1	2	199.3	2
WBTSEN	AB1209	29	1	20	2	20120930	1606	26.501N	72.384W	265	267	18.578	36.618	2	36.620	2	193.1	2	193.6	2
WBTSEN	AB1209	29	1	21	2	20120930	1606	26.501N	72.384W	174	176	20.181	36.697	2	36.696	2	197.4	2	196.6	4
WBTSEN	AB1209	29	1	22	2	20120930	1606	26.501N	72.384W	114	115	21.737	36.767	2	36.768	2	200.4	2	199.1	2
WBTSEN	AB1209	29	1	23	2	20120930	1606	26.501N	72.384W	64	64	23.661	36.671	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	29	1	24	2	20120930	1606	26.501N	72.384W	2	2	29.214	36.258	2	36.260	2	196.3	2	195.6	2
WBTSEN	AB1209	30	1	1	2	20120930	2200	26.501N	71.989W	5272	5373	2.152	34.862	2	34.862	2	254.6	2	253.5	2
WBTSEN	AB1209	30	1	2	2	20120930	2200	26.501N	71.989W	4958	5049	2.260	34.880	2	34.881	2	261.0	2	260.4	6
WBTSEN	AB1209	30	1	3	2	20120930	2200	26.501N	71.989W	4652	4734	2.289	34.887	2	34.886	2	264.3	2	264.4	2
WBTSEN	AB1209	30	1	4	2	20120930	2200	26.501N	71.989W	4346	4420	2.306	34.892	2	34.891	2	265.8	2	266.3	2
WBTSEN	AB1209	30	1	5	2	20120930	2200	26.501N	71.989W	4033	4099	2.315	34.895	2	34.894	2	267.4	2	267.9	6
WBTSEN	AB1209	30	1	6	2	20120930	2200	26.501N	71.989W	3545	3599	2.433	34.906	2	34.906	2	268.5	2	269.0	2
WBTSEN	AB1209	30	1	7	2	20120930	2200	26.501N	71.989W	3056	3099	2.738	34.927	2	34.926	2	265.7	2	265.9	2
WBTSEN	AB1209	30	1	8	2	20120930	2200	26.501N	71.989W	2566	2599	3.100	34.947	2	34.947	2	263.7	2	263.9	2
WBTSEN	AB1209	30	1	9	2	20120930	2200	26.501N	71.989W	2075	2099	3.505	34.963	2	34.962	2	264.6	2	264.4	2
WBTSEN	AB1209	30	1	10	2	20120930	2200	26.501N	71.989W	1681	1699	3.966	34.982	2	34.982	2	259.4	2	259.9	2
WBTSEN	AB1209	30	1	11	2	20120930	2200	26.501N	71.989W	1400	1414	4.638	35.033	2	35.034	2	247.2	2	246.4	2
WBTSEN	AB1209	30	1	12	2	20120930	2200	26.501N	71.989W	1228	1239	5.301	35.065	2	35.065	6	227.9	2	228.0	2
WBTSEN	AB1209	30	1	13	2	20120930	2200	26.501N	71.989W	1055	1064	6.462	35.082	2	35.079	2	189.8	2	190.0	2
WBTSEN	AB1209	30	1	14	2	20120930	2200	26.501N	71.989W	901	909	8.179	35.123	2	35.120	2	150.5	2	150.2	2
WBTSEN	AB1209	30	1	15	2	20120930	2200	26.501N	71.989W	792	799	10.238	35.326	2	35.324	2	143.4	2	143.3	2
WBTSEN	AB1209	30	1	16	2	20120930	2200	26.501N	71.989W	683	689	12.658	35.642	2	35.639	2	153.6	2	152.7	2
WBTSEN	AB1209	30	1	17	2	20120930	2200	26.501N	71.989W	575	579	15.349	36.069	2	36.068	2	168.7	2	168.6	2
WBTSEN	AB1209	30	1	18	2	20120930	2200	26.501N	71.989W	466	470	17.202	36.414	2	36.414	2	174.3	2	196.0	4
WBTSEN	AB1209	30	1	19	2	20120930	2200	26.501N	71.989W	357	360	18.019	36.557	2	36.556	2	199.5	2	201.2	2
WBTSEN	AB1209	30	1	20	2	20120930	2200	26.501N	71.989W	248	250	18.784	36.632	2	36.632	6	189.4	2	191.3	2
WBTSEN	AB1209	30	1	21	2	20120930	2200	26.501N	71.989W	158	159	20.318	36.670	2	36.668	2	208.4	2	208.3	2
WBTSEN	AB1209	30	1	22	2	20120930	2200	26.501N	71.989W	94	95	22.527	36.782	2	36.780	2	215.1	2	216.8	2
WBTSEN	AB1209	30	1	23	2	20120930	2200	26.501N	71.989W	44	45	26.372	36.384	2	36.405	4	220.4	2	220.3	2
WBTSEN	AB1209	30	1	24	2	20120930	2200	26.501N	71.989W	3	3	29.148	36.229	2	36.231	2	196.6	2	196.0	2
WBTSEN	AB1209	31	1	1	2	20121001	0416	26.500N	71.501W	5403	5508	2.077	34.849	2	34.870	4	251.3	2	250.0	2
WBTSEN	AB1209	31	1	2	2	20121001	0416	26.500N	71.501W	5031	5124	2.232	34.874	2	34.883	4	259.3	2	258.6	2

WBTSEN	AB1209	31	1	3	2	20121001	0416	26.500N	71.501W	4649	4732	2.278	34.885	2	34.902	4	263.7	2	263.8	2
WBTSEN	AB1209	31	1	4	2	20121001	0416	26.500N	71.501W	4272	4344	2.295	34.892	2	34.891	2	265.7	2	265.7	6
WBTSEN	AB1209	31	1	5	2	20121001	0416	26.500N	71.501W	3887	3949	2.330	34.897	2	34.899	2	267.6	2	268.2	2
WBTSEN	AB1209	31	1	6	2	20121001	0416	26.500N	71.501W	3399	3449	2.476	34.910	2	34.909	2	268.1	2	268.0	2
WBTSEN	AB1209	31	1	7	2	20121001	0416	26.500N	71.501W	2909	2948	2.764	34.927	2	34.940	4	264.6	2	265.6	2
WBTSEN	AB1209	31	1	8	2	20121001	0416	26.500N	71.501W	2419	2449	3.151	34.953	2	34.951	2	262.8	2	262.2	2
WBTSEN	AB1209	31	1	9	2	20121001	0416	26.500N	71.501W	1927	1949	3.678	34.979	2	34.981	2	238.5	2	261.1	4
WBTSEN	AB1209	31	1	10	2	20121001	0416	26.500N	71.501W	1583	1599	4.205	35.009	2	35.013	2	255.6	2	254.7	6
WBTSEN	AB1209	31	1	11	2	20121001	0416	26.500N	71.501W	1430	1444	4.487	35.015	2	35.030	4	251.0	2	250.7	2
WBTSEN	AB1209	31	1	12	2	20121001	0416	26.500N	71.501W	1262	1275	5.010	35.044	2	35.052	4	237.9	2	237.9	2
WBTSEN	AB1209	31	1	13	2	20121001	0416	26.500N	71.501W	1094	1104	6.095	35.081	2	35.082	2	187.5	2	237.9	4
WBTSEN	AB1209	31	1	14	2	20121001	0416	26.500N	71.501W	901	909	8.546	35.173	2	35.175	2	139.7	2	153.9	4
WBTSEN	AB1209	31	1	15	2	20121001	0416	26.500N	71.501W	785	792	11.180	35.446	2	35.449	2	147.6	2	147.4	2
WBTSEN	AB1209	31	1	16	2	20121001	0416	26.500N	71.501W	713	719	13.042	35.697	2	35.700	2	161.2	2	161.8	2
WBTSEN	AB1209	31	1	17	2	20121001	0416	26.500N	71.501W	614	619	15.546	36.100	2	36.100	2	177.2	2	177.5	2
WBTSEN	AB1209	31	1	18	2	20121001	0416	26.500N	71.501W	506	510	17.385	36.454	2	36.458	2	185.8	2	201.0	4
WBTSEN	AB1209	31	1	19	2	20121001	0416	26.500N	71.501W	397	400	18.007	36.567	2	36.568	2	204.1	2	205.2	2
WBTSEN	AB1209	31	1	20	2	20121001	0416	26.500N	71.501W	287	290	18.459	36.612	2	36.620	2	197.5	2	198.8	2
WBTSEN	AB1209	31	1	21	2	20121001	0416	26.500N	71.501W	198	200	19.450	36.585	2	36.599	4	209.5	2	209.4	2
WBTSEN	AB1209	31	1	22	2	20121001	0416	26.500N	71.501W	119	120	20.642	36.655	2	36.658	2	221.6	2	220.3	2
WBTSEN	AB1209	31	1	23	2	20121001	0416	26.500N	71.501W	69	69	22.943	36.803	2	36.809	2	225.0	2	223.6	2
WBTSEN	AB1209	31	1	24	2	20121001	0416	26.500N	71.501W	3	3	28.997	36.578	2	36.581	2	195.3	2	196.3	2
WBTSEN	AB1209	32	1	1	2	20121001	1104	26.504N	71.003W	5467	5575	2.106	34.853	2	34.853	2	251.9	2	250.7	6
WBTSEN	AB1209	32	1	2	2	20121001	1104	26.504N	71.003W	5151	5249	2.219	34.872	2	34.876	2	258.1	2	257.5	2
WBTSEN	AB1209	32	1	3	2	20121001	1104	26.504N	71.003W	4825	4913	2.281	34.885	2	34.888	2	262.5	2	263.5	2
WBTSEN	AB1209	32	1	4	2	20121001	1104	26.504N	71.003W	4511	4589	2.294	34.890	2	34.887	2	264.9	2	265.5	2
WBTSEN	AB1209	32	1	5	2	20121001	1104	26.504N	71.003W	4179	4249	2.310	34.894	2	34.896	2	266.6	2	267.5	2
WBTSEN	AB1209	32	1	6	2	20121001	1104	26.504N	71.003W	3691	3748	2.372	34.900	2	34.935	4	267.9	2	269.4	2
WBTSEN	AB1209	32	1	7	2	20121001	1104	26.504N	71.003W	3204	3250	2.577	34.917	2	34.920	2	267.2	2	267.0	2
WBTSEN	AB1209	32	1	8	2	20121001	1104	26.504N	71.003W	2713	2749	2.943	34.941	2	34.936	2	263.6	2	263.6	2
WBTSEN	AB1209	32	1	9	2	20121001	1104	26.504N	71.003W	2223	2250	3.352	34.965	2	34.964	2	260.9	2	261.7	2
WBTSEN	AB1209	32	1	10	2	20121001	1104	26.504N	71.003W	1771	1790	3.816	34.979	2	34.977	2	262.0	2	262.0	2
WBTSEN	AB1209	32	1	11	2	20121001	1104	26.504N	71.003W	1385	1399	4.711	35.045	2	35.054	4	245.6	2	244.2	6
WBTSEN	AB1209	32	1	12	2	20121001	1104	26.504N	71.003W	1198	1210	5.339	35.071	2	35.069	2	229.4	2	230.0	2
WBTSEN	AB1209	32	1	13	2	20121001	1104	26.504N	71.003W	1030	1040	6.529	35.089	2	35.110	4	192.8	2	195.2	2
WBTSEN	AB1209	32	1	14	2	20121001	1104	26.504N	71.003W	914	922	8.045	35.124	2	35.138	4	154.4	2	154.8	2
WBTSEN	AB1209	32	1	15	2	20121001	1104	26.504N	71.003W	783	789	10.791	35.397	2	35.403	2	146.9	2	146.8	2
WBTSEN	AB1209	32	1	16	2	20121001	1104	26.504N	71.003W	694	699	12.994	35.689	2	35.705	4	159.1	2	160.1	2
WBTSEN	AB1209	32	1	17	2	20121001	1104	26.504N	71.003W	585	589	15.409	36.081	2	36.111	4	174.4	2	175.8	2
WBTSEN	AB1209	32	1	18	2	20121001	1104	26.504N	71.003W	471	475	17.351	36.439	2	36.454	4	183.4	2	240.1	4
WBTSEN	AB1209	32	1	19	2	20121001	1104	26.504N	71.003W	368	370	17.993	36.552	2	36.572	4	200.7	2	202.3	2
WBTSEN	AB1209	32	1	20	2	20121001	1104	26.504N	71.003W	258	260	18.734	36.630	2	36.628	2	192.0	2	192.3	2
WBTSEN	AB1209	32	1	21	2	20121001	1104	26.504N	71.003W	169	170	20.153	36.670	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	32	1	22	2	20121001	1104	26.504N	71.003W	98	99	22.226	36.775	2	36.785	2	221.0	2	220.3	2
WBTSEN	AB1209	32	1	23	2	20121001	1104	26.504N	71.003W	49	49	26.609	36.615	2	36.647	4	225.2	2	223.2	2
WBTSEN	AB1209	32	1	24	2	20121001	1104	26.504N	71.003W	3	3	28.922	36.536	2	36.543	2	196.3	2	198.7	2
WBTSEN	AB1209	33	1	1	2	20121001	1735	26.502N	70.500W	5471	5578	2.126	34.856	2	34.857	2	252.5	2	250.7	2
WBTSEN	AB1209	33	1	2	2	20121001	1735	26.502N	70.500W	5084	5179	2.269	34.879	2	34.877	2	260.5	2	260.3	6
WBTSEN	AB1209	33	1	3	2	20121001	1735	26.502N	70.500W	4696	4780	2.296	34.888	2	34.889	2	263.8	2	263.8	2
WBTSEN	AB1209	33	1	4	2	20121001	1735	26.502N	70.500W	4316	4390	2.306	34.893	2	34.890	2	266.0	2	266.5	2
WBTSEN	AB1209	33	1	5	2	20121001	1735	26.502N	70.500W	3935	3998	2.338	34.898	2	34.897	2	267.3	2	267.9	2
WBTSEN	AB1209	33	1	6	2	20121001	1735	26.502N	70.500W	3448	3500	2.467	34.909	2	34.908	2	268.0	2	268.9	2
WBTSEN	AB1209	33	1	7	2	20121001	1735	26.502N	70.500W	2958	2999	2.749	34.929	2	34.929	2	263.3	2	265.0	2
WBTSEN	AB1209	33	1	8	2	20121001	1735	26.502N	70.500W	2468	2499	3.125	34.951	2	34.950	2	262.7	2	262.7	2
WBTSEN	AB1209	33	1	9	2	20121001	1735	26.502N	70.500W	1976	1999	3.613	34.971	2	34.971	2	262.8	2	262.6	2
WBTSEN	AB1209	33	1	10	2	20121001	1735	26.502N	70.500W	1651	1669	4.121	35.012	2	35.012	2	256.6	2	254.5	2
WBTSEN	AB1209	33	1	11	2	20121001	1735	26.502N	70.500W	1445	1460	4.504	35.030	2	35.032	2	249.4	2	248.8	6
WBTSEN	AB1209	33	1	12	2	20121001	1735	26.502N	70.500W	1267	1280	4.968	35.051	2	35.051	2	239.6	2	237.8	2
WBTSEN	AB1209	33	1	13	2	20121001	1735	26.502N	70.500W	998	1007	6.677	35.093	2	35.093	2	191.7	2	190.8	2
WBTSEN	AB1209	33	1	14	2	20121001	1735	26.502N	70.500W	925	934	7.696	35.129	2	35.130	2	168.2	2	168.7	2
WBTSEN	AB1209	33	1	15	2	20121001	1735	26.502N	70.500W	818	825	9.392	35.237	2	35.241	2	145.0	2	145.0	2
WBTSEN	AB1209	33	1	16	2	20121001	1735	26.502N	70.500W	708	713	12.433	35.606	2	35.603	2	156.0	2	154.4	2
WBTSEN	AB1209	33	1	17	2	20121001	1735	26.502N	70.500W	599	604	14.757	35.968	2	35.970	2	172.2	2	171.0	2
WBTSEN	AB1209	33	1	18	2	20121001	1735	26.502N	70.500W	490	494	16.896	36.351	2	36.351	2	190.3	2	190.1	2
WBTSEN	AB1209	33	1	19	2	20121001	1735	26.502N	70.500W	382	385	17.864	36.534	2	36.531	2	200.7	2	200.3	2
WBTSEN	AB1209	33	1	20	2	20121001	1735	26.502N	70.500W	272	274	18.460	36.607	2	36.605	2	194.7	2	195.7	2

WBTSEN	AB1209	33	1	21	2	20121001	1735	26.502N	70.500W	184	185	19.527	36.598	2	36.600	6	183.4	2	207.5	4
WBTSEN	AB1209	33	1	22	2	20121001	1735	26.502N	70.500W	114	114	21.507	36.743	2	36.741	2	221.4	2	216.2	2
WBTSEN	AB1209	33	1	23	2	20121001	1735	26.502N	70.500W	64	64	24.007	36.813	2	36.810	2	226.4	2	227.2	2
WBTSEN	AB1209	33	1	24	2	20121001	1735	26.502N	70.500W	2	2	29.175	36.609	2	36.609	2	196.0	2	195.6	2
WBTSEN	AB1209	34	1	1	2	20121002	0004	26.502N	70.004W	5469	5576	2.103	34.853	2	34.853	2	251.6	2	249.7	6
WBTSEN	AB1209	34	1	2	2	20121002	0004	26.502N	70.004W	5045	5140	2.261	34.879	2	34.878	2	260.4	2	259.9	2
WBTSEN	AB1209	34	1	3	2	20121002	0004	26.502N	70.004W	4618	4700	2.292	34.888	2	34.889	2	264.4	2	264.3	2
WBTSEN	AB1209	34	1	4	2	20121002	0004	26.502N	70.004W	4189	4259	2.308	34.894	2	34.891	2	265.9	2	266.6	2
WBTSEN	AB1209	34	1	5	2	20121002	0004	26.502N	70.004W	3765	3824	2.353	34.900	2	34.899	2	267.7	2	268.5	2
WBTSEN	AB1209	34	1	6	2	20121002	0004	26.502N	70.004W	3257	3304	2.529	34.913	2	34.912	6	268.0	2	269.1	2
WBTSEN	AB1209	34	1	7	2	20121002	0004	26.502N	70.004W	2753	2789	2.875	34.936	2	34.937	2	264.4	2	265.0	2
WBTSEN	AB1209	34	1	8	2	20121002	0004	26.502N	70.004W	2243	2270	3.322	34.961	2	34.959	2	262.6	2	262.7	2
WBTSEN	AB1209	34	1	9	2	20121002	0004	26.502N	70.004W	1834	1854	3.785	34.982	2	34.983	2	261.2	2	260.8	2
WBTSEN	AB1209	34	1	10	2	20121002	0004	26.502N	70.004W	1583	1599	4.228	35.015	2	35.013	2	254.3	2	253.6	2
WBTSEN	AB1209	34	1	11	2	20121002	0004	26.502N	70.004W	1361	1374	4.784	35.056	2	35.054	2	242.0	2	241.5	2
WBTSEN	AB1209	34	1	12	2	20121002	0004	26.502N	70.004W	1192	1204	5.255	35.062	2	35.061	2	229.6	2	229.7	2
WBTSEN	AB1209	34	1	13	2	20121002	0004	26.502N	70.004W	1025	1034	6.298	35.081	2	35.082	2	197.0	2	197.3	2
WBTSEN	AB1209	34	1	14	2	20121002	0004	26.502N	70.004W	916	925	7.588	35.125	2	35.122	2	171.1	2	171.9	2
WBTSEN	AB1209	34	1	15	2	20121002	0004	26.502N	70.004W	807	814	9.646	35.266	2	35.262	6	144.3	2	144.1	2
WBTSEN	AB1209	34	1	16	2	20121002	0004	26.502N	70.004W	699	704	12.173	35.573	2	35.571	2	152.5	2	151.7	2
WBTSEN	AB1209	34	1	17	2	20121002	0004	26.502N	70.004W	590	594	14.962	36.002	2	35.992	2	170.8	2	170.6	2
WBTSEN	AB1209	34	1	18	2	20121002	0004	26.502N	70.004W	480	484	16.947	36.363	2	36.356	2	193.2	2	192.5	2
WBTSEN	AB1209	34	1	19	2	20121002	0004	26.502N	70.004W	372	375	17.921	36.544	2	36.542	2	200.5	2	201.3	2
WBTSEN	AB1209	34	1	20	2	20121002	0004	26.502N	70.004W	262	264	18.583	36.618	2	36.615	2	193.8	2	194.2	2
WBTSEN	AB1209	34	1	21	2	20121002	0004	26.502N	70.004W	173	174	19.865	36.652	2	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	34	1	22	2	20121002	0004	26.502N	70.004W	93	94	22.333	36.782	2	36.779	2	211.2	2	228.9	4
WBTSEN	AB1209	34	1	23	2	20121002	0004	26.502N	70.004W	44	44	27.096	36.618	2	36.637	4	196.6	2	213.9	4
WBTSEN	AB1209	34	1	24	2	20121002	0004	26.502N	70.004W	2	2	29.105	36.647	2	36.645	2	194.9	2	195.2	2
WBTSEN	AB1209	35	1	1	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	2	2	20121005	0542	26.488N	76.109W	4780	4866	2.238	34.880	2	34.877	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	3	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	4	2	20121005	0542	26.488N	76.109W	3938	4001	2.270	34.893	2	34.891	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	5	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	6	2	20121005	0542	26.488N	76.109W	3448	3500	2.386	34.904	2	34.902	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	7	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	8	2	20121005	0542	26.488N	76.109W	2958	2999	2.689	34.922	2	34.922	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	9	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	10	2	20121005	0542	26.488N	76.109W	2469	2500	3.144	34.949	2	34.947	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	11	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	12	2	20121005	0542	26.488N	76.109W	1978	2000	3.585	34.962	2	34.961	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	13	2	20121005	0542	26.488N	76.109W	1485	1500	4.246	34.991	2	34.994	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	14	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	15	2	20121005	0542	26.488N	76.109W	793	800	9.956	35.278	2	35.279	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	16	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	17	2	20121005	0542	26.488N	76.109W	495	499	16.775	36.322	2	36.322	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	18	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	19	2	20121005	0542	26.488N	76.109W	197	199	19.579	36.712	2	36.712	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	20	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	21	2	20121005	0542	26.488N	76.109W	98	99	21.977	36.735	2	36.735	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	22	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	23	2	20121005	0542	26.488N	76.109W	3	3	28.614	36.235	2	36.234	2	-999.0	9	-999.0	9
WBTSEN	AB1209	35	1	24	2	20121005	0542	26.488N	76.109W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	1	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	2	2	20121007	0442	26.489N	76.473W	4791	4878	2.281	34.884	2	34.883	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	3	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	4	2	20121007	0442	26.489N	76.473W	3908	3970	2.278	34.894	2	34.891	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	5	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	6	2	20121007	0442	26.489N	76.473W	3401	3452	2.416	34.905	2	34.904	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	7	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	8	2	20121007	0442	26.489N	76.473W	2898	2937	2.864	34.930	2	34.930	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	9	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	10	2	20121007	0442	26.489N	76.473W	2407	2437	3.163	34.945	2	34.943	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	11	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	12	2	20121007	0442	26.489N	76.473W	1932	1953	3.593	34.966	2	34.964	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	13	2	20121007	0442	26.489N	76.473W	1487	1502	4.146	34.992	2	34.991	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	14	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9

WBTSEN	AB1209	36	1	15	2	20121007	0442	26.489N	76.473W	833	840	8.768	35.177	2	35.178	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	16	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	17	2	20121007	0442	26.489N	76.473W	542	546	15.805	36.148	2	36.154	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	18	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	19	2	20121007	0442	26.489N	76.473W	197	199	19.428	36.609	2	36.605	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	20	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	21	2	20121007	0442	26.489N	76.473W	99	99	22.722	36.777	2	36.779	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	22	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	23	2	20121007	0442	26.489N	76.473W	4	4	28.818	36.340	2	36.341	2	-999.0	9	-999.0	9
WBTSEN	AB1209	36	1	24	2	20121007	0442	26.489N	76.473W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	1	2	20121009	1125	27.003N	79.202W	458	461	16.676	36.301	2	36.301	2	178.0	2	179.4	2
WBTSEN	AB1209	37	1	2	2	20121009	1125	27.003N	79.202W	307	310	18.575	36.572	2	36.575	2	172.8	2	172.6	2
WBTSEN	AB1209	37	1	3	2	20121009	1125	27.003N	79.202W	148	149	22.862	36.801	2	36.807	2	187.3	2	188.5	2
WBTSEN	AB1209	37	1	4	2	20121009	1125	27.003N	79.202W	59	59	28.763	36.027	2	36.028	2	199.2	2	200.2	2
WBTSEN	AB1209	37	1	5	2	20121009	1125	27.003N	79.202W	3	3	29.038	35.993	2	35.994	2	195.5	2	195.2	2
WBTSEN	AB1209	37	1	6	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	7	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	8	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	9	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	10	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	11	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	12	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	13	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	14	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	15	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	16	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	17	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	18	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	19	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	20	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	21	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	22	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	23	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	37	1	24	2	20121009	1125	27.003N	79.202W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	1	2	20121009	1242	27.002N	79.282W	585	590	12.634	35.602	2	35.621	4	139.9	2	139.4	2
WBTSEN	AB1209	38	1	2	2	20121009	1242	27.002N	79.282W	451	455	14.897	35.942	2	35.943	2	142.8	2	143.8	2
WBTSEN	AB1209	38	1	3	2	20121009	1242	27.002N	79.282W	289	291	18.604	36.574	2	36.578	2	173.8	2	170.7	2
WBTSEN	AB1209	38	1	4	2	20121009	1242	27.002N	79.282W	121	121	24.318	36.754	2	36.759	2	162.1	2	160.5	2
WBTSEN	AB1209	38	1	5	2	20121009	1242	27.002N	79.282W	49	49	28.951	36.024	2	36.025	2	195.9	2	195.6	2
WBTSEN	AB1209	38	1	6	2	20121009	1242	27.002N	79.282W	3	3	28.977	36.020	2	36.020	2	196.0	2	196.2	2
WBTSEN	AB1209	38	1	7	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	8	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	9	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	10	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	11	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	12	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	13	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	14	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	15	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	16	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	17	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	18	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	19	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	20	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	21	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	22	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	23	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	38	1	24	2	20121009	1242	27.002N	79.282W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	1	2	20121009	1409	27.004N	79.383W	661	666	9.679	35.136	2	35.148	4	122.4	2	123.2	2
WBTSEN	AB1209	39	1	2	2	20121009	1409	27.004N	79.383W	534	538	11.570	35.397	2	35.397	2	127.1	2	126.6	2
WBTSEN	AB1209	39	1	3	2	20121009	1409	27.004N	79.383W	357	360	16.825	36.316	2	36.315	2	164.2	2	155.2	4
WBTSEN	AB1209	39	1	4	2	20121009	1409	27.004N	79.383W	173	174	20.687	36.771	2	36.767	2	156.5	2	156.8	2
WBTSEN	AB1209	39	1	5	2	20121009	1409	27.004N	79.383W	69	69	27.838	36.143	2	36.152	2	192.6	2	192.5	2
WBTSEN	AB1209	39	1	6	2	20121009	1409	27.004N	79.383W	3	3	29.148	36.024	2	36.025	2	195.9	2	195.8	2
WBTSEN	AB1209	39	1	7	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	8	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9

WBTSEN	AB1209	39	1	9	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	10	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	11	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	12	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	13	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	14	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	15	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	16	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	17	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	18	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	19	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	20	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	21	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	22	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	23	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	39	1	24	2	20121009	1409	27.004N	79.383W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	1	2	20121009	1547	27.008N	79.500W	729	736	7.325	34.922	2	34.926	2	130.5	2	130.4	2
WBTSEN	AB1209	40	1	2	2	20121009	1547	27.008N	79.500W	652	658	8.502	35.000	2	35.000	2	123.7	2	123.3	2
WBTSEN	AB1209	40	1	3	2	20121009	1547	27.008N	79.500W	471	474	11.876	35.442	2	35.447	2	127.6	2	127.1	2
WBTSEN	AB1209	40	1	4	2	20121009	1547	27.008N	79.500W	311	313	16.203	36.165	2	36.167	2	149.1	2	149.3	2
WBTSEN	AB1209	40	1	5	2	20121009	1547	27.008N	79.500W	170	171	20.310	36.747	2	36.750	2	148.7	2	150.6	2
WBTSEN	AB1209	40	1	6	2	20121009	1547	27.008N	79.500W	74	75	27.332	36.233	2	36.233	2	189.1	2	189.4	2
WBTSEN	AB1209	40	1	7	2	20121009	1547	27.008N	79.500W	2	2	29.179	36.001	2	36.001	2	195.5	2	194.7	2
WBTSEN	AB1209	40	1	8	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	9	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	10	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	11	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	12	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	13	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	14	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	15	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	16	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	17	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	18	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	19	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	20	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	21	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	22	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	23	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	40	1	24	2	20121009	1547	27.008N	79.500W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	1	2	20121009	1733	27.003N	79.616W	628	633	6.773	34.914	2	34.914	2	137.8	2	137.6	2
WBTSEN	AB1209	41	1	2	2	20121009	1733	27.003N	79.616W	468	472	10.381	35.249	2	35.254	2	119.9	2	124.9	4
WBTSEN	AB1209	41	1	3	2	20121009	1733	27.003N	79.616W	317	319	14.451	35.867	2	35.872	2	139.9	2	139.1	2
WBTSEN	AB1209	41	1	4	2	20121009	1733	27.003N	79.616W	178	180	19.201	36.591	2	36.588	2	145.5	2	146.9	2
WBTSEN	AB1209	41	1	5	2	20121009	1733	27.003N	79.616W	69	69	27.469	36.218	2	36.223	2	191.1	2	191.2	2
WBTSEN	AB1209	41	1	6	2	20121009	1733	27.003N	79.616W	3	3	29.349	36.019	2	36.018	2	195.5	2	194.0	2
WBTSEN	AB1209	41	1	7	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	8	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	9	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	10	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	11	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	12	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	13	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	14	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	15	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	16	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	17	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	18	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	19	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	20	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	21	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	22	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	23	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	41	1	24	2	20121009	1733	27.003N	79.616W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	1	2	20121009	1849	27.002N	79.682W	509	513	7.052	34.921	2	34.922	2	134.2	2	134.8	2
WBTSEN	AB1209	42	1	2	2	20121009	1849	27.002N	79.682W	398	401	10.323	35.275	2	35.286	2	127.9	2	127.1	2

WBTSEN	AB1209	42	1	3	2	20121009	1849	27.002N	79.682W	247	249	15.678	36.064	2	36.063	2	140.9	2	141.2	2
WBTSEN	AB1209	42	1	4	2	20121009	1849	27.002N	79.682W	119	120	21.132	36.609	2	36.605	2	147.4	2	151.1	4
WBTSEN	AB1209	42	1	5	2	20121009	1849	27.002N	79.682W	39	39	29.182	36.004	2	36.004	2	193.0	2	194.9	2
WBTSEN	AB1209	42	1	6	2	20121009	1849	27.002N	79.682W	3	3	29.339	36.008	2	36.007	2	194.0	2	194.5	2
WBTSEN	AB1209	42	1	7	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	8	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	9	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	10	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	11	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	12	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	13	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	14	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	15	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	16	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	17	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	18	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	19	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	20	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	21	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	22	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	23	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	42	1	24	2	20121009	1849	27.002N	79.682W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	1	2	20121009	2107	27.000N	79.784W	348	351	7.941	34.956	2	34.959	2	125.9	2	126.1	2
WBTSEN	AB1209	43	1	2	2	20121009	2107	27.000N	79.784W	120	120	19.625	36.517	2	36.526	2	136.9	2	136.6	2
WBTSEN	AB1209	43	1	3	2	20121009	2107	27.000N	79.784W	39	39	28.492	36.085	2	36.096	2	197.1	2	196.5	2
WBTSEN	AB1209	43	1	4	2	20121009	2107	27.000N	79.784W	3	3	29.245	36.002	2	36.002	2	195.2	2	194.8	2
WBTSEN	AB1209	43	1	5	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	6	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	7	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	8	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	9	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	10	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	11	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	12	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	13	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	14	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	15	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	16	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	17	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	18	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	19	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	20	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	21	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	22	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	23	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	43	1	24	2	20121009	2107	27.000N	79.784W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	1	2	20121009	2249	27.002N	79.866W	245	246	8.869	35.046	2	35.047	2	122.9	2	122.9	2
WBTSEN	AB1209	44	1	2	2	20121009	2249	27.002N	79.866W	161	163	11.792	35.474	2	35.473	2	124.4	2	129.3	4
WBTSEN	AB1209	44	1	3	2	20121009	2249	27.002N	79.866W	68	69	24.334	36.621	2	36.617	2	169.9	2	168.7	2
WBTSEN	AB1209	44	1	4	2	20121009	2249	27.002N	79.866W	4	4	28.748	36.048	2	36.052	2	195.9	2	196.0	2
WBTSEN	AB1209	44	1	5	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	6	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	7	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	8	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	9	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	10	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	11	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	12	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	13	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	14	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	15	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	16	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	17	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	18	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	19	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	20	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9

WBTSEN	AB1209	44	1	21	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	22	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	23	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	44	1	24	2	20121009	2249	27.002N	79.866W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	1	2	20121010	0009	27.002N	79.929W	129	129	10.599	35.299	2	35.306	2	126.0	2	126.1	2
WBTSEN	AB1209	45	1	2	2	20121010	0009	27.002N	79.929W	60	60	21.565	35.967	2	35.968	2	174.3	2	165.7	2
WBTSEN	AB1209	45	1	3	2	20121010	0009	27.002N	79.929W	3	3	28.751	35.888	2	35.890	2	196.0	2	196.8	2
WBTSEN	AB1209	45	1	4	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	5	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	6	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	7	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	8	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	9	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	10	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	11	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	12	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	13	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	14	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	15	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	16	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	17	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	18	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	19	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	20	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	21	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	22	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	23	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9
WBTSEN	AB1209	45	1	24	2	20121010	0009	27.002N	79.929W	-999	-999	-999.000	-999.000	9	-999.000	9	-999.0	9	-999.0	9