



**CTD/O₂, LADCP AND XBT MEASUREMENTS COLLECTED ABOARD
THE *R/V SEWARD JOHNSON*, NOVEMBER-DECEMBER 1998:
NORTH BRAZIL CURRENT RINGS EXPERIMENT CRUISE 1 (NBC-1)**

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CTD/O₂, LADCP and XBT measurements collected aboard the R/V SEWARD JOHNSON, November-December 1998: North Brazil Current Rings Experiment Cruise 1 (NBC-1)

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Abstract. Summaries of CTD/O₂, LADCP, XBT measurements and hydrographic data acquired on an oceanographic research cruise during the fall of 1998 aboard the Harbor Branch Oceanographic Institution ship *R/V SEWARD JOHNSON* are presented. Data acquisition and processing systems are described and calibration procedures are documented. Station location, CTD/O₂, LADCP, and XBT summary data listings, and profiles are included for each station.

1. Introduction

The North Brazil Current rings are large (400 km diameter) anticyclones that pinch off from the North Brazil Current (NBC) retroflection in the western tropical Atlantic near 8°N, translate northwestward along the coast of South America, and decay throughout topographic interaction near the passages of the southeastern Caribbean. Advection within translating NBC rings has been proposed as one of several important pathways for the transport of South Atlantic upper-ocean water across the equatorial-tropical gyre boundary and into the North Atlantic subtropical gyre. Such transport is required to complete the Meridional Overturning Cell (MOC) in the Atlantic forced by the high-latitude production and southward export of North Atlantic Deep Water.

The mechanisms, which contribute to NBC ring formation and the structure and dynamics of the rings themselves, are not well understood. The specific objectives of the cruise are to:

1. Obtain a thorough description of the spatial and temporal evolution of the North Brazil Current retroflection and the separation of rings from the retroflection,
2. Determine the physical structure of the rings after separation from the NBC, including their sizes, vertical structure, horizontal swirl velocities, and the volume of South Atlantic water they trap and transport, and
3. Determine the rates of translation, decay, and mixing with resident North Atlantic waters as the rings move northwestward from their generation point toward the Caribbean Sea.

To accomplish these objectives, several complementary measurement techniques were employed. Primary elements of the observing strategy included: (1) an Inverted Echo Sounder (IES) array placed within TOPEX/GEOSAT-2 tracklines to optimally monitor the evolution of the NBC retroflection and ring generation events, (2) moored current and temperature-salinity measurements along the ring translation corridor to determine the transport and water mass characteristics of the rings, and (3) detailed shipboard CTD/ADCP surveys and deployments of surface drifters and subsurface RAFOS floats in selected rings to track their propagation and decay at various stages of their life cycles. This report describes the CTD/LADCP survey data and additional XBT profile data collected during the first cruise of this project (NBC-1), which took place from November 7 to December 11, 1998 aboard the *R/V SEWARD JOHNSON*.

A total of 68 hydrographic stations were occupied during two legs of this cruise. Figure 1 shows

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station locations for leg 1 and leg 2. Table 1 provides a summary of cast information. At each station, profiles of temperature, salinity (conductivity) and dissolved oxygen concentration were collected to a depth of 2000m or to within approximately 10m of the bottom at shallower depths. LADCP measurements were taken concurrently with CTD/O₂ stations. Water samples for calibration of the salinity and dissolved oxygen profiles were collected at each station.

2. Standards and Pre-Cruise Calibrations

The CTD/O₂ system is a real-time data acquisitions 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 SEASOFT software.

The SBE 911plus system transmits data from primary and auxiliary sensors in the form of binary numbers equivalent of 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 rosette water sampler, also made by Sea-Bird Electronics, Inc. A modem and rosette interface allows the 911plus system to control the operations of the rosette directly without interrupting the flow of data from the CTD.

The SBE 9plus underwater unit is configured with dual standard modular temperature (SBE 3) 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 are added to the pumped sensor configuration following the temperature-conductivity (TC) pair.

2.1 Conductivity

The flow-through conductivity-sensing element is a glass tube (cell) with three platinum electrodes. 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/month and resolution of 0.00004 S/m at 24 scans per second.

Two conductivity sensors were used during NBC-1, serial numbers s/n1374 and 1387. Pre-cruise sensor calibrations were performed at Sea-Bird Electronics, Inc. in Bellevue, Washington. The following coefficients were entered into SEASOFT using software module SEACON:

s/n 1374	s/n 1387
June 9, 1998	April 17, 1998
$g = -4.27462699e+00$	$g = -4.05634514e+00$
$h = 5.21681775e-01$	$h = 4.62039307e-01$
$i = -4.66319760e-05$	$i = -1.50583604e-04$
$j = 3.07572222e-06$	$j = 3.32621635e-05$
$ctcor = 3.2500e-06$	$ctcor = 3.2500e-06$
$cpcor = -9.5700e-08$	$cpcor = -9.5700e-08$

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:

$$C(S/m) = (g + hf^2 + if^3 + jf^4) / [10 (1 + ctcor * t + cpcor * p)]$$

where g , h , i , j , $ctcor$, and $cpcor$ 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). SEASOFT automatically implements this equation.

2.2 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 temperature 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 Wein Bridge circuit. The thermistor resistance is exponentially related to temperature. The SBE 3 thermometer has a typical accuracy/stability of $\pm 0.004^\circ\text{C}$ 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.

The two temperature sensors used during NBC-1 were s/n 1701 and 1987. Pre cruise sensor calibrations were performed at Sea-Bird Electronics, Inc. in Bellevue, Washington. The following coefficients were entered into SEASOFT using SEACON:

s/n 1701	s/n 1075
May 01, 1998	May 01, 1998
$g = -4.79045670e-03$	$g = 4.811581676e+00$
$h = 6.53699147e-04$	$h = 6.70191644e-04$
$i = 1.84549957e-05$	$i = 2.57253374e-05$
$j = 1.00984586e-06$	$j = 2.07717961e-06$
$f_0 = 1000.0$	$f_0 = 1000.0$

Temperature (ITS-90) is computed according to

$$T(C) = 1/g + h [\ln(f_0 / f)] + i [\ln^2(f_0 / f)] + j [\ln^3(f_0 / f)] - 273.15$$

Where g , h , i , j and f_0 are the calibration coefficients above and f is the instrument frequency (kHz). Seasoft automatically implements this equation and converts between ITS-90 and IPTS-68 temperature scales as desired.

2.3 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% FS. The nominal pressure frequency (0 to full scale) is 34 to 38 kHz. The nominal temperature frequency is 172 kHz + 50 ppm/°C.

Pre-cruise sensor calibrations were performed at Sea-Bird Electronics, Inc. in Bellevue, Washington. The following coefficients were entered into SEASOFT using module SEACON:

s/n 58808	s/n 50619
May 31, 1996	June 24, 1994
$c1 = -4.53844e+04$	$c1 = -4.010525e+04$
$c2 = -1.963440e-01$	$c2 = 6.815307e+1$
$c3 = 1.278040e-02$	$c3 = 1.28865e-02$
$d1 = 3.779600e-02$	$d1 = 0.039747$
$d2 = 0$	$d2 = 0$

May 31, 1996	June 24, 1994
t1 = 3.010293e+01	t1 = 3.029263e+01
t2 = -2.932600e-04	t2 = -5.273358e-05
t3 = 3.610820e-06	t3 = 4.37835e-06
t4 = 3.748630e-09	t4 = 2.06507e-09

Pressure coefficients are first formulated into

$$\begin{aligned}
 c &= c_1 + c_2U + c_3U^2 \\
 d &= d_1 + d_2U \\
 t0 &= t1 + t2 * U + t3 * U^2 + t4 * U^3
 \end{aligned}$$

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

$$P(psia) = c (1 - (t0^2 / t^2)) (1 - d (1 - (t0^2 / t^2)))$$

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

2.4 Oxygen

The SBE 13Y dissolved oxygen sensor (Yellow Springs Instrument (YSI)) uses a polarographic type element. 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. The interface electronics outputs voltages proportional to membrane current (oxygen current) and membrane temperature (oxygen temperature). Oxygen temperature is used for internal temperature compensation. Initial computation of dissolved oxygen in engineering units is done in the software. The range for dissolved oxygen is 0 to 670 μmol/kg; nominal accuracy is 4.45 μmol/kg; resolution is 0.4 μmol/kg. Response times are roughly 2 seconds at 25°C and 5 seconds at 0°C.

Oxygen sensors 130433 and 230531 were used during NBC-1. The following oxygen calibrations were entered into SEASOFT using SEACON:

s/n 130433 September 9, 1998	s/n 230531 August 31, 1998
m = 1.0048e-5	m = 1.0059e-5
b = -4.8229e-9	b = -1.6094e-8
soc = .0785	soc = 0.0887
boc = -.0083	boc = -0.0209
tcor = -0.033	tcor = -0.033
pcor = 1.50e-4	pcor = 1.50-e4
tau = 2.0	tau = 2.0
wt = 0.85	wt = .85
k = 6.5742	k = 6.5121
c = -1.4886	c = -1.7991

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.

3. Data Acquisition

CTD/O₂ measurements were made using a SBE 9plus CTD with dual sensor configuration. Each set of sensors included a temperature, conductivity, and dissolved oxygen sensor. The sets were placed

as mirror images to each other mounted low in the CTD main housing with the intakes approximately 6-8 inches apart. The TC pairs were monitored for calibration drift and shifts by examining the differences between the two pairs on each CTD and comparing CTD salinity values with bottle salinity measurements.

AOML's SBE 9plus CTD/O₂ s/n 09P10779-0363 (sampling rate 24Hz) was mounted in a 24-position frame and employed as the primary package. Auxiliary sensors included a Lowered Acoustic Doppler Current Profiler (LADCP) and a Simrad altimeter. Water samples were collected using an SBE24-bottle rosette and 10-liter niskin bottles. Data from the primary sensor package was used for all final data in this report.

The package entered the water from the starboard side of the ship and was held within 5 meters of the surface for 1 minute in order to activate the pump. The package was lowered at a rate of 30m/min to 100m and 60m/min generally to within 10 meters of the bottom, slowing on the approach. The altimeter monitored the position of the package relative to the bottom.

Upon completion of the cast, sensors were flushed repeatedly and stored with a dilute Triton-X solution in the plumbing. Niskin bottles were then sampled for oxygen, salinity and nutrients.

A SBE 11plus deck unit received the data signal from the CTD. Digitized data were forwarded to a personal computer equipped with SEASOFT acquisition and processing software version 4.234. Preliminary temperature, salinity, and oxygen profiles were displayed in real time. Raw data files were archived to SyQuest 230mb removable drives.

3.1 Data Acquisition/System Problems

Most of the data acquisition problems incurred during the cruise were due to data flow interruption in the cable termination. When the data stream signal is broken, the data that is transmitted from the underwater unit to the 911plus deck unit has questionable accuracy. During NBC-1, six CTD stations (1, 15, and 42 through 45) experienced numerous signal interruptions. Therefore, the data from these stations are not complete, and are not included in this data report. Another problem that was discovered during leg 2 of the cruise was the fluctuation of pressure sensor #50619. This sensor gave inaccurate pressure readings after station 42, and was subsequently replaced with sensor #58808. The performance of the temperature, conductivity, and oxygen sensors was outstanding.

3.2 Salinity Analyses

Bottle salinity analyses were performed in the ship's temperature-controlled salinity laboratory using a Guildline Model 8400B inductive autosalinometer, and a dedicated PC. Software allowed the user to standardize the autosal and perform a second standardization using a fresher standard (30 PSS) for a linearity check. IAPSO Standard Seawater was used as the standard. The autosal was standardized before each case of samples were analyzed, or every 24 samples. The software limits set required that each successive reading is within ± 0.002 PSS or the program would reject that reading and seek another. Stable room temperature and high performance of the autosalinometer allowed these limits to be so strictly set.

Duplicate samples were taken from the deepest bottle on each cast. Bottle salinities were compared with preliminary CTD salinity values to monitor CTD conductivity cell performance and drift. The expected precision of the autosal is 0.001 PSS, with an accuracy of 0.0003 PSS.

3.3 Oxygen Analyses

Bottle oxygen analyses were also performed in the ship's temperature-controlled salinity laboratory using a photometric automatic Winkler method tritator with a Carpenter modification, and a dedicated PC. The water samples are drawn (without air bubbles) from niskin bottles immediately upon

arrival on deck. Manganous sulfate (or chloride) is added to the sample, followed by the addition of an alkaline sodium hydroxide-sodium iodide solution. These solutions "pickle" the sample causing it to precipitate and react with the dissolved oxygen in the water sample. The sample is then dissolved and photometrically titrated to an end point with a standardized sodium thiosulphate solution. The content of oxygen value is calculated utilizing the volume of the water sample bottle and the amount of added thiosulphate. Automated titrating systems can attain a precision of $\sim \pm 4.46 \mu\text{mol/kg}$ (Friederich, *et al.*, 1991).

4. At Sea Processing of CTD data

SEASOFT consists of modular menu driven routines for acquisition, display, processing, and archiving of oceanographic data acquired with SBE equipment. The software is designed to work with a PC. 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 SEASOFT post processing modules. Unless otherwise noted, all calibration parameters given are factory default values recommended by SeaBird Electronics, Inc. The following is the SEASOFT processing module sequence and specifications used in the reduction of CTD/O₂ data from this cruise:

- DATCNV converted the raw data to pressure, temperature, conductivity, oxygen current, and oxygen temperature; and computed salinity, the time rate of change of oxygen current, and preliminary oxygen. DATCNV also extracted bottle information where scans were marked with a bottle confirmation bit during acquisition.
- ROSSUM created a summary of the bottle data. Bottle position, date, and time were output automatically. Pressure, temperature, conductivity, salinity, oxygen current, oxygen temperature, time rate of change of oxygen current, and preliminary oxygen values were averaged over a 2 second interval from 5 to 3 seconds prior to the confirm bit. ROSSUM computed potential temperature and sigma-theta.
- WILDEDIT marked extreme outliers in the data files. The first pass of WILDEDIT obtained an accurate estimate of the true standard deviation of the data. The data were read in blocks of 200 scans. Data greater than two standard deviations were flagged. The second pass computed a standard deviation over the same 200 scans excluding the flagged values. Values greater than 16 standard deviations were marked as bad values.
- SPLIT removes decreasing pressure records from the data files.
- FILTER performed a low pass filter on pressure data with a time constant of 0.15 seconds. In order to produce no time shift, the filter first runs forward through the data file and then runs backwards through the data file.
- ALIGNCTD aligns conductivity; temperature and oxygen in time relative to pressure to ensure that all calculations are made using measurements from the same parcel of water, which minimizes salinity spiking and density errors. The SBE 11plus deck unit has factory settings to advance the primary conductivity cell; therefore, ALIGNCTD was not performed on this cell. The secondary conductivity cell, however, is not advanced in the deck unit and so was advanced 0.073 seconds in the ALIGNCTD module. Since the SBE3 temperature sensor response is fast, (0.06 seconds), it is not necessary to advance temperature relative to pressure. Oxygen sensors s/n 130433 and s/n 230531 were advanced 3 seconds in ALIGNCTD.
- CELLTM uses a recursive filter to removed conductivity cell thermal mass effects from measure conductivity. Both conductivity cells are epoxy coated and therefore the thermal anomaly amplitude (α) and the time constant ($1/\beta$) were 0.03 and 9.0 respectively for each sensor.

- DERIVE was used to re-compute the time rate of change of oxygen current (dox/dt) and oxygen ($\mu\text{mol/kg}$) with a time window size of 2 seconds.
- LOOPEDIT marks data scans where the CTD package was moving less than a minimum velocity of 0.25 m/s or travelling backwards due to ship roll.
- BINAVERAGE averages the data into 1 decibar (dbar) pressure bins starting at 1 dbar with no surface bin. The center value of the first bin was set to equal the bin size. The bin minimum and maximum values are the center value $\pm$ half the bin size. Scans with pressure values greater than the minimum and less than or equal to the maximum were averaged. Scans were interpolated so that a data record exists for every decibar. The number of points averaged in each bin was added to the variables listed in the data file.
- DERIVE recomputed salinity and calculates other oceanographic parameters (e.g. density, etc.).

5. Post-Cruise Calibrations

Post cruise sensor calibrations were done at Sea-Bird Electronics, Inc during January 1999. Primary TC pair T1701/C1374 were selected for final data reduction for all stations. In addition to the Seasoft processing modules, several programs obtained from Pacific Marine Environmental Laboratory (PMEL) were used to further reduce the CTD/O₂ data:

- FILLSFC was used to copy the first good value of salinity, potential temperature, oxygen and oxygen current back to the surface. FILLSFC then back-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 despiked 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 SEASOFT module LOOPEDIT, PMEL program DELOOP computed values of density locally referenced between every 1 dbar of pressure to compute $N^2 = (-g/\rho) (dp/dz)$ and linearly interpolated measured parameters over those records where $N^2 \leq -1.0e-05\text{s}^{-2}$.
- FILTDOC applies a median filter of width 5 dbar to the time rate of change in oxygen current (doc/dt).

5.1 Conductivity

Conductivity slope and bias, along with a linear pressure term (modified beta), were computed by a least-squares minimization of CTD and bottle conductivity differences. The function minimized was

$$BC - m * CC - b - \beta * CP$$

where BC is bottle conductivity (S/m), CC is pre-cruise calibrated CTD conductivity (S/m), CP is the CTD pressure (dbar), m is the conductivity slope, b is the bias (S/m), and β is a linear pressure (S/m/dbar). The final conductivity (S/m) is

$$m * CC + b + \beta * CP$$

The slope term m is a second-order polynomial function of station to allow the entire cruise to be fit at once with a smoothly varying station dependent slope correction. For s/n 1374 a series of fits were made, each fit throwing out bottle values for locations having a residual between CTD and bottle conductivity greater than three standard deviations. The procedure was repeated with the remaining bottle values until no more bottle values were thrown out.

For s/n 1374, the slope correction ranged from 1.0011699 to 1.0012183, the bias applied was $-3.313\text{e-}3$ S/m, and the beta term was $2.340\text{e-}7$ S/m/dbar. Of the 809 bottles, the percentage of bottles retained in the fit was 77.01 with a standard deviation of 0.0002618 S/m. PMEL program CALCTD applied these calibrations.

CTD-bottle conductivity differences are plotted against station number to show the stability of the calibrated CTD conductivities relative to the bottle conductivities (Figure 2, upper panel). CTD-bottle conductivity differences are plotted against pressure (Figure 2, lower panel).

After the final CTD conductivity was determined by CALCTD, final salinity values were computed. Salinity values were determined according to UNESCO 1983 polynomial (Fofonoff, 1983). The standard deviation of the bottle salinity differences was $\pm 2.62\text{e-}004$.

5.2 Temperature

The pre-cruise calibration of T1701 is the mean of two post-cruise calibrations, and is within $0.05\text{e-}3^\circ\text{C}$ of the overall drift trajectory over the duration of the cruise as determined by the calibration history of the sensor. The pressure corrections for this sensor was determined by Sea-Bird to be zero. However, a bias of $-0.6\text{e-}3^\circ\text{C}$ was applied to the temperature data in program CALCTD to account for the effect of viscous heating on SBE 3 sensors. An adjustment of $-0.6\text{e-}3^\circ\text{C}$ results in errors of no more than $\pm 0.15\text{e-}3^\circ\text{C}$ from this effect for the full range of oceanographic temperature and salinity.

5.3 Oxygen

Oxygen samples collected during CTD/O₂ profiles were used for post measurement calibration. Due to a potential hysteresis problem with oxygen sensors, PMEL program OXDWNP replaced up-profile niskin sample data with corresponding processed down-profile CTD/O₂ data at common pressure levels. Oxygen saturation values were computed according to Benson and Krausse (1984) in units of $\mu\text{mol/kg}$.

The algorithm used for converting oxygen sensor current and probe temperature measurements as described by Owens and Millard (1985) 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. WHOI program OXFITMR uses Numerical Recipes (Press *et al.*, 1986) Fortran routines MRQMIN, MRQCOF, GAUSSJ, and COVSRT to perform non-linear least squares regression using the Levenberg-Marquardt method. A Fortran subroutine, FOXY, describes the oxygen model with the derivatives of the model with respect to six coefficients in the following order: oxygen current slope, temperature correction, pressure correction, weight, oxygen current bias and oxygen current lag.

Program OXFITMR reads the data for a group of stations. The data are edited to remove imprecise points where values are less than zero or greater than 1.2 times the saturation value. The routine varies the six (or fewer) parameters of the model in such a way as to produce the best least squares fit between the calibration oxygen values and the computed values. Individual differences between the calibration oxygen values and the computed values (residuals) are then compared with the standard deviation of the residuals. Any residuals exceeding a factor of 2.8 standard deviations are rejected. A factor of 2.8 will have a 0.5% chance of rejecting a valid oxygen value for a normally distributed set of residuals. The iterative fitting process is continued until none of the data fail the edit criteria. Coefficients were applied using AOML program CALIBOXY for plotting in Matlab.

By plotting the oxygen residuals versus station, appropriate station groupings for further refinements of fitting are obtained by looking for abrupt station-to-station changes in the residuals. For each grouping, one set of coefficients was determined by fitting bottles from the entire water column. Pressure correction, weight, and lag coefficients were fixed within a reasonable range from output of full water column group fits. Final coefficients were applied to downcast data using AOML program CALCTDOX2. An overall correction (3rd order polynomial fit) was applied to final oxygen data to bring the standard deviation near the nominal WOCE standard accuracy of 0.5% for discrete oxygen titrations.

CTD-bottle oxygen differences are plotted against station number to show the stability of the calibrated CTD oxygen values relative to bottle oxygen values (Figure 3, upper panel). CTD-bottle oxygen differences are also plotted against pressure to show fit (Figure 3, lower panel) through water column. The standard deviation of the oxygen differences was $\pm 3.43 \mu\text{mol/kg}$.

6. Lowered Acoustic Doppler Current Profiler

An RD Instruments 300 kHz Broadband ADCP (SN 207) was mounted, in downward-looking mode near the center of the CTD / rosette frame. Velocity profiles were internally recorded during CTD casts, and post-processed using AOML-developed software to create velocity shear profiles. Absolute velocities were calculated by referencing shear profiles using ship drift obtained from P-code GPS positions obtained at the beginning and end of each cast. The shear profile processing methods are similar to those described in Fischer and Visbeck (1993); see also Wilson (1994) for an analysis of the performance of the 300 kHz Broadband ADCP in lowered applications. Significant setup parameters were:

Mode 1
25, 8 m bins
1 ping / sec
1 ping / ensemble
2 m s⁻¹ fixed ambiguity velocity
Narrow Bandwidth

Velocity data are averaged into 10 m bins for presentation. The first valid bin is at 20m; values plotted at 10m and the surface are repeated from 20m. Deepest bin is approximately 100m below maximum cast depth, or within 15m of the bottom. Depth-averaged errors are estimated to be less than 1 cm s⁻¹. Profiles shown are based on all shear profiles derived from up- and downcasts. Positions and times listed are midpoints of start-down and at-surface values used in processing.

7. Expendable Bathythermograph Data

Temperature profiles were measured at 176 stations (Table 3) using type T-7 expendable bathythermograph (XBT) probes. Locations of XBT drops are also give in Table 3. The launches are listed in sequential order; probes that failed are not listed. The probes were launched from the stern of the vessel while underway. Deployment procedures included noting the time (Z), location, depth (m), thermosalinograph temperature (°C) and salinity, and engine intake water temperature (°C). The Data was acquired on an AOML supplied SEASIV PC running SEAS4 software. The underway XBT autolauncher was engineered and manufactured at NOAA/AOML in Miami, FL.

The output of the acquired data is in ASCII format. Each file is run through a series of AOML created post processing programs to produce data containing; a header of date, time, latitude, and longitude as well as column data of depth (m) and temperature (°C). Each XBT file is quality controlled according to standard AOML QC procedures (Daneshzadeh, et al., 1994).

longitude as well as column data of depth (m) and temperature (°C). Each XBT file is quality controlled according to standard AOML QC procedures (Daneshzadeh, et al., 1994).

8. Final Data Presentation

AOML Matlab program DATAREPORT processes finalized CTD/O₂ data and computes ITS-90 temperature, ITS-90 potential temperature and dynamic height. 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 left is in "standard depths" and its corresponding profile plot is shown on the facing page. Niskin bottle depths are presented on the right side of the profile plot. Bottle salinity values are plotted as points in the three smaller plots. LADCP profile plots showing U and V components are presented in Appendix B. The final QC'd XBT data were used to produce profile plots displayed in Appendix C.

9. Acknowledgments

The assistance of Captain Vince Seiler and the crew of the R/V SEWARD JOHNSON are gratefully acknowledged. Marine Technician Donald Cucciarra provided high quality oxygen and salinity samples and analysis documentation. The scientific participation from Brazil and Trinidad and Tobago were extremely helpful in all aspects of the cruise. Technical support from Kristy McTaggart and Greg Johnson of PMEL was extremely helpful.

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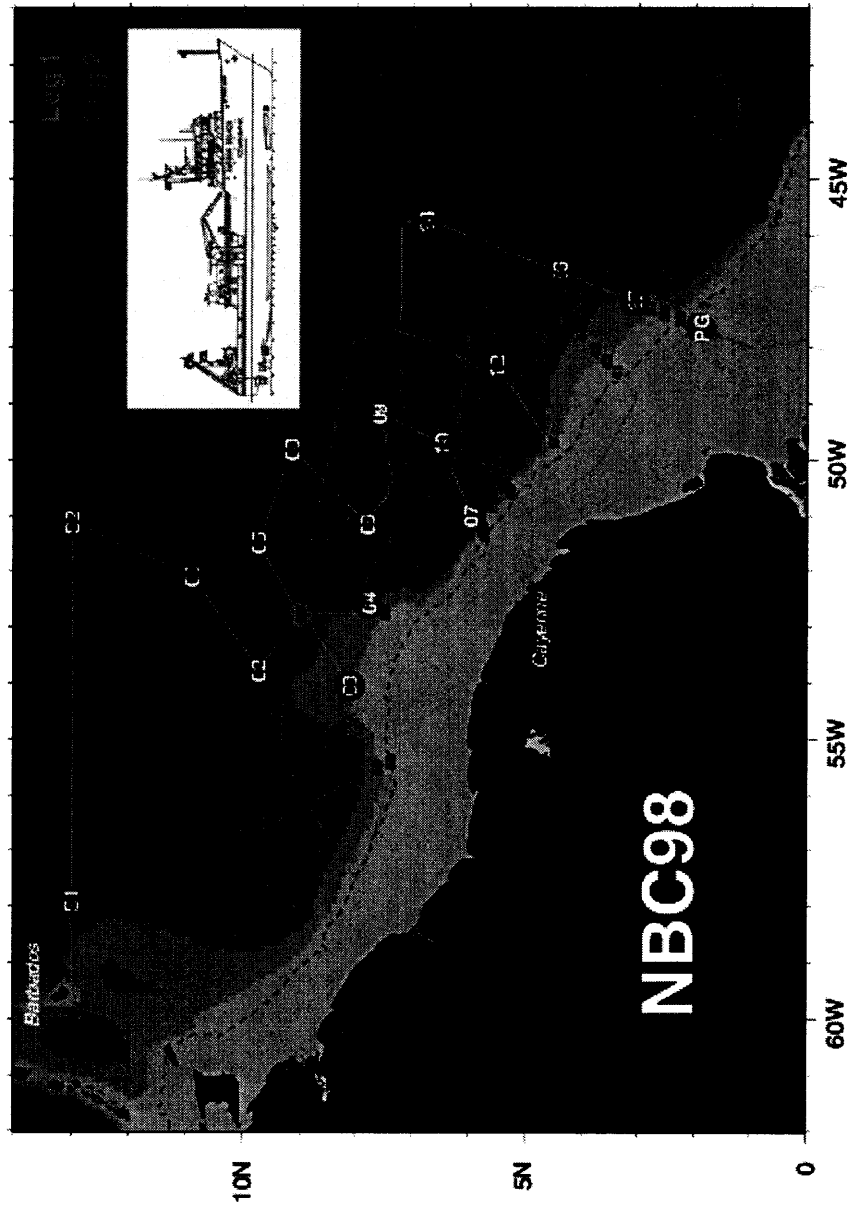
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FIGURES AND TABLES

CTD

R/V Seward Johnson November - December 1998 Barbados - Belem - Barbados



**Table 1:
CTD cast
summary**

Station	Date	Time (Z)	Latitude N	Longitude W	Depth (m)	Cast (db)
1	11 09 98	2244	13.000	-57.900	3000	2000.9
2	11 11 98	2003	12.996	-51.116	5000	2003.3
3	11 12 98	1230	10.911	-52.078	4914	2000.7
4	11 13 98	0400	9.744	-53.783	3000	1999.7
5	11 14 98	1620	8.103	-54.041	1111	1121.1
6	11 15 98	0257	7.503	-52.733	1150	1140.9
7	11 15 98	2210	8.986	-52.769	4600	2000.0
8	11 16 98	1323	9.755	-51.483	4650	2001.1
9	11 17 98	0319	9.148	-49.808	4600	2003.0
10	11 17 98	1735	7.801	-51.151	4600	2003.5
11	11 17 98	2316	7.337	-50.549	4223	2001.9
12	11 18 98	1027	7.769	-49.175	4000	1998.8
13	11 18 98	2129	6.463	-49.709	4000	2003.0
14	11 19 98	2017	5.772	-51.246	1000	771.5
15	11 19 98	2243	5.747	-51.269	409	457.0
16	11 19 98	2344	5.728	-51.325	120	118.6
17	11 20 98	1433	4.520	-49.688	1682	1666.4
18	11 21 98	0331	5.500	-48.319	3441	2000.7
19	11 21 98	1611	7.350	-47.660	4236	2013.3
20	11 22 98	0443	7.205	-45.754	4312	2011.9
21	11 22 98	1030	6.766	-45.743	4400	2001.8
22	11 22 98	1617	6.001	-46.000	3969	2000.6
23	11 22 98	2139	5.261	-46.310	3686	2002.5
24	11 23 98	0508	4.413	-46.652	3273	2002.3
25	11 23 98	1111	3.751	-46.915	2606	2000.5
26	11 23 98	1954	3.078	-47.150	1805	1793.0
27	11 24 98	0033	2.801	-47.283	1513	1544.7
28	11 24 98	0330	2.567	-47.383	1293	1256.7
29	11 24 98	0365	2.275	-47.479	540	515.5
30	12 01 98	0319	8.050	-47.600	4406	2002.0
31	12 01 98	1308	7.751	-47.949	4328	2001.0
32	12 01 98	1707	7.399	-48.307	4300	2008.0
33	12 01 98	2140	7.046	-48.665	4200	1999.0
34	12 02 98	0153	6.726	-49.013	4100	1997.0
35	12 02 98	0601	6.387	-49.379	3800	1997.0
36	12 02 98	1011	6.049	-49.734	3750	2010.0
37	12 02 98	1418	5.731	-50.083	3400	2023.0
38	12 02 98	1734	5.520	-50.309	2950	1997.0
39	12 02 98	2038	5.366	-50.468	2008	1947.0
40	12 02 98	2330	5.279	-50.571	406	409.0
41	12 04 98	0059	3.395	-48.437	515	519.0
42	12 04 98	0317	3.566	-48.252	956	742.0
43	12 04 98	0750	3.783	-48.033	1400	1289.0
44	12 04 98	1049	4.015	-47.772	1241	2082.0
45	12 04 98	1423	4.277	-47.486	2400	2006.0
46	12 05 98	0221	6.000	-47.500	3812	2002.0

**Table 1:
CTD cast
summary**

Station	Date	Time (Z)	Latitude N	Longitude W	Depth (m)	Cast (db)
47	12 05 98	0638	6.049	-47.995	3795	2002.0
48	12 05 98	1116	6.100	-48.500	3786	1996.0
49	12 05 98	1536	6.168	-49.003	3750	2003.0
50	12 05 98	2025	6.233	-49.500	3683	1999.0
51	12 06 98	0021	6.283	-50.000	3813	2002.0
52	12 06 98	0439	6.397	-50.506	3694	2009.0
53	12 06 98	1101	7.084	-50.777	4088	2001.0
54	12 06 98	1500	7.272	-51.202	4083	2000.0
55	12 06 98	1905	7.500	-51.649	4144	2000.0
56	12 06 98	2302	7.751	-52.000	3317	1999.0
57	12 07 98	0250	7.884	-52.527	2319	1999.0
58	12 09 98	0029	7.387	-55.408	540	535.0
59	12 09 98	0228	7.634	-55.514	1556	1550.0
60	12 09 98	0532	7.950	-55.664	2169	2001.0
61	12 09 98	0908	8.267	-55.851	2631	2002.0
62	12 09 98	1232	8.586	-56.015	2932	2002.0
63	12 09 98	1552	8.901	-56.182	3252	2006.0
64	12 09 98	1924	9.213	-56.369	3360	2001.0
65	12 09 98	2258	9.535	-56.549	3518	2008.0
66	12 10 98	0233	9.833	-56.716	3600	2000.0
67	12 10 98	0619	10.166	-56.899	3685	2000.0
68	12 10 98	0955	10.467	-57.050	3813	2006.0

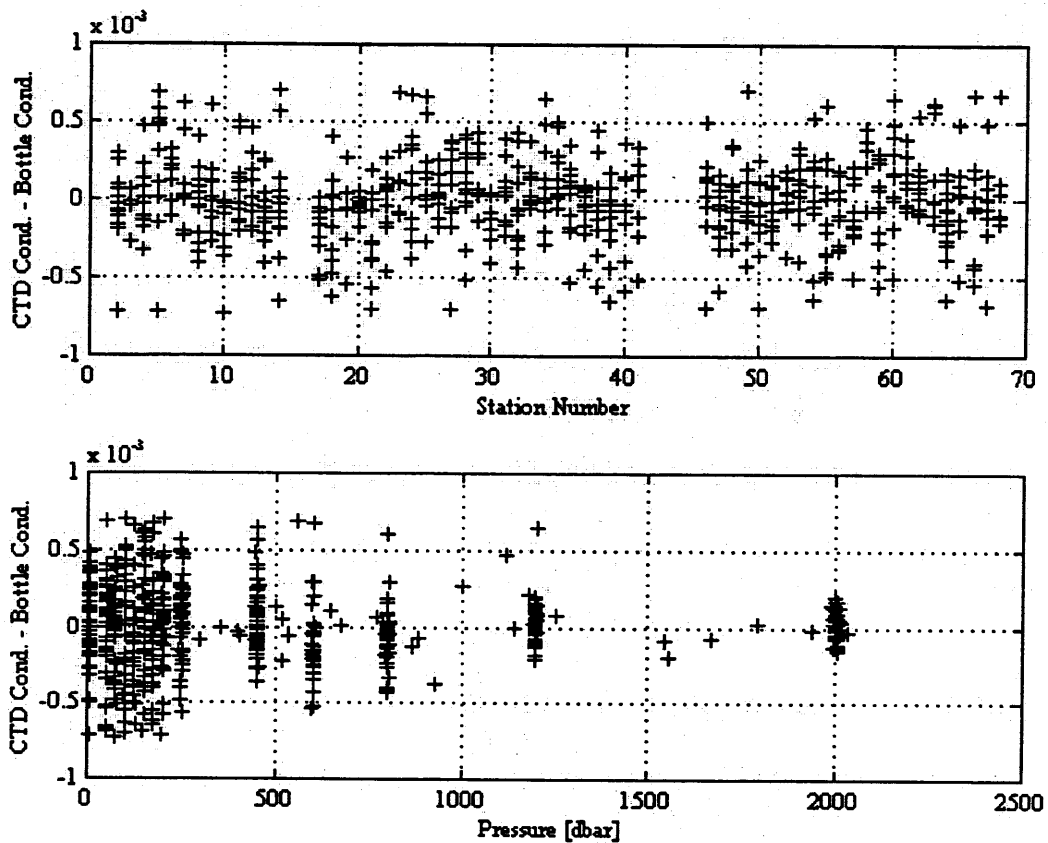


Figure 2. NBC-1, Calibrated CTD-bottle conductivity differences.

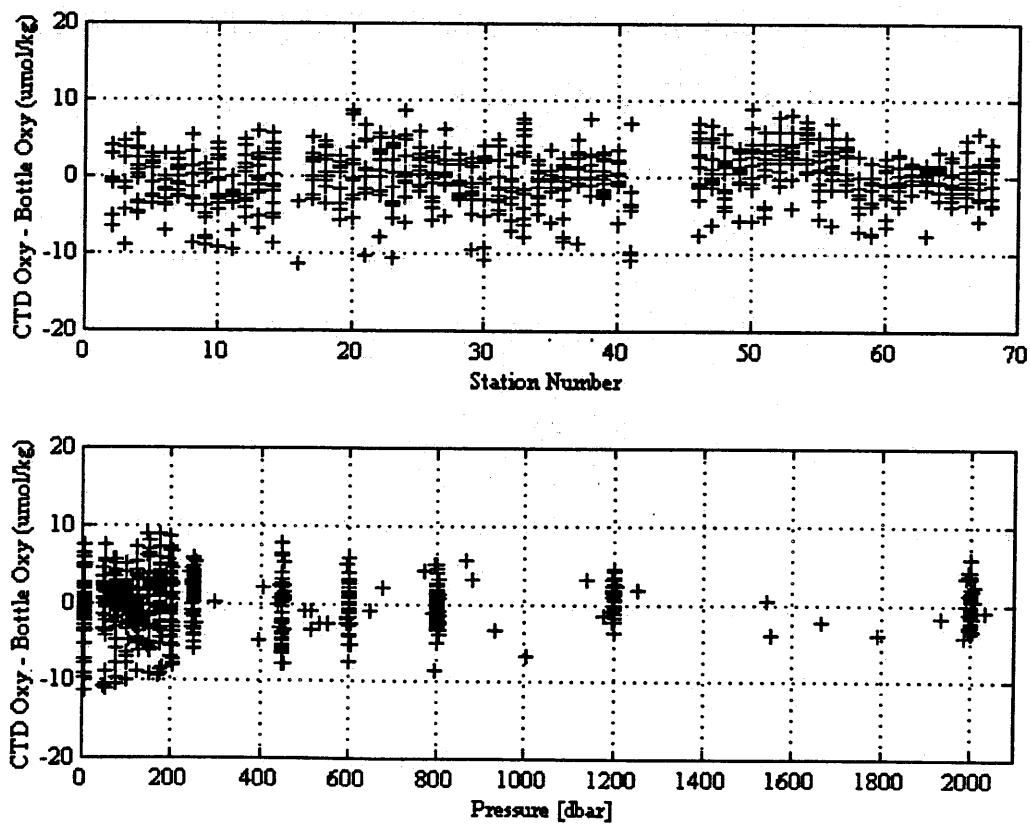


Figure 3. NBC-1, Calibrated - bottle oxygen differences.

**Table 2:
XBT Data
Summary**

Drop #	Date	Time (Z)	Latitude N	Longitude W
3	11/14/98	0429	8.535	-53.395
4	11/14/98	1647	7.823	-53.512
5	11/15/98	0845	8.250	-52.745
6	11/15/98	0848	8.250	-52.745
7	11/16/98	0429	9.395	-52.127
8	11/16/98	2020	9.438	-50.615
10	11/18/98	1608	6.987	-49.468
11	11/19/98	0247	6.235	-50.323
12	11/19/98	1806	5.895	-51.065
13	11/19/98	1840	5.830	-51.152
14	11/19/98	1859	5.792	-51.200
16	11/20/98	1902	4.877	-49.260
20	11/20/98	1921	4.910	-49.208
21	11/20/98	2139	5.152	-48.850
24	11/21/98	1244	6.813	-47.850
25	11/21/98	2205	7.203	-46.927
26	11/22/98	0123	7.205	-46.318
27	11/22/98	1427	6.335	-45.887
28	11/23/98	1428	3.445	-47.022
29	11/24/98	0604	2.332	-47.468
30	11/28/98	1414	2.302	-47.488
32	11/28/98	1512	2.472	-47.420
33	11/28/98	1659	2.797	-47.293
34	11/28/98	1900	3.177	-47.143
35	11/28/98	1954	3.342	-47.077
36	11/28/98	2056	3.528	-47.005
37	11/28/98	2149	3.683	-46.955
38	11/28/98	2259	3.867	-47.092
39	11/29/98	0000	4.018	-47.207
40	11/29/98	0100	4.153	-47.333
42	11/29/98	0204	4.288	-47.485
43	11/29/98	0300	4.418	-47.592
44	11/29/98	0401	4.557	-47.718
45	11/29/98	0501	4.682	-47.858
46	11/29/98	0559	4.818	-47.982
47	11/29/98	0700	4.965	-48.113
48	11/29/98	0758	5.103	-48.240
49	11/29/98	0858	5.247	-48.367
50	11/29/98	1000	5.393	-48.500
52	11/29/98	1200	5.677	-48.755
54	11/29/98	1302	5.823	-48.890
55	11/29/98	1400	5.963	-49.013
56	11/29/98	1502	6.115	-49.152
57	11/29/98	1558	6.253	-49.275
58	11/29/98	1701	6.387	-49.400
60	11/29/98	1803	6.537	-49.537
61	11/29/98	1859	6.675	-49.665
63	11/29/98	2003	6.832	-49.805
64	11/29/98	2059	6.970	-49.925
66	11/29/98	2259	7.253	-50.197
67	11/30/98	0000	7.392	-50.335

**Table 2:
XBT Data
Summary**

Drop #	Date	Time (Z)	Latitude N	Longitude W
70	11/30/98	0104	7.543	-50.478
71	11/30/98	0200	7.677	-50.603
72	11/30/98	0258	7.813	-50.732
73	11/30/98	0356	7.948	-50.858
74	11/30/98	0456	8.088	-50.992
75	11/30/98	0556	8.233	-51.128
76	11/30/98	0656	8.380	-51.263
77	11/30/98	0755	8.527	-51.397
78	11/30/98	0855	8.670	-51.528
79	11/30/98	0956	8.812	-51.657
80	11/30/98	1200	8.797	-51.368
81	11/30/98	1358	8.722	-51.015
82	11/30/98	1603	8.640	-50.630
83	11/30/98	1803	8.565	-50.258
84	11/30/98	1958	8.487	-49.897
85	11/30/98	2200	8.400	-49.522
86	12/1/98	0000	8.340	-49.153
87	12/1/98	0200	8.263	-48.787
88	12/1/98	0400	8.193	-48.438
89	12/1/98	0601	8.120	-48.092
90	12/1/98	0758	8.055	-47.770
91	12/1/98	1158	7.895	-47.787
92	12/1/98	1601	7.528	-48.170
93	12/1/98	1858	7.353	-48.308
94	12/1/98	2002	7.220	-48.438
95	12/1/98	2005	7.213	-48.447
96	12/2/98	0039	6.867	-48.843
97	12/2/98	0448	6.520	-49.217
98	12/2/98	0843	6.227	-49.548
99	12/2/98	1310	5.862	-49.945
100	12/2/98	1639	5.628	-50.207
101	12/2/98	1956	5.445	-50.418
102	12/2/98	2000	5.437	-50.425
103	12/2/98	2305	5.320	-50.545
104	12/4/98	0232	3.490	-48.342
105	12/4/98	0552	3.680	-48.152
106	12/4/98	0941	3.890	-47.915
107	12/4/98	1313	4.148	-47.633
108	12/4/98	1728	4.602	-47.432
109	12/4/98	1928	4.967	-47.382
110	12/4/98	2130	5.332	-47.333
111	12/4/98	2329	5.693	-47.285
112	12/5/98	0053	5.950	-47.255
113	12/5/98	0510	6.020	-47.755
114	12/5/98	0942	6.075	-48.247
115	12/5/98	1413	6.135	-48.770
116	12/5/98	1902	6.173	-49.258
117	12/5/98	2305	6.260	-49.762
118	12/6/98	0304	6.307	-50.247
119	12/6/98	0741	6.585	-50.702
120	12/6/98	1348	7.188	-50.982

**Table 2:
XBT Data
Summary**

Drop #	Date	Time (Z)	Latitude N	Longitude W
121	12/6/98	1740	7.398	-51.422
122	12/6/98	2141	7.660	-51.823
123	12/7/98	0138	7.858	-52.308
124	12/7/98	0616	8.232	-52.747
125	12/7/98	0807	8.553	-52.957
126	12/7/98	1005	8.895	-53.177
127	12/7/98	1058	9.045	-53.282
128	12/7/98	1158	9.222	-53.395
129	12/7/98	1236	9.332	-53.468
130	12/7/98	1329	9.333	-53.647
131	12/7/98	1440	9.332	-53.888
132	12/7/98	1530	9.335	-54.053
133	12/7/98	1630	9.333	-54.250
134	12/7/98	1730	9.332	-54.450
135	12/7/98	1830	9.333	-54.648
136	12/7/98	1929	9.332	-54.838
137	12/7/98	2029	9.315	-55.035
138	12/7/98	2130	9.278	-55.227
139	12/7/98	2228	9.212	-55.407
140	12/7/98	2234	9.203	-55.428
141	12/7/98	2330	9.143	-55.598
142	12/8/98	0030	9.075	-55.787
143	12/8/98	0131	9.008	-55.995
144	12/8/98	0227	8.903	-56.150
145	12/8/98	0242	8.880	-56.183
146	12/8/98	0402	8.755	-56.365
147	12/8/98	0459	8.650	-56.518
148	12/8/98	0600	8.537	-56.680
149	12/8/98	0700	8.428	-56.838
150	12/8/98	0703	8.422	-56.847
151	12/8/98	0759	8.318	-56.998
152	12/8/98	0900	8.203	-57.163
153	12/8/98	1000	8.097	-57.332
154	12/8/98	1100	7.977	-57.500
155	12/8/98	1103	7.970	-57.510
156	12/8/98	1113	7.953	-57.535
157	12/8/98	1530	7.725	-56.855
158	12/8/98	1628	7.677	-56.687
159	12/8/98	1728	7.627	-56.515
160	12/8/98	1829	7.578	-56.342
161	12/8/98	1937	7.522	-56.143
162	12/8/98	2034	7.472	-55.975
163	12/8/98	2129	7.422	-55.810
164	12/8/98	2132	7.418	-55.800
165	12/8/98	2228	7.368	-55.627
166	12/9/98	0149	7.530	-55.477
167	12/9/98	0432	7.790	-55.597
168	12/9/98	0807	8.120	-55.767
169	12/9/98	1136	8.433	-55.940
170	12/9/98	1459	8.760	-56.110
171	12/9/98	1816	9.052	-56.272

**Table 2:
XBT Data
Summary**

Drop #	Date	Time (Z)	Latitude N	Longitude W
172	12/9/98	2207	9.413	-56.482
173	12/10/98	0131	9.703	-56.635
175	12/10/98	0515	10.008	-56.813
176	12/10/98	0854	10.317	-56.977

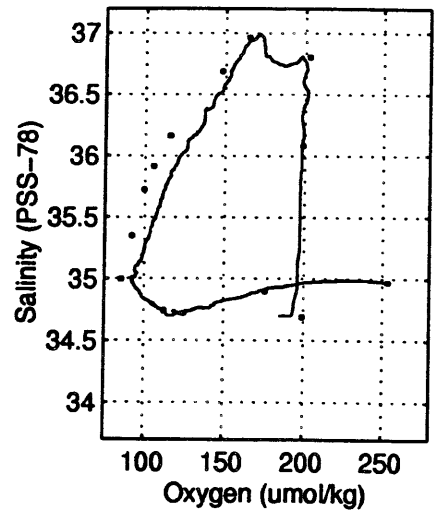
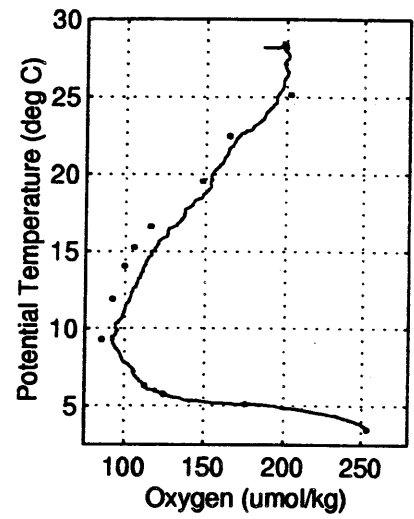
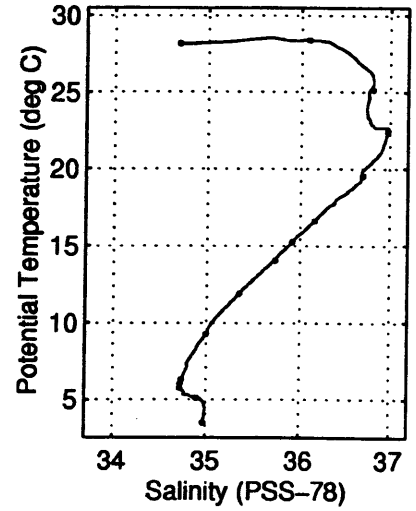
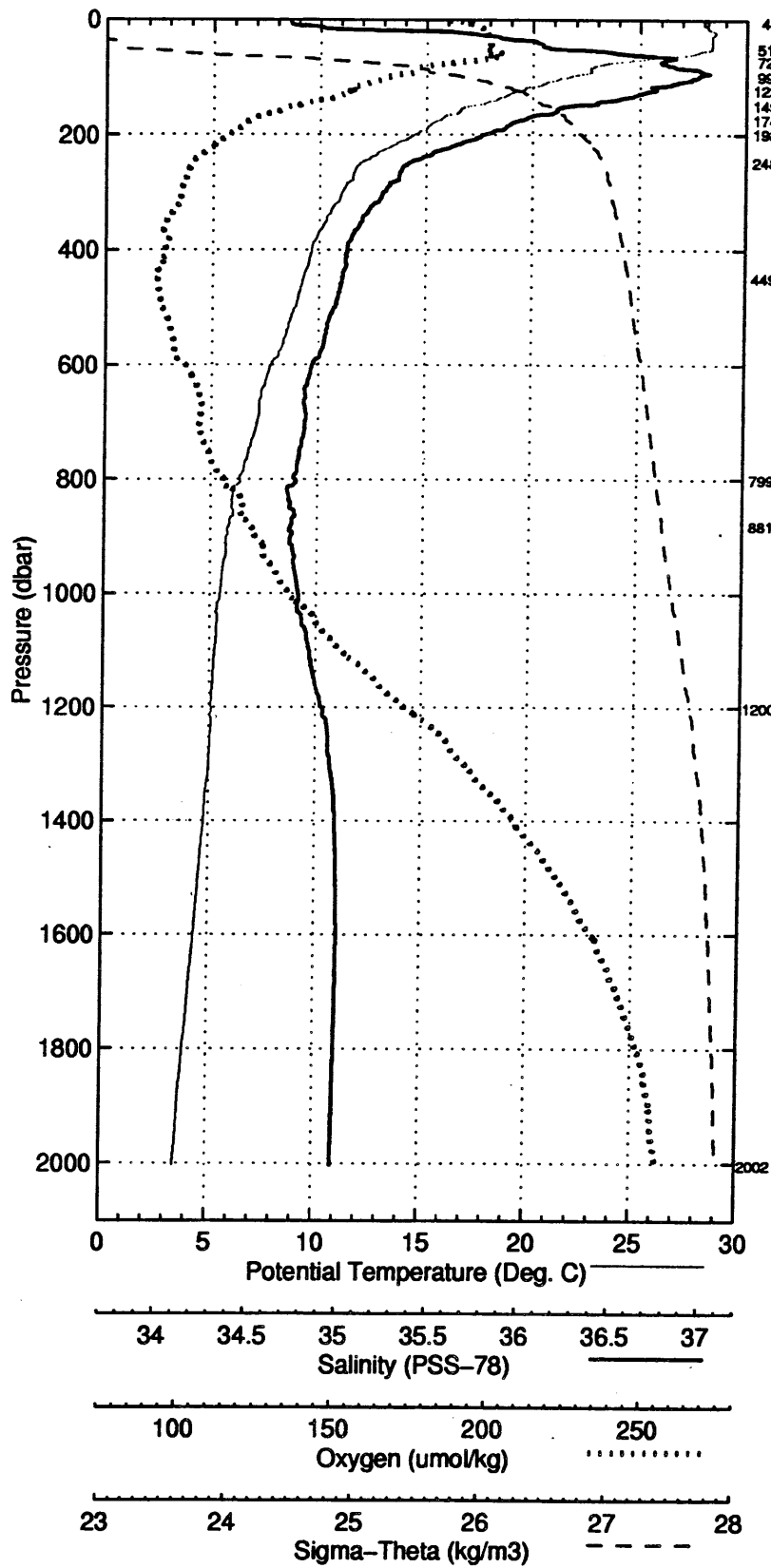
APPENDIX A
CTD DATA

NBC-1 R/V SEWARD JOHNSON
CTD Station 2 (98002)
Latitude 12.996N Longitude 51.116W
11-Nov-1998 20:03Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.174	28.174	34.700	185.1	0.006	22.115
10	28.134	28.132	34.737	193.4	0.057	22.157
20	28.433	28.429	35.472	197.0	0.112	22.613
30	28.356	28.349	35.846	197.5	0.163	22.921
40	28.366	28.356	36.058	198.1	0.211	23.078
50	28.348	28.336	36.126	198.8	0.259	23.137
60	27.489	27.475	36.533	201.2	0.304	23.727
70	24.997	24.982	36.752	193.8	0.340	24.678
80	22.916	22.900	36.777	178.7	0.369	25.317
90	22.698	22.680	36.955	173.5	0.395	25.517
100	21.672	21.652	36.934	164.8	0.419	25.793
110	20.628	20.607	36.823	159.3	0.440	25.997
120	19.653	19.631	36.706	153.9	0.460	26.169
130	18.901	18.877	36.607	150.8	0.478	26.288
140	18.314	18.289	36.482	143.6	0.495	26.342
150	17.124	17.098	36.242	135.6	0.512	26.451
160	16.592	16.565	36.159	129.9	0.528	26.515
170	15.810	15.783	36.009	123.0	0.544	26.581
180	15.291	15.263	35.919	119.3	0.558	26.630
190	15.017	14.988	35.879	117.4	0.573	26.660
200	14.414	14.384	35.767	113.6	0.587	26.705
250	11.907	11.875	35.349	102.9	0.652	26.891
300	11.061	11.024	35.217	99.2	0.712	26.948
350	10.320	10.279	35.102	94.2	0.770	26.991
400	9.652	9.606	35.020	94.4	0.827	27.043
450	9.232	9.182	34.993	91.8	0.881	27.092
500	8.899	8.844	34.954	93.0	0.934	27.116
550	8.435	8.376	34.903	96.4	0.986	27.149
600	7.757	7.696	34.833	100.7	1.036	27.197
650	7.318	7.254	34.796	105.2	1.084	27.232
700	7.131	7.063	34.796	105.5	1.131	27.259
750	6.745	6.674	34.767	108.3	1.177	27.290
800	6.345	6.271	34.740	113.2	1.222	27.322
900	5.747	5.667	34.720	123.5	1.306	27.383
1000	5.490	5.402	34.767	134.3	1.386	27.453
1500	4.552	4.425	34.988	221.3	1.698	27.744
2000	3.487	3.327	34.968	253.9	1.938	27.844

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.145	28.144	34.693	199.1
52	13	28.368	28.355	36.083	198.8
73	12	25.152	25.136	36.803	202.7
99	11	22.454	22.434	36.965	164.6
123	10	19.540	19.518	36.688	148.0
150	9	16.612	16.588	36.161	115.7
174	8	15.259	15.232	35.913	105.1
199	7	14.042	14.013	35.724	99.3
248	6	11.892	11.860	35.350	91.9
449	5	9.277	9.227	34.996	85.4
800	4	6.297	6.223	34.741	112.5
881	3	5.756	5.678	34.720	124.7
1201	2	5.106	5.002	34.901	175.9
2003	1	3.486	3.326	34.973	253.7

NBC-1 R/V SEWARD JOHNSON
 CTD Station 2 (98002)
 Latitude 12.996 N Longitude 51.116 W
 11-Nov-1998 20:03 Z

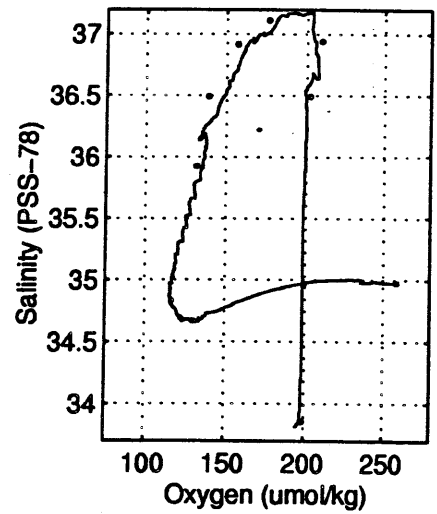
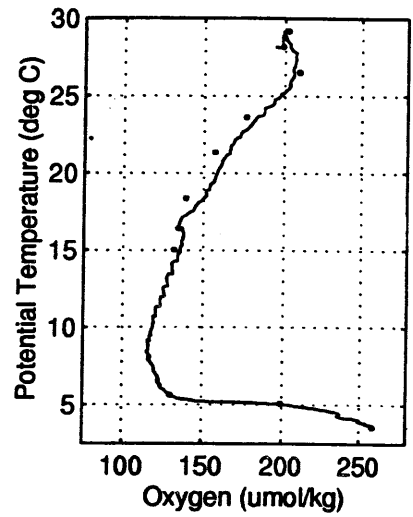
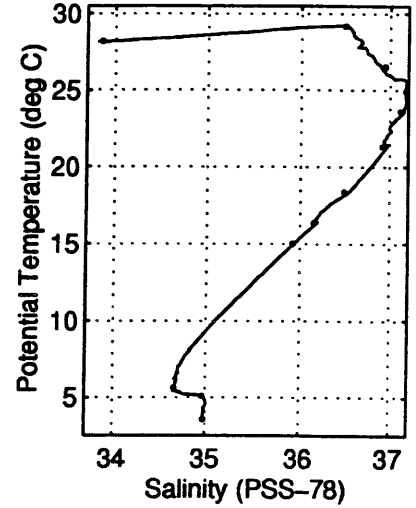
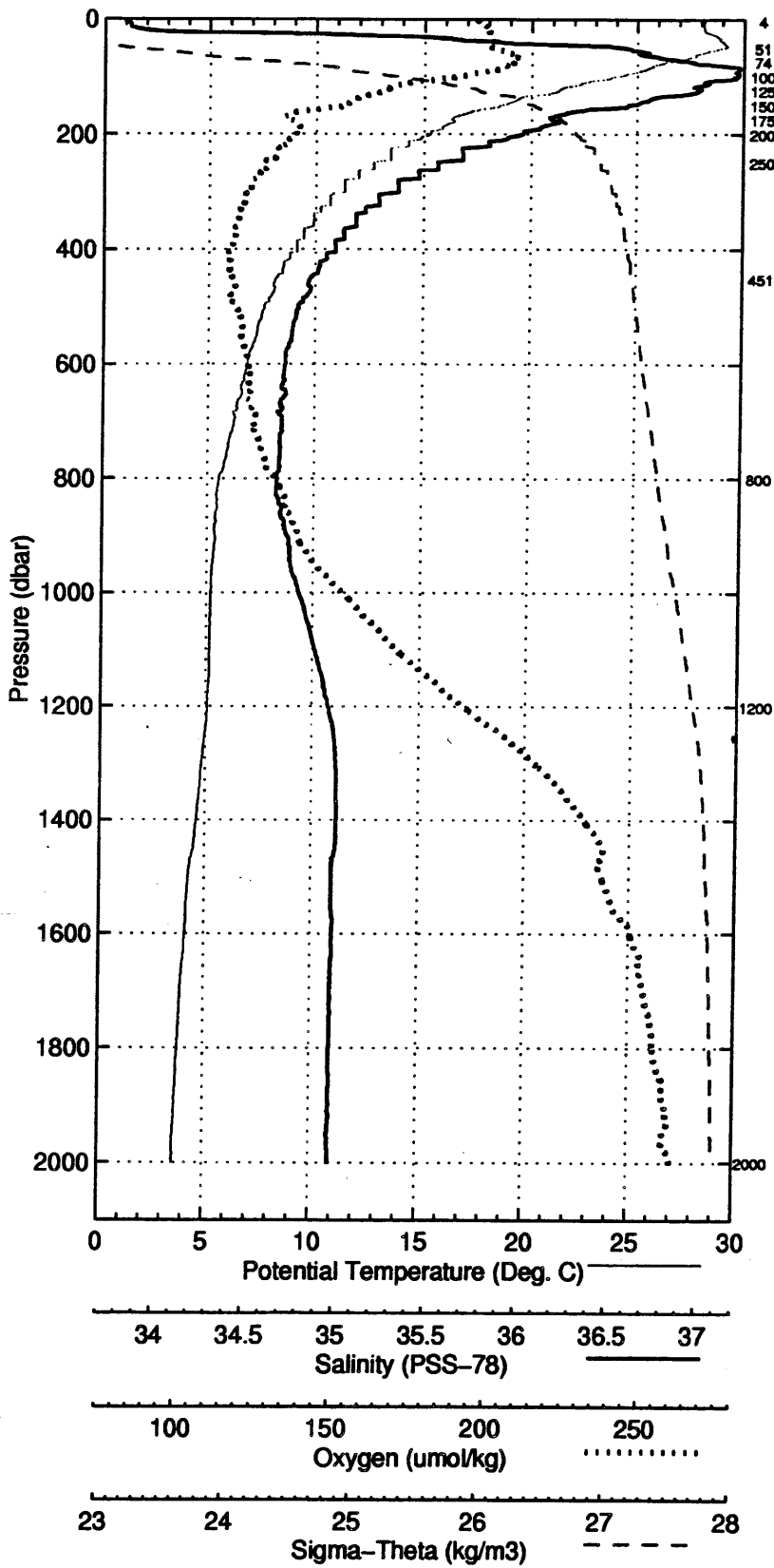


NBC-1 R/V SEWARD JOHNSON
CTD Station 3 (98003)
Latitude 10.911N Longitude 52.078W
12-Nov-1998 12:30Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.107	28.107	33.816	194.6	0.006	21.472
10	28.128	28.125	33.845	196.6	0.063	21.488
20	28.171	28.166	33.959	197.9	0.126	21.562
30	28.741	28.734	35.335	198.3	0.184	22.409
40	29.016	29.007	35.856	199.2	0.237	22.711
50	29.097	29.085	36.537	198.9	0.286	23.197
60	27.928	27.914	36.657	204.9	0.330	23.676
70	27.078	27.062	36.816	206.8	0.371	24.073
80	25.735	25.717	37.047	203.2	0.407	24.675
90	25.157	25.137	37.167	198.8	0.438	24.946
100	23.913	23.892	37.163	187.3	0.467	25.320
110	22.516	22.494	36.986	173.0	0.492	25.595
120	21.476	21.452	36.955	166.1	0.515	25.866
130	20.831	20.806	36.897	161.8	0.537	26.000
140	19.346	19.320	36.687	155.1	0.556	26.236
150	18.544	18.517	36.566	151.7	0.573	26.350
160	17.298	17.271	36.280	139.9	0.590	26.439
170	16.461	16.434	36.149	133.2	0.606	26.538
180	16.317	16.287	36.174	137.1	0.621	26.592
190	15.837	15.807	36.083	137.8	0.636	26.633
200	15.278	15.247	35.984	136.5	0.651	26.683
250	12.667	12.633	35.525	127.9	0.717	26.881
300	11.349	11.311	35.312	122.3	0.776	26.969
350	9.918	9.877	35.087	118.7	0.832	27.049
400	9.142	9.098	34.976	116.9	0.885	27.091
450	8.173	8.126	34.840	116.9	0.937	27.137
500	7.627	7.577	34.774	118.7	0.987	27.166
550	7.272	7.219	34.743	119.8	1.035	27.194
600	6.856	6.799	34.708	122.1	1.083	27.224
650	6.617	6.556	34.710	122.2	1.130	27.259
700	6.246	6.183	34.690	124.0	1.174	27.293
750	5.936	5.869	34.682	126.5	1.218	27.327
800	5.558	5.489	34.664	131.3	1.260	27.359
900	5.378	5.301	34.724	138.6	1.340	27.430
1000	5.194	5.109	34.789	152.8	1.414	27.505
1500	4.236	4.113	34.979	237.0	1.702	27.770
2000	3.563	3.402	34.973	260.0	1.934	27.841

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	13	28.178	28.177	33.858	198.9
51	12	29.181	29.169	36.490	202.2
75	11	26.529	26.512	36.940	209.7
101	10	23.612	23.591	37.114	176.3
125	9	21.339	21.315	36.918	157.0
151	8	18.365	18.338	36.492	138.8
175	7	16.433	NaN	NaN	NaN
201	6	15.018	14.987	35.921	132.1
250	5	12.657	NaN	NaN	NaN
452	4	8.280	NaN	NaN	NaN
800	3	5.627	5.557	34.668	130.6
1201	2	5.076	4.973	34.966	199.3
2000	1	3.563	3.402	34.977	258.4

NBC-1 R/V SEWARD JOHNSON
 CTD Station 3 (98003)
 Latitude 10.911 N Longitude 52.078 W
 12-Nov-1998 12:30 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 4 (98004)
Latitude 9.744N Longitude 53.783W
13-Nov-1998 04:00Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m²/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.002	28.002	35.177	186.3	0.005	22.529
10	27.986	27.984	35.171	196.2	0.053	22.532
20	28.047	28.043	35.293	197.7	0.106	22.605
30	28.126	28.119	35.424	197.9	0.158	22.679
40	27.813	27.803	35.775	197.8	0.209	23.047
50	27.210	27.198	36.251	195.5	0.254	23.602
60	24.013	24.001	36.211	176.1	0.293	24.564
70	21.503	21.489	36.150	171.0	0.322	25.240
80	21.057	21.042	36.157	166.2	0.349	25.369
90	19.446	19.430	36.093	159.6	0.373	25.752
100	17.988	17.970	35.931	159.8	0.394	25.998
110	17.170	17.152	35.842	159.7	0.414	26.130
120	15.861	15.842	35.707	156.9	0.432	26.333
130	15.302	15.282	35.609	157.5	0.449	26.384
140	14.820	14.799	35.524	159.0	0.466	26.426
150	14.256	14.234	35.442	159.0	0.482	26.485
160	13.875	13.852	35.384	159.1	0.498	26.521
170	13.308	13.284	35.304	158.6	0.513	26.576
180	13.061	13.036	35.274	158.7	0.528	26.603
190	12.828	12.802	35.241	157.6	0.543	26.625
200	12.637	12.610	35.209	157.5	0.557	26.639
250	11.715	11.683	35.088	155.6	0.628	26.725
300	10.796	10.759	34.978	153.2	0.695	26.809
350	9.915	9.874	34.890	150.1	0.758	26.895
400	9.004	8.960	34.810	141.7	0.817	26.983
450	8.097	8.051	34.709	142.9	0.874	27.045
500	7.906	7.855	34.706	141.4	0.928	27.072
550	6.876	6.824	34.593	141.8	0.980	27.129
600	6.615	6.559	34.567	144.7	1.031	27.145
650	6.507	6.447	34.562	145.8	1.081	27.157
700	6.276	6.212	34.599	134.5	1.131	27.217
750	5.803	5.737	34.580	135.3	1.178	27.262
800	5.726	5.656	34.616	133.6	1.223	27.301
900	5.037	4.962	34.567	143.1	1.308	27.345
1000	4.916	4.833	34.611	148.1	1.390	27.396
1500	4.686	4.558	35.005	232.1	1.714	27.744
2000	3.675	3.513	34.977	263.5	1.960	27.834

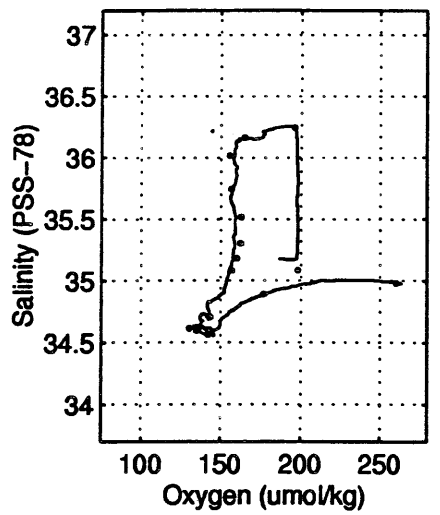
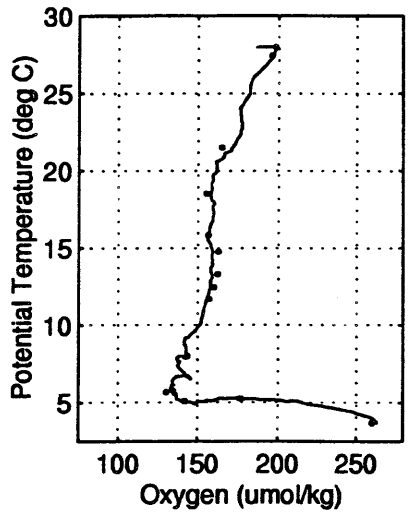
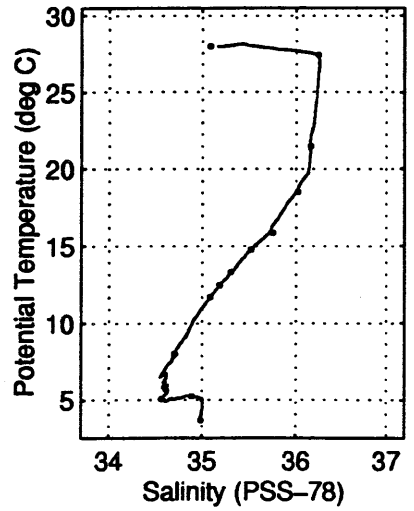
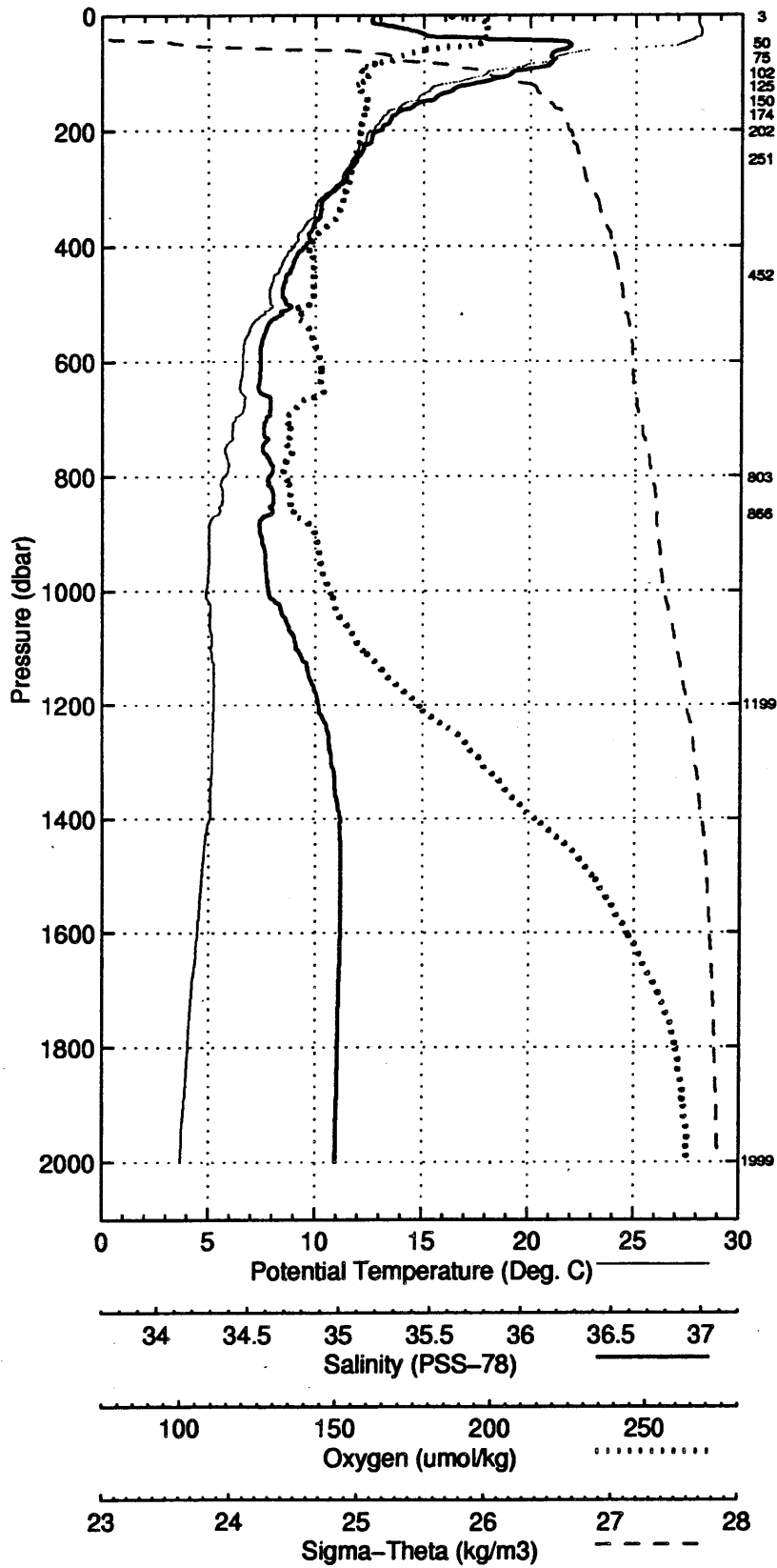
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	27.972	27.971	35.087	198.2
50	13	27.424	27.412	36.245	195.7
76	12	21.491	21.476	36.162	164.4
102	11	18.510	18.492	36.018	155.3
125	10	15.841	15.821	35.744	156.4
150	9	14.765	14.742	35.516	162.8
174	8	13.316	13.291	35.304	162.2
203	7	12.445	12.418	35.184	160.1
251	6	11.686	11.654	35.083	157.0
453	5	8.014	7.968	34.706	143.6
803	4	5.667	5.597	34.615	130.6
867	3	5.073	5.001	34.564	142.1
1200	2	5.251	5.146	34.893	176.5
1999	1	3.677	3.514	34.982	260.0

NBC-1 R/V SEWARD JOHNSON

CTD Station 4 (98004)

Latitude 9.744 N Longitude 53.783 W

13-Nov-1998 04:00 Z

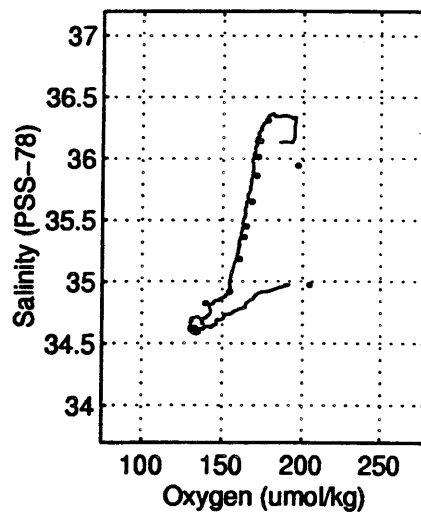
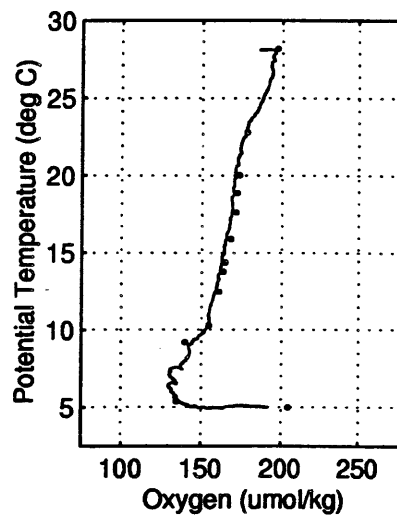
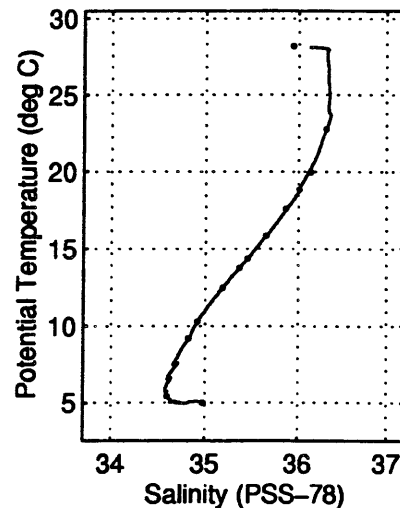
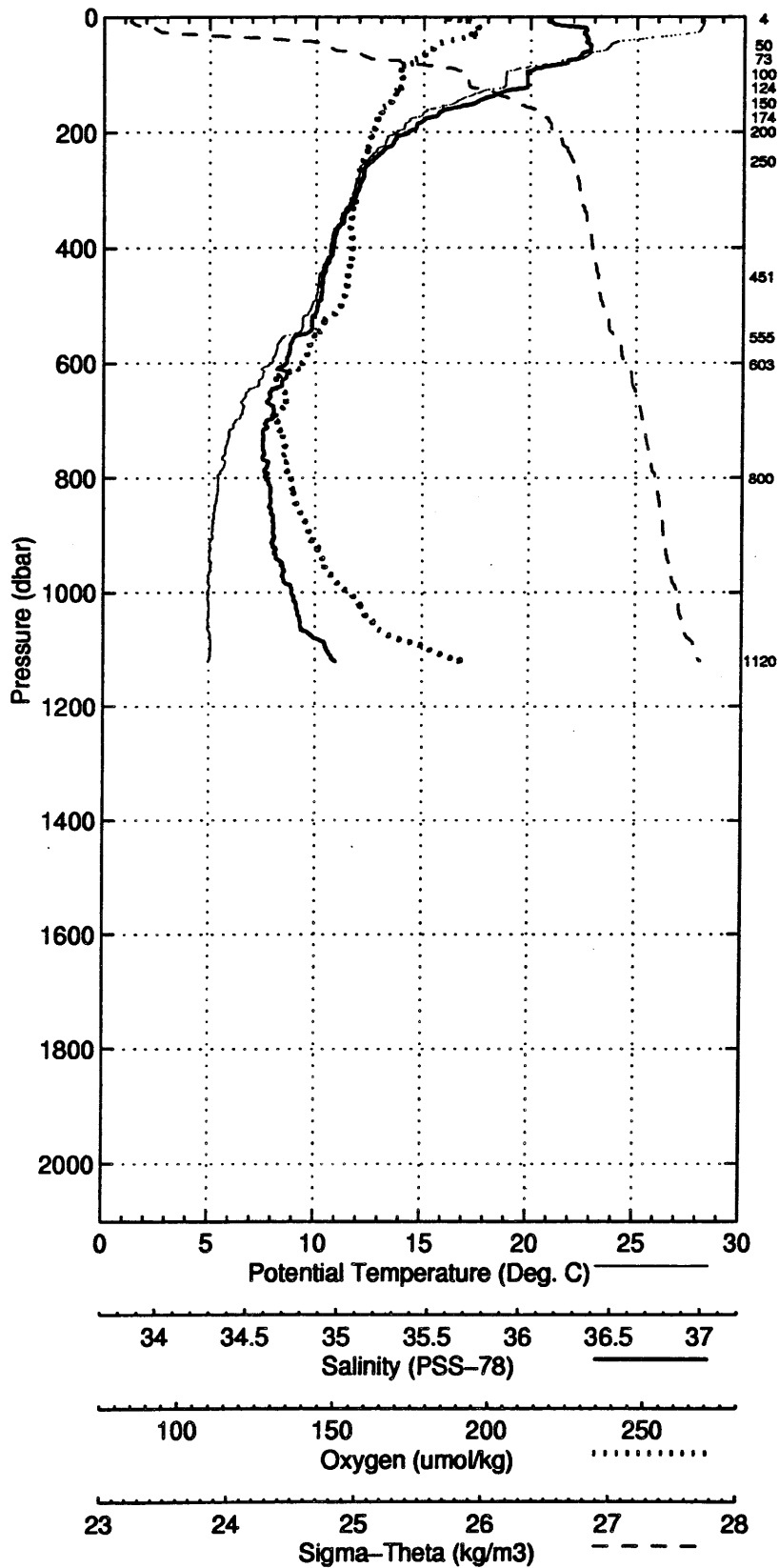


NBC-1 R/V SEWARD JOHNSON
CTD Station 5 (98005)
Latitude 8.103N Longitude 54.041W
14-Nov-1998 16:20Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.104	28.104	36.135	185.3	0.005	23.216
10	28.107	28.104	36.150	193.8	0.047	23.228
20	27.994	27.990	36.334	195.1	0.092	23.405
30	27.298	27.291	36.326	193.0	0.136	23.627
40	24.848	24.840	36.349	187.5	0.175	24.414
50	23.749	23.738	36.363	181.1	0.208	24.756
60	23.227	23.215	36.343	178.5	0.239	24.895
70	22.562	22.548	36.300	177.0	0.269	25.056
80	21.417	21.401	36.234	174.1	0.297	25.329
90	19.372	19.355	36.057	170.2	0.321	25.743
100	18.856	18.839	36.016	170.2	0.343	25.845
110	18.833	18.813	36.016	170.7	0.365	25.852
120	18.815	18.794	36.016	170.7	0.387	25.857
130	17.673	17.651	35.884	168.7	0.408	26.042
140	16.916	16.893	35.791	167.6	0.428	26.154
150	16.436	16.412	35.727	166.5	0.446	26.218
160	15.368	15.343	35.584	163.7	0.464	26.353
170	14.951	14.925	35.528	164.1	0.481	26.403
180	14.332	14.306	35.447	162.5	0.497	26.474
190	14.099	14.071	35.410	162.1	0.513	26.495
200	13.745	13.716	35.366	161.4	0.529	26.537
250	12.378	12.344	35.171	158.1	0.604	26.663
300	11.782	11.743	35.096	156.2	0.674	26.720
350	11.159	11.115	35.019	154.9	0.743	26.778
400	10.673	10.624	34.961	155.0	0.810	26.822
450	10.166	10.113	34.907	153.5	0.875	26.869
500	9.833	9.775	34.878	151.3	0.939	26.906
550	9.007	8.946	34.809	142.2	1.000	26.987
600	7.941	7.879	34.708	139.1	1.056	27.072
650	6.784	6.722	34.619	132.8	1.109	27.165
700	6.241	6.178	34.600	130.5	1.157	27.222
750	5.758	5.693	34.579	134.0	1.204	27.267
800	5.436	5.368	34.598	135.6	1.248	27.321
900	5.161	5.085	34.641	141.9	1.330	27.390
1000	4.934	4.850	34.736	154.1	1.407	27.492

<u>Pressure</u> <u>Dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.192	28.191	35.941	196.9
50	13	22.765	22.755	36.308	177.7
74	12	19.994	19.981	36.139	173.1
101	11	18.856	18.838	36.010	172.1
124	10	17.605	17.584	35.860	171.2
151	9	15.858	15.835	35.647	168.1
175	8	14.365	14.339	35.448	164.5
200	7	13.754	13.725	35.362	163.4
251	6	12.470	12.436	35.184	160.6
452	5	10.288	10.234	34.920	154.5
556	4	9.197	9.134	34.825	139.9
603	3	7.918	NaN	NaN	NaN
801	2	5.402	5.334	34.598	134.7
1121	1	4.987	4.892	34.975	204.8

NBC-1 R/V SEWARD JOHNSON
CTD Station 5 (98005)
Latitude 8.103 N Longitude 54.041 W
14-Nov-1998 16:20 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 6 (98006)
Latitude 7.503N Longitude 52.733W
15-Nov-1998 02:57Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.830	27.829	36.302	199.0	0.004	23.433
10	27.825	27.822	36.339	197.2	0.044	23.463
20	27.798	27.793	36.339	198.0	0.089	23.473
30	26.985	26.978	36.336	196.4	0.132	23.736
40	26.436	26.427	36.352	195.5	0.172	23.924
50	26.270	26.259	36.357	194.7	0.212	23.982
60	25.795	25.782	36.377	189.5	0.250	24.147
70	25.649	25.634	36.381	188.2	0.288	24.197
80	25.500	25.482	36.390	185.1	0.325	24.251
90	24.460	24.440	36.365	183.2	0.361	24.551
100	24.178	24.157	36.362	183.1	0.395	24.634
110	23.846	23.823	36.354	182.2	0.428	24.728
120	23.134	23.109	36.327	179.2	0.460	24.918
130	22.428	22.402	36.281	177.2	0.490	25.087
140	20.564	20.537	36.106	168.4	0.517	25.470
150	19.815	19.787	36.150	164.3	0.541	25.704
160	19.280	19.251	36.331	156.3	0.563	25.983
170	19.368	19.337	36.534	148.8	0.584	26.116
180	18.212	18.180	36.340	142.4	0.603	26.263
190	17.158	17.127	36.189	138.7	0.620	26.406
200	16.810	16.777	36.155	137.1	0.637	26.463
250	13.298	13.263	35.523	128.7	0.711	26.753
300	10.397	10.361	35.033	134.8	0.774	26.922
350	9.372	9.333	34.908	129.1	0.833	26.999
400	8.486	8.444	34.821	123.8	0.888	27.072
450	8.277	8.230	34.819	118.3	0.940	27.104
500	7.985	7.933	34.812	118.8	0.992	27.144
550	6.783	6.731	34.640	124.4	1.041	27.179
600	6.467	6.412	34.640	125.2	1.089	27.223
650	6.115	6.057	34.625	126.5	1.135	27.257
700	5.426	5.367	34.572	133.1	1.179	27.300
750	5.202	5.140	34.590	137.0	1.221	27.342
800	5.141	5.074	34.630	140.1	1.262	27.381
900	5.006	4.931	34.745	151.5	1.337	27.490
1000	5.161	5.076	34.892	172.5	1.404	27.591

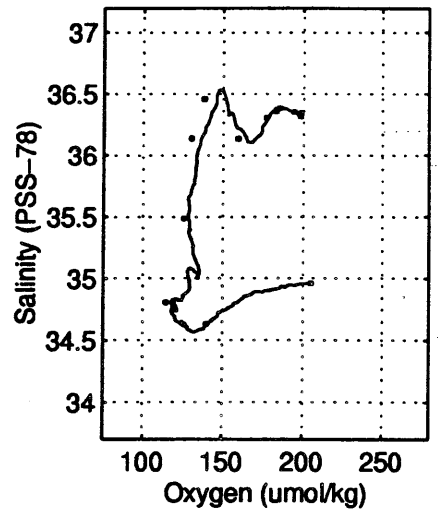
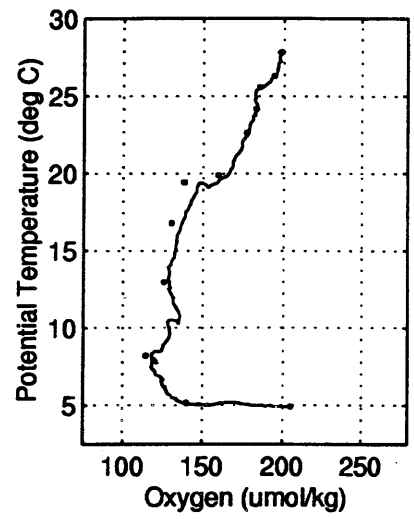
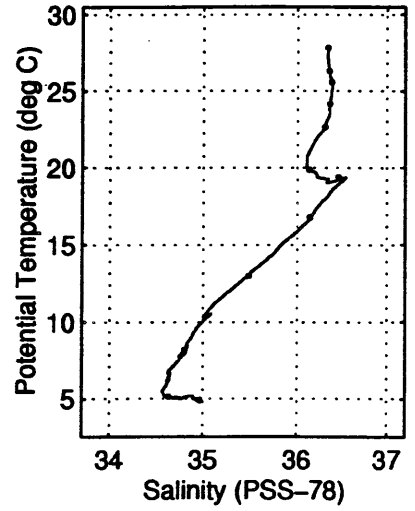
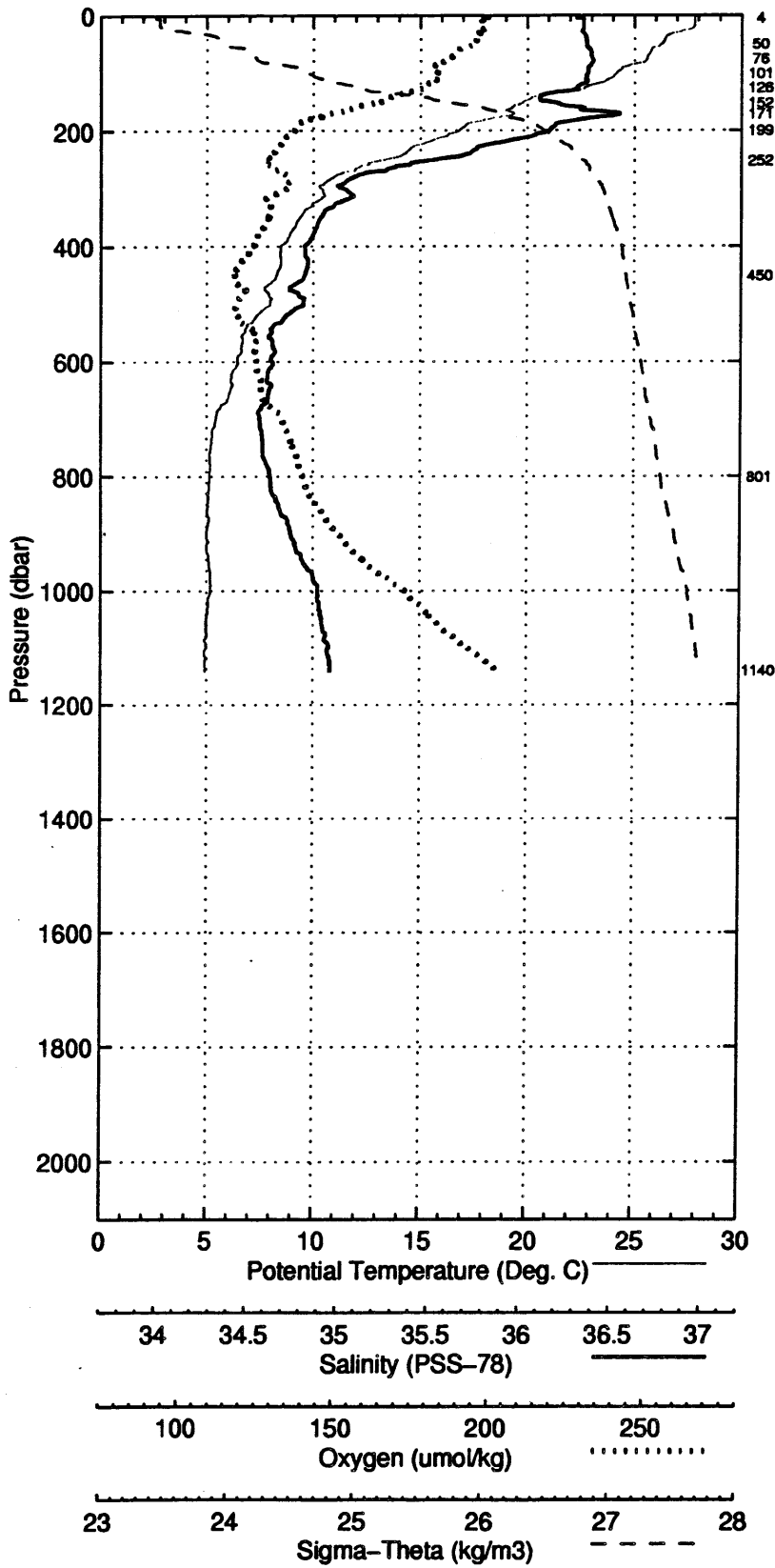
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	12	27.818	27.817	36.338	198.3
50	11	26.305	26.294	36.353	194.0
76	10	25.582	25.565	36.381	185.0
101	9	24.176	24.154	36.358	182.7
126	8	22.635	22.610	36.304	177.0
153	7	19.875	19.847	36.134	159.4
172	6	19.417	19.386	36.460	138.1
200	5	16.775	16.742	36.137	130.5
252	4	12.971	12.936	35.485	125.6
451	3	8.192	8.145	34.808	114.4
801	2	5.142	5.075	34.634	140.2
1141	1	4.918	4.821	34.962	205.0

NBC-1 R/V SEWARD JOHNSON

CTD Station 6 (98006)

Latitude 7.503 N Longitude 52.733 W

15-Nov-1998 02:57 Z

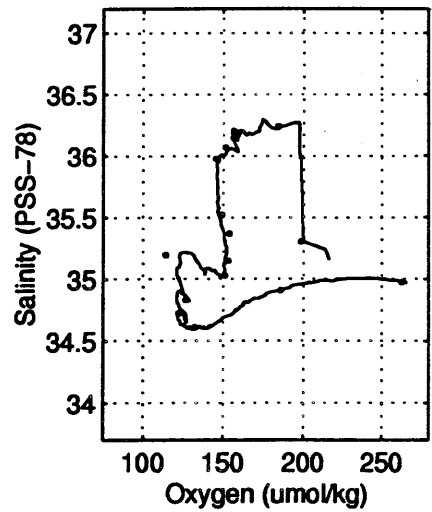
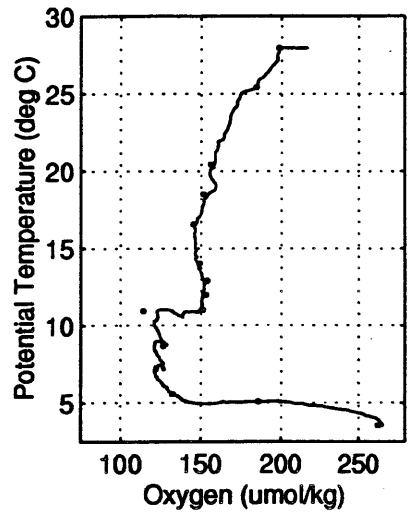
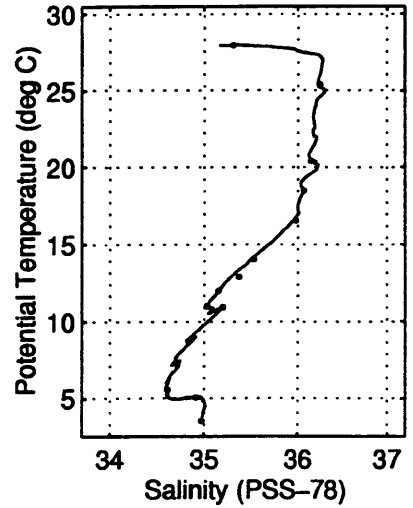
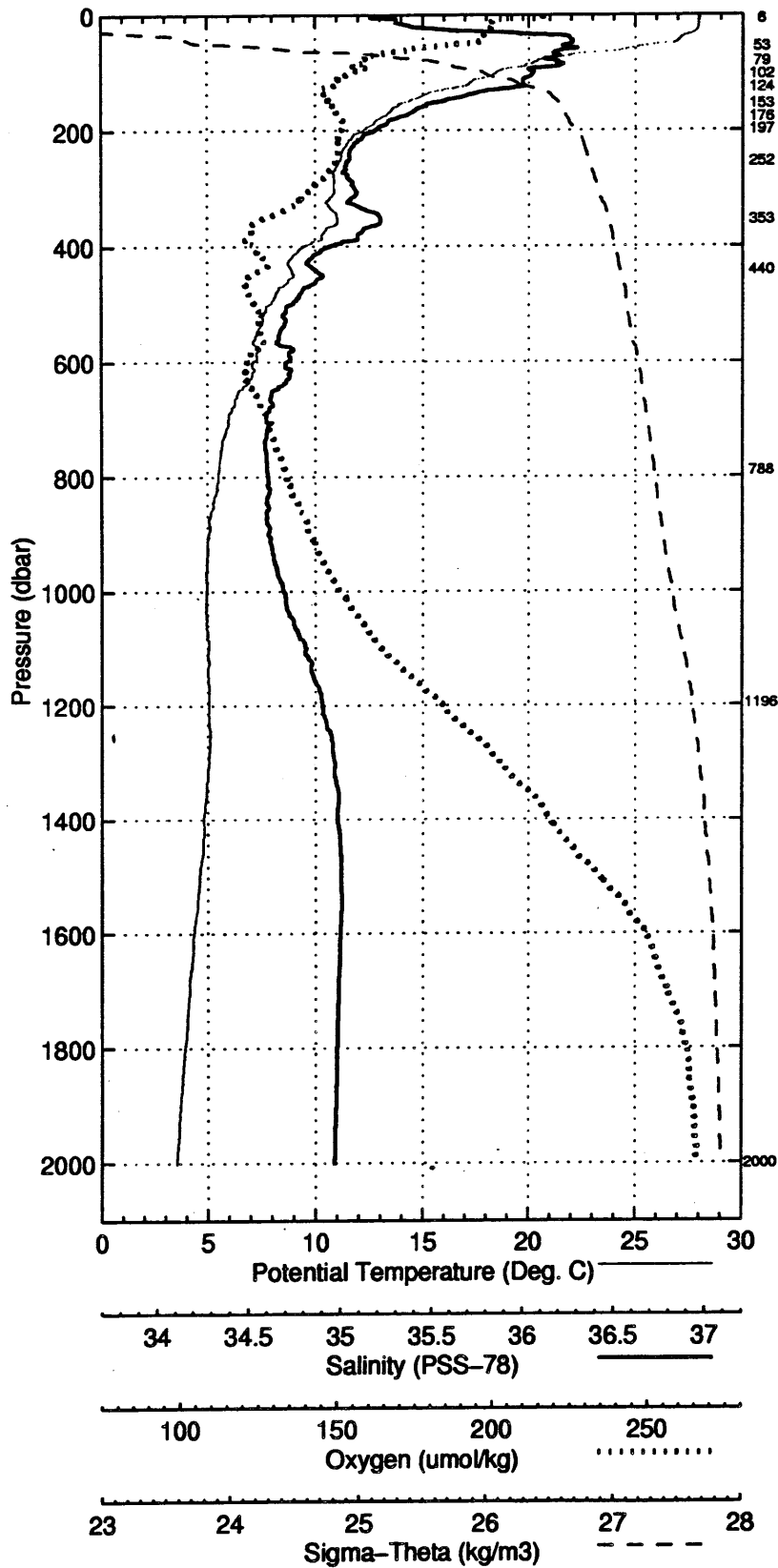


NBC-1 R/V SEWARD JOHNSON
CTD Station 7 (98007)
Latitude 8.986N Longitude 52.769W
15-Nov-1998 22:10Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.961	27.961	35.164	216.2	0.005	22.533
10	27.969	27.967	35.305	200.0	0.053	22.638
20	27.967	27.962	35.380	199.6	0.104	22.696
30	27.774	27.767	35.813	198.6	0.154	23.087
40	27.150	27.141	36.258	197.3	0.199	23.625
50	26.431	26.420	36.260	191.5	0.241	23.857
60	24.566	24.553	36.236	172.7	0.278	24.418
70	21.981	21.967	36.200	162.5	0.310	25.145
80	20.416	20.400	36.185	157.7	0.336	25.565
90	19.642	19.626	36.152	155.7	0.359	25.745
100	18.479	18.461	36.060	154.3	0.381	25.974
110	17.821	17.802	36.016	151.4	0.401	26.105
120	17.177	17.157	36.002	149.8	0.420	26.252
130	15.919	15.899	35.844	145.8	0.437	26.426
140	15.013	14.991	35.686	146.5	0.453	26.509
150	14.330	14.308	35.552	146.5	0.468	26.554
160	13.658	13.635	35.435	148.7	0.483	26.606
170	13.410	13.386	35.382	150.1	0.498	26.616
180	12.949	12.924	35.288	151.1	0.512	26.637
190	12.680	12.655	35.245	151.9	0.526	26.658
200	12.245	12.219	35.187	151.8	0.541	26.698
250	11.188	11.157	35.050	150.0	0.607	26.792
300	10.883	10.846	35.078	142.0	0.671	26.872
350	11.014	10.970	35.215	127.6	0.732	26.957
400	9.494	9.449	34.947	123.9	0.790	27.012
450	9.011	8.961	34.909	123.0	0.846	27.061
500	7.929	7.878	34.740	123.9	0.900	27.096
550	7.294	7.240	34.674	125.9	0.951	27.137
600	7.154	7.096	34.715	121.9	1.001	27.189
650	6.461	6.401	34.636	123.6	1.050	27.221
700	5.993	5.931	34.603	128.9	1.096	27.256
750	5.676	5.611	34.598	131.0	1.141	27.292
800	5.517	5.448	34.612	134.3	1.184	27.323
900	5.051	4.976	34.614	141.7	1.267	27.381
1000	4.959	4.876	34.696	151.3	1.344	27.458
1500	4.627	4.499	35.004	234.8	1.652	27.750
2000	3.530	3.369	34.970	265.6	1.893	27.842

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
6	14	27.950	27.948	35.305	198.5
54	13	25.390	25.378	36.241	184.0
79	12	20.411	20.396	36.148	156.2
103	11	18.482	18.464	36.066	151.4
124	10	16.545	16.524	35.977	145.1
154	9	14.027	14.005	35.520	148.9
176	8	12.882	12.858	35.368	153.8
198	7	11.979	11.953	35.149	153.0
253	6	11.006	10.974	35.029	151.2
353	5	10.935	10.892	35.196	114.1
441	4	8.686	8.639	34.833	126.7
789	3	5.558	5.489	34.611	132.5
1196	2	5.063	4.960	34.909	185.6
2001	1	3.532	3.371	34.974	262.7

NBC-1 R/V SEWARD JOHNSON
 CTD Station 7 (98007)
 Latitude 8.986 N Longitude 52.769 W
 15-Nov-1998 22:10 Z

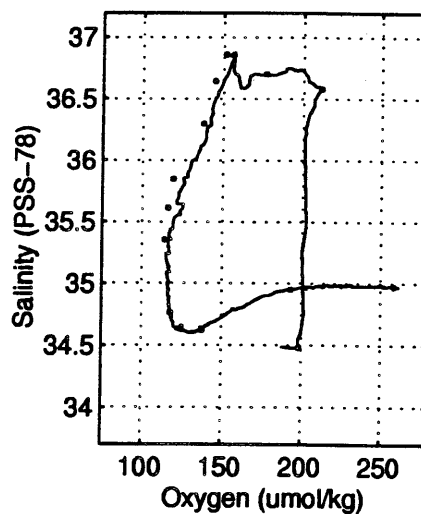
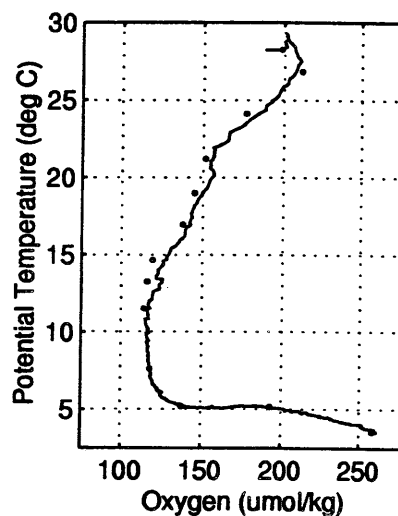
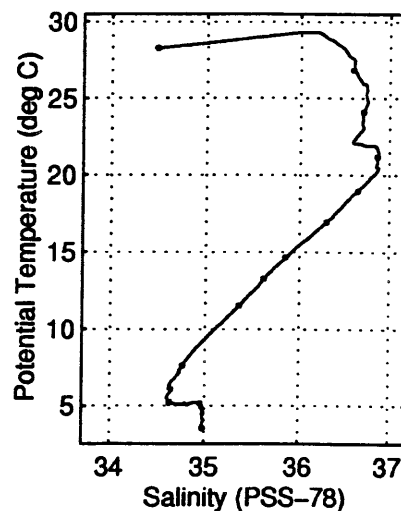
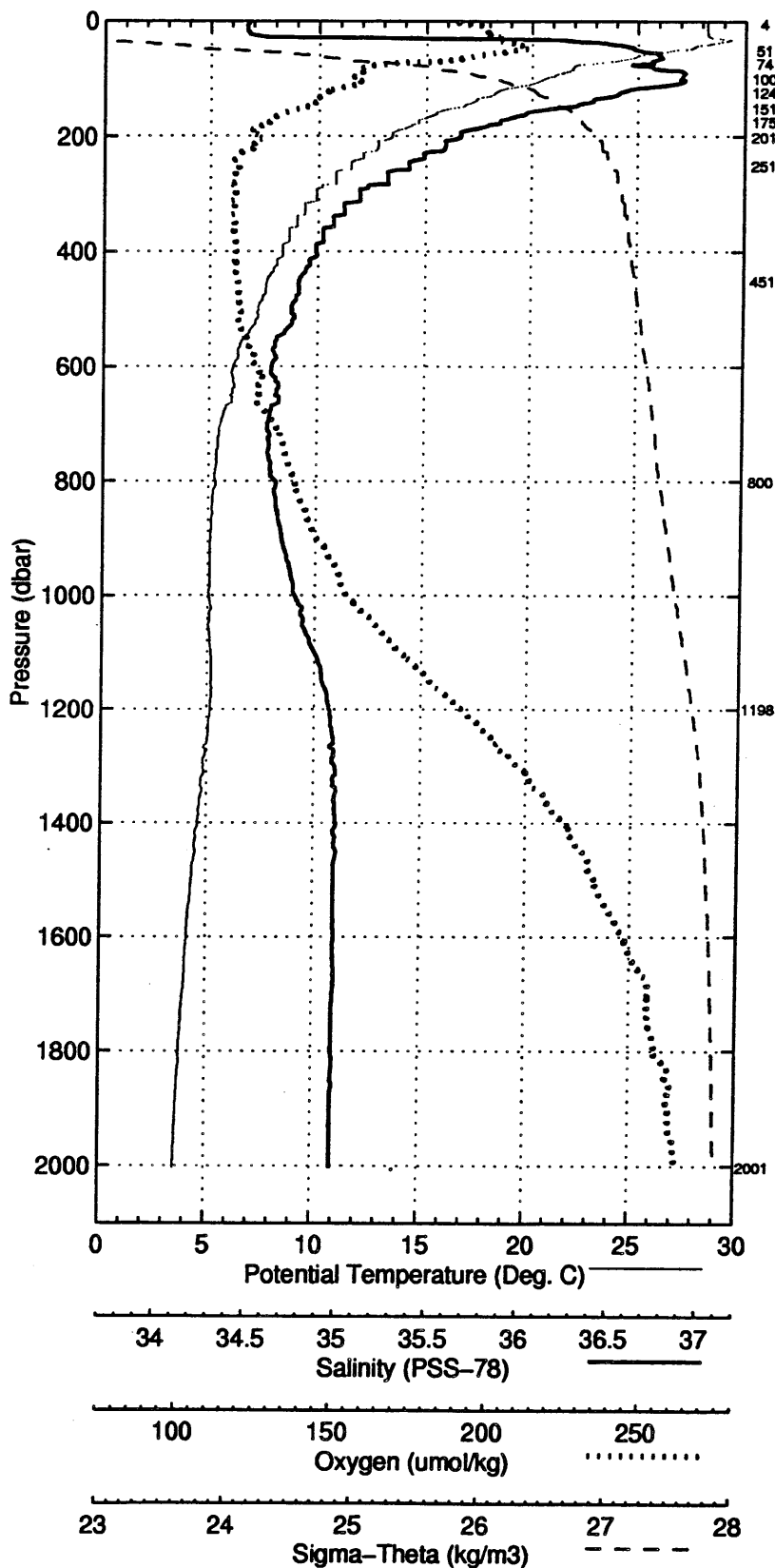


NBC-1 R/V SEWARD JOHNSON
CTD Station 8 (98008)
Latitude 9.755N Longitude 51.483W
16-Nov-1998 13:23Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.233	28.233	34.491	187.7	0.006	21.938
10	28.241	28.238	34.479	195.9	0.059	21.928
20	28.247	28.243	34.488	197.3	0.118	21.934
30	28.773	28.766	35.254	200.0	0.176	22.338
40	28.351	28.342	36.453	207.1	0.224	23.380
50	26.832	26.820	36.601	207.4	0.266	23.988
60	25.067	25.054	36.734	194.2	0.302	24.642
70	23.961	23.946	36.692	181.9	0.334	24.945
80	21.984	21.968	36.700	158.3	0.361	25.525
90	21.482	21.464	36.874	156.6	0.385	25.799
100	20.637	20.618	36.852	154.3	0.406	26.015
110	19.931	19.911	36.804	155.3	0.425	26.169
120	18.566	18.544	36.566	147.0	0.443	26.341
130	18.080	18.058	36.490	144.8	0.460	26.406
140	17.294	17.270	36.366	142.7	0.476	26.505
150	16.529	16.505	36.219	139.4	0.492	26.575
160	15.501	15.476	36.008	132.5	0.506	26.650
170	14.924	14.898	35.906	128.5	0.520	26.700
180	14.337	14.310	35.801	126.1	0.534	26.747
190	13.672	13.644	35.681	122.0	0.547	26.795
200	13.392	13.364	35.641	125.6	0.560	26.822
250	11.511	11.479	35.357	118.2	0.621	26.972
300	9.925	9.890	35.092	117.3	0.676	27.049
350	9.035	8.996	34.950	117.0	0.729	27.087
400	8.381	8.339	34.857	117.4	0.781	27.117
450	7.667	7.622	34.767	117.9	0.831	27.154
500	7.254	7.206	34.729	119.3	0.880	27.184
550	6.552	6.501	34.648	121.1	0.928	27.216
600	6.124	6.071	34.621	124.1	0.974	27.251
650	6.012	5.955	34.641	125.2	1.018	27.282
700	5.550	5.490	34.602	129.9	1.061	27.309
750	5.371	5.308	34.605	133.4	1.104	27.333
800	5.345	5.277	34.647	136.5	1.145	27.371
900	5.115	5.040	34.683	143.6	1.223	27.428
1000	5.060	4.976	34.756	153.4	1.297	27.494
1500	4.316	4.193	34.979	234.0	1.592	27.762
2000	3.536	3.375	34.972	261.3	1.825	27.842

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	13	28.262	28.261	34.483	198.6
51	12	26.843	26.831	36.581	211.8
74	11	24.105	24.089	36.702	176.6
101	10	21.195	21.176	36.859	151.4
124	9	18.983	18.961	36.644	144.9
152	8	16.938	16.913	36.297	138.0
176	7	14.644	14.618	35.847	119.1
202	6	13.248	13.219	35.613	116.0
251	5	11.513	11.480	35.353	114.3
451	4	7.606	7.561	34.765	118.2
800	3	5.194	5.127	34.623	137.7
1199	2	5.159	5.055	34.952	193.2
2002	1	3.535	3.374	34.976	258.7

NBC-1 R/V SEWARD JOHNSON
 CTD Station 8 (98008)
 Latitude 9.755 N Longitude 51.483 W
 16-Nov-1998 13:23 Z

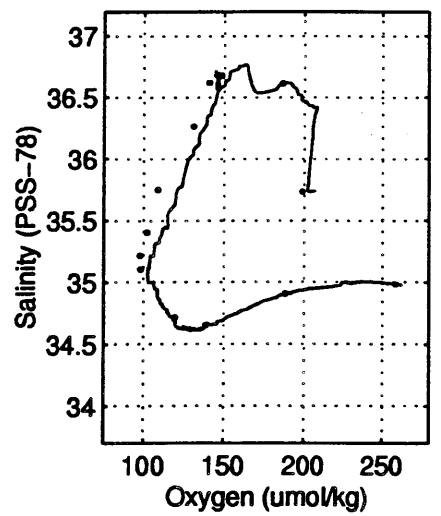
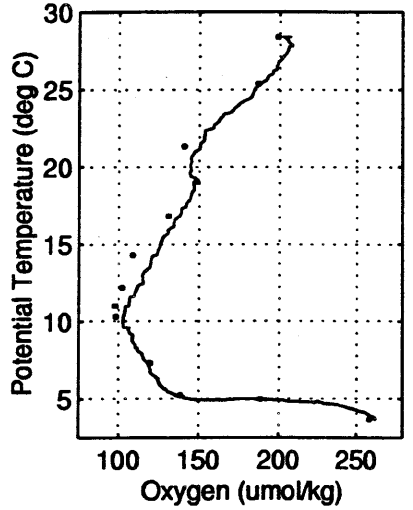
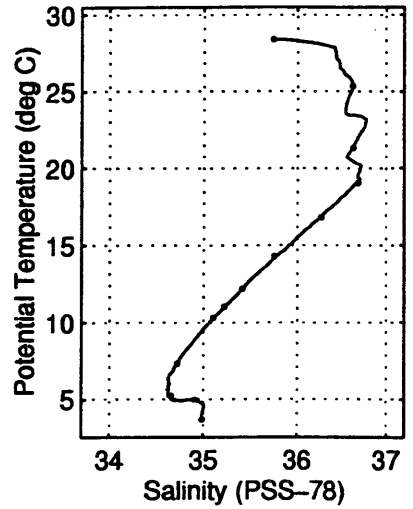
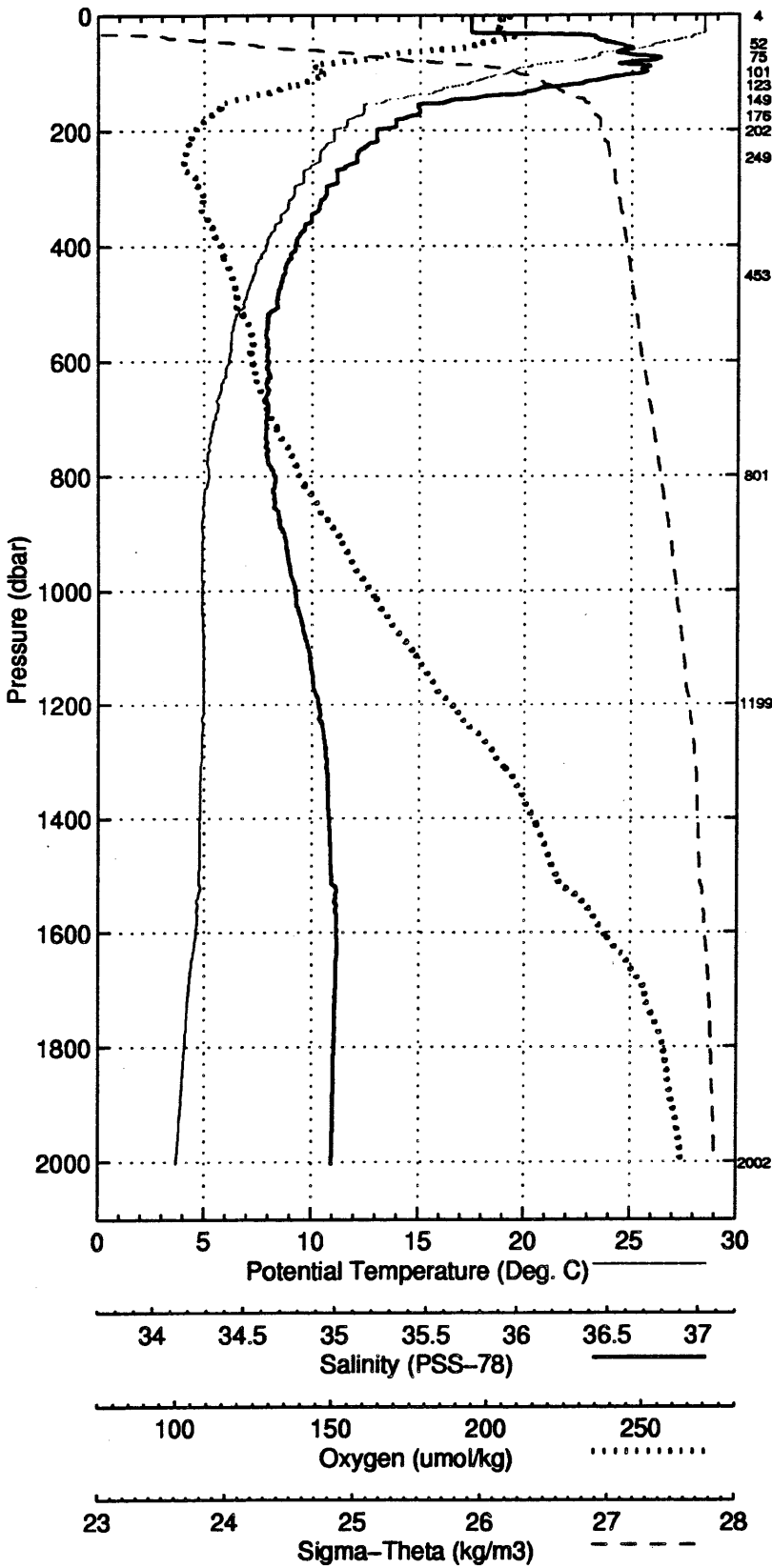


NBC-1 R/V SEWARD JOHNSON
CTD Station 9 (98009)
Latitude 9.148N Longitude 49.808W
17-Nov-1998 03:19Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.404	28.404	35.735	206.5	0.005	22.817
10	28.390	28.387	35.734	203.2	0.050	22.823
20	28.394	28.389	35.735	203.3	0.101	22.823
30	28.398	28.391	35.739	202.5	0.151	22.826
40	27.768	27.758	36.415	205.8	0.197	23.543
50	26.165	26.154	36.522	195.8	0.237	24.140
60	25.100	25.087	36.608	184.6	0.273	24.536
70	23.475	23.461	36.622	166.5	0.304	25.035
80	22.352	22.336	36.710	153.5	0.331	25.429
90	20.112	20.095	36.713	144.4	0.353	26.049
100	19.206	19.187	36.684	147.9	0.372	26.267
110	18.042	18.023	36.478	144.5	0.389	26.404
120	17.246	17.226	36.329	138.8	0.405	26.486
130	16.005	15.984	36.091	132.0	0.420	26.596
140	14.575	14.554	35.832	124.3	0.434	26.717
150	13.327	13.306	35.597	117.2	0.448	26.798
160	12.403	12.382	35.442	114.4	0.460	26.863
170	12.374	12.351	35.443	112.9	0.472	26.870
180	11.762	11.739	35.343	109.7	0.484	26.911
190	11.610	11.586	35.320	108.2	0.496	26.922
200	10.999	10.974	35.215	106.1	0.508	26.952
250	10.330	10.300	35.109	103.3	0.565	26.991
300	9.172	9.139	34.943	107.9	0.619	27.057
350	8.547	8.510	34.863	110.2	0.672	27.094
400	7.890	7.849	34.775	114.6	0.723	27.126
450	7.297	7.253	34.711	118.0	0.772	27.162
500	6.843	6.796	34.675	119.8	0.821	27.198
550	6.298	6.249	34.621	124.1	0.867	27.227
600	6.178	6.125	34.635	124.8	0.913	27.255
650	5.811	5.754	34.635	127.1	0.957	27.302
700	5.528	5.468	34.626	130.4	0.999	27.331
750	5.231	5.168	34.620	135.7	1.040	27.362
800	5.223	5.156	34.664	139.3	1.080	27.399
900	4.945	4.870	34.717	151.5	1.155	27.475
1000	4.935	4.852	34.779	162.3	1.225	27.526
1500	4.764	4.635	34.975	222.3	1.529	27.711
2000	3.682	3.519	34.977	262.0	1.780	27.833

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	13	28.379	28.378	35.735	198.8
52	12	25.353	25.341	36.613	186.3
75	11	21.309	21.294	36.620	140.7
101	10	19.043	19.025	36.677	148.4
124	9	16.796	16.776	36.262	130.9
149	8	14.277	14.255	35.748	108.6
177	7	12.178	12.155	35.407	102.0
203	6	11.012	10.987	35.219	97.6
249	5	10.324	10.294	35.106	98.3
454	4	7.310	7.266	34.718	119.6
801	3	5.237	5.169	34.653	138.6
1200	2	4.970	4.868	34.908	188.1
2003	1	3.673	3.510	34.983	258.4

NBC-1 R/V SEWARD JOHNSON
 CTD Station 9 (98009)
 Latitude 9.148 N Longitude 49.808 W
 17-Nov-1998 03:19 Z

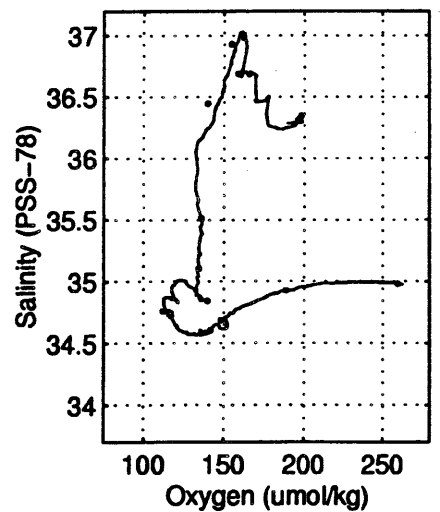
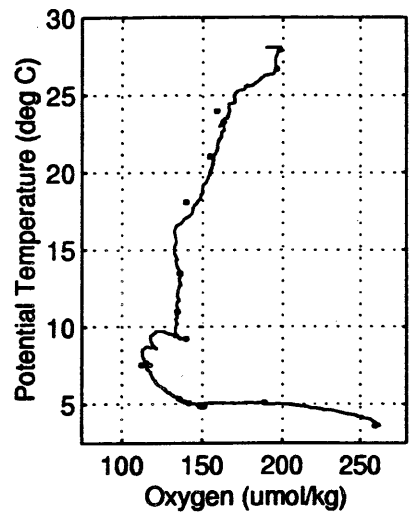
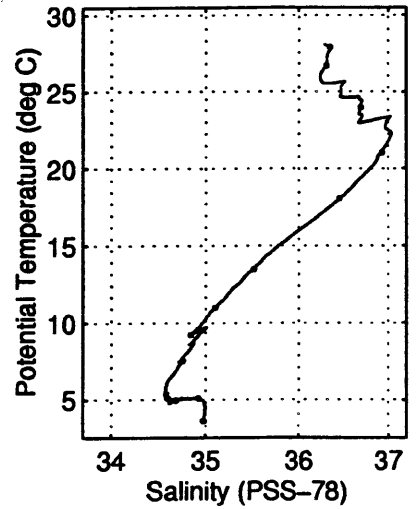
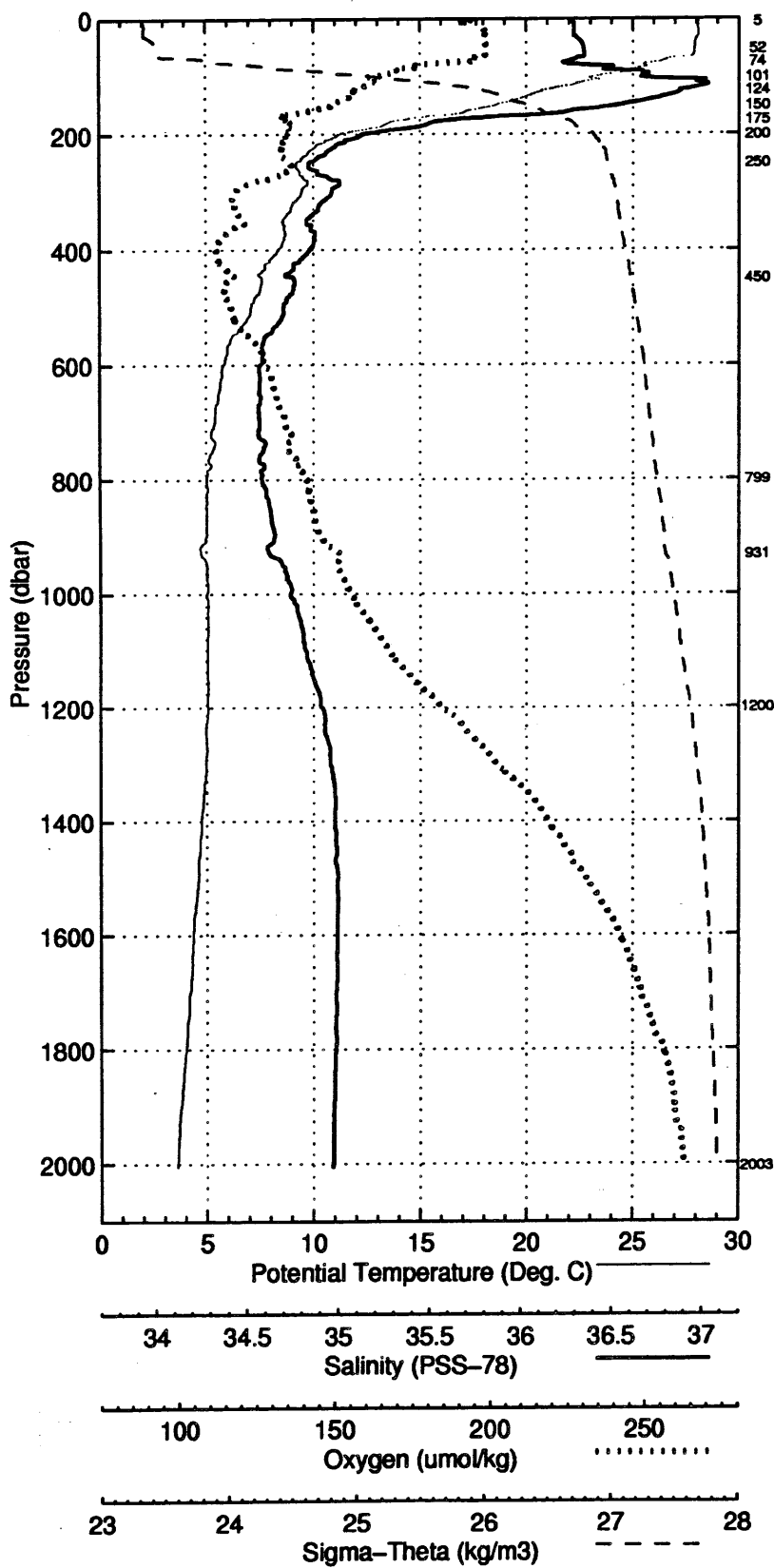


NBC-1 R/V SEWARD JOHNSON
CTD Station 10 (98010)
Latitude 7.801N Longitude 51.151W
17-Nov-1998 17:35Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.073	28.073	36.284	193.8	0.005	23.339
10	28.075	28.073	36.291	197.1	0.045	23.345
20	28.076	28.072	36.292	198.5	0.091	23.347
30	28.082	28.075	36.292	198.2	0.136	23.346
40	27.944	27.935	36.331	198.5	0.181	23.423
50	27.913	27.901	36.344	198.4	0.226	23.444
60	27.884	27.870	36.349	198.4	0.270	23.459
70	26.634	26.618	36.296	195.9	0.314	23.823
80	25.535	25.517	36.326	176.6	0.353	24.192
90	24.610	24.591	36.557	169.9	0.389	24.651
100	23.331	23.310	36.701	161.8	0.420	25.142
110	22.614	22.592	36.967	161.6	0.446	25.552
120	21.389	21.366	36.957	158.7	0.469	25.892
130	20.400	20.375	36.854	155.7	0.490	26.084
140	19.508	19.483	36.712	152.6	0.509	26.213
150	18.574	18.547	36.550	149.0	0.527	26.330
160	17.211	17.185	36.276	141.9	0.544	26.457
170	15.315	15.289	35.853	133.0	0.559	26.573
180	13.525	13.500	35.510	136.1	0.574	26.692
190	12.655	12.630	35.374	135.5	0.588	26.762
200	11.186	11.161	35.133	134.7	0.600	26.855
250	9.214	9.187	34.842	136.0	0.659	26.969
300	9.460	9.426	34.967	118.6	0.715	27.029
350	8.584	8.546	34.830	121.4	0.769	27.063
400	8.377	8.334	34.846	112.5	0.821	27.109
450	7.607	7.562	34.761	116.7	0.872	27.157
500	7.100	7.052	34.705	117.3	0.920	27.186
550	6.228	6.179	34.606	122.8	0.968	27.225
600	5.829	5.777	34.578	127.5	1.013	27.254
650	5.584	5.529	34.571	131.6	1.057	27.279
700	5.414	5.355	34.575	134.4	1.101	27.304
750	5.318	5.255	34.591	135.6	1.143	27.329
800	5.038	4.972	34.587	141.2	1.184	27.358
900	5.011	4.937	34.657	145.8	1.263	27.419
1000	5.044	4.960	34.743	155.4	1.338	27.486
1500	4.625	4.498	34.997	230.8	1.642	27.744
2000	3.616	3.455	34.974	262.5	1.886	27.837

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.058	NaN	NaN	NaN
52	13	27.906	27.893	36.346	197.8
74	12	26.679	26.662	36.306	196.1
102	11	23.958	23.937	36.689	158.6
124	10	21.026	21.002	36.929	154.4
151	9	18.073	18.046	36.447	139.8
175	8	13.460	13.435	35.513	136.0
201	7	10.993	10.968	35.104	134.4
250	6	9.211	9.184	34.842	139.6
451	5	7.541	7.496	34.760	112.3
800	4	5.068	5.002	34.607	141.6
932	3	4.956	4.879	34.688	148.4
1200	2	5.090	4.987	34.926	188.5
2004	1	3.610	3.448	34.980	259.6

NBC-1 R/V SEWARD JOHNSON
 CTD Station 10 (98010)
 Latitude 7.801 N Longitude 51.151 W
 17-Nov-1998 17:35 Z

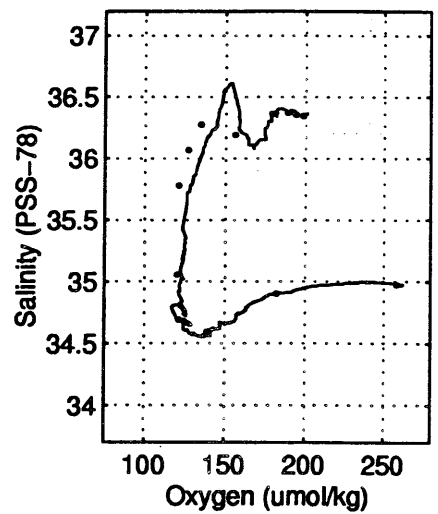
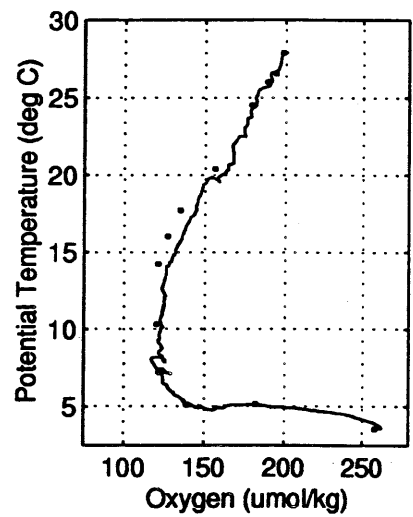
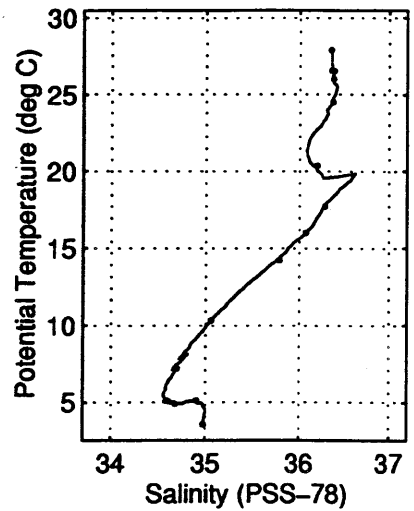
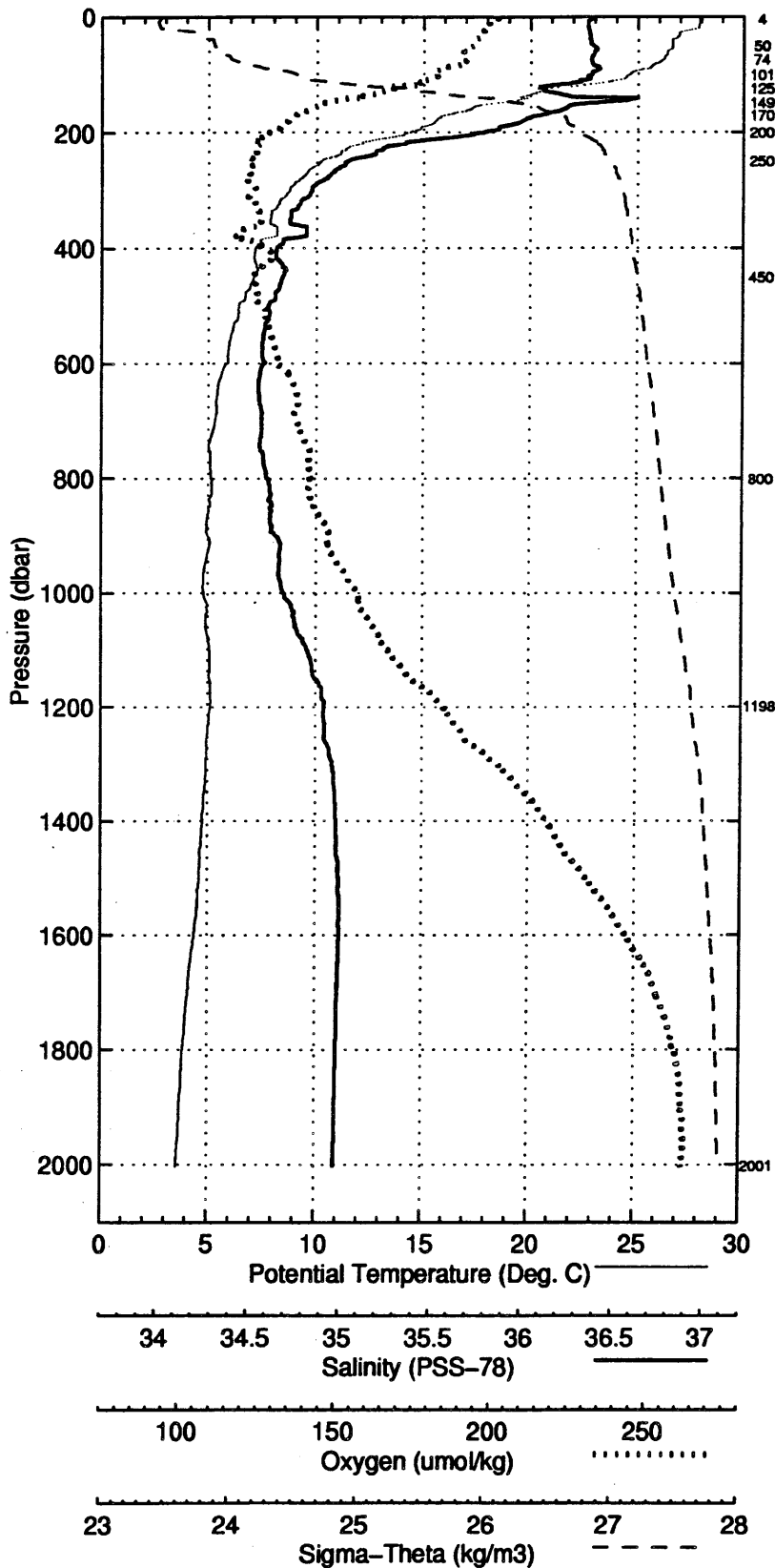


NBC-1 R/V SEWARD JOHNSON
CTD Station 11 (98011)
Latitude 7.337N Longitude 50.549W
17-Nov-1998 23:16Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.886	27.886	36.367	201.2	0.004	23.463
10	27.899	27.897	36.344	198.4	0.044	23.443
20	27.838	27.833	36.346	198.5	0.089	23.466
30	26.948	26.941	36.355	196.3	0.131	23.762
40	26.625	26.615	36.358	194.6	0.172	23.869
50	26.632	26.620	36.371	193.7	0.212	23.878
60	26.389	26.376	36.381	190.4	0.252	23.963
70	26.260	26.244	36.368	190.8	0.292	23.996
80	25.957	25.939	36.369	190.2	0.331	24.093
90	25.443	25.423	36.407	183.0	0.369	24.283
100	24.603	24.582	36.366	181.7	0.404	24.510
110	23.991	23.968	36.300	178.3	0.438	24.644
120	22.152	22.128	36.116	169.0	0.470	25.038
130	20.421	20.396	36.135	164.3	0.496	25.530
140	19.640	19.614	36.390	158.2	0.519	25.932
150	18.177	18.150	36.338	145.4	0.538	26.267
160	17.190	17.163	36.217	140.8	0.555	26.417
170	16.143	16.116	36.092	136.3	0.571	26.569
180	15.591	15.563	35.991	134.1	0.586	26.617
190	14.914	14.885	35.870	131.7	0.601	26.675
200	14.368	14.338	35.782	128.3	0.615	26.726
250	10.202	10.173	35.035	123.5	0.677	26.955
300	8.739	8.706	34.840	123.5	0.732	27.045
350	7.836	7.801	34.721	125.6	0.785	27.090
400	7.164	7.126	34.649	127.2	0.835	27.130
450	7.076	7.033	34.680	123.8	0.885	27.168
500	6.395	6.350	34.605	126.0	0.932	27.202
550	6.047	5.999	34.579	128.7	0.979	27.227
600	5.837	5.785	34.580	130.6	1.024	27.255
650	5.420	5.365	34.554	137.0	1.068	27.285
700	5.313	5.255	34.569	137.1	1.111	27.311
750	5.046	4.985	34.562	141.3	1.153	27.337
800	5.141	5.074	34.600	141.2	1.194	27.357
900	4.992	4.917	34.646	147.5	1.274	27.413
1000	4.810	4.728	34.692	156.4	1.349	27.472
1500	4.621	4.493	34.994	230.1	1.656	27.742
2000	3.552	3.391	34.971	261.5	1.896	27.840

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	13	27.887	27.885	36.343	198.4
51	12	26.556	26.544	36.353	193.7
74	11	25.989	25.973	36.371	188.7
101	10	24.517	24.495	36.363	178.9
125	9	20.368	20.345	36.191	156.1
149	8	17.711	17.685	36.274	134.8
171	7	16.019	15.991	36.069	126.8
201	6	14.221	14.191	35.778	121.3
250	5	10.322	10.292	35.057	120.3
451	4	7.199	7.156	34.694	121.5
801	3	5.117	5.051	34.596	139.1
1199	2	5.130	5.027	34.904	181.9
2002	1	3.554	3.393	34.976	258.1

NBC-1 R/V SEWARD JOHNSON
 CTD Station 11 (98011)
 Latitude 7.337 N Longitude 50.549 W
 17-Nov-1998 23:16 Z

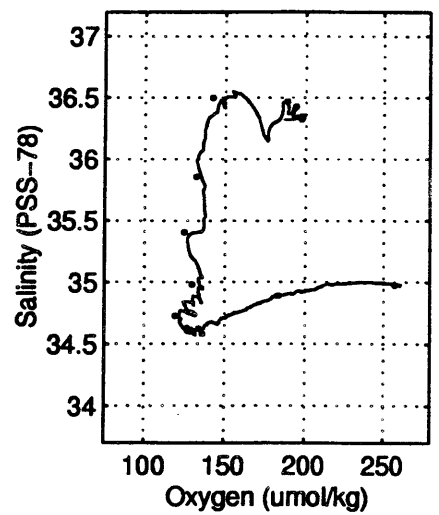
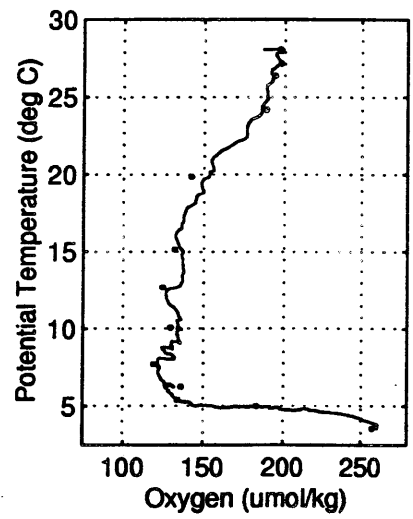
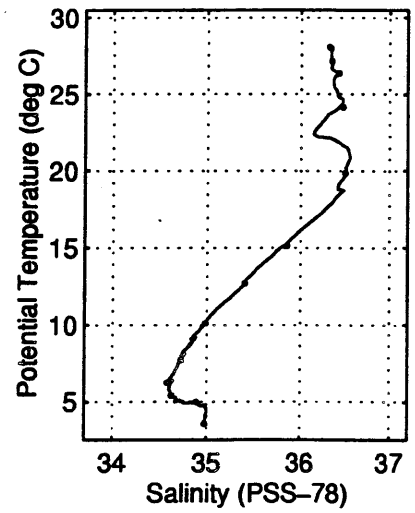
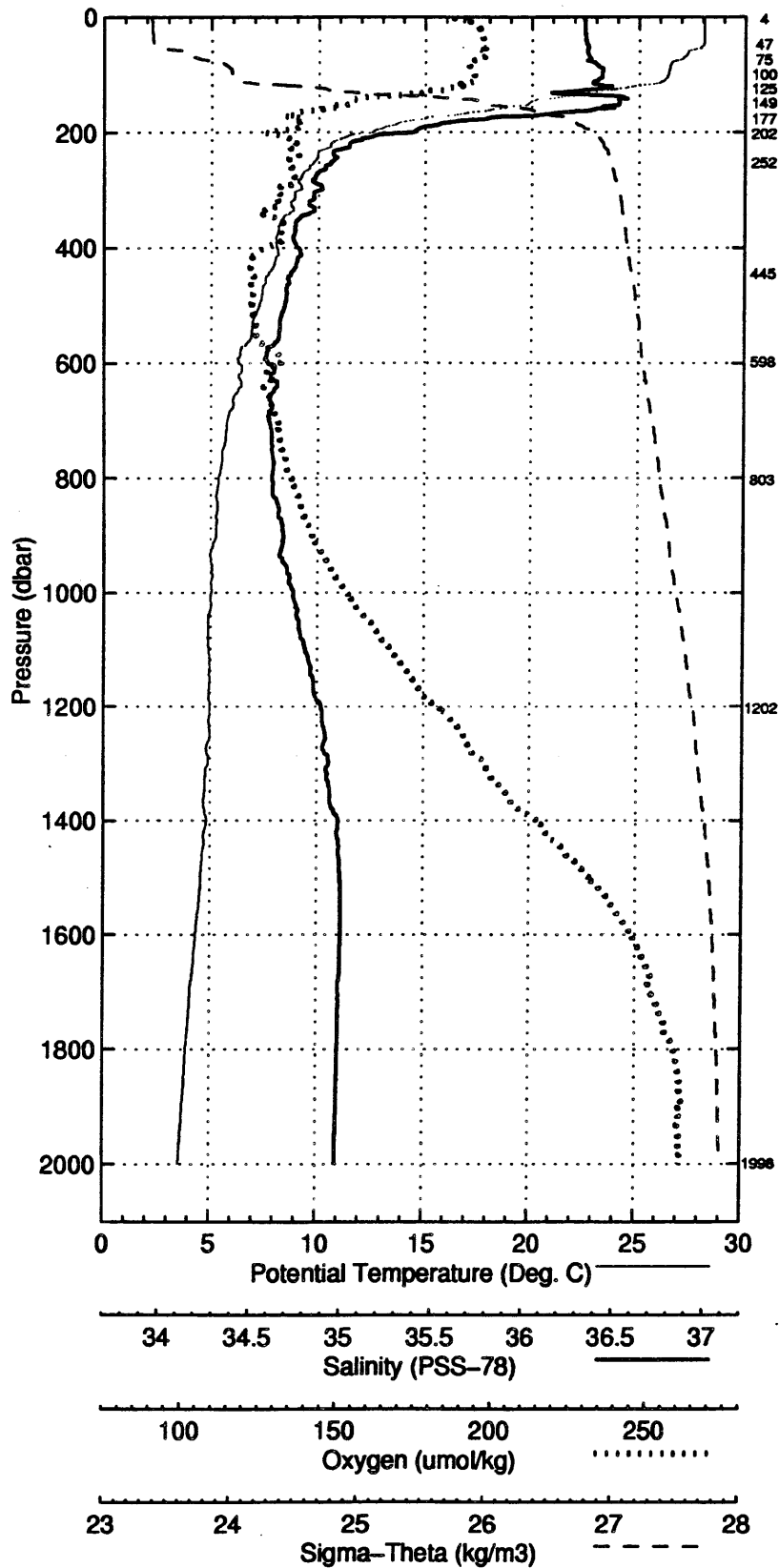


NBC-1 R/V SEWARD JOHNSON
CTD Station 12 (98012)
Latitude 7.769N Longitude 49.175W
18-Nov-1998 10:27Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.063	28.062	36.319	186.4	0.005	23.368
10	28.060	28.058	36.322	192.3	0.045	23.373
20	28.062	28.057	36.322	194.6	0.090	23.374
30	28.064	28.057	36.323	195.7	0.135	23.376
40	28.062	28.053	36.325	196.2	0.180	23.380
50	28.006	27.994	36.337	196.5	0.225	23.409
60	27.325	27.311	36.335	196.6	0.269	23.630
70	27.123	27.107	36.346	196.3	0.312	23.705
80	26.516	26.498	36.374	191.4	0.353	23.922
90	26.438	26.418	36.418	192.5	0.393	23.980
100	26.374	26.351	36.416	193.1	0.433	24.000
110	26.202	26.177	36.392	192.4	0.472	24.038
120	24.819	24.793	36.420	189.4	0.510	24.487
130	23.004	22.977	36.214	176.5	0.543	24.871
140	21.240	21.213	36.535	157.6	0.570	25.613
150	19.821	19.793	36.505	153.1	0.592	25.974
160	18.176	18.148	36.378	144.7	0.611	26.299
170	16.507	16.480	36.077	136.2	0.628	26.472
180	14.291	14.264	35.653	136.9	0.643	26.642
190	13.140	13.114	35.455	137.1	0.657	26.729
200	12.524	12.497	35.382	127.7	0.671	26.795
250	9.819	9.791	34.944	133.6	0.731	26.949
300	9.111	9.078	34.875	130.3	0.787	27.014
350	8.318	8.282	34.759	130.4	0.842	27.048
400	8.058	8.017	34.754	126.3	0.895	27.085
450	7.531	7.486	34.700	122.5	0.947	27.120
500	7.225	7.177	34.682	122.0	0.997	27.151
550	6.860	6.808	34.653	123.2	1.046	27.179
600	6.276	6.222	34.590	131.3	1.095	27.207
650	6.228	6.169	34.621	126.2	1.141	27.239
700	5.773	5.712	34.599	130.7	1.187	27.279
750	5.554	5.490	34.612	131.8	1.230	27.318
800	5.367	5.299	34.616	134.8	1.272	27.344
900	5.246	5.170	34.679	141.7	1.353	27.410
1000	5.043	4.959	34.736	152.7	1.428	27.480
1500	4.572	4.446	34.994	231.1	1.736	27.747
2000	3.564	3.403	34.971	260.4	1.976	27.839

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.063	28.062	36.319	197.2
48	13	27.973	27.961	36.333	197.9
75	12	27.150	27.132	36.343	197.4
101	11	26.356	26.333	36.424	193.7
125	10	24.160	24.133	36.468	188.2
150	9	19.855	19.828	36.497	142.1
177	8	15.134	15.107	35.854	132.0
203	7	12.685	12.657	35.405	124.7
253	6	10.088	10.059	34.982	129.7
445	5	7.708	7.664	34.726	119.1
598	4	6.252	6.198	34.582	136.4
803	3	5.412	5.344	34.623	134.1
1203	2	4.980	4.878	34.892	183.4
1999	1	3.566	3.405	34.976	257.5

NBC-1 R/V SEWARD JOHNSON
 CTD Station 12 (98012)
 Latitude 7.769 N Longitude 49.175 W
 18-Nov-1998 10:27 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 13 (98013)
Latitude 6.463N Longitude 49.709W
18-Nov-1998 21:29Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.475	28.475	36.330	199.3	0.005	23.241
10	28.489	28.487	36.336	198.1	0.046	23.242
20	28.317	28.312	36.329	198.2	0.092	23.296
30	28.306	28.299	36.329	198.2	0.138	23.301
40	28.294	28.284	36.329	198.1	0.184	23.306
50	28.230	28.218	36.328	198.2	0.230	23.328
60	27.941	27.927	36.329	198.5	0.275	23.426
70	27.715	27.699	36.334	199.2	0.319	23.505
80	27.580	27.561	36.329	198.6	0.363	23.546
90	27.486	27.465	36.346	198.5	0.407	23.590
100	27.268	27.244	36.360	197.6	0.450	23.674
110	26.526	26.501	36.461	194.1	0.491	23.988
120	25.173	25.147	36.547	190.9	0.528	24.476
130	24.652	24.624	36.514	189.4	0.562	24.611
140	21.519	21.492	36.176	183.5	0.592	25.263
150	16.605	16.581	35.590	164.5	0.616	26.073
160	11.570	11.549	35.027	161.9	0.631	26.700
170	11.219	11.198	35.018	159.7	0.644	26.758
180	10.906	10.884	34.987	158.3	0.657	26.791
190	10.622	10.599	34.953	157.1	0.670	26.815
200	10.575	10.551	34.948	157.3	0.683	26.820
250	9.625	9.597	34.856	153.5	0.744	26.913
300	8.784	8.751	34.758	151.7	0.802	26.973
350	8.331	8.294	34.717	150.3	0.859	27.013
400	7.795	7.755	34.660	151.0	0.914	27.049
450	7.581	7.536	34.642	151.2	0.967	27.067
500	7.117	7.069	34.602	151.2	1.020	27.103
550	7.085	7.033	34.626	142.1	1.071	27.127
600	6.660	6.604	34.605	137.2	1.122	27.169
650	6.197	6.138	34.586	133.7	1.170	27.215
700	5.885	5.823	34.567	134.2	1.217	27.240
750	5.711	5.646	34.563	136.5	1.263	27.259
800	5.591	5.522	34.590	135.4	1.308	27.297
900	5.040	4.965	34.569	142.8	1.394	27.346
1000	5.100	5.015	34.650	148.3	1.476	27.406
1500	4.753	4.625	34.992	220.9	1.809	27.726
2000	3.562	3.401	34.973	260.8	2.055	27.840

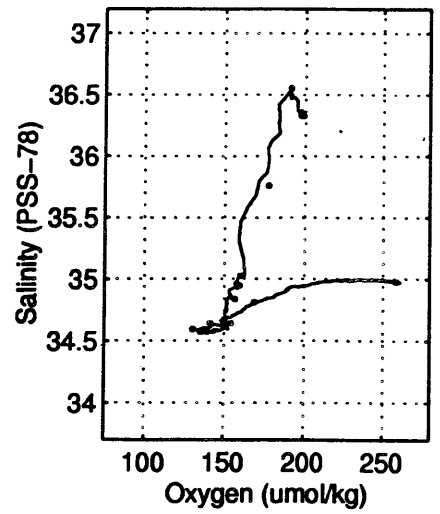
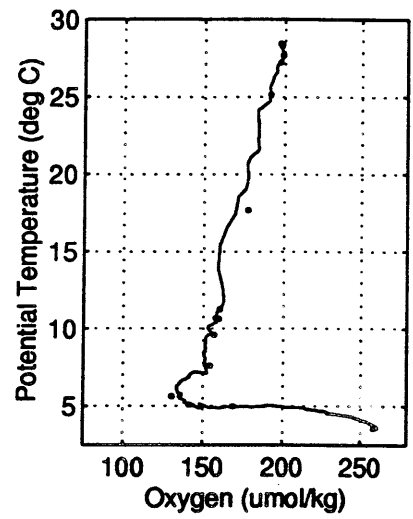
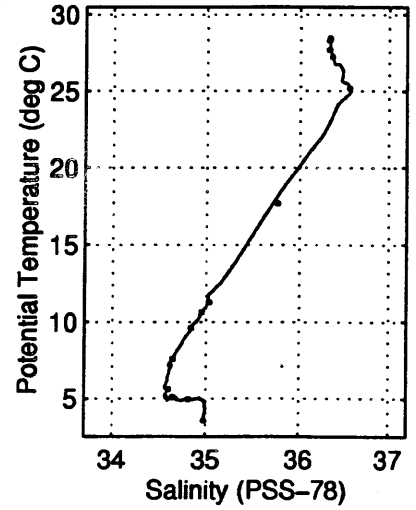
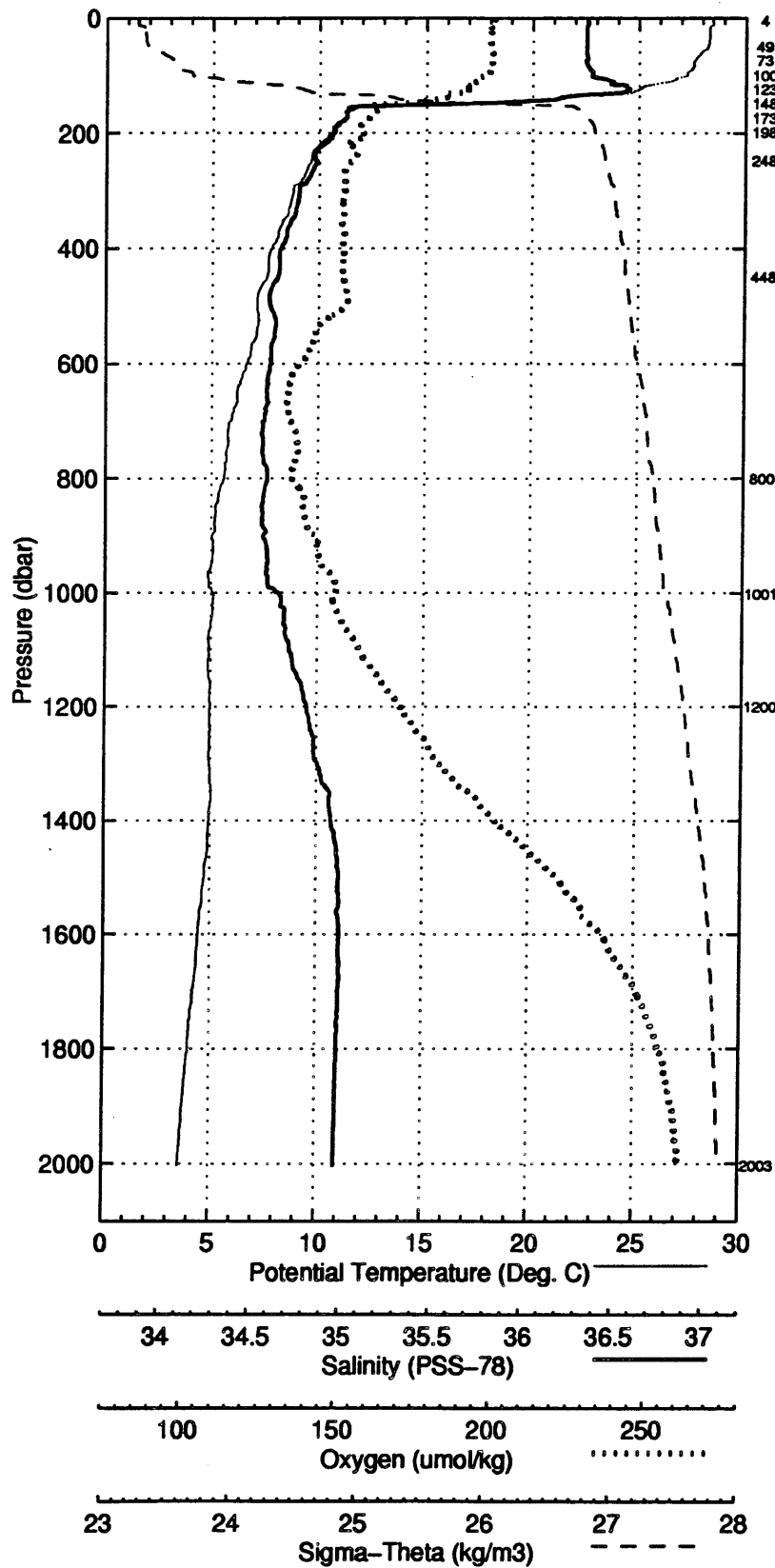
<u>Pressure</u> <u>Dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.438	28.437	36.332	197.3
50	13	28.291	28.279	36.324	197.9
74	12	27.672	27.655	36.325	198.8
101	11	27.229	27.206	36.356	197.0
124	10	25.177	25.150	36.551	190.8
149	9	17.669	17.643	35.760	177.5
174	8	11.278	11.256	35.028	160.4
199	7	10.622	10.598	34.950	159.5
248	6	9.600	9.572	34.839	156.9
449	5	7.594	7.550	34.645	154.1
800	4	5.621	5.551	34.597	130.3
1002	3	5.097	5.013	34.645	141.5
1200	2	4.966	4.864	34.815	168.8
2003	1	3.561	3.399	34.977	258.6

NBC-1 R/V SEWARD JOHNSON

CTD Station 13 (98013)

Latitude 6.463 N Longitude 49.709 W

18-Nov-1998 21:29 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 14 (98014)
Latitude 5.772N Longitude 51.246W
19-Nov-1998 20:17Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	29.327	29.327	36.067	199.0	0.005	22.758
10	29.182	29.179	36.075	198.8	0.051	22.814
20	28.369	28.364	36.453	196.8	0.097	23.372
30	27.740	27.733	36.400	195.1	0.142	23.540
40	26.921	26.912	36.354	185.1	0.184	23.772
50	26.569	26.558	36.339	178.8	0.225	23.874
60	26.420	26.407	36.337	177.4	0.265	23.920
70	24.405	24.390	36.238	171.5	0.303	24.469
80	22.898	22.881	36.286	178.2	0.335	24.950
90	21.272	21.255	36.172	169.5	0.363	25.323
100	20.469	20.450	36.153	165.1	0.389	25.528
110	19.674	19.654	36.230	155.8	0.413	25.798
120	18.603	18.581	36.302	150.5	0.433	26.131
130	18.422	18.399	36.357	144.4	0.452	26.218
140	16.539	16.516	35.995	144.0	0.469	26.400
150	16.629	16.604	36.116	142.0	0.486	26.472
160	15.499	15.474	35.879	139.6	0.501	26.550
170	14.507	14.481	35.681	139.9	0.516	26.617
180	13.598	13.573	35.496	140.4	0.531	26.666
190	12.714	12.689	35.336	141.1	0.545	26.722
200	12.119	12.093	35.231	142.0	0.558	26.756
250	11.092	11.061	35.080	142.5	0.623	26.833
300	9.891	9.857	34.919	141.5	0.685	26.919
350	9.871	9.831	34.957	134.8	0.744	26.954
400	9.643	9.597	34.966	125.9	0.802	27.001
450	9.044	8.995	34.882	125.3	0.858	27.035
500	8.118	8.066	34.765	127.2	0.913	27.087
550	7.637	7.582	34.716	126.3	0.965	27.121
600	7.082	7.024	34.669	126.7	1.016	27.163
650	6.821	6.759	34.650	127.2	1.066	27.184
700	5.748	5.687	34.602	130.2	1.113	27.285
750	5.181	5.119	34.628	136.4	1.155	27.374

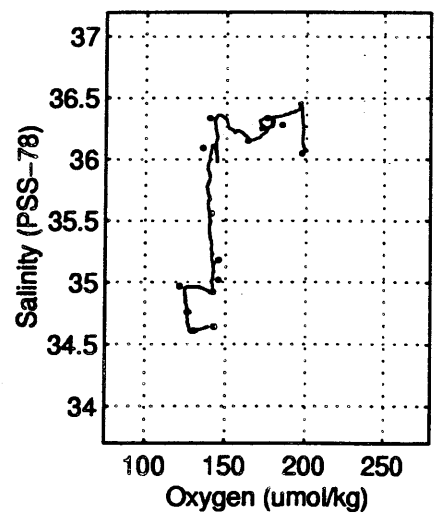
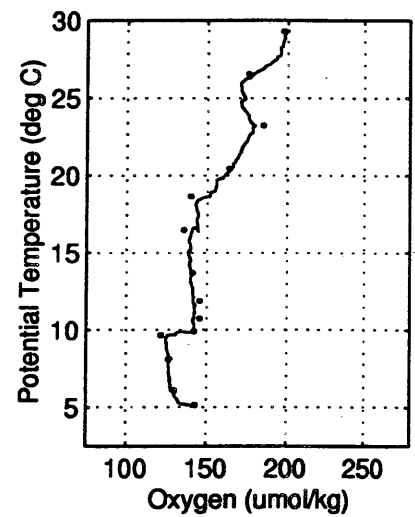
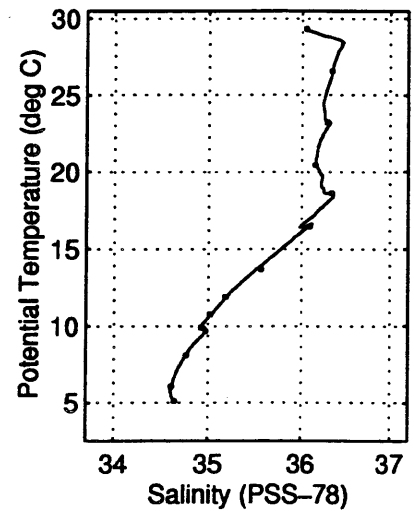
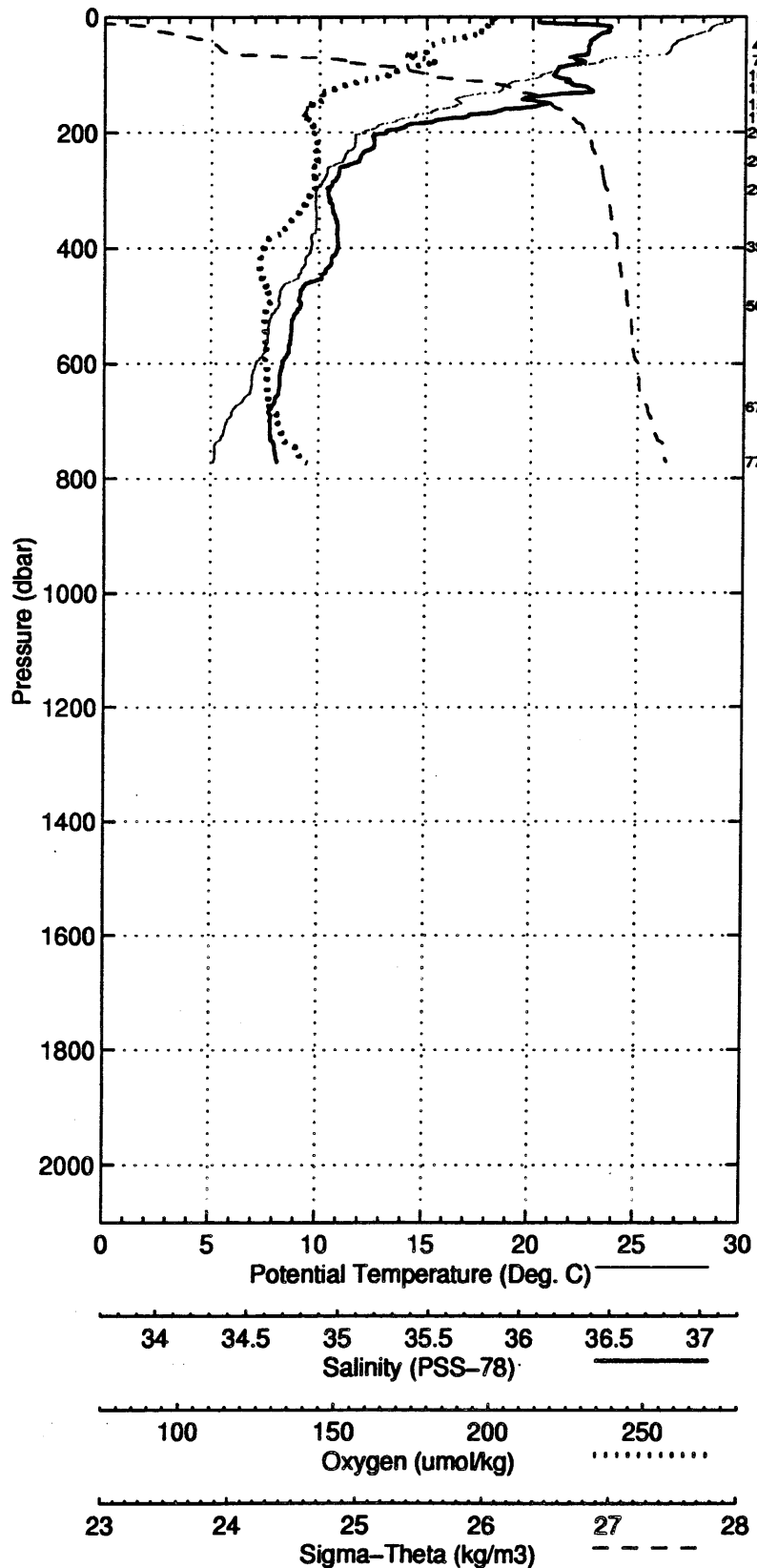
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
3	14	29.317	29.316	36.047	197.2
50	13	26.565	26.553	36.334	175.5
75	12	23.232	23.217	36.281	184.9
102	11	20.445	20.425	36.151	163.4
124	10	18.631	18.609	36.335	139.6
153	9	16.465	16.440	36.093	135.6
175	8	13.683	13.658	35.560	141.0
201	7	11.874	11.848	35.183	145.6
250	6	10.735	10.705	35.020	145.4
300	5	9.893	9.859	34.925	142.1
397	4	9.663	9.618	34.969	121.4
501	3	8.106	8.054	34.763	126.1
676	2	6.074	6.014	34.609	130.0
772	1	5.129	5.065	34.642	142.8

NBC-1 R/V SEWARD JOHNSON

CTD Station 14 (98014)

Latitude 5.772 N Longitude 51.246 W

19-Nov-1998 20:17 Z

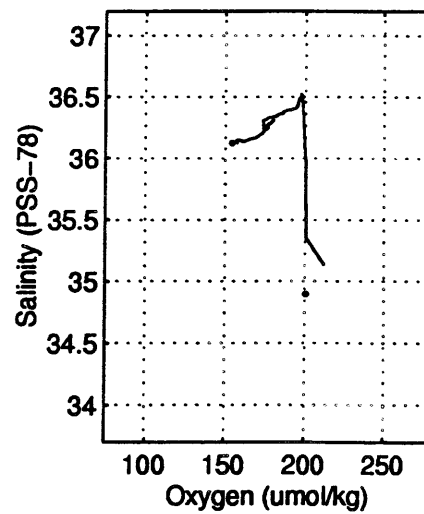
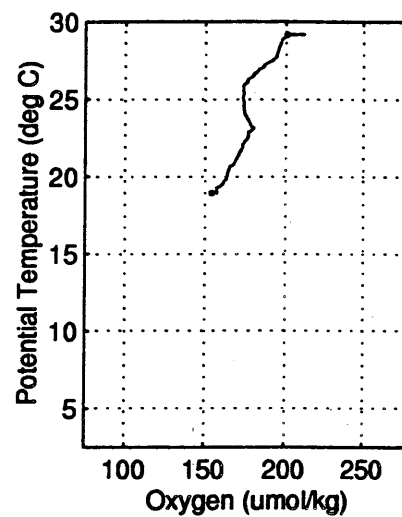
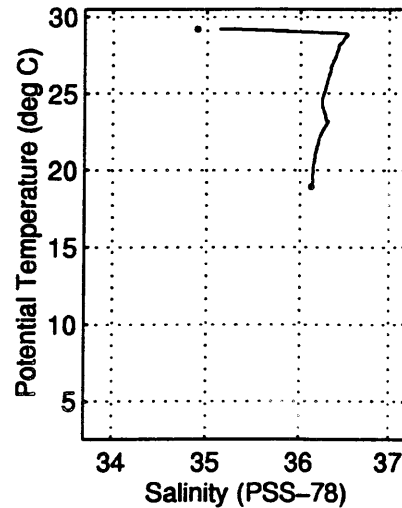
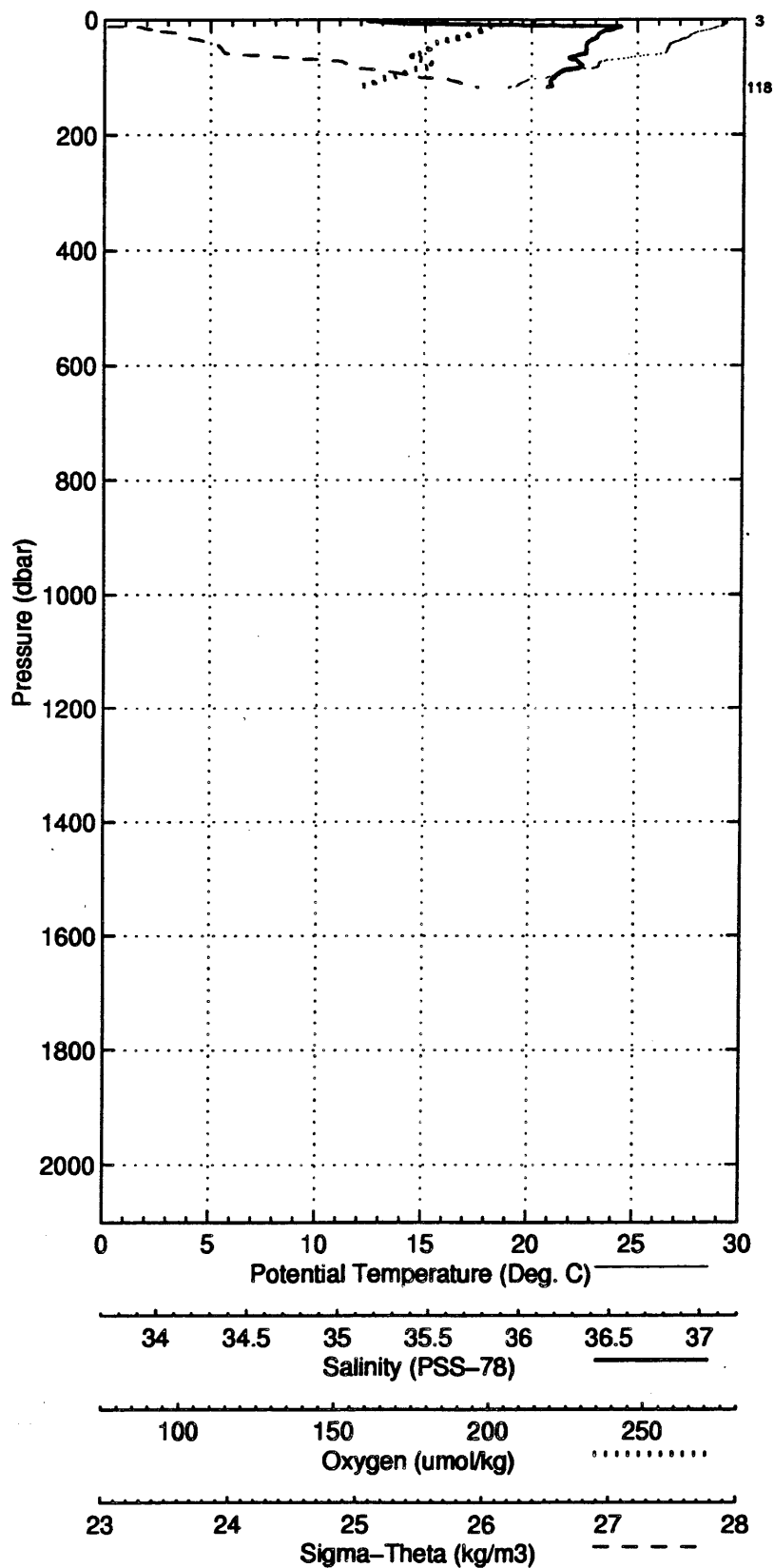


NBC-1 R/V SEWARD JOHNSON
 CTD Station 16 (98016)
 Latitude 5.728N Longitude 51.325W
 19-Nov-1998 23:44Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	29.186	29.186	35.138	212.1	0.006	22.108
10	29.027	29.024	35.959	200.3	0.055	22.779
20	28.097	28.092	36.423	194.9	0.101	23.439
30	27.416	27.410	36.394	189.7	0.144	23.640
40	26.698	26.689	36.342	181.4	0.186	23.833
50	26.427	26.416	36.334	178.8	0.226	23.915
60	26.106	26.092	36.319	176.0	0.266	24.006
70	23.798	23.783	36.264	175.7	0.302	24.669
80	23.157	23.141	36.311	180.0	0.333	24.894
90	21.811	21.793	36.200	172.9	0.363	25.194
100	20.783	20.764	36.161	167.6	0.390	25.449
110	19.510	19.490	36.137	161.0	0.413	25.770

<u>Pressure</u> <u>Dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
3	2	29.188	29.187	34.898	200.8
119	1	18.923	18.902	36.124	154.1

NBC-1 R/V SEWARD JOHNSON
 CTD Station 16 (98016)
 Latitude 5.728 N Longitude 51.325 W
 19-Nov-1998 23:44 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 17 (98017)
Latitude 4.520N Longitude 49.688W
20-Nov-1998 14:33Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m3kg-1</u>	<u>SigT</u> <u>kg/m3</u>
1	28.212	28.211	36.336	193.8	0.005	23.332
10	28.180	28.178	36.335	197.0	0.045	23.344
20	28.130	28.125	36.332	197.3	0.091	23.360
30	27.851	27.844	36.332	197.4	0.136	23.452
40	27.750	27.741	36.334	197.8	0.180	23.488
50	27.561	27.550	36.339	197.7	0.224	23.555
60	27.364	27.350	36.348	197.4	0.267	23.627
70	27.273	27.257	36.347	196.9	0.310	23.657
80	26.656	26.638	36.342	191.4	0.352	23.852
90	25.863	25.843	36.449	190.5	0.390	24.184
100	24.374	24.353	36.329	185.2	0.427	24.550
110	20.324	20.303	36.040	174.3	0.455	25.481
120	16.776	16.757	35.644	167.8	0.478	26.072
130	16.413	16.392	35.904	153.5	0.497	26.358
140	12.809	12.790	35.237	154.1	0.512	26.623
150	11.515	11.496	35.065	156.1	0.526	26.739
160	11.361	11.340	35.050	156.0	0.539	26.756
170	11.289	11.268	35.040	154.7	0.552	26.762
180	11.259	11.237	35.038	153.5	0.565	26.766
190	11.249	11.225	35.038	152.2	0.579	26.769
200	11.230	11.205	35.035	151.7	0.592	26.770
250	10.992	10.961	35.003	150.3	0.658	26.791
300	10.513	10.477	34.949	149.8	0.723	26.836
350	10.061	10.020	34.897	149.9	0.786	26.876
400	9.700	9.654	34.855	150.5	0.848	26.905
450	9.348	9.297	34.823	150.1	0.910	26.940
500	8.368	8.316	34.728	147.0	0.969	27.020
550	8.050	7.993	34.700	147.1	1.024	27.048
600	7.305	7.246	34.672	134.2	1.078	27.134
650	6.630	6.570	34.618	132.6	1.128	27.185
700	6.545	6.480	34.636	128.3	1.177	27.212
750	5.367	5.304	34.540	135.0	1.222	27.282
800	5.176	5.109	34.567	139.0	1.266	27.327
900	4.888	4.814	34.630	147.1	1.347	27.412
1000	4.736	4.655	34.710	158.3	1.420	27.494
1500	4.473	4.348	34.998	241.6	1.699	27.761

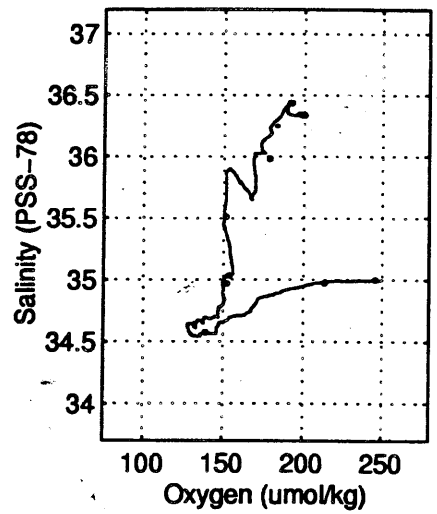
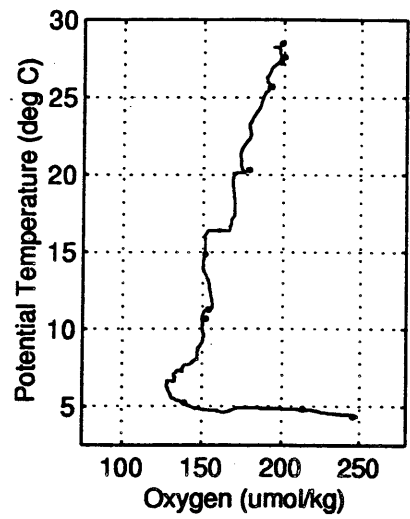
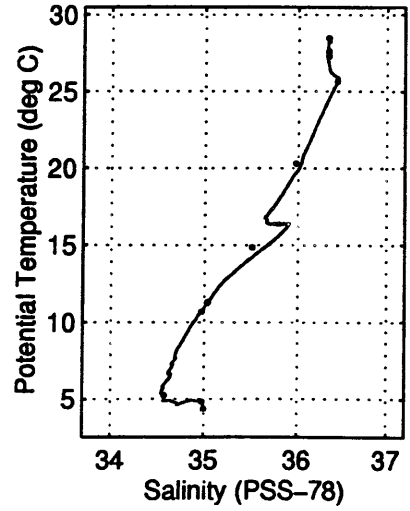
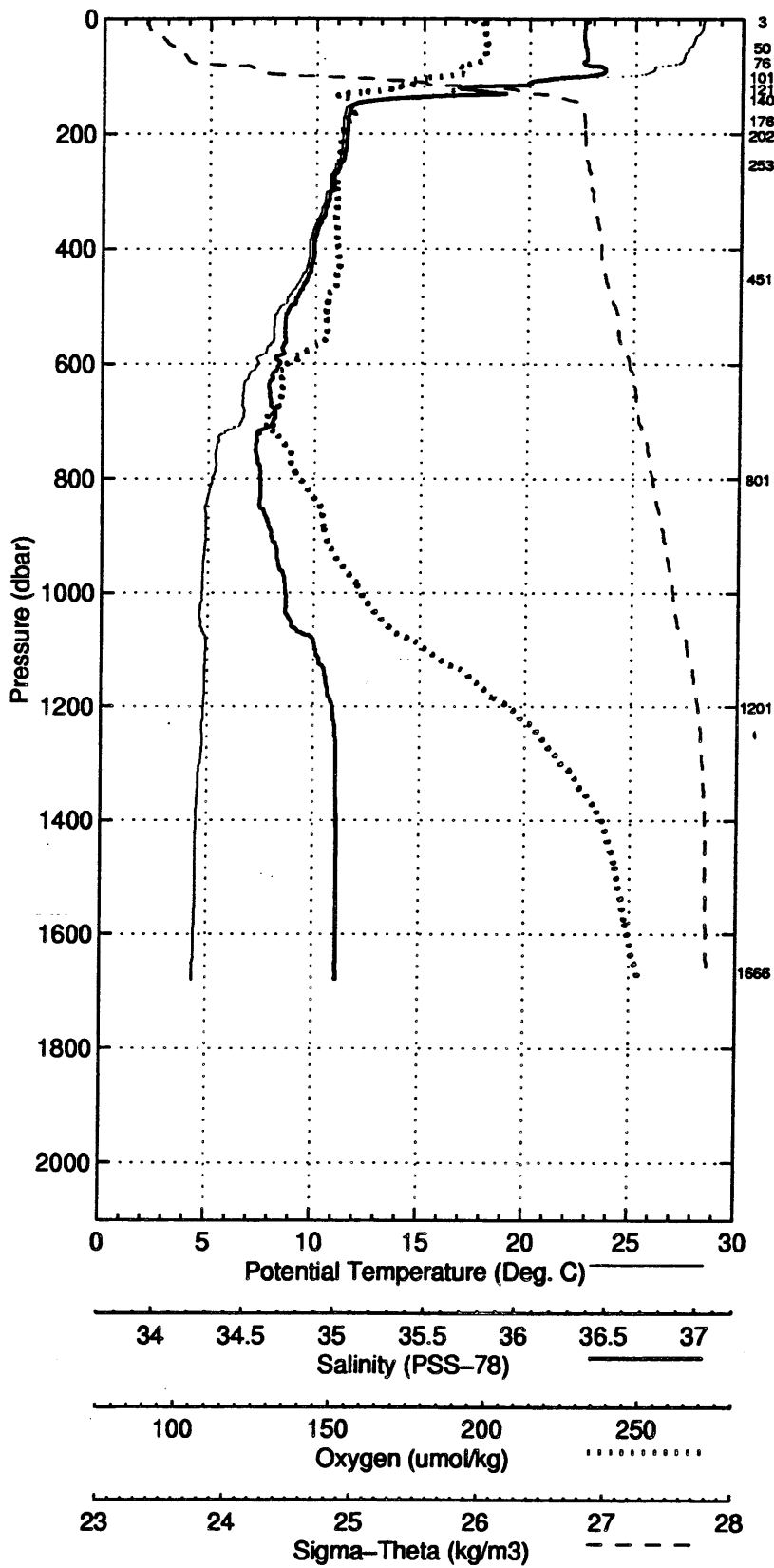
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	13	28.459	28.458	36.334	198.7
51	12	27.591	27.579	36.334	200.1
76	11	27.285	27.268	36.339	198.1
101	10	25.676	25.654	36.435	192.1
122	9	20.308	20.285	35.980	178.4
140	8	14.835	14.814	35.510	151.3
177	7	11.280	11.258	35.036	153.9
203	6	11.239	11.214	35.032	153.8
253	5	10.664	10.633	34.968	152.3
452	4	8.983	NaN	NaN	NaN
801	3	5.231	5.164	34.575	139.0
1201	2	4.826	4.725	34.975	213.6
1667	1	4.351	4.211	35.001	245.9

NBC-1 R/V SEWARD JOHNSON

CTD Station 17 (98017)

Latitude 4.520 N Longitude 49.688 W

20-Nov-1998 14:33 Z

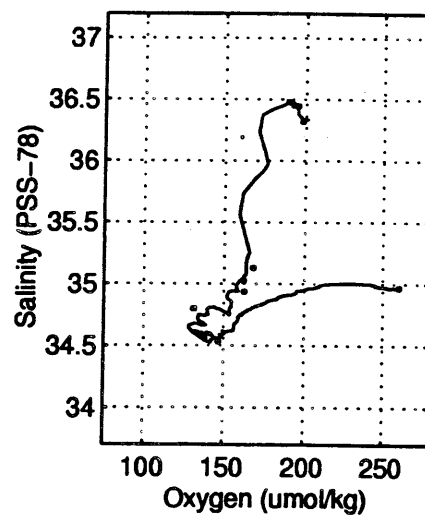
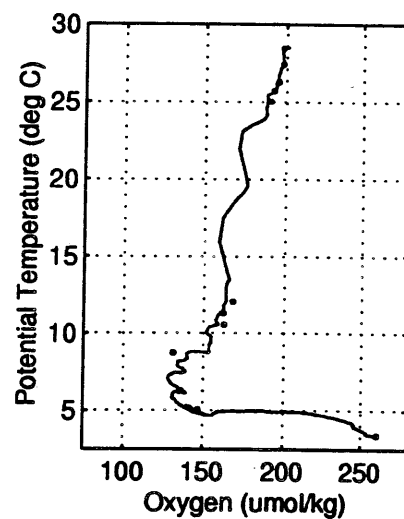
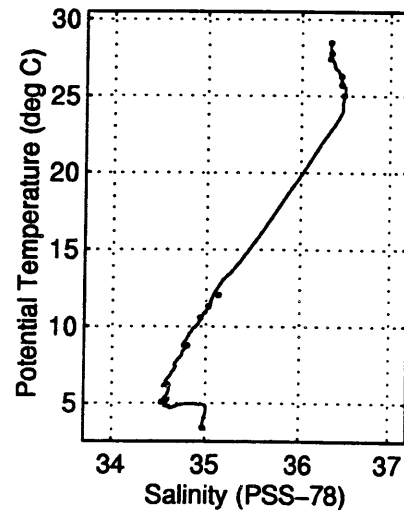
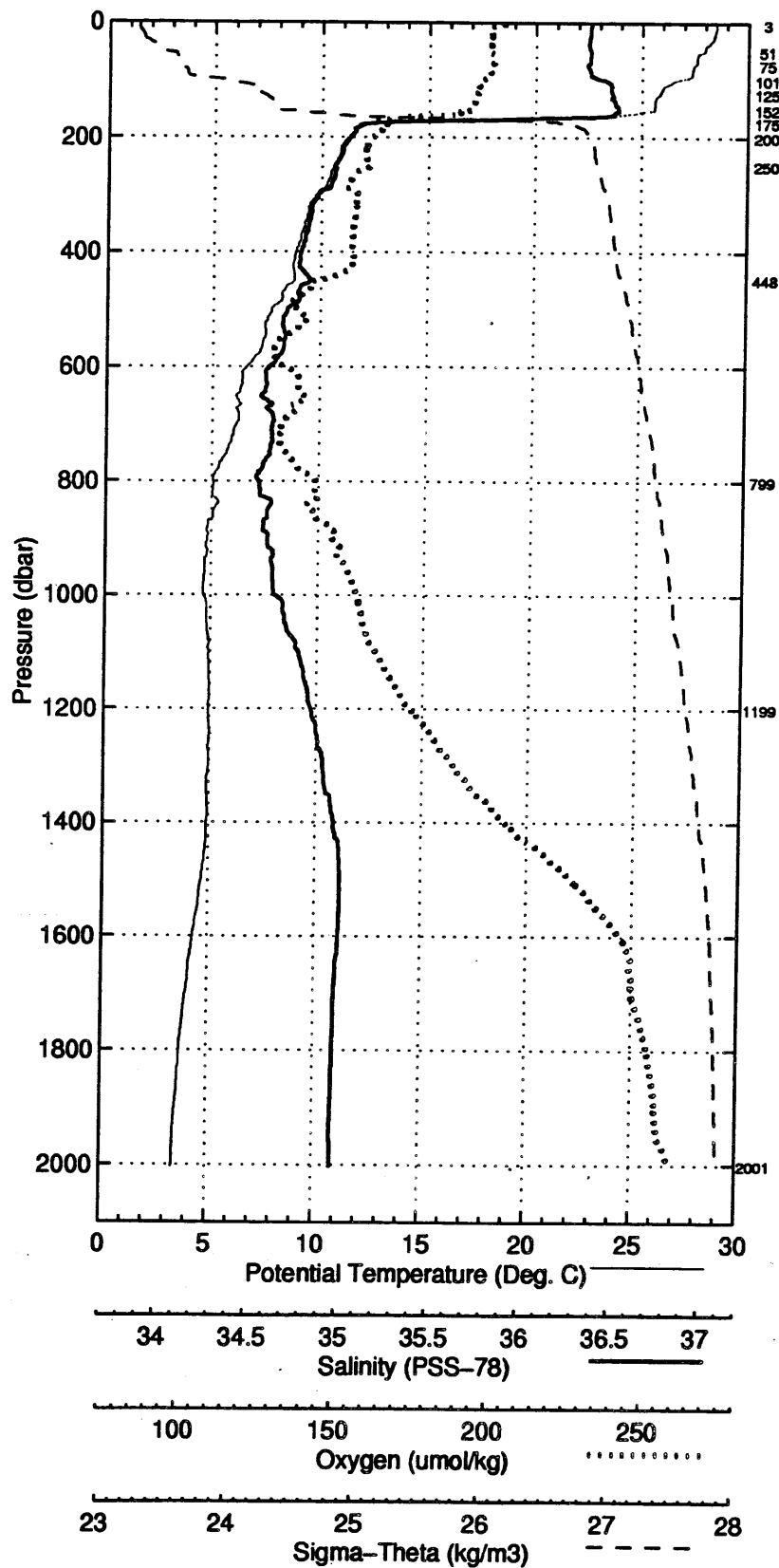


NBC-1 R/V SEWARD JOHNSON
CTD Station 18 (98018)
Latitude 5.500N Longitude 48.319W
21-Nov-1998 03:31Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.499	28.498	36.333	201.5	0.005	23.235
10	28.494	28.492	36.329	197.2	0.046	23.235
20	28.410	28.405	36.328	197.5	0.093	23.264
30	28.344	28.337	36.323	197.5	0.139	23.284
40	28.056	28.047	36.320	197.4	0.184	23.378
50	27.947	27.935	36.330	198.1	0.229	23.422
60	27.602	27.588	36.330	198.3	0.273	23.537
70	27.587	27.571	36.326	198.2	0.317	23.540
80	27.413	27.394	36.321	196.9	0.360	23.594
90	27.371	27.350	36.331	197.2	0.404	23.617
100	26.654	26.632	36.408	195.0	0.446	23.906
110	26.073	26.048	36.449	193.6	0.485	24.122
120	25.921	25.894	36.448	193.4	0.523	24.170
130	25.709	25.680	36.454	192.3	0.561	24.241
140	25.626	25.595	36.468	192.2	0.598	24.279
150	25.587	25.554	36.488	191.6	0.635	24.308
160	24.180	24.146	36.464	187.7	0.670	24.718
170	17.473	17.445	35.733	161.3	0.698	25.977
180	12.005	11.982	35.073	163.5	0.713	26.654
190	11.539	11.514	35.051	162.1	0.727	26.726
200	11.250	11.225	35.025	159.5	0.740	26.759
250	10.560	10.530	34.940	158.8	0.806	26.819
300	9.761	9.726	34.852	155.0	0.868	26.889
350	9.234	9.195	34.800	153.6	0.929	26.936
400	8.846	8.803	34.759	153.5	0.987	26.968
450	8.788	8.739	34.813	141.8	1.045	27.021
500	7.729	7.679	34.687	136.8	1.100	27.083
550	7.397	7.343	34.677	130.8	1.152	27.124
600	6.593	6.537	34.593	132.2	1.203	27.169
650	6.115	6.057	34.548	138.1	1.252	27.196
700	6.123	6.060	34.614	131.7	1.299	27.248
750	5.663	5.598	34.595	132.8	1.344	27.291
800	5.080	5.014	34.538	142.3	1.387	27.315
900	4.822	4.749	34.591	147.9	1.470	27.388
1000	4.669	4.588	34.631	156.2	1.547	27.439
1500	4.688	4.560	35.005	226.0	1.868	27.744
2000	3.411	3.252	34.966	258.3	2.102	27.849

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	13	28.469	28.469	36.328	198.1
51	12	27.798	27.786	36.330	NaN
75	11	27.423	27.406	36.316	197.8
101	10	26.286	26.263	36.444	195.0
125	9	25.719	25.691	36.453	192.3
153	8	25.026	24.993	36.474	190.1
175	7	12.037	12.014	35.128	168.0
201	6	11.288	11.263	35.026	162.3
250	5	10.554	10.524	34.937	162.6
448	4	8.729	8.680	34.800	131.2
800	3	5.063	4.997	34.535	146.8
1200	2	4.936	NaN	NaN	NaN
2001	1	3.411	3.252	34.970	260.4

NBC-1 R/V SEWARD JOHNSON
 CTD Station 18 (98018)
 Latitude 5.500 N Longitude 48.319 W
 21-Nov-1998 03:31 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 19 (98019)
Latitude 7.350N Longitude 47.660W
21-Nov-1998 16:11Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.276	28.275	36.331	193.7	0.005	23.308
10	28.186	28.183	36.327	196.4	0.046	23.335
20	28.103	28.098	36.325	197.2	0.091	23.363
30	28.116	28.109	36.343	197.3	0.136	23.374
40	28.124	28.115	36.362	197.1	0.181	23.387
50	27.840	27.829	36.349	197.3	0.226	23.472
60	27.426	27.412	36.343	197.7	0.269	23.604
70	26.519	26.503	36.364	193.9	0.310	23.911
80	25.783	25.766	36.374	189.0	0.350	24.151
90	25.303	25.283	36.676	184.8	0.386	24.529
100	24.763	24.741	36.802	179.5	0.419	24.791
110	21.525	21.503	36.644	157.5	0.447	25.614
120	19.445	19.424	36.417	144.1	0.469	26.002
130	18.171	18.148	36.257	136.7	0.488	26.205
140	16.900	16.877	36.066	130.6	0.506	26.369
150	16.227	16.203	35.964	129.0	0.522	26.449
160	14.736	14.712	35.742	128.7	0.538	26.614
170	13.696	13.672	35.576	127.0	0.552	26.707
180	12.677	12.652	35.411	125.3	0.565	26.787
190	12.076	12.051	35.310	126.0	0.578	26.826
200	11.515	11.490	35.214	126.8	0.591	26.857
250	9.555	9.527	34.871	139.8	0.651	26.936
300	9.100	9.067	34.870	133.4	0.708	27.012
350	8.603	8.565	34.807	122.3	0.762	27.042
400	8.093	8.052	34.758	123.0	0.816	27.083
450	7.592	7.547	34.705	119.6	0.868	27.115
500	7.205	7.156	34.676	118.7	0.918	27.148
550	6.823	6.772	34.664	119.8	0.967	27.193
600	6.390	6.335	34.629	123.7	1.015	27.223
650	6.062	6.004	34.616	126.0	1.061	27.256
700	5.734	5.674	34.602	128.5	1.105	27.287
750	5.356	5.293	34.585	134.8	1.149	27.320
800	5.043	4.977	34.573	140.1	1.190	27.347
900	4.922	4.848	34.620	144.5	1.271	27.400
1000	5.044	4.960	34.733	150.7	1.346	27.478
1500	4.704	4.576	35.001	224.9	1.660	27.739
2000	3.553	3.392	34.971	257.3	1.901	27.840

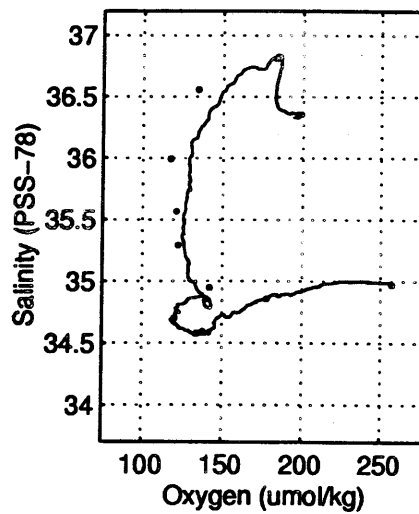
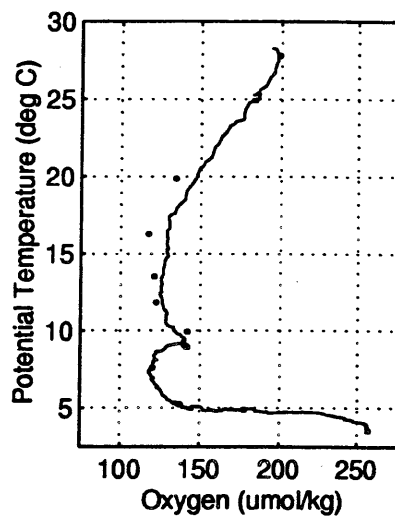
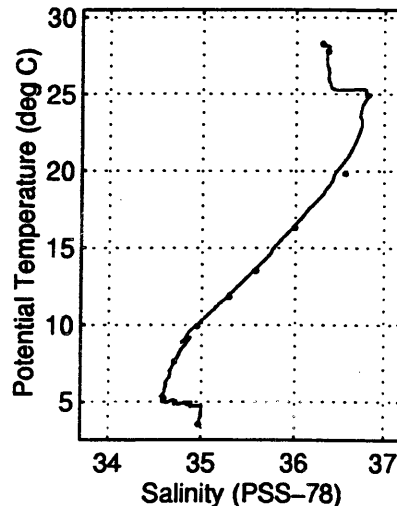
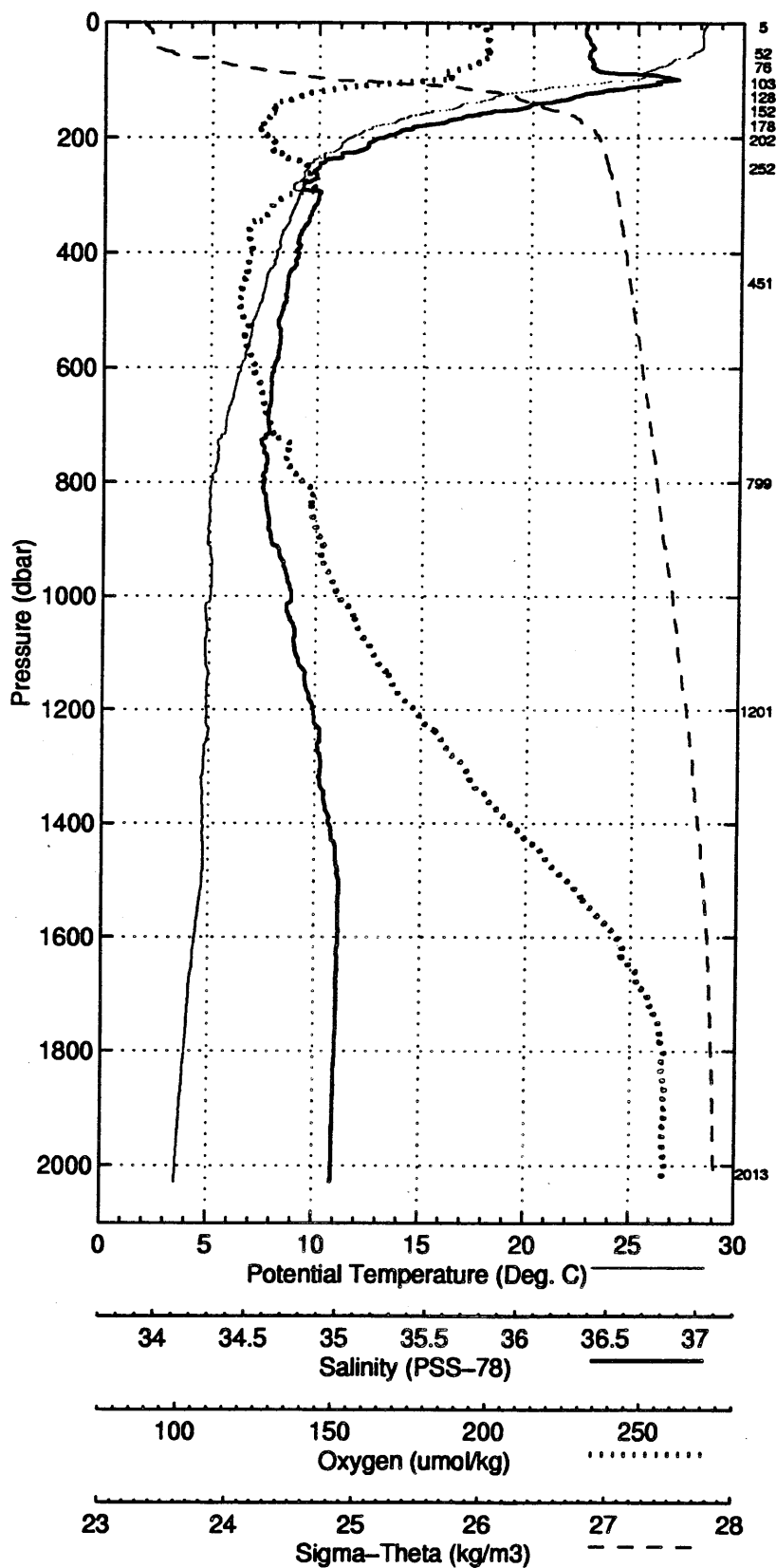
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
6	13	28.261	28.259	36.297	NaN
52	12	27.784	27.771	36.355	199.0
76	11	26.527	NaN	NaN	NaN
104	10	24.914	24.892	36.810	183.3
129	9	19.839	19.815	36.557	134.2
152	8	16.278	16.254	35.993	117.3
179	7	13.504	13.479	35.566	121.1
203	6	11.816	11.790	35.291	122.2
252	5	9.928	9.899	34.947	142.0
451	4	7.611	7.566	34.704	120.5
800	3	5.217	5.150	34.596	138.0
1201	2	4.891	4.790	34.859	177.9
2013	1	3.530	3.368	34.973	257.4

NBC-1 R/V SEWARD JOHNSON

CTD Station 19 (98019)

Latitude 7.350 N Longitude 47.660 W

21-Nov-1998 16:11 Z

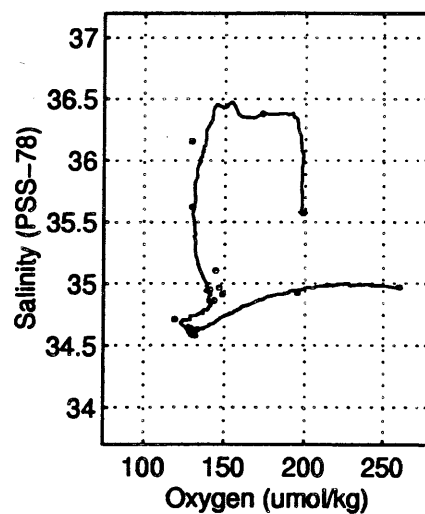
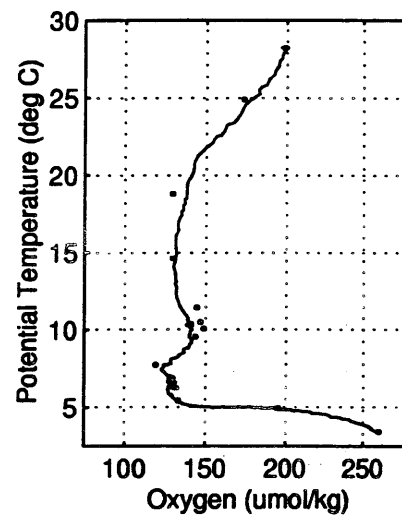
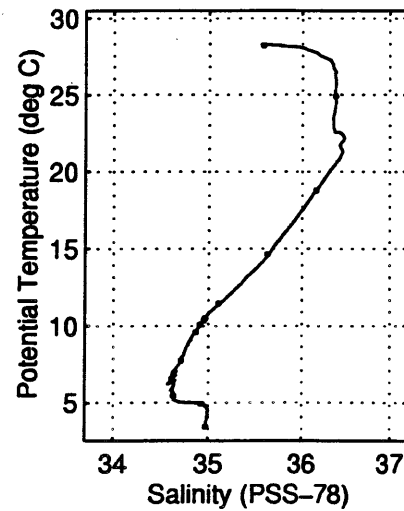
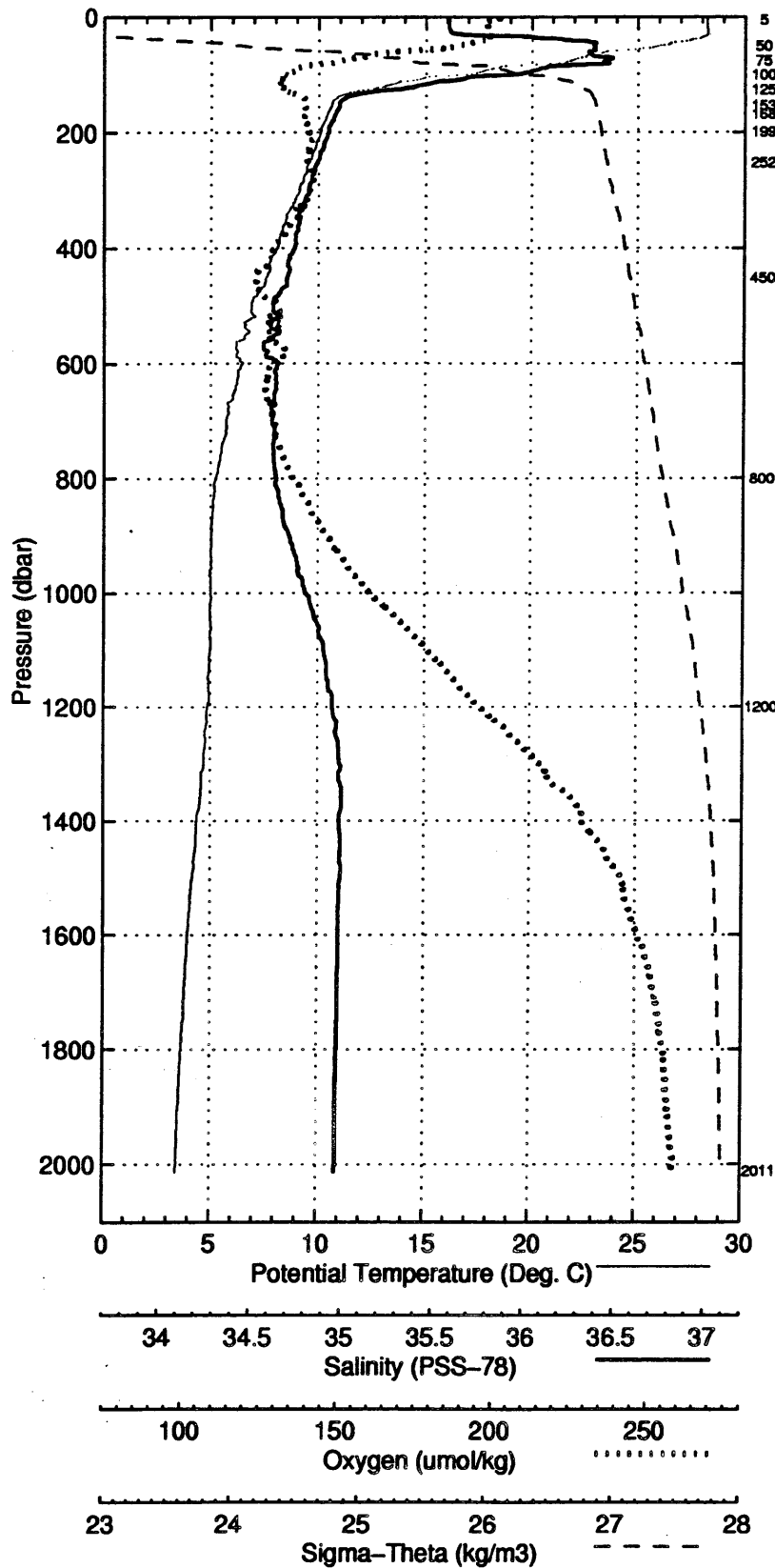


NBC-1 R/V SEWARD JOHNSON
CTD Station 20 (98020)
Latitude 7.205N Longitude 45.754W
22-Nov-1998 04:43Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.234	28.234	35.573	201.1	0.005	22.751
10	28.240	28.238	35.577	196.8	0.051	22.754
20	28.248	28.243	35.578	197.5	0.102	22.753
30	28.253	28.246	35.620	197.8	0.153	22.785
40	27.521	27.512	36.209	196.8	0.200	23.468
50	26.055	26.044	36.378	188.1	0.241	24.065
60	23.566	23.553	36.349	168.5	0.276	24.801
70	22.539	22.525	36.426	156.5	0.306	25.158
80	21.540	21.524	36.435	147.4	0.333	25.448
90	18.105	18.090	36.074	136.8	0.354	26.077
100	16.901	16.885	35.927	132.6	0.373	26.258
110	14.405	14.389	35.608	130.8	0.389	26.578
120	13.093	13.077	35.395	131.8	0.403	26.687
130	11.629	11.613	35.156	133.6	0.416	26.787
140	10.869	10.852	35.013	138.5	0.429	26.816
150	10.625	10.607	34.979	138.6	0.441	26.833
160	10.525	10.506	34.971	139.5	0.454	26.845
170	10.397	10.377	34.955	139.4	0.466	26.856
180	10.295	10.274	34.943	138.0	0.478	26.864
190	10.159	10.136	34.925	140.2	0.490	26.874
200	10.093	10.070	34.920	140.3	0.502	26.882
250	9.575	9.547	34.862	139.7	0.562	26.926
300	9.116	9.083	34.816	140.5	0.621	26.966
350	8.493	8.456	34.766	135.5	0.677	27.026
400	8.084	8.043	34.736	128.8	0.731	27.067
450	7.602	7.557	34.698	124.4	0.783	27.108
500	6.904	6.857	34.622	130.4	0.834	27.147
550	6.629	6.578	34.634	126.6	0.883	27.195
600	6.470	6.415	34.652	129.0	0.930	27.232
650	6.078	6.020	34.632	126.8	0.976	27.267
700	5.726	5.665	34.617	129.4	1.020	27.300
750	5.499	5.434	34.625	131.5	1.062	27.334
800	5.257	5.189	34.641	135.7	1.104	27.376
900	5.036	4.961	34.713	146.3	1.180	27.461
1000	5.008	4.924	34.798	159.7	1.251	27.534
1500	4.188	4.065	34.992	241.2	1.527	27.786
2000	3.453	3.294	34.968	258.2	1.752	27.847

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	13	28.210	28.209	35.571	199.0
51	12	24.894	24.883	36.379	173.1
76	11	18.781	18.768	36.156	129.3
100	10	14.629	14.614	35.620	129.6
126	9	11.433	11.418	35.105	144.6
154	8	10.497	10.479	34.967	146.8
168	7	10.343	10.323	34.950	141.1
199	6	10.065	10.042	34.914	148.7
252	5	9.568	9.539	34.862	143.5
451	4	7.733	7.688	34.711	119.1
800	3	5.442	5.373	34.630	133.1
1200	2	4.927	4.825	34.928	195.4
2012	1	3.428	3.268	34.972	260.5

NBC-1 R/V SEWARD JOHNSON
 CTD Station 20 (98020)
 Latitude 7.205 N Longitude 45.754 W
 22-Nov-1998 04:43 Z

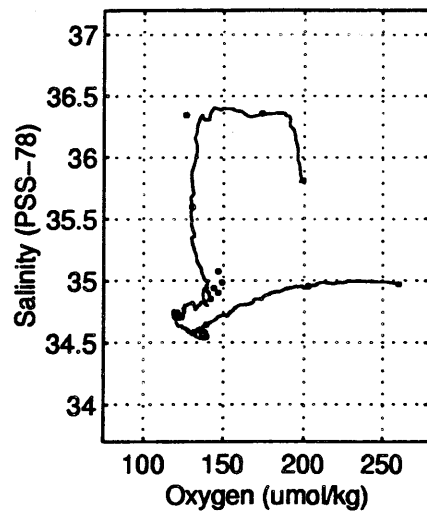
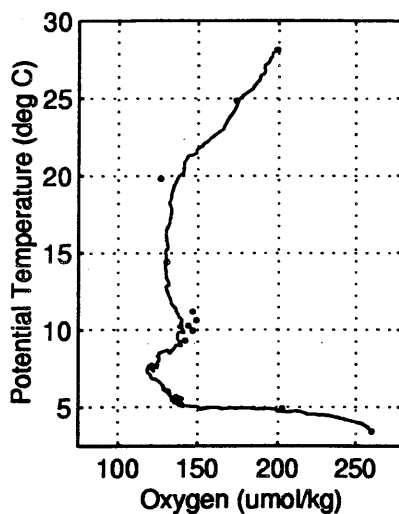
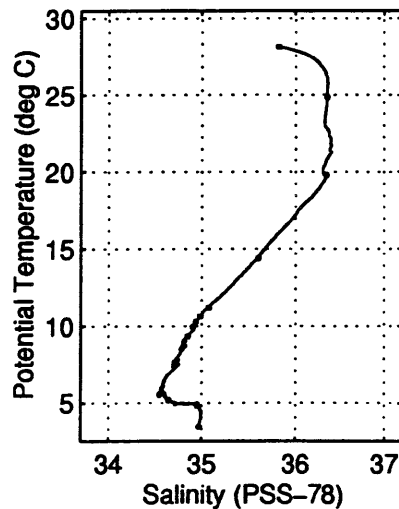
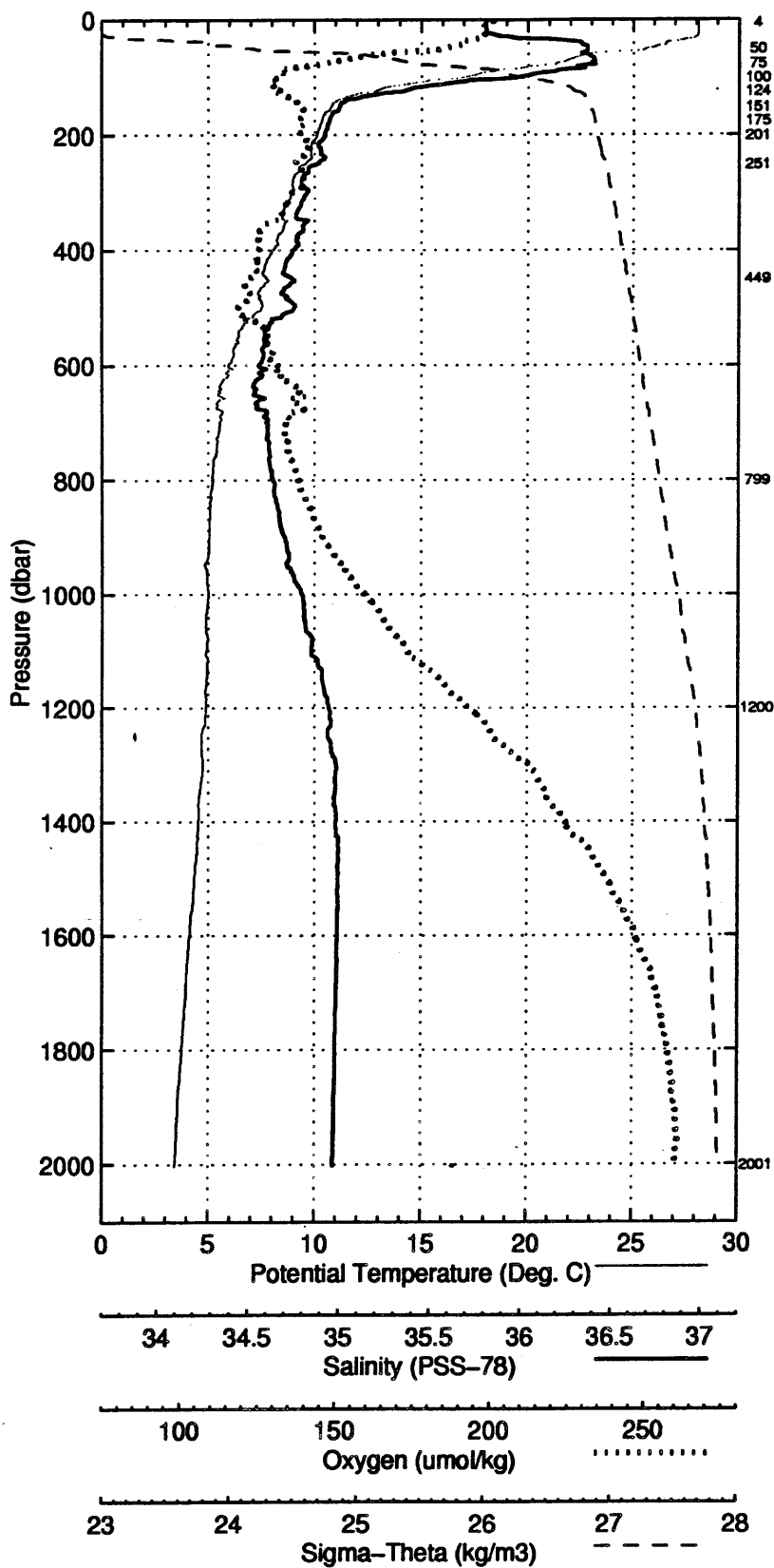


NBC-1 R/V SEWARD JOHNSON
CTD Station 21 (98021)
Latitude 6.766N Longitude 45.743W
22-Nov-1998 10:30Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.067	28.066	35.803	200.4	0.005	22.979
10	28.095	28.092	35.799	197.8	0.049	22.969
20	28.098	28.094	35.802	197.9	0.098	22.971
30	27.978	27.971	35.933	197.3	0.146	23.110
40	26.592	26.583	36.325	190.6	0.190	23.854
50	25.720	25.709	36.361	184.2	0.229	24.157
60	22.845	22.833	36.351	163.5	0.264	25.012
70	21.897	21.883	36.394	152.7	0.291	25.316
80	20.433	20.418	36.328	141.0	0.317	25.669
90	18.352	18.336	36.180	132.6	0.338	26.097
100	16.971	16.954	35.973	132.3	0.356	26.278
110	14.611	14.594	35.609	130.2	0.373	26.535
120	13.137	13.120	35.391	131.4	0.387	26.675
130	11.952	11.935	35.205	133.0	0.401	26.764
140	11.049	11.032	35.036	137.5	0.413	26.801
150	10.831	10.813	35.008	138.5	0.426	26.820
160	10.567	10.548	34.978	140.1	0.439	26.843
170	10.403	10.383	34.955	139.2	0.451	26.854
180	10.303	10.282	34.943	140.2	0.463	26.863
190	10.212	10.190	34.935	137.7	0.475	26.872
200	10.126	10.102	34.925	139.7	0.488	26.880
250	9.557	9.529	34.881	137.5	0.547	26.944
300	8.992	8.959	34.827	136.1	0.604	26.995
350	8.685	8.648	34.825	130.0	0.659	27.043
400	8.013	7.972	34.748	125.7	0.713	27.087
450	7.765	7.719	34.746	122.1	0.764	27.123
500	7.493	7.443	34.753	118.8	0.814	27.169
550	6.422	6.372	34.595	127.7	0.863	27.191
600	5.966	5.913	34.562	131.5	0.910	27.224
650	5.479	5.424	34.532	138.8	0.955	27.261
700	5.532	5.473	34.599	134.1	0.999	27.309
750	5.389	5.325	34.620	134.9	1.041	27.343
800	5.198	5.131	34.638	138.1	1.082	27.381
900	5.063	4.988	34.702	146.1	1.159	27.449
1000	5.003	4.919	34.797	159.6	1.229	27.534
1500	4.347	4.223	34.995	237.7	1.513	27.772
2000	3.438	3.279	34.967	259.8	1.743	27.847

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	13	28.128	28.127	35.812	199.2
50	12	24.844	24.833	36.357	173.8
75	11	19.797	19.783	36.344	126.6
101	10	14.399	14.385	35.595	130.6
124	9	11.192	11.177	35.075	146.9
151	8	10.625	10.607	34.986	149.2
175	7	10.279	10.258	34.940	143.9
201	6	9.953	9.930	34.905	146.6
251	5	9.328	9.300	34.855	142.1
450	4	7.599	7.554	34.715	120.3
800	3	5.190	5.123	34.647	139.2
1200	2	4.904	4.803	34.953	202.6
2001	1	3.439	3.279	34.973	260.6

NBC-1 R/V SEWARD JOHNSON
 CTD Station 21 (98021)
 Latitude 6.766 N Longitude 45.743 W
 22-Nov-1998 10:30 Z

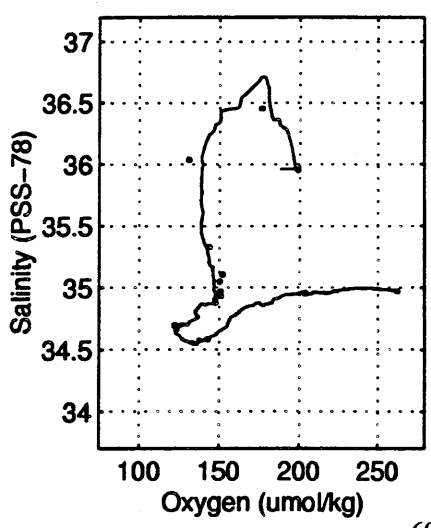
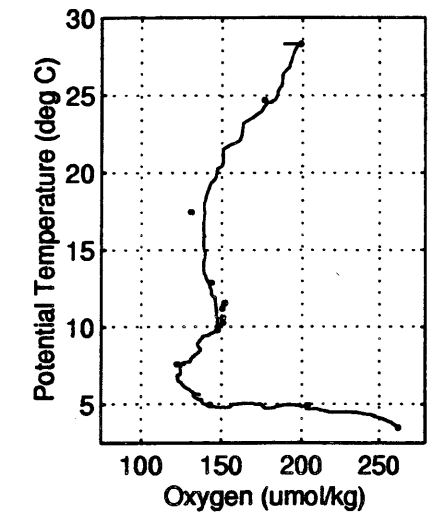
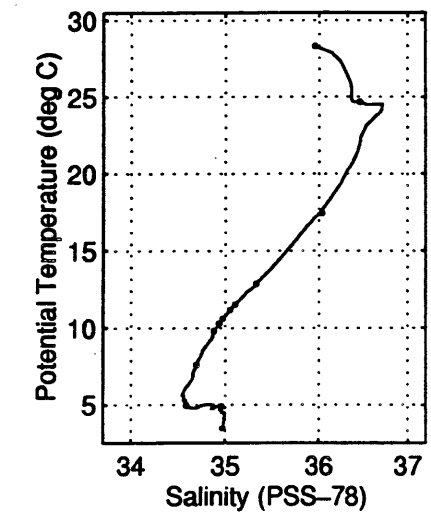
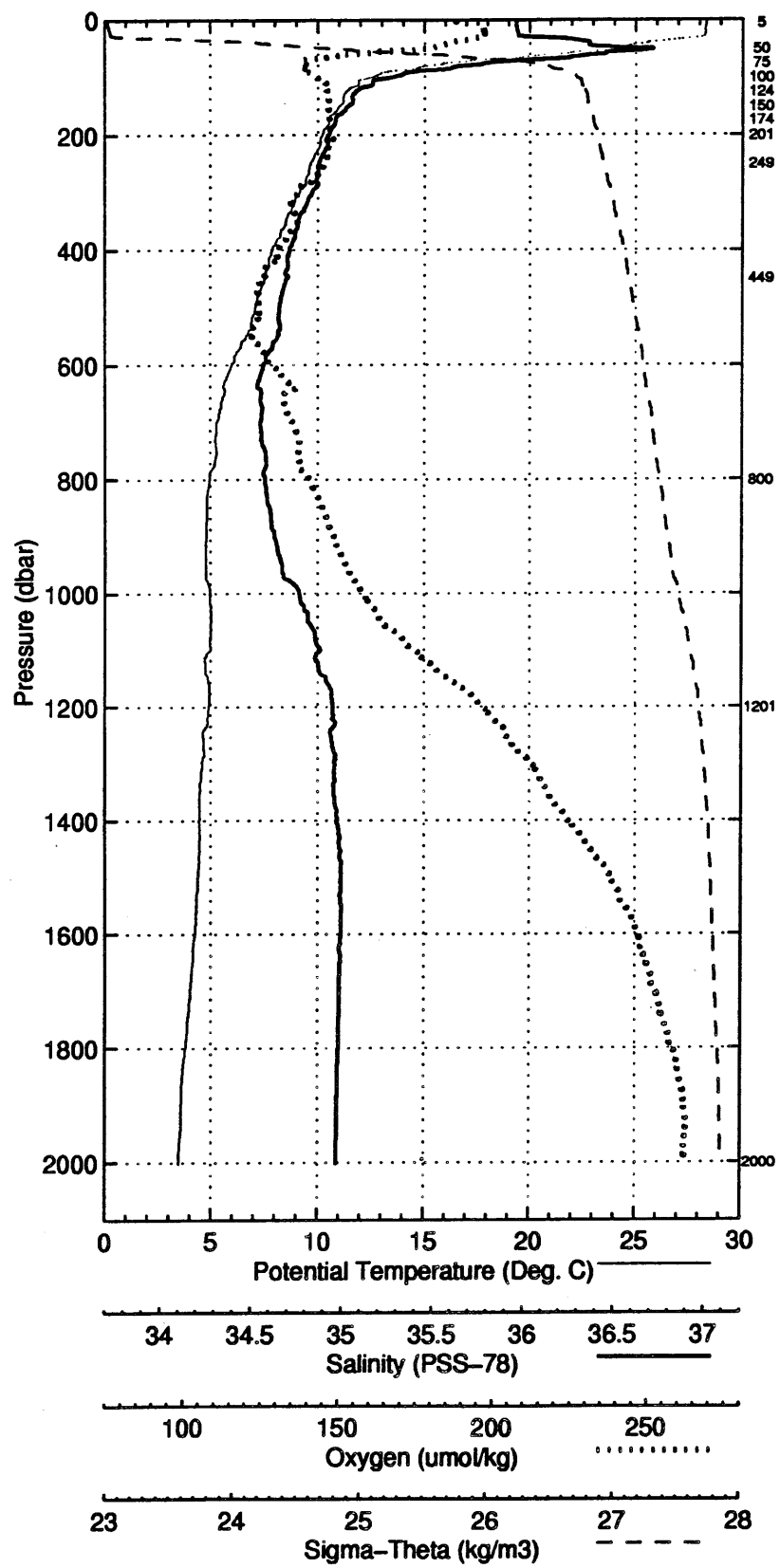


NBC-1 R/V SEWARD JOHNSON
CTD Station 22 (98022)
Latitude 6.001N Longitude 46.000W
22-Nov-1998 16:17Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.299	28.298	35.961	187.7	0.005	23.021
10	28.292	28.290	35.960	196.1	0.048	23.025
20	28.265	28.261	35.965	196.8	0.097	23.038
30	28.093	28.085	36.045	196.1	0.145	23.157
40	25.603	25.594	36.363	186.6	0.186	24.194
50	24.538	24.527	36.711	178.3	0.220	24.784
60	21.500	21.488	36.435	150.5	0.249	25.457
70	17.363	17.352	35.995	139.3	0.270	26.197
80	15.101	15.089	35.663	138.8	0.287	26.467
90	13.290	13.278	35.389	140.0	0.302	26.641
100	12.508	12.494	35.267	142.9	0.316	26.704
110	11.910	11.896	35.167	145.9	0.329	26.742
120	11.461	11.446	35.092	146.2	0.342	26.768
130	11.235	11.219	35.059	146.5	0.355	26.785
140	11.194	11.176	35.058	146.9	0.368	26.792
150	11.018	11.000	35.031	146.6	0.381	26.804
160	10.819	10.799	35.004	146.7	0.394	26.819
170	10.579	10.559	34.967	147.2	0.406	26.833
180	10.529	10.508	34.961	147.7	0.419	26.838
190	10.308	10.286	34.937	147.3	0.431	26.858
200	10.217	10.193	34.927	147.2	0.444	26.867
250	9.680	9.651	34.872	145.3	0.504	26.916
300	9.162	9.129	34.837	136.8	0.562	26.975
350	8.527	8.490	34.762	137.0	0.618	27.018
400	7.888	7.847	34.713	131.0	0.672	27.078
450	7.531	7.487	34.696	124.7	0.724	27.117
500	7.087	7.039	34.659	124.7	0.775	27.152
550	6.653	6.601	34.648	122.5	0.823	27.203
600	5.998	5.945	34.572	128.4	0.870	27.228
650	5.643	5.587	34.559	132.7	0.916	27.263
700	5.305	5.246	34.555	135.3	0.959	27.301
750	5.297	5.234	34.581	137.1	1.002	27.323
800	4.968	4.903	34.580	140.6	1.043	27.361
900	4.808	4.735	34.632	148.6	1.122	27.422
1000	4.982	4.898	34.766	158.2	1.195	27.511
1500	4.411	4.286	34.994	237.9	1.479	27.764
2000	3.472	3.313	34.969	262.3	1.713	27.846

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	13	28.308	28.307	35.952	199.0
50	12	24.682	24.671	36.455	176.4
75	11	17.434	17.421	36.035	130.7
100	10	12.874	12.860	35.326	143.8
125	9	11.537	11.521	35.107	151.6
150	8	11.174	11.155	35.052	150.2
174	7	10.600	10.579	34.969	150.5
201	6	10.273	10.249	34.933	150.5
250	5	9.799	9.771	34.880	147.5
449	4	7.593	7.549	34.695	122.3
801	3	4.953	4.887	34.585	142.9
1201	2	4.927	4.825	34.955	203.7
2001	1	3.473	3.313	34.973	262.3

NBC-1 R/V SEWARD JOHNSON
CTD Station 22 (98022)
Latitude 6.001 N Longitude 46.000 W
22-Nov-1998 16:17 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 23 (98023)
Latitude 5.261N Longitude 46.310W
22-Nov-1998 21:39Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.498	28.498	35.215	203.3	0.005	22.395
10	28.503	28.500	35.216	199.7	0.054	22.396
20	28.509	28.504	35.228	200.1	0.109	22.404
30	28.145	28.137	36.187	202.1	0.160	23.247
40	26.616	26.607	36.452	195.3	0.202	23.943
50	25.128	25.118	36.542	185.3	0.239	24.476
60	24.210	24.198	36.569	176.5	0.272	24.776
70	22.253	22.239	36.608	162.2	0.301	25.378
80	18.435	18.421	36.006	149.8	0.324	25.942
90	16.173	16.159	35.763	146.4	0.342	26.302
100	15.060	15.045	35.635	144.4	0.359	26.456
110	12.719	12.704	35.264	145.3	0.374	26.660
120	11.810	11.794	35.127	146.9	0.387	26.731
130	11.486	11.470	35.083	146.8	0.401	26.757
140	11.287	11.270	35.057	147.2	0.414	26.774
150	11.103	11.085	35.030	147.4	0.427	26.788
160	10.944	10.924	35.010	147.9	0.440	26.801
170	10.873	10.852	34.999	148.2	0.452	26.806
180	10.757	10.735	34.985	149.1	0.465	26.816
190	10.595	10.572	34.967	148.5	0.478	26.831
200	10.478	10.455	34.954	148.2	0.490	26.842
250	10.184	10.155	34.922	149.6	0.552	26.870
300	9.835	9.800	34.890	147.3	0.613	26.906
350	9.100	9.061	34.836	134.4	0.672	26.986
400	8.402	8.360	34.755	133.1	0.728	27.034
450	7.692	7.647	34.696	122.4	0.782	27.094
500	7.087	7.039	34.650	123.4	0.833	27.145
550	6.588	6.537	34.596	132.3	0.883	27.171
600	6.265	6.211	34.589	129.4	0.931	27.208
650	5.985	5.928	34.575	131.5	0.978	27.233
700	5.623	5.563	34.553	135.2	1.024	27.261
750	5.608	5.543	34.602	132.5	1.068	27.303
800	5.476	5.408	34.631	133.3	1.111	27.343
900	4.824	4.751	34.618	145.3	1.191	27.410
1000	4.762	4.681	34.678	153.8	1.267	27.466
1500	4.538	4.412	34.974	223.7	1.574	27.735
2000	3.507	3.347	34.970	262.1	1.815	27.843

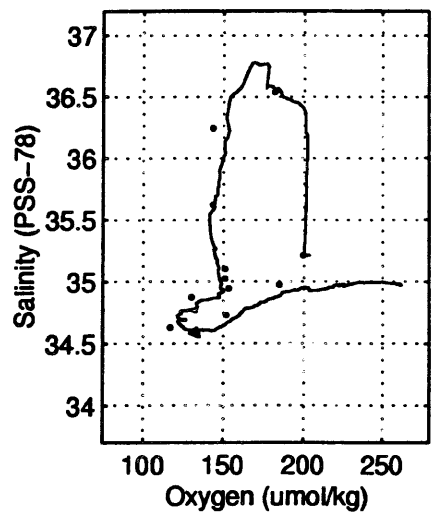
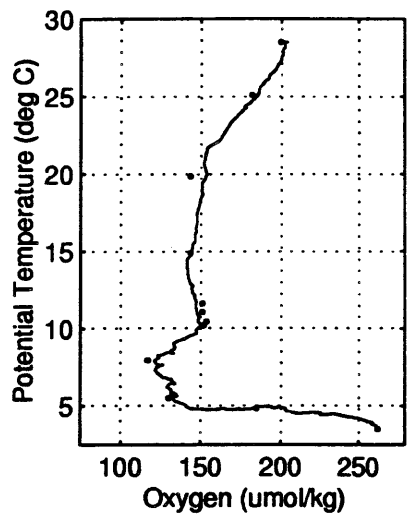
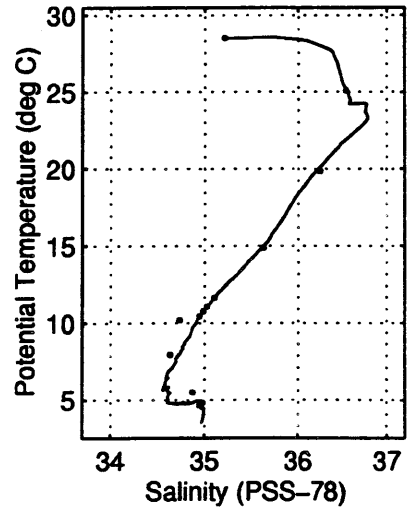
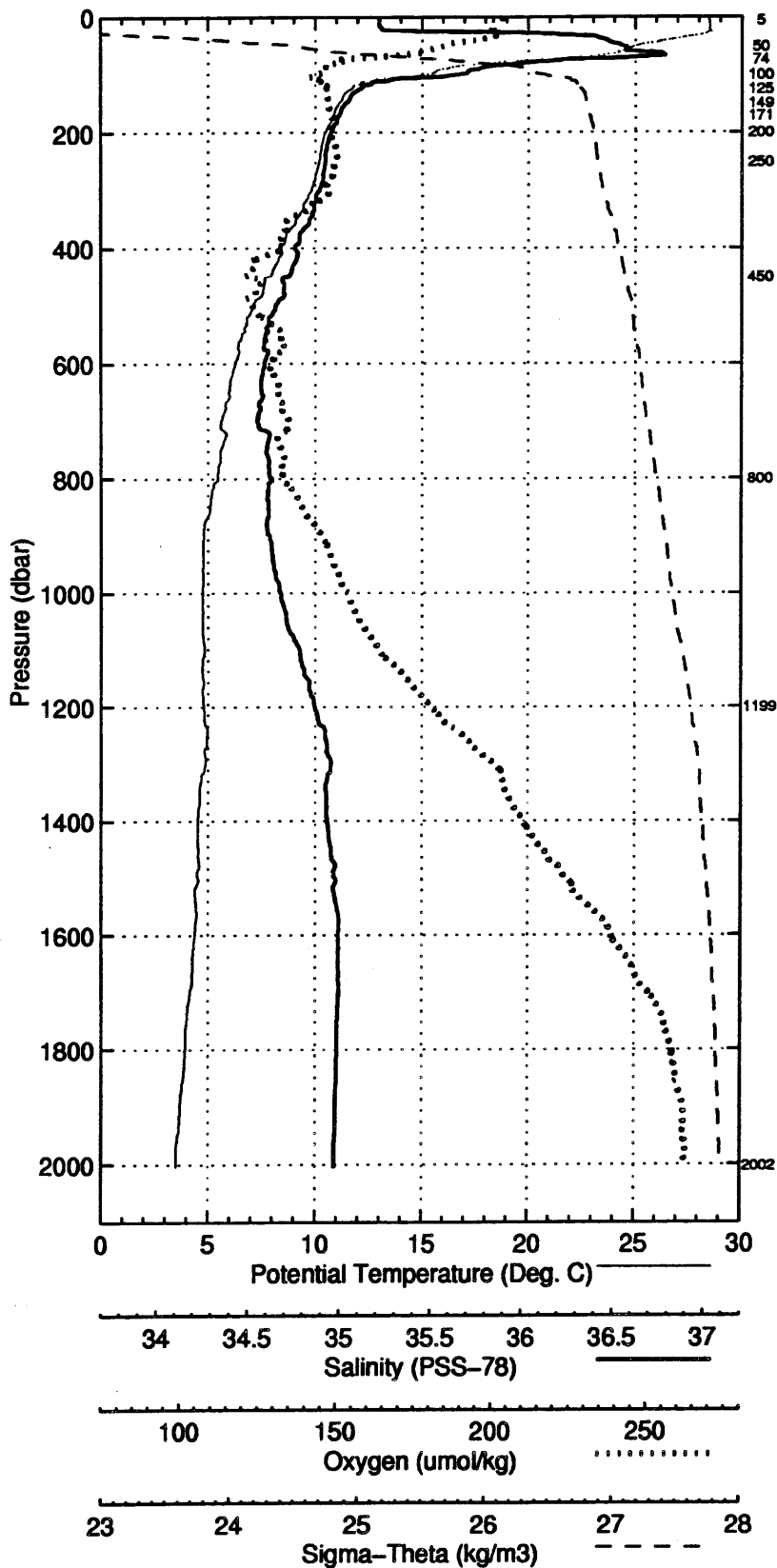
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
6	13	28.502	28.500	35.212	199.6
51	12	25.073	25.062	36.537	181.7
74	11	19.849	19.835	36.244	143.1
100	10	14.871	14.856	35.619	143.1
125	9	11.632	11.616	35.104	151.2
150	8	11.068	11.050	35.023	151.2
171	7	10.773	10.752	34.985	NaN
200	6	10.443	10.419	34.946	153.2
251	5	10.181	10.151	34.731	151.6
450	4	7.947	7.901	34.630	117.0
800	3	5.491	5.422	34.875	130.0
1200	2	4.827	4.726	34.975	184.7
2002	1	3.500	NaN	NaN	262.6

NBC-1 R/V SEWARD JOHNSON

CTD Station 23 (98023)

Latitude 5.261 N Longitude 46.310 W

22-Nov-1998 21:39 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 24 (98024)
Latitude 4.413N Longitude 46.652W
23-Nov-1998 05:08Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.029	28.028	36.285	203.0	0.005	23.354
10	28.028	28.026	36.286	199.2	0.045	23.357
20	28.027	28.022	36.287	199.9	0.090	23.359
30	28.032	28.025	36.288	199.6	0.136	23.360
40	28.032	28.022	36.299	199.1	0.181	23.370
50	27.969	27.957	36.329	198.7	0.226	23.415
60	27.675	27.661	36.333	198.7	0.270	23.515
70	27.150	27.134	36.336	197.9	0.313	23.689
80	26.870	26.852	36.361	194.9	0.355	23.799
90	26.570	26.550	36.383	191.5	0.396	23.912
100	25.156	25.134	36.434	183.6	0.434	24.393
110	24.833	24.809	36.402	180.8	0.470	24.468
120	20.357	20.334	36.189	173.5	0.500	25.587
130	18.845	18.821	36.026	177.3	0.523	25.858
140	17.597	17.573	35.878	176.5	0.543	26.057
150	16.586	16.561	35.750	175.4	0.563	26.201
160	16.390	16.364	35.720	176.4	0.581	26.225
170	16.129	16.102	35.689	175.1	0.600	26.262
180	15.211	15.184	35.557	174.0	0.617	26.367
190	14.698	14.670	35.492	171.9	0.634	26.431
200	14.427	14.397	35.522	162.8	0.650	26.513
250	11.215	11.183	35.116	143.0	0.721	26.839
300	10.248	10.213	35.082	122.9	0.781	26.986
350	9.059	9.021	34.889	122.7	0.836	27.034
400	7.758	7.718	34.695	133.1	0.890	27.082
450	7.294	7.250	34.655	131.9	0.942	27.118
500	7.189	7.141	34.671	128.3	0.992	27.147
550	6.481	6.430	34.611	128.8	1.041	27.197
600	5.884	5.832	34.564	131.7	1.088	27.236
650	5.646	5.590	34.560	132.8	1.133	27.263
700	5.404	5.345	34.566	133.9	1.177	27.298
750	5.270	5.208	34.584	136.9	1.220	27.329
800	5.025	4.959	34.586	139.9	1.261	27.360
900	4.848	4.774	34.644	148.4	1.339	27.427
1000	4.729	4.647	34.716	160.8	1.412	27.499
1500	4.530	4.404	34.996	232.3	1.714	27.753
2000	3.487	3.328	34.970	262.1	1.950	27.846

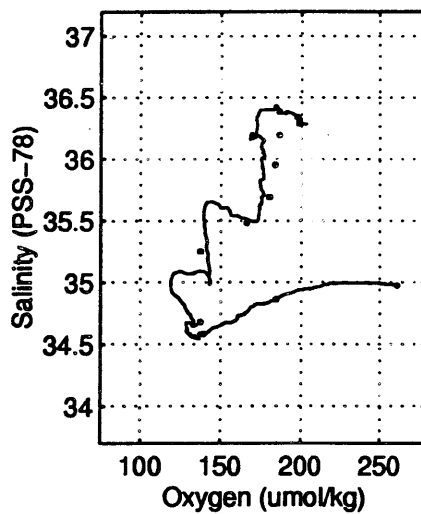
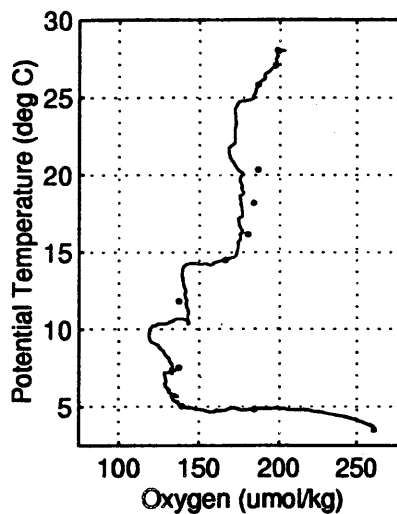
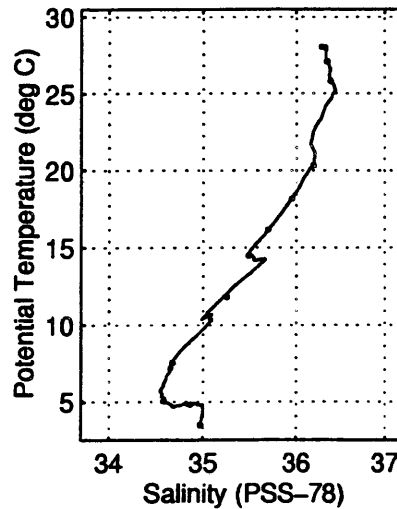
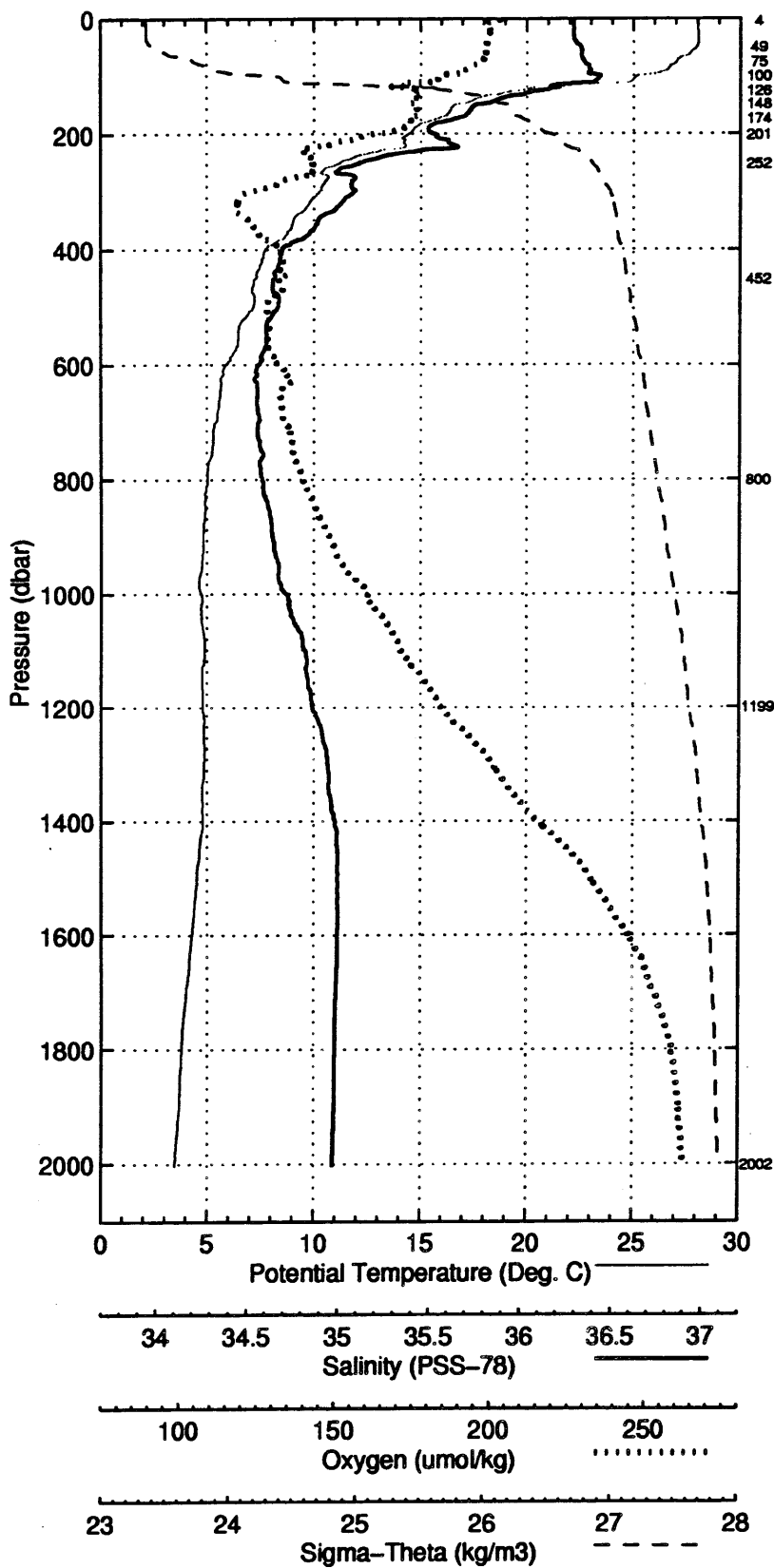
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	13	28.009	28.008	36.286	198.6
50	12	28.000	27.988	36.316	198.7
76	11	27.082	27.065	36.343	197.3
101	10	25.816	25.794	36.383	186.2
126	9	20.328	20.304	36.192	186.5
148	8	18.179	18.153	35.952	183.6
174	7	16.160	16.132	35.690	180.2
202	6	14.483	14.453	35.482	166.3
252	5	11.815	11.782	35.249	137.3
453	4	7.524	7.479	34.681	137.4
801	3	5.044	4.978	34.585	139.4
1200	2	4.825	4.725	34.863	184.5
2002	1	3.487	3.327	34.974	261.3

NBC-1 R/V SEWARD JOHNSON

CTD Station 24 (98024)

Latitude 4.413 N Longitude 46.652 W

23-Nov-1998 05:08 Z

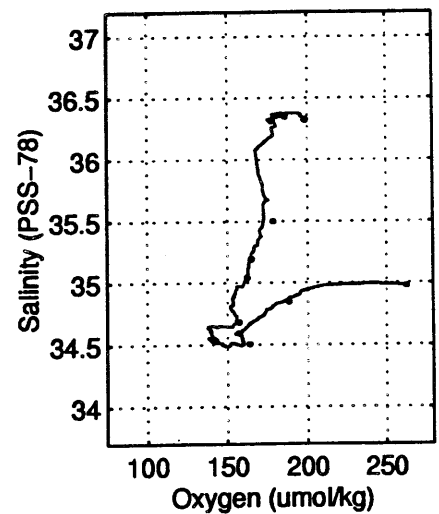
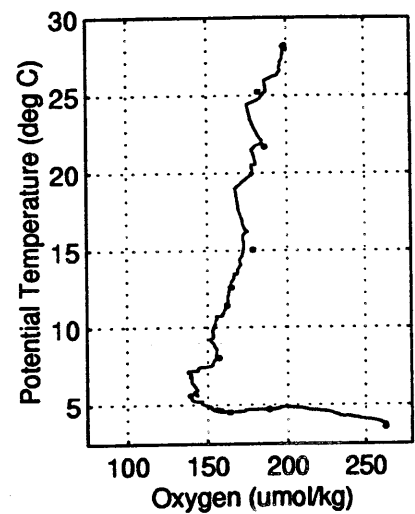
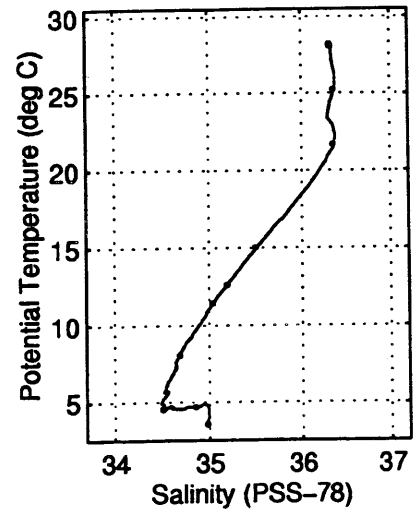
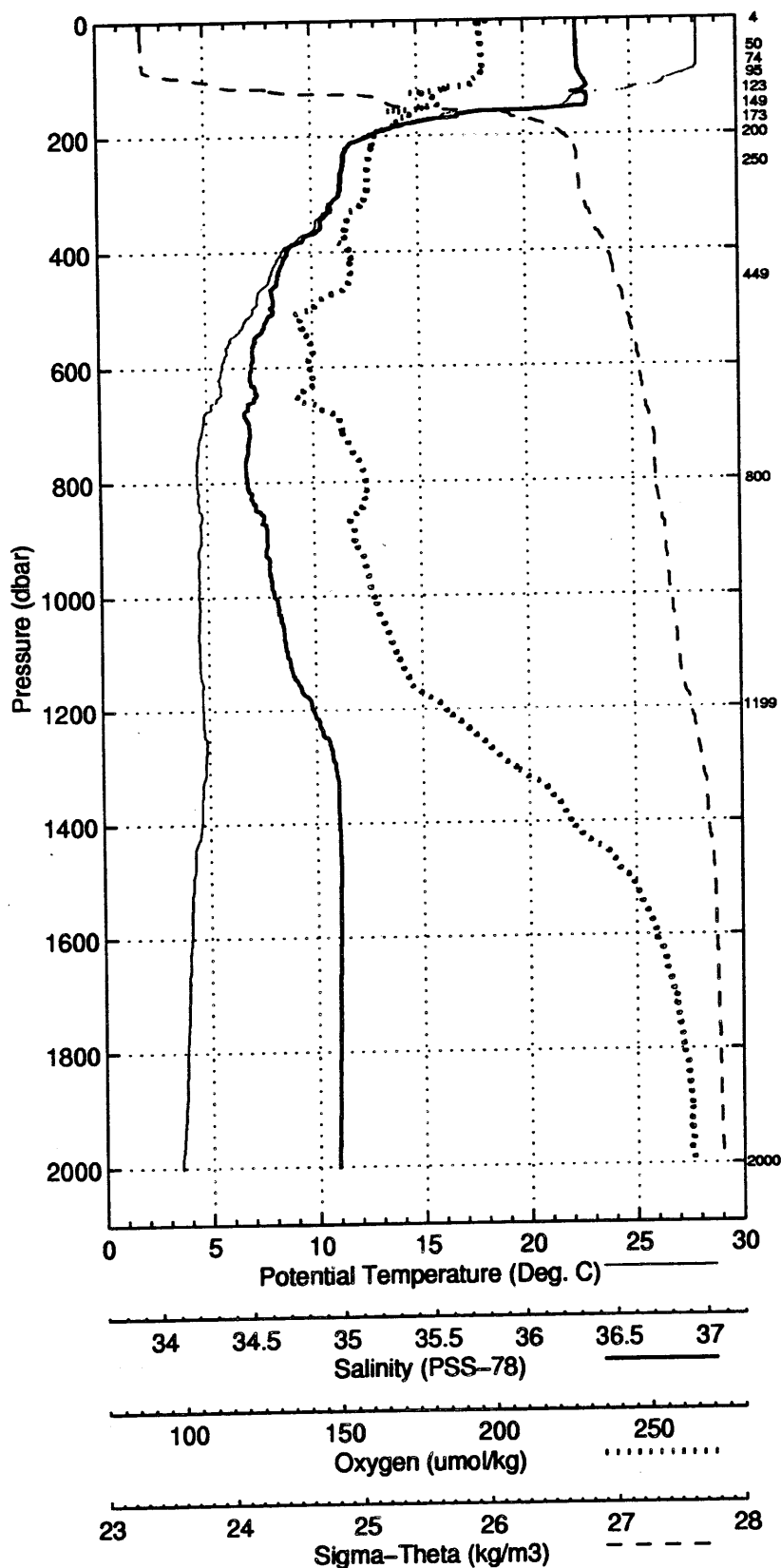


NBC-1 R/V SEWARD JOHNSON
CTD Station 25 (98025)
Latitude 3.751N Longitude 46.915W
23-Nov-1998 11:11Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m²/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.140	28.140	36.318	200.1	0.005	23.343
10	28.137	28.135	36.317	197.3	0.045	23.344
20	28.139	28.134	36.318	197.7	0.091	23.346
30	28.140	28.133	36.318	197.9	0.136	23.347
40	28.140	28.131	36.319	198.1	0.181	23.349
50	28.141	28.129	36.320	198.2	0.227	23.351
60	28.145	28.131	36.322	198.3	0.272	23.353
70	28.144	28.127	36.323	198.4	0.318	23.356
80	28.139	28.120	36.325	198.6	0.364	23.361
90	27.925	27.904	36.332	197.8	0.409	23.437
100	27.125	27.102	36.346	196.1	0.453	23.709
110	26.567	26.542	36.367	195.9	0.494	23.904
120	25.174	25.148	36.364	186.0	0.532	24.337
130	22.640	22.613	36.366	180.9	0.566	25.091
140	22.136	22.108	36.378	183.8	0.594	25.244
150	21.768	21.739	36.369	180.7	0.621	25.342
160	16.762	16.736	35.757	172.0	0.644	26.166
170	15.527	15.501	35.580	172.7	0.663	26.314
180	14.040	14.013	35.376	171.0	0.679	26.481
190	13.100	13.073	35.257	166.3	0.695	26.583
200	12.578	12.551	35.190	163.5	0.710	26.636
250	11.433	11.401	35.044	161.6	0.779	26.743
300	11.237	11.199	35.020	161.4	0.847	26.762
350	10.214	10.173	34.918	154.9	0.912	26.866
400	8.601	8.558	34.730	155.9	0.972	26.984
450	7.985	7.939	34.675	155.3	1.029	27.035
500	7.234	7.186	34.648	143.2	1.082	27.122
550	6.172	6.122	34.552	142.4	1.131	27.189
600	5.763	5.712	34.531	142.8	1.178	27.225
650	5.631	5.575	34.558	138.2	1.224	27.264
700	4.845	4.789	34.517	152.2	1.267	27.323
750	4.601	4.542	34.507	156.1	1.308	27.342
800	4.535	4.472	34.504	160.0	1.348	27.349
900	4.687	4.614	34.610	156.4	1.427	27.418
1000	4.547	4.467	34.646	162.2	1.502	27.463
1500	4.182	4.060	34.994	244.4	1.799	27.788
2000	3.565	3.404	34.972	264.0	2.031	27.840

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	13	28.180	28.179	36.321	198.9
50	12	28.157	28.145	36.320	198.6
75	11	28.158	28.140	36.321	198.7
96	10	28.040	28.017	36.326	198.9
123	9	25.232	25.205	36.359	182.0
150	8	21.688	21.659	36.347	185.9
174	7	15.035	15.009	35.498	178.4
200	6	12.601	12.574	35.191	164.8
250	5	11.429	11.398	35.040	162.4
450	4	8.042	7.995	34.685	157.3
801	3	4.529	4.467	34.507	163.8
1199	2	4.710	4.610	34.849	188.1
2001	1	3.565	3.404	34.977	262.7

NBC-1 R/V SEWARD JOHNSON
 CTD Station 25 (98025)
 Latitude 3.751 N Longitude 46.915 W
 23-Nov-1998 11:11 Z

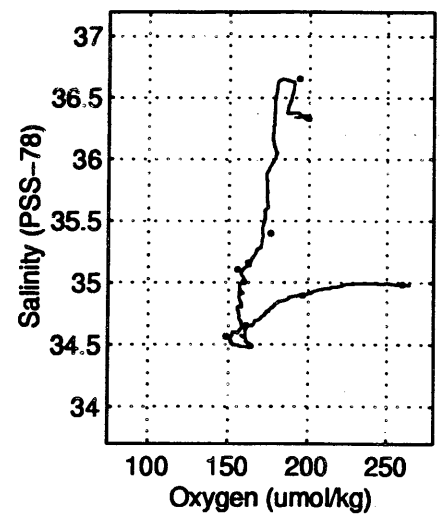
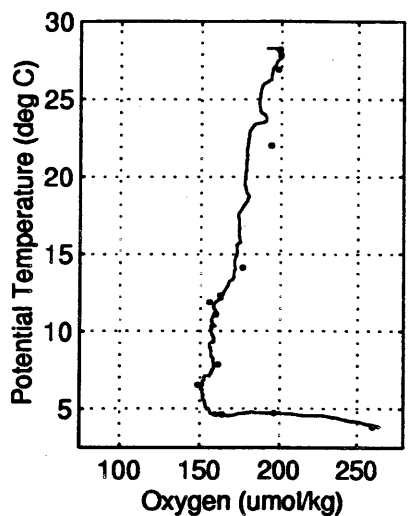
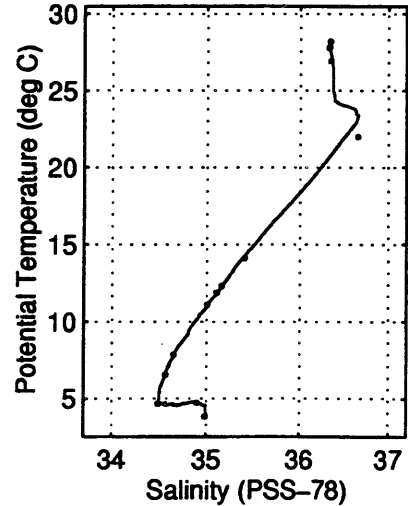
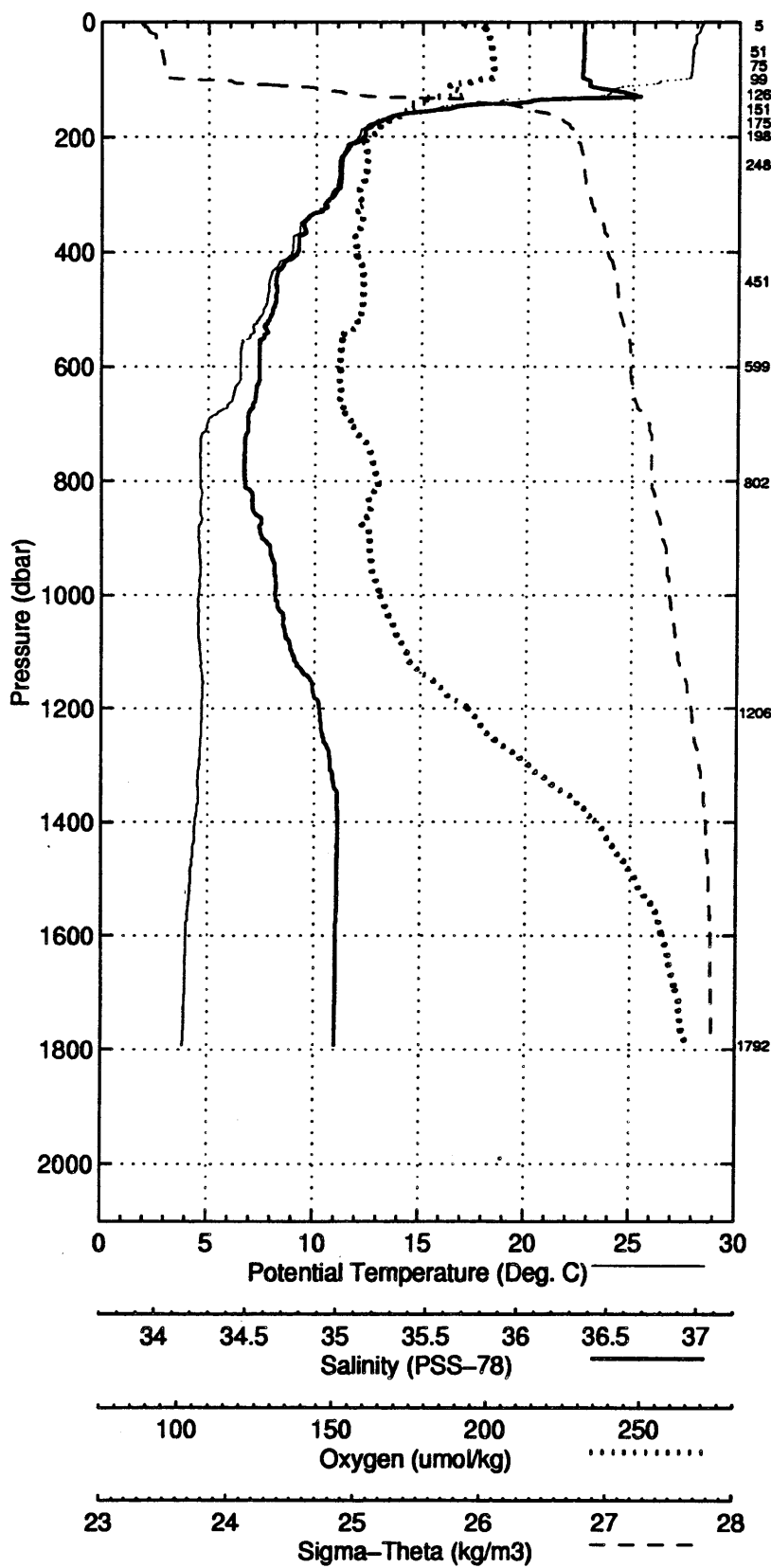


NBC-1 R/V SEWARD JOHNSON
CTD Station 26 (98026)
Latitude 3.078N Longitude 47.150W
23-Nov-1998 19:54Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg-1</u>	<u>SigT</u> <u>kg/m3</u>
1	28.272	28.271	36.340	190.7	0.005	23.316
10	28.169	28.167	36.340	197.3	0.045	23.351
20	28.058	28.053	36.339	198.1	0.091	23.389
30	27.965	27.958	36.339	199.3	0.135	23.420
40	27.900	27.891	36.338	199.5	0.180	23.442
50	27.825	27.813	36.337	199.9	0.224	23.468
60	27.805	27.791	36.337	200.2	0.269	23.476
70	27.782	27.766	36.336	200.3	0.313	23.484
80	27.764	27.745	36.334	200.3	0.357	23.490
90	27.733	27.712	36.332	200.4	0.402	23.500
100	27.197	27.174	36.351	196.4	0.446	23.689
110	25.229	25.204	36.371	186.7	0.485	24.324
120	24.032	24.006	36.508	189.1	0.518	24.791
130	23.397	23.370	36.654	183.6	0.549	25.090
140	18.421	18.396	36.007	178.8	0.572	25.952
150	15.773	15.750	35.614	174.6	0.591	26.284
160	13.866	13.843	35.345	170.9	0.607	26.493
170	12.936	12.913	35.238	167.1	0.623	26.600
180	12.404	12.380	35.175	163.9	0.637	26.657
190	12.100	12.075	35.136	163.2	0.651	26.686
200	12.007	11.981	35.129	161.0	0.665	26.699
250	11.076	11.044	35.005	159.7	0.733	26.778
300	10.716	10.679	34.968	156.8	0.799	26.815
350	9.288	9.249	34.800	158.0	0.862	26.928
400	8.885	8.841	34.765	156.6	0.921	26.967
450	7.848	7.803	34.651	158.8	0.977	27.036
500	7.573	7.523	34.634	158.1	1.032	27.064
550	6.924	6.872	34.584	152.5	1.085	27.116
600	6.510	6.454	34.561	151.3	1.135	27.154
650	6.194	6.136	34.543	151.4	1.185	27.182
700	4.950	4.893	34.501	154.9	1.231	27.299
750	4.635	4.576	34.482	161.1	1.273	27.319
800	4.637	4.574	34.482	163.4	1.315	27.320
900	4.553	4.482	34.577	160.8	1.395	27.406
1000	4.570	4.490	34.650	164.2	1.469	27.464
1500	4.197	4.074	34.993	247.5	1.759	27.785

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
6	14	28.181	28.180	36.334	199.3
51	13	27.828	27.816	36.331	199.6
76	12	27.790	27.772	36.328	199.6
100	11	26.902	26.879	36.341	198.0
126	10	21.997	21.971	36.653	193.7
151	9	14.118	14.096	35.399	176.1
175	8	12.314	12.291	35.160	162.2
198	7	11.873	11.847	35.108	155.7
249	6	11.091	11.060	35.004	159.7
451	5	7.857	7.811	34.654	161.1
599	4	6.537	6.482	34.566	148.5
803	3	4.644	4.580	34.487	164.0
1207	2	4.726	4.625	34.898	196.4
1792	1	3.840	3.694	34.986	260.2

NBC-1 R/V SEWARD JOHNSON
 CTD Station 26 (98026)
 Latitude 3.078 N Longitude 47.150 W
 23-Nov-1998 19:54 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 27 (98027)
Latitude 2.801N Longitude 47.283W
24-Nov-1998 00:33Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m²/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.633	28.633	36.349	199.4	0.005	23.203
10	28.261	28.258	36.338	196.1	0.046	23.319
20	28.133	28.128	36.338	197.8	0.091	23.363
30	28.078	28.071	36.337	198.4	0.137	23.382
40	27.920	27.911	36.337	198.6	0.181	23.435
50	27.719	27.707	36.339	198.7	0.226	23.504
60	27.650	27.636	36.340	198.7	0.270	23.529
70	27.570	27.553	36.341	198.7	0.313	23.557
80	27.538	27.519	36.342	198.8	0.357	23.570
90	27.472	27.451	36.342	198.9	0.400	23.592
100	27.442	27.419	36.340	198.9	0.444	23.602
110	26.581	26.556	36.365	194.7	0.486	23.898
120	25.087	25.061	36.477	190.0	0.523	24.449
130	24.873	24.844	36.584	192.0	0.558	24.597
140	22.326	22.297	36.485	180.0	0.590	25.272
150	17.658	17.633	35.887	176.6	0.613	26.049
160	15.819	15.794	35.623	176.1	0.632	26.281
170	15.119	15.093	35.531	173.8	0.649	26.367
180	13.493	13.467	35.298	169.7	0.665	26.534
190	12.975	12.949	35.233	169.7	0.680	26.590
200	11.982	11.956	35.111	165.5	0.695	26.690
250	10.982	10.951	34.994	160.9	0.762	26.786
300	10.823	10.786	34.976	161.3	0.829	26.803
350	9.534	9.494	34.827	158.5	0.892	26.909
400	8.828	8.785	34.746	159.8	0.952	26.961
450	8.489	8.441	34.711	160.1	1.010	26.988
500	7.756	7.706	34.650	158.4	1.066	27.050
550	7.181	7.127	34.596	156.1	1.120	27.090
600	6.789	6.732	34.577	151.0	1.173	27.130
650	6.210	6.151	34.542	151.4	1.223	27.179
700	5.389	5.330	34.508	153.2	1.270	27.253
750	4.689	4.630	34.492	157.6	1.313	27.321
800	4.620	4.557	34.487	161.7	1.355	27.326
900	4.660	4.588	34.600	158.2	1.436	27.413
1000	4.623	4.542	34.649	162.0	1.510	27.457
1500	4.230	4.108	34.992	246.4	1.800	27.781

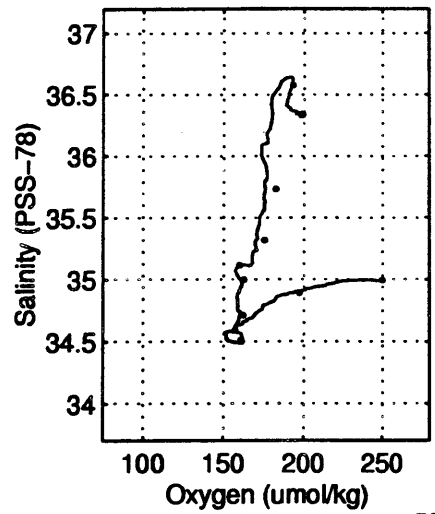
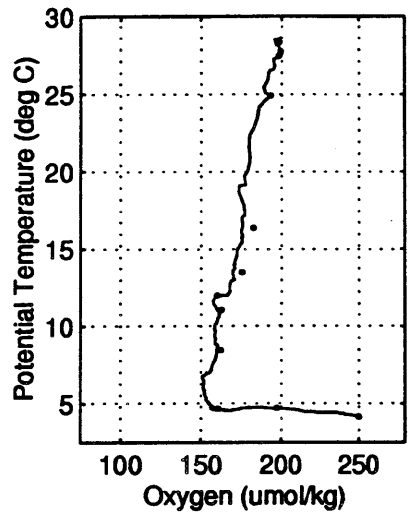
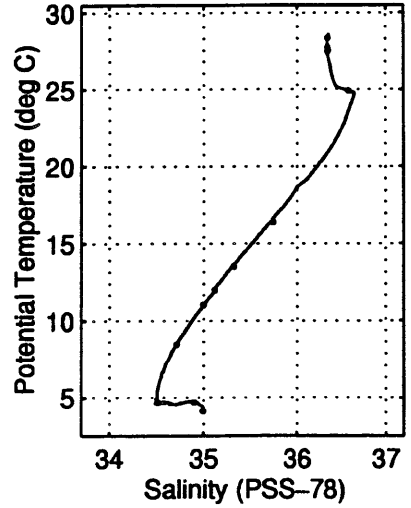
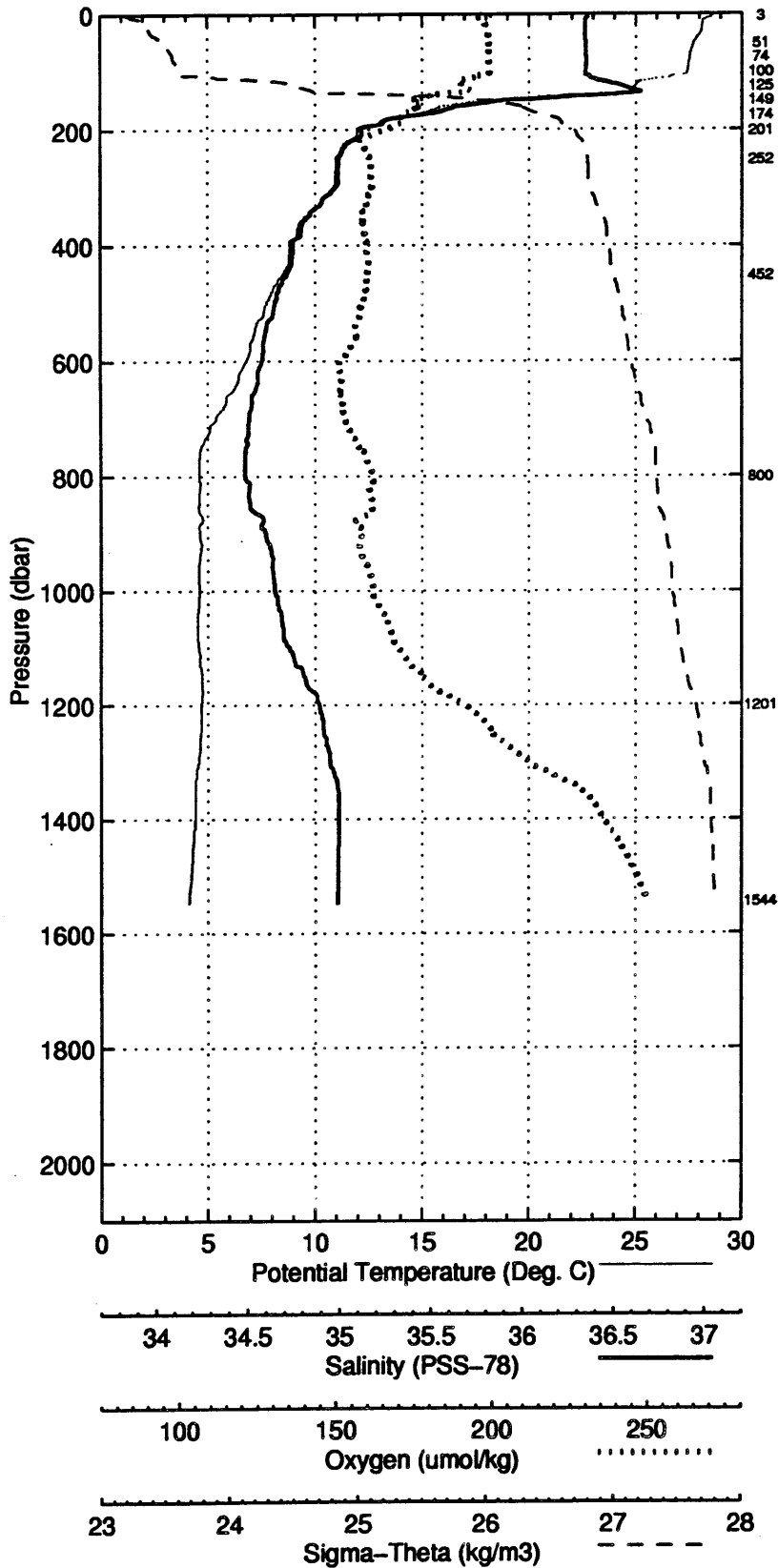
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	13	28.344	28.343	36.340	198.5
51	12	27.734	27.722	36.336	199.3
75	11	27.556	27.538	36.341	198.8
101	10	27.451	27.427	36.333	198.1
125	9	24.913	24.886	36.575	192.9
150	8	16.367	16.342	35.732	182.5
175	7	13.492	13.467	35.318	175.6
202	6	11.978	11.952	35.116	159.8
252	5	11.053	11.022	35.000	162.6
452	4	8.458	8.410	34.713	162.2
801	3	4.671	4.607	34.513	160.6
1201	2	4.700	4.601	34.895	197.2
1545	1	4.145	4.019	34.995	250.2

NBC-1 R/V SEWARD JOHNSON

CTD Station 27 (98027)

Latitude 2.801 N Longitude 47.283 W

24-Nov-1998 00:33 Z

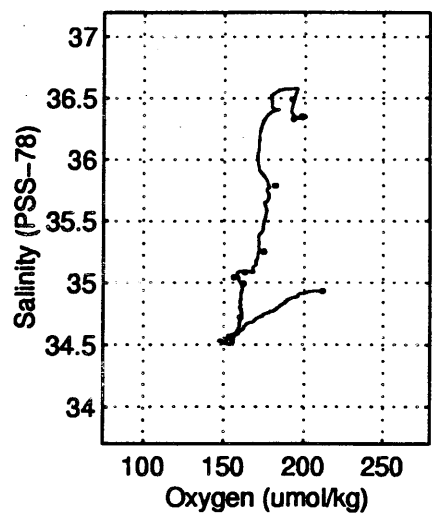
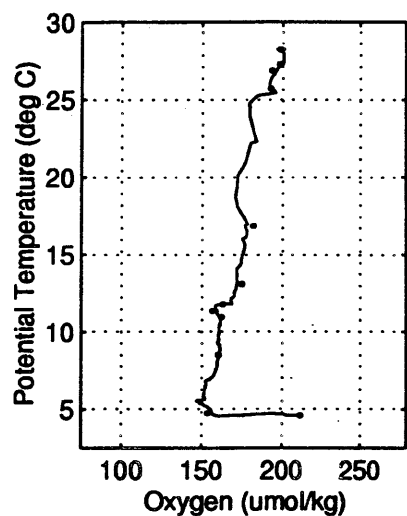
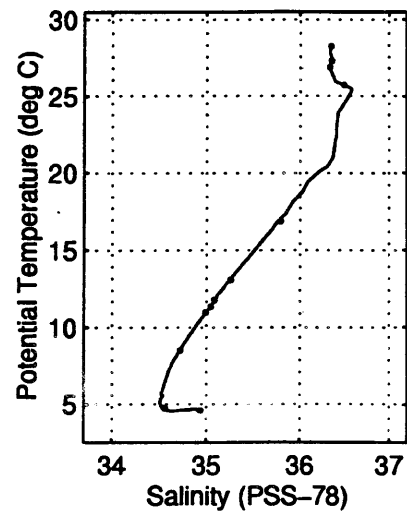
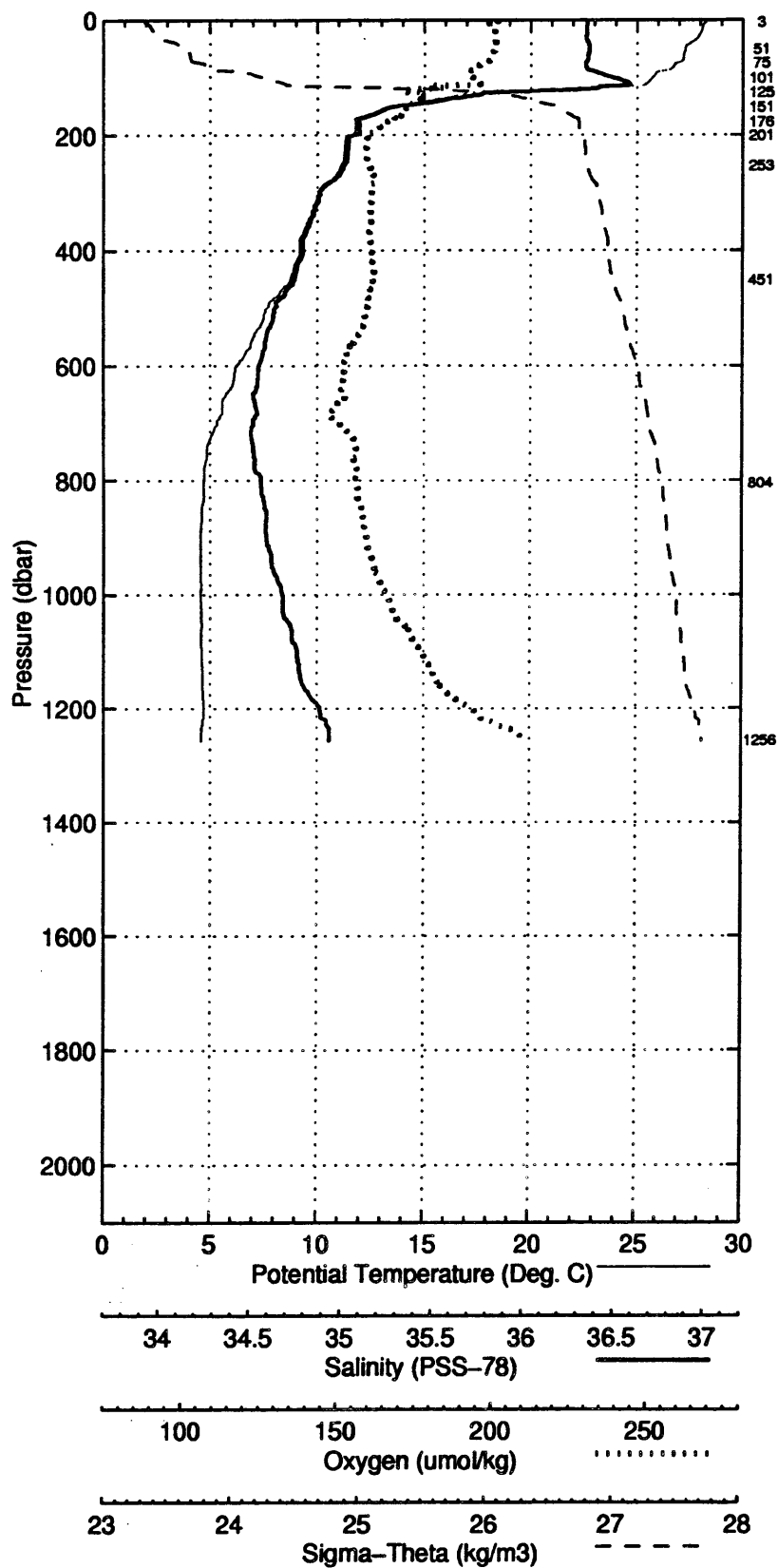


NBC-1 R/V SEWARD JOHNSON
CTD Station 28 (98028)
Latitude 2.567N Longitude 47.383W
24-Nov-1998 03:30Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.250	28.250	36.345	201.1	0.005	23.326
10	28.130	28.127	36.341	199.7	0.045	23.365
20	28.060	28.055	36.340	200.1	0.090	23.389
30	27.908	27.901	36.338	200.5	0.135	23.438
40	27.564	27.555	36.349	200.4	0.179	23.560
50	27.293	27.282	36.355	200.1	0.222	23.654
60	27.218	27.204	36.350	199.1	0.264	23.676
70	27.186	27.170	36.344	198.5	0.307	23.683
80	26.751	26.733	36.335	195.0	0.349	23.817
90	26.039	26.019	36.384	191.5	0.389	24.080
100	25.763	25.741	36.477	193.0	0.427	24.238
110	25.475	25.451	36.570	195.1	0.463	24.399
120	20.978	20.955	36.363	176.8	0.495	25.552
130	16.830	16.809	35.751	176.5	0.516	26.142
140	15.218	15.196	35.538	175.8	0.534	26.349
150	13.507	13.486	35.303	171.4	0.550	26.534
160	12.736	12.714	35.203	170.9	0.565	26.613
170	12.001	11.979	35.107	168.0	0.580	26.681
180	11.797	11.774	35.096	164.5	0.593	26.712
190	11.784	11.759	35.096	162.8	0.607	26.715
200	11.514	11.488	35.063	158.6	0.621	26.740
250	11.148	11.117	35.018	159.6	0.688	26.774
300	10.035	10.000	34.883	160.8	0.752	26.867
350	9.550	9.510	34.828	160.5	0.814	26.907
400	9.172	9.127	34.788	160.8	0.874	26.939
450	8.747	8.698	34.741	161.2	0.934	26.971
500	7.648	7.597	34.636	159.4	0.990	27.054
550	7.027	6.974	34.589	155.8	1.044	27.106
600	6.222	6.168	34.547	151.9	1.095	27.181
650	5.753	5.697	34.520	151.4	1.143	27.218
700	5.347	5.288	34.518	150.5	1.188	27.267
750	4.858	4.797	34.521	156.0	1.231	27.326
800	4.711	4.647	34.560	156.1	1.272	27.374
900	4.568	4.496	34.590	159.3	1.349	27.415
1000	4.575	4.495	34.679	165.7	1.423	27.487

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	12	28.235	28.234	36.342	198.3
51	11	27.279	27.267	36.350	197.9
75	10	26.886	26.869	36.330	193.0
101	9	25.711	25.688	36.489	192.4
126	8	16.837	16.817	35.786	181.6
151	7	13.072	13.051	35.254	174.8
177	6	11.763	11.740	35.085	163.2
201	5	11.342	11.317	35.046	156.5
254	4	10.960	10.928	34.995	162.1
452	3	8.501	8.453	34.721	160.5
804	2	4.731	4.667	34.561	153.7
1256	1	4.603	4.499	34.936	211.6

NBC-1 R/V SEWARD JOHNSON
 CTD Station 28 (98028)
 Latitude 2.567 N Longitude 47.383 W
 24-Nov-1998 03:30 Z

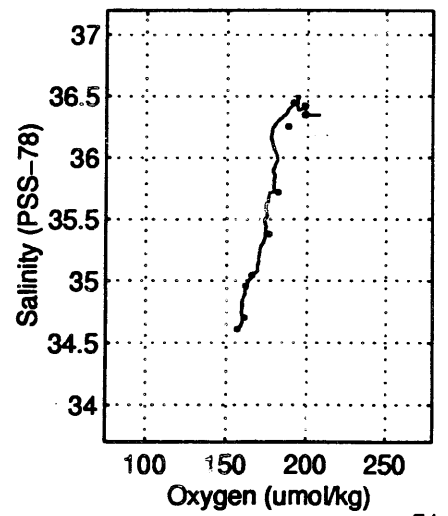
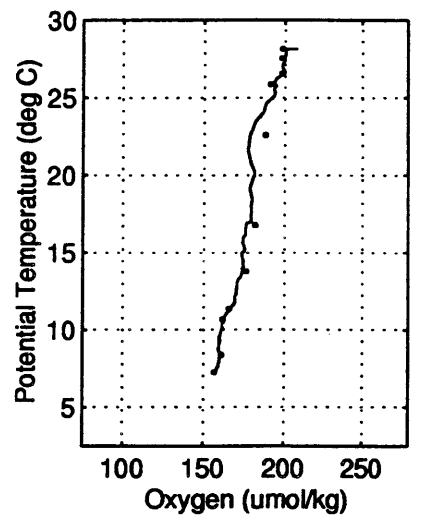
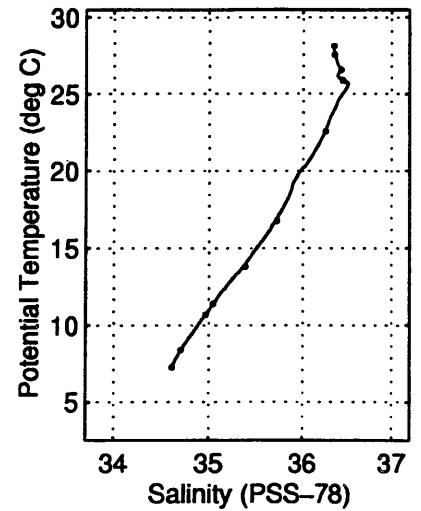
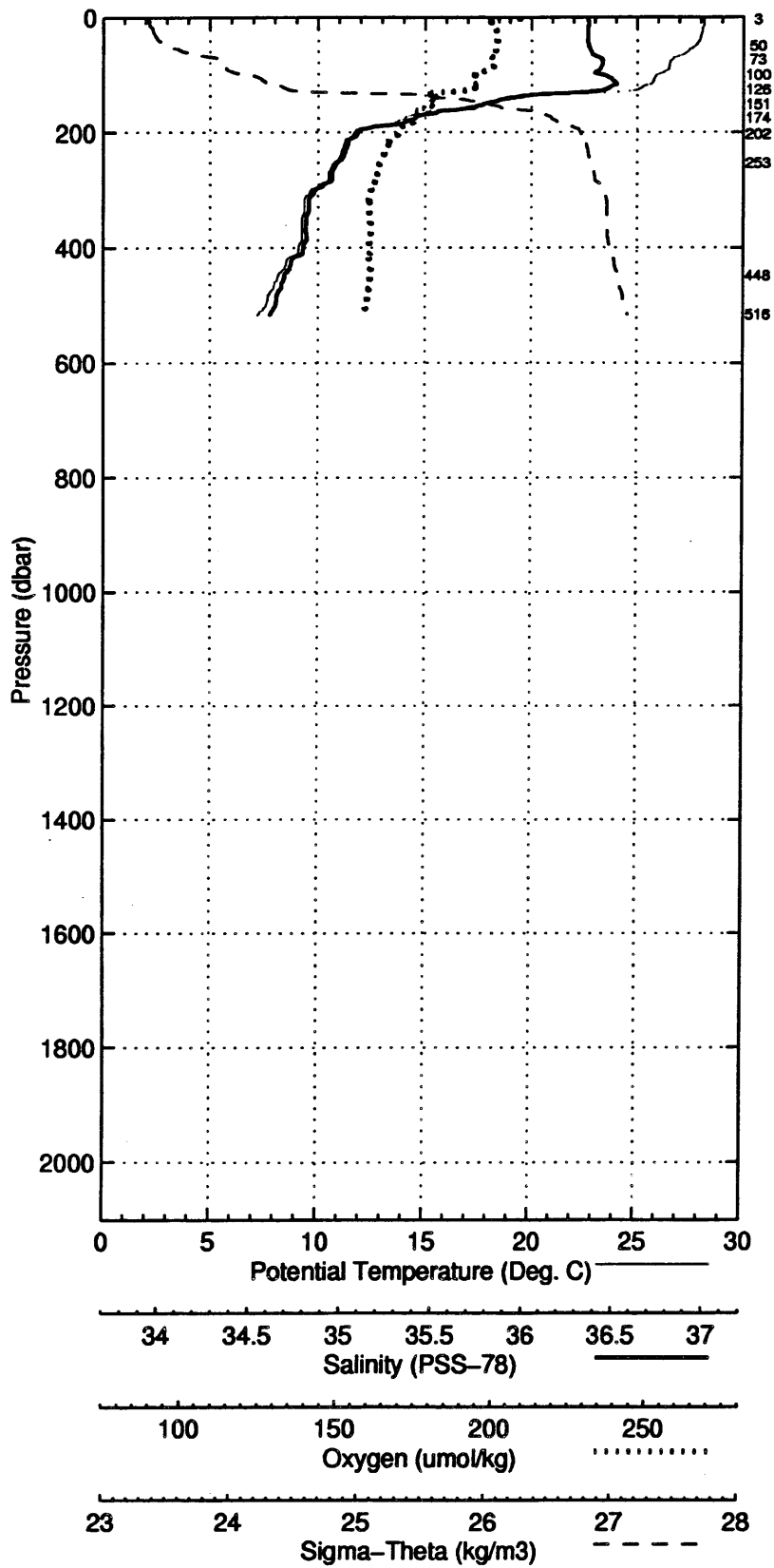


NBC-1 R/V SEWARD JOHNSON
CTD Station 29 (98029)
Latitude 2.275N Longitude 47.479W
24-Nov-1998 04:05Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.159	28.159	36.345	207.9	0.005	23.357
10	28.152	28.149	36.347	198.7	0.045	23.362
20	28.074	28.069	36.342	199.9	0.090	23.386
30	28.025	28.018	36.343	200.5	0.135	23.403
40	27.944	27.935	36.343	200.7	0.180	23.432
50	27.752	27.740	36.348	200.3	0.224	23.500
60	27.422	27.408	36.360	199.7	0.268	23.618
70	26.760	26.744	36.405	199.2	0.310	23.866
80	26.549	26.531	36.424	199.8	0.350	23.948
90	26.495	26.475	36.413	198.6	0.390	23.959
100	25.967	25.945	36.422	193.4	0.429	24.133
110	25.777	25.753	36.480	194.3	0.467	24.237
120	25.292	25.266	36.474	193.7	0.503	24.384
130	24.086	24.058	36.356	186.8	0.539	24.661
140	19.551	19.525	35.927	179.6	0.565	25.602
150	17.579	17.554	35.779	179.4	0.587	25.986
160	16.170	16.144	35.643	175.9	0.607	26.216
170	14.408	14.383	35.436	174.6	0.624	26.449
180	13.744	13.718	35.354	173.9	0.640	26.526
190	12.433	12.408	35.175	170.3	0.655	26.652
200	11.715	11.689	35.085	169.0	0.669	26.719
250	10.821	10.791	34.980	163.2	0.736	26.803
300	9.678	9.644	34.852	160.3	0.799	26.902
350	9.267	9.228	34.803	160.0	0.859	26.934
400	9.115	9.071	34.788	159.8	0.919	26.948
450	8.148	8.101	34.684	159.9	0.976	27.018
500	7.582	7.532	34.635	158.8	1.032	27.064

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	11	28.134	28.133	36.342	198.3
50	10	27.539	27.527	36.350	198.1
74	9	26.564	26.547	36.422	198.1
100	8	25.869	25.847	36.444	190.9
126	7	22.576	22.551	36.252	187.8
151	6	16.761	16.737	35.717	181.6
175	5	13.779	13.754	35.381	176.4
203	4	11.365	11.339	35.046	165.8
254	3	10.669	10.638	34.962	161.8
448	2	8.377	8.329	34.705	161.2
516	1	7.249	7.199	34.612	156.9

NBC-1 R/V SEWARD JOHNSON
CTD Station 29 (98029)
Latitude 2.275 N Longitude 47.479 W
24-Nov-1998 04:05 Z

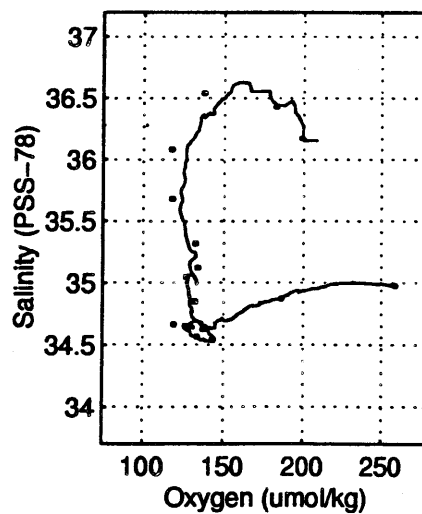
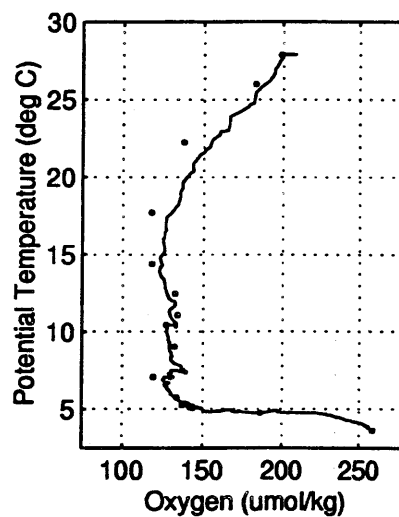
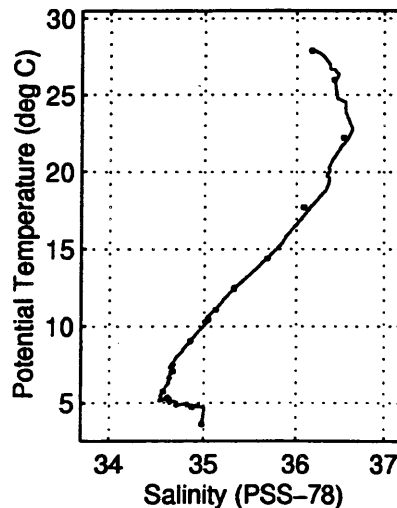
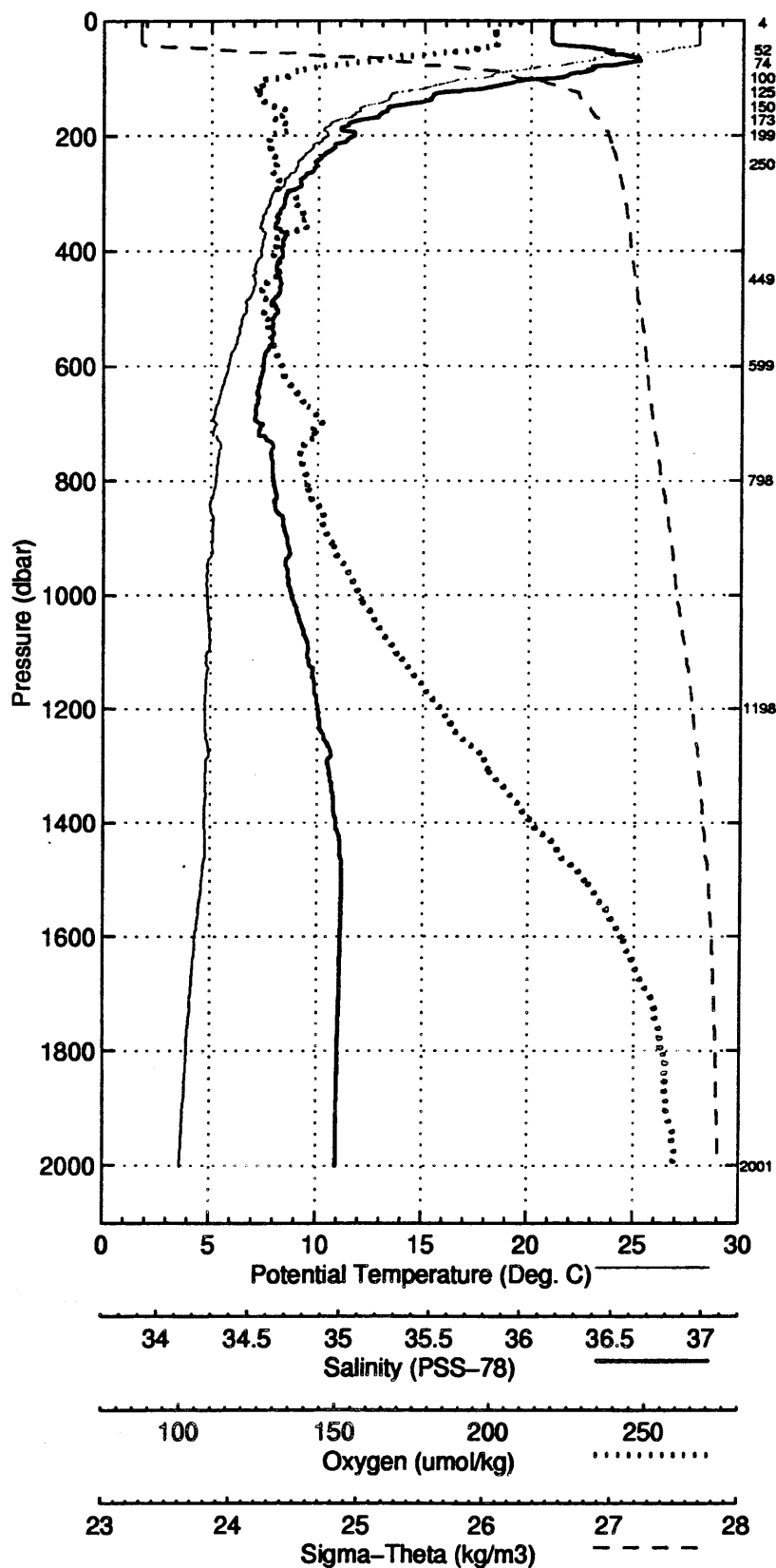


NBC-1 R/V SEWARD JOHNSON
CTD Station 30 (98030)
Latitude 8.050N Longitude 47.600W
01-Dec-1998 03:19Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.908	27.907	36.154	208.1	0.005	23.295
10	27.908	27.906	36.146	200.2	0.046	23.291
20	27.913	27.908	36.147	200.3	0.092	23.291
30	27.916	27.909	36.147	200.5	0.138	23.292
40	27.927	27.918	36.155	200.6	0.184	23.296
50	26.651	26.639	36.402	194.3	0.227	23.895
60	24.655	24.642	36.508	178.4	0.264	24.596
70	22.892	22.878	36.628	160.4	0.293	25.210
80	20.401	20.386	36.374	143.5	0.318	25.713
90	18.680	18.664	36.312	135.3	0.340	26.116
100	17.827	17.810	36.176	131.2	0.358	26.226
110	15.890	15.873	35.897	125.1	0.375	26.472
120	14.769	14.751	35.738	123.0	0.390	26.600
130	13.391	13.373	35.497	125.1	0.404	26.707
140	13.145	13.125	35.452	125.8	0.417	26.723
150	12.054	12.034	35.260	129.4	0.431	26.789
160	11.744	11.723	35.213	132.8	0.444	26.812
170	11.256	11.234	35.145	128.7	0.456	26.850
180	10.557	10.535	35.031	132.7	0.468	26.887
190	10.258	10.236	34.991	132.8	0.480	26.909
200	10.419	10.395	35.061	127.6	0.492	26.936
250	9.044	9.017	34.856	129.8	0.548	27.007
300	7.864	7.834	34.692	134.1	0.602	27.062
350	7.382	7.348	34.643	138.2	0.654	27.094
400	7.348	7.309	34.670	130.0	0.704	27.121
450	7.038	6.995	34.659	128.0	0.754	27.157
500	6.638	6.591	34.636	127.3	0.803	27.194
550	6.245	6.196	34.614	128.7	0.849	27.229
600	5.817	5.765	34.568	131.8	0.895	27.248
650	5.418	5.364	34.536	136.7	0.940	27.271
700	5.256	5.198	34.561	144.2	0.983	27.311
750	5.389	5.325	34.612	138.1	1.025	27.337
800	5.239	5.172	34.627	140.1	1.066	27.367
900	5.088	5.012	34.699	147.2	1.143	27.444
1000	4.847	4.764	34.724	156.7	1.216	27.493
1500	4.609	4.481	35.003	229.7	1.518	27.751
2000	3.624	3.462	34.975	259.2	1.759	27.836

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	27.877	27.876	36.170	199.0
52	13	25.981	25.969	36.427	182.4
74	12	22.225	22.210	36.540	137.3
100	11	17.700	17.682	36.083	117.8
125	10	14.393	14.374	35.680	118.1
151	9	12.447	12.426	35.321	132.2
174	8	11.067	11.045	35.123	133.9
199	7	10.428	10.404	35.048	127.1
251	6	9.023	8.996	34.851	131.9
449	5	7.066	7.023	34.667	118.9
599	4	5.750	5.698	34.566	133.7
799	3	5.242	5.174	34.625	137.0
1199	2	4.750	4.650	34.873	185.8
2001	1	3.623	3.461	34.978	259.1

NBC-1 R/V SEWARD JOHNSON
 CTD Station 30 (98030)
 Latitude 8.050 N Longitude 47.600 W
 01-Dec-1998 03:19 Z

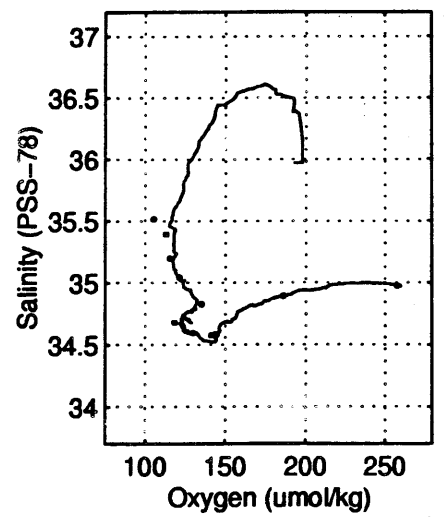
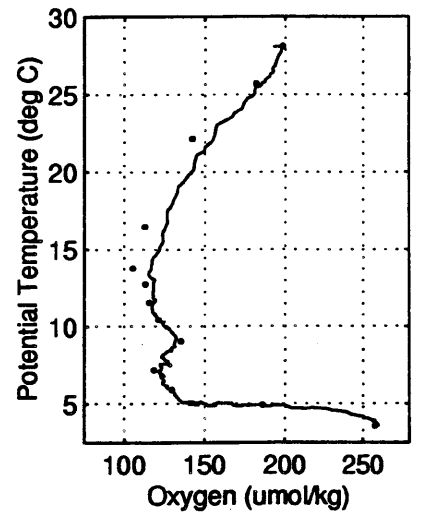
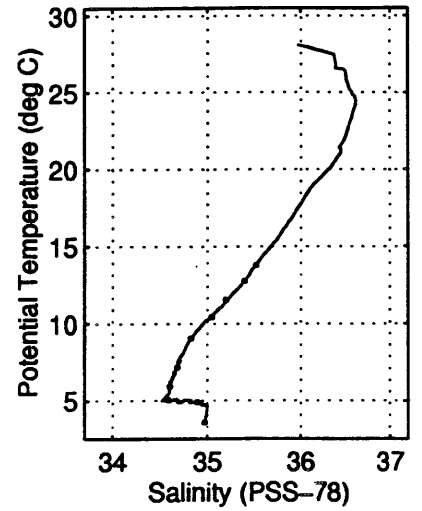
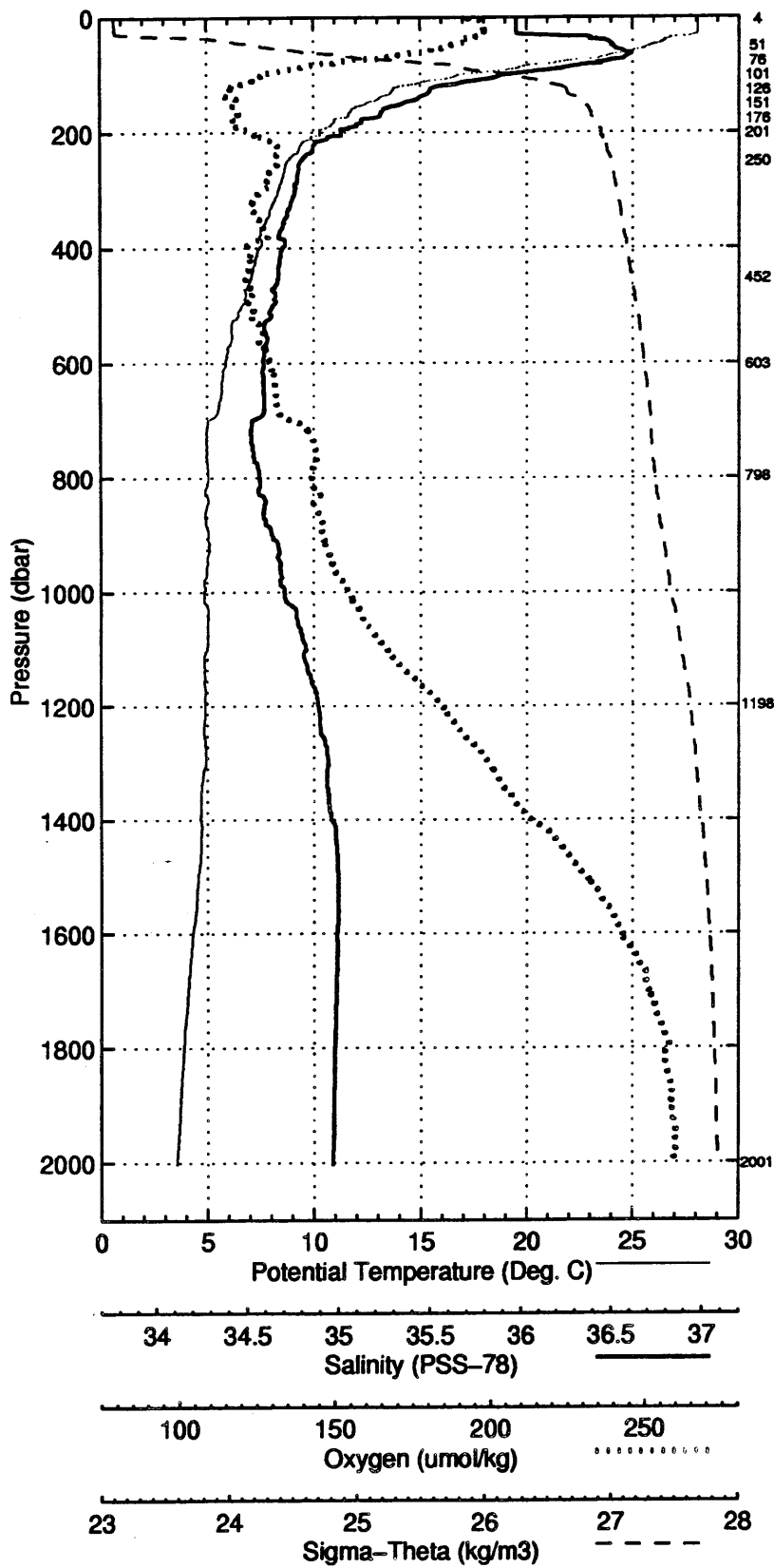


NBC-1 R/V SEWARD JOHNSON
CTD Station 31 (98031)
Latitude 7.751N Longitude 47.949W
01-Dec-1998 13:08Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.051	28.051	35.974	192.7	0.005	23.113
10	28.064	28.062	35.974	197.0	0.048	23.110
20	28.063	28.058	35.974	197.8	0.095	23.112
30	28.009	28.002	36.016	197.6	0.143	23.163
40	26.524	26.515	36.465	192.4	0.185	23.982
50	25.766	25.755	36.509	187.0	0.223	24.255
60	24.901	24.888	36.568	179.5	0.258	24.567
70	23.477	23.462	36.572	165.9	0.290	24.997
80	21.321	21.306	36.446	149.6	0.317	25.517
90	19.327	19.311	36.199	136.5	0.339	25.863
100	16.787	16.770	35.895	126.9	0.359	26.261
110	15.466	15.449	35.745	123.7	0.376	26.451
120	14.017	14.000	35.545	117.1	0.392	26.613
130	13.644	13.625	35.498	116.2	0.406	26.655
140	13.093	13.074	35.441	117.9	0.420	26.725
150	12.453	12.433	35.351	118.0	0.433	26.782
160	11.804	11.783	35.249	117.9	0.446	26.828
170	11.661	11.639	35.232	119.2	0.458	26.843
180	10.991	10.969	35.130	117.7	0.471	26.887
190	10.759	10.736	35.087	118.8	0.483	26.896
200	10.304	10.280	35.017	124.0	0.494	26.921
250	8.763	8.737	34.795	131.1	0.551	27.004
300	8.371	8.340	34.765	126.6	0.606	27.043
350	7.812	7.777	34.708	125.6	0.658	27.083
400	7.463	7.423	34.697	122.4	0.709	27.126
450	7.111	7.068	34.674	121.8	0.759	27.159
500	6.654	6.608	34.642	123.0	0.807	27.196
550	6.189	6.140	34.608	126.9	0.853	27.231
600	5.880	5.828	34.594	129.5	0.899	27.260
650	5.700	5.644	34.595	131.1	0.943	27.284
700	5.069	5.012	34.532	136.8	0.986	27.309
750	4.987	4.926	34.533	143.9	1.028	27.320
800	5.062	4.996	34.573	142.9	1.070	27.345
900	5.059	4.984	34.638	146.2	1.150	27.399
1000	4.861	4.779	34.707	154.4	1.226	27.478
1500	4.561	4.434	34.997	231.4	1.530	27.751
2000	3.562	3.401	34.970	259.1	1.770	27.839

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.113	NaN	NaN	198.6
52	13	25.663	NaN	NaN	181.6
76	12	22.131	NaN	NaN	142.2
102	11	16.437	NaN	NaN	112.5
127	10	13.765	13.747	35.516	105.1
152	9	12.754	12.733	35.393	112.9
177	8	11.543	11.520	35.197	115.2
202	7	10.420	10.396	35.047	121.2
251	6	9.034	9.006	34.828	135.1
453	5	7.173	7.129	34.679	118.6
603	4	5.908	5.855	34.597	129.6
798	3	5.058	4.992	34.578	141.2
1199	2	4.904	4.803	34.893	186.1
2002	1	3.563	3.402	34.974	257.9

NBC-1 R/V SEWARD JOHNSON
 CTD Station 31 (98031)
 Latitude 7.751 N Longitude 47.949 W
 01-Dec-1998 13:08 Z

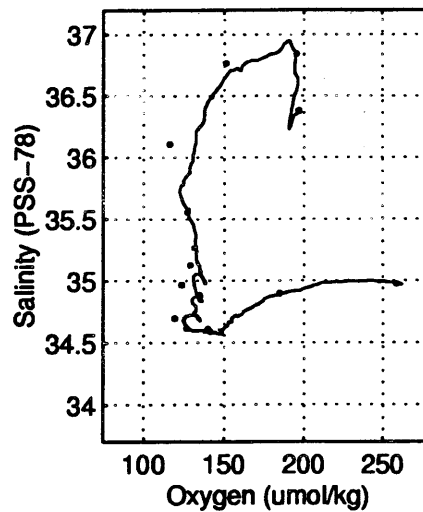
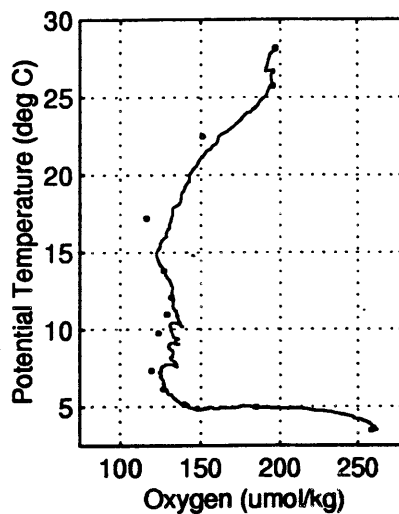
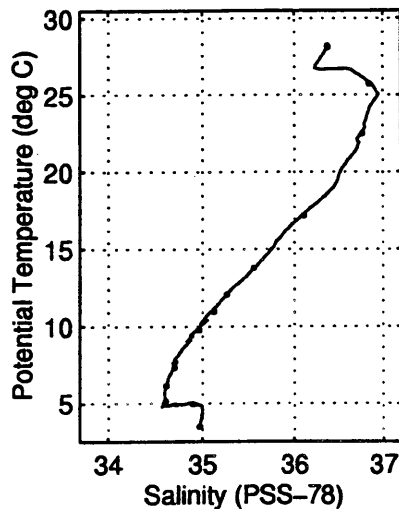
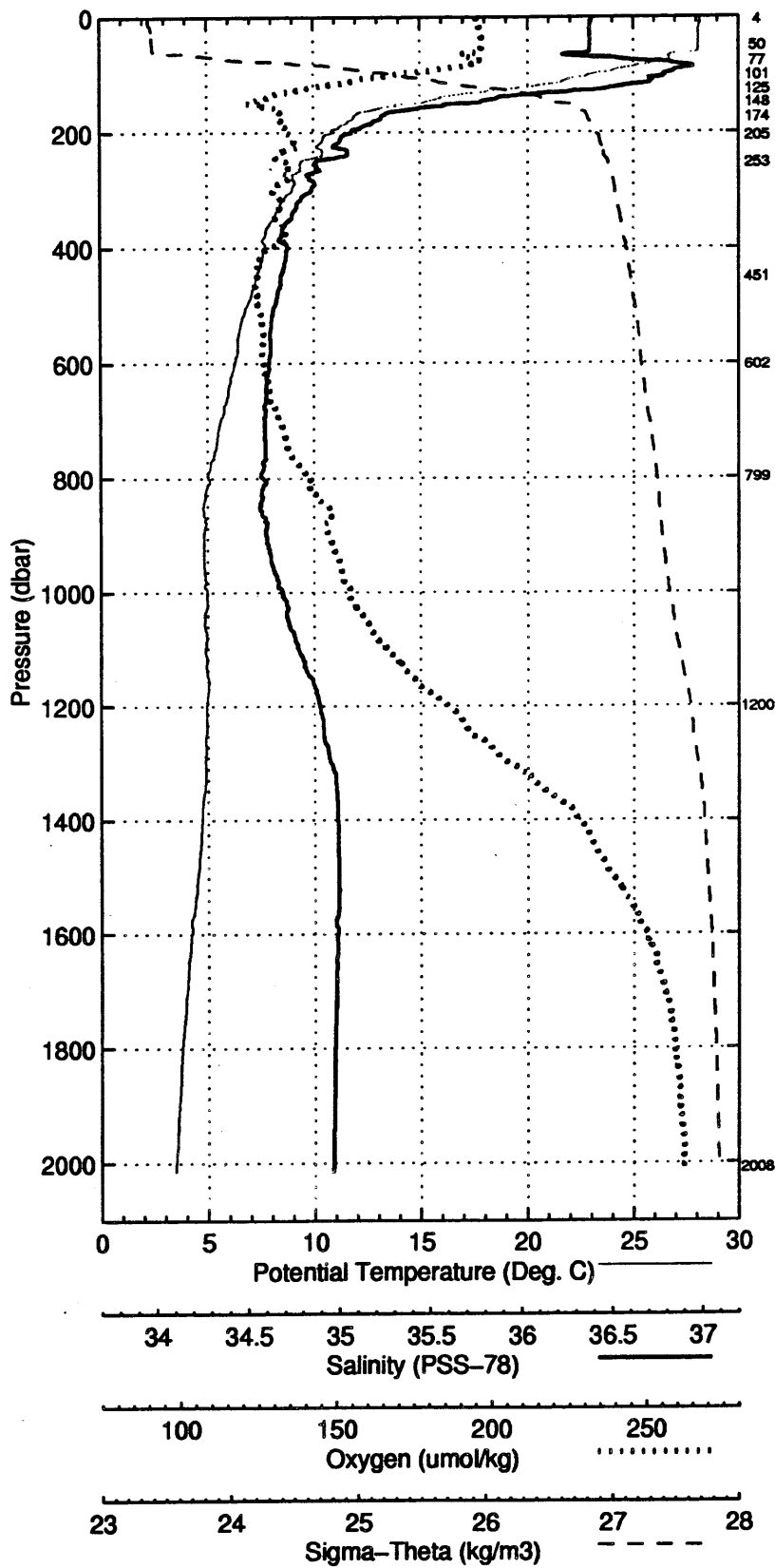


NBC-1 R/V SEWARD JOHNSON
CTD Station 32 (98032)
Latitude 7.399N Longitude 48.307W
01-Dec-1998 17:07Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.175	28.175	36.382	195.2	0.004	23.379
10	28.163	28.161	36.371	195.4	0.045	23.376
20	28.104	28.099	36.371	196.5	0.090	23.398
30	28.087	28.080	36.371	196.6	0.135	23.405
40	28.085	28.075	36.372	196.8	0.180	23.407
50	28.085	28.074	36.374	197.1	0.225	23.410
60	28.057	28.043	36.370	197.0	0.269	23.418
70	26.716	26.700	36.412	192.7	0.312	23.885
80	25.839	25.821	36.832	194.5	0.350	24.480
90	24.453	24.433	36.878	185.6	0.382	24.942
100	23.002	22.982	36.788	169.2	0.411	25.303
110	21.754	21.732	36.715	156.6	0.437	25.604
120	20.429	20.407	36.559	145.7	0.460	25.850
130	18.041	18.018	36.262	135.6	0.479	26.241
140	15.980	15.958	35.873	128.4	0.496	26.435
150	14.830	14.807	35.722	122.0	0.512	26.577
160	12.941	12.919	35.417	131.3	0.526	26.738
170	12.023	12.001	35.257	132.4	0.539	26.793
180	11.682	11.659	35.203	132.7	0.552	26.817
190	11.257	11.233	35.139	133.7	0.565	26.846
200	10.875	10.850	35.077	135.7	0.577	26.868
250	9.455	9.427	34.882	133.6	0.636	26.961
300	8.999	8.966	34.856	130.4	0.692	27.017
350	8.107	8.072	34.738	131.3	0.746	27.063
400	7.734	7.694	34.724	128.4	0.798	27.108
450	7.311	7.268	34.689	125.2	0.849	27.143
500	6.872	6.825	34.654	125.2	0.898	27.177
550	6.468	6.417	34.627	127.3	0.946	27.211
600	6.289	6.235	34.620	127.2	0.992	27.229
650	5.987	5.929	34.606	129.2	1.038	27.258
700	5.624	5.563	34.598	132.7	1.083	27.297
750	5.394	5.330	34.600	135.0	1.125	27.327
800	5.062	4.996	34.586	142.4	1.167	27.355
900	4.851	4.778	34.605	148.4	1.247	27.395
1000	4.970	4.887	34.692	154.4	1.323	27.453
1500	4.519	4.393	34.999	239.1	1.628	27.757
2000	3.498	3.338	34.968	262.4	1.863	27.843

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.181	28.180	36.374	196.7
51	13	28.095	28.083	36.378	196.7
77	12	25.711	25.694	36.843	195.5
101	11	22.468	22.448	36.764	150.9
126	10	17.168	17.146	36.107	116.2
149	9	13.777	13.756	35.553	127.0
175	8	12.058	12.035	35.265	131.7
206	7	10.961	10.936	35.125	128.9
253	6	9.757	9.728	34.967	123.6
451	5	7.345	7.301	34.698	119.2
603	4	6.138	6.084	34.615	126.7
799	3	5.138	5.071	34.610	139.7
1201	2	4.970	4.868	34.899	184.6
2008	1	3.487	3.326	34.974	258.9

NBC-1 R/V SEWARD JOHNSON
 CTD Station 32 (98032)
 Latitude 7.399 N Longitude 48.307 W
 01-Dec-1998 17:07 Z

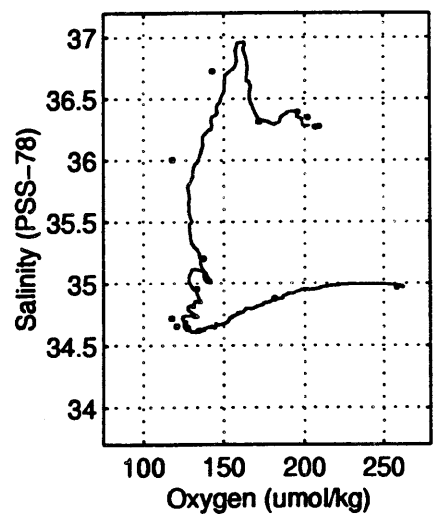
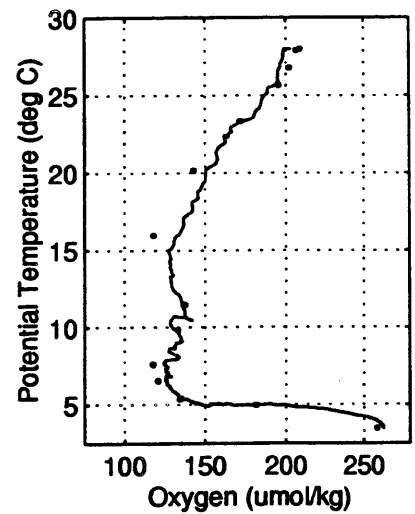
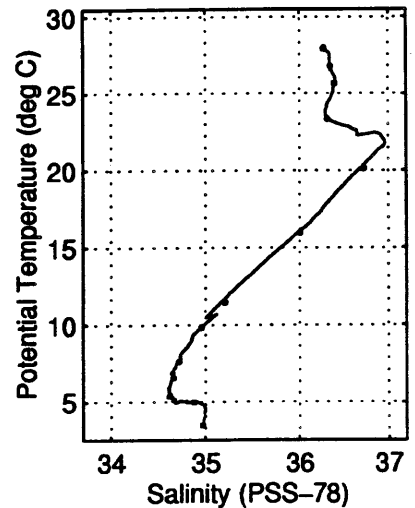
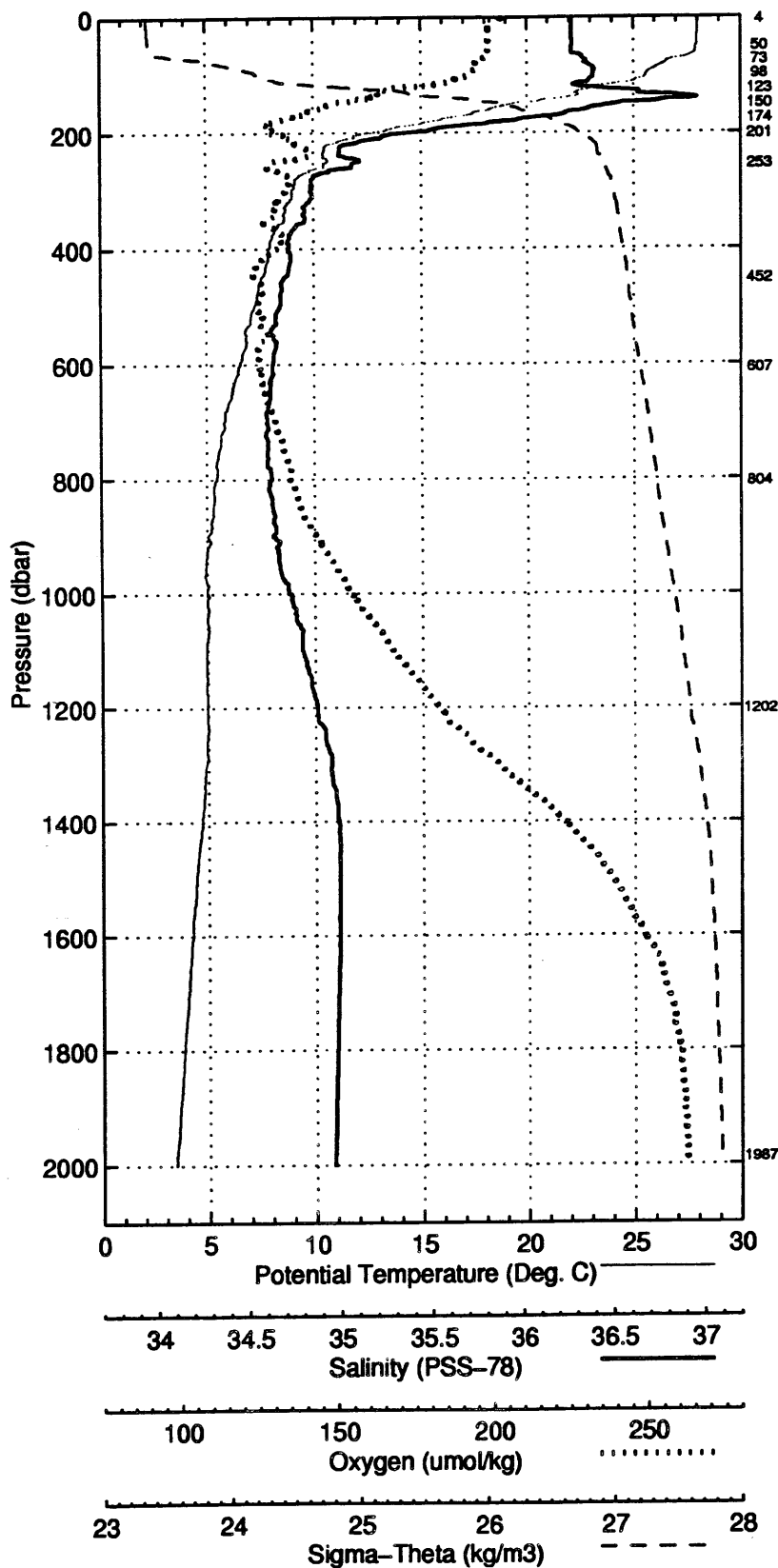


NBC-1 R/V SEWARD JOHNSON
CTD Station 33 (98033)
Latitude 7.046N Longitude 48.665W
01-Dec-1998 21:40Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.968	27.968	36.280	203.0	0.005	23.370
10	27.970	27.967	36.280	198.7	0.045	23.372
20	27.972	27.967	36.280	198.8	0.090	23.372
30	27.971	27.964	36.280	199.0	0.135	23.374
40	27.965	27.956	36.281	199.0	0.180	23.378
50	27.934	27.923	36.281	198.8	0.226	23.390
60	27.881	27.866	36.278	198.9	0.271	23.407
70	27.377	27.361	36.337	197.9	0.315	23.616
80	26.462	26.444	36.362	195.0	0.356	23.929
90	25.956	25.936	36.397	195.0	0.395	24.116
100	25.603	25.581	36.396	192.2	0.433	24.227
110	25.085	25.061	36.374	187.9	0.469	24.371
120	23.382	23.357	36.315	176.2	0.504	24.837
130	22.387	22.361	36.650	163.9	0.532	25.379
140	21.924	21.896	36.961	162.5	0.557	25.748
150	19.334	19.307	36.536	149.1	0.578	26.125
160	18.216	18.188	36.362	144.1	0.597	26.276
170	17.173	17.145	36.207	137.6	0.614	26.414
180	15.628	15.599	35.916	131.0	0.630	26.552
190	13.900	13.872	35.587	128.3	0.645	26.675
200	12.675	12.648	35.368	129.3	0.658	26.755
250	10.620	10.589	35.104	130.1	0.720	26.936
300	8.998	8.965	34.848	134.3	0.777	27.011
350	8.629	8.592	34.819	128.3	0.832	27.047
400	7.923	7.883	34.727	131.5	0.885	27.083
450	7.570	7.526	34.704	124.8	0.937	27.118
500	7.246	7.197	34.681	125.2	0.987	27.147
550	6.870	6.818	34.650	128.6	1.037	27.175
600	6.564	6.508	34.644	125.9	1.085	27.212
650	6.208	6.149	34.629	127.8	1.132	27.248
700	5.835	5.773	34.611	131.1	1.176	27.281
750	5.583	5.518	34.614	133.6	1.220	27.316
800	5.478	5.410	34.636	135.6	1.262	27.347
900	5.048	4.973	34.645	144.8	1.343	27.406
1000	5.024	4.940	34.728	155.4	1.419	27.476
1500	4.432	4.307	34.996	238.9	1.722	27.763
2000	3.453	3.293	34.967	262.9	1.957	27.846

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	27.987	27.986	36.273	208.9
50	13	27.909	27.897	36.268	206.3
74	12	26.779	26.762	36.345	202.0
99	11	25.653	25.631	36.391	195.4
124	10	23.328	23.302	36.312	171.5
150	9	20.137	20.109	36.724	142.9
175	8	15.951	15.923	36.005	118.0
202	7	11.449	11.423	35.202	137.4
254	6	9.828	9.799	34.956	133.3
453	5	7.611	7.566	34.719	117.7
607	4	6.540	6.484	34.657	120.8
804	3	5.360	5.292	34.620	134.4
1203	2	4.973	4.871	34.880	181.3
1987	1	3.462	3.304	34.971	258.5

NBC-1 R/V SEWARD JOHNSON
 CTD Station 33 (98033)
 Latitude 7.046 N Longitude 48.665 W
 01-Dec-1998 21:40 Z

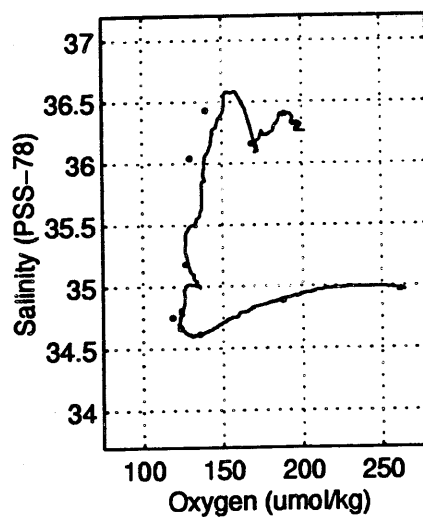
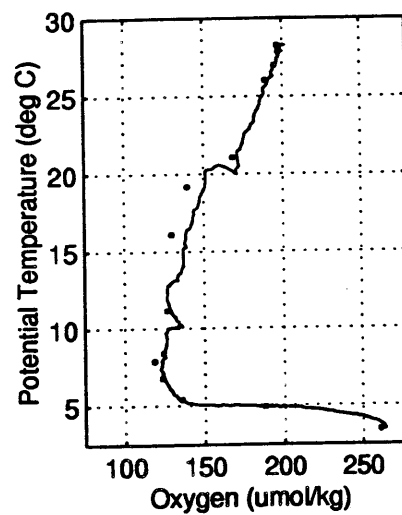
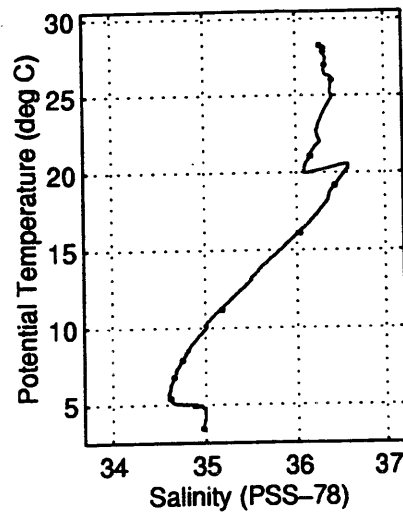
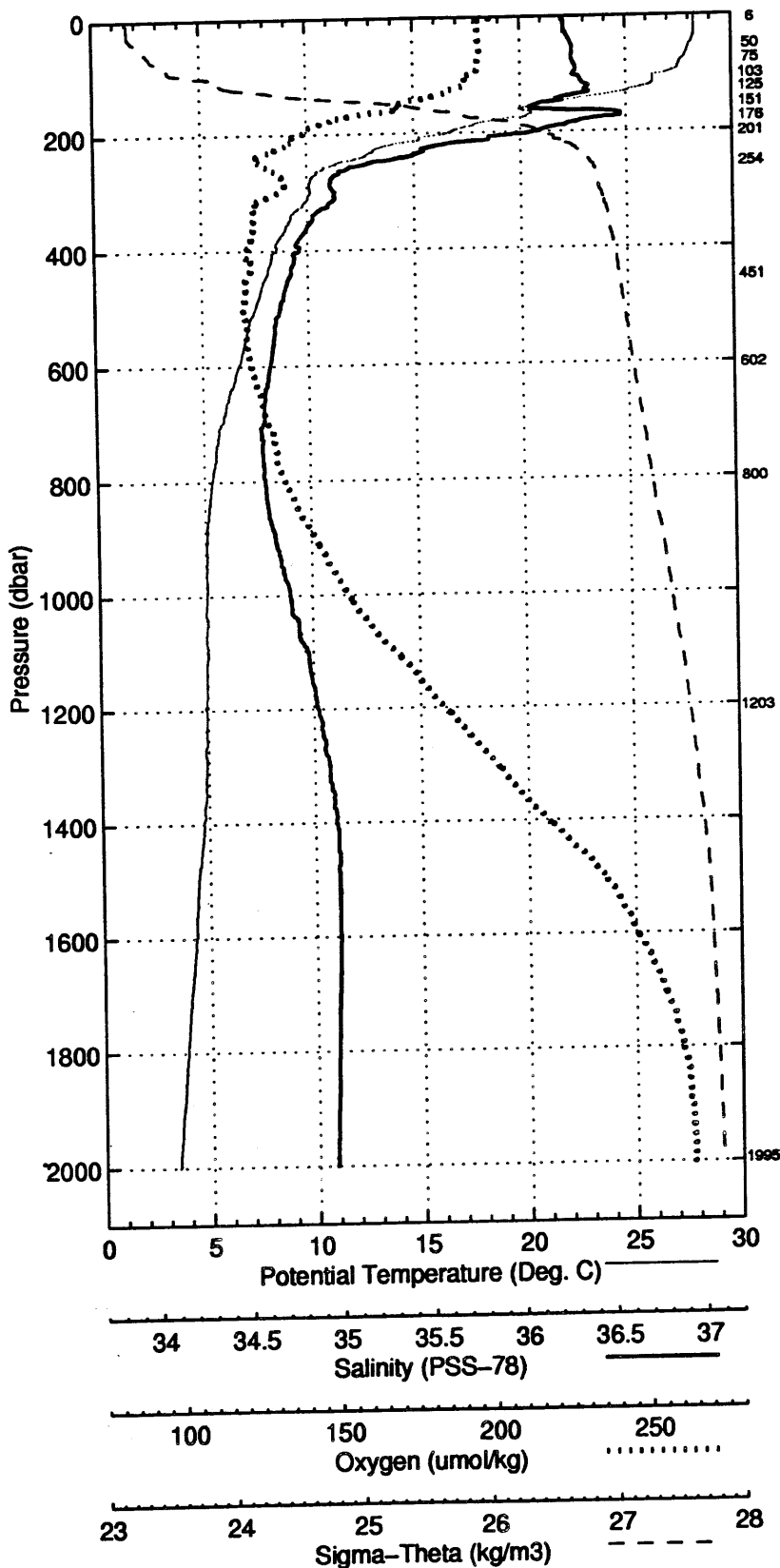


NBC-1 R/V SEWARD JOHNSON
CTD Station 34 (98034)
Latitude 6.726N Longitude 49.013W
02-Dec-1998 01:53Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.259	28.259	36.259	201.7	0.005	23.259
10	28.258	28.256	36.271	197.8	0.046	23.269
20	28.265	28.260	36.272	197.9	0.092	23.269
30	28.274	28.267	36.285	198.0	0.138	23.278
40	28.192	28.182	36.301	198.0	0.184	23.319
50	28.040	28.028	36.316	198.2	0.230	23.381
60	27.939	27.925	36.317	198.5	0.275	23.417
70	27.837	27.821	36.315	198.5	0.319	23.450
80	27.590	27.572	36.324	197.9	0.364	23.539
90	27.477	27.456	36.337	197.7	0.407	23.587
100	26.926	26.903	36.323	195.0	0.450	23.756
110	26.295	26.271	36.362	194.0	0.490	23.986
120	26.166	26.139	36.402	192.8	0.530	24.058
130	25.084	25.056	36.399	188.0	0.567	24.392
140	23.328	23.299	36.261	182.1	0.601	24.814
150	21.066	21.037	36.144	171.4	0.630	25.364
160	19.955	19.925	36.101	171.0	0.656	25.631
170	20.401	20.369	36.579	156.6	0.678	25.878
180	18.663	18.631	36.365	148.5	0.699	26.169
190	17.410	17.377	36.237	143.9	0.717	26.382
200	16.528	16.496	36.100	141.3	0.733	26.487
250	11.394	11.362	35.203	128.2	0.803	26.873
300	10.176	10.141	35.019	133.8	0.863	26.949
350	9.142	9.103	34.886	126.1	0.920	27.019
400	8.523	8.481	34.819	123.7	0.974	27.066
450	7.967	7.921	34.758	123.4	1.027	27.103
500	7.518	7.468	34.713	122.9	1.078	27.134
550	7.044	6.991	34.677	123.4	1.128	27.173
600	6.686	6.630	34.652	124.8	1.177	27.203
650	6.230	6.171	34.622	127.6	1.224	27.240
700	5.850	5.789	34.609	129.7	1.269	27.278
750	5.574	5.509	34.605	132.6	1.313	27.310
800	5.364	5.296	34.616	135.1	1.356	27.344
900	5.096	5.021	34.668	144.6	1.436	27.419
1000	5.037	4.953	34.745	154.9	1.510	27.488
1500	4.461	4.335	34.995	236.0	1.813	27.760
2000	3.438	3.279	34.967	264.4	2.049	27.847

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
6	14	28.246	28.244	36.271	196.8
51	13	28.062	28.050	36.312	198.0
76	12	27.831	27.813	36.310	197.5
103	11	26.965	26.941	36.323	195.0
125	10	25.992	25.964	36.401	189.2
152	9	21.055	21.026	36.158	168.5
176	8	19.166	19.135	36.430	139.7
202	7	16.090	16.057	36.041	129.6
254	6	11.156	11.124	35.184	126.6
451	5	7.894	7.848	34.753	118.4
603	4	6.783	6.727	34.663	123.6
801	3	5.407	5.339	34.616	135.5
1203	2	4.933	4.831	34.889	187.4
1995	1	3.457	3.298	34.972	261.6

NBC-1 R/V SEWARD JOHNSON
CTD Station 34 (98034)
Latitude 6.726 N Longitude 49.013 W
02-Dec-1998 01:53 Z

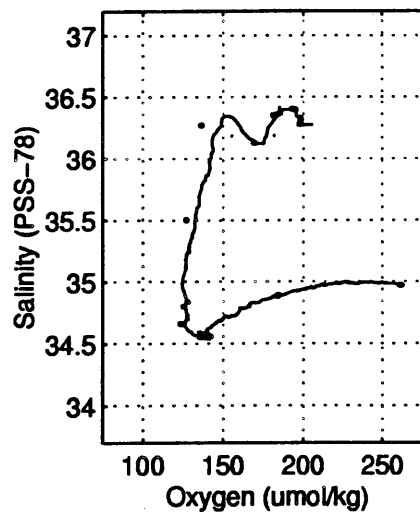
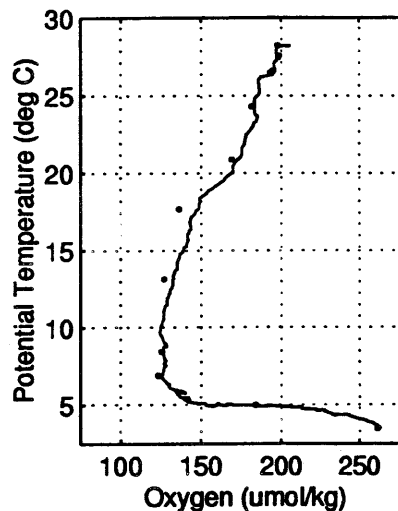
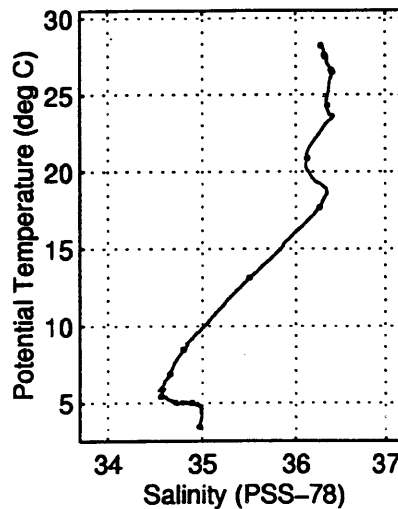
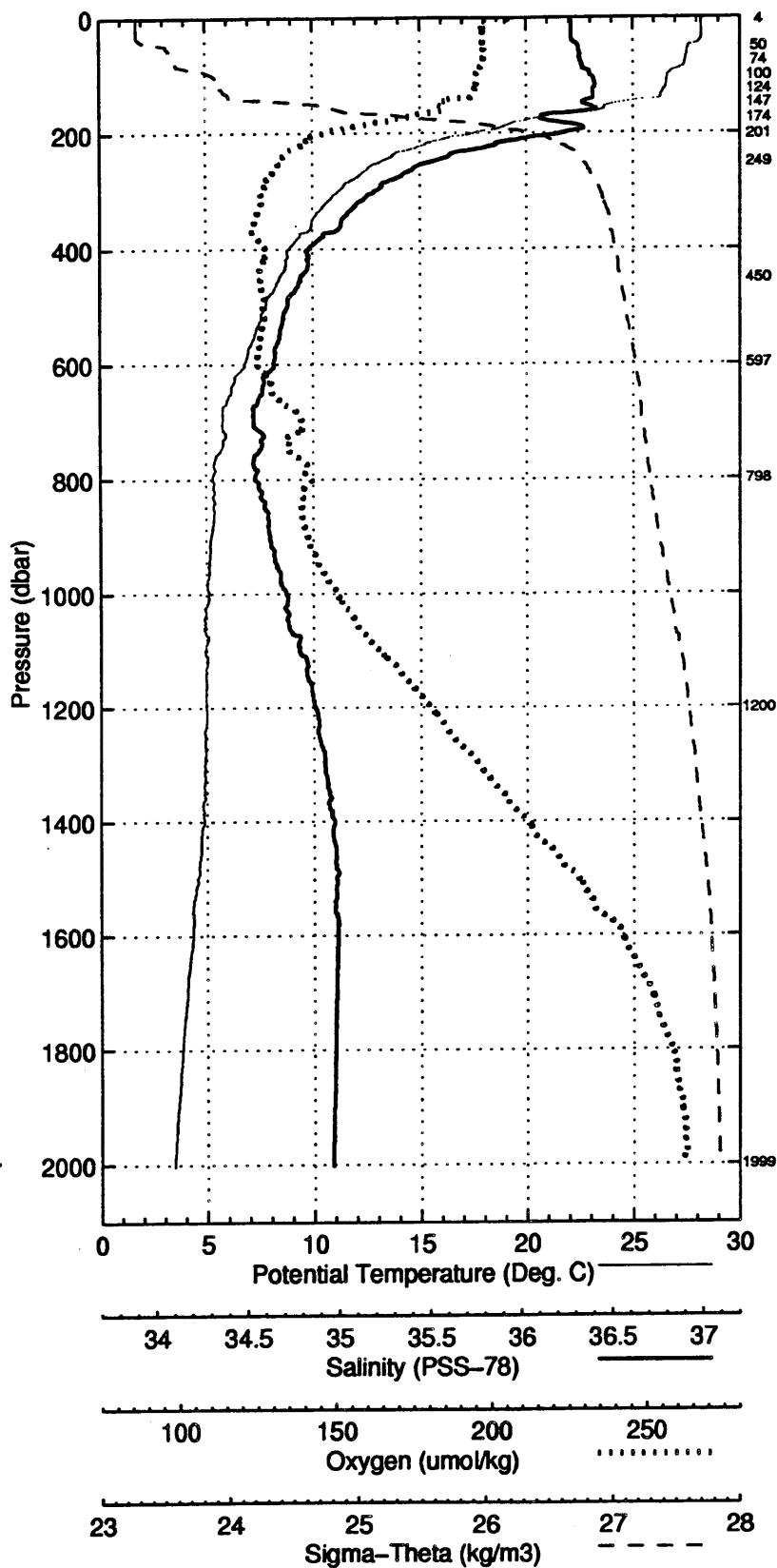


NBC-1 R/V SEWARD JOHNSON
CTD Station 35 (98035)
Latitude 6.387N Longitude 49.379W
02-Dec-1998 06:01Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.198	28.198	36.273	205.7	0.005	23.290
10	28.214	28.212	36.279	197.6	0.046	23.290
20	28.217	28.212	36.279	197.5	0.092	23.291
30	28.218	28.211	36.279	197.6	0.138	23.292
40	28.158	28.149	36.283	197.5	0.183	23.317
50	27.598	27.586	36.316	197.8	0.228	23.526
60	27.539	27.525	36.323	198.3	0.272	23.552
70	27.483	27.466	36.321	197.8	0.316	23.570
80	27.425	27.407	36.335	197.7	0.359	23.601
90	27.026	27.005	36.347	195.2	0.402	23.740
100	26.638	26.615	36.380	195.4	0.443	23.890
110	26.597	26.572	36.403	195.4	0.483	23.922
120	26.559	26.532	36.409	195.5	0.523	23.939
130	26.409	26.380	36.395	194.7	0.564	23.978
140	26.256	26.224	36.398	191.5	0.603	24.030
150	24.042	24.010	36.346	183.2	0.639	24.669
160	23.552	23.519	36.413	185.0	0.671	24.866
170	21.182	21.149	36.122	175.3	0.701	25.318
180	19.726	19.692	36.165	165.8	0.726	25.742
190	18.846	18.812	36.337	154.3	0.747	26.101
200	17.516	17.482	36.239	146.6	0.766	26.358
250	13.123	13.088	35.504	132.7	0.840	26.773
300	11.208	11.170	35.205	127.1	0.903	26.912
350	9.996	9.955	35.025	124.7	0.962	26.987
400	8.933	8.890	34.847	127.7	1.019	27.023
450	8.442	8.394	34.799	126.8	1.074	27.064
500	7.778	7.727	34.726	127.5	1.127	27.107
550	7.272	7.218	34.685	126.7	1.178	27.148
600	6.794	6.737	34.652	125.7	1.228	27.189
650	6.186	6.128	34.590	130.4	1.276	27.220
700	5.772	5.711	34.543	139.7	1.322	27.236
750	5.682	5.617	34.573	135.7	1.368	27.272
800	5.290	5.223	34.549	142.3	1.412	27.299
900	5.242	5.166	34.632	141.7	1.497	27.373
1000	5.124	5.039	34.720	150.9	1.575	27.459
1500	4.545	4.418	34.989	228.2	1.888	27.746
2000	3.458	3.298	34.968	262.8	2.124	27.847

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.204	28.203	36.276	197.4
50	13	27.570	27.558	36.315	198.6
75	12	27.452	27.434	36.326	198.0
101	11	26.615	26.592	36.393	194.9
124	10	26.469	26.440	36.402	193.1
148	9	24.294	24.263	36.351	181.2
174	8	20.860	20.827	36.127	169.3
202	7	17.666	17.632	36.268	136.2
250	6	13.127	13.092	35.501	127.0
451	5	8.450	8.402	34.801	125.5
598	4	6.888	6.831	34.662	123.3
798	3	5.401	5.333	34.564	141.5
1201	2	4.997	4.894	34.890	184.0
1999	1	3.459	3.300	34.973	261.7

NBC-1 R/V SEWARD JOHNSON
 CTD Station 35 (98035)
 Latitude 6.387 N Longitude 49.379 W
 02-Dec-1998 06:01 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 36 (98036)
Latitude 6.049N Longitude 49.734W
02-Dec-1998 10:11Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.126	28.126	36.308	202.4	0.005	23.340
10	28.127	28.125	36.309	197.3	0.045	23.342
20	28.128	28.123	36.309	197.3	0.091	23.343
30	28.131	28.124	36.310	197.3	0.136	23.344
40	28.107	28.098	36.312	197.3	0.182	23.355
50	27.822	27.811	36.313	198.4	0.227	23.450
60	27.581	27.567	36.325	198.7	0.270	23.540
70	27.457	27.441	36.330	198.2	0.314	23.585
80	27.388	27.369	36.341	198.3	0.357	23.617
90	27.235	27.214	36.354	197.5	0.400	23.678
100	27.045	27.022	36.362	196.3	0.442	23.747
110	26.869	26.844	36.379	196.7	0.484	23.817
120	26.640	26.613	36.379	195.9	0.525	23.892
130	24.432	24.405	36.411	185.4	0.563	24.599
140	23.398	23.369	36.487	185.9	0.595	24.964
150	21.249	21.220	36.164	180.7	0.624	25.329
160	18.969	18.940	35.919	170.5	0.649	25.748
170	14.808	14.782	35.652	154.3	0.668	26.529
180	13.022	12.998	35.383	149.5	0.682	26.696
190	11.795	11.770	35.151	150.0	0.696	26.755
200	11.029	11.004	35.008	152.6	0.709	26.786
250	10.507	10.477	34.948	152.0	0.773	26.834
300	9.771	9.736	34.861	151.7	0.835	26.894
350	9.169	9.130	34.793	153.2	0.895	26.941
400	8.574	8.531	34.735	152.4	0.953	26.992
450	7.800	7.755	34.659	153.5	1.009	27.049
500	7.375	7.326	34.624	152.2	1.063	27.084
550	6.849	6.797	34.602	146.4	1.115	27.140
600	6.657	6.601	34.590	143.7	1.165	27.157
650	6.318	6.259	34.581	138.3	1.214	27.196
700	5.926	5.864	34.546	140.5	1.262	27.219
750	5.927	5.861	34.577	138.3	1.309	27.244
800	5.395	5.327	34.520	145.0	1.355	27.264
900	5.260	5.184	34.572	143.5	1.444	27.324
1000	4.950	4.867	34.638	149.5	1.526	27.413
1500	4.586	4.459	34.992	228.4	1.847	27.744
2000	3.494	3.334	34.969	261.0	2.085	27.844

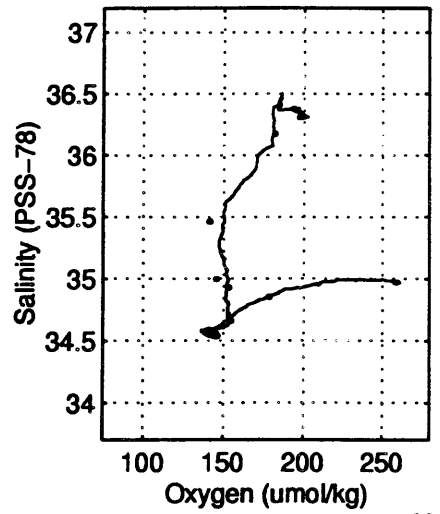
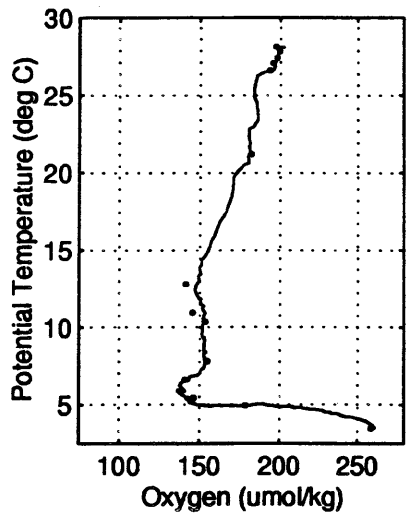
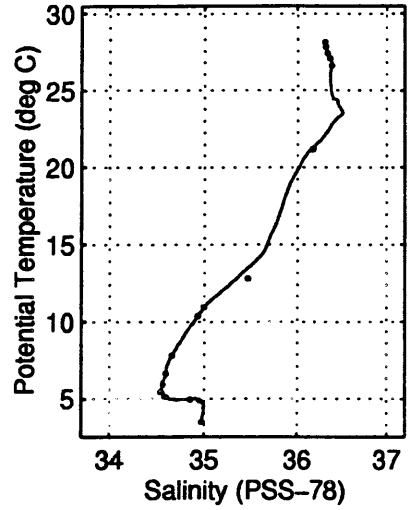
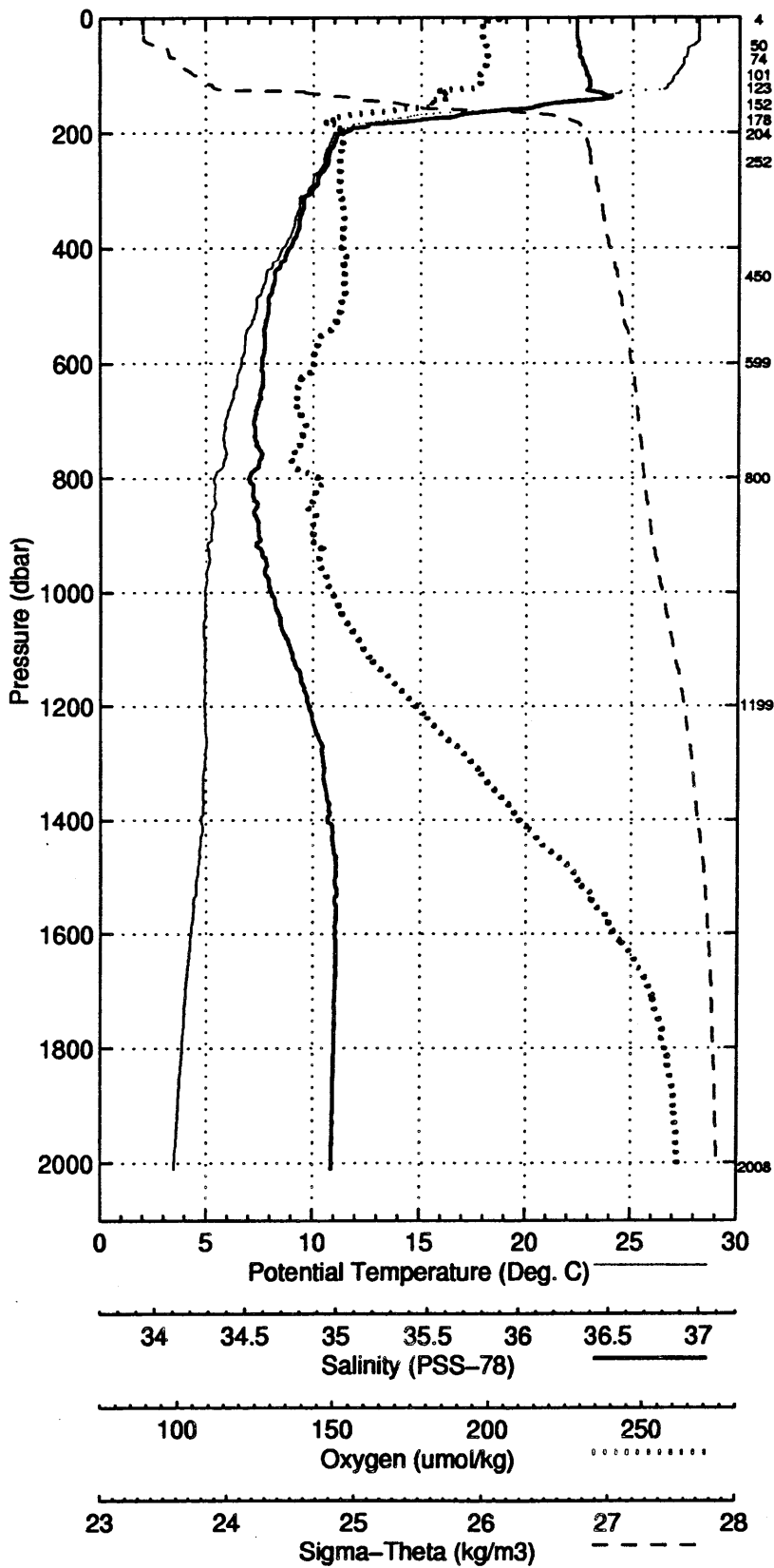
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.128	28.127	36.307	197.1
51	13	27.828	27.816	36.312	199.7
74	12	27.414	27.396	36.331	198.2
101	11	27.070	27.046	36.360	195.4
124	10	26.606	26.577	36.375	193.4
152	9	21.183	21.154	36.173	181.7
179	8	12.785	12.760	35.463	141.4
204	7	10.951	10.926	34.998	145.4
253	6	10.360	10.330	34.931	153.2
451	5	7.792	7.746	34.662	154.8
600	4	6.614	6.559	34.592	140.9
801	3	5.436	5.368	34.539	146.3
1199	2	4.948	4.846	34.854	178.4
2009	1	3.480	3.319	34.972	259.1

NBC-1 R/V SEWARD JOHNSON

CTD Station 36 (98036)

Latitude 6.049 N Longitude 49.734 W

02-Dec-1998 10:11 Z

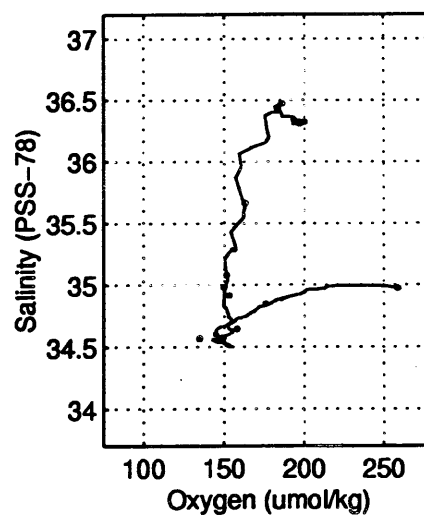
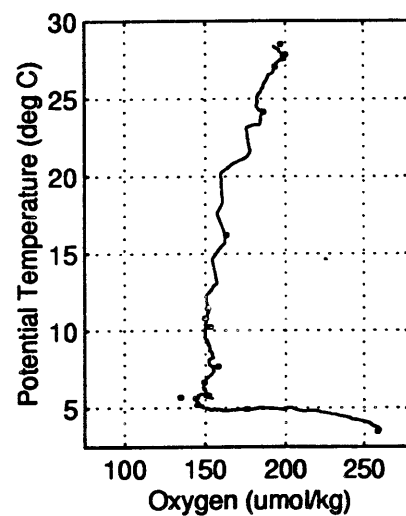
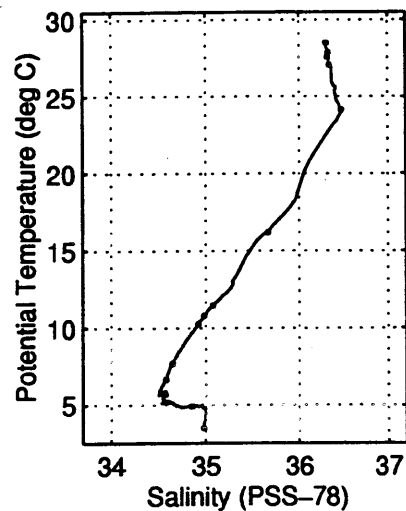
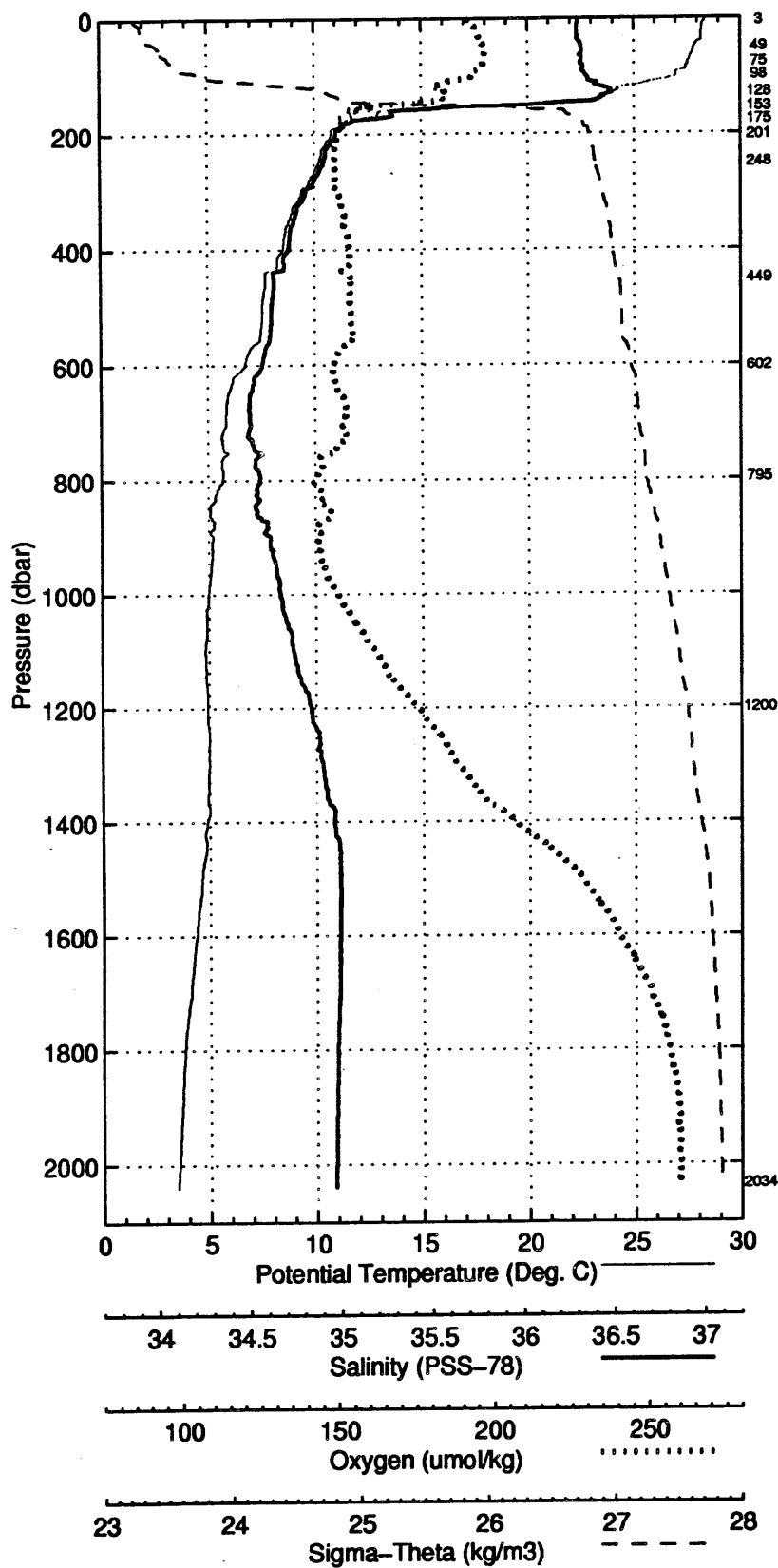


NBC-1 R/V SEWARD JOHNSON
CTD Station 37 (98037)
Latitude 5.731N Longitude 50.083W
02-Dec-1998 14:18Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.336	28.336	36.305	192.1	0.005	23.268
10	28.245	28.243	36.304	193.6	0.046	23.299
20	28.194	28.190	36.303	195.1	0.092	23.317
30	28.185	28.178	36.304	195.7	0.137	23.321
40	28.141	28.132	36.310	195.6	0.183	23.343
50	27.858	27.846	36.326	197.6	0.228	23.449
60	27.779	27.765	36.326	197.9	0.272	23.476
70	27.631	27.614	36.328	197.7	0.316	23.527
80	27.531	27.513	36.324	197.1	0.360	23.558
90	27.389	27.368	36.329	195.6	0.403	23.609
100	26.985	26.962	36.352	193.4	0.446	23.758
110	25.763	25.739	36.380	186.0	0.486	24.166
120	24.495	24.469	36.447	181.7	0.522	24.606
130	23.993	23.965	36.476	185.2	0.554	24.780
140	23.487	23.458	36.422	184.5	0.586	24.889
150	20.174	20.146	36.063	159.6	0.615	25.543
160	13.076	13.054	35.291	157.4	0.633	26.613
170	12.583	12.560	35.269	153.2	0.647	26.694
180	11.414	11.391	35.065	152.1	0.661	26.759
190	10.940	10.917	35.002	151.3	0.674	26.797
200	10.793	10.768	34.984	151.2	0.687	26.810
250	10.212	10.183	34.915	149.9	0.750	26.860
300	9.428	9.394	34.821	150.7	0.811	26.920
350	8.797	8.759	34.753	152.8	0.870	26.969
400	8.515	8.472	34.722	154.1	0.927	26.990
450	7.690	7.645	34.641	154.9	0.983	27.051
500	7.533	7.484	34.631	154.7	1.037	27.067
550	7.439	7.384	34.621	155.5	1.091	27.074
600	6.729	6.673	34.579	149.7	1.143	27.140
650	5.947	5.889	34.512	151.2	1.192	27.189
700	5.835	5.773	34.511	153.0	1.241	27.202
750	5.784	5.719	34.545	150.1	1.288	27.237
800	5.660	5.591	34.565	143.1	1.334	27.268
900	5.215	5.139	34.619	144.5	1.420	27.366
1000	4.984	4.901	34.670	150.5	1.500	27.435
1500	4.628	4.500	34.996	228.3	1.821	27.743
2000	3.553	3.392	34.972	260.6	2.060	27.841

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.494	28.493	36.306	196.9
50	13	27.855	27.843	36.323	200.0
76	12	27.573	27.555	36.320	198.8
99	11	27.053	27.030	36.338	193.3
128	10	24.142	24.115	36.471	185.9
153	9	16.180	16.155	35.662	163.2
176	8	11.462	11.440	35.080	151.5
202	7	10.796	10.772	34.982	149.9
249	6	10.244	10.215	34.916	152.8
450	5	7.680	7.635	34.646	158.1
602	4	6.656	6.599	34.578	149.3
796	3	5.684	5.615	34.569	134.8
1200	2	4.921	4.820	34.848	175.9
2034	1	3.484	3.321	34.976	259.1

NBC-1 R/V SEWARD JOHNSON
CTD Station 37 (98037)
Latitude 5.731 N Longitude 50.083 W
02-Dec-1998 14:18 Z

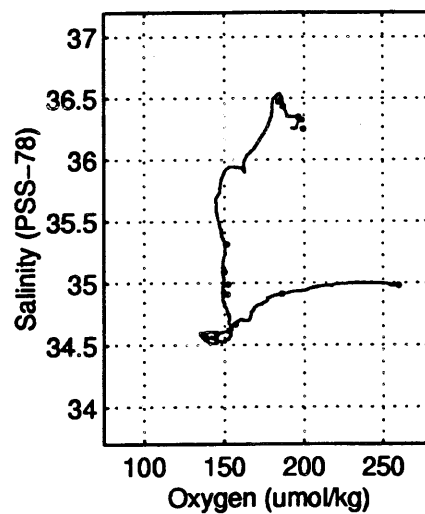
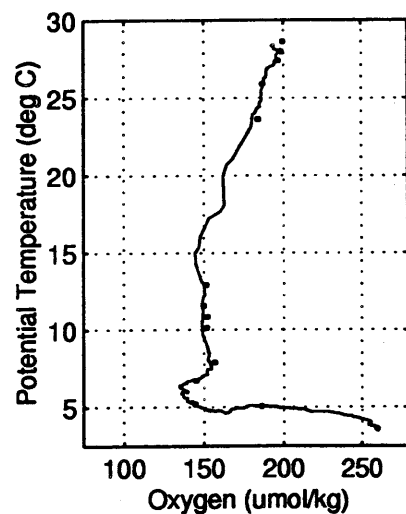
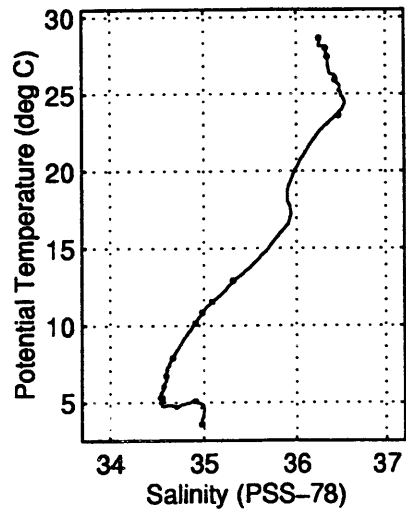
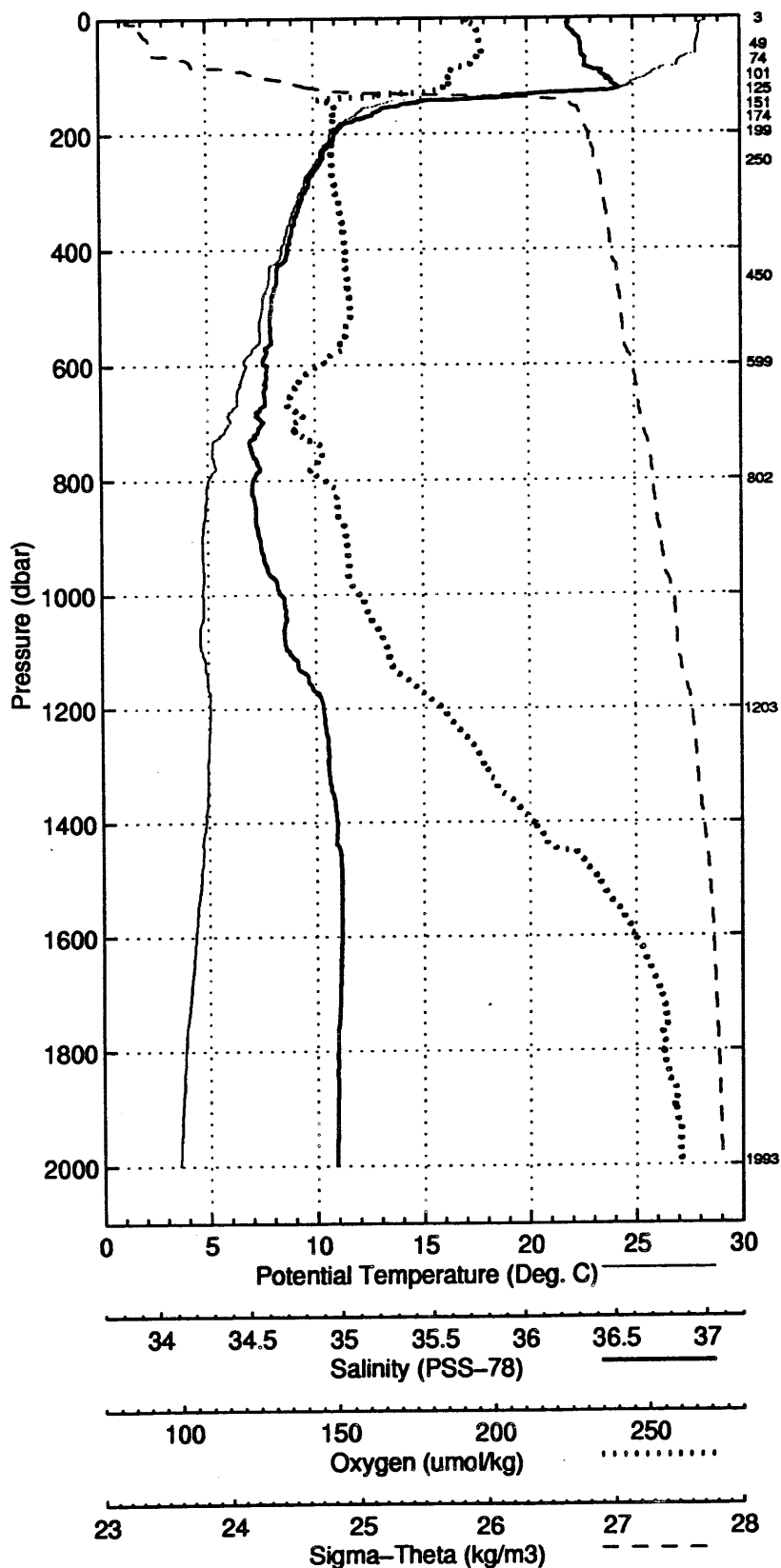


NBC-1 R/V SEWARD JOHNSON
CTD Station 38 (98038)
Latitude 5.520N Longitude 50.309W
02-Dec-1998 17:34Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.313	28.313	36.256	192.0	0.005	23.239
10	28.134	28.132	36.250	194.1	0.046	23.294
20	28.096	28.091	36.267	195.4	0.092	23.322
30	28.076	28.069	36.296	196.0	0.137	23.351
40	28.017	28.007	36.320	196.2	0.183	23.391
50	27.963	27.951	36.328	196.7	0.227	23.416
60	27.960	27.946	36.330	197.0	0.272	23.420
70	27.333	27.317	36.353	194.2	0.316	23.642
80	27.086	27.068	36.350	193.3	0.359	23.721
90	26.271	26.250	36.398	188.1	0.399	24.018
100	25.711	25.689	36.449	186.7	0.437	24.233
110	25.031	25.007	36.497	185.9	0.474	24.480
120	24.625	24.599	36.527	184.8	0.508	24.628
130	21.703	21.677	36.147	171.8	0.539	25.189
140	15.370	15.349	35.736	147.0	0.561	26.467
150	12.955	12.935	35.340	149.9	0.575	26.674
160	12.196	12.175	35.222	149.9	0.589	26.733
170	11.844	11.822	35.155	149.1	0.602	26.749
180	11.297	11.274	35.048	149.3	0.615	26.768
190	11.001	10.978	35.007	149.2	0.628	26.790
200	10.776	10.751	34.981	149.3	0.641	26.811
250	10.114	10.084	34.903	149.0	0.704	26.867
300	9.420	9.386	34.822	149.9	0.765	26.922
350	8.910	8.872	34.763	152.3	0.824	26.959
400	8.514	8.471	34.724	153.3	0.881	26.992
450	7.915	7.870	34.665	153.9	0.937	27.037
500	7.612	7.562	34.636	154.8	0.992	27.060
550	7.467	7.413	34.631	153.1	1.046	27.078
600	6.803	6.746	34.603	145.9	1.098	27.149
650	6.393	6.333	34.593	136.0	1.148	27.196
700	6.062	5.999	34.585	136.7	1.196	27.233
750	5.237	5.175	34.525	145.7	1.241	27.286
800	5.039	4.973	34.531	146.5	1.284	27.314
900	4.746	4.673	34.563	153.3	1.368	27.374
1000	4.742	4.660	34.679	157.6	1.445	27.469
1500	4.615	4.488	35.004	233.8	1.757	27.750
2000	3.574	3.412	34.973	260.7	1.997	27.840

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.623	28.622	36.248	199.8
49	13	27.987	27.976	36.322	198.4
75	12	27.409	27.392	36.345	196.5
101	11	25.907	25.884	36.433	186.8
126	10	23.624	23.597	36.469	184.0
151	9	12.907	12.887	35.314	151.5
174	8	11.555	11.533	35.091	150.0
200	7	10.844	10.820	34.988	152.0
250	6	10.140	10.110	34.909	151.6
450	5	7.907	7.861	34.667	156.9
600	4	6.719	6.663	34.590	145.0
802	3	5.191	5.124	34.554	144.6
1204	2	5.083	4.979	34.914	186.0
1994	1	3.587	3.426	34.981	260.3

NBC-1 R/V SEWARD JOHNSON
 CTD Station 38 (98038)
 Latitude 5.520 N Longitude 50.309 W
 02-Dec-1998 17:34 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 39 (98039)
Latitude 5.366N Longitude 50.468W
02-Dec-1998 20:38Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.358	28.358	36.241	195.6	0.005	23.212
10	28.063	28.060	36.258	195.2	0.046	23.324
20	27.990	27.985	36.310	196.5	0.091	23.389
30	27.919	27.912	36.334	197.2	0.136	23.432
40	27.909	27.900	36.343	197.5	0.181	23.443
50	27.894	27.882	36.343	197.6	0.225	23.450
60	27.876	27.862	36.343	197.5	0.270	23.457
70	26.972	26.956	36.363	193.5	0.313	23.766
80	26.741	26.723	36.374	191.9	0.354	23.850
90	25.869	25.849	36.427	188.8	0.394	24.166
100	25.613	25.591	36.440	188.3	0.431	24.257
110	25.547	25.522	36.468	187.3	0.468	24.300
120	23.527	23.502	36.440	177.5	0.503	24.889
130	22.037	22.011	36.273	179.4	0.532	25.192
140	18.115	18.090	35.873	162.1	0.557	25.926
150	12.228	12.208	35.203	146.7	0.573	26.711
160	11.970	11.949	35.188	150.5	0.586	26.750
170	11.735	11.713	35.168	147.7	0.599	26.779
180	11.029	11.007	35.038	148.3	0.612	26.809
190	10.544	10.521	34.959	148.4	0.625	26.834
200	10.433	10.409	34.942	148.9	0.637	26.840
250	10.064	10.035	34.912	149.2	0.699	26.883
300	9.413	9.380	34.826	149.3	0.759	26.926
350	8.878	8.840	34.766	151.1	0.817	26.967
400	8.581	8.539	34.736	150.7	0.875	26.991
450	8.162	8.115	34.697	151.2	0.931	27.026
500	7.803	7.752	34.653	154.1	0.987	27.046
550	7.311	7.257	34.630	150.1	1.041	27.099
600	6.950	6.893	34.637	133.3	1.093	27.156
650	5.867	5.810	34.580	133.9	1.140	27.252
700	5.463	5.403	34.583	135.7	1.184	27.305
750	5.162	5.100	34.566	139.5	1.227	27.327
800	5.003	4.938	34.581	143.1	1.268	27.358
900	4.825	4.752	34.593	149.9	1.348	27.390
1000	4.792	4.710	34.710	158.6	1.424	27.488
1500	4.530	4.404	34.995	234.9	1.722	27.752

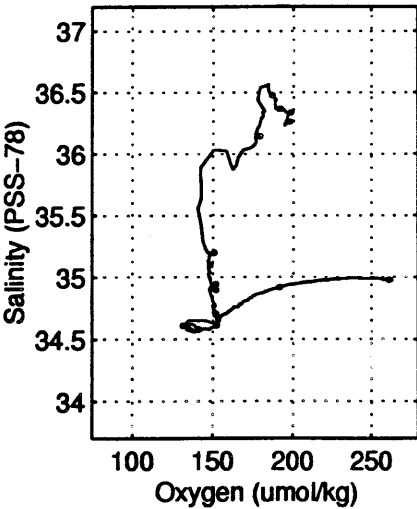
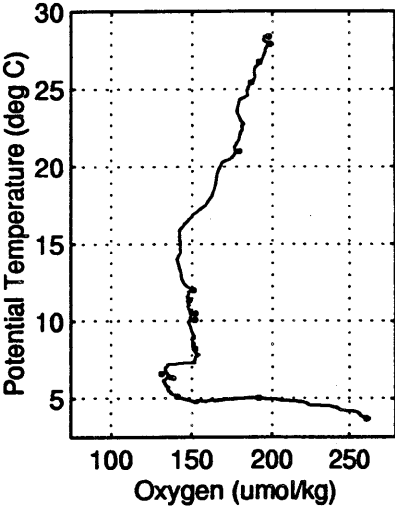
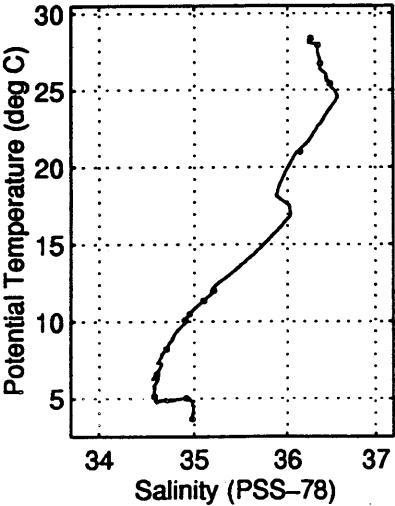
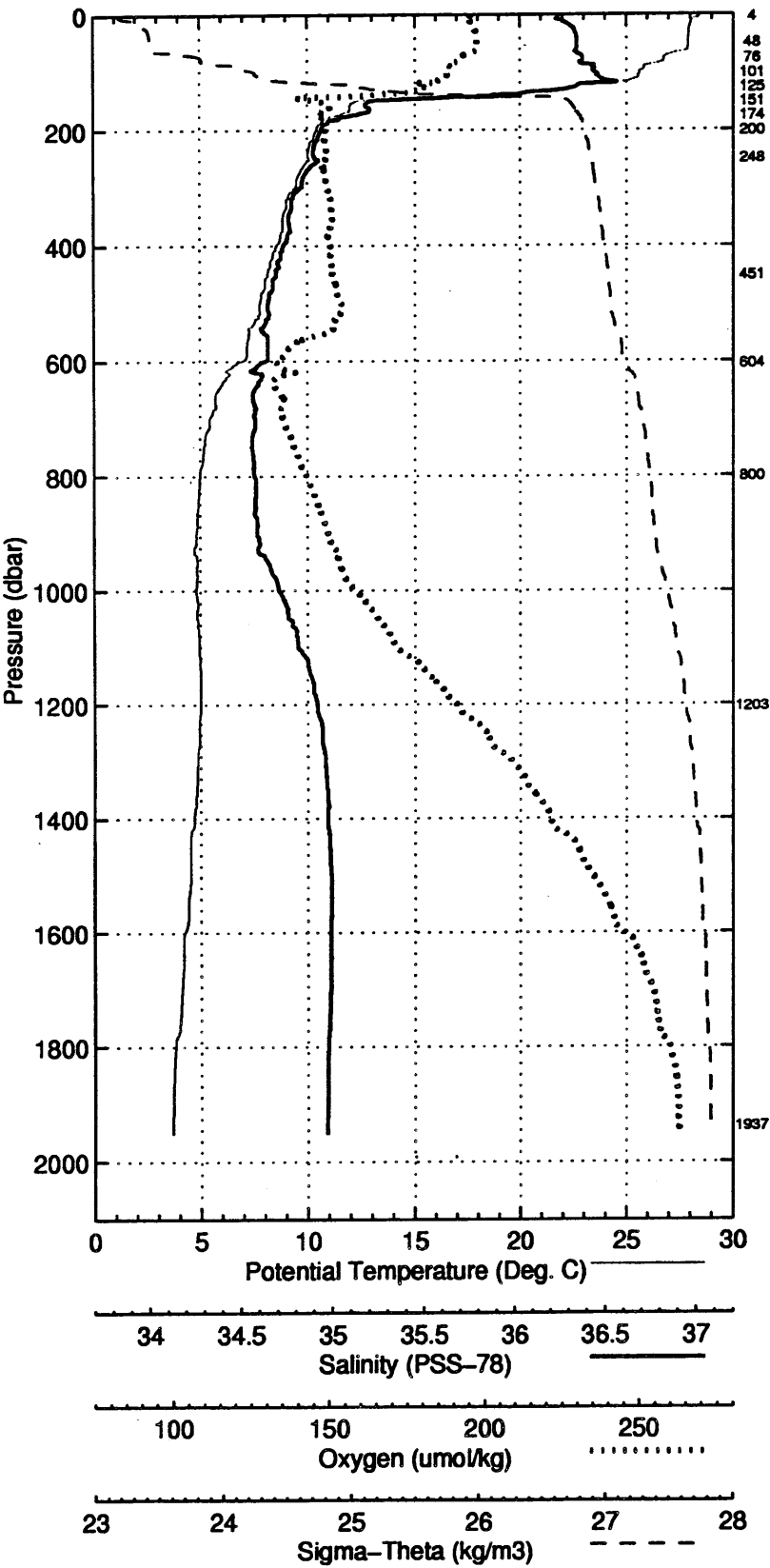
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.369	28.368	36.261	197.5
49	13	27.916	27.904	36.336	198.3
76	12	26.738	26.721	36.363	191.5
101	11	25.418	25.395	36.475	186.6
126	10	20.987	20.963	36.142	178.9
151	9	12.002	11.982	35.201	150.8
175	8	11.337	11.315	35.099	148.1
200	7	10.481	10.457	34.947	151.8
249	6	10.066	10.037	34.899	151.7
451	5	8.195	8.149	34.704	151.6
604	4	6.587	6.531	34.611	131.3
800	3	5.118	5.052	34.582	140.9
1203	2	5.006	4.903	34.919	191.2
1938	1	3.669	3.512	34.979	261.4

NBC-1 R/V SEWARD JOHNSON

CTD Station 39 (98039)

Latitude 5.366 N Longitude 50.468 W

02-Dec-1998 20:38 Z

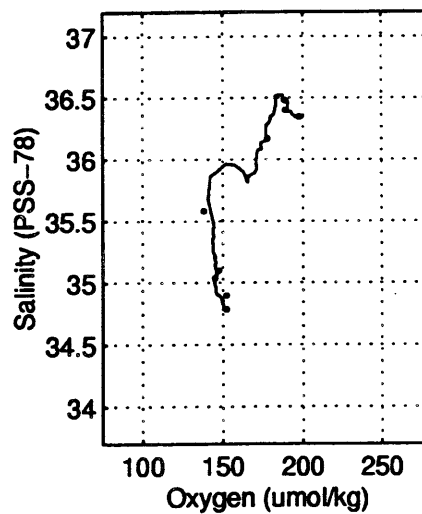
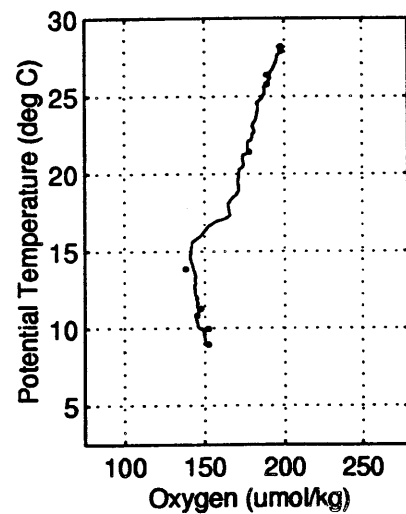
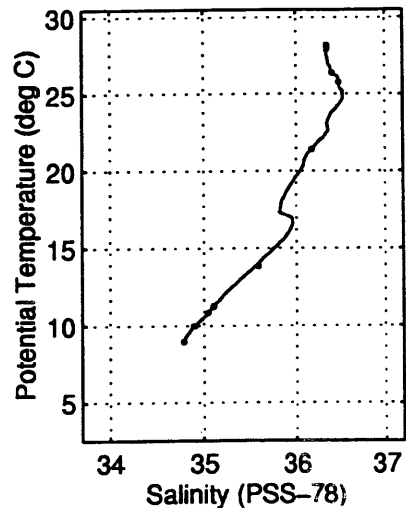
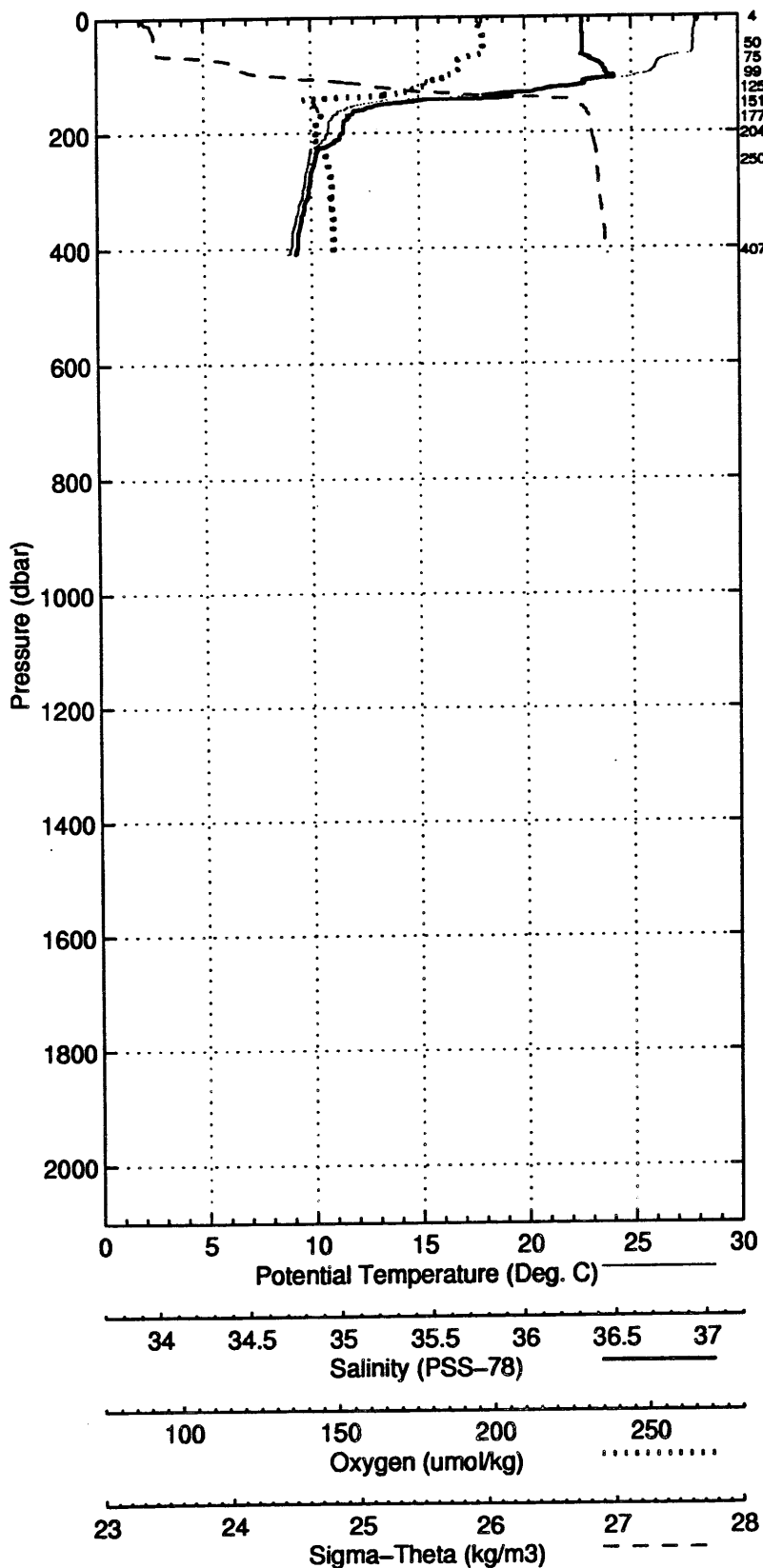


NBC-1 R/V SEWARD JOHNSON
CTD Station 40 (98040)
Latitude 5.279N Longitude 50.571W
02-Dec-1998 23:30Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.142	28.142	36.345	200.1	0.005	23.362
10	28.116	28.114	36.346	196.4	0.045	23.373
20	27.970	27.965	36.344	197.3	0.090	23.421
30	27.919	27.912	36.346	198.0	0.134	23.440
40	27.912	27.902	36.347	198.3	0.179	23.445
50	27.912	27.900	36.347	198.3	0.223	23.447
60	27.883	27.869	36.348	198.2	0.268	23.459
70	26.769	26.753	36.381	192.8	0.311	23.845
80	26.206	26.188	36.436	190.6	0.351	24.066
90	26.113	26.093	36.463	190.7	0.389	24.116
100	25.600	25.578	36.478	187.1	0.427	24.290
110	23.513	23.490	36.372	182.0	0.461	24.840
120	22.164	22.140	36.302	179.2	0.491	25.176
130	20.268	20.244	36.073	171.6	0.518	25.523
140	16.026	16.003	35.917	148.1	0.538	26.459
150	12.373	12.353	35.279	143.9	0.552	26.742
160	11.580	11.560	35.154	145.2	0.565	26.796
170	11.043	11.022	35.067	146.6	0.578	26.828
180	10.854	10.832	35.048	145.1	0.590	26.848
190	10.831	10.808	35.045	145.1	0.602	26.850
200	10.808	10.783	35.040	144.6	0.615	26.851
250	9.892	9.863	34.885	148.7	0.676	26.891
300	9.630	9.596	34.853	150.0	0.737	26.912
350	9.303	9.264	34.815	150.4	0.796	26.937
400	9.070	9.026	34.792	150.4	0.855	26.959

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	10	28.173	28.172	36.344	197.5
50	9	27.910	27.898	36.344	197.9
75	8	26.364	26.347	36.402	189.3
100	7	25.768	25.745	36.475	189.2
126	6	21.398	21.374	36.167	177.7
151	5	13.843	13.821	35.582	138.3
178	4	11.260	11.238	35.103	147.5
204	3	10.836	10.812	35.041	145.2
251	2	9.974	9.945	34.898	152.1
407	1	8.957	8.912	34.787	152.2

NBC-1 R/V SEWARD JOHNSON
 CTD Station 40 (98040)
 Latitude 5.279 N Longitude 50.571 W
 02-Dec-1998 23:30 Z

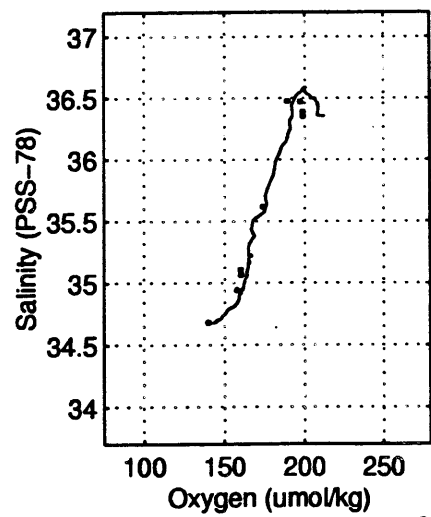
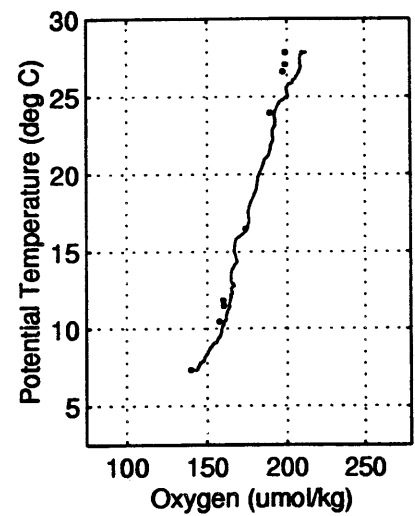
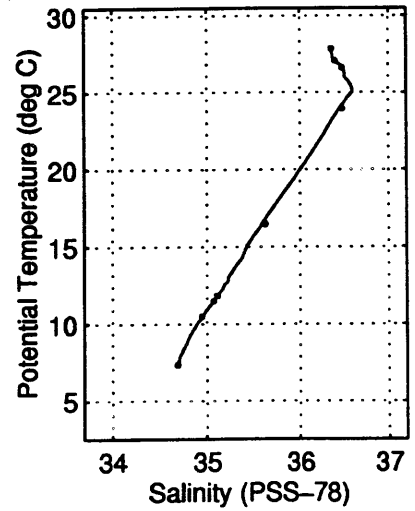
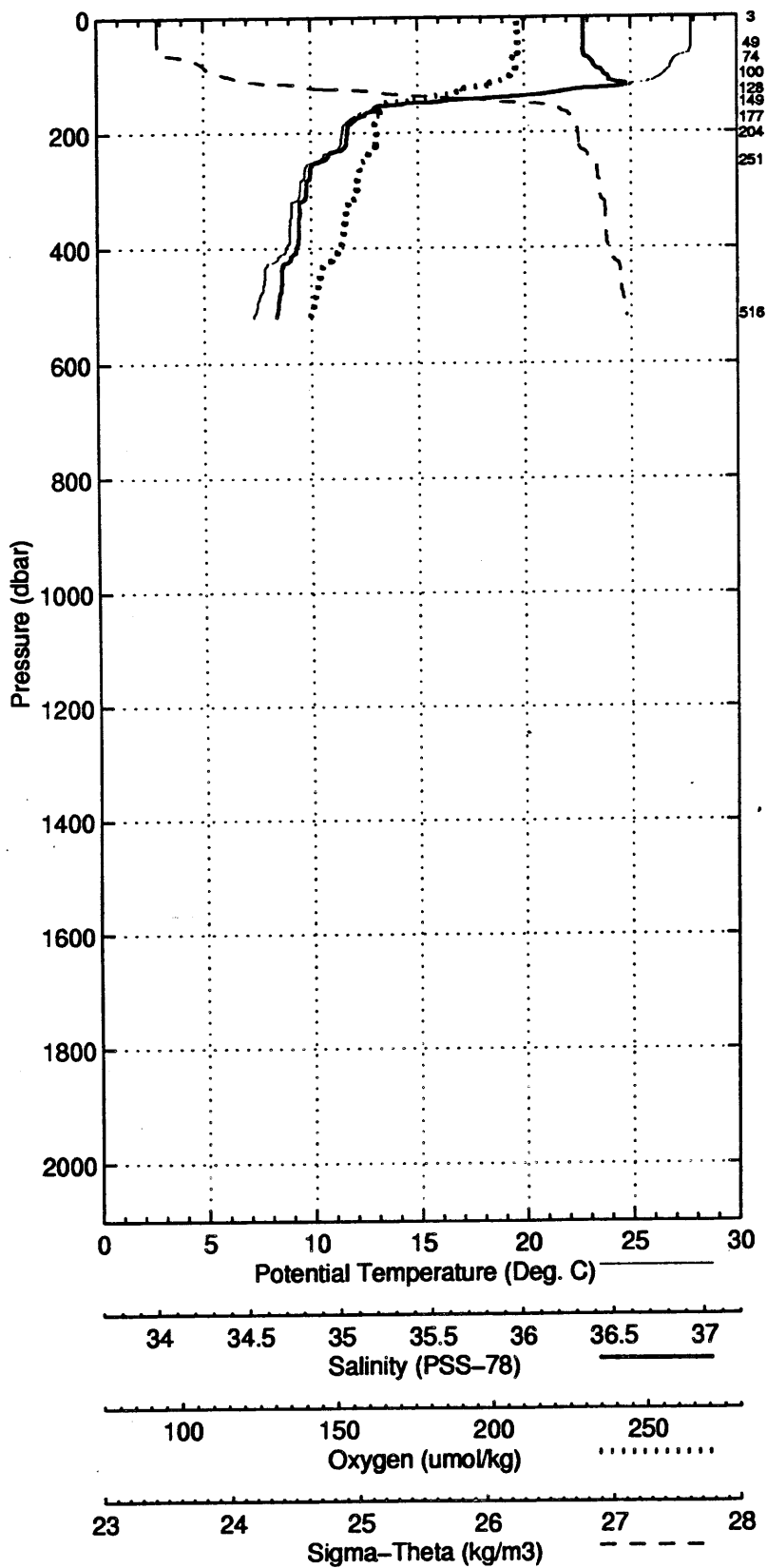


NBC-1 R/V SEWARD JOHNSON
CTD Station 41 (98041)
Latitude 3.395N Longitude 48.437W
04-Dec-1998 00:59Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.862	27.862	36.355	211.7	0.004	23.462
10	27.847	27.844	36.356	209.4	0.044	23.469
20	27.850	27.845	36.357	209.6	0.088	23.470
30	27.853	27.846	36.357	209.6	0.132	23.470
40	27.852	27.842	36.357	209.7	0.177	23.472
50	27.840	27.829	36.355	209.7	0.221	23.477
60	27.790	27.776	36.355	209.5	0.265	23.495
70	27.205	27.189	36.372	208.4	0.309	23.698
80	26.950	26.931	36.410	208.8	0.350	23.810
90	26.861	26.841	36.431	208.8	0.391	23.856
100	26.573	26.551	36.471	207.3	0.431	23.979
110	26.108	26.084	36.496	204.6	0.470	24.146
120	24.944	24.918	36.576	199.1	0.506	24.568
130	22.044	22.018	36.235	190.3	0.537	25.160
140	18.956	18.931	35.876	180.6	0.563	25.716
150	14.329	14.307	35.379	168.8	0.583	26.421
160	12.826	12.805	35.224	166.6	0.598	26.610
170	12.225	12.202	35.160	164.7	0.612	26.679
180	11.746	11.723	35.099	164.2	0.626	26.724
190	11.511	11.487	35.070	164.0	0.639	26.745
200	11.467	11.441	35.066	164.1	0.653	26.751
250	10.166	10.137	34.913	159.7	0.718	26.866
300	9.499	9.465	34.841	158.1	0.778	26.924
350	9.041	9.002	34.801	154.3	0.837	26.968
400	8.818	8.774	34.786	152.3	0.895	26.994
450	7.839	7.794	34.709	146.3	0.949	27.083
500	7.481	7.431	34.688	144.2	1.002	27.120

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	10	27.843	27.842	36.353	199.0
49	9	27.832	27.820	36.351	199.0
74	8	27.054	27.037	36.388	198.8
100	7	26.603	26.580	36.467	197.3
128	6	23.944	23.917	36.473	189.0
149	5	16.468	16.444	35.618	173.8
177	4	11.829	11.806	35.110	160.0
205	3	11.493	11.467	35.068	160.4
252	2	10.477	10.447	34.945	157.6
517	1	7.346	7.296	34.683	139.9

NBC-1 R/V SEWARD JOHNSON
 CTD Station 41 (98041)
 Latitude 3.395 N Longitude 48.437 W
 04-Dec-1998 00:59 Z

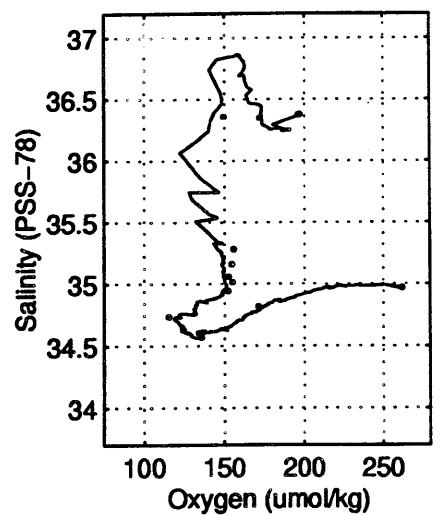
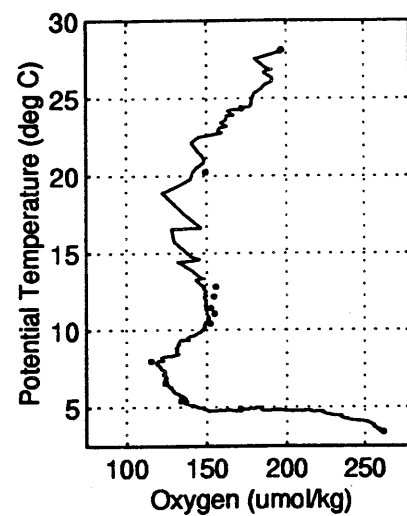
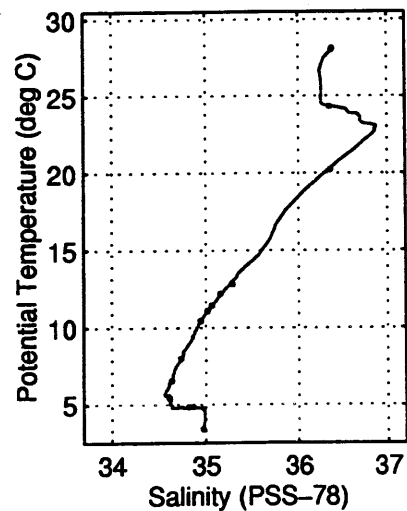
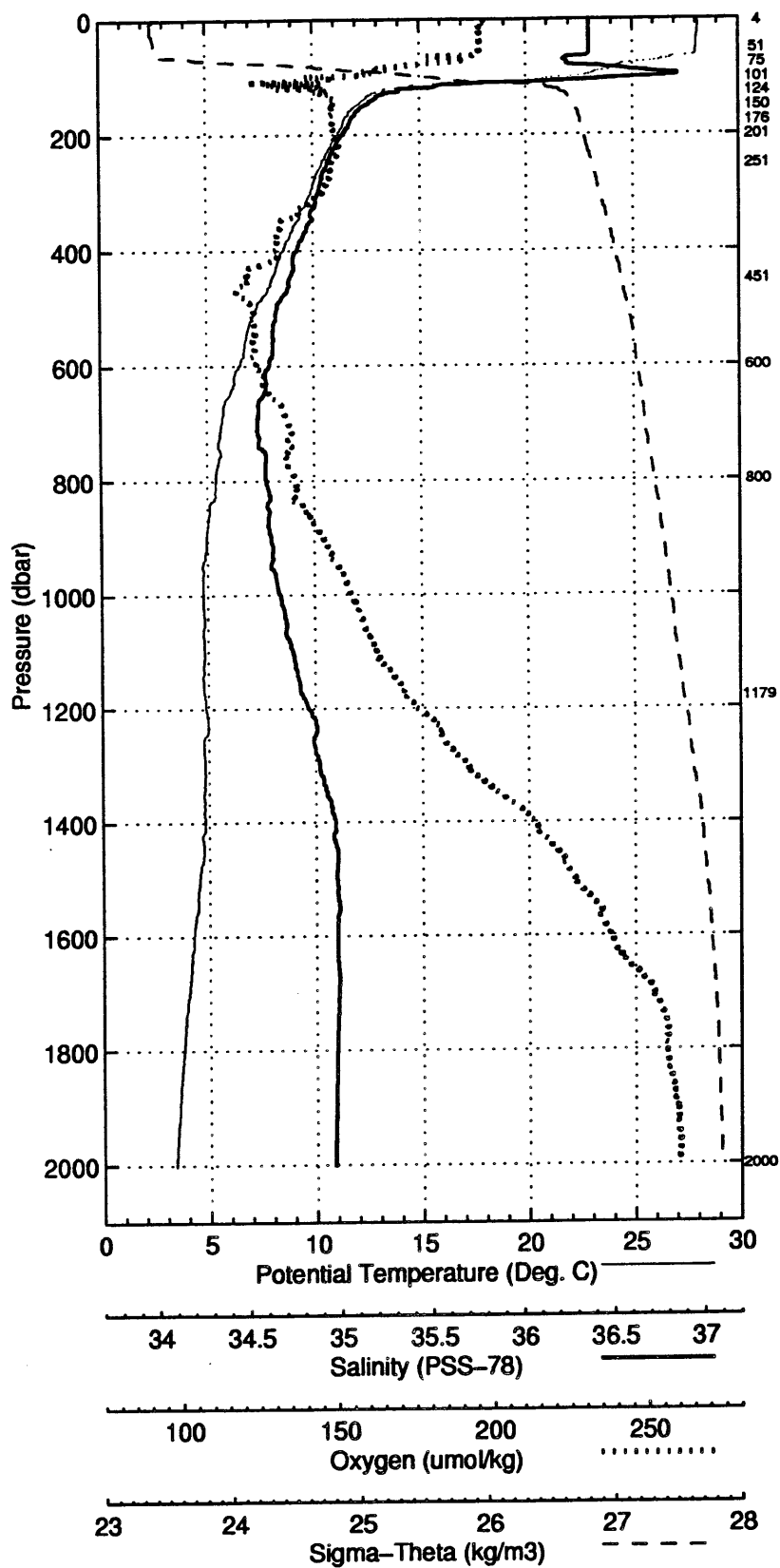


NBC-1 R/V SEWARD JOHNSON
CTD Station 46 (98046)
Latitude 6.000N Longitude 47.500W
05-Dec-1998 02:21Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.019	28.018	36.375	198.4	0.004	23.426
10	28.106	28.104	36.377	196.8	0.045	23.400
20	28.102	28.097	36.377	196.6	0.090	23.403
30	28.069	28.062	36.377	196.6	0.134	23.415
40	28.036	28.026	36.377	196.7	0.179	23.428
50	28.028	28.016	36.377	196.8	0.224	23.432
60	28.018	28.003	36.376	196.0	0.268	23.436
70	26.642	26.626	36.238	185.6	0.312	23.777
80	24.406	24.388	36.293	173.8	0.349	24.511
90	23.605	23.586	36.695	162.2	0.381	25.055
100	22.116	22.096	36.740	140.4	0.408	25.521
110	17.609	17.590	35.862	134.6	0.431	26.039
120	13.902	13.885	35.413	140.0	0.447	26.535
130	12.761	12.744	35.251	147.7	0.462	26.643
140	12.369	12.350	35.193	148.5	0.476	26.675
150	12.019	11.999	35.144	148.7	0.490	26.705
160	11.703	11.682	35.105	149.8	0.503	26.735
170	11.543	11.521	35.082	149.3	0.517	26.748
180	11.442	11.419	35.067	149.7	0.530	26.756
190	11.305	11.281	35.050	149.8	0.543	26.768
200	11.155	11.130	35.029	150.3	0.556	26.779
250	10.433	10.403	34.946	149.2	0.621	26.845
300	9.896	9.862	34.896	146.4	0.682	26.901
350	9.235	9.196	34.849	132.6	0.742	26.975
400	8.621	8.578	34.779	130.9	0.798	27.019
450	8.045	7.999	34.734	122.8	0.853	27.072
500	7.320	7.271	34.666	123.7	0.905	27.125
550	6.873	6.821	34.645	125.1	0.955	27.171
600	6.525	6.469	34.621	125.2	1.004	27.200
650	6.077	6.019	34.592	129.2	1.051	27.236
700	5.689	5.629	34.557	135.1	1.096	27.257
750	5.637	5.572	34.599	134.7	1.141	27.297
800	5.414	5.346	34.604	137.2	1.184	27.329
900	4.954	4.880	34.628	146.4	1.265	27.403
1000	4.791	4.709	34.679	155.5	1.341	27.463
1500	4.548	4.421	34.981	226.5	1.659	27.740
2000	3.394	3.235	34.965	260.9	1.894	27.850

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.116	28.114	36.376	196.8
52	13	28.028	28.015	36.373	196.2
75	12	24.330	24.314	36.348	171.8
102	11	20.220	20.201	36.358	149.5
125	10	12.805	12.788	35.283	155.8
150	9	12.172	12.153	35.160	154.6
176	8	11.425	11.403	35.061	152.5
201	7	11.076	11.051	35.017	154.8
251	6	10.431	10.401	34.944	152.0
451	5	7.996	7.950	34.735	115.4
601	4	6.559	6.503	34.630	124.2
800	3	5.412	5.344	34.605	134.1
1180	2	4.877	4.777	34.818	171.2
2000	1	3.394	3.235	34.969	262.1

NBC-1 R/V SEWARD JOHNSON
CTD Station 46 (98046)
Latitude 6.000 N Longitude 47.500 W
05-Dec-1998 02:21 Z

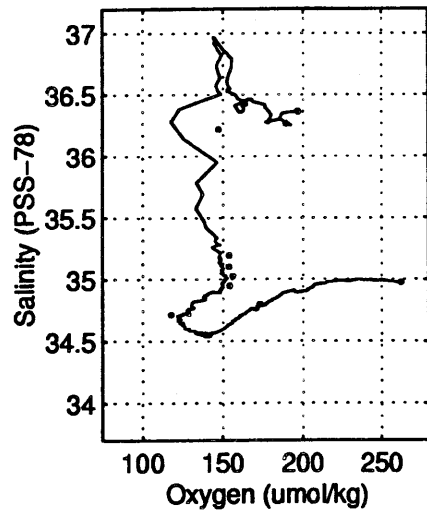
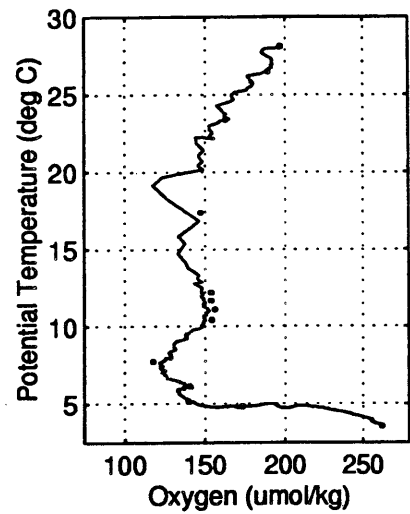
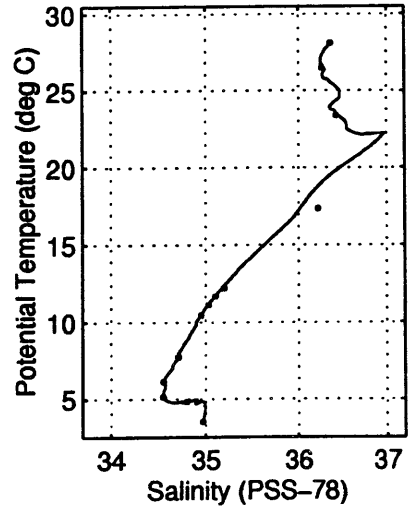
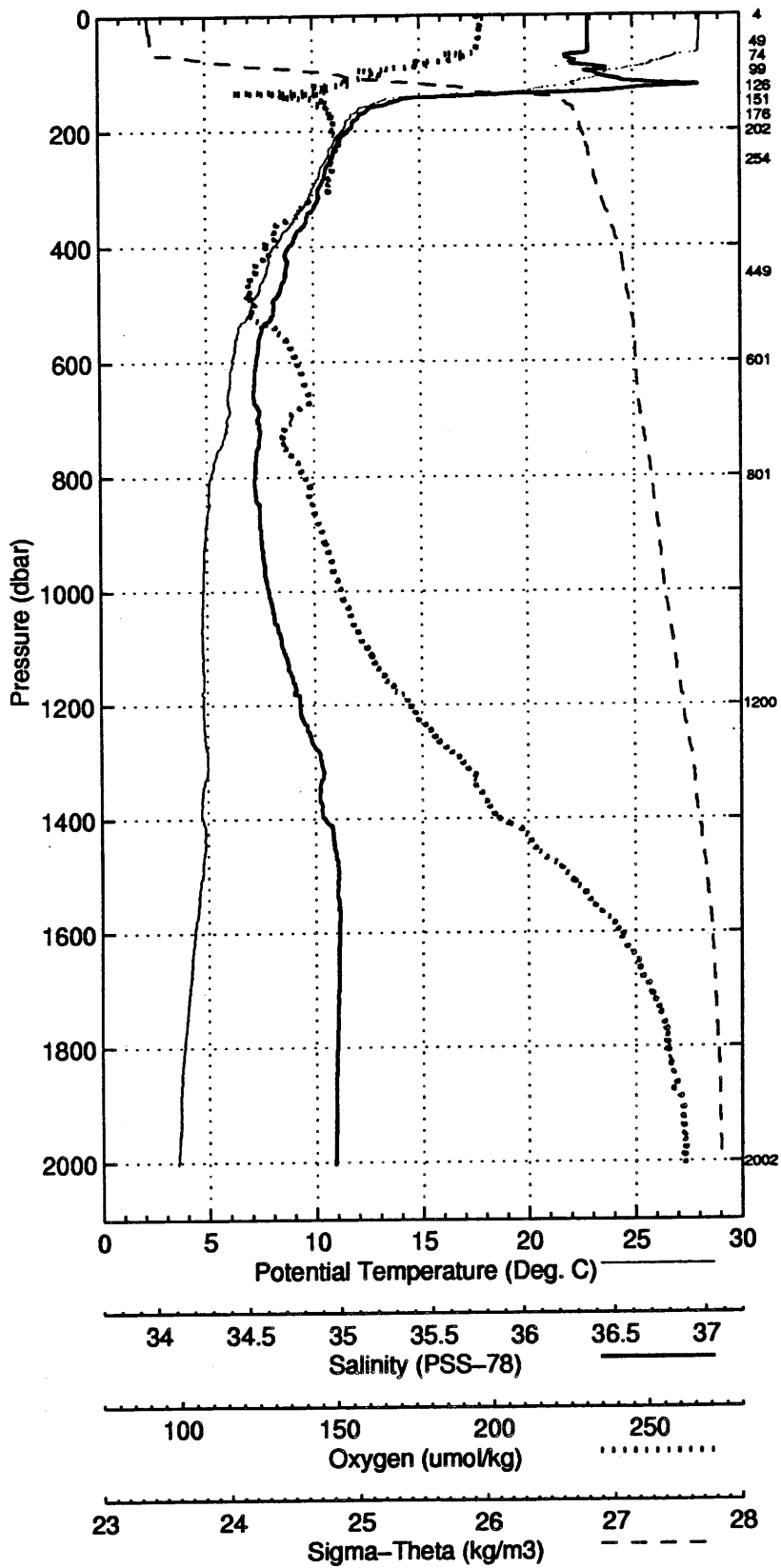


NBC-1 R/V SEWARD JOHNSON
CTD Station 47 (98047)
Latitude 6.049N Longitude 47.995W
05-Dec-1998 06:38Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.146	28.146	36.374	196.0	0.004	23.382
10	28.126	28.124	36.370	197.2	0.045	23.387
20	28.118	28.113	36.370	197.2	0.090	23.392
30	28.087	28.080	36.370	196.6	0.135	23.403
40	28.079	28.070	36.371	196.6	0.180	23.408
50	28.072	28.060	36.371	196.2	0.225	23.413
60	28.064	28.050	36.371	196.1	0.269	23.417
70	27.048	27.032	36.248	191.5	0.314	23.655
80	26.337	26.319	36.296	184.3	0.355	23.919
90	25.269	25.249	36.417	176.2	0.394	24.344
100	23.726	23.705	36.396	162.9	0.427	24.794
110	23.130	23.107	36.503	157.3	0.458	25.051
120	22.160	22.136	36.793	155.5	0.485	25.551
130	20.253	20.228	36.528	147.0	0.507	25.875
140	15.371	15.350	35.691	137.5	0.526	26.432
150	13.056	13.035	35.302	145.4	0.541	26.625
160	12.197	12.176	35.170	147.5	0.555	26.692
170	11.938	11.916	35.135	147.5	0.569	26.715
180	11.678	11.655	35.102	149.3	0.583	26.739
190	11.547	11.523	35.084	150.1	0.596	26.750
200	11.368	11.342	35.058	149.9	0.609	26.763
250	10.630	10.600	34.967	149.7	0.674	26.827
300	9.964	9.930	34.898	148.1	0.737	26.890
350	9.140	9.101	34.831	136.8	0.796	26.976
400	8.170	8.128	34.735	128.4	0.852	27.053
450	7.766	7.721	34.715	123.7	0.905	27.099
500	7.142	7.094	34.653	124.6	0.957	27.139
550	6.490	6.440	34.581	132.2	1.006	27.171
600	6.225	6.171	34.554	138.1	1.055	27.185
650	6.031	5.973	34.540	141.3	1.103	27.200
700	5.943	5.881	34.559	137.0	1.150	27.227
750	5.602	5.537	34.560	134.3	1.197	27.270
800	5.208	5.141	34.545	140.5	1.241	27.306
900	4.956	4.882	34.577	145.7	1.325	27.362
1000	4.826	4.744	34.616	151.8	1.405	27.409
1500	4.735	4.607	34.991	224.1	1.736	27.727
2000	3.543	3.382	34.971	261.0	1.977	27.841

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.102	28.101	36.365	196.4
50	13	28.082	28.071	36.360	196.6
75	12	26.476	26.459	36.265	189.3
99	11	23.378	23.358	36.426	162.6
127	10	17.368	17.346	36.217	147.0
152	9	12.200	12.180	35.194	153.8
177	8	11.684	11.662	35.105	153.8
203	7	11.108	11.083	35.029	156.1
254	6	10.426	10.395	34.947	154.2
449	5	7.724	7.679	34.716	117.8
602	4	6.134	6.081	34.551	140.7
802	3	5.140	5.074	34.548	139.7
1201	2	4.823	4.722	34.800	173.3
2002	1	3.533	3.372	34.974	262.3

NBC-1 R/V SEWARD JOHNSON
CTD Station 47 (98047)
Latitude 6.049 N Longitude 47.995 W
05-Dec-1998 06:38 Z

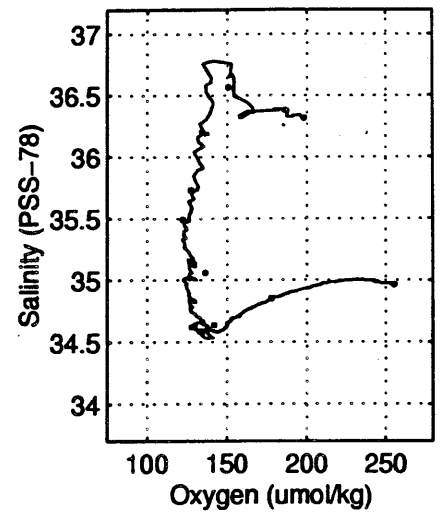
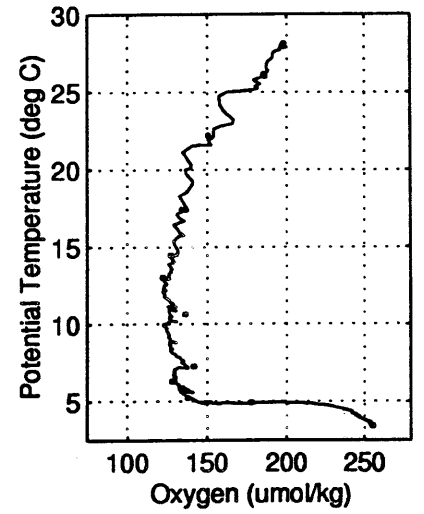
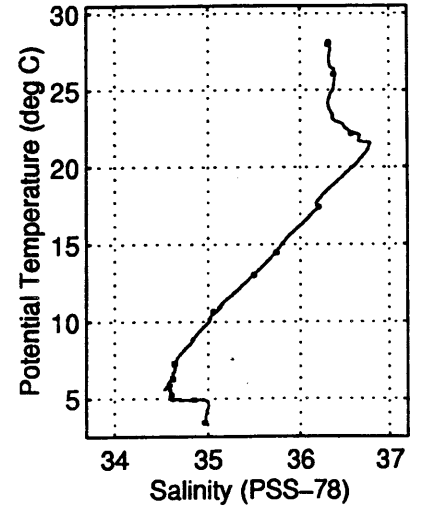
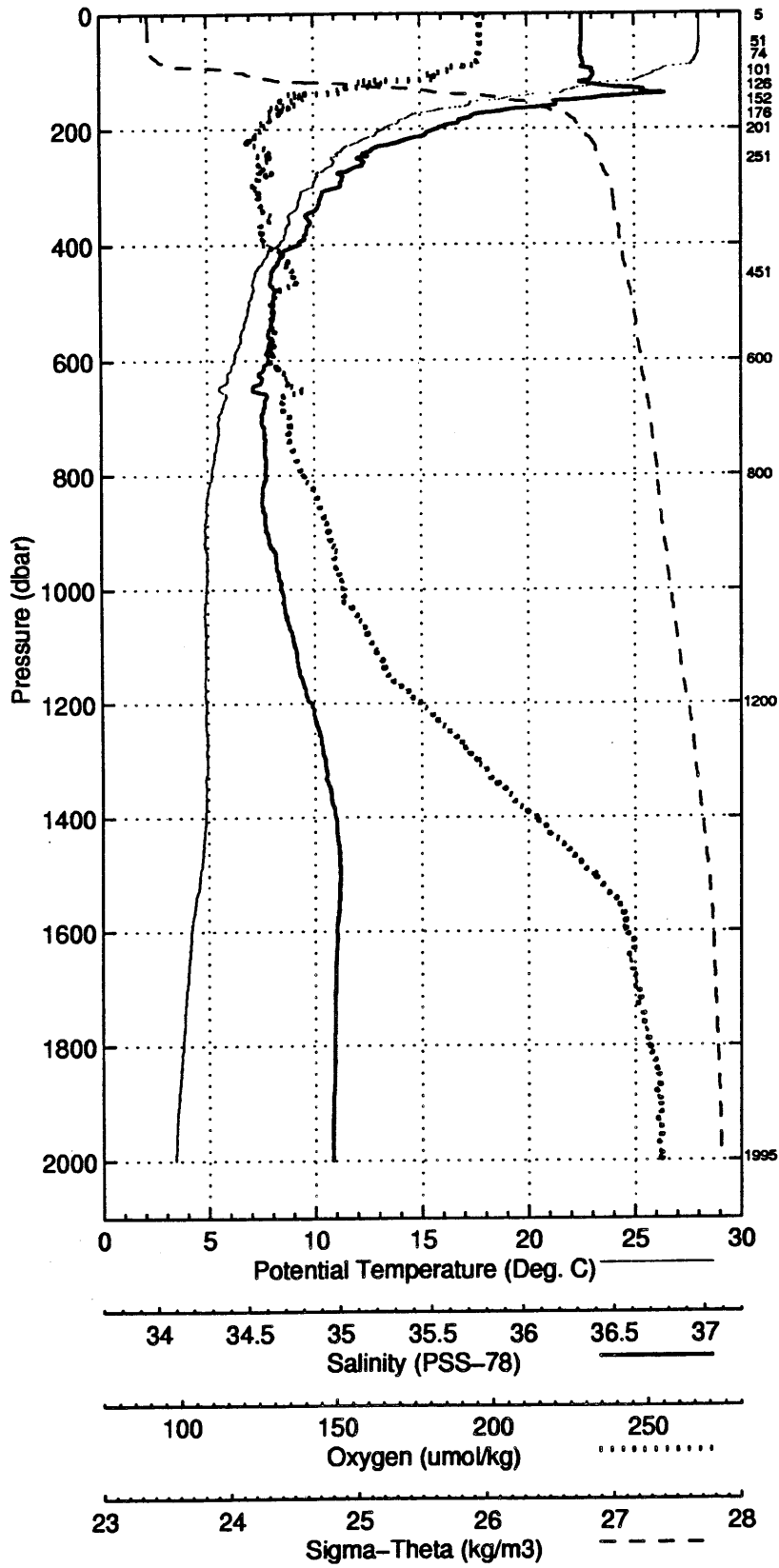


NBC-1 R/V SEWARD JOHNSON
CTD Station 48 (98048)
Latitude 6.100N Longitude 48.500W
05-Dec-1998 11:16Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.063	28.063	36.328	195.9	0.004	23.375
10	28.068	28.066	36.328	196.5	0.045	23.375
20	28.067	28.062	36.327	196.5	0.090	23.377
30	28.067	28.059	36.327	196.5	0.135	23.378
40	28.067	28.058	36.327	196.5	0.180	23.379
50	28.061	28.049	36.326	196.3	0.225	23.382
60	28.033	28.019	36.321	196.5	0.271	23.390
70	28.000	27.983	36.323	196.2	0.316	23.403
80	27.869	27.851	36.332	196.1	0.361	23.454
90	27.650	27.629	36.338	193.4	0.405	23.532
100	26.229	26.207	36.384	184.8	0.446	24.022
110	25.499	25.474	36.384	183.2	0.484	24.251
120	23.756	23.731	36.327	160.4	0.519	24.735
130	22.197	22.171	36.608	154.3	0.549	25.401
140	21.120	21.093	36.757	134.8	0.573	25.816
150	18.542	18.516	36.310	137.1	0.593	26.154
160	17.184	17.157	36.166	132.1	0.611	26.379
170	15.519	15.493	35.871	130.4	0.627	26.541
180	14.445	14.419	35.727	129.7	0.641	26.666
190	13.976	13.949	35.655	128.8	0.655	26.711
200	13.311	13.283	35.540	126.3	0.669	26.760
250	10.870	10.839	35.108	130.0	0.732	26.895
300	9.972	9.937	35.010	122.7	0.791	26.977
350	8.814	8.776	34.824	130.0	0.847	27.022
400	8.401	8.359	34.782	127.0	0.902	27.055
450	7.254	7.210	34.632	137.9	0.954	27.106
500	6.969	6.922	34.643	129.5	1.005	27.155
550	6.612	6.561	34.620	130.7	1.054	27.186
600	6.287	6.232	34.616	129.9	1.101	27.226
650	5.579	5.523	34.532	138.5	1.147	27.249
700	5.575	5.515	34.583	134.8	1.192	27.291
750	5.411	5.347	34.596	136.4	1.235	27.322
800	5.204	5.137	34.600	140.6	1.276	27.350
900	4.913	4.839	34.609	147.9	1.357	27.392
1000	4.935	4.852	34.685	152.1	1.434	27.452
1500	4.610	4.483	35.004	232.9	1.751	27.751
2000	3.414	3.256	34.961	254.3	1.985	27.845

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
6	14	28.106	28.104	36.318	197.9
52	13	28.042	28.029	36.315	198.1
74	12	27.964	27.946	36.314	197.9
102	11	26.018	25.995	36.381	186.0
127	10	22.180	22.155	36.568	150.6
152	9	17.422	17.396	36.203	134.3
176	8	14.462	14.436	35.731	127.5
202	7	13.030	13.002	35.493	122.4
252	6	10.645	10.614	35.060	136.1
452	5	7.279	7.235	34.638	141.8
601	4	6.295	6.240	34.620	128.1
801	3	5.224	5.157	34.604	137.9
1200	2	4.924	4.822	34.855	177.6
1995	1	3.420	3.262	34.966	255.3

NBC-1 R/V SEWARD JOHNSON
 CTD Station 48 (98048)
 Latitude 6.100 N Longitude 48.500 W
 05-Dec-1998 11:16 Z

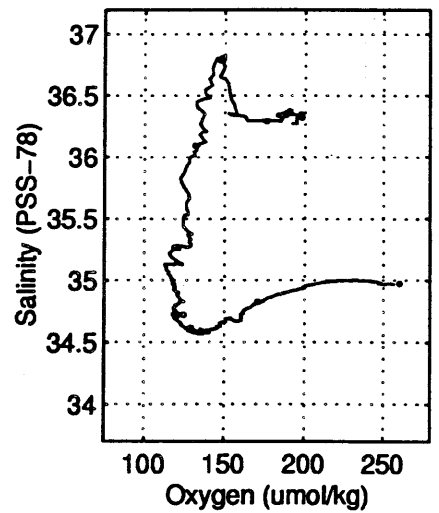
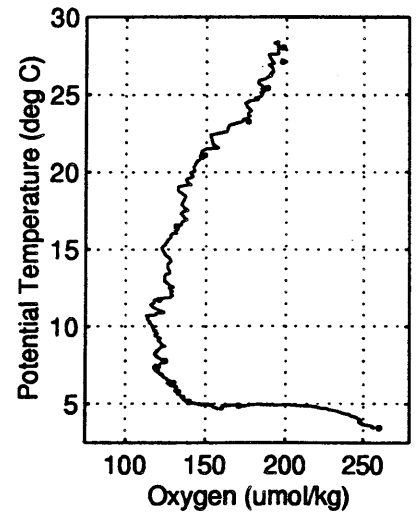
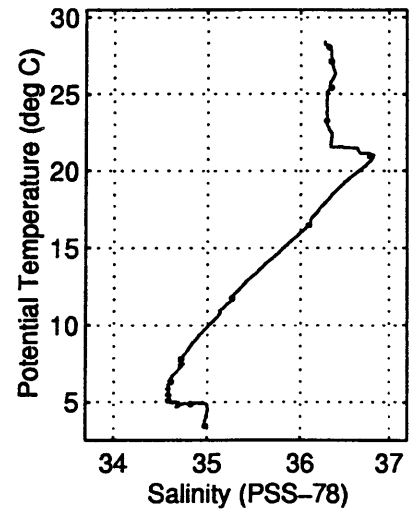
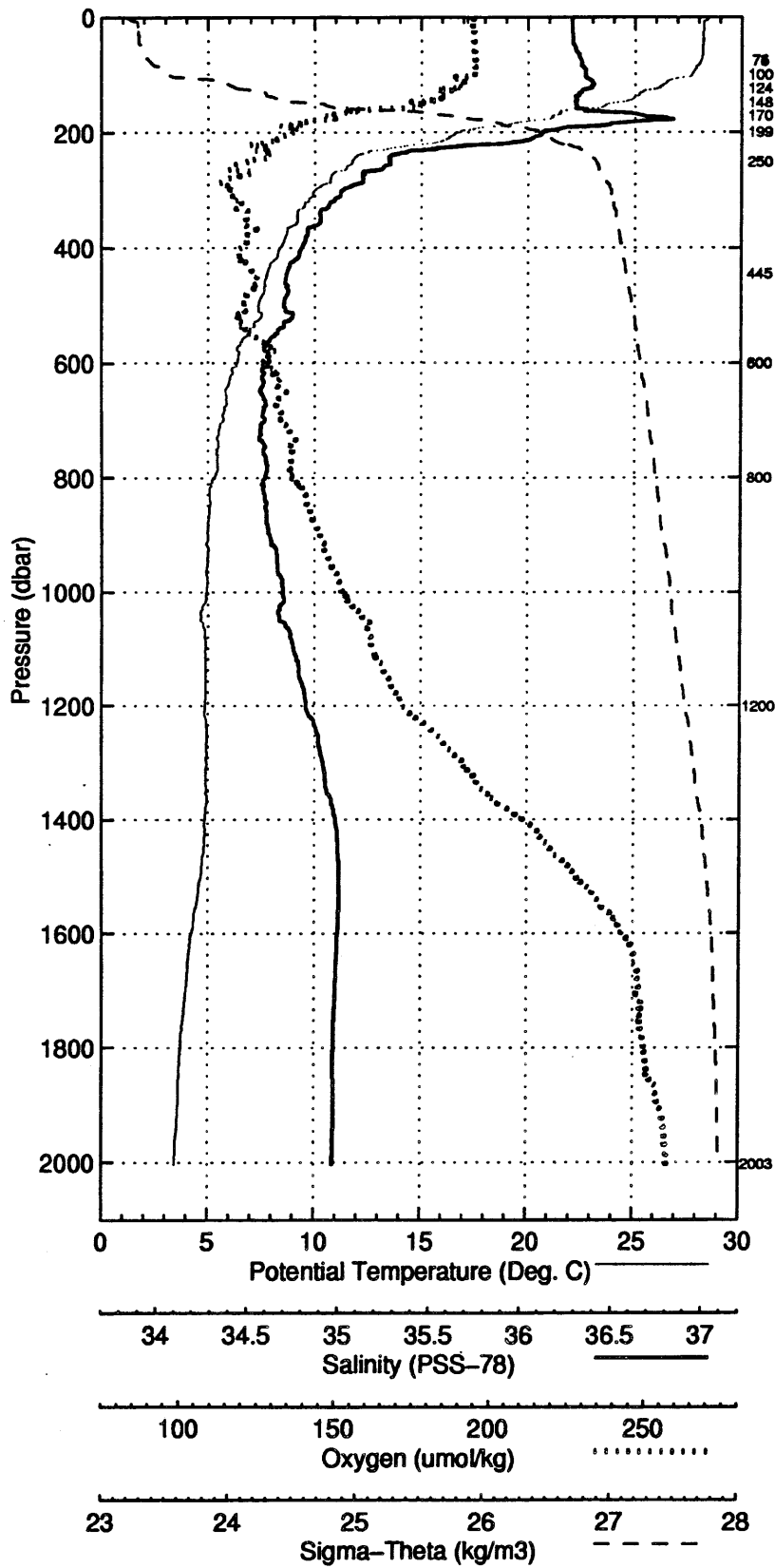


NBC-1 R/V SEWARD JOHNSON
CTD Station 49 (98049)
Latitude 6.168N Longitude 49.003W
05-Dec-1998 15:36Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.430	28.430	36.273	194.1	0.005	23.213
10	28.234	28.232	36.273	194.2	0.046	23.279
20	28.222	28.217	36.274	194.3	0.092	23.285
30	28.218	28.211	36.275	194.5	0.138	23.288
40	28.220	28.211	36.275	194.4	0.184	23.290
50	28.186	28.174	36.285	194.7	0.230	23.311
60	28.188	28.173	36.296	194.6	0.276	23.319
70	28.151	28.135	36.312	194.7	0.322	23.345
80	28.042	28.023	36.323	194.8	0.367	23.391
90	27.840	27.819	36.342	194.7	0.412	23.473
100	27.662	27.639	36.343	194.9	0.456	23.533
110	26.568	26.543	36.374	191.6	0.499	23.909
120	26.234	26.207	36.376	188.9	0.539	24.018
130	25.361	25.332	36.324	184.0	0.577	24.251
140	24.961	24.930	36.293	184.5	0.614	24.352
150	23.754	23.723	36.291	175.7	0.649	24.713
160	22.607	22.574	36.329	162.9	0.681	25.076
170	21.386	21.353	36.646	147.8	0.707	25.661
180	20.073	20.039	36.671	142.7	0.729	26.037
190	18.431	18.398	36.351	137.4	0.748	26.217
200	16.802	16.769	36.111	135.2	0.766	26.431
250	11.764	11.732	35.273	122.0	0.837	26.859
300	10.005	9.970	35.019	116.7	0.897	26.978
350	9.197	9.158	34.899	121.4	0.953	27.020
400	8.370	8.328	34.794	119.9	1.008	27.069
450	7.741	7.696	34.711	124.8	1.061	27.099
500	7.356	7.307	34.698	121.2	1.112	27.145
550	6.838	6.786	34.649	123.5	1.161	27.179
600	6.343	6.288	34.611	128.0	1.209	27.215
650	5.825	5.768	34.571	134.2	1.255	27.250
700	5.714	5.654	34.593	132.5	1.300	27.282
750	5.424	5.360	34.587	135.6	1.344	27.313
800	5.301	5.233	34.596	137.1	1.386	27.336
900	5.002	4.927	34.622	145.3	1.467	27.392
1000	4.943	4.860	34.694	152.2	1.544	27.458
1500	4.668	4.540	35.002	227.5	1.862	27.743
2000	3.460	3.300	34.968	256.8	2.096	27.846

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
74	13	28.023	28.006	36.318	198.1
76	14	28.019	28.001	36.319	198.2
101	12	27.113	27.089	36.345	197.4
124	11	25.407	25.379	36.345	188.0
148	10	23.261	23.230	36.293	176.1
171	9	20.977	20.944	36.784	147.2
200	8	16.478	16.445	36.092	131.6
251	7	11.721	11.689	35.261	121.2
445	6	7.763	7.719	34.723	124.6
600	5	6.314	6.260	34.613	128.7
601	4	6.315	6.261	34.614	129.2
800	3	5.116	5.050	34.587	139.6
1201	2	4.872	4.770	34.827	170.9
2003	1	3.455	3.296	34.975	260.6

NBC-1 R/V SEWARD JOHNSON
 CTD Station 49 (98049)
 Latitude 6.168 N Longitude 49.003 W
 05-Dec-1998 15:36 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 50 (98050)
Latitude 6.233N Longitude 49.500W
05-Dec-1998 20:25Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.412	28.412	36.295	195.8	0.005	23.235
10	28.272	28.270	36.307	195.2	0.046	23.292
20	28.236	28.231	36.309	195.4	0.092	23.307
30	28.219	28.212	36.310	194.9	0.138	23.315
40	28.218	28.208	36.312	194.9	0.183	23.319
50	28.201	28.189	36.314	195.1	0.229	23.327
60	28.059	28.045	36.308	195.0	0.275	23.371
70	27.927	27.911	36.300	195.8	0.320	23.409
80	27.795	27.777	36.325	196.2	0.365	23.473
90	27.512	27.491	36.339	195.4	0.408	23.577
100	27.281	27.258	36.349	193.7	0.452	23.661
110	26.280	26.255	36.393	188.6	0.493	24.014
120	26.260	26.233	36.405	188.9	0.532	24.031
130	26.012	25.983	36.438	188.5	0.571	24.135
140	25.895	25.864	36.435	188.3	0.609	24.171
150	25.246	25.213	36.391	183.1	0.647	24.340
160	23.919	23.885	36.288	174.1	0.682	24.663
170	21.451	21.418	36.176	160.1	0.713	25.285
180	20.918	20.883	36.460	157.1	0.738	25.649
190	20.039	20.004	36.628	144.6	0.760	26.014
200	18.913	18.878	36.459	139.5	0.780	26.179
250	12.479	12.445	35.399	119.4	0.855	26.820
300	11.116	11.078	35.242	106.7	0.917	26.957
350	10.209	10.167	35.088	104.5	0.974	26.999
400	9.232	9.188	34.947	106.3	1.030	27.054
450	8.553	8.505	34.859	112.0	1.084	27.094
500	7.861	7.810	34.770	116.2	1.136	27.130
550	7.317	7.263	34.713	119.3	1.186	27.163
600	6.965	6.908	34.692	121.0	1.236	27.197
650	6.438	6.378	34.641	124.0	1.283	27.228
700	5.995	5.933	34.616	127.5	1.329	27.266
750	5.796	5.731	34.630	129.0	1.374	27.302
800	5.371	5.303	34.609	134.0	1.416	27.338
900	5.066	4.991	34.650	142.8	1.497	27.407
1000	5.030	4.946	34.729	152.5	1.572	27.476
1500	4.516	4.390	34.998	229.8	1.877	27.756
2000	3.417	3.258	34.966	256.3	2.111	27.848

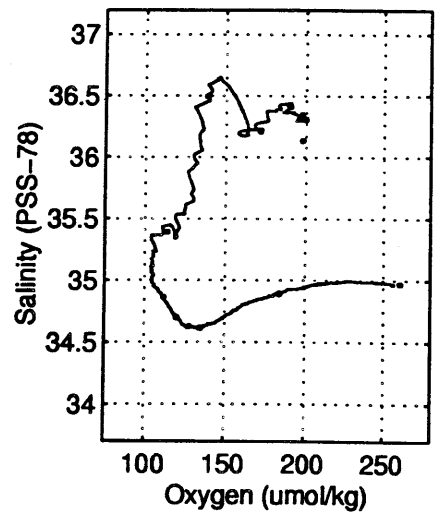
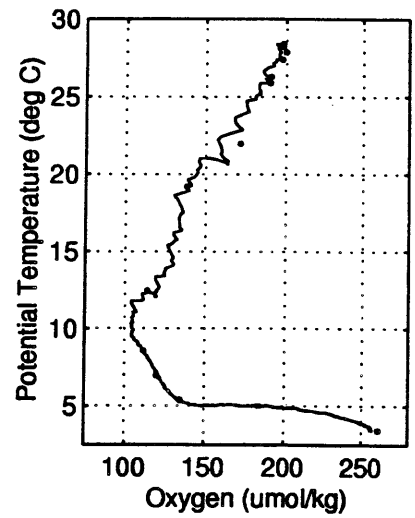
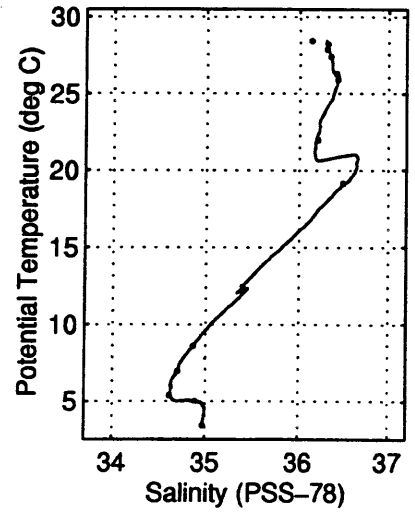
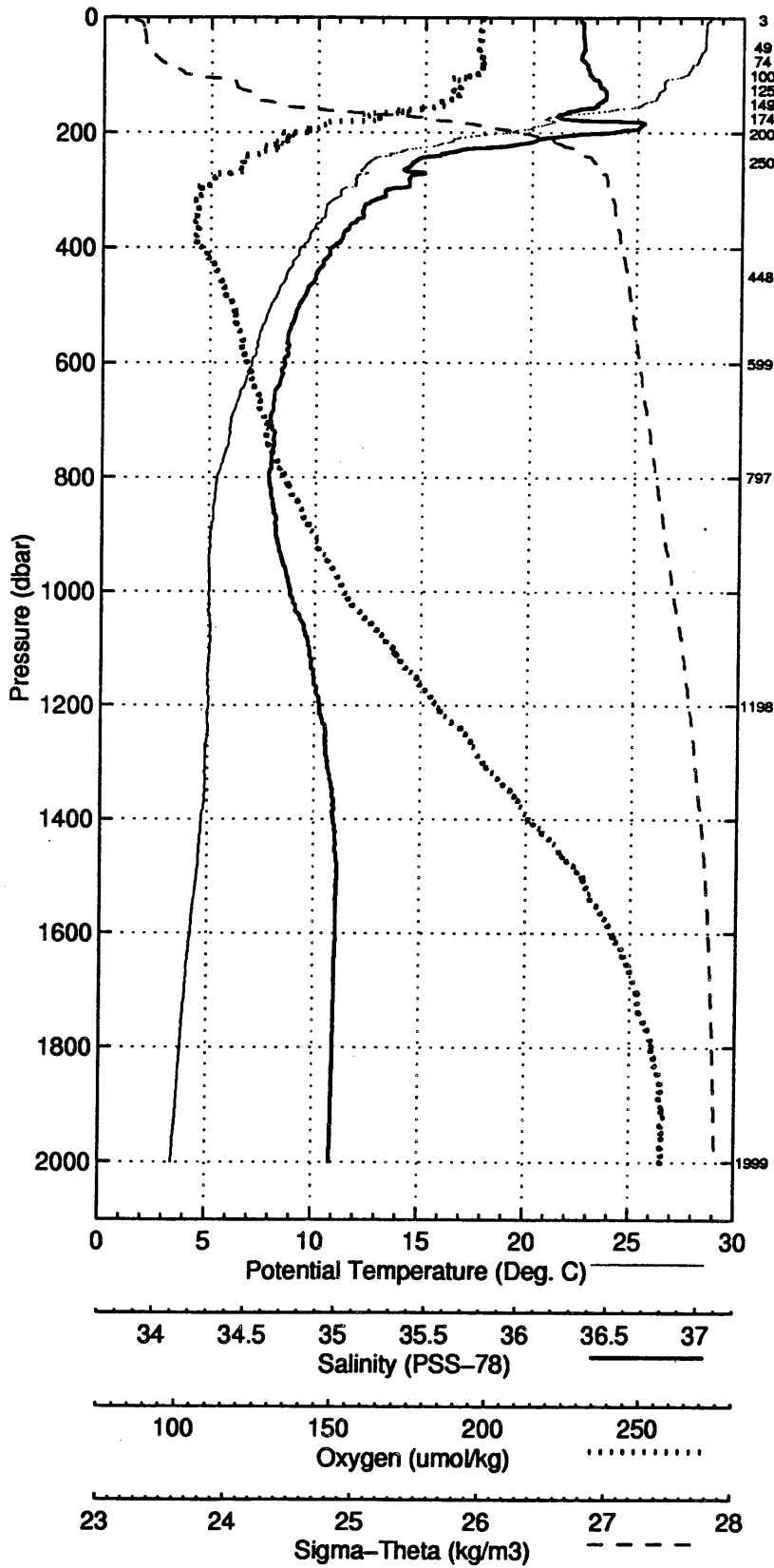
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
3	14	28.430	28.430	36.134	197.9
50	13	28.212	28.200	36.310	198.2
75	12	27.873	27.855	36.305	199.9
100	11	27.394	27.370	36.343	197.5
125	10	26.275	26.246	36.411	190.3
149	9	25.877	25.843	36.427	190.1
174	8	21.953	21.918	36.209	171.4
200	7	19.166	19.130	36.494	138.2
250	6	12.439	12.405	35.392	113.6
448	5	8.574	8.526	34.865	112.0
599	4	6.963	6.905	34.698	120.1
797	3	5.383	5.315	34.614	134.9
1198	2	5.004	4.902	34.894	183.8
2000	1	3.418	3.259	34.972	260.9

NBC-1 R/V SEWARD JOHNSON

CTD Station 50 (98050)

Latitude 6.233 N Longitude 49.500 W

05-Dec-1998 20:25 Z

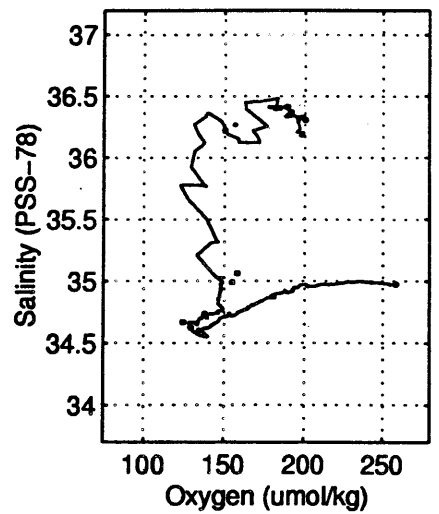
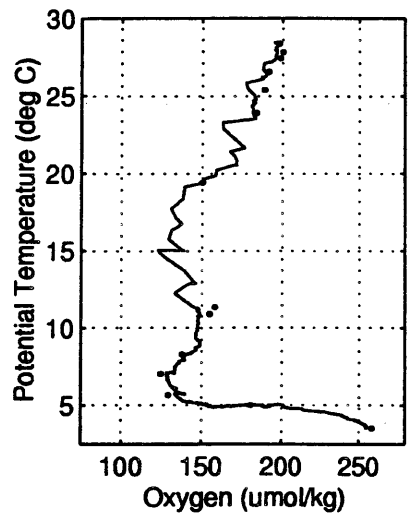
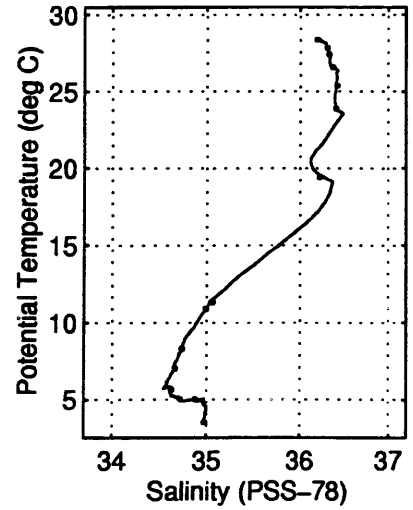
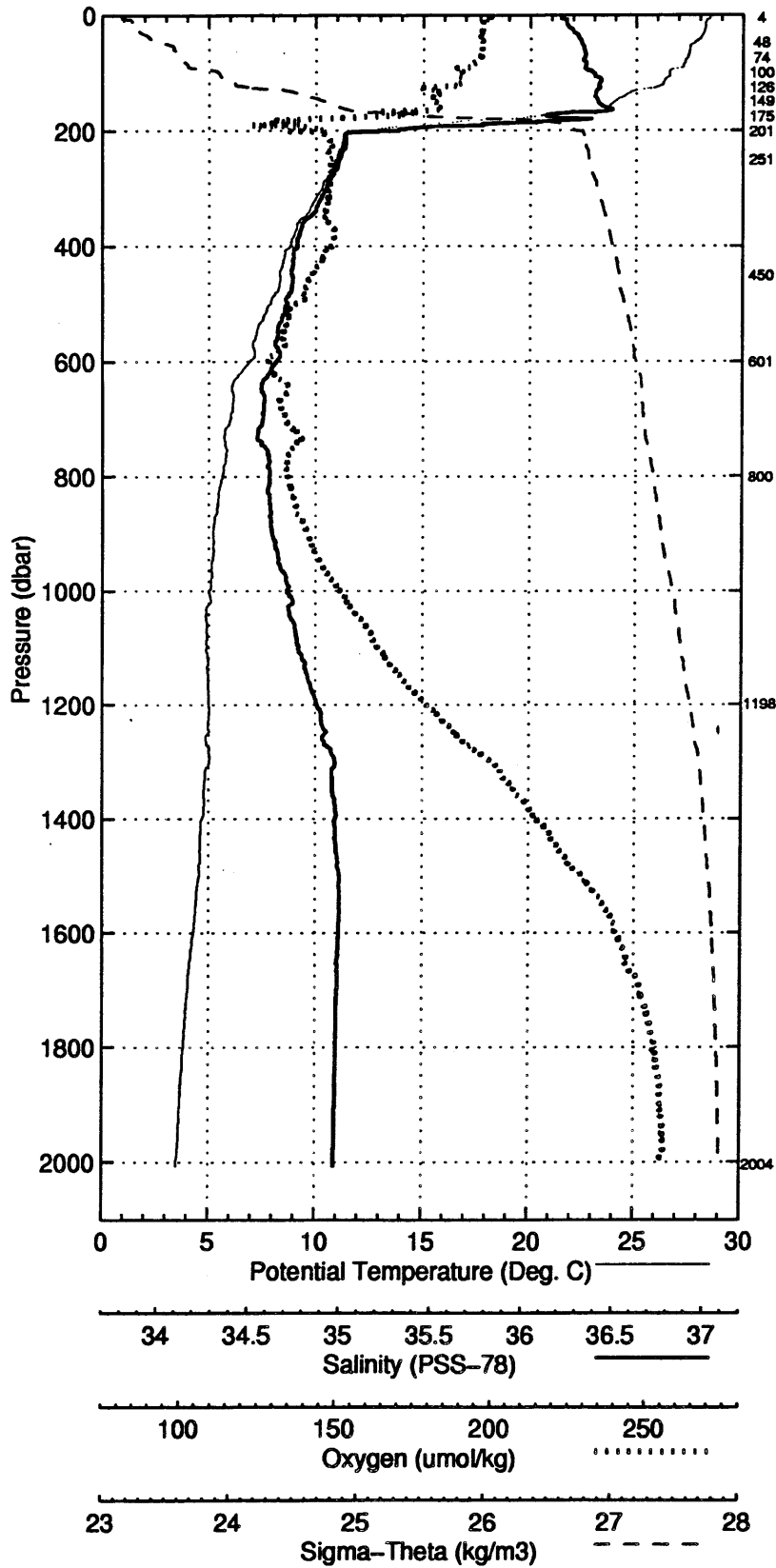


NBC-1 R/V SEWARD JOHNSON
CTD Station 51 (98051)
Latitude 6.283N Longitude 50.000W
06-Dec-1998 00:21Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.463	28.463	36.202	199.0	0.005	23.148
10	28.293	28.291	36.229	196.5	0.047	23.227
20	28.234	28.229	36.239	196.6	0.093	23.255
30	28.172	28.165	36.269	196.1	0.139	23.299
40	28.024	28.015	36.296	196.5	0.185	23.370
50	27.663	27.652	36.314	195.8	0.229	23.503
60	27.520	27.506	36.326	196.2	0.273	23.560
70	27.451	27.435	36.332	196.1	0.316	23.589
80	27.303	27.284	36.328	194.9	0.359	23.635
90	27.203	27.182	36.333	192.8	0.402	23.672
100	26.580	26.557	36.375	190.1	0.443	23.904
110	26.401	26.376	36.416	190.3	0.483	23.994
120	26.246	26.219	36.409	187.7	0.523	24.038
130	25.015	24.987	36.401	182.7	0.561	24.415
140	24.437	24.407	36.387	182.2	0.596	24.581
150	23.962	23.930	36.403	180.8	0.629	24.736
160	23.673	23.640	36.444	182.5	0.661	24.853
170	21.425	21.392	36.221	167.2	0.691	25.326
180	19.149	19.116	36.366	139.2	0.716	26.046
190	15.021	14.992	35.778	133.9	0.732	26.581
200	12.867	12.839	35.314	141.9	0.746	26.675
250	10.931	10.900	34.994	148.6	0.813	26.795
300	10.277	10.241	34.922	148.0	0.877	26.856
350	9.420	9.381	34.828	146.3	0.939	26.929
400	8.812	8.769	34.764	148.3	0.997	26.977
450	8.329	8.282	34.738	141.7	1.054	27.033
500	7.886	7.835	34.712	136.5	1.109	27.080
550	7.234	7.181	34.659	133.3	1.161	27.132
600	6.911	6.854	34.652	128.2	1.211	27.173
650	6.097	6.039	34.572	134.5	1.259	27.217
700	6.022	5.959	34.580	133.1	1.306	27.234
750	5.822	5.756	34.593	136.2	1.352	27.270
800	5.637	5.567	34.614	134.5	1.397	27.310
900	5.218	5.142	34.630	141.0	1.481	27.374
1000	5.016	4.932	34.711	151.0	1.559	27.464
1500	4.577	4.451	34.998	228.1	1.868	27.750
2000	3.524	3.364	34.968	254.9	2.105	27.841

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.373	28.372	36.190	197.9
48	13	27.832	27.821	36.305	200.3
74	12	27.427	27.409	36.328	198.7
101	11	26.551	26.528	36.369	191.3
126	10	25.381	25.353	36.414	188.7
150	9	23.888	23.856	36.402	183.6
176	8	19.414	19.382	36.218	150.3
202	7	11.339	11.313	35.063	158.1
252	6	10.897	10.866	34.991	154.9
451	5	8.291	8.244	34.738	138.0
601	4	7.034	6.977	34.669	124.7
801	3	5.653	5.584	34.625	129.4
1199	2	5.007	4.905	34.877	180.6
2005	1	3.516	3.355	34.975	258.5

NBC-1 R/V SEWARD JOHNSON
CTD Station 51 (98051)
Latitude 6.283 N Longitude 50.000 W
06-Dec-1998 00:21 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 52 (98052)
Latitude 6.397N Longitude 50.506W
06-Dec-1998 04:39Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.200	28.199	36.221	200.8	0.005	23.250
10	28.273	28.270	36.234	195.7	0.046	23.237
20	28.175	28.170	36.260	195.8	0.092	23.291
30	27.974	27.967	36.325	195.8	0.138	23.406
40	27.810	27.801	36.319	197.5	0.182	23.458
50	27.727	27.715	36.320	197.8	0.227	23.487
60	27.618	27.604	36.322	197.8	0.271	23.526
70	27.498	27.482	36.328	196.9	0.314	23.571
80	27.411	27.392	36.335	196.4	0.358	23.605
90	27.236	27.215	36.328	194.7	0.401	23.658
100	27.083	27.060	36.339	192.6	0.443	23.717
110	26.645	26.620	36.383	190.4	0.485	23.891
120	24.804	24.778	36.385	182.4	0.522	24.466
130	24.593	24.565	36.422	182.2	0.557	24.558
140	24.067	24.037	36.505	182.8	0.590	24.781
150	16.960	16.935	35.794	158.6	0.617	26.146
160	13.510	13.487	35.369	142.2	0.633	26.584
170	12.107	12.085	35.139	154.3	0.647	26.685
180	11.408	11.385	35.051	151.8	0.661	26.750
190	11.145	11.121	35.022	148.6	0.674	26.775
200	11.015	10.991	35.007	147.5	0.687	26.787
250	10.417	10.387	34.935	147.1	0.752	26.840
300	9.749	9.715	34.855	147.6	0.814	26.893
350	9.334	9.295	34.807	150.3	0.874	26.926
400	8.832	8.789	34.753	152.0	0.934	26.965
450	8.202	8.155	34.686	152.4	0.992	27.011
500	7.909	7.858	34.661	153.5	1.048	27.037
550	7.375	7.321	34.617	152.4	1.102	27.080
600	6.304	6.250	34.544	146.0	1.154	27.167
650	5.862	5.805	34.513	149.4	1.202	27.200
700	5.684	5.624	34.509	150.5	1.250	27.220
750	5.349	5.285	34.493	153.7	1.296	27.247
800	5.281	5.213	34.495	155.1	1.342	27.258
900	5.144	5.069	34.551	149.3	1.431	27.320
1000	4.856	4.774	34.620	152.9	1.514	27.409
1500	4.635	4.508	34.987	224.2	1.842	27.735
2000	3.538	3.378	34.971	256.0	2.083	27.842

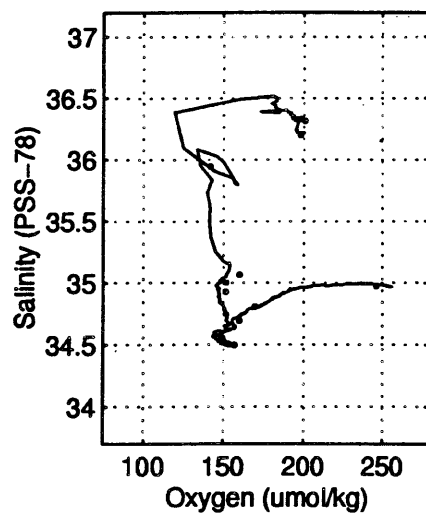
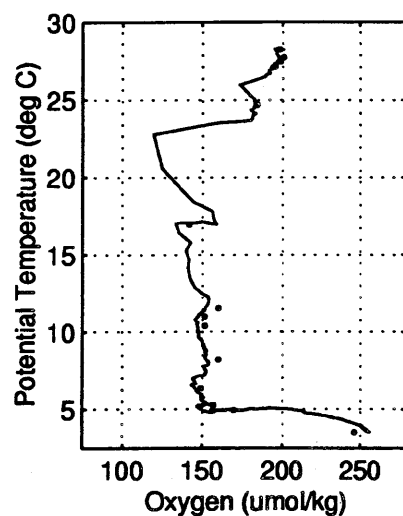
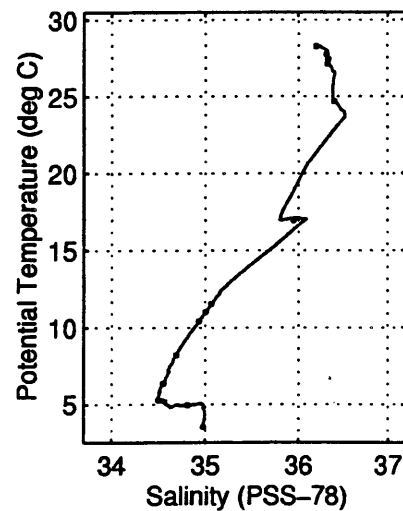
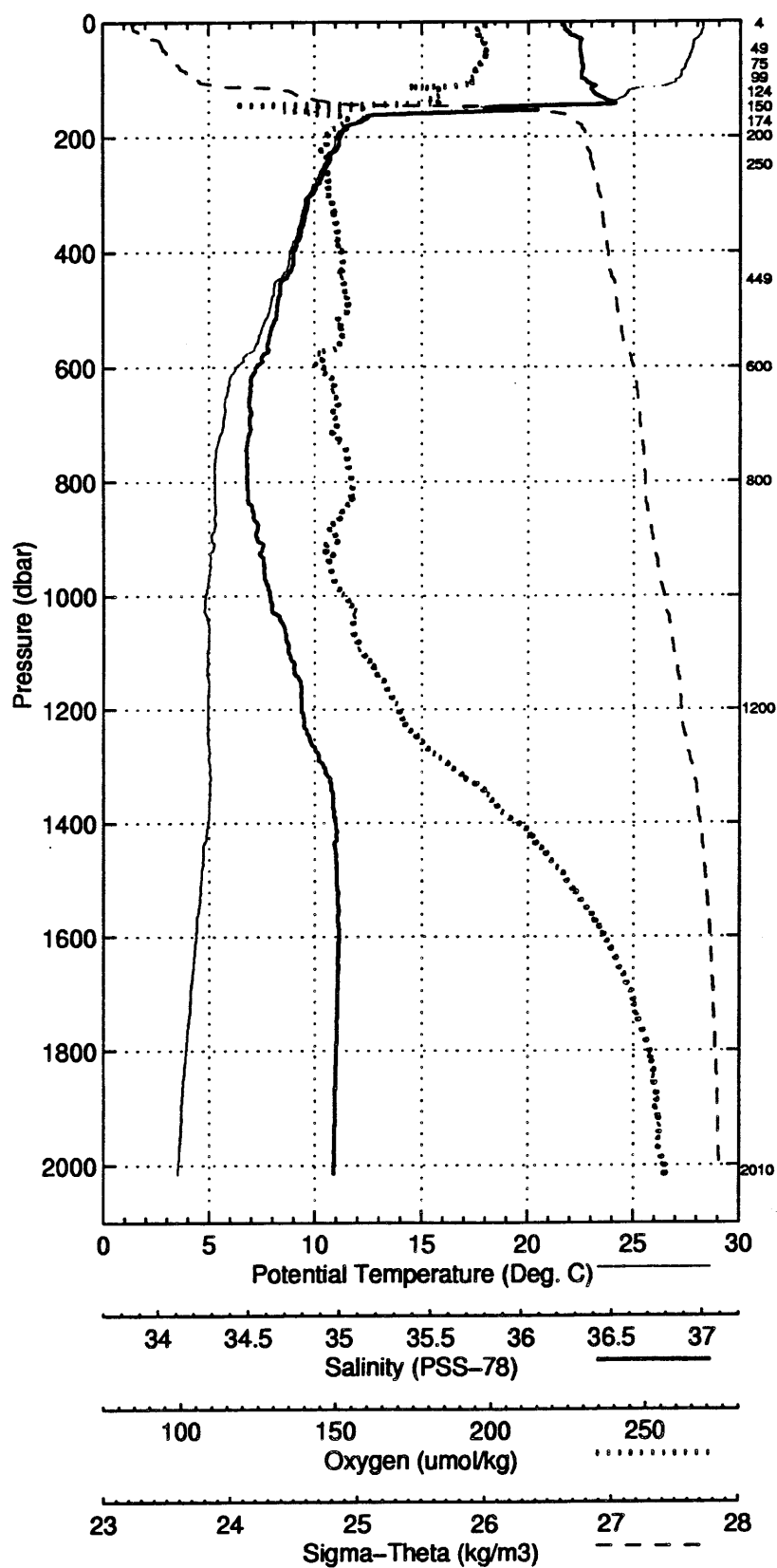
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.249	28.248	36.199	198.0
50	13	27.750	27.739	36.314	200.7
76	12	27.446	27.428	36.329	198.3
99	11	27.146	27.123	36.328	195.3
124	10	24.686	24.659	36.394	183.9
150	9	16.936	16.911	35.944	141.7
175	8	11.533	11.511	35.066	159.8
200	7	11.002	10.977	35.003	151.4
250	6	10.404	10.374	34.931	151.3
450	5	8.205	8.158	34.695	160.1
601	4	6.357	6.302	34.553	148.9
800	3	5.285	5.217	34.501	156.9
1200	2	4.949	4.848	34.811	169.5
2010	1	3.520	3.358	34.976	246.2

NBC-1 R/V SEWARD JOHNSON

CTD Station 52 (98052)

Latitude 6.397 N Longitude 50.506 W

06-Dec-1998 04:39 Z



NBC-1 R/V SEWARD JOHNSON
CTD Station 53 (98053)
Latitude 7.084N Longitude 50.777W
06-Dec-1998 11:01Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.073	28.073	36.161	199.5	0.005	23.247
10	28.151	28.148	36.193	196.2	0.046	23.246
20	28.206	28.201	36.264	196.2	0.092	23.283
30	28.160	28.153	36.267	196.4	0.138	23.302
40	27.859	27.849	36.323	197.6	0.184	23.445
50	27.699	27.688	36.313	198.1	0.228	23.491
60	27.653	27.638	36.320	197.9	0.272	23.512
70	27.613	27.597	36.322	197.9	0.316	23.528
80	27.422	27.403	36.332	196.7	0.360	23.599
90	27.404	27.383	36.333	196.2	0.403	23.608
100	27.118	27.095	36.356	192.5	0.446	23.719
110	25.835	25.810	36.389	184.5	0.486	24.151
120	25.344	25.317	36.405	184.4	0.523	24.316
130	24.704	24.676	36.410	180.7	0.559	24.516
140	24.368	24.338	36.486	184.6	0.592	24.676
150	21.297	21.267	36.203	173.4	0.623	25.346
160	13.159	13.137	35.223	156.4	0.643	26.543
170	11.973	11.950	35.120	152.0	0.658	26.697
180	11.493	11.470	35.067	152.2	0.671	26.746
190	11.420	11.396	35.057	151.1	0.684	26.753
200	11.326	11.301	35.044	149.8	0.698	26.760
250	10.667	10.636	34.964	146.8	0.763	26.819
300	10.103	10.068	34.894	146.8	0.826	26.864
350	9.568	9.528	34.832	147.9	0.888	26.908
400	8.855	8.812	34.756	151.2	0.948	26.964
450	8.259	8.212	34.697	151.5	1.006	27.011
500	7.800	7.749	34.658	151.0	1.061	27.050
550	7.389	7.335	34.638	146.8	1.115	27.095
600	7.112	7.054	34.645	135.4	1.167	27.140
650	5.855	5.798	34.547	135.9	1.216	27.227
700	5.579	5.519	34.519	144.1	1.262	27.240
750	5.635	5.570	34.541	142.7	1.308	27.252
800	5.495	5.427	34.556	139.8	1.354	27.281
900	5.175	5.100	34.588	144.0	1.440	27.346
1000	4.988	4.904	34.658	149.7	1.521	27.424
1500	4.711	4.583	34.983	220.2	1.846	27.724
2000	3.620	3.459	34.975	255.3	2.093	27.837

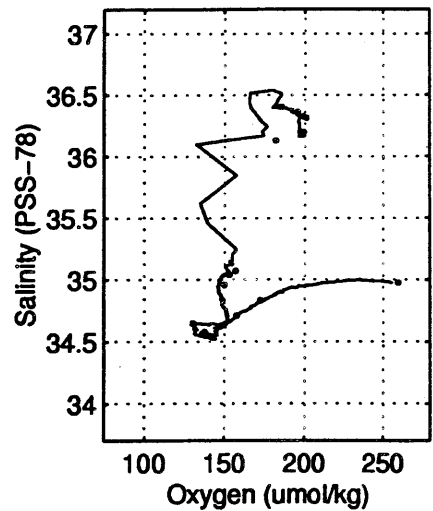
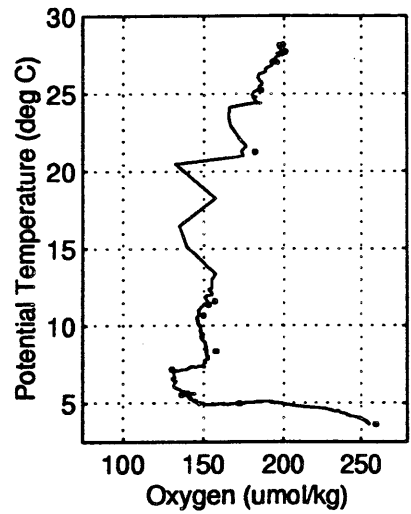
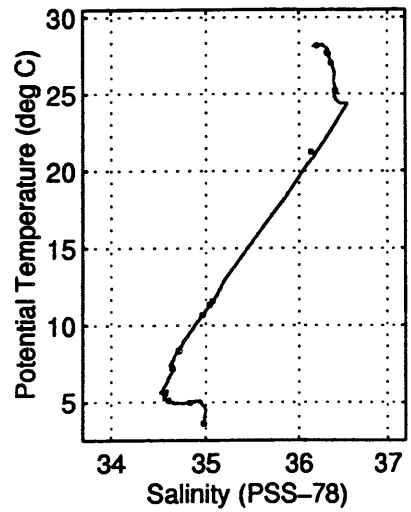
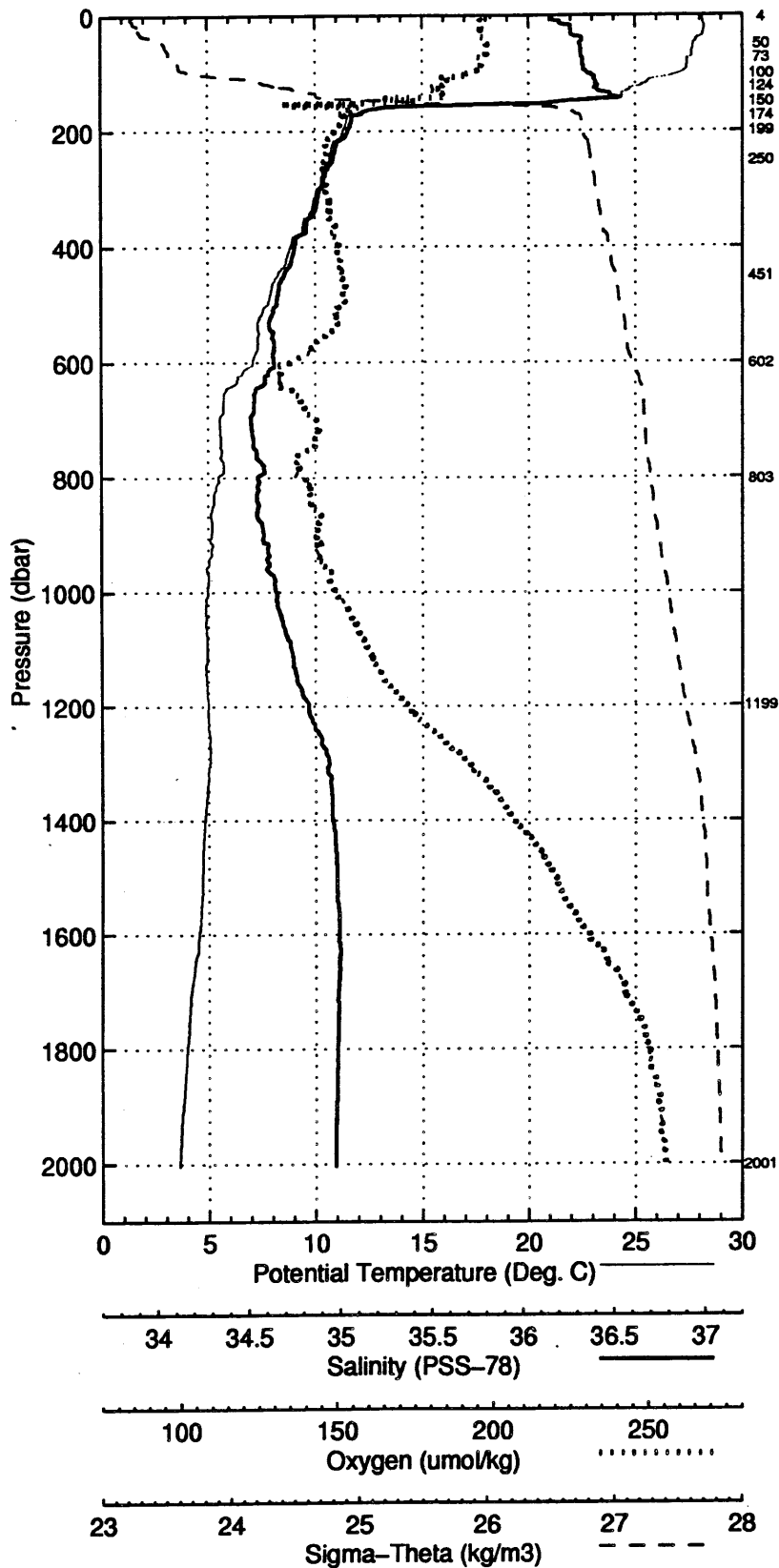
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.137	28.136	36.198	199.2
50	13	27.690	27.679	36.312	200.6
73	12	27.590	27.572	36.325	199.0
101	11	27.003	26.980	36.359	195.2
124	10	25.227	25.200	36.404	185.1
150	9	21.231	21.202	36.129	181.5
174	8	11.594	11.572	35.072	156.7
199	7	11.341	11.315	35.041	153.0
251	6	10.663	10.633	34.961	150.0
451	5	8.348	8.300	34.711	157.5
602	4	7.158	7.100	34.648	130.4
803	3	5.528	5.459	34.568	136.3
1199	2	4.968	4.866	34.833	172.5
2002	1	3.621	3.459	34.978	259.6

NBC-1 R/V SEWARD JOHNSON

CTD Station 53 (98053)

Latitude 7.084 N Longitude 50.777 W

06-Dec-1998 11:01 Z

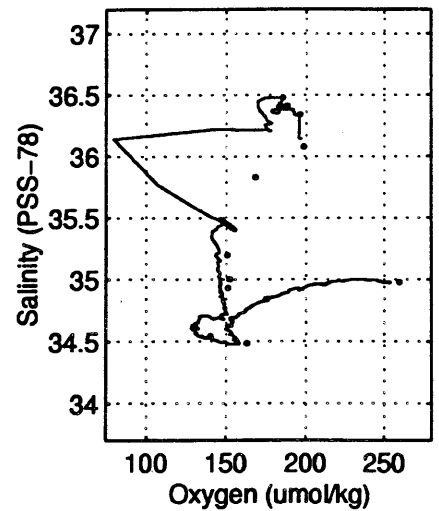
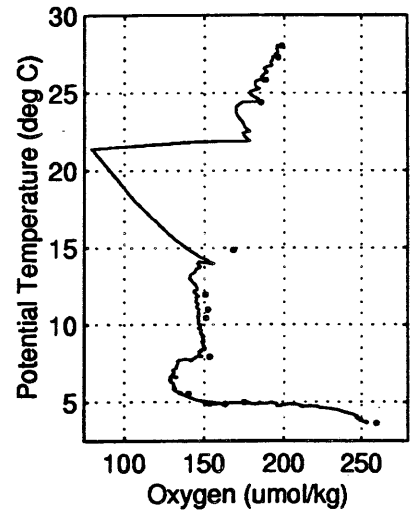
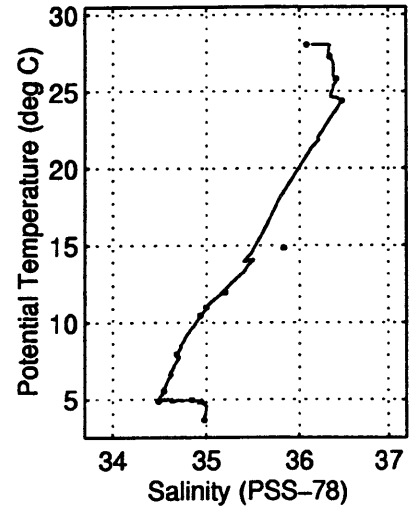
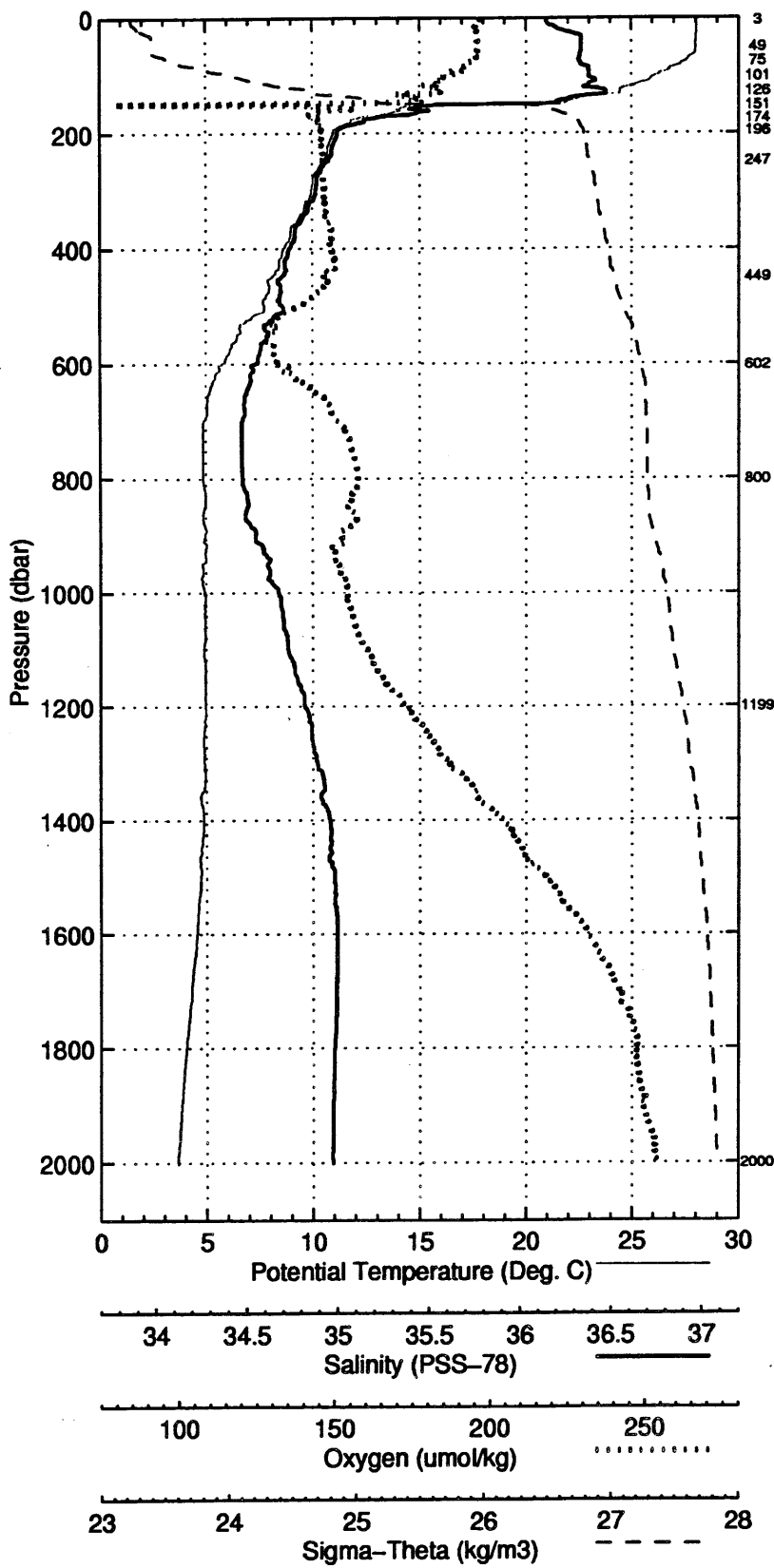


NBC-1 R/V SEWARD JOHNSON
CTD Station 54 (98054)
Latitude 7.272N Longitude 51.202W
06-Dec-1998 15:00Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.035	28.035	36.143	196.9	0.005	23.246
10	28.049	28.046	36.153	195.4	0.046	23.250
20	28.049	28.045	36.212	195.5	0.092	23.295
30	28.015	28.008	36.330	195.6	0.138	23.397
40	28.000	27.991	36.337	196.0	0.182	23.409
50	27.998	27.987	36.337	195.9	0.227	23.411
60	27.983	27.969	36.335	196.1	0.272	23.416
70	27.653	27.637	36.327	196.0	0.317	23.520
80	27.309	27.291	36.334	193.5	0.360	23.638
90	26.767	26.747	36.378	191.5	0.402	23.846
100	26.139	26.117	36.379	186.4	0.442	24.047
110	25.726	25.702	36.414	182.0	0.480	24.203
120	24.789	24.763	36.351	180.1	0.517	24.445
130	24.448	24.420	36.477	184.2	0.551	24.645
140	22.521	22.492	36.267	178.1	0.582	25.051
150	17.939	17.914	35.767	106.9	0.610	25.889
160	14.001	13.977	35.447	152.2	0.626	26.544
170	12.598	12.575	35.273	144.2	0.641	26.694
180	11.830	11.807	35.150	145.3	0.654	26.748
190	11.212	11.188	35.030	145.5	0.668	26.770
200	10.988	10.963	35.006	146.5	0.681	26.792
250	10.438	10.408	34.938	146.2	0.745	26.839
300	9.966	9.931	34.886	147.4	0.807	26.881
350	9.319	9.279	34.807	148.7	0.868	26.928
400	8.653	8.611	34.740	149.2	0.927	26.983
450	8.099	8.052	34.697	146.6	0.984	27.035
500	7.762	7.712	34.703	138.9	1.038	27.091
550	6.492	6.442	34.618	128.8	1.088	27.201
600	5.752	5.700	34.552	131.6	1.134	27.243
650	5.163	5.110	34.506	144.2	1.179	27.277
700	4.898	4.842	34.481	151.7	1.222	27.288
750	4.865	4.805	34.481	156.3	1.265	27.293
800	4.880	4.816	34.483	157.9	1.309	27.294
900	4.950	4.876	34.554	152.6	1.395	27.345
1000	4.917	4.834	34.679	154.5	1.474	27.449
1500	4.738	4.609	34.987	218.5	1.798	27.724
2000	3.646	3.484	34.975	254.0	2.047	27.834

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.032	28.031	36.078	198.4
50	13	27.993	NaN	NaN	NaN
75	12	27.262	27.245	36.340	196.1
101	11	25.817	25.794	36.411	187.9
127	10	24.379	24.352	36.475	185.1
152	9	14.823	14.800	35.830	167.9
174	8	11.956	11.933	35.199	150.6
196	7	10.993	10.969	35.002	152.1
248	6	10.442	10.412	34.935	151.0
449	5	7.926	7.880	34.682	153.4
602	4	5.529	5.478	34.544	140.1
801	3	4.873	4.808	34.485	163.0
1200	2	4.977	4.874	34.842	175.1
2001	1	3.646	3.484	34.980	259.9

NBC-1 R/V SEWARD JOHNSON
 CTD Station 54 (98054)
 Latitude 7.272 N Longitude 51.202 W
 06-Dec-1998 15:00 Z

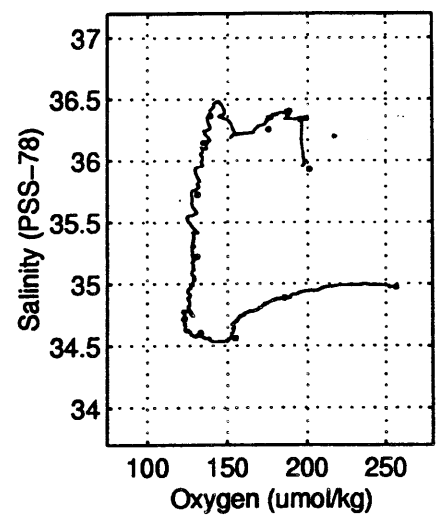
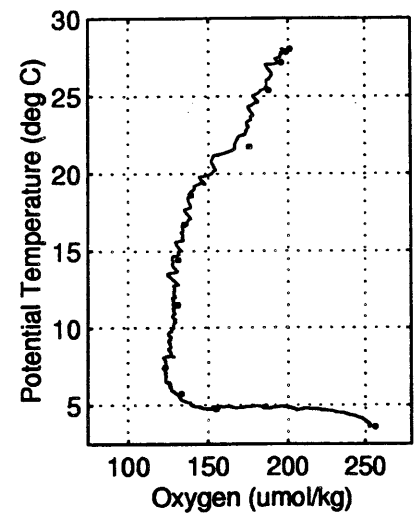
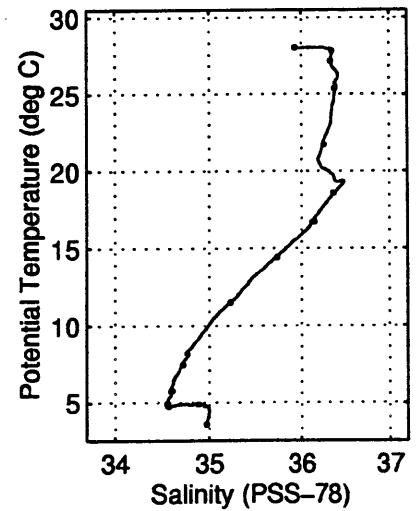
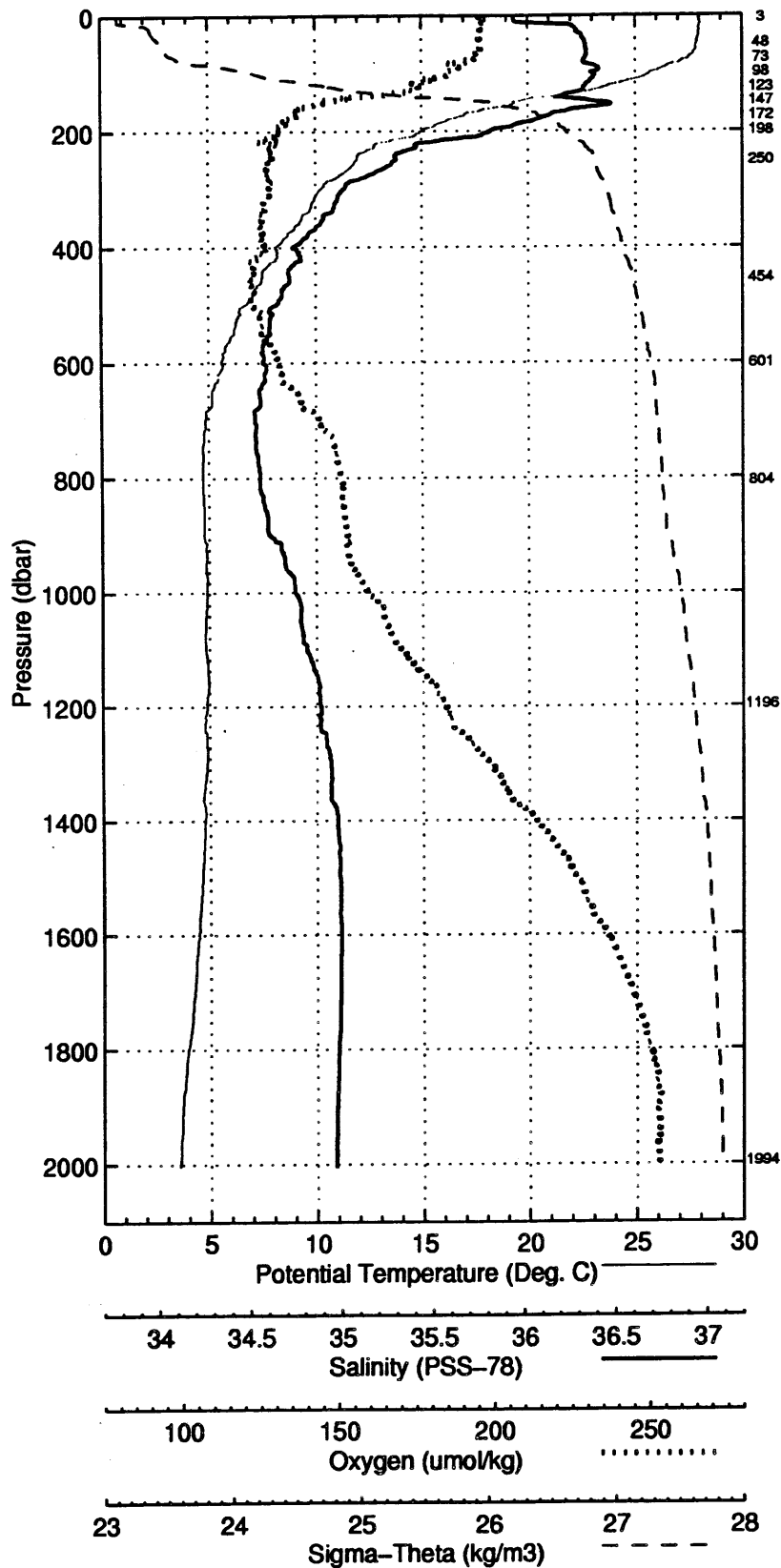


NBC-1 R/V SEWARD JOHNSON
CTD Station 55 (98055)
Latitude 7.500N Longitude 51.649W
06-Dec-1998 19:05Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.974	27.974	35.956	196.0	0.005	23.125
10	27.971	27.968	35.959	197.2	0.047	23.129
20	27.970	27.965	36.281	196.2	0.093	23.374
30	27.953	27.946	36.303	196.2	0.138	23.397
40	27.911	27.902	36.331	196.2	0.183	23.433
50	27.854	27.842	36.345	196.5	0.228	23.464
60	27.817	27.802	36.349	196.4	0.272	23.481
70	27.599	27.582	36.348	194.9	0.316	23.553
80	27.153	27.134	36.333	192.8	0.359	23.687
90	26.394	26.374	36.408	189.6	0.400	23.987
100	25.675	25.653	36.379	186.3	0.438	24.191
110	25.091	25.067	36.378	179.6	0.475	24.372
120	23.960	23.935	36.347	176.5	0.510	24.691
130	23.010	22.983	36.327	174.9	0.541	24.955
140	21.288	21.261	36.221	159.3	0.570	25.361
150	19.285	19.258	36.405	148.0	0.593	26.037
160	18.433	18.405	36.350	137.0	0.612	26.214
170	17.081	17.052	36.164	138.8	0.630	26.403
180	16.303	16.274	36.079	134.5	0.646	26.522
190	15.642	15.612	35.955	133.8	0.661	26.579
200	15.002	14.971	35.827	131.6	0.676	26.624
250	11.933	11.900	35.306	127.2	0.744	26.853
300	10.221	10.186	35.018	128.4	0.805	26.941
350	9.344	9.305	34.910	126.1	0.863	27.005
400	8.111	8.069	34.742	128.4	0.918	27.067
450	7.493	7.449	34.722	122.9	0.969	27.143
500	6.678	6.632	34.642	123.5	1.018	27.194
550	6.180	6.131	34.617	125.9	1.065	27.240
600	5.619	5.568	34.581	131.8	1.109	27.282
650	5.177	5.124	34.558	137.7	1.151	27.317
700	4.857	4.801	34.534	145.3	1.193	27.335
750	4.734	4.675	34.541	149.7	1.233	27.355
800	4.732	4.668	34.560	151.5	1.273	27.371
900	4.771	4.698	34.615	153.4	1.351	27.413
1000	4.908	4.825	34.752	160.1	1.424	27.508
1500	4.641	4.513	34.993	226.3	1.725	27.739
2000	3.569	3.407	34.969	253.0	1.970	27.837

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.012	28.012	35.930	201.3
48	13	27.820	27.808	36.342	198.7
73	12	27.160	27.143	36.332	195.7
98	11	25.357	25.335	36.380	187.5
124	10	21.729	21.704	36.255	175.4
148	9	18.591	18.565	36.367	139.0
173	8	16.724	16.695	36.145	135.1
199	7	14.405	14.375	35.725	131.1
251	6	11.492	11.460	35.224	130.7
455	5	7.448	7.404	34.721	123.1
601	4	5.742	5.690	34.606	133.3
805	3	4.731	4.666	34.563	154.7
1197	2	4.885	4.784	34.888	185.5
1995	1	3.583	3.422	34.974	256.6

NBC-1 R/V SEWARD JOHNSON
 CTD Station 55 (98055)
 Latitude 7.500 N Longitude 51.649 W
 06-Dec-1998 19:05 Z

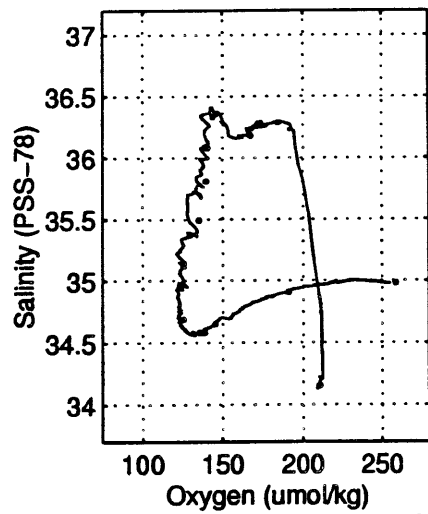
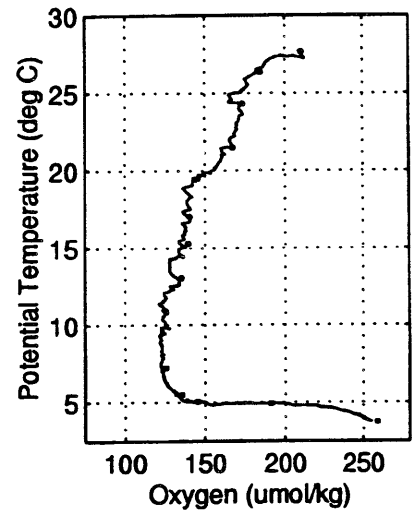
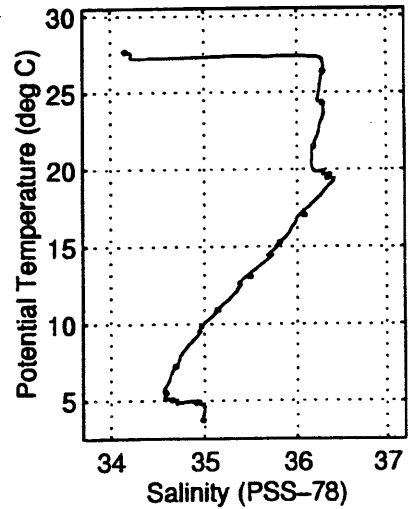
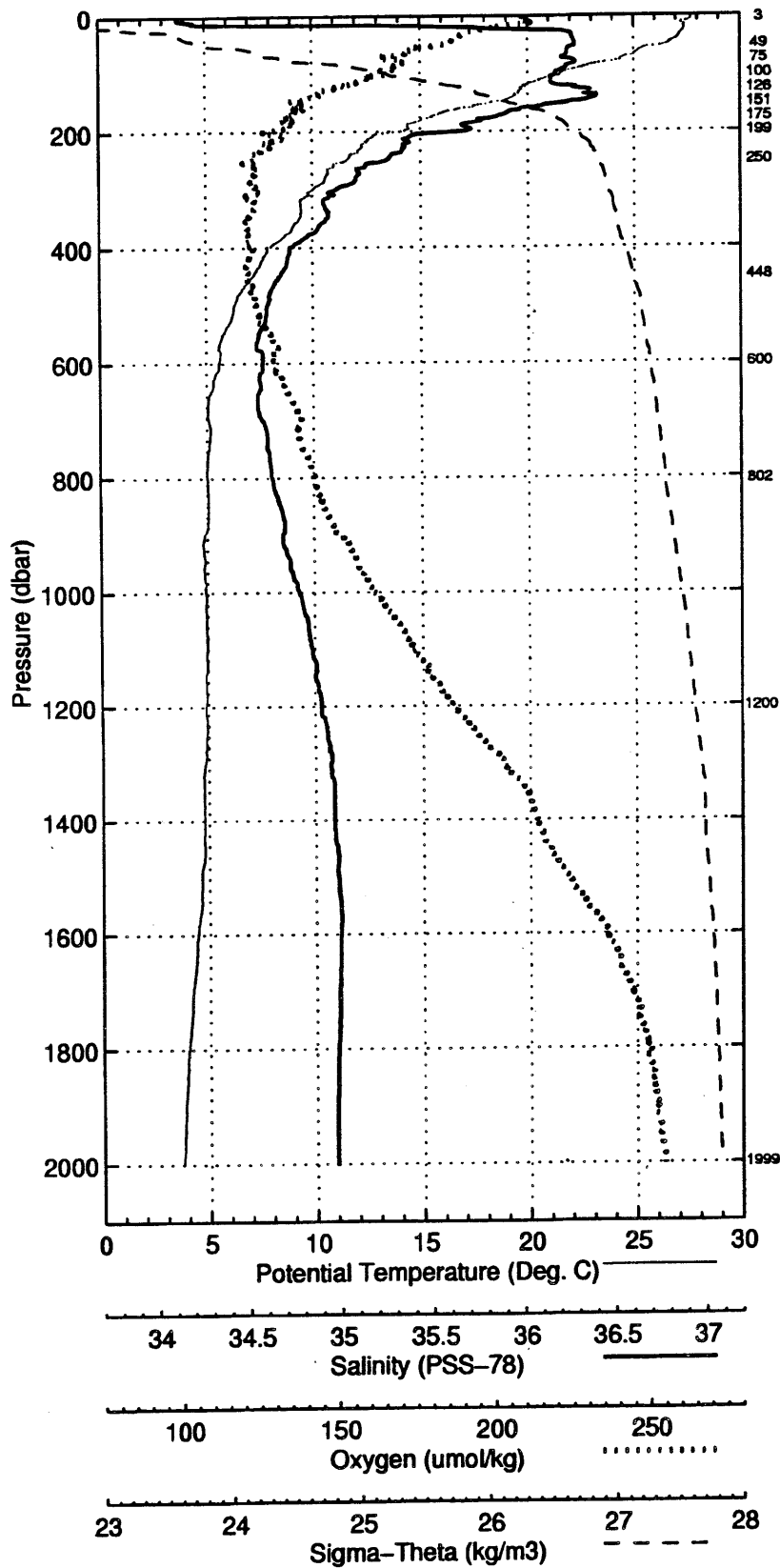


NBC-1 R/V SEWARD JOHNSON
CTD Station 56 (98056)
Latitude 7.751N Longitude 52.000W
06-Dec-1998 23:02Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.682	27.681	34.129	210.1	0.006	21.845
10	27.565	27.562	34.214	211.5	0.059	21.948
20	27.362	27.357	35.715	201.3	0.112	23.145
30	27.248	27.241	36.267	191.9	0.157	23.600
40	27.046	27.036	36.282	188.6	0.200	23.677
50	26.611	26.599	36.292	184.1	0.241	23.825
60	25.295	25.282	36.247	174.0	0.280	24.204
70	24.891	24.876	36.236	164.9	0.316	24.320
80	23.984	23.967	36.291	171.0	0.351	24.636
90	22.526	22.507	36.242	168.7	0.382	25.024
100	21.583	21.563	36.186	166.8	0.411	25.249
110	20.699	20.678	36.161	159.9	0.437	25.473
120	19.904	19.882	36.185	153.2	0.461	25.704
130	19.623	19.599	36.371	146.4	0.484	25.922
140	19.340	19.315	36.407	143.0	0.504	26.023
150	18.296	18.269	36.258	141.6	0.524	26.176
160	16.828	16.801	35.995	140.7	0.542	26.333
170	15.867	15.840	35.910	137.0	0.559	26.492
180	15.027	15.000	35.766	137.3	0.574	26.570
190	14.407	14.379	35.678	136.3	0.589	26.637
200	14.055	14.025	35.653	127.7	0.604	26.694
250	11.588	11.555	35.262	123.6	0.668	26.884
300	10.015	9.980	34.994	125.0	0.727	26.957
350	9.368	9.329	34.942	122.7	0.784	27.026
400	7.898	7.857	34.742	124.1	0.838	27.099
450	7.195	7.151	34.684	123.1	0.888	27.155
500	6.315	6.270	34.618	125.3	0.935	27.222
550	5.769	5.721	34.567	129.9	0.981	27.252
600	5.601	5.550	34.591	131.5	1.025	27.292
650	5.195	5.142	34.570	135.1	1.067	27.325
700	5.095	5.038	34.589	139.3	1.108	27.352
750	5.092	5.030	34.618	140.0	1.148	27.376
800	5.019	4.953	34.640	143.7	1.186	27.403
900	4.866	4.792	34.696	152.7	1.261	27.467
1000	4.931	4.848	34.785	162.5	1.331	27.532
1500	4.645	4.517	34.990	224.1	1.629	27.736
2000	3.740	3.576	34.978	255.0	1.877	27.828

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	27.660	27.659	34.153	210.5
50	13	26.362	26.351	36.286	184.4
75	12	24.298	24.282	36.280	173.5
101	11	21.457	21.438	36.179	167.3
126	10	19.436	19.413	36.333	143.8
151	9	17.029	17.004	36.079	140.1
176	8	15.269	15.242	35.808	139.4
200	7	13.070	13.042	35.492	135.2
251	6	10.909	10.878	35.145	125.3
449	5	7.229	7.186	34.691	125.3
600	4	5.510	5.460	34.588	135.5
803	3	5.049	4.983	34.653	145.1
1201	2	4.913	4.811	34.908	191.1
2000	1	3.741	3.577	34.983	259.1

NBC-1 R/V SEWARD JOHNSON
 CTD Station 56 (98056)
 Latitude 7.751 N Longitude 52.000 W
 06-Dec-1998 23:02 Z

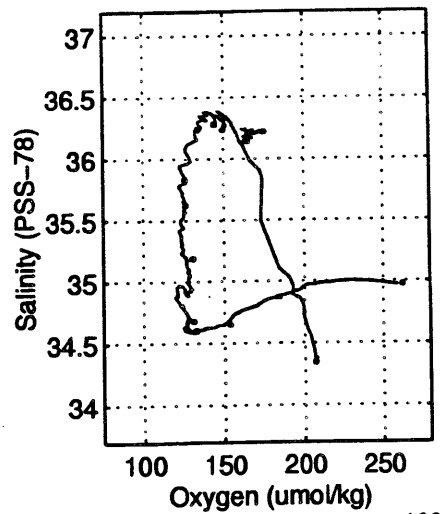
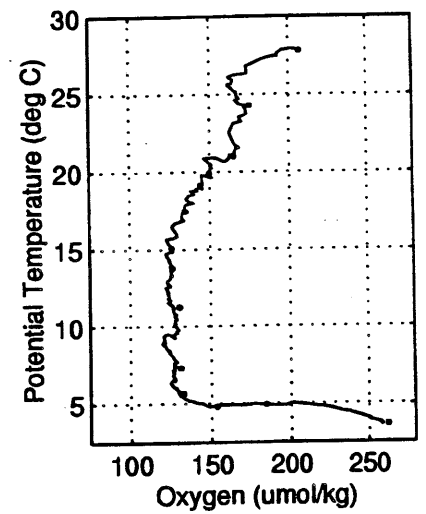
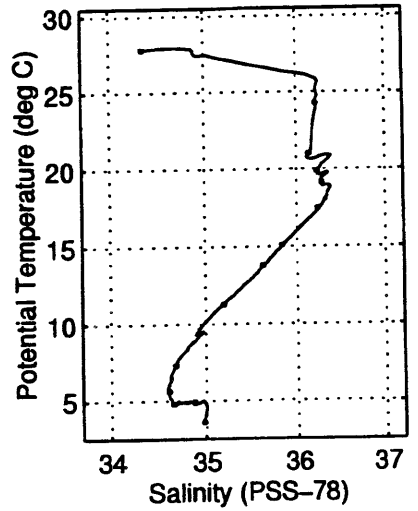
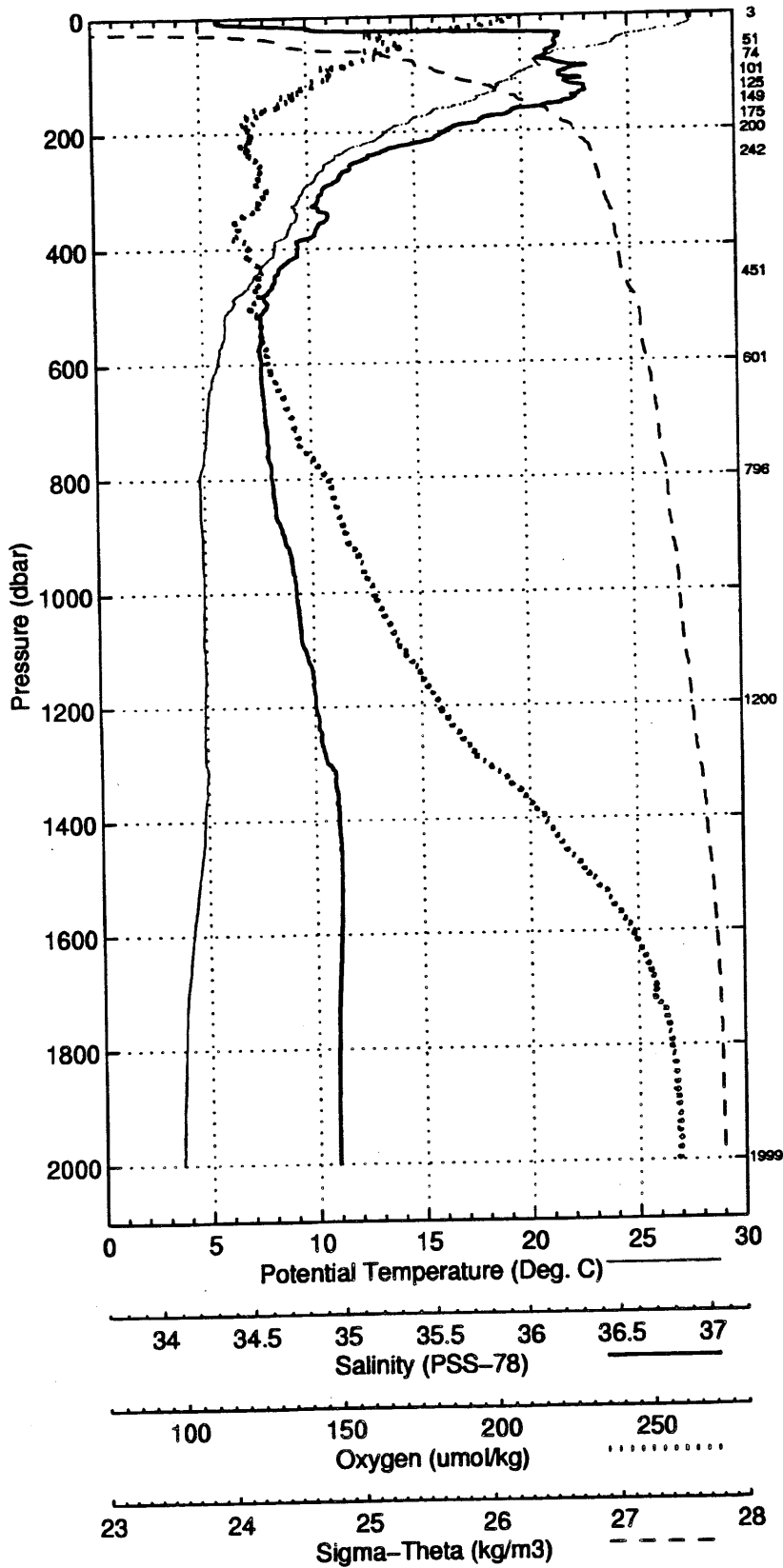


NBC-1 R/V SEWARD JOHNSON
CTD Station 57 (98057)
Latitude 7.884N Longitude 52.527W
07-Dec-1998 02:50Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.806	27.806	34.382	208.5	0.006	21.995
10	27.851	27.848	34.416	206.5	0.058	22.008
20	27.718	27.713	34.885	194.5	0.114	22.405
30	26.131	26.125	36.110	161.8	0.162	23.836
40	24.597	24.588	36.227	166.1	0.199	24.398
50	24.267	24.256	36.225	172.3	0.234	24.497
60	22.506	22.493	36.179	162.1	0.267	24.979
70	21.244	21.230	36.160	165.5	0.294	25.320
80	20.680	20.665	36.208	158.0	0.320	25.511
90	20.571	20.554	36.347	149.5	0.345	25.648
100	19.896	19.878	36.240	150.5	0.368	25.746
110	19.779	19.759	36.347	146.2	0.390	25.860
120	18.891	18.870	36.296	145.5	0.411	26.052
130	18.784	18.761	36.376	141.8	0.430	26.141
140	17.984	17.960	36.307	138.8	0.449	26.290
150	17.476	17.451	36.262	135.7	0.467	26.381
160	16.441	16.415	36.074	126.0	0.483	26.484
170	15.744	15.717	35.960	127.5	0.499	26.558
180	14.872	14.844	35.812	126.3	0.513	26.639
190	14.103	14.075	35.687	125.0	0.528	26.709
200	13.717	13.689	35.625	125.6	0.541	26.743
250	11.067	11.035	35.150	126.6	0.605	26.892
300	9.789	9.754	34.944	130.1	0.665	26.956
350	9.438	9.399	34.968	121.5	0.721	27.035
400	8.415	8.373	34.809	124.1	0.775	27.074
450	7.426	7.382	34.681	127.3	0.828	27.121
500	6.450	6.404	34.635	125.2	0.876	27.218
550	6.030	5.981	34.603	128.0	0.921	27.247
600	5.707	5.655	34.604	129.4	0.966	27.290
650	5.284	5.230	34.608	133.9	1.007	27.344
700	5.162	5.104	34.620	137.5	1.047	27.368
750	5.032	4.970	34.632	141.3	1.087	27.394
800	4.795	4.730	34.650	149.0	1.124	27.436
900	4.896	4.822	34.714	154.3	1.197	27.478
1000	4.923	4.839	34.777	162.8	1.266	27.526
1500	4.550	4.424	35.004	231.2	1.568	27.757
2000	3.619	3.457	34.972	258.8	1.803	27.834

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	27.798	27.797	34.349	207.0
52	13	24.272	24.261	36.218	174.9
75	12	21.009	20.995	36.141	165.1
101	11	19.872	19.853	36.233	149.6
126	10	19.151	19.129	36.281	144.0
150	9	17.470	17.445	36.239	134.2
176	8	15.070	15.043	35.831	125.8
200	7	13.768	13.739	35.624	126.1
242	6	11.252	11.222	35.190	130.6
451	5	7.311	7.267	34.681	130.7
601	4	5.641	5.590	34.605	132.5
796	3	4.802	4.738	34.652	153.4
1200	2	4.911	4.809	34.877	183.8
1999	1	3.620	3.458	34.975	262.5

NBC-1 R/V SEWARD JOHNSON
 CTD Station 57 (98057)
 Latitude 7.884 N Longitude 52.527 W
 07-Dec-1998 02:50 Z

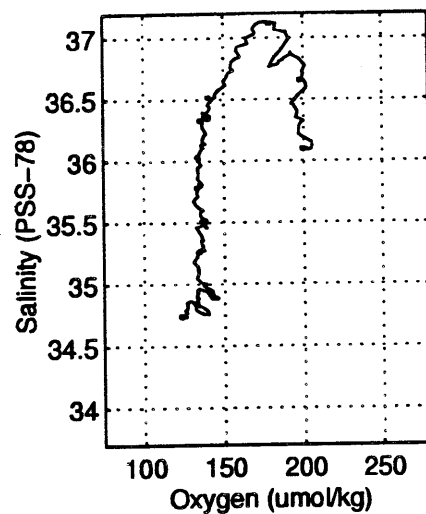
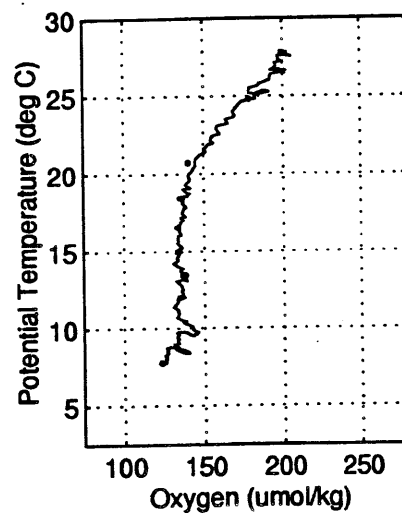
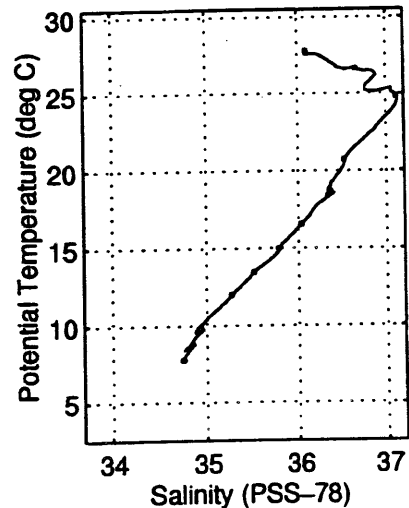
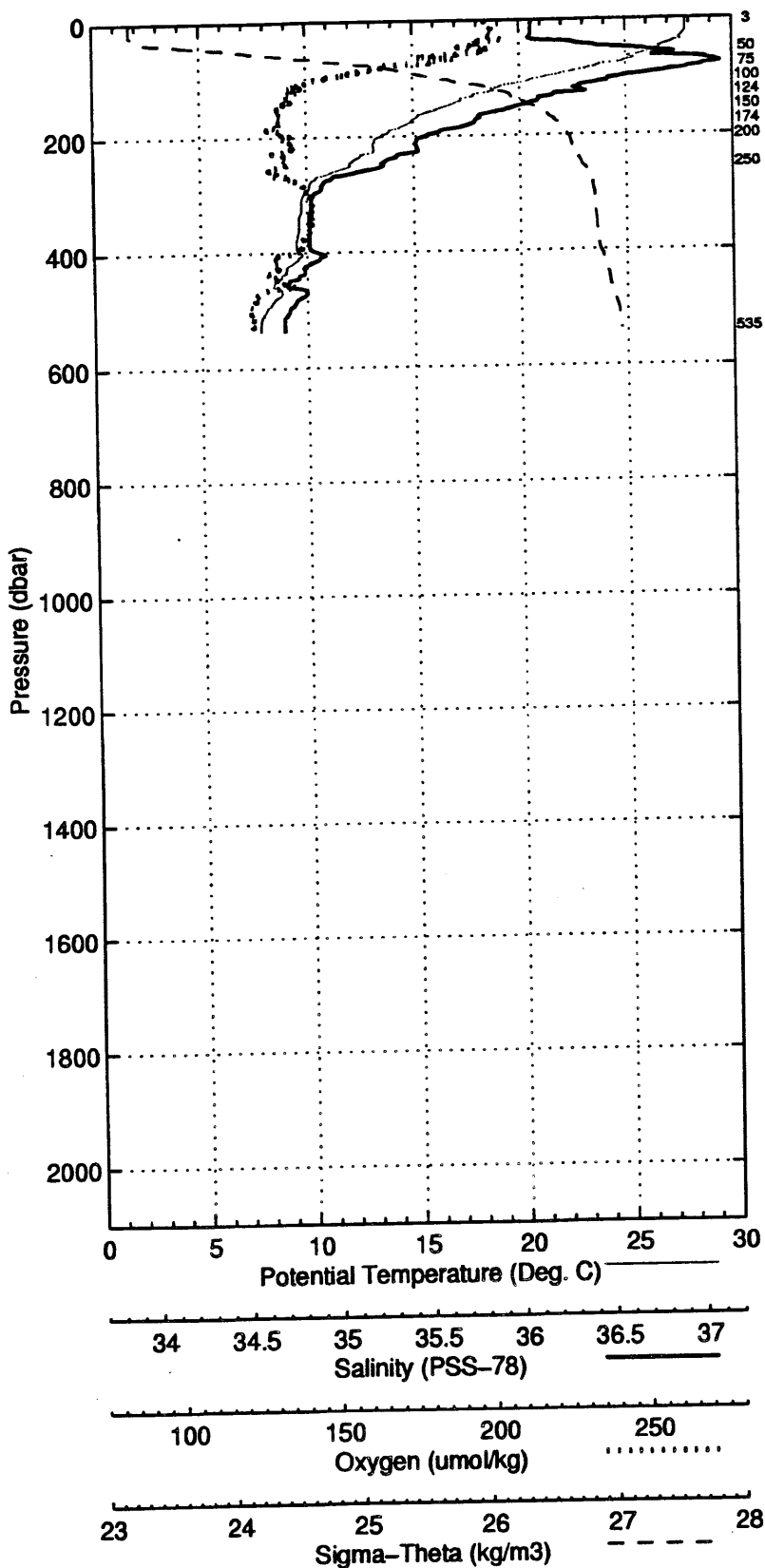


NBC-1 R/V SEWARD JOHNSON
CTD Station 58 (98058)
Latitude 7.387N Longitude 55.408W
09-Dec-1998 00:29Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	27.810	27.810	36.104	200.2	0.005	23.290
10	27.815	27.813	36.098	202.3	0.046	23.285
20	27.817	27.812	36.098	202.7	0.092	23.286
30	27.633	27.626	36.086	201.9	0.137	23.338
40	27.223	27.214	36.325	199.9	0.182	23.652
50	26.659	26.648	36.635	201.2	0.222	24.068
60	25.879	25.866	36.827	187.6	0.259	24.461
70	25.256	25.241	37.059	184.9	0.292	24.830
80	23.716	23.699	37.036	169.5	0.321	25.280
90	22.554	22.536	36.844	160.3	0.347	25.474
100	21.209	21.189	36.583	147.3	0.372	25.654
110	19.775	19.755	36.452	140.2	0.394	25.941
120	18.702	18.680	36.340	141.3	0.414	26.134
130	17.838	17.815	36.222	138.9	0.433	26.261
140	17.228	17.204	36.139	136.7	0.450	26.346
150	16.396	16.372	36.012	134.9	0.467	26.447
160	15.585	15.560	35.876	134.0	0.483	26.529
170	15.091	15.065	35.806	134.6	0.498	26.586
180	14.694	14.667	35.761	133.3	0.513	26.639
190	13.902	13.874	35.606	135.8	0.527	26.688
200	13.499	13.471	35.522	135.5	0.541	26.708
250	12.030	11.997	35.286	134.8	0.608	26.819
300	9.842	9.807	34.903	144.1	0.670	26.915
350	9.644	9.604	34.882	144.5	0.730	26.933
400	9.662	9.616	34.922	140.2	0.789	26.964
450	8.486	8.438	34.769	136.3	0.846	27.033
500	8.060	8.008	34.768	126.1	0.901	27.098

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
3	10	27.811	27.811	36.094	199.4
50	9	26.628	26.616	36.653	197.4
75	8	24.812	24.796	37.115	178.5
101	7	20.711	20.692	36.513	140.3
125	6	18.417	18.395	36.330	135.1
150	5	16.560	16.535	36.032	133.6
175	4	14.987	14.960	35.782	133.1
201	3	13.452	13.424	35.510	138.1
250	2	12.008	11.975	35.269	134.9
535	1	7.780	7.725	34.743	122.9

NBC-1 R/V SEWARD JOHNSON
 CTD Station 58 (98058)
 Latitude 7.387 N Longitude 55.408 W
 09-Dec-1998 00:29 Z

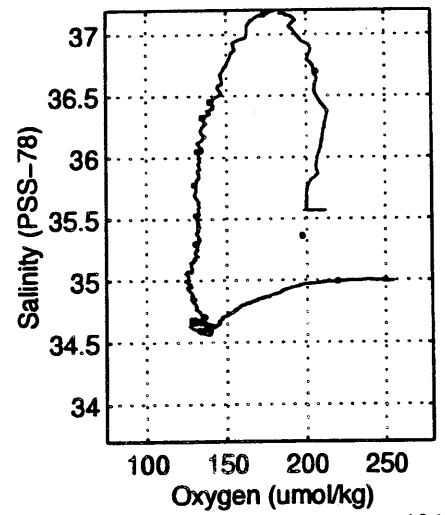
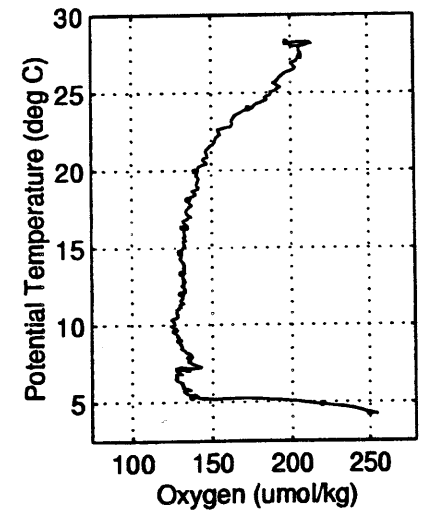
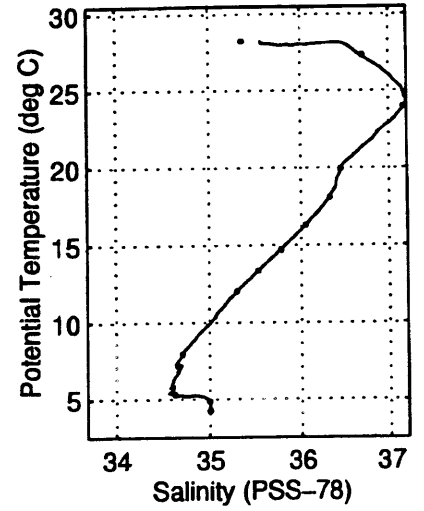
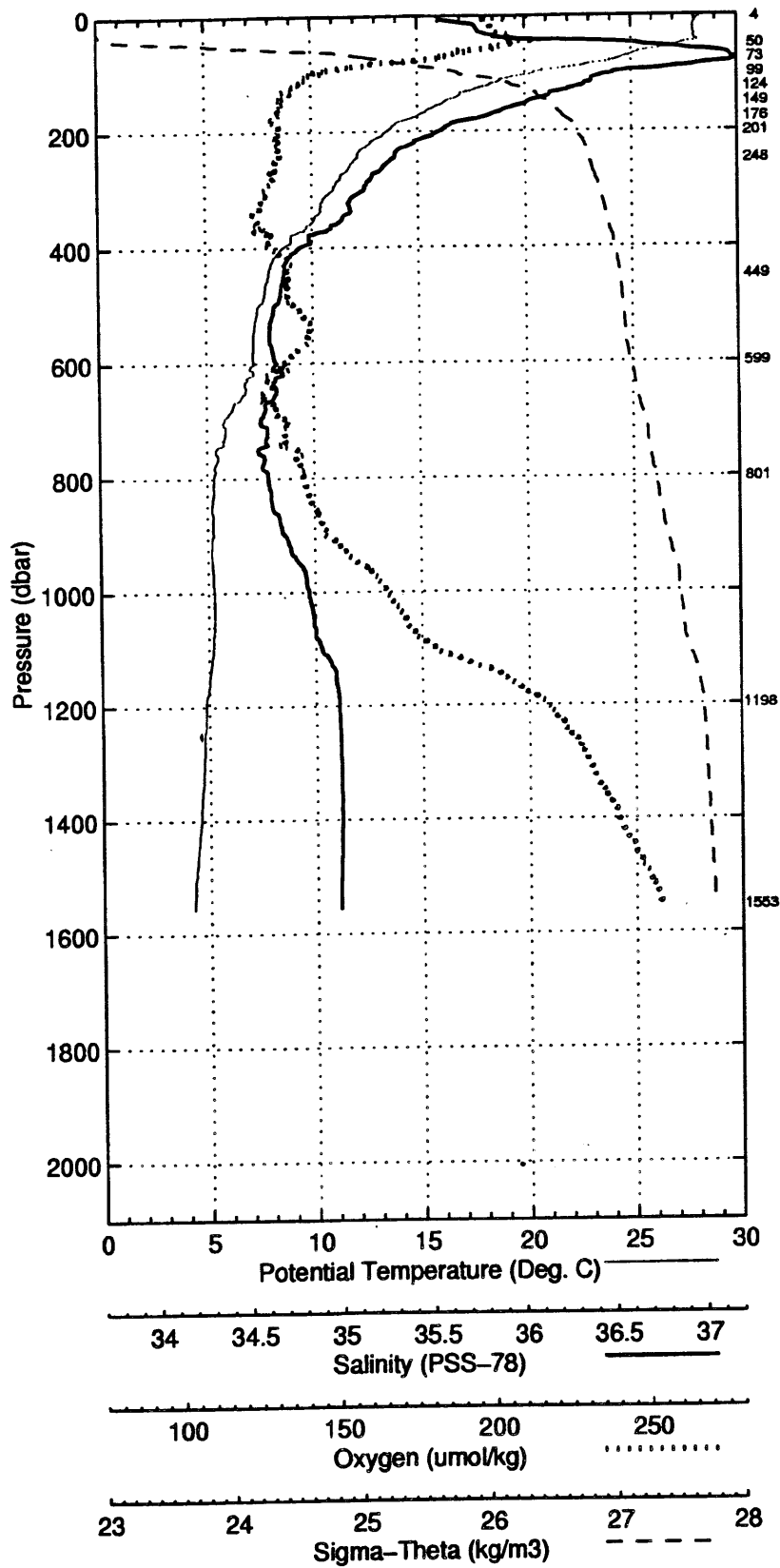


NBC-1 R/V SEWARD JOHNSON
CTD Station 59 (98059)
Latitude 7.634N Longitude 55.514W
09-Dec-1998 02:28Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.254	28.254	35.568	212.5	0.005	22.741
10	28.063	28.061	35.638	199.7	0.051	22.858
20	27.954	27.949	35.767	200.8	0.100	22.992
30	27.978	27.971	35.800	202.2	0.148	23.011
40	28.011	28.001	35.963	206.8	0.197	23.124
50	27.383	27.371	36.661	206.0	0.240	23.855
60	26.022	26.008	37.001	193.6	0.278	24.548
70	24.856	24.841	37.164	187.4	0.309	25.033
80	23.943	23.926	37.165	172.5	0.337	25.311
90	22.096	22.078	36.842	152.5	0.362	25.603
100	20.405	20.386	36.512	145.8	0.385	25.819
110	18.962	18.943	36.397	140.5	0.406	26.110
120	18.373	18.352	36.351	138.8	0.424	26.226
130	17.459	17.437	36.236	134.2	0.442	26.364
140	16.906	16.883	36.150	134.8	0.459	26.432
150	16.252	16.228	36.044	134.7	0.475	26.505
160	15.682	15.657	35.947	132.0	0.490	26.561
170	15.158	15.132	35.855	132.8	0.505	26.609
180	14.474	14.447	35.732	130.9	0.520	26.664
190	13.868	13.841	35.621	132.0	0.534	26.707
200	13.531	13.503	35.565	132.3	0.547	26.735
250	11.989	11.956	35.297	132.1	0.613	26.835
300	10.998	10.960	35.151	128.4	0.675	26.908
350	10.127	10.085	35.031	125.8	0.735	26.969
400	8.623	8.580	34.796	130.6	0.792	27.032
450	7.933	7.887	34.708	135.4	0.846	27.068
500	7.479	7.430	34.659	137.2	0.899	27.096
550	7.217	7.163	34.631	141.7	0.952	27.113
600	7.218	7.159	34.664	133.5	1.003	27.140
650	6.814	6.752	34.665	127.6	1.053	27.198
700	5.805	5.744	34.579	133.7	1.100	27.260
750	5.401	5.337	34.562	138.0	1.144	27.296
800	5.318	5.251	34.614	140.1	1.187	27.348
900	5.277	5.200	34.706	146.6	1.267	27.428
1000	5.274	5.188	34.833	166.5	1.338	27.531
1500	4.331	4.207	34.998	249.9	1.616	27.776

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.241	28.240	35.360	197.3
50	13	27.333	27.321	36.699	206.1
74	12	23.981	23.965	37.161	173.1
99	11	19.940	19.922	36.451	139.3
124	10	18.099	18.077	36.323	134.8
149	9	16.310	16.286	36.051	131.5
176	8	14.693	14.667	35.777	129.7
201	7	13.337	13.309	35.530	130.7
249	6	12.014	11.981	35.299	130.5
449	5	7.927	7.881	34.705	135.7
600	4	7.185	7.127	34.660	130.4
801	3	5.315	5.247	34.618	136.9
1199	2	4.877	4.775	34.996	219.4
1553	1	4.258	4.130	35.002	250.2

NBC-1 R/V SEWARD JOHNSON
 CTD Station 59 (98059)
 Latitude 7.634 N Longitude 55.514 W
 09-Dec-1998 02:28 Z

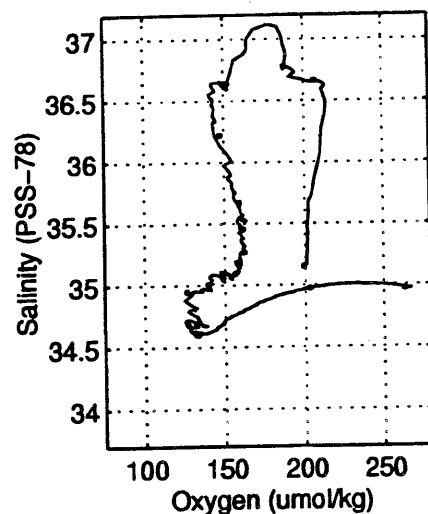
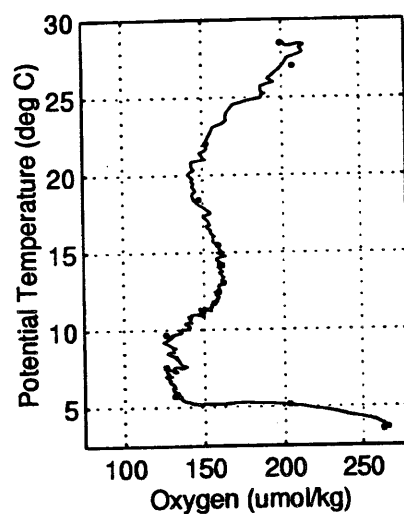
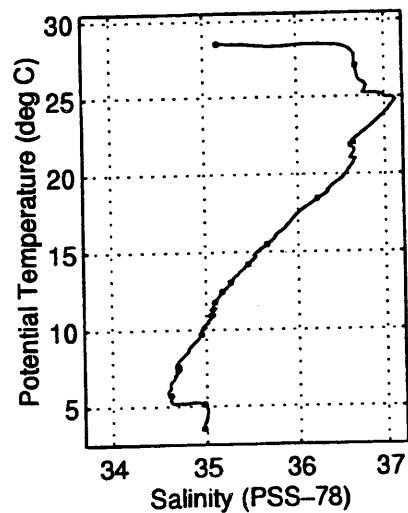
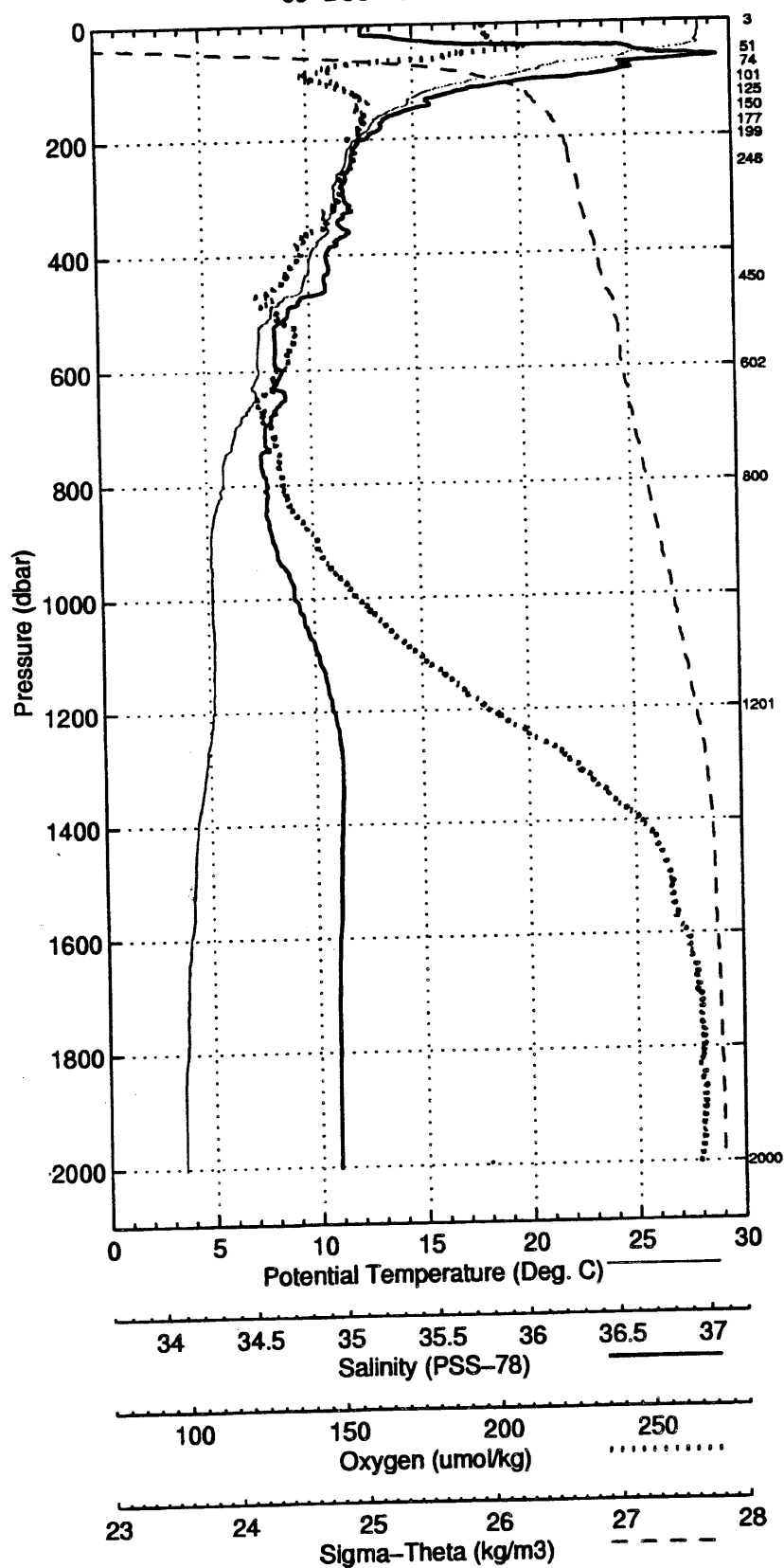


NBC-1 R/V SEWARD JOHNSON
CTD Station 60 (98060)
Latitude 7.950N Longitude 55.664W
09-Dec-1998 05:32Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.505	28.504	35.182	200.1	0.005	22.368
10	28.518	28.515	35.171	200.9	0.055	22.356
20	28.475	28.470	35.283	201.4	0.109	22.457
30	28.425	28.418	35.512	201.8	0.162	22.647
40	28.430	28.420	36.382	213.4	0.212	23.301
50	26.679	26.668	36.675	196.7	0.254	24.092
60	24.953	24.939	37.032	186.3	0.288	24.903
70	22.216	22.202	36.635	152.4	0.316	25.409
80	21.001	20.985	36.635	150.9	0.339	25.749
90	19.671	19.655	36.487	143.0	0.361	25.993
100	17.653	17.636	36.035	153.6	0.380	26.160
110	16.417	16.400	35.830	154.8	0.398	26.299
120	15.458	15.439	35.659	158.3	0.416	26.387
130	14.814	14.795	35.522	161.2	0.432	26.424
140	14.716	14.695	35.542	160.7	0.448	26.462
150	13.915	13.894	35.411	160.3	0.464	26.533
160	13.370	13.347	35.314	162.7	0.479	26.571
170	13.124	13.100	35.278	161.4	0.494	26.593
180	12.951	12.926	35.271	160.2	0.509	26.623
190	12.624	12.599	35.217	159.3	0.523	26.647
200	12.337	12.310	35.174	156.8	0.538	26.670
250	11.714	11.682	35.098	156.8	0.607	26.732
300	11.290	11.252	35.068	153.5	0.674	26.790
350	10.909	10.866	35.047	148.5	0.740	26.845
400	10.126	10.079	34.963	141.1	0.802	26.918
450	9.762	9.710	34.956	133.8	0.863	26.976
500	8.206	8.153	34.748	132.9	0.919	27.061
550	7.601	7.546	34.678	138.2	0.973	27.096
600	7.598	7.537	34.713	132.2	1.026	27.125
650	7.428	7.364	34.728	126.7	1.077	27.163
700	6.460	6.395	34.614	130.4	1.127	27.205
750	5.930	5.863	34.590	133.7	1.174	27.255
800	5.831	5.760	34.624	133.9	1.220	27.295
900	5.188	5.112	34.648	144.2	1.304	27.392
1000	5.196	5.110	34.760	156.3	1.379	27.482
1500	4.180	4.058	34.993	257.3	1.664	27.788
2000	3.548	3.387	34.968	265.7	1.890	27.838

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.505	28.504	35.152	199.1
51	13	27.039	27.027	36.661	206.9
75	12	22.022	22.007	36.639	152.0
101	11	18.414	18.396	36.219	147.7
125	10	15.483	15.464	35.665	159.0
151	9	14.179	14.157	35.454	161.3
177	8	13.042	13.018	35.268	162.2
200	7	12.438	12.411	35.175	159.0
247	6	11.743	11.711	35.095	156.3
450	5	9.671	9.619	34.951	126.1
602	4	7.583	7.523	34.709	126.1
801	3	5.708	5.638	34.620	131.1
1202	2	5.150	5.046	34.975	203.1
2000	1	3.550	3.389	34.970	263.7

NBC-1 R/V SEWARD JOHNSON
 CTD Station 60 (98060)
 Latitude 7.950 N Longitude 55.664 W
 09-Dec-1998 05:32 Z

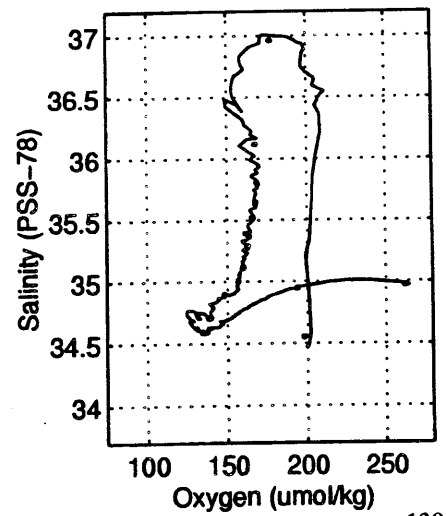
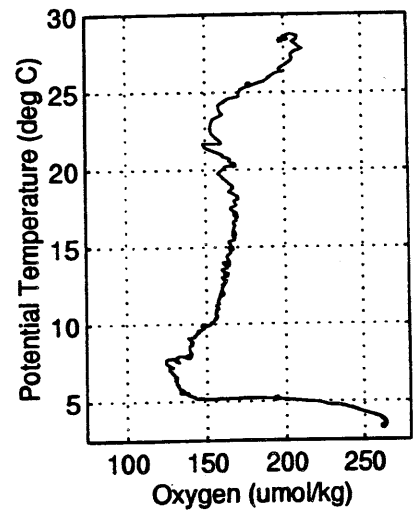
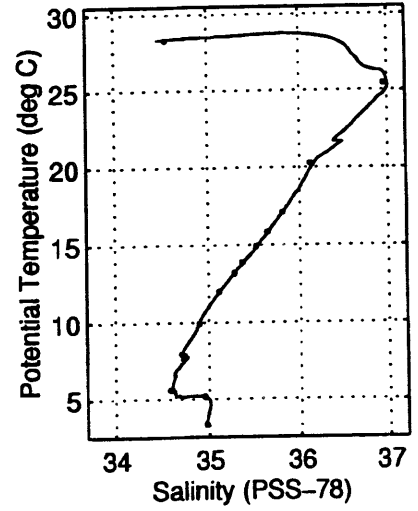
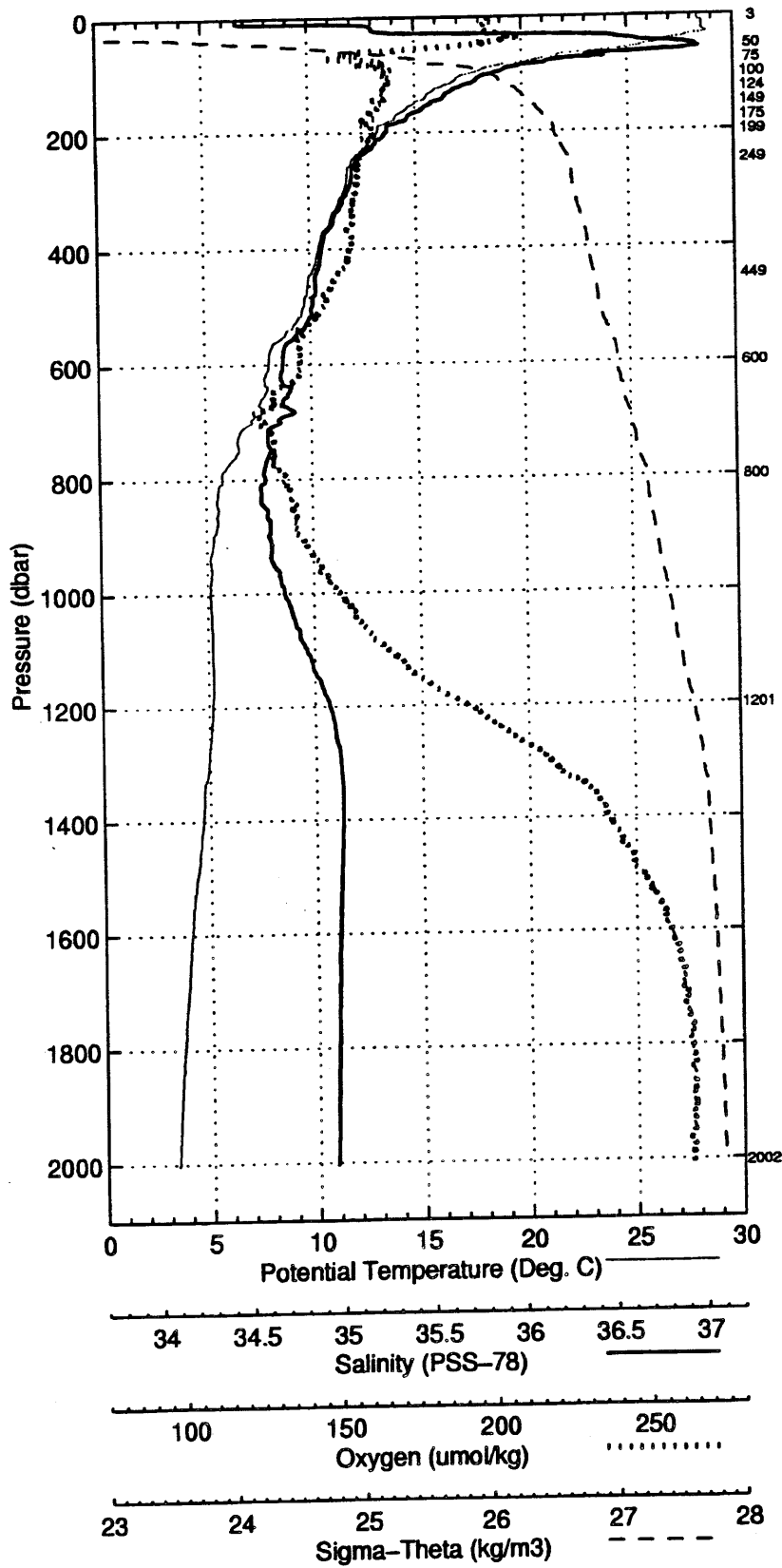


NBC-1 R/V SEWARD JOHNSON
CTD Station 61 (98061)
Latitude 8.267N Longitude 55.851W
09-Dec-1998 09:08Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.333	28.333	34.474	200.8	0.006	21.892
10	28.391	28.389	34.579	202.1	0.059	21.953
20	28.552	28.547	35.217	199.4	0.114	22.382
30	28.748	28.741	35.839	203.7	0.168	22.785
40	27.161	27.152	36.636	205.4	0.212	23.907
50	26.103	26.091	36.964	192.4	0.249	24.492
60	24.146	24.133	36.832	158.3	0.280	24.995
70	21.667	21.653	36.440	156.2	0.308	25.416
80	20.264	20.249	36.164	168.8	0.333	25.589
90	18.216	18.200	35.942	170.5	0.355	25.949
100	17.412	17.395	35.849	165.7	0.375	26.076
110	16.886	16.868	35.783	169.4	0.394	26.152
120	16.291	16.272	35.703	167.5	0.413	26.231
130	15.762	15.742	35.638	166.9	0.430	26.303
140	15.474	15.452	35.602	167.8	0.448	26.342
150	14.990	14.968	35.536	165.8	0.465	26.399
160	14.591	14.567	35.485	164.8	0.481	26.447
170	14.126	14.102	35.416	164.7	0.497	26.493
180	13.802	13.776	35.374	162.3	0.513	26.530
190	13.285	13.258	35.296	163.7	0.528	26.576
200	13.218	13.190	35.286	163.2	0.543	26.582
250	12.015	11.983	35.125	159.5	0.616	26.697
300	11.642	11.604	35.078	158.0	0.686	26.732
350	11.002	10.958	34.998	157.3	0.754	26.790
400	10.427	10.379	34.935	156.5	0.820	26.844
450	9.947	9.895	34.896	151.6	0.884	26.898
500	9.711	9.653	34.879	147.4	0.947	26.926
550	8.804	8.744	34.789	140.2	1.007	27.003
600	8.017	7.955	34.712	139.9	1.063	27.064
650	7.857	7.790	34.741	131.6	1.117	27.112
700	7.211	7.142	34.696	127.4	1.170	27.169
750	6.567	6.497	34.642	130.2	1.219	27.214
800	5.770	5.700	34.608	134.4	1.265	27.290
900	5.323	5.246	34.625	139.8	1.352	27.358
1000	5.133	5.048	34.705	151.7	1.431	27.446
1500	4.346	4.222	35.000	248.2	1.731	27.776
2000	3.357	3.199	34.964	263.4	1.957	27.852

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.316	28.315	34.556	197.9
51	13	25.467	25.456	36.964	177.5
75	12	20.287	20.273	36.116	167.8
101	11	17.101	17.084	35.804	168.5
125	10	15.839	15.819	35.639	167.6
150	9	14.892	14.869	35.517	165.9
175	8	13.895	13.870	35.367	164.0
200	7	13.196	13.168	35.281	162.8
249	6	11.977	11.945	35.119	159.8
450	5	9.913	9.861	34.898	148.0
601	4	7.933	7.871	34.708	138.2
800	3	5.608	5.539	34.590	134.5
1201	2	5.178	5.074	34.950	193.6
2003	1	3.350	3.192	34.970	262.5

NBC-1 R/V SEWARD JOHNSON
 CTD Station 61 (98061)
 Latitude 8.267 N Longitude 55.851 W
 09-Dec-1998 09:08 Z

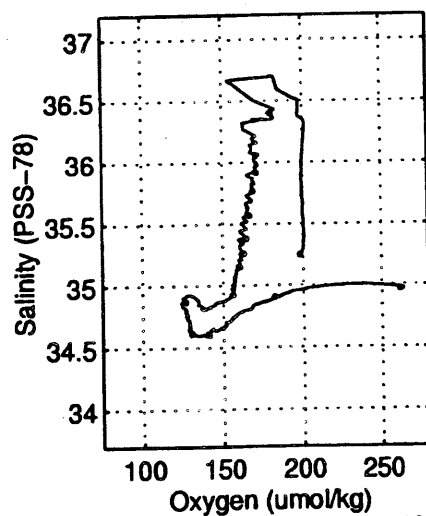
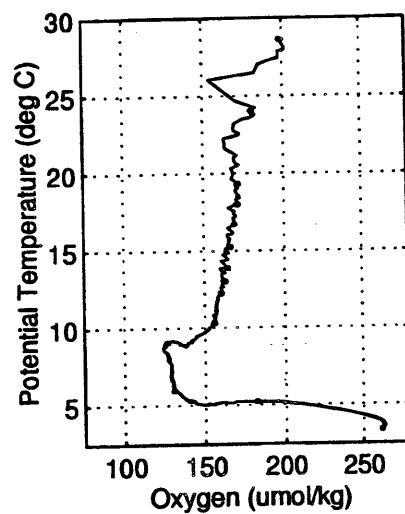
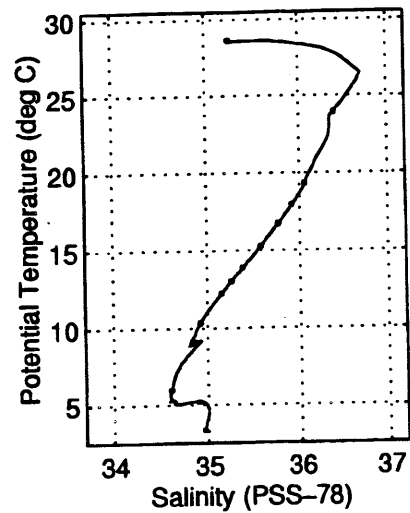
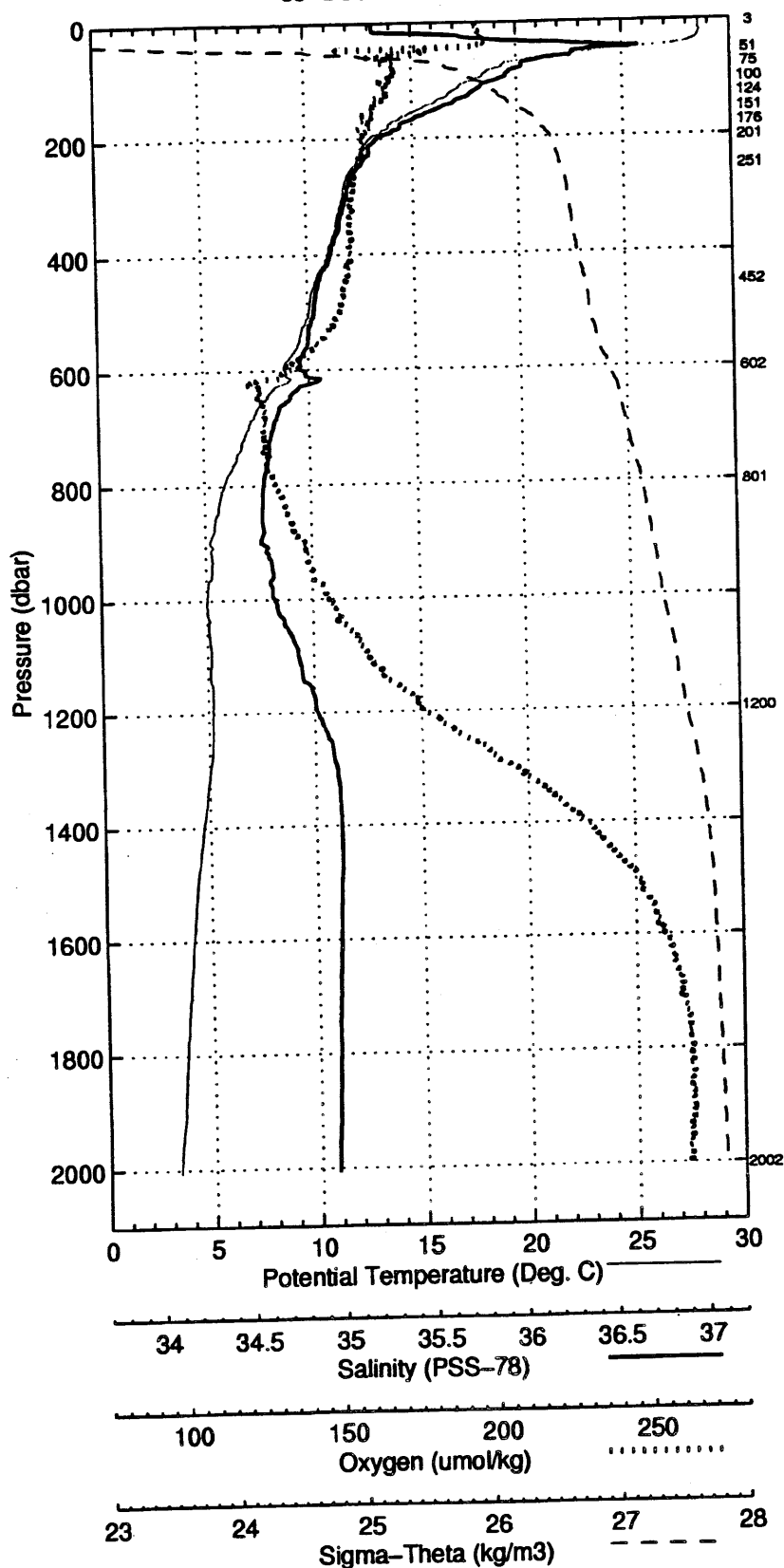


NBC-1 R/V SEWARD JOHNSON
CTD Station 62 (98062)
Latitude 8.586N Longitude 56.015W
09-Dec-1998 12:32Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.587	28.587	35.239	198.1	0.005	22.384
10	28.561	28.558	35.239	198.4	0.054	22.393
20	28.607	28.602	35.545	200.2	0.108	22.610
30	28.490	28.483	35.856	199.3	0.159	22.884
40	27.863	27.853	36.375	197.3	0.206	23.483
50	24.166	24.155	36.422	180.3	0.243	24.677
60	22.245	22.233	36.322	163.1	0.274	25.162
70	19.641	19.628	36.080	167.3	0.298	25.688
80	19.115	19.100	36.046	170.2	0.321	25.800
90	18.410	18.394	35.973	171.6	0.342	25.924
100	18.029	18.012	35.926	169.3	0.363	25.984
110	17.276	17.257	35.833	170.0	0.383	26.098
120	16.901	16.881	35.791	169.0	0.402	26.156
130	16.558	16.537	35.742	166.6	0.421	26.199
140	16.052	16.030	35.674	165.3	0.439	26.265
150	15.363	15.340	35.588	164.7	0.457	26.356
160	14.795	14.771	35.510	162.2	0.474	26.422
170	14.276	14.251	35.432	161.1	0.490	26.474
180	13.892	13.866	35.384	164.1	0.506	26.518
190	13.529	13.502	35.334	161.3	0.521	26.556
200	13.037	13.009	35.258	160.9	0.536	26.597
250	12.203	12.170	35.150	159.4	0.609	26.680
300	11.748	11.709	35.091	158.0	0.679	26.723
350	11.403	11.358	35.047	157.7	0.748	26.755
400	10.990	10.940	34.996	157.7	0.817	26.792
450	10.361	10.307	34.927	155.7	0.883	26.851
500	10.070	10.011	34.901	153.9	0.948	26.883
550	9.591	9.528	34.869	147.0	1.011	26.940
600	8.882	8.816	34.833	137.0	1.071	27.028
650	7.973	7.906	34.758	127.4	1.126	27.108
700	7.154	7.085	34.669	129.0	1.179	27.156
750	6.534	6.464	34.630	130.4	1.229	27.209
800	5.926	5.855	34.607	132.5	1.276	27.270
900	5.208	5.132	34.590	140.8	1.364	27.344
1000	5.049	4.965	34.660	149.0	1.445	27.420
1500	4.344	4.220	35.000	246.6	1.756	27.776
2000	3.341	3.184	34.963	262.7	1.985	27.853

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.632	28.631	35.248	198.0
51	13	23.929	23.918	36.393	180.4
75	12	19.319	19.305	36.055	171.1
100	11	17.972	17.955	35.913	171.0
125	10	16.711	16.691	35.764	168.7
151	9	15.238	15.215	35.567	166.6
176	8	13.869	13.844	35.379	164.5
202	7	13.007	12.979	35.256	163.0
251	6	12.230	12.197	35.154	160.3
453	5	10.338	10.284	34.926	156.1
603	4	9.060	8.992	34.874	126.6
801	3	5.981	5.909	34.614	130.3
1200	2	5.206	5.101	34.907	181.9
2002	1	3.343	3.185	34.967	262.0

NBC-1 R/V SEWARD JOHNSON
 CTD Station 62 (98062)
 Latitude 8.586 N Longitude 56.015 W
 09-Dec-1998 12:32 Z

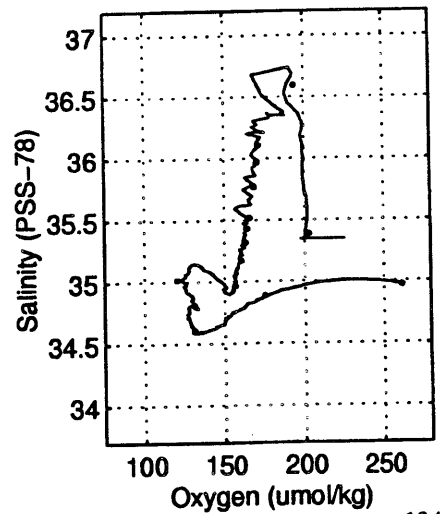
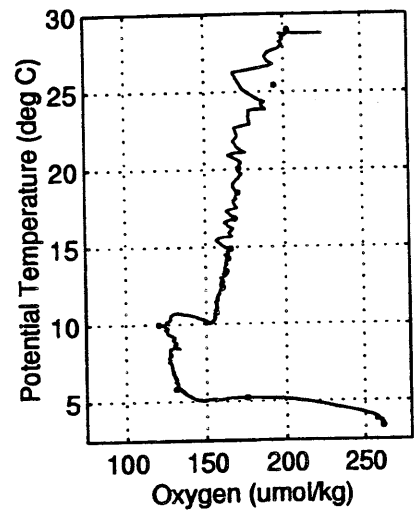
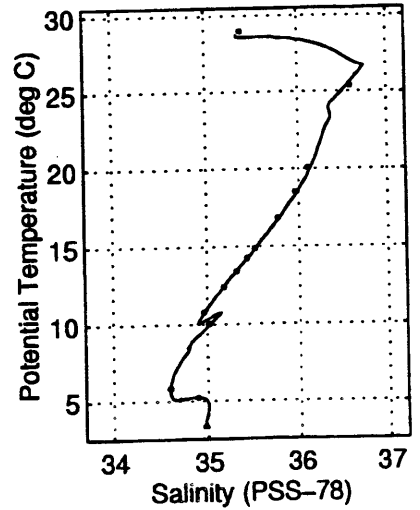
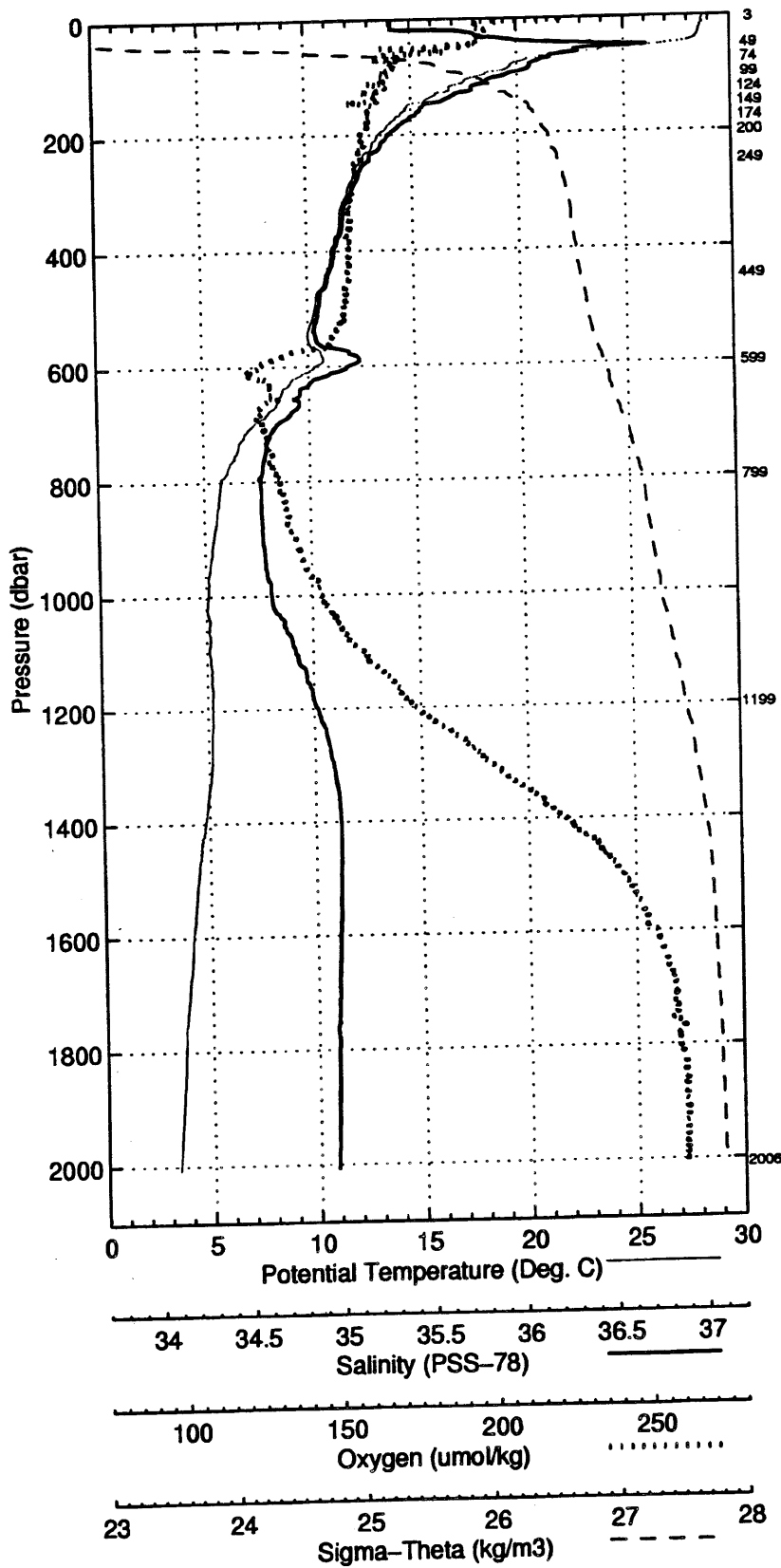


NBC-1 R/V SEWARD JOHNSON
CTD Station 63 (98063)
Latitude 8.901N Longitude 56.182W
09-Dec-1998 15:52Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.744	28.743	35.342	225.1	0.005	22.409
10	28.686	28.684	35.342	198.4	0.054	22.429
20	28.621	28.616	35.675	201.5	0.108	22.703
30	28.520	28.513	35.806	199.5	0.158	22.836
40	28.313	28.304	36.094	199.5	0.207	23.123
50	26.665	26.654	36.739	190.7	0.250	24.145
60	23.328	23.315	36.366	177.5	0.284	24.884
70	20.921	20.907	36.200	164.6	0.311	25.438
80	19.716	19.701	36.104	172.6	0.335	25.688
90	19.344	19.327	36.073	169.8	0.358	25.763
100	18.178	18.160	35.950	169.0	0.379	25.965
110	17.462	17.444	35.859	169.5	0.399	26.072
120	16.823	16.803	35.782	169.4	0.419	26.167
130	16.174	16.153	35.691	167.4	0.437	26.250
140	15.717	15.695	35.634	166.0	0.455	26.311
150	14.836	14.813	35.517	165.0	0.472	26.417
160	14.650	14.626	35.494	163.6	0.489	26.441
170	14.295	14.270	35.446	164.0	0.505	26.480
180	14.021	13.995	35.402	162.6	0.521	26.505
190	13.775	13.748	35.363	162.4	0.536	26.527
200	13.428	13.400	35.321	162.1	0.552	26.567
250	12.508	12.474	35.190	158.9	0.626	26.652
300	11.956	11.917	35.118	158.1	0.698	26.705
350	11.561	11.516	35.066	157.4	0.768	26.741
400	11.154	11.104	35.015	156.7	0.837	26.778
450	10.845	10.790	34.979	156.8	0.905	26.808
500	10.345	10.285	34.926	155.6	0.971	26.856
550	10.011	9.946	34.909	151.0	1.036	26.902
600	10.325	10.253	35.086	127.4	1.099	26.988
650	8.697	8.626	34.819	130.0	1.158	27.047
700	7.385	7.316	34.690	128.1	1.213	27.140
750	6.570	6.499	34.625	130.6	1.263	27.201
800	5.824	5.753	34.595	133.5	1.310	27.273
900	5.410	5.332	34.604	138.4	1.399	27.331
1000	5.106	5.022	34.645	146.0	1.482	27.401
1500	4.422	4.297	35.002	242.1	1.799	27.770
2000	3.383	3.225	34.965	261.4	2.028	27.851

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.972	28.972	35.383	202.9
49	13	25.402	25.391	36.592	193.6
74	12	20.060	20.046	36.105	171.2
100	11	18.498	18.481	35.968	170.6
125	10	16.826	16.805	35.766	168.4
150	9	14.867	14.845	35.516	165.7
174	8	14.230	14.205	35.429	164.2
200	7	13.412	13.384	35.318	163.0
249	6	12.384	12.351	35.173	160.2
450	5	10.775	10.720	34.967	156.6
600	4	10.009	9.938	35.019	120.4
800	3	5.830	5.759	34.603	131.4
1200	2	5.219	5.115	34.891	175.1
2007	1	3.362	3.204	34.969	261.5

NBC-1 R/V SEWARD JOHNSON
 CTD Station 63 (98063)
 Latitude 8.901 N Longitude 56.182 W
 09-Dec-1998 15:52 Z

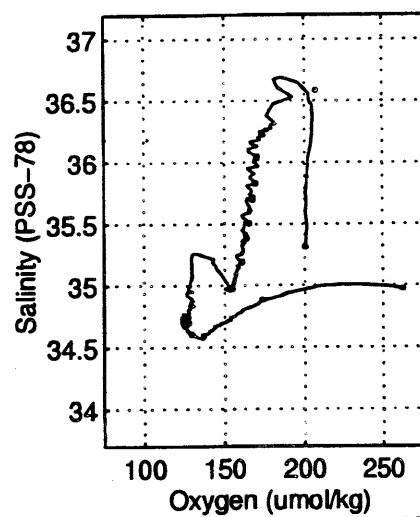
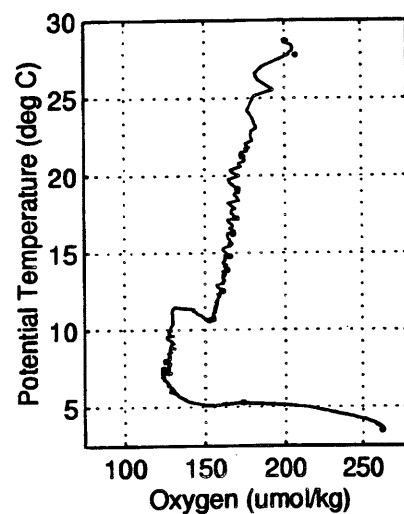
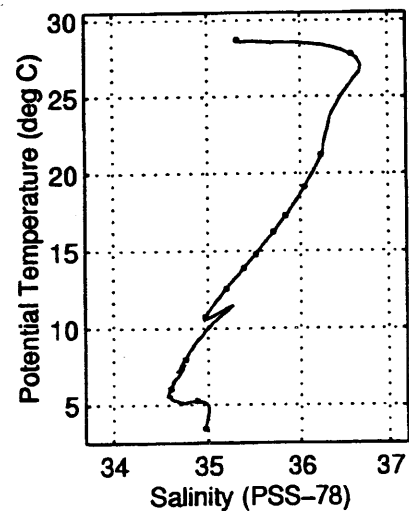
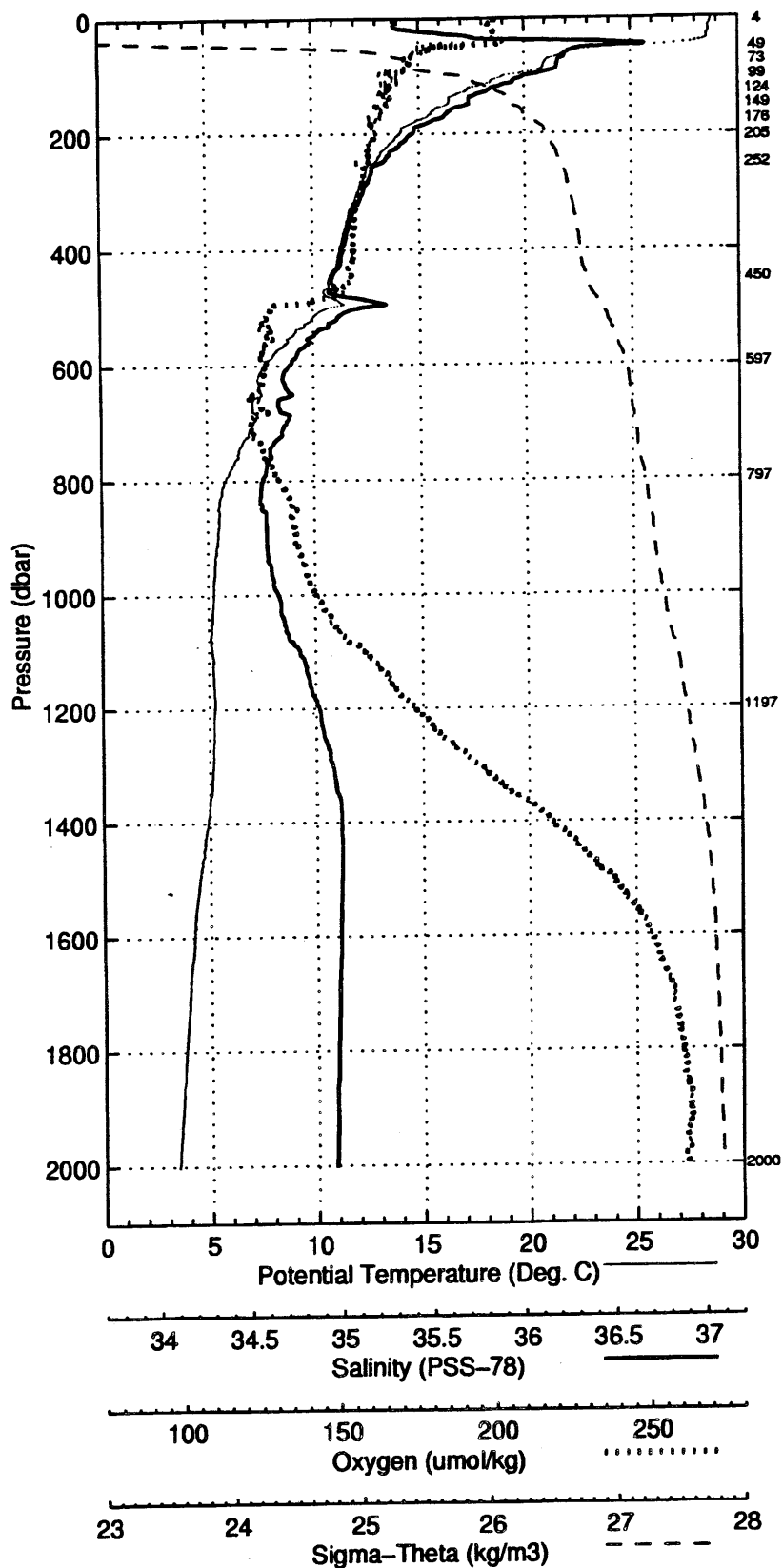


NBC-1 R/V SEWARD JOHNSON
CTD Station 64 (98064)
Latitude 9.213N Longitude 56.369W
09-Dec-1998 19:24Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.742	28.741	35.310	201.7	0.005	22.386
10	28.682	28.680	35.314	199.8	0.054	22.409
20	28.611	28.606	35.390	201.1	0.108	22.492
30	28.524	28.517	35.693	201.1	0.161	22.750
40	28.369	28.360	36.249	205.1	0.210	23.221
50	25.132	25.121	36.474	180.7	0.251	24.424
60	22.043	22.031	36.268	175.4	0.281	25.178
70	21.198	21.185	36.232	173.2	0.308	25.386
80	20.937	20.922	36.216	174.7	0.333	25.447
90	20.676	20.659	36.193	171.1	0.359	25.501
100	18.985	18.967	36.028	169.9	0.382	25.821
110	18.375	18.356	35.966	171.3	0.404	25.929
120	17.422	17.402	35.854	168.2	0.424	26.079
130	16.873	16.851	35.780	166.3	0.444	26.155
140	16.420	16.398	35.725	168.5	0.462	26.219
150	16.310	16.286	35.711	165.8	0.481	26.235
160	15.683	15.658	35.623	165.3	0.499	26.311
170	15.426	15.400	35.587	165.6	0.516	26.343
180	14.761	14.734	35.502	163.0	0.533	26.424
190	14.199	14.171	35.426	163.5	0.549	26.487
200	14.126	14.097	35.415	162.2	0.565	26.494
250	12.934	12.900	35.245	157.4	0.642	26.610
300	12.156	12.116	35.145	159.0	0.715	26.687
350	11.614	11.569	35.072	157.0	0.785	26.735
400	11.282	11.231	35.032	156.5	0.855	26.768
450	10.753	10.698	34.971	155.2	0.923	26.818
500	10.708	10.647	35.123	129.6	0.988	26.947
550	8.950	8.889	34.855	129.1	1.047	27.033
600	7.737	7.676	34.734	127.6	1.102	27.122
650	7.596	7.531	34.752	124.0	1.154	27.158
700	7.204	7.135	34.718	123.4	1.204	27.188
750	6.502	6.432	34.631	126.9	1.253	27.214
800	5.844	5.773	34.588	132.2	1.301	27.264
900	5.466	5.389	34.608	137.7	1.389	27.328
1000	5.257	5.171	34.666	143.9	1.473	27.401
1500	4.494	4.369	35.004	238.8	1.795	27.763
2000	3.464	3.304	34.968	262.4	2.028	27.846

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.706	28.705	35.314	200.4
50	13	27.792	27.780	36.582	207.3
74	12	21.215	21.200	36.229	173.7
100	11	19.132	19.114	36.049	170.5
125	10	17.244	17.224	35.829	169.6
150	9	16.220	16.196	35.696	167.8
177	8	14.755	14.728	35.506	165.3
205	7	13.876	13.846	35.383	163.8
252	6	12.533	12.499	35.194	161.2
450	5	10.719	10.663	34.972	154.8
597	4	7.958	7.896	34.761	125.3
798	3	6.050	5.978	34.606	129.4
1198	2	5.282	5.178	34.886	173.5
2000	1	3.464	3.305	34.973	262.7

NBC-1 R/V SEWARD JOHNSON
 CTD Station 64 (98064)
 Latitude 9.213 N Longitude 56.369 W
 09-Dec-1998 19:24 Z

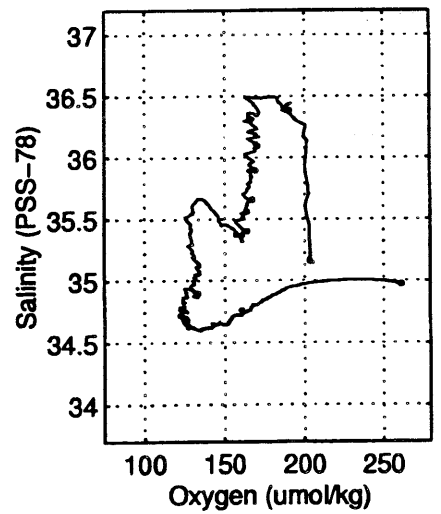
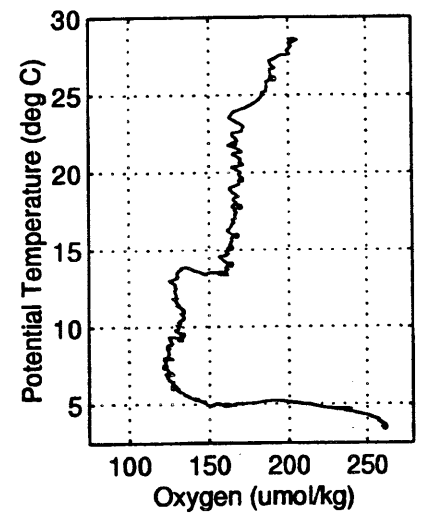
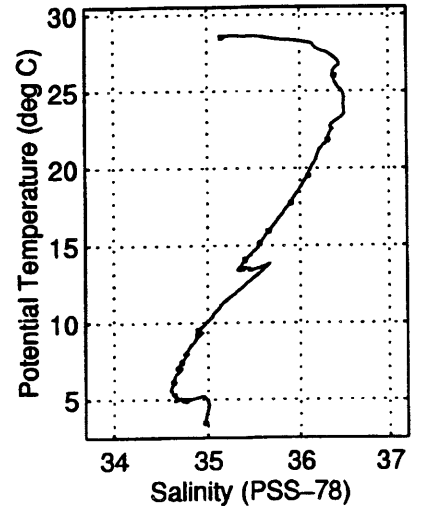
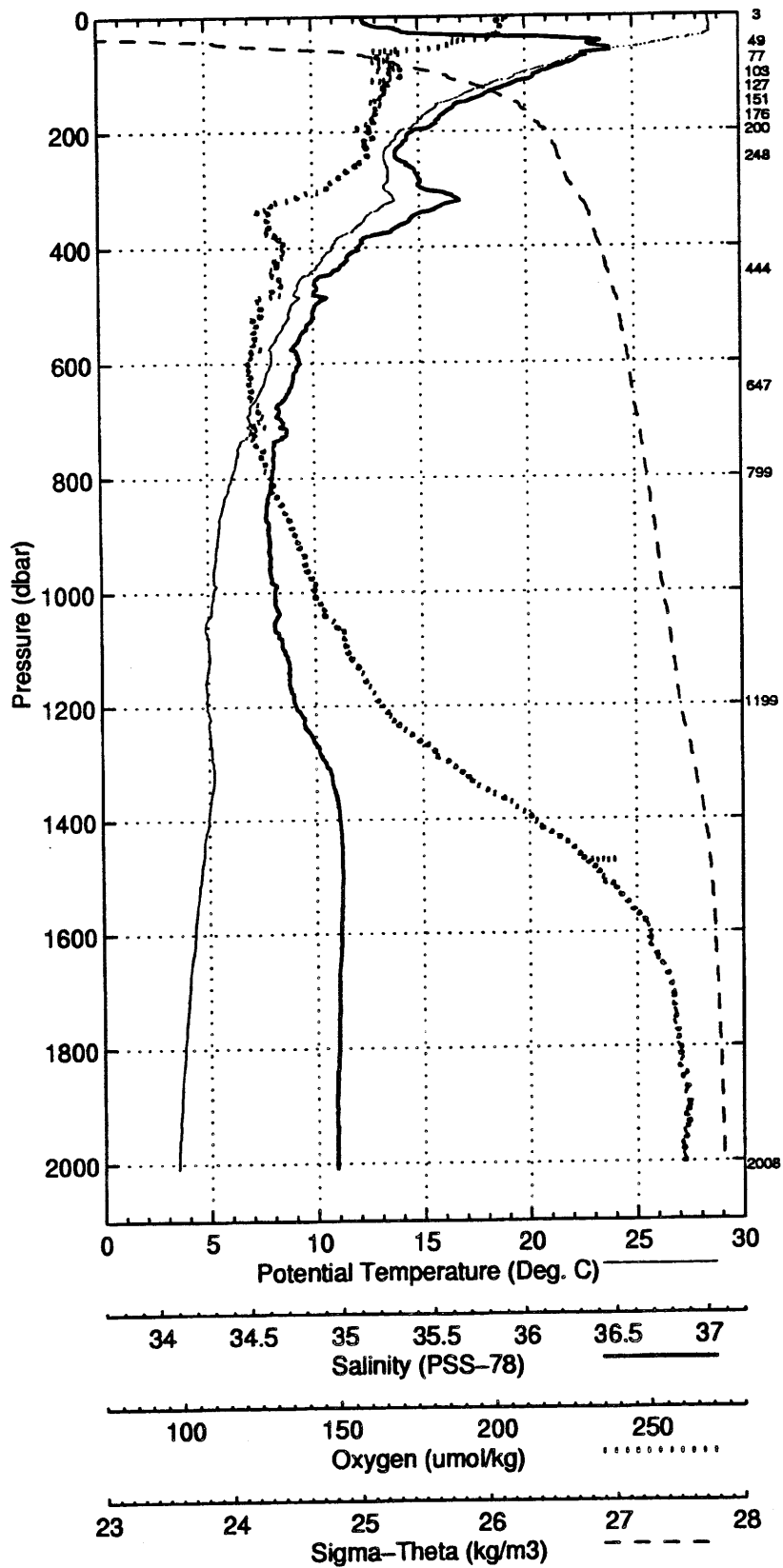


NBC-1 R/V SEWARD JOHNSON
CTD Station 65 (98065)
Latitude 9.535N Longitude 56.549W
09-Dec-1998 22:58Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.486	28.486	35.147	205.7	0.005	22.347
10	28.556	28.554	35.155	203.1	0.055	22.332
20	28.623	28.618	35.308	203.2	0.110	22.427
30	28.614	28.607	35.455	203.0	0.163	22.542
40	27.616	27.607	36.261	200.8	0.212	23.477
50	25.950	25.938	36.378	188.2	0.252	24.098
60	23.904	23.891	36.490	165.4	0.287	24.808
70	22.573	22.559	36.362	164.6	0.317	25.100
80	21.640	21.625	36.288	164.9	0.345	25.308
90	20.723	20.706	36.181	169.1	0.371	25.479
100	19.814	19.796	36.103	168.8	0.395	25.664
110	19.290	19.270	36.059	169.2	0.418	25.767
120	18.261	18.240	35.944	165.4	0.440	25.942
130	17.480	17.458	35.852	166.5	0.460	26.064
140	16.933	16.910	35.786	164.6	0.480	26.145
150	16.080	16.056	35.676	163.0	0.498	26.261
160	15.761	15.736	35.632	164.1	0.516	26.301
170	15.337	15.310	35.585	163.0	0.533	26.361
180	15.022	14.995	35.547	162.7	0.550	26.401
190	14.743	14.714	35.520	162.1	0.567	26.442
200	14.111	14.082	35.413	161.6	0.583	26.496
250	13.387	13.352	35.348	159.8	0.661	26.599
300	13.403	13.361	35.479	146.5	0.734	26.700
350	12.465	12.417	35.404	129.0	0.802	26.832
400	10.891	10.842	35.116	134.3	0.867	26.904
450	9.540	9.489	34.905	132.6	0.927	26.973
500	8.965	8.910	34.877	126.4	0.985	27.045
550	8.337	8.279	34.799	124.6	1.040	27.083
600	8.018	7.956	34.790	122.9	1.093	27.125
650	7.507	7.442	34.730	122.8	1.145	27.153
700	6.996	6.928	34.693	125.8	1.196	27.196
750	6.441	6.371	34.643	127.0	1.244	27.232
800	6.121	6.048	34.631	129.5	1.291	27.264
900	5.489	5.411	34.617	137.2	1.380	27.333
1000	5.273	5.187	34.648	143.3	1.465	27.384
1500	4.621	4.494	35.008	235.1	1.800	27.753
2000	3.477	3.317	34.968	261.0	2.035	27.845

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.533	28.532	35.161	203.0
50	13	26.024	26.013	36.382	190.5
77	12	21.825	21.809	36.308	165.7
103	11	19.512	19.494	36.095	170.6
127	10	17.749	17.727	35.896	169.3
152	9	15.918	15.894	35.656	167.2
177	8	15.114	15.086	35.561	163.8
200	7	14.052	14.022	35.403	163.8
249	6	13.458	13.423	35.375	157.3
445	5	9.494	9.443	34.900	133.2
647	4	7.417	7.353	34.722	122.3
799	3	6.104	6.032	34.631	127.4
1199	2	4.934	4.832	34.762	160.9
2008	1	3.475	3.314	34.973	261.5

NBC-1 R/V SEWARD JOHNSON
CTD Station 65 (98065)
Latitude 9.535 N Longitude 56.549 W
09-Dec-1998 22:58 Z

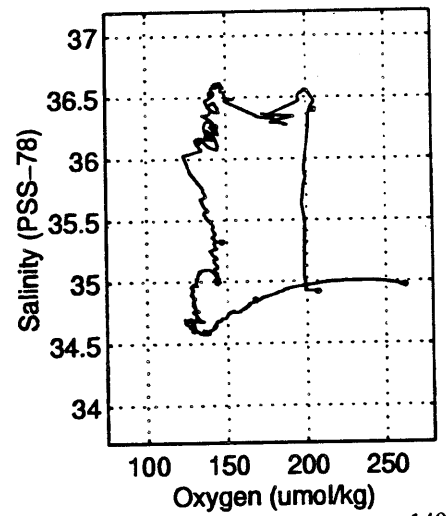
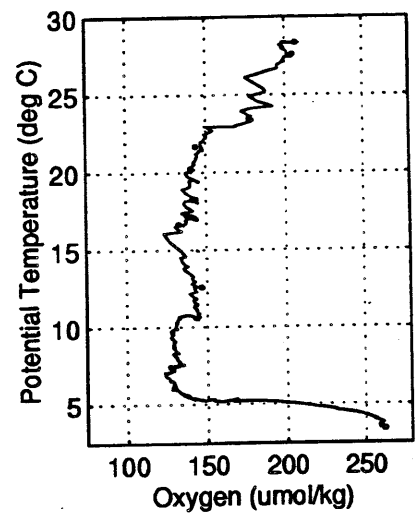
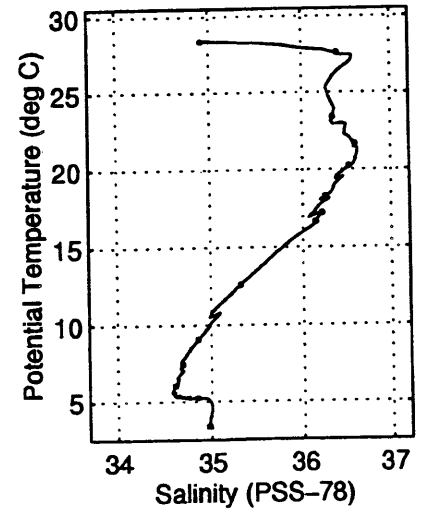
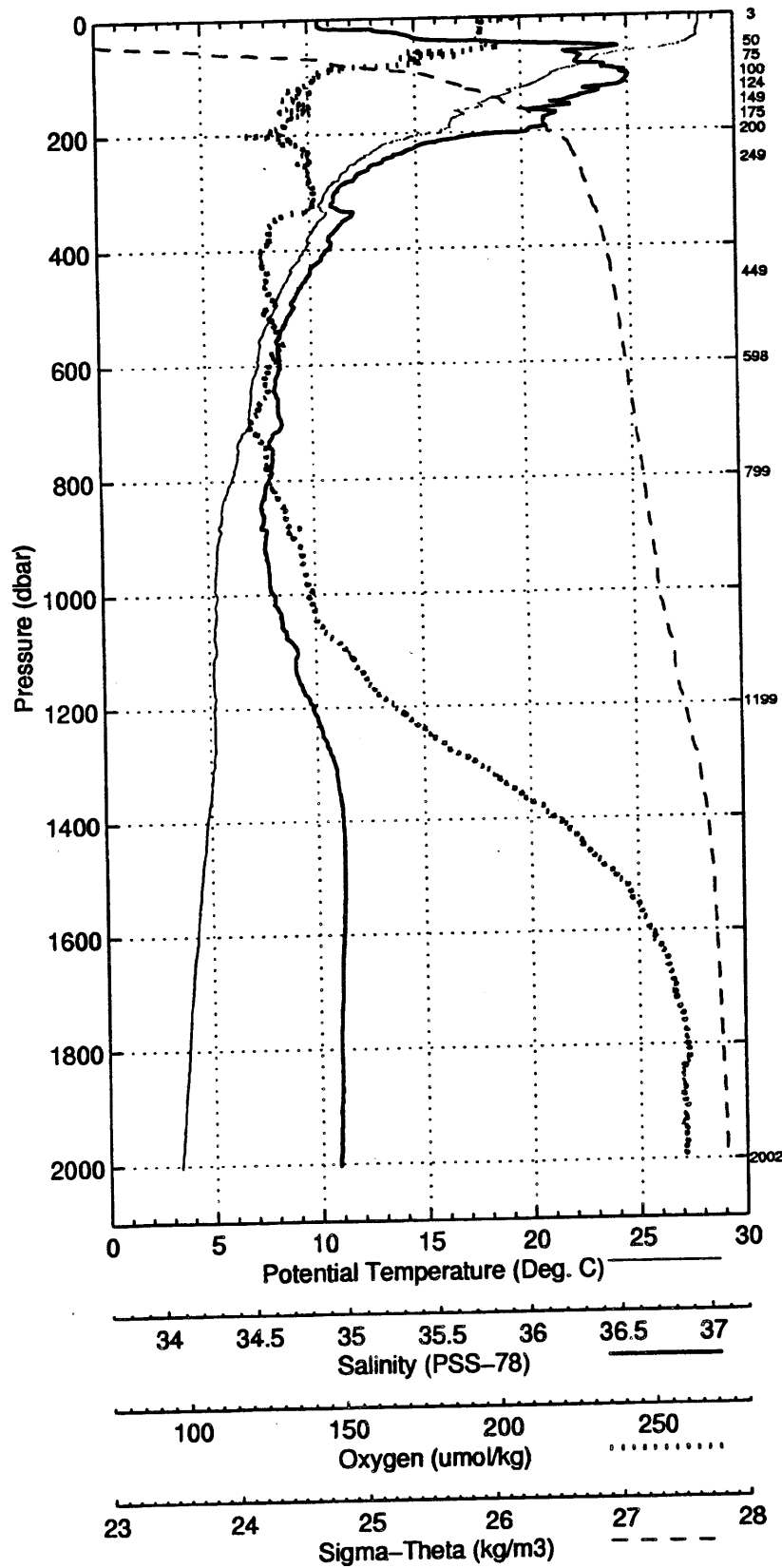


NBC-1 R/V SEWARD JOHNSON
CTD Station 66 (98066)
Latitude 9.833N Longitude 56.716W
10-Dec-1998 02:33Z

<u>Pressure</u> <u>Dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.365	28.365	34.924	209.1	0.006	22.220
10	28.362	28.360	34.924	199.4	0.056	22.223
20	28.331	28.326	35.219	198.8	0.111	22.456
30	28.275	28.268	35.408	198.7	0.164	22.618
40	28.190	28.180	35.635	197.0	0.216	22.818
50	27.605	27.593	36.362	201.6	0.263	23.558
60	26.102	26.088	36.350	175.3	0.303	24.031
70	23.664	23.649	36.355	177.0	0.338	24.777
80	23.159	23.142	36.327	175.2	0.369	24.906
90	22.291	22.273	36.475	150.8	0.398	25.268
100	21.438	21.419	36.594	147.2	0.424	25.599
110	20.973	20.951	36.608	143.8	0.447	25.739
120	20.361	20.339	36.571	140.6	0.469	25.878
130	19.535	19.512	36.458	142.1	0.490	26.011
140	18.730	18.705	36.342	136.8	0.511	26.130
150	18.022	17.996	36.198	144.6	0.529	26.199
160	17.388	17.361	36.156	134.6	0.548	26.322
170	17.121	17.092	36.203	137.9	0.565	26.424
180	16.684	16.655	36.157	136.5	0.581	26.493
190	16.611	16.580	36.164	134.0	0.597	26.516
200	16.171	16.139	36.059	131.7	0.612	26.539
250	12.204	12.171	35.258	140.2	0.683	26.764
300	10.776	10.740	35.011	144.8	0.749	26.838
350	10.438	10.396	35.050	131.6	0.811	26.930
400	9.763	9.716	34.961	127.3	0.870	26.978
450	8.930	8.881	34.843	128.8	0.928	27.023
500	8.352	8.299	34.773	129.3	0.983	27.058
550	7.689	7.634	34.688	132.7	1.037	27.091
600	7.475	7.415	34.691	129.7	1.090	27.125
650	7.164	7.101	34.670	128.4	1.142	27.154
700	7.037	6.969	34.698	123.8	1.192	27.195
750	6.508	6.438	34.647	128.1	1.240	27.227
800	6.186	6.113	34.624	129.9	1.288	27.250
900	5.549	5.470	34.604	136.8	1.379	27.315
1000	5.391	5.304	34.643	142.5	1.464	27.366
1500	4.528	4.402	35.007	239.3	1.793	27.762
2000	3.380	3.221	34.964	260.8	2.026	27.850

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.342	28.341	34.918	206.8
50	13	27.604	27.592	36.393	205.1
75	12	23.429	23.413	36.341	177.5
100	11	21.673	21.653	36.593	143.8
124	10	20.238	20.214	36.526	140.6
150	9	18.284	18.258	36.257	143.3
175	8	17.227	17.198	36.216	137.8
201	7	16.649	16.616	36.139	132.6
250	6	12.574	12.540	35.325	146.8
450	5	9.036	8.986	34.858	NaN
599	4	7.435	7.375	34.692	127.1
800	3	6.049	5.977	34.611	128.8
1199	2	5.250	5.145	34.853	167.8
2002	1	3.379	3.220	34.969	262.5

NBC-1 R/V SEWARD JOHNSON
 CTD Station 66 (98066)
 Latitude 9.833 N Longitude 56.716 W
 10-Dec-1998 02:33 Z

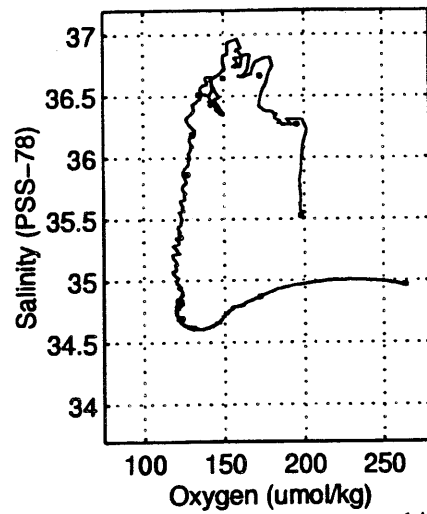
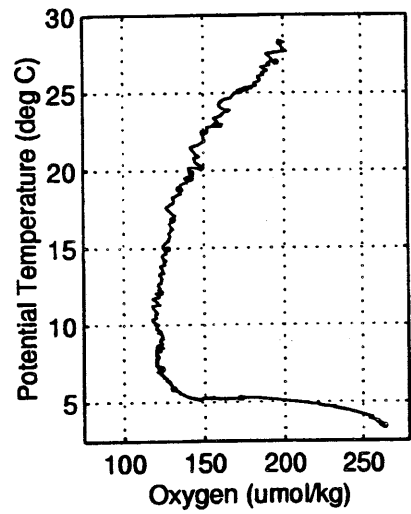
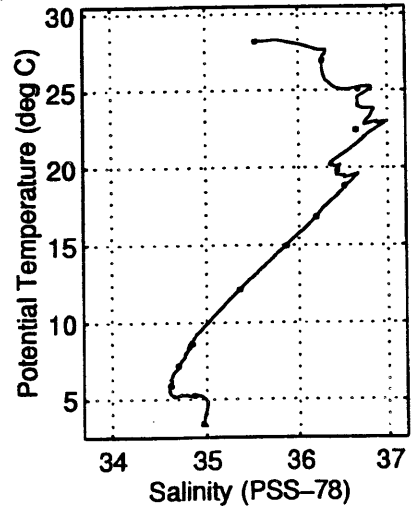
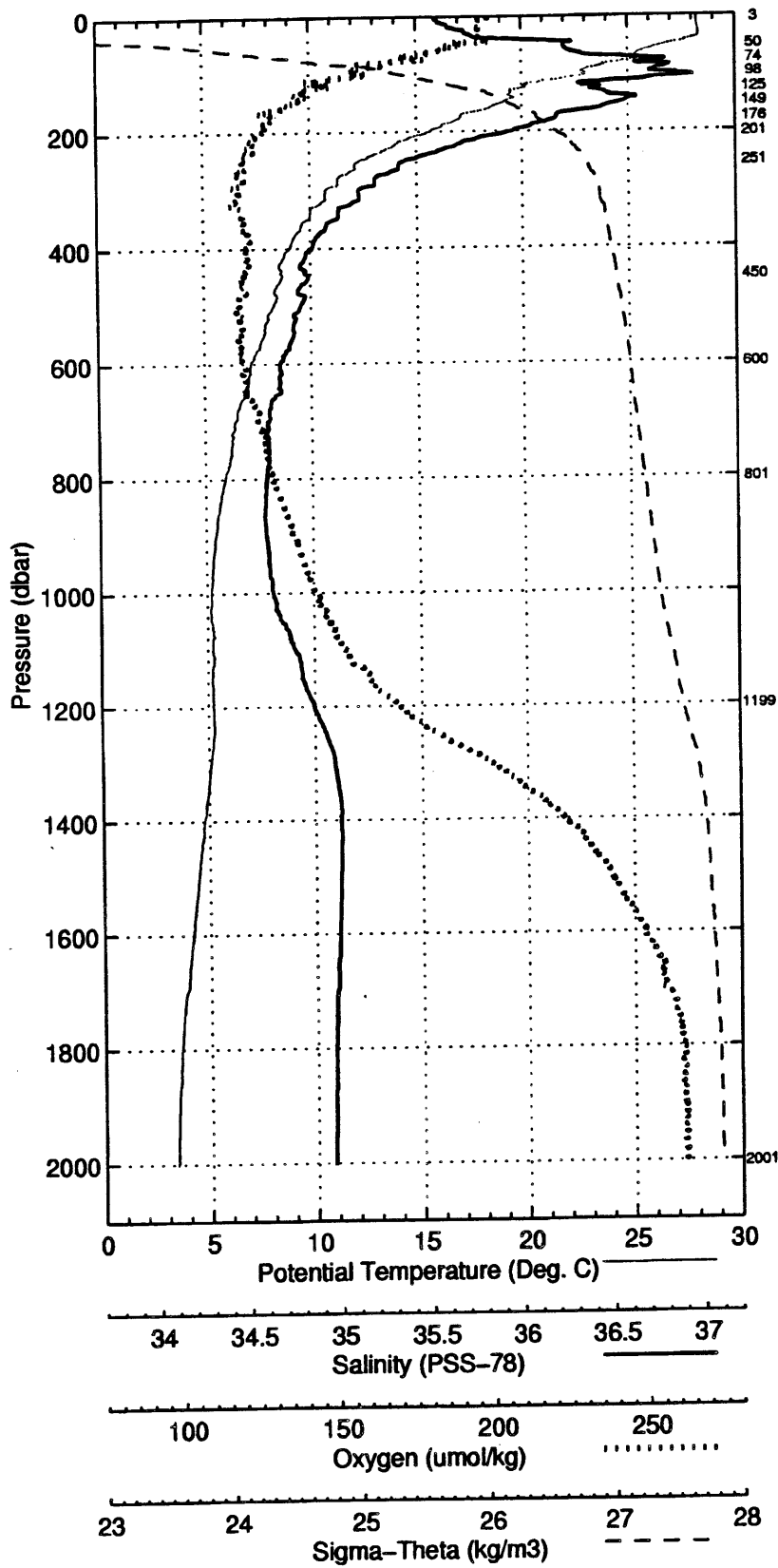


NBC-1 R/V SEWARD JOHNSON
CTD Station 67 (98067)
Latitude 10.166N Longitude 56.899W
10-Dec-1998 06:19Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg³</u>	<u>SigT</u> <u>kg/m³</u>
1	28.203	28.203	35.553	200.5	0.005	22.746
10	28.209	28.207	35.572	197.5	0.051	22.760
20	28.261	28.256	35.651	197.5	0.102	22.804
30	28.309	28.302	35.723	197.4	0.152	22.844
40	28.038	28.028	35.984	198.2	0.201	23.131
50	26.873	26.862	36.263	189.7	0.245	23.719
60	25.821	25.808	36.293	185.3	0.286	24.076
70	25.074	25.059	36.504	172.8	0.322	24.467
80	24.680	24.662	36.683	167.4	0.356	24.724
90	23.350	23.331	36.806	156.5	0.386	25.215
100	23.000	22.980	36.882	158.0	0.413	25.375
110	21.843	21.822	36.713	149.5	0.438	25.578
120	20.176	20.154	36.376	147.2	0.461	25.778
130	19.510	19.486	36.462	141.7	0.483	26.020
140	19.566	19.540	36.628	142.5	0.503	26.134
150	19.078	19.051	36.573	135.6	0.521	26.219
160	18.419	18.391	36.462	133.3	0.540	26.302
170	17.136	17.107	36.230	130.8	0.557	26.441
180	16.905	16.875	36.196	130.4	0.573	26.471
190	16.193	16.163	36.084	129.7	0.589	26.552
200	15.596	15.565	35.969	127.9	0.604	26.601
250	12.290	12.257	35.380	121.7	0.673	26.842
300	10.732	10.695	35.132	120.5	0.734	26.940
350	9.913	9.873	35.005	120.4	0.793	26.985
400	8.988	8.944	34.872	123.2	0.849	27.034
450	8.664	8.615	34.857	120.8	0.903	27.075
500	8.244	8.192	34.811	120.4	0.957	27.105
550	7.814	7.758	34.773	120.6	1.009	27.140
600	7.179	7.121	34.696	121.9	1.059	27.171
650	7.039	6.977	34.696	121.7	1.108	27.192
700	6.407	6.343	34.628	126.5	1.157	27.223
750	6.230	6.161	34.632	128.7	1.204	27.250
800	5.927	5.856	34.617	130.5	1.250	27.277
900	5.431	5.353	34.614	137.4	1.338	27.337
1000	5.197	5.112	34.644	144.2	1.422	27.390
1500	4.487	4.361	35.004	238.7	1.743	27.764
2000	3.408	3.249	34.963	262.3	1.972	27.847

<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
4	14	28.209	28.208	35.526	197.6
51	13	26.948	26.936	36.268	195.3
75	12	25.068	25.052	36.665	172.3
98	11	22.424	22.404	36.645	149.6
125	10	19.804	19.780	36.434	142.4
150	9	18.814	18.788	36.510	134.3
176	8	16.817	16.788	36.191	130.4
202	7	14.940	14.909	35.863	127.5
252	6	12.111	12.078	35.353	122.7
451	5	8.603	8.555	34.844	121.6
601	4	7.174	7.115	34.697	123.5
801	3	5.863	5.792	34.617	131.0
1200	2	5.246	5.141	34.872	172.4
2001	1	3.408	3.250	34.967	264.2

NBC-1 R/V SEWARD JOHNSON
CTD Station 67 (98067)
Latitude 10.166 N Longitude 56.899 W
10-Dec-1998 06:19 Z

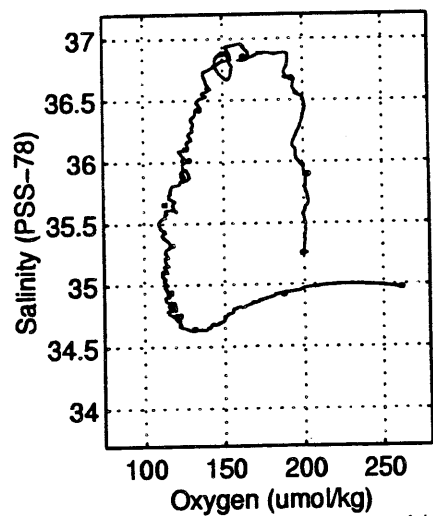
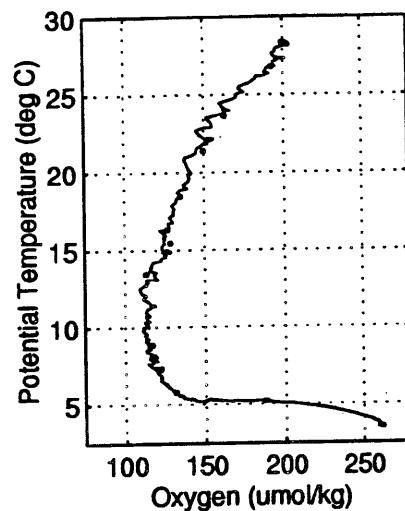
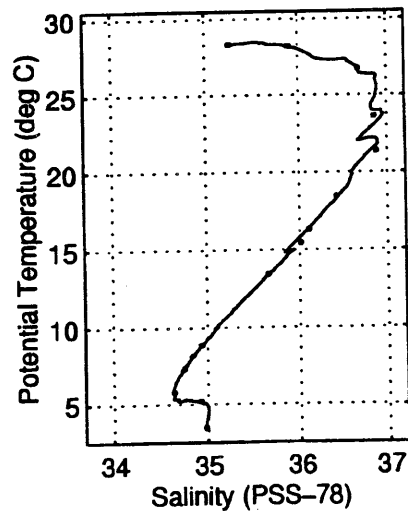
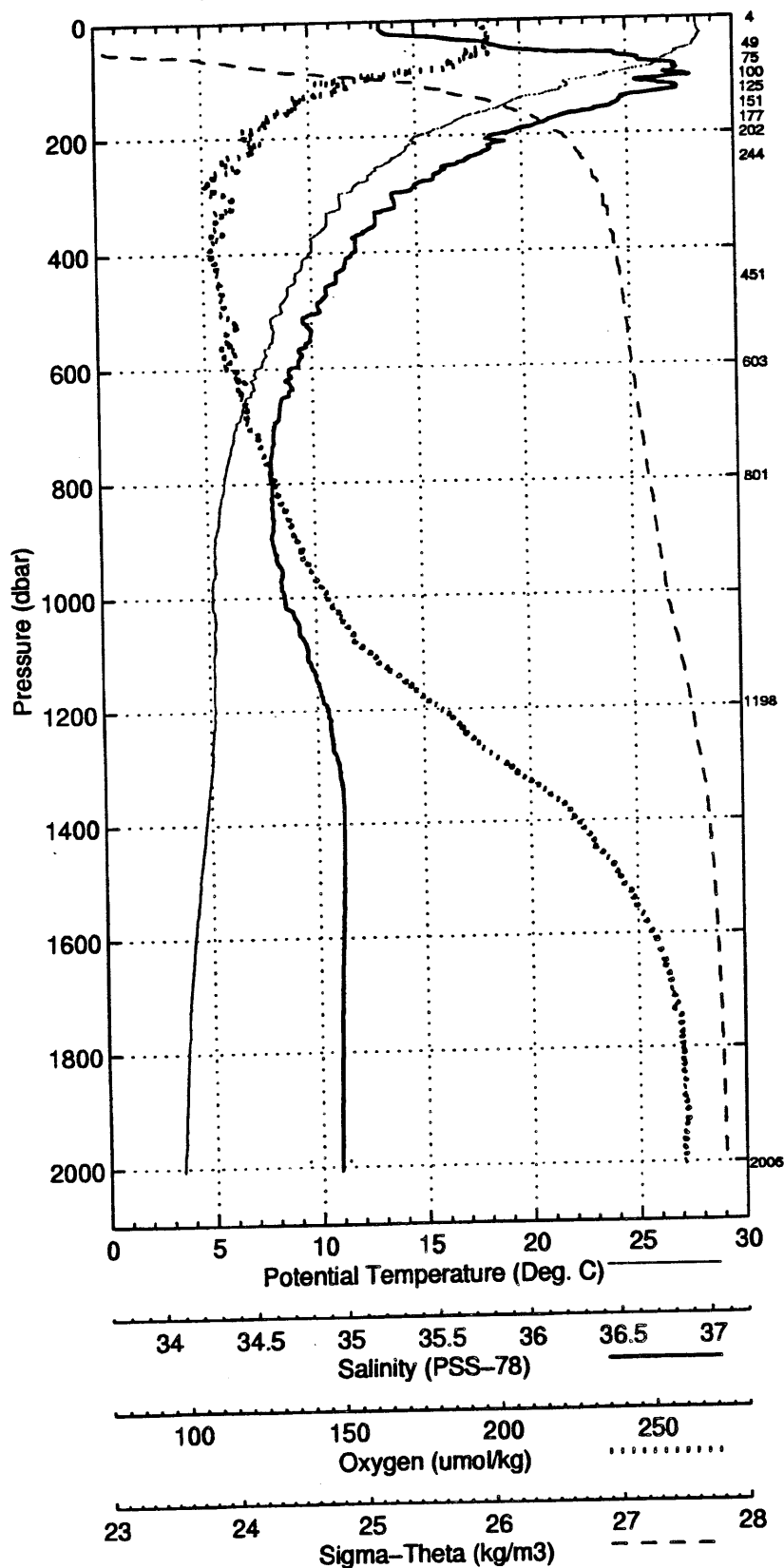


NBC-1 R/V SEWARD JOHNSON
CTD Station 68 (98068)
Latitude 10.467N Longitude 57.050W
10-Dec-1998 09:55Z

<u>Pressure</u> <u>dbar</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>	<u>DynHt</u> <u>m³/kg⁻¹</u>	<u>SigT</u> <u>kg/m³</u>
1	28.226	28.226	35.258	201.7	0.005	22.517
10	28.288	28.285	35.257	199.7	0.053	22.498
20	28.323	28.318	35.280	199.9	0.107	22.504
30	28.406	28.399	35.584	200.3	0.159	22.708
40	28.253	28.244	35.844	201.2	0.210	22.955
50	28.083	28.071	35.958	200.0	0.258	23.098
60	27.366	27.352	36.522	199.9	0.303	23.758
70	26.806	26.790	36.683	193.1	0.343	24.061
80	26.346	26.328	36.864	190.5	0.380	24.345
90	25.163	25.143	36.878	174.9	0.415	24.726
100	23.858	23.837	36.933	163.6	0.446	25.162
110	22.039	22.017	36.673	153.9	0.472	25.493
120	21.940	21.916	36.887	151.5	0.497	25.684
130	21.063	21.038	36.747	141.3	0.520	25.823
140	19.662	19.636	36.580	140.9	0.540	26.071
150	19.047	19.020	36.539	137.8	0.560	26.201
160	18.269	18.241	36.415	132.3	0.578	26.304
170	17.213	17.185	36.241	129.2	0.595	26.430
180	16.674	16.645	36.151	126.9	0.611	26.490
190	15.878	15.848	36.022	124.3	0.627	26.576
200	15.101	15.070	35.885	123.0	0.642	26.647
250	13.453	13.418	35.666	118.5	0.710	26.831
300	11.379	11.341	35.315	117.2	0.771	26.965
350	10.752	10.709	35.224	113.4	0.829	27.011
400	9.928	9.881	35.098	111.1	0.884	27.057
450	9.252	9.201	35.002	114.5	0.938	27.096
500	8.611	8.557	34.914	115.2	0.990	27.130
550	8.173	8.116	34.858	116.7	1.041	27.154
600	7.377	7.318	34.747	118.3	1.091	27.184
650	6.925	6.863	34.704	121.3	1.140	27.213
700	6.437	6.373	34.657	123.8	1.188	27.242
750	6.091	6.023	34.639	127.0	1.234	27.273
800	5.818	5.748	34.636	130.7	1.278	27.306
900	5.359	5.282	34.636	137.7	1.363	27.363
1000	5.188	5.103	34.696	147.3	1.443	27.433
1500	4.412	4.287	35.002	240.3	1.751	27.770
2000	3.496	3.336	34.969	260.5	1.981	27.844

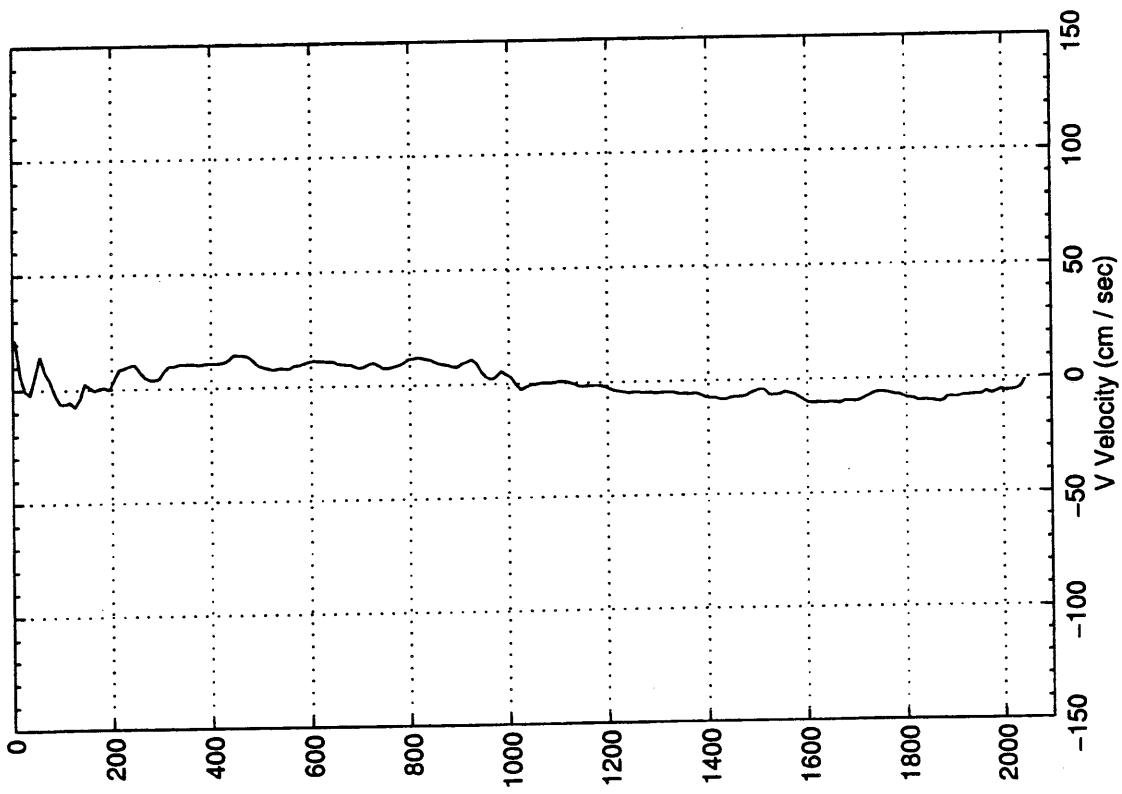
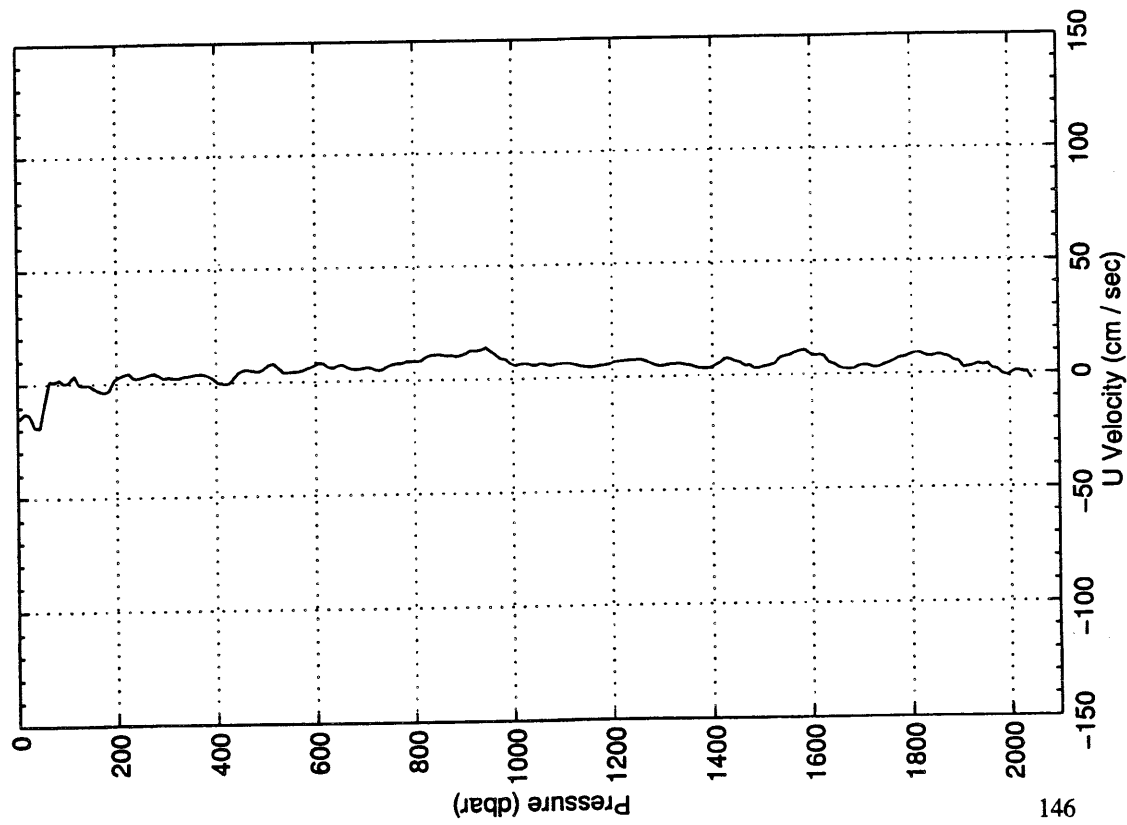
<u>Pressure</u> <u>dbar</u>	<u>Niskin</u>	<u>Temp68</u> <u>Deg C</u>	<u>PoTemp68</u> <u>Deg C</u>	<u>Salinity</u> <u>PSS-78</u>	<u>Oxygen</u> <u>μmol/kg</u>
5	14	28.325	28.324	35.255	199.4
50	13	28.208	28.197	35.897	202.6
76	12	26.739	26.721	36.678	192.0
101	11	23.637	23.616	36.855	162.5
125	10	21.384	21.359	36.874	149.6
152	9	18.441	18.414	36.420	135.2
177	8	16.321	16.292	36.105	126.5
202	7	15.435	15.404	36.012	128.4
245	6	13.435	13.400	35.655	113.0
452	5	8.837	8.788	34.939	116.4
603	4	7.342	7.282	34.749	122.0
801	3	5.780	5.710	34.643	131.1
1198	2	5.208	5.104	34.925	187.0
2006	1	3.491	3.330	34.975	262.0

NBC-1 R/V SEWARD JOHNSON
 CTD Station 68 (98068)
 Latitude 10.467 N Longitude 57.050 W
 10-Dec-1998 09:55 Z

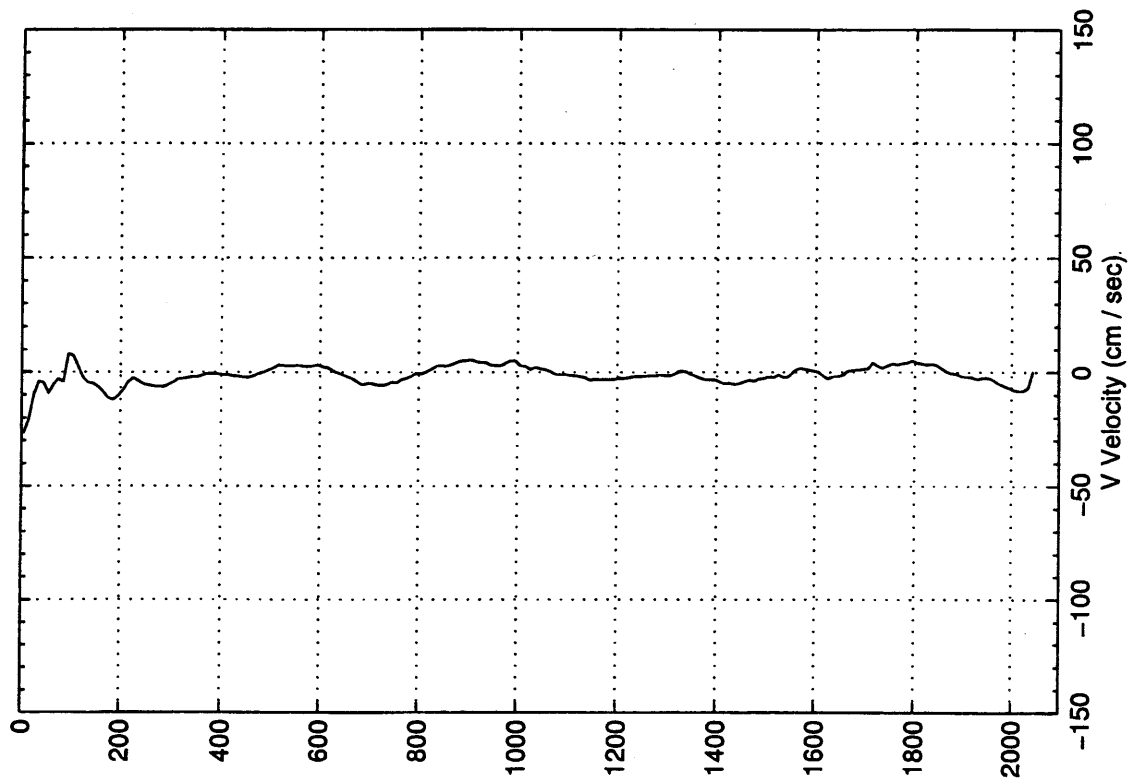
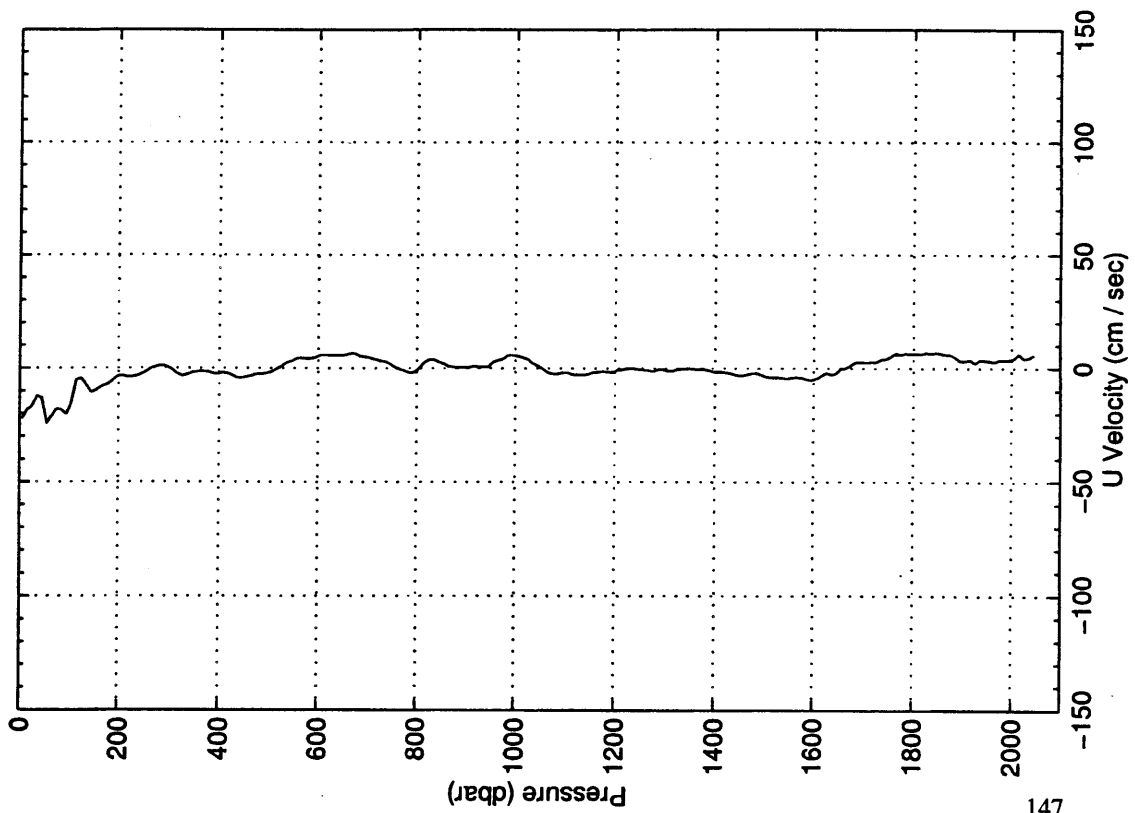


APPENDIX B
LADCP DATA

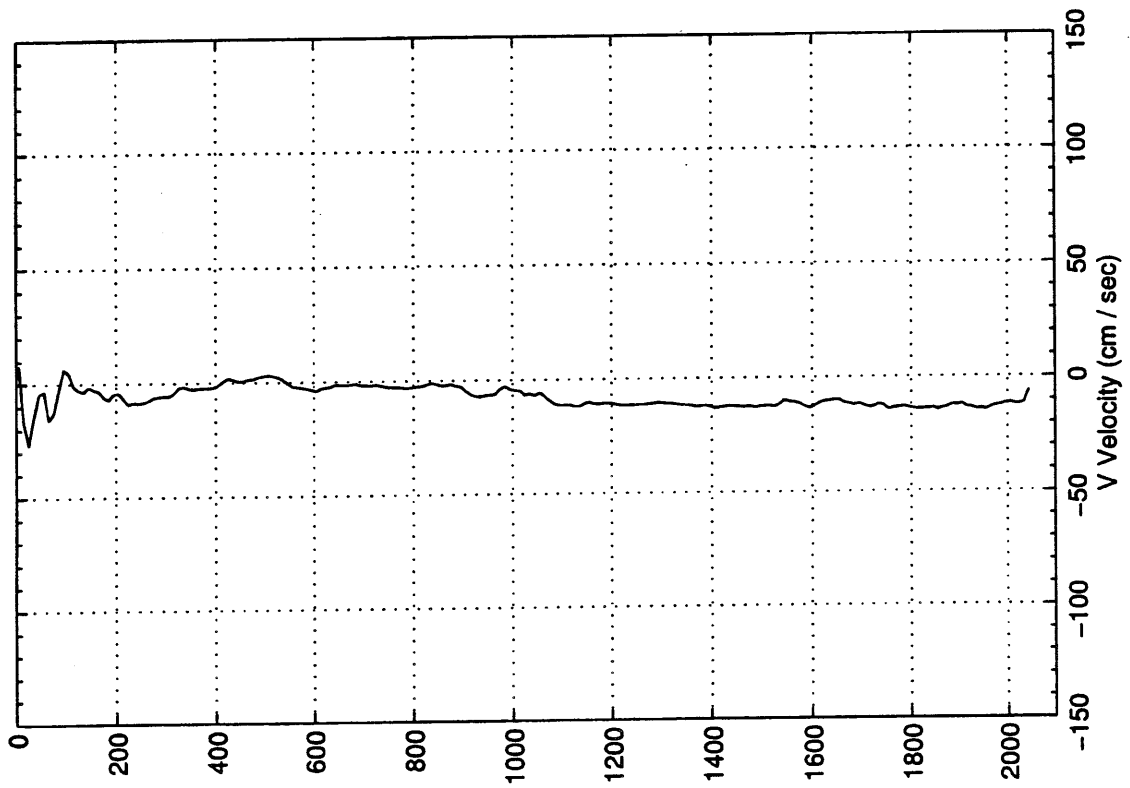
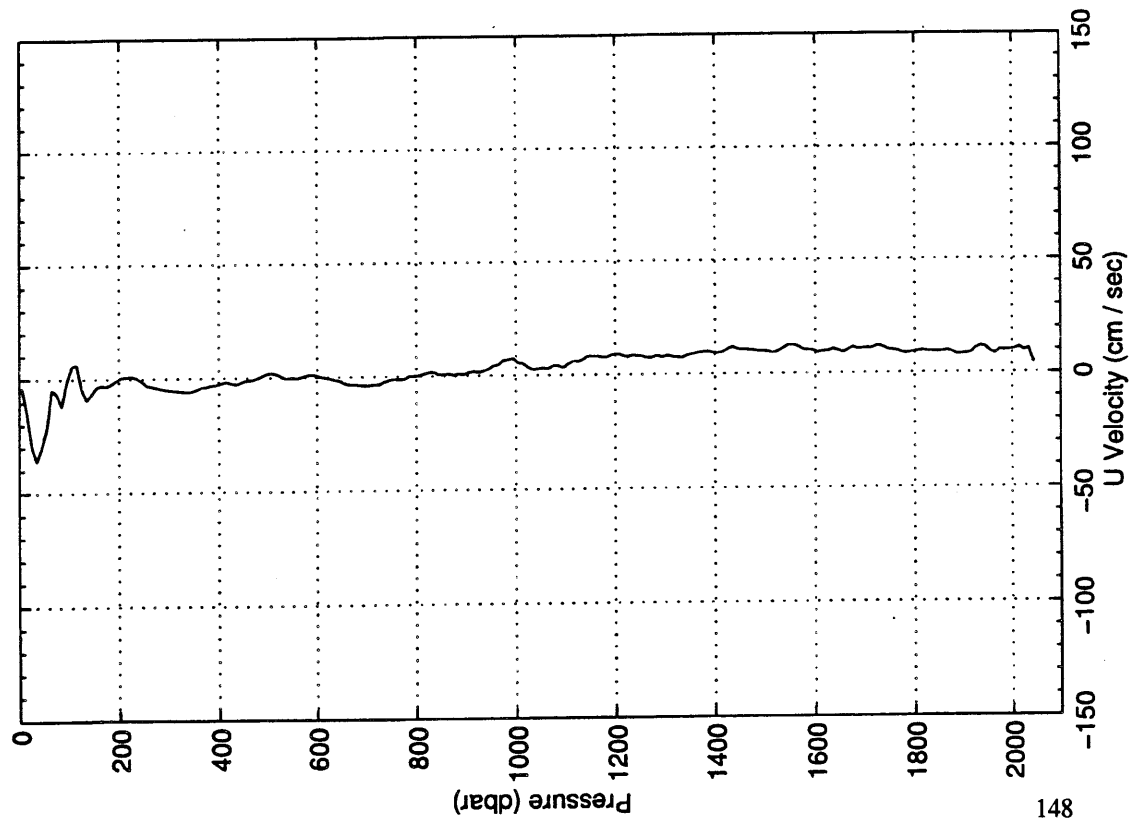
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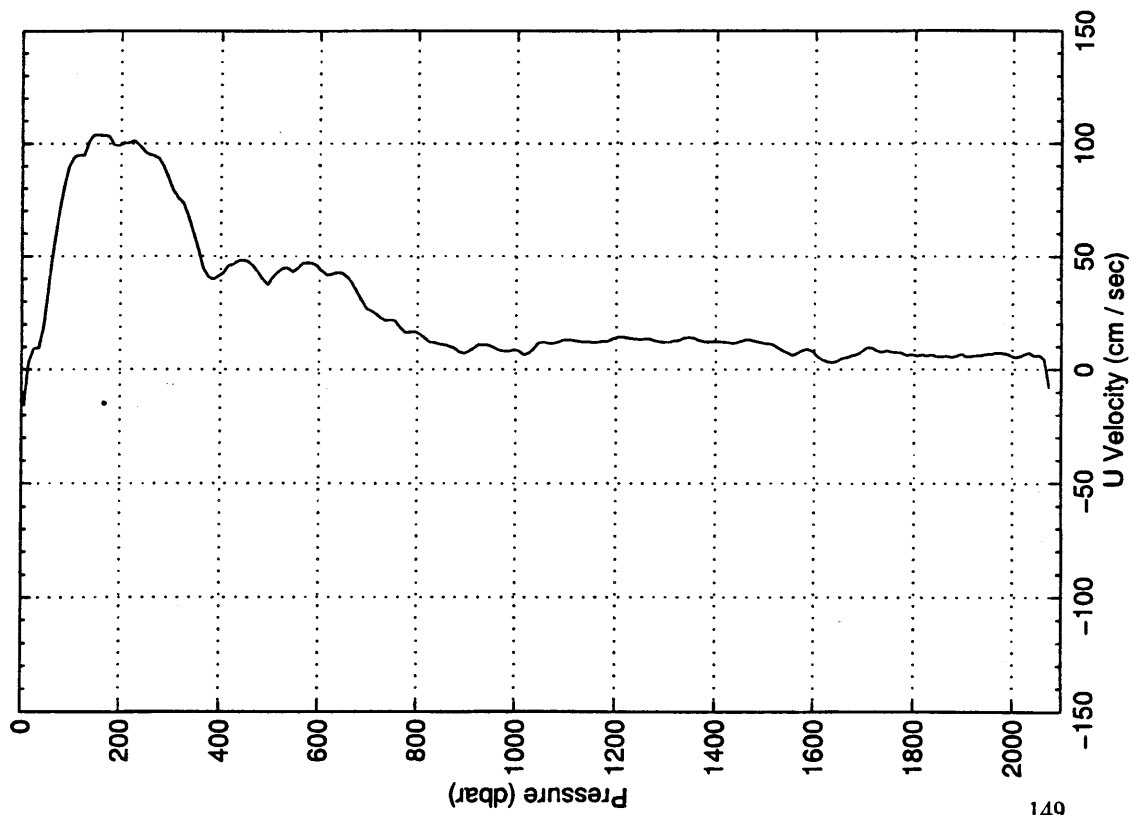
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11-Nov-1998 20:39 Z



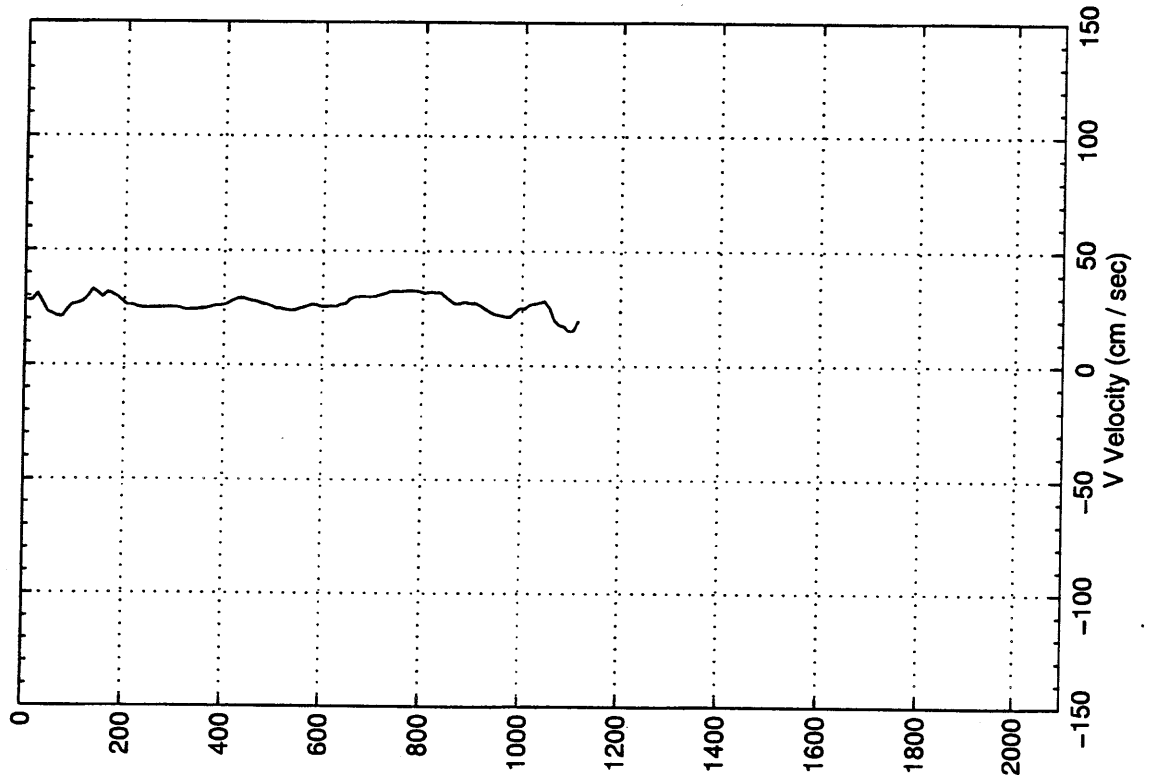
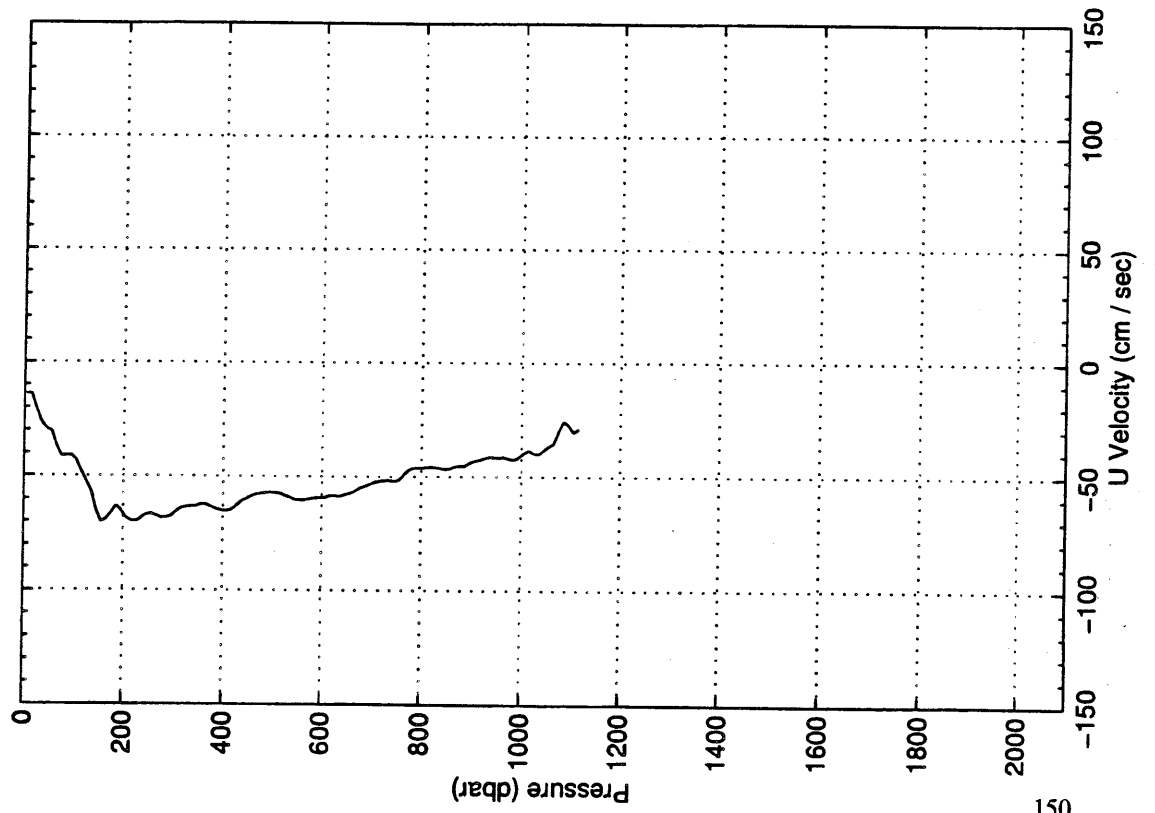
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12-Nov-1998 13:09 Z



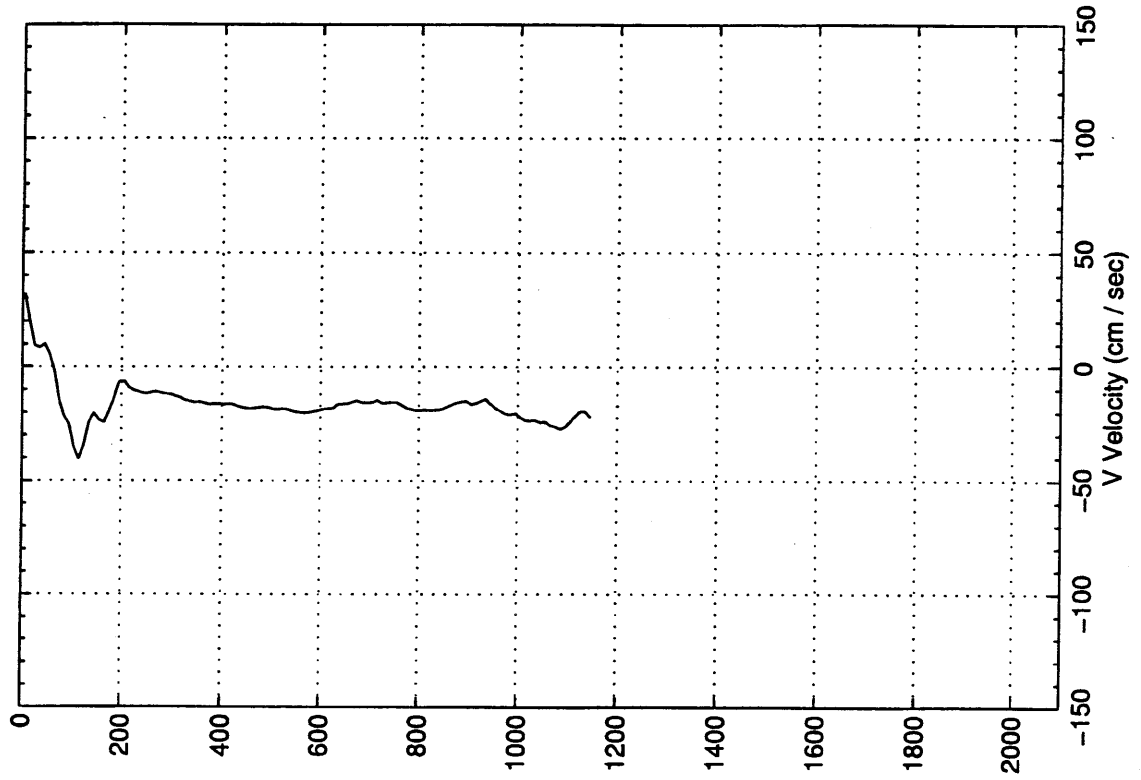
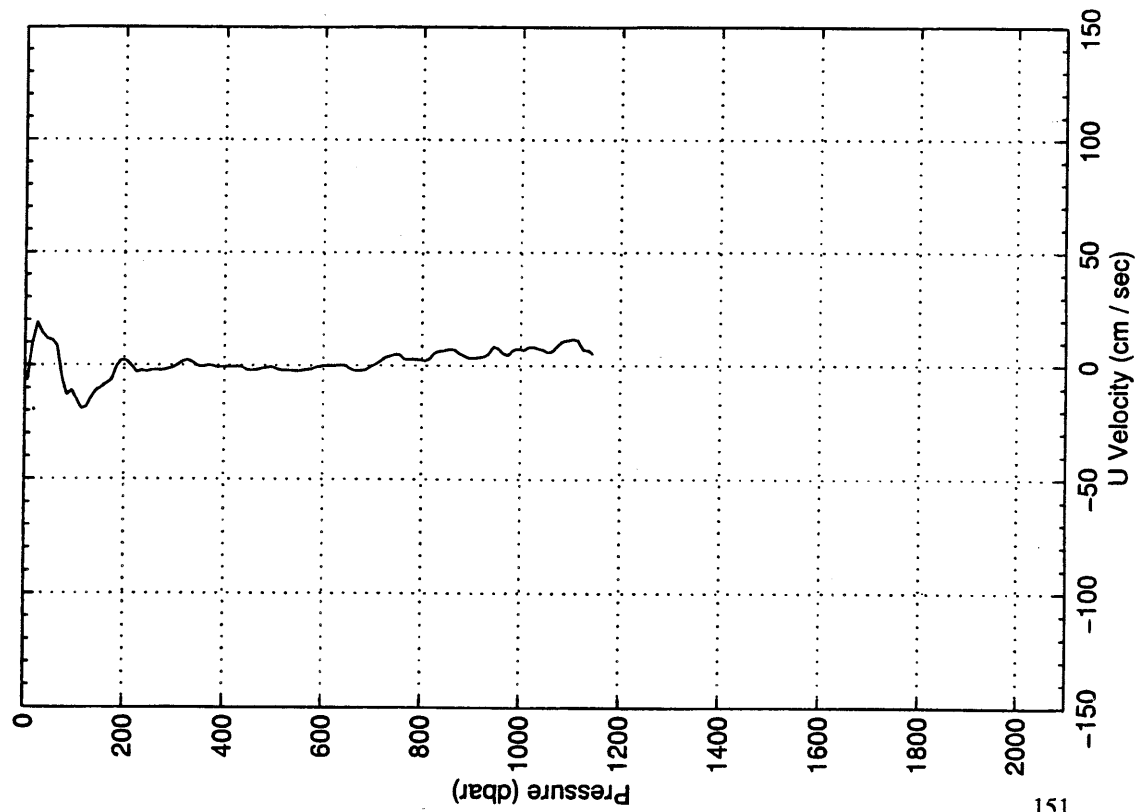
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LADCP Station 4 (98004)
Latitude 9.753N Longitude 53.111 W
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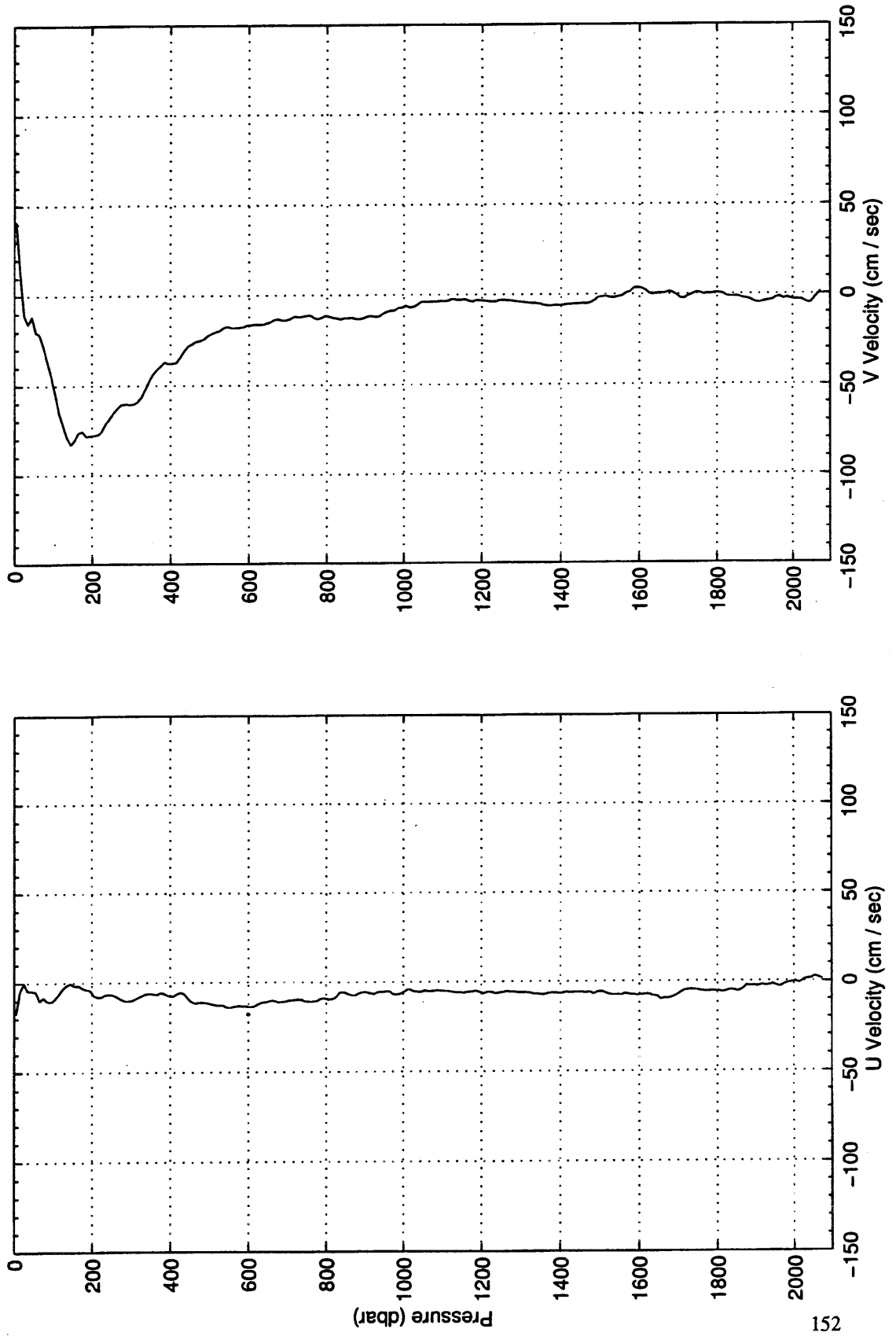
NBC-1 RV SEWARD JOHNSON
LADCP Station 5 (98005)
Latitude 8.111N Longitude 54.047 W
14-Nov-1998 12:44 Z



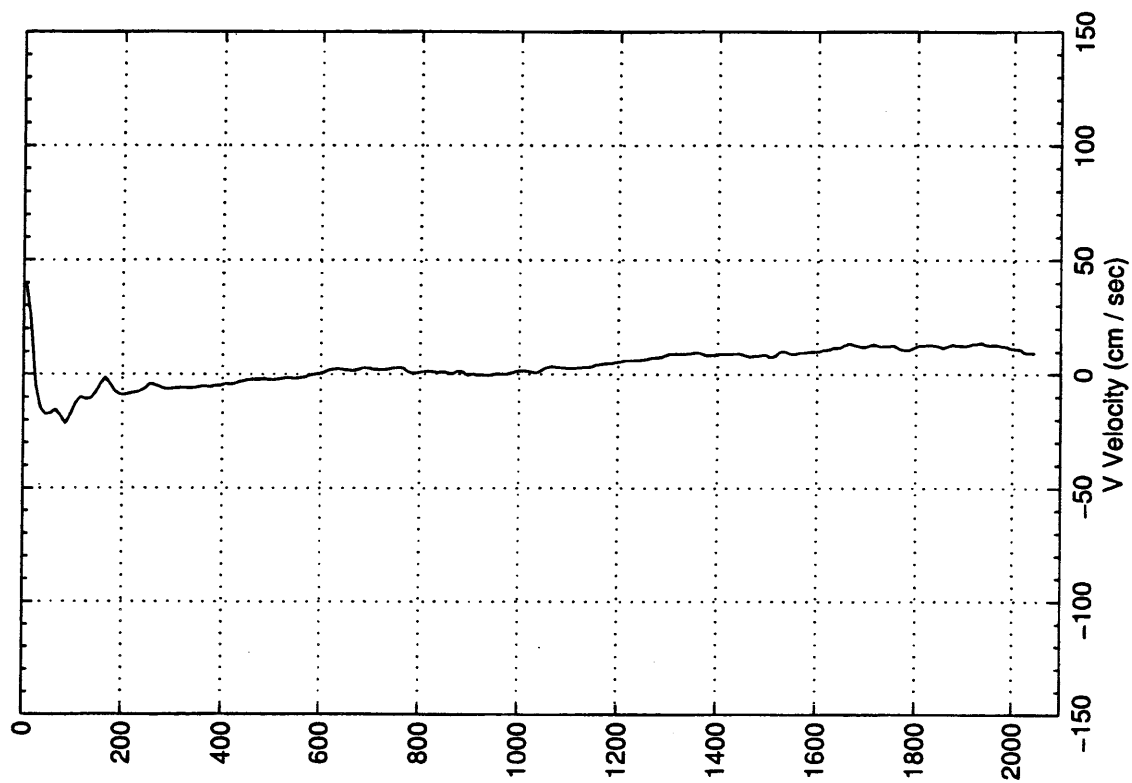
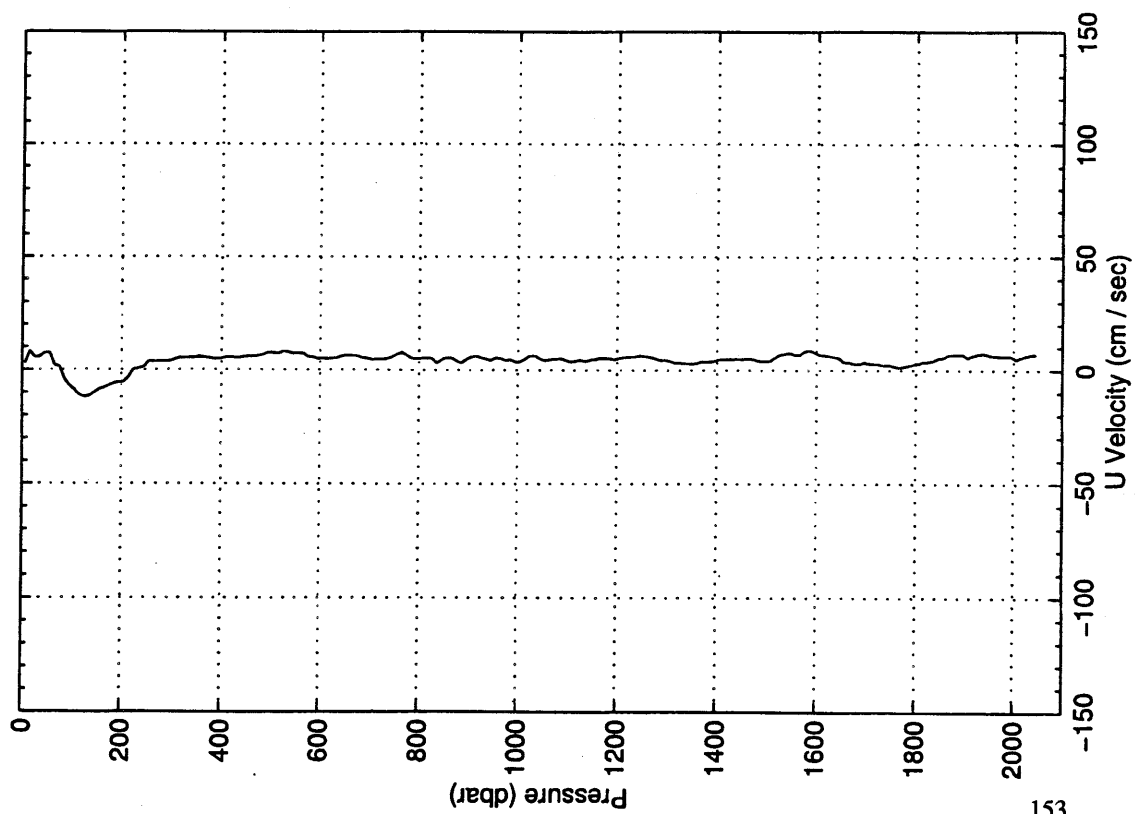
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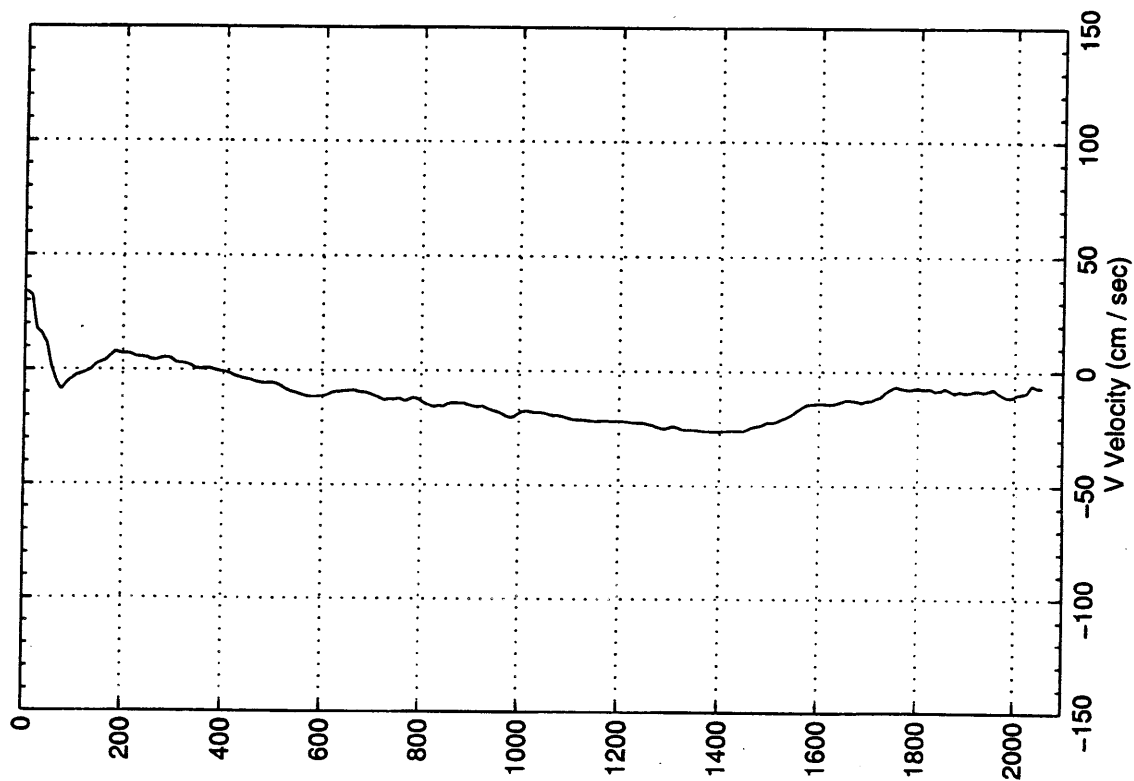
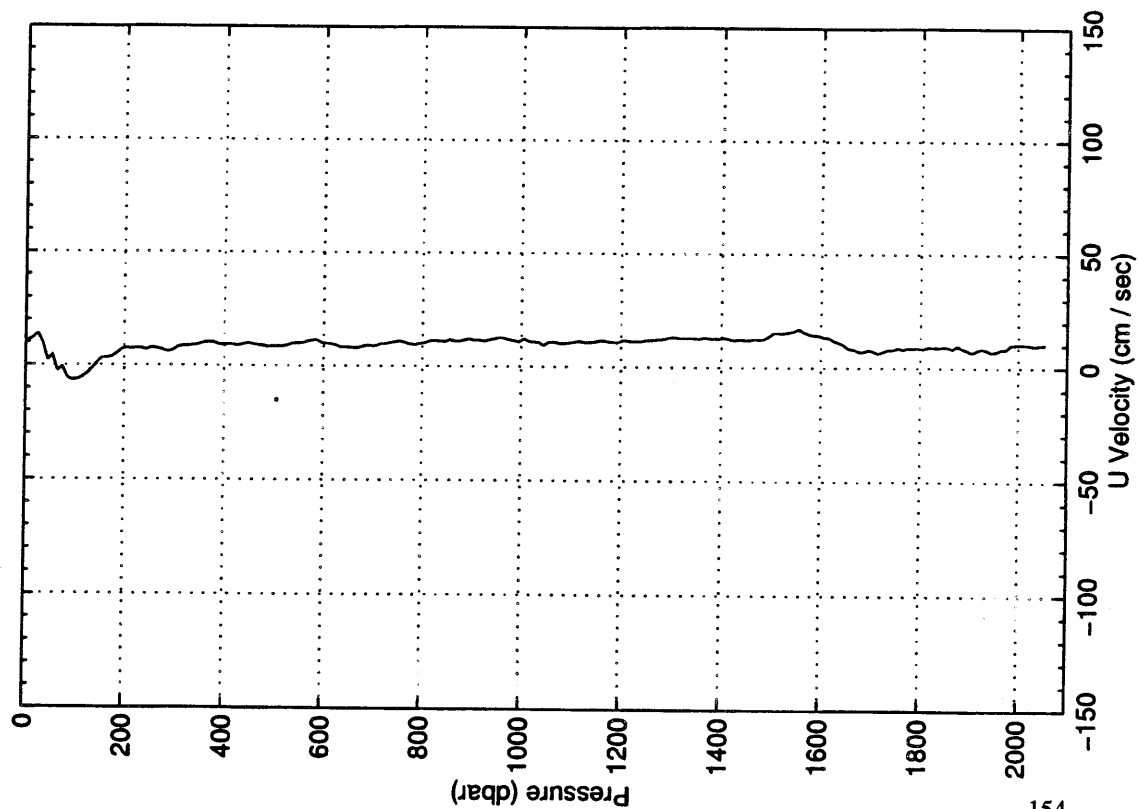
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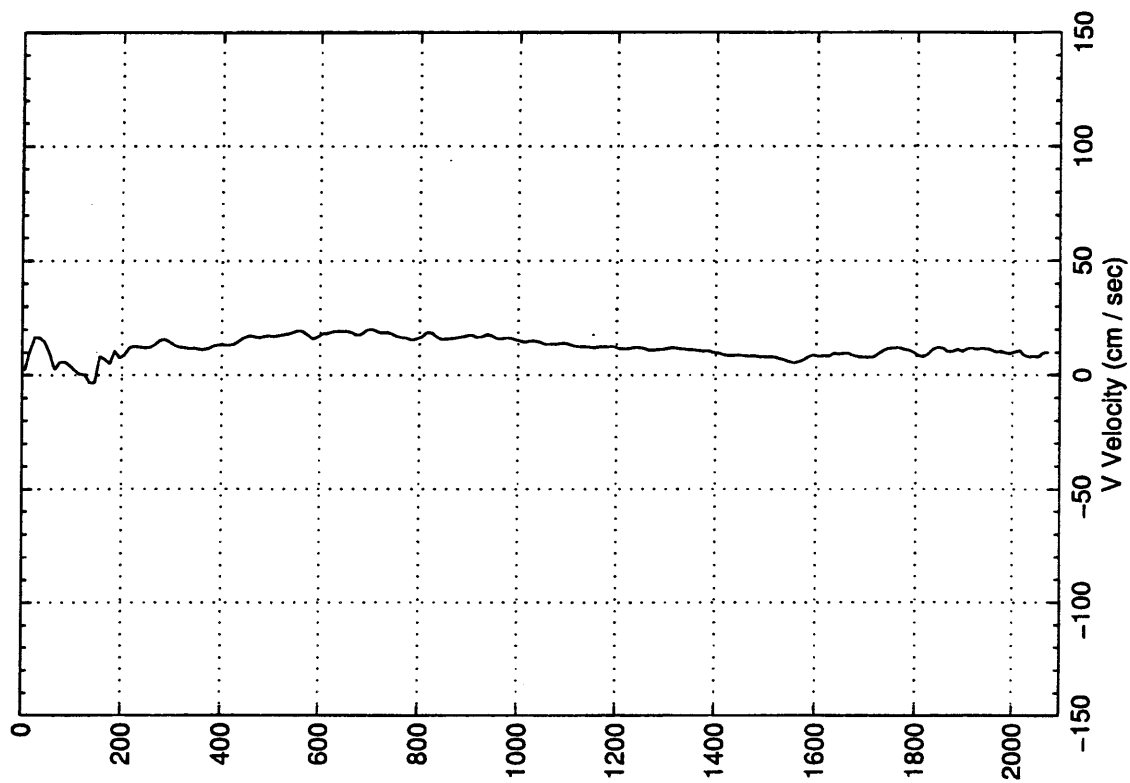
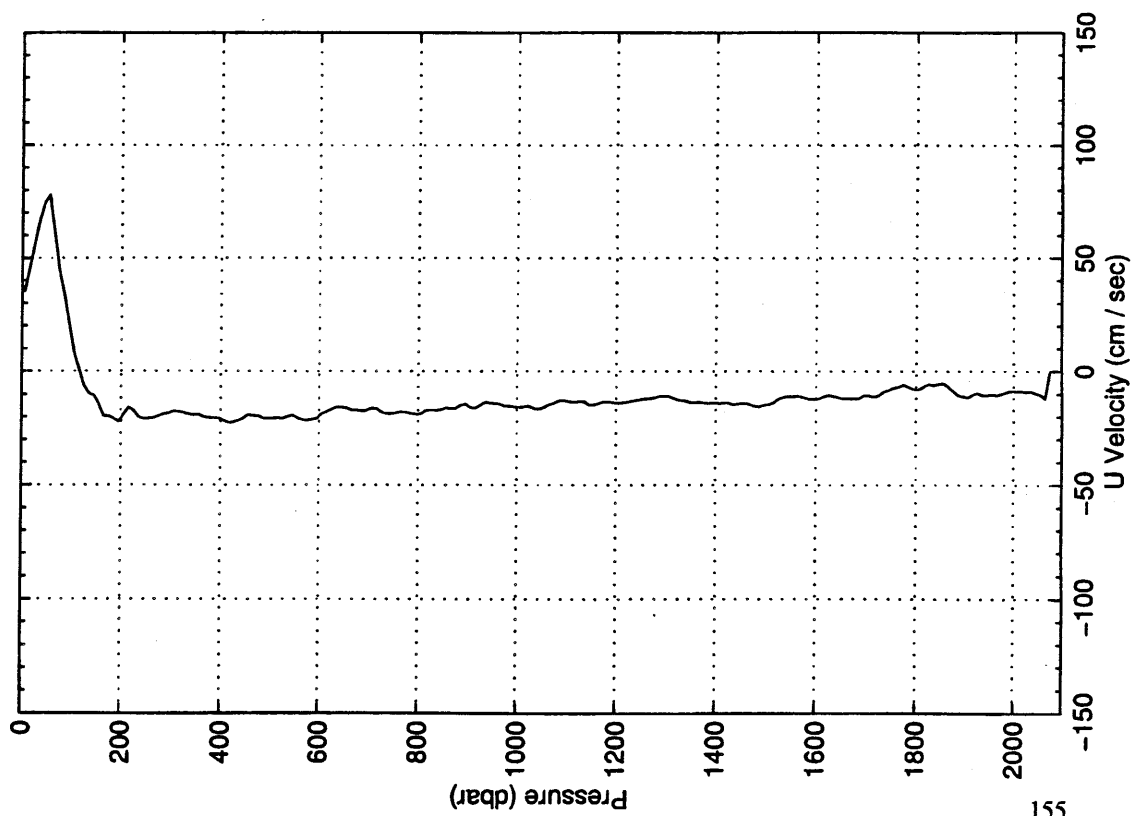
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16-Nov-1998 14:01 Z



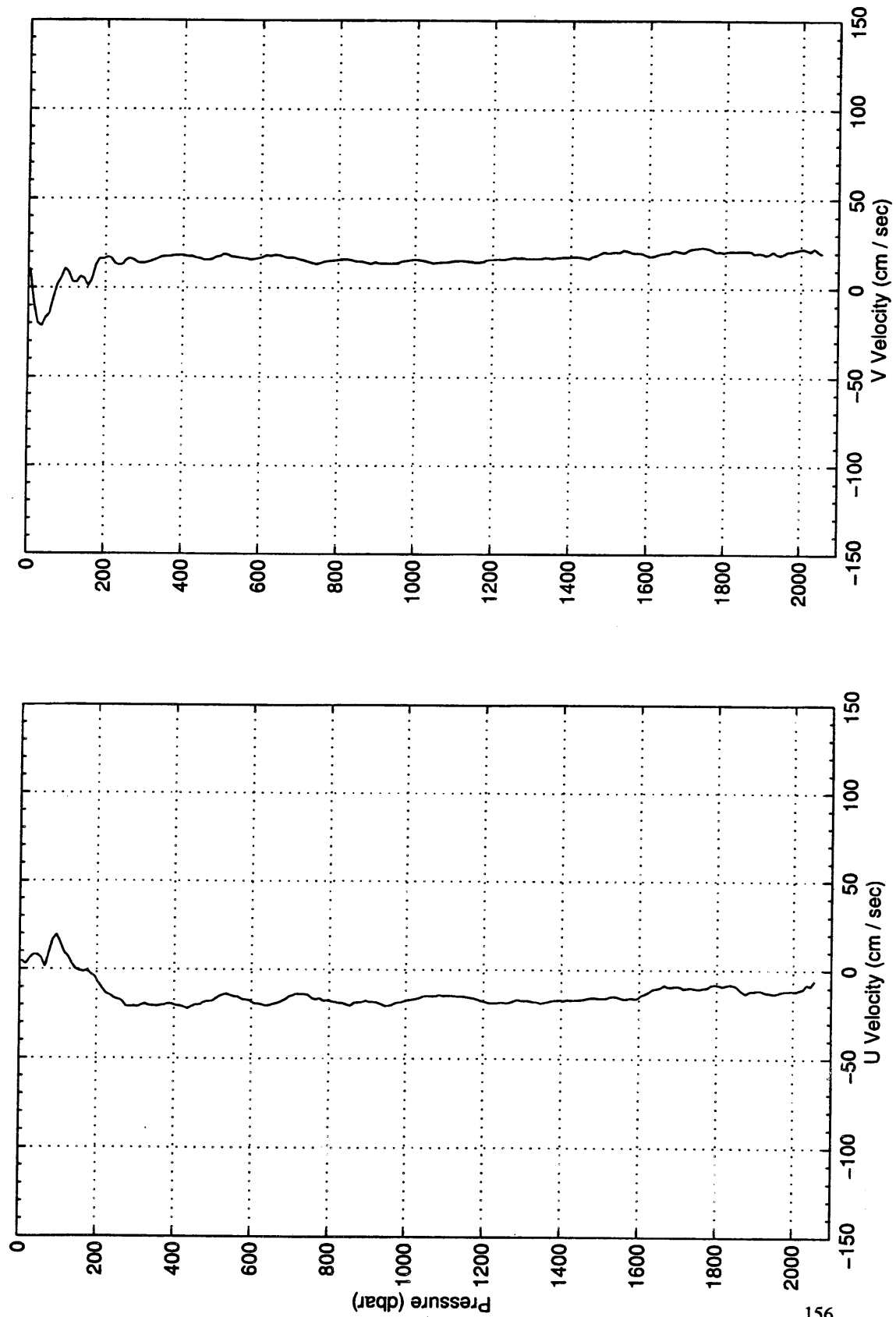
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17-Nov-1998 03:58 Z



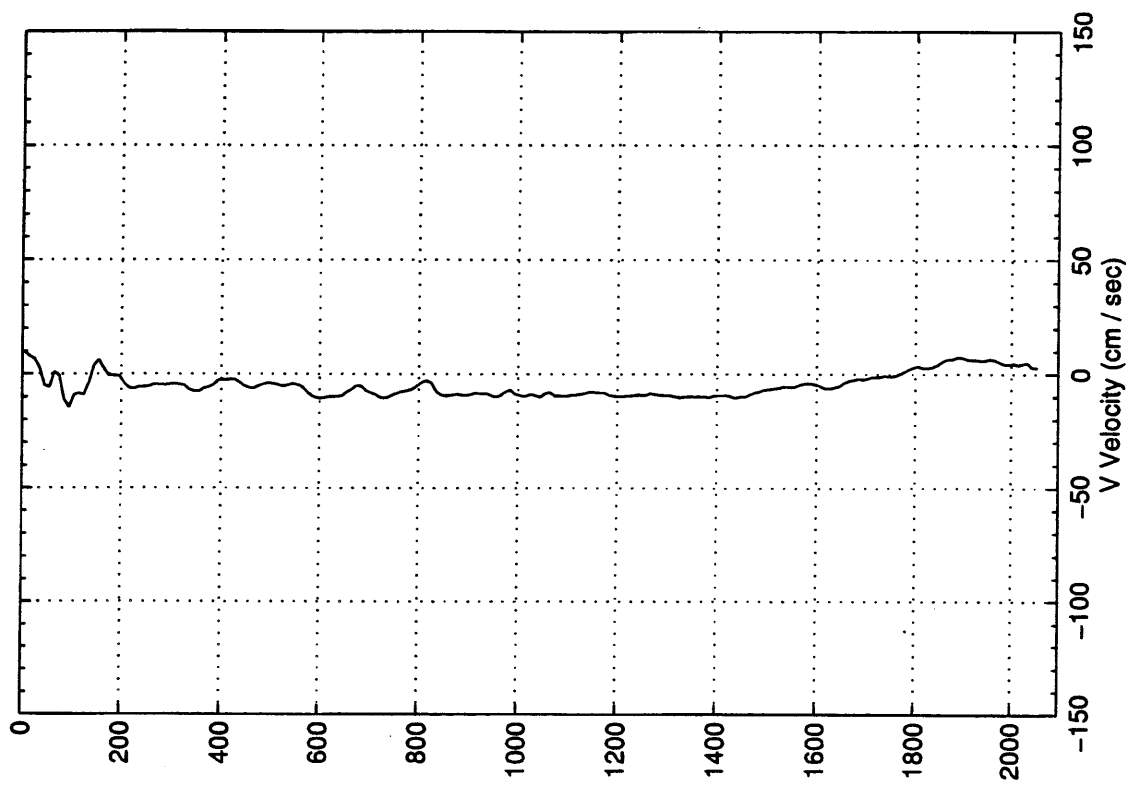
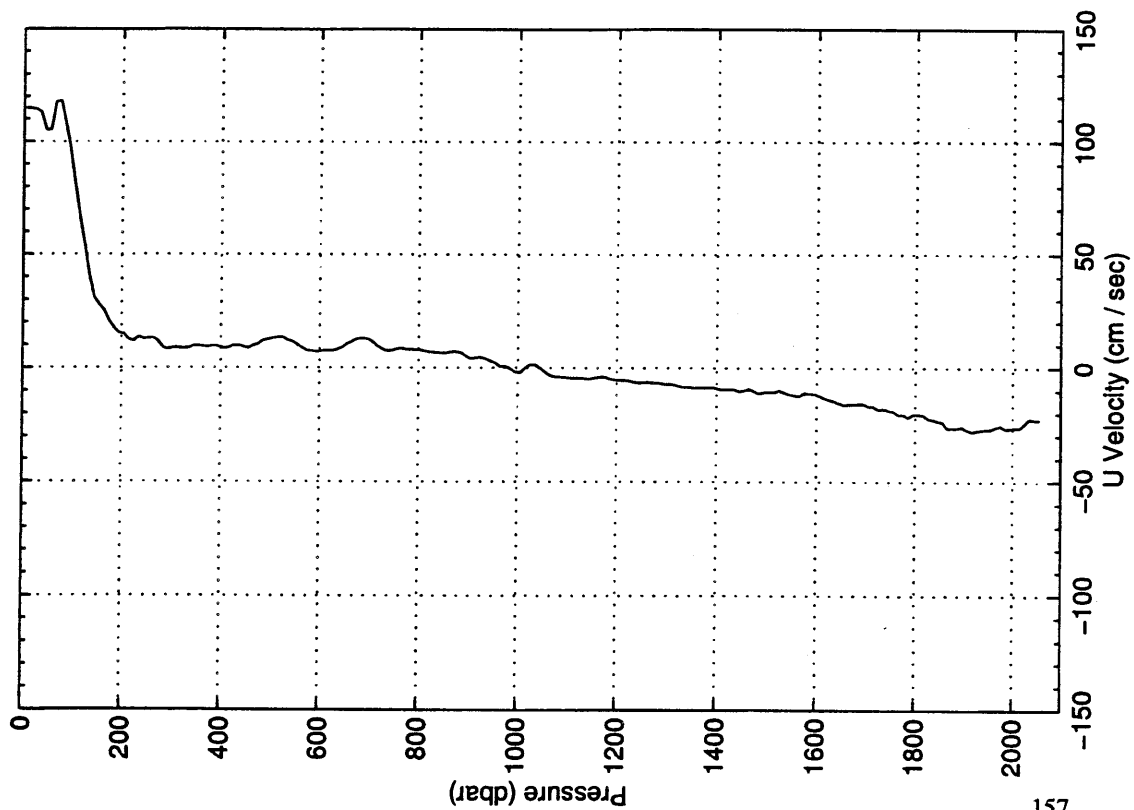
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LADCP Station 10 (98010)
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17-Nov-1998 18:11 Z



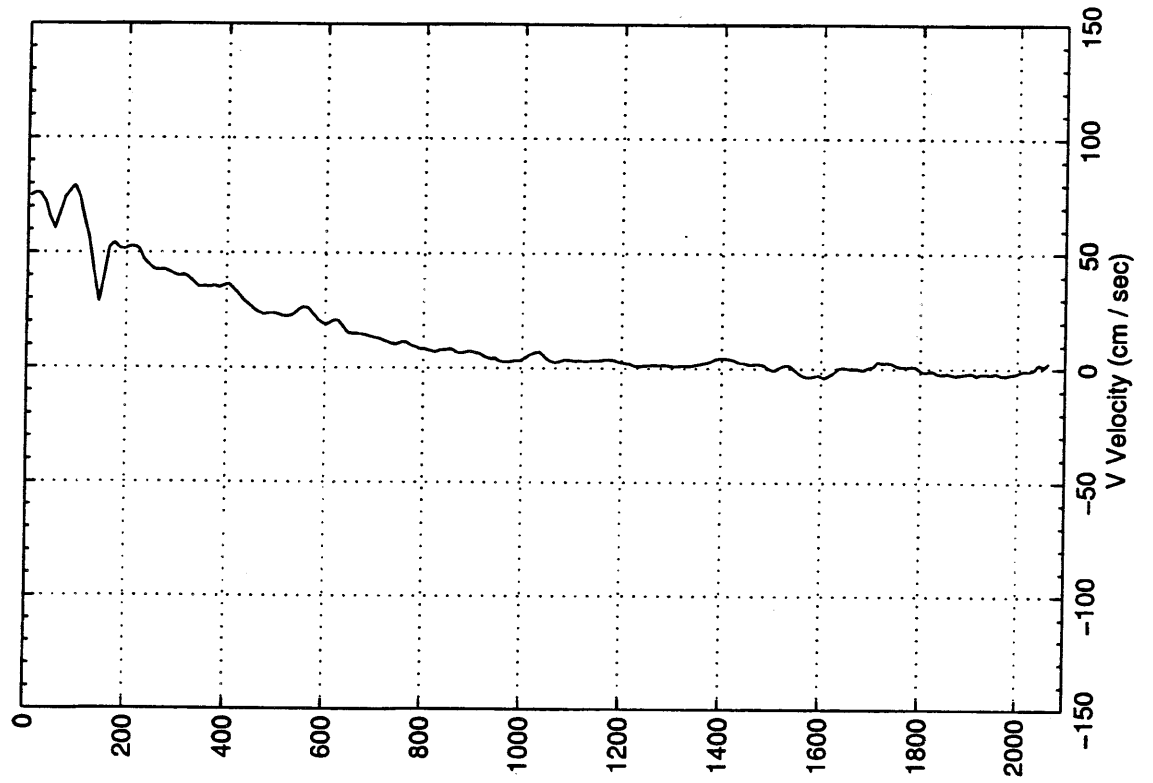
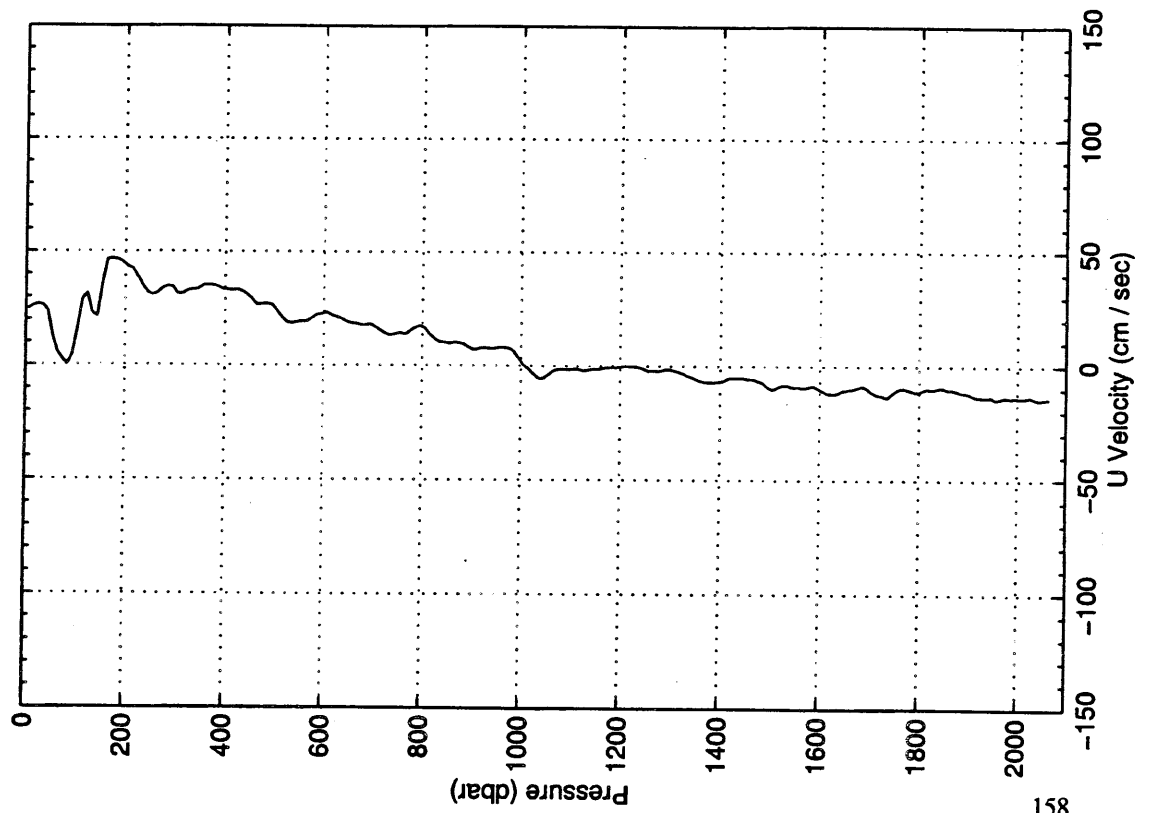
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LADCP Station 11 (98011)
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17-Nov-1998 23:56 Z



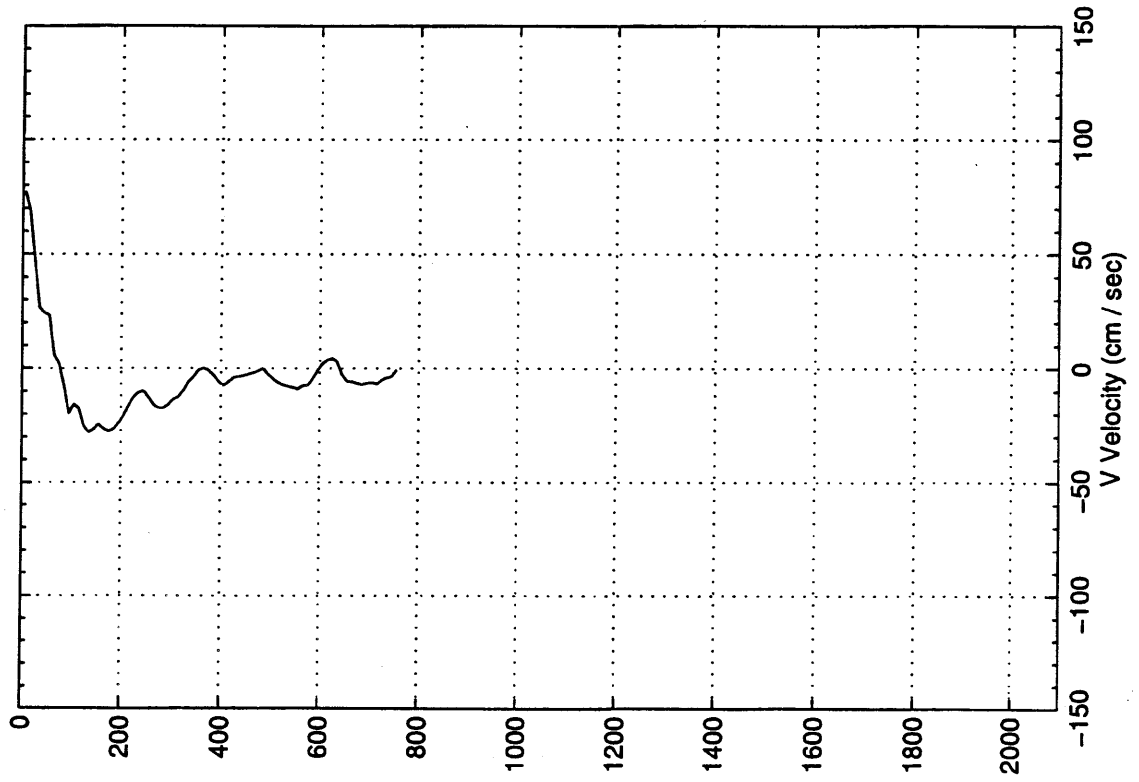
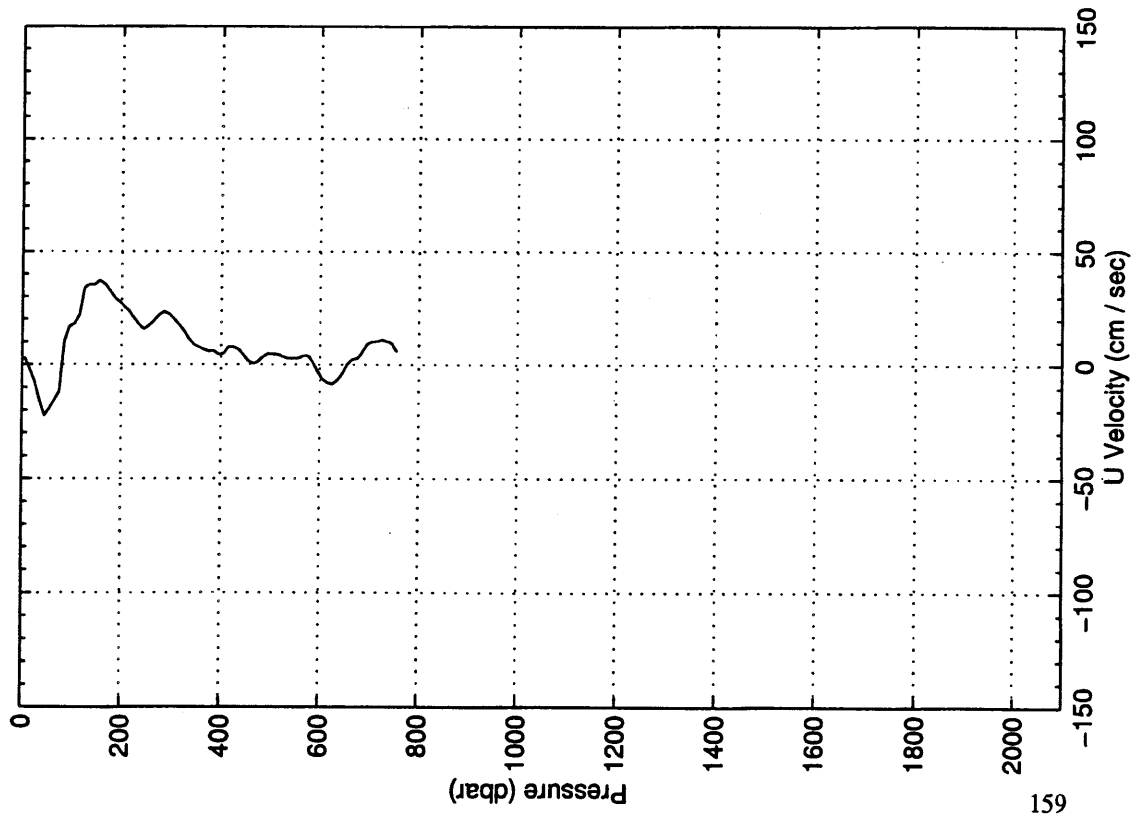
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LADCP Station 12 (98012)
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18-Nov-1998 11:11 Z



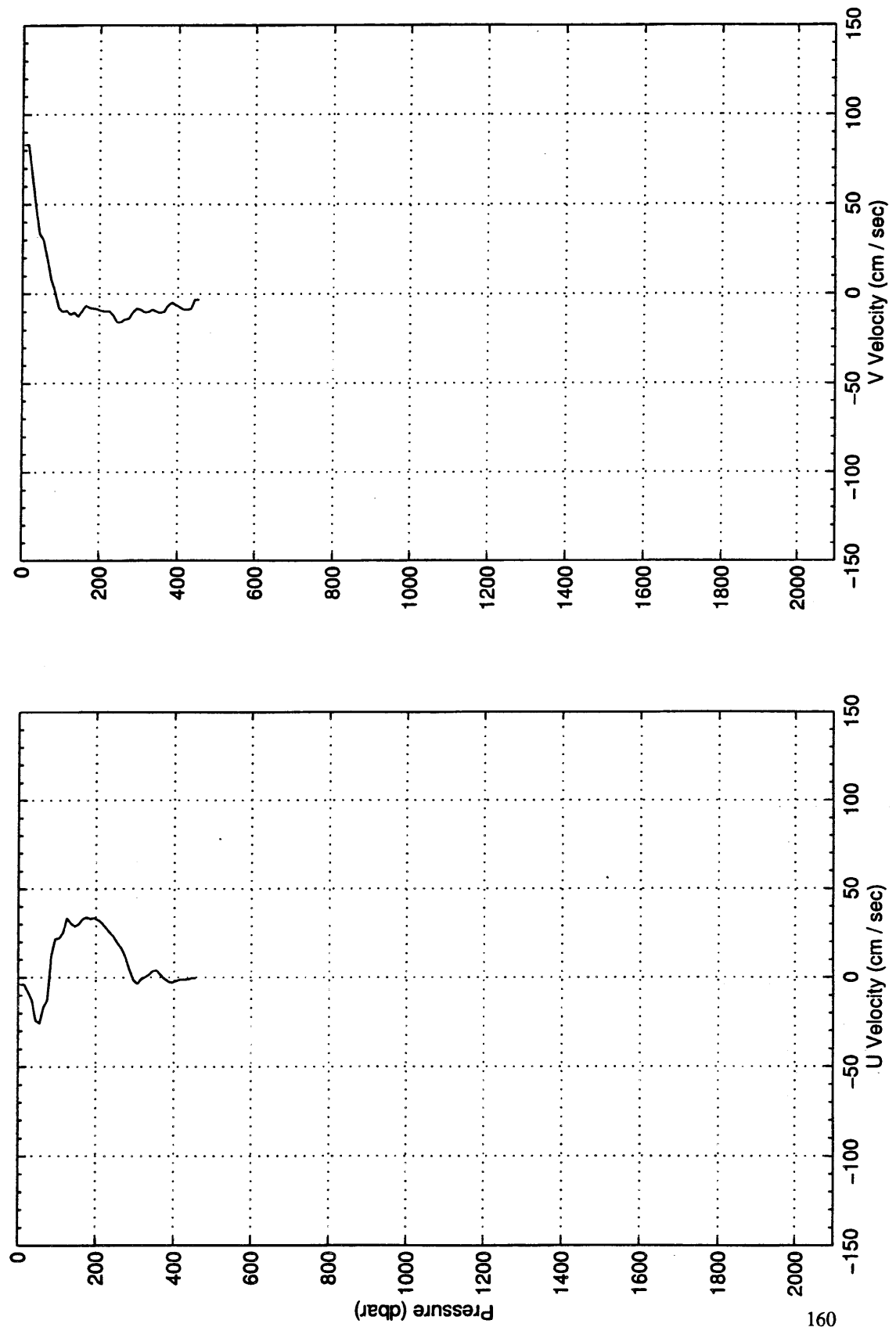
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LADCP Station 13 (98013)
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18-Nov-1998 22:09 Z



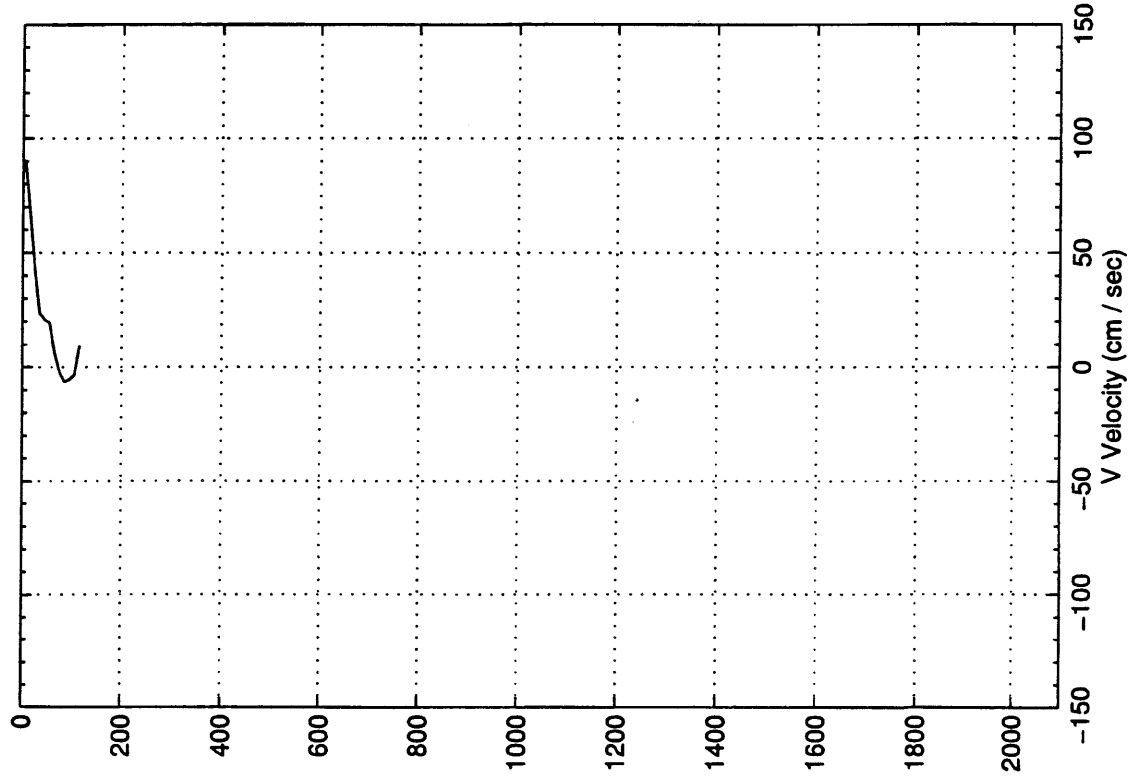
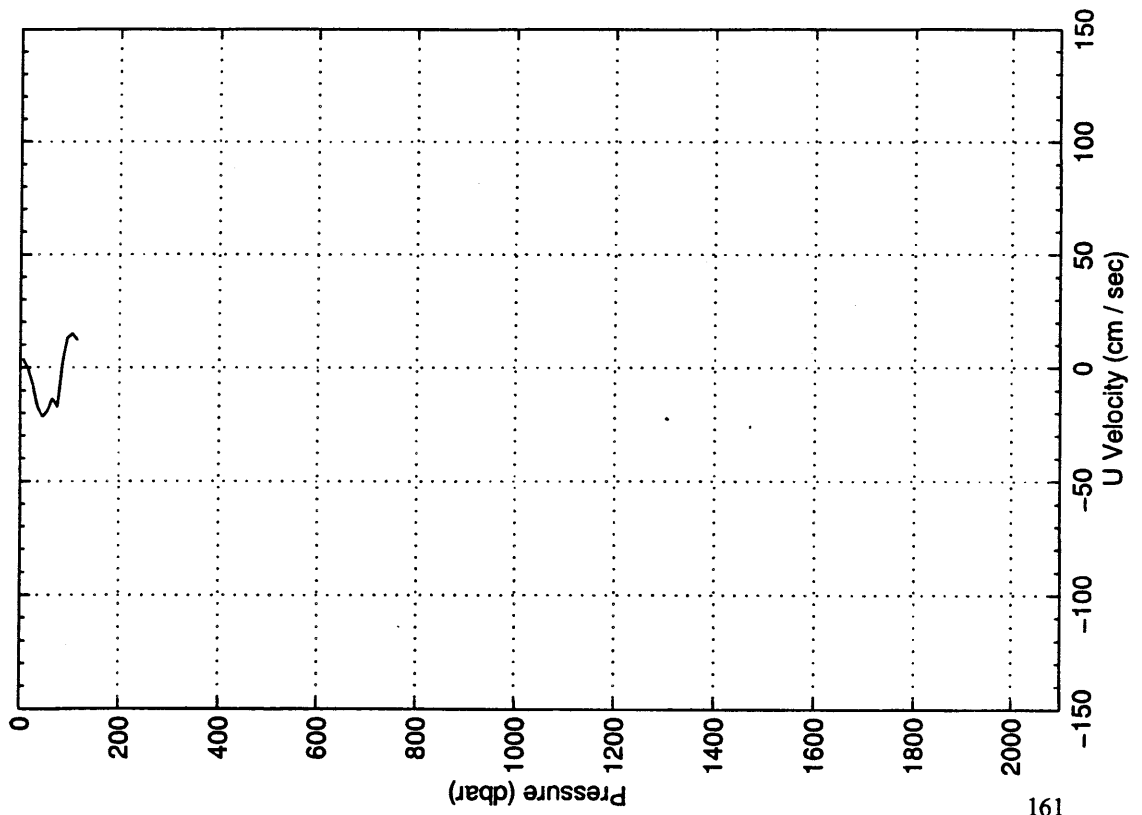
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LADCP Station 14 (98014)
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19-Nov-1998 20:35 Z



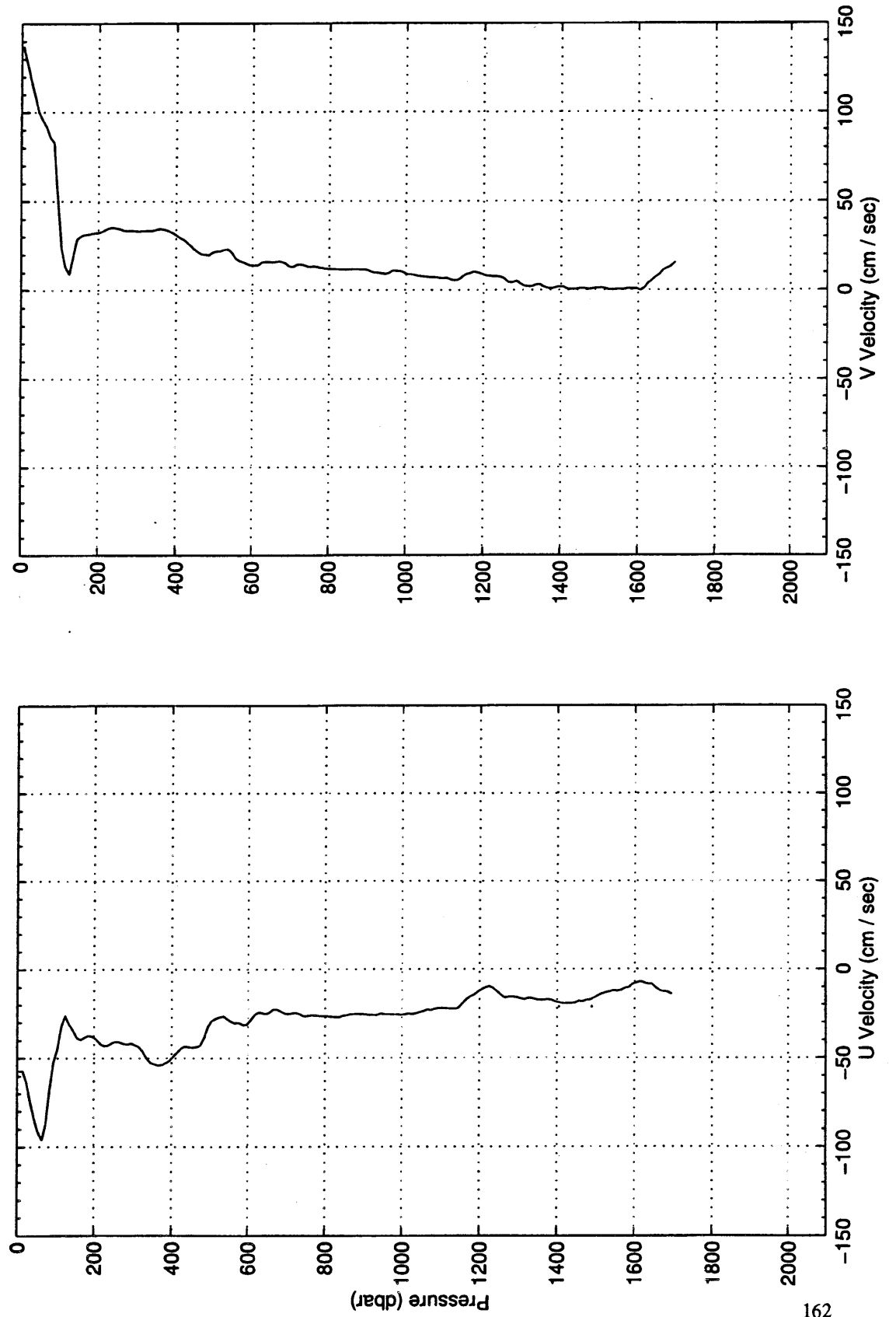
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19-Nov-1998 22:53 Z



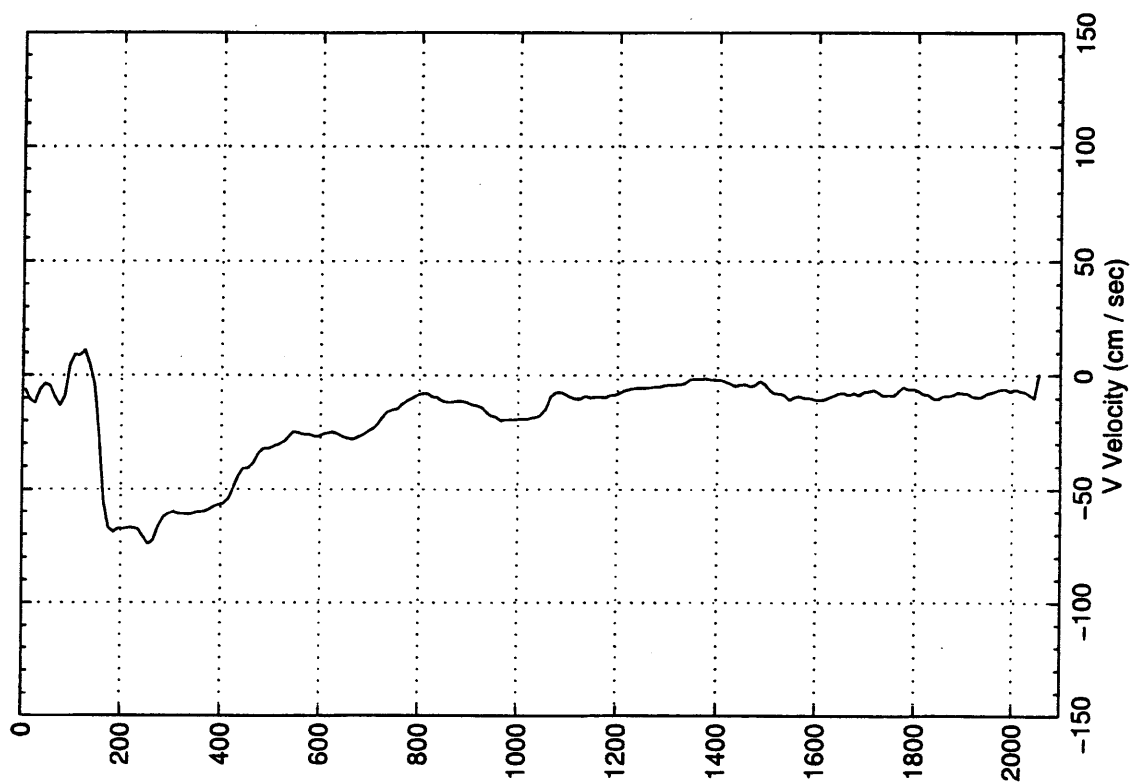
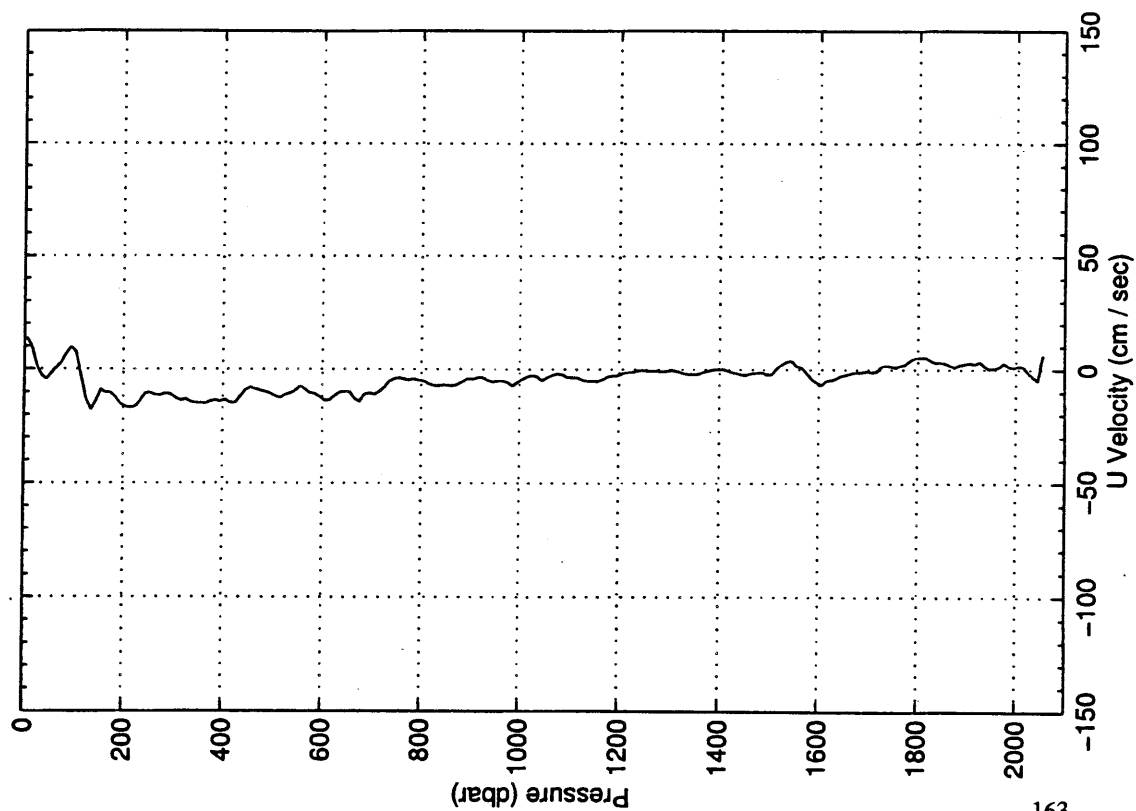
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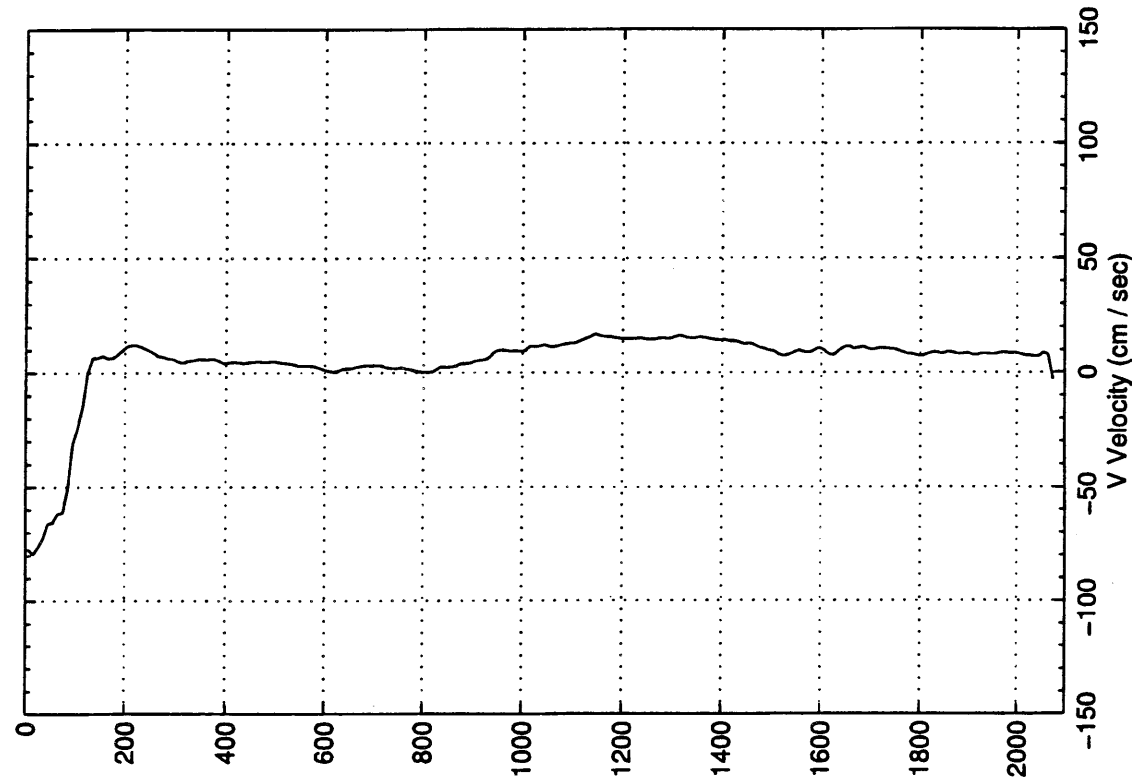
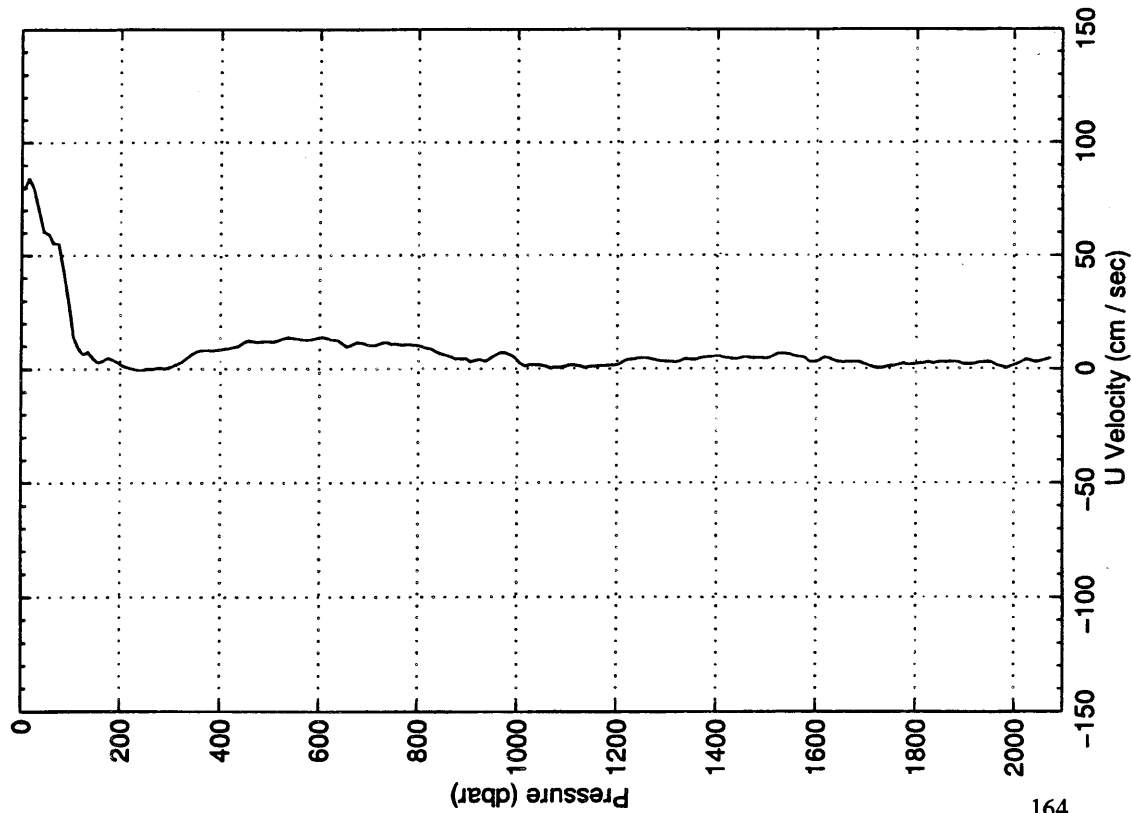
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20-Nov-1998 15:16 Z



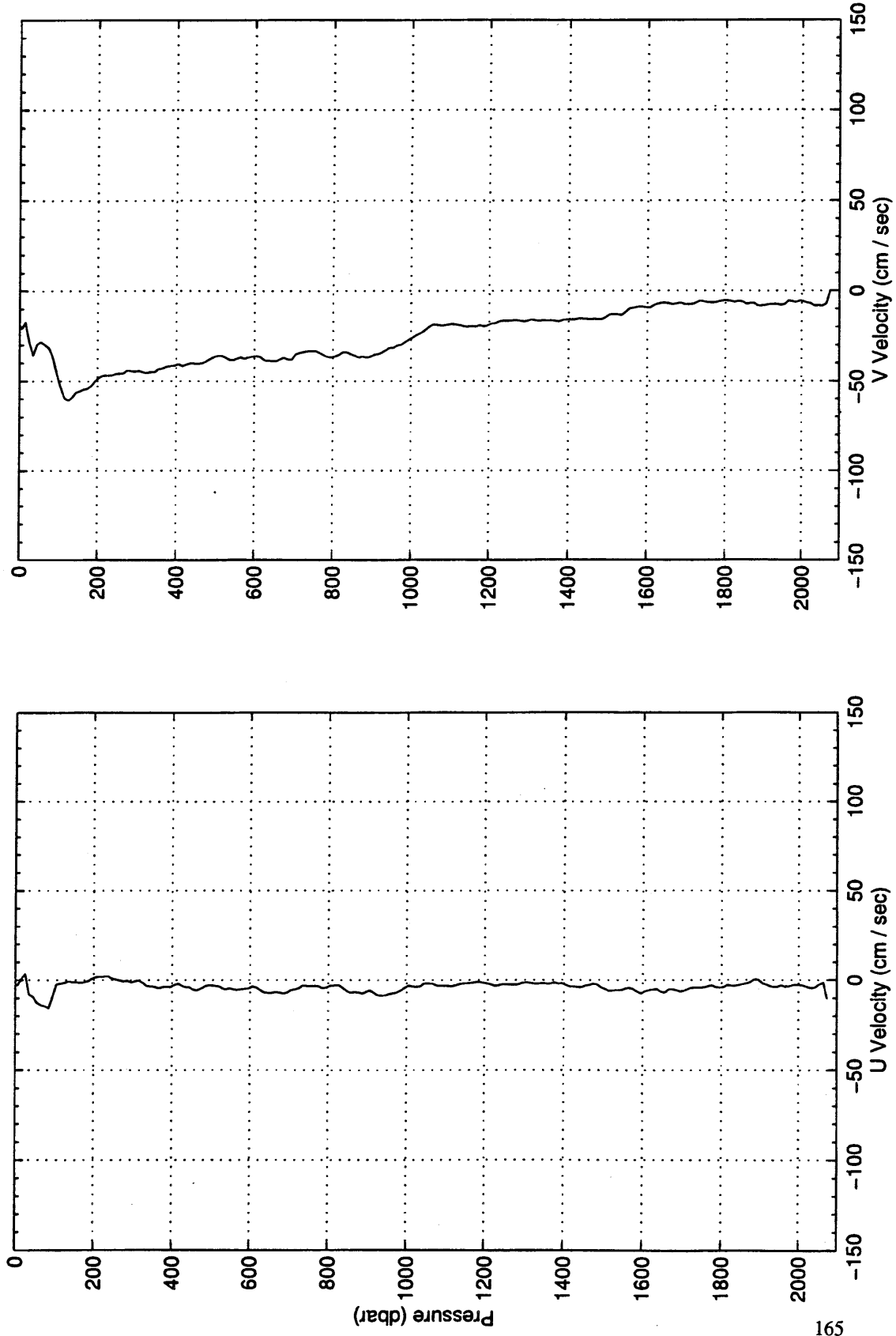
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21-Nov-1998 04:10 Z



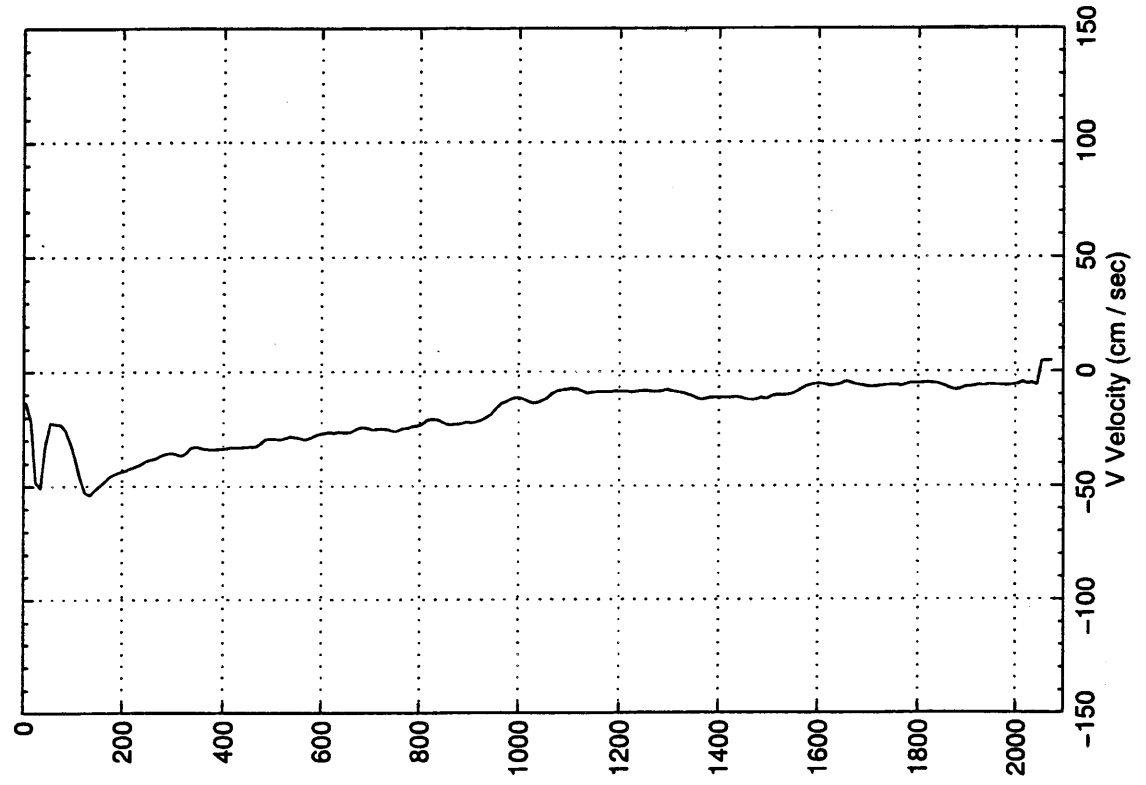
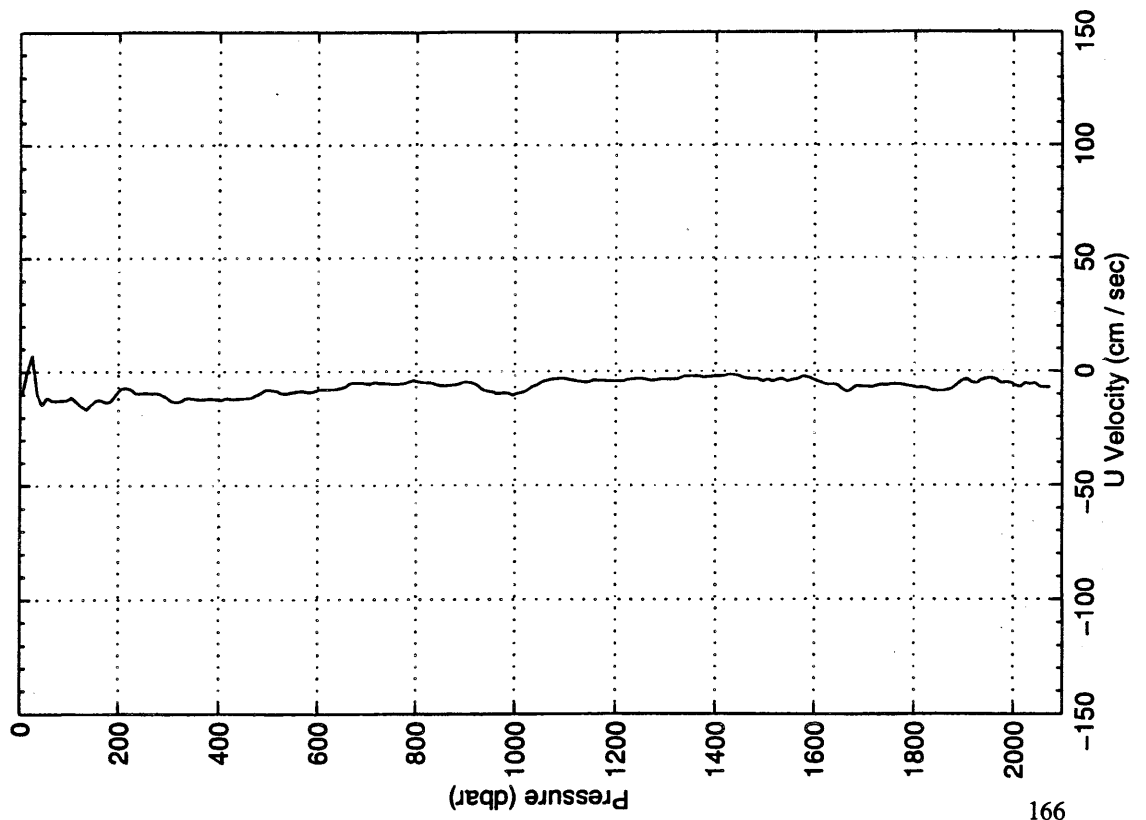
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21-Nov-1998 17:02 Z



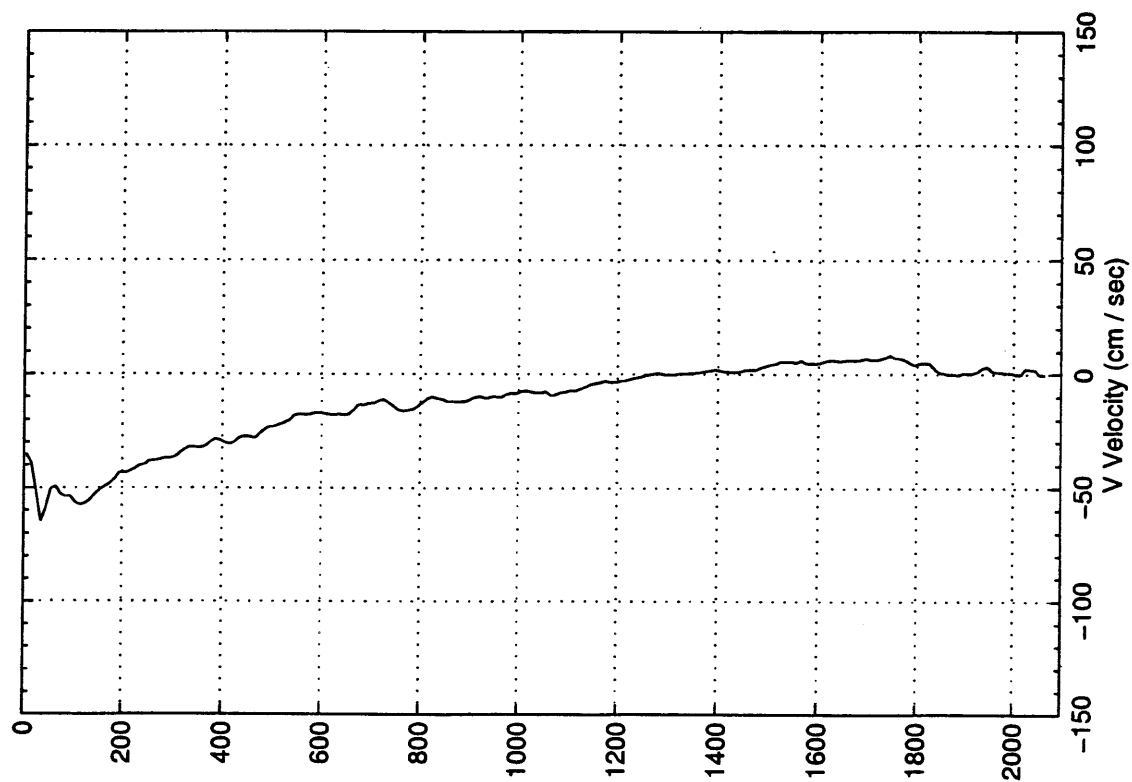
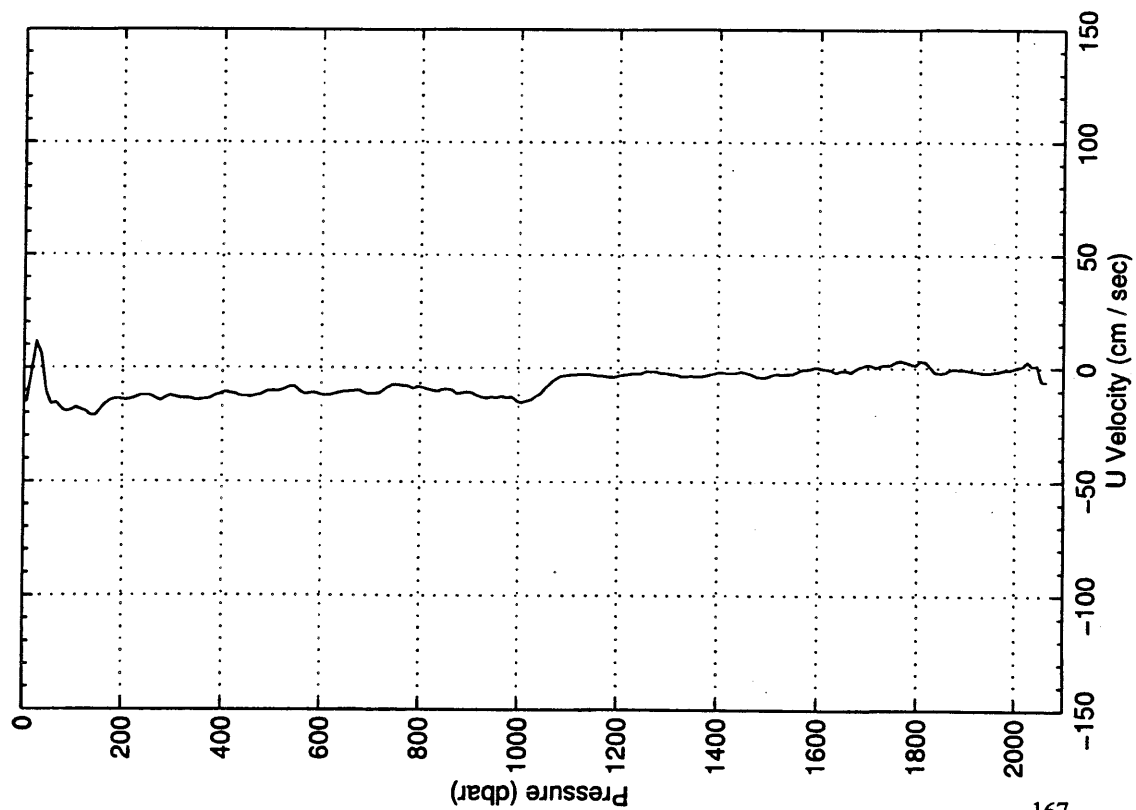
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22-Nov-1998 05:21 Z



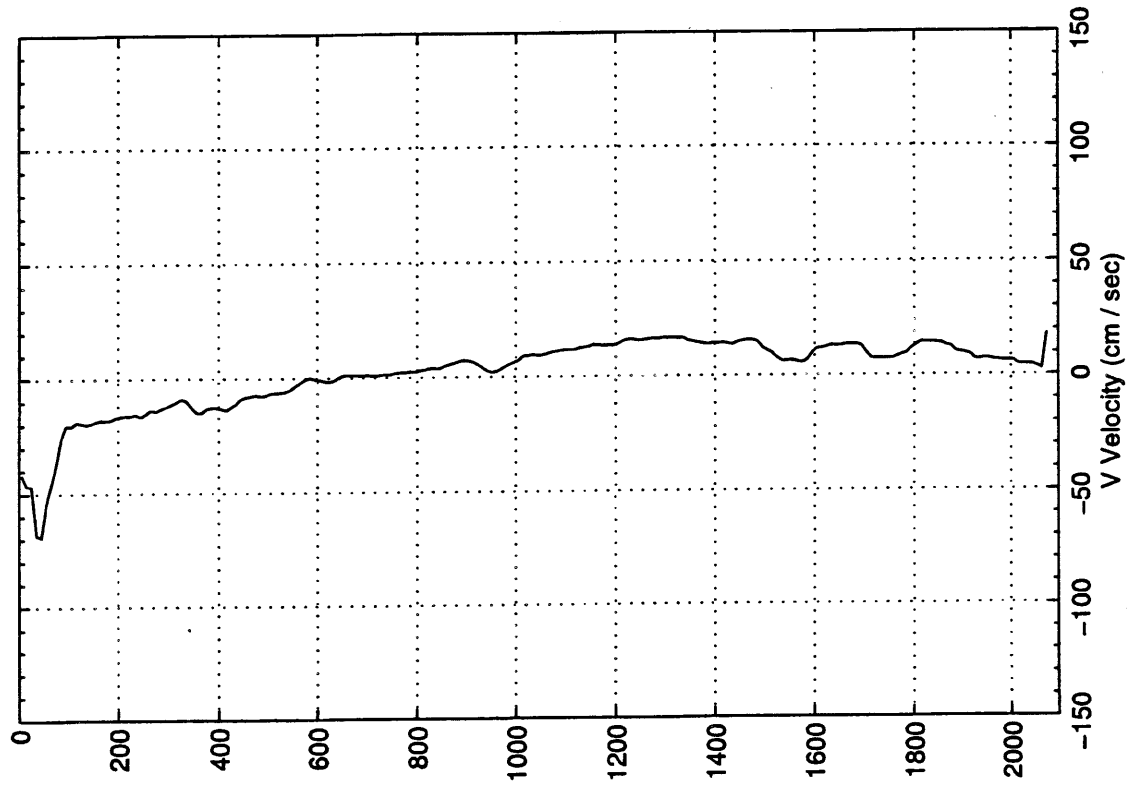
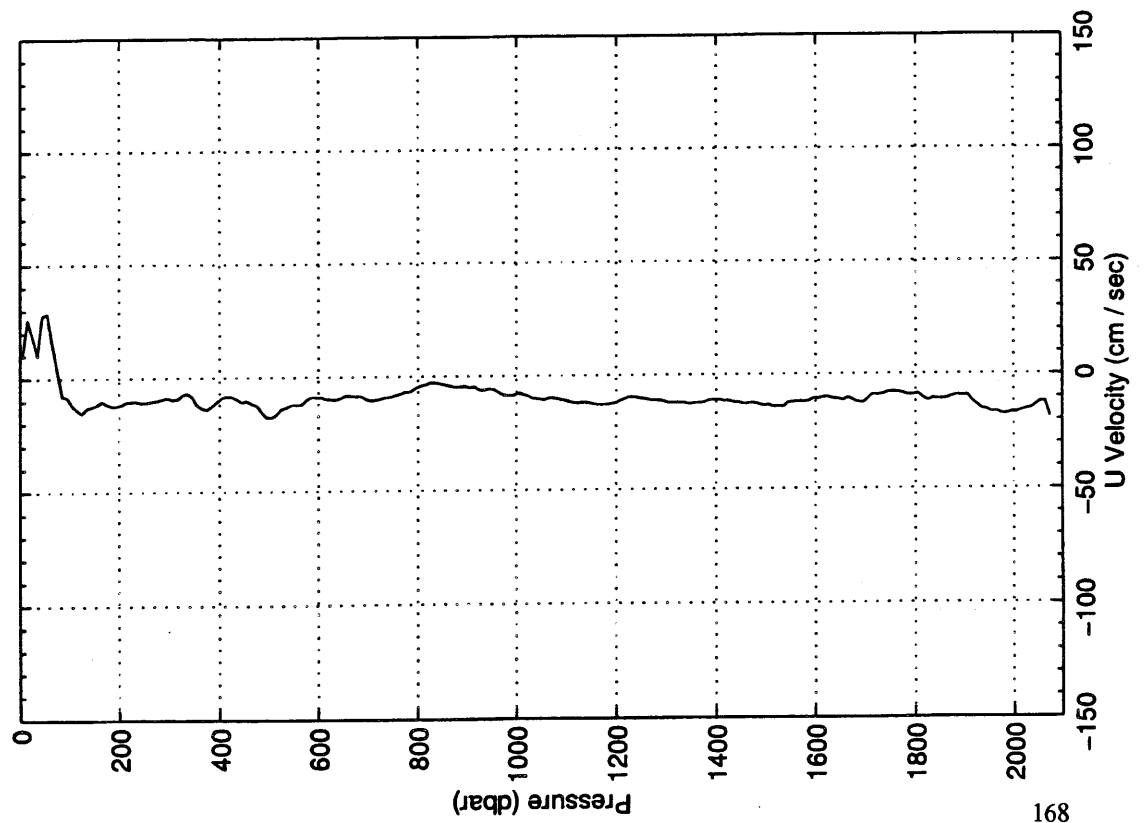
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22-Nov-1998 11:10 Z



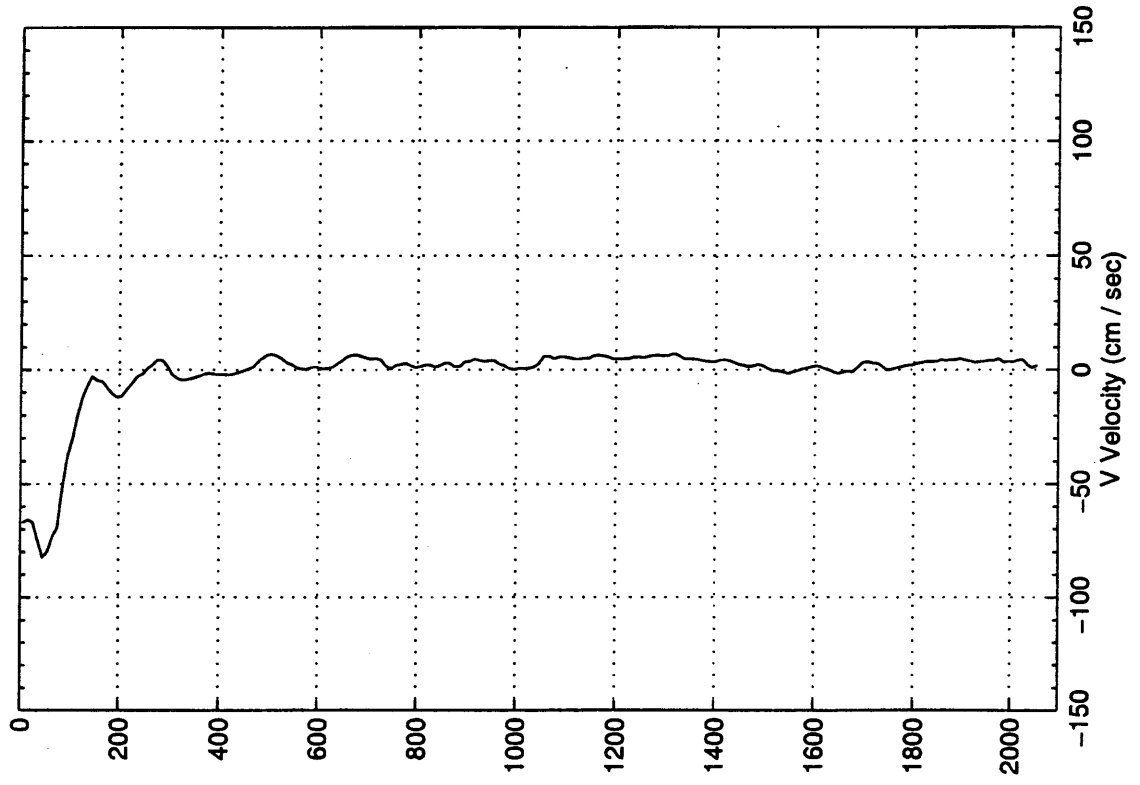
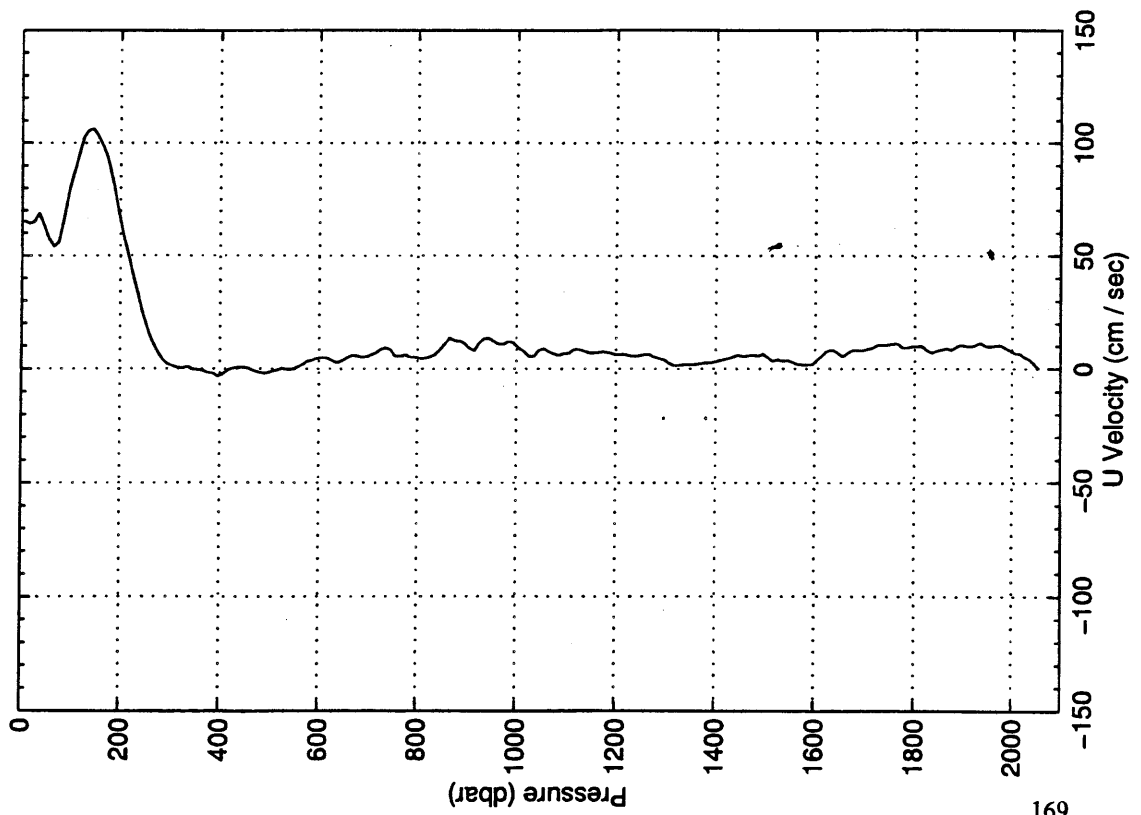
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22-Nov-1998 16:55 Z



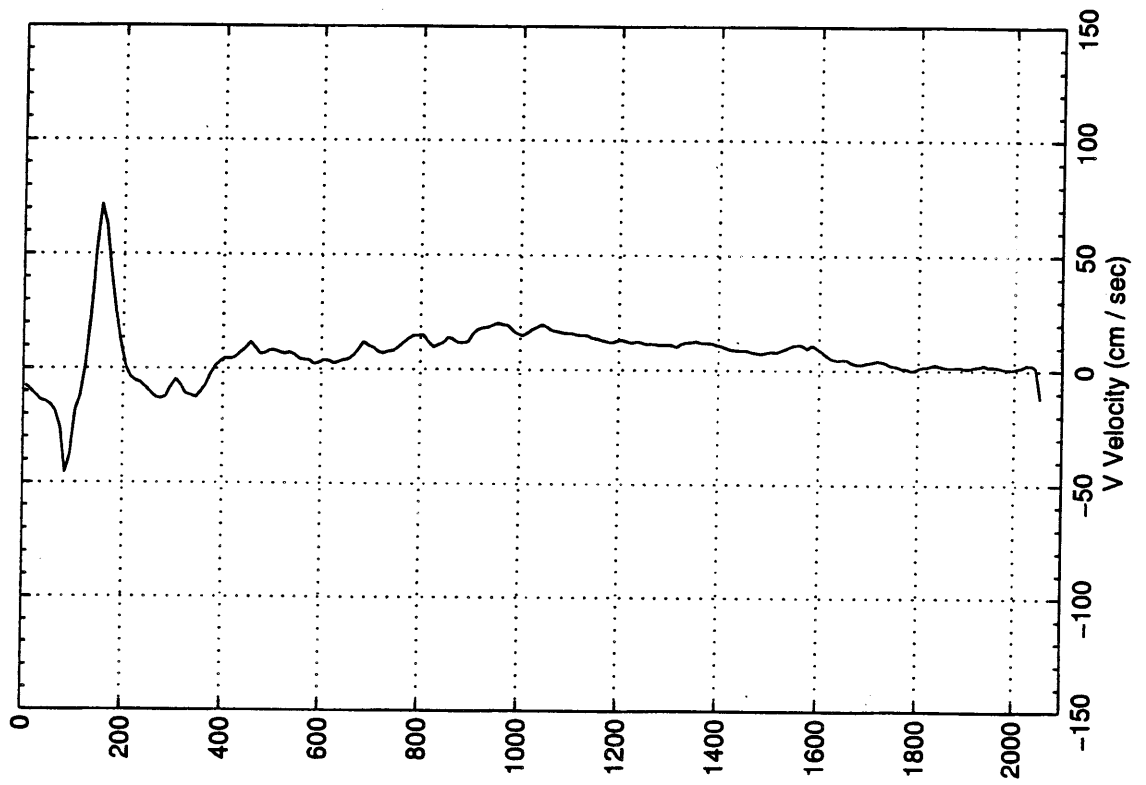
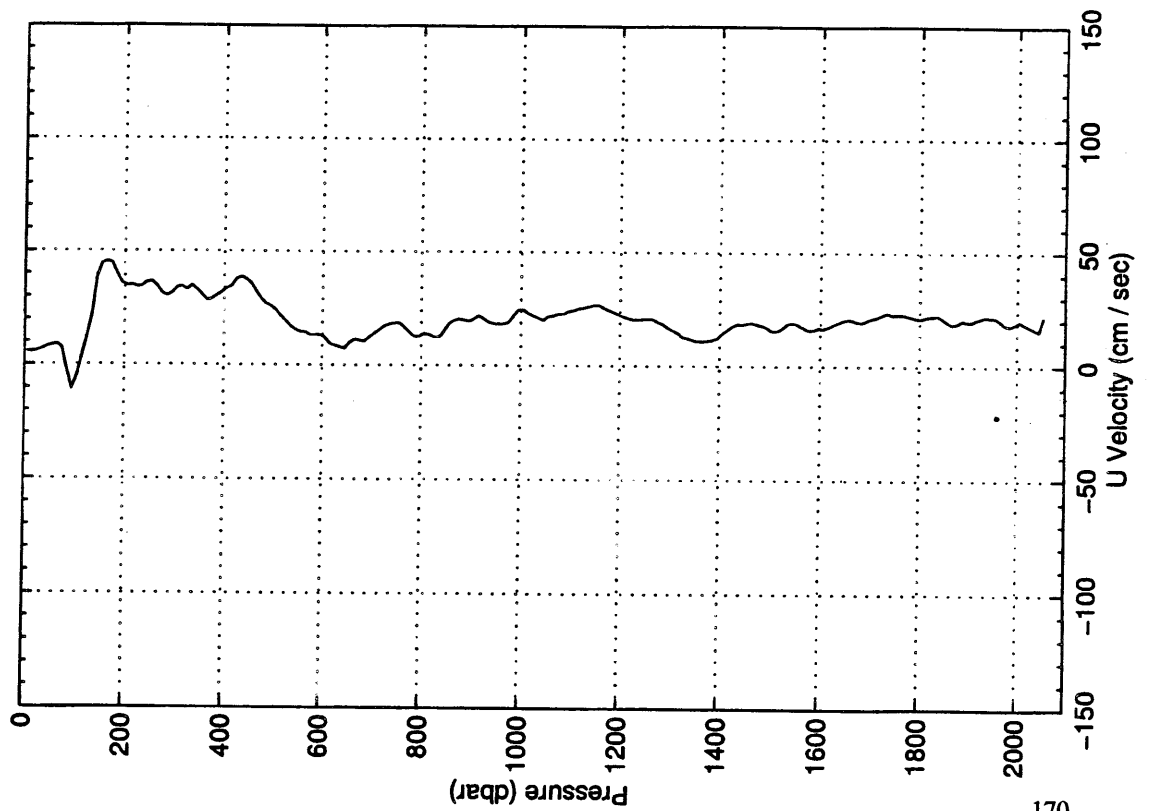
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22-Nov-1998 22:18 Z



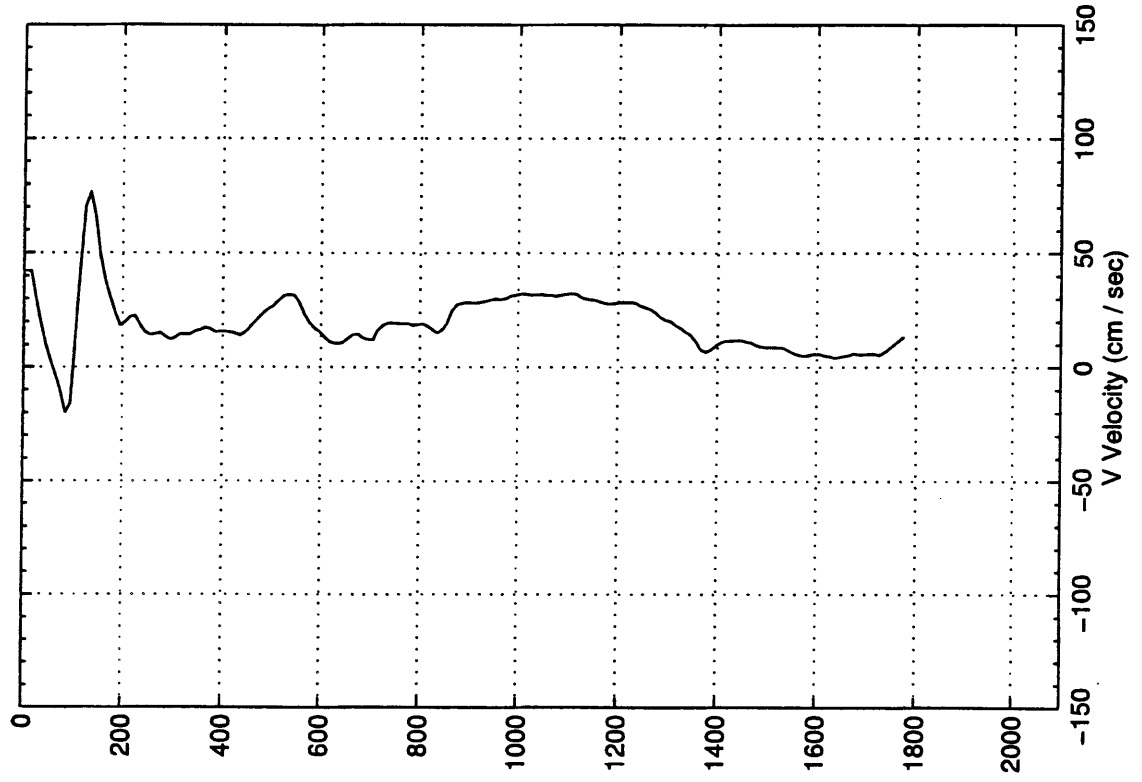
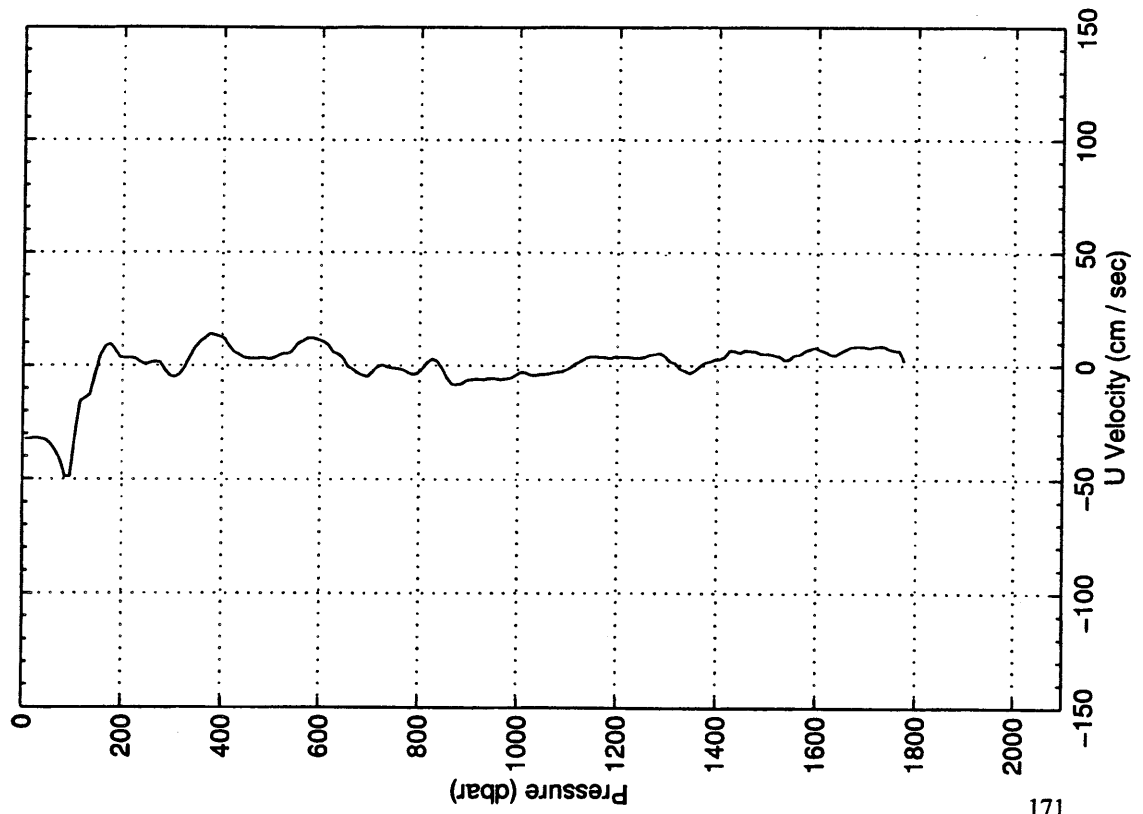
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Latitude 4.402N Longitude 46.143 W
23-Nov-1998 05:48 Z



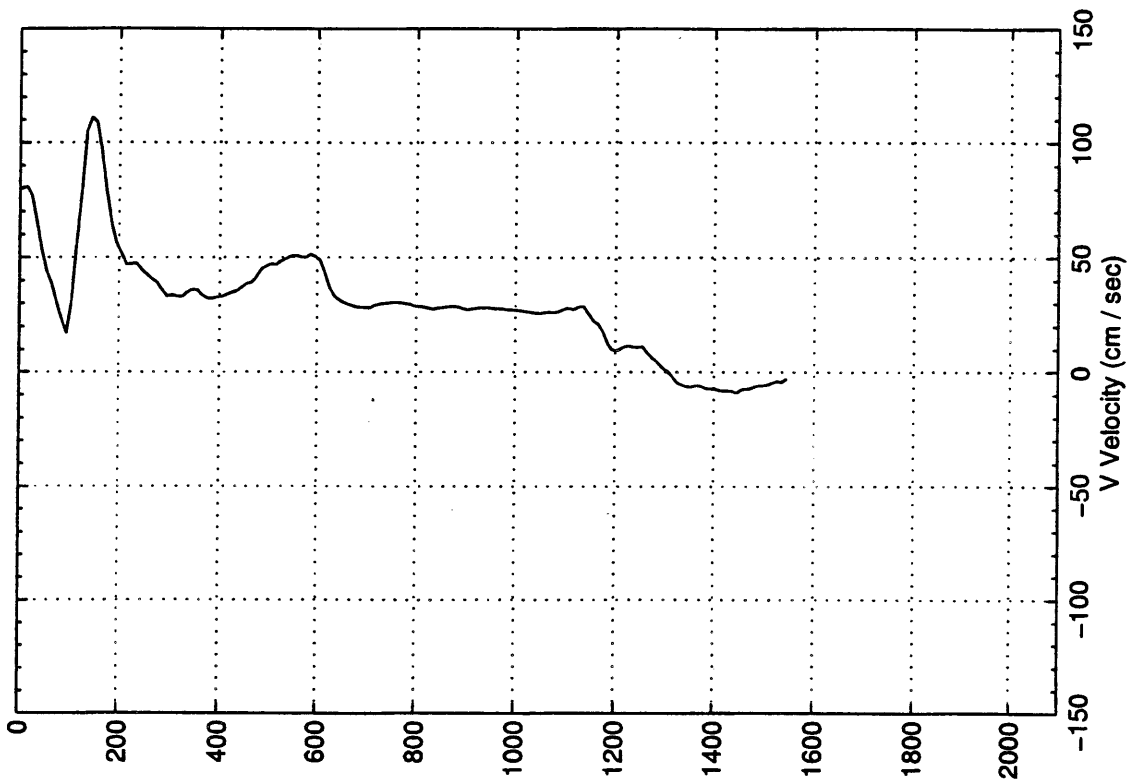
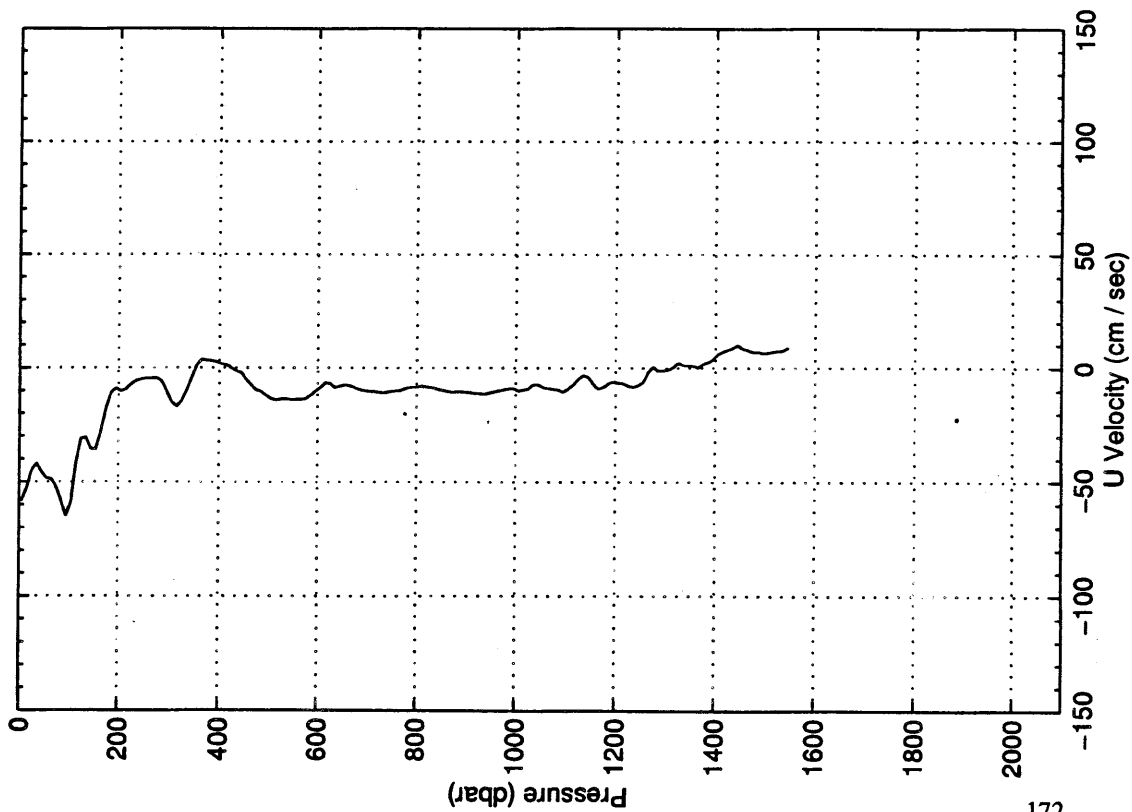
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Latitude 3.754N Longitude 46.078 W
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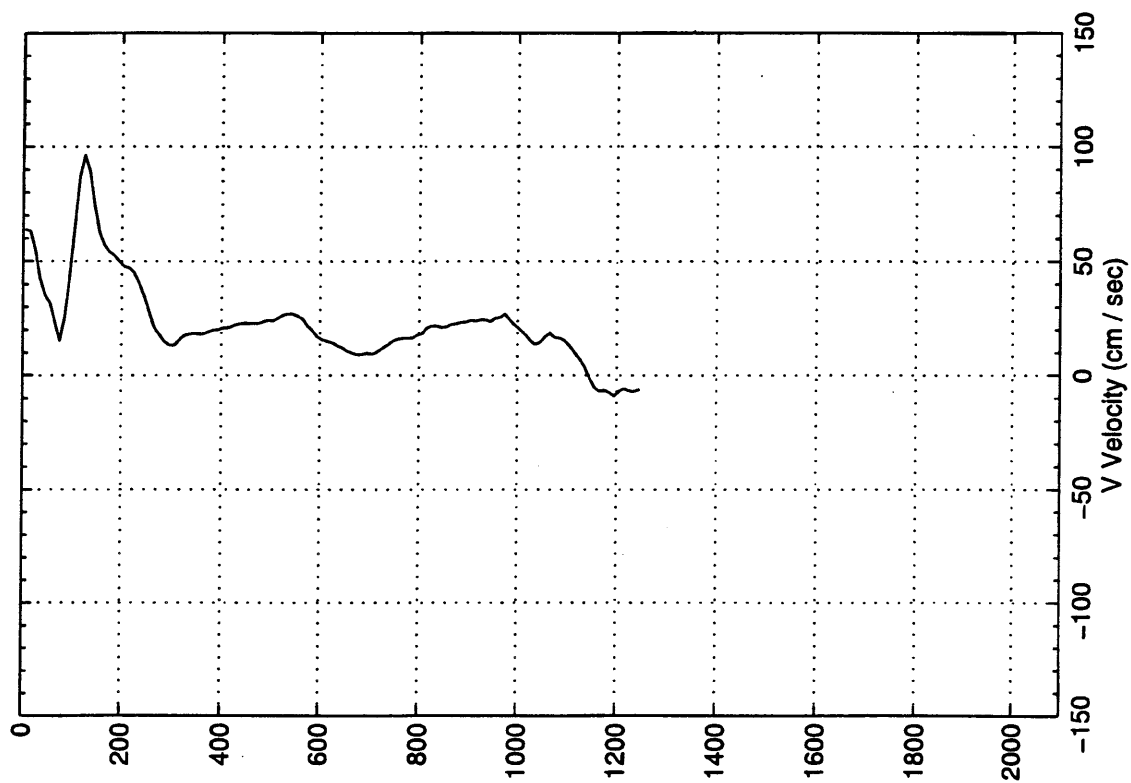
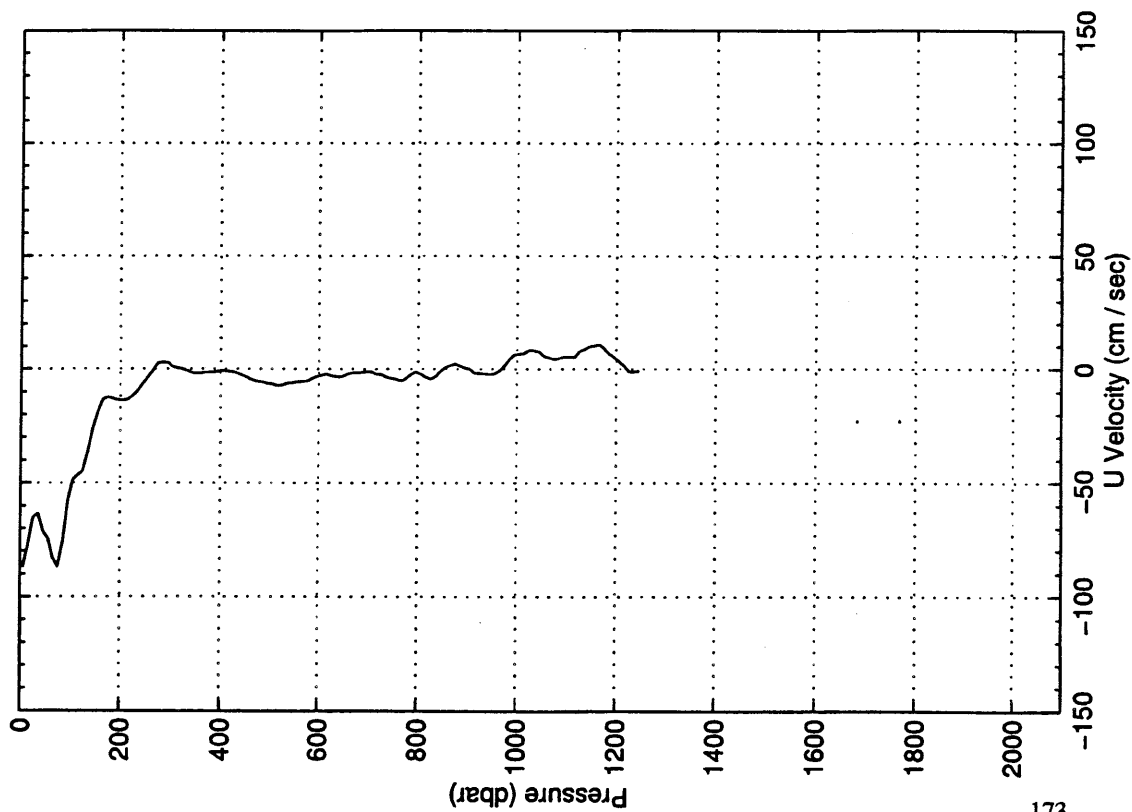
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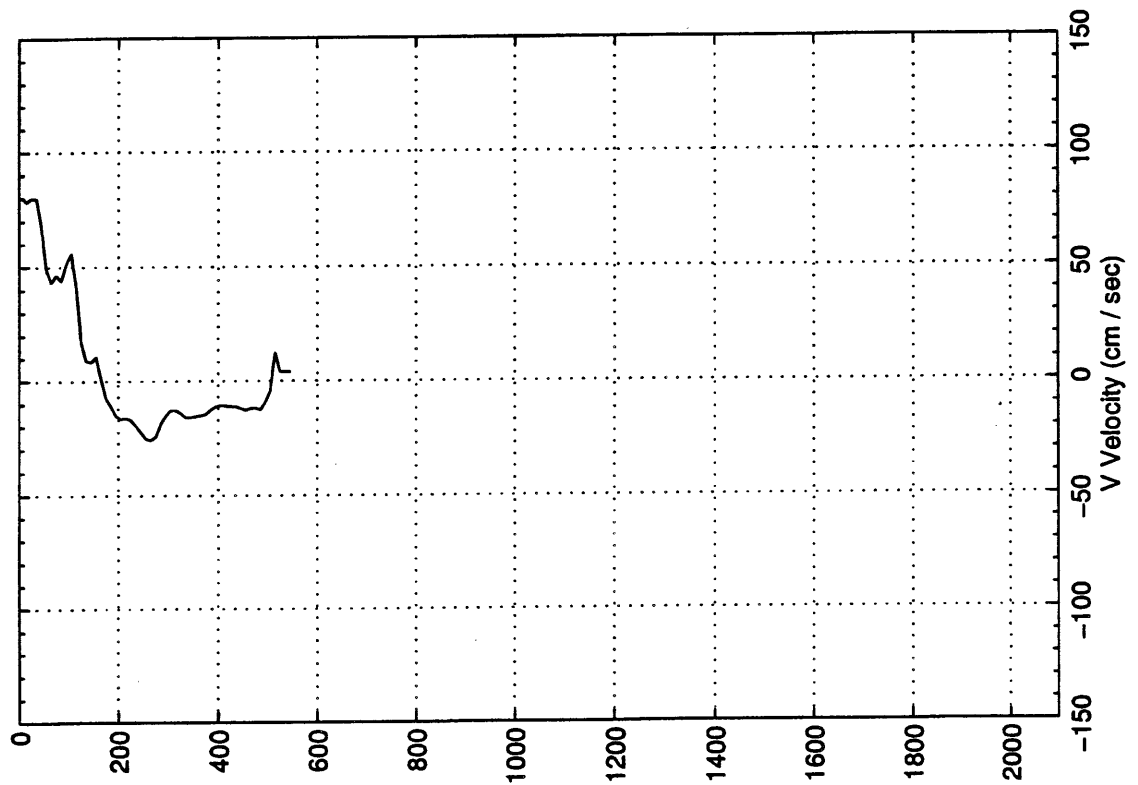
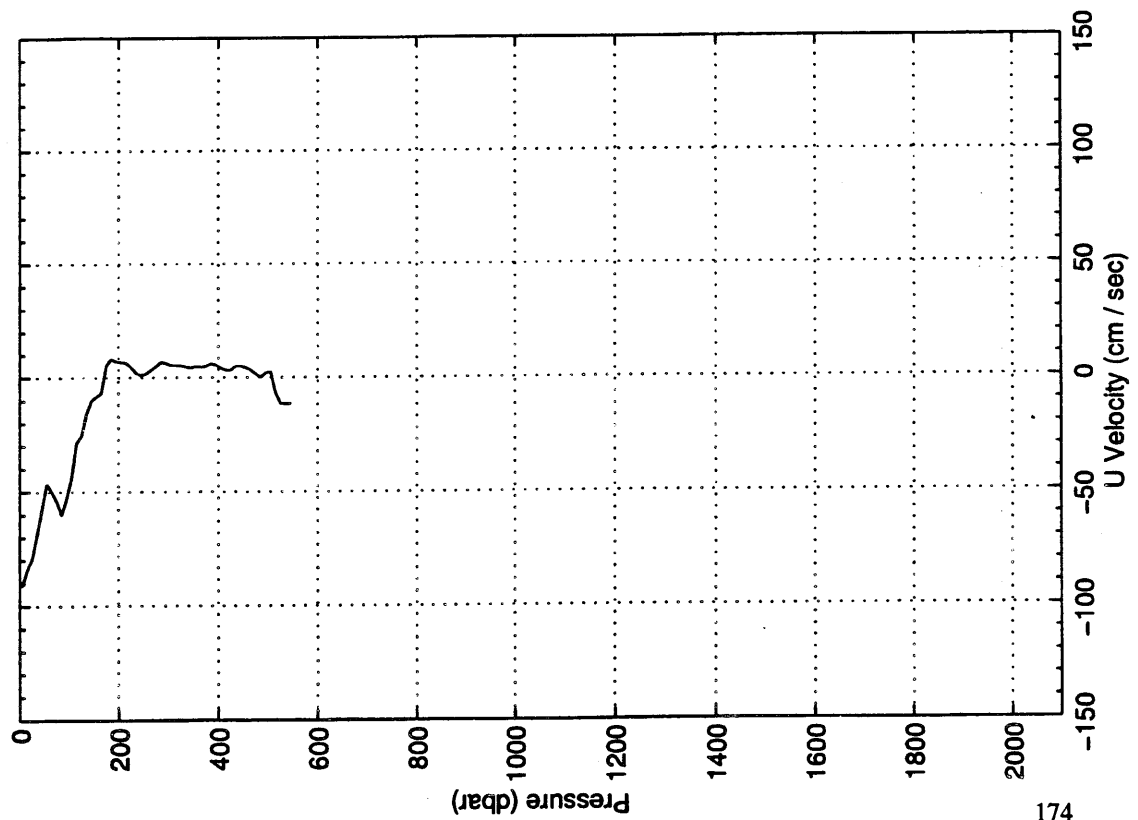
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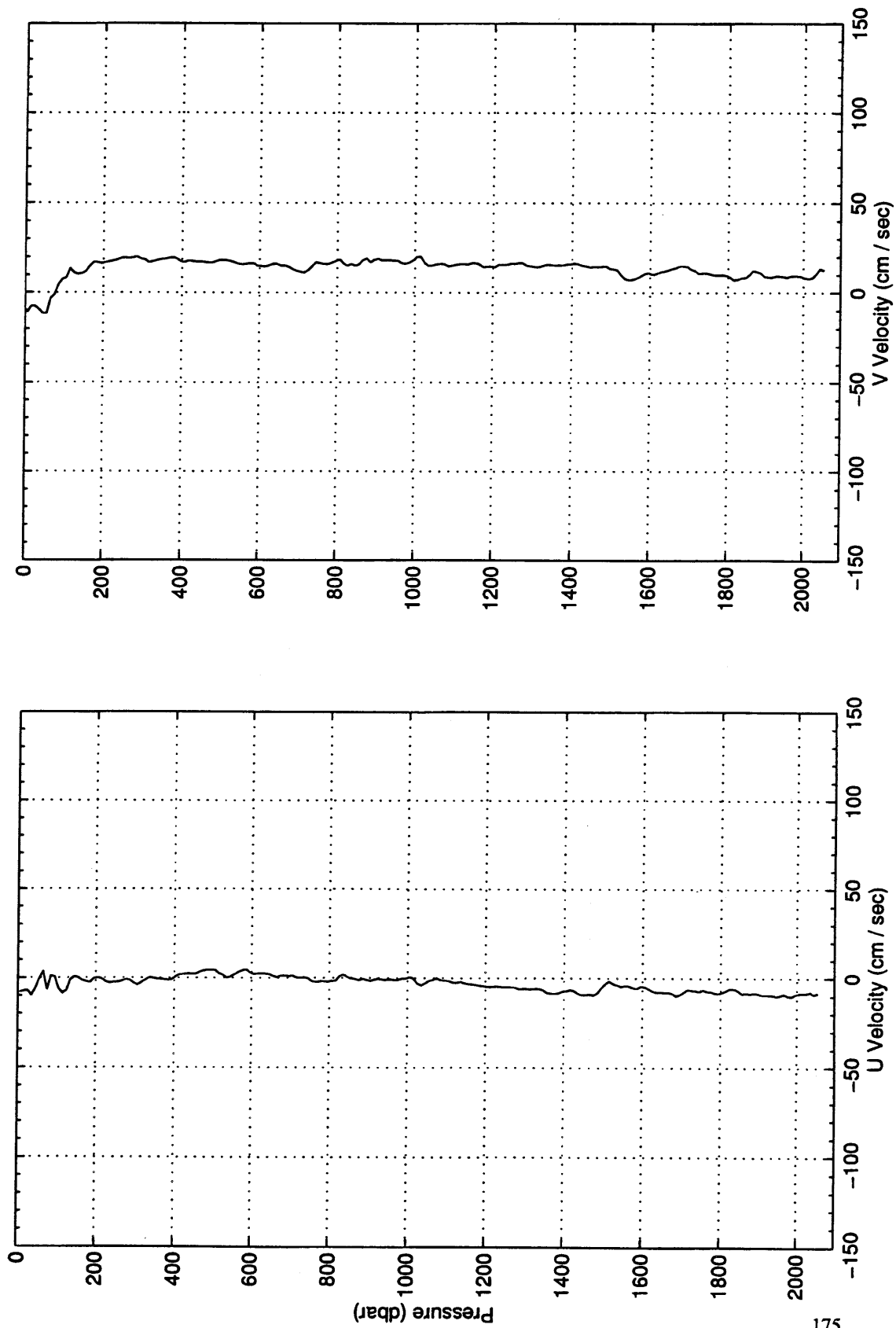
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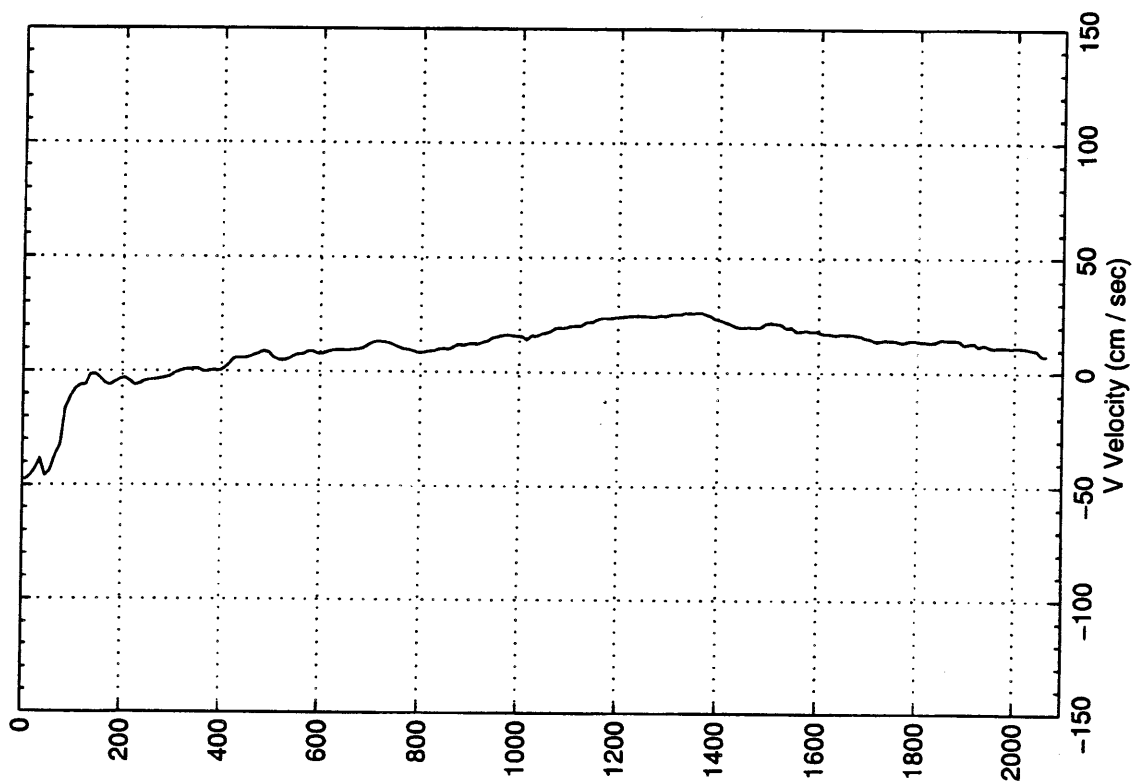
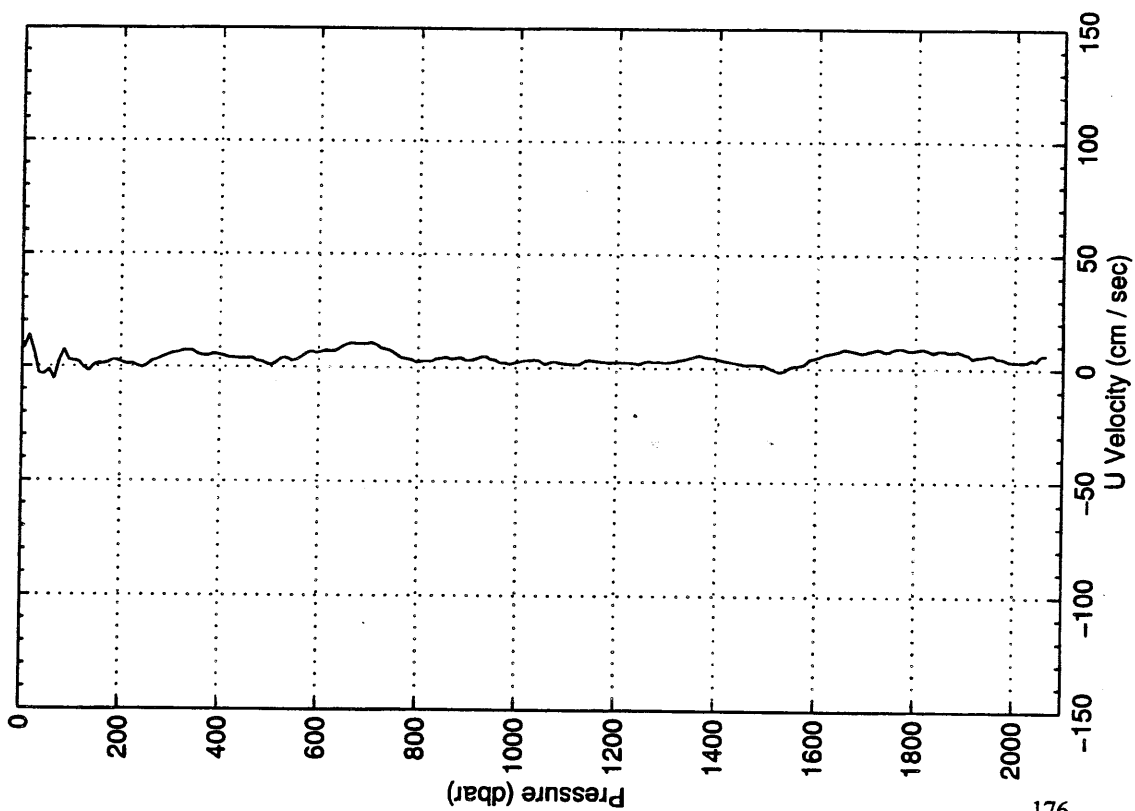
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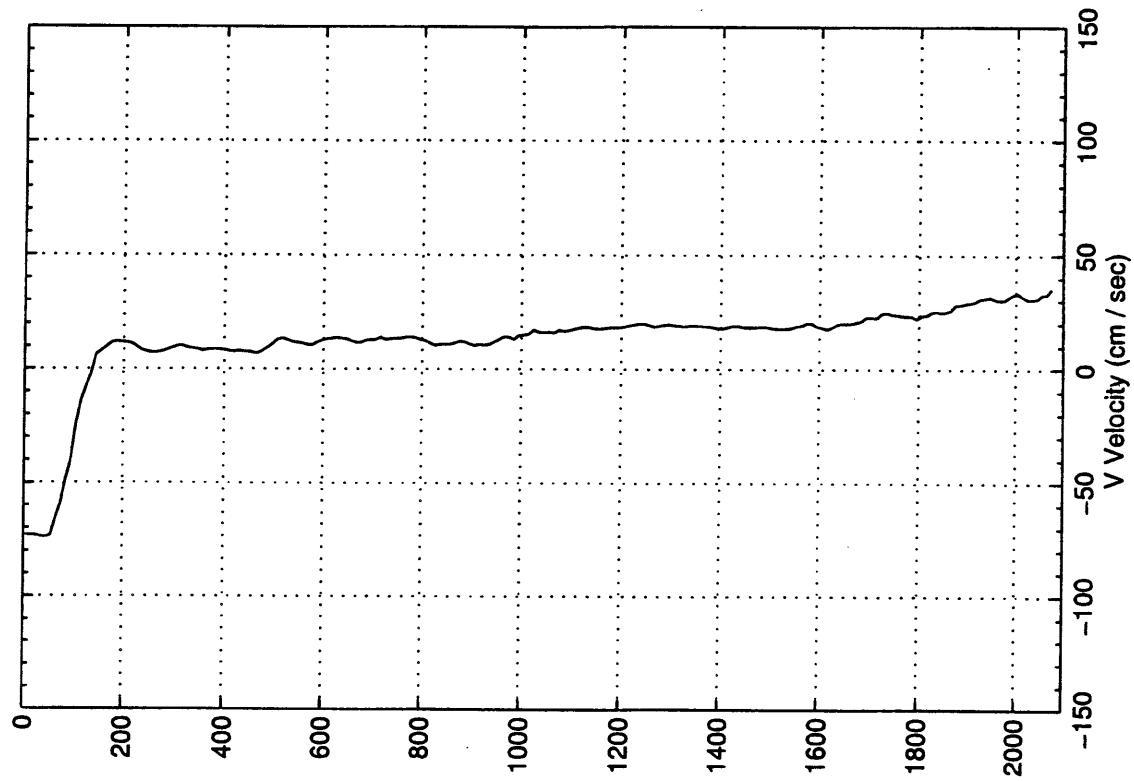
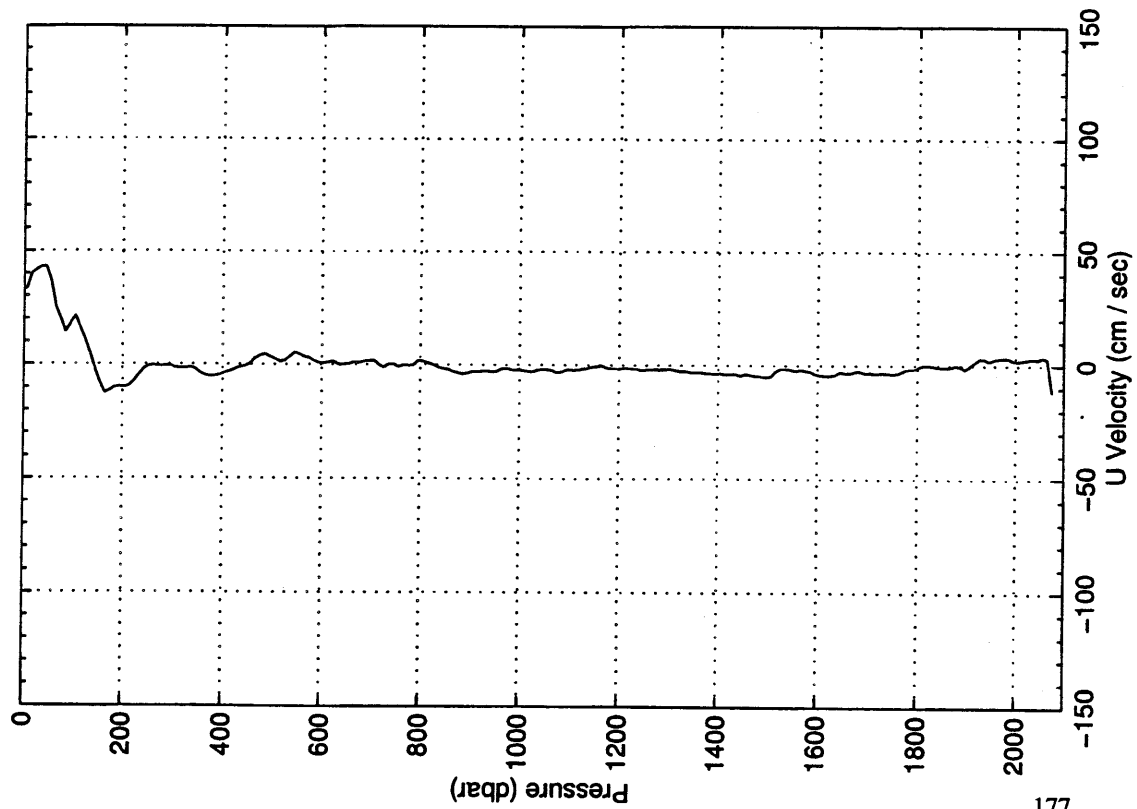
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01-Dec-1998 09:52 Z



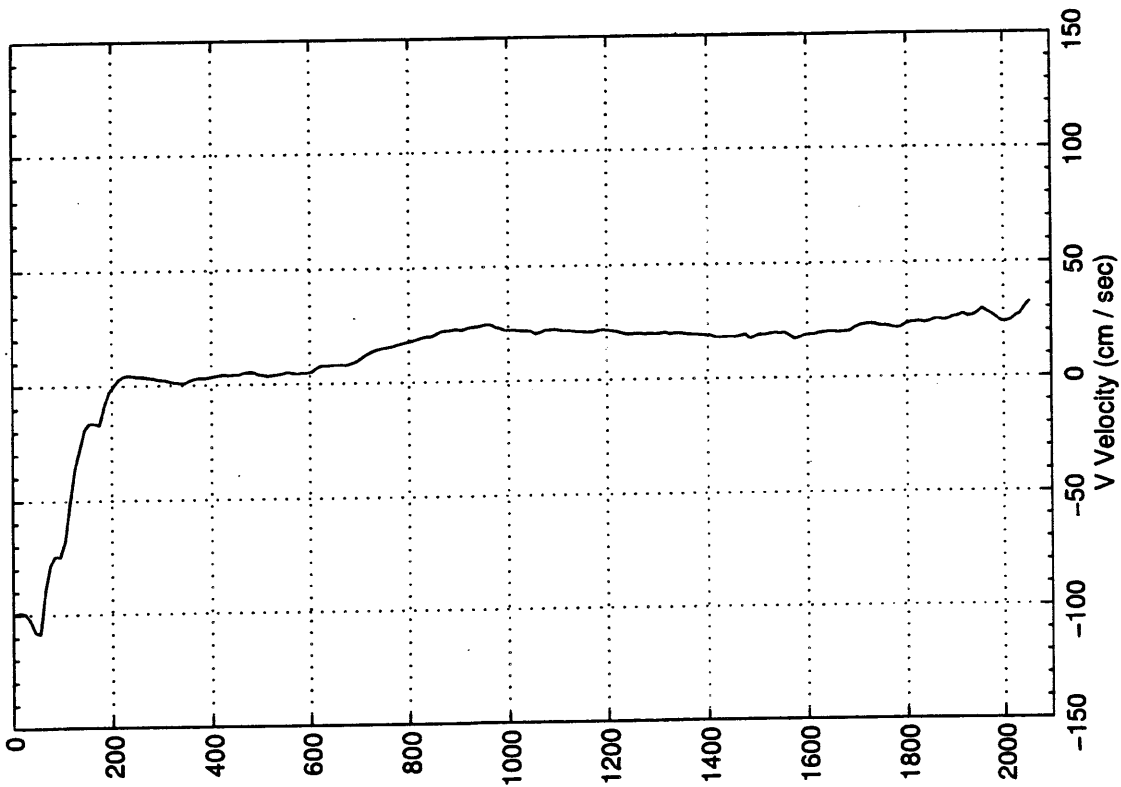
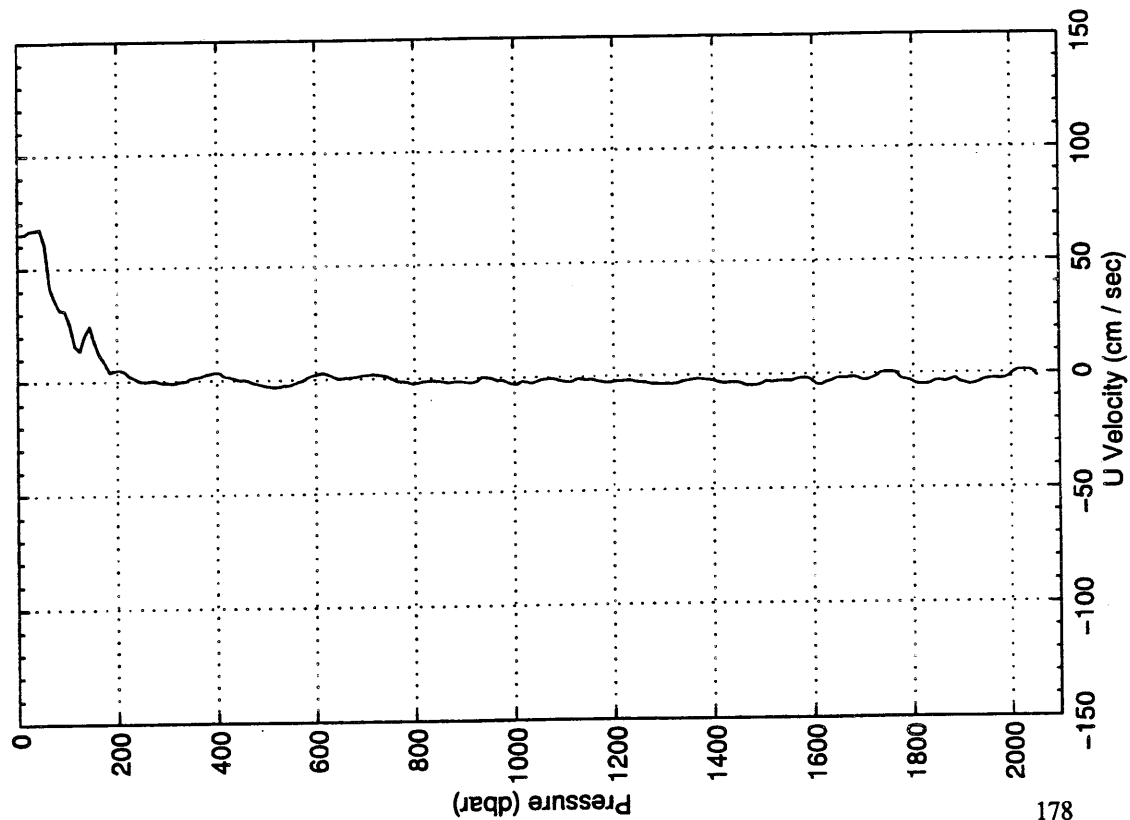
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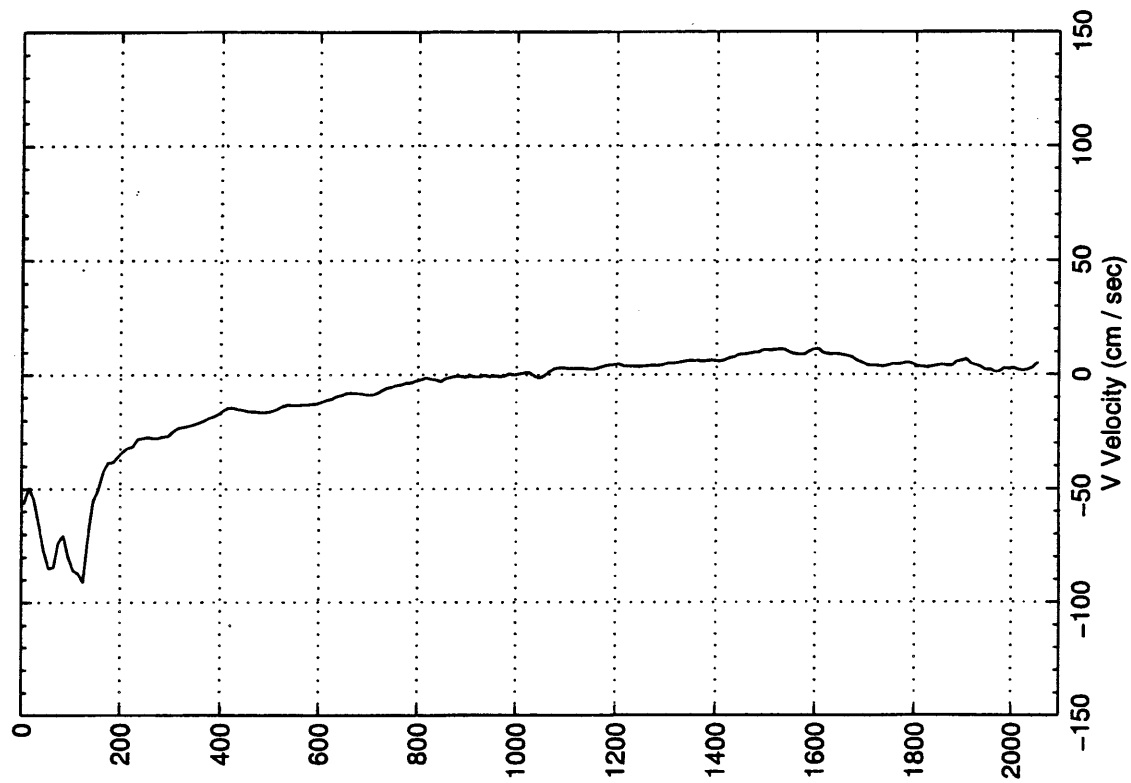
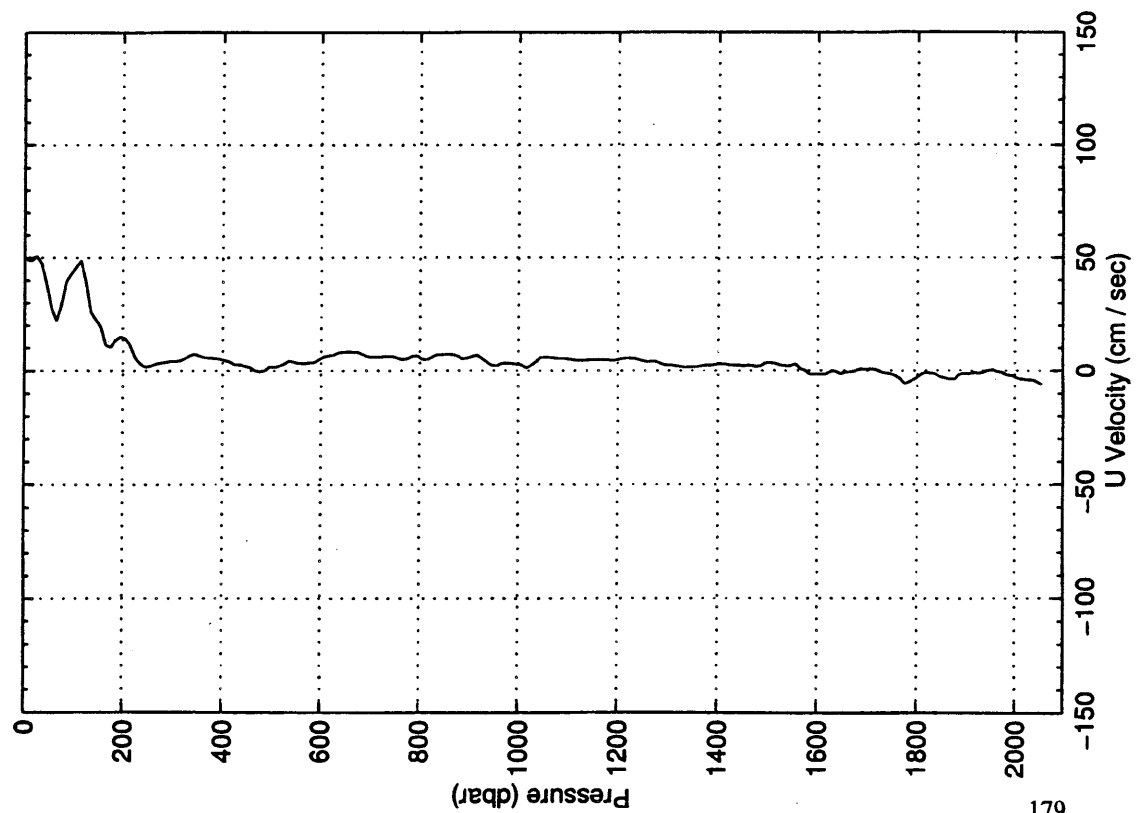
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LADCP Station 32 (98032)
Latitude 7.374N Longitude 48.143 W
01-Dec-1998 17:59 Z



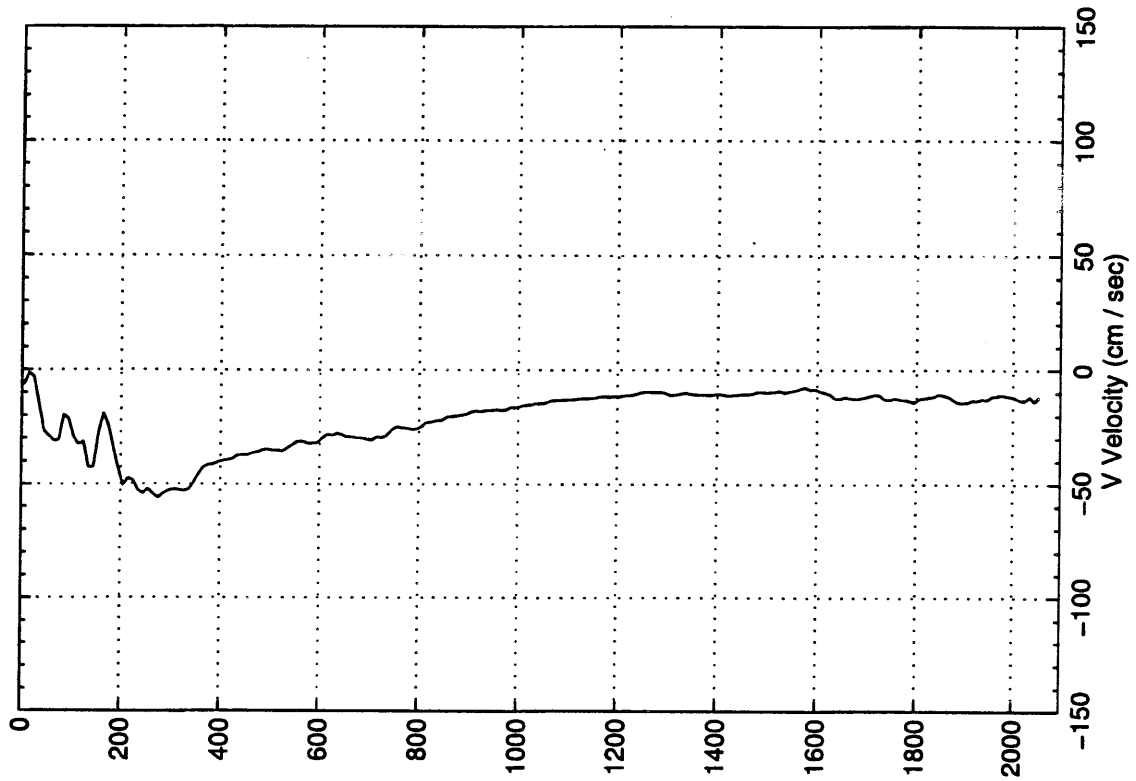
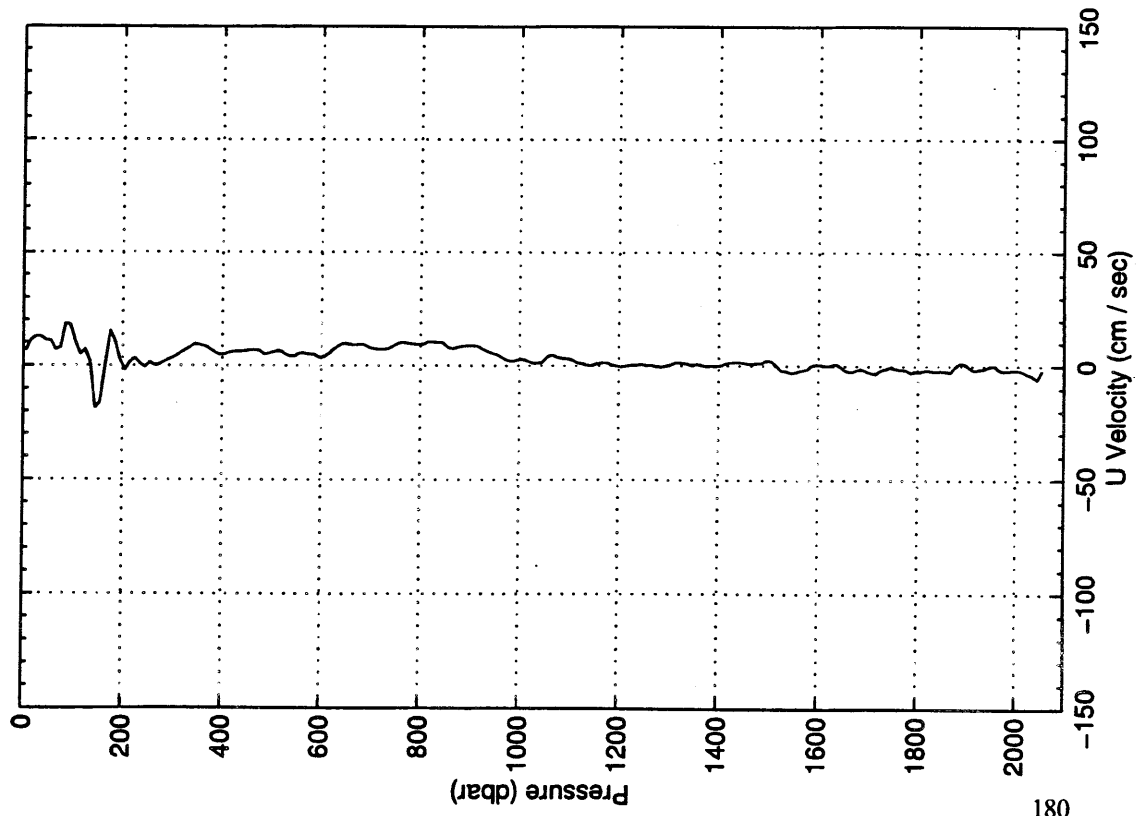
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LADCP Station 33 (98033)
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01-Dec-1998 22:28 Z



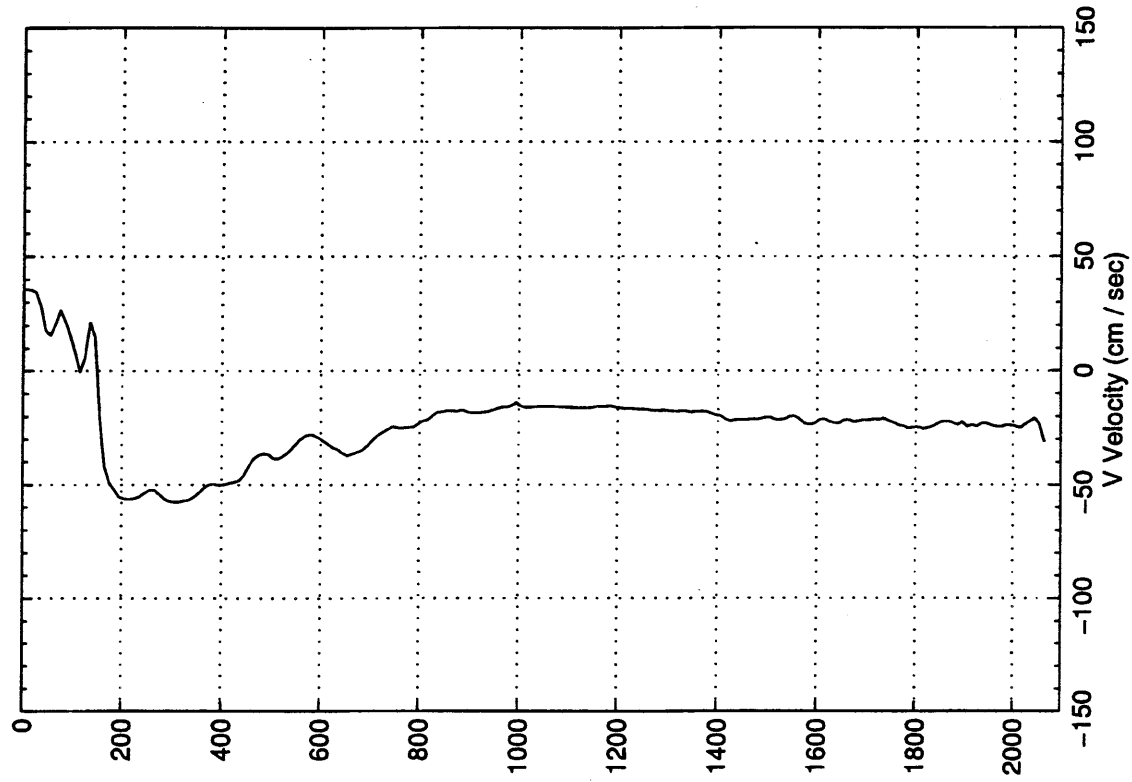
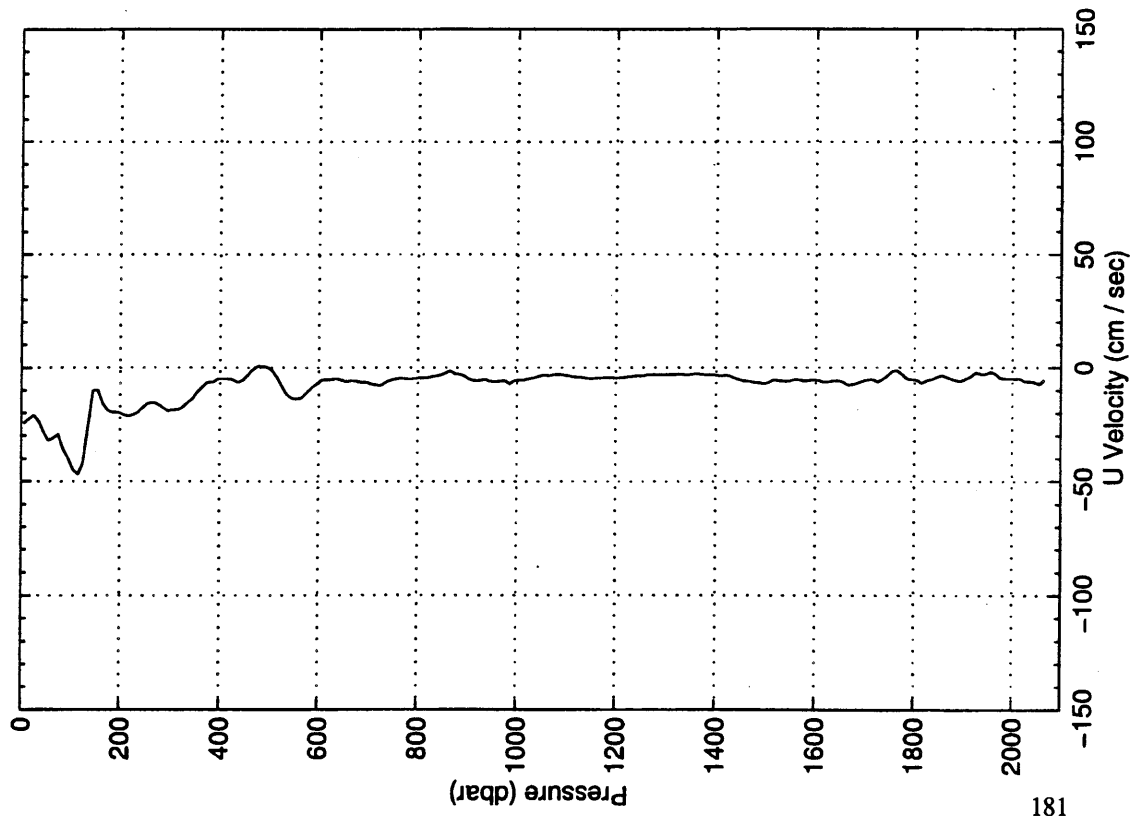
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Latitude 6.709N Longitude 49.014 W
02-Dec-1998 02:35 Z



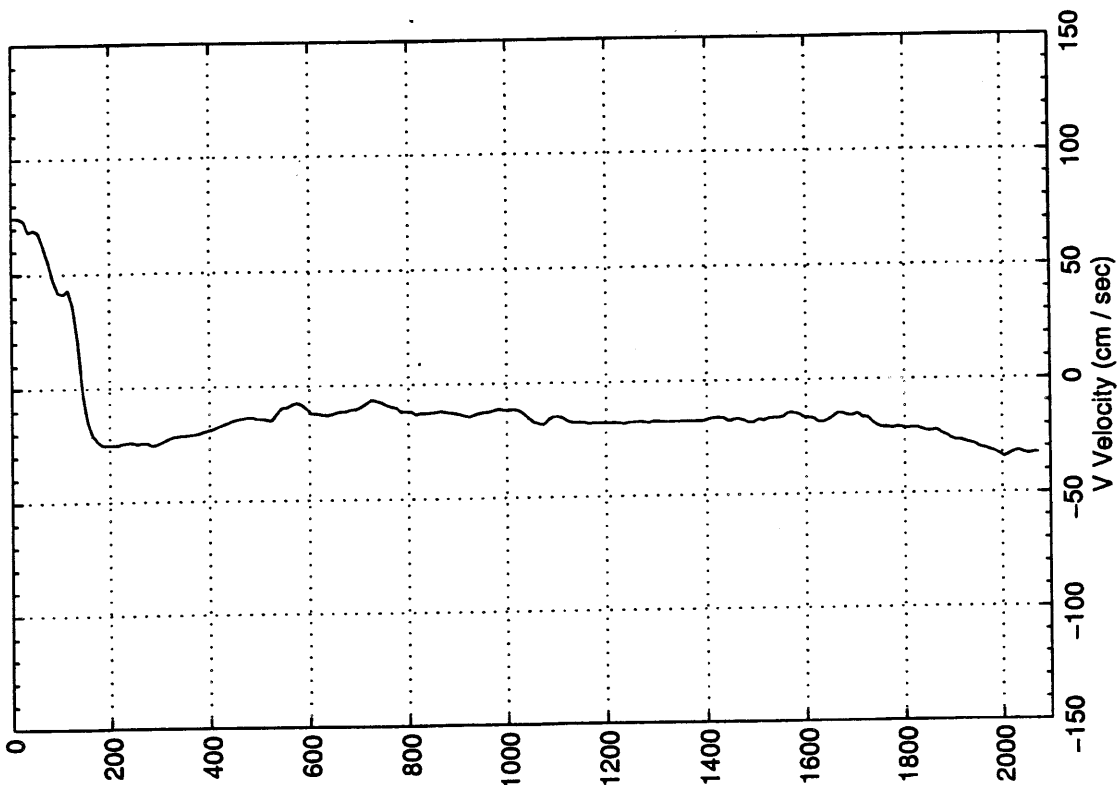
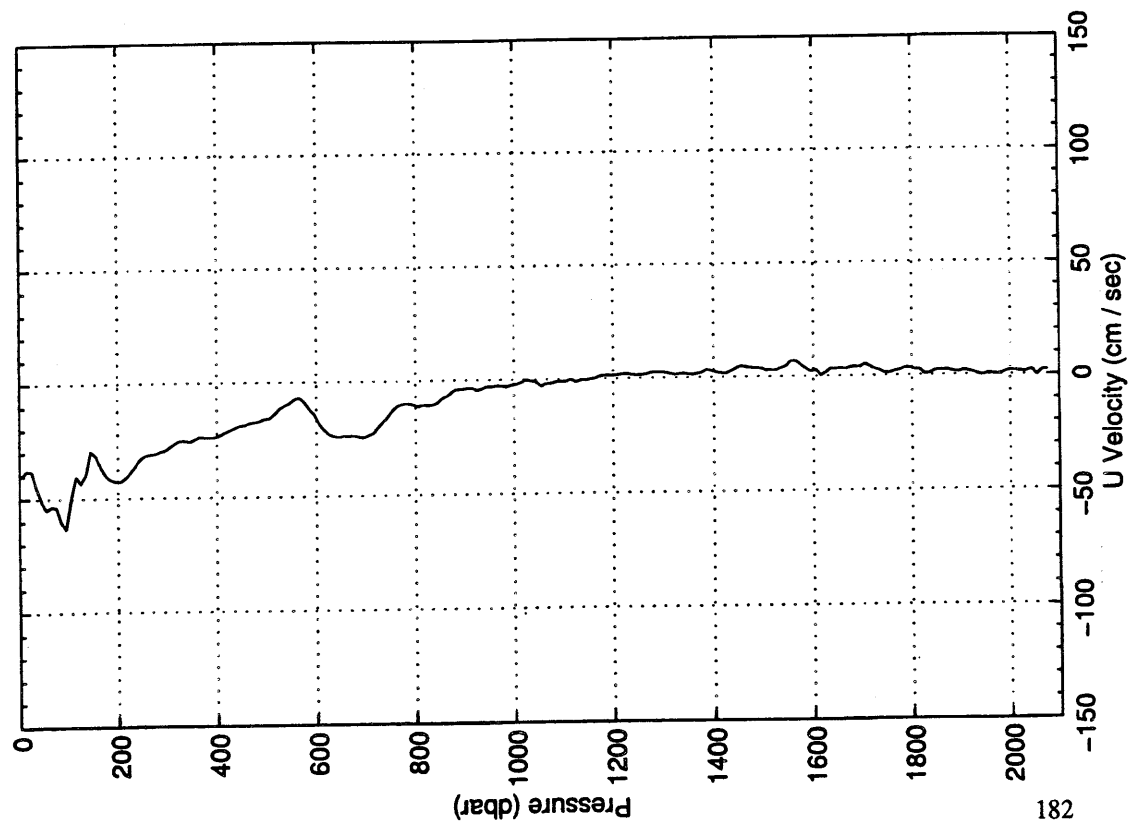
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Latitude 6.383N Longitude 49.050 W
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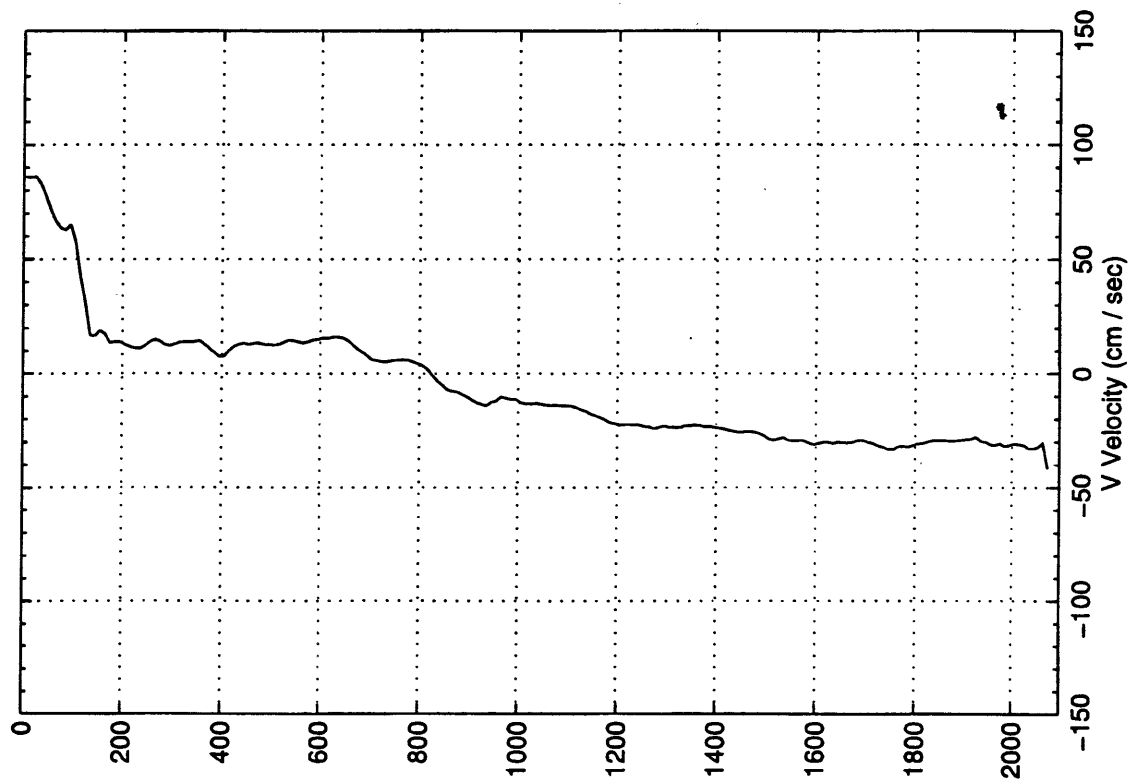
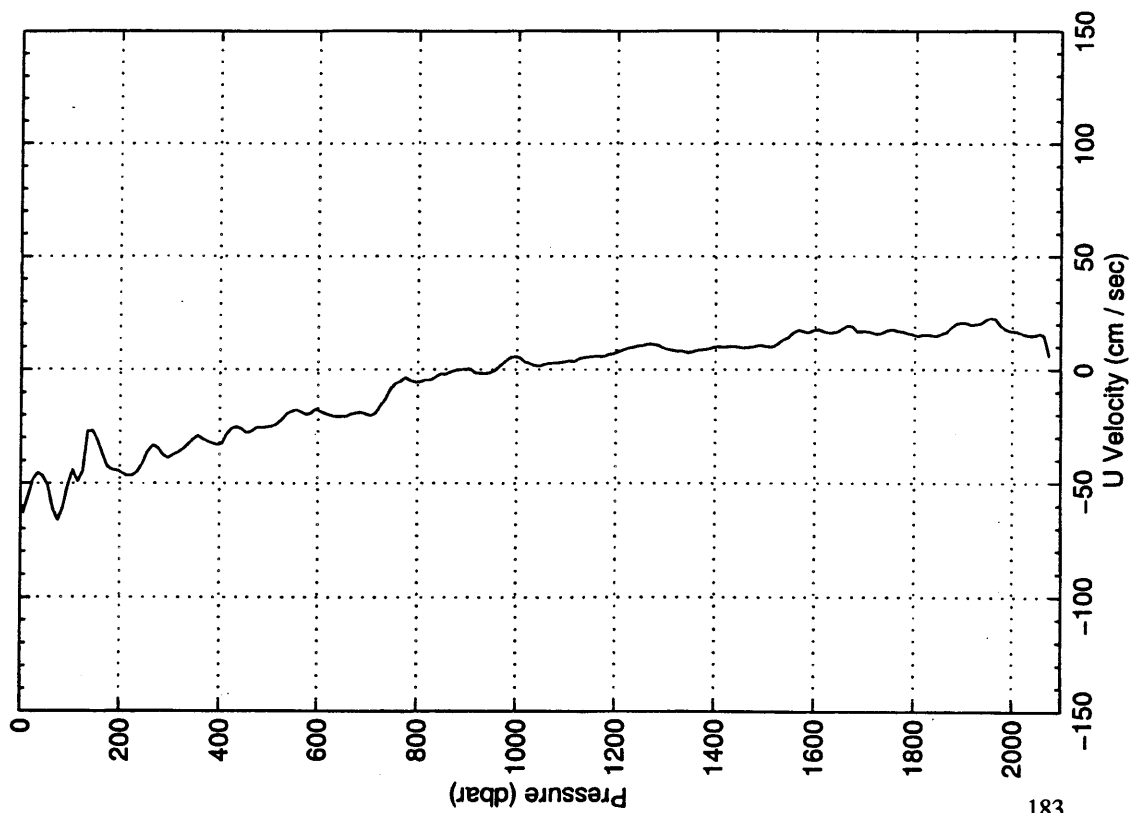
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02-Dec-1998 10:52 Z



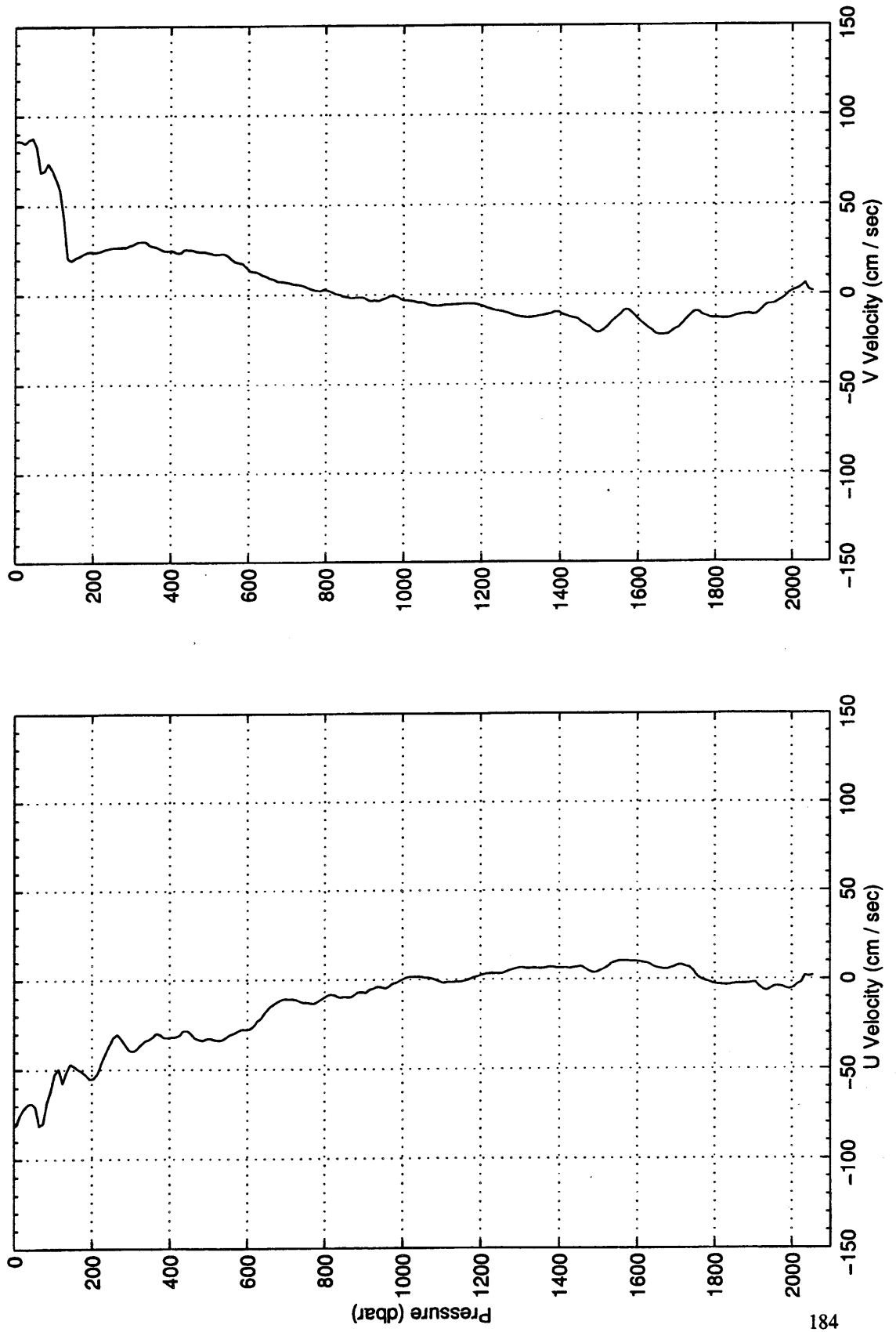
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LADCP Station 37 (98037)
Latitude 5.739N Longitude 50.089 W
02-Dec-1998 14:59 Z



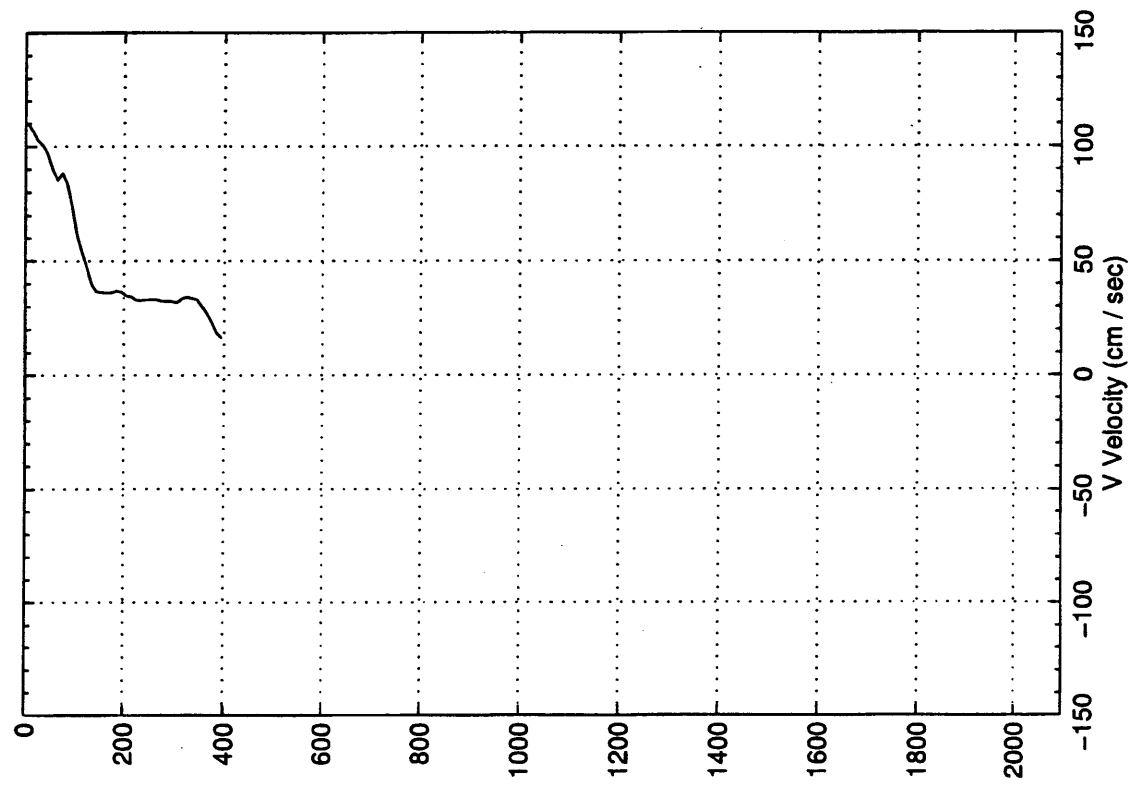
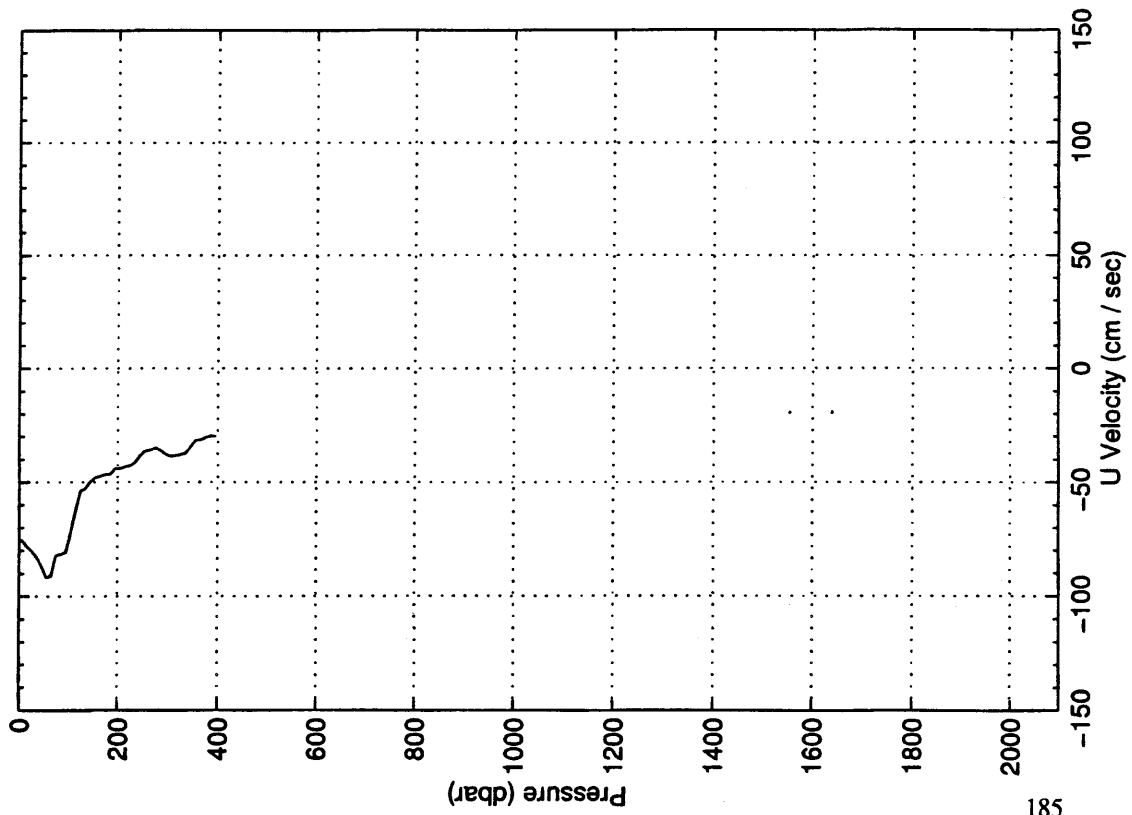
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Latitude 5.535N Longitude 50.150 W
02-Dec-1998 18:17 Z



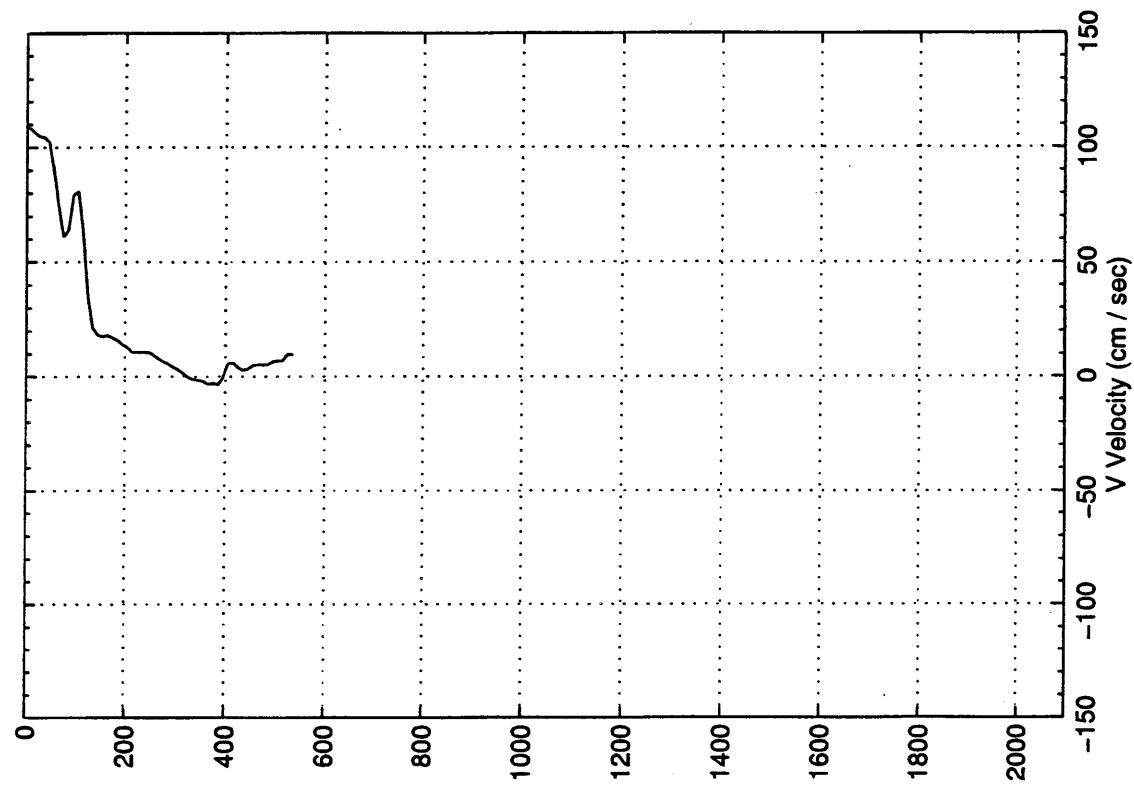
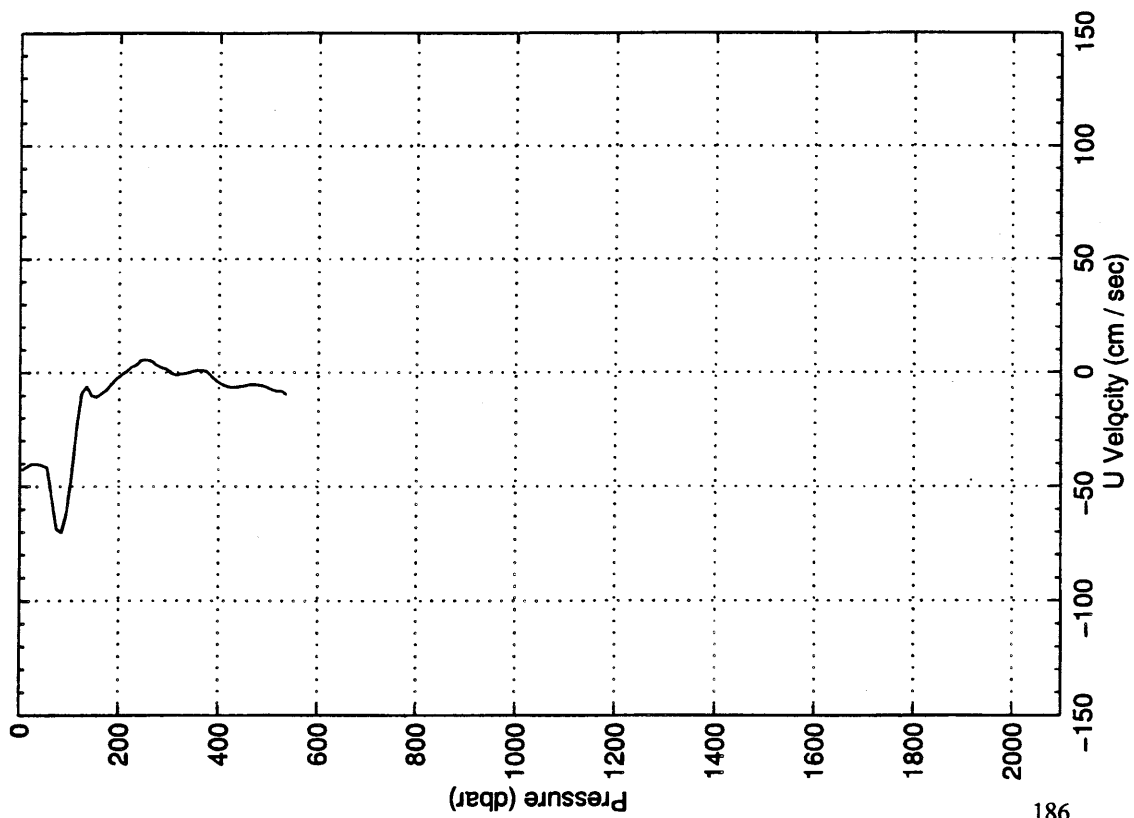
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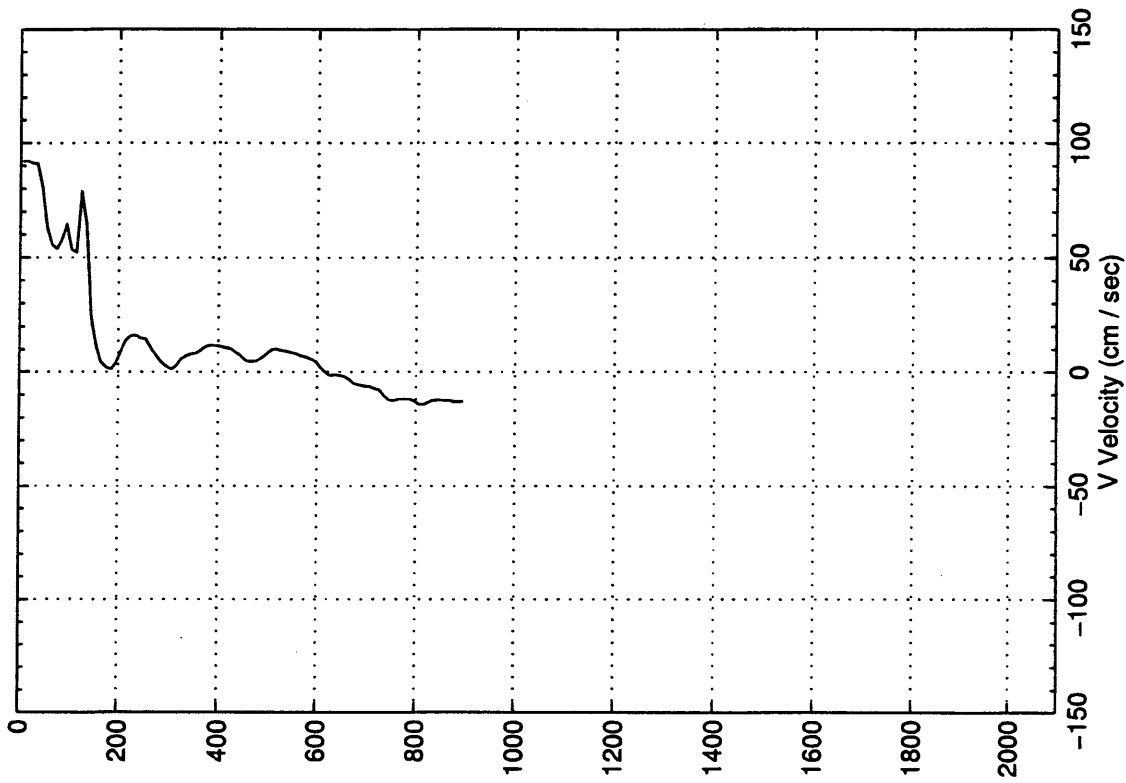
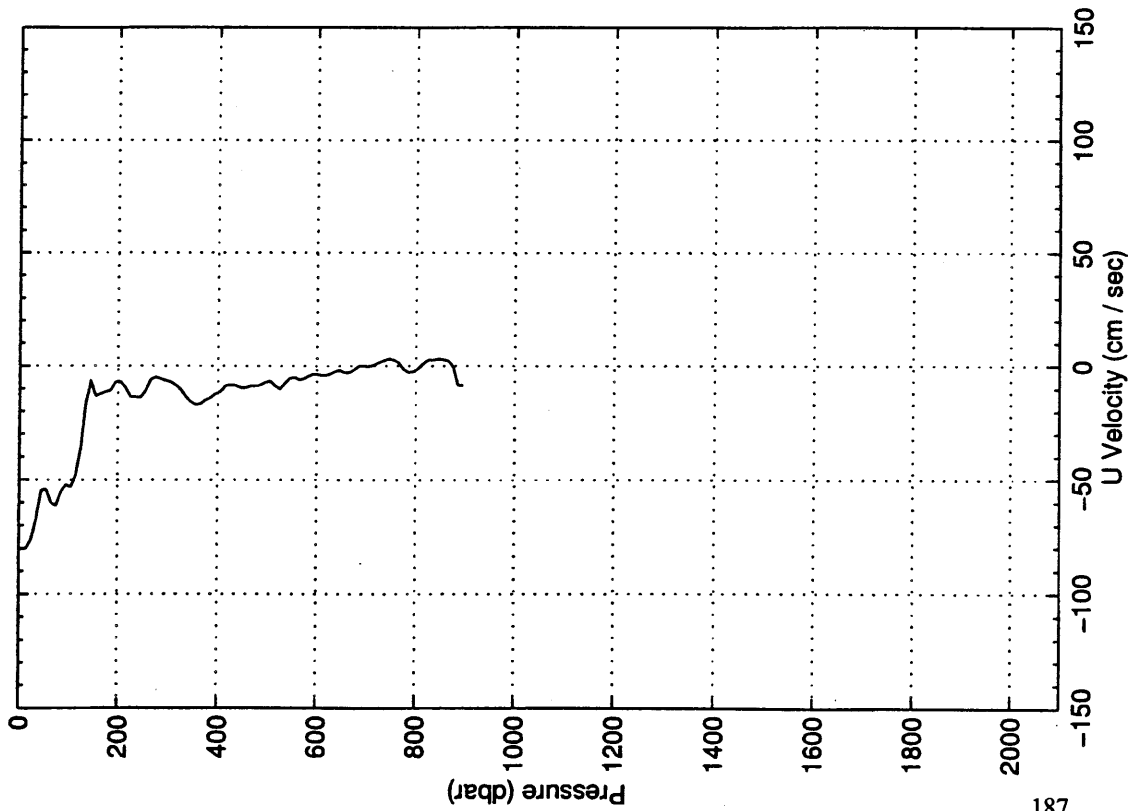
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LADCP Station 40 (98040)
Latitude 5.282N Longitude 50.080 W
02-Dec-1998 23:47 Z



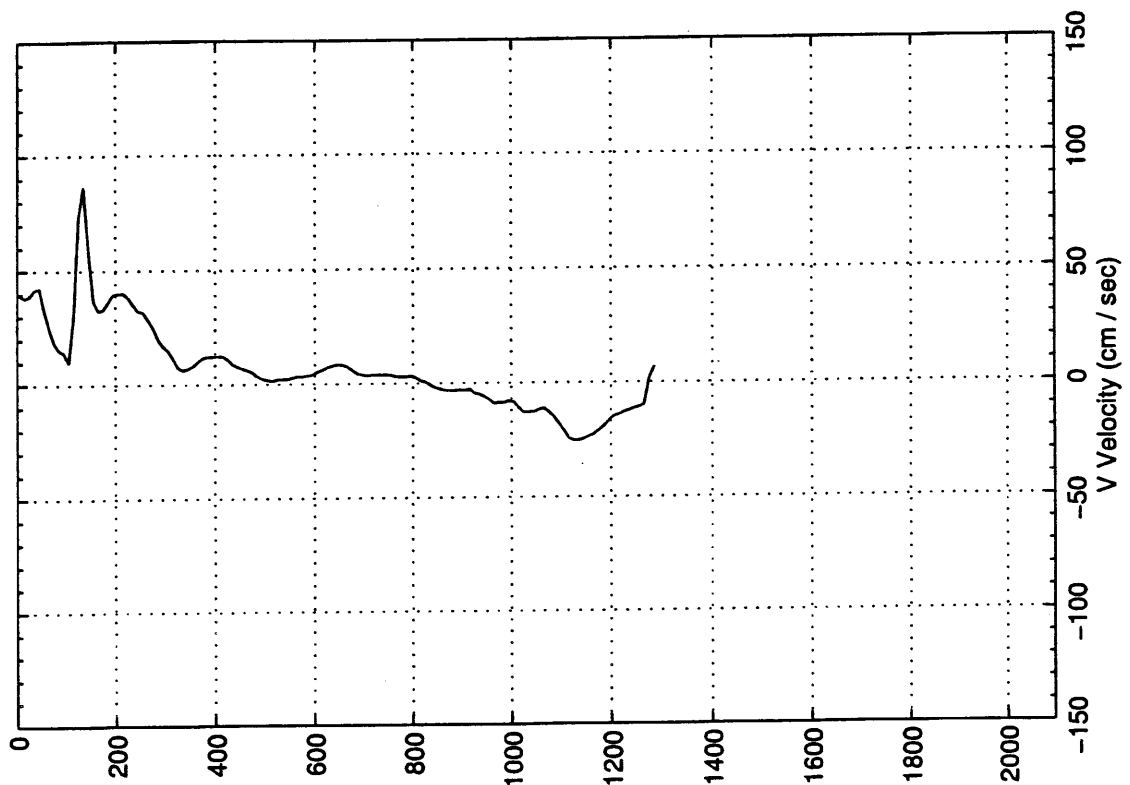
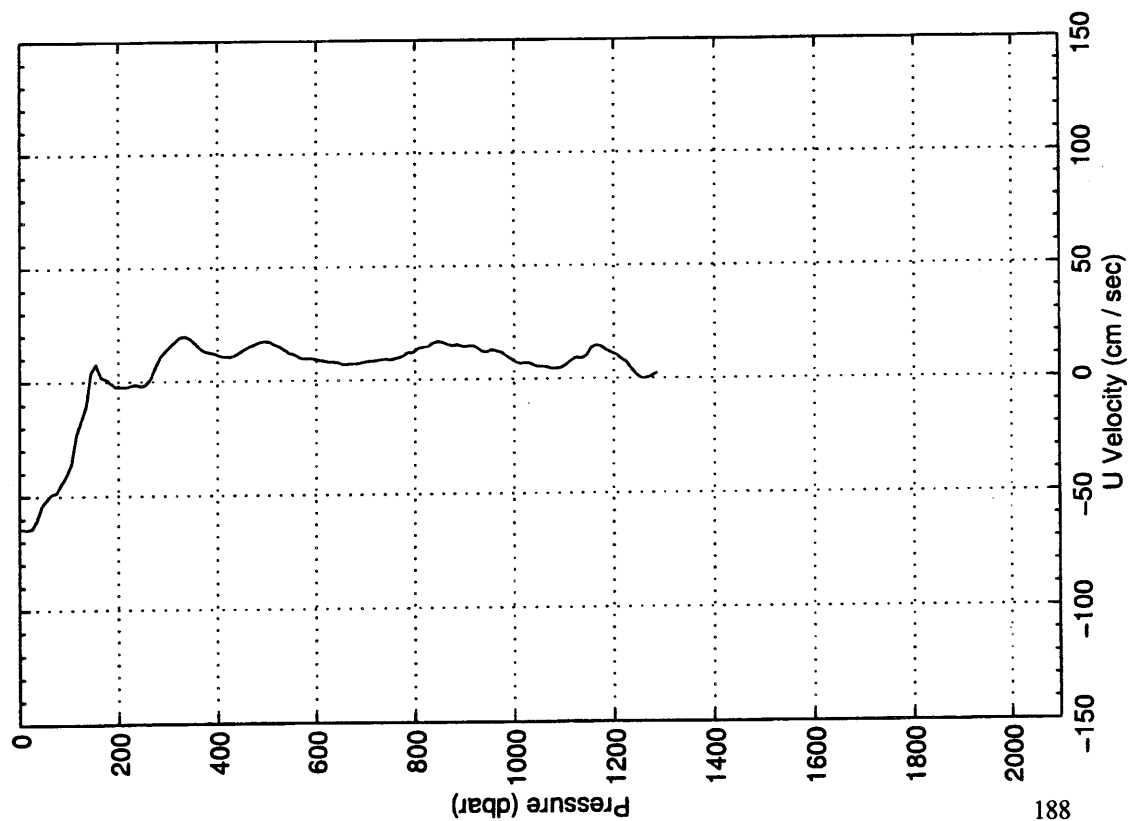
NBC-1 R/V SEWARD JOHNSON
LADCP Station 41 (98041)
Latitude 3.412N Longitude 48.112 W
04-Dec-1998 01:18 Z



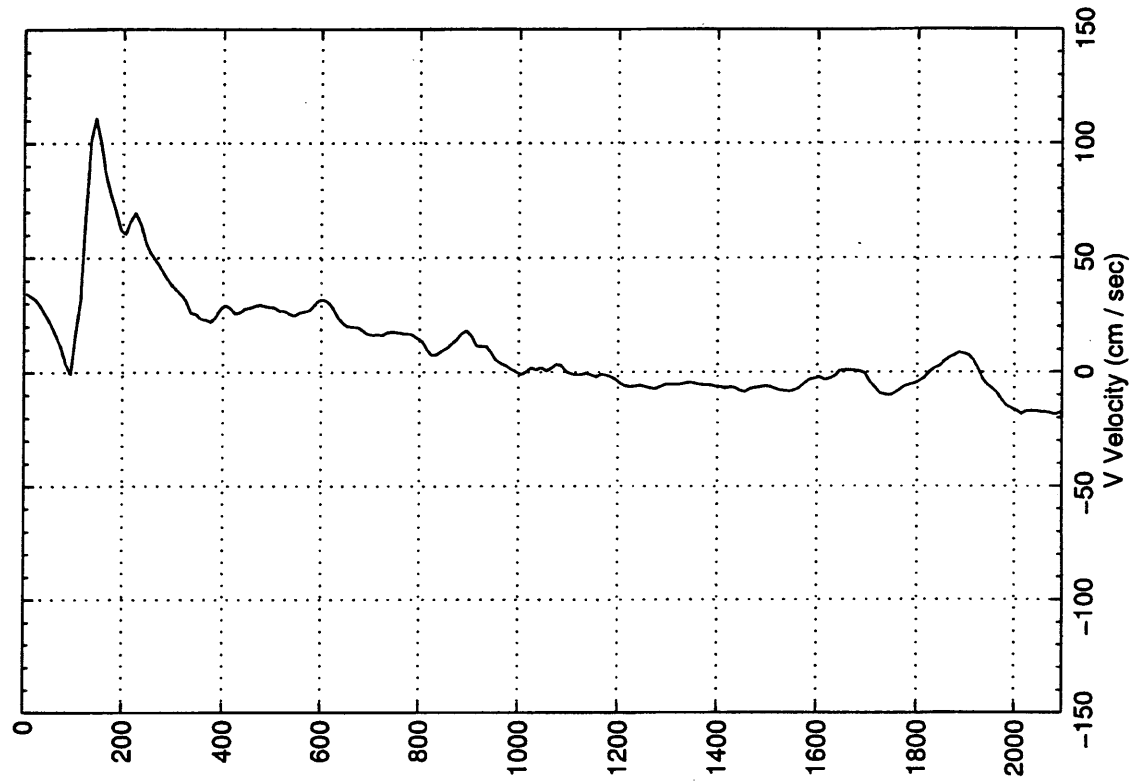
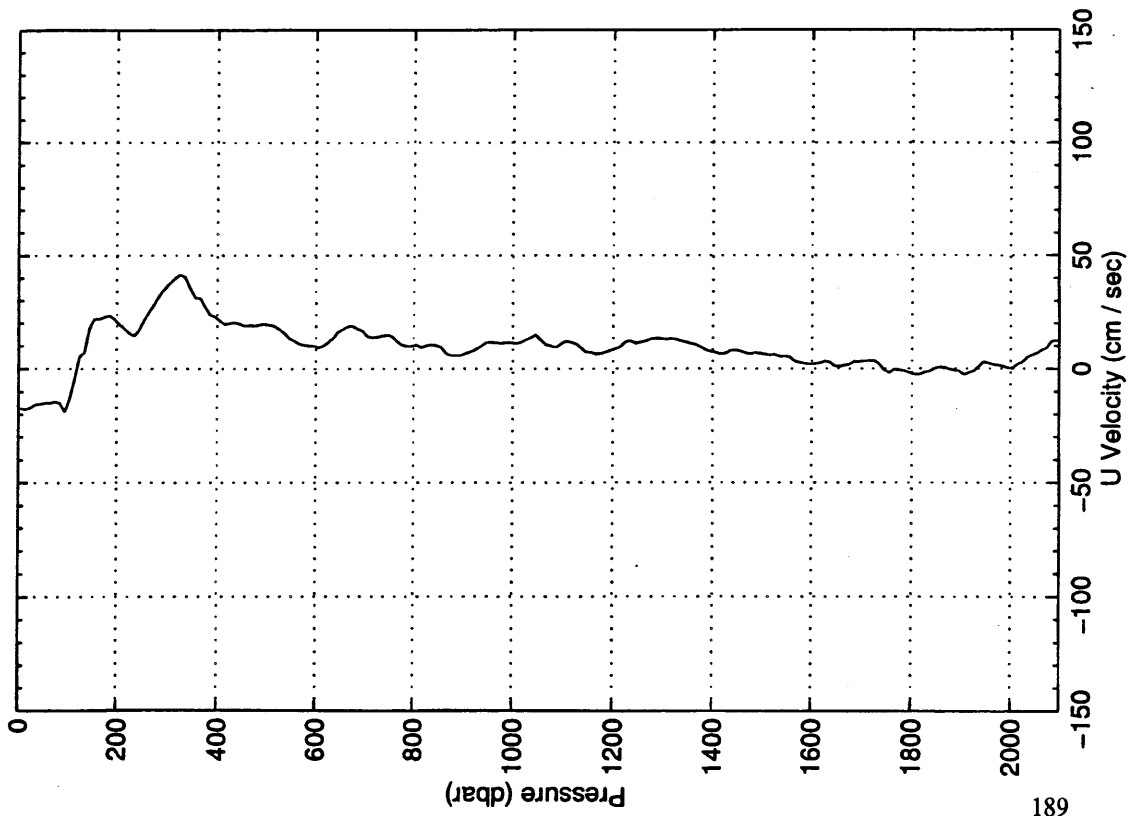
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Latitude 3.572N Longitude 48.089 W
04-Dec-1998 03:34 Z



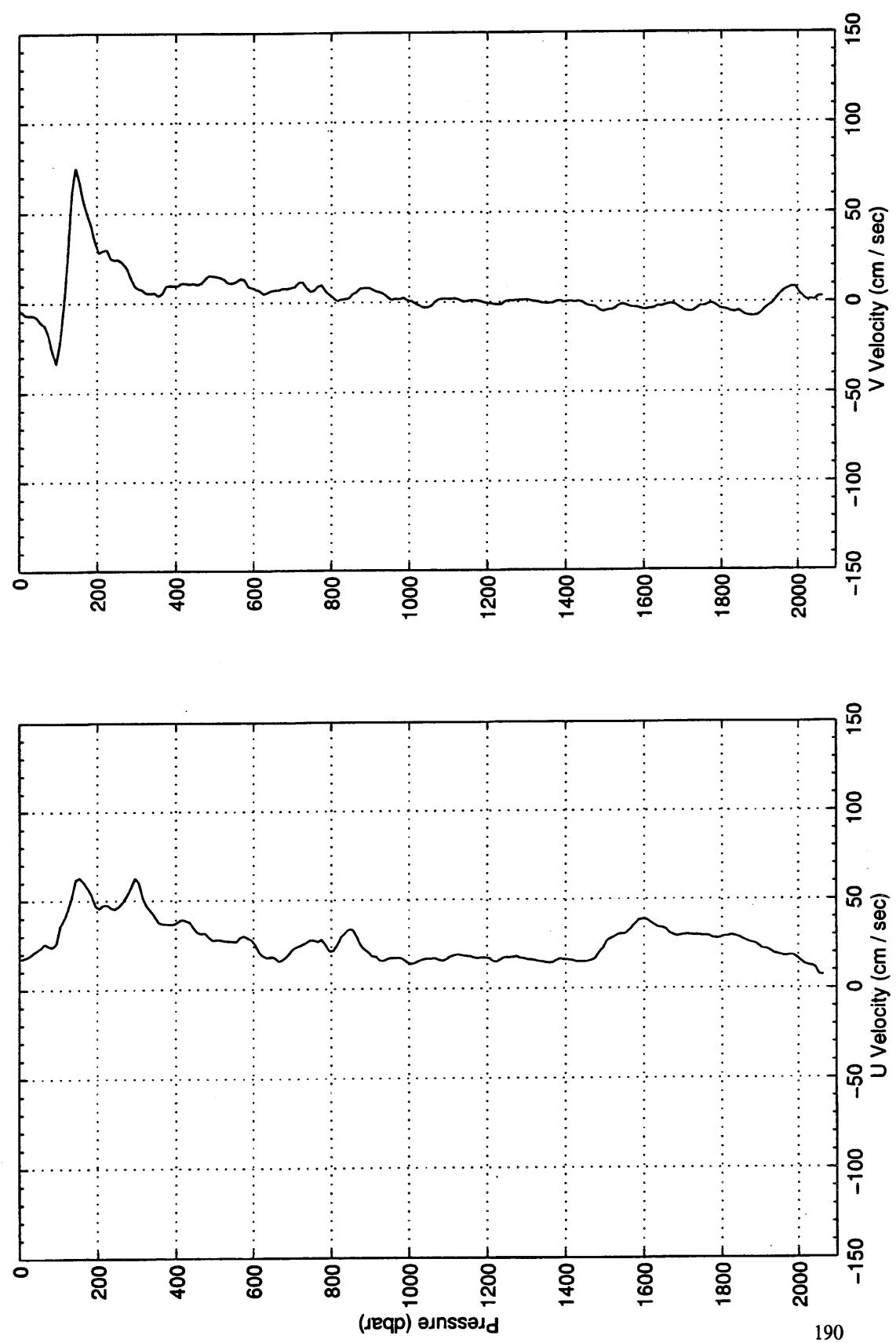
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LADCP Station 43 (98043)
Latitude 3.792N Longitude 48.034 W
04-Dec-1998 08:14 Z



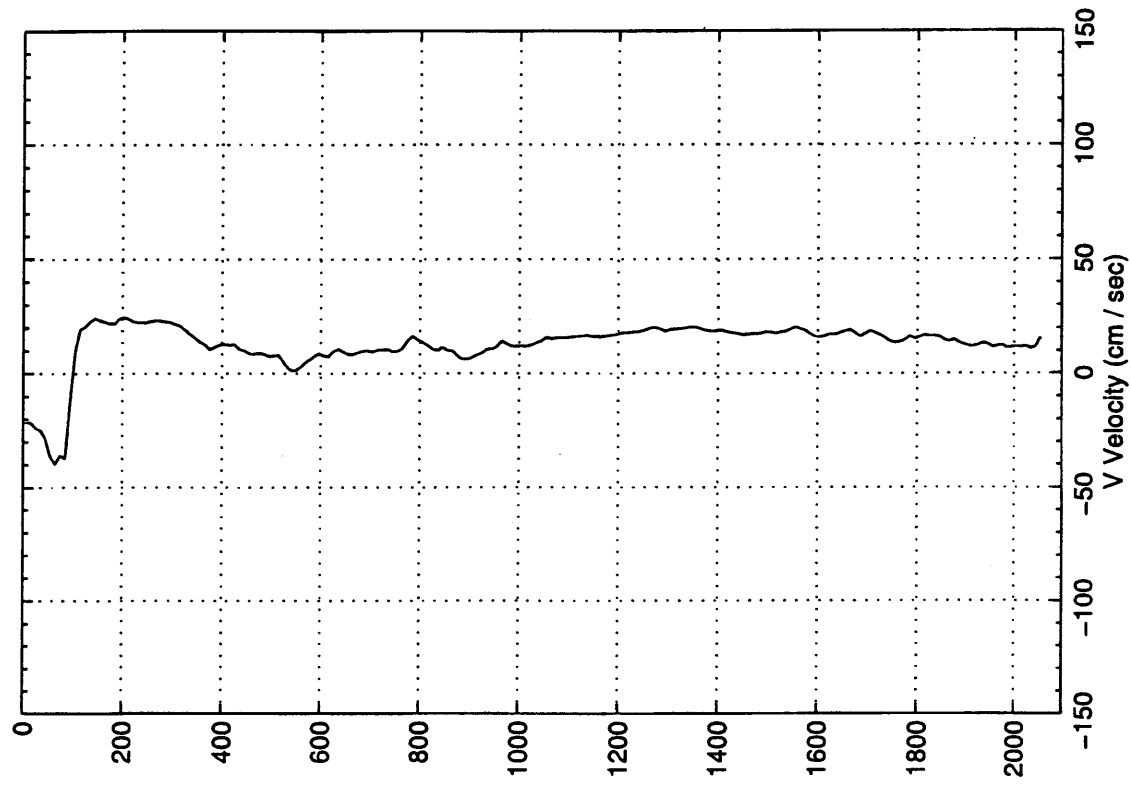
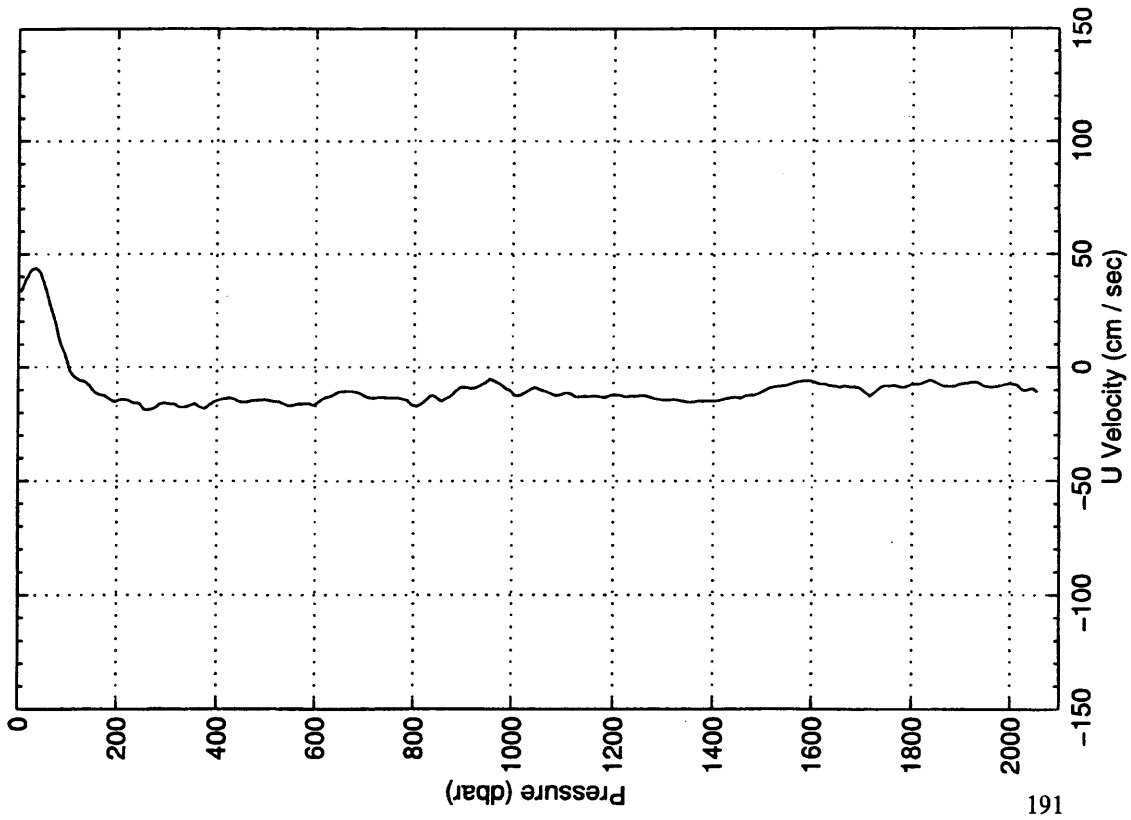
NBC-1 R/V SEWARD JOHNSON
LADCP Station 44 (98044)
Latitude 4.026N Longitude 47.108 W
04-Dec-1998 11:28 Z



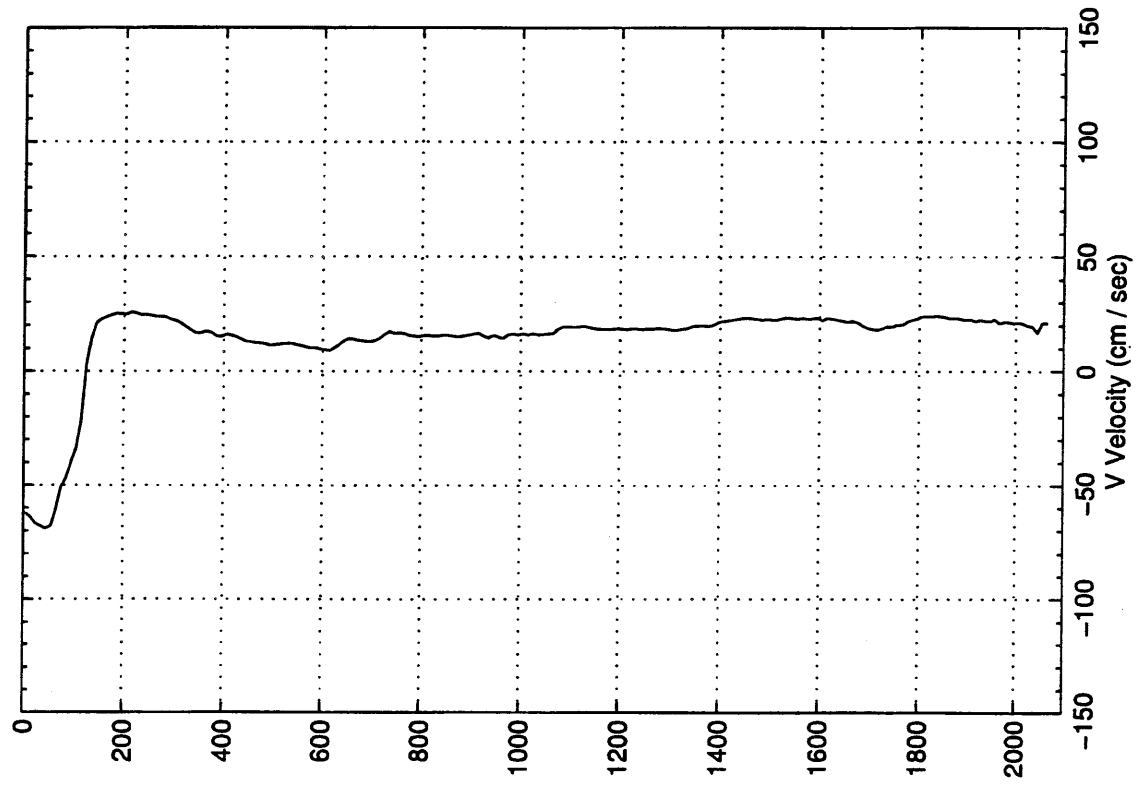
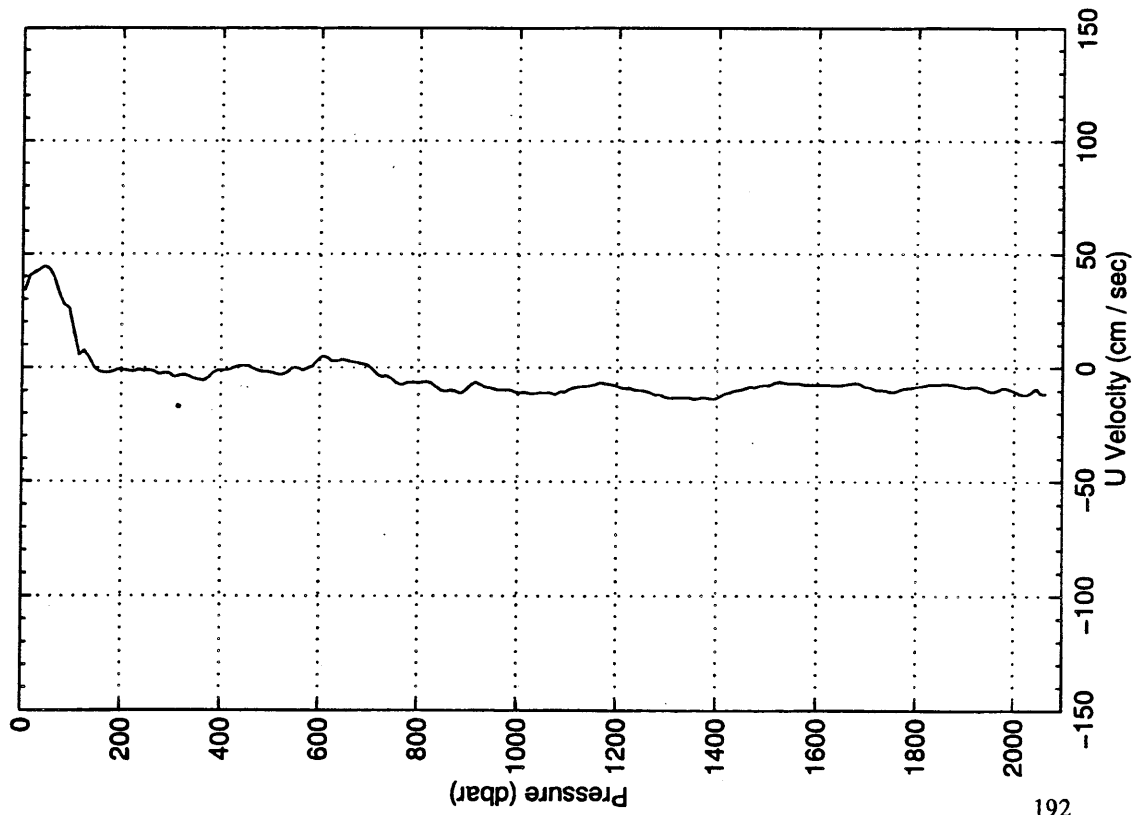
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LADCP Station 45 (98045)
Latitude 4.279N Longitude 47.147 W
04-Dec-1998 14:59 Z



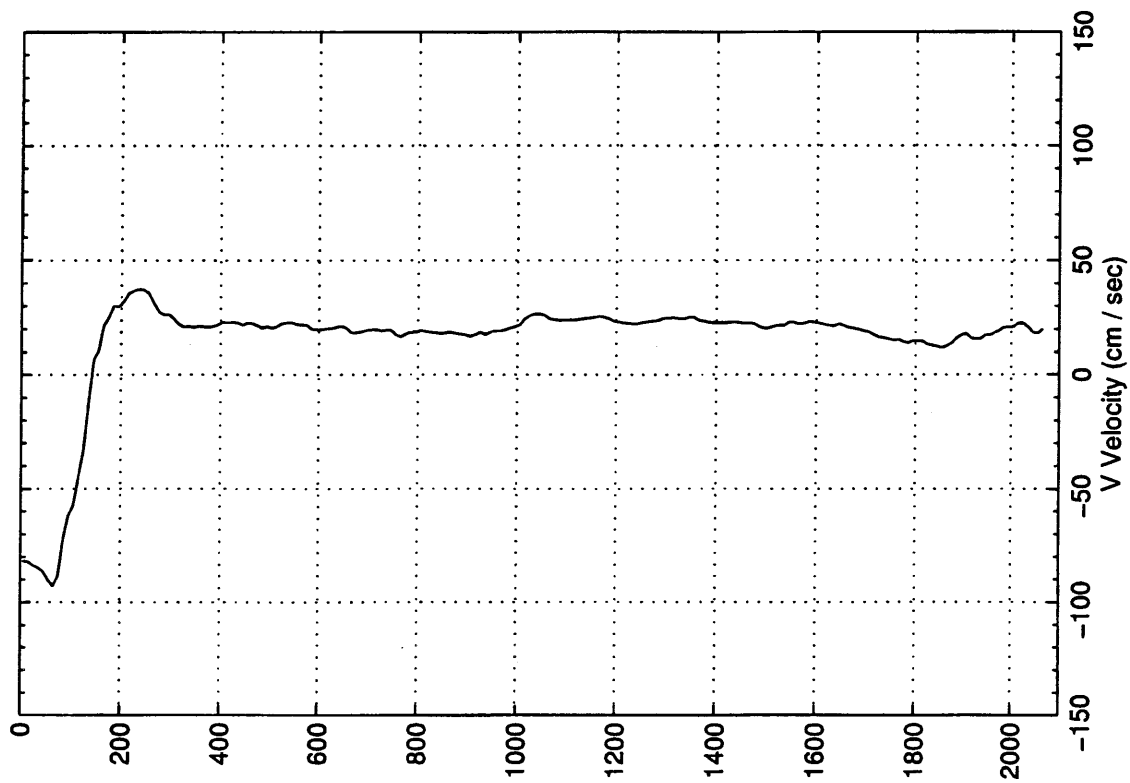
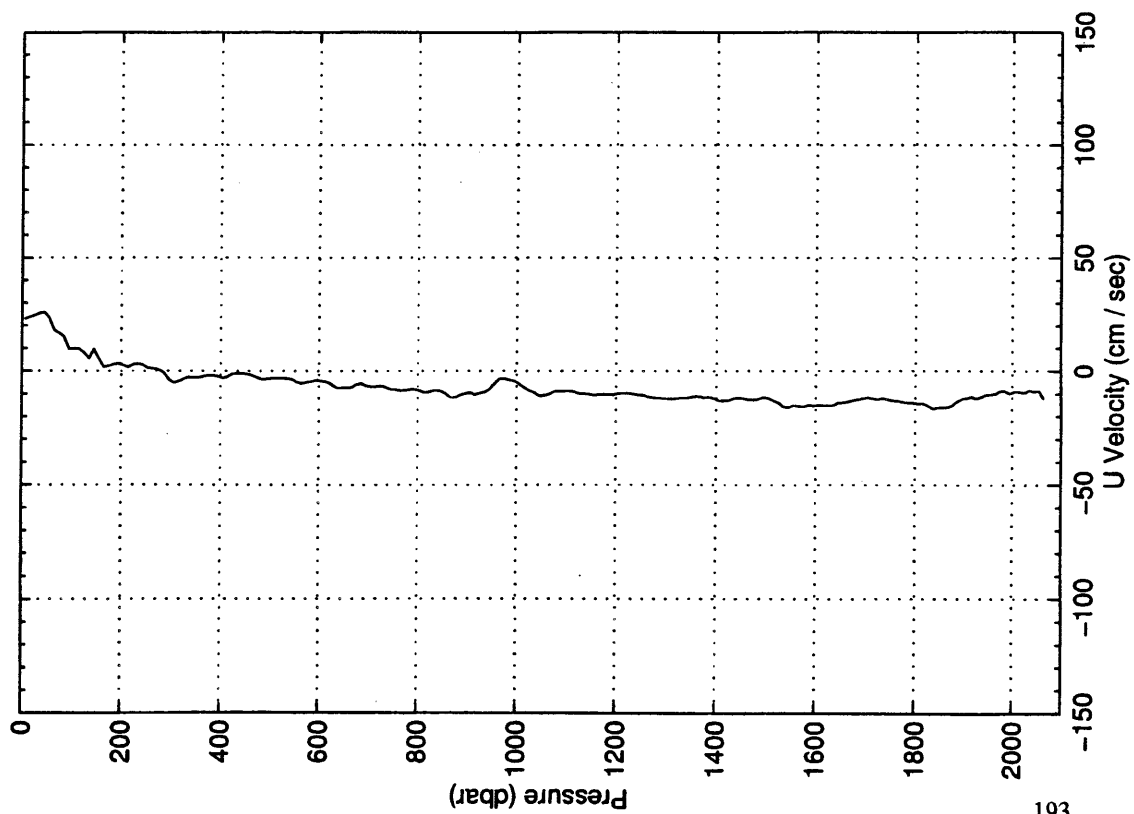
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Latitude 5.996N Longitude 47.087 W
05-Dec-1998 03:01 Z



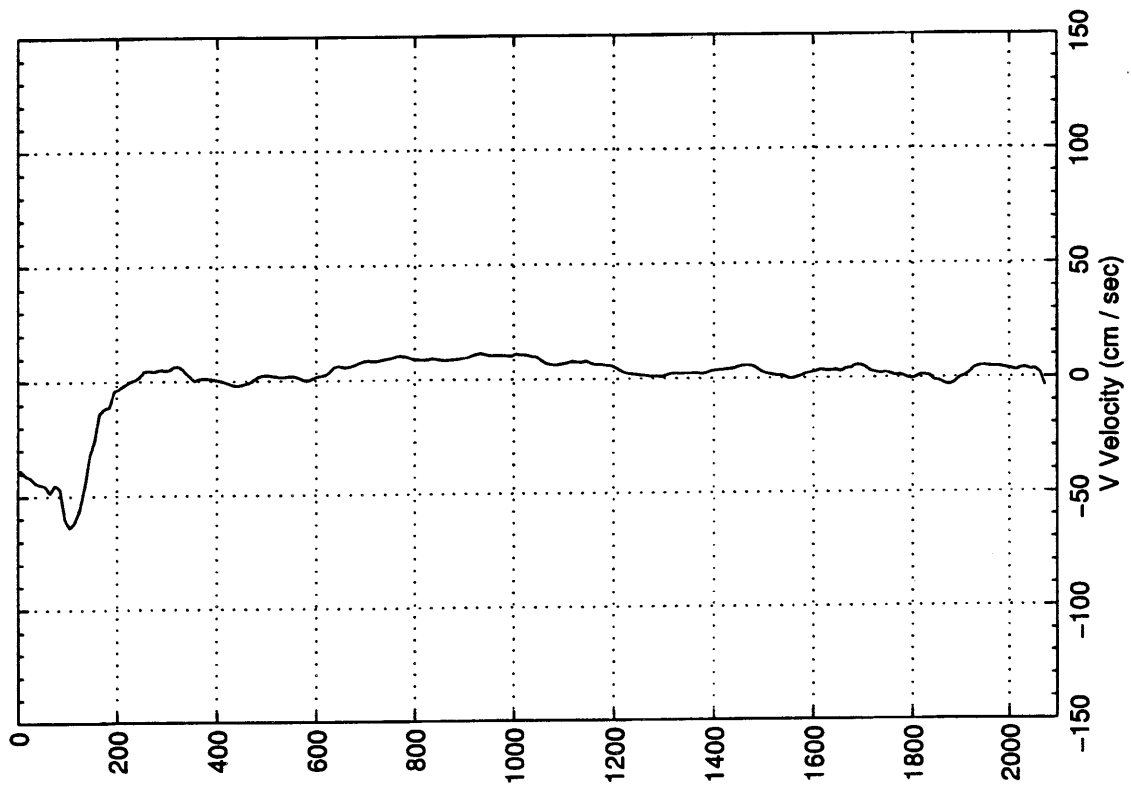
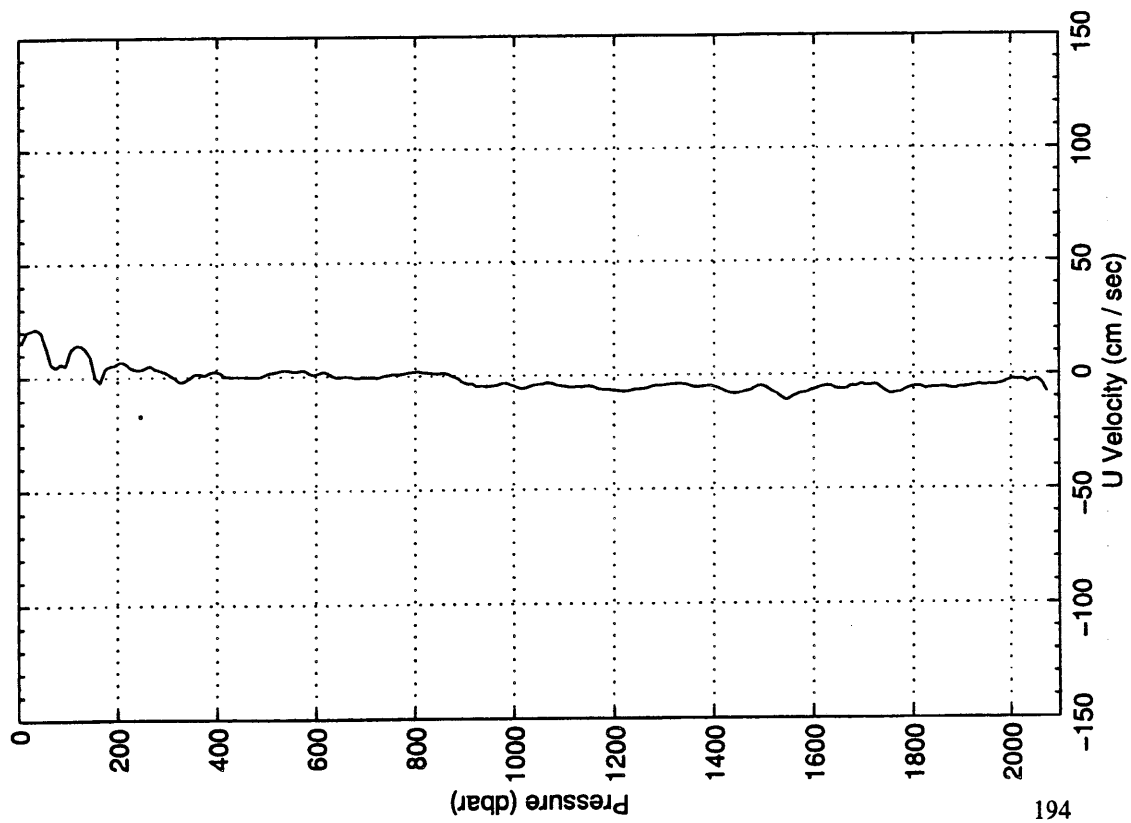
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Latitude 6.036N Longitude 47.163 W
05-Dec-1998 07:20 Z



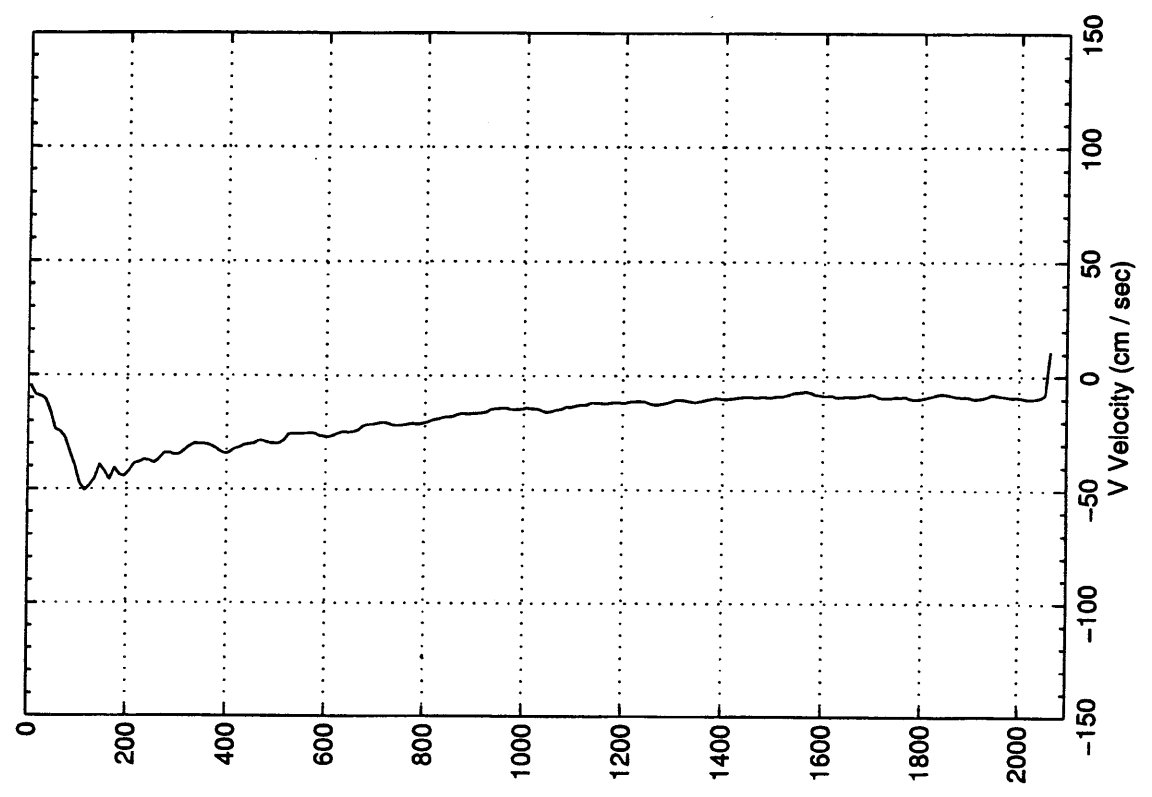
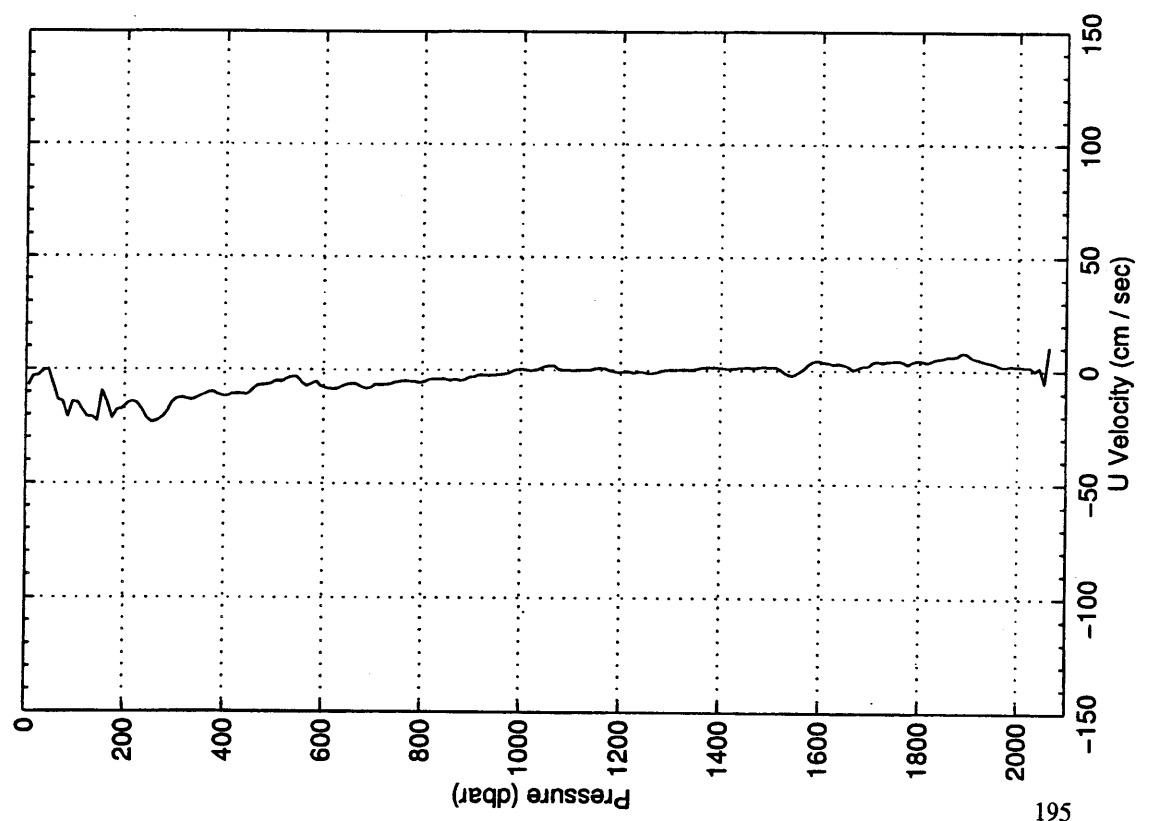
NBC-1 R/V SEWARD JOHNSON
LADCP Station 48 (98048)
Latitude 6.091N Longitude 48.008 W
05-Dec-1998 11:57 Z



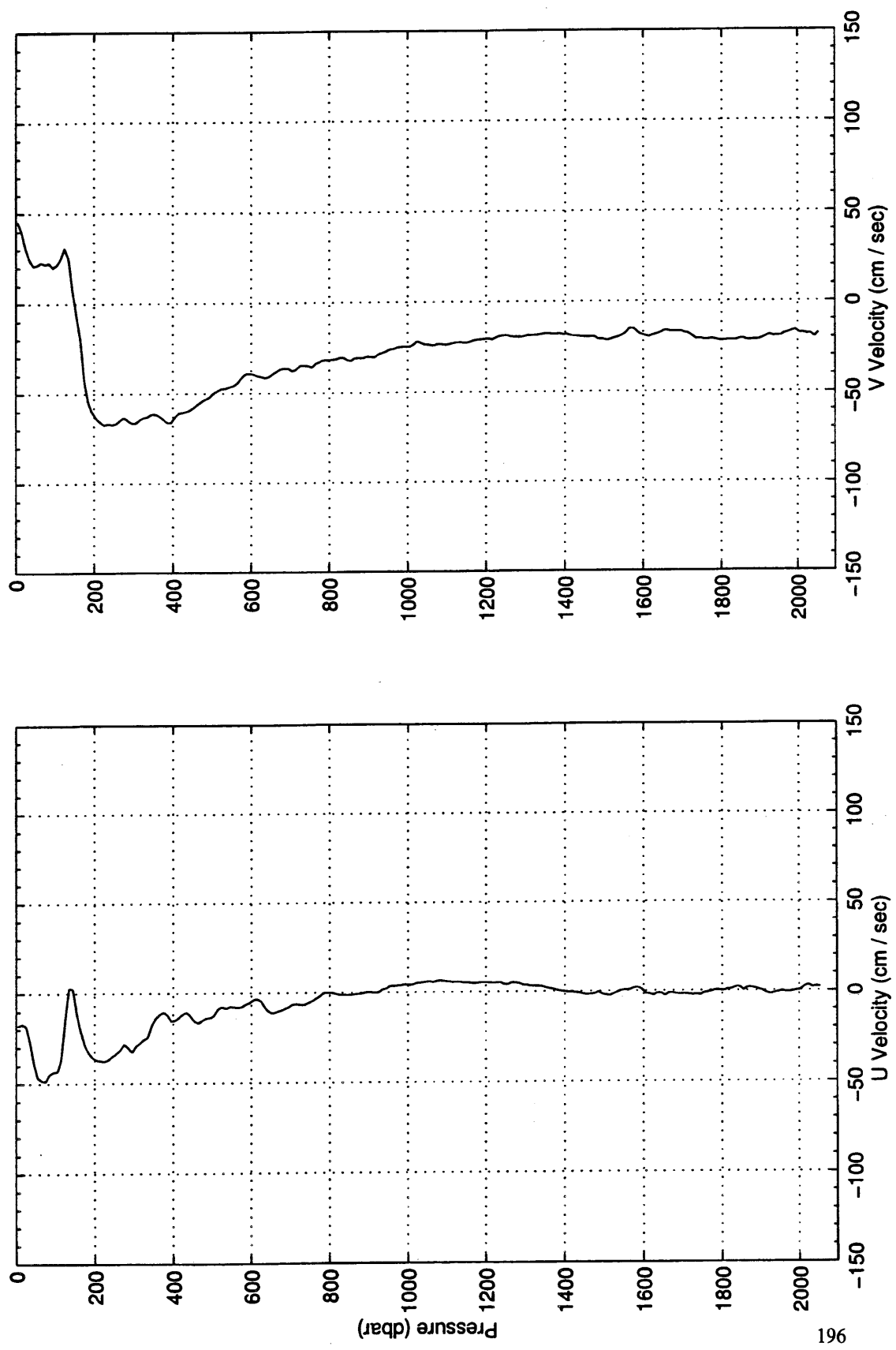
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LADCP Station 49 (98049)
Latitude 6.161N Longitude 49.010 W
05-Dec-1998 16:17 Z



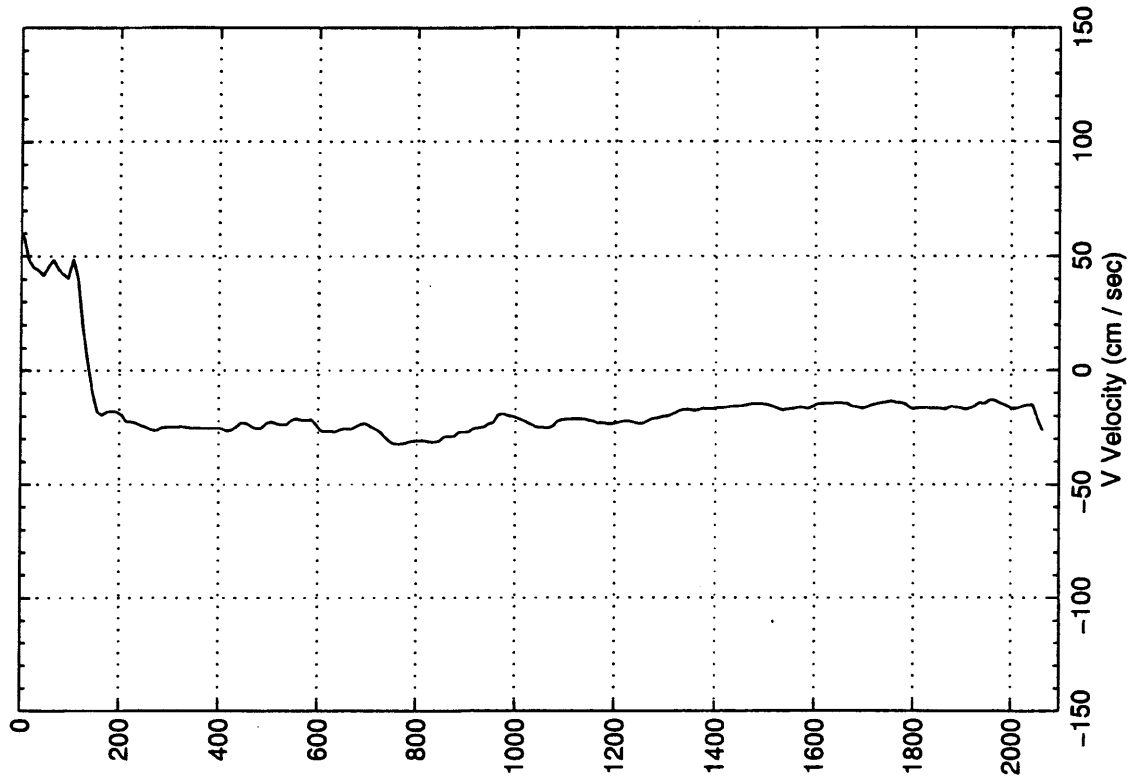
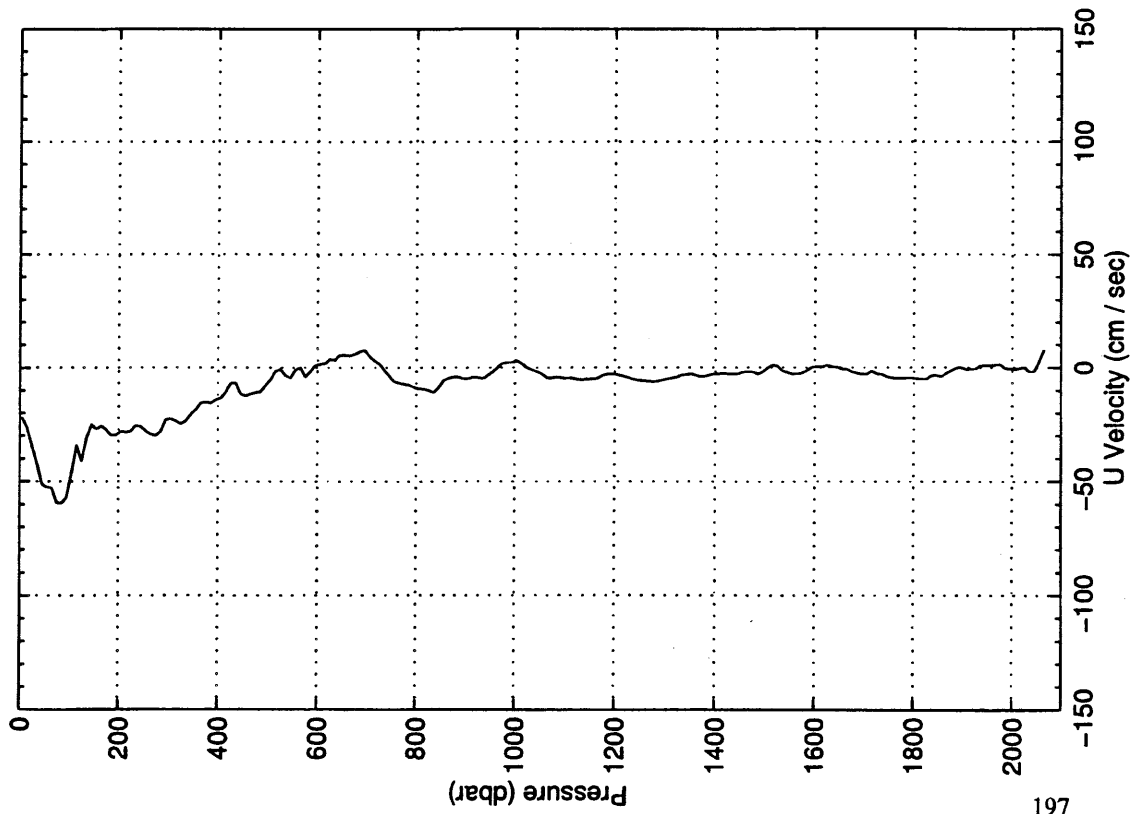
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LADCP Station 50 (98050)
Latitude 6.231N Longitude 49.004 W
05-Dec-1998 21:02 Z



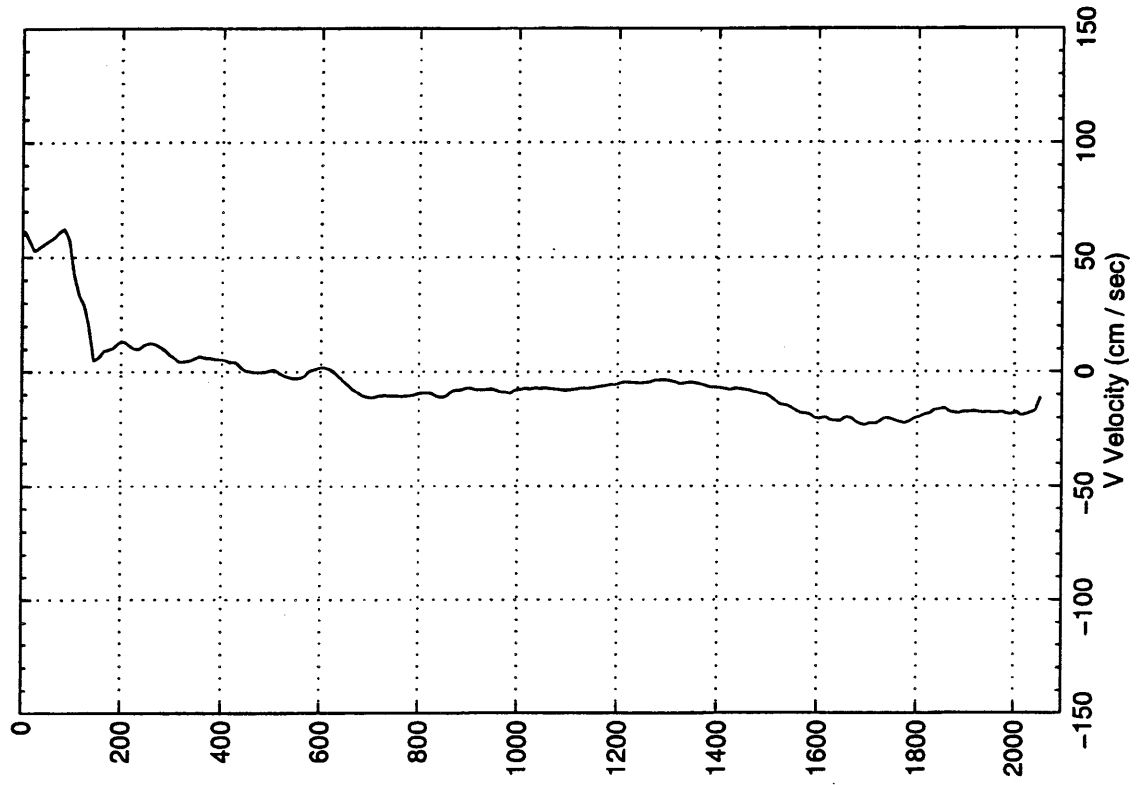
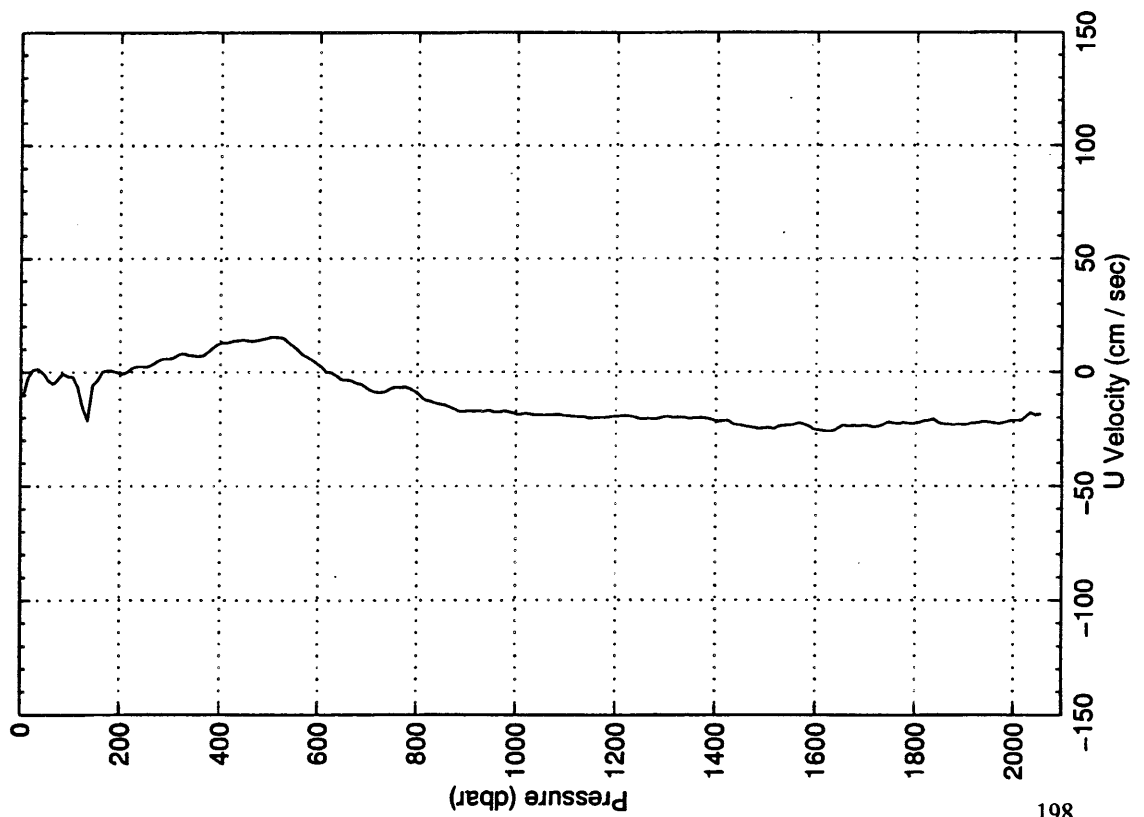
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LADCP Station 51 (98051)
Latitude 6.284N Longitude 50.009 W
06-Dec-1998 01:04 Z



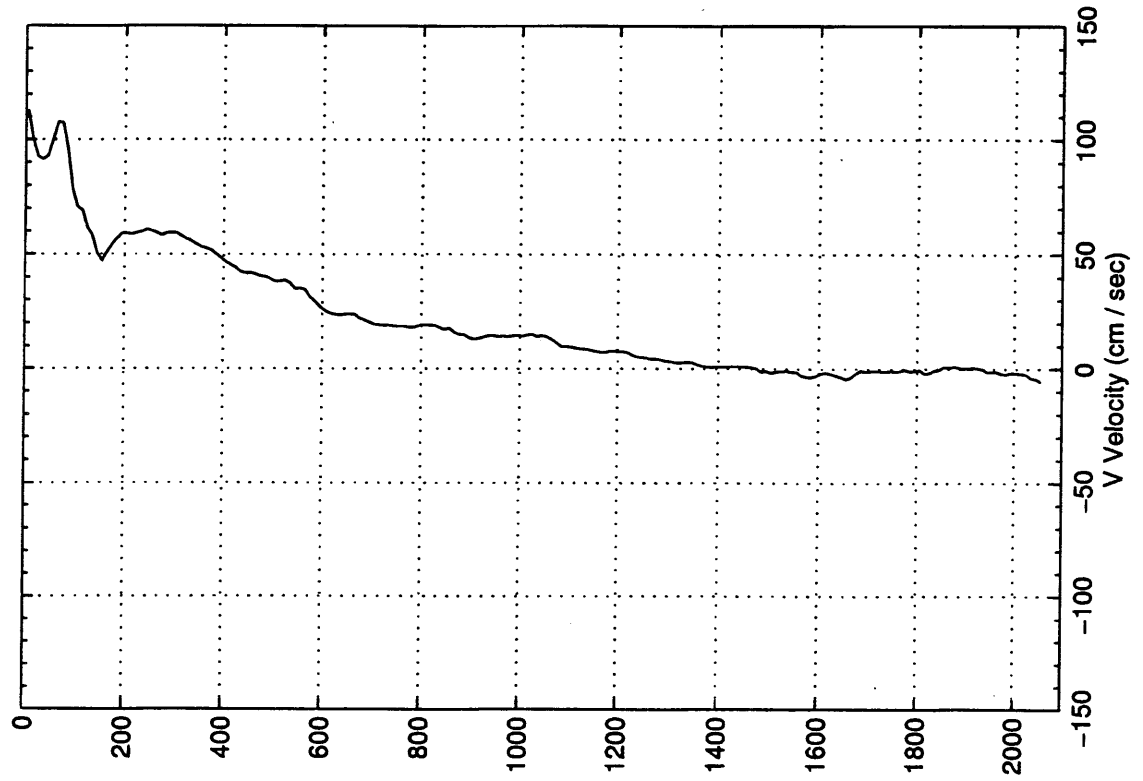
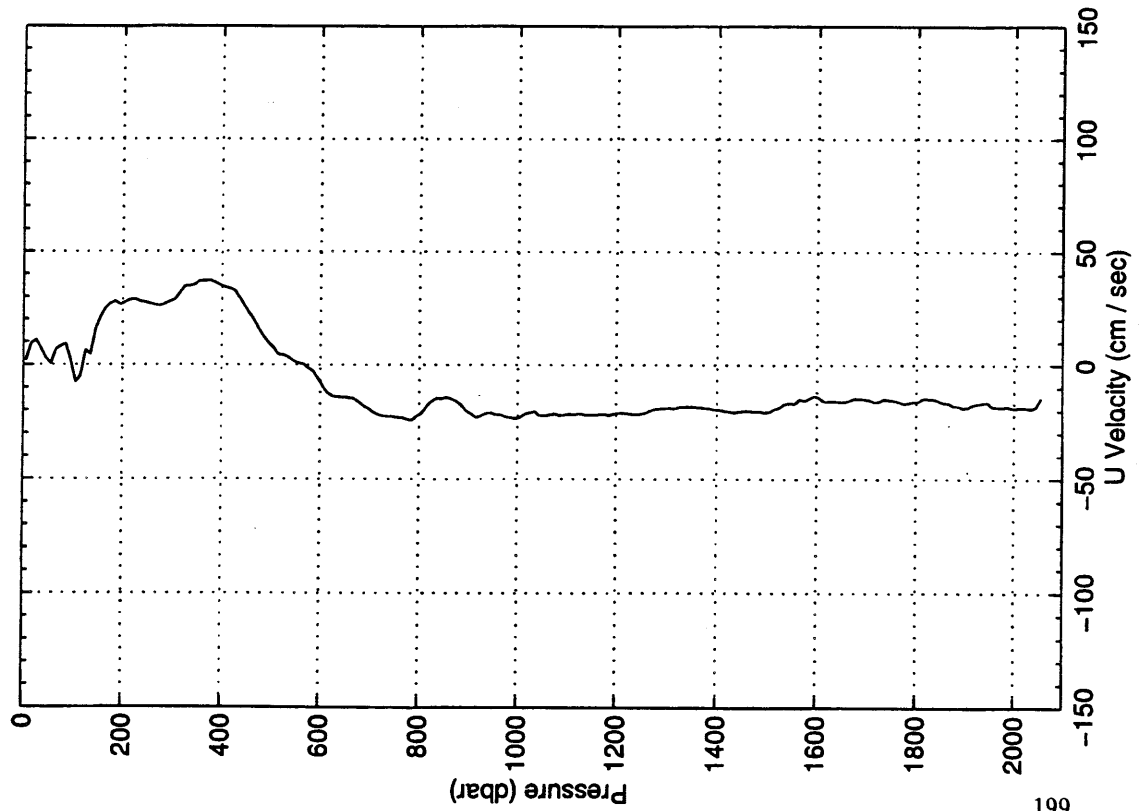
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LADCP Station 52 (98052)
Latitude 6.400N Longitude 50.010 W
06-Dec-1998 05:21 Z



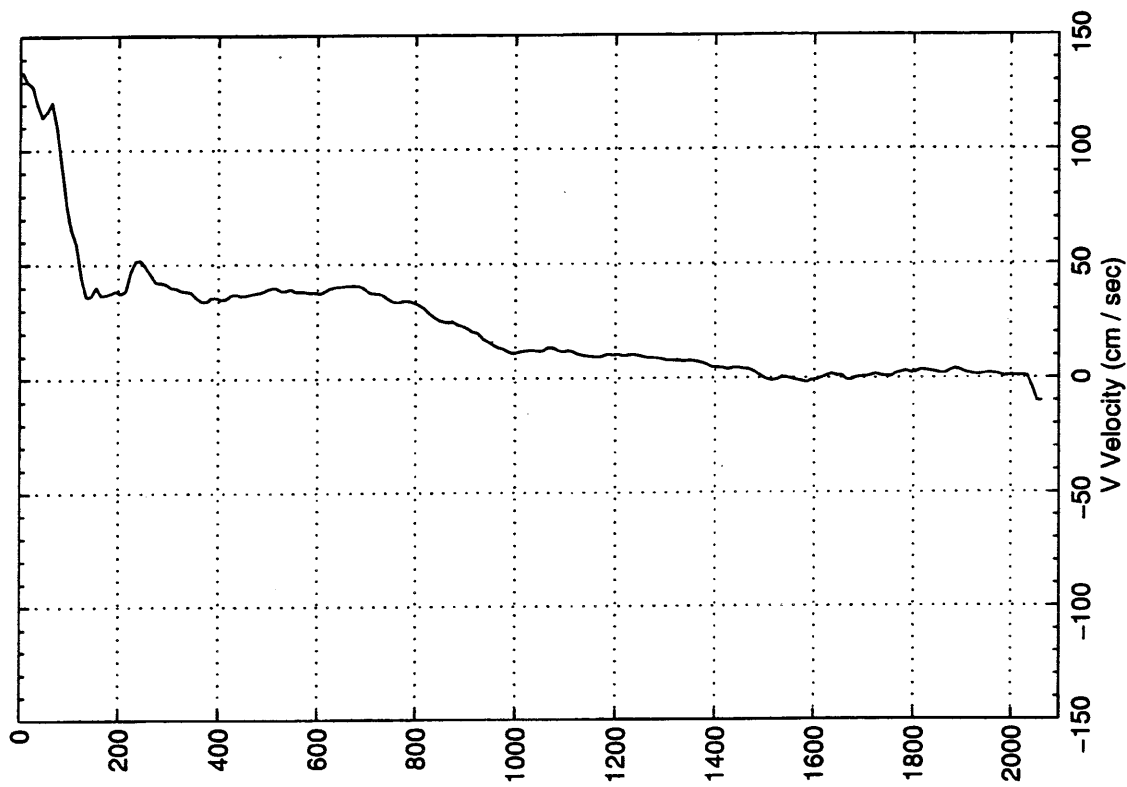
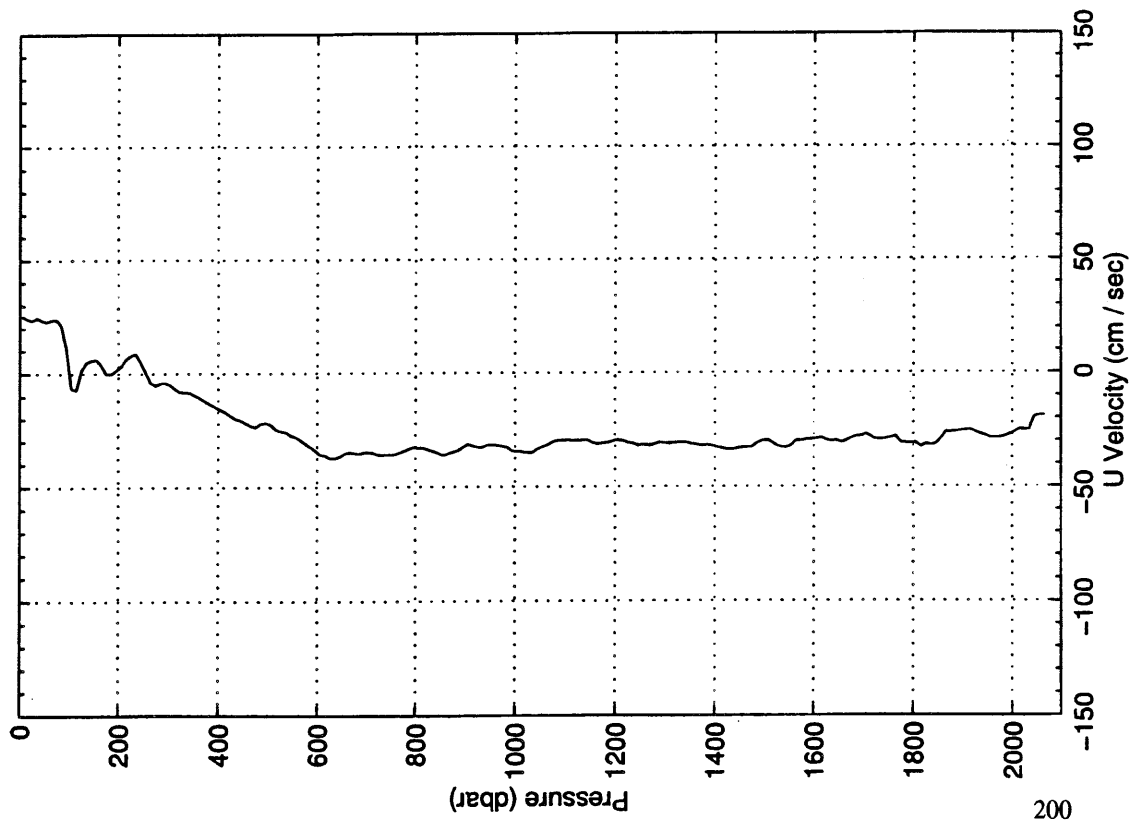
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06-Dec-1998 11:46 Z



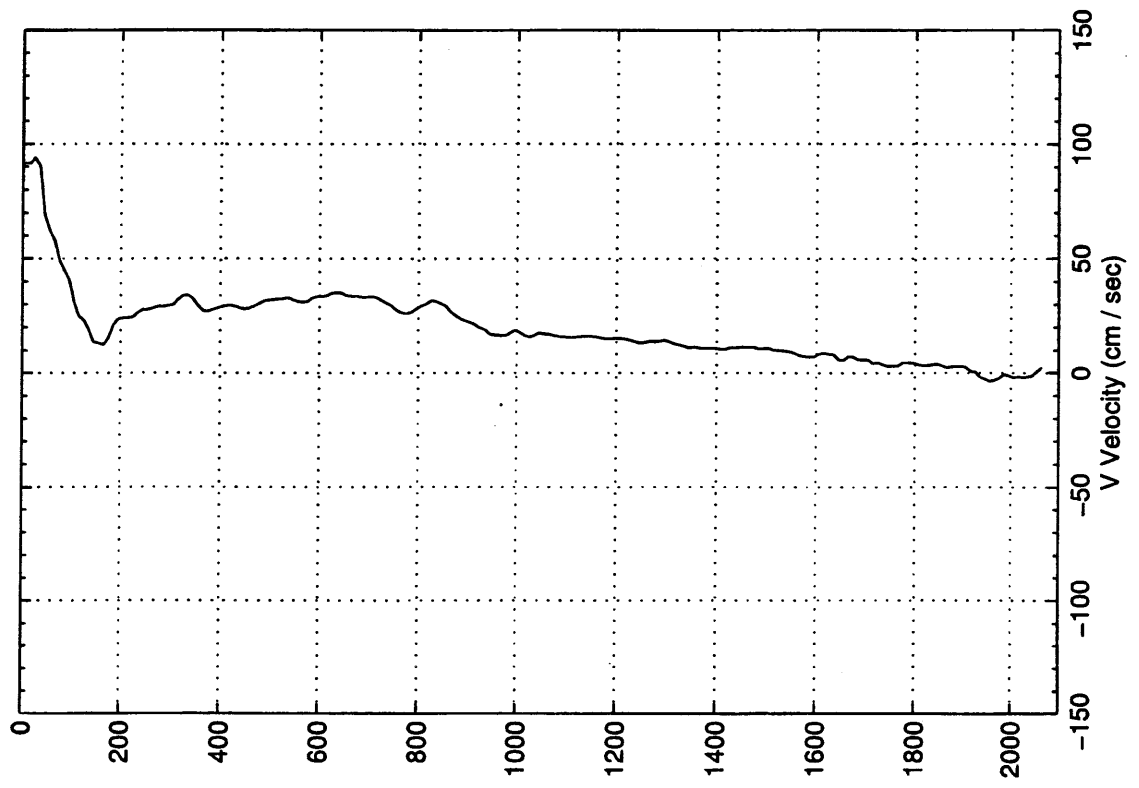
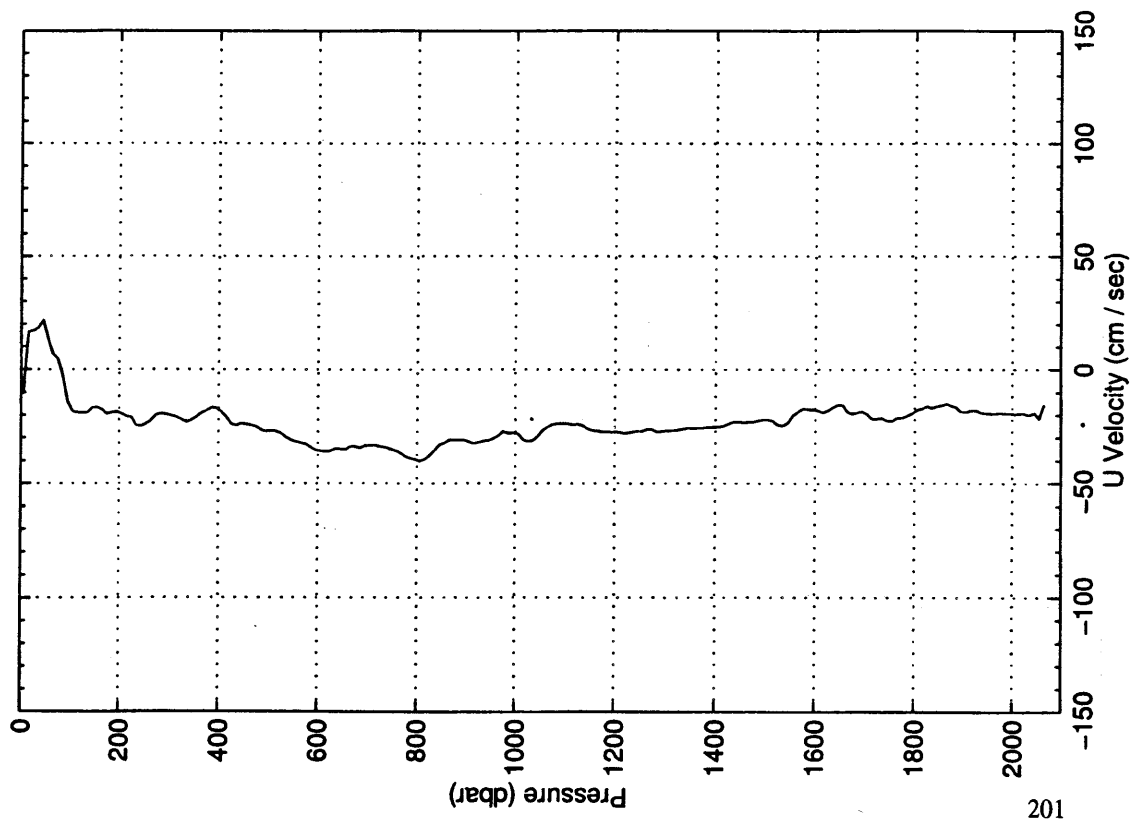
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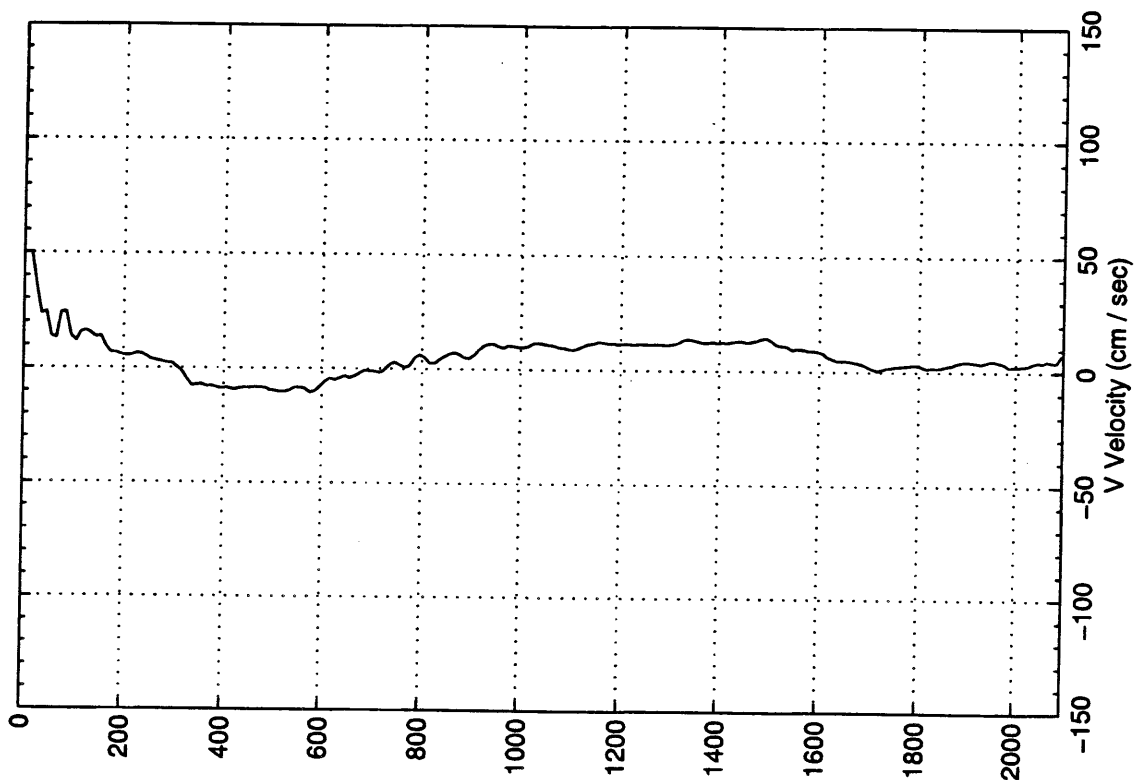
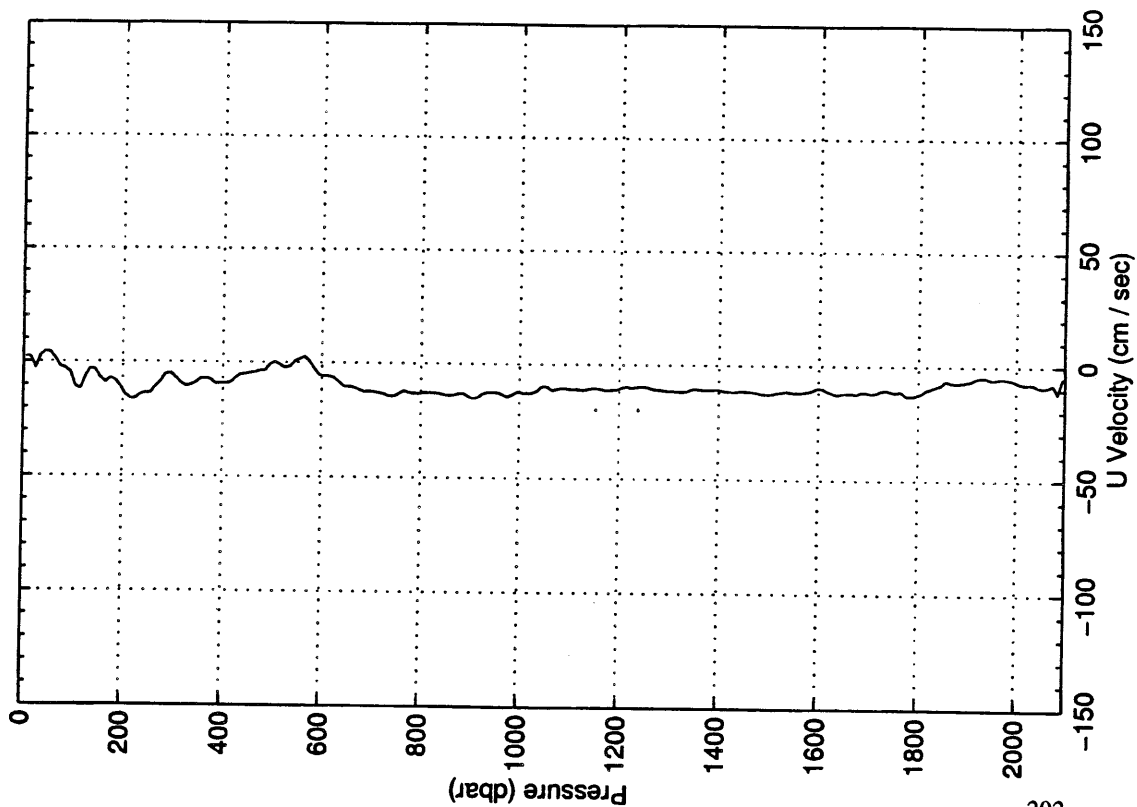
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LADCP Station 55 (98055)
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06-Dec-1998 19:48 Z



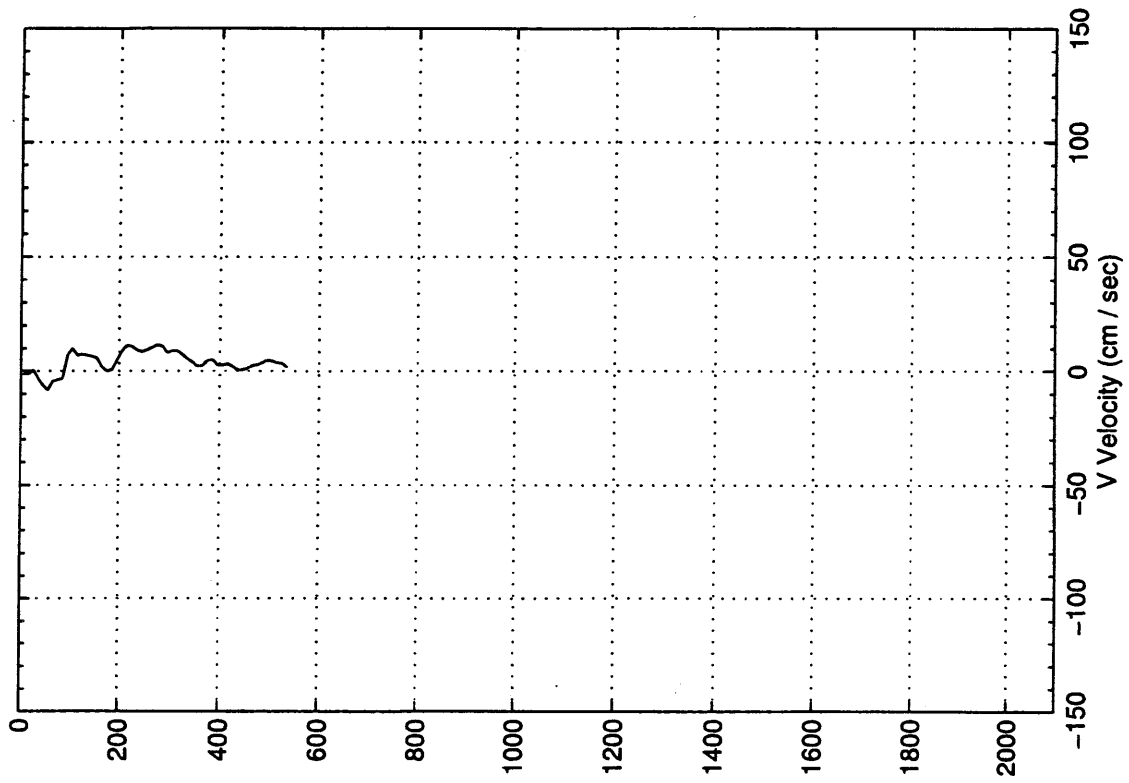
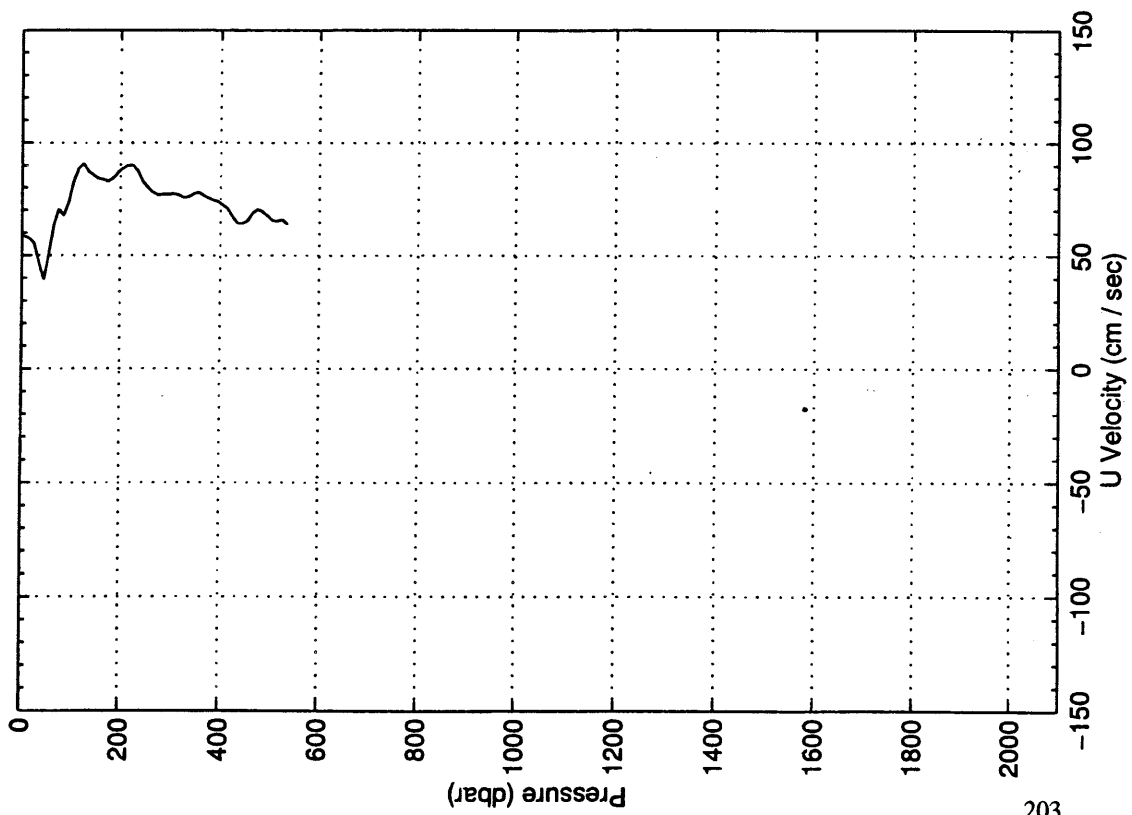
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Latitude 7.770N Longitude 52.074 W
06-Dec-1998 23:43 Z



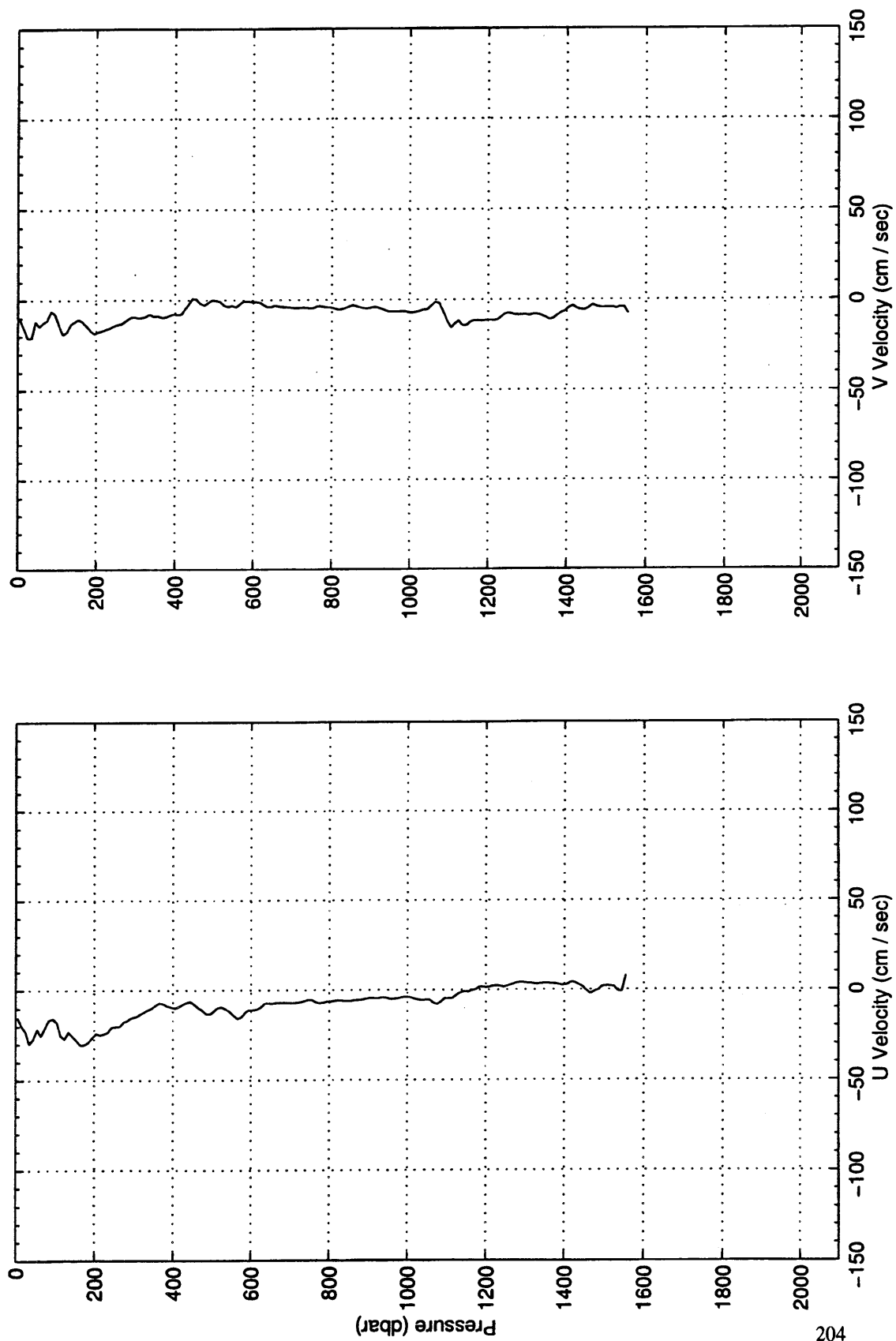
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07-Dec-1998 03:30 Z



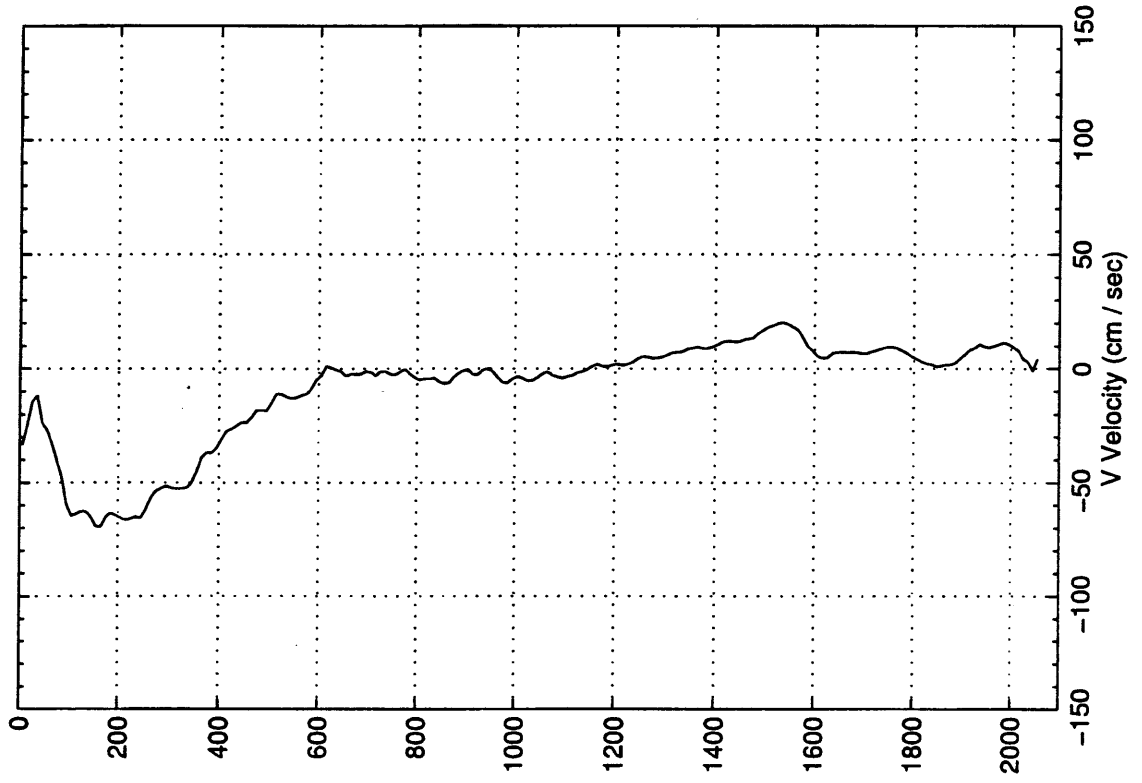
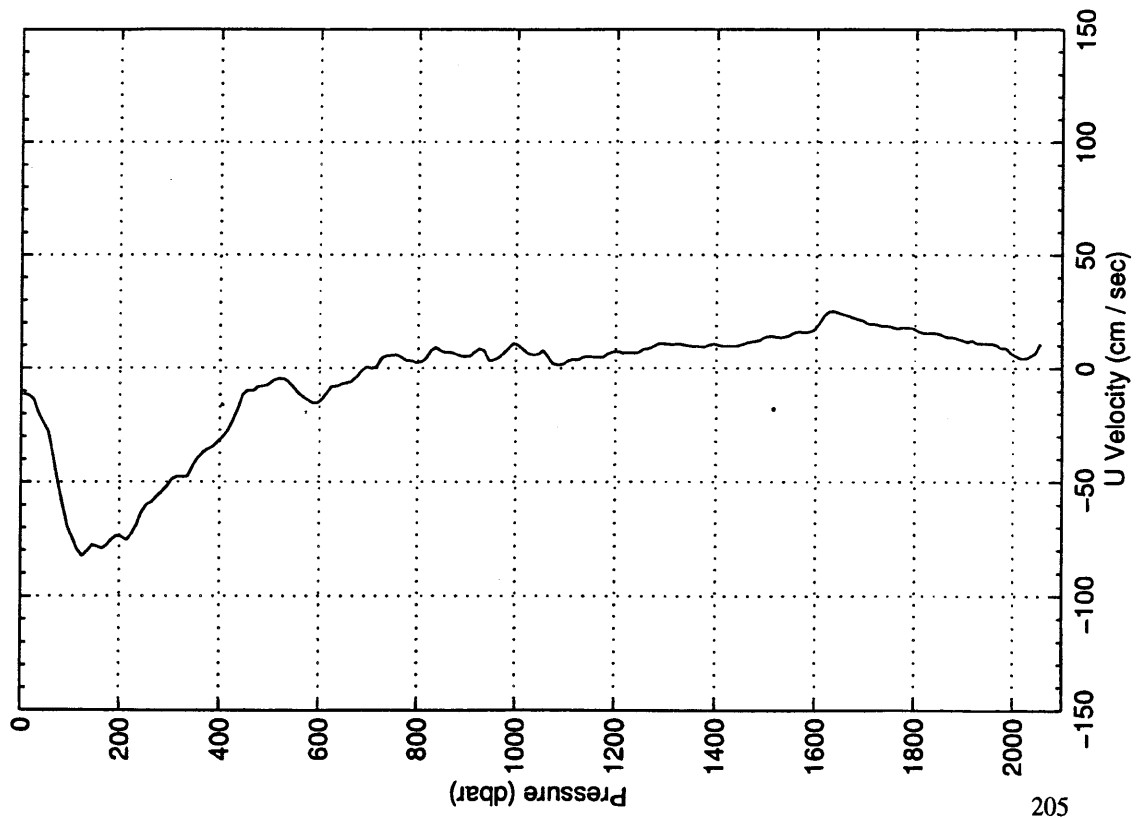
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Latitude 7.389N Longitude 55.078 W
09-Dec-1998 00:43 Z



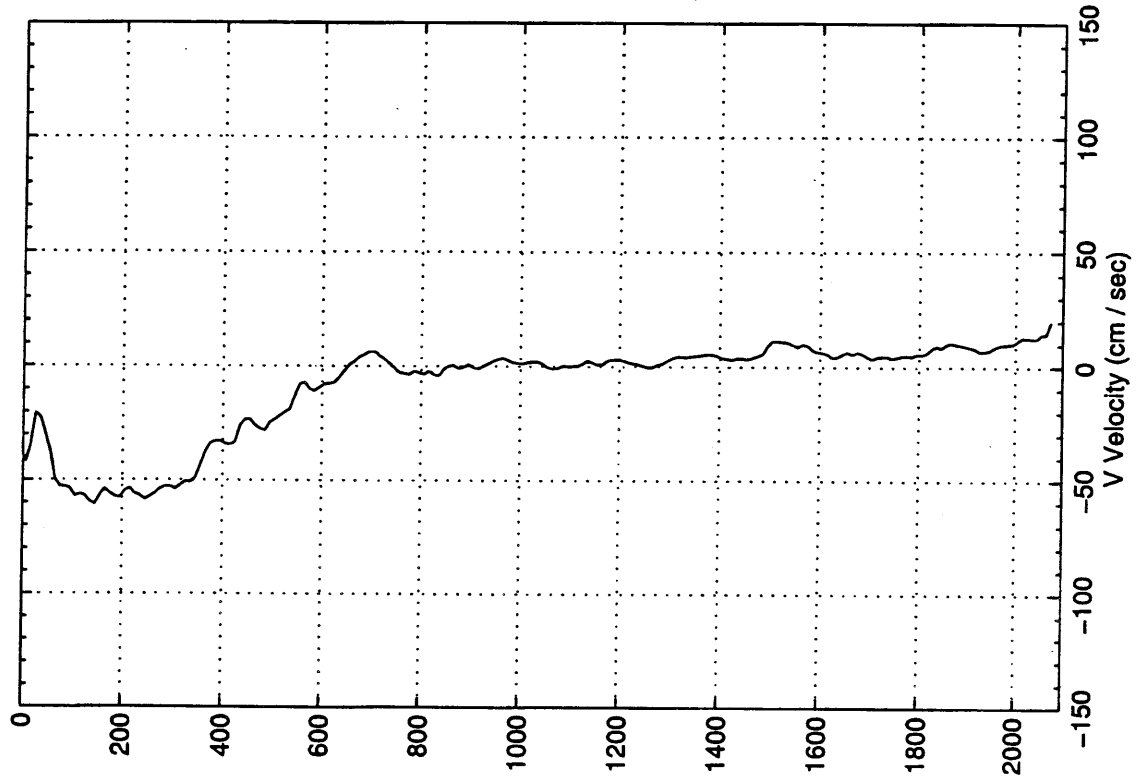
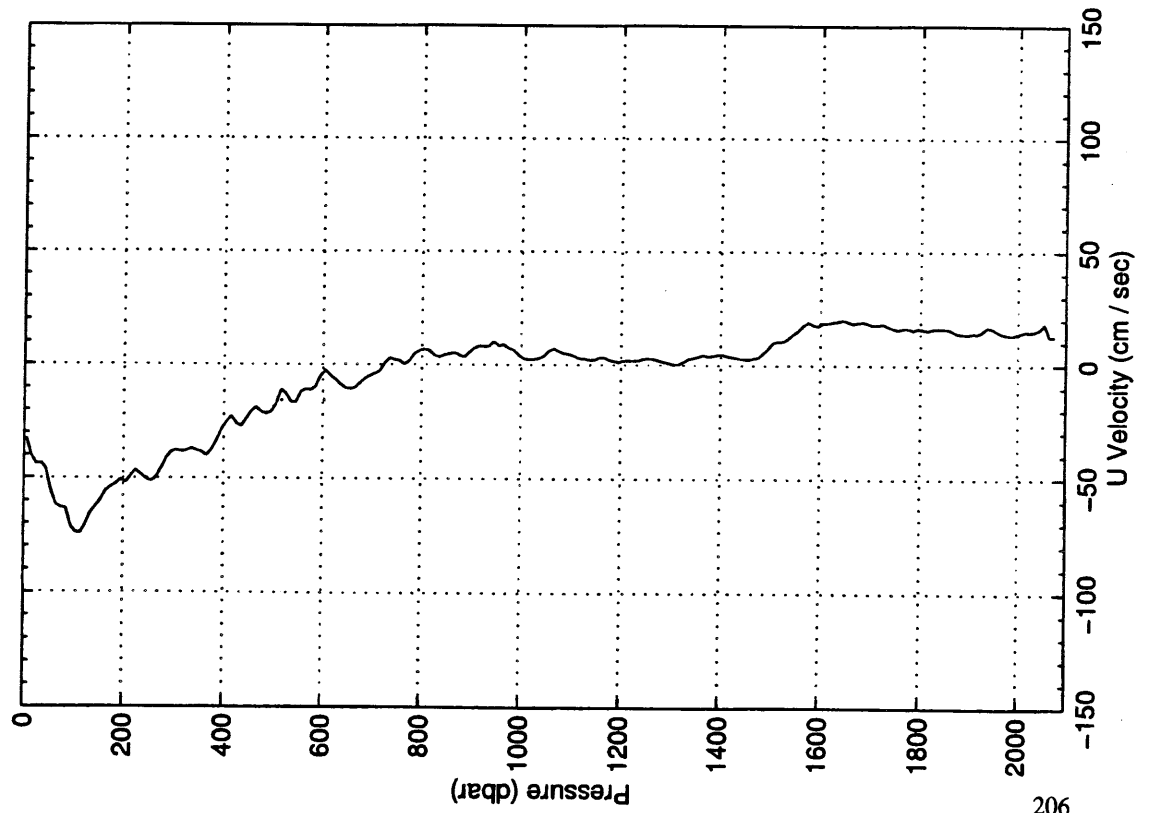
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Latitude 7.638N Longitude 55.021 W
09-Dec-1998 03:00 Z



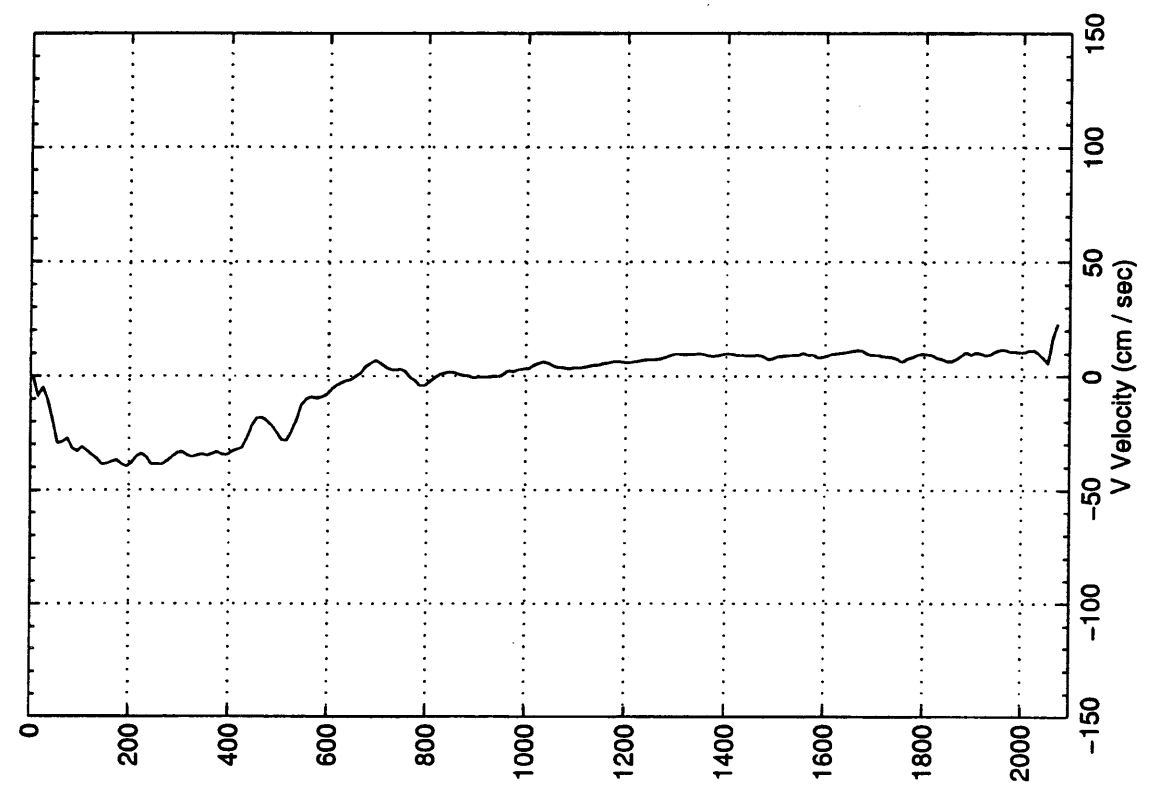
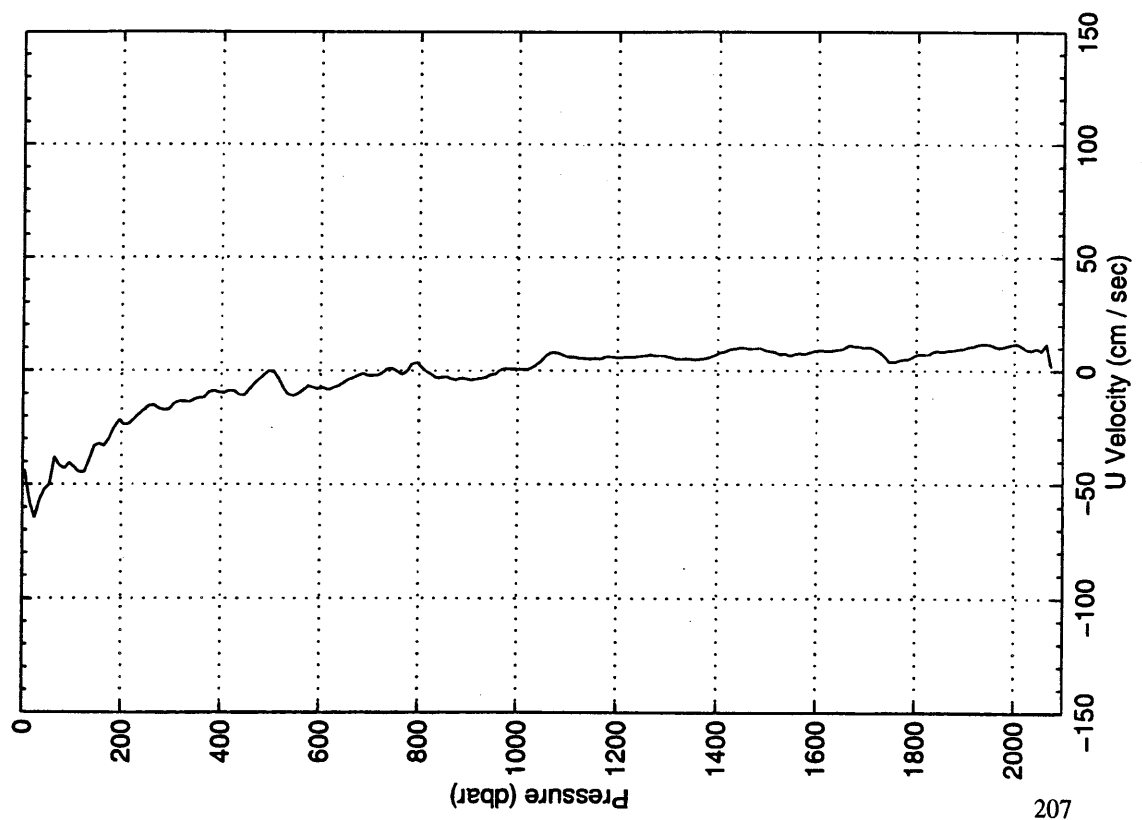
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Latitude 7.945N Longitude 55.086 W
09-Dec-1998 06:14 Z



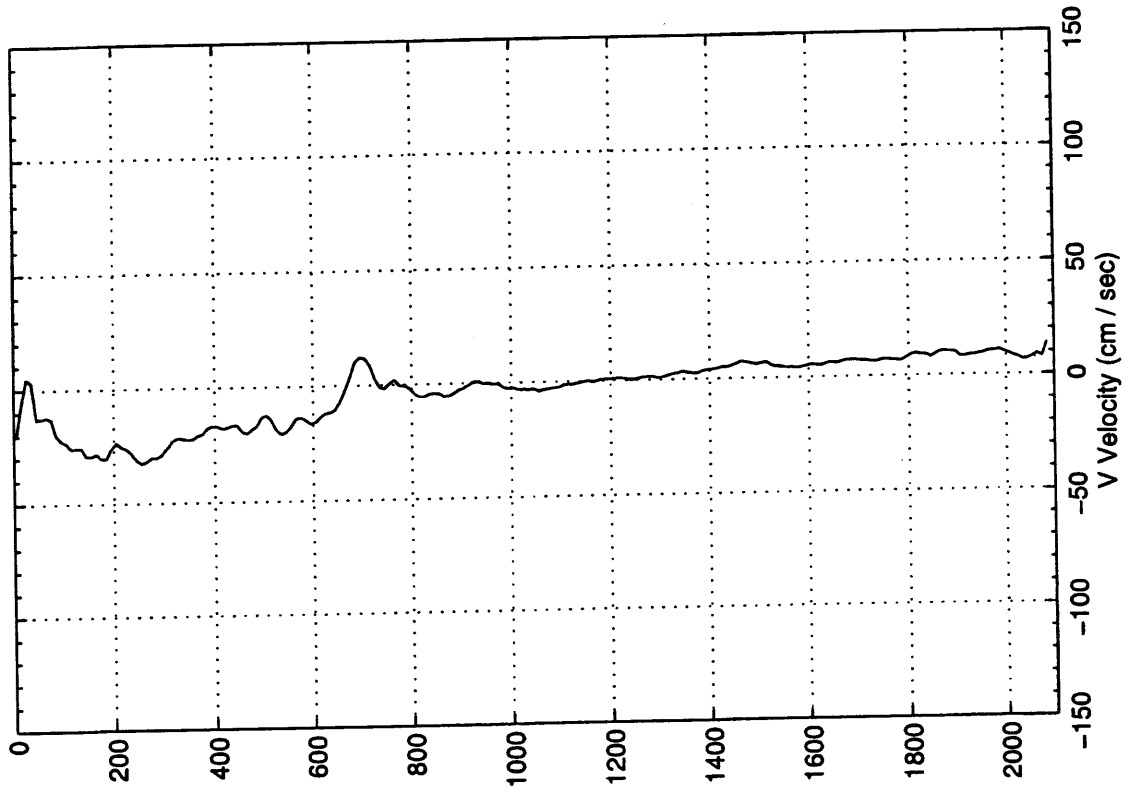
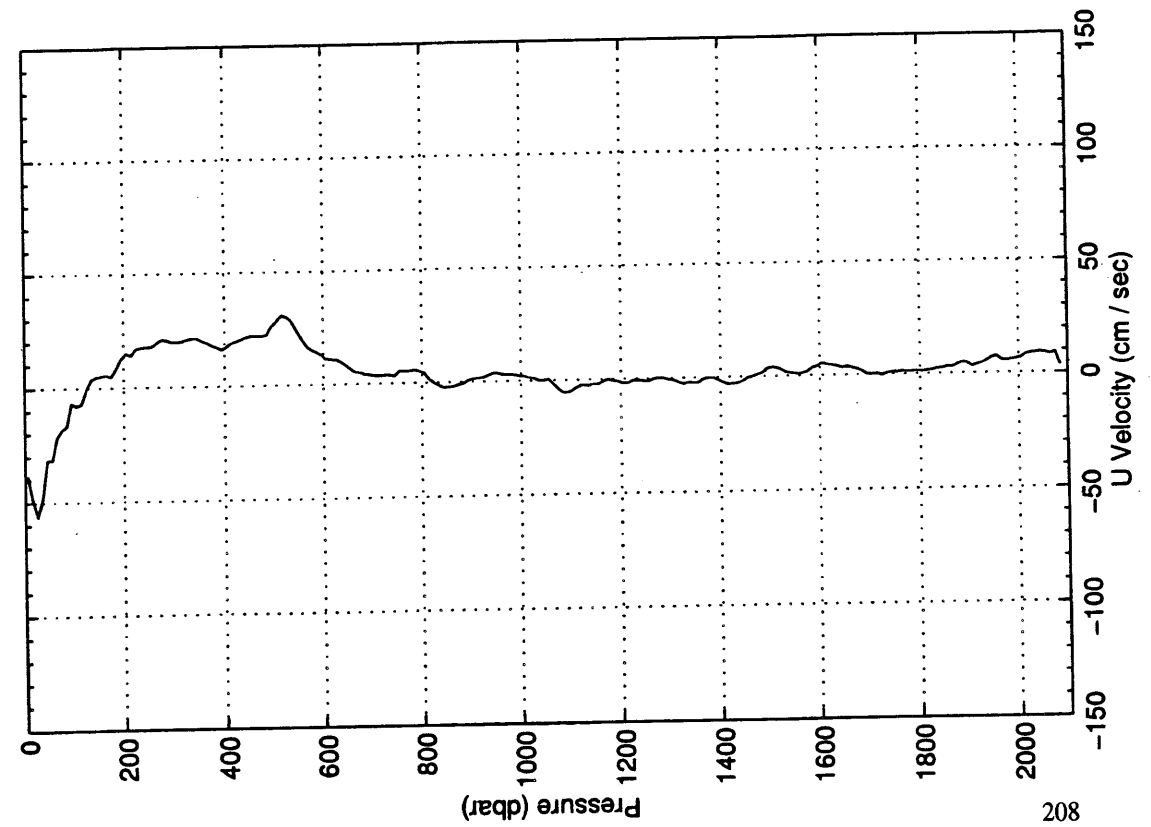
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LADCP Station 61 (98061)
Latitude 8.263N Longitude 55.025 W
09-Dec-1998 09:46 Z



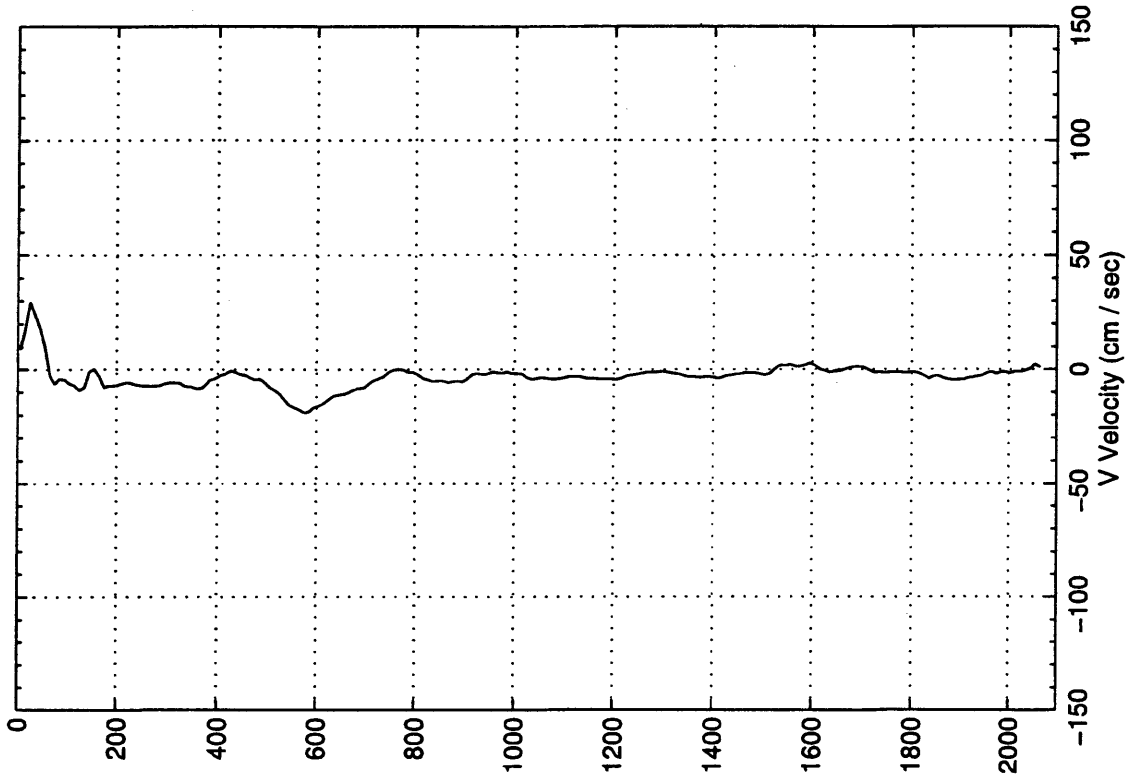
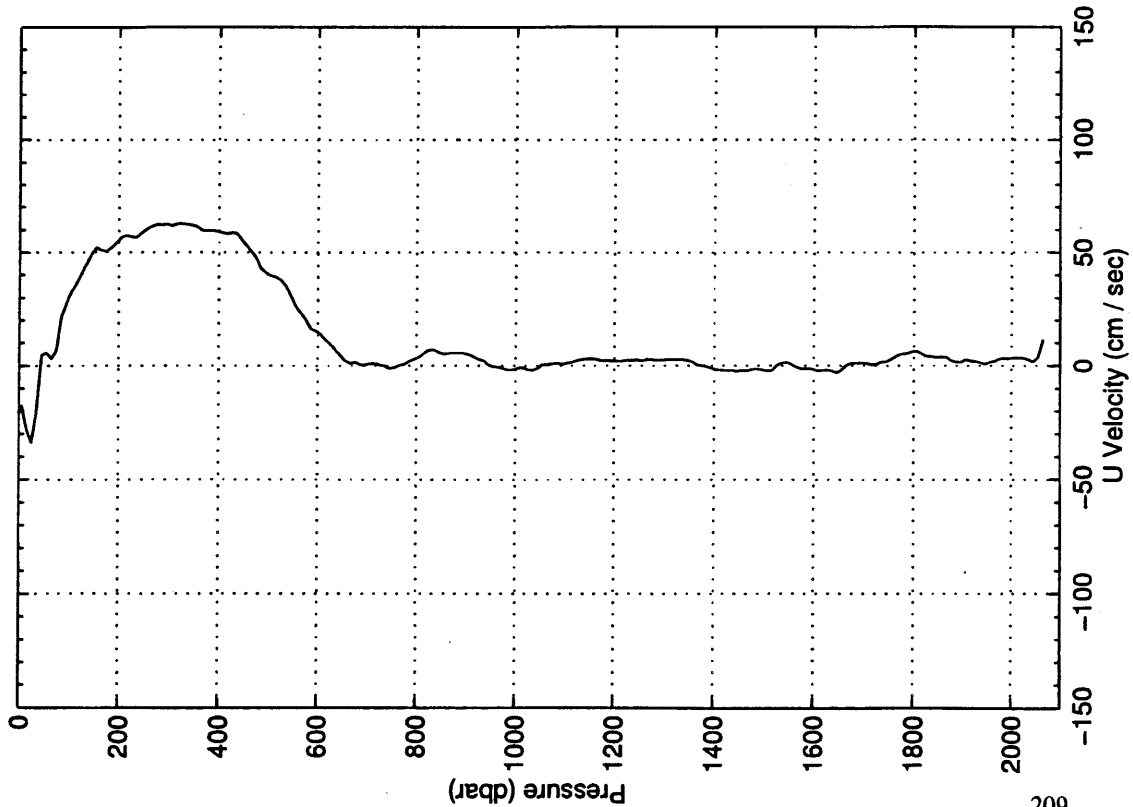
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Latitude 8.583N Longitude 56.026 W
09-Dec-1998 13:11 Z



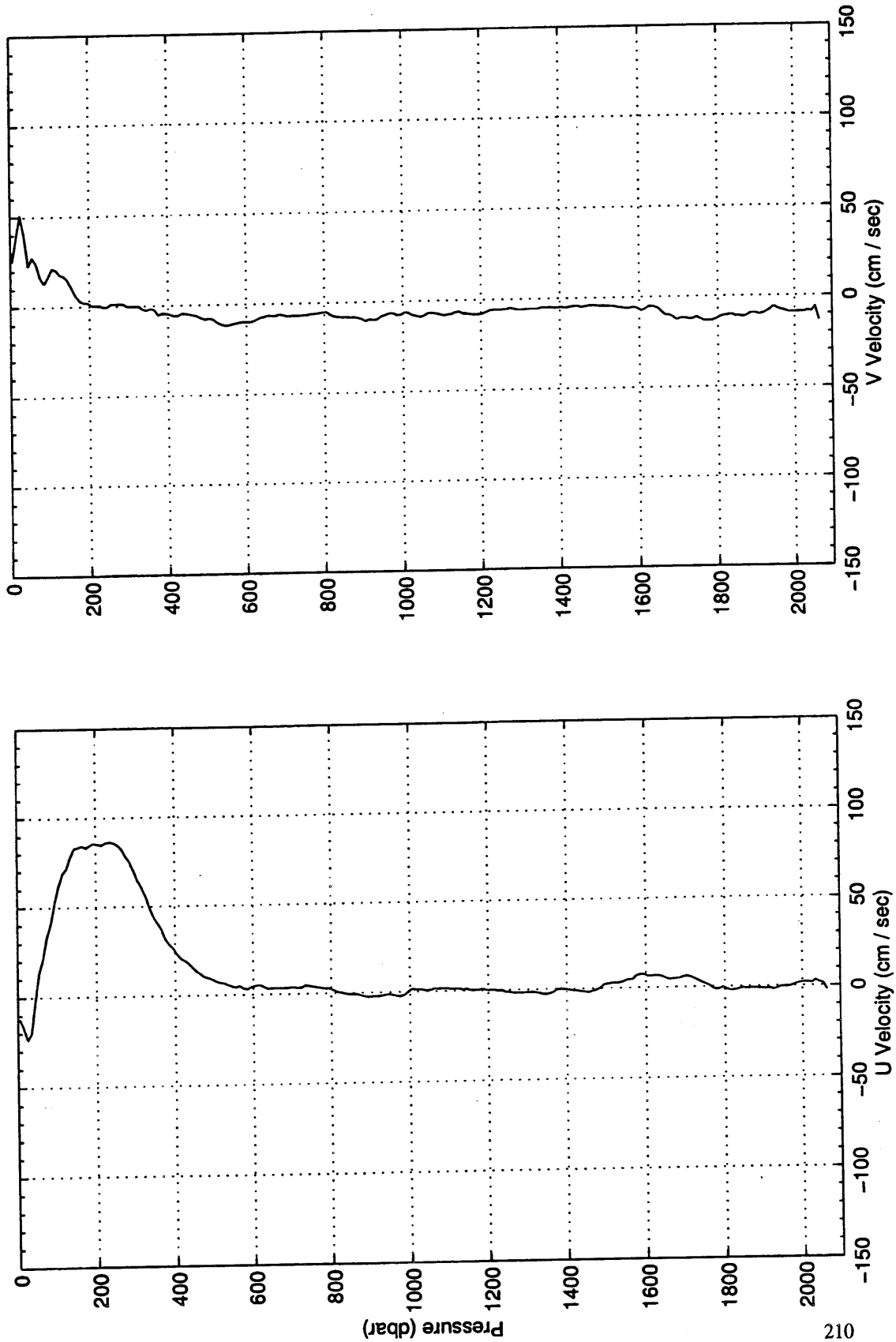
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LADCP Station 63 (98063)
Latitude 8.901N Longitude 56.014 W
09-Dec-1998 16:31 Z



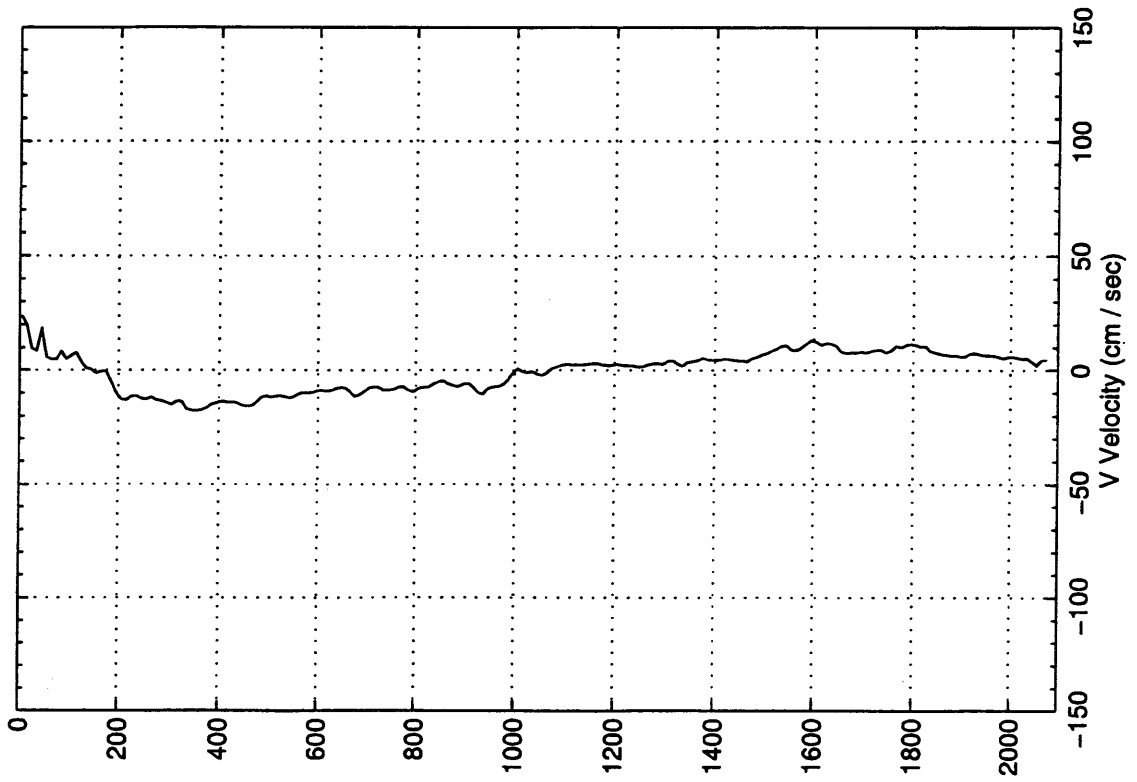
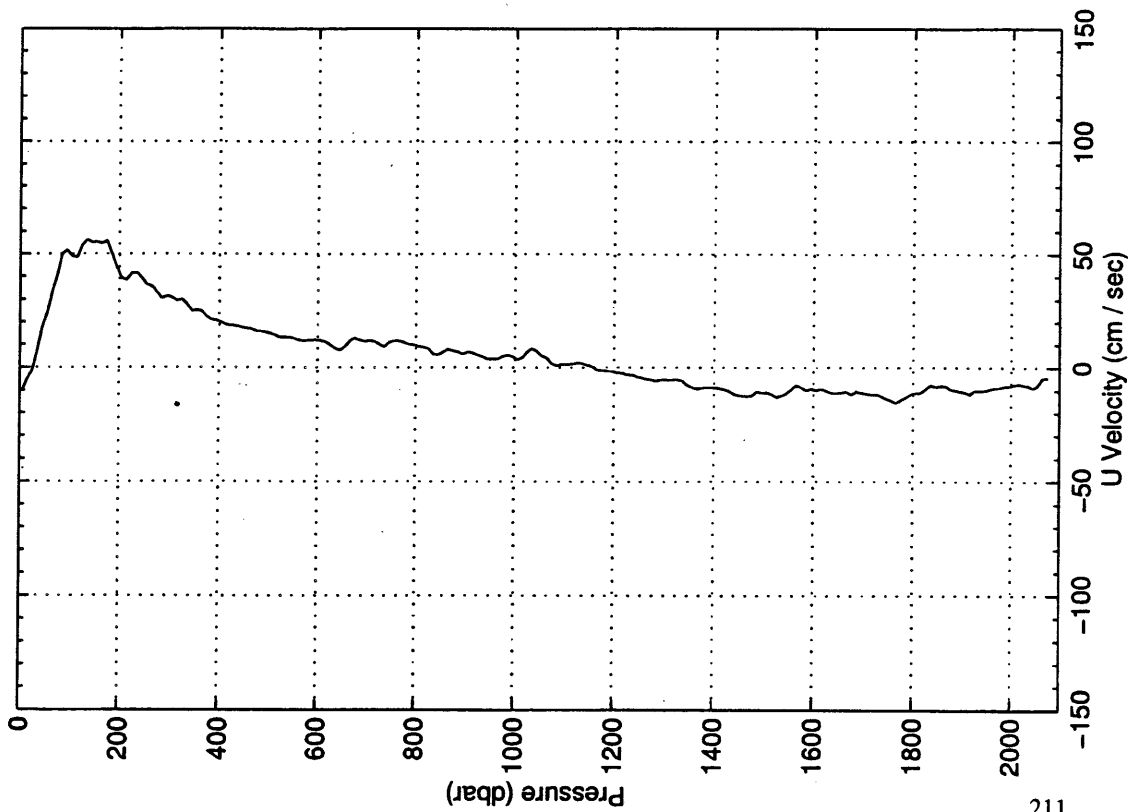
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Latitude 9.217N Longitude 56.037 W
09-Dec-1998 20:02 Z



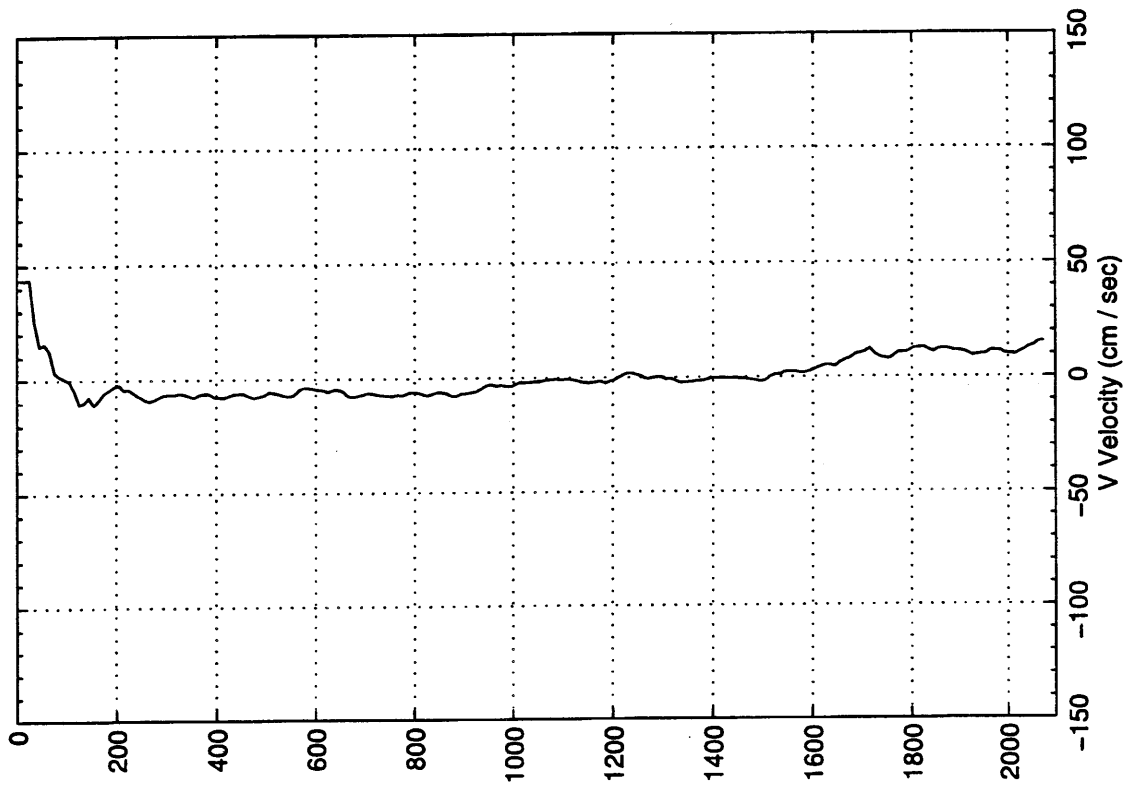
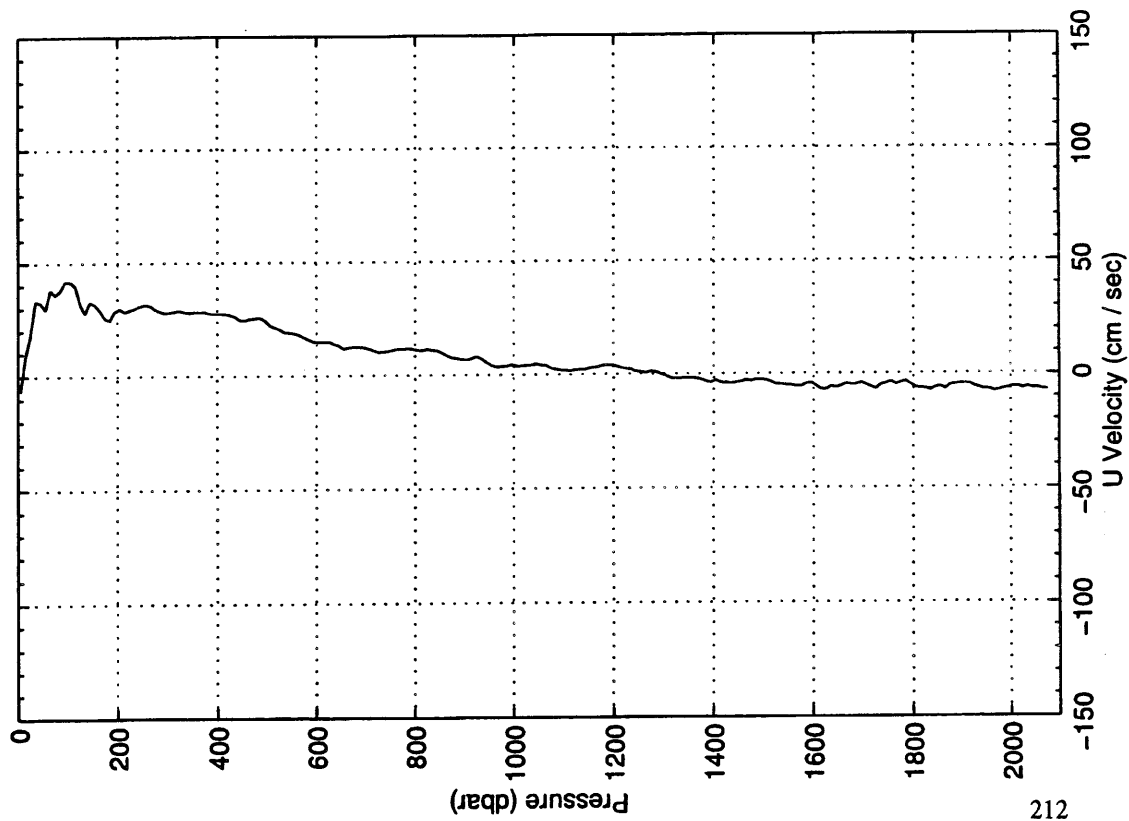
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LADCP Station 65 (98065)
Latitude 9.540N Longitude 56.047 W
09-Dec-1998 23:37 Z



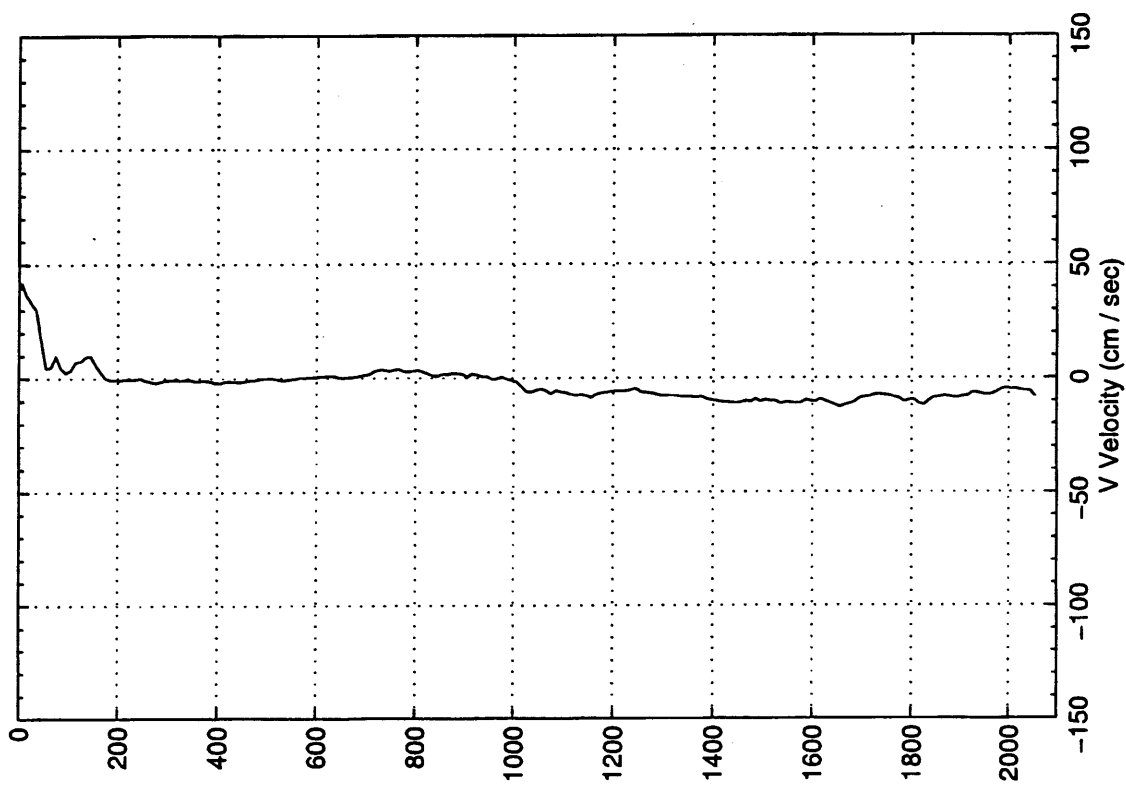
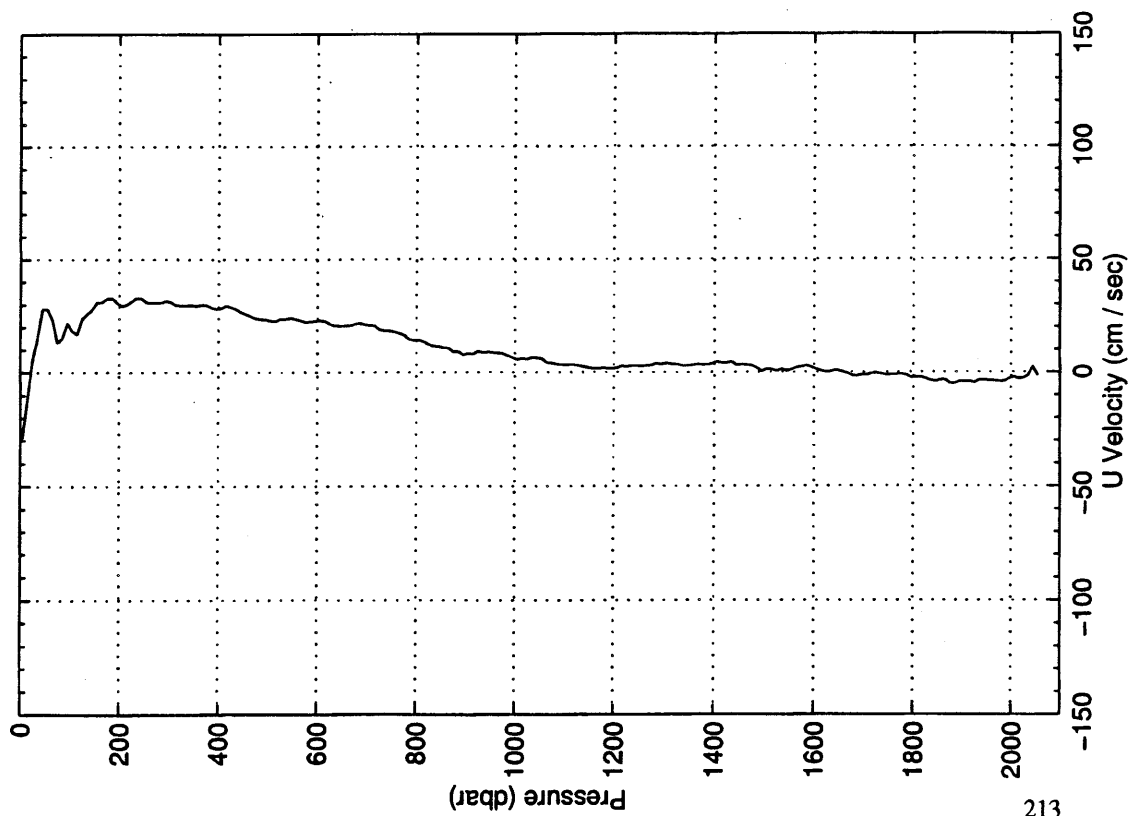
NBC-1 R/V SEWARD JOHNSON
LADCP Station 66 (98066)
Latitude 9.838N Longitude 56.048 W
10-Dec-1998 03:13 Z



NBC-1 R/V SEWARD JOHNSON
LADCP Station 67 (98067)
Latitude 10.174N Longitude 56.060 W
10-Dec-1998 06:59 Z



NBC-1 R/V SEWARD JOHNSON
LADCP Station 68 (98068)
Latitude 10.479N Longitude 57.047 W
10-Dec-1998 10:34 Z



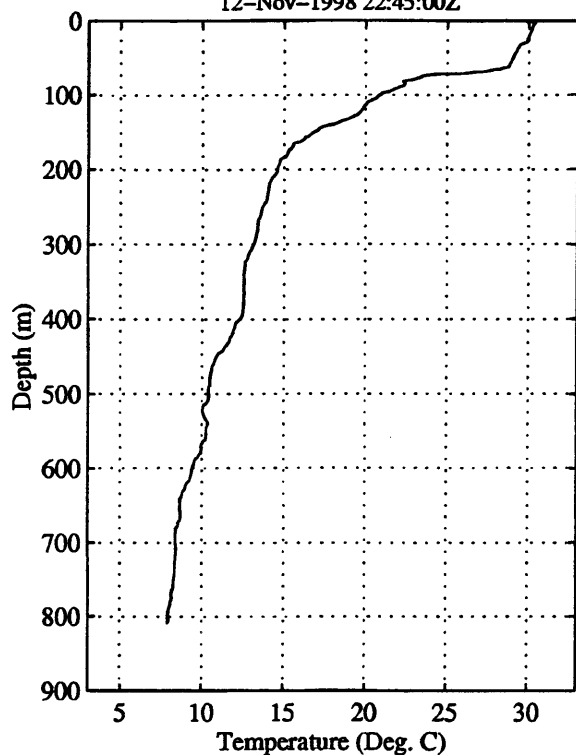
APPENDIX C

XBT DATA

NBC-1 R/V SEWARD JOHNSON XBT Drop 001

Lat. 9.912 N Long. 53.493 W

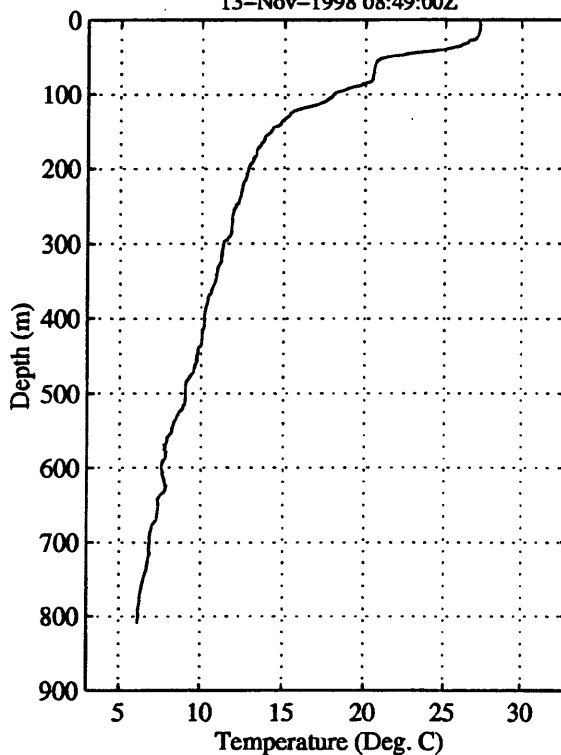
12-Nov-1998 22:45:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 002

Lat. 9.390 N Long. 53.280 W

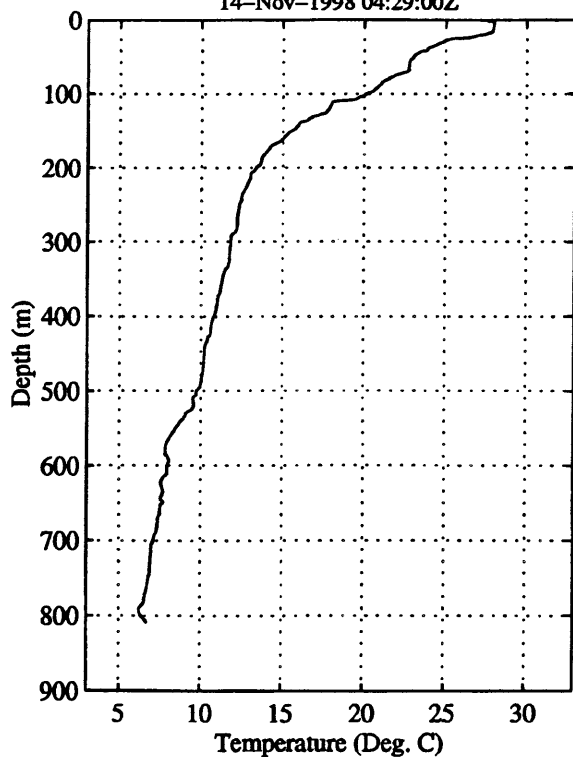
13-Nov-1998 08:49:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 003

Lat. 8.535 N Long. 53.395 W

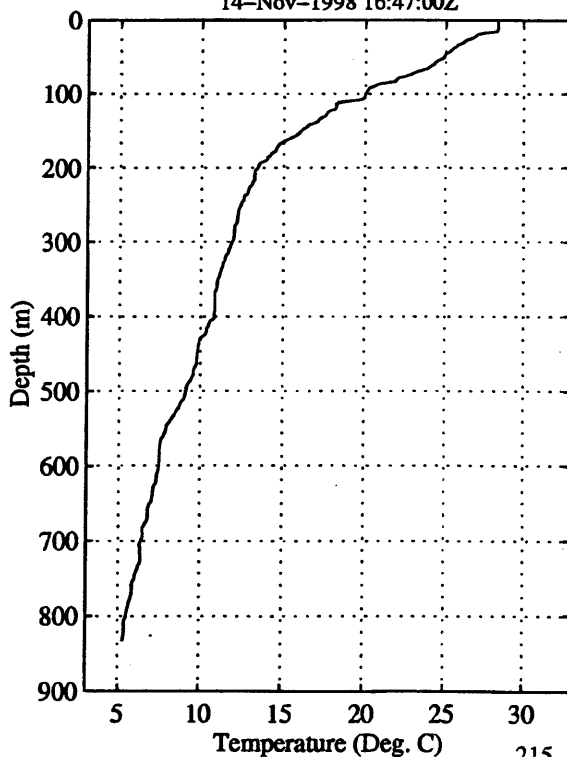
14-Nov-1998 04:29:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 004

Lat. 7.823 N Long. 53.512 W

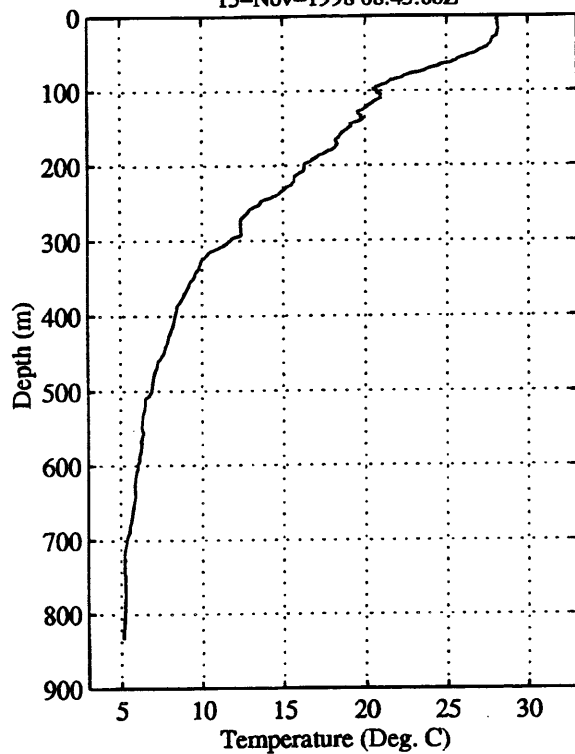
14-Nov-1998 16:47:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 005

Lat. 8.250 N Long. 52.745 W

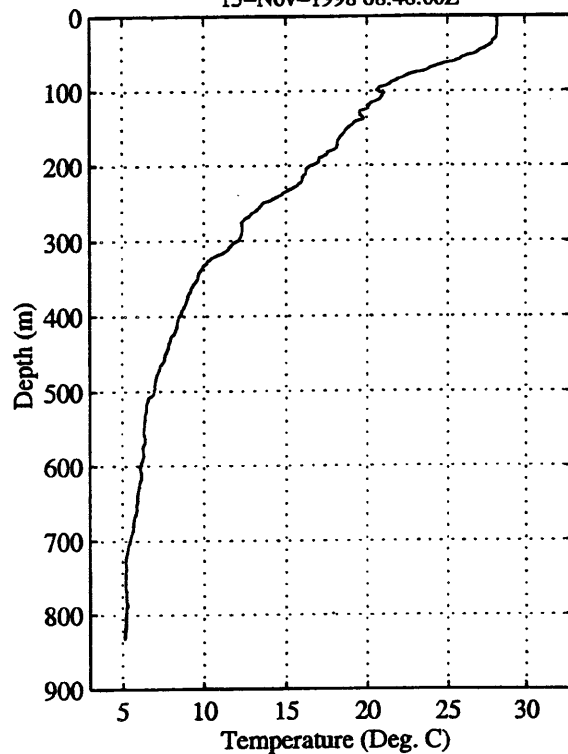
15-Nov-1998 08:45:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 006

Lat. 8.250 N Long. 52.745 W

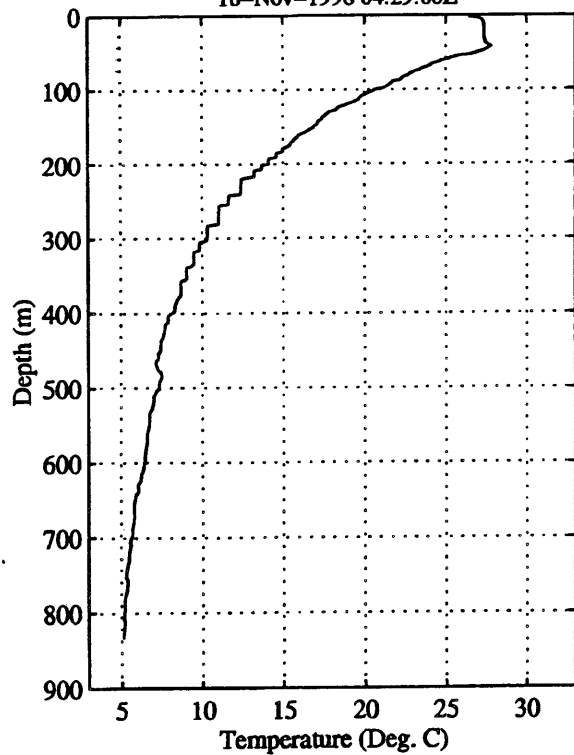
15-Nov-1998 08:48:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 007

Lat. 9.395 N Long. 52.127 W

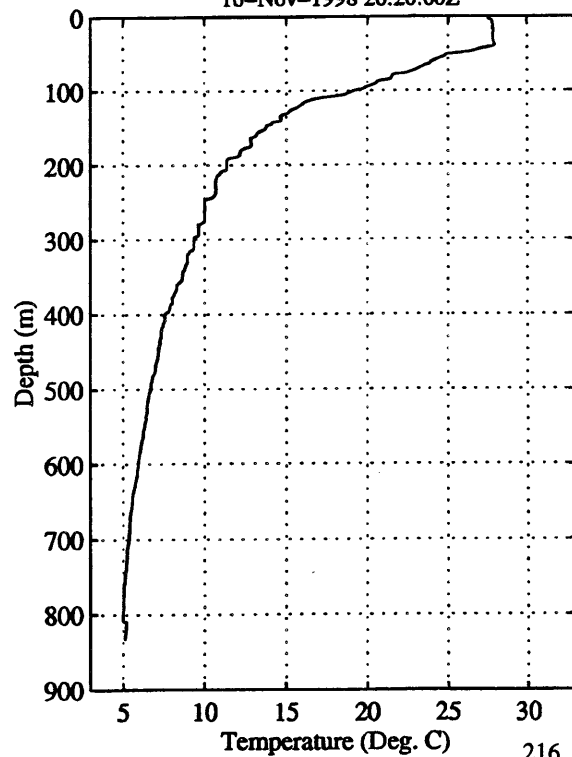
16-Nov-1998 04:29:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 008

Lat. 9.438 N Long. 50.615 W

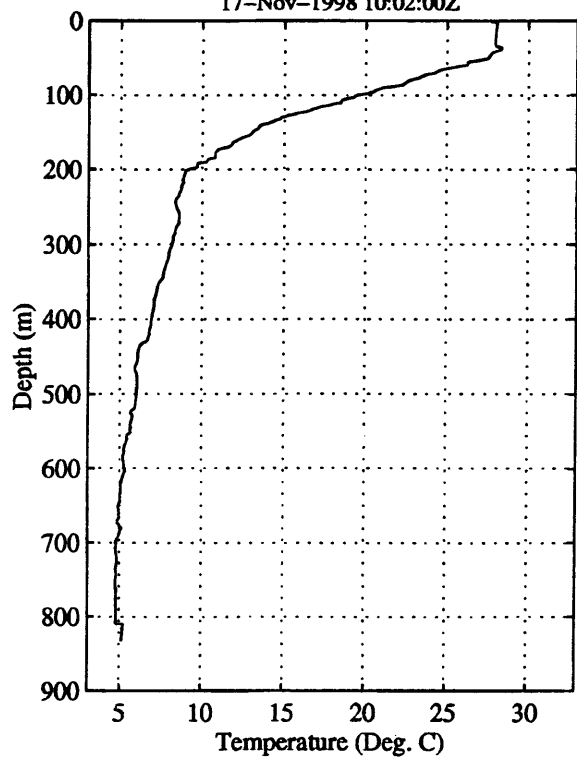
16-Nov-1998 20:20:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 009

Lat. 8.465 N Long. 50.490 W

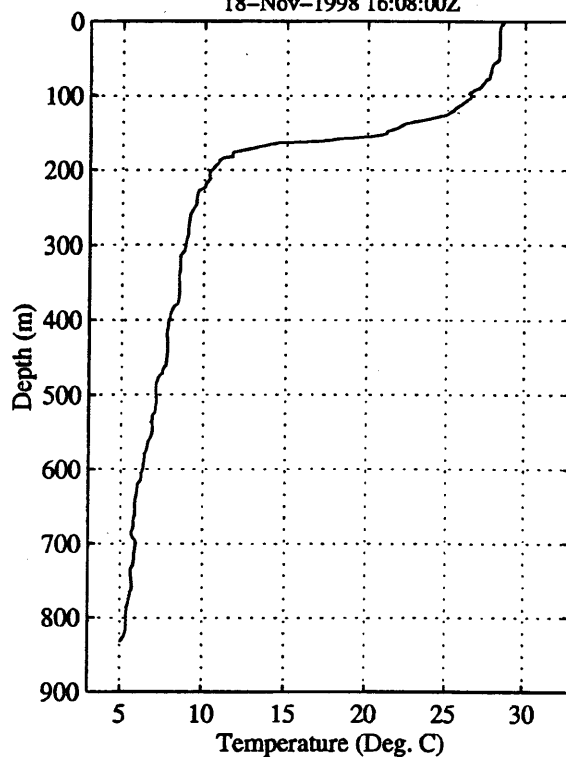
17-Nov-1998 10:02:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 010

Lat. 6.987 N Long. 49.468 W

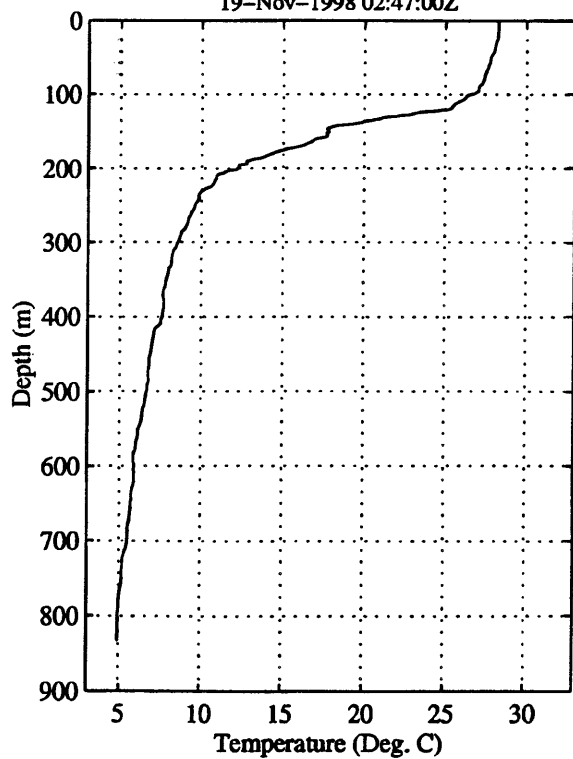
18-Nov-1998 16:08:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 011

Lat. 6.235 N Long. 50.323 W

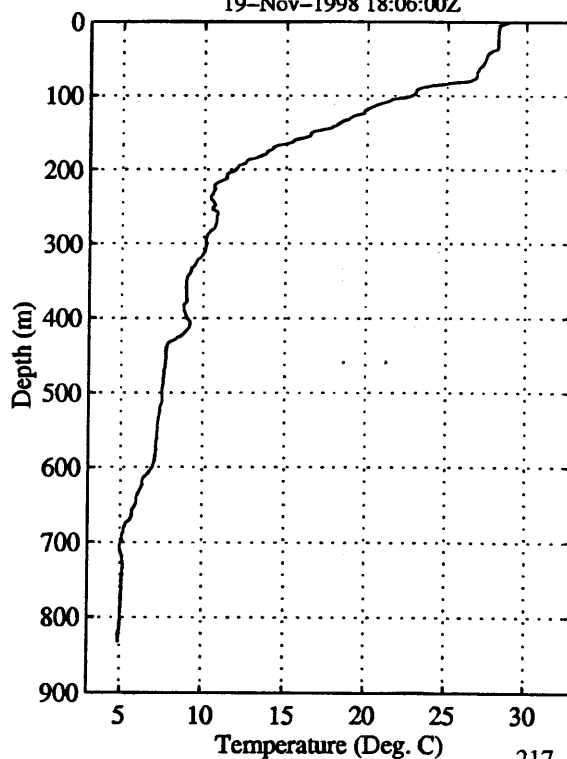
19-Nov-1998 02:47:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 012

Lat. 5.895 N Long. 51.065 W

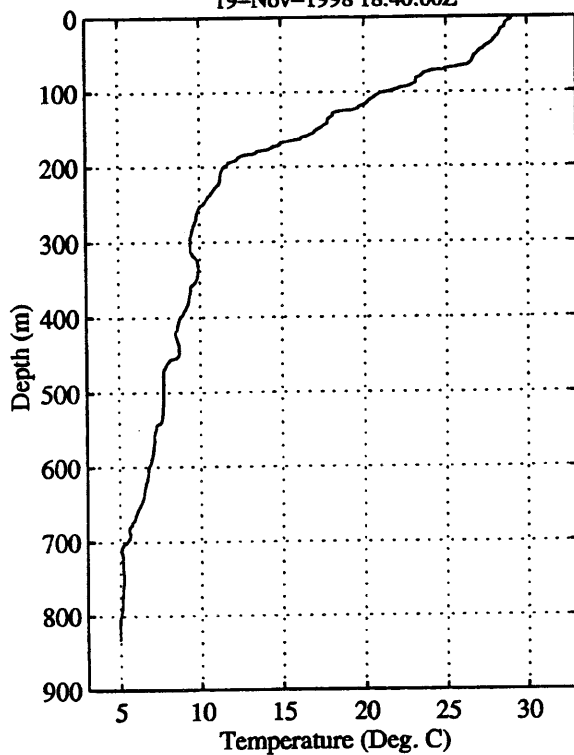
19-Nov-1998 18:06:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 013

Lat. 5.830 N Long. 51.152 W

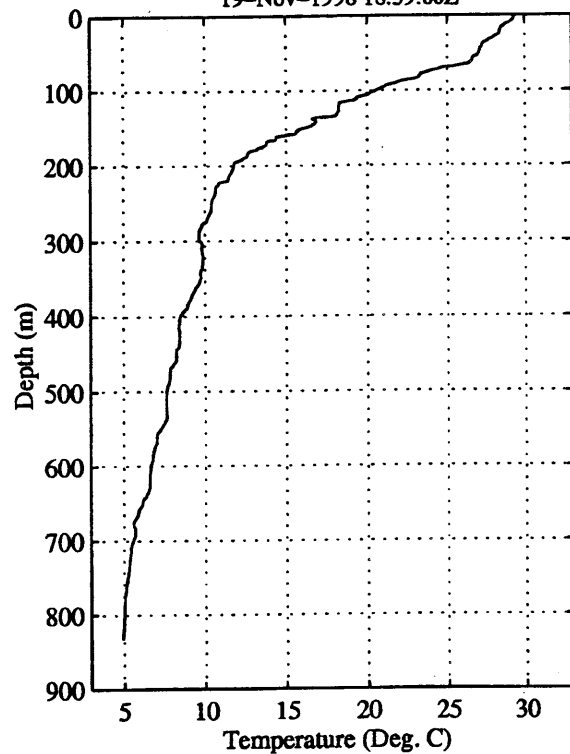
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NBC-1 R/V SEWARD JOHNSON XBT Drop 014

Lat. 5.792 N Long. 51.200 W

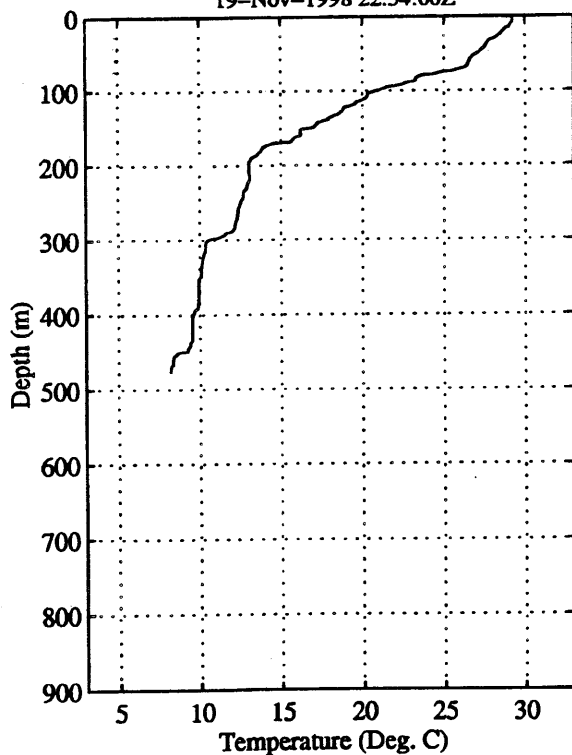
19-Nov-1998 18:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 015

Lat. 5.752 N Long. 51.272 W

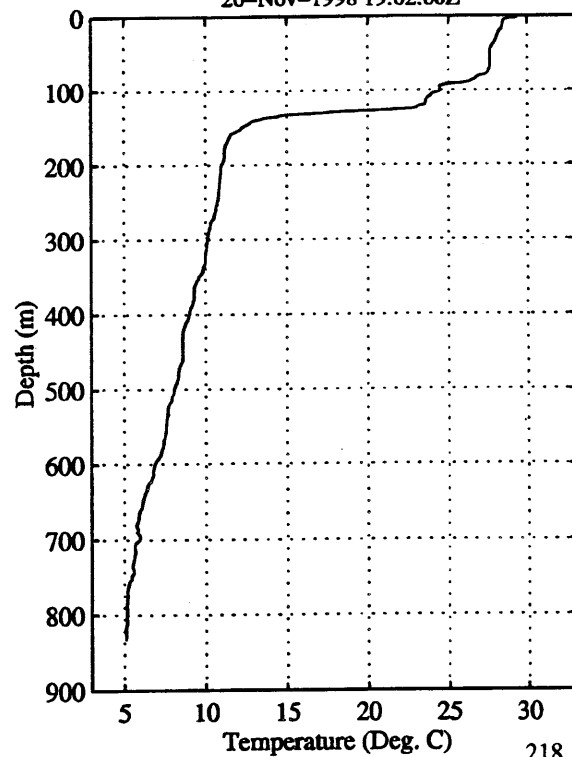
19-Nov-1998 22:54:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 016

Lat. 4.877 N Long. 49.260 W

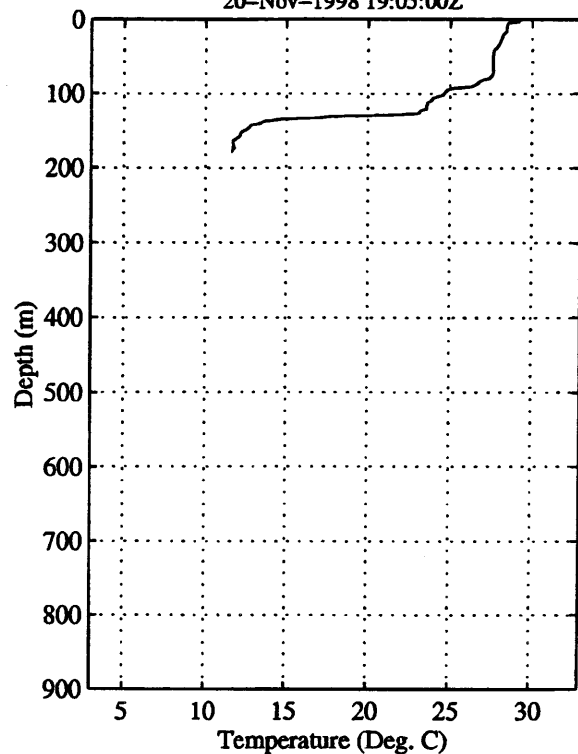
20-Nov-1998 19:02:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 017

Lat. 4.883 N Long. 49.248 W

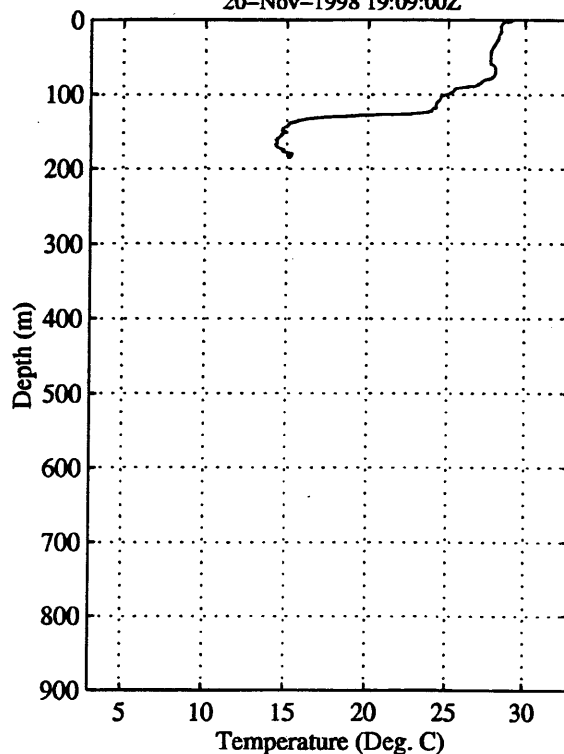
20-Nov-1998 19:05:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 018

Lat. 4.888 N Long. 49.240 W

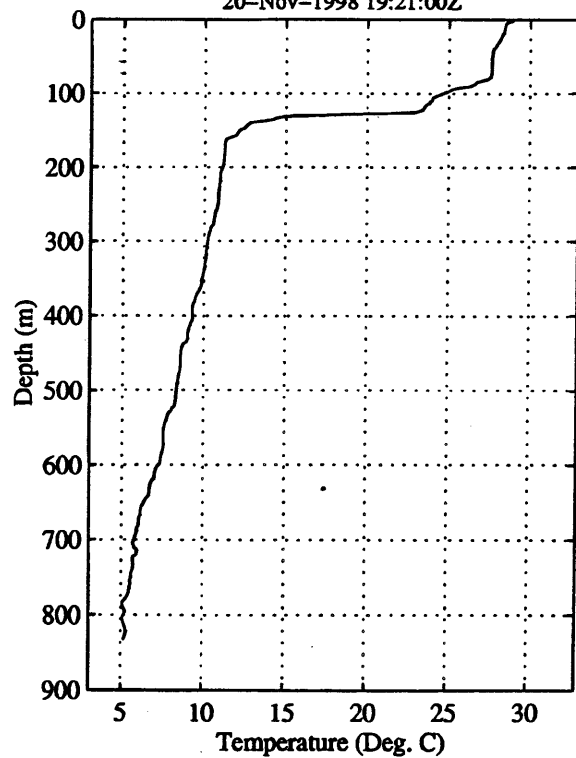
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NBC-1 R/V SEWARD JOHNSON XBT Drop 020

Lat. 4.910 N Long. 49.208 W

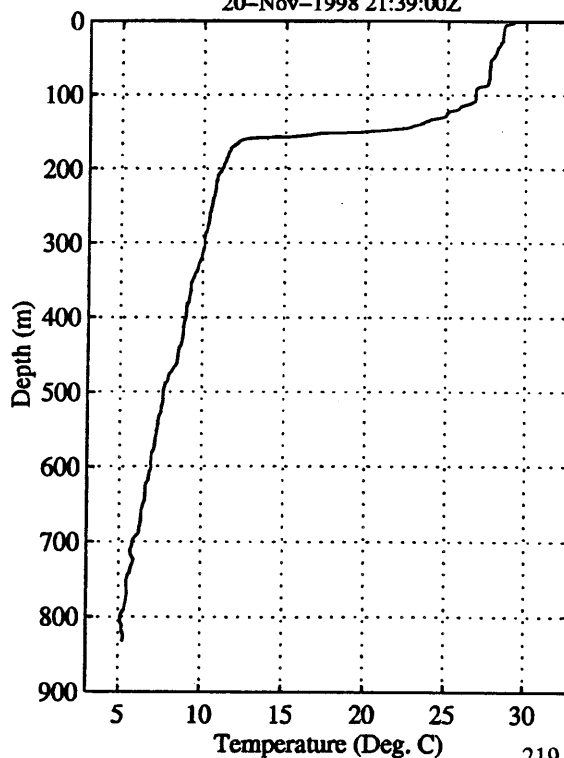
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NBC-1 R/V SEWARD JOHNSON XBT Drop 021

Lat. 5.152 N Long. 48.850 W

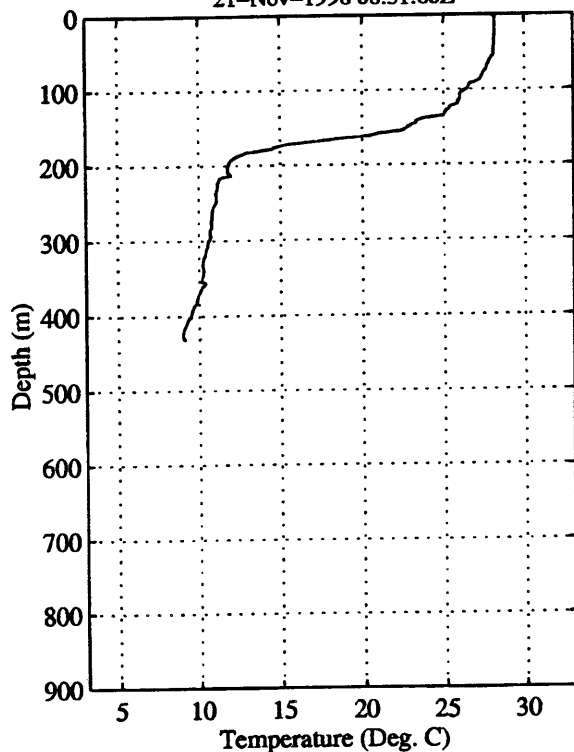
20-Nov-1998 21:39:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 022

Lat. 6.123 N Long. 48.098 W

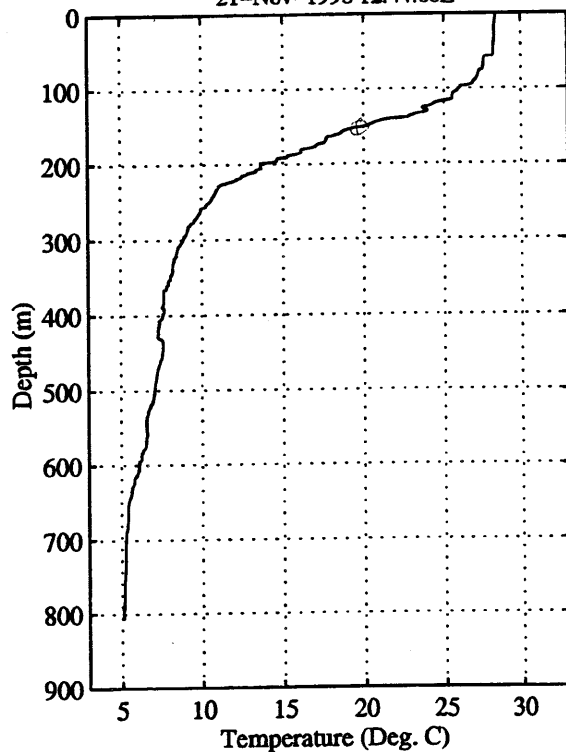
21-Nov-1998 08:31:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 024

Lat. 6.813 N Long. 47.850 W

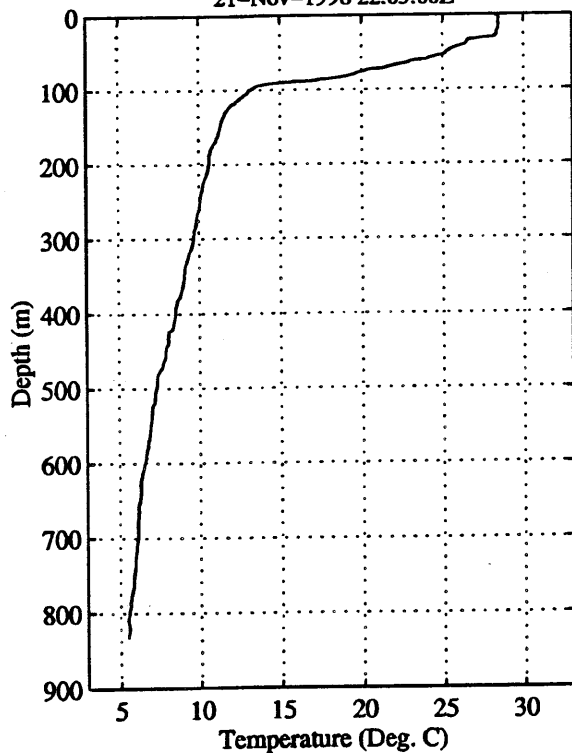
21-Nov-1998 12:44:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 025

Lat. 7.203 N Long. 46.927 W

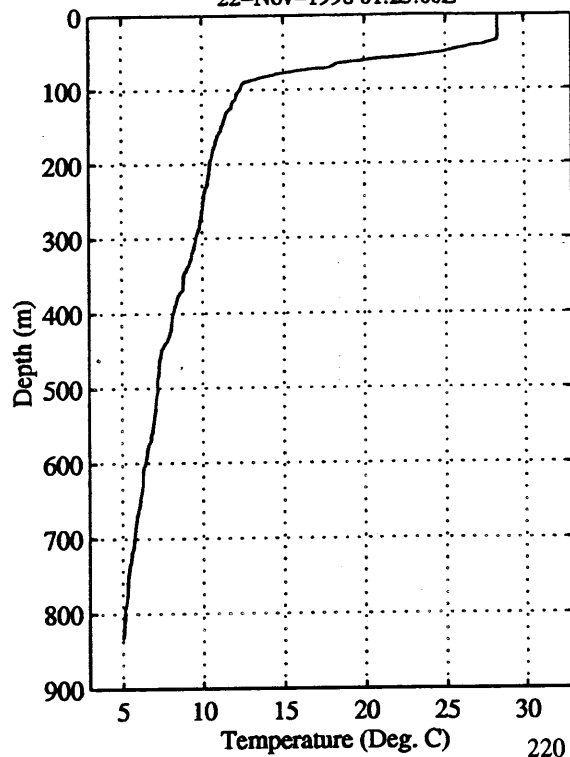
21-Nov-1998 22:05:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 026

Lat. 7.205 N Long. 46.318 W

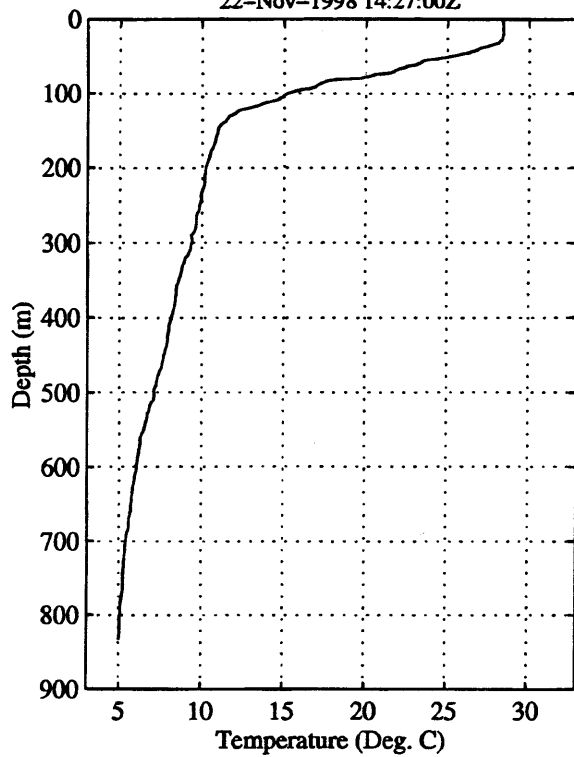
22-Nov-1998 01:23:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 027

Lat. 6.335 N Long. 45.887 W

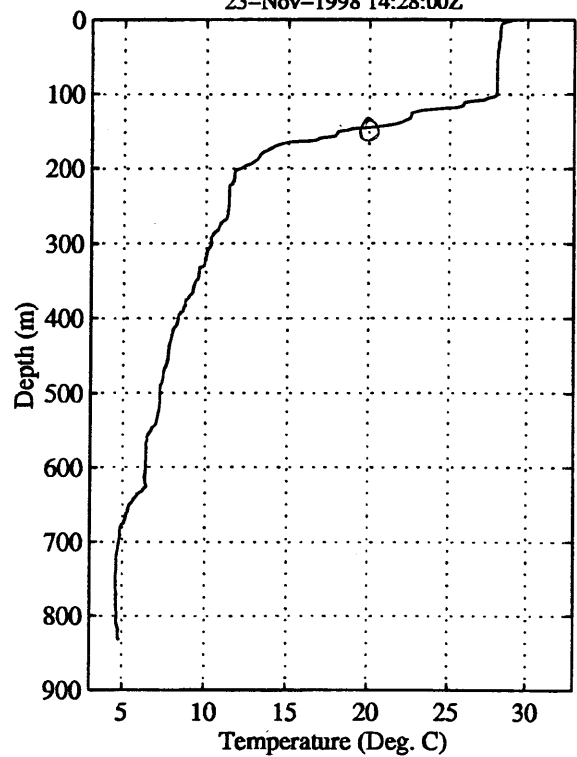
22-Nov-1998 14:27:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 028

Lat. 3.445 N Long. 47.022 W

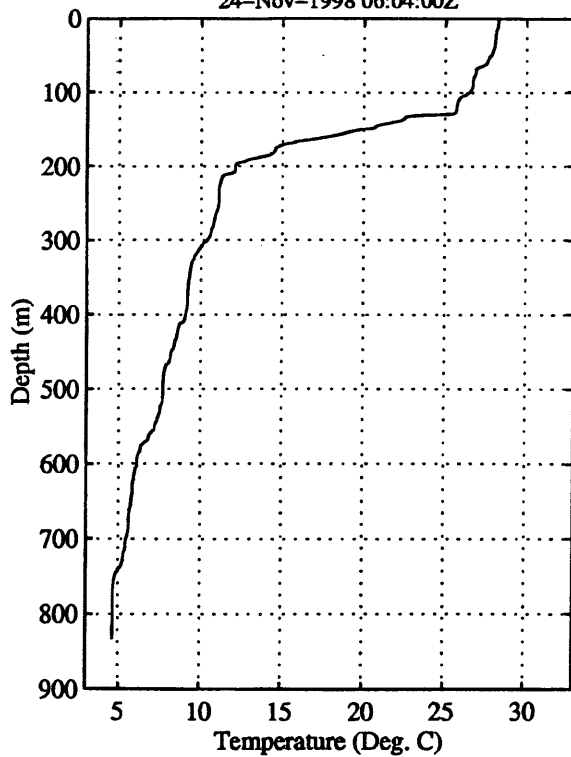
23-Nov-1998 14:28:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 029

Lat. 2.332 N Long. 47.468 W

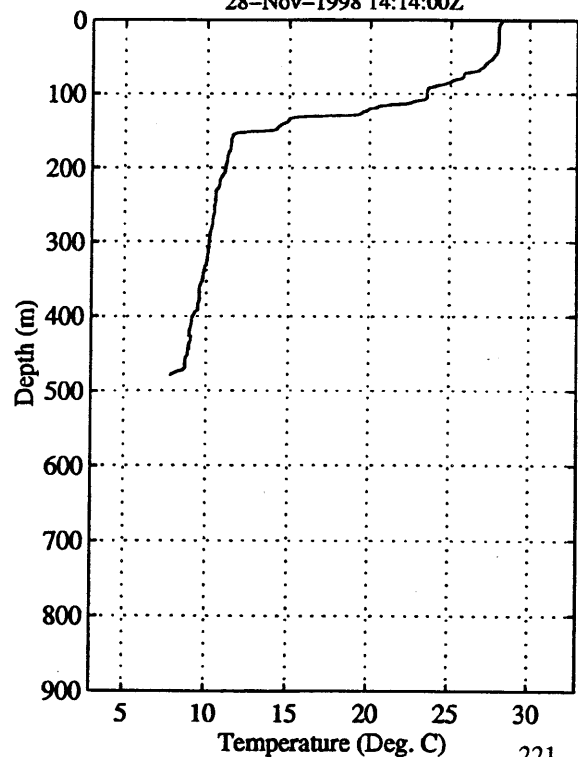
24-Nov-1998 06:04:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 030

Lat. 2.302 N Long. 47.488 W

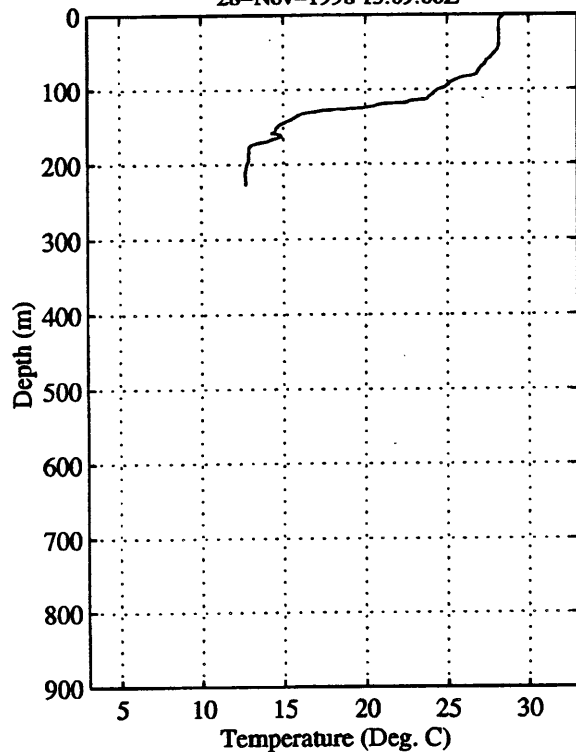
28-Nov-1998 14:14:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 031

Lat. 2.460 N Long. 47.425 W

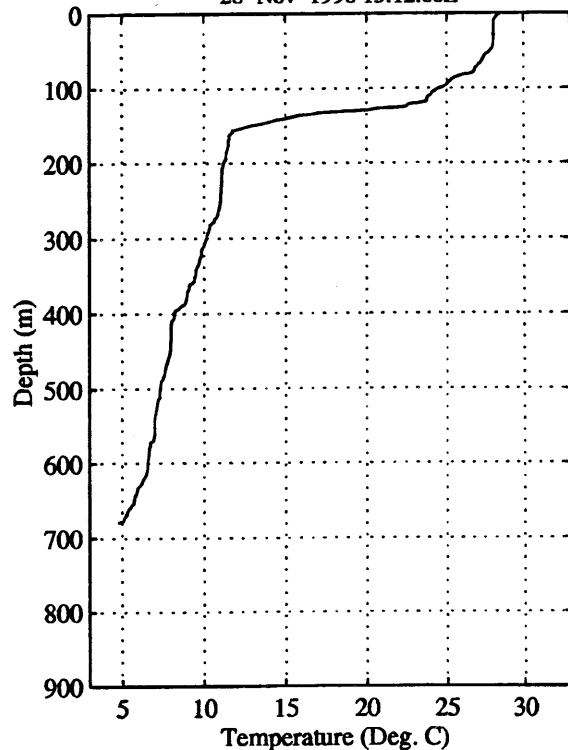
28-Nov-1998 15:09:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 032

Lat. 2.472 N Long. 47.420 W

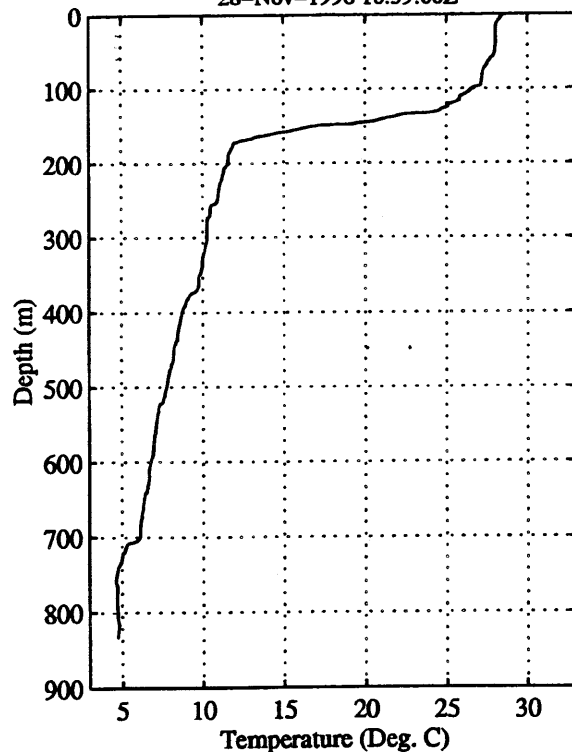
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Lat. 2.797 N Long. 47.293 W

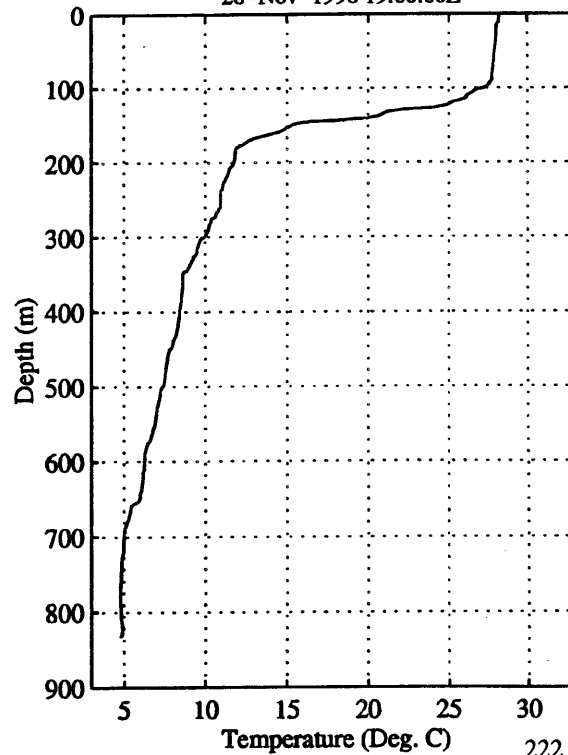
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NBC-1 R/V SEWARD JOHNSON XBT Drop 034

Lat. 3.177 N Long. 47.143 W

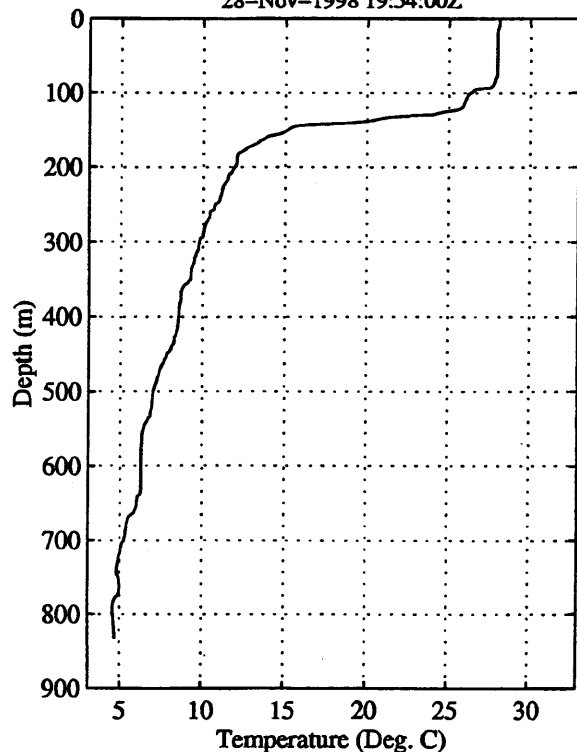
28-Nov-1998 19:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 035

Lat. 3.342 N Long. 47.077 W

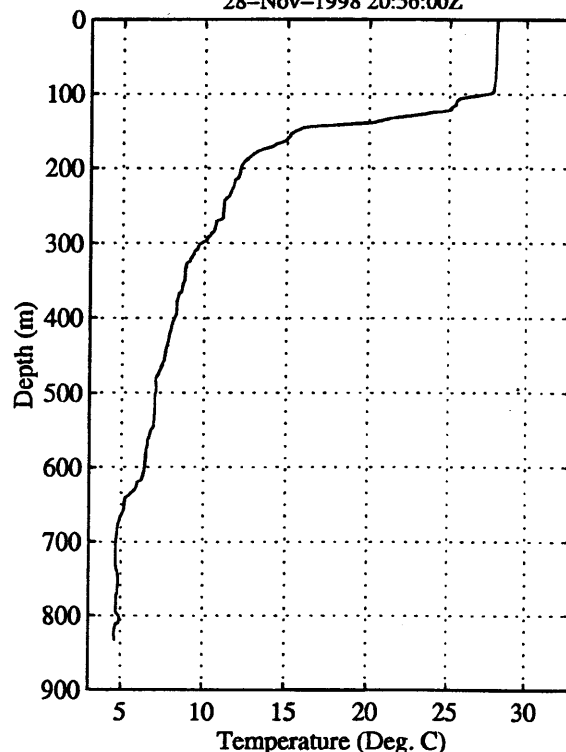
28-Nov-1998 19:54:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 036

Lat. 3.528 N Long. 47.005 W

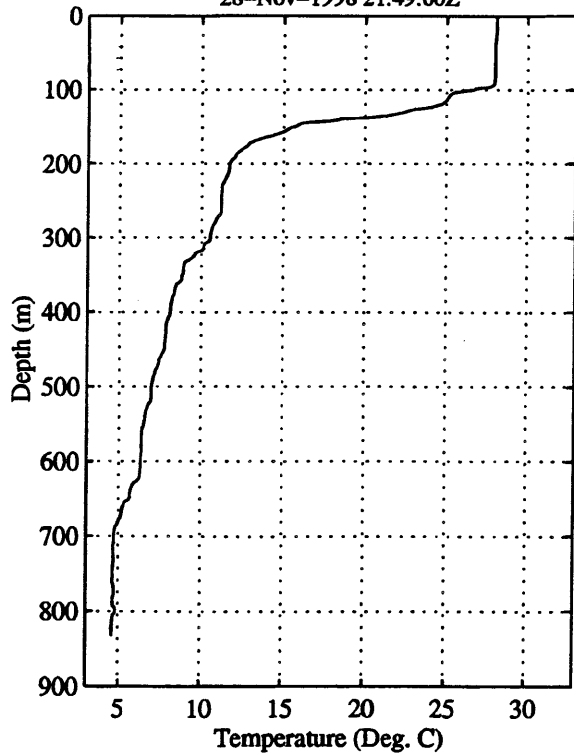
28-Nov-1998 20:56:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 037

Lat. 3.683 N Long. 46.955 W

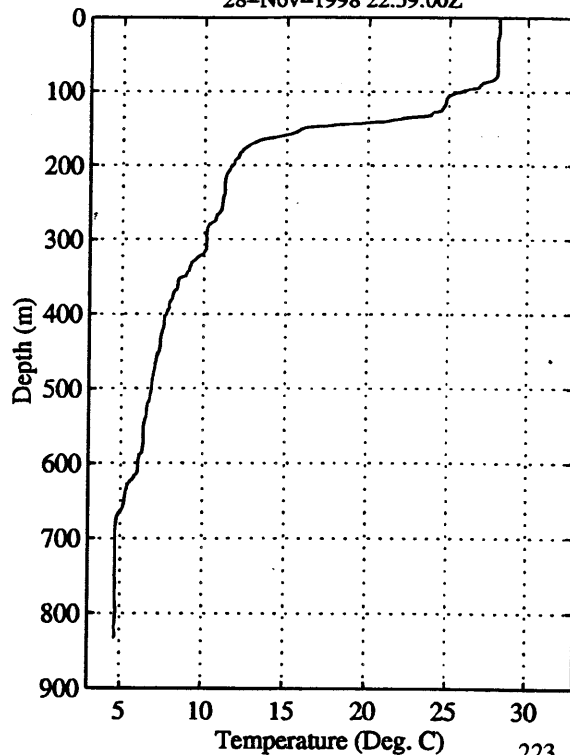
28-Nov-1998 21:49:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 038

Lat. 3.867 N Long. 47.092 W

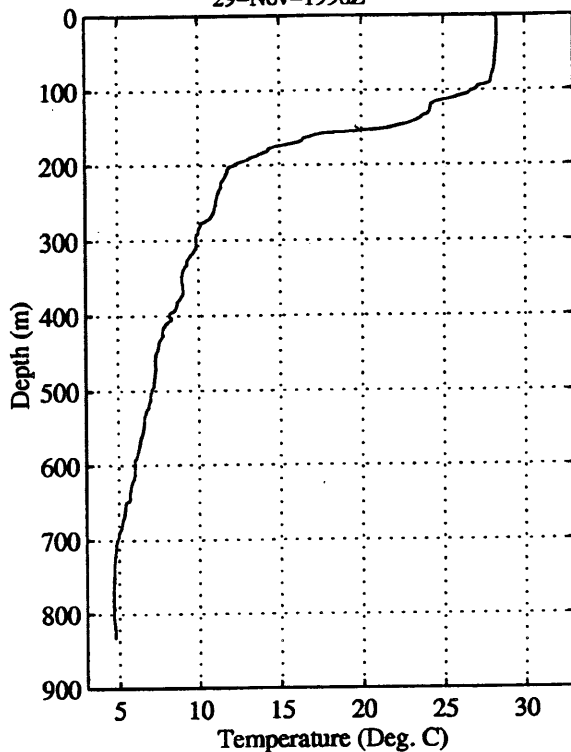
28-Nov-1998 22:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 039

Lat. 4.018 N Long. 47.207 W *

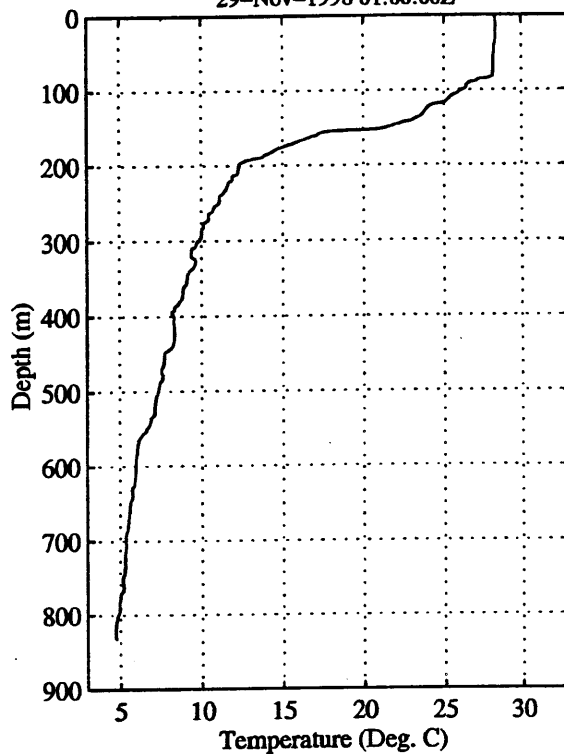
29-Nov-1998Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 040

Lat. 4.153 N Long. 47.333 W

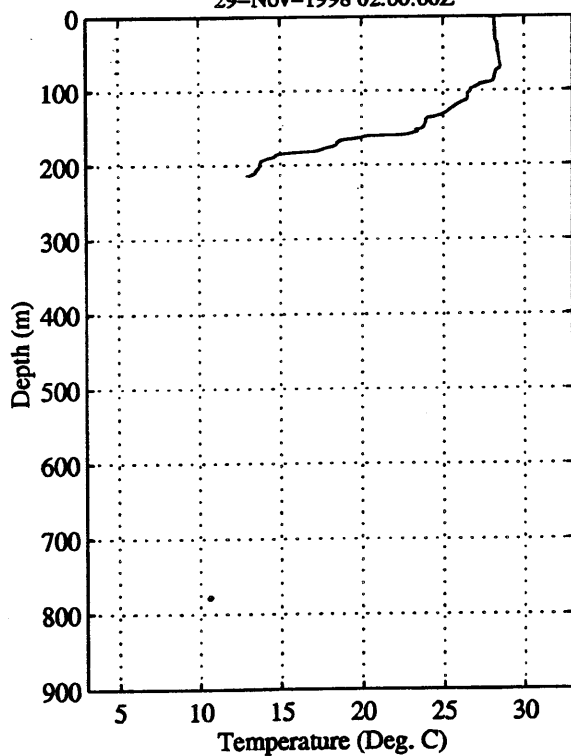
29-Nov-1998 01:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 041

Lat. 4.280 N Long. 47.477 W

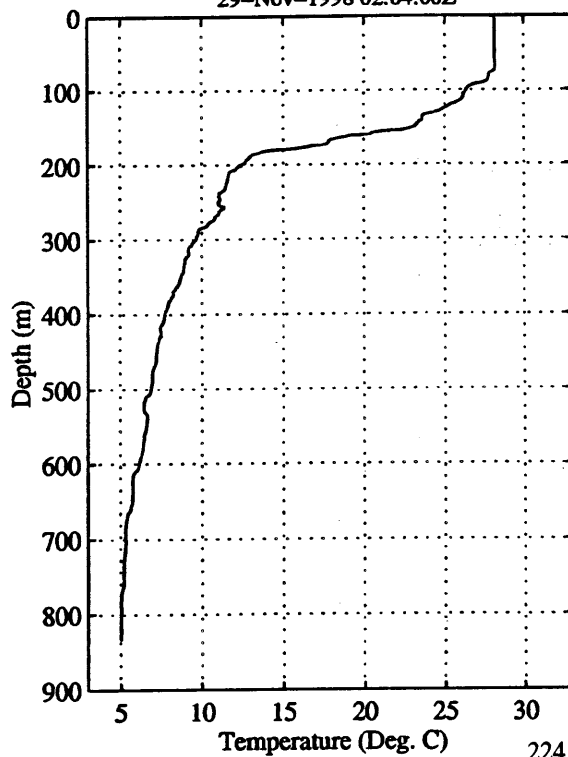
29-Nov-1998 02:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 042

Lat. 4.288 N Long. 47.485 W

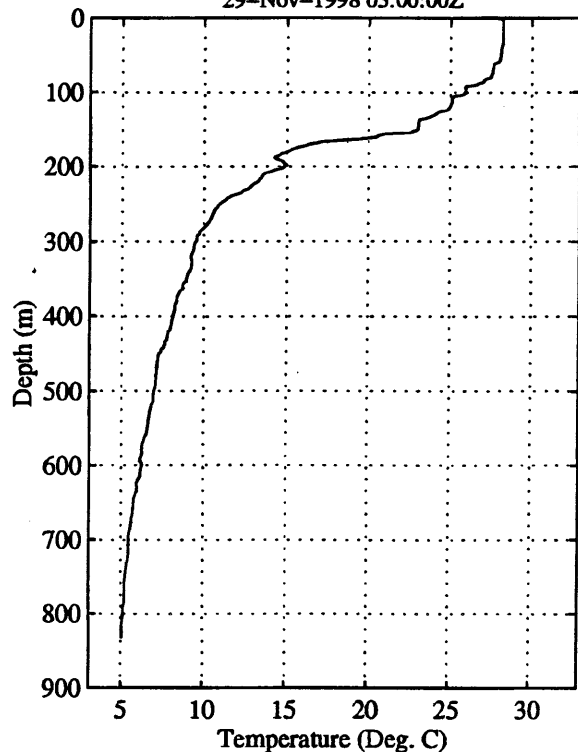
29-Nov-1998 02:04:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 043

Lat. 4.418 N Long. 47.592 W

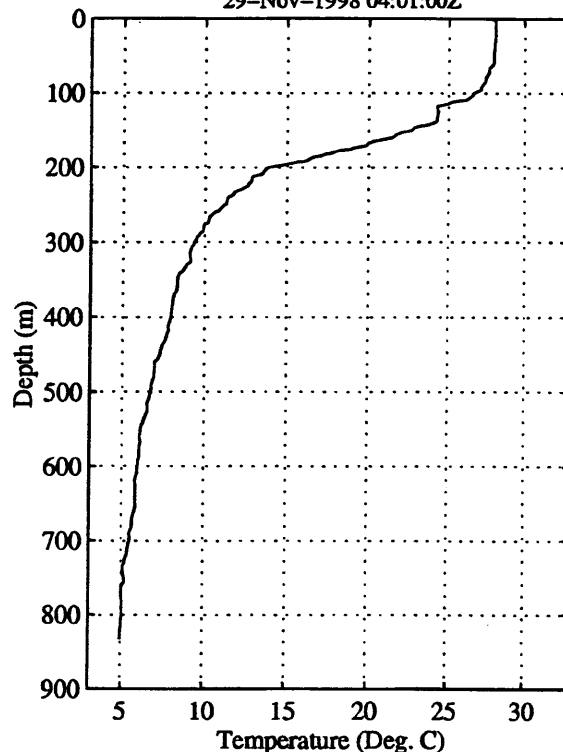
29-Nov-1998 03:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 044

Lat. 4.557 N Long. 47.718 W

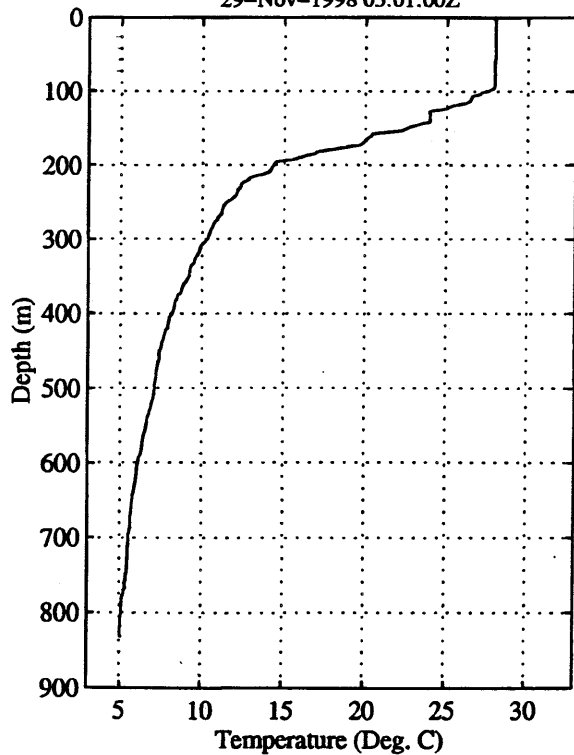
29-Nov-1998 04:01:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 045

Lat. 4.682 N Long. 47.858 W

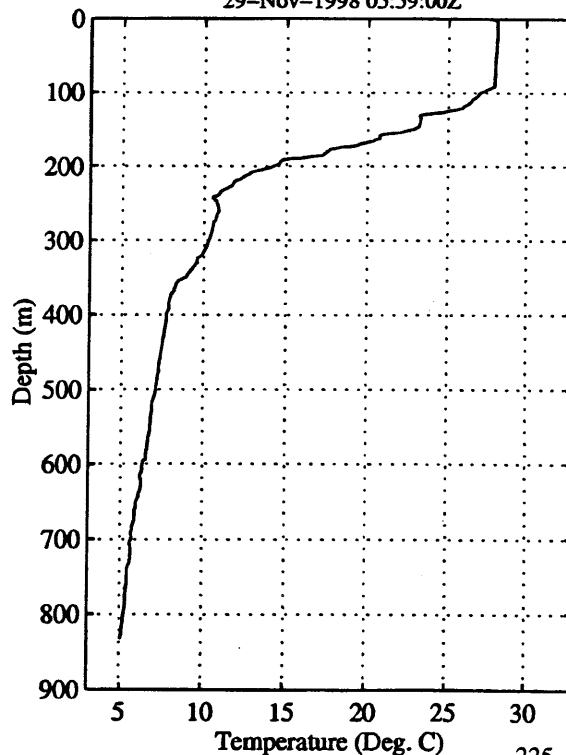
29-Nov-1998 05:01:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 046

Lat. 4.818 N Long. 47.982 W

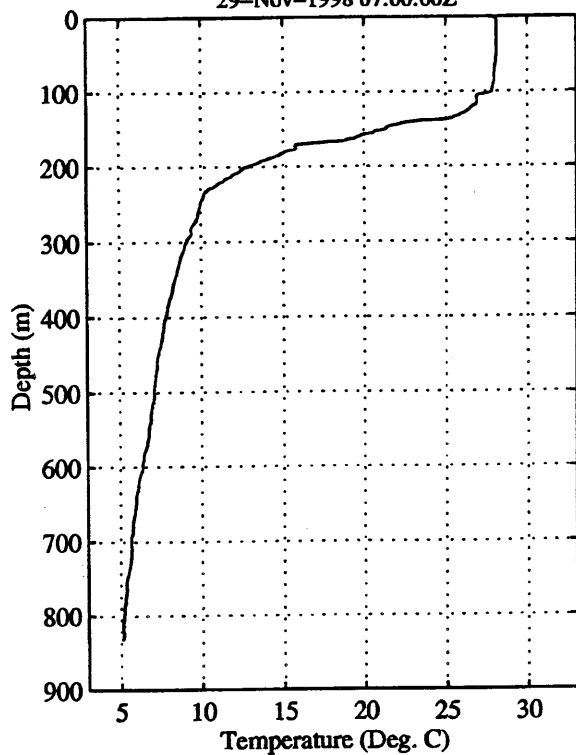
29-Nov-1998 05:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 047

Lat. 4.965 N Long. 48.113 W

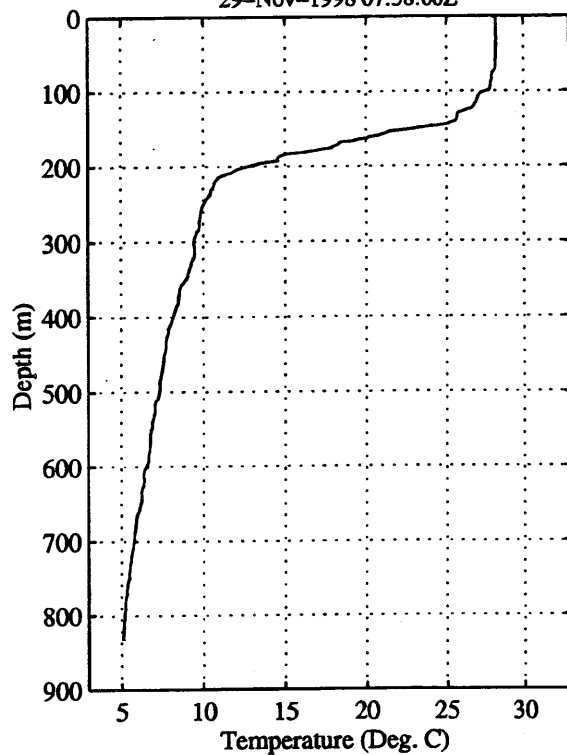
29-Nov-1998 07:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 048

Lat. 5.103 N Long. 48.240 W

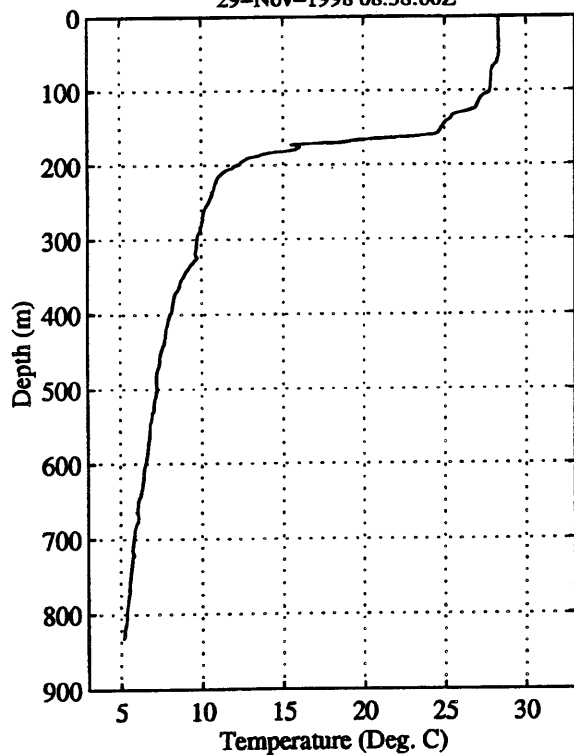
29-Nov-1998 07:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 049

Lat. 5.247 N Long. 48.367 W

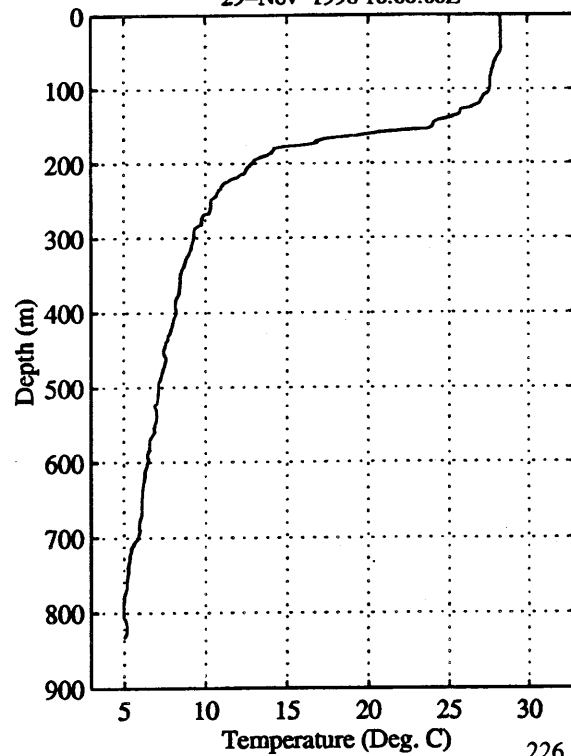
29-Nov-1998 08:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 050

Lat. 5.393 N Long. 48.500 W

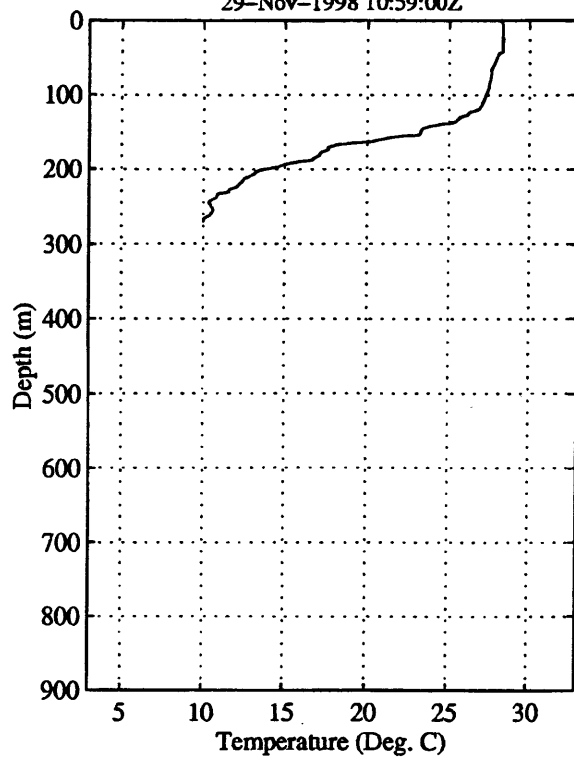
29-Nov-1998 10:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 051

Lat. 5.535 N Long. 48.627 W

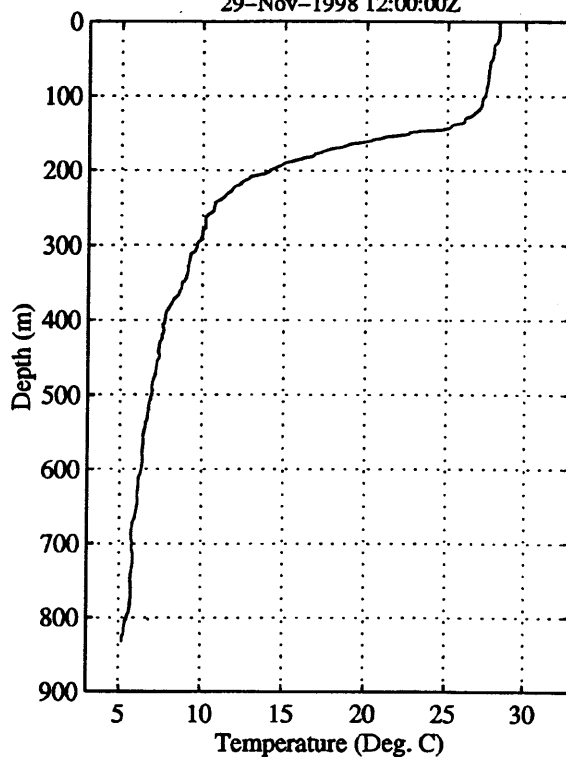
29-Nov-1998 10:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 052

Lat. 5.677 N Long. 48.755 W

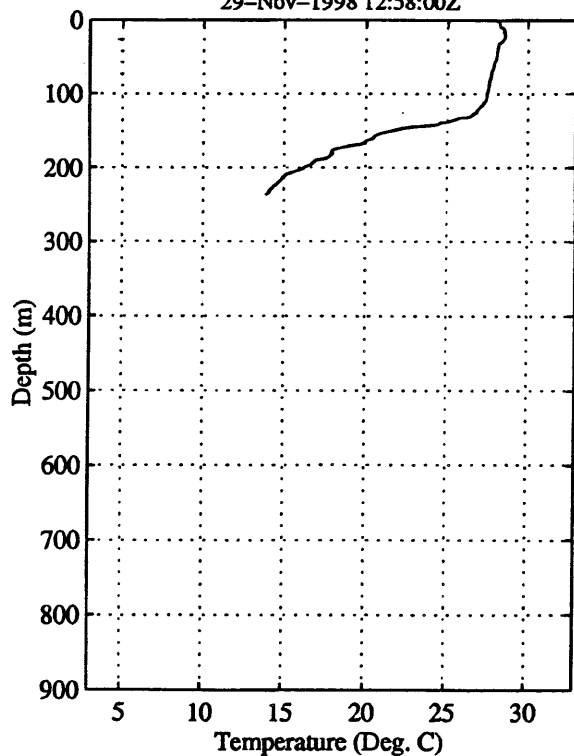
29-Nov-1998 12:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 053

Lat. 5.815 N Long. 48.882 W

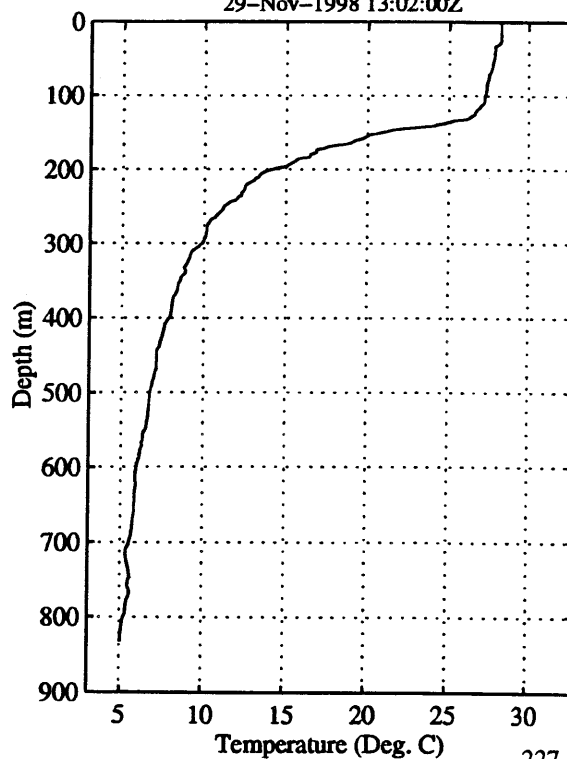
29-Nov-1998 12:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 054

Lat. 5.823 N Long. 48.890 W

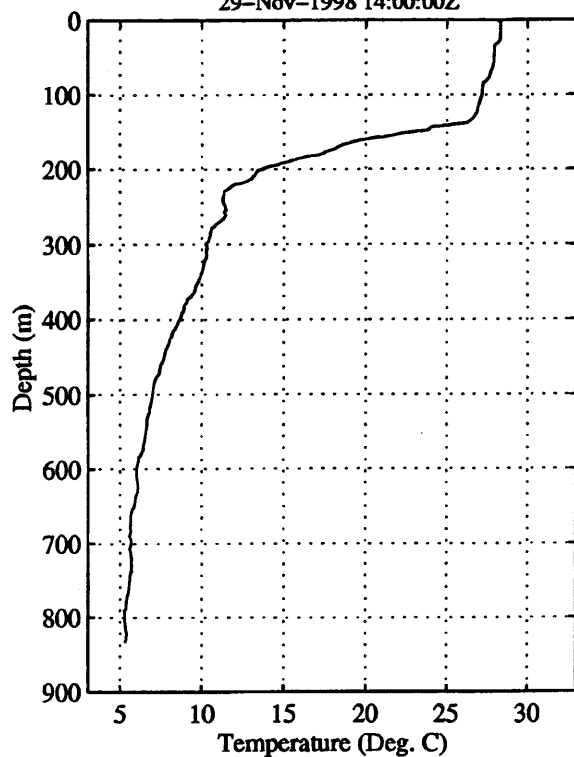
29-Nov-1998 13:02:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 055

Lat. 5.963 N Long. 49.013 W

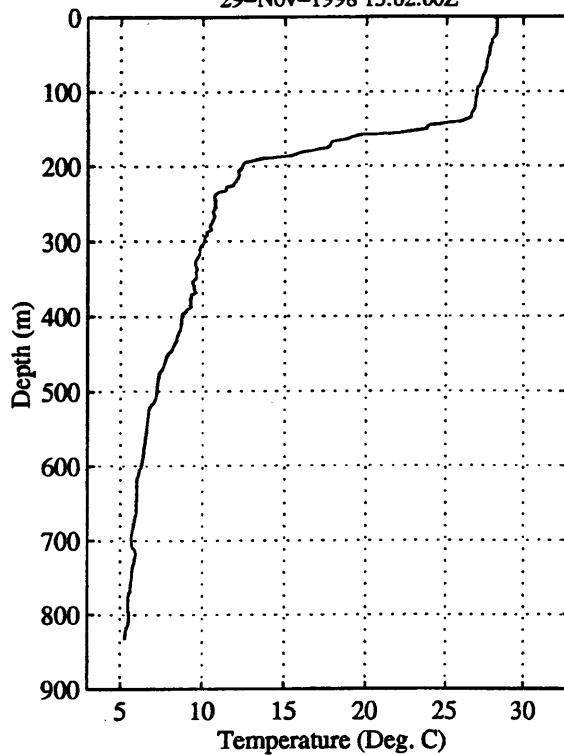
29-Nov-1998 14:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 056

Lat. 6.115 N Long. 49.152 W

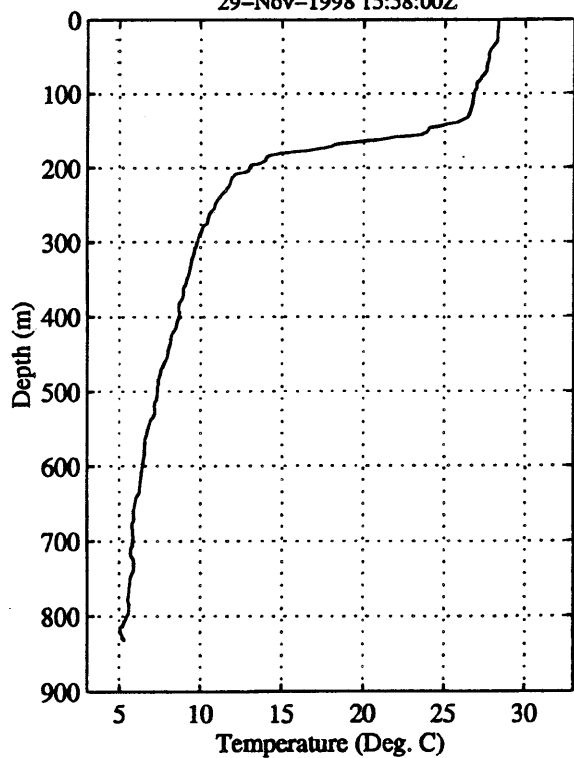
29-Nov-1998 15:02:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 057

Lat. 6.253 N Long. 49.275 W

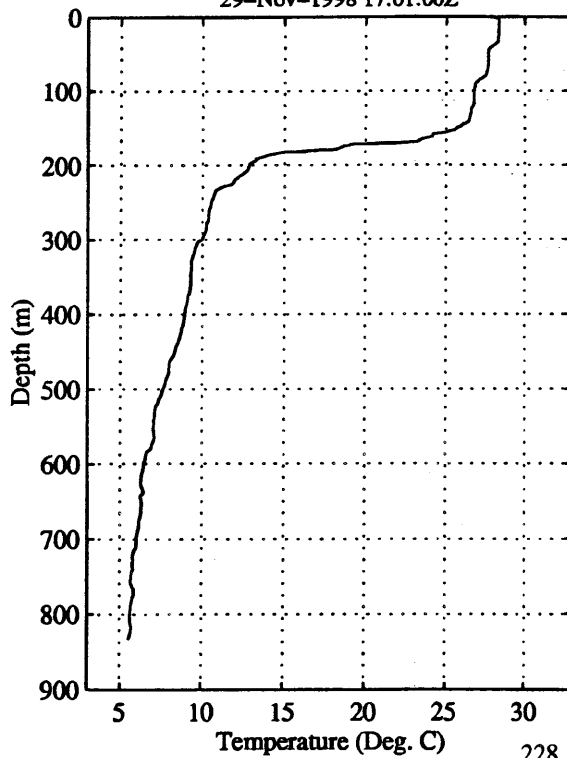
29-Nov-1998 15:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 058

Lat. 6.387 N Long. 49.400 W

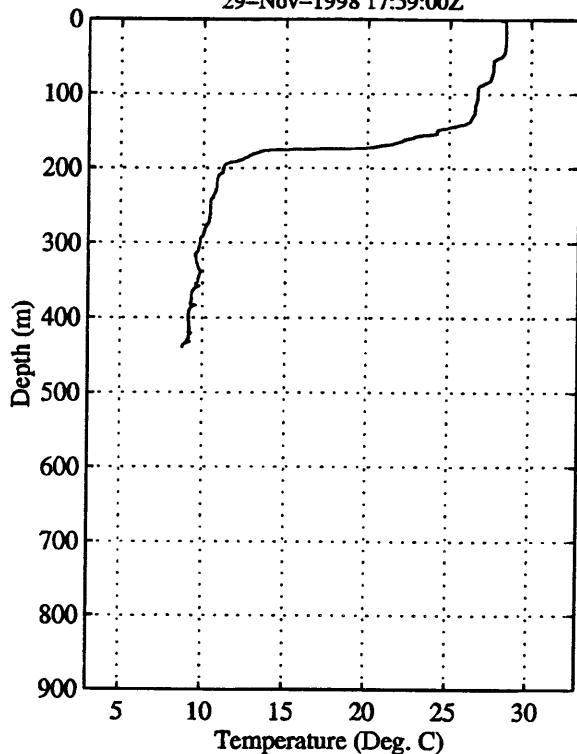
29-Nov-1998 17:01:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 059

Lat. 6.528 N Long. 49.528 W

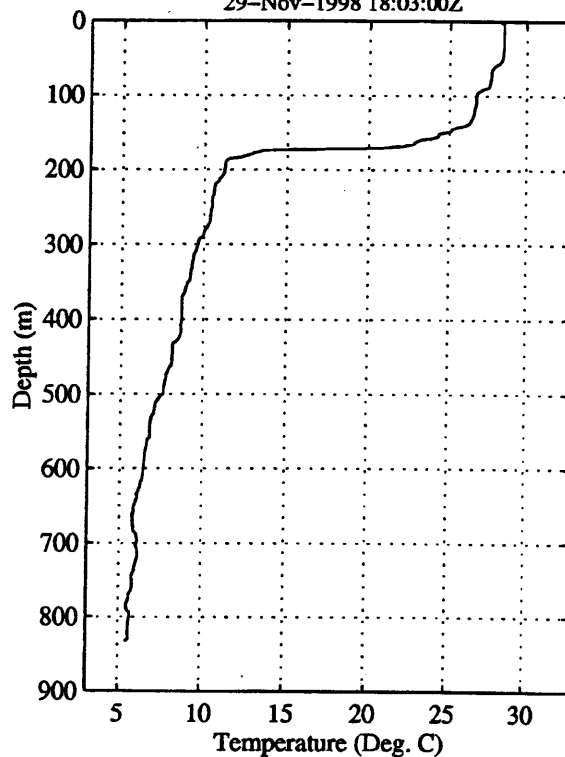
29-Nov-1998 17:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 060

Lat. 6.537 N Long. 49.537 W

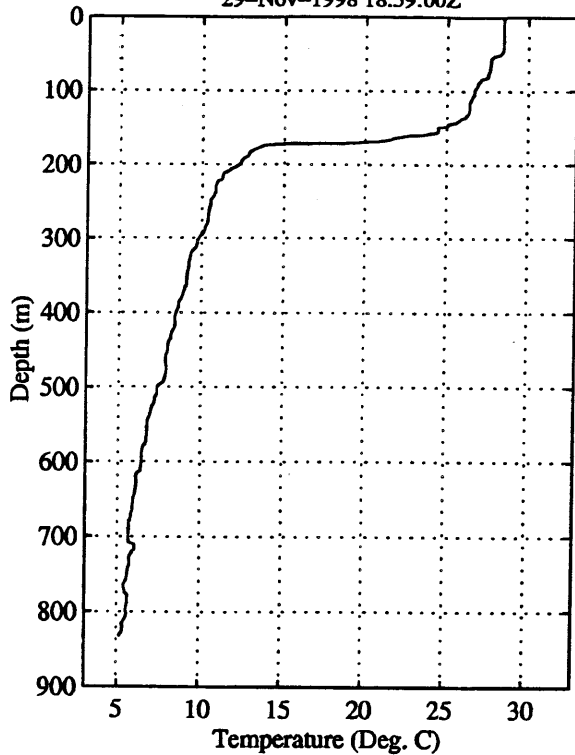
29-Nov-1998 18:03:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 061

Lat. 6.675 N Long. 49.665 W

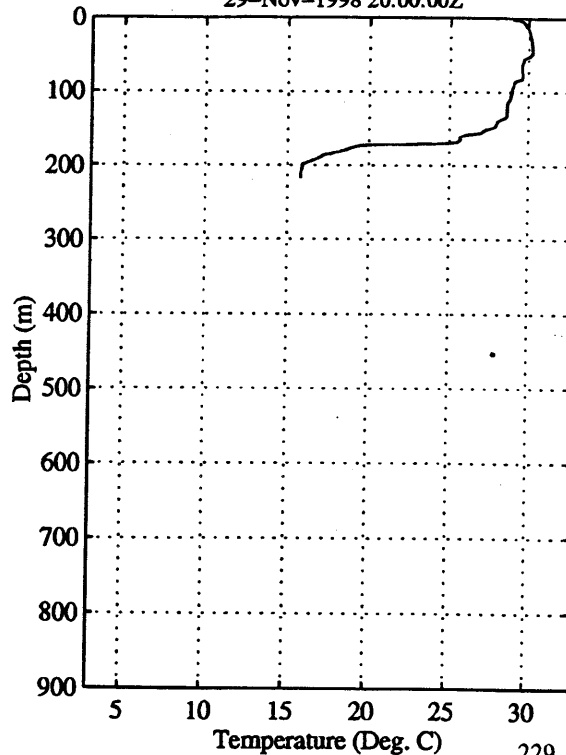
29-Nov-1998 18:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 062

Lat. 6.825 N Long. 49.798 W

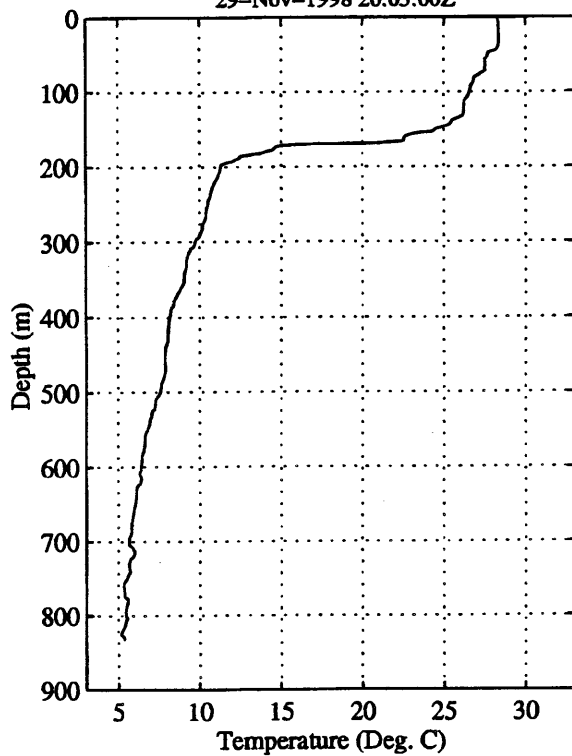
29-Nov-1998 20:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 063

Lat. 6.832 N Long. 49.805 W

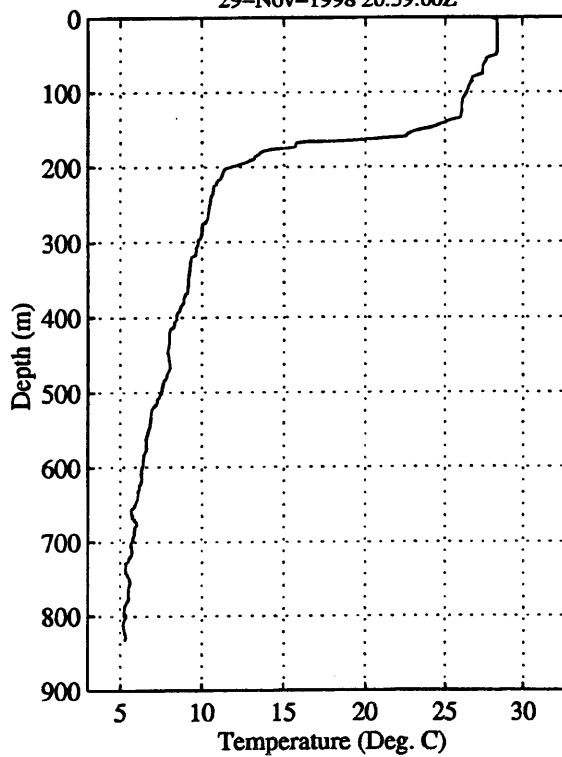
29-Nov-1998 20:03:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 064

Lat. 6.970 N Long. 49.925 W

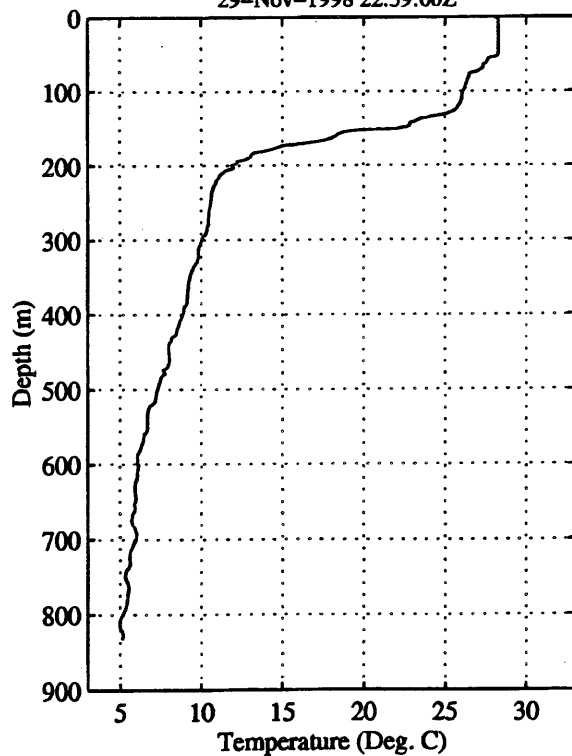
29-Nov-1998 20:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 066

Lat. 7.253 N Long. 50.197 W

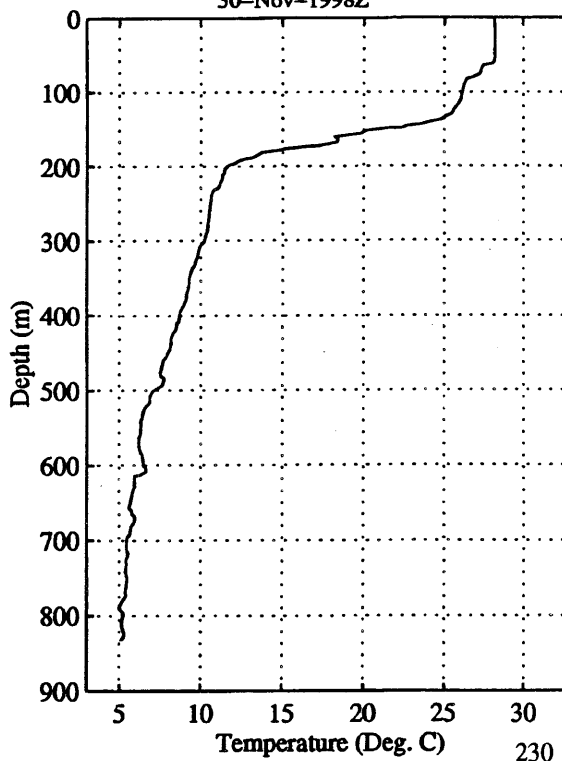
29-Nov-1998 22:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 067

Lat. 7.392 N Long. 50.335 W

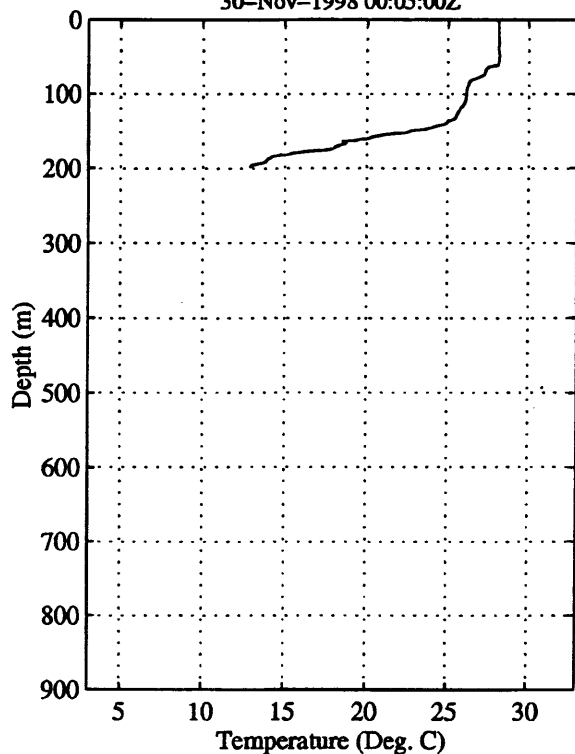
30-Nov-1998Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 068

Lat. 7.403 N Long. 50.347 W

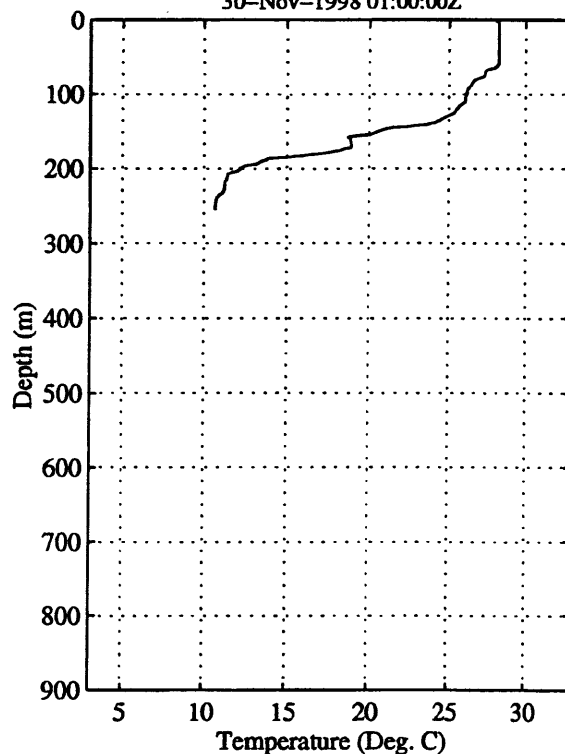
30-Nov-1998 00:05:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 069

Lat. 7.533 N Long. 50.470 W

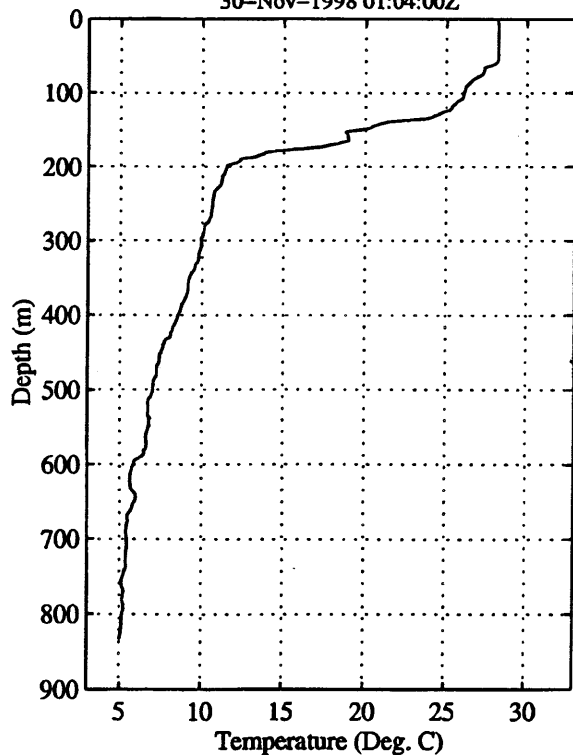
30-Nov-1998 01:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 070

Lat. 7.543 N Long. 50.478 W

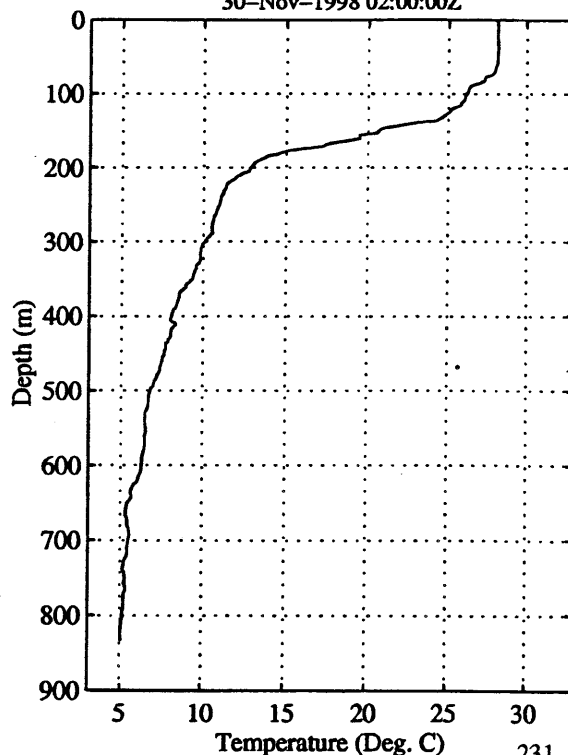
30-Nov-1998 01:04:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 071

Lat. 7.677 N Long. 50.603 W

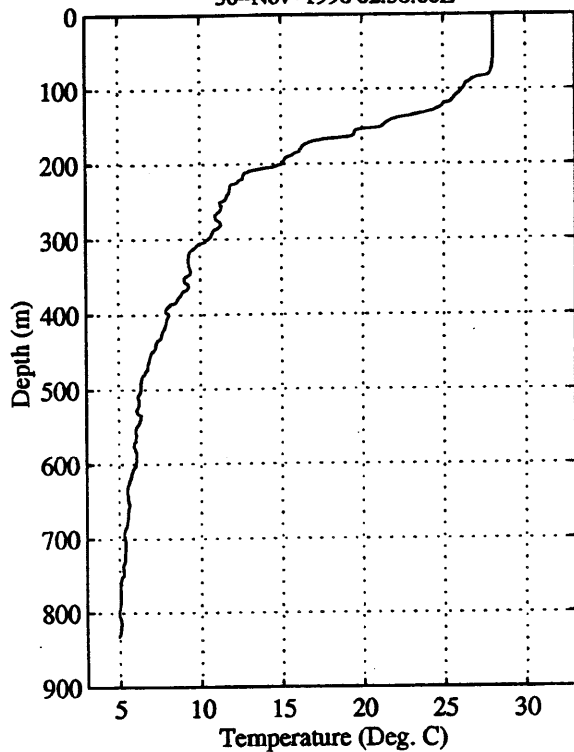
30-Nov-1998 02:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 072

Lat. 7.813 N Long. 50.732 W

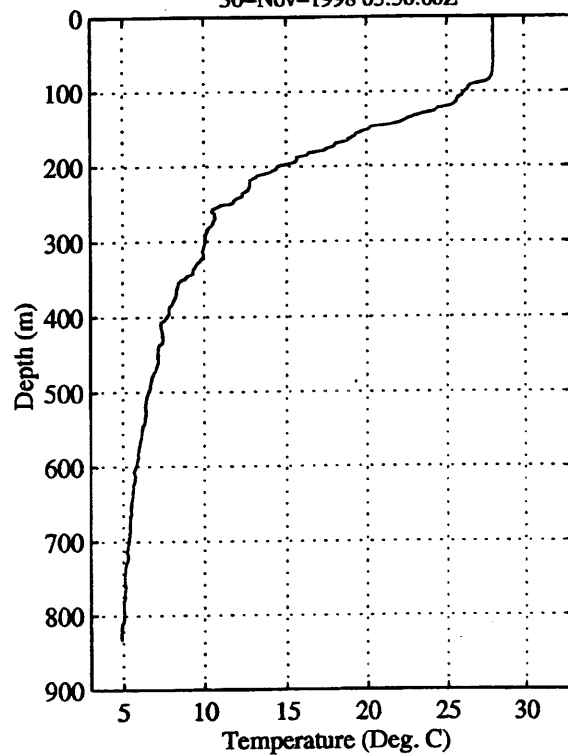
30-Nov-1998 02:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 073

Lat. 7.948 N Long. 50.858 W

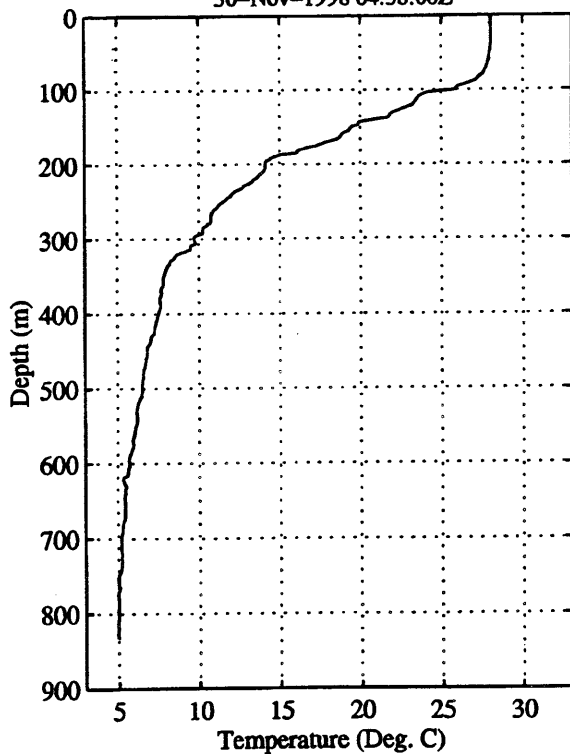
30-Nov-1998 03:56:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 074

Lat. 8.088 N Long. 50.992 W

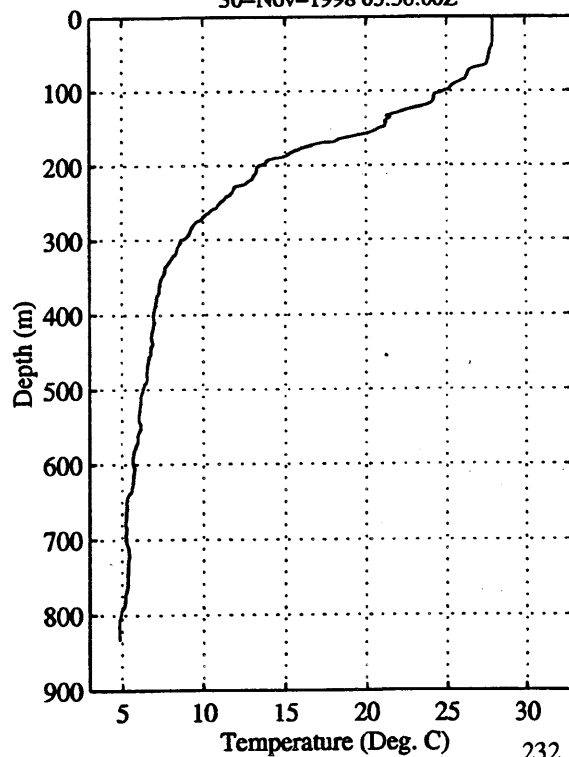
30-Nov-1998 04:56:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 075

Lat. 8.233 N Long. 51.128 W

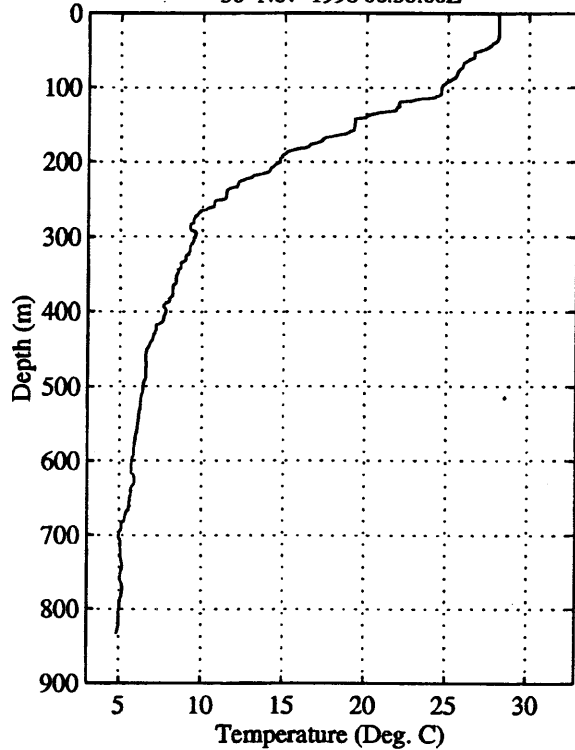
30-Nov-1998 05:56:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 076

Lat. 8.380 N Long. 51.263 W

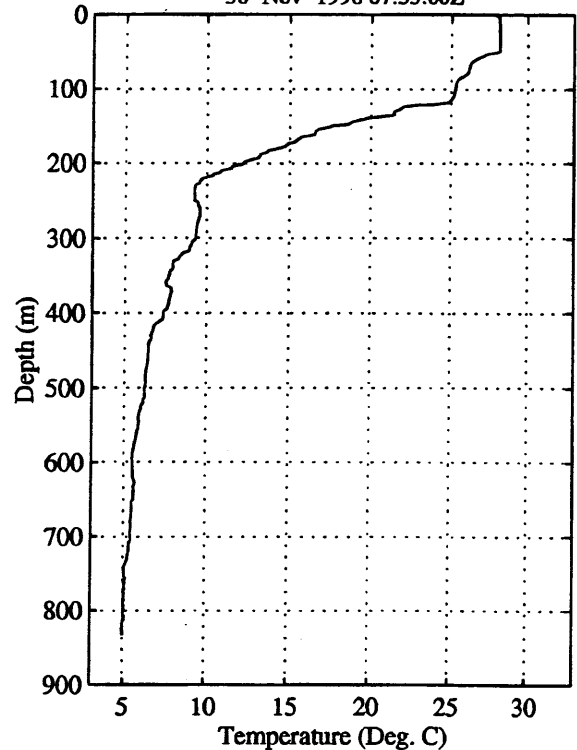
30-Nov-1998 06:56:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 077

Lat. 8.527 N Long. 51.397 W

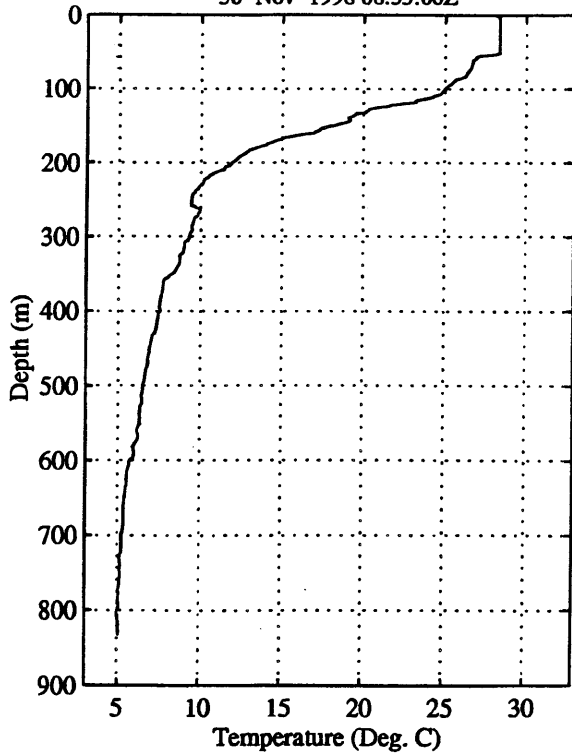
30-Nov-1998 07:55:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 078

Lat. 8.670 N Long. 51.528 W

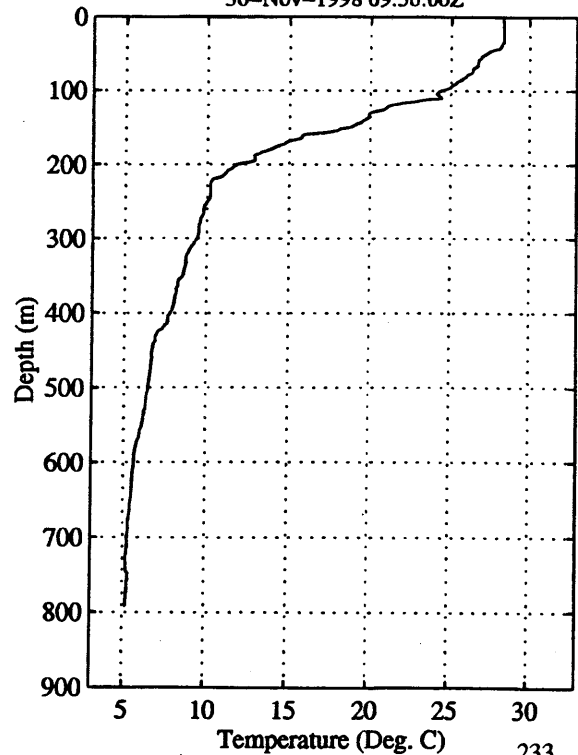
30-Nov-1998 08:55:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 079

Lat. 8.812 N Long. 51.657 W

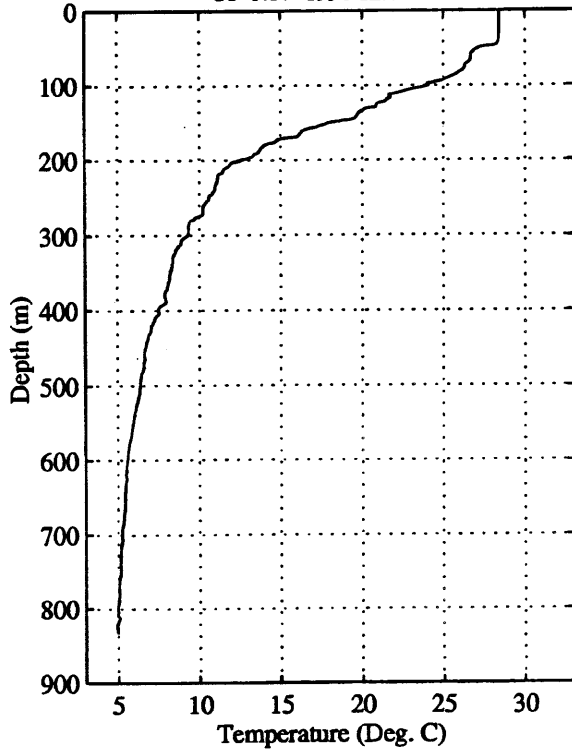
30-Nov-1998 09:56:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 080

Lat. 8.797 N Long. 51.368 W

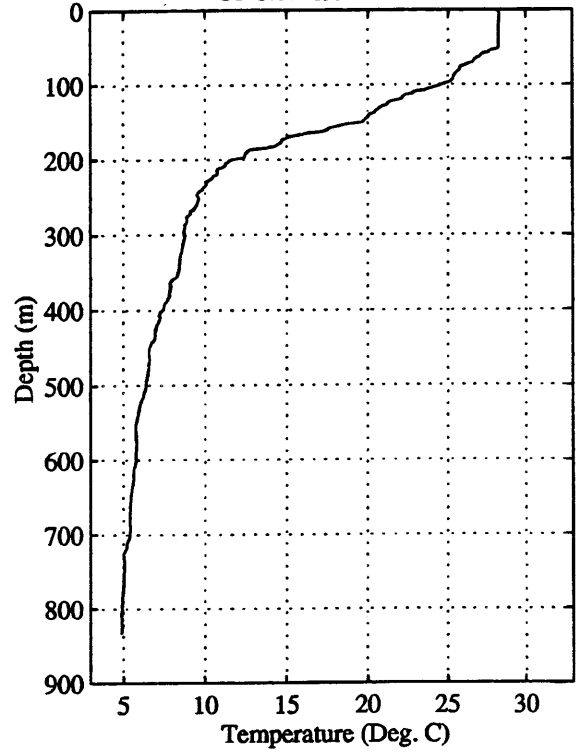
30-Nov-1998 12:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 081

Lat. 8.722 N Long. 51.015 W

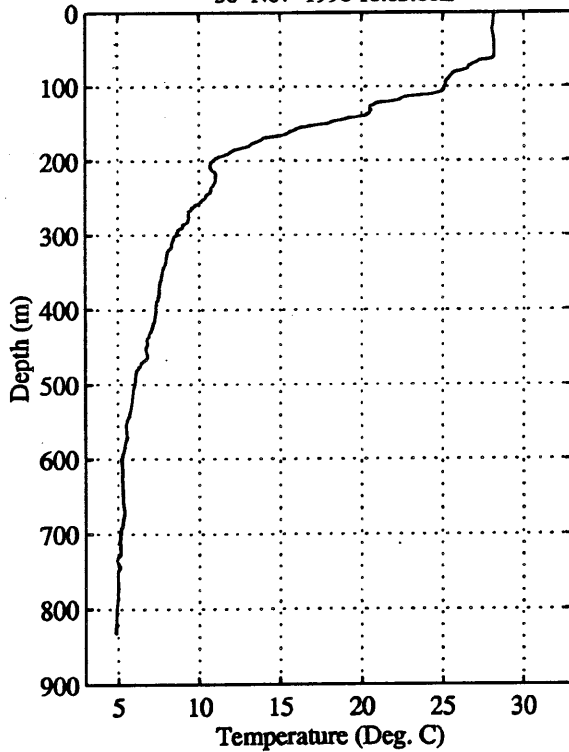
30-Nov-1998 13:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 082

Lat. 8.640 N Long. 50.630 W

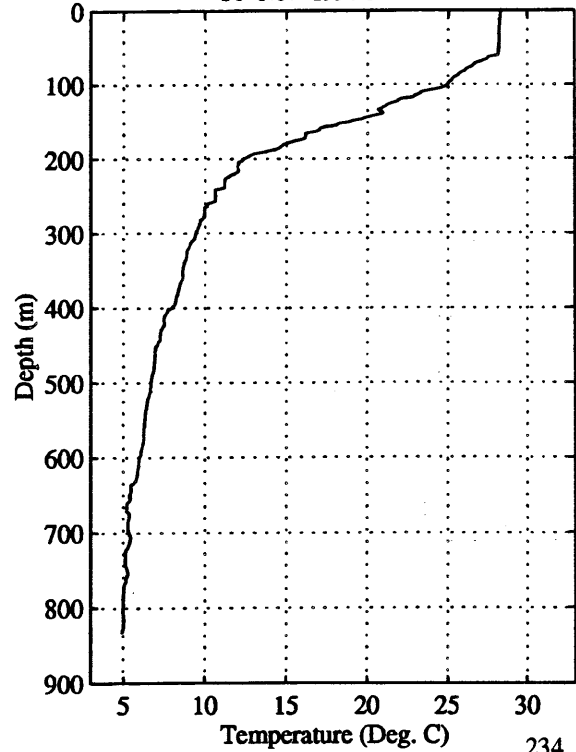
30-Nov-1998 16:03:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 083

Lat. 8.565 N Long. 50.258 W

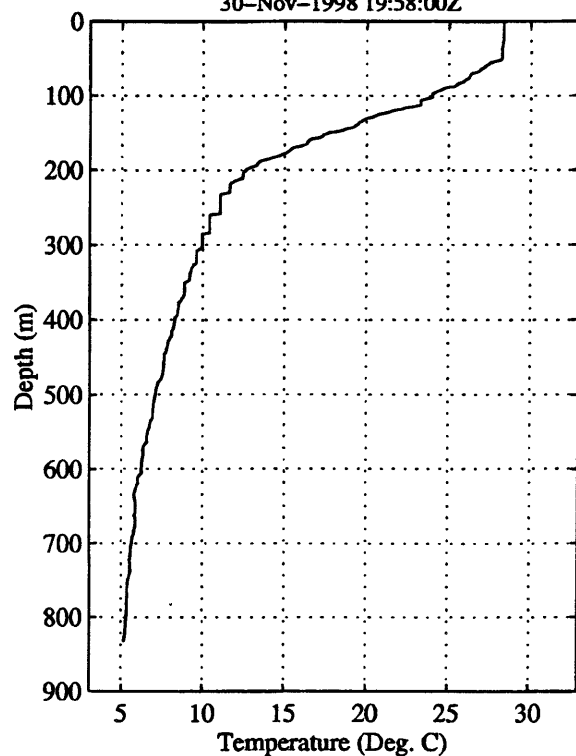
30-Nov-1998 18:03:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 084

Lat. 8.487 N Long. 49.897 W

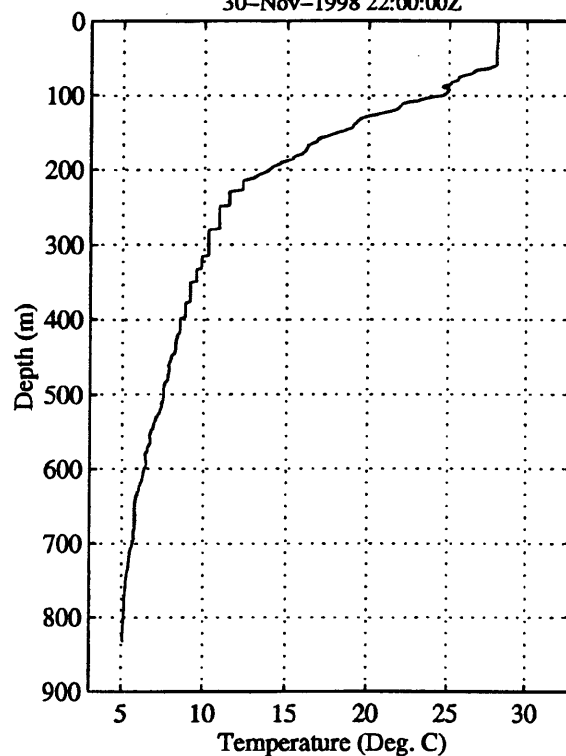
30-Nov-1998 19:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 085

Lat. 8.400 N Long. 49.522 W

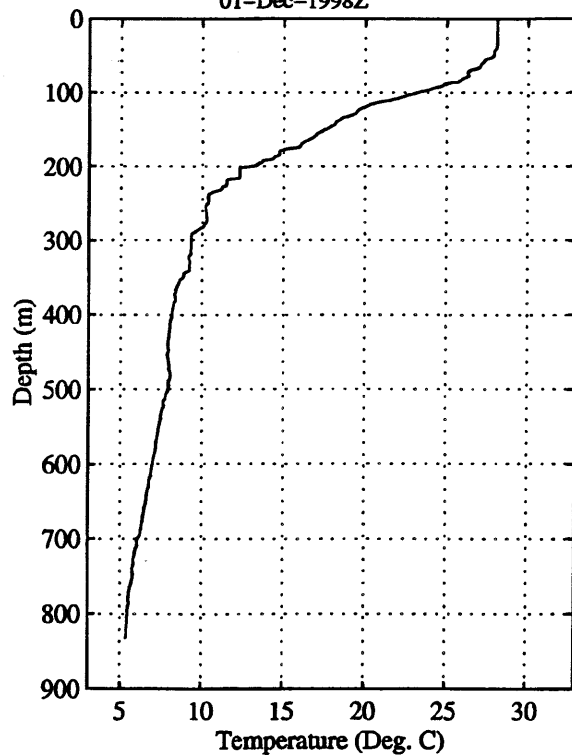
30-Nov-1998 22:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 086

Lat. 8.340 N Long. 49.153 W

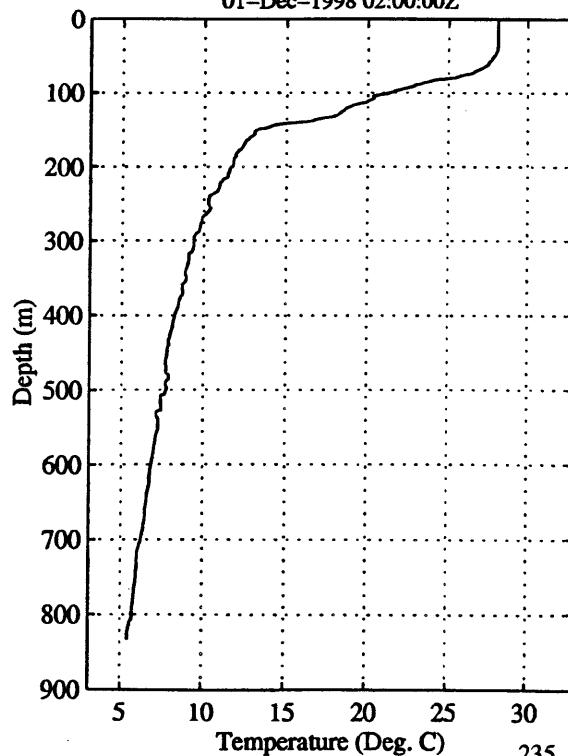
01-Dec-1998Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 087

Lat. 8.263 N Long. 48.787 W

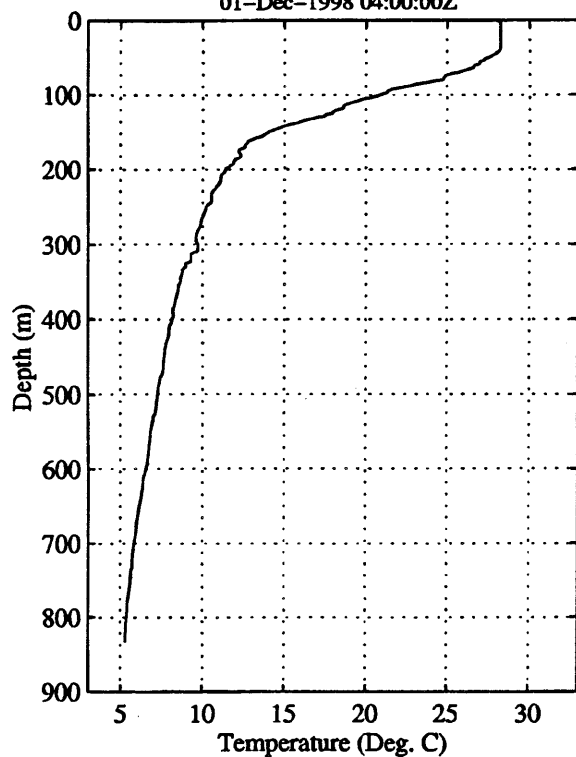
01-Dec-1998 02:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 088

Lat. 8.193 N Long. 48.438 W

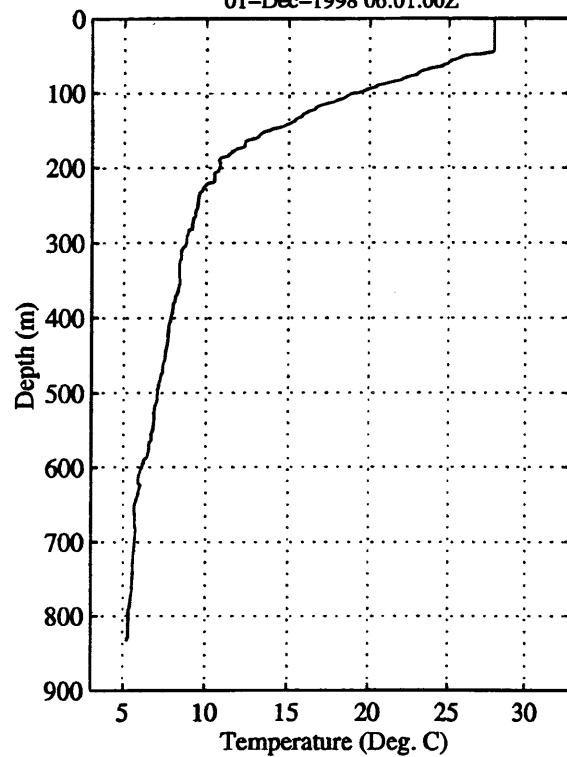
01-Dec-1998 04:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 089

Lat. 8.120 N Long. 48.092 W

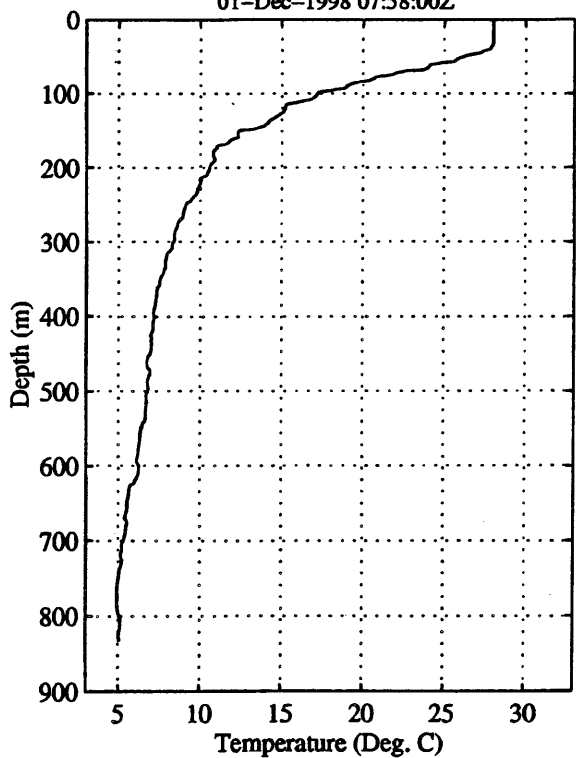
01-Dec-1998 06:01:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 090

Lat. 8.055 N Long. 47.770 W

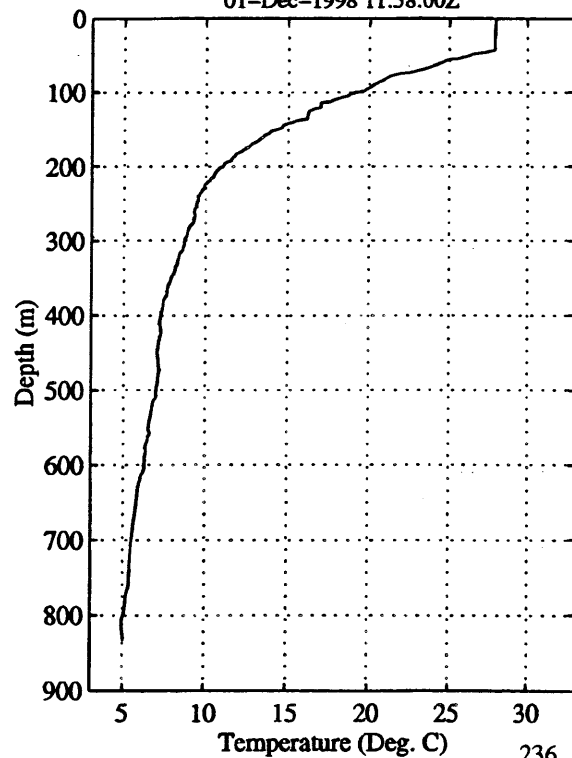
01-Dec-1998 07:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 091

Lat. 7.895 N Long. 47.787 W

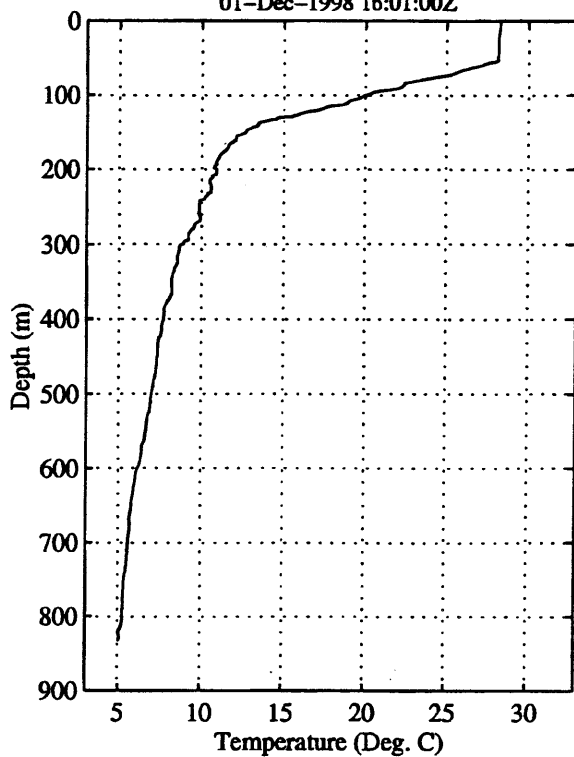
01-Dec-1998 11:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 092

Lat. 7.528 N Long. 48.170 W

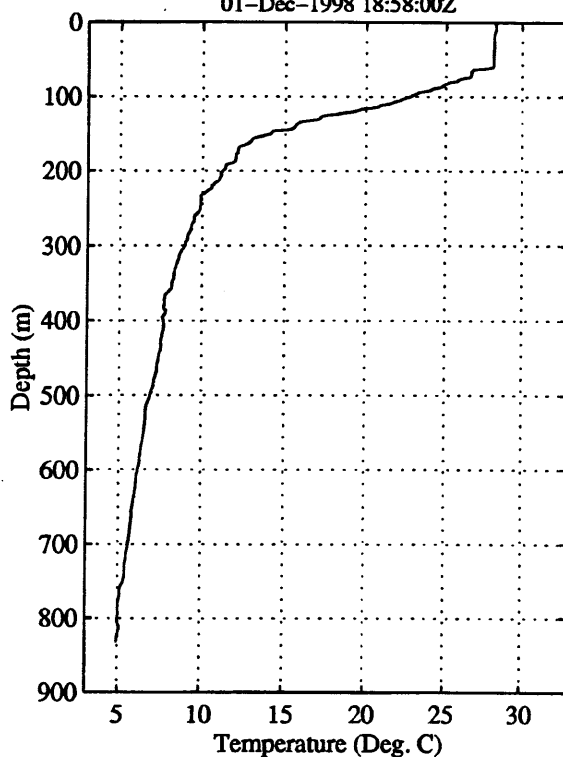
01-Dec-1998 16:01:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 093

Lat. 7.353 N Long. 48.308 W

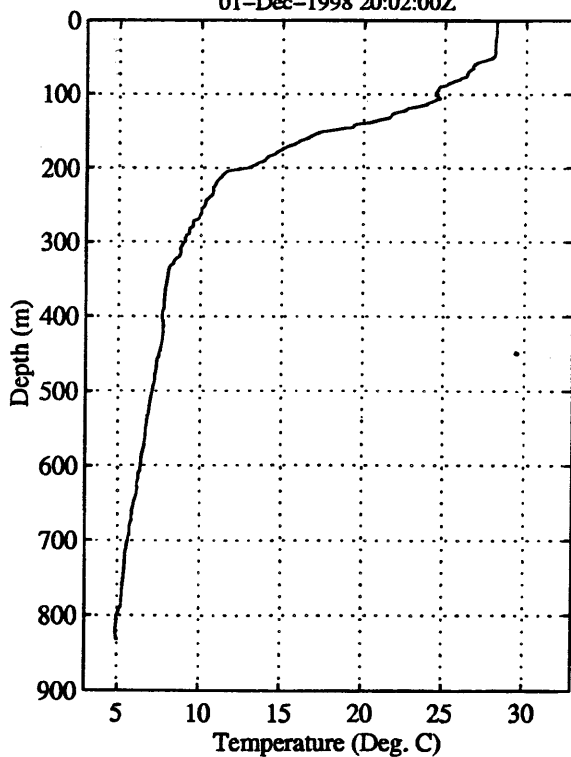
01-Dec-1998 18:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 094

Lat. 7.220 N Long. 48.438 W

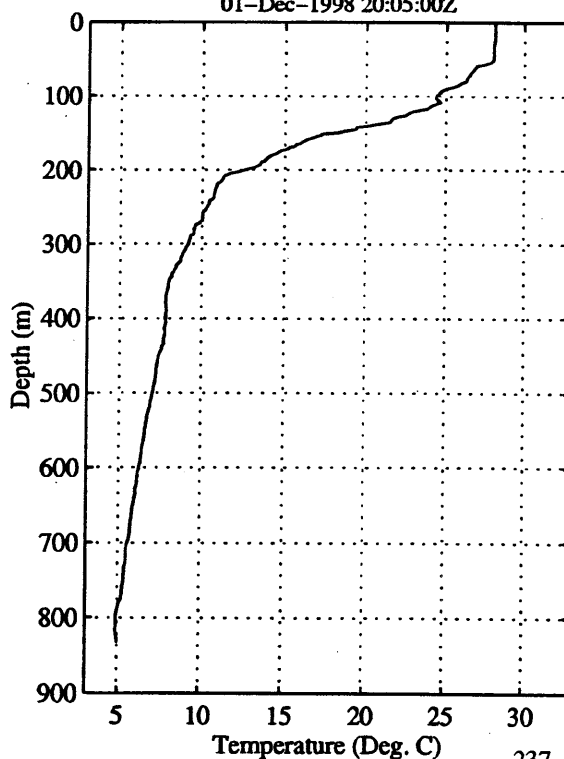
01-Dec-1998 20:02:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 095

Lat. 7.213 N Long. 48.447 W

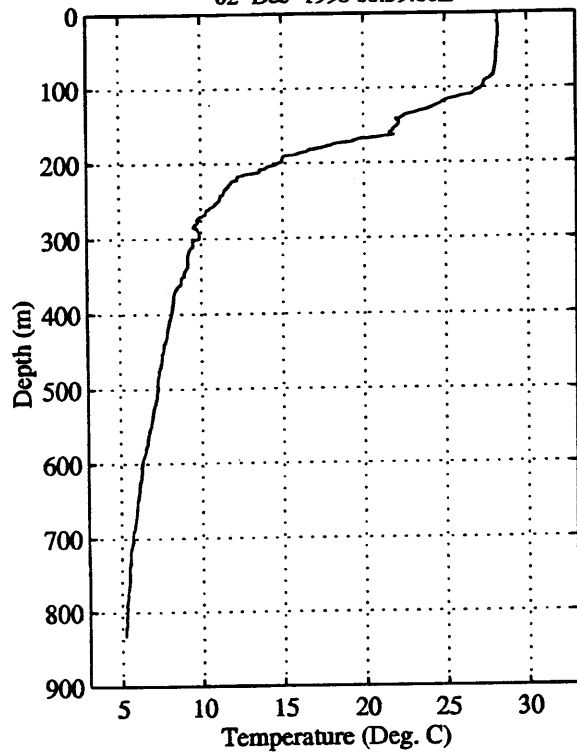
01-Dec-1998 20:05:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 096

Lat. 6.867 N Long. 48.843 W

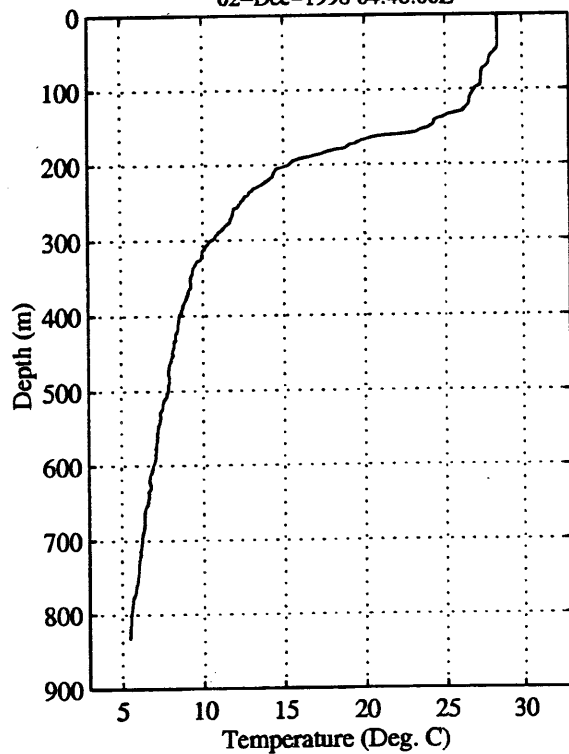
02-Dec-1998 00:39:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 097

Lat. 6.520 N Long. 49.217 W

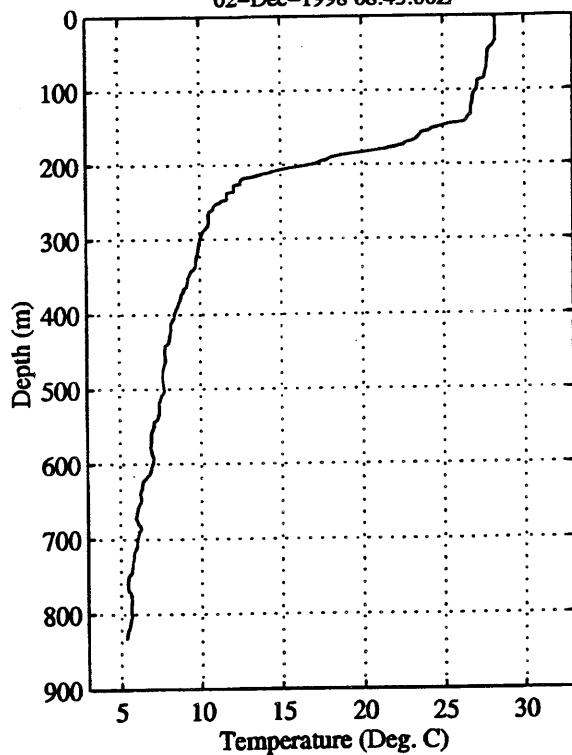
02-Dec-1998 04:48:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 098

Lat. 6.227 N Long. 49.548 W

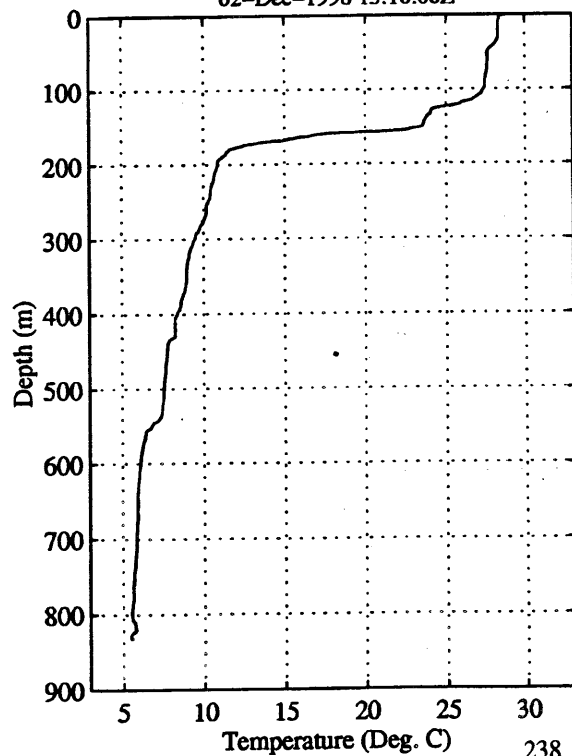
02-Dec-1998 08:43:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 099

Lat. 5.862 N Long. 49.945 W

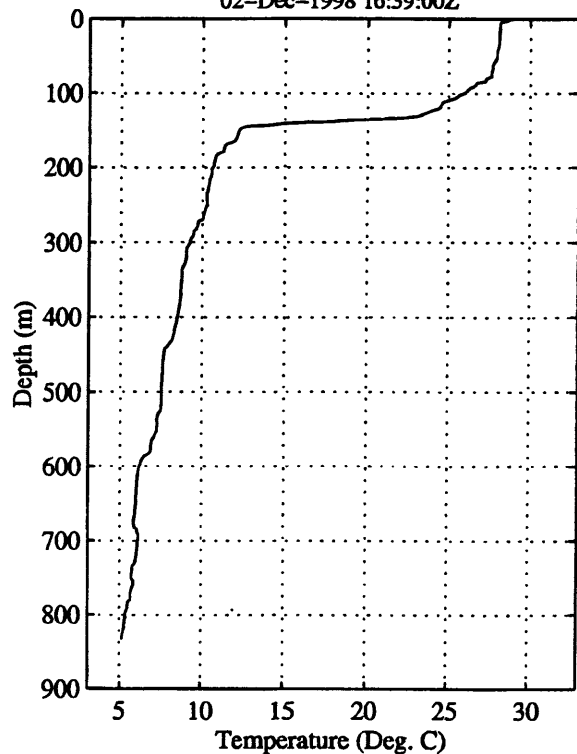
02-Dec-1998 13:10:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 100

Lat. 5.628 N Long. 50.207 W

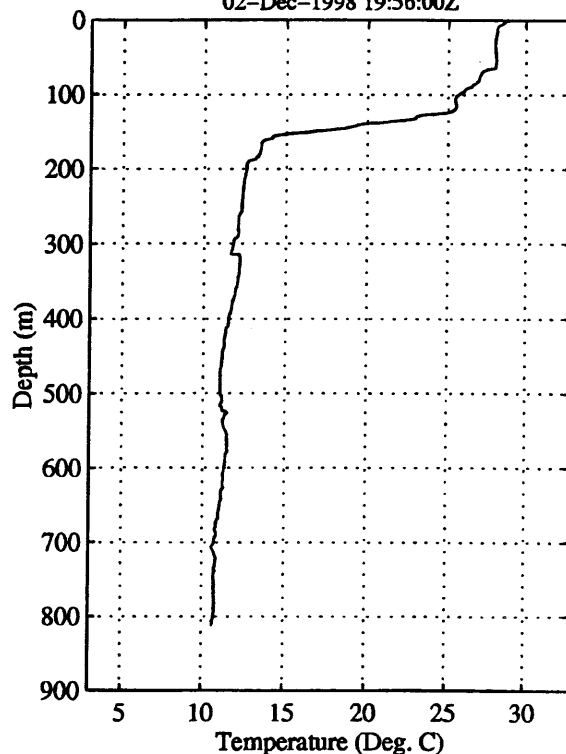
02-Dec-1998 16:39:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 101

Lat. 5.445 N Long. 50.418 W

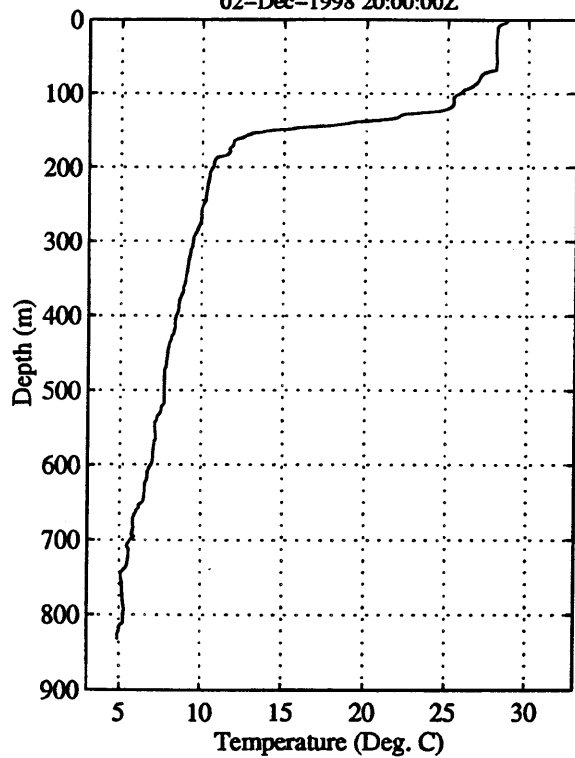
02-Dec-1998 19:56:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 102

Lat. 5.437 N Long. 50.425 W

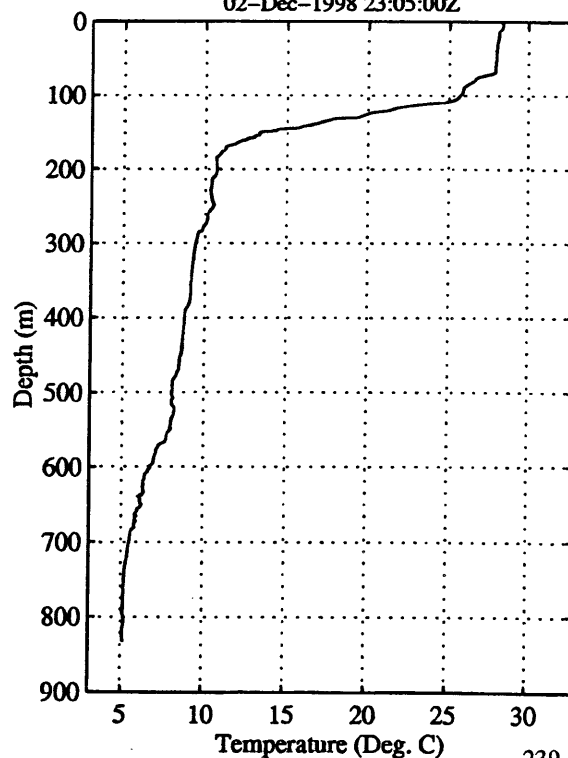
02-Dec-1998 20:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 103

Lat. 5.320 N Long. 50.545 W

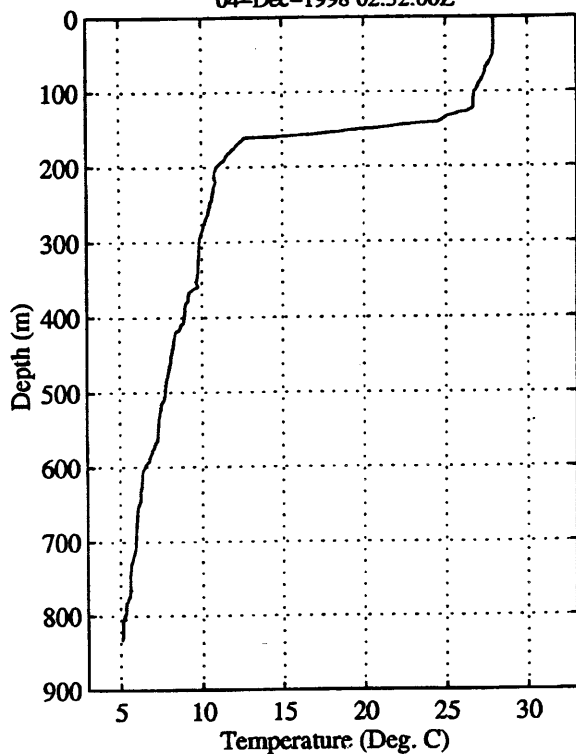
02-Dec-1998 23:05:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 104

Lat. 3.490 N Long. 48.342 W

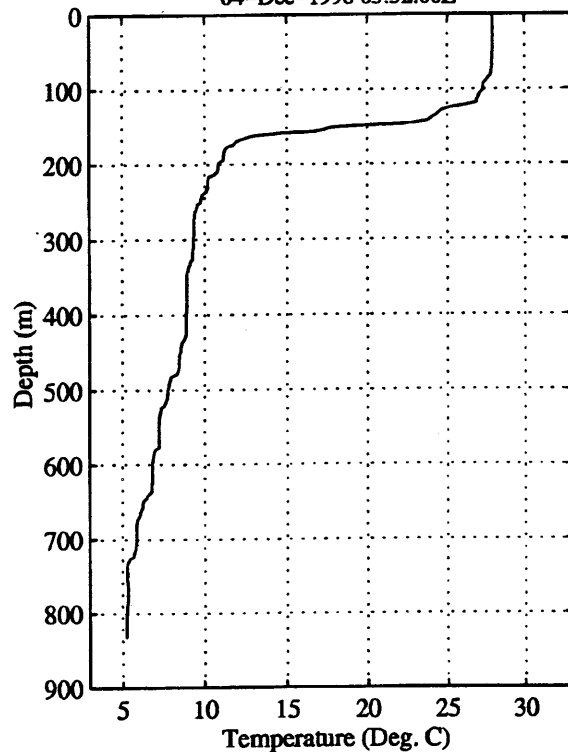
04-Dec-1998 02:32:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 105

Lat. 3.680 N Long. 48.152 W

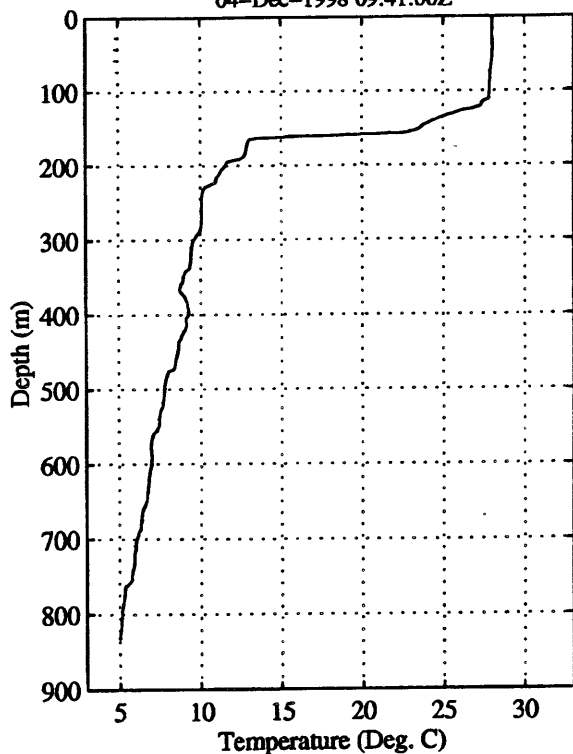
04-Dec-1998 05:52:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 106

Lat. 3.890 N Long. 47.915 W

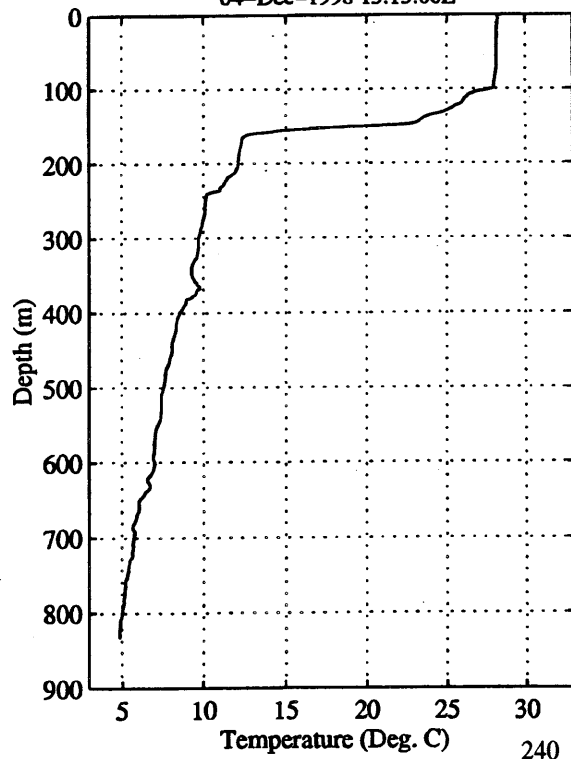
04-Dec-1998 09:41:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 107

Lat. 4.148 N Long. 47.633 W

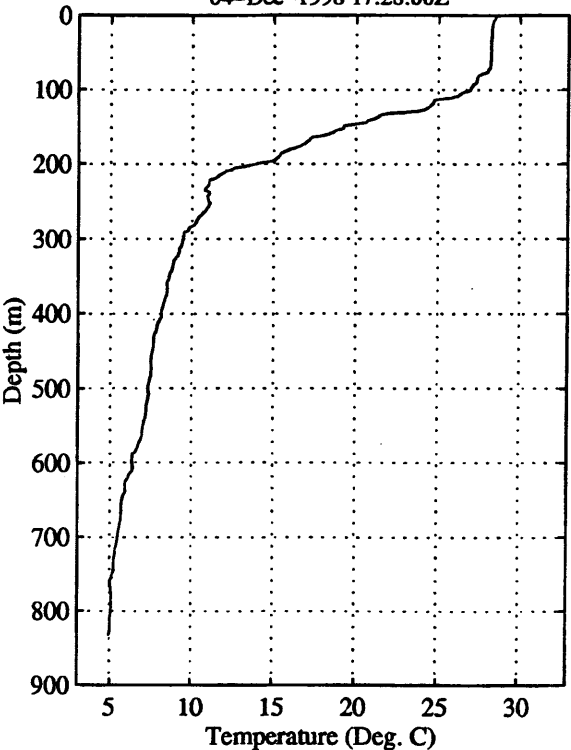
04-Dec-1998 13:13:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 108

Lat. 4.602 N Long. 47.432 W

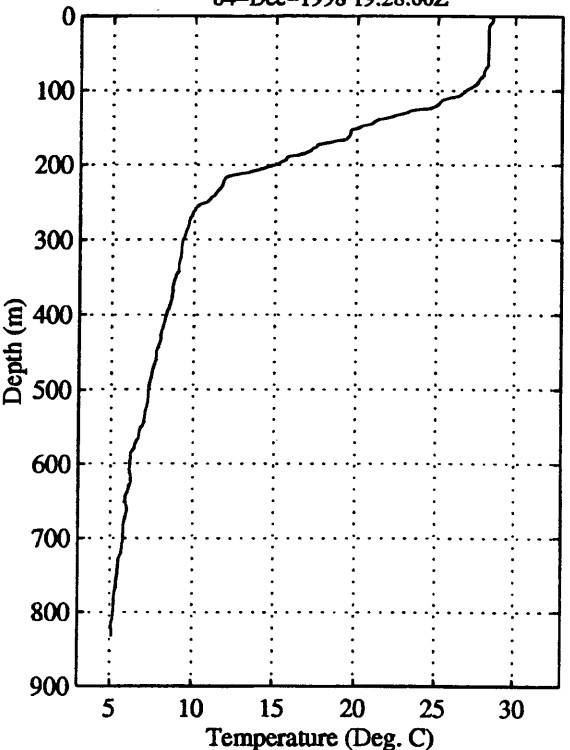
04-Dec-1998 17:28:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 109

Lat. 4.967 N Long. 47.382 W

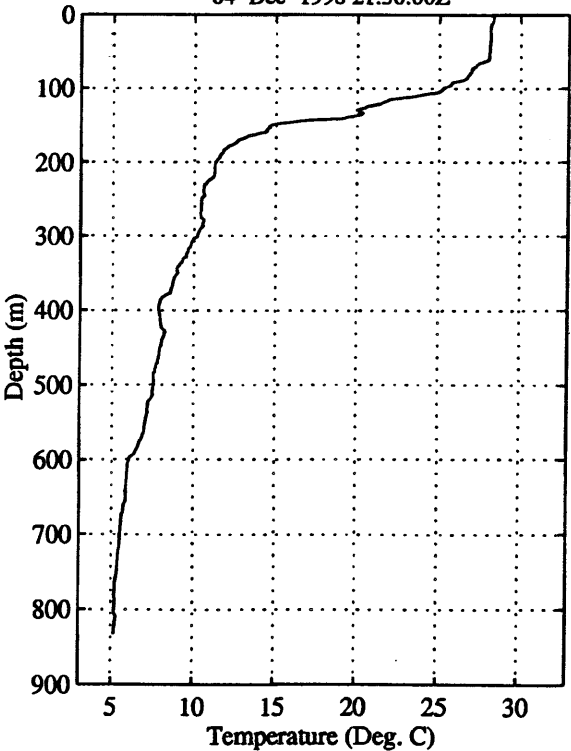
04-Dec-1998 19:28:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 110

Lat. 5.332 N Long. 47.333 W

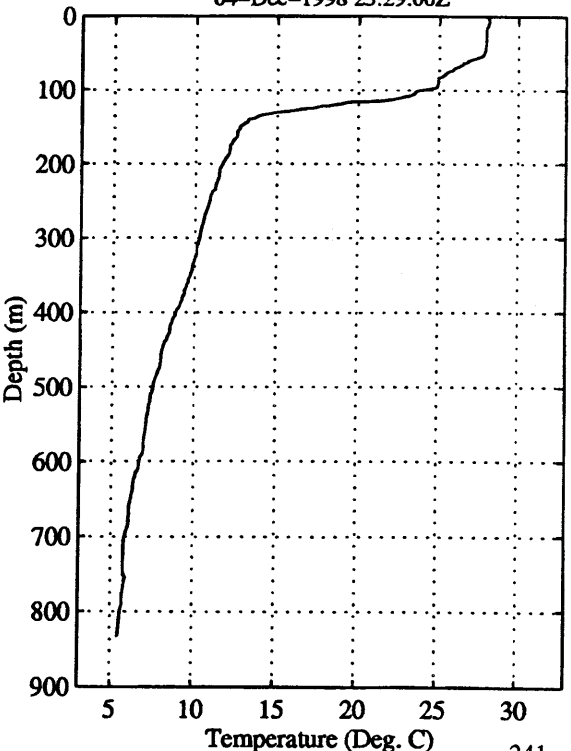
04-Dec-1998 21:30:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 111

Lat. 5.693 N Long. 47.285 W

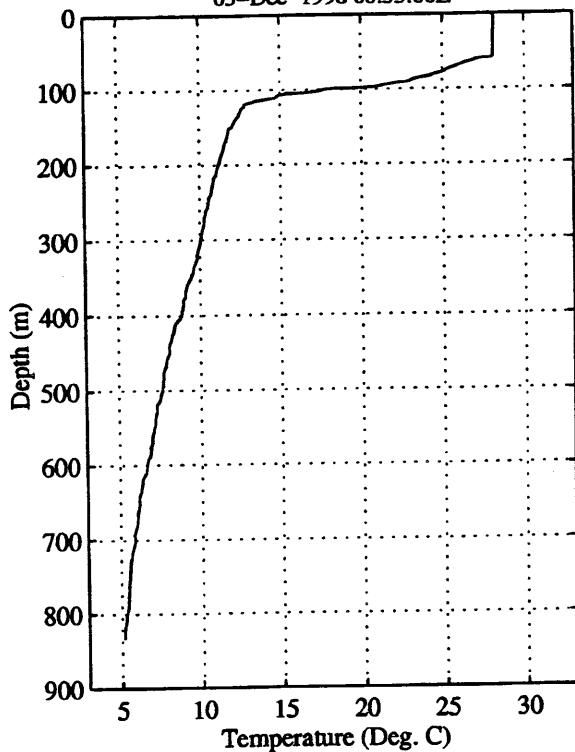
04-Dec-1998 23:29:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 112

Lat. 5.950 N Long. 47.255 W

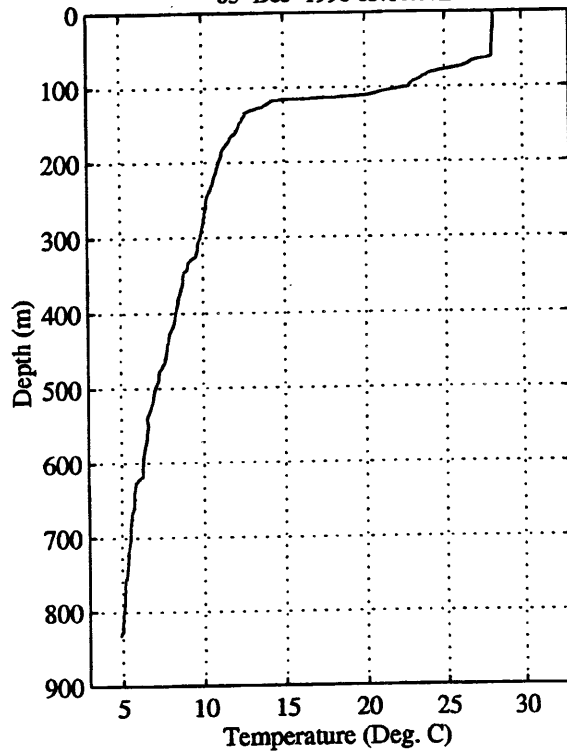
05-Dec-1998 00:53:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 113

Lat. 6.020 N Long. 47.755 W

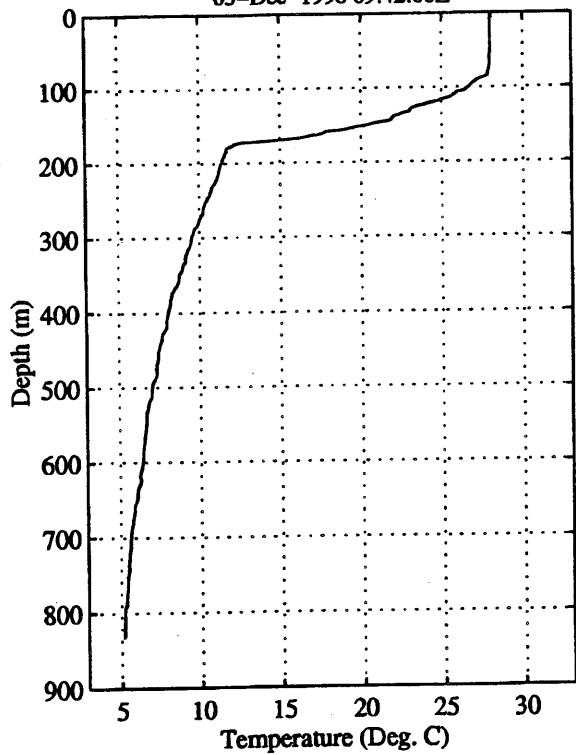
05-Dec-1998 05:10:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 114

Lat. 6.075 N Long. 48.247 W

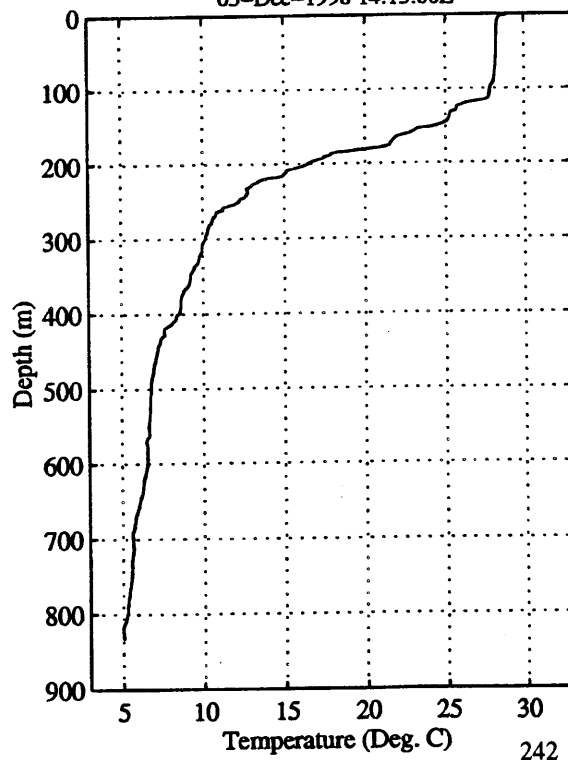
05-Dec-1998 09:42:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 115

Lat. 6.135 N Long. 48.770 W

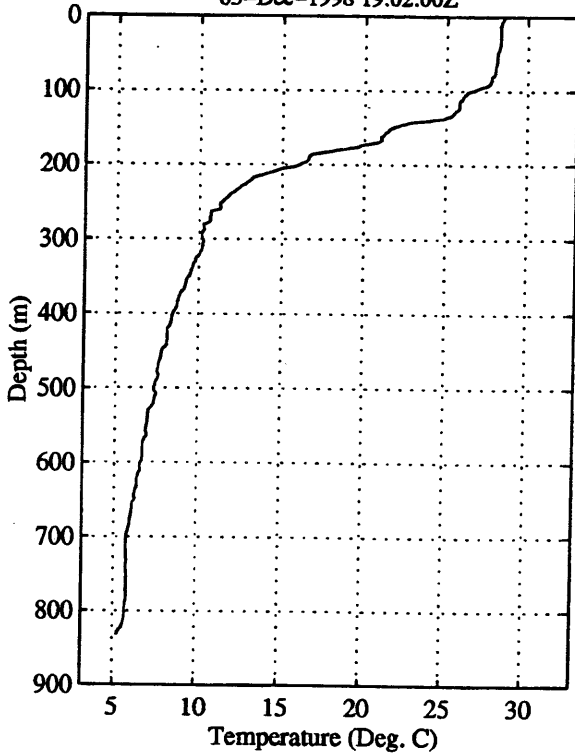
05-Dec-1998 14:13:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 116

Lat. 6.173 N Long. 49.258 W

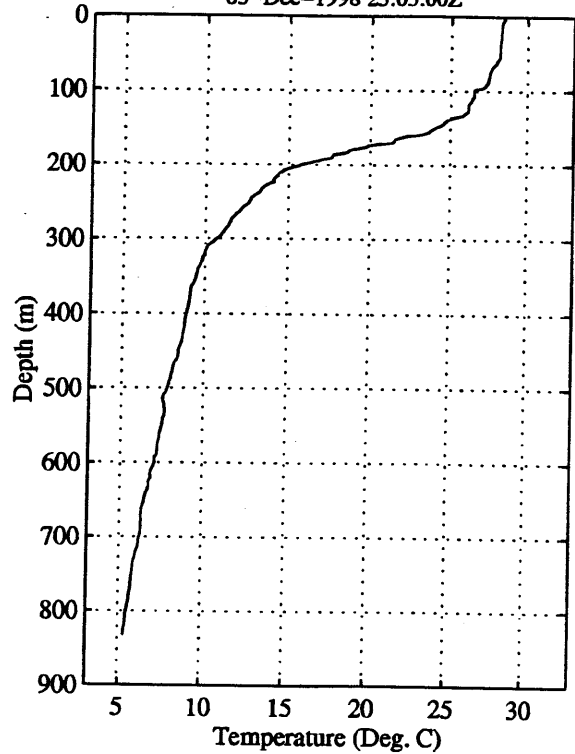
05-Dec-1998 19:02:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 117

Lat. 6.260 N Long. 49.762 W

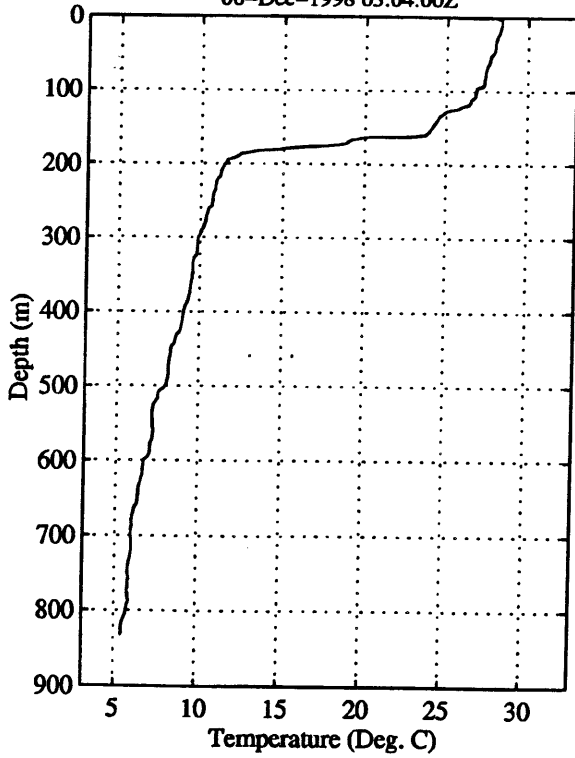
05-Dec-1998 23:05:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 118

Lat. 6.307 N Long. 50.247 W

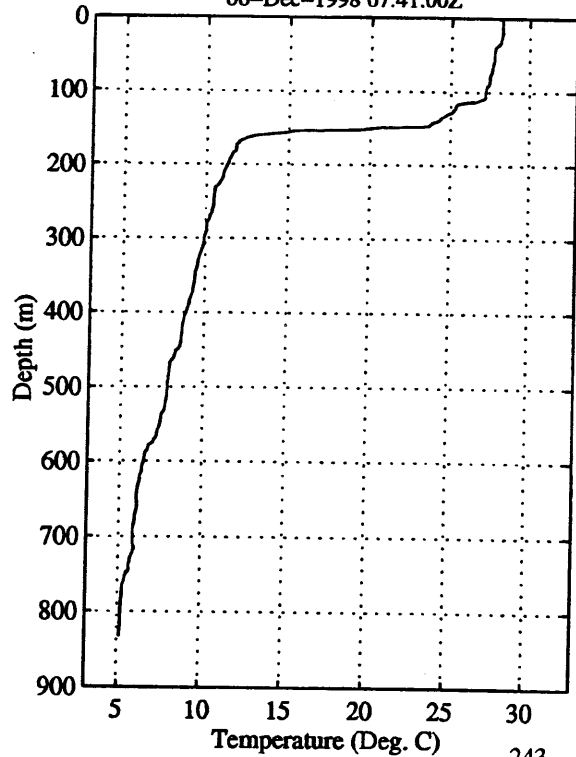
06-Dec-1998 03:04:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 119

Lat. 6.585 N Long. 50.702 W

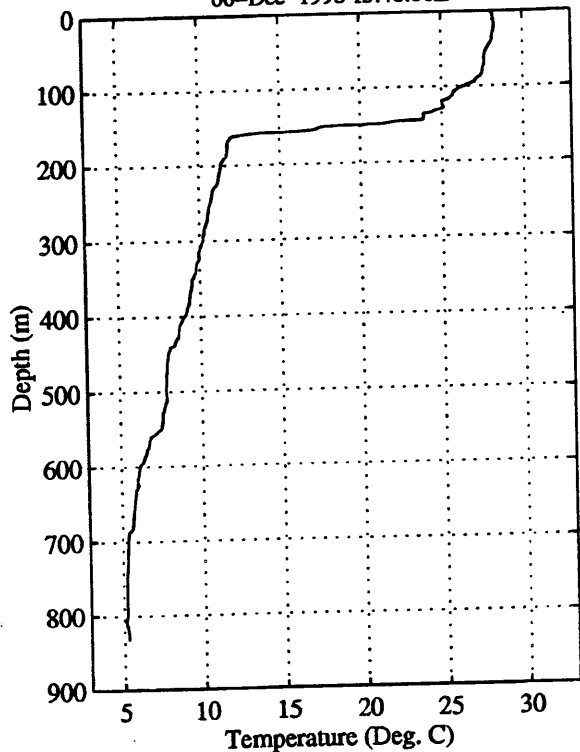
06-Dec-1998 07:41:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 120

Lat. 7.188 N Long. 50.982 W

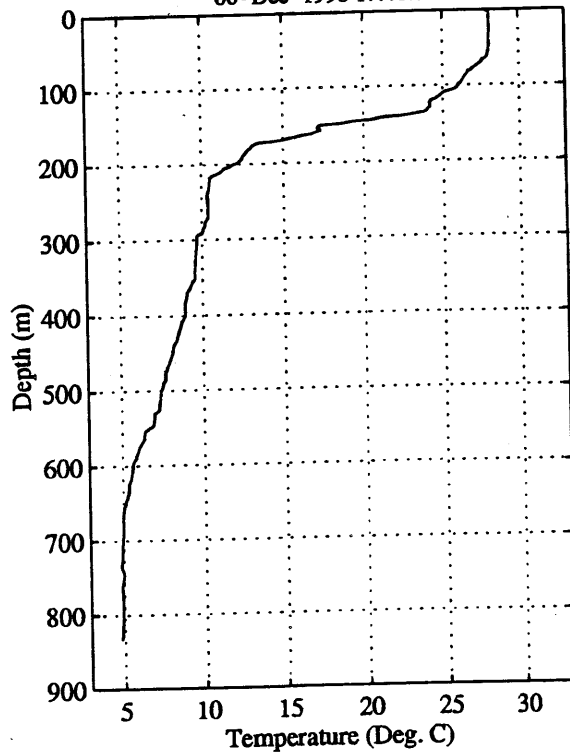
06-Dec-1998 13:48:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 121

Lat. 7.398 N Long. 51.422 W

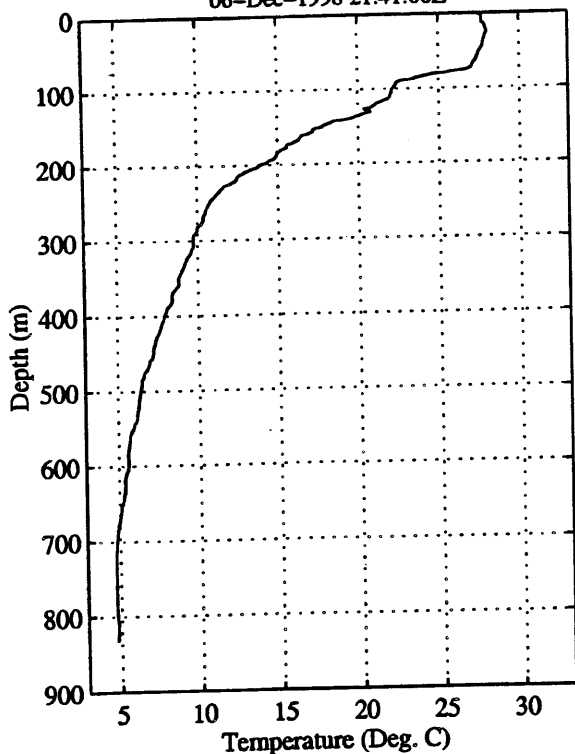
06-Dec-1998 17:40:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 122

Lat. 7.660 N Long. 51.823 W

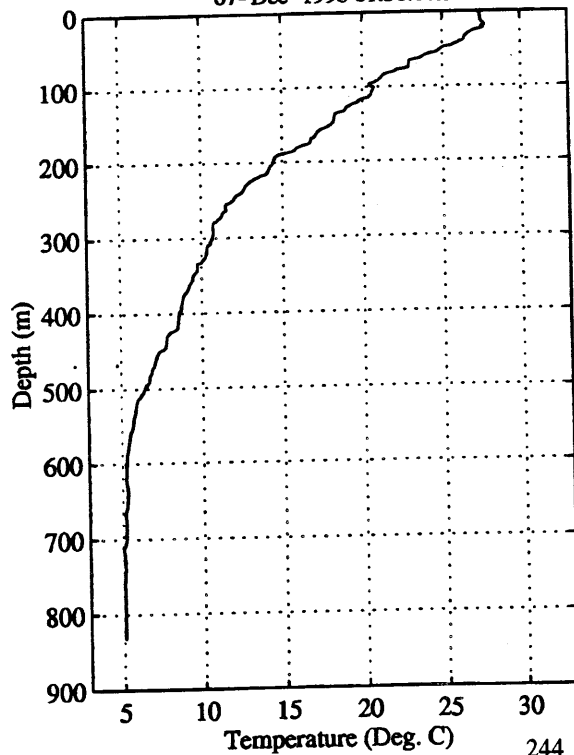
06-Dec-1998 21:41:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 123

Lat. 7.858 N Long. 52.308 W

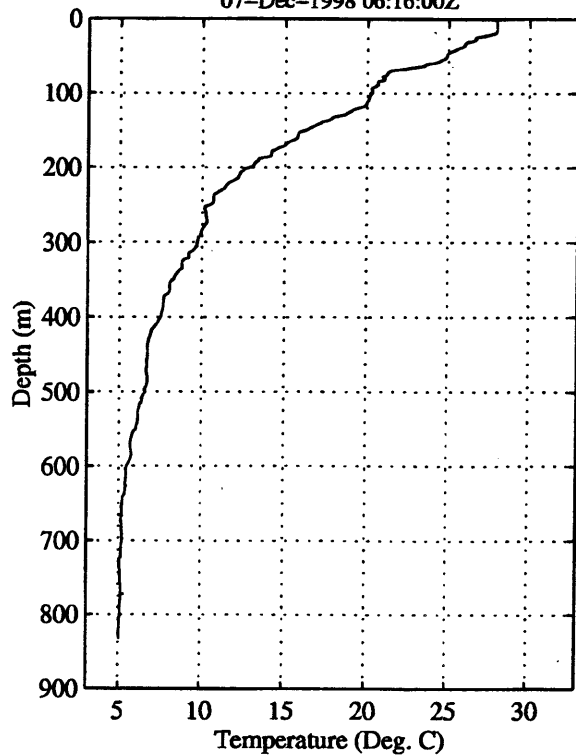
07-Dec-1998 01:38:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 124

Lat. 8.232 N Long. 52.747 W

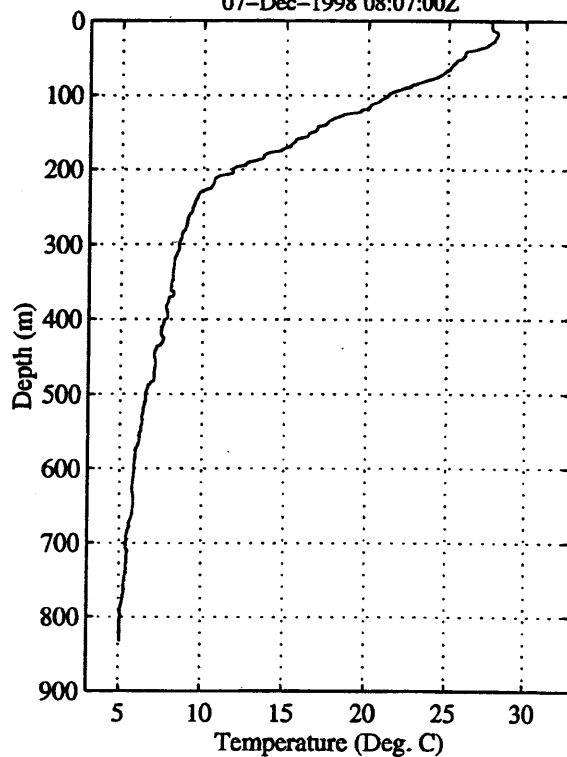
07-Dec-1998 06:16:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 125

Lat. 8.553 N Long. 52.957 W

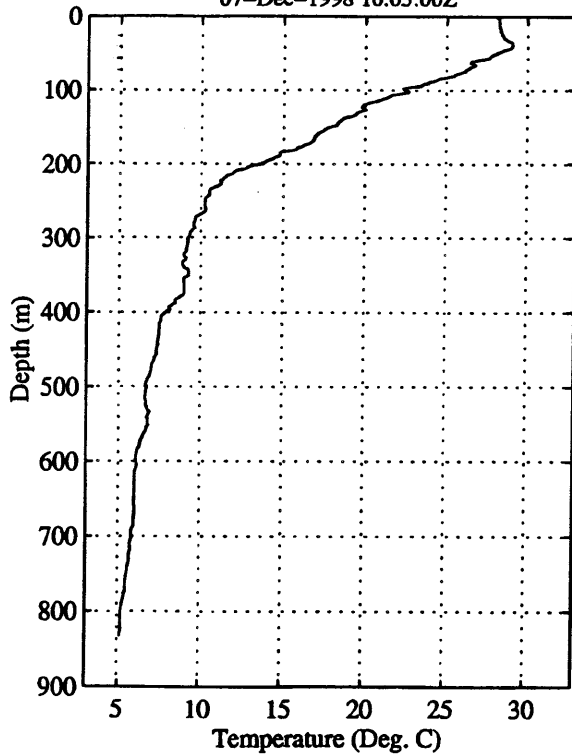
07-Dec-1998 08:07:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 126

Lat. 8.895 N Long. 53.177 W

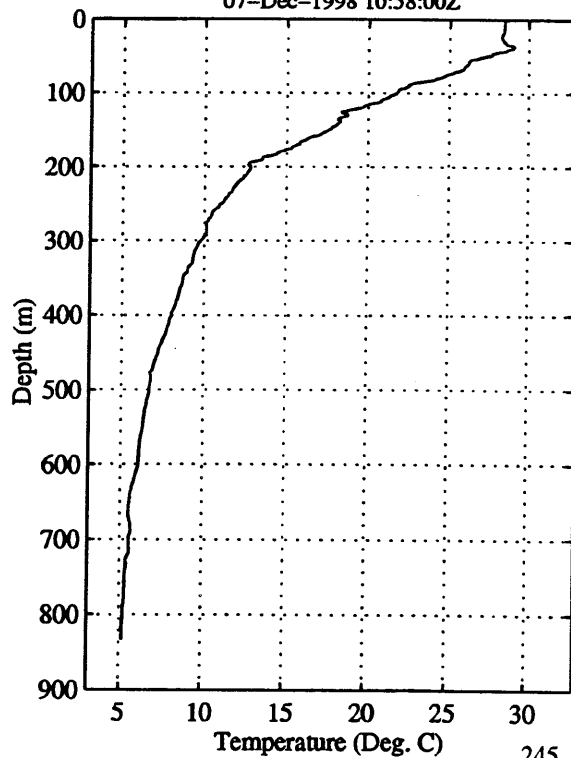
07-Dec-1998 10:05:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 127

Lat. 9.045 N Long. 53.282 W

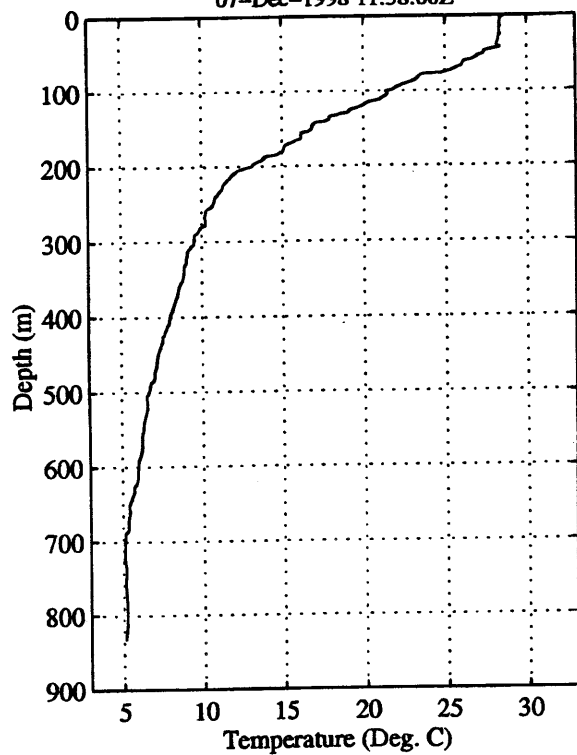
07-Dec-1998 10:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 128

Lat. 9.222 N Long. 53.395 W

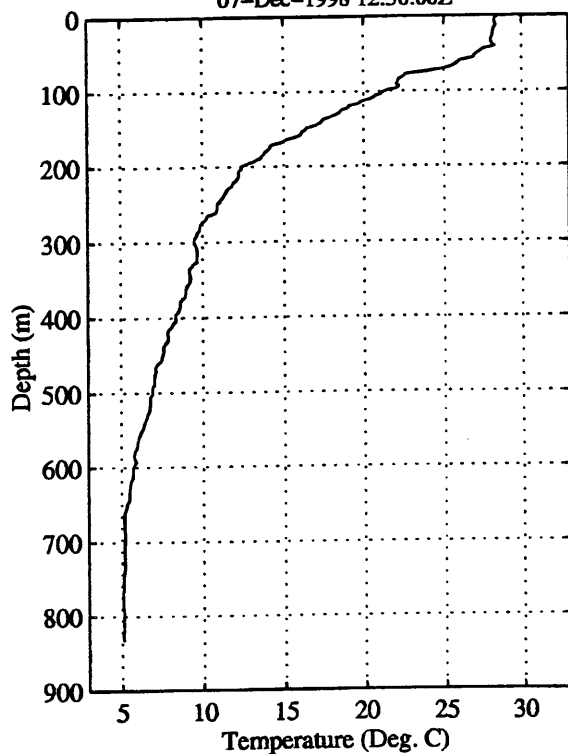
07-Dec-1998 11:58:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 129

Lat. 9.332 N Long. 53.468 W

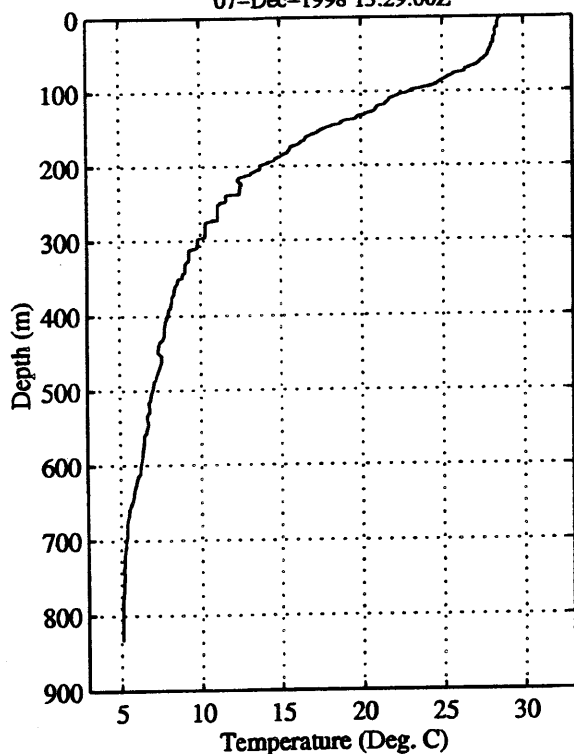
07-Dec-1998 12:36:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 130

Lat. 9.333 N Long. 53.647 W

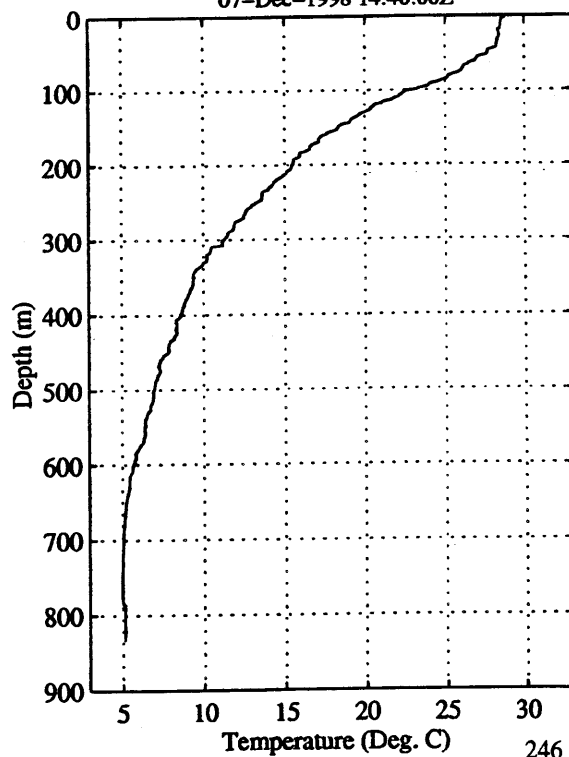
07-Dec-1998 13:29:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 131

Lat. 9.332 N Long. 53.888 W

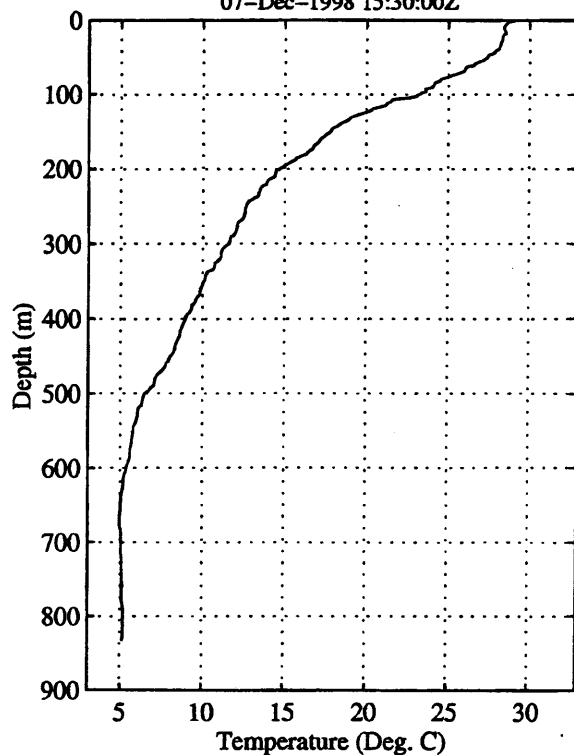
07-Dec-1998 14:40:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 132

Lat. 9.335 N Long. 54.053 W

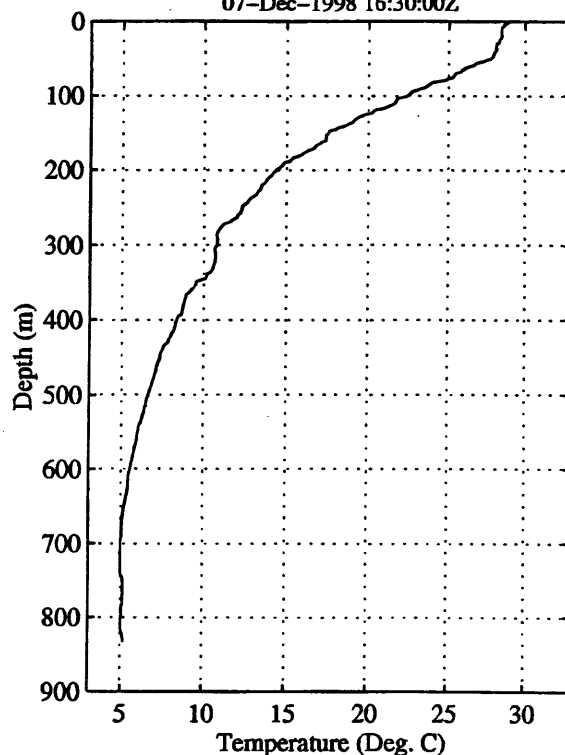
07-Dec-1998 15:30:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 133

Lat. 9.333 N Long. 54.250 W

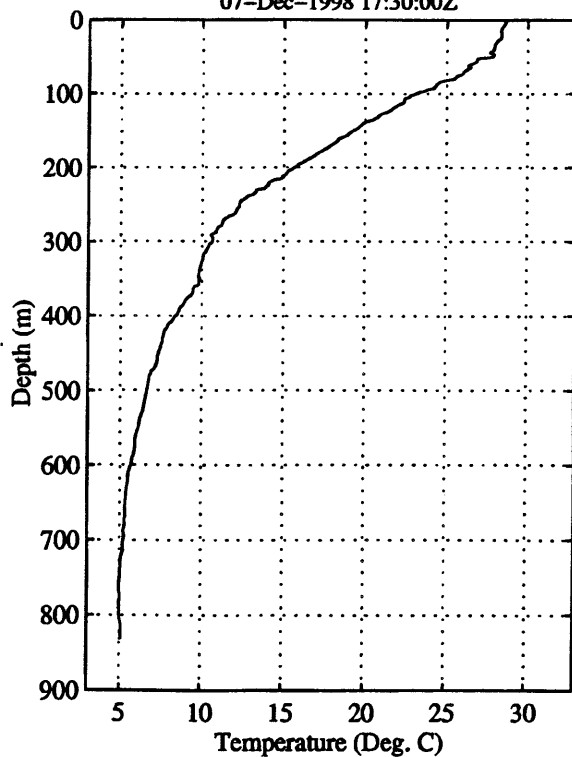
07-Dec-1998 16:30:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 134

Lat. 9.332 N Long. 54.450 W

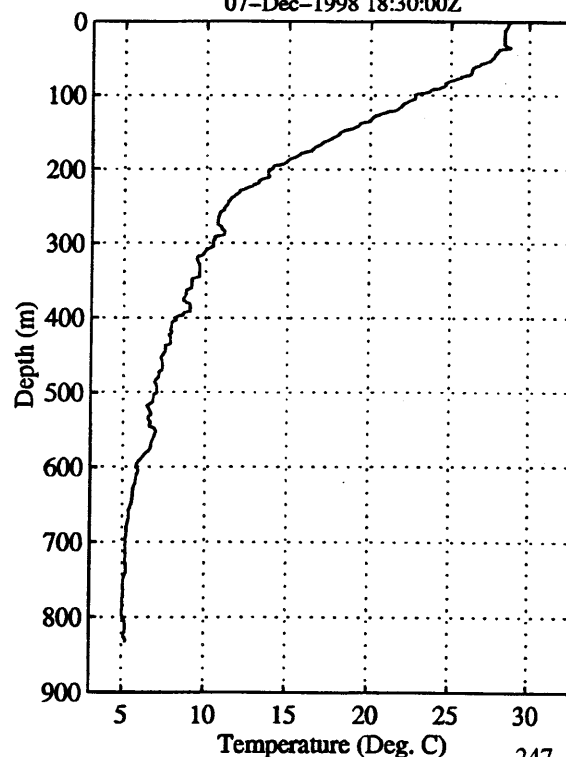
07-Dec-1998 17:30:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 135

Lat. 9.333 N Long. 54.648 W

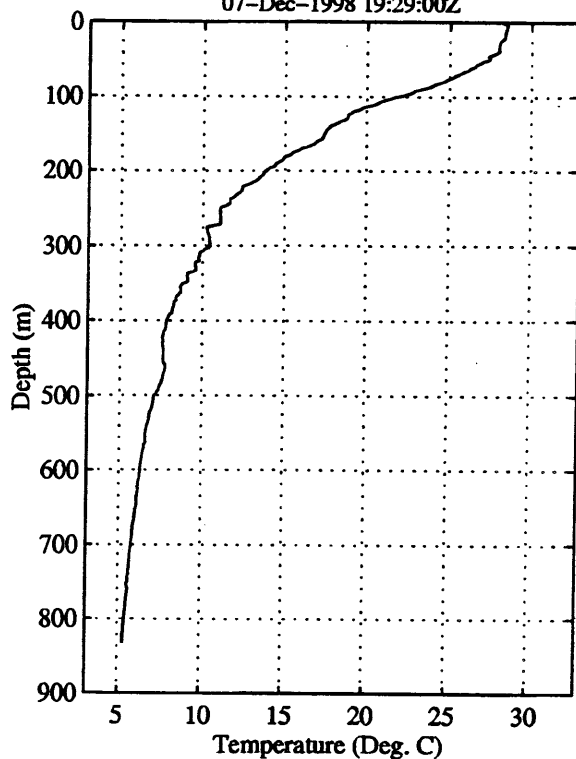
07-Dec-1998 18:30:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 136

Lat. 9.332 N Long. 54.838 W

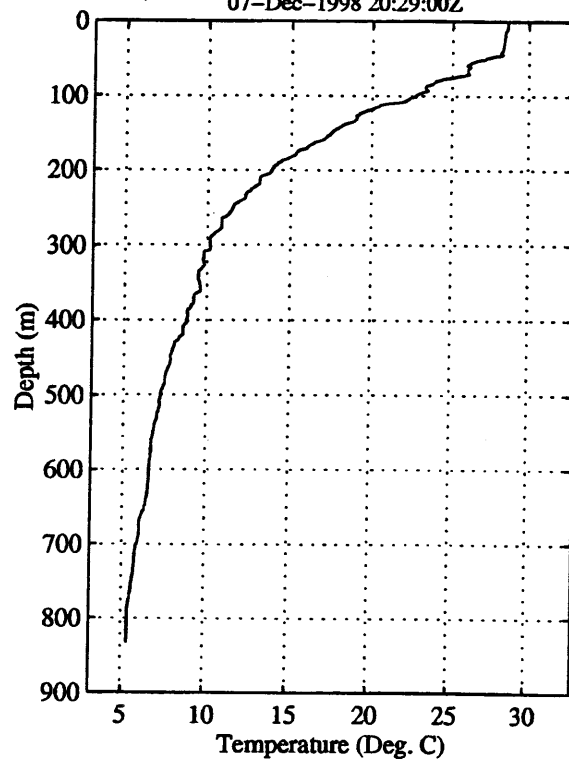
07-Dec-1998 19:29:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 137

Lat. 9.315 N Long. 55.035 W

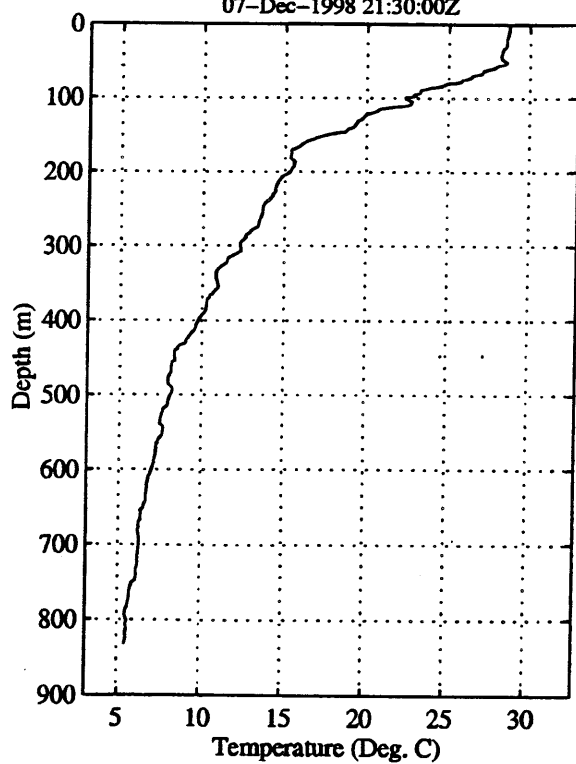
07-Dec-1998 20:29:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 138

Lat. 9.278 N Long. 55.227 W

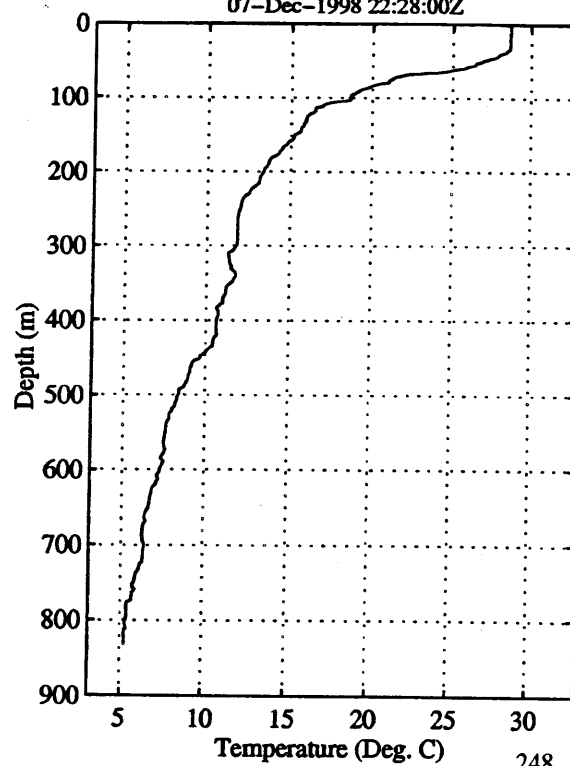
07-Dec-1998 21:30:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 139

Lat. 9.212 N Long. 55.407 W

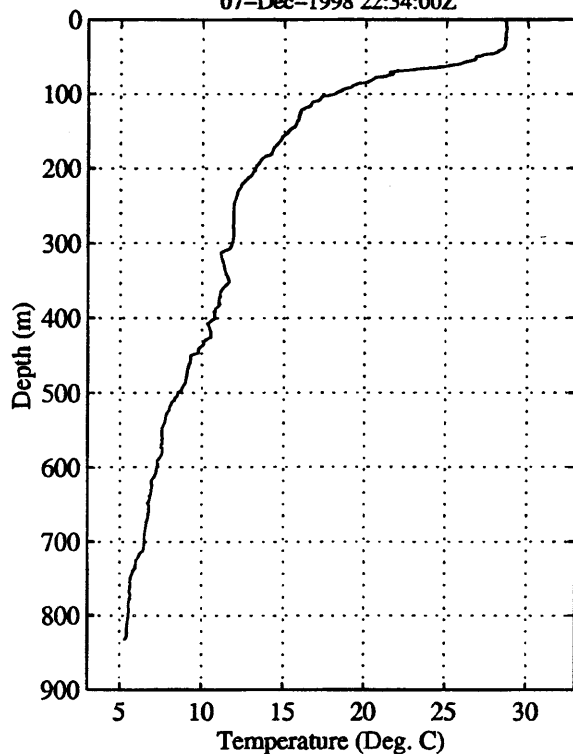
07-Dec-1998 22:28:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 140

Lat. 9.203 N Long. 55.428 W

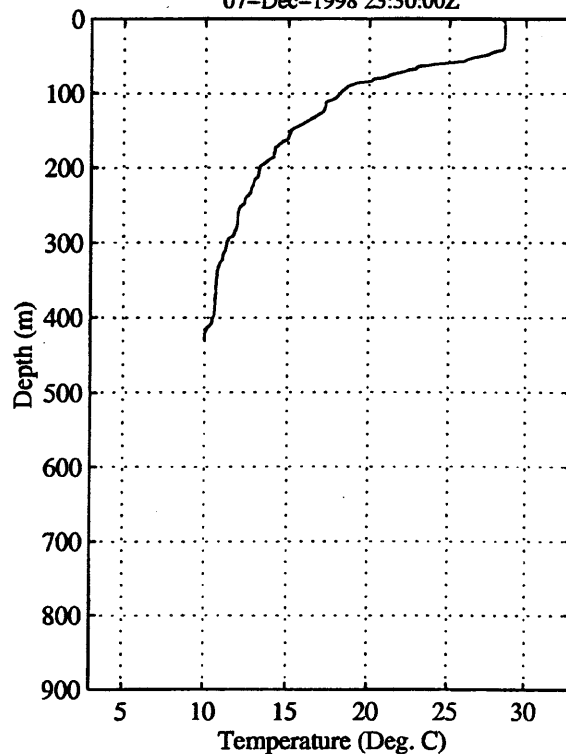
07-Dec-1998 22:34:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 141

Lat. 9.143 N Long. 55.598 W

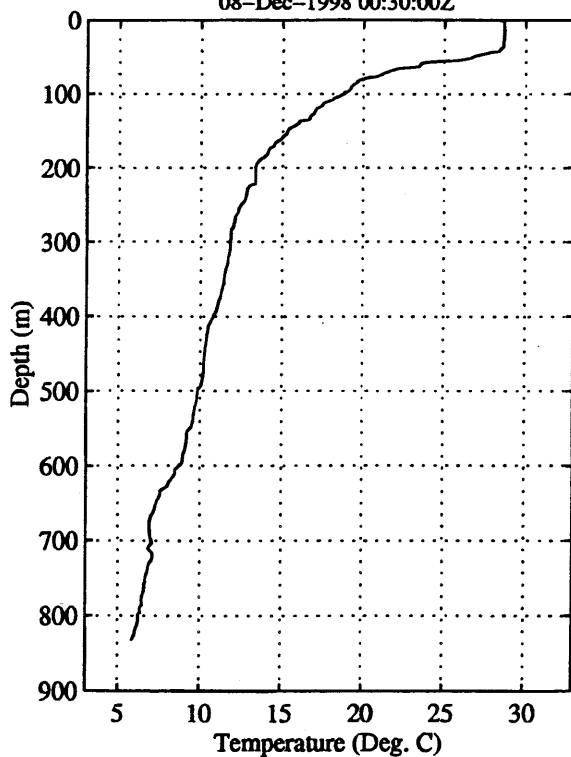
07-Dec-1998 23:30:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 142

Lat. 9.075 N Long. 55.787 W

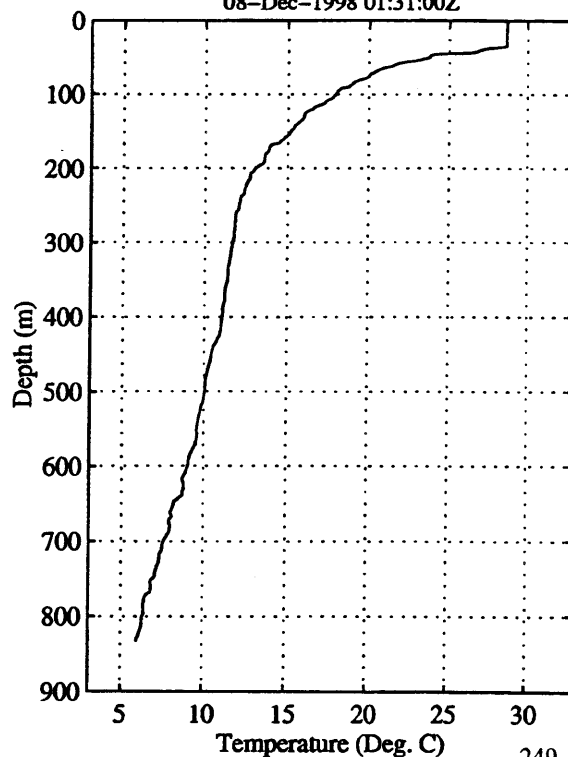
08-Dec-1998 00:30:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 143

Lat. 9.008 N Long. 55.995 W

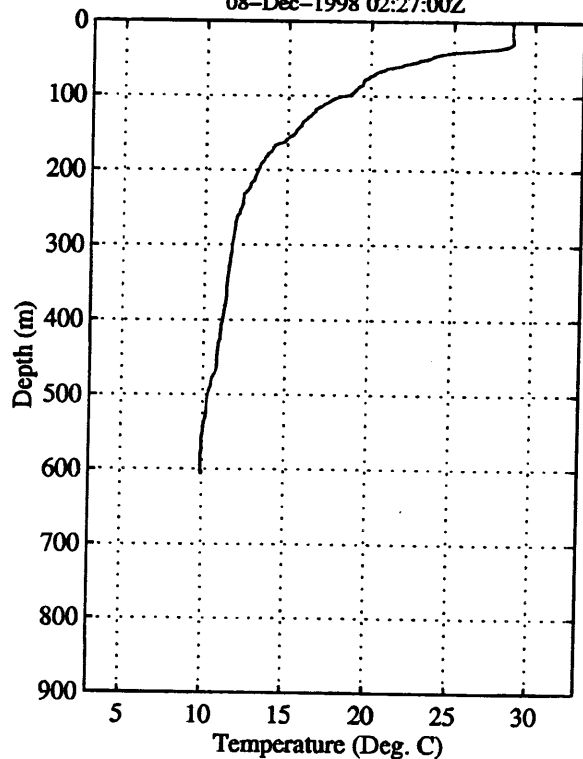
08-Dec-1998 01:31:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 144

Lat. 8.903 N Long. 56.150 W

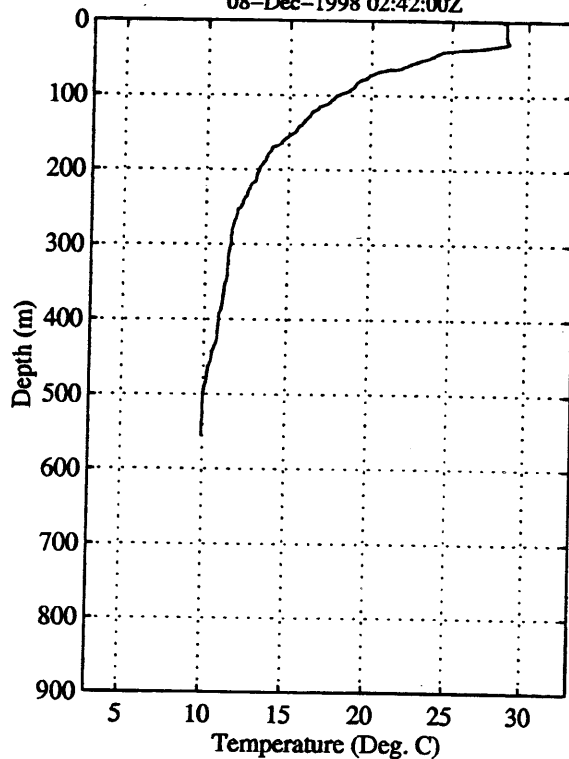
08-Dec-1998 02:27:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 145

Lat. 8.880 N Long. 56.183 W

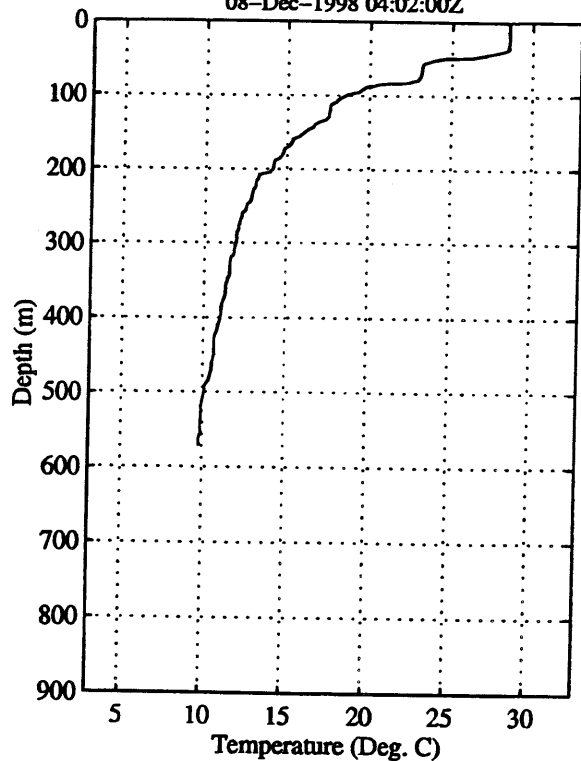
08-Dec-1998 02:42:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 146

Lat. 8.755 N Long. 56.365 W

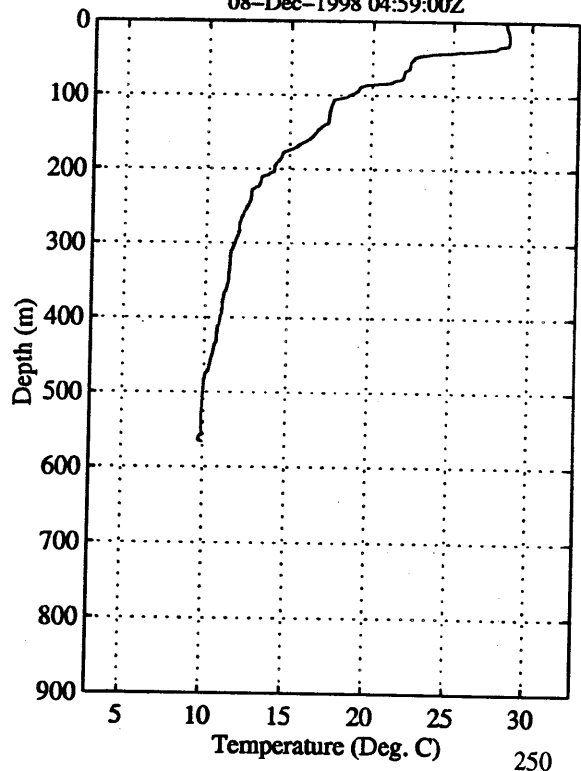
08-Dec-1998 04:02:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 147

Lat. 8.650 N Long. 56.518 W

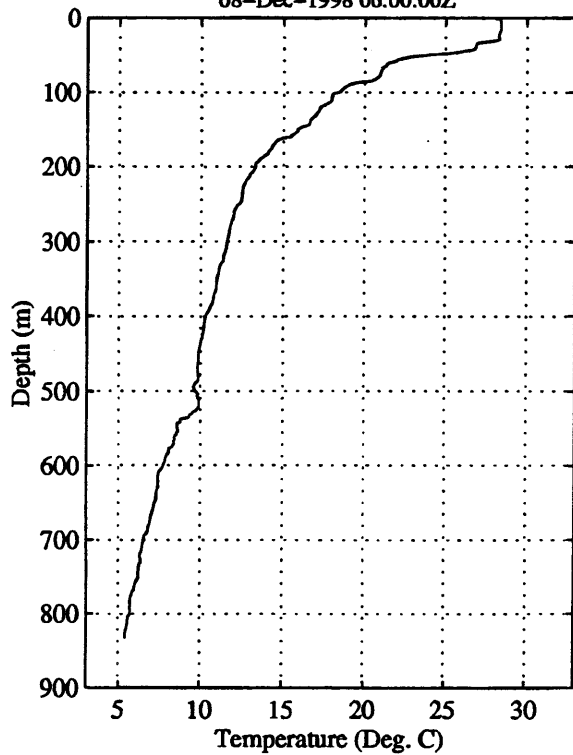
08-Dec-1998 04:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 148

Lat. 8.537 N Long. 56.680 W

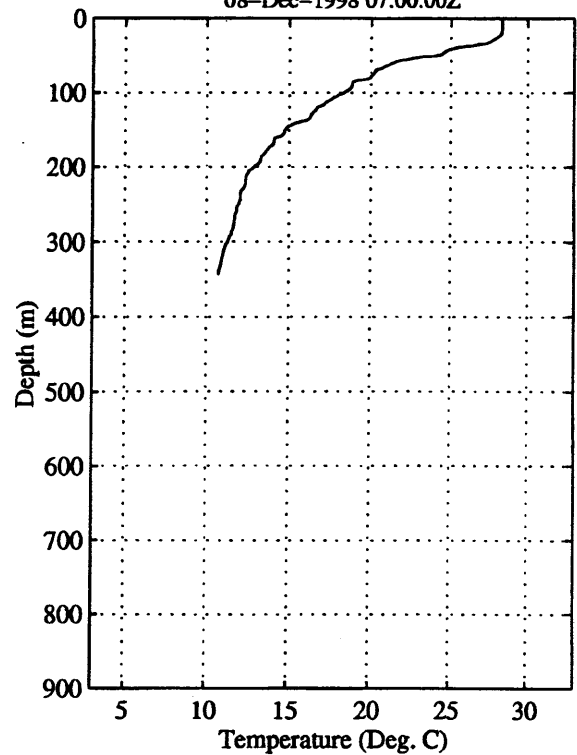
08-Dec-1998 06:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 149

Lat. 8.428 N Long. 56.838 W

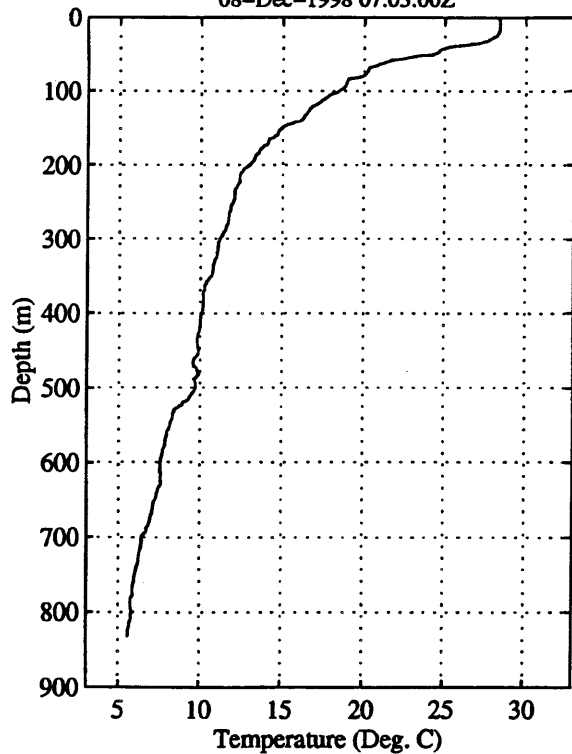
08-Dec-1998 07:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 150

Lat. 8.422 N Long. 56.847 W

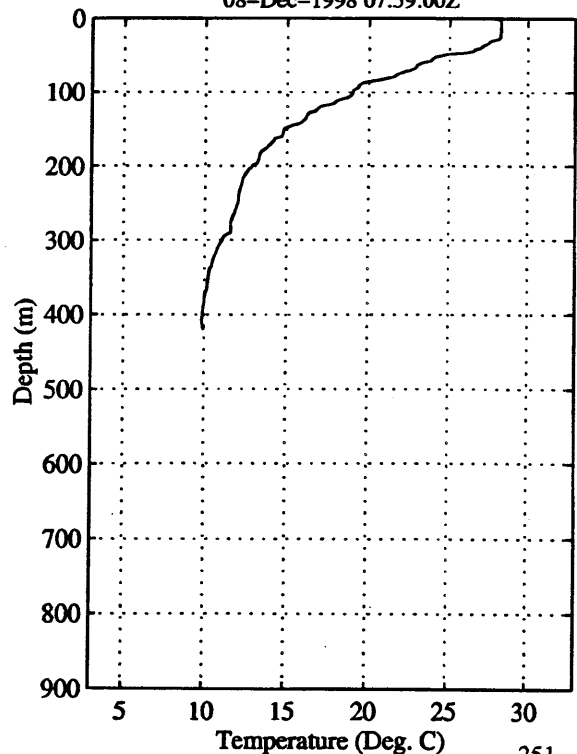
08-Dec-1998 07:03:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 151

Lat. 8.318 N Long. 56.998 W

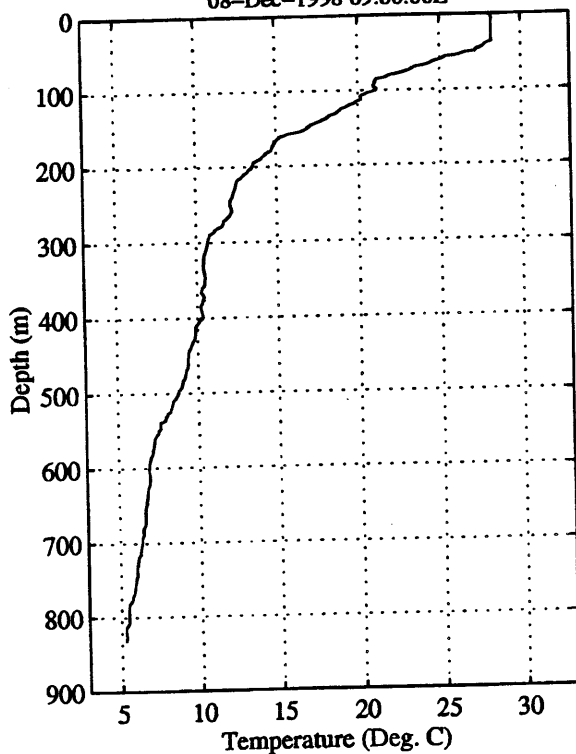
08-Dec-1998 07:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 152

Lat. 8.203 N Long. 57.163 W

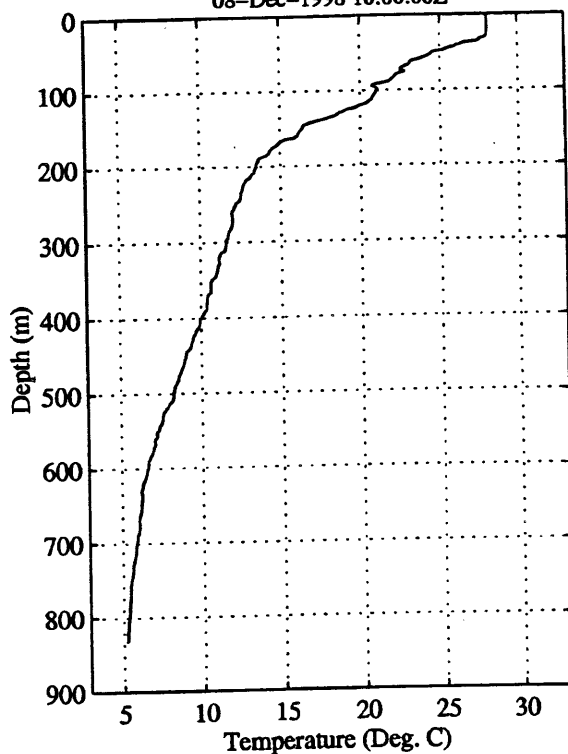
08-Dec-1998 09:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 153

Lat. 8.097 N Long. 57.332 W

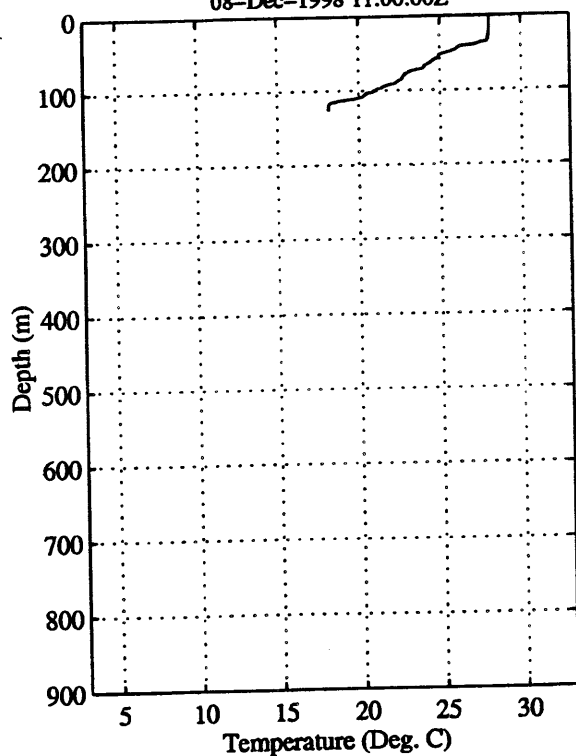
08-Dec-1998 10:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 154

Lat. 7.977 N Long. 57.500 W

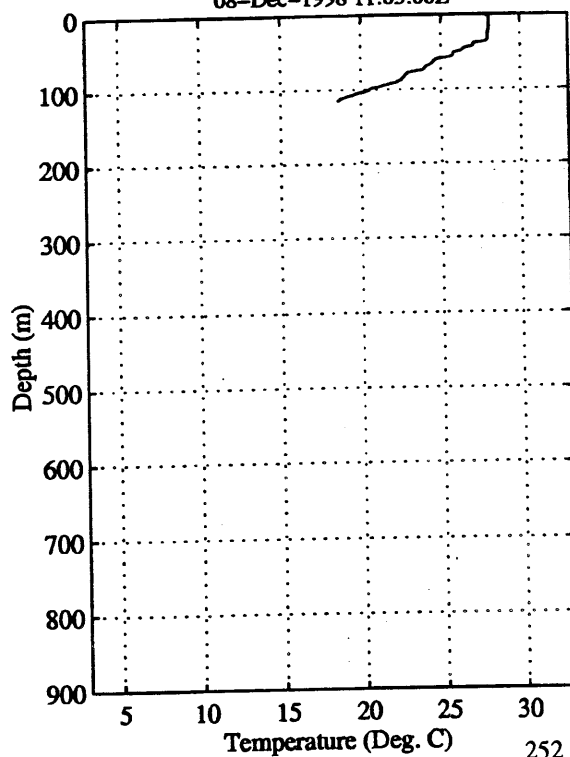
08-Dec-1998 11:00:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 155

Lat. 7.970 N Long. 57.510 W

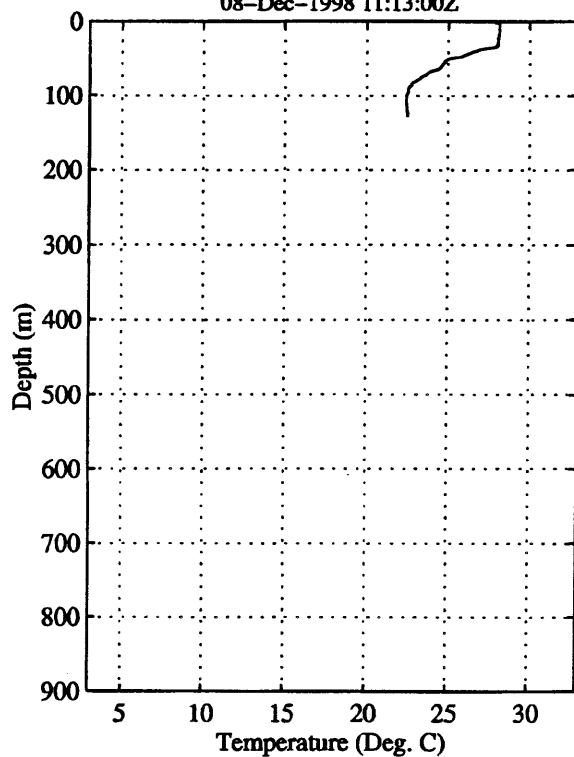
08-Dec-1998 11:03:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 156

Lat. 7.953 N Long. 57.535 W

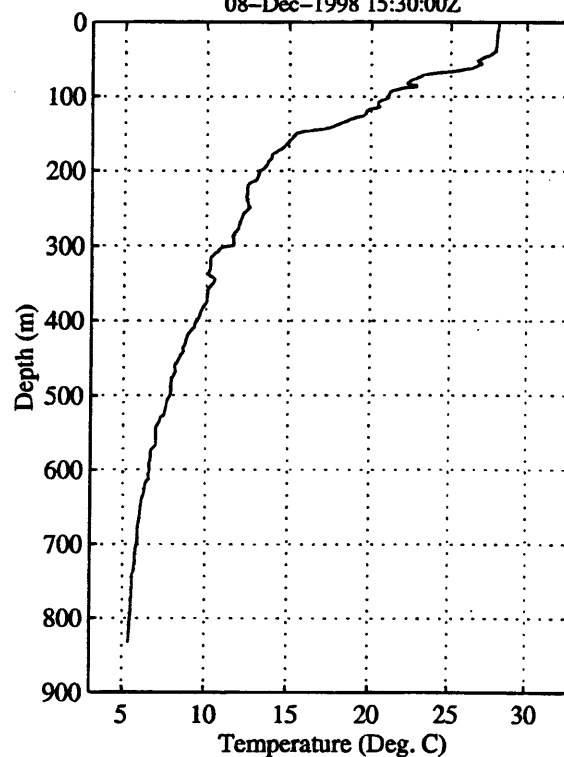
08-Dec-1998 11:13:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 157

Lat. 7.725 N Long. 56.855 W

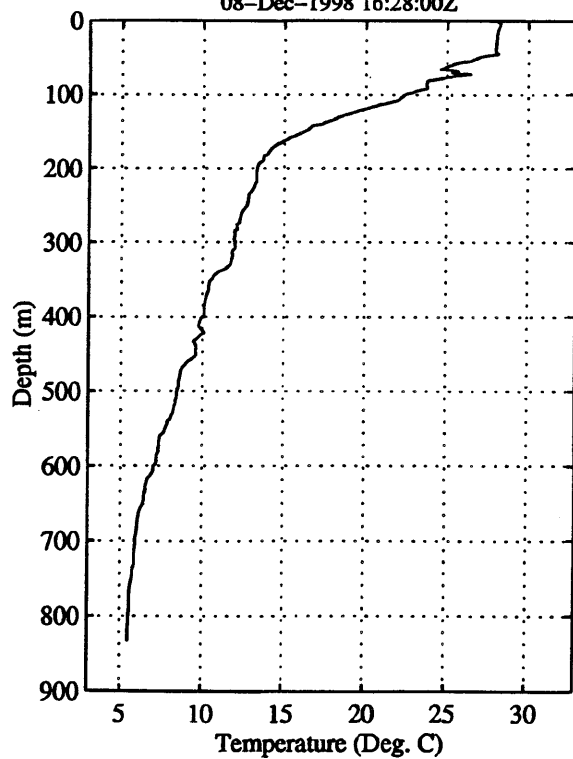
08-Dec-1998 15:30:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 158

Lat. 7.677 N Long. 56.687 W

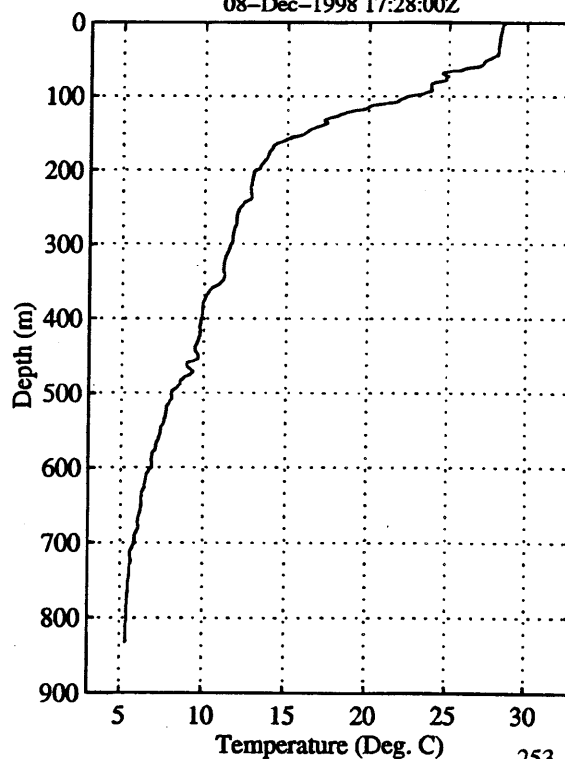
08-Dec-1998 16:28:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 159

Lat. 7.627 N Long. 56.515 W

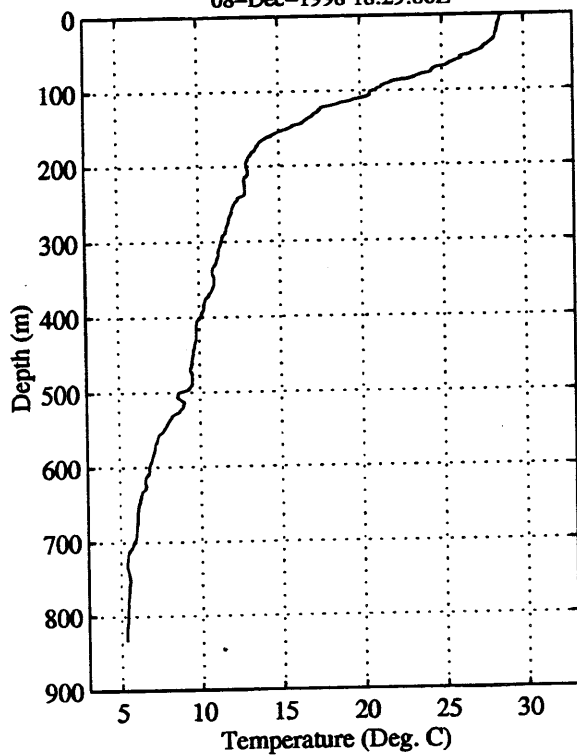
08-Dec-1998 17:28:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 160

Lat. 7.578 N Long. 56.342 W

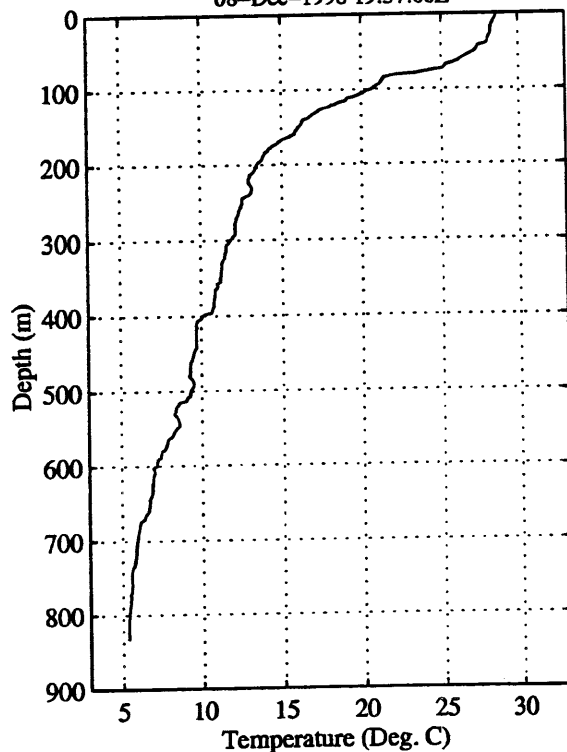
08-Dec-1998 18:29:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 161

Lat. 7.522 N Long. 56.143 W

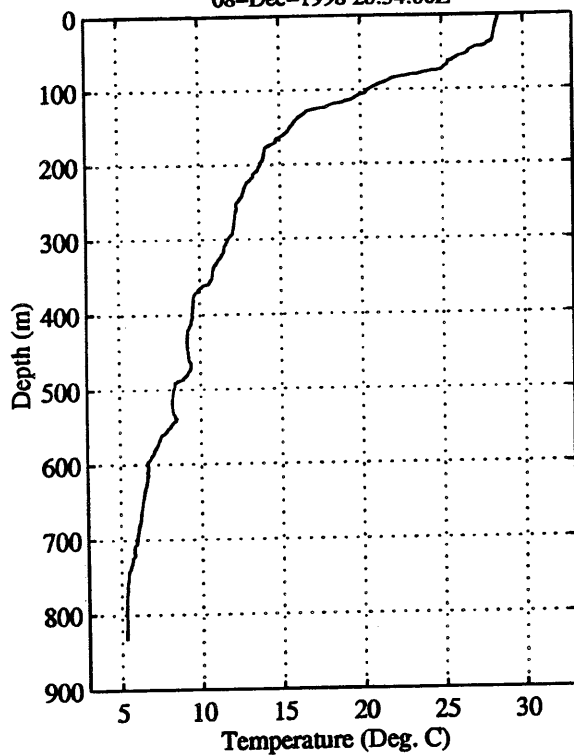
08-Dec-1998 19:37:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 162

Lat. 7.472 N Long. 55.975 W

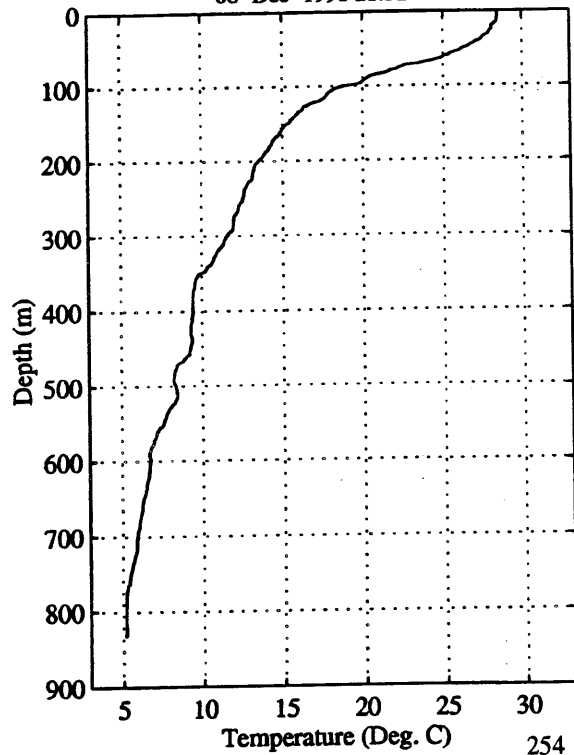
08-Dec-1998 20:34:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 164

Lat. 7.418 N Long. 55.800 W

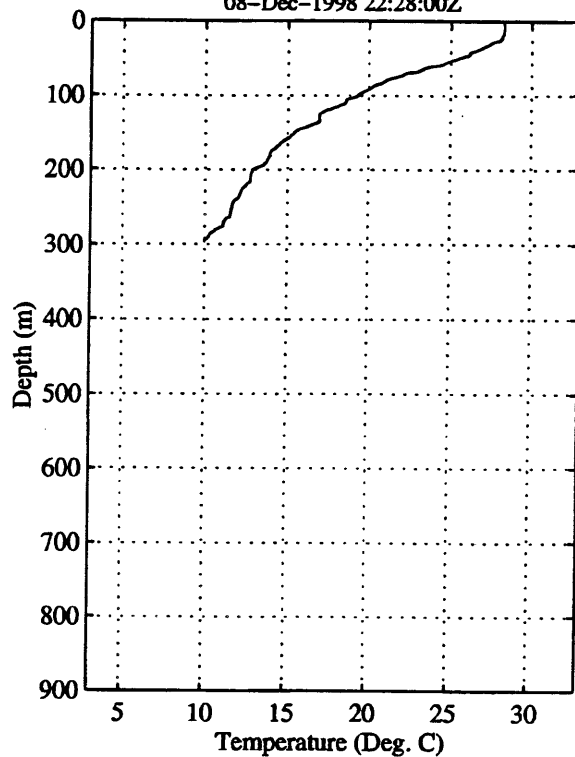
08-Dec-1998 21:32:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 165

Lat. 7.368 N Long. 55.627 W

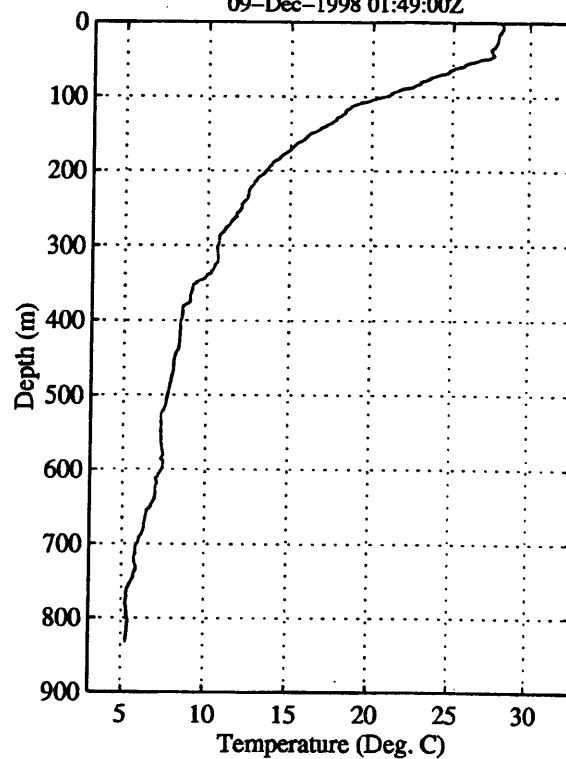
08-Dec-1998 22:28:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 166

Lat. 7.530 N Long. 55.477 W

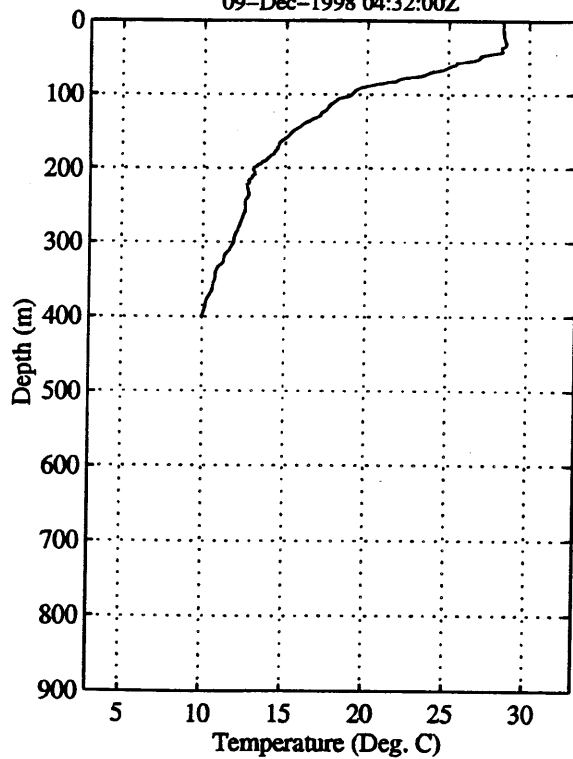
09-Dec-1998 01:49:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 167

Lat. 7.790 N Long. 55.597 W

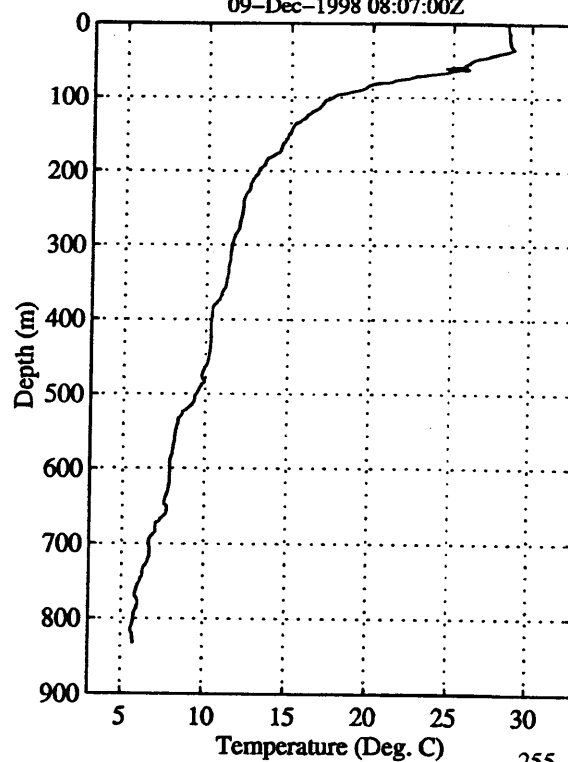
09-Dec-1998 04:32:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 168

Lat. 8.120 N Long. 55.767 W

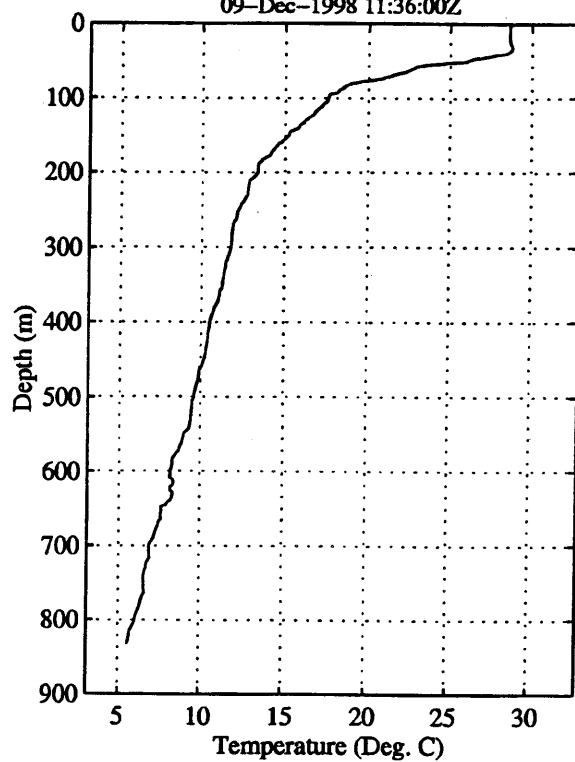
09-Dec-1998 08:07:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 169

Lat. 8.433 N Long. 55.940 W

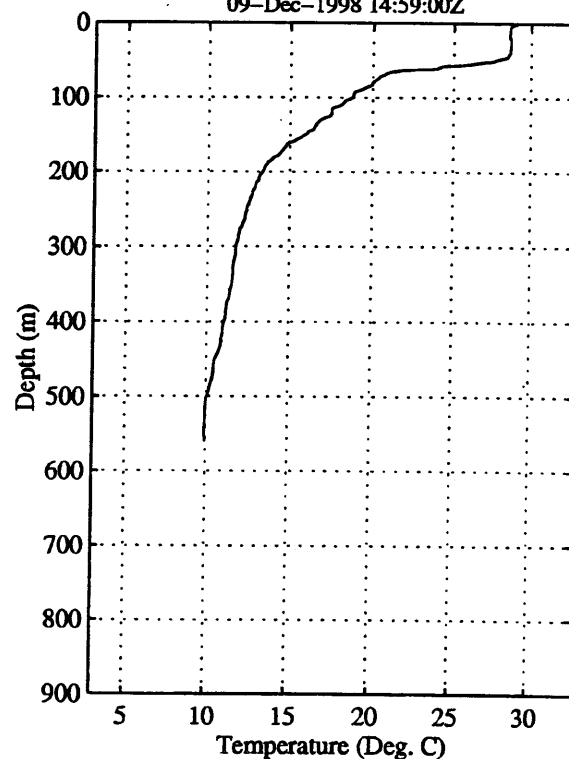
09-Dec-1998 11:36:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 170

Lat. 8.760 N Long. 56.110 W

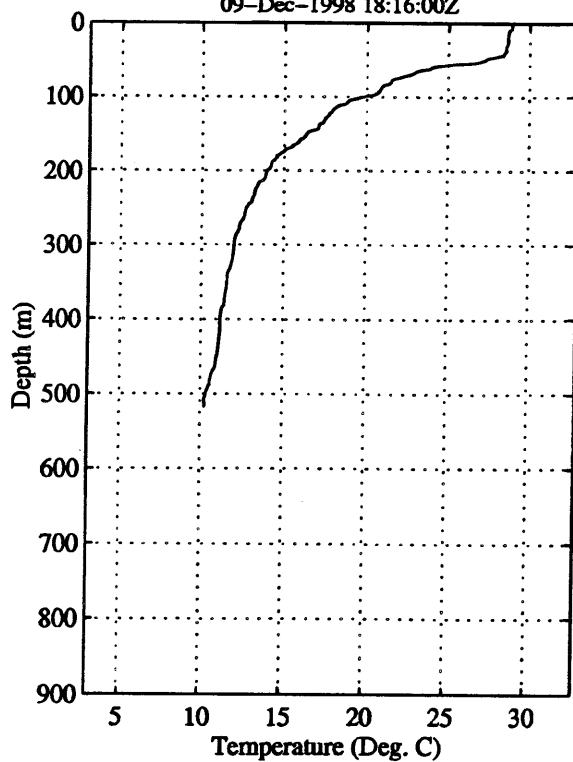
09-Dec-1998 14:59:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 171

Lat. 9.052 N Long. 56.272 W

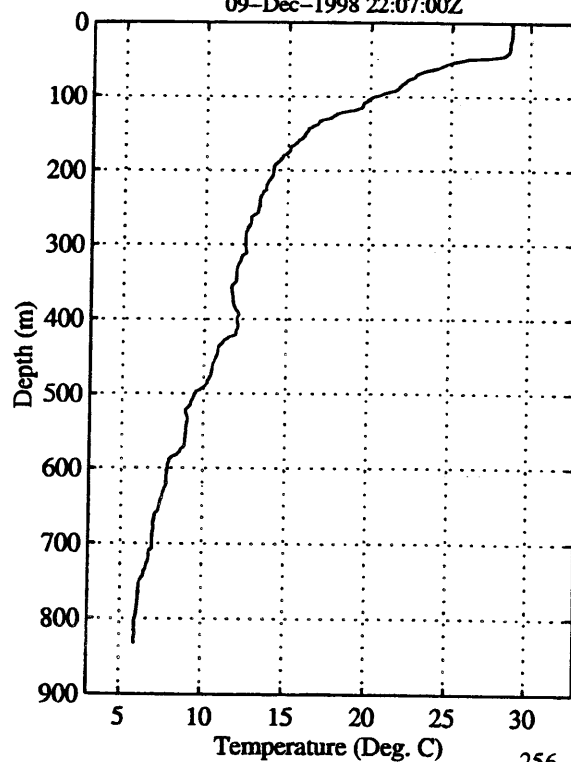
09-Dec-1998 18:16:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 172

Lat. 9.413 N Long. 56.482 W

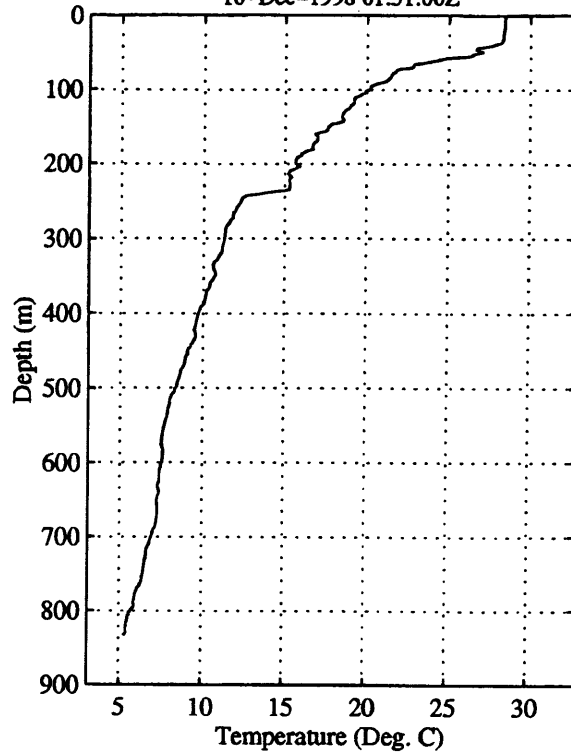
09-Dec-1998 22:07:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 173

Lat. 9.703 N Long. 56.635 W

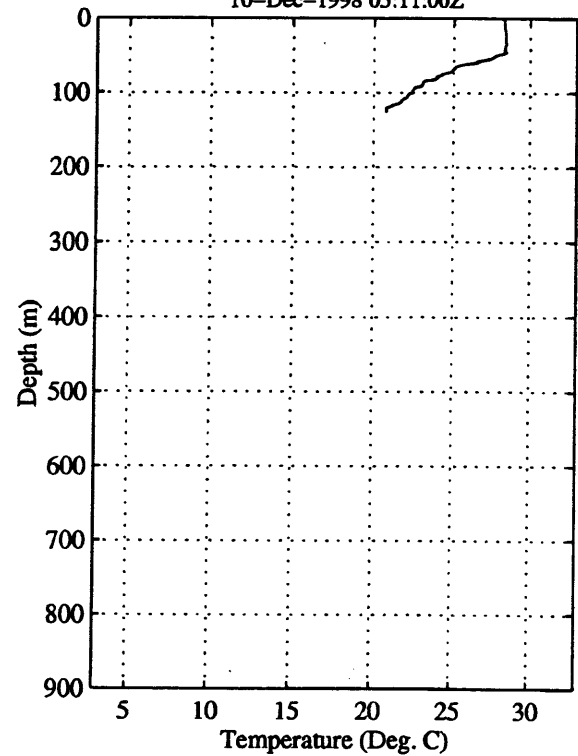
10-Dec-1998 01:31:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 174

Lat. 9.998 N Long. 56.807 W

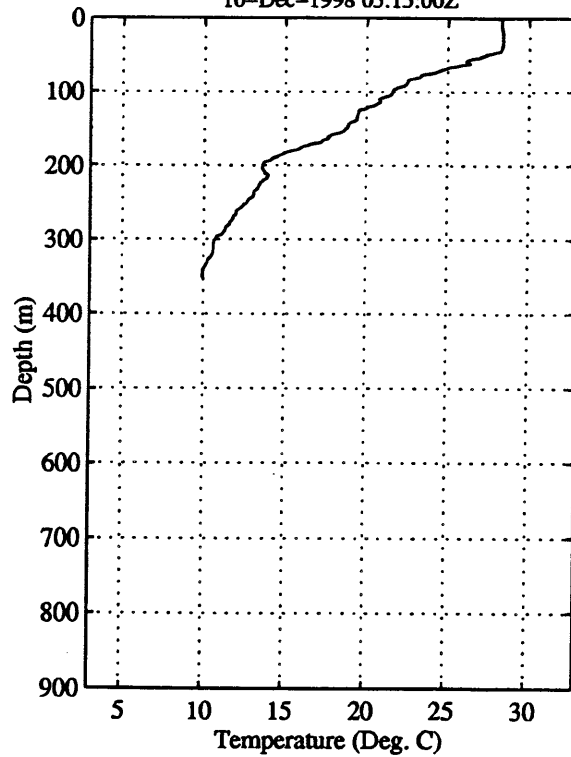
10-Dec-1998 05:11:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 175

Lat. 10.008 N Long. 56.813 W

10-Dec-1998 05:15:00Z



NBC-1 R/V SEWARD JOHNSON XBT Drop 176

Lat. 10.317 N Long. 56.977 W

10-Dec-1998 08:54:00Z

