CTD-O_2 AND NUTRIENTS ALONG THE EASTERN BOUNDARY OF THE NORTH ATLANTIC OCEAN FROM 60°N TO 20°N

BORD-EST

DATA REPORT - VOLUME 1

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ABSTRACT

A quasi-meridional hydrographic-tracer section was carried out in May and June 1988 from 60°N to 20°N at some distance offshore from the European and African continental slopes to describe the eastern boundary conditions of the North-Atlantic basin. This report presents the calibration procedures, vertical distributions and listings of the basic parameters at the 85 stations of the section.

RESUME

Une section d'hydrologie-géochimie légère a été réalisée en mai et juin 1988 de 60°N à 20°N au large des talus continentaux européens et africains dans le but de décrire les conditions à la frontière Est du bassin Nord-Atlantique. Dans ce rapport sont présentées les procédures de calibration, les distributions verticales et listings des principaux paramètres aux 85 stations de la section.

1 The BORD-EST Project

Knowledge of the dynamic conditions at eastern boundaries of the oceans is of primary importance in all Sverdrupian models traditionally integrated from the east. Surprisingly the real conditions along this boundary are not well known. Most hydrographic sections carried out in the past are zonal, and the existing meridional ones are located in the ocean interior. Through lack of information one is generally led to assume that the eastern coast is devoid of any boundary layer, although several observations and theoretical considerations suggest a more complex behaviour.

The question of the real density distribution along the eastern boundary of the North Atlantic Ocean was at the origin of the BORD-EST programme. A long quasi-meridional hydrographic-tracer section was proposed and realized (fig. 1, cruise BORD-EST 2) at a sufficient distance offshore from the European and African continental slopes so that it can be considered the eastern limit of the interior geostrophic regime of the ocean. It was thought, when proposed, that this section would also be useful for other categories of models -numerical and diagnostic- and characterize the source of Mediterranean Water into the Atlantic Ocean.

Another volet of the BORD-EST proposal aimed at describing the eastern boundary processes themselves in the region offshore from the Iberian peninsula, between Cape St-Vincent and Cape Finisterre. Meridional currents are known to exist there along the continental slope, both at the surface, where a "Portuguese Current" is generally thought to flow southward, and at depth, where a narrow vein of Mediterranean Water is being entrained northward by the "Lusitania Current". Eight currentmeter moorings were deployed for a year and a local CTD-tracer array was carried out in order to describe the boundary currents (cruises BORD-EST 1 and BORD-EST 3).

This report is devoted to the data from the long hydrographic section of the cruise BORD-EST 2. Data from the local experiment will be presented in a separate report.

2 The Long Eastern Boundary Section

2.1 The participants

The BORD-EST programme was initiated by scientists of the Department "Etudes Océaniques" of IFREMER/Brest, but each cruise benefitted from the participation of several laboratories. A summary of all contributions to BORD-EST 2, with domains of interest of each group and names of principal investigators, is given in table 1. The cruise was divided in two parts, from Brest to Lisbon, then to Las Palmas, A. Colin de Verdière and M. Arhan being respectively chief scientists of the first and second parts. A. Billant and J.P. Gouillou from the technical group of "Etudes Océaniques" were in charge of the CTD calibration and operation, and J. Morvan from ENSCR in charge of the nutrient measurements during the first part. Pre- and post-cruise sensor calibrations were carried out at the metrology laboratory of IFREMER. We also wish to acknowledge the participation of numerous other colleagues who took part in the preparation and execution of the cruise, Commandant H. Guidal, and the officers and crew of the research vessel Jean Charcot. This report was prepared by A. Billant and M. Arhan, with the aid of I. Bodevin, C. Lagadec and J. Le Gall.

Institution	Type of measurement	Principal investigators
IFREMER	CTD-O_2	M. Arhan A. Colin de Verdière* H. Mercier
LODYC/LGI	$3H_e$, Tritium	L. Mémery
UBO	Nutrients	P. Tréguer
UEA		J. Harvey
GOUL/Lisboa		I. Ambar

TABLE 1

⋆ Now at the Université de Bretagne Occidentale

The meanings of acronyms used in table 1 and the text are as follows :

- IFREMER : Institut Français de Recherche pour l'Exploitation de la Mer.
- LODYC/LGI : Laboratoire d'Océanographie Dynamique et de Climatologie/Laboratoire de Géochimie Isotopique (Gif-sur-Yvette, France).

- UBO : Université de Bretagne Occidentale (Brest, France).
- UEA : University of East Anglia (Norwich, U.K.).
- GOUL : Grupo do Oceanografia da Universidade de Lisboa.
- ENSCR : Ecole Nationale Supérieure de Chimie de Rennes.

2.2 The CTD-O_2 and Nutrients data

The data were acquired at 85 stations occupied between 60°N (in the Faeroe Bank Channel) and 19°43N by the research vessel Jean Charcot from May 10 to June 6, 1988. The nominal station spacing was 35NM, and measurements were made at all stations from near surface down to 10 to 100 meters from the bottom. The ocean was generally deeper than 4000 m along the section, except in the Rockall trough north of approximately 52°N. The stations were made with NBIS instruments equiped with a Beckman dissolved oxygen sensor and a multisampler. Two probes had to be used because of a failure of the first one at station 34 : the second one was used until station 47 when its oxygen sensor failed in its turn, the previous one, once repaired, being again put into service at station 48. In the following we call :

- Phase I : the group of stations 1 to 34 executed with probe A.
- Phase II : the group of stations 35 to 47 executed with probe B.
- Phase III : the group of stations 48 to 85 executed with probe A.

Station 45 was carried out at the location of the deep crater of the Tore Seamount (5400 m) to compare both instruments in deep stagnant water.

The original 12 x 2.4 l General Oceanics multisampler was replaced at station 14 by the bigger 16 x 8 l SUBER sampler which allows to trigger the bottles without switching off the probe.

Dissolved oxygen, salinity and nutrients were analysed on board at each level of all stations. Samples were also taken every third or fourth stations (indicated by a triangle on figure 1) for analysis of tritium and helium 3. Station 7 stands aside from the line of the section because it was positionned at the location of a previous TTO station for comparison purposes. Stations 48 and 49 were carried out at the same location before and after calling to Lisbon, to check the continuity of the calibration.

The calibration of the CTD-O_2 and nutrient data is discussed in section 3 of this report. In section 4 our calibrated data are compared with other data from the same region. Section 5 presents the vertical distributions of the basic physical and chemical parameters. Listings of these parameters may then be found in sections 6 and 7, respectively, along with the main informations of the station headers, i.e. exact positions, dates, and bottom depths. The list of references and the figures for sections 1 to 4 are placed at the end of section 4, before the vertical distributions and listings of parameters.

3 Calibration of the CTD-O_2 and Nutrient Data

3.1 Calibration of pressure

The sensors were calibrated against a deadweight tester "Desgranges et Huot" itself calibrated at the French Laboratoire National d'Essais, whose relative accuracy is 2 10^{-4}. Calibration is performed by realizing sixteen measurements at increasing pressures from 0 to 6000 db, the same number at decreasing pressures, and fitting third order polynomials to both profiles. Figure 2a presents the pre-cruise calibration curve of probe A, figure 2b both pre- and post-cruise curves of probe B. The pre-cruise calibration was used on board the ship, and since the post-cruise curve of probe B did not differ by more than 1.5 db from the pre-cruise one, the latter was kept as the definitive calibration for phase II. Unfortunately things were not so simple for probe A as may be seen from the time evolution of the deck pressure offset shown on figure 3. This offset (dots on the figure) started to increase at station 14 to reach 7 db at the end of phase I. It was brought back to near zero values by electronic compensation after repair during phase II but started to drift again at the beginning of phase III and reached 10 db at the end of the cruise. To be able to correct for this drift probe A was submitted on return to the laboratory to a series of pressure cycles simulating real CTD profiles and a calibration was realized every five such pseudo-stations. The results shown on figure 4 reveal that the drift was effective only at pressures lower than $\simeq$ 1200 db. The constant difference observed at higher pressures between the pre- and post-cruise calibrations accounts for the 7 db compensation applied before phase III. The following procedure was eventually retained to correct the pressures of phases I and III :

- determine the initial calibration curves p_{i1} and p_{i3} valid at the beginning of each phase (p_{i1} is the pre-cruise curve),
- in the pressure range $p < 1200$ db apply the linear correction $p_c = p_i - p_d$ (1200 - p_i)/1200, where p_d is the deck pressure offset. From figure 4 the error associated with this operation in the range $p < 1200$ db does not exceed 2 db.

When applying a similar procedure on the up traces (to estimate pressures at which water samples were taken) the function p_i above was given by the hysteresis curve with $p_{max} = 6000$ db.

3.2 Calibration of temperature

The temperature calibration was performed before and after the cruise following the procedure described in Billant (1984) using the temperature scale T68. Results are shown on figures 5a and 5b for probes A and B respectively. For probe A the difference between pre- and post-cruise curves amounts to more than 0.005°C at lower temperatures. However comparison with subsequent calibrations of the same sensor suggest the post cruise values of figure 5a to be slightly too high. Also, probe A was used immediately after BORD-EST 2 for another two-weeks CTD array before coming back to Brest and being calibrated. For these reasons more weight was given to the pre-cruise points to obtain the fitted polynomial of figure 5a. The stability of the temperature sensor of probe B was better (figure 5b).

3.3 Calibration of conductivity

Conductivity was calibrated following the procedure described in Billant (1985). All water samples taken during the up-profiles were analyzed on board using a G8400 Guildline salinometer[1]. These salinities were transformed into conductivities C_H using the corrected temperatures and pressures at the sampling levels. The calibration forces C_H to match the probe conductivities C_p, themselves corrected for pressure and temperature effects. A correct fit is obtained from a first order polynomial. Table 2 shows the results of this calibration for the three phases of the cruise.

	Phase I	Phase II	Phase III
Total number of samples	459	190	588
% of samples used for the calibration	94 %	87 %	90 %
R.M.S. difference	0.0058	0.0041	0.0037
Maximum difference $\Delta C = C_H - C_p$	0.0163	0.0114	0.0105

TABLE 2

Residuals are reported station per station for the three phases on figures 6a, b, c. Figure 6a shows that phase I should itself be subdivided into three parts : i) stations 1 to 20 which were less

[1]The standard seawater used during this cruise was from package P106 dated 8/6/1987 ($K_{15} = 0.99989$)

than 3000 m deep. Mean residuals are generally lower than 0.003 but scattered around zero, which may be a consequence of the samples being taken in the relatively shallow and inhomogeneous water of Rockall trough. ii) stations 21 to 24, which are the first "deep" stations ($>$ 4000 m) and show systematic positive mean residuals. It must be said that the probe hit the bottom at station 24, which required cleaning of the sensors. iii) this cleaning seems to have stabilized the sensor response, for mean residuals of the last part (station 25 to 34) are systematically negative. Phase II and stations 49 to 81 of phase III show moderate mean residuals scattered around zero, those of stations 81 to 85 being again relatively intense and positive.

It was then decided to perform finer distinct calibrations for each of the station groups 1-20, 25-34, 35-47 and 48-81. Stations 21 to 24 and 82 to 85 were calibrated individually, as were stations 35 and 37 which, though showing acceptable mean residuals on figure 6b had relatively high deep residuals and deep $\theta - S$ curves abnormally different from those of the neighbouring stations. Table 3 summarizes the results of this finer calibration.

	Phase I		Phase II	Phase III
	1-20	25-34	35-47	48-81
Total number of samples	233	151	160	524
% of samples used for the calibration	91 %	90 %	88 %	89 %
R.M.S. (C)	0.0035	0.0029	0.0032	0.0034
Maximum difference $\Delta C = C_H - C_p$	0.0099	0.0080	0.0090	0.0095

TABLE 3

As an example figures 7a, b show the distributions of ΔC versus pressure and conductivity for stations 48 to 81, after the final calibration.

Figure 8 shows the two deep $\theta - S$ diagrams provided by probes A and B at the intercomparison station 45. The very good agreement of both curves at $\theta < 2.15$°C over the 700 deepest meters gives confidence that the use of two probes had no consequence on the results.

Figure 9 provides another way of testing the continuity of the salinity calibration throughout the section. Salinity on deep θ levels is reported from station 19 (previous ones were not suffi-

ciently deep) to station 85. Although some meridional evolution is apparent, there is no trace of particuliar discontinuities at transitions from one phase, or part, of the cruise to another.

3.4 Calibration of dissolved oxygen

The water samples were analysed according to the Winkler method and using a Methrom titroprocessor. Figure 10 showing the series of Winkler values at 3000 m, 4000 m, and the bottom, illustrates the continuity and range of variation of the oxygen content of deep waters in the North-East Atlantic. These values may be regarded as uncertain by about 0.03 ml/l.

The procedure used to calibrate the Beckman sensor from these sample values is basically that of Millard (1982), with some improvements at some stations or groups of stations, as will be seen below. The algorithm is the following :

$$OXYC(ml/l) = soc \times OC \times OXSAT \times exp\{oxtc \times [oxc1 \times T + oxc2(OT - T)] + oxpc \times P\} \quad (1)$$

where :

OC is the Beckman oxygen current,

OT is the Beckman sensor temperature,

P is the calibrated NBIS pressure,

T is the calibrated NBIS temperature,

soc is the oxygen current slope factor,

$oxtc$ is the temperature correction factor,

$oxc1$ equals 1 and $oxc2$ is the weight factor of the Beckman sensor temperature,

$oxpc$ is the pressure correction factor,

$OXSAT$ is the oxygen saturation value (Weiss, 1970).

The above expression is linearized by taking its natural logarithm and the parameters soc, $oxtc$, $oxc2$ and $oxpc$ determined through a linear least square regression. Calibration of the down profiles utilizes values of OC, OT and T averaged over intervals of thickness 15 db centered at the levels (calibrated pressure) where the samples were taken on the up-profiles.

This procedure was applied to each of the three phases of the cruise but these results provided highly variable residuals so that further subdivisions had to be considered which in some parts

of phases I and II ended in groups formed by single stations. Table 4 summarizes the final subdivisions and the r.m.s. differences associated with the regression procedure.

Station or station group	r.m.s. difference	r.m.s. difference after 5th order polyn.	Station or station group	r.m.s. difference	r.m.s. difference after 5th order polyn.
1	0.055		37	0.049	
2	0.137		38	0.079	
3	0.050		39	0.085	0.081
4	0.026		40	0.088	
5	0.129		41	0.096	
6	0.183		42	0.057	
7	0.095		43	0.027	
8 to 11	0.089		44	0.079	
12			45	0.024	
13	0.020		46	0.079	0.062
14 to 20	0.066		47	0.041	
21	0.037		48	0.029	
22	0.084		49	0.075	
23 to 34	0.063		50 to 72	0.061	0.051
35	0.069	0.049	73 to 85	0.058	0.056
36	0.091				

TABLE 4

The main reasons for so much subdividing the set of stations are :

- The important meridional evolution and variability of the dissolved oxygen profiles. Another effect of the high variability (associated with ship drift during station) in the northern part of Rockall Trough was apparent as sensible differences at upper levels between up- and down-profiles, causing at some of the first stations r.m.s. differences between Winkler and Beckman values which exceed .1 ml/l (table 4).

- The deepening of the ocean up to station 20.

- The poor functioning of the oxygen sensor of probe B during most of phase II, which led to the second probe change at station 48.

Phase III is characterized by a change in the hydrologic structure around stations 72-73, Mediterranean Water being present in the profiles north of these stations and absent south of them. This led to distinguish two main groups in this phase, one from station 50 to station 72, the other from 73 to 85. Figure 11 a,b shows for both groups the distribution of residuals [O_2 (Winkler) - O_2 (Beckman)] as function of the pressure, after application of Millard's (1982) procedure. In carrying out the regression a weight of 3 was given to the samples at and below 2000 m to compensate for the less numerous samples in this layer. Whereas Millard's model provides a correct fit to the oxygen profiles of the second group (fig. 11b), residuals from the first group (fig. 11a) exhibit a pressure-dependent bias which amounts to more than 0.05 ml/l in some layers. The same behaviour was observed in phase II where Mediterranean Water was also present in the profiles. But it was less pronounced, may be because different water masses present there above and below Mediterranean Water also altered the oxygen profile. More information on the application of this calibration procedure to these two station groups is given in table 5.

	Station group 50-72	Station group 73-85
Total number of samples	383	206
% of samples used for the calibration	94 %	87 %
Global r.m.s. difference	0.061	0.058
r.m.s. difference in layer 0-2000 db	0.068	0.068
r.m.s. difference in layer 2000 db - bottom	0.042	0.029

TABLE 5

Although Millard's procedure proved satisfactory on the station group 73-85, its application to the group 50-72 shows that improvement is necessary in some regions to eliminate the misfit left by the method. This was performed by fitting a five degree polynomial (in pressure) to the residuals and adding it to the r.h.s. of expression (1). This leads to the final residuals displayed

in figure 12 a,b for both station groups. The adjustment between rosette and sample values is now far better for the group 50-72 (fig. 12a). The gradient in the residuals between 1500 db and 2000 db is not totally resorbed, but the bias have disappeared at most levels, particularly at the deepest ones. The polynomial does not bring much to the calibration of the second group (fig. 12b) for which Millard's procedure had already provided good results. The polynomial adjustment was tested on several other stations or groups of stations from phases I and II, but finally retained at only a few stations where the improvement it brought on the deepest part of the profile was significant (table 4).

Table 6 summarizes the final calibration on both groups of phase III, using the five degree polynomial. Final r.m.s. differences around 0.03 ml/l were attained in the deep water, which are comparable to the uncertainty on the Winkler measurements.

	Station group 50-72	Station group 73-85
Global r.m.s. difference	0.051	0.056
r.m.s. difference in layer 0-2000 db	0.058	0.066
r.m.s. difference in layer 2000 db - bottom	0.035	0.028

TABLE 6

3.5 The nutrient data

The water samples for nutrient analysis were collected in 100 ml glass flasks from the rosette samplers and analysed in duplicate on board the ship within one to two hours after taping. Nitrate (+ nitrite) and silicate were determined using the automated methods described by Tréguer and Le Corre (1975), in unfiltered samples. Special care was taken of the calibration procedure, using double deionized water (DIW) as an absolute reference. A set of working standards was systematically run every ten samples and at the beginning and end of the set of analysis for each station.

For nitrate calibration a pipetted amount of standard solution (in DIW) was added in low nutrient seawater in order to prepare daily working standards (10, 20, 30 and eventually 40 μM)

run through the manifold (range 0- 40 μM, see Tréguer and Le Corre, 1975). The concentration of NO_3 was determined after correction from non linearity in the 20-40 μM range. Due to variations of the reduction yield of the $Cd - Cu$ column the accuracy of the measurement is about $\pm$ 1.5%.

For silicate calibration, a pipetted amount of standard solution (in DIW) was added in low nutrient seawater in order to prepare daily working standards (10, 20, 30, 40, 50 and eventually 60 μM) run through the manifolds (range 0-40 μM or 0-80 μM, Tréguer and Le Corre, 1975). The concentration of silicate was determined after correction of non linearity in the 20-80 μM range, and of the refractive index effect. The accuracy of the measurement is about $\pm$ 1%.

Some problems happened during leg 1 : at stations 16, 17 and 18 the working standards were prepared in relatively rich nutrient seawater possibly leading to less accurate determinations of both nitrate and silicate. Abnormally high signals for nitrate calibration at stations 26 and 28, could result in less accurate values. Abnormally high signals for silicate calibration (within the 0-30 μM range) at stations 37, 38 and 39 could similarly result in less accurate values. No special problems are to be mentioned for leg 2 during which very consistent values were recorded (for this leg the accuracy of both nitrate and silicate may be estimated at 1%.

4 Comparison with Other Data Sets

In this paragraph the calibrated BORD-EST 2 data are compared with other data from the same region.

- The cruise BORD-EST 3 carried out one year after BORD-EST 2 approximately re-occupied that part of the section between 37°N and 43°N (fig. 13) providing data for comparison with stations 38 to 50.
- Some BORD-EST 2 stations were located close to stations from the TTO program carried out in 1981-83 (fig. 14).
- Other recent hydrological transects like those of the R.V. Atlantis II along 36N and 24N (1981) or that of the R.V. Hudson along 48N (1982) are intersected by the BORD-EST 2 section and provide further elements of comparison.

4.1 The deep $\theta - S$ diagram

The comparison can only be meaningful in deep water where the ocean variability is weaker.

Figure 9 shows the BORD-EST 3 salinity values on the θ levels already used for BORD-EST 2, in the common latitudinal range. Although the agreement is very good (within 0.001) at both extremities of the common domain, differences up to 0.005 are observed at intermediate stations (see for instance stations 42 of BORD-EST 2 and 38 of BORD-EST 3). However these differences could result from deep variability as the meridional evolution looks similar at both cruises with the only difference that the observed northward salinity increase has shifted to the north by 3 to 4 degrees of latitude in BORD-EST 3. The horizontal straight lines drawn on the same figure show the salinity values predicted by Saunders' (1986) deep $\theta - S$ relationship for the eastern North Atlantic basin. The difference between these and the BORD-EST values is latitude and depth dependent, and highest ($\Delta S \simeq 0.005$) at the northern stations. The agreement is particularly good ($\Delta S < 0.002$) between stations 46 and 62 (38N and 31N).

The deep $\theta - S$ diagrams shown on figure 15 (a to h) illustrate the other comparisons on a station per station basis. The TTO deep salinities appear on the whole fresher than the BORD-EST 2 ones by about 0.005 (with the exception of TTO 112 compared with BE 48-49 showing a better agreement). Station H13 from the 48N transect compares relatively well ($\Delta S \leq 0.003$)

with BE 26-27 and the agreement between the stations from the 36N and 24N transects and those of BORD-EST 2 is still better (< 0.002).

4.2 The deep dissolved oxygen values

The BORD-EST 3 Winkler values at 3000 db, 4000 db, and the bottom, are reported on figure 10 for comparison with the BORD-EST 2 values in the common latitudinal range. The agreement is generally good (i.e. compatible with the assumed accuracy of 0.03 ml/l of each value), with the exception of BORD-EST 3 station 29 at 4000 db and the bottom and stations 27 and 28 at the bottom, which show values higher by 0.08 to 0.1 ml/l than the corresponding ones of BORD-EST 2. As the agreement is good at 3000 db it is again suggested that these differences are real and due to deep variability.

Figure 16a to g provides the deep oxygen calibrated profiles ($p \geq 3000$ db) for comparison with the other stations reported on figure 14. The agreement is pretty good (within 0.03 ml/l) with the TTO stations 112 and 117, as with TTO 80 and TTO 91 (tropical study) at depths greater than 3000 db. However differences up to 0.1 ml/l are observed at TTO 77. There is also a good agreement with station 162 from R.V. Atlantis II below 3700 db but discrepancies from 0.05 to 0.08 ml/l are observed between station 51 and the Atlantis II station 91, although the value at 3000 db at the latter matches our calibrated profile.

The horizontal lines on these curves are drawn at the value 5.67 ml/l which Saunders (1986) suggests as the quasi-uniform dissolved oxygen concentration in the deep Northeast Atlantic, although that author expects slightly lower values along the eastern margin of the basin. The BORD-EST values are indeed lower, and average concentrations of 5.59 ml/l, rather than 5.67, are observed on the curves at 4000 db and the bottom on figure 10.

4.3 The deep nutrient values

Figures 17 shows the variability of the nitrate concentration at the nominal sampling level 4000 m along the section. The values from the other cruises also reported reveal a good agreement between the BORD-EST 2, TTO and ATLANTIS II data, but differences of more than 1 μmol/l are observed between BORD-EST 2 and BORD-EST 3.

Figure 18 provides the same visualizations for the silicate concentrations at 2000 db, 2500 db, 3000 db and 4000 db. Some anomalous values stand out at stations 47 (level 2000 db) and 52 (3000) which should be considered with caution, although no reason was found to eliminate them. On the whole comparison with the other data sets is pretty good at 2000 db, but some differences exist at 4000 db, leg 1, where the BORD-EST 2 values exceed both the TTO and BORD-EST 3 values by 2 to 3 μmol/l. The agreement is better at this same level with stations TTO 80, TTO 77 and W162 farther in the south.

REFERENCES

Billant, A., 1984. Description et utilisation du système embarqué de mesures d'hydrologie recueillies par une sonde Neil-Brown. Calibration de ces mesures. Rapport interne IFREMER (DERO/EO).

Billant, A., 1985. Calibration des mesures d'une sonde CTD-O_2 Neil-Brown. Rapport Scientifique et Technique de l'IFREMER, n° 1.

Millard, R., 1982. CTD calibrations and data processing techniques at WHOI using the 1978 practical salinity scale. International STD Conference and Workshop, San Diego.

Saunders, P.M., 1986. The accuracy of measurement of salinity, oxygen and temperature in the deep ocean. J. Phys. Ocean., 16, pp. 189-195.

Tréguer, P., P. Le Corre, 1975. Manuel d'analyse automatique des sels nutritifs dans l'eau de mer. 150 p.

Weiss, R.F., 1970. The solubility of nitrogen, oxygen and argon in water and sea-water. Deep-Sea Res., 17, pp. 721-735.

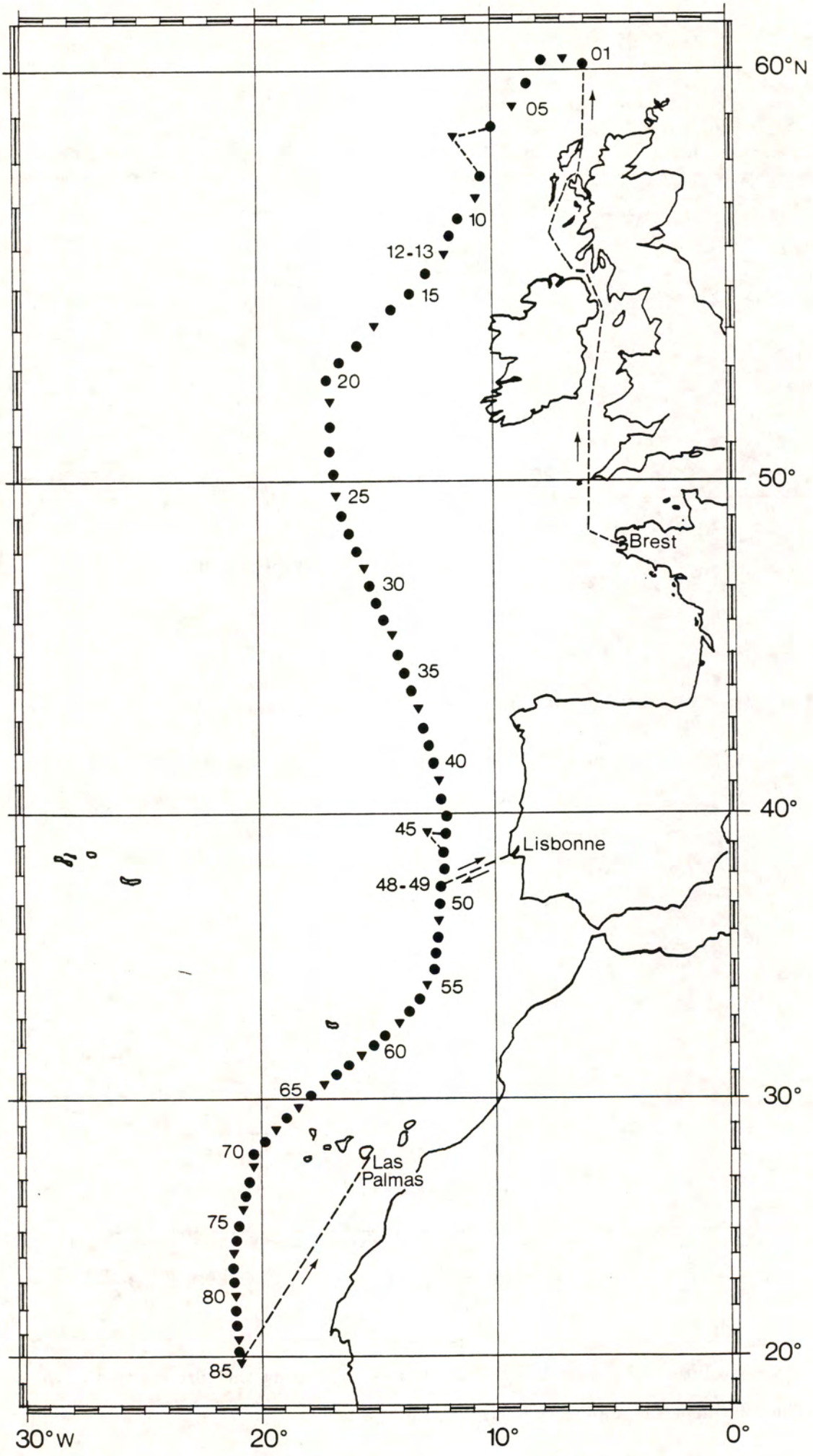


Figure 1 : Locations of stations during the cruise BORD-EST 2.

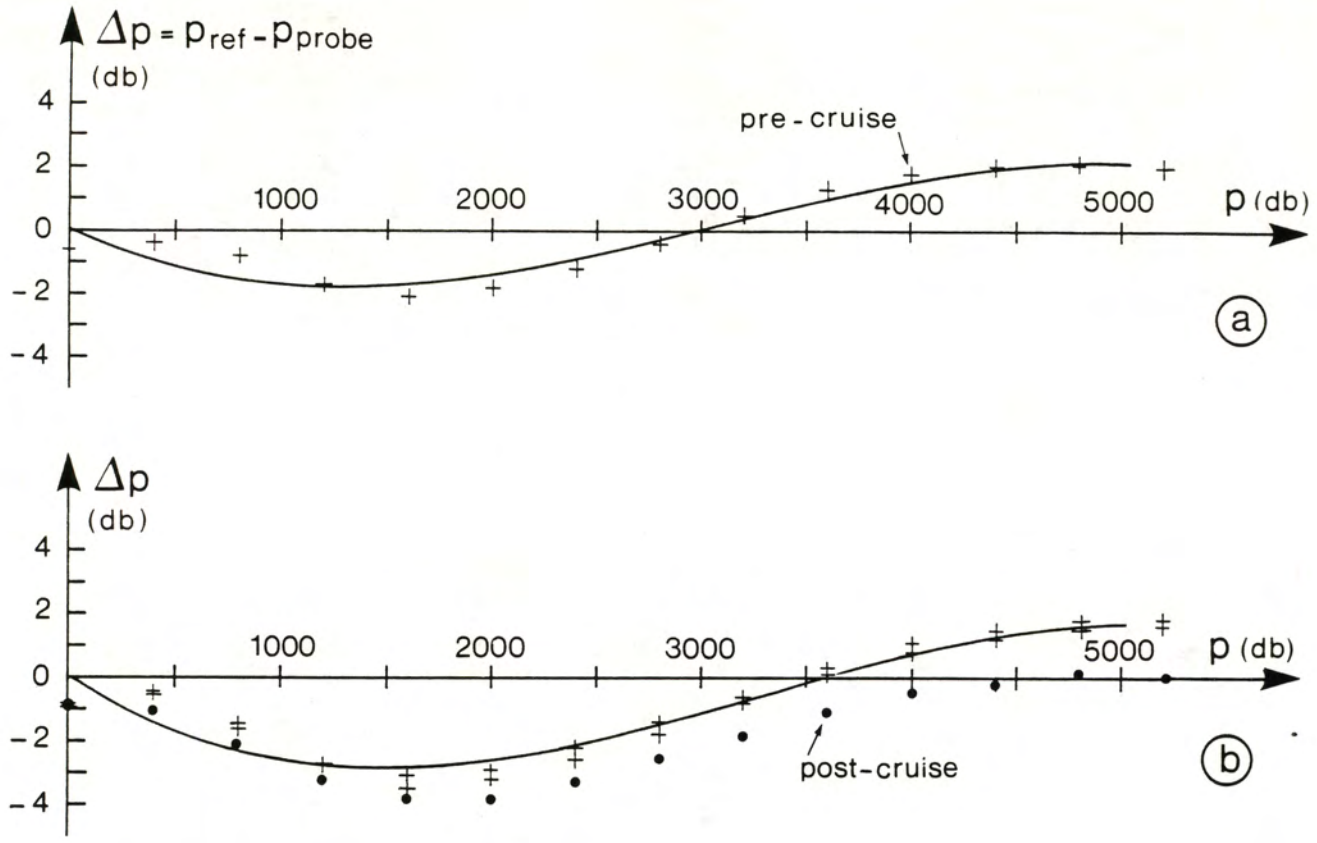


Figure 2 : Pressure calibration curves of probe A (a, pre-cruise curve only), and probe B (b).

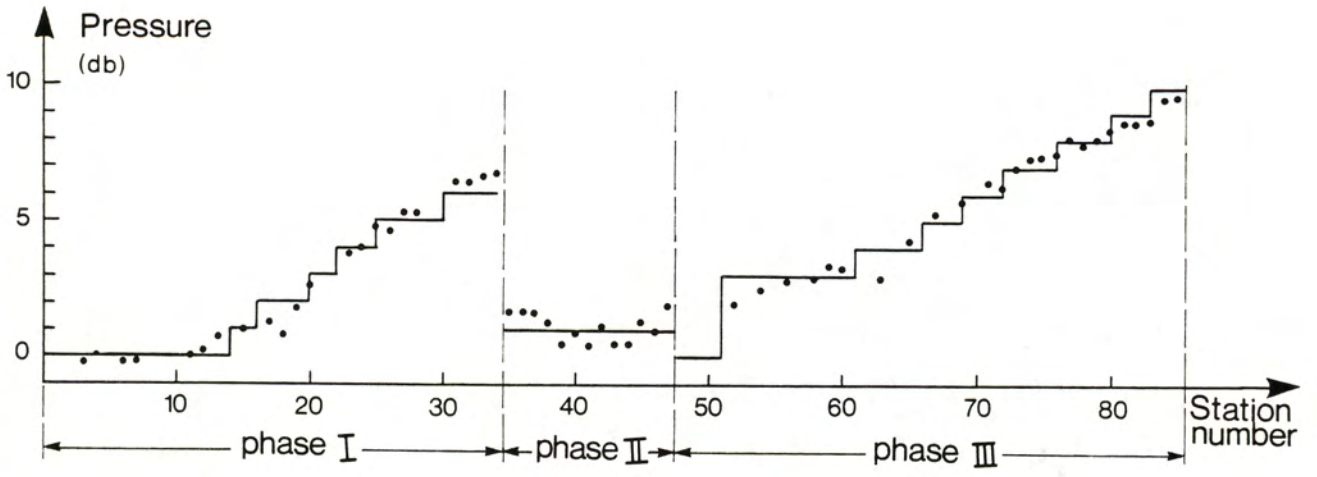


Figure 3 : Evolution of the deck pressure offset (dots) during the three phases of the cruise. The full line is the applied correction (p_d in the text).

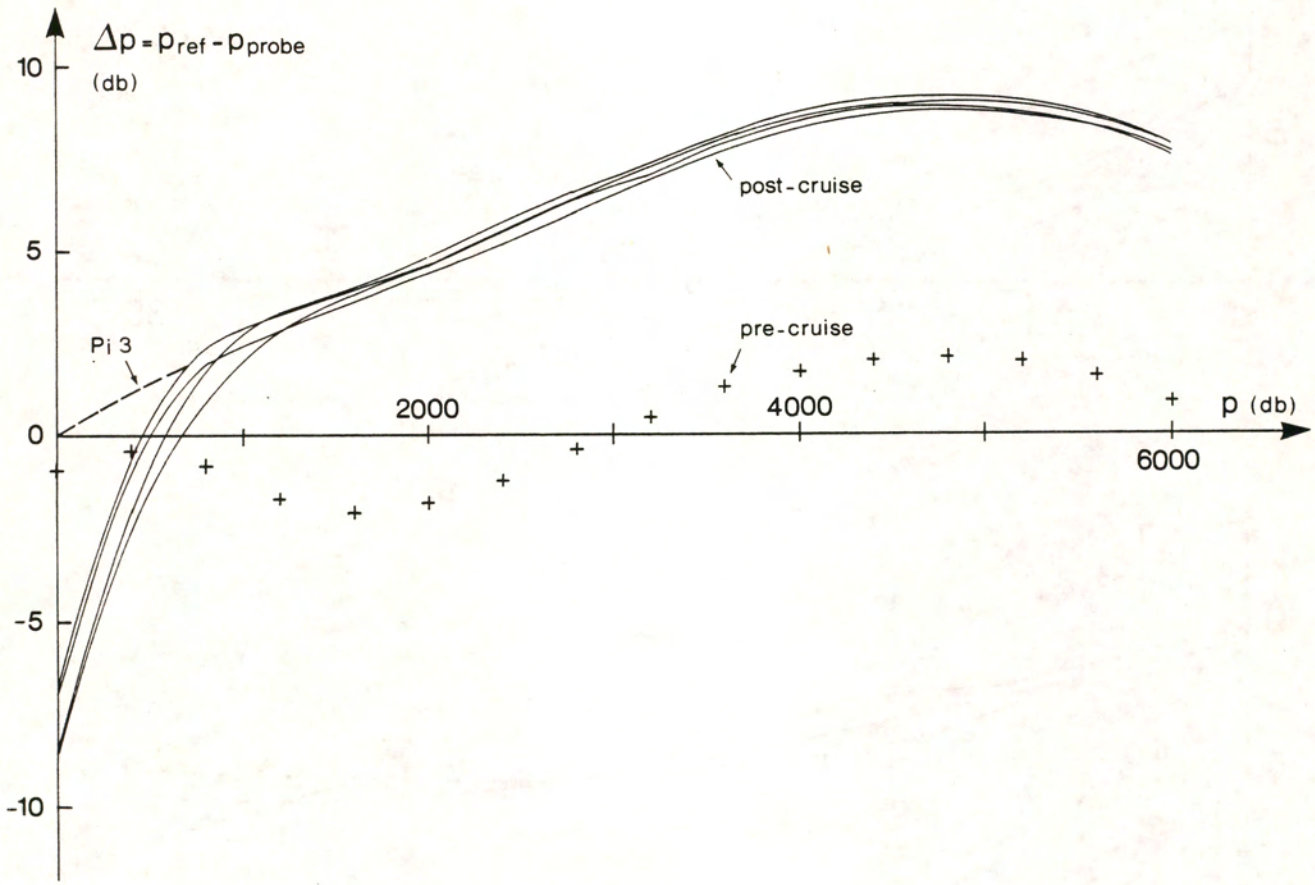


Figure 4 : Post-cruise calibration curves of probe A. The pre-cruise calibration points are also shown.

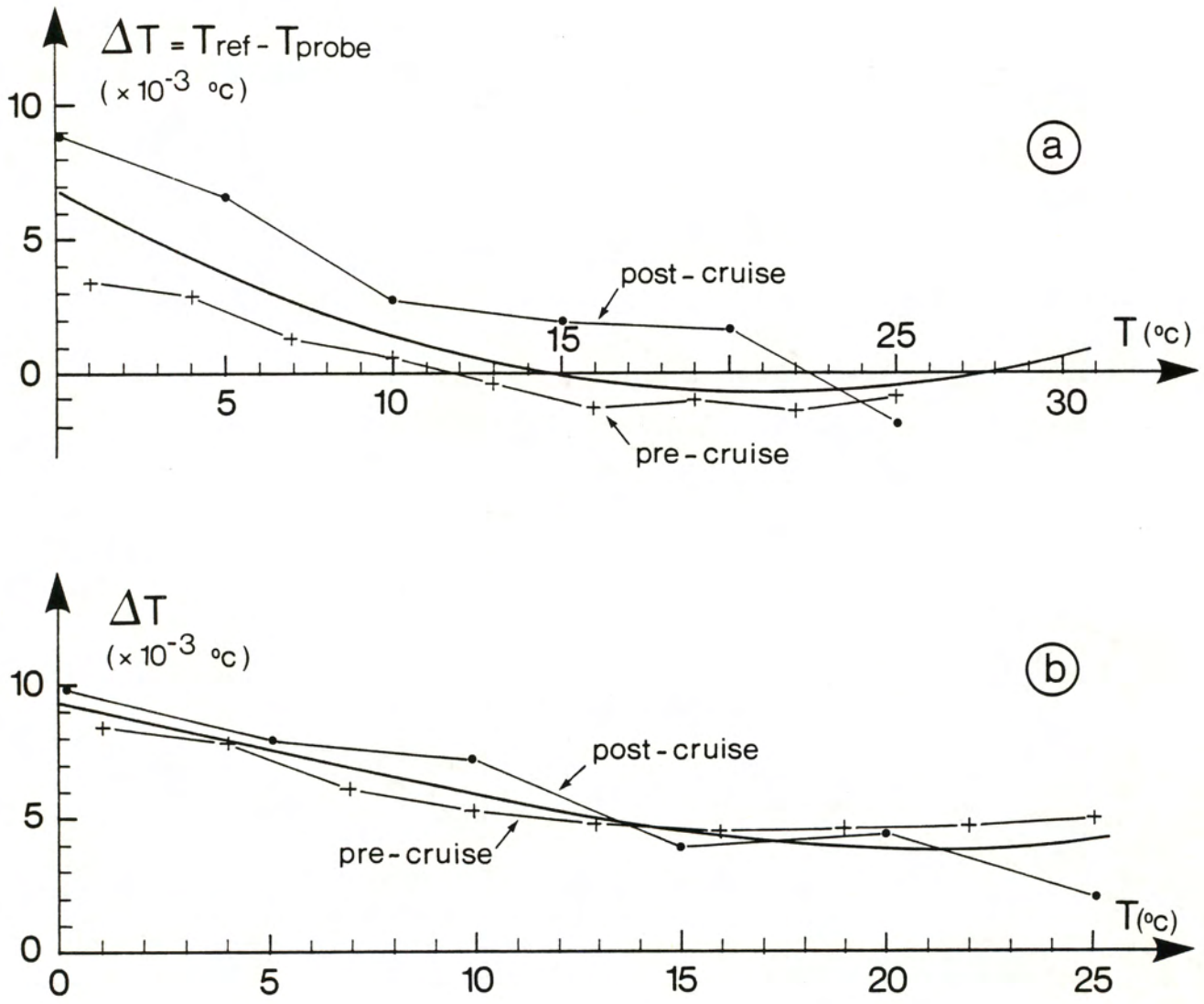


Figure 5 : Temperature calibration curves of probe A (a) and B (b).

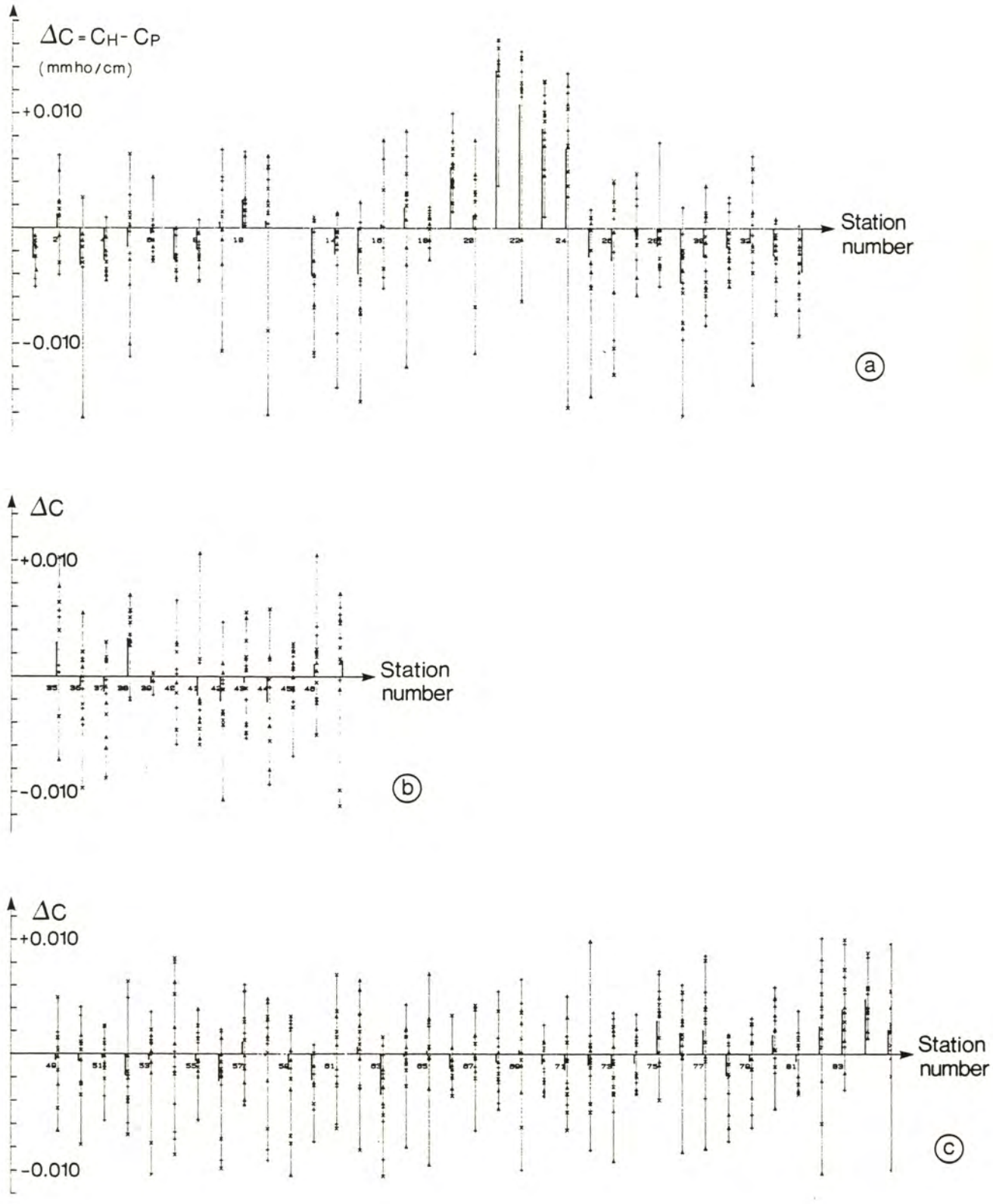


Figure 6 : Conductivity residuals ($\Delta C = C_H - C_p$) after a first global calibration on each phase (a, b, c for phases I, II, III). Bold segments show the mean residuals at each station.

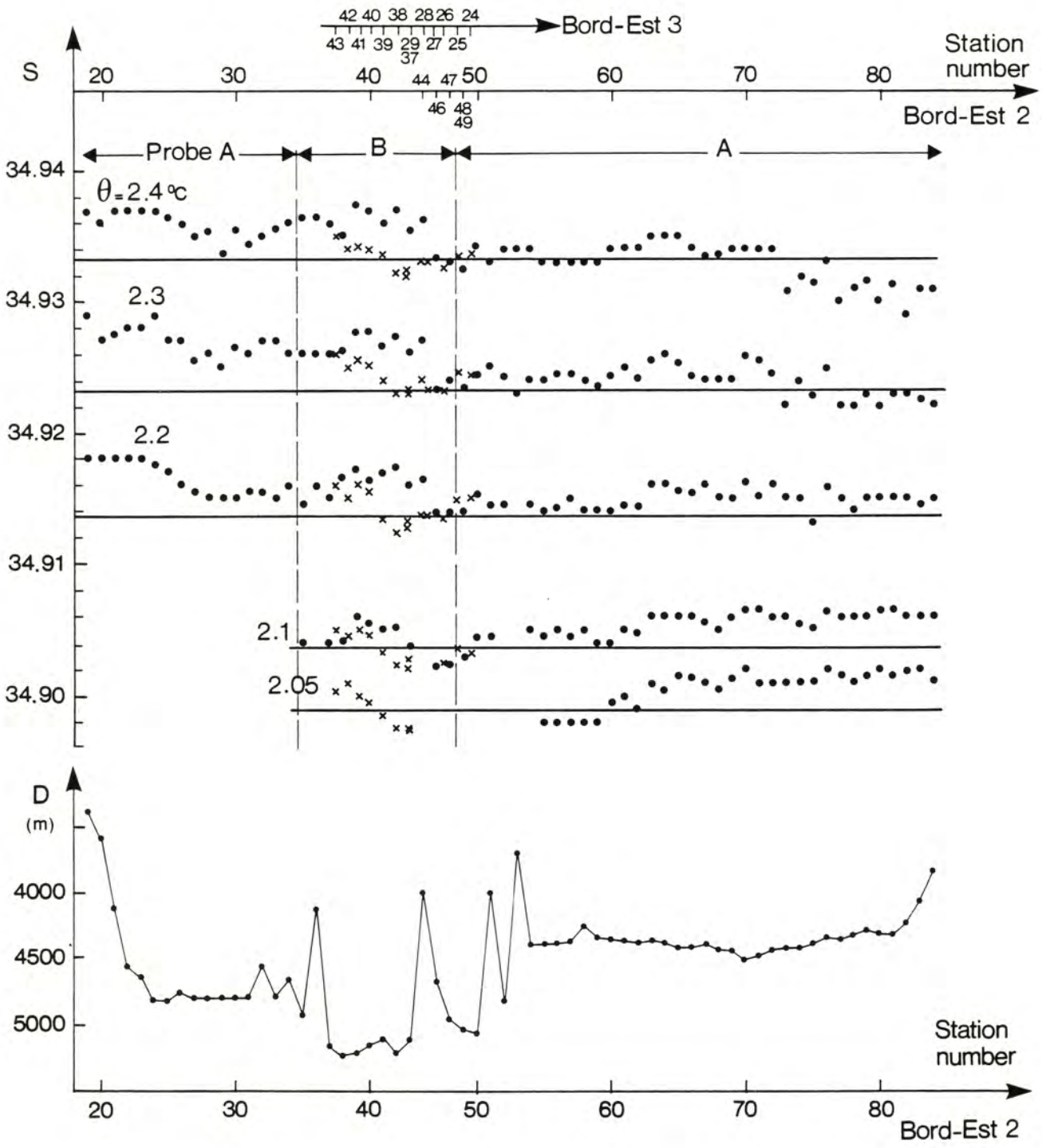


Figure 9 : Calibrated salinities on deep θ levels. The BORD-EST 3 salinities at the same levels are shown for comparison. The horizontal straight lines give the salinity values predicted by Saunders' (1986) $\theta - S$ relationship.

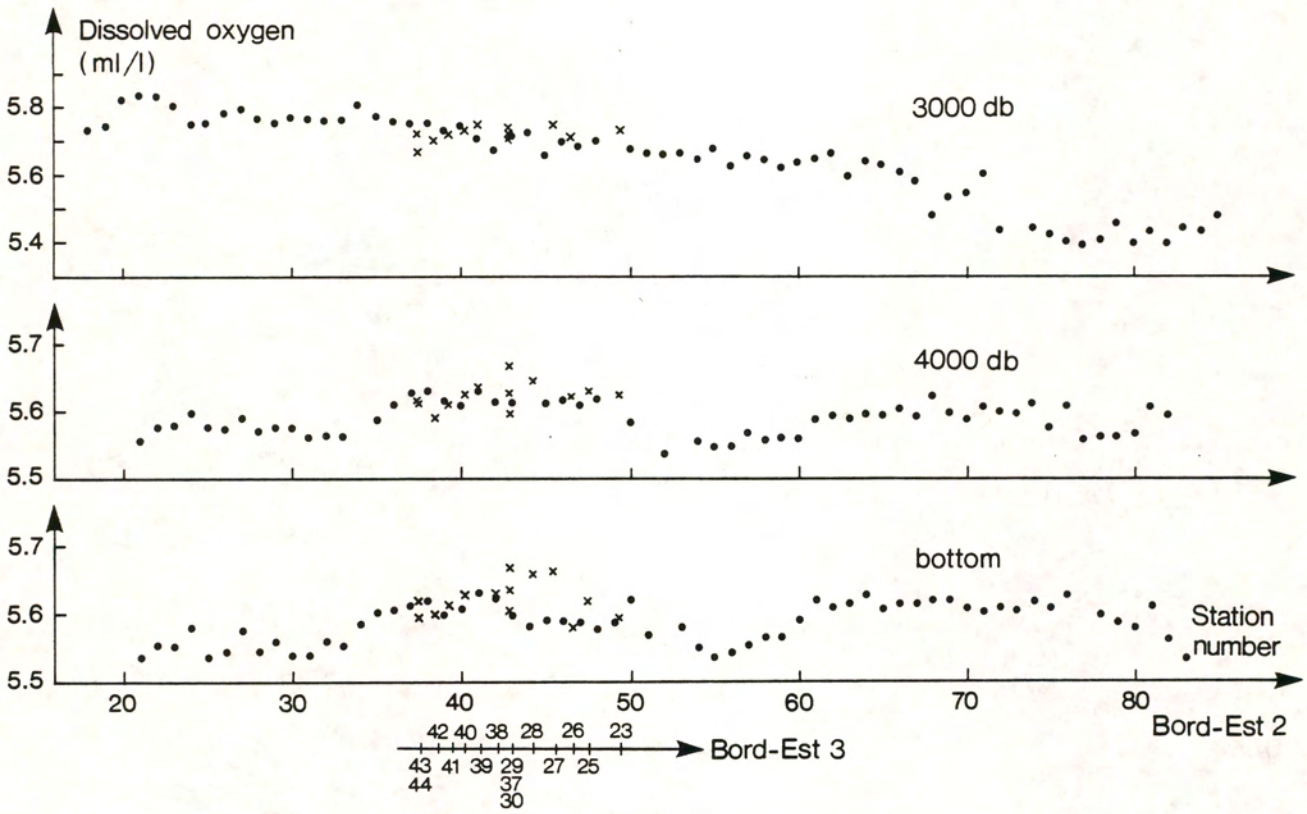


Figure 10 : Winkler values of dissolved oxygen at 3000 db, 4000 db and the bottom at all stations of BORD-EST 2 and some BORD-EST 3 stations for comparison. Note the different vertical scale of the 3000 db curve.

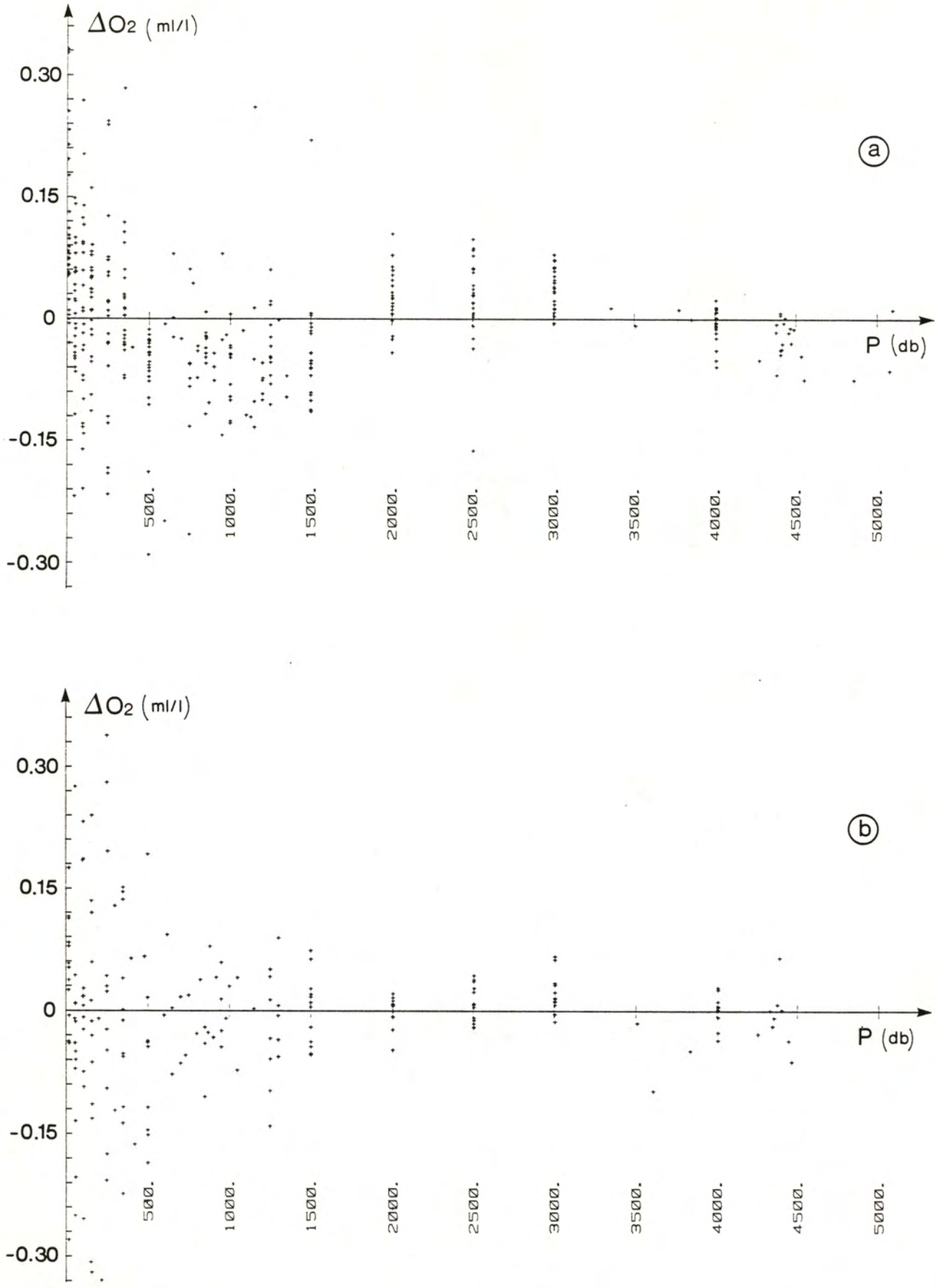


Figure 11 : Residuals of dissolved oxygen after calibration of station groups 50 to 72 (a) and 73 to 85 (b) according to Millard's (1982) procedure.

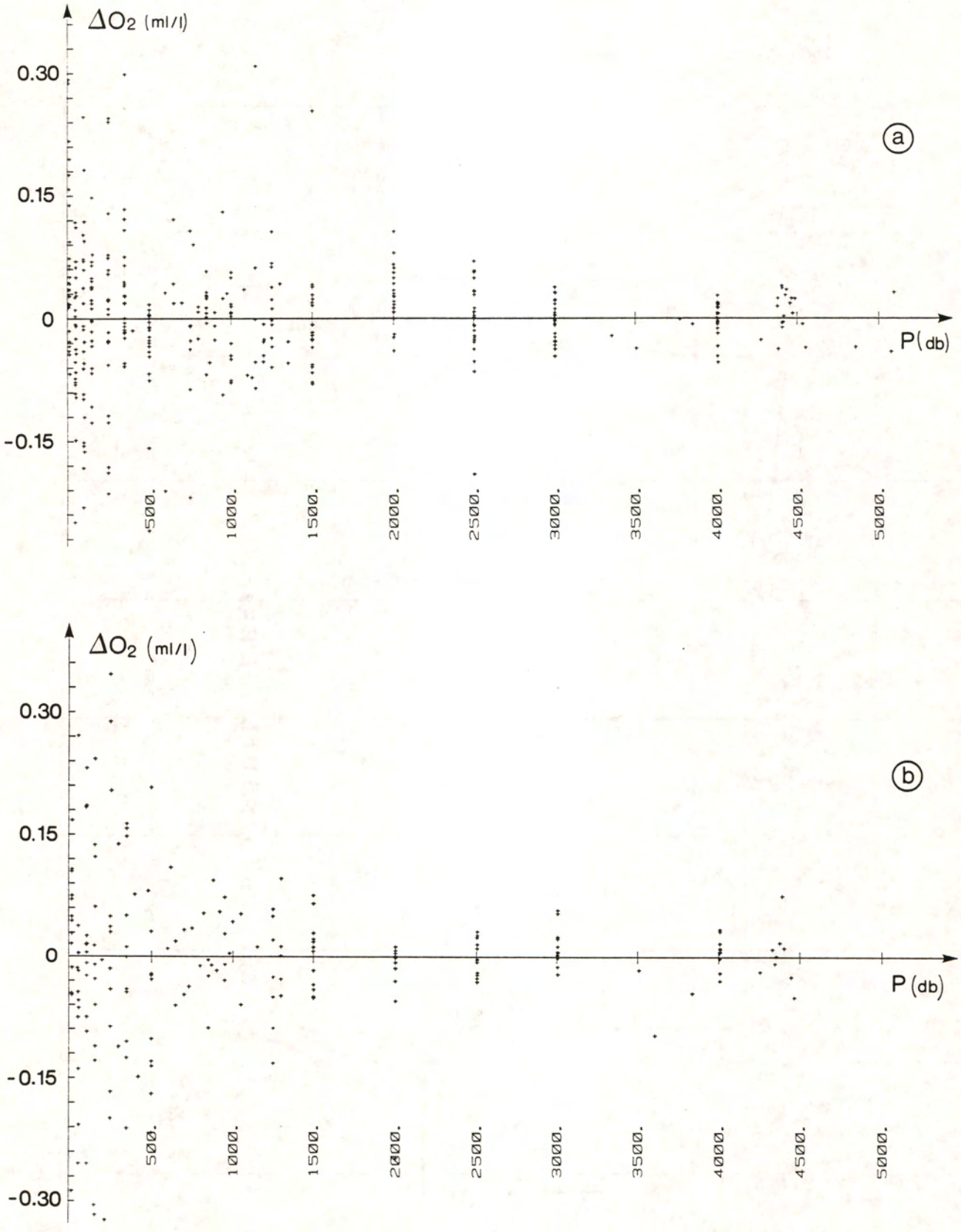


Figure 12 : Same as figure 11 after use of a five degree polynomial to reduce the misfit left by Millard's (1982) model.

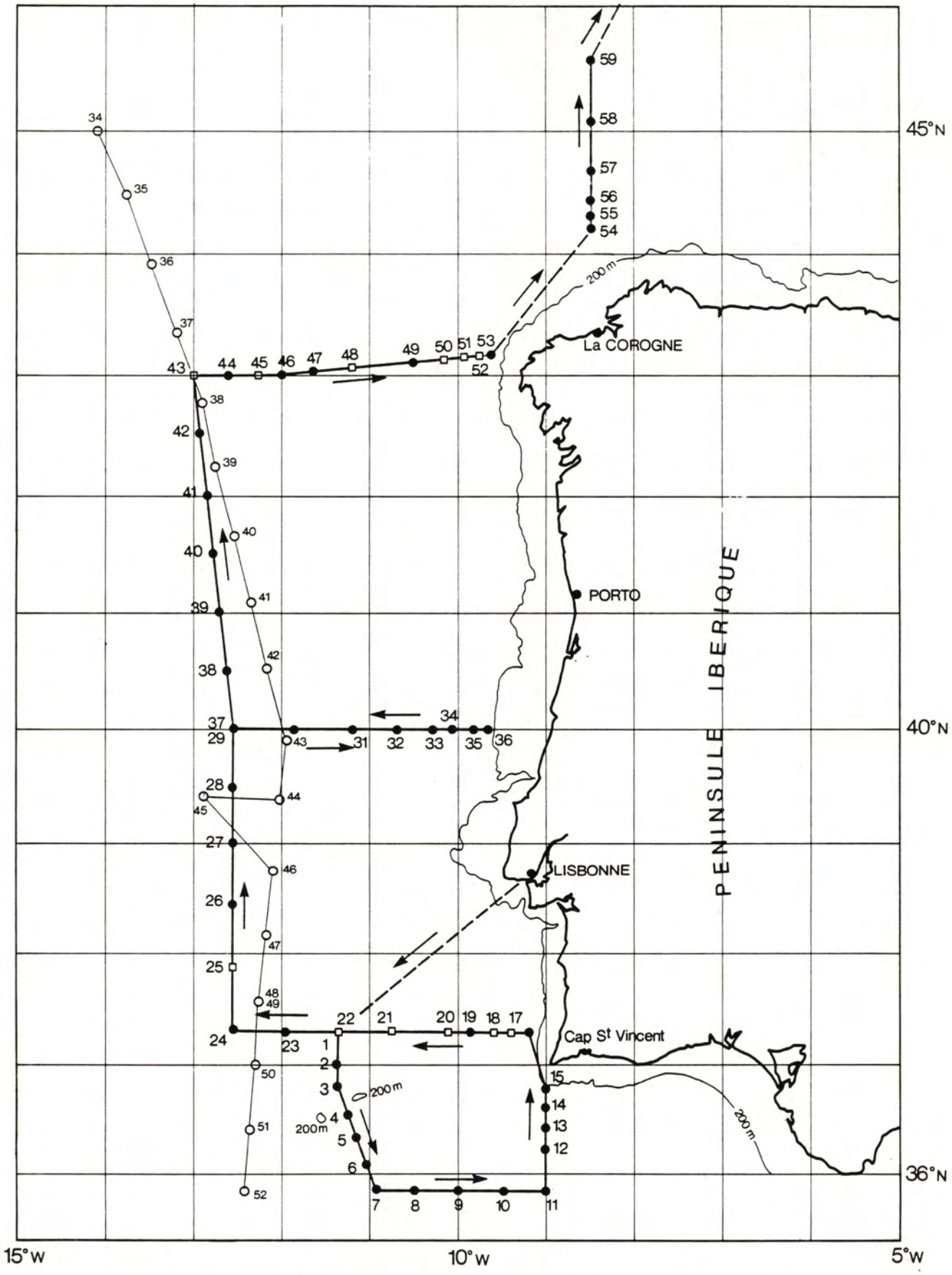


Figure 13 : Stations from the BORD-EST 2 and BORD-EST 3 cruises in the common latitudinal domain. Stations 23 to 30 and 37 to 44 of BORD-EST 3 were used for comparison with BORD-EST 2.

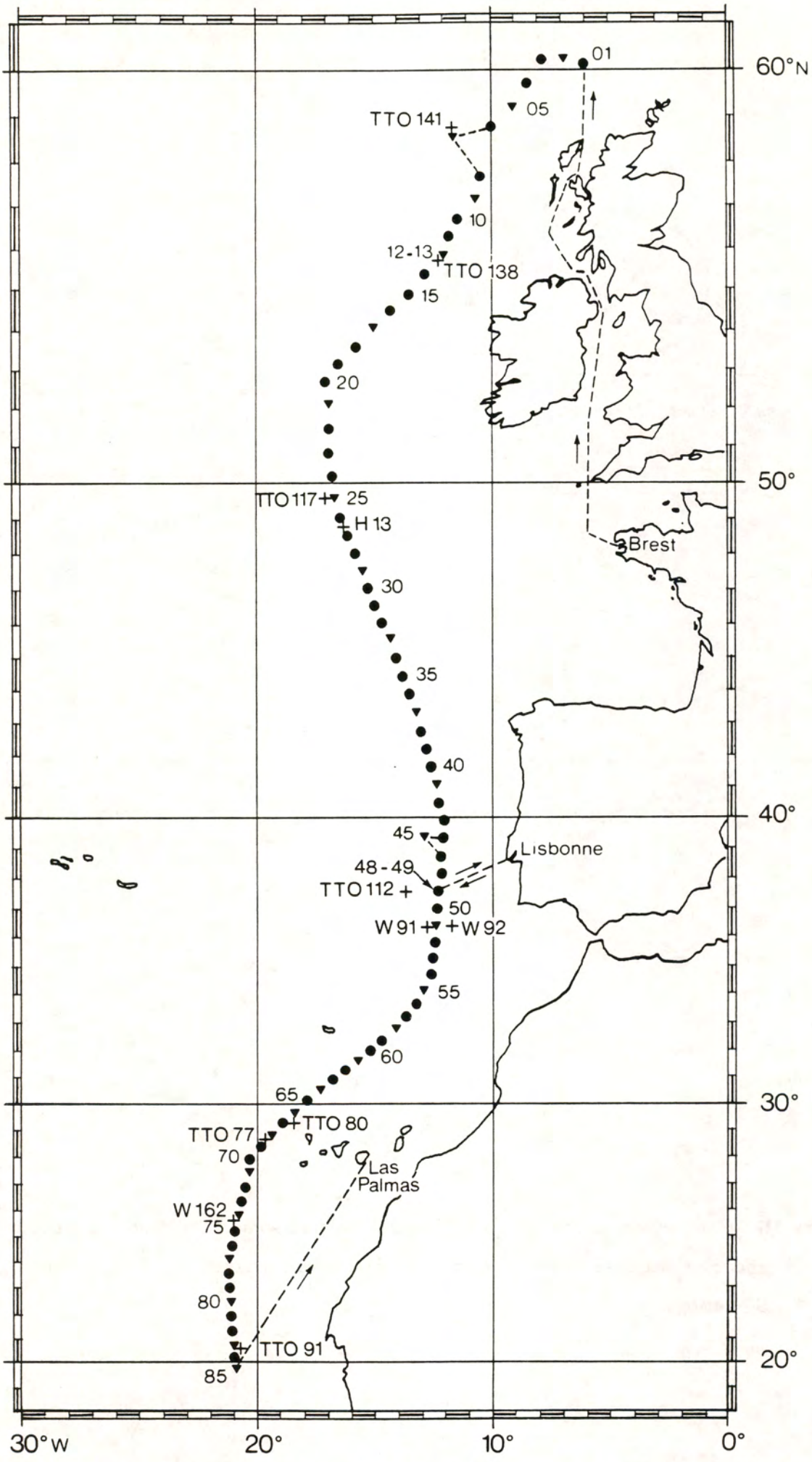


Figure 14 : Locations of hydrographic stations from other programs which were used for comparison with the BORD-EST 2 data.

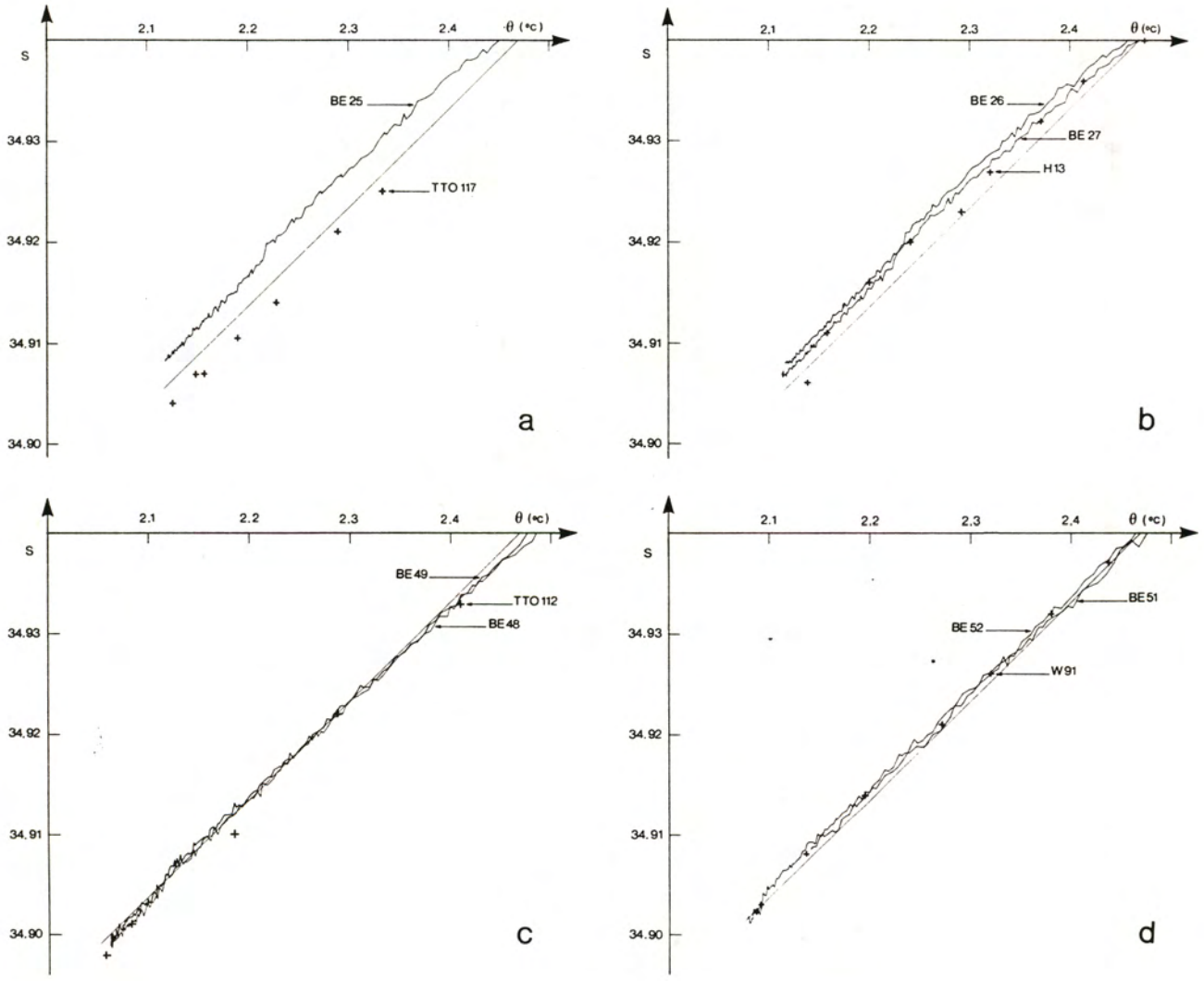


Figure 15 : Comparison of the deep $\theta - S$ relationship at some BORD-EST 2 stations and neighbouring stations of other programs. Straight lines are Saunders' (1986) proposed deep $\theta - S$ relationship.

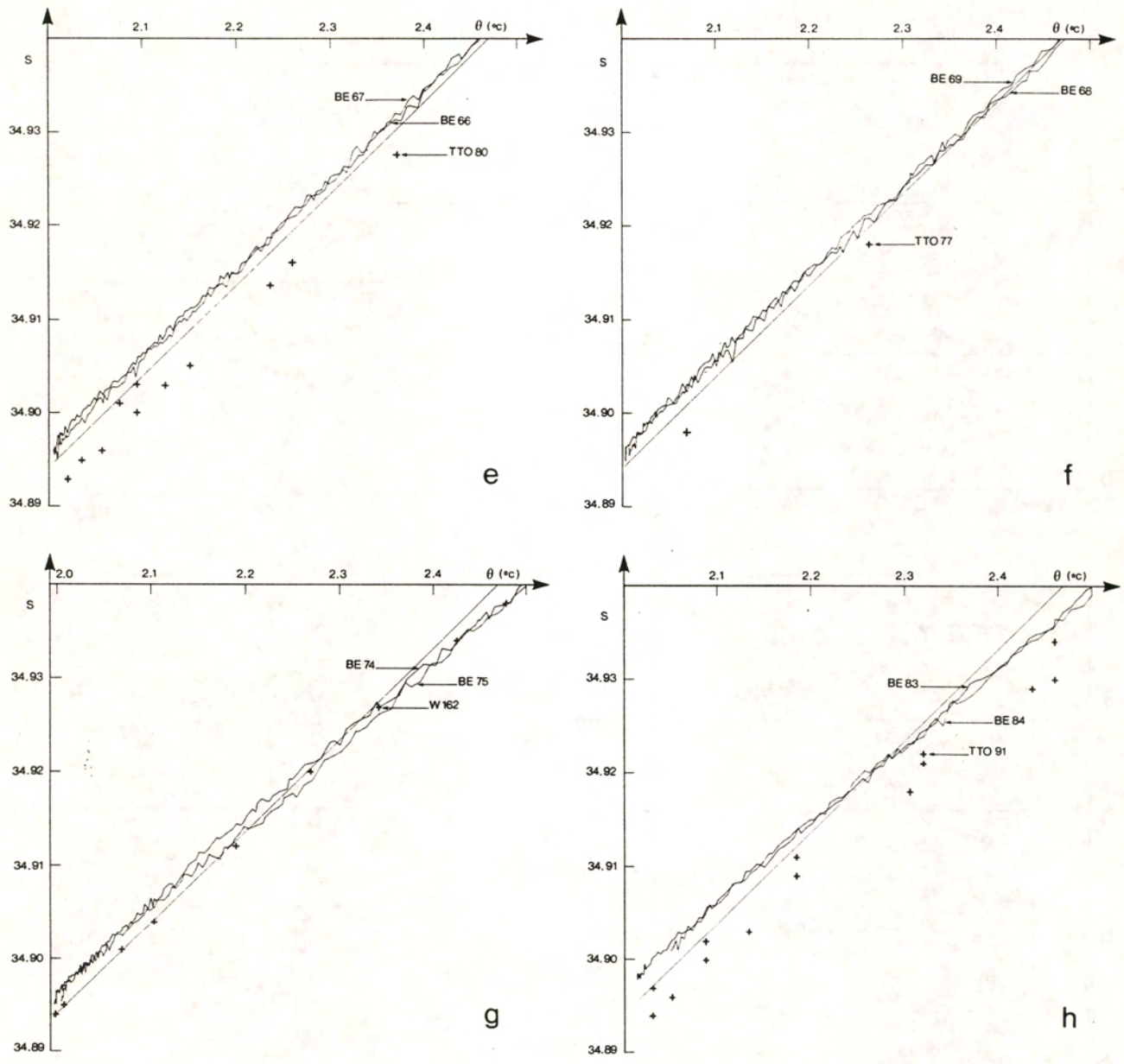


Figure 15 (continued)

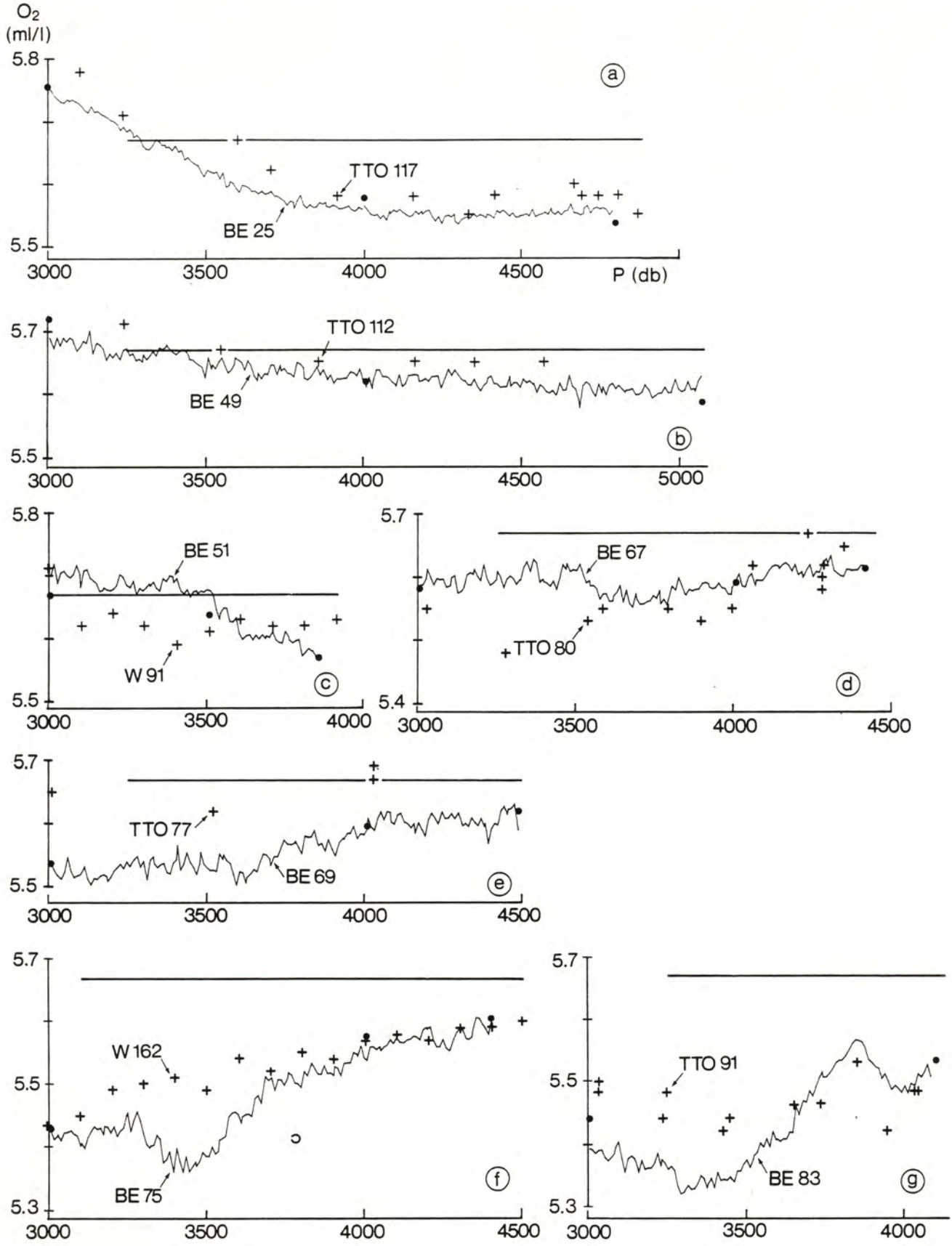


Figure 16 : Comparison of deep oxygen profiles at some BORD-EST 2 stations and neighbouring stations of other programs. The BORD-EST 2 Beckman profiles (10 db sampling) are accompanied by the Winkler values. Values used for comparison are Winkler concentrations at the TTO stations and extracted from continuous CTD-O_2 profiles at W91 and W162.

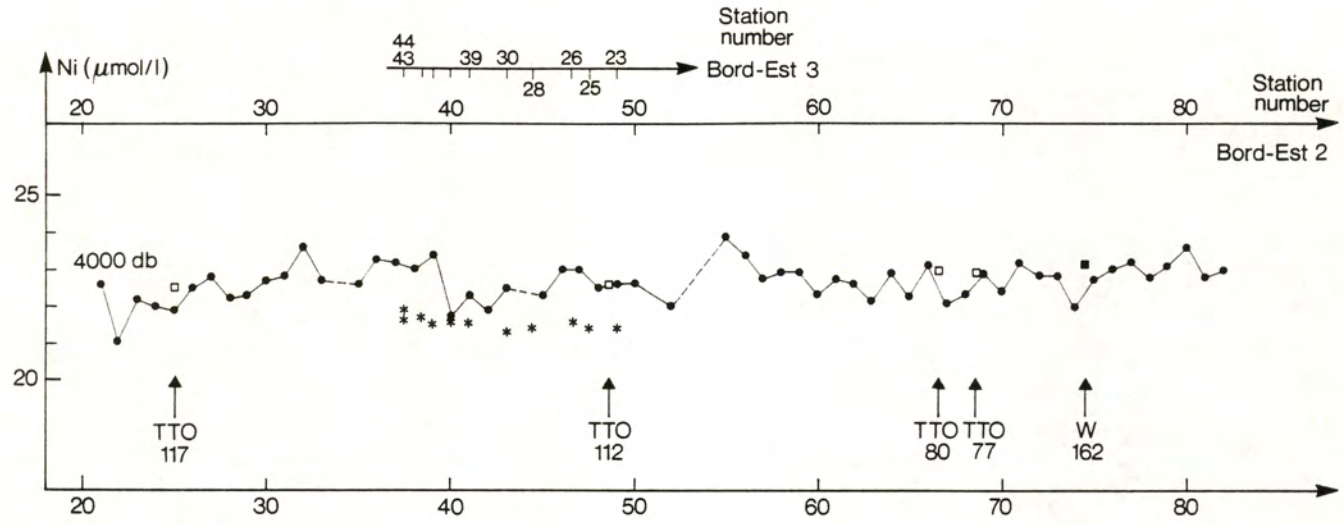


Figure 17 : Nitrate concentrations at nominal level 4000 db for all deep stations. Values from other cruises are reported for comparison. The latter have been interpolated to 4000 db and converted into μmol/l (using the density 1.026), when necessary.

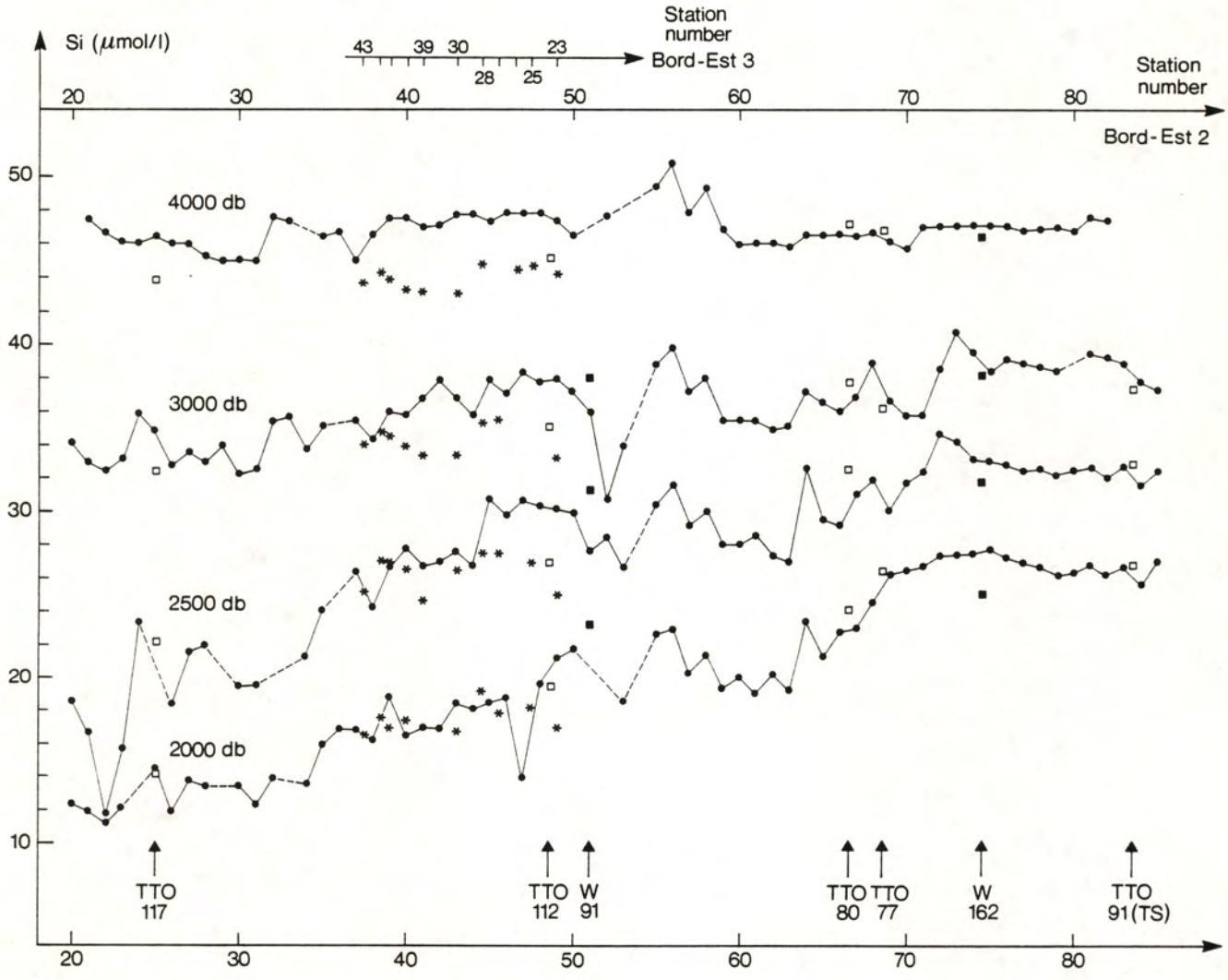
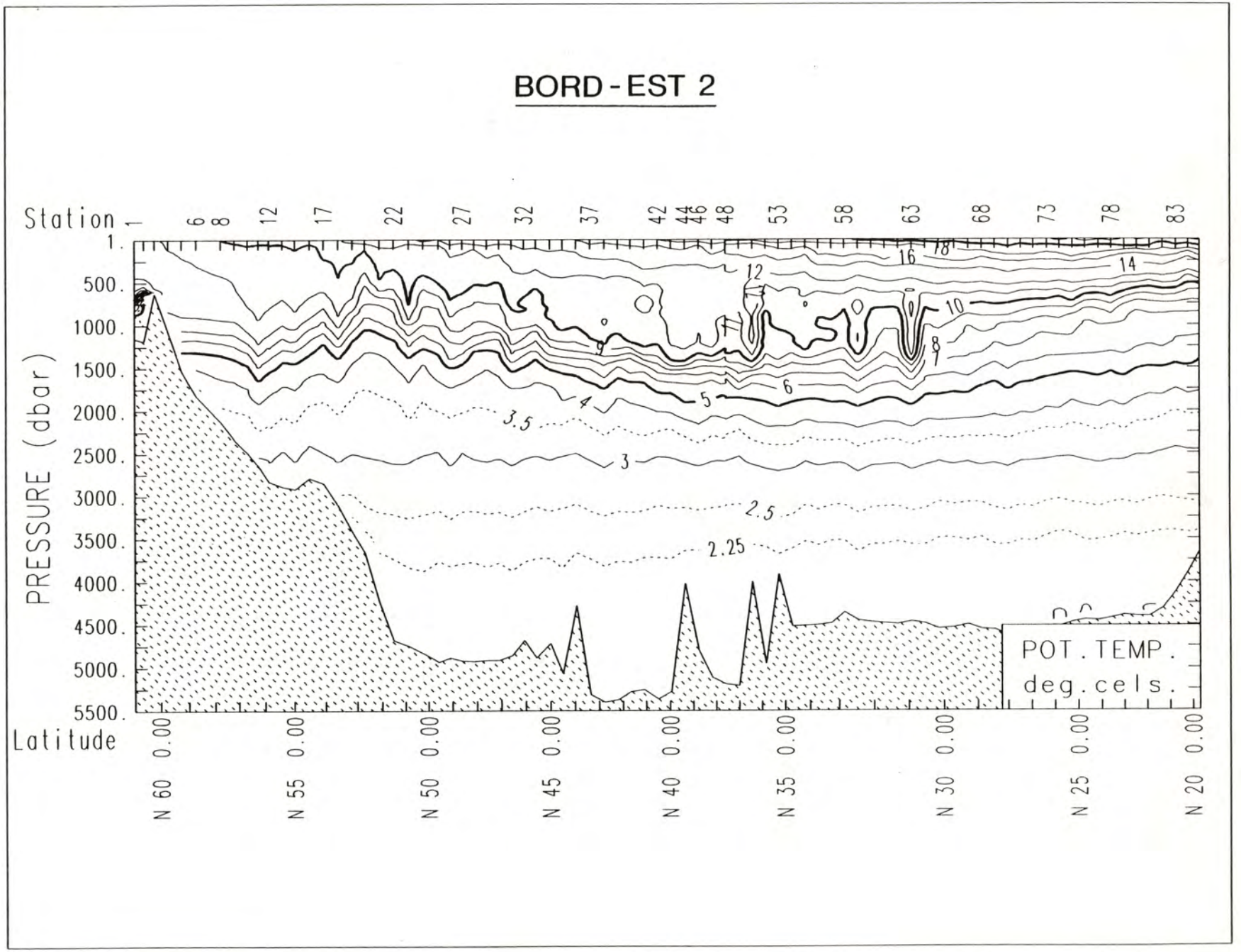


Figure 18 : Silicate concentrations at nominal levels 2000 db, 2500 db, 3000 db and 4000 db for all deep stations. Values from other cruises are reported for comparison. The latter have been interpolated to the nominal levels and converted into μmol/l when necessary.

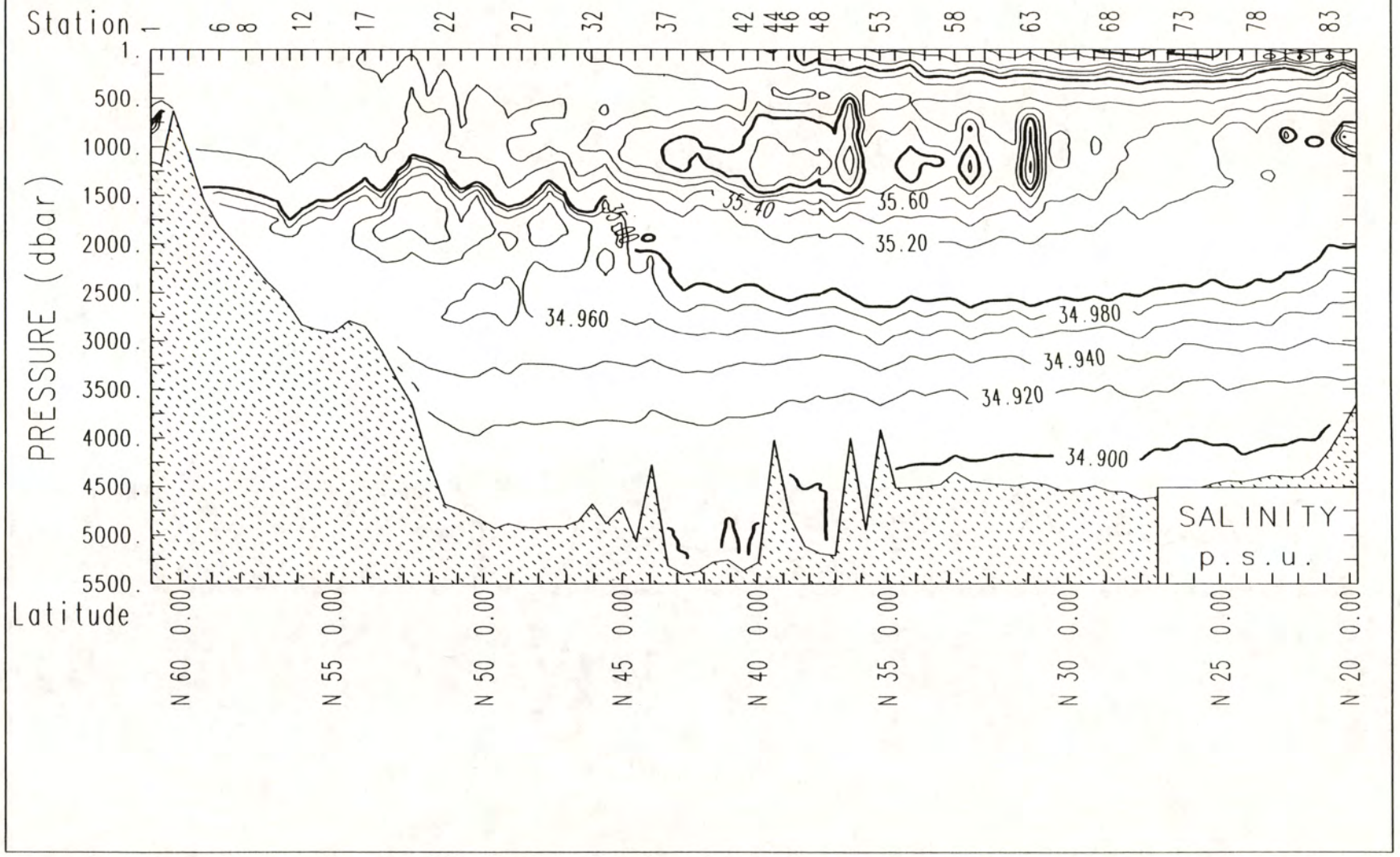
5 Vertical distributions of the basic parameters

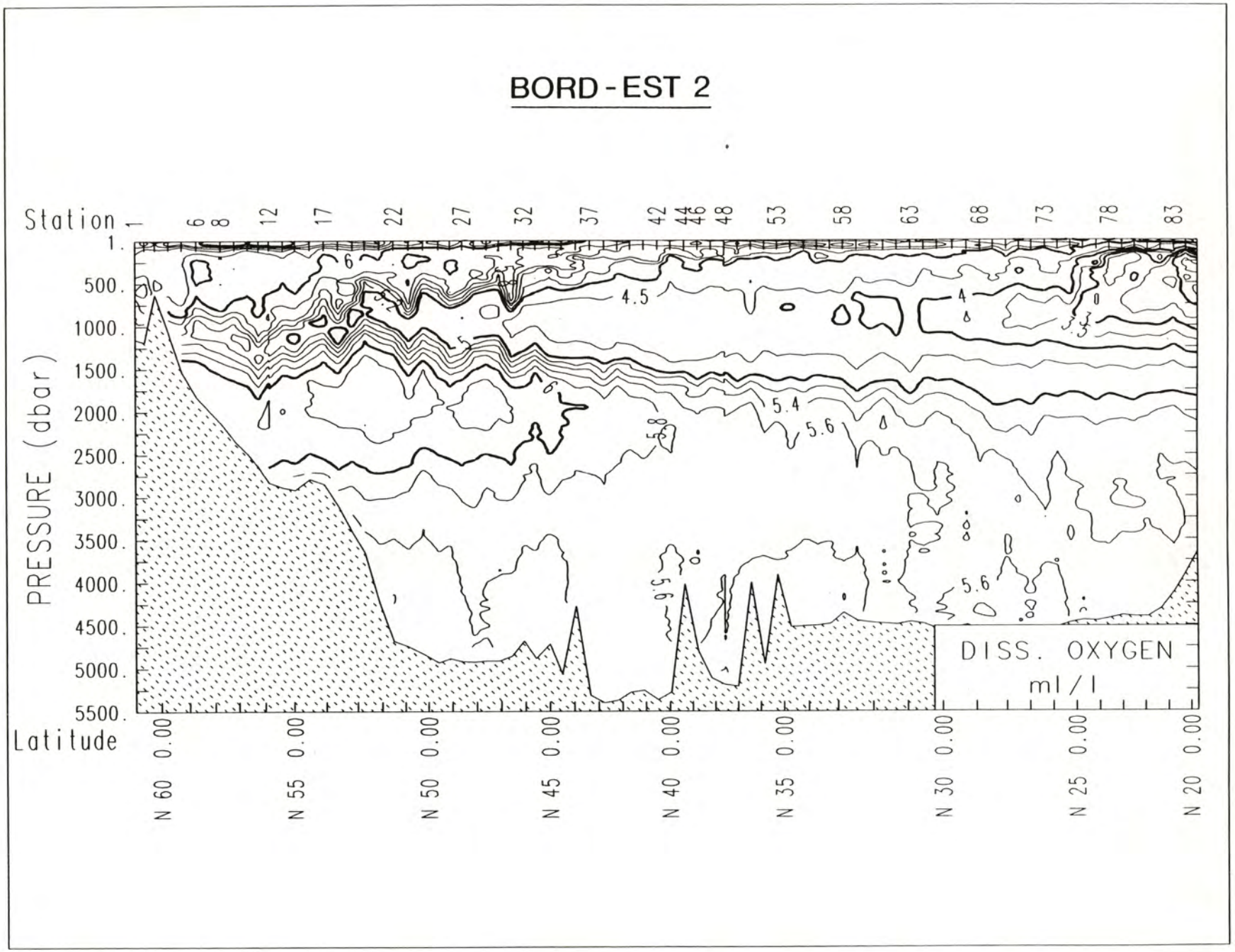
These distributions are shown in the following pages for the CTD parameters potential temperature, salinity, dissolved oxygen, and potential density referred to the surface (only displayed down to 1000 m), and the rosette parameters salinity, dissolved oxygen, nitrate and silicate. Stations 7 and 45 which stand aside from the main track of the section are not reported. Stations 12 and 54 where some chemical tracers data are lacking were also withdrawn from the corresponding displays. Stations 48 and 49 carried out at the same location before and after calling to Lisbon are both displayed for illustration of the variability effect at a 3 days interval. In order to eliminate the small scale features on the displays the measured CTD parameters had to be smoothed vertically. This was done using a Gaussian filter of standard deviations 15 db on the temperature and oxygen, and 30 db on the salinity. The potential density computed from the original non smoothed temperature and salinity profiles was itself non filtered. The rosette parameters were linearly interpolated from the original discrete vertical sampling to provide continuous profiles. The agreement between the CTD and rosette distributions of salinity and dissolved oxygen distributions is pretty good.

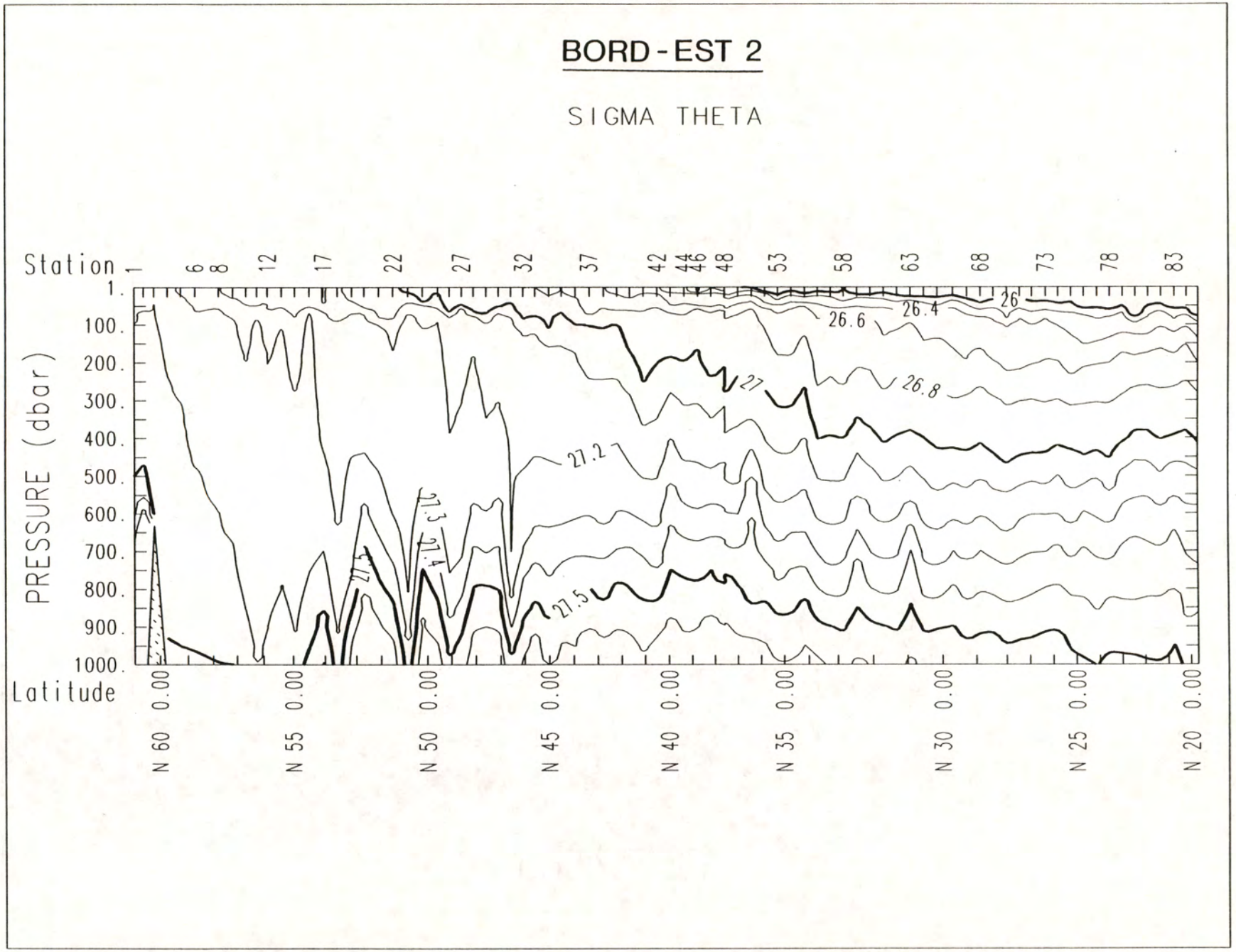
BORD - EST 2


Station
1
6
8
12
17
22
27
32
37
42
44
46
48
53
58
63
68
73
78
83
PRESSURE (dbar)
1.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
4500.
5000.
5500.
16
18
14
12
10
9
8
7
6
5
4
3.5
3
2.5
2.25
POT. TEMP.
deg.cels.
Latitude
0.00
N 60
N 55
N 50
N 45
N 40
N 35
N 30
N 25
N 20

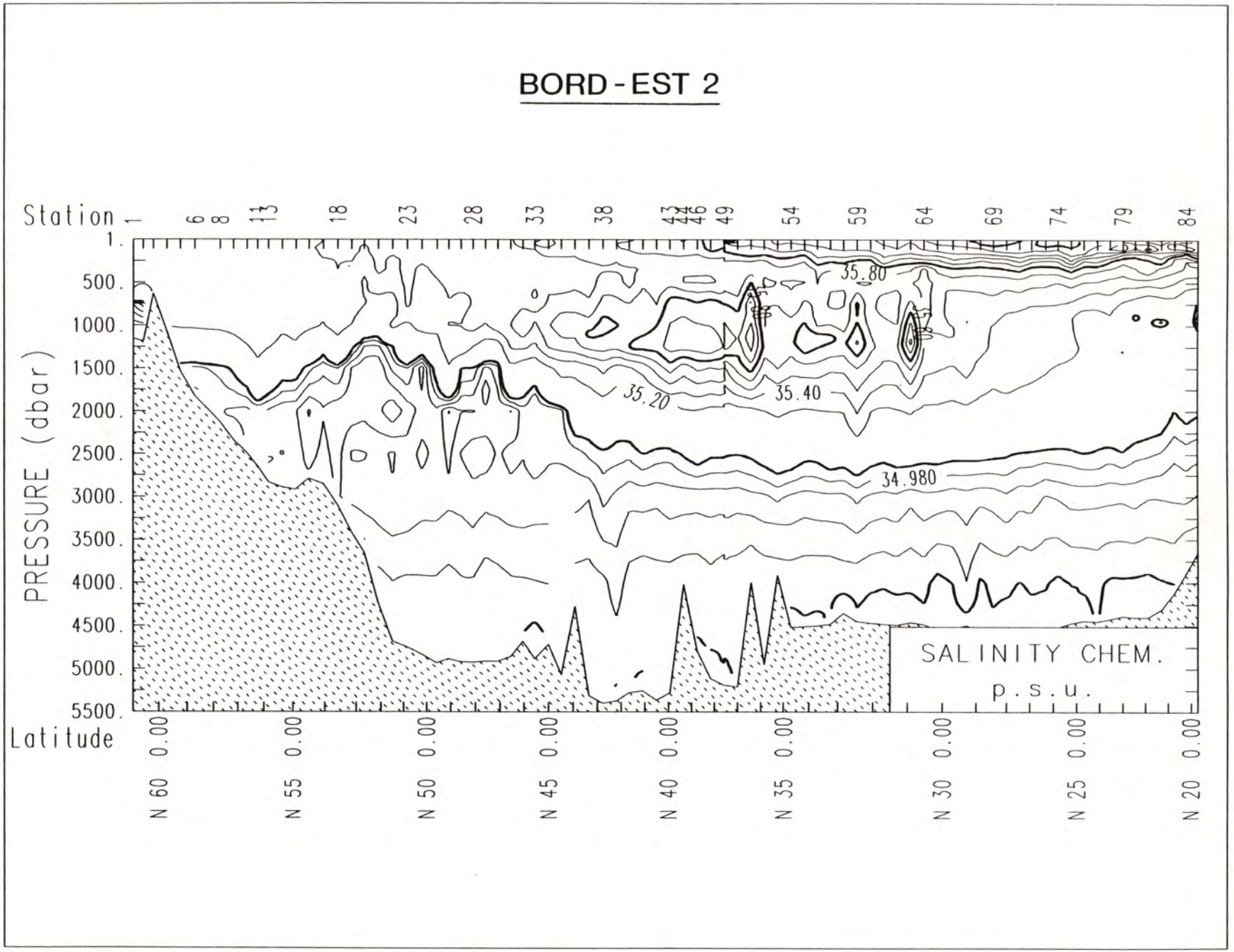
BORD - EST 2


Station
1
6
8
12
17
22
27
32
37
42
44
46
48
53
58
63
68
73
78
83
PRESSURE (dbar)
1.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
4500.
5000.
5500.
35.40
35.60
35.20
34.960
34.980
34.940
34.920
34.900
SALINITY
p.s.u.
Latitude
N 60 0.00
N 55 0.00
N 50 0.00
N 45 0.00
N 40 0.00
N 35 0.00
N 30 0.00
N 25 0.00
N 20 0.00

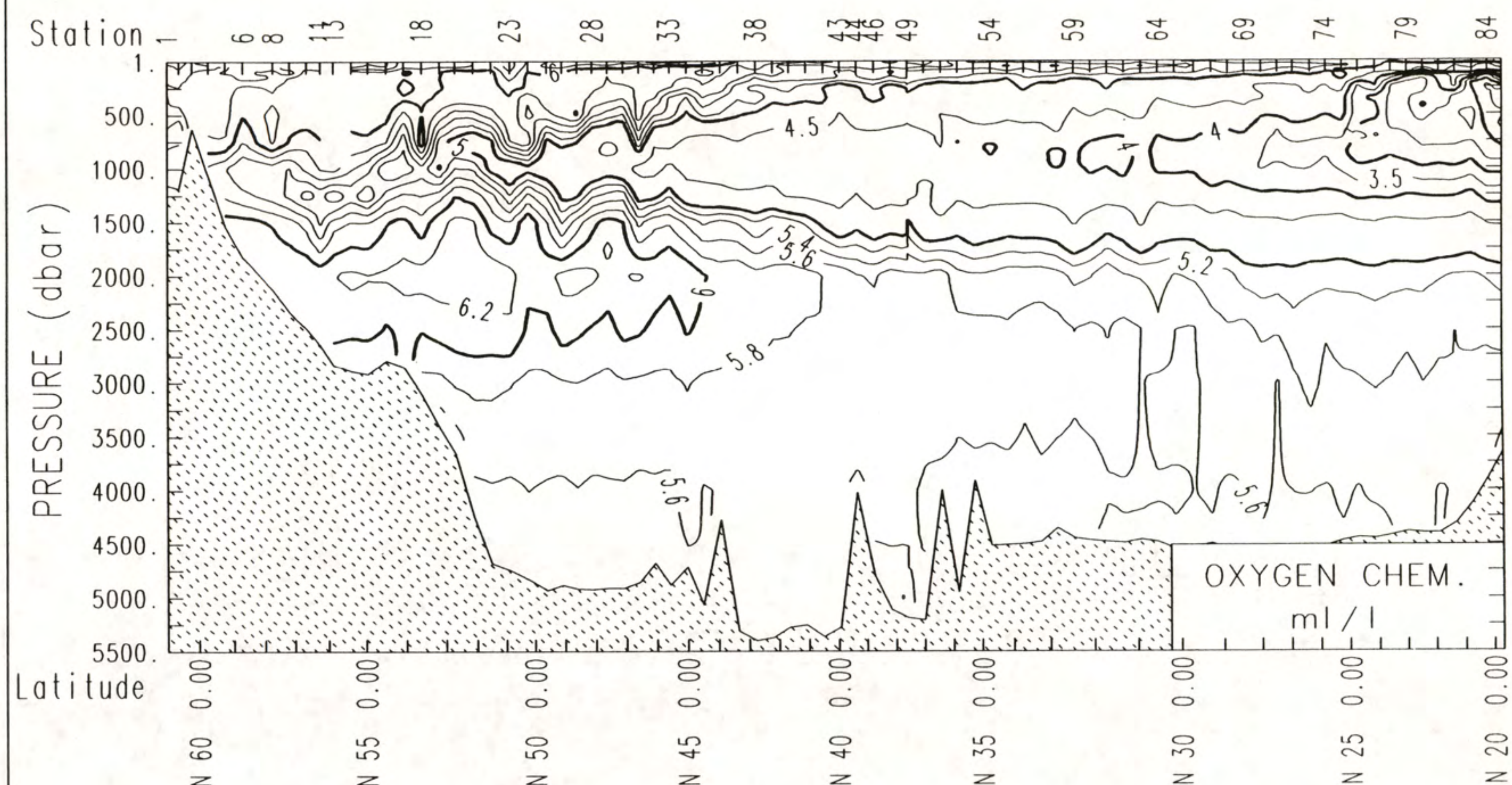

BORD - EST 2
Station
1
6
8
12
17
22
27
32
37
42
44
46
48
53
58
63
68
73
78
83
PRESSURE (dbar)
1.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
4500.
5000.
5500.
6
4.5
4
5.4
5.6
5.8
5.6
5.6
DISS. OXYGEN
ml/l
Latitude
N 60 0.00
N 55 0.00
N 50 0.00
N 45 0.00
N 40 0.00
N 35 0.00
N 30 0.00
N 25 0.00
N 20 0.00


BORD - EST 2
SIGMA THETA
Station
1
6
8
12
17
22
27
32
37
42
44
46
48
53
58
63
68
73
78
83
PRESSURE (dbar)
1.
100.
200.
300.
400.
500.
600.
700.
800.
900.
1000.
26
26.4
26.6
26.8
27
27.2
27.3
27.4
27.5
27.5
Latitude
N 60 0.00
N 55 0.00
N 50 0.00
N 45 0.00
N 40 0.00
N 35 0.00
N 30 0.00
N 25 0.00
N 20 0.00

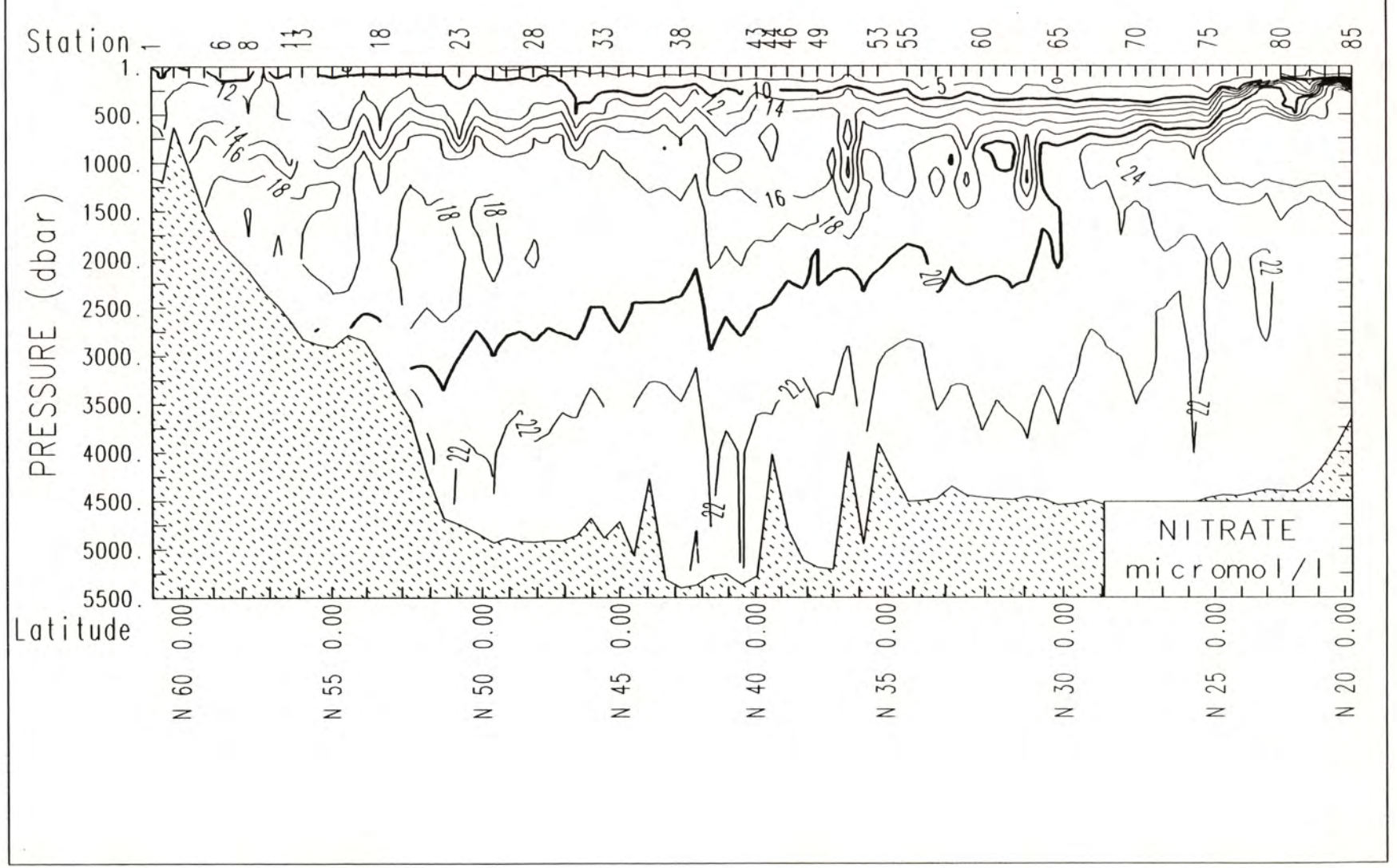
BORD - EST 2


Station
1
6
8
11
13
18
23
28
33
38
43
44
46
49
54
59
64
69
74
79
84
PRESSURE (dbar)
1.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
4500.
5000.
5500.
35.80
35.20
35.40
34.980
SALINITY CHEM.
p.s.u.
Latitude
N 60 0.00
N 55 0.00
N 50 0.00
N 45 0.00
N 40 0.00
N 35 0.00
N 30 0.00
N 25 0.00
N 20 0.00

BORD - EST 2


Station
1
6
8
11
13
18
23
28
33
38
43
44
46
49
54
59
64
69
74
79
84
PRESSURE (dbar)
1.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
4500.
5000.
5500.
Latitude
N 60 0.00
N 55 0.00
N 50 0.00
N 45 0.00
N 40 0.00
N 35 0.00
N 30 0.00
N 25 0.00
N 20 0.00
4.5
4
3.5
5
5.4
5.6
5.2
6.2
6
5.8
5.6
5.6
OXYGEN CHEM.
ml/l

BORD - EST 2


Station
PRESSURE (dbar)
Latitude
NITRATE
micromol/l
N 60 0.00
N 55 0.00
N 50 0.00
N 45 0.00
N 40 0.00
N 35 0.00
N 30 0.00
N 25 0.00
N 20 0.00

BORD - EST 2
Station
1
6
8
11
14
19
24
29
34
39
44
46
47
49
51
53
55
57
62
67
72
77
82
PRESSURE (dbar)
1.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
4500.
5000.
5500.
0
2.5
5
10
12.5
15
20
25
30
35
40
45
SILICATE
micromol/l
Latitude
N 60 0.00
N 55 0.00
N 50 0.00
N 45 0.00
N 40 0.00
N 35 0.00
N 30 0.00
N 25 0.00
N 20 0.00

6 Listing of CTD-O_2 parameters

The temperature and salinity values listed below are extracted from the non-filtered profiles. The reported dissolved oxygen values were passed through a 11 db width running mean to eliminate the ship motions effects. This reduces the noise on the profiles to less than 0.05 ml/l.

Station : 1	Cruise : BORD-EST2
Date : 10-05-88	Ship : Jean-Charcot
Bottom depth: 1155 m	Institute: Ifremer
Position : N 60 7.78 W 6 0.31	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	8.906	35.309	6.62
10.0	8.908	35.307	6.64
20.0	8.908	35.308	6.63
30.0	8.856	35.301	6.67
40.0	8.828	35.307	6.66
50.0	8.823	35.307	6.62
60.0	8.826	35.308	6.61
70.0	8.833	35.309	6.60
80.0	8.832	35.309	6.57
90.0	8.841	35.315	6.59
100.0	8.788	35.318	6.52
200.0	8.636	35.318	6.34
300.0	8.595	35.315	6.37
400.0	8.290	35.278	6.34
500.0	7.832	35.246	6.44
600.0	7.007	35.201	6.61
700.0	5.240	35.086	6.63
800.0	1.672	34.971	6.68
900.0	-0.628	34.901	6.82
1000.0	-0.719	34.906	6.84
1099.0	-0.735	34.906	6.93

Station : 3	Cruise : BORD-EST2
Date : 11-05-88	Ship : Jean-Charcot
Bottom depth: 630 m	Institute: Ifremer
Position : N 60 12.05 W 7 44.95	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	8.891	35.316	6.23
10.0	8.881	35.316	6.52
20.0	8.837	35.315	6.63
30.0	8.808	35.313	6.60
40.0	8.766	35.310	6.55
50.0	8.766	35.311	6.57
60.0	8.764	35.311	6.55
70.0	8.755	35.311	6.50
80.0	8.753	35.311	6.47
90.0	8.737	35.310	6.42
100.0	8.722	35.310	6.38
200.0	8.657	35.309	6.31
300.0	8.639	35.306	6.30
400.0	8.551	35.294	6.23
500.0	8.345	35.264	6.13
600.0	7.894	35.235	6.22
630.0	4.427	35.133	6.32

Station : 2	Cruise : BORD-EST2
Date : 11-05-88	Ship : Jean-Charcot
Bottom depth: 1190 m	Institute: Ifremer
Position : N 60 14.90 W 6 50.11	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	8.886	35.318	6.84
10.0	8.887	35.318	6.95
20.0	8.888	35.318	6.98
30.0	8.888	35.318	6.89
40.0	8.890	35.317	6.88
50.0	8.863	35.306	6.81
60.0	8.791	35.307	6.68
70.0	8.661	35.313	6.45
80.0	8.662	35.312	6.42
90.0	8.660	35.312	6.39
100.0	8.651	35.313	6.37
200.0	8.636	35.310	6.33
300.0	8.553	35.297	6.35
400.0	8.339	35.280	6.41
500.0	7.601	35.234	6.63
600.0	4.981	35.075	6.71
700.0	0.243	34.909	6.42
800.0	-0.140	34.904	6.53
900.0	-0.281	34.904	6.72
1000.0	-0.430	34.905	6.85
1100.0	-0.662	34.908	6.97
1140.0	-0.690	34.907	7.01

Station : 4	Cruise : BORD-EST2
Date : 11-05-88	Ship : Jean-Charcot
Bottom depth: 1070 m	Institute: Ifremer
Position : N 59 41.91 W 8 23.54	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	9.162	35.327	6.72
10.0	9.157	35.327	6.91
20.0	9.126	35.327	6.97
30.0	9.105	35.328	6.96
40.0	9.106	35.329	6.91
50.0	9.109	35.334	6.83
60.0	9.085	35.338	6.70
70.0	9.084	35.339	6.57
80.0	9.064	35.339	6.45
90.0	9.060	35.339	6.38
100.0	9.048	35.338	6.35
200.0	8.865	35.322	6.22
300.0	8.681	35.294	6.27
400.0	8.644	35.296	6.29
500.0	8.532	35.278	6.27
600.0	8.523	35.283	6.25
700.0	8.358	35.260	6.17
800.0	8.219	35.250	5.99
900.0	7.918	35.232	5.83
1000.0	7.392	35.205	5.69
1021.0	7.355	35.202	5.93

Station : 5	Cruise : BORD-EST2
Date : 11-05-88	Ship : Jean-Charcot
Bottom depth: 1532 m	Institute: Ifremer
Position : N 59 12.07 W 8 59.86	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	9.683	35.341	6.90
10.0	9.672	35.339	6.90
20.0	9.512	35.340	6.94
30.0	9.399	35.345	6.89
40.0	9.312	35.342	6.80
50.0	9.193	35.345	6.58
60.0	9.169	35.344	6.47
70.0	9.163	35.346	6.36
80.0	9.163	35.346	6.29
90.0	9.162	35.346	6.26
100.0	9.158	35.346	6.27
200.0	9.047	35.335	6.20
300.0	8.842	35.319	6.25
400.0	8.774	35.315	6.34
500.0	8.711	35.306	6.33
600.0	8.636	35.297	6.37
700.0	8.524	35.282	6.29
800.0	8.298	35.258	6.10
900.0	8.091	35.245	5.90
1000.0	7.554	35.219	5.61
1100.0	6.775	35.175	5.56
1200.0	5.899	35.108	5.60
1300.0	5.240	35.063	5.78
1400.0	4.481	35.000	6.03
1485.0	4.203	34.981	6.30

Station : 6	Cruise : BORD-EST2
Date : 11-05-88	Ship : Jean-Charcot
Bottom depth: 1810 m	Institute: Ifremer
Position : N 58 47.03 W 9 54.83	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	9.851	35.350	6.97
10.0	9.848	35.353	6.93
20.0	9.849	35.354	6.98
30.0	9.846	35.355	7.01
40.0	9.774	35.352	6.99
50.0	9.665	35.357	6.92
60.0	9.624	35.358	6.86
70.0	9.556	35.359	6.70
80.0	9.489	35.356	6.54
90.0	9.466	35.356	6.42
100.0	9.440	35.357	6.37
200.0	9.165	35.337	6.07
300.0	9.047	35.331	5.88
400.0	8.930	35.322	5.87
500.0	8.794	35.310	5.95
600.0	8.750	35.308	6.02
700.0	8.592	35.290	5.96
800.0	8.398	35.273	5.72
900.0	8.122	35.254	5.45
1000.0	7.553	35.212	5.35
1100.0	6.785	35.180	5.26
1200.0	5.848	35.108	5.62
1300.0	5.161	35.053	5.81
1400.0	4.595	35.002	6.01
1500.0	4.159	34.974	6.12
1600.0	3.902	34.958	6.17
1700.0	3.707	34.958	6.15
1760.0	3.577	34.959	6.11

Station : 7	Cruise	: BORD-EST2	
Date : 12-05-88	Ship	: Jean-Charcot	
Bottom depth: 1765 m	Institute:	Ifremer	
Position : N 58 34.40 W 11 32.67			

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	9.688	35.324	6.95
10.0	9.690	35.324	6.87
20.0	9.704	35.347	6.84
30.0	9.636	35.353	6.84
40.0	9.612	35.355	6.78
50.0	9.559	35.353	6.72
60.0	9.549	35.355	6.64
70.0	9.544	35.357	6.53
80.0	9.501	35.358	6.38
90.0	9.484	35.356	6.31
100.0	9.466	35.356	6.30
200.0	9.420	35.359	6.04
300.0	9.294	35.347	6.07
400.0	9.169	35.342	6.11
500.0	8.996	35.327	5.98
600.0	8.856	35.316	6.20
700.0	8.660	35.291	6.14
800.0	8.428	35.271	6.07
900.0	8.125	35.258	5.58
1000.0	7.407	35.214	5.46
1100.0	6.658	35.169	5.60
1200.0	5.962	35.118	5.67
1300.0	5.093	35.050	5.88
1400.0	4.553	35.007	6.02
1500.0	4.125	34.972	6.10
1600.0	3.921	34.958	6.14
1700.0	3.713	34.959	6.14
1710.0	3.694	34.957	6.12

Station : 8	Cruise	: BORD-EST2	
Date : 12-05-88	Ship	: Jean-Charcot	
Bottom depth: 2105 m	Institute:	Ifremer	
Position : N 57 43.37 W 10 24.40			

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	9.990	35.332	7.08
10.0	10.004	35.330	7.15
20.0	9.815	35.329	7.17
30.0	9.769	35.338	7.16
40.0	9.677	35.345	7.09
50.0	9.608	35.350	7.03
60.0	9.561	35.352	6.91
70.0	9.543	35.351	6.79
80.0	9.506	35.351	6.69
90.0	9.468	35.352	6.58
100.0	9.442	35.353	6.53
200.0	9.271	35.350	6.27
300.0	9.186	35.345	6.12
400.0	9.084	35.339	6.10
500.0	8.801	35.295	6.21
600.0	8.813	35.308	6.15
700.0	8.675	35.290	6.21
800.0	8.575	35.284	6.07
900.0	8.237	35.259	5.73
1000.0	7.749	35.225	5.50
1100.0	7.046	35.188	5.33
1200.0	6.172	35.135	5.52
1300.0	5.412	35.069	5.58
1400.0	4.830	35.019	5.78
1500.0	4.510	34.992	5.91
1600.0	4.194	34.969	6.03
1700.0	3.990	34.956	6.12
1800.0	3.911	34.965	6.11
1900.0	3.706	34.957	6.14
2000.0	3.549	34.955	6.13
2066.0	3.230	34.956	6.05

Station : 9	Cruise : BORD-EST2
Date : 12-05-88	Ship : Jean-Charcot
Bottom depth: 2310 m	Institute: Ifremer
Position : N 57 7.94 W 10 37.43	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	10.471	35.342	7.22
10.0	10.468	35.341	7.21
20.0	10.314	35.333	7.30
30.0	10.120	35.353	7.29
40.0	10.097	35.369	7.19
50.0	9.864	35.346	7.10
60.0	9.751	35.356	6.85
70.0	9.666	35.359	6.62
80.0	9.671	35.368	6.51
90.0	9.617	35.366	6.41
100.0	9.620	35.374	6.33
200.0	9.455	35.361	6.10
300.0	9.352	35.351	6.03
400.0	9.203	35.342	6.03
500.0	9.105	35.337	6.04
600.0	9.001	35.327	6.09
700.0	8.780	35.305	5.99
800.0	8.563	35.285	5.87
900.0	8.296	35.270	5.54
1000.0	7.844	35.238	5.37
1100.0	7.220	35.209	5.15
1200.0	6.352	35.149	5.30
1300.0	5.783	35.102	5.43
1400.0	5.109	35.038	5.63
1500.0	4.643	35.004	5.85
1600.0	4.330	34.978	5.95
1700.0	4.018	34.953	6.07
1800.0	3.891	34.952	6.10
1900.0	3.758	34.952	6.08
2000.0	3.667	34.954	6.11
2100.0	3.579	34.956	6.12
2200.0	3.459	34.957	6.11
2259.0	3.338	34.957	6.11

Station : 10	Cruise : BORD-EST2
Date : 13-05-88	Ship : Jean-Charcot
Bottom depth: 2460 m	Institute: Ifremer
Position : N 56 41.94 W 11 20.10	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	10.333	35.360	6.99
10.0	10.333	35.360	6.96
20.0	10.322	35.361	6.99
30.0	10.308	35.361	7.02
40.0	10.258	35.360	7.02
50.0	10.175	35.362	6.88
60.0	10.151	35.362	6.72
70.0	10.070	35.361	6.63
80.0	9.906	35.361	6.47
90.0	9.817	35.363	6.29
100.0	9.798	35.363	6.20
200.0	9.588	35.352	6.04
300.0	9.497	35.363	6.09
400.0	9.491	35.364	6.07
500.0	9.468	35.362	6.06
600.0	9.366	35.350	6.03
700.0	9.222	35.341	5.91
800.0	9.040	35.328	5.92
900.0	8.728	35.300	5.82
1000.0	8.419	35.275	5.73
1100.0	7.971	35.253	5.29
1200.0	7.149	35.209	5.11
1300.0	6.251	35.143	5.23
1400.0	5.548	35.079	5.49
1500.0	4.949	35.028	5.75
1600.0	4.524	34.989	5.90
1700.0	4.291	34.972	6.01
1800.0	4.112	34.969	6.07
1900.0	3.896	34.955	6.13
2000.0	3.769	34.956	6.14
2100.0	3.597	34.959	6.14
2200.0	3.516	34.958	6.14
2300.0	3.419	34.959	6.14
2400.0	3.295	34.958	6.11
2434.0	3.218	34.958	6.08

Station : 11	Cruise : BORD-EST2
Date : 13-05-88	Ship : Jean-Charcot
Bottom depth: 2610 m	Institute: Ifremer
Position : N 56 15.13 W 11 38.06	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	10.305	35.343	7.09
10.0	10.303	35.343	7.07
20.0	10.303	35.343	7.13
30.0	10.297	35.344	7.19
40.0	10.264	35.343	7.20
50.0	10.128	35.347	7.06
60.0	9.958	35.351	6.81
70.0	9.795	35.353	6.63
80.0	9.642	35.354	6.50
90.0	9.584	35.360	6.37
100.0	9.566	35.363	6.31
200.0	9.489	35.367	6.06
300.0	9.492	35.368	6.07
400.0	9.495	35.369	6.07
500.0	9.496	35.369	6.10
600.0	9.471	35.366	6.10
700.0	9.394	35.357	6.06
800.0	9.288	35.350	6.15
900.0	9.197	35.345	5.94
1000.0	8.893	35.317	5.84
1100.0	8.581	35.289	5.81
1200.0	8.196	35.268	5.52
1300.0	7.525	35.226	5.28
1400.0	6.774	35.187	5.09
1500.0	6.080	35.125	5.40
1600.0	5.369	35.061	5.58
1700.0	4.865	35.019	5.79
1800.0	4.469	34.985	5.96
1900.0	4.187	34.965	6.05
2000.0	3.958	34.948	6.16
2100.0	3.836	34.951	6.20
2200.0	3.711	34.952	6.19
2300.0	3.597	34.956	6.19
2400.0	3.459	34.957	6.20
2500.0	3.307	34.958	6.15
2565.0	3.093	34.954	6.07

Station : 12	Cruise : BORD-EST2
Date : 13-05-88	Ship : Jean-Charcot
Bottom depth: 2795 m	Institute: Ifremer
Position : N 55 49.64 W 11 59.95	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	10.357	35.353	7.16
10.0	10.358	35.346	7.25
20.0	10.357	35.348	7.22
30.0	10.349	35.356	7.21
40.0	10.325	35.353	7.22
50.0	10.030	35.357	7.11
60.0	9.878	35.357	6.85
70.0	9.800	35.355	6.71
80.0	9.780	35.359	6.50
90.0	9.783	35.365	6.39
100.0	9.769	35.365	6.34
200.0	9.576	35.360	6.16
300.0	9.508	35.364	6.16
400.0	9.501	35.365	6.11
500.0	9.479	35.363	6.08
600.0	9.413	35.354	6.01
700.0	9.282	35.346	5.98
800.0	9.121	35.333	5.92
900.0	8.859	35.309	5.74
1000.0	8.554	35.283	5.92
1100.0	8.211	35.260	5.52
1200.0	7.584	35.236	5.16
1300.0	6.822	35.191	5.16
1400.0	6.119	35.129	5.43
1500.0	5.433	35.072	5.72
1600.0	4.889	35.019	5.88
1700.0	4.477	34.984	6.07
1800.0	4.199	34.961	6.18
1900.0	4.041	34.961	6.23
2000.0	3.897	34.955	6.24
2100.0	3.752	34.950	6.22
2200.0	3.654	34.954	6.20
2300.0	3.552	34.956	6.16
2400.0	3.411	34.957	6.12
2500.0	3.311	34.959	6.08
2600.0	3.183	34.959	6.04
2700.0	3.026	34.955	5.95
2742.0	2.944	34.953	5.90

Station : 13	Cruise : BORD-EST2
Date : 13-05-88	Ship : Jean-Charcot
Bottom depth: 2790 m	Institute: Ifremer
Position : N 55 49.75 W 11 59.60	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	10.397	35.360	7.24
10.0	10.400	35.360	7.25
20.0	10.400	35.359	7.32
30.0	10.402	35.359	7.32
40.0	10.388	35.345	7.25
50.0	10.211	35.333	7.21
60.0	10.028	35.343	6.96
70.0	9.940	35.353	6.71
80.0	9.870	35.356	6.59
90.0	9.841	35.353	6.49
100.0	9.821	35.355	6.38
200.0	9.606	35.353	6.11
300.0	9.504	35.363	6.19
400.0	9.502	35.367	6.16
500.0	9.492	35.367	6.12
600.0	9.411	35.355	6.00
700.0	9.291	35.343	5.98
800.0	9.089	35.322	5.84
900.0	8.854	35.310	5.94
1000.0	8.502	35.278	5.89
1100.0	8.190	35.261	5.45
1200.0	7.624	35.238	5.08
1300.0	6.915	35.193	5.09
1400.0	6.123	35.130	5.38
1500.0	5.469	35.074	5.62
1600.0	4.864	35.015	5.81
1700.0	4.492	34.983	5.96
1800.0	4.178	34.961	6.11
1900.0	4.015	34.953	6.14
2000.0	3.885	34.950	6.18
2100.0	3.770	34.947	6.17
2200.0	3.669	34.954	6.15
2300.0	3.585	34.956	6.13
2400.0	3.465	34.956	6.11
2500.0	3.329	34.958	6.08
2600.0	3.208	34.959	6.03
2700.0	3.050	34.955	5.95
2740.0	2.956	34.954	5.89

Station : 14	Cruise : BORD-EST2
Date : 14-05-88	Ship : Jean-Charcot
Bottom depth: 2845 m	Institute: Ifremer
Position : N 55 23.11 W 12 45.23	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	10.292	35.346	7.41
10.0	10.295	35.350	7.40
20.0	10.294	35.350	7.42
30.0	10.296	35.350	7.39
40.0	10.299	35.350	7.27
50.0	10.223	35.343	7.16
60.0	9.944	35.348	7.01
70.0	9.852	35.355	6.87
80.0	9.813	35.356	6.77
90.0	9.699	35.354	6.65
100.0	9.635	35.352	6.49
200.0	9.497	35.360	6.18
300.0	9.489	35.366	6.11
400.0	9.475	35.368	6.10
500.0	9.361	35.355	5.97
600.0	9.245	35.346	5.90
700.0	9.074	35.331	5.89
800.0	8.825	35.308	5.71
900.0	8.498	35.284	5.66
1000.0	8.090	35.258	5.38
1100.0	7.496	35.230	5.06
1200.0	6.696	35.177	5.18
1300.0	6.012	35.124	5.38
1400.0	5.280	35.054	5.69
1500.0	4.858	35.019	5.88
1600.0	4.417	34.982	6.05
1700.0	4.167	34.960	6.15
1800.0	3.981	34.955	6.19
1900.0	3.851	34.952	6.17
2000.0	3.723	34.947	6.20
2100.0	3.652	34.953	6.15
2200.0	3.543	34.954	6.17
2300.0	3.446	34.959	6.11
2400.0	3.288	34.957	6.10
2500.0	3.161	34.958	6.04
2600.0	3.061	34.958	5.96
2700.0	2.953	34.955	5.90
2799.0	2.814	34.947	5.79

Station : 15	Cruise : BORD-EST2
Date : 14-05-88	Ship : Jean-Charcot
Bottom depth: 2875 m	Institute: Ifremer
Position : N 54 55.75 W 13 24.84	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	10.743	35.382	6.82
10.0	10.736	35.384	6.92
20.0	10.723	35.384	6.98
30.0	10.711	35.384	6.98
40.0	10.704	35.385	6.95
50.0	10.686	35.385	6.91
60.0	10.644	35.387	6.82
70.0	10.432	35.389	6.64
80.0	10.334	35.393	6.42
90.0	10.224	35.393	6.33
100.0	10.111	35.391	6.24
200.0	9.734	35.347	6.17
300.0	9.596	35.365	6.08
400.0	9.507	35.369	6.11
500.0	9.492	35.367	6.13
600.0	9.474	35.367	6.01
700.0	9.352	35.353	5.90
800.0	9.165	35.337	5.77
900.0	8.904	35.311	5.72
1000.0	8.377	35.269	5.37
1100.0	7.637	35.201	4.95
1200.0	7.003	35.194	5.01
1300.0	6.172	35.137	5.24
1400.0	5.391	35.066	5.58
1500.0	4.874	35.018	5.83
1600.0	4.490	34.987	6.00
1700.0	4.254	34.967	6.03
1800.0	4.060	34.955	6.15
1900.0	3.905	34.950	6.19
2000.0	3.794	34.949	6.17
2100.0	3.703	34.950	6.15
2200.0	3.628	34.953	6.15
2300.0	3.532	34.956	6.13
2400.0	3.434	34.958	6.10
2500.0	3.316	34.959	6.05
2600.0	3.201	34.960	5.99
2700.0	3.015	34.957	5.88
2757.0	2.851	34.950	5.77

Station : 16	Cruise : BORD-EST2
Date : 14-05-88	Ship : Jean-Charcot
Bottom depth: 2755 m	Institute: Ifremer
Position : N 54 30.10 W 14 12.41	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	10.521	35.351	6.79
10.0	10.515	35.352	6.82
20.0	10.509	35.352	6.79
30.0	10.505	35.351	6.79
40.0	10.394	35.350	6.78
50.0	10.213	35.341	6.76
60.0	9.802	35.358	6.65
70.0	9.646	35.372	6.47
80.0	9.611	35.373	6.46
90.0	9.577	35.376	6.39
100.0	9.545	35.368	6.36
200.0	9.477	35.367	6.19
300.0	9.463	35.368	6.12
400.0	9.392	35.356	6.03
500.0	9.319	35.353	5.92
600.0	9.198	35.344	5.91
700.0	9.003	35.325	5.73
800.0	8.694	35.301	5.58
900.0	8.215	35.267	5.37
1000.0	7.496	35.231	5.13
1100.0	6.632	35.172	5.17
1200.0	5.960	35.118	5.37
1300.0	5.321	35.060	5.60
1400.0	4.842	35.015	5.82
1500.0	4.476	34.981	5.97
1600.0	4.109	34.946	6.16
1700.0	3.932	34.944	6.22
1800.0	3.855	34.947	6.16
1900.0	3.713	34.948	6.18
2000.0	3.559	34.942	6.21
2100.0	3.516	34.949	6.19
2200.0	3.427	34.955	6.12
2300.0	3.310	34.957	6.10
2400.0	3.191	34.958	6.05
2500.0	3.057	34.958	5.97
2600.0	2.950	34.954	5.89
2700.0	2.837	34.948	5.81
2721.0	2.813	34.947	5.80

Station : 17	Cruise : BORD-EST2
Date : 15-05-88	Ship : Jean-Charcot
Bottom depth: 2815 m	Institute: Ifremer
Position : N 54 3.33 W 14 55.90	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	10.998	35.410	6.66
10.0	10.995	35.410	6.63
20.0	10.998	35.410	6.71
30.0	10.998	35.410	6.67
40.0	10.997	35.409	6.63
50.0	10.839	35.403	6.52
60.0	10.611	35.418	6.45
70.0	10.436	35.439	6.25
80.0	10.398	35.435	6.19
90.0	10.398	35.442	6.12
100.0	10.374	35.440	6.08
200.0	10.112	35.401	5.91
300.0	9.768	35.350	6.02
400.0	9.622	35.337	5.86
500.0	9.338	35.325	5.68
600.0	9.068	35.301	5.44
700.0	8.609	35.265	5.21
800.0	7.975	35.210	5.07
900.0	7.519	35.216	4.94
1000.0	6.841	35.190	5.01
1100.0	5.981	35.119	5.26
1200.0	5.234	35.048	5.61
1300.0	4.760	35.006	5.85
1400.0	4.467	34.979	5.98
1500.0	4.238	34.960	6.09
1600.0	4.062	34.951	6.13
1700.0	3.903	34.944	6.23
1800.0	3.744	34.928	6.28
1900.0	3.641	34.923	6.32
2000.0	3.609	34.930	6.26
2100.0	3.568	34.945	6.18
2200.0	3.518	34.957	6.14
2300.0	3.419	34.958	6.11
2400.0	3.309	34.958	6.08
2500.0	3.186	34.959	6.04
2600.0	3.059	34.957	5.96
2700.0	2.873	34.949	5.83
2762.0	2.809	34.946	5.73

Station : 18	Cruise : BORD-EST2
Date : 15-05-88	Ship : Jean-Charcot
Bottom depth: 3090 m	Institute: Ifremer
Position : N 53 36.00 W 15 40.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	10.919	35.420	6.65
10.0	10.919	35.420	6.70
20.0	10.915	35.421	6.71
30.0	10.913	35.420	6.65
40.0	10.900	35.421	6.62
50.0	10.887	35.421	6.54
60.0	10.859	35.421	6.41
70.0	10.837	35.421	6.33
80.0	10.711	35.422	6.26
90.0	10.497	35.428	6.20
100.0	10.364	35.433	6.14
200.0	10.196	35.413	6.03
300.0	10.146	35.405	5.95
400.0	10.087	35.395	5.90
500.0	9.929	35.369	5.84
600.0	9.714	35.351	5.83
700.0	9.524	35.358	5.92
800.0	9.429	35.351	5.77
900.0	9.073	35.336	5.51
1000.0	8.405	35.278	5.09
1100.0	7.567	35.237	4.68
1200.0	6.698	35.170	4.95
1300.0	5.732	35.097	5.35
1400.0	4.989	35.023	5.72
1500.0	4.575	34.988	5.96
1600.0	4.318	34.970	6.06
1700.0	4.033	34.943	6.19
1800.0	3.800	34.917	6.30
1900.0	3.736	34.918	6.30
2000.0	3.679	34.922	6.28
2100.0	3.649	34.934	6.25
2200.0	3.597	34.941	6.19
2300.0	3.528	34.950	6.16
2400.0	3.437	34.956	6.10
2500.0	3.307	34.958	6.08
2600.0	3.217	34.959	6.05
2700.0	3.086	34.958	5.98
2800.0	2.978	34.957	5.89
2900.0	2.860	34.952	5.81
3000.0	2.740	34.944	5.73
3026.0	2.701	34.940	5.70

Station : 19	Cruise : BORD-EST2
Date : 15-05-88	Ship : Jean-Charcot
Bottom depth: 3370 m	Institute: Ifremer
Position : N 53 9.10 W 16 23.81	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	11.234	35.426	6.87
10.0	11.239	35.423	6.81
20.0	11.129	35.420	6.79
30.0	11.105	35.426	6.76
40.0	11.022	35.426	6.70
50.0	10.675	35.417	6.64
60.0	10.588	35.426	6.56
70.0	10.471	35.416	6.44
80.0	10.375	35.431	6.32
90.0	10.349	35.429	6.26
100.0	10.354	35.430	6.22
200.0	10.114	35.396	6.07
300.0	9.895	35.361	5.96
400.0	9.567	35.317	5.89
500.0	9.493	35.354	5.74
600.0	9.438	35.354	5.96
700.0	8.984	35.303	5.64
800.0	8.411	35.264	5.03
900.0	7.184	35.199	4.83
1000.0	6.622	35.186	4.99
1100.0	5.791	35.108	5.33
1200.0	4.944	35.016	5.76
1300.0	4.518	34.976	5.95
1400.0	4.218	34.950	6.11
1500.0	3.964	34.924	6.22
1600.0	3.797	34.909	6.34
1700.0	3.731	34.910	6.29
1800.0	3.640	34.910	6.33
1900.0	3.624	34.920	6.31
2000.0	3.607	34.929	6.26
2100.0	3.557	34.934	6.22
2200.0	3.522	34.942	6.19
2300.0	3.486	34.957	6.09
2400.0	3.321	34.958	6.08
2500.0	3.207	34.960	6.05
2600.0	3.085	34.959	5.98
2700.0	2.990	34.959	5.91
2800.0	2.900	34.955	5.85
2900.0	2.809	34.951	5.78
3000.0	2.722	34.944	5.73
3100.0	2.648	34.937	5.66
3200.0	2.560	34.929	5.60
3300.0	2.453	34.917	5.54
3333.0	2.433	34.915	5.53

Station : 20	Cruise : BORD-EST2
Date : 15-05-88	Ship : Jean-Charcot
Bottom depth: 3585 m	Institute: Ifremer
Position : N 52 45.00 W 17 0.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	11.446	35.432	7.02
10.0	11.354	35.423	6.96
20.0	11.222	35.424	6.81
30.0	11.182	35.424	6.75
40.0	11.157	35.422	6.67
50.0	11.105	35.416	6.56
60.0	10.718	35.387	6.53
70.0	10.343	35.387	6.32
80.0	10.197	35.368	6.20
90.0	10.080	35.355	6.18
100.0	10.118	35.372	6.13
200.0	9.826	35.330	5.98
300.0	9.468	35.273	5.92
400.0	8.921	35.186	5.72
500.0	8.611	35.194	5.20
600.0	7.656	35.109	4.96
700.0	7.145	35.134	4.91
800.0	6.211	35.074	5.15
900.0	6.144	35.149	5.14
1000.0	5.466	35.080	5.46
1100.0	4.751	34.995	5.88
1200.0	4.397	34.966	6.03
1300.0	4.154	34.941	6.16
1400.0	3.955	34.926	6.27
1500.0	3.839	34.919	6.29
1600.0	3.745	34.916	6.35
1700.0	3.663	34.913	6.35
1800.0	3.601	34.915	6.34
1900.0	3.597	34.924	6.30
2000.0	3.570	34.932	6.26
2100.0	3.541	34.941	6.23
2200.0	3.477	34.946	6.21
2300.0	3.408	34.950	6.20
2400.0	3.359	34.954	6.15
2500.0	3.245	34.958	6.11
2600.0	3.150	34.959	6.08
2700.0	3.070	34.959	5.99
2800.0	2.978	34.958	5.91
2900.0	2.904	34.955	5.88
3000.0	2.839	34.951	5.82
3100.0	2.764	34.946	5.76
3200.0	2.696	34.939	5.72
3300.0	2.622	34.932	5.66
3400.0	2.542	34.924	5.60
3500.0	2.448	34.914	5.54
3513.0	2.448	34.913	5.55

Station : 21	Cruise : BORD-EST2
Date : 16-05-88	Ship : Jean-Charcot
Bottom depth: 4125 m	Institute: Ifremer
Position : N 52 7.00 W 17 0.00	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	11.603	35.476	6.74
10.0	11.603	35.476	6.74
20.0	11.474	35.450	6.75
30.0	11.445	35.454	6.96
40.0	11.422	35.462	6.92
50.0	11.398	35.470	6.69
60.0	11.352	35.472	6.51
70.0	11.328	35.472	6.47
80.0	11.256	35.475	6.42
90.0	11.029	35.496	6.31
100.0	10.831	35.499	6.13
200.0	10.423	35.453	5.98
300.0	10.254	35.436	5.92
400.0	10.134	35.428	5.72
500.0	9.773	35.390	5.44
600.0	9.050	35.288	5.01
700.0	7.396	35.081	4.91
800.0	6.495	35.033	4.96
900.0	6.620	35.164	4.88
1000.0	5.697	35.087	5.26
1100.0	5.051	35.015	5.55
1200.0	4.533	34.965	5.85
1300.0	4.172	34.932	6.05
1400.0	4.007	34.925	6.17
1500.0	3.889	34.916	6.25
1600.0	3.812	34.917	6.28
1700.0	3.686	34.909	6.33
1800.0	3.649	34.912	6.35
1900.0	3.576	34.909	6.39
2000.0	3.558	34.919	6.34
2100.0	3.561	34.934	6.28
2200.0	3.502	34.942	6.25
2300.0	3.444	34.946	6.23
2400.0	3.385	34.952	6.17
2500.0	3.287	34.955	6.12
2600.0	3.188	34.957	6.07
2700.0	3.099	34.958	6.01
2800.0	3.010	34.956	5.95
2900.0	2.937	34.956	5.90
3000.0	2.883	34.953	5.81
3100.0	2.816	34.949	5.76
3200.0	2.758	34.944	5.73
3300.0	2.702	34.939	5.68
3400.0	2.671	34.936	5.65
3500.0	2.639	34.931	5.62
3600.0	2.587	34.926	5.59
3700.0	2.544	34.921	5.57
3800.0	2.527	34.918	5.57
3900.0	2.516	34.915	5.59
4000.0	2.504	34.913	5.57
4100.0	2.496	34.911	5.55
4132.0	2.498	34.910	5.54

Station : 22	Cruise : BORD-EST2
Date : 16-05-88	Ship : Jean-Charcot
Bottom depth: 4560 m	Institute: Ifremer
Position : N 51 30.00 W 16 50.00	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	11.601	35.469	6.32
10.0	11.497	35.460	6.37
20.0	11.415	35.470	6.31
30.0	11.390	35.468	6.28
40.0	11.386	35.468	6.23
50.0	11.388	35.470	6.19
60.0	11.385	35.470	6.10
70.0	11.381	35.471	6.05
80.0	11.307	35.470	6.04
90.0	11.124	35.473	6.02
100.0	10.887	35.462	5.91
200.0	10.350	35.401	5.80
300.0	10.044	35.362	5.86
400.0	9.904	35.350	5.71
500.0	9.406	35.261	5.87
600.0	8.918	35.197	5.53
700.0	7.911	35.086	5.05
800.0	7.354	35.110	4.76
900.0	6.969	35.157	4.76
1000.0	6.748	35.220	4.87
1100.0	5.499	35.056	5.38
1200.0	4.861	35.002	5.73
1300.0	4.550	34.980	5.90
1400.0	4.162	34.939	6.13
1500.0	4.067	34.939	6.19
1600.0	3.878	34.922	6.30
1700.0	3.746	34.912	6.35
1800.0	3.701	34.919	6.34
1900.0	3.618	34.918	6.36
2000.0	3.580	34.921	6.36
2100.0	3.567	34.931	6.29
2200.0	3.538	34.940	6.24
2300.0	3.475	34.948	6.19
2400.0	3.402	34.952	6.15
2500.0	3.318	34.956	6.12
2600.0	3.236	34.959	6.06
2700.0	3.143	34.959	6.00
2800.0	3.043	34.959	5.92
2900.0	2.961	34.956	5.85
3000.0	2.894	34.953	5.81
3100.0	2.832	34.950	5.74
3200.0	2.775	34.946	5.69
3300.0	2.725	34.941	5.65
3400.0	2.677	34.937	5.63
3500.0	2.640	34.932	5.59
3600.0	2.604	34.928	5.58
3700.0	2.580	34.924	5.55
3800.0	2.560	34.921	5.55
3900.0	2.540	34.918	5.54
4000.0	2.533	34.916	5.56
4100.0	2.528	34.914	5.59
4200.0	2.527	34.912	5.61
4300.0	2.528	34.911	5.59
4400.0	2.532	34.910	5.58
4500.0	2.535	34.909	5.56
4522.0	2.536	34.909	5.56

Station : 23	Cruise : BORD-EST2
Date : 16-05-88	Ship : Jean-Charcot
Bottom depth: 4630 m	Institute: Ifremer
Position : N 50 51.00 W 16 48.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	11.846	35.441	6.41
10.0	11.736	35.430	6.40
20.0	11.371	35.418	6.48
30.0	11.172	35.439	6.38
40.0	11.144	35.442	6.30
50.0	11.027	35.443	6.24
60.0	10.900	35.447	6.13
70.0	10.681	35.456	6.09
80.0	10.539	35.461	6.00
90.0	10.494	35.462	5.97
100.0	10.475	35.460	5.94
200.0	10.371	35.444	6.05
300.0	10.366	35.445	6.05
400.0	10.381	35.448	6.01
500.0	10.389	35.451	6.02
600.0	10.337	35.441	5.94
700.0	10.272	35.445	5.90
800.0	9.978	35.414	5.61
900.0	9.276	35.355	5.05
1000.0	7.742	35.157	4.76
1100.0	7.319	35.211	4.74
1200.0	6.233	35.119	5.08
1300.0	5.608	35.083	5.37
1400.0	4.967	35.018	5.63
1500.0	4.519	34.973	5.87
1600.0	4.222	34.953	6.05
1700.0	4.030	34.941	6.14
1800.0	3.961	34.941	6.13
1900.0	3.788	34.925	6.26
2000.0	3.716	34.931	6.26
2100.0	3.663	34.936	6.20
2200.0	3.610	34.944	6.20
2300.0	3.499	34.950	6.14
2400.0	3.384	34.954	6.09
2500.0	3.295	34.958	6.05
2600.0	3.223	34.960	6.04
2700.0	3.146	34.963	5.93
2800.0	3.068	34.960	5.85
2900.0	2.972	34.956	5.81
3000.0	2.914	34.954	5.76
3100.0	2.835	34.949	5.74
3200.0	2.792	34.947	5.71
3300.0	2.751	34.943	5.67
3400.0	2.705	34.939	5.65
3500.0	2.671	34.934	5.64
3600.0	2.628	34.930	5.60
3700.0	2.606	34.927	5.58
3800.0	2.584	34.924	5.56
3900.0	2.573	34.921	5.56
4000.0	2.559	34.919	5.54
4100.0	2.543	34.915	5.52
4200.0	2.542	34.914	5.53
4300.0	2.540	34.913	5.53
4400.0	2.540	34.911	5.52
4500.0	2.544	34.910	5.52
4600.0	2.549	34.910	5.53
4604.0	2.549	34.910	5.53

Station : 24	Cruise : BORD-EST2
Date : 17-05-88	Ship : Jean-Charcot
Bottom depth: 4800 m	Institute: Ifremer
Position : N 50 13.07 W 16 45.02	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	12.132	35.464	6.05
10.0	12.142	35.474	6.16
20.0	11.920	35.453	6.20
30.0	11.869	35.459	6.23
40.0	11.699	35.464	6.19
50.0	11.138	35.470	6.13
60.0	11.032	35.475	6.03
70.0	10.977	35.480	6.06
80.0	10.870	35.486	5.98
90.0	10.854	35.485	5.95
100.0	10.712	35.464	5.98
200.0	10.382	35.427	6.08
300.0	10.243	35.407	5.93
400.0	10.105	35.396	5.75
500.0	9.637	35.325	5.42
600.0	8.905	35.263	5.04
700.0	8.477	35.316	4.67
800.0	7.825	35.294	4.70
900.0	7.685	35.345	4.73
1000.0	6.939	35.292	4.99
1100.0	6.336	35.238	5.24
1200.0	5.577	35.126	5.47
1300.0	4.892	35.052	5.78
1400.0	4.356	34.987	6.01
1500.0	4.006	34.940	6.20
1600.0	3.853	34.926	6.26
1700.0	3.749	34.921	6.30
1800.0	3.695	34.925	6.30
1900.0	3.642	34.930	6.28
2000.0	3.616	34.941	6.23
2100.0	3.617	34.956	6.14
2200.0	3.470	34.949	6.15
2300.0	3.385	34.955	6.09
2400.0	3.289	34.960	6.03
2500.0	3.226	34.965	5.92
2600.0	3.132	34.963	5.87
2700.0	3.025	34.961	5.77
2800.0	2.950	34.957	5.73
2900.0	2.895	34.953	5.70
3000.0	2.857	34.949	5.68
3100.0	2.814	34.947	5.69
3200.0	2.783	34.945	5.67
3300.0	2.732	34.942	5.60
3400.0	2.705	34.939	5.60
3500.0	2.677	34.936	5.59
3600.0	2.646	34.932	5.57
3700.0	2.619	34.929	5.57
3800.0	2.597	34.925	5.56
3900.0	2.582	34.922	5.55
4000.0	2.568	34.920	5.55
4100.0	2.556	34.917	5.53
4200.0	2.549	34.915	5.52
4300.0	2.561	34.918	5.52
4350.0	2.560	34.915	5.50

Station : 25	Cruise : BORD-EST2
Date : 17-05-88	Ship : Jean-Charcot
Bottom depth: 4810 m	Institute: Ifremer
Position : N 49 33.00 W 16 40.40	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	11.990	35.468	6.16
10.0	11.984	35.467	6.20
20.0	11.649	35.467	6.29
30.0	11.618	35.469	6.26
40.0	11.611	35.472	6.22
50.0	11.454	35.460	6.21
60.0	11.107	35.466	6.13
70.0	10.854	35.477	6.04
80.0	10.757	35.474	6.01
90.0	10.717	35.476	5.89
100.0	10.687	35.471	5.86
200.0	10.531	35.460	5.94
300.0	10.430	35.447	5.90
400.0	10.335	35.437	5.85
500.0	10.097	35.409	5.64
600.0	9.549	35.345	5.20
700.0	8.598	35.234	5.04
800.0	8.066	35.250	4.74
900.0	7.675	35.281	4.67
1000.0	7.231	35.301	4.82
1100.0	6.804	35.259	4.96
1200.0	6.173	35.187	5.22
1300.0	5.347	35.096	5.51
1400.0	4.820	35.031	5.75
1500.0	4.536	35.009	5.88
1600.0	4.288	34.982	5.99
1700.0	4.037	34.958	6.11
1800.0	3.860	34.945	6.20
1900.0	3.728	34.940	6.23
2000.0	3.649	34.945	6.18
2100.0	3.574	34.949	6.17
2200.0	3.454	34.953	6.17
2300.0	3.391	34.959	6.08
2400.0	3.285	34.959	6.05
2500.0	3.188	34.963	6.00
2600.0	3.103	34.961	5.95
2700.0	3.033	34.961	5.87
2800.0	2.970	34.958	5.83
2900.0	2.897	34.954	5.78
3000.0	2.837	34.950	5.76
3100.0	2.785	34.946	5.73
3200.0	2.752	34.943	5.71
3300.0	2.715	34.939	5.67
3400.0	2.670	34.935	5.67
3500.0	2.634	34.931	5.62
3600.0	2.599	34.927	5.60
3700.0	2.588	34.925	5.59
3800.0	2.569	34.922	5.58
3900.0	2.556	34.919	5.57
4000.0	2.551	34.917	5.57
4100.0	2.544	34.915	5.57
4200.0	2.542	34.913	5.56
4300.0	2.541	34.912	5.54
4400.0	2.544	34.911	5.56
4500.0	2.547	34.910	5.56
4600.0	2.552	34.910	5.56
4700.0	2.558	34.909	5.57
4800.0	2.565	34.908	5.57
4801.0	2.565	34.908	5.56

Station : 26	Cruise : BORD-EST2
Date : 17-05-88	Ship : Jean-Charcot
Bottom depth: 4750 m	Institute: Ifremer
Position : N 49 5.00 W 16 20.00	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	12.582	35.531	6.32
10.0	12.560	35.531	6.40
20.0	12.552	35.530	6.38
30.0	12.444	35.524	6.38
40.0	12.214	35.522	6.35
50.0	12.185	35.525	6.32
60.0	12.177	35.529	6.28
70.0	11.819	35.529	6.20
80.0	11.547	35.539	6.08
90.0	11.472	35.547	6.00
100.0	11.360	35.548	5.97
200.0	11.036	35.515	5.96
300.0	10.900	35.501	6.06
400.0	10.729	35.472	6.04
500.0	10.527	35.446	5.91
600.0	10.368	35.432	6.03
700.0	10.091	35.402	5.41
800.0	9.655	35.388	4.89
900.0	9.061	35.386	4.62
1000.0	8.573	35.409	4.58
1100.0	7.976	35.402	4.65
1200.0	7.096	35.322	4.91
1300.0	6.813	35.303	5.05
1400.0	6.145	35.232	5.27
1500.0	5.068	35.084	5.65
1600.0	4.553	35.014	5.85
1700.0	4.224	34.972	5.99
1800.0	3.969	34.943	6.12
1900.0	3.816	34.933	6.17
2000.0	3.733	34.936	6.18
2100.0	3.658	34.942	6.18
2200.0	3.598	34.951	6.15
2300.0	3.547	34.959	6.10
2400.0	3.435	34.961	6.08
2500.0	3.361	34.963	6.02
2600.0	3.256	34.964	5.98
2700.0	3.156	34.964	5.90
2800.0	3.074	34.962	5.84
2900.0	2.997	34.958	5.80
3000.0	2.926	34.954	5.76
3100.0	2.866	34.950	5.70
3200.0	2.797	34.945	5.67
3300.0	2.755	34.941	5.67
3400.0	2.706	34.937	5.64
3500.0	2.667	34.933	5.62
3600.0	2.642	34.930	5.59
3700.0	2.609	34.926	5.59
3800.0	2.582	34.922	5.57
3900.0	2.563	34.919	5.57
4000.0	2.549	34.916	5.56
4100.0	2.544	34.915	5.56
4200.0	2.539	34.913	5.57
4300.0	2.539	34.912	5.56
4400.0	2.540	34.911	5.57
4500.0	2.543	34.909	5.57
4600.0	2.547	34.909	5.56
4700.0	2.553	34.908	5.56
4743.0	2.555	34.908	5.56

Station : 27	Cruise : BORD-EST2
Date : 18-05-88	Ship : Jean-Charcot
Bottom depth: 4795 m	Institute: Ifremer
Position : N 48 35.11 W 16 3.36	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	12.539	35.509	6.20
10.0	12.540	35.503	6.18
20.0	12.267	35.467	6.16
30.0	12.187	35.464	6.09
40.0	12.162	35.526	6.16
50.0	11.922	35.530	6.09
60.0	11.400	35.549	5.99
70.0	11.323	35.546	5.91
80.0	11.267	35.540	5.86
90.0	11.242	35.539	5.90
100.0	11.215	35.535	5.89
200.0	10.961	35.510	5.97
300.0	10.808	35.490	5.94
400.0	10.637	35.463	5.95
500.0	10.492	35.454	5.98
600.0	10.273	35.424	5.62
700.0	9.615	35.329	5.28
800.0	9.116	35.341	4.73
900.0	8.783	35.404	4.47
1000.0	8.571	35.463	4.51
1100.0	7.997	35.441	4.66
1200.0	7.246	35.359	4.89
1300.0	6.408	35.255	5.16
1400.0	5.497	35.131	5.49
1500.0	4.840	35.043	5.75
1600.0	4.426	34.993	5.96
1700.0	4.068	34.950	6.16
1800.0	3.945	34.948	6.19
1900.0	3.838	34.948	6.22
2000.0	3.690	34.943	6.22
2100.0	3.591	34.947	6.22
2200.0	3.472	34.951	6.20
2300.0	3.391	34.954	6.18
2400.0	3.303	34.959	6.11
2500.0	3.188	34.959	6.07
2600.0	3.126	34.959	6.00
2700.0	3.061	34.959	5.93
2800.0	2.995	34.957	5.88
2900.0	2.921	34.954	5.84
3000.0	2.876	34.951	5.82
3100.0	2.813	34.946	5.79
3200.0	2.754	34.941	5.76
3300.0	2.715	34.938	5.72
3400.0	2.675	34.934	5.70
3500.0	2.639	34.929	5.68
3600.0	2.613	34.926	5.67
3700.0	2.597	34.924	5.64
3800.0	2.576	34.921	5.62
3900.0	2.562	34.917	5.62
4000.0	2.555	34.916	5.62
4100.0	2.551	34.914	5.61
4200.0	2.545	34.913	5.60
4300.0	2.543	34.911	5.59
4400.0	2.541	34.910	5.58
4500.0	2.543	34.908	5.58
4600.0	2.546	34.908	5.59
4700.0	2.551	34.907	5.59
4772.0	2.556	34.907	5.59

Station : 28	Cruise : BORD-EST2
Date : 18-05-88	Ship : Jean-Charcot
Bottom depth: 4800 m	Institute: Ifremer
Position : N 48 6.08 W 15 45.03	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	12.478	35.507	6.29
10.0	12.481	35.507	6.16
20.0	12.479	35.508	6.19
30.0	12.478	35.506	6.22
40.0	12.273	35.493	6.25
50.0	12.169	35.507	6.32
60.0	12.007	35.511	6.31
70.0	11.727	35.496	6.08
80.0	11.280	35.511	6.02
90.0	11.105	35.517	6.00
100.0	11.045	35.520	5.89
200.0	10.763	35.488	5.89
300.0	10.594	35.468	5.89
400.0	10.406	35.445	5.75
500.0	10.196	35.425	5.67
600.0	9.714	35.388	5.13
700.0	9.096	35.379	4.73
800.0	8.740	35.422	4.56
900.0	8.277	35.438	4.58
1000.0	7.702	35.404	4.71
1100.0	7.259	35.377	4.90
1200.0	6.551	35.287	5.14
1300.0	5.094	35.064	5.64
1400.0	4.710	35.027	5.82
1500.0	4.406	34.996	5.97
1600.0	4.115	34.960	6.13
1700.0	3.951	34.942	6.24
1800.0	3.765	34.930	6.33
1900.0	3.704	34.936	6.30
2000.0	3.635	34.938	6.29
2100.0	3.600	34.948	6.26
2200.0	3.566	34.965	6.19
2300.0	3.463	34.968	6.14
2400.0	3.364	34.969	6.09
2500.0	3.291	34.968	6.03
2600.0	3.175	34.966	5.93
2700.0	3.096	34.963	5.90
2800.0	2.995	34.957	5.90
2900.0	2.939	34.955	5.89
3000.0	2.872	34.951	5.83
3100.0	2.814	34.947	5.82
3200.0	2.749	34.942	5.77
3300.0	2.708	34.938	5.74
3400.0	2.680	34.935	5.73
3500.0	2.641	34.930	5.70
3600.0	2.607	34.926	5.67
3700.0	2.588	34.924	5.66
3800.0	2.575	34.921	5.65
3900.0	2.565	34.918	5.62
4000.0	2.552	34.915	5.64
4100.0	2.549	34.914	5.62
4200.0	2.538	34.913	5.62
4300.0	2.543	34.911	5.61
4400.0	2.540	34.910	5.62
4500.0	2.542	34.908	5.62
4600.0	2.548	34.908	5.61
4700.0	2.556	34.908	5.59
4784.0	2.563	34.907	5.60

Station : 29	Cruise : BORD-EST2
Date : 18-05-88	Ship : Jean-Charcot
Bottom depth: 4790 m	Institute: Ifremer
Position : N 47 35.00 W 15 30.00	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	12.663	35.555	6.48
10.0	12.660	35.557	6.48
20.0	12.661	35.556	6.46
30.0	12.660	35.556	6.53
40.0	12.511	35.556	6.43
50.0	12.310	35.535	6.32
60.0	12.212	35.541	6.20
70.0	12.087	35.553	6.09
80.0	11.966	35.563	6.06
90.0	11.853	35.574	5.99
100.0	11.471	35.557	5.89
200.0	11.066	35.518	5.78
300.0	10.892	35.500	5.97
400.0	10.668	35.469	5.88
500.0	10.312	35.435	5.51
600.0	9.631	35.356	4.96
700.0	9.237	35.388	4.58
800.0	9.107	35.507	4.43
900.0	8.847	35.563	4.47
1000.0	7.681	35.394	4.71
1100.0	7.066	35.349	4.93
1200.0	5.881	35.181	5.32
1300.0	5.040	35.060	5.63
1400.0	4.406	34.973	5.95
1500.0	4.152	34.950	6.09
1600.0	3.961	34.935	6.17
1700.0	3.840	34.930	6.23
1800.0	3.766	34.931	6.29
1900.0	3.705	34.935	6.26
2000.0	3.650	34.939	6.27
2100.0	3.599	34.949	6.22
2200.0	3.514	34.955	6.21
2300.0	3.445	34.962	6.15
2400.0	3.389	34.965	6.09
2500.0	3.316	34.972	5.98
2600.0	3.208	34.968	5.90
2700.0	3.103	34.964	5.85
2800.0	3.005	34.958	5.84
2900.0	2.941	34.954	5.81
3000.0	2.878	34.952	5.78
3100.0	2.817	34.947	5.76
3200.0	2.767	34.942	5.72
3300.0	2.712	34.937	5.69
3400.0	2.681	34.933	5.68
3500.0	2.654	34.931	5.66
3600.0	2.626	34.928	5.66
3700.0	2.597	34.924	5.64
3800.0	2.585	34.922	5.62
3900.0	2.569	34.918	5.60
4000.0	2.561	34.917	5.60
4100.0	2.552	34.914	5.59
4200.0	2.552	34.913	5.59
4300.0	2.550	34.912	5.61
4400.0	2.542	34.910	5.59
4500.0	2.538	34.908	5.61
4600.0	2.541	34.907	5.59
4700.0	2.546	34.907	5.60
4761.0	2.550	34.906	5.59

Station : 30	Cruise : BORD-EST2
Date : 18-05-88	Ship : Jean-Charcot
Bottom depth: 4790 m	Institute: Ifremer
Position : N 47 5.14 W 15 11.36	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	12.661	35.526	6.18
10.0	12.660	35.525	6.23
20.0	12.657	35.527	6.27
30.0	12.640	35.531	6.33
40.0	12.419	35.538	6.23
50.0	12.098	35.545	6.05
60.0	11.840	35.547	5.95
70.0	11.567	35.550	5.90
80.0	11.340	35.545	5.93
90.0	11.275	35.541	5.90
100.0	11.224	35.538	5.74
200.0	10.953	35.502	5.78
300.0	10.770	35.482	5.71
400.0	10.391	35.425	5.38
500.0	10.092	35.408	5.29
600.0	9.559	35.376	4.91
700.0	9.168	35.391	4.59
800.0	8.828	35.431	4.51
900.0	8.621	35.501	4.52
1000.0	8.374	35.540	4.62
1100.0	6.939	35.307	4.93
1200.0	5.823	35.153	5.30
1300.0	5.210	35.080	5.58
1400.0	4.765	35.027	5.75
1500.0	4.362	34.979	5.95
1600.0	4.131	34.959	6.08
1700.0	3.963	34.947	6.19
1800.0	3.827	34.940	6.25
1900.0	3.735	34.940	6.26
2000.0	3.681	34.947	6.22
2100.0	3.609	34.955	6.20
2200.0	3.538	34.956	6.17
2300.0	3.445	34.960	6.14
2400.0	3.346	34.960	6.14
2500.0	3.265	34.965	6.04
2600.0	3.174	34.966	5.94
2700.0	3.090	34.963	5.87
2800.0	3.012	34.959	5.88
2900.0	2.932	34.954	5.83
3000.0	2.858	34.950	5.83
3100.0	2.806	34.947	5.77
3200.0	2.758	34.942	5.74
3300.0	2.720	34.939	5.74
3400.0	2.673	34.934	5.70
3500.0	2.635	34.929	5.69
3600.0	2.611	34.927	5.63
3700.0	2.588	34.924	5.63
3800.0	2.575	34.921	5.62
3900.0	2.560	34.917	5.60
4000.0	2.552	34.915	5.61
4100.0	2.542	34.914	5.57
4200.0	2.541	34.912	5.58
4300.0	2.539	34.911	5.59
4400.0	2.547	34.911	5.57
4500.0	2.551	34.909	5.59
4600.0	2.556	34.910	5.58
4700.0	2.567	34.909	5.58
4752.0	2.573	34.909	5.59

Station : 31	Cruise : BORD-EST2
Date : 19-05-88	Ship : Jean-Charcot
Bottom depth: 4735 m	Institute: Ifremer
Position : N 46 34.00 W 14 55.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	12.784	35.590	6.27
10.0	12.789	35.590	6.31
20.0	12.623	35.580	6.29
30.0	12.319	35.583	6.10
40.0	12.256	35.584	6.05
50.0	12.162	35.585	5.92
60.0	12.089	35.581	5.92
70.0	11.889	35.571	5.92
80.0	11.703	35.577	5.90
90.0	11.625	35.585	5.84
100.0	11.587	35.580	5.83
200.0	11.438	35.568	5.90
300.0	11.105	35.531	5.79
400.0	11.003	35.522	5.89
500.0	10.969	35.515	5.96
600.0	10.954	35.511	5.86
700.0	10.899	35.500	5.90
800.0	10.164	35.429	5.21
900.0	9.640	35.468	4.54
1000.0	9.552	35.626	4.34
1100.0	8.743	35.548	4.48
1200.0	8.465	35.581	4.56
1300.0	7.309	35.429	4.92
1400.0	6.515	35.301	5.12
1500.0	5.423	35.142	5.50
1600.0	4.710	35.041	5.80
1700.0	4.277	34.981	5.98
1800.0	4.007	34.950	6.13
1900.0	3.851	34.938	6.18
2000.0	3.767	34.941	6.22
2100.0	3.684	34.946	6.20
2200.0	3.601	34.951	6.21
2300.0	3.542	34.963	6.10
2400.0	3.455	34.964	6.08
2500.0	3.354	34.967	6.03
2600.0	3.248	34.963	6.02
2700.0	3.151	34.963	5.93
2800.0	3.081	34.962	5.86
2900.0	2.993	34.956	5.84
3000.0	2.913	34.952	5.82
3100.0	2.852	34.949	5.78
3200.0	2.796	34.944	5.75
3300.0	2.740	34.940	5.73
3400.0	2.693	34.936	5.69
3500.0	2.670	34.932	5.65
3600.0	2.631	34.928	5.63
3700.0	2.610	34.925	5.63
3800.0	2.598	34.922	5.62
3900.0	2.578	34.919	5.58
4000.0	2.574	34.917	5.56
4100.0	2.568	34.916	5.58
4200.0	2.562	34.914	5.58
4300.0	2.560	34.913	5.57
4400.0	2.561	34.912	5.55
4500.0	2.565	34.910	5.55
4600.0	2.570	34.910	5.55
4700.0	2.580	34.910	5.55
4733.0	2.581	34.910	5.54

Station : 32	Cruise : BORD-EST2
Date : 19-05-88	Ship : Jean-Charcot
Bottom depth: 4565 m	Institute: Ifremer
Position : N 46 3.06 W 14 39.26	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	13.363	35.613	6.33
10.0	13.129	35.611	6.37
20.0	13.034	35.610	6.35
30.0	12.832	35.621	6.16
40.0	12.650	35.622	6.11
50.0	12.600	35.624	5.99
60.0	12.558	35.618	5.95
70.0	12.481	35.615	5.89
80.0	12.404	35.618	5.81
90.0	12.312	35.619	5.75
100.0	12.211	35.617	5.71
200.0	11.577	35.577	5.83
300.0	11.400	35.556	5.82
400.0	11.032	35.503	5.32
500.0	10.745	35.480	5.25
600.0	10.420	35.452	5.15
700.0	9.828	35.399	4.91
800.0	10.171	35.634	4.32
900.0	9.879	35.676	4.35
1000.0	9.866	35.790	4.31
1100.0	8.350	35.536	4.56
1200.0	7.750	35.488	4.77
1300.0	6.819	35.341	5.01
1400.0	5.645	35.170	5.38
1500.0	5.052	35.084	5.62
1600.0	4.507	35.012	5.86
1700.0	4.237	34.986	5.99
1800.0	3.981	34.960	6.10
1900.0	3.905	34.964	6.09
2000.0	3.807	34.965	6.09
2100.0	3.704	34.966	6.12
2200.0	3.601	34.970	6.07
2300.0	3.457	34.969	6.03
2400.0	3.373	34.974	5.96
2500.0	3.266	34.970	5.92
2600.0	3.188	34.969	5.83
2700.0	3.082	34.963	5.83
2800.0	2.988	34.959	5.82
2900.0	2.930	34.956	5.77
3000.0	2.851	34.949	5.73
3100.0	2.800	34.946	5.74
3200.0	2.758	34.942	5.70
3300.0	2.712	34.938	5.65
3400.0	2.672	34.934	5.65
3500.0	2.638	34.931	5.64
3600.0	2.611	34.927	5.59
3700.0	2.586	34.924	5.57
3800.0	2.567	34.921	5.57
3900.0	2.560	34.917	5.55
4000.0	2.554	34.916	5.55
4100.0	2.551	34.914	5.54
4200.0	2.547	34.913	5.55
4300.0	2.545	34.912	5.57
4400.0	2.548	34.910	5.55
4500.0	2.546	34.910	5.54
4552.0	2.546	34.909	5.54

Station	: 33	Cruise	: BORD-EST2
Date	: 19-05-88	Ship	: Jean-Charcot
Bottom depth	: 4770 m	Institute	: Ifremer
Position	: N 45 35.06 W 14 20.89		

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	13.382	35.621	6.50
10.0	13.142	35.612	6.45
20.0	12.993	35.615	6.25
30.0	12.927	35.610	6.10
40.0	12.781	35.623	5.93
50.0	12.753	35.627	5.92
60.0	12.682	35.624	5.94
70.0	12.554	35.617	5.93
80.0	12.210	35.599	5.91
90.0	12.077	35.607	5.83
100.0	11.962	35.618	5.71
200.0	11.558	35.571	5.70
300.0	11.355	35.545	5.68
400.0	10.975	35.500	5.23
500.0	10.503	35.446	5.21
600.0	10.002	35.404	5.02
700.0	9.786	35.460	4.61
800.0	9.841	35.608	4.38
900.0	9.676	35.716	4.32
1000.0	9.085	35.699	4.50
1100.0	7.746	35.478	4.79
1200.0	6.969	35.377	5.02
1300.0	6.163	35.255	5.26
1400.0	5.076	35.079	5.63
1500.0	4.556	35.011	5.87
1600.0	4.170	34.967	6.06
1700.0	4.080	34.973	6.08
1800.0	3.971	34.967	6.17
1900.0	3.998	34.993	6.12
2000.0	3.783	34.967	6.13
2100.0	3.781	34.986	6.05
2200.0	3.687	34.993	5.98
2300.0	3.476	34.978	6.00
2400.0	3.373	34.978	5.92
2500.0	3.249	34.974	5.89
2600.0	3.142	34.969	5.79
2700.0	3.053	34.963	5.79
2800.0	2.937	34.956	5.76
2900.0	2.895	34.954	5.77
3000.0	2.846	34.951	5.76
3100.0	2.769	34.945	5.76
3200.0	2.727	34.940	5.72
3300.0	2.681	34.936	5.68
3400.0	2.649	34.932	5.65
3500.0	2.615	34.929	5.63
3600.0	2.587	34.925	5.61
3700.0	2.576	34.923	5.56
3800.0	2.566	34.921	5.57
3900.0	2.556	34.917	5.56
4000.0	2.554	34.916	5.56
4100.0	2.556	34.915	5.55
4200.0	2.555	34.915	5.52
4300.0	2.550	34.912	5.53
4400.0	2.548	34.911	5.54
4500.0	2.543	34.909	5.54
4600.0	2.544	34.908	5.55
4700.0	2.548	34.907	5.55
4753.0	2.552	34.907	5.54

Station	: 34	Cruise	: BORD-EST2
Date	: 20-05-88	Ship	: Jean-Charcot
Bottom depth	: 4650 m	Institute	: Ifremer
Position	: N 45 0.21 W 14 5.01		

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	13.644	35.623	6.30
10.0	13.641	35.622	6.39
20.0	13.346	35.599	6.49
30.0	13.168	35.616	6.12
40.0	13.148	35.622	5.96
50.0	13.072	35.635	5.88
60.0	12.940	35.636	5.88
70.0	12.744	35.626	5.82
80.0	12.584	35.631	5.84
90.0	12.490	35.619	5.77
100.0	12.436	35.615	5.70
200.0	11.620	35.583	5.80
300.0	11.355	35.555	5.54
400.0	11.064	35.526	5.26
500.0	10.889	35.519	5.03
600.0	10.798	35.567	4.80
700.0	10.488	35.599	4.53
800.0	10.156	35.631	4.34
900.0	10.318	35.772	4.24
1000.0	9.955	35.793	4.27
1100.0	9.792	35.861	4.34
1200.0	8.407	35.637	4.66
1300.0	7.835	35.567	4.80
1400.0	6.544	35.347	5.15
1500.0	5.291	35.143	5.54
1600.0	4.535	35.023	5.82
1700.0	4.143	34.973	6.02
1800.0	3.935	34.957	6.12
1900.0	3.828	34.953	6.15
2000.0	3.757	34.956	6.13
2100.0	3.712	34.967	6.12
2200.0	3.633	34.969	6.10
2300.0	3.522	34.969	6.07
2400.0	3.397	34.968	6.04
2500.0	3.298	34.968	6.00
2600.0	3.192	34.966	5.97
2700.0	3.106	34.963	5.91
2800.0	3.012	34.958	5.86
2900.0	2.945	34.956	5.83
3000.0	2.854	34.950	5.78
3100.0	2.813	34.947	5.77
3200.0	2.750	34.942	5.71
3300.0	2.704	34.937	5.68
3400.0	2.663	34.934	5.63
3500.0	2.617	34.928	5.57
3600.0	2.587	34.925	5.57
3700.0	2.572	34.923	5.54
3800.0	2.565	34.920	5.53
3900.0	2.560	34.918	5.54
4000.0	2.560	34.916	5.53
4100.0	2.552	34.914	5.52
4200.0	2.550	34.913	5.53
4300.0	2.546	34.912	5.54
4400.0	2.541	34.910	5.56
4500.0	2.533	34.908	5.58
4600.0	2.530	34.907	5.57
4602.0	2.530	34.906	5.57

Station : 35	Cruise : BORD-EST2
Date : 20-05-88	Ship : Jean-Charcot
Bottom depth: 4930 m	Institute: Ifremer
Position : N 44 29.90 W 13 46.16	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	13.438	35.645	6.48
10.0	13.437	35.645	6.35
20.0	13.310	35.649	6.43
30.0	13.171	35.646	6.26
40.0	12.972	35.640	6.08
50.0	12.848	35.639	5.98
60.0	12.633	35.640	5.93
70.0	12.434	35.649	5.91
80.0	12.287	35.666	5.80
90.0	12.238	35.671	5.75
100.0	12.151	35.660	5.78
200.0	11.763	35.613	5.79
300.0	11.524	35.587	5.71
400.0	11.251	35.551	5.51
500.0	10.846	35.508	5.25
600.0	10.488	35.507	4.97
700.0	10.483	35.623	4.48
800.0	10.627	35.777	4.24
900.0	10.606	35.902	4.17
1000.0	10.384	35.939	4.19
1100.0	9.791	35.886	4.32
1200.0	9.152	35.814	4.50
1300.0	7.952	35.609	4.80
1400.0	6.763	35.410	5.13
1500.0	5.689	35.231	5.46
1600.0	4.855	35.102	5.76
1700.0	4.456	35.048	5.92
1800.0	4.248	35.026	5.98
1900.0	4.128	35.020	5.99
2000.0	3.937	35.008	6.01
2100.0	3.762	34.991	6.01
2200.0	3.650	34.990	6.00
2300.0	3.466	34.978	6.01
2400.0	3.324	34.974	5.98
2500.0	3.249	34.975	5.94
2600.0	3.130	34.970	5.87
2700.0	3.037	34.965	5.85
2800.0	2.961	34.961	5.80
2900.0	2.893	34.957	5.77
3000.0	2.843	34.953	5.75
3100.0	2.787	34.947	5.72
3200.0	2.736	34.943	5.69
3300.0	2.691	34.938	5.66
3400.0	2.664	34.935	5.64
3500.0	2.631	34.930	5.61
3600.0	2.615	34.928	5.61
3700.0	2.598	34.925	5.60
3800.0	2.586	34.922	5.59
3900.0	2.575	34.919	5.58
4000.0	2.564	34.916	5.58
4100.0	2.556	34.914	5.58
4200.0	2.536	34.911	5.59
4300.0	2.525	34.908	5.59
4400.0	2.519	34.906	5.58
4500.0	2.517	34.904	5.58
4600.0	2.520	34.904	5.60
4700.0	2.527	34.903	5.58
4800.0	2.535	34.901	5.60
4900.0	2.546	34.902	5.58
4904.0	2.546	34.901	5.57

Station : 36	Cruise : BORD-EST2
Date : 20-05-88	Ship : Jean-Charcot
Bottom depth: 4180 m	Institute: Ifremer
Position : N 43 55.40 W 13 30.66	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	13.992	35.656	6.17
10.0	13.995	35.659	6.12
20.0	13.765	35.663	6.10
30.0	13.451	35.663	5.94
40.0	13.429	35.663	5.86
50.0	13.410	35.665	5.83
60.0	13.338	35.667	5.82
70.0	13.300	35.669	5.82
80.0	13.086	35.669	5.80
90.0	12.685	35.662	5.82
100.0	12.505	35.656	5.83
200.0	11.811	35.618	5.27
300.0	11.551	35.584	5.49
400.0	11.158	35.542	5.36
500.0	10.839	35.512	5.31
600.0	10.703	35.569	4.80
700.0	10.868	35.734	4.42
800.0	10.633	35.802	4.28
900.0	10.633	35.903	4.24
1000.0	10.291	35.911	4.26
1100.0	9.649	35.860	4.39
1200.0	9.123	35.808	4.56
1300.0	8.108	35.652	4.80
1400.0	6.885	35.436	5.10
1500.0	5.906	35.273	5.38
1600.0	5.072	35.144	5.65
1700.0	4.675	35.091	5.76
1800.0	4.251	35.032	5.92
1900.0	3.978	35.001	5.99
2000.0	3.988	35.027	5.96
2100.0	3.621	34.980	5.99
2200.0	3.514	34.975	5.99
2300.0	3.422	34.979	5.94
2400.0	3.318	34.977	5.89
2500.0	3.197	34.971	5.86
2600.0	3.113	34.967	5.83
2700.0	2.999	34.963	5.80
2800.0	2.931	34.959	5.78
2900.0	2.877	34.955	5.74
3000.0	2.810	34.950	5.70
3100.0	2.755	34.945	5.69
3200.0	2.705	34.940	5.67
3300.0	2.670	34.936	5.66
3400.0	2.647	34.933	5.65
3500.0	2.600	34.927	5.64
3600.0	2.572	34.923	5.62
3700.0	2.554	34.920	5.61
3800.0	2.540	34.918	5.62
3900.0	2.537	34.916	5.63
4000.0	2.536	34.914	5.62
4100.0	2.535	34.913	5.64
4200.0	2.531	34.911	5.63
4229.0	2.527	34.910	5.64

Station : 37	Cruise : BORD-EST2
Date : 20-05-88	Ship : Jean-Charcot
Bottom depth: 5160 m	Institute: Ifremer
Position : N 43 21.22 W 13 12.50	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	14.456	35.749	5.94
10.0	14.464	35.746	5.94
20.0	14.461	35.748	5.98
30.0	14.266	35.745	5.96
40.0	14.132	35.745	5.90
50.0	14.084	35.751	5.82
60.0	13.984	35.745	5.77
70.0	13.908	35.743	5.78
80.0	13.622	35.758	5.77
90.0	13.133	35.748	5.73
100.0	12.838	35.732	5.72
200.0	12.247	35.659	5.53
300.0	11.475	35.570	5.27
400.0	11.125	35.542	5.14
500.0	10.828	35.523	5.03
600.0	10.525	35.540	4.73
700.0	10.300	35.599	4.43
800.0	10.253	35.738	4.32
900.0	10.574	35.926	4.27
1000.0	10.529	36.012	4.30
1100.0	10.340	36.039	4.37
1200.0	9.765	35.976	4.50
1300.0	8.474	35.738	4.77
1400.0	7.169	35.502	5.12
1500.0	6.213	35.347	5.38
1600.0	5.533	35.239	5.59
1700.0	4.906	35.149	5.78
1800.0	4.466	35.076	5.93
1900.0	4.172	35.040	6.00
2000.0	4.024	35.034	6.00
2100.0	3.857	35.019	5.98
2200.0	3.645	34.996	5.99
2300.0	3.550	34.996	5.95
2400.0	3.403	34.986	5.93
2500.0	3.305	34.986	5.90
2600.0	3.196	34.979	5.85
2700.0	3.098	34.971	5.80
2800.0	2.995	34.964	5.78
2900.0	2.911	34.959	5.76
3000.0	2.855	34.954	5.73
3100.0	2.802	34.948	5.72
3200.0	2.754	34.943	5.69
3300.0	2.708	34.938	5.67
3400.0	2.665	34.934	5.65
3500.0	2.628	34.930	5.64
3600.0	2.604	34.926	5.63
3700.0	2.578	34.922	5.62
3800.0	2.559	34.920	5.62
3900.0	2.547	34.917	5.61
4000.0	2.539	34.915	5.61
4100.0	2.528	34.912	5.61
4200.0	2.516	34.909	5.61
4300.0	2.513	34.907	5.62
4400.0	2.510	34.905	5.62
4500.0	2.508	34.904	5.63
4600.0	2.511	34.903	5.62
4700.0	2.515	34.902	5.64
4800.0	2.520	34.901	5.64
4900.0	2.528	34.900	5.65
5000.0	2.536	34.900	5.64
5100.0	2.547	34.899	5.65
5161.0	2.555	34.899	5.65

Station : 38	Cruise : BORD-EST2
Date : 21-05-88	Ship : Jean-Charcot
Bottom depth: 5235 m	Institute: Ifremer
Position : N 42 46.00 W 12 55.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	14.532	35.711	5.91
10.0	14.520	35.712	5.93
20.0	14.478	35.708	5.96
30.0	14.216	35.716	6.01
40.0	13.993	35.716	6.04
50.0	13.844	35.724	5.92
60.0	13.608	35.699	5.85
70.0	13.515	35.690	5.85
80.0	13.343	35.696	5.78
90.0	12.999	35.706	5.72
100.0	12.875	35.731	5.62
200.0	12.283	35.680	5.37
300.0	11.604	35.600	5.29
400.0	11.212	35.565	5.18
500.0	11.021	35.566	4.94
600.0	10.771	35.573	4.89
700.0	10.858	35.723	4.48
800.0	11.164	35.910	4.33
900.0	10.968	35.987	4.24
1000.0	11.141	36.130	4.25
1100.0	10.501	36.053	4.27
1200.0	10.287	36.093	4.33
1300.0	8.944	35.827	4.61
1400.0	7.700	35.604	4.90
1500.0	6.941	35.470	5.13
1600.0	6.289	35.360	5.32
1700.0	5.392	35.216	5.61
1800.0	4.888	35.144	5.74
1900.0	4.579	35.107	5.82
2000.0	4.231	35.064	5.91
2100.0	3.918	35.021	6.00
2200.0	3.790	35.016	5.95
2300.0	3.680	35.014	5.91
2400.0	3.550	35.007	5.89
2500.0	3.427	34.998	5.87
2600.0	3.290	34.989	5.84
2700.0	3.175	34.980	5.83
2800.0	3.063	34.970	5.81
2900.0	2.965	34.961	5.80
3000.0	2.892	34.955	5.77
3100.0	2.830	34.950	5.74
3200.0	2.785	34.946	5.73
3300.0	2.739	34.941	5.72
3400.0	2.692	34.937	5.69
3500.0	2.662	34.932	5.67
3600.0	2.634	34.929	5.65
3700.0	2.608	34.925	5.65
3800.0	2.583	34.922	5.64
3900.0	2.559	34.917	5.63
4000.0	2.541	34.914	5.62
4100.0	2.532	34.911	5.64
4200.0	2.527	34.909	5.62
4300.0	2.520	34.908	5.63
4400.0	2.518	34.906	5.63
4500.0	2.517	34.905	5.63
4600.0	2.520	34.904	5.64
4700.0	2.523	34.903	5.65
4800.0	2.528	34.902	5.64
4900.0	2.535	34.901	5.66
5000.0	2.543	34.901	5.65
5100.0	2.552	34.900	5.66
5200.0	2.562	34.900	5.66
5252.0	2.568	34.900	5.65

Station : 39	Cruise : BORD-EST2
Date : 21-05-88	Ship : Jean-Charcot
Bottom depth: 5210 m	Institute: Ifremer
Position : N 42 11.93 W 12 43.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	15.508	35.784	5.68
10.0	15.320	35.787	5.77
20.0	14.953	35.802	5.86
30.0	14.645	35.805	5.91
40.0	14.489	35.801	5.89
50.0	14.476	35.827	5.83
60.0	14.118	35.799	5.75
70.0	13.528	35.804	5.73
80.0	13.032	35.759	5.67
90.0	12.937	35.746	5.64
100.0	12.808	35.729	5.67
200.0	12.251	35.672	5.53
300.0	11.656	35.603	5.13
400.0	11.242	35.576	4.95
500.0	10.902	35.566	4.85
600.0	10.644	35.578	4.61
700.0	10.826	35.747	4.35
800.0	10.985	35.927	4.22
900.0	10.858	35.991	4.21
1000.0	10.567	36.015	4.26
1100.0	10.133	35.985	4.35
1200.0	9.401	35.883	4.51
1300.0	9.025	35.855	4.64
1400.0	7.356	35.547	5.05
1500.0	6.018	35.314	5.41
1600.0	5.286	35.198	5.62
1700.0	4.720	35.116	5.80
1800.0	4.324	35.070	5.89
1900.0	4.036	35.037	5.96
2000.0	3.890	35.028	5.92
2100.0	3.776	35.023	5.90
2200.0	3.660	35.017	5.89
2300.0	3.533	35.008	5.87
2400.0	3.424	35.001	5.85
2500.0	3.285	34.991	5.81
2600.0	3.173	34.982	5.80
2700.0	3.080	34.974	5.77
2800.0	3.001	34.969	5.73
2900.0	2.929	34.961	5.73
3000.0	2.873	34.957	5.69
3100.0	2.807	34.951	5.66
3200.0	2.756	34.945	5.65
3300.0	2.711	34.941	5.65
3400.0	2.672	34.936	5.63
3500.0	2.637	34.932	5.62
3600.0	2.605	34.927	5.63
3700.0	2.586	34.925	5.62
3800.0	2.566	34.922	5.62
3900.0	2.549	34.919	5.62
4000.0	2.540	34.916	5.62
4100.0	2.532	34.914	5.62
4200.0	2.519	34.911	5.64
4300.0	2.514	34.909	5.63
4400.0	2.510	34.907	5.64
4500.0	2.510	34.907	5.64
4600.0	2.514	34.906	5.65
4700.0	2.517	34.905	5.64
4800.0	2.525	34.904	5.66
4900.0	2.533	34.903	5.66
5000.0	2.542	34.903	5.67
5100.0	2.552	34.902	5.65
5200.0	2.559	34.902	5.63
5214.0	2.560	34.902	5.62

Station : 40	Cruise : BORD-EST2
Date : 21-05-88	Ship : Jean-Charcot
Bottom depth: 5130 m	Institute: Ifremer
Position : N 41 40.00 W 12 30.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	15.691	35.784	5.82
10.0	15.430	35.787	5.75
20.0	15.200	35.768	5.83
30.0	14.824	35.776	5.85
40.0	14.925	35.873	5.78
50.0	14.801	35.928	5.64
60.0	14.609	35.931	5.54
70.0	13.981	35.897	5.54
80.0	13.792	35.890	5.45
90.0	13.636	35.878	5.44
100.0	13.494	35.855	5.44
200.0	12.680	35.725	5.38
300.0	11.800	35.612	5.10
400.0	11.301	35.559	5.01
500.0	10.906	35.529	4.95
600.0	10.679	35.582	4.64
700.0	10.846	35.763	4.29
800.0	10.800	35.860	4.25
900.0	10.750	35.950	4.24
1000.0	10.250	35.935	4.28
1100.0	10.439	36.070	4.33
1200.0	10.171	36.073	4.45
1300.0	8.915	35.837	4.66
1400.0	7.051	35.483	5.04
1500.0	6.438	35.400	5.23
1600.0	5.602	35.265	5.44
1700.0	4.935	35.153	5.65
1800.0	4.577	35.102	5.78
1900.0	4.190	35.053	5.87
2000.0	3.981	35.034	5.91
2100.0	3.899	35.037	5.86
2200.0	3.761	35.025	5.86
2300.0	3.574	35.009	5.87
2400.0	3.447	35.002	5.84
2500.0	3.331	34.995	5.78
2600.0	3.196	34.984	5.77
2700.0	3.082	34.974	5.77
2800.0	2.998	34.966	5.75
2900.0	2.921	34.961	5.73
3000.0	2.866	34.955	5.71
3100.0	2.821	34.951	5.71
3200.0	2.760	34.945	5.70
3300.0	2.716	34.941	5.67
3400.0	2.681	34.936	5.65
3500.0	2.639	34.932	5.64
3600.0	2.614	34.929	5.62
3700.0	2.588	34.925	5.62
3800.0	2.570	34.922	5.60
3900.0	2.557	34.919	5.61
4000.0	2.541	34.915	5.62
4100.0	2.528	34.913	5.61
4200.0	2.519	34.911	5.62
4300.0	2.513	34.909	5.62
4400.0	2.508	34.907	5.63
4500.0	2.508	34.906	5.63
4600.0	2.509	34.904	5.64
4700.0	2.514	34.904	5.64
4800.0	2.521	34.903	5.65
4900.0	2.528	34.902	5.66
5000.0	2.536	34.902	5.67
5100.0	2.546	34.901	5.68
5134.0	2.549	34.901	5.69

Station : 41	Cruise : BORD-EST2
Date : 22-05-88	Ship : Jean-Charcot
Bottom depth: 5110 m	Institute: Ifremer
Position : N 41 4.89 W 12 20.10	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	15.826	35.931	5.66
10.0	15.748	35.939	5.62
20.0	15.331	35.951	5.71
30.0	15.068	35.936	5.72
40.0	14.852	35.915	5.69
50.0	14.783	35.923	5.59
60.0	14.634	35.926	5.48
70.0	14.333	35.944	5.51
80.0	14.089	35.964	5.44
90.0	13.972	35.949	5.47
100.0	13.884	35.934	5.46
200.0	13.459	35.860	5.49
300.0	12.451	35.700	5.01
400.0	11.703	35.604	5.00
500.0	11.160	35.561	4.88
600.0	10.900	35.604	4.57
700.0	11.342	35.837	4.32
800.0	11.463	35.993	4.30
900.0	10.662	35.889	4.24
1000.0	10.411	35.932	4.24
1100.0	10.656	36.084	4.28
1200.0	10.433	36.120	4.36
1300.0	9.634	36.000	4.51
1400.0	8.261	35.730	4.77
1500.0	6.657	35.434	5.09
1600.0	5.672	35.267	5.39
1700.0	4.995	35.158	5.62
1800.0	4.626	35.108	5.76
1900.0	4.311	35.074	5.86
2000.0	4.056	35.045	5.89
2100.0	3.992	35.056	5.86
2200.0	3.868	35.052	5.84
2300.0	3.666	35.030	5.83
2400.0	3.480	35.009	5.85
2500.0	3.351	35.000	5.82
2600.0	3.221	34.988	5.79
2700.0	3.118	34.979	5.77
2800.0	3.027	34.970	5.75
2900.0	2.945	34.962	5.74
3000.0	2.868	34.956	5.72
3100.0	2.798	34.949	5.70
3200.0	2.741	34.943	5.68
3300.0	2.685	34.937	5.68
3400.0	2.650	34.933	5.65
3500.0	2.616	34.929	5.65
3600.0	2.590	34.925	5.65
3700.0	2.572	34.922	5.64
3800.0	2.552	34.920	5.63
3900.0	2.538	34.917	5.62
4000.0	2.529	34.913	5.61
4100.0	2.517	34.911	5.62
4200.0	2.505	34.909	5.62
4300.0	2.501	34.907	5.61
4400.0	2.496	34.905	5.61
4500.0	2.495	34.904	5.62
4600.0	2.500	34.903	5.62
4700.0	2.505	34.901	5.62
4800.0	2.511	34.900	5.62
4900.0	2.520	34.900	5.62
5000.0	2.531	34.899	5.63
5100.0	2.541	34.899	5.63
5157.0	2.547	34.899	5.62

Station : 42	Cruise : BORD-EST2
Date : 22-05-88	Ship : Jean-Charcot
Bottom depth: 5211 m	Institute: Ifremer
Position : N 40 30.00 W 12 9.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	16.034	35.889	5.67
10.0	15.831	35.890	5.75
20.0	15.223	35.908	5.86
30.0	15.094	35.914	5.82
40.0	14.846	35.914	5.71
50.0	14.752	35.912	5.64
60.0	14.066	35.901	5.62
70.0	13.781	35.904	5.58
80.0	13.730	35.900	5.59
90.0	13.745	35.907	5.55
100.0	13.684	35.899	5.53
200.0	13.160	35.815	5.52
300.0	12.249	35.664	5.06
400.0	11.598	35.590	5.13
500.0	11.162	35.563	4.90
600.0	10.767	35.563	4.78
700.0	10.904	35.696	4.38
800.0	10.757	35.805	4.28
900.0	10.933	35.984	4.18
1000.0	10.590	36.016	4.19
1100.0	10.399	36.062	4.24
1200.0	10.383	36.120	4.28
1300.0	9.704	36.000	4.44
1400.0	8.806	35.847	4.65
1500.0	7.667	35.644	4.94
1600.0	6.690	35.483	5.18
1700.0	5.804	35.327	5.43
1800.0	5.069	35.207	5.64
1900.0	4.504	35.119	5.77
2000.0	4.203	35.085	5.80
2100.0	3.976	35.061	5.79
2200.0	3.788	35.041	5.78
2300.0	3.551	35.017	5.80
2400.0	3.386	35.001	5.79
2500.0	3.289	34.993	5.78
2600.0	3.148	34.982	5.73
2700.0	3.051	34.973	5.71
2800.0	2.963	34.966	5.69
2900.0	2.874	34.958	5.67
3000.0	2.812	34.951	5.64
3100.0	2.767	34.947	5.66
3200.0	2.712	34.941	5.64
3300.0	2.676	34.937	5.65
3400.0	2.641	34.933	5.62
3500.0	2.616	34.929	5.61
3600.0	2.591	34.926	5.61
3700.0	2.572	34.923	5.60
3800.0	2.551	34.920	5.61
3900.0	2.539	34.917	5.59
4000.0	2.523	34.914	5.60
4100.0	2.515	34.911	5.60
4200.0	2.506	34.909	5.61
4300.0	2.504	34.908	5.61
4400.0	2.500	34.906	5.62
4500.0	2.501	34.905	5.61
4600.0	2.501	34.904	5.61
4700.0	2.507	34.903	5.63
4800.0	2.514	34.902	5.63
4900.0	2.522	34.901	5.63
5000.0	2.531	34.901	5.64
5100.0	2.541	34.900	5.64
5200.0	2.552	34.900	5.64
5201.0	2.552	34.900	5.64

Station : 43	Cruise : BORD-EST2
Date : 22-05-88	Ship : Jean-Charcot
Bottom depth: 5120 m	Institute: Ifremer
Position : N 39 56.14 W 11 56.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	17.007	35.966	6.01
10.0	16.797	35.964	5.67
20.0	15.957	35.950	5.79
30.0	15.715	35.942	5.80
40.0	15.547	35.940	5.80
50.0	15.419	35.944	5.73
60.0	15.157	35.955	5.65
70.0	14.630	35.972	5.55
80.0	14.387	35.968	5.45
90.0	14.258	35.957	5.37
100.0	14.105	35.939	5.28
200.0	12.863	35.774	4.84
300.0	12.053	35.683	4.76
400.0	11.527	35.655	4.66
500.0	11.405	35.726	4.48
600.0	11.531	35.881	4.32
700.0	11.819	36.057	4.28
800.0	11.726	36.124	4.29
900.0	11.635	36.201	4.27
1000.0	11.400	36.225	4.24
1100.0	11.421	36.303	4.27
1200.0	11.288	36.333	4.27
1300.0	10.872	36.288	4.34
1400.0	10.348	36.199	4.45
1500.0	8.799	35.880	4.75
1600.0	6.838	35.506	5.21
1700.0	5.840	35.340	5.44
1800.0	5.145	35.228	5.61
1900.0	4.615	35.149	5.73
2000.0	4.274	35.104	5.77
2100.0	3.958	35.062	5.80
2200.0	3.694	35.029	5.83
2300.0	3.549	35.016	5.83
2400.0	3.418	35.004	5.82
2500.0	3.284	34.992	5.80
2600.0	3.167	34.983	5.76
2700.0	3.075	34.975	5.73
2800.0	2.975	34.964	5.73
2900.0	2.907	34.959	5.71
3000.0	2.834	34.952	5.69
3100.0	2.784	34.947	5.67
3200.0	2.735	34.942	5.65
3300.0	2.688	34.937	5.63
3400.0	2.654	34.932	5.61
3500.0	2.626	34.929	5.60
3600.0	2.600	34.926	5.59
3700.0	2.574	34.922	5.58
3800.0	2.552	34.919	5.59
3900.0	2.541	34.916	5.59
4000.0	2.530	34.913	5.58
4100.0	2.515	34.910	5.58
4200.0	2.505	34.908	5.58
4300.0	2.499	34.906	5.59
4400.0	2.496	34.904	5.58
4500.0	2.496	34.903	5.59
4600.0	2.502	34.902	5.59
4700.0	2.508	34.901	5.61
4800.0	2.516	34.900	5.62
4900.0	2.524	34.900	5.61
5000.0	2.533	34.899	5.61
5100.0	2.545	34.899	5.62
5200.0	2.555	34.899	5.62
5239.0	2.557	34.898	5.64

Station : 44	Cruise : BORD-EST2
Date : 22-05-88	Ship : Jean-Charcot
Bottom depth: 4000 m	Institute: Ifremer
Position : N 39 21.06 W 12 0.28	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	17.239	36.044	5.60
10.0	17.050	36.033	5.61
20.0	16.245	36.008	5.72
30.0	16.034	36.011	5.71
40.0	15.666	35.980	5.75
50.0	15.360	35.956	5.76
60.0	15.259	35.954	5.75
70.0	14.932	35.993	5.69
80.0	14.571	36.029	5.56
90.0	14.285	36.004	5.46
100.0	14.249	36.001	5.40
200.0	13.077	35.800	5.15
300.0	12.083	35.656	5.02
400.0	11.488	35.592	4.99
500.0	11.202	35.606	4.77
600.0	11.309	35.766	4.50
700.0	11.659	35.990	4.36
800.0	12.127	36.209	4.43
900.0	11.683	36.183	4.37
1000.0	11.760	36.272	4.37
1100.0	11.729	36.341	4.36
1200.0	11.340	36.307	4.35
1300.0	11.077	36.300	4.37
1400.0	10.430	36.202	4.47
1500.0	8.653	35.835	4.79
1600.0	6.763	35.461	5.20
1700.0	5.928	35.320	5.39
1800.0	5.798	35.339	5.40
1900.0	5.210	35.253	5.52
2000.0	4.615	35.154	5.66
2100.0	4.181	35.095	5.71
2200.0	3.870	35.055	5.75
2300.0	3.696	35.041	5.72
2400.0	3.534	35.027	5.68
2500.0	3.345	35.002	5.72
2600.0	3.216	34.990	5.72
2700.0	3.102	34.979	5.70
2800.0	2.995	34.968	5.70
2900.0	2.925	34.961	5.69
3000.0	2.835	34.953	5.68
3100.0	2.779	34.948	5.66
3200.0	2.730	34.942	5.66
3300.0	2.676	34.936	5.64
3400.0	2.637	34.932	5.62
3500.0	2.603	34.928	5.60
3600.0	2.571	34.924	5.61
3700.0	2.552	34.921	5.60
3800.0	2.543	34.919	5.61
3900.0	2.517	34.915	5.61
3939.0	2.511	34.914	5.60

Station : 45	Cruise : BORD-EST2
Date : 23-05-88	Ship : Jean-Charcot
Bottom depth: 5451 m	Institute: Ifremer
Position : N 39 23.82 W 12 51.24	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	17.249	35.993	5.71
10.0	17.049	36.003	5.61
20.0	16.572	36.120	5.67
30.0	16.303	36.137	5.72
40.0	16.139	36.117	5.71
50.0	15.903	36.119	5.64
60.0	15.758	36.130	5.58
70.0	15.297	36.129	5.52
80.0	14.918	36.111	5.45
90.0	14.787	36.096	5.44
100.0	14.664	36.080	5.38
200.0	13.777	35.917	5.27
300.0	12.340	35.684	4.93
400.0	11.662	35.608	4.85
500.0	11.287	35.600	4.64
600.0	11.187	35.693	4.45
700.0	11.525	35.923	4.30
800.0	11.398	36.007	4.27
900.0	10.995	36.011	4.19
1000.0	10.876	36.068	4.19
1100.0	10.944	36.154	4.24
1200.0	10.564	36.139	4.32
1300.0	10.014	36.062	4.43
1400.0	9.068	35.901	4.63
1500.0	7.799	35.668	4.92
1600.0	6.641	35.472	5.19
1700.0	5.498	35.278	5.47
1800.0	4.850	35.176	5.63
1900.0	4.567	35.145	5.68
2000.0	4.167	35.087	5.76
2100.0	3.960	35.066	5.75
2200.0	3.775	35.047	5.74
2300.0	3.525	35.018	5.76
2400.0	3.414	35.008	5.75
2500.0	3.294	34.998	5.72
2600.0	3.162	34.984	5.69
2700.0	3.041	34.971	5.70
2800.0	2.946	34.963	5.68
2900.0	2.884	34.957	5.67
3000.0	2.830	34.951	5.66
3100.0	2.774	34.946	5.67
3200.0	2.737	34.942	5.63
3300.0	2.699	34.938	5.63
3400.0	2.670	34.934	5.63
3500.0	2.633	34.929	5.61
3600.0	2.596	34.925	5.60
3700.0	2.573	34.922	5.60
3800.0	2.554	34.919	5.59
3900.0	2.538	34.916	5.59
4000.0	2.526	34.912	5.59
4100.0	2.518	34.910	5.58
4200.0	2.507	34.908	5.59
4300.0	2.501	34.906	5.59
4400.0	2.498	34.904	5.59
4500.0	2.502	34.904	5.59
4600.0	2.512	34.903	5.59
4700.0	2.523	34.903	5.61
4792.0	2.534	34.903	5.61

Station : 46	Cruise : BORD-EST2
Date : 23-05-88	Ship : Jean-Charcot
Bottom depth: 4670 m	Institute: Ifremer
Position : N 38 45.03 W 12 5.13	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	17.778	35.850	5.59
10.0	17.794	35.866	5.65
20.0	15.958	35.860	5.90
30.0	15.606	35.862	5.93
40.0	15.434	35.866	5.91
50.0	15.144	35.859	5.85
60.0	14.155	35.882	5.76
70.0	13.767	35.889	5.60
80.0	13.717	35.885	5.53
90.0	13.607	35.871	5.45
100.0	13.558	35.868	5.45
200.0	12.909	35.775	5.43
300.0	12.024	35.641	5.01
400.0	11.622	35.625	4.97
500.0	11.113	35.576	4.90
600.0	11.197	35.718	4.54
700.0	11.671	35.982	4.37
800.0	11.602	36.068	4.32
900.0	11.252	36.088	4.22
1000.0	11.268	36.175	4.20
1100.0	11.095	36.213	4.22
1200.0	11.154	36.305	4.22
1300.0	10.500	36.217	4.32
1400.0	9.261	35.968	4.48
1500.0	8.011	35.732	4.72
1600.0	6.925	35.545	4.94
1700.0	6.069	35.397	5.19
1800.0	5.577	35.316	5.35
1900.0	5.171	35.251	5.48
2000.0	4.755	35.189	5.58
2100.0	4.397	35.139	5.65
2200.0	4.089	35.095	5.70
2300.0	3.866	35.066	5.73
2400.0	3.631	35.041	5.71
2500.0	3.438	35.016	5.72
2600.0	3.278	34.997	5.73
2700.0	3.162	34.985	5.72
2800.0	3.043	34.971	5.71
2900.0	2.945	34.961	5.70
3000.0	2.867	34.954	5.67
3100.0	2.799	34.946	5.66
3200.0	2.740	34.940	5.65
3300.0	2.689	34.934	5.63
3400.0	2.636	34.928	5.62
3500.0	2.605	34.924	5.61
3600.0	2.572	34.920	5.60
3700.0	2.544	34.917	5.60
3800.0	2.518	34.913	5.60
3900.0	2.498	34.910	5.61
4000.0	2.488	34.907	5.61
4100.0	2.476	34.905	5.62
4200.0	2.471	34.902	5.62
4300.0	2.470	34.901	5.63
4400.0	2.474	34.900	5.63
4500.0	2.480	34.899	5.63
4600.0	2.487	34.899	5.62
4700.0	2.495	34.899	5.61
4706.0	2.496	34.898	5.60

Station : 47	Cruise : BORD-EST2
Date : 24-05-88	Ship : Jean-Charcot
Bottom depth: 4960 m	Institute: Ifremer
Position : N 38 10.00 W 12 8.00	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	18.136	36.203	5.47
10.0	17.520	36.192	5.58
20.0	16.875	36.199	5.69
30.0	16.664	36.206	5.69
40.0	16.498	36.210	5.69
50.0	16.383	36.206	5.67
60.0	16.089	36.182	5.71
70.0	15.148	36.155	5.72
80.0	15.043	36.151	5.55
90.0	14.979	36.140	5.45
100.0	14.813	36.111	5.40
200.0	13.681	35.896	5.29
300.0	12.421	35.696	4.86
400.0	11.660	35.604	4.90
500.0	11.131	35.587	4.68
600.0	11.154	35.723	4.33
700.0	11.798	36.031	4.22
800.0	11.590	36.105	4.26
900.0	11.252	36.116	4.20
1000.0	11.201	36.182	4.22
1100.0	11.228	36.263	4.26
1200.0	11.414	36.375	4.30
1300.0	10.982	36.322	4.36
1400.0	9.691	36.067	4.54
1500.0	7.973	35.731	4.86
1600.0	6.611	35.480	5.17
1700.0	5.792	35.343	5.37
1800.0	5.368	35.281	5.45
1900.0	4.984	35.223	5.51
2000.0	4.342	35.117	5.67
2100.0	4.078	35.087	5.69
2200.0	3.828	35.053	5.73
2300.0	3.684	35.042	5.71
2400.0	3.511	35.024	5.69
2500.0	3.348	35.005	5.70
2600.0	3.203	34.989	5.70
2700.0	3.089	34.977	5.69
2800.0	3.003	34.968	5.69
2900.0	2.916	34.959	5.70
3000.0	2.838	34.952	5.70
3100.0	2.782	34.945	5.69
3200.0	2.735	34.939	5.69
3300.0	2.689	34.934	5.67
3400.0	2.640	34.929	5.66
3500.0	2.601	34.925	5.64
3600.0	2.577	34.921	5.65
3700.0	2.553	34.917	5.63
3800.0	2.525	34.914	5.63
3900.0	2.506	34.911	5.62
4000.0	2.495	34.908	5.61
4100.0	2.488	34.906	5.61
4200.0	2.483	34.903	5.61
4300.0	2.482	34.903	5.61
4400.0	2.484	34.901	5.60
4500.0	2.487	34.900	5.60
4600.0	2.491	34.899	5.59
4700.0	2.502	34.899	5.58
4800.0	2.514	34.899	5.58
4900.0	2.525	34.899	5.58
5000.0	2.535	34.898	5.58
5039.0	2.538	34.899	5.58

Station : 48	Cruise : BORD-EST2
Date : 24-05-88	Ship : Jean-Charcot
Bottom depth: 5040 m	Institute: Ifremer
Position : N 37 35.19 W 12 15.18	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	18.059	36.082	5.54
10.0	17.599	36.048	5.60
20.0	16.612	36.058	5.73
30.0	16.288	36.058	5.68
40.0	15.973	36.049	5.69
50.0	15.845	36.035	5.76
60.0	14.991	36.012	5.82
70.0	14.443	36.002	5.62
80.0	14.361	36.008	5.54
90.0	14.267	35.996	5.53
100.0	14.132	35.970	5.51
200.0	13.186	35.805	5.22
300.0	12.049	35.644	4.97
400.0	11.533	35.596	4.92
500.0	11.249	35.620	4.64
600.0	11.187	35.714	4.38
700.0	11.430	35.910	4.27
800.0	11.616	36.073	4.25
900.0	11.091	36.056	4.22
1000.0	10.962	36.118	4.22
1100.0	11.007	36.217	4.24
1200.0	10.746	36.203	4.31
1300.0	9.872	36.053	4.50
1400.0	8.944	35.872	4.67
1500.0	8.117	35.757	4.82
1600.0	6.957	35.551	5.08
1700.0	6.030	35.384	5.29
1800.0	5.344	35.279	5.44
1900.0	4.826	35.197	5.54
2000.0	4.429	35.140	5.62
2100.0	4.177	35.105	5.65
2200.0	3.928	35.073	5.67
2300.0	3.739	35.050	5.69
2400.0	3.532	35.025	5.68
2500.0	3.341	35.003	5.69
2600.0	3.214	34.989	5.68
2700.0	3.098	34.976	5.68
2800.0	2.995	34.965	5.69
2900.0	2.901	34.956	5.68
3000.0	2.830	34.949	5.68
3100.0	2.763	34.942	5.65
3200.0	2.715	34.936	5.65
3300.0	2.666	34.932	5.64
3400.0	2.620	34.926	5.64
3500.0	2.579	34.922	5.63
3600.0	2.559	34.919	5.62
3700.0	2.527	34.915	5.61
3800.0	2.508	34.912	5.61
3900.0	2.488	34.909	5.60
4000.0	2.480	34.907	5.59
4100.0	2.474	34.905	5.60
4200.0	2.472	34.903	5.60
4300.0	2.472	34.902	5.60
4400.0	2.473	34.901	5.59
4500.0	2.473	34.899	5.58
4600.0	2.482	34.899	5.58
4700.0	2.494	34.899	5.59
4800.0	2.507	34.899	5.59
4900.0	2.520	34.899	5.59
5000.0	2.533	34.899	5.60
5058.0	2.540	34.900	5.60

Station : 49	Cruise : BORD-EST2
Date : 27-05-88	Ship : Jean-Charcot
Bottom depth: 5047 m	Institute: Ifremer
Position : N 37 35.00 W 12 15.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	18.641	36.241	5.38
10.0	18.263	36.221	5.50
20.0	17.982	36.214	5.55
30.0	17.352	36.281	5.54
40.0	16.752	36.168	5.60
50.0	16.337	36.117	5.67
60.0	15.905	36.155	5.63
70.0	15.550	36.141	5.54
80.0	15.313	36.144	5.38
90.0	15.126	36.135	5.34
100.0	14.863	36.085	5.26
200.0	13.832	35.924	5.30
300.0	12.733	35.726	5.01
400.0	11.863	35.621	4.92
500.0	11.367	35.601	4.78
600.0	11.197	35.708	4.45
700.0	11.420	35.911	4.35
800.0	11.519	36.070	4.37
900.0	11.348	36.120	4.27
1000.0	11.293	36.189	4.30
1100.0	11.186	36.257	4.31
1200.0	11.111	36.306	4.31
1300.0	10.354	36.170	4.41
1400.0	9.370	35.988	4.55
1500.0	7.914	35.709	4.83
1600.0	6.647	35.478	5.11
1700.0	5.556	35.288	5.38
1800.0	5.509	35.305	5.40
1900.0	4.936	35.216	5.48
2000.0	4.545	35.155	5.56
2100.0	4.188	35.105	5.63
2200.0	3.876	35.065	5.67
2300.0	3.665	35.041	5.68
2400.0	3.511	35.022	5.69
2500.0	3.316	35.001	5.69
2600.0	3.197	34.986	5.70
2700.0	3.085	34.974	5.70
2800.0	2.992	34.966	5.70
2900.0	2.897	34.956	5.68
3000.0	2.819	34.948	5.67
3100.0	2.761	34.942	5.67
3200.0	2.708	34.936	5.66
3300.0	2.664	34.932	5.65
3400.0	2.620	34.926	5.66
3500.0	2.588	34.922	5.63
3600.0	2.559	34.919	5.64
3700.0	2.535	34.916	5.64
3800.0	2.512	34.913	5.63
3900.0	2.496	34.910	5.61
4000.0	2.486	34.909	5.62
4100.0	2.481	34.907	5.61
4200.0	2.476	34.904	5.62
4300.0	2.475	34.903	5.62
4400.0	2.478	34.902	5.62
4500.0	2.476	34.900	5.61
4600.0	2.483	34.899	5.60
4700.0	2.495	34.899	5.60
4800.0	2.508	34.900	5.60
4900.0	2.520	34.900	5.60
5000.0	2.533	34.900	5.60
5079.0	2.543	34.900	5.61

Station : 50	Cruise : BORD-EST2
Date : 28-05-88	Ship : Jean-Charcot
Bottom depth: 5055 m	Institute: Ifremer
Position : N 37 0.00 W 12 16.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	18.708	36.195	5.31
10.0	18.386	36.237	5.49
20.0	17.557	36.246	5.73
30.0	16.999	36.258	5.81
40.0	16.783	36.263	5.85
50.0	16.203	36.232	5.89
60.0	15.698	36.198	5.85
70.0	15.418	36.173	5.65
80.0	15.187	36.150	5.53
90.0	15.078	36.141	5.46
100.0	14.988	36.135	5.41
200.0	13.629	35.877	5.11
300.0	12.459	35.697	4.90
400.0	11.787	35.620	4.79
500.0	11.389	35.598	4.77
600.0	11.187	35.696	4.40
700.0	11.374	35.882	4.29
800.0	11.387	36.005	4.27
900.0	11.002	36.015	4.23
1000.0	10.708	36.049	4.24
1100.0	10.754	36.141	4.30
1200.0	10.613	36.167	4.36
1300.0	10.202	36.126	4.44
1400.0	9.586	36.023	4.58
1500.0	8.742	35.870	4.74
1600.0	7.918	35.728	4.87
1700.0	6.927	35.555	5.08
1800.0	5.658	35.332	5.37
1900.0	4.765	35.193	5.55
2000.0	4.318	35.128	5.61
2100.0	4.047	35.089	5.66
2200.0	3.704	35.044	5.70
2300.0	3.557	35.029	5.71
2400.0	3.380	35.009	5.71
2500.0	3.251	34.995	5.73
2600.0	3.163	34.986	5.71
2700.0	3.059	34.975	5.71
2800.0	2.968	34.964	5.71
2900.0	2.857	34.954	5.69
3000.0	2.793	34.948	5.70
3100.0	2.755	34.943	5.69
3200.0	2.692	34.936	5.68
3300.0	2.641	34.931	5.66
3400.0	2.614	34.927	5.66
3500.0	2.579	34.923	5.64
3600.0	2.545	34.919	5.63
3700.0	2.526	34.916	5.62
3800.0	2.505	34.913	5.61
3900.0	2.495	34.911	5.60
4000.0	2.483	34.909	5.59
4100.0	2.473	34.907	5.58
4200.0	2.473	34.905	5.58
4300.0	2.474	34.904	5.57
4400.0	2.476	34.903	5.57
4500.0	2.476	34.901	5.57
4600.0	2.483	34.901	5.55
4700.0	2.495	34.900	5.56
4800.0	2.508	34.901	5.56
4900.0	2.520	34.901	5.56
5000.0	2.533	34.901	5.57
5098.0	2.546	34.901	5.59

Station : 51	Cruise : BORD-EST2
Date : 28-05-88	Ship : Jean-Charcot
Bottom depth: 3900 m	Institute: Ifremer
Position : N 36 25.00 W 12 20.07	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	18.960	36.235	5.37
10.0	18.004	36.226	5.55
20.0	17.272	36.205	5.66
30.0	16.818	36.212	5.72
40.0	16.273	36.209	5.75
50.0	15.814	36.198	5.76
60.0	15.366	36.190	5.52
70.0	15.199	36.188	5.32
80.0	15.121	36.183	5.26
90.0	15.108	36.182	5.25
100.0	15.063	36.175	5.23
200.0	14.687	36.093	5.15
300.0	12.734	35.740	4.75
400.0	11.867	35.685	4.63
500.0	12.377	35.986	4.49
600.0	13.121	36.302	4.64
700.0	13.138	36.360	4.66
800.0	12.974	36.363	4.64
900.0	12.240	36.295	4.42
1000.0	12.291	36.413	4.42
1100.0	12.570	36.547	4.46
1200.0	12.316	36.515	4.45
1300.0	11.525	36.376	4.37
1400.0	10.505	36.221	4.45
1500.0	9.208	35.965	4.61
1600.0	7.009	35.526	5.09
1700.0	5.955	35.350	5.35
1800.0	5.487	35.274	5.49
1900.0	5.054	35.210	5.60
2000.0	4.606	35.144	5.71
2100.0	4.216	35.094	5.74
2200.0	3.997	35.069	5.76
2300.0	3.784	35.046	5.78
2400.0	3.589	35.024	5.78
2500.0	3.391	35.004	5.78
2600.0	3.271	34.994	5.78
2700.0	3.146	34.981	5.75
2800.0	3.037	34.969	5.76
2900.0	2.933	34.958	5.72
3000.0	2.864	34.954	5.71
3100.0	2.790	34.945	5.69
3200.0	2.723	34.938	5.69
3300.0	2.654	34.932	5.68
3400.0	2.622	34.928	5.69
3500.0	2.582	34.923	5.68
3600.0	2.533	34.917	5.62
3700.0	2.501	34.913	5.61
3800.0	2.479	34.910	5.58
3858.0	2.472	34.909	5.59

Station : 52	Cruise : BORD-EST2
Date : 28-05-88	Ship : Jean-Charcot
Bottom depth: 4810 m	Institute: Ifremer
Position : N 35 50.00 W 12 24.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	19.995	36.390	5.20
10.0	19.542	36.375	5.35
20.0	18.123	36.329	5.58
30.0	17.866	36.334	5.61
40.0	17.744	36.369	5.61
50.0	17.003	36.252	5.60
60.0	16.184	36.236	5.79
70.0	16.014	36.227	5.71
80.0	15.827	36.215	5.68
90.0	15.689	36.204	5.56
100.0	15.437	36.172	5.39
200.0	13.775	35.873	4.97
300.0	12.688	35.722	4.96
400.0	11.924	35.621	4.63
500.0	11.240	35.548	4.58
600.0	10.643	35.522	4.33
700.0	10.454	35.601	4.22
800.0	10.429	35.736	4.21
900.0	9.522	35.657	4.21
1000.0	9.749	35.806	4.16
1100.0	9.786	35.901	4.24
1200.0	9.354	35.886	4.40
1300.0	9.350	35.941	4.50
1400.0	8.854	35.877	4.63
1500.0	7.811	35.693	4.85
1600.0	6.960	35.539	5.01
1700.0	6.270	35.440	5.15
1800.0	5.738	35.355	5.26
1900.0	5.167	35.265	5.39
2000.0	4.796	35.207	5.45
2100.0	4.434	35.147	5.52
2200.0	4.156	35.111	5.56
2300.0	3.914	35.077	5.62
2400.0	3.677	35.048	5.63
2500.0	3.505	35.027	5.66
2600.0	3.332	35.005	5.67
2700.0	3.200	34.990	5.67
2800.0	3.068	34.974	5.71
2900.0	2.969	34.964	5.68
3000.0	2.893	34.956	5.69
3100.0	2.813	34.949	5.66
3200.0	2.749	34.942	5.65
3300.0	2.694	34.935	5.66
3400.0	2.642	34.930	5.64
3500.0	2.590	34.924	5.63
3600.0	2.550	34.918	5.61
3700.0	2.521	34.915	5.60
3800.0	2.492	34.912	5.59
3900.0	2.477	34.909	5.57
4000.0	2.469	34.907	5.55
4100.0	2.464	34.905	5.54
4200.0	2.461	34.903	5.52
4300.0	2.470	34.902	5.51
4400.0	2.481	34.902	5.51
4500.0	2.494	34.902	5.51
4600.0	2.506	34.903	5.51
4700.0	2.518	34.902	5.52
4800.0	2.526	34.902	5.53
4859.0	2.530	34.901	5.53

Station : 53	Cruise : BORD-EST2
Date : 29-05-88	Ship : Jean-Charcot
Bottom depth: 3700 m	Institute: Ifremer
Position : N 35 16.00 W 12 27.73	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	19.823	36.460	5.29
10.0	19.829	36.459	5.37
20.0	19.505	36.438	5.39
30.0	18.732	36.378	5.50
40.0	18.277	36.373	5.55
50.0	17.621	36.363	5.61
60.0	17.077	36.341	5.70
70.0	16.682	36.311	5.66
80.0	16.476	36.289	5.61
90.0	16.353	36.283	5.41
100.0	16.198	36.250	5.32
200.0	14.877	36.071	5.09
300.0	13.086	35.774	4.87
400.0	12.177	35.654	4.83
500.0	11.586	35.593	4.72
600.0	11.073	35.575	4.48
700.0	10.911	35.668	4.23
800.0	10.551	35.700	4.05
900.0	11.124	35.976	4.20
1000.0	10.765	35.983	4.15
1100.0	9.679	35.836	4.16
1200.0	9.584	35.912	4.31
1300.0	9.315	35.906	4.45
1400.0	9.212	35.948	4.56
1500.0	8.234	35.777	4.75
1600.0	7.311	35.619	4.93
1700.0	6.558	35.488	5.09
1800.0	5.820	35.362	5.26
1900.0	5.462	35.312	5.33
2000.0	4.991	35.235	5.42
2100.0	4.427	35.146	5.59
2200.0	4.130	35.102	5.65
2300.0	3.909	35.074	5.66
2400.0	3.713	35.049	5.66
2500.0	3.508	35.023	5.72
2600.0	3.354	35.007	5.71
2700.0	3.234	34.993	5.74
2800.0	3.151	34.983	5.72
2900.0	3.053	34.973	5.72
3000.0	2.969	34.964	5.69
3100.0	2.896	34.955	5.68
3200.0	2.814	34.947	5.68
3300.0	2.747	34.941	5.66
3400.0	2.684	34.934	5.65
3500.0	2.636	34.928	5.64
3600.0	2.598	34.923	5.63
3700.0	2.554	34.918	5.61
3778.0	2.530	34.915	5.58

Station : 54	Cruise : BORD-EST2
Date : 29-05-88	Ship : Jean-Charcot
Bottom depth: 4410 m	Institute: Ifremer
Position : N 34 41.02 W 12 32.10	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	19.590	36.460	5.22
10.0	19.498	36.434	5.36
20.0	18.650	36.342	5.49
30.0	17.893	36.369	5.60
40.0	17.654	36.361	5.64
50.0	17.045	36.333	5.68
60.0	16.722	36.337	5.66
70.0	16.489	36.321	5.51
80.0	16.361	36.310	5.31
90.0	16.337	36.315	5.23
100.0	16.161	36.287	5.21
200.0	14.703	36.040	5.03
300.0	13.052	35.767	4.83
400.0	12.184	35.655	4.83
500.0	11.420	35.563	4.76
600.0	10.939	35.561	4.49
700.0	10.685	35.627	4.16
800.0	10.110	35.632	3.91
900.0	10.802	35.910	4.13
1000.0	10.291	35.879	4.18
1100.0	10.323	36.004	4.19
1200.0	10.171	36.039	4.29
1300.0	9.321	35.894	4.44
1400.0	8.424	35.768	4.63
1500.0	7.821	35.683	4.80
1600.0	6.836	35.520	4.99
1700.0	6.170	35.417	5.15
1800.0	5.663	35.338	5.25
1900.0	5.194	35.263	5.36
2000.0	4.763	35.199	5.42
2100.0	4.432	35.150	5.49
2200.0	4.118	35.103	5.54
2300.0	3.875	35.071	5.57
2400.0	3.705	35.051	5.58
2500.0	3.500	35.025	5.64
2600.0	3.362	35.007	5.65
2700.0	3.186	34.987	5.67
2800.0	3.060	34.975	5.66
2900.0	2.989	34.967	5.63
3000.0	2.877	34.956	5.66
3100.0	2.835	34.951	5.65
3200.0	2.780	34.945	5.64
3300.0	2.698	34.936	5.64
3400.0	2.647	34.931	5.63
3500.0	2.605	34.925	5.61
3600.0	2.561	34.919	5.61
3700.0	2.523	34.915	5.60
3800.0	2.495	34.911	5.58
3900.0	2.486	34.909	5.56
4000.0	2.470	34.906	5.56
4100.0	2.460	34.905	5.57
4200.0	2.455	34.903	5.55
4300.0	2.451	34.900	5.56
4400.0	2.448	34.898	5.55
4428.0	2.449	34.898	5.55

Station : 55	Cruise : BORD-EST2
Date : 29-05-88	Ship : Jean-Charcot
Bottom depth: 4400 m	Institute: Ifremer
Position : N 34 10.16 W 12 53.75	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	19.991	36.475	5.15
10.0	19.915	36.474	5.19
20.0	19.273	36.420	5.40
30.0	18.357	36.414	5.53
40.0	17.944	36.393	5.60
50.0	16.826	36.340	5.79
60.0	16.635	36.345	5.72
70.0	16.379	36.315	5.57
80.0	16.050	36.271	5.32
90.0	15.914	36.262	5.19
100.0	15.865	36.251	5.13
200.0	13.737	35.875	4.78
300.0	12.624	35.714	4.82
400.0	11.930	35.626	4.82
500.0	11.461	35.596	4.62
600.0	11.154	35.623	4.42
700.0	10.982	35.705	4.23
800.0	11.101	35.891	4.19
900.0	10.816	35.941	4.12
1000.0	10.652	36.008	4.15
1100.0	10.597	36.092	4.21
1200.0	10.731	36.217	4.30
1300.0	9.998	36.102	4.42
1400.0	8.874	35.905	4.59
1500.0	7.802	35.709	4.79
1600.0	6.929	35.556	4.95
1700.0	6.327	35.458	5.07
1800.0	5.556	35.331	5.22
1900.0	4.964	35.230	5.36
2000.0	4.522	35.162	5.47
2100.0	4.211	35.114	5.53
2200.0	3.921	35.078	5.60
2300.0	3.721	35.052	5.63
2400.0	3.510	35.025	5.66
2500.0	3.349	35.007	5.70
2600.0	3.204	34.989	5.71
2700.0	3.099	34.978	5.70
2800.0	2.989	34.966	5.69
2900.0	2.906	34.959	5.65
3000.0	2.824	34.951	5.65
3100.0	2.761	34.944	5.63
3200.0	2.708	34.938	5.63
3300.0	2.645	34.930	5.62
3400.0	2.598	34.925	5.62
3500.0	2.564	34.921	5.61
3600.0	2.522	34.917	5.58
3700.0	2.484	34.911	5.56
3800.0	2.469	34.908	5.56
3900.0	2.462	34.907	5.53
4000.0	2.461	34.906	5.53
4100.0	2.455	34.904	5.52
4200.0	2.451	34.902	5.51
4300.0	2.446	34.899	5.52
4400.0	2.444	34.898	5.51
4439.0	2.444	34.898	5.50

Station : 56	Cruise : BORD-EST2
Date : 29-05-88	Ship : Jean-Charcot
Bottom depth: 4390 m	Institute: Ifremer
Position : N 33 40.00 W 13 12.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	19.972	36.495	5.25
10.0	19.693	36.463	5.33
20.0	18.926	36.472	5.50
30.0	18.602	36.475	5.49
40.0	18.184	36.446	5.52
50.0	17.550	36.401	5.70
60.0	17.177	36.375	5.75
70.0	17.010	36.362	5.65
80.0	16.872	36.358	5.44
90.0	16.762	36.351	5.32
100.0	16.707	36.347	5.24
200.0	15.789	36.215	5.26
300.0	14.048	35.889	4.83
400.0	12.865	35.729	4.83
500.0	11.912	35.612	4.66
600.0	11.138	35.538	4.65
700.0	10.739	35.581	4.34
800.0	10.469	35.659	4.23
900.0	10.148	35.737	4.05
1000.0	9.997	35.823	4.07
1100.0	10.419	36.026	4.21
1200.0	9.571	35.889	4.34
1300.0	9.161	35.870	4.46
1400.0	8.927	35.884	4.60
1500.0	7.745	35.675	4.84
1600.0	6.865	35.529	5.04
1700.0	6.108	35.404	5.19
1800.0	5.506	35.309	5.31
1900.0	5.028	35.232	5.45
2000.0	4.648	35.178	5.52
2100.0	4.328	35.131	5.56
2200.0	4.038	35.092	5.63
2300.0	3.796	35.060	5.64
2400.0	3.608	35.037	5.66
2500.0	3.433	35.016	5.68
2600.0	3.274	34.998	5.69
2700.0	3.163	34.985	5.68
2800.0	3.050	34.973	5.68
2900.0	2.961	34.963	5.67
3000.0	2.880	34.956	5.68
3100.0	2.802	34.947	5.65
3200.0	2.731	34.939	5.63
3300.0	2.676	34.933	5.65
3400.0	2.624	34.927	5.64
3500.0	2.579	34.923	5.61
3600.0	2.541	34.918	5.60
3700.0	2.507	34.914	5.58
3800.0	2.484	34.910	5.56
3900.0	2.469	34.908	5.55
4000.0	2.459	34.906	5.54
4100.0	2.451	34.904	5.54
4200.0	2.446	34.902	5.53
4300.0	2.439	34.899	5.51
4400.0	2.439	34.898	5.52
4428.0	2.441	34.897	5.52

Station : 57	Cruise : BORD-EST2
Date : 30-05-88	Ship : Jean-Charcot
Bottom depth: 4375 m	Institute: Ifremer
Position : N 33 12.71 W 13 36.94	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	19.806	36.466	5.21
10.0	19.805	36.465	5.32
20.0	18.984	36.427	5.43
30.0	18.541	36.451	5.52
40.0	18.333	36.429	5.54
50.0	18.102	36.419	5.60
60.0	17.445	36.391	5.61
70.0	17.115	36.384	5.63
80.0	16.924	36.371	5.53
90.0	16.776	36.344	5.43
100.0	16.719	36.363	5.28
200.0	15.903	36.252	5.22
300.0	14.058	35.918	4.73
400.0	12.811	35.730	4.71
500.0	11.968	35.618	4.66
600.0	11.268	35.559	4.47
700.0	10.755	35.543	4.22
800.0	10.372	35.603	4.04
900.0	10.322	35.750	4.04
1000.0	9.964	35.779	4.01
1100.0	10.524	36.038	4.18
1200.0	10.185	36.029	4.28
1300.0	9.230	35.873	4.37
1400.0	8.371	35.746	4.60
1500.0	7.616	35.638	4.78
1600.0	6.932	35.537	4.99
1700.0	6.257	35.428	5.20
1800.0	5.627	35.329	5.34
1900.0	5.189	35.259	5.42
2000.0	4.715	35.188	5.49
2100.0	4.330	35.132	5.58
2200.0	4.022	35.090	5.65
2300.0	3.773	35.057	5.67
2400.0	3.581	35.034	5.67
2500.0	3.409	35.013	5.69
2600.0	3.235	34.993	5.72
2700.0	3.112	34.980	5.71
2800.0	3.002	34.968	5.70
2900.0	2.911	34.959	5.69
3000.0	2.834	34.951	5.65
3100.0	2.762	34.944	5.64
3200.0	2.692	34.937	5.61
3300.0	2.650	34.932	5.62
3400.0	2.602	34.926	5.63
3500.0	2.555	34.921	5.61
3600.0	2.519	34.917	5.61
3700.0	2.490	34.913	5.60
3800.0	2.475	34.910	5.58
3900.0	2.460	34.907	5.57
4000.0	2.450	34.905	5.57
4100.0	2.444	34.904	5.55
4200.0	2.438	34.902	5.55
4300.0	2.434	34.898	5.55
4400.0	2.437	34.898	5.55
4409.0	2.438	34.898	5.51

Station : 58	Cruise : BORD-EST2
Date : 30-05-88	Ship : Jean-Charcot
Bottom depth: 4250 m	Institute: Ifremer
Position : N 32 50.02 W 14 7.99	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	19.751	36.543	5.28
10.0	19.751	36.543	5.31
20.0	19.744	36.538	5.39
30.0	19.220	36.475	5.50
40.0	18.597	36.449	5.63
50.0	18.284	36.442	5.65
60.0	17.580	36.424	5.79
70.0	17.272	36.416	5.78
80.0	17.173	36.429	5.61
90.0	17.003	36.420	5.51
100.0	16.862	36.412	5.46
200.0	16.083	36.267	5.14
300.0	14.387	35.968	4.85
400.0	12.891	35.741	4.82
500.0	11.992	35.625	4.67
600.0	11.261	35.566	4.60
700.0	10.666	35.543	4.10
800.0	10.167	35.563	3.97
900.0	9.878	35.639	3.93
1000.0	9.649	35.710	3.99
1100.0	9.645	35.810	4.13
1200.0	9.709	35.941	4.24
1300.0	8.813	35.786	4.40
1400.0	8.274	35.721	4.54
1500.0	7.645	35.637	4.74
1600.0	6.923	35.525	4.90
1700.0	6.210	35.416	5.10
1800.0	5.692	35.339	5.29
1900.0	5.193	35.263	5.40
2000.0	4.715	35.191	5.51
2100.0	4.347	35.134	5.56
2200.0	4.068	35.097	5.61
2300.0	3.789	35.061	5.66
2400.0	3.580	35.034	5.66
2500.0	3.397	35.012	5.69
2600.0	3.246	34.994	5.72
2700.0	3.124	34.982	5.71
2800.0	3.008	34.968	5.69
2900.0	2.910	34.959	5.67
3000.0	2.825	34.950	5.67
3100.0	2.759	34.943	5.66
3200.0	2.690	34.936	5.65
3300.0	2.641	34.930	5.66
3400.0	2.591	34.924	5.65
3500.0	2.553	34.920	5.63
3600.0	2.524	34.916	5.62
3700.0	2.490	34.912	5.62
3800.0	2.469	34.909	5.59
3900.0	2.452	34.907	5.60
4000.0	2.444	34.905	5.59
4100.0	2.435	34.902	5.59
4200.0	2.425	34.900	5.60
4281.0	2.421	34.899	5.59

Station : 59	Cruise : BORD-EST2
Date : 30-05-88	Ship : Jean-Charcot
Bottom depth: 4340 m	Institute: Ifremer
Position : N 32 26.00 W 14 39.00	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	20.147	36.605	5.28
10.0	20.089	36.606	5.32
20.0	19.897	36.588	5.40
30.0	18.902	36.524	5.53
40.0	18.700	36.510	5.46
50.0	18.051	36.456	5.56
60.0	17.452	36.468	5.70
70.0	17.362	36.489	5.58
80.0	17.186	36.459	5.53
90.0	16.987	36.431	5.53
100.0	16.902	36.425	5.44
200.0	15.306	36.112	4.81
300.0	13.608	35.849	4.60
400.0	12.386	35.682	4.58
500.0	11.527	35.589	4.45
600.0	10.882	35.562	4.06
700.0	10.988	35.743	3.94
800.0	11.747	36.036	4.22
900.0	10.927	35.945	4.07
1000.0	10.780	35.989	4.03
1100.0	11.143	36.161	4.17
1200.0	11.158	36.230	4.22
1300.0	10.760	36.182	4.20
1400.0	9.720	35.981	4.29
1500.0	8.539	35.783	4.47
1600.0	7.606	35.635	4.68
1700.0	6.849	35.526	4.87
1800.0	6.194	35.416	5.04
1900.0	5.452	35.303	5.21
2000.0	4.963	35.227	5.31
2100.0	4.530	35.161	5.36
2200.0	4.182	35.110	5.52
2300.0	3.935	35.079	5.50
2400.0	3.737	35.052	5.56
2500.0	3.527	35.026	5.59
2600.0	3.375	35.007	5.59
2700.0	3.239	34.993	5.61
2800.0	3.117	34.978	5.62
2900.0	3.014	34.968	5.61
3000.0	2.922	34.958	5.62
3100.0	2.835	34.949	5.63
3200.0	2.758	34.941	5.61
3300.0	2.689	34.934	5.60
3400.0	2.642	34.929	5.64
3500.0	2.604	34.924	5.61
3600.0	2.572	34.921	5.60
3700.0	2.537	34.916	5.60
3800.0	2.500	34.912	5.58
3900.0	2.481	34.909	5.58
4000.0	2.459	34.906	5.54
4100.0	2.449	34.903	5.53
4200.0	2.439	34.901	5.55
4300.0	2.433	34.898	5.56
4375.0	2.429	34.897	5.59

Station : 60	Cruise : BORD-EST2
Date : 30-05-88	Ship : Jean-Charcot
Bottom depth: 4360 m	Institute: Ifremer
Position : N 32 4.05 W 15 11.52	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	20.187	36.592	5.32
10.0	20.196	36.591	5.30
20.0	19.775	36.538	5.42
30.0	18.901	36.507	5.61
40.0	18.742	36.510	5.62
50.0	18.586	36.500	5.64
60.0	17.505	36.448	5.79
70.0	17.230	36.441	5.76
80.0	17.100	36.442	5.61
90.0	17.010	36.438	5.42
100.0	16.941	36.433	5.36
200.0	15.624	36.172	4.97
300.0	13.687	35.852	4.67
400.0	12.595	35.702	4.67
500.0	11.725	35.598	4.57
600.0	11.121	35.553	4.29
700.0	10.612	35.559	3.91
800.0	10.200	35.600	3.79
900.0	9.888	35.669	3.83
1000.0	9.610	35.714	3.94
1100.0	9.661	35.827	4.11
1200.0	9.467	35.859	4.19
1300.0	9.107	35.842	4.34
1400.0	8.457	35.760	4.48
1500.0	7.666	35.639	4.73
1600.0	6.905	35.516	4.86
1700.0	6.233	35.415	5.04
1800.0	5.691	35.333	5.17
1900.0	5.184	35.260	5.31
2000.0	4.756	35.193	5.41
2100.0	4.336	35.132	5.50
2200.0	4.108	35.102	5.49
2300.0	3.861	35.069	5.57
2400.0	3.643	35.042	5.62
2500.0	3.459	35.019	5.66
2600.0	3.282	34.999	5.67
2700.0	3.151	34.984	5.67
2800.0	3.035	34.972	5.69
2900.0	2.940	34.961	5.67
3000.0	2.861	34.954	5.67
3100.0	2.789	34.946	5.65
3200.0	2.718	34.939	5.67
3300.0	2.663	34.933	5.64
3400.0	2.618	34.927	5.67
3500.0	2.578	34.922	5.67
3600.0	2.540	34.918	5.64
3700.0	2.511	34.914	5.63
3800.0	2.483	34.911	5.64
3900.0	2.466	34.907	5.64
4000.0	2.451	34.905	5.60
4100.0	2.437	34.903	5.62
4200.0	2.425	34.900	5.64
4300.0	2.413	34.898	5.64
4386.0	2.407	34.895	5.62

Station : 61	Cruise : BORD-EST2
Date : 31-05-88	Ship : Jean-Charcot
Bottom depth: 4370 m	Institute: Ifremer
Position : N 31 41.00 W 15 42.00	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	20.283	36.646	5.22
10.0	20.285	36.646	5.33
20.0	19.921	36.653	5.45
30.0	19.390	36.647	5.50
40.0	19.016	36.615	5.54
50.0	18.793	36.603	5.57
60.0	18.131	36.617	5.57
70.0	17.960	36.616	5.54
80.0	17.821	36.600	5.52
90.0	17.722	36.584	5.45
100.0	17.595	36.563	5.34
200.0	16.727	36.397	5.17
300.0	14.516	35.978	4.64
400.0	13.036	35.760	4.58
500.0	12.032	35.633	4.41
600.0	11.309	35.564	4.23
700.0	10.605	35.533	3.92
800.0	10.103	35.558	3.82
900.0	9.625	35.601	3.94
1000.0	9.296	35.643	4.00
1100.0	8.925	35.666	4.16
1200.0	8.614	35.683	4.29
1300.0	8.313	35.686	4.45
1400.0	7.616	35.595	4.66
1500.0	7.034	35.520	4.86
1600.0	6.565	35.461	4.96
1700.0	6.076	35.389	5.04
1800.0	5.414	35.286	5.34
1900.0	4.973	35.219	5.46
2000.0	4.568	35.161	5.58
2100.0	4.253	35.117	5.61
2200.0	4.002	35.088	5.63
2300.0	3.780	35.059	5.57
2400.0	3.575	35.034	5.54
2500.0	3.410	35.013	5.59
2600.0	3.256	34.996	5.64
2700.0	3.141	34.983	5.66
2800.0	3.032	34.971	5.67
2900.0	2.929	34.961	5.64
3000.0	2.847	34.952	5.66
3100.0	2.774	34.944	5.64
3200.0	2.704	34.938	5.64
3300.0	2.652	34.932	5.63
3400.0	2.608	34.926	5.62
3500.0	2.572	34.922	5.62
3600.0	2.534	34.917	5.62
3700.0	2.509	34.914	5.62
3800.0	2.482	34.910	5.59
3900.0	2.463	34.907	5.59
4000.0	2.448	34.905	5.59
4100.0	2.433	34.902	5.60
4200.0	2.421	34.900	5.61
4300.0	2.409	34.898	5.64
4400.0	2.405	34.895	5.63
4409.0	2.404	34.895	5.64

Station : 62	Cruise : BORD-EST2
Date : 31-05-88	Ship : Jean-Charcot
Bottom depth: 4385 m	Institute: Ifremer
Position : N 31 17.64 W 16 13.12	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	20.419	36.734	5.07
10.0	20.430	36.736	5.07
20.0	20.403	36.734	5.13
30.0	19.964	36.702	5.26
40.0	19.522	36.729	5.42
50.0	19.236	36.680	5.41
60.0	18.703	36.661	5.51
70.0	18.131	36.610	5.52
80.0	17.959	36.606	5.48
90.0	17.835	36.617	5.41
100.0	17.625	36.577	5.29
200.0	15.809	36.211	4.73
300.0	14.170	35.935	4.62
400.0	12.845	35.739	4.57
500.0	11.958	35.627	4.51
600.0	11.167	35.554	4.30
700.0	10.583	35.542	3.99
800.0	10.230	35.596	3.87
900.0	9.394	35.536	3.70
1000.0	9.283	35.617	3.84
1100.0	9.026	35.647	3.93
1200.0	8.888	35.714	4.11
1300.0	8.648	35.739	4.32
1400.0	8.134	35.678	4.48
1500.0	7.185	35.537	4.72
1600.0	6.470	35.425	4.92
1700.0	6.047	35.374	5.04
1800.0	5.480	35.290	5.16
1900.0	5.047	35.227	5.26
2000.0	4.663	35.173	5.34
2100.0	4.306	35.125	5.43
2200.0	3.994	35.085	5.49
2300.0	3.781	35.056	5.54
2400.0	3.575	35.033	5.56
2500.0	3.429	35.016	5.62
2600.0	3.258	34.994	5.65
2700.0	3.106	34.979	5.66
2800.0	2.996	34.966	5.69
2900.0	2.896	34.957	5.68
3000.0	2.832	34.951	5.65
3100.0	2.775	34.945	5.66
3200.0	2.704	34.937	5.64
3300.0	2.650	34.932	5.64
3400.0	2.600	34.925	5.65
3500.0	2.559	34.921	5.65
3600.0	2.520	34.916	5.65
3700.0	2.494	34.912	5.63
3800.0	2.471	34.909	5.63
3900.0	2.455	34.906	5.62
4000.0	2.438	34.904	5.60
4100.0	2.426	34.902	5.62
4200.0	2.414	34.899	5.62
4300.0	2.405	34.897	5.63
4400.0	2.402	34.894	5.62
4409.0	2.402	34.895	5.61

Station : 63	Cruise : BORD-EST2
Date : 31-05-88	Ship : Jean-Charcot
Bottom depth: 4355 m	Institute: Ifremer
Position : N 30 55.00 W 16 45.00	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	20.555	36.676	5.25
10.0	20.559	36.678	5.18
20.0	20.533	36.678	5.22
30.0	19.559	36.600	5.42
40.0	18.764	36.566	5.60
50.0	17.988	36.523	5.67
60.0	17.818	36.542	5.66
70.0	17.737	36.548	5.56
80.0	17.590	36.541	5.48
90.0	17.474	36.536	5.38
100.0	17.339	36.526	5.22
200.0	16.149	36.268	5.04
300.0	14.046	35.906	4.70
400.0	12.690	35.711	4.72
500.0	11.718	35.592	4.64
600.0	10.995	35.578	4.32
700.0	11.821	35.979	4.27
800.0	12.499	36.247	4.43
900.0	12.214	36.246	4.37
1000.0	11.842	36.247	4.30
1100.0	11.923	36.367	4.26
1200.0	12.016	36.448	4.28
1300.0	11.703	36.399	4.26
1400.0	10.607	36.169	4.27
1500.0	8.811	35.815	4.38
1600.0	7.685	35.636	4.66
1700.0	6.599	35.469	4.86
1800.0	5.991	35.378	5.00
1900.0	5.403	35.289	5.17
2000.0	4.790	35.196	5.31
2100.0	4.473	35.152	5.37
2200.0	4.153	35.108	5.42
2300.0	3.915	35.077	5.46
2400.0	3.708	35.049	5.50
2500.0	3.533	35.029	5.52
2600.0	3.336	35.005	5.60
2700.0	3.207	34.990	5.62
2800.0	3.078	34.976	5.65
2900.0	2.960	34.964	5.63
3000.0	2.891	34.958	5.58
3100.0	2.803	34.949	5.58
3200.0	2.746	34.942	5.61
3300.0	2.673	34.935	5.59
3400.0	2.630	34.930	5.61
3500.0	2.580	34.924	5.61
3600.0	2.539	34.919	5.59
3700.0	2.499	34.914	5.60
3800.0	2.465	34.910	5.58
3900.0	2.449	34.907	5.58
4000.0	2.432	34.905	5.59
4100.0	2.419	34.902	5.59
4200.0	2.407	34.900	5.60
4300.0	2.398	34.897	5.61
4381.0	2.400	34.895	5.61

Station : 64	Cruise : BORD-EST2
Date : 01-06-88	Ship : Jean-Charcot
Bottom depth: 4375 m	Institute: Ifremer
Position : N 30 32.12 W 17 16.59	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	21.043	36.802	5.18
10.0	21.048	36.802	5.17
20.0	21.033	36.794	5.24
30.0	19.827	36.709	5.45
40.0	19.574	36.698	5.50
50.0	18.976	36.665	5.50
60.0	18.252	36.623	5.63
70.0	18.176	36.657	5.54
80.0	18.000	36.624	5.48
90.0	17.880	36.619	5.39
100.0	17.833	36.618	5.23
200.0	16.210	36.293	4.76
300.0	14.338	35.969	4.53
400.0	12.970	35.761	4.44
500.0	12.063	35.647	4.36
600.0	11.318	35.568	4.31
700.0	10.645	35.537	3.99
800.0	10.090	35.536	3.78
900.0	9.626	35.582	3.87
1000.0	9.104	35.582	3.91
1100.0	8.661	35.585	4.03
1200.0	8.206	35.578	4.19
1300.0	7.961	35.598	4.38
1400.0	7.153	35.491	4.58
1500.0	6.748	35.442	4.79
1600.0	6.149	35.371	4.97
1700.0	5.840	35.344	5.11
1800.0	5.250	35.254	5.18
1900.0	4.859	35.198	5.25
2000.0	4.532	35.154	5.31
2100.0	4.204	35.109	5.39
2200.0	3.980	35.080	5.41
2300.0	3.800	35.060	5.41
2400.0	3.585	35.034	5.42
2500.0	3.410	35.013	5.44
2600.0	3.279	34.999	5.49
2700.0	3.144	34.984	5.49
2800.0	3.050	34.973	5.50
2900.0	2.942	34.963	5.58
3000.0	2.849	34.954	5.60
3100.0	2.784	34.947	5.60
3200.0	2.728	34.941	5.59
3300.0	2.668	34.934	5.59
3400.0	2.618	34.928	5.62
3500.0	2.575	34.924	5.61
3600.0	2.538	34.919	5.59
3700.0	2.504	34.915	5.58
3800.0	2.476	34.911	5.58
3900.0	2.458	34.908	5.57
4000.0	2.441	34.905	5.57
4100.0	2.426	34.902	5.56
4200.0	2.410	34.900	5.59
4300.0	2.401	34.898	5.60
4400.0	2.401	34.896	5.59
4408.0	2.401	34.896	5.59

Station : 65	Cruise : BORD-EST2
Date : 01-06-88	Ship : Jean-Charcot
Bottom depth: 4415 m	Institute: Ifremer
Position : N 30 8.00 W 17 47.50	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.073	36.866	5.20
10.0	21.077	36.865	5.12
20.0	21.082	36.865	5.12
30.0	20.348	36.795	5.27
40.0	20.072	36.821	5.44
50.0	19.822	36.828	5.51
60.0	18.832	36.770	5.63
70.0	18.453	36.733	5.58
80.0	18.289	36.714	5.44
90.0	18.161	36.702	5.38
100.0	18.030	36.681	5.22
200.0	17.209	36.515	5.13
300.0	14.679	36.024	4.55
400.0	13.329	35.815	4.55
500.0	12.331	35.676	4.42
600.0	11.394	35.571	4.31
700.0	10.712	35.532	4.03
800.0	10.255	35.573	3.85
900.0	9.901	35.649	3.87
1000.0	9.383	35.641	3.91
1100.0	8.803	35.612	4.00
1200.0	8.319	35.600	4.20
1300.0	7.853	35.568	4.39
1400.0	7.245	35.490	4.58
1500.0	6.596	35.427	4.81
1600.0	6.092	35.358	4.95
1700.0	5.577	35.287	5.09
1800.0	5.182	35.239	5.20
1900.0	4.870	35.199	5.28
2000.0	4.474	35.145	5.39
2100.0	4.218	35.115	5.47
2200.0	3.945	35.079	5.48
2300.0	3.708	35.050	5.54
2400.0	3.525	35.028	5.53
2500.0	3.348	35.008	5.56
2600.0	3.203	34.992	5.60
2700.0	3.075	34.978	5.65
2800.0	2.983	34.968	5.61
2900.0	2.888	34.959	5.60
3000.0	2.806	34.949	5.61
3100.0	2.731	34.942	5.63
3200.0	2.673	34.936	5.61
3300.0	2.621	34.930	5.59
3400.0	2.576	34.925	5.60
3500.0	2.543	34.920	5.60
3600.0	2.511	34.916	5.58
3700.0	2.484	34.913	5.58
3800.0	2.465	34.911	5.58
3900.0	2.445	34.907	5.58
4000.0	2.430	34.904	5.58
4100.0	2.412	34.902	5.59
4200.0	2.400	34.900	5.59
4300.0	2.395	34.898	5.59
4400.0	2.402	34.896	5.59
4470.0	2.410	34.896	5.58

Station : 66	Cruise : BORD-EST2
Date : 01-06-88	Ship : Jean-Charcot
Bottom depth: 4425 m	Institute: Ifremer
Position : N 29 42.13 W 18 22.98	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.162	36.852	4.98
10.0	21.132	36.849	5.04
20.0	20.600	36.760	5.15
30.0	19.993	36.800	5.29
40.0	19.651	36.815	5.27
50.0	19.224	36.798	5.35
60.0	18.841	36.795	5.38
70.0	18.482	36.779	5.31
80.0	18.319	36.764	5.21
90.0	18.255	36.753	5.21
100.0	18.241	36.750	5.16
200.0	17.394	36.542	5.01
300.0	14.906	36.045	4.60
400.0	13.201	35.778	4.61
500.0	12.041	35.629	4.43
600.0	11.263	35.560	4.23
700.0	10.447	35.527	3.93
800.0	9.887	35.541	3.75
900.0	9.303	35.530	3.74
1000.0	8.792	35.531	3.84
1100.0	8.490	35.567	4.01
1200.0	8.151	35.570	4.17
1300.0	7.581	35.526	4.39
1400.0	7.069	35.470	4.59
1500.0	6.433	35.389	4.79
1600.0	5.952	35.333	4.93
1700.0	5.522	35.280	5.09
1800.0	5.147	35.231	5.18
1900.0	4.748	35.177	5.27
2000.0	4.456	35.143	5.32
2100.0	4.190	35.109	5.41
2200.0	3.965	35.082	5.45
2300.0	3.740	35.054	5.49
2400.0	3.541	35.029	5.52
2500.0	3.384	35.012	5.55
2600.0	3.253	34.996	5.58
2700.0	3.120	34.982	5.57
2800.0	3.002	34.970	5.58
2900.0	2.909	34.959	5.61
3000.0	2.827	34.951	5.59
3100.0	2.755	34.944	5.59
3200.0	2.693	34.937	5.58
3300.0	2.631	34.930	5.54
3400.0	2.581	34.924	5.56
3500.0	2.536	34.919	5.55
3600.0	2.498	34.915	5.57
3700.0	2.475	34.912	5.59
3800.0	2.454	34.908	5.59
3900.0	2.435	34.906	5.59
4000.0	2.416	34.903	5.59
4100.0	2.401	34.901	5.60
4200.0	2.393	34.899	5.61
4300.0	2.394	34.897	5.60
4400.0	2.401	34.896	5.60
4459.0	2.406	34.896	5.61

Station : 67 Cruise : BORD-EST2

Date : 01-06-88 Ship : Jean-Charcot

Bottom depth: 4390 m Institute: Ifremer

Position : N 29 18.59
W 18 54.97

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.259	37.004	5.13
10.0	21.259	37.004	5.26
20.0	21.253	37.003	5.24
30.0	21.146	37.002	5.18
40.0	20.312	36.935	5.33
50.0	20.158	36.952	5.35
60.0	19.504	36.855	5.41
70.0	19.178	36.828	5.39
80.0	18.899	36.827	5.35
90.0	18.702	36.792	5.27
100.0	18.486	36.748	5.19
200.0	17.457	36.555	4.89
300.0	14.892	36.059	4.49
400.0	13.319	35.806	4.43
500.0	12.219	35.659	4.43
600.0	11.319	35.572	4.15
700.0	10.549	35.517	3.88
800.0	9.717	35.460	3.54
900.0	8.826	35.403	3.48
1000.0	8.209	35.382	3.58
1100.0	7.970	35.433	3.82
1200.0	7.695	35.455	4.05
1300.0	7.453	35.479	4.26
1400.0	7.107	35.475	4.43
1500.0	6.696	35.436	4.64
1600.0	6.160	35.367	4.81
1700.0	5.592	35.294	4.98
1800.0	5.144	35.232	5.11
1900.0	4.769	35.180	5.18
2000.0	4.394	35.131	5.26
2100.0	4.159	35.100	5.29
2200.0	3.903	35.069	5.34
2300.0	3.682	35.043	5.41
2400.0	3.510	35.023	5.46
2500.0	3.358	35.007	5.47
2600.0	3.212	34.990	5.47
2700.0	3.086	34.976	5.49
2800.0	2.975	34.965	5.51
2900.0	2.889	34.957	5.52
3000.0	2.804	34.949	5.58
3100.0	2.741	34.942	5.58
3200.0	2.677	34.934	5.60
3300.0	2.634	34.930	5.61
3400.0	2.587	34.924	5.59
3500.0	2.550	34.921	5.62
3600.0	2.513	34.916	5.57
3700.0	2.487	34.913	5.56
3800.0	2.465	34.909	5.58
3900.0	2.445	34.906	5.59
4000.0	2.424	34.903	5.59
4100.0	2.412	34.901	5.60
4200.0	2.394	34.898	5.62
4300.0	2.394	34.897	5.63
4400.0	2.402	34.895	5.62
4420.0	2.404	34.895	5.61

Station : 68 Cruise : BORD-EST2

Date : 02-06-88 Ship : Jean-Charcot

Bottom depth: 4445 m Institute: Ifremer

Position : N 28 52.18
W 19 22.54

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.475	37.025	5.09
10.0	21.487	37.026	5.05
20.0	21.492	37.026	5.10
30.0	21.493	37.025	5.13
40.0	21.224	37.014	5.19
50.0	20.686	36.993	5.27
60.0	20.024	36.891	5.39
70.0	19.303	36.827	5.54
80.0	19.026	36.803	5.45
90.0	18.880	36.802	5.38
100.0	18.615	36.768	5.28
200.0	16.256	36.283	4.67
300.0	14.510	35.994	4.55
400.0	13.133	35.781	4.48
500.0	12.061	35.641	4.35
600.0	11.181	35.556	4.12
700.0	10.351	35.505	3.78
800.0	9.719	35.481	3.63
900.0	9.037	35.451	3.58
1000.0	8.454	35.440	3.69
1100.0	8.038	35.441	3.87
1200.0	7.726	35.456	4.06
1300.0	7.312	35.441	4.27
1400.0	6.692	35.380	4.49
1500.0	6.154	35.321	4.64
1600.0	5.716	35.276	4.81
1700.0	5.210	35.214	4.93
1800.0	4.793	35.163	4.99
1900.0	4.541	35.133	5.07
2000.0	4.301	35.110	5.17
2100.0	4.139	35.098	5.25
2200.0	3.933	35.071	5.31
2300.0	3.714	35.046	5.35
2400.0	3.563	35.030	5.36
2500.0	3.410	35.013	5.39
2600.0	3.284	34.999	5.40
2700.0	3.102	34.977	5.44
2800.0	3.002	34.968	5.47
2900.0	2.889	34.955	5.42
3000.0	2.809	34.946	5.45
3100.0	2.737	34.941	5.46
3200.0	2.673	34.934	5.49
3300.0	2.627	34.928	5.50
3400.0	2.575	34.923	5.50
3500.0	2.535	34.919	5.52
3600.0	2.500	34.915	5.54
3700.0	2.478	34.911	5.56
3800.0	2.451	34.908	5.56
3900.0	2.434	34.905	5.57
4000.0	2.415	34.902	5.59
4100.0	2.398	34.900	5.61
4200.0	2.389	34.898	5.62
4300.0	2.384	34.896	5.58
4400.0	2.396	34.895	5.61
4478.0	2.406	34.895	5.59

Station : 69	Cruise : BORD-EST2
Date : 02-06-88	Ship : Jean-Charcot
Bottom depth: 4450 m	Institute: Ifremer
Position : N 28 26.08 W 19 47.54	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.450	37.077	5.11
10.0	21.450	37.077	4.99
20.0	21.447	37.077	5.00
30.0	21.446	37.077	4.98
40.0	20.885	37.040	5.21
50.0	20.716	37.041	5.20
60.0	20.051	36.952	5.25
70.0	19.544	36.898	5.32
80.0	19.287	36.876	5.26
90.0	19.188	36.870	5.15
100.0	18.994	36.851	5.05
200.0	16.984	36.420	4.57
300.0	14.907	36.059	4.49
400.0	13.452	35.819	4.55
500.0	12.366	35.680	4.42
600.0	11.346	35.573	4.16
700.0	10.557	35.520	3.87
800.0	9.813	35.488	3.64
900.0	9.061	35.458	3.62
1000.0	8.160	35.389	3.64
1100.0	7.925	35.434	3.88
1200.0	7.140	35.343	4.00
1300.0	6.720	35.330	4.20
1400.0	6.311	35.303	4.44
1500.0	5.742	35.240	4.55
1600.0	5.367	35.204	4.67
1700.0	5.025	35.172	4.79
1800.0	4.700	35.139	4.90
1900.0	4.481	35.117	4.99
2000.0	4.258	35.093	5.06
2100.0	4.075	35.073	5.12
2200.0	3.865	35.052	5.18
2300.0	3.670	35.031	5.28
2400.0	3.534	35.018	5.36
2500.0	3.375	35.002	5.41
2600.0	3.245	34.989	5.46
2700.0	3.114	34.975	5.49
2800.0	3.047	34.970	5.50
2900.0	2.957	34.961	5.53
3000.0	2.869	34.954	5.53
3100.0	2.785	34.945	5.52
3200.0	2.724	34.940	5.52
3300.0	2.674	34.934	5.54
3400.0	2.625	34.927	5.53
3500.0	2.579	34.922	5.54
3600.0	2.526	34.917	5.51
3700.0	2.503	34.914	5.54
3800.0	2.476	34.911	5.56
3900.0	2.453	34.908	5.56
4000.0	2.434	34.905	5.59
4100.0	2.416	34.902	5.60
4200.0	2.402	34.899	5.60
4300.0	2.399	34.898	5.61
4400.0	2.404	34.896	5.59
4489.0	2.411	34.896	5.59

Station : 70	Cruise : BORD-EST2
Date : 02-06-88	Ship : Jean-Charcot
Bottom depth: 4515 m	Institute: Ifremer
Position : N 28 0.00 W 20 15.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.714	37.097	5.06
10.0	21.632	37.094	5.08
20.0	21.579	37.092	5.13
30.0	21.555	37.092	5.06
40.0	21.004	37.016	5.10
50.0	20.843	37.035	5.18
60.0	20.691	37.035	5.15
70.0	20.602	37.043	5.20
80.0	20.520	37.036	5.18
90.0	19.867	36.925	5.27
100.0	19.148	36.825	5.38
200.0	17.905	36.639	5.06
300.0	15.280	36.120	4.59
400.0	13.923	35.900	4.51
500.0	12.463	35.688	4.35
600.0	11.463	35.582	3.93
700.0	10.499	35.487	3.62
800.0	9.729	35.449	3.53
900.0	9.024	35.423	3.57
1000.0	7.899	35.298	3.44
1100.0	7.498	35.294	3.60
1200.0	7.236	35.341	3.90
1300.0	6.922	35.348	4.14
1400.0	6.635	35.357	4.36
1500.0	6.254	35.326	4.54
1600.0	5.761	35.267	4.69
1700.0	5.327	35.217	4.80
1800.0	4.983	35.180	4.90
1900.0	4.675	35.145	4.98
2000.0	4.359	35.109	5.07
2100.0	4.118	35.081	5.11
2200.0	3.914	35.060	5.18
2300.0	3.748	35.040	5.23
2400.0	3.545	35.019	5.27
2500.0	3.406	35.004	5.35
2600.0	3.288	34.993	5.43
2700.0	3.172	34.982	5.49
2800.0	3.084	34.974	5.57
2900.0	2.997	34.966	5.57
3000.0	2.922	34.958	5.59
3100.0	2.806	34.948	5.57
3200.0	2.731	34.941	5.59
3300.0	2.676	34.934	5.57
3400.0	2.626	34.928	5.58
3500.0	2.576	34.924	5.61
3600.0	2.536	34.920	5.61
3700.0	2.508	34.916	5.60
3800.0	2.483	34.913	5.61
3900.0	2.462	34.909	5.63
4000.0	2.440	34.906	5.63
4100.0	2.418	34.903	5.63
4200.0	2.408	34.901	5.64
4300.0	2.402	34.898	5.63
4400.0	2.405	34.897	5.63
4500.0	2.411	34.896	5.65
4559.0	2.417	34.896	5.63

Station : 71	Cruise : BORD-EST2
Date : 02-06-88	Ship : Jean-Charcot
Bottom depth: 4505 m	Institute: Ifremer
Position : N 27 26.58 W 20 22.37	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	21.517	37.003	4.96
10.0	21.520	37.002	5.07
20.0	21.524	37.003	5.09
30.0	20.723	36.926	5.34
40.0	20.542	36.938	5.38
50.0	20.431	36.966	5.38
60.0	19.976	36.897	5.35
70.0	19.503	36.852	5.30
80.0	19.256	36.851	5.23
90.0	19.069	36.845	5.08
100.0	19.012	36.845	5.05
200.0	17.663	36.574	4.67
300.0	15.188	36.106	4.43
400.0	13.453	35.825	3.96
500.0	12.332	35.678	4.10
600.0	11.145	35.539	3.68
700.0	10.256	35.461	3.41
800.0	9.417	35.395	3.32
900.0	8.733	35.381	3.41
1000.0	8.035	35.340	3.49
1100.0	7.575	35.341	3.70
1200.0	7.233	35.344	3.96
1300.0	6.914	35.343	4.14
1400.0	6.387	35.307	4.38
1500.0	5.809	35.255	4.57
1600.0	5.498	35.230	4.73
1700.0	5.032	35.180	4.86
1800.0	4.744	35.151	4.96
1900.0	4.467	35.121	5.03
2000.0	4.218	35.093	5.10
2100.0	4.031	35.072	5.14
2200.0	3.820	35.049	5.20
2300.0	3.641	35.030	5.27
2400.0	3.449	35.009	5.28
2500.0	3.331	34.997	5.40
2600.0	3.208	34.984	5.36
2700.0	3.113	34.975	5.37
2800.0	3.006	34.964	5.42
2900.0	2.918	34.958	5.54
3000.0	2.840	34.952	5.60
3100.0	2.761	34.944	5.60
3200.0	2.711	34.939	5.58
3300.0	2.655	34.932	5.57
3400.0	2.600	34.927	5.56
3500.0	2.549	34.921	5.57
3600.0	2.521	34.917	5.57
3700.0	2.495	34.914	5.57
3800.0	2.456	34.909	5.57
3900.0	2.426	34.906	5.59
4000.0	2.411	34.903	5.61
4100.0	2.396	34.900	5.61
4200.0	2.387	34.898	5.61
4300.0	2.392	34.897	5.61
4400.0	2.397	34.896	5.61
4500.0	2.406	34.895	5.61
4538.0	2.410	34.895	5.60

Station : 72	Cruise : BORD-EST2
Date : 03-06-88	Ship : Jean-Charcot
Bottom depth: 4460 m	Institute: Ifremer
Position : N 26 55.55 W 20 30.03	

PRESSURE dbar	TEMPERATURE deg.cels.	SALINITY	DISS. OXYGEN ml/l
1.0	21.673	36.954	5.06
10.0	21.681	36.955	5.20
20.0	21.679	36.954	5.18
30.0	21.624	36.956	5.20
40.0	20.944	37.007	5.28
50.0	20.970	37.114	5.23
60.0	20.735	37.080	5.30
70.0	20.267	37.009	5.36
80.0	19.356	36.846	5.41
90.0	19.222	36.821	5.23
100.0	19.210	36.867	5.22
200.0	17.385	36.502	4.67
300.0	15.017	36.069	4.45
400.0	13.394	35.814	4.37
500.0	12.100	35.645	4.20
600.0	11.075	35.540	3.92
700.0	10.171	35.459	3.56
800.0	9.189	35.365	3.29
900.0	8.302	35.297	3.27
1000.0	7.695	35.271	3.43
1100.0	7.103	35.237	3.60
1200.0	6.862	35.279	3.90
1300.0	6.633	35.308	4.10
1400.0	6.273	35.288	4.31
1500.0	5.874	35.257	4.48
1600.0	5.331	35.201	4.64
1700.0	5.077	35.179	4.80
1800.0	4.724	35.145	4.90
1900.0	4.469	35.119	4.97
2000.0	4.275	35.097	5.03
2100.0	4.004	35.065	5.11
2200.0	3.767	35.042	5.15
2300.0	3.601	35.024	5.20
2400.0	3.443	35.008	5.22
2500.0	3.307	34.994	5.28
2600.0	3.193	34.981	5.28
2700.0	3.104	34.972	5.29
2800.0	3.017	34.963	5.31
2900.0	2.928	34.956	5.35
3000.0	2.844	34.949	5.41
3100.0	2.777	34.944	5.46
3200.0	2.711	34.939	5.56
3300.0	2.658	34.932	5.56
3400.0	2.608	34.927	5.54
3500.0	2.559	34.922	5.55
3600.0	2.517	34.917	5.56
3700.0	2.484	34.913	5.57
3800.0	2.453	34.909	5.59
3900.0	2.435	34.905	5.57
4000.0	2.415	34.903	5.59
4100.0	2.398	34.901	5.57
4200.0	2.389	34.899	5.62
4300.0	2.392	34.898	5.60
4400.0	2.402	34.896	5.59
4500.0	2.411	34.896	5.60
4502.0	2.411	34.896	5.61

Station : 73	Cruise : BORD-EST2
Date : 03-06-88	Ship : Jean-Charcot
Bottom depth: 4425 m	Institute: Ifremer
Position : N 26 20.06 W 20 38.66	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.951	37.071	5.09
10.0	21.926	37.069	5.03
20.0	21.897	37.069	5.01
30.0	21.815	37.065	5.09
40.0	21.122	37.089	5.25
50.0	20.839	37.085	5.25
60.0	20.484	37.033	5.32
70.0	19.769	36.953	5.29
80.0	19.354	36.898	5.23
90.0	19.099	36.846	5.10
100.0	18.865	36.802	4.96
200.0	16.991	36.414	4.55
300.0	15.107	36.079	4.56
400.0	13.463	35.825	4.45
500.0	12.215	35.660	4.29
600.0	11.078	35.540	4.00
700.0	10.084	35.442	3.58
800.0	9.036	35.353	3.34
900.0	8.138	35.283	3.39
1000.0	7.519	35.249	3.53
1100.0	7.090	35.267	3.79
1200.0	6.813	35.281	4.05
1300.0	6.446	35.283	4.29
1400.0	5.985	35.250	4.48
1500.0	5.590	35.214	4.62
1600.0	5.191	35.177	4.78
1700.0	4.888	35.148	4.88
1800.0	4.607	35.124	4.99
1900.0	4.284	35.091	5.07
2000.0	4.089	35.072	5.18
2100.0	3.878	35.051	5.23
2200.0	3.681	35.032	5.27
2300.0	3.535	35.016	5.31
2400.0	3.404	35.003	5.33
2500.0	3.295	34.991	5.35
2600.0	3.178	34.980	5.36
2700.0	3.072	34.969	5.36
2800.0	2.966	34.959	5.39
2900.0	2.860	34.949	5.38
3000.0	2.792	34.942	5.37
3100.0	2.729	34.936	5.38
3200.0	2.670	34.931	5.40
3300.0	2.614	34.926	5.42
3400.0	2.570	34.921	5.43
3500.0	2.522	34.917	5.49
3600.0	2.489	34.913	5.50
3700.0	2.460	34.910	5.57
3800.0	2.434	34.907	5.60
3900.0	2.410	34.903	5.61
4000.0	2.394	34.901	5.63
4100.0	2.390	34.899	5.65
4200.0	2.384	34.897	5.65
4300.0	2.387	34.897	5.65
4400.0	2.396	34.895	5.64
4468.0	2.402	34.895	5.65

Station : 74	Cruise : BORD-EST2
Date : 03-06-88	Ship : Jean-Charcot
Bottom depth: 4415 m	Institute: Ifremer
Position : N 25 48.13 W 20 47.46	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	22.116	37.127	4.94
10.0	22.118	37.126	5.06
20.0	21.996	37.115	5.13
30.0	21.822	37.094	5.13
40.0	21.392	37.059	5.23
50.0	20.863	37.058	5.34
60.0	20.678	37.046	5.42
70.0	20.205	36.998	5.39
80.0	19.763	36.960	5.34
90.0	19.543	36.927	5.28
100.0	19.340	36.898	5.27
200.0	17.091	36.446	4.63
300.0	15.075	36.087	4.53
400.0	13.269	35.795	4.53
500.0	11.929	35.626	4.23
600.0	11.019	35.528	3.82
700.0	9.833	35.408	3.35
800.0	9.034	35.360	3.37
900.0	8.271	35.311	3.47
1000.0	7.683	35.284	3.62
1100.0	7.224	35.276	3.80
1200.0	6.775	35.263	3.98
1300.0	6.433	35.274	4.26
1400.0	5.994	35.238	4.41
1500.0	5.360	35.174	4.61
1600.0	5.087	35.161	4.76
1700.0	4.826	35.138	4.87
1800.0	4.545	35.114	4.96
1900.0	4.318	35.093	5.06
2000.0	4.121	35.074	5.13
2100.0	3.924	35.053	5.20
2200.0	3.710	35.032	5.28
2300.0	3.534	35.016	5.34
2400.0	3.436	35.006	5.39
2500.0	3.292	34.992	5.41
2600.0	3.134	34.976	5.44
2700.0	3.037	34.967	5.43
2800.0	2.950	34.959	5.46
2900.0	2.863	34.950	5.47
3000.0	2.792	34.943	5.45
3100.0	2.711	34.937	5.47
3200.0	2.653	34.931	5.48
3300.0	2.589	34.925	5.48
3400.0	2.540	34.919	5.50
3500.0	2.505	34.916	5.56
3600.0	2.472	34.912	5.59
3700.0	2.435	34.908	5.59
3800.0	2.416	34.905	5.59
3900.0	2.404	34.903	5.60
4000.0	2.389	34.900	5.63
4100.0	2.384	34.899	5.64
4200.0	2.380	34.898	5.64
4300.0	2.383	34.896	5.65
4400.0	2.392	34.895	5.65
4450.0	2.396	34.895	5.65

Station : 75	Cruise : BORD-EST2
Date : 04-06-88	Ship : Jean-Charcot
Bottom depth: 4380 m	Institute: Ifremer
Position : N 25 14.89 W 20 54.62	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.937	37.148	5.02
10.0	21.936	37.147	5.14
20.0	21.848	37.145	5.07
30.0	21.595	37.128	5.13
40.0	21.396	37.117	5.25
50.0	21.126	37.127	5.27
60.0	20.825	37.071	5.27
70.0	20.359	37.025	5.27
80.0	20.095	37.011	5.20
90.0	19.794	36.957	5.07
100.0	19.650	36.942	4.92
200.0	18.458	36.745	4.99
300.0	15.295	36.115	4.31
400.0	13.452	35.823	4.13
500.0	12.212	35.658	4.27
600.0	11.360	35.565	4.18
700.0	10.342	35.477	3.82
800.0	9.128	35.353	3.31
900.0	7.901	35.204	3.09
1000.0	7.563	35.213	3.29
1100.0	7.188	35.245	3.65
1200.0	6.752	35.243	3.90
1300.0	6.333	35.226	4.10
1400.0	5.838	35.199	4.35
1500.0	5.423	35.181	4.57
1600.0	4.973	35.141	4.75
1700.0	4.685	35.116	4.88
1800.0	4.337	35.086	5.03
1900.0	4.129	35.071	5.11
2000.0	3.948	35.054	5.14
2100.0	3.762	35.035	5.20
2200.0	3.607	35.021	5.25
2300.0	3.475	35.007	5.30
2400.0	3.354	34.996	5.31
2500.0	3.254	34.986	5.35
2600.0	3.154	34.977	5.38
2700.0	3.079	34.970	5.39
2800.0	2.980	34.960	5.41
2900.0	2.885	34.953	5.40
3000.0	2.806	34.945	5.42
3100.0	2.735	34.938	5.41
3200.0	2.680	34.933	5.42
3300.0	2.615	34.927	5.42
3400.0	2.565	34.921	5.38
3500.0	2.518	34.916	5.39
3600.0	2.480	34.912	5.45
3700.0	2.459	34.909	5.50
3800.0	2.427	34.905	5.50
3900.0	2.405	34.903	5.52
4000.0	2.398	34.901	5.55
4100.0	2.392	34.899	5.56
4200.0	2.393	34.899	5.59
4300.0	2.393	34.897	5.59
4400.0	2.398	34.895	5.59
4410.0	2.398	34.895	5.60

Station : 76	Cruise : BORD-EST2
Date : 04-06-88	Ship : Jean-Charcot
Bottom depth: 4340 m	Institute: Ifremer
Position : N 24 42.18 W 21 2.93	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	22.188	36.912	4.93
10.0	22.185	36.912	4.94
20.0	22.182	36.911	4.98
30.0	22.050	36.910	5.06
40.0	21.478	36.950	5.13
50.0	21.326	36.953	5.18
60.0	20.518	36.889	5.23
70.0	20.117	36.884	5.20
80.0	20.055	36.926	5.15
90.0	19.858	36.901	5.10
100.0	19.746	36.891	5.00
200.0	17.176	36.421	4.19
300.0	15.183	36.092	3.96
400.0	13.339	35.793	3.46
500.0	12.101	35.620	3.28
600.0	10.617	35.446	3.16
700.0	9.432	35.319	2.90
800.0	8.206	35.170	2.67
900.0	7.391	35.091	2.86
1000.0	6.945	35.090	3.15
1100.0	6.559	35.107	3.47
1200.0	6.312	35.136	3.76
1300.0	6.253	35.194	4.08
1400.0	5.902	35.202	4.35
1500.0	5.477	35.177	4.58
1600.0	4.989	35.141	4.77
1700.0	4.730	35.118	4.87
1800.0	4.485	35.098	5.00
1900.0	4.237	35.078	5.07
2000.0	4.009	35.057	5.15
2100.0	3.834	35.042	5.22
2200.0	3.646	35.023	5.26
2300.0	3.499	35.011	5.30
2400.0	3.427	35.004	5.32
2500.0	3.305	34.992	5.34
2600.0	3.186	34.980	5.38
2700.0	3.086	34.970	5.38
2800.0	2.994	34.961	5.40
2900.0	2.919	34.955	5.41
3000.0	2.823	34.945	5.39
3100.0	2.756	34.939	5.38
3200.0	2.696	34.935	5.42
3300.0	2.651	34.931	5.46
3400.0	2.618	34.927	5.48
3500.0	2.552	34.920	5.45
3600.0	2.515	34.917	5.51
3700.0	2.471	34.912	5.53
3800.0	2.440	34.908	5.54
3900.0	2.420	34.905	5.57
4000.0	2.394	34.902	5.59
4100.0	2.382	34.899	5.59
4200.0	2.379	34.898	5.60
4300.0	2.378	34.897	5.60
4379.0	2.384	34.896	5.61

Station : 77	Cruise : BORD-EST2
Date : 04-06-88	Ship : Jean-Charcot
Bottom depth: 4350 m	Institute: Ifremer
Position : N 24 6.65 W 21 10.68	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	22.153	36.769	5.08
10.0	21.907	36.765	5.09
20.0	21.884	36.796	5.08
30.0	21.901	36.819	5.05
40.0	21.194	36.809	5.18
50.0	20.899	36.853	5.19
60.0	20.234	36.775	5.19
70.0	19.929	36.743	4.88
80.0	19.613	36.724	4.66
90.0	19.542	36.746	4.54
100.0	19.525	36.777	4.58
200.0	16.880	36.351	3.80
300.0	15.073	36.071	3.89
400.0	13.269	35.764	3.04
500.0	11.771	35.575	3.03
600.0	10.589	35.417	2.78
700.0	9.299	35.256	2.50
800.0	8.293	35.163	2.58
900.0	7.458	35.086	2.75
1000.0	7.077	35.096	3.10
1100.0	6.655	35.102	3.36
1200.0	6.455	35.153	3.71
1300.0	6.295	35.200	4.08
1400.0	5.771	35.158	4.26
1500.0	5.495	35.167	4.47
1600.0	5.123	35.147	4.64
1700.0	4.816	35.127	4.81
1800.0	4.518	35.102	4.90
1900.0	4.286	35.080	5.01
2000.0	4.085	35.066	5.12
2100.0	3.908	35.048	5.15
2200.0	3.743	35.034	5.22
2300.0	3.561	35.014	5.30
2400.0	3.465	35.005	5.30
2500.0	3.354	34.996	5.32
2600.0	3.227	34.984	5.35
2700.0	3.124	34.974	5.36
2800.0	3.014	34.962	5.38
2900.0	2.912	34.954	5.37
3000.0	2.829	34.946	5.37
3100.0	2.780	34.941	5.35
3200.0	2.700	34.933	5.36
3300.0	2.642	34.928	5.35
3400.0	2.594	34.923	5.35
3500.0	2.548	34.918	5.36
3600.0	2.508	34.915	5.42
3700.0	2.483	34.913	5.49
3800.0	2.456	34.909	5.50
3900.0	2.437	34.906	5.51
4000.0	2.413	34.903	5.55
4100.0	2.401	34.901	5.55
4200.0	2.395	34.899	5.57
4300.0	2.395	34.898	5.58
4394.0	2.398	34.896	5.61

Station : 78	Cruise : BORD-EST2
Date : 04-06-88	Ship : Jean-Charcot
Bottom depth: 4325 m	Institute: Ifremer
Position : N 23 33.57 W 21 11.88	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	22.272	36.657	4.94
10.0	22.272	36.660	4.98
20.0	22.000	36.632	5.06
30.0	21.825	36.606	5.02
40.0	21.684	36.599	5.03
50.0	21.211	36.681	5.04
60.0	19.949	36.646	4.54
70.0	20.141	36.853	4.55
80.0	20.043	36.901	4.75
90.0	19.502	36.774	4.63
100.0	19.201	36.719	4.41
200.0	16.167	36.146	2.72
300.0	14.333	35.852	2.30
400.0	13.118	35.709	2.42
500.0	11.755	35.522	2.26
600.0	10.767	35.433	2.74
700.0	9.729	35.338	2.84
800.0	8.521	35.228	2.83
900.0	7.909	35.182	2.97
1000.0	6.985	35.109	3.27
1100.0	6.691	35.121	3.52
1200.0	6.353	35.159	3.78
1300.0	6.151	35.191	4.10
1400.0	5.796	35.181	4.29
1500.0	5.333	35.158	4.56
1600.0	4.967	35.130	4.72
1700.0	4.674	35.106	4.85
1800.0	4.383	35.082	4.98
1900.0	4.148	35.063	5.06
2000.0	3.926	35.043	5.14
2100.0	3.766	35.028	5.20
2200.0	3.615	35.015	5.24
2300.0	3.501	35.007	5.29
2400.0	3.400	34.997	5.31
2500.0	3.287	34.988	5.34
2600.0	3.192	34.979	5.34
2700.0	3.079	34.969	5.35
2800.0	2.993	34.961	5.39
2900.0	2.897	34.953	5.39
3000.0	2.812	34.945	5.40
3100.0	2.744	34.938	5.39
3200.0	2.671	34.931	5.38
3300.0	2.617	34.926	5.36
3400.0	2.579	34.922	5.35
3500.0	2.538	34.918	5.38
3600.0	2.503	34.914	5.41
3700.0	2.464	34.909	5.45
3800.0	2.434	34.907	5.50
3900.0	2.411	34.905	5.54
4000.0	2.403	34.902	5.57
4100.0	2.394	34.900	5.56
4200.0	2.390	34.899	5.57
4300.0	2.388	34.897	5.60
4359.0	2.390	34.897	5.60

Station : 79	Cruise : BORD-EST2
Date : 05-06-88	Ship : Jean-Charcot
Bottom depth: 4280 m	Institute: Ifremer
Position : N 23 0.00 W 21 10.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.916	36.561	5.08
10.0	21.848	36.569	5.18
20.0	21.678	36.611	5.25
30.0	21.633	36.651	5.28
40.0	21.663	36.785	5.22
50.0	20.588	36.834	4.90
60.0	20.415	36.962	4.85
70.0	20.257	36.986	4.97
80.0	20.190	37.000	4.85
90.0	19.950	36.971	4.79
100.0	19.784	36.950	4.78
200.0	15.584	36.048	2.46
300.0	14.097	35.846	2.41
400.0	12.465	35.605	2.37
500.0	11.110	35.461	2.70
600.0	10.196	35.373	2.75
700.0	8.777	35.191	2.46
800.0	7.705	35.067	2.55
900.0	7.266	35.064	2.82
1000.0	6.944	35.099	3.19
1100.0	6.485	35.079	3.43
1200.0	6.455	35.159	3.74
1300.0	6.341	35.219	4.13
1400.0	5.890	35.191	4.31
1500.0	5.386	35.156	4.50
1600.0	5.127	35.141	4.68
1700.0	4.777	35.111	4.83
1800.0	4.523	35.094	4.95
1900.0	4.263	35.073	5.05
2000.0	4.021	35.051	5.15
2100.0	3.841	35.036	5.20
2200.0	3.708	35.024	5.24
2300.0	3.573	35.014	5.27
2400.0	3.420	34.999	5.34
2500.0	3.278	34.985	5.33
2600.0	3.188	34.978	5.37
2700.0	3.075	34.968	5.38
2800.0	3.006	34.962	5.39
2900.0	2.917	34.954	5.40
3000.0	2.807	34.946	5.44
3100.0	2.722	34.937	5.43
3200.0	2.655	34.931	5.37
3300.0	2.606	34.925	5.37
3400.0	2.551	34.920	5.38
3500.0	2.515	34.917	5.42
3600.0	2.491	34.914	5.48
3700.0	2.460	34.910	5.48
3800.0	2.434	34.907	5.50
3900.0	2.417	34.904	5.53
4000.0	2.402	34.902	5.56
4100.0	2.387	34.900	5.57
4200.0	2.383	34.898	5.58
4300.0	2.382	34.897	5.60
4335.0	2.385	34.897	5.58

Station : 80	Cruise : BORD-EST2
Date : 05-06-88	Ship : Jean-Charcot
Bottom depth: 4310 m	Institute: Ifremer
Position : N 22 27.21 W 21 7.88	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	22.013	36.479	4.98
10.0	22.001	36.481	5.00
20.0	21.997	36.482	5.01
30.0	21.941	36.601	4.96
40.0	21.781	36.627	4.95
50.0	21.547	36.664	4.99
60.0	21.206	36.671	4.91
70.0	20.658	36.590	4.53
80.0	20.062	36.708	4.29
90.0	19.375	36.600	4.14
100.0	18.772	36.529	3.85
200.0	15.130	35.927	2.18
300.0	13.849	35.832	2.67
400.0	12.487	35.667	3.03
500.0	11.152	35.493	2.91
600.0	9.560	35.253	2.34
700.0	8.190	35.088	2.22
800.0	7.305	34.996	2.44
900.0	6.750	34.968	2.56
1000.0	6.605	35.034	3.08
1100.0	6.164	35.030	3.37
1200.0	6.388	35.159	3.77
1300.0	6.013	35.153	4.04
1400.0	5.581	35.137	4.23
1500.0	5.192	35.120	4.44
1600.0	4.855	35.104	4.65
1700.0	4.512	35.075	4.80
1800.0	4.292	35.061	4.94
1900.0	4.081	35.047	5.01
2000.0	3.888	35.032	5.12
2100.0	3.716	35.020	5.20
2200.0	3.576	35.009	5.23
2300.0	3.459	35.000	5.27
2400.0	3.347	34.991	5.29
2500.0	3.234	34.980	5.30
2600.0	3.122	34.970	5.32
2700.0	3.021	34.960	5.33
2800.0	2.945	34.956	5.35
2900.0	2.875	34.949	5.37
3000.0	2.826	34.947	5.39
3100.0	2.750	34.940	5.44
3200.0	2.660	34.930	5.40
3300.0	2.608	34.926	5.39
3400.0	2.563	34.921	5.38
3500.0	2.523	34.917	5.45
3600.0	2.490	34.914	5.47
3700.0	2.461	34.910	5.49
3800.0	2.429	34.907	5.52
3900.0	2.410	34.903	5.55
4000.0	2.395	34.902	5.56
4100.0	2.385	34.899	5.58
4200.0	2.384	34.898	5.59
4300.0	2.384	34.897	5.59
4350.0	2.389	34.897	5.59

Station : 81	Cruise	: BORD-EST2	
Date : 05-06-88	Ship	: Jean-Charcot	
Bottom depth: 4315 m	Institute:	Ifremer	
Position : N 21 53.00 W 21 6.00			

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	22.019	36.138	5.60
10.0	21.866	36.122	5.61
20.0	21.294	36.298	5.27
30.0	21.030	36.491	5.12
40.0	20.652	36.650	4.79
50.0	20.328	36.735	4.56
60.0	20.473	36.969	4.76
70.0	20.374	36.991	4.84
80.0	19.661	36.765	4.68
90.0	19.697	36.880	4.58
100.0	19.799	36.953	4.83
200.0	15.732	36.093	2.92
300.0	13.891	35.859	2.83
400.0	12.259	35.605	2.61
500.0	10.767	35.406	2.24
600.0	9.453	35.245	2.15
700.0	8.429	35.118	2.25
800.0	7.488	35.030	2.41
900.0	6.932	35.012	2.73
1000.0	6.564	35.022	3.04
1100.0	6.404	35.086	3.45
1200.0	6.195	35.122	3.77
1300.0	5.877	35.138	4.07
1400.0	5.482	35.137	4.33
1500.0	5.069	35.112	4.54
1600.0	4.764	35.096	4.71
1700.0	4.419	35.068	4.87
1800.0	4.176	35.048	4.98
1900.0	3.996	35.040	5.09
2000.0	3.832	35.029	5.17
2100.0	3.709	35.023	5.22
2200.0	3.562	35.008	5.28
2300.0	3.436	34.998	5.30
2400.0	3.335	34.990	5.31
2500.0	3.226	34.980	5.34
2600.0	3.119	34.969	5.35
2700.0	3.021	34.960	5.38
2800.0	2.926	34.953	5.37
2900.0	2.861	34.949	5.38
3000.0	2.782	34.942	5.38
3100.0	2.718	34.936	5.38
3200.0	2.655	34.931	5.40
3300.0	2.593	34.925	5.41
3400.0	2.554	34.921	5.41
3500.0	2.512	34.917	5.44
3600.0	2.478	34.913	5.48
3700.0	2.435	34.908	5.52
3800.0	2.411	34.906	5.53
3900.0	2.389	34.902	5.55
4000.0	2.379	34.900	5.58
4100.0	2.375	34.898	5.58
4200.0	2.375	34.897	5.59
4300.0	2.379	34.897	5.59
4350.0	2.385	34.896	5.57

Station : 82	Cruise	: BORD-EST2	
Date : 05-06-88	Ship	: Jean-Charcot	
Bottom depth: 4225 m	Institute:	Ifremer	
Position : N 21 18.95 W 21 4.08			

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.933	36.249	5.33
10.0	21.627	36.236	5.44
20.0	20.917	36.366	5.33
30.0	20.536	36.348	5.26
40.0	19.675	36.437	4.78
50.0	19.389	36.476	4.48
60.0	19.088	36.533	4.46
70.0	18.769	36.499	4.46
80.0	18.750	36.560	4.49
90.0	18.487	36.513	4.42
100.0	18.323	36.532	4.31
200.0	16.115	36.238	3.57
300.0	14.116	35.868	2.82
400.0	12.369	35.600	2.24
500.0	11.302	35.484	2.49
600.0	9.813	35.287	2.16
700.0	8.623	35.154	2.19
800.0	7.485	35.031	2.39
900.0	6.922	35.011	2.69
1000.0	6.387	34.991	3.00
1100.0	6.222	35.035	3.35
1200.0	6.322	35.130	3.71
1300.0	5.965	35.145	4.03
1400.0	5.560	35.142	4.29
1500.0	5.087	35.116	4.55
1600.0	4.720	35.088	4.72
1700.0	4.465	35.074	4.86
1800.0	4.194	35.053	5.01
1900.0	3.945	35.032	5.13
2000.0	3.789	35.020	5.22
2100.0	3.636	35.009	5.26
2200.0	3.497	34.997	5.30
2300.0	3.393	34.990	5.36
2400.0	3.298	34.985	5.35
2500.0	3.175	34.973	5.40
2600.0	3.082	34.967	5.41
2700.0	3.004	34.962	5.41
2800.0	2.909	34.954	5.40
2900.0	2.818	34.944	5.39
3000.0	2.753	34.938	5.39
3100.0	2.686	34.933	5.36
3200.0	2.635	34.928	5.36
3300.0	2.578	34.923	5.37
3400.0	2.538	34.919	5.40
3500.0	2.502	34.916	5.44
3600.0	2.468	34.912	5.47
3700.0	2.430	34.908	5.52
3800.0	2.405	34.904	5.55
3900.0	2.388	34.902	5.58
4000.0	2.377	34.901	5.59
4100.0	2.374	34.898	5.59
4200.0	2.375	34.897	5.57
4259.0	2.382	34.897	5.59

Station : 83	Cruise : BORD-EST2
Date : 06-06-88	Ship : Jean-Charcot
Bottom depth: 4030 m	Institute: Ifremer
Position : N 20 44.00 W 21 1.00	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	22.035	36.416	5.14
10.0	21.319	36.360	5.33
20.0	21.042	36.388	5.27
30.0	20.824	36.408	5.18
40.0	20.839	36.533	4.95
50.0	20.634	36.658	4.60
60.0	20.219	36.762	4.36
70.0	19.753	36.722	4.38
80.0	19.556	36.702	4.38
90.0	19.501	36.722	4.29
100.0	18.669	36.547	3.93
200.0	15.282	35.953	2.75
300.0	13.533	35.728	2.05
400.0	12.141	35.567	2.16
500.0	11.057	35.472	2.80
600.0	9.720	35.298	2.44
700.0	8.499	35.167	2.46
800.0	7.525	35.054	2.62
900.0	6.739	35.008	2.92
1000.0	6.347	35.006	3.18
1100.0	6.288	35.086	3.63
1200.0	6.031	35.114	3.90
1300.0	5.793	35.146	4.22
1400.0	5.362	35.124	4.45
1500.0	4.836	35.080	4.63
1600.0	4.536	35.061	4.79
1700.0	4.260	35.041	4.90
1800.0	4.011	35.024	5.02
1900.0	3.839	35.016	5.16
2000.0	3.657	35.001	5.22
2100.0	3.536	34.993	5.27
2200.0	3.413	34.985	5.29
2300.0	3.319	34.978	5.30
2400.0	3.231	34.973	5.32
2500.0	3.134	34.965	5.35
2600.0	3.050	34.961	5.40
2700.0	2.985	34.958	5.45
2800.0	2.922	34.955	5.40
2900.0	2.854	34.948	5.38
3000.0	2.769	34.942	5.39
3100.0	2.706	34.936	5.40
3200.0	2.644	34.929	5.37
3300.0	2.588	34.924	5.33
3400.0	2.538	34.919	5.34
3500.0	2.486	34.914	5.38
3600.0	2.444	34.910	5.41
3700.0	2.401	34.905	5.48
3800.0	2.371	34.902	5.53
3900.0	2.358	34.899	5.53
4000.0	2.362	34.899	5.49
4088.0	2.370	34.898	5.51

Station : 84	Cruise : BORD-EST2
Date : 06-06-88	Ship : Jean-Charcot
Bottom depth: 3820 m	Institute: Ifremer
Position : N 20 12.29 W 20 58.17	

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	21.994	36.301	5.23
10.0	21.645	36.286	5.29
20.0	21.265	36.258	5.44
30.0	20.834	36.270	5.29
40.0	20.763	36.296	5.00
50.0	20.216	36.508	4.40
60.0	19.675	36.588	4.08
70.0	19.188	36.523	4.01
80.0	18.760	36.539	3.89
90.0	18.712	36.618	3.90
100.0	18.911	36.716	4.20
200.0	14.266	35.742	1.65
300.0	12.641	35.507	1.35
400.0	11.577	35.457	1.84
500.0	10.174	35.253	1.52
600.0	9.008	35.119	1.66
700.0	8.154	35.040	2.02
800.0	7.399	34.967	2.27
900.0	6.712	34.929	2.44
1000.0	6.529	34.987	3.01
1100.0	6.194	35.015	3.34
1200.0	5.946	35.056	3.70
1300.0	5.715	35.087	3.97
1400.0	5.413	35.095	4.29
1500.0	5.031	35.092	4.51
1600.0	4.635	35.062	4.69
1700.0	4.343	35.042	4.85
1800.0	4.156	35.035	5.00
1900.0	3.915	35.015	5.10
2000.0	3.752	35.006	5.17
2100.0	3.588	34.992	5.22
2200.0	3.456	34.984	5.29
2300.0	3.359	34.981	5.32
2400.0	3.249	34.972	5.35
2500.0	3.179	34.968	5.36
2600.0	3.079	34.959	5.40
2700.0	3.007	34.956	5.42
2800.0	2.953	34.957	5.42
2900.0	2.870	34.950	5.44
3000.0	2.793	34.942	5.43
3100.0	2.716	34.936	5.41
3200.0	2.657	34.931	5.41
3300.0	2.598	34.924	5.40
3400.0	2.552	34.921	5.45
3500.0	2.501	34.915	5.45
3600.0	2.456	34.911	5.48
3700.0	2.410	34.906	5.47
3800.0	2.384	34.902	5.45
3839.0	2.378	34.901	5.44

Station	: 85	Cruise	: BORD-EST2
Date	: 06-06-88	Ship	: Jean-Charcot
Bottom depth	: 3590 m	Institute	: Ifremer
Position	: N 19 42.01 W 20 56.14		

PRESSURE	TEMPERATURE	SALINITY	DISS. OXYGEN
dbar	deg.cels.		ml/l
1.0	22.445	36.497	4.96
10.0	22.102	36.474	5.13
20.0	21.631	36.426	5.20
30.0	21.428	36.455	5.23
40.0	21.365	36.503	5.11
50.0	21.299	36.512	5.01
60.0	21.149	36.504	4.89
70.0	20.298	36.453	4.74
80.0	19.336	36.492	4.29
90.0	19.209	36.576	4.23
100.0	18.802	36.557	4.22
200.0	15.752	36.032	2.44
300.0	13.154	35.612	1.45
400.0	12.079	35.515	1.70
500.0	10.466	35.315	1.68
600.0	8.969	35.105	1.42
700.0	8.138	35.011	1.60
800.0	7.463	34.987	2.19
900.0	6.820	34.954	2.44
1000.0	6.418	34.957	2.78
1100.0	6.133	34.996	3.16
1200.0	5.943	35.064	3.65
1300.0	5.595	35.071	3.94
1400.0	5.133	35.053	4.14
1500.0	4.890	35.063	4.50
1600.0	4.613	35.053	4.64
1700.0	4.303	35.035	4.83
1800.0	4.114	35.029	4.96
1900.0	3.899	35.015	5.07
2000.0	3.724	35.003	5.13
2100.0	3.568	34.993	5.19
2200.0	3.462	34.986	5.24
2300.0	3.353	34.980	5.28
2400.0	3.261	34.974	5.32
2500.0	3.165	34.966	5.35
2600.0	3.077	34.960	5.37
2700.0	2.988	34.953	5.39
2800.0	2.904	34.947	5.43
2900.0	2.846	34.943	5.46
3000.0	2.802	34.943	5.48
3100.0	2.736	34.937	5.50
3200.0	2.670	34.932	5.48
3300.0	2.603	34.926	5.49
3400.0	2.537	34.919	5.51
3500.0	2.494	34.914	5.51
3600.0	2.454	34.909	5.47
3608.0	2.442	34.908	5.45

7 Listings of the rosette sampled parameters

Some of the values listed below are followed by the letter "d", which means that they are doubtfull. All salinity an dissolved oxygen values which deviated from the fitted NBIS profiles by more than 2.8 r.m.s. differences were marked in this way. Some silicate values at stations 47, 52 and 80 should also be regarded as doubtfull (see paragraph 4.3 above) although they are not marked.

Station : 1 Cruise : BORD-EST2

Date : 10-05-88 Ship : Jean-Charcot

Bottom depth: 1139 m Institute: Ifremer

Position : N 60 7.78
W 6 0.31

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	35.311	6.66	10.0	4.6
47.0	35.304	6.52	10.6	4.7
99.0	35.308	6.57	10.5	4.6
148.0		6.43		
197.0	35.317	6.40	10.8	4.7
247.0	35.321	6.39	10.7	4.6
348.0	35.306	6.41	11.1	4.8
497.0	35.247	6.41	11.8	5.3
596.0	35.192 d	6.56	12.0	5.3
746.0	34.963	6.78	13.2	7.0
996.0	34.909	6.85	14.4	10.2

Station : 3 Cruise : BORD-EST2

Date : 11-05-88 Ship : Jean-Charcot

Bottom depth: 625 m Institute: Ifremer

Position : N 60 12.05
W 7 44.95

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
606.0	35.230	6.26	12.8	7.5
9.0	35.300 d	6.54	10.5	4.8
48.0		6.45	10.8	5.6
98.0	35.311	6.40	11.0	5.2
148.0	35.310	6.35	11.3	5.2
197.0	35.307	6.33	11.6	5.4
248.0	35.301	6.28	12.0	5.6
349.0	35.294	6.25	12.8	5.5
444.0	35.274	6.23	12.9	6.2

Station : 2 Cruise : BORD-EST2

Date : 11-05-88 Ship : Jean-Charcot

Bottom depth: 1171 m Institute: Ifremer

Position : N 60 14.90
W 6 50.11

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
10.0	35.325	6.68	8.7	4.2
54.0	35.315	6.63	9.7	
97.0	35.320	6.53	9.7	5.2
152.0	35.320	6.51	10.6	5.5
200.0	35.316	6.42	10.8	5.6
245.0	35.311	6.40	10.7	5.6
346.0	35.293	6.30	11.7	6.0
496.0	35.246	6.51	11.5	6.3
602.0	35.041	6.71		
985.0	34.915	6.91	12.6	7.4
1113.0	34.912	6.93	13.3	10.8

Station : 4 Cruise : BORD-EST2

Date : 11-05-88 Ship : Jean-Charcot

Bottom depth: 1064 m Institute: Ifremer

Position : N 59 41.91
W 8 23.54

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
1.0	35.326	6.85	8.9	2.5
49.0	35.337	6.46 d	10.4	3.4
96.0	35.336	6.33	11.2	4.3
149.0	35.328	6.28	11.9	5.0
197.0	35.322	6.24	12.4	5.3
248.0	35.312	6.20	12.3	5.0
348.0	35.276	6.24	13.1	5.3
497.0	35.282	6.25	12.9	5.8
596.0	35.286	6.24	13.0	5.5
748.0	35.256	6.17	13.5	6.2
998.0	35.207	5.75	16.1	8.6
1021.0	35.204	5.86	15.6	8.3

Station : 5	Cruise : BORD-EST2
Date : 11-05-88	Ship : Jean-Charcot
Bottom depth: 1525 m	Institute: Ifremer
Position : N 59 12.07 W 8 59.86	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
49.0	35.351	6.35	d	10.4	4.0
100.0	35.344	6.43			
149.0	35.333	6.25			
199.0	35.343	6.29		12.2	5.1
248.0	35.316	6.34		12.2	5.1
348.0	35.318	6.30		12.4	5.2
545.0	35.308	6.26		13.4	5.9
748.0	35.269	6.18		16.5	8.6
999.0	35.215	5.62		17.7	10.6
1246.0	35.094	5.74		17.7	10.6
1246.0	35.092	5.77			
1454.0	34.997	6.03		18.0	11.8

Station : 7	Cruise : BORD-EST2
Date : 12-05-88	Ship : Jean-Charcot
Bottom depth: 1757 m	Institute: Ifremer
Position : N 58 34.40 W 11 32.67	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
9.0	35.368	6.90	d	7.0	0.8
49.0	35.357	6.52	d	8.3	2.0
99.0	35.359	6.27		10.4	3.7
148.0	35.358	6.32		10.0	3.6
248.0	35.358	6.11		11.7	4.9
344.0	35.345	6.11		12.1	5.0
497.0	35.332	6.11		12.2	5.2
749.0	35.285	6.11		13.1	5.6
997.0	35.216	5.39		17.1	9.3
1247.0	35.079	5.62		18.4	11.0
1498.0	34.978	6.11		18.0	12.0
1675.0	34.966	6.16		17.9	14.1

Station : 6	Cruise : BORD-EST2
Date : 11-05-88	Ship : Jean-Charcot
Bottom depth: 1802 m	Institute: Ifremer
Position : N 58 47.03 W 9 54.83	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
8.0	35.357	6.69	d	7.1	0.6
47.0	35.364	6.57	d	7.8	1.3
100.0	35.356	6.45		9.5	2.8
147.0	35.351	6.49		9.9	3.1
247.0	35.341	6.12		12.7	5.2
346.0	35.327	6.00		13.4	5.6
496.0	35.311	6.02		13.6	5.6
746.0	35.285	5.82	d	15.0	6.9
995.0	35.224	5.42		17.5	9.2
1244.0	35.085	5.65		18.4	10.8
1497.0	34.975	6.08		18.6	12.2
1757.0	34.958	6.10		19.1	16.7

Station : 8	Cruise : BORD-EST2
Date : 11-05-88	Ship : Jean-Charcot
Bottom depth: 2098 m	Institute: Ifremer
Position : N 57 43.37 W 10 24.40	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
50.0	35.356	6.50	d	8.9	2.0
99.0	35.356	6.32			
148.0	35.353	6.40		10.2	3.2
241.0	35.348	6.23		11.6	4.8
347.0	35.346	6.16		11.9	4.9
496.0	35.319	6.27		12.0	5.0
746.0	35.286	6.23		13.1	5.5
998.0	35.232	5.47		16.5	8.5
1257.0	35.096	5.52		18.5	10.7
1507.0	34.986	5.99		17.9	10.9
2010.0	34.961	6.14		18.1	15.5
2060.0	34.961	6.05		18.6	19.4

Station : 9	Cruise : BORD-EST2
Date : 12-05-88	Ship : Jean-Charcot
Bottom depth: 2304 m	Institute: Ifremer
Position : N 57 7.94 W 10 37.43	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
47.0	35.362	6.28	d	11.9	4.3
98.0	35.375	6.54		12.3	4.6
148.0	35.368	6.18		12.2	4.7
247.0	35.368	6.10		12.5	4.9
347.0	35.351			12.9	5.2
495.0	35.345	6.09		13.8	5.8
746.0	35.303	5.98		13.7	5.8
995.0	35.248	5.39		17.2	8.8
1246.0	35.143	5.35		18.7	10.7
1497.0	35.007	5.88		18.6	10.9
1997.0	34.957	6.17		18.5	13.5
2252.0	34.967	6.09		18.6	17.0

Station : 11	Cruise : BORD-EST2
Date : 13-05-88	Ship : Jean-Charcot
Bottom depth: 2609 m	Institute: Ifremer
Position : N 56 15.13 W 11 38.06	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
8.0	35.348	6.64	d	6.0	0.3
48.0	35.339	d 6.32	d	7.4	1.7
99.0	35.365	6.12		11.5	4.5
148.0	35.361	6.12			
248.0	35.372	6.14		11.5	4.6
347.0	35.370	6.18		11.8	4.6
496.0	35.373	6.13		11.8	4.6
746.0	35.362	5.99		12.7	5.0
996.0	35.341	5.82		13.6	5.8
1243.0	35.268	5.26		17.2	8.7
1496.0	35.140	5.36		19.0	10.7
1997.0	34.958	6.15		18.6	11.8

Station : 10	Cruise : BORD-EST2
Date : 13-05-88	Ship : Jean-Charcot
Bottom depth: 2455 m	Institute: Ifremer
Position : N 56 41.94 W 11 20.10	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
51.0	35.367	6.27	d	6.5	0.7
101.0	35.363	6.08		8.9	2.5
153.0	35.366	6.12		11.8	4.8
246.0		6.12			
354.0	35.375	6.15		12.0	4.7
504.0	35.368	6.14		11.9	4.9
744.0	35.337	5.87		13.2	5.7
996.0	35.285	5.66		15.1	7.2
1242.0	35.192	5.11		18.6	10.7
1495.0	35.038	5.72		18.3	11.0
1998.0	34.954	6.18		17.7	13.0
2458.0	34.960	5.91			

Station : 12	Cruise : BORD-EST2
Date : 13-05-88	Ship : Jean-Charcot
Bottom depth: 2793 m	Institute: Ifremer
Position : N 55 49.64 W 11 59.95	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l

Station : 13	Cruise : BORD-EST2
Date : 13-05-88	Ship : Jean-Charcot
Bottom depth: 2788 m	Institute: Ifremer
Position : N 55 49.75 W 11 59.60	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
997.0	35.290	5.88	18.0 d	18.5 d
1238.0	35.215	5.07	17.9 d	18.5 d
1484.0	35.074	5.59	18.1 d	18.4 d
1484.0	35.075	5.71 d		
1996.0	34.955	6.18	17.9 d	18.3 d
1996.0	34.958	6.19		
2500.0	34.957	6.10		
2500.0	34.954	6.10		
2500.0	34.956	6.11		
2500.0	34.963	6.09		
2500.0	34.957	6.10		
2739.0	34.956	5.89	19.3 d	30.7 d

Station : 15	Cruise : BORD-EST2
Date : 14-05-88	Ship : Jean-Charcot
Bottom depth: 2873 m	Institute: Ifremer
Position : N 54 55.75 W 13 24.84	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	35.375 d	6.62 d	5.9	0.5
47.0	35.376 d	6.57 d	6.0	0.5
98.0	35.386	6.14	9.2	3.3
147.0	35.370	6.04	11.5	5.0
246.0	35.351	6.05	11.6	5.1
345.0	35.362	6.13	11.3	4.9
495.0	35.365	6.16	11.5	4.9
747.0	35.346	5.94	12.4	5.6
995.0	35.269	5.48	15.3	8.1
1244.0	35.173	5.04	18.7	11.5
1495.0	35.023	5.80	17.9	11.6
1997.0	34.942	6.21	17.5	13.1
2497.0	34.952	6.11	18.2	19.1
2822.0	34.942	5.73		

Station : 14	Cruise : BORD-EST2
Date : 14-05-88	Ship : Jean-Charcot
Bottom depth: 2841 m	Institute: Ifremer
Position : N 55 23.11 W 12 45.23	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
6.0	35.353	6.68 d		
47.0	35.338 d	6.63 d	5.9	0.7
98.0	35.362	6.11 d	10.9	4.0
245.0	35.362	6.19	11.7	4.7
346.0	35.366	6.20	11.6	4.7
495.0	35.349	6.04	12.2	5.2
748.0	35.321	5.97	13.2	5.9
1246.0	35.154	5.27	18.3	11.1
1495.0	35.023	5.80	18.0	11.3
1998.0	34.946	6.24	17.5	13.1
2499.0	34.961	6.08	18.7	21.3
2818.0	34.936	5.76	20.6	37.1

Station : 16	Cruise : BORD-EST2
Date : 14-05-88	Ship : Jean-Charcot
Bottom depth: 2749 m	Institute: Ifremer
Position : N 54 30.10 W 14 12.41	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	35.294 d	6.64	4.6 d	0.5 d
47.0	35.350	6.61	4.5 d	0.5 d
97.0	35.370 d	6.16 d	10.6 d	4.8 d
146.0	35.342 d	6.16	10.9 d	4.8 d
246.0	35.364	6.15	11.0 d	4.8 d
346.0	35.370	6.16	10.9 d	4.8 d
495.0	35.362 d	6.07 d	11.3 d	5.1 d
746.0	35.314	5.83	12.7 d	6.2 d
995.0	35.233	4.99	17.0 d	10.2 d
1245.0	35.092	5.49	17.2 d	11.5 d
1495.0	34.988	5.98	17.0 d	11.5 d
1997.0	34.918 d	6.23	16.8 d	13.7 d
2499.0	34.932 d	5.97	18.7 d	
2732.0	34.942	5.81	19.9 d	

Station : 17 Cruise : BORD-EST2

Date : 15-05-88 Ship : Jean-Charcot

Bottom depth: 2809 m Institute: Ifremer

Position : N 54 3.33
W 14 55.90

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l		SILICATE micromol/l	
7.0	35.402	6.29	d	6.4	d	0.7	d
48.0	35.412	6.24	d	7.7	d	1.6	d
98.0	35.445	5.99		11.2	d	4.6	d
146.0	35.432	6.02		11.3	d	4.7	d
246.0	35.388	5.93		12.0	d	5.2	d
347.0	35.358	6.04		12.2	d	5.4	d
495.0	35.311	5.74		14.1	d	6.5	d
743.0	35.249	5.26		16.9	d	9.2	d
997.0	35.194	5.07		19.0	d	11.7	d
1243.0	35.022	5.63		19.4	d	12.1	d
1497.0	34.965	6.06		18.9	d	12.0	d
1997.0	34.938	6.27		18.5	d	13.4	d
2497.0	34.946	6.07		19.4	d	23.1	d
2765.0	34.950	6.15	d	21.9	d	37.1	d

Station : 19 Cruise : BORD-EST2

Date : 15-05-88 Ship : Jean-Charcot

Bottom depth: 3368 m Institute: Ifremer

Position : N 53 9.10
W 16 23.81

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
8.0	35.444	6.23	d	7.3	1.9
48.0	35.430	6.21	d	7.6	2.0
99.0	35.461	6.02	d	10.8	4.8
149.0	35.444	6.00		10.9	4.9
248.0	35.404	6.01		11.5	4.9
347.0	35.357	5.97		12.2	5.4
498.0	35.339	5.74		13.2	6.2
751.0	35.287	5.10	d	16.6	8.8
996.0	35.193	4.98		19.2	11.9
1247.0	35.011	5.71		18.5	11.8
1494.0	34.939	6.14		18.3	11.4
1997.0	34.928	6.31		17.9	12.4
2498.0	34.962	6.08		18.5	20.4
2999.0	34.949	5.74	d		29.7
3297.0	34.922	5.55			33.0

Station : 18 Cruise : BORD-EST2

Date : 15-05-88 Ship : Jean-Charcot

Bottom depth: 3089 m Institute: Ifremer

Position : N 53 36.00
W 15 40.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l		SILICATE micromol/l	
8.0	35.421	6.36	d	7.1	d	0.6	d
47.0	35.421	6.31	d	7.1	d	0.8	d
97.0	35.432	6.01		11.2	d	4.2	d
146.0	35.415	6.03		11.3	d	4.4	d
246.0	35.404	6.05		11.0	d	4.4	d
339.0	35.401	6.04		11.4	d	4.4	d
496.0	35.380	5.99		11.8	d	4.7	d
745.0	35.367	6.14	d	12.1	d	4.6	d
997.0	35.270	5.30	d	16.6	d	8.4	d
1497.0	34.981	5.88		18.8	d	11.3	d
1997.0	34.926	6.29		18.2	d	11.8	d
3001.0		5.74		21.0	d	37.6	d
3031.0	34.938	5.70		21.1	d	39.2	d

Station : 20 Cruise : BORD-EST2

Date : 15-05-88 Ship : Jean-Charcot

Bottom depth: 3582 m Institute: Ifremer

Position : N 52 45.00
W 17 0.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
6.0	35.422	6.27	d	7.3	2.1
46.0	35.416	6.24	d	7.5	2.4
96.0	35.368	5.89	d	11.8	5.3
146.0	35.366	5.95		11.4	5.2
246.0	35.295	d 5.97		12.2	5.7
344.0	35.248	5.95		12.7	6.1
494.0	35.167	5.48	d	15.0	8.0
745.0	35.213	4.91		18.2	11.0
995.0	35.070	5.40		18.1	11.7
1246.0	34.959	5.98		18.0	11.3
1495.0	34.925	6.25		17.1	11.2
1996.0	34.933	6.30		17.1	12.4
2499.0	34.961	6.12		17.4	18.5
3000.0	34.953	5.82		18.8	34.1
3503.0	34.919	5.53		23.5	48.0

Station : 21	Cruise : BORD-EST2
Date : 16-05-88	Ship : Jean-Charcot
Bottom depth: 4134 m	Institute: Ifremer
Position : N 52 7.00 W 17 0.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	35.451	6.22	5.4	1.2
46.0	35.458 d	6.19 d	5.7	1.2
96.0	35.487	5.94 d	10.6	4.2
146.0	35.471	5.96	10.5	4.3
246.0	35.448	5.97	10.5	4.5
346.0	35.446	5.96	10.7	4.4
494.0	35.318	5.51	13.5	6.4
745.0	35.118	4.74	18.8	11.2
995.0	35.057	5.36	18.9	11.8
1246.0	34.957	5.90	18.3	11.4
1496.0	34.923	6.22	17.9	11.0
1998.0	34.925	6.33	17.2	11.9
2499.0	34.955	6.15	18.0	16.7
3001.0	34.954	5.84	19.7	32.9
4004.0	34.912	5.56	22.6	47.5
4128.0	34.913	5.54	22.6	48.2

Station : 23	Cruise : BORD-EST2
Date : 16-05-88	Ship : Jean-Charcot
Bottom depth: 4656 m	Institute: Ifremer
Position : N 50 51.00 W 16 48.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	35.439	6.43	5.2	0.4
7.0	35.440	6.49		
46.0	35.440 d	6.52 d	5.1	0.5
247.0	35.444	6.05	10.4	4.4
346.0	35.447	5.98	10.7	4.4
496.0	35.442	6.00	10.5	
745.0	35.448	5.80	11.6	
996.0	35.165	4.69	19.1	11.1
1246.0	35.116	5.21	18.9	11.9
1496.0	34.981	5.82	18.6	11.5
1998.0	34.929	6.27	17.8	12.1
2499.0	34.949	6.17	18.0	15.7
3001.0	34.956	5.81	20.0	33.2
3951.0	34.918	5.58	22.2	46.1
4614.0	34.910	5.55	22.5	47.8

Station : 22	Cruise : BORD-EST2
Date : 16-05-88	Ship : Jean-Charcot
Bottom depth: 4579 m	Institute: Ifremer
Position : N 51 30.00 W 16 50.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
46.0	35.472	6.15	7.6	0.4
96.0	35.468	5.92	10.4	0.5
147.0	35.432	5.90	10.9	0.5
245.0	35.356	5.93	11.5	4.3
345.0	35.357	5.93	11.5	4.3
495.0	35.322	5.72	12.7	4.3
745.0	35.083	4.94	17.8	4.7
995.0	35.234	4.89	18.1	10.8
1245.0	34.997	5.68	18.2	11.6
1997.0	34.905	6.35	17.0	11.2
2498.0	34.962	6.14	17.4	11.8
2999.0	34.958	5.84	19.4	32.5
4002.0	34.919	5.58	21.1	46.6
4526.0	34.918	5.55	21.2	48.0

Station : 24	Cruise : BORD-EST2
Date : 17-05-88	Ship : Jean-Charcot
Bottom depth: 4826 m	Institute: Ifremer
Position : N 50 13.07 W 16 45.02	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
6.0	35.474	6.18	5.9	1.5
45.0	35.511	6.13	6.8	2.4
95.0	35.462	6.00	10.5	4.2
146.0		5.95	11.0	4.6
246.0	35.426	5.98	11.1	4.7
345.0	35.365 d	5.63 d	12.1	6.3
499.0	35.341	5.55	13.5	6.4
742.0	35.239	5.95 d	18.5	11.9
994.0	35.282	4.88	18.7	12.0
1245.0	35.043	5.65	18.3	12.0
1496.0	34.931	6.16	17.7	11.6
2499.0	34.966	5.96	19.1	23.3
3001.0	34.949	5.75	21.0	35.9
4003.0	34.917	5.60	22.0	46.0
4214.0	34.907	5.58	22.4	47.0

Station : 25	Cruise : BORD-EST2
Date : 17-05-88	Ship : Jean-Charcot
Bottom depth: 4839 m	Institute: Ifremer
Position : N 49 33.00 W 16 40.40	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
4.0	35.428 d	6.19	5.7	0.9
44.0	35.466	6.23	5.7	0.7
145.0	35.450	5.94	10.4	4.7
244.0	35.457	5.98	10.4	4.5
344.0	35.443	5.94	10.7	4.7
494.0	35.387 d	5.74	11.6	5.1
744.0	35.249	4.93	16.8	9.5
994.0	35.248 d	4.74	18.7	11.8
1245.0	35.137	5.36	18.1	12.1
1495.0	35.028	5.80	17.8	12.3
1997.0	34.955	6.13	17.4	14.4
2999.0	34.949	5.76	20.0	34.9
4002.0	34.917	5.58	21.9	46.4
4805.0	34.907	5.54	22.1	48.9

Station : 27	Cruise : BORD-EST2
Date : 18-05-88	Ship : Jean-Charcot
Bottom depth: 4826 m	Institute: Ifremer
Position : N 48 35.11 W 16 3.36	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
3.0	35.504	6.25	3.7	0.6
43.0	35.523	6.18	5.2	1.3
94.0	35.544	5.85	9.8	3.8
144.0	35.523	5.86	10.2	4.1
244.0	35.499	5.93	10.5	4.2
343.0	35.475	5.89	10.9	4.4
492.0	35.457	6.03	10.7	4.4
743.0	35.342	5.03	16.1	7.9
994.0	35.405	4.54	19.0	10.9
1244.0	35.334	4.95	19.2	12.1
1496.0	35.002 d	5.70	18.8	12.3
1996.0	34.939	6.28	18.1	13.7
2499.0	34.961	6.04	19.0	21.6
2999.0		5.80	21.0	33.6
4015.0	34.917	5.59	22.8	45.9
4778.0	34.907	5.58		

Station : 26	Cruise : BORD-EST2
Date : 17-05-88	Ship : Jean-Charcot
Bottom depth: 4781 m	Institute: Ifremer
Position : N 49 5.00 W 16 20.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
4.0	35.537	6.33	4.1 d	0.4
43.0	35.531	6.26	4.9 d	0.6
145.0	35.526	5.90	10.3 d	4.0
245.0	35.515	5.93	10.4 d	4.0
344.0	35.498	5.92	10.4 d	4.1
494.0	35.454 d	5.88	11.3 d	4.6
745.0	35.383 d	5.14	15.0 d	6.8
995.0	35.403	4.53	18.8 d	10.2
1246.0	35.311	4.93	19.3 d	11.4
1997.0	34.919 d	6.26	18.3 d	11.9
2499.0	34.935 d	6.09	18.8 d	18.4
3000.0	34.945	5.78	20.8 d	32.8
4004.0	34.913	5.57	22.5 d	45.9
4744.0	34.908	5.54	23.1 d	48.3

Station : 28	Cruise : BORD-EST2
Date : 18-05-88	Ship : Jean-Charcot
Bottom depth: 4828 m	Institute: Ifremer
Position : N 48 6.08 W 15 45.03	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
4.0	35.510	6.26	4.1 d	0.8
43.0	35.519	6.15	9.9 d	0.6
93.0	35.528	5.85	9.9 d	4.0
144.0	35.503	5.91	9.9 d	4.1
244.0	35.466	5.83	11.0 d	4.7
343.0	35.437	5.77	11.6 d	5.0
493.0	35.409	5.49	12.9 d	5.9
743.0	35.411	4.53	18.0 d	10.2
996.0	35.482	4.65	18.2 d	11.6
1245.0	35.197 d	5.35	18.6 d	12.3
1497.0	34.996	5.94	18.3 d	12.1
1997.0	34.939	6.24	17.8 d	13.4
2498.0	34.971	5.98	18.9 d	22.0
2999.0	34.952	5.77	20.5 d	33.0
4002.0	34.918	5.57	22.2 d	45.2
4788.0	34.906	5.54	22.7 d	47.5

Station : 29 Cruise : BORD-EST2

Date : 18-05-88 Ship : Jean-Charcot

Bottom depth: 4819 m Institute: Ifremer

Position : N 47 35.00
W 15 30.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
6.0	35.557	6.38	3.2	0.5
45.0	35.541	6.13 d	4.7	1.1
93.0	35.560	5.81	10.0	4.0
144.0	35.546	5.80	10.3	4.2
243.0	35.491 d	5.78	10.7	4.3
343.0	35.475	5.69 d	11.2	4.7
493.0	35.423	5.32	13.6	6.1
743.0	35.411	4.51	17.9	9.9
844.0	35.544	4.41	18.1	10.4
1245.0	35.111	5.45	18.9	12.0
1496.0	34.953	6.08	18.1	11.6
1746.0	34.930	6.24	18.0	11.8
2497.0	34.971	5.93	19.4	
2999.0	34.947	5.75	20.8	33.9
4003.0	34.909	5.58	22.3	44.9
4763.0	34.903	5.56	23.1	47.5

Station : 31 Cruise : BORD-EST2

Date : 19-05-88 Ship : Jean-Charcot

Bottom depth: 4809 m Institute: Ifremer

Position : N 46 34.00
W 14 55.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
6.0	35.594	6.35	2.2	0.6
46.0		6.00	5.0	2.2
93.0	35.582	5.89	8.4	3.2
141.0	35.576	5.93	9.4	3.5
242.0	35.550	5.82	9.4	3.6
342.0	35.529	5.86	10.0	3.6
492.0	35.516	5.92	9.9	3.6
743.0	35.449	5.40	13.4	5.4
993.0	35.607	4.38	18.3	9.8
1246.0	35.417	4.82	19.2	11.4
1498.0	35.138	5.54	18.4	11.8
1997.0	34.939	6.22	18.2	12.3
2497.0	34.967	6.03	18.8	19.5
3000.0	34.952	5.77	20.6	32.5
4000.0	34.917	5.56	22.8	44.9
4741.0	34.908	5.54	23.4	47.3

Station : 30 Cruise : BORD-EST2

Date : 18-05-88 Ship : Jean-Charcot

Bottom depth: 4819 m Institute: Ifremer

Position : N 47 5.14
W 15 11.36

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
10.0	35.523	6.22	3.7	0.7
48.0	35.545	6.11	4.3	1.3
95.0	35.546	5.83	9.9	4.0
143.0	35.529	5.88	9.9	4.2
243.0	35.500	5.77	10.7	4.3
342.0	35.469	5.62	11.8	5.0
742.0	35.414	4.50	18.5	9.7
992.0	35.539	4.63	18.5	11.0
1245.0	35.090	5.51	19.3	11.7
1495.0	34.973	6.00	18.9	11.6
1998.0	34.949	6.19	18.3	13.4
2498.0	34.957	6.06	18.8	19.4
3000.0	34.949	5.78	21.0	32.2
4003.0	34.912	5.58	22.7	45.0
4756.0	34.903	5.54	23.0	48.0

Station : 32 Cruise : BORD-EST2

Date : 19-05-88 Ship : Jean-Charcot

Bottom depth: 4593 m Institute: Ifremer

Position : N 46 3.06
W 14 39.26

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
8.0	35.626	6.50	0.7	0.4
49.0	35.626	6.03	3.7	1.1
93.0	35.601 d	5.97 d	5.6	2.0
142.0	35.586	5.82	8.8	3.4
242.0	35.574	5.95 d	8.9	3.4
342.0	35.549	5.82	9.3	3.7
492.0	35.492	5.45 d	12.0	4.8
742.0	35.530 d	4.55	17.1	8.3
993.0	35.801	4.33	17.6	9.7
1245.0	35.448	4.89	18.9	11.5
1495.0	35.065	5.74	19.1	11.9
1998.0	34.970	6.13	18.8	13.9
3000.0	34.952	5.76	21.2	35.5
4002.0	34.918	5.57	23.6	47.6
4556.0	34.901	5.56	23.7	49.5

Station : 33 Cruise : BORD-EST2

Date : 19-05-88 Ship : Jean-Charcot

Bottom depth: 4801 m Institute: Ifremer

Position : N 45 35.06
W 14 20.89

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
5.0	35.610	6.53	0.9	0.7
45.0	35.597	6.00	3.0	1.3
93.0	35.609	5.83	7.1	2.9
142.0	35.591	5.84	8.6	3.5
242.0	35.570	5.83	9.3	3.7
344.0	35.508	5.37	11.8	4.8
492.0	35.468	5.35	11.8	4.8
644.0	35.350	4.80	16.9	8.5
893.0	35.656	4.36	18.1	10.1
1244.0	35.368	5.15	18.9	13.2
1494.0	35.047	5.76	18.8	12.2
1846.0	34.969	6.12	18.8	12.7
2497.0	34.974	5.89	20.0	
2999.0	34.950	5.77	21.2	35.7
4002.0	34.919	5.56	22.7	47.3
4759.0	34.887 d	5.55	23.4	49.6

Station : 35 Cruise : BORD-EST2

Date : 20-05-88 Ship : Jean-Charcot

Bottom depth: 4971 m Institute: Ifremer

Position : N 44 29.90
W 13 46.16

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
12.0	35.629	6.40	0.5	1.0
52.0	35.625	5.92	3.0	1.6
98.0	35.663	5.73	7.1	2.6
148.0	35.618	5.83	7.8	3.2
247.0	35.586	5.79	9.1	3.6
347.0	35.526	5.59	10.8	4.3
496.0	35.492	5.25	13.6	5.7
745.0	35.689	4.28	16.9	8.6
995.0	35.936	4.29	17.4	10.0
1244.0	35.691	4.69	18.3	11.5
1494.0	35.265	5.36	19.0	12.9
1995.0	34.972	6.02	19.0	15.9
2497.0	34.966	5.95	20.1	24.1
2997.0	34.941	5.77	21.3	35.2
4000.0		5.59	22.6	46.4
4907.0		5.60	23.7	49.2

Station : 34 Cruise : BORD-EST2

Date : 20-05-88 Ship : Jean-Charcot

Bottom depth: 4682 m Institute: Ifremer

Position : N 45 0.21
W 14 5.01

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
10.0	35.585 d	6.40	0.2	0.8
47.0	35.571 d	6.01	1.6	1.1
96.0	35.600	5.89	4.8	2.5
141.0	35.640	5.82	6.9	2.8
242.0	35.574 d	5.64	9.5	3.6
340.0	35.563	5.19	12.0	4.6
493.0	35.560	4.96	13.7	5.6
743.0	35.627	4.43	16.7	8.3
992.0	35.779	4.33	18.0	9.9
1245.0	35.626	4.72	18.5	11.3
1494.0	35.168	5.55	18.9	12.1
1995.0	34.960	6.17	18.4	13.6
2498.0	34.964	6.02	19.1	21.4
3001.0	34.949	5.81	20.8	33.8
4587.0	34.903	5.59		48.9

Station : 36 Cruise : BORD-EST2

Date : 20-05-88 Ship : Jean-Charcot

Bottom depth: 4147 m Institute: Ifremer

Position : N 43 55.40
W 13 30.66

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
13.0	35.651	6.23	0.0	0.9
52.0	35.652 d	5.89	1.0	1.1
148.0	35.619	5.79	7.6	3.0
248.0	35.582	5.77	8.8	3.5
347.0	35.551	5.39	11.2	4.4
496.0	35.518	5.19	13.2	5.4
746.0	35.738	4.33	16.8	8.4
995.0	35.885	4.29	17.2	9.8
1245.0	35.747	4.63	17.7	10.9
1495.0	35.250	5.44	18.8	12.7
1996.0	35.041	5.92	19.1	16.9
2497.0	34.969	5.91	20.1	
2997.0	34.947	5.76	21.5	
4003.0	34.912	5.61	23.3	46.7
4230.0	34.909	5.61	23.7	47.8

Station : 37	Cruise : BORD-EST2
Date : 20-05-88	Ship : Jean-Charcot
Bottom depth: 5209 m	Institute: Ifremer
Position : N 43 21.22 W 13 12.50	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
8.0	35.743	5.99	0.0	1.2 d
48.0	35.757	5.74	1.3	1.3 d
98.0	35.712	5.72	5.8	2.1 d
147.0	35.705	5.72	6.3	2.4 d
247.0	35.610	5.26	11.5	4.2 d
347.0	35.548	5.22	12.9	5.0 d
546.0	35.507	4.96	15.4	6.7 d
845.0	35.722	4.27	18.1	9.9 d
1095.0	36.047	4.33	17.2	10.3 d
1244.0	35.878	4.58	17.9	11.3 d
1494.0	35.333	5.37	19.0	13.0 d
1995.0	35.032	5.96	19.2	16.9 d
2496.0	34.985	5.88	20.1	26.3 d
2999.0	34.941	5.75	21.5	35.5 d
4002.0	34.912	5.63	23.2	45.0 d
5164.0	34.900	5.61	23.6	48.4 d

Station : 39	Cruise : BORD-EST2
Date : 21-05-88	Ship : Jean-Charcot
Bottom depth: 5262 m	Institute: Ifremer
Position : N 42 11.93 W 12 43.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
11.0	35.708 d	5.92 d	0.3	1.4 d
48.0	35.797 d	5.62 d	3.3	1.8 d
99.0	35.783 d	5.73 d	6.0	2.3 d
148.0	35.656 d	5.58 d	8.6	3.3 d
248.0	35.605 d	5.19 d	12.1	4.6 d
349.0	35.577 d	5.09 d	13.1	5.1 d
745.0	35.849 d	4.27 d	17.4	8.9 d
995.0	36.014 d	4.27 d	17.6	9.9 d
1246.0	35.871	4.61	18.4	11.3 d
1485.0	35.344 d	5.32 d	19.4	13.1 d
1990.0	35.027	5.90	19.7	18.8 d
2486.0	34.990 d	5.82 d	21.1	26.8 d
2998.0	34.955	5.73	21.8	36.0 d
4001.0		5.62	23.4	47.5 d
5213.0	34.899	5.60	24.3	51.3 d

Station : 38	Cruise : BORD-EST2
Date : 21-05-88	Ship : Jean-Charcot
Bottom depth: 5289 m	Institute: Ifremer
Position : N 42 46.00 W 12 55.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
8.0	35.716 d	5.95	0.0	1.2 d
48.0	35.686	5.96		1.3 d
99.0	35.698	5.71	5.3	2.0 d
148.0	35.712	5.41	7.7	2.9 d
248.0	35.639	5.14	10.9	4.1 d
347.0	35.575	5.33	11.1	
747.0	35.867	4.32	15.9	8.3 d
995.0	36.081	4.26	16.2	9.4 d
1246.0	35.905	4.57	17.5	10.9 d
1495.0	35.454	5.20	18.3	12.8 d
1996.0	35.073	5.87	18.6	16.3 d
2496.0	34.992	5.86	20.4	24.4 d
2999.0		5.75	21.1	34.4 d
4001.0	34.915	5.63	23.0	46.6 d
5258.0	34.905	5.62	23.6	50.9 d

Station : 40	Cruise : BORD-EST2
Date : 21-05-88	Ship : Jean-Charcot
Bottom depth: 5200 m	Institute: Ifremer
Position : N 41 40.00 W 12 30.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	35.743 d	5.90	0.0	1.3
48.0	35.906 d	5.54	2.7	1.8
98.0	35.845	5.56	4.4	2.3
148.0	35.769		5.5	2.6
347.0	35.577 d	5.09	11.1	4.9
496.0	35.523	4.87	13.3	6.2
746.0	35.809	4.22	15.4	8.6
995.0	35.893 d	4.25	15.9	9.9
1244.0	36.012	4.43	15.3	10.2
1494.0	35.381	5.28	17.1	12.0
1995.0	35.035	5.93	17.7	16.5
2496.0	34.986	5.81	19.1	27.8
2999.0	34.946	5.74	20.1	35.8
4000.0	34.912	5.61	21.6	47.5
5155.0	34.900	5.61	22.2	51.3

Station : 41 Cruise : BORD-EST2

Date : 22-05-88 Ship : Jean-Charcot

Bottom depth: 5162 m Institute: Ifremer

Position : N 41 4.89
W 12 20.10

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	35.921 d	5.80	0.0	1.1
48.0	35.947	5.52	2.1	1.4
97.0	35.949	5.48	3.8	2.0
148.0	35.851	5.55	4.4	2.1
247.0	35.610 d	5.07	10.5	4.4
348.0	35.611	5.05	10.6	4.4
794.0	35.989	4.26	14.6	7.7
944.0	35.873	4.22	16.5	9.5
1244.0	36.087 d	4.41	15.6	9.9
1495.0	35.471	5.15	17.4	12.0
1997.0	35.062	5.88	18.2	17.0
2496.0	35.000	5.78	19.8	26.8
3000.0	34.947	5.71	20.8	36.8
3976.0	34.909	5.63	22.3	47.1
5130.0	34.899	5.63	22.6	50.9

Station : 43 Cruise : BORD-EST2

Date : 22-05-88 Ship : Jean-Charcot

Bottom depth: 5175 m Institute: Ifremer

Position : N 39 56.14
W 11 56.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	35.944 d	5.76	0.2	1.0
49.0	35.944	5.70	0.2	1.1
99.0	35.949	5.32	4.1	2.0
148.0	35.859	5.40	5.4	2.3
248.0	35.706	4.78	11.5	4.3
348.0	35.646	4.71	13.5	5.1
498.0	35.717	4.47	14.8	6.5
745.0	36.099	4.30	14.1	7.3
996.0	36.209	4.24	14.9	8.3
1245.0	36.302	4.31	14.9	9.0
1495.0	35.899	4.68	16.5	11.4
1996.0	35.086	5.76	18.9	18.4
2497.0	34.988	5.80	19.9	27.6
3000.0	34.950	5.71	21.2	36.8
4001.0	34.910	5.61	22.5	47.7
5235.0	34.898	5.60	22.9	51.1

Station : 42 Cruise : BORD-EST2

Date : 22-05-88 Ship : Jean-Charcot

Bottom depth: 5266 m Institute: Ifremer

Position : N 40 30.00
W 12 9.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	35.895	5.87	0.0	1.2
48.0	35.908	5.53	3.3	1.7
99.0	35.860	5.57	4.1	2.6
148.0	35.823	5.51	5.0	2.8
247.0	35.674	4.99 d	9.7	4.3
346.0	35.607	5.09	10.3	4.5
745.0	35.787	4.26	15.9	8.5
995.0	35.997	4.21	16.0	9.7
1245.0	36.103	4.34	15.8	10.2
1495.0	35.688	4.90	17.0	11.7
1995.0	35.069	5.79	17.8	16.9
2496.0	34.991	5.80	19.1	27.5
2998.0	34.945	5.68	20.6	37.8
4001.0	34.911	5.61	21.9	47.1
5203.0		5.62	21.9	50.6

Station : 44 Cruise : BORD-EST2

Date : 22-05-88 Ship : Jean-Charcot

Bottom depth: 4027 m Institute: Ifremer

Position : N 39 21.06
W 12 0.28

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	36.015	5.68	0.0	1.5
49.0	35.962	5.66	0.3	1.5
99.0	36.002	5.41	3.7	2.1
148.0	35.870 d	5.39	5.0	2.5
247.0	35.709 d	4.97	10.1	4.0
347.0	35.610	4.93	12.3	4.9
496.0	35.593	4.67	14.4	6.4
746.0	36.122 d	4.36	13.4	7.3
995.0	36.248	4.31	14.0	8.3
1246.0	36.294 d	4.51	14.9	9.3
1495.0	35.694	4.88	16.9	12.0
1996.0	35.181	5.61	18.6	18.0
2496.0	35.004	5.77	20.1	26.8
3000.0	34.949	5.73	20.9	35.8
3500.0		5.65	21.9	43.2
3938.0	34.909	5.58	22.3	47.7

Station : 45 Cruise : BORD-EST2

Date : 23-05-88 Ship : Jean-Charcot

Bottom depth: 5515 m Institute: Ifremer

Position : N 39 23.82
W 12 51.24

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
8.0	36.025	5.64		0.0	1.7
48.0	36.133	5.68		0.0	1.6
97.0	36.081	5.36		3.1	2.1
148.0	35.970	5.40		4.4	2.4
248.0	35.728	4.93		10.0	4.1
346.0	35.633	4.91		11.7	5.0
496.0	35.607	4.28		14.0	6.3
746.0	36.044	4.28		14.2	8.0
995.0	36.050	4.18		16.1	10.0
1245.0	36.095	4.37		15.8	10.6
1495.0	35.654	4.94		17.0	12.7
1995.0	35.114	5.15	d	18.5	18.5
2496.0	34.993	5.76		19.9	30.7
2998.0	34.948	5.66		21.0	37.9
4000.0	34.909	5.61		22.3	47.3
4793.0	34.903	5.59		22.7	50.0

Station : 47 Cruise : BORD-EST2

Date : 24-05-88 Ship : Jean-Charcot

Bottom depth: 5010 m Institute: Ifremer

Position : N 38 10.00
W 12 8.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
9.0	36.182	5.55		0.0	1.3
49.0	36.164	5.68		0.0	1.3
98.0	36.103	5.38		2.9	1.7
148.0	35.962	5.41		4.4	2.0
248.0	35.733	4.86		10.0	3.8
347.0	35.620	4.97		12.0	4.4
497.0	35.583	4.74		14.5	5.9
746.0	36.094	4.28		14.5	7.7
995.0	36.187	4.23		15.4	9.1
1245.0	36.388	4.32		14.7	9.4
1495.0	35.797	4.79		17.3	11.7
1995.0	35.138	5.69	d	19.0	14.1
2497.0	35.006	5.72		20.6	30.7
2998.0	34.949	5.68		21.7	38.3
4002.0	34.912	5.61		23.0	47.8
5041.0	34.896	5.59		23.1	49.8

Station : 46 Cruise : BORD-EST2

Date : 23-05-88 Ship : Jean-Charcot

Bottom depth: 4711 m Institute: Ifremer

Position : N 38 45.03
W 12 5.13

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	35.888	5.66	0.0	1.4
48.0	35.857	5.73	0.0	1.5
98.0	35.862	5.54	4.1	2.2
148.0	35.838	5.53	5.1	2.6
248.0	35.688	5.10	10.0	4.1
347.0	35.611	5.06	11.8	4.8
497.0	35.590	4.82	14.3	6.3
745.0	36.023	4.30	14.9	8.1
996.0	36.215	4.27	15.0	9.1
1245.0	36.314	4.26	15.3	9.9
1494.0	35.843	4.70	17.5	12.9
1995.0	35.183	5.57	19.3	18.7
2497.0	35.018	5.70	20.8	29.8
2998.0	34.948	5.70	21.5	37.1
4001.0	34.906	5.62	23.0	47.9
4709.0	34.899	5.59	23.3	49.5

Station : 48 Cruise : BORD-EST2

Date : 24-05-88 Ship : Jean-Charcot

Bottom depth: 5091 m Institute: Ifremer

Position : N 37 35.19
W 12 15.18

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
8.0	36.036 d	5.65	0.0	1.1
48.0	36.080 d	5.78	0.0	1.2
98.0	35.985	5.46	3.7	1.8
148.0	35.953	5.49	4.2	1.9
248.0	35.711	5.01	9.8	3.6
347.0	35.631	4.93	12.0	4.5
497.0	35.623	4.64	14.6	5.8
746.0	35.993	4.27	15.1	7.8
995.0	36.096	4.21	16.0	9.2
1246.0	36.182	4.34	15.7	9.8
1495.0	35.799 d	4.79	17.1	12.4
1997.0	35.139	5.64	20.7	19.6
2498.0	35.005	5.72	20.5	30.4
2999.0	34.949	5.70	21.4	37.7
4002.0	34.906	5.62	22.5	47.8
5053.0	34.899	5.58	22.9	49.6

Station : 49	Cruise : BORD-EST2
Date : 27-05-88	Ship : Jean-Charcot
Bottom depth: 5099 m	Institute: Ifremer
Position : N 37 35.00 W 12 15.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	34.902 d	5.54	0.0	4.2
49.0	36.181	5.75	0.0	4.3
100.0	36.103	5.38	3.2	4.7
149.0	35.974	5.32	5.1	4.9
250.0	35.800	5.15	8.3	5.7
349.0	35.659	4.79	12.5	7.3
499.0	35.670	4.59	14.6	8.5
799.0	36.075 d	4.27	14.5	10.7
1148.0	36.335 d	4.31	15.0	11.7
1248.0	36.273 d	4.35	15.5	12.4
1500.0	35.577 d	5.05 d	17.9	15.4
2003.0	35.120	5.64	19.3	21.2
2505.0	35.003	5.74	20.6	30.1
3006.0	34.950	5.72	21.6	37.9
4008.0	34.908	5.62	22.6	47.4
5080.0	34.898	5.59	22.9	49.6

Station : 51	Cruise : BORD-EST2
Date : 28-05-88	Ship : Jean-Charcot
Bottom depth: 3929 m	Institute: Ifremer
Position : N 36 25.00 W 12 20.07	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	36.244	5.70 d	0.0	2.5
47.0	36.212	5.69	0.1	2.2
97.0	36.174	5.30	5.6	2.8
147.0	36.156	5.25	6.2	3.0
248.0	35.808	4.77	12.5	4.8
349.0	35.668	4.76	12.3	5.7
499.0	36.001	4.49	12.5	6.6
749.0	36.376	4.56	10.3	6.1
869.0	36.290	4.43	12.2	7.3
1128.0	36.564	4.40	11.5	7.4
1349.0	36.356	4.30	14.4	10.1
2001.0	35.126	5.71		
2505.0	35.005	5.73	19.7	27.5
3006.0	34.953	5.67	21.2	35.9
3508.0	34.922	5.64	22.2	42.5
3859.0	34.909	5.57	22.7	46.8

Station : 50	Cruise : BORD-EST2
Date : 28-05-88	Ship : Jean-Charcot
Bottom depth: 5107 m	Institute: Ifremer
Position : N 37 0.00 W 12 16.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	36.243 d	5.49	0.0	4.3
49.0	36.266 d	5.63 d	0.0	4.3
99.0	36.151	5.33	2.4	4.1
149.0	36.069 d	5.32	3.8	4.1
249.0	35.787	4.88	9.9	4.1
349.0	35.649	4.81	12.4	5.5
500.0	35.615	4.73	15.1	6.1
849.0	36.014	4.19	16.0	7.7
1000.0	36.051	4.17	16.7	10.4
1150.0	36.179	4.61 d	16.1	11.3
1499.0	35.875	4.66	17.3	
2001.0	35.117	5.65	19.7	21.7
2504.0	35.000	5.70	20.8	29.9
3006.0	34.948	5.67	21.6	37.2
4007.0	34.906	5.58	22.6	46.4
5097.0	34.901	5.62	23.4	48.3

Station : 52	Cruise : BORD-EST2
Date : 28-05-88	Ship : Jean-Charcot
Bottom depth: 4855 m	Institute: Ifremer
Position : N 35 50.00 W 12 24.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
8.0	36.333	5.48 d	0.0	5.2
47.0	36.351	5.59	0.0	4.3
97.0	36.162	5.31	3.0	4.1
148.0	36.090	5.24	4.1	3.9
245.0	35.786	4.85	10.3	5.4
347.0	35.668	4.84	12.0	5.8
499.0	35.553	4.55	15.5	7.5
749.0	35.794	3.99 d	17.1	9.8
999.0	35.792	4.13	18.9	13.0
1251.0	35.933	4.40	17.6	12.8
1500.0	35.670	4.83	17.9	14.4
2002.0	35.196	5.47	19.6	
2504.0	35.018	5.66	20.2	28.4
3006.0	34.955	5.66	20.9	30.7
4009.0	34.903	5.54	22.0	47.6
4863.0	34.898	5.50	22.5	49.1

Station : 53	Cruise : BORD-EST2
Date : 29-05-88	Ship : Jean-Charcot
Bottom depth: 3723 m	Institute: Ifremer
Position : N 35 16.00 W 12 27.73	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	36.464	5.32	0.1	1.7
47.0	36.415	5.59	0.1	1.3
97.0	36.295	5.25	2.3	1.7
147.0	36.166	5.17	3.8	2.1
248.0	35.916	4.89	8.1	3.3
348.0	35.747	4.84	11.4	4.3
498.0	35.605	4.69	13.6	5.6
769.0	35.797 d	4.11	17.8	9.2
949.0	35.958	4.10	18.0	10.2
1349.0	35.916	4.47	18.4	12.3
1500.0	35.804	4.67	18.2	13.0
2002.0	35.226	5.43	19.7	18.7
2504.0	35.029	5.66	21.0	26.8
3006.0	34.964	5.67	21.9	34.0
3357.0	34.937	5.63	22.3	38.8
3781.0	34.917	5.58	22.8	43.8

Station : 55	Cruise : BORD-EST2
Date : 29-05-88	Ship : Jean-Charcot
Bottom depth: 4434 m	Institute: Ifremer
Position : N 34 10.16 W 12 53.75	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	36.479	5.34 d	0.1	5.5
48.0	36.418	5.62	0.2	5.3
97.0	36.294	5.41 d	0.6	5.5
147.0	36.092	5.04	5.2	6.3
248.0	35.812	4.84	10.2	7.4
348.0	35.671	4.82	12.3	7.8
499.0	35.595	4.61	15.2	8.8
749.0	35.834	4.15	17.0	11.5
900.0	35.939	4.10	17.8	13.0
1198.0	36.201	4.24	16.9	13.1
1499.0	35.713	4.80	18.9	16.6
2004.0	35.164	5.51	20.5	22.6
2504.0	35.010	5.62	21.0	30.3
3005.0	34.951	5.68	22.5	38.8
4008.0	34.905	5.55	23.9	49.4
4435.0	34.899	5.54	23.7	51.1

Station : 54	Cruise : BORD-EST2
Date : 29-05-88	Ship : Jean-Charcot
Bottom depth: 4446 m	Institute: Ifremer
Position : N 34 41.02 W 12 32.10	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	36.454	5.34		
47.0	36.383	5.59		
97.0	36.291 d	5.24		
148.0	36.179	5.15		
248.0	35.881	4.81		
348.0	35.749	4.87		
498.0	35.576	4.77		
799.0	35.664	3.93		
999.0	35.913	4.11		
1199.0	35.934	4.26		
1500.0	35.688	4.74		
2002.0	35.197	5.45		
2504.0	35.025	5.65		
3006.0	34.955	5.65		
4008.0	34.907	5.56		
4413.0	34.897	5.55		

Station : 56	Cruise : BORD-EST2
Date : 29-05-88	Ship : Jean-Charcot
Bottom depth: 4424 m	Institute: Ifremer
Position : N 33 40.00 W 13 12.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	36.465 d	5.32	0.0	4.8
47.0	36.462	5.56	0.0	4.5
97.0	36.347	5.26	2.1	4.8
148.0	36.313	5.21	2.6	5.0
248.0	36.129	5.07	4.9	5.5
349.0	35.830	4.80	10.1	4.8
498.0		4.62	14.0	7.4
900.0	35.732	4.05	19.3	8.8
1000.0	35.786	4.03		
1150.0	36.128	4.20		
1500.0	35.715	4.77	18.6	16.6
2002.0	35.188	5.51	20.4	23.0
2504.0	35.011	5.66	21.4	31.6
3005.0	34.953	5.63	22.2	39.8
4009.0	34.904	5.55	23.4	50.8
4430.0	34.899	5.54	23.9	52.6

Station : 57 Cruise : BORD-EST2

Date : 30-05-88 Ship : Jean-Charcot

Bottom depth: 4409 m Institute: Ifremer

Position : N 33 12.71
W 13 36.94

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
7.0	36.430 d	5.32	0.0	3.6
47.0	36.471 d	5.57	0.1	3.3
97.0	36.412	5.46	0.4	3.9
147.0	36.360	5.20	3.3	3.8
248.0	36.018 d	4.86	6.9	4.9
348.0	35.819	4.69	10.5	6.4
499.0	35.635	4.67	13.2	7.5
749.0	35.557	4.15	18.1	11.1
974.0	35.768	4.02	18.9	13.9
1148.0	36.065	4.20	17.0	12.9
1498.0	35.640	4.76	18.6	16.8
2003.0	35.199	5.52	19.1	20.2
2504.0	35.025	5.68	20.4	29.2
3005.0	34.954	5.66	21.1	37.2
4008.0	34.904	5.57	22.7	47.8
4408.0	34.900	5.56	22.4	50.0

Station : 59 Cruise : BORD-EST2

Date : 30-05-88 Ship : Jean-Charcot

Bottom depth: 4377 m Institute: Ifremer

Position : N 32 26.00
W 14 39.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
11.0	36.608	5.30	0.1	1.3
50.0	36.514	5.51	0.2	1.3
98.0	36.420	5.25 d	1.4	1.5
147.0	36.376	5.12	2.5	1.8
247.0	35.957	4.60	9.2	4.0
348.0	35.742	4.62	11.6	4.7
498.0	35.592	4.43	15.2	6.7
749.0	36.029	4.17	14.7	8.8
949.0	35.986	4.05	16.8	11.1
1201.0	36.228	4.19	15.5	10.6
1500.0	35.800	4.45	18.2	13.7
2003.0		5.35	19.1	19.3
2505.0	35.033	5.60	20.8	27.9
3007.0	34.964	5.62	21.6	35.4
4009.0	34.906	5.56	22.9	46.8
4375.0	34.898	5.57	22.4	48.4

Station : 58 Cruise : BORD-EST2

Date : 30-05-88 Ship : Jean-Charcot

Bottom depth: 4282 m Institute: Ifremer

Position : N 32 50.02
W 14 7.99

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
10.0	36.542	5.33	0.3	3.3
50.0	36.417 d	5.62	0.3	3.1
101.0	36.420	5.40	0.6	3.8
147.0	36.383 d	5.18	2.4	3.9
248.0	36.051	4.87 d	6.9	5.2
397.0	35.731	4.79	11.9	7.3
648.0	35.562	4.55	16.8	10.0
849.0	35.623	3.91	19.8	14.0
999.0	35.717	4.00	20.2	15.0
1199.0	35.949	4.20	18.7	15.0
1499.0	35.651	4.70	19.0	16.8
2002.0	35.207	5.47	19.9	21.4
2504.0	35.020	5.66	20.5	29.9
3007.0	34.954	5.64	21.6	38.0
4008.0	34.908	5.56	22.9	49.3
4276.0	34.889	5.57	23.0	52.0

Station : 60 Cruise : BORD-EST2

Date : 30-05-88 Ship : Jean-Charcot

Bottom depth: 4394 m Institute: Ifremer

Position : N 32 4.05
W 15 11.52

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
11.0	36.593	5.27	0.0	0.2
49.0	36.513 d	5.49	0.0	0.2
97.0	36.428 d	5.39	0.0	1.0
147.0	36.383	5.15	2.0	1.3
247.0	35.943	4.67	8.8	3.4
348.0	35.761 d	4.73	10.8	4.0
497.0	35.598	4.55	13.7	5.6
848.0	35.632 d	3.80	20.0	11.9
1098.0	35.796	4.04	18.8	12.6
1249.0	35.848	4.22	18.2	13.1
1498.0	35.655 d	4.67	18.2	14.3
2002.0	35.200	5.39	19.6	20.0
2505.0	35.018	5.63	20.5	28.0
3007.0	34.955	5.64	21.0	35.4
4010.0	34.902	5.56	22.3	45.9
4387.0	34.894	5.59	22.5	47.9

Station : 61 Cruise : BORD-EST2

Date : 31-05-88 Ship : Jean-Charcot

Bottom depth: 4403 m Institute: Ifremer

Position : N 31 41.00
W 15 42.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
8.0	36.641 d	5.25	0.2	3.2
46.0	36.619	5.46	0.2	2.7
97.0	36.540 d	5.25	0.8	2.8
145.0	36.458	5.16	2.2	2.7
247.0	36.364	5.09 d	2.8	2.6
345.0	35.883	4.67	9.7	4.1
498.0	35.636	4.43	14.3	5.8
798.0	35.557	3.84	20.3	11.1
999.0	35.640	4.01	20.1	12.6
1249.0	35.708	4.29	19.7	13.8
1499.0	35.544	4.83	18.7	14.4
2004.0	35.159	5.56	19.4	19.0
2504.0	35.011	5.59	21.1	28.6
3005.0	34.952	5.65	21.4	35.5
4008.0	34.901	5.59	22.7	46.0
4411.0	34.893	5.62	22.2	47.5

Station : 63 Cruise : BORD-EST2

Date : 31-05-88 Ship : Jean-Charcot

Bottom depth: 4394 m Institute: Ifremer

Position : N 30 55.00
W 16 45.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	36.674	5.27	0.1	0.5
49.0	36.558	5.63	0.1	0.7
96.0	36.537	5.26	0.8	0.8
147.0	36.436	5.14	2.4	1.3
247.0	36.068	4.70	7.9	2.8
347.0	35.823	4.71	10.2	4.0
498.0	35.609	4.64	13.8	5.5
648.0	35.700 d	4.20	16.4	7.9
998.0	36.249	4.25	14.2	8.0
1198.0	36.447	4.26	13.7	8.1
1500.0	35.825 d	4.42	18.0	12.6
2002.0	35.210	5.38	19.5	19.2
2503.0	35.020	5.60	20.6	27.0
3007.0	34.945	5.59	21.4	35.1
4007.0	34.902	5.59	22.1	45.8
4381.0	34.894	5.61	22.3	47.1

Station : 62 Cruise : BORD-EST2

Date : 31-05-88 Ship : Jean-Charcot

Bottom depth: 4418 m Institute: Ifremer

Position : N 31 17.64
W 16 13.12

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
11.0	36.732	5.27 d	0.0	1.0
51.0	36.673 d	5.47	0.0	1.2
102.0	36.597	5.41	0.0	1.7
147.0	36.517	5.15	1.4	1.7
247.0	36.116	4.65	0.7	3.0
347.0	35.875		9.8	3.6
497.0	35.650	4.51	13.9	5.2
697.0	35.544	4.02	18.3	8.6
899.0	35.548	3.71	21.4	13.0
1249.0	35.776	4.27	18.6	13.1
1500.0	35.541	4.75	18.9	14.4
2001.0	35.184	5.41	19.7	20.2
2504.0	35.019	5.65	20.2	27.3
3006.0	34.954	5.67	21.0	34.9
4009.0	34.904	5.59	22.6	46.0
4409.0	34.891	5.61	22.4	47.7

Station : 64 Cruise : BORD-EST2

Date : 01-06-88 Ship : Jean-Charcot

Bottom depth: 4407 m Institute: Ifremer

Position : N 30 32.12
W 17 16.59

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
11.0	36.811	5.19	0.0	0.9
51.0	36.694	5.47	0.0	1.2
101.0	36.629	5.23	0.6	1.3
146.0	36.537	5.14	1.5	1.5
248.0	36.122	4.63	7.3	4.1
347.0	35.529 d	4.51		
597.0	35.569	4.12 d	17.0	7.9
848.0	35.570	3.82	20.6	12.2
998.0	35.595	3.91	21.1	13.9
1249.0	35.606	4.38	20.0	15.0
1500.0	35.450	4.77	19.7	16.2
2002.0	35.154	5.33	20.5	23.3
2504.0	35.012	5.43	21.4	32.5
3005.0	34.953	5.64	21.6	37.2
4008.0	34.905	5.59	22.9	46.5
4408.0	34.896	5.63	23.2	48.4

Station : 65 Cruise : BORD-EST2

Date : 01-06-88 Ship : Jean-Charcot

Bottom depth: 4449 m Institute: Ifremer

Position : N 30 8.00
W 17 47.50

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
10.0	36.872	5.21	0.0	1.3
49.0	36.820 d	5.42	0.0	1.0
96.0	36.682	5.27	0.0	1.1
147.0	36.567 d	5.09	7.1	2.7
247.0	36.145	4.64	1.7	1.3
346.0	35.863	4.58	10.4	4.1
498.0	35.630	4.37	14.3	5.8
849.0	35.635	3.85	20.3	11.7
998.0	35.629	3.92	20.7	13.4
1249.0	35.549	4.27	20.5	15.4
1500.0	35.414	4.78	19.9	16.5
2002.0	35.155	5.41	19.8	21.4
2504.0	35.014	5.60	20.8	29.5
3006.0	34.951	5.63	21.5	36.5
4008.0	34.893	5.59	22.2	46.4
4467.0	34.896	5.61	23.1	48.0

Station : 66 Cruise : BORD-EST2

Date : 01-06-88 Ship : Jean-Charcot

Bottom depth: 4459 m Institute: Ifremer

Position : N 29 42.13
W 18 22.98

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
6.0	36.845 d	5.16 d	0.0	0.5
46.0	36.858	5.41	0.0	0.5
96.0	36.719	5.27	0.0	0.8
146.0	36.634	5.09	1.5	1.0
247.0	36.348	4.83	4.4	1.8
347.0	35.935	4.64	9.3	3.4
597.0	35.576	4.27	16.5	6.6
847.0	35.552	3.77	21.3	12.0
1078.0	35.619	4.03	21.0	13.8
1250.0	35.548	4.29	21.0	15.4
1499.0	35.377 d	4.79	20.7	16.0
2002.0	35.136	5.37	20.7	22.8
2504.0	35.009	5.61	21.0	29.1
3005.0	34.947	5.61	21.7	36.0
4008.0	34.900	5.60	23.1	46.5
4459.0	34.894	5.62	23.0	48.1

Station : 67 Cruise : BORD-EST2

Date : 01-06-88 Ship : Jean-Charcot

Bottom depth: 4421 m Institute: Ifremer

Position : N 29 18.59
W 18 54.97

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
4.0	37.008	5.16	0.0	1.0
49.0	36.889	5.39	0.0	0.8
95.0	36.763	5.11	0.5	0.9
145.0	36.649	5.06	1.5	1.1
245.0	36.293	4.65	5.6	2.2
346.0	35.923	4.56	9.9	3.8
497.0	35.660	4.44	14.2	5.6
749.0	35.503	3.69	21.1	11.5
947.0	35.397	3.56	23.9	15.8
1249.0	35.449	4.14	22.2	18.6
1500.0	35.466	4.64	20.4	18.6
2002.0	35.147	5.29	20.6	23.0
2504.0	35.008	5.47	21.4	31.1
3006.0	34.950	5.58	22.7	36.8
4008.0	34.919 d	5.59	22.0	46.4
4422.0	34.895	5.61	22.5	47.8

Station : 68 Cruise : BORD-EST2

Date : 02-06-88 Ship : Jean-Charcot

Bottom depth: 4477 m Institute: Ifremer

Position : N 28 52.18
W 19 22.54

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	37.030 d	5.11	0.0	1.1
50.0	37.003 d	5.31	0.0	1.0
97.0	36.789	5.39	0.0	1.0
149.0	36.662	5.02	1.6	1.2
245.0	36.198	4.63	6.6	2.5
345.0	35.917 d	4.57	9.6	3.9
495.0	35.661	4.30	14.7	6.0
847.0	35.475	3.61	22.4	13.7
997.0	35.434	3.74	23.0	15.9
1249.0	35.458	4.22	21.7	16.7
1499.0	35.335	4.68	20.9	18.9
2003.0	35.125	5.25	20.3	24.5
2505.0	35.008	5.42	21.6	31.9
3008.0	34.945	5.48	22.1	38.8
4006.0	34.897	5.62	22.3	46.6
4380.0	34.894	5.62	22.6	48.1

Station : 69	Cruise : BORD-EST2
Date : 02-06-88	Ship : Jean-Charcot
Bottom depth: 4482 m	Institute: Ifremer
Position : N 28 26.08 W 19 47.54	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	37.072	5.11	0.0	1.0
50.0	37.058	5.27	0.0	1.0
100.0	36.913 d	5.24 d	0.0	1.0
144.0	36.730	4.95	1.6	1.3
244.0	36.264	4.60	6.1	2.3
345.0	35.937	4.63	9.7	3.5
496.0	35.686	4.36	14.0	5.4
847.0	35.481	3.65	22.8	13.3
998.0	35.394	3.66	24.4	16.2
1248.0	35.361	4.11	23.2	17.7
1499.0	35.284	4.57	22.2	19.5
2002.0	35.102	5.11	21.8	26.1
2505.0	35.005	5.46	21.4	30.2
3007.0	34.947	5.54	22.0	36.6
4008.0	34.904	5.60	22.9	46.0
4491.0	34.897	5.62	22.9	47.8

Station : 71	Cruise : BORD-EST2
Date : 02-06-88	Ship : Jean-Charcot
Bottom depth: 4539 m	Institute: Ifremer
Position : N 27 26.58 W 20 22.37	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	37.010	5.11	0.0	0.8
49.0	36.945	5.30	0.0	0.8
100.0	36.863	5.14	0.1	1.0
145.0	36.820	4.98	1.3	1.2
246.0	36.457	4.37 d	5.8	2.5
347.0	36.049 d	4.14 d	8.6	4.0
496.0	35.704	4.13	15.0	6.1
646.0		3.49	21.5	10.2
848.0	35.374	3.31	25.3	15.1
1146.0	35.354	3.86	24.7	18.3
1499.0	35.271	4.55	22.1	21.3
2002.0	35.105	5.10	21.5	26.6
2505.0	34.994	5.37	22.0	32.3
3004.0	34.947	5.61	21.6	35.7
4009.0	34.899	5.61	23.2	46.9
4536.0	34.895	5.61	23.3	48.5

Station : 70	Cruise : BORD-EST2
Date : 02-06-88	Ship : Jean-Charcot
Bottom depth: 4550 m	Institute: Ifremer
Position : N 28 0.00 W 20 15.00	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
9.0	37.087	5.11	0.0	0.7
49.0	37.013	5.28	0.0	0.7
99.0	36.904	5.23	0.0	0.8
145.0	36.816	5.02	1.0	1.0
245.0	36.271	4.39 d	6.9	2.7
345.0	35.999	4.56	9.0	3.5
497.0	35.668	4.06 d	15.7	6.4
749.0	35.469	3.57	21.7	10.8
997.0	35.304	3.46	25.3	17.6
1250.0	35.370	4.06	22.8	17.9
1502.0	35.322	4.56	21.5	19.7
2003.0	35.104	5.08	21.9	26.4
2504.0	35.002	5.35	21.6	31.6
3006.0	34.955	5.55	21.6	35.7
4009.0	34.903	5.59	22.4	45.6
4552.0	34.892	5.61	22.2	47.6

Station : 72	Cruise : BORD-EST2
Date : 03-06-88	Ship : Jean-Charcot
Bottom depth: 4491 m	Institute: Ifremer
Position : N 26 55.55 W 20 30.03	

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l	NITRATE micromol/l	SILICATE micromol/l
8.0	36.952	5.10	0.1	1.0
48.0	36.961	5.31	0.1	1.0
99.0	36.869 d	5.06	0.3	1.8
143.0	36.763	4.95	1.4	1.8
244.0	36.255	4.45	6.8	3.1
344.0	35.899 d	4.49	10.1	4.4
496.0	35.659	4.24	15.1	6.4
849.0	35.325	3.27	25.6	16.5
998.0	35.266	3.48	26.0	18.9
1299.0	35.322	4.15	23.2	19.4
1498.0	35.249	4.50	23.1	21.4
2001.0	35.094	5.08	21.8	27.3
2504.0	34.992	5.27	22.0	34.6
3007.0	34.948	5.44	22.5	38.5
4009.0	34.902	5.60	22.8	47.0
4471.0	34.895	5.61	22.8	48.5

Station : 73 Cruise : BORD-EST2

Date : 03-06-88 Ship : Jean-Charcot

Bottom depth: 4455 m Institute: Ifremer

Position : N 26 20.06
W 20 38.66

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
13.0	37.069	5.09		0.0	0.9
53.0	37.103	5.28		0.0	1.0
104.0	36.865	5.18	d	0.0	1.1
154.0	36.723	d 4.93		1.7	1.3
244.0	36.198	4.56		7.0	2.6
344.0	35.891	4.47		10.6	4.1
496.0	35.646	4.18		15.5	6.5
846.0	35.324	3.25		25.7	16.3
1047.0	35.251	3.56		25.8	19.0
1248.0	35.293	4.05		23.7	19.4
1500.0	35.217	4.59		22.3	21.6
2001.0	35.074	5.12		21.8	27.4
2504.0	34.989	5.32		22.1	34.2
3006.0	34.938	5.34		22.7	40.7
4008.0	34.901	5.60		22.8	47.0
4470.0	34.895	5.61		22.7	48.0

Station : 75 Cruise : BORD-EST2

Date : 04-06-88 Ship : Jean-Charcot

Bottom depth: 4408 m Institute: Ifremer

Position : N 25 14.89
W 20 54.62

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
10.0	37.151	5.08		0.0	1.1
51.0	37.099	d 5.22		0.0	1.1
100.0	36.974	4.97		0.0	1.2
151.0	36.917	5.13		0.1	1.1
252.0	36.575	4.69	d	3.5	1.8
344.0	36.071	4.26		9.8	3.5
496.0	35.670	4.21		15.1	6.0
867.0	35.219	3.06		27.5	18.3
917.0	35.209	3.17		27.3	18.8
1248.0	35.238	4.05		23.9	20.0
1500.0	35.166	4.64		22.9	22.1
2002.0	35.053	5.14		22.1	27.7
2504.0	34.992	5.32		22.3	33.0
3006.0	34.946	5.43		22.0	38.4
4008.0	34.900	5.58		22.7	47.0
4405.0	34.896	5.61		22.7	47.6

Station : 74 Cruise : BORD-EST2

Date : 03-06-88 Ship : Jean-Charcot

Bottom depth: 4445 m Institute: Ifremer

Position : N 25 48.13
W 20 47.46

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
13.0	37.129	5.11		0.1	1.3
50.0	37.036	5.24		0.1	1.3
104.0	36.832	5.02	d	1.0	1.4
154.0	36.688	4.86		2.3	1.6
245.0	36.214	4.46	d	7.2	3.0
345.0	35.917	4.47		10.6	5.2
495.0	35.608	d 4.03	d	16.4	7.4
796.0	35.364	3.34		23.1	15.5
1149.0	35.260	3.86		24.9	19.9
1299.0	35.272	4.22		23.7	19.9
1499.0	35.176	4.59		22.7	22.2
2001.0	35.050	d 5.13		21.3	27.4
2503.0	34.991	5.38		21.2	33.2
3005.0	34.941	5.45		21.7	39.5
4007.0	34.896	5.61		22.0	47.1
4450.0	34.896	5.62		22.3	48.4

Station : 76 Cruise : BORD-EST2

Date : 04-06-88 Ship : Jean-Charcot

Bottom depth: 4367 m Institute: Ifremer

Position : N 24 42.18
W 21 2.93

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
13.0	36.915	5.05		0.0	0.6
53.0	36.943	d 5.19		0.0	0.6
104.0	36.876	4.89		1.6	1.0
154.0	36.845	4.74		2.7	1.2
244.0	36.199	3.46		12.9	4.2
345.0	35.891	3.09	d	17.0	6.0
496.0	35.595	3.20		20.4	8.9
818.0	35.191	2.70		29.3	18.3
947.0	35.086	2.94		29.7	21.1
1249.0	35.177	3.88		25.7	20.7
1500.0	35.180	4.52		23.0	21.5
2001.0	35.064	5.12		21.5	27.2
2504.0	34.997	5.34		22.3	32.8
3006.0	34.946	5.41		22.4	39.1
4008.0	34.901	5.61		23.0	47.0
4381.0	34.897	5.63		23.0	48.1

Station : 77 Cruise : BORD-EST2

Date : 04-06-88 Ship : Jean-Charcot

Bottom depth: 4377 m Institute: Ifremer

Position : N 24 6.65
W 21 10.68

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
9.0	36.789	5.11		0.0	0.5
49.0	36.845	5.20		0.1	0.5
100.0	36.733	d 4.75	d	2.5	0.8
149.0	36.569	4.20	d	6.5	1.9
244.0	36.251	4.00	d	9.5	3.0
346.0	35.835	2.89		18.9	6.6
495.0	35.589	3.22	d	21.6	8.5
696.0	35.262	d 2.46		29.3	16.0
997.0	35.100	3.11	d	29.4	20.8
1248.0	35.198	3.92		25.5	19.8
1500.0	35.171	4.49		23.5	21.3
2002.0	35.022	d 5.09		22.5	26.9
2505.0	34.997	5.31		22.1	32.4
3005.0	34.945	5.39		22.4	38.8
4008.0	34.903	5.56		23.2	46.7
4397.0	34.901	5.67		23.0	47.7

Station : 78 Cruise : BORD-EST2

Date : 04-06-88 Ship : Jean-Charcot

Bottom depth: 4351 m Institute: Ifremer

Position : N 23 33.57
W 21 11.88

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
13.0		5.07		0.0	1.0
53.0	36.698	d 4.74	d	0.4	1.1
104.0	36.818	d 4.59	d	2.7	1.5
154.0	36.546	3.84		8.1	2.8
244.0	36.023	2.48		18.0	6.0
345.0	35.777	2.41		21.1	7.5
495.0	35.523	2.25		25.5	10.4
847.0	35.209	2.87		28.2	17.9
1048.0	35.114	3.46		28.1	20.5
1248.0	35.183	d 3.88		26.2	19.9
1498.0	35.157	4.57		23.1	21.5
2002.0	35.047	5.13		21.9	26.7
2504.0	34.989	5.32		22.2	32.5
3006.0	34.944	5.41		22.2	38.6
4008.0	34.897	5.56		22.8	46.8
4360.0	34.894	5.60		23.1	47.5

Station : 79 Cruise : BORD-EST2

Date : 05-06-88 Ship : Jean-Charcot

Bottom depth: 4303 m Institute: Ifremer

Position : N 23 0.00
W 21 10.00

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
13.0	36.553	5.14			1.1
53.0	36.881	d 4.85			1.1
104.0	36.946	4.80			1.3
153.0	36.276	d 3.09		10.7	4.3
245.0	35.847	2.01	d	22.1	7.5
344.0	35.709	2.44		21.5	8.2
495.0	35.480	2.35	d	25.9	11.2
848.0	35.039	2.64		31.7	21.3
998.0	35.104	3.23		29.1	21.1
1298.0	35.203	4.14		24.1	20.2
1499.0	35.153	4.54		23.3	21.4
2002.0	35.049	5.14		21.7	26.1
2505.0		5.35		21.5	32.2
3006.0	34.943	5.46		22.2	38.4
4009.0	34.897	5.56		23.1	46.9
4335.0	34.891	5.59		23.3	47.8

Station : 80 Cruise : BORD-EST2

Date : 05-06-88 Ship : Jean-Charcot

Bottom depth: 4333 m Institute: Ifremer

Position : N 22 27.21
W 21 7.88

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
13.0	36.489	5.11		0.0	0.6
54.0	36.629	d 4.92		0.0	0.5
103.0	36.561	3.88		8.1	2.4
155.0	36.226	2.69		15.3	4.6
195.0	36.006	d 2.24		19.7	6.1
294.0	35.849	2.45		20.4	6.9
417.0	35.682	3.09		20.0	7.5
616.0	35.267	2.31		29.3	15.3
878.0	34.975	2.58		32.1	22.9
1248.0	35.160	3.97		25.5	20.1
1498.0	35.122	4.52		24.5	22.3
2002.0	35.036	5.14		22.2	26.3
2505.0	34.985	5.32		22.9	32.4
3006.0	34.946	5.40		22.2	
4008.0	34.896	5.57		23.6	46.7
4351.0	34.895	5.58		23.6	47.9

Station : 81 Cruise : BORD-EST2

Date : 05-06-88 Ship : Jean-Charcot

Bottom depth: 4338 m Institute: Ifremer

Position : N 21 53.00
W 21 6.00

PRESSURE CHEM. dbar	SALINITY CHEM.		OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
12.0	36.302		5.32	d	0.3	1.0
53.0	36.660		4.86	d	1.8	1.0
103.0	36.910		4.73		1.8	1.1
154.0	36.243		3.19	d	13.8	4.4
245.0	35.961	d	2.94	d	16.9	6.0
345.0	35.975	d	2.94		19.6	7.4
495.0	35.473		2.36		19.7	7.4
646.0	35.185		2.07		31.6	17.4
947.0	35.008		2.93		30.9	22.6
1299.0	35.144		4.09		25.3	21.3
1500.0	35.124		4.56		23.6	22.3
2002.0	35.028		5.18		22.1	26.8
2504.0	34.982		5.36		22.1	32.6
3006.0	34.941		5.43		22.2	39.4
4009.0	34.895		5.61		22.8	47.5
4360.0	34.895		5.61		22.8	48.7

Station : 83 Cruise : BORD-EST2

Date : 06-06-88 Ship : Jean-Charcot

Bottom depth: 4077 m Institute: Ifremer

Position : N 20 44.00
W 21 1.00

PRESSURE CHEM. dbar	SALINITY CHEM.		OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
13.0	36.382		5.30		0.4	0.8
53.0	36.869		4.64		2.2	1.2
104.0	36.594		4.41	d	6.0	2.1
153.0	36.266		3.39	d	13.5	4.4
214.0	35.797		1.91	d	23.3	8.4
295.0	35.723		2.07		23.8	8.4
394.0	35.577		2.22		25.7	10.3
496.0	35.410	d	2.72		24.6	10.8
727.0	35.124		2.41		30.9	19.1
976.0	35.015		3.13		29.9	22.5
1249.0	35.146		4.11		25.1	20.6
1499.0	35.084		4.65		23.6	22.1
2002.0	35.000		5.22		22.6	26.6
2504.0	34.964		5.37		22.5	32.7
3006.0	34.942		5.44		22.3	38.9
4100.0	34.896		5.53		23.2	48.5

Station : 82 Cruise : BORD-EST2

Date : 05-06-88 Ship : Jean-Charcot

Bottom depth: 4246 m Institute: Ifremer

Position : N 21 18.95
W 21 4.08

PRESSURE CHEM. dbar	SALINITY CHEM.		OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
14.0	36.256		5.47		0.6	0.2
53.0	36.385		4.54		5.7	0.6
103.0	36.533		4.29		6.2	2.1
154.0	36.361		3.61	d	11.1	3.6
244.0	36.112		3.62		12.8	4.2
346.0	35.705	d	2.36		22.5	8.3
496.0	35.511		2.43		25.4	10.8
646.0	35.214		2.15		30.1	16.6
947.0	34.973		2.86		31.3	23.0
1299.0	35.140		4.12		24.2	21.3
1499.0	35.114		4.56		23.5	22.3
2002.0	35.023		5.21		22.2	26.1
2504.0	34.977		5.40		22.1	32.0
3004.0	34.941		5.40		22.7	39.2
4008.0	34.898		5.59		23.0	47.3
4259.0	34.896		5.57		23.1	48.2

Station : 84 Cruise : BORD-EST2

Date : 06-06-88 Ship : Jean-Charcot

Bottom depth: 3832 m Institute: Ifremer

Position : N 20 12.29
W 20 58.17

PRESSURE CHEM. dbar	SALINITY CHEM.		OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
14.0	36.289		5.47	d	0.4	0.8
54.0	36.547		4.23	d	3.4	1.4
104.0	36.709		4.19		6.0	2.4
154.0	36.007	d	2.20		20.4	6.5
245.0	35.593		1.38		27.9	9.6
344.0	35.570		1.66		27.5	10.2
475.0	35.319		1.59		31.9	14.1
697.0	35.047		2.05		34.0	19.6
898.0			2.42		34.7	23.8
1298.0	35.086		3.93		26.9	21.3
1499.0	35.098		4.47		24.3	21.8
2001.0	35.011		5.18		22.5	25.6
2505.0	34.969		5.38		22.1	31.5
3006.0	34.944		5.44		22.2	37.7
3507.0	34.913		5.45		22.9	44.9
3842.0	34.899		5.40		23.3	49.2

Station : 85	Cruise : BORD-EST2		
Date : 06-06-88	Ship : Jean-Charcot		
Bottom depth: 3599 m	Institute: Ifremer		
Position : N 19 42.01 W 20 56.14			

PRESSURE CHEM. dbar	SALINITY CHEM.	OXYGEN CHEM. ml/l		NITRATE micromol/l	SILICATE micromol/l
13.0	36.472	5.19		0.3	0.6
53.0	36.518	4.90		0.9	0.8
103.0	36.570	4.22		6.7	2.1
153.0	36.354	3.47		12.2	3.8
245.0	35.782	1.73		23.2	7.9
344.0	35.512	1.14		30.8	10.9
495.0	35.328	1.59	d	31.7	14.1
596.0	35.122	1.41		35.2	17.8
746.0	34.996	1.82		35.6	21.0
948.0	34.961	2.56		33.4	23.0
1248.0	35.073	3.78		27.4	21.9
1499.0	35.068	4.45		25.0	22.3
2002.0	35.004	5.13		22.1	26.9
2504.0	34.965	5.34		22.3	32.4
3005.0	34.938	5.48		22.0	37.2
3608.0	34.905	5.37		23.1	47.3

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A quasi-meridional hydrographic-tracer section was carried out in May and June 1988 from 60°N to 20°N at some distance offshore from the European and African continental slopes to describe the eastern boundary conditions of the North Atlantic basin. This report presents the calibration procedures, vertical distributions and listings of the basic parameters at the 85 stations of the section.

Une section d'hydrologie-géochimie légère a été réalisée en mai et juin 1988 de 60°N à 20°N au large des talus continentaux européens et africains dans le but de décrire les conditions à la frontière orientale du bassin Nord-Atlantique. Dans ce rapport sont présentés les procédures d'étalonnage, les distributions verticales et les listings des principaux paramètres aux 85 stations de la section.

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