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**THE VENTS 1991 AND 1992 CLEFT SEGMENT PLUME MONITORING  
EXPERIMENT: PHYSICAL AND CHEMICAL DATA, NOAA SHIP *DISCOVERER*,  
JUNE 1991 AND MAY 1992**

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# **The VENTS 1991 and 1992 Cleft Segment Plume Monitoring Experiment: Physical and Chemical Data, NOAA Ship *Discoverer*, June 1991 and May 1992**

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*Abstract.* This report summarizes salinity, temperature, nutrient, and total suspended matter data collected during the NOAA VENTS cruise in June 1991 and May 1992. The 1991 data was collected from June 7 to June 24, 1991 over the Juan de Fuca Ridge covering an area from 44°00'N to 48°30'N and 128°30'W to 130°40'W. The 1992 data was collected from May 14 to June 11 over the Juan de Fuca Ridge covering an area from 44°00'N to 48°00'N and 126°30'W to 131°00'W.

## **1.0 INTRODUCTION**

The National Oceanic and Atmospheric Administration (NOAA) VENTS Program was established in 1984 to study the oceanic effects of hydrothermal activity along seafloor spreading centers. VENTS Program scientists from the Pacific Marine Environmental Laboratory (PMEL) have conducted intensive oceanographic research on the Cleft Segment of the Juan de Fuca Ridge spreading center located in the northeast Pacific Ocean basin.

The Juan de Fuca Ridge is a medium rate spreading center, consisting of the Cleft, Vance, Axial, Cobb, Endeavour, and West Valley segments. The ridge is bounded on the south by the Blanco Fracture Zone and on the north by the Sovanco Fracture Zone.

As part of the continuing VENTS Program research effort, chemical oceanography cruises were conducted in June 1991 and May 1992 aboard the NOAA Ship *Discoverer* with scientists from NOAA, the University of Washington, and the University of Hawaii. These cruises concentrated on physical oceanography and geochemical studies of the neutrally buoyant hydrothermal plumes over the Cleft segment (Fig. 1) in order to quantitatively assess the impact of hydrothermal emissions on the seawater chemistry of the northeast Pacific Ocean. This report includes the complete set of hydrographic, nutrient, and total suspended matter data collected on the cruise (Appendix A) and a description of the sampling and analytical methods employed.

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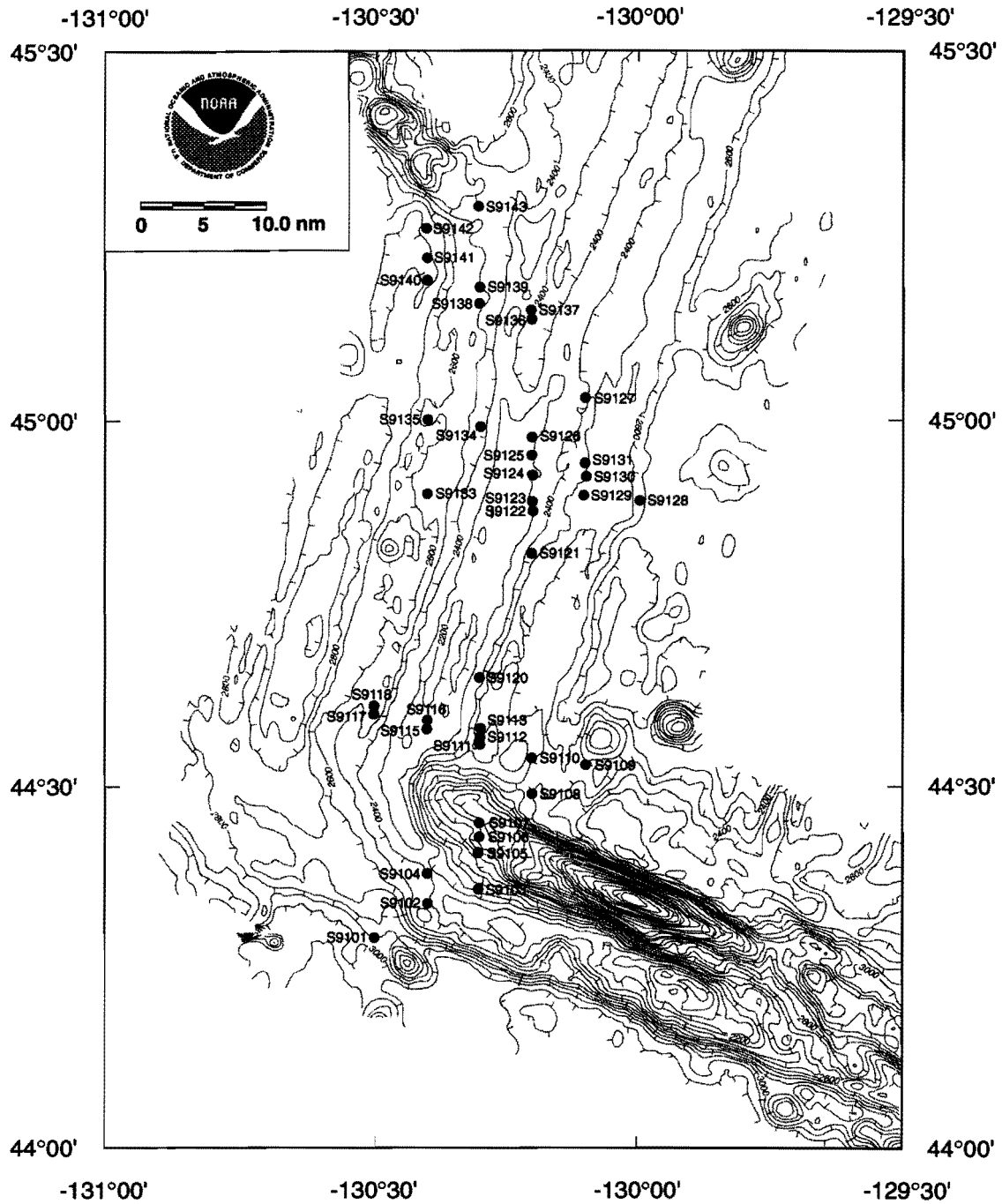


Fig. 1. Station locations south of 45°31' for the VENTS 1991 Plume Monitoring Experiment.

## **2.0 SAMPLING METHODS**

### **2.1 Sample and Data Collection**

#### *2.1.1 Seawater Samples*

Seawater samples were collected in standard 30-liter Niskin™ bottles fixed to a 12-position General Oceanics™ sampling rosette. The Niskin™ bottles were internally coated with Teflon and modified with Teflon stopcocks. The sampling rosette was equipped with a CTD-transmissometer, altimeter, and pinger locator. It was lowered into the water using standard hydrographic cable. The bottles were electronically tripped at pre-determined depths via a signal from the shipboard deck unit and closed by use of silastic tubing. Upon retrieval the Niskin™ bottles were removed from the rosette and placed in a non-contaminating pressure filtration rack for sub-sampling (Feely *et al.*, 1991).

Salinity samples were collected from the Niskin™ bottle in 250-ml citrate bottles.

Nutrient samples were collected from the Niskin™ bottle in HDPE 60-ml bottles prepared by washing with 10% HCL and rinsed with deionized water. Unfiltered nutrient samples were taken directly from the Niskin™ bottle. Filtered nutrient samples were taken downline of the 0.4- $\mu\text{m}$  pore size Nuclepore polycarbonate filter during the total suspended matter pressure filtration of the seawater. All nutrients were analyzed at sea within 12 hours after collection.

Total suspended matter samples were collected by 12 psi nitrogen pressure filtration of the seawater in the Niskin™ bottle through 37 mm diameter, 0.4  $\mu\text{m}$  pore size Nuclepore polycarbonate filters. As described in detail in Feely *et al.*(1991) an air filter was placed in the tygon line connecting the nitrogen gas and the Niskin™ bottle to prevent contamination of the seawater sample from particulates in the gas. To ensure that all particulates were filtered out of the seawater, the filtration racks were designed to tilt the Niskin™ bottle at a 45-degree angle and during filtration the bottle was gently agitated to keep particles in suspension. The seawater filtrate was directed into pre-calibrated 20-L plastic jerricans and volumes were measured to the nearest 100 mL. Depending upon the sample's proximity to the ridge crest, it took from 2 to 8 hours to filter 20-L of seawater, or to obtain a total of 400  $\mu\text{g}$  of loading on the filter. All filters were loaded and unloaded from the teflon savillex holders inside a laminar flow hood. After filtration the particulate samples were rinsed with pH 8.0 deionized water and dried in a dessicator under vacuum.

#### *2.1.2 Conductivity-Temperature-Depth-Transmissometer Data*

CTD-transmissometer data was collected using a Sea-Bird conductivity-temperature-depth (CTD) sensor and a Sea Tech 0.25-m path length beam transmissometer secured to the frame of a General Oceanics™ sampling rosette. CTD information at the sampling depths were recorded shipboard on a MicroVax data acquisition system at trip time by taking a 10-second average of the continuously collected 1-second average data.

## 2.2 Sample Analysis

### 2.2.1 Bottle Salinity

Bottle salinity analysis was conducted by NOAA Ship *Discoverer* personnel on a shipboard Guildline Autosol™. Samples were stabilized to room temperature, 18°C, before analysis. Final salinity was determined by averaging three measurements from each citrate bottle.

### 2.2.2 Nutrients

Silicic acid and phosphate analysis were conducted by Kathy Krogslund of the University of Washington, employing a Technicon Autoanalyzer and the techniques described by Whitledge (1981). In the analysis of silicic acid, the average precision of the replicate analyses was  $\pm 0.5$   $\mu\text{mol/l}$ . Alpha Inorganics™ reagent grade  $\text{Na}_2\text{SiF}_6$  was the standard used for this analysis. The phosphate analysis had an average precision of replicate analyses of  $\pm 20.0$   $\text{nmol/l}$ . Fisher™ certified primary standard  $\text{KH}_2\text{PO}_4$  was used for standardization.

### 2.2.3 Total Suspended Matter

Total suspended matter filters were weighed after desiccation on a Cahn 26™ Automatic Electrobalance which has an accuracy of  $\pm 0.005\%$  of the true sample mass. Corrections for changes in filter weight were determined by reweighing reference filters, resulting in a net weight of particulate suspended matter. Given the net weight and volume of water filtered, total suspended matter concentrations were determined.

### 2.2.4 Conductivity-Temperature-Depth-Transmissometer Data

Measured conductivity was converted to salinity using standard UNESCO algorithms (Fofonoff and Millard, 1983). The conductivity data was corrected by direct comparison of bottle salinity and CTD salinity values. An average offset was determined for each cast.

Potential temperature was calculated using standard UNESCO algorithms (Fofonoff and Millard, 1983) and the CTD measured values of in situ temperature and salinity.

In situ density was calculated using standard UNESCO algorithms (Fofonoff and Millard, 1983) and the CTD measured values of in situ temperature and salinity.

Potential density was determined using standard UNESCO algorithms (Fofonoff and Millard, 1983) and the CTD measured salinity values.

Attenuation was measured and final values calculated as described in detail in Bartz *et al.* (1978).

The attenuation anomaly was calculated by determining the background value associated with each cast and subtracting that value from each discrete value.

The temperature anomaly ( $\Delta\theta$ ) of each cast was calculated relative to the ambient water of the same potential density using the method of Lupton *et al.* (1985) with the equation



$$\Delta\theta = (\theta - k\sigma_\theta) - b$$

where  $\theta$  and  $\sigma_\theta$  are the potential temperature and potential density, respectively, and  $k$  and  $b$  are the slope and intercept, respectively, of the trend of  $\theta$  as a function of  $\sigma_\theta$  in water immediately above the hydrothermal plume where the hydrographic effect of the hydrothermal emissions is negligible. The equation used for calculating the temperature anomaly for each individual cast is listed in the bottom left-hand portion of each station table.

### **3.0 STATION DATA**

#### **3.1 Station Locations for VENTS 1991**

The data represented in Appendix A were collected from June 07 to June 24, 1991 over the Juan de Fuca Ridge covering an area from 44°00'N to 48°30'N and 128°30'W to 130°40'W. LORAN C was used for shipboard navigation and a listing of each station's latitude, longitude, and date of occupation is given in Table 1.

Vertical CTD profiles were taken at the majority of stations. Additionally, given the dynamic nature of hydrothermal plumes, a limited number of lengthy, horizontal tows, called "tow-yos," were also conducted. Tow-yos were conducted by regularly cycling the CTD rosette package between the top and bottom of the hydrothermal plume. The ship's towing speed varied from 2–3 km/hr. NISKIN™ bottle trip positions for each tow are given in Table 3.

A bathymetric map of the cruise project area overlaid with vertical cast positions is given in Figures 1 and 2.

#### **3.2 Station Locations for VENTS 1992**

The data represented in Appendix A were collected from May 14 to June 11, 1992 over the Juan de Fuca Ridge covering an area from 44°00'N to 48°00'N and 126°30'W to 131°00'W. GPS was used for shipboard navigation and a listing of each station's latitude, longitude, and date of occupation is given in Table 2.

Vertical CTD profile stations and tow-yos were taken over the project area. NISKIN™ bottle trip positions for each tow are given in Table 4.

A bathymetric map of the cruise project area overlaid with vertical cast positions is given in Figure 3.

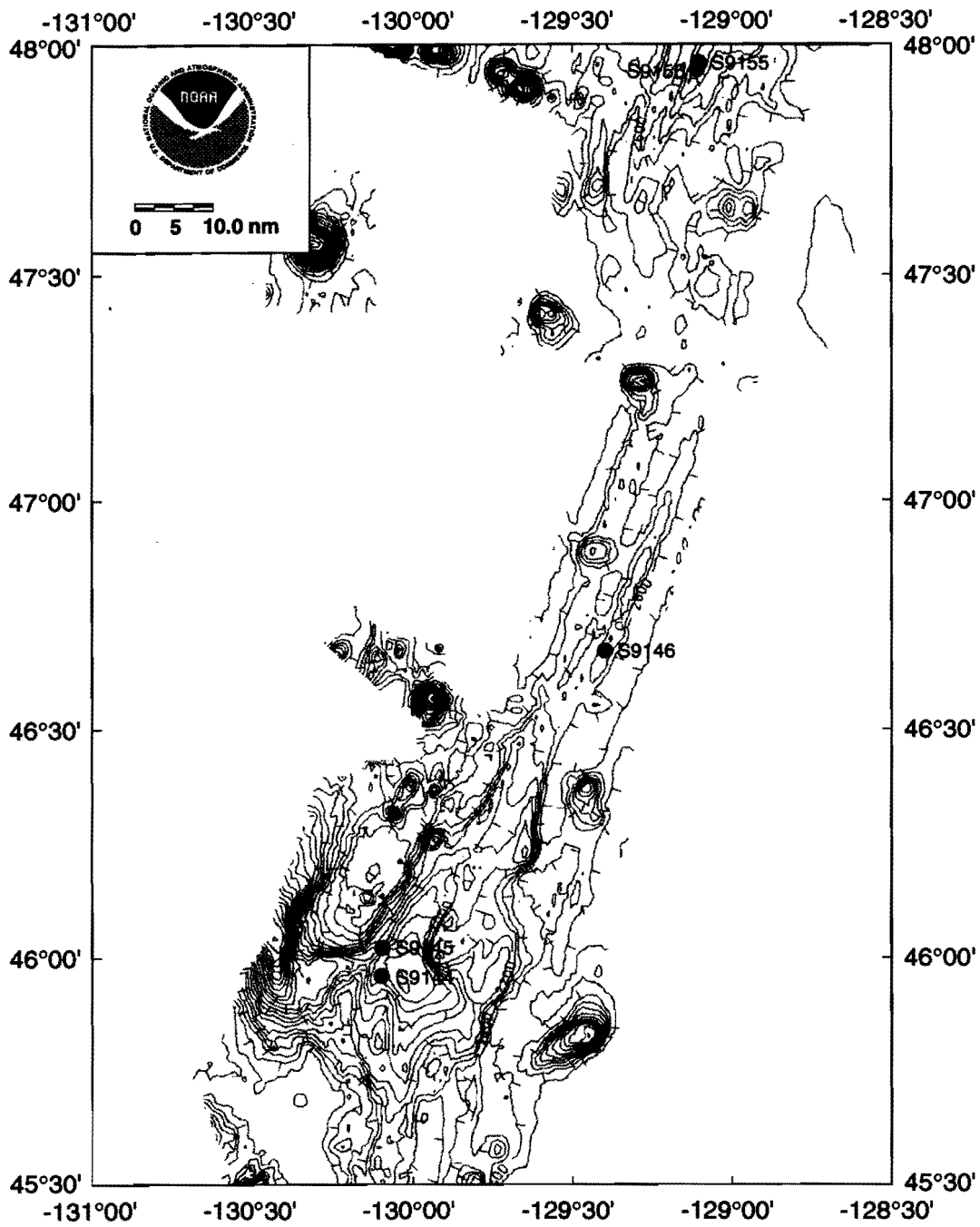


Fig. 2. Station locations north of 45°30' for the VENTS 1991 Plume Monitoring Experiment.

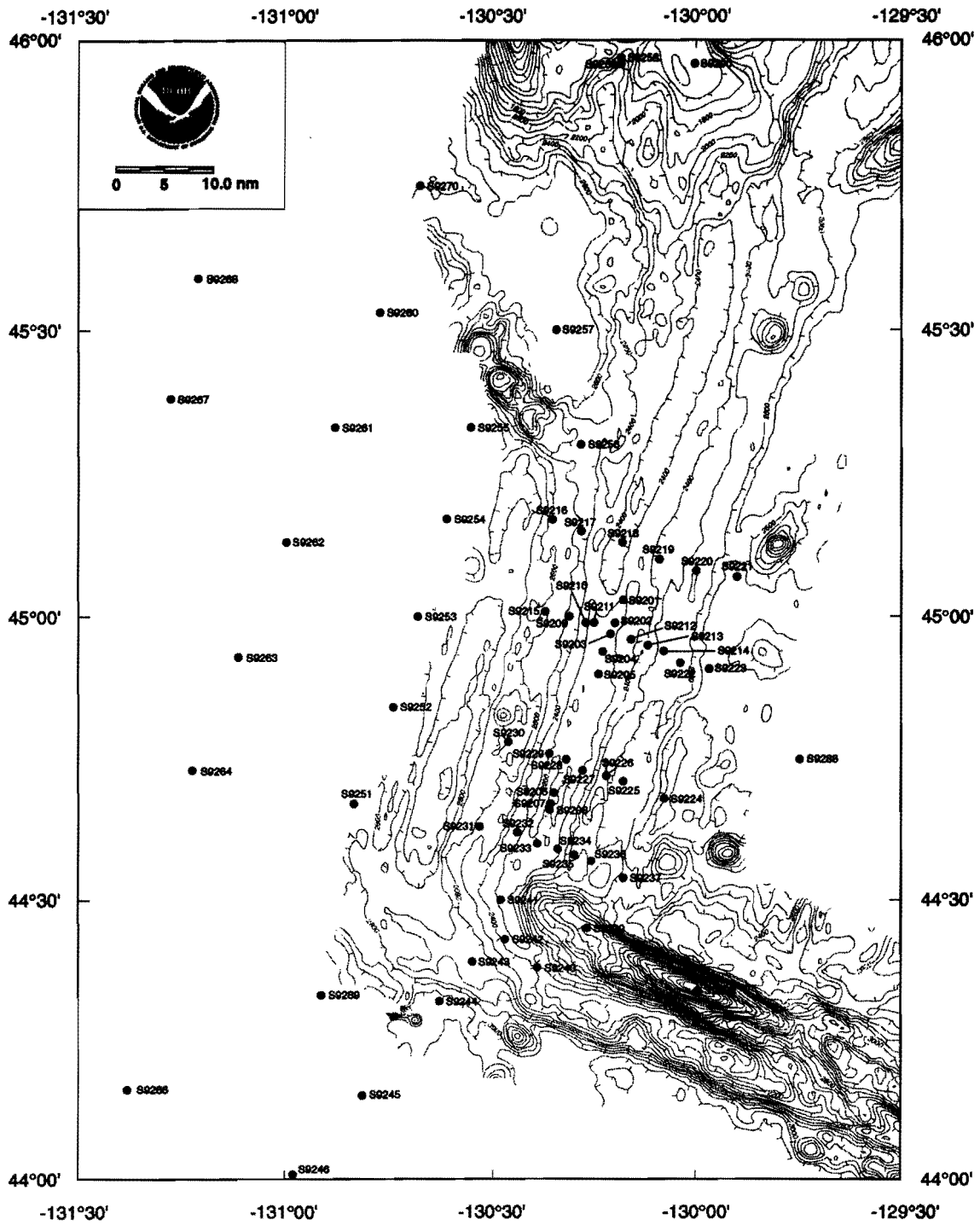


Fig. 3. Station locations for the VENTS 1992 Plume Monitoring Experiment.

TABLE 1  
VENTS 1991 LEG 2  
(JUNE 1991)  
STATION LOCATIONS

| STATION NAME | DATE OCCUPIED | LATITUDE (N) | LONGITUDE (W) |
|--------------|---------------|--------------|---------------|
| T9101C1      | 07 JUN 91     | 48°27.4'     | 128°42.6'     |
| T9102C2      | 08 JUN 91     | 48°04.0'     | 129°03.0'     |
| S9155C3      | 08 JUN 91     | 47°57.6'     | 129°06.0'     |
| T9103C4      | 08 JUN 91     | 47°59.2'     | 129°00.6'     |
| T9104C5      | 09 JUN 91     | 47°58.0'     | 129°11.4'     |
| S9156C6      | 09 JUN 91     | 47°56.9'     | 129°08.4'     |
| S9146C7      | 09 JUN 91     | 46°40.9'     | 129°24.0'     |
| T9105C8      | 10 JUN 91     | 45°07.1'     | 130°09.0'     |
| S9127C9      | 11 JUN 91     | 45°01.9'     | 130°10.8'     |
| S9127C10     | 11 JUN 91     | 45°18.6'     | 130°10.8'     |
| S9126C11     | 11 JUN 91     | 44°58.8'     | 130°13.2'     |
| S9126C12     | 11 JUN 91     | 44°58.9'     | 130°13.2'     |
| T9106C13     | 11 JUN 91     | 44°56.8'     | 130°05.4'     |
| S9122C14     | 12 JUN 91     | 44°52.6'     | 130°15.0'     |
| S9122C15     | 12 JUN 91     | 44°52.9'     | 130°14.4'     |
| S9121C16     | 12 JUN 91     | 44°52.9'     | 130°16.8'     |
| S9125C17     | 13 JUN 91     | 44°57.8'     | 130°13.2'     |
| T9107C18     | 13 JUN 91     | 45°00.7'     | 130°05.4'     |
| S9125C19     | 13 JUN 91     | 44°57.3'     | 130°13.2'     |
| S9123C20     | 13 JUN 91     | 44°54.1'     | 130°25.2'     |
| S9128C21     | 14 JUN 91     | 44°53.2'     | 130°03.0'     |
| S9129C22     | 14 JUN 91     | 44°53.9'     | 130°06.6'     |
| S9130C23     | 14 JUN 91     | 44°55.4'     | 130°09.0'     |
| S9131C24     | 14 JUN 91     | 44°56.3'     | 130°10.8'     |
| S9124C25     | 14 JUN 91     | 44°56.0'     | 130°13.8'     |
| T9108C26     | 15 JUN 91     | 44°51.8'     | 130°07.2'     |
| S9124C27     | 15 JUN 91     | 44°56.1'     | 130°13.8'     |
| S9123C28     | 15 JUN 91     | 44°53.5'     | 130°16.2'     |
| S9131C29     | 15 JUN 91     | 44°56.1'     | 130°10.8'     |
| S9135C30     | 16 JUN 91     | 44°59.9'     | 130°24.0'     |
| S9134C31     | 16 JUN 91     | 44°59.2'     | 130°21.6'     |
| S9133C32     | 16 JUN 91     | 44°58.1'     | 130°17.4'     |
| S9132C33     | 16 JUN 91     | 44°56.9'     | 130°15.6'     |
| S9132C35     | 16 JUN 91     | 44°57.4'     | 130°14.4'     |
| T9109C36     | 16 JUN 91     | 44°31.1'     | 130°27.0'     |
| T9110C37     | 17 JUN 91     | 44°43.9'     | 130°19.8'     |
| S9133C38     | 18 JUN 91     | 44°58.1'     | 130°17.4'     |
| S9130C39     | 18 JUN 91     | 44°55.6'     | 130°09.0'     |
| S9120C40     | 18 JUN 91     | 44°39.1'     | 130°22.2'     |
| T9111C41     | 18 JUN 91     | 44°26.7'     | 130°27.0'     |
| S9101C42     | 19 JUN 91     | 44°17.5'     | 130°31.2'     |
| S9102C43     | 19 JUN 91     | 44°20.5'     | 130°28.8'     |
| S9103C44     | 19 JUN 91     | 44°21.7'     | 130°22.8'     |
| S9104C45     | 19 JUN 91     | 44°22.7'     | 130°24.0'     |
| S9105C46     | 19 JUN 91     | 44°24.4'     | 130°22.2'     |

TABLE 1 (Continued)  
VENTS 1991 LEG 2  
(JUNE 1991)  
STATION LOCATIONS

| STATION<br>NAME | DATE<br>OCCUPIED | LATITUDE<br>(N) | LONGITUDE<br>(W) |
|-----------------|------------------|-----------------|------------------|
| S9106C47        | 19 JUN 91        | 44°26.0'        | 130°20.4'        |
| S9107C48        | 19 JUN 91        | 44°27.1'        | 130°19.8'        |
| S9108C49        | 20 JUN 91        | 44°29.5'        | 130°16.8'        |
| S9109C50        | 20 JUN 91        | 44°31.5'        | 130°11.4'        |
| S9110C51        | 20 JUN 91        | 44°32.5'        | 130°15.0'        |
| S9111C52        | 20 JUN 91        | 44°33.5'        | 130°18.6'        |
| S9112C53        | 20 JUN 91        | 44°34.0'        | 130°21.0'        |
| S9113C54        | 20 JUN 91        | 44°34.5'        | 130°22.8'        |
| S9114C55        | 20 JUN 91        | 44°34.9'        | 130°24.0'        |
| S9115C56        | 20 JUN 91        | 44°34.9'        | 130°25.8'        |
| S9116C57        | 20 JUN 91        | 44°35.3'        | 130°28.2'        |
| S9117C58        | 20 JUN 91        | 44°35.8'        | 130°30.6'        |
| S9118C59        | 20 JUN 91        | 44°36.2'        | 130°32.4'        |
| S9119C60        | 21 JUN 91        | 44°36.7'        | 130°35.4'        |
| S9120C61        | 21 JUN 91        | 44°39.1'        | 130°22.2'        |
| S9136C62        | 21 JUN 91        | 45°08.5'        | 130°14.0'        |
| S9137C63        | 21 JUN 91        | 45°09.1'        | 130°16.8'        |
| S9138C64        | 21 JUN 91        | 45°09.8'        | 130°19.8'        |
| S9139C65        | 21 JUN 91        | 45°10.6'        | 130°22.8'        |
| S9140C66        | 22 JUN 91        | 45°11.4'        | 130°25.8'        |
| S9141C67        | 22 JUN 91        | 45°13.4'        | 130°24.6'        |
| S9142C68        | 22 JUN 91        | 45°15.4'        | 130°24.0'        |
| S9143C69        | 22 JUN 91        | 45°17.3'        | 130°22.8'        |
| T9112C70        | 22 JUN 91        | 45°16.0'        | 130°08.4'        |
| T9113C71        | 23 JUN 91        | 45°55.9'        | 130°00.6'        |
| S9144C73        | 24 JUN 91        | 45°57.6'        | 130°10.8'        |
| S9145C74        | 24 JUN 91        | 46°01.0'        | 130°10.2'        |
| T9115C75        | 24 JUN 91        | 46°00.8'        | 129°54.6'        |

TABLE 2  
VENTS 1992  
(MAY/JUNE 1992)  
STATION LOCATIONS

| STATION<br>NAME | DATE<br>OCCUPIED | LATITUDE<br>(N) | LONGITUDE<br>(W) |
|-----------------|------------------|-----------------|------------------|
| S9281C001       | 16 MAY 92        | 44°45.0'        | 125°19.8'        |
| S9282C002       | 16 MAY 92        | 44°45.0'        | 125°49.8'        |
| S9283C003       | 16 MAY 92        | 44°45.0'        | 126°30.0'        |
| S9284C004       | 16 MAY 92        | 44°45.0'        | 127°09.0'        |
| S9285C005       | 17 MAY 92        | 44°45.0'        | 127°49.8'        |
| S9286C006       | 17 MAY 92        | 44°45.0'        | 128°30.0'        |
| S9287C007       | 17 MAY 92        | 44°45.0'        | 129°09.6'        |
| S9288C008       | 17 MAY 92        | 44°45.0'        | 129°45.0'        |
| S9213C009       | 18 MAY 92        | 44°57.0'        | 130°07.2'        |
| S9214C010       | 18 MAY 92        | 44°56.4'        | 130°04.8'        |
| S9210C011       | 19 MAY 92        | 44°59.4'        | 130°16.2'        |
| S9209C012       | 19 MAY 92        | 45°00.0'        | 130°18.6'        |
| S9223C013       | 20 MAY 92        | 44°54.6'        | 129°58.2'        |
| S9222C014       | 20 MAY 92        | 44°55.2'        | 130°02.4'        |
| T9201C015       | 21 MAY 92        | 44°48.0'        | 130°18.0'        |
| T9202C016       | 21 MAY 92        | 45°04.2'        | 130°14.4'        |
| T9203C017       | 22 MAY 92        | 45°01.8'        | 130°19.2'        |
| S9215C018       | 22 MAY 92        | 45°00.6'        | 130°22.2'        |
| T9204C019       | 23 MAY 92        | 44°54.6'        | 130°21.0'        |
| T9205C020       | 23 MAY 92        | 45°00.6'        | 130°11.4'        |
| S9204C021       | 24 MAY 92        | 44°56.4'        | 130°13.8'        |
| S9205C022       | 24 MAY 92        | 44°54.0'        | 130°14.4'        |
| T9206C023       | 24 MAY 92        | 44°47.4'        | 130°18.6'        |
| T9207C024       | 25 MAY 92        | 44°41.4'        | 130°26.4'        |
| T9208C025       | 25 MAY 92        | 44°39.0'        | 130°21.6'        |
| S9208C026       | 26 MAY 92        | 44°39.6'        | 130°21.6'        |
| S9207C027       | 26 MAY 92        | 44°40.2'        | 130°21.6'        |
| S9206C028       | 26 MAY 92        | 44°41.4'        | 130°21.0'        |
| S9211C029       | 27 MAY 92        | 44°59.4'        | 130°15.0'        |
| S9212C030       | 27 MAY 92        | 44°57.6'        | 130°09.6'        |
| S9203C031       | 28 MAY 92        | 44°58.2'        | 130°12.6'        |
| T9209C032       | 28 MAY 92        | 44°58.2'        | 130°12.6'        |
| S9201C033       | 28 MAY 92        | 45°01.8'        | 130°10.8'        |
| S9202C034       | 29 MAY 92        | 44°59.4'        | 130°12.0'        |
| S9258C035       | 29 MAY 92        | 45°57.6'        | 130°10.8'        |
| S9259C036       | 29 MAY 92        | 46°01.2'        | 130°10.2'        |
| S9216C037       | 29 MAY 92        | 45°10.2'        | 130°21.0'        |
| S9217C038       | 29 MAY 92        | 45°09.0'        | 130°16.8'        |
| S9218C039       | 29 MAY 92        | 45°07.8'        | 130°10.8'        |
| S9219C040       | 30 MAY 92        | 45°06.0'        | 130°05.4'        |
| S9220C041       | 30 MAY 92        | 45°04.8'        | 130°00.0'        |
| S9221C042       | 30 MAY 92        | 45°04.2'        | 129°54.0'        |
| S9224C043       | 30 MAY 92        | 44°40.8'        | 130°48.0'        |
| S9225C044       | 30 MAY 92        | 44°42.6'        | 130°10.8'        |
| S9226C045       | 30 MAY 92        | 44°43.2'        | 130°13.2'        |

TABLE 2 (Continued)  
VENTS 1992  
(MAY/JUNE 1992)  
STATION LOCATIONS

| STATION<br>NAME | DATE<br>OCCUPIED | LATITUDE<br>(N) | LONGITUDE<br>(W) |
|-----------------|------------------|-----------------|------------------|
| S9227C046       | 30 MAY 92        | 44°43.8'        | 130°16.8'        |
| S9228C047       | 31 MAY 92        | 44°45.0'        | 130°19.2'        |
| S9229C048       | 31 MAY 92        | 44°45.6'        | 130°21.6'        |
| S9230C049       | 31 MAY 92        | 44°46.8'        | 130°27.6'        |
| S9231C050       | 31 MAY 92        | 44°37.8'        | 130°31.8'        |
| S9233C051       | 31 MAY 92        | 44°36.0'        | 130°23.4'        |
| S9232C052       | 31 MAY 92        | 44°37.2'        | 130°26.4'        |
| S9234C053       | 31 MAY 92        | 44°35.4'        | 130°20.4'        |
| S9235C054       | 31 MAY 92        | 44°34.8'        | 130°18.0'        |
| S9236C055       | 31 MAY 92        | 44°34.2'        | 130°15.6'        |
| S9237C056       | 01 JUN 92        | 44°32.4'        | 130°10.8'        |
| S9239C057       | 01 JUN 92        | 44°27.0'        | 130°16.2'        |
| S9240C058       | 01 JUN 92        | 44°22.8'        | 130°23.4'        |
| S9241C059       | 01 JUN 92        | 44°30.0'        | 130°28.8'        |
| S9242C060       | 01 JUN 92        | 44°25.8'        | 130°28.2'        |
| S9238C061       | 01 JUN 92        | 44°20.4'        | 130°00.0'        |
| S9243C062       | 01 JUN 92        | 44°23.4'        | 130°33.0'        |
| S9244C063       | 02 JUN 92        | 44°19.2'        | 130°37.8'        |
| S9245C064       | 02 JUN 92        | 44°09.0'        | 130°49.2'        |
| S9246C065       | 02 JUN 92        | 44°00.6'        | 130°59.4'        |
| S9289C066       | 02 JUN 92        | 44°19.8'        | 130°55.2'        |
| S9251C067       | 02 JUN 92        | 44°40.2'        | 130°50.4'        |
| S9252C068       | 02 JUN 92        | 44°50.4'        | 130°44.4'        |
| S9253C069       | 03 JUN 92        | 45°00.0'        | 130°41.4'        |
| S9254C070       | 03 JUN 92        | 45°10.2'        | 130°36.6'        |
| S9255C071       | 03 JUN 92        | 45°19.8'        | 130°33.0'        |
| S9256C072       | 03 JUN 92        | 45°18.0'        | 130°16.8'        |
| S9257C073       | 03 JUN 92        | 45°30.0'        | 130°20.4'        |
| S9270C074       | 03 JUN 92        | 45°45.0'        | 130°40.2'        |
| S9290C075       | 04 JUN 92        | 45°57.6'        | 130°00.0'        |
| S9258C076       | 04 JUN 92        | 45°58.2'        | 130°10.8'        |
| S9259C077       | 04 JUN 92        | 46°01.2'        | 130°10.2'        |
| S9260C078       | 04 JUN 92        | 45°31.8'        | 130°46.2'        |
| S9261C079       | 04 JUN 92        | 45°19.8'        | 130°52.8'        |
| S9262C080       | 04 JUN 92        | 45°07.8'        | 131°00.0'        |
| S9263C081       | 05 JUN 92        | 44°55.8'        | 131°07.2'        |
| S9264C082       | 05 JUN 92        | 44°43.8'        | 131°13.8'        |
| S9265C083       | 05 JUN 92        | 44°56.4'        | 131°30.6'        |
| S9266C084       | 05 JUN 92        | 44°09.6'        | 131°23.4'        |
| S9267C085       | 05 JUN 92        | 45°22.8'        | 131°16.8'        |
| S9268C086       | 05 JUN 92        | 45°35.4'        | 131°12.6'        |
| S9269C087       | 06 JUN 92        | 46°04.2'        | 130°27.0'        |
| S9258C088       | 06 JUN 92        | 45°57.6'        | 130°10.8'        |
| S9259C089       | 06 JUN 92        | 46°01.2'        | 130°10.8'        |
| S9291C090       | 06 JUN 92        | 47°22.8'        | 129°13.8'        |

TABLE 2 (Continued)  
VENTS 1992  
(MAY/JUNE 1992)  
STATION LOCATIONS

| STATION<br>NAME | DATE<br>OCCUPIED | LATITUDE<br>(N) | LONGITUDE<br>(W) |
|-----------------|------------------|-----------------|------------------|
| S9292C091       | 06 JUN 92        | 47°22.8'        | 129°09.0'        |
| S9210C092       | 08 JUN 92        | 47°14.4'        | 128°03.0'        |
| S9293C093       | 08 JUN 92        | 47°22.8'        | 129°03.0'        |
| S9294C094       | 08 JUN 92        | 47°22.8'        | 128°58.2'        |
| S9295C095       | 08 JUN 92        | 47°23.4'        | 128°50.4'        |
| S9210C096       | 09 JUN 92        | 47°49.8'        | 127°43.8'        |
| S9210C097       | 09 JUN 92        | 47°50.4'        | 127°37.8'        |
| S9210C098       | 09 JUN 92        | 47°52.2'        | 127°37.2'        |
| T9211C099       | 09 JUN 92        | 47°51.6'        | 127°35.4'        |
| T9212C100       | 09 JUN 92        | 47°42.6'        | 127°46.8'        |
| T9213C101       | 10 JUN 92        | 47°50.4'        | 127°43.8'        |
| S9276C102       | 10 JUN 92        | 47°30.0'        | 128°19.8'        |
| T9214C103       | 10 JUN 92        | 47°48.6'        | 127°33.0'        |
| T9215C104       | 10 JUN 92        | 47°52.8'        | 127°45.0'        |
| S9210C105       | 11 JUN 92        | 47°34.8'        | 127°51.0'        |
| S9210C106       | 11 JUN 92        | 47°51.0'        | 127°36.6'        |
| S9275C107       | 11 JUN 92        | 48°00.0'        | 127°37.8'        |
| S9274C108       | 11 JUN 92        | 48°10.2'        | 126°37.2'        |



TABLE 3  
VENTS 1991  
(JUNE 1991)  
TOW NISKIN™ TRIP POSITIONS

| STATION NAME | DATE OCCUPIED | NISKIN NO. | LATITUDE (N) | LONGITUDE (W) |
|--------------|---------------|------------|--------------|---------------|
| T9102        | 08 JUN 1991   | 27         | 129°03.6'    | 48°03.6'      |
|              |               | 3          | 129°04.2'    | 48°02.0'      |
|              |               | 20         | 129°04.2'    | 48°01.7'      |
|              |               | 15         | 129°04.8'    | 48°00.1'      |
|              |               | 21         | 129°05.4'    | 47°58.9'      |
|              |               | 12         | 129°06.0'    | 47°57.9'      |
|              |               | 17         | 129°06.6'    | 47°57.1'      |
|              |               | 14         | 129°07.2'    | 47°56.2'      |
|              |               | 25         | 129°07.2'    | 47°55.1'      |
|              |               | 11         | 129°07.8'    | 47°54.1'      |
|              |               | 1          | 129°08.4'    | 47°53.2'      |
|              |               | 18         | 129°09.0'    | 47°52.4'      |
| T9103        | 08 JUN 1991   | 9          | 129°00.6'    | 47°59.2'      |
|              |               | 29         | 129°02.4'    | 47°59.6'      |
|              |               | 26         | 129°03.6'    | 48°00.0'      |
|              |               | 23         | 129°04.2'    | 48°00.1'      |
|              |               | 12         | 129°04.2'    | 48°00.2'      |
|              |               | 15         | 129°04.8'    | 48°00.2'      |
|              |               | 17         | 129°04.8'    | 48°00.3'      |
|              |               | 20         | 129°04.8'    | 48°00.4'      |
|              |               | 3          | 129°05.4'    | 48°00.4'      |
|              |               | 14         | 129°06.0'    | 48°06.6'      |
|              |               | 5          | 129°07.2'    | 48°01.1'      |
|              |               | 21         | 129°08.4'    | 48°01.3'      |
| T9104        | 09 JUN 1991   | 10         | 129°09.6'    | 47°57.2'      |
|              |               | 19         | 129°09.0'    | 47°57.0'      |
|              |               | 8          | 129°08.4'    | 47°56.9'      |
|              |               | 31         | 129°07.2'    | 47°56.4'      |
|              |               | 24         | 129°06.6'    | 47°56.3'      |
|              |               | 16         | 129°06.6'    | 47°56.2'      |
|              |               | 30         | 129°05.4'    | 47°55.9'      |
| T9105        | 10 JUN 1991   | 23         | 130°12.0'    | 45°01.0'      |
|              |               | 1          | 130°13.2'    | 44°58.7'      |
|              |               | 22         | 130°13.8'    | 44°58.3'      |
|              |               | 21         | 130°13.8'    | 44°58.2'      |
|              |               | 18         | 130°13.8'    | 44°57.7'      |
|              |               | 3          | 130°13.8'    | 44°57.7'      |
|              |               | 5          | 130°14.4'    | 44°57.2'      |
|              |               | 11         | 130°14.4'    | 44°57.1'      |
|              |               | 13         | 130°15.0'    | 44°56.3'      |
|              |               | 2          | 130°15.0'    | 44°56.2'      |
|              |               | 6          | 130°16.2'    | 44°53.5'      |
| 17           | 130°16.2'     | 44°53.3'   |              |               |

TABLE 3 (Continued)  
VENTS 1991  
(JUNE 1991)  
TOW NISKIN™ TRIP POSITIONS

| STATION NAME | DATE OCCUPIED | NISKIN NO. | LATITUDE (N) | LONGITUDE (W) |
|--------------|---------------|------------|--------------|---------------|
| T9106        | 11 JUN 1991   | 14         | 130°10.8'    | 44°58.2'      |
|              |               | 15         | 130°11.4'    | 44°58.4'      |
|              |               | 20         | 130°12.0'    | 44°58.5'      |
|              |               | 8          | 130°12.0'    | 44°58.5'      |
|              |               | 29         | 130°12.0'    | 44°58.6'      |
|              |               | 5          | 130°12.6'    | 44°58.6'      |
|              |               | 12         | 130°13.2'    | 44°58.9'      |
|              |               | 24         | 130°13.8'    | 44°59.0'      |
|              |               | 9          | 130°13.8'    | 44°59.0'      |
|              |               | 19         | 130°14.4'    | 44°59.2'      |
|              |               | 16         | 130°15.0'    | 44°59.4'      |
|              |               | 26         | 130°15.0'    | 44°59.4'      |
| T9107        | 13 JUN 1991   | 3          | 130°11.4'    | 45°01.6'      |
|              |               | 18         | 130°11.4'    | 45°01.7'      |
|              |               | 12         | 130°15.0'    | 45°02.5'      |
| T9108        | 15 JUN 1991   | 22         | 130°15.6'    | 44°53.2'      |
|              |               | 2          | 130°16.2'    | 44°53.5'      |
|              |               | 13         | 130°16.8'    | 44°53.6'      |
|              |               | 6          | 130°18.0'    | 44°53.8'      |
|              |               | 21         | 130°18.6'    | 44°54.0'      |
|              |               | 23         | 130°19.8'    | 44°54.3'      |
|              |               | 27         | 130°20.4'    | 44°54.5'      |
|              |               | 19         | 130°21.0'    | 44°54.6'      |
| 26           | 130°21.6'     | 44°54.8'   |              |               |
| T9109        | 16 JUN 1991   | 27         | 130°24.0'    | 44°36.5'      |
|              |               | 16         | 130°23.4'    | 44°37.9'      |
|              |               | 23         | 130°23.4'    | 44°38.3'      |
|              |               | 3          | 130°23.4'    | 44°38.5'      |
|              |               | 5          | 130°22.8'    | 44°39.1'      |
|              |               | 2          | 130°22.8'    | 44°39.5'      |
|              |               | 20         | 130°22.8'    | 44°39.6'      |
|              |               | 13         | 130°22.2'    | 44°40.2'      |
|              |               | 8          | 130°22.2'    | 44°40.7'      |
|              |               | 25         | 130°22.2'    | 44°40.8'      |
| T9110        | 17 JUN 1991   | 17         | 130°20.4'    | 44°44.2'      |
|              |               | 29         | 130°19.2'    | 44°46.9'      |
|              |               | 30         | 130°19.2'    | 44°47.2'      |
|              |               | 12         | 130°15.6'    | 44°53.3'      |
|              |               | 26         | 130°13.2'    | 44°59.2'      |

TABLE 3 (Continued)  
VENTS 1991  
(JUNE 1991)  
TOW NISKIN™ TRIP POSITIONS

| STATION NAME | DATE OCCUPIED | NISKIN NO. | LATITUDE (N) | LONGITUDE (W) |
|--------------|---------------|------------|--------------|---------------|
| T9111        | 18 JUN 1991   | 31         | 130°24.6'    | 44°21.9'      |
|              |               | 12         | 130°26.4'    | 44°24.1'      |
|              |               | 24         | 130°27.6'    | 44°25.6'      |
|              |               | 17         | 130°28.2'    | 44°26.6'      |
|              |               | 21         | 130°28.8'    | 44°28.0'      |
|              |               | 19         | 130°29.4'    | 44°29.0'      |
| T9112        | 22 JUN 1991   | 17         | 130°10.2'    | 45°07.9'      |
|              |               | 10         | 130°10.8'    | 45°05.3'      |
|              |               | 3          | 130°12.6'    | 45°00.9'      |
|              |               | 29         | 130°13.2'    | 44°58.9'      |
| T9113        | 23 JUN 1991   | 3          | 130°01.8'    | 45°55.6'      |
|              |               | 29         | 130°01.8'    | 45°55.5'      |
|              |               | 31         | 130°01.2'    | 45°54.9'      |
|              |               | 24         | 130°01.2'    | 45°54.5'      |
|              |               | 17         | 130°01.8'    | 45°54.4'      |
| T9115        | 24 JUN 1991   | 20         | 129°54.6'    | 46°01.9'      |
|              |               | 31         | 129°51.6'    | 46°05.7'      |
|              |               | 29         | 129°51.6'    | 46°05.8'      |
|              |               | 3          | 129°51.6'    | 46°06.2'      |
|              |               | 1          | 129°51.0'    | 46°07.4'      |
|              |               | 24         | 129°43.2'    | 46°16.9'      |
|              |               | 17         | 129°43.2'    | 46°16.9'      |
|              |               | 15         | 129°43.2'    | 46°17.0'      |
|              |               | 25         | 129°43.2'    | 46°17.0'      |
|              |               | 10         | 129°43.2'    | 46°17.2'      |
| 2            | 129°42.6'     | 46°17.5'   |              |               |

TABLE 4  
VENTS 1992  
(MAY/JUNE 1992)  
TOW NISKIN™ TRIP POSITIONS

| STATION NAME | DATE OCCUPIED | NISKIN # | LONGITUDE (W) | LATITUDE (N) |
|--------------|---------------|----------|---------------|--------------|
| T9201        | 21 MAY 92     | 9        | 130°13.9'     | 44°55.4'     |
|              |               | 10       | 130°13.9'     | 44°55.4'     |
|              |               | 12       | 130°12.3'     | 44°59.2'     |
|              |               | 16       | 130°12.1'     | 44°59.6'     |
|              |               | 18       | 130°12.1'     | 44°59.6'     |
|              |               | 2        | 130°11.6'     | 45°00.3'     |
|              |               | 3        | 130°11.4'     | 45°00.7'     |
|              |               | 14       | 130°10.7'     | 45°02.1'     |
|              |               | 5        | 130°10.2'     | 45°02.8'     |
|              |               | 6        | 130°06.5'     | 45°09.8'     |
| T9202        | 21 MAY 92     | 17       | 130°11.4'     | 45°03.8'     |
|              |               | 23       | 130°10.8'     | 45°03.8'     |
|              |               | 13       | 130°10.8'     | 45°03.8'     |
|              |               | 29       | 130°10.8'     | 45°03.8'     |
|              |               | 27       | 130°10.8'     | 45°03.8'     |
|              |               | 19       | 130°10.8'     | 45°03.7'     |
|              |               | 30       | 130°10.8'     | 45°03.6'     |
|              |               | 11       | 130°09.6'     | 45°03.4'     |
|              |               | 24       | 130°08.4'     | 45°02.9'     |
| T9203        | 22 MAY 92     | 9        | 130°19.2'     | 45°01.7'     |
|              |               | 10       | 130°18.0'     | 45°01.3'     |
|              |               | 12       | 130°16.2'     | 45°00.8'     |
|              |               | 16       | 130°15.6'     | 45°00.7'     |
|              |               | 18       | 130°15.0'     | 45°00.5'     |
|              |               | 2        | 130°14.4'     | 45°00.4'     |
|              |               | 3        | 130°13.8'     | 45°00.1'     |
|              |               | 14       | 130°12.6'     | 44°59.8'     |
|              |               | 5        | 130°10.2'     | 44°59.3'     |
|              |               | 6        | 130°08.4'     | 44°58.9'     |
| T9204        | 23 MAY 92     | 18       | 130°21.0'     | 44°54.9'     |
|              |               | 2        | 130°21.0'     | 44°54.8'     |
|              |               | 13       | 130°19.8'     | 44°54.6'     |
|              |               | 23       | 130°19.8'     | 44°54.4'     |
|              |               | 17       | 130°18.6'     | 44°54.2'     |
|              |               | 15       | 130°18.0'     | 44°54.0'     |
|              |               | 6        | 130°17.4'     | 44°53.8'     |
|              |               | 5        | 130°16.2'     | 44°53.5'     |
|              |               | 14       | 130°15.6'     | 44°53.3'     |
|              |               | 3        | 130°13.8'     | 44°52.9'     |
| T9205        | 23 MAY 92     | 11       | 130°12.0'     | 44°59.5'     |
|              |               | 30       | 130°12.6'     | 44°59.2'     |

TABLE 4 (Continued)  
VENTS 1992  
(MAY/JUNE 1992)  
TOW NISKIN™ TRIP POSITIONS

| STATION NAME | DATE OCCUPIED | NISKIN # | LONGITUDE (W) | LATITUDE (N) |
|--------------|---------------|----------|---------------|--------------|
|              |               | 19       | 130°12.6'     | 44°58.6'     |
|              |               | 27       | 130°12.6'     | 44°58.0'     |
|              |               | 29       | 130°12.6'     | 44°57.8'     |
|              |               | 25       | 130°13.2'     | 44°56.6'     |
|              |               | 22       | 130°14.4'     | 44°55.1'     |
|              |               | 12       | 130°14.4'     | 44°54.2'     |
|              |               | 26       | 130°15.0'     | 44°53.4'     |
|              |               | 24       | 130°15.0'     | 44°53.3'     |
| T9206        | 24 MAY 92     | 21       | 130°18.6'     | 44°46.4'     |
|              |               | 6        | 130°21.0'     | 44°41.1'     |
|              |               | 5        | 130°21.0'     | 44°40.9'     |
|              |               | 3        | 130°21.6'     | 44°40.4'     |
|              |               | 17       | 130°21.6'     | 44°39.9'     |
|              |               | 24       | 130°21.6'     | 44°39.8'     |
|              |               | 18       | 130°21.6'     | 44°39.1'     |
|              |               | 2        | 130°22.2'     | 44°38.8'     |
|              |               | 13       | 130°22.2'     | 44°38.6'     |
|              |               | 23       | 130°26.4'     | 44°30.8'     |
| T9207        | 25 MAY 92     | 22       | 130°26.4'     | 44°41.9'     |
|              |               | 29       | 130°26.4'     | 44°41.9'     |
|              |               | 12       | 130°25.8'     | 44°41.6'     |
|              |               | 26       | 130°24.6'     | 44°41.2'     |
|              |               | 11       | 130°24.0'     | 44°41.2'     |
|              |               | 30       | 130°24.0'     | 44°41.1'     |
|              |               | 19       | 130°23.4'     | 44°41.0'     |
|              |               | 15       | 130°22.8'     | 44°40.7'     |
|              |               | 9        | 130°21.6'     | 44°40.2'     |
|              |               | 23       | 130°19.2'     | 44°39.2'     |
| T9208        | 25 MAY 92     | 1        | 130°21.6'     | 44°39.3'     |
|              |               | 2        | 130°21.6'     | 44°39.3'     |
|              |               | 3        | 130°21.6'     | 44°39.4'     |
|              |               | 4        | 130°21.6'     | 44°39.4'     |
|              |               | 5        | 130°21.6'     | 44°40.7'     |
|              |               | 6        | 130°21.6'     | 44°40.7'     |
|              |               | 7        | 130°21.0'     | 44°40.9'     |
|              |               | 8        | 130°21.0'     | 44°41.2'     |
|              |               | 9        | 130°21.0'     | 44°41.2'     |
|              |               | 10       | 130°21.0'     | 44°41.1'     |
| T9209        | 28 MAY 92     | 10       | 130°12.6'     | 44°58.1'     |
|              |               | 14       | 130°12.6'     | 44°58.1'     |
|              |               | 27       | 130°12.6'     | 44°58.1'     |

TABLE 4 (Continued)  
VENTS 1992  
(MAY/JUNE 1992)  
TOW NISKIN™ TRIP POSITIONS

| STATION NAME | DATE OCCUPIED | NISKIN # | LONGITUDE (W) | LATITUDE (N) |
|--------------|---------------|----------|---------------|--------------|
|              |               | 17       | 130°12.6'     | 44°58.2'     |
|              |               | 1        | 130°12.6'     | 44°58.3'     |
|              |               | 6        | 130°12.6'     | 44°58.3'     |
|              |               | 24       | 130°13.2'     | 44°58.3'     |
|              |               | 18       | 130°13.2'     | 44°58.3'     |
|              |               | 3        | 130°13.2'     | 44°58.3'     |
|              |               | 15       | 130°13.2'     | 44°58.3'     |
| T9210        | 08 JUN 92     | 15       | 128°03.0'     | 47°15.7'     |
|              |               | 23       | 128°03.0'     | 47°15.7'     |
|              |               | 19       | 128°03.0'     | 47°16.4'     |
|              |               | 13       | 128°03.0'     | 47°16.9'     |
|              |               | 14       | 128°03.0'     | 47°17.0'     |
|              |               | 16       | 128°03.0'     | 47°17.2'     |
|              |               | 9        | 128°03.0'     | 47°17.3'     |
|              |               | 6        | 128°03.0'     | 47°17.7'     |
|              |               | 3        | 128°03.0'     | 47°18.2'     |
|              |               | 30       | 128°03.0'     | 47°18.6'     |
| T9211        | 09 JUN 92     | 27       | 127°35.4'     | 47°51.8'     |
|              |               | 1        | 127°36.6'     | 47°51.7'     |
|              |               | 21       | 127°37.2'     | 47°51.6'     |
|              |               | 2        | 127°37.2'     | 47°51.5'     |
|              |               | 25       | 127°37.2'     | 47°51.5'     |
|              |               | 10       | 127°40.8'     | 47°50.9'     |
|              |               | 8        | 127°44.4'     | 47°50.2'     |
|              |               | 5        | 127°44.4'     | 47°50.1'     |
|              |               | 11       | 127°45.0'     | 47°50.1'     |
|              |               | 26       | 127°45.6'     | 47°49.9'     |
| T9212        | 09 JUN 92     | 6        | 127°46.8'     | 47°42.6'     |
|              |               | 23       | 127°46.8'     | 47°42.6'     |
|              |               | 14       | 127°46.8'     | 47°42.6'     |
|              |               | 16       | 127°46.8'     | 47°42.6'     |
|              |               | 9        | 127°46.8'     | 47°42.6'     |
|              |               | 18       | 127.°46.8'    | 47°42.6'     |
|              |               | 30       | 127°48.0'     | 47°41.9'     |
|              |               | 3        | 127°48.0'     | 47°41.8'     |
|              |               | 13       | 127°48.0'     | 47°41.8'     |
|              |               | 24       | 127°48.0'     | 47°41.8'     |
|              |               | 17       | 127°48.0'     | 47°41.8'     |
|              |               | 22       | 127°48.0'     | 47°41.6'     |
| T9213        | 10 JUN 92     | 1        | 127°43.8'     | 47°50.6'     |
|              |               | 21       | 127°43.8'     | 47°50.6'     |

TABLE 4 (Continued)  
VENTS 1992  
(MAY/JUNE 1992)  
TOW NISKIN™ TRIP POSITIONS

| STATION NAME | DATE OCCUPIED | NISKIN # | LONGITUDE (W) | LATITUDE (N) |
|--------------|---------------|----------|---------------|--------------|
|              |               | 2        | 127°43.8'     | 47°50.6'     |
|              |               | 25       | 127°43.8'     | 47°50.5'     |
|              |               | 10       | 127°43.8'     | 47°50.5'     |
|              |               | 11       | 127°44.4'     | 47°49.7'     |
|              |               | 19       | 127°44.4'     | 47°49.7'     |
|              |               | 15       | 127°44.4'     | 47°49.6'     |
|              |               | 31       | 127°44.4'     | 47°49.6'     |
| T9214        | 10 JUN 92     | 22       | 127°33.0'     | 47°48.8'     |
|              |               | 27       | 127°34.2'     | 47°49.4'     |
|              |               | 24       | 127°34.8'     | 47°49.9'     |
|              |               | 30       | 127°36.0'     | 47°50.8'     |
|              |               | 31       | 27°36.6'      | 47°51.3'     |
|              |               | 13       | 127°37.8'     | 47°51.9'     |
|              |               | 17       | 127°38.4'     | 47°52.4'     |
|              |               | 6        | 127°39.0'     | 47°53.0'     |
|              |               | 9        | 127°40.2'     | 47°53.5'     |
|              |               | 23       | 127°40.8'     | 47°54.1'     |
| T9215        | 10 JUN 92     | 20       | 127°44.4'     | 47°52.4'     |
|              |               | 1        | 127°43.8'     | 47°50.7'     |
|              |               | 21       | 127°43.8'     | 47°50.6'     |
|              |               | 2        | 127°43.8'     | 47°49.9'     |
|              |               | 12       | 127°43.8'     | 47°49.6'     |
|              |               | 14       | 127°43.2'     | 47°49.6'     |
|              |               | 10       | 127°43.2'     | 47°49.4'     |
|              |               | 16       | 127°43.2'     | 47°48.6'     |
|              |               | 29       | 127°43.2'     | 47°48.5'     |
|              |               | 15       | 127°42.6'     | 47°47.9'     |

### 3.3 Individual Station Data

The header on the data tables in Appendix A contains the station identification and consecutive cast number, the date the station was occupied, and the latitude and longitude of the station. The data is listed in rows by Niskin™ bottle number and in 21 columns as follows:

- Column 1: Niskin™ bottle number
- Column 2: Depth in meters
- Column 3: Depth in decibars
- Column 4: In situ temperature (°C)
- Column 5: Potential temperature (°C)
- Column 6: Temperature anomaly (°C)
- Column 7: Salinity-CTD (PSU)
- Column 8: Salinity-Bottle (PSU)
- Column 9: Attenuation (1/m)
- Column 10: Attenuation anomaly (1/m)
- Column 11: In situ density (CTD salinity)
- Column 12: In situ density (Bottle salinity)
- Column 13: Potential density (CTD salinity)
- Column 14: Potential density (Bottle salinity)
- Column 15: Filtered PO<sub>4</sub>
- Column 16: Filtered SiO<sub>4</sub>
- Column 17: Total suspended matter

The lower left portion of each table displays the equation used to calculate the station's temperature anomaly and attenuation anomaly.

### 4.0 ACKNOWLEDGMENTS

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# **APPENDIX A:**

## **Station Data Tables VENTS 1991**

VENTS 1991 - LEG II  
 Station T9101 Cast 1 7 JUNE 1991  
 LAT: 48 27.4N LONG: 128 42.7W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 10       | 2389.3    | 2423.5     | 1.770         | 1.601   |             | 34.624         | 34.624            | 0.383        | 0.013        | 27.688        | 27.688           | 27.701            | 27.701               |
| 8        | 2364.5    | 2398.2     | 1.776         | 1.609   |             | 34.623         | 34.620            | 0.381        | 0.011        | 27.687        | 27.685           | 27.700            | 27.697               |
| 31       | 2345.6    | 2378.9     | 1.785         | 1.620   |             | 34.622         | 34.622            | 0.382        | 0.012        | 27.686        | 27.686           | 27.698            | 27.698               |
| 16       | 2339.9    | 2373.1     | 1.783         | 1.618   |             | 34.622         | 34.623            | 0.387        | 0.017        | 27.686        | 27.687           | 27.698            | 27.699               |
| 26       | 2396.0    | 2430.4     | 1.760         | 1.590   |             | 34.626         | 34.605            | 0.384        | 0.014        | 27.691        | 27.674           | 27.703            | 27.687               |
| 22       | 2366.5    | 2400.3     | 1.768         | 1.601   |             | 34.623         | 34.624            | 0.377        | 0.007        | 27.688        | 27.688           | 27.700            | 27.701               |
| 24       | 2335.6    | 2368.7     | 1.780         | 1.616   |             | 34.620         | 34.620            | 0.372        | 0.002        | 27.684        | 27.684           | 27.697            | 27.697               |
| 6        | 2305.7    | 2338.3     | 1.786         | 1.624   |             | 34.618         | 34.618            | 0.372        | 0.002        | 27.682        | 27.682           | 27.695            | 27.694               |
| 2        | 2251.7    | 2283.2     | 1.806         | 1.649   |             | 34.613         | 34.611            | 0.373        | 0.003        | 27.677        | 27.675           | 27.689            | 27.687               |
| 19       | 2205.2    | 2235.8     | 1.818         | 1.665   |             | 34.609         | 34.611            | 0.371        | 0.001        | 27.673        | 27.674           | 27.684            | 27.686               |
| 29       | 2105.3    | 2134.0     | 1.858         | 1.713   |             | 34.602         | 34.602            | 0.372        | 0.002        | 27.664        | 27.664           | 27.675            | 27.675               |
| 30       | 2008.3    | 2035.2     | 1.892         | 1.754   |             | 34.594         | 34.596            | 0.370        | 0.000        | 27.655        | 27.657           | 27.665            | 27.667               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 10       | 2.850        | 182.433       | 24.15      |
| 8        | 2.866        | 182.286       | 22.22      |
| 31       | 2.871        | 182.471       | 21.93      |
| 16       | 2.877        | 182.129       | 21.25      |
| 26       | 2.877        | 180.645       | 26.72      |
| 22       | 2.869        | 181.561       | 21.57      |
| 24       | 2.855        | 180.444       | 16.73      |
| 6        | 2.868        | 179.773       | 12.27      |
| 2        | 2.876        | 178.564       | 14.24      |
| 19       | 2.863        | 178.660       | 10.77      |
| 29       | 2.909        | 176.917       | 10.88      |
| 30       | 2.905        | 175.895       | 12.99      |

Atten-Anom = Atten - 0.37

VENTS 1991 - LEG II  
 Station T9102 Cast 2 8 JUNE 1991  
 LAT: 48 4.0N LONG: 129 3.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 27       | 2075.4    | 2103.5     | 1.866        | 1.723   | 0.034       | 34.608         | 34.608            | 0.382        | 0.005        | 27.668        | 27.668           | 27.679            | 27.679               |
| 3        | 2116.4    | 2145.2     | 1.872        | 1.725   | 0.036       | 34.608         | 34.608            | 0.382        | 0.005        | 27.668        | 27.668           | 27.679            | 27.679               |
| 20       | 2049.1    | 2076.7     | 1.927        | 1.785   | 0.050       | 34.602         | 34.602            | 0.393        | 0.016        | 27.659        | 27.659           | 27.670            | 27.670               |
| 15       | 1926.9    | 1952.3     | 1.977        | 1.845   | 0.076       | 34.599         | 34.600            | 0.417        | 0.040        | 27.652        | 27.653           | 27.663            | 27.663               |
| 21       | 1888.2    | 1912.9     | 1.994        | 1.865   | 0.104       | 34.603         | 34.603            | 0.436        | 0.059        | 27.654        | 27.654           | 27.664            | 27.664               |
| 12       | 1848.7    | 1872.7     | 1.997        | 1.871   | 0.076       | 34.595         | 34.595            | 0.414        | 0.037        | 27.647        | 27.647           | 27.657            | 27.657               |
| 17       | 2044.2    | 2071.7     | 1.947        | 1.805   | 0.074       | 34.605         | 34.606            | 0.404        | 0.027        | 27.659        | 27.660           | 27.671            | 27.671               |
| 14       | 2042.0    | 2069.4     | 1.918        | 1.777   | 0.057       | 34.605         | 34.608            | 0.393        | 0.016        | 27.662        | 27.664           | 27.673            | 27.675               |
| 25       | 2057.8    | 2085.5     | 1.865        | 1.724   | 0.031       | 34.607         | 34.607            | 0.382        | 0.005        | 27.667        | 27.665           | 27.676            | 27.676               |
| 11       | 2059.5    | 2087.3     | 1.864        | 1.722   | 0.038       | 34.609         | 34.609            | 0.382        | 0.005        | 27.669        | 27.669           | 27.680            | 27.680               |
| 1        | 2166.1    | 2195.9     | 1.824        | 1.674   | 0.035       | 34.616         | 34.615            | 0.383        | 0.006        | 27.677        | 27.677           | 27.689            | 27.688               |
| 18       | 2014.4    | 2041.4     | 1.897        | 1.759   | 0.022       | 34.599         | 34.598            | 0.380        | 0.003        | 27.659        | 27.658           | 27.669            | 27.668               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 27       |              |               | 13.80      |
| 3        | 2.905        | 179.153       | 19.13      |
| 20       | 2.882        | 178.848       | 23.57      |
| 15       | 2.870        | 180.612       | 41.58      |
| 21       | 2.853        | 182.632       | 39.46      |
| 12       | 2.876        | 179.697       | 28.90      |
| 17       | 2.856        | 180.519       | 29.41      |
| 14       | 2.884        | 180.043       | 22.28      |
| 25       | 2.872        | 177.731       | 19.75      |
| 11       | 2.869        | 178.271       | 26.17      |
| 1        | 2.881        | 179.501       | 14.66      |
| 18       | 2.903        | 176.466       | 13.54      |

D-Theta = (ptemp + (4.8884 \* pden)) - 136.995  
 Atten-Anom = Atten - 0.377

VENTS 1991 - LEG II  
 Station S9155 Cast 3 8 JUNE 1991  
 LAT: 47 57.6N LONG: 129 6.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 30       | 2155.2    | 2184.7     | 1.930         | 1.779   | 0.065       | 34.608         | 34.609            | 0.407        | 0.031        | 27.663        | 27.664           | 27.675            | 27.676               |
| 26       | 2122.9    | 2151.8     | 1.941         | 1.793   | 0.069       | 34.607         | 34.603            | 0.418        | 0.042        | 27.661        | 27.658           | 27.673            | 27.670               |
| 2        | 2097.6    | 2126.0     | 1.954         | 1.808   | 0.075       | 34.606         | 34.603            | 0.406        | 0.030        | 27.660        | 27.657           | 27.671            | 27.669               |
| 10       | 2047.4    | 2075.0     | 1.960         | 1.818   | 0.077       | 34.605         | 34.606            | 0.408        | 0.032        | 27.658        | 27.659           | 27.669            | 27.670               |
| 19       | 2030.0    | 2057.2     | 1.972         | 1.831   | 0.086       | 34.605         | 34.604            | 0.411        | 0.035        | 27.657        | 27.657           | 27.668            | 27.668               |
| 8        | 1998.8    | 2025.5     | 1.967         | 1.829   | 0.076       | 34.603         | 34.603            | 0.412        | 0.036        | 27.656        | 27.656           | 27.667            | 27.667               |
| 31       | 1951.2    | 1977.0     | 1.981         | 1.847   | 0.076       | 34.600         | 34.601            | 0.414        | 0.038        | 27.653        | 27.654           | 27.663            | 27.664               |
| 16       | 1899.1    | 1924.0     | 1.994         | 1.864   | 0.079       | 34.598         | 34.598            | 0.412        | 0.036        | 27.650        | 27.650           | 27.660            | 27.660               |
| 22       | 1849.6    | 1873.6     | 1.989         | 1.863   | 0.043       | 34.589         | 34.588            | 0.395        | 0.019        | 27.643        | 27.642           | 27.652            | 27.652               |
| 24       | 1797.1    | 1820.2     | 2.023         | 1.901   | -3e-04      | 34.572         | 34.572            | 0.378        | 0.002        | 27.627        | 27.627           | 27.637            | 27.637               |
| 6        | 1699.5    | 1720.9     | 2.155         | 2.040   | -0.001      | 34.550         | 34.550            | 0.378        | 0.002        | 27.599        | 27.599           | 27.608            | 27.608               |
| 13       | 1600.5    | 1620.3     | 2.230         | 2.122   | 0.010       | 34.540         | 34.539            | 0.378        | 0.002        | 27.585        | 27.584           | 27.593            | 27.593               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 30       | 2.907        | 180.206       | 23.70      |
| 26       | 2.892        | 179.313       |            |
| 2        | 2.889        | 179.945       | 29.53      |
| 10       | 2.888        | 180.565       | 36.04      |
| 19       | 2.872        | 174.208       | 49.86      |
| 8        | 2.887        | 180.131       | 37.17      |
| 31       | 2.895        | 180.012       | 41.98      |
| 16       | 2.902        | 179.707       | 63.45      |
| 22       | 2.945        | 175.843       | 20.00      |
| 24       | 2.979        | 171.706       | 13.15      |
| 6        | 3.025        | 168.594       | 18.00      |
| 13       | 3.056        | 166.777       | 10.04      |

D-Theta = (ptemp + (4.8884 \* pden)) - 137  
 Atten-Anom = Atten - 0.376

VENTS 1991 - LEG II  
 Station T9103 Cast 4 8 JUNE 1991  
 LAT: 47 59.2N LONG: 129 0.7W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 9        | 1997.3    | 2023.9     | 1.935         | 1.798   | 0.057       | 34.603         | 34.602            | 0.397        | 0.021        | 27.659        | 27.658           | 27.669            | 27.669               |
| 29       | 1995.1    | 2021.7     | 1.957         | 1.819   | 0.074       | 34.604         | 34.604            | 0.408        | 0.032        | 27.658        | 27.658           | 27.669            | 27.669               |
| 26       | 1989.7    | 2016.2     | 1.958         | 1.821   | 0.079       | 34.605         | 34.604            | 0.408        | 0.032        | 27.659        | 27.658           | 27.669            | 27.668               |
| 23       | 1999.9    | 2026.6     | 1.967         | 1.829   | 0.084       | 34.605         | 34.604            | 0.441        | 0.065        | 27.658        | 27.657           | 27.669            | 27.668               |
| 12       | 2133.7    | 2162.8     | 1.887         | 1.739   | 0.047       | 34.610         | 34.611            | 0.385        | 0.009        | 27.668        | 27.669           | 27.679            | 27.680               |
| 15       | 2025.1    | 2052.2     | 1.938         | 1.798   | 0.061       | 34.604         | 34.604            | 0.399        | 0.023        | 27.659        | 27.659           | 27.670            | 27.670               |
| 17       | 1961.1    | 1987.1     | 1.953         | 1.818   | 0.066       | 34.602         | 34.603            | 0.404        | 0.028        | 27.657        | 27.657           | 27.667            | 27.668               |
| 20       | 1929.2    | 1954.6     | 1.952         | 1.820   | 0.055       | 34.599         | 34.599            | 0.399        | 0.023        | 27.654        | 27.654           | 27.664            | 27.664               |
| 3        | 1997.5    | 2024.1     | 1.939         | 1.802   | 0.059       | 34.603         | 34.604            | 0.399        | 0.023        | 27.658        | 27.659           | 27.669            | 27.670               |
| 14       | 2001.5    | 2028.2     | 1.937         | 1.799   | 0.062       | 34.604         | 34.604            | 0.399        | 0.023        | 27.659        | 27.659           | 27.670            | 27.670               |
| 5        | 2026.6    | 2053.8     | 1.898         | 1.759   | 0.040       | 34.605         | 34.604            | 0.384        | 0.008        | 27.663        | 27.662           | 27.674            | 27.673               |
| 21       | 2061.8    | 2089.6     | 1.864         | 1.722   | 0.025       | 34.607         | 34.606            | 0.380        | 0.004        | 27.667        | 27.667           | 27.678            | 27.678               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 9        | 2.877        | 178.388       | 24.08      |
| 29       | 2.898        | 179.699       | 39.63      |
| 26       | 2.885        | 179.665       | 41.52      |
| 23       | 2.833        | 179.838       | 39.84      |
| 12       | 2.895        | 178.190       | 17.22      |
| 15       | 2.899        | 178.926       | 27.23      |
| 17       | 2.876        | 179.337       | 31.59      |
| 20       | 2.917        | 178.013       | 29.92      |
| 3        | 2.934        | 178.955       | 25.20      |
| 14       | 2.882        | 179.137       | 31.50      |
| 5        | 2.880        | 177.661       | 17.06      |
| 21       | 2.875        | 176.988       | 15.30      |

D-Theta = (ptemp + (4.8884 \* pden)) - 137  
 Atten-Anom = Atten - 0.376

VENTS 1991 - LEG II  
 Station T9104 Cast 5 9 JUNE 1991  
 LAT: 47 58.0N LONG: 129 11.2W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 10       | 2022.7    | 2049.8     | 1.926        | 1.787   | 0.046       | 34.602         | 34.603            | 0.393        | 0.017        | 27.659        | 27.659           | 27.669            | 27.670               |
| 19       | 2023.0    | 2050.1     | 1.931        | 1.791   | 0.053       | 34.603         | 34.604            | 0.396        | 0.020        | 27.659        | 27.660           | 27.670            | 27.671               |
| 8        | 2046.4    | 2074.0     | 1.942        | 1.800   | 0.074       | 34.607         | 34.606            | 0.460        | 0.084        | 27.661        | 27.661           | 27.672            | 27.672               |
| 31       | 1992.4    | 2019.0     | 1.933        | 1.796   | 0.060       | 34.604         | 34.604            | 0.398        | 0.022        | 27.660        | 27.660           | 27.670            | 27.670               |
| 24       | 2067.2    | 2095.1     | 1.880        | 1.737   | 0.039       | 34.608         | 34.608            | 0.384        | 0.008        | 27.667        | 27.667           | 27.678            | 27.678               |
| 16       | 1991.9    | 2018.5     | 1.923        | 1.786   | 0.030       | 34.598         | 34.598            | 0.385        | 0.009        | 27.656        | 27.656           | 27.666            | 27.666               |
| 30       | 2074.0    | 2102.1     | 1.870        | 1.727   | 0.036       | 34.609         | 34.607            | 0.381        | 0.005        | 27.669        | 27.667           | 27.680            | 27.678               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 10       | 2.925        | 178.978       | 21.62      |
| 19       | 2.829        | 179.388       | 29.03      |
| 8        | 2.779        | 180.798       | 44.00      |
| 31       | 2.903        | 179.718       | 15.60      |
| 24       | 2.934        | 178.771       | 15.49      |
| 16       | 2.940        | 177.445       | 16.18      |
| 30       | 2.947        | 178.454       | 11.50      |

D-Theta = (ptemp + (4.8884 \* pden)) - 137  
 Atten-Anom = Atten - 0.376



VENTS 1991 - LEG II  
 Station S9156 Cast 6 9 JUNE 1991  
 LAT: 47 56.9N LONG: 129 8.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 9        | 2166.6    | 2196.4     | 1.914        | 1.762   | 0.054       | 34.608         | 34.609            | 0.393        | 0.0175       | 27.664        | 27.665           | 27.676            | 27.677               |
| 29       | 2125.7    | 2154.7     | 1.915        | 1.767   | 0.057       | 34.608         | 34.608            | 0.397        | 0.0215       | 27.664        | 27.664           | 27.676            | 27.676               |
| 12       | 2097.8    | 2126.3     | 1.915        | 1.769   | 0.058       | 34.608         | 34.608            | 0.397        | 0.0215       | 27.664        | 27.664           | 27.676            | 27.676               |
| 17       | 2076.5    | 2104.6     | 1.914        | 1.770   | 0.059       | 34.608         | 34.608            | 0.396        | 0.0205       | 27.664        | 27.664           | 27.675            | 27.675               |
| 26       | 2051.0    | 2078.6     | 1.920        | 1.778   | 0.060       | 34.607         | 34.607            | 0.396        | 0.0205       | 27.663        | 27.663           | 27.674            | 27.674               |
| 6        | 2025.1    | 2052.2     | 1.934        | 1.794   | 0.055       | 34.603         | 34.603            | 0.396        | 0.0205       | 27.659        | 27.659           | 27.670            | 27.670               |
| 13       | 1999.0    | 2025.7     | 1.941        | 1.803   | 0.049       | 34.600         | 34.600            | 0.393        | 0.0175       | 27.656        | 27.656           | 27.667            | 27.667               |
| 27       | 1949.3    | 1975.0     | 1.949        | 1.816   | 0.029       | 34.593         | 34.593            | 0.387        | 0.0115       | 27.650        | 27.650           | 27.660            | 27.660               |
| 25       | 1900.7    | 1925.6     | 1.960        | 1.830   | 0.018       | 34.588         | 34.586            | 0.381        | 0.0055       | 27.645        | 27.643           | 27.655            | 27.653               |
| 11       | 1796.8    | 1819.9     | 2.036        | 1.914   | -2e-04      | 34.570         | 34.569            | 0.377        | 0.0015       | 27.624        | 27.624           | 27.634            | 27.633               |
| 18       | 1702.7    | 1724.2     | 2.110        | 1.995   | -0.001      | 34.557         | 34.557            | 0.377        | 0.0015       | 27.608        | 27.608           | 27.617            | 27.617               |
| 2        | 1601.0    | 1620.8     | 2.199        | 2.091   | 0.003       | 34.543         | 34.541            | 0.378        | 0.0025       | 27.590        | 27.588           | 27.598            | 27.597               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 9        | 2.932        | 178.911       | 19.49      |
| 29       | 2.921        | 179.292       | 19.55      |
| 12       | 2.915        | 179.481       | 26.03      |
| 17       | 2.917        | 179.737       | 20.96      |
| 26       | 2.932        | 179.590       | 22.04      |
| 6        | 2.908        | 179.397       | 24.19      |
| 13       | 2.948        | 178.273       | 22.15      |
| 27       | 2.977        | 176.901       | 17.57      |
| 25       | 2.974        | 175.427       | 13.14      |
| 11       | 3.026        | 172.730       | 10.13      |
| 18       | 3.041        | 171.054       | 13.86      |
| 2        |              |               |            |

D-Theta = (ptemp + (4.8884 \* pden)) - 137  
 Atten-Anom = Atten - 0.3755

VENTS 1991 - LEG II  
 Station S9146 Cast 7 9 JUNE 1991  
 LAT: 46 40.9N LONG: 129 23.8W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 5        | 2384.3    | 2418.0     | 1.828         | 1.658   | 0.009       | 34.621         | 34.621            | 0.380        | 0.006       | 27.681        | 27.681           | 27.694            | 27.694               |
| 23       | 2382.1    | 2415.8     | 1.820         | 1.651   | 0.008       | 34.622         | 34.622            | 0.379        | 0.005       | 27.683        | 27.683           | 27.696            | 27.696               |
| 21       | 2349.3    | 2382.3     | 1.826         | 1.660   | 0.010       | 34.621         | 34.621            | 0.381        | 0.007       | 27.682        | 27.682           | 27.694            | 27.694               |
| 22       | 2323.9    | 2356.5     | 1.830         | 1.666   | 0.014       | 34.621         | 34.620            | 0.383        | 0.009       | 27.681        | 27.681           | 27.694            | 27.693               |
| 1        | 2301.5    | 2333.7     | 1.832         | 1.670   | 0.012       | 34.620         | 34.619            | 0.381        | 0.007       | 27.680        | 27.680           | 27.692            | 27.692               |
| 3        | 2302.1    | 2334.2     | 1.831         | 1.669   | 0.012       | 34.620         | 34.619            | 0.382        | 0.008       | 27.680        | 27.680           | 27.693            | 27.692               |
| 25       | 2275.1    | 2306.7     | 1.835         | 1.675   | 0.012       | 34.619         | 34.618            | 0.380        | 0.006       | 27.679        | 27.679           | 27.691            | 27.691               |
| 18       | 2249.6    | 2280.7     | 1.840         | 1.682   | 0.009       | 34.617         | 34.617            | 0.379        | 0.005       | 27.677        | 27.677           | 27.689            | 27.689               |
| 11       | 2226.0    | 2256.6     | 1.844         | 1.688   | 0.009       | 34.616         | 34.616            | 0.378        | 0.004       | 27.676        | 27.676           | 27.688            | 27.688               |
| 2        | 2200.5    | 2230.7     | 1.846         | 1.692   | 0.004       | 34.614         | 34.614            | 0.377        | 0.003       | 27.674        | 27.674           | 27.686            | 27.686               |
| 15       | 2174.1    | 2203.8     | 1.856         | 1.705   | 4e-04       | 34.611         | 34.611            | 0.376        | 0.002       | 27.671        | 27.671           | 27.683            | 27.683               |
| 14       | 2100.4    | 2128.6     | 1.904         | 1.758   | 4e-04       | 34.602         | 34.603            | 0.376        | 0.002       | 27.660        | 27.661           | 27.672            | 27.672               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 5        | 2.930        | 180.257       | 12.51      |
| 23       |              |               |            |
| 21       | 2.928        | 180.003       | 10.71      |
| 22       | 2.928        | 180.632       | 13.15      |
| 1        | 2.933        | 180.244       | 12.43      |
| 3        |              |               |            |
| 25       | 2.929        | 179.690       | 17.14      |
| 18       | 2.954        | 179.423       | 9.54       |
| 11       | 2.937        | 178.880       | 10.17      |
| 2        | 2.953        | 178.634       | 9.53       |
| 15       | 2.954        | 178.190       | 11.32      |
| 14       | 2.981        | 176.958       | 8.81       |

D-Theta = (ptemp + (4.762 \* pden)) - 133.53  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station T9105 Cast 8 10 JUNE 1991  
 LAT: 45 7.1N LONG: 130 9.3W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 23       | 2092.3    | 2120.1     | 1.895        | 1.750   | 0.014       | 34.608         | 34.608            | 0.384        | 0.008       | 27.666        | 27.666           | 27.677            | 27.677               |
| 1        | 2072.4    | 2099.9     | 1.906        | 1.763   | 0.019       | 34.607         | 34.607            | 0.391        | 0.015       | 27.664        | 27.664           | 27.675            | 27.675               |
| 22       | 2227.3    | 2257.6     | 1.900        | 1.743   | 0.024       | 34.612         | 34.612            | 0.384        | 0.008       | 27.669        | 27.670           | 27.681            | 27.682               |
| 21       | 2071.1    | 2098.6     | 1.915        | 1.772   | 0.043       | 34.612         | 34.612            | 0.389        | 0.013       | 27.668        | 27.668           | 27.679            | 27.679               |
| 18       | 2091.7    | 2119.5     | 1.912        | 1.767   | 0.040       | 34.612         | 34.610            | 0.388        | 0.012       | 27.668        | 27.666           | 27.679            | 27.677               |
| 3        | 2241.9    | 2272.5     | 1.915        | 1.757   | 0.037       | 34.613         | 34.613            | 0.386        | 0.010       | 27.668        | 27.668           | 27.681            | 27.681               |
| 5        | 2139.0    | 2167.7     | 1.896        | 1.747   | 0.023       | 34.611         | 34.612            | 0.385        | 0.009       | 27.668        | 27.669           | 27.680            | 27.680               |
| 11       | 2242.9    | 2273.6     | 1.900        | 1.742   | 0.024       | 34.612         | 34.612            | 0.383        | 0.007       | 27.669        | 27.669           | 27.681            | 27.681               |
| 13       | 2108.5    | 2136.6     | 1.884        | 1.738   | 0.010       | 34.609         | 34.609            | 0.380        | 0.004       | 27.668        | 27.668           | 27.679            | 27.679               |
| 2        | 2238.4    | 2269.0     | 1.888        | 1.730   | 0.012       | 34.611         | 34.612            | 0.380        | 0.004       | 27.669        | 27.670           | 27.681            | 27.682               |
| 6        | 2101.7    | 2129.7     | 1.886        | 1.740   | 0.008       | 34.608         | 34.608            | 0.381        | 0.005       | 27.667        | 27.667           | 27.678            | 27.678               |
| 17       | 2231.2    | 2261.6     | 1.889        | 1.732   | 0.010       | 34.610         | 34.610            | 0.382        | 0.006       | 27.668        | 27.668           | 27.680            | 27.680               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 23       | 2.923        | 178.106       | 18.42      |
| 1        | 2.912        | 178.018       | 26.04      |
| 22       | 2.913        | 179.013       | 19.94      |
| 21       | 2.905        | 179.811       | 27.90      |
| 18       | 2.888        | 179.351       | 33.36      |
| 3        | 2.902        | 179.919       | 23.22      |
| 5        | 2.896        | 179.481       | 27.41      |
| 11       | 2.915        | 179.337       | 20.25      |
| 13       | 2.922        | 178.713       | 12.10      |
| 2        | 2.921        | 179.324       | 12.96      |
| 6        | 2.937        | 178.415       | 13.86      |
| 17       | 2.924        | 179.026       | 15.62      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.376

VENTS 1991 - LEG II  
 Station S9127 Cast 9 11 JUNE 1991  
 LAT: 45 1.9N LONG: 130 10.7W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 9        | 2264.0    | 2295.0     | 1.875         | 1.715   | 0.014       | 34.614         | 34.615            | 0.379        | 0.005       | 27.672        | 27.673           | 27.684            | 27.685               |
| 26       | 2227.2    | 2257.6     | 1.878         | 1.722   | 0.021       | 34.615         | 34.615            | 0.379        | 0.005       | 27.673        | 27.673           | 27.685            | 27.685               |
| 20       | 2198.6    | 2228.4     | 1.878         | 1.724   | 0.019       | 34.614         | 34.614            | 0.381        | 0.007       | 27.672        | 27.672           | 27.684            | 27.684               |
| 19       | 2176.4    | 2205.7     | 1.877         | 1.725   | 0.016       | 34.613         | 34.614            | 0.381        | 0.007       | 27.671        | 27.672           | 27.683            | 27.684               |
| 31       | 2151.5    | 2180.4     | 1.883         | 1.733   | 0.018       | 34.612         | 34.613            | 0.386        | 0.012       | 27.670        | 27.671           | 27.682            | 27.682               |
| 27       | 2127.4    | 2155.9     | 1.881         | 1.733   | 0.011       | 34.610         | 34.610            | 0.380        | 0.006       | 27.669        | 27.670           | 27.680            | 27.680               |
| 16       | 2098.9    | 2126.9     | 1.891         | 1.746   | 0.004       | 34.606         | 34.606            | 0.379        | 0.005       | 27.665        | 27.665           | 27.676            | 27.676               |
| 8        | 2075.3    | 2102.8     | 1.902         | 1.759   | 0.002       | 34.603         | 34.603            | 0.376        | 0.002       | 27.661        | 27.661           | 27.672            | 27.672               |
| 10       | 2056.9    | 2084.0     | 1.912         | 1.770   | 0.002       | 34.601         | 34.601            | 0.376        | 0.002       | 27.659        | 27.659           | 27.670            | 27.670               |
| 30       | 2001.5    | 2027.6     | 1.936         | 1.798   | 0.002       | 34.596         | 34.597            | 0.375        | 0.001       | 27.653        | 27.654           | 27.664            | 27.665               |
| 29       | 1901.3    | 1925.6     | 1.987         | 1.857   | 0.003       | 34.586         | 34.586            | 0.375        | 0.001       | 27.641        | 27.641           | 27.651            | 27.651               |
| 12       | 1801.7    | 1824.4     | 2.065         | 1.942   | 0.007       | 34.572         | 34.571            | 0.375        | 0.001       | 27.624        | 27.623           | 27.633            | 27.633               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 9        | 2.888        | 179.518       | 13.98      |
| 26       | 2.880        | 180.206       | 15.34      |
| 20       | 2.895        | 180.646       | 15.81      |
| 19       | 2.887        | 180.672       | 15.18      |
| 31       | 2.890        | 180.988       | 13.89      |
| 27       | 2.889        | 180.031       | 17.09      |
| 16       | 2.891        | 179.431       | 12.61      |
| 8        | 2.918        | 177.966       | 10.28      |
| 10       | 2.914        | 178.112       | 9.33       |
| 30       | 2.925        | 177.079       | 8.95       |
| 29       | 2.947        | 175.986       |            |
| 12       | 2.978        | 173.846       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station S9127 Cast 10 11 JUNE 1991  
 LAT: 45 1.9N LONG: 130 10.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 6        | 2279.7    | 2311.1     | 1.875        | 1.714   | 0.013       | 34.614         | 34.615            | 0.379        | 0.005        | 27.672        | 27.673           | 27.685            | 27.685               |
| 17       | 2251.3    | 2282.1     | 1.873        | 1.715   | 0.013       | 34.614         | 34.612            | 0.378        | 0.004        | 27.672        | 27.671           | 27.685            | 27.683               |
| 11       | 2200.7    | 2230.5     | 1.876        | 1.722   | 0.014       | 34.613         | 34.614            | 0.379        | 0.005        | 27.671        | 27.672           | 27.683            | 27.684               |
| 2        | 2149.1    | 2178.0     | 1.886        | 1.736   | 0.013       | 34.610         | 34.611            | 0.380        | 0.006        | 27.668        | 27.669           | 27.680            | 27.680               |
| 21       | 2162.7    | 2191.8     | 1.891        | 1.740   | 0.026       | 34.613         | 34.613            | 0.382        | 0.008        | 27.670        | 27.670           | 27.682            | 27.682               |
| 13       | 2099.3    | 2127.3     | 1.898        | 1.752   | 0.005       | 34.605         | 34.605            | 0.377        | 0.003        | 27.663        | 27.663           | 27.674            | 27.674               |
| 18       | 1998.6    | 2024.7     | 1.945        | 1.807   | 5e-04       | 34.594         | 34.594            | 0.375        | 0.001        | 27.651        | 27.651           | 27.661            | 27.661               |
| 3        | 1899.9    | 1924.3     | 2.009        | 1.879   | 0.003       | 34.582         | 34.582            | 0.374        | 0.000        | 27.636        | 27.636           | 27.646            | 27.646               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 6        | 2.945        | 178.682       |            |
| 17       | 2.955        | 178.462       |            |
| 11       | 2.939        | 178.497       |            |
| 2        | 2.892        | 177.409       |            |
| 21       | 2.939        | 178.653       |            |
| 13       | 2.932        | 176.949       |            |
| 18       | 3.006        | 176.632       |            |
| 3        | 2.975        | 173.939       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station S9126 Cast 11 11 JUNE 1991  
 LAT: 44 58.8N LONG: 130 13.4W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 6        | 2236.9    | 2267.4     | 1.881         | 1.724   | 0.016       | 34.614         | 34.613            | 0.378        | 0.004       | 27.672        | 27.671           | 27.684            | 27.683               |
| 17       | 2198.8    | 2228.5     | 1.897         | 1.743   | 0.025       | 34.613         | 34.612            | 0.383        | 0.009       | 27.670        | 27.669           | 27.682            | 27.681               |
| 23       | 2175.5    | 2204.9     | 1.902         | 1.750   | 0.026       | 34.612         | 34.613            | 0.385        | 0.011       | 27.669        | 27.669           | 27.680            | 27.681               |
| 11       | 2151.5    | 2180.4     | 1.917         | 1.767   | 0.037       | 34.612         | 34.612            | 0.394        | 0.020       | 27.667        | 27.667           | 27.679            | 27.679               |
| 2        | 2127.1    | 2155.6     | 1.920         | 1.772   | 0.040       | 34.612         | 34.612            | 0.396        | 0.022       | 27.667        | 27.667           | 27.679            | 27.679               |
| 1        | 2129.1    | 2157.6     | 1.919         | 1.771   | 0.039       | 34.612         | 34.612            | 0.396        | 0.022       | 27.667        | 27.667           | 27.679            | 27.679               |
| 21       | 2101.0    | 2128.9     | 1.918         | 1.772   | 0.040       | 34.612         | 34.612            | 0.397        | 0.023       | 27.667        | 27.667           | 27.679            | 27.679               |
| 13       | 2082.6    | 2110.3     | 1.918         | 1.774   | 0.041       | 34.612         | 34.613            | 0.399        | 0.025       | 27.667        | 27.668           | 27.678            | 27.679               |
| 22       | 2047.2    | 2074.2     | 1.905         | 1.764   | 0.013       | 34.606         | 34.606            | 0.385        | 0.011       | 27.664        | 27.664           | 27.674            | 27.674               |
| 18       | 1996.5    | 2022.6     | 1.924         | 1.787   | 0.002       | 34.599         | 34.599            | 0.376        | 0.002       | 27.656        | 27.656           | 27.667            | 27.667               |
| 3        | 1896.2    | 1920.5     | 1.969         | 1.840   | 1e-04       | 34.589         | 34.589            | 0.375        | 0.001       | 27.645        | 27.645           | 27.655            | 27.655               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 6        | 2.926        | 180.305       | 18.37      |
| 17       | 2.890        | 180.356       | 23.81      |
| 23       | 2.905        | 180.569       | 31.28      |
| 11       | 2.880        | 180.664       | 32.38      |
| 2        | 2.820        | 182.258       | 40.72      |
| 1        | 2.890        | 180.534       | 50.60      |
| 21       | 2.869        | 181.261       | 41.03      |
| 13       | 2.918        | 178.192       | 20.78      |
| 22       | 2.925        | 177.069       | 25.17      |
| 18       | 2.943        | 175.553       | 11.27      |
| 3        | 2.988        | 174.326       | 18.50      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.065  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station S9126 Cast 12 11 JUNE 1991  
 LAT: 44 58.9N LONG: 130 13.4W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 14       | 2233.6    | 2264.1     | 1.894        | 1.737   | 0.024       | 34.614         | 34.614            | 0.380        | 0.006       | 27.671        | 27.671           | 27.683            | 27.683               |
| 15       | 2201.9    | 2231.7     | 1.899        | 1.744   | 0.029       | 34.614         | 34.613            | 0.381        | 0.007       | 27.670        | 27.670           | 27.682            | 27.681               |
| 8        | 2176.6    | 2206.0     | 1.902        | 1.750   | 0.028       | 34.613         | 34.613            | 0.384        | 0.010       | 27.669        | 27.669           | 27.681            | 27.681               |
| 29       | 2151.4    | 2180.3     | 1.904        | 1.754   | 0.031       | 34.613         | 34.613            | 0.387        | 0.013       | 27.669        | 27.669           | 27.681            | 27.681               |
| 12       | 2113.4    | 2141.6     | 1.917        | 1.770   | 0.042       | 34.613         | 34.614            | 0.403        | 0.029       | 27.668        | 27.668           | 27.680            | 27.680               |
| 24       | 2050.6    | 2077.6     | 1.902        | 1.761   | 0.014       | 34.607         | 34.607            | 0.384        | 0.010       | 27.665        | 27.665           | 27.675            | 27.675               |
| 19       | 1999.1    | 2025.2     | 1.911        | 1.774   | 0.004       | 34.602         | 34.602            | 0.377        | 0.003       | 27.660        | 27.660           | 27.670            | 27.670               |
| 6        | 1903.3    | 1927.7     | 1.950        | 1.820   | 0.001       | 34.593         | 34.593            | 0.375        | 0.001       | 27.650        | 27.650           | 27.660            | 27.660               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.946        | 179.073       |            |
| 15       | 2.939        | 179.464       |            |
| 8        | 2.954        | 179.831       |            |
| 29       | 2.953        | 179.213       |            |
| 12       | 2.904        | 180.356       |            |
| 24       | 2.905        | 178.329       |            |
| 19       | 2.897        | 176.644       |            |
| 6        | 2.886        | 176.257       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.066  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station T9106 Cast 13 11 JUNE 1991  
 LAT: 44 56.8N LONG: 130 5.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (l/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 14       | 2114.7    | 2142.9     | 1.898        | 1.751   | 0.022       | 34.610         | 34.610            | 0.386        | 0.012       | 27.667        | 27.667           | 27.679            | 27.679               |
| 15       | 2060.2    | 2087.4     | 1.908        | 1.766   | 0.028       | 34.609         | 34.609            | 0.394        | 0.020       | 27.666        | 27.666           | 27.677            | 27.677               |
| 20       | 2284.1    | 2315.5     | 1.880        | 1.719   | 0.012       | 34.613         | 34.610            | 0.379        | 0.005       | 27.671        | 27.669           | 27.683            | 27.681               |
| 8        | 2074.3    | 2101.8     | 1.914        | 1.770   | 0.042       | 34.612         | 34.612            | 0.396        | 0.022       | 27.668        | 27.668           | 27.679            | 27.679               |
| 29       | 2261.2    | 2292.2     | 1.884        | 1.724   | 0.016       | 34.613         | 34.612            | 0.379        | 0.005       | 27.671        | 27.670           | 27.683            | 27.682               |
| 5        | 2061.5    | 2088.8     | 1.918        | 1.775   | 0.042       | 34.611         | 34.611            | 0.399        | 0.025       | 27.666        | 27.666           | 27.678            | 27.678               |
| 12       | 2232.8    | 2263.2     | 1.903        | 1.746   | 0.030       | 34.613         | 34.613            | 0.381        | 0.007       | 27.669        | 27.669           | 27.681            | 27.681               |
| 24       | 2112.2    | 2140.4     | 1.907        | 1.760   | 0.032       | 34.611         | 34.611            | 0.389        | 0.015       | 27.667        | 27.667           | 27.679            | 27.679               |
| 9        | 2076.9    | 2104.4     | 1.909        | 1.765   | 0.028       | 34.609         | 34.609            | 0.394        | 0.020       | 27.666        | 27.666           | 27.677            | 27.677               |
| 19       | 2164.3    | 2193.4     | 1.899        | 1.748   | 0.024       | 34.611         | 34.612            | 0.385        | 0.011       | 27.668        | 27.669           | 27.680            | 27.680               |
| 16       | 2269.2    | 2300.3     | 1.877        | 1.717   | 0.015       | 34.614         | 34.614            | 0.380        | 0.006       | 27.672        | 27.672           | 27.684            | 27.684               |
| 26       | 2155.6    | 2184.6     | 1.905        | 1.754   | 0.024       | 34.610         | 34.610            | 0.390        | 0.016       | 27.667        | 27.667           | 27.678            | 27.678               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.864        | 179.715       | 25.52      |
| 15       | 2.875        | 179.655       | 32.05      |
| 20       | 2.902        | 179.411       | 15.44      |
| 8        | 2.878        | 180.116       | 40.97      |
| 29       | 2.893        | 179.512       | 15.61      |
| 5        | 2.876        | 183.696       | 38.96      |
| 12       | 2.900        | 179.556       | 27.27      |
| 24       | 2.898        | 179.870       | 32.82      |
| 9        | 2.881        | 179.707       | 31.22      |
| 19       | 2.893        | 180.049       | 22.17      |
| 16       | 2.884        | 179.840       | 14.23      |
| 26       | 2.875        | 179.539       | 32.64      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.374



VENTS 1991 - LEG II  
 Station S9122 Cast 14 12 JUNE 1991  
 LAT: 44 52.6N LONG: 130 15.2W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 6        | 2254.9    | 2285.7     | 1.875        | 1.716   | 0.010       | 34.613         | 34.613            | 0.378        | 0.004       | 27.671        | 27.671           | 27.684            | 27.684               |
| 27       | 2226.6    | 2256.9     | 1.873        | 1.717   | 0.011       | 34.613         | 34.613            | 0.378        | 0.004       | 27.672        | 27.672           | 27.684            | 27.684               |
| 2        | 2202.0    | 2231.8     | 1.871        | 1.717   | 0.011       | 34.613         | 34.613            | 0.378        | 0.004       | 27.672        | 27.672           | 27.684            | 27.684               |
| 1        | 2177.3    | 2206.6     | 1.878        | 1.726   | 0.013       | 34.612         | 34.612            | 0.378        | 0.004       | 27.670        | 27.670           | 27.682            | 27.682               |
| 10       | 2149.1    | 2177.9     | 1.879        | 1.729   | 0.008       | 34.610         | 34.610            | 0.378        | 0.004       | 27.669        | 27.669           | 27.680            | 27.680               |
| 17       | 2124.3    | 2152.7     | 1.883        | 1.736   | 0.008       | 34.609         | 34.609            | 0.378        | 0.004       | 27.668        | 27.668           | 27.679            | 27.679               |
| 11       | 2100.4    | 2128.3     | 1.885        | 1.740   | 0.004       | 34.607         | 34.607            | 0.377        | 0.003       | 27.666        | 27.666           | 27.677            | 27.677               |
| 23       | 2077.4    | 2104.9     | 1.889        | 1.746   | 0.004       | 34.606         | 34.606            | 0.376        | 0.002       | 27.665        | 27.665           | 27.676            | 27.676               |
| 13       | 2045.6    | 2072.5     | 1.905        | 1.764   | 0.001       | 34.602         | 34.602            | 0.376        | 0.002       | 27.660        | 27.660           | 27.671            | 27.671               |
| 21       | 2025.7    | 2052.2     | 1.919        | 1.780   | 0.004       | 34.600         | 34.600            | 0.376        | 0.002       | 27.658        | 27.658           | 27.668            | 27.668               |
| 30       | 1948.2    | 1973.3     | 1.955        | 1.822   | 0.002       | 34.592         | 34.592            | 0.375        | 0.001       | 27.648        | 27.648           | 27.659            | 27.659               |
| 31       | 1855.4    | 1879.0     | 1.994        | 1.868   | 0.003       | 34.584         | 34.584            | 0.375        | 0.001       | 27.639        | 27.639           | 27.649            | 27.649               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 6        | 2.885        | 181.695       |            |
| 27       | 2.882        | 181.475       | 17.38      |
| 2        | 2.895        | 181.565       | 22.49      |
| 1        | 2.914        | 181.310       | 15.72      |
| 10       | 2.868        | 180.522       |            |
| 17       | 2.914        | 180.683       | 13.88      |
| 11       | 2.900        | 180.033       | 15.76      |
| 23       | 2.929        | 179.221       | 10.33      |
| 13       | 2.918        | 179.357       | 12.34      |
| 21       | 2.923        | 177.734       | 13.32      |
| 30       | 2.929        | 177.012       | 10.49      |
| 31       | 2.949        | 175.676       | 2.49       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station S9122 Cast 15 12 JUNE 1991  
 LAT: 44 52.9N LONG: 130 14.3W

| Miskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 3        | 2255.3    | 2286.2     | 1.880        | 1.721   | 0.015       | 34.614         | 34.613            | 0.378        | 0.004        | 27.672        | 27.671           | 27.684            | 27.683               |
| 18       | 2196.2    | 2225.9     | 1.876        | 1.722   | 0.009       | 34.612         | 34.613            | 0.377        | 0.003        | 27.671        | 27.671           | 27.682            | 27.683               |
| 22       | 2152.7    | 2181.6     | 1.878        | 1.728   | 0.009       | 34.611         | 34.611            | 0.378        | 0.004        | 27.670        | 27.670           | 27.681            | 27.681               |
| 29       | 2118.4    | 2146.7     | 1.884        | 1.737   | 0.011       | 34.610         | 34.610            | 0.380        | 0.006        | 27.668        | 27.668           | 27.680            | 27.680               |
| 5        | 2099.0    | 2126.9     | 1.886        | 1.741   | 0.006       | 34.608         | 34.608            | 0.379        | 0.005        | 27.667        | 27.667           | 27.678            | 27.678               |
| 16       | 1998.3    | 2024.4     | 1.920        | 1.783   | 7e-04       | 34.599         | 34.598            | 0.375        | 0.001        | 27.657        | 27.656           | 27.667            | 27.667               |
| 15       | 1900.2    | 1924.6     | 1.969        | 1.839   | 9e-04       | 34.589         | 34.589            | 0.378        | 0.004        | 27.645        | 27.645           | 27.655            | 27.655               |

| Miskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 3        | 2.878        | 176.934       |            |
| 18       | 2.887        | 175.113       |            |
| 22       | 2.901        | 174.973       |            |
| 29       | 2.881        | 175.959       |            |
| 5        | 2.894        | 176.631       |            |
| 16       | 2.932        | 175.082       |            |
| 15       | 2.907        | 174.139       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.064  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station S9121 Cast 16 12 JUNE 1991  
 LAT: 44 49.3N LONG: 130 17.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 3        | 2268.6    | 2299.7     | 1.888         | 1.728   | 0.018       | 34.613         | 34.614            | 0.377        | 0.003       | 27.670        | 27.671           | 27.683            | 27.684               |
| 18       | 2198.6    | 2228.3     | 1.885         | 1.731   | 0.020       | 34.613         | 34.611            | 0.378        | 0.004       | 27.671        | 27.669           | 27.682            | 27.681               |
| 14       | 2172.9    | 2202.1     | 1.882         | 1.730   | 0.020       | 34.613         | 34.613            | 0.379        | 0.005       | 27.671        | 27.671           | 27.683            | 27.683               |
| 22       | 2144.1    | 2172.9     | 1.882         | 1.733   | 0.018       | 34.612         | 34.611            | 0.379        | 0.005       | 27.670        | 27.669           | 27.682            | 27.681               |
| 16       | 2122.9    | 2151.2     | 1.879         | 1.732   | 0.006       | 34.609         | 34.609            | 0.376        | 0.002       | 27.668        | 27.668           | 27.679            | 27.679               |
| 24       | 2098.5    | 2126.4     | 1.882         | 1.737   | 0.002       | 34.607         | 34.607            | 0.375        | 0.001       | 27.666        | 27.666           | 27.677            | 27.677               |
| 20       | 2073.0    | 2100.4     | 1.888         | 1.745   | 0.004       | 34.606         | 34.606            | 0.375        | 0.001       | 27.665        | 27.665           | 27.676            | 27.676               |
| 5        | 2051.4    | 2078.4     | 1.891         | 1.750   | 0.003       | 34.605         | 34.605            | 0.375        | 0.001       | 27.664        | 27.664           | 27.675            | 27.675               |
| 8        | 2026.8    | 2053.4     | 1.902         | 1.763   | 0.004       | 34.603         | 34.603            | 0.375        | 0.001       | 27.661        | 27.661           | 27.672            | 27.672               |
| 29       | 1979.3    | 2005.0     | 1.918         | 1.782   | 0.003       | 34.599         | 34.599            | 0.375        | 0.001       | 27.657        | 27.657           | 27.667            | 27.667               |
| 15       | 1901.0    | 1925.3     | 1.956         | 1.827   | 0.002       | 34.591         | 34.590            | 0.375        | 0.001       | 27.647        | 27.647           | 27.658            | 27.657               |
| 10       | 1800.5    | 1823.1     | 2.025         | 1.903   | 0.004       | 34.578         | 34.578            | 0.374        | 0.000       | 27.632        | 27.632           | 27.641            | 27.641               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 3        | 2.877        | 181.672       | 11.63      |
| 18       | 2.865        | 181.836       | 11.67      |
| 14       | 2.847        | 182.199       | 11.98      |
| 22       | 2.857        | 182.000       | 15.56      |
| 16       | 2.867        | 180.645       | 9.41       |
| 24       | 2.864        | 179.954       | 8.73       |
| 20       | 2.858        | 179.706       | 9.80       |
| 5        | 2.871        | 179.956       | 9.22       |
| 8        | 2.909        | 179.599       | 6.84       |
| 29       | 2.953        | 178.854       | 8.72       |
| 15       | 2.990        | 178.107       | 7.61       |
| 10       | 3.012        | 176.598       | 7.81       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.374

VENTS 1991 -- LEG II  
 Station S9125 Cast 17 13 JUNE 1991  
 LAT: 44 57.8N LONG: 130 13.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 3        | 2257.8    | 2288.7     | 1.900        | 1.741   | 0.017       | 34.609         | 34.609            | 0.382        | 0.008        | 27.666        | 27.666           | 27.679            | 27.679               |
| 18       | 2203.4    | 2233.3     | 1.898        | 1.743   | 0.022       | 34.610         | 34.610            | 0.382        | 0.008        | 27.667        | 27.667           | 27.679            | 27.679               |
| 14       | 2152.0    | 2180.9     | 1.908        | 1.758   | 0.035       | 34.611         | 34.608            | 0.384        | 0.010        | 27.667        | 27.665           | 27.679            | 27.676               |
| 2        | 2119.2    | 2147.5     | 1.915        | 1.767   | 0.045       | 34.612         | 34.612            | 0.385        | 0.011        | 27.668        | 27.668           | 27.679            | 27.679               |
| 16       | 2100.8    | 2128.8     | 1.913        | 1.767   | 0.041       | 34.611         | 34.611            | 0.385        | 0.011        | 27.667        | 27.666           | 27.678            | 27.677               |
| 24       | 2051.2    | 2078.3     | 1.902        | 1.761   | 0.019       | 34.606         | 34.606            | 0.382        | 0.008        | 27.664        | 27.664           | 27.675            | 27.675               |
| 20       | 1999.6    | 2025.7     | 1.915        | 1.778   | 8e-04       | 34.598         | 34.597            | 0.375        | 0.001        | 27.656        | 27.656           | 27.667            | 27.666               |
| 5        | 1900.9    | 1925.3     | 1.961        | 1.831   | 0.003       | 34.589         | 34.590            | 0.375        | 0.001        | 27.646        | 27.646           | 27.656            | 27.656               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 3        | 2.891        | 179.538       |            |
| 18       | 2.891        | 179.391       |            |
| 14       | 2.877        | 179.875       |            |
| 2        | 2.878        | 180.180       |            |
| 16       | 2.867        | 180.269       |            |
| 24       | 2.897        | 178.616       |            |
| 20       | 2.913        | 176.986       |            |
| 5        | 2.941        | 175.569       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.057  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station T9107 Cast 18 13 JUNE 1991  
 LAT: 45 00.7N LONG: 130 5.2W

| Miskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 3        | 2114.9    | 2143.2     | 1.891        | 1.744   | 0.016       | 34.609         | 34.609            | 0.381        | 0.007       | 27.667        | 27.667           | 27.678            | 27.678               |
| 18       | 2135.2    | 2163.8     | 1.886        | 1.738   | 0.019       | 34.611         | 34.611            | 0.390        | 0.016       | 27.669        | 27.669           | 27.680            | 27.680               |
| 12       | 2157.2    | 2186.2     | 1.888        | 1.738   | 0.015       | 34.610         | 34.610            | 0.380        | 0.006       | 27.668        | 27.668           | 27.680            | 27.680               |

| Miskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 3        | 2.889        | 180.361       | 17.64      |
| 18       | 2.890        | 180.848       | 16.80      |
| 12       | 2.883        | 180.273       | 18.31      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.06  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station S9125 Cast 19 13 JUNE 1991  
 LAT: 44 57.3N LONG: 130 13.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp. Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|----------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 8        | 2257.7    | 2288.6     | 1.903         | 1.743          | 0.024       | 34.612         | 34.613            | 0.381        | 0.007        | 27.668        | 27.669           | 27.681            | 27.682               |
| 29       | 2222.9    | 2253.1     | 1.908         | 1.751          | 0.029       | 34.612         | 34.612            | 0.382        | 0.008        | 27.668        | 27.668           | 27.680            | 27.680               |
| 15       | 2202.9    | 2232.8     | 1.911         | 1.756          | 0.032       | 34.612         | 34.612            | 0.383        | 0.009        | 27.668        | 27.668           | 27.680            | 27.680               |
| 14       | 2178.1    | 2207.5     | 1.910         | 1.757          | 0.029       | 34.611         | 34.611            | 0.384        | 0.010        | 27.667        | 27.667           | 27.679            | 27.679               |
| 2        | 2150.5    | 2179.4     | 1.910         | 1.760          | 0.031       | 34.611         | 34.611            | 0.385        | 0.011        | 27.667        | 27.667           | 27.679            | 27.679               |
| 22       | 2125.6    | 2154.1     | 1.909         | 1.761          | 0.028       | 34.610         | 34.610            | 0.385        | 0.011        | 27.666        | 27.666           | 27.678            | 27.678               |
| 16       | 2098.7    | 2126.6     | 1.907         | 1.761          | 0.024       | 34.609         | 34.609            | 0.384        | 0.010        | 27.666        | 27.666           | 27.677            | 27.677               |
| 24       | 2073.6    | 2101.1     | 1.905         | 1.762          | 0.024       | 34.609         | 34.609            | 0.383        | 0.009        | 27.666        | 27.666           | 27.677            | 27.677               |
| 19       | 2049.7    | 2076.8     | 1.904         | 1.763          | 0.014       | 34.606         | 34.605            | 0.381        | 0.007        | 27.664        | 27.663           | 27.674            | 27.674               |
| 20       | 2002.6    | 2028.8     | 1.912         | 1.775          | 0.004       | 34.601         | 34.601            | 0.376        | 0.002        | 27.659        | 27.659           | 27.670            | 27.670               |
| 5        | 1903.5    | 1927.9     | 1.968         | 1.838          | 0.001       | 34.589         | 34.589            | 0.375        | 0.001        | 27.645        | 27.645           | 27.655            | 27.655               |
| 26       | 1789.8    | 1812.3     | 2.057         | 1.935          | 0.002       | 34.572         | 34.572            | 0.374        | 0.000        | 27.624        | 27.624           | 27.634            | 27.634               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 8        | 2.884        | 178.474       | 20.78      |
| 29       | 2.888        | 179.162       | 21.77      |
| 15       | 2.883        | 179.418       | 21.22      |
| 14       | 2.885        | 179.096       | 22.28      |
| 2        | 2.890        | 179.218       | 24.01      |
| 22       | 2.889        | 178.814       | 26.47      |
| 16       | 2.889        | 179.092       | 27.50      |
| 24       | 2.885        | 179.160       | 31.54      |
| 19       | 2.889        | 178.141       | 22.44      |
| 20       | 2.908        | 176.755       | 15.76      |
| 5        | 2.995        | 174.812       | 9.47       |
| 26       | 2.964        | 173.677       | 9.67       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.063  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station S9123 Cast 20 13 JUNE 1991  
 LAT: 44 54.1N LONG: 130 25.3W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 30       | 2256.5    | 2287.3     | 1.885         | 1.726   | 0.016       | 34.612         | 34.613            | 0.376        | 0.002       | 27.670        | 27.671           | 27.682            | 27.683               |
| 21       | 2201.2    | 2231.0     | 1.891         | 1.737   | 0.023       | 34.612         | 34.610            | 0.381        | 0.007       | 27.669        | 27.668           | 27.681            | 27.680               |
| 13       | 2148.1    | 2176.9     | 1.903         | 1.753   | 0.034       | 34.612         | 34.612            | 0.386        | 0.012       | 27.668        | 27.668           | 27.680            | 27.680               |
| 1        | 2112.3    | 2140.5     | 1.909         | 1.762   | 0.043       | 34.613         | 34.612            | 0.392        | 0.018       | 27.669        | 27.668           | 27.680            | 27.679               |
| 9        | 2051.1    | 2078.1     | 1.895         | 1.754   | 0.001       | 34.603         | 34.605            | 0.376        | 0.002       | 27.662        | 27.663           | 27.673            | 27.674               |
| 17       | 2000.2    | 2026.3     | 1.911         | 1.774   | -1e-04      | 34.599         | 34.600            | 0.375        | 0.001       | 27.657        | 27.658           | 27.668            | 27.669               |
| 11       | 1950.6    | 1975.9     | 1.946         | 1.812   | 0.003       | 34.593         | 34.593            | 0.375        | 0.001       | 27.650        | 27.650           | 27.660            | 27.660               |
| 31       | 1900.8    | 1925.1     | 2.001         | 1.871   | 7e-04       | 34.582         | 34.582            | 0.374        | 0.000       | 27.637        | 27.637           | 27.647            | 27.647               |
| 19       | 5.8       | 5.8        | 12.339        | 12.338  | -3.497      | 32.503         | 32.503            | 0.576        | 0.202       | 24.587        | 24.587           | 24.587            | 24.587               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 30       | 2.941        | 179.249       |            |
| 21       | 2.937        | 178.159       |            |
| 13       | 2.976        | 178.075       |            |
| 1        | 2.935        | 178.497       |            |
| 9        | 2.956        | 175.512       |            |
| 17       | 2.972        | 174.938       |            |
| 11       | 3.006        | 174.889       |            |
| 31       | 2.973        | 174.744       |            |
| 19       |              |               |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.059  
 Atten-Anom = Atten - 0.374

VENTS 1991 - LEG II  
 Station S9128 Cast 21 14 JUNE 1991  
 LAT: 44 53.1N LONG: 130 3.2W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 30       | 2503.5    | 2539.2     | 1.799        | 1.619   | 0.006       | 34.625         | 34.625            | 0.384        |             | 27.687        | 27.687           | 27.700            | 27.700               |
| 21       | 2400.3    | 2433.9     | 1.797        | 1.626   | 0.003       | 34.623         | 34.624            | 0.382        |             | 27.685        | 27.686           | 27.698            | 27.699               |
| 6        | 2300.7    | 2332.4     | 1.807        | 1.645   | 2e-04       | 34.619         | 34.620            | 0.381        |             | 27.682        | 27.682           | 27.694            | 27.695               |
| 13       | 2251.2    | 2282.0     | 1.824        | 1.666   | 0.003       | 34.616         | 34.617            | 0.383        |             | 27.678        | 27.679           | 27.690            | 27.691               |
| 1        | 2201.9    | 2231.7     | 1.835        | 1.682   | 0.001       | 34.613         | 34.613            | 0.384        |             | 27.675        | 27.675           | 27.686            | 27.686               |
| 23       | 2148.6    | 2177.4     | 1.856        | 1.707   | 0.003       | 34.609         | 34.610            | 0.384        |             | 27.670        | 27.671           | 27.682            | 27.682               |
| 9        | 2100.2    | 2128.1     | 1.874        | 1.729   | 0.005       | 34.606         | 34.607            | 0.380        |             | 27.666        | 27.667           | 27.677            | 27.678               |
| 10       | 2050.7    | 2077.8     | 1.901        | 1.760   | 0.003       | 34.600         | 34.601            | 0.379        |             | 27.659        | 27.660           | 27.670            | 27.671               |
| 5        | 2000.0    | 2026.1     | 1.925        | 1.788   | 0.006       | 34.596         | 34.594            | 0.381        |             | 27.654        | 27.652           | 27.665            | 27.663               |
| 11       | 1900.3    | 1924.6     | 1.983        | 1.853   | 0.003       | 34.584         | 34.585            | 0.385        |             | 27.640        | 27.641           | 27.650            | 27.651               |
| 31       | 1748.5    | 1770.2     | 2.100        | 1.981   | 0.009       | 34.564         | 34.562            | 0.382        |             | 27.614        | 27.613           | 27.624            | 27.622               |
| 27       | 1499.0    | 1516.8     | 2.423        | 2.321   | 0.047       | 34.518         | 34.517            | 0.380        |             | 27.551        | 27.550           | 27.560            | 27.559               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 30       | 2.848        | 182.320       | 13.66      |
| 21       | 2.850        | 181.596       | 12.48      |
| 6        | 2.845        | 180.079       | 10.51      |
| 13       |              |               | 9.25       |
| 1        | 2.878        | 179.318       | 10.25      |
| 23       | 2.884        | 178.663       | 11.16      |
| 9        | 2.894        | 178.009       | 13.72      |
| 10       | 2.920        | 177.330       | 11.42      |
| 5        | 2.907        | 175.425       | 8.60       |
| 11       | 2.926        | 174.924       | 10.46      |
| 31       | 2.981        | 171.864       | 9.39       |
| 27       | 3.042        | 163.883       | 11.09      |

D-Theta = (ptemp + (4.689 \* pden)) - 131.501



VENTS 1991 - LEG II  
 Station s9129 Cast 22 14 JUNE 1991  
 LAT: 44 53.9N LONG: 130 6.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 3        | 2504.9    | 2540.6     | 1.805        | 1.625   | 6e-04       | 34.624         | 34.623            | 0.368        | 0.008        | 27.686        | 27.685           | 27.699            | 27.698               |
| 12       | 2401.4    | 2435.0     | 1.804        | 1.633   | 0.002       | 34.623         | 34.623            | 0.366        | 0.006        | 27.685        | 27.685           | 27.698            | 27.698               |
| 2        | 2300.9    | 2332.6     | 1.824        | 1.662   | -0.001      | 34.617         | 34.616            | 0.363        | 0.003        | 27.679        | 27.678           | 27.691            | 27.690               |
| 19       | 2250.6    | 2281.3     | 1.839        | 1.681   | 0.003       | 34.615         | 34.615            | 0.363        | 0.003        | 27.676        | 27.676           | 27.688            | 27.688               |
| 20       | 2199.5    | 2229.3     | 1.850        | 1.697   | -0.002      | 34.611         | 34.611            | 0.363        | 0.003        | 27.672        | 27.672           | 27.683            | 27.683               |
| 24       | 2149.7    | 2178.6     | 1.868        | 1.719   | 0.001       | 34.608         | 34.608            | 0.362        | 0.002        | 27.668        | 27.668           | 27.679            | 27.679               |
| 16       | 2099.4    | 2127.3     | 1.894        | 1.749   | -0.002      | 34.602         | 34.602            | 0.362        | 0.002        | 27.661        | 27.661           | 27.672            | 27.672               |
| 22       | 2050.2    | 2077.2     | 1.926        | 1.784   | 0.006       | 34.598         | 34.598            | 0.362        | 0.002        | 27.655        | 27.655           | 27.666            | 27.666               |
| 29       | 1994.4    | 2020.4     | 1.948        | 1.811   | 0.004       | 34.593         | 34.594            | 0.362        | 0.002        | 27.650        | 27.651           | 27.660            | 27.661               |
| 15       | 1901.9    | 1926.3     | 1.991        | 1.861   | 0.002       | 34.584         | 34.585            | 0.361        | 0.001        | 27.639        | 27.640           | 27.649            | 27.650               |
| 26       | 1750.6    | 1772.4     | 2.110        | 1.991   | -0.002      | 34.561         | 34.561            | 0.362        | 0.002        | 27.611        | 27.611           | 27.621            | 27.621               |
| 14       | 1499.3    | 1517.1     | 2.413        | 2.311   | 0.039       | 34.519         | 34.519            | 0.363        | 0.003        | 27.553        | 27.553           | 27.561            | 27.561               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 3        | 2.873        | 182.177       | 14.29      |
| 12       | 2.844        | 180.779       | 11.21      |
| 2        | 2.854        | 179.191       | 10.54      |
| 19       | 2.869        | 178.586       | 10.56      |
| 20       | 2.865        | 178.109       | 10.00      |
| 24       |              |               |            |
| 16       | 2.902        | 177.290       | 10.08      |
| 22       | 2.902        | 176.635       | 10.12      |
| 29       | 2.917        | 175.910       | 11.31      |
| 15       | 2.953        | 174.793       | 7.94       |
| 26       | 2.983        | 172.363       | 9.36       |
| 14       | 3.064        | 164.587       | 7.28       |

D-Theta = (ptemp + (4.689 \* pden)) - 131.506  
 Atten-Anom = Atten - 0.36

VENTS 1991 - LEG II  
 Station S9130 Cast 23 14 JUNE 1991  
 LAT: 44 55.5N LONG: 130 8.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 17       | 2354.2    | 2386.9     | 1.832        | 1.655   | 8e-04       | 34.619         | 34.620            | 0.372        | 0.011        | 27.680        | 27.680           | 27.692            | 27.693               |
| 18       | 2302.0    | 2333.8     | 1.835        | 1.673   | -0.002      | 34.617         | 34.617            | 0.368        | 0.007        | 27.678        | 27.678           | 27.690            | 27.690               |
| 8        | 2249.4    | 2280.2     | 1.843        | 1.685   | -6e-04      | 34.615         | 34.617            | 0.369        | 0.008        | 27.676        | 27.677           | 27.688            | 27.689               |
| 9        | 2205.0    | 2234.9     | 1.851        | 1.697   | -0.004      | 34.612         | 34.612            | 0.367        | 0.006        | 27.673        | 27.673           | 27.684            | 27.684               |
| 10       | 2149.4    | 2178.3     | 1.873        | 1.724   | 0.003       | 34.609         | 34.609            | 0.366        | 0.005        | 27.668        | 27.668           | 27.680            | 27.680               |
| 24       | 2098.7    | 2126.6     | 1.887        | 1.742   | -1e-04      | 34.605         | 34.605            | 0.364        | 0.003        | 27.664        | 27.664           | 27.675            | 27.675               |
| 1        | 2049.5    | 2076.5     | 1.912        | 1.771   | -0.003      | 34.599         | 34.599            | 0.364        | 0.003        | 27.657        | 27.657           | 27.668            | 27.668               |
| 11       | 2001.2    | 2027.3     | 1.932        | 1.794   | -0.002      | 34.595         | 34.595            | 0.364        | 0.003        | 27.653        | 27.653           | 27.663            | 27.663               |
| 5        | 1904.4    | 1928.9     | 1.969        | 1.839   | 0.001       | 34.588         | 34.588            | 0.363        | 0.002        | 27.644        | 27.644           | 27.654            | 27.654               |
| 31       | 1749.4    | 1771.2     | 2.099        | 1.980   | 0.004       | 34.564         | 34.564            | 0.364        | 0.003        | 27.615        | 27.615           | 27.624            | 27.624               |
| 23       | 1501.1    | 1518.9     | 2.403        | 2.301   | 0.046       | 34.520         | 34.520            | 0.365        | 0.004        | 27.554        | 27.554           | 27.563            | 27.563               |
| 27       | 1252.7    | 1266.8     | 2.801        | 2.714   | 0.109       | 34.468         | 34.468            | 0.365        | 0.004        | 27.478        | 27.478           | 27.486            | 27.486               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 17       | 2.837        | 179.892       | 18.79      |
| 18       | 2.853        | 179.069       | 13.02      |
| 8        | 2.860        | 179.252       | 13.78      |
| 9        | 2.866        | 178.255       | 11.15      |
| 10       | 2.874        | 178.242       | 10.43      |
| 24       | 2.879        | 177.627       | 10.64      |
| 1        | 2.902        | 176.640       | 9.89       |
| 11       | 2.898        | 175.966       | 10.12      |
| 5        | 2.916        | 175.107       | 9.37       |
| 31       | 2.967        | 171.546       | 9.25       |
| 23       | 3.050        | 164.613       | 10.24      |
| 27       | 3.112        | 152.730       | 10.15      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.06  
 Atten-Anom = Atten - 0.361

VENTS 1991 - LEG II  
 Station S9131 Cast 24 14 JUNE 1991  
 LAT: 44 56.3N LONG: 130 10.9W

| Miskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 3        | 2300.2    | 2331.9     | 1.864        | 1.701   | 0.004       | 34.615         | 34.615            | 0.370        | 0.008       | 27.674        | 27.674           | 27.686            | 27.686               |
| 16       | 2202.4    | 2232.3     | 1.872        | 1.718   | 0.011       | 34.614         | 34.615            | 0.369        | 0.007       | 27.672        | 27.673           | 27.684            | 27.685               |
| 12       | 2175.1    | 2204.4     | 1.874        | 1.722   | 0.014       | 34.614         | 34.613            | 0.369        | 0.007       | 27.672        | 27.672           | 27.684            | 27.683               |
| 26       | 2149.1    | 2177.9     | 1.875        | 1.726   | 0.016       | 34.614         | 34.612            | 0.370        | 0.008       | 27.672        | 27.671           | 27.684            | 27.682               |
| 2        | 2124.8    | 2153.2     | 1.889        | 1.741   | 0.016       | 34.611         | 34.611            | 0.371        | 0.009       | 27.669        | 27.669           | 27.680            | 27.680               |
| 19       | 2101.7    | 2129.6     | 1.887        | 1.741   | 0.008       | 34.609         | 34.609            | 0.369        | 0.007       | 27.667        | 27.667           | 27.678            | 27.678               |
| 9        | 2076.5    | 2104.0     | 1.888        | 1.745   | 0.003       | 34.607         | 34.607            | 0.369        | 0.007       | 27.666        | 27.666           | 27.677            | 27.677               |
| 21       | 2049.3    | 2076.3     | 1.899        | 1.758   | 0.004       | 34.605         | 34.605            | 0.368        | 0.006       | 27.663        | 27.663           | 27.674            | 27.674               |
| 13       | 1998.5    | 2024.6     | 1.922        | 1.785   | 5e-05       | 34.599         | 34.599            | 0.366        | 0.004       | 27.657        | 27.657           | 27.667            | 27.667               |
| 30       | 1899.8    | 1924.2     | 1.965        | 1.835   | 5e-05       | 34.590         | 34.590            | 0.364        | 0.002       | 27.646        | 27.646           | 27.656            | 27.656               |
| 29       | 1754.9    | 1776.8     | 2.093        | 1.974   | 0.001       | 34.566         | 34.566            | 0.364        | 0.002       | 27.617        | 27.617           | 27.626            | 27.626               |
| 32       | 1497.3    | 1515.0     | 2.425        | 2.323   | 0.050       | 34.519         | 34.519            | 0.365        | 0.003       | 27.552        | 27.552           | 27.560            | 27.560               |

| Miskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 3        | 2.923        | 178.142       | 16.69      |
| 16       | 2.907        | 178.703       | 16.38      |
| 12       | 2.916        | 178.771       | 20.33      |
| 26       | 2.917        | 178.598       | 17.26      |
| 2        | 2.897        | 178.367       | 21.79      |
| 19       | 2.907        | 177.736       | 14.72      |
| 9        | 2.913        | 177.562       | 13.39      |
| 21       | 2.927        | 176.942       | 9.57       |
| 13       | 2.945        | 176.218       | 9.08       |
| 30       | 2.963        | 175.196       |            |
| 29       | 3.009        | 171.389       | 10.46      |
| 32       | 3.070        | 163.845       | 7.71       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.066  
 Atten-Anom = Atten - 0.362

VENTS 1991 - LEG II  
 Station S9124 Cast 25 14 JUNE 1991  
 LAT: 44 56.0N LONG: 130 14.1W

| Wiskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 9        | 2245.5    | 2276.2     | 1.893        | 1.735   | 0.021       | 34.613         | 34.613            | 0.372        | 0.008        | 27.670        | 27.670           | 27.682            | 27.682               |
| 5        | 2226.5    | 2256.8     | 1.891        | 1.734   | 0.020       | 34.613         | 34.615            | 0.373        | 0.009        | 27.670        | 27.672           | 27.682            | 27.684               |
| 18       | 2195.6    | 2225.3     | 1.889        | 1.735   | 0.021       | 34.613         | 34.612            | 0.373        | 0.009        | 27.670        | 27.670           | 27.682            | 27.681               |
| 14       | 2172.8    | 2202.1     | 1.900        | 1.748   | 0.026       | 34.612         | 34.613            | 0.378        | 0.014        | 27.669        | 27.670           | 27.680            | 27.681               |
| 15       | 2150.4    | 2179.3     | 1.913        | 1.763   | 0.039       | 34.613         | 34.613            | 0.384        | 0.020        | 27.668        | 27.668           | 27.680            | 27.680               |
| 10       | 2124.4    | 2152.8     | 1.915        | 1.767   | 0.042       | 34.613         | 34.612            | 0.386        | 0.022        | 27.668        | 27.668           | 27.680            | 27.679               |
| 24       | 2099.7    | 2127.6     | 1.914        | 1.768   | 0.039       | 34.612         | 34.611            | 0.386        | 0.022        | 27.668        | 27.667           | 27.679            | 27.678               |
| 1        | 2049.3    | 2076.3     | 1.912        | 1.771   | 0.037       | 34.611         | 34.611            | 0.386        | 0.022        | 27.667        | 27.667           | 27.678            | 27.678               |
| 31       | 2024.1    | 2050.6     | 1.908        | 1.769   | 0.025       | 34.608         | 34.608            | 0.388        | 0.024        | 27.665        | 27.665           | 27.676            | 27.676               |
| 11       | 2014.1    | 2040.5     | 1.906        | 1.768   | 0.016       | 34.606         | 34.605            | 0.388        | 0.024        | 27.663        | 27.663           | 27.674            | 27.673               |
| 23       | 1896.7    | 1921.0     | 1.961        | 1.832   | 0.003       | 34.591         | 34.590            | 0.383        | 0.019        | 27.647        | 27.646           | 27.657            | 27.656               |
| 27       | 1896.7    | 1921.0     | 1.961        | 1.832   | 0.003       | 34.591         | 34.591            | 0.376        | 0.012        | 27.647        | 27.647           | 27.657            | 27.656               |

| Wiskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 9        | 2.860        | 179.175       | 16.91      |
| 5        | 2.846        | 179.046       | 16.71      |
| 18       | 2.836        | 177.789       | 17.81      |
| 14       | 2.851        | 178.814       | 23.71      |
| 15       | 2.833        | 179.769       | 35.48      |
| 10       | 2.862        | 180.147       | 35.27      |
| 24       | 2.834        | 180.181       | 38.11      |
| 1        | 2.837        | 179.359       | 38.12      |
| 31       | 2.845        | 179.070       | 27.93      |
| 11       | 2.833        | 178.006       | 19.19      |
| 23       | 2.895        | 175.525       | 8.07       |
| 27       |              |               |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.064  
 Atten-Anom = Atten - 0.364

VENTS 1991 - LEG II  
 Station T9108 Cast 26 15 JUNE 1991  
 LAT: 44 51.9N LONG: 130 7.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 22       | 2098.4    | 2126.3     | 1.915        | 1.769   | 0.041       | 34.612         | 34.612            | 0.373        | 0.013        | 27.668        | 27.668           | 27.679            | 27.679               |
| 2        | 2067.9    | 2095.3     | 1.914        | 1.771   | 0.043       | 34.612         | 34.612            | 0.373        | 0.013        | 27.668        | 27.668           | 27.679            | 27.679               |
| 13       | 2063.6    | 2090.9     | 1.912        | 1.769   | 0.042       | 34.612         | 34.613            | 0.372        | 0.012        | 27.668        | 27.669           | 27.679            | 27.680               |
| 6        | 2195.6    | 2225.3     | 1.899        | 1.745   | 0.022       | 34.611         | 34.610            | 0.359        | -0.001       | 27.668        | 27.667           | 27.680            | 27.679               |
| 21       | 2138.8    | 2167.4     | 1.901        | 1.752   | 0.027       | 34.611         | 34.609            | 0.362        | 0.002        | 27.668        | 27.666           | 27.679            | 27.678               |
| 23       | 2122.8    | 2151.1     | 1.887        | 1.740   | 0.015       | 34.610         | 34.609            | 0.355        | -0.005       | 27.668        | 27.667           | 27.679            | 27.679               |
| 27       | 2180.0    | 2209.4     | 1.886        | 1.734   | 0.015       | 34.611         | 34.610            | 0.354        | -0.006       | 27.669        | 27.668           | 27.681            | 27.680               |
| 19       | 2134.8    | 2163.4     | 1.898        | 1.749   | 0.018       | 34.609         | 34.608            | 0.355        | -0.005       | 27.666        | 27.666           | 27.678            | 27.677               |
| 26       | 2220.9    | 2251.1     | 1.886        | 1.730   | 0.012       | 34.611         | 34.611            | 0.353        | -0.007       | 27.669        | 27.669           | 27.681            | 27.681               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 22       | 2.836        | 180.809       | 41.81      |
| 2        | 2.831        | 180.722       | 49.74      |
| 13       | 2.835        | 180.705       | 46.53      |
| 6        | 2.868        | 179.531       | 24.50      |
| 21       | 2.857        | 179.407       | 32.07      |
| 23       | 2.871        | 178.700       | 22.85      |
| 27       | 2.871        | 178.787       | 16.43      |
| 19       | 2.869        | 178.886       | 19.63      |
| 26       | 2.862        | 178.749       | 18.26      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.36

VENTS 1991 - LEG II  
 Station S9124 Cast 27 15 JUNE 1991  
 LAT: 44 56.1N LONG: 130 14.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 3        | 2227.8    | 2258.2     | 1.885        | 1.728   | 0.022       | 34.614         | 34.614            | 0.347        | -0.012       | 27.671        | 27.671           | 27.683            | 27.683               |
| 9        | 2198.0    | 2227.8     | 1.882        | 1.728   | 0.018       | 34.613         | 34.614            | 0.343        | -0.016       | 27.671        | 27.672           | 27.683            | 27.683               |
| 5        | 2150.5    | 2179.4     | 1.888        | 1.738   | 0.025       | 34.613         | 34.613            | 0.367        | 0.008        | 27.670        | 27.670           | 27.682            | 27.682               |
| 18       | 2127.9    | 2156.3     | 1.901        | 1.753   | 0.034       | 34.613         | 34.613            | 0.372        | 0.013        | 27.669        | 27.669           | 27.681            | 27.681               |
| 14       | 2099.8    | 2127.8     | 1.892        | 1.747   | 0.023       | 34.611         | 34.611            | 0.371        | 0.012        | 27.669        | 27.669           | 27.680            | 27.680               |
| 15       | 2047.2    | 2074.2     | 1.901        | 1.760   | 0.006       | 34.604         | 34.604            | 0.367        | 0.008        | 27.662        | 27.662           | 27.673            | 27.673               |
| 29       | 1999.5    | 2025.6     | 1.912        | 1.775   | 0.001       | 34.600         | 34.600            | 0.363        | 0.004        | 27.658        | 27.658           | 27.669            | 27.669               |
| 30       | 1903.4    | 1927.8     | 1.951        | 1.821   | 0.002       | 34.592         | 34.592            | 0.362        | 0.003        | 27.649        | 27.649           | 27.659            | 27.659               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 3        | 2.880        | 180.411       |            |
| 9        | 2.883        | 179.566       |            |
| 5        | 2.891        | 179.604       |            |
| 18       | 2.879        | 180.547       |            |
| 14       | 2.881        | 180.326       |            |
| 15       | 2.899        | 178.883       |            |
| 29       | 2.918        | 178.969       |            |
| 30       | 2.924        | 178.100       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.359

VENTS 1991 - LEG II  
 Station S9123 Cast 28 15 JUNE 1991  
 LAT: 44 53.4N LONG: 130 15.9W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 3        | 2236.9    | 2267.4     | 1.905         | 1.747   | 0.023       | 34.611         | 34.607            | 0.390        | 0.0085      | 27.668        | 27.664           | 27.680            | 27.676               |
| 9        | 2197.7    | 2227.5     | 1.906         | 1.752   | 0.026       | 34.611         | 34.611            | 0.393        | 0.0115      | 27.667        | 27.667           | 27.679            | 27.679               |
| 1        | 2174.0    | 2203.3     | 1.908         | 1.756   | 0.033       | 34.612         | 34.610            | 0.395        | 0.0135      | 27.668        | 27.666           | 27.680            | 27.678               |
| 5        | 2150.3    | 2179.2     | 1.910         | 1.760   | 0.035       | 34.612         | 34.612            | 0.397        | 0.0155      | 27.668        | 27.668           | 27.679            | 27.679               |
| 18       | 2118.5    | 2146.8     | 1.909         | 1.762   | 0.033       | 34.611         | 34.611            | 0.397        | 0.0155      | 27.667        | 27.667           | 27.679            | 27.679               |
| 10       | 2099.4    | 2127.3     | 1.907         | 1.761   | 0.033       | 34.611         | 34.611            | 0.396        | 0.0145      | 27.667        | 27.667           | 27.679            | 27.679               |
| 14       | 2078.2    | 2105.8     | 1.899         | 1.755   | 0.018       | 34.608         | 34.609            | 0.391        | 0.0095      | 27.666        | 27.666           | 27.677            | 27.677               |
| 15       | 2050.6    | 2077.7     | 1.905         | 1.764   | 0.019       | 34.607         | 34.608            | 0.393        | 0.0115      | 27.664        | 27.665           | 27.675            | 27.676               |
| 31       | 2027.1    | 2053.7     | 1.905         | 1.766   | 0.010       | 34.604         | 34.603            | 0.388        | 0.0065      | 27.662        | 27.661           | 27.673            | 27.672               |
| 29       | 2005.6    | 2031.8     | 1.904         | 1.766   | 0.007       | 34.603         | 34.603            | 0.385        | 0.0035      | 27.661        | 27.661           | 27.672            | 27.672               |
| 30       | 1899.5    | 1923.9     | 1.966         | 1.837   | 0.001       | 34.589         | 34.589            | 0.383        | 0.0015      | 27.645        | 27.645           | 27.655            | 27.655               |
| 24       | 1799.2    | 1821.8     | 2.056         | 1.934   | -0.002      | 34.571         | 34.572            | 0.383        | 0.0015      | 27.624        | 27.624           | 27.633            | 27.634               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 3        | 2.921        | 180.373       | 36.51      |
| 9        | 2.911        | 180.418       | 36.27      |
| 1        | 2.890        | 179.517       | 36.86      |
| 5        | 2.871        | 181.118       | 42.85      |
| 18       | 2.894        | 181.023       | 38.59      |
| 10       | 2.899        | 181.116       | 39.11      |
| 14       | 2.900        | 180.237       | 29.02      |
| 15       | 2.889        | 180.643       | 31.61      |
| 31       | 2.910        | 178.912       | 24.16      |
| 29       | 2.939        | 178.712       | 11.65      |
| 30       | 2.943        | 176.639       | 9.78       |
| 24       | 2.979        | 173.936       | 40.23      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.3815

VENTS 1991 - LEG II  
 Station S9131 Cast 29 15 JUNE 1991  
 LAT: 44 56.1N LONG: 130 11.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 20       | 2250.2    | 2281.0     | 1.875         | 1.717   | 0.011       | 34.613         | 34.614            | 0.385        | 0.005       | 27.671        | 27.672           | 27.684            | 27.684               |
| 19       | 2199.6    | 2229.4     | 1.869         | 1.715   | 0.010       | 34.613         | 34.614            | 0.386        | 0.006       | 27.672        | 27.673           | 27.684            | 27.684               |
| 17       | 2148.1    | 2177.0     | 1.868         | 1.719   | 0.012       | 34.613         | 34.612            | 0.385        | 0.005       | 27.672        | 27.671           | 27.683            | 27.683               |
| 23       | 2120.5    | 2148.8     | 1.875         | 1.728   | 0.015       | 34.612         | 34.611            | 0.386        | 0.006       | 27.671        | 27.670           | 27.682            | 27.681               |
| 26       | 2102.3    | 2130.2     | 1.874         | 1.729   | 0.004       | 34.609         | 34.609            | 0.384        | 0.004       | 27.668        | 27.668           | 27.679            | 27.679               |
| 27       | 2054.1    | 2081.2     | 1.904         | 1.762   | 0.004       | 34.603         | 34.603            | 0.383        | 0.003       | 27.661        | 27.661           | 27.672            | 27.672               |
| 25       | 2000.3    | 2026.4     | 1.924         | 1.787   | 0.005       | 34.599         | 34.599            | 0.382        | 0.002       | 27.656        | 27.656           | 27.667            | 27.667               |
| 8        | 1897.6    | 1921.9     | 1.981         | 1.851   | 0.003       | 34.587         | 34.587            | 0.382        | 0.002       | 27.642        | 27.642           | 27.652            | 27.652               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.967        | 179.570       |            |
| 19       | 2.945        | 179.328       |            |
| 17       | 2.940        | 179.329       |            |
| 23       | 2.940        | 178.387       |            |
| 26       | 2.952        | 178.285       |            |
| 27       | 2.954        | 177.274       |            |
| 25       |              |               |            |
| 8        | 2.996        | 175.158       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.38



VENTS 1991 - LEG II  
 Station S9135 Cast 30 16 JUNE 1991  
 LAT: 44 59.9N LONG: 130 23.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 22       | 2515.9    | 2551.9     | 1.798        | 1.617   | -7e-04      | 34.627         | 34.626            | 0.388        | 0.008        | 27.689        | 27.688           | 27.702            | 27.701               |
| 19       | 2397.8    | 2431.5     | 1.825        | 1.654   | 0.002       | 34.621         | 34.622            | 0.384        | 0.004        | 27.682        | 27.683           | 27.695            | 27.695               |
| 6        | 2350.3    | 2383.0     | 1.840        | 1.673   | -1e-04      | 34.617         | 34.616            | 0.382        | 0.002        | 27.677        | 27.677           | 27.690            | 27.689               |
| 17       | 2301.8    | 2333.6     | 1.850        | 1.687   | 0.002       | 34.615         | 34.616            | 0.382        | 0.002        | 27.675        | 27.676           | 27.687            | 27.688               |
| 23       | 2253.8    | 2284.6     | 1.862        | 1.704   | 0.001       | 34.612         | 34.610            | 0.383        | 0.003        | 27.672        | 27.670           | 27.684            | 27.684               |
| 21       | 2203.0    | 2232.8     | 1.876        | 1.722   | -0.001      | 34.608         | 34.609            | 0.384        | 0.004        | 27.667        | 27.668           | 27.679            | 27.680               |
| 26       | 2151.6    | 2180.5     | 1.884        | 1.734   | -4e-04      | 34.606         | 34.606            | 0.382        | 0.002        | 27.665        | 27.665           | 27.677            | 27.677               |
| 8        | 2099.5    | 2127.5     | 1.906        | 1.760   | -0.002      | 34.601         | 34.602            | 0.381        | 0.001        | 27.659        | 27.660           | 27.671            | 27.671               |
| 2        | 2045.4    | 2072.3     | 1.932        | 1.791   | -2e-04      | 34.596         | 34.594            | 0.381        | 0.001        | 27.653        | 27.652           | 27.664            | 27.663               |
| 25       | 2002.1    | 2028.3     | 1.954        | 1.816   | 0.002       | 34.592         | 34.594            | 0.382        | 0.002        | 27.648        | 27.650           | 27.659            | 27.661               |
| 27       | 1746.0    | 1767.7     | 2.140        | 2.021   | 0.009       | 34.558         | 34.558            | 0.382        | 0.002        | 27.606        | 27.606           | 27.616            | 27.616               |
| 13       | 1746.5    | 1768.2     | 2.139        | 2.020   | 0.009       | 34.558         | 34.558            | 0.382        | 0.002        | 27.606        | 27.606           | 27.616            | 27.616               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 22       | 2.893        | 179.366       | 19.03      |
| 19       | 2.899        | 180.237       | 15.27      |
| 6        | 2.905        | 179.482       | 14.21      |
| 17       | 2.935        | 179.109       | 10.84      |
| 23       | 2.924        | 178.935       | 12.48      |
| 21       | 2.919        | 178.446       | 12.22      |
| 26       | 2.947        | 178.248       | 11.42      |
| 8        | 2.928        | 177.597       | 10.04      |
| 2        | 2.959        | 176.562       | 9.85       |
| 25       | 2.988        | 176.248       | 13.52      |
| 27       | 3.023        | 161.459       | 23.71      |
| 13       | 3.024        | 171.379       | 9.75       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.059  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9134 Cast 31 16 JUNE 1991  
 LAT: 44 59.2N LONG: 130 21.4W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 9        | 2437.6    | 2472.0     | 1.821        | 1.647   | 0.008       | 34.624         | 34.622            | 0.387        | 0.007        | 27.684        | 27.683           | 27.698            | 27.696               |
| 20       | 2347.0    | 2379.7     | 1.833        | 1.667   | 0.003       | 34.619         | 34.618            | 0.383        | 0.003        | 27.680        | 27.679           | 27.692            | 27.691               |
| 1        | 2251.9    | 2282.7     | 1.841        | 1.683   | 0.003       | 34.616         | 34.615            | 0.382        | 0.002        | 27.676        | 27.676           | 27.688            | 27.688               |
| 10       | 2198.8    | 2228.6     | 1.850        | 1.697   | 0.004       | 34.614         | 34.614            | 0.382        | 0.002        | 27.674        | 27.674           | 27.686            | 27.686               |
| 16       | 2149.3    | 2178.2     | 1.872        | 1.723   | -7e-04      | 34.608         | 34.609            | 0.382        | 0.002        | 27.668        | 27.668           | 27.679            | 27.680               |
| 12       | 2092.1    | 2119.9     | 1.889        | 1.744   | -0.001      | 34.604         | 34.605            | 0.383        | 0.003        | 27.663        | 27.664           | 27.674            | 27.675               |
| 11       | 2050.0    | 2077.0     | 1.920        | 1.778   | 0.007       | 34.600         | 34.600            | 0.381        | 0.001        | 27.658        | 27.658           | 27.668            | 27.668               |
| 18       | 2002.6    | 2028.8     | 1.929        | 1.791   | 3e-04       | 34.596         | 34.597            | 0.382        | 0.002        | 27.654        | 27.654           | 27.664            | 27.665               |
| 15       | 1903.7    | 1928.2     | 1.973        | 1.843   | 1e-03       | 34.587         | 34.588            | 0.382        | 0.002        | 27.643        | 27.644           | 27.653            | 27.654               |
| 14       | 1800.2    | 1822.9     | 2.042        | 1.920   | 0.003       | 34.574         | 34.575            | 0.381        | 0.001        | 27.627        | 27.628           | 27.637            | 27.638               |
| 3        | 1699.3    | 1720.2     | 2.150        | 2.035   | 0.011       | 34.556         | 34.557            | 0.382        | 0.002        | 27.604        | 27.605           | 27.613            | 27.614               |
| 31       | 1499.5    | 1517.2     | 2.427        | 2.325   | 0.054       | 34.518         | 34.519            | 0.383        | 0.003        | 27.551        | 27.552           | 27.559            | 27.560               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 9        | 2.906        | 180.741       | 15.00      |
| 20       | 2.914        | 180.194       | 10.27      |
| 1        | 2.928        | 179.578       | 11.90      |
| 10       | 2.948        | 179.483       | 9.50       |
| 16       | 2.935        | 178.889       | 9.72       |
| 12       | 2.907        | 177.550       | 11.01      |
| 11       | 2.958        | 176.874       | 10.12      |
| 18       | 2.951        | 176.302       | 8.92       |
| 15       | 2.970        | 175.370       | 9.63       |
| 14       | 3.013        | 173.577       | 8.27       |
| 3        | 3.053        | 170.991       | 9.43       |
| 31       | 3.086        | 163.716       | 8.36       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.059  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9133 Cast 32 16 JUNE 1991  
 LAT: 44 58.1N LONG: 130 17.6W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 24       | 2297.9    | 2329.5     | 1.861         | 1.699   | 0.010       | 34.616         | 34.616            | 0.388        | -0.001      | 27.675        | 27.675           | 27.687            | 27.687               |
| 5        | 2250.5    | 2281.3     | 1.859         | 1.701   | 0.008       | 34.615         | 34.614            | 0.387        | -0.002      | 27.674        | 27.673           | 27.686            | 27.686               |
| 8        | 2185.3    | 2214.8     | 1.878         | 1.725   | 0.009       | 34.611         | 34.612            | 0.388        | -0.001      | 27.670        | 27.670           | 27.681            | 27.682               |
| 2        | 2150.7    | 2179.6     | 1.884         | 1.734   | 0.011       | 34.610         | 34.610            | 0.388        | -0.001      | 27.668        | 27.668           | 27.680            | 27.680               |
| 27       | 2101.9    | 2129.9     | 1.892         | 1.746   | 0.005       | 34.606         | 34.607            | 0.386        | -0.003      | 27.665        | 27.665           | 27.676            | 27.677               |
| 13       | 2049.8    | 2076.9     | 1.909         | 1.768   | 1e-04       | 34.601         | 34.602            | 0.384        | -0.005      | 27.659        | 27.660           | 27.670            | 27.671               |
| 25       | 1998.5    | 2024.6     | 1.933         | 1.796   | 9e-05       | 34.596         | 34.597            | 0.383        | -0.006      | 27.653        | 27.654           | 27.664            | 27.665               |
| 26       | 1948.4    | 1973.6     | 1.949         | 1.816   | -0.002      | 34.592         | 34.592            | 0.383        | -0.006      | 27.649        | 27.649           | 27.659            | 27.659               |
| 23       | 1901.4    | 1925.8     | 1.973         | 1.843   | 0.002       | 34.588         | 34.587            | 0.382        | -0.007      | 27.644        | 27.643           | 27.654            | 27.653               |
| 17       | 1751.2    | 1773.0     | 2.098         | 1.979   | 0.005       | 34.565         | 34.565            | 0.383        | -0.006      | 27.615        | 27.615           | 27.625            | 27.625               |
| 29       | 1497.2    | 1514.9     | 2.414         | 2.312   | 0.047       | 34.519         | 34.519            | 0.384        | -0.005      | 27.553        | 27.553           | 27.561            | 27.561               |
| 30       | 1251.6    | 1265.7     | 2.846         | 2.759   | 0.115       | 34.463         | 34.463            | 0.384        | -0.005      | 27.470        | 27.470           | 27.478            | 27.478               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 24       | 2.929        | 179.849       | 20.65      |
| 5        | 2.922        | 179.215       | 15.63      |
| 8        | 2.881        | 178.430       | 18.13      |
| 2        | 2.919        | 178.153       | 18.46      |
| 27       | 2.908        | 177.623       | 31.66      |
| 13       | 2.938        | 176.816       | 22.77      |
| 25       | 2.951        | 175.085       | 35.85      |
| 26       | 2.949        | 175.662       | 24.62      |
| 23       | 2.972        | 175.387       | 17.08      |
| 17       | 3.007        | 171.311       | 16.98      |
| 29       | 3.076        | 164.048       | 18.18      |
| 30       | 3.166        | 151.567       | 19.34      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.389

VENTS 1991 - LEG II  
 Station S9132 Cast 33 16 JUNE 1991  
 LAT: 44 56.9N LONG: 130 15.6W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 10       | 2149.9    | 2178.8     | 1.898         | 1.748   | 0.023       | 34.612         | 34.609            | 0.390        | 0.010       | 27.669        | 27.666           | 27.680            | 27.678               |
| 9        | 2124.5    | 2152.9     | 1.896         | 1.748   | 0.023       | 34.612         | 34.612            | 0.390        | 0.010       | 27.669        | 27.669           | 27.680            | 27.680               |
| 1        | 2098.6    | 2126.6     | 1.893         | 1.748   | 0.022       | 34.612         | 34.612            | 0.390        | 0.010       | 27.669        | 27.669           | 27.680            | 27.680               |
| 21       | 2074.4    | 2101.8     | 1.893         | 1.750   | 0.020       | 34.611         | 34.611            | 0.390        | 0.010       | 27.668        | 27.668           | 27.679            | 27.679               |
| 6        | 2054.5    | 2081.6     | 1.893         | 1.751   | 0.017       | 34.610         | 34.610            | 0.389        | 0.009       | 27.668        | 27.668           | 27.679            | 27.679               |
| 19       | 2023.7    | 2050.3     | 1.895         | 1.756   | 0.006       | 34.606         | 34.605            | 0.385        | 0.005       | 27.664        | 27.663           | 27.675            | 27.674               |
| 22       | 1995.2    | 2021.2     | 1.903         | 1.766   | 0.002       | 34.603         | 34.602            | 0.382        | 0.002       | 27.661        | 27.660           | 27.672            | 27.671               |
| 11       | 1900.1    | 1924.4     | 1.953         | 1.824   | 0.002       | 34.593         | 34.593            | 0.381        | 0.001       | 27.649        | 27.649           | 27.659            | 27.659               |
| 18       | 1800.4    | 1823.0     | 2.041         | 1.919   | 0.002       | 34.576         | 34.575            | 0.381        | 0.001       | 27.629        | 27.628           | 27.638            | 27.638               |
| 15       | 1700.9    | 1721.9     | 2.111         | 1.996   | 3e-05       | 34.562         | 34.563            | 0.381        | 0.001       | 27.612        | 27.613           | 27.621            | 27.622               |
| 14       | 1600.1    | 1619.4     | 2.243         | 2.135   | 0.015       | 34.542         | 34.543            | 0.382        | 0.002       | 27.585        | 27.586           | 27.594            | 27.595               |
| 31       | 1499.9    | 1517.6     | 2.431         | 2.328   | 0.049       | 34.518         | 34.519            | 0.382        | 0.002       | 27.550        | 27.551           | 27.559            | 27.560               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 10       | 2.934        | 179.657       | 49.78      |
| 9        | 2.944        | 179.556       | 56.95      |
| 1        | 2.931        | 179.159       | 18.89      |
| 21       | 2.907        | 179.445       | 26.12      |
| 6        | 2.939        | 178.799       | 24.34      |
| 19       | 2.966        | 177.891       | 11.67      |
| 22       | 2.979        | 177.438       | 10.33      |
| 11       | 3.005        | 176.053       | 8.44       |
| 18       | 3.052        | 174.090       |            |
| 15       | 3.060        | 172.046       | 7.91       |
| 14       | 3.089        | 168.151       | 7.40       |
| 31       | 3.134        | 163.780       | 7.05       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.067  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9132 Cast 35 16 JUNE 1991  
 LAT: 44 57.4N LONG: 130 14.5W

| Niskin # | Depth (m) | Depth (db) | Insltu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 27       | 2157.4    | 2186.4     | 1.896        | 1.745   | 0.025       | 34.613         | 34.614            | 0.390        | 0.001        | 27.670        | 27.671           | 27.681            | 27.682               |
| 16       | 2119.8    | 2148.1     | 1.896        | 1.749   | 0.023       | 34.612         | 34.612            | 0.391        | 0.002        | 27.669        | 27.669           | 27.680            | 27.680               |
| 3        | 2098.4    | 2126.3     | 1.892        | 1.747   | 0.018       | 34.611         | 34.611            | 0.390        | 0.001        | 27.669        | 27.669           | 27.680            | 27.680               |
| 5        | 2073.2    | 2100.6     | 1.888        | 1.745   | 0.013       | 34.610         | 34.610            | 0.389        | 0.000        | 27.668        | 27.668           | 27.679            | 27.679               |
| 20       | 2049.7    | 2076.7     | 1.892        | 1.751   | 0.006       | 34.607         | 34.607            | 0.386        | -0.003       | 27.665        | 27.665           | 27.676            | 27.676               |
| 13       | 2001.1    | 2027.3     | 1.913        | 1.776   | 4e-04       | 34.601         | 34.601            | 0.382        | -0.007       | 27.659        | 27.659           | 27.669            | 27.669               |
| 25       | 1952.3    | 1977.6     | 1.944        | 1.810   | 0.001       | 34.595         | 34.593            | 0.382        | -0.007       | 27.652        | 27.650           | 27.662            | 27.660               |
| 26       | 1900.3    | 1924.7     | 1.971        | 1.841   | 0.003       | 34.590         | 34.590            | 0.382        | -0.007       | 27.646        | 27.646           | 27.656            | 27.656               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 27       | 2.922        | 180.012       |            |
| 16       | 2.937        | 179.540       |            |
| 3        | 2.927        | 179.593       |            |
| 5        | 2.917        | 178.901       |            |
| 20       | 2.913        | 178.303       |            |
| 13       | 2.929        | 177.190       |            |
| 25       | 2.932        | 176.172       |            |
| 26       | 2.929        | 175.784       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.067  
 Atten-Anom = Atten - 0.389

VENTS 1991 - LEG II  
 Station T9109 Cast 36 16 JUNE 1991  
 LAT: 44 31.1N LONG: 130 27.3W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 27       | 2058.0    | 2085.1     | 1.890        | 1.748   | 0.013       | 34.607         | 34.605            | 0.390        | 0.0095      | 27.665        | 27.664           | 27.676            | 27.675               |
| 16       | 2109.4    | 2137.4     | 1.891        | 1.745   | 0.011       | 34.607         | 34.608            | 0.389        | 0.0085      | 27.665        | 27.666           | 27.677            | 27.677               |
| 23       | 2192.4    | 2221.9     | 1.895        | 1.741   | 0.013       | 34.608         | 34.608            | 0.389        | 0.0085      | 27.666        | 27.666           | 27.678            | 27.678               |
| 3        | 2066.6    | 2093.8     | 1.901        | 1.758   | 0.024       | 34.608         | 34.609            | 0.404        | 0.0235      | 27.665        | 27.666           | 27.676            | 27.677               |
| 5        | 2085.3    | 2112.8     | 1.891        | 1.747   | 0.013       | 34.607         | 34.606            | 0.387        | 0.0065      | 27.665        | 27.665           | 27.676            | 27.676               |
| 2        | 2116.8    | 2145.0     | 1.891        | 1.744   | 0.014       | 34.608         | 34.608            | 0.387        | 0.0065      | 27.666        | 27.666           | 27.677            | 27.677               |
| 20       | 2201.0    | 2230.7     | 1.894        | 1.740   | 0.012       | 34.608         | 34.608            | 0.387        | 0.0065      | 27.666        | 27.666           | 27.678            | 27.678               |
| 13       | 2091.1    | 2118.8     | 1.895        | 1.750   | 0.015       | 34.607         | 34.607            | 0.388        | 0.0075      | 27.665        | 27.665           | 27.676            | 27.676               |
| 8        | 2105.9    | 2133.8     | 1.891        | 1.745   | 0.011       | 34.607         | 34.608            | 0.388        | 0.0075      | 27.665        | 27.666           | 27.677            | 27.677               |
| 25       | 2214.6    | 2244.6     | 1.903        | 1.747   | 0.020       | 34.609         | 34.609            | 0.387        | 0.0065      | 27.666        | 27.666           | 27.678            | 27.677               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 27       | 2.832        | 180.287       | 13.00      |
| 16       | 2.832        | 180.287       | 18.24      |
| 23       | 2.823        | 180.547       | 20.56      |
| 3        | 2.752        | 181.239       | 49.72      |
| 5        | 2.833        | 180.073       | 12.72      |
| 2        | 2.834        | 179.869       | 13.33      |
| 20       | 2.827        | 179.913       | 11.80      |
| 13       | 2.758        | 179.903       | 15.42      |
| 8        | 2.828        | 179.677       | 14.16      |
| 25       |              |               |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.058  
 Atten-Anom = Atten - 0.3805

VENTS 1991 - LEG II  
 Station T9110 Cast 37 17 JUNE 1991  
 LAT: 44 43.9N LONG: 130 19.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 17       | 2125.8    | 2154.2     | 1.891        | 1.743   | 0.013       | 34.609         | 34.607            | 0.386        | 0.006       | 27.667        | 27.665           | 27.678            | 27.677               |
| 24       | 2125.8    | 2154.2     | 1.891        | 1.743   | 0.013       | 34.609         | 34.609            | 0.386        | 0.006       | 27.667        | 27.667           | 27.678            | 27.678               |
| 29       | 2139.9    | 2168.5     | 1.890        | 1.741   | 0.011       | 34.609         | 34.601            | 0.389        | 0.009       | 27.667        | 27.661           | 27.679            | 27.672               |
| 30       | 2128.0    | 2156.4     | 1.884        | 1.736   | 0.008       | 34.609         | 34.603            | 0.384        | 0.004       | 27.668        | 27.663           | 27.679            | 27.674               |
| 12       | 2124.2    | 2152.5     | 1.890        | 1.742   | 0.016       | 34.610         | 34.610            | 0.386        | 0.006       | 27.668        | 27.668           | 27.679            | 27.679               |
| 26       | 2111.5    | 2139.6     | 1.912        | 1.765   | 0.034       | 34.611         | 34.611            | 0.402        | 0.022       | 27.667        | 27.667           | 27.678            | 27.678               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 17       | 2.872        | 179.038       | 13.22      |
| 24       | 2.861        | 179.134       | 13.06      |
| 29       | 2.896        | 177.080       | 9.34       |
| 30       | 2.885        | 177.728       | 10.09      |
| 12       | 2.872        | 179.191       | 10.56      |
| 26       | 2.826        | 180.358       | 41.16      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.063  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9133 Cast 38 18 JUNE 1991  
 LAT: 44 58.1N LONG: 130 17.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 13       | 2412.7    | 2446.6     | 1.836        | 1.664   | 0.003       | 34.620         | 34.620            | 0.388        | 0.008        | 27.680        | 27.680           | 27.693            | 27.693               |
| 3        | 2198.5    | 2228.2     | 1.882        | 1.728   | 0.012       | 34.611         | 34.611            | 0.383        | 0.003        | 27.669        | 27.669           | 27.681            | 27.681               |
| 16       | 2115.2    | 2143.4     | 1.893        | 1.746   | 0.020       | 34.610         | 34.610            | 0.387        | 0.007        | 27.668        | 27.668           | 27.679            | 27.679               |
| 9        | 2000.6    | 2026.7     | 1.913        | 1.776   | 0.003       | 34.600         | 34.600            | 0.389        | 0.009        | 27.658        | 27.658           | 27.669            | 27.669               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 13       | 2.860        | 179.700       |            |
| 3        | 2.880        | 178.427       |            |
| 16       | 2.860        | 178.936       |            |
| 9        | 2.889        | 176.925       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.061  
 Atten-Anom = Atten - 0.38



VENTS 1991 - LEG II  
 Station S9130 Cast 39 18 JUNE 1991  
 LAT: 44 55.6N LONG: 130 8.9W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 8        | 2362.9    | 2395.8     | 1.848         | 1.680   | 0.008       | 34.618         | 34.617            | 0.387        | 0.007       | 27.678        | 27.677           | 27.690            | 27.690               |
| 13       | 2301.9    | 2333.7     | 1.847         | 1.684   | 0.004       | 34.616         | 34.616            | 0.386        | 0.006       | 27.676        | 27.676           | 27.688            | 27.688               |
| 2        | 2303.7    | 2335.5     | 1.847         | 1.684   | 0.003       | 34.616         | 34.616            | 0.386        | 0.006       | 27.676        | 27.676           | 27.688            | 27.688               |
| 20       | 2253.7    | 2284.5     | 1.849         | 1.691   | 4e-04       | 34.614         | 34.614            | 0.383        | 0.003       | 27.674        | 27.674           | 27.686            | 27.686               |
| 3        | 2202.2    | 2232.0     | 1.858         | 1.704   | 0.002       | 34.612         | 34.612            | 0.382        | 0.002       | 27.672        | 27.672           | 27.684            | 27.684               |
| 5        | 2151.3    | 2180.2     | 1.866         | 1.716   | 0.003       | 34.610         | 34.611            | 0.382        | 0.002       | 27.670        | 27.671           | 27.681            | 27.682               |
| 16       | 2101.4    | 2129.4     | 1.885         | 1.740   | -6e-04      | 34.605         | 34.605            | 0.381        | 0.001       | 27.664        | 27.664           | 27.675            | 27.675               |
| 27       | 2099.5    | 2127.5     | 1.886         | 1.741   | 2e-04       | 34.605         | 34.605            | 0.381        | 0.001       | 27.664        | 27.664           | 27.675            | 27.675               |
| 10       | 1998.4    | 2024.4     | 1.925         | 1.788   | 0.002       | 34.597         | 34.598            | 0.381        | 0.001       | 27.655        | 27.656           | 27.665            | 27.666               |
| 9        | 1904.3    | 1928.7     | 1.988         | 1.858   | -4e-04      | 34.584         | 34.585            | 0.381        | 0.001       | 27.639        | 27.640           | 27.650            | 27.650               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 8        | 2.836        | 178.497       |            |
| 13       | 2.831        | 179.094       |            |
| 2        |              |               |            |
| 20       | 2.856        | 179.245       |            |
| 3        | 2.841        | 178.309       |            |
| 5        | 2.869        | 178.776       |            |
| 16       | 2.850        | 177.372       |            |
| 27       |              |               |            |
| 10       | 2.883        | 177.163       |            |
| 9        | 2.911        | 174.684       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.059  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9120 Cast 40 18 JUNE 1991  
 LAT: 44 39.1N LONG: 130 22.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 8        | 2212.8    | 2242.8     | 1.898         | 1.743   | 0.018       | 34.609         | 34.609            | 0.386        | 0.006        | 27.666        | 27.666           | 27.678            | 27.678               |
| 13       | 2200.3    | 2230.1     | 1.898         | 1.744   | 0.019       | 34.609         | 34.609            | 0.387        | 0.007        | 27.666        | 27.666           | 27.678            | 27.678               |
| 2        | 2179.9    | 2209.3     | 1.895         | 1.742   | 0.018       | 34.609         | 34.609            | 0.389        | 0.009        | 27.667        | 27.667           | 27.678            | 27.678               |
| 30       | 2149.1    | 2177.9     | 1.892         | 1.742   | 0.014       | 34.608         | 34.608            | 0.385        | 0.005        | 27.666        | 27.666           | 27.678            | 27.678               |
| 3        | 2124.7    | 2153.0     | 1.890         | 1.742   | 0.011       | 34.607         | 34.607            | 0.385        | 0.005        | 27.665        | 27.665           | 27.677            | 27.677               |
| 23       | 2099.0    | 2126.9     | 1.890         | 1.745   | 0.012       | 34.607         | 34.607            | 0.386        | 0.006        | 27.665        | 27.665           | 27.677            | 27.677               |
| 5        | 2093.7    | 2121.4     | 1.891         | 1.746   | 0.013       | 34.607         | 34.607            | 0.386        | 0.006        | 27.665        | 27.665           | 27.677            | 27.677               |
| 16       | 2050.8    | 2077.8     | 1.889         | 1.748   | 0.011       | 34.606         | 34.606            | 0.386        | 0.006        | 27.665        | 27.665           | 27.676            | 27.676               |
| 27       | 2024.9    | 2051.4     | 1.892         | 1.753   | 0.014       | 34.606         | 34.606            | 0.388        | 0.008        | 27.665        | 27.665           | 27.675            | 27.675               |
| 10       | 2001.2    | 2027.3     | 1.907         | 1.770   | 0.007       | 34.601         | 34.601            | 0.384        | 0.004        | 27.659        | 27.659           | 27.670            | 27.670               |
| 9        | 1949.0    | 1974.1     | 1.917         | 1.784   | 0.005       | 34.598         | 34.598            | 0.383        | 0.003        | 27.656        | 27.656           | 27.666            | 27.666               |
| 29       | 1902.3    | 1926.7     | 1.953         | 1.823   | 0.001       | 34.590         | 34.590            | 0.381        | 0.001        | 27.647        | 27.647           | 27.657            | 27.657               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 8        | 2.841        | 179.496       | 14.88      |
| 13       | 2.848        | 178.566       | 17.38      |
| 2        | 2.845        | 178.303       | 17.00      |
| 30       | 2.873        | 178.304       | 13.54      |
| 3        | 2.865        | 178.156       | 11.42      |
| 23       |              |               |            |
| 5        | 2.870        | 177.945       | 14.07      |
| 16       | 2.861        | 178.019       | 13.73      |
| 27       | 2.845        | 177.967       | 16.02      |
| 10       | 2.888        | 177.334       | 8.51       |
| 9        | 2.879        | 176.764       | 8.66       |
| 29       | 2.908        | 175.646       | 6.89       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.057  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station T9111 Cast 41 18 JUNE 1991  
 LAT: 44 26.7N LONG: 130 26.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 31       | 2061.8    | 2088.9     | 1.876        | 1.734   | 5e-04       | 34.606         | 34.606            | 0.382        | 0.002       | 27.666        | 27.666           | 27.677            | 27.677               |
| 12       | 2048.0    | 2074.9     | 1.868        | 1.727   | -2e-04      | 34.607         | 34.606            | 0.382        | 0.002       | 27.667        | 27.666           | 27.678            | 27.677               |
| 24       | 2040.1    | 2066.8     | 1.883        | 1.743   | -0.001      | 34.604         | 34.606            | 0.382        | 0.002       | 27.664        | 27.665           | 27.674            | 27.676               |
| 17       | 2041.8    | 2068.6     | 1.875        | 1.735   | 1e-03       | 34.606         | 34.606            | 0.382        | 0.002       | 27.666        | 27.666           | 27.677            | 27.677               |
| 21       | 2070.6    | 2097.9     | 1.880        | 1.737   | 0.003       | 34.606         | 34.605            | 0.382        | 0.002       | 27.665        | 27.665           | 27.676            | 27.676               |
| 19       | 2077.7    | 2105.1     | 1.876        | 1.733   | 0.003       | 34.607         | 34.606            | 0.383        | 0.003       | 27.667        | 27.666           | 27.678            | 27.677               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.875        | 177.627       | 8.66       |
| 12       | 2.861        | 177.395       | 7.50       |
| 24       | 2.862        | 177.290       | 8.97       |
| 17       | 2.850        | 177.417       | 8.33       |
| 21       | 2.848        | 177.312       | 10.19      |
| 19       | 2.842        | 177.829       | 9.26       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.058  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9101 Cast 42 19 JUNE 1991  
 LAT: 44 17.5N LONG: 130 31.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 20       | 2862.1    | 2905.3     | 1.675        | 1.464   |             | 34.646         | 34.646            | 0.383        |              | 27.713        | 27.713           | 27.729            | 27.729               |
| 10       | 2398.2    | 2431.7     | 1.800        | 1.630   |             | 34.625         | 34.626            | 0.381        |              | 27.687        | 27.688           | 27.700            | 27.701               |
| 11       | 2302.5    | 2334.1     | 1.818        | 1.656   |             | 34.621         | 34.621            | 0.383        |              | 27.682        | 27.682           | 27.695            | 27.695               |
| 15       | 2195.6    | 2225.2     | 1.835        | 1.682   |             | 34.616         | 34.617            | 0.382        |              | 27.677        | 27.678           | 27.689            | 27.689               |
| 6        | 2094.2    | 2121.9     | 1.875        | 1.730   |             | 34.608         | 34.608            | 0.381        |              | 27.667        | 27.667           | 27.679            | 27.679               |
| 22       | 2000.2    | 2026.2     | 1.940        | 1.802   |             | 34.597         | 34.594            | 0.381        |              | 27.654        | 27.651           | 27.664            | 27.662               |
| 18       | 1898.3    | 1922.5     | 2.012        | 1.882   |             | 34.588         | 34.589            | 0.381        |              | 27.641        | 27.641           | 27.651            | 27.652               |
| 14       | 1741.6    | 1763.2     | 2.191        | 2.072   |             | 34.564         | 34.563            | 0.382        |              | 27.607        | 27.606           | 27.617            | 27.616               |
| 23       | 1493.5    | 1511.0     | 2.568        | 2.464   |             | 34.523         | 34.524            | 0.382        |              | 27.543        | 27.544           | 27.552            | 27.552               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.757        | 179.194       |            |
| 10       | 2.855        | 180.521       |            |
| 11       | 2.840        | 180.424       |            |
| 15       | 2.859        | 179.938       |            |
| 6        | 2.883        | 179.139       |            |
| 22       | 2.906        | 176.236       |            |
| 18       | 2.943        | 174.358       |            |
| 14       | 2.987        | 169.825       |            |
| 23       | 3.084        | 159.777       |            |

VENTS 1991 - LEG II  
 Station S9102 Cast 43 19 JUNE 1991  
 LAT: 44 20.5N LONG: 130 29.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Ttheta (CTD) | Sigma-Ttheta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|--------------------|-----------------------|
| 20       | 2765.3    | 2806.4     | 1.694        | 1.491   |             | 34.643         | 34.642            | 0.385        |              | 27.709        | 27.709           | 27.724             | 27.724                |
| 10       | 2399.2    | 2432.7     | 1.826        | 1.655   |             | 34.621         | 34.621            | 0.382        |              | 27.682        | 27.682           | 27.695             | 27.695                |
| 11       | 2302.5    | 2334.1     | 1.831        | 1.669   |             | 34.619         | 34.619            | 0.382        |              | 27.680        | 27.680           | 27.692             | 27.692                |
| 15       | 2200.6    | 2230.3     | 1.842        | 1.689   |             | 34.615         | 34.615            | 0.382        |              | 27.676        | 27.676           | 27.687             | 27.687                |
| 6        | 2103.1    | 2130.9     | 1.869        | 1.724   |             | 34.610         | 34.611            | 0.381        |              | 27.670        | 27.670           | 27.681             | 27.681                |
| 22       | 1995.1    | 2021.0     | 1.911        | 1.774   |             | 34.601         | 34.601            | 0.381        |              | 27.659        | 27.659           | 27.670             | 27.670                |
| 18       | 1899.7    | 1924.0     | 1.998        | 1.868   |             | 34.587         | 34.587            | 0.381        |              | 27.641        | 27.641           | 27.651             | 27.651                |
| 14       | 1748.7    | 1770.3     | 2.154        | 2.035   |             | 34.567         | 34.566            | 0.382        |              | 27.612        | 27.612           | 27.622             | 27.621                |
| 23       | 1501.3    | 1519.0     | 2.506        | 2.402   |             | 34.526         | 34.525            | 0.382        |              | 27.550        | 27.550           | 27.559             | 27.558                |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.767        | 180.197       | 13.06      |
| 10       | 2.863        | 181.131       | 8.38       |
| 11       | 2.864        | 181.186       | 10.36      |
| 15       | 2.879        | 180.500       | 8.09       |
| 6        | 2.892        | 179.576       | 8.21       |
| 22       | 2.928        | 177.824       | 10.60      |
| 18       | 2.962        | 176.073       | 9.08       |
| 14       | 2.999        | 171.886       | 8.20       |
| 23       | 3.082        | 162.251       | 8.47       |

VENTS 1991 - LEG II  
 Station S9103 Cast 44 19 JUNE 1991  
 LAT: 44 21.6N LONG: 130 22.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 2        | 2535.2    | 2571.4     | 1.817        | 1.634   |             | 34.624         | 34.623            | 0.382        |              | 27.685        | 27.684           | 27.699            | 27.698               |
| 21       | 2404.9    | 2438.5     | 1.822        | 1.651   |             | 34.621         | 34.622            | 0.382        |              | 27.682        | 27.683           | 27.695            | 27.696               |
| 17       | 2299.3    | 2330.8     | 1.837        | 1.675   |             | 34.616         | 34.617            | 0.382        |              | 27.677        | 27.678           | 27.689            | 27.690               |
| 8        | 2206.1    | 2235.9     | 1.850        | 1.696   |             | 34.613         | 34.613            | 0.382        |              | 27.673        | 27.673           | 27.685            | 27.685               |
| 3        | 2103.8    | 2131.7     | 1.883        | 1.737   |             | 34.607         | 34.607            | 0.380        |              | 27.666        | 27.666           | 27.677            | 27.677               |
| 16       | 2000.4    | 2026.4     | 1.910        | 1.773   |             | 34.602         | 34.602            | 0.381        |              | 27.660        | 27.660           | 27.670            | 27.670               |
| 5        | 1901.2    | 1925.4     | 1.984        | 1.854   |             | 34.589         | 34.590            | 0.381        |              | 27.644        | 27.644           | 27.654            | 27.655               |
| 30       | 1750.8    | 1772.5     | 2.142        | 2.022   |             | 34.571         | 34.571            | 0.381        |              | 27.617        | 27.617           | 27.626            | 27.626               |
| 27       | 1500.8    | 1518.6     | 2.472        | 2.369   |             | 34.527         | 34.527            | 0.382        |              | 27.554        | 27.554           | 27.563            | 27.563               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 2        | 2.873        | 180.900       |            |
| 21       | 2.897        | 180.813       |            |
| 17       | 2.882        | 180.373       |            |
| 8        | 2.904        | 179.619       |            |
| 3        | 2.916        | 178.641       |            |
| 16       | 2.921        | 177.447       |            |
| 5        | 2.954        | 175.641       |            |
| 30       | 2.993        | 171.149       |            |
| 27       | 3.082        | 162.468       |            |

VENTS 1991 - LEG II  
 Station S9104 Cast 45 19 JUNE 1991  
 LAT: 44 22.7N LONG: 130 24.2W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 2        | 2389.1    | 2422.5     | 1.815        | 1.645   |             | 34.623         | 34.622            | 0.382        |             | 27.684        | 27.683           | 27.697            | 27.696               |
| 21       | 2302.0    | 2333.6     | 1.825        | 1.663   |             | 34.620         | 34.620            | 0.381        |             | 27.681        | 27.681           | 27.693            | 27.693               |
| 17       | 2199.5    | 2229.2     | 1.836        | 1.683   |             | 34.616         | 34.616            | 0.383        |             | 27.677        | 27.677           | 27.689            | 27.689               |
| 8        | 2149.5    | 2178.2     | 1.842        | 1.693   |             | 34.614         | 34.614            | 0.383        |             | 27.675        | 27.675           | 27.686            | 27.686               |
| 3        | 2098.8    | 2126.6     | 1.846        | 1.701   |             | 34.613         | 34.613            | 0.382        |             | 27.674        | 27.674           | 27.685            | 27.685               |
| 16       | 2001.5    | 2027.6     | 1.912        | 1.775   |             | 34.599         | 34.599            | 0.381        |             | 27.657        | 27.657           | 27.668            | 27.668               |
| 5        | 1900.1    | 1924.4     | 1.990        | 1.860   |             | 34.587         | 34.588            | 0.381        |             | 27.642        | 27.642           | 27.652            | 27.653               |
| 30       | 1749.9    | 1771.6     | 2.160        | 2.040   |             | 34.565         | 34.559            | 0.381        |             | 27.610        | 27.606           | 27.620            | 27.615               |
| 27       | 1501.8    | 1519.6     | 2.509        | 2.405   |             | 34.526         | 34.527            | 0.383        |             | 27.550        | 27.551           | 27.559            | 27.560               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 2        | 2.871        | 179.734       | 10.21      |
| 21       | 2.851        | 179.224       | 11.19      |
| 17       | 2.847        | 178.530       | 11.49      |
| 8        | 2.865        | 178.453       | 11.15      |
| 3        | 2.860        | 177.964       | 10.70      |
| 16       | 2.891        | 176.208       | 8.74       |
| 5        | 2.924        | 174.928       | 8.24       |
| 30       | 2.971        | 170.474       | 8.36       |
| 27       | 3.054        | 161.316       | 8.76       |

VENTS 1991 - LEG II  
 Station S9105 Cast 46 19 JUNE 1991  
 LAT: 44 24.4N LONG: 130 21.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 10       | 2486.4    | 2521.6     | 1.813        | 1.634   |             | 34.625         | 34.625            | 0.384        |             | 27.686        | 27.686           | 27.699            | 27.699               |
| 6        | 2400.4    | 2433.9     | 1.817        | 1.646   |             | 34.623         | 34.623            | 0.394        |             | 27.684        | 27.684           | 27.697            | 27.697               |
| 23       | 2301.6    | 2333.2     | 1.831        | 1.669   |             | 34.619         | 34.619            | 0.382        |             | 27.680        | 27.680           | 27.692            | 27.692               |
| 11       | 2200.1    | 2229.8     | 1.857        | 1.703   |             | 34.612         | 34.612            | 0.381        |             | 27.672        | 27.672           | 27.684            | 27.684               |
| 14       | 2101.1    | 2128.9     | 1.892        | 1.746   |             | 34.604         | 34.604            | 0.381        |             | 27.663        | 27.663           | 27.674            | 27.674               |
| 15       | 2000.4    | 2026.4     | 1.923        | 1.786   |             | 34.597         | 34.597            | 0.381        |             | 27.655        | 27.655           | 27.665            | 27.665               |
| 18       | 1896.4    | 1920.6     | 1.996        | 1.866   |             | 34.586         | 34.586            | 0.381        |             | 27.640        | 27.640           | 27.650            | 27.650               |
| 13       | 1747.4    | 1769.1     | 2.121        | 2.002   |             | 34.567         | 34.567            | 0.381        |             | 27.615        | 27.615           | 27.625            | 27.625               |
| 9        | 1500.0    | 1517.7     | 2.460        | 2.357   |             | 34.531         | 34.531            | 0.382        |             | 27.558        | 27.558           | 27.567            | 27.567               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 10       | 2.830        | 182.590       | 12.78      |
| 6        | 2.846        | 181.502       | 9.60       |
| 23       | 2.931        | 180.931       | 8.72       |
| 11       | 2.839        | 179.335       | 13.62      |
| 14       | 2.855        | 177.929       | 9.78       |
| 15       | 2.859        | 177.263       | 8.96       |
| 18       | 2.922        | 175.255       | 6.97       |
| 13       | 2.942        | 171.776       | 12.70      |
| 9        | 3.031        | 162.679       | 8.81       |



VENTS 1991 - LEG II  
 Station S9106 Cast 47 19 JUNE 1991  
 LAT: 44 26.0N LONG: 130 20.6W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 20       | 2841.7    | 2884.4     | 1.841        | 1.628   |             | 34.627         | 34.627            | 0.385        |              | 27.685        | 27.685           | 27.701            | 27.701               |
| 22       | 2394.6    | 2428.0     | 1.815        | 1.645   |             | 34.624         | 34.623            | 0.383        |              | 27.685        | 27.684           | 27.698            | 27.697               |
| 26       | 2295.5    | 2327.0     | 1.828        | 1.666   |             | 34.619         | 34.619            | 0.382        |              | 27.680        | 27.680           | 27.692            | 27.692               |
| 29       | 2202.4    | 2232.1     | 1.859        | 1.705   |             | 34.613         | 34.613            | 0.382        |              | 27.673        | 27.673           | 27.684            | 27.684               |
| 1        | 2101.5    | 2129.3     | 1.895        | 1.749   |             | 34.606         | 34.606            | 0.381        |              | 27.664        | 27.664           | 27.675            | 27.675               |
| 19       | 2004.6    | 2030.7     | 1.941        | 1.803   |             | 34.597         | 34.597            | 0.381        |              | 27.653        | 27.653           | 27.664            | 27.664               |
| 24       | 1899.8    | 1924.1     | 1.985        | 1.855   |             | 34.589         | 34.586            | 0.381        |              | 27.644        | 27.641           | 27.654            | 27.651               |
| 12       | 1756.3    | 1778.1     | 2.115        | 1.995   |             | 34.568         | 34.568            | 0.381        |              | 27.616        | 27.616           | 27.626            | 27.626               |
| 31       | 1505.2    | 1522.9     | 2.467        | 2.364   |             | 34.526         | 34.527            | 0.382        |              | 27.554        | 27.555           | 27.562            | 27.563               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.835        | 181.661       |            |
| 22       | 2.845        | 180.915       |            |
| 26       | 2.849        | 179.776       |            |
| 29       | 2.855        | 178.560       |            |
| 1        | 2.856        | 177.282       |            |
| 19       | 2.891        | 176.705       |            |
| 24       | 2.926        | 174.946       |            |
| 12       | 2.963        | 171.815       |            |
| 31       | 3.037        | 163.108       |            |

VENTS 1991 - LEG II  
 Station S9107 Cast 48 19 JUNE 1991  
 LAT: 44 27.1N LONG: 130 19.6W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 20       | 3174.6    | 3224.9     | 1.871         | 1.624   |             | 34.628         | 34.627            | 0.385        |             | 27.684        | 27.683           | 27.703            | 27.702               |
| 22       | 2398.0    | 2431.5     | 1.816         | 1.645   |             | 34.622         | 34.622            | 0.383        |             | 27.683        | 27.683           | 27.696            | 27.696               |
| 26       | 2299.9    | 2331.5     | 1.829         | 1.667   |             | 34.618         | 34.617            | 0.382        |             | 27.679        | 27.678           | 27.691            | 27.691               |
| 29       | 2200.0    | 2229.7     | 1.854         | 1.700   |             | 34.613         | 34.613            | 0.381        |             | 27.673        | 27.673           | 27.685            | 27.685               |
| 1        | 2101.4    | 2129.3     | 1.886         | 1.740   |             | 34.607         | 34.607            | 0.381        |             | 27.666        | 27.666           | 27.677            | 27.677               |
| 5        | 2000.9    | 2027.0     | 1.932         | 1.794   |             | 34.598         | 34.599            | 0.381        |             | 27.655        | 27.656           | 27.666            | 27.666               |
| 3        | 1896.3    | 1920.5     | 1.980         | 1.851   |             | 34.589         | 34.590            | 0.381        |             | 27.644        | 27.645           | 27.654            | 27.655               |
| 12       | 1748.6    | 1770.3     | 2.136         | 2.017   |             | 34.565         | 34.566            | 0.381        |             | 27.612        | 27.613           | 27.622            | 27.623               |
| 27       | 1481.7    | 1499.2     | 2.568         | 2.465   |             | 34.519         | 34.519            | 0.383        |             | 27.540        | 27.540           | 27.548            | 27.548               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.841        | 183.328       | 13.12      |
| 22       | 2.836        | 181.790       | 10.45      |
| 26       | 2.837        | 180.687       | 11.77      |
| 29       | 2.851        | 179.146       | 9.35       |
| 1        | 2.872        | 178.105       | 9.50       |
| 5        | 2.888        | 176.631       | 8.61       |
| 3        | 2.928        | 175.327       | 6.98       |
| 12       | 2.972        | 171.207       | 10.95      |
| 27       | 3.066        | 159.439       | 10.61      |

VENTS 1991 - LEG II  
 Station S9108 Cast 49 20 JUNE 1991  
 LAT: 44 29.5N LONG: 130 16.8W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 6        | 2808.6    | 2850.6     | 1.837         | 1.627         |             | 34.626         | 34.626            | 0.383        |              | 27.685        | 27.685           | 27.701            | 27.701               |
| 10       | 2400.9    | 2434.5     | 1.814         | 1.643         |             | 34.623         | 34.624            | 0.383        |              | 27.684        | 27.685           | 27.697            | 27.698               |
| 23       | 2299.7    | 2331.3     | 1.826         | 1.664         |             | 34.619         | 34.618            | 0.382        |              | 27.680        | 27.679           | 27.692            | 27.692               |
| 11       | 2201.1    | 2230.9     | 1.849         | 1.695         |             | 34.614         | 34.614            | 0.381        |              | 27.674        | 27.674           | 27.686            | 27.686               |
| 14       | 2099.8    | 2127.7     | 1.870         | 1.725         |             | 34.608         | 34.609            | 0.381        |              | 27.668        | 27.669           | 27.679            | 27.680               |
| 15       | 1998.5    | 2024.5     | 1.921         | 1.784         |             | 34.598         | 34.598            | 0.381        |              | 27.656        | 27.656           | 27.666            | 27.666               |
| 18       | 1897.2    | 1921.4     | 1.977         | 1.848         |             | 34.588         | 34.588            | 0.381        |              | 27.643        | 27.643           | 27.654            | 27.654               |
| 30       | 1746.1    | 1767.8     | 2.140         | 2.021         |             | 34.564         | 34.565            | 0.381        |              | 27.611        | 27.612           | 27.621            | 27.622               |
| 31       | 1510.5    | 1528.4     | 2.506         | 2.402         |             | 34.525         | 34.525            | 0.382        |              | 27.550        | 27.550           | 27.558            | 27.558               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 6        | 2.811        | 183.549       |            |
| 10       | 2.829        | 182.048       |            |
| 23       | 2.819        | 180.816       |            |
| 11       | 2.849        | 179.811       |            |
| 14       | 2.858        | 178.795       |            |
| 15       | 2.899        | 177.821       |            |
| 18       | 2.897        | 176.265       |            |
| 30       | 2.952        | 172.086       |            |
| 31       | 3.034        | 161.517       |            |

VENTS 1991 - LEG II  
 Station S9109 Cast 50 20 JUNE 1991  
 LAT: 44 31.5N LONG: 130 11.6W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 6        | 2675.0    | 2714.2     | 1.814         | 1.618   |             | 34.628         | 34.621            | 0.387        |             | 27.688        | 27.683           | 27.703            | 27.697               |
| 10       | 2398.4    | 2431.9     | 1.811         | 1.640   |             | 34.623         | 34.623            | 0.383        |             | 27.684        | 27.684           | 27.697            | 27.697               |
| 23       | 2300.8    | 2332.4     | 1.815         | 1.653   |             | 34.621         | 34.628            | 0.382        |             | 27.682        | 27.688           | 27.695            | 27.700               |
| 11       | 2203.0    | 2232.8     | 1.846         | 1.692   |             | 34.614         | 34.614            | 0.381        |             | 27.674        | 27.674           | 27.686            | 27.686               |
| 14       | 2100.5    | 2128.4     | 1.900         | 1.754   |             | 34.605         | 34.604            | 0.381        |             | 27.663        | 27.662           | 27.674            | 27.673               |
| 15       | 2001.5    | 2027.6     | 1.930         | 1.792   |             | 34.598         | 34.598            | 0.381        |             | 27.655        | 27.655           | 27.666            | 27.666               |
| 18       | 1899.3    | 1923.6     | 2.016         | 1.886   |             | 34.584         | 34.584            | 0.381        |             | 27.637        | 27.637           | 27.647            | 27.647               |
| 30       | 1746.6    | 1768.3     | 2.155         | 2.036   |             | 34.563         | 34.563            | 0.382        |             | 27.609        | 27.609           | 27.619            | 27.619               |
| 31       | 1503.1    | 1520.8     | 2.521         | 2.417   |             | 34.525         | 34.525            | 0.382        |             | 27.548        | 27.548           | 27.557            | 27.557               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 6        | 2.847        | 183.858       |            |
| 10       | 2.869        | 181.943       |            |
| 23       | 2.855        | 181.812       |            |
| 11       | 2.891        | 180.628       |            |
| 14       | 2.900        | 178.733       |            |
| 15       | 2.916        | 177.688       |            |
| 18       | 2.946        | 174.996       |            |
| 30       | 2.982        | 172.004       |            |
| 31       | 3.055        | 161.612       |            |

VENTS 1991 - LEG II  
 Station S9110 Cast 51 20 JUNE 1991  
 LAT: 44 32.5N LONG: 130 14.8W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 6        | 2448.4    | 2482.9     | 1.811         | 1.636   |             | 34.624         | 34.624            | 0.385        |              | 27.685        | 27.685           | 27.698            | 27.698               |
| 10       | 2401.1    | 2434.7     | 1.806         | 1.635   |             | 34.625         | 34.625            | 0.385        |              | 27.686        | 27.686           | 27.699            | 27.699               |
| 23       | 2298.5    | 2330.1     | 1.808         | 1.646   |             | 34.623         | 34.622            | 0.383        |              | 27.685        | 27.684           | 27.697            | 27.696               |
| 11       | 2200.9    | 2230.6     | 1.850         | 1.696   |             | 34.613         | 34.613            | 0.381        |              | 27.673        | 27.673           | 27.685            | 27.685               |
| 14       | 2103.2    | 2131.1     | 1.882         | 1.736   |             | 34.606         | 34.606            | 0.381        |              | 27.665        | 27.665           | 27.676            | 27.676               |
| 15       | 2005.0    | 2031.1     | 1.927         | 1.789   |             | 34.596         | 34.596            | 0.381        |              | 27.654        | 27.654           | 27.664            | 27.664               |
| 18       | 1901.0    | 1925.3     | 2.000         | 1.870   |             | 34.583         | 34.582            | 0.381        |              | 27.638        | 27.637           | 27.648            | 27.647               |
| 30       | 1746.0    | 1767.6     | 2.121         | 2.002   |             | 34.561         | 34.561            | 0.381        |              | 27.610        | 27.610           | 27.620            | 27.620               |
| 31       | 1500.7    | 1518.4     | 2.470         | 2.367   |             | 34.520         | 34.521            | 0.382        |              | 27.549        | 27.549           | 27.557            | 27.558               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 6        | 2.808        | 181.986       |            |
| 10       | 2.826        | 182.503       |            |
| 23       | 2.811        | 181.508       |            |
| 11       | 2.850        | 179.951       |            |
| 14       | 2.829        | 178.597       |            |
| 15       | 2.869        | 177.326       |            |
| 18       | 2.903        | 175.675       |            |
| 30       | 2.904        | 172.013       |            |
| 31       | 3.019        | 163.570       |            |

VENTS 1991 - LEG II  
 Station S9111 Cast 52 20 JUNE 1991  
 LAT: 44 33.6N LONG: 130 18.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 6        | 2479.0    | 2514.1     | 1.813        | 1.635   |             | 34.624         | 34.624            | 0.387        |             | 27.685        | 27.685           | 27.699            | 27.699               |
| 10       | 2398.0    | 2431.5     | 1.811        | 1.640   |             | 34.623         | 34.623            | 0.385        |             | 27.684        | 27.684           | 27.697            | 27.697               |
| 23       | 2301.6    | 2333.3     | 1.827        | 1.665   |             | 34.618         | 34.619            | 0.382        |             | 27.679        | 27.680           | 27.691            | 27.692               |
| 11       | 2200.5    | 2230.2     | 1.839        | 1.686   |             | 34.615         | 34.615            | 0.382        |             | 27.676        | 27.676           | 27.688            | 27.688               |
| 24       | 2099.5    | 2127.3     | 1.874        | 1.729   |             | 34.607         | 34.607            | 0.381        |             | 27.667        | 27.667           | 27.678            | 27.678               |
| 15       | 2000.5    | 2026.6     | 1.928        | 1.791   |             | 34.596         | 34.597            | 0.381        |             | 27.654        | 27.654           | 27.665            | 27.665               |
| 18       | 1898.5    | 1922.7     | 1.972        | 1.843   |             | 34.587         | 34.588            | 0.381        |             | 27.643        | 27.644           | 27.653            | 27.654               |
| 30       | 1749.7    | 1771.4     | 2.101        | 1.982   |             | 34.565         | 34.565            | 0.381        |             | 27.615        | 27.615           | 27.625            | 27.625               |
| 31       | 1499.5    | 1517.3     | 2.410        | 2.308   |             | 34.527         | 34.527            | 0.382        |             | 27.559        | 27.559           | 27.568            | 27.568               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 6        | 2.838        | 182.621       |            |
| 10       | 2.827        | 181.667       |            |
| 23       | 2.833        | 179.636       |            |
| 11       | 2.836        | 179.730       |            |
| 24       | 2.857        | 178.745       |            |
| 15       | 2.872        | 177.126       |            |
| 18       | 2.907        | 175.940       |            |
| 30       | 2.970        | 173.083       |            |
| 31       | 3.053        | 165.179       |            |

VENTS 1991 -- LEG II  
 Station S9112 Cast 53 20 JUNE 1991  
 LAT: 44 34.0N LONG: 130 20.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 6        | 2277.9    | 2309.1     | 1.834        | 1.674   |             | 34.618         | 34.619            | 0.386        |             | 27.679        | 27.679           | 27.691            | 27.692               |
| 10       | 2248.3    | 2278.9     | 1.836        | 1.678   |             | 34.618         | 34.617            | 0.385        |             | 27.678        | 27.678           | 27.690            | 27.690               |
| 23       | 2199.3    | 2229.0     | 1.837        | 1.684   |             | 34.616         | 34.617            | 0.383        |             | 27.677        | 27.678           | 27.688            | 27.689               |
| 11       | 2146.6    | 2175.3     | 1.852        | 1.703   |             | 34.613         | 34.613            | 0.382        |             | 27.673        | 27.673           | 27.685            | 27.685               |
| 24       | 2097.3    | 2125.1     | 1.876        | 1.731   |             | 34.607         | 34.599            | 0.381        |             | 27.667        | 27.660           | 27.678            | 27.671               |
| 15       | 1998.5    | 2024.5     | 1.908        | 1.771   |             | 34.601         | 34.600            | 0.381        |             | 27.659        | 27.658           | 27.670            | 27.669               |
| 18       | 1898.7    | 1923.0     | 1.947        | 1.818   |             | 34.592         | 34.592            | 0.381        |             | 27.649        | 27.649           | 27.659            | 27.659               |
| 30       | 1744.9    | 1766.5     | 2.065        | 1.947   |             | 34.570         | 34.570            | 0.381        |             | 27.622        | 27.622           | 27.631            | 27.631               |
| 9        | 1498.0    | 1515.7     | 2.393        | 2.291   |             | 34.526         | 34.527            | 0.382        |             | 27.560        | 27.561           | 27.568            | 27.569               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 6        | 2.821        | 180.478       | 12.29      |
| 10       | 2.838        | 180.070       | 11.43      |
| 23       | 2.838        | 179.777       | 12.96      |
| 11       | 2.851        | 178.876       | 8.48       |
| 24       | 2.863        | 178.006       | 8.75       |
| 15       | 2.857        | 177.409       |            |
| 18       | 2.886        | 176.394       | 7.68       |
| 30       | 2.925        | 173.566       |            |
| 9        | 3.024        | 165.314       |            |

VENTS 1991 - LEG II  
 Station S9113 Cast 54 20 JUNE 1991  
 LAT: 44 34.5N LONG: 130 22.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (l/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 14       | 2101.6    | 2129.5     | 1.861        | 1.716   |             | 34.612         | 34.612            | 0.383        |             | 27.672        | 27.672           | 27.683            | 27.683               |
| 19       | 2072.7    | 2100.1     | 1.863        | 1.720   |             | 34.612         | 34.612            | 0.383        |             | 27.672        | 27.672           | 27.682            | 27.682               |
| 31       | 2048.9    | 2075.8     | 1.872        | 1.731   |             | 34.609         | 34.609            | 0.383        |             | 27.668        | 27.668           | 27.679            | 27.679               |
| 12       | 2000.2    | 2026.2     | 1.889        | 1.752   |             | 34.605         | 34.604            | 0.383        |             | 27.664        | 27.663           | 27.674            | 27.674               |
| 16       | 1899.0    | 1923.3     | 1.953        | 1.824   |             | 34.592         | 34.591            | 0.382        |             | 27.649        | 27.648           | 27.659            | 27.658               |
| 3        | 1750.1    | 1771.8     | 2.030        | 1.912   |             | 34.576         | 34.576            | 0.381        |             | 27.630        | 27.630           | 27.639            | 27.639               |
| 8        | 1510.2    | 1528.1     | 2.402        | 2.299   |             | 34.522         | 34.523            | 0.381        |             | 27.556        | 27.557           | 27.565            | 27.565               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.883        | 179.482       | 14.05      |
| 19       | 2.872        | 179.513       | 12.13      |
| 31       | 2.884        | 179.065       | 10.60      |
| 12       | 2.896        | 178.379       | 8.64       |
| 16       | 2.916        | 176.953       | 7.88       |
| 3        | 2.956        | 174.738       | 8.27       |
| 8        | 3.028        | 165.370       | 7.91       |



VENTS 1991 - LEG II  
 Station S9114 Cast 55 20 JUNE 1991  
 LAT: 44 34.9N LONG: 130 24.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 20       | 2211.1    | 2241.0     | 1.859        | 1.704   | 0.004       | 34.614         | 34.614            | 0.384        | 0.004       | 27.673        | 27.673           | 27.685            | 27.685               |
| 22       | 2174.7    | 2204.0     | 1.865        | 1.713   | 0.007       | 34.613         | 34.613            | 0.383        | 0.003       | 27.672        | 27.672           | 27.684            | 27.684               |
| 26       | 2151.1    | 2179.9     | 1.870        | 1.720   | 0.008       | 34.612         | 34.613            | 0.383        | 0.003       | 27.671        | 27.672           | 27.682            | 27.683               |
| 29       | 2122.8    | 2151.1     | 1.869        | 1.722   | 0.009       | 34.612         | 34.612            | 0.382        | 0.002       | 27.671        | 27.672           | 27.682            | 27.683               |
| 17       | 2099.3    | 2127.2     | 1.868        | 1.723   | 0.009       | 34.612         | 34.612            | 0.383        | 0.003       | 27.671        | 27.671           | 27.682            | 27.682               |
| 2        | 2001.7    | 2027.8     | 1.909        | 1.772   | 8e-04       | 34.601         | 34.602            | 0.381        | 0.001       | 27.659        | 27.660           | 27.670            | 27.671               |
| 1        | 1901.8    | 1926.1     | 1.938        | 1.809   | -7e-04      | 34.594         | 34.593            | 0.381        | 0.001       | 27.651        | 27.651           | 27.661            | 27.661               |
| 5        | 1749.5    | 1771.2     | 2.075        | 1.956   | 0.003       | 34.569         | 34.569            | 0.381        | 0.001       | 27.620        | 27.620           | 27.630            | 27.630               |
| 27       | 1498.7    | 1516.4     | 2.460        | 2.357   | 0.062       | 34.516         | 34.515            | 0.381        | 0.001       | 27.546        | 27.546           | 27.555            | 27.554               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.850        | 180.128       | 11.21      |
| 22       | 2.880        | 179.387       | 10.54      |
| 26       | 2.862        | 179.553       | 11.32      |
| 29       | 2.863        | 179.783       | 10.50      |
| 17       | 2.878        | 179.760       | 10.30      |
| 2        | 2.902        | 177.630       | 10.27      |
| 1        | 2.917        | 176.899       | 7.76       |
| 5        | 2.954        | 173.463       | 7.93       |
| 27       | 3.071        | 163.485       | 7.09       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.064  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9115 Cast 56 20 JUNE 1991  
 LAT: 44 34.9N LONG: 130 26.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 18       | 2157.0    | 2185.9     | 1.869        | 1.719   |             | 34.612         | 34.612            | 0.382        |              | 27.671        | 27.671           | 27.683            | 27.683               |
| 24       | 2123.6    | 2151.9     | 1.867        | 1.720   |             | 34.612         | 34.612            | 0.383        |              | 27.671        | 27.671           | 27.683            | 27.683               |
| 10       | 2099.5    | 2127.3     | 1.866        | 1.721   |             | 34.612         | 34.611            | 0.383        |              | 27.671        | 27.671           | 27.682            | 27.682               |
| 11       | 2076.3    | 2103.7     | 1.867        | 1.724   |             | 34.611         | 34.612            | 0.383        |              | 27.670        | 27.671           | 27.681            | 27.682               |
| 21       | 2050.3    | 2077.3     | 1.887        | 1.746   |             | 34.606         | 34.606            | 0.381        |              | 27.665        | 27.665           | 27.676            | 27.676               |
| 6        | 2000.0    | 2026.1     | 1.902        | 1.765   |             | 34.603         | 34.603            | 0.381        |              | 27.661        | 27.661           | 27.672            | 27.672               |
| 30       | 1901.5    | 1925.8     | 1.955        | 1.826   |             | 34.592         | 34.592            | 0.380        |              | 27.648        | 27.648           | 27.658            | 27.658               |
| 15       | 1750.1    | 1771.9     | 2.068        | 1.950   |             | 34.571         | 34.570            | 0.380        |              | 27.623        | 27.622           | 27.631            | 27.631               |
| 23       | 1501.7    | 1519.4     | 2.445        | 2.342   |             | 34.519         | 34.519            | 0.381        |              | 27.550        | 27.550           | 27.559            | 27.559               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 18       | 2.892        | 179.003       | 10.59      |
| 24       | 2.883        | 178.950       | 9.84       |
| 10       | 2.897        | 178.732       | 11.06      |
| 11       | 2.888        | 178.608       | 9.39       |
| 21       | 2.915        | 177.976       | 16.83      |
| 6        | 2.890        | 177.436       | 9.25       |
| 30       | 2.960        | 175.882       | 5.91       |
| 15       | 3.002        | 173.012       | 7.15       |
| 23       | 3.091        | 163.977       | 8.82       |

VENTS 1991 - LEG II  
 Station S9116 Cast 57 20 JUNE 1991  
 LAT: 44 35.4N LONG: 130 28.2W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 14       | 2293.7    | 2325.2     | 1.853        | 1.691   |             | 34.617         | 34.616            | 0.384        |             | 27.676        | 27.676           | 27.689            | 27.688               |
| 9        | 2249.6    | 2280.3     | 1.857        | 1.699   |             | 34.615         | 34.615            | 0.383        |             | 27.674        | 27.674           | 27.686            | 27.686               |
| 19       | 2200.2    | 2230.0     | 1.861        | 1.707   |             | 34.614         | 34.614            | 0.383        |             | 27.673        | 27.673           | 27.685            | 27.685               |
| 3        | 2148.6    | 2177.4     | 1.862        | 1.713   |             | 34.613         | 34.611            | 0.383        |             | 27.672        | 27.671           | 27.684            | 27.682               |
| 12       | 2099.8    | 2127.6     | 1.867        | 1.722   |             | 34.611         | 34.611            | 0.383        |             | 27.670        | 27.670           | 27.682            | 27.682               |
| 16       | 1999.5    | 2025.6     | 1.897        | 1.760   |             | 34.604         | 34.604            | 0.381        |             | 27.663        | 27.663           | 27.673            | 27.673               |
| 8        | 1896.0    | 1920.2     | 1.944        | 1.815   |             | 34.594         | 34.596            | 0.381        |             | 27.651        | 27.652           | 27.661            | 27.662               |
| 25       | 1749.7    | 1771.4     | 2.093        | 1.974   |             | 34.568         |                   | 0.381        |             | 27.618        |                  | 27.628            |                      |
| 31       | 1499.3    | 1517.0     | 2.493        | 2.390   |             | 34.521         | 34.521            | 0.383        |             | 27.548        | 27.548           | 27.556            | 27.556               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.897        | 179.940       |            |
| 9        | 2.906        | 179.303       |            |
| 19       | 2.899        | 179.647       |            |
| 3        | 2.881        | 179.229       |            |
| 12       | 2.904        | 179.094       |            |
| 16       | 2.926        | 177.871       |            |
| 8        | 2.954        | 176.260       |            |
| 25       |              |               |            |
| 31       | 3.096        | 162.160       |            |

VENTS 1991 - LEG II  
 Station S9117 Cast 58 20 JUNE 1991  
 LAT: 44 35.8N LONG: 130 30.3W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Salinity (l/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|----------------|-------------|---------------|------------------|-------------------|----------------------|
| 14       | 2526.4    | 2562.5     | 1.800         | 1.618   |             | 34.626         | 34.627            | 0.382          |             | 27.688        | 27.688           | 27.701            | 27.702               |
| 9        | 2398.7    | 2432.3     | 1.823         | 1.652   |             | 34.621         | 34.619            | 0.381          |             | 27.682        | 27.680           | 27.695            | 27.693               |
| 19       | 2300.6    | 2332.2     | 1.835         | 1.673   |             | 34.618         | 34.618            | 0.381          |             | 27.679        | 27.679           | 27.691            | 27.691               |
| 3        | 2198.9    | 2228.6     | 1.847         | 1.694   |             | 34.613         | 34.613            | 0.383          |             | 27.674        | 27.674           | 27.685            | 27.685               |
| 12       | 2098.8    | 2126.6     | 1.872         | 1.727   |             | 34.607         | 34.607            | 0.381          |             | 27.667        | 27.667           | 27.678            | 27.678               |
| 16       | 2001.0    | 2027.0     | 1.929         | 1.791   |             | 34.596         | 34.597            | 0.381          |             | 27.654        | 27.654           | 27.664            | 27.665               |
| 8        | 1899.8    | 1924.1     | 1.991         | 1.861   |             | 34.586         | 34.587            | 0.381          |             | 27.641        | 27.642           | 27.651            | 27.652               |
| 26       | 1749.7    | 1771.4     | 2.136         | 2.017   |             | 34.562         | 34.563            | 0.381          |             | 27.610        | 27.611           | 27.619            | 27.620               |
| 31       | 1501.3    | 1519.1     | 2.478         | 2.375   |             | 34.520         | 34.520            | 0.381          |             | 27.548        | 27.548           | 27.557            | 27.557               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.866        | 180.457       |            |
| 9        | 2.902        | 180.603       |            |
| 19       | 2.880        | 180.352       |            |
| 3        | 2.891        | 179.592       |            |
| 12       | 2.917        | 178.642       |            |
| 16       | 2.924        | 176.985       |            |
| 8        | 2.986        | 175.566       |            |
| 26       | 3.038        | 172.022       |            |
| 31       | 3.117        | 162.764       |            |

VENTS 1991 - LEG II  
 Station S9118 Cast 59 20 JUNE 1991  
 LAT: 44 36.2N LONG: 130 32.4W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 14       | 2418.3    | 2452.3     | 1.824         | 1.651   |             | 34.622         | 34.622            | 0.382        |             | 27.683        | 27.683           | 27.696            | 27.696               |
| 9        | 2349.4    | 2382.0     | 1.833         | 1.666   |             | 34.619         | 34.620            | 0.381        |             | 27.680        | 27.680           | 27.692            | 27.693               |
| 19       | 2301.3    | 2332.9     | 1.835         | 1.673   |             | 34.618         | 34.618            | 0.381        |             | 27.679        | 27.679           | 27.691            | 27.691               |
| 3        | 2199.3    | 2229.0     | 1.848         | 1.695   |             | 34.615         | 34.615            | 0.381        |             | 27.675        | 27.675           | 27.687            | 27.687               |
| 12       | 2099.0    | 2126.8     | 1.880         | 1.735   |             | 34.608         | 34.608            | 0.380        |             | 27.667        | 27.667           | 27.678            | 27.678               |
| 16       | 1997.9    | 2023.9     | 1.930         | 1.793   |             | 34.600         | 34.600            | 0.381        |             | 27.657        | 27.657           | 27.667            | 27.667               |
| 8        | 1898.0    | 1922.3     | 1.993         | 1.863   |             | 34.588         | 34.588            | 0.380        |             | 27.642        | 27.642           | 27.652            | 27.652               |
| 26       | 1752.3    | 1774.1     | 2.115         | 1.996   |             | 34.569         | 34.568            | 0.382        |             | 27.617        | 27.616           | 27.627            | 27.626               |
| 31       | 1497.7    | 1515.4     | 2.466         | 2.363   |             | 34.521         | 34.522            | 0.381        |             | 27.550        | 27.551           | 27.558            | 27.559               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.880        | 179.921       |            |
| 9        | 2.877        | 179.472       |            |
| 19       | 2.892        | 179.721       |            |
| 3        | 2.889        | 178.916       |            |
| 12       | 2.914        | 178.257       |            |
| 16       | 2.930        | 176.973       |            |
| 8        | 2.983        | 175.509       |            |
| 26       | 3.020        | 172.302       |            |
| 31       | 3.105        | 163.790       |            |

VENTS 1991 - LEG II  
 Station S9119 Cast 60 21 JUNE 1991  
 LAT: 44 36.6N LONG: 130 35.3W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 14       | 2568.7    | 2605.7     | 1.766        | 1.581   |             | 34.633         | 34.634            | 0.382        |              | 27.696        | 27.697           | 27.710            | 27.711               |
| 9        | 2402.9    | 2436.5     | 1.816        | 1.645   |             | 34.624         | 34.624            | 0.380        |              | 27.685        | 27.685           | 27.698            | 27.698               |
| 19       | 2301.7    | 2333.4     | 1.837        | 1.675   |             | 34.619         | 34.618            | 0.381        |              | 27.679        | 27.678           | 27.692            | 27.691               |
| 5        | 2201.4    | 2231.1     | 1.851        | 1.697   |             | 34.615         | 34.615            | 0.381        |              | 27.675        | 27.675           | 27.687            | 27.687               |
| 3        | 2100.7    | 2128.6     | 1.885        | 1.740   |             | 34.607         | 34.608            | 0.381        |              | 27.666        | 27.667           | 27.677            | 27.678               |
| 12       | 1999.8    | 2025.9     | 1.912        | 1.775   |             | 34.602         | 34.602            | 0.381        |              | 27.660        | 27.660           | 27.670            | 27.670               |
| 16       | 1900.0    | 1924.3     | 1.972        | 1.842   |             | 34.591         | 34.591            | 0.381        |              | 27.646        | 27.646           | 27.656            | 27.656               |
| 1        | 1751.7    | 1773.5     | 2.085        | 1.966   |             | 34.575         | 34.573            | 0.381        |              | 27.624        | 27.623           | 27.634            | 27.632               |
| 8        | 1753.7    | 1775.5     | 2.083        | 1.964   |             | 34.575         | 34.575            | 0.381        |              | 27.625        | 27.625           | 27.634            | 27.634               |
| 26       | 1755.7    | 1777.5     | 2.082        | 1.963   |             | 34.576         | 34.576            | 0.381        |              | 27.625        | 27.625           | 27.635            | 27.635               |
| 31       | 1499.2    | 1517.0     | 2.424        | 2.322   |             | 34.525         | 34.525            | 0.382        |              | 27.557        | 27.557           | 27.565            | 27.565               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.859        | 181.994       |            |
| 9        | 2.897        | 181.333       |            |
| 19       | 2.905        | 181.029       |            |
| 5        | 2.926        | 180.537       |            |
| 3        | 2.934        | 179.509       |            |
| 12       | 2.946        | 178.597       |            |
| 16       | 2.983        | 177.370       |            |
| 1        | 3.010        | 174.013       |            |
| 8        | 3.004        | 174.014       |            |
| 26       | 2.991        | 174.014       |            |
| 31       | 3.108        | 165.055       |            |

VENTS 1991 - LEG II  
 Station S9120 Cast 61 21 JUNE 1991  
 LAT: 44 39.1N LONG: 130 21.9W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 14       | 2193.6    | 2223.2     | 1.878         | 1.725   | 0.009       | 34.611         | 34.611            | 0.383        | 0.003       | 27.670        | 27.670           | 27.681            | 27.681               |
| 9        | 2174.5    | 2203.7     | 1.875         | 1.723   | 0.008       | 34.611         | 34.611            | 0.383        | 0.003       | 27.670        | 27.670           | 27.681            | 27.681               |
| 19       | 2150.6    | 2179.4     | 1.875         | 1.725   | 0.009       | 34.611         | 34.611            | 0.384        | 0.004       | 27.670        | 27.670           | 27.681            | 27.681               |
| 5        | 2125.2    | 2153.6     | 1.879         | 1.732   | 0.009       | 34.610         | 34.610            | 0.385        | 0.005       | 27.669        | 27.669           | 27.680            | 27.680               |
| 3        | 2100.3    | 2128.2     | 1.879         | 1.734   | 0.007       | 34.609         | 34.609            | 0.384        | 0.004       | 27.668        | 27.668           | 27.679            | 27.679               |
| 12       | 2075.2    | 2102.6     | 1.884         | 1.741   | 0.008       | 34.608         | 34.608            | 0.384        | 0.004       | 27.667        | 27.667           | 27.678            | 27.678               |
| 16       | 2050.3    | 2077.3     | 1.892         | 1.751   | 0.007       | 34.606         | 34.605            | 0.383        | 0.003       | 27.665        | 27.664           | 27.675            | 27.675               |
| 18       | 2025.8    | 2052.3     | 1.894         | 1.755   | 0.006       | 34.605         | 34.604            | 0.383        | 0.003       | 27.664        | 27.663           | 27.674            | 27.673               |
| 6        | 2002.1    | 2028.2     | 1.904         | 1.767   | 0.003       | 34.602         | 34.601            | 0.382        | 0.002       | 27.660        | 27.660           | 27.671            | 27.670               |
| 15       | 1900.0    | 1924.3     | 1.976         | 1.846   | 1e-04       | 34.587         | 34.588            | 0.381        | 0.001       | 27.643        | 27.644           | 27.653            | 27.654               |
| 31       | 1750.4    | 1772.2     | 2.093         | 1.974   | 0.006       | 34.566         | 34.566            | 0.381        | 0.001       | 27.617        | 27.617           | 27.626            | 27.626               |
| 10       | 1501.6    | 1519.4     | 2.444         | 2.341   | 0.058       | 34.517         | 34.516            | 0.382        | 0.002       | 27.548        | 27.548           | 27.557            | 27.556               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.937        | 181.125       | 11.68      |
| 9        | 2.935        | 180.855       | 11.56      |
| 19       | 2.918        | 180.740       | 12.26      |
| 5        | 2.928        | 180.793       | 13.65      |
| 3        | 2.917        | 180.356       | 11.90      |
| 12       | 2.932        | 180.034       | 13.09      |
| 16       | 2.930        | 179.629       | 10.55      |
| 18       | 2.932        | 179.213       | 10.12      |
| 6        | 2.955        | 179.006       | 18.88      |
| 15       | 2.975        | 176.729       | 7.42       |
| 31       | 3.020        | 169.200       | 9.68       |
| 10       | 3.123        | 164.490       | 12.22      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9136 Cast 62 21 JUNE 1991  
 LAT: 45 8.5N LONG: 130 14.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 10       | 2221.1    | 2251.4     | 1.862        | 1.706   | 0.008       | 34.614         | 34.615            | 0.384        | 0.004       | 27.673        | 27.674           | 27.685            | 27.686               |
| 22       | 2201.0    | 2230.9     | 1.866        | 1.712   | 0.011       | 34.614         | 34.614            | 0.384        | 0.004       | 27.673        | 27.673           | 27.685            | 27.685               |
| 11       | 2175.2    | 2204.6     | 1.865        | 1.713   | 0.012       | 34.614         | 34.615            | 0.384        | 0.004       | 27.673        | 27.674           | 27.685            | 27.685               |
| 20       | 2149.3    | 2178.2     | 1.864        | 1.715   | 0.009       | 34.613         | 34.613            | 0.384        | 0.004       | 27.672        | 27.672           | 27.684            | 27.684               |
| 2        | 2098.3    | 2126.3     | 1.878        | 1.733   | 0.003       | 34.608         | 34.608            | 0.382        | 0.002       | 27.667        | 27.667           | 27.678            | 27.678               |
| 8        | 1999.3    | 2025.4     | 1.938        | 1.800   | 0.003       | 34.596         | 34.594            | 0.381        | 0.001       | 27.653        | 27.651           | 27.664            | 27.662               |
| 21       | 1898.9    | 1923.3     | 1.994        | 1.864   | 7e-04       | 34.584         | 34.586            | 0.381        | 0.001       | 27.639        | 27.640           | 27.649            | 27.651               |
| 23       | 1748.2    | 1770.0     | 2.137        | 2.018   | 0.012       | 34.560         | 34.559            | 0.381        | 0.001       | 27.608        | 27.607           | 27.618            | 27.617               |
| 17       | 1498.8    | 1516.6     | 2.368        | 2.266   | 0.041       | 34.525         | 34.525            | 0.382        | 0.002       | 27.561        | 27.561           | 27.570            | 27.570               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 10       | 2.913        | 179.344       | 11.80      |
| 22       | 2.927        | 179.355       | 13.08      |
| 11       | 2.932        | 179.603       | 12.68      |
| 20       | 2.932        | 179.491       | 11.02      |
| 2        | 2.943        | 178.186       | 10.21      |
| 8        | 2.961        | 176.241       | 7.99       |
| 21       | 2.992        | 175.008       | 8.33       |
| 23       | 3.044        | 171.398       | 9.05       |
| 17       | 3.123        | 165.750       | 9.89       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.38



VENTS 1991 - LEG II  
 Station S9137 Cast 63 21 JUNE 1991  
 LAT: 45 9.1N LONG: 130 16.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 29       | 2434.1    | 2468.5     | 1.842        | 1.668   | 0.003       | 34.620         | 34.620            | 0.388        | 0.008       | 27.680        | 27.680           | 27.693            | 27.693               |
| 14       | 2349.6    | 2382.3     | 1.864        | 1.697   | 0.011       | 34.617         | 34.616            | 0.386        | 0.006       | 27.676        | 27.675           | 27.688            | 27.687               |
| 6        | 2300.4    | 2332.2     | 1.873        | 1.710   | 0.013       | 34.615         | 34.614            | 0.385        | 0.005       | 27.673        | 27.672           | 27.686            | 27.685               |
| 18       | 2200.4    | 2230.2     | 1.871        | 1.717   | 0.006       | 34.612         | 34.611            | 0.384        | 0.004       | 27.671        | 27.670           | 27.683            | 27.682               |
| 24       | 2099.8    | 2127.8     | 1.897        | 1.751   | -4e-04      | 34.604         | 34.604            | 0.381        | 0.001       | 27.663        | 27.663           | 27.674            | 27.674               |
| 9        | 1999.8    | 2025.9     | 1.940        | 1.802   | -2e-04      | 34.595         | 34.595            | 0.381        | 0.001       | 27.652        | 27.652           | 27.663            | 27.663               |
| 19       | 1901.1    | 1925.5     | 1.991        | 1.861   | 0.001       | 34.585         | 34.585            | 0.381        | 0.001       | 27.640        | 27.640           | 27.650            | 27.650               |
| 12       | 1751.8    | 1773.7     | 2.091        | 1.972   | 0.003       | 34.566         | 34.565            | 0.381        | 0.001       | 27.617        | 27.616           | 27.626            | 27.625               |
| 30       | 1500.8    | 1518.7     | 2.400        | 2.298   | 0.045       | 34.521         | 34.521            | 0.382        | 0.002       | 27.555        | 27.555           | 27.564            | 27.564               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 29       | 2.879        | 181.266       | 12.69      |
| 14       | 2.865        | 179.429       | 14.46      |
| 6        | 2.878        | 180.440       | 12.37      |
| 18       | 2.889        | 179.819       | 13.13      |
| 24       | 2.904        | 178.988       | 9.53       |
| 9        | 2.950        | 177.284       | 7.15       |
| 19       | 2.982        | 175.962       | 5.15       |
| 12       | 3.002        | 173.393       | 6.38       |
| 30       | 3.094        | 165.445       | 6.74       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.063  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9138 Cast 64 21 JUNE 1991  
 LAT: 45 9.8N LONG: 130 19.9W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 2        | 2551.4    | 2588.2     | 1.809         | 1.624   | -0.003      | 34.627         | 34.626            | 0.387        | 0.0065       | 27.688        | 27.687           | 27.702            | 27.701               |
| 15       | 2398.8    | 2432.5     | 1.850         | 1.679   | 0.004       | 34.619         | 34.619            | 0.386        | 0.0055       | 27.678        | 27.678           | 27.691            | 27.691               |
| 21       | 2298.0    | 2329.7     | 1.867         | 1.704   | 0.010       | 34.616         | 34.615            | 0.386        | 0.0055       | 27.674        | 27.674           | 27.687            | 27.686               |
| 27       | 2200.5    | 2230.3     | 1.876         | 1.722   | 0.010       | 34.613         | 34.613            | 0.387        | 0.0065       | 27.671        | 27.671           | 27.683            | 27.683               |
| 13       | 2094.4    | 2122.3     | 1.900         | 1.755   | 0.017       | 34.609         | 34.608            | 0.394        | 0.0135       | 27.666        | 27.665           | 27.677            | 27.677               |
| 17       | 2001.7    | 2027.9     | 1.928         | 1.790   | 2e-05       | 34.598         | 34.598            | 0.382        | 0.0015       | 27.655        | 27.655           | 27.666            | 27.666               |
| 8        | 1900.5    | 1924.9     | 1.993         | 1.863   | -4e-04      | 34.585         | 34.585            | 0.382        | 0.0015       | 27.640        | 27.640           | 27.650            | 27.650               |
| 3        | 1748.4    | 1770.2     | 2.091         | 1.972   | 0.004       | 34.567         | 34.567            | 0.382        | 0.0015       | 27.618        | 27.618           | 27.627            | 27.627               |
| 23       | 1496.9    | 1514.6     | 2.374         | 2.272   | 0.040       | 34.525         | 34.525            | 0.383        | 0.0025       | 27.561        | 27.561           | 27.569            | 27.569               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 2        | 2.879        | 181.604       | 14.76      |
| 15       | 2.905        | 180.737       | 13.66      |
| 21       | 2.900        | 180.583       | 14.53      |
| 27       | 2.905        | 180.283       | 14.75      |
| 13       | 2.895        | 179.602       | 25.02      |
| 17       | 2.948        | 177.579       | 8.37       |
| 8        | 2.978        | 175.928       | 7.71       |
| 3        | 3.018        | 173.503       | 7.51       |
| 23       | 3.098        | 166.309       | 8.51       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.066  
 Atten-Anom = Atten - 0.3805

VENTS 1991 - LEG II  
 Station S9139 Cast 65 21 JUNE 1991  
 LAT: 45 10.6N LONG: 130 22.8W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 5        | 2696.7    | 2736.5     | 1.754         | 1.557   | -0.011      | 34.637         | 34.637            | 0.385        | 0.005        | 27.700        | 27.700           | 27.715            | 27.715               |
| 26       | 2397.6    | 2431.3     | 1.836         | 1.665   | 0.006       | 34.622         | 34.622            | 0.381        | 0.001        | 27.682        | 27.682           | 27.695            | 27.695               |
| 22       | 2299.5    | 2331.2     | 1.856         | 1.694   | 0.003       | 34.616         | 34.616            | 0.384        | 0.004        | 27.675        | 27.675           | 27.688            | 27.688               |
| 20       | 2199.9    | 2229.7     | 1.887         | 1.733   | 0.010       | 34.611         | 34.611            | 0.388        | 0.008        | 27.669        | 27.669           | 27.681            | 27.681               |
| 16       | 2135.9    | 2164.6     | 1.898         | 1.749   | 0.010       | 34.608         | 34.608            | 0.390        | 0.010        | 27.666        | 27.666           | 27.677            | 27.675               |
| 11       | 1999.4    | 2025.6     | 1.942         | 1.804   | -0.002      | 34.595         | 34.595            | 0.381        | 0.001        | 27.652        | 27.652           | 27.662            | 27.662               |
| 10       | 1898.7    | 1923.1     | 2.004         | 1.874   | -6e-04      | 34.583         | 34.583            | 0.381        | 0.001        | 27.637        | 27.637           | 27.647            | 27.647               |
| 25       | 1749.5    | 1771.3     | 2.124         | 2.005   | 0.007       | 34.562         | 34.563            | 0.382        | 0.002        | 27.611        | 27.612           | 27.620            | 27.621               |
| 31       | 1499.5    | 1517.3     | 2.417         | 2.315   | 0.049       | 34.520         | 34.520            | 0.383        | 0.003        | 27.553        | 27.553           | 27.562            | 27.562               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 5        | 2.859        | 181.413       |            |
| 26       | 2.891        | 180.564       | 10.08      |
| 22       | 2.915        | 179.922       | 11.67      |
| 20       | 2.910        | 179.270       | 14.01      |
| 16       | 2.917        | 179.339       | 17.79      |
| 11       | 2.952        | 177.426       | 8.62       |
| 10       | 2.944        | 176.246       |            |
| 25       | 3.029        | 172.712       |            |
| 31       | 3.111        | 165.338       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.066  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9140 Cast 66 22 JUNE 1991  
 LAT: 45 11.4N LONG: 130 25.9W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 5        | 2741.3    | 2782.1     | 1.748         | 1.547   | -0.010      | 34.638         | 34.638            | 0.387        | 0.007        | 27.701        | 27.701           | 27.716            | 27.716               |
| 30       | 2399.5    | 2433.2     | 1.833         | 1.662   | 0.004       | 34.621         | 34.621            | 0.383        | 0.003        | 27.681        | 27.681           | 27.694            | 27.694               |
| 24       | 2298.9    | 2330.7     | 1.841         | 1.679   | 6e-04       | 34.617         | 34.617            | 0.383        | 0.003        | 27.677        | 27.677           | 27.690            | 27.690               |
| 12       | 2199.9    | 2229.8     | 1.862         | 1.708   | 0.005       | 34.613         | 34.613            | 0.384        | 0.004        | 27.672        | 27.672           | 27.684            | 27.684               |
| 19       | 2144.0    | 2172.8     | 1.871         | 1.722   | 0.007       | 34.611         | 34.611            | 0.385        | 0.005        | 27.670        | 27.670           | 27.682            | 27.682               |
| 9        | 2000.5    | 2026.6     | 1.925         | 1.788   | 0.002       | 34.598         | 34.597            | 0.381        | 0.001        | 27.656        | 27.655           | 27.666            | 27.665               |
| 10       | 1899.1    | 1923.5     | 1.993         | 1.863   | 0.004       | 34.585         | 34.585            | 0.381        | 0.001        | 27.640        | 27.640           | 27.650            | 27.650               |
| 25       | 1751.0    | 1772.9     | 2.101         | 1.982   | 0.003       | 34.564         | 34.564            | 0.381        | 0.001        | 27.614        | 27.614           | 27.624            | 27.624               |
| 31       | 1500.1    | 1517.9     | 2.407         | 2.305   | 0.057       | 34.523         | 34.522            | 0.382        | 0.002        | 27.556        | 27.556           | 27.565            | 27.564               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 5        | 2.856        | 181.630       |            |
| 30       | 2.899        | 180.699       |            |
| 24       | 2.934        | 180.046       |            |
| 12       | 2.917        | 178.981       | 11.20      |
| 19       | 2.921        | 178.949       | 11.24      |
| 9        | 2.942        | 176.921       | 8.50       |
| 10       | 2.979        | 175.151       |            |
| 25       |              |               |            |
| 31       | 3.110        | 164.880       |            |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9141 Cast 67 22 JUNE 1991  
 LAT: 45 13.4N LONG: 130 24.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 5        | 2766.8    | 2808.1     | 1.748        | 1.544   | -0.012      | 34.638         | 34.638            | 0.388        | 0.008        | 27.701        | 27.701           | 27.716            | 27.716               |
| 30       | 2303.1    | 2335.0     | 1.846        | 1.683   | 0.007       | 34.618         | 34.618            | 0.384        | 0.004        | 27.678        | 27.678           | 27.690            | 27.690               |
| 24       | 2200.4    | 2230.3     | 1.866        | 1.712   | 0.008       | 34.613         | 34.613            | 0.382        | 0.002        | 27.672        | 27.672           | 27.684            | 27.684               |
| 17       | 2152.0    | 2181.0     | 1.878        | 1.728   | 0.011       | 34.611         | 34.610            | 0.385        | 0.005        | 27.670        | 27.669           | 27.681            | 27.680               |
| 14       | 2098.7    | 2126.7     | 1.887        | 1.742   | 0.009       | 34.608         | 34.608            | 0.386        | 0.006        | 27.667        | 27.667           | 27.678            | 27.678               |
| 2        | 2048.7    | 2075.7     | 1.902        | 1.761   | 0.003       | 34.603         | 34.603            | 0.383        | 0.003        | 27.661        | 27.661           | 27.672            | 27.672               |
| 10       | 2001.6    | 2027.8     | 1.923        | 1.786   | 8e-04       | 34.598         | 34.598            | 0.382        | 0.002        | 27.656        | 27.656           | 27.666            | 27.666               |
| 25       | 1749.4    | 1771.3     | 2.105        | 1.986   | 0.006       | 34.564         | 34.564            | 0.381        | 0.001        | 27.614        | 27.614           | 27.623            | 27.623               |
| 29       | 1502.6    | 1520.5     | 2.425        | 2.322   | 0.050       | 34.518         | 34.519            | 0.381        | 0.001        | 27.551        | 27.552           | 27.559            | 27.560               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 5        | 2.855        | 180.720       | 14.52      |
| 30       | 2.921        | 179.676       | 11.82      |
| 24       | 2.926        | 178.538       | 9.76       |
| 17       | 2.910        | 178.694       | 13.82      |
| 14       | 2.930        | 178.311       | 15.27      |
| 2        | 2.942        | 177.711       | 11.41      |
| 10       | 2.938        | 176.843       | 8.65       |
| 25       | 3.029        | 172.116       | 7.45       |
| 29       | 3.108        | 163.211       | 7.08       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.062  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station S9142 Cast 68 22 JUNE 1991  
 LAT: 45 15.4N LONG: 130 24.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 21       | 2737.6    | 2778.3     | 1.759        | 1.558   | -0.007      | 34.637         | 34.636            | 0.386        | 0.006       | 27.700        | 27.699           | 27.715            | 27.714               |
| 18       | 2298.5    | 2330.2     | 1.867        | 1.704   | 0.009       | 34.615         | 34.615            | 0.384        | 0.004       | 27.674        | 27.674           | 27.686            | 27.686               |
| 6        | 2251.2    | 2282.0     | 1.877        | 1.718   | 0.015       | 34.614         | 34.614            | 0.385        | 0.005       | 27.672        | 27.672           | 27.684            | 27.684               |
| 11       | 2203.0    | 2232.9     | 1.888        | 1.734   | 0.013       | 34.611         | 34.611            | 0.388        | 0.008       | 27.669        | 27.669           | 27.681            | 27.681               |
| 8        | 2153.6    | 2182.6     | 1.895        | 1.745   | 0.017       | 34.610         | 34.610            | 0.390        | 0.010       | 27.667        | 27.667           | 27.679            | 27.679               |
| 15       | 2102.9    | 2130.9     | 1.895        | 1.749   | 0.013       | 34.608         | 34.608            | 0.390        | 0.010       | 27.666        | 27.666           | 27.677            | 27.677               |
| 16       | 2050.0    | 2077.0     | 1.913        | 1.772   | 0.005       | 34.602         | 34.602            | 0.383        | 0.003       | 27.660        | 27.660           | 27.671            | 27.671               |
| 22       | 2000.8    | 2027.0     | 1.942        | 1.804   | 0.001       | 34.595         | 34.596            | 0.381        | 0.001       | 27.652        | 27.652           | 27.662            | 27.662               |
| 23       | 1497.9    | 1515.6     | 2.449        | 2.346   | 0.057       | 34.516         | 34.518            | 0.382        | 0.002       | 27.547        | 27.549           | 27.556            | 27.557               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 21       | 2.843        | 181.452       | 13.91      |
| 18       | 2.923        | 179.859       | 12.95      |
| 6        | 2.912        | 179.561       | 15.59      |
| 11       | 2.909        | 179.418       | 18.25      |
| 8        | 2.919        | 179.172       | 19.15      |
| 15       | 2.904        | 178.875       | 18.57      |
| 16       | 2.947        | 177.991       | 13.44      |
| 22       | 2.961        | 176.481       | 10.97      |
| 23       | 3.115        | 163.840       | 8.18       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.063  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station 99143 Cast 69 22 JUNE 1991  
 LAT: 45 17.4N LONG: 130 22.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 20       | 2476.7    | 2511.9     | 1.842        | 1.664   | 0.002       | 34.621         | 34.620            | 0.386        | 0.006       | 27.680        | 27.680           | 27.694            | 27.693               |
| 31       | 2300.3    | 2332.1     | 1.862        | 1.699   | 0.004       | 34.615         | 34.615            | 0.384        | 0.004       | 27.674        | 27.674           | 27.686            | 27.686               |
| 12       | 2248.6    | 2279.3     | 1.878        | 1.720   | 0.006       | 34.612         | 34.612            | 0.385        | 0.005       | 27.670        | 27.670           | 27.683            | 27.683               |
| 19       | 2203.3    | 2233.2     | 1.890        | 1.736   | 0.009       | 34.610         | 34.610            | 0.385        | 0.005       | 27.668        | 27.668           | 27.680            | 27.680               |
| 9        | 2151.0    | 2180.0     | 1.903        | 1.753   | 0.006       | 34.606         | 34.606            | 0.385        | 0.005       | 27.664        | 27.664           | 27.675            | 27.675               |
| 13       | 2100.2    | 2128.2     | 1.919        | 1.773   | 0.004       | 34.602         | 34.602            | 0.384        | 0.004       | 27.659        | 27.659           | 27.670            | 27.670               |
| 27       | 2049.9    | 2077.0     | 1.933        | 1.791   | 0.002       | 34.598         | 34.599            | 0.381        | 0.001       | 27.655        | 27.655           | 27.666            | 27.667               |
| 25       | 2000.5    | 2026.7     | 1.949        | 1.811   | 0.004       | 34.595         | 34.595            | 0.381        | 0.001       | 27.651        | 27.651           | 27.662            | 27.662               |
| 26       | 1502.4    | 1520.3     | 2.415        | 2.312   | 0.044       | 34.519         | 34.519            | 0.381        | 0.001       | 27.553        | 27.553           | 27.561            | 27.561               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.901        | 180.573       | 10.92      |
| 31       | 2.903        | 179.884       | 14.65      |
| 12       | 2.924        | 179.473       | 11.57      |
| 19       | 2.919        | 179.319       | 13.22      |
| 9        | 2.917        | 178.805       | 13.42      |
| 13       | 2.954        | 178.004       | 10.44      |
| 27       | 2.952        | 177.521       | 7.48       |
| 25       | 2.948        | 177.069       | 8.58       |
| 26       | 3.105        | 164.561       | 7.28       |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.065  
 Atten-Anom = Atten - 0.38

VENTS 1991 - LEG II  
 Station T9112 Cast 70 22 JUNE 1991  
 LAT: 45 16.0N LONG: 130 8.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 17       | 2212.3    | 2242.4     | 1.870        | 1.715   | 0.010       | 34.614         | 34.613            | 0.385        | 0.005       | 27.673        | 27.672           | 27.684            | 27.684               |
| 10       | 2285.3    | 2316.8     | 1.880        | 1.718   | 0.020       | 34.616         | 34.615            | 0.385        | 0.005       | 27.673        | 27.673           | 27.686            | 27.685               |
| 3        | 2158.3    | 2187.4     | 1.875        | 1.725   | 0.020       | 34.615         | 34.613            | 0.385        | 0.005       | 27.673        | 27.671           | 27.685            | 27.683               |
| 29       | 2177.4    | 2206.8     | 1.893        | 1.741   | 0.031       | 34.615         | 34.613            | 0.390        | 0.010       | 27.672        | 27.670           | 27.683            | 27.682               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 17       | 2.894        | 178.993       | 11.06      |
| 10       | 2.897        | 179.064       | 12.42      |
| 3        | 2.879        | 178.722       | 13.69      |
| 29       | 2.888        | 178.836       | 14.03      |

D-Theta = (ptemp + (4.5643 \* pden)) - 128.065  
 Atten-Anom = Atten - 0.38



VENTS 1991 - LEG II  
 Station T9113 Cast 71 23 JUNE 1991  
 LAT: 45 55.9N LONG: 130 00.6W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 3        | 1519.1    | 1537.3     | 2.426         | 2.322   |             | 34.528         | 34.528            | 0.430        | 0.049       | 27.559        | 27.559           | 27.568            | 27.568               |
| 29       | 1532.9    | 1551.3     | 2.370         | 2.265   |             | 34.531         | 34.532            | 0.430        | 0.049       | 27.566        | 27.567           | 27.575            | 27.575               |
| 31       | 1482.6    | 1500.2     | 2.408         | 2.307   |             | 34.526         | 34.526            | 0.405        | 0.024       | 27.559        | 27.559           | 27.567            | 27.567               |
| 24       | 1441.2    | 1458.2     | 2.429         | 2.331   |             | 34.521         | 34.521            | 0.420        | 0.039       | 27.553        | 27.553           | 27.561            | 27.561               |
| 17       | 1473.2    | 1490.7     | 2.415         | 2.315   |             | 34.526         | 34.526            | 0.459        | 0.078       | 27.558        | 27.558           | 27.566            | 27.566               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 3        | 3.085        | 168.925       | 38.03      |
| 29       | 3.083        | 167.703       | 22.08      |
| 31       | 3.081        | 166.234       | 18.36      |
| 24       | 3.088        | 165.422       | 18.72      |
| 17       | 3.088        | 166.829       | 29.45      |

Atten-Anom = Atten - 0.381

VENTS 1991 - LEG II  
 Station T9113 Cast 73 24 JUNE 1991  
 LAT: 45 57.6N LONG: 130 10.6W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 5        | 1933.2    | 1958.3     | 2.032         | 1.899   |             | 34.581         | 34.582            | 0.381        |              | 27.633        | 27.634           | 27.644            | 27.645               |
| 22       | 1899.5    | 1924.0     | 2.043         | 1.912   |             | 34.579         | 34.579            | 0.381        |              | 27.631        | 27.631           | 27.641            | 27.641               |
| 19       | 1800.9    | 1823.7     | 2.143         | 2.019   |             | 34.562         | 34.562            | 0.381        |              | 27.609        | 27.609           | 27.619            | 27.619               |
| 30       | 1699.2    | 1720.4     | 2.194         | 2.078   |             | 34.555         | 34.555            | 0.382        |              | 27.600        | 27.600           | 27.609            | 27.609               |
| 12       | 1594.2    | 1613.6     | 2.283         | 2.175   |             | 34.541         | 34.540            | 0.381        |              | 27.581        | 27.580           | 27.590            | 27.589               |
| 9        | 1497.0    | 1514.9     | 2.406         | 2.304   |             | 34.523         | 34.522            | 0.381        |              | 27.556        | 27.556           | 27.565            | 27.564               |
| 27       | 1402.2    | 1418.6     | 2.576         | 2.480   |             | 34.499         | 34.499            | 0.381        |              | 27.523        | 27.523           | 27.531            | 27.531               |
| 13       | 1299.1    | 1314.0     | 2.792         | 2.702   |             | 34.475         | 34.475            | 0.381        |              | 27.485        | 27.485           | 27.493            | 27.493               |
| 26       | 1201.7    | 1215.2     | 3.019         | 2.934   |             | 34.449         | 34.450            | 0.381        |              | 27.444        | 27.444           | 27.451            | 27.452               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 5        | 2.976        | 173.869       | 12.80      |
| 22       | 2.964        | 173.621       | 14.75      |
| 19       | 3.021        | 171.141       | 13.92      |
| 30       | 3.030        | 170.751       | 10.18      |
| 12       | 3.076        | 167.606       | 10.82      |
| 9        | 3.077        | 164.244       | 10.26      |
| 27       | 3.123        | 159.848       | 12.96      |
| 13       | 3.155        | 153.404       | 9.59       |
| 26       | 3.175        | 146.631       | 14.34      |

VENTS 1991 - LEG II  
 Station S9145 Cast 74 24 JUNE 1991  
 LAT: 46 1.0N LONG: 130 10.3W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 21       | 2154.5    | 2183.7     | 1.935        | 1.784   |             | 34.599         | 34.599            | 0.382        |             | 27.656        | 27.656           | 27.667            | 27.667               |
| 18       | 1900.9    | 1925.5     | 2.065        | 1.934   |             | 34.576         | 34.576            | 0.383        |             | 27.627        | 27.627           | 27.637            | 27.637               |
| 6        | 1799.6    | 1822.4     | 2.107        | 1.984   |             | 34.568         | 34.568            | 0.382        |             | 27.617        | 27.617           | 27.627            | 27.627               |
| 11       | 1701.0    | 1722.1     | 2.185        | 2.069   |             | 34.555         | 34.555            | 0.383        |             | 27.600        | 27.600           | 27.610            | 27.610               |
| 8        | 1599.9    | 1619.4     | 2.337        | 2.227   |             | 34.533         | 34.533            | 0.393        |             | 27.570        | 27.570           | 27.579            | 27.579               |
| 16       | 1500.9    | 1518.9     | 2.422        | 2.319   |             | 34.521         | 34.521            | 0.382        |             | 27.554        | 27.554           | 27.562            | 27.562               |
| 14       | 1401.2    | 1417.6     | 2.574        | 2.478   |             | 34.500         | 34.500            | 0.381        |             | 27.524        | 27.524           | 27.532            | 27.532               |
| 23       | 1295.4    | 1310.3     | 2.814        | 2.724   |             | 34.473         | 34.474            | 0.382        |             | 27.481        | 27.482           | 27.489            | 27.490               |
| 2        | 13.2      | 13.3       | 12.442       | 12.440  |             | 32.526         | 32.525            | 0.446        |             | 24.585        | 24.585           | 24.586            | 24.585               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 21       | 2.894        | 177.304       | 13.69      |
| 18       | 2.924        | 173.882       | 10.20      |
| 6        | 2.944        | 172.727       | 8.71       |
| 11       | 2.979        | 170.346       | 6.45       |
| 8        | 3.012        | 166.522       | 9.93       |
| 16       | 3.060        | 165.100       | 8.25       |
| 14       | 3.067        | 159.740       | 4.89       |
| 23       | 3.117        | 152.980       |            |
| 2        |              |               |            |

VENTS 1991 - LEG II  
 Station T9115 Cast 75 24 JUNE 1991  
 LAT: 46 00.8N LONG: 129 54.6W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 20       | 2170.5    | 2199.9     | 1.957        | 1.804   |             | 34.600         | 34.599            | 0.385        | 0.003        | 27.655        | 27.654           | 27.666            | 27.666               |
| 31       | 2039.2    | 2066.2     | 1.957        | 1.816   |             | 34.596         | 34.596            | 0.384        | 0.002        | 27.651        | 27.651           | 27.662            | 27.662               |
| 29       | 1902.2    | 1926.8     | 2.001        | 1.871   |             | 34.586         | 34.586            | 0.383        | 0.001        | 27.640        | 27.640           | 27.650            | 27.650               |
| 3        | 1508.3    | 1526.3     | 2.368        | 2.265   |             | 34.527         | 34.526            | 0.383        | 0.001        | 27.563        | 27.562           | 27.571            | 27.571               |
| 1        | 1952.6    | 1978.1     | 1.996        | 1.862   |             | 34.589         | 34.589            | 0.386        | 0.004        | 27.643        | 27.643           | 27.653            | 27.653               |
| 24       | 2173.2    | 2202.7     | 1.932        | 1.779   |             | 34.604         | 34.604            | 0.387        | 0.005        | 27.660        | 27.660           | 27.672            | 27.672               |
| 17       | 2115.6    | 2144.1     | 1.933        | 1.785   |             | 34.601         | 34.601            | 0.384        | 0.002        | 27.657        | 27.657           | 27.669            | 27.669               |
| 15       | 2049.2    | 2076.4     | 1.955        | 1.813   |             | 34.595         | 34.595            | 0.384        | 0.002        | 27.651        | 27.651           | 27.662            | 27.662               |
| 25       | 1996.7    | 2022.9     | 1.967        | 1.829   |             | 34.592         | 34.583            | 0.383        | 0.001        | 27.647        | 27.640           | 27.658            | 27.651               |
| 10       | 1749.9    | 1771.9     | 2.125        | 2.006   |             | 34.562         | 34.562            | 0.382        | 0.000        | 27.611        | 27.611           | 27.620            | 27.620               |
| 2        | 1503.9    | 1521.9     | 2.454        | 2.351   |             | 34.517         | 34.504            | 0.383        | 0.001        | 27.548        | 27.537           | 27.556            | 27.546               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.935        | 176.613       | 9.09       |
| 31       | 2.949        | 176.310       | 12.22      |
| 29       | 2.957        | 174.315       | 9.26       |
| 3        | 3.073        | 163.989       | 8.94       |
| 1        | 2.951        | 175.123       |            |
| 24       | 2.910        | 177.004       | 13.73      |
| 17       | 2.935        | 175.953       | 8.71       |
| 15       | 2.938        | 175.281       | 9.75       |
| 25       | 2.951        | 172.766       | 8.96       |
| 10       | 3.001        | 171.092       |            |
| 2        | 3.138        | 162.146       |            |

Atten-Anom = Atten - 0.382

## **APPENDIX B:**

### **Station Data Tables VENTS 1992**

VENTS 1992 - LEG I  
 Station S9281 Cast 1 16 MAY 1992  
 LAT: 44 45.1N LONG: 125 19.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 1701.6    | 1722.5     | 2.203        | 2.087   |             | 34.569         |                   | 0.361        |             | 27.610        |                  | 27.620            |                      |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        |              |               |            |

VENTS 1992 - LEG I  
 Station S9282 Cast 2 16 MAY 1992  
 LAT: 44 44.9N LONG: 125 50.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 1004.4    | 1015.1     | 3.474        | 3.401   |             | 34.418         |                   | 0.356        |             | 27.376        |                  | 27.383            |                      |
| 2        | 1004.2    | 1014.9     | 3.475        | 3.402   |             | 34.418         |                   | 0.356        |             | 27.376        |                  | 27.383            |                      |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        |              |               |            |
| 2        |              |               |            |

VENTS 1992 - LEG I  
 Station S9283 Cast 3 16 MAY 1992  
 LAT: 44 44.8N LONG: 126 30.2W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 1        | 1002.8    | 1013.4     | 3.642        | 3.568   |             | 34.391         |                   | 0.356        |              | 27.338        |                  | 27.345            |                      |
| 2        | 503.6     | 508.4      | 5.253        | 5.212   |             | 34.087         |                   | 0.360        |              | 26.922        |                  | 26.927            |                      |
| 3        | 249.3     | 251.5      | 7.261        | 7.237   |             | 33.948         |                   | 0.366        |              | 26.554        |                  | 26.558            |                      |
| 5        | 8.4       | 8.5        | 13.201       | 13.200  |             | 32.413         |                   | 0.426        |              | 24.350        |                  | 24.351            |                      |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 3.221        | 132.826       |            |
| 2        | 2.916        | 83.104        |            |
| 3        | 2.267        | 46.525        |            |
| 5        | 0.417        | 4.494         |            |



VENTS 1992 - LEG I  
 Station S9284 Cast 4 16 MAY 1992  
 LAT: 44 46.4N LONG: 127 08.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 1000.6    | 1011.3     | 3.629        | 3.555   |             | 34.401         |                   | 0.355        |             | 27.347        |                  | 27.354            |                      |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        |              |               |            |

VENTS 1992 - LEG I  
 Station S9285 Cast 5 17 MAY 1992  
 LAT: 44 45.0N LONG: 127 50.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 2003.1    | 2029.3     | 1.898        | 1.761   |             | 34.601         |                   | 0.351        |             | 27.660        |                  | 27.671            |                      |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 3.002        | 179.533       |            |

VENTS 1992 - LEG I  
 Station S9286 Cast 6 17 MAY 1992  
 LAT: 44 45.0N LONG: 128 29.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 1        | 1002.4    | 1013.1     | 3.49         | 3.417         |             | 34.409         |                   | 0.361        |              | 27.367        |                  | 27.374            |                      |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        |              |               |            |

VENTS 1992 - LEG I  
 Station S9287 Cast 7 17 MAY 1992  
 LAT: 44 45.0 N LONG: 129 09.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 988.1     | 998.5      | 3.490        | 3.419   |             | 34.409         |                   | 0.361        |             | 27.367        |                  | 27.374            |                      |
| 2        | 2775.7    | 2817.0     | 1.731        | 1.527   |             | 34.646         |                   | 0.361        |             | 27.709        |                  | 27.724            |                      |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        |              |               |            |
| 2        | 2.848        | 187.439       |            |

VENTS 1992 - LEG I  
 Station S9288 Cast 8 17 MAY 1992  
 LAT: 44 44.9N LONG: 129 45.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 999.5     | 1010.1     | 3.335        | 3.264   |             | 34.396         |                   | 0.36         |             | 27.372        |                  | 27.372            |                      |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 3.305        | 137.678       |            |

VENTS 1992 - LEG I  
 Station S9213 Cast 9 18 MAY 1992  
 LAT: 44 56.8N LONG: 130 07.2W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 1        | 2373.7    | 2406.9     | 1.821        | 1.652   | 0.002       | 34.622         | 34.630            | 0.356        | 0.003        | 27.683        | 27.689           | 27.696            | 27.702               |
| 17       | 2300.7    | 2332.5     | 1.825        | 1.663   | 0.001       | 34.620         | 34.622            | 0.355        | 0.002        | 27.681        | 27.683           | 27.693            | 27.695               |
| 3        | 2198.1    | 2227.9     | 1.861        | 1.707   | 7e-04       | 34.612         | 34.619            | 0.352        | -0.001       | 27.672        | 27.677           | 27.683            | 27.689               |
| 14       | 2170.3    | 2199.6     | 1.872        | 1.721   | 0.002       | 34.610         | 34.615            | 0.353        | 0.000        | 27.669        | 27.673           | 27.681            | 27.685               |
| 5        | 2148.5    | 2177.3     | 1.873        | 1.724   | 0.004       | 34.610         | 34.612            | 0.352        | -0.001       | 27.669        | 27.671           | 27.681            | 27.682               |
| 6        | 2119.0    | 2147.2     | 1.874        | 1.727   | 0.002       | 34.609         | 34.610            | 0.352        | -0.001       | 27.668        | 27.669           | 27.680            | 27.680               |
| 19       | 2102.4    | 2130.3     | 1.875        | 1.730   | 3e-04       | 34.608         | 34.608            | 0.352        | -0.001       | 27.667        | 27.667           | 27.679            | 27.679               |
| 8        | 2076.1    | 2103.6     | 1.882        | 1.739   | 0.006       | 34.608         | 34.606            | 0.352        | -0.001       | 27.667        | 27.665           | 27.678            | 27.676               |
| 30       | 2054.1    | 2081.2     | 1.891        | 1.749   | 0.002       | 34.605         | 34.600            | 0.352        | -0.001       | 27.664        | 27.660           | 27.675            | 27.671               |
| 10       | 2000.7    | 2026.8     | 1.911        | 1.774   | -5e-04      | 34.600         | 34.588            | 0.352        | -0.001       | 27.658        | 27.649           | 27.669            | 27.659               |
| 11       | 1899.9    | 1924.3     | 1.962        | 1.833   | 5.55e-04    | 34.590         | 34.571            | 0.351        | -0.002       | 27.646        | 27.631           | 27.656            | 27.641               |
| 12       | 1748.8    | 1770.5     | 2.079        | 1.961   | 0.001       | 34.568         | 34.631            | 0.350        | -0.003       | 27.619        | 27.670           | 27.629            | 27.679               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        |              |               | 16.54      |
| 17       | 2.935        | 181.602       | 15.93      |
| 3        | 2.949        | 179.187       | 14.46      |
| 14       | 2.948        | 178.391       | 12.52      |
| 5        | 2.940        | 178.532       | 12.89      |
| 6        | 2.946        | 179.463       | 16.55      |
| 19       | 2.942        | 179.394       | 12.47      |
| 8        | 2.965        | 179.091       | 32.84      |
| 30       | 2.962        | 178.861       |            |
| 10       | 2.972        | 177.803       | 13.05      |
| 11       | 2.991        | 176.509       | 16.58      |
| 12       | 3.056        | 173.767       | 18.97      |

D-Theta = (ptemp + (4.60841 \* pden)) - 129.28349  
 Atten-Anom = Atten - 0.353

VENTS 1992 - LEG I  
 Station S9214 Cast 10 18 MAY 1992  
 LAT: 44 56.IN LONG: 130 05.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 2        | 2473.7    | 2508.8     | 1.814        | 1.636         | 0.002       | 34.624         | 34.630            | 0.358        | 0.004       | 27.685        | 27.690           | 27.698            | 27.703               |
| 13       | 2399.1    | 2432.8     | 1.807        | 1.636         | -0.002      | 34.623         | 34.626            | 0.357        | 0.003       | 27.685        | 27.687           | 27.698            | 27.700               |
| 24       | 2300.3    | 2332.0     | 1.823        | 1.661         | -0.001      | 34.619         | 34.622            | 0.353        | -0.001      | 27.680        | 27.683           | 27.693            | 27.695               |
| 15       | 2203.7    | 2233.5     | 1.838        | 1.684         | -7e-04      | 34.615         | 34.615            | 0.352        | -0.002      | 27.676        | 27.676           | 27.688            | 27.688               |
| 16       | 2148.2    | 2177.0     | 1.860        | 1.711         | 0.002       | 34.611         | 34.612            | 0.353        | -0.001      | 27.671        | 27.672           | 27.682            | 27.683               |
| 27       | 2128.2    | 2156.6     | 1.868        | 1.720         | 4e-04       | 34.609         | 34.608            | 0.352        | -0.002      | 27.669        | 27.668           | 27.680            | 27.679               |
| 18       | 2103.0    | 2130.9     | 1.875        | 1.730         | 0.003       | 34.608         | 34.604            | 0.352        | -0.002      | 27.667        | 27.664           | 27.679            | 27.675               |
| 25       | 2073.8    | 2101.2     | 1.888        | 1.745         | 0.001       | 34.605         | 34.599            | 0.352        | -0.002      | 27.664        | 27.659           | 27.675            | 27.670               |
| 22       | 2051.4    | 2078.4     | 1.894        | 1.753         | -1e-03      | 34.603         | 34.589            | 0.352        | -0.002      | 27.662        | 27.651           | 27.673            | 27.662               |
| 26       | 2003.1    | 2029.2     | 1.919        | 1.781         | -1e-03      | 34.598         | 34.564            | 0.351        | -0.003      | 27.656        | 27.629           | 27.667            | 27.639               |
| 23       | 1899.3    | 1923.7     | 1.974        | 1.844         | 0.002       | 34.588         |                   | 0.352        | -0.002      | 27.644        |                  | 27.654            |                      |
| 21       | 1755.4    | 1777.2     | 2.082        | 1.963         | 4.34e-05    | 34.567         |                   | 0.351        | -0.003      | 27.618        |                  | 27.628            |                      |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 2        |              |               | 16.21      |
| 13       | 2.890        | 181.645       | 14.59      |
| 24       |              |               | 16.43      |
| 15       | 2.920        | 180.535       | 11.12      |
| 16       | 2.932        | 179.806       | 11.48      |
| 27       | 2.929        | 179.447       | 32.14      |
| 18       | 2.932        | 179.007       | 9.46       |
| 25       | 2.941        | 178.244       | 10.65      |
| 22       | 2.954        | 178.578       | 11.31      |
| 26       | 2.963        | 178.045       | 12.49      |
| 23       | 3.007        | 176.519       | 11.00      |
| 21       | 3.064        | 174.150       |            |

D-Theta = (ptemp + (4.63945 \* pden)) - 130.1403  
 Atten-Anom = Atten - 0.354

VENTS 1992 - LEG I  
 Station S9210 Cast 11 19 MAY 1992  
 LAT: 44 59.1N LONG: 130 16.3W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2200.3    | 2230.1     | 1.903        | 1.749   | 0.028       | 34.614         | 34.614            | 0.367        | 0.012        | 27.670        | 27.670           | 27.682            | 27.682               |
| 2        | 2180.7    | 2210.1     | 1.901        | 1.748   | 0.028       | 34.614         | 34.614            | 0.367        | 0.012        | 27.670        | 27.670           | 27.682            | 27.682               |
| 13       | 2166.3    | 2195.5     | 1.905        | 1.754   | 0.028       | 34.613         | 34.614            | 0.368        | 0.013        | 27.669        | 27.670           | 27.681            | 27.682               |
| 24       | 2149.7    | 2178.6     | 1.904        | 1.754   | 0.028       | 34.613         | 34.614            | 0.368        | 0.013        | 27.669        | 27.670           | 27.681            | 27.682               |
| 15       | 2122.5    | 2150.9     | 1.906        | 1.758   | 0.031       | 34.613         | 34.614            | 0.369        | 0.014        | 27.669        | 27.670           | 27.680            | 27.681               |
| 26       | 2098.7    | 2126.6     | 1.904        | 1.758   | 0.016       | 34.609         | 34.611            | 0.362        | 0.007        | 27.666        | 27.668           | 27.677            | 27.679               |
| 23       | 2055.1    | 2082.3     | 1.908        | 1.766   | 0.007       | 34.605         | 34.607            | 0.359        | 0.004        | 27.662        | 27.664           | 27.673            | 27.675               |
| 18       | 2001.9    | 2028.0     | 1.918        | 1.781   | 0.005       | 34.602         | 34.603            | 0.355        | 0.000        | 27.659        | 27.660           | 27.670            | 27.671               |
| 25       | 2370.7    | 2403.8     | 1.965        | 1.795   | -0.727      | 34.401         | 34.592            | 0.353        | -0.002       | 27.495        | 27.648           | 27.508            | 27.661               |
| 22       | 1749.3    | 1771.1     | 2.086        | 1.967   | -1e-04      | 34.568         | 34.570            | 0.354        | -0.001       | 27.619        | 27.620           | 27.628            | 27.630               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.944        | 180.976       | 41.92      |
| 2        | 2.940        | 181.535       | 28.13      |
| 13       |              |               | 37.78      |
| 24       | 2.946        | 181.001       | 41.03      |
| 15       | 2.955        | 180.937       | 41.23      |
| 26       | 2.960        | 180.919       | 22.68      |
| 23       | 2.964        | 179.290       | 27.46      |
| 18       | 2.982        | 178.225       | 13.48      |
| 25       |              |               |            |
| 22       | 3.056        | 173.173       | 13.53      |

D-Theta = (ptemp + (4.59857 \* pden)) - 129.01754  
 Atten-Anom = Atten - 0.355



VENTS 1992 - LEG I  
 Station S9209 Cast 12 19 MAY 1992  
 LAT: 44 59.8N LONG: 130 18.4W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-t (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|---------------|----------------------|
| 12       | 2364.7    | 2397.7     | 1.852        | 1.684   | 0.004       | 34.618         | 34.626            | 0.357        | 0.002        | 27.677        | 27.684           | 27.677        | 27.690               |
| 17       | 2300.2    | 2331.9     | 1.868        | 1.705   | 0.007       | 34.615         | 34.620            | 0.357        | 0.002        | 27.674        | 27.678           | 27.674        | 27.690               |
| 3        | 2200.8    | 2230.6     | 1.883        | 1.729   | 0.011       | 34.612         | 34.616            | 0.361        | 0.006        | 27.670        | 27.673           | 27.670        | 27.685               |
| 14       | 2143.7    | 2172.4     | 1.901        | 1.752   | 0.026       | 34.612         |                   | 0.368        | 0.013        | 27.669        |                  | 27.669        | 27.680               |
| 5        | 2125.8    | 2154.2     | 1.897        | 1.749   | 0.018       | 34.610         | 34.616            | 0.366        | 0.011        | 27.667        | 27.672           | 27.667        | 27.684               |
| 6        | 2100.1    | 2128.0     | 1.902        | 1.756   | 0.022       | 34.610         | 34.615            | 0.366        | 0.011        | 27.667        | 27.671           | 27.667        | 27.682               |
| 19       | 2044.8    | 2071.7     | 1.908        | 1.767   | 0.011       | 34.605         | 34.614            | 0.359        | 0.004        | 27.662        | 27.670           | 27.662        | 27.681               |
| 8        | 2005.6    | 2031.9     | 1.915        | 1.777   | 0.003       | 34.601         | 34.606            | 0.353        | -0.002       | 27.659        | 27.663           | 27.659        | 27.673               |
| 9        | 1903.6    | 1928.0     | 1.972        | 1.842   | -0.002      | 34.588         | 34.594            | 0.352        | -0.003       | 27.644        | 27.649           | 27.644        | 27.659               |
| 10       | 1748.8    | 1770.5     | 2.097        | 1.978   | -0.001      | 34.584         | 34.570            | 0.353        | -0.002       | 27.615        | 27.619           | 27.615        | 27.629               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 12       |              |               | 17.02      |
| 17       | 2.937        | 181.110       | 13.16      |
| 3        | 2.935        | 180.717       | 20.51      |
| 14       | 2.960        | 180.716       | 40.62      |
| 5        | 2.941        | 181.433       | 26.56      |
| 6        | 2.967        | 179.733       | 32.66      |
| 19       | 2.971        | 178.484       | 18.38      |
| 8        | 2.981        | 177.998       | 17.65      |
| 9        | 3.000        | 175.939       | 10.29      |
| 10       | 3.044        | 173.637       | 9.24       |

D-Theta = (ptemp + (4.53702 \* pden)) - 127.31043  
 Atten-Anom = Atten - 0.355

VENTS 1992 - LEG I  
 Station S9223 Cast 13 20 MAY 1992  
 LAT: 44 54.4N LONG: 129 58.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 29       | 2643.3    | 2681.9     | 1.792        | 1.599   | 0.008       | 34.632         | 34.630            | 0.354        | 0.003        | 27.693        | 27.691           | 27.708            | 27.706               |
| 16       | 2505.0    | 2540.7     | 1.791        | 1.611   | 0.005       | 34.629         | 34.622            | 0.353        | 0.002        | 27.691        | 27.685           | 27.704            | 27.699               |
| 3        | 2309.7    | 2341.5     | 1.812        | 1.649   | 3e-04       | 34.621         | 34.619            | 0.350        | -0.001       | 27.683        | 27.681           | 27.695            | 27.693               |
| 17       | 2250.6    | 2281.4     | 1.823        | 1.665   | -3e-04      | 34.618         | 34.615            | 0.350        | -0.001       | 27.679        | 27.677           | 27.691            | 27.689               |
| 9        | 2195.0    | 2224.7     | 1.838        | 1.685   | 0.001       | 34.615         | 34.612            | 0.350        | -0.001       | 27.676        | 27.674           | 27.688            | 27.685               |
| 23       | 2148.1    | 2176.9     | 1.857        | 1.708   | 0.001       | 34.611         | 34.610            | 0.350        | -0.001       | 27.671        | 27.670           | 27.683            | 27.682               |
| 18       | 2123.6    | 2152.0     | 1.947        | 1.799   | -0.273      | 34.521         | 34.608            | 0.349        | -0.003       | 27.592        | 27.662           | 27.604            | 27.673               |
| 10       | 2101.6    | 2129.6     | 1.875        | 1.730   | 8e-04       | 34.607         | 34.606            | 0.349        | -0.003       | 27.667        | 27.666           | 27.678            | 27.677               |
| 26       | 2050.7    | 2077.8     | 1.891        | 1.750   | -9e-04      | 34.603         | 34.600            | 0.349        | -0.003       | 27.662        | 27.660           | 27.673            | 27.671               |
| 12       | 2003.7    | 2029.9     | 1.912        | 1.774   | 2.74e-04    | 34.599         | 34.588            | 0.349        | -0.003       | 27.657        | 27.649           | 27.668            | 27.659               |
| 25       | 1893.7    | 1917.9     | 1.969        | 1.840   | -0.002      | 34.587         | 34.571            | 0.349        | -0.003       | 27.643        | 27.630           | 27.653            | 27.640               |
| 22       | 1748.4    | 1770.2     | 2.130        | 2.011   | 0.044       | 34.570         | 34.631            | 0.351        | -0.002       | 27.617        | 27.666           | 27.626            | 27.675               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 29       | 2.866        | 183.013       |            |
| 16       | 2.866        | 180.218       |            |
| 3        | 2.879        | 180.379       |            |
| 17       | 2.884        | 180.194       |            |
| 9        | 2.908        | 179.504       |            |
| 23       | 2.930        | 178.710       | 9.15       |
| 18       | 2.919        | 178.594       | 10.64      |
| 10       | 2.929        | 178.341       |            |
| 26       | 2.933        | 177.409       | 8.68       |
| 12       | 2.965        | 176.546       |            |
| 25       | 3.033        | 173.130       |            |
| 22       | 2.866        | 184.581       |            |

D-Theta = (ptemp + (4.6204 \* pden)) - 129.6112  
 Atten-Anom = Atten - (0.344 + 0.004377\*Theta)

VENTS 1992 - LEG I  
 Station S9222 Cast 14 20 MAY 1992  
 LAT: 44 55.3N LONG: 130 02.3W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 20       | 2474.1    | 2509.3     | 1.792        | 1.615   | 0.007       | 34.628         | 34.630            | 0.357        | 0.006        | 27.690        | 27.691           | 27.703            | 27.705               |
| 2        | 2400.0    | 2433.6     | 1.796        | 1.626   | 0.002       | 34.625         | 34.626            | 0.352        | 0.001        | 27.687        | 27.688           | 27.700            | 27.701               |
| 24       | 2299.9    | 2331.6     | 1.807        | 1.645   | 5e-04       | 34.621         | 34.622            | 0.351        | 0.000        | 27.683        | 27.684           | 27.695            | 27.696               |
| 15       | 2201.2    | 2231.1     | 1.839        | 1.686   | 6e-04       | 34.614         | 34.615            | 0.350        | -0.001       | 27.675        | 27.676           | 27.687            | 27.688               |
| 14       | 2149.5    | 2178.3     | 1.856        | 1.707   | 0.003       | 34.611         | 34.612            | 0.351        | 0.000        | 27.671        | 27.672           | 27.683            | 27.684               |
| 5        | 2100.7    | 2128.7     | 1.875        | 1.730   | 0.003       | 34.607         | 34.608            | 0.350        | -0.001       | 27.667        | 27.667           | 27.678            | 27.679               |
| 6        | 2047.8    | 2074.8     | 1.899        | 1.758   | 0.007       | 34.603         | 34.604            | 0.350        | -0.001       | 27.662        | 27.662           | 27.672            | 27.673               |
| 19       | 2001.1    | 2027.2     | 1.923        | 1.786   | 0.006       | 34.598         | 34.599            | 0.350        | -0.001       | 27.656        | 27.656           | 27.666            | 27.667               |
| 11       | 1899.9    | 1924.3     | 1.975        | 1.845   | 0.003       | 34.587         | 34.589            | 0.351        | 0.000        | 27.643        | 27.644           | 27.653            | 27.654               |
| 13       | 1750.4    | 1772.2     | 2.107        | 1.988   | 0.005       | 34.563         | 34.564            | 0.349        | -0.002       | 27.613        | 27.614           | 27.623            | 27.623               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.885        | 182.467       |            |
| 2        | 2.916        | 181.746       |            |
| 24       | 2.904        | 180.421       |            |
| 15       | 2.924        | 179.609       | 11.75      |
| 14       | 2.923        | 179.185       | 10.24      |
| 5        | 2.931        | 178.899       | 9.76       |
| 6        | 2.926        | 178.544       |            |
| 19       | 2.972        | 178.658       |            |
| 11       | 2.974        | 175.984       |            |
| 13       | 3.058        | 173.595       |            |

D-Theta = (ptemp + (4.64435 \* pden)) - 130.27168  
 Atten-Anom = Atten - 0.351

VENTS 1992 - LEG I  
 Station T9201 Cast 15 21 MAY 1992  
 LAT: 44 48.0N LONG: 130 18.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 9        | 2137.6    | 2166.2     | 1.905        | 1.756   | 0.033       | 34.614         | 34.615            | 0.362        | 0.014       | 27.670        | 27.671           | 27.681            | 27.682               |
| 10       | 2136.4    | 2165.0     | 1.904        | 1.755   | 0.032       | 34.614         | 34.614            | 0.362        | 0.014       | 27.670        | 27.670           | 27.681            | 27.681               |
| 12       | 2057.3    | 2084.4     | 1.900        | 1.758   | 0.020       | 34.610         | 34.610            | 0.362        | 0.014       | 27.667        | 27.667           | 27.678            | 27.678               |
| 16       | 2099.7    | 2127.6     | 1.912        | 1.766   | 0.036       | 34.613         | 36.614            | 0.363        | 0.015       | 27.669        | 29.273           | 27.680            | 29.285               |
| 18       | 2100.5    | 2128.4     | 1.911        | 1.765   | 0.035       | 34.613         | 34.613            | 0.362        | 0.014       | 27.669        | 27.669           | 27.680            | 27.680               |
| 2        | 2103.1    | 2131.0     | 1.897        | 1.751   | 0.011       | 34.609         | 34.609            | 0.361        | 0.014       | 27.667        | 27.667           | 27.678            | 27.678               |
| 3        | 2103.6    | 2131.6     | 1.902        | 1.756   | 0.015       | 34.609         | 34.609            | 0.360        | 0.012       | 27.666        | 27.666           | 27.677            | 27.677               |
| 14       | 2177.3    | 2206.7     | 1.881        | 1.729   | 0.011       | 34.613         | 34.613            | 0.353        | 0.005       | 27.671        | 27.671           | 27.683            | 27.683               |
| 5        | 2236.2    | 2266.6     | 1.884        | 1.727   | 0.013       | 34.614         | 34.614            | 0.354        | 0.006       | 27.672        | 27.672           | 27.684            | 27.684               |
| 6        | 2089.4    | 2117.1     | 1.891        | 1.746   | -0.002      | 34.605         | 34.606            | 0.349        | 8e-04       | 27.664        | 27.665           | 27.675            | 27.676               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 9        | 2.872        | 180.221       | 27.77      |
| 10       | 2.864        | 180.226       | 29.86      |
| 12       | 2.883        | 179.185       | 22.22      |
| 16       | 2.886        | 180.791       | 23.01      |
| 18       | 2.882        | 181.094       | 23.68      |
| 2        | 2.897        | 179.328       | 22.05      |
| 3        | 2.885        | 179.921       | 19.73      |
| 14       | 2.868        | 180.175       | 13.25      |
| 5        | 2.879        | 180.105       | 14.52      |
| 6        | 2.921        | 177.700       | 31.35      |

D-Theta = (ptemp + (4.5052 \* pden)) - 126.4335  
 Atten-Anom = Atten - 0.3355

VENTS 1992 - LEG I  
 Station T9202 Cast 16 21 MAY 1992  
 LAT: 45 04.3N LONG: 130 14.5W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 15       | 2102.1    | 2130.1     | 1.902         | 1.756   | 0.020       | 34.609         | 34.610            | 0.365        | 0.016        | 27.666        | 27.667           | 27.677            | 27.678               |
| 17       | 2116.6    | 2144.9     | 1.895         | 1.748   | 0.018       | 34.610         | 34.610            | 0.362        | 0.013        | 27.667        | 27.667           | 27.679            | 27.679               |
| 23       | 2101.8    | 2129.8     | 1.901         | 1.755   | 0.019       | 34.609         | 34.609            | 0.362        | 0.013        | 27.666        | 27.666           | 27.677            | 27.677               |
| 13       | 2090.0    | 2117.8     | 1.904         | 1.759   | 0.018       | 34.608         | 34.608            | 0.363        | 0.014        | 27.665        | 27.665           | 27.676            | 27.676               |
| 29       | 2072.9    | 2100.3     | 1.902         | 1.759   | 0.018       | 34.608         | 34.608            | 0.362        | 0.013        | 27.665        | 27.665           | 27.676            | 27.676               |
| 27       | 2083.0    | 2110.7     | 1.902         | 1.758   | 0.017       | 34.608         | 34.607            | 0.362        | 0.013        | 27.665        | 27.665           | 27.676            | 27.676               |
| 19       | 2075.0    | 2102.5     | 1.898         | 1.755   | 0.019       | 34.609         | 34.609            | 0.363        | 0.014        | 27.666        | 27.666           | 27.677            | 27.677               |
| 30       | 2074.9    | 2102.4     | 1.905         | 1.761   | 0.016       | 34.607         | 34.607            | 0.361        | 0.012        | 27.664        | 27.664           | 27.675            | 27.675               |
| 11       | 2124.6    | 2153.0     | 1.894         | 1.746   | 0.017       | 34.610         | 34.609            | 0.357        | 0.007        | 27.668        | 27.667           | 27.679            | 27.678               |
| 24       | 2099.4    | 2127.3     | 1.892         | 1.747   | 0.002       | 34.606         | 34.604            | 0.348        | -0.002       | 27.665        | 27.663           | 27.676            | 27.674               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 15       | 2.931        | 180.675       | 30.10      |
| 17       | 2.925        | 180.971       | 22.32      |
| 23       | 2.921        | 181.138       | 23.52      |
| 13       | 2.923        | 181.510       | 23.40      |
| 29       | 2.927        | 181.585       | 26.10      |
| 27       | 2.927        | 180.615       | 25.83      |
| 19       | 2.919        | 181.007       | 25.07      |
| 30       | 2.928        | 180.227       | 24.12      |
| 11       | 2.925        | 179.805       | 22.05      |
| 24       | 2.940        | 178.918       | 9.17       |

D-Theta = (ptemp + (4.5819 \* pden)) - 128.5515  
 Atten-Anom = Atten - 0.3495

VENTS 1992 - LEG I  
 Station T9203 Cast 17 22 MAY 1992  
 LAT: 45 01.5N LONG: 130 19.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 9        | 2115.7    | 2144.0     | 1.898         | 1.751   | 0.019       | 34.612         | 34.612            | 0.362        | 0.013        | 27.669        | 27.669           | 27.680            | 27.680               |
| 10       | 2204.9    | 2234.8     | 1.899         | 1.744   | 0.018       | 34.613         | 34.612            | 0.361        | 0.012        | 27.670        | 27.669           | 27.681            | 27.681               |
| 12       | 2168.9    | 2198.1     | 1.914         | 1.762   | 0.026       | 34.612         | 34.611            | 0.364        | 0.015        | 27.668        | 27.667           | 27.679            | 27.679               |
| 16       | 2116.6    | 2144.8     | 1.907         | 1.760   | 0.028       | 34.613         | 34.612            | 0.364        | 0.015        | 27.669        | 27.668           | 27.680            | 27.679               |
| 18       | 2089.3    | 2117.0     | 1.898         | 1.753   | 0.013       | 34.610         | 34.609            | 0.364        | 0.015        | 27.667        | 27.666           | 27.678            | 27.678               |
| 2        | 2208.4    | 2238.4     | 1.900         | 1.745   | 0.015       | 34.612         | 34.611            | 0.355        | 0.006        | 27.669        | 27.668           | 27.681            | 27.680               |
| 3        | 2162.8    | 2191.9     | 1.892         | 1.741   | 0.016       | 34.613         | 34.612            | 0.355        | 0.006        | 27.670        | 27.669           | 27.682            | 27.681               |
| 14       | 2154.7    | 2183.7     | 1.863         | 1.713   | 0.005       | 34.615         | 34.614            | 0.352        | 0.003        | 27.674        | 27.673           | 27.685            | 27.685               |
| 5        | 2124.6    | 2153.0     | 1.878         | 1.731   | -0.009      | 34.608         | 34.615            | 0.348        | -0.001       | 27.667        | 27.673           | 27.678            | 27.684               |
| 6        | 2112.6    | 2140.8     | 1.874         | 1.728   | -0.011      | 34.608         | 34.609            | 0.348        | -0.001       | 27.668        | 27.668           | 27.679            | 27.680               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 9        | 2.905        | 181.983       | 28.08      |
| 10       | 2.909        | 180.950       | 24.50      |
| 12       | 2.906        | 181.197       | 31.22      |
| 16       | 2.898        | 181.692       | 34.12      |
| 18       | 2.911        | 180.206       | 26.44      |
| 3        | 2.897        | 181.138       | 17.15      |
| 2        | 2.896        | 181.493       | 15.29      |
| 14       | 2.891        | 180.428       | 13.96      |
| 5        | 2.893        | 181.224       | 11.01      |
| 6        | 2.902        | 179.820       | 10.43      |

D-Theta = (ptemp + (4.504 \* pden)) - 126.4035  
 Atten-Anom = Atten - 0.3490

VENTS 1992 - LEG I  
 Station S9215 Cast 18 22 MAY 1992  
 LAT: 45 00.5N LONG: 130 22.3W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 20       | 2206.0    | 2235.9     | 1.852        | 1.698   | 0.015       | 34.615         | 34.615            | 0.359        | -0.002      | 27.675        | 27.675           | 27.687            | 27.687               |
| 1        | 2154.3    | 2183.2     | 1.870        | 1.720   | 0.018       | 34.612         | 34.611            | 0.358        | -0.003      | 27.671        | 27.670           | 27.682            | 27.682               |
| 26       | 2105.7    | 2133.8     | 1.885        | 1.739   | 0.018       | 34.609         | 34.608            | 0.358        | -0.003      | 27.667        | 27.667           | 27.679            | 27.678               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.858        | 181.808       | 11.62      |
| 1        | 2.875        | 178.850       | 11.99      |
| 26       | 2.895        | 180.254       | 12.15      |

D-Theta = (ptemp + (4.87836 \* pden)) - 136.74774  
 Atten-Anom = Atten - 0.361

VENTS 1992 - LEG I  
 Station T9204 Cast 19 23 MAY 1992  
 LAT: 44 54.6N LONG: 130 21.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 18       | 2106.0    | 2134.6     | 1.893        | 1.747   | 0.019       | 34.612         | 34.611            | 0.361        | 0.013       | 27.669        | 27.668           | 27.680            | 27.680               |
| 2        | 2101.0    | 2129.5     | 1.892        | 1.746   | 0.019       | 34.611         | 34.609            | 0.358        | 0.010       | 27.669        | 27.667           | 27.680            | 27.678               |
| 13       | 2099.0    | 2127.0     | 1.885        | 1.740   | 0.011       | 34.610         | 34.609            | 0.362        | 0.014       | 27.668        | 27.667           | 27.679            | 27.679               |
| 23       | 2095.1    | 2122.9     | 1.898        | 1.753   | 0.023       | 34.611         | 34.608            | 0.360        | 0.012       | 27.668        | 27.666           | 27.677            | 27.677               |
| 17       | 2102.5    | 2130.5     | 1.892        | 1.746   | 0.022       | 34.612         | 34.610            | 0.358        | 0.010       | 27.669        | 27.668           | 27.681            | 27.679               |
| 15       | 2096.4    | 2124.3     | 1.886        | 1.741   | 0.022       | 34.613         | 34.610            | 0.356        | 0.007       | 27.671        | 27.668           | 27.682            | 27.679               |
| 6        | 2099.6    | 2127.6     | 1.883        | 1.738   | 0.009       | 34.610         | 34.608            | 0.352        | 0.004       | 27.668        | 27.667           | 27.680            | 27.678               |
| 5        | 2090.4    | 2118.1     | 1.898        | 1.753   | 0.033       | 34.614         | 34.612            | 0.362        | 0.014       | 27.670        | 27.669           | 27.682            | 27.680               |
| 14       | 2093.9    | 2121.7     | 1.882        | 1.737   | 0.008       | 34.610         | 34.607            | 0.351        | 0.003       | 27.669        | 27.666           | 27.680            | 27.677               |
| 3        | 2155.6    | 2184.6     | 1.849        | 1.699   | 3e-04       | 34.615         | 34.613            | 0.348        | -5e-04      | 27.675        | 27.673           | 27.686            | 27.685               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 18       | 2.887        | 179.893       | 22.16      |
| 2        | 2.896        | 180.261       | 19.64      |
| 13       | 2.896        | 179.868       | 23.04      |
| 23       | 2.896        | 180.281       | 31.57      |
| 17       | 2.896        | 180.533       | 21.77      |
| 15       | 2.903        | 180.894       | 18.23      |
| 6        | 2.899        | 179.523       | 14.88      |
| 5        | 2.874        | 181.720       | 35.38      |
| 14       | 2.888        | 179.679       | 12.96      |
| 3        | 2.888        | 180.286       | 11.61      |

D-Theta = (ptemp + (4.4947 \* pden)) - 126.1397  
 Atten-Anom = Atten - 0.3485



VENTS 1992 - LEG I  
 Station T9205 Cast 20 23 MAY 1992  
 LAT: 45 00.6N LONG: 130 11.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2146.5    | 2175.3     | 1.883        | 1.734   | 0.011       | 34.612         | 34.612            | 0.353        | 0.004        | 27.670        | 27.670           | 27.681            | 27.681               |
| 30       | 2135.1    | 2163.7     | 1.883        | 1.735   | 0.008       | 34.611         | 34.612            | 0.352        | 0.003        | 27.669        | 27.670           | 27.681            | 27.681               |
| 19       | 2149.3    | 2178.1     | 1.893        | 1.743   | 0.021       | 34.613         | 34.614            | 0.354        | 0.005        | 27.670        | 27.671           | 27.682            | 27.682               |
| 27       | 2128.2    | 2156.7     | 1.898        | 1.750   | 0.022       | 34.612         | 34.611            | 0.356        | 0.006        | 27.669        | 27.668           | 27.680            | 27.679               |
| 29       | 2155.5    | 2184.5     | 1.900        | 1.750   | 0.025       | 34.613         | 34.613            | 0.356        | 0.006        | 27.670        | 27.670           | 27.681            | 27.681               |
| 25       | 2141.5    | 2170.2     | 1.910        | 1.761   | 0.029       | 34.612         | 34.612            | 0.361        | 0.012        | 27.668        | 27.668           | 27.679            | 27.679               |
| 22       | 2148.4    | 2177.2     | 1.881        | 1.731   | 0.006       | 34.611         | 34.603            | 0.352        | 0.003        | 27.669        | 27.663           | 27.681            | 27.674               |
| 12       | 2171.9    | 2201.2     | 1.880        | 1.728   | 0.011       | 34.613         | 34.614            | 0.352        | 0.003        | 27.671        | 27.672           | 27.683            | 27.683               |
| 26       | 2162.5    | 2191.6     | 1.883        | 1.732   | 0.021       | 34.615         | 34.615            | 0.353        | 0.004        | 27.672        | 27.672           | 27.684            | 27.684               |
| 24       | 2164.2    | 2193.4     | 1.883        | 1.732   | 0.021       | 34.615         | 34.615            | 0.353        | 0.004        | 27.672        | 27.672           | 27.684            | 27.684               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.894        | 179.629       | 14.69      |
| 30       | 2.888        | 179.588       | 14.36      |
| 19       | 2.912        | 181.036       | 17.83      |
| 27       | 2.897        | 179.269       | 18.02      |
| 29       | 2.904        | 180.553       | 20.64      |
| 25       | 2.875        | 180.827       | 26.82      |
| 22       | 2.879        | 178.555       | 17.18      |
| 12       | 2.882        | 180.012       | 17.14      |
| 26       | 2.878        | 180.433       |            |
| 24       |              |               |            |

D-Theta = (ptemp + (4.3915 \* pden)) - 123.2858  
 Atten-Anom. = Atten - 0.3495

VENTS 1992 - LEG I  
 Station S9204 Cast 21 24 MAY 1992  
 LAT: 44 56.1N LONG: 130 13.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 24       | 2245.7    | 2276.4     | 1.878        | 1.720   | 0.010       | 34.614         | 34.615            | 0.352        | 0.005        | 27.672        | 27.673           | 27.684            | 27.685               |
| 18       | 2199.8    | 2229.6     | 1.872        | 1.718   | 0.009       | 34.614         | 34.616            | 0.352        | 0.005        | 27.672        | 27.674           | 27.684            | 27.686               |
| 2        | 2152.6    | 2181.5     | 1.877        | 1.727   | 0.004       | 34.611         | 34.611            | 0.351        | 0.004        | 27.670        | 27.670           | 27.681            | 27.681               |
| 13       | 2101.4    | 2129.4     | 1.889        | 1.743   | 0.008       | 34.609         | 34.609            | 0.353        | 0.006        | 27.667        | 27.667           | 27.678            | 27.678               |
| 23       | 2071.5    | 2098.9     | 1.900        | 1.757   | 0.010       | 34.607         | 34.607            | 0.354        | 0.007        | 27.665        | 27.665           | 27.676            | 27.676               |
| 17       | 2050.4    | 2077.4     | 1.900        | 1.759   | 0.008       | 34.606         | 34.607            | 0.355        | 0.008        | 27.664        | 27.665           | 27.675            | 27.676               |
| 3        | 2025.5    | 2052.1     | 1.904        | 1.765   | 0.008       | 34.605         | 34.605            | 0.354        | 0.007        | 27.663        | 27.663           | 27.674            | 27.674               |
| 14       | 2004.1    | 2030.3     | 1.911        | 1.773   | 0.003       | 34.602         | 34.602            | 0.350        | 0.003        | 27.660        | 27.660           | 27.670            | 27.670               |
| 5        | 1951.4    | 1976.7     | 1.937        | 1.804   | 0.002       | 34.596         | 34.597            | 0.348        | 4e-04        | 27.653        | 27.654           | 27.663            | 27.664               |
| 6        | 1802.0    | 1824.6     | 2.036        | 1.914   | 4e-04       | 34.575         | 34.575            | 0.346        | -0.002       | 27.628        | 27.628           | 27.638            | 27.638               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 24       | 2.900        | 181.314       | 14.30      |
| 18       | 2.886        | 180.443       | 18.61      |
| 2        | 2.879        | 180.193       | 11.26      |
| 13       | 2.898        | 180.062       | 16.08      |
| 23       | 2.917        | 180.530       | 17.82      |
| 17       | 2.917        | 180.950       | 17.43      |
| 3        | 2.917        | 180.540       | 17.16      |
| 14       | 2.933        | 179.730       | 14.08      |
| 5        | 2.940        | 178.057       | 10.25      |
| 6        | 3.007        | 175.035       | 7.09       |

D-Theta = (ptemp + (4.41325 \* pden)) - 123.8866  
 Atten-Anom = Atten - (0.3346 + 0.007184\*Theta)

VENTS 1992 - LEG I  
 Station S9205 Cast 22 24 MAY 1992  
 LAT: 44 53.9N LONG: 130 14.5W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 2246.4    | 2277.1     | 1.888         | 1.730   | 0.025       | 34.615         | 34.615            | 0.352        | 0.004       | 27.672        | 27.672           | 27.684            | 27.684               |
| 2        | 2201.1    | 2230.9     | 1.883         | 1.729   | 0.021       | 34.614         | 34.615            | 0.352        | 0.004       | 27.672        | 27.672           | 27.684            | 27.684               |
| 3        | 2148.3    | 2177.1     | 1.881         | 1.731   | 0.022       | 34.614         | 34.614            | 0.352        | 0.004       | 27.672        | 27.672           | 27.683            | 27.683               |
| 4        | 2126.7    | 2155.1     | 1.878         | 1.730   | 0.007       | 34.610         | 34.612            | 0.350        | 0.002       | 27.669        | 27.670           | 27.680            | 27.682               |
| 5        | 2101.8    | 2129.7     | 1.882         | 1.737   | 0.008       | 34.609         | 34.609            | 0.351        | 0.003       | 27.668        | 27.668           | 27.679            | 27.679               |
| 6        | 2075.1    | 2102.5     | 1.892         | 1.749   | 0.008       | 34.607         | 34.607            | 0.352        | 0.004       | 27.665        | 27.665           | 27.676            | 27.676               |
| 7        | 2050.6    | 2077.6     | 1.898         | 1.757   | 0.006       | 34.605         | 34.605            | 0.349        | 9e-04       | 27.663        | 27.663           | 27.674            | 27.674               |
| 8        | 2004.3    | 2030.5     | 1.915         | 1.777   | 0.002       | 34.600         | 34.600            | 0.347        | -0.001      | 27.658        | 27.658           | 27.669            | 27.669               |
| 9        | 1949.1    | 1974.3     | 1.948         | 1.815   | 5e-04       | 34.593         | 34.593            | 0.346        | -0.002      | 27.650        | 27.650           | 27.660            | 27.660               |
| 10       | 1802.9    | 1825.6     | 2.030         | 1.908   | -8e-04      | 34.576         | 34.575            | 0.346        | -0.003      | 27.630        | 27.629           | 27.639            | 27.638               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 2.891        | 180.998       | 17.29      |
| 2        | 2.881        | 180.686       | 16.53      |
| 3        | 2.897        | 108.562       | 12.74      |
| 4        | 2.894        | 179.561       | 18.43      |
| 5        | 2.883        | 179.620       | 13.94      |
| 6        | 2.885        | 179.498       | 13.33      |
| 7        | 2.887        | 179.179       | 15.95      |
| 8        | 2.896        | 178.215       | 10.17      |
| 9        | 2.917        | 177.071       | 9.03       |
| 10       | 2.969        | 175.627       | 6.38       |

D-Theta = (ptemp + (4.5352 \* pden)) - 127.25805  
 Atten-Anom = Atten - (0.3426 + 0.003148\*Theta)

VENTS 1992 - LEG I  
 Station T9206 Cast 23 24 MAY 1992  
 LAT: 44 47.5N LONG: 130 18.4W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 21       | 2153.1    | 2182.0     | 1.889         | 1.739   | 0.019       | 34.614         | 34.614            | 0.355        | 0.008        | 27.671        | 27.671           | 27.683            | 27.683               |
| 6        | 2188.6    | 2218.2     | 1.904         | 1.751   | 0.029       | 34.613         | 34.612            | 0.354        | 0.007        | 27.669        | 27.668           | 27.681            | 27.680               |
| 5        | 2149.8    | 2178.6     | 1.901         | 1.751   | 0.026       | 34.612         | 34.612            | 0.354        | 0.007        | 27.669        | 27.669           | 27.680            | 27.680               |
| 3        | 2063.1    | 2090.3     | 1.910         | 1.767   | 0.033       | 34.611         | 34.611            | 0.384        | 0.037        | 27.667        | 27.667           | 27.678            | 27.678               |
| 17       | 2182.3    | 2211.7     | 1.912         | 1.759   | 0.031       | 34.612         | 34.611            | 0.367        | 0.020        | 27.668        | 27.667           | 27.680            | 27.679               |
| 24       | 2062.1    | 2089.3     | 1.905         | 1.763   | 0.026       | 34.610         | 34.609            | 0.366        | 0.019        | 27.667        | 27.666           | 27.678            | 27.677               |
| 18       | 2074.3    | 2101.7     | 1.904         | 1.761   | 0.028       | 34.611         | 34.608            | 0.365        | 0.018        | 27.668        | 27.665           | 27.679            | 27.676               |
| 2        | 2172.5    | 2201.7     | 1.902         | 1.750   | 0.025       | 34.612         | 34.609            | 0.359        | 0.012        | 27.669        | 27.666           | 27.680            | 27.678               |
| 13       | 2056.4    | 2083.6     | 1.898         | 1.756   | 0.026       | 34.611         | 34.611            | 0.361        | 0.014        | 27.668        | 27.668           | 27.679            | 27.679               |
| 23       | 2210.2    | 2240.2     | 1.850         | 1.696   | 0.004       | 34.616         |                   | 0.349        | 0.002        | 27.676        |                  | 27.688            |                      |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 21       | 2.866        | 181.203       | 16.35      |
| 6        | 2.868        | 180.148       | 33.74      |
| 5        | 2.874        | 180.567       | 20.22      |
| 3        | 2.877        | 181.384       | 58.81      |
| 17       | 2.901        | 181.205       | 37.53      |
| 24       | 2.904        | 180.848       | 36.25      |
| 18       | 2.879        | 180.696       | 29.59      |
| 2        | 2.873        | 180.070       | 24.15      |
| 13       | 2.857        | 180.577       | 41.79      |
| 23       |              |               |            |

D-Theta = (ptemp + (4.6923 \* pden)) - 131.6086  
 Atten-Anom = Atten - 0.3470

VENTS 1992 - LEG I  
 Station T9207 Cast 24 25 MAY 1992  
 LAT: 44 41.8N LONG: 130 26.3W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (l/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 22       | 2072.6    | 2100.0     | 1.881         | 1.738   | 2.004       | 34.608         | 34.608            | 0.347        | 0.001        | 27.667        | 27.667           | 27.678            | 27.678               |
| 29       | 2060.5    | 2087.6     | 1.886         | 1.744   | 2.007       | 34.608         | 34.601            | 0.350        | 0.004        | 27.667        | 27.661           | 27.677            | 27.672               |
| 12       | 2063.9    | 2091.2     | 1.885         | 1.743   | 2.010       | 34.609         | 34.605            | 0.352        | 0.006        | 27.667        | 27.664           | 27.678            | 27.675               |
| 26       | 2118.6    | 2146.9     | 1.900         | 1.753   | 2.024       | 34.611         | 34.608            | 0.360        | 0.014        | 27.668        | 27.665           | 27.679            | 27.677               |
| 11       | 2047.2    | 2074.1     | 1.898         | 1.757   | 2.023       | 34.610         | 34.604            | 0.365        | 0.019        | 27.667        | 27.662           | 27.678            | 27.673               |
| 30       | 2188.7    | 2218.2     | 1.903         | 1.750   | 2.022       | 34.611         | 34.609            | 0.360        | 0.014        | 27.668        | 27.666           | 27.679            | 27.678               |
| 19       | 2057.0    | 2084.1     | 1.911         | 1.769   | 2.035       | 34.611         | 34.608            | 0.373        | 0.027        | 27.667        | 27.665           | 27.678            | 27.676               |
| 15       | 2022.8    | 2049.3     | 1.908         | 1.769   | 2.035       | 34.611         | 34.605            | 0.385        | 0.039        | 27.667        | 27.662           | 27.678            | 27.673               |
| 9        | 2042.4    | 2069.3     | 1.909         | 1.768   | 2.031       | 34.610         | 34.610            | 0.392        | 0.046        | 27.666        | 27.666           | 27.677            | 27.673               |
| 23       | 2088.1    | 2115.7     | 1.868         | 1.724   | 2.002       | 34.610         | 34.605            | 0.346        | 0.000        | 27.670        | 27.666           | 27.681            | 27.677               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 22       | 2.902        | 178.141       | 10.82      |
| 29       | 2.873        | 179.249       | 13.68      |
| 12       | 2.869        | 178.564       | 15.98      |
| 26       | 2.861        | 180.247       | 27.69      |
| 11       | 2.854        | 180.579       | 34.91      |
| 30       | 2.865        | 180.858       | 28.61      |
| 19       | 2.866        | 181.061       | 40.92      |
| 15       | 2.861        | 181.110       | 68.37      |
| 9        | 2.861        | 180.583       | 76.50      |
| 23       | 2.897        | 178.826       | 9.91       |

D-Theta = (ptemp + (4.6277 \* pden)) - 127.8196  
 Atten-Anom = Atten - 0.3460

VENTS 1992 - LEG I  
 Station T9208 Cast 25 25 MAY 1992  
 LAT: 44 39.3N LONG: 130 21.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 1        | 2183.3    | 2212.7     | 1.902        | 1.749         | 0.023       | 34.612         | 34.604            | 0.355        | 0.008        | 27.669        | 27.662           | 27.680            | 27.674               |
| 2        | 2019.5    | 2046.0     | 1.899        | 1.760         | 0.020       | 34.609         | 34.607            | 0.365        | 0.018        | 27.666        | 27.665           | 27.677            | 27.675               |
| 3        | 2183.3    | 2212.8     | 1.902        | 1.749         | 0.023       | 34.612         | 34.611            | 0.355        | 0.008        | 27.669        | 27.668           | 27.680            | 27.680               |
| 4        | 2017.6    | 2044.0     | 1.899        | 1.760         | 0.020       | 34.609         | 34.607            | 0.364        | 0.017        | 27.666        | 27.665           | 27.677            | 27.675               |
| 5        | 2189.7    | 2219.3     | 1.902        | 1.749         | 0.019       | 34.611         |                   | 0.356        | 0.009        | 27.668        |                  | 27.680            |                      |
| 6        | 2039.7    | 2066.4     | 1.905        | 1.765         | 0.023       | 34.609         | 34.606            | 0.369        | 0.022        | 27.666        | 27.664           | 27.677            | 27.674               |
| 7        | 2103.9    | 2131.9     | 1.905        | 1.759         | 0.022       | 34.610         | 34.608            | 0.364        | 0.017        | 27.667        | 27.665           | 27.678            | 27.676               |
| 8        | 2195.8    | 2225.4     | 1.909        | 1.755         | 0.020       | 34.610         | 34.608            | 0.356        | 0.009        | 27.666        | 27.665           | 27.678            | 27.677               |
| 9        | 2091.8    | 2119.5     | 1.903        | 1.758         | 0.018       | 34.609         | 34.607            | 0.361        | 0.014        | 27.666        | 27.664           | 27.677            | 27.676               |
| 10       | 1725.4    | 1746.7     | 2.110        | 1.993         | 0.005       | 34.563         | 34.560            | 0.344        | -0.003       | 27.613        | 27.610           | 27.622            | 27.620               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 2.887        | 180.086       | 26.04      |
| 2        | 2.897        | 179.944       | 39.93      |
| 3        | 2.899        | 180.347       | 25.31      |
| 4        | 2.897        | 179.738       | 34.43      |
| 5        |              |               |            |
| 6        | 2.885        | 180.013       | 43.76      |
| 7        | 2.891        | 180.409       | 36.89      |
| 8        | 2.889        | 180.588       | 29.71      |
| 9        | 2.893        | 179.876       | 32.26      |
| 10       | 3.002        | 172.430       | 8.95       |

D-Theta = (ptemp + (4.5005 \* pden)) - 126.3011  
 Atten-Anom = Atten - 0.3470

VENTS 1992 - LEG I  
 Station S9208 Cast 26 26 MAY 1992  
 LAT: 44 39.5N LONG: 130 21.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 9        | 2184.2    | 2213.6     | 1.900        | 1.747   | 0.034       | 34.612         | 0.356             | 0.009        | 0.009        | 27.669        | 27.669           | 27.680            | 27.680               |
| 30       | 2152.5    | 2181.3     | 1.904        | 1.754   | 0.035       | 34.611         | 0.362             | 0.016        | 0.016        | 27.668        | 27.668           | 27.679            | 27.679               |
| 23       | 2127.1    | 2155.5     | 1.907        | 1.759   | 0.038       | 34.611         | 0.366             | 0.019        | 0.019        | 27.667        | 27.667           | 27.678            | 27.678               |
| 19       | 2100.6    | 2128.5     | 1.907        | 1.761   | 0.036       | 34.610         | 0.369             | 0.022        | 0.022        | 27.667        | 27.667           | 27.678            | 27.678               |
| 29       | 2074.0    | 2101.4     | 1.906        | 1.763   | 0.037       | 34.610         | 0.372             | 0.025        | 0.025        | 27.667        | 27.667           | 27.678            | 27.678               |
| 12       | 2049.1    | 2076.0     | 1.906        | 1.765   | 0.038       | 34.610         | 0.377             | 0.030        | 0.030        | 27.667        | 27.667           | 27.676            | 27.676               |
| 26       | 2023.3    | 2049.8     | 1.908        | 1.769   | 0.034       | 34.608         | 0.378             | 0.032        | 0.032        | 27.665        | 27.665           | 27.673            | 27.673               |
| 11       | 2001.3    | 2027.4     | 1.908        | 1.771   | 0.024       | 34.605         | 0.357             | 0.010        | 0.010        | 27.662        | 27.662           | 27.662            | 27.662               |
| 22       | 1931.7    | 1956.6     | 1.938        | 1.806   | 0.010       | 34.595         | 0.346             | -5e-04       | -5e-04       | 27.652        | 27.652           | 27.662            | 27.662               |
| 13       | 1797.2    | 1819.7     | 2.025        | 1.903   | 0.010       | 34.578         | 0.344             | -0.003       | -0.003       | 27.632        | 27.632           | 27.641            | 27.641               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 9        | 2.865        | 178.260       | 22.63      |
| 30       | 2.885        | 178.655       | 31.98      |
| 23       | 2.863        | 178.393       | 39.42      |
| 19       | 2.856        | 179.105       | 41.76      |
| 29       | 2.856        | 178.921       | 50.00      |
| 12       | 2.867        | 179.288       | 52.22      |
| 26       | 2.869        | 178.910       | 53.77      |
| 11       | 2.860        | 178.669       | 24.42      |
| 22       | 2.888        | 177.129       | 12.42      |
| 13       | 2.935        | 174.180       | 7.87       |

D-Theta = (ptemp + (4.60238 \* pden)) - 129.10886  
 Atten-Anom = Atten - 0.3465

VENTS 1992 - LEG I  
 Station S9207 Cast 27 26 MAY 1992  
 LAT: 44 40.4N LONG: 130 21.4W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 20       | 2196.6    | 2226.2     | 1.909         | 1.755   | 0.031       | 34.612         | 34.608            | 0.358        | 0.011        | 27.668        | 27.665           | 27.680            | 27.677               |
| 2        | 2152.3    | 2181.2     | 1.911         | 1.761   | 0.031       | 34.611         | 34.611            | 0.363        | 0.016        | 27.667        | 27.667           | 27.679            | 27.679               |
| 7        | 2122.5    | 2150.7     | 1.907         | 1.759   | 0.027       | 34.610         | 34.603            | 0.367        | 0.020        | 27.667        | 27.661           | 27.678            | 27.672               |
| 24       | 2095.5    | 2123.3     | 1.908         | 1.763   | 0.033       | 34.611         | 34.608            | 0.370        | 0.023        | 27.667        | 27.665           | 27.678            | 27.676               |
| 25       | 2070.9    | 2098.2     | 1.904         | 1.761   | 0.028       | 34.610         | 34.606            | 0.367        | 0.020        | 27.667        | 27.664           | 27.678            | 27.675               |
| 15       | 2048.5    | 2075.5     | 1.902         | 1.761   | 0.028       | 34.610         | 34.607            | 0.368        | 0.021        | 27.667        | 27.665           | 27.678            | 27.675               |
| 16       | 2023.6    | 2050.1     | 1.901         | 1.762   | 0.025       | 34.609         | 34.604            | 0.365        | 0.018        | 27.666        | 27.662           | 27.677            | 27.673               |
| 1        | 1996.3    | 2022.3     | 1.899         | 1.762   | 0.021       | 34.608         | 34.606            | 0.364        | 0.017        | 27.666        | 27.664           | 27.676            | 27.674               |
| 31       | 1949.8    | 1975.0     | 1.917         | 1.784   | 0.005       | 34.600         | 34.596            | 0.349        | 0.002        | 27.658        | 27.655           | 27.668            | 27.665               |
| 18       | 1799.3    | 1821.9     | 2.011         | 1.889   | 0.002       | 34.581         | 34.579            | 0.345        | -0.002       | 27.635        | 27.634           | 27.645            | 27.643               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.595        | 178.260       | 28.55      |
| 2        | 2.884        | 178.655       | 36.90      |
| 7        | 2.863        | 178.727       | 40.91      |
| 24       | 2.855        | 179.102       | 44.67      |
| 25       | 2.856        | 178.921       | 40.89      |
| 15       | 2.867        | 179.296       | 37.73      |
| 16       | 2.869        | 178.910       | 36.67      |
| 1        | 2.862        | 178.669       | 37.68      |
| 31       | 2.888        | 177.129       | 19.26      |
| 18       | 2.935        | 174.180       | 8.34       |

D-Theta = (ptemp + (4.66139 \* pden)) - 130.75019  
 Atten-Anom = Atten - 0.347



VENTS 1992 - LEG I  
 Station S9206 Cast 28 26 MAY 1992  
 LAT: 44 41.4N LONG: 130 20.8W

| Miskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 14       | 2205.7    | 2235.5     | 1.911        | 1.756   | 0.025       | 34.611         | 34.609            | 0.355        | 0.009        | 27.667        | 27.665           | 27.679            | 27.677               |
| 10       | 2151.0    | 2179.9     | 1.907        | 1.757   | 0.025       | 34.611         | 34.609            | 0.354        | 0.008        | 27.667        | 27.666           | 27.679            | 27.677               |
| 17       | 2101.3    | 2129.2     | 1.902        | 1.756   | 0.025       | 34.611         | 34.607            | 0.357        | 0.011        | 27.668        | 27.665           | 27.679            | 27.676               |
| 8        | 2076.8    | 2104.2     | 1.900        | 1.756   | 0.021       | 34.610         | 34.608            | 0.357        | 0.011        | 27.667        | 27.665           | 27.678            | 27.677               |
| 21       | 2051.7    | 2078.7     | 1.896        | 1.755   | 0.013       | 34.608         | 34.607            | 0.352        | 0.006        | 27.666        | 27.665           | 27.677            | 27.676               |
| 3        | 2001.6    | 2027.7     | 1.910        | 1.773   | 0.010       | 34.604         | 34.602            | 0.354        | 0.008        | 27.662        | 27.660           | 27.672            | 27.670               |
| 6        | 1950.4    | 1975.6     | 1.932        | 1.799   | 8e-04       | 34.597         | 34.596            | 0.347        | 0.001        | 27.654        | 27.653           | 27.664            | 27.664               |
| 5        | 1802.3    | 1824.9     | 2.007        | 1.885   | -0.003      | 34.581         | 34.580            | 0.344        | -0.002       | 27.635        | 27.635           | 27.645            | 27.644               |

| Miskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.881        | 180.686       | 22.55      |
| 10       | 2.895        | 180.562       | 21.24      |
| 17       | 2.883        | 179.620       | 28.38      |
| 8        | 2.885        | 179.498       | 28.56      |
| 21       | 2.886        | 179.179       | 20.14      |
| 3        | 2.896        | 178.215       | 24.71      |
| 6        | 2.917        | 177.071       | 12.84      |
| 5        | 2.969        | 175.627       | 10.82      |

D-Theta = (ptemp + (4.6125 \* pden)) - 129.40038  
 Atten-Anom = Atten - 0.346

VENTS 1992 - LEG I  
 Station S9211 Cast 29 27 MAY 1992  
 LAT: 44 59.2N LONG: 130 14.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 1        | 2238.9    | 2269.4     | 1.907        | 1.749   | 16.652      | 34.614         | 34.614            | 0.356        | 0.010        | 27.670        | 27.667           | 27.682            | 27.679               |
| 27       | 2204.0    | 2233.8     | 1.906        | 1.751   | 16.648      | 34.613         | 34.610            | 0.358        | 0.012        | 27.669        | 27.667           | 27.681            | 27.679               |
| 10       | 2177.4    | 2206.8     | 1.905        | 1.753   | 16.649      | 34.613         | 34.611            | 0.358        | 0.012        | 27.669        | 27.668           | 27.681            | 27.679               |
| 14       | 2148.9    | 2177.8     | 1.907        | 1.757   | 16.652      | 34.613         | 34.611            | 0.361        | 0.015        | 27.669        | 27.667           | 27.681            | 27.679               |
| 15       | 2093.4    | 2121.2     | 1.898        | 1.753   | 16.636      | 34.610         | 34.608            | 0.354        | 0.008        | 27.667        | 27.666           | 27.678            | 27.677               |
| 18       | 2047.0    | 2074.0     | 1.901        | 1.760   | 16.617      | 34.605         | 34.607            | 0.349        | 0.003        | 27.663        | 27.665           | 27.674            | 27.675               |
| 24       | 1994.4    | 2020.5     | 1.913        | 1.776   | 16.613      | 34.602         | 34.598            | 0.348        | 0.002        | 27.660        | 27.656           | 27.670            | 27.667               |
| 25       | 1947.4    | 1972.6     | 1.941        | 1.808   | 16.604      | 34.596         | 34.591            | 0.346        | 0.000        | 27.653        | 27.649           | 27.663            | 27.659               |
| 2        | 1797.9    | 1820.5     | 2.042        | 1.920   | 16.577      | 34.576         | 34.572            | 0.344        | -0.002       | 27.629        | 27.625           | 27.638            | 27.635               |
| 31       | 1747.2    | 1769.0     | 2.106        | 1.987   | 16.579      | 34.568         | 34.564            | 0.344        | -0.002       | 27.617        | 27.614           | 27.627            | 27.623               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        |              |               |            |
| 27       | 2.868        | 180.771       | 33.88      |
| 10       | 2.875        | 180.290       | 30.30      |
| 14       | 2.868        | 181.128       | 33.05      |
| 15       | 2.879        | 180.065       | 21.39      |
| 18       | 2.883        | 179.606       | 14.71      |
| 24       | 2.878        | 177.680       | 14.53      |
| 25       | 2.900        | 177.273       | 11.97      |
| 2        | 2.947        | 167.683       | 7.80       |
| 31       | 2.957        | 172.363       | 9.50       |

D-Theta = (ptemp + (5.62418 \* pden)) - 140.78535  
 Atten-Anom = Atten - 0.346

VENTS 1992 - LEG I  
 Station S9212 Cast 30 27 MAY 1992  
 LAT: 44 57.3N LONG: 130 09.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 2334.3    | 2366.7     | 1.861        | 1.695   | 0.009       | 34.617         | 34.615            | 0.350        | 0.003       | 27.676        | 27.674           | 27.688            | 27.687               |
| 17       | 2251.3    | 2282.0     | 1.861        | 1.703   | 0.014       | 34.617         | 34.613            | 0.349        | 0.002       | 27.676        | 27.673           | 27.688            | 27.685               |
| 26       | 2197.8    | 2227.5     | 1.862        | 1.708   | 0.014       | 34.616         | 34.614            | 0.349        | 0.002       | 27.675        | 27.673           | 27.687            | 27.685               |
| 16       | 2176.3    | 2205.6     | 1.861        | 1.709   | 0.011       | 34.615         | 34.614            | 0.348        | 0.001       | 27.674        | 27.673           | 27.686            | 27.685               |
| 12       | 2152.1    | 2181.0     | 1.857        | 1.708   | 0.006       | 34.614         | 34.611            | 0.347        | 5e-04       | 27.674        | 27.671           | 27.685            | 27.683               |
| 13       | 2100.7    | 2128.6     | 1.870        | 1.725   | -4e-04      | 34.609         | 34.606            | 0.345        | -0.002      | 27.669        | 27.666           | 27.680            | 27.677               |
| 11       | 2051.1    | 2078.1     | 1.892        | 1.751   | 0.002       | 34.605         | 34.602            | 0.345        | -0.002      | 27.664        | 27.661           | 27.675            | 27.672               |
| 22       | 2000.0    | 2026.1     | 1.907        | 1.770   | 5e-04       | 34.601         | 34.598            | 0.345        | -0.002      | 27.659        | 27.657           | 27.670            | 27.667               |
| 8        | 1951.1    | 1976.4     | 1.928        | 1.795   | 0.002       | 34.597         | 34.593            | 0.344        | -0.003      | 27.654        | 27.651           | 27.665            | 27.662               |
| 5        | 1800.4    | 1823.1     | 2.014        | 1.892   | -0.002      | 34.578         | 34.577            | 0.344        | -0.003      | 27.633        | 27.632           | 27.642            | 27.641               |

| Niskin # | PO4 (umol/L) | SiO4 (umol/L) | TSM (ug/L) |
|----------|--------------|---------------|------------|
| 1        | 2.895        | 179.643       | 16.02      |
| 17       | 2.858        | 179.939       | 14.55      |
| 26       | 2.856        | 180.544       | 16.65      |
| 16       | 2.872        | 179.967       | 16.26      |
| 12       | 2.914        | 180.730       | 13.36      |
| 13       | 2.903        | 179.746       | 9.62       |
| 11       | 2.919        | 179.485       | 8.91       |
| 22       | 2.917        | 179.544       | 8.81       |
| 8        | 2.959        | 178.100       | 8.20       |
| 5        | 2.970        | 175.960       | 8.40       |

D-Theta = (ptemp + (4.49454 \* pden)) - 126.13289  
 Atten-Anom = Atten - 0.3465

VENTS 1992 - LEG I  
 Station S9203 Cast 31 28 MAY 1992  
 LAT: 44 58.2N LONG: 130 12.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 21       | 2237.2    | 2267.7     | 1.872        | 1.715   | 0.014       | 34.615         | 34.614            | 0.351        | 0.006        | 27.673        | 27.672           | 27.685            | 27.685               |
| 9        | 2198.5    | 2228.2     | 1.872        | 1.718   | 0.013       | 34.614         | 34.675            | 0.351        | 0.006        | 27.672        | 27.721           | 27.684            | 27.733               |
| 30       | 2173.0    | 2202.3     | 1.876        | 1.724   | 0.009       | 34.612         | 34.609            | 0.350        | 0.005        | 27.671        | 27.668           | 27.682            | 27.680               |
| 23       | 2151.4    | 2180.2     | 1.883        | 1.733   | 0.011       | 34.611         | 34.608            | 0.352        | 0.007        | 27.669        | 27.667           | 27.681            | 27.678               |
| 19       | 2126.7    | 2155.2     | 1.885        | 1.737   | 0.007       | 34.609         | 34.605            | 0.351        | 0.006        | 27.667        | 27.664           | 27.679            | 27.676               |
| 29       | 2101.9    | 2129.9     | 1.887        | 1.741   | 0.002       | 34.607         | 34.604            | 0.349        | 0.004        | 27.666        | 27.663           | 27.677            | 27.674               |
| 13       | 2051.8    | 2078.9     | 1.896        | 1.755   | 0.011       | 34.607         | 34.603            | 0.353        | 0.008        | 27.665        | 27.662           | 27.676            | 27.673               |
| 11       | 2001.9    | 2028.1     | 1.904        | 1.767   | 0.004       | 34.603         | 34.599            | 0.348        | 0.003        | 27.661        | 27.658           | 27.672            | 27.669               |
| 22       | 1949.1    | 1974.3     | 1.923        | 1.790   | 0.001       | 34.598         | 34.594            | 0.347        | 0.002        | 27.656        | 27.652           | 27.665            | 27.663               |
| 8        | 1800.6    | 1823.2     | 2.044        | 1.922   | -8e-04      | 34.574         | 34.570            | 0.346        | 2e-04        | 27.627        | 27.624           | 27.637            | 27.633               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 21       | 2.923        | 180.080       | 16.71      |
| 9        | 2.907        | 179.830       | 13.59      |
| 30       | 2.903        | 178.950       | 12.31      |
| 23       | 2.913        | 178.730       | 15.18      |
| 19       | 2.937        | 178.860       | 13.92      |
| 29       | 2.920        | 178.040       | 10.47      |
| 13       | 2.915        | 178.222       | 15.83      |
| 11       | 2.929        | 173.109       | 10.59      |
| 22       | 2.944        | 176.767       | 10.14      |
| 8        | 3.015        | 173.892       | 9.46       |

D-Theta = (ptemp + (4.5471 \* pden)) - 127.5887  
 Atten-Anom = Atten - (0.3395 + 0.003289\*Theta)

VENTS 1992 - LEG I  
 Station T9209 Cast 32 28 MAY 1992  
 LAT: 44 58.2N LONG: 130 12.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 10       | 2176.0    | 2205.4     | 1.881        | 1.729   | 0.014       | 34.613         | 34.618            | 0.349        | 0.004        | 27.671        | 27.675           | 27.683            | 27.687               |
| 14       | 2174.5    | 2203.8     | 1.882        | 1.730   | 0.008       | 34.611         | 34.612            | 0.349        | 0.004        | 27.669        | 27.670           | 27.681            | 27.682               |
| 27       | 2176.8    | 2206.1     | 1.894        | 1.742   | 0.030       | 34.615         | 34.615            | 0.348        | 0.003        | 27.672        | 27.672           | 27.683            | 27.683               |
| 17       | 2175.2    | 2204.5     | 1.890        | 1.738   | 0.009       | 34.610         | 34.611            | 0.350        | 0.005        | 27.668        | 27.669           | 27.680            | 27.680               |
| 1        | 2174.2    | 2203.5     | 1.903        | 1.751   | 0.025       | 34.612         | 34.612            | 0.352        | 0.007        | 27.668        | 27.668           | 27.680            | 27.680               |
| 6        | 2245.3    | 2275.9     | 1.890        | 1.732   | 0.020       | 34.614         | 34.616            | 0.348        | 0.003        | 27.671        | 27.673           | 27.683            | 27.685               |
| 24       | 2202.1    | 2231.9     | 1.893        | 1.739   | 0.017       | 34.612         | 34.607            | 0.349        | 0.004        | 27.669        | 27.665           | 27.681            | 27.677               |
| 18       | 2175.2    | 2204.5     | 1.893        | 1.741   | 0.015       | 34.611         | 34.612            | 0.350        | 0.005        | 27.668        | 27.669           | 27.680            | 27.681               |
| 3        | 2150.4    | 2179.3     | 1.899        | 1.749   | 0.017       | 34.610         | 34.610            | 0.352        | 0.007        | 27.667        | 27.667           | 27.679            | 27.679               |
| 15       | 2101.1    | 2129.1     | 1.895        | 1.749   | 0.013       | 34.609         | 34.610            | 0.353        | 0.008        | 27.667        | 27.667           | 27.678            | 27.679               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 10       | 2.928        | 179.522       | 14.40      |
| 14       | 2.928        | 179.522       | 13.73      |
| 27       | 2.928        | 179.522       | 16.31      |
| 17       | 2.928        | 179.522       | 14.45      |
| 1        | 2.928        | 179.522       | 20.15      |
| 6        | 2.932        | 180.194       | 14.14      |
| 24       | 2.923        | 179.606       | 16.22      |
| 18       | 2.937        | 179.368       | 16.09      |
| 3        | 2.943        | 180.104       | 18.89      |
| 15       | 2.938        | 179.098       | 20.18      |

D-Theta = (ptemp + (4.4671 \* pden)) - 125.3758  
 Atten-Anom = Atten - 0.3450

VENTS 1992 - LEG I  
 Station S9201 Cast 33 28 MAY 1992  
 LAT: 45 02.0N LONG: 130 10.6W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 14       | 2252.9    | 2283.7     | 1.891         | 1.732   | 0.033       | 34.614         | 34.616            | 0.351        | 0.006       | 27.671        | 27.673           | 27.683            | 27.685               |
| 10       | 2197.7    | 2227.5     | 1.893         | 1.739   | 0.029       | 34.612         | 34.613            | 0.353        | 0.008       | 27.669        | 27.670           | 27.681            | 27.682               |
| 27       | 2148.3    | 2177.2     | 1.895         | 1.745   | 0.033       | 34.612         | 34.614            | 0.357        | 0.011       | 27.669        | 27.671           | 27.681            | 27.682               |
| 15       | 2124.3    | 2152.7     | 1.903         | 1.755   | 0.035       | 34.611         | 34.612            | 0.359        | 0.013       | 27.668        | 27.668           | 27.679            | 27.680               |
| 3        | 2102.0    | 2130.0     | 1.904         | 1.758   | 0.033       | 34.610         | 34.610            | 0.364        | 0.018       | 27.667        | 27.667           | 27.678            | 27.678               |
| 6        | 2074.0    | 2101.5     | 1.906         | 1.763   | 0.032       | 34.609         | 34.610            | 0.363        | 0.017       | 27.666        | 27.667           | 27.677            | 27.678               |
| 18       | 2055.1    | 2082.3     | 1.906         | 1.764   | 0.029       | 34.608         | 34.609            | 0.363        | 0.017       | 27.665        | 27.665           | 27.676            | 27.677               |
| 13       | 2006.9    | 2033.1     | 1.920         | 1.782   | 0.008       | 34.600         | 34.600            | 0.346        | 4e-04       | 27.658        | 27.658           | 27.668            | 27.668               |
| 17       | 1952.5    | 1977.8     | 1.933         | 1.800   | 0.003       | 34.596         | 34.596            | 0.344        | -0.002      | 27.653        | 27.653           | 27.664            | 27.664               |
| 24       | 1800.7    | 1823.4     | 2.042         | 1.920   | -0.002      | 34.576         | 34.578            | 0.343        | -0.003      | 27.629        | 27.630           | 27.638            | 27.640               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.867        | 179.317       | 15.25      |
| 10       | 2.873        | 179.388       | 21.26      |
| 27       | 2.868        | 179.561       | 27.42      |
| 15       | 2.877        | 179.160       | 28.56      |
| 3        | 2.877        | 179.400       | 31.81      |
| 6        | 2.887        | 178.680       | 32.52      |
| 18       | 2.887        | 179.820       | 32.28      |
| 13       | 2.919        | 177.854       | 12.87      |
| 17       | 2.915        | 175.728       | 13.27      |
| 24       | 2.956        | 173.025       | 10.79      |

D-Theta = (ptemp + (4.94818 \* pden)) - 138.68068  
 Atten-Anom = Atten - (0.3401 + 0.003105\*Theta)

VENTS 1992 - LEG I  
 Station S9202 Cast 34 29 MAY 1992  
 LAT: 44 59.5N LONG: 130 12.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (l/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 19       | 2229.0    | 2259.4     | 1.901         | 1.744   | 0.030       | 34.613         | 34.613            | 0.353        | 0.008       | 27.669        | 27.669           | 27.681            | 27.681               |
| 29       | 2201.4    | 2231.2     | 1.902         | 1.747   | 0.029       | 34.612         | 34.613            | 0.355        | 0.010       | 27.669        | 27.669           | 27.680            | 27.680               |
| 30       | 2176.8    | 2206.2     | 1.901         | 1.749   | 0.026       | 34.611         | 34.613            | 0.356        | 0.011       | 27.668        | 27.668           | 27.680            | 27.681               |
| 25       | 2150.5    | 2179.4     | 1.901         | 1.751   | 0.023       | 34.610         | 34.611            | 0.358        | 0.013       | 27.667        | 27.667           | 27.679            | 27.679               |
| 12       | 2124.0    | 2152.4     | 1.904         | 1.756   | 0.031       | 34.611         | 34.615            | 0.357        | 0.012       | 27.668        | 27.671           | 27.679            | 27.682               |
| 16       | 2099.8    | 2127.7     | 1.899         | 1.753   | 0.021       | 34.609         | 34.598            | 0.355        | 0.010       | 27.666        | 27.658           | 27.678            | 27.669               |
| 2        | 2049.3    | 2076.3     | 1.903         | 1.762   | 0.019       | 34.607         | 34.604            | 0.354        | 0.009       | 27.664        | 27.662           | 27.675            | 27.673               |
| 22       | 1999.9    | 2026.0     | 1.903         | 1.772   | 0.011       | 34.603         | 34.578            | 0.352        | 0.007       | 27.661        | 27.641           | 27.671            | 27.651               |
| 8        | 1950.0    | 1975.2     | 1.925         | 1.792   | 0.002       | 34.597         | 34.610            | 0.344        | -8e-04      | 27.655        | 27.665           | 27.665            | 27.675               |
| 11       | 1801.1    | 1823.8     | 2.027         | 1.905   | -1e-04      | 34.577         | 34.606            | 0.344        | -0.001      | 27.631        | 27.654           | 27.640            | 27.664               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       |              |               |            |
| 29       | 2.891        | 178.961       | 24.09      |
| 30       | 2.884        | 178.680       | 26.19      |
| 25       | 2.895        | 179.233       | 26.57      |
| 12       | 2.884        | 180.066       | 24.47      |
| 16       | 2.891        | 179.117       | 22.24      |
| 2        | 2.905        | 178.361       | 20.60      |
| 22       | 2.906        | 177.750       | 17.10      |
| 8        | 2.921        | 176.859       | 8.64       |
| 11       | 2.964        | 174.014       | 5.96       |

D-Theta = (ptemp + (4.63604 \* pden)) - 130.0464  
 Atten-Anom = Atten - (0.3357 + 0.005077\*Theta)

VENTS 1992 - LEG I  
 Station S9258 Cast 35 29 MAY 1992  
 LAT: 45 57.7N LONG: 130 10.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 5        | 1925.5    | 1950.5     | 2.000        | 1.868   |             | 34.587         | 34.587            | 0.353        |              | 27.641        | 27.641           | 27.651            | 27.651               |
| 31       | 1902.5    | 1927.1     | 2.031        | 1.900   |             | 34.582         | 34.582            | 0.347        |              | 27.634        | 27.634           | 27.645            | 27.645               |
| 26       | 1869.7    | 1893.7     | 2.061        | 1.933   |             | 34.576         | 34.577            | 0.347        |              | 27.627        | 27.628           | 27.637            | 27.638               |
| 21       | 1852.3    | 1876.0     | 2.069        | 1.942   |             | 34.575         | 34.576            | 0.345        |              | 27.626        | 27.627           | 27.636            | 27.637               |
| 9        | 1801.4    | 1824.3     | 2.096        | 1.973   |             | 34.569         | 34.570            | 0.344        |              | 27.619        | 27.620           | 27.629            | 27.629               |
| 6        | 1751.3    | 1773.3     | 2.126        | 2.007   |             | 34.564         | 34.566            | 0.345        |              | 27.612        | 27.614           | 27.622            | 27.623               |
| 23       | 1702.6    | 1723.8     | 2.179        | 2.063   |             | 34.555         | 34.557            | 0.351        |              | 27.601        | 27.602           | 27.610            | 27.612               |
| 19       | 1600.8    | 1620.4     | 2.270        | 2.161   |             | 34.540         | 34.541            | 0.345        |              | 27.581        | 27.582           | 27.590            | 27.591               |
| 18       | 1500.4    | 1518.3     | 2.359        | 2.257   |             | 34.524         | 34.525            | 0.353        |              | 27.561        | 27.562           | 27.570            | 27.570               |
| 13       | 1398.6    | 1414.9     | 2.509        | 2.414   |             | 34.498         | 34.498            | 0.344        |              | 27.528        | 27.528           | 27.536            | 27.536               |
| 17       | 1249.1    | 1263.2     | 2.769        | 2.683   |             | 34.453         | 34.454            | 0.346        |              | 27.469        | 27.470           | 27.477            | 27.478               |
| 24       | 1002.0    | 1012.7     | 3.210        | 3.140   |             | 34.375         | 34.376            | 0.347        |              | 27.367        | 27.368           | 27.373            | 27.374               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 5        | 2.963        | 175.563       |            |
| 31       | 2.967        | 174.946       |            |
| 26       | 2.982        | 173.815       |            |
| 21       | 2.985        | 173.662       |            |
| 9        | 3.001        | 173.556       |            |
| 6        | 3.000        | 171.970       |            |
| 23       | 3.028        | 170.933       |            |
| 19       | 3.057        | 168.987       |            |
| 18       | 3.088        | 165.942       |            |
| 13       | 3.130        | 161.748       |            |
| 17       | 3.168        | 153.585       |            |
| 24       | 3.197        | 139.836       |            |



VENTS 1992 - LEG I  
 Station S9259 Cast 36 29 MAY 1992  
 LAT: 46 01.1N LONG: 130 10.3W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2117.5    | 2146.0     | 1.925        | 1.777         |             | 34.601         | 34.602            | 0.348        |              | 27.658        | 27.659           | 27.669            | 27.670               |
| 26       | 2001.2    | 2027.0     | 1.955        | 1.817         |             | 34.595         | 34.595            | 0.346        |              | 27.651        | 27.651           | 27.661            | 27.661               |
| 13       | 1899.7    | 1924.2     | 1.989        | 1.859         |             | 34.588         | 34.588            | 0.345        |              | 27.642        | 27.642           | 27.653            | 27.653               |
| 17       | 1852.0    | 1875.7     | 2.010        | 1.884         |             | 34.584         | 34.584            | 0.344        |              | 27.638        | 27.638           | 27.648            | 27.648               |
| 24       | 1800.5    | 1823.3     | 2.053        | 1.931         |             | 34.576         | 34.578            | 0.344        |              | 27.628        | 27.629           | 27.637            | 27.639               |
| 5        | 1751.0    | 1773.0     | 2.108        | 1.989         |             | 34.566         | 34.567            | 0.345        |              | 27.615        | 27.616           | 27.625            | 27.626               |
| 31       | 1703.2    | 1724.4     | 2.146        | 2.030         |             | 34.560         | 34.562            | 0.344        |              | 27.608        | 27.609           | 27.617            | 27.618               |
| 18       | 1598.4    | 1617.9     | 2.225        | 2.117         |             | 34.546         | 34.548            | 0.345        |              | 27.590        | 27.591           | 27.599            | 27.600               |
| 21       | 1499.8    | 1517.7     | 2.333        | 2.232         |             | 34.528         | 34.530            | 0.347        |              | 27.567        | 27.568           | 27.575            | 27.577               |
| 9        | 1398.9    | 1415.2     | 2.455        | 2.360         |             | 34.506         | 34.508            | 0.346        |              | 27.539        | 27.540           | 27.547            | 27.548               |
| 6        | 1250.3    | 1264.5     | 2.779        | 2.693         |             | 34.450         | 34.452            | 0.346        |              | 27.466        | 27.468           | 27.474            | 27.475               |
| 23       | 999.9     | 1010.7     | 3.203        | 3.133         |             | 34.371         | 34.372            | 0.347        |              | 27.364        | 27.365           | 27.371            | 27.372               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.914        | 176.223       |            |
| 26       | 2.940        | 178.014       |            |
| 13       | 2.898        | 176.791       |            |
| 17       | 2.940        | 176.018       |            |
| 24       | 2.951        | 175.044       |            |
| 5        | 2.973        | 174.438       |            |
| 31       | 2.984        | 172.276       |            |
| 18       | 3.011        | 170.257       |            |
| 21       | 3.047        | 167.277       |            |
| 9        | 3.071        | 163.358       |            |
| 6        | 3.117        | 154.075       |            |
| 23       | 3.127        | 140.566       |            |

VENTS 1992 - LEG I  
 Station S9216 Cast 37 29 MAY 1992  
 LAT: 45 10.0N LONG: 130 21.5W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2476.9    | 2512.2     | 1.803         | 1.625   | 0.006       | 34.627         | 34.635            | 0.345        | -1e-04       | 27.688        | 27.695           | 27.702            | 27.708               |
| 26       | 2302.0    | 2333.8     | 1.835         | 1.673   | 0.007       | 34.619         | 34.621            | 0.344        | -0.001       | 27.679        | 27.681           | 27.692            | 27.693               |
| 13       | 2203.0    | 2232.9     | 1.850         | 1.696   | 0.007       | 34.615         | 34.616            | 0.344        | -0.001       | 27.675        | 27.676           | 27.687            | 27.688               |
| 17       | 2175.5    | 2204.9     | 1.859         | 1.707   | 0.007       | 34.613         | 34.614            | 0.344        | -0.001       | 27.673        | 27.673           | 27.684            | 27.685               |
| 24       | 2150.8    | 2179.8     | 1.867         | 1.717   | 0.006       | 34.611         | 34.612            | 0.343        | -0.002       | 27.670        | 27.671           | 27.682            | 27.683               |
| 5        | 2125.2    | 2153.7     | 1.878         | 1.731   | 0.003       | 34.608         | 34.609            | 0.343        | -0.002       | 27.667        | 27.668           | 27.679            | 27.679               |
| 31       | 2102.6    | 2130.6     | 1.885         | 1.739   | 0.005       | 34.607         | 34.608            | 0.344        | -0.001       | 27.666        | 27.667           | 27.677            | 27.678               |
| 18       | 2049.7    | 2076.8     | 1.906         | 1.765   | 0.003       | 34.602         | 34.603            | 0.344        | -0.001       | 27.660        | 27.661           | 27.671            | 27.672               |
| 21       | 2004.0    | 2030.2     | 1.920         | 1.782   | 0.003       | 34.599         | 34.600            | 0.343        | -0.002       | 27.657        | 27.658           | 27.667            | 27.668               |
| 9        | 1950.8    | 1976.1     | 1.949         | 1.815   | 0.002       | 34.593         | 34.594            | 0.343        | -0.002       | 27.650        | 27.650           | 27.660            | 27.661               |
| 6        | 1805.0    | 1827.8     | 2.063         | 1.940   | -9e-04      | 34.571         | 34.572            | 0.343        | -0.003       | 27.623        | 27.624           | 27.633            | 27.634               |
| 23       | 1501.1    | 1518.9     | 2.474         | 2.371   | 0.092       | 34.524         | 34.525            | 0.344        | -0.002       | 27.552        | 27.552           | 27.560            | 27.561               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.860        | 181.957       |            |
| 26       | 2.879        | 179.754       |            |
| 13       | 2.881        | 179.777       | 11.00      |
| 17       | 2.895        | 179.461       | 10.82      |
| 24       | 2.895        | 178.253       | 10.65      |
| 5        | 2.910        | 178.874       |            |
| 31       | 2.915        | 179.272       |            |
| 18       | 2.919        | 178.088       |            |
| 21       | 2.915        | 177.443       |            |
| 9        | 2.941        | 176.599       |            |
| 6        | 2.984        | 173.411       |            |
| 23       | 3.084        | 163.076       |            |

D-Theta = (ptemp + (4.66041 \* pden)) - 130.7207  
 Atten-Anom = Atten - (0.3426 + 0.001547\*Theta)

VENTS 1992 - LEG I  
 Station S9217 Cast 38 29 MAY 1992  
 LAT: 45 09.0N LONG: 130 17.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2459.5    | 2494.4     | 1.833        | 1.656   | 0.008       | 34.623         | 34.623            | 0.351        | 0.005        | 27.683        | 27.683           | 27.696            | 27.696               |
| 26       | 2303.9    | 2335.8     | 1.867        | 1.704   | 0.013       | 34.616         | 34.616            | 0.350        | 0.004        | 27.674        | 27.674           | 27.687            | 27.687               |
| 14       | 2200.5    | 2230.4     | 1.878        | 1.724   | 0.011       | 34.612         | 34.613            | 0.350        | 0.004        | 27.670        | 27.671           | 27.682            | 27.683               |
| 10       | 2175.5    | 2204.8     | 1.884        | 1.732   | 0.012       | 34.611         | 34.611            | 0.351        | 0.005        | 27.669        | 27.669           | 27.681            | 27.681               |
| 27       | 2148.5    | 2177.4     | 1.894        | 1.744   | 0.017       | 34.610         | 34.614            | 0.354        | 0.008        | 27.668        | 27.671           | 27.679            | 27.682               |
| 5        | 2126.2    | 2154.6     | 1.895        | 1.747   | 0.018       | 34.610         | 34.611            | 0.356        | 0.010        | 27.667        | 27.668           | 27.679            | 27.680               |
| 31       | 2100.8    | 2128.8     | 1.896        | 1.750   | 0.021       | 34.610         | 34.610            | 0.357        | 0.011        | 27.667        | 27.667           | 27.679            | 27.679               |
| 18       | 2050.7    | 2077.7     | 1.903        | 1.762   | 0.017       | 34.607         | 34.607            | 0.356        | 0.010        | 27.664        | 27.664           | 27.675            | 27.675               |
| 21       | 2000.2    | 2026.4     | 1.910        | 1.773   | 0.009       | 34.603         | 34.603            | 0.350        | 0.004        | 27.661        | 27.661           | 27.671            | 27.671               |
| 9        | 1950.1    | 1975.4     | 1.936        | 1.803   | -0.002      | 34.595         | 34.595            | 0.344        | -0.002       | 27.652        | 27.652           | 27.663            | 27.663               |
| 6        | 1799.2    | 1821.9     | 2.048        | 1.926   | 0.002       | 34.575         | 34.576            | 0.343        | -0.003       | 27.627        | 27.628           | 27.637            | 27.638               |
| 23       | 1499.0    | 1516.8     | 2.390        | 2.288   | 0.026       | 34.521         | 34.521            | 0.345        | -0.001       | 27.556        | 27.556           | 27.565            | 27.565               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.880        | 181.919       |            |
| 26       | 2.904        | 181.137       |            |
| 14       | 2.924        | 179.684       |            |
| 10       | 2.932        | 179.870       |            |
| 27       | 2.916        | 180.291       | 23.11      |
| 5        | 2.929        | 181.043       | 24.22      |
| 31       | 2.934        | 180.840       | 25.11      |
| 18       | 2.924        | 179.977       |            |
| 21       | 2.947        | 179.326       |            |
| 9        | 2.959        | 177.674       |            |
| 6        | 3.008        | 174.505       |            |
| 23       | 3.115        | 165.969       |            |

D-Theta = (ptemp + (4.6757 \* pden)) - 131.14669  
 Atten-Anom = Atten - 0.346

VENTS 1992 - LEG I  
 Station S9218 Cast 39 29 MAY 1992  
 LAT: 45 07.5N LONG: 130 11.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2363.6    | 2396.6     | 1.858         | 1.690   | 0.019       | 34.619         | 34.619            | 0.348        | 0.002        | 27.678        | 27.678           | 27.690            | 27.690               |
| 26       | 2302.1    | 2333.9     | 1.854         | 1.691   | 0.017       | 34.618         | 34.618            | 0.348        | 0.002        | 27.677        | 27.677           | 27.689            | 27.689               |
| 14       | 2201.3    | 2231.1     | 1.856         | 1.702   | 0.008       | 34.614         | 34.614            | 0.347        | 0.002        | 27.674        | 27.674           | 27.685            | 27.685               |
| 10       | 2175.5    | 2204.8     | 1.859         | 1.707   | 0.008       | 34.613         | 34.613            | 0.345        | -5e-04       | 27.673        | 27.673           | 27.684            | 27.684               |
| 12       | 2150.3    | 2179.2     | 1.863         | 1.714   | 0.004       | 34.611         | 34.612            | 0.344        | -0.002       | 27.671        | 27.672           | 27.682            | 27.683               |
| 25       | 2123.1    | 2151.5     | 1.870         | 1.723   | 0.003       | 34.609         | 34.609            | 0.344        | -0.002       | 27.669        | 27.669           | 27.680            | 27.680               |
| 36       | 2098.5    | 2126.5     | 1.881         | 1.736   | 0.004       | 34.607         | 34.607            | 0.344        | -0.002       | 27.666        | 27.666           | 27.677            | 27.677               |
| 18       | 2048.2    | 2075.2     | 1.906         | 1.765   | 0.011       | 34.604         | 34.604            | 0.349        | 0.003        | 27.662        | 27.662           | 27.673            | 27.673               |
| 21       | 2000.9    | 2027.1     | 1.920         | 1.783   | 0.003       | 34.599         | 34.599            | 0.345        | -5e-04       | 27.657        | 27.657           | 27.667            | 27.667               |
| 9        | 1950.2    | 1975.5     | 1.937         | 1.804   | 0.002       | 34.595         | 34.595            | 0.344        | -0.002       | 27.652        | 27.652           | 27.663            | 27.663               |
| 6        | 1801.6    | 1824.3     | 2.029         | 1.907   | -0.005      | 34.576         | 34.576            | 0.343        | -0.003       | 27.630        | 27.630           | 27.639            | 27.639               |
| 23       | 1500.6    | 1518.4     | 2.411         | 2.309   | 0.074       | 34.531         | 34.531            | 0.344        | -0.002       | 27.562        | 27.562           | 27.571            | 27.571               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.894        | 180.296       |            |
| 26       | 2.889        | 180.328       |            |
| 14       | 2.889        | 179.972       |            |
| 10       | 2.899        | 179.299       |            |
| 12       | 2.910        | 179.014       | 16.78      |
| 25       | 2.917        | 178.014       | 12.36      |
| 36       | 2.922        | 177.237       | 11.78      |
| 18       | 2.927        | 177.479       |            |
| 21       | 2.939        | 176.457       |            |
| 9        | 2.948        | 176.629       |            |
| 6        | 2.972        | 174.096       |            |
| 23       | 3.093        | 164.504       |            |

D-Theta = (ptemp + (4.72152 \* pden)) - 132.4112  
 Atten-Anom = Atten - 0.3455

VENTS 1992 - LEG I  
 Station S9219 Cast 40 30 MAY 1992  
 LAT: 45 06.2N LONG: 130 05.2W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2402.8    | 2436.5     | 1.823         | 1.652   | 0.001       | 34.621         | 34.620            | 0.350        | 0.005        | 27.682        | 27.681           | 27.695            | 27.694               |
| 26       | 2299.4    | 2331.2     | 1.835         | 1.673   | 3e-05       | 34.617         | 34.617            | 0.344        | -0.001       | 27.678        | 27.678           | 27.690            | 27.690               |
| 14       | 2203.9    | 2233.8     | 1.853         | 1.699   | 0.002       | 34.613         | 34.613            | 0.344        | -0.001       | 27.673        | 27.673           | 27.685            | 27.685               |
| 10       | 2172.5    | 2201.8     | 1.859         | 1.708   | 0.004       | 34.612         | 34.611            | 0.344        | -0.001       | 27.672        | 27.671           | 27.683            | 27.683               |
| 13       | 2150.1    | 2179.0     | 1.866         | 1.717   | 0.006       | 34.611         | 34.610            | 0.344        | -0.001       | 27.671        | 27.670           | 27.682            | 27.681               |
| 17       | 2126.0    | 2154.4     | 1.876         | 1.729   | -7e-04      | 34.607         | 34.606            | 0.343        | -0.002       | 27.667        | 27.666           | 27.678            | 27.677               |
| 24       | 2101.6    | 2129.6     | 1.887         | 1.741   | 4e-04       | 34.605         | 34.605            | 0.343        | -0.001       | 27.664        | 27.664           | 27.675            | 27.675               |
| 18       | 2051.2    | 2078.2     | 1.907         | 1.766   | 0.001       | 34.601         | 34.601            | 0.343        | -0.002       | 27.659        | 27.659           | 27.670            | 27.670               |
| 21       | 2000.4    | 2026.6     | 1.921         | 1.784   | -0.002      | 34.597         | 34.597            | 0.343        | -0.002       | 27.655        | 27.655           | 27.666            | 27.666               |
| 9        | 1950.2    | 1975.4     | 1.934         | 1.801   | -0.002      | 34.594         | 34.595            | 0.343        | -0.002       | 27.652        | 27.652           | 27.662            | 27.662               |
| 6        | 1800.6    | 1823.2     | 2.028         | 1.906   | -6e-04      | 34.576         | 34.575            | 0.343        | -0.002       | 27.630        | 27.629           | 27.639            | 27.639               |
| 23       | 1502.0    | 1519.8     | 2.384         | 2.282   | 0.015       | 34.516         | 34.516            | 0.344        | -0.001       | 27.553        | 27.553           | 27.561            | 27.561               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.855        | 180.354       |            |
| 26       | 2.880        | 179.313       |            |
| 14       | 2.896        | 179.071       |            |
| 10       | 2.883        | 178.984       |            |
| 13       | 2.882        | 179.183       | 10.48      |
| 17       | 2.879        | 178.405       | 10.56      |
| 24       | 2.896        | 178.568       | 11.80      |
| 18       | 2.908        | 178.302       |            |
| 21       | 2.908        | 177.059       |            |
| 9        | 2.931        | 177.020       |            |
| 6        | 2.970        | 174.931       |            |
| 23       | 3.088        | 166.162       |            |

D-Theta = (ptemp + (4.6115 \* pden)) - 129.36559  
 Atten-Anom = Atten - 0.345

VENTS 1992 - LEG I  
 Station S9220 Cast 41 30 MAY 1992  
 LAT: 45 05.0N LONG: 130 00.2W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2576.1    | 2613.3     | 1.814         | 1.627   | -8e-05      | 34.625         | 34.626            | 0.348        | 0.003        | 27.686        | 27.687           | 27.700            | 27.701               |
| 26       | 2302.1    | 2333.8     | 1.828         | 1.666   | -1e-04      | 34.618         | 34.619            | 0.343        | -0.002       | 27.679        | 27.680           | 27.691            | 27.692               |
| 14       | 2203.4    | 2233.3     | 1.845         | 1.691   | 0.002       | 34.614         | 34.615            | 0.343        | -0.002       | 27.675        | 27.675           | 27.686            | 27.687               |
| 10       | 2172.8    | 2202.1     | 1.850         | 1.699   | 0.003       | 34.613         | 34.613            | 0.343        | -0.002       | 27.673        | 27.673           | 27.685            | 27.685               |
| 3        | 2150.8    | 2179.7     | 1.860         | 1.711   | 4e-07       | 34.610         | 34.611            | 0.343        | -0.002       | 27.670        | 27.671           | 27.682            | 27.682               |
| 31       | 2124.6    | 2153.0     | 1.874         | 1.727   | 0.003       | 34.608         | 34.608            | 0.343        | -0.002       | 27.668        | 27.668           | 27.679            | 27.679               |
| 5        | 2100.6    | 2128.6     | 1.892         | 1.746   | 0.005       | 34.605         | 34.606            | 0.343        | -0.002       | 27.664        | 27.665           | 27.675            | 27.676               |
| 18       | 2049.6    | 2076.7     | 1.916         | 1.774   | 0.005       | 34.600         | 34.607            | 0.346        | 0.001        | 27.658        | 27.663           | 27.669            | 27.674               |
| 21       | 2004.5    | 2030.8     | 1.937         | 1.799   | 0.003       | 34.595         | 34.596            | 0.342        | -0.003       | 27.652        | 27.653           | 27.663            | 27.664               |
| 9        | 1948.5    | 1973.7     | 1.959         | 1.825   | 0.002       | 34.590         | 34.591            | 0.342        | -0.003       | 27.646        | 27.647           | 27.657            | 27.658               |
| 6        | 1801.2    | 1823.9     | 2.068         | 1.945   | -0.001      | 34.568         | 34.570            | 0.343        | -0.002       | 27.620        | 27.622           | 27.630            | 27.632               |
| 23       | 1504.2    | 1522.1     | 2.415         | 2.312   | 0.018       | 34.510         | 34.512            | 0.344        | -0.001       | 27.545        | 27.547           | 27.554            | 27.555               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.906        | 182.779       |            |
| 26       | 2.922        | 180.725       |            |
| 14       | 2.936        | 179.747       |            |
| 10       | 2.928        | 178.685       |            |
| 3        | 2.929        | 178.867       | 9.07       |
| 31       | 2.917        | 178.172       | 9.30       |
| 5        | 2.930        | 176.469       |            |
| 18       | 2.954        | 175.869       | 9.66       |
| 21       | 2.953        | 175.149       |            |
| 9        | 2.963        | 174.157       |            |
| 6        | 3.028        | 171.159       |            |
| 23       | 3.115        | 162.389       |            |

D-Theta = (ptemp + (4.5665 \* pden)) - 128.11869  
 Atten-Anom = Atten - 0.345

VENTS 1992 - LEG I  
 Station S9221 Cast 42 30 MAY 1992  
 LAT: 45 04.0N LONG: 129 54.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity |          | Atten. (1/m) | Atten. Anom. | Sigma-t |          | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------|----------|--------------|--------------|---------|----------|-------------------|----------------------|
|          |           |            |              |         |             | (CTD)    | (Bottle) |              |              | (CTD)   | (Bottle) |                   |                      |
| 19       | 2723.4    | 2763.8     | 1.783        | 1.583   | 0.022       | 34.635   | 34.636   | 0.350        | 0.007        | 27.696  | 27.697   | 27.711            | 27.712               |
| 26       | 2299.8    | 2331.5     | 1.805        | 1.643   | 0.007       | 34.621   | 34.622   | 0.342        | -0.002       | 27.683  | 27.684   | 27.695            | 27.696               |
| 14       | 2197.7    | 2227.5     | 1.829        | 1.676   | 0.008       | 34.616   | 34.616   | 0.342        | -0.002       | 27.677  | 27.677   | 27.689            | 27.689               |
| 10       | 2174.2    | 2203.5     | 1.838        | 1.687   | 0.008       | 34.614   | 34.614   | 0.342        | -0.002       | 27.675  | 27.675   | 27.687            | 27.687               |
| 12       | 2151.0    | 2179.9     | 1.854        | 1.705   | 0.007       | 34.611   | 34.611   | 0.342        | -0.002       | 27.671  | 27.671   | 27.683            | 27.683               |
| 25       | 2125.4    | 2153.8     | 1.867        | 1.720   | 0.005       | 34.608   | 34.609   | 0.342        | -0.002       | 27.668  | 27.669   | 27.679            | 27.680               |
| 30       | 2102.2    | 2130.2     | 1.876        | 1.731   | 0.004       | 34.606   | 34.607   | 0.341        | -0.003       | 27.666  | 27.667   | 27.677            | 27.678               |
| 18       | 2047.3    | 2074.3     | 1.905        | 1.764   | 0.002       | 34.600   | 34.601   | 0.342        | -0.002       | 27.659  | 27.659   | 27.670            | 27.670               |
| 21       | 2001.7    | 2027.9     | 1.931        | 1.793   | 0.002       | 34.595   | 34.596   | 0.343        | -0.001       | 27.653  | 27.653   | 27.663            | 27.664               |
| 9        | 1953.3    | 1978.6     | 1.956        | 1.822   | 4e-04       | 34.590   | 34.591   | 0.342        | -0.003       | 27.647  | 27.647   | 27.657            | 27.658               |
| 6        | 1801.9    | 1824.6     | 2.065        | 1.942   | -0.002      | 34.570   | 34.570   | 0.342        | -0.003       | 27.622  | 27.622   | 27.632            | 27.632               |
| 23       | 1501.4    | 1519.2     | 2.454        | 2.351   | 0.043       | 34.517   | 34.518   | 0.344        | -0.003       | 27.548  | 27.548   | 27.556            | 27.557               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
|          |              |               |            |
| 26       | 2.889        | 181.305       |            |
| 14       | 2.917        | 180.767       |            |
| 10       | 2.919        | 180.170       |            |
| 12       | 2.930        | 179.947       | 7.45       |
| 25       | 2.932        | 179.467       | 7.86       |
| 30       | 2.913        | 179.314       | 8.11       |
| 18       | 2.935        | 177.945       |            |
| 21       | 2.948        | 177.324       |            |
| 9        | 2.967        | 177.229       |            |
| 6        | 3.005        | 174.515       |            |
| 23       | 3.099        | 164.795       |            |

D-Theta = (ptemp + (4.8241 \* pden)) - 135.2423  
 Atten-Anom = Atten - (0.3366 + 0.00435\*Theta)

VENTS 1992 - LEG I  
 Station S9224 Cast 43 30 MAY 1992  
 LAT: 44 41.0N LONG: 130 04.5W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2866.6    | 2909.9     | 1.778         | 1.564         |             | 34.639         | 34.639            | 0.350        |              | 27.700        | 27.700           | 27.716            | 27.716               |
| 26       | 2299.1    | 2330.7     | 1.812         | 1.650         |             | 34.622         | 34.620            | 0.343        |              | 27.684        | 27.682           | 27.696            | 27.694               |
| 14       | 2201.6    | 2231.4     | 1.836         | 1.683         |             | 34.616         | 34.614            | 0.342        |              | 27.677        | 27.675           | 27.689            | 27.687               |
| 10       | 2174.6    | 2203.8     | 1.842         | 1.691         |             | 34.614         | 34.614            | 0.342        |              | 27.675        | 27.675           | 27.686            | 27.686               |
| 13       | 2149.6    | 2178.4     | 1.851         | 1.702         |             | 34.612         | 34.611            | 0.342        |              | 27.673        | 27.672           | 27.684            | 27.683               |
| 17       | 2125.7    | 2154.0     | 1.864         | 1.717         |             | 34.610         | 34.610            | 0.342        |              | 27.670        | 27.670           | 27.681            | 27.681               |
| 24       | 2101.4    | 2129.4     | 1.875         | 1.730         |             | 34.607         | 34.607            | 0.342        |              | 27.667        | 27.667           | 27.678            | 27.678               |
| 18       | 2050.8    | 2077.8     | 1.892         | 1.751         |             | 34.603         | 34.603            | 0.342        |              | 27.662        | 27.662           | 27.673            | 27.673               |
| 21       | 2000.8    | 2026.9     | 1.916         | 1.779         |             | 34.599         | 34.598            | 0.342        |              | 27.657        | 27.656           | 27.668            | 27.667               |
| 9        | 1950.6    | 1975.8     | 1.938         | 1.805         |             | 34.594         | 34.594            | 0.342        |              | 27.651        | 27.651           | 27.662            | 27.662               |
| 6        | 1800.9    | 1823.6     | 2.053         | 1.931         |             | 34.574         | 34.574            | 0.342        |              | 27.626        | 27.626           | 27.636            | 27.636               |
| 23       | 1500.5    | 1518.2     | 2.387         | 2.285         |             | 34.519         | 34.518            | 0.344        |              | 27.555        | 27.554           | 27.563            | 27.563               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.891        | 186.508       |            |
| 26       | 2.886        | 181.758       |            |
| 14       | 2.932        | 181.026       |            |
| 10       | 2.939        | 180.701       | 8.62       |
| 13       | 2.950        | 180.236       | 8.51       |
| 17       | 2.955        | 180.084       | 8.23       |
| 24       | 2.960        | 180.165       |            |
| 18       | 2.955        | 179.619       |            |
| 21       | 2.972        | 178.771       |            |
| 9        | 2.981        | 178.340       |            |
| 6        | 3.027        | 175.053       |            |
| 23       | 3.126        | 166.191       |            |



VENTS 1992 - LEG I  
 Station S9225 Cast 44 30 MAY 1992  
 LAT: 44 42.6N LONG: 130 10.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2609.0    | 2646.8     | 1.799        | 1.609   | 0.010       | 34.630         | 34.630            | 0.349        | 0.005        | 27.691        | 27.691           | 27.705            | 27.705               |
| 26       | 2304.1    | 2335.8     | 1.803        | 1.641   | 9e-04       | 34.622         | 34.622            | 0.343        | -0.001       | 27.684        | 27.684           | 27.696            | 27.696               |
| 14       | 2200.2    | 2230.0     | 1.828        | 1.675   | 3e-04       | 34.616         | 34.616            | 0.343        | -0.001       | 27.677        | 27.677           | 27.689            | 27.689               |
| 31       | 2172.7    | 2201.9     | 1.841        | 1.690   | 0.003       | 34.614         | 34.614            | 0.343        | -0.001       | 27.675        | 27.675           | 27.686            | 27.686               |
| 5        | 2151.2    | 2180.0     | 1.847        | 1.698   | 2e-04       | 34.612         | 34.612            | 0.342        | -0.002       | 27.673        | 27.673           | 27.684            | 27.684               |
| 3        | 2123.5    | 2151.8     | 1.857        | 1.710   | 6e-04       | 34.610         | 34.610            | 0.343        | -0.001       | 27.670        | 27.670           | 27.682            | 27.682               |
| 24       | 2101.8    | 2129.8     | 1.869        | 1.724   | 0.002       | 34.608         | 34.608            | 0.343        | -0.002       | 27.668        | 27.668           | 27.679            | 27.679               |
| 18       | 2051.5    | 2078.5     | 1.890        | 1.749   | -6e-04      | 34.603         | 34.603            | 0.343        | -0.002       | 27.662        | 27.662           | 27.673            | 27.673               |
| 21       | 2002.9    | 2029.1     | 1.908        | 1.771   | 0.002       | 34.600         | 34.601            | 0.343        | -0.002       | 27.658        | 27.659           | 27.669            | 27.670               |
| 9        | 1912.2    | 1936.8     | 1.969        | 1.838   | 6e-04       | 34.588         | 34.589            | 0.343        | -0.002       | 27.644        | 27.645           | 27.654            | 27.655               |
| 6        | 1797.5    | 1820.1     | 2.048        | 1.926   | 0.004       | 34.574         | 34.574            | 0.343        | -0.002       | 27.627        | 27.627           | 27.636            | 27.636               |
| 23       | 1503.0    | 1520.8     | 2.367        | 2.265   | 0.017       | 34.521         | 34.522            | 0.344        | -0.003       | 27.558        | 27.559           | 27.567            | 27.567               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.907        | 184.350       |            |
| 26       | 2.913        | 181.738       |            |
| 14       | 2.919        | 180.495       |            |
| 31       | 2.913        | 180.043       | 9.37       |
| 5        | 2.909        | 179.613       | 8.28       |
| 3        | 2.932        | 179.474       | 9.65       |
| 24       | 2.925        | 179.196       |            |
| 18       | 2.941        | 178.813       |            |
| 21       | 2.948        | 178.140       |            |
| 9        | 2.963        | 176.793       |            |
| 6        | 2.988        | 174.564       |            |
| 23       | 3.093        | 166.308       |            |

D-Theta = (ptemp + (4.6817 \* pden)) - 131.3066  
 Atten-Anom = Atten - (0.3374 + 0.00412\*Theta)

VENTS 1992 - LEG I  
 Station S9226 Cast 45 30 MAY 1992  
 LAT: 44 43.3N LONG: 130 13.4W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2543.6    | 2580.1     | 1.806        | 1.622   | 0.008       | 34.626         | 34.627            | 0.349        | 0.006        | 27.687        | 27.688           | 27.701            | 27.702               |
| 26       | 2298.8    | 2330.5     | 1.816        | 1.654   | 0.002       | 34.619         | 34.620            | 0.343        | -2e-04       | 27.681        | 27.682           | 27.693            | 27.694               |
| 14       | 2200.1    | 2229.8     | 1.838        | 1.685   | 0.002       | 34.614         | 34.616            | 0.342        | -0.001       | 27.675        | 27.677           | 27.687            | 27.688               |
| 12       | 2175.1    | 2204.3     | 1.846        | 1.695   | 0.005       | 34.613         | 34.614            | 0.342        | -0.001       | 27.674        | 27.674           | 27.685            | 27.686               |
| 25       | 2148.7    | 2177.5     | 1.853        | 1.704   | 0.003       | 34.611         | 34.612            | 0.342        | -0.002       | 27.672        | 27.672           | 27.683            | 27.684               |
| 30       | 2122.8    | 2151.1     | 1.861        | 1.714   | 0.002       | 34.609         | 34.610            | 0.342        | -0.002       | 27.669        | 27.670           | 27.681            | 27.681               |
| 24       | 2099.7    | 2127.6     | 1.868        | 1.723   | -5e-05      | 34.607         | 34.609            | 0.342        | -0.002       | 27.667        | 27.669           | 27.678            | 27.680               |
| 18       | 2052.9    | 2079.9     | 1.893        | 1.752   | 0.003       | 34.603         | 34.604            | 0.342        | -0.002       | 27.662        | 27.663           | 27.673            | 27.674               |
| 21       | 2002.4    | 2028.5     | 1.913        | 1.776   | -0.001      | 34.598         | 34.600            | 0.342        | -0.002       | 27.656        | 27.658           | 27.667            | 27.669               |
| 9        | 1950.5    | 1975.7     | 1.938        | 1.805   | -0.002      | 34.593         | 34.595            | 0.342        | -0.002       | 27.651        | 27.652           | 27.661            | 27.662               |
| 6        | 1800.2    | 1822.8     | 2.050        | 1.928   | 0.002       | 34.574         | 34.576            | 0.342        | -0.003       | 27.626        | 27.628           | 27.636            | 27.638               |
| 23       | 1500.6    | 1518.4     | 2.410        | 2.308   | 0.048       | 34.525         | 34.527            | 0.343        | -0.004       | 27.558        | 27.559           | 27.566            | 27.568               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.871        | 182.865       |            |
| 26       | 2.883        | 180.435       |            |
| 14       | 2.912        | 180.145       |            |
| 12       | 2.909        | 179.809       | 12.45      |
| 25       | 2.931        | 179.717       | 16.44      |
| 30       | 2.900        | 179.543       | 8.56       |
| 24       | 2.920        | 179.614       |            |
| 18       | 2.926        | 178.883       |            |
| 21       | 2.915        | 178.512       |            |
| 9        | 2.943        | 177.699       |            |
| 6        | 2.988        | 175.189       |            |
| 23       | 3.079        | 165.503       |            |

D-Theta = (ptemp + (4.7941 \* pden)) - 134.4154  
 Atten-Anom = Atten - (0.3325 + 0.00648\*Theta)

VENTS 1992 - LEG I  
 Station 9227 Cast 46 30 MAY 1992  
 LAT: 44 44.0N LONG: 130 16.6W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2246.8    | 2277.5     | 1.849         | 1.691   | 0.006       | 34.616         | 34.609            | 0.348        | 0.005        | 27.676        | 27.670           | 27.688            | 27.682               |
| 26       | 2226.7    | 2257.0     | 1.851         | 1.695   | 0.009       | 34.616         | 34.608            | 0.348        | 0.005        | 27.676        | 27.669           | 27.688            | 27.681               |
| 14       | 2201.3    | 2231.1     | 1.858         | 1.704   | 0.015       | 34.616         | 34.607            | 0.348        | 0.004        | 27.675        | 27.668           | 27.687            | 27.680               |
| 10       | 2175.2    | 2204.5     | 1.861         | 1.709   | 0.011       | 34.614         | 34.606            | 0.347        | 0.003        | 27.673        | 27.667           | 27.685            | 27.678               |
| 13       | 2150.7    | 2179.6     | 1.860         | 1.711   | 0.008       | 34.613         | 34.605            | 0.344        | 4e-04        | 27.673        | 27.666           | 27.684            | 27.678               |
| 17       | 2125.8    | 2154.2     | 1.860         | 1.713   | 0.006       | 34.612         | 34.604            | 0.343        | -6e-04       | 27.672        | 27.665           | 27.683            | 27.677               |
| 24       | 2100.6    | 2128.5     | 1.868         | 1.723   | 0.005       | 34.610         | 34.602            | 0.344        | 3e-04        | 27.670        | 27.663           | 27.681            | 27.674               |
| 18       | 2049.2    | 2076.1     | 1.887         | 1.746   | 0.002       | 34.605         | 34.597            | 0.343        | -8e-04       | 27.664        | 27.658           | 27.675            | 27.669               |
| 21       | 1999.2    | 2025.2     | 1.907         | 1.770   | -6e-04      | 34.600         | 34.592            | 0.343        | -1e-03       | 27.659        | 27.652           | 27.669            | 27.663               |
| 9        | 1951.4    | 1976.6     | 1.928         | 1.795   | -0.003      | 34.595         | 34.588            | 0.342        | -0.002       | 27.653        | 27.647           | 27.663            | 27.658               |
| 6        | 1799.6    | 1822.2     | 2.017         | 1.895   | 3e-04       | 34.578         | 34.570            | 0.342        | -0.003       | 27.632        | 27.626           | 27.642            | 27.635               |
| 23       | 1499.0    | 1516.7     | 2.427         | 2.325   | 0.094       | 34.529         | 34.523            | 0.343        | -0.005       | 27.560        | 27.555           | 27.568            | 27.563               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.904        | 182.159       |            |
| 26       | 2.893        | 181.842       |            |
| 14       | 2.900        | 181.913       |            |
| 10       | 2.909        | 181.667       |            |
| 13       | 2.907        | 181.432       |            |
| 17       | 2.910        | 180.472       | 11.16      |
| 24       | 2.905        | 180.495       | 13.00      |
| 18       | 2.923        | 179.277       | 8.88       |
| 21       | 2.933        | 178.832       |            |
| 9        | 2.947        | 178.317       |            |
| 6        | 2.979        | 175.974       |            |
| 23       | 3.085        | 165.388       |            |

D-Theta = (ptemp + (4.5563 \* pden)) - 127.8393  
 Atten-Anom = Atten - (0.3325 + 0.00648\*Theta)

VENTS 1992 - LEG I  
 Station S9228 Cast 47 31 MAY 1992  
 LAT: 44 45.0N LONG: 130 19.2W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2213.7    | 2243.7     | 1.893         | 1.738   | 0.020       | 34.612         | 34.605            | 0.348        | 0.004        | 27.669        | 27.664           | 27.681            | 27.676               |
| 26       | 2197.7    | 2227.4     | 1.892         | 1.738   | 0.020       | 34.612         | 34.604            | 0.348        | 0.004        | 27.669        | 27.663           | 27.681            | 27.675               |
| 14       | 2173.8    | 2203.1     | 1.891         | 1.739   | 0.014       | 34.610         | 34.604            | 0.349        | 0.005        | 27.668        | 27.663           | 27.679            | 27.675               |
| 10       | 2151.2    | 2180.1     | 1.889         | 1.739   | 0.021       | 34.612         | 34.603            | 0.350        | 0.006        | 27.670        | 27.662           | 27.681            | 27.674               |
| 13       | 2125.3    | 2153.6     | 1.896         | 1.748   | 0.020       | 34.610         | 34.602            | 0.354        | 0.010        | 27.667        | 27.661           | 27.679            | 27.672               |
| 11       | 2102.3    | 2130.2     | 1.895         | 1.749   | 0.020       | 34.610         | 34.602            | 0.355        | 0.011        | 27.667        | 27.661           | 27.679            | 27.672               |
| 3        | 2075.1    | 2102.6     | 1.899         | 1.756   | 0.021       | 34.609         | 34.600            | 0.356        | 0.012        | 27.666        | 27.659           | 27.677            | 27.670               |
| 5        | 2051.6    | 2078.6     | 1.900         | 1.759   | 0.019       | 34.608         | 34.600            | 0.357        | 0.013        | 27.665        | 27.659           | 27.676            | 27.670               |
| 21       | 2000.5    | 2026.6     | 1.906         | 1.769   | 0.011       | 34.604         | 34.596            | 0.351        | 0.007        | 27.662        | 27.655           | 27.672            | 27.666               |
| 9        | 1949.7    | 1974.9     | 1.915         | 1.782   | 0.005       | 34.600         | 34.592            | 0.346        | 0.002        | 27.658        | 27.652           | 27.668            | 27.662               |
| 6        | 1798.5    | 1821.1     | 2.025         | 1.903   | 0.002       | 34.578         | 34.569            | 0.342        | -0.003       | 27.632        | 27.624           | 27.641            | 27.634               |
| 23       | 1500.5    | 1518.3     | 2.395         | 2.293   | 0.060       | 34.527         | 34.519            | 0.343        | -0.003       | 27.561        | 27.554           | 27.569            | 27.563               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.909        | 180.140       |            |
| 26       | 2.918        | 180.200       |            |
| 14       | 2.902        | 180.319       |            |
| 10       | 2.893        | 180.332       |            |
| 13       | 2.912        | 180.310       | 25.41      |
| 11       | 2.903        | 180.217       | 26.58      |
| 3        | 2.901        | 179.808       |            |
| 5        | 2.912        | 180.032       |            |
| 21       | 2.916        | 179.399       |            |
| 9        | 2.916        | 178.684       |            |
| 6        | 2.980        | 175.410       |            |
| 23       | 3.071        | 166.137       |            |

D-Theta = (ptemp + (4.6014 \* pden)) - 129.0897  
 Atten-Anom = Atten - (0.3394 + 0.00286\*Theta)

VENTS 1992 - LEG I  
 Station S9229 Cast 48 31 MAY 1992  
 LAT: 44 45.7N LONG: 130 21.8W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 19       | 2298.3    | 2329.9     | 1.848        | 1.686   | 0.007       | 34.617         | 34.608            | 0.346        | 0.002       | 27.677        | 27.670           | 27.689            | 27.682               |
| 26       | 2276.7    | 2308.0     | 1.847        | 1.687   | 0.008       | 34.617         | 34.607            | 0.346        | 0.002       | 27.677        | 27.669           | 27.689            | 27.681               |
| 14       | 2199.8    | 2229.6     | 1.857        | 1.703   | 0.007       | 34.614         | 34.606            | 0.346        | 0.002       | 27.674        | 27.667           | 27.685            | 27.679               |
| 10       | 2147.8    | 2176.6     | 1.867        | 1.718   | 0.009       | 34.612         | 34.603            | 0.346        | 0.002       | 27.671        | 27.664           | 27.683            | 27.675               |
| 13       | 2123.8    | 2152.1     | 1.873        | 1.726   | 0.011       | 34.611         | 34.603            | 0.347        | 0.003       | 27.670        | 27.664           | 27.681            | 27.675               |
| 12       | 2095.6    | 2123.4     | 1.881        | 1.736   | 0.010       | 34.609         | 34.601            | 0.347        | 0.003       | 27.668        | 27.661           | 27.679            | 27.672               |
| 29       | 2048.0    | 2075.0     | 1.893        | 1.752   | 0.001       | 34.604         | 34.596            | 0.344        | -4e-04      | 27.663        | 27.656           | 27.674            | 27.667               |
| 1        | 1998.3    | 2024.3     | 1.922        | 1.785   | 4e-06       | 34.598         | 34.590            | 0.343        | -0.002      | 27.656        | 27.649           | 27.666            | 27.660               |
| 21       | 1946.0    | 1971.1     | 1.945        | 1.812   | -0.001      | 34.593         | 34.584            | 0.343        | -0.002      | 27.650        | 27.643           | 27.660            | 27.653               |
| 9        | 1800.5    | 1823.2     | 2.056        | 1.934   | 0.009       | 34.575         | 34.567            | 0.343        | -0.002      | 27.627        | 27.620           | 27.636            | 27.630               |
| 6        | 1495.8    | 1513.5     | 2.445        | 2.343   | 0.066       | 34.522         | 34.514            | 0.344        | -0.003      | 27.552        | 27.546           | 27.561            | 27.555               |
| 23       | 1001.8    | 1012.4     | 3.338        | 3.267   | 0.101       | 34.386         | 34.379            | 0.347        | -0.005      | 27.364        | 27.358           | 27.370            | 27.365               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.875        | 182.124       |            |
| 26       | 2.878        | 181.380       |            |
| 14       | 2.875        | 180.613       |            |
| 10       | 2.870        | 180.469       |            |
| 13       | 2.872        | 180.361       | 13.46      |
| 12       | 2.885        | 179.882       | 13.27      |
| 29       | 2.905        | 178.671       | 8.43       |
| 1        | 2.913        | 178.071       |            |
| 21       | 2.936        | 177.136       |            |
| 9        | 2.974        | 174.534       |            |
| 6        | 3.086        | 163.789       |            |
| 23       | 3.160        | 137.562       |            |

D-Theta = (ptemp + (4.6649 \* pden)) - 130.8456  
 Atten-Anom = Atten - (0.3356 + 0.00501\*Theta)

VENTS 1992 - LEG I  
 Station S9230 Cast 49 31 MAY 1992  
 LAT: 44 46.9N LONG: 130 27.4W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2601.2    | 2638.9     | 1.800         | 1.611   | 0.024       | 34.629         | 34.620            | 0.343        | -6e-04       | 27.690        | 27.683           | 27.704            | 27.697               |
| 26       | 2302.7    | 2334.4     | 1.828         | 1.666   | 0.016       | 34.619         | 34.610            | 0.343        | -8e-04       | 27.680        | 27.673           | 27.692            | 27.685               |
| 14       | 2201.1    | 2230.9     | 1.843         | 1.689   | 0.018       | 34.616         | 34.607            | 0.343        | -9e-04       | 27.676        | 27.669           | 27.688            | 27.681               |
| 10       | 2175.7    | 2205.0     | 1.850         | 1.699   | 0.020       | 34.615         | 34.605            | 0.343        | -1e-03       | 27.675        | 27.667           | 27.687            | 27.679               |
| 25       | 2149.6    | 2178.4     | 1.854         | 1.705   | 0.019       | 34.614         | 34.605            | 0.343        | -1e-03       | 27.674        | 27.667           | 27.685            | 27.678               |
| 30       | 2122.4    | 2150.7     | 1.857         | 1.710   | 0.018       | 34.613         | 34.602            | 0.343        | -0.001       | 27.673        | 27.664           | 27.684            | 27.675               |
| 15       | 2102.6    | 2130.6     | 1.862         | 1.717   | 0.014       | 34.611         | 34.603            | 0.342        | -0.002       | 27.671        | 27.661           | 27.682            | 27.676               |
| 1        | 2052.8    | 2079.8     | 1.871         | 1.730   | 0.014       | 34.609         | 34.599            | 0.342        | -0.002       | 27.669        | 27.661           | 27.679            | 27.671               |
| 21       | 2001.3    | 2027.4     | 1.896         | 1.759   | 0.010       | 34.604         | 34.595            | 0.342        | -0.002       | 27.663        | 27.655           | 27.673            | 27.666               |
| 9        | 1951.2    | 1976.5     | 1.921         | 1.788   | 0.007       | 34.599         | 34.590            | 0.342        | -0.002       | 27.657        | 27.649           | 27.667            | 27.660               |
| 6        | 1802.4    | 1825.0     | 2.060         | 1.937   | 5.93e-04    | 34.576         | 34.567            | 0.343        | -0.002       | 27.627        | 27.620           | 27.637            | 27.630               |
| 23       | 1497.8    | 1515.6     | 2.491         | 2.388   | 0.045       | 34.524         | 34.515            | 0.344        | -0.003       | 27.550        | 27.543           | 27.559            | 27.552               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.831        | 182.250       |            |
| 26       | 2.855        | 181.764       |            |
| 14       | 2.862        | 181.112       |            |
| 10       | 2.871        | 180.211       |            |
| 25       | 2.864        | 179.891       |            |
| 30       | 2.869        | 179.892       |            |
| 15       | 2.869        | 180.106       | 10.23      |
| 1        | 2.886        | 179.525       | 9.08       |
| 21       | 2.885        | 178.731       | 8.80       |
| 9        | 2.913        | 177.700       |            |
| 6        | 2.960        | 173.384       |            |
| 23       | 3.049        | 162.735       |            |

D-Theta = (ptemp + (5.1989 \* pden)) - 145.6184  
 Atten-Anom = Atten - (0.3374 + 0.00386\*Theta)

VENTS 1992 - LEG I  
 Station S9231 Cast 50 31 MAY 1992  
 LAT: 44 38.0N LONG: 130 31.5W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 19       | 2470.5    | 2505.5     | 1.829         | 1.651   |             | 34.623         | 34.614            | 0.346        | 0.003       | 27.683        | 27.676           | 27.696            | 27.689               |
| 26       | 2297.6    | 2329.2     | 1.830         | 1.668   |             | 34.620         | 34.610            | 0.343        | -3e-04      | 27.681        | 27.673           | 27.693            | 27.685               |
| 14       | 2201.8    | 2231.6     | 1.847         | 1.693   |             | 34.615         | 34.606            | 0.343        | -5e-04      | 27.675        | 27.668           | 27.687            | 27.680               |
| 10       | 2175.1    | 2204.3     | 1.854         | 1.703   |             | 34.614         | 34.605            | 0.343        | -5e-04      | 27.674        | 27.667           | 27.685            | 27.678               |
| 25       | 2149.4    | 2178.2     | 1.858         | 1.709   |             | 34.613         | 34.604            | 0.343        | -5e-04      | 27.673        | 27.666           | 27.684            | 27.677               |
| 30       | 2125.0    | 2153.3     | 1.863         | 1.716   |             | 34.612         | 34.603            | 0.343        | -6e-04      | 27.672        | 27.664           | 27.683            | 27.676               |
| 18       | 2100.1    | 2128.0     | 1.874         | 1.729   |             | 34.609         | 34.601            | 0.342        | -0.002      | 27.668        | 27.662           | 27.679            | 27.673               |
| 24       | 2048.9    | 2075.8     | 1.896         | 1.755   |             | 34.606         | 34.597            | 0.342        | -0.002      | 27.664        | 27.657           | 27.675            | 27.668               |
| 17       | 2001.6    | 2027.7     | 1.910         | 1.773   |             | 34.603         | 34.594            | 0.342        | -0.002      | 27.661        | 27.653           | 27.671            | 27.664               |
| 9        | 1950.1    | 1975.3     | 1.945         | 1.812   |             | 34.598         | 34.589            | 0.342        | -0.002      | 27.654        | 27.647           | 27.664            | 27.657               |
| 6        | 1800.9    | 1823.5     | 2.045         | 1.923   |             | 34.580         | 34.571            | 0.342        | -0.003      | 27.632        | 27.624           | 27.641            | 27.634               |
| 23       | 1501.3    | 1519.1     | 2.451         | 2.348   |             | 34.523         | 34.514            | 0.344        | -0.003      | 27.553        | 27.545           | 27.561            | 27.554               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.861        | 181.014       |            |
| 26       | 2.868        | 180.564       |            |
| 14       | 2.889        | 180.245       |            |
| 10       | 2.871        | 180.067       |            |
| 25       | 2.888        | 180.173       |            |
| 30       | 2.892        | 180.102       |            |
| 18       | 2.888        | 179.226       | 8.54       |
| 24       | 2.910        | 178.397       | 8.60       |
| 17       | 2.918        | 178.207       | 9.32       |
| 9        | 2.922        | 177.686       |            |
| 6        | 2.966        | 174.145       |            |
| 23       | 3.079        | 164.082       |            |

Atten-Anom = Atten - (0.3355 + 0.0047\*Theta)

VENTS 1992 - LEG I  
 Station S9233 Cast 51 31 MAY 1992  
 LAT: 44 36.0N LONG: 130 23.5W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2195.3    | 2225.0     | 1.893         | 1.739   | 0.033       | 34.613         | 34.604            | 0.350        | 0.005        | 27.670        | 27.663           | 27.682            | 27.675               |
| 26       | 2179.6    | 2208.9     | 1.902         | 1.749   | 0.035       | 34.612         | 34.603            | 0.352        | 0.007        | 27.669        | 27.661           | 27.680            | 27.673               |
| 14       | 2150.4    | 2179.2     | 1.900         | 1.750   | 0.036       | 34.612         | 34.613            | 0.352        | 0.007        | 27.669        | 27.670           | 27.680            | 27.681               |
| 10       | 2125.0    | 2153.3     | 1.898         | 1.750   | 0.036       | 34.612         | 34.613            | 0.353        | 0.008        | 27.669        | 27.670           | 27.680            | 27.681               |
| 25       | 2101.2    | 2129.1     | 1.899         | 1.753   | 0.038       | 34.612         | 34.612            | 0.354        | 0.009        | 27.669        | 27.669           | 27.680            | 27.680               |
| 30       | 2076.2    | 2103.6     | 1.898         | 1.754   | 0.035       | 34.611         | 34.612            | 0.357        | 0.012        | 27.668        | 27.669           | 27.679            | 27.680               |
| 13       | 2050.8    | 2077.7     | 1.896         | 1.755   | 0.031       | 34.610         | 34.610            | 0.355        | 0.010        | 27.667        | 27.667           | 27.678            | 27.678               |
| 12       | 2027.9    | 2054.4     | 1.897         | 1.758   | 0.025       | 34.608         | 34.609            | 0.352        | 0.007        | 27.666        | 27.667           | 27.676            | 27.672               |
| 29       | 2002.3    | 2028.4     | 1.908         | 1.771   | 0.014       | 34.603         | 34.604            | 0.347        | 0.002        | 27.661        | 27.662           | 27.671            | 27.672               |
| 9        | 1949.8    | 1974.9     | 1.930         | 1.797   | 0.007       | 34.597         | 34.598            | 0.344        | -7e-04       | 27.654        | 27.655           | 27.665            | 27.665               |
| 6        | 1800.4    | 1823.0     | 2.038         | 1.916   | 0.004       | 34.577         | 34.578            | 0.342        | -0.003       | 27.630        | 27.631           | 27.639            | 27.640               |
| 23       | 1499.7    | 1517.4     | 2.384         | 2.282   | 0.008       | 34.520         | 34.520            | 0.344        | -0.002       | 27.556        | 27.556           | 27.564            | 27.564               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.857        | 180.951       |            |
| 26       | 2.862        | 181.064       |            |
| 14       | 2.870        | 181.081       |            |
| 10       | 2.864        | 180.813       |            |
| 25       | 2.880        | 180.854       |            |
| 30       |              |               |            |
| 13       | 2.878        | 180.299       | 19.62      |
| 12       |              |               | 18.67      |
| 29       | 2.893        | 178.421       | 14.48      |
| 9        | 2.911        | 177.735       |            |
| 6        | 2.965        | 174.641       |            |
| 23       | 3.061        | 165.923       |            |

D-Theta = (ptemp + (4.8365 \* pden)) - 135.5897  
 Atten-Anom = Atten - (0.3402 + 0.00251\*Theta)



VENTS 1992 - LEG I  
 Station S9232 Cast 52 31 MAY 1992  
 LAT: 44 37.0N LONG: 130 26.5W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2331.0    | 2363.2     | 1.853         | 1.688         | 0.013       | 34.617         | 34.621            | 0.346        | 0.001        | 27.676        | 27.680           | 27.689            | 27.692               |
| 26       | 2296.7    | 2328.3     | 1.852         | 1.690         | 0.014       | 34.617         | 34.618            | 0.346        | 0.001        | 27.676        | 27.677           | 27.689            | 27.690               |
| 14       | 2201.4    | 2231.1     | 1.845         | 1.691         | 0.011       | 34.616         | 34.616            | 0.345        | 0.000        | 27.676        | 27.676           | 27.688            | 27.688               |
| 10       | 2175.3    | 2204.5     | 1.850         | 1.699         | 0.012       | 34.615         | 34.615            | 0.344        | -0.001       | 27.675        | 27.675           | 27.687            | 27.687               |
| 11       | 2149.5    | 2178.3     | 1.854         | 1.705         | 0.009       | 34.613         | 34.613            | 0.344        | -0.001       | 27.673        | 27.673           | 27.684            | 27.684               |
| 30       | 2120.8    | 2149.1     | 1.861         | 1.714         | 0.007       | 34.611         | 34.612            | 0.343        | -0.002       | 27.671        | 27.672           | 27.682            | 27.683               |
| 1        | 2100.3    | 2128.2     | 1.866         | 1.721         | 0.008       | 34.610         | 34.610            | 0.343        | -0.002       | 27.670        | 27.670           | 27.681            | 27.681               |
| 21       | 2051.6    | 2078.6     | 1.885         | 1.744         | 0.003       | 34.605         | 34.606            | 0.343        | -0.002       | 27.664        | 27.665           | 27.675            | 27.676               |
| 15       | 2001.6    | 2027.7     | 1.906         | 1.769         | 0.004       | 34.601         | 34.601            | 0.342        | -0.003       | 27.659        | 27.659           | 27.670            | 27.670               |
| 9        | 1949.3    | 1974.5     | 1.933         | 1.800         | 0.001       | 34.595         | 34.596            | 0.342        | -0.003       | 27.653        | 27.653           | 27.663            | 27.664               |
| 6        | 1800.3    | 1822.8     | 2.026         | 1.904         | -0.001      | 34.577         | 34.578            | 0.342        | -0.003       | 27.631        | 27.632           | 27.640            | 27.641               |
| 3        | 1499.2    | 1516.9     | 2.435         | 2.332         | 0.067       | 34.525         | 34.526            | 0.344        | -0.001       | 27.556        | 27.556           | 27.564            | 27.565               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.879        | 181.032       |            |
| 26       | 2.870        | 180.600       |            |
| 14       | 2.873        | 180.497       |            |
| 10       | 2.883        | 180.077       |            |
| 11       | 2.870        | 179.526       |            |
| 30       | 2.885        | 179.552       |            |
| 1        | 2.902        | 179.614       | 11.54      |
| 21       | 2.880        | 178.461       | 10.92      |
| 15       | 2.918        | 177.909       | 10.42      |
| 9        | 2.902        | 177.226       |            |
| 6        | 2.955        | 174.858       |            |
| 3        | 3.066        | 164.400       |            |

D-Theta = (ptemp + (4.7333 \* pden)) - 132.735  
 Atten-Anom = Atten - 0.345

VENTS 1992 - LEG I  
 Station S9234 Cast 53 31 MAY 1992  
 LAT: 44 35.1N LONG: 130 20.4W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2257.3    | 2288.1     | 1.847        | 1.688   | 0.006       | 34.619         | 34.618            | 0.348        | 0.005        | 27.678        | 27.678           | 27.690            | 27.690               |
| 26       | 2195.2    | 2224.8     | 1.849        | 1.696   | 0.004       | 34.617         | 34.616            | 0.344        | 9e-04        | 27.677        | 27.676           | 27.688            | 27.688               |
| 14       | 2161.3    | 2190.3     | 1.863        | 1.713   | 0.003       | 34.614         | 34.613            | 0.344        | 7e-04        | 27.673        | 27.672           | 27.685            | 27.684               |
| 10       | 2149.3    | 2178.1     | 1.864        | 1.715   | 0.005       | 34.614         | 34.612            | 0.344        | 7e-04        | 27.673        | 27.671           | 27.685            | 27.683               |
| 11       | 2128.3    | 2156.7     | 1.866        | 1.718   | 0.004       | 34.613         | 34.612            | 0.344        | 7e-04        | 27.672        | 27.671           | 27.682            | 27.683               |
| 30       | 2110.6    | 2138.7     | 1.871        | 1.725   | 0.004       | 34.612         | 34.610            | 0.344        | 7e-04        | 27.671        | 27.669           | 27.682            | 27.681               |
| 17       | 2075.4    | 2102.8     | 1.883        | 1.740   | 0.003       | 34.609         | 34.606            | 0.343        | -4e-04       | 27.668        | 27.665           | 27.679            | 27.676               |
| 18       | 2050.2    | 2077.2     | 1.897        | 1.756   | -0.002      | 34.605         | 34.603            | 0.342        | -0.002       | 27.663        | 27.662           | 27.674            | 27.673               |
| 8        | 1997.3    | 2023.3     | 1.921        | 1.784   | -0.002      | 34.600         | 34.598            | 0.342        | -0.002       | 27.657        | 27.656           | 27.668            | 27.666               |
| 9        | 1947.3    | 1972.4     | 1.940        | 1.807   | -0.001      | 34.596         | 34.594            | 0.342        | -0.002       | 27.653        | 27.651           | 27.663            | 27.661               |
| 6        | 1800.9    | 1823.5     | 2.024        | 1.902   | 0.001       | 34.580         | 34.578            | 0.342        | -0.003       | 27.633        | 27.632           | 27.643            | 27.641               |
| 3        | 1500.8    | 1518.5     | 2.421        | 2.318   | 0.084       | 34.531         | 34.530            | 0.343        | -0.004       | 27.562        | 27.561           | 27.570            | 27.569               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.881        | 180.365       |            |
| 26       | 2.890        | 180.272       |            |
| 14       | 2.900        | 180.014       |            |
| 10       | 2.903        | 179.216       |            |
| 11       | 2.893        | 179.298       |            |
| 30       | 2.885        | 178.935       | 9.36       |
| 17       | 2.886        | 178.747       | 8.77       |
| 18       | 2.913        | 177.304       | 6.30       |
| 8        | 2.914        | 177.598       |            |
| 9        | 2.920        | 177.047       |            |
| 6        | 2.955        | 174.807       |            |
| 3        | 3.067        | 166.280       |            |

D-Theta = (ptemp + (4.5902 \* pden)) - 128.7873  
 Atten-Anom = Atten - (0.3317 + 0.00675\*Theta)

VENTS 1992 - LEG I  
 Station S9235 Cast 54 31 MAY 1992  
 LAT: 44 34.7N LONG: 130 18.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 19       | 2501.9    | 2537.5     | 1.820        | 1.640   | 0.005       | 34.623         | 34.621            | 0.348        | 0.006       | 27.684        | 27.682           | 27.697            | 27.696               |
| 26       | 2306.9    | 2338.7     | 1.825        | 1.662   | 0.008       | 34.620         | 34.614            | 0.347        | 0.005       | 27.681        | 27.676           | 27.693            | 27.688               |
| 14       | 2201.4    | 2231.1     | 1.843        | 1.689   | 0.006       | 34.615         | 34.609            | 0.343        | 6e-04       | 27.676        | 27.671           | 27.687            | 27.682               |
| 10       | 2176.2    | 2205.5     | 1.850        | 1.699   | 0.004       | 34.613         | 34.607            | 0.344        | 0.002       | 27.673        | 27.669           | 27.685            | 27.680               |
| 11       | 2152.7    | 2181.5     | 1.857        | 1.708   | 0.002       | 34.611         | 34.606            | 0.343        | 5e-04       | 27.671        | 27.667           | 27.683            | 27.679               |
| 30       | 2127.3    | 2155.7     | 1.868        | 1.721   | 0.003       | 34.609         | 34.603            | 0.343        | 4e-04       | 27.669        | 27.664           | 27.680            | 27.675               |
| 13       | 2103.4    | 2131.3     | 1.870        | 1.725   | 0.005       | 34.609         | 34.602            | 0.343        | 4e-04       | 27.669        | 27.663           | 27.680            | 27.674               |
| 12       | 2050.0    | 2076.9     | 1.888        | 1.747   | 0.004       | 34.605         | 34.599            | 0.343        | 2e-04       | 27.664        | 27.659           | 27.675            | 27.670               |
| 29       | 1998.2    | 2024.3     | 1.913        | 1.776   | 0.004       | 34.600         | 34.595            | 0.342        | -0.001      | 27.658        | 27.654           | 27.669            | 27.665               |
| 9        | 1951.4    | 1976.6     | 1.938        | 1.805   | -0.001      | 34.594         | 34.588            | 0.342        | -0.001      | 27.651        | 27.647           | 27.662            | 27.657               |
| 6        | 1798.7    | 1821.2     | 2.052        | 1.930   | 0.001       | 34.574         | 34.568            | 0.342        | -0.002      | 27.626        | 27.621           | 27.631            | 27.631               |
| 3        | 1501.3    | 1519.1     | 2.497        | 2.394   | 0.079       | 34.520         | 34.514            | 0.343        | -0.005      | 27.546        | 27.542           | 27.555            | 27.550               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.887        | 183.537       |            |
| 26       | 2.890        | 180.772       |            |
| 14       | 2.908        | 179.964       |            |
| 10       | 2.899        | 179.823       |            |
| 11       | 2.902        | 179.014       |            |
| 30       | 2.921        | 179.318       |            |
| 13       | 2.912        | 179.458       | 10.22      |
| 12       | 2.931        | 178.626       | 9.86       |
| 29       | 2.943        | 178.461       | 8.77       |
| 9        | 2.965        | 177.547       |            |
| 6        | 3.108        | 162.826       |            |
| 3        | 2.992        | 175.063       |            |

D-Theta = (ptemp + (4.7776 \* pden)) - 133.962  
 Atten-Anom = Atten - (0.329 + 0.00791\*Theta)

VENTS 1992 - LEG I  
 Station S9236 Cast 55 31 MAY 1992  
 LAT: 44 34.1N LONG: 130 15.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2513.2    | 2549.1     | 1.813        | 1.632   | 0.013       | 34.625         | 34.619            | 0.347        | 0.003        | 27.686        | 27.681           | 27.700            | 27.695               |
| 26       | 2293.5    | 2325.0     | 1.819        | 1.658   | 0.006       | 34.619         | 34.613            | 0.342        | -0.002       | 27.681        | 27.676           | 27.693            | 27.688               |
| 14       | 2203.4    | 2233.2     | 1.845        | 1.691   | 0.008       | 34.614         | 34.608            | 0.342        | -0.002       | 27.675        | 27.670           | 27.686            | 27.681               |
| 10       | 2174.5    | 2203.8     | 1.853        | 1.702   | 0.007       | 34.612         | 34.606            | 0.341        | -0.003       | 27.672        | 27.668           | 27.684            | 27.679               |
| 11       | 2150.2    | 2179.0     | 1.857        | 1.708   | 0.007       | 34.611         | 34.605            | 0.342        | -0.002       | 27.671        | 27.667           | 27.683            | 27.679               |
| 30       | 2124.0    | 2152.3     | 1.862        | 1.715   | 0.007       | 34.610         | 34.605            | 0.342        | -0.002       | 27.670        | 27.666           | 27.681            | 27.677               |
| 24       | 2099.6    | 2127.5     | 1.879        | 1.734   | 0.008       | 34.607         | 34.601            | 0.343        | -0.001       | 27.666        | 27.662           | 27.677            | 27.673               |
| 2        | 2051.2    | 2078.1     | 1.900        | 1.759   | 0.008       | 34.603         | 34.597            | 0.342        | -0.002       | 27.661        | 27.657           | 27.672            | 27.668               |
| 16       | 2003.0    | 2029.1     | 1.914        | 1.777   | -4e-04      | 34.598         | 34.593            | 0.342        | -0.002       | 27.656        | 27.652           | 27.667            | 27.663               |
| 9        | 1951.4    | 1976.6     | 1.940        | 1.807   | 0.003       | 34.594         | 34.588            | 0.341        | -0.003       | 27.651        | 27.646           | 27.661            | 27.657               |
| 6        | 1799.9    | 1822.5     | 2.062        | 1.939   | 0.005       | 34.573         | 34.567            | 0.342        | -0.002       | 27.625        | 27.620           | 27.634            | 27.630               |
| 3        | 1501.7    | 1519.5     | 2.399        | 2.297   | 0.048       | 34.528         | 34.523            | 0.343        | -0.001       | 27.561        | 27.557           | 27.570            | 27.566               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.872        | 181.777       |            |
| 26       | 2.886        | 180.257       |            |
| 14       | 2.902        | 179.520       |            |
| 10       | 2.906        | 179.169       |            |
| 11       | 2.904        | 179.402       |            |
| 30       | 2.902        | 179.239       | 10.50      |
| 24       | 2.914        | 178.852       | 11.17      |
| 2        | 2.940        | 177.975       | 16.02      |
| 16       | 2.940        | 177.671       |            |
| 9        | 2.942        | 177.144       |            |
| 6        | 2.990        | 174.431       |            |
| 3        | 3.086        | 165.331       |            |

D-Theta = (ptemp + (4.8416 \* pden)) - 135.7294  
 Atten-Anom = Atten - 0.344

VENTS 1992 - LEG I  
 Station S9237 Cast 56 01 JUNE 1992  
 LAT: 44 32.6N LONG: 130 10.6W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 19       | 2573.6    | 2610.7     | 1.795        | 1.609   |             | 34.630         | 34.624            | 0.347        | 0.004        | 27.691        | 27.686           | 27.705            | 27.700               |
| 26       | 2299.9    | 2331.5     | 1.816        | 1.654   |             | 34.622         | 34.616            | 0.343        | -3e-04       | 27.683        | 27.678           | 27.695            | 27.691               |
| 14       | 2197.9    | 2227.6     | 1.841        | 1.688   |             | 34.616         | 34.610            | 0.343        | -4e-04       | 27.676        | 27.672           | 27.688            | 27.683               |
| 10       | 2175.7    | 2204.9     | 1.846        | 1.695   |             | 34.614         | 34.608            | 0.342        | -0.001       | 27.674        | 27.670           | 27.686            | 27.681               |
| 11       | 2146.5    | 2175.2     | 1.856        | 1.707   |             | 34.612         | 34.606            | 0.342        | -0.001       | 27.672        | 27.667           | 27.683            | 27.679               |
| 8        | 2128.0    | 2156.4     | 1.860        | 1.713   |             | 34.611         | 34.604            | 0.342        | -0.002       | 27.671        | 27.665           | 27.682            | 27.677               |
| 18       | 2102.3    | 2130.2     | 1.862        | 1.717   |             | 34.609         | 34.603            | 0.342        | -0.002       | 27.669        | 27.664           | 27.680            | 27.676               |
| 17       | 2051.5    | 2078.4     | 1.884        | 1.743   |             | 34.606         | 34.600            | 0.342        | -0.002       | 27.665        | 27.660           | 27.676            | 27.671               |
| 16       | 2000.8    | 2026.9     | 1.909        | 1.772   |             | 34.601         | 34.595            | 0.342        | -0.002       | 27.659        | 27.654           | 27.670            | 27.665               |
| 9        | 1949.4    | 1974.6     | 1.928        | 1.795   |             | 34.596         | 34.590            | 0.342        | -0.002       | 27.654        | 27.649           | 27.664            | 27.659               |
| 6        | 1801.3    | 1823.9     | 2.036        | 1.914   |             | 34.575         | 34.569            | 0.341        | -0.003       | 27.628        | 27.624           | 27.638            | 27.633               |
| 3        | 1496.7    | 1514.4     | 2.364        | 2.262   |             | 34.522         | 34.517            | 0.343        | -0.003       | 27.559        | 27.555           | 27.568            | 27.564               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 19       | 2.883        | 184.150       |            |
| 26       | 2.897        | 181.614       |            |
| 14       | 2.913        | 180.134       |            |
| 10       | 2.902        | 180.040       |            |
| 11       | 2.917        | 179.594       |            |
| 8        | 2.908        | 179.465       | 9.30       |
| 18       | 2.915        | 178.878       | 8.22       |
| 17       | 2.935        | 178.795       | 8.83       |
| 16       | 2.953        | 177.985       |            |
| 9        | 2.940        | 177.469       |            |
| 6        | 2.987        | 174.827       |            |
| 3        | 3.108        | 166.478       |            |

Atten-Anom = Atten - (0.336 + 0.00439\*Theta)

VENTS 1992 - LEG I  
 Station S9239 Cast 57 01 JUNE 1992  
 LAT: 44 26.9N LONG: 130 16.2W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 26       | 3318.9    | 3372.6     | 1.887         | 1.625         |             | 34.628         | 34.621            | 0.343        |              | 27.683        | 27.677           | 27.702            | 27.697               |
| 19       | 2800.3    | 2842.1     | 1.836         | 1.627         |             | 34.627         | 34.621            | 0.343        |              | 27.686        | 27.681           | 27.701            | 27.697               |
| 14       | 2501.0    | 2536.6     | 1.821         | 1.641         |             | 34.624         | 34.619            | 0.343        |              | 27.684        | 27.680           | 27.698            | 27.694               |
| 10       | 2199.1    | 2228.8     | 1.872         | 1.718         |             | 34.611         | 34.604            | 0.342        |              | 27.670        | 27.664           | 27.682            | 27.676               |
| 11       | 2149.7    | 2178.4     | 1.878         | 1.728         |             | 34.609         | 34.603            | 0.342        |              | 27.668        | 27.663           | 27.679            | 27.671               |
| 29       | 2100.4    | 2128.2     | 1.892         | 1.746         |             | 34.606         | 34.600            | 0.342        |              | 27.665        | 27.660           | 27.676            | 27.671               |
| 12       | 2052.7    | 2079.7     | 1.903         | 1.761         |             | 34.603         | 34.596            | 0.342        |              | 27.661        | 27.656           | 27.672            | 27.667               |
| 13       | 2004.9    | 2031.0     | 1.928         | 1.790         |             | 34.598         | 34.592            | 0.342        |              | 27.655        | 27.650           | 27.666            | 27.661               |
| 16       | 1952.6    | 1977.8     | 1.960         | 1.826         |             | 34.593         | 34.587            | 0.341        |              | 27.649        | 27.644           | 27.659            | 27.654               |
| 9        | 1792.1    | 1814.5     | 2.071         | 1.949         |             | 34.574         | 34.574            | 0.342        |              | 27.625        | 27.625           | 27.634            | 27.634               |
| 6        | 1501.8    | 1519.6     | 2.410         | 2.308         |             | 34.517         | 34.518            | 0.343        |              | 27.551        | 27.552           | 27.560            | 27.561               |
| 3        | 1001.0    | 1011.6     | 3.387         | 3.315         |             | 34.386         | 34.388            | 0.345        |              | 27.359        | 27.360           | 27.366            | 27.367               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 26       | 2.886        | 184.594       |            |
| 19       | 2.885        | 184.342       |            |
| 14       | 2.889        | 181.504       |            |
| 10       | 2.911        | 180.571       |            |
| 11       | 2.910        | 180.246       | 9.77       |
| 29       | 2.915        | 179.253       | 9.31       |
| 12       | 2.914        | 178.939       | 8.77       |
| 13       | 2.932        | 177.873       |            |
| 16       | 2.948        | 177.833       |            |
| 9        | 2.982        | 174.760       |            |
| 6        | 3.102        | 165.416       |            |
| 3        | 3.205        | 136.202       |            |

VENTS 1992 - LEG I  
 Station S9240 Cast 58 01 JUNE 1992  
 LAT: 44 23.0N LONG: 130 23.6W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 26       | 2360.8    | 2393.6     | 1.833         | 1.665   |             | 34.621         | 34.621            | 0.343        |              | 27.681        | 27.681           | 27.694            | 27.694               |
| 30       | 2311.0    | 2342.8     | 1.829         | 1.666   |             | 34.621         | 34.621            | 0.343        |              | 27.681        | 27.681           | 27.694            | 27.694               |
| 14       | 2199.5    | 2229.1     | 1.833         | 1.680   |             | 34.618         | 34.619            | 0.343        |              | 27.679        | 27.680           | 27.690            | 27.691               |
| 10       | 2174.4    | 2203.6     | 1.837         | 1.686   |             | 34.617         | 34.618            | 0.343        |              | 27.678        | 27.678           | 27.689            | 27.690               |
| 19       | 2150.4    | 2179.2     | 1.841         | 1.692   |             | 34.616         | 34.617            | 0.343        |              | 27.676        | 27.677           | 27.688            | 27.689               |
| 24       | 2125.7    | 2154.0     | 1.845         | 1.698   |             | 34.615         | 34.615            | 0.342        |              | 27.675        | 27.675           | 27.687            | 27.687               |
| 2        | 2099.5    | 2127.3     | 1.849         | 1.704   |             | 34.614         | 34.614            | 0.343        |              | 27.674        | 27.674           | 27.685            | 27.685               |
| 13       | 2045.0    | 2071.8     | 1.872         | 1.732   |             | 34.610         | 34.610            | 0.342        |              | 27.669        | 27.669           | 27.680            | 27.680               |
| 16       | 1997.2    | 2023.2     | 1.917         | 1.780   |             | 34.602         | 34.602            | 0.342        |              | 27.659        | 27.659           | 27.670            | 27.670               |
| 15       | 1943.1    | 1968.1     | 1.945         | 1.812   |             | 34.596         | 34.597            | 0.342        |              | 27.652        | 27.653           | 27.663            | 27.663               |
| 6        | 1798.3    | 1820.8     | 2.052         | 1.930   |             | 34.577         | 34.577            | 0.342        |              | 27.629        | 27.629           | 27.638            | 27.638               |
| 3        | 1499.4    | 1517.1     | 2.389         | 2.287   |             | 34.523         | 34.524            | 0.343        |              | 27.558        | 27.559           | 27.566            | 27.567               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 26       | 2.884        | 182.003       |            |
| 30       | 2.886        | 181.400       |            |
| 14       | 2.892        | 181.530       |            |
| 10       | 2.891        | 181.435       |            |
| 19       | 2.915        | 181.187       |            |
| 24       | 2.898        | 180.880       | 11.92      |
| 2        | 2.903        | 180.844       | 9.04       |
| 13       | 2.912        | 180.040       |            |
| 16       | 2.909        | 178.728       |            |
| 15       | 2.939        | 177.983       |            |
| 6        | 2.995        | 174.956       |            |
| 3        | 3.090        | 166.183       |            |

VENTS 1992 - LEG I  
 Station S9241 Cast 59 01 JUNE 1992  
 LAT: 44 30.1N LONG: 130 28.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 5        | 2182.9    | 2212.2     | 1.848        | 1.696   |             | 34.616         | 34.616            | 0.346        |              | 27.676        | 27.676           | 27.688            | 27.688               |
| 30       | 2161.8    | 2190.8     | 1.847        | 1.697   |             | 34.616         | 34.615            | 0.346        |              | 27.676        | 27.675           | 27.687            | 27.687               |
| 14       | 2126.4    | 2154.7     | 1.849        | 1.702   |             | 34.614         | 34.613            | 0.345        |              | 27.674        | 27.673           | 27.685            | 27.685               |
| 10       | 2100.6    | 2128.4     | 1.849        | 1.704   |             | 34.612         | 34.585            | 0.343        |              | 27.673        | 27.651           | 27.684            | 27.662               |
| 19       | 2076.2    | 2103.6     | 1.864        | 1.721   |             | 34.609         | 34.608            | 0.342        |              | 27.669        | 27.668           | 27.680            | 27.679               |
| 8        | 2050.1    | 2077.0     | 1.883        | 1.742   |             | 34.605         | 34.605            | 0.342        |              | 27.664        | 27.664           | 27.675            | 27.675               |
| 18       | 2023.6    | 2050.0     | 1.895        | 1.756   |             | 34.602         | 34.602            | 0.342        |              | 27.661        | 27.661           | 27.672            | 27.672               |
| 17       | 1998.8    | 2024.8     | 1.897        | 1.760   |             | 34.602         | 34.602            | 0.343        |              | 27.661        | 27.661           | 27.671            | 27.671               |
| 16       | 1946.7    | 1971.8     | 1.925        | 1.792   |             | 34.596         | 34.596            | 0.342        |              | 27.654        | 27.654           | 27.664            | 27.664               |
| 15       | 1896.6    | 1920.9     | 1.961        | 1.832   |             | 34.589         | 34.595            | 0.342        |              | 27.646        | 27.650           | 27.656            | 27.660               |
| 6        | 1797.4    | 1819.9     | 2.047        | 1.925   |             | 34.573         | 34.573            | 0.342        |              | 27.626        | 27.626           | 27.636            | 27.636               |
| 3        | 1494.9    | 1512.5     | 2.478        | 2.375   |             | 34.519         | 34.518            | 0.343        |              | 27.547        | 27.546           | 27.556            | 27.555               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 5        | 2.914        | 180.996       |            |
| 30       | 2.924        | 180.724       |            |
| 14       | 2.924        | 180.334       |            |
| 10       | 2.921        | 176.403       |            |
| 19       | 2.958        | 179.212       | 8.68       |
| 8        | 2.947        | 179.223       | 9.11       |
| 18       | 2.960        | 178.868       | 8.91       |
| 17       | 2.956        | 178.655       |            |
| 16       | 2.982        | 177.781       |            |
| 15       | 2.985        | 177.060       |            |
| 6        | 3.026        | 174.792       |            |
| 3        | 3.144        | 163.825       |            |



VENTS 1992 - LEG I  
 Station S9242 Cast 60 01 JUNE 1992  
 LAT: 44 26.0N LONG: 130 28.4W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 5        | 2335.4    | 2367.7     | 1.832         | 1.667   |             | 34.619         | 34.618            | 0.345        |              | 27.680        | 27.679           | 27.692            | 27.691               |
| 30       | 2251.4    | 2282.0     | 1.829         | 1.671   |             | 34.618         | 34.618            | 0.344        |              | 27.679        | 27.679           | 27.691            | 27.691               |
| 14       | 2201.3    | 2231.0     | 1.836         | 1.683   |             | 34.616         | 34.616            | 0.343        |              | 27.677        | 27.677           | 27.689            | 27.689               |
| 10       | 2177.0    | 2206.2     | 1.836         | 1.685   |             | 34.616         | 34.615            | 0.345        |              | 27.677        | 27.676           | 27.688            | 27.688               |
| 26       | 2149.3    | 2178.0     | 1.851         | 1.702   |             | 34.613         | 34.612            | 0.343        |              | 27.673        | 27.673           | 27.685            | 27.684               |
| 11       | 2123.3    | 2151.6     | 1.858         | 1.711   |             | 34.612         | 34.611            | 0.343        |              | 27.672        | 27.671           | 27.683            | 27.682               |
| 29       | 2100.7    | 2128.5     | 1.870         | 1.725   |             | 34.610         | 34.610            | 0.343        |              | 27.669        | 27.669           | 27.681            | 27.681               |
| 17       | 2051.9    | 2078.9     | 1.907         | 1.765   |             | 34.602         | 34.602            | 0.343        |              | 27.660        | 27.660           | 27.671            | 27.671               |
| 16       | 1998.3    | 2024.3     | 1.937         | 1.800   |             | 34.596         | 34.596            | 0.342        |              | 27.653        | 27.653           | 27.664            | 27.664               |
| 15       | 1950.5    | 1975.7     | 1.958         | 1.824   |             | 34.592         | 34.592            | 0.341        |              | 27.648        | 27.648           | 27.659            | 27.659               |
| 6        | 1798.1    | 1820.6     | 2.082         | 1.959   |             | 34.570         | 34.569            | 0.343        |              | 27.621        | 27.620           | 27.630            | 27.630               |
| 3        | 1500.5    | 1518.2     | 2.466         | 2.363   |             | 34.516         | 34.517            | 0.343        |              | 27.546        | 27.547           | 27.554            | 27.555               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 5        | 2.875        | 181.244       |            |
| 30       | 2.893        | 181.208       |            |
| 14       | 2.895        | 180.755       |            |
| 10       | 2.895        | 180.719       |            |
| 26       | 2.905        | 179.721       |            |
| 11       | 2.909        | 179.823       |            |
| 29       | 2.910        | 179.752       | 9.61       |
| 17       | 2.945        | 178.916       | 9.49       |
| 16       | 2.947        | 177.778       | 8.15       |
| 15       | 2.960        | 177.312       |            |
| 6        | 3.005        | 173.766       |            |
| 3        | 3.109        | 163.735       |            |

VENTS 1992 - LEG I  
 Station S9238 Cast 61 01 JUNE 1992  
 LAT: 44 20.5N LONG: 130 00.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (l/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 26       | 4832.5    | 4927.9     | 2.068        | 1.624         |             | 34.629         | 34.628            | 0.343        |              | 27.669        | 27.668           | 27.703            | 27.703               |
| 30       | 4500.4    | 4585.7     | 2.025        | 1.624         |             | 34.629         | 34.627            | 0.342        |              | 27.672        | 27.671           | 27.703            | 27.702               |
| 14       | 4003.1    | 4074.3     | 1.964        | 1.624         |             | 34.629         | 34.628            | 0.342        |              | 27.677        | 27.677           | 27.703            | 27.703               |
| 10       | 3500.4    | 3558.5     | 1.907        | 1.625         |             | 34.629         | 34.626            | 0.343        |              | 27.682        | 27.679           | 27.703            | 27.701               |
| 5        | 2800.0    | 2841.8     | 1.846        | 1.637         |             | 34.626         | 34.624            | 0.344        |              | 27.684        | 27.683           | 27.700            | 27.698               |
| 11       | 2497.0    | 2532.5     | 1.842        | 1.662         |             | 34.621         | 34.622            | 0.343        |              | 27.680        | 27.681           | 27.694            | 27.695               |
| 25       | 2201.5    | 2231.2     | 1.865        | 1.711         |             | 34.613         | 34.612            | 0.343        |              | 27.672        | 27.671           | 27.684            | 27.683               |
| 24       | 2098.9    | 2126.7     | 1.882        | 1.737         |             | 34.609         | 34.608            | 0.342        |              | 27.668        | 27.667           | 27.679            | 27.678               |
| 2        | 2000.0    | 2026.0     | 1.916        | 1.779         |             | 34.603         | 34.601            | 0.343        |              | 27.660        | 27.659           | 27.671            | 27.669               |
| 15       | 1800.4    | 1823.0     | 2.010        | 1.888         |             | 34.586         | 34.584            | 0.343        |              | 27.639        | 27.638           | 27.649            | 27.647               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 26       | 2.836        | 183.707       |            |
| 30       | 2.873        | 183.534       |            |
| 14       | 2.834        | 183.012       |            |
| 10       | 2.852        | 183.338       |            |
| 5        | 2.843        | 182.028       |            |
| 11       | 2.875        | 181.368       |            |
| 25       | 2.876        | 180.023       | 16.43      |
| 24       | 2.879        | 179.386       | 9.08       |
| 2        | 2.909        | 178.193       | 7.76       |
| 15       | 2.922        | 175.688       |            |

VENTS 1992 - LEG I  
 Station S9243 Cast 62 01 JUNE 1992  
 LAT: 44 23.6N LONG: 130 33.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 26       | 2664.4    | 2703.3     | 1.733        | 1.539   |             | 34.638         | 34.630            | 0.344        |              | 27.702        | 27.696           | 27.717            | 27.710               |
| 30       | 2305.6    | 2337.3     | 1.824        | 1.662   |             | 34.622         | 34.621            | 0.342        |              | 27.683        | 27.682           | 27.695            | 27.694               |
| 14       | 2199.9    | 2229.5     | 1.851        | 1.697   |             | 34.617         | 34.615            | 0.343        |              | 27.677        | 27.675           | 27.688            | 27.687               |
| 10       | 2175.7    | 2204.9     | 1.864        | 1.712   |             | 34.614         | 34.613            | 0.343        |              | 27.673        | 27.672           | 27.685            | 27.684               |
| 5        | 2150.7    | 2179.5     | 1.870        | 1.720   |             | 34.613         | 34.612            | 0.343        |              | 27.672        | 27.671           | 27.683            | 27.682               |
| 11       | 2124.9    | 2153.2     | 1.880        | 1.733   |             | 34.611         | 34.610            | 0.343        |              | 27.669        | 27.667           | 27.681            | 27.680               |
| 29       | 2100.4    | 2128.2     | 1.886        | 1.741   |             | 34.609         | 34.608            | 0.343        |              | 27.667        | 27.667           | 27.679            | 27.678               |
| 17       | 2048.5    | 2075.3     | 1.916        | 1.775   |             | 34.605         | 34.604            | 0.343        |              | 27.662        | 27.661           | 27.673            | 27.672               |
| 16       | 1999.0    | 2025.0     | 1.930        | 1.793   |             | 34.602         | 34.600            | 0.343        |              | 27.658        | 27.657           | 27.669            | 27.667               |
| 15       | 1947.6    | 1972.7     | 1.978        | 1.844   |             | 34.595         | 34.595            | 0.343        |              | 27.649        | 27.649           | 27.659            | 27.659               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 26       | 2.813        | 180.119       |            |
| 30       | 2.885        | 179.464       |            |
| 14       | 2.885        | 178.763       |            |
| 10       | 2.875        | 178.424       |            |
| 5        | 2.891        | 178.459       |            |
| 11       | 2.892        | 178.319       | 7.88       |
| 29       | 2.897        | 177.606       | 8.68       |
| 17       | 2.913        | 178.377       | 7.29       |
| 16       | 2.918        | 177.454       |            |
| 15       | 2.948        | 176.180       |            |

VENTS 1992 - LEG I  
 Station S9244 Cast 63 02 JUNE 1992  
 LAT: 44 19.0N LONG: 130 37.9W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (l/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 26       | 2964.6    | 3010.1     | 1.643         | 1.422   |             | 34.653         | 34.651            | 0.343        |             | 27.721        | 27.720           | 27.737            | 27.736               |
| 30       | 2301.5    | 2333.1     | 1.836         | 1.674   |             | 34.621         | 34.620            | 0.340        |             | 27.681        | 27.680           | 27.693            | 27.692               |
| 14       | 2202.3    | 2232.0     | 1.864         | 1.710   |             | 34.616         | 34.613            | 0.340        |             | 27.675        | 27.672           | 27.686            | 27.684               |
| 10       | 2173.0    | 2202.1     | 1.869         | 1.718   |             | 34.613         | 34.612            | 0.340        |             | 27.672        | 27.671           | 27.683            | 27.683               |
| 5        | 2149.5    | 2178.2     | 1.877         | 1.727   |             | 34.611         | 34.610            | 0.340        |             | 27.670        | 27.669           | 27.681            | 27.680               |
| 19       | 2124.0    | 2152.2     | 1.888         | 1.741   |             | 34.610         | 34.610            | 0.340        |             | 27.668        | 27.668           | 27.679            | 27.679               |
| 8        | 2091.5    | 2119.1     | 1.901         | 1.756   |             | 34.608         | 34.606            | 0.340        |             | 27.665        | 27.664           | 27.677            | 27.675               |
| 18       | 2049.4    | 2076.3     | 1.923         | 1.781   |             | 34.604         | 34.601            | 0.340        |             | 27.660        | 27.658           | 27.671            | 27.669               |
| 16       | 1997.3    | 2023.2     | 1.938         | 1.801   |             | 34.601         |                   | 0.341        |             | 27.657        |                  | 27.668            |                      |
| 15       | 1947.5    | 1972.6     | 1.966         | 1.832   |             | 34.597         | 34.599            | 0.341        |             | 27.652        | 27.653           | 27.662            | 27.664               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 26       | 2.972        | 176.209       |            |
| 30       | 2.941        | 177.885       |            |
| 14       | 2.922        | 177.336       |            |
| 10       | 2.916        | 178.567       |            |
| 5        | 2.916        | 179.435       | 9.12       |
| 19       | 2.901        | 179.389       | 9.24       |
| 8        | 2.903        | 179.730       | 11.08      |
| 18       | 2.872        | 179.732       |            |
| 16       | 2.874        | 180.507       |            |
| 15       | 2.739        | 180.860       |            |

VENTS 1992 - LEG I  
 Station S9245 Cast 64 02 JUNE 1992  
 LAT: 44 09.3N LONG: 130 49.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 26       | 3104.5    | 3153.1     | 1.596        | 1.362   |             | 34.660         | 34.660            | 0.342        |              | 27.730        | 27.730           | 27.747            | 27.747               |
| 30       | 2509.4    | 2545.0     | 1.762        | 1.582   |             | 34.633         | 34.633            | 0.338        |              | 27.696        | 27.696           | 27.710            | 27.710               |
| 14       | 2201.9    | 2231.5     | 1.857        | 1.703   |             | 34.616         | 34.618            | 0.340        |              | 27.675        | 27.677           | 27.687            | 27.689               |
| 10       | 2151.2    | 2179.9     | 1.867        | 1.717   |             | 34.612         | 34.615            | 0.339        |              | 27.671        | 27.674           | 27.683            | 27.685               |
| 11       | 2101.1    | 2128.9     | 1.893        | 1.747   |             | 34.610         | 34.605            | 0.340        |              | 27.668        | 27.664           | 27.679            | 27.675               |
| 29       | 2051.2    | 2078.1     | 1.921        | 1.779   |             | 34.607         | 34.601            | 0.340        |              | 27.663        | 27.658           | 27.674            | 27.669               |
| 17       | 2001.3    | 2027.3     | 1.948        | 1.810   |             | 34.602         | 34.601            | 0.340        |              | 27.657        | 27.656           | 27.668            | 27.667               |
| 25       | 1948.1    | 1973.2     | 1.974        | 1.840   |             | 34.599         | 34.596            | 0.340        |              | 27.652        | 27.650           | 27.663            | 27.661               |
| 24       | 1798.8    | 1821.3     | 2.095        | 1.972   |             | 34.582         |                   | 0.340        |              | 27.629        |                  | 27.639            |                      |
| 2        | 1498.0    | 1515.7     | 2.509        | 2.406   |             | 34.526         | 34.522            | 0.342        |              | 27.550        | 27.547           | 27.559            | 27.556               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 26       | 2.731        | 180.196       |            |
| 30       | 2.851        | 180.942       |            |
| 14       | 2.899        | 180.093       |            |
| 10       | 2.922        | 179.208       | 6.83       |
| 11       | 2.936        | 178.533       |            |
| 29       | 2.940        | 177.521       | 8.11       |
| 17       | 2.945        | 176.404       |            |
| 25       | 2.930        | 176.743       |            |
| 24       |              |               |            |
| 2        | 3.121        | 161.926       |            |

VENTS 1992 - LEG I  
 Station S9246 Cast 65 02 JUNE 1992  
 LAT: 44 00.3N LONG: 130 59.7W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 26       | 3503.5    | 3561.6     | 1.538         | 1.265   |             | 34.674         | 34.671            | 0.352        |             | 27.746        | 27.743           | 27.765            | 27.763               |
| 30       | 2308.0    | 2339.7     | 1.823         | 1.660   |             | 34.623         | 34.618            | 0.340        |             | 27.683        | 27.679           | 27.696            | 27.692               |
| 14       | 2195.3    | 2224.8     | 1.854         | 1.701   |             | 34.616         | 34.613            | 0.340        |             | 27.675        | 27.673           | 27.687            | 27.685               |
| 12       | 2147.5    | 2176.1     | 1.869         | 1.720   |             | 34.613         | 34.610            | 0.340        |             | 27.672        | 27.670           | 27.683            | 27.681               |
| 3        | 2124.6    | 2152.8     | 1.879         | 1.732   |             | 34.612         | 34.613            | 0.340        |             | 27.670        | 27.671           | 27.682            | 27.682               |
| 8        | 2101.4    | 2129.1     | 1.892         | 1.746   |             | 34.604         | 34.610            | 0.340        |             | 27.663        | 27.668           | 27.674            | 27.679               |
| 17       | 2050.9    | 2077.8     | 1.921         | 1.779   |             | 34.605         | 34.606            | 0.340        |             | 27.661        | 27.662           | 27.672            | 27.673               |
| 25       | 1998.1    | 2024.0     | 1.944         | 1.806   |             | 34.601         | 34.599            | 0.340        |             | 27.656        | 27.655           | 27.667            | 27.666               |
| 24       | 1946.5    | 1971.5     | 1.982         | 1.848   |             | 34.595         | 34.596            | 0.341        |             | 27.649        | 27.649           | 27.659            | 27.660               |
| 2        | 1796.5    | 1818.9     | 2.107         | 1.984   |             | 34.575         | 34.576            | 0.341        |             | 27.623        | 27.623           | 27.632            | 27.633               |
| 5        | 1499.8    | 1517.5     | 2.525         | 2.421   |             | 34.522         | 34.523            | 0.343        |             | 27.546        | 27.546           | 27.554            | 27.555               |
| 19       | 497.9     | 502.5      | 4.781         | 4.742   |             | 34.030         | 34.032            | 0.349        |             | 26.931        | 26.933           | 26.935            | 26.937               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 26       | 2.631        | 181.352       |            |
| 30       | 2.871        | 180.729       |            |
| 14       | 2.876        | 178.998       |            |
| 12       | 2.889        | 178.849       |            |
| 3        | 2.903        | 178.781       |            |
| 8        | 2.910        | 178.586       |            |
| 17       | 2.920        | 178.056       | 7.97       |
| 25       | 2.890        | 176.649       | 9.13       |
| 24       | 2.959        | 176.627       | 7.06       |
| 2        | 2.993        | 172.311       |            |
| 5        | 3.089        | 161.069       |            |
| 19       | 2.862        | 83.206        |            |

VENTS 1992 - LEG I  
 Station S9289 Cast 66 02 JUNE 1992  
 LAT: 44 20.0N LONG: 130 55.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Salinity (l/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|----------------|--------------|---------------|------------------|-------------------|----------------------|
| 31       | 3209.9    | 3261.0     | 1.553         | 1.310         |             | 34.667         | 34.668            | 0.343          |              | 27.739        | 27.740           | 27.757            | 27.757               |
| 29       | 2303.3    | 2334.9     | 1.820         | 1.658         |             | 34.623         | 34.623            | 0.340          |              | 27.684        | 27.684           | 27.696            | 27.696               |
| 15       | 2201.8    | 2231.5     | 1.856         | 1.702         |             | 34.615         | 34.616            | 0.340          |              | 27.675        | 27.675           | 27.686            | 27.687               |
| 10       | 2173.9    | 2203.1     | 1.863         | 1.712         |             | 34.614         | 34.614            | 0.340          |              | 27.673        | 27.673           | 27.685            | 27.685               |
| 13       | 2150.8    | 2179.6     | 1.871         | 1.721         |             | 34.613         | 34.613            | 0.340          |              | 27.672        | 27.672           | 27.683            | 27.683               |
| 9        | 2125.2    | 2153.5     | 1.880         | 1.733         |             | 34.611         | 34.612            | 0.340          |              | 27.669        | 27.670           | 27.682            | 27.682               |
| 16       | 2100.3    | 2128.2     | 1.893         | 1.747         |             | 34.609         | 34.602            | 0.340          |              | 27.667        | 27.661           | 27.678            | 27.672               |
| 22       | 2049.5    | 2076.4     | 1.916         | 1.775         |             | 34.605         | 34.606            | 0.342          |              | 27.662        | 27.663           | 27.673            | 27.674               |
| 18       | 1999.0    | 2025.0     | 1.947         | 1.809         |             | 34.600         | 34.600            | 0.340          |              | 27.655        | 27.655           | 27.666            | 27.666               |
| 6        | 1948.4    | 1973.5     | 1.980         | 1.846         |             | 34.595         | 34.588            | 0.340          |              | 27.649        | 27.643           | 27.659            | 27.654               |
| 21       | 1799.0    | 1821.5     | 2.113         | 1.990         |             | 34.574         | 34.575            | 0.342          |              | 27.621        | 27.622           | 27.631            | 27.632               |
| 11       | 1498.7    | 1516.4     | 2.506         | 2.403         |             | -34.521        | 34.522            | 0.343          |              | 27.546        | 27.547           | 27.555            | 27.556               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.665        | 179.830       |            |
| 29       | 2.854        | 180.657       |            |
| 15       | 2.881        | 179.995       |            |
| 10       | 2.872        | 179.996       |            |
| 13       | 2.881        | 179.601       |            |
| 9        | 2.886        | 179.218       |            |
| 16       | 2.899        | 178.882       | 7.50       |
| 22       | 2.907        | 178.324       | 8.37       |
| 18       | 2.913        | 177.511       | 6.98       |
| 6        | 2.922        | 176.977       |            |
| 21       | 2.982        | 173.243       |            |
| 11       | 3.079        | 162.919       |            |

VENTS 1992 - LEG I  
 Station S9251 Cast 67 02 JUNE 1992  
 LAT: 44 40.2N LONG: 130 50.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Attenu. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|---------------|--------------|---------------|------------------|-------------------|----------------------|
| 31       | 2620.8    | 2658.9     | 1.710         | 1.521   |             | 34.641         | 34.641            | 0.344         |              | 27.707        | 27.707           | 27.721            | 27.721               |
| 29       | 2300.0    | 2331.6     | 1.816         | 1.654   |             | 34.624         | 34.624            | 0.340         |              | 27.685        | 27.685           | 27.697            | 27.697               |
| 15       | 2197.8    | 2227.5     | 1.840         | 1.687   |             | 34.618         | 34.618            | 0.340         |              | 27.678        | 27.678           | 27.690            | 27.690               |
| 10       | 2173.1    | 2202.4     | 1.852         | 1.701   |             | 34.616         | 34.616            | 0.340         |              | 27.676        | 27.676           | 27.687            | 27.687               |
| 13       | 2149.1    | 2177.9     | 1.859         | 1.710   |             | 34.615         | 34.614            | 0.341         |              | 27.674        | 27.673           | 27.686            | 27.685               |
| 9        | 2123.9    | 2152.3     | 1.867         | 1.720   |             | 34.613         | 34.613            | 0.342         |              | 27.672        | 27.672           | 27.683            | 27.683               |
| 24       | 2100.3    | 2128.2     | 1.879         | 1.734   |             | 34.610         | 34.610            | 0.341         |              | 27.669        | 27.669           | 27.680            | 27.680               |
| 2        | 2055.0    | 2082.1     | 1.910         | 1.768   |             | 34.605         | 34.605            | 0.341         |              | 27.662        | 27.662           | 27.673            | 27.673               |
| 17       | 2000.5    | 2026.6     | 1.925         | 1.788   |             | 34.603         | 34.603            | 0.340         |              | 27.660        | 27.660           | 27.670            | 27.670               |
| 6        | 1949.8    | 1975.0     | 1.952         | 1.818   |             | 34.598         | 34.598            | 0.341         |              | 27.653        | 27.653           | 27.664            | 27.664               |
| 21       | 1798.6    | 1821.2     | 2.080         | 1.957   |             | 34.577         | 34.578            | 0.341         |              | 27.626        | 27.627           | 27.637            | 27.637               |
| 11       | 1493.4    | 1511.0     | 2.475         | 2.372   |             | 34.519         | 34.519            | 0.343         |              | 27.547        | 27.547           | 27.556            | 27.556               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.797        | 181.092       |            |
| 29       | 2.891        | 181.116       |            |
| 15       | 2.862        | 182.016       |            |
| 10       | 2.885        | 179.909       |            |
| 13       | 2.896        | 179.738       |            |
| 9        | 2.882        | 179.371       |            |
| 24       | 2.903        | 179.084       | 9.50       |
| 2        | 2.906        | 178.015       | 7.73       |
| 17       | 2.922        | 177.545       | 5.54       |
| 6        | 2.974        | 177.052       |            |
| 21       | 2.954        | 173.378       |            |
| 11       | 3.089        | 162.815       |            |



VENTS 1992 - LEG I  
 Station S9252 Cast 68 02 JUNE 1992  
 LAT: 44 50.2N LONG: 130 44.7W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 31       | 2856.9    | 2900.1     | 1.721         | 1.509         |             | 34.643         | 34.643            | 0.344        |              | 27.707        | 27.707           | 27.723            | 27.723               |
| 29       | 2297.9    | 2329.6     | 1.823         | 1.661         |             | 34.621         | 34.623            | 0.341        |              | 27.682        | 27.683           | 27.694            | 27.696               |
| 15       | 2201.6    | 2231.4     | 1.846         | 1.692         |             | 34.616         | 34.616            | 0.342        |              | 27.676        | 27.676           | 27.688            | 27.688               |
| 10       | 2175.5    | 2204.9     | 1.852         | 1.701         |             | 34.615         | 34.615            | 0.342        |              | 27.675        | 27.675           | 27.686            | 27.686               |
| 13       | 2151.5    | 2180.4     | 1.860         | 1.711         |             | 34.613         | 34.613            | 0.342        |              | 27.673        | 27.673           | 27.684            | 27.684               |
| 9        | 2126.5    | 2154.9     | 1.866         | 1.719         |             | 34.611         | 34.612            | 0.342        |              | 27.671        | 27.671           | 27.682            | 27.683               |
| 16       | 2101.9    | 2129.8     | 1.879         | 1.734         |             | 34.609         | 34.609            | 0.342        |              | 27.668        | 27.668           | 27.679            | 27.679               |
| 22       | 2049.3    | 2076.3     | 1.883         | 1.742         |             | 34.608         | 34.607            | 0.341        |              | 27.667        | 27.666           | 27.678            | 27.677               |
| 18       | 2000.7    | 2026.9     | 1.913         | 1.776         |             | 34.602         | 34.602            | 0.341        |              | 27.660        | 27.660           | 27.670            | 27.670               |
| 6        | 1950.5    | 1975.7     | 1.948         | 1.814         |             | 34.596         | 34.596            | 0.342        |              | 27.652        | 27.652           | 27.662            | 27.662               |
| 21       | 1802.4    | 1825.0     | 2.085         | 1.962         |             | 34.575         | 34.574            | 0.341        |              | 27.624        | 27.624           | 27.634            | 27.633               |
| 11       | 1500.6    | 1518.3     | 2.468         | 2.365         |             | 34.526         | 34.528            | 0.353        |              | 27.554        | 27.555           | 27.562            | 27.564               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.827        | 184.411       |            |
| 29       | 2.903        | 182.725       |            |
| 15       | 2.925        | 181.693       |            |
| 10       | 2.922        | 181.645       |            |
| 13       | 2.918        | 181.289       |            |
| 9        | 2.912        | 180.885       | 9.11       |
| 16       | 2.922        | 181.123       | 7.46       |
| 22       | 2.936        | 179.817       | 9.35       |
| 18       | 2.937        | 178.463       |            |
| 6        | 2.949        | 177.584       |            |
| 21       | 2.998        | 173.987       |            |
| 11       | 3.107        | 163.764       |            |

VENTS 1992 - LEG I  
 Station S9253 Cast 69 03 JUNE 1992  
 LAT: 44 59.9N LONG: 130 41.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 31       | 2825.8    | 2868.3     | 1.757         | 1.547   |             | 34.638         | 34.647            | 0.347        |              | 27.701        | 27.708           | 27.716            | 27.723               |
| 29       | 2306.0    | 2337.8     | 1.833         | 1.670   |             | 34.620         | 34.620            | 0.342        |              | 27.680        | 27.680           | 27.693            | 27.693               |
| 15       | 2199.1    | 2228.9     | 1.850         | 1.697   |             | 34.616         | 34.616            | 0.341        |              | 27.676        | 27.676           | 27.687            | 27.687               |
| 10       | 2172.8    | 2202.1     | 1.855         | 1.704   |             | 34.615         | 34.616            | 0.342        |              | 27.675        | 27.675           | 27.686            | 27.687               |
| 13       | 2148.0    | 2176.8     | 1.862         | 1.713   |             | 34.613         | 34.613            | 0.341        |              | 27.672        | 27.672           | 27.684            | 27.684               |
| 17       | 2122.5    | 2150.8     | 1.873         | 1.726   |             | 34.611         | 34.612            | 0.342        |              | 27.670        | 27.671           | 27.681            | 27.682               |
| 2        | 2097.3    | 2125.2     | 1.882         | 1.737   |             | 34.609         | 34.610            | 0.342        |              | 27.668        | 27.669           | 27.679            | 27.680               |
| 24       | 2050.5    | 2077.5     | 1.903         | 1.762   |             | 34.605         | 34.606            | 0.341        |              | 27.663        | 27.664           | 27.674            | 27.675               |
| 18       | 1998.8    | 2024.9     | 1.928         | 1.791   |             | 34.601         | 34.602            | 0.342        |              | 27.658        | 27.659           | 27.668            | 27.669               |
| 6        | 1948.6    | 1973.8     | 1.962         | 1.828   |             | 34.595         | 34.595            | 0.342        |              | 27.650        | 27.650           | 27.661            | 27.661               |
| 21       | 1798.6    | 1821.2     | 2.085         | 1.962   |             | 34.575         | 34.576            | 0.342        |              | 27.624        | 27.625           | 27.634            | 27.635               |
| 11       | 1499.7    | 1517.5     | 2.495         | 2.392   |             | 34.523         | 34.525            | 0.344        |              | 27.549        | 27.551           | 27.558            | 27.559               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.843        | 183.225       |            |
| 29       | 2.907        | 181.473       |            |
| 15       | 2.918        | 180.489       |            |
| 10       | 2.916        | 180.274       |            |
| 13       | 2.919        | 179.779       |            |
| 17       | 2.932        | 181.136       | 7.17       |
| 2        | 2.941        | 179.290       | 8.35       |
| 24       | 2.940        | 178.748       | 14.58      |
| 18       | 2.949        | 178.428       |            |
| 6        | 2.954        | 176.989       |            |
| 21       | 3.005        | 173.510       |            |
| 11       | 3.114        | 162.760       |            |

VENTS 1992 - LEG I  
 Station S9254 Cast 70 03 JUNE 1992  
 LAT: 45 09.9N LONG: 130 36.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 31       | 2609.6    | 2647.5     | 1.764        | 1.575   |             | 34.635         | 34.640            | 0.347        |              | 27.698        | 27.702           | 27.712            | 27.716               |
| 29       | 2300.1    | 2331.9     | 1.835        | 1.673   |             | 34.619         | 34.620            | 0.341        |              | 27.679        | 27.680           | 27.692            | 27.692               |
| 15       | 2200.9    | 2230.8     | 1.853        | 1.699   |             | 34.615         | 34.614            | 0.341        |              | 27.675        | 27.674           | 27.686            | 27.686               |
| 10       | 2149.7    | 2178.6     | 1.872        | 1.723   |             | 34.612         | 34.613            | 0.342        |              | 27.671        | 27.672           | 27.682            | 27.683               |
| 13       | 2099.2    | 2127.2     | 1.884        | 1.739   |             | 34.609         | 34.610            | 0.342        |              | 27.668        | 27.668           | 27.679            | 27.679               |
| 9        | 2050.6    | 2077.7     | 1.897        | 1.756   |             | 34.605         | 34.606            | 0.342        |              | 27.663        | 27.664           | 27.674            | 27.675               |
| 16       | 2001.6    | 2027.8     | 1.924        | 1.786   |             | 34.601         | 34.601            | 0.342        |              | 27.658        | 27.658           | 27.669            | 27.669               |
| 22       | 1950.0    | 1975.3     | 1.959        | 1.825   |             | 34.595         | 34.599            | 0.341        |              | 27.650        | 27.654           | 27.661            | 27.664               |
| 18       | 1801.8    | 1824.5     | 2.093        | 1.970   |             | 34.574         | 34.575            | 0.341        |              | 27.623        | 27.624           | 27.633            | 27.634               |
| 6        | 1501.4    | 1519.2     | 2.495        | 2.392   |             | 34.523         | 34.524            | 0.343        |              | 27.549        | 27.550           | 27.558            | 27.558               |
| 21       | 1000.8    | 1011.5     | 3.389        | 3.317   |             | 34.393         | 34.393            | 0.344        |              | 27.364        | 27.364           | 27.371            | 27.371               |
| 11       | 502.4     | 507.1      | 4.564        | 4.526   |             | 34.032         | 34.033            | 0.348        |              | 26.957        | 26.957           | 26.961            | 26.962               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.845        | 182.577       |            |
| 29       | 2.897        | 181.047       |            |
| 15       | 2.912        | 180.294       |            |
| 10       | 2.936        | 179.784       | 8.17       |
| 13       | 2.925        | 179.691       | 8.65       |
| 9        | 2.943        | 179.101       | 8.19       |
| 16       | 2.948        | 178.301       |            |
| 22       | 2.963        | 176.841       |            |
| 18       | 3.003        | 173.701       |            |
| 6        | 3.114        | 162.541       |            |
| 21       | 3.204        | 136.466       |            |
| 11       | 2.921        | 87.943        |            |

VENTS 1992 - LEG I  
 Station S9255 Cast 71 03 JUNE 1992  
 LAT: 45 20.0N LONG: 130 33.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 31       | 2722.0    | 2762.4     | 1.794         | 1.594         |             | 34.632         | 34.633            | 0.347        |              | 27.693        | 27.694           | 27.708            | 27.709               |
| 29       | 2299.9    | 2331.7     | 1.839         | 1.677         |             | 34.618         | 34.619            | 0.343        |              | 27.678        | 27.679           | 27.691            | 27.691               |
| 15       | 2202.0    | 2231.9     | 1.845         | 1.691         |             | 34.616         | 34.617            | 0.343        |              | 27.676        | 27.677           | 27.688            | 27.689               |
| 17       | 2175.4    | 2204.8     | 1.846         | 1.695         |             | 34.616         | 34.616            | 0.343        |              | 27.676        | 27.676           | 27.688            | 27.688               |
| 24       | 2149.8    | 2178.8     | 1.850         | 1.701         |             | 34.615         | 34.616            | 0.343        |              | 27.675        | 27.676           | 27.686            | 27.687               |
| 25       | 2124.7    | 2153.1     | 1.855         | 1.708         |             | 34.613         | 34.613            | 0.343        |              | 27.673        | 27.673           | 27.684            | 27.684               |
| 16       | 2101.1    | 2129.2     | 1.866         | 1.721         |             | 34.610         | 34.611            | 0.342        |              | 27.670        | 27.671           | 27.681            | 27.682               |
| 22       | 2049.5    | 2076.6     | 1.889         | 1.748         |             | 34.605         | 34.606            | 0.343        |              | 27.664        | 27.665           | 27.675            | 27.676               |
| 18       | 2001.4    | 2027.6     | 1.911         | 1.774         |             | 34.601         | 34.602            | 0.343        |              | 27.659        | 27.660           | 27.670            | 27.670               |
| 6        | 1951.3    | 1976.6     | 1.934         | 1.801         |             | 34.596         | 34.597            | 0.342        |              | 27.653        | 27.654           | 27.664            | 27.664               |
| 21       | 1800.2    | 1823.0     | 2.042         | 1.920         |             | 34.581         | 34.582            | 0.341        |              | 27.633        | 27.633           | 27.642            | 27.643               |
| 11       | 1500.8    | 1518.6     | 2.442         | 2.339         |             | 34.528         | 34.529            | 0.342        |              | 27.557        | 27.558           | 27.566            | 27.567               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.866        | 182.348       |            |
| 29       | 2.902        | 180.991       |            |
| 15       | 2.913        | 182.361       |            |
| 17       | 2.916        | 180.314       |            |
| 24       | 2.921        | 180.373       |            |
| 25       | 2.922        | 180.386       |            |
| 16       | 2.931        | 179.616       | 10.21      |
| 22       | 2.935        | 178.732       | 8.11       |
| 18       | 2.941        | 177.618       | 9.55       |
| 6        | 2.955        | 176.492       |            |
| 21       | 2.981        | 173.997       |            |
| 11       | 3.098        | 163.585       |            |

VENTS 1992 - LEG I  
 Station S9256 Cast 72 03 JUNE 1992  
 LAT: 45 18.0N LONG: 130 17.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 31       | 2411.4    | 2445.3     | 1.850         | 1.678         |             | 34.619         | 34.622            | 0.347        |              | 27.678        | 27.681           | 27.691            | 27.694               |
| 29       | 2300.3    | 2332.0     | 1.850         | 1.688         |             | 34.617         | 34.618            | 0.346        |              | 27.677        | 27.677           | 27.689            | 27.690               |
| 15       | 2200.7    | 2230.6     | 1.863         | 1.709         |             | 34.613         | 34.615            | 0.344        |              | 27.672        | 27.674           | 27.684            | 27.686               |
| 17       | 2176.3    | 2205.7     | 1.866         | 1.714         |             | 34.612         | 34.616            | 0.344        |              | 27.671        | 27.675           | 27.683            | 27.686               |
| 24       | 2151.9    | 2180.8     | 1.868         | 1.718         |             | 34.612         | 34.612            | 0.344        |              | 27.671        | 27.671           | 27.683            | 27.683               |
| 25       | 2124.3    | 2152.7     | 1.875         | 1.728         |             | 34.610         | 34.610            | 0.344        |              | 27.669        | 27.669           | 27.680            | 27.680               |
| 10       | 2101.6    | 2129.6     | 1.883         | 1.738         |             | 34.608         | 34.608            | 0.344        |              | 27.667        | 27.667           | 27.678            | 27.678               |
| 13       | 2050.2    | 2077.3     | 1.900         | 1.759         |             | 34.603         | 34.604            | 0.344        |              | 27.661        | 27.662           | 27.672            | 27.673               |
| 9        | 2000.8    | 2027.1     | 1.928         | 1.790         |             | 34.597         | 34.598            | 0.342        |              | 27.654        | 27.655           | 27.665            | 27.666               |
| 6        | 1952.6    | 1977.9     | 1.951         | 1.817         |             | 34.593         | 34.594            | 0.342        |              | 27.649        | 27.650           | 27.660            | 27.661               |
| 21       | 1799.6    | 1822.3     | 2.070         | 1.947         |             | 34.572         | 34.573            | 0.341        |              | 27.623        | 27.624           | 27.633            | 27.634               |
| 11       | 1500.9    | 1518.7     | 2.390         | 2.288         |             | 34.519         | 34.520            | 0.343        |              | 27.555        | 27.555           | 27.563            | 27.564               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.871        | 181.541       |            |
| 29       | 2.877        | 181.238       |            |
| 15       | 2.881        | 180.294       |            |
| 17       | 2.881        | 180.471       |            |
| 24       | 2.878        | 180.454       |            |
| 25       | 2.894        | 180.174       |            |
| 10       | 2.891        | 179.769       | 12.27      |
| 13       | 2.906        | 178.861       | 9.75       |
| 9        | 2.924        | 177.840       | 8.58       |
| 6        | 2.932        | 177.116       |            |
| 21       | 2.980        | 174.063       |            |
| 11       | 3.081        | 165.645       |            |

VENTS 1992 - LEG I  
 Station S9257 Cast 73 03 JUNE 1992  
 LAT: 45 30.0N LONG: 130 20.3W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Attenu. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|---------------|--------------|---------------|------------------|-------------------|----------------------|
| 31       | 2711.8    | 2752.0     | 1.746         | 1.547   |             | 34.636         | 34.637            | 0.353         |              | 27.700        | 27.701           | 27.715            | 27.715               |
| 29       | 2301.2    | 2333.1     | 1.853         | 1.690   |             | 34.617         | 34.618            | 0.344         |              | 27.676        | 27.677           | 27.689            | 27.690               |
| 15       | 2201.0    | 2230.9     | 1.880         | 1.726   |             | 34.611         | 34.612            | 0.344         |              | 27.669        | 27.670           | 27.681            | 27.682               |
| 17       | 2172.9    | 2202.3     | 1.887         | 1.735   |             | 34.610         | 34.611            | 0.345         |              | 27.668        | 27.669           | 27.680            | 27.681               |
| 24       | 2149.8    | 2178.8     | 1.892         | 1.742   |             | 34.609         | 34.609            | 0.345         |              | 27.667        | 27.667           | 27.678            | 27.678               |
| 26       | 2122.9    | 2151.3     | 1.902         | 1.754   |             | 34.606         | 34.608            | 0.347         |              | 27.664        | 27.665           | 27.675            | 27.677               |
| 18       | 2100.0    | 2128.0     | 1.909         | 1.763   |             | 34.604         | 34.604            | 0.344         |              | 27.662        | 27.662           | 27.673            | 27.673               |
| 22       | 2048.8    | 2075.9     | 1.927         | 1.785   |             | 34.600         | 34.601            | 0.343         |              | 27.657        | 27.658           | 27.668            | 27.669               |
| 16       | 1999.5    | 2025.8     | 1.943         | 1.805   |             | 34.596         | 34.596            | 0.342         |              | 27.653        | 27.653           | 27.663            | 27.663               |
| 6        | 1949.8    | 1975.1     | 1.961         | 1.827   |             | 34.592         | 34.593            | 0.342         |              | 27.648        | 27.649           | 27.658            | 27.659               |
| 21       | 1801.3    | 1824.1     | 2.076         | 1.953   |             | 34.569         | 34.570            | 0.341         |              | 27.620        | 27.621           | 27.630            | 27.631               |
| 11       | 1497.7    | 1515.5     | 2.396         | 2.294   |             | 34.516         | 34.517            | 0.343         |              | 27.552        | 27.553           | 27.560            | 27.561               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.794        | 180.661       |            |
| 29       | 2.868        | 179.523       |            |
| 15       | 2.863        | 178.685       |            |
| 17       | 2.895        | 177.859       | 17.19      |
| 24       | 2.907        | 177.436       | 13.88      |
| 26       | 2.915        | 177.035       | 16.21      |
| 18       | 2.919        | 177.142       |            |
| 22       | 2.928        | 176.305       |            |
| 16       | 2.936        | 175.883       |            |
| 6        | 2.944        | 175.162       |            |
| 21       | 2.977        | 171.886       |            |
| 11       | 3.058        | 163.730       |            |

VENTS 1992 - LEG I  
 Station S9270 Cast 74 03 JUNE 1992  
 LAT: 45 45.0N LONG: 130 39.9W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 31       | 2749.2    | 2790.3     | 1.731         | 1.529         |             | 34.638         | 34.639            | 0.348        |              | 27.703        | 27.703           | 27.718            | 27.718               |
| 29       | 2306.4    | 2338.4     | 1.849         | 1.686         |             | 34.617         | 34.618            | 0.343        |              | 27.677        | 27.677           | 27.689            | 27.690               |
| 15       | 2204.9    | 2234.9     | 1.870         | 1.716         |             | 34.612         | 34.613            | 0.344        |              | 27.671        | 27.672           | 27.683            | 27.684               |
| 8        | 2176.3    | 2205.8     | 1.874         | 1.722         |             | 34.611         | 34.612            | 0.344        |              | 27.670        | 27.671           | 27.682            | 27.682               |
| 5        | 2149.9    | 2178.9     | 1.878         | 1.728         |             | 34.610         | 34.612            | 0.344        |              | 27.669        | 27.670           | 27.680            | 27.682               |
| 19       | 2124.8    | 2153.4     | 1.885         | 1.737         |             | 34.608         | 34.610            | 0.343        |              | 27.667        | 27.668           | 27.678            | 27.680               |
| 14       | 2101.8    | 2129.9     | 1.889         | 1.743         |             | 34.607         | 34.609            | 0.344        |              | 27.666        | 27.667           | 27.677            | 27.678               |
| 22       | 2045.8    | 2072.9     | 1.909         | 1.768         |             | 34.602         | 34.608            | 0.343        |              | 27.660        | 27.665           | 27.671            | 27.676               |
| 16       | 1999.4    | 2025.7     | 1.930         | 1.793         |             | 34.598         | 34.605            | 0.342        |              | 27.655        | 27.661           | 27.666            | 27.671               |
| 6        | 1950.7    | 1976.1     | 1.959         | 1.825         |             | 34.592         | 34.600            | 0.341        |              | 27.648        | 27.654           | 27.658            | 27.665               |
| 21       | 1799.8    | 1822.5     | 2.056         | 1.934         |             | 34.573         | 34.593            | 0.342        |              | 27.625        | 27.641           | 27.635            | 27.651               |
| 11       | 1500.1    | 1518.0     | 2.429         | 2.326         |             | 34.510         | 34.514            | 0.343        |              | 27.544        | 27.547           | 27.553            | 27.556               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 31       | 2.805        | 180.607       |            |
| 29       | 2.837        | 180.596       |            |
| 15       | 2.855        | 178.797       |            |
| 8        | 2.872        | 178.428       |            |
| 5        | 2.851        | 178.232       | 10.51      |
| 19       | 2.858        | 178.139       | 10.50      |
| 14       | 2.855        | 178.347       | 11.03      |
| 22       | 2.865        | 177.897       |            |
| 16       | 2.865        | 177.113       |            |
| 6        | 2.892        | 177.009       |            |
| 21       | 2.957        | 173.687       |            |
| 11       | 3.058        | 164.024       |            |

VENTS 1992 - LEG I  
 Station S9290 Cast 75 04 JUNE 1992  
 LAT: 45 57.4N LONG: 130 00.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 1511.6    | 1529.7     | 2.377         | 2.274         |             | 34.523         | 34.527            | 0.358        |              | 27.559        | 27.562           | 27.567            | 27.571               |
| 30       | 1478.3    | 1495.9     | 2.375         | 2.275         |             | 34.523         | 34.523            | 0.353        |              | 27.559        | 27.559           | 27.567            | 27.567               |
| 18       | 1451.8    | 1469.0     | 2.386         | 2.288         |             | 34.521         | 34.523            | 0.353        |              | 27.557        | 27.558           | 27.565            | 27.566               |
| 10       | 1425.7    | 1442.5     | 2.409         | 2.313         |             | 34.517         | 34.518            | 0.354        |              | 27.551        | 27.552           | 27.559            | 27.560               |
| 13       | 1398.0    | 1414.4     | 2.447         | 2.352         |             | 34.509         | 34.510            | 0.349        |              | 27.542        | 27.543           | 27.550            | 27.551               |
| 9        | 1377.2    | 1393.2     | 2.456         | 2.363         |             | 34.508         | 34.508            | 0.349        |              | 27.540        | 27.540           | 27.548            | 27.548               |
| 16       | 1355.5    | 1371.3     | 2.516         | 2.424         |             | 34.497         | 34.500            | 0.348        |              | 27.526        | 27.529           | 27.534            | 27.537               |
| 3        | 1328.5    | 1343.8     | 2.537         | 2.447         |             | 34.493         | 34.494            | 0.346        |              | 27.521        | 27.522           | 27.529            | 27.530               |
| 12       | 606.3     | 612.2      | 4.280         | 4.234         |             | 34.150         | 34.150            | 0.347        |              | 27.081        | 27.081           | 27.086            | 27.086               |
| 6        | 549.7     | 555.0      | 4.440         | 4.398         |             | 34.116         | 34.118            | 0.348        |              | 27.037        | 27.038           | 27.041            | 27.043               |
| 22       | 501.5     | 506.3      | 4.666         | 4.627         |             | 34.078         | 34.077            | 0.348        |              | 26.982        | 26.981           | 26.986            | 26.985               |
| 21       | 449.3     | 453.6      | 4.779         | 4.744         |             | 34.027         | 34.027            | 0.351        |              | 26.929        | 26.929           | 26.933            | 26.933               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 3.074        | 166.971       |            |
| 30       | 3.099        | 166.974       | 17.62      |
| 18       | 3.089        | 166.633       | 19.56      |
| 10       | 3.074        | 166.173       | 20.24      |
| 13       | 3.111        | 164.693       |            |
| 9        | 3.100        | 163.260       |            |
| 16       | 3.128        | 161.341       |            |
| 3        | 3.138        | 160.633       |            |
| 12       | 3.087        | 101.528       |            |
| 6        | 3.066        | 96.061        |            |
| 22       | 2.977        | 88.695        |            |
| 21       | 2.909        | 82.743        |            |



VENTS 1992 - LEG I  
 Station S9258 Cast 76 04 JUNE 1992  
 LAT: 45 57.7N LONG: 130 11.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 1935.1    | 1960.2     | 2.036        | 1.902   |             | 34.581         | 34.582            | 0.348        |              | 27.633        | 27.634           | 27.644            | 27.644               |
| 23       | 1904.9    | 1929.5     | 2.059        | 1.928   |             | 34.576         | 34.578            | 0.345        |              | 27.627        | 27.629           | 27.638            | 27.639               |
| 19       | 1874.6    | 1898.7     | 2.063        | 1.934   |             | 34.575         | 34.576            | 0.346        |              | 27.626        | 27.627           | 27.636            | 27.637               |
| 17       | 1849.7    | 1873.4     | 2.063        | 1.936   |             | 34.575         | 34.576            | 0.345        |              | 27.626        | 27.627           | 27.636            | 27.637               |
| 13       | 1799.8    | 1822.6     | 2.104        | 1.981   |             | 34.568         | 34.569            | 0.345        |              | 27.617        | 27.618           | 27.627            | 27.628               |
| 9        | 1748.3    | 1770.2     | 2.154        | 2.035   |             | 34.559         | 34.560            | 0.345        |              | 27.606        | 27.607           | 27.616            | 27.616               |
| 26       | 1697.0    | 1718.1     | 2.181        | 2.065   |             | 34.554         | 34.555            | 0.345        |              | 27.600        | 27.601           | 27.609            | 27.610               |
| 3        | 1597.3    | 1616.8     | 2.278        | 2.169   |             | 34.538         | 34.538            | 0.344        |              | 27.579        | 27.579           | 27.588            | 27.588               |
| 12       | 1500.3    | 1518.2     | 2.398        | 2.296   |             | 34.517         | 34.518            | 0.344        |              | 27.552        | 27.553           | 27.561            | 27.562               |
| 6        | 1400.9    | 1417.3     | 2.520        | 2.424   |             | 34.496         | 34.497            | 0.344        |              | 27.525        | 27.526           | 27.533            | 27.534               |
| 22       | 1246.0    | 1260.1     | 2.745        | 2.659   |             | 34.457         | 34.459            | 0.344        |              | 27.475        | 27.476           | 27.482            | 27.484               |
| 8        | 994.3     | 1005.0     | 3.297        | 3.227   |             | 34.353         | 34.353            | 0.345        |              | 27.341        | 27.341           | 27.348            | 27.348               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.975        | 175.741       |            |
| 23       | 2.996        | 175.217       |            |
| 19       | 3.011        | 174.563       |            |
| 17       | 2.984        | 174.323       |            |
| 13       | 2.995        | 172.555       |            |
| 9        | 3.008        | 171.496       |            |
| 26       | 3.002        | 171.196       |            |
| 3        | 3.026        | 168.194       |            |
| 12       | 3.070        | 165.048       |            |
| 6        | 3.108        | 161.082       |            |
| 22       | 3.155        | 154.493       |            |
| 8        | 3.178        | 136.381       |            |

VENTS 1992 - LEG I  
 Station S9259 Cast 77 04 JUNE 1992  
 LAT: 46 01.1N LONG: 130 10.4W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2162.1    | 2191.4     | 1.927        | 1.776   |             | 34.601         | 34.602            | 0.349        |              | 27.658        | 27.659           | 27.669            | 27.670               |
| 23       | 2127.3    | 2156.0     | 1.942        | 1.793   |             | 34.598         | 34.599            | 0.347        |              | 27.654        | 27.655           | 27.666            | 27.667               |
| 19       | 2098.3    | 2126.4     | 1.973        | 1.826   |             | 34.592         | 34.592            | 0.346        |              | 27.647        | 27.647           | 27.658            | 27.658               |
| 17       | 2048.3    | 2075.4     | 1.999        | 1.856   |             | 34.588         | 34.589            | 0.345        |              | 27.642        | 27.643           | 27.653            | 27.654               |
| 13       | 1998.3    | 2024.6     | 2.012        | 1.873   |             | 34.585         | 34.584            | 0.344        |              | 27.638        | 27.637           | 27.649            | 27.648               |
| 9        | 1947.7    | 1973.1     | 2.024        | 1.890   |             | 34.582         | 34.582            | 0.343        |              | 27.635        | 27.635           | 27.645            | 27.645               |
| 26       | 1898.4    | 1923.0     | 2.043        | 1.912   |             | 34.578         | 34.578            | 0.343        |              | 27.630        | 27.630           | 27.640            | 27.640               |
| 3        | 1848.1    | 1871.7     | 2.073        | 1.946   |             | 34.573         | 34.571            | 0.343        |              | 27.624        | 27.622           | 27.634            | 27.632               |
| 12       | 1798.5    | 1821.3     | 2.096        | 1.973   |             | 34.568         | 34.568            | 0.343        |              | 27.618        | 27.618           | 27.628            | 27.628               |
| 6        | 1748.8    | 1770.8     | 2.122        | 2.003   |             | 34.564         | 34.564            | 0.343        |              | 27.613        | 27.613           | 27.622            | 27.622               |
| 22       | 1703.6    | 1724.8     | 2.171        | 2.055   |             | 34.556         | 34.556            | 0.344        |              | 27.602        | 27.602           | 27.612            | 27.612               |
| 8        | 1498.6    | 1516.5     | 2.426        | 2.324   |             | 34.512         | 34.513            | 0.344        |              | 27.546        | 27.547           | 27.555            | 27.555               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.896        | 178.174       |            |
| 23       | 2.899        | 178.162       |            |
| 19       | 2.901        | 177.845       |            |
| 17       | 2.914        | 176.680       |            |
| 13       | 2.938        | 175.349       |            |
| 9        | 2.945        | 175.326       |            |
| 26       | 2.940        | 176.246       |            |
| 3        | 2.956        | 174.550       |            |
| 12       | 2.953        | 174.469       |            |
| 6        | 2.987        | 172.774       |            |
| 22       | 3.004        | 171.232       |            |
| 8        | 3.057        | 163.920       |            |

VENTS 1992 - LEG I  
 Station S9260 Cast 78 04 JUNE 1992  
 LAT: 45 32.0N LONG: 130 46.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2725.3    | 2765.8     | 1.723        | 1.524         |             | 34.641         | 34.641            | 0.348        |              | 27.706        | 27.706           | 27.720            | 27.720               |
| 23       | 2299.3    | 2331.1     | 1.844        | 1.682         |             | 34.618         | 34.618            | 0.343        |              | 27.678        | 27.678           | 27.690            | 27.690               |
| 19       | 2202.2    | 2232.2     | 1.862        | 1.708         |             | 34.614         | 34.614            | 0.344        |              | 27.673        | 27.673           | 27.685            | 27.685               |
| 17       | 2177.2    | 2206.7     | 1.866        | 1.714         |             | 34.613         | 34.613            | 0.344        |              | 27.672        | 27.672           | 27.684            | 27.684               |
| 13       | 2151.0    | 2180.0     | 1.875        | 1.725         |             | 34.611         | 34.611            | 0.344        |              | 27.670        | 27.670           | 27.681            | 27.681               |
| 9        | 2122.6    | 2151.1     | 1.881        | 1.734         |             | 34.609         | 34.610            | 0.343        |              | 27.668        | 27.669           | 27.679            | 27.680               |
| 26       | 2100.2    | 2128.3     | 1.890        | 1.745         |             | 34.608         | 34.608            | 0.345        |              | 27.666        | 27.666           | 27.677            | 27.677               |
| 3        | 2049.0    | 2076.1     | 1.904        | 1.763         |             | 34.604         | 34.604            | 0.344        |              | 27.662        | 27.662           | 27.673            | 27.673               |
| 12       | 2000.7    | 2027.0     | 1.920        | 1.783         |             | 34.601         | 34.601            | 0.343        |              | 27.658        | 27.658           | 27.669            | 27.669               |
| 6        | 1953.2    | 1978.6     | 1.941        | 1.807         |             | 34.597         | 34.600            | 0.342        |              | 27.653        | 27.656           | 27.664            | 27.666               |
| 22       | 1795.0    | 1817.6     | 2.068        | 1.946         |             | 34.578         | 34.578            | 0.342        |              | 27.628        | 27.628           | 27.638            | 27.638               |
| 8        | 1501.5    | 1519.4     | 2.462        | 2.359         |             | 34.526         | 34.527            | 0.343        |              | 27.554        | 27.555           | 27.563            | 27.564               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.820        | 181.712       |            |
| 23       | 2.895        | 180.342       |            |
| 19       | 2.887        | 179.986       |            |
| 17       | 2.886        | 179.223       |            |
| 13       | 2.897        | 179.276       |            |
| 9        | 2.893        | 179.306       |            |
| 26       | 2.907        | 179.103       |            |
| 3        | 2.921        | 178.107       |            |
| 12       | 2.940        | 177.799       |            |
| 6        | 2.929        | 175.802       | 10.65      |
| 22       | 2.974        | 173.293       |            |
| 8        | 3.074        | 162.897       |            |

VENTS 1992 - LEG I  
 Station S9261 Cast 79 04 JUNE 1992  
 LAT: 45 20.0N LONG: 130 53.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2794.4    | 2836.4     | 1.696         | 1.491   |             | 34.645         | 34.645            | 0.350        |              | 27.711        | 27.711           | 27.726            | 27.726               |
| 23       | 2306.6    | 2338.6     | 1.834         | 1.671   |             | 34.620         | 34.619            | 0.341        |              | 27.680        | 27.679           | 27.693            | 27.692               |
| 19       | 2199.2    | 2229.1     | 1.857         | 1.703   |             | 34.615         | 34.614            | 0.341        |              | 27.674        | 27.674           | 27.686            | 27.685               |
| 17       | 2175.0    | 2204.4     | 1.862         | 1.710   |             | 34.614         | 34.613            | 0.341        |              | 27.673        | 27.672           | 27.685            | 27.684               |
| 13       | 2148.8    | 2177.7     | 1.868         | 1.719   |             | 34.612         | 34.612            | 0.342        |              | 27.671        | 27.671           | 27.683            | 27.683               |
| 10       | 2120.5    | 2148.9     | 1.873         | 1.726   |             | 34.611         | 34.611            | 0.341        |              | 27.670        | 27.670           | 27.681            | 27.681               |
| 18       | 2099.6    | 2127.7     | 1.880         | 1.735   |             | 34.610         | 34.609            | 0.341        |              | 27.669        | 27.668           | 27.679            | 27.679               |
| 21       | 2046.1    | 2073.2     | 1.899         | 1.758   |             | 34.606         | 34.605            | 0.342        |              | 27.664        | 27.663           | 27.675            | 27.674               |
| 12       | 1996.1    | 2022.2     | 1.926         | 1.789   |             | 34.601         | 34.600            | 0.341        |              | 27.658        | 27.657           | 27.668            | 27.668               |
| 6        | 1949.2    | 1974.4     | 1.949         | 1.816   |             | 34.596         | 34.596            | 0.341        |              | 27.652        | 27.652           | 27.662            | 27.662               |
| 22       | 1796.9    | 1819.6     | 2.081         | 1.958   |             | 34.575         | 34.575            | 0.342        |              | 27.625        | 27.625           | 27.634            | 27.634               |
| 8        | 1499.2    | 1517.1     | 2.482         | 2.379   |             | 34.520         | 34.520            | 0.343        |              | 27.548        | 27.548           | 27.556            | 27.556               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.770        | 183.784       |            |
| 23       | 2.879        | 181.131       |            |
| 19       | 2.903        | 180.709       |            |
| 17       | 2.909        | 179.816       |            |
| 13       | 2.931        | 179.820       |            |
| 10       | 2.945        | 179.468       |            |
| 18       | 2.942        | 179.658       | 8.75       |
| 21       | 2.947        | 179.330       | 9.88       |
| 12       | 2.959        | 178.853       | 7.41       |
| 6        | 2.973        | 176.802       |            |
| 22       | 3.014        | 172.727       |            |
| 8        | 3.130        | 162.281       |            |

VENTS 1992 - LEG I  
 Station S9262 Cast 80 04 JUNE 1992  
 LAT: 45 08.0N LONG: 131 00.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2759.8    | 2800.9     | 1.694         | 1.492   |             | 34.645         | 34.646            | 0.349        |              | 27.711        | 27.712           | 27.726            | 27.727               |
| 23       | 2289.8    | 2321.4     | 1.824         | 1.663   |             | 34.621         | 34.621            | 0.342        |              | 27.682        | 27.682           | 27.694            | 27.694               |
| 19       | 2202.1    | 2232.0     | 1.842         | 1.688   |             | 34.617         | 34.618            | 0.341        |              | 27.677        | 27.678           | 27.689            | 27.690               |
| 17       | 2183.9    | 2213.4     | 1.849         | 1.697   |             | 34.616         | 34.617            | 0.341        |              | 27.676        | 27.677           | 27.687            | 27.688               |
| 13       | 2150.8    | 2179.8     | 1.859         | 1.710   |             | 34.614         | 34.615            | 0.341        |              | 27.673        | 27.674           | 27.685            | 27.686               |
| 10       | 2124.8    | 2153.2     | 1.865         | 1.718   |             | 34.613         | 34.613            | 0.341        |              | 27.672        | 27.672           | 27.683            | 27.683               |
| 3        | 2099.3    | 2127.3     | 1.871         | 1.726   |             | 34.611         | 34.611            | 0.341        |              | 27.670        | 27.670           | 27.681            | 27.681               |
| 26       | 2049.8    | 2076.8     | 1.890         | 1.749   |             | 34.607         | 34.608            | 0.342        |              | 27.665        | 27.666           | 27.676            | 27.677               |
| 9        | 2000.6    | 2026.8     | 1.922         | 1.785   |             | 34.602         | 34.602            | 0.342        |              | 27.659        | 27.659           | 27.670            | 27.670               |
| 6        | 1948.3    | 1973.5     | 1.955         | 1.822   |             | 34.596         | 34.596            | 0.342        |              | 27.652        | 27.652           | 27.662            | 27.662               |
| 22       | 1799.0    | 1821.7     | 2.057         | 1.935   |             | 34.579         | 34.594            | 0.343        |              | 27.630        | 27.642           | 27.640            | 27.652               |
| 8        | 1501.8    | 1519.6     | 2.451         | 2.348   |             | 34.523         | 34.524            | 0.344        |              | 27.553        | 27.553           | 27.561            | 27.562               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.789        | 182.703       |            |
| 23       | 2.866        | 181.682       |            |
| 19       | 2.876        | 180.987       |            |
| 17       | 2.878        | 181.302       |            |
| 13       | 2.864        | 180.212       |            |
| 10       | 2.786        | 178.820       | 12.96      |
| 3        | 2.882        | 179.914       | 9.64       |
| 26       | 2.908        | 179.440       | 13.80      |
| 9        | 2.902        | 177.990       |            |
| 6        | 2.928        | 177.273       |            |
| 22       | 2.931        | 176.381       |            |
| 8        | 3.033        | 163.573       |            |

VENTS 1992 - LEG I  
 Station S9263 Cast 81 05 JUNE 1992  
 LAT: 44 56.0N LONG: 131 07.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2860.3    | 2903.6     | 1.639        | 1.428   |             | 34.652         | 34.652            | 0.345        |              | 27.721        | 27.721           | 27.736            | 27.736               |
| 23       | 2300.1    | 2331.8     | 1.822        | 1.660   |             | 34.621         | 34.621            | 0.341        |              | 27.682        | 27.682           | 27.694            | 27.694               |
| 19       | 2200.7    | 2230.5     | 1.846        | 1.692   |             | 34.616         | 34.620            | 0.342        |              | 27.676        | 27.679           | 27.688            | 27.691               |
| 17       | 2174.7    | 2204.0     | 1.857        | 1.706   |             | 34.614         | 34.614            | 0.342        |              | 27.674        | 27.674           | 27.685            | 27.685               |
| 13       | 2148.7    | 2177.5     | 1.861        | 1.712   |             | 34.613         | 34.612            | 0.342        |              | 27.673        | 27.672           | 27.684            | 27.683               |
| 25       | 2121.8    | 2150.1     | 1.871        | 1.724   |             | 34.611         | 34.611            | 0.342        |              | 27.670        | 27.670           | 27.681            | 27.681               |
| 2        | 2096.3    | 2124.1     | 1.881        | 1.736   |             | 34.609         | 34.608            | 0.343        |              | 27.668        | 27.667           | 27.679            | 27.678               |
| 14       | 2046.6    | 2073.6     | 1.899        | 1.758   |             | 34.605         | 34.606            | 0.343        |              | 27.663        | 27.664           | 27.674            | 27.675               |
| 9        | 1999.3    | 2025.4     | 1.920        | 1.783   |             | 34.601         | 34.601            | 0.342        |              | 27.658        | 27.658           | 27.669            | 27.669               |
| 5        | 1941.6    | 1966.7     | 1.957        | 1.824   |             | 34.595         | 34.595            | 0.342        |              | 27.651        | 27.651           | 27.661            | 27.661               |
| 22       | 1802.4    | 1825.1     | 2.076        | 1.953   |             | 34.577         | 34.579            | 0.342        |              | 27.627        | 27.628           | 27.637            | 27.638               |
| 8        | 1501.6    | 1519.4     | 2.457        | 2.354   |             | 34.527         | 34.527            | 0.344        |              | 27.555        | 27.555           | 27.564            | 27.564               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.761        | 179.965       |            |
| 23       | 2.881        | 180.334       |            |
| 19       | 2.895        | 179.583       |            |
| 17       | 2.906        | 178.930       |            |
| 13       | 2.894        | 179.015       |            |
| 25       | 2.903        | 179.412       | 13.35      |
| 2        | 2.921        | 179.113       | 9.75       |
| 14       | 2.909        | 178.786       | 9.60       |
| 9        | 2.940        | 177.890       |            |
| 5        | 2.949        | 176.738       |            |
| 22       | 2.976        | 174.049       |            |
| 8        | 3.103        | 163.684       |            |

VENTS 1992 - LEG I  
 Station S9264 Cast 82 05 JUNE 1992  
 LAT: 44 44.1N LONG: 131 13.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (l/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 11       | 3255.3    | 3307.6     | 1.562        | 1.314   |             | 34.666         | 34.665            | 0.343        |             | 27.738        | 27.737           | 27.755            | 27.755               |
| 23       | 2300.3    | 2331.9     | 1.835        | 1.673   |             | 34.619         | 34.619            | 0.341        |             | 27.679        | 27.679           | 27.692            | 27.692               |
| 19       | 2196.8    | 2226.5     | 1.854        | 1.701   |             | 34.615         | 34.615            | 0.342        |             | 27.675        | 27.675           | 27.686            | 27.686               |
| 17       | 2176.5    | 2205.8     | 1.859        | 1.707   |             | 34.614         | 34.613            | 0.341        |             | 27.673        | 27.673           | 27.685            | 27.684               |
| 13       | 2151.1    | 2179.9     | 1.864        | 1.715   |             | 34.612         | 34.613            | 0.342        |             | 27.671        | 27.672           | 27.683            | 27.684               |
| 10       | 2127.1    | 2155.5     | 1.869        | 1.722   |             | 34.611         |                   | 0.342        |             | 27.670        |                  | 27.682            |                      |
| 3        | 2098.6    | 2126.5     | 1.881        | 1.736   |             | 34.609         | 34.609            | 0.342        |             | 27.668        | 27.668           | 27.679            | 27.679               |
| 26       | 2050.5    | 2077.5     | 1.898        | 1.757   |             | 34.605         | 34.605            | 0.342        |             | 27.663        | 27.663           | 27.674            | 27.674               |
| 9        | 2002.5    | 2028.7     | 1.918        | 1.780   |             | 34.601         | 34.600            | 0.342        |             | 27.658        | 27.658           | 27.669            | 27.668               |
| 15       | 1951.6    | 1976.9     | 1.948        | 1.814   |             | 34.595         | 34.594            | 0.342        |             | 27.651        | 27.651           | 27.662            | 27.661               |
| 22       | 1802.0    | 1824.6     | 2.069        | 1.946   |             | 34.574         | 34.573            | 0.342        |             | 27.625        | 27.624           | 27.635            | 27.634               |
| 8        | 1500.4    | 1518.1     | 2.461        | 2.358   |             | 34.518         | 34.518            | 0.344        |             | 27.548        | 27.548           | 27.556            | 27.556               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.732        | 179.428       |            |
| 23       | 2.918        | 180.557       |            |
| 19       | 2.937        | 179.748       |            |
| 17       | 2.918        | 179.548       |            |
| 13       | 2.923        | 178.973       |            |
| 10       | 2.916        | 178.676       | 62.69      |
| 3        | 2.925        | 178.683       | 9.17       |
| 26       | 2.923        | 178.038       | 11.22      |
| 9        | 2.939        | 177.601       |            |
| 15       | 2.954        | 176.664       |            |
| 22       | 2.995        | 173.783       |            |
| 8        | 3.110        | 163.779       |            |

VENTS 1992 - LEG I  
 Station S9265 Cast 83 05 JUNE 1992  
 LAT: 44 56.6N LONG: 131 30.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Salinity (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|----------------|-------------|---------------|------------------|-------------------|----------------------|
| 11       | 3401.2    | 3457.1     | 1.544        | 1.281         |             | 34.672         | 34.670            | 0.352          |             | 27.744        | 27.742           | 27.763            | 27.761               |
| 23       | 2300.1    | 2331.8     | 1.826        | 1.664         |             | 34.621         | 34.620            | 0.341          |             | 27.682        | 27.681           | 27.694            | 27.693               |
| 19       | 2201.0    | 2203.8     | 1.848        | 1.694         |             | 34.615         | 34.615            | 0.342          |             | 27.675        | 27.675           | 27.687            | 27.687               |
| 17       | 2174.6    | 2203.9     | 1.856        | 1.705         |             | 34.614         | 34.614            | 0.342          |             | 27.674        | 27.674           | 27.685            | 27.685               |
| 13       | 2148.8    | 2177.6     | 1.865        | 1.716         |             | 34.612         | 34.612            | 0.343          |             | 27.671        | 27.671           | 27.683            | 27.683               |
| 2        | 2136.6    | 2165.2     | 1.864        | 1.716         |             | 34.612         | 34.610            | 0.342          |             | 27.671        | 27.670           | 27.683            | 27.681               |
| 25       | 2098.9    | 2126.8     | 1.880        | 1.735         |             | 34.609         | 34.608            | 0.343          |             | 27.668        | 27.667           | 27.679            | 27.678               |
| 14       | 2050.2    | 2077.2     | 1.907        | 1.766         |             | 34.604         | 34.603            | 0.342          |             | 27.662        | 27.661           | 27.672            | 27.672               |
| 21       | 1999.4    | 2025.5     | 1.931        | 1.794         |             | 34.599         | 34.598            | 0.342          |             | 27.656        | 27.655           | 27.666            | 27.666               |
| 15       | 1949.8    | 1975.0     | 1.956        | 1.822         |             | 34.593         | 34.593            | 0.342          |             | 27.649        | 27.649           | 27.659            | 27.659               |
| 22       | 1800.8    | 1823.5     | 2.064        | 1.941         |             | 34.573         | 34.572            | 0.342          |             | 27.625        | 27.624           | 27.634            | 27.633               |
| 8        | 1499.1    | 1516.9     | 2.431        | 2.329         |             | 34.516         | 34.515            | 0.345          |             | 27.549        | 27.548           | 27.557            | 27.557               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.667        | 180.620       |            |
| 23       | 2.881        | 180.109       |            |
| 19       | 2.903        | 179.248       |            |
| 17       | 2.882        | 179.249       |            |
| 13       | 2.900        | 178.130       |            |
| 2        | 2.908        | 178.050       |            |
| 25       | 2.902        | 178.199       | 19.22      |
| 14       | 2.929        | 177.431       | 11.46      |
| 21       | 2.940        | 176.365       | 10.85      |
| 15       | 2.932        | 175.541       |            |
| 22       | 2.977        | 172.798       |            |
| 8        | 3.085        | 162.048       |            |



VENTS 1992 - LEG I  
 Station S9266 Cast 84 05 JUNE 1992  
 LAT: 45 09.6N LONG: 131 23.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 3175.7    | 3226.0     | 1.577        | 1.337         |             | 34.663         | 34.662            | 0.350        |              | 27.734        | 27.733           | 27.751            | 27.751               |
| 23       | 2298.3    | 2329.8     | 1.814        | 1.652         |             | 34.622         | 34.622            | 0.342        |              | 27.683        | 27.683           | 27.696            | 27.696               |
| 19       | 2198.0    | 2227.6     | 1.837        | 1.684         |             | 34.617         | 34.618            | 0.342        |              | 27.678        | 27.678           | 27.689            | 27.690               |
| 16       | 2175.3    | 2204.5     | 1.846        | 1.695         |             | 34.615         | 34.627            | 0.342        |              | 27.675        | 27.685           | 27.687            | 27.696               |
| 13       | 2152.1    | 2180.8     | 1.854        | 1.705         |             | 34.613         | 34.612            | 0.342        |              | 27.673        | 27.672           | 27.684            | 27.684               |
| 2        | 2125.3    | 2153.6     | 1.860        | 1.713         |             | 34.612         | 34.611            | 0.342        |              | 27.672        | 27.671           | 27.683            | 27.682               |
| 31       | 2102.8    | 2130.7     | 1.867        | 1.722         |             | 34.610         | 34.609            | 0.342        |              | 27.670        | 27.669           | 27.681            | 27.680               |
| 10       | 2045.4    | 2072.2     | 1.887        | 1.746         |             | 34.606         | 34.605            | 0.343        |              | 27.665        | 27.664           | 27.676            | 27.675               |
| 3        | 1998.9    | 2024.8     | 1.902        | 1.765         |             | 34.602         | 34.601            | 0.343        |              | 27.661        | 27.660           | 27.671            | 27.670               |
| 15       | 1950.2    | 1975.3     | 1.942        | 1.809         |             | 34.595         | 34.595            | 0.343        |              | 27.652        | 27.652           | 27.662            | 27.662               |
| 22       | 1791.7    | 1814.0     | 2.065        | 1.943         |             | 34.572         | 34.571            | 0.343        |              | 27.624        | 27.623           | 27.633            | 27.632               |
| 8        | 1500.9    | 1518.5     | 2.470        | 2.367         |             | -34.523        | 34.522            | 0.345        |              | 27.551        | 27.550           | 27.560            | 27.559               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.673        | 179.311       |            |
| 23       | 2.841        | 180.241       |            |
| 19       | 2.850        | 179.206       |            |
| 16       | 2.837        | 178.642       |            |
| 13       | 2.857        | 178.725       |            |
| 2        | 2.860        | 178.821       |            |
| 31       | 2.865        | 178.272       | 10.41      |
| 10       | 2.868        | 179.296       | 9.67       |
| 3        | 2.876        | 177.375       | 14.61      |
| 15       | 2.926        | 176.531       |            |
| 22       | 2.945        | 173.052       |            |
| 8        | 3.054        | 163.782       |            |

VENTS 1992 - LEG I  
 Station S9267 Cast 85 05 JUNE 1992  
 LAT: 45 22.6N LONG: 131 16.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2960.9    | 3006.5     | 1.645        | 1.424         |             | 34.652         | 34.654            | 0.347        |              | 27.720        | 27.722           | 27.736            | 27.738               |
| 23       | 2296.1    | 2327.8     | 1.833        | 1.671         |             | 34.620         | 34.619            | 0.342        |              | 27.680        | 27.680           | 27.693            | 27.692               |
| 19       | 2199.5    | 2229.4     | 1.849        | 1.696         |             | 34.615         | 34.612            | 0.343        |              | 27.675        | 27.673           | 27.687            | 27.684               |
| 16       | 2174.9    | 2204.3     | 1.856        | 1.705         |             | 34.614         | 34.613            | 0.343        |              | 27.674        | 27.673           | 27.685            | 27.684               |
| 13       | 2149.4    | 2178.4     | 1.859        | 1.710         |             | 34.613         | 34.611            | 0.343        |              | 27.673        | 27.671           | 27.684            | 27.682               |
| 2        | 2124.7    | 2153.2     | 1.865        | 1.718         |             | 34.612         | 34.611            | 0.343        |              | 27.671        | 27.671           | 27.683            | 27.682               |
| 25       | 2099.9    | 2127.9     | 1.871        | 1.726         |             | 34.609         | 34.607            | 0.343        |              | 27.669        | 27.667           | 27.680            | 27.678               |
| 14       | 2047.8    | 2074.9     | 1.882        | 1.741         |             | 34.606         | 34.604            | 0.343        |              | 27.665        | 27.664           | 27.676            | 27.674               |
| 21       | 1999.0    | 2025.1     | 1.911        | 1.772         |             | 35.142         | 34.599            | 0.343        |              | 28.093        | 27.657           | 28.104            | 27.668               |
| 15       | 1949.2    | 1974.5     | 1.938        | 1.805         |             | 34.597         | 34.596            | 0.343        |              | 27.654        | 27.653           | 27.664            | 27.663               |
| 22       | 1800.3    | 1823.1     | 2.037        | 1.915         |             | 34.580         | 34.578            | 0.343        |              | 27.632        | 27.631           | 27.642            | 27.640               |
| 8        | 1500.7    | 1518.5     | 2.399        | 2.297         |             | 34.528         | 34.528            | 0.344        |              | 27.561        | 27.561           | 27.570            | 27.570               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.761        | 179.267       |            |
| 23       | 2.889        | 179.457       |            |
| 19       | 2.894        | 179.846       |            |
| 16       | 2.915        | 177.887       |            |
| 13       | 2.910        | 178.250       |            |
| 2        | 2.921        | 178.293       |            |
| 25       | 2.912        | 178.296       | 10.55      |
| 14       | 2.930        | 176.977       | 9.04       |
| 21       | 2.940        | 176.259       | 9.00       |
| 15       | 2.946        | 176.009       |            |
| 22       | 2.989        | 172.967       |            |
| 8        | 3.086        | 163.393       |            |

VENTS 1992 - LEG I  
 Station S9268 Cast 86 05 JUNE 1992  
 LAT: 45 35.5N LONG: 131 12.6W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Salinity (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|----------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2719.0    | 2759.4     | 1.726        | 1.527         |             | 34.640         | 34.638            | 0.351          |              | 27.705        | 27.703           | 27.719            | 27.718               |
| 23       | 2298.1    | 2329.9     | 1.834        | 1.672         |             | 34.619         | 34.618            | 0.344          |              | 27.679        | 27.679           | 27.692            | 27.691               |
| 19       | 2200.6    | 2230.5     | 1.858        | 1.704         |             | 34.614         | 34.614            | 0.344          |              | 27.674        | 27.674           | 27.685            | 27.685               |
| 16       | 2145.5    | 2174.4     | 1.869        | 1.720         |             | 34.611         | 34.611            | 0.344          |              | 27.670        | 27.670           | 27.682            | 27.682               |
| 13       | 2101.1    | 2129.2     | 1.883        | 1.738         |             | 34.609         | 34.608            | 0.344          |              | 27.668        | 27.667           | 27.679            | 27.678               |
| 2        | 2053.4    | 2080.6     | 1.905        | 1.763         |             | 34.604         | 34.604            | 0.344          |              | 27.662        | 27.662           | 27.673            | 27.673               |
| 31       | 2001.8    | 2028.1     | 1.927        | 1.789         |             | 34.600         | 34.600            | 0.343          |              | 27.657        | 27.657           | 27.668            | 27.668               |
| 10       | 1951.0    | 1976.3     | 1.961        | 1.827         |             | 34.595         | 34.594            | 0.342          |              | 27.650        | 27.650           | 27.661            | 27.660               |
| 3        | 2177.0    | 2206.5     | 1.864        | 1.712         |             | 34.613         | 34.612            | 0.344          |              | 27.672        | 27.671           | 27.684            | 27.683               |
| 15       | 2125.4    | 2153.9     | 1.877        | 1.730         |             | 34.609         | 34.608            | 0.344          |              | 27.668        | 27.667           | 27.679            | 27.679               |
| 22       | 1801.1    | 1823.8     | 2.061        | 1.938         |             | 34.573         | 34.572            | 0.343          |              | 27.625        | 27.624           | 27.634            | 27.634               |
| 8        | 1500.5    | 1518.4     | 2.402        | 2.300         |             | 34.522         | 34.522            | 0.344          |              | 27.556        | 27.556           | 27.565            | 27.565               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.806        | 180.886       |            |
| 23       | 2.852        | 179.512       |            |
| 19       | 2.901        | 178.581       |            |
| 16       | 2.885        | 178.175       | 12.05      |
| 13       | 2.910        | 177.983       | 11.43      |
| 2        | 2.913        | 176.450       | 10.04      |
| 31       | 2.931        | 175.856       |            |
| 10       | 2.934        | 175.397       |            |
| 3        | 2.890        | 178.723       |            |
| 15       | 2.902        | 177.956       |            |
| 22       | 2.985        | 172.385       |            |
| 8        | 3.092        | 163.945       |            |

VENTS 1992 - LEG I  
 Station S9269 Cast 87 06 JUNE 1992  
 LAT: 46 04.0N LONG: 130 27.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Attenu. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|---------------|-------------|---------------|------------------|-------------------|----------------------|
| 11       | 541.0     | 546.2      | 4.375         | 4.334   |             | 34.145         | 34.144            | 0.357         |             | 27.067        | 27.066           | 27.071            | 27.070               |
| 19       | 524.7     | 529.7      | 4.392         | 4.352   |             | 34.146         | 34.146            | 0.356         |             | 27.066        | 27.066           | 27.070            | 27.070               |
| 14       | 500.5     | 505.3      | 4.604         | 4.566   |             | 34.095         | 34.095            | 0.356         |             | 27.002        | 27.002           | 27.006            | 27.006               |
| 31       | 473.6     | 478.1      | 4.852         | 4.815   |             | 34.039         | 34.037            | 0.356         |             | 26.930        | 26.929           | 26.934            | 26.933               |
| 3        | 451.8     | 456.0      | 4.917         | 4.881   |             | 34.008         | 34.007            | 0.360         |             | 26.898        | 26.898           | 26.902            | 26.902               |
| 22       | 423.2     | 427.1      | 4.895         | 4.862   |             | 33.958         | 33.957            | 0.359         |             | 26.861        | 26.860           | 26.865            | 26.864               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 3.067        | 100.074       |            |
| 19       | 3.059        | 99.706        |            |
| 14       | 2.991        | 92.174        |            |
| 31       | 2.889        | 82.758        |            |
| 3        | 2.826        | 79.441        |            |
| 22       | 2.716        | 75.389        |            |

VENTS 1992 - LEG I  
 Station S9258 Cast 88 06 JUNE 1992  
 LAT: 45 57.6N LONG: 130 10.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 1921.8    | 1946.7     | 2.022        | 1.890         |             | 34.583         | 34.583            | 0.348        |              | 27.636        | 27.636           | 27.646            | 27.646               |
| 23       | 1892.0    | 1916.4     | 2.049        | 1.919         |             | 34.578         | 34.579            | 0.346        |              | 27.630        | 27.631           | 27.640            | 27.641               |
| 19       | 1874.4    | 1898.4     | 2.059        | 1.930         |             | 34.576         | 34.575            | 0.346        |              | 27.627        | 27.627           | 27.637            | 27.637               |
| 13       | 1850.1    | 1873.8     | 2.057        | 1.930         |             | 34.576         | 34.575            | 0.345        |              | 27.627        | 27.627           | 27.637            | 27.637               |
| 14       | 1801.5    | 1824.4     | 2.113        | 1.990         |             | 34.567         | 34.566            | 0.345        |              | 27.616        | 27.615           | 27.626            | 27.625               |
| 16       | 1748.8    | 1770.8     | 2.138        | 2.019         |             | 34.562         | 34.561            | 0.345        |              | 27.610        | 27.609           | 27.619            | 27.619               |
| 9        | 1701.2    | 1722.4     | 2.165        | 2.049         |             | 34.557         | 34.556            | 0.345        |              | 27.604        | 27.603           | 27.613            | 27.612               |
| 6        | 1600.3    | 1619.8     | 2.276        | 2.167         |             | 34.538         | 34.537            | 0.344        |              | 27.579        | 27.579           | 27.587            | 27.587               |
| 3        | 1500.3    | 1518.2     | 2.378        | 2.276         |             | 34.522         | 34.521            | 0.344        |              | 27.558        | 27.557           | 27.566            | 27.566               |
| 2        | 1399.9    | 1416.3     | 2.528        | 2.432         |             | 34.494         | 34.494            | 0.345        |              | 27.523        | 27.523           | 27.531            | 27.531               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.961        | 175.248       |            |
| 23       | 2.964        | 174.356       |            |
| 19       | 2.966        | 173.625       |            |
| 13       | 2.976        | 174.003       |            |
| 14       | 2.987        | 172.273       |            |
| 16       | 2.995        | 172.380       |            |
| 9        | 2.999        | 171.203       |            |
| 6        | 3.039        | 167.879       |            |
| 3        | 3.046        | 164.311       |            |
| 2        | 3.087        | 160.635       |            |

VENTS 1992 - LEG I  
 Station S9259 Cast 89 06 JUNE 1992  
 LAT: 46 00.9N LONG: 130 10.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp Anom. | Temp. Anom. | Atten. (1/m) | Atten. Anom. | Salinity (CTD) | Salinity (Bottle) | Salinity (Bottle) | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------------|-------------|--------------|--------------|----------------|-------------------|-------------------|---------------|------------------|------------------|-------------------|----------------------|
| 11       | 1933.8    | 1958.9     | 2.040        | 1.907         |             | 0.345        |              | 34.580         | 34.579            | 34.579            | 27.632        | 27.631           | 27.631           | 27.643            | 27.642               |
| 23       | 1899.2    | 1923.7     | 2.057        | 1.926         |             | 0.345        |              | 34.576         | 34.575            | 34.575            | 27.627        | 27.627           | 27.627           | 27.638            | 27.637               |
| 19       | 1874.5    | 1898.6     | 2.075        | 1.946         |             | 0.355        |              | 34.573         | 34.572            | 34.572            | 27.624        | 27.623           | 27.623           | 27.634            | 27.633               |
| 13       | 1849.8    | 1873.5     | 2.090        | 1.963         |             | 0.346        |              | 34.570         | 34.562            | 34.562            | 27.620        | 27.614           | 27.614           | 27.630            | 27.624               |
| 14       | 1825.1    | 1848.4     | 2.111        | 1.986         |             | 0.344        |              | 34.567         | 34.566            | 34.566            | 27.616        | 27.615           | 27.615           | 27.626            | 27.625               |
| 16       | 1801.0    | 1823.8     | 2.125        | 2.002         |             | 0.344        |              | 34.564         | 34.563            | 34.563            | 27.612        | 27.612           | 27.612           | 27.622            | 27.621               |
| 9        | 1750.2    | 1772.2     | 2.152        | 2.032         |             | 0.345        |              | 34.560         | 34.559            | 34.559            | 27.607        | 27.606           | 27.606           | 27.617            | 27.616               |
| 6        | 1696.9    | 1718.0     | 2.201        | 2.085         |             | 0.345        |              | 34.552         | 34.550            | 34.550            | 27.597        | 27.595           | 27.595           | 27.606            | 27.604               |
| 3        | 1597.6    | 1617.1     | 2.268        | 2.159         |             | 0.345        |              | 34.540         | 34.539            | 34.539            | 27.582        | 27.581           | 27.581           | 27.590            | 27.590               |
| 2        | 1497.3    | 1515.2     | 2.435        | 2.333         |             | 0.345        |              | 34.510         | 34.509            | 34.509            | 27.544        | 27.543           | 27.543           | 27.552            | 27.551               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.970        | 174.794       |            |
| 23       | 2.974        | 174.685       |            |
| 19       | 2.980        | 173.645       |            |
| 13       | 2.990        | 173.496       |            |
| 14       | 2.979        | 173.241       |            |
| 16       | 2.994        | 172.519       |            |
| 9        | 2.989        | 171.997       |            |
| 6        | 3.019        | 170.289       |            |
| 3        | 3.019        | 169.632       |            |
| 2        | 3.063        | 163.887       |            |

VENTS 1992 - LEG I  
 Station S9291 Cast 90 06 JUNE 1992  
 LAT: 47 23.1N LONG: 129 14.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 11       | 2618.2    | 2656.9     | 1.759        | 1.569   |             | 34.631         | 34.630            | 0.351        |             | 27.695        | 27.694           | 27.709            | 27.708               |
| 23       | 2300.9    | 2333.2     | 1.801        | 1.639   |             | 34.621         | 34.619            | 0.344        |             | 27.684        | 27.682           | 27.696            | 27.694               |
| 19       | 2200.3    | 2230.6     | 1.837        | 1.684   |             | 34.612         | 34.611            | 0.344        |             | 27.674        | 27.673           | 27.685            | 27.684               |
| 13       | 2174.5    | 2204.3     | 1.843        | 1.692   |             | 34.609         | 34.607            | 0.343        |             | 27.671        | 27.669           | 27.682            | 27.681               |
| 14       | 2149.8    | 2179.1     | 1.852        | 1.703   |             | 34.607         | 34.606            | 0.343        |             | 27.668        | 27.668           | 27.680            | 27.679               |
| 16       | 2124.6    | 2153.5     | 1.861        | 1.714   |             | 34.605         | 34.603            | 0.344        |             | 27.666        | 27.665           | 27.677            | 27.676               |
| 9        | 2099.2    | 2127.6     | 1.876        | 1.731   |             | 34.602         | 34.601            | 0.343        |             | 27.663        | 27.662           | 27.674            | 27.673               |
| 6        | 2050.5    | 2078.0     | 1.900        | 1.759   |             | 34.597         | 34.595            | 0.343        |             | 27.657        | 27.655           | 27.668            | 27.666               |
| 3        | 2000.1    | 2026.7     | 1.918        | 1.781   |             | 34.593         | 34.593            | 0.343        |             | 27.652        | 27.652           | 27.663            | 27.663               |
| 2        | 1746.7    | 1768.9     | 2.110        | 1.991   |             | 34.557         | 34.557            | 0.344        |             | 27.608        | 27.608           | 27.617            | 27.617               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.847        | 180.076       |            |
| 23       | 2.897        | 179.061       |            |
| 19       | 2.942        | 177.246       |            |
| 13       | 2.951        | 176.817       |            |
| 14       | 2.933        | 176.762       |            |
| 16       | 2.962        | 177.159       |            |
| 9        | 2.969        | 176.543       |            |
| 6        | 2.977        | 176.154       | 10.68      |
| 3        | 2.988        | 175.765       | 10.78      |
| 2        | 3.074        | 171.701       |            |

VENTS 1992 - LEG I  
 Station S9292 Cast 91 06 JUNE 1992  
 LAT: 47 23.0N LONG: 129 08.9W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 11       | 2632.0    | 2671.0     | 1.727        | 1.536   |             | 34.635         | 34.634            | 0.349        |              | 27.700        | 27.700           | 27.715            | 27.714               |
| 23       | 2304.8    | 2337.1     | 1.791        | 1.629   |             | 34.622         | 34.621            | 0.344        |              | 27.685        | 27.684           | 27.697            | 27.697               |
| 19       | 2199.9    | 2230.2     | 1.834        | 1.681   |             | 34.613         | 34.612            | 0.343        |              | 27.675        | 27.674           | 27.686            | 27.685               |
| 13       | 2172.9    | 2202.7     | 1.855        | 1.704   |             | 34.609         | 34.610            | 0.343        |              | 27.670        | 27.671           | 27.681            | 27.682               |
| 14       | 2152.0    | 2181.3     | 1.866        | 1.716   |             | 34.607         | 34.606            | 0.343        |              | 27.667        | 27.667           | 27.679            | 27.678               |
| 16       | 2125.2    | 2154.1     | 1.873        | 1.726   |             | 34.604         | 34.604            | 0.343        |              | 27.664        | 27.664           | 27.676            | 27.676               |
| 6        | 2099.4    | 2127.8     | 1.880        | 1.735   |             | 34.602         | 34.602            | 0.343        |              | 27.662        | 27.662           | 27.673            | 27.673               |
| 6        | 2047.4    | 2074.9     | 1.896        | 1.755   |             | 34.599         | 34.598            | 0.343        |              | 27.659        | 27.658           | 27.669            | 27.669               |
| 3        | 1998.9    | 2025.5     | 1.907        | 1.770   |             | 34.596         | 34.595            | 0.343        |              | 27.655        | 27.655           | 27.666            | 27.665               |
| 30       | 1951.1    | 1976.8     | 1.927        | 1.794   |             | 34.592         | 34.591            | 0.344        |              | 27.651        | 27.650           | 27.661            | 27.660               |
| 15       | 1799.6    | 1822.6     | 2.057        | 1.935   |             | 34.567         | 34.566            | 0.343        |              | 27.620        | 27.619           | 27.630            | 27.629               |
| 10       | 1500.4    | 1518.5     | 2.440        | 2.337   |             | 34.496         | 34.495            | 0.344        |              | 27.532        | 27.531           | 27.541            | 27.540               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 11       | 2.838        | 180.581       |            |
| 23       | 2.889        | 178.612       |            |
| 19       | 2.911        | 177.907       |            |
| 13       | 2.930        | 177.735       |            |
| 14       | 2.928        | 177.457       |            |
| 16       | 2.920        | 176.606       |            |
| 9        | 2.945        | 175.995       |            |
| 6        | 2.949        | 175.903       |            |
| 3        | 2.949        | 175.890       |            |
| 30       | 2.966        | 175.399       |            |
| 15       | 3.017        | 172.563       |            |
| 10       | 3.133        | 163.245       |            |



VENTS 1992 - LEG I  
 Station T9210 Cast 92 08 JUNE 1992  
 LAT: 47 14.5N LONG: 128 03.2W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 15       | 2655.3    | 2694.7     | 1.777        | 1.583   | 0.035       | 34.639         | 34.641            | 0.353        | 0.008        | 27.700        | 27.701           | 27.714            | 27.716               |
| 23       | 2527.9    | 2564.7     | 1.782        | 1.600   | 0.016       | 34.631         | 34.630            | 0.344        | -8e-04       | 27.693        | 27.692           | 27.707            | 27.706               |
| 19       | 2410.7    | 2445.1     | 1.789        | 1.618   | 0.013       | 34.627         | 34.626            | 0.344        | -9e-04       | 27.689        | 27.688           | 27.702            | 27.701               |
| 13       | 2227.6    | 2258.4     | 1.810        | 1.655   | 0.004       | 34.618         | 34.617            | 0.344        | -0.001       | 27.680        | 27.680           | 27.692            | 27.691               |
| 14       | 2186.6    | 2216.6     | 1.847        | 1.695   | 0.004       | 34.611         | 34.610            | 0.344        | -0.001       | 27.672        | 27.671           | 27.684            | 27.683               |
| 16       | 2222.1    | 2252.8     | 1.816        | 1.661   | 0.004       | 34.617         | 34.616            | 0.344        | -0.001       | 27.679        | 27.678           | 27.691            | 27.690               |
| 9        | 2174.4    | 2204.1     | 1.825        | 1.674   | 0.001       | 34.614         | 34.613            | 0.344        | -0.001       | 27.676        | 27.675           | 27.688            | 27.687               |
| 6        | 2267.7    | 2299.2     | 1.800        | 1.641   | 0.006       | 34.621         | 34.621            | 0.344        | -0.001       | 27.684        | 27.684           | 27.696            | 27.696               |
| 3        | 2513.3    | 2549.8     | 1.785        | 1.604   | 0.015       | 34.630         | 34.629            | 0.343        | -0.002       | 27.692        | 27.691           | 27.706            | 27.705               |
| 30       | 2640.9    | 2680.0     | 1.778        | 1.585   | 0.037       | 34.639         | 34.638            | 0.352        | 0.007        | 27.700        | 27.699           | 27.714            | 27.713               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 15       | 2.889        | 192.082       | 15.74      |
| 23       | 2.813        | 188.260       | 8.72       |
| 19       | 2.891        | 185.010       | 8.02       |
| 13       | 2.900        | 182.531       | 8.33       |
| 14       | 2.946        | 180.786       | 8.00       |
| 16       | 2.860        | 181.463       | 7.64       |
| 9        | 2.861        | 181.489       | 9.49       |
| 6        | 2.850        | 184.112       | 7.65       |
| 3        | 2.856        | 187.377       | 7.94       |
| 30       | 2.883        | 194.313       | 17.74      |

D-Theta = (ptemp + (4.648783 \* pden)) -130.386176  
 Atten-Anom = Atten - 0.3355

VENTS 1992 - LEG I  
 Station S9293 Cast 93 08 JUNE 1992  
 LAT: 47 23.0N LONG: 129 03.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 1        | 2562.2    | 2599.7     | 1.734        | 1.550   |             | 34.633         | 34.633            | 0.349        |              | 27.698        | 27.698           | 27.712            | 27.712               |
| 27       | 2302.0    | 2334.3     | 1.810        | 1.648   |             | 34.619         | 34.618            | 0.345        |              | 27.681        | 27.680           | 27.694            | 27.693               |
| 26       | 2201.6    | 2231.9     | 1.837        | 1.684   |             | 34.613         | 34.612            | 0.345        |              | 27.674        | 27.674           | 27.686            | 27.685               |
| 8        | 2174.2    | 2204.0     | 1.849        | 1.698   |             | 34.610         | 34.610            | 0.345        |              | 27.671        | 27.671           | 27.683            | 27.683               |
| 11       | 2151.2    | 2180.5     | 1.858        | 1.709   |             | 34.608         | 34.608            | 0.344        |              | 27.669        | 27.669           | 27.680            | 27.680               |
| 10       | 2125.3    | 2154.2     | 1.872        | 1.725   |             | 34.606         | 34.606            | 0.345        |              | 27.666        | 27.666           | 27.677            | 27.677               |
| 21       | 2102.7    | 2131.1     | 1.890        | 1.744   |             | 34.603         | 34.603            | 0.346        |              | 27.662        | 27.662           | 27.673            | 27.673               |
| 2        | 2050.9    | 2078.4     | 1.923        | 1.781   |             | 34.596         | 34.596            | 0.346        |              | 27.654        | 27.654           | 27.665            | 27.665               |
| 25       | 1998.6    | 2025.2     | 1.953        | 1.815   |             | 34.589         | 34.588            | 0.345        |              | 27.646        | 27.645           | 27.657            | 27.656               |
| 5        | 1948.9    | 1974.5     | 1.982        | 1.848   |             | 34.582         | 34.581            | 0.343        |              | 27.638        | 27.637           | 27.649            | 27.648               |
| 22       | 1800.3    | 1823.4     | 2.067        | 1.944   |             | 34.565         | 34.567            | 0.344        |              | 27.618        | 27.619           | 27.628            | 27.629               |
| 18       | 1498.6    | 1516.7     | 2.416        | 2.314   |             | 34.501         | 34.501            | 0.346        |              | 27.538        | 27.538           | 27.547            | 27.547               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 2.856        | 181.627       |            |
| 27       | 2.906        | 181.966       |            |
| 26       | 2.919        | 180.729       |            |
| 8        | 2.925        | 180.565       |            |
| 11       | 2.921        | 180.061       |            |
| 10       | 2.932        | 179.979       |            |
| 21       | 2.933        | 179.380       |            |
| 2        | 2.944        | 178.346       |            |
| 25       | 2.959        | 176.074       |            |
| 5        | 2.990        | 175.271       |            |
| 22       | 3.009        | 172.538       |            |
| 18       | 3.125        | 164.258       |            |

VENTS 1992 - LEG I  
 Station S9294 Cast 94 08 JUNE 1992  
 LAT: 47 22.9N LONG: 128 58.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 1        | 2643.0    | 2682.2     | 1.765        | 1.573   |             | 34.632         | 34.633            | 0.353        |              | 27.695        | 27.696           | 27.710            | 27.710               |
| 27       | 2310.5    | 2343.0     | 1.794        | 1.632   |             | 34.622         | 34.621            | 0.347        |              | 27.685        | 27.684           | 27.697            | 27.696               |
| 26       | 2199.6    | 2229.9     | 1.828        | 1.675   |             | 34.613         | 34.614            | 0.345        |              | 27.675        | 27.676           | 27.687            | 27.688               |
| 8        | 2175.5    | 2205.3     | 1.842        | 1.691   |             | 34.610         | 34.611            | 0.345        |              | 27.672        | 27.672           | 27.683            | 27.684               |
| 11       | 2150.6    | 2179.9     | 1.854        | 1.705   |             | 34.609         | 34.609            | 0.346        |              | 27.670        | 27.670           | 27.681            | 27.681               |
| 10       | 2125.9    | 2154.8     | 1.870        | 1.723   |             | 34.606         | 34.606            | 0.346        |              | 27.666        | 27.666           | 27.677            | 27.677               |
| 21       | 2101.6    | 2130.0     | 1.880        | 1.735   |             | 34.604         | 34.603            | 0.346        |              | 27.664        | 27.663           | 27.675            | 27.674               |
| 2        | 2048.0    | 2075.5     | 1.908        | 1.767   |             | 34.598         | 34.598            | 0.346        |              | 27.657        | 27.657           | 27.668            | 27.668               |
| 25       | 2002.3    | 2029.0     | 1.937        | 1.799   |             | 34.592         | 34.592            | 0.346        |              | 27.650        | 27.650           | 27.660            | 27.660               |
| 5        | 1949.1    | 1974.7     | 1.970        | 1.836   |             | 34.585         | 34.585            | 0.344        |              | 27.642        | 27.642           | 27.652            | 27.652               |
| 18       | 1500.2    | 1518.3     | 2.446        | 2.343   |             | 34.507         | 34.506            | 0.345        |              | 27.540        | 27.540           | 27.549            | 27.548               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 2.846        | 183.898       |            |
| 27       | 2.898        | 183.686       |            |
| 26       | 2.910        | 181.237       |            |
| 8        | 2.924        | 181.740       |            |
| 11       | 2.940        | 180.004       |            |
| 10       | 2.949        | 180.601       |            |
| 21       | 2.944        | 180.241       |            |
| 2        | 2.961        | 179.894       |            |
| 25       | 2.966        | 178.225       |            |
| 5        | 2.972        | 176.258       |            |
| 18       | 3.118        | 164.335       |            |

VENTS 1992 - IEG I  
 Station S9295 Cast 95 08 JUNE 1992  
 LAT: 47 23.2N LONG: 128 50.3W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 2618.4    | 2657.1     | 1.772         | 1.582   |             | 34.635         | 34.621            | 0.368        |             | 27.697        | 27.686           | 27.711            | 27.700               |
| 27       | 2305.4    | 2337.7     | 1.782         | 1.620   |             | 34.623         | 34.622            | 0.346        |             | 27.687        | 27.686           | 27.699            | 27.698               |
| 26       | 2203.0    | 2233.3     | 1.818         | 1.665   |             | 34.614         | 34.614            | 0.346        |             | 27.677        | 27.677           | 27.688            | 27.688               |
| 8        | 2176.9    | 2206.7     | 1.828         | 1.677   |             | 34.612         | 34.612            | 0.345        |             | 27.674        | 27.674           | 27.686            | 27.686               |
| 11       | 2150.7    | 2180.1     | 1.839         | 1.690   |             | 34.610         | 34.610            | 0.346        |             | 27.672        | 27.672           | 27.683            | 27.683               |
| 10       | 2125.4    | 2154.3     | 1.854         | 1.707   |             | 34.606         | 34.606            | 0.345        |             | 27.667        | 27.667           | 27.679            | 27.679               |
| 21       | 2100.7    | 2129.1     | 1.863         | 1.718   |             | 34.604         | 34.605            | 0.345        |             | 27.665        | 27.666           | 27.676            | 27.677               |
| 2        | 2048.6    | 2076.1     | 1.887         | 1.746   |             | 34.599         | 34.599            | 0.345        |             | 27.659        | 27.659           | 27.670            | 27.670               |
| 25       | 1998.7    | 2025.2     | 1.925         | 1.788   |             | 34.593         | 34.593            | 0.345        |             | 27.652        | 27.652           | 27.662            | 27.662               |
| 5        | 1948.5    | 1974.1     | 1.961         | 1.827   |             | 34.585         | 34.587            | 0.345        |             | 27.642        | 27.644           | 27.653            | 27.654               |
| 22       | 1800.8    | 1823.8     | 2.086         | 1.963   |             | 34.563         | 34.563            | 0.345        |             | 27.615        | 27.615           | 27.625            | 27.625               |
| 18       | 1499.1    | 1517.2     | 2.463         | 2.360   |             | 34.504         | 34.504            | 0.345        |             | 27.536        | 27.536           | 27.545            | 27.545               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 2.889        | 189.168       |            |
| 27       | 2.871        | 182.875       |            |
| 26       | 2.886        | 180.316       |            |
| 8        | 2.893        | 179.923       |            |
| 11       | 2.909        | 178.569       |            |
| 10       | 2.894        | 178.501       |            |
| 21       | 2.899        | 179.042       |            |
| 2        | 2.925        | 178.568       |            |
| 25       | 2.909        | 177.416       |            |
| 5        | 2.924        | 177.077       |            |
| 22       | 2.977        | 173.273       |            |
| 18       | 3.064        | 163.636       |            |

VENTS 1992 - LEG I  
 Station S92101 Cast 96 09 JUNE 1992  
 LAT: 47 49.8N LONG: 127 44.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 1        | 2626.2    | 2665.1     | 1.787         | 1.596   | 0.049       | 34.639         | 34.639            | 0.359        | 0.015       | 27.699        | 27.699           | 27.713            | 27.713               |
| 27       | 2605.0    | 2643.5     | 1.785         | 1.596   | 0.049       | 34.639         | 34.639            | 0.359        | 0.015       | 27.699        | 27.699           | 27.713            | 27.713               |
| 26       | 2584.7    | 2622.8     | 1.783         | 1.596   | 0.049       | 34.639         | 34.640            | 0.358        | 0.014       | 27.699        | 27.700           | 27.713            | 27.714               |
| 8        | 2564.3    | 2601.9     | 1.781         | 1.596   | 0.049       | 34.639         | 34.639            | 0.354        | 0.010       | 27.700        | 27.700           | 27.713            | 27.713               |
| 11       | 2544.6    | 2581.9     | 1.779         | 1.595   | 0.041       | 34.637         | 34.638            | 0.348        | 0.004       | 27.698        | 27.699           | 27.712            | 27.713               |
| 10       | 2525.9    | 2562.8     | 1.779         | 1.597   | 0.043       | 34.637         | 34.637            | 0.345        | 8e-04       | 27.698        | 27.698           | 27.712            | 27.712               |
| 21       | 2505.2    | 2541.7     | 1.775         | 1.595   | 0.038       | 34.636         | 34.636            | 0.344        | -1e-04      | 27.698        | 27.698           | 27.711            | 27.711               |
| 2        | 2485.2    | 2521.2     | 1.772         | 1.594   | 0.029       | 34.634         | 34.635            | 0.343        | -0.001      | 27.696        | 27.697           | 27.710            | 27.710               |
| 25       | 2465.7    | 2501.3     | 1.771         | 1.595   | 0.030       | 34.634         | 34.633            | 0.342        | -0.002      | 27.696        | 27.695           | 27.710            | 27.709               |
| 5        | 2444.6    | 2479.9     | 1.770         | 1.596   | 0.023       | 34.632         | 34.632            | 0.342        | -0.002      | 27.695        | 27.695           | 27.708            | 27.708               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 2.939        | 195.155       | 19.47      |
| 27       | 2.950        | 195.319       | 20.43      |
| 26       | 2.939        | 194.965       | 19.91      |
| 8        | 2.924        | 194.910       | 17.20      |
| 11       | 2.942        | 194.475       | 12.30      |
| 10       | 2.945        | 193.944       | 10.04      |
| 21       | 2.934        | 192.515       | 10.57      |
| 2        | 2.931        | 190.364       | 8.16       |
| 25       | 2.933        | 189.670       | 8.50       |
| 5        | 2.928        | 188.172       | 7.93       |

D-Theta = (ptemp + (4.7101 \* pden)) - 132.0797  
 Atten-Anom = Atten - (0.3215 + 0.01419\*Theta)

VENTS 1992 - LEG I  
 Station S92100 Cast 97 09 JUNE 1992  
 LAT: 47 50.6N LONG: 127 37.5W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 20       | 2623.9    | 2662.8     | 1.783        | 1.592   | 0.049       | 34.639         | 34.640            | 0.358        | 0.014       | 27.699        | 27.700           | 27.714            | 27.715               |
| 23       | 2591.6    | 2629.8     | 1.778        | 1.590   | 0.047       | 34.639         | 34.640            | 0.357        | 0.013       | 27.700        | 27.701           | 27.714            | 27.715               |
| 14       | 2560.5    | 2598.1     | 1.772        | 1.587   | 0.042       | 34.638         | 34.639            | 0.348        | 0.004       | 27.699        | 27.700           | 27.713            | 27.714               |
| 16       | 2531.6    | 2568.6     | 1.772        | 1.590   | 0.032       | 34.635         | 34.636            | 0.342        | -0.002      | 27.697        | 27.698           | 27.711            | 27.711               |
| 9        | 2499.9    | 2536.2     | 1.772        | 1.593   | 0.030       | 34.634         | 34.634            | 0.342        | -0.002      | 27.696        | 27.696           | 27.710            | 27.710               |
| 6        | 2467.2    | 2502.8     | 1.774        | 1.598   | 0.022       | 34.631         | 34.632            | 0.342        | -0.002      | 27.694        | 27.694           | 27.707            | 27.708               |
| 3        | 2441.4    | 2476.6     | 1.777        | 1.603   | 0.022       | 34.630         | 34.631            | 0.343        | -9e-04      | 27.693        | 27.693           | 27.706            | 27.706               |
| 30       | 2411.5    | 2446.1     | 1.782        | 1.611   | 0.020       | 34.628         | 34.628            | 0.343        | -1e-03      | 27.691        | 27.691           | 27.704            | 27.704               |
| 18       | 2380.2    | 2414.1     | 1.787        | 1.618   | 0.017       | 34.626         | 34.627            | 0.342        | -0.002      | 27.689        | 27.689           | 27.701            | 27.702               |
| 13       | 2350.7    | 2384.0     | 1.792        | 1.626   | 0.018       | 34.625         | 34.626            | 0.343        | -0.001      | 27.687        | 27.688           | 27.700            | 27.701               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.861        | 194.584       | 20.79      |
| 23       | 2.875        | 194.133       | 21.79      |
| 14       | 2.850        | 192.529       | 17.54      |
| 16       | 2.842        | 189.451       | 10.60      |
| 9        | 2.843        | 187.863       | 7.82       |
| 6        | 2.848        | 186.226       | 7.74       |
| 3        | 2.836        | 185.415       | 8.00       |
| 30       | 2.856        | 184.769       | 8.70       |
| 18       | 2.867        | 183.849       | 7.59       |
| 13       | 2.855        | 183.722       | 7.41       |

D-Theta = (ptemp + (4.6683 \* pden)) - 130.9194  
 Atten-Anom = Atten - (0.32 + 0.01489\*Theta)

VENTS 1992 -- LEG I  
 Station S92102 Cast 98 09 JUNE 1992  
 LAT: 47 52.3N LONG: 127 37.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 22       | 2630.9    | 2670.0     | 1.787        | 1.595   | 0.051       | 34.637         | 34.639            | 0.353        | 0.009        | 27.697        | 27.699           | 27.712            | 27.713               |
| 29       | 2601.4    | 2639.9     | 1.783        | 1.594   | 0.050       | 34.637         | 34.639            | 0.353        | 0.009        | 27.698        | 27.699           | 27.712            | 27.714               |
| 17       | 2566.2    | 2603.9     | 1.782        | 1.596   | 0.048       | 34.636         | 34.637            | 0.350        | 0.006        | 27.697        | 27.698           | 27.711            | 27.712               |
| 24       | 2529.9    | 2566.8     | 1.784        | 1.602   | 0.039       | 34.633         | 34.634            | 0.345        | 0.001        | 27.694        | 27.695           | 27.708            | 27.709               |
| 12       | 2494.1    | 2530.3     | 1.781        | 1.602   | 0.032       | 34.631         | 34.633            | 0.343        | -8e-04       | 27.693        | 27.695           | 27.707            | 27.708               |
| 19       | 2461.8    | 2497.4     | 1.778        | 1.602   | 0.028       | 34.630         | 34.631            | 0.342        | -0.002       | 27.693        | 27.693           | 27.706            | 27.707               |
| 15       | 2424.8    | 2459.6     | 1.779        | 1.607   | 0.023       | 34.628         | 34.630            | 0.342        | -0.002       | 27.691        | 27.692           | 27.704            | 27.705               |
| 31       | 2389.2    | 2423.3     | 1.780        | 1.611   | 0.022       | 34.627         | 34.629            | 0.342        | -0.002       | 27.690        | 27.692           | 27.703            | 27.704               |

| Niskin # | PO4 (umol/l) | SI04 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 22       | 2.892        | 192.728       | 18.65      |
| 29       | 2.890        | 193.006       | 25.45      |
| 17       | 2.886        | 191.663       | 14.67      |
| 24       | 2.876        | 188.758       | 11.92      |
| 12       | 2.883        | 187.594       | 10.22      |
| 19       | 2.888        | 186.244       | 6.67       |
| 15       | 2.865        | 185.385       | 7.41       |
| 31       | 2.868        | 184.419       | 7.53       |

D-Theta = (ptemp + (4.8808 \* pden)) - 136.8005  
 Atten-Anom = Atten - (0.3289 + 0.009293\*Theta)

VENTS 1992 - LEG I  
 Station T9211 Cast 99 09 JUNE 1992  
 LAT: 47 51.8N LONG: 127 35.4W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 27       | 2625.1    | 2664.1     | 1.784        | 1.593   | 0.039       | 34.638         | 34.640            | 0.359        | 0.016       | 27.698        | 27.700           | 27.713            | 27.714               |
| 1        | 2611.1    | 2649.7     | 1.781        | 1.591   | 0.042       | 34.639         | 34.641            | 0.357        | 0.013       | 27.700        | 27.701           | 27.714            | 27.715               |
| 21       | 2600.4    | 2638.8     | 1.778        | 1.589   | 0.040       | 34.639         | 34.641            | 0.354        | 0.011       | 27.700        | 27.701           | 27.714            | 27.716               |
| 2        | 2520.2    | 2557.0     | 1.779        | 1.598   | 0.031       | 34.635         | 34.637            | 0.348        | 0.004       | 27.696        | 27.698           | 27.710            | 27.712               |
| 25       | 2405.0    | 2439.4     | 1.773        | 1.602   | 0.023       | 34.632         | 34.625            | 0.344        | 5e-04       | 27.695        | 27.689           | 27.707            | 27.702               |
| 10       | 2630.9    | 2670.0     | 1.782        | 1.590   | 0.041       | 34.639         | 34.640            | 0.353        | 0.010       | 27.699        | 27.700           | 27.714            | 27.715               |
| 8        | 2631.4    | 2670.5     | 1.788        | 1.596   | 0.041       | 34.638         | 34.640            | 0.357        | 0.013       | 27.698        | 27.700           | 27.713            | 27.714               |
| 5        | 2522.5    | 2559.3     | 1.778        | 1.597   | 0.034       | 34.636         | 34.640            | 0.348        | 0.004       | 27.697        | 27.701           | 27.711            | 27.714               |
| 11       | 2578.3    | 2616.3     | 1.783        | 1.596   | 0.019       | 34.632         | 34.634            | 0.343        | -5e-04      | 27.694        | 27.695           | 27.708            | 27.709               |
| 26       | 2632.3    | 2671.4     | 1.788        | 1.596   | 0.041       | 34.638         | 34.640            | 0.357        | 0.013       | 27.698        | 27.700           | 27.713            | 27.714               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 27       | 2.871        | 194.133       |            |
| 1        | 2.873        | 195.860       |            |
| 21       | 2.876        | 194.304       |            |
| 2        | 2.856        | 190.663       |            |
| 25       | 2.868        | 186.166       |            |
| 10       | 2.856        | 193.292       |            |
| 8        | 2.859        | 194.013       |            |
| 5        | 2.864        | 192.285       |            |
| 11       | 2.847        | 187.889       |            |
| 26       | 2.851        | 194.435       |            |

D-Theta = (ptemp + (4.6134 \* pden)) - 129.4043  
 Atten-Anom = Atten - 0.3435



VENTS 1992 - LEG I  
 Station T9212 Cast 100 09 JUNE 1992  
 LAT: 47 42.6N LONG: 127 46.9W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp Anom. | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (l/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 6        | 2641.8    | 2681.0     | 1.787         | 1.594         | 0.036       | 34.637         | 34.640            | 0.361        | 0.017        | 27.697        | 27.700           | 27.712            | 27.714               |
| 23       | 2625.2    | 2664.2     | 1.786         | 1.595         | 0.037       | 34.637         | 34.638            | 0.359        | 0.015        | 27.698        | 27.698           | 27.712            | 27.713               |
| 14       | 2610.6    | 2649.2     | 1.786         | 1.596         | 0.038       | 34.637         | 34.638            | 0.359        | 0.015        | 27.698        | 27.698           | 27.712            | 27.713               |
| 16       | 2592.3    | 2630.5     | 1.785         | 1.597         | 0.038       | 34.637         | 34.638            | 0.359        | 0.015        | 27.698        | 27.698           | 27.712            | 27.713               |
| 9        | 2579.9    | 2617.9     | 1.784         | 1.597         | 0.035       | 34.636         | 34.637            | 0.357        | 0.013        | 27.697        | 27.698           | 27.711            | 27.712               |
| 18       | 2493.0    | 2529.1     | 1.776         | 1.597         | 0.020       | 34.632         | 34.633            | 0.345        | 0.001        | 27.694        | 27.695           | 27.708            | 27.709               |
| 30       | 2630.2    | 2669.2     | 1.788         | 1.596         | 0.038       | 34.637         | 34.636            | 0.359        | 0.015        | 27.697        | 27.697           | 27.712            | 27.711               |
| 3        | 2599.0    | 2637.3     | 1.786         | 1.597         | 0.038       | 34.637         | 34.638            | 0.358        | 0.014        | 27.698        | 27.698           | 27.712            | 27.713               |
| 13       | 2573.9    | 2611.8     | 1.780         | 1.594         | 0.029       | 34.635         | 34.634            | 0.349        | 0.005        | 27.696        | 27.696           | 27.710            | 27.710               |
| 24       | 2549.6    | 2587.0     | 1.779         | 1.595         | 0.026       | 34.634         | 34.634            | 0.346        | 0.002        | 27.696        | 27.696           | 27.709            | 27.709               |
| 17       | 2523.9    | 2560.7     | 1.777         | 1.595         | 0.023       | 34.633         | 34.632            | 0.345        | 0.001        | 27.695        | 27.694           | 27.709            | 27.708               |
| 22       | 2499.0    | 2535.3     | 1.776         | 1.597         | 0.016       | 34.631         | 34.631            | 0.345        | 0.001        | 27.693        | 27.693           | 27.707            | 27.707               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 6        | 2.895        | 194.713       |            |
| 23       | 2.898        | 194.588       |            |
| 14       | 2.890        | 194.805       |            |
| 16       | 2.887        | 195.035       |            |
| 9        | 2.905        | 195.549       |            |
| 18       | 2.892        | 190.250       |            |
| 30       | 2.907        | 194.659       |            |
| 3        | 2.923        | 194.860       |            |
| 13       | 2.929        | 193.162       |            |
| 24       | 2.918        | 192.051       |            |
| 17       | 2.918        | 191.222       |            |
| 22       | 2.917        | 189.869       |            |

D-Theta = (ptemp + (4.5907 \* pden)) - 128.7751  
 Atten-Anom = Atten - 0.3440

VENTS 1992 - LEG I  
 Station T9213 Cast 101 10 JUNE 1992  
 LAT: 47 50.5N LONG: 127 43.7W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 1        | 2590.0    | 2628.2     | 1.785        | 1.597   | 0.040       | 34.638         | 34.636            | 0.358        | 0.014        | 27.698        | 27.697           | 27.713            | 27.711               |
| 21       | 2572.2    | 2610.1     | 1.783        | 1.597   | 0.040       | 34.638         | 34.636            | 0.358        | 0.014        | 27.699        | 27.697           | 27.713            | 27.711               |
| 2        | 2560.2    | 2597.8     | 1.782        | 1.597   | 0.040       | 34.638         | 34.636            | 0.358        | 0.014        | 27.699        | 27.697           | 27.713            | 27.711               |
| 25       | 2423.0    | 2457.7     | 1.778        | 1.606   | 0.013       | 34.629         | 34.625            | 0.343        | -0.001       | 27.692        | 27.689           | 27.705            | 27.701               |
| 10       | 2388.7    | 2422.8     | 1.781        | 1.612   | 0.009       | 34.627         | 34.633            | 0.343        | -0.001       | 27.690        | 27.695           | 27.703            | 27.707               |
| 11       | 2590.4    | 2628.6     | 1.782        | 1.595   | -0.366      | 34.528         | 34.632            | 0.351        | 0.007        | 27.610        | 27.694           | 27.624            | 27.708               |
| 19       | 2574.0    | 2611.8     | 1.780        | 1.594   | -0.336      | 34.536         | 34.632            | 0.350        | 0.006        | 27.617        | 27.694           | 27.631            | 27.708               |
| 15       | 2559.5    | 2597.1     | 1.779        | 1.595   | -0.325      | 34.539         | 34.631            | 0.349        | 0.005        | 27.619        | 27.693           | 27.633            | 27.707               |
| 31       | 2543.4    | 2580.6     | 1.777        | 1.594   | -0.289      | 34.549         | 34.630            | 0.347        | 0.003        | 27.628        | 27.693           | 27.641            | 27.706               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 1        | 2.886        | 195.048       |            |
| 21       | 2.896        | 195.068       |            |
| 2        | 2.897        | 195.183       |            |
| 25       | 2.868        | 185.149       |            |
| 10       |              |               |            |
| 11       | 2.882        | 192.071       |            |
| 19       | 2.890        | 192.278       |            |
| 15       | 2.900        | 191.450       |            |
| 31       | 2.898        | 190.487       |            |

D-Theta = (ptemp + (4.5765 \* pden)) - 128.3835  
 Atten-Anom = Atten - 0.3440

VENTS 1992 - LEG I  
 Station S9276 Cast 102 10 JUNE 1992  
 LAT: 47 30.0N LONG: 128 20.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 18       | 2644.8    | 2684.1     | 1.769         | 1.576   |             | 34.639         | 34.636            | 0.363        |              | 27.700        | 27.698           | 27.715            | 27.712               |
| 26       | 2620.6    | 2659.4     | 1.783         | 1.592   |             | 34.637         | 34.634            | 0.356        |              | 27.698        | 27.695           | 27.712            | 27.710               |
| 25       | 2594.9    | 2633.1     | 1.785         | 1.597   |             | 34.636         | 34.632            | 0.351        |              | 27.697        | 27.694           | 27.711            | 27.708               |
| 5        | 2571.6    | 2609.4     | 1.782         | 1.596   |             | 34.634         | 34.631            | 0.347        |              | 27.695        | 27.693           | 27.709            | 27.707               |
| 8        | 2520.5    | 2557.1     | 1.777         | 1.596   |             | 34.631         | 34.629            | 0.345        |              | 27.693        | 27.692           | 27.707            | 27.705               |
| 12       | 2417.4    | 2451.9     | 1.779         | 1.607   |             | 34.627         | 34.623            | 0.343        |              | 27.690        | 27.687           | 27.703            | 27.700               |
| 27       | 2299.0    | 2331.2     | 1.796         | 1.635   |             | 34.620         | 34.616            | 0.344        |              | 27.683        | 27.680           | 27.695            | 27.692               |
| 6        | 2200.0    | 2230.3     | 1.831         | 1.678   |             | 34.611         | 34.610            | 0.345        |              | 27.673        | 27.672           | 27.685            | 27.684               |
| 9        | 2097.6    | 2126.0     | 1.874         | 1.729   |             | 34.602         | 34.598            | 0.345        |              | 27.663        | 27.660           | 27.674            | 27.671               |
| 23       | 1999.2    | 2025.8     | 1.929         | 1.792   |             | 34.592         | 34.588            | 0.344        |              | 27.650        | 27.647           | 27.661            | 27.658               |
| 16       | 1001.3    | 1012.2     | 3.209         | 3.139   |             | 34.341         | 34.338            | 0.349        |              | 27.340        | 27.337           | 27.346            | 27.344               |
| 14       | 499.8     | 504.7      | 4.796         | 4.757   |             | -34.061        | 34.057            | 0.352        |              | 26.954        | 26.951           | 26.958            | 26.955               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 18       | 2.828        | 192.492       |            |
| 26       | 2.855        | 195.503       |            |
| 25       | 2.889        | 195.395       |            |
| 5        | 2.887        | 193.661       |            |
| 8        | 2.868        | 190.521       |            |
| 12       | 2.847        | 187.341       |            |
| 27       | 2.843        | 183.288       |            |
| 6        | 2.858        | 181.409       |            |
| 9        | 2.872        | 178.835       |            |
| 23       | 2.905        | 177.803       |            |
| 16       | 3.113        | 139.039       |            |
| 14       | 2.918        | 86.835        |            |

VENTS 1992 - LEG I  
 Station T9214 Cast 103 10 JUNE 1992  
 LAT: 47 48.8N LONG: 127 33.0W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 22       | 2618.6    | 2657.4     | 1.781         | 1.591   |             | 34.638         |                   | 0.360        |              | 27.699        |                  | 27.713            |                      |
| 27       | 2616.2    | 2654.9     | 1.782         | 1.592   |             | 34.637         |                   | 0.360        |              | 27.698        |                  | 27.712            |                      |
| 24       | 2609.3    | 2647.9     | 1.783         | 1.593   |             | 34.637         |                   | 0.359        |              | 27.698        |                  | 27.712            |                      |
| 30       | 2616.2    | 2655.0     | 1.781         | 1.591   |             | 34.637         |                   | 0.357        |              | 27.698        |                  | 27.712            |                      |
| 3        | 2617.1    | 2655.9     | 1.782         | 1.592   |             | 34.637         |                   | 0.358        |              | 27.698        |                  | 27.712            |                      |
| 13       | 2625.7    | 2664.6     | 1.790         | 1.599   |             | 34.634         |                   | 0.350        |              | 27.695        |                  | 27.709            |                      |
| 17       | 2619.0    | 2657.8     | 1.783         | 1.592   |             | 34.637         |                   | 0.356        |              | 27.698        |                  | 27.712            |                      |
| 6        | 2627.9    | 2666.9     | 1.783         | 1.592   |             | 34.637         |                   | 0.356        |              | 27.698        |                  | 27.712            |                      |
| 9        | 2632.1    | 2671.2     | 1.787         | 1.595   |             | 34.637         |                   | 0.356        |              | 27.697        |                  | 27.712            |                      |
| 23       | 2640.0    | 2679.3     | 1.788         | 1.595   |             | 34.637         |                   | 0.356        |              | 27.697        |                  | 27.712            |                      |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 22       | 2.902        | 196.223       |            |
| 27       | 2.890        | 195.951       |            |
| 24       | 2.879        | 195.497       |            |
| 30       | 2.882        | 195.278       |            |
| 3        | 2.882        | 195.698       |            |
| 13       | 2.885        | 191.505       |            |
| 17       | 2.929        | 194.193       |            |
| 6        | 2.885        | 194.871       |            |
| 9        | 2.887        | 195.388       |            |
| 23       | 2.907        | 194.957       |            |

VENTS 1992 - LEG I  
 Station T9215 Cast 104 10 JUNE 1992  
 LAT: 47 52.5N LONG: 127 45.0W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 20       | 2620.2    | 2659.1     | 1.785        | 1.594   | 0.037       | 34.637         | 34.637            | 0.356        | 0.011        | 27.698        | 27.698           | 27.712            | 27.712               |
| 1        | 2614.6    | 2653.3     | 1.785        | 1.595   | 0.037       | 34.637         | 34.637            | 0.352        | 0.007        | 27.698        | 27.698           | 27.712            | 27.712               |
| 21       | 2459.3    | 2494.8     | 1.778        | 1.602   | 0.024       | 34.632         | 34.632            | 0.345        | 0.000        | 27.694        | 27.694           | 27.707            | 27.707               |
| 2        | 2509.9    | 2546.4     | 1.777        | 1.597   | 0.028       | 34.634         | 34.634            | 0.347        | 0.002        | 27.696        | 27.696           | 27.709            | 27.709               |
| 12       | 2504.1    | 2540.5     | 1.775        | 1.595   | 0.034       | 34.636         | 34.636            | 0.346        | 0.001        | 27.698        | 27.698           | 27.711            | 27.711               |
| 14       | 2559.8    | 2597.4     | 1.781        | 1.596   | 0.042       | 34.638         | 34.638            | 0.357        | 0.012        | 27.699        | 27.699           | 27.713            | 27.713               |
| 10       | 2618.1    | 2656.9     | 1.785        | 1.594   | 0.041       | 34.638         | 34.638            | 0.357        | 0.012        | 27.698        | 27.698           | 27.713            | 27.713               |
| 16       | 2631.8    | 2670.9     | 1.788        | 1.596   | 0.038       | 34.637         | 34.637            | 0.358        | 0.013        | 27.697        | 27.697           | 27.712            | 27.712               |
| 29       | 2501.3    | 2537.7     | 1.774        | 1.595   | 0.026       | 34.634         | 34.634            | 0.344        | -0.001       | 27.696        | 27.696           | 27.710            | 27.710               |
| 15       | 2639.8    | 2679.0     | 1.789        | 1.596   | 0.042       | 34.638         | 34.638            | 0.359        | 0.014        | 27.698        | 27.698           | 27.713            | 27.713               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 20       | 2.898        | 193.517       |            |
| 1        | 2.889        | 193.732       |            |
| 21       | 2.867        | 188.766       |            |
| 2        | 2.878        | 190.690       |            |
| 12       | 2.912        | 193.643       |            |
| 14       | 2.903        | 195.464       |            |
| 10       | 2.911        | 195.238       |            |
| 16       | 2.892        | 195.048       |            |
| 29       | 2.888        | 190.291       |            |
| 15       | 2.919        | 195.629       |            |

D-Theta = (ptemp + (4.5576 \* pden)) - 127.8574  
 Atten-Anom = Atten - 0.3450

VENTS 1992 - LEG I  
 Station S92103 Cast 105 11 JUNE 1992  
 LAT: 47 35.0N LONG: 127 51.1W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 24       | 2659.2    | 2698.8     | 1.776         | 1.582   | 0.046       | 34.639         | 0.363             | 0.017        | 0.363        | 27.700        | 27.700           | 27.714            | 27.714               |
| 23       | 2646.4    | 2685.7     | 1.778         | 1.585   | 0.048       | 34.639         | 0.361             | 0.015        | 0.361        | 27.700        | 27.700           | 27.714            | 27.714               |
| 6        | 2629.7    | 2668.7     | 1.785         | 1.593   | 0.045       | 34.637         | 0.356             | 0.010        | 0.356        | 27.698        | 27.698           | 27.712            | 27.712               |
| 3        | 2604.8    | 2643.3     | 1.785         | 1.596   | 0.047       | 34.637         | 0.355             | 0.009        | 0.355        | 27.698        | 27.698           | 27.712            | 27.712               |
| 27       | 2581.5    | 2619.5     | 1.782         | 1.595   | 0.043       | 34.636         | 0.351             | 0.005        | 0.351        | 27.697        | 27.697           | 27.711            | 27.711               |
| 11       | 2555.2    | 2592.6     | 1.775         | 1.591   | 0.032       | 34.634         | 0.348             | 0.002        | 0.348        | 27.696        | 27.696           | 27.710            | 27.710               |
| 19       | 2531.1    | 2568.0     | 1.766         | 1.584   | 0.020       | 34.632         | 0.347             | 0.001        | 0.347        | 27.695        | 27.695           | 27.709            | 27.709               |
| 31       | 2490.0    | 2526.0     | 1.774         | 1.596   | 0.028       | 34.632         | 0.345             | -9e-04       | 0.345        | 27.694        | 27.694           | 27.708            | 27.708               |
| 9        | 2451.0    | 2486.3     | 1.776         | 1.601   | 0.024       | 34.630         | 0.343             | -0.003       | 0.343        | 27.693        | 27.693           | 27.706            | 27.706               |
| 22       | 2348.2    | 2381.4     | 1.787         | 1.621   | 0.014       | 34.624         | 0.343             | -0.003       | 0.343        | 27.687        | 27.687           | 27.700            | 27.700               |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 24       | 2.848        | 192.127       |            |
| 23       | 2.860        | 192.934       |            |
| 6        | 2.889        | 193.418       |            |
| 3        | 2.883        | 194.466       |            |
| 27       | 2.883        | 193.404       |            |
| 11       | 2.881        | 190.892       |            |
| 19       | 2.859        | 186.363       |            |
| 31       | 2.858        | 189.051       |            |
| 9        | 2.878        | 186.928       |            |
| 22       | 2.882        | 184.549       |            |

D-Theta = (ptemp + (4.7662 \* pden)) - 133.629  
 Atten-Anom = Atten - (0.3312 + 0.009186\*Theta)

VENTS 1992 - LEG I  
 Station S92104 Cast 106 11 JUNE 1992  
 LAT: 47 51.1N LONG: 127 36.6W

| Miskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 13       | 2616.0    | 2654.8     | 1.782        | 1.592   | 0.048       | 34.638         | 34.638            | 0.359        | 0.013        | 27.699        | 27.699           | 27.713            | 27.713               |
| 8        | 2600.0    | 2638.5     | 1.780        | 1.591   | 0.047       | 34.638         | 34.638            | 0.359        | 0.013        | 27.699        | 27.699           | 27.713            | 27.713               |
| 30       | 2581.3    | 2619.3     | 1.777        | 1.590   | 0.043       | 34.637         | 34.637            | 0.353        | 0.007        | 27.698        | 27.698           | 27.712            | 27.712               |
| 17       | 2559.3    | 2596.9     | 1.776        | 1.591   | 0.040       | 34.636         | 34.636            | 0.347        | 0.001        | 27.698        | 27.698           | 27.711            | 27.711               |
| 18       | 2532.4    | 2569.4     | 1.775        | 1.593   | 0.033       | 34.634         | 34.634            | 0.345        | -8e-04       | 27.696        | 27.696           | 27.710            | 27.710               |
| 26       | 2509.8    | 2546.3     | 1.775        | 1.595   | 0.031       | 34.633         | 34.633            | 0.344        | -0.002       | 27.695        | 27.695           | 27.709            | 27.709               |
| 25       | 2485.8    | 2521.9     | 1.774        | 1.596   | 0.028       | 34.632         | 34.632            | 0.344        | -0.002       | 27.694        | 27.694           | 27.708            | 27.708               |
| 5        | 2446.3    | 2481.5     | 1.774        | 1.600   | 0.022       | 34.630         | 34.630            | 0.344        | -0.002       | 27.693        | 27.693           | 27.706            | 27.706               |
| 21       | 2405.8    | 2440.3     | 1.775        | 1.604   | 0.018       | 34.628         | 34.628            | 0.343        | -0.003       | 27.691        | 27.691           | 27.704            | 27.704               |

| Miskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 13       | 2.880        | 194.844       |            |
| 8        | 2.888        | 194.843       |            |
| 30       | 2.872        | 192.346       |            |
| 17       | 2.890        | 191.581       |            |
| 18       | 2.880        | 190.366       |            |
| 26       | 2.866        | 189.643       |            |
| 25       | 2.863        | 188.032       |            |
| 5        | 2.859        | 186.735       |            |
| 21       | 2.862        | 185.370       |            |

D-Theta = (ptemp + (4.7568 \* pden)) - 133.369  
 Atten-Anom = Atten - (0.3331 + 0.007996\*Theta)

VENTS 1992 - LEG I  
 Station S9275 Cast 107 11 JUNE 1992  
 LAT: 48 00.0N LONG: 127 37.9W

| Niskin # | Depth (m) | Depth (db) | In situ Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (l/m) | Atten. Anom. | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|---------------|---------|-------------|----------------|-------------------|--------------|--------------|---------------|------------------|-------------------|----------------------|
| 14       | 2619.1    | 2658.0     | 1.780         | 1.589   |             | 34.638         |                   | 0.358        |              | 27.699        |                  | 27.713            |                      |
| 29       | 2605.9    | 2644.5     | 1.781         | 1.592   |             | 34.638         |                   | 0.358        |              | 27.699        |                  | 27.713            |                      |
| 16       | 2588.7    | 2627.0     | 1.778         | 1.590   |             | 34.638         |                   | 0.353        |              | 27.699        |                  | 27.713            |                      |
| 10       | 2565.5    | 2603.2     | 1.775         | 1.590   |             | 34.636         |                   | 0.347        |              | 27.698        |                  | 27.712            |                      |
| 15       | 2539.6    | 2576.8     | 1.772         | 1.589   |             | 34.634         |                   | 0.345        |              | 27.696        |                  | 27.710            |                      |
| 1        | 2514.8    | 2551.5     | 1.772         | 1.591   |             | 34.633         |                   | 0.344        |              | 27.695        |                  | 27.709            |                      |
| 12       | 2489.9    | 2526.0     | 1.772         | 1.594   |             | 34.632         |                   | 0.344        |              | 27.695        |                  | 27.708            |                      |
| 9        | 2450.2    | 2485.6     | 1.772         | 1.597   |             | 34.630         |                   | 0.344        |              | 27.693        |                  | 27.706            |                      |
| 24       | 2409.4    | 2444.0     | 1.776         | 1.605   |             | 34.628         |                   | 0.344        |              | 27.691        |                  | 27.704            |                      |
| 27       | 2309.6    | 2342.1     | 1.793         | 1.631   |             | 34.622         |                   | 0.344        |              | 27.685        |                  | 27.697            |                      |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 14       | 2.869        | 194.222       |            |
| 29       | 2.864        | 195.150       |            |
| 16       | 2.885        | 193.831       |            |
| 10       | 2.873        | 191.677       |            |
| 15       | 2.860        | 189.308       |            |
| 1        | 2.861        | 189.025       |            |
| 12       | 2.851        | 186.952       |            |
| 9        | 2.845        | 186.076       |            |
| 24       | 2.859        | 185.026       |            |
| 27       | 2.860        | 182.966       |            |



VENTS 1992 - LEG I  
 Station S9274 Cast 108 11 JUNE 1992  
 LAT: 48 10.0N LONG: 126 37.1W

| Niskin # | Depth (m) | Depth (db) | Insitu Temp. | Pottemp | Temp. Anom. | Salinity (CTD) | Salinity (Bottle) | Atten. (1/m) | Atten. Anom | Sigma-t (CTD) | Sigma-t (Bottle) | Sigma-Theta (CTD) | Sigma-Theta (Bottle) |
|----------|-----------|------------|--------------|---------|-------------|----------------|-------------------|--------------|-------------|---------------|------------------|-------------------|----------------------|
| 5        | 2472.0    | 2507.8     | 1.772        | 1.595   |             | 34.638         |                   | 0.395        |             | 27.699        |                  | 27.713            |                      |
| 21       | 2300.4    | 2332.8     | 1.765        | 1.604   |             | 34.631         |                   | 0.367        |             | 27.694        |                  | 27.706            |                      |
| 2        | 2199.8    | 2230.3     | 1.782        | 1.630   |             | 34.625         |                   | 0.373        |             | 27.688        |                  | 27.700            |                      |
| 3        | 2100.4    | 2129.0     | 1.808        | 1.664   |             | 34.618         |                   | 0.370        |             | 27.681        |                  | 27.692            |                      |
| 23       | 1999.4    | 2026.1     | 1.865        | 1.729   |             | 34.607         |                   | 0.372        |             | 27.667        |                  | 27.678            |                      |
| 6        | 1899.5    | 1924.4     | 1.924        | 1.795   |             | 34.595         |                   | 0.373        |             | 27.653        |                  | 27.663            |                      |
| 31       | 1497.0    | 1515.2     | 2.564        | 2.460   |             | 34.512         |                   | 0.377        |             | 27.534        |                  | 27.543            |                      |
| 11       | 999.8     | 1010.7     | 3.481        | 3.409   |             | 34.366         |                   | 0.372        |             | 27.334        |                  | 27.341            |                      |
| 19       | 499.9     | 504.7      | 4.948        | 4.908   |             | 34.069         |                   | 0.379        |             | 26.943        |                  | 26.948            |                      |
| 22       | 297.4     | 300.2      | 6.019        | 5.993   |             | 33.953         |                   | 0.383        |             | 26.723        |                  | 26.726            |                      |
| 25       | 18.9      | 19.0       | 13.287       | 13.284  |             | 32.208         |                   | 0.520        |             | 24.175        |                  | 24.175            |                      |

| Niskin # | PO4 (umol/l) | SiO4 (umol/l) | TSM (ug/l) |
|----------|--------------|---------------|------------|
| 5        | 2.938        | 197.106       |            |
| 21       | 2.910        | 186.531       |            |
| 2        | 2.912        | 186.898       |            |
| 3        | 2.922        | 184.063       |            |
| 23       | 2.933        | 182.372       |            |
| 6        | 2.970        | 180.041       |            |
| 31       | 3.122        | 161.588       |            |
| 11       | 3.204        | 133.434       |            |
| 19       | 2.941        | 85.029        |            |
| 22       | 2.479        | 57.855        |            |
| 25       | 0.407        | 2.648         |            |