DATA REPORT

R/V KNORR
WARM CORE RINGS Nº 2
19 APR - 6 MAY, 1982

edited by

D.A. Phinney, E.W. Langton, J.C. Garside

Technical Report No. 40

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**BIGELOW LABORATORY
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OCEAN SCIENCES**

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Technical Report # 40

R/V *KNORR*

Warm Core Ring Project

19 April - 6 May, 1982

edited by

D.A. Phinney, E.W. Langton and J.C. Garside

Bigelow Laboratory for Ocean Sciences

McKown Point

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December 1983

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INTRODUCTION

The second cruise of the Warm Core Rings program marks the beginning of an intensive season of field study. Again, our interests are primarily concerned with measuring the bio-optical properties of rings and surrounding water masses. Through our observations of the horizontal and vertical distributions of phytoplankton and their pigments concurrent with observations of the submarine light field, we attempt to further our understanding of the relationship between light and photosynthetic organisms in the sea, and our ability to remotely sense them.

Several modifications to the main objectives of the program's field efforts, from those of October 1981, are to be noted. Studies of ring 81-D in October 1981 was the first attempt for many investigators to make measurements in the unique environment of a warm core ring. As the likelihood of the ring surviving until the following field season was slim, no attempt was made to revisit the ring. Physical measurements were made from a constantly mobile platform, R/V Endeavor, while the biological platform, R/V Atlantis II, sat on station for days. Biological measurements were spatially divided into three sub-areas: slope water, ring center, and the high velocity region.

With our feet wet, the strategy was now to select a ring that would be long lived, such that it could be revisited several times during the field season. While the physical measurements were being made in much the same fashion from R/V Endeavor, biologists were split among R/V Knorr and R/V Oceanus, with a resultant increase in mobility. Finally,

measurements of the surrounding water masses grew to include the Gulf Stream and Sargasso Sea.

The reader will find the format of the present report to be that of Bigelow Laboratory Technical Report #31, R/V Atlantis II Warm Core Rings I, October 1981.

R/V KNORR 93 CRUISE TRACK
APRIL 19 - MAY 6, 1982

Methods

I. Continuous underway data acquisition

Throughout the duration of the cruise, data from a number of instruments is collected continuously to evaluate horizontal variability and spatial distributions of several parameters. Seawater is pumped from a through-hull fitting 2 meters below the surface to a deck distribution tank which debubbles and supplies the seawater to instruments in the lab at a constant 10 l/minute rate.

Three Turner Design Model 10-005R red sensitive fluorometers are outfitted with blue T-5 lamps and the following color filters:

Chlorophyll	Excitation filter	CS5-60
	Emission filter	CS2-64
	Reference filter	CS3-66
Fucoxanthin	Excitation filter	CS4-64
	Emission filter	CS2-64
	Reference filter	CS3-66
Phycoerythrin	Excitation filter	IF 530
	Emission filter	IF 580
	Reference filters	1% ND & W8

CS - Corning Glass filter
 IF - Labsphere Interference filter
 ND - Neutral Density filter
 W - Wratten Gelatin Filter

They are placed in series with a semi-conductor temperature transducer to monitor fluorescence of the three pigments and temperature continuously. A Biospherical Instruments Model QSR-250 integrating irradiance meter is placed at a non-shaded location to continuously monitor photosynthetically active incident solar irradiance (PAR) between 400 and 700 nm.

To facilitate concurrent data sampling and mass storage, the above instruments are interfaced to the ships WHOI Sail data acquisition system as described by Peal and Mellinger (1981). Twenty eight parameters in all are collected at 5 minute intervals and stored on magnetic tape and as hard printed copy.

Peal, K.R. and E.C. Mellinger, 1981. Oceans 14: 287-291.

II. Pumping station procedure

The surface 125m is continuously profiled using a large volume pumping system which enables onboard analysis of biological, chemical and physical parameters. The system components include a Flygt Model B205 submersible pump, >125m of two inch diameter flexible hose and the deck distribution box described above. The hose intake is secured to a rosette with CTD and lowered to the desired depth. The pump is deployed just below the surface. Surface underway seawater feed lines are

removed from the distribution tank and are replaced by the ca. 200 l/minute flow from the pumping system. Flushing rates are very short and delay characteristics from the distribution tank to the instruments remain constant for either system.

When the entire system has flushed, sampling begins by raising the rosette 1 meter every 30 seconds until it reaches 2m depth where the system is again allowed to flush. Depth corrections from the CTD are applied to instrument readings to compensate for delay time through the pumping system. Discrete samples are drawn directly from the instrument outflow at depths of interest for instrument calibration and biological experimentation.

Temperature and salinity data are obtained from a conductivity-temperature probe developed at Bigelow Laboratory. An Inter Ocean Model 195R conductivity transducer, range 0-60mmho, and Fenwal GC32L8 thermistor, range 0-30°C, package is placed in the distribution tank and values logged every 30 seconds on a Hewlett-Packard 85 plus 3497A data acquisition unit. Temperature output voltage x 10 = temperature, accuracy $\pm 0.1^\circ\text{C}$. Conductivity output voltage x 10 = conductivity, accuracy ± 0.1 mmho.

Discrete phytoplankton chlorophyll

The fluorometric determination of chlorophyll as described by Yentsch and Menzel (1963) is followed. Phytoplankton are harvested on Millipore HA cellulose acetate membrane filters, pore size $0.45\ \mu$. The filter and particulate material are homogenized in 85% acetone for 1 minute, extract volume brought to 12 ml and centrifuged at 3000 rpm for 5 minutes. Fluorescence of the supernatant is measured using a Turner Model 111 fluorometer outfitted with a red sensitive photomultiplier tube, blue T-5 lamp, CS5-60 excitation filter and CS2-64 emission filter. Three drops of 1N HCl are added directly to the cuvette and fluorescence again measured after 1 minute for phaeopigment determination.

Calibration is performed using prepared chlorophyll a from spinach purchased from Sigma Chemical Corp.

Yentsch, C.S. and D.W. Menzel, 1963. Deep-Sea Res. 10: 221-231.

Phytoplankton spectral signatures

Yentsch and Yentsch (1979) describe a technique for differentiating phytoplankton into color groups by in vivo absorption and fluorescence spectral signatures. Particulates are harvested from one liter of seawater using a Whatman GF/F 25 mm diameter glass fiber filter. Absorption spectra are measured between 350 and 750 nm with a Bausch and Lomb Spectronic 2000 dual beam spectrophotometer. Two wetted blank filters are placed vertically in a lucite holder in front of the sample and reference detectors and a baseline stored. The wetted filter with particulates is placed in front of the sample detector with a blank filter remaining as reference and the absorption spectrum is recorded.

This method is an adaptation of the opal glass technique proposed by Shibata (1958) for in vivo plant pigment studies. Due to the large light scattering effect of cells or chloroplasts in suspension, the beam of the spectrophotometer must be diffused sufficiently such that scatter plays a lesser role than absorption. Truper and Yentsch (1967) proposed using a glass fiber filter in place of opal glass as the beam diffuser working with photosynthetic bacteria. Yentsch and Phinney (1982) and Kiefer and SooHoo (1982) have also worked with particulates on glass fiber filters.

The same sample filter is then transferred to a Baird-Atomic Model SF-1 fluorescence spectrophotometer where it is placed vertically in the sample compartment so as to create a front surface measurement. One excitation spectrum is recorded between 350 and 600 nm viewing fluorescence at 680 nm. Two emission spectra are viewed between 500 and 750 nm for excitations at 470 and 530 nm. This same filter is then processed as above for extracted chlorophyll.

Kiefer, D.A. and J.B. SooHoo, 1982. Limnol. Oceanogr., 27 (3): 492-499.

Shibata, K., 1958. J. Biochem. 45: 599-623.

Truper, H. and C.S. Yentsch, 1967. J. Bacteriol. 94: 1255-1256.

Yentsch, C.S. and D.A. Phinney, 1982. Jour. Plank. Res. 4 (1): 93-102.

Yentsch, C.S. and C.M. Yentsch, 1979. J. Mar. Res. 37 (3): 471-483.

III. Downwelling and upwelling irradiance

A four channel submarine photometer developed at Bigelow Laboratory is employed to measure relative downwelling and upwelling irradiance. Four photodiodes are individually filtered at 440, 520, 550 and 670 nm with half-power bandwidths of 7.5, 8.2, 9.2 and 11.5 nm respectively. A pressure transducer of accuracy ± 0.5 m displays depth. The photometer is lowered to specific depths facing the surface for downwelling irradiance, retrieved, turned over and lowered for upwelling irradiance. Relative curves for each band are plotted and attenuation coefficients calculated for each depth interval by:

$$K = -\ln \cdot \frac{1}{z_2 - z_1} \cdot \frac{\Sigma dz_2}{\Sigma dz_1}$$

Where K = the attenuation coefficient at the half interval depth $(z_2 - z_1)/2 + z_1$

Σdz_1 = relative irradiance at depth z_1 .

Σdz_2 = relative irradiance at depth z_2 .

Total Downwelling Irradiance (PAR)

Total photosynthetically active radiation (PAR) between 400-700 nm is measured as a function of depth with a Biospherical Instrument model QSI-140 quantum scalar irradiance meter.

Overflight Data Summary

		Bucket Chlorophyll
#1	1400 GMT	2.06 ug/l
#2	1403	1.68

Position

1400 GMT	Loran C	39° 09.24'	69° 25.45'
1400	Omega	39° 09.53'	69° 24.28'
1410	Sat Nav	39° 09.28'	69° 25.12'

Secchi Depth 14m

Water Color Index 5BG 5/6

Total Irradiance Op# 0420.05 1600-1630 GMT

0-30m k = 0.150

30-60m k = 0.049

Four Channel Irradiance Op# 0420.06 1650-1745 GMT

		k ₄₄₀	k ₅₂₀	k ₅₅₀	k ₆₇₀
E _d	0-11.5m	0.238	0.191	0.162	0.443
	11.5-63.5m	0.058	0.050	0.065	-
E _u	0-6.5m	0.253	0.185	0.211	0.378
	6.5-28m	0.068	0.060	0.085	-

Vertical profile information for this station can be found as Op# 0420.09, station 1, Slope water, 2130 GMT.

R/V KNORR

OPERATION #0420.09

TEMPERATURE (°C) -O-

R/V KNORR
OPERATION #0420.09

FUCO/CHL RATIO -O-

OPERATION 0420.09 STATION 1 LATITUDE 39° 9.0'N LONGITUDE 69°26.0'W DATE 04/20/82 TIME 0330

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (o/oo)	SIGMA T	CHLOROPHYLL (ug/l)	FUCCI:CHL
2.0	9.72	32.731	25.250	2.680	0.413
3.5	9.77	32.890	25.365	2.720	0.406
4.9	9.62	33.027	25.497	2.840	0.423
6.0	9.40	33.127	25.611	3.504	0.437
7.2	9.08	32.594	25.245	4.047	0.470
8.5	9.00	32.771	25.396	4.288	0.493
9.6	9.14	32.746	25.355	4.288	0.482
10.7	8.96	32.392	25.106	4.228	0.476
11.7	8.99	32.053	24.837	4.047	0.482
12.9	8.99	32.156	24.918	3.987	0.476
14.8	8.74	32.384	25.134	3.806	0.482
15.2	8.65	32.466	25.212	2.720	0.453
17.6	8.49	32.403	25.187	1.875	0.405
18.4	8.43	32.353	25.157	1.875	0.405
19.2	8.39	32.495	25.274	1.815	0.414
20.0	8.37	32.514	25.291	1.694	0.390
20.7	8.37	32.725	25.457	1.634	0.399
21.3	8.45	32.651	25.387	1.634	0.399
22.1	8.48	32.939	25.608	1.574	0.385
23.0	8.56	33.181	25.784	1.393	0.391
24.0	8.83	33.243	25.791	1.151	0.353
25.0	9.18	33.124	25.644	0.669	0.317
26.0	9.81	33.569	25.888	0.669	0.244
27.0	10.34	33.687	25.890	0.669	0.244
28.0	10.61	33.840	25.962	0.669	0.281
29.0	10.74	33.719	25.845	0.669	0.244
30.0	10.83	33.636	25.765	0.669	0.244
31.0	10.85	33.618	25.747	0.669	0.244
31.5	10.84	33.627	25.756	0.669	0.281
32.0	10.73	34.030	26.088	0.669	0.281
33.7	10.81	34.055	26.094	0.488	0.317
35.3	10.82	34.046	26.085	0.488	0.317
36.0	11.02	33.960	25.983	0.488	0.317
37.0	11.00	34.079	26.078	0.488	0.317
38.0	11.18	33.813	25.839	0.488	0.317
39.0	11.13	33.461	25.576	0.427	0.331
40.0	11.10	33.588	25.679	0.488	0.317
41.0	11.06	33.625	25.715	0.488	0.276
42.5	11.19	33.605	25.676	0.427	0.288
43.3	11.35	33.657	25.687	0.548	0.304
44.1	11.41	33.602	25.634	0.608	0.329
45.0	11.50	33.520	25.554	0.608	0.366
46.3	11.61	33.715	25.685	0.669	0.353
47.7	11.52	33.994	25.918	0.669	0.353
49.0	11.73	33.704	25.654	0.608	0.366
49.5	11.63	33.893	25.819	0.608	0.329
50.0	11.65	33.483	25.497	0.669	0.353
51.0	11.62	33.608	25.600	0.608	0.329
52.0	11.75	33.490	25.485	0.548	0.304
53.0	11.87	33.577	25.530	0.488	0.317
54.0	11.85	33.595	25.547	0.488	0.317
55.0	11.99	33.664	25.574	0.488	0.317
56.3	11.97	33.779	25.667	0.548	0.304
57.7	12.02	33.831	25.698	0.488	0.317
59.0	12.04	33.910	25.756	0.488	0.317
60.0	12.06	33.892	25.738	0.488	0.276
61.0	11.99	34.053	25.876	0.488	0.317
62.0	12.00	34.142	25.942	0.488	0.276
63.0	12.04	34.008	25.831	0.488	0.276
64.0	12.16	34.093	25.874	0.488	0.317
65.0	12.25	34.011	25.793	0.488	0.317
66.0	12.20	34.153	25.913	0.488	0.276
66.7	12.24	34.311	26.027	0.427	0.288
67.3	12.36	34.298	25.994	0.488	0.276
68.0	12.37	34.288	25.985	0.427	0.331
69.5	12.31	34.343	26.039	0.488	0.276
71.0	12.44	34.321	25.997	0.427	0.288
72.0	12.30	34.353	26.048	0.427	0.288
73.0	12.22	34.426	26.121	0.427	0.288
74.0	12.26	34.486	26.160	0.427	0.288
75.0	12.21	34.630	26.280	0.427	0.288
76.0	12.21	34.630	26.280	0.427	0.288
77.0	12.26	34.583	26.235	0.427	0.288
78.5	12.23	34.708	26.337	0.427	0.288
80.0	12.21	34.630	26.280	0.427	0.288
80.5	12.27	34.768	26.376	0.427	0.288
81.0	12.20	34.736	26.365	0.427	0.288
82.0	12.33	34.616	26.246	0.427	0.288
83.0	12.25	34.787	26.394	0.427	0.288
84.3	12.31	34.537	26.189	0.427	0.288
85.5	12.31	34.440	26.114	0.367	0.302
86.2	12.33	34.519	26.171	0.427	0.246
87.0	12.22	34.523	26.196	0.427	0.288
88.5	12.30	34.546	26.198	0.427	0.246
90.0	12.21	34.533	26.205	0.367	0.302
91.0	12.20	34.445	26.139	0.367	0.257
92.0	12.32	34.334	26.030	0.367	0.302
93.0	12.21	34.533	26.205	0.367	0.302
94.0	12.16	34.384	26.100	0.367	0.302
95.0	12.00	34.434	26.169	0.367	0.257
96.0	11.93	34.499	26.233	0.367	0.302
97.0	11.97	34.560	26.272	0.367	0.302
98.0	12.01	34.425	26.160	0.367	0.302
99.0	12.05	34.486	26.200	0.367	0.257
100.0	11.93	34.695	26.385	0.427	0.288
101.0	11.89	34.830	26.497	0.367	0.257
102.0	12.20	34.542	26.214	0.367	0.302
103.0	11.99	34.737	26.406	0.367	0.257
104.5	12.02	34.709	26.378	0.367	0.302
106.0	11.97	34.951	26.576	0.367	0.302
106.5	11.86	35.055	26.677	0.367	0.257
107.0	11.90	35.017	26.640	0.367	0.257
109.0	11.77	35.140	26.760	0.367	0.257
109.5	11.81	35.004	26.647	0.367	0.257
110.0	11.80	35.013	26.656	0.367	0.257
112.0	11.89	35.125	26.725	0.367	0.257
113.0	11.94	35.176	26.755	0.367	0.257
114.0	11.82	35.191	26.790	0.367	0.257
115.0	11.83	35.182	26.781	0.367	0.257
116.0	11.81	35.200	26.799	0.367	0.257

R/V KNØRR

OPERATION #0422.07

TEMPERATURE (°C) -O-

R/V KNORR
OPERATION #0422.07

FUCO/CHL RATIO -O-

OPERATION 0422.07 STATION 2 LATITUDE 38°51.4'N LONGITUDE 71°17.4'W DATE 04/22/82 TIME 1730

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (o/oo)	SIGMA T	CHLOROPHYLL (ug/l)	FUCO:CHL
1.0	15.77	36.667	27.099	1.871	0.433
1.5	15.85	36.593	27.024	1.871	0.411
3.7	15.81	36.630	27.061	1.871	0.433
4.2	15.74	36.785	27.197	1.925	0.424
5.0	15.76	36.857	27.248	1.925	0.424
5.8	15.75	36.867	27.258	1.980	0.414
6.7	15.78	36.748	27.159	1.980	0.435
7.9	15.89	36.646	27.055	2.034	0.426
9.1	15.76	36.767	27.178	2.034	0.426
10.1	15.81	36.720	27.131	2.088	0.417
11.1	15.81	36.720	27.131	2.088	0.417
12.3	15.78	36.839	27.229	2.088	0.437
13.4	15.74	36.423	26.919	2.088	0.437
14.5	15.74	36.604	27.058	2.088	0.437
15.5	15.79	36.558	27.011	2.034	0.426
16.5	15.72	36.804	27.216	1.980	0.414
17.5	15.63	36.798	27.232	1.925	0.424
18.5	15.74	36.785	27.197	2.088	0.437
19.5	15.68	36.751	27.185	2.142	0.428
20.5	15.78	36.658	27.090	2.142	0.428
21.5	15.68	36.842	27.254	2.088	0.417
22.5	15.77	36.667	27.099	2.088	0.417
23.4	15.74	36.785	27.197	2.034	0.446
24.4	15.68	36.842	27.254	2.034	0.426
25.4	15.64	36.516	27.013	1.980	0.414
26.4	15.77	36.395	26.890	1.980	0.435
27.4	15.73	36.523	26.998	1.817	0.421
28.4	15.70	36.732	27.166	1.817	0.421
29.4	15.63	36.707	27.162	1.763	0.431
30.6	15.75	36.595	27.049	1.871	0.433
31.8	15.88	36.474	26.926	1.871	0.433
33.0	15.67	36.760	27.194	1.871	0.433
34.2	15.79	36.739	27.150	1.763	0.409
35.2	15.52	36.992	27.407	1.709	0.419
36.2	15.67	37.033	27.404	1.655	0.405
37.2	15.76	36.857	27.248	1.546	0.376
38.2	15.64	36.970	27.362	1.600	0.416
39.3	15.62	36.898	27.311	1.546	0.401
40.4	15.68	36.842	27.254	1.492	0.412
41.4	15.65	36.870	27.283	1.384	0.409
42.4	15.65	37.052	27.423	1.275	0.405
43.4	15.69	36.923	27.315	1.275	0.375
44.3	15.66	37.042	27.413	1.329	0.392
45.5	15.65	36.961	27.353	1.329	0.392
46.6	15.67	36.942	27.334	1.384	0.381
47.7	15.67	36.942	27.334	1.384	0.409
48.7	15.69	36.107	26.687	1.384	0.409
49.7	15.67	36.125	26.706	1.384	0.409
50.7	15.63	36.344	26.883	1.384	0.381
51.7	15.69	36.379	26.896	1.275	0.405
52.6	15.75	36.414	26.909	1.275	0.375
53.5	15.82	36.349	26.844	1.275	0.375
54.5	15.63	36.525	27.022	1.275	0.375
55.5	15.67	36.488	26.985	1.221	0.387
56.4	15.64	36.607	27.083	1.221	0.387
57.2	15.57	36.581	27.079	1.221	0.387
58.0	15.64	36.788	27.222	1.167	0.400
59.3	15.65	36.688	27.143	1.221	0.387
60.5	15.62	36.807	27.241	1.221	0.387
61.8	15.67	36.669	27.124	1.221	0.387
62.8	15.80	36.729	27.141	1.221	0.387
63.8	15.71	36.723	27.156	1.167	0.369
64.8	15.63	36.798	27.232	1.167	0.369
65.8	15.59	36.835	27.270	1.167	0.369
66.9	15.55	36.964	27.378	1.004	0.340
68.0	15.58	36.936	27.350	0.896	0.366
69.2	15.54	37.064	27.458	0.896	0.329
70.4	15.56	37.137	27.509	0.896	0.366
71.4	15.67	36.851	27.264	0.950	0.353
72.4	15.51	37.093	27.487	0.950	0.353
73.3	15.58	37.027	27.420	1.004	0.374
74.3	15.54	37.064	27.458	1.004	0.374
75.4	15.61	37.089	27.461	1.058	0.361
76.5	15.76	36.948	27.318	1.058	0.361

R/V KNORR
OPERATION #0424.07

TEMPERATURE (°C) -O-

R/V KNORR

OPERATION #0424.07

FUCC/CHL RATIO -O-

OPERATION 0424.07 STATION 6 LATITUDE 39°46.4'N LONGITUDE 71°26.9'W DATE 04/24/82 TIME 15:5

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (g/100)	SIGMA T	CHLOROPHYLL (ug/l)	FUCO:CHL
1.2	10.31	35.749	27.501	2.192	0.558
2.0	10.08	35.977	27.719	2.274	0.543
3.2	10.18	35.980	27.704	2.192	0.558
4.4	10.20	35.961	27.685	2.274	0.569
5.6	10.10	36.060	27.781	2.355	0.554
6.8	10.12	36.040	27.762	2.437	0.539
7.7	10.17	35.888	27.634	2.764	0.556
8.5	10.15	35.805	27.573	2.928	0.552
9.8	10.25	35.706	27.478	3.173	0.537
11.0	10.19	35.970	27.695	3.173	0.537
11.9	10.08	35.874	27.639	3.255	0.565
12.8	10.18	35.878	27.624	3.419	0.562
13.8	10.10	36.060	27.781	3.582	0.558
14.8	10.17	35.785	27.554	3.746	0.555
15.9	10.09	36.070	27.790	3.828	0.545
16.9	10.08	36.080	27.800	3.746	0.555
17.9	10.29	36.076	27.759	3.746	0.555
18.9	10.28	36.188	27.849	3.501	0.551
20.0	10.45	36.121	27.766	3.255	0.565
21.2	10.53	36.245	27.849	3.010	0.561
22.4	10.60	36.176	27.782	2.601	0.536
23.8	10.61	36.166	27.772	2.519	0.526
25.2	10.68	36.299	27.863	2.274	0.517
25.0	10.62	36.257	27.842	2.192	0.505
26.0	10.51	36.367	27.947	2.028	0.506
27.1	10.60	36.277	27.861	1.865	0.478
28.5	10.51	36.265	27.868	1.537	0.444
29.8	10.64	36.339	27.902	1.128	0.373
30.7	10.60	36.379	27.940	0.719	0.317
31.5	10.59	36.491	28.029	0.556	0.296
32.7	10.83	36.352	27.878	0.474	0.250
33.9	10.77	36.311	27.856	0.474	0.250
35.5	10.75	36.534	28.033	0.392	0.269
37.1	10.84	36.444	27.947	0.392	0.198
37.0	10.69	36.492	28.012	0.392	0.198
38.0	10.81	36.372	27.897	0.392	0.198
39.0	10.87	36.515	27.997	0.310	0.214
40.0	10.89	36.495	27.978	0.310	0.214
41.1	10.88	36.606	28.066	0.229	0.149
41.9	11.05	36.537	27.981	0.229	0.149
42.8	10.99	36.597	28.039	0.229	0.149
43.5	11.07	36.618	28.040	0.229	0.149
45.2	11.12	36.669	28.070	0.229	0.149
46.3	11.25	36.740	28.101	0.229	0.149
47.3	11.42	36.570	27.937	0.229	0.149
48.3	11.49	36.601	27.948	0.229	0.149
49.4	11.80	36.394	27.728	0.229	0.149
50.5	11.66	36.631	27.939	0.229	0.149
51.5	11.60	36.790	28.074	0.229	0.149
52.5	11.73	36.661	27.949	0.229	0.149
53.5	11.88	36.612	27.882	0.229	0.149
54.5	11.83	36.661	27.930	0.229	0.149
55.7	11.79	36.701	27.968	0.229	0.149
56.7	11.70	36.790	28.055	0.229	0.149
57.8	11.71	36.780	28.045	0.229	0.149
58.8	11.81	36.681	27.949	0.229	0.149
59.8	11.80	36.691	27.959	0.229	0.149
60.8	11.72	36.870	28.113	0.229	0.149
61.8	11.79	36.800	28.045	0.229	0.149
63.1	11.72	36.771	28.036	0.229	0.149
63.2	11.66	36.930	28.171	0.229	0.149
64.7	11.73	36.860	28.103	0.229	0.149
66.2	11.86	36.731	27.978	0.229	0.149
66.9	11.75	36.741	28.007	0.229	0.149
68.0	11.76	36.731	27.997	0.229	0.149
69.2	11.74	36.751	28.016	0.147	0.072
70.0	11.80	36.691	27.959	0.229	0.149
70.9	11.73	36.761	28.026	0.229	0.149
72.0	11.74	36.850	28.094	0.147	0.072
73.2	11.72	36.870	28.113	0.147	0.164
74.0	11.81	36.879	28.103	0.229	0.149
75.0	11.80	36.989	28.190	0.229	0.149
76.0	11.81	36.879	28.103	0.147	0.072
76.9	11.95	36.839	28.045	0.229	0.066
77.9	11.94	36.948	28.131	0.147	0.072
78.9	11.92	36.869	28.074	0.147	0.072
80.0	12.03	36.760	27.967	0.147	0.164
81.0	12.13	36.662	27.871	0.147	0.072
82.0	11.93	36.958	28.141	0.147	0.164
83.0	12.09	36.701	27.910	0.147	0.072
84.0	12.02	36.770	27.977	0.147	0.072
85.0	12.11	36.681	27.891	0.147	0.072
86.0	12.01	36.879	28.063	0.147	0.072
87.0	12.00	36.888	28.073	0.147	0.164
87.7	12.02	36.869	28.054	0.147	0.072
88.3	12.03	36.859	28.044	0.147	0.072
89.1	12.02	36.967	28.130	0.147	0.072
90.0	12.12	36.868	28.034	0.147	0.072
91.0	12.20	36.986	28.109	0.147	0.072
92.0	12.33	36.955	28.059	0.147	0.072
93.3	12.46	36.924	28.010	0.147	0.072
94.7	12.42	37.062	28.124	0.147	0.072
96.0	12.31	37.073	28.155	0.147	0.072
97.0	12.39	36.993	28.077	0.147	0.072
98.0	12.43	37.052	28.115	0.147	0.072
99.0	12.49	37.090	28.132	0.147	0.072
100.0	12.57	36.913	27.979	0.147	0.072
101.0	12.57	37.108	28.131	0.147	0.072
102.0	12.62	37.059	28.082	0.147	0.072
103.0	12.74	37.038	28.041	0.147	0.072
104.0	12.63	37.146	28.148	0.147	0.072
105.0	12.77	37.105	28.088	0.147	0.072
106.0	12.67	37.204	28.185	0.147	0.072
107.0	12.77	37.105	28.088	0.147	0.072
107.3	12.77	37.105	28.088	0.147	0.072
107.7	12.84	37.133	28.095	0.147	0.072
108.0	12.73	37.242	28.202	0.147	0.072

R/V KNORR
OPERATION #0425.09

TEMPERATURE (°C) -O-

R/V KNORR
OPERATION #0425.09

FUCO/CHL RATIO -O-

OPERATION 0425.09 STATION 9 LATITUDE 39° 0.2'N LONGITUDE 71°29.8'W DATE 04/25/82 TIME 2050

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (o/oo)	SIGMA T	CHLOROPHYLL (ug/l)	FUCCI:CHL
1.9	16.16	37.480	27.634	0.681	0.296
4.0	15.93	37.760	27.903	0.681	0.296
5.1	15.94	37.750	27.893	0.681	0.296
6.2	16.03	37.660	27.803	0.681	0.296
7.3	15.96	37.810	27.935	0.681	0.296
8.1	15.97	37.760	27.894	0.773	0.278
9.0	16.00	37.680	27.825	0.773	0.336
10.2	16.20	37.490	27.632	0.773	0.336
11.5	15.99	37.710	27.851	0.773	0.278
12.0	15.87	37.710	27.879	0.773	0.278
12.5	15.95	37.560	27.745	0.773	0.336
13.0	15.89	37.720	27.882	0.773	0.336
14.2	15.91	37.680	27.846	0.773	0.336
15.4	15.85	37.690	27.868	0.773	0.336
16.6	15.93	37.560	27.749	0.773	0.336
17.8	15.77	37.810	27.979	0.773	0.336
19.0	15.75	37.690	27.891	0.773	0.336
20.5	15.75	37.750	27.937	0.773	0.336
21.9	15.80	37.620	27.826	0.773	0.278
22.9	15.77	37.590	27.810	0.773	0.336
23.9	15.75	37.590	27.814	0.865	0.317
24.9	15.71	37.550	27.793	0.773	0.317
26.0	15.76	37.580	27.804	0.773	0.317
27.0	15.68	37.810	28.000	0.773	0.317
28.0	15.63	37.770	27.981	0.773	0.317
29.3	15.71	37.570	27.898	0.773	0.317
30.6	15.69	37.780	27.974	0.773	0.317
31.3	15.80	37.450	27.695	0.773	0.317
32.0	15.75	37.510	27.753	0.773	0.317
34.4	15.85	37.410	27.653	0.773	0.278
35.6	15.75	37.480	27.730	0.773	0.278
36.7	15.83	37.560	27.773	0.773	0.336
37.8	15.76	37.470	27.720	0.773	0.278
38.8	15.76	37.500	27.743	0.773	0.278
40.3	15.66	37.590	27.835	0.773	0.278
41.7	15.65	37.630	27.868	0.773	0.336
42.2	15.72	37.510	27.760	0.773	0.336
42.7	15.86	37.530	27.743	0.773	0.336
43.8	15.83	37.540	27.757	0.773	0.336
44.9	15.63	37.780	27.988	0.773	0.336
46.0	15.67	37.720	27.933	0.773	0.336
47.0	15.81	37.590	27.800	0.773	0.336
48.0	15.70	37.590	27.826	0.681	0.296
49.0	15.68	37.670	27.892	0.773	0.278
50.0	15.65	37.590	27.837	0.773	0.336
51.0	15.67	37.630	27.863	0.773	0.336
52.0	15.70	37.550	27.795	0.773	0.278
53.2	15.79	37.460	27.705	0.681	0.296
54.5	15.77	37.450	27.702	0.681	0.296
55.8	15.73	37.670	27.880	0.681	0.296
57.0	15.63	37.610	27.857	0.681	0.296
57.7	15.62	37.760	27.975	0.589	0.317
58.3	15.82	37.450	27.690	0.589	0.317
59.0	15.63	37.610	27.857	0.589	0.317
60.0	15.65	37.600	27.845	0.497	0.269
61.0	15.77	37.470	27.717	0.497	0.269
62.0	15.70	37.620	27.849	0.497	0.269
63.0	15.86	37.460	27.689	0.589	0.250
64.3	15.75	37.490	27.737	0.589	0.250
65.7	15.82	37.490	27.721	0.589	0.317
67.0	15.74	37.500	27.747	0.589	0.317
68.0	15.74	37.510	27.755	0.589	0.317
69.0	15.65	37.610	27.853	0.589	0.250
69.5	15.81	37.580	27.793	0.497	0.269
70.0	15.65	37.730	27.945	0.497	0.269
71.5	15.77	37.550	27.779	0.497	0.269
73.0	15.89	37.350	27.597	0.497	0.269
74.0	15.89	37.350	27.597	0.589	0.317
75.0	15.75	37.550	27.783	0.589	0.317
76.1	15.65	37.730	27.945	0.681	0.296
77.2	15.73	37.520	27.765	0.681	0.296
78.0	15.79	37.610	27.820	0.589	0.317
79.3	15.79	37.520	27.751	0.681	0.296
80.6	15.65	37.580	27.830	0.589	0.317
81.5	15.79	37.450	27.697	0.589	0.250
82.5	15.76	37.640	27.850	0.589	0.250
83.3	15.80	37.560	27.780	0.497	0.269
84.0	15.79	37.430	27.682	0.589	0.250
85.2	15.89	37.440	27.669	0.589	0.317
86.4	15.71	37.500	27.754	0.589	0.317
87.5	15.65	37.650	27.883	0.681	0.296
88.5	15.82	37.410	27.659	0.681	0.296
89.5	15.73	37.500	27.750	0.589	0.317
90.3	15.75	37.480	27.730	0.589	0.250
91.1	15.81	37.420	27.670	0.589	0.250
92.0	15.64	37.620	27.863	0.497	0.269
93.3	15.65	37.580	27.830	0.497	0.269
94.7	15.82	37.600	27.806	0.497	0.269
96.0	15.62	37.710	27.937	0.497	0.269
97.0	15.78	37.450	27.700	0.497	0.269
98.0	15.70	37.670	27.887	0.497	0.269
99.0	15.77	37.480	27.725	0.497	0.269
100.0	15.66	37.730	27.943	0.497	0.269
101.0	15.62	37.780	27.991	0.497	0.269
101.5	15.79	37.480	27.720	0.497	0.269
102.0	15.63	37.640	27.880	0.497	0.198
103.5	15.63	37.600	27.850	0.497	0.269
105.0	15.76	37.620	27.835	0.497	0.269
106.0	15.66	37.590	27.835	0.497	0.269
106.5	15.67	37.710	27.925	0.497	0.269
107.0	15.68	37.710	27.923	0.497	0.269
108.0	15.61	37.760	27.977	0.497	0.269
109.0	15.88	37.480	27.699	0.497	0.269
110.0	15.75	37.550	27.783	0.497	0.269
111.0	15.65	37.740	27.953	0.497	0.269
112.0	15.70	37.580	27.818	0.497	0.269
113.5	15.77	37.490	27.733	0.497	0.269
115.0	15.77	37.470	27.717	0.497	0.269
115.5	15.94	37.310	27.555	0.497	0.269
116.0	15.65	37.610	27.853	0.497	0.269
116.5	15.64	37.760	27.971	0.497	0.269

R/V KNORR
OPERATION #0428.04

R/V KNORR
OPERATION #0428.04

FUCO/CHL RATIO -O-

OPERATION 0408.04 STATION 11 LATITUDE 38°52.8'N LONGITUDE 71°42.4'W DATE 04/28/82 TIME 1222

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (g/kg)	SIGMA T	CHLOROPHYLL (ug/L)	FUCCI:CH
1.9	16.03	37.520	27.695	0.816	0.317
3.0	15.85	37.810	27.976	0.816	0.317
3.3	15.94	37.770	27.909	0.816	0.317
3.6	15.88	37.800	27.946	0.816	0.317
4.7	15.84	37.870	28.009	0.816	0.317
5.8	16.01	37.580	27.746	0.816	0.317
6.9	15.92	37.770	27.913	0.816	0.317
8.0	15.92	37.770	27.913	0.816	0.317
9.0	16.04	37.610	27.762	0.816	0.317
10.0	15.99	37.660	27.812	0.816	0.317
11.0	16.03	37.650	27.795	0.816	0.317
12.0	16.05	37.610	27.760	0.816	0.317
13.0	16.03	37.660	27.803	0.816	0.317
14.0	15.91	37.760	27.908	0.816	0.317
15.0	15.89	37.770	27.920	0.816	0.317
16.0	15.90	37.790	27.933	0.816	0.317
17.1	15.86	37.820	27.966	0.816	0.317
18.1	16.07	37.630	27.771	0.816	0.317
19.2	15.85	37.800	27.953	0.816	0.317
20.4	15.99	37.630	27.789	0.816	0.317
21.6	15.96	37.750	27.889	0.722	0.340
22.8	16.01	37.640	27.792	0.722	0.340
24.0	15.89	37.920	28.036	0.722	0.340
24.8	16.11	37.520	27.677	0.722	0.340
25.6	15.88	37.790	27.938	0.722	0.340
26.4	15.99	37.640	27.797	0.722	0.340
27.2	15.85	37.780	27.937	0.722	0.340
28.4	15.83	37.800	27.957	0.722	0.340
29.6	15.94	37.720	27.870	0.722	0.340
30.7	15.94	37.700	27.855	0.722	0.340
31.9	16.11	37.610	27.746	0.722	0.340
32.1	15.96	37.810	27.935	0.722	0.340
34.2	15.95	37.850	27.968	0.722	0.340
35.5	15.98	37.630	27.792	0.722	0.269
36.7	15.98	37.610	27.776	0.722	0.269
37.4	15.86	37.730	27.896	0.722	0.340
38.1	15.88	37.730	27.892	0.722	0.340
38.9	15.97	37.730	27.871	0.722	0.340
39.6	15.87	37.690	27.863	0.722	0.340
40.8	15.84	37.700	27.878	0.722	0.340
42.0	15.87	37.790	27.940	0.722	0.340
43.2	15.95	37.710	27.860	0.722	0.269
44.4	15.95	37.610	27.783	0.629	0.291
45.5	16.00	37.630	27.787	0.722	0.340
46.2	15.97	37.710	27.855	0.629	0.291
46.8	15.94	37.630	27.801	0.629	0.291
47.5	15.86	37.820	27.966	0.629	0.291
48.6	15.99	37.710	27.851	0.629	0.291
49.7	15.82	37.720	27.898	0.629	0.291
50.8	16.00	37.630	27.787	0.629	0.291
51.9	15.87	37.680	27.856	0.535	0.317
53.0	15.92	37.760	27.906	0.535	0.317
54.2	15.87	37.840	27.979	0.535	0.317
55.3	15.96	37.590	27.765	0.535	0.317
56.2	15.94	37.610	27.786	0.535	0.317
57.1	15.89	37.710	27.874	0.535	0.233
58.0	15.99	37.680	27.828	0.535	0.317
59.0	15.95	37.700	27.852	0.535	0.233
60.0	15.86	37.740	27.904	0.535	0.233
61.0	15.97	37.590	27.763	0.535	0.233
62.0	15.98	37.750	27.884	0.535	0.233
63.0	16.02	37.540	27.713	0.535	0.233
64.0	15.94	37.720	27.870	0.442	0.255
65.2	15.90	37.780	27.926	0.442	0.255
66.4	15.95	37.710	27.860	0.442	0.255
67.5	16.08	37.620	27.761	0.442	0.255
68.0	16.10	37.590	27.733	0.442	0.255
68.5	16.00	37.610	27.772	0.442	0.255
69.0	15.95	37.760	27.899	0.442	0.255
70.7	15.87	37.780	27.933	0.442	0.255
72.3	15.87	37.790	27.940	0.442	0.255
74.0	16.00	37.550	27.725	0.442	0.255
74.3	15.91	37.800	27.939	0.442	0.255
74.5	15.98	37.730	27.869	0.442	0.255
75.3	15.94	37.760	27.901	0.442	0.255
76.2	15.95	37.750	27.891	0.442	0.255
77.0	15.91	37.640	27.816	0.442	0.255
78.7	15.98	37.710	27.853	0.442	0.255
80.3	15.88	37.730	27.892	0.442	0.255
82.0	15.84	37.720	27.893	0.442	0.255
83.1	15.88	37.750	27.907	0.442	0.255
84.2	16.05	37.680	27.814	0.442	0.255
85.3	15.92	37.770	27.913	0.442	0.255
86.4	15.95	37.780	27.914	0.442	0.255
87.5	15.94	37.720	27.893	0.442	0.255
88.8	15.99	37.680	27.828	0.442	0.164
90.0	16.02	37.670	27.813	0.442	0.164
90.7	15.97	37.660	27.817	0.348	0.181
91.3	15.98	37.720	27.861	0.348	0.181
92.0	16.01	37.630	27.785	0.348	0.181
92.7	15.92	37.690	27.852	0.348	0.181
93.3	15.95	37.600	27.775	0.348	0.181
94.0	15.94	37.740	27.886	0.348	0.181
95.3	15.87	37.710	27.879	0.348	0.181
96.7	15.88	37.820	27.961	0.348	0.181
96.7	15.88	37.820	27.961	0.348	0.181
98.0	15.87	37.760	27.917	0.348	0.181
99.3	15.95	37.690	27.845	0.348	0.181
100.5	15.88	37.640	27.823	0.348	0.181
101.8	15.96	37.710	27.858	0.348	0.181
103.0	15.87	37.790	27.940	0.348	0.181
103.8	15.88	37.770	27.923	0.348	0.181
104.5	15.98	37.710	27.853	0.348	0.181
105.3	15.97	37.720	27.863	0.348	0.181
106.0	15.89	37.760	27.913	0.348	0.181
108.0	15.96	37.660	27.819	0.348	0.181
110.0	15.90	37.700	27.864	0.254	0.203
110.3	15.96	37.740	27.881	0.348	0.181
110.7	15.91	37.800	27.939	0.348	0.181
111.0	15.91	37.730	27.885	0.348	0.181
112.5	15.88	37.770	27.923	0.348	0.181
114.0	15.90	37.770	27.918	0.348	0.181
115.5	16.00	37.640	27.795	0.348	0.181
117.0	15.88	37.840	27.977	0.348	0.181

R/V KNORR
OPERATION #0429.05

R/V KNORR
OPERATION #0429.05

FUCO/CHL RATIO -O-

OPERATION 0429.05 STATION 12 LATITUDE 39°21.3'N LONGITUDE 71°50.9'W DATE 04/29/82 TIME 1430

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (o/ooo)	SIGMA T	CHLOROPHYLL (ug/l)	FUCC:CHL
2.9	13.37	36.730	27.674	1.803	0.414
4.6	13.35	36.610	27.585	1.803	0.414
5.5	13.34	36.700	27.657	1.887	0.400
6.5	13.36	36.660	27.622	1.803	0.414
7.5	13.36	36.670	27.629	1.719	0.395
8.5	13.36	36.640	27.606	1.803	0.414
9.5	13.36	36.610	27.583	1.887	0.400
10.5	13.38	36.650	27.610	1.971	0.387
11.4	13.39	36.650	27.608	2.055	0.434
12.3	13.38	36.630	27.594	2.138	0.421
13.2	13.39	36.660	27.615	2.222	0.409
14.0	13.28	36.680	27.654	2.306	0.424
15.0	13.28	36.760	27.716	2.390	0.412
16.0	13.38	36.690	27.641	2.390	0.438
17.0	13.36	36.610	27.583	2.390	0.438
18.0	13.36	36.670	27.629	2.390	0.412
19.0	13.35	36.670	27.631	2.390	0.412
20.0	13.46	36.750	27.670	2.390	0.412
21.0	13.37	36.940	27.836	2.390	0.412
22.0	13.35	36.770	27.709	2.306	0.424
23.0	13.54	36.520	27.476	2.222	0.409
24.0	13.47	36.690	27.622	2.222	0.436
25.0	13.44	36.790	27.705	2.222	0.409
26.0	13.48	36.750	27.666	2.138	0.421
27.3	13.46	36.850	27.748	2.138	0.421
28.5	13.54	36.770	27.669	2.138	0.421
29.8	13.53	36.710	27.625	2.055	0.405
31.0	13.56	36.580	27.518	2.138	0.421
32.3	13.56	36.670	27.588	2.055	0.405
33.7	13.57	36.720	27.624	2.055	0.405
35.0	13.55	36.710	27.621	2.055	0.405
35.3	13.70	36.730	27.604	2.055	0.434
35.7	13.58	36.660	27.576	2.055	0.405
36.0	13.61	36.540	27.477	2.055	0.434
37.3	13.57	36.790	27.678	2.055	0.405
38.7	13.58	36.770	27.661	2.055	0.405
40.0	13.67	36.700	27.588	2.055	0.405
41.0	13.57	36.580	27.516	2.055	0.405
42.1	13.55	36.790	27.682	2.055	0.405
43.1	13.67	36.720	27.603	2.055	0.434
44.1	13.65	36.710	27.600	2.055	0.405
45.2	13.66	36.700	27.590	1.971	0.418
46.6	13.71	36.790	27.649	1.971	0.418
48.0	13.67	36.800	27.665	1.971	0.418
49.5	13.85	36.800	27.627	1.971	0.387
50.9	13.81	36.890	27.705	1.971	0.418
51.7	13.87	36.730	27.568	1.887	0.431
52.5	13.87	36.670	27.522	1.887	0.400
53.2	13.99	36.710	27.527	1.887	0.400
54.0	13.88	36.880	27.682	1.887	0.400
54.8	13.98	36.790	27.591	1.887	0.400
55.5	13.96	36.800	27.603	1.887	0.400
56.6	13.98	36.790	27.591	1.803	0.414
57.7	13.88	36.950	27.736	1.719	0.395
59.0	13.94	36.930	27.708	1.551	0.389
60.2	13.98	36.940	27.707	1.048	0.363
61.3	13.93	36.810	27.617	0.797	0.262
62.5	13.86	36.970	27.756	0.713	0.278
63.5	13.85	36.930	27.727	0.545	0.250
64.5	13.87	36.920	27.715	0.378	0.137
65.5	13.89	36.830	27.641	0.294	0.149
66.5	13.88	36.750	27.582	0.210	0.072
67.4	13.85	36.770	27.604	0.210	0.072
68.3	13.87	36.720	27.561	0.210	0.072
69.2	13.74	36.900	27.727	0.210	0.072
70.2	13.82	36.890	27.703	0.210	0.072
71.4	13.77	36.880	27.706	0.210	0.072
72.6	13.74	36.980	27.789	0.294	0.149
73.8	13.82	36.920	27.726	0.210	0.164
75.0	13.84	36.840	27.660	0.294	0.066
75.8	13.98	36.830	27.622	0.210	0.164
76.5	14.11	36.890	27.641	0.210	0.072
78.5	13.97	36.910	27.686	0.210	0.072
79.3	13.98	36.900	27.676	0.210	0.072
80.1	14.02	36.970	27.722	0.210	0.072
80.9	13.98	37.040	27.784	0.126	0.080
81.4	13.96	36.940	27.711	0.126	0.080
81.8	14.01	36.800	27.593	0.126	0.080
82.6	13.87	37.000	27.777	0.126	0.080
83.5	13.92	36.910	27.697	0.126	0.080
84.4	13.94	36.940	27.716	0.126	0.080
85.2	13.97	36.950	27.717	0.126	0.080
87.3	13.98	36.860	27.645	0.042	-0.025
87.9	13.86	37.020	27.795	0.126	0.080
88.5	13.88	36.950	27.736	0.126	0.080
89.0	13.89	37.000	27.773	0.042	0.089
90.3	13.98	36.850	27.638	0.042	-0.025
91.7	13.98	36.940	27.707	0.042	-0.025
93.0	13.95	36.950	27.721	0.042	-0.025
93.3	13.94	36.950	27.723	0.126	0.080
93.7	13.88	37.050	27.814	0.126	0.080
94.0	13.98	36.900	27.676	0.126	0.080
96.0	13.88	36.910	27.705	0.042	0.089
98.0	13.94	36.870	27.662	0.042	0.089
99.0	13.85	37.010	27.789	0.126	0.080
100.5	13.87	36.870	27.677	0.126	-0.022
102.0	13.90	37.000	27.771	0.042	0.089
102.6	13.90	36.970	27.747	0.126	0.080
103.2	13.94	36.980	27.747	0.042	-0.025
103.8	13.78	37.050	27.835	0.126	0.080
104.4	13.87	37.020	27.793	0.042	-0.025
105.0	13.90	36.910	27.701	0.126	-0.022
106.0	13.89	36.940	27.726	0.126	0.080
107.0	13.88	36.840	27.651	0.042	-0.025
108.0	13.89	36.920	27.711	0.126	0.080
109.0	13.89	36.870	27.672	0.126	0.080

R/V KNORR
OPERATION #0430.01

TEMPERATURE (°C) -O-

R/V KNORR
OPERATION #0430.01

FUCO/CHL RATIO -O-

OPERATION 0430.01 STATION 13 LATITUDE 37°26.7'N LONGITUDE 69°56.7'W DATE 04/30/82 TIME 1745

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (o/oo)	SIGMA T	CHLOROPHYLL (ug/l)	FUCC:CHL
2.0	24.14	37.280	25.345	0.379	-
2.9	24.16	37.310	25.356	0.419	-
3.8	24.15	37.340	25.387	0.379	-
4.9	24.16	37.300	25.354	0.379	-
6.0	24.17	37.190	25.268	0.419	-
6.9	24.14	37.370	25.413	0.379	-
7.8	24.16	37.260	25.324	0.379	-
9.5	24.14	37.310	25.368	0.339	-
10.3	24.14	37.250	25.322	0.379	-
11.1	24.16	37.220	25.293	0.419	-
11.9	24.14	37.280	25.345	0.379	-
13.2	24.17	37.150	25.237	0.379	-
14.5	24.13	37.230	25.310	0.379	-
15.5	24.18	37.280	25.333	0.379	-
16.6	24.22	37.250	25.298	0.419	-
17.6	24.15	37.250	25.319	0.379	-
18.7	24.17	37.280	25.336	0.379	-
19.7	24.18	37.320	25.363	0.379	-
20.8	24.16	37.250	25.316	0.379	-
21.8	24.13	37.220	25.302	0.459	-
22.9	24.14	37.200	25.284	0.379	-
23.6	24.17	37.370	25.404	0.419	-
24.3	24.18	37.210	25.280	0.419	-
25.0	24.16	37.200	25.278	0.419	-
26.0	24.15	37.320	25.372	0.419	-
27.0	24.22	37.270	25.313	0.419	-
28.0	24.15	37.350	25.395	0.419	-
29.0	24.15	37.270	25.334	0.459	-
30.0	24.16	37.250	25.316	0.419	-
31.3	24.17	37.330	25.374	0.419	-
32.5	24.15	37.350	25.395	0.419	-
33.2	24.14	37.380	25.421	0.419	-
33.6	24.14	37.350	25.398	0.459	-
34.0	24.14	37.360	25.405	0.459	-
36.0	24.29	37.180	25.224	0.459	-
38.0	24.15	37.250	25.319	0.459	-
39.2	24.15	37.330	25.380	0.459	-
40.4	24.15	37.370	25.410	0.459	-
41.6	24.13	37.330	25.386	0.419	-
42.8	24.14	37.300	25.360	0.459	-
43.9	24.14	37.330	25.383	0.419	-
44.5	24.16	37.340	25.384	0.459	-
45.0	24.13	37.290	25.355	0.419	-
46.2	24.16	37.320	25.369	0.498	-
47.4	24.15	37.250	25.319	0.459	-
48.5	24.12	37.250	25.328	0.498	-
49.4	24.14	37.360	25.405	0.498	-
50.3	24.25	37.190	25.244	0.498	-
51.2	24.15	37.300	25.357	0.459	-
52.1	24.18	37.280	25.333	0.459	-
53.0	24.13	37.300	25.363	0.498	-
54.1	24.15	37.320	25.372	0.498	-
55.2	24.13	37.360	25.408	0.538	-
56.3	24.16	37.310	25.362	0.538	-
57.4	24.16	37.340	25.384	0.578	-
58.5	24.14	37.380	25.421	0.538	-
59.3	24.16	37.250	25.316	0.578	-
60.1	24.15	37.340	25.387	0.618	-
60.9	24.23	37.160	25.227	0.618	-
61.7	24.09	37.280	25.360	0.658	-
62.5	24.04	37.380	25.450	0.698	-
63.6	24.19	37.200	25.269	0.737	-
64.7	24.07	37.360	25.426	0.817	-
65.8	24.06	37.420	25.475	0.897	-
66.9	24.00	37.580	25.614	0.777	-
68.0	23.88	37.480	25.574	0.737	-
69.4	23.87	37.440	25.547	0.698	-
70.8	23.94	37.320	25.435	0.698	-
72.2	23.83	37.420	25.543	0.698	-
73.6	23.74	37.490	25.623	0.698	-
75.0	23.64	37.580	25.721	0.658	-
75.8	23.74	37.540	25.661	0.658	-
76.5	23.88	37.380	25.498	0.658	-
77.3	23.68	37.390	25.565	0.658	-
78.0	23.65	37.540	25.688	0.618	-
79.3	23.66	37.520	25.670	0.578	-
80.7	23.53	37.580	25.754	0.538	-
82.0	23.52	37.550	25.734	0.498	-
83.0	23.45	37.540	25.747	0.498	-
84.0	23.45	37.560	25.762	0.498	-
85.0	23.42	37.510	25.733	0.498	-
86.0	23.42	37.640	25.832	0.538	-
87.0	23.43	37.540	25.753	0.498	-
88.0	23.44	37.600	25.795	0.498	-
89.5	23.35	37.600	25.822	0.498	-
91.0	23.32	37.630	25.853	0.459	-
91.8	23.24	37.600	25.854	0.498	-
92.6	23.34	37.520	25.764	0.459	-
93.4	23.21	37.620	25.878	0.459	-
94.2	23.22	37.640	25.890	0.459	-
95.0	23.25	37.550	25.813	0.419	-
96.0	23.12	37.560	25.859	0.379	-
97.0	23.05	37.610	25.917	0.379	-
98.0	22.93	37.750	26.058	0.379	-
99.0	22.83	37.740	26.080	0.379	-
100.0	22.92	37.670	26.001	0.379	-
101.5	22.92	37.690	26.016	0.379	-
103.0	22.95	37.660	25.984	0.339	-
104.0	22.84	37.630	25.993	0.379	-
105.0	22.75	37.760	26.118	0.379	-
106.0	22.87	37.600	25.962	0.379	-
107.0	22.73	37.790	26.147	0.339	-
107.5	22.72	37.660	26.051	0.299	-
108.0	22.62	37.730	26.133	0.299	-
109.0	22.52	37.690	26.131	0.260	-
110.0	22.54	37.780	26.194	0.299	-
111.0	22.53	37.640	26.091	0.299	-
112.0	22.41	37.760	26.216	0.260	-
113.0	22.52	37.670	26.116	0.260	-
114.0	22.43	37.740	26.195	0.260	-
115.0	22.51	37.640	26.096	0.260	-

R/V KNORR
OPERATION #0501.05

R/V KNORR
OPERATION #0501.05

FUCO/CHL RATIO -O-

OPERATION 0501.05 STATION 14 LATITUDE 36°43.8'N LONGITUDE 69°21.8'W DATE 05/01/82 TIME 1252

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (o/oo)	SIGMA T	CHLOROPHYLL (ug/l)	FUCO:CHL
1.0	19.14	37.710	27.073	0.483	0.639
2.3	19.15	37.670	27.040	0.483	0.581
3.5	19.25	37.600	26.960	0.483	0.610
4.4	19.22	37.680	27.029	0.483	0.610
5.2	19.24	37.590	26.955	0.483	0.610
6.2	19.21	37.700	27.047	0.529	0.620
7.3	19.18	37.670	27.032	0.529	0.592
8.4	19.18	37.620	26.994	0.621	0.585
9.5	19.15	37.730	27.085	0.529	0.592
10.5	19.26	37.610	26.965	0.529	0.620
11.6	19.14	37.670	27.042	0.529	0.620
12.6	19.19	37.670	27.029	0.529	0.620
13.6	19.20	37.660	27.019	0.529	0.649
14.6	19.17	37.690	27.050	0.529	0.649
15.6	19.13	37.630	27.014	0.575	0.602
16.6	19.14	37.660	27.035	0.575	0.630
17.5	19.14	37.750	27.103	0.575	0.630
18.5	19.14	37.650	27.027	0.575	0.630
19.5	19.19	37.690	27.044	0.667	0.595
20.7	19.16	37.700	27.060	0.621	0.612
21.9	19.24	37.560	26.932	0.621	0.639
23.1	19.16	37.730	27.083	0.667	0.621
24.2	19.16	37.700	27.060	0.667	0.621
25.3	19.13	37.670	27.045	0.667	0.647
26.4	19.14	37.760	27.111	0.667	0.647
27.5	19.14	37.740	27.096	0.667	0.621
28.5	19.20	37.630	26.996	0.713	0.605
29.5	19.15	37.660	27.032	0.713	0.630
30.5	19.15	37.710	27.070	0.759	0.614
31.4	19.24	37.520	26.901	0.713	0.656
32.2	19.24	37.500	26.886	0.713	0.630
33.3	19.24	37.650	27.001	0.713	0.630
34.4	19.13	37.770	27.121	0.713	0.656
35.5	19.19	37.680	27.037	0.713	0.630
36.6	19.14	37.710	27.073	0.759	0.638
37.8	19.17	37.730	27.080	0.759	0.638
38.9	19.16	37.670	27.037	0.759	0.638
40.0	19.16	37.650	27.022	0.759	0.638
41.0	19.13	37.750	27.106	0.759	0.638
42.0	19.19	37.660	27.021	0.759	0.638
43.0	19.13	37.720	27.083	0.759	0.663
44.0	19.16	37.710	27.068	0.759	0.698
45.0	19.13	37.700	27.068	0.759	0.663
46.0	19.15	37.680	27.047	0.759	0.663
47.0	19.18	37.670	27.032	0.759	0.663
48.0	19.15	37.600	26.986	0.759	0.638
49.0	19.14	37.640	27.019	0.713	0.656
50.0	19.14	37.680	27.050	0.759	0.663
51.0	19.18	37.680	27.039	0.759	0.663
52.0	19.18	37.720	27.070	0.759	0.638
53.2	19.20	37.680	27.034	0.713	0.681
54.4	19.16	37.680	27.045	0.713	0.681
55.5	19.22	37.630	26.991	0.713	0.681
56.5	19.20	37.620	26.988	0.713	0.656
57.5	19.15	37.710	27.070	0.713	0.656
58.5	19.13	37.660	27.037	0.667	0.674
59.6	19.02	37.700	27.096	0.621	0.639
60.7	19.05	37.660	27.058	0.621	0.639
61.8	19.15	37.620	27.001	0.621	0.639
62.9	19.03	37.760	27.140	0.575	0.630
63.9	19.03	37.730	27.117	0.575	0.630
64.9	19.07	37.640	27.037	0.575	0.630
65.9	19.04	37.770	27.145	0.575	0.630
66.8	19.05	37.770	27.142	0.575	0.630
67.7	18.96	37.730	27.135	0.575	0.602
68.6	18.93	37.810	27.204	0.575	0.630
69.5	19.08	37.530	26.951	0.529	0.649
70.5	18.95	37.770	27.168	0.529	0.649
71.6	19.03	37.650	27.055	0.529	0.620
72.7	18.95	37.770	27.168	0.529	0.592
73.8	18.93	37.630	27.066	0.529	0.592
74.9	18.99	37.700	27.104	0.483	0.610
76.0	18.94	37.740	27.148	0.483	0.610
77.0	18.83	37.850	27.260	0.437	0.599
78.0	18.99	37.600	27.028	0.437	0.569
79.0	18.94	37.690	27.109	0.437	0.599
80.0	18.86	37.740	27.168	0.391	0.588
81.0	18.84	37.830	27.242	0.391	0.588
82.0	18.88	37.690	27.125	0.391	0.588
83.0	18.86	37.630	27.084	0.345	0.543
84.0	18.90	37.620	27.066	0.345	0.543
85.0	18.97	37.600	27.033	0.345	0.543
86.0	18.97	37.630	27.056	0.345	0.575
87.5	18.97	37.560	27.002	0.345	0.543
89.0	18.91	37.570	27.025	0.345	0.575
90.0	18.91	37.680	27.109	0.299	0.529
91.0	18.84	37.600	27.066	0.299	0.529
92.0	18.88	37.730	27.155	0.253	0.513
93.0	18.84	37.700	27.143	0.253	0.479
94.0	18.84	37.720	27.158	0.253	0.548
95.0	18.82	37.660	27.117	0.253	0.513
96.0	18.83	37.710	27.153	0.253	0.479
97.0	18.79	37.700	27.156	0.253	0.479
98.0	18.85	37.680	27.125	0.207	0.497
99.0	18.83	37.620	27.084	0.253	0.479
100.0	18.73	37.710	27.179	0.253	0.479
101.0	18.73	37.790	27.240	0.253	0.479
102.0	18.80	37.620	27.092	0.207	0.497
103.0	18.85	37.650	27.102	0.207	0.497
104.0	18.77	37.700	27.161	0.207	0.497
105.0	18.76	37.710	27.171	0.253	0.479
106.0	18.81	37.630	27.097	0.207	0.461
107.0	18.78	37.690	27.151	0.207	0.497
109.0	18.88	37.550	27.018	0.207	0.497
110.0	18.85	37.640	27.094	0.207	0.461
111.0	18.80	37.650	27.115	0.207	0.461
112.0	18.77	37.770	27.214	0.207	0.461
113.5	18.73	37.720	27.186	0.207	0.497
115.0	18.86	37.560	27.031	0.207	0.461
115.7	18.80	37.580	27.061	0.207	0.461
116.5	18.76	37.760	27.209	0.207	0.461
117.0	18.80	37.610	27.084	0.207	0.461
118.0	18.76	37.610	27.095	0.207	0.461

R/V KNØRR
OPERATION #0503.05

R/V KNORR
OPERATION #0503.05

FUCO/CHL RATIO -O-

OPERATION 0503.05 STATION 16 LATITUDE 38°58.1'N LONGITUDE 71°40.1'W DATE 05/03/82 TIME 1345

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (o/oo)	SIGMA T	CHLOROPHYLL (ug/l)	FUCC:CHL
1.0	16.27	37.550	27.662	0.683	0.775
1.9	16.34	37.390	27.523	0.683	0.775
2.8	16.36	37.470	27.579	0.683	0.775
3.8	16.24	37.400	27.554	0.683	0.807
4.8	16.29	37.480	27.604	0.683	0.807
5.8	16.31	37.420	27.553	0.683	0.775
6.8	16.30	37.410	27.547	0.766	0.811
7.8	16.16	37.580	27.711	0.766	0.811
8.8	16.15	37.600	27.729	0.766	0.811
9.9	16.14	37.610	27.739	0.848	0.816
11.0	16.14	37.500	27.654	0.848	0.816
12.0	16.20	37.450	27.602	0.848	0.816
13.0	16.14	37.610	27.739	0.848	0.816
14.0	16.14	37.620	27.746	0.848	0.816
15.0	16.15	37.520	27.667	0.931	0.791
16.1	16.15	37.600	27.729	0.848	0.816
17.3	16.14	37.450	27.616	0.848	0.845
18.4	16.22	37.410	27.566	0.848	0.816
19.5	16.23	37.510	27.641	0.848	0.816
20.7	16.24	37.410	27.561	0.931	0.791
21.8	16.13	37.460	27.626	0.848	0.845
22.7	16.20	37.430	27.586	0.848	0.816
23.6	16.20	37.360	27.532	0.931	0.820
24.5	16.08	37.500	27.668	0.848	0.845
25.5	16.26	37.440	27.580	0.931	0.820
26.5	16.16	37.480	27.634	0.848	0.845
27.4	16.03	37.610	27.765	0.931	0.791
28.3	16.17	37.450	27.609	0.848	0.816
29.2	16.16	37.480	27.634	0.931	0.791
30.1	16.05	37.660	27.798	0.931	0.820
32.0	16.09	37.450	27.627	0.848	0.845
33.0	16.04	37.580	27.739	0.848	0.845
34.0	16.04	37.610	27.762	0.848	0.845
36.1	16.16	37.480	27.634	0.848	0.874
37.2	16.14	37.510	27.662	0.848	0.845
38.3	16.26	37.390	27.541	0.848	0.845
39.4	16.23	37.430	27.579	0.848	0.816
40.5	16.15	37.510	27.660	0.848	0.874
41.0	16.17	37.450	27.609	0.848	0.845
42.2	16.16	37.360	27.542	0.848	0.874
43.1	16.17	37.400	27.570	0.931	0.848
44.0	16.08	37.540	27.699	0.931	0.820
45.2	16.18	37.450	27.606	0.848	0.845
46.4	16.21	37.330	27.507	0.848	0.845
47.6	16.05	37.580	27.737	0.848	0.816
48.8	16.14	37.420	27.593	0.848	0.816
50.0	16.11	37.380	27.569	0.848	0.786
51.0	16.03	37.530	27.703	0.766	0.842
52.0	16.15	37.370	27.552	0.766	0.811
53.1	16.07	37.470	27.647	0.766	0.811
54.2	16.06	37.470	27.650	0.766	0.811
55.4	16.06	37.530	27.696	0.766	0.781
56.5	16.08	37.560	27.714	0.766	0.781
57.6	16.12	37.410	27.590	0.683	0.839
58.8	16.06	37.470	27.650	0.683	0.807
59.9	16.10	37.480	27.648	0.766	0.811
61.0	16.13	37.380	27.564	0.683	0.807
62.0	16.07	37.450	27.632	0.683	0.807
63.0	16.04	37.580	27.739	0.683	0.775
64.0	16.05	37.600	27.752	0.683	0.775
65.0	16.06	37.580	27.734	0.683	0.807
65.9	16.16	37.430	27.596	0.683	0.775
67.0	16.20	37.430	27.586	0.683	0.775
68.0	16.06	37.520	27.688	0.683	0.807
69.1	16.15	37.420	27.590	0.683	0.807
70.1	16.14	37.400	27.577	0.683	0.775
71.2	16.13	37.420	27.595	0.683	0.775
72.2	16.08	37.420	27.607	0.683	0.807
73.3	16.17	37.420	27.586	0.683	0.807
74.3	16.04	37.450	27.639	0.683	0.775
75.4	16.04	37.570	27.731	0.600	0.802
76.5	16.13	37.410	27.587	0.600	0.802
77.7	16.09	37.490	27.658	0.600	0.770
78.9	16.03	37.520	27.695	0.517	0.763
80.1	16.14	37.380	27.562	0.517	0.797
80.8	16.07	37.580	27.732	0.600	0.737
81.7	16.06	37.550	27.711	0.517	0.730
82.6	16.04	37.490	27.670	0.517	0.730
83.0	16.12	37.480	27.643	0.434	0.756
84.3	16.03	37.500	27.680	0.434	0.687
85.7	16.04	37.590	27.747	0.434	0.756
87.0	16.05	37.520	27.691	0.434	0.722
88.0	16.04	37.550	27.716	0.434	0.687
89.0	16.13	37.460	27.626	0.434	0.687
90.0	16.12	37.560	27.705	0.434	0.722
91.0	16.05	37.480	27.660	0.434	0.722
92.0	16.04	37.520	27.693	0.434	0.687
93.0	16.10	37.500	27.664	0.434	0.722
94.0	16.16	37.430	27.596	0.434	0.687
95.0	16.05	37.490	27.668	0.434	0.722
96.0	16.07	37.580	27.732	0.352	0.713
97.0	16.06	37.570	27.727	0.352	0.713
98.0	16.03	37.590	27.749	0.434	0.687
99.0	16.09	37.500	27.666	0.352	0.677
100.0	16.06	37.560	27.719	0.352	0.713
101.0	16.05	37.470	27.652	0.352	0.713
102.2	16.15	37.470	27.629	0.352	0.677
103.4	16.03	37.510	27.688	0.352	0.677
104.6	16.07	37.650	27.786	0.352	0.677
105.8	16.06	37.480	27.658	0.352	0.713
107.0	16.03	37.590	27.749	0.269	0.704
108.0	16.06	37.480	27.658	0.352	0.641
109.0	16.14	37.380	27.562	0.352	0.677
110.0	16.10	37.480	27.648	0.352	0.677
111.0	16.14	37.400	27.577	0.352	0.641
112.0	16.04	37.560	27.724	0.434	0.687
113.2	16.03	37.540	27.711	0.352	0.713
114.3	16.09	37.490	27.658	0.352	0.677
115.5	16.08	37.440	27.622	0.352	0.677
116.7	16.13	37.360	27.549	0.352	0.677
117.8	16.06	37.560	27.719	0.352	0.677
119.0	16.11	37.480	27.646	0.352	0.677

R/V KNØRR
OPERATION #0505.04

R/V KNORR
OPERATION #0505.04

FUCO/CHL RATIO -O-

OPERATION 0505.04 STATION 17 LATITUDE 39°20.2'N LONGITUDE 70°39.2'W DATE 05/05/82 TIME 1300

DEPTH (M)	TEMPERATURE (deg C)	SALINITY (o/oo)	SIGMA T	CHLOROPHYLL (ug/l)	FUCCI:CHL
1.2	11.94	36.090	27.465	1.949	1.021
2.4	11.82	36.180	27.558	2.024	1.057
3.6	11.82	36.090	27.488	2.061	1.043
4.8	11.89	36.140	27.513	2.099	1.055
6.0	11.78	36.240	27.612	2.136	1.078
7.1	11.97	35.890	27.304	2.248	1.049
8.2	11.82	36.040	27.449	2.210	1.074
9.3	11.70	36.300	27.474	2.285	1.048
10.4	11.89	35.960	27.374	2.322	1.070
11.5	11.82	36.070	27.472	2.360	1.091
12.5	11.81	36.160	27.544	2.434	1.077
13.4	11.84	36.230	27.593	2.472	1.097
14.3	11.81	36.140	27.529	2.584	1.071
15.3	11.95	36.090	27.463	2.770	1.115
16.7	11.80	36.260	27.624	3.143	1.145
18.0	11.89	36.260	27.606	3.293	1.181
18.9	12.01	36.490	27.762	3.106	1.193
19.8	12.27	36.500	27.718	1.837	1.092
20.7	12.51	36.930	28.004	1.464	0.989
21.6	12.74	36.780	27.842	1.352	1.041
22.5	12.69	36.820	27.883	1.277	0.992
23.0	12.66	36.690	27.788	1.091	0.920
24.0	12.52	36.930	28.002	0.904	0.852
25.0	12.69	36.760	27.836	0.830	0.802
26.0	12.71	36.810	27.871	0.792	0.799
27.0	12.74	36.990	28.004	0.792	0.799
28.2	12.72	36.990	28.008	0.792	0.799
29.4	12.75	37.030	28.033	0.792	0.776
30.6	12.74	36.930	27.958	0.755	0.772
31.8	12.91	36.880	27.885	0.718	0.791
33.0	12.84	36.930	27.938	0.718	0.743
34.0	13.02	36.840	27.831	0.680	0.762
35.0	12.99	36.940	27.915	0.680	0.738
36.0	13.10	36.750	27.745	0.680	0.738
37.0	12.96	37.010	27.975	0.643	0.732
38.0	12.94	36.960	27.940	0.643	0.681
39.0	12.89	36.980	27.966	0.568	0.693
40.1	12.81	37.050	28.037	0.494	0.592
41.2	12.92	36.950	27.937	0.494	0.592
42.4	12.98	36.990	27.955	0.494	0.620
43.5	12.93	36.940	27.927	0.494	0.649
44.5	12.82	37.030	28.019	0.456	0.639
45.5	12.92	37.200	28.130	0.456	0.610
46.5	13.05	37.000	27.949	0.419	0.599
47.5	13.04	37.130	28.052	0.419	0.569
48.5	13.04	37.150	28.067	0.419	0.569
49.5	13.22	37.220	28.084	0.419	0.569
50.5	13.15	37.130	28.029	0.382	0.588
51.5	13.26	37.080	27.967	0.382	0.556
52.5	13.12	37.130	28.035	0.382	0.556
53.5	13.23	37.130	28.012	0.382	0.556
54.7	13.17	37.080	27.986	0.382	0.556
55.9	13.22	37.140	28.022	0.382	0.525
57.0	13.27	37.080	27.965	0.382	0.556
58.1	13.26	37.090	27.975	0.382	0.525
59.2	13.33	37.070	27.945	0.344	0.543
60.3	13.28	37.210	28.064	0.382	0.525
61.4	13.23	37.120	28.005	0.344	0.575
62.5	13.27	37.080	27.965	0.344	0.543
63.5	13.24	37.150	28.026	0.344	0.543
64.6	13.22	37.290	28.138	0.344	0.543
65.7	13.29	37.040	27.930	0.344	0.543
66.8	13.26	37.190	28.053	0.344	0.511
67.9	13.38	37.160	28.004	0.344	0.543
69.0	13.44	37.200	28.023	0.307	0.529
69.9	13.62	37.110	27.915	0.307	0.495
70.8	13.50	37.230	28.033	0.307	0.529
71.7	13.44	37.270	28.077	0.270	0.511
72.6	13.49	37.400	28.167	0.307	0.529
73.5	13.48	37.240	28.045	0.307	0.529
74.3	13.53	37.220	28.019	0.270	0.513
75.1	13.58	37.180	27.978	0.270	0.479
76.0	13.49	37.150	27.973	0.270	0.513
77.0	13.49	37.150	27.973	0.270	0.513
78.0	13.40	37.460	28.232	0.270	0.513
79.0	13.73	37.180	27.946	0.270	0.513
80.2	13.52	37.230	28.029	0.270	0.513
81.4	13.60	37.260	28.035	0.270	0.513
82.5	13.57	37.200	27.995	0.270	0.513
83.3	13.53	37.280	28.066	0.270	0.513
84.0	13.41	37.310	28.114	0.270	0.513
85.1	13.56	37.350	28.113	0.270	0.479
86.3	13.71	37.370	28.097	0.270	0.513
87.4	13.73	37.470	28.170	0.232	0.497
88.5	13.61	37.450	28.180	0.232	0.497
89.7	13.76	37.260	28.001	0.232	0.497
90.9	13.66	37.270	28.030	0.232	0.497
92.0	13.62	37.300	28.062	0.232	0.497
93.0	13.63	37.330	28.083	0.232	0.497
94.0	13.59	37.460	28.192	0.232	0.497
95.0	13.61	37.320	28.080	0.232	0.497
95.5	13.54	37.390	28.149	0.232	0.497
96.0	13.55	37.280	28.061	0.232	0.497
97.3	13.66	37.210	27.984	0.232	0.497
98.7	13.64	37.230	28.004	0.232	0.533
100.0	13.61	37.310	28.072	0.232	0.497
100.7	13.71	37.320	28.059	0.232	0.497
101.3	13.76	37.380	28.094	0.232	0.497
102.0	13.82	37.350	28.058	0.232	0.497
103.0	13.75	37.380	28.096	0.232	0.497
104.0	13.84	37.490	28.162	0.232	0.497
104.6	13.95	37.300	27.992	0.232	0.497
105.2	13.94	37.490	28.141	0.232	0.497
105.8	14.02	37.390	28.046	0.232	0.497
106.4	14.10	37.320	27.975	0.195	0.554
107.0	13.91	37.560	28.201	0.232	0.461
107.5	14.08	37.340	27.995	0.232	0.497
108.0	14.07	37.440	28.074	0.232	0.497
110.0	14.02	37.450	28.093	0.232	0.497
112.0	13.94	37.470	28.125	0.232	0.497
114.0	14.04	37.270	27.949	0.232	0.461

R/V KNORR UNDERWAY 19 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL ($\mu\text{g/l}$)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/ $\text{cm}^2/\text{sec} \times 10^{17}$)
17:00	41°27.6'N	70°44.6'W	4.74	-	-	-	-
17:15	41°25.7'N	70°46.7'W	4.82	-	-	-	-
17:30	41°23.8'N	70°48.8'W	4.91	-	-	-	-
17:45	41°21.9'N	70°50.9'W	5.08	-	-	-	-
18:00	41°19.9'N	70°53.0'W	5.03	-	-	-	-
18:15	41°17.6'N	70°52.7'W	5.15	-	-	-	-
18:30	41°15.2'N	70°52.5'W	5.27	-	-	-	-
18:45	41°13.0'N	70°52.5'W	4.96	-	-	-	-
19:00	41°10.9'N	70°51.6'W	5.17	-	-	-	-
19:15	41°08.9'N	70°50.1'W	5.48	-	-	-	-
19:30	41°06.9'N	70°48.6'W	5.48	-	-	-	-
19:45	41°04.9'N	70°47.2'W	5.62	-	-	-	-
20:00	41°02.8'N	70°45.2'W	5.75	-	-	-	-
20:15	41°00.7'N	70°43.4'W	5.47	-	-	-	-
20:30	40°58.6'N	70°41.6'W	5.75	-	-	-	-
20:45	40°56.5'N	70°39.9'W	5.76	-	-	-	-
21:00	40°54.4'N	70°38.1'W	5.22	-	-	-	-
21:15	40°52.2'N	70°36.4'W	5.21	-	-	-	-
21:30	40°50.1'N	70°34.7'W	5.40	-	-	-	-
21:45	40°47.9'N	70°32.9'W	5.50	-	-	-	-
22:00	40°45.8'N	70°31.2'W	5.52	-	-	-	-
22:15	40°43.6'N	70°29.4'W	5.19	-	-	-	-
22:30	40°41.3'N	70°27.8'W	5.54	-	-	-	-
22:45	40°38.9'N	70°26.3'W	5.63	-	-	-	-
23:00	40°36.6'N	70°24.8'W	5.14	-	-	-	-
23:15	40°34.4'N	70°23.2'W	5.29	-	-	-	-
23:30	40°32.1'N	70°21.6'W	6.71	-	-	-	-
23:45	40°29.8'N	70°20.1'W	5.78	-	-	-	-
24:00	40°27.5'N	70°18.6'W	6.20	-	-	-	-

R/V KNORR UNDERWAY 20 APRIL 1982							
TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	40°27.5'N	70°18.6'W	6.20	-	-	-	0.000
0:15	40°25.2'N	70°17.1'W	6.08	-	-	-	0.000
0:30	40°22.9'N	70°15.5'W	6.09	-	-	-	0.000
0:45	40°20.6'N	70°14.0'W	6.17	-	-	-	0.000
1:00	40°18.3'N	70°12.5'W	6.13	-	-	-	0.000
1:15	40°15.9'N	70°11.0'W	6.04	-	-	-	0.000
1:30	40°13.5'N	70°09.5'W	5.73	-	-	-	0.000
1:45	40°11.1'N	70°08.1'W	5.85	-	-	-	0.000
2:00	40°08.7'N	70°06.8'W	5.96	-	-	-	0.000
2:15	40°06.2'N	70°05.6'W	6.07	-	-	-	0.000
2:30	40°03.6'N	70°04.4'W	6.18	-	-	-	0.000
2:45	40°01.1'N	70°03.2'W	6.29	-	-	-	0.000
3:00	39°58.7'N	70°02.0'W	6.40	-	-	-	0.000
3:15	39°56.6'N	70°00.5'W	6.51	-	-	-	0.000
3:30	39°53.7'N	69°58.4'W	7.48	-	-	-	0.000
3:45	39°51.3'N	69°56.7'W	7.99	-	-	-	0.000
4:00	39°48.8'N	69°54.9'W	8.50	-	-	-	0.000
4:15	39°46.4'N	69°53.0'W	8.91	-	-	-	0.000
4:30	39°44.0'N	69°51.2'W	8.14	-	-	-	0.000
4:45	39°41.7'N	69°49.4'W	7.75	-	-	-	0.000
5:00	39°39.5'N	69°47.7'W	7.46	-	-	-	0.000
5:15	39°37.3'N	69°46.0'W	8.31	-	-	-	0.000
5:30	39°35.0'N	69°44.3'W	7.90	-	-	-	0.000
5:45	39°32.7'N	69°42.8'W	7.31	-	-	-	0.000
6:00	39°30.5'N	69°41.3'W	7.07	-	-	-	0.000
6:15	39°28.4'N	69°39.3'W	7.70	-	-	-	0.000
6:30	39°26.2'N	69°37.9'W	7.39	-	-	-	0.000
6:45	39°24.0'N	69°36.5'W	6.88	-	-	-	0.000
7:00	39°21.2'N	69°35.7'W	7.23	-	-	-	0.000
7:15	39°18.7'N	69°35.0'W	7.35	-	-	-	0.000
7:30	39°16.6'N	69°33.5'W	8.36	-	-	-	0.000
7:45	39°14.6'N	69°31.6'W	9.70	-	-	-	0.000
8:00	39°12.6'N	69°29.4'W	10.77	-	-	-	0.000
8:15	39°10.8'N	69°27.2'W	10.51	-	-	-	0.000
8:30	39°09.0'N	69°24.9'W	8.79	-	-	-	0.000
8:45	39°08.7'N	69°24.9'W	8.88	-	-	-	0.000
9:00	39°08.7'N	69°25.1'W	8.91	-	-	-	0.000
9:15	39°08.6'N	69°25.2'W	8.98	-	-	-	0.000
9:30	39°08.6'N	69°25.4'W	8.90	-	-	-	0.000
9:45	39°08.6'N	69°25.5'W	8.87	-	-	-	0.004
10:00	39°08.6'N	69°25.7'W	8.83	-	-	-	0.215
10:15	39°08.7'N	69°25.9'W	8.85	-	-	-	0.525
10:30	39°08.8'N	69°26.0'W	8.82	-	-	-	0.214
10:45	39°08.9'N	69°26.1'W	8.74	-	-	-	1.095
11:00	39°08.8'N	69°26.1'W	8.72	-	-	-	1.336
11:15	39°08.8'N	69°27.5'W	8.72	-	-	-	0.324
11:30	39°08.9'N	69°26.7'W	8.70	-	-	-	1.349
11:45	39°09.0'N	69°25.9'W	8.74	-	-	-	1.446
12:00	39°09.0'N	69°25.8'W	8.78	-	-	-	1.377
12:15	39°09.0'N	69°25.8'W	8.71	-	-	-	1.638
12:30	39°09.1'N	69°25.8'W	8.64	-	-	-	1.706
12:45	39°09.1'N	69°25.6'W	8.67	-	-	-	1.745
13:00	39°09.2'N	69°25.7'W	8.75	-	-	-	1.791
13:15	39°09.2'N	69°25.7'W	8.81	-	-	-	1.750
13:30	39°09.2'N	69°25.7'W	8.87	-	-	-	1.806
13:45	39°09.2'N	69°25.5'W	8.98	-	-	-	1.826
14:00	39°09.3'N	69°25.5'W	8.77	-	-	-	1.820
14:15	39°09.3'N	69°25.2'W	8.83	-	-	-	1.839
14:30	39°09.4'N	69°25.3'W	8.77	-	-	-	1.885
14:45	39°09.4'N	69°25.3'W	8.87	-	-	-	1.872
15:00	39°09.4'N	69°25.2'W	9.04	-	-	-	1.326
15:15	39°09.3'N	69°25.1'W	9.20	-	-	-	1.376
15:30	39°09.2'N	69°25.4'W	8.93	-	-	-	0.900
15:45	39°08.9'N	69°25.4'W	8.99	-	-	-	0.808
16:00	39°08.7'N	69°25.5'W	9.53	-	-	-	1.004
16:15	39°08.5'N	69°25.8'W	9.35	-	-	-	1.784
16:30	39°08.3'N	69°26.0'W	9.52	-	-	-	1.933
16:45	39°08.2'N	69°26.3'W	8.96	-	-	-	1.915
17:00	39°08.2'N	69°26.5'W	9.13	-	-	-	1.813
17:15	39°08.3'N	69°26.4'W	9.24	-	-	-	1.836
17:30	39°08.5'N	69°26.8'W	9.31	-	-	-	1.834
17:45	39°08.5'N	69°27.1'W	9.52	-	-	-	1.773
18:00	39°08.6'N	69°27.3'W	10.00	-	-	-	1.779
18:15	39°08.7'N	69°26.2'W	9.34	-	-	-	1.225
18:30	39°08.4'N	69°26.0'W	9.07	-	-	-	1.780
18:45	39°07.9'N	69°26.6'W	10.51	-	-	-	1.657
19:00	39°07.3'N	69°27.1'W	10.70	-	-	-	1.098
19:15	39°06.8'N	69°27.1'W	10.82	-	-	-	1.206
19:30	39°06.3'N	69°27.9'W	10.62	-	-	-	1.310
19:45	39°05.7'N	69°28.5'W	10.15	-	-	-	0.622
20:00	39°05.1'N	69°29.1'W	10.28	-	-	-	0.554
20:15	39°04.5'N	69°29.4'W	10.33	-	-	-	0.415
20:30	39°05.8'N	69°28.2'W	9.24	-	-	-	0.306
20:45	39°07.5'N	69°26.6'W	9.65	-	-	-	0.208
21:00	39°09.2'N	69°24.9'W	9.14	-	-	-	0.131
21:15	39°09.1'N	69°25.2'W	9.14	-	-	-	0.073
21:30	39°09.1'N	69°25.7'W	9.18	-	-	-	0.036
21:45	39°09.1'N	69°26.1'W	9.73	-	-	-	0.011
22:00	39°08.1'N	69°26.0'W	9.69	-	-	-	0.000
22:15	39°08.6'N	69°26.3'W	9.80	-	-	-	0.000
22:30	39°09.5'N	69°26.9'W	9.92	-	-	-	0.000
22:45	39°10.0'N	69°26.8'W	9.20	-	-	-	0.000
23:00	39°09.0'N	69°24.9'W	9.17	-	-	-	0.000
23:15	39°09.1'N	69°24.9'W	9.65	-	-	-	0.000
23:30	39°09.2'N	69°25.0'W	10.01	-	-	-	0.000
23:45	39°09.2'N	69°24.9'W	10.05	-	-	-	0.000
24:00	39°09.2'N	69°25.0'W	9.37	-	-	-	0.000

R/V NNORR UNDERWAY 21 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec $\times 10^{17}$)
0:00	39°09.2'N	69°25.0'W	9.37	2.539	0.533	1.292	0.000
0:15	39°09.2'N	69°25.1'W	9.87	2.570	0.555	1.331	0.000
0:30	39°09.2'N	69°25.2'W	9.82	2.589	0.556	1.319	0.000
0:45	39°09.0'N	69°25.4'W	10.07	2.551	0.556	1.385	0.000
1:00	39°09.0'N	69°25.1'W	9.83	2.621	0.575	1.348	0.000
1:15	39°09.0'N	69°25.1'W	9.80	3.021	0.556	1.168	0.000
1:30	39°09.1'N	69°24.9'W	9.83	3.198	0.540	1.090	0.000
1:45	39°09.1'N	69°24.3'W	9.89	3.059	0.561	1.124	0.000
2:00	39°09.0'N	69°23.7'W	9.34	3.109	0.582	1.093	0.000
2:15	39°08.9'N	69°23.0'W	9.18	3.109	0.584	1.061	0.000
2:30	39°08.6'N	69°22.5'W	9.12	3.642	0.596	0.947	0.000
2:45	39°08.8'N	69°21.8'W	9.55	4.257	0.583	0.863	0.000
3:00	39°08.9'N	69°21.2'W	10.29	4.897	0.583	0.739	0.000
3:15	39°08.9'N	69°23.1'W	9.22	3.943	0.572	0.877	0.000
3:30	39°09.0'N	69°25.1'W	9.95	2.996	0.550	1.106	0.000
3:45	39°09.0'N	69°25.2'W	9.65	2.761	0.569	1.229	0.000
4:00	39°09.1'N	69°25.1'W	9.90	3.009	0.551	1.122	0.000
4:15	39°09.1'N	69°24.9'W	9.99	3.177	0.551	1.093	0.000
4:30	39°09.1'N	69°24.5'W	9.83	2.958	0.557	1.144	0.000
4:45	39°09.0'N	69°24.6'W	9.82	2.967	0.571	1.165	0.000
5:00	39°08.9'N	69°24.5'W	9.36	3.657	0.607	0.985	0.000
5:15	39°08.7'N	69°24.1'W	9.57	2.905	0.580	1.175	0.000
5:30	39°08.4'N	69°24.2'W	9.13	2.843	0.587	1.237	0.000
5:45	39°08.3'N	69°24.0'W	9.60	2.852	0.591	1.240	0.000
6:00	39°08.1'N	69°23.9'W	9.80	2.795	0.576	1.217	0.000
6:15	39°08.0'N	69°23.7'W	9.82	2.936	0.579	1.169	0.000
6:30	39°07.8'N	69°23.7'W	9.82	3.220	0.588	1.051	0.000
6:45	39°07.8'N	69°23.9'W	9.75	2.971	0.561	1.107	0.000
7:00	39°07.8'N	69°23.8'W	9.74	2.621	0.571	1.217	0.000
7:15	39°07.7'N	69°23.9'W	9.79	2.767	0.558	1.130	0.000
7:30	39°07.6'N	69°23.9'W	9.75	2.747	0.561	1.143	0.000
7:45	39°07.5'N	69°23.9'W	9.74	2.823	0.550	1.075	0.000
8:00	39°07.5'N	69°24.0'W	9.61	2.722	0.569	1.091	0.000
8:15	39°07.4'N	69°24.0'W	9.54	3.013	0.579	0.989	0.000
8:30	39°07.9'N	69°24.1'W	9.49	3.029	0.580	0.981	0.000
8:45	39°08.3'N	69°24.2'W	9.48	4.259	0.617	0.768	0.000
9:00	39°08.3'N	69°24.2'W	9.65	3.518	0.605	0.901	0.000
9:15	39°08.3'N	69°24.1'W	9.70	2.908	0.592	0.996	0.000
9:30	39°08.3'N	69°24.1'W	9.64	2.882	0.585	0.999	0.000
9:45	39°08.3'N	69°24.1'W	9.53	3.249	0.598	0.941	0.000
10:00	39°08.3'N	69°24.1'W	9.86	2.875	0.587	1.017	0.004
10:15	39°08.2'N	69°24.1'W	9.89	2.268	0.585	1.299	0.025
10:30	39°08.1'N	69°24.1'W	9.89	2.422	0.604	1.217	0.040
10:45	39°08.3'N	69°24.2'W	9.63	3.292	0.630	0.982	0.065
11:00	39°08.4'N	69°24.2'W	9.79	3.176	0.621	1.014	0.067
11:15	39°08.3'N	69°24.5'W	9.73	3.438	0.623	0.962	0.110
11:30	39°08.3'N	69°24.4'W	9.99	2.752	0.605	1.133	0.207
11:45	39°08.2'N	69°24.3'W	9.88	3.180	0.616	1.028	0.221
12:00	39°08.1'N	69°24.2'W	9.81	2.847	0.612	1.129	0.299
12:15	39°08.1'N	69°24.2'W	9.90	2.153	0.600	1.420	0.360
12:30	39°08.1'N	69°24.1'W	9.79	2.192	0.599	1.401	0.451
12:45	39°08.1'N	69°24.1'W	9.78	2.150	0.589	1.410	0.439
13:00	39°08.1'N	69°24.0'W	9.57	2.659	0.598	1.146	0.703
13:15	39°08.2'N	69°23.7'W	9.72	2.238	0.597	1.309	0.754
13:30	39°08.1'N	69°24.2'W	9.77	2.809	0.625	1.084	1.371
13:45	39°07.8'N	69°24.6'W	9.98	1.496	0.613	1.743	1.526
14:00	39°07.6'N	69°25.1'W	10.02	1.539	0.617	1.684	1.602
14:15	39°07.3'N	69°25.6'W	9.63	2.250	0.638	1.237	0.372
14:30	39°07.2'N	69°26.0'W	9.78	1.472	0.619	1.725	1.244
14:45	39°07.1'N	69°26.1'W	9.82	1.892	0.629	1.404	1.474
15:00	39°07.1'N	69°26.3'W	9.72	1.996	0.637	1.373	1.898
15:15	39°07.1'N	69°26.6'W	10.16	2.123	0.660	1.330	1.972
15:30	39°07.0'N	69°26.9'W	10.46	1.208	0.657	2.106	1.509
15:45	39°07.0'N	69°27.0'W	10.20	2.129	0.658	1.384	0.436
16:00	39°07.1'N	69°27.2'W	10.06	2.574	0.678	1.208	1.452
16:15	39°07.3'N	69°26.9'W	10.30	1.918	0.647	1.477	0.448
16:30	39°07.8'N	69°26.0'W	9.62	2.691	0.669	1.145	1.210
16:45	39°08.1'N	69°24.4'W	9.54	2.853	0.677	1.080	1.366
17:00	39°08.1'N	69°24.0'W	9.46	1.726	0.639	1.618	1.840
17:15	39°08.0'N	69°24.2'W	9.44	1.467	0.644	1.822	1.803
17:30	39°07.8'N	69°24.3'W	9.26	2.592	0.641	1.162	1.445
17:45	39°07.7'N	69°24.5'W	10.08	1.104	0.631	2.205	0.982
18:00	39°07.2'N	69°25.1'W	10.23	0.979	0.629	2.379	1.253
18:15	39°07.0'N	69°25.4'W	10.42	1.294	0.603	1.878	1.232
18:30	39°06.8'N	69°25.6'W	10.13	1.333	0.607	1.810	1.164
18:45	39°06.6'N	69°26.1'W	10.42	1.682	0.603	1.478	1.091
19:00	39°06.4'N	69°26.6'W	10.56	1.813	0.590	1.389	1.035
19:15	39°06.3'N	69°26.7'W	10.12	1.760	0.586	1.431	1.093
19:30	39°06.3'N	69°26.9'W	9.71	2.462	0.598	1.078	1.038
19:45	39°06.3'N	69°27.0'W	9.88	2.180	0.589	1.161	1.238
20:00	39°06.2'N	69°27.1'W	9.85	2.380	0.601	1.056	1.346
20:15	39°06.2'N	69°27.0'W	9.81	2.266	0.611	1.108	1.036
20:30	39°07.0'N	69°29.3'W	10.42	3.937	0.645	0.763	1.359
20:45	39°08.1'N	69°32.4'W	9.28	4.355	0.632	0.669	0.536
21:00	39°09.3'N	69°35.6'W	11.28	5.714	0.631	0.607	0.495
21:15	39°10.5'N	69°38.3'W	12.36	6.802	0.569	0.464	0.417
21:30	39°11.7'N	69°41.0'W	11.03	6.442	0.584	0.476	0.318
21:45	39°12.7'N	69°43.8'W	8.10	3.928	0.588	0.741	0.347
22:00	39°13.9'N	69°47.4'W	8.19	3.258	0.583	0.882	0.247
22:15	39°15.1'N	69°50.5'W	9.93	4.127	0.600	0.705	0.230
22:30	39°16.4'N	69°53.6'W	10.55	4.195	0.572	0.671	0.148
22:45	39°17.6'N	69°56.6'W	10.42	4.291	0.569	0.676	0.074
23:00	39°18.8'N	69°59.7'W	10.40	3.829	0.556	0.699	0.025
23:15	39°20.1'N	70°02.6'W	10.06	3.032	0.579	0.888	0.004
23:30	39°21.4'N	70°05.4'W	9.91	3.339	0.565	0.838	0.000
23:45	39°22.7'N	70°08.4'W	9.45	2.840	0.595	0.959	0.000
24:00	39°24.0'N	70°11.5'W	8.64	3.319	0.589	0.882	0.000

R/V KNORR UNDERWAY 22 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	39°24.0'N	70°11.5'W	8.64	3.319	0.589	0.882	0.000
0:15	39°25.7'N	70°15.0'W	7.76	2.166	0.607	1.352	0.000
0:30	39°27.0'N	70°17.9'W	9.06	2.963	0.611	0.955	0.000
0:45	39°28.4'N	70°20.9'W	9.41	4.079	0.605	0.744	0.000
1:00	39°29.7'N	70°23.7'W	9.16	2.811	0.658	1.178	0.000
1:15	39°31.1'N	70°26.7'W	8.89	4.026	0.624	0.915	0.000
1:30	39°30.8'N	70°29.3'W	10.02	4.551	0.607	0.680	0.000
1:45	39°28.8'N	70°31.7'W	10.91	4.307	0.611	0.709	0.000
2:00	39°26.9'N	70°34.1'W	11.26	4.402	0.632	0.799	0.000
2:15	39°25.0'N	70°36.6'W	11.59	4.464	0.596	0.647	0.000
2:30	39°23.1'N	70°39.1'W	11.46	5.329	0.624	0.577	0.000
2:45	39°21.5'N	70°41.6'W	12.39	6.182	0.651	0.487	0.000
3:00	39°19.9'N	70°44.1'W	12.48	7.156	0.626	0.416	0.000
3:15	39°18.0'N	70°46.3'W	12.85	6.479	0.648	0.439	0.000
3:30	39°16.1'N	70°48.5'W	12.61	7.129	0.619	0.420	0.000
3:45	39°14.3'N	70°50.9'W	12.07	7.455	0.622	0.397	0.000
4:00	39°12.3'N	70°53.2'W	12.37	6.841	0.633	0.428	0.000
4:15	39°10.4'N	70°55.7'W	14.44	4.490	0.637	0.523	0.000
4:30	39°08.5'N	70°57.9'W	15.04	2.922	0.624	0.645	0.000
4:45	39°06.6'N	71°00.3'W	15.67	1.913	0.607	0.827	0.000
5:00	39°04.9'N	71°02.7'W	15.81	2.067	0.596	0.761	0.000
5:15	39°03.2'N	71°05.3'W	15.91	1.518	0.604	0.916	0.000
5:30	39°01.4'N	71°07.7'W	15.88	1.589	0.619	0.840	0.000
5:45	38°59.6'N	71°10.2'W	15.76	1.716	0.609	0.845	0.000
6:00	38°57.8'N	71°12.8'W	15.89	1.434	0.625	0.948	0.000
6:15	38°56.1'N	71°15.5'W	15.86	1.619	0.601	0.829	0.000
6:30	38°54.5'N	71°17.9'W	15.67	1.901	0.615	0.778	0.000
6:45	38°52.6'N	71°20.3'W	15.68	1.807	0.621	0.793	0.000
7:00	38°50.7'N	71°22.7'W	15.96	1.390	0.619	0.916	0.000
7:15	38°52.2'N	71°24.9'W	15.94	1.015	0.638	1.125	0.000
7:30	38°53.7'N	71°27.2'W	15.95	1.262	0.604	0.978	0.000
7:45	38°55.4'N	71°29.3'W	15.96	1.254	0.622	0.983	0.000
8:00	38°57.2'N	71°31.5'W	15.91	1.188	0.638	1.012	0.000
8:15	38°57.0'N	71°20.2'W	15.98	1.141	0.617	1.022	0.000
8:30	38°56.0'N	71°20.6'W	15.98	1.157	0.615	1.058	0.000
8:45	38°54.9'N	71°21.1'W	15.98	0.947	0.647	1.169	0.000
9:00	38°53.9'N	71°21.5'W	15.67	1.013	0.625	1.153	0.000
9:15	38°52.9'N	71°21.9'W	15.52	1.481	0.632	0.823	0.000
9:30	38°51.8'N	71°22.4'W	15.80	1.431	0.647	0.837	0.000
9:45	38°50.9'N	71°22.8'W	15.86	1.165	0.654	0.951	0.001
10:00	38°50.9'N	71°23.0'W	15.86	1.122	0.658	0.978	0.018
10:15	38°51.0'N	71°23.0'W	15.83	1.119	0.642	0.964	0.075
10:30	38°51.0'N	71°23.0'W	15.87	1.138	0.664	0.950	0.164
10:45	38°51.1'N	71°23.0'W	15.85	1.034	0.653	0.977	0.658
11:00	38°51.2'N	71°23.3'W	15.89	0.984	0.673	1.035	0.915
11:15	38°51.3'N	71°23.6'W	15.87	0.901	0.663	1.086	1.140
11:30	38°51.5'N	71°23.9'W	15.90	0.903	0.692	1.069	1.244
11:45	38°51.5'N	71°23.8'W	15.88	0.687	0.694	1.286	1.444
12:00	38°51.7'N	71°24.3'W	15.90	0.907	0.668	1.017	1.525
12:15	38°51.8'N	71°24.5'W	15.91	0.630	0.704	1.315	1.280
12:30	38°52.0'N	71°24.6'W	15.88	0.600	0.735	1.371	1.735
12:45	38°52.1'N	71°24.8'W	15.92	0.758	0.682	1.082	1.770
13:00	38°52.4'N	71°25.1'W	15.92	0.587	0.730	1.350	1.874
13:15	38°52.4'N	71°25.1'W	15.91	0.618	0.733	1.345	1.866
13:30	38°52.4'N	71°25.1'W	15.93	0.650	0.728	1.182	1.901
13:45	38°52.7'N	71°25.1'W	15.92	0.637	0.740	1.227	1.908
14:00	38°53.1'N	71°25.2'W	15.92	0.662	0.724	1.098	1.939
14:15	38°53.3'N	71°25.1'W	15.95	0.663	0.708	1.137	1.976
14:30	38°53.7'N	71°25.1'W	15.95	0.556	0.754	1.170	1.940
14:45	38°54.0'N	71°25.1'W	15.93	0.498	0.753	1.187	1.486
15:00	38°54.3'N	71°25.1'W	15.93	0.397	0.815	1.406	0.024
15:15	38°54.4'N	71°24.7'W	15.94	0.396	0.840	1.275	1.811
15:30	38°54.7'N	71°22.4'W	15.91	0.000	0.727	0.912	0.160
15:45	38°54.7'N	71°19.4'W	15.65	0.669	0.726	0.919	1.928
16:00	38°54.8'N	71°16.7'W	15.60	0.586	0.739	0.885	1.953
16:15	38°54.6'N	71°16.5'W	15.64	0.567	0.787	1.219	0.047
16:30	38°54.2'N	71°16.5'W	15.62	0.654	0.771	1.165	1.439
16:45	38°53.8'N	71°16.5'W	15.62	0.688	0.748	1.292	0.040
17:00	38°53.4'N	71°16.5'W	15.66	0.631	0.747	1.315	1.803
17:15	38°53.3'N	71°16.5'W	15.67	0.555	0.792	1.536	1.662
17:30	38°53.1'N	71°16.5'W	15.68	0.534	0.797	1.781	1.633
17:45	38°53.0'N	71°16.5'W	15.65	-	-	-	1.685
18:00	38°52.8'N	71°16.4'W	15.67	-	-	-	1.509
18:15	38°53.5'N	71°16.5'W	15.68	-	-	-	0.088
18:30	38°51.7'N	71°17.4'W	15.69	-	-	-	1.348
18:45	38°51.3'N	71°17.4'W	15.65	-	-	-	1.815
19:00	38°51.0'N	71°17.4'W	15.67	-	-	-	0.115
19:15	38°50.7'N	71°16.9'W	15.68	-	-	-	0.000
19:30	38°50.4'N	71°16.9'W	15.68	-	-	-	0.948
19:45	38°50.2'N	71°17.0'W	15.71	-	-	-	0.813
20:00	38°50.0'N	71°17.6'W	15.77	2.061	0.609	0.367	0.692
20:15	38°49.8'N	71°18.3'W	15.63	2.329	0.604	0.307	0.545
20:30	38°49.2'N	71°18.9'W	15.70	2.199	0.592	0.373	0.397
20:45	38°48.4'N	71°19.4'W	15.85	1.550	0.603	0.344	0.351
21:00	38°47.6'N	71°20.0'W	15.90	1.110	0.633	0.354	0.309
21:15	38°47.1'N	71°20.3'W	15.89	1.150	0.628	0.334	0.291
21:30	38°46.5'N	71°20.6'W	15.83	1.300	0.622	0.318	0.242
21:45	38°46.8'N	71°20.7'W	15.84	1.486	0.623	0.299	0.184
22:00	38°47.0'N	71°20.9'W	15.87	1.095	0.624	0.258	0.148
22:15	38°47.5'N	71°21.4'W	15.85	1.157	0.633	0.277	0.114
22:30	38°48.8'N	71°21.9'W	15.81	1.138	0.639	0.232	0.093
22:45	38°49.3'N	71°21.8'W	15.62	1.567	0.636	0.218	0.050
23:00	38°49.1'N	71°22.3'W	15.62	1.348	0.654	0.245	0.025
23:15	38°49.0'N	71°22.5'W	15.61	1.339	0.643	0.213	0.013
23:30	38°48.9'N	71°22.7'W	15.59	1.435	0.624	0.197	0.004
23:45	38°48.8'N	71°23.1'W	15.61	1.421	0.640	0.245	0.000
24:00	38°48.9'N	71°23.5'W	15.58	1.404	0.642	0.217	0.000

R/V KNORR UNDERWAY 23 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL ($\mu\text{g/l}$)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec $\times 10^{17}$)
0:00	38°48.9'N	71°23.5'W	15.58	1.404	0.642	0.217	0.000
0:15	38°47.8'N	71°23.8'W	15.58	1.358	0.637	0.208	0.000
0:30	38°45.5'N	71°23.9'W	15.82	1.021	0.662	0.169	0.000
0:45	38°43.9'N	71°25.2'W	15.55	1.366	0.646	0.140	0.000
1:00	38°43.8'N	71°28.5'W	15.57	1.288	0.642	0.119	0.000
1:15	38°45.2'N	71°26.2'W	15.61	1.598	0.637	0.116	0.000
1:30	38°46.5'N	71°23.9'W	15.83	1.088	0.676	0.049	0.000
1:45	38°46.6'N	71°24.0'W	15.78	1.115	0.652	0.055	0.000
2:00	38°46.7'N	71°24.3'W	15.67	1.156	0.658	0.005	0.000
2:15	38°46.8'N	71°24.8'W	15.67	-	-	-	0.000
2:30	38°46.9'N	71°25.2'W	15.62	-	-	-	0.000
2:45	38°47.0'N	71°25.4'W	15.60	-	-	-	0.000
3:00	38°47.0'N	71°25.6'W	15.53	-	-	-	0.000
3:15	38°46.8'N	71°26.0'W	15.58	-	-	-	0.000
3:30	38°46.7'N	71°26.3'W	15.56	1.537	0.659	4.189	0.000
3:45	38°46.7'N	71°26.6'W	15.58	1.424	0.676	4.611	0.000
4:00	38°46.6'N	71°27.0'W	15.56	1.333	0.683	5.020	0.000
4:15	38°46.6'N	71°27.3'W	15.57	1.287	0.705	5.225	0.000
4:30	38°46.6'N	71°27.6'W	15.55	1.220	0.713	5.608	0.000
4:45	38°46.9'N	71°28.4'W	15.55	1.267	0.706	5.283	0.000
5:00	38°47.3'N	71°29.1'W	15.55	1.288	0.727	5.171	0.000
5:15	38°47.5'N	71°30.2'W	15.53	1.151	0.753	6.095	0.000
5:30	38°47.7'N	71°31.4'W	15.56	1.045	0.777	6.976	0.000
5:45	38°48.3'N	71°31.2'W	15.57	1.085	0.725	6.481	0.000
6:00	38°48.8'N	71°31.9'W	15.55	1.233	0.677	5.384	0.000
6:15	38°49.2'N	71°32.6'W	15.58	1.367	0.652	4.667	0.000
6:30	38°49.4'N	71°34.9'W	15.58	1.090	0.727	6.342	0.000
6:45	38°49.3'N	71°38.1'W	15.80	0.858	0.878	9.627	0.000
7:00	38°49.2'N	71°41.3'W	15.83	0.955	0.793	7.681	0.000
7:15	38°49.2'N	71°44.3'W	15.87	0.844	0.852	9.476	0.000
7:30	38°49.4'N	71°47.6'W	15.69	1.317	0.698	4.846	0.000
7:45	38°49.5'N	71°51.0'W	15.65	0.832	0.942	10.013	0.000
8:00	38°49.2'N	71°52.8'W	15.67	1.082	0.799	6.333	0.000
8:15	38°48.0'N	71°49.8'W	15.57	0.898	0.842	8.515	0.000
8:30	38°46.9'N	71°46.8'W	15.84	1.090	0.759	6.218	0.000
8:45	38°45.7'N	71°44.0'W	15.78	0.703	1.087	13.815	0.000
9:00	38°44.4'N	71°41.1'W	15.80	0.838	0.870	9.702	0.000
9:15	38°43.1'N	71°38.4'W	15.74	0.597	1.571	22.776	0.000
9:30	38°42.2'N	71°35.6'W	15.52	0.752	1.070	11.902	0.000
9:45	38°42.0'N	71°32.6'W	15.70	0.783	0.954	10.690	0.000
10:00	38°42.1'N	71°32.5'W	15.74	0.657	1.141	16.378	0.006
10:15	38°42.2'N	71°32.7'W	15.74	0.644	1.184	16.718	0.024
10:30	38°42.2'N	71°33.0'W	15.76	0.640	1.137	16.980	0.079
10:45	38°41.9'N	71°32.8'W	15.74	0.638	1.224	17.118	0.180
11:00	38°42.5'N	71°33.7'W	15.77	0.651	1.218	16.268	0.318
11:15	38°42.3'N	71°34.8'W	15.74	0.648	1.268	16.436	0.381
11:30	38°42.5'N	71°34.7'W	15.75	0.640	1.325	16.774	1.230
11:45	38°42.6'N	71°34.7'W	15.73	0.659	1.230	15.647	1.428
12:00	38°42.8'N	71°34.8'W	15.72	0.641	1.252	16.706	1.544
12:15	38°42.8'N	71°35.1'W	15.71	0.640	1.269	16.642	1.676
12:30	38°42.8'N	71°35.3'W	15.74	0.658	1.260	15.258	1.799
12:45	38°42.8'N	71°35.7'W	15.75	0.628	1.264	17.581	1.790
13:00	38°42.9'N	71°36.0'W	15.72	0.639	1.313	16.449	1.844
13:15	38°43.1'N	71°36.3'W	15.73	0.610	1.487	18.740	1.895
13:30	38°43.2'N	71°36.7'W	15.73	0.645	1.261	16.075	1.907
13:45	38°43.4'N	71°37.1'W	15.74	0.644	1.268	15.872	1.911
14:00	38°43.5'N	71°37.5'W	15.72	0.651	1.268	14.941	1.920
14:15	38°43.8'N	71°37.8'W	15.75	0.627	1.348	15.870	1.933
14:30	38°44.0'N	71°37.7'W	15.74	0.613	1.454	16.994	1.852
14:45	38°44.0'N	71°37.5'W	15.61	0.775	1.000	9.453	1.821
15:00	38°44.0'N	71°37.4'W	15.53	0.885	0.904	7.152	1.820
15:15	38°43.4'N	71°37.3'W	15.54	0.610	1.539	17.656	1.798
15:30	38°42.2'N	71°37.4'W	15.75	0.590	1.661	21.295	1.857
15:45	38°42.2'N	71°37.5'W	15.77	0.478	3.289	54.066	1.883
16:00	38°42.3'N	71°37.6'W	15.77	0.477	3.369	54.639	1.879
16:15	38°42.6'N	71°37.9'W	15.74	0.585	1.690	20.716	1.864
16:30	38°42.8'N	71°37.7'W	15.67	0.572	1.940	25.454	1.865
16:45	38°43.0'N	71°37.9'W	15.53	0.769	1.169	11.739	1.871
17:00	38°43.2'N	71°38.0'W	15.55	0.673	1.400	16.311	1.869
17:15	38°43.2'N	71°38.2'W	15.56	0.636	1.562	17.999	1.837
17:30	38°43.1'N	71°38.4'W	15.55	0.736	1.212	12.024	1.824
17:45	38°43.1'N	71°38.6'W	15.68	0.677	1.353	14.600	1.822
18:00	38°42.9'N	71°38.8'W	15.71	0.652	1.322	15.403	1.820
18:15	38°42.9'N	71°39.1'W	15.72	0.631	1.351	16.584	1.806
18:30	38°42.9'N	71°39.3'W	15.74	0.601	1.587	18.966	1.801
18:45	38°43.1'N	71°39.8'W	15.78	0.534	1.995	28.384	1.805
19:00	38°43.1'N	71°40.1'W	15.77	0.504	2.727	38.093	1.816
19:15	38°43.5'N	71°40.5'W	15.77	0.532	2.201	28.303	1.814
19:30	38°43.9'N	71°41.0'W	15.77	0.532	2.240	28.521	1.799
19:45	38°43.2'N	71°40.5'W	15.77	0.574	1.664	19.967	1.890
20:00	38°42.6'N	71°40.2'W	15.77	0.609	1.446	16.346	1.737
20:15	38°42.6'N	71°40.4'W	15.77	0.616	1.471	15.541	1.701
20:30	38°42.6'N	71°40.8'W	15.77	0.688	1.155	11.409	0.408
20:45	38°42.6'N	71°41.1'W	15.77	0.709	1.089	10.183	0.337
21:00	38°42.6'N	71°41.4'W	15.74	0.760	1.054	8.709	0.329
21:15	38°42.6'N	71°42.0'W	15.71	0.762	1.048	8.740	0.322
21:30	38°42.5'N	71°42.6'W	15.69	0.815	0.937	7.779	0.307
21:45	38°42.2'N	71°43.2'W	15.66	0.861	0.928	6.897	0.289
22:00	38°41.9'N	71°44.0'W	15.54	0.881	0.882	6.571	1.275
22:15	38°42.2'N	71°43.6'W	15.71	0.890	0.834	6.489	1.080
22:30	38°42.5'N	71°43.3'W	15.75	0.889	0.924	6.223	0.200
22:45	38°42.7'N	71°42.9'W	15.75	0.813	0.967	7.338	0.164
23:00	38°42.9'N	71°42.6'W	15.75	0.784	1.024	7.875	0.113
23:15	38°43.1'N	71°43.1'W	15.75	0.806	0.998	7.382	0.054
23:30	38°43.1'N	71°43.6'W	15.71	0.793	1.060	7.765	0.016
23:45	38°43.4'N	71°43.6'W	15.72	0.806	1.030	7.465	0.001
24:00	38°43.6'N	71°43.5'W	15.77	0.792	1.075	7.797	0.000

R/V KNORR UNDERWAY 24 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	38°43.6'N	71°43.5'W	15.77	0.792	1.075	7.797	0.000
0:15	38°46.3'N	71°42.9'W	15.57	0.801	1.084	7.763	0.000
0:30	38°49.1'N	71°42.4'W	15.61	0.903	0.937	5.976	0.000
0:45	38°51.8'N	71°41.8'W	15.58	0.803	1.100	7.805	0.000
1:00	38°54.6'N	71°41.2'W	15.55	0.795	1.135	7.719	0.000
1:15	38°57.4'N	71°40.4'W	15.73	0.770	1.106	8.280	0.000
1:30	39°00.2'N	71°39.5'W	15.58	0.662	1.414	-	0.000
1:45	39°03.0'N	71°38.6'W	15.76	0.747	1.206	9.040	0.000
2:00	39°05.8'N	71°37.7'W	15.80	0.796	1.086	7.793	0.000
2:15	39°08.6'N	71°36.5'W	15.69	0.737	1.177	9.023	0.000
2:30	39°11.3'N	71°35.5'W	15.49	0.877	1.029	6.431	0.000
2:45	39°14.0'N	71°34.8'W	15.59	0.897	1.013	6.320	0.000
3:00	39°16.6'N	71°34.1'W	15.29	0.826	1.075	7.294	0.000
3:15	39°19.4'N	71°33.4'W	14.88	1.523	0.807	2.823	0.000
3:30	39°22.2'N	71°32.9'W	15.08	1.335	0.855	3.599	0.000
3:45	39°24.9'N	71°32.4'W	14.64	1.276	0.874	3.786	0.000
4:00	39°27.6'N	71°31.8'W	13.21	2.761	0.715	1.588	0.000
4:15	39°27.6'N	71°31.5'W	12.96	3.013	0.706	1.436	0.000
4:30	39°27.8'N	71°31.2'W	13.00	2.924	0.721	1.451	0.000
4:45	39°27.9'N	71°31.3'W	12.81	3.028	0.715	1.450	0.000
5:00	39°28.1'N	71°30.6'W	12.68	3.150	0.710	1.417	0.000
5:15	39°28.2'N	71°29.9'W	12.75	3.140	0.712	1.400	0.000
5:30	39°28.1'N	71°29.7'W	12.82	3.076	0.721	1.449	0.000
5:45	39°27.9'N	71°29.0'W	13.05	2.906	0.724	1.512	0.000
6:00	39°27.7'N	71°28.4'W	13.12	-	-	-	0.000
6:15	39°27.5'N	71°27.8'W	13.13	-	-	-	0.000
6:30	39°27.4'N	71°28.1'W	13.21	-	-	-	0.000
6:45	39°27.5'N	71°29.4'W	13.29	-	-	-	0.000
7:00	39°27.5'N	71°30.8'W	13.33	2.677	0.708	1.627	0.000
7:15	39°27.6'N	71°31.7'W	13.22	2.767	0.722	1.611	0.000
7:30	39°27.7'N	71°31.4'W	13.28	2.723	0.716	1.591	0.000
7:45	39°27.8'N	71°31.2'W	13.30	2.649	0.718	1.631	0.000
8:00	39°27.8'N	71°30.9'W	13.31	2.612	0.730	1.639	0.000
8:15	39°28.7'N	71°31.4'W	13.36	2.578	0.729	1.682	0.000
8:30	39°27.7'N	71°30.1'W	13.48	2.475	0.728	1.716	0.000
8:45	39°28.7'N	71°29.8'W	13.29	2.449	0.735	1.763	0.000
9:00	39°31.1'N	71°29.6'W	12.05	2.761	0.733	1.609	0.000
9:15	39°33.9'N	71°29.3'W	11.54	3.660	0.714	1.312	0.000
9:30	39°36.9'N	71°29.1'W	11.15	2.368	0.788	2.010	0.000
9:45	39°39.8'N	71°29.0'W	10.63	2.403	0.762	1.985	0.001
10:00	39°42.2'N	71°28.2'W	10.47	2.780	0.805	1.745	0.026
10:15	39°42.2'N	71°28.1'W	10.46	2.683	0.755	1.745	0.083
10:30	39°42.2'N	71°27.8'W	10.47	2.812	0.752	1.659	0.167
10:45	39°42.2'N	71°27.5'W	10.47	3.006	0.734	1.526	0.549
11:00	39°42.2'N	71°27.0'W	10.47	3.136	0.732	1.470	0.803
11:15	39°42.3'N	71°27.7'W	10.45	3.176	0.735	1.471	1.005
11:30	39°42.3'N	71°27.9'W	10.47	3.316	0.711	1.439	1.181
11:45	39°42.6'N	71°27.5'W	10.47	3.129	0.757	1.501	1.311
12:00	39°44.5'N	71°27.6'W	10.41	2.950	0.766	1.635	1.449
12:15	39°47.0'N	71°27.0'W	9.90	3.371	0.743	1.464	1.520
12:30	39°49.5'N	71°26.4'W	10.50	3.278	0.721	1.510	1.643
12:45	39°52.1'N	71°25.8'W	7.55	3.258	0.723	1.541	1.706
13:00	39°53.9'N	71°25.5'W	6.91	-	-	-	1.709
13:15	39°53.9'N	71°25.7'W	6.86	1.947	0.805	2.818	1.768
13:30	39°53.8'N	71°26.0'W	6.85	1.967	0.790	2.826	1.795
13:45	39°53.8'N	71°26.0'W	6.81	1.884	0.811	2.991	1.809
14:00	39°53.9'N	71°26.0'W	6.84	1.877	0.815	2.981	1.833
14:15	39°53.6'N	71°26.1'W	6.84	1.828	0.833	3.099	1.813
14:30	39°53.6'N	71°26.2'W	6.85	1.814	0.811	3.170	1.817
14:45	39°53.7'N	71°26.3'W	6.88	1.744	0.838	3.264	1.867
15:00	39°53.7'N	71°26.2'W	6.97	1.744	0.864	3.248	1.870
15:15	39°53.4'N	71°26.5'W	7.01	1.764	0.861	3.259	1.828
15:30	39°52.1'N	71°26.7'W	6.97	1.630	0.839	3.582	1.700
15:45	39°49.3'N	71°27.0'W	8.17	1.690	0.865	3.452	1.720
16:00	39°46.7'N	71°27.1'W	10.20	2.655	0.786	2.007	1.666
16:15	39°46.5'N	71°26.9'W	9.98	2.504	0.796	2.041	1.655
16:30	39°46.4'N	71°26.5'W	10.05	-	-	-	1.722
16:45	39°46.4'N	71°26.1'W	10.09	-	-	-	1.726
17:00	39°46.4'N	71°25.6'W	10.15	-	-	-	1.730
17:15	39°46.3'N	71°25.2'W	10.08	2.371	0.807	2.378	1.731
17:30	39°46.2'N	71°24.6'W	10.28	2.337	0.837	2.390	1.747
17:45	39°44.7'N	71°24.7'W	10.07	2.415	0.840	2.388	1.742
18:00	39°42.2'N	71°24.8'W	10.61	3.083	0.810	1.948	1.741
18:15	39°39.6'N	71°25.2'W	10.86	2.320	0.937	2.573	1.749
18:30	39°37.0'N	71°25.7'W	11.09	2.503	0.877	2.413	1.755
18:45	39°34.4'N	71°26.0'W	11.61	2.984	0.831	2.023	1.766
19:00	39°31.8'N	71°26.4'W	11.98	2.511	0.873	2.351	1.758
19:15	39°29.4'N	71°26.7'W	12.11	2.644	0.802	2.160	1.758
19:30	39°26.9'N	71°27.0'W	12.57	3.839	0.744	1.526	1.754
19:45	39°24.6'N	71°27.9'W	12.79	3.099	0.772	1.769	1.727
20:00	39°22.5'N	71°30.0'W	13.38	2.767	0.753	1.875	1.667
20:15	39°21.0'N	71°31.8'W	13.99	3.622	0.721	1.441	1.714
20:30	39°18.4'N	71°31.5'W	13.93	2.620	0.776	1.708	1.706
20:45	39°17.9'N	71°31.2'W	14.05	2.587	0.766	1.691	0.436
21:00	39°17.8'N	71°31.0'W	14.07	2.697	0.744	1.571	0.424
21:15	39°17.7'N	71°30.9'W	14.09	2.740	0.754	1.545	0.421
21:30	39°17.6'N	71°30.7'W	14.11	2.870	0.718	1.430	0.603
21:45	39°17.5'N	71°30.6'W	14.16	2.993	0.688	1.347	1.198
22:00	39°16.0'N	71°30.8'W	14.30	2.957	0.694	1.378	1.170
22:15	39°13.6'N	71°31.4'W	15.54	1.759	0.733	2.469	0.979
22:30	39°11.1'N	71°32.0'W	15.74	0.896	0.973	5.870	0.757
22:45	39°08.7'N	71°32.6'W	15.74	0.842	0.974	6.513	0.255
23:00	39°06.3'N	71°33.2'W	15.61	0.926	0.968	5.507	0.265
23:15	39°03.9'N	71°33.7'W	15.63	0.862	0.969	5.991	0.072
23:30	39°03.8'N	71°33.8'W	15.64	0.829	1.015	6.824	0.018
23:45	39°03.9'N	71°33.9'W	15.61	0.800	1.055	7.059	0.001
24:00	39°03.9'N	71°34.0'W	15.61	0.799	1.073	7.055	0.000

R/V KNORR UNDERWAY 25 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	39°03.9'N	71°34.0'W	15.61	0.799	1.073	7.055	0.000
0:15	39°04.1'N	71°33.7'W	15.62	0.799	1.032	6.954	0.000
0:30	39°04.1'N	71°33.3'W	15.61	0.806	1.036	6.818	0.000
0:45	39°03.9'N	71°33.6'W	15.63	0.778	1.053	7.352	0.000
1:00	39°03.6'N	71°33.9'W	15.62	0.784	1.066	7.050	0.000
1:15	39°03.5'N	71°33.5'W	15.62	0.795	1.069	6.876	0.000
1:30	39°03.5'N	71°33.0'W	15.65	0.770	1.052	7.331	0.000
1:45	39°03.3'N	71°33.2'W	15.69	0.776	1.101	7.186	0.000
2:00	39°03.2'N	71°33.4'W	15.68	0.784	1.072	6.823	0.000
2:15	39°03.2'N	71°33.1'W	15.68	0.779	1.119	6.848	0.000
2:30	39°03.2'N	71°32.9'W	15.70	0.746	1.144	7.677	0.000
2:45	39°03.3'N	71°32.7'W	15.68	0.763	1.030	7.185	0.000
3:00	39°03.3'N	71°32.6'W	15.68	0.753	1.074	7.295	0.000
3:15	39°03.2'N	71°32.8'W	15.68	0.724	1.199	7.864	0.000
3:30	39°03.2'N	71°33.0'W	15.69	0.749	1.141	7.205	0.000
3:45	39°03.1'N	71°32.9'W	15.69	0.728	1.168	7.648	0.000
4:00	39°01.6'N	71°31.2'W	15.82	0.726	1.116	7.785	0.000
4:15	38°59.6'N	71°30.6'W	15.83	0.593	1.627	13.363	0.000
4:30	38°57.5'N	71°30.0'W	15.75	0.555	1.830	17.019	0.000
4:45	38°55.5'N	71°29.4'W	15.60	0.715	1.172	7.790	0.000
5:00	38°53.4'N	71°28.8'W	15.80	0.648	1.379	9.788	0.000
5:15	38°52.2'N	71°31.7'W	15.80	0.463	5.108	50.174	0.000
5:30	38°50.9'N	71°34.6'W	15.84	0.532	2.360	20.387	0.000
5:45	38°50.4'N	71°37.7'W	15.84	0.593	1.643	12.823	0.000
6:00	38°50.5'N	71°37.6'W	15.86	0.612	1.492	11.282	0.000
6:15	38°50.3'N	71°37.8'W	15.83	0.619	1.481	10.852	0.000
6:30	38°50.2'N	71°38.1'W	15.84	0.598	1.573	11.967	0.000
6:45	38°50.0'N	71°38.4'W	15.85	0.572	1.792	13.982	0.000
7:00	38°49.8'N	71°38.7'W	15.83	0.582	1.783	13.096	0.000
7:15	38°49.9'N	71°38.4'W	15.85	0.583	1.598	12.799	0.000
7:30	38°51.1'N	71°37.5'W	15.83	0.588	1.666	12.294	0.000
7:45	38°53.3'N	71°35.8'W	15.85	0.621	1.464	10.418	0.000
8:00	38°55.5'N	71°34.2'W	15.85	0.606	1.566	11.414	0.000
8:15	38°57.8'N	71°32.0'W	15.83	0.523	2.617	20.633	0.000
8:30	39°00.0'N	71°29.9'W	15.83	-	-	-	0.000
8:45	39°00.2'N	71°29.8'W	15.84	-	-	-	0.000
9:00	39°00.2'N	71°31.9'W	15.82	-	-	-	0.000
9:15	38°59.7'N	71°38.6'W	15.80	-	-	-	0.000
9:30	39°00.0'N	71°40.2'W	15.80	-	-	-	0.000
9:45	39°00.3'N	71°41.9'W	15.73	-	-	-	0.001
10:00	39°00.5'N	71°41.8'W	15.52	-	-	-	0.015
10:15	39°00.4'N	71°38.6'W	15.79	-	-	-	0.057
10:30	39°00.4'N	71°35.4'W	15.82	-	-	-	0.108
10:45	39°00.7'N	71°33.9'W	15.79	-	-	-	0.165
11:00	39°00.1'N	71°30.2'W	15.80	-	-	-	0.210
11:15	39°00.1'N	71°30.2'W	15.83	-	-	-	1.051
11:30	39°00.1'N	71°30.2'W	15.82	-	-	-	1.237
11:45	39°00.0'N	71°30.1'W	15.81	-	-	-	1.378
12:00	39°00.0'N	71°30.1'W	15.80	-	-	-	1.491
12:15	38°59.9'N	71°29.9'W	15.79	-	-	-	1.582
12:30	38°59.8'N	71°30.1'W	15.78	-	-	-	1.648
12:45	38°59.8'N	71°30.9'W	15.78	-	-	-	1.710
13:00	38°59.7'N	71°31.3'W	15.80	-	-	-	1.756
13:15	38°59.7'N	71°31.6'W	15.84	-	-	-	1.789
13:30	38°59.5'N	71°31.7'W	15.83	-	-	-	1.814
13:45	38°59.5'N	71°32.2'W	15.86	-	-	-	1.833
14:00	38°59.4'N	71°32.3'W	15.89	-	-	-	1.809
14:15	38°59.5'N	71°32.0'W	15.88	-	-	-	1.812
14:30	38°59.6'N	71°31.7'W	15.90	-	-	-	1.818
14:45	38°59.6'N	71°31.6'W	15.91	-	-	-	1.831
15:00	38°59.6'N	71°31.5'W	15.95	-	-	-	1.830
15:15	38°59.5'N	71°31.5'W	15.95	-	-	-	1.833
15:30	38°59.4'N	71°31.5'W	15.99	-	-	-	1.829
15:45	38°59.2'N	71°31.4'W	15.97	-	-	-	1.492
16:00	38°56.0'N	71°31.0'W	16.02	-	-	-	1.743
16:15	38°56.1'N	71°30.5'W	16.04	-	-	-	1.742
16:30	38°56.3'N	71°30.0'W	16.02	-	-	-	1.745
16:45	38°56.4'N	71°29.4'W	16.04	-	-	-	1.746
17:00	38°56.5'N	71°29.0'W	16.07	-	-	-	1.749
17:15	38°56.1'N	71°28.7'W	16.07	-	-	-	1.756
17:30	38°55.5'N	71°28.5'W	16.11	-	-	-	1.087
17:45	38°55.3'N	71°28.7'W	16.11	-	-	-	1.730
18:00	38°55.1'N	71°28.8'W	16.12	-	-	-	0.762
18:15	38°54.9'N	71°29.0'W	16.08	-	-	-	1.288
18:30	38°54.7'N	71°29.2'W	16.10	-	-	-	-
18:45	38°54.2'N	71°29.7'W	16.13	-	-	-	-
19:00	38°53.9'N	71°30.2'W	16.17	-	-	-	-
19:15	38°54.9'N	71°30.2'W	16.38	-	-	-	-
19:30	38°57.2'N	71°30.1'W	16.60	-	-	-	-
19:45	38°59.4'N	71°29.9'W	16.81	-	-	-	-
20:00	39°00.2'N	71°29.8'W	17.02	-	-	-	-
20:15	39°00.0'N	71°29.5'W	17.23	-	-	-	-
20:30	38°59.9'N	71°29.4'W	17.45	-	-	-	-
20:45	38°59.8'N	71°29.1'W	17.66	-	-	-	-
21:00	38°59.4'N	71°28.2'W	17.87	-	-	-	-
21:15	38°59.2'N	71°27.8'W	18.09	-	-	-	-
21:30	38°59.0'N	71°27.8'W	18.30	-	-	-	-
21:45	38°59.1'N	71°28.2'W	18.51	-	-	-	-
22:00	38°59.9'N	71°29.4'W	18.72	-	-	-	-
22:15	39°00.0'N	71°30.0'W	18.94	-	-	-	-
22:30	38°59.7'N	71°29.7'W	19.15	-	-	-	-
22:45	38°59.6'N	71°29.8'W	19.36	-	-	-	-
23:00	38°59.6'N	71°29.9'W	19.57	-	-	-	-
23:15	38°59.5'N	71°29.9'W	19.79	-	-	-	-
23:30	38°59.4'N	71°29.9'W	20.00	-	-	-	-
23:45	38°59.4'N	71°29.9'W	20.21	-	-	-	-
24:00	38°59.4'N	71°29.9'W	20.43	-	-	-	-

R/V KNORR UNDERWAY 26 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCC:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	38°59.4'N	71°29.9'W	16.01	0.750	1.146	3.625	-
0:15	38°59.3'N	71°29.9'W	15.99	0.780	1.128	3.537	-
0:30	38°59.3'N	71°29.7'W	15.98	0.757	1.218	3.388	-
0:45	38°59.2'N	71°29.8'W	15.96	0.759	1.175	3.451	-
1:00	38°58.8'N	71°30.0'W	15.98	0.717	1.210	3.953	-
1:15	38°58.5'N	71°30.0'W	16.00	0.616	1.617	5.700	-
1:30	38°58.5'N	71°29.9'W	15.97	0.565	2.040	7.464	-
1:45	38°58.6'N	71°29.7'W	15.96	0.601	1.727	5.877	-
2:00	38°58.7'N	71°29.6'W	15.96	0.584	1.785	6.322	-
2:15	38°58.7'N	71°29.8'W	15.96	0.559	2.031	7.646	-
2:30	38°58.7'N	71°29.7'W	15.96	0.563	1.912	7.252	-
2:45	38°58.3'N	71°29.9'W	15.93	0.530	2.564	9.529	-
3:00	38°58.2'N	71°29.4'W	15.94	0.542	2.389	8.419	-
3:15	38°58.1'N	71°29.5'W	15.94	0.535	2.280	8.501	-
3:30	38°57.9'N	71°29.6'W	15.93	0.517	2.661	10.192	-
3:45	38°57.8'N	71°29.6'W	15.93	0.503	2.993	11.418	-
4:00	38°57.6'N	71°29.6'W	15.93	0.509	2.797	10.290	-
4:15	38°57.2'N	71°29.6'W	15.93	0.507	2.988	11.108	-
4:30	38°57.6'N	71°29.7'W	15.93	0.497	3.140	11.757	-
4:45	38°58.7'N	71°29.9'W	15.90	0.505	3.004	10.038	-
5:00	38°59.8'N	71°30.0'W	15.91	0.518	2.504	9.200	-
5:15	39°00.0'N	71°29.9'W	15.90	0.519	2.714	8.225	-
5:30	39°00.0'N	71°29.6'W	15.89	0.546	2.195	6.909	-
5:45	39°00.0'N	71°29.3'W	15.80	0.677	1.414	3.539	-
6:00	39°00.0'N	71°29.0'W	15.75	0.792	1.112	2.472	-
6:15	38°59.3'N	71°29.0'W	15.80	0.736	1.267	2.874	-
6:30	38°59.7'N	71°29.4'W	15.89	0.539	2.266	7.942	-
6:45	38°59.9'N	71°29.7'W	15.87	0.486	3.762	11.886	-
7:00	39°00.1'N	71°30.0'W	15.87	0.453	6.443	22.803	-
7:15	39°00.1'N	71°30.0'W	15.86	0.467	5.015	16.510	-
7:30	39°00.0'N	71°30.1'W	15.84	0.471	4.700	15.323	-
7:45	39°00.0'N	71°30.2'W	15.86	0.463	5.416	18.407	-
8:00	39°00.0'N	71°30.2'W	15.86	0.470	4.677	15.994	-
8:15	39°00.1'N	71°30.1'W	15.85	0.539	2.240	7.091	-
8:30	39°00.1'N	71°30.0'W	15.84	0.529	2.427	6.925	-
8:45	39°00.1'N	71°29.9'W	15.86	0.537	2.405	6.765	-
9:00	39°00.2'N	71°29.7'W	15.84	0.466	5.021	15.227	-
9:15	39°00.2'N	71°29.6'W	15.84	0.450	6.969	22.258	-
9:30	39°00.2'N	71°29.6'W	15.84	0.478	4.146	14.203	-
9:45	39°00.1'N	71°29.7'W	15.86	0.464	5.629	21.405	-
10:00	39°00.0'N	71°29.7'W	15.85	0.446	8.662	31.617	-
10:15	39°00.0'N	71°29.8'W	15.86	0.458	5.981	27.886	-
10:30	39°00.0'N	71°29.9'W	15.86	0.472	4.844	20.391	-
10:45	38°59.9'N	71°29.9'W	15.86	0.493	3.798	15.447	-
11:00	38°59.8'N	71°29.8'W	15.87	0.487	3.880	16.199	-
11:15	38°59.8'N	71°29.7'W	15.88	0.521	2.539	11.655	-
11:30	38°59.9'N	71°29.9'W	15.87	0.521	2.865	10.720	-
11:45	38°59.9'N	71°30.0'W	15.87	0.549	2.367	8.681	-
12:00	38°59.9'N	71°30.0'W	15.87	0.570	2.131	7.564	-
12:15	39°00.0'N	71°29.9'W	15.87	0.604	1.860	5.510	-
12:30	39°00.0'N	71°29.9'W	15.86	0.549	2.618	7.345	-
12:45	39°00.1'N	71°29.9'W	15.88	-	-	-	-
13:00	39°00.2'N	71°29.8'W	15.89	0.563	2.334	7.000	-
13:15	38°59.9'N	71°29.7'W	15.88	0.548	2.437	6.509	-
13:30	38°59.7'N	71°29.9'W	15.87	0.577	2.213	5.176	-
13:45	38°59.5'N	71°30.2'W	15.89	0.542	2.495	6.757	-
14:00	38°59.4'N	71°30.3'W	15.90	0.692	1.612	2.708	-
14:15	38°59.2'N	71°30.4'W	15.92	0.791	1.316	2.164	-
14:30	38°59.0'N	71°30.5'W	15.93	0.785	1.268	2.147	-
14:45	38°58.7'N	71°30.6'W	15.94	0.819	1.199	1.957	-
15:00	38°58.6'N	71°30.8'W	15.90	0.983	1.110	1.457	-
15:15	38°59.1'N	71°30.6'W	15.83	1.048	1.034	1.307	-
15:30	38°59.4'N	71°30.5'W	15.95	0.956	1.075	1.786	-
15:45	38°59.1'N	71°30.5'W	15.91	0.999	1.077	1.901	-
16:00	38°58.7'N	71°30.8'W	15.78	1.180	1.003	1.569	-
16:15	38°58.5'N	71°30.8'W	15.77	1.238	0.940	1.534	-
16:30	38°58.4'N	71°30.3'W	15.80	1.268	0.915	1.410	-
16:45	38°59.1'N	71°29.3'W	15.92	1.111	1.023	1.748	-
17:00	39°00.2'N	71°29.6'W	15.92	1.088	1.050	1.782	-
17:15	39°00.0'N	71°29.6'W	15.90	1.174	0.962	1.510	-
17:30	39°00.0'N	71°29.5'W	15.90	1.138	1.000	1.531	-
17:45	39°00.0'N	71°29.1'W	15.90	1.128	1.017	1.394	-
18:00	39°00.0'N	71°29.0'W	15.88	1.112	0.987	1.283	-
18:15	39°00.2'N	71°28.9'W	15.92	1.029	1.061	1.520	-
18:30	39°00.3'N	71°28.8'W	15.91	1.139	0.990	1.259	-
18:45	39°00.3'N	71°28.8'W	15.90	1.281	0.906	0.962	-
19:00	39°00.4'N	71°28.7'W	15.90	1.371	0.893	0.857	-
19:15	39°00.1'N	71°28.2'W	15.90	1.303	0.881	0.880	-
19:30	38°59.6'N	71°27.6'W	15.92	1.186	0.899	0.883	-
19:45	38°59.2'N	71°27.1'W	15.90	1.102	0.962	0.980	-
20:00	38°58.8'N	71°26.6'W	15.89	1.025	0.963	0.996	-
20:15	38°58.4'N	71°26.1'W	15.89	0.973	1.038	1.067	-
20:30	38°57.9'N	71°25.7'W	15.70	1.591	0.838	0.792	-
20:45	38°57.5'N	71°25.2'W	15.69	1.711	0.849	0.573	-
21:00	38°57.1'N	71°24.8'W	15.70	1.713	0.855	0.584	-
21:15	38°56.7'N	71°24.3'W	15.69	1.631	0.826	0.633	-
21:30	38°56.3'N	71°24.0'W	15.71	1.591	0.836	0.629	-
21:45	38°55.8'N	71°23.6'W	15.72	1.538	0.860	0.598	-
22:00	38°55.4'N	71°23.1'W	15.70	1.452	0.871	0.636	-
22:15	38°54.8'N	71°22.8'W	15.74	1.421	0.899	0.673	-
22:30	38°54.3'N	71°22.4'W	15.78	1.310	0.914	0.754	-
22:45	38°54.1'N	71°21.9'W	15.80	1.174	0.987	0.819	-
23:00	38°53.9'N	71°21.7'W	15.80	1.170	0.950	0.791	-
23:15	38°53.9'N	71°21.7'W	15.82	1.176	0.986	0.760	-
23:30	38°54.2'N	71°22.2'W	15.80	1.092	1.043	0.809	-
23:45	38°55.5'N	71°23.7'W	15.69	1.211	0.967	0.772	-
24:00	38°56.8'N	71°25.3'W	15.71	1.557	0.915	0.629	-

S/V KNORR UNDERWAY 27 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/L)	FUCCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE QUANTITIES 2 SEC 10 17
0:00	38°56.8'N	71°25.3'W	15.71	1.557	0.915	0.809	-
0:15	38°58.1'N	71°26.8'W	15.86	0.971	1.123	0.957	-
0:30	38°58.9'N	71°28.3'W	15.68	1.197	1.011	0.858	-
0:45	38°58.8'N	71°28.4'W	15.73	1.049	1.055	0.763	-
1:00	38°58.4'N	71°28.5'W	15.74	0.984	1.112	0.899	-
1:15	38°58.1'N	71°28.8'W	15.76	0.945	1.108	0.961	-
1:30	38°58.4'N	71°28.9'W	15.78	0.910	1.184	1.057	-
1:45	38°59.1'N	71°29.1'W	15.82	0.988	1.094	0.929	-
2:00	38°59.6'N	71°29.1'W	15.83	0.879	1.207	1.347	-
2:15	38°59.4'N	71°29.0'W	15.82	0.855	1.242	1.691	-
2:30	38°59.2'N	71°28.7'W	15.80	0.875	1.251	1.785	-
2:45	38°59.0'N	71°28.4'W	15.81	0.946	1.177	1.616	-
3:00	38°58.7'N	71°28.1'W	15.78	0.959	1.141	1.518	-
3:15	38°58.4'N	71°27.8'W	15.77	0.973	1.187	1.653	-
3:30	38°58.5'N	71°26.1'W	15.69	1.009	1.162	1.626	-
3:45	38°58.6'N	71°23.5'W	15.80	0.980	1.184	1.697	-
4:00	38°58.4'N	71°20.3'W	15.26	2.023	0.927	0.700	-
4:15	38°58.1'N	71°17.2'W	15.69	1.161	1.090	1.278	-
4:30	38°57.9'N	71°14.1'W	15.62	0.862	1.345	1.997	-
4:45	38°57.6'N	71°11.1'W	15.29	1.828	0.955	0.794	-
5:00	38°57.3'N	71°08.0'W	15.31	2.093	0.904	0.660	-
5:15	38°57.0'N	71°04.8'W	15.40	1.658	0.943	0.869	-
5:30	38°56.6'N	71°01.8'W	14.55	1.530	0.997	1.071	-
5:45	38°56.3'N	70°58.8'W	13.75	2.014	0.903	0.868	-
6:00	38°56.1'N	70°55.8'W	13.81	1.979	0.885	0.930	-
6:15	38°55.8'N	70°52.9'W	13.00	2.766	0.818	0.678	-
6:30	38°55.2'N	70°50.8'W	12.21	2.781	0.837	0.718	-
6:45	38°53.4'N	70°52.2'W	12.32	2.859	0.832	0.744	-
7:00	38°51.4'N	70°54.7'W	12.53	3.160	0.817	0.639	-
7:15	38°49.5'N	70°56.9'W	12.81	3.814	0.802	0.529	-
7:30	38°47.8'N	70°59.1'W	12.96	3.816	0.805	0.532	-
7:45	38°46.0'N	71°01.2'W	13.06	3.821	0.803	0.531	-
8:00	38°44.3'N	71°03.4'W	12.95	3.490	0.802	0.556	-
8:15	38°42.5'N	71°05.5'W	12.82	3.367	0.805	0.595	-
8:30	38°41.9'N	71°06.3'W	12.65	3.095	0.820	0.650	-
8:45	38°41.9'N	71°06.5'W	12.79	3.179	0.833	0.649	-
9:00	38°41.9'N	71°06.6'W	12.92	3.373	0.824	0.588	-
9:15	38°41.9'N	71°06.8'W	13.00	3.509	0.822	0.582	-
9:30	38°41.9'N	71°06.9'W	13.09	3.521	0.818	0.551	-
9:45	38°41.8'N	71°06.9'W	13.16	3.587	0.804	0.499	-
10:00	38°41.8'N	71°07.0'W	13.14	3.585	0.803	0.487	-
10:15	38°41.7'N	71°07.1'W	13.14	3.583	0.792	0.473	-
10:30	38°41.7'N	71°07.1'W	13.12	3.761	0.778	0.426	-
10:45	38°41.7'N	71°07.2'W	13.09	3.916	0.774	0.405	-
11:00	38°41.7'N	71°07.3'W	13.20	3.892	0.772	0.398	-
11:15	38°42.1'N	71°07.7'W	13.22	3.399	0.808	0.449	-
11:30	38°42.5'N	71°08.2'W	13.39	2.909	0.811	0.472	-
11:45	38°42.8'N	71°07.1'W	13.40	2.755	0.831	0.483	-
12:00	38°43.8'N	71°10.7'W	14.20	1.911	0.891	0.681	-
12:15	38°45.0'N	71°13.8'W	14.81	1.710	0.911	0.612	-
12:30	38°46.2'N	71°17.0'W	15.41	1.535	0.933	0.589	-
12:45	38°46.1'N	71°17.7'W	15.59	1.181	1.027	0.697	-
13:00	38°45.6'N	71°18.0'W	15.53	1.377	0.989	0.573	-
13:15	38°45.5'N	71°18.4'W	15.59	1.351	0.976	0.538	-
13:30	38°45.1'N	71°18.8'W	-	-	-	-	-
13:45	38°44.7'N	71°19.0'W	-	-	-	-	-
14:00	38°44.7'N	71°19.2'W	-	-	-	-	-
14:15	38°44.6'N	71°19.4'W	-	-	-	-	-
14:30	38°44.4'N	71°19.7'W	-	-	-	-	-
14:45	38°44.2'N	71°19.5'W	-	-	-	-	-
15:00	38°44.0'N	71°19.6'W	-	-	-	-	-
15:15	38°43.8'N	71°19.7'W	-	-	-	-	-
15:30	38°43.6'N	71°19.7'W	-	-	-	-	-
15:45	38°43.3'N	71°19.8'W	-	-	-	-	-
16:00	38°42.9'N	71°19.9'W	-	-	-	-	-
16:15	38°42.4'N	71°20.7'W	-	-	-	-	-
16:30	38°42.0'N	71°20.6'W	-	-	-	-	-
16:45	38°41.6'N	71°21.0'W	-	-	-	-	-
17:00	38°41.1'N	71°21.5'W	-	-	-	-	-
17:15	38°40.8'N	71°21.9'W	-	-	-	-	-
17:30	38°40.5'N	71°22.2'W	-	-	-	-	-
17:45	38°40.4'N	71°22.5'W	-	-	-	-	-
18:00	38°40.2'N	71°22.8'W	15.37	2.189	0.918	0.510	0.437
18:15	38°40.0'N	71°23.0'W	15.34	2.216	0.925	0.503	0.479
18:30	38°39.8'N	71°23.1'W	15.34	2.272	0.908	0.451	0.469
18:45	38°40.2'N	71°23.7'W	15.26	2.387	0.891	0.408	0.442
19:00	38°41.1'N	71°24.8'W	15.58	1.889	0.945	0.476	0.441
19:15	38°43.2'N	71°26.6'W	15.69	1.419	0.975	0.505	0.400
19:30	38°42.6'N	71°27.0'W	15.69	1.331	1.044	0.493	0.613
19:45	38°41.8'N	71°27.4'W	15.71	1.528	0.957	0.443	0.513
20:00	38°41.0'N	71°27.8'W	15.71	1.443	0.967	0.433	0.461
20:15	38°40.3'N	71°28.2'W	15.76	1.299	1.016	0.495	0.368
20:30	38°40.9'N	71°29.1'W	15.72	1.246	1.041	0.486	0.313
20:45	38°42.6'N	71°30.6'W	15.71	1.472	0.961	0.396	0.265
21:00	38°44.3'N	71°32.1'W	15.54	2.371	0.897	0.268	0.287
21:15	38°46.5'N	71°33.5'W	15.74	1.274	1.015	0.408	0.404
21:30	38°48.6'N	71°34.7'W	15.80	1.102	1.094	0.526	0.356
21:45	38°51.0'N	71°35.8'W	15.81	0.923	1.207	0.664	0.242
22:00	38°53.4'N	71°36.9'W	15.90	0.876	1.244	0.514	0.171
22:15	38°54.8'N	71°36.5'W	15.90	0.896	1.219	0.550	0.124
22:30	38°54.9'N	71°36.5'W	15.90	0.854	1.271	0.587	0.106
22:45	38°54.9'N	71°36.5'W	15.90	0.799	1.329	0.564	0.094
23:00	38°54.9'N	71°36.5'W	15.92	0.770	1.414	0.646	0.038
23:15	38°54.9'N	71°36.8'W	15.90	0.708	1.620	0.457	0.016
23:30	38°54.9'N	71°37.0'W	15.92	0.660	1.800	0.686	0.004
23:45	38°55.0'N	71°37.2'W	15.92	0.618	1.965	0.658	0.000
24:00	38°55.0'N	71°37.5'W	15.90	0.611	2.143	0.679	0.000

R/V ANDRE UNDERWAY 28 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	38°55.0'N	71°37.5'W	15.90	0.611	2.143	0.679	0.000
0:15	38°54.9'N	71°37.5'W	15.92	0.611	2.108	0.848	0.000
0:30	38°54.9'N	71°37.5'W	15.91	0.604	2.113	0.838	0.000
0:45	38°54.9'N	71°37.5'W	15.90	0.611	2.179	0.036	0.000
1:00	38°54.8'N	71°37.6'W	15.92	0.597	2.269	0.039	0.000
1:15	38°54.7'N	71°37.6'W	15.91	0.583	2.338	0.042	0.000
1:30	38°54.3'N	71°37.8'W	15.90	0.604	2.192	0.038	0.000
1:45	38°54.0'N	71°38.0'W	15.88	0.591	2.196	0.040	0.000
2:00	38°53.8'N	71°38.0'W	15.93	0.590	2.319	0.040	0.000
2:15	38°53.8'N	71°38.1'W	15.93	0.597	2.242	0.039	0.000
2:30	38°53.7'N	71°38.2'W	15.92	0.576	2.481	0.044	0.000
2:45	38°53.7'N	71°38.3'W	15.91	0.583	2.260	0.042	0.000
3:00	38°53.7'N	71°38.3'W	15.90	0.576	2.390	0.044	0.000
3:15	38°53.5'N	71°38.4'W	15.89	0.583	2.253	0.042	0.000
3:30	38°53.3'N	71°38.6'W	15.90	0.570	2.482	0.046	0.000
3:45	38°53.2'N	71°38.9'W	15.90	0.563	2.657	0.048	0.000
4:00	38°53.2'N	71°38.9'W	15.90	0.583	2.334	0.042	0.000
4:15	38°53.1'N	71°39.0'W	15.90	0.556	2.839	0.050	0.000
4:30	38°53.0'N	71°39.2'W	15.90	0.563	2.431	0.048	0.000
4:45	38°52.9'N	71°39.4'W	15.90	0.562	2.595	0.048	0.000
5:00	38°53.0'N	71°39.6'W	15.91	0.549	2.776	0.053	0.000
5:15	38°52.8'N	71°39.5'W	15.87	0.543	2.882	0.056	0.000
5:30	38°52.6'N	71°39.4'W	15.88	0.549	2.742	0.053	0.000
5:45	38°52.7'N	71°39.5'W	15.87	0.561	2.760	0.049	0.000
6:00	38°52.7'N	71°39.5'W	15.87	0.563	2.565	0.048	0.000
6:15	38°52.8'N	71°39.6'W	15.88	0.569	2.428	0.046	0.000
6:30	38°52.7'N	71°39.6'W	15.88	0.576	2.483	0.044	0.000
6:45	38°52.5'N	71°39.7'W	15.87	0.576	2.535	0.044	0.000
7:00	38°52.5'N	71°39.8'W	15.87	0.583	2.498	0.042	0.000
7:15	38°52.5'N	71°39.9'W	15.89	0.584	2.378	0.042	0.000
7:30	38°52.5'N	71°39.9'W	15.91	0.584	2.346	0.042	0.000
7:45	38°52.4'N	71°40.1'W	15.87	0.608	2.110	0.037	0.000
8:00	38°52.4'N	71°40.1'W	15.90	0.590	2.285	0.040	0.000
8:15	38°52.5'N	71°40.3'W	15.90	0.572	2.523	0.045	0.000
8:30	38°52.5'N	71°40.4'W	15.89	0.575	2.438	0.044	0.000
8:45	38°52.7'N	71°40.6'W	15.89	0.585	2.266	0.042	0.000
9:00	38°52.8'N	71°40.8'W	15.87	0.605	2.056	0.037	0.000
9:15	38°52.9'N	71°41.0'W	15.88	0.552	2.815	0.052	0.000
9:30	38°52.9'N	71°41.0'W	15.87	0.564	2.674	0.048	0.000
9:45	38°52.9'N	71°41.0'W	15.85	0.576	2.406	0.044	0.003
10:00	38°52.9'N	71°41.0'W	15.87	0.552	2.600	0.052	0.008
10:15	38°52.9'N	71°41.0'W	15.86	0.563	2.467	0.048	0.016
10:30	38°52.9'N	71°41.0'W	15.86	0.563	2.517	0.048	0.049
10:45	38°53.0'N	71°41.4'W	15.86	0.542	2.873	0.056	0.062
11:00	38°53.0'N	71°41.4'W	15.88	0.522	3.321	0.067	0.054
11:15	38°53.0'N	71°41.4'W	15.89	0.542	3.030	0.056	0.138
11:30	38°53.0'N	71°41.7'W	15.88	0.556	2.627	0.050	0.123
11:45	38°53.0'N	71°41.8'W	15.88	0.552	2.526	0.052	0.199
12:00	38°53.0'N	71°41.9'W	15.87	0.572	2.580	0.045	0.291
12:15	38°52.9'N	71°42.2'W	15.91	0.567	2.492	0.047	0.461
12:30	38°52.8'N	71°42.6'W	15.87	0.559	2.641	0.049	0.568
12:45	38°52.7'N	71°43.0'W	15.87	-	-	-	0.294
13:00	38°52.6'N	71°43.5'W	15.86	-	-	-	0.387
13:15	38°52.5'N	71°44.0'W	15.88	-	-	-	0.340
13:30	38°52.3'N	71°44.4'W	15.87	-	-	-	0.317
13:45	38°52.2'N	71°44.5'W	15.88	-	-	-	0.362
14:00	38°52.4'N	71°42.9'W	15.87	-	-	-	0.367
14:15	38°52.8'N	71°40.2'W	15.84	-	-	-	0.408
14:30	38°53.0'N	71°38.9'W	15.81	-	-	-	0.381
14:45	38°52.9'N	71°38.9'W	15.81	-	-	-	0.359
15:00	38°52.7'N	71°39.0'W	15.81	-	-	-	0.375
15:15	38°52.5'N	71°39.1'W	15.81	-	-	-	0.413
15:30	38°52.4'N	71°39.3'W	15.83	-	-	-	0.440
15:45	38°52.2'N	71°39.5'W	15.81	-	-	-	0.306
16:00	38°52.1'N	71°39.6'W	15.82	-	-	-	0.301
16:15	38°52.1'N	71°39.5'W	-	-	-	-	-
16:30	38°52.0'N	71°39.9'W	-	-	-	-	-
16:45	38°51.9'N	71°40.0'W	-	-	-	-	-
17:00	38°51.9'N	71°40.2'W	-	-	-	-	-
17:15	38°51.9'N	71°40.3'W	-	-	-	-	-
17:30	38°51.8'N	71°40.5'W	-	-	-	-	-
17:45	38°51.8'N	71°40.6'W	-	-	-	-	-
18:00	38°52.2'N	71°40.6'W	-	-	-	-	-
18:15	38°52.9'N	71°40.0'W	-	-	-	-	-
18:30	38°53.4'N	71°39.7'W	15.90	0.915	-	-	0.226
18:45	38°53.3'N	71°39.9'W	15.85	0.899	-	-	0.170
19:00	38°53.3'N	71°40.1'W	15.82	0.837	-	-	0.155
19:15	38°53.2'N	71°40.3'W	15.83	0.838	-	-	0.126
19:30	38°53.2'N	71°40.4'W	15.84	0.821	-	-	0.122
19:45	38°53.3'N	71°40.4'W	15.83	0.834	-	-	0.105
20:00	38°53.3'N	71°40.4'W	15.83	0.805	-	-	0.126
20:15	38°53.3'N	71°40.4'W	15.84	0.786	-	-	0.105
20:30	38°53.3'N	71°40.3'W	15.83	0.809	-	-	0.117
20:45	38°53.3'N	71°40.2'W	15.81	0.812	-	-	0.123
21:00	38°53.3'N	71°40.1'W	15.80	0.794	-	-	0.113
21:15	38°53.3'N	71°40.1'W	15.81	0.758	-	-	0.089
21:30	38°53.3'N	71°40.0'W	15.80	0.736	-	-	0.048
21:45	38°53.2'N	71°39.9'W	15.81	0.715	-	-	0.058
22:00	38°53.1'N	71°39.8'W	15.80	0.736	-	-	0.064
22:15	38°53.1'N	71°39.7'W	15.81	0.693	-	-	0.042
22:30	38°53.1'N	71°39.5'W	15.80	0.693	-	-	0.018
22:45	38°53.1'N	71°39.3'W	15.81	0.675	-	-	0.017
23:00	38°53.2'N	71°39.0'W	15.80	0.680	-	-	0.011
23:15	38°53.1'N	71°39.0'W	15.81	0.733	-	-	0.008
23:30	38°53.1'N	71°39.0'W	15.80	0.668	-	-	0.007
23:45	38°53.1'N	71°39.0'W	15.81	0.697	-	-	0.001

R/V KNORR 29 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	38°53.0'N	71°39.0'W	15.80	0.671	-	-	0.000
0:15	38°53.0'N	71°39.0'W	15.80	0.660	-	-	0.000
0:30	38°53.0'N	71°39.0'W	15.79	0.669	-	-	0.000
0:45	38°53.0'N	71°39.0'W	15.81	0.640	-	-	0.000
1:00	38°53.1'N	71°38.9'W	15.81	0.622	-	-	0.000
1:15	38°53.1'N	71°38.9'W	15.81	0.653	-	-	0.000
1:30	38°53.1'N	71°38.9'W	15.80	0.554	-	-	0.000
1:45	38°53.4'N	71°41.9'W	15.79	0.585	-	-	0.000
2:00	38°54.0'N	71°44.7'W	15.80	0.541	-	-	0.000
2:15	38°54.6'N	71°47.4'W	15.79	0.449	-	-	0.000
2:30	38°55.4'N	71°50.1'W	15.82	-	-	-	0.000
2:45	38°56.3'N	71°52.8'W	15.78	-	-	-	0.000
3:00	38°57.0'N	71°55.4'W	15.75	0.569	-	-	0.000
3:15	38°57.8'N	71°58.1'W	15.75	0.578	-	-	0.000
3:30	38°58.3'N	72°00.9'W	15.74	0.571	-	-	0.000
3:45	38°58.8'N	72°03.5'W	15.64	0.340	-	-	0.000
4:00	39°00.1'N	72°05.7'W	15.63	0.701	-	-	0.000
4:15	39°01.5'N	72°07.8'W	15.65	0.718	-	-	0.000
4:30	39°03.1'N	72°09.8'W	15.57	0.661	-	-	0.000
4:45	39°04.6'N	72°11.9'W	15.43	0.635	-	-	0.000
5:00	39°05.4'N	72°11.5'W	15.40	0.673	-	-	0.000
5:15	39°05.1'N	72°08.7'W	15.45	0.675	-	-	0.000
5:30	39°05.0'N	72°06.2'W	15.55	0.675	-	-	0.000
5:45	39°04.8'N	72°03.5'W	15.59	0.673	-	-	0.000
6:00	39°04.5'N	72°00.7'W	15.67	0.690	-	-	0.000
6:15	39°04.3'N	71°58.0'W	15.65	0.765	-	-	0.000
6:30	39°05.1'N	71°57.0'W	15.66	0.787	-	-	0.000
6:45	39°07.1'N	71°57.9'W	15.55	0.655	-	-	0.000
7:00	39°09.1'N	71°58.7'W	15.55	0.615	-	-	0.000
7:15	39°11.0'N	71°59.6'W	15.49	0.788	-	-	0.000
7:30	39°13.1'N	72°00.5'W	14.92	0.788	-	-	0.000
7:45	39°14.7'N	72°00.7'W	14.45	1.041	-	-	0.000
8:00	39°13.8'N	71°57.8'W	14.75	1.003	-	-	0.000
8:15	39°12.3'N	71°54.6'W	15.29	0.694	-	-	0.000
8:30	39°11.1'N	71°52.1'W	15.49	0.729	-	-	0.000
8:45	39°11.4'N	71°51.5'W	15.49	0.659	-	-	0.000
9:00	39°12.9'N	71°52.4'W	15.46	0.730	-	-	0.000
9:15	39°14.9'N	71°53.7'W	14.85	0.768	-	-	0.000
9:30	39°16.8'N	71°55.1'W	14.49	-	-	-	0.000
9:45	39°19.0'N	71°56.0'W	13.52	-	-	-	0.003
10:00	39°20.0'N	71°56.3'W	12.92	-	-	-	0.034
10:15	39°20.0'N	71°56.1'W	12.92	-	-	-	0.112
10:30	39°20.0'N	71°56.0'W	12.89	-	-	-	0.202
10:45	39°20.0'N	71°55.8'W	12.92	-	-	-	0.222
11:00	39°20.0'N	71°55.6'W	12.94	-	-	-	0.461
11:15	39°20.0'N	71°55.4'W	12.91	-	-	-	0.929
11:30	39°20.1'N	71°55.1'W	12.96	1.916	-	-	1.294
11:45	39°20.2'N	71°54.7'W	12.97	1.996	-	-	1.430
12:00	39°20.3'N	71°54.5'W	12.94	2.090	-	-	1.549
12:15	39°20.4'N	71°54.2'W	12.98	2.009	-	-	1.654
12:30	39°20.6'N	71°53.9'W	12.97	2.072	-	-	1.724
12:45	39°20.7'N	71°53.5'W	13.00	2.034	-	-	1.785
13:00	39°20.8'N	71°53.1'W	12.99	1.564	-	-	1.274
13:15	39°21.0'N	71°52.8'W	13.00	2.055	-	-	1.864
13:30	39°21.1'N	71°52.4'W	13.00	2.044	-	-	1.893
13:45	39°21.3'N	71°52.1'W	13.01	2.093	-	-	1.909
14:00	39°21.4'N	71°51.8'W	13.07	2.072	-	-	1.928
14:15	39°21.3'N	71°51.5'W	13.05	2.110	-	-	1.929
14:30	39°21.4'N	71°51.0'W	13.04	2.121	-	-	1.939
14:45	39°21.5'N	71°50.7'W	13.07	-	-	-	1.928
15:00	39°21.7'N	71°50.4'W	13.09	-	-	-	1.937
15:15	39°21.9'N	71°50.1'W	13.11	-	-	-	0.627
15:30	39°22.1'N	71°49.8'W	13.13	-	-	-	1.935
15:45	39°22.3'N	71°49.5'W	13.11	-	-	-	1.918
16:00	39°22.4'N	71°49.2'W	13.13	1.870	-	-	1.916
16:15	39°22.4'N	71°48.8'W	13.15	1.961	-	-	1.907
16:30	39°22.5'N	71°48.4'W	13.14	1.932	-	-	1.903
16:45	39°22.6'N	71°48.0'W	13.16	1.919	-	-	1.912
17:00	39°22.7'N	71°47.7'W	13.13	1.857	-	-	1.911
17:15	39°22.8'N	71°47.1'W	13.09	1.772	-	-	1.899
17:30	39°23.0'N	71°46.8'W	13.12	1.701	-	-	1.892
17:45	39°23.1'N	71°46.5'W	13.10	1.734	-	-	1.889
18:00	39°23.4'N	71°46.1'W	13.06	1.829	-	-	1.899
18:15	39°23.5'N	71°45.5'W	13.03	1.795	-	-	1.896
18:30	39°22.7'N	71°43.8'W	13.11	1.937	-	-	1.900
18:45	39°22.0'N	71°42.5'W	13.83	1.670	-	-	1.907
19:00	39°22.3'N	71°41.9'W	13.82	1.882	-	-	1.891
19:15	39°22.6'N	71°41.3'W	13.69	1.785	-	-	1.878
19:30	39°23.2'N	71°40.7'W	13.65	1.778	-	-	1.866
19:45	39°23.7'N	71°40.1'W	13.67	1.940	-	-	1.847
20:00	39°22.9'N	71°38.9'W	13.82	1.926	-	-	1.837
20:15	39°23.3'N	71°38.7'W	13.84	1.726	-	-	1.755
20:30	39°23.8'N	71°38.6'W	13.62	1.818	-	-	1.717
20:45	39°24.3'N	71°38.4'W	13.24	1.884	-	-	1.670
21:00	39°24.8'N	71°38.1'W	13.15	1.922	-	-	0.842
21:15	39°25.3'N	71°38.0'W	13.11	2.055	-	-	0.393
21:30	39°25.9'N	71°37.8'W	13.13	2.188	-	-	0.695
21:45	39°26.5'N	71°37.7'W	13.07	2.266	-	-	1.169
22:00	39°27.1'N	71°37.5'W	12.97	2.291	-	-	0.657
22:15	39°26.1'N	71°37.1'W	13.03	2.411	-	-	1.216
22:30	39°24.3'N	71°36.5'W	13.19	2.372	-	-	1.022
22:45	39°22.5'N	71°35.9'W	14.16	2.147	-	-	0.419
23:00	39°22.4'N	71°34.7'W	14.21	2.059	-	-	0.152
23:15	39°22.3'N	71°34.5'W	14.21	2.035	-	-	0.103
23:30	39°22.2'N	71°34.2'W	14.23	1.928	-	-	0.041
23:45	39°22.1'N	71°34.0'W	14.33	1.804	-	-	0.005
24:00	39°21.9'N	71°33.8'W	14.36	1.667	-	-	0.000

R/V KNORR UNDERWAY 30 APRIL 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	39°21.9'N	71°33.8'W	14.36	1.667	-	-	0.000
0:15	39°21.8'N	71°33.6'W	14.38	1.545	-	-	0.000
0:30	39°21.8'N	71°33.6'W	14.39	1.446	-	-	0.000
0:45	39°21.8'N	71°33.6'W	14.38	1.322	-	-	0.000
1:00	39°21.7'N	71°33.6'W	14.37	1.288	-	-	0.000
1:15	39°21.6'N	71°33.5'W	14.37	1.236	-	-	0.000
1:30	39°21.5'N	71°33.4'W	14.34	1.182	-	-	0.000
1:45	39°21.2'N	71°33.3'W	14.31	1.157	-	-	0.000
2:00	39°20.8'N	71°33.2'W	14.27	1.155	-	-	0.000
2:15	39°20.6'N	71°33.2'W	14.28	1.152	-	-	0.000
2:30	39°20.7'N	71°33.3'W	14.30	1.201	-	-	0.000
2:45	39°21.0'N	71°33.3'W	14.26	1.265	-	-	0.000
3:00	39°21.5'N	71°33.2'W	14.31	1.195	-	-	0.000
3:15	39°21.9'N	71°32.7'W	14.35	1.234	-	-	0.000
3:30	39°22.2'N	71°32.3'W	14.28	1.276	-	-	0.000
3:45	39°22.6'N	71°31.8'W	14.25	1.349	-	-	0.000
4:00	39°22.5'N	71°31.0'W	14.24	1.475	-	-	0.000
4:15	39°20.4'N	71°28.3'W	14.26	1.185	-	-	0.000
4:30	39°18.3'N	71°25.6'W	14.41	1.073	-	-	0.000
4:45	39°16.4'N	71°22.1'W	14.73	0.940	-	-	0.000
5:00	39°13.8'N	71°20.6'W	14.80	0.863	-	-	0.000
5:15	39°11.4'N	71°18.2'W	14.87	0.749	-	-	0.000
5:30	39°09.1'N	71°15.8'W	14.93	0.877	-	-	0.000
5:45	39°06.8'N	71°13.4'W	14.70	0.933	-	-	0.000
6:00	39°04.4'N	71°11.1'W	14.46	1.251	-	-	0.000
6:15	39°01.8'N	71°09.2'W	14.55	1.211	-	-	0.000
6:30	38°59.2'N	71°07.3'W	15.03	0.856	-	-	0.000
6:45	38°56.6'N	71°05.4'W	15.02	1.003	-	-	0.000
7:00	38°54.2'N	71°03.8'W	14.49	1.179	-	-	0.000
7:15	38°51.6'N	71°02.0'W	13.33	1.690	-	-	0.000
7:30	38°49.1'N	71°00.2'W	12.84	1.794	-	-	0.000
7:45	38°46.6'N	70°58.4'W	12.84	1.739	-	-	0.000
8:00	38°44.1'N	70°56.6'W	12.24	1.738	-	-	0.000
8:15	38°41.6'N	70°54.9'W	11.97	2.199	-	-	0.000
8:30	38°39.0'N	70°53.2'W	11.11	2.298	-	-	0.000
8:45	38°36.5'N	70°51.5'W	10.00	3.460	-	-	0.000
9:00	38°34.0'N	70°49.8'W	9.49	3.145	-	-	0.000
9:15	38°31.5'N	70°48.2'W	8.83	3.344	-	-	0.000
9:30	38°29.0'N	70°46.5'W	9.43	3.200	-	-	0.000
9:45	38°26.6'N	70°44.9'W	10.55	4.219	-	-	0.009
10:00	38°24.1'N	70°43.2'W	9.89	2.798	-	-	0.042
10:15	38°21.5'N	70°41.4'W	10.24	2.628	-	-	0.100
10:30	38°19.0'N	70°39.6'W	11.00	2.890	-	-	0.158
10:45	38°16.5'N	70°38.0'W	11.99	2.499	-	-	0.208
11:00	38°14.1'N	70°36.5'W	14.11	2.781	-	-	0.261
11:15	38°11.8'N	70°34.8'W	13.96	2.355	-	-	0.679
11:30	38°09.6'N	70°33.1'W	15.49	2.434	-	-	0.328
11:45	38°07.4'N	70°31.4'W	15.96	2.333	-	-	0.357
12:00	38°05.1'N	70°29.7'W	15.81	2.168	-	-	1.416
12:15	38°02.2'N	70°27.5'W	15.33	1.640	-	-	1.513
12:30	38°00.6'N	70°26.2'W	17.82	1.323	-	-	1.577
12:45	37°58.4'N	70°24.4'W	18.46	1.307	-	-	1.637
13:00	37°56.2'N	70°22.6'W	20.09	1.141	-	-	1.704
13:15	37°54.0'N	70°20.8'W	20.73	1.106	-	-	1.716
13:30	37°51.9'N	70°19.2'W	20.79	1.016	-	-	0.443
13:45	37°49.8'N	70°17.5'W	21.14	1.033	-	-	1.761
14:00	37°47.7'N	70°16.0'W	21.10	0.997	-	-	1.794
14:15	37°45.4'N	70°14.4'W	20.60	1.095	-	-	1.815
14:30	37°43.3'N	70°12.9'W	20.40	1.125	-	-	1.132
14:45	37°41.2'N	70°11.4'W	19.92	1.053	-	-	0.767
15:00	37°39.3'N	70°09.8'W	20.16	0.900	-	-	0.944
15:15	37°37.4'N	70°08.1'W	21.60	0.795	-	-	1.362
15:30	37°35.6'N	70°06.8'W	22.70	0.611	-	-	1.847
15:45	37°33.8'N	70°05.6'W	23.19	0.490	-	-	1.371
16:00	37°32.0'N	70°04.5'W	23.83	0.383	-	-	1.299
16:15	37°30.2'N	70°03.1'W	24.14	2.067	-	-	1.800
16:30	37°28.4'N	70°02.0'W	24.57	2.408	-	-	1.849
16:45	37°26.6'N	70°00.8'W	24.75	2.358	-	-	1.771
17:00	37°24.8'N	69°59.7'W	24.66	2.342	-	-	1.930
17:15	37°22.8'N	69°58.5'W	24.61	2.200	-	-	1.860
17:30	37°21.2'N	69°57.2'W	24.01	2.112	-	-	1.894
17:45	37°21.7'N	69°56.7'W	24.07	-	-	-	1.863
18:00	37°22.2'N	69°56.3'W	24.04	-	-	-	1.914
18:15	37°22.7'N	69°55.4'W	24.04	-	-	-	0.182
18:30	37°23.5'N	69°54.9'W	24.01	-	-	-	1.452
18:45	37°24.3'N	69°54.4'W	24.02	-	-	-	1.831
19:00	37°25.1'N	69°53.9'W	23.99	-	-	-	1.888
19:15	37°25.8'N	69°53.3'W	23.97	-	-	-	1.629
19:30	37°26.5'N	69°52.7'W	24.04	-	-	-	1.903
19:45	37°25.0'N	69°51.7'W	24.02	-	-	-	1.362
20:00	37°22.8'N	69°50.7'W	24.08	-	-	-	0.711
20:15	37°26.0'N	69°50.0'W	24.19	-	-	-	1.703
20:30	37°29.1'N	69°49.4'W	24.27	-	-	-	1.353
20:45	37°30.4'N	69°48.8'W	24.28	-	-	-	1.512
21:00	37°30.9'N	69°48.2'W	24.33	-	-	-	0.501
21:15	37°31.3'N	69°47.5'W	25.65	-	-	-	1.613
21:30	37°31.7'N	69°46.8'W	24.13	-	-	-	1.563
21:45	37°32.0'N	69°46.2'W	24.00	-	-	-	1.382
22:00	37°32.2'N	69°45.9'W	24.03	-	-	-	1.213
22:15	37°32.4'N	69°45.7'W	24.07	-	-	-	1.060
22:30	37°32.7'N	69°45.5'W	24.13	-	-	-	0.330
22:45	37°32.9'N	69°45.2'W	24.20	-	-	-	0.254
23:00	37°33.2'N	69°44.8'W	24.25	-	-	-	0.149
23:15	37°33.5'N	69°44.4'W	24.27	-	-	-	0.056
23:30	37°33.8'N	69°44.0'W	24.21	-	-	-	0.010
23:45	37°34.0'N	69°43.5'W	24.17	-	-	-	0.000
24:00	37°34.2'N	69°43.1'W	24.04	-	-	-	0.000

R/V KNORR UNDERWAY 01 MAY 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	37°34.2'N	69°43.1'W	24.04	-	-	-	0.000
0:15	37°34.7'N	69°42.5'W	24.01	-	-	-	0.000
0:30	37°35.0'N	69°42.0'W	24.01	-	-	-	0.000
0:45	37°33.0'N	69°41.5'W	24.03	-	-	-	0.000
1:00	37°31.1'N	69°41.0'W	-	-	-	-	0.000
1:15	37°29.0'N	69°40.4'W	-	-	-	-	0.000
1:30	37°26.9'N	69°39.8'W	-	-	-	-	0.000
1:45	37°24.7'N	69°39.2'W	-	-	-	-	0.000
2:00	37°22.4'N	69°38.5'W	-	-	-	-	0.000
2:15	37°20.1'N	69°37.8'W	-	-	-	-	0.000
2:30	37°17.7'N	69°37.1'W	24.01	-	-	-	0.000
2:45	37°15.1'N	69°36.2'W	24.02	0.687	0.629	2.059	0.000
3:00	37°12.9'N	69°35.7'W	23.81	0.730	0.627	1.957	0.000
3:15	37°10.3'N	69°35.1'W	23.71	0.780	0.642	1.867	0.000
3:30	37°07.7'N	69°34.4'W	22.94	0.786	0.640	1.840	0.000
3:45	37°05.1'N	69°33.5'W	21.40	0.675	0.639	2.006	0.000
4:00	37°02.5'N	69°32.6'W	19.85	0.799	0.644	1.850	0.000
4:15	36°59.7'N	69°30.7'W	19.25	1.024	0.620	1.572	0.000
4:30	36°57.4'N	69°28.8'W	19.20	1.106	0.601	1.502	0.000
4:45	36°55.1'N	69°28.8'W	19.16	1.103	0.606	1.509	0.000
5:00	36°52.7'N	69°29.0'W	19.16	1.150	0.596	1.470	0.000
5:15	36°50.2'N	69°28.1'W	19.16	1.185	0.597	1.426	0.000
5:30	36°47.7'N	69°27.3'W	19.15	1.302	0.600	1.318	0.000
5:45	36°45.2'N	69°26.5'W	19.10	1.354	0.591	1.277	0.000
6:00	36°42.8'N	69°25.7'W	18.82	1.056	0.633	1.532	0.000
6:15	36°41.4'N	69°25.3'W	18.86	1.136	0.620	1.438	0.000
6:30	36°41.4'N	69°25.3'W	18.86	1.129	0.620	1.455	0.000
6:45	36°41.5'N	69°25.3'W	18.87	1.102	0.622	1.450	0.000
7:00	36°41.6'N	69°25.2'W	18.86	1.123	0.609	1.447	0.000
7:15	36°41.3'N	69°25.3'W	18.85	1.106	0.621	1.453	0.000
7:30	36°40.9'N	69°25.3'W	18.86	1.120	0.639	1.455	0.000
7:45	36°40.7'N	69°25.4'W	18.82	1.116	0.633	1.433	0.000
8:00	36°41.6'N	69°25.5'W	18.82	1.095	0.626	1.428	0.000
8:15	36°41.7'N	69°25.5'W	18.81	1.098	0.629	1.419	0.000
8:30	36°41.7'N	69°25.4'W	18.82	1.091	0.613	1.427	0.000
8:45	36°42.0'N	69°25.2'W	18.80	0.925	0.698	1.602	0.000
9:00	36°42.5'N	69°25.0'W	18.81	0.920	0.719	1.624	0.000
9:15	36°42.6'N	69°24.8'W	18.82	0.934	0.706	1.606	0.000
9:30	36°42.9'N	69°24.6'W	18.81	0.924	0.700	1.583	0.001
9:45	36°43.2'N	69°24.5'W	18.81	0.900	0.729	1.609	0.018
10:00	36°43.2'N	69°24.3'W	18.84	0.934	0.700	1.569	0.072
10:15	36°43.4'N	69°24.2'W	18.81	0.959	0.723	1.539	0.267
10:30	36°43.4'N	69°24.1'W	18.80	0.945	0.731	1.573	0.585
10:45	36°43.5'N	69°24.0'W	18.80	0.941	0.712	1.532	0.858
11:00	36°43.5'N	69°24.0'W	18.79	0.945	0.732	1.532	1.092
11:15	36°43.5'N	69°24.0'W	18.81	0.870	0.748	1.636	1.266
11:30	36°43.5'N	69°24.0'W	18.82	0.815	0.810	1.783	1.409
11:45	36°43.6'N	69°23.9'W	18.82	0.860	0.765	1.652	1.499
12:00	36°43.6'N	69°23.9'W	18.83	0.773	0.766	1.770	1.570
12:15	36°43.6'N	69°23.6'W	18.84	0.795	0.756	1.699	1.631
12:30	36°43.5'N	69°23.3'W	18.86	0.793	0.754	1.715	1.684
12:45	36°43.7'N	69°23.5'W	18.86	0.726	0.826	1.850	1.734
13:00	36°43.8'N	69°23.6'W	18.86	0.594	0.907	2.153	1.728
13:15	36°43.8'N	69°23.0'W	18.87	0.486	0.973	2.429	1.754
13:30	36°43.8'N	69°22.5'W	18.88	-	-	-	1.779
13:45	36°44.0'N	69°22.5'W	18.90	-	-	-	1.795
14:00	36°44.3'N	69°22.4'W	18.89	-	-	-	1.815
14:15	36°44.3'N	69°22.2'W	18.94	-	-	-	1.828
14:30	36°44.4'N	69°21.9'W	18.93	-	-	-	1.827
14:45	36°44.4'N	69°21.3'W	18.94	0.376	1.054	2.875	1.927
15:00	36°44.9'N	69°21.5'W	18.99	0.393	1.037	2.763	1.960
15:15	36°44.9'N	69°20.8'W	18.98	0.440	0.993	2.575	1.975
15:30	36°45.3'N	69°20.9'W	19.01	0.437	0.930	2.542	1.978
15:45	36°45.5'N	69°20.6'W	19.02	0.443	0.929	2.436	1.986
16:00	36°45.6'N	69°20.1'W	19.02	0.470	0.890	2.345	1.981
16:15	36°45.9'N	69°19.7'W	19.07	0.493	0.847	2.228	1.978
16:30	36°46.1'N	69°19.1'W	19.10	0.478	0.854	2.287	1.976
16:45	36°46.7'N	69°19.3'W	19.08	0.494	0.840	2.209	1.977
17:00	36°47.2'N	69°19.1'W	19.06	0.496	0.845	2.180	1.945
17:15	36°47.2'N	69°18.3'W	18.93	0.562	0.829	2.024	1.907
17:30	36°47.4'N	69°18.3'W	18.91	0.669	0.865	1.850	1.383
17:45	36°47.7'N	69°18.3'W	18.88	0.660	0.886	1.883	1.205
18:00	36°47.7'N	69°18.2'W	18.99	0.602	0.884	2.020	1.910
18:15	36°47.8'N	69°18.0'W	19.08	0.606	0.850	1.980	1.932
18:30	36°47.4'N	69°18.0'W	19.17	0.449	0.880	2.318	1.934
18:45	36°47.0'N	69°18.1'W	19.20	0.464	0.887	2.300	1.924
19:00	36°46.7'N	69°18.1'W	19.48	0.509	0.827	2.185	1.937
19:15	36°46.4'N	69°18.2'W	19.71	0.437	0.841	2.358	1.933
19:30	36°46.1'N	69°18.2'W	19.77	0.387	0.850	2.456	1.932
19:45	36°45.9'N	69°18.2'W	19.88	0.436	0.861	2.334	1.907
20:00	36°45.6'N	69°18.2'W	19.93	0.420	0.819	2.380	1.875
20:15	36°45.0'N	69°19.5'W	19.98	0.396	0.850	2.370	1.767
20:30	36°44.1'N	69°21.5'W	19.80	0.370	0.868	2.503	1.704
20:45	36°43.2'N	69°23.5'W	19.56	0.407	0.888	2.425	1.721
21:00	36°42.8'N	69°24.4'W	19.49	0.520	0.826	2.152	1.645
21:15	36°42.8'N	69°24.3'W	19.51	0.585	0.832	1.995	1.555
21:30	36°42.7'N	69°24.2'W	19.51	0.615	0.825	1.959	1.438
21:45	36°42.7'N	69°24.0'W	19.53	0.603	0.800	1.933	1.275
22:00	36°42.7'N	69°23.9'W	19.54	0.612	0.802	1.862	1.041
22:15	36°42.7'N	69°23.7'W	19.52	0.621	0.785	1.886	0.908
22:30	36°42.7'N	69°23.6'W	19.51	0.614	0.783	1.909	0.651
22:45	36°42.9'N	69°24.2'W	19.47	0.614	0.807	1.887	0.221
23:00	36°42.9'N	69°24.2'W	19.45	0.676	0.803	1.728	0.104
23:15	36°42.9'N	69°24.2'W	19.45	0.643	0.801	1.824	0.049
23:30	36°42.9'N	69°24.2'W	19.45	0.641	0.793	1.798	0.008
23:45	36°42.9'N	69°24.2'W	19.45	0.616	0.860	1.852	0.000
24:00	36°42.9'N	69°24.2'W	19.44	0.616	0.860	1.852	0.000

R/V KNORR UNDERWAY 02 MAY 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (counts/cm ² /sec x10 ¹⁷)
0:00	36°42.9'N	69°24.2'W	19.44	0.630	0.823	1.798	0.000
0:15	36°42.6'N	69°23.7'W	19.45	0.606	0.840	1.903	0.000
0:30	36°42.5'N	69°23.6'W	19.42	0.636	0.829	1.821	0.000
0:45	36°42.6'N	69°23.7'W	19.39	0.692	0.814	1.727	0.000
1:00	36°42.6'N	69°23.9'W	19.40	0.700	0.820	1.728	0.000
1:15	36°42.7'N	69°24.1'W	19.39	0.687	0.850	1.737	0.000
1:30	36°42.5'N	69°23.7'W	19.36	0.772	0.807	1.599	0.000
1:45	36°42.6'N	69°24.2'W	19.34	0.894	0.768	1.415	0.000
2:00	36°42.6'N	69°24.3'W	19.34	0.999	0.717	1.308	0.000
2:15	36°42.2'N	69°24.0'W	19.29	1.038	0.714	1.258	0.000
2:30	36°42.3'N	69°24.2'W	19.28	1.030	0.709	1.257	0.000
2:45	36°42.4'N	69°24.5'W	19.26	1.073	0.675	1.207	0.000
3:00	36°42.4'N	69°24.5'W	19.25	1.061	0.710	1.214	0.000
3:15	36°42.5'N	69°24.5'W	19.26	1.059	0.702	1.201	0.000
3:30	36°42.5'N	69°24.5'W	19.26	1.072	0.700	1.200	0.000
3:45	36°42.5'N	69°24.5'W	19.24	1.075	0.708	1.198	0.000
4:00	36°42.5'N	69°24.5'W	19.25	1.082	0.705	1.155	0.000
4:15	36°42.5'N	69°24.6'W	19.20	1.092	0.684	1.183	0.000
4:30	36°42.6'N	69°25.1'W	19.11	1.159	0.699	1.113	0.000
4:45	36°42.7'N	69°25.5'W	19.08	1.177	0.709	1.109	0.000
5:00	36°42.6'N	69°25.7'W	19.05	1.179	0.712	1.131	0.000
5:15	36°42.2'N	69°25.8'W	19.05	1.196	0.735	1.120	0.000
5:30	36°41.8'N	69°25.8'W	19.03	1.172	0.744	1.134	0.000
5:45	36°41.4'N	69°25.8'W	19.02	1.154	0.755	1.153	0.000
6:00	36°41.0'N	69°25.9'W	19.02	1.142	0.755	1.175	0.000
6:15	36°42.3'N	69°28.4'W	18.94	0.989	0.764	1.271	0.000
6:30	36°43.5'N	69°30.9'W	18.87	0.686	0.777	1.606	0.000
6:45	36°44.9'N	69°33.9'W	18.96	0.584	0.841	1.738	0.000
7:00	36°46.2'N	69°36.9'W	19.08	0.496	0.878	1.891	0.000
7:15	36°46.4'N	69°37.2'W	19.18	0.556	0.833	1.805	0.000
7:30	36°46.5'N	69°37.5'W	19.14	0.828	0.817	1.455	0.000
7:45	36°46.7'N	69°37.8'W	22.32	0.761	0.836	1.512	0.000
8:00	36°51.1'N	69°49.3'W	22.83	0.574	0.832	1.727	0.000
8:15	36°52.2'N	69°52.1'W	22.95	0.366	0.812	2.114	0.000
8:30	36°53.6'N	69°55.4'W	22.93	0.278	0.867	2.361	0.000
8:45	36°55.0'N	69°58.4'W	22.78	0.313	0.841	2.203	0.000
9:00	36°56.4'N	70°01.4'W	22.66	0.366	0.791	2.035	0.000
9:15	36°57.9'N	70°04.2'W	23.40	0.414	0.803	1.921	0.000
9:30	36°59.4'N	70°06.9'W	23.93	0.303	0.841	2.200	0.001
9:45	37°00.9'N	70°09.7'W	24.41	0.403	0.792	1.949	0.014
10:00	37°02.4'N	70°12.5'W	24.81	0.491	0.745	1.712	0.058
10:15	37°04.2'N	70°14.9'W	24.88	0.581	0.703	1.568	0.145
10:30	37°05.9'N	70°17.3'W	24.78	0.580	0.751	1.591	0.281
10:45	37°07.3'N	70°19.8'W	24.61	0.633	0.756	1.500	0.575
11:00	37°08.6'N	70°22.2'W	24.81	0.401	0.794	1.892	0.949
11:15	37°09.9'N	70°24.6'W	24.85	0.427	0.765	1.800	1.033
11:30	37°11.3'N	70°27.0'W	24.74	0.387	0.837	1.921	0.913
11:45	37°12.5'N	70°29.4'W	24.61	0.414	0.834	1.861	1.335
12:00	37°13.8'N	70°31.8'W	24.45	0.336	0.829	2.096	1.237
12:15	37°14.3'N	70°31.8'W	24.35	0.255	0.838	2.258	0.700
12:30	37°14.5'N	70°30.9'W	24.39	0.247	0.873	2.235	1.272
12:45	37°15.0'N	70°30.5'W	24.46	0.264	0.877	2.195	1.605
13:00	37°15.2'N	70°30.0'W	24.53	0.304	0.833	2.110	1.728
13:15	37°15.6'N	70°29.3'W	24.56	0.339	0.832	2.011	1.855
13:30	37°17.0'N	70°30.4'W	24.33	0.273	0.855	2.196	1.988
13:45	37°18.7'N	70°32.6'W	23.84	0.180	0.928	2.534	1.160
14:00	37°20.4'N	70°34.8'W	23.36	0.319	0.885	2.124	1.848
14:15	37°21.8'N	70°37.1'W	20.18	1.239	0.802	1.099	1.945
14:30	37°23.7'N	70°39.3'W	19.15	1.048	0.890	1.269	1.978
14:45	37°25.6'N	70°41.6'W	17.17	1.676	0.845	0.927	1.972
15:00	37°27.5'N	70°43.8'W	16.55	2.697	0.915	0.654	1.974
15:15	37°29.3'N	70°46.4'W	16.49	2.960	0.924	0.613	1.978
15:30	37°31.2'N	70°48.8'W	19.43	0.741	0.920	1.599	1.973
15:45	37°33.2'N	70°51.4'W	19.73	0.694	0.890	1.609	1.961
16:00	37°35.1'N	70°53.9'W	19.81	0.635	0.859	1.687	1.955
16:15	37°37.0'N	70°56.0'W	18.27	0.768	0.848	1.488	1.949
16:30	37°39.0'N	70°58.7'W	16.29	2.079	0.857	0.779	0.000
16:45	37°41.0'N	71°01.5'W	15.82	2.042	0.967	0.826	0.966
17:00	37°42.9'N	71°04.2'W	15.98	1.736	1.078	0.957	0.707
17:15	37°45.1'N	71°06.6'W	16.19	1.507	1.133	1.043	0.000
17:30	37°47.3'N	71°09.0'W	16.10	1.607	1.136	0.997	0.718
17:45	37°49.5'N	71°11.5'W	15.30	2.027	1.159	0.849	1.315
18:00	37°51.6'N	71°13.9'W	15.11	1.989	1.222	0.873	0.643
18:15	37°53.7'N	71°16.4'W	12.98	2.831	-	0.698	0.583
18:30	37°55.7'N	71°18.8'W	8.45	1.889	1.467	0.953	1.333
18:45	37°57.6'N	71°21.2'W	11.28	1.401	1.468	1.211	0.000
19:00	37°59.6'N	71°23.6'W	11.41	1.393	1.458	1.213	1.875
19:15	38°02.2'N	71°24.8'W	11.02	0.972	1.443	1.583	1.789
19:30	38°04.7'N	71°25.9'W	10.59	1.087	1.439	1.477	1.741
19:45	38°07.5'N	71°26.7'W	10.81	1.308	1.538	1.309	1.699
20:00	38°10.2'N	71°27.5'W	10.23	1.392	1.529	1.277	1.643
20:15	38°13.1'N	71°28.4'W	10.08	1.280	1.558	1.350	1.567
20:30	38°15.8'N	71°29.2'W	9.96	1.190	1.630	1.448	1.465
20:45	38°18.5'N	71°30.0'W	11.05	1.888	1.658	1.078	1.387
21:00	38°21.2'N	71°30.9'W	13.29	2.086	1.532	0.882	0.899
21:15	38°23.9'N	71°31.8'W	14.12	2.107	1.435	0.846	0.576
21:30	38°26.7'N	71°32.7'W	14.24	1.860	1.392	0.900	0.798
21:45	38°29.4'N	71°33.6'W	15.17	0.900	1.298	1.438	0.998
22:00	38°32.2'N	71°34.4'W	15.76	1.081	1.217	1.224	0.851
22:15	38°35.0'N	71°35.2'W	15.95	0.935	1.209	1.324	0.704
22:30	38°37.8'N	71°36.0'W	16.01	0.965	1.141	1.288	0.524
22:45	38°40.7'N	71°36.8'W	15.99	0.935	1.130	1.319	0.206
23:00	38°43.5'N	71°37.5'W	16.10	0.856	1.104	1.369	0.138
23:15	38°46.2'N	71°38.1'W	16.17	0.810	1.097	1.422	0.080
23:30	38°49.1'N	71°38.7'W	16.19	0.711	1.108	1.501	0.031
23:45	38°51.8'N	71°39.3'W	16.26	0.722	1.093	1.484	0.005
24:00	38°54.6'N	71°39.9'W	16.26	0.761	1.000	1.409	0.000

R/V KNORR UNDERWAY 03 MAY 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec $\times 10^{17}$)
0:00	38°54.6'N	71°39.9'W	16.26	0.761	1.000	1.409	0.000
0:15	38°57.4'N	71°40.2'W	16.31	0.838	1.023	1.356	0.000
0:30	38°57.5'N	71°40.3'W	16.04	0.794	1.023	1.372	0.000
0:45	38°57.4'N	71°40.5'W	16.31	0.784	1.020	1.372	0.000
1:00	38°57.3'N	71°40.8'W	16.30	0.711	1.022	1.469	0.000
1:15	38°57.0'N	71°41.1'W	16.11	0.683	1.078	1.518	0.000
1:30	38°56.4'N	71°41.6'W	16.18	0.711	1.056	1.489	0.000
1:45	38°55.8'N	71°42.1'W	16.15	0.682	1.055	1.541	0.000
2:00	38°55.5'N	71°41.7'W	16.20	0.645	1.099	1.571	0.000
2:15	38°54.9'N	71°42.5'W	16.15	0.635	1.075	1.633	0.000
2:30	38°54.5'N	71°42.1'W	16.11	0.615	1.116	1.659	0.000
2:45	38°55.4'N	71°41.7'W	16.11	0.552	1.192	1.760	0.000
3:00	38°55.7'N	71°41.3'W	16.14	0.594	1.164	1.672	0.000
3:15	38°55.8'N	71°41.0'W	16.14	0.615	1.132	1.626	0.000
3:30	38°56.4'N	71°40.5'W	16.09	0.614	1.166	1.637	0.000
3:45	38°57.5'N	71°40.1'W	16.08	0.646	1.158	1.599	0.000
4:00	38°57.7'N	71°39.7'W	16.04	0.611	1.149	1.640	0.000
4:15	38°57.6'N	71°39.3'W	16.04	0.534	1.230	1.807	0.000
4:30	38°57.5'N	71°39.2'W	15.99	0.586	1.180	1.705	0.000
4:45	38°57.5'N	71°39.2'W	15.95	0.644	1.114	1.622	0.000
5:00	38°57.5'N	71°39.1'W	15.95	0.547	1.236	1.799	0.000
5:15	38°58.1'N	71°39.0'W	15.98	0.501	1.279	1.877	0.000
5:30	38°58.4'N	71°39.0'W	15.96	0.500	1.296	1.887	0.000
5:45	38°57.9'N	71°39.5'W	15.95	0.508	1.278	1.821	0.000
6:00	38°57.5'N	71°40.0'W	15.94	0.553	1.211	1.782	0.000
6:15	38°57.5'N	71°40.0'W	15.91	0.643	1.124	1.624	0.000
6:30	38°57.5'N	71°40.0'W	15.91	0.527	1.254	1.834	0.000
6:45	38°57.5'N	71°39.9'W	15.92	0.461	1.336	1.947	0.000
7:00	38°57.5'N	71°39.9'W	15.87	0.464	1.331	1.929	0.000
7:15	38°57.6'N	71°39.9'W	15.88	0.460	1.291	1.938	0.000
7:30	38°57.6'N	71°39.9'W	15.88	0.459	1.328	1.975	0.000
7:45	38°57.6'N	71°39.9'W	15.89	0.430	1.351	2.014	0.000
8:00	38°57.6'N	71°39.9'W	15.86	0.424	1.339	2.043	0.000
8:15	38°57.6'N	71°39.9'W	15.87	0.428	1.324	2.010	0.000
8:30	38°57.6'N	71°40.0'W	15.86	0.401	1.351	2.072	0.000
8:45	38°57.7'N	71°40.0'W	15.84	0.455	1.223	1.955	0.000
9:00	38°57.7'N	71°40.0'W	15.85	0.388	1.374	2.176	0.000
9:15	38°57.7'N	71°40.0'W	15.86	0.364	1.416	2.194	0.000
9:30	38°57.8'N	71°40.0'W	15.85	0.358	1.428	2.207	0.000
9:45	38°57.8'N	71°40.0'W	15.86	0.341	1.396	2.283	0.010
10:00	38°57.8'N	71°40.0'W	15.85	0.363	1.370	2.188	0.050
10:15	38°57.9'N	71°40.1'W	15.84	0.314	1.516	2.350	0.122
10:30	38°58.0'N	71°40.1'W	15.84	0.310	1.581	2.403	0.225
10:45	38°58.2'N	71°40.2'W	15.83	0.316	1.509	2.376	0.530
11:00	38°58.1'N	71°40.2'W	15.81	0.338	1.487	2.334	0.717
11:15	38°57.8'N	71°40.1'W	15.84	0.349	1.523	2.265	0.695
11:30	38°57.5'N	71°40.0'W	15.82	0.420	1.351	2.000	0.936
11:45	38°57.6'N	71°40.3'W	15.82	0.449	1.229	1.900	1.208
12:00	38°57.7'N	71°40.6'W	15.81	0.381	1.308	2.008	1.261
12:15	38°57.8'N	71°40.9'W	15.81	0.439	1.308	1.924	1.320
12:30	38°57.9'N	71°40.7'W	15.83	0.492	1.221	1.749	1.244
12:45	38°57.9'N	71°40.4'W	15.83	0.451	1.303	1.804	1.159
13:00	38°58.0'N	71°40.3'W	15.85	0.473	1.242	1.765	1.492
13:15	38°58.1'N	71°40.2'W	15.84	0.495	1.218	1.719	1.144
13:30	38°58.1'N	71°40.1'W	15.83	0.466	1.222	1.732	1.695
13:45	38°58.1'N	71°40.0'W	15.87	0.489	1.247	1.720	1.259
14:00	38°58.1'N	71°39.2'W	15.88	-	-	-	0.987
14:15	38°58.2'N	71°38.8'W	15.92	-	-	-	1.430
14:30	38°58.2'N	71°38.4'W	15.92	-	-	-	1.178
14:45	38°58.3'N	71°38.1'W	15.91	-	-	-	1.224
15:00	38°58.4'N	71°37.8'W	15.95	-	-	-	0.410
15:15	38°58.6'N	71°37.4'W	15.87	0.439	1.357	1.850	1.325
15:30	38°58.8'N	71°37.0'W	15.99	0.414	1.322	1.890	1.466
15:45	38°58.8'N	71°36.5'W	15.99	0.415	1.263	1.835	0.493
16:00	38°59.0'N	71°36.0'W	16.00	0.412	1.271	1.844	1.494
16:15	38°58.8'N	71°36.0'W	16.02	0.414	1.271	1.838	0.456
16:30	38°58.2'N	71°37.3'W	15.99	0.453	1.261	1.771	0.245
16:45	38°57.7'N	71°37.7'W	15.95	0.407	1.258	1.818	0.000
17:00	38°57.3'N	71°37.8'W	15.98	0.382	1.332	1.906	1.689
17:15	38°56.8'N	71°37.9'W	15.97	0.392	1.299	1.855	1.051
17:30	38°56.4'N	71°38.5'W	16.00	0.375	1.299	1.917	1.390
17:45	38°56.1'N	71°39.2'W	15.97	0.382	1.270	1.931	1.028
18:00	38°55.6'N	71°39.6'W	15.99	0.356	1.290	1.956	1.345
18:15	38°55.2'N	71°39.9'W	16.00	0.391	1.304	1.860	1.573
18:30	38°54.8'N	71°40.3'W	16.03	0.417	1.263	1.843	1.738
18:45	38°55.3'N	71°40.4'W	16.04	0.420	1.293	1.792	1.866
19:00	38°56.9'N	71°40.1'W	16.05	0.402	1.315	1.877	1.590
19:15	38°57.5'N	71°39.9'W	16.09	0.390	1.395	1.905	1.529
19:30	38°57.5'N	71°39.9'W	16.09	0.435	1.377	1.799	1.514
19:45	38°57.5'N	71°39.8'W	16.09	0.447	1.366	1.776	1.742
20:00	38°57.5'N	71°39.8'W	16.11	0.444	1.400	1.806	1.642
20:15	38°57.4'N	71°40.1'W	16.12	0.448	1.356	1.771	1.714
20:30	38°57.4'N	71°40.5'W	16.11	0.471	1.332	1.694	1.466
20:45	38°57.3'N	71°40.8'W	16.08	0.454	1.331	1.731	1.248
21:00	38°57.2'N	71°39.5'W	16.12	0.509	1.327	1.654	0.455
21:15	38°57.1'N	71°39.5'W	16.12	0.528	1.285	1.614	0.434
21:30	38°57.2'N	71°39.7'W	16.15	0.564	1.311	1.530	0.373
21:45	38°57.3'N	71°39.9'W	16.15	0.556	1.316	1.560	0.363
22:00	38°57.4'N	71°40.1'W	16.13	0.631	1.323	1.437	0.340
22:15	38°57.5'N	71°40.2'W	16.13	0.611	1.368	1.481	0.297
22:30	38°58.4'N	71°38.9'W	16.09	0.628	1.369	1.459	0.329
22:45	39°00.0'N	71°36.2'W	16.11	0.673	1.391	1.422	0.245
23:00	39°01.7'N	71°33.4'W	16.05	0.616	1.426	1.543	0.168
23:15	39°03.3'N	71°30.4'W	15.94	0.432	1.477	1.804	0.099
23:30	39°05.0'N	71°27.4'W	15.81	0.729	1.452	1.378	0.040
23:45	39°05.7'N	71°26.3'W	15.60	0.943	1.514	1.195	0.007
24:00	39°04.3'N	71°28.1'W	15.89	0.691	1.469	1.430	0.000

R/V KNORR UNDERWAY 04 MAY 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	39°04.3'N	71°28.1'W	15.89	0.691	1.469	1.430	0.000
0:15	39°02.6'N	71°30.6'W	15.91	0.649	1.372	1.459	0.000
0:30	39°00.9'N	71°33.3'W	15.99	0.481	1.337	1.648	0.000
0:45	38°59.6'N	71°36.1'W	15.99	0.779	1.224	1.214	0.000
1:00	38°58.3'N	71°39.0'W	15.98	0.798	1.220	1.211	0.000
1:15	38°57.7'N	71°39.7'W	16.10	0.703	1.252	1.286	0.000
1:30	38°58.0'N	71°39.5'W	16.06	0.714	1.186	1.283	0.000
1:45	38°58.4'N	71°39.2'W	16.03	0.723	1.218	1.221	0.000
2:00	38°58.7'N	71°39.0'W	16.01	0.741	1.196	1.250	0.000
2:15	38°58.9'N	71°38.9'W	16.01	0.746	1.234	1.227	0.000
2:30	38°59.1'N	71°38.7'W	16.01	0.768	1.210	1.219	0.000
2:45	38°59.3'N	71°38.6'W	16.01	0.816	1.154	1.152	0.000
3:00	38°59.5'N	71°38.4'W	15.99	0.792	1.180	1.162	0.000
3:15	38°59.6'N	71°38.3'W	15.99	0.800	1.234	1.178	0.000
3:30	39°00.4'N	71°40.0'W	15.98	0.788	1.197	1.202	0.000
3:45	39°02.0'N	71°42.9'W	15.93	0.645	1.198	1.328	0.000
4:00	39°03.2'N	71°45.8'W	15.85	0.696	1.174	1.258	0.000
4:15	39°04.4'N	71°48.6'W	15.86	0.711	1.209	1.244	0.000
4:30	39°05.6'N	71°51.5'W	15.80	0.780	1.204	1.199	0.000
4:45	39°06.8'N	71°54.3'W	15.84	0.505	1.233	1.531	0.000
5:00	39°08.1'N	71°57.2'W	15.83	0.615	1.139	1.340	0.000
5:15	39°09.3'N	72°00.0'W	15.55	1.215	1.156	0.905	0.000
5:30	39°10.8'N	71°58.5'W	15.63	0.958	1.165	1.041	0.000
5:45	39°12.4'N	71°58.5'W	15.47	1.014	1.163	1.025	0.000
6:00	39°14.0'N	71°58.5'W	15.30	0.980	1.221	1.012	0.000
6:15	39°07.1'N	71°49.2'W	14.50	1.964	1.201	0.694	0.000
6:30	39°06.4'N	71°46.2'W	15.17	2.214	1.226	0.647	0.000
6:45	39°07.4'N	71°44.8'W	15.78	0.844	1.182	1.143	0.000
7:00	39°08.3'N	71°43.4'W	15.77	0.578	1.229	1.403	0.000
7:15	39°05.6'N	71°42.5'W	15.81	0.698	1.183	1.254	0.000
7:30	39°02.9'N	71°41.6'W	15.75	0.640	1.186	1.312	0.000
7:45	39°00.2'N	71°40.8'W	15.69	0.782	1.220	1.165	0.000
8:00	38°57.4'N	71°39.9'W	15.74	0.982	1.204	1.022	0.000
8:15	38°57.5'N	71°39.9'W	15.76	0.852	1.242	1.106	0.000
8:30	38°57.5'N	71°39.9'W	15.74	0.839	1.215	1.111	0.000
8:45	38°57.5'N	71°39.9'W	15.73	0.839	1.200	1.111	0.000
9:00	38°57.5'N	71°39.9'W	15.72	0.829	1.260	1.144	0.000
9:15	38°57.5'N	71°39.8'W	15.71	0.822	1.273	1.126	0.000
9:30	38°57.4'N	71°39.8'W	15.70	0.843	1.231	1.138	0.001
9:45	38°57.4'N	71°39.8'W	15.71	0.804	1.306	1.153	0.011
10:00	38°57.4'N	71°39.8'W	15.73	0.756	1.303	1.203	0.050
10:15	38°57.5'N	71°39.9'W	15.74	0.713	1.284	1.223	0.120
10:30	38°57.6'N	71°40.0'W	15.71	0.656	1.335	1.327	0.139
10:45	38°57.6'N	71°40.1'W	15.72	0.648	1.354	1.358	0.183
11:00	38°57.6'N	71°40.1'W	15.71	0.682	1.296	1.269	0.286
11:15	38°57.6'N	71°40.1'W	15.71	0.765	1.312	1.188	0.657
11:30	38°57.6'N	71°40.1'W	15.71	0.773	1.371	1.179	0.938
11:45	38°57.6'N	71°40.1'W	15.71	0.761	1.360	1.184	0.245
12:00	38°57.6'N	71°40.0'W	15.72	0.778	1.380	1.213	0.345
12:15	38°57.9'N	71°39.6'W	15.72	0.855	1.334	1.123	0.220
12:30	38°58.1'N	71°39.3'W	15.71	0.856	1.362	1.111	0.144
12:45	38°58.2'N	71°39.0'W	15.73	0.865	1.406	1.132	0.103
13:00	38°58.4'N	71°38.7'W	15.69	0.942	1.418	1.033	0.109
13:15	38°58.5'N	71°38.3'W	15.71	0.999	1.393	1.031	0.202
13:30	38°58.6'N	71°37.9'W	15.72	0.913	1.528	1.097	0.150
13:45	38°58.8'N	71°37.5'W	15.70	0.955	1.507	1.037	0.181
14:00	38°58.9'N	71°37.1'W	15.71	0.977	1.494	1.041	0.178
14:15	38°59.0'N	71°36.9'W	15.72	1.081	1.466	0.961	0.759
14:30	38°59.3'N	71°36.9'W	15.71	1.109	1.396	0.923	0.735
14:45	38°59.3'N	71°36.8'W	15.71	1.243	1.394	0.862	0.852
15:00	38°58.7'N	71°36.6'W	15.70	1.119	1.419	0.933	1.930
15:15	38°58.1'N	71°36.5'W	15.71	0.949	1.584	1.024	1.357
15:30	38°57.5'N	71°36.4'W	15.74	0.697	1.792	1.310	1.033
15:45	38°56.8'N	71°36.3'W	15.69	0.529	1.922	1.571	0.943
16:00	38°57.2'N	71°38.3'W	15.73	0.385	2.123	1.825	0.000
16:15	38°57.6'N	71°39.0'W	15.74	0.343	2.336	2.005	1.959
16:30	38°57.5'N	71°39.5'W	15.74	0.424	2.142	1.809	1.883
16:45	38°57.5'N	71°39.3'W	15.74	0.590	1.843	1.528	1.924
17:00	38°57.5'N	71°39.0'W	15.81	0.665	1.591	1.313	1.924
17:15	38°57.6'N	71°38.7'W	15.87	0.612	1.538	1.412	1.908
17:30	38°57.8'N	71°39.2'W	15.86	0.641	1.498	1.350	1.871
17:45	38°58.1'N	71°39.6'W	15.89	-	-	-	0.187
18:00	38°58.0'N	71°39.5'W	15.85	-	-	-	1.854
18:15	38°57.9'N	71°39.3'W	15.89	-	-	-	1.851
18:30	38°57.9'N	71°39.6'W	15.93	-	-	-	1.457
18:45	38°57.8'N	71°39.6'W	15.91	-	-	-	1.440
19:00	38°57.7'N	71°39.6'W	15.93	1.040	0.723	1.898	1.727
19:15	38°57.8'N	71°39.5'W	15.91	1.119	0.697	1.730	1.692
19:30	38°57.8'N	71°39.5'W	15.89	1.260	0.668	1.540	1.740
19:45	38°57.9'N	71°39.3'W	15.90	1.436	0.640	1.328	1.775
20:00	38°57.9'N	71°39.2'W	15.90	1.475	0.621	1.301	1.620
20:15	38°57.9'N	71°39.0'W	15.86	1.284	0.784	1.472	1.709
20:30	38°57.8'N	71°38.8'W	15.86	1.278	0.758	1.505	1.471
20:45	38°57.5'N	71°39.3'W	15.91	1.348	0.737	1.401	1.382
21:00	38°57.2'N	71°39.9'W	15.95	1.383	0.715	1.348	0.658
21:15	38°57.0'N	71°40.2'W	15.93	1.402	0.696	1.345	0.718
21:30	38°56.9'N	71°40.7'W	15.92	1.185	0.687	1.552	1.132
21:45	38°56.7'N	71°41.0'W	15.82	1.201	0.664	1.522	1.054
22:00	38°56.8'N	71°40.8'W	15.89	1.258	0.667	1.455	0.599
22:15	38°57.0'N	71°40.7'W	15.87	1.915	0.686	1.013	0.438
22:30	38°57.2'N	71°40.5'W	15.86	1.957	0.704	0.998	0.309
22:45	38°57.3'N	71°40.3'W	15.89	1.901	0.699	1.022	0.234
23:00	38°57.5'N	71°40.1'W	15.86	1.698	0.722	1.133	0.196
23:15	38°57.5'N	71°40.1'W	15.87	1.510	0.711	1.255	0.100
23:30	38°57.5'N	71°40.1'W	15.85	1.269	0.724	1.463	0.040
23:45	38°57.5'N	71°40.1'W	15.84	1.221	0.715	1.510	0.008
24:00	38°57.6'N	71°40.1'W	15.78	1.181	0.696	1.556	0.000

R/V KNORR UNDERWAY 05 MAY 1982

TIME (GMT)	LATITUDE	LONGITUDE	TEMPERATURE (deg C)	CHLOROPHYLL (ug/l)	FUCO:CHL RATIO	PHYCO:CHL RATIO	IRRADIANCE (quanta/cm ² /sec x10 ¹⁷)
0:00	38°57.6'N	71°40.1'W	15.78	1.181	0.696	1.556	0.000
0:15	38°57.5'N	71°40.0'W	15.76	1.194	0.716	1.540	0.000
0:30	38°57.4'N	71°39.9'W	15.65	1.288	0.721	1.440	0.000
0:45	38°57.4'N	71°39.9'W	15.61	1.387	0.720	1.336	0.000
1:00	38°57.5'N	71°39.5'W	15.59	1.467	0.703	1.284	0.000
1:15	38°57.5'N	71°38.9'W	15.63	1.287	0.707	1.440	0.000
1:30	38°57.5'N	71°38.6'W	15.66	1.238	0.739	1.483	0.000
1:45	38°57.5'N	71°38.1'W	15.67	1.255	0.714	1.466	0.000
2:00	38°58.8'N	71°35.1'W	15.59	1.488	0.717	1.273	0.000
2:15	38°59.9'N	71°31.8'W	15.62	1.357	0.728	1.393	0.000
2:30	39°01.1'N	71°28.4'W	15.71	1.150	0.721	1.582	0.001
2:45	39°02.3'N	71°25.1'W	15.77	0.991	0.700	1.790	0.000
3:00	39°03.5'N	71°21.8'W	15.67	1.366	0.723	1.363	0.000
3:15	39°04.7'N	71°18.4'W	15.39	1.416	0.729	1.314	0.000
3:30	39°05.9'N	71°15.1'W	13.67	2.911	0.754	0.739	0.000
3:45	39°07.1'N	71°11.9'W	10.75	1.880	0.771	1.191	0.000
4:00	39°08.3'N	71°08.7'W	9.40	1.214	0.872	1.816	0.000
4:15	39°09.5'N	71°05.6'W	9.02	1.342	1.014	1.709	0.000
4:30	39°10.7'N	71°02.4'W	9.94	1.387	1.120	1.649	0.000
4:45	39°12.1'N	70°59.3'W	9.70	1.233	1.044	1.836	0.000
5:00	39°13.5'N	70°56.3'W	10.52	1.081	1.067	2.039	0.000
5:15	39°14.8'N	70°53.2'W	10.25	0.983	1.036	2.183	0.000
5:30	39°16.1'N	70°50.1'W	9.51	1.088	1.056	2.074	0.000
5:45	39°17.4'N	70°47.1'W	9.80	1.008	1.033	2.210	0.000
6:00	39°18.8'N	70°44.1'W	10.62	1.014	1.079	2.198	0.000
6:15	39°19.7'N	70°41.1'W	11.46	1.462	1.176	1.561	0.000
6:30	39°20.0'N	70°38.3'W	11.82	1.602	1.170	1.440	0.000
6:45	39°19.9'N	70°38.1'W	11.71	1.710	1.121	1.332	0.000
7:00	39°19.8'N	70°38.1'W	11.85	1.696	1.136	1.342	0.000
7:15	39°19.8'N	70°38.1'W	11.96	1.822	1.127	1.248	0.000
7:30	39°19.9'N	70°38.0'W	11.81	1.819	1.117	1.242	0.000
7:45	39°20.0'N	70°37.9'W	11.84	1.803	1.088	1.259	0.000
8:00	39°20.0'N	70°37.8'W	11.90	1.801	1.128	1.271	0.000
8:15	39°20.0'N	70°37.8'W	11.83	1.739	1.147	1.309	0.000
8:30	39°20.1'N	70°37.8'W	11.72	1.669	1.149	1.348	0.000
8:45	39°20.1'N	70°37.8'W	11.70	1.684	1.161	1.336	0.000
9:00	39°20.1'N	70°37.8'W	11.76	1.613	1.196	1.404	0.000
9:15	39°20.2'N	70°37.8'W	11.75	1.616	1.220	1.406	0.000
9:30	39°20.1'N	70°37.9'W	11.61	1.597	1.203	1.424	0.002
9:45	39°20.1'N	70°38.0'W	11.65	1.544	1.220	1.466	0.008
10:00	39°20.1'N	70°38.0'W	11.59	1.552	1.215	1.461	0.026
10:15	39°20.1'N	70°38.1'W	11.66	1.607	1.180	1.417	0.070
10:30	39°20.2'N	70°38.2'W	11.59	1.623	1.190	1.381	0.139
10:45	39°20.3'N	70°38.3'W	11.61	1.621	1.199	1.415	0.239
11:00	39°20.3'N	70°38.4'W	11.58	1.610	1.212	1.399	0.278
11:15	39°20.3'N	70°38.4'W	11.59	1.646	1.184	1.373	0.307
11:30	39°20.4'N	70°38.5'W	11.62	1.660	1.222	1.383	0.396
11:45	39°20.4'N	70°38.7'W	11.62	1.689	1.187	1.354	0.646
12:00	39°20.5'N	70°38.5'W	11.76	1.567	1.223	1.438	0.803
12:15	39°20.8'N	70°38.4'W	11.55	1.307	1.211	1.707	0.752
12:30	39°21.1'N	70°38.3'W	11.56	1.211	1.223	1.824	0.604
12:45	39°20.6'N	70°38.1'W	11.58	1.300	1.272	1.714	0.490
13:00	39°20.0'N	70°38.3'W	11.74	1.221	1.392	1.823	0.851
13:15	39°20.1'N	70°38.3'W	11.70	-	-	-	0.780
13:30	39°20.1'N	70°38.3'W	11.67	-	-	-	1.328
13:45	39°20.1'N	70°38.3'W	11.79	-	-	-	0.861
14:00	39°20.1'N	70°38.3'W	11.83	-	-	-	1.071
14:15	39°20.2'N	70°39.5'W	11.87	-	-	-	1.069
14:30	39°20.3'N	70°40.1'W	11.86	1.125	1.338	1.960	1.243
14:45	39°20.2'N	70°40.4'W	11.91	1.113	1.273	1.958	0.051
15:00	39°20.2'N	70°40.7'W	11.93	1.065	1.235	2.023	0.027
15:15	39°20.1'N	70°40.9'W	11.92	0.786	1.487	2.725	0.047
15:30	39°20.1'N	70°41.3'W	11.84	0.723	1.820	3.021	1.876
15:45	39°20.1'N	70°41.5'W	11.59	0.569	2.023	3.748	1.822
16:00	39°20.0'N	70°41.0'W	11.32	0.497	2.387	4.298	1.826
16:15	39°20.1'N	70°39.0'W	11.92	0.545	2.084	3.917	1.899
16:30	39°20.3'N	70°37.8'W	11.69	0.607	1.598	3.478	1.913
16:45	39°20.4'N	70°37.8'W	11.88	1.013	1.502	2.190	1.908
17:00	39°20.6'N	70°38.1'W	12.05	1.166	1.360	1.936	1.906
17:15	39°20.8'N	70°38.3'W	12.06	1.047	1.271	2.096	1.906
17:30	39°20.9'N	70°37.9'W	11.68	0.860	1.150	2.480	1.892
17:45	39°21.2'N	70°38.3'W	12.21	1.380	1.146	1.598	1.863
18:00	39°21.3'N	70°38.7'W	11.99	1.124	1.130	1.910	1.882
18:15	39°21.6'N	70°38.9'W	11.79	1.115	1.139	1.922	1.851
18:30	39°21.8'N	70°39.2'W	11.40	0.937	1.083	2.215	1.817
18:45	39°22.0'N	70°39.7'W	11.79	0.772	1.153	2.659	1.821
19:00	39°22.2'N	70°40.3'W	11.68	0.767	1.175	2.667	1.799
19:15	39°23.7'N	70°40.7'W	11.69	0.855	1.126	2.433	1.807
19:30	39°26.3'N	70°41.2'W	10.69	0.608	1.097	3.266	1.795
19:45	39°29.0'N	70°41.8'W	10.38	0.549	1.097	3.550	1.771
20:00	39°31.7'N	70°42.3'W	10.21	0.493	1.121	3.944	1.751
20:15	39°33.8'N	70°42.8'W	9.76	0.514	1.230	3.867	1.704
20:30	39°35.9'N	70°43.2'W	11.77	0.709	1.225	3.153	1.673
20:45	39°38.0'N	70°43.6'W	11.48	0.777	1.183	2.676	1.616
21:00	39°40.1'N	70°44.1'W	11.26	0.876	1.164	2.393	0.451
21:15	39°42.3'N	70°44.6'W	10.30	0.669	1.170	3.008	0.413
21:30	39°44.5'N	70°45.0'W	10.29	0.624	1.151	3.211	0.385
21:45	39°46.7'N	70°45.5'W	10.83	0.661	1.197	3.105	0.423
22:00	39°48.8'N	70°46.1'W	9.85	0.778	1.297	2.732	1.016
22:15	39°50.8'N	70°46.1'W	9.94	0.768	1.284	2.793	1.054
22:30	39°52.8'N	70°46.2'W	9.93	0.849	1.288	2.535	0.882
22:45	39°54.8'N	70°46.4'W	9.87	0.914	1.312	2.394	0.487
23:00	39°56.7'N	70°46.4'W	11.39	1.318	1.369	1.676	0.180
23:15	39°58.7'N	70°46.5'W	11.71	1.472	1.279	1.532	0.091
23:30	40°00.7'N	70°46.6'W	10.88	1.396	1.244	1.583	0.040
23:45	40°02.7'N	70°46.7'W	10.55	1.369	1.231	1.641	0.009
24:00	40°04.7'N	70°46.8'W	10.34	1.082	1.173	2.013	0.000

SOLAR IRRADIANCE
R/V KNØRR 05/05/82

SOLAR IRRADIANCE
R/V KNORR 05/04/82

SOLAR IRRADIANCE
R/V KNORR 05/03/82

SOLAR IRRADIANCE
R/V KNORR 05/02/82

SOLAR IRRADIANCE
R/V KNØRR 05/01/82

SOLAR IRRADIANCE
R/V KNØRR 04/30/82

SOLAR IRRADIANCE
R/V KNORR 04/29/82

SOLAR IRRADIANCE
R/V KNORR 04/28/82

SOLAR IRRADIANCE
R/V KNORR 04/27/82

SOLAR IRRADIANCE
R/V KNORR 04/25/82

SOLAR IRRADIANCE
R/V KNORR 04/24/82

SOLAR IRRADIANCE
R/V KNØRR 04/23/82

SOLAR IRRADIANCE
R/V KNORR 04/22/82

SOLAR IRRADIANCE
R/V KNORR 04/21/82

SOLAR IRRADIANCE
R/V KNORR 04/20/82

KNØRR 0420.06 DOWNWELLING
SLOPE WATER

RELATIVE LIGHT

KNØRR 0420.06 DOWNWELLING

SLOPE WATER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
2.50	0.18970	0.15066	0.12208	0.55903
6.00	0.25774	0.21422	0.17010	0.48931
9.75	0.24748	0.18726	0.18051	0.54972
14.25	0.11054	0.08146	0.08373	0.32250
19.50	0.13459	0.09929	0.10406	0.41589
24.50	0.04165	0.02972	0.05026	
29.50	0.02968	0.03037	0.04059	
33.50	0.04478	0.03739	0.06819	
36.50	0.22033	0.16004	0.15954	
41.50	0.01728	0.02147	0.03783	
48.00	0.03719	0.03775	0.05415	
53.00	0.04918	0.04643	0.06315	
59.25	0.06268	0.05772	0.07497	

KNØRR 0422.06 DOWNWELLING
RING CENTER

RELATIVE LIGHT

KNØRR 0422.06 DOWNWELLING

RING CENTER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
1.25	0.07593	0.23220	0.19103	0.67808
3.50	0.09064	0.09589	0.10615	0.51542
7.50	0.04672	0.04096	0.04937	0.31785
12.50	0.03437	0.03792	0.04264	0.35439
17.50	0.03923	0.04271	0.05557	0.26143
23.00	0.04986	0.05138	0.07088	0.21062
27.50	0.03771	0.07593	0.09148	0.16184
31.50	0.03452	0.02737	0.04072	0.09400
36.50	0.07258	0.07713	0.08271	0.18326
44.00	0.06016	0.06737	0.08232	
55.00	0.05254	0.05159	0.06758	
64.50	0.03974	0.03576	0.04843	
73.25	0.05420	0.05528	0.07258	
81.75	0.04426	0.04342	0.05670	
88.50	0.04870	0.05184	0.07349	

KNØRR 0425.04 DOWNWELLING
RING CENTER

KNØRR 0425.04 DOWNWELLING

RING CENTER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
1.85	0.03088	0.16313	0.04136	0.46939
4.25	0.05479	0.06425	0.06907	0.63839
6.15	0.08829	0.09946	0.12768	0.70126
9.50	0.05247	0.03579	0.06369	0.34036
14.75	0.05552	0.06149	0.06923	0.31774
20.25	0.09073	0.08281	0.10119	0.23781
24.00	0.03031	0.01961	0.03298	0.18922
29.00	0.05265	0.05895	0.07473	0.28782
36.00	0.03640	0.03560	0.04933	
41.25	0.04801	0.03136	0.06393	
46.25	0.04191	0.04057	0.05456	
54.50	0.03942	0.04550	0.05772	
65.00	0.04643	0.04972	0.06745	
75.00	0.04308	0.04400	0.06217	
85.00	0.04855	0.05021	0.06592	
95.00	0.04700	0.04964	0.06286	

KNORR 0429.06 DOWNWELLING
HIGH VEL JOINT SHIP

KNORR 0429.06 DOWNWELLING

HIGH VEL JOINT SHIP

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
1.25	0.34712	0.30603	0.25929	0.48349
3.50	0.19659	0.18539	0.15776	0.41698
7.75	0.13152	0.10336	0.11221	0.43153
14.50	0.15923	0.12284	0.12469	0.36850
21.75	0.12680	0.09491	0.09948	0.20475
28.25	0.12115	0.08185	0.08697	0.25065
35.50	0.12088	0.09591	0.10389	
45.50	0.12245	0.09998	0.10930	
56.50	0.08047	0.07501	0.08664	
66.75	0.03520	0.04528	0.06347	

KNORR 0430.03 DOWNWELLING
GULF STREAM

KNORR 0430.03 DOWNWELLING

GULF STREAM

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
2.00	0.10443	0.15915	0.10311	0.48775
7.01	0.01561	0.03073	0.03863	0.36122
16.01	0.08466	0.09756	0.11372	0.30440
25.75	0.08440	0.08741	0.09812	0.13617
35.75	0.01846	0.02115	0.03641	0.07772
47.00	0.05041	0.03328	0.06560	
56.50	0.11454	0.11340	0.12984	
64.25	0.03074	0.02866	0.03733	

KNØRR 0501.06 DOWNWELLING
SARGASSO SEA

KNØRR 0501.06 DOWNWELLING
SARGASSO SEA

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
2.75	0.07954	0.10845	0.10859	0.48303
7.50	0.07215	0.07607	0.07569	0.39276
14.75	0.07929	0.08568	0.09933	0.37156
29.75	0.07601	0.07393	0.08715	0.06376
45.75	0.06887	0.06875	0.08405	0.00256
56.50	0.06302	0.06011	0.07495	0.01103
66.75	0.06165	0.06132	0.07310	0.00829
77.00	0.05394	0.05136	0.06360	0.00561
86.50	0.03915	0.05269	0.06257	0.00889
96.50	0.04844	0.04375	0.04997	0.00387

KNØRR 0503.06 DOWNWELLING
RING CENTER

RELATIVE LIGHT

KNØRR 0503.06 DOWNWELLING

RING CENTER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
1.25	0.11845	0.16943	0.09217	0.64080
3.50	0.02399	0.03276	0.04550	0.36620
7.75	0.03689	0.06376	0.06702	0.37314
14.50	0.06730	0.07100	0.08312	0.39259
22.75	0.06687	0.06971	0.07820	0.16790
32.50	0.04700	0.04774	0.06165	0.05435
42.00	0.04952	0.05091	0.06036	
50.50	0.07006	0.07523	0.09262	
59.50	0.02880	0.03118	0.04827	
67.50	0.04860	0.05153	0.06827	
74.00	0.04793	0.04941	0.06824	

KNØRR 0505.04 DOWNWELLING
SLOPE WATER

KNØRR 0505.04 DOWNWELLING

SLOPE WATER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
1.25	0.20911	0.18417	0.08091	0.52364
3.50	0.16853	0.12179	0.09470	0.40132
7.50	0.22077	0.15787	0.15040	0.47719
15.00	0.16147	0.07837	0.06229	0.30251
25.00	0.13499	0.11039	0.11071	
35.00	0.11192	0.08253	0.09335	
50.00	0.01038	0.01536	0.03422	
65.00	0.09963	0.10996	0.12785	

KNØRR 0420.06 UPWELLING
SLOPE WATER

RELATIVE LIGHT

KNØRR 0420.06 UPWELLING

SLOPE WATER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
2.25	0.20156	0.14441	0.13851	0.37832
5.00	0.29413	0.21686	0.26745	
8.75	0.08192	0.07926	0.11069	
13.00	0.06893	0.06411	0.09053	
17.50	0.05860	0.04463	0.06875	
24.00	0.06919	0.06069	0.08348	

KNORR 0422.06 UPWELLING
RING CENTER

RELATIVE LIGHT

KNORR 0422.06 UPWELLING

RING CENTER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
2.00	0.03861	0.06077	0.03708	0.35595
5.00	0.05728	0.05417	0.07438	0.41158
8.75	0.06026	0.05288	0.06833	0.46210
13.00	0.03672	0.03606	0.04359	
17.25	0.03496	0.03298	0.04052	
22.25	0.06581	0.05973	0.07634	
26.75	0.06835	0.06178	0.07808	
30.75	0.05034	0.05640	0.05118	
35.50	0.06327	0.04463	0.06190	
44.00	0.03940	0.03039	0.03379	

KNØRR 0425.04 UPWELLING
RING CENTER

KNØRR 0425.04 UPWELLING

RING CENTER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₅₇₀
2.25	0.07208	0.08925	0.09099	0.61207
7.00	0.05536	0.05169	0.06758	
12.25	0.04459	0.04459	0.05664	
17.75	0.05006	0.05006	0.06742	
25.00	0.04783	0.04053	0.05385	
34.00	0.05273	0.05002	0.06190	
44.50	0.04721	0.03928	0.05435	
55.00	0.05115	0.04329	0.06061	
65.00	0.03721	0.02877	0.03365	
74.50	0.03971	0.03616	0.04505	

KNØRR 0429.06 UPWELLING
HIGH VEL JOINT SHIP

KNØRR 0429.06 UPWELLING

HIGH VEL JOINT SHIP

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
3.50	0.13919	0.10647	0.10028	0.27856
8.75	0.18039	0.13274	0.14451	0.28489
15.25	0.11673	0.08750	0.09912	
24.00	0.08718	0.07809	0.09808	
34.25	0.04071	0.05360	0.07430	

KNØRR 0501.06 UPWELLING
SARGASSO SEA

KNØRR 0501.06 UPWELLING
SARGASSO SEA

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
2.50	0.06432	0.06643	0.07038	0.25316
7.25	0.06358	0.05496	0.06756	0.09597
14.50	0.06686	0.05676	0.06935	0.03591
24.00	0.05817	0.04861	0.05563	0.02364
34.00	0.06700	0.05507	0.05873	0.01823
44.50	0.05366	0.03987	0.04055	0.02259
54.50	0.04690	0.03353	0.02981	0.01202
63.50	0.03544	0.02153	0.01416	0.00654
73.50	0.02255	0.01422	0.01227	0.00568
83.25	0.01484	0.01517	0.00812	0.01625

KNØRR 0503.06 UPWELLING
RING CENTER

KNØRR 0503.06 UPWELLING

RING CENTER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
3.25	0.05632	0.06021	0.06564	0.27287
8.00	0.06777	0.06283	0.07557	0.19638
14.00	0.06069	0.05995	0.06633	0.20528
22.00	0.06485	0.05165	0.06809	
29.50	0.05657	0.05627	0.07216	
37.50	0.04977	0.04184	0.05058	
45.75	0.04449	0.04221	0.05227	

KNØRR 0505.04 UPWELLING
SLOPE WATER

RELATIVE LIGHT

KNØRR 0505.04 UPWELLING

SLOPE WATER

DEPTH	K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
2.75	0.11729	0.02574	0.00539	0.25640
8.25	0.17807	0.12990	0.13678	0.45136
16.75	0.12374	0.09915	0.12308	
26.50	0.05472	0.04537	0.05616	
36.00	0.01572	0.02563	0.03401	
45.50	0.01518	0.01466	0.01666	

Operation #	Location	GMT	Depth Interval	Average K Values			
				K ₄₄₀	K ₅₂₀	K ₅₅₀	K ₆₇₀
K0420.06	Slope clear sky	1650-1745	0-11.5	0.238	0.191	0.162	0.443
			11.5-63.5	0.058	0.050	0.065	-
			0-6.5	0.253	0.185	0.211	0.378
			6.5-28	0.068	0.060	0.085	-
K0422.06	Ring Ctr hazy, overcast	1705-1810	0-92	0.051	0.054	0.067	0.264
			0-50	0.052	0.047	0.057	0.419
K0425.04	Ring Ctr	1530-1640	0-100	0.049	0.052	0.065	0.337
			0-79	0.048	0.043	0.056	0.612
K0429.06	High Vel partly cloudy	1600-1700	0-51.5	0.137	0.107	0.111	0.335
			0-39.5	0.102	0.085	0.100	0.282
K0430.03	Gulf Str in/out clouds	2000-2030	0-68	0.059	0.065	0.077	0.234
K0501.07	Sargasso clear sky	1445-1600	0-102	0.068	0.067	0.079	0.399
			0-50	0.062	0.051	0.059	-
K0503.06	Ring Ctr partly cloudy	1500-1610	0-77	0.054	0.057	0.070	0.393
			0-49.5	0.058	0.053	0.064	0.221
K0505.04	Slope in/out clouds	1430-1515	0-40	0.155	0.104	0.096	0.380
			0-22	0.142	0.098	0.109	0.377

OPERATION #0420.05 SLOPE WATER

OPERATION #0422.05
RING CENTER

QUANTA/CM²/SEC X 10¹⁵

OPERATION #0426.08
RING CENTER

QUANTA/CM² / SEC X 10¹⁵

OPERATION #0501.10
SARGASSO SEA

QUANTA/CM² / SEC X 10¹⁵

OPERATION #0505.08
RING CENTER

QUANTA/CM²/SEC X 10¹⁵

KN0420.09 SPECTRUM 1
TOTAL CHL=1.474 UG/L, CORRECTED DEPTH=2 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.11727	485	0.12988	620	0.02768
355	0.11676	490	0.12318	625	0.02872
360	0.11625	495	0.11403	630	0.02984
365	0.11761	500	0.10447	635	0.02729
370	0.12270	505	0.09258	640	0.02677
375	0.12422	510	0.08271	645	0.02877
380	0.12798	515	0.07153	650	0.03152
385	0.13193	520	0.06307	655	0.03244
390	0.13443	525	0.05612	660	0.03968
395	0.13718	530	0.05090	665	0.05625
400	0.14222	535	0.04754	670	0.07328
405	0.14996	540	0.04316	675	0.08136
410	0.16219	545	0.03929	680	0.07425
415	0.16933	550	0.03474	685	0.05749
420	0.17400	555	0.03110	690	0.03455
425	0.17622	560	0.02884	695	0.02130
430	0.18530	565	0.02639	700	0.01252
435	0.19055	570	0.02436	705	0.00714
440	0.18615	575	0.02497	710	0.00630
445	0.17771	580	0.02733	715	0.00437
450	0.17243	585	0.02751	720	0.00354
455	0.16955	590	0.02819	725	0.00316
460	0.16815	595	0.02883	730	0.00210
465	0.16435	600	0.02626	735	0.00093
470	0.15485	605	0.02430	740	0.00101
475	0.14631	610	0.02481	745	-0.00115
480	0.13792	615	0.02556	750	0.0

KN0420.09 SPECTRUM 2
TOTAL CHL=2.420 UG/L, CORRECTED DEPTH=15 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.17251	485	0.17774	620	0.04474
355	0.17329	490	0.16873	625	0.04689
360	0.17148	495	0.16029	630	0.04722
365	0.17597	500	0.14633	635	0.04734
370	0.18147	505	0.13105	640	0.04805
375	0.18654	510	0.11641	645	0.04988
380	0.18964	515	0.10363	650	0.05374
385	0.19289	520	0.09309	655	0.06324
390	0.19663	525	0.08689	660	0.07741
395	0.20194	530	0.08273	665	0.10630
400	0.20980	535	0.07848	670	0.12714
405	0.22488	540	0.07317	675	0.12887
410	0.23768	545	0.06792	680	0.11571
415	0.24401	550	0.06299	685	0.08062
420	0.25056	555	0.05632	690	0.04646
425	0.25517	560	0.05079	695	0.02575
430	0.26484	565	0.04578	700	0.01315
435	0.26758	570	0.04277	705	0.00814
440	0.26035	575	0.04239	710	0.00641
445	0.24467	580	0.04383	715	0.00417
450	0.23558	585	0.04368	720	0.00333
455	0.23342	590	0.04308	725	0.00259
460	0.23177	595	0.04204	730	0.00107
465	0.22352	600	0.03931	735	0.00157
470	0.21212	605	0.03902	740	-0.00025
475	0.20267	610	0.04062	745	0.00029
480	0.18625	615	0.04211	750	0.0

KN0420.09 SPECTRUM 3
TOTAL CHL=0.519 UG/L, CORRECTED DEPTH=22 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.12643	485	0.11823	620	0.03201
355	0.12691	490	0.10902	625	0.03228
360	0.12596	495	0.10032	630	0.03245
365	0.12511	500	0.09222	635	0.03238
370	0.12983	505	0.08507	640	0.03218
375	0.13307	510	0.07939	645	0.03626
380	0.13150	515	0.07212	650	0.03627
385	0.13426	520	0.06648	655	0.03916
390	0.13557	525	0.06257	660	0.04579
395	0.13660	530	0.05736	665	0.06069
400	0.14265	535	0.05328	670	0.07203
405	0.14805	540	0.04945	675	0.07725
410	0.15343	545	0.04460	680	0.06485
415	0.15975	550	0.04153	685	0.04583
420	0.16180	555	0.03693	690	0.02758
425	0.16526	560	0.03281	695	0.01681
430	0.16524	565	0.03121	700	0.01188
435	0.16680	570	0.02932	705	0.00940
440	0.16414	575	0.03156	710	0.00769
445	0.15661	580	0.03294	715	0.00782
450	0.15197	585	0.03396	720	0.00564
455	0.14793	590	0.03364	725	0.00566
460	0.14858	595	0.03322	730	0.00351
465	0.14572	600	0.03172	735	0.00333
470	0.14073	605	0.03028	740	0.00106
475	0.13398	610	0.03016	745	0.00087
480	0.12580	615	0.03005	750	0.0

KN0420.09 SPECTRUM 4
TOTAL CHL=0.231 UG/L, CORRECTED DEPTH=60 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.07110	485	0.04266	620	0.01310
355	0.07117	490	0.03966	625	0.01388
360	0.07103	495	0.03774	630	0.01274
365	0.06613	500	0.03585	635	0.01134
370	0.06446	505	0.03386	640	0.01333
375	0.06676	510	0.03106	645	0.01576
380	0.06488	515	0.02976	650	0.01610
385	0.06469	520	0.02785	655	0.01704
390	0.06397	525	0.02665	660	0.01870
395	0.06092	530	0.02406	665	0.02201
400	0.06331	535	0.02319	670	0.02439
405	0.06253	540	0.02133	675	0.02470
410	0.06366	545	0.02003	680	0.02219
415	0.06376	550	0.01784	685	0.01737
420	0.06299	555	0.01731	690	0.01064
425	0.06285	560	0.01623	695	0.00923
430	0.05763	565	0.01322	700	0.00668
435	0.05879	570	0.01291	705	0.00359
440	0.05848	575	0.01351	710	0.00532
445	0.05542	580	0.01542	715	0.00426
450	0.05384	585	0.01591	720	0.00280
455	0.05185	590	0.01508	725	0.00371
460	0.05163	595	0.01404	730	0.00266
465	0.05008	600	0.01329	735	0.00191
470	0.04969	605	0.01385	740	0.00119
475	0.04798	610	0.01400	745	0.00069
480	0.04417	615	0.01358	750	0.0

KN0420.09 SPECTRUM 5
TOTAL CHL=0.168 UG/L, CORRECTED DEPTH=110 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.03327	485	0.01713	620	0.00689
355	0.03228	490	0.01626	625	0.00688
360	0.03427	495	0.01627	630	0.00490
365	0.03311	500	0.01429	635	0.00298
370	0.03299	505	0.01428	640	0.00334
375	0.03420	510	0.01416	645	0.00570
380	0.03451	515	0.01255	650	0.00759
385	0.03183	520	0.01182	655	0.00770
390	0.03474	525	0.01121	660	0.00954
395	0.03293	530	0.00990	665	0.01255
400	0.03548	535	0.00917	670	0.01399
405	0.03481	540	0.00878	675	0.01416
410	0.03564	545	0.00815	680	0.01262
415	0.03693	550	0.00630	685	0.00976
420	0.03735	555	0.00472	690	0.00611
425	0.03587	560	0.00458	695	0.00603
430	0.03148	565	0.00304	700	0.00407
435	0.03236	570	0.00352	705	0.00295
440	0.03001	575	0.00412	710	0.00328
445	0.02842	580	0.00590	715	0.00209
450	0.02703	585	0.00642	720	0.00205
455	0.02679	590	0.00682	725	0.00257
460	0.02601	595	0.00629	730	0.00145
465	0.02421	600	0.00579	735	0.00129
470	0.02373	605	0.00565	740	0.00006
475	0.02085	610	0.00611	745	0.00001
480	0.02084	615	0.00689	750	0.0

KN0422.07 SPECTRUM 1
TOTAL CHL=1.327 UG/L, CORRECTED DEPTH=2 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.14477	485	0.14379	620	0.03858
355	0.14439	490	0.13605	625	0.03891
360	0.14521	495	0.12744	630	0.03855
365	0.14806	500	0.11736	635	0.04003
370	0.14876	505	0.10639	640	0.04067
375	0.15496	510	0.09813	645	0.04344
380	0.16022	515	0.08863	650	0.04576
385	0.16103	520	0.08050	655	0.04762
390	0.16326	525	0.07402	660	0.05553
395	0.16621	530	0.06782	665	0.07274
400	0.17455	535	0.06359	670	0.08959
405	0.17975	540	0.05782	675	0.09672
410	0.18851	545	0.05311	680	0.08343
415	0.19502	550	0.04879	685	0.06121
420	0.20010	555	0.04516	690	0.03271
425	0.20380	560	0.04132	695	0.01997
430	0.20714	565	0.03819	700	0.01251
435	0.20799	570	0.03631	705	0.00850
440	0.20312	575	0.03831	710	0.00548
445	0.18983	580	0.03952	715	0.00489
450	0.18308	585	0.03895	720	0.00503
455	0.17932	590	0.03883	725	0.00438
460	0.17677	595	0.03772	730	0.00284
465	0.17305	600	0.03543	735	0.00117
470	0.16833	605	0.03497	740	0.00140
475	0.15982	610	0.03499	745	-0.00055
480	0.15052	615	0.03676	750	0.0

KN0422.07 SPECTRUM 3
TOTAL CHL=0.889 UG/L, CORRECTED DEPTH=19.5 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.14671	485	0.14472	620	0.04018
355	0.14412	490	0.13441	625	0.04161
360	0.14930	495	0.12366	630	0.04291
365	0.15163	500	0.11561	635	0.04289
370	0.15431	505	0.10558	640	0.04516
375	0.15525	510	0.09722	645	0.04686
380	0.15904	515	0.08946	650	0.04863
385	0.16152	520	0.08258	655	0.05107
390	0.16336	525	0.07619	660	0.06385
395	0.16740	530	0.07097	665	0.08287
400	0.17222	535	0.06827	670	0.09573
405	0.18049	540	0.06248	675	0.10037
410	0.18648	545	0.05686	680	0.08581
415	0.19230	550	0.05238	685	0.06541
420	0.19846	555	0.04814	690	0.04329
425	0.20377	560	0.04220	695	0.02517
430	0.20609	565	0.03948	700	0.01614
435	0.20748	570	0.03774	705	0.01159
440	0.19957	575	0.03832	710	0.00891
445	0.19105	580	0.03986	715	0.00625
450	0.18105	585	0.04092	720	0.00504
455	0.17852	590	0.04141	725	0.00495
460	0.17682	595	0.04025	730	0.00299
465	0.17534	600	0.03838	735	0.00330
470	0.16889	605	0.03823	740	0.00267
475	0.16016	610	0.03881	745	0.00132
480	0.15317	615	0.03985	750	0.0

KN0422.07 SPECTRUM 4
TOTAL CHL=1.091 UG/L, CORRECTED DEPTH=33 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.13156	485	0.13608	620	0.03645
355	0.13317	490	0.12769	625	0.03764
360	0.12995	495	0.11677	630	0.03942
365	0.13468	500	0.10969	635	0.03966
370	0.13701	505	0.09994	640	0.04235
375	0.14145	510	0.09347	645	0.04488
380	0.14378	515	0.08464	650	0.04617
385	0.14809	520	0.07899	655	0.04875
390	0.15072	525	0.07373	660	0.05631
395	0.15246	530	0.06729	665	0.07424
400	0.15659	535	0.06345	670	0.09068
405	0.16298	540	0.05910	675	0.09606
410	0.17111	545	0.05346	680	0.08435
415	0.17907	550	0.04881	685	0.06244
420	0.18141	555	0.04493	690	0.03998
425	0.18405	560	0.03956	695	0.02170
430	0.18847	565	0.03674	700	0.01386
435	0.19132	570	0.03564	705	0.00995
440	0.18626	575	0.03491	710	0.00683
445	0.17824	580	0.03585	715	0.00471
450	0.16895	585	0.03743	720	0.00440
455	0.16508	590	0.03794	725	0.00261
460	0.16415	595	0.03843	730	0.00373
465	0.16279	600	0.03567	735	0.00265
470	0.15931	605	0.03307	740	0.00092
475	0.15363	610	0.03438	745	-0.00051
480	0.14508	615	0.03588	750	0.0

KN0422.07 SPECTRUM 5
TOTAL CHL=0.708 UG/L, CORRECTED DEPTH=50.5 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.10494	485	0.10028	620	0.02703
355	0.10278	490	0.09338	625	0.02757
360	0.10710	495	0.08646	630	0.02854
365	0.10765	500	0.08037	635	0.02791
370	0.10944	505	0.07534	640	0.03055
375	0.11303	510	0.06908	645	0.03248
380	0.11351	515	0.06399	650	0.03311
385	0.11581	520	0.05951	655	0.03476
390	0.11796	525	0.05496	660	0.04316
395	0.11966	530	0.05090	665	0.05343
400	0.12568	535	0.04713	670	0.06340
405	0.13145	540	0.04392	675	0.06662
410	0.13539	545	0.03949	680	0.05935
415	0.13909	550	0.03631	685	0.04406
420	0.14066	555	0.03162	690	0.02539
425	0.14289	560	0.02883	695	0.01565
430	0.14157	565	0.02560	700	0.00996
435	0.14419	570	0.02439	705	0.00556
440	0.13943	575	0.02524	710	0.00593
445	0.13144	580	0.02668	715	0.00396
450	0.12620	585	0.02711	720	0.00315
455	0.12212	590	0.02826	725	0.00271
460	0.12230	595	0.02834	730	-0.00034
465	0.12090	600	0.02545	735	0.00008
470	0.11819	605	0.02498	740	-0.00064
475	0.11213	610	0.02610	745	-0.00116
480	0.10604	615	0.02581	750	0.0

KN0422.07 SPECTRUM 6
TOTAL CHL=0.440 UG/L, CORRECTED DEPTH=110 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.06085	485	0.06590	620	0.06510
355	0.06140	490	0.06587	625	0.06507
360	0.06030	495	0.06584	630	0.06504
365	0.06148	500	0.06581	635	0.06501
370	0.06544	505	0.06578	640	0.06498
375	0.06368	510	0.06575	645	0.06495
380	0.06763	515	0.06572	650	0.01923
385	0.07068	520	0.06569	655	0.02061
390	0.06918	525	0.06566	660	0.02490
395	0.07094	530	0.06563	665	0.03114
400	0.07611	535	0.06560	670	0.03850
405	0.07980	540	0.06557	675	0.04111
410	0.08232	545	0.06554	680	0.03298
415	0.08446	550	0.06551	685	0.02130
420	0.08580	555	0.06548	690	0.01340
425	0.08777	560	0.06545	695	0.00712
430	0.08802	565	0.06542	700	0.00387
435	0.08850	570	0.06539	705	0.00291
440	0.08594	575	0.06536	710	0.00226
445	0.07984	580	0.06533	715	0.00176
450	0.07598	585	0.06530	720	0.00019
455	0.07371	590	0.06527	725	-0.00020
460	0.07320	595	0.06524	730	0.00131
465	0.07231	600	0.06521	735	-0.00064
470	0.06893	605	0.06518	740	0.00101
475	0.06670	610	0.06515	745	-0.00080
480	0.06592	615	0.06513	750	0.0

KN0424.07 SPECTRUM 1
TOTAL CHL=2.614 UG/L, CORRECTED DEPTH=2 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.22842	485	0.22222	620	0.05857
355	0.22092	490	0.21147	625	0.06053
360	0.22122	495	0.19883	630	0.06252
365	0.22201	500	0.18329	635	0.06151
370	0.23210	505	0.16885	640	0.06241
375	0.23647	510	0.15584	645	0.06277
380	0.24327	515	0.14380	650	0.06462
385	0.24609	520	0.13226	655	0.07018
390	0.25071	525	0.12428	660	0.08334
395	0.25646	530	0.11629	665	0.10958
400	0.26351	535	0.10883	670	0.14278
405	0.27481	540	0.10072	675	0.15571
410	0.28844	545	0.09250	680	0.14857
415	0.30003	550	0.08549	685	0.11933
420	0.30471	555	0.07786	690	0.07242
425	0.31208	560	0.07002	695	0.04044
430	0.31678	565	0.06431	700	0.02286
435	0.32033	570	0.06032	705	0.01555
440	0.31528	575	0.05956	710	0.01116
445	0.30125	580	0.06094	715	0.00802
450	0.28834	585	0.05950	720	0.00722
455	0.27960	590	0.05980	725	0.00266
460	0.27836	595	0.05660	730	0.00187
465	0.27410	600	0.05363	735	0.00145
470	0.26366	605	0.05289	740	-0.00009
475	0.24928	610	0.05354	745	0.00042
480	0.23482	615	0.05569	750	0.0

KN0424.07 SPECTRUM 2
TOTAL CHL=2.683 UG/L, CORRECTED DEPTH=18 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.22726	485	0.21929	620	0.06189
355	0.22108	490	0.20450	625	0.06325
360	0.22427	495	0.19435	630	0.06496
365	0.22497	500	0.18365	635	0.06494
370	0.23030	505	0.16947	640	0.06549
375	0.23811	510	0.15765	645	0.06600
380	0.23981	515	0.14778	650	0.06632
385	0.24344	520	0.13546	655	0.07565
390	0.25086	525	0.12789	660	0.09486
395	0.25494	530	0.12106	665	0.12918
400	0.25831	535	0.11472	670	0.15403
405	0.26843	540	0.10719	675	0.16216
410	0.28219	545	0.09808	680	0.14736
415	0.29506	550	0.09233	685	0.11389
420	0.30040	555	0.08400	690	0.06441
425	0.30049	560	0.07513	695	0.03544
430	0.31078	565	0.06926	700	0.02397
435	0.31835	570	0.06430	705	0.01579
440	0.31664	575	0.06143	710	0.01256
445	0.30223	580	0.06286	715	0.01013
450	0.28684	585	0.06198	720	0.00651
455	0.28020	590	0.06104	725	0.00416
460	0.27789	595	0.05867	730	0.00298
465	0.27355	600	0.05603	735	0.00155
470	0.26192	605	0.05358	740	0.00055
475	0.24896	610	0.05480	745	-0.00053
480	0.23401	615	0.05822	750	0.0

KN0424.07 SPECTRUM 3
TOTAL CHL=1.887 UG/L, CORRECTED DEPTH=25 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.16165	485	0.15077	620	0.04347
355	0.16137	490	0.14000	625	0.04418
360	0.16193	495	0.13228	630	0.04495
365	0.16518	500	0.12450	635	0.04533
370	0.16809	505	0.11719	640	0.04574
375	0.17102	510	0.11040	645	0.04709
380	0.17443	515	0.10384	650	0.04830
385	0.17394	520	0.09731	655	0.05162
390	0.17601	525	0.09213	660	0.06614
395	0.18013	530	0.08653	665	0.09126
400	0.18396	535	0.08109	670	0.10838
405	0.19041	540	0.07521	675	0.11263
410	0.19964	545	0.06977	680	0.09728
415	0.20384	550	0.06315	685	0.06693
420	0.20382	555	0.05582	690	0.04011
425	0.21008	560	0.05049	695	0.02630
430	0.21215	565	0.04709	700	0.01652
435	0.21482	570	0.04453	705	0.01297
440	0.21281	575	0.04361	710	0.01047
445	0.20370	580	0.04562	715	0.00950
450	0.19419	585	0.04480	720	0.00730
455	0.18902	590	0.04353	725	0.00532
460	0.18764	595	0.04288	730	0.00403
465	0.18523	600	0.03989	735	0.00317
470	0.17804	605	0.03771	740	0.00135
475	0.16866	610	0.03899	745	0.00127
480	0.15719	615	0.04099	750	0.0

K0424.07 SPECTRUM 4
TOTAL CHL=0.274 UG/L, CORRECTED DEPTH=37 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.05553	485	0.03663	620	0.00903
355	0.05114	490	0.03369	625	0.01005
360	0.05215	495	0.03172	630	0.00874
365	0.05252	500	0.02989	635	0.00865
370	0.05296	505	0.02740	640	0.00931
375	0.05323	510	0.02640	645	0.01116
380	0.05432	515	0.02341	650	0.01172
385	0.05194	520	0.02291	655	0.01210
390	0.05221	525	0.02116	660	0.01396
395	0.05174	530	0.01961	665	0.01728
400	0.05233	535	0.01841	670	0.02050
405	0.05521	540	0.01602	675	0.02105
410	0.05645	545	0.01506	680	0.01783
415	0.05598	550	0.01321	685	0.01471
420	0.05808	555	0.01194	690	0.00950
425	0.05790	560	0.01174	695	0.00594
430	0.05636	565	0.00999	700	0.00469
435	0.05195	570	0.00820	705	0.00427
440	0.05192	575	0.00877	710	0.00266
445	0.05059	580	0.01064	715	0.00164
450	0.04922	585	0.01131	720	0.00117
455	0.04625	590	0.01024	725	0.00021
460	0.04686	595	0.01102	730	-0.00118
465	0.04496	600	0.00919	735	0.00054
470	0.04222	605	0.00920	740	-0.00005
475	0.04224	610	0.00913	745	0.00078
480	0.03867	615	0.00993	750	0.0

KN0424.07 SPECTRUM 5
TOTAL CHL=0.094 UG/L, CORRECTED DEPTH=106 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.02422	485	0.00834	620	0.00294
355	0.02305	490	0.00714	625	0.00177
360	0.02539	495	0.00614	630	0.00086
365	0.02547	500	0.00638	635	
370	0.02753	505	0.00561	640	
375	0.02849	510	0.00650	645	0.00158
380	0.02629	515	0.00573	650	0.00226
385	0.02794	520	0.00455	655	0.00227
390	0.02863	525	0.00353	660	0.00151
395	0.02967	530	0.00407	665	0.00276
400	0.03023	535	0.00271	670	0.00398
405	0.03026	540	0.00252	675	0.00379
410	0.03122	545	0.00268	680	0.00350
415	0.03200	550	0.00143	685	0.00210
420	0.03086	555	0.00168	690	0.00181
425	0.03241	560	0.00100	695	0.00251
430	0.02784	565	0.00167	700	0.00046
435	0.02363	570	0.00139	705	0.00095
440	0.02042	575		710	0.00119
445	0.01684	580	0.00346	715	0.00106
450	0.01453	585	0.00317	720	-0.00124
455	0.01412	590	0.00315	725	-0.00044
460	0.01251	595	0.00273	730	-0.00000
465	0.01176	600	0.00356	735	-0.00041
470	0.01145	605	0.00248	740	-0.00095
475	0.01039	610	0.00239	745	0.00010
480	0.00903	615	0.00188	750	0.0

KN0425.09 SPECTRUM 1
TOTAL CHL=0.437 UG/L, CORRECTED DEPTH=23 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.05505	485	0.05261	620	0.01288
355	0.05772	490	0.04829	625	0.01523
360	0.05471	495	0.04427	630	0.01395
365	0.05831	500	0.04024	635	0.01343
370	0.05817	505	0.03587	640	0.01218
375	0.06472	510	0.03251	645	0.01594
380	0.06217	515	0.02967	650	0.01586
385	0.06147	520	0.02710	655	0.01779
390	0.06452	525	0.02441	660	0.02162
395	0.06705	530	0.02298	665	0.02813
400	0.07084	535	0.02074	670	0.03537
405	0.07288	540	0.01920	675	0.03587
410	0.07641	545	0.01706	680	0.02957
415	0.08039	550	0.01505	685	0.02223
420	0.08008	555	0.01279	690	0.01260
425	0.08066	560	0.01242	695	0.00842
430	0.08209	565	0.01185	700	0.00541
435	0.08310	570	0.01084	705	0.00360
440	0.08097	575	0.01077	710	0.00445
445	0.07394	580	0.01438	715	0.00194
450	0.07083	585	0.01356	720	0.00240
455	0.06765	590	0.01369	725	0.00209
460	0.06647	595	0.01336	730	0.00109
465	0.06585	600	0.01370	735	0.00201
470	0.06372	605	0.01418	740	0.00085
475	0.05989	610	0.01290	745	0.00098
480	0.05618	615	0.01362	750	0.0

KN0425.09 SPECTRUM 4
TOTAL CHL=0.199 UG/L, CORRECTED DEPTH =110 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.05860	485	0.04617	620	0.01371
355	0.06049	490	0.04367	625	0.01457
360	0.05675	495	0.04014	630	0.01486
365	0.06179	500	0.03663	635	0.01193
370	0.05967	505	0.03434	640	0.01084
375	0.06257	510	0.03290	645	0.01304
380	0.06354	515	0.02976	650	0.01412
385	0.06460	520	0.02730	655	0.01531
390	0.06720	525	0.02673	660	0.01680
395	0.06521	530	0.02460	665	0.01973
400	0.06642	535	0.02408	670	0.02593
405	0.06929	540	0.02228	675	0.02779
410	0.07332	545	0.01923	680	0.02443
415	0.07442	550	0.01844	685	0.02022
420	0.07543	555	0.01672	690	0.01332
425	0.07499	560	0.01546	695	0.00572
430	0.07460	565	0.01317	700	0.00448
435	0.07203	570	0.01354	705	0.00391
440	0.06621	575	0.01402	710	0.00328
445	0.06407	580	0.01518	715	0.00073
450	0.05987	585	0.01557	720	0.00154
455	0.05849	590	0.01537	725	-0.00012
460	0.05746	595	0.01649	730	-0.00061
465	0.05692	600	0.01503	735	-0.00146
470	0.05452	605	0.01379	740	-0.00127
475	0.05353	610	0.01300	745	-0.00237
480	0.04946	615	0.01371	750	0.0

KN0429.05 SPECTRUM 1
TOTAL CHL=1.607 UG/L, CORRECTED DEPTH=2 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.15331	485	0.13293	620	0.03752
355	0.14532	490	0.12842	625	0.03874
360	0.14564	495	0.11931	630	0.03846
365	0.14803	500	0.11317	635	0.03999
370	0.15277	505	0.10466	640	0.04018
375	0.15443	510	0.09835	645	0.04154
380	0.15670	515	0.09253	650	0.04351
385	0.15888	520	0.08556	655	0.04462
390	0.15770	525	0.07893	660	0.05556
395	0.16332	530	0.07449	665	0.07380
400	0.16649	535	0.07153	670	0.09034
405	0.17098	540	0.06625	675	0.09599
410	0.17703	545	0.06128	680	0.08741
415	0.18330	550	0.05638	685	0.06907
420	0.18487	555	0.05091	690	0.04201
425	0.18574	560	0.04572	695	0.02614
430	0.18915	565	0.04223	700	0.01961
435	0.19117	570	0.03670	705	0.01537
440	0.18732	575	0.03726	710	0.01046
445	0.17579	580	0.03830	715	0.01040
450	0.16826	585	0.03769	720	0.00650
455	0.16363	590	0.03747	725	0.00531
460	0.16321	595	0.03657	730	0.00385
465	0.15882	600	0.03472	735	0.00463
470	0.15410	605	0.03492	740	0.00243
475	0.15029	610	0.03467	745	0.00242
480	0.14124	615	0.03632	750	0.0

KN0429.05 SPECTRUM 2
TOTAL CHL=1.842 UG/L, CORRECTED DEPTH=20 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.16762	485	0.14417	620	0.04391
355	0.16778	490	0.13781	625	0.04474
360	0.16746	495	0.13050	630	0.04560
365	0.16977	500	0.12387	635	0.04481
370	0.16866	505	0.11697	640	0.04491
375	0.17377	510	0.10950	645	0.04693
380	0.17515	515	0.10366	650	0.04748
385	0.17661	520	0.09779	655	0.05052
390	0.18011	525	0.09248	660	0.06148
395	0.18137	530	0.08789	665	0.07815
400	0.18605	535	0.08290	670	0.09513
405	0.19048	540	0.07744	675	0.09856
410	0.19675	545	0.07250	680	0.08658
415	0.20124	550	0.06639	685	0.06752
420	0.20387	555	0.06161	690	0.04247
425	0.20471	560	0.05587	695	0.02747
430	0.20500	565	0.05174	700	0.01996
435	0.20433	570	0.04888	705	0.01631
440	0.19765	575	0.04721	710	0.01343
445	0.18860	580	0.04696	715	0.01102
450	0.17901	585	0.04667	720	0.00807
455	0.17519	590	0.04637	725	0.00583
460	0.17422	595	0.04391	730	0.00434
465	0.16964	600	0.04269	735	0.02778
470	0.16580	605	0.04104	740	0.00254
475	0.15976	610	0.04236	745	-0.00119
480	0.15317	615	0.04366	750	0.0

KN0429.05 SPECTRUM 3
TOTAL CHL=1.667 UG/L, CORRECTED DEPTH=55 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.13617	485	0.11910	620	0.03555
355	0.13660	490	0.11320	625	0.03539
360	0.13574	495	0.10468	630	0.03535
365	0.13898	500	0.09945	635	0.03498
370	0.14001	505	0.09519	640	0.03404
375	0.14227	510	0.08923	645	0.03527
380	0.14579	515	0.08463	650	0.03620
385	0.14776	520	0.07991	655	0.04149
390	0.14784	525	0.07621	660	0.04983
395	0.14988	530	0.07272	665	0.06616
400	0.15130	535	0.06791	670	0.08311
405	0.15603	540	0.06301	675	0.08647
410	0.16187	545	0.05873	680	0.07591
415	0.16445	550	0.05411	685	0.05628
420	0.16632	555	0.04844	690	0.03576
425	0.16776	560	0.04460	695	0.02529
430	0.16851	565	0.03871	700	0.01779
435	0.16694	570	0.03594	705	0.01565
440	0.16156	575	0.03422	710	0.01128
445	0.15413	580	0.03584	715	0.01151
450	0.14811	585	0.03691	720	0.00928
455	0.14397	590	0.03584	725	0.00603
460	0.14188	595	0.03411	730	0.00407
465	0.13873	600	0.03192	735	0.00164
470	0.13531	605	0.03316	740	0.00271
475	0.13191	610	0.03325	745	0.00184
480	0.12378	615	0.03450	750	0.0

KN0429.05 SPECTRUM 4
TOTAL CHL=0.249 UG/L, CORRECTED DEPTH=71.5 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.05143	485	0.02814	620	0.01119
355	0.05172	490	0.02660	625	0.01046
360	0.05115	495	0.02534	630	0.00997
365	0.04974	500	0.02448	635	0.00928
370	0.05217	505	0.02374	640	0.00984
375	0.05128	510	0.02217	645	0.01229
380	0.05141	515	0.02076	650	0.01288
385	0.04984	520	0.01991	655	0.01342
390	0.05160	525	0.01907	660	0.01298
395	0.05284	530	0.01689	665	0.01720
400	0.05287	535	0.01715	670	0.01712
405	0.05175	540	0.01607	675	0.01758
410	0.04998	545	0.01533	680	0.01531
415	0.05037	550	0.01413	685	0.01388
420	0.05217	555	0.01191	690	0.00893
425	0.05136	560	0.01145	695	0.00815
430	0.05089	565	0.01056	700	0.00590
435	0.04470	570	0.00937	705	0.00618
440	0.04267	575	0.00967	710	0.00465
445	0.03986	580	0.01146	715	0.00401
450	0.03762	585	0.01180	720	0.00430
455	0.03543	590	0.01191	725	0.00255
460	0.03419	595	0.01246	730	0.00228
465	0.03413	600	0.01120	735	-0.00021
470	0.03230	605	0.01038	740	0.00042
475	0.03074	610	0.01151	745	0.00116
480	0.02973	615	0.01131	750	0.0

KN0429.05 SPECTRUM 5
TOTAL CHL=0.115 UG/L, CORRECTED DEPTH=110 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.03023	485	0.01367	620	0.00512
355	0.03102	490	0.01433	625	0.00383
360	0.02944	495	0.01212	630	0.00428
365	0.03141	500	0.01155	635	0.00282
370	0.03176	505	0.01090	640	0.00246
375	0.03112	510	0.01112	645	0.00348
380	0.02936	515	0.00981	650	0.00555
385	0.02953	520	0.00862	655	0.00554
390	0.03013	525	0.00814	660	0.00588
395	0.02996	530	0.00765	665	0.00703
400	0.03144	535	0.00754	670	0.00765
405	0.03106	540	0.00570	675	0.00808
410	0.03125	545	0.00637	680	0.00759
415	0.03205	550	0.00584	685	0.00555
420	0.03177	555	0.00526	690	0.00406
425	0.03102	560	0.00421	695	0.00377
430	0.02972	565	0.00398	700	0.00344
435	0.02574	570	0.00321	705	0.00327
440	0.02426	575	0.00377	710	0.00245
445	0.02219	580	0.00597	715	0.00163
450	0.02110	585	0.00509	720	0.00196
455	0.02047	590	0.00457	725	0.00155
460	0.01908	595	0.00455	730	0.00285
465	0.01790	600	0.00443	735	0.00067
470	0.01695	605	0.00395	740	0.00008
475	0.01654	610	0.00486	745	-0.00001
480	0.01457	615	0.00483	750	0.0

KN0430.01 SPECTRUM 1
TOTAL CHL=0.289 UG/L, CORRECTED DEPTH=2 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.06440	485	0.05519	620	0.01597
355	0.06243	490	0.05251	625	0.01513
360	0.06840	495	0.05051	630	0.01434
365	0.06390	500	0.04640	635	0.01341
370	0.06601	505	0.04088	640	0.01465
375	0.06854	510	0.03639	645	0.01713
380	0.06808	515	0.03309	650	0.01748
385	0.06963	520	0.02888	655	0.01697
390	0.07003	525	0.02604	660	0.01936
395	0.07142	530	0.02422	665	0.02285
400	0.07665	535	0.02297	670	0.02573
405	0.07782	540	0.02227	675	0.02757
410	0.07969	545	0.01984	680	0.02297
415	0.08278	550	0.01902	685	0.01849
420	0.08443	555	0.01687	690	0.01237
425	0.08665	560	0.01667	695	0.00812
430	0.08367	565	0.01597	700	0.00728
435	0.08495	570	0.01539	705	0.00644
440	0.08390	575	0.01620	710	0.00573
445	0.08060	580	0.01683	715	0.00372
450	0.07585	585	0.01772	720	0.00298
455	0.07357	590	0.01665	725	0.00370
460	0.06960	595	0.01686	730	0.00233
465	0.06535	600	0.01532	735	0.00204
470	0.06177	605	0.01589	740	0.00219
475	0.06025	610	0.01534	745	0.00014
480	0.05749	615	0.01504	750	0.0

KN0430.01 SPECTRUM 2
TOTAL CHL=0.295 UG/L, CORRECTED DEPTH=23 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.04935	485	0.03847	620	0.00575
355	0.04752	490	0.03509	625	0.00638
360	0.04343	495	0.03249	630	0.00577
365	0.04522	500	0.02983	635	0.00405
370	0.04299	505	0.02459	640	0.00438
375	0.04519	510	0.02141	645	0.00716
380	0.04730	515	0.01824	650	0.00938
385	0.05060	520	0.01396	655	0.00968
390	0.04990	525	0.01241	660	0.01195
395	0.05355	530	0.01096	665	0.01547
400	0.05266	535	0.00875	670	0.01790
405	0.05629	540	0.00785	675	0.01921
410	0.05904	545	0.00741	680	0.01665
415	0.06278	550	0.00561	685	0.01100
420	0.06547	555	0.00555	690	0.00406
425	0.06819	560	0.00391	695	0.00339
430	0.06375	565	0.00376	700	0.00097
435	0.06269	570	0.00361	705	0.00274
440	0.06245	575	0.00392	710	0.00019
445	0.06096	580	0.00606	715	-0.00058
450	0.05691	585	0.00707	720	0.00042
455	0.05296	590	0.00622	725	-0.00101
460	0.05040	595	0.00582	730	-0.00101
465	0.04608	600	0.00546	735	-0.00119
470	0.04414	605	0.00600	740	-0.00116
475	0.04095	610	0.00570	745	-0.00142
480	0.03922	615	0.00636	750	0.0

KN0430.01 SPECTRUM 3
TOTAL CHL=0.330 UG/L, CORRECTED DEPTH=34 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.05865	485	0.04977	620	0.01207
355	0.05729	490	0.04659	625	0.01205
360	0.06002	495	0.04403	630	0.01207
365	0.06100	500	0.03846	635	0.01162
370	0.05791	505	0.03379	640	0.01065
375	0.06248	510	0.03002	645	0.01340
380	0.06114	515	0.02575	650	0.01497
385	0.06107	520	0.02196	655	0.01512
390	0.06296	525	0.01986	660	0.01915
395	0.06493	530	0.01913	665	0.02240
400	0.06787	535	0.01810	670	0.02495
405	0.07163	540	0.01672	675	0.02603
410	0.07158	545	0.01383	680	0.02248
415	0.07567	550	0.01347	685	0.01718
420	0.07989	555	0.01197	690	0.01102
425	0.07976	560	0.01079	695	0.00725
430	0.07775	565	0.01017	700	0.00560
435	0.07861	570	0.00975	705	0.00518
440	0.07732	575	0.00991	710	0.00541
445	0.07484	580	0.01215	715	0.00297
450	0.06890	585	0.01245	720	0.00174
455	0.06500	590	0.01316	725	0.00304
460	0.06387	595	0.01236	730	0.00145
465	0.06006	600	0.01247	735	0.00020
470	0.05559	605	0.01241	740	0.00141
475	0.05279	610	0.01123	745	0.00028
480	0.05137	615	0.01200	750	0.0

KN0430.01 SPECTRUM 4
TOTAL CHL=0.578 UG/L, CORRECTED DEPTH=64.5 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.06877	485	0.06342	620	0.01300
355	0.06855	490	0.05906	625	0.01507
360	0.06854	495	0.05324	630	0.01439
365	0.06538	500	0.04812	635	0.01310
370	0.06744	505	0.04176	640	0.01274
375	0.06950	510	0.03713	645	0.01580
380	0.06874	515	0.03170	650	0.01619
385	0.07059	520	0.02799	655	0.01909
390	0.07247	525	0.02431	660	0.02401
395	0.07365	530	0.02304	665	0.03173
400	0.07444	535	0.02013	670	0.03608
405	0.07856	540	0.01952	675	0.03737
410	0.08139	545	0.01731	680	0.03241
415	0.08618	550	0.01505	685	0.02400
420	0.08755	555	0.01305	690	0.01612
425	0.08859	560	0.01024	695	0.00873
430	0.09104	565	0.01055	700	0.00595
435	0.09002	570	0.00953	705	0.00333
440	0.08910	575	0.00925	710	0.00230
445	0.08712	580	0.01343	715	0.00065
450	0.08391	585	0.01399	720	0.00170
455	0.08007	590	0.01401	725	0.00106
460	0.07695	595	0.01395	730	-0.00008
465	0.07481	600	0.01475	735	0.00075
470	0.07237	605	0.01286	740	0.00067
475	0.06820	610	0.01442	745	-0.00113
480	0.06572	615	0.01452	750	0.0

KN0430.01 SPECTRUM 5
TOTAL CHL=0.144 UG/L, CORRECTED DEPTH=110 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.03514	485	0.02474	620	0.00558
355	0.03623	490	0.02380	625	0.00694
360	0.03406	495	0.01994	630	0.00540
365	0.03822	500	0.01835	635	0.00584
370	0.03488	505	0.01530	640	0.00736
375	0.03348	510	0.01426	645	0.01103
380	0.03522	515	0.01148	650	0.01265
385	0.03363	520	0.00960	655	0.01210
390	0.03545	525	0.00863	660	0.01276
395	0.03550	530	0.00934	665	0.01291
400	0.03488	535	0.00760	670	0.01275
405	0.03641	540	0.00665	675	0.01297
410	0.03747	545	0.00629	680	0.01045
415	0.03891	550	0.00578	685	0.00657
420	0.03840	555	0.00520	690	0.00633
425	0.03773	560	0.00403	695	0.00394
430	0.03525	565	0.00391	700	0.00312
435	0.03442	570	0.00334	705	0.00216
440	0.03448	575	0.00391	710	0.00299
445	0.03428	580	0.00710	715	0.00268
450	0.03316	585	0.00724	720	0.00169
455	0.03152	590	0.00724	725	0.00310
460	0.02877	595	0.00804	730	0.00266
465	0.02914	600	0.00640	735	0.00117
470	0.02788	605	0.00742	740	0.00080
475	0.02817	610	0.00630	745	0.00049
480	0.02702	615	0.00615	750	0.0

KN0501.05 SPECTRUM 1
TOTAL CHL=0.342 UG/L, CORRECTED DEPTH=2 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.05953	485	0.05798	620	0.01504
355	0.05986	490	0.05434	625	0.01567
360	0.06065	495	0.05058	630	0.01387
365	0.06049	500	0.04592	635	0.01367
370	0.05996	505	0.04140	640	0.01367
375	0.06449	510	0.03733	645	0.01620
380	0.06493	515	0.03311	650	0.01641
385	0.06591	520	0.02982	655	0.01780
390	0.06498	525	0.02720	660	0.02104
395	0.06952	530	0.02631	665	0.02608
400	0.07037	535	0.02309	670	0.03202
405	0.07464	540	0.02195	675	0.03368
410	0.07587	545	0.02012	680	0.03161
415	0.08049	550	0.01867	685	0.02554
420	0.08043	555	0.01583	690	0.01526
425	0.08199	560	0.01519	695	0.01045
430	0.08128	565	0.01437	700	0.00793
435	0.08134	570	0.01321	705	0.00566
440	0.08015	575	0.01297	710	0.00431
445	0.07477	580	0.01603	715	0.00470
450	0.07093	585	0.01684	720	0.00223
455	0.06968	590	0.01509	725	0.00519
460	0.06843	595	0.01631	730	0.00273
465	0.06722	600	0.01457	735	0.00202
470	0.06487	605	0.01511	740	0.00324
475	0.06111	610	0.01414	745	0.00270
480	0.05892	615	0.01534	750	0.0

KN0501.05 SPECTRUM 2
TOTAL CHL=0.327 UG/L, CORRECTED DEPTH=47 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.05288	485	0.05456	620	0.01224
355	0.04865	490	0.05143	625	0.01212
360	0.05123	495	0.04894	630	0.01287
365	0.05532	500	0.04372	635	0.01316
370	0.05532	505	0.03876	640	0.01498
375	0.05595	510	0.03530	645	0.01661
380	0.05774	515	0.02892	650	0.01752
385	0.05982	520	0.02696	655	0.01866
390	0.06080	525	0.02370	660	0.02128
395	0.06229	530	0.02268	665	0.02665
400	0.06433	535	0.02080	670	0.03387
405	0.07022	540	0.01817	675	0.03593
410	0.07199	545	0.01714	680	0.03254
415	0.07506	550	0.01573	685	0.02519
420	0.07661	555	0.01272	690	0.01476
425	0.07671	560	0.01089	695	0.00858
430	0.07645	565	0.00970	700	0.00418
435	0.07718	570	0.00912	705	0.00389
440	0.07516	575	0.01002	710	0.00336
445	0.06993	580	0.01244	715	0.00168
450	0.06477	585	0.01289	720	0.00135
455	0.06562	590	0.01195	725	0.00167
460	0.06476	595	0.01275	730	-0.00014
465	0.06372	600	0.01223	735	0.00043
470	0.06091	605	0.01131	740	0.00092
475	0.05995	610	0.01211	745	-0.00042
480	0.05574	615	0.01234	750	0.0

KN0501.05 SPECTRUM 3
TOTAL CHL=0.383 UG/L, CORRECTED DEPTH=63 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.04464	485	0.04375	620	0.00933
355	0.04104	490	0.04141	625	0.01041
360	0.04401	495	0.03900	630	0.00964
365	0.04300	500	0.03503	635	0.00917
370	0.04528	505	0.03164	640	0.01055
375	0.04742	510	0.02703	645	0.01393
380	0.05007	515	0.02411	650	0.01337
385	0.04919	520	0.02249	655	0.01481
390	0.05087	525	0.02032	660	0.01585
395	0.05242	530	0.01819	665	0.02218
400	0.05642	535	0.01701	670	0.02692
405	0.05605	540	0.01524	675	0.02741
410	0.05981	545	0.01427	680	0.02645
415	0.06209	550	0.01216	685	0.01819
420	0.06210	555	0.01001	690	0.01001
425	0.06228	560	0.00855	695	0.00626
430	0.06085	565	0.00844	700	0.00268
435	0.06127	570	0.00754	705	0.00280
440	0.05760	575	0.00679	710	0.00144
445	0.05358	580	0.00910	715	0.00149
450	0.05111	585	0.00963	720	0.00136
455	0.05059	590	0.01042	725	0.00054
460	0.05118	595	0.00998	730	-0.00009
465	0.04972	600	0.00948	735	-0.00061
470	0.04831	605	0.00851	740	-0.00126
475	0.04731	610	0.00838	745	-0.00078

KN0501.05 SPECTRUM 4
TOTAL CHL=0.177 UG/L, CORRECTED DEPTH=85 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.02625	485	0.01896	620	0.00297
355	0.02445	490	0.01634	625	0.00361
360	0.02805	495	0.01529	630	0.00244
365	0.02377	500	0.01486	635	0.00178
370	0.02721	505	0.01318	640	0.00309
375	0.02903	510	0.01219	645	0.00570
380	0.02911	515	0.01058	650	0.00588
385	0.03081	520	0.00782	655	0.00547
390	0.03122	525	0.00836	660	0.00666
395	0.03245	530	0.00692	665	0.01023
400	0.03419	535	0.00581	670	0.01255
405	0.03665	540	0.00377	675	0.01174
410	0.03681	545	0.00364	680	0.01127
415	0.03757	550	0.00281	685	0.00755
420	0.03846	555	0.00146	690	0.00355
425	0.03893	560	0.00144	695	0.00169
430	0.03240	565	0.00112	700	0.00024
435	0.03363	570	0.00037	705	0.00037
440	0.03015	575	0.00058	710	-0.00167
445	0.02717	580	0.00260	715	-0.00124
450	0.02565	585	0.00500	720	-0.00113
455	0.02399	590	0.00484	725	-0.00179
460	0.04099	595	0.00375	730	-0.00116
465	0.02324	600	0.00278	735	-0.00064
470	0.02126	605	0.00326	740	-0.00027
475	0.02232	610	0.00405	745	-0.00259
480	0.02067	615	0.00369	750	0.0

KN0501.05 SPECTRUM 5
TOTAL CHL=0.079 UG/L, CORRECTED DEPTH=110 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.02429	485	0.01051	620	0.00213
355	0.02549	490	0.00984	625	0.00312
360	0.02308	495	0.00772	630	0.00166
365	0.02264	500	0.00770	635	0.00099
370	0.02376	505	0.00810	640	0.00061
375	0.02592	510	0.00820	645	0.00245
380	0.02771	515	0.00597	650	0.00434
385	0.02716	520	0.00565	655	0.00407
390	0.02599	525	0.00623	660	0.00437
395	0.02833	530	0.00498	665	0.00457
400	0.02853	535	0.00349	670	0.00533
405	0.03059	540	0.00332	675	0.00709
410	0.03061	545	0.00365	680	0.00479
415	0.03016	550	0.00281	685	0.00465
420	0.02747	555	0.00134	690	0.00346
425	0.02918	560	0.00167	695	0.00066
430	0.02743	565	0.00142	700	0.00044
435	0.02357	570	0.00060	705	0.00134
440	0.02129	575	0.00066	710	0.00035
445	0.01825	580	0.00395	715	0.00202
450	0.01553	585	0.00284	720	0.00120
455	0.01547	590	0.00289	725	-0.00025
460	0.01482	595	0.00334	730	-0.00019
465	0.01442	600	0.00316	735	0.00047
470	0.01294	605	0.00180	740	-0.00057
475	0.01285	610	0.00213	745	0.00054
480	0.01088	615	0.00268	750	0.0

KN0503.05 SPECTRUM 1
TOTAL CHL=0.639 UG/L, CORRECTED DEPTH=2 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.71000	485	0.05524	620	0.01340
355	0.05290	490	0.05104	625	0.01369
360	0.05320	495	0.04807	630	0.01442
365	0.05298	500	0.04299	635	0.01393
370	0.05554	505	0.03892	640	0.01607
375	0.05915	510	0.03464	645	0.01872
380	0.06481	515	0.02896	650	0.01931
385	0.06404	520	0.02661	655	0.02064
390	0.06762	525	0.02393	660	0.02501
395	0.07146	530	0.02115	665	0.03186
400	0.07574	535	0.01936	670	0.04027
405	0.08025	540	0.01625	675	0.04312
410	0.08474	545	0.01406	680	0.03741
415	0.08879	550	0.01289	685	0.02365
420	0.09046	555	0.01248	690	0.01461
425	0.09329	560	0.01000	695	0.00764
430	0.09144	565	0.00952	700	0.00433
435	0.09177	570	0.00988	705	0.00261
440	0.08679	575	0.01002	710	0.00261
445	0.08033	580	0.01224	715	0.00137
450	0.07463	585	0.01219	720	0.00151
455	0.07273	590	0.01187	725	0.00136
460	0.07061	595	0.01239	730	0.00159
465	0.06948	600	0.01104	735	0.00195
470	0.06702	605	0.01153	740	0.00018
475	0.06201	610	0.01322	745	-0.00038
480	0.05815	615	0.01371	750	0.0

KN0503.05 SPECTRUM 2
TOTAL CHL=0.673 UG/L, CORRECTED DEPTH=34 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.05663	485	0.05334	620	0.01423
355	0.05815	490	0.04743	625	0.01395
360	0.05881	495	0.04377	630	0.01351
365	0.05561	500	0.03957	635	0.01399
370	0.05915	505	0.03698	640	0.01412
375	0.06186	510	0.03298	645	0.01725
380	0.06351	515	0.03038	650	0.01643
385	0.06552	520	0.02757	655	0.01867
390	0.06688	525	0.02513	660	0.02214
395	0.06870	530	0.02294	665	0.03068
400	0.07161	535	0.01961	670	0.03591
405	0.07549	540	0.01812	675	0.03775
410	0.07912	545	0.01524	680	0.02991
415	0.08209	550	0.01275	685	0.02089
420	0.08310	555	0.01114	690	0.01119
425	0.08410	560	0.01058	695	0.00526
430	0.08548	565	0.01002	700	0.00262
435	0.08377	570	0.00874	705	0.00299
440	0.07989	575	0.01021	710	0.00132
445	0.07342	580	0.01320	715	0.00045
450	0.06926	585	0.01288	720	0.00100
455	0.06790	590	0.01384	725	-0.00034
460	0.06715	595	0.01268	730	0.00131
465	0.06681	600	0.01123	735	-0.00159
470	0.06365	605	0.01196	740	0.00067
475	0.05971	610	0.01289	745	-0.00101
480	0.05734	615	0.01311	750	0.0

KN0503.05 SPECTRUM 3
TOTAL CHL=0.393 UG/L, CORRECTED DEPTH=70 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.04763	485	0.04325	620	0.01009
355	0.05084	490	0.03984	625	0.01120
360	0.05021	495	0.03706	630	0.01063
365	0.05040	500	0.03273	635	0.00956
370	0.05180	505	0.03080	640	0.00943
375	0.05232	510	0.02831	645	0.01218
380	0.05320	515	0.02563	650	0.01409
385	0.05537	520	0.02429	655	0.01452
390	0.05377	525	0.02198	660	0.01506
395	0.05470	530	0.02015	665	0.02075
400	0.05655	535	0.01732	670	0.02559
405	0.05728	540	0.01643	675	0.02925
410	0.05999	545	0.01378	680	0.02580
415	0.06212	550	0.01136	685	0.01823
420	0.06376	555	0.00992	690	0.01106
425	0.06592	560	0.00900	695	0.00656
430	0.06433	565	0.00926	700	0.00317
435	0.06561	570	0.00825	705	0.00063
440	0.06118	575	0.00728	710	0.00100
445	0.05838	580	0.01062	715	0.00068
450	0.05472	585	0.01069	720	0.00045
455	0.05410	590	0.01213	725	0.00094
460	0.05311	595	0.01090	730	-0.00040
465	0.05291	600	0.01061	735	-0.00130
470	0.05084	605	0.00908	740	0.00083
475	0.04954	610	0.01065	745	0.00065
480	0.04678	615	0.01041	750	0.0

KN0503.05 SPECTRUM 4
TOTAL CHL=0.192 UG/L, CORRECTED DEPTH=110 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.03284	485	0.02096	620	0.00611
355	0.03399	490	0.01863	625	0.00730
360	0.03169	495	0.01808	630	0.00492
365	0.03325	500	0.01731	635	0.00401
370	0.03463	505	0.01599	640	0.00503
375	0.03366	510	0.01467	645	0.00761
380	0.03412	515	0.01393	650	0.00934
385	0.03448	520	0.01190	655	0.00938
390	0.03401	525	0.01128	660	0.01025
395	0.03529	530	0.01000	665	0.01204
400	0.03775	535	0.00989	670	0.01420
405	0.03749	540	0.00736	675	0.01495
410	0.03776	545	0.00700	680	0.01178
415	0.03729	550	0.00601	685	0.00715
420	0.03798	555	0.00468	690	0.00486
425	0.03901	560	0.00428	695	0.00338
430	0.03568	565	0.00344	700	0.00284
435	0.03593	570	0.00437	705	0.00198
440	0.03136	575	0.00451	710	0.00166
445	0.03005	580	0.00582	715	0.00228
450	0.02747	585	0.00578	720	0.00025
455	0.02746	590	0.00664	725	0.00172
460	0.02727	595	0.00699	730	0.00114
465	0.02543	600	0.00603	735	0.00051
470	0.02517	605	0.00648	740	0.00097
475	0.02436	610	0.00539	745	0.00102
480	0.02382	615	0.00548	750	0.0

KN0505.04 SPECTRUM 1
TOTAL CHL=1.847 UG/L, CORRECTED DEPTH=2 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.19795	485	0.19945	620	0.04825
355	0.19845	490	0.18622	625	0.04923
360	0.19783	495	0.17586	630	0.05073
365	0.19882	500	0.16525	635	0.05027
370	0.20251	505	0.14961	640	0.05190
375	0.20948	510	0.13762	645	0.05289
380	0.21570	515	0.12717	650	0.05343
385	0.21737	520	0.11736	655	0.05617
390	0.22240	525	0.10680	660	0.06985
395	0.22820	530	0.09954	665	0.09154
400	0.23804	535	0.09110	670	0.12065
405	0.24736	540	0.08484	675	0.13222
410	0.25880	545	0.07383	680	0.11635
415	0.26525	550	0.06530	685	0.08561
420	0.26699	555	0.06016	690	0.04799
425	0.27213	560	0.05408	695	0.02449
430	0.27668	565	0.04870	700	0.01418
435	0.27642	570	0.04736	705	0.01332
440	0.27292	575	0.04708	710	0.00923
445	0.26018	580	0.04864	715	0.00605
450	0.25074	585	0.04950	720	0.00416
455	0.24654	590	0.04994	725	0.00355
460	0.24441	595	0.04786	730	0.00220
465	0.24054	600	0.04567	735	0.00137
470	0.23067	605	0.04437	740	0.00117
475	0.21924	610	0.04368	745	0.00013
480	0.21078	615	0.04637	750	0.0

KN0505.04 SPECTRUM 2
TOTAL CHL=3.467 UG/L, CORRECTED DEPTH=19 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.24165	485	0.24125	620	0.06437
355	0.24316	490	0.22986	625	0.06649
360	0.24015	495	0.21190	630	0.06846
365	0.24535	500	0.19869	635	0.06937
370	0.24901	505	0.18634	640	0.07132
375	0.25565	510	0.17493	645	0.07190
380	0.26126	515	0.16286	650	0.07279
385	0.26473	520	0.15174	655	0.07401
390	0.26839	525	0.14293	660	0.08729
395	0.27364	530	0.13463	665	0.11456
400	0.27846	535	0.12524	670	0.14946
405	0.28845	540	0.11581	675	0.16450
410	0.30020	545	0.10637	680	0.15358
415	0.30875	550	0.09851	685	0.11419
420	0.31421	555	0.08715	690	0.07147
425	0.31982	560	0.07944	695	0.04342
430	0.32437	565	0.07250	700	0.02690
435	0.32555	570	0.06709	705	0.01639
440	0.32213	575	0.06547	710	0.01342
445	0.30601	580	0.06679	715	0.01092
450	0.29279	585	0.06769	720	0.00810
455	0.29015	590	0.06799	725	0.00486
460	0.29015	595	0.06801	730	0.00366
465	0.28668	600	0.06424	735	0.00353
470	0.28094	605	0.06127	740	0.00148
475	0.26721	610	0.06080	745	0.00029
480	0.25407	615	0.06268	750	0.0

KN0505.04 SPECTRUM 3
TOTAL CHL=0.152 UG/L, CORRECTED DEPTH=60 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.05385	485	0.02811	620	0.00965
355	0.05601	490	0.02634	625	0.00972
360	0.05269	495	0.02398	630	0.00911
365	0.05354	500	0.02347	635	0.00772
370	0.05298	505	0.02230	640	0.00722
375	0.05169	510	0.02252	645	0.00825
380	0.05118	515	0.02011	650	0.00947
385	0.05224	520	0.01859	655	0.00887
390	0.05224	525	0.01731	660	0.01136
395	0.05417	530	0.01782	665	0.01113
400	0.05543	535	0.01671	670	0.01972
405	0.05666	540	0.01625	675	0.01454
410	0.05603	545	0.01503	680	0.01229
415	0.05437	550	0.01329	685	0.00926
420	0.05607	555	0.01205	690	0.00748
425	0.05575	560	0.01146	695	0.00698
430	0.05250	565	0.01096	700	0.00578
435	0.04690	570	0.01029	705	0.00361
440	0.04301	575	0.01008	710	0.00376
445	0.04007	580	0.01134	715	0.00283
450	0.03721	585	0.01209	720	0.00302
455	0.03555	590	0.01071	725	0.00118
460	0.03388	595	0.01078	730	0.00023
465	0.03376	600	0.01087	735	0.00080
470	0.03286	605	0.01078	740	0.00076
475	0.03187	610	0.00990	745	0.00128
480	0.03051	615	0.00961	750	0.0

KN0505.04 SPECTRUM 4
TOTAL CHL=0.065 UG/L, CORRECTED DEPTH=110 M

WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE	WAVELENGTH	ABSORBANCE
350	0.03314	485	0.01640	620	0.00576
355	0.04277	490	0.01518	625	0.00561
360	0.03953	495	0.01501	630	0.00592
365	0.03974	500	0.01527	635	0.00277
370	0.04230	505	0.01445	640	0.00337
375	0.04284	510	0.01352	645	0.00453
380	0.04043	515	0.01326	650	0.00504
385	0.04102	520	0.01173	655	0.00720
390	0.03976	525	0.01097	660	0.00577
395	0.04087	530	0.01007	665	0.00663
400	0.04065	535	0.01033	670	0.00741
405	0.04299	540	0.00875	675	0.00522
410	0.04194	545	0.00812	680	0.00546
415	0.04120	550	0.00884	685	0.00466
420	0.04231	555	0.00653	690	0.00370
425	0.04081	560	0.00603	695	0.00303
430	0.03915	565	0.00712	700	0.00342
435	0.03224	570	0.00654	705	0.00221
440	0.02881	575	0.00609	710	0.00187
445	0.02667	580	0.00769	715	0.00288
450	0.02442	585	0.00592	720	0.00107
455	0.02371	590	0.00682	725	0.00217
460	0.02203	595	0.00668	730	0.00095
465	0.02093	600	0.00645	735	0.00079
470	0.01962	605	0.00646	740	0.00068
475	0.01800	610	0.00513	745	-0.00003
480	0.01785	615	0.00551	750	0.0