

**CONTINUOUS RECORDING OF CHLOROPHYLL A WITH A MOORED BUOY  
SYSTEM IN BREID BAY, ANTARCTICA, DECEMBER 1985-FEBRUARY 1986**

**Mitsuo FUKUCHI**

(National Institute of Polar Research,  
9-10, Kaga 1-chome, Itabashi-ku, Tokyo 173)

and

**Hiroshi HATTORI**

(Faculty of Agriculture, Tohoku University,  
1-1, Tsutsumidori-Amamiyamachi, Sendai 980)

A chlorophyll measuring buoy system was designed for monitoring both long- and short-term temporal variations in phytoplankton communities (Fig. 1).

The system contains three sensors (fluorometer, thermistor and pressure transducer), a data logger and a power unit. Details of the buoy system are given in Table 1 and a block diagram is shown in Fig. 2.

The data logger is interfaced to a personal computer for setting up sampling parameters and for retrieving recorded data. The two windows of the fluorometer are cleaned by mechanically operated brushes to remove any fouling organisms.

A read only memory (ROM, 8-k-byte) based data logger controls the time interval at which measurement and recording occurs as follows. An hourly signal from a quartz crystal oscillator turns on the power to the central processing unit

(CPU) for 5.5 minutes. During this period, readings were made by the fluorometer (60 seconds), thermistor (15 seconds) and pressure transducer (30 seconds) and followed by a 2-min window brushing. A second set of readings were made, after the window brushing. Figure 3 shows the timing of the activities of the system. The power circuit is closed between sampling periods to conserve battery power.

Digital data on fluorescence intensity, temperature and depth are stored on a 64-K-byte random access memory (RAM) which is capable of storing three months of data at a sampling frequency of 1-hr. Continuous power for the timer and RAM is supplied by a back-up circuit using lithium batteries. Electronic components were chosen to minimize power consumption.

The chlorophyll measuring buoy was moored in Breid Bay, Antarctica ( $70^{\circ}11.54'S$ ,  $24^{\circ}18.68'E$ ) where the water depth was 286 m. The buoy was suspended at 52 m below the surface as shown in Fig. 4.

The buoy was deployed on 28 December 1985 when the Bay was free of pack ice, and recovered on 13 February 1986 when there was pack ice around the mooring position. The mooring position and the distribution of pack ice edge in February are shown in Fig. 5, which illustrate the drifting directions of icebergs also.

The chlorophyll measuring buoy worked successfully for 47 days and recorded a total of 1127 sets of time series data. The time series data of chlorophyll a, temperature and depth are shown in Fig. 6. All data are listed in Table 2.

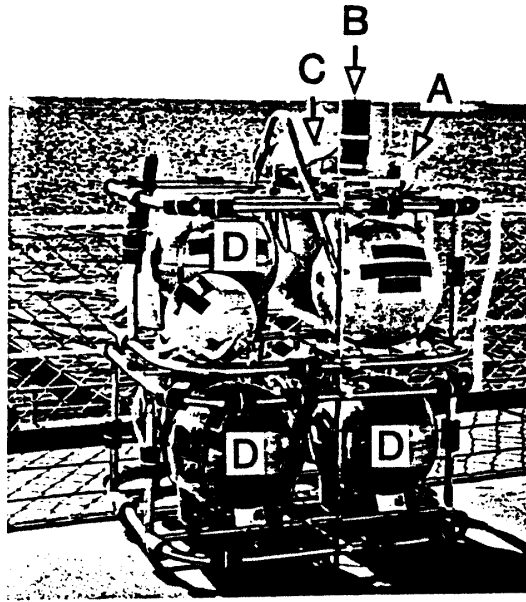


Fig. 1. A chlorophyll measuring buoy on deck of icebreaker SHIRASE. A beacon and flasher are attached to the buoy. A: in-situ fluorometer, B: window wiper, C: data logger, D: batteries.

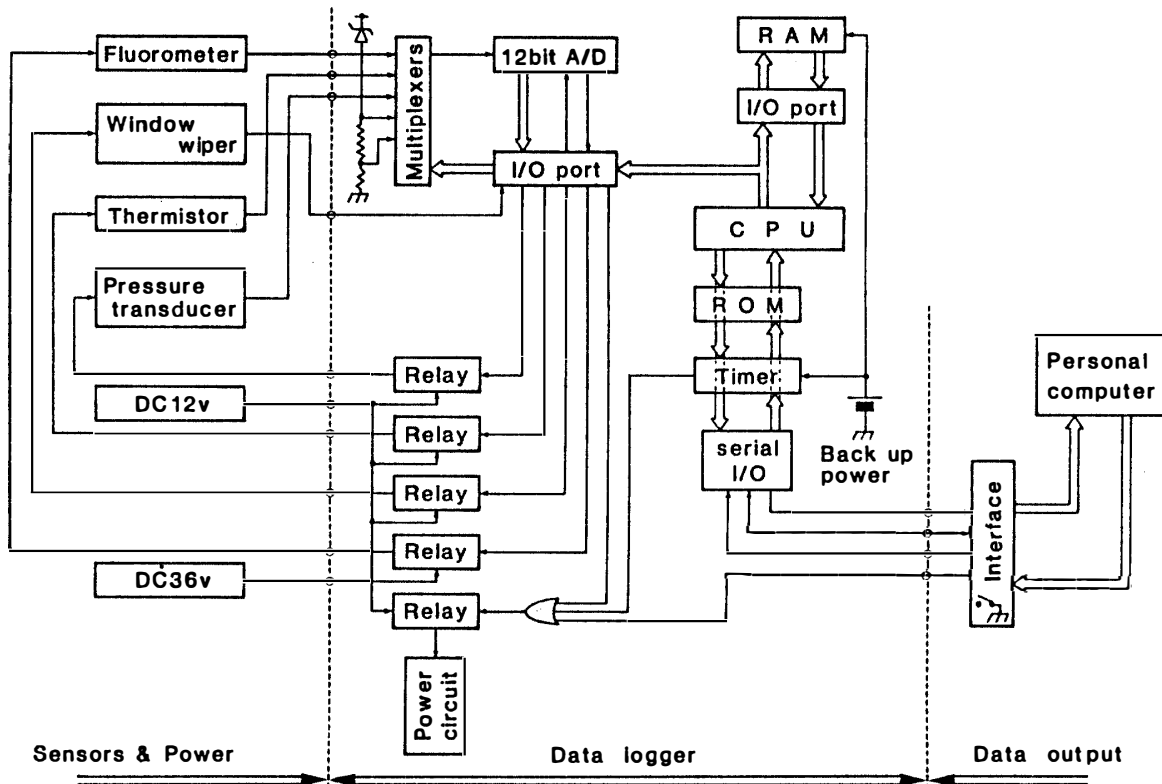
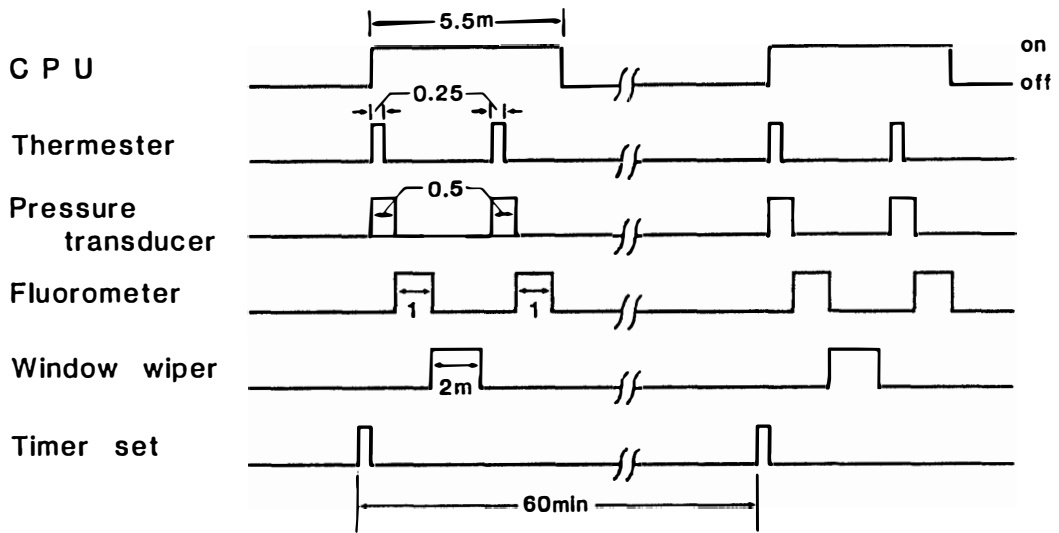


Fig. 2. A block diagram of a chlorophyll measuring buoy.



Time chart of system operation

Fig. 3. A time chart of chlorophyll measuring buoy operation.

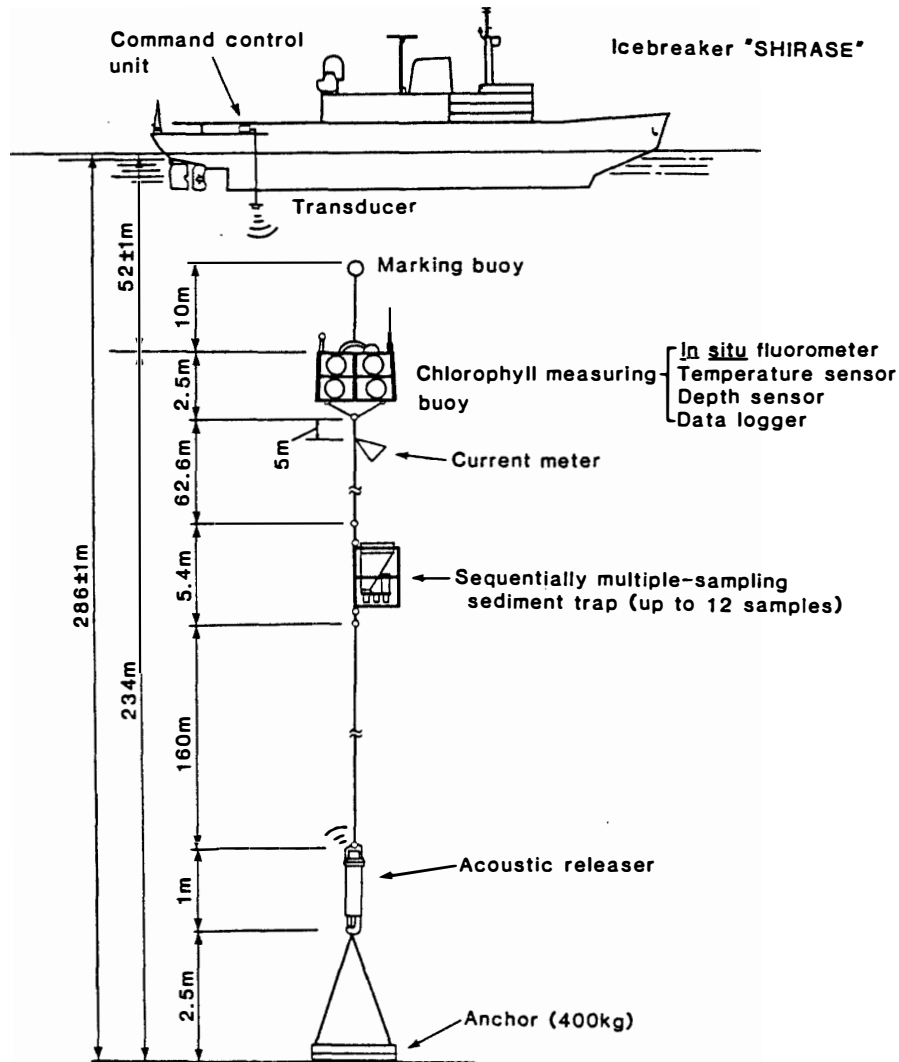


Fig. 4. A mooring array of a chlorophyll measuring buoy in the Breid Bay, Antarctica.

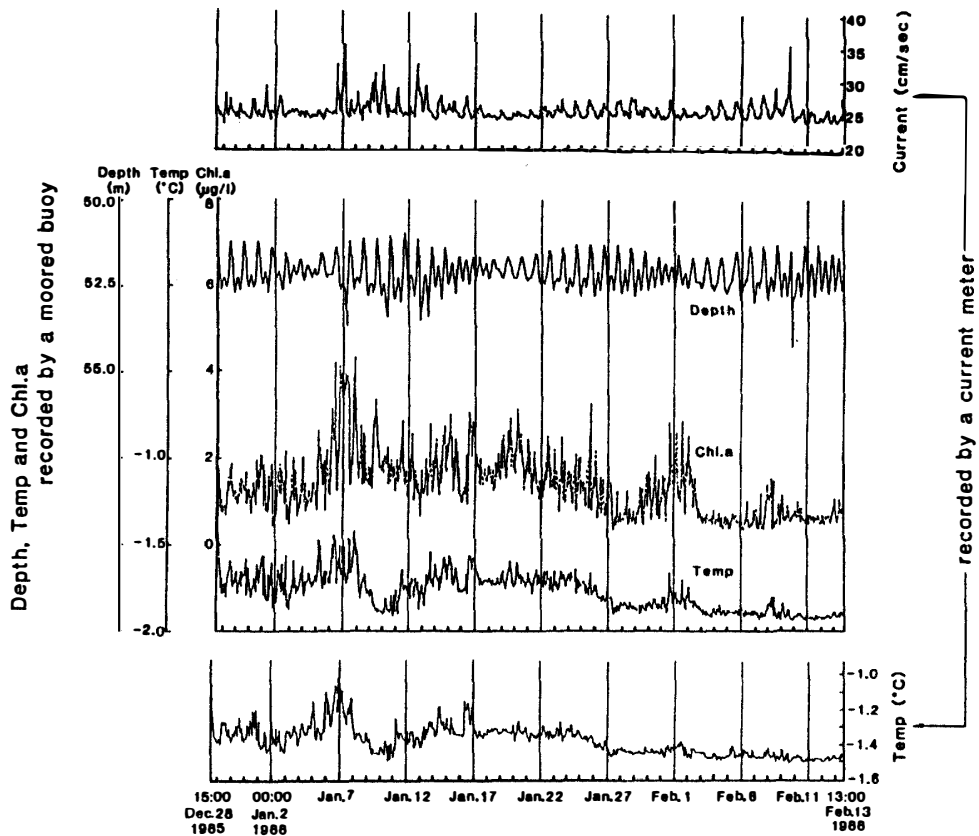


Fig. 5. A 47 days time series data on depth, chlorophyll a and temperature measured by the buoy between 1500 LMT 28 December 1985 and 1300 LMT 13 February 1986 in the Breid Bay, Antarctica. Data on current and temperature recorded by the current meter are also included.

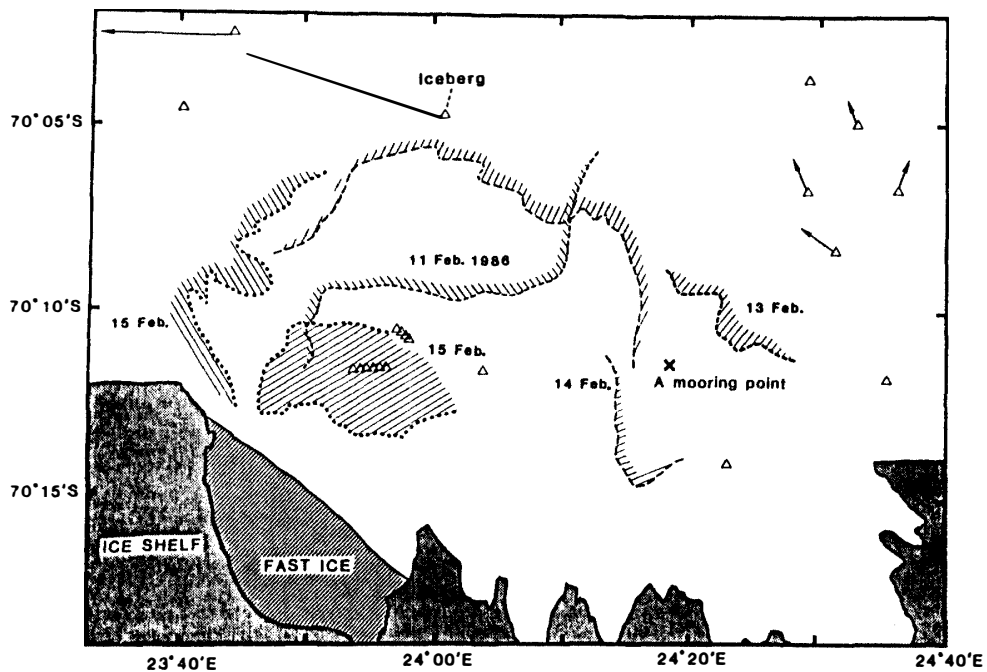


Fig. 6. A mooring location of the chlorophyll measuring buoy in the Breid Bay, Antarctica, and the distribution of pack ice in February 1986. Triangles and arrows indicate the positions and drifting directions of icebergs, respectively.

Table 1. Specifications of a chlorophyll measuring buoy.

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SIZE: 112<sup>L</sup> x 112<sup>W</sup> x 147<sup>H</sup> cm

WEIGHT: 330kg in air, -120kg in water  
(positive buoyancy)

**SENSORS:**

Fluorometer... Aquatracka(Chelsea Envir. Ins. Lmt., UK)  
Excitation wavelength 400-440 nm  
Emission wavelength 600< nm  
Sensitivity Chlorophyll 0.1ug/l

Thermister.... PXA-64(Takara Themister Inc., Jpn)  
Range -5 +35<sup>o</sup>c  
Accuracy ±0.1<sup>o</sup>c  
Resolution 0.01deg

Pressure transducer... P305D(Validyne Eng. Corp., USA)  
Range 0 35kgf/cm<sup>2</sup>  
Accuracy ±0.5% FS  
Resolution 0.02kg/cm<sup>2</sup>

DATA LOGGER: 90 days at 1 hour sampling rate(a set of before  
and after washing)

POWER: DC12V(36AH) dryfit battery (A 200) x 5  
(Sonnenschein, West Germany)

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Table 2. Time series data on depth, chlorophyll *a* and temperature measured by the chlorophyll measuring buoy deployed at 52 m depth for a 47 days period between 1500 LMT on 28 December 1985 and 1300 LMT on 13 February 1986 in the Breid Bay, Antarctica. Data set of depth, chlorophyll and temperature listed in left and right sides indicate those recorded before and after brushing windows of the fluorometer.

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 12/28 | 11:00 | -8.7         | 2.44         | .53           | -8.3         | 2.98         | .76           |
| 12/28 | 12:00 | -8.5         | 3.77         | .73           | -8.4         | 3.82         | .71           |
| 12/28 | 13:00 | -8.5         | 3.57         | 2.19          | -8.6         | 2.98         | 2.11          |
| 12/28 | 14:00 | 51.1         | -1.46        | 2.94          | 50.9         | -1.46        | 2.67          |
| 12/28 | 15:00 | 51.6         | -1.43        | 2.76          | 51.5         | -1.45        | 2.55          |
| 12/28 | 16:00 | 51.9         | -1.46        | 2.26          | 51.9         | -1.47        | 2.50          |
| 12/28 | 17:00 | 52.2         | -1.60        | 1.55          | 52.3         | -1.61        | 1.41          |
| 12/28 | 18:00 | 52.4         | -1.50        | 2.13          | 52.4         | -1.52        | 2.02          |
| 12/28 | 19:00 | 52.6         | -1.58        | 1.73          | 52.6         | -1.58        | 1.65          |
| 12/28 | 20:00 | 52.6         | -1.63        | 1.32          | 52.5         | -1.63        | 1.39          |
| 12/28 | 21:00 | 52.5         | -1.54        | 1.80          | 52.5         | -1.57        | 1.80          |
| 12/28 | 22:00 | 52.4         | -1.63        | 1.40          | 52.4         | -1.63        | 1.42          |
| 12/28 | 23:00 | 52.3         | -1.63        | 1.35          | 52.3         | -1.64        | 1.29          |
| 12/29 | 00:00 | 52.3         | -1.62        | 1.53          | 52.3         | -1.61        | 1.56          |
| 12/29 | 01:00 | 52.3         | -1.57        | 1.55          | 52.3         | -1.60        | 1.58          |
| 12/29 | 02:00 | 52.4         | -1.60        | 1.56          | 52.4         | -1.59        | 1.56          |
| 12/29 | 03:00 | 52.4         | -1.62        | 1.53          | 52.4         | -1.60        | 1.51          |
| 12/29 | 04:00 | 52.5         | -1.65        | 1.22          | 52.4         | -1.64        | 1.33          |
| 12/29 | 05:00 | 52.5         | -1.61        | 1.39          | 52.5         | -1.63        | 1.34          |
| 12/29 | 06:00 | 52.5         | -1.54        | 2.10          | 52.5         | -1.55        | 1.87          |
| 12/29 | 07:00 | 52.4         | -1.53        | 2.47          | 52.4         | -1.52        | 2.35          |
| 12/29 | 08:00 | 52.3         | -1.51        | 2.12          | 52.2         | -1.51        | 2.16          |
| 12/29 | 09:00 | 51.8         | -1.50        | 2.15          | 51.8         | -1.51        | 2.03          |
| 12/29 | 10:00 | 51.5         | -1.45        | 2.61          | 51.5         | -1.45        | 2.62          |
| 12/29 | 11:00 | 51.3         | -1.44        | 2.75          | 51.3         | -1.43        | 2.57          |
| 12/29 | 12:00 | 51.2         | -1.47        | 2.19          | 51.2         | -1.49        | 2.40          |
| 12/29 | 13:00 | 51.2         | -1.47        | 2.46          | 51.3         | -1.46        | 2.65          |
| 12/29 | 14:00 | 51.5         | -1.48        | 2.87          | 51.5         | -1.44        | 2.78          |
| 12/29 | 15:00 | 51.7         | -1.57        | 2.03          | 51.8         | -1.56        | 2.05          |
| 12/29 | 16:00 | 52.0         | -1.59        | 2.11          | 52.1         | -1.58        | 1.89          |
| 12/29 | 17:00 | 52.3         | -1.57        | 1.85          | 52.3         | -1.57        | 1.81          |
| 12/29 | 18:00 | 52.5         | -1.57        | 2.02          | 52.4         | -1.57        | 1.89          |
| 12/29 | 19:00 | 52.6         | -1.55        | 1.92          | 52.6         | -1.56        | 1.77          |
| 12/29 | 20:00 | 52.7         | -1.57        | 1.93          | 52.6         | -1.56        | 1.76          |
| 12/29 | 21:00 | 52.6         | -1.51        | 2.05          | 52.5         | -1.50        | 1.84          |
| 12/29 | 22:00 | 52.5         | -1.56        | 1.86          | 52.5         | -1.53        | 1.82          |
| 12/29 | 23:00 | 52.4         | -1.50        | 1.76          | 52.4         | -1.50        | 1.77          |
| 12/30 | 00:00 | 52.3         | -1.57        | 1.79          | 52.4         | -1.57        | 1.94          |
| 12/30 | 01:00 | 52.3         | -1.63        | 1.61          | 52.3         | -1.61        | 1.81          |
| 12/30 | 02:00 | 52.3         | -1.59        | 1.73          | 52.3         | -1.60        | 1.70          |
| 12/30 | 03:00 | 52.4         | -1.58        | 2.20          | 52.4         | -1.59        | 1.89          |
| 12/30 | 04:00 | 52.5         | -1.53        | 2.27          | 52.6         | -1.53        | 2.33          |
| 12/30 | 05:00 | 52.6         | -1.57        | 2.08          | 52.6         | -1.57        | 1.83          |
| 12/30 | 06:00 | 52.6         | -1.50        | 1.98          | 52.6         | -1.49        | 2.20          |
| 12/30 | 07:00 | 52.4         | -1.51        | 2.42          | 52.5         | -1.52        | 2.15          |
| 12/30 | 08:00 | 52.4         | -1.59        | 1.91          | 52.4         | -1.59        | 1.98          |
| 12/30 | 09:00 | 52.1         | -1.50        | 2.35          | 52.1         | -1.51        | 2.04          |
| 12/30 | 10:00 | 51.7         | -1.55        | 2.16          | 51.7         | -1.53        | 1.94          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 12/30 | 11:00 | 51.5         | -1.53        | 2.16          | 51.4         | -1.54        | 2.18          |
| 12/30 | 12:00 | 51.2         | -1.51        | 2.24          | 51.2         | -1.51        | 2.22          |
| 12/30 | 13:00 | 51.2         | -1.53        | 2.02          | 51.2         | -1.54        | 2.09          |
| 12/30 | 14:00 | 51.3         | -1.53        | 2.14          | 51.3         | -1.53        | 2.01          |
| 12/30 | 15:00 | 51.5         | -1.45        | 2.35          | 51.6         | -1.45        | 2.34          |
| 12/30 | 16:00 | 51.7         | -1.43        | 2.60          | 51.8         | -1.43        | 2.30          |
| 12/30 | 17:00 | 52.1         | -1.64        | 1.62          | 52.1         | -1.63        | 1.65          |
| 12/30 | 18:00 | 52.4         | -1.56        | 1.85          | 52.3         | -1.56        | 1.84          |
| 12/30 | 19:00 | 52.4         | -1.55        | 1.87          | 52.4         | -1.54        | 1.74          |
| 12/30 | 20:00 | 52.5         | -1.48        | 1.87          | 52.5         | -1.52        | 1.86          |
| 12/30 | 21:00 | 52.4         | -1.54        | 2.09          | 52.4         | -1.56        | 1.98          |
| 12/30 | 22:00 | 52.5         | -1.56        | 1.87          | 52.4         | -1.61        | 1.78          |
| 12/30 | 23:00 | 52.4         | -1.62        | 1.92          | 52.4         | -1.62        | 1.88          |
| 12/31 | 00:00 | 52.3         | -1.61        | 1.78          | 52.2         | -1.63        | 1.59          |
| 12/31 | 01:00 | 52.2         | -1.65        | 1.43          | 52.2         | -1.65        | 1.74          |
| 12/31 | 02:00 | 52.3         | -1.65        | 1.30          | 52.3         | -1.65        | 1.52          |
| 12/31 | 03:00 | 52.4         | -1.61        | 2.04          | 52.4         | -1.61        | 1.80          |
| 12/31 | 04:00 | 52.4         | -1.60        | 1.87          | 52.4         | -1.61        | 1.87          |
| 12/31 | 05:00 | 52.5         | -1.59        | 1.95          | 52.5         | -1.57        | 2.29          |
| 12/31 | 06:00 | 52.5         | -1.54        | 2.15          | 52.5         | -1.54        | 2.15          |
| 12/31 | 07:00 | 52.5         | -1.56        | 2.03          | 52.6         | -1.56        | 1.88          |
| 12/31 | 08:00 | 52.4         | -1.59        | 1.85          | 52.4         | -1.59        | 1.78          |
| 12/31 | 09:00 | 52.3         | -1.57        | 1.88          | 52.3         | -1.62        | 1.71          |
| 12/31 | 10:00 | 52.0         | -1.62        | 1.75          | 52.0         | -1.63        | 1.59          |
| 12/31 | 11:00 | 51.6         | -1.46        | 2.56          | 51.7         | -1.43        | 2.96          |
| 12/31 | 12:00 | 51.4         | -1.48        | 2.71          | 51.4         | -1.48        | 2.56          |
| 12/31 | 13:00 | 51.2         | -1.51        | 2.57          | 51.3         | -1.52        | 2.42          |
| 12/31 | 14:00 | 51.2         | -1.52        | 2.46          | 51.2         | -1.54        | 2.33          |
| 12/31 | 15:00 | 51.3         | -1.57        | 2.08          | 51.4         | -1.55        | 2.36          |
| 12/31 | 16:00 | 51.6         | -1.54        | 2.34          | 51.6         | -1.57        | 2.22          |
| 12/31 | 17:00 | 51.8         | -1.50        | 2.70          | 51.9         | -1.51        | 2.59          |
| 12/31 | 18:00 | 52.1         | -1.43        | 3.00          | 52.2         | -1.43        | 3.11          |
| 12/31 | 19:00 | 52.4         | -1.48        | 2.68          | 52.4         | -1.46        | 2.84          |
| 12/31 | 20:00 | 52.4         | -1.43        | 2.77          | 52.4         | -1.44        | 2.92          |
| 12/31 | 21:00 | 52.3         | -1.41        | 3.09          | 52.4         | -1.40        | 2.66          |
| 12/31 | 22:00 | 52.4         | -1.46        | 2.70          | 52.4         | -1.53        | 2.58          |
| 12/31 | 23:00 | 52.4         | -1.64        | 1.60          | 52.4         | -1.64        | 1.54          |
| 01/01 | 00:00 | 52.3         | -1.41        | 2.86          | 52.3         | -1.43        | 2.80          |
| 01/01 | 01:00 | 52.2         | -1.50        | 2.33          | 52.2         | -1.47        | 2.48          |
| 01/01 | 02:00 | 52.1         | -1.52        | 2.42          | 52.2         | -1.55        | 2.17          |
| 01/01 | 03:00 | 52.2         | -1.66        | 1.40          | 52.2         | -1.66        | 1.40          |
| 01/01 | 04:00 | 52.3         | -1.66        | 1.39          | 52.3         | -1.66        | 1.42          |
| 01/01 | 05:00 | 52.4         | -1.67        | 1.63          | 52.4         | -1.66        | 1.65          |
| 01/01 | 06:00 | 52.4         | -1.66        | 1.71          | 52.5         | -1.69        | 1.48          |
| 01/01 | 07:00 | 52.7         | -1.67        | 1.44          | 52.7         | -1.68        | 1.34          |
| 01/01 | 08:00 | 52.6         | -1.52        | 2.51          | 52.7         | -1.53        | 2.41          |
| 01/01 | 09:00 | 52.4         | -1.67        | 1.55          | 52.4         | -1.69        | 1.43          |
| 01/01 | 10:00 | 52.1         | -1.63        | 1.78          | 52.1         | -1.62        | 1.86          |



| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/01 | 11:00 | 51.9         | -1.58        | 2.12          | 51.8         | -1.59        | 2.12          |
| 01/01 | 12:00 | 51.7         | -1.58        | 2.29          | 51.6         | -1.58        | 2.20          |
| 01/01 | 13:00 | 51.4         | -1.48        | 2.59          | 51.5         | -1.46        | 2.53          |
| 01/01 | 14:00 | 51.4         | -1.45        | 2.86          | 51.4         | -1.45        | 2.75          |
| 01/01 | 15:00 | 51.4         | -1.52        | 2.48          | 51.5         | -1.53        | 2.39          |
| 01/01 | 16:00 | 51.6         | -1.71        | .85           | 51.6         | -1.71        | .85           |
| 01/01 | 17:00 | 51.7         | -1.70        | .88           | 51.7         | -1.70        | .97           |
| 01/01 | 18:00 | 51.8         | -1.69        | 1.13          | 51.9         | -1.67        | 1.26          |
| 01/01 | 19:00 | 52.0         | -1.68        | 1.07          | 52.0         | -1.68        | 1.16          |
| 01/01 | 20:00 | 52.2         | -1.69        | 1.24          | 52.2         | -1.69        | 1.09          |
| 01/01 | 21:00 | 52.3         | -1.68        | 1.30          | 52.2         | -1.68        | 1.16          |
| 01/01 | 22:00 | 52.3         | -1.67        | 1.19          | 52.3         | -1.67        | 1.10          |
| 01/01 | 23:00 | 52.3         | -1.68        | 1.28          | 52.3         | -1.67        | 1.62          |
| 01/02 | 00:00 | 52.2         | -1.54        | 2.23          | 52.2         | -1.55        | 2.24          |
| 01/02 | 01:00 | 52.2         | -1.49        | 2.65          | 52.2         | -1.49        | 2.50          |
| 01/02 | 02:00 | 52.1         | -1.53        | 2.33          | 52.2         | -1.53        | 2.41          |
| 01/02 | 03:00 | 52.2         | -1.54        | 2.36          | 52.2         | -1.58        | 2.06          |
| 01/02 | 04:00 | 52.2         | -1.59        | 1.94          | 52.2         | -1.59        | 2.10          |
| 01/02 | 05:00 | 52.4         | -1.51        | 2.72          | 52.3         | -1.50        | 2.84          |
| 01/02 | 06:00 | 52.4         | -1.57        | 2.29          | 52.4         | -1.56        | 2.40          |
| 01/02 | 07:00 | 52.5         | -1.62        | 1.91          | 52.5         | -1.61        | 2.06          |
| 01/02 | 08:00 | 52.6         | -1.46        | 2.64          | 52.7         | -1.51        | 2.48          |
| 01/02 | 09:00 | 52.6         | -1.55        | 2.55          | 52.6         | -1.58        | 2.27          |
| 01/02 | 10:00 | 52.6         | -1.61        | 1.99          | 52.5         | -1.57        | 2.30          |
| 01/02 | 11:00 | 52.4         | -1.56        | 2.49          | 52.4         | -1.55        | 2.16          |
| 01/02 | 12:00 | 52.1         | -1.64        | 1.62          | 52.1         | -1.63        | 1.73          |
| 01/02 | 13:00 | 51.8         | -1.56        | 2.32          | 51.8         | -1.54        | 2.37          |
| 01/02 | 14:00 | 51.6         | -1.61        | 1.72          | 51.5         | -1.63        | 1.60          |
| 01/02 | 15:00 | 51.6         | -1.41        | 3.23          | 51.6         | -1.42        | 3.21          |
| 01/02 | 16:00 | 51.7         | -1.59        | 1.80          | 51.7         | -1.64        | 1.79          |
| 01/02 | 17:00 | 51.7         | -1.71        | 1.07          | 51.7         | -1.71        | 1.19          |
| 01/02 | 18:00 | 51.8         | -1.67        | 1.59          | 51.9         | -1.68        | 1.38          |
| 01/02 | 19:00 | 52.0         | -1.68        | 1.53          | 52.1         | -1.69        | 1.32          |
| 01/02 | 20:00 | 52.3         | -1.71        | 1.16          | 52.3         | -1.71        | 1.23          |
| 01/02 | 21:00 | 52.4         | -1.71        | 1.14          | 52.4         | -1.71        | 1.08          |
| 01/02 | 22:00 | 52.4         | -1.72        | .94           | 52.4         | -1.72        | .92           |
| 01/02 | 23:00 | 52.4         | -1.63        | 1.44          | 52.4         | -1.62        | 1.79          |
| 01/03 | 00:00 | 52.3         | -1.66        | 1.63          | 52.3         | -1.64        | 1.69          |
| 01/03 | 01:00 | 52.2         | -1.64        | 1.85          | 52.2         | -1.60        | 2.52          |
| 01/03 | 02:00 | 52.1         | -1.61        | 1.99          | 52.1         | -1.61        | 2.10          |
| 01/03 | 03:00 | 52.0         | -1.55        | 2.05          | 52.0         | -1.54        | 2.18          |
| 01/03 | 04:00 | 51.9         | -1.58        | 1.91          | 52.0         | -1.56        | 1.99          |
| 01/03 | 05:00 | 52.0         | -1.44        | 3.05          | 52.0         | -1.42        | 2.98          |
| 01/03 | 06:00 | 52.1         | -1.60        | 1.72          | 52.0         | -1.60        | 1.72          |
| 01/03 | 07:00 | 52.1         | -1.57        | 2.03          | 52.1         | -1.58        | 1.89          |
| 01/03 | 08:00 | 52.2         | -1.54        | 2.67          | 52.2         | -1.55        | 2.40          |
| 01/03 | 09:00 | 52.2         | -1.58        | 2.40          | 52.2         | -1.55        | 2.43          |
| 01/03 | 10:00 | 52.2         | -1.63        | 1.88          | 52.2         | -1.63        | 1.79          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/03 | 11:00 | 52.1         | -1.58        | 2.17          | 52.1         | -1.59        | 1.71          |
| 01/03 | 12:00 | 52.1         | -1.61        | 1.21          | 52.0         | -1.61        | 1.31          |
| 01/03 | 13:00 | 51.9         | -1.61        | 1.35          | 51.9         | -1.61        | 1.51          |
| 01/03 | 14:00 | 51.8         | -1.61        | 1.43          | 51.8         | -1.60        | 1.36          |
| 01/03 | 15:00 | 51.7         | -1.59        | 1.49          | 51.7         | -1.59        | 1.42          |
| 01/03 | 16:00 | 51.7         | -1.57        | 1.52          | 51.7         | -1.58        | 1.51          |
| 01/03 | 17:00 | 51.7         | -1.54        | 1.78          | 51.7         | -1.55        | 1.60          |
| 01/03 | 18:00 | 51.8         | -1.51        | 2.24          | 51.9         | -1.53        | 2.39          |
| 01/03 | 19:00 | 52.0         | -1.53        | 2.01          | 52.0         | -1.50        | 2.29          |
| 01/03 | 20:00 | 52.2         | -1.55        | 1.88          | 52.2         | -1.54        | 1.94          |
| 01/03 | 21:00 | 52.3         | -1.47        | 3.06          | 52.3         | -1.47        | 2.98          |
| 01/03 | 22:00 | 52.3         | -1.60        | 2.03          | 52.3         | -1.61        | 1.99          |
| 01/03 | 23:00 | 52.4         | -1.59        | 1.99          | 52.3         | -1.59        | 1.94          |
| 01/04 | 00:00 | 52.3         | -1.64        | 1.65          | 52.2         | -1.63        | 1.80          |
| 01/04 | 01:00 | 52.3         | -1.58        | 2.10          | 52.2         | -1.57        | 1.85          |
| 01/04 | 02:00 | 52.1         | -1.56        | 2.29          | 52.1         | -1.56        | 2.10          |
| 01/04 | 03:00 | 52.0         | -1.61        | 1.39          | 52.0         | -1.62        | 1.34          |
| 01/04 | 04:00 | 51.9         | -1.56        | 1.76          | 51.9         | -1.55        | 1.89          |
| 01/04 | 05:00 | 51.9         | -1.56        | 1.79          | 51.9         | -1.55        | 1.78          |
| 01/04 | 06:00 | 51.9         | -1.56        | 1.55          | 52.0         | -1.54        | 1.81          |
| 01/04 | 07:00 | 52.0         | -1.55        | 1.63          | 52.0         | -1.55        | 1.60          |
| 01/04 | 08:00 | 52.0         | -1.51        | 2.06          | 52.0         | -1.52        | 1.88          |
| 01/04 | 09:00 | 52.1         | -1.53        | 1.86          | 52.1         | -1.54        | 1.99          |
| 01/04 | 10:00 | 52.2         | -1.53        | 1.89          | 52.1         | -1.53        | 1.93          |
| 01/04 | 11:00 | 52.1         | -1.57        | 1.68          | 52.1         | -1.57        | 1.66          |
| 01/04 | 12:00 | 52.2         | -1.56        | 1.75          | 52.2         | -1.56        | 1.80          |
| 01/04 | 13:00 | 52.3         | -1.57        | 1.71          | 52.3         | -1.57        | 1.66          |
| 01/04 | 14:00 | 52.2         | -1.59        | 1.71          | 52.3         | -1.59        | 1.74          |
| 01/04 | 15:00 | 52.2         | -1.57        | 2.30          | 52.2         | -1.57        | 2.08          |
| 01/04 | 16:00 | 52.1         | -1.56        | 2.25          | 52.0         | -1.55        | 2.31          |
| 01/04 | 17:00 | 52.1         | -1.58        | 2.12          | 52.1         | -1.57        | 2.27          |
| 01/04 | 18:00 | 52.0         | -1.56        | 2.17          | 52.0         | -1.55        | 2.01          |
| 01/04 | 19:00 | 52.1         | -1.54        | 2.17          | 52.1         | -1.54        | 1.98          |
| 01/04 | 20:00 | 52.2         | -1.52        | 2.11          | 52.2         | -1.52        | 1.98          |
| 01/04 | 21:00 | 52.2         | -1.55        | 1.67          | 52.2         | -1.55        | 1.75          |
| 01/04 | 22:00 | 52.2         | -1.56        | 1.58          | 52.2         | -1.54        | 1.59          |
| 01/04 | 23:00 | 52.2         | -1.55        | 1.51          | 52.2         | -1.56        | 1.43          |
| 01/05 | 00:00 | 52.2         | -1.49        | 2.77          | 52.2         | -1.48        | 2.75          |
| 01/05 | 01:00 | 52.1         | -1.32        | 3.80          | 52.1         | -1.32        | 3.55          |
| 01/05 | 02:00 | 51.9         | -1.40        | 3.17          | 51.9         | -1.41        | 2.95          |
| 01/05 | 03:00 | 51.8         | -1.43        | 3.12          | 51.8         | -1.42        | 3.23          |
| 01/05 | 04:00 | 51.7         | -1.35        | 3.24          | 51.7         | -1.35        | 3.28          |
| 01/05 | 05:00 | 51.6         | -1.41        | 3.17          | 51.7         | -1.42        | 3.34          |
| 01/05 | 06:00 | 51.6         | -1.50        | 2.89          | 51.6         | -1.50        | 3.14          |
| 01/05 | 07:00 | 51.6         | -1.56        | 2.58          | 51.6         | -1.56        | 2.75          |
| 01/05 | 08:00 | 51.7         | -1.56        | 2.37          | 51.7         | -1.58        | 2.37          |
| 01/05 | 09:00 | 51.7         | -1.60        | 2.20          | 51.7         | -1.61        | 2.26          |
| 01/05 | 10:00 | 51.9         | -1.54        | 2.72          | 51.9         | -1.55        | 2.52          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/05 | 11:00 | 52.1         | -1.53        | 2.90          | 52.1         | -1.52        | 2.93          |
| 01/05 | 12:00 | 52.0         | -1.50        | 2.96          | 52.0         | -1.54        | 2.40          |
| 01/05 | 13:00 | 52.2         | -1.58        | 1.40          | 52.2         | -1.58        | 2.48          |
| 01/05 | 14:00 | 52.3         | -1.55        | 2.80          | 52.3         | -1.54        | 2.88          |
| 01/05 | 15:00 | 52.3         | -1.50        | 3.10          | 52.2         | -1.51        | 2.83          |
| 01/05 | 16:00 | 52.3         | -1.51        | 3.27          | 52.2         | -1.51        | 2.67          |
| 01/05 | 17:00 | 52.2         | -1.51        | 2.61          | 52.2         | -1.52        | 2.41          |
| 01/05 | 18:00 | 52.2         | -1.57        | 2.08          | 52.2         | -1.57        | 2.08          |
| 01/05 | 19:00 | 52.2         | -1.57        | 1.96          | 52.1         | -1.57        | 2.04          |
| 01/05 | 20:00 | 52.2         | -1.56        | 2.16          | 52.1         | -1.56        | 2.39          |
| 01/05 | 21:00 | 52.2         | -1.51        | 2.74          | 52.1         | -1.55        | 1.89          |
| 01/05 | 22:00 | 52.2         | -1.57        | 2.17          | 52.2         | -1.56        | 2.02          |
| 01/05 | 23:00 | 52.2         | -1.46        | 3.13          | 52.2         | -1.44        | 3.36          |
| 01/06 | 00:00 | 52.2         | -1.35        | 4.31          | 52.2         | -1.33        | 4.40          |
| 01/06 | 01:00 | 52.2         | -1.34        | 4.28          | 52.1         | -1.34        | 4.38          |
| 01/06 | 02:00 | 52.0         | -1.43        | 3.66          | 51.9         | -1.43        | 4.06          |
| 01/06 | 03:00 | 51.9         | -1.42        | 3.52          | 51.9         | -1.41        | 3.87          |
| 01/06 | 04:00 | 51.8         | -1.30        | 3.78          | 51.7         | -1.40        | 3.53          |
| 01/06 | 05:00 | 51.7         | -1.35        | 3.51          | 51.7         | -1.39        | 3.52          |
| 01/06 | 06:00 | 51.5         | -1.29        | 3.73          | 51.5         | -1.30        | 5.60          |
| 01/06 | 07:00 | 51.5         | -1.36        | 3.75          | 51.4         | -1.40        | 3.09          |
| 01/06 | 08:00 | 51.4         | -1.43        | 2.93          | 51.4         | -1.42        | 3.22          |
| 01/06 | 09:00 | 51.4         | -1.57        | 2.05          | 51.4         | -1.56        | 2.12          |
| 01/06 | 10:00 | 51.6         | -1.50        | 2.99          | 51.5         | -1.52        | 2.04          |
| 01/06 | 11:00 | 51.7         | -1.48        | 2.79          | 51.7         | -1.47        | 2.79          |
| 01/06 | 12:00 | 52.0         | -1.43        | 3.13          | 52.1         | -1.41        | 3.11          |
| 01/06 | 13:00 | 52.3         | -1.48        | 2.88          | 52.4         | -1.45        | 3.44          |
| 01/06 | 14:00 | 52.5         | -1.35        | 5.34          | 52.6         | -1.42        | 5.50          |
| 01/06 | 15:00 | 52.5         | -1.50        | 5.15          | 52.6         | -1.52        | 4.78          |
| 01/06 | 16:00 | 52.6         | -1.50        | 4.91          | 52.7         | -1.50        | 5.11          |
| 01/06 | 17:00 | 52.5         | -1.52        | 5.08          | 52.6         | -1.47        | 5.32          |
| 01/06 | 18:00 | 52.5         | -1.36        | 4.75          | 52.4         | -1.36        | 5.04          |
| 01/06 | 19:00 | 52.4         | -1.45        | 5.33          | 52.3         | -1.39        | 4.75          |
| 01/06 | 20:00 | 52.5         | -1.39        | 4.65          | 52.5         | -1.43        | 5.00          |
| 01/06 | 21:00 | 52.5         | -1.55        | 5.16          | 52.4         | -1.52        | 5.14          |
| 01/06 | 22:00 | 52.5         | -1.48        | 5.20          | 52.4         | -1.47        | 4.98          |
| 01/06 | 23:00 | 52.5         | -1.36        | 4.77          | 52.5         | -1.44        | 4.73          |
| 01/07 | 00:00 | 52.6         | -1.49        | 4.90          | 52.7         | -1.50        | 5.10          |
| 01/07 | 01:00 | 53.2         | -1.53        | 5.33          | 53.1         | -1.56        | 4.89          |
| 01/07 | 02:00 | 52.7         | -1.56        | 5.06          | 52.8         | -1.56        | 4.95          |
| 01/07 | 03:00 | 53.2         | -1.58        | 5.18          | 53.1         | -1.56        | 5.04          |
| 01/07 | 04:00 | 53.7         | -1.54        | 5.28          | 53.7         | -1.54        | 5.19          |
| 01/07 | 05:00 | 52.4         | -1.55        | 5.26          | 52.5         | -1.55        | 5.21          |
| 01/07 | 06:00 | 51.8         | -1.51        | 5.15          | 51.8         | -1.49        | 5.06          |
| 01/07 | 07:00 | 51.6         | -1.31        | 5.06          | 51.6         | -1.36        | 4.62          |
| 01/07 | 08:00 | 51.2         | -1.47        | 2.60          | 51.2         | -1.47        | 2.58          |
| 01/07 | 09:00 | 51.2         | -1.49        | 2.33          | 51.2         | -1.52        | 2.17          |
| 01/07 | 10:00 | 51.3         | -1.51        | 2.26          | 51.4         | -1.48        | 2.62          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/07 | 11:00 | 51.6         | -1.51        | 2.71          | 51.6         | -1.51        | 2.43          |
| 01/07 | 12:00 | 51.7         | -1.47        | 2.88          | 51.7         | -1.46        | 2.88          |
| 01/07 | 13:00 | 52.0         | -1.42        | 3.07          | 52.1         | -1.43        | 3.02          |
| 01/07 | 14:00 | 52.3         | -1.48        | 2.92          | 52.3         | -1.48        | 2.76          |
| 01/07 | 15:00 | 52.4         | -1.31        | 4.49          | 52.5         | -1.33        | 4.66          |
| 01/07 | 16:00 | 52.6         | -1.38        | 4.81          | 52.6         | -1.29        | 5.23          |
| 01/07 | 17:00 | 52.6         | -1.36        | 4.85          | 52.6         | -1.37        | 4.81          |
| 01/07 | 18:00 | 52.5         | -1.27        | 5.74          | 52.5         | -1.31        | 4.94          |
| 01/07 | 19:00 | 52.4         | -1.41        | 4.01          | 52.4         | -1.37        | 4.59          |
| 01/07 | 20:00 | 52.4         | -1.36        | 3.82          | 52.4         | -1.36        | 4.02          |
| 01/07 | 21:00 | 52.3         | -1.38        | 3.80          | 52.3         | -1.38        | 3.48          |
| 01/07 | 22:00 | 52.3         | -1.39        | 3.27          | 52.3         | -1.41        | 3.31          |
| 01/07 | 23:00 | 52.3         | -1.47        | 3.03          | 52.3         | -1.45        | 2.61          |
| 01/08 | 00:00 | 52.4         | -1.48        | 2.39          | 52.4         | -1.51        | 2.53          |
| 01/08 | 01:00 | 52.4         | -1.58        | 2.71          | 52.5         | -1.59        | 2.73          |
| 01/08 | 02:00 | 52.4         | -1.63        | 2.96          | 52.4         | -1.58        | 2.77          |
| 01/08 | 03:00 | 52.4         | -1.62        | 2.68          | 52.4         | -1.62        | 2.65          |
| 01/08 | 04:00 | 52.3         | -1.66        | 3.68          | 52.3         | -1.65        | 3.00          |
| 01/08 | 05:00 | 52.2         | -1.64        | 3.54          | 52.2         | -1.65        | 3.94          |
| 01/08 | 06:00 | 51.9         | -1.61        | 3.22          | 51.9         | -1.60        | 2.89          |
| 01/08 | 07:00 | 51.7         | -1.57        | 2.22          | 51.7         | -1.56        | 2.43          |
| 01/08 | 08:00 | 51.3         | -1.56        | 2.76          | 51.3         | -1.57        | 3.25          |
| 01/08 | 09:00 | 51.1         | -1.54        | 3.43          | 51.1         | -1.56        | 3.37          |
| 01/08 | 10:00 | 51.1         | -1.56        | 3.74          | 51.1         | -1.56        | 3.34          |
| 01/08 | 11:00 | 51.2         | -1.56        | 2.29          | 51.2         | -1.56        | 2.25          |
| 01/08 | 12:00 | 51.5         | -1.52        | 3.03          | 51.5         | -1.54        | 3.64          |
| 01/08 | 13:00 | 51.7         | -1.54        | 3.21          | 51.8         | -1.55        | 3.36          |
| 01/08 | 14:00 | 52.0         | -1.59        | 2.37          | 52.1         | -1.58        | 2.35          |
| 01/08 | 15:00 | 52.3         | -1.61        | 2.48          | 52.4         | -1.62        | 2.41          |
| 01/08 | 16:00 | 52.6         | -1.63        | 2.58          | 52.5         | -1.63        | 2.33          |
| 01/08 | 17:00 | 52.8         | -1.61        | 2.54          | 52.8         | -1.61        | 2.38          |
| 01/08 | 18:00 | 52.8         | -1.62        | 2.56          | 52.8         | -1.63        | 2.23          |
| 01/08 | 19:00 | 52.8         | -1.63        | 2.76          | 52.8         | -1.63        | 2.63          |
| 01/08 | 20:00 | 52.6         | -1.64        | 2.37          | 52.6         | -1.64        | 2.37          |
| 01/08 | 21:00 | 52.5         | -1.65        | 2.22          | 52.5         | -1.66        | 2.18          |
| 01/08 | 22:00 | 52.4         | -1.62        | 2.71          | 52.4         | -1.63        | 2.73          |
| 01/08 | 23:00 | 52.4         | -1.61        | 2.73          | 52.4         | -1.62        | 2.65          |
| 01/09 | 00:00 | 52.4         | -1.64        | 2.44          | 52.4         | -1.64        | 2.38          |
| 01/09 | 01:00 | 52.4         | -1.62        | 2.18          | 52.4         | -1.59        | 2.10          |
| 01/09 | 02:00 | 52.5         | -1.62        | 2.82          | 52.5         | -1.63        | 2.53          |
| 01/09 | 03:00 | 52.7         | -1.69        | 3.73          | 52.7         | -1.68        | 3.59          |
| 01/09 | 04:00 | 52.6         | -1.70        | 4.07          | 52.7         | -1.70        | 4.15          |
| 01/09 | 05:00 | 52.6         | -1.69        | 3.87          | 52.6         | -1.69        | 3.88          |
| 01/09 | 06:00 | 52.5         | -1.71        | 4.06          | 52.4         | -1.71        | 4.07          |
| 01/09 | 07:00 | 52.1         | -1.71        | 4.64          | 52.1         | -1.70        | 4.28          |
| 01/09 | 08:00 | 51.6         | -1.73        | 4.17          | 51.6         | -1.73        | 4.28          |
| 01/09 | 09:00 | 51.2         | -1.72        | 4.16          | 51.2         | -1.72        | 4.08          |
| 01/09 | 10:00 | 51.1         | -1.74        | 3.84          | 51.1         | -1.74        | 3.59          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/09 | 11:00 | 51.3         | -1.74        | 3.27          | 51.3         | -1.73        | 3.26          |
| 01/09 | 12:00 | 51.5         | -1.73        | 3.34          | 51.6         | -1.73        | 3.37          |
| 01/09 | 13:00 | 51.7         | -1.72        | 3.38          | 51.7         | -1.72        | 3.17          |
| 01/09 | 14:00 | 52.0         | -1.73        | 2.88          | 52.1         | -1.73        | 2.73          |
| 01/09 | 15:00 | 52.4         | -1.73        | 2.72          | 52.4         | -1.73        | 2.73          |
| 01/09 | 16:00 | 52.5         | -1.73        | 2.81          | 52.5         | -1.73        | 2.67          |
| 01/09 | 17:00 | 52.7         | -1.73        | 2.79          | 52.8         | -1.73        | 2.64          |
| 01/09 | 18:00 | 52.8         | -1.74        | 2.79          | 52.9         | -1.74        | 2.76          |
| 01/09 | 19:00 | 52.7         | -1.74        | 2.70          | 52.8         | -1.74        | 2.68          |
| 01/09 | 20:00 | 52.6         | -1.75        | 2.95          | 52.6         | -1.75        | 2.65          |
| 01/09 | 21:00 | 52.5         | -1.75        | 2.74          | 52.4         | -1.75        | 2.58          |
| 01/09 | 22:00 | 52.4         | -1.74        | 2.75          | 52.4         | -1.74        | 2.78          |
| 01/09 | 23:00 | 52.5         | -1.74        | 2.96          | 52.6         | -1.74        | 3.05          |
| 01/10 | 00:00 | 52.7         | -1.72        | 3.09          | 52.7         | -1.71        | 3.03          |
| 01/10 | 01:00 | 52.8         | -1.71        | 2.90          | 52.8         | -1.71        | 2.84          |
| 01/10 | 02:00 | 53.1         | -1.66        | 2.95          | 53.1         | -1.66        | 2.89          |
| 01/10 | 03:00 | 53.3         | -1.68        | 2.83          | 53.3         | -1.66        | 2.86          |
| 01/10 | 04:00 | 53.4         | -1.70        | 2.96          | 53.5         | -1.70        | 2.83          |
| 01/10 | 05:00 | 53.4         | -1.72        | 3.21          | 53.5         | -1.74        | 3.33          |
| 01/10 | 06:00 | 53.3         | -1.73        | 2.24          | 53.0         | -1.73        | 3.03          |
| 01/10 | 07:00 | 52.5         | -1.73        | 2.77          | 52.4         | -1.73        | 2.99          |
| 01/10 | 08:00 | 51.7         | -1.74        | 2.93          | 51.7         | -1.74        | 2.67          |
| 01/10 | 09:00 | 51.0         | -1.74        | 2.87          | 51.4         | -1.74        | 2.68          |
| 01/10 | 10:00 | 51.2         | -1.72        | 2.79          | 51.2         | -1.72        | 2.33          |
| 01/10 | 11:00 | 51.1         | -1.72        | 2.66          | 51.1         | -1.73        | 2.63          |
| 01/10 | 12:00 | 51.3         | -1.64        | 2.83          | 51.3         | -1.62        | 2.98          |
| 01/10 | 13:00 | 51.6         | -1.71        | 2.54          | 51.6         | -1.71        | 2.52          |
| 01/10 | 14:00 | 52.0         | -1.76        | 2.43          | 52.0         | -1.75        | 2.44          |
| 01/10 | 15:00 | 52.4         | -1.76        | 2.46          | 52.4         | -1.75        | 2.43          |
| 01/10 | 16:00 | 52.8         | -1.65        | 2.80          | 52.8         | -1.65        | 2.71          |
| 01/10 | 17:00 | 52.9         | -1.64        | 2.47          | 52.9         | -1.64        | 2.52          |
| 01/10 | 18:00 | 52.9         | -1.71        | 2.05          | 52.9         | -1.72        | 2.23          |
| 01/10 | 19:00 | 52.9         | -1.74        | 2.17          | 52.9         | -1.73        | 2.03          |
| 01/10 | 20:00 | 52.8         | -1.64        | 2.43          | 52.9         | -1.65        | 2.43          |
| 01/10 | 21:00 | 52.6         | -1.61        | 2.62          | 52.6         | -1.62        | 2.79          |
| 01/10 | 22:00 | 52.5         | -1.66        | 2.98          | 52.5         | -1.66        | 2.97          |
| 01/10 | 23:00 | 52.4         | -1.72        | 2.49          | 52.3         | -1.73        | 2.52          |
| 01/11 | 00:00 | 52.3         | -1.75        | 2.30          | 52.4         | -1.76        | 2.29          |
| 01/11 | 01:00 | 52.4         | -1.73        | 2.86          | 52.4         | -1.73        | 2.81          |
| 01/11 | 02:00 | 52.5         | -1.64        | 2.82          | 52.5         | -1.64        | 2.73          |
| 01/11 | 03:00 | 52.6         | -1.67        | 2.86          | 52.6         | -1.68        | 2.81          |
| 01/11 | 04:00 | 52.8         | -1.65        | 2.57          | 52.8         | -1.66        | 2.65          |
| 01/11 | 05:00 | 53.0         | -1.59        | 3.21          | 53.0         | -1.58        | 3.18          |
| 01/11 | 06:00 | 52.9         | -1.51        | 3.28          | 52.8         | -1.48        | 3.60          |
| 01/11 | 07:00 | 52.6         | -1.51        | 3.49          | 52.7         | -1.47        | 3.55          |
| 01/11 | 08:00 | 52.3         | -1.49        | 4.09          | 52.2         | -1.50        | 3.63          |
| 01/11 | 09:00 | 51.7         | -1.56        | 3.22          | 51.7         | -1.56        | 3.13          |
| 01/11 | 10:00 | 51.3         | -1.60        | 2.61          | 51.3         | -1.60        | 2.59          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/11 | 11:00 | 51.0         | -1.61        | 2.39          | 51.0         | -1.61        | 2.33          |
| 01/11 | 12:00 | 51.0         | -1.61        | 2.40          | 51.0         | -1.61        | 2.22          |
| 01/11 | 13:00 | 51.0         | -1.58        | 2.42          | 51.0         | -1.59        | 2.44          |
| 01/11 | 14:00 | 51.3         | -1.59        | 2.60          | 51.3         | -1.60        | 2.37          |
| 01/11 | 15:00 | 51.7         | -1.58        | 2.65          | 51.7         | -1.58        | 2.39          |
| 01/11 | 16:00 | 52.0         | -1.62        | 2.05          | 52.0         | -1.62        | 2.06          |
| 01/11 | 17:00 | 52.4         | -1.63        | 1.87          | 52.4         | -1.63        | 1.90          |
| 01/11 | 18:00 | 52.7         | -1.59        | 2.12          | 52.7         | -1.60        | 2.38          |
| 01/11 | 19:00 | 52.9         | -1.63        | 1.99          | 52.9         | -1.62        | 2.16          |
| 01/11 | 20:00 | 52.8         | -1.64        | 2.13          | 52.8         | -1.64        | 1.99          |
| 01/11 | 21:00 | 52.6         | -1.63        | 2.41          | 52.6         | -1.62        | 2.50          |
| 01/11 | 22:00 | 52.4         | -1.56        | 3.00          | 52.4         | -1.56        | 2.82          |
| 01/11 | 23:00 | 52.2         | -1.66        | 2.36          | 52.2         | -1.66        | 2.31          |
| 01/12 | 00:00 | 52.2         | -1.65        | 2.41          | 52.2         | -1.62        | 2.58          |
| 01/12 | 01:00 | 52.3         | -1.54        | 3.49          | 52.3         | -1.54        | 3.27          |
| 01/12 | 02:00 | 52.3         | -1.54        | 3.45          | 52.3         | -1.52        | 3.72          |
| 01/12 | 03:00 | 52.4         | -1.57        | 3.05          | 52.4         | -1.57        | 3.07          |
| 01/12 | 04:00 | 52.6         | -1.58        | 2.79          | 52.6         | -1.59        | 2.62          |
| 01/12 | 05:00 | 52.7         | -1.63        | 1.82          | 52.7         | -1.66        | 1.74          |
| 01/12 | 06:00 | 52.8         | -1.65        | 1.99          | 52.8         | -1.67        | 1.90          |
| 01/12 | 07:00 | 52.6         | -1.62        | 2.26          | 52.7         | -1.59        | 2.22          |
| 01/12 | 08:00 | 52.5         | -1.54        | 2.55          | 52.5         | -1.54        | 2.65          |
| 01/12 | 09:00 | 52.2         | -1.57        | 2.18          | 52.2         | -1.57        | 2.12          |
| 01/12 | 10:00 | 51.7         | -1.57        | 2.15          | 51.6         | -1.55        | 2.40          |
| 01/12 | 11:00 | 51.4         | -1.61        | 2.01          | 51.4         | -1.60        | 1.97          |
| 01/12 | 12:00 | 51.1         | -1.60        | 2.23          | 51.2         | -1.60        | 2.03          |
| 01/12 | 13:00 | 51.2         | -1.56        | 2.29          | 51.2         | -1.56        | 2.24          |
| 01/12 | 14:00 | 51.5         | -1.60        | 1.92          | 51.5         | -1.60        | 1.99          |
| 01/12 | 15:00 | 52.1         | -1.72        | 1.90          | 52.2         | -1.72        | 1.98          |
| 01/12 | 16:00 | 52.9         | -1.65        | 1.67          | 53.0         | -1.66        | 1.35          |
| 01/12 | 17:00 | 53.5         | -1.67        | 1.22          | 53.6         | -1.67        | 1.21          |
| 01/12 | 18:00 | 53.1         | -1.63        | 1.97          | 53.1         | -1.63        | 1.91          |
| 01/12 | 19:00 | 53.2         | -1.61        | 2.67          | 53.2         | -1.62        | 2.45          |
| 01/12 | 20:00 | 53.2         | -1.58        | 2.11          | 53.2         | -1.60        | 2.04          |
| 01/12 | 21:00 | 53.1         | -1.62        | 2.22          | 53.0         | -1.61        | 1.95          |
| 01/12 | 22:00 | 52.8         | -1.64        | 2.11          | 52.7         | -1.66        | 1.93          |
| 01/12 | 23:00 | 52.4         | -1.63        | 1.94          | 52.5         | -1.63        | 2.07          |
| 01/13 | 00:00 | 52.3         | -1.66        | 1.94          | 52.3         | -1.66        | 1.99          |
| 01/13 | 01:00 | 52.2         | -1.70        | 2.08          | 52.2         | -1.70        | 2.00          |
| 01/13 | 02:00 | 52.2         | -1.65        | 2.77          | 52.2         | -1.64        | 2.78          |
| 01/13 | 03:00 | 52.3         | -1.62        | 2.57          | 52.3         | -1.64        | 2.37          |
| 01/13 | 04:00 | 52.4         | -1.52        | 3.01          | 52.5         | -1.53        | 2.75          |
| 01/13 | 05:00 | 52.7         | -1.55        | 2.42          | 52.8         | -1.55        | 2.45          |
| 01/13 | 06:00 | 53.0         | -1.58        | 1.88          | 53.0         | -1.58        | 1.91          |
| 01/13 | 07:00 | 53.4         | -1.57        | 2.77          | 53.4         | -1.59        | 2.56          |
| 01/13 | 08:00 | 53.3         | -1.57        | 2.45          | 53.3         | -1.56        | 2.33          |
| 01/13 | 09:00 | 52.9         | -1.53        | 2.60          | 52.9         | -1.52        | 2.51          |
| 01/13 | 10:00 | 52.5         | -1.48        | 2.98          | 52.4         | -1.53        | 2.49          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/13 | 11:00 | 52.1         | -1.39        | 4.00          | 52.1         | -1.40        | 3.84          |
| 01/13 | 12:00 | 51.7         | -1.57        | 2.29          | 51.6         | -1.54        | 2.60          |
| 01/13 | 13:00 | 51.5         | -1.57        | 2.26          | 51.4         | -1.57        | 2.32          |
| 01/13 | 14:00 | 51.4         | -1.55        | 2.31          | 51.4         | -1.56        | 2.23          |
| 01/13 | 15:00 | 51.5         | -1.57        | 1.99          | 51.6         | -1.59        | 2.13          |
| 01/13 | 16:00 | 51.8         | -1.55        | 2.50          | 51.8         | -1.54        | 2.95          |
| 01/13 | 17:00 | 52.1         | -1.59        | 2.14          | 52.1         | -1.59        | 2.24          |
| 01/13 | 18:00 | 52.3         | -1.54        | 2.60          | 52.4         | -1.53        | 2.66          |
| 01/13 | 19:00 | 52.5         | -1.52        | 2.77          | 52.4         | -1.53        | 2.50          |
| 01/13 | 20:00 | 52.5         | -1.46        | 3.24          | 52.5         | -1.46        | 2.78          |
| 01/13 | 21:00 | 52.5         | -1.53        | 3.13          | 52.5         | -1.47        | 3.07          |
| 01/13 | 22:00 | 52.4         | -1.48        | 3.37          | 52.5         | -1.48        | 3.56          |
| 01/13 | 23:00 | 52.3         | -1.52        | 2.95          | 52.3         | -1.51        | 2.73          |
| 01/14 | 00:00 | 52.0         | -1.55        | 2.41          | 52.0         | -1.53        | 2.90          |
| 01/14 | 01:00 | 51.9         | -1.54        | 2.41          | 52.0         | -1.56        | 2.05          |
| 01/14 | 02:00 | 52.0         | -1.56        | 2.19          | 51.9         | -1.56        | 2.27          |
| 01/14 | 03:00 | 52.1         | -1.57        | 2.06          | 52.1         | -1.58        | 1.88          |
| 01/14 | 04:00 | 52.3         | -1.61        | 1.92          | 52.3         | -1.59        | 2.12          |
| 01/14 | 05:00 | 52.4         | -1.53        | 2.75          | 52.5         | -1.53        | 2.83          |
| 01/14 | 06:00 | 52.7         | -1.59        | 2.26          | 52.8         | -1.59        | 2.29          |
| 01/14 | 07:00 | 52.9         | -1.56        | 2.43          | 52.9         | -1.58        | 2.25          |
| 01/14 | 08:00 | 52.9         | -1.57        | 2.40          | 52.9         | -1.54        | 2.86          |
| 01/14 | 09:00 | 52.7         | -1.51        | 3.17          | 52.7         | -1.48        | 3.15          |
| 01/14 | 10:00 | 52.3         | -1.45        | 3.61          | 52.3         | -1.45        | 3.70          |
| 01/14 | 11:00 | 51.9         | -1.42        | 3.56          | 51.9         | -1.44        | 3.42          |
| 01/14 | 12:00 | 51.7         | -1.48        | 3.43          | 51.7         | -1.47        | 3.33          |
| 01/14 | 13:00 | 51.5         | -1.42        | 3.94          | 51.5         | -1.44        | 3.74          |
| 01/14 | 14:00 | 51.4         | -1.43        | 3.74          | 51.4         | -1.43        | 3.51          |
| 01/14 | 15:00 | 51.5         | -1.51        | 3.02          | 51.5         | -1.51        | 2.87          |
| 01/14 | 16:00 | 51.7         | -1.50        | 3.00          | 51.7         | -1.52        | 2.61          |
| 01/14 | 17:00 | 52.0         | -1.45        | 3.39          | 52.0         | -1.46        | 3.22          |
| 01/14 | 18:00 | 52.3         | -1.55        | 2.96          | 52.3         | -1.52        | 3.44          |
| 01/14 | 19:00 | 52.4         | -1.50        | 3.25          | 52.4         | -1.47        | 3.34          |
| 01/14 | 20:00 | 52.4         | -1.49        | 3.24          | 52.4         | -1.48        | 3.05          |
| 01/14 | 21:00 | 52.4         | -1.41        | 3.54          | 52.4         | -1.41        | 3.57          |
| 01/14 | 22:00 | 52.4         | -1.46        | 3.61          | 52.4         | -1.47        | 3.63          |
| 01/14 | 23:00 | 52.3         | -1.43        | 4.12          | 52.2         | -1.42        | 4.27          |
| 01/15 | 00:00 | 52.0         | -1.42        | 3.68          | 52.0         | -1.42        | 4.03          |
| 01/15 | 01:00 | 51.9         | -1.46        | 3.65          | 51.8         | -1.44        | 3.63          |
| 01/15 | 02:00 | 51.8         | -1.45        | 3.60          | 51.8         | -1.42        | 3.66          |
| 01/15 | 03:00 | 51.8         | -1.56        | 2.35          | 51.8         | -1.55        | 2.77          |
| 01/15 | 04:00 | 52.0         | -1.57        | 2.39          | 52.0         | -1.52        | 2.78          |
| 01/15 | 05:00 | 52.2         | -1.58        | 2.02          | 52.2         | -1.58        | 2.20          |
| 01/15 | 06:00 | 52.4         | -1.58        | 2.35          | 52.4         | -1.57        | 2.53          |
| 01/15 | 07:00 | 52.4         | -1.53        | 3.05          | 52.4         | -1.53        | 3.00          |
| 01/15 | 08:00 | 52.5         | -1.56        | 2.82          | 52.5         | -1.56        | 2.50          |
| 01/15 | 09:00 | 52.7         | -1.49        | 3.58          | 52.7         | -1.49        | 3.45          |
| 01/15 | 10:00 | 52.4         | -1.48        | 3.45          | 52.4         | -1.49        | 3.46          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/15 | 11:00 | 52.1         | -1.51        | 3.20          | 52.0         | -1.52        | 3.04          |
| 01/15 | 12:00 | 51.9         | -1.53        | 3.11          | 51.8         | -1.52        | 3.16          |
| 01/15 | 13:00 | 51.7         | -1.55        | 2.34          | 51.7         | -1.56        | 2.44          |
| 01/15 | 14:00 | 51.7         | -1.56        | 2.62          | 51.6         | -1.56        | 2.54          |
| 01/15 | 15:00 | 51.7         | -1.62        | 2.01          | 51.7         | -1.62        | 1.99          |
| 01/15 | 16:00 | 51.7         | -1.61        | 1.91          | 51.7         | -1.61        | 1.91          |
| 01/15 | 17:00 | 51.9         | -1.61        | 1.88          | 52.0         | -1.61        | 1.83          |
| 01/15 | 18:00 | 52.1         | -1.62        | 1.73          | 52.1         | -1.62        | 1.90          |
| 01/15 | 19:00 | 52.3         | -1.61        | 1.66          | 52.3         | -1.61        | 1.66          |
| 01/15 | 20:00 | 52.3         | -1.62        | 1.89          | 52.3         | -1.62        | 1.99          |
| 01/15 | 21:00 | 52.4         | -1.62        | 1.67          | 52.4         | -1.62        | 1.76          |
| 01/15 | 22:00 | 52.4         | -1.62        | 2.02          | 52.4         | -1.62        | 1.69          |
| 01/15 | 23:00 | 52.1         | -1.61        | 1.86          | 52.1         | -1.61        | 2.04          |
| 01/16 | 00:00 | 51.9         | -1.60        | 2.18          | 51.9         | -1.59        | 2.15          |
| 01/16 | 01:00 | 51.8         | -1.61        | 2.16          | 51.8         | -1.61        | 1.89          |
| 01/16 | 02:00 | 51.7         | -1.60        | 2.10          | 51.7         | -1.60        | 1.99          |
| 01/16 | 03:00 | 51.7         | -1.61        | 1.94          | 51.7         | -1.60        | 2.05          |
| 01/16 | 04:00 | 51.8         | -1.52        | 3.13          | 51.8         | -1.52        | 3.07          |
| 01/16 | 05:00 | 51.9         | -1.62        | 1.73          | 51.9         | -1.62        | 1.65          |
| 01/16 | 06:00 | 52.1         | -1.63        | 1.61          | 52.1         | -1.62        | 1.75          |
| 01/16 | 07:00 | 52.3         | -1.62        | 1.65          | 52.3         | -1.62        | 1.78          |
| 01/16 | 08:00 | 52.4         | -1.41        | 4.31          | 52.4         | -1.40        | 3.99          |
| 01/16 | 09:00 | 52.4         | -1.42        | 3.93          | 52.4         | -1.42        | 3.70          |
| 01/16 | 10:00 | 52.4         | -1.41        | 4.28          | 52.4         | -1.41        | 4.16          |
| 01/16 | 11:00 | 52.2         | -1.41        | 4.06          | 52.1         | -1.40        | 4.01          |
| 01/16 | 12:00 | 52.0         | -1.45        | 3.87          | 52.0         | -1.46        | 3.84          |
| 01/16 | 13:00 | 51.8         | -1.44        | 3.94          | 51.8         | -1.44        | 3.72          |
| 01/16 | 14:00 | 51.8         | -1.49        | 3.15          | 51.7         | -1.49        | 3.03          |
| 01/16 | 15:00 | 51.7         | -1.42        | 3.62          | 51.7         | -1.41        | 3.79          |
| 01/16 | 16:00 | 51.8         | -1.42        | 4.07          | 51.8         | -1.41        | 4.02          |
| 01/16 | 17:00 | 52.0         | -1.42        | 3.74          | 52.0         | -1.41        | 3.63          |
| 01/16 | 18:00 | 52.0         | -1.45        | 3.74          | 52.0         | -1.45        | 3.81          |
| 01/16 | 19:00 | 52.2         | -1.45        | 3.78          | 52.2         | -1.46        | 3.78          |
| 01/16 | 20:00 | 52.3         | -1.42        | 3.51          | 52.2         | -1.46        | 3.10          |
| 01/16 | 21:00 | 52.3         | -1.48        | 2.67          | 52.3         | -1.48        | 3.16          |
| 01/16 | 22:00 | 52.3         | -1.49        | 3.04          | 52.2         | -1.49        | 2.94          |
| 01/16 | 23:00 | 52.2         | -1.49        | 3.14          | 52.2         | -1.49        | 2.76          |
| 01/17 | 00:00 | 52.0         | -1.50        | 2.89          | 52.0         | -1.50        | 3.13          |
| 01/17 | 01:00 | 51.9         | -1.52        | 2.91          | 51.9         | -1.52        | 2.90          |
| 01/17 | 02:00 | 51.8         | -1.53        | 2.74          | 51.7         | -1.53        | 2.82          |
| 01/17 | 03:00 | 51.7         | -1.55        | 2.76          | 51.7         | -1.55        | 2.47          |
| 01/17 | 04:00 | 51.7         | -1.54        | 2.52          | 51.7         | -1.55        | 2.30          |
| 01/17 | 05:00 | 51.8         | -1.58        | 2.24          | 51.8         | -1.59        | 2.27          |
| 01/17 | 06:00 | 51.9         | -1.54        | 3.02          | 51.9         | -1.54        | 2.75          |
| 01/17 | 07:00 | 52.0         | -1.55        | 2.66          | 52.1         | -1.56        | 2.46          |
| 01/17 | 08:00 | 52.1         | -1.57        | 2.40          | 52.1         | -1.57        | 2.36          |
| 01/17 | 09:00 | 52.2         | -1.57        | 2.56          | 52.2         | -1.57        | 2.52          |
| 01/17 | 10:00 | 52.2         | -1.58        | 2.50          | 52.1         | -1.58        | 2.24          |



| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/17 | 11:00 | 52.1         | -1.56        | 2.55          | 52.1         | -1.55        | 2.65          |
| 01/17 | 12:00 | 52.0         | -1.57        | 2.42          | 52.0         | -1.57        | 2.53          |
| 01/17 | 13:00 | 52.0         | -1.56        | 2.74          | 51.9         | -1.55        | 2.60          |
| 01/17 | 14:00 | 51.9         | -1.55        | 2.60          | 51.9         | -1.55        | 2.38          |
| 01/17 | 15:00 | 51.8         | -1.55        | 2.46          | 51.8         | -1.55        | 2.38          |
| 01/17 | 16:00 | 51.9         | -1.55        | 2.54          | 51.8         | -1.55        | 2.45          |
| 01/17 | 17:00 | 52.0         | -1.55        | 2.39          | 52.0         | -1.55        | 2.33          |
| 01/17 | 18:00 | 52.1         | -1.56        | 2.58          | 52.1         | -1.56        | 2.73          |
| 01/17 | 19:00 | 52.2         | -1.56        | 2.53          | 52.2         | -1.56        | 2.53          |
| 01/17 | 20:00 | 52.3         | -1.56        | 2.72          | 52.3         | -1.56        | 2.83          |
| 01/17 | 21:00 | 52.3         | -1.55        | 2.58          | 52.3         | -1.55        | 2.53          |
| 01/17 | 22:00 | 52.3         | -1.54        | 2.55          | 52.3         | -1.54        | 2.64          |
| 01/17 | 23:00 | 52.2         | -1.56        | 2.57          | 52.2         | -1.56        | 2.45          |
| 01/18 | 00:00 | 52.1         | -1.55        | 2.72          | 52.1         | -1.56        | 2.60          |
| 01/18 | 01:00 | 52.0         | -1.56        | 2.24          | 52.0         | -1.56        | 2.56          |
| 01/18 | 02:00 | 51.8         | -1.57        | 2.34          | 51.8         | -1.57        | 2.42          |
| 01/18 | 03:00 | 51.7         | -1.58        | 2.46          | 51.7         | -1.57        | 2.26          |
| 01/18 | 04:00 | 51.7         | -1.55        | 2.68          | 51.7         | -1.55        | 2.60          |
| 01/18 | 05:00 | 51.7         | -1.57        | 2.31          | 51.7         | -1.57        | 2.04          |
| 01/18 | 06:00 | 51.7         | -1.57        | 2.08          | 51.8         | -1.57        | 2.08          |
| 01/18 | 07:00 | 51.8         | -1.58        | 2.09          | 51.8         | -1.58        | 2.10          |
| 01/18 | 08:00 | 51.9         | -1.58        | 2.38          | 51.9         | -1.58        | 2.16          |
| 01/18 | 09:00 | 52.0         | -1.57        | 2.72          | 52.0         | -1.57        | 2.88          |
| 01/18 | 10:00 | 52.0         | -1.57        | 2.61          | 52.0         | -1.57        | 2.63          |
| 01/18 | 11:00 | 52.0         | -1.58        | 2.58          | 52.0         | -1.58        | 2.43          |
| 01/18 | 12:00 | 52.0         | -1.57        | 2.71          | 52.0         | -1.57        | 2.77          |
| 01/18 | 13:00 | 52.0         | -1.54        | 2.70          | 52.0         | -1.54        | 2.62          |
| 01/18 | 14:00 | 52.0         | -1.56        | 2.91          | 52.0         | -1.55        | 3.15          |
| 01/18 | 15:00 | 52.1         | -1.57        | 2.53          | 52.0         | -1.58        | 2.59          |
| 01/18 | 16:00 | 52.1         | -1.57        | 2.66          | 52.1         | -1.56        | 2.56          |
| 01/18 | 17:00 | 52.1         | -1.58        | 2.43          | 52.1         | -1.58        | 2.39          |
| 01/18 | 18:00 | 52.2         | -1.57        | 2.58          | 52.2         | -1.57        | 2.72          |
| 01/18 | 19:00 | 52.2         | -1.52        | 3.17          | 52.3         | -1.52        | 3.43          |
| 01/18 | 20:00 | 52.3         | -1.52        | 3.55          | 52.3         | -1.50        | 3.17          |
| 01/18 | 21:00 | 52.3         | -1.57        | 3.20          | 52.3         | -1.57        | 2.68          |
| 01/18 | 22:00 | 52.3         | -1.51        | 3.49          | 52.3         | -1.49        | 3.50          |
| 01/18 | 23:00 | 52.3         | -1.50        | 3.59          | 52.3         | -1.49        | 3.68          |
| 01/19 | 00:00 | 52.2         | -1.54        | 3.32          | 52.2         | -1.52        | 3.45          |
| 01/19 | 01:00 | 52.1         | -1.57        | 2.83          | 52.1         | -1.58        | 2.90          |
| 01/19 | 02:00 | 51.9         | -1.58        | 2.61          | 51.9         | -1.58        | 2.87          |
| 01/19 | 03:00 | 51.8         | -1.59        | 2.61          | 51.8         | -1.60        | 2.42          |
| 01/19 | 04:00 | 51.7         | -1.60        | 2.44          | 51.7         | -1.60        | 2.46          |
| 01/19 | 05:00 | 51.7         | -1.57        | 2.88          | 51.7         | -1.55        | 2.78          |
| 01/19 | 06:00 | 51.7         | -1.55        | 3.19          | 51.7         | -1.55        | 2.66          |
| 01/19 | 07:00 | 51.7         | -1.53        | 3.60          | 51.7         | -1.52        | 3.81          |
| 01/19 | 08:00 | 51.7         | -1.49        | 3.32          | 51.7         | -1.50        | 3.23          |
| 01/19 | 09:00 | 51.7         | -1.48        | 3.16          | 51.8         | -1.48        | 3.45          |
| 01/19 | 10:00 | 51.8         | -1.50        | 3.32          | 51.8         | -1.50        | 3.33          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/19 | 11:00 | 51.9         | -1.44        | 4.14          | 51.9         | -1.45        | 3.35          |
| 01/19 | 12:00 | 51.9         | -1.50        | 3.26          | 51.8         | -1.52        | 3.24          |
| 01/19 | 13:00 | 52.0         | -1.50        | 3.53          | 52.0         | -1.50        | 2.77          |
| 01/19 | 14:00 | 52.1         | -1.48        | 3.60          | 52.1         | -1.49        | 3.09          |
| 01/19 | 15:00 | 52.2         | -1.57        | 3.10          | 52.2         | -1.57        | 3.32          |
| 01/19 | 16:00 | 52.2         | -1.55        | 3.09          | 52.2         | -1.55        | 2.99          |
| 01/19 | 17:00 | 52.3         | -1.58        | 3.11          | 52.3         | -1.59        | 2.73          |
| 01/19 | 18:00 | 52.3         | -1.59        | 2.66          | 52.3         | -1.59        | 2.88          |
| 01/19 | 19:00 | 52.3         | -1.58        | 3.17          | 52.3         | -1.58        | 3.09          |
| 01/19 | 20:00 | 52.3         | -1.58        | 2.76          | 52.3         | -1.58        | 2.55          |
| 01/19 | 21:00 | 52.3         | -1.58        | 3.30          | 52.3         | -1.58        | 3.04          |
| 01/19 | 22:00 | 52.3         | -1.57        | 3.23          | 52.3         | -1.57        | 2.95          |
| 01/19 | 23:00 | 52.3         | -1.47        | 3.78          | 52.3         | -1.49        | 3.62          |
| 01/20 | 00:00 | 52.2         | -1.45        | 4.39          | 52.2         | -1.48        | 3.97          |
| 01/20 | 01:00 | 52.1         | -1.46        | 4.04          | 52.1         | -1.44        | 3.79          |
| 01/20 | 02:00 | 52.0         | -1.51        | 4.19          | 52.0         | -1.45        | 3.97          |
| 01/20 | 03:00 | 51.9         | -1.54        | 3.26          | 51.9         | -1.54        | 3.65          |
| 01/20 | 04:00 | 51.8         | -1.53        | 3.40          | 51.7         | -1.54        | 3.17          |
| 01/20 | 05:00 | 51.7         | -1.54        | 3.56          | 51.7         | -1.54        | 3.51          |
| 01/20 | 06:00 | 51.7         | -1.53        | 3.53          | 51.7         | -1.53        | 3.53          |
| 01/20 | 07:00 | 51.7         | -1.52        | 3.39          | 51.7         | -1.53        | 3.74          |
| 01/20 | 08:00 | 51.7         | -1.57        | 3.15          | 51.7         | -1.57        | 3.15          |
| 01/20 | 09:00 | 51.7         | -1.55        | 2.88          | 51.7         | -1.54        | 2.88          |
| 01/20 | 10:00 | 51.8         | -1.53        | 3.05          | 51.8         | -1.54        | 2.92          |
| 01/20 | 11:00 | 51.9         | -1.54        | 2.69          | 51.9         | -1.54        | 2.70          |
| 01/20 | 12:00 | 52.0         | -1.55        | 2.50          | 52.0         | -1.54        | 2.04          |
| 01/20 | 13:00 | 52.1         | -1.55        | 2.52          | 52.1         | -1.55        | 2.33          |
| 01/20 | 14:00 | 52.2         | -1.57        | 2.34          | 52.2         | -1.57        | 2.33          |
| 01/20 | 15:00 | 52.3         | -1.57        | 2.50          | 52.3         | -1.57        | 2.46          |
| 01/20 | 16:00 | 52.3         | -1.59        | 2.63          | 52.3         | -1.58        | 2.62          |
| 01/20 | 17:00 | 52.3         | -1.57        | 2.81          | 52.4         | -1.56        | 2.94          |
| 01/20 | 18:00 | 52.4         | -1.56        | 2.78          | 52.4         | -1.57        | 2.90          |
| 01/20 | 19:00 | 52.4         | -1.56        | 2.98          | 52.4         | -1.51        | 3.59          |
| 01/20 | 20:00 | 52.3         | -1.51        | 3.41          | 52.3         | -1.57        | 2.86          |
| 01/20 | 21:00 | 52.3         | -1.56        | 2.93          | 52.4         | -1.57        | 2.56          |
| 01/20 | 22:00 | 52.3         | -1.56        | 2.97          | 52.3         | -1.55        | 2.95          |
| 01/20 | 23:00 | 52.3         | -1.54        | 3.19          | 52.3         | -1.54        | 3.21          |
| 01/21 | 00:00 | 52.3         | -1.57        | 2.41          | 52.2         | -1.57        | 2.54          |
| 01/21 | 01:00 | 52.2         | -1.58        | 2.08          | 52.1         | -1.59        | 2.16          |
| 01/21 | 02:00 | 52.2         | -1.56        | 2.64          | 52.2         | -1.57        | 2.56          |
| 01/21 | 03:00 | 52.1         | -1.63        | 1.95          | 52.1         | -1.63        | 2.17          |
| 01/21 | 04:00 | 52.0         | -1.63        | 2.17          | 52.0         | -1.62        | 2.27          |
| 01/21 | 05:00 | 51.9         | -1.59        | 2.73          | 51.8         | -1.60        | 2.56          |
| 01/21 | 06:00 | 51.7         | -1.61        | 2.34          | 51.7         | -1.61        | 2.26          |
| 01/21 | 07:00 | 51.7         | -1.54        | 3.21          | 51.7         | -1.54        | 2.87          |
| 01/21 | 08:00 | 51.6         | -1.54        | 2.75          | 51.7         | -1.55        | 2.77          |
| 01/21 | 09:00 | 51.6         | -1.52        | 2.63          | 51.6         | -1.52        | 2.78          |
| 01/21 | 10:00 | 51.6         | -1.52        | 2.24          | 51.6         | -1.51        | 2.27          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/21 | 11:00 | 51.7         | -1.49        | 2.38          | 51.8         | -1.49        | 2.45          |
| 01/21 | 12:00 | 51.8         | -1.51        | 2.26          | 51.8         | -1.51        | 2.07          |
| 01/21 | 13:00 | 52.0         | -1.58        | 2.15          | 52.0         | -1.58        | 2.02          |
| 01/21 | 14:00 | 52.2         | -1.57        | 2.10          | 52.2         | -1.58        | 2.22          |
| 01/21 | 15:00 | 52.4         | -1.52        | 2.12          | 52.4         | -1.53        | 1.93          |
| 01/21 | 16:00 | 52.4         | -1.52        | 2.37          | 52.4         | -1.52        | 1.79          |
| 01/21 | 17:00 | 52.4         | -1.57        | 1.96          | 52.4         | -1.57        | 2.08          |
| 01/21 | 18:00 | 52.4         | -1.55        | 2.06          | 52.4         | -1.54        | 2.25          |
| 01/21 | 19:00 | 52.4         | -1.54        | 2.04          | 52.4         | -1.55        | 2.04          |
| 01/21 | 20:00 | 52.4         | -1.53        | 2.19          | 52.4         | -1.54        | 2.08          |
| 01/21 | 21:00 | 52.4         | -1.52        | 2.27          | 52.4         | -1.52        | 2.35          |
| 01/21 | 22:00 | 52.4         | -1.53        | 1.96          | 52.4         | -1.53        | 2.11          |
| 01/21 | 23:00 | 52.4         | -1.56        | 1.86          | 52.4         | -1.54        | 2.10          |
| 01/22 | 00:00 | 52.4         | -1.59        | 2.20          | 52.4         | -1.60        | 2.25          |
| 01/22 | 01:00 | 52.4         | -1.54        | 2.17          | 52.4         | -1.53        | 2.01          |
| 01/22 | 02:00 | 52.4         | -1.50        | 2.60          | 52.4         | -1.49        | 2.40          |
| 01/22 | 03:00 | 52.3         | -1.56        | 2.53          | 52.3         | -1.55        | 2.65          |
| 01/22 | 04:00 | 52.2         | -1.57        | 2.90          | 52.2         | -1.57        | 2.92          |
| 01/22 | 05:00 | 52.1         | -1.58        | 2.51          | 52.0         | -1.60        | 2.36          |
| 01/22 | 06:00 | 51.9         | -1.56        | 2.62          | 51.9         | -1.54        | 3.01          |
| 01/22 | 07:00 | 51.7         | -1.50        | 3.66          | 51.7         | -1.49        | 3.55          |
| 01/22 | 08:00 | 51.6         | -1.55        | 2.69          | 51.6         | -1.55        | 2.75          |
| 01/22 | 09:00 | 51.5         | -1.55        | 2.68          | 51.5         | -1.55        | 2.61          |
| 01/22 | 10:00 | 51.5         | -1.54        | 2.77          | 51.5         | -1.53        | 3.37          |
| 01/22 | 11:00 | 51.5         | -1.55        | 3.13          | 51.6         | -1.56        | 2.13          |
| 01/22 | 12:00 | 51.7         | -1.61        | 2.14          | 51.7         | -1.59        | 2.42          |
| 01/22 | 13:00 | 51.9         | -1.58        | 2.47          | 51.9         | -1.57        | 2.83          |
| 01/22 | 14:00 | 52.2         | -1.53        | 2.58          | 52.2         | -1.54        | 2.54          |
| 01/22 | 15:00 | 52.4         | -1.56        | 2.47          | 52.4         | -1.58        | 2.10          |
| 01/22 | 16:00 | 52.5         | -1.57        | 2.27          | 52.5         | -1.59        | 2.20          |
| 01/22 | 17:00 | 52.6         | -1.62        | 2.46          | 52.6         | -1.62        | 2.53          |
| 01/22 | 18:00 | 52.6         | -1.61        | 2.49          | 52.6         | -1.61        | 2.42          |
| 01/22 | 19:00 | 52.4         | -1.57        | 2.10          | 52.4         | -1.57        | 2.24          |
| 01/22 | 20:00 | 52.4         | -1.50        | 3.06          | 52.4         | -1.49        | 3.27          |
| 01/22 | 21:00 | 52.4         | -1.58        | 2.21          | 52.4         | -1.57        | 2.61          |
| 01/22 | 22:00 | 52.4         | -1.58        | 2.08          | 52.3         | -1.58        | 2.09          |
| 01/22 | 23:00 | 52.3         | -1.59        | 2.07          | 52.3         | -1.55        | 2.48          |
| 01/23 | 00:00 | 52.3         | -1.56        | 2.57          | 52.3         | -1.57        | 2.68          |
| 01/23 | 01:00 | 52.4         | -1.59        | 2.52          | 52.4         | -1.60        | 2.04          |
| 01/23 | 02:00 | 52.4         | -1.61        | 2.14          | 52.4         | -1.61        | 2.02          |
| 01/23 | 03:00 | 52.4         | -1.61        | 2.08          | 52.4         | -1.61        | 1.92          |
| 01/23 | 04:00 | 52.4         | -1.58        | 2.22          | 52.4         | -1.57        | 2.50          |
| 01/23 | 05:00 | 52.3         | -1.60        | 1.36          | 52.2         | -1.60        | 1.55          |
| 01/23 | 06:00 | 52.1         | -1.55        | 2.00          | 52.0         | -1.55        | 2.22          |
| 01/23 | 07:00 | 51.8         | -1.52        | 2.50          | 51.7         | -1.52        | 1.96          |
| 01/23 | 08:00 | 51.7         | -1.50        | 3.28          | 51.6         | -1.49        | 3.63          |
| 01/23 | 09:00 | 51.4         | -1.52        | 2.41          | 51.5         | -1.58        | 2.25          |
| 01/23 | 10:00 | 51.4         | -1.55        | 2.68          | 51.4         | -1.55        | 2.44          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/23 | 11:00 | 51.4         | -1.53        | 2.39          | 51.4         | -1.53        | 2.23          |
| 01/23 | 12:00 | 51.6         | -1.52        | 1.76          | 51.6         | -1.52        | 1.78          |
| 01/23 | 13:00 | 51.8         | -1.52        | 1.80          | 51.8         | -1.52        | 1.71          |
| 01/23 | 14:00 | 52.1         | -1.54        | 2.95          | 52.1         | -1.52        | 2.70          |
| 01/23 | 15:00 | 52.4         | -1.56        | 2.08          | 52.4         | -1.57        | 1.68          |
| 01/23 | 16:00 | 52.5         | -1.59        | 1.67          | 52.5         | -1.59        | 1.78          |
| 01/23 | 17:00 | 52.7         | -1.59        | 1.81          | 52.7         | -1.60        | 1.70          |
| 01/23 | 18:00 | 52.7         | -1.59        | 2.18          | 52.7         | -1.57        | 2.19          |
| 01/23 | 19:00 | 52.7         | -1.54        | 2.39          | 52.7         | -1.54        | 2.58          |
| 01/23 | 20:00 | 52.5         | -1.55        | 2.10          | 52.5         | -1.59        | 2.10          |
| 01/23 | 21:00 | 52.4         | -1.53        | 2.27          | 52.4         | -1.54        | 2.18          |
| 01/23 | 22:00 | 52.3         | -1.52        | 2.59          | 52.3         | -1.52        | 2.63          |
| 01/23 | 23:00 | 52.4         | -1.54        | 2.43          | 52.4         | -1.55        | 2.19          |
| 01/24 | 00:00 | 52.4         | -1.55        | 2.33          | 52.4         | -1.56        | 2.25          |
| 01/24 | 01:00 | 52.4         | -1.56        | 2.01          | 52.5         | -1.55        | 2.26          |
| 01/24 | 02:00 | 52.5         | -1.51        | 2.56          | 52.5         | -1.51        | 2.46          |
| 01/24 | 03:00 | 52.5         | -1.55        | 1.89          | 52.5         | -1.55        | 1.90          |
| 01/24 | 04:00 | 52.5         | -1.53        | 1.73          | 52.5         | -1.56        | 1.87          |
| 01/24 | 05:00 | 52.4         | -1.53        | 1.63          | 52.4         | -1.54        | 1.69          |
| 01/24 | 06:00 | 52.3         | -1.54        | 2.37          | 52.2         | -1.54        | 2.64          |
| 01/24 | 07:00 | 52.0         | -1.54        | 2.60          | 51.9         | -1.54        | 2.63          |
| 01/24 | 08:00 | 51.7         | -1.54        | 2.81          | 51.7         | -1.53        | 2.63          |
| 01/24 | 09:00 | 51.6         | -1.57        | 1.83          | 51.5         | -1.60        | 2.44          |
| 01/24 | 10:00 | 51.3         | -1.49        | 3.13          | 51.3         | -1.54        | 2.95          |
| 01/24 | 11:00 | 51.3         | -1.63        | 1.50          | 51.3         | -1.58        | 1.68          |
| 01/24 | 12:00 | 51.5         | -1.63        | 1.38          | 51.5         | -1.64        | 1.38          |
| 01/24 | 13:00 | 51.7         | -1.54        | 2.24          | 51.7         | -1.52        | 1.91          |
| 01/24 | 14:00 | 52.0         | -1.58        | 1.99          | 52.0         | -1.58        | 1.85          |
| 01/24 | 15:00 | 52.3         | -1.55        | 3.02          | 52.3         | -1.56        | 2.89          |
| 01/24 | 16:00 | 52.5         | -1.60        | 2.41          | 52.5         | -1.59        | 2.64          |
| 01/24 | 17:00 | 52.7         | -1.55        | 2.80          | 52.7         | -1.57        | 2.78          |
| 01/24 | 18:00 | 52.7         | -1.57        | 3.05          | 52.8         | -1.55        | 2.41          |
| 01/24 | 19:00 | 52.8         | -1.59        | 2.14          | 52.7         | -1.61        | 1.92          |
| 01/24 | 20:00 | 52.5         | -1.59        | 2.28          | 52.5         | -1.59        | 2.37          |
| 01/24 | 21:00 | 52.5         | -1.57        | 2.27          | 52.4         | -1.57        | 2.28          |
| 01/24 | 22:00 | 52.4         | -1.57        | 2.22          | 52.3         | -1.57        | 2.25          |
| 01/24 | 23:00 | 52.3         | -1.56        | 2.15          | 52.3         | -1.56        | 1.99          |
| 01/25 | 00:00 | 52.3         | -1.57        | 2.35          | 52.3         | -1.57        | 2.12          |
| 01/25 | 01:00 | 52.3         | -1.56        | 2.12          | 52.3         | -1.56        | 1.95          |
| 01/25 | 02:00 | 52.4         | -1.57        | 2.35          | 52.4         | -1.57        | 1.73          |
| 01/25 | 03:00 | 52.5         | -1.60        | 2.07          | 52.5         | -1.59        | 2.14          |
| 01/25 | 04:00 | 52.5         | -1.63        | 1.66          | 52.4         | -1.65        | 1.53          |
| 01/25 | 05:00 | 52.5         | -1.58        | 2.15          | 52.4         | -1.57        | 2.71          |
| 01/25 | 06:00 | 52.4         | -1.63        | 1.93          | 52.3         | -1.62        | 2.27          |
| 01/25 | 07:00 | 52.1         | -1.60        | 2.04          | 52.1         | -1.58        | 2.39          |
| 01/25 | 08:00 | 51.8         | -1.60        | 2.46          | 51.8         | -1.58        | 2.94          |
| 01/25 | 09:00 | 51.6         | -1.61        | 2.15          | 51.6         | -1.59        | 2.67          |
| 01/25 | 10:00 | 51.4         | -1.64        | 1.47          | 51.3         | -1.64        | 1.57          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/25 | 11:00 | 51.3         | -1.57        | 3.65          | 51.3         | -1.53        | 3.32          |
| 01/25 | 12:00 | 51.4         | -1.57        | 2.13          | 51.4         | -1.58        | 2.01          |
| 01/25 | 13:00 | 51.5         | -1.51        | 4.54          | 51.5         | -1.52        | 3.30          |
| 01/25 | 14:00 | 51.8         | -1.59        | 2.51          | 51.9         | -1.59        | 2.60          |
| 01/25 | 15:00 | 52.1         | -1.64        | 1.41          | 52.1         | -1.65        | 1.40          |
| 01/25 | 16:00 | 52.4         | -1.62        | 1.79          | 52.4         | -1.62        | 1.66          |
| 01/25 | 17:00 | 52.6         | -1.63        | 1.86          | 52.7         | -1.65        | 1.79          |
| 01/25 | 18:00 | 52.8         | -1.62        | 2.10          | 52.8         | -1.62        | 2.05          |
| 01/25 | 19:00 | 52.8         | -1.62        | 2.19          | 52.8         | -1.62        | 2.47          |
| 01/25 | 20:00 | 52.7         | -1.60        | 2.62          | 52.6         | -1.60        | 2.33          |
| 01/25 | 21:00 | 52.5         | -1.58        | 2.94          | 52.5         | -1.58        | 3.22          |
| 01/25 | 22:00 | 52.4         | -1.58        | 2.67          | 52.4         | -1.57        | 2.67          |
| 01/25 | 23:00 | 52.3         | -1.61        | 2.15          | 52.3         | -1.60        | 2.05          |
| 01/26 | 00:00 | 52.1         | -1.63        | 1.67          | 52.1         | -1.63        | 2.01          |
| 01/26 | 01:00 | 52.2         | -1.65        | 1.66          | 52.2         | -1.65        | 1.14          |
| 01/26 | 02:00 | 52.4         | -1.65        | 1.80          | 52.3         | -1.64        | 1.94          |
| 01/26 | 03:00 | 52.4         | -1.66        | 1.72          | 52.4         | -1.66        | 1.48          |
| 01/26 | 04:00 | 52.5         | -1.66        | 1.53          | 52.5         | -1.67        | 1.69          |
| 01/26 | 05:00 | 52.6         | -1.65        | 1.72          | 52.5         | -1.66        | 1.45          |
| 01/26 | 06:00 | 52.4         | -1.65        | 2.46          | 52.4         | -1.64        | 1.86          |
| 01/26 | 07:00 | 52.3         | -1.66        | 1.90          | 52.3         | -1.66        | 1.95          |
| 01/26 | 08:00 | 52.0         | -1.68        | 1.30          | 51.9         | -1.68        | 1.33          |
| 01/26 | 09:00 | 51.7         | -1.65        | 1.96          | 51.6         | -1.65        | 1.40          |
| 01/26 | 10:00 | 51.4         | -1.67        | 1.47          | 51.4         | -1.67        | 1.65          |
| 01/26 | 11:00 | 51.3         | -1.64        | 2.40          | 51.3         | -1.65        | 1.97          |
| 01/26 | 12:00 | 51.3         | -1.65        | 1.91          | 51.3         | -1.65        | 2.01          |
| 01/26 | 13:00 | 51.4         | -1.66        | 1.60          | 51.4         | -1.66        | 1.68          |
| 01/26 | 14:00 | 51.7         | -1.67        | 1.56          | 51.7         | -1.67        | 1.43          |
| 01/26 | 15:00 | 51.9         | -1.68        | 1.32          | 52.0         | -1.69        | 1.18          |
| 01/26 | 16:00 | 52.3         | -1.67        | 1.59          | 52.3         | -1.66        | 1.49          |
| 01/26 | 17:00 | 52.5         | -1.67        | 1.47          | 52.5         | -1.67        | 1.28          |
| 01/26 | 18:00 | 52.7         | -1.62        | 2.32          | 52.7         | -1.62        | 2.19          |
| 01/26 | 19:00 | 52.7         | -1.65        | 2.00          | 52.7         | -1.66        | 1.73          |
| 01/26 | 20:00 | 52.7         | -1.65        | 2.36          | 52.6         | -1.64        | 2.47          |
| 01/26 | 21:00 | 52.5         | -1.66        | 2.09          | 52.5         | -1.65        | 2.37          |
| 01/26 | 22:00 | 52.4         | -1.66        | 1.75          | 52.4         | -1.66        | 1.79          |
| 01/26 | 23:00 | 52.2         | -1.66        | 1.91          | 52.2         | -1.66        | 1.91          |
| 01/27 | 00:00 | 52.2         | -1.66        | 1.99          | 52.2         | -1.67        | 1.86          |
| 01/27 | 01:00 | 52.2         | -1.65        | 2.33          | 52.2         | -1.65        | 2.14          |
| 01/27 | 02:00 | 52.3         | -1.67        | 1.98          | 52.3         | -1.67        | 1.98          |
| 01/27 | 03:00 | 52.4         | -1.66        | 2.14          | 52.4         | -1.67        | 1.77          |
| 01/27 | 04:00 | 52.5         | -1.72        | 1.30          | 52.5         | -1.72        | 1.04          |
| 01/27 | 05:00 | 52.6         | -1.73        | 1.04          | 52.6         | -1.73        | 1.14          |
| 01/27 | 06:00 | 52.6         | -1.75        | .70           | 52.5         | -1.75        | .71           |
| 01/27 | 07:00 | 52.4         | -1.75        | .80           | 52.4         | -1.75        | .78           |
| 01/27 | 08:00 | 52.2         | -1.74        | .89           | 52.2         | -1.74        | .89           |
| 01/27 | 09:00 | 51.9         | -1.71        | 1.10          | 51.9         | -1.72        | .91           |
| 01/27 | 10:00 | 51.6         | -1.71        | 1.24          | 51.6         | -1.72        | 1.21          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/27 | 11:00 | 51.4         | -1.71        | .97           | 51.4         | -1.72        | .89           |
| 01/27 | 12:00 | 51.3         | -1.74        | 1.01          | 51.3         | -1.74        | .86           |
| 01/27 | 13:00 | 51.3         | -1.70        | 1.70          | 51.3         | -1.69        | 2.04          |
| 01/27 | 14:00 | 51.6         | -1.71        | 1.01          | 51.6         | -1.71        | 1.14          |
| 01/27 | 15:00 | 51.8         | -1.73        | 1.09          | 51.8         | -1.73        | 1.10          |
| 01/27 | 16:00 | 52.2         | -1.72        | 1.03          | 52.2         | -1.71        | .96           |
| 01/27 | 17:00 | 52.4         | -1.73        | 1.15          | 52.4         | -1.73        | 1.23          |
| 01/27 | 18:00 | 52.6         | -1.70        | 1.10          | 52.6         | -1.69        | 1.03          |
| 01/27 | 19:00 | 52.7         | -1.68        | 1.22          | 52.8         | -1.68        | 1.37          |
| 01/27 | 20:00 | 52.7         | -1.69        | 1.03          | 52.7         | -1.69        | 1.09          |
| 01/27 | 21:00 | 52.7         | -1.69        | 1.12          | 52.7         | -1.69        | 1.01          |
| 01/27 | 22:00 | 52.5         | -1.70        | 1.09          | 52.5         | -1.70        | 1.02          |
| 01/27 | 23:00 | 52.4         | -1.70        | 1.19          | 52.4         | -1.70        | 1.00          |
| 01/28 | 00:00 | 52.2         | -1.70        | 1.09          | 52.2         | -1.70        | 1.05          |
| 01/28 | 01:00 | 52.0         | -1.69        | 1.20          | 52.1         | -1.70        | 1.10          |
| 01/28 | 02:00 | 52.2         | -1.68        | 1.47          | 52.2         | -1.68        | 1.28          |
| 01/28 | 03:00 | 52.3         | -1.69        | 1.34          | 52.4         | -1.69        | 1.33          |
| 01/28 | 04:00 | 52.4         | -1.69        | 1.21          | 52.5         | -1.69        | 1.58          |
| 01/28 | 05:00 | 52.5         | -1.69        | 1.44          | 52.6         | -1.70        | 1.51          |
| 01/28 | 06:00 | 52.6         | -1.72        | 1.24          | 52.6         | -1.72        | 1.49          |
| 01/28 | 07:00 | 52.5         | -1.70        | 1.99          | 52.5         | -1.67        | 2.04          |
| 01/28 | 08:00 | 52.4         | -1.71        | .93           | 52.4         | -1.71        | 1.05          |
| 01/28 | 09:00 | 52.1         | -1.72        | .91           | 52.0         | -1.72        | 1.05          |
| 01/28 | 10:00 | 51.7         | -1.71        | .92           | 51.7         | -1.71        | .89           |
| 01/28 | 11:00 | 51.4         | -1.72        | 1.02          | 51.4         | -1.72        | 1.11          |
| 01/28 | 12:00 | 51.4         | -1.68        | 1.47          | 51.4         | -1.70        | .98           |
| 01/28 | 13:00 | 51.4         | -1.70        | 1.16          | 51.4         | -1.70        | 1.18          |
| 01/28 | 14:00 | 51.5         | -1.70        | 1.17          | 51.5         | -1.70        | 1.22          |
| 01/28 | 15:00 | 51.7         | -1.71        | 1.24          | 51.7         | -1.71        | 1.15          |
| 01/28 | 16:00 | 52.1         | -1.72        | 1.01          | 52.1         | -1.72        | 1.12          |
| 01/28 | 17:00 | 52.4         | -1.71        | .97           | 52.4         | -1.71        | 1.14          |
| 01/28 | 18:00 | 52.6         | -1.70        | 1.11          | 52.6         | -1.70        | 1.11          |
| 01/28 | 19:00 | 52.8         | -1.72        | 1.38          | 52.8         | -1.70        | 1.27          |
| 01/28 | 20:00 | 52.8         | -1.72        | 1.14          | 52.8         | -1.72        | 1.14          |
| 01/28 | 21:00 | 52.8         | -1.71        | 1.08          | 52.7         | -1.71        | 1.06          |
| 01/28 | 22:00 | 52.5         | -1.72        | .98           | 52.5         | -1.72        | .97           |
| 01/28 | 23:00 | 52.4         | -1.71        | .98           | 52.4         | -1.73        | .91           |
| 01/29 | 00:00 | 52.2         | -1.73        | .91           | 52.1         | -1.73        | .91           |
| 01/29 | 01:00 | 52.0         | -1.72        | 1.35          | 52.0         | -1.71        | 1.17          |
| 01/29 | 02:00 | 52.1         | -1.72        | 1.32          | 52.0         | -1.72        | 1.34          |
| 01/29 | 03:00 | 52.2         | -1.72        | 1.31          | 52.2         | -1.72        | 1.24          |
| 01/29 | 04:00 | 52.4         | -1.72        | 1.25          | 52.4         | -1.72        | 1.29          |
| 01/29 | 05:00 | 52.4         | -1.75        | 1.68          | 52.4         | -1.74        | 1.64          |
| 01/29 | 06:00 | 52.6         | -1.70        | 2.16          | 52.6         | -1.70        | 1.95          |
| 01/29 | 07:00 | 52.6         | -1.72        | 1.48          | 52.6         | -1.72        | 1.50          |
| 01/29 | 08:00 | 52.5         | -1.74        | 2.05          | 52.5         | -1.73        | 1.84          |
| 01/29 | 09:00 | 52.3         | -1.71        | 1.86          | 52.3         | -1.71        | 1.89          |
| 01/29 | 10:00 | 52.0         | -1.71        | 1.58          | 51.9         | -1.71        | 1.14          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/29 | 11:00 | 51.7         | -1.70        | 2.12          | 51.7         | -1.69        | 1.85          |
| 01/29 | 12:00 | 51.7         | -1.71        | .98           | 51.6         | -1.71        | 1.16          |
| 01/29 | 13:00 | 51.5         | -1.72        | 1.05          | 51.5         | -1.72        | .90           |
| 01/29 | 14:00 | 51.5         | -1.72        | 1.11          | 51.5         | -1.72        | .97           |
| 01/29 | 15:00 | 51.7         | -1.73        | 1.58          | 51.7         | -1.73        | 1.36          |
| 01/29 | 16:00 | 52.0         | -1.73        | 1.87          | 52.0         | -1.73        | 1.94          |
| 01/29 | 17:00 | 52.3         | -1.73        | 2.23          | 52.3         | -1.72        | 2.53          |
| 01/29 | 18:00 | 52.4         | -1.69        | 2.22          | 52.4         | -1.69        | 2.51          |
| 01/29 | 19:00 | 52.5         | -1.70        | 2.29          | 52.6         | -1.70        | 2.19          |
| 01/29 | 20:00 | 52.6         | -1.71        | 1.52          | 52.6         | -1.71        | 1.65          |
| 01/29 | 21:00 | 52.5         | -1.70        | 2.08          | 52.5         | -1.70        | 2.61          |
| 01/29 | 22:00 | 52.4         | -1.69        | 2.27          | 52.4         | -1.69        | 2.14          |
| 01/29 | 23:00 | 52.3         | -1.68        | 2.47          | 52.2         | -1.68        | 2.02          |
| 01/30 | 00:00 | 52.0         | -1.70        | 1.76          | 52.0         | -1.71        | 2.10          |
| 01/30 | 01:00 | 51.9         | -1.69        | 2.21          | 51.9         | -1.69        | 2.44          |
| 01/30 | 02:00 | 51.9         | -1.71        | 1.50          | 51.9         | -1.71        | 1.74          |
| 01/30 | 03:00 | 51.9         | -1.72        | 1.22          | 51.9         | -1.72        | 1.65          |
| 01/30 | 04:00 | 52.1         | -1.72        | 1.09          | 52.1         | -1.72        | 1.28          |
| 01/30 | 05:00 | 52.3         | -1.70        | 1.58          | 52.3         | -1.70        | 1.66          |
| 01/30 | 06:00 | 52.4         | -1.69        | 1.59          | 52.4         | -1.70        | 1.55          |
| 01/30 | 07:00 | 52.5         | -1.66        | 2.48          | 52.5         | -1.68        | 1.90          |
| 01/30 | 08:00 | 52.5         | -1.68        | 2.20          | 52.5         | -1.69        | 2.02          |
| 01/30 | 09:00 | 52.4         | -1.68        | 2.32          | 52.4         | -1.67        | 3.10          |
| 01/30 | 10:00 | 52.3         | -1.66        | 2.43          | 52.2         | -1.68        | 2.18          |
| 01/30 | 11:00 | 52.0         | -1.69        | 2.13          | 52.0         | -1.69        | 2.09          |
| 01/30 | 12:00 | 51.8         | -1.70        | 1.78          | 51.8         | -1.70        | 1.41          |
| 01/30 | 13:00 | 51.7         | -1.71        | 1.77          | 51.7         | -1.71        | 1.70          |
| 01/30 | 14:00 | 51.7         | -1.72        | 1.23          | 51.7         | -1.72        | 1.58          |
| 01/30 | 15:00 | 51.7         | -1.71        | 1.84          | 51.7         | -1.71        | 1.89          |
| 01/30 | 16:00 | 51.9         | -1.69        | 2.41          | 51.9         | -1.70        | 1.91          |
| 01/30 | 17:00 | 52.1         | -1.71        | 1.37          | 52.1         | -1.71        | 1.64          |
| 01/30 | 18:00 | 52.4         | -1.71        | 1.46          | 52.4         | -1.72        | 1.13          |
| 01/30 | 19:00 | 52.4         | -1.71        | 1.55          | 52.4         | -1.71        | 1.35          |
| 01/30 | 20:00 | 52.4         | -1.71        | 1.56          | 52.4         | -1.70        | 1.86          |
| 01/30 | 21:00 | 52.4         | -1.72        | 1.81          | 52.4         | -1.72        | 1.79          |
| 01/30 | 22:00 | 52.3         | -1.68        | 1.67          | 52.3         | -1.70        | 1.74          |
| 01/30 | 23:00 | 52.1         | -1.65        | 2.45          | 52.1         | -1.65        | 2.52          |
| 01/31 | 00:00 | 51.9         | -1.68        | 2.03          | 51.9         | -1.67        | 2.20          |
| 01/31 | 01:00 | 51.9         | -1.68        | 2.28          | 51.9         | -1.67        | 2.30          |
| 01/31 | 02:00 | 51.8         | -1.69        | 1.89          | 51.7         | -1.69        | 1.86          |
| 01/31 | 03:00 | 51.8         | -1.65        | 2.46          | 51.8         | -1.68        | 1.98          |
| 01/31 | 04:00 | 51.9         | -1.72        | 1.51          | 52.0         | -1.70        | 2.08          |
| 01/31 | 05:00 | 52.2         | -1.74        | 1.35          | 52.2         | -1.73        | 1.51          |
| 01/31 | 06:00 | 52.2         | -1.74        | 1.52          | 52.2         | -1.74        | .97           |
| 01/31 | 07:00 | 52.3         | -1.73        | 1.60          | 52.4         | -1.73        | 1.55          |
| 01/31 | 08:00 | 52.4         | -1.70        | 2.23          | 52.4         | -1.67        | 2.30          |
| 01/31 | 09:00 | 52.4         | -1.68        | 2.35          | 52.4         | -1.68        | 2.00          |
| 01/31 | 10:00 | 52.3         | -1.68        | 2.00          | 52.3         | -1.68        | 2.48          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 01/31 | 11:00 | 52.1         | -1.51        | 4.04          | 52.1         | -1.62        | 2.50          |
| 01/31 | 12:00 | 52.0         | -1.63        | 2.15          | 52.0         | -1.67        | 2.36          |
| 01/31 | 13:00 | 51.9         | -1.59        | 3.69          | 51.9         | -1.59        | 2.22          |
| 01/31 | 14:00 | 51.9         | -1.59        | 2.68          | 51.9         | -1.59        | 3.74          |
| 01/31 | 15:00 | 52.0         | -1.61        | 3.39          | 51.9         | -1.63        | 3.13          |
| 01/31 | 16:00 | 52.1         | -1.63        | 2.83          | 52.1         | -1.65        | 2.81          |
| 01/31 | 17:00 | 52.3         | -1.69        | 2.46          | 52.3         | -1.69        | 2.02          |
| 01/31 | 18:00 | 52.4         | -1.66        | 2.06          | 52.4         | -1.69        | 1.94          |
| 01/31 | 19:00 | 52.5         | -1.66        | 2.26          | 52.5         | -1.68        | 1.76          |
| 01/31 | 20:00 | 52.5         | -1.68        | 1.77          | 52.4         | -1.69        | 1.87          |
| 01/31 | 21:00 | 52.5         | -1.66        | 2.37          | 52.5         | -1.66        | 1.87          |
| 01/31 | 22:00 | 52.4         | -1.66        | 2.94          | 52.4         | -1.65        | 2.93          |
| 01/31 | 23:00 | 52.3         | -1.64        | 3.20          | 52.2         | -1.64        | 3.28          |
| 02/01 | 00:00 | 52.0         | -1.61        | 3.32          | 52.0         | -1.61        | 3.55          |
| 02/01 | 01:00 | 51.8         | -1.69        | 2.16          | 51.7         | -1.63        | 3.76          |
| 02/01 | 02:00 | 51.6         | -1.66        | 2.62          | 51.7         | -1.63        | 3.39          |
| 02/01 | 03:00 | 51.7         | -1.66        | 2.29          | 51.7         | -1.67        | 1.90          |
| 02/01 | 04:00 | 51.8         | -1.67        | 1.80          | 51.8         | -1.67        | 2.20          |
| 02/01 | 05:00 | 51.9         | -1.67        | 2.04          | 51.9         | -1.68        | 1.83          |
| 02/01 | 06:00 | 52.1         | -1.67        | 1.88          | 52.1         | -1.67        | 1.90          |
| 02/01 | 07:00 | 52.3         | -1.69        | 2.11          | 52.3         | -1.70        | 1.73          |
| 02/01 | 08:00 | 52.4         | -1.69        | 1.68          | 52.4         | -1.70        | 1.79          |
| 02/01 | 09:00 | 52.4         | -1.69        | 2.10          | 52.4         | -1.69        | 2.22          |
| 02/01 | 10:00 | 52.4         | -1.62        | 3.26          | 52.5         | -1.61        | 3.63          |
| 02/01 | 11:00 | 52.4         | -1.55        | 4.05          | 52.4         | -1.56        | 4.08          |
| 02/01 | 12:00 | 52.3         | -1.63        | 3.38          | 52.3         | -1.58        | 3.80          |
| 02/01 | 13:00 | 52.2         | -1.66        | 2.30          | 52.2         | -1.67        | 2.22          |
| 02/01 | 14:00 | 52.2         | -1.68        | 2.21          | 52.1         | -1.68        | 2.31          |
| 02/01 | 15:00 | 52.1         | -1.65        | 2.42          | 52.1         | -1.66        | 2.62          |
| 02/01 | 16:00 | 52.2         | -1.71        | 1.89          | 52.2         | -1.70        | 1.94          |
| 02/01 | 17:00 | 52.3         | -1.72        | 1.50          | 52.3         | -1.73        | 1.30          |
| 02/01 | 18:00 | 52.4         | -1.66        | 2.69          | 52.4         | -1.65        | 2.89          |
| 02/01 | 19:00 | 52.5         | -1.64        | 2.89          | 52.4         | -1.64        | 2.79          |
| 02/01 | 20:00 | 52.5         | -1.66        | 2.47          | 52.5         | -1.65        | 2.74          |
| 02/01 | 21:00 | 52.5         | -1.62        | 3.20          | 52.5         | -1.62        | 2.93          |
| 02/01 | 22:00 | 52.4         | -1.60        | 3.49          | 52.4         | -1.62        | 2.92          |
| 02/01 | 23:00 | 52.3         | -1.59        | 3.68          | 52.3         | -1.60        | 3.46          |
| 02/02 | 00:00 | 52.1         | -1.67        | 2.21          | 52.2         | -1.66        | 2.58          |
| 02/02 | 01:00 | 52.0         | -1.68        | 2.53          | 52.0         | -1.67        | 2.50          |
| 02/02 | 02:00 | 51.8         | -1.68        | 2.78          | 51.8         | -1.68        | 2.53          |
| 02/02 | 03:00 | 51.7         | -1.68        | 2.53          | 51.7         | -1.69        | 2.54          |
| 02/02 | 04:00 | 51.7         | -1.67        | 2.44          | 51.7         | -1.67        | 2.25          |
| 02/02 | 05:00 | 51.7         | -1.67        | 2.41          | 51.7         | -1.67        | 1.96          |
| 02/02 | 06:00 | 51.8         | -1.67        | 2.22          | 51.8         | -1.67        | 2.02          |
| 02/02 | 07:00 | 51.9         | -1.71        | 1.51          | 52.0         | -1.70        | 1.80          |
| 02/02 | 08:00 | 52.1         | -1.67        | 2.22          | 52.1         | -1.68        | 2.25          |
| 02/02 | 09:00 | 52.3         | -1.69        | 1.86          | 52.3         | -1.67        | 2.19          |
| 02/02 | 10:00 | 52.4         | -1.67        | 2.45          | 52.4         | -1.67        | 2.42          |



| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 02/02 | 11:00 | 52.4         | -1.68        | 1.91          | 52.4         | -1.68        | 2.01          |
| 02/02 | 12:00 | 52.4         | -1.70        | 1.74          | 52.4         | -1.70        | 2.10          |
| 02/02 | 13:00 | 52.4         | -1.69        | 1.72          | 52.4         | -1.69        | 1.69          |
| 02/02 | 14:00 | 52.4         | -1.71        | 1.46          | 52.4         | -1.71        | 1.42          |
| 02/02 | 15:00 | 52.4         | -1.71        | 1.50          | 52.4         | -1.71        | 1.38          |
| 02/02 | 16:00 | 52.4         | -1.72        | 1.19          | 52.4         | -1.72        | 1.11          |
| 02/02 | 17:00 | 52.4         | -1.70        | 1.52          | 52.4         | -1.69        | 1.46          |
| 02/02 | 18:00 | 52.4         | -1.72        | 1.42          | 52.4         | -1.72        | 1.42          |
| 02/02 | 19:00 | 52.5         | -1.71        | 1.36          | 52.5         | -1.71        | 1.21          |
| 02/02 | 20:00 | 52.5         | -1.73        | 1.15          | 52.5         | -1.72        | 1.31          |
| 02/02 | 21:00 | 52.5         | -1.73        | 1.30          | 52.5         | -1.73        | 1.21          |
| 02/02 | 22:00 | 52.4         | -1.73        | 1.06          | 52.5         | -1.74        | .98           |
| 02/02 | 23:00 | 52.4         | -1.75        | 1.02          | 52.4         | -1.75        | 1.07          |
| 02/03 | 00:00 | 52.3         | -1.72        | 1.22          | 52.3         | -1.72        | 1.21          |
| 02/03 | 01:00 | 52.1         | -1.75        | .98           | 52.1         | -1.75        | .95           |
| 02/03 | 02:00 | 52.0         | -1.75        | 1.08          | 51.9         | -1.76        | 1.09          |
| 02/03 | 03:00 | 51.8         | -1.75        | 1.06          | 51.8         | -1.75        | 1.16          |
| 02/03 | 04:00 | 51.7         | -1.73        | 1.15          | 51.7         | -1.73        | 1.08          |
| 02/03 | 05:00 | 51.7         | -1.73        | 1.22          | 51.7         | -1.73        | 1.13          |
| 02/03 | 06:00 | 51.7         | -1.76        | .96           | 51.7         | -1.76        | .94           |
| 02/03 | 07:00 | 51.7         | -1.75        | 1.20          | 51.7         | -1.75        | 1.15          |
| 02/03 | 08:00 | 51.8         | -1.74        | 1.29          | 51.8         | -1.74        | 1.14          |
| 02/03 | 09:00 | 51.9         | -1.75        | 1.15          | 52.0         | -1.75        | 1.16          |
| 02/03 | 10:00 | 52.1         | -1.76        | 1.05          | 52.1         | -1.76        | 1.07          |
| 02/03 | 11:00 | 52.2         | -1.76        | 1.12          | 52.3         | -1.76        | 1.03          |
| 02/03 | 12:00 | 52.3         | -1.76        | 1.09          | 52.3         | -1.77        | 1.09          |
| 02/03 | 13:00 | 52.5         | -1.77        | 1.05          | 52.4         | -1.78        | 1.07          |
| 02/03 | 14:00 | 52.5         | -1.75        | 1.15          | 52.4         | -1.76        | 1.13          |
| 02/03 | 15:00 | 52.5         | -1.76        | 1.04          | 52.4         | -1.77        | 1.03          |
| 02/03 | 16:00 | 52.4         | -1.77        | 1.12          | 52.4         | -1.77        | .97           |
| 02/03 | 17:00 | 52.5         | -1.74        | 1.07          | 52.4         | -1.75        | 1.23          |
| 02/03 | 18:00 | 52.6         | -1.73        | 1.00          | 52.5         | -1.77        | .86           |
| 02/03 | 19:00 | 52.6         | -1.72        | 1.18          | 52.5         | -1.71        | 1.24          |
| 02/03 | 20:00 | 52.5         | -1.74        | 1.42          | 52.5         | -1.74        | 1.21          |
| 02/03 | 21:00 | 52.5         | -1.75        | 1.12          | 52.5         | -1.75        | 1.15          |
| 02/03 | 22:00 | 52.5         | -1.74        | 1.08          | 52.4         | -1.75        | 1.02          |
| 02/03 | 23:00 | 52.5         | -1.75        | 1.03          | 52.4         | -1.75        | .91           |
| 02/04 | 00:00 | 52.4         | -1.76        | .93           | 52.3         | -1.77        | 1.06          |
| 02/04 | 01:00 | 52.3         | -1.72        | 1.03          | 52.2         | -1.74        | 1.12          |
| 02/04 | 02:00 | 52.1         | -1.73        | 1.13          | 52.1         | -1.71        | 1.06          |
| 02/04 | 03:00 | 51.9         | -1.73        | 1.05          | 51.9         | -1.72        | 1.10          |
| 02/04 | 04:00 | 51.9         | -1.74        | .99           | 51.7         | -1.75        | 1.10          |
| 02/04 | 05:00 | 51.8         | -1.72        | 1.30          | 51.7         | -1.72        | 1.08          |
| 02/04 | 06:00 | 51.7         | -1.70        | 1.33          | 51.7         | -1.71        | 1.27          |
| 02/04 | 07:00 | 51.7         | -1.74        | 1.00          | 51.6         | -1.77        | .99           |
| 02/04 | 08:00 | 51.7         | -1.76        | .84           | 51.7         | -1.76        | .83           |
| 02/04 | 09:00 | 51.8         | -1.76        | .98           | 51.7         | -1.77        | .91           |
| 02/04 | 10:00 | 51.9         | -1.75        | 1.19          | 51.8         | -1.76        | .96           |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 02/04 | 11:00 | 52.1         | -1.73        | .86           | 52.0         | -1.75        | .82           |
| 02/04 | 12:00 | 52.4         | -1.73        | .78           | 52.4         | -1.73        | .78           |
| 02/04 | 13:00 | 52.5         | -1.74        | .78           | 52.4         | -1.78        | .74           |
| 02/04 | 14:00 | 52.6         | -1.73        | .98           | 52.6         | -1.73        | .94           |
| 02/04 | 15:00 | 52.6         | -1.76        | .93           | 52.6         | -1.75        | 1.09          |
| 02/04 | 16:00 | 52.7         | -1.75        | 1.03          | 52.6         | -1.75        | 1.11          |
| 02/04 | 17:00 | 52.7         | -1.76        | 1.21          | 52.6         | -1.77        | .88           |
| 02/04 | 18:00 | 52.6         | -1.76        | 1.01          | 52.5         | -1.77        | .95           |
| 02/04 | 19:00 | 52.6         | -1.75        | 1.01          | 52.6         | -1.75        | .91           |
| 02/04 | 20:00 | 52.5         | -1.73        | .95           | 52.5         | -1.73        | 1.03          |
| 02/04 | 21:00 | 52.5         | -1.75        | 1.15          | 52.5         | -1.75        | 1.10          |
| 02/04 | 22:00 | 52.5         | -1.73        | .95           | 52.4         | -1.75        | 1.05          |
| 02/04 | 23:00 | 52.4         | -1.74        | .90           | 52.3         | -1.75        | .80           |
| 02/05 | 00:00 | 52.4         | -1.74        | .78           | 52.3         | -1.76        | .69           |
| 02/05 | 01:00 | 52.4         | -1.74        | .83           | 52.4         | -1.73        | .80           |
| 02/05 | 02:00 | 52.2         | -1.74        | .87           | 52.2         | -1.73        | 1.01          |
| 02/05 | 03:00 | 52.1         | -1.74        | 1.02          | 52.1         | -1.74        | 1.00          |
| 02/05 | 04:00 | 51.9         | -1.74        | 1.19          | 51.8         | -1.75        | 1.04          |
| 02/05 | 05:00 | 51.9         | -1.74        | 1.31          | 51.8         | -1.74        | 1.24          |
| 02/05 | 06:00 | 51.8         | -1.75        | 1.18          | 51.7         | -1.76        | 1.25          |
| 02/05 | 07:00 | 51.6         | -1.75        | 1.14          | 51.6         | -1.75        | 1.12          |
| 02/05 | 08:00 | 51.5         | -1.75        | 1.13          | 51.5         | -1.75        | 1.25          |
| 02/05 | 09:00 | 51.5         | -1.73        | 1.09          | 51.4         | -1.74        | 1.18          |
| 02/05 | 10:00 | 51.5         | -1.73        | 1.08          | 51.5         | -1.73        | 1.18          |
| 02/05 | 11:00 | 51.7         | -1.73        | .99           | 51.7         | -1.73        | 1.28          |
| 02/05 | 12:00 | 51.8         | -1.74        | .99           | 51.7         | -1.75        | .93           |
| 02/05 | 13:00 | 52.1         | -1.76        | 1.11          | 52.2         | -1.76        | .92           |
| 02/05 | 14:00 | 52.4         | -1.75        | .95           | 52.5         | -1.74        | .94           |
| 02/05 | 15:00 | 52.6         | -1.72        | 1.11          | 52.5         | -1.73        | 1.01          |
| 02/05 | 16:00 | 52.9         | -1.76        | .95           | 52.8         | -1.76        | .88           |
| 02/05 | 17:00 | 52.9         | -1.76        | .95           | 52.9         | -1.77        | .84           |
| 02/05 | 18:00 | 52.9         | -1.73        | .95           | 52.9         | -1.73        | .99           |
| 02/05 | 19:00 | 52.7         | -1.72        | 1.15          | 52.7         | -1.72        | 1.06          |
| 02/05 | 20:00 | 52.6         | -1.71        | 1.31          | 52.5         | -1.73        | 1.11          |
| 02/05 | 21:00 | 52.5         | -1.72        | 1.01          | 52.4         | -1.74        | 1.02          |
| 02/05 | 22:00 | 52.5         | -1.74        | .98           | 52.5         | -1.73        | .91           |
| 02/05 | 23:00 | 52.5         | -1.75        | .74           | 52.3         | -1.76        | .76           |
| 02/06 | 00:00 | 52.5         | -1.77        | .87           | 52.5         | -1.76        | .80           |
| 02/06 | 01:00 | 52.4         | -1.76        | .81           | 52.4         | -1.76        | .70           |
| 02/06 | 02:00 | 52.3         | -1.76        | .93           | 52.4         | -1.75        | .79           |
| 02/06 | 03:00 | 52.4         | -1.73        | 1.08          | 52.3         | -1.73        | .96           |
| 02/06 | 04:00 | 52.3         | -1.76        | 1.04          | 52.3         | -1.75        | .97           |
| 02/06 | 05:00 | 52.1         | -1.74        | 1.00          | 52.1         | -1.74        | 1.16          |
| 02/06 | 06:00 | 51.8         | -1.74        | 1.21          | 51.7         | -1.75        | 1.29          |
| 02/06 | 07:00 | 51.6         | -1.75        | 1.73          | 51.7         | -1.75        | 1.19          |
| 02/06 | 08:00 | 51.6         | -1.75        | 1.07          | 51.5         | -1.75        | 1.12          |
| 02/06 | 09:00 | 51.4         | -1.74        | 1.10          | 51.4         | -1.74        | 1.05          |
| 02/06 | 10:00 | 51.3         | -1.75        | .98           | 51.3         | -1.74        | .82           |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 02/06 | 11:00 | 51.4         | -1.74        | .92           | 51.3         | -1.75        | .80           |
| 02/06 | 12:00 | 51.6         | -1.75        | .87           | 51.5         | -1.76        | .78           |
| 02/06 | 13:00 | 51.8         | -1.76        | .81           | 51.7         | -1.77        | .80           |
| 02/06 | 14:00 | 52.2         | -1.75        | .90           | 52.1         | -1.75        | .99           |
| 02/06 | 15:00 | 52.5         | -1.73        | .96           | 52.5         | -1.74        | .99           |
| 02/06 | 16:00 | 52.7         | -1.75        | .92           | 52.8         | -1.74        | .88           |
| 02/06 | 17:00 | 53.0         | -1.76        | .85           | 52.9         | -1.77        | .84           |
| 02/06 | 18:00 | 53.0         | -1.75        | 1.01          | 52.9         | -1.77        | 1.14          |
| 02/06 | 19:00 | 52.9         | -1.73        | 1.35          | 52.8         | -1.73        | 1.42          |
| 02/06 | 20:00 | 52.7         | -1.75        | 1.06          | 52.7         | -1.74        | 1.05          |
| 02/06 | 21:00 | 52.5         | -1.74        | 1.23          | 52.4         | -1.75        | 1.31          |
| 02/06 | 22:00 | 52.4         | -1.75        | 1.40          | 52.5         | -1.75        | 1.22          |
| 02/06 | 23:00 | 52.4         | -1.75        | 1.42          | 52.3         | -1.76        | 1.29          |
| 02/07 | 00:00 | 52.4         | -1.74        | 1.47          | 52.4         | -1.74        | 1.30          |
| 02/07 | 01:00 | 52.4         | -1.77        | .80           | 52.3         | -1.78        | .81           |
| 02/07 | 02:00 | 52.5         | -1.76        | .96           | 52.5         | -1.76        | 1.20          |
| 02/07 | 03:00 | 52.5         | -1.76        | .80           | 52.5         | -1.77        | .77           |
| 02/07 | 04:00 | 52.4         | -1.78        | .78           | 52.4         | -1.78        | .75           |
| 02/07 | 05:00 | 52.4         | -1.77        | .79           | 52.3         | -1.78        | .79           |
| 02/07 | 06:00 | 52.2         | -1.76        | .98           | 52.2         | -1.76        | .99           |
| 02/07 | 07:00 | 51.9         | -1.74        | 1.25          | 51.9         | -1.74        | 1.18          |
| 02/07 | 08:00 | 51.7         | -1.74        | 2.00          | 51.5         | -1.76        | 1.27          |
| 02/07 | 09:00 | 51.5         | -1.77        | .77           | 51.4         | -1.77        | 1.02          |
| 02/07 | 10:00 | 51.3         | -1.77        | .84           | 51.2         | -1.78        | .83           |
| 02/07 | 11:00 | 51.3         | -1.76        | .86           | 51.2         | -1.77        | .77           |
| 02/07 | 12:00 | 51.5         | -1.75        | .84           | 51.5         | -1.75        | .94           |
| 02/07 | 13:00 | 51.8         | -1.76        | .88           | 51.8         | -1.75        | .89           |
| 02/07 | 14:00 | 52.1         | -1.76        | .77           | 52.2         | -1.76        | .73           |
| 02/07 | 15:00 | 52.4         | -1.76        | .96           | 52.4         | -1.76        | 1.10          |
| 02/07 | 16:00 | 52.6         | -1.73        | 1.33          | 52.5         | -1.74        | 1.18          |
| 02/07 | 17:00 | 52.8         | -1.73        | 1.26          | 52.8         | -1.73        | 1.28          |
| 02/07 | 18:00 | 52.8         | -1.73        | 1.86          | 52.9         | -1.72        | 1.94          |
| 02/07 | 19:00 | 52.9         | -1.71        | 2.28          | 52.8         | -1.67        | 2.26          |
| 02/07 | 20:00 | 52.7         | -1.69        | 1.86          | 52.6         | -1.70        | 1.77          |
| 02/07 | 21:00 | 52.5         | -1.69        | 2.02          | 52.4         | -1.70        | 1.93          |
| 02/07 | 22:00 | 52.4         | -1.70        | 1.94          | 52.3         | -1.71        | 1.77          |
| 02/07 | 23:00 | 52.2         | -1.70        | 1.98          | 52.1         | -1.70        | 1.90          |
| 02/08 | 00:00 | 52.3         | -1.68        | 1.88          | 52.3         | -1.67        | 1.74          |
| 02/08 | 01:00 | 52.3         | -1.71        | 1.93          | 52.3         | -1.68        | 1.90          |
| 02/08 | 02:00 | 52.4         | -1.66        | 2.46          | 52.5         | -1.65        | 1.84          |
| 02/08 | 03:00 | 52.5         | -1.65        | 2.28          | 52.4         | -1.66        | 2.36          |
| 02/08 | 04:00 | 52.6         | -1.72        | 1.52          | 52.5         | -1.72        | 1.66          |
| 02/08 | 05:00 | 52.6         | -1.76        | .79           | 52.6         | -1.77        | .76           |
| 02/08 | 06:00 | 52.5         | -1.76        | 1.04          | 52.5         | -1.76        | 1.08          |
| 02/08 | 07:00 | 52.3         | -1.65        | 2.37          | 52.3         | -1.68        | 1.48          |
| 02/08 | 08:00 | 51.9         | -1.76        | .77           | 51.8         | -1.75        | .78           |
| 02/08 | 09:00 | 51.6         | -1.75        | .97           | 51.6         | -1.75        | .92           |
| 02/08 | 10:00 | 51.4         | -1.74        | 1.08          | 51.3         | -1.75        | .96           |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 02/08 | 11:00 | 51.3         | -1.77        | 1.01          | 51.1         | -1.78        | .94           |
| 02/08 | 12:00 | 51.3         | -1.78        | 1.06          | 51.4         | -1.77        | 1.06          |
| 02/08 | 13:00 | 51.6         | -1.78        | .93           | 51.6         | -1.78        | 1.03          |
| 02/08 | 14:00 | 51.9         | -1.77        | 1.09          | 51.9         | -1.77        | 1.07          |
| 02/08 | 15:00 | 52.3         | -1.74        | 1.23          | 52.3         | -1.74        | 1.25          |
| 02/08 | 16:00 | 52.4         | -1.75        | 1.63          | 52.4         | -1.76        | 1.34          |
| 02/08 | 17:00 | 52.6         | -1.78        | 1.23          | 52.6         | -1.78        | 1.18          |
| 02/08 | 18:00 | 52.7         | -1.75        | 1.26          | 52.7         | -1.79        | .93           |
| 02/08 | 19:00 | 52.8         | -1.79        | .88           | 52.7         | -1.80        | .90           |
| 02/08 | 20:00 | 52.6         | -1.75        | 1.01          | 52.5         | -1.77        | .99           |
| 02/08 | 21:00 | 52.5         | -1.72        | 1.58          | 52.4         | -1.73        | 1.75          |
| 02/08 | 22:00 | 52.2         | -1.71        | 1.91          | 52.2         | -1.71        | 1.84          |
| 02/08 | 23:00 | 52.1         | -1.69        | 1.89          | 52.0         | -1.70        | 1.85          |
| 02/09 | 00:00 | 52.1         | -1.72        | 1.56          | 52.1         | -1.72        | 1.51          |
| 02/09 | 01:00 | 52.2         | -1.77        | 1.03          | 52.2         | -1.77        | 1.06          |
| 02/09 | 02:00 | 52.3         | -1.76        | 1.18          | 52.3         | -1.77        | 1.17          |
| 02/09 | 03:00 | 52.5         | -1.78        | 1.16          | 52.6         | -1.77        | 1.19          |
| 02/09 | 04:00 | 52.7         | -1.77        | 1.04          | 52.7         | -1.78        | 1.04          |
| 02/09 | 05:00 | 52.8         | -1.77        | 1.10          | 52.8         | -1.76        | 1.09          |
| 02/09 | 06:00 | 52.8         | -1.76        | 1.09          | 52.8         | -1.77        | 1.06          |
| 02/09 | 07:00 | 52.5         | -1.73        | 1.41          | 52.4         | -1.74        | 1.26          |
| 02/09 | 08:00 | 52.3         | -1.76        | 1.33          | 52.2         | -1.75        | 1.62          |
| 02/09 | 09:00 | 52.0         | -1.74        | 1.47          | 52.0         | -1.74        | 1.42          |
| 02/09 | 10:00 | 51.7         | -1.73        | 1.15          | 51.7         | -1.74        | 1.14          |
| 02/09 | 11:00 | 51.5         | -1.77        | 1.41          | 51.5         | -1.77        | 1.27          |
| 02/09 | 12:00 | 51.6         | -1.78        | 1.16          | 51.5         | -1.79        | 1.08          |
| 02/09 | 13:00 | 53.3         | -1.78        | 1.15          | 53.6         | -1.78        | 1.01          |
| 02/09 | 14:00 | 54.3         | -1.79        | .99           | 54.2         | -1.79        | 1.10          |
| 02/09 | 15:00 | 53.7         | -1.79        | 1.06          | 53.6         | -1.80        | 1.08          |
| 02/09 | 16:00 | 53.2         | -1.79        | 1.18          | 53.2         | -1.79        | 1.18          |
| 02/09 | 17:00 | 52.8         | -1.79        | 1.07          | 52.8         | -1.79        | 1.13          |
| 02/09 | 18:00 | 52.9         | -1.78        | 1.23          | 52.8         | -1.79        | 1.27          |
| 02/09 | 19:00 | 52.8         | -1.77        | 1.18          | 52.8         | -1.77        | 1.25          |
| 02/09 | 20:00 | 52.7         | -1.77        | 1.29          | 52.7         | -1.77        | 1.33          |
| 02/09 | 21:00 | 52.5         | -1.77        | 1.40          | 52.5         | -1.76        | 1.24          |
| 02/09 | 22:00 | 52.2         | -1.77        | 1.21          | 52.3         | -1.76        | 1.40          |
| 02/09 | 23:00 | 52.2         | -1.77        | 1.33          | 52.2         | -1.77        | 1.21          |
| 02/10 | 00:00 | 52.1         | -1.76        | 1.19          | 52.0         | -1.77        | 1.22          |
| 02/10 | 01:00 | 52.1         | -1.77        | 1.18          | 52.0         | -1.78        | 1.13          |
| 02/10 | 02:00 | 52.2         | -1.75        | 1.72          | 52.2         | -1.76        | 1.67          |
| 02/10 | 03:00 | 52.5         | -1.75        | 1.59          | 52.5         | -1.75        | 1.38          |
| 02/10 | 04:00 | 52.6         | -1.76        | 1.18          | 52.5         | -1.77        | 1.19          |
| 02/10 | 05:00 | 52.8         | -1.76        | 1.31          | 52.8         | -1.76        | 1.30          |
| 02/10 | 06:00 | 52.8         | -1.75        | 1.49          | 52.8         | -1.75        | 1.40          |
| 02/10 | 07:00 | 52.7         | -1.77        | 1.11          | 52.7         | -1.77        | 1.11          |
| 02/10 | 08:00 | 52.5         | -1.77        | .99           | 52.4         | -1.78        | 1.01          |
| 02/10 | 09:00 | 52.0         | -1.76        | 1.50          | 52.1         | -1.75        | 1.36          |
| 02/10 | 10:00 | 51.8         | -1.77        | 1.46          | 51.8         | -1.77        | 1.30          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 02/10 | 11:00 | 51.5         | -1.78        | 1.13          | 51.5         | -1.78        | 1.17          |
| 02/10 | 12:00 | 51.3         | -1.78        | 1.08          | 51.3         | -1.78        | 1.12          |
| 02/10 | 13:00 | 51.4         | -1.79        | 1.06          | 51.3         | -1.80        | 1.03          |
| 02/10 | 14:00 | 51.6         | -1.77        | 1.12          | 51.6         | -1.79        | 1.08          |
| 02/10 | 15:00 | 51.8         | -1.78        | 1.04          | 51.7         | -1.80        | .98           |
| 02/10 | 16:00 | 52.2         | -1.79        | .95           | 52.1         | -1.79        | 1.01          |
| 02/10 | 17:00 | 52.5         | -1.78        | 1.00          | 52.4         | -1.79        | .99           |
| 02/10 | 18:00 | 52.5         | -1.77        | 1.22          | 52.4         | -1.78        | 1.16          |
| 02/10 | 19:00 | 52.7         | -1.77        | 1.20          | 52.7         | -1.77        | 1.17          |
| 02/10 | 20:00 | 52.5         | -1.78        | 1.22          | 52.5         | -1.78        | 1.25          |
| 02/10 | 21:00 | 52.5         | -1.78        | .89           | 52.4         | -1.80        | 1.03          |
| 02/10 | 22:00 | 52.1         | -1.78        | 1.03          | 52.0         | -1.78        | 1.27          |
| 02/10 | 23:00 | 51.9         | -1.78        | .92           | 51.8         | -1.79        | .97           |
| 02/11 | 00:00 | 51.8         | -1.77        | 1.26          | 51.9         | -1.77        | 1.20          |
| 02/11 | 01:00 | 51.9         | -1.77        | 1.26          | 51.7         | -1.78        | 1.12          |
| 02/11 | 02:00 | 51.9         | -1.78        | 1.23          | 52.0         | -1.77        | 1.14          |
| 02/11 | 03:00 | 52.2         | -1.77        | 1.19          | 52.2         | -1.78        | 1.04          |
| 02/11 | 04:00 | 52.4         | -1.77        | 1.12          | 52.5         | -1.77        | 1.08          |
| 02/11 | 05:00 | 52.7         | -1.78        | 1.13          | 52.7         | -1.78        | 1.07          |
| 02/11 | 06:00 | 52.8         | -1.78        | 1.16          | 52.8         | -1.78        | 1.11          |
| 02/11 | 07:00 | 52.8         | -1.78        | 1.07          | 52.7         | -1.79        | 1.21          |
| 02/11 | 08:00 | 52.6         | -1.79        | .97           | 52.6         | -1.79        | 1.08          |
| 02/11 | 09:00 | 52.3         | -1.78        | 1.04          | 52.3         | -1.78        | 1.17          |
| 02/11 | 10:00 | 52.0         | -1.77        | 1.17          | 51.8         | -1.78        | 1.12          |
| 02/11 | 11:00 | 51.7         | -1.76        | 1.11          | 51.7         | -1.76        | 1.15          |
| 02/11 | 12:00 | 51.5         | -1.77        | 1.17          | 51.4         | -1.77        | 1.07          |
| 02/11 | 13:00 | 51.3         | -1.78        | 1.07          | 51.4         | -1.77        | 1.10          |
| 02/11 | 14:00 | 51.5         | -1.77        | 1.09          | 51.4         | -1.78        | 1.15          |
| 02/11 | 15:00 | 51.7         | -1.77        | 1.13          | 51.7         | -1.78        | 1.28          |
| 02/11 | 16:00 | 52.0         | -1.77        | 1.11          | 52.1         | -1.77        | 1.22          |
| 02/11 | 17:00 | 52.4         | -1.77        | 1.10          | 52.4         | -1.77        | 1.06          |
| 02/11 | 18:00 | 52.6         | -1.77        | 1.08          | 52.5         | -1.79        | .97           |
| 02/11 | 19:00 | 52.6         | -1.77        | 1.12          | 52.6         | -1.77        | .94           |
| 02/11 | 20:00 | 52.5         | -1.77        | .97           | 52.5         | -1.77        | .89           |
| 02/11 | 21:00 | 52.4         | -1.78        | .99           | 52.3         | -1.78        | 1.06          |
| 02/11 | 22:00 | 52.2         | -1.78        | .95           | 52.2         | -1.77        | .96           |
| 02/11 | 23:00 | 51.9         | -1.77        | 1.05          | 51.9         | -1.77        | 1.25          |
| 02/12 | 00:00 | 51.8         | -1.78        | 1.04          | 51.8         | -1.78        | 1.09          |
| 02/12 | 01:00 | 51.7         | -1.78        | 1.15          | 51.7         | -1.78        | 1.11          |
| 02/12 | 02:00 | 51.8         | -1.78        | 1.04          | 51.8         | -1.79        | .95           |
| 02/12 | 03:00 | 52.0         | -1.78        | .91           | 51.9         | -1.79        | 1.01          |
| 02/12 | 04:00 | 52.2         | -1.77        | 1.11          | 52.2         | -1.77        | 1.07          |
| 02/12 | 05:00 | 52.5         | -1.77        | 1.23          | 52.5         | -1.77        | 1.10          |
| 02/12 | 06:00 | 52.6         | -1.76        | 1.11          | 52.5         | -1.77        | 1.08          |
| 02/12 | 07:00 | 52.7         | -1.77        | 1.21          | 52.7         | -1.78        | 1.19          |
| 02/12 | 08:00 | 52.7         | -1.76        | 1.19          | 52.7         | -1.76        | 1.19          |
| 02/12 | 09:00 | 52.5         | -1.76        | 1.18          | 52.4         | -1.77        | 1.20          |
| 02/12 | 10:00 | 52.3         | -1.76        | 1.18          | 52.2         | -1.77        | 1.25          |

| Date  | Time  | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] | Depth<br>[m] | Temp<br>[°C] | Chl<br>[ug/l] |
|-------|-------|--------------|--------------|---------------|--------------|--------------|---------------|
| 02/12 | 11:00 | 51.9         | -1.77        | 1.09          | 51.9         | -1.77        | 1.10          |
| 02/12 | 12:00 | 51.7         | -1.78        | 1.10          | 51.7         | -1.78        | 1.05          |
| 02/12 | 13:00 | 51.6         | -1.77        | 1.04          | 51.6         | -1.78        | 1.12          |
| 02/12 | 14:00 | 51.6         | -1.78        | 1.10          | 51.6         | -1.78        | .96           |
| 02/12 | 15:00 | 51.6         | -1.77        | 1.16          | 51.7         | -1.77        | 1.09          |
| 02/12 | 16:00 | 51.9         | -1.76        | 1.32          | 51.8         | -1.77        | 1.11          |
| 02/12 | 17:00 | 52.2         | -1.76        | 1.23          | 52.2         | -1.76        | 1.36          |
| 02/12 | 18:00 | 52.5         | -1.74        | 1.37          | 52.5         | -1.74        | 1.41          |
| 02/12 | 19:00 | 52.6         | -1.74        | 1.47          | 52.6         | -1.74        | 1.49          |
| 02/12 | 20:00 | 52.5         | -1.75        | 1.66          | 52.4         | -1.75        | 1.70          |
| 02/12 | 21:00 | 52.5         | -1.74        | 1.81          | 52.4         | -1.75        | 1.64          |
| 02/12 | 22:00 | 52.3         | -1.75        | 1.47          | 52.2         | -1.76        | 1.43          |
| 02/12 | 23:00 | 52.0         | -1.77        | 1.22          | 51.9         | -1.78        | 1.33          |
| 02/13 | 00:00 | 51.8         | -1.77        | 1.25          | 51.7         | -1.78        | 1.09          |
| 02/13 | 01:00 | 51.7         | -1.77        | 1.01          | 51.7         | -1.77        | 1.12          |
| 02/13 | 02:00 | 51.7         | -1.77        | .97           | 51.6         | -1.78        | 1.13          |
| 02/13 | 03:00 | 51.9         | -1.76        | 1.21          | 51.9         | -1.76        | 1.14          |
| 02/13 | 04:00 | 52.2         | -1.76        | 1.32          | 52.1         | -1.77        | 1.14          |
| 02/13 | 05:00 | 52.4         | -1.75        | 1.80          | 52.4         | -1.75        | 1.37          |
| 02/13 | 06:00 | 52.4         | -1.77        | 1.37          | 52.4         | -1.76        | 1.31          |
| 02/13 | 07:00 | 52.6         | -1.74        | 1.37          | 52.5         | -1.75        | 1.71          |
| 02/13 | 08:00 | 52.5         | -1.75        | 1.42          | 52.5         | -1.75        | 1.67          |
| 02/13 | 09:00 | 52.5         | -1.75        | 1.39          | 52.5         | -1.75        | 1.29          |
| 02/13 | 10:00 | 52.3         | -1.74        | 1.49          | 52.2         | -1.75        | 1.56          |
| 02/13 | 11:00 | 52.0         | -1.76        | 1.36          | 52.0         | -1.75        | 1.41          |
| 02/13 | 12:00 | 51.8         | -1.73        | 1.62          | 51.8         | -1.73        | 1.54          |
| 02/13 | 13:00 | 51.7         | -1.75        | 1.63          | 51.6         | -1.76        | 3.01          |
| 02/13 | 14:00 | -7.8         | -.06         | .53           | -7.9         | .42          | .73           |
| 02/13 | 15:00 | -8.1         | 2.80         | .88           | -8.3         | 3.17         | 3.49          |
| 02/13 | 16:00 | -8.4         | 2.67         | 5.85          | -8.5         | 2.49         | 1.00          |
| 02/13 | 17:00 | -8.3         | 1.21         | .07           | -8.4         | .98          | .07           |