HAVSTOVAN
FAROE MARINE RESEARCH INSTITUTE

THOR ADCP Deployments in Faroese Waters 2010 - 2011

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Contents

Introduction

This report documents nine ADCP deployments in Faroese waters in 2010 – 2011. Aanderaa Current Meters are included in two, and Microcats in two of the deployments. The deployments are listed in Table 1. Each deployment is identified by an 8-character label where the first four characters indicate the site (Fig. 1) while the last characters show year and month of deployment. Most of the moorings were located at standard (Nordic WOCE) sites.

At sites NWFB, NWFC, NWNB, NWNG, NWSC and NWSY, 75 kHz RDI ADCP's were placed in the top of single-point moorings. At sites NWNA, NWNE, and NWSX, "shallow-water" rigs were used, where a RDI ADCP was placed on the bottom inside a protective aluminium frame. At sites NWSX and NWSY the instruments were 75 kHz Long Rangers. The other ADCP's were all 75 kHz RDI Broadband ADCP 's except at sites NWNA and NWNE where the instruments were 150 kHz Broadbands. For each deployment, the ADCP measures the velocity averaged over a number (14 – 61) of depth layers ("bins") which were 25 m for all rigs except for the deployments NWNA, NWSX and NWSY where the depth layers were 10 m. At 20 minute intervals, the ADCP records the data from all bins into "ensembles". In all deployments, except NWSX and NWSY, each ensemble is based only upon one ping. In deployment NWSX and NWSY, each ensemble is based upon 10 pings. At sites NWNG and NWSC, an Aanderaa current meter was on the mooring line below the ADCP. The Aanderaa current meters recorded speed, direction and temperature at 60 minute intervals. At deployments NWFB and NWSX, a Microcat was attached to the ADCP. The Microcat recorded temperature, salinity and pressure every 10 minutes.

At NWFB, the data for the uppermost bins were affected by some instrumental malfunction. Therefore only the deepest 16 bins are included in this record.
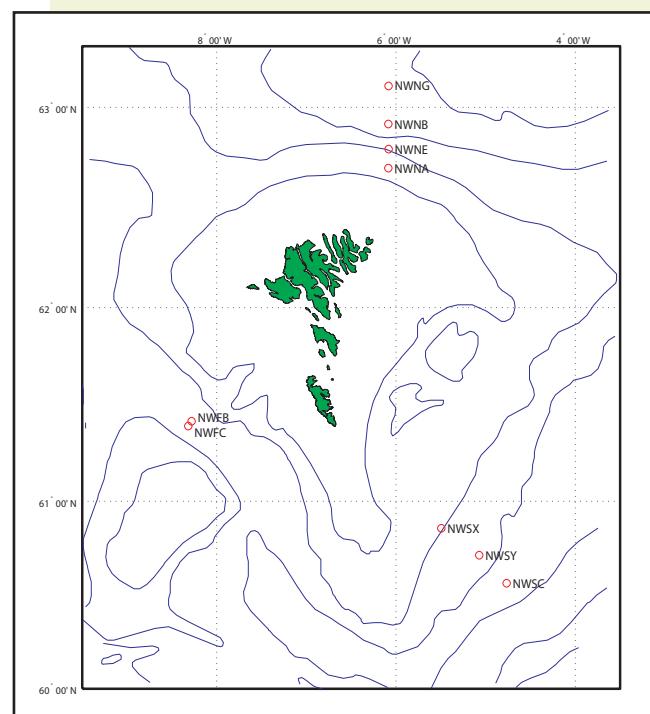
Figure 1. ADCP mooring sites in Faroese waters 2010-2011 superposed on a map with the bottom topography. Each site is indicated by a four-letter label.

Table 1. List of deployments with information on duration and range of valid data. All depths are in meters. The last column indicates whether Aanderaa or Microcat instruments were on the mooring.

```
           |Bottom|Int.|                       | Dur.| No |          |
Deployment| depth|min.|   Valid data period   | days|bins|Depthrange| Comments
-----------------------------------------------------------------------------------
NWFB1006  |  814 | 20 | 2010 06 05-2011 05 23 | 351 | 16 | 398- 773 | Microcat
NWFC1006  |  839 | 20 | 2010 06 05-2011 05 23 | 351 | 23 | 248- 798 |
NWNA1006  |  298 | 20 | 2010 06 04-2011 05 20 | 350 | 24 |  51- 281 |
NWNB1006  |  961 | 20 | 2010 06 04-2011 05 20 | 350 | 23 | 122- 672 |
NWNE1006  |  456 | 20 | 2010 06 04-2011 05 20 | 350 | 14 |  99- 424 |
NWNG1006  | 1796 | 20 | 2010 06 04-2011 05 20 | 350 | 22 |  68- 593 | Aanderaa
NWSC1006  | 1066 | 20 | 2010 06 05-2011 05 21 | 350 | 20 | 137- 612 | Aanderaa
NWSX1006  |  549 | 20 | 2010 06 04-2011 05 21 | 350 | 48 |  60- 530 | Microcat
NWSY1006  |  908 | 20 | 2010 06 05-2011 05 21 | 350 | 61 |  77- 677 |
```

Quality control and calibration

The ADCP data have been quality controlled by a standard procedure based upon consideration of ADCP performance (error velocity etc.) and data variation with time in relation to neighbouring bins (spikes). The editing has been done manually using an interactive graphical software package developed by Faroe Marine Research Institute (FAMRI), based upon MATLAB. The editing has been done with a philosophy of minimal interference. Thus, only observations, which were considered clearly erroneous, were flagged. Generally, the series have been edited up to the level where about 50% of the observations were found to be valid. Bins above this level have not been included. The velocity direction has been corrected for magnetic deviation, by adding a constant as indicated in the header of the data file. The instrument depths are found using the data from the surface echo, except for the sites NWFB, NWFC, NWNA, NWSX, and NWSY. The instrument depth at site NWFC and NWNA is found from the echo sounding depth (corrected for change in sound velocity) and the length of the mooring line. The instrument depths at sites NWFB and NWSX are found from the Microcat pressure measurements, and the instrument depth at site NWSY is found from the ADCP pressure measurements.

The Aanderaa data have been calibrated using calibration coefficients from the manufacturer. In the Aanderaa current meter, several speed and compass readings are taken during a sampling interval, while the temperature and conductivity readings are taken once at the end of the interval only. At the end of the interval, the instrument stores a vector average of the velocity for the whole sampling interval, as well as the temperature and conductivity readings. In the data file, the time of each record is the middle of the speed-averaging interval. In the calibration procedure the velocity direction has been corrected for magnetic deviation, by adding a constant. The actual correction for each deployment is stored in the header of the data file. The data have been quality controlled by a standard procedure based upon data variation with time in relation to neighbouring values (spikes). The editing has been done manually using an interactive graphical software package developed by FAMRI, based upon MATLAB.

Data from the Microcat instruments have been quality controlled by a standard procedure based upon data variation with time in relation to neighbouring values (spikes). The editing has been done manually using an interactive graphical software package developed by FAMRI, based upon MATLAB. In addition the salinity data have been edited by removing all consequtive salinity pairs, where there is a large jump in the temperature. The salinity data from the MiroCats are not calibrated and must be treated with caution.

Report format

For each deployment, the report contains several pages, beginning with a page that has a drawing of the mooring and details of the deployment. After that, there are some pages describing the ADCP data, beginning with a page with detailed error statistics for the deployment, which indicates also how many "long" (i.e. several consecutive ensembles) error gaps are for each bin. On the next page there is for each bin listed the average speed (scalar average) and velocity magnitude and direction (vectorial average) as well as the fraction of "good" ensembles (in parts per thousand). This is followed by a frequency distribution of speeds for each bin, which lists the frequency (in parts per thousand) of speeds (scalar) exceeding specified values. Then there are some pages listing tidal constituents. These pages contain five tables with data for the constituents M2, S2, N2, O1, and K1. Each table lists for each bin the amplitude and Greenwich phase lag for the east and north velocity components and lists also major and minor semi-axes of the tidal ellipse for the constituent as well as its inclination (Fig. 2) and sense of rotation (cyclonic = C, anticyclonic = A). The tidal constants were computed by an adapted version of the Foreman FORTRAN package.

The description of the Aanderaa current meter data includes first a text page listing metadata information in the header and showing the list of parameters in the data file with a tally of the number of records flagged and not flagged for error in each parameter. Any comments to the data are then listed. The rest of the text page describes features of the velocity observations in the series. First is shown the residual current, defined as the vectorial average of all non-flagged records. Next are shown the results of tidal analysis on the

series. The number of records interpolated before the analysis is listed as well as the number that could not be interpolated (too large gap). Since both deployments have 60 minutes intervals, all analyses are performed on unfiltered data. 15 of the dominant constituents are listed and for each constituent, amplitude and Greenwich phase lag are shown for the east (E-ampl and E-gpl) and the north (N-ampl and N-gpl) velocity components respectively, followed by the characteristics of the tidal ellipse, its major and minor semi-axes, the inclination (Incl) of the ellipse, its Greenwich phase lag (Grphl), and whether it rotates cyclonically (C) or anticyclonically (A). The definitions of the tidal ellipse parameters are shown in Figure 2. The tidal constants were computed by an adapted version of the Foreman FORTRAN package. Finally, on the Aanderaa text page, is a table listing the directional current distribution as relative numbers of observations in parts per thousand. The table also lists for each direction interval, the relative flux, the average speed and the maximum speed. Then one page shows plots of the listed parameters as a function of time and one page shows the progressive vector diagram.

The Microcat data all include temperature, salinity, pressure and depth. The data are presented on two pages, the first page showing plots of temperature, salinity and depth time series, while the second is a T-S diagram of the recorded data.

On the following pages, the data descriptions from each deployment are presented in the same sequence as Table 1. For each deployment, the ADCP data are presented first, followed by possible Aanderaa or Microcat data.
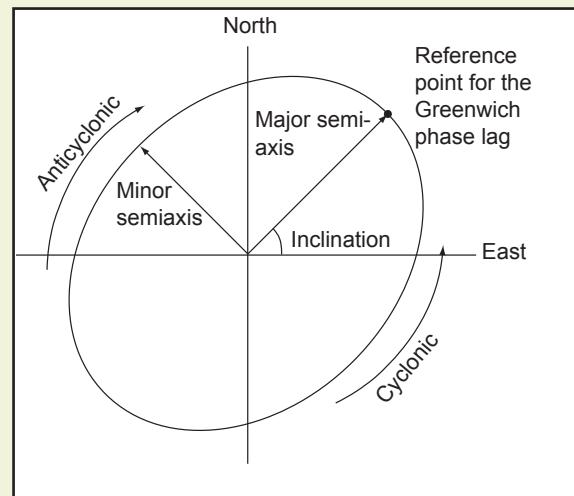
Figure 2. Parameters of the tidal ellipse for a given constituent. The reference point for the Greenwich phase lag is always chosen to be above the east-west axis.

NWFB1006

Latitude: 61°25.000´N

Longitude: 008°17.000´W

Echo sounding depth: 825 m

Bottom depth corr.: 814 m

Time of deployment: 5/6 - 2010 1223 UTC

Time of recovery: 23/5 - 2011 0425 UTC

ADCP:

Instrument no.: RDI ADCP 1642

Instrument frequency: 75 kHz

Height above bottom: 6 m

Depth: 808 m (corr.)

Time of first data: 5/6 - 2010 1240 UTC

Time of last data: 23/05 - 2011 0400 UTC

Sample interval: 20 min

No. of ensembles: 25319

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 773 m (corr.)

No. of bins: 16
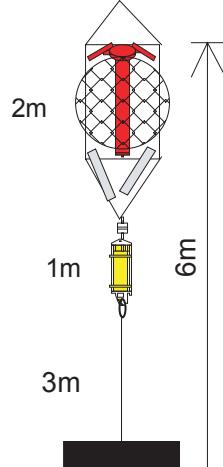
Micro Cat:

Instrument no.: 1993

Height above bottom: 5 m

Time of first data: 5/6 - 2010 1240 UTC

Time of last data: 23/5 - 2011 0420 UTC

Sample interval: 10 min

No. of ensembles: 50639

Instrument depth: 809 m

Data:

The ADCP data for the uppermost bins were affected by some instrumental malfunction.

The temperature measurements from the ADCP could not be used.

The salinity from the MicroCat is uncalibrated and may have a drift.

NWFB1006 ADCP 1642

```
Error statistics for deployment: NWFB1006 updated 2012/01/09
----------------



Surface distance invalid due to range limitation
Heading, pitch and roll not edited
Temperature data invalid due to instrument failure
Velocity edited up to and including bin 16 by TP in Jan 2012
Intensity edited up to and including bin 16 by EVM in Sep 2011

Total number of  ensembles:        25319
Interval between ensembles:      20 min
Original number of bins:             32
Number of acceptable velocity bins:  16
Number of acceptable intensity bins: 16

Flagged values have been replaced by error codes: -999.99 for temperature, -999
for velocity and intensity. For observations where velocity is flagged, error
codes have been inserted into speed, direction and vertical velocity files



Number of temperature ens. flagged:  25319

Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
--------------------|------------------------------------------------------------
     Int.  Velocity |              Number of velocity gaps of length
Bin  ens.   ens.  % |-------------------------------------------------------------
     flgd   flgd flgd|   1     2     3     4     5  6-10 11-20 21-30 31-50   >50
--------------------|------------------------------------------------------------
  1      1    283   1|  181    28     8     3     2     0     0     0     0     0
  2      1    291   1|  144    51     9     3     0     1     0     0     0     0
  3      0    360   1|  151    62    13     4     2     1     1     0     0     0
  4      0    436   2|  169    64    21     4     1     5     2     0     0     0
  5      0    506   2|  202    77    18     9     3     2     2     0     0     0
  6      0    503   2|  189    85    17     6     3     4     2     0     0     0
  7      0    796   3|  273   127    33    13     7     6     3     0     0     0
  8      0    892   4|  294   121    43    15    10    13     2     0     0     0
  9      0   1217   5|  463   139    61    18     8    18     5     0     0     0
 10      0   1335   5|  517   148    69    32    14    14     2     0     0     0
 11      0   1427   6|  538   161    54    35    16    21     0     0     1     0
 12      0   1391   5|  423   138    74    26    19    24     5     0     1     0
 13      0   1188   5|  391   123    56    19    13    22     5     0     0     0
 14      0   1464   6|  380   118    67    29    14    31    10     4     0     0
 15      0   1513   6|  317   108    55    20    16    33    12     6     2     0
 16      0   2872  11|  452   187    81    36    22    59    36     9    10     0
```

NWFB1006 ADCP 1642

```
Deployment: NWFB1006 updated 2012/01/09
Instrument no.: 1642
Instrument freq.: 75
Latitude: 61 25.000 N
Longitude:08 17.000 W
Bottom depth:  814
Instrument depth:  808
Center depth of first bin:  773
Bin length:  25
Number of bins:  16
Number of first ensemble:    303
Time of first ensemble: 2010 06 05 12 40
Number of last ensemble:   25621
Time of last ensemble:  2011 05 23 04 00
Time between ensembles (min.):   20
All directions have been corrected by adding:  -7.0
```

Below is listed for each bin the average speed (scalar average) and
the average velocity magnitude and direction formed as a vectorial
average of non-flagged (Good) observations. The last column shows the
number of good values used in parts per thousand

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	773	41	983	976	304	989
2	748	66	1059	1054	307	989
3	723	91	1089	1084	309	986
4	698	116	1094	1090	310	983
5	673	141	1088	1083	311	980
6	648	166	1066	1061	312	980
7	623	191	1015	1007	313	969
8	598	216	919	906	315	965
9	573	241	775	752	318	952
10	548	266	602	563	320	947
11	523	291	445	382	323	944
12	498	316	334	245	325	945
13	473	341	274	160	327	953
14	448	366	243	110	328	942
15	423	391	232	82	330	940
16	398	416	229	63	332	887

NWFB1006 ADCP 1642

```
Deployment: NWFB1006


Frequency of high speeds.
=========================


Frequency (in parts per thousand) of speeds equal to or exceeding specified vales.


====================================================================================================
Bin|Depth|                                          Speed (cm/s)
no.|   m|   10    20    30    40    50    60    70    80    90   100   110   120   130   140   150   160   170   180
----------------------------------------------------------------------------------------------------
  1|  773|  989   989   989   988   985   974   936   859   717   482   227    72    17     4     1     0     0     0
  2|  748|  989   989   989   989   986   980   958   910   833   683   439   181    46    10     2     0     0     0
  3|  723|  986   986   986   986   984   978   958   917   855   739   533   257    69    14     2     0     0     0
  4|  698|  983   983   983   983   981   975   954   915   855   746   549   270    74    14     3     0     0     0
  5|  673|  980   980   980   980   978   969   946   906   842   730   533   264    71    13     2     0     0     0
  6|  648|  980   980   979   978   973   960   930   878   807   688   492   242    63    12     2     0     0     0
  7|  623|  968   966   963   954   942   919   872   810   727   591   390   188    48     9     1     0     0     0
  8|  598|  961   950   934   917   889   846   783   693   582   431   259   109    26     5     1     0     0     0
  9|  573|  941   914   875   829   768   698   607   495   374   238   119    40     9     2     0     0     0     0
 10|  548|  918   851   768   682   591   488   373   263   169    87    34     9     2     0     0     0     0     0
 11|  523|  889   763   615   480   359   254   172   105    57    26     8     2     0     0     0     0     0     0
 12|  498|  853   650   454   298   190   118    65    36    19     7     2     1     0     0     0     0     0     0
 13|  473|  828   574   347   190    99    50    25    14     7     3     1     0     0     0     0     0     0     0
 14|  448|  801   519   279   126    55    25    11     6     2     1     0     0     0     0     0     0     0     0
 15|  423|  790   496   253   108    41    15     6     3     1     0     0     0     0     0     0     0     0     0
 16|  398|  741   464   239    98    34    11     4     1     1     0     0     0     0     0     0     0     0     0
```

NWFB1006 ADCP 1642

Harmonic constants for constituent M2 for deployment NWFB1006.

```
================================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl   R
        m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01    773      30      59      19     336      30      19       7      54   A
 02    748      35      61      19     329      35      19     178     242   A
 03    723      34      67      17     323      34      16     171     252   A
 04    698      32      77      15     318      33      12     165     263   A
 05    673      30      84      14     308      32       9     160     270   A
 06    648      24      99      16     282      29       1     147     280   A
 07    623      22     129      23     264      29      12     135     286   C
 08    598      26     152      25     256      28      22     137     296   C
 09    573      29     180      28     240      35      21      43     208   C
 10    548      37     212      34     216      51       2      42     214   C
 11    523      49     239      54     188      66      31      50     210   A
 12    498      63     252      78     177      82      58      65     196   A
 13    473      69     258      94     175      95      68      80     183   A
 14    448      72     263     101     176     101      72      86     179   A
 15    423      75     269     106     178     106      75      92     176   A
 16    398      76     273     108     179     108      76      95     176   A
```

Harmonic constants for constituent S2 for deployment NWFB1006.

```
================================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl   R
        m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01    773      13      89      11      17      14      10      31      67   A
 02    748      15      97      10      16      15      10      11      89   A
 03    723      15     102      10      15      15      10       3     100   A
 04    698      13     106       8       7      13       8     171     292   A
 05    673       8     118       7     341      10       4     143     314   A
 06    648       7     161       5     310       8       2     144     330   C
 07    623      13     193       4     271      13       4       4     194   C
 08    598      18     201       5     281      18       5       3     202   C
 09    573      20     227       7     275      20       5      13     230   C
 10    548      20     260      11     214      22       7      22     252   A
 11    523      25     283      23     206      27      21      36     254   A
 12    498      29     296      33     208      33      29      83     214   A
 13    473      31     294      40     211      41      30      78     220   A
 14    448      29     290      40     210      40      28      75     220   A
 15    423      26     294      40     212      41      25      83     216   A
 16    398      26     299      41     215      41      26      84     219   A
```

NWFB1006 ADCP 1642

Harmonic constants for constituent N2 for deployment NWFB1006.

```
================================================================================
Bin   Depth   E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
          m  mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01     773       9      28       6     291       9       6     172     212  A
 02     748       9      34       6     289       9       5     167     222  A
 03     723       9      39       5     290      10       5     166     226  A
 04     698       9      41       5     297      10       5     170     227  A
 05     673      10      49       5     296      10       4     165     236  A
 06     648      10      68       3     287      11       2     165     251  A
 07     623      14      85       2     265      14       0     170     265  C
 08     598      15      96       4     248      16       2     166     274  C
 09     573      13     129       3     221      13       3     180     309  C
 10     548      12     168       6     164      14       0      27     167  A
 11     523      14     185      12     139      17       7      37     167  A
 12     498      13     191      13     138      17       8      44     166  A
 13     473      10     219      16     149      17      10      71     159  A
 14     448      12     249      17     154      17      12      96     150  A
 15     423      14     262      18     161      19      13     106     150  A
 16     398      14     268      20     165      21      14     106     155  A
```

Harmonic constants for constituent O1 for deployment NWFB1006.

```
================================================================================
Bin   Depth   E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
          m  mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01     773      16     325       8     168      18       3     155     150  A
 02     748      19     327       7     162      20       2     159     149  A
 03     723      19     323       9     156      21       2     156     146  A
 04     698      19     326      10     152      21       1     152     147  A
 05     673      19     326      11     153      22       1     151     148  A
 06     648      23     332      11     155      26       0     154     153  A
 07     623      28     340      15     161      32       0     151     161  A
 08     598      35     342      23     161      42       0     146     161  C
 09     573      35     345      29     168      46       1     141     166  A
 10     548      31     348      29     175      43       3     137     171  A
 11     523      25     352      25     173      36       1     135     173  A
 12     498      19     358      22     180      30       1     131     179  A
 13     473      14       5      20     187      24       0     124     186  A
 14     448      13      10      19     188      23       1     124     188  C
 15     423      16      22      19     198      25       1     130     200  C
 16     398      18      17      21     204      27       2     130     201  A
```

NWFB1006 ADCP 1642

Harmonic constants for constituent K1 for deployment NWFB1006.

```
=============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
-----------------------------------------------------------------------------
 01     773      18     230       8      65      20       2     156      53  A
 02     748      20     228      10      60      22       2     155      50  A
 03     723      20     226      11      62      23       3     152      50  A
 04     698      20     230      13      61      23       2     147      53  A
 05     673      21     229      14      62      25       3     147      53  A
 06     648      22     234      15      63      27       2     146      57  A
 07     623      27     240      18      63      32       1     146      61  A
 08     598      29     244      23      67      37       1     142      66  A
 09     573      31     246      27      66      41       0     138      66  A
 10     548      29     248      30      67      42       0     134      68  C
 11     523      23     249      26      67      35       1     132      68  C
 12     498      19     256      26      69      32       2     127      72  C
 13     473      13     262      28      70      31       2     114      72  C
 14     448       9     274      23      65      24       4     109      68  C
 15     423       8     290      21      63      22       6     105      67  C
 16     398       8     286      20      64      21       5     107      68  C
```

NWFB1006 MicroCat 1993

Months 2010-2011
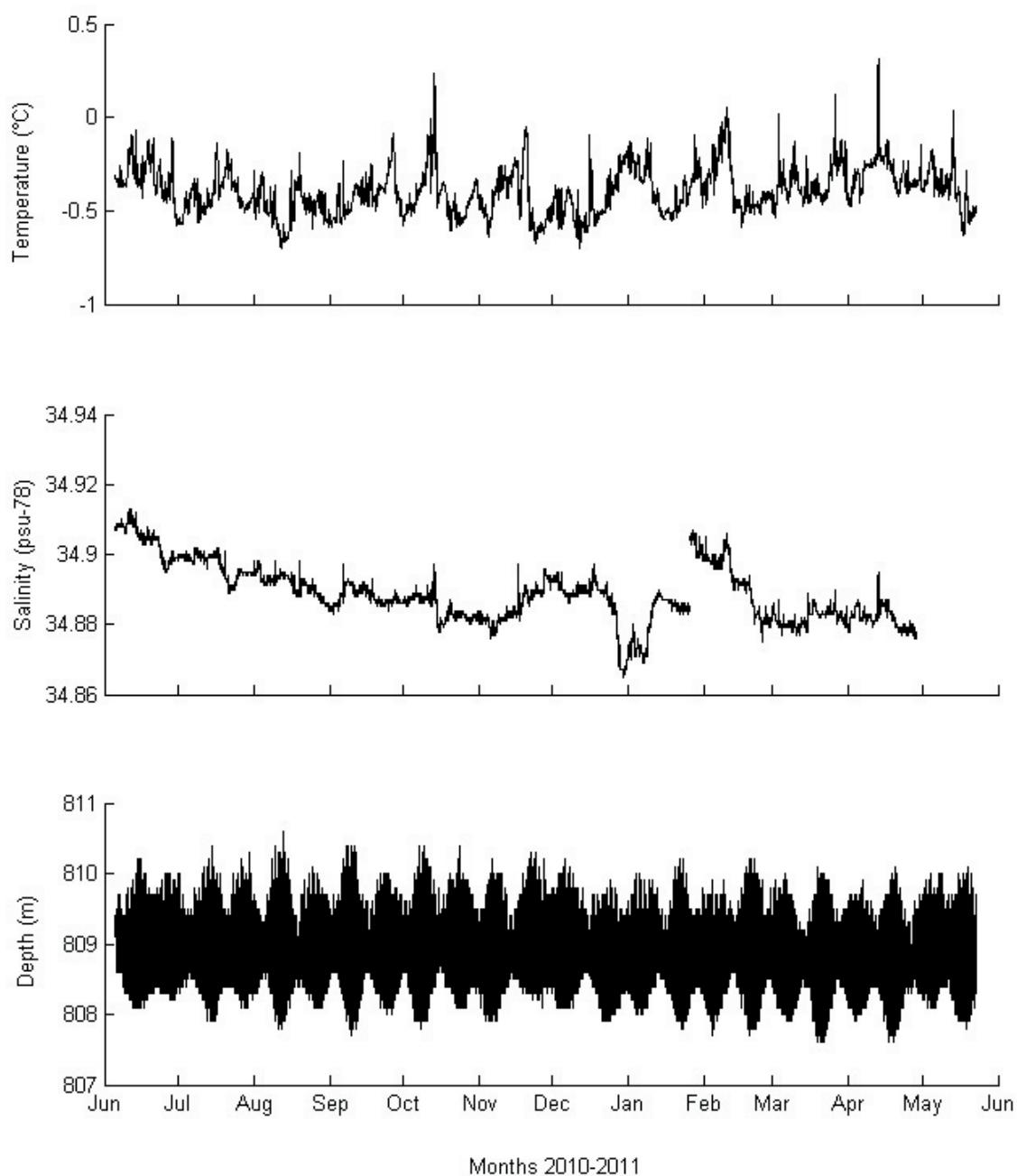
NWFB1006 MicroCat 1993
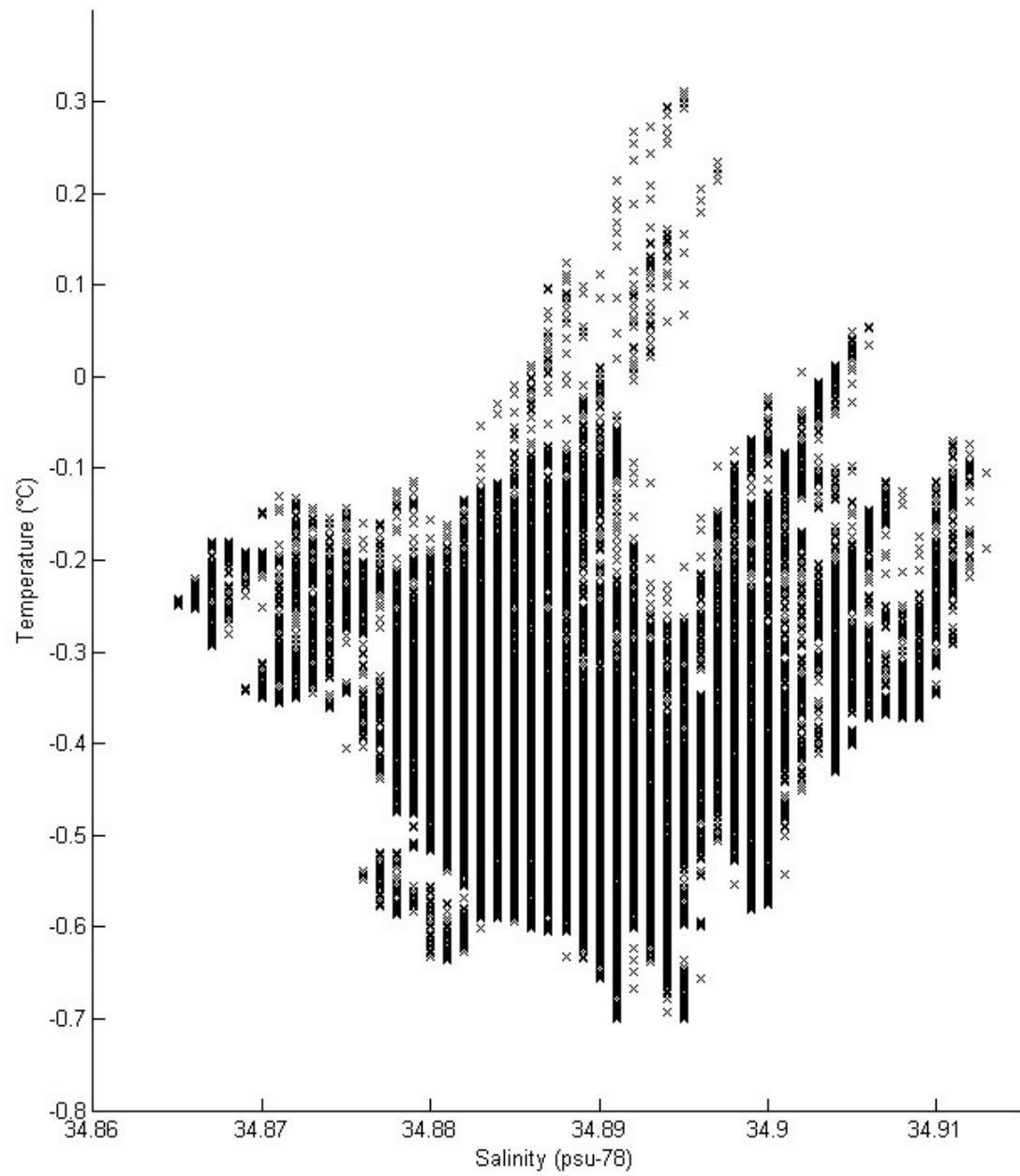
NWFC1006

Latitude: 61°23.570´N

Longitude: 008°19.000´W

Echo sounding depth: 848 m

Bottom depth corr.: 839 m

Time of deployment: 5/6 - 2010 1206 UTC

Time of recovery: 23/5 - 2011 0348 UTC

ADCP:

Instrument no.: RDI ADCP 1285

Instrument frequency: 75 kHz

Height above bottom: 6 m

Depth: 833 m (corr.)

Time of first data: 5/6 - 2010 1240 UTC

Time of last data: 23/5 - 2011 0320 UTC

Sample interval: 20 min

No. of ensembles: 25317

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 798 m (corr.)

No. of bins: 23
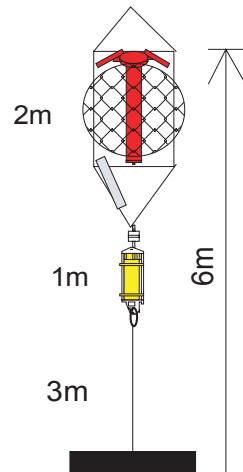
Data:

All data ok.

NWFC1006 ADCP 1285

```
Error statistics for deployment: NWFC1006 updated 2012/01/09
----------------


Surface distance invalid due to range limitation
Heading, pitch and roll not edited
Temperature edited by EVM in Oct 2011
Velocity edited up to and including bin 23 by AKL in Jan 2012
Intensity edited up to and including bin 23 by EVM in Sep 2011

Total number of  ensembles:       25317
Interval between ensembles:       20 min
Original number of bins:             32
Number of acceptable velocity bins:  23
Number of acceptable intensity bins: 23

Flagged values have been replaced by error codes: -999.99 for temperature, -999
for velocity and intensity. For observations where velocity is flagged, error
codes have been inserted into speed, direction and vertical velocity files


Number of temperature ens. flagged:       0

Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
--------------------|-----------------------------------------------------------
    Int.  Velocity  |            Number of velocity gaps of length
Bin ens.  ens.   %  |-----------------------------------------------------------
    flgd  flgd  flgd|   1     2     3     4     5  6-10 11-20 21-30 31-50   >50
--------------------|-----------------------------------------------------------
  1     0   737    3|  574    40    11     6     4     1     0     0     0     0
  2     0   319    1|  275    14     4     1     0     0     0     0     0     0
  3     0   322    1|  266    14     4     4     0     0     0     0     0     0
  4     0   565    2|  386    48    13     9     0     1     0     0     0     0
  5     0  1269    5|  692   143    54    18     7     3     0     0     0     0
  6     0  1842    7|  948   197    65    32    11    14     2     0     0     0
  7     0  2503   10| 1442   283    82    30     9    13     0     0     0     0
  8     0  2895   11| 1556   338    99    38    17    13     2     0     0     0
  9     0  2535   10| 1399   307    76    29    12    16     1     0     0     0
 10     0  1698    7| 1056   166    52    17     4     5     0     1     0     0
 11     0  1252    5|  766   118    39    10     6     4     1     1     0     0
 12     0   690    3|  428    74    24     6     2     1     0     0     0     0
 13     0   453    2|  352    28     6     5     0     1     0     0     0     0
 14     0   341    1|  273    13     7     3     0     1     0     0     0     0
 15     0   245    1|  201     8     2     0     1     2     0     0     0     0
 16     0   282    1|  223    14     4     1     0     2     0     0     0     0
 17     0   313    1|  204    13     5     4     1     3     0     1     0     0
 18     0   472    2|  240    25    16     2     1     8     1     2     0     0
 19     0  1588    6|  386    87    40    31    30    32    14     6     1     0
 20     0  3142   12|  503   109    67    50    30    54    46    17     7     1
 21     0  4562   18|  474   101    62    44    24    77    53    42    16     6
 22     0  7773   31|  754   155    87    63    40    97    67    42    33    25
 23     0 11818   47|  739   208   120    73    43   118    84    51    53    29
```

NWFC1006 ADCP 1285

```
Deployment: NWFC1006 updated 2012/01/09
Instrument no.:  1285
Instrument freq.:  75
Latitude: 61 23.570 N
Longitude:08 19.000 W
Bottom depth:  839
Instrument depth:  833
Center depth of first bin:  798
Bin length:  25
Number of bins:  23
Number of first ensemble:    303
Time of first ensemble: 2010 06 05 12 40
Number of last ensemble:   25619
Time of last ensemble:  2011 05 23 03 20
Time between ensembles (min.):   20
All directions have been corrected by adding:  -7.0
```

Below is listed for each bin the average speed (scalar average) and
the average velocity magnitude and direction formed as a vectorial
average of non-flagged (Good) observations. The last column shows the
number of good values used in parts per thousand

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	798	41	1047	1042	305	971
2	773	66	1115	1111	307	987
3	748	91	1133	1129	310	987
4	723	116	1125	1120	311	978
5	698	141	1095	1090	312	950
6	673	166	1019	1011	312	927
7	648	191	854	834	314	901
8	623	216	657	609	318	886
9	598	241	470	376	323	900
10	573	266	333	190	331	933
11	548	291	255	74	359	951
12	523	316	223	43	49	973
13	498	341	208	52	89	982
14	473	366	203	66	104	987
15	448	391	201	76	112	990
16	423	416	203	82	116	989
17	398	441	205	87	118	988
18	373	466	207	91	120	981
19	348	491	208	92	121	937
20	323	516	210	93	123	876
21	298	541	212	94	124	820
22	273	566	213	95	124	693
23	248	591	214	98	124	533

NWFC1006 ADCP 1285

```
Frequency of high speeds.
========================

Frequency (in parts per thousand) of speeds equal to or exceeding specified vales.

================================================================================================
Bin|Depth|                              Speed (cm/s)
no.|   m|   10   20   30   40   50   60   70   80   90  100  110  120  130  140  150  160  170  180
------------------------------------------------------------------------------------------------
  1|  798|  971  969  967  963  954  945  923  871  776  620  411  210   78   22    5    1    0    0
  2|  773|  987  986  983  980  973  964  953  924  866  762  594  358  147   39    7    1    0    0
  3|  748|  987  986  983  980  973  965  954  928  878  788  638  409  173   47    8    1    0    0
  4|  723|  977  976  973  970  963  953  939  910  855  763  615  396  171   45    8    1    0    0
  5|  698|  949  947  944  937  926  910  890  849  786  689  545  353  154   43   10    1    0    0
  6|  673|  924  915  902  887  867  840  806  749  666  560  430  273  123   38    8    1    0    0
  7|  648|  884  850  815  783  738  685  626  549  458  357  253  152   68   21    5    1    0    0
  8|  623|  846  762  681  616  554  485  416  341  263  189  123   66   28   10    3    1    0    0
  9|  598|  831  681  535  432  354  288  226  164  115   79   45   21    8    3    1    0    0    0
 10|  573|  828  599  400  270  192  135   92   60   39   22    9    3    1    0    0    0    0    0
 11|  548|  814  531  282  144   82   49   27   14    7    3    1    0    0    0    0    0    0    0
 12|  523|  814  491  222   90   40   18    8    4    2    0    0    0    0    0    0    0    0    0
 13|  498|  807  460  192   66   21    7    2    1    0    0    0    0    0    0    0    0    0    0
 14|  473|  809  451  178   55   14    3    1    0    0    0    0    0    0    0    0    0    0    0
 15|  448|  806  450  181   55   13    3    0    0    0    0    0    0    0    0    0    0    0    0
 16|  423|  806  446  182   61   15    3    1    0    0    0    0    0    0    0    0    0    0    0
 17|  398|  807  452  188   66   18    4    1    0    0    0    0    0    0    0    0    0    0    0
 18|  373|  805  454  194   69   20    5    1    0    0    0    0    0    0    0    0    0    0    0
 19|  348|  768  432  188   67   21    5    1    0    0    0    0    0    0    0    0    0    0    0
 20|  323|  719  409  179   67   22    5    1    0    0    0    0    0    0    0    0    0    0    0
 21|  298|  675  388  171   66   22    5    1    0    0    0    0    0    0    0    0    0    0    0
 22|  273|  569  327  148   59   19    5    1    0    0    0    0    0    0    0    0    0    0    0
 23|  248|  438  253  116   50   18    5    0    0    0    0    0    0    0    0    0    0    0    0
```

NWFC1006 ADCP 1285

Harmonic constants for constituent M2 for deployment NWFC1006.

```
==============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
------------------------------------------------------------------------------
 01    798      13      80       9     299      15       5     147     272  A
 02    773      15      75      12     290      18       5     143     267  A
 03    748      18      68      17     281      23       7     137     264  A
 04    723      19      65      19     279      25       8     135     262  A
 05    698      22      77      23     290      30       9     132     275  A
 06    673      29     105      30     306      41       8     135     296  A
 07    648      46     125      37     317      58       6     142     310  A
 08    623      58     135      35     315      68       0     149     315  A
 09    598      51     150      16     290      53      10     166     327  C
 10    573      36     189      23     175      43       5      32     185  A
 11    548      44     230      53     160      57      38      60     181  A
 12    523      49     244      67     163      68      48      78     172  A
 13    498      52     255      76     167      76      52      87     169  A
 14    473      55     263      82     171      82      55      92     170  A
 15    448      59     270      85     176      85      58      95     173  A
 16    423      62     275      88     180      88      62      96     176  A
 17    398      65     278      90     183      90      64      96     179  A
 18    373      65     281      93     186      93      65      97     181  A
 19    348      67     283      96     189      96      66      95     186  A
 20    323      68     283      98     191      98      68      93     189  A
 21    298      69     283      98     192      98      69      91     192  A
 22    273      72     284     100     192     100      72      92     191  A
 23    248      77     285      99     192     100      77      96     188  A
```

Harmonic constants for constituent S2 for deployment NWFC1006.

```
==============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
------------------------------------------------------------------------------
 01    798       6     124       6     343       8       3     133     324  A
 02    773       5     124       5     342       7       2     134     324  A
 03    748       6      99       6     329       8       4     138     302  A
 04    723       6     106       7     337       8       4     127     318  A
 05    698       9     135      10     349      13       4     132     334  A
 06    673      14     166      13       8      18       4     137     356  A
 07    648      23     181      14      11      27       2     150       3  A
 08    623      28     187      16       8      32       0     151       7  A
 09    598      22     207       7      29      23       0     163      27  A
 10    573      16     243       8     207      18       4      24     237  A
 11    548      18     289      22     204      22      18      80     211  A
 12    523      20     299      29     207      29      20      93     204  A
 13    498      20     299      32     205      32      20      93     203  A
 14    473      18     301      32     210      32      18      91     209  A
 15    448      19     306      34     215      34      19      91     214  A
 16    423      19     308      35     218      35      19      90     217  A
 17    398      21     312      37     218      37      21      93     217  A
 18    373      21     313      37     221      37      21      92     219  A
 19    348      21     317      37     224      37      21      93     222  A
 20    323      22     314      36     225      36      22      89     225  A
 21    298      21     317      35     228      35      21      89     228  A
 22    273      23     321      34     229      34      23      93     227  A
 23    248      23     324      39     232      39      23      93     230  A
```

NWFC1006 ADCP 1285

Harmonic constants for constituent N2 for deployment NWFC1006.

```
================================================================================
Bin   Depth   E-ampl   E-gpl   N-ampl   N-gpl   Major   Minor   Incl   Grphl   R
        m     mm/sec    deg    mm/sec    deg    mm/sec  mm/sec   deg    deg
--------------------------------------------------------------------------------
 01    798       5       51       4      237      6       0      143    233    A
 02    773       5       41       3      236      6       1      152    224    A
 03    748       6       34       4      229      7       1      150    218    A
 04    723       7       29       4      240      8       2      148    218    A
 05    698       9       47       6      254     11       3      147    235    A
 06    673      14       66       9      266     16       3      149    251    A
 07    648      20       88       9      278     22       2      156    269    A
 08    623      18      110       7      297     19       1      161    291    A
 09    598      18      119       5      295     19       0      164    299    C
 10    573      13      133       2       79     13       1        4    133    A
 11    548      10      177       9       97     10       8       26    156    A
 12    523      10      199      13      116     13      10       76    127    A
 13    498       8      211      15      131     15       8       82    135    A
 14    473       7      238      17      143     17       7       93    141    A
 15    448       9      248      18      151     18       9       95    149    A
 16    423      10      261      19      157     19       9      100    152    A
 17    398      10      268      19      159     20       9      102    153    A
 18    373      11      271      19      160     20      10      106    151    A
 19    348      11      271      21      164     21      10      101    159    A
 20    323      11      275      21      169     21      11      101    164    A
 21    298       9      275      22      173     22       9       96    171    A
 22    273      10      266      22      176     22      10       90    176    A
 23    248      12      265      22      179     22      12       86    181    A
```

Harmonic constants for constituent O1 for deployment NWFC1006.

```
================================================================================
Bin   Depth   E-ampl   E-gpl   N-ampl   N-gpl   Major   Minor   Incl   Grphl   R
        m     mm/sec    deg    mm/sec    deg    mm/sec  mm/sec   deg    deg
--------------------------------------------------------------------------------
 01    798      11      345      10      160     14       1      138    163    C
 02    773      10      344      10      166     14       0      136    165    A
 03    748      11      342      11      160     16       0      136    161    C
 04    723      11      345      14      163     18       0      130    164    C
 05    698      17      349      16      176     24       1      136    172    A
 06    673      27      358      25      182     37       1      137    180    A
 07    648      39        1      33      187     51       3      139    183    A
 08    623      41        1      36      187     54       3      138    184    A
 09    598      37        5      34      186     50       1      137    186    A
 10    573      28       10      29      192     40       1      134    191    A
 11    548      20       20      24      201     31       0      130    200    A
 12    523      18       19      19      207     26       2      133    203    A
 13    498      16       19      17      201     24       1      134    200    A
 14    473      16       23      16      201     23       0      136    202    C
 15    448      16       27      15      202     22       1      135    205    C
 16    423      16       28      14      205     21       1      139    207    C
 17    398      16       27      14      205     21       0      138    206    C
 18    373      16       27      15      205     22       0      137    206    C
 19    348      14       19      13      199     20       0      137    199    C
 20    323      13       18      12      200     18       0      137    199    A
 21    298      11       12      10      183     15       1      138    188    C
 22    273      10        4       7      180     12       0      142    182    C
 23    248      11       22       6      193     13       1      153    200    C
```

NWFC1006 ADCP 1285

Harmonic constants for constituent K1 for deployment NWFC1006.

```
================================================================================
Bin   Depth  E-ampl  E-gpl  N-ampl  N-gpl  Major   Minor    Incl   Grphl  R
        m    mm/sec    deg  mm/sec    deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01    798      15     238      13     68      19       2     140      62   A
 02    773      14     239      12     70      19       2     141      64   A
 03    748      14     238      14     72      20       2     136      65   A
 04    723      13     246      14     67      19       0     133      67   A
 05    698      16     256      16     75      22       0     135      76   C
 06    673      25     256      23     75      34       0     137      76   C
 07    648      35     255      31     74      47       0     139      75   C
 08    623      38     250      36     69      52       0     137      69   C
 09    598      30     249      34     70      46       1     132      70   A
 10    573      22     258      28     74      36       1     128      75   C
 11    548      17     268      23     77      29       3     127      81   C
 12    523      16     270      23     76      27       3     124      81   C
 13    498      13     273      23     79      26       3     120      82   C
 14    473      12     279      24     82      26       3     117      85   C
 15    448      11     284      23     80      26       4     114      84   C
 16    423      10     282      24     78      26       4     113      82   C
 17    398      11     275      24     77      26       3     113      80   C
 18    373      11     271      24     76      26       3     114      79   C
 19    348      12     272      22     75      24       3     118      79   C
 20    323      12     270      19     73      22       3     121      78   C
 21    298      11     272      16     75      19       3     125      81   C
 22    273      14     270      17     77      21       2     129      82   C
 23    248      14     265      18     64      23       4     126      71   C
```

NWNA1006

Latitude: 62°42.080´N

Longitude: 006°04.800´W

Echo sound depth: 299 m

Bottom depth corr.: 298 m

Time of deployment: 4/6 - 2010 0131 UTC

Time of recovery: 20/5 - 2011 0335 UTC

ADCP:

Instrument no.: RDI ADCP 1279

Instrument frequency: 150 kHz

Height above bottom: 1m

Depth: 297 m (corr.)

Time of first data: 4/6 – 2010 0140 UTC

Time of last data: 20/5 – 2011 0320 UTC

Sample interval: 20 min

No. of ensembles: 25206

Pings per ens.:   1

Binlength: 10 m

Depth of first bin: 281 m (corr.)

No. of bins: 24

Data:

All data ok.
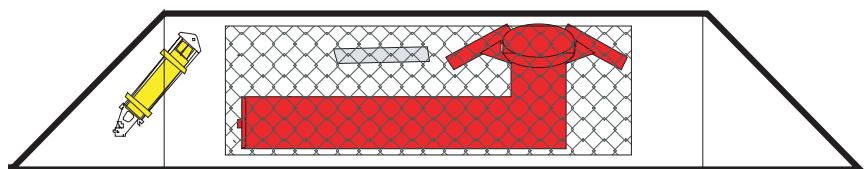
NWNA1006 ADCP 1279

```
Error statistics for deployment: NWNA1006 updated 2011/11/30
----------------


Surface distance invalid due to range limitation
Heading, pitch and roll not edited
Temperature edited by EVM in Sep 2011
Velocity edited up to and including bin 24 by JMB in Nov 2011
Intensity edited up to and including bin 24 by EVM in Sep 2011

Total number of  ensembles:        25206
Interval between ensembles:       20 min
Original number of bins:             30
Number of acceptable velocity bins:  24
Number of acceptable intensity bins: 24


Flagged values have been replaced by error codes: -999.99 for temperature, -999
for velocity and intensity. For observations where velocity is flagged, error
codes have been inserted into speed, direction and vertical velocity files



Number of temperature ens. flagged:        0

Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the
num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
```

	Int.	Velocity				Number of velocity gaps of length					
Bin	ens.	ens.	%									
	flgd	flgd	flgd	1	2	3	4	5	6-10	11-20	21-30	31-50	>50
1	1	2782	11	1852	315	64	21	2	2	0	0	0	0
2	0	3393	13	1999	425	115	32	10	3	0	0	0	0
3	0	3344	13	1962	379	124	37	9	8	0	0	0	0
4	0	3197	13	1910	365	108	38	11	4	0	0	0	0
5	0	2800	11	1797	311	73	22	10	4	0	0	0	0
6	0	2719	11	1783	323	59	17	5	3	0	0	0	0
7	0	2421	10	1610	260	61	14	5	4	0	0	0	0
8	0	2093	8	1453	204	54	13	0	3	0	0	0	0
9	0	1786	7	1239	176	42	11	5	0	0	0	0	0
10	0	1867	7	1245	193	47	11	5	4	0	0	0	0
11	0	1733	7	1180	176	39	14	3	2	0	0	0	0
12	0	1571	6	1023	160	40	11	3	5	1	0	0	0
13	0	1606	6	1034	145	48	17	5	7	0	0	0	0
14	0	1830	7	1045	177	59	20	11	8	3	1	0	0
15	0	2358	9	1216	232	72	25	7	12	9	4	0	0
16	0	2292	9	1115	215	44	24	9	15	10	6	2	0
17	0	2963	12	1253	209	81	31	17	16	15	8	8	0
18	0	3440	14	1181	206	69	33	25	27	24	9	17	0
19	0	4084	16	1191	278	77	31	19	37	23	15	20	2
20	0	5822	23	1295	361	143	67	23	73	24	18	31	6
21	0	7216	29	1384	401	185	87	44	78	36	16	43	7
22	0	8557	34	1382	417	201	90	50	101	53	23	43	18
23	0	10401	41	1350	389	185	112	52	129	51	23	30	38
24	0	12786	51	1220	399	175	97	53	134	78	43	39	49

NWNA1006 ADCP 1279

```
Deployment: NWNA1006 updated 2011/11/30
Instrument no.: 1279
Instrument freq.: 150
Latitude: 62 42.080  N
Longitude:06 04.800 W
Bottom depth:  298
Instrument depth:  297
Center depth of first bin:  281
Bin length:  10
Number of bins:  24
Number of first ensemble:    198
Time of first ensemble: 2010 06 04 01 40
Number of last ensemble:   25403
Time of last ensemble:  2011 05 20 03 20
Time between ensembles (min.):    20
All directions have been corrected by adding:  -7.0
```

Below is listed for each bin the average speed (scalar average) and
the average velocity magnitude and direction formed as a vectorial
average of non-flagged (Good) observations. The last column shows the
number of good values used in parts per thousand

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	281	17	205	132	96	890
2	271	27	218	136	99	865
3	261	37	225	134	102	867
4	251	47	230	135	104	873
5	241	57	234	138	106	889
6	231	67	237	144	106	892
7	221	77	239	148	107	904
8	211	87	242	153	107	917
9	201	97	244	158	107	929
10	191	107	247	164	107	926
11	181	117	249	168	108	931
12	171	127	251	170	107	938
13	161	137	253	173	107	936
14	151	147	256	176	107	927
15	141	157	258	179	107	906
16	131	167	259	181	107	909
17	121	177	262	183	107	882
18	111	187	264	184	107	864
19	101	197	269	187	107	838
20	91	207	272	190	107	769
21	81	217	277	193	107	714
22	71	227	281	196	108	661
23	61	237	288	200	108	587
24	51	247	292	202	108	493

NWNA1006 ADCP 1279

```
Frequency of high speeds.
=========================

Frequency (in parts per thousand) of speeds equal to or exceeding specified vales.

=====================================================================================================
Bin|Depth|                                     Speed (cm/s)
no.|   m|  10   20   30   40   50   60   70   80   90  100  110  120  130  140  150  160  170  180
-----------------------------------------------------------------------------------------------------
  1| 281| 706  401  186   70   18    2    0    0    0    0    0    0    0    0    0    0    0    0
  2| 271| 705  418  205   89   29    6    1    0    0    0    0    0    0    0    0    0    0    0
  3| 261| 722  439  220   98   35    9    1    0    0    0    0    0    0    0    0    0    0    0
  4| 251| 734  454  229  104   42   11    1    0    0    0    0    0    0    0    0    0    0    0
  5| 241| 750  470  243  115   45   13    2    0    0    0    0    0    0    0    0    0    0    0
  6| 231| 755  477  251  120   51   15    3    0    0    0    0    0    0    0    0    0    0    0
  7| 221| 765  488  262  127   54   16    2    0    0    0    0    0    0    0    0    0    0    0
  8| 211| 779  499  273  135   57   18    3    0    0    0    0    0    0    0    0    0    0    0
  9| 201| 790  513  281  140   61   20    4    1    0    0    0    0    0    0    0    0    0    0
 10| 191| 791  515  287  146   64   20    4    1    0    0    0    0    0    0    0    0    0    0
 11| 181| 797  523  292  151   66   21    4    1    1    0    0    0    0    0    0    0    0    0
 12| 171| 806  530  300  154   68   22    5    1    0    0    0    0    0    0    0    0    0    0
 13| 161| 806  538  303  159   68   24    6    2    1    0    0    0    0    0    0    0    0    0
 14| 151| 800  539  308  161   72   25    6    2    1    0    0    0    0    0    0    0    0    0
 15| 141| 785  530  307  162   72   24    6    2    1    0    0    0    0    0    0    0    0    0
 16| 131| 790  536  309  167   74   26    6    2    1    0    0    0    0    0    0    0    0    0
 17| 121| 766  523  308  165   74   27    7    2    1    0    0    0    0    0    0    0    0    0
 18| 111| 750  515  308  167   76   26    8    2    1    0    0    0    0    0    0    0    0    0
 19| 101| 731  509  309  169   77   30    9    3    1    0    0    0    0    0    0    0    0    0
 20|  91| 671  475  290  163   74   28    9    3    1    0    0    0    0    0    0    0    0    0
 21|  81| 625  448  281  156   71   28    9    3    1    1    0    0    0    0    0    0    0    0
 22|  71| 581  419  267  149   71   28    9    3    1    1    0    0    0    0    0    0    0    0
 23|  61| 523  381  245  138   69   28   10    3    1    1    0    0    0    0    0    0    0    0
 24|  51| 442  328  210  120   61   25    8    2    1    0    0    0    0    0    0    0    0    0
```

NWNA1006 ADCP 1279

Harmonic constants for constituent M2 for deployment NWNA1006.

```
===============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
        m    mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
-------------------------------------------------------------------------------
01     281     133     291      89     174     142      74     156     124   A
02     271     145     291     102     174     156      85     154     125   A
03     261     156     291     112     176     168      94     154     127   A
04     251     162     293     117     178     173     100     154     128   A
05     241     166     295     120     181     177     104     155     130   A
06     231     170     297     121     185     180     106     156     132   A
07     221     171     300     121     188     180     107     157     134   A
08     211     172     302     120     191     180     108     158     135   A
09     201     172     303     119     194     179     108     159     136   A
10     191     174     305     116     197     179     107     162     136   A
11     181     173     307     115     200     178     107     163     137   A
12     171     173     309     113     202     178     105     163     139   A
13     161     174     310     111     204     178     104     165     140   A
14     151     175     312     109     207     178     103     166     140   A
15     141     172     313     106     209     175     102     167     140   A
16     131     171     314     105     211     174     100     168     141   A
17     121     170     316     103     212     172      99     168     143   A
18     111     169     317     102     214     172      98     169     143   A
19     101     169     318      98     215     171      94     169     144   A
20      91     170     319      97     217     171      94     170     145   A
21      81     167     321      96     220     168      93     171     146   A
22      71     167     322      94     221     168      92     171     147   A
23      61     170     324      96     227     171      95     175     147   A
24      51     172     325     100     230     172      99     176     148   A
```

Harmonic constants for constituent S2 for deployment NWNA1006.

```
===============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
        m    mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
-------------------------------------------------------------------------------
01     281      43     338      28     217      46      23     155     171   A
02     271      45     337      34     219      50      27     152     173   A
03     261      46     333      38     224      50      33     150     175   A
04     251      50     335      40     225      54      35     152     174   A
05     241      55     335      42     226      58      38     155     172   A
06     231      61     337      42     228      63      38     159     170   A
07     221      63     340      43     228      66      38     159     173   A
08     211      65     343      44     231      68      39     159     175   A
09     201      68     345      42     233      71      38     162     175   A
10     191      68     346      44     233      71      38     160     178   A
11     181      69     349      42     236      72      37     161     179   A
12     171      69     350      42     239      71      38     162     180   A
13     161      69     351      41     240      71      37     164     179   A
14     151      69     351      40     242      71      37     165     180   A
15     141      68     353      40     244      70      37     165     181   A
16     131      68     354      39     245      70      36     165     182   A
17     121      66     355      39     247      68      36     166     183   A
18     111      66     359      38     248      68      34     164     187   A
19     101      66     359      39     252      68      36     166     187   A
20      91      65     360      38     253      66      36     166     188   A
21      81      65       0      37     254      66      35     167     188   A
22      71      65       2      37     254      67      34     167     189   A
23      61      64       2      34     255      65      32     168     188   A
24      51      64     360      33     259      64      32     173     183   A
```

NWNA1006 ADCP 1279

Harmonic constants for constituent N2 for deployment NWNA1006.

```
==============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
------------------------------------------------------------------------------
 01    281      21     267      16     138      24      11     146     104   A
 02    271      25     266      18     141      27      13     150     101   A
 03    261      27     268      19     145      30      15     152     103   A
 04    251      28     269      21     150      31      17     151     106   A
 05    241      30     268      21     155      32      19     156     102   A
 06    231      30     270      23     158      32      20     152     109   A
 07    221      32     272      23     160      34      20     157     106   A
 08    211      33     274      23     163      34      21     157     109   A
 09    201      34     276      24     165      36      21     157     111   A
 10    191      36     279      25     169      38      22     159     112   A
 11    181      38     279      23     170      39      21     164     109   A
 12    171      38     280      23     173      39      21     165     108   A
 13    161      38     282      23     177      39      22     167     109   A
 14    151      38     282      23     180      38      22     169     109   A
 15    141      38     283      24     182      38      23     169     110   A
 16    131      38     286      23     184      39      23     170     112   A
 17    121      38     287      23     186      39      23     170     113   A
 18    111      39     286      23     185      40      22     171     111   A
 19    101      37     284      23     187      37      22     173     108   A
 20     91      38     285      23     185      39      22     172     110   A
 21     81      38     286      24     185      38      23     169     113   A
 22     71      34     284      20     190      34      20     176     106   A
 23     61      32     297      19     192      33      18     167     124   A
 24     51      35     310      16     200      35      15     169     134   A
```

Harmonic constants for constituent O1 for deployment NWNA1006.

```
==============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
------------------------------------------------------------------------------
 01    281      24      38      11     310      24      11       1      38   A
 02    271      26      36      12     291      27      12     172     220   A
 03    261      27      41      13     291      27      12     169     226   A
 04    251      27      36      12     296      27      12     175     218   A
 05    241      27      31      12     287      27      11     173     214   A
 06    231      26      28      13     289      26      12     175     210   A
 07    221      26      27      13     287      26      13     173     211   A
 08    211      27      27      14     286      27      14     172     212   A
 09    201      28      29      15     285      28      14     170     214   A
 10    191      28      33      15     285      29      14     168     219   A
 11    181      29      34      16     284      29      15     166     221   A
 12    171      29      37      17     283      30      15     162     226   A
 13    161      29      36      17     284      30      16     163     225   A
 14    151      29      38      18     286      30      16     161     229   A
 15    141      29      38      19     284      30      16     158     231   A
 16    131      30      41      20     281      32      16     155     233   A
 17    121      30      39      20     280      32      16     156     231   A
 18    111      33      40      20     283      34      17     159     231   A
 19    101      36      39      22     280      38      18     159     229   A
 20     91      36      38      20     283      38      18     163     226   A
 21     81      36      35      20     284      37      18     165     223   A
 22     71      36      39      21     282      38      18     161     229   A
 23     61      33      31      22     276      35      19     157     224   A
 24     51      34      27      20     265      36      16     158     217   A
```

NWNA1006 ADCP 1279

Harmonic constants for constituent K1 for deployment NWNA1006.

```
================================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         m  mm/sec     deg  mm/sec    deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01    281      31     278      17     193      31      17       4     276  A
 02    271      34     287      20     190      34      20     174     111  A
 03    261      38     290      21     182      39      20     167     117  A
 04    251      40     287      22     179      41      21     166     114  A
 05    241      39     285      21     176      40      19     167     112  A
 06    231      39     281      21     175      39      20     168     107  A
 07    221      39     277      21     176      39      21     171     102  A
 08    211      39     276      22     175      40      22     171     101  A
 09    201      39     275      22     173      40      22     170     100  A
 10    191      39     273      23     170      40      22     169      99  A
 11    181      40     272      22     171      41      22     171      96  A
 12    171      42     274      24     171      43      23     170      99  A
 13    161      43     274      24     170      43      23     169      99  A
 14    151      44     273      25     169      45      24     169      98  A
 15    141      45     271      25     168      45      24     170      96  A
 16    131      46     270      25     167      46      25     170      95  A
 17    121      47     267      26     165      47      25     171      92  A
 18    111      46     265      26     164      46      25     171      90  A
 19    101      47     263      25     164      47      24     173      87  A
 20     91      46     261      24     162      46      23     173      85  A
 21     81      46     257      22     160      46      22     176      79  A
 22     71      46     254      20     157      46      20     176      76  A
 23     61      45     250      18     149      45      18     175      72  A
 24     51      44     247      17     149      44      17     176      69  A
```

NWNB1006

Latitude: 62°55.060´N

Longitude: 006°05.150´W

Echo sounding depth: 977 m

Bottom depth corr.: 961 m

Time of deployment: 4/6 - 2010 0349 UTC

Time of recovery: 20/5 - 2011 0609 UTC

ADCP:

Instrument no.: RDI ADCP 1577

Instrument frequency: 75 kHz

Height above bottom: 254 m (corr.)

Depth: 707 m (corr.)

Time of first data: 4/6 - 2010 0420 UTC

Time of last data: 20/5 - 2011 0540 UTC

Sample interval: 20 min

No. of ensembles: 25205

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 672 m (corr.)

No. of bins: 23

Data:

All data ok.

2m

1m

200m

254m

5m

1m

40m

5m
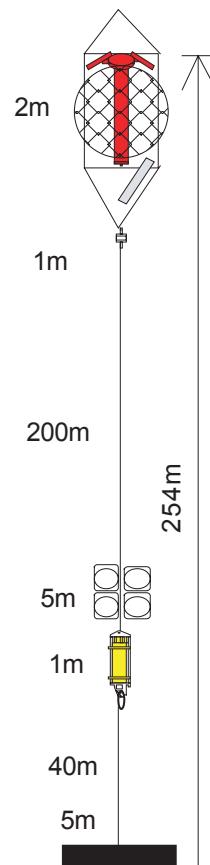
NWNB1006 ADCP 1577

```
Error statistics for deployment: NWNB1006 updated 2011/08/29
----------------


Surface distance not edited
Heading, pitch and roll not edited
Temperature edited by TP in Jul 2011
Velocity edited up to and including bin 23 by TP in Jul 2011
Intensity edited up to and including bin 23 by EVM in Aug 2011

Total number of  ensembles:       25205
Interval between ensembles:      20 min
Original number of bins:            32
Number of acceptable velocity bins:  23
Number of acceptable intensity bins: 23


Flagged values have been replaced by error codes: -999.99 for temperature, -999
for velocity and intensity. For observations where velocity is flagged, error
codes have been inserted into speed, direction and vertical velocity files


Number of temperature ens. flagged:       0

Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the
num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
```

	Int.	Velocity		|	Number of velocity gaps of length									
Bin	ens.	ens.	%	|	1	2	3	4	5	6-10	11-20	21-30	31-50	>50
	flgd	flgd	flgd	|										
1	5	78	0|	68	5	0	0	0	0	0	0	0	0
2	7	111	0|	97	7	0	0	0	0	0	0	0	0
3	3	170	1|	122	18	4	0	0	0	0	0	0	0
4	0	147	1|	102	8	7	2	0	0	0	0	0	0
5	0	144	1|	103	10	7	0	0	0	0	0	0	0
6	0	222	1|	132	19	4	1	3	3	0	0	0	0
7	0	245	1|	139	22	4	0	1	4	1	0	0	0
8	0	245	1|	114	20	14	4	1	4	0	0	0	0
9	0	303	1|	123	33	12	7	4	4	0	0	0	0
10	0	439	2|	236	40	13	9	1	6	0	0	0	0
11	0	437	2|	213	60	11	3	1	6	1	0	0	0
12	0	502	2|	237	55	17	10	6	3	1	0	0	0
13	1	549	2|	232	67	15	10	7	6	1	0	0	0
14	0	651	3|	328	72	20	8	3	8	1	0	0	0
15	0	741	3|	369	70	27	17	3	4	1	1	0	0
16	0	845	3|	369	65	22	9	3	14	8	1	0	0
17	0	1820	7|	472	115	38	21	11	28	18	12	3	0
18	0	3366	13|	565	150	78	42	33	46	31	19	17	1
19	0	4963	20|	530	162	97	56	34	97	37	15	41	4
20	0	6658	26|	507	165	90	48	39	87	40	29	52	15
21	0	8605	34|	526	189	88	54	48	81	64	40	57	27
22	0	11499	46|	468	144	107	54	44	85	72	34	57	56
23	2	14541	58|	360	143	84	44	39	97	80	40	45	68

NWNB1006 ADCP 1577

```
Deployment: NWNB1006 updated 2011/08/29
Instrument no.:  1577
Instrument freq.:  75
Latitude: 62 55.060 N
Longitude:06 05.150 W
Bottom depth:   961
Instrument depth:  707
Center depth of first bin:  672
Bin length:  25
Number of bins:  23
Number of first ensemble:    206
Time of first ensemble: 2010 06 04 04 20
Number of last ensemble:   25410
Time of last ensemble:  2011 05 20 05 40
Time between ensembles (min.):   20
All directions have been corrected by adding:  -7.0
```

Below is listed for each bin the average speed (scalar average) and
the average velocity magnitude and direction formed as a vectorial
average of non-flagged (Good) observations. The last column shows the
number of good values used in parts per thousand

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	672	289	140	37	94	997
2	647	314	139	32	92	996
3	622	339	138	29	92	993
4	597	364	137	25	90	994
5	572	389	137	22	89	994
6	547	414	137	20	90	991
7	522	439	137	19	94	990
8	497	464	139	21	96	990
9	472	489	144	26	97	988
10	447	514	150	33	99	983
11	422	539	160	45	101	983
12	397	564	169	61	104	980
13	372	589	181	78	105	978
14	347	614	195	95	106	974
15	322	639	209	111	106	971
16	297	664	225	129	107	966
17	272	689	239	143	108	928
18	247	714	254	158	107	866
19	222	739	268	170	108	803
20	197	764	278	176	108	736
21	172	789	286	176	108	659
22	147	814	288	169	107	544
23	122	839	285	160	103	423

NWNB1006 ADCP 1577

```
Frequency of high speeds.
========================

Frequency (in parts per thousand) of speeds equal to or exceeding specified vales.
```

```
=================================================================================================
Bin|Depth|                                        Speed (cm/s)
no.|   m|  10   20   30   40   50   60   70   80   90  100  110  120  130  140  150  160  170  180
-------------------------------------------------------------------------------------------------
 1|  672| 602  217   65   15    4    1    0    0    0    0    0    0    0    0    0    0    0    0
 2|  647| 603  212   61   14    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 3|  622| 593  210   56   12    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 4|  597| 597  205   54   11    2    0    0    0    0    0    0    0    0    0    0    0    0    0
 5|  572| 611  199   50    8    1    0    0    0    0    0    0    0    0    0    0    0    0    0
 6|  547| 613  195   47    8    1    0    0    0    0    0    0    0    0    0    0    0    0    0
 7|  522| 615  197   46    7    1    0    0    0    0    0    0    0    0    0    0    0    0    0
 8|  497| 628  206   43    7    1    0    0    0    0    0    0    0    0    0    0    0    0    0
 9|  472| 647  223   49    8    1    0    0    0    0    0    0    0    0    0    0    0    0    0
10|  447| 668  252   58   10    1    0    0    0    0    0    0    0    0    0    0    0    0    0
11|  422| 700  293   75   13    2    0    0    0    0    0    0    0    0    0    0    0    0    0
12|  397| 720  329   98   18    3    0    0    0    0    0    0    0    0    0    0    0    0    0
13|  372| 747  376  126   29    5    1    0    0    0    0    0    0    0    0    0    0    0    0
14|  347| 778  422  161   42    9    2    0    0    0    0    0    0    0    0    0    0    0    0
15|  322| 797  473  203   62   14    3    1    0    0    0    0    0    0    0    0    0    0    0
16|  297| 818  515  248   92   23    5    1    0    0    0    0    0    0    0    0    0    0    0
17|  272| 805  529  272  112   33    7    2    0    0    0    0    0    0    0    0    0    0    0
18|  247| 763  524  293  133   47   10    2    0    0    0    0    0    0    0    0    0    0    0
19|  222| 712  508  302  148   59   17    3    1    0    0    0    0    0    0    0    0    0    0
20|  197| 657  478  293  154   68   23    6    1    0    0    0    0    0    0    0    0    0    0
21|  172| 595  436  270  148   70   27    7    2    0    0    0    0    0    0    0    0    0    0
22|  147| 494  364  220  120   62   25    7    2    0    0    0    0    0    0    0    0    0    0
23|  122| 382  279  168   89   47   23    8    2    0    0    0    0    0    0    0    0    0    0
```

NWNB1006 ADCP 1577

Harmonic constants for constituent M2 for deployment NWNB1006.

```
================================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl  Major   Minor    Incl   Grphl  R
         m  mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01    672      73     266      41     125      80      23     154      94  A
 02    647      76     268      41     131      82      26     156      96  A
 03    622      79     269      41     136      84      28     158      97  A
 04    597      82     271      42     142      87      31     160      98  A
 05    572      85     273      42     150      89      33     162     100  A
 06    547      87     276      40     158      89      34     165     102  A
 07    522      89     279      38     167      90      34     169     103  A
 08    497      93     283      38     176      94      36     172     105  A
 09    472      98     287      41     190      98      40     176     108  A
 10    447     105     292      46     201     105      46     180     112  A
 11    422     112     295      51     208     112      51       2     294  A
 12    397     116     298      55     215     116      54       4     296  A
 13    372     118     301      58     220     118      57       6     298  A
 14    347     119     303      61     225     120      60       8     300  A
 15    322     121     308      65     233     122      62      11     303  A
 16    297     121     313      69     241     123      65      14     305  A
 17    272     120     318      74     248     124      68      17     308  A
 18    247     121     321      80     252     126      72      20     309  A
 19    222     123     323      82     256     129      72      22     310  A
 20    197     124     327      85     258     130      76      22     313  A
 21    172     128     328      94     260     135      83      25     313  A
 22    147     133     330      96     260     140      86      23     316  A
 23    122     135     331     102     258     142      93      23     315  A
```

Harmonic constants for constituent S2 for deployment NWNB1006.

```
================================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl  Major   Minor    Incl   Grphl  R
         m  mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01    672      31     312      16     189      32      13     161     140  A
 02    647      32     314      16     195      33      14     163     141  A
 03    622      33     315      16     200      34      14     165     142  A
 04    597      33     318      17     206      34      15     167     144  A
 05    572      34     319      16     211      34      15     169     144  A
 06    547      35     321      16     216      35      16     171     145  A
 07    522      35     323      15     225      35      15     175     145  A
 08    497      35     328      15     234      35      15     178     148  A
 09    472      36     330      16     239      36      16     179     151  A
 10    447      37     336      17     254      37      17       5     333  A
 11    422      39     344      19     270      39      18      10     339  A
 12    397      40     348      22     276      40      20      13     342  A
 13    372      41     348      22     275      41      21      12     342  A
 14    347      42     346      23     274      42      22      13     340  A
 15    322      39     346      21     276      40      19      14     339  A
 16    297      36     347      18     286      38      15      16     340  A
 17    272      34     352      18     304      37      12      22     345  A
 18    247      36     359      20     313      39      13      25     350  A
 19    222      40       5      23     320      43      15      26     356  A
 20    197      42       9      27     319      46      19      28     357  A
 21    172      41       5      26     314      45      18      26     354  A
 22    147      37     359      26     312      42      17      31     346  A
 23    122      39     358      30     300      44      23      30     341  A
```

NWNB1006 ADCP 1577

Harmonic constants for constituent N2 for deployment NWNB1006.

```
================================================================================
Bin   Depth  E-ampl  E-gpl  N-ampl  N-gpl  Major   Minor   Incl   Grphl   R
        m    mm/sec    deg  mm/sec    deg  mm/sec  mm/sec    deg     deg
--------------------------------------------------------------------------------
 01    672      14     273       3    171      14       3    177      93   A
 02    647      13     277       2    170      13       2    177      97   A
 03    622      12     273       2    161      12       2    176      94   A
 04    597      11     269       2    144      12       2    173      90   A
 05    572      11     264       2    134      11       1    174      85   A
 06    547      11     263       2    115      11       1    170      84   A
 07    522       9     260       2     58       9       1    168      79   C
 08    497       7     270       3      9       7       3    175      88   C
 09    472       7     263       3     29       7       3    163      77   C
 10    447       8     257       4     40       8       2    155      70   C
 11    422      10     256       4     32      10       3    163      71   C
 12    397      13     251       4     87      14       1    163      73   A
 13    372      18     252       7    138      18       6    170      76   A
 14    347      20     259       9    159      20       8    175      82   A
 15    322      23     270      12    183      23      12      2     269   A
 16    297      23     277      14    202      24      13     12     270   A
 17    272      23     285      13    212      23      12     14     277   A
 18    247      24     286      14    213      24      13     14     278   A
 19    222      22     281      12    208      23      11     12     275   A
 20    197      27     290      15    215      27      14     11     284   A
 21    172      27     299      16    226      28      15     13     292   A
 22    147      35     304      23    234      36      21     20     292   A
 23    122      38     311      24    255      41      19     25     299   A
```

Harmonic constants for constituent O1 for deployment NWNB1006.

```
================================================================================
Bin   Depth  E-ampl  E-gpl  N-ampl  N-gpl  Major   Minor   Incl   Grphl   R
        m    mm/sec    deg  mm/sec    deg  mm/sec  mm/sec    deg     deg
--------------------------------------------------------------------------------
 01    672       4      68       4    278       5       1    134     264   A
 02    647       4      71       4    285       5       1    135     268   A
 03    622       4      69       4    289       5       2    135     269   A
 04    597       3      73       3    284       4       1    133     270   A
 05    572       3      66       3    269       4       1    141     255   A
 06    547       5      59       3    274       6       2    146     250   A
 07    522       6      48       3    295       7       3    164     236   A
 08    497       8      50       4    280       8       3    160     237   A
 09    472       7      45       4    251       8       2    151     231   A
 10    447       7      43       4    242       8       1    153     227   A
 11    422       9      38       4    279       9       3    166     223   A
 12    397       8      49       4    285       9       3    161     236   A
 13    372       9      39       6    260      10       3    152     229   A
 14    347       9      39       7    258      11       4    147     231   A
 15    322       9      32       7    246      11       3    143     224   A
 16    297      10      26       7    246      12       4    150     217   A
 17    272       8      42       7    270      10       4    140     242   A
 18    247       8      60       7    284       9       4    139     259   A
 19    222       8      42       7    296       9       7    148     247   A
 20    197       9      63      13    295      14       6    118     282   A
 21    172       8      70      15    299      16       6    111     292   A
 22    147      13     100      19    293      23       2    124     289   A
 23    122      18     123      23    306      29       1    128     305   A
```

NWNB1006 ADCP 1577

Harmonic constants for constituent K1 for deployment NWNB1006.

```
==============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         m  mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
------------------------------------------------------------------------------
 01    672      6     276      5     125      7       2      137     109   A
 02    647      6     277      5     120      8       2      142     106   A
 03    622      7     272      6     118      9       2      141     102   A
 04    597      8     271      6     122     10       3      143     102   A
 05    572      8     274      7     127     10       3      141     107   A
 06    547      7     273      7     123     10       3      137     107   A
 07    522      8     272      7     123     10       3      136     107   A
 08    497      8     266      7     129     10       4      141     103   A
 09    472      9     268      7     131     10       4      145     103   A
 10    447     10     265      7     133     11       5      150      98   A
 11    422     11     272      7     150     12       6      154     105   A
 12    397     11     272      7     140     12       5      151     104   A
 13    372     11     271      8     127     13       4      145     103   A
 14    347     10     264      9     125     13       5      141     101   A
 15    322      9     273      8     139     11       5      140     113   A
 16    297     12     276      8     138     14       5      150     107   A
 17    272     14     263      6     171     14       6      179      84   A
 18    247     10     246      6     204     11       4       27     237   A
 19    222      8     199      8     214     11       1       47     207   C
 20    197      7     173     13     236     14       6       72     228   C
 21    172      7     153     13     236     13       7       85     233   C
 22    147      3     134     12     215     12       3       88     215   C
 23    122      8     272     11     185     11       8       86     188   A
```

NWNE1006

Latitude:　　　62°47.590´N

Longitude:　　006°04.980´W

Echo sounding depth:　454 m

Bottom depth corr.:　456 m

Time of deployment:　4/6 - 2010 0244 UTC

Time of recovery:　20/5 – 2011 0447 UTC

ADCP:

Instrument no.:　RDI ADCP 1244

Instrument frequency:　150 kHz

Height above bottom:　1 m

Depth:　455 m (corr.)

Time of first data:　4/6 – 2010 0300 UTC

Time of last data:　20/5 – 2011 0420 UTC

Sample interval:　20 min

No. of ensembles:　25205

Pings per ens.:　1

Binlength:　25 m

Depth of first bin:　424 m (corr.)

No. of bins:　14

Data:

All data ok.
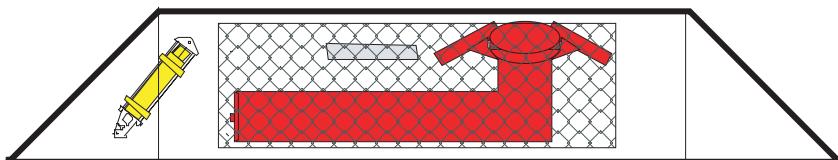
NWNE1006 ADCP 1244

```
Error statistics for deployment: NWNE1006 updated 2011/11/30
----------------


Surface distance not edited
Heading, pitch and roll not edited
Temperature edited by EVM in Sep 2011
Velocity edited up to and including bin 14 by JMB in Nov 2011
Intensity edited up to and including bin 14 by EVM in Sep 2011

Total number of  ensembles:        25205
Interval between ensembles:     20 min
Original number of bins:           20
Number of acceptable velocity bins:  14
Number of acceptable intensity bins: 14


Flagged values have been replaced by error codes: -999.99 for temperature, -999
for velocity and intensity. For observations where velocity is flagged, error
codes have been inserted into speed, direction and vertical velocity files


Number of temperature ens. flagged:       0

Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the
num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
--------------------|----------------------------------------------------------
    Int.  Velocity |          Number of velocity gaps of length
Bin ens.  ens.   % |-----------------------------------------------------------
    flgd  flgd flgd|   1     2     3     4     5  6-10 11-20 21-30 31-50    >50
--------------------|----------------------------------------------------------
  1     0  1056    4|  833    78    11     3     1     2     0     0     0     0
  2     0  1197    5|  960    95    13     2     0     0     0     0     0     0
  3     0  1522    6| 1214   115    16     5     2     0     0     0     0     0
  4     0  1601    6| 1253   133    20     4     1     0     0     0     0     0
  5     0  1837    7| 1407   159    27     5     1     1     0     0     0     0
  6     0  1851    7| 1433   157    21     6     2     1     0     0     0     0
  7     0  1925    8| 1433   172    32     7     2     2     0     0     0     0
  8     0  2023    8| 1433   203    31    14     3     3     0     0     0     0
  9     0  2054    8| 1374   209    37    13     6     8     1     0     0     0
 10     0  2260    9| 1331   216    59    24     7    20     3     0     0     0
 11     0  3167   13| 1346   217    76    34     6    45    21    11     3     0
 12     0  4634   18| 1198   252   101    50    25    84    33    22    17     0
 13     0  6842   27| 1265   301   157    65    37   110    47    32    48     0
 14     0 10085   40| 1534   453   199    90    57   128    65    35    82     6
```

NWNE1006 ADCP 1244

```
Deployment: NWNE1006 updated 2011/11/30
Instrument no.: 1244
Instrument freq.: 150
Latitude: 62 47.590 N
Longitude:06 04.980 W
Bottom depth:  456
Instrument depth:  455
Center depth of first bin:  424
Bin length:  25
Number of bins:  14
Number of first ensemble:    202
Time of first ensemble: 2010 06 04 03 00
Number of last ensemble:   25406
Time of last ensemble:  2011 05 20 04 20
Time between ensembles (min.):   20
All directions have been corrected by adding:  -7.0
```

Below is listed for each bin the average speed (scalar average) and
the average velocity magnitude and direction formed as a vectorial
average of non-flagged (Good) observations. The last column shows the
number of good values used in parts per thousand

```
=======================================================================
  Bin no.     Depth     Height     Speed      Vel      Dir      Good
                  m          m      mm/s      mm/s      deg       ppt
-----------------------------------------------------------------------
        1       424         32       218        98       92       958
        2       399         57       228       120       98       953
        3       374         82       236       140      102       940
        4       349        107       244       159      103       936
        5       324        132       253       175      103       927
        6       299        157       262       190      104       927
        7       274        182       273       203      104       924
        8       249        207       282       214      105       920
        9       224        232       290       222      105       919
       10       199        257       297       229      105       910
       11       174        282       302       234      105       874
       12       149        307       305       235      105       816
       13       124        332       309       236      106       729
       14        99        357       313       233      105       600
```

NWNE1006 ADCP 1244

```
Frequency of high speeds.
=========================

Frequency (in parts per thousand) of speeds equal to or exceeding specified vales.

==================================================================================================
Bin|Depth|                                     Speed (cm/s)
no.|   m|   10   20   30   40   50   60   70   80   90  100  110  120  130  140  150  160  170  180
--------------------------------------------------------------------------------------------------
  1|  424|  796  477  228   92   26    3    0    0    0    0    0    0    0    0    0    0    0    0
  2|  399|  791  486  252  122   43   10    1    0    0    0    0    0    0    0    0    0    0    0
  3|  374|  797  491  267  132   52   14    2    0    0    0    0    0    0    0    0    0    0    0
  4|  349|  797  510  291  142   60   19    4    0    0    0    0    0    0    0    0    0    0    0
  5|  324|  795  519  307  162   71   22    5    1    0    0    0    0    0    0    0    0    0    0
  6|  299|  802  534  329  186   84   28    7    1    0    0    0    0    0    0    0    0    0    0
  7|  274|  803  559  356  203   98   35    9    2    0    0    0    0    0    0    0    0    0    0
  8|  249|  804  573  371  221  111   45   13    2    0    0    0    0    0    0    0    0    0    0
  9|  224|  808  580  387  234  123   53   18    3    1    0    0    0    0    0    0    0    0    0
 10|  199|  802  583  396  247  132   62   23    5    1    0    0    0    0    0    0    0    0    0
 11|  174|  773  566  388  244  137   66   27    7    1    0    0    0    0    0    0    0    0    0
 12|  149|  720  531  362  234  133   66   28   10    1    0    0    0    0    0    0    0    0    0
 13|  124|  645  477  327  211  122   64   28   11    2    1    0    0    0    0    0    0    0    0
 14|   99|  535  400  273  174  103   54   25   11    3    1    0    0    0    0    0    0    0    0
```

NWNE1006 ADCP 1244

Harmonic constants for constituent M2 for deployment NWNE1006.

```
=====================================================================================
Bin   Depth   E-ampl   E-gpl   N-ampl   N-gpl   Major   Minor    Incl   Grphl   R
        m     mm/sec    deg    mm/sec    deg    mm/sec  mm/sec    deg    deg
-------------------------------------------------------------------------------------
 01     424     121      257     100      139     136      78      146     98    A
 02     399     130      264     103      148     144      83      149    103    A
 03     374     136      274      96      160     145      83      156    109    A
 04     349     140      284      90      175     145      83      162    115    A
 05     324     139      294      83      190     141      79      168    120    A
 06     299     140      303      80      205     141      79      173    126    A
 07     274     141      309      79      216     142      79      178    131    A
 08     249     141      314      80      224     141      80      180    134    A
 09     224     140      317      80      230     140      79        3    315    A
 10     199     139      319      79      234     139      79        4    317    A
 11     174     137      320      79      238     138      78        7    316    A
 12     149     136      321      79      240     137      77        8    317    A
 13     124     136      323      77      241     136      76        6    320    A
 14      99     136      327      77      245     137      76        7    323    A
```

Harmonic constants for constituent S2 for deployment NWNE1006.

```
=====================================================================================
Bin   Depth   E-ampl   E-gpl   N-ampl   N-gpl   Major   Minor    Incl   Grphl   R
        m     mm/sec    deg    mm/sec    deg    mm/sec  mm/sec    deg    deg
-------------------------------------------------------------------------------------
 01     424      47      306      35      197      49      31      156    142    A
 02     399      50      309      37      204      52      35      160    143    A
 03     374      51      316      35      215      52      34      166    146    A
 04     349      51      323      36      224      52      35      169    151    A
 05     324      53      330      35      234      53      35      173    155    A
 06     299      52      338      33      247      52      33      179    159    A
 07     274      49      348      30      261      49      30        3    346    A
 08     249      50      354      28      267      50      28        2    353    A
 09     224      51      357      27      269      51      27        1    356    A
 10     199      49      359      26      270      49      26        1    358    A
 11     174      47      358      23      275      47      23        5    356    A
 12     149      44      354      21      275      45      21        7    351    A
 13     124      42      355      23      276      42      22        9    350    A
 14      99      49        2      25      275      49      25        2      1    A
```

NWNE1006 ADCP 1244

Harmonic constants for constituent N2 for deployment NWNE1006.

```
=================================================================================
Bin    Depth   E-ampl   E-gpl  N-ampl   N-gpl   Major    Minor     Incl   Grphl  R
          m  mm/sec     deg  mm/sec     deg  mm/sec  mm/sec      deg    deg
---------------------------------------------------------------------------------
 01      424      20     238      18     115      24      13      142      80  A
 02      399      22     221      24      98      29      16      131      73  A
 03      374      18     228      20      93      24      10      131      74  A
 04      349      17     261      10     109      19       4      151      88  A
 05      324      21     286       8     184      21       8      175     107  A
 06      299      25     293      12     206      25      12        2     292  A
 07      274      27     294      14     213      27      14        6     291  A
 08      249      29     290      15     203      29      15        3     288  A
 09      224      30     289      15     204      30      15        3     288  A
 10      199      31     288      17     201      31      17        2     287  A
 11      174      32     291      16     196      32      16      177     112  A
 12      149      29     287      16     195      29      16      178     108  A
 13      124      31     290      17     195      31      17      176     113  A
 14       99      30     288      20     196      30      20      178     109  A
```

Harmonic constants for constituent O1 for deployment NWNE1006.

```
=================================================================================
Bin    Depth   E-ampl   E-gpl  N-ampl   N-gpl   Major    Minor     Incl   Grphl  R
          m  mm/sec     deg  mm/sec     deg  mm/sec  mm/sec      deg    deg
---------------------------------------------------------------------------------
 01      424      16      28      10     314      16       9       14      21  A
 02      399      18      35       9     299      18       9      176     217  A
 03      374      19      35       8     283      19       7      170     219  A
 04      349      19      36       9     287      20       9      169     221  A
 05      324      19      36      11     298      19      11      173     220  A
 06      299      19      40      11     297      19      11      168     227  A
 07      274      21      39      12     299      21      12      172     223  A
 08      249      22      37      12     295      22      11      172     221  A
 09      224      21      40      12     297      21      11      170     225  A
 10      199      20      38      12     297      21      12      170     224  A
 11      174      20      37      11     297      20      11      171     222  A
 12      149      23      32      12     296      23      11      175     215  A
 13      124      23      35      10     303      23      10      179     215  A
 14       99      22      40      12     313      22      12        3      38  A
```

NWNE1006 ADCP 1244

Harmonic constants for constituent K1 for deployment NWNE1006.

```
==============================================================================
Bin    Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
           m  mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
------------------------------------------------------------------------------

 01      424      20     254      13     176      20      12      11     248  A
 02      399      19     263      12     163      19      11     171      88  A
 03      374      19     269      13     158      20      11     160     101  A
 04      349      18     273      14     149      20      10     147     111  A
 05      324      18     280      15     146      21       9     141     119  A
 06      299      21     286      16     149      25       9     145     121  A
 07      274      22     279      16     152      25      12     148     115  A
 08      249      21     276      16     154      24      12     148     114  A
 09      224      20     276      18     155      23      13     142     119  A
 10      199      18     276      18     157      22      13     136     126  A
 11      174      15     265      17     161      18      13     119     139  A
 12      149       7     222      17     173      18       5      75     177  A
 13      124       9     170      17     179      20       1      62     177  C
 14       99      14     166      16     188      21       4      49     179  C
```

NWNG1006

Latitude: 63°06.000´N

Longitude: 006°05.000´W

Echo sounding depth: 1844 m

Bottom depth corr.: 1796 m

Time of deployment: 4/6 - 2010 0505 UTC

Time of recovery: 20/5 - 2011 0802 UTC

ADCP:

Instrument no.: RDI ADCP 1292

Instrument frequence: 75 kHz

Height above bottom: 1168 m

Depth: 628 m (corr.)

Time of first data: 4/6 – 2010 0540 UTC

Time of last data: 20/5 – 2011 0740 UTC

Sample interval: 20 min

No. of ensembles: 25207

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 593 m (corr.)

No. of bins: 22
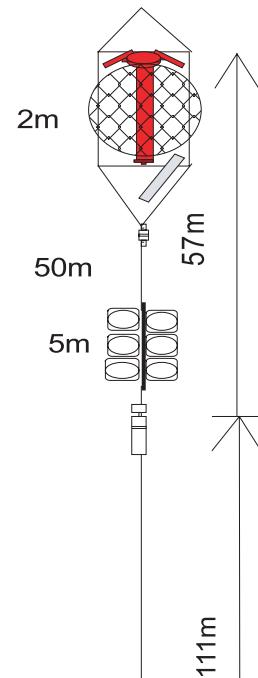
Aanderaa:

Instrument no.: RCM9 721

Height above bottom: 1111 m

Depth: 685 m (corr.)

Time of first data: 4/6 – 2010 0530 UTC

Time of last data: 20/5 – 2011 0630 UTC

Sample interval: 60 min

No. of ensembles: 8402

Data:

All data ok.

2m

57 m

50m

5m

1111m

1100m

5m

1m

5m
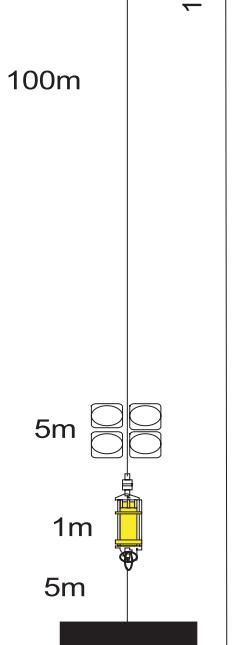
NWNG1006 ADCP 1292

```
Error statistics for deployment: NWNG1006 updated 2011/09/07
----------------


Surface distance not edited
Heading, pitch and roll not edited
Temperature edited by EVM in Sep 2011
Velocity edited up to and including bin 22 by TP in Aug 2011
Intensity edited up to and including bin 22 by EVM in Sep 2011

Total number of  ensembles:       25207
Interval between ensembles:      20 min
Original number of bins:            32
Number of acceptable velocity bins:  22
Number of acceptable intensity bins: 22


Flagged values have been replaced by error codes: -999.99 for temperature, -999
for velocity and intensity. For observations where velocity is flagged, error
codes have been inserted into speed, direction and vertical velocity files


Number of temperature ens. flagged:       2

Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the
num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
```

Bin	Int. ens. flgd	Velocity ens. flgd	% flgd	Number of velocity gaps of length									
				1	2	3	4	5	6-10	11-20	21-30	31-50	>50
1	3	158	1		109	16	4	0	1	0	0	0	0	0
2	0	182	1		112	18	10	1	0	0	0	0	0	0
3	0	224	1		119	35	4	2	3	0	0	0	0	0
4	0	185	1		102	29	5	1	0	1	0	0	0	0
5	0	201	1		123	10	12	4	0	1	0	0	0	0
6	0	179	1		82	25	5	4	2	1	0	0	0	0
7	0	195	1		85	24	8	4	2	2	0	0	0	0
8	0	206	1		104	25	9	5	1	0	0	0	0	0
9	0	364	1		154	35	20	4	6	5	0	0	0	0
10	0	435	2		159	39	13	8	3	5	3	1	0	0
11	1	638	3		266	70	30	8	4	11	1	0	0	0
12	0	780	3		274	50	28	20	18	18	3	0	0	0
13	0	954	4		386	84	42	23	6	14	4	0	0	0
14	0	1120	4		378	89	46	20	19	17	4	3	0	0
15	0	1522	6		413	131	49	27	11	30	11	5	1	0
16	0	2123	8		464	141	57	39	19	40	14	7	8	0
17	1	2956	12		520	143	51	48	25	54	25	9	18	0
18	0	4096	16		485	120	78	37	18	55	40	25	27	3
19	1	6649	26		425	161	73	45	21	69	54	27	59	16
20	0	7639	30		422	119	58	32	15	47	53	22	71	32
21	0	10694	42		497	131	85	35	26	79	73	37	67	51
22	0	14889	59		486	150	79	43	21	66	71	41	57	84

NWNG1006 ADCP 1292

```
Deployment: NWNG1006 updated 2011/09/07
Instrument no.:  1292
Instrument freq.:  75
Latitude: 63 06.000 N
Longitude:06 05.000 W
Bottom depth: 1796
Instrument depth:  628
Center depth of first bin:  593
Bin length:  25
Number of bins:  22
Number of first ensemble:    210
Time of first ensemble: 2010 06 04 05 40
Number of last ensemble:   25416
Time of last ensemble:  2011 05 20 07 40
Time between ensembles (min.):   20
All directions have been corrected by adding:  -7.0
```

Below is listed for each bin the average speed (scalar average) and
the average velocity magnitude and direction formed as a vectorial
average of non-flagged (Good) observations. The last column shows the
number of good values used in parts per thousand

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	593	1203	94	16	127	994
2	568	1228	96	17	127	993
3	543	1253	98	17	128	991
4	518	1278	101	18	127	993
5	493	1303	106	18	125	992
6	468	1328	111	19	120	993
7	443	1353	117	21	119	992
8	418	1378	124	23	115	992
9	393	1403	131	26	110	986
10	368	1428	140	32	108	983
11	343	1453	149	37	108	975
12	318	1478	161	44	108	969
13	293	1503	173	51	108	962
14	268	1528	187	57	108	956
15	243	1553	201	63	108	940
16	218	1578	218	70	108	916
17	193	1603	234	73	108	883
18	168	1628	249	76	107	838
19	143	1653	265	78	101	736
20	118	1678	280	82	98	697
21	93	1703	293	92	94	576
22	68	1728	305	109	91	409

NWNG1006 ADCP 1292

```
Frequency of high speeds.
=========================

Frequency (in parts per thousand) of speeds equal to or exceeding specified vales.

==================================================================================================
Bin|Depth|                                    Speed (cm/s)
no.|   m|   10   20   30   40   50   60   70   80   90  100  110  120  130  140  150  160  170  180
--------------------------------------------------------------------------------------------------
  1|  593|  403   34    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  2|  568|  418   43    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  3|  543|  433   52    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  4|  518|  453   61    3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  5|  493|  480   76    4    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  6|  468|  508   95    9    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  7|  443|  536  118   13    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  8|  418|  570  146   22    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  9|  393|  594  174   32    5    1    0    0    0    0    0    0    0    0    0    0    0    0    0
 10|  368|  622  209   46    7    1    0    0    0    0    0    0    0    0    0    0    0    0    0
 11|  343|  650  247   66   12    2    0    0    0    0    0    0    0    0    0    0    0    0    0
 12|  318|  676  290   87   20    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 13|  293|  706  335  111   27    5    1    0    0    0    0    0    0    0    0    0    0    0    0
 14|  268|  736  383  147   40    9    1    0    0    0    0    0    0    0    0    0    0    0    0
 15|  243|  750  421  181   60   14    2    0    0    0    0    0    0    0    0    0    0    0    0
 16|  218|  762  459  217   83   24    4    0    0    0    0    0    0    0    0    0    0    0    0
 17|  193|  751  474  244  106   38    9    1    0    0    0    0    0    0    0    0    0    0    0
 18|  168|  726  483  262  127   51   15    2    0    0    0    0    0    0    0    0    0    0    0
 19|  143|  652  461  260  131   59   21    5    1    0    0    0    0    0    0    0    0    0    0
 20|  118|  630  457  268  142   67   26    9    3    0    0    0    0    0    0    0    0    0    0
 21|   93|  525  391  239  129   65   30   11    5    2    1    0    0    0    0    0    0    0    0
 22|   68|  378  283  179  100   56   28   12    5    3    1    1    0    0    0    0    0    0    0
```

NWNG1006 ADCP 1292

Harmonic constants for constituent M2 for deployment NWNG1006.

```
==============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
------------------------------------------------------------------------------
 01    593      69     291      27     243      72      19      16     287   A
 02    568      70     293      29     246      73      20      17     288   A
 03    543      70     294      30     249      73      20      18     289   A
 04    518      69     295      30     251      73      20      19     290   A
 05    493      69     296      31     254      74      20      20     291   A
 06    468      70     298      34     257      75      21      21     292   A
 07    443      70     302      36     262      76      21      24     295   A
 08    418      68     306      38     270      75      20      27     299   A
 09    393      65     310      42     280      75      18      31     302   A
 10    368      63     315      45     287      75      18      34     306   A
 11    343      63     322      50     292      77      20      37     311   A
 12    318      65     328      57     294      82      25      40     313   A
 13    293      67     333      63     294      86      30      43     315   A
 14    268      69     339      71     298      92      35      46     318   A
 15    243      69     345      78     302      97      38      50     320   A
 16    218      71     350      82     306     100      41      51     324   A
 17    193      74     357      93     308     109      47      54     326   A
 18    168      75       2      99     307     112      54      58     324   A
 19    143      80       4     106     308     119      59      58     325   A
 20    118      84       3     107     309     122      60      57     326   A
 21     93      85     359     110     313     128      52      55     329   A
 22     68      84     357      98     312     119      48      51     330   A
```

Harmonic constants for constituent S2 for deployment NWNG1006.

```
==============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
------------------------------------------------------------------------------
 01    593      26     329      11     288      27       7      19     324   A
 02    568      26     330      11     289      27       7      20     325   A
 03    543      24     333      11     297      26       6      21     328   A
 04    518      24     334      11     299      25       6      21     329   A
 05    493      23     332      10     298      25       5      21     327   A
 06    468      23     329       9     297      24       4      19     325   A
 07    443      23     329       8     303      24       3      18     326   A
 08    418      22     330       9     318      23       2      21     328   A
 09    393      20     338      10     333      22       1      27     337   A
 10    368      19     353      13     342      23       2      33     349   A
 11    343      17     359      15     347      23       2      42     353   A
 12    318      15       9      16     348      22       4      46     359   A
 13    293      15      22      18     355      23       5      51       6   A
 14    268      16      32      20     358      24       7      51      11   A
 15    243      16      29      22     359      26       7      55       9   A
 16    218      16      30      21     358      25       7      55       9   A
 17    193      17      34      23     354      27       9      56       7   A
 18    168      20      28      25     354      31       9      53       6   A
 19    143      25      22      24     351      34       9      44       7   A
 20    118      30      21      23     334      35      14      34       5   A
 21     93      34      22      23     341      39      13      31      11   A
 22     68      26      30      26     342      34      15      45       5   A
```

NWNG1006 ADCP 1292

Harmonic constants for constituent N2 for deployment NWNG1006.

```
================================================================================
Bin   Depth  E-ampl  E-gpl  N-ampl   N-gpl  Major   Minor    Incl  Grphl  R
        m    mm/sec    deg  mm/sec     deg  mm/sec  mm/sec     deg    deg
--------------------------------------------------------------------------------
 01    593      13    260       3     206     14       3       8    258   A
 02    568      14    265       4     217     14       3      10    263   A
 03    543      13    263       4     219     14       2      12    261   A
 04    518      13    263       3     229     13       2      12    261   A
 05    493      13    268       3     247     13       1      13    267   A
 06    468      13    271       4     251     13       1      17    270   A
 07    443      13    276       5     251     14       2      19    273   A
 08    418      15    288       9     263     17       3      30    282   A
 09    393      17    299      13     263     21       7      36    286   A
 10    368      18    304      14     256     21       9      36    287   A
 11    343      19    302      15     251     22      10      33    286   A
 12    318      19    305      15     256     22      10      34    289   A
 13    293      20    304      15     256     23      10      32    290   A
 14    268      21    307      15     256     23      10      31    292   A
 15    243      20    308      15     258     23      10      33    292   A
 16    218      21    308      17     266     25       9      37    293   A
 17    193      22    313      19     267     27      11      39    295   A
 18    168      25    321      21     259     29      17      35    299   A
 19    143      30    324      22     257     32      19      25    308   A
 20    118      34    325      22     257     36      20      19    315   A
 21     93      34    324      22     265     36      18      25    311   A
 22     68      45    319      31     274     51      19      32    306   A
```

Harmonic constants for constituent O1 for deployment NWNG1006.

```
================================================================================
Bin   Depth  E-ampl  E-gpl  N-ampl   N-gpl  Major   Minor    Incl  Grphl  R
        m    mm/sec    deg  mm/sec     deg  mm/sec  mm/sec     deg    deg
--------------------------------------------------------------------------------
 01    593       5     62       2     286      5       1     163    246   A
 02    568       5     65       2     276      5       1     162    248   A
 03    543       4     60       2     294      5       1     166    245   A
 04    518       5     61       2     291      5       1     163    246   A
 05    493       5     56       2     293      6       1     170    238   A
 06    468       5     49       2     283      5       1     167    233   A
 07    443       5     56       2     282      5       1     160    242   A
 08    418       5     57       2     299      5       2     169    241   A
 09    393       5     56       2     290      6       1     167    240   A
 10    368       5     47       1     250      5       1     165    229   A
 11    343       4     44       1     308      4       1     178    224   A
 12    318       6     47       2     327      6       2       3     46   A
 13    293       7     44       2     331      7       2       5     42   A
 14    268       7     35       2     353      7       1      15     32   A
 15    243       8     38       5     356      8       3      28     28   A
 16    218      10     36       3     330     10       3       8     34   A
 17    193      10     39       4     310     10       4       0     39   A
 18    168       9     54       3     282      9       2     167    237   A
 19    143       9     41       2     100      9       2       7     42   C
 20    118      12      3       1     113     12       1     179    183   C
 21     93      14    354       5     232     15       4     169    176   A
 22     68      18    350      12     255     18      12     174    174   A
```

NWNG1006 ADCP 1292

Harmonic constants for constituent K1 for deployment NWNG1006.

```
=============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl  Grphl  R
         m   mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg    deg
-----------------------------------------------------------------------------
 01    593       4     293       3     165       5       2     140    135  A
 02    568       4     284       3     159       5       2     140    128  A
 03    543       4     290       3     152       4       2     139    128  A
 04    518       4     287       3     150       4       2     141    124  A
 05    493       4     294       2     150       4       1     150    123  A
 06    468       4     304       2     136       4       0     149    127  A
 07    443       4     290       3     129       5       1     148    115  A
 08    418       5     283       3     144       5       2     150    114  A
 09    393       5     289       3     151       6       2     158    116  A
 10    368       6     282       3     174       6       3     171    106  A
 11    343       5     294       3     154       6       2     155    121  A
 12    318       6     304       3     152       6       1     156    129  A
 13    293       7     305       2     222       7       2       3    304  A
 14    268       7     313       3     263       7       2      17    308  A
 15    243       6     290       4     267       7       1      28    285  A
 16    218       5     287       3     267       5       1      30    282  A
 17    193       3     298       5     260       6       2      60    270  A
 18    168       3     241      11     264      11       1      74    262  C
 19    143       5     167      17     261      17       5      91    261  C
 20    118       6     111      22     250      23       4     103    252  C
 21     93       4     123      22     238      23       4      95    239  C
 22     68      10     352      23     229      24       8     105    224  A
```

NWNG1006 Aanderaa 721

```
Deployment: NWNG1006          analyzed from beginning to end
Instrument no.:    721
Instrument type: Aanderaa
Latitude: 63 06.000 N
Longitude:06 05.000 W
Bottom depth: 1796
Instrument depth:  685
Number of records: 8402
Time of first record: 2010 06 04 05 30
Time of last record : 2011 05 20 06 30
Time between records (min.): 60.000

Parameters              Records OK    Records flagged
----------              ----------    ---------------
Column  1  : Recno
Column  2- 4: Date
Column  5- 6: Time
Column  7  : Temp        8402                0
Column  8  : Speed       8402                0
Column  9  : Direct      8402                0

Comments
--------




Residual current:  18 mm/sec towards: 136 degrees
----------------




TIDAL ANALYSIS
--------------
Error flagged records interpolated for velocity:    0, records not int.:     0
Tidal analysis performed on unfiltered data
========================================================================================
Const    Freq      E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
         c/hr      mm/sec    deg   mm/sec    deg   mm/sec  mm/sec    deg     deg
----------------------------------------------------------------------------------------
MM    .00151215       9      102      2       37     10       1        4     101   A
MSF   .00282193       6      346      2      213      6       2      163     171   A
Q1    .03721850       4       34      1      163      4       0      173     213   C
O1    .03873065       6       64      1      311      6       1      177     244   A
NO1   .04026859       0      121      1      327      1       0      106     325   A
P1    .04155259       2      282      1      116      2       0      153     105   A
K1    .04178075       5      297      3      162      5       2      152     128   A
N2    .07899925      15      249      2      166     15       2        1     249   A
M2    .08051140      81      288     32      240     84      23       16     283   A
L2    .08202355      10      314      9      242     11       8       31     292   A
S2    .08333334      30      325     12      281     31       8       18     320   A
K2    .08356149       7      339      5      295      9       3       32     326   A
MK3   .12229210       1       92      0       34      1       0       20      83   A
M4    .16102280       1       61      1       21      1       0       29      51   A
MS4   .16384470       1      205      1      121      1       1        9     199   A




DIRECTIONAL CURRENT DISTRIBUTION (for all nonflagged observations in series)
--------------------------------
Relative number of observations in parts per thousand (ppt) grouped into speed and
direction intervals (of 30 degree width centred around the directions shown)
========================================================================================
   Speed    |                    Direction intervals                   | All dir.
 intervals  |---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----|---- ----
  (mm/s)    | 15   45   75  105  135  165  195  225  255  285  315  345| Tot  Acc
------------|---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----|---- ----
   0 -   50 | 17   15   15   17   20   20   18   18   17   15   17   15| 205  205
  50 -  100 | 23   28   40   39   36   32   35   33   36   35   22   18| 376  581
 100 -  150 |  9   18   35   36   23   16   15   24   29   24   10    5| 245  826
 150 -  200 |  2    9   18   20    9    5    6   12   17   10    1    1| 111  937
 200 -  300 |  1    3   13   15    6    3    3    5    5    4    1 0.24|  59  996
 300 -  400 |  0 0.12    1    1    1 0.36 0.24 0.12 0.36    0    0    0|   4 1000
------------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
Total  (ppt)| 53   73  122  128   95   76   77   91  105   90   51   39|
Rel.flux (ppt)| 41   72  144  154   96   66   70   91  112   89   38   26|
------------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
Avg.spd (mm/s)| 78   98  118  121  100   87   91  100  106  100   75   67|
Max.spd (mm/s)|249  311  358  343  343  331  340  320  320  290  261  223|
```

NWNG1006 Aanderaa 721

Months 2010-2011

NWNG1006 Aanderaa 721

Start

N

Stop

100 km
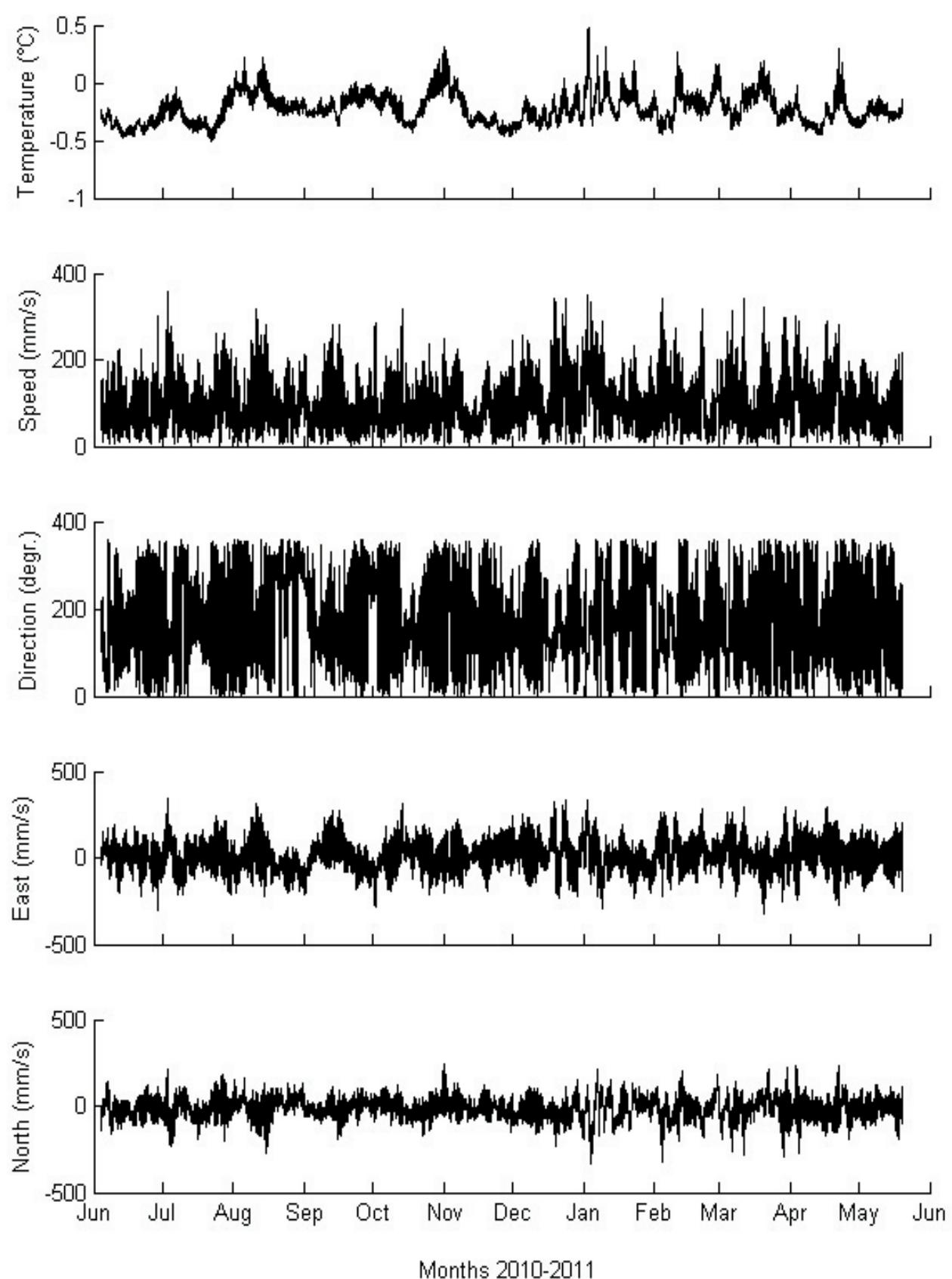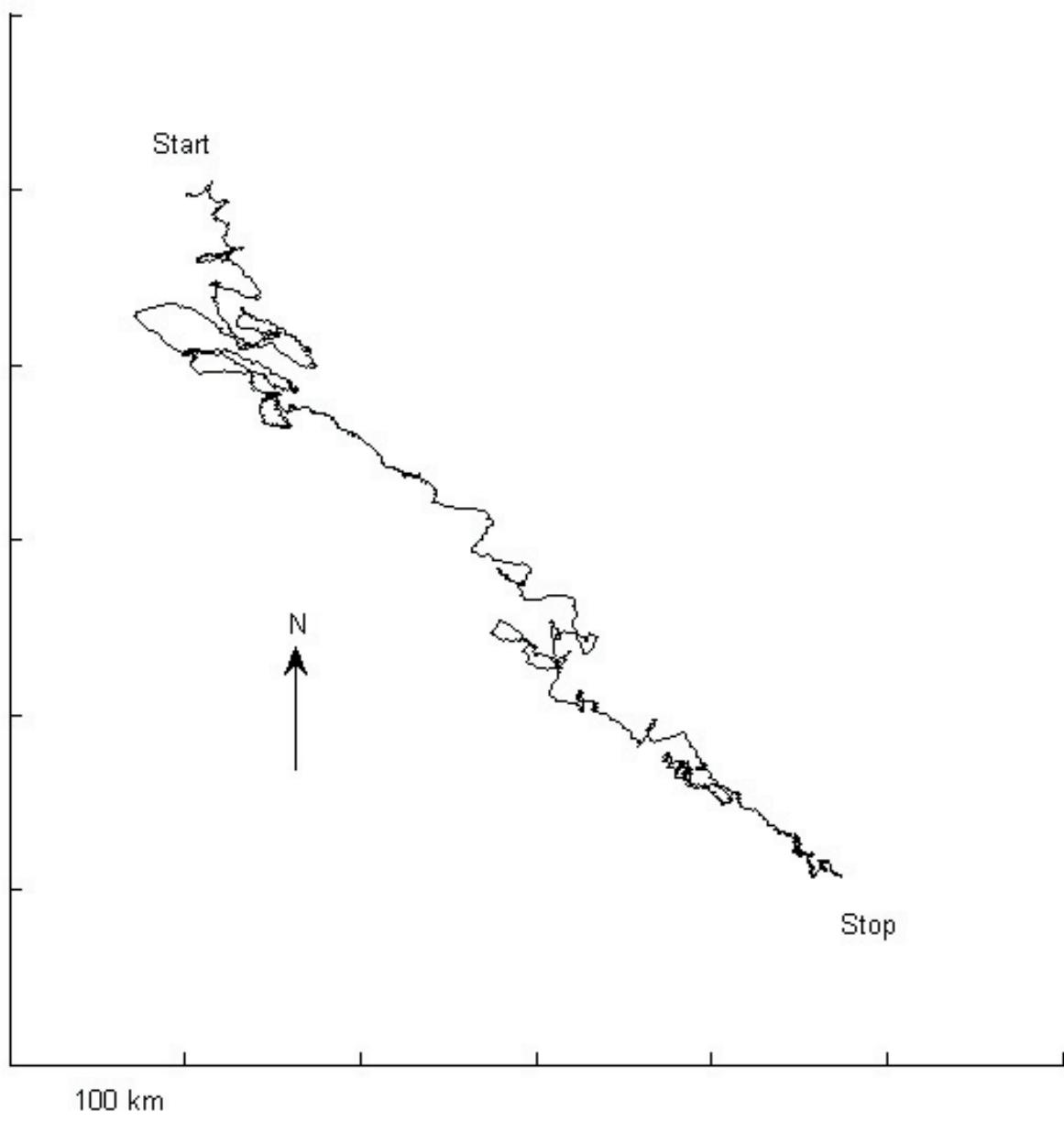
NWSC1006

Latitude:　　60°34.000´N

Longitude:　004°46.000´W

Echo sounding depth: 1096 m

Bottom depth corr.: 1066 m

Time of deployment: 5/6 - 2010 0115 UTC

Time of recovery: 21/5 - 2011 1758 UTC

ADCP:

Instrument no.: RDI ADCP 1644

Instrument frequency: 75 kHz

Height above bottom: 419 m (corr.)

Depth: 647 m (corr.)

Time of first data: 5/6 - 2010 0140 UTC

Time of last data: 21/5 - 2011 1740 UTC

Sample interval: 20 min

No. of ensembles: 25249

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 612 m (corr.)

No. of bins: 20
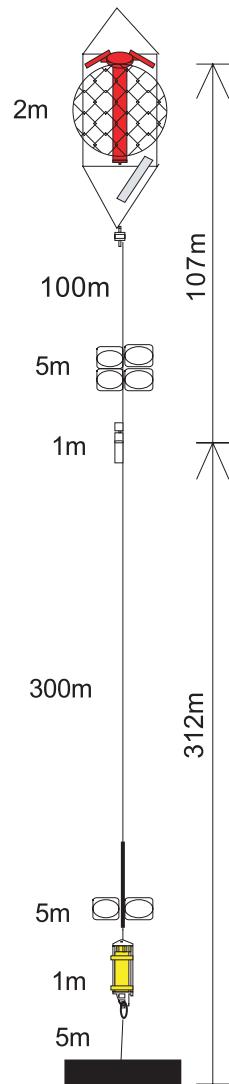
Aanderaa:

Instrument no.: RCM9 718

Height above bottom: 312 m

Depth: 754 m (corr.)

Time of first data: 5/6 – 2010 0130 UTC

Time of last data: 21/5 – 2011 1630 UTC

Sample interval: 60 min

No. of records: 8416

Data:

All data ok.

2m

100m

5m

1m

300m

5m

1m

5m

107m

312m
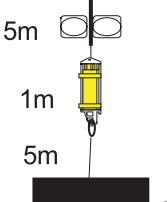
NWSC1006 ADCP 1644

```
Error statistics for deployment: NWSC1006 updated 2011/08/29
----------------



Surface distance not edited
Heading, pitch and roll not edited
Temperature edited by EVM in Aug 2011
Velocity edited up to and including bin 20 by ErJ in Aug 2011
Intensity edited up to and including bin 20 by EVM in Aug 2011

Total number of  ensembles:        25249
Interval between ensembles:      20 min
Original number of bins:            32
Number of acceptable velocity bins:  20
Number of acceptable intensity bins: 20


Flagged values have been replaced by error codes: -999.99 for temperature, -999
for velocity and intensity. For observations where velocity is flagged, error
codes have been inserted into speed, direction and vertical velocity files



Number of temperature ens. flagged:      0

Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the
num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
```

```
--------------------|-------------------------------------------------------------
     Int.  Velocity |              Number of velocity gaps of length
Bin  ens.  ens.   % |-------------------------------------------------------------
     flgd  flgd flgd|   1     2     3     4     5  6-10 11-20 21-30 31-50   >50
--------------------|-------------------------------------------------------------
  1    1    98    0|   92     3     0     0     0     0     0     0     0     0
  2    0    37    0|   37     0     0     0     0     0     0     0     0     0
  3    0    35    0|   35     0     0     0     0     0     0     0     0     0
  4    0    30    0|   30     0     0     0     0     0     0     0     0     0
  5    0    47    0|   40     2     1     0     0     0     0     0     0     0
  6    0    50    0|   44     3     0     0     0     0     0     0     0     0
  7    0    26    0|   22     2     0     0     0     0     0     0     0     0
  8    1    52    0|   46     3     0     0     0     0     0     0     0     0
  9    0    94    0|   88     3     0     0     0     0     0     0     0     0
 10    1   121    0|  113     4     0     0     0     0     0     0     0     0
 11    1   128    1|  110     9     0     0     0     0     0     0     0     0
 12    2   138    1|  134     2     0     0     0     0     0     0     0     0
 13    0   196    1|  152    13     2     3     0     0     0     0     0     0
 14    0   276    1|  195    12     5     3     1     2     1     0     0     0
 15    0   671    3|  331    47    15     9     3    11     3     1     0     0
 16    0   954    4|  458    62    21     7     6    10     5     2     2     0
 17    0  1808    7|  591   124    44    28    15    24    18     5     1     1
 18    0  3689   15|  846   241    98    49    38    60    42    15     7     0
 19    1  6164   24|  848   277   125    84    57   125    61    34    29     1
 20    0  9015   36| 1069   310   167    94    55   134    93    42    65     3
```

NWSC1006 ADCP 1644

```
Deployment: NWSC1006 updated 2011/08/29
Instrument no.:  1644
Instrument freq.:  75
Latitude: 60 34.000 N
Longitude:04 46.000 W
Bottom depth: 1066
Instrument depth:  647
Center depth of first bin:  612
Bin length:  25
Number of bins:  20
Number of first ensemble:    270
Time of first ensemble: 2010 06 05 01 40
Number of last ensemble:   25518
Time of last ensemble:  2011 05 21 17 40
Time between ensembles (min.):   20
All directions have been corrected by adding:  -5.0
```

Below is listed for each bin the average speed (scalar average) and the average velocity magnitude and direction formed as a vectorial average of non-flagged (Good) observations. The last column shows the number of good values used in parts per thousand

```
========================================================================
   Bin no.      Depth     Height      Speed       Vel       Dir     Good
                 m          m         mm/s       mm/s       deg      ppt
------------------------------------------------------------------------
         1       612        454        174        59        199      996
         2       587        479        175        59        197      999
         3       562        504        176        57        196      999
         4       537        529        177        55        193      999
         5       512        554        180        55        191      998
         6       487        579        184        56        187      998
         7       462        604        190        58        183      999
         8       437        629        197        59        179      998
         9       412        654        204        63        174      996
        10       387        679        210        65        170      995
        11       362        704        215        64        164      995
        12       337        729        223        61        160      995
        13       312        754        231        60        156      992
        14       287        779        237        61        151      989
        15       262        804        244        64        147      973
        16       237        829        253        67        145      962
        17       212        854        262        70        143      928
        18       187        879        273        77        141      854
        19       162        904        285        82        140      756
        20       137        929        295        87        134      643
```

NWSC1006 ADCP 1644

```
Frequency of high speeds.
=========================

Frequency (in parts per thousand) of speeds equal to or exceeding specified vales.

===========================================================================================
Bin|Depth|                                    Speed (cm/s)
no.|   m|  10   20   30   40   50   60   70   80   90  100  110  120  130  140  150  160  170  180
-------------------------------------------------------------------------------------------
  1|  612| 741  353  114   29    4    1    0    0    0    0    0    0    0    0    0    0    0    0
  2|  587| 746  356  114   29    4    1    0    0    0    0    0    0    0    0    0    0    0    0
  3|  562| 749  362  116   29    4    1    0    0    0    0    0    0    0    0    0    0    0    0
  4|  537| 751  370  118   31    5    1    0    0    0    0    0    0    0    0    0    0    0    0
  5|  512| 760  377  126   32    5    1    0    0    0    0    0    0    0    0    0    0    0    0
  6|  487| 767  391  138   33    6    1    0    0    0    0    0    0    0    0    0    0    0    0
  7|  462| 786  409  152   42    9    2    0    0    0    0    0    0    0    0    0    0    0    0
  8|  437| 802  430  169   52   13    3    1    0    0    0    0    0    0    0    0    0    0    0
  9|  412| 809  457  192   61   18    5    2    0    0    0    0    0    0    0    0    0    0    0
 10|  387| 815  478  205   71   21    6    2    1    0    0    0    0    0    0    0    0    0    0
 11|  362| 827  494  221   76   25    6    2    1    0    0    0    0    0    0    0    0    0    0
 12|  337| 840  514  241   90   26    7    2    1    0    0    0    0    0    0    0    0    0    0
 13|  312| 842  540  263  103   33   10    3    1    0    0    0    0    0    0    0    0    0    0
 14|  287| 849  555  282  117   40   13    4    1    0    0    0    0    0    0    0    0    0    0
 15|  262| 835  559  294  132   49   16    6    2    0    0    0    0    0    0    0    0    0    0
 16|  237| 834  572  312  145   62   22    7    2    1    0    0    0    0    0    0    0    0    0
 17|  212| 809  568  323  156   72   29    9    3    1    0    0    0    0    0    0    0    0    0
 18|  187| 751  543  321  165   78   33   12    4    1    0    0    0    0    0    0    0    0    0
 19|  162| 674  495  304  165   82   38   16    6    1    0    0    0    0    0    0    0    0    0
 20|  137| 575  426  272  157   82   40   17    6    2    1    0    0    0    0    0    0    0    0
```

NWSC1006 ADCP 1644

Harmonic constants for constituent M2 for deployment NWSC1006.

```
================================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
        m    mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01     612     161     255      92     249     186       8      30     254  A
 02     587     160     255      93     250     185       8      30     254  A
 03     562     159     256      94     250     185       7      31     254  A
 04     537     158     256      96     251     185       7      31     255  A
 05     512     158     257      97     252     185       7      32     255  A
 06     487     156     257      97     254     184       5      32     256  A
 07     462     151     258      99     256     181       2      33     257  A
 08     437     147     260     105     259     181       1      36     259  A
 09     412     142     261     112     262     181       0      38     261  C
 10     387     135     262     114     265     177       4      40     264  C
 11     362     127     264     117     269     172       8      43     266  C
 12     337     121     266     122     271     172       8      45     269  C
 13     312     118     267     127     273     173       9      47     270  C
 14     287     115     268     131     274     174      10      49     271  C
 15     262     113     269     134     275     175       9      50     273  C
 16     237     113     271     138     276     178       8      51     274  C
 17     212     116     271     140     277     181       9      50     274  C
 18     187     117     270     141     277     183      11      51     274  C
 19     162     120     270     143     279     186      15      50     276  C
 20     137     121     270     147     280     190      16      50     276  C
```

Harmonic constants for constituent S2 for deployment NWSC1006.

```
================================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl  R
        m    mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
 01     612      45     296      42     308      61       6      43     302  C
 02     587      45     296      41     308      61       6      43     301  C
 03     562      45     297      42     307      61       6      43     302  C
 04     537      46     298      43     305      63       4      43     302  C
 05     512      47     299      43     305      64       3      42     302  C
 06     487      48     300      44     302      65       1      43     301  C
 07     462      50     300      44     299      66       0      41     300  A
 08     437      51     299      42     296      66       2      39     298  A
 09     412      55     301      43     295      70       3      38     299  A
 10     387      55     299      43     295      70       2      38     297  A
 11     362      53     295      41     297      67       1      38     296  C
 12     337      54     290      41     295      68       3      37     292  C
 13     312      57     290      40     291      69       1      35     290  C
 14     287      58     294      39     291      70       1      34     293  A
 15     262      57     298      40     291      69       4      35     296  A
 16     237      58     299      39     290      70       5      34     296  A
 17     212      59     299      39     290      70       5      33     296  A
 18     187      65     300      39     290      76       6      31     298  A
 19     162      67     303      37     288      76       9      29     300  A
 20     137      71     301      39     290      81       6      29     299  A
```

NWSC1006 ADCP 1644

Harmonic constants for constituent N2 for deployment NWSC1006.

```
================================================================================
Bin   Depth   E-ampl   E-gpl   N-ampl   N-gpl   Major   Minor   Incl   Grphl   R
        m     mm/sec    deg    mm/sec    deg    mm/sec  mm/sec   deg    deg
--------------------------------------------------------------------------------
 01    612      35      222      12      220      37       0      19     222    A
 02    587      35      224      14      224      37       0      22     224    C
 03    562      34      224      14      224      37       0      22     224    A
 04    537      34      225      14      222      37       1      23     225    A
 05    512      35      229      16      221      39       2      25     227    A
 06    487      35      233      19      227      39       2      28     231    A
 07    462      33      237      21      230      39       2      33     235    A
 08    437      31      244      24      237      39       2      38     241    A
 09    412      27      245      25      241      37       2      43     243    A
 10    387      26      251      29      248      39       1      49     249    A
 11    362      25      261      33      250      41       4      53     254    A
 12    337      25      262      33      250      41       4      53     254    A
 13    312      25      265      35      252      43       4      55     256    A
 14    287      27      268      36      252      45       6      54     258    A
 15    262      28      266      37      251      46       6      54     256    A
 16    237      29      263      37      247      46       6      53     253    A
 17    212      29      262      38      248      48       6      53     253    A
 18    187      29      261      36      250      46       4      51     254    A
 19    162      28      257      36      255      45       1      52     256    A
 20    137      25      263      34      258      42       2      54     260    A
```

Harmonic constants for constituent O1 for deployment NWSC1006.

```
================================================================================
Bin   Depth   E-ampl   E-gpl   N-ampl   N-gpl   Major   Minor   Incl   Grphl   R
        m     mm/sec    deg    mm/sec    deg    mm/sec  mm/sec   deg    deg
--------------------------------------------------------------------------------
 01    612      11       15       9       44      13       3      39      26    C
 02    587      11       17       8       42      13       3      38      26    C
 03    562      10       17       8       44      13       3      37      27    C
 04    537      11       15       8       45      13       3      34      24    C
 05    512      11       13       8       43      13       3      35      23    C
 06    487      11       13       8       36      13       3      38      22    C
 07    462      10       13       7       39      12       3      35      22    C
 08    437       9       15       7       49      11       3      35      26    C
 09    412      11       14       7       45      13       3      33      24    C
 10    387      12       10       6       35      14       3      26      15    C
 11    362      13       10       7       36      14       3      27      16    C
 12    337      13        9       7       42      14       3      25      16    C
 13    312      13        3       7       43      14       4      23      10    C
 14    287      12      360       7       41      13       4      28      10    C
 15    262      11        4       6       46      12       4      23      12    C
 16    237      10      357       4       26      11       2      21       1    C
 17    212      11      357       5       16      12       1      25       1    C
 18    187      10      359      10       32      13       4      43      15    C
 19    162       8      356       9       58      10       6      56      37    C
 20    137       9       11       9       53      11       4      44      31    C
```

NWSC1006 ADCP 1644

Harmonic constants for constituent K1 for deployment NWSC1006.

```
================================================================================
Bin   Depth  E-ampl  E-gpl  N-ampl  N-gpl  Major   Minor    Incl   Grphl  R
         m   mm/sec    deg  mm/sec    deg  mm/sec  mm/sec    deg     deg
--------------------------------------------------------------------------------
 01    612       7     246       1    249      7       0     10     246   C
 02    587       7     257       2    256      8       0     14     257   A
 03    562       7     258       1    279      7       1     11     259   C
 04    537       8     248       2    235      8       0     11     247   A
 05    512       7     249       2    250      8       0     13     249   C
 06    487       7     254       2    259      7       0     19     254   C
 07    462       6     254       2    237      7       1     17     252   A
 08    437       5     253       2    277      5       1     16     255   C
 09    412       4     234       2    266      4       1     26     241   C
 10    387       5     218       4    223      7       0     41     221   C
 11    362       4     196       5    199      7       0     54     198   C
 12    337       5     128       4    167      6       2     37     143   C
 13    312       6     129       4    156      7       2     36     139   C
 14    287       5     168       4    161      6       0     41     165   A
 15    262       8     210       5    161      9       3     24     201   A
 16    237      10     206       6    175     12       3     27     199   A
 17    212      10     197       6    199     11       0     30     198   C
 18    187      10     206       5    170     11       3     24     199   A
 19    162      14     227       2    112     14       2    177      48   A
 20    137      21     242       2     88     21       1    175      62   A
```

NWSC1006 AANDERAA 718

```
Deployment: NWSC1006        analyzed from beginning to end
Instrument no.:   718
Instrument type: Aanderaa
Latitude: 60 34.000 N
Longitude:04 46.000 W
Bottom depth: 1066
Instrument depth:  754
Number of records: 8416
Time of first record: 2010 06 05 01 30
Time of last record : 2011 05 21 16 30
Time between records (min.): 60.000

Parameters              Records OK    Records flagged
----------              ----------    ---------------
Column  1  : Recno
Column  2- 4: Date
Column  5- 6: Time
Column  7  : Temp        8416                0
Column  8  : Speed       8416                0
Column  9  : Direct      8416                0

Comments
--------



Residual current:  64 mm/sec towards: 196 degrees
----------------



TIDAL ANALYSIS
--------------
Error flagged records interpolated for velocity:     0, records not int.:     0
Tidal analysis performed on unfiltered data
=================================================================================
Const     Freq      E-ampl  E-gpl  N-ampl  N-gpl   Major   Minor    Incl   Grphl  R
          c/hr      mm/sec   deg   mm/sec    deg  mm/sec  mm/sec     deg     deg
---------------------------------------------------------------------------------
MM     .00151215       10      75      17      90      19       2      59      86  C
MSF    .00282193        5      26      15      86      15       5      79      83  C
Q1     .03721850        5     329       5       3       6       2      47     347  C
O1     .03873065       11      12       9      41      14       4      41      24  C
NO1    .04026859        2      94       1     120       2       0      35     102  C
P1     .04155259        3     246       1     300       3       1      11     249  C
K1     .04178075        7     252       2     303       7       2      11     254  C
N2     .07899925       35     223      15     226      38       1      22     223  C
M2     .08051140      163     256     102     249     192      11      32     254  A
L2     .08202355        5     107       5     309       7       1     135     298  A
S2     .08333334       48     299      45     303      65       3      43     301  C
K2     .08356149       15     295      13     301      20       1      42     298  C
MK3    .12229210        0     191       1     333       1       0     118     342  C
M4     .16102280        1     156       3     357       3       0     109     355  A
MS4    .16384470        0      63       2      15       2       0      85      16  A



DIRECTIONAL CURRENT DISTRIBUTION (for all nonflagged observations in series)
--------------------------------
Relative number of observations in parts per thousand (ppt) grouped into speed and
direction intervals (of 30 degree width centred around the directions shown)
=================================================================================
   Speed    |                  Direction intervals               | All dir.
  intervals |---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----|---- ----
   (mm/s)   | 15   45   75  105  135  165  195  225  255  285  345| Tot  Acc
-----------------------------------------------------------------------------
   0 -   50 | 10   10    9    8    9    8    6   10    8    7    6|  95   95
  50 -  100 | 11   21   21   20   13   16   20   23   23   10    7| 189  285
 100 -  150 |  8   24   29   16   13   13   21   34   26    8    3    4| 199  484
 150 -  200 |  4   21   27   13    8    8   21   41   26    3    1    1| 172  656
 200 -  300 |  2   20   29   15    5   10   30   77   29    2 0.24    0| 218  874
 300 -  400 |  0    5    9    4    3    5   11   40   10 0.12    0    0|  88  961
 400 -  500 |  0    1    2    2    3    4    5   14    2    0    0    0|  33  994
 500 -  600 |  0    0    0 0.36    0 0.12    1    4    0    0    0    0|   6 1000
 600 -  700 |  0    0    0    0    0    0 0.24    0    0    0    0    0| .24 1000
-----------------------------------------------------------------------------
Total   (ppt)| 33  102  126   77   53   65  114  243  124   30   14   18|
Rel.flux (ppt)| 18   91  123   68   45   61  126  316  121   17    6    7|
-----------------------------------------------------------------------------
Avg.spd (mm/s)| 93  156  169  153  147  164  192  227  170   99   75   71|
Max.spd (mm/s)|270  458  496  522  478  513  622  578  475  334  208  185|
-----------------------------------------------------------------------------
```

NWSC1006 Aanderaa 718

Months 2010-2011

NWSC1006 Aanderaa 718

Start

N

Stop

100 km
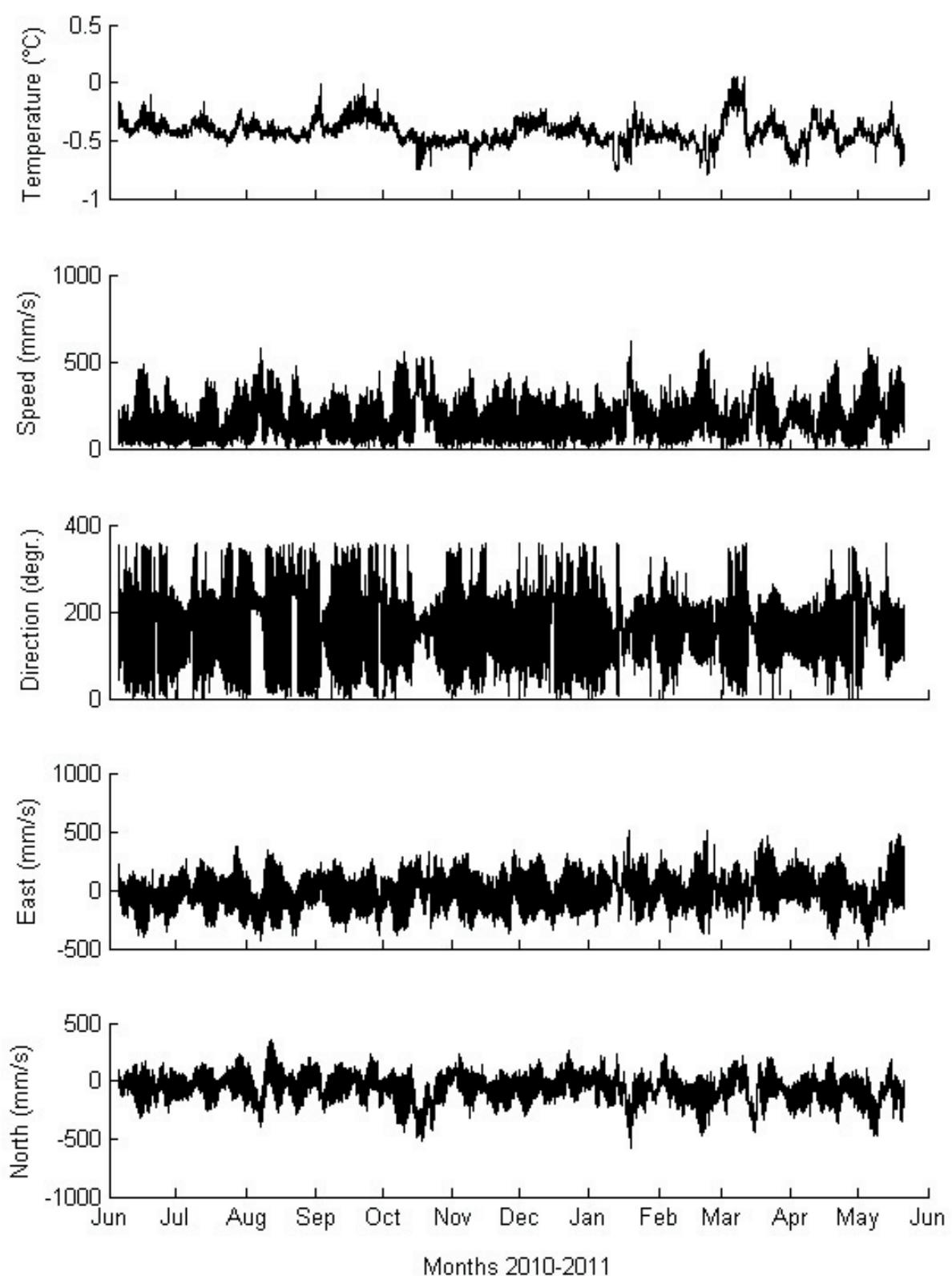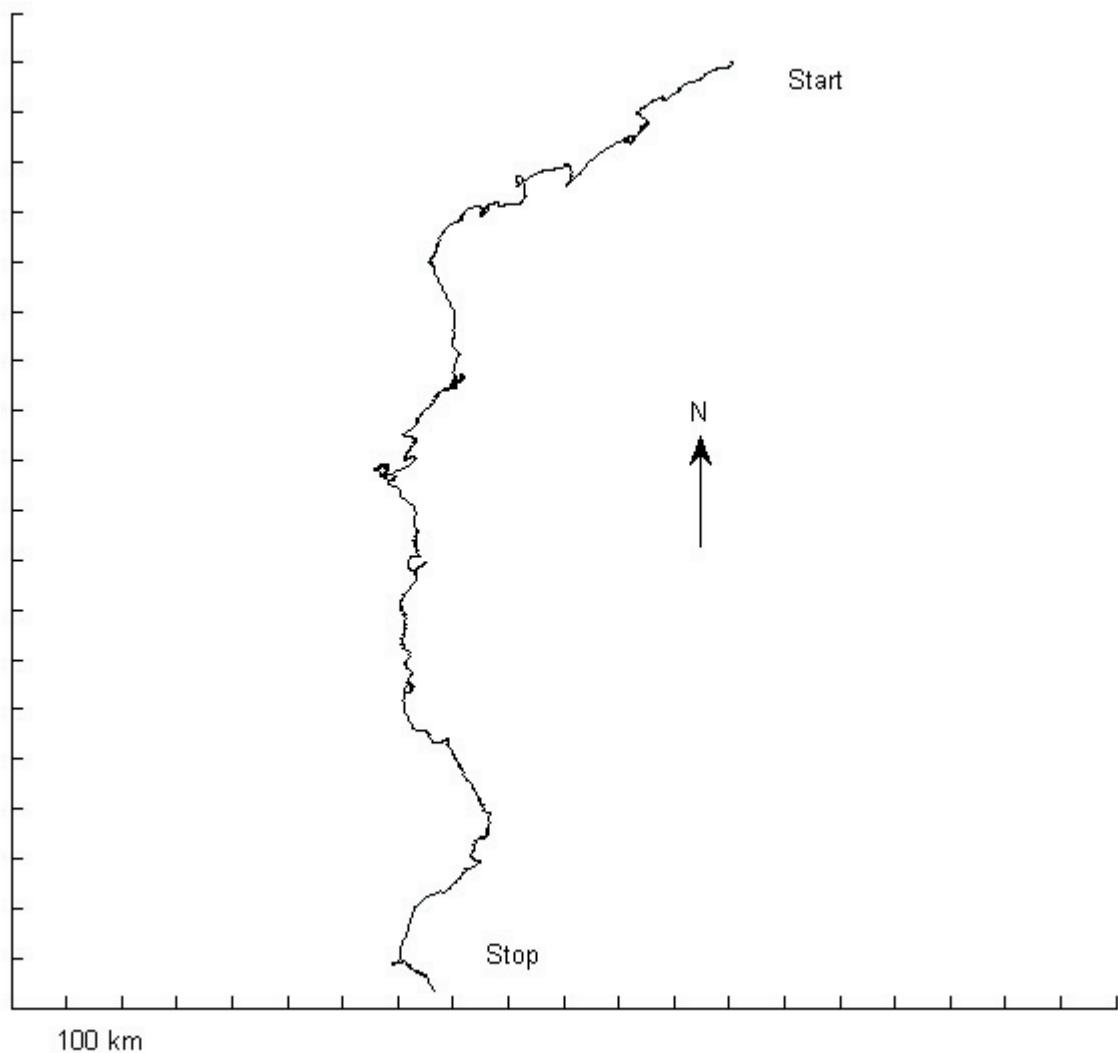
NWSX1006

Latitude: 60°51.510´N

Longitude: 005°30.120´W

Echo sounding depth: 540 m

Bottom depth corr.: 549 m

Time of deployment: 4/6 - 2010 2125 UTC

Time of recovery: 21/5 – 2011 1417 UTC

ADCP:

Instrument no.: RDI ADCP 3368

Instrument frequency: 75 kHz

Height above bottom: 1 m

Depth: 548 m (corr.)

Time of first data: 4/6 – 2010 2140 UTC

Time of last data: 21/5 – 2011 1400 UTC

Sample interval: 20 min

No. of ensembles: 25250

Pings per ens.: 10

Binlength: 10 m

Depth of first bin: 530 m (corr.)

No. of bins: 48

MicroCat:
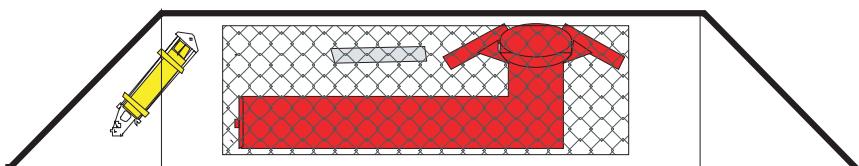
Instrument no.: 0984

Height above bottom: 1 m

Time of first data: 4/6 – 2010 2150 UTC

Time of last data: 21/5 – 2011 1410 UTC

Sample interval: 10 min

No. of ensembles: 50499

Instrument depth: 548 m

Data:

The salinity from the MicroCat is uncalibrated and may have a drift.

NWSX1006 ADCP 3368

```
Error statistics for deployment: NWSX1006 updated 2011/10/31
----------------


Surface distance not edited
Depth edited by EVM in Sep 2011
Heading, pitch and roll not edited
Temperature edited by EVM in Sep 2011
Velocity edited up to and including bin 48 by JMB in Oct 2011
Intensity edited up to and including bin 48 by EVM in Sep 2011

Total number of  ensembles:       25250
Interval between ensembles:      20 min
Original number of bins:            60
Number of acceptable velocity bins:  48
Number of acceptable intensity bins: 48

Flagged values have been replaced by error codes: -999.99 for temperature and
depth, -999 for velocity and intensity. For observations where velocity is
flagged, error codes have been inserted into speed, direction and vertical vel-
ocity files


Number of depth ens. flagged       :        1
Number of temperature ens. flagged:        0


Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
```

Bin	Int. ens. flgd	Velocity ens. flgd	% flgd	Number of velocity gaps of length									
				1	2	3	4	5	6-10	11-20	21-30	31-50	>50
1	0	33	0	33	0	0	0	0	0	0	0	0	0
2	0	25	0	23	1	0	0	0	0	0	0	0	0
3	0	11	0	11	0	0	0	0	0	0	0	0	0
4	0	14	0	14	0	0	0	0	0	0	0	0	0
5	0	15	0	15	0	0	0	0	0	0	0	0	0
6	0	27	0	25	1	0	0	0	0	0	0	0	0
7	0	14	0	14	0	0	0	0	0	0	0	0	0
8	0	18	0	18	0	0	0	0	0	0	0	0	0
9	0	15	0	15	0	0	0	0	0	0	0	0	0
10	0	19	0	19	0	0	0	0	0	0	0	0	0
11	0	29	0	29	0	0	0	0	0	0	0	0	0
12	0	28	0	26	1	0	0	0	0	0	0	0	0
13	0	36	0	36	0	0	0	0	0	0	0	0	0
14	0	26	0	26	0	0	0	0	0	0	0	0	0
15	0	37	0	37	0	0	0	0	0	0	0	0	0
16	0	39	0	39	0	0	0	0	0	0	0	0	0
17	0	37	0	37	0	0	0	0	0	0	0	0	0
18	0	44	0	44	0	0	0	0	0	0	0	0	0
19	0	33	0	33	0	0	0	0	0	0	0	0	0
20	0	35	0	35	0	0	0	0	0	0	0	0	0
21	0	57	0	57	0	0	0	0	0	0	0	0	0
22	0	58	0	58	0	0	0	0	0	0	0	0	0
23	0	70	0	68	1	0	0	0	0	0	0	0	0
24	0	53	0	53	0	0	0	0	0	0	0	0	0
25	0	35	0	35	0	0	0	0	0	0	0	0	0
26	0	54	0	54	0	0	0	0	0	0	0	0	0
27	0	84	0	84	0	0	0	0	0	0	0	0	0
28	0	154	1	154	0	0	0	0	0	0	0	0	0
29	0	79	0	77	1	0	0	0	0	0	0	0	0
30	0	93	0	93	0	0	0	0	0	0	0	0	0
31	0	80	0	76	2	0	0	0	0	0	0	0	0
32	0	126	0	121	1	1	0	0	0	0	0	0	0
33	0	143	1	125	6	0	0	0	1	0	0	0	0
34	0	161	1	147	4	0	0	0	1	0	0	0	0
35	0	199	1	165	12	2	1	0	0	0	0	0	0
36	0	204	1	172	8	1	2	1	0	0	0	0	0
37	0	234	1	191	12	5	1	0	0	0	0	0	0
38	0	243	1	194	7	3	4	0	1	0	0	0	0
39	0	281	1	208	20	9	0	0	1	0	0	0	0
40	0	357	1	247	28	9	2	0	3	0	0	0	0
41	0	455	2	290	26	16	3	3	3	1	0	0	0
42	0	555	2	342	43	8	7	2	4	1	1	0	0
43	0	829	3	446	63	26	10	5	5	4	1	0	0
44	0	1599	6	382	49	16	11	4	22	22	15	4	0
45	0	2541	10	336	40	21	17	9	36	26	27	11	2
46	0	2979	12	404	58	32	10	17	38	35	28	13	2
47	0	4477	18	387	50	38	21	19	42	45	30	35	6
48	0	6346	25	487	57	39	26	21	62	69	28	56	12

NWSX1006 ADCP 3368

```
Deployment: NWSX1006 updated 2011/10/31
Instrument no.:  3368
Instrument freq.:  75
Latitude: 60 51.510 N
Longitude:05 30.120 W
Bottom depth:  549
Instrument depth:  548
Center depth of first bin:  530
Bin length:  10
Number of bins:  48
Number of first ensemble:    258
Time of first ensemble: 2010 06 04 21 40
Number of last ensemble:   25507
Time of last ensemble:  2011 05 21 14 00
Time between ensembles (min.):    20
All directions have been corrected by adding:  -6.0
```

Below is listed for each bin the average speed (scalar average) and
the average velocity magnitude and direction formed as a vectorial
average of non-flagged (Good) observations. The last column shows the
number of good values used in parts per thousand

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	530	19	238	73	192	999
2	520	29	254	78	196	999
3	510	39	263	79	200	1000
4	500	49	269	80	203	999
5	490	59	272	79	206	999
6	480	69	273	78	209	999
7	470	79	273	77	211	999
8	460	89	272	77	214	999
9	450	99	271	76	216	999
10	440	109	270	76	218	999
11	430	119	268	76	220	999
12	420	129	265	75	221	999
13	410	139	262	76	223	999
14	400	149	259	75	224	999
15	390	159	255	75	225	999
16	380	169	252	76	226	998
17	370	179	248	77	227	999
18	360	189	244	80	227	998
19	350	199	241	82	227	999
20	340	209	238	84	228	999
21	330	219	235	86	229	998
22	320	229	234	88	229	998
23	310	239	231	88	229	997
24	300	249	228	88	230	998
25	290	259	225	88	230	999
26	280	269	223	88	230	998
27	270	279	222	87	231	997
28	260	289	221	88	231	994
29	250	299	221	89	232	997
30	240	309	221	91	232	996
31	230	319	221	92	232	997
32	220	329	221	93	232	995
33	210	339	221	93	232	994
34	200	349	220	93	232	994
35	190	359	220	92	232	992
36	180	369	219	90	232	992
37	170	379	219	88	231	991
38	160	389	220	88	231	990
39	150	399	221	87	231	989
40	140	409	221	86	231	986
41	130	419	223	85	231	982
42	120	429	222	82	231	978
43	110	439	223	80	232	967
44	100	449	222	78	232	937
45	90	459	222	75	232	899
46	80	469	223	74	231	882
47	70	479	224	73	231	823
48	60	489	225	71	230	749

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```
Frequency of high speeds.
=========================

Frequency (in parts per thousand) of speeds equal to or exceeding specified vales.
```

Bin no.	Depth m	|	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
1	530		850	573	302	122	34	6	0	0	0	0	0	0	0	0	0	0	0	0
2	520		869	607	348	157	52	13	1	0	0	0	0	0	0	0	0	0	0	0
3	510		879	628	370	175	61	16	2	0	0	0	0	0	0	0	0	0	0	0
4	500		888	639	387	187	68	19	3	0	0	0	0	0	0	0	0	0	0	0
5	490		895	647	397	191	72	19	3	0	0	0	0	0	0	0	0	0	0	0
6	480		898	650	396	197	72	19	3	0	0	0	0	0	0	0	0	0	0	0
7	470		897	652	394	193	72	20	3	0	0	0	0	0	0	0	0	0	0	0
8	460		900	650	391	192	74	21	3	0	0	0	0	0	0	0	0	0	0	0
9	450		895	647	385	190	72	22	4	0	0	0	0	0	0	0	0	0	0	0
10	440		895	645	380	186	71	21	4	1	0	0	0	0	0	0	0	0	0	0
11	430		896	638	376	179	70	20	4	1	0	0	0	0	0	0	0	0	0	0
12	420		893	630	367	174	66	19	3	1	0	0	0	0	0	0	0	0	0	0
13	410		892	623	354	168	64	19	3	1	0	0	0	0	0	0	0	0	0	0
14	400		889	616	343	160	61	16	3	1	0	0	0	0	0	0	0	0	0	0
15	390		886	605	336	153	57	14	3	1	0	0	0	0	0	0	0	0	0	0
16	380		874	595	327	149	54	14	4	0	0	0	0	0	0	0	0	0	0	0
17	370		868	587	314	141	51	14	4	1	0	0	0	0	0	0	0	0	0	0
18	360		865	573	302	132	46	14	4	1	0	0	0	0	0	0	0	0	0	0
19	350		862	561	295	127	44	15	5	1	0	0	0	0	0	0	0	0	0	0
20	340		858	553	288	122	44	15	5	1	0	0	0	0	0	0	0	0	0	0
21	330		850	543	275	117	43	16	5	1	0	0	0	0	0	0	0	0	0	0
22	320		849	535	272	113	43	16	5	1	0	0	0	0	0	0	0	0	0	0
23	310		844	527	263	107	42	15	5	1	0	0	0	0	0	0	0	0	0	0
24	300		841	523	256	102	40	14	4	1	0	0	0	0	0	0	0	0	0	0
25	290		837	513	250	98	37	14	4	1	0	0	0	0	0	0	0	0	0	0
26	280		832	506	245	95	36	13	4	1	1	0	0	0	0	0	0	0	0	0
27	270		829	498	242	93	32	13	4	2	1	0	0	0	0	0	0	0	0	0
28	260		828	496	236	91	34	12	5	1	1	0	0	0	0	0	0	0	0	0
29	250		830	499	233	91	34	14	5	2	1	0	0	0	0	0	0	0	0	0
30	240		828	503	237	91	33	13	5	2	1	0	0	0	0	0	0	0	0	0
31	230		830	501	236	90	35	13	6	2	1	0	0	0	0	0	0	0	0	0
32	220		828	498	234	91	35	14	6	2	1	0	0	0	0	0	0	0	0	0
33	210		825	493	232	91	36	14	7	2	1	0	0	0	0	0	0	0	0	0
34	200		820	490	230	91	36	15	7	3	1	0	0	0	0	0	0	0	0	0
35	190		816	489	229	92	37	15	6	2	1	0	0	0	0	0	0	0	0	0
36	180		814	486	229	93	37	15	6	2	1	0	0	0	0	0	0	0	0	0
37	170		815	487	226	93	36	15	6	2	0	0	0	0	0	0	0	0	0	0
38	160		816	488	232	94	36	15	5	2	0	0	0	0	0	0	0	0	0	0
39	150		819	491	230	93	37	15	6	2	0	0	0	0	0	0	0	0	0	0
40	140		818	489	230	92	37	15	5	2	0	0	0	0	0	0	0	0	0	0
41	130		820	497	231	94	36	15	6	2	0	0	0	0	0	0	0	0	0	0
42	120		815	497	230	94	35	14	5	2	0	0	0	0	0	0	0	0	0	0
43	110		807	489	231	94	35	13	5	1	0	0	0	0	0	0	0	0	0	0
44	100		782	472	220	90	33	13	5	1	0	0	0	0	0	0	0	0	0	0
45	90		753	451	212	87	32	12	5	2	0	0	0	0	0	0	0	0	0	0
46	80		740	444	211	85	32	13	6	2	0	0	0	0	0	0	0	0	0	0
47	70		690	414	195	80	31	13	6	2	1	0	0	0	0	0	0	0	0	0
48	60		625	378	181	74	29	14	6	2	1	0	0	0	0	0	0	0	0	0

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Harmonic constants for constituent M2 for deployment NWSX1006.

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===============================================================================
Bin   Depth  E-ampl  E-gpl  N-ampl  N-gpl  Major   Minor   Incl   Grphl  R
        m    mm/sec   deg   mm/sec   deg   mm/sec  mm/sec   deg    deg
-------------------------------------------------------------------------------
 01    530    225     245    120     207    246      68      25    238   A
 02    520    246     247    130     202    265      84      23    239   A
 03    510    258     247    137     200    277      93      23    239   A
 04    500    266     248    145     200    286     100      23    240   A
 05    490    270     249    152     201    292     105      24    240   A
 06    480    273     250    157     201    295     108      24    240   A
 07    470    273     250    161     203    297     109      25    240   A
 08    460    273     251    165     204    299     110      26    241   A
 09    450    271     252    167     206    299     110      27    241   A
 10    440    268     253    168     207    297     109      28    242   A
 11    430    265     254    168     209    295     107      28    243   A
 12    420    262     254    169     210    293     105      29    243   A
 13    410    258     255    169     212    291     102      30    244   A
 14    400    252     256    168     214    287      99      30    244   A
 15    390    248     256    166     216    283      95      31    245   A
 16    380    241     256    165     218    278      90      32    245   A
 17    370    234     257    161     219    271      85      32    245   A
 18    360    227     257    157     221    265      79      33    246   A
 19    350    222     257    154     223    259      74      33    246   A
 20    340    217     257    150     224    254      69      33    247   A
 21    330    212     257    147     226    250      64      33    247   A
 22    320    208     256    144     227    246      59      33    247   A
 23    310    204     256    139     228    241      55      33    247   A
 24    300    200     255    137     229    237      51      33    247   A
 25    290    197     255    134     230    234      48      33    248   A
 26    280    194     255    132     232    231      44      33    248   A
 27    270    191     255    130     232    228      41      33    248   A
 28    260    188     255    130     234    225      39      34    248   A
 29    250    187     254    128     234    224      37      34    248   A
 30    240    186     254    126     235    222      35      34    248   A
 31    230    184     254    125     235    219      34      34    248   A
 32    220    181     253    122     235    216      31      33    248   A
 33    210    179     253    120     236    213      30      33    248   A
 34    200    178     253    118     236    211      28      33    248   R
 35    190    176     253    116     237    209      26      33    248   A
 36    180    174     252    116     238    208      24      33    248   A
 37    170    172     252    115     239    206      23      33    248   A
 38    160    172     252    114     240    205      21      33    248   A
 39    150    171     252    114     240    205      20      34    248   A
 40    140    169     252    114     241    203      18      34    248   A
 41    130    169     252    114     241    203      18      34    248   A
 42    120    168     252    114     242    202      17      34    249   A
 43    110    166     253    114     243    201      16      34    249   A
 44    100    166     252    113     243    200      14      34    250   A
 45     90    164     252    112     244    198      13      34    249   A
 46     80    161     251    110     244    194      11      34    249   A
 47     70    156     250    108     244    190       9      35    248   A
 48     60    152     249    108     245    186       7      35    248   A
```

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Harmonic constants for constituent S2 for deployment NWSX1006.

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================================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl   R
        m    mm/sec    deg   mm/sec    deg   mm/sec  mm/sec    deg    deg
--------------------------------------------------------------------------------
01    530      74      285     46      252      84      22      30     276    A
02    520      82      286     48      248      91      26      28     277    A
03    510      87      287     51      244      96      32      26     278    A
04    500      91      288     53      242     100      35      26     278    A
05    490      94      288     54      242     102      36      25     279    A
06    480      95      289     55      243     104      36      25     280    A
07    470      97      289     55      244     106      36      25     280    A
08    460      95      290     56      246     105      36      26     280    A
09    450      95      290     57      247     105      35      27     281    A
10    440      94      291     58      248     104      35      28     281    A
11    430      92      291     57      251     103      33      28     281    A
12    420      89      291     56      253     100      31      29     282    A
13    410      87      292     54      255      98      29      29     283    A
14    400      84      292     53      258      96      26      30     283    A
15    390      83      292     52      260      95      24      30     283    A
16    380      81      291     51      263      93      21      31     284    A
17    370      78      291     50      266      91      18      31     284    A
18    360      76      290     50      267      90      17      32     283    A
19    350      74      288     48      269      87      13      33     282    A
20    340      71      287     49      269      85      12      34     281    A
21    330      69      286     48      269      84      12      35     281    A
22    320      69      287     49      270      84      12      35     281    A
23    310      69      288     49      272      83      11      35     283    A
24    300      69      289     49      273      84      11      35     284    A
25    290      70      291     48      274      84      12      34     285    A
26    280      71      292     48      273      85      13      34     286    A
27    270      70      292     48      272      84      14      34     286    A
28    260      71      293     48      273      84      14      34     287    A
29    250      70      293     47      273      83      14      33     287    A
30    240      69      293     46      272      82      14      33     287    A
31    230      68      294     45      273      81      14      33     287    A
32    220      68      295     45      275      81      14      33     289    A
33    210      68      296     45      276      81      13      33     290    A
34    200      69      297     47      278      82      13      33     291    A
35    190      69      297     47      280      82      12      34     292    A
36    180      68      297     46      280      81      12      34     292    A
37    170      67      297     46      282      80      10      34     292    A
38    160      67      297     45      282      80       9      33     292    A
39    150      66      295     45      283      79       8      34     291    A
40    140      65      293     42      284      77       6      33     290    A
41    130      63      292     41      283      75       6      33     289    A
42    120      61      291     40      284      73       4      33     289    A
43    110      60      289     38      285      71       2      32     288    A
44    100      57      288     38      286      69       1      33     288    A
45     90      57      289     40      287      69       1      35     288    A
46     80      55      289     40      288      68       1      36     289    A
47     70      54      289     43      288      69       1      38     289    A
48     60      50      291     43      287      66       2      41     289    A
```

NWSX1006 ADCP 3368

Harmonic constants for constituent N2 for deployment NWSX1006.

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================================================================================
Bin   Depth   E-ampl   E-gpl   N-ampl   N-gpl   Major   Minor   Incl   Grphl   R
        m     mm/sec    deg    mm/sec    deg    mm/sec  mm/sec   deg     deg
--------------------------------------------------------------------------------
 01     530      43      205      13      160      45       9      13     203    A
 02     520      46      206      15      157      48      11      13     203    A
 03     510      48      207      17      160      50      12      14     204    A
 04     500      49      209      17      159      50      13      14     205    A
 05     490      49      210      18      162      51      13      15     206    A
 06     480      51      211      18      162      52      13      14     207    A
 07     470      51      213      19      162      53      14      14     209    A
 08     460      52      214      20      159      53      16      14     210    A
 09     450      55      216      22      161      57      18      15     211    A
 10     440      57      217      26      163      59      20      17     211    A
 11     430      57      219      28      166      60      21      19     212    A
 12     420      57      221      29      169      60      22      20     214    A
 13     410      56      222      30      173      60      21      22     214    A
 14     400      55      225      31      177      59      21      24     216    A
 15     390      54      227      31      180      59      21      25     217    A
 16     380      54      228      32      185      60      20      26     219    A
 17     370      53      229      34      187      60      20      29     219    A
 18     360      52      229      36      188      60      20      32     217    A
 19     350      51      230      38      189      60      21      34     216    A
 20     340      50      232      37      192      59      20      34     219    A
 21     330      49      234      36      196      58      19      34     222    A
 22     320      47      235      35      200      56      17      35     223    A
 23     310      44      236      35      203      54      16      37     224    A
 24     300      42      238      35      207      53      14      39     225    A
 25     290      41      239      34      210      52      13      39     228    A
 26     280      40      242      35      212      51      13      40     229    A
 27     270      40      243      34      215      51      13      40     231    A
 28     260      40      243      34      216      51      12      40     232    A
 29     250      40      243      34      217      51      12      40     232    A
 30     240      40      244      33      218      51      12      39     234    A
 31     230      40      245      33      219      50      12      38     235    A
 32     220      40      244      32      220      51      11      38     235    A
 33     210      40      243      33      220      51      10      39     234    A
 34     200      40      242      33      220      50      10      39     234    R
 35     190      38      241      31      220      49       9      39     233    A
 36     180      37      241      30      220      47       9      38     233    A
 37     170      37      240      29      220      46       8      38     232    A
 38     160      37      241      29      223      46       7      38     234    A
 39     150      37      241      29      223      46       7      37     234    A
 40     140      37      241      29      223      46       7      38     234    A
 41     130      36      240      29      225      46       6      39     234    A
 42     120      35      242      29      227      45       6      39     236    A
 43     110      34      242      29      230      44       5      40     237    A
 44     100      32      242      29      234      43       3      42     238    A
 45      90      30      243      29      238      42       2      45     241    A
 46      80      29      242      29      240      41       1      45     241    A
 47      70      27      244      30      244      41       0      48     244    A
 48      60      26      242      29      240      39       1      47     241    A
```

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Harmonic constants for constituent O1 for deployment NWSX1006.

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================================================================================
Bin    Depth   E-ampl   E-gpl   N-ampl   N-gpl   Major   Minor    Incl   Grphl   R
        m      mm/sec     deg   mm/sec     deg  mm/sec  mm/sec     deg     deg
--------------------------------------------------------------------------------
01      530       70      331      12      351      71       4       9     332   C
02      520       70      330       9        2      71       5       6     331   C
03      510       67      328       9       21      68       7       5     328   C
04      500       65      327       9       33      65       9       3     327   C
05      490       62      325      12       41      62      11       3     326   C
06      480       60      323      12       44      60      12       2     324   C
07      470       57      322      13       52      57      13       0     322   C
08      460       55      321      13       52      55      13     180     141   C
09      450       53      319      13       56      53      13     178     139   C
10      440       51      317      13       65      51      12     176     136   C
11      430       47      316      13       73      48      12     172     134   C
12      420       45      315      14       79      46      12     169     132   C
13      410       44      313      14       82      45      11     168     130   C
14      400       44      308      13       91      45       8     166     126   C
15      390       41      306      11      102      43       4     167     125   C
16      380       41      305       9      113      42       2     167     125   C
17      370       40      304       9      117      41       1     167     124   C
18      360       39      303      10      124      41       0     166     123   A
19      350       39      303      11      126      40       1     164     123   A
20      340       37      302      12      134      39       2     163     123   A
21      330       37      302      12      136      39       3     163     123   A
22      320       36      299      13      139      38       4     161     121   A
23      310       37      298      13      139      39       5     161     120   A
24      300       37      298      13      144      39       5     162     120   A
25      290       37      296      13      150      38       7     163     119   A
26      280       36      296      14      148      38       7     161     120   A
27      270       36      295      15      151      38       8     161     120   A
28      260       35      296      16      149      38       8     159     121   A
29      250       36      297      15      150      38       8     160     122   A
30      240       35      298      14      153      37       8     161     122   A
31      230       35      297      14      151      37       8     160     121   A
32      220       35      295      15      148      37       8     160     120   A
33      210       33      296      14      148      35       7     159     120   A
34      200       33      297      14      146      35       6     159     121   A
35      190       33      297      13      142      35       5     160     120   A
36      180       31      299      13      141      34       5     158     122   A
37      170       32      301      13      139      35       4     159     123   A
38      160       31      302      13      133      34       2     158     124   A
39      150       31      302      13      132      34       2     158     123   A
40      140       30      302      13      135      33       3     157     124   A
41      130       30      302      13      137      33       3     157     124   A
42      120       30      302      13      138      33       3     157     125   A
43      110       30      303      13      137      32       3     157     125   A
44      100       31      306      12      130      33       1     158     126   A
45       90       30      305      12      125      32       0     158     125   A
46       80       29      306      11      122      31       1     160     125   C
47       70       28      301      11      104      30       3     159     119   C
48       60       29      301      11      105      31       3     159     119   C
```

NWSX1006 ADCP 3368

Harmonic constants for constituent K1 for deployment NWSX1006.

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===============================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl  Major   Minor    Incl   Grphl  R
        m    mm/sec    deg   mm/sec    deg   mm/sec  mm/sec    deg    deg
-------------------------------------------------------------------------------
01    530      54     216      11     186     55       5       10     215   A
02    520      55     215       6     176     55       4        5     214   A
03    510      54     211       3     202     54       0        3     211   A
04    500      50     209       3     281     50       3        1     209   C
05    490      47     207       4     309     47       4      179      26   C
06    480      44     204       4     320     44       4      177      24   C
07    470      42     202       5     328     42       4      176      21   C
08    460      39     199       5     333     39       3      175      18   C
09    450      37     196       5     350     37       2      173      15   C
10    440      35     194       5     350     36       2      173      13   C
11    430      34     193       6     357     34       2      171      12   C
12    420      31     190       7     355     32       2      168      10   C
13    410      28     187       8     357     29       1      165       7   C
14    400      26     182       8       7     27       1      162       3   A
15    390      26     177       9      14     27       2      161     359   A
16    380      26     170      10      24     27       5      162     354   A
17    370      26     165      10      35     27       7      166     349   A
18    360      27     159      11      46     27      10      169     343   A
19    350      28     154      12      55     28      12      176     335   A
20    340      28     150      13      62     28      13        1     149   A
21    330      29     148      12      69     29      12        6     146   A
22    320      30     146      13      73     30      12        8     143   A
23    310      29     147      13      71     29      12        7     144   A
24    300      28     149      13      70     28      12        6     147   A
25    290      27     152      14      71     28      14        6     149   A
26    280      27     156      15      70     27      15        3     154   A
27    270      26     160      16      67     26      16      178     341   A
28    260      26     162      17      70     26      17      179     342   A
29    250      27     164      17      70     27      17      176     347   A
30    240      27     164      16      71     27      16      178     345   A
31    230      27     164      16      73     27      16      179     345   A
32    220      27     160      16      73     27      16        3     159   A
33    210      26     159      15      72     26      15        2     158   A
34    200      27     160      15      69     27      15      179     340   A
35    190      28     162      15      71     28      15      179     342   A
36    180      27     163      15      66     27      14      175     346   A
37    170      26     163      13      64     26      13      173     347   A
38    160      25     166      12      60     26      11      171     350   A
39    150      24     167      11      61     24      11      171     351   A
40    140      24     170      12      56     24      10      166     357   A
41    130      24     170      12      52     25      10      163     357   A
42    120      24     173      12      42     25       8      160     360   A
43    110      25     177      12      38     26       7      159       3   A
44    100      23     180      11      26     25       4      156       4   A
45     90      22     183      10       9     24       1      155       4   A
46     80      23     188      10      11     25       0      156       9   A
47     70      24     197       9     351     25       4      160      14   C
48     60      28     200      10     343     29       6      163      16   C
```

NWSX1006 MicroCat 0984

Temperature (°C), Salinity (psu-78), Depth (m) plots for Months 2010-2011
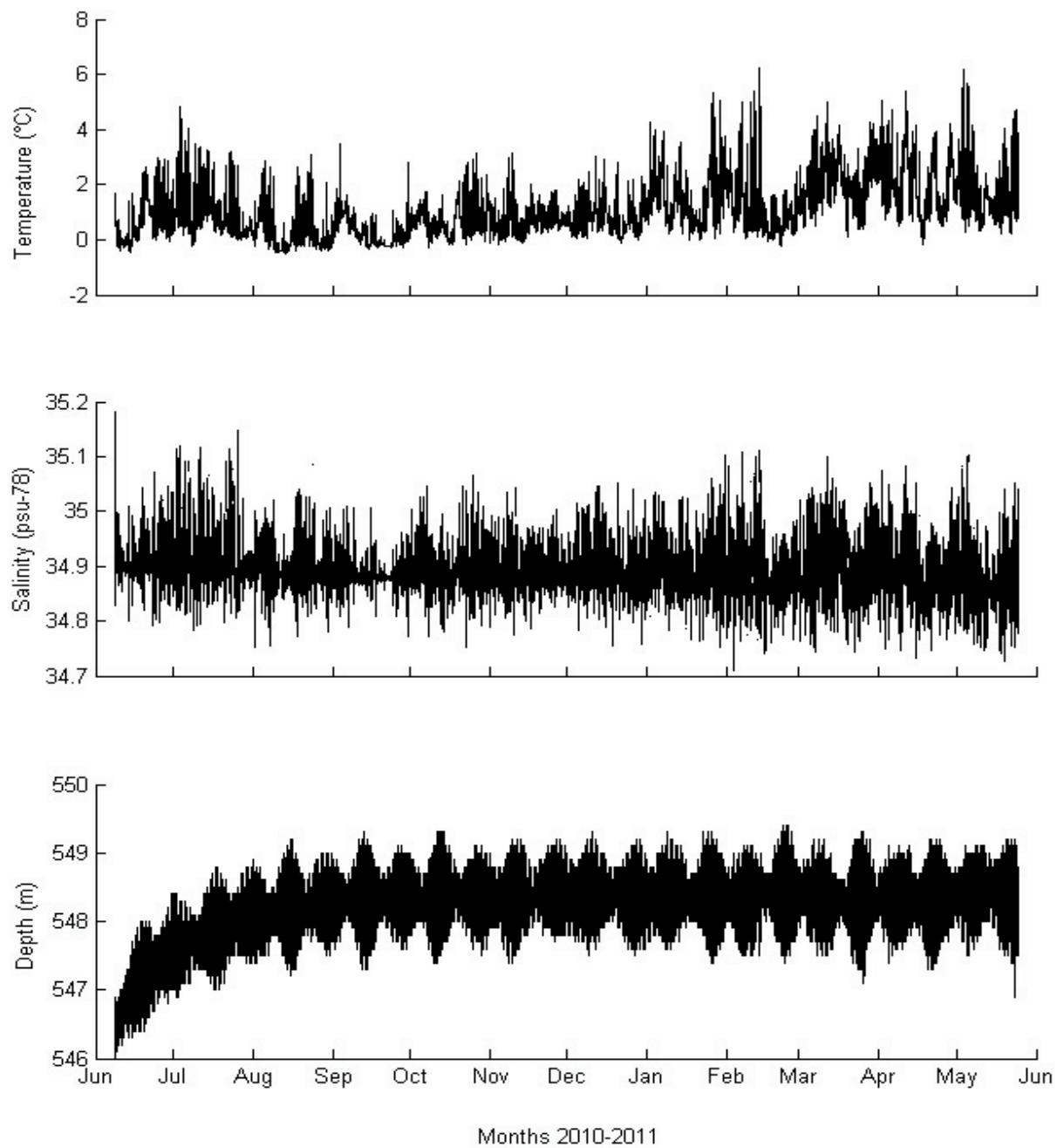
NWSX1006 MicroCat 0984
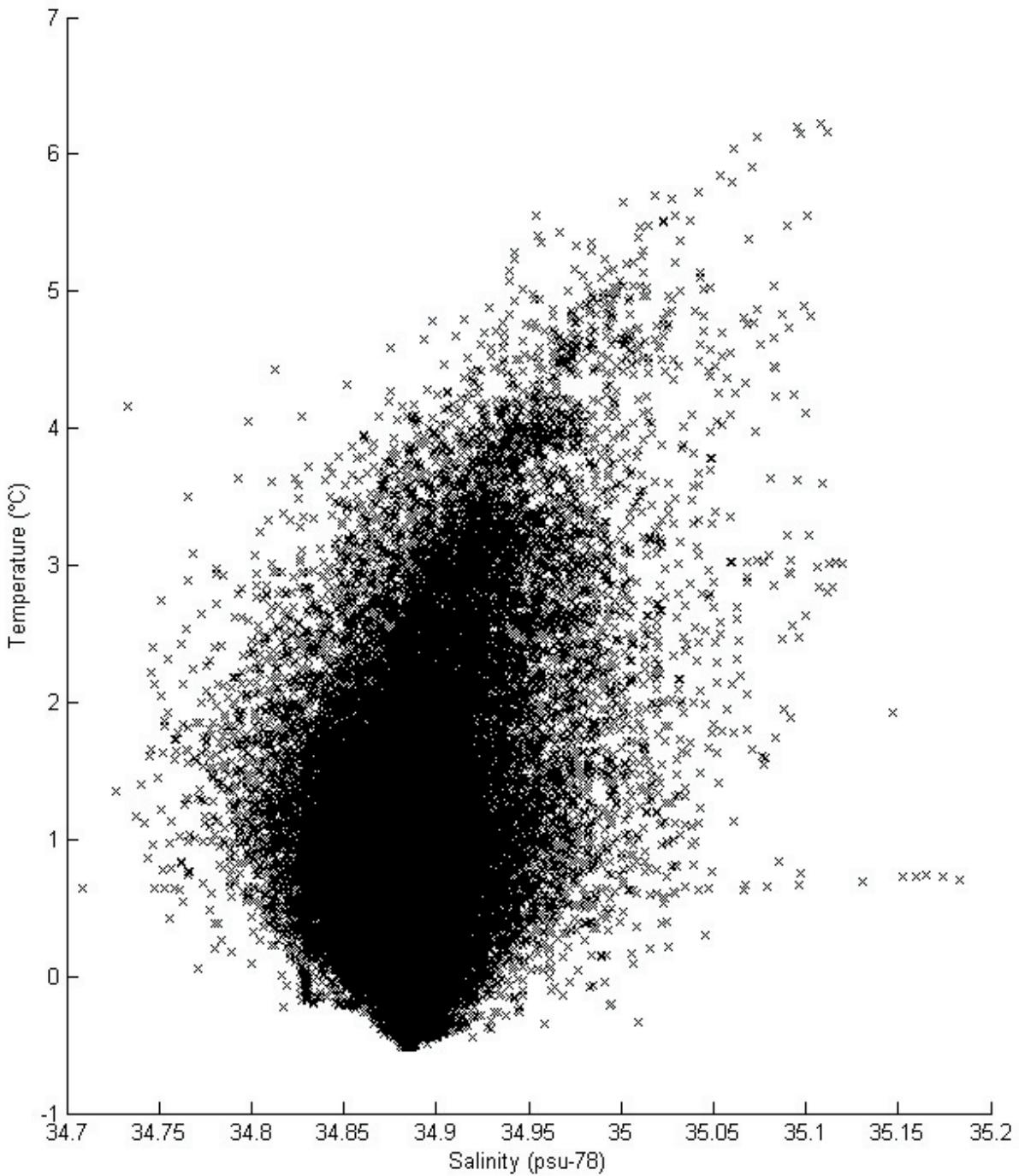
NWSY1006

Latitude: 60°42.900´N

Longitude: 005°04.900´W

Echo sounding depth: 914 m

Bottom depth corr.: 908 m

Time of deployment: 4/6 – 2010 2342 UTC

Time of recovery: 21/5 – 2011 1622 UTC

ADCP:

Instrument no.: RDI ADCP 8552

Instrument frequency: 75 kHz

Height above bottom: 213 m

Depth: 695 m (corr.)

Time of first data: 5/6 – 2010 0020 UTC

Time of last data: 21/5 – 2011 1600 UTC

Sample interval: 20 min

No. of ensembles: 25248

Pings per ens.: 10

Binlength: 10 m

Depth of first bin: 677 m (corr.)

No. of bins: 61

Data:

All data ok.

2m

200m

213 m

5m

1m

5m

NWSY1006 ADCP 8552

```
Error statistics for deployment: NWSY1006 updated 2011/11/04
----------------


Surface distance not edited
Depth edited by EVM in Sep 2011
Heading, pitch and roll not edited
Temperature edited by EVM in Sep 2011
Velocity edited up to and including bin 61 by AKL in Nov 2011
Intensity edited up to and including bin 61 by EVM in Sep 2011

Total number of  ensembles:       25248
Interval between ensembles:      20 min
Original number of bins:            70
Number of acceptable velocity bins:  61
Number of acceptable intensity bins: 61

Flagged values have been replaced by error codes: -999.99 for temperature and
depth, -999 for velocity and intensity. For observations where velocity is
flagged, error codes have been inserted into speed, direction and vertical vel-
ocity files


Number of depth ens. flagged     :       1
Number of temperature ens. flagged:      0


Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
-------------------|-------------------------------------------------------
     Int.  Velocity |            Number of velocity gaps of length
Bin  ens.   ens.  %  |-------------------------------------------------------
     flgd   flgd flgd|   1     2     3     4     5  6-10 11-20 21-30 31-50  >50
-------------------|-------------------------------------------------------
   1     0    87   0|   87     0     0     0     0     0     0     0     0     0
   2     0    73   0|   73     0     0     0     0     0     0     0     0     0
   3     0   120   0|  115     1     1     0     0     0     0     0     0     0
   4     0    98   0|   96     1     0     0     0     0     0     0     0     0
   5     0    81   0|   81     0     0     0     0     0     0     0     0     0
   6     0    93   0|   91     1     0     0     0     0     0     0     0     0
   7     0   101   0|  101     0     0     0     0     0     0     0     0     0
   8     0   111   0|  109     1     0     0     0     0     0     0     0     0
   9     0   128   1|  128     0     0     0     0     0     0     0     0     0
  10     0    91   0|   91     0     0     0     0     0     0     0     0     0
  11     0    88   0|   88     0     0     0     0     0     0     0     0     0
  12     0   101   0|  101     0     0     0     0     0     0     0     0     0
  13     0    92   0|   92     0     0     0     0     0     0     0     0     0
  14     0    93   0|   93     0     0     0     0     0     0     0     0     0
  15     0   101   0|  101     0     0     0     0     0     0     0     0     0
  16     0    67   0|   67     0     0     0     0     0     0     0     0     0
  17     0    77   0|   77     0     0     0     0     0     0     0     0     0
  18     0    78   0|   78     0     0     0     0     0     0     0     0     0
  19     0    73   0|   73     0     0     0     0     0     0     0     0     0
  20     0    89   0|   89     0     0     0     0     0     0     0     0     0
  21     0    90   0|   90     0     0     0     0     0     0     0     0     0
  22     0    74   0|   74     0     0     0     0     0     0     0     0     0
  23     0   121   0|  121     0     0     0     0     0     0     0     0     0
  24     0    95   0|   95     0     0     0     0     0     0     0     0     0
  25     0    81   0|   81     0     0     0     0     0     0     0     0     0
  26     0    73   0|   73     0     0     0     0     0     0     0     0     0
  27     0    93   0|   93     0     0     0     0     0     0     0     0     0
  28     0    79   0|   79     0     0     0     0     0     0     0     0     0
  29     0   110   0|  108     1     0     0     0     0     0     0     0     0
  30     0    81   0|   81     0     0     0     0     0     0     0     0     0
  31     0    60   0|   58     1     0     0     0     0     0     0     0     0
  32     0    86   0|   86     0     0     0     0     0     0     0     0     0
  33     0    84   0|   84     0     0     0     0     0     0     0     0     0
  34     0    82   0|   82     0     0     0     0     0     0     0     0     0
  35     0    80   0|   78     1     0     0     0     0     0     0     0     0
  36     0    72   0|   72     0     0     0     0     0     0     0     0     0
  37     0    74   0|   74     0     0     0     0     0     0     0     0     0
  38     0    76   0|   74     1     0     0     0     0     0     0     0     0
  39     0    78   0|   78     0     0     0     0     0     0     0     0     0
  40     0    70   0|   68     1     0     0     0     0     0     0     0     0
  41     0    87   0|   87     0     0     0     0     0     0     0     0     0
  42     0    97   0|   95     1     0     0     0     0     0     0     0     0
  43     0    99   0|   97     1     0     0     0     0     0     0     0     0
  44     0    88   0|   88     0     0     0     0     0     0     0     0     0
  45     0   143   1|  108     4     1     1     0     2     0     0     0     0
  46     0   185   1|  109     7     1     0     0     2     3     0     0     0
  47     0   276   1|  157     8     5     1     3     0     4     0     0     0
  48     0   368   1|  165    12     9     2     3     4     5     1     0     0
  49     0   499   2|  172    19     9     5     2     8     7     3     0     0
  50     0   746   3|  243    29    12     8     5     9     7     7     0     0
  51     0  1062   4|  266    48    14    13    13    12     8     6     5     0
  52     0  1432   6|  369    63    23    10    10    20    11     8     7     0
  53     0  1911   8|  441    72    30    19     8    27    19    12     9     0
  54     0  2381   9|  416    78    34    13    15    32    24    19    14     0
  55     0  3046  12|  445    78    32    21    11    35    30    19    25     1
  56     0  3598  14|  486    99    35    15    14    26    32    22    39     0
  57     0  4646  18|  610   102    47    21    16    37    36    30    46     3
  58     0  6143  24|  475    80    32    20    12    52    55    38    67     7
  59     0  8729  35|  606   124    81    47    26    69    74    38    84    19
  60     0 11401  45|  578   138    87    48    40    82    81    61    67    32
  61     0 13465  53|  707   129    82    55    42    82    56    64    72    34
```
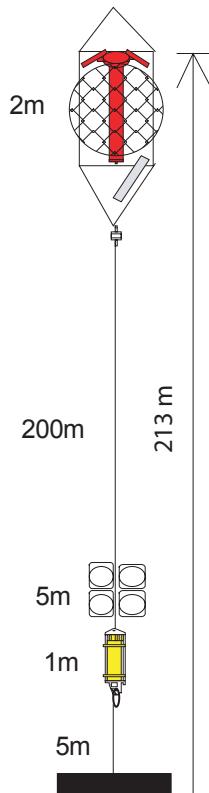
NWSY1006 ADCP 8552

```
Deployment: NWSY1006 updated 2011/11/04
Instrument no.:  8552
Instrument freq.:  75
Latitude: 60 42.900 N
Longitude:05 04.900 W
Bottom depth:  908
Instrument depth:  695
Center depth of first bin:  677
Bin length:  10
Number of bins:  61
Number of first ensemble:    257
Time of first ensemble: 2010 06 05 00 20
Number of last ensemble:   25504
Time of last ensemble:  2011 05 21 16 00
Time between ensembles (min.):    20
All directions have been corrected by adding:  -6.0
```

Below is listed for each bin the average speed (scalar average) and
the average velocity magnitude and direction formed as a vectorial
average of non-flagged (Good) observations. The last column shows the
number of good values used in parts per thousand

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	677	231	200	32	190	997
2	667	241	200	32	190	997
3	657	251	200	33	189	995
4	647	261	199	33	189	996
5	637	271	199	33	189	997
6	627	281	199	33	188	996
7	617	291	199	33	187	996
8	607	301	199	33	187	996
9	597	311	198	33	186	995
10	587	321	198	33	186	996
11	577	331	197	33	184	997
12	567	341	196	33	183	996
13	557	351	195	33	182	996
14	547	361	194	34	182	996
15	537	371	192	34	182	996
16	527	381	189	35	183	997
17	517	391	187	36	183	997
18	507	401	185	36	182	997
19	497	411	183	37	180	997
20	487	421	182	38	179	996
21	477	431	181	39	179	996
22	467	441	180	40	179	997
23	457	451	180	40	179	995
24	447	461	180	41	179	996
25	437	471	180	42	179	997
26	427	481	181	44	178	997
27	417	491	183	45	178	996
28	407	501	186	47	177	997
29	397	511	189	48	177	996
30	387	521	191	50	177	997
31	377	531	194	51	176	998
32	367	541	198	51	175	997
33	357	551	202	50	174	997
34	347	561	205	49	173	997
35	337	571	209	48	172	997
36	327	581	213	47	170	997
37	317	591	216	46	169	997
38	307	601	220	46	166	997
39	297	611	223	45	163	997
40	287	621	225	44	160	997
41	277	631	229	43	157	997
42	267	641	232	44	154	996
43	257	651	235	44	153	996
44	247	661	239	44	151	997
45	237	671	241	44	149	994
46	227	681	244	45	148	993
47	217	691	247	45	146	989
48	207	701	250	45	145	985
49	197	711	254	46	142	980
50	187	721	257	46	141	970
51	177	731	260	47	138	958
52	167	741	262	48	135	943
53	157	751	265	48	133	924
54	147	761	268	49	131	906
55	137	771	272	49	126	879
56	127	781	276	51	124	857
57	117	791	280	52	120	816
58	107	801	285	55	117	757
59	97	811	290	61	109	654
60	87	821	300	64	102	548
61	77	831	307	78	94	467

NWSY1006 ADCP 8552

```
Frequency of high speeds.
=========================

Frequency (in parts per thousand) of speeds equal to or exceeding specified vales.

==================================================================================================
Bin|Depth|                                   Speed (cm/s)
no.|   m|  10   20   30   40   50   60   70   80   90  100  110  120  130  140  150  160  170  180
--------------------------------------------------------------------------------------------------
  1| 677| 842  460  163   34    3    0    0    0    0    0    0    0    0    0    0    0    0    0
  2| 667| 842  466  160   33    3    0    0    0    0    0    0    0    0    0    0    0    0    0
  3| 657| 840  462  160   32    4    0    0    0    0    0    0    0    0    0    0    0    0    0
  4| 647| 840  459  158   32    4    0    0    0    0    0    0    0    0    0    0    0    0    0
  5| 637| 839  457  157   34    4    0    0    0    0    0    0    0    0    0    0    0    0    0
  6| 627| 838  457  155   33    3    0    0    0    0    0    0    0    0    0    0    0    0    0
  7| 617| 837  457  157   32    3    0    0    0    0    0    0    0    0    0    0    0    0    0
  8| 607| 838  460  158   31    3    0    0    0    0    0    0    0    0    0    0    0    0    0
  9| 597| 837  452  154   31    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 10| 587| 839  452  153   30    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 11| 577| 835  451  150   30    4    0    0    0    0    0    0    0    0    0    0    0    0    0
 12| 567| 829  445  151   30    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 13| 557| 828  441  146   30    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 14| 547| 823  435  144   28    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 15| 537| 814  428  140   28    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 16| 527| 811  421  135   27    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 17| 517| 802  410  130   26    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 18| 507| 794  400  127   26    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 19| 497| 790  392  121   25    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 20| 487| 788  381  121   26    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 21| 477| 781  380  121   26    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 22| 467| 780  377  122   26    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 23| 457| 774  374  122   26    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 24| 447| 770  370  120   27    3    0    0    0    0    0    0    0    0    0    0    0    0    0
 25| 437| 770  372  122   27    4    0    0    0    0    0    0    0    0    0    0    0    0    0
 26| 427| 774  378  129   28    4    0    0    0    0    0    0    0    0    0    0    0    0    0
 27| 417| 776  386  133   32    4    0    0    0    0    0    0    0    0    0    0    0    0    0
 28| 407| 788  396  140   34    4    0    0    0    0    0    0    0    0    0    0    0    0    0
 29| 397| 790  407  147   39    6    1    0    0    0    0    0    0    0    0    0    0    0    0
 30| 387| 792  412  155   43    8    1    0    0    0    0    0    0    0    0    0    0    0    0
 31| 377| 796  417  167   49   10    1    0    0    0    0    0    0    0    0    0    0    0    0
 32| 367| 804  432  175   54   12    2    0    0    0    0    0    0    0    0    0    0    0    0
 33| 357| 812  449  179   58   15    3    0    0    0    0    0    0    0    0    0    0    0    0
 34| 347| 816  460  191   63   17    3    0    0    0    0    0    0    0    0    0    0    0    0
 35| 337| 826  473  199   66   19    4    0    0    0    0    0    0    0    0    0    0    0    0
 36| 327| 827  489  212   72   22    6    1    0    0    0    0    0    0    0    0    0    0    0
 37| 317| 837  497  224   77   23    6    1    0    0    0    0    0    0    0    0    0    0    0
 38| 307| 842  509  232   80   23    7    1    0    0    0    0    0    0    0    0    0    0    0
 39| 297| 843  519  240   88   27    7    2    0    0    0    0    0    0    0    0    0    0    0
 40| 287| 846  527  250   93   29    7    2    0    0    0    0    0    0    0    0    0    0    0
 41| 277| 848  538  260   97   30    8    2    0    0    0    0    0    0    0    0    0    0    0
 42| 267| 849  549  269  103   32   10    2    0    0    0    0    0    0    0    0    0    0    0
 43| 257| 855  558  279  107   34   11    3    0    0    0    0    0    0    0    0    0    0    0
 44| 247| 859  569  290  115   38   11    3    1    0    0    0    0    0    0    0    0    0    0
 45| 237| 857  575  298  122   40   13    4    1    0    0    0    0    0    0    0    0    0    0
 46| 227| 859  581  306  126   43   14    3    1    0    0    0    0    0    0    0    0    0    0
 47| 217| 856  585  315  134   47   15    4    1    0    0    0    0    0    0    0    0    0    0
 48| 207| 857  588  321  141   50   17    4    1    0    0    0    0    0    0    0    0    0    0
 49| 197| 856  593  328  148   54   18    5    1    0    0    0    0    0    0    0    0    0    0
 50| 187| 849  592  330  154   58   19    5    1    0    0    0    0    0    0    0    0    0    0
 51| 177| 845  590  335  158   60   20    5    1    0    0    0    0    0    0    0    0    0    0
 52| 167| 834  586  335  161   64   20    6    1    0    0    0    0    0    0    0    0    0    0
 53| 157| 821  580  331  160   65   22    7    1    0    0    0    0    0    0    0    0    0    0
 54| 147| 808  576  334  160   66   23    7    2    0    0    0    0    0    0    0    0    0    0
 55| 137| 785  571  332  162   67   25    8    2    0    0    0    0    0    0    0    0    0    0
 56| 127| 771  564  336  164   69   26    8    2    0    0    0    0    0    0    0    0    0    0
 57| 117| 740  550  328  160   69   25    8    2    0    0    0    0    0    0    0    0    0    0
 58| 107| 691  519  312  159   69   25    7    2    0    0    0    0    0    0    0    0    0    0
 59|  97| 602  454  280  144   63   23    6    2    0    0    0    0    0    0    0    0    0    0
 60|  87| 509  394  249  132   59   21    6    2    0    0    0    0    0    0    0    0    0    0
 61|  77| 433  339  222  122   55   21    7    2    0    0    0    0    0    0    0    0    0    0
```

NWSY1006 ADCP 8552

Harmonic constants for constituent M2 for deployment NWSY1006.

```
================================================================================
Bin    Depth  E-ampl   E-gpl  N-ampl   N-gpl  Major   Minor   Incl   Grphl  R
         m    mm/sec     deg  mm/sec     deg  mm/sec  mm/sec    deg     deg
--------------------------------------------------------------------------------
01      677     222     248     110     209     239      65      23     242   A
02      667     222     248     111     209     239      65      23     242   A
03      657     221     249     110     209     238      65      23     242   A
04      647     220     249     110     209     238      64      23     242   A
05      637     219     249     110     210     237      64      23     242   A
06      627     218     249     109     210     236      63      23     242   A
07      617     218     249     110     211     236      62      23     242   A
08      607     217     249     110     211     236      62      24     242   A
09      597     215     249     110     212     234      61      24     242   A
10      587     214     249     110     212     233      60      24     242   A
11      577     213     249     109     214     232      58      24     243   A
12      567     210     249     108     215     230      55      25     243   A
13      557     207     249     107     217     227      53      25     243   A
14      547     204     249     106     218     225      50      25     243   A
15      537     201     250     103     220     221      46      25     244   A
16      527     196     249     102     222     217      42      26     244   A
17      517     191     249     100     225     212      37      26     244   A
18      507     186     249      98     227     208      33      27     244   A
19      497     181     249      96     230     203      27      27     245   A
20      487     175     249      95     233     197      23      28     246   A
21      477     169     249      95     237     193      18      29     246   A
22      467     163     249      95     240     188      12      30     247   A
23      457     157     249      95     243     183       7      31     247   A
24      447     151     249      94     248     178       1      32     249   A
25      437     143     249      95     252     172       4      34     250   C
26      427     137     250      97     255     167       7      35     251   C
27      417     130     250     100     258     164      10      38     253   C
28      407     124     252     105     261     162      13      40     255   C
29      397     119     253     109     264     161      15      42     258   C
30      387     113     254     111     267     158      18      45     260   C
31      377     108     255     115     269     156      19      47     263   C
32      367     103     256     118     270     156      19      49     264   C
33      357     100     258     122     272     156      20      51     266   C
34      347      95     260     127     274     157      18      53     269   C
35      337      91     263     132     275     160      15      55     271   C
36      327      90     266     137     275     164      12      57     272   C
37      317      88     268     143     275     168       9      58     273   C
38      307      86     272     148     275     171       5      60     274   C
39      297      85     274     153     276     174       1      61     275   C
40      287      85     277     156     276     178       2      62     276   A
41      277      84     280     160     276     181       5      62     277   A
42      267      85     282     163     275     184       8      63     277   A
43      257      86     283     165     275     186      10      63     277   A
44      247      86     284     167     275     188      11      63     277   A
45      237      87     284     168     275     188      12      63     277   A
46      227      87     286     169     275     190      14      63     277   A
47      217      87     287     170     275     191      17      63     278   A
48      207      88     288     172     275     192      17      63     278   A
49      197      89     289     174     275     194      19      63     278   A
50      187      90     290     174     275     195      21      63     278   A
51      177      90     290     175     275     196      21      63     278   A
52      167      90     290     175     275     196      21      63     278   A
53      157      89     291     176     275     196      21      64     279   A
54      147      89     291     176     276     196      21      64     279   A
55      137      87     293     177     276     196      22      64     279   A
56      127      85     294     178     276     196      24      65     280   A
57      117      85     297     180     277     197      27      66     280   A
58      107      83     300     183     276     199      31      67     280   A
59       97      84     299     188     275     203      31      67     279   A
60       87      93     298     190     274     208      34      65     278   A
61       77      97     297     186     272     206      37      64     277   A
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Harmonic constants for constituent S2 for deployment NWSY1006.

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================================================================================
Bin   Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor   Incl   Grphl  R
        m    mm/sec    deg   mm/sec    deg    mm/sec  mm/sec   deg     deg
--------------------------------------------------------------------------------
01     677     69      288     38      264      77      14      27     283   A
02     667     69      288     37      263      77      14      27     283   A
03     657     69      288     38      264      77      14      28     283   A
04     647     69      289     38      264      77      14      28     283   A
05     637     68      289     38      264      77      14      28     283   A
06     627     69      288     38      264      77      14      28     283   A
07     617     68      288     38      264      77      14      28     283   A
08     607     67      289     38      265      76      14      28     283   A
09     597     67      288     39      268      77      12      29     283   A
10     587     66      289     38      268      76      12      29     284   A
11     577     65      288     38      268      75      11      29     283   A
12     567     65      288     37      269      74      10      29     283   A
13     557     65      288     37      270      74      10      29     284   A
14     547     65      288     37      270      74      10      29     284   A
15     537     65      288     37      271      74      10      29     284   A
16     527     64      288     37      270      73      10      30     284   A
17     517     64      288     38      270      74      10      30     283   A
18     507     64      287     38      270      74       9      30     283   A
19     497     62      287     39      272      73       9      31     283   A
20     487     61      287     39      275      72       7      32     284   A
21     477     58      288     39      277      70       6      33     285   A
22     467     56      288     39      279      68       5      35     285   A
23     457     55      288     39      281      67       4      35     286   A
24     447     53      289     39      284      66       3      36     287   A
25     437     51      288     39      287      64       1      37     288   A
26     427     49      289     39      290      63       0      38     290   C
27     417     48      289     39      293      62       2      39     291   C
28     407     48      290     39      294      62       2      39     291   C
29     397     47      292     40      296      62       2      40     294   C
30     387     46      293     42      299      62       3      42     295   C
31     377     44      293     44      301      62       4      44     297   C
32     367     43      294     45      304      62       5      46     299   C
33     357     41      294     47      306      62       6      48     301   C
34     347     39      293     48      307      62       7      51     301   C
35     337     37      290     49      309      60       9      53     302   C
36     327     35      289     50      310      60      10      56     303   C
37     317     34      292     52      310      61       9      57     304   C
38     307     34      295     52      311      62       8      57     306   C
39     297     34      300     54      311      63       6      58     308   C
40     287     35      304     55      310      65       3      57     308   C
41     277     37      308     56      309      67       1      56     309   C
42     267     38      307     55      308      67       1      55     308   C
43     257     40      307     55      307      68       0      54     307   C
44     247     40      308     54      307      67       1      53     307   A
45     237     41      308     54      306      68       1      53     307   A
46     227     41      309     55      307      69       1      53     308   A
47     217     41      310     55      307      69       2      53     308   A
48     207     43      312     56      307      71       3      53     309   A
49     197     45      311     57      307      72       3      52     309   A
50     187     46      311     56      307      73       2      51     309   A
51     177     48      311     56      306      74       3      49     308   A
52     167     50      312     56      306      75       4      49     309   A
53     157     49      310     55      306      74       3      48     308   A
54     147     51      310     54      305      74       3      47     307   A
55     137     51      312     55      305      75       4      47     308   A
56     127     52      311     54      305      75       4      46     308   A
57     117     52      313     53      305      75       5      46     309   A
58     107     51      312     55      304      74       5      47     307   A
59      97     47      312     53      304      71       5      49     308   A
60      87     42      313     55      305      69       4      53     308   A
61      77     38      308     57      310      68       1      56     309   C
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Harmonic constants for constituent N2 for deployment NWSY1006.

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============================================================================
Bin   Depth  E-ampl  E-gpl  N-ampl  N-gpl  Major   Minor   Incl  Grphl  R
        m   mm/sec    deg  mm/sec    deg  mm/sec  mm/sec    deg    deg
----------------------------------------------------------------------------
01     677     48     212     15     160     49     11      11    209    A
02     667     47     212     14     160     48     11      11    209    A
03     657     46     212     14     159     47     11      11    209    A
04     647     46     212     15     160     47     11      11    209    A
05     637     48     212     15     159     49     12      12    209    A
06     627     47     212     15     160     48     11      12    209    A
07     617     46     213     14     161     47     11      11    210    A
08     607     47     212     14     157     47     11      11    209    A
09     597     46     212     14     160     47     11      11    210    A
10     587     46     212     14     158     47     11      11    209    A
11     577     46     211     13     158     47     11      10    209    A
12     567     46     211     13     159     47     10      10    209    A
13     557     46     212     13     157     46     10      10    209    A
14     547     44     212     13     161     45     10      11    209    A
15     537     43     211     11     160     43      9      10    209    A
16     527     42     211     11     161     43      8      10    209    A
17     517     40     210     11     169     41      7      12    208    A
18     507     39     211     11     165     40      8      11    208    A
19     497     38     210      9     174     39      5      11    209    A
20     487     35     211      9     186     36      3      12    210    A
21     477     35     211      8     189     36      3      13    209    A
22     467     35     212      9     198     36      2      14    211    A
23     457     34     212     10     205     35      1      16    211    A
24     447     33     215     10     213     34      0      17    215    A
25     437     32     218     11     214     34      1      19    218    A
26     427     30     221     12     216     32      1      21    220    A
27     417     30     223     14     219     33      1      25    222    A
28     407     29     223     15     223     32      0      27    223    A
29     397     28     226     17     224     33      0      32    225    A
30     387     26     230     21     233     34      1      39    231    C
31     377     24     237     24     235     34      0      44    236    A
32     367     24     244     26     240     35      1      48    242    A
33     357     25     251     30     241     39      3      50    245    A
34     347     26     258     34     239     42      7      52    246    A
35     337     28     263     38     240     46      9      54    248    A
36     327     29     268     40     241     48     11      55    250    A
37     317     29     272     41     239     48     13      56    250    A
38     307     30     275     41     237     48     16      56    249    A
39     297     32     275     41     236     49     16      54    250    A
40     287     32     274     41     236     49     16      53    249    A
41     277     33     275     41     235     49     18      53    250    A
42     267     33     276     41     236     49     17      53    251    A
43     257     33     279     42     237     50     18      55    252    A
44     247     32     282     43     239     50     19      56    253    A
45     237     32     285     44     240     51     19      57    254    A
46     227     32     287     45     241     52     20      58    254    A
47     217     33     289     46     241     52     21      59    255    A
48     207     32     290     45     242     52     21      58    256    A
49     197     32     294     46     243     51     22      60    257    A
50     187     31     294     47     245     52     21      62    257    A
51     177     29     296     46     246     50     20      63    258    A
52     167     28     299     48     247     52     21      66    257    A
53     157     27     299     49     248     53     19      68    257    A
54     147     27     304     50     250     53     21      69    259    A
55     137     29     308     51     250     54     23      69    259    A
56     127     29     311     52     252     55     24      71    261    A
57     117     31     305     55     251     59     24      68    260    A
58     107     32     309     56     252     59     25      69    261    A
59      97     35     307     58     251     62     27      67    262    A
60      87     36     307     64     248     67     30      69    258    A
61      77     41     304     65     246     70     32      67    257    A
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Harmonic constants for constituent O1 for deployment NWSY1006.

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================================================================================
Bin   Depth  E-ampl   E-gpl   N-ampl   N-gpl   Major   Minor   Incl   Grphl   R
        m    mm/sec     deg   mm/sec     deg  mm/sec  mm/sec    deg     deg
--------------------------------------------------------------------------------
01     677      16      357        9      35      18       5     26       5   C
02     667      16      354        9      35      18       6     26       3   C
03     657      16      353       10      36      18       6     27       3   C
04     647      17      354       10      37      18       6     26       3   C
05     637      16      354       10      38      18       6     28       4   C
06     627      16      353       10      37      18       6     27       3   C
07     617      16      352       10      40      17       6     27       3   C
08     607      16      355       10      36      18       6     28       5   C
09     597      16      354       10      38      18       6     27       4   C
10     587      16      353       10      39      17       6     27       3   C
11     577      16      352        9      34      18       6     26       1   C
12     567      16      353       10      36      18       6     31       5   C
13     557      15      357       10      33      17       5     30       6   C
14     547      15      357       10      37      17       6     31       8   C
15     537      16      355       10      39      17       6     29       6   C
16     527      16      355       10      35      18       6     28       5   C
17     517      16      353       10      37      18       6     27       3   C
18     507      16      350        9      37      18       6     24     359   C
19     497      17      349        9      37      18       6     22     357   C
20     487      17      348        9      34      18       6     22     355   C
21     477      17      346        8      29      18       5     19     351   C
22     467      16      348        8      29      17       5     21     354   C
23     457      16      350        8      32      17       5     23     357   C
24     447      15      350        8      36      16       5     21     357   C
25     437      16      348        7      40      17       5     17     353   C
26     427      16      349        7      42      17       5     17     355   C
27     417      16      348        7      43      16       6     17     354   C
28     407      16      347        8      40      17       6     21     355   C
29     397      16      348        9      39      17       7     25     359   C
30     387      15      348        9      42      16       7     25     360   C
31     377      15      351        9      48      16       7     23       2   C
32     367      15      353       10      49      16       8     27       7   C
33     357      15      353       11      43      17       7     31       8   C
34     347      15      349       10      36      17       6     29       1   C
35     337      14      345        9      28      16       6     29     356   C
36     327      15      345        8      23      17       5     26     353   C
37     317      14      344        8      20      16       4     26     352   C
38     307      14      345        8      17      15       4     27     352   C
39     297      14      345        7      17      15       3     25     352   C
40     287      13      349        8      21      15       4     29     357   C
41     277      14      349        8      26      15       4     27     358   C
42     267      14      347        8      23      15       4     26     354   C
43     257      13      346        9      26      15       5     32     358   C
44     247      13      344        9      23      15       5     32     355   C
45     237      12      345        8      26      14       4     30     356   C
46     227      13      346        8      29      15       5     29     357   C
47     217      12      341        8      32      14       6     28     354   C
48     207      12      339        8      30      13       5     26     350   C
49     197      13      341        8      26      15       5     28     352   C
50     187      13      343        7      29      14       5     23     351   C
51     177      13      340        6      37      14       5     17     347   C
52     167      13      346        6      59      13       6     10     351   C
53     157      13      340        6      67      13       6      1     340   C
54     147      14      336        8      75      14       8    173     153   C
55     137      12      334        6      76      12       6    171     149   C
56     127      12      331        7      73      12       7    170     146   C
57     117      10      343        8      98      10       6    150     144   C
58     107      10      333        9      81      11       8    142     124   C
59      97      12      340        9      50      13       8     27     358   C
60      87      13      332       11      46      14      10     31     355   C
61      77      14      334       15      19      19       8     49     360   C
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NWSY1006 ADCP 8552

Harmonic constants for constituent K1 for deployment NWSY1006.

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=============================================================================
Bin    Depth  E-ampl   E-gpl  N-ampl   N-gpl   Major   Minor    Incl   Grphl   R
         m    mm/sec     deg  mm/sec     deg  mm/sec  mm/sec     deg     deg
-----------------------------------------------------------------------------
01     677      11      205       3     257      11       2      10     207   C
02     667      11      204       4     254      12       3      13     207   C
03     657      11      204       4     252      12       3      14     207   C
04     647      11      207       4     250      11       2      14     210   C
05     637      12      211       3     253      12       2      11     213   C
06     627      12      209       3     229      12       1      13     210   C
07     617      12      206       3     246      12       2      13     208   C
08     607      11      204       3     261      11       2       8     205   C
09     597      11      204       3     247      12       2      10     205   C
10     587      11      205       2     250      11       2       9     206   C
11     577      11      205       3     256      11       2      10     207   C
12     567      11      206       2     264      11       2       7     207   C
13     557      11      204       2     255      11       2       8     205   C
14     547      12      204       2     245      12       1       8     205   C
15     537      12      201       3     240      12       2      10     203   C
16     527      11      203       3     227      12       1      13     205   C
17     517      11      211       3     246      12       2      11     213   C
18     507      11      209       3     248      11       2      12     211   C
19     497      11      214       2     257      11       1       7     215   C
20     487      11      213       2     273      11       1       4     214   C
21     477      11      206       2     266      11       1       4     207   C
22     467      10      204       1     290      10       1       1     204   C
23     457      11      207       1     266      11       0       1     207   C
24     447      11      206       1     331      11       0     178      26   C
25     437      11      213       1     302      11       1       0     214   C
26     427      10      213       2     203      10       0       9     213   A
27     417       9      214       1     217       9       0       9     214   C
28     407       8      207       1     241       8       1       7     207   C
29     397       8      198       2     237       8       1      10     200   C
30     387       8      186       4     218       8       2      22     191   C
31     377       7      185       5     218       9       2      34     196   C
32     367       8      172       5     207       9       2      29     181   C
33     357       8      164       6     209       9       4      33     178   C
34     347       8      152       6     192       9       3      33     164   C
35     337       8      139       6     187      10       4      32     153   C
36     327       9      141       6     181      10       3      32     153   C
37     317       8      142       6     182      10       3      35     156   C
38     307       8      150       6     181      10       3      33     160   C
39     297       8      156       4     171       9       1      27     159   C
40     287       9      169       4     172      10       0      23     170   C
41     277       9      180       3     146      10       2      15     177   A
42     267      10      185       3     144      10       2      13     183   A
43     257      10      185       3     142      10       2      15     182   A
44     247      10      186       3     138      10       2      12     183   A
45     237      10      183       4     121      10       3      11     179   A
46     227      10      175       3     120      11       3      11     173   A
47     217      10      174       3     132      11       2      12     172   A
48     207      11      175       3     141      11       1      11     173   A
49     197      11      182       2     115      11       2       4     181   A
50     187      12      185       1     127      12       1       2     185   A
51     177      12      197       1     314      12       1     178      17   C
52     167      13      210       1     292      13       1       0     210   C
53     157      14      216       2      17      14       1     172      36   C
54     147      14      222       3      18      15       1     168      40   C
55     137      17      230       5     344      17       5     172      48   C
56     127      20      231       6     352      20       5     171      49   C
57     117      23      240       9     329      23       9       1     240   C
58     107      28      239      10     320      28       9       4     240   C
59      97      29      237      11     300      30      10      11     240   C
60      87      28      241      12     300      28      10      15     247   C
61      77      25      231      10     299      26       9      10     235   C
```