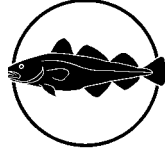# The Faroese Fisheries Laboratory

Fiskirannsóknarstovan

Nordic WOCE ADCP Deployments
in Faroese Waters
2002 - 2003

By

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Technical Report No.: 03-04

Tórshavn
November 2003

Introduction

This report documents 9 ADCP deployments in Faroese waters in 2002 – 2003. Aanderaa Current Meter records are included 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. The moorings were located at 7 standard (Nordic WOCE) sites with two deployments at NWFC and NWSB and one at each of the other sites. At site NWFC, data from the first two months were required for analysis. This mooring was therefore recovered, data downloaded, and the mooring redeployed. At site NWSB, the mooring surfaced unplanned due to failure of the acoustic release. Using the ARGOS beacon, the mooring was picked up, data were downloaded, and the mooring redeployed.
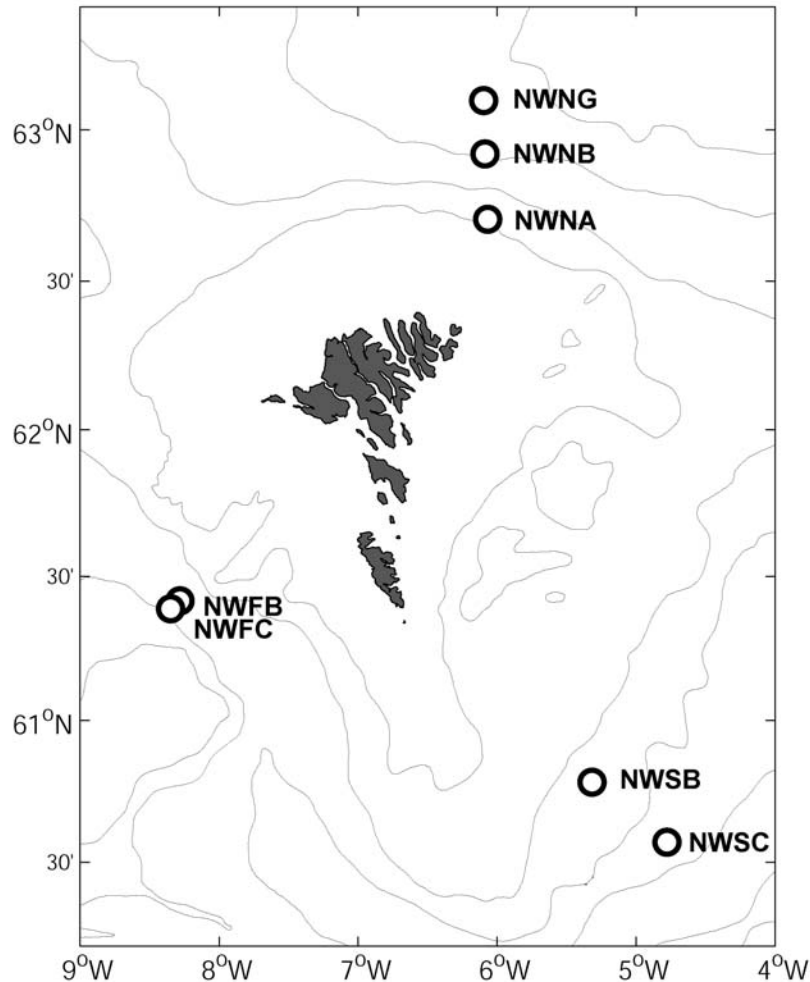
Figure 1. ADCP and Aanderaa mooring sites in Faroese waters 2002-2003 superposed on a map with the bottom topography. Each site is indicated by a four-letter label.

At site NWFB, NWFC, NWNB, NWNG, NWSB, and NWSC, 75 kHz RDI Broadband ADCP's were placed in the top of single-point moorings. At site NWNA, a "shallow-water" rig was used where a 150 kHz RDI Broadband ADCP was placed on the bottom inside a protective aluminium frame. For each deployment, the ADCP measures the velocity averaged over a number (21 – 25) of depth layers ("bins") which were 25m for all rigs except for the deployment NWNA where the depth layers were 10m. At 20 minutes intervals the ADCP records the data from all bins into "ensembles". In these deployments, each ensemble is based only upon one ping. At site 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's interval.

Table 1. List of deployments with information on duration and range of valid data. All depths are in meters. The last column indicates for one deployment that one of the ADCP beams has been faulty and 3-beam computations have been used. It also indicates whether an Aanderaa or a Microcat instrument was on the mooring.

Deployment	Bottom depth	Int. min.	Valid data period	Dur. days	No bins	Depthrange	Comments
NWFB0207	812	20	2002 07 07–2003 06 16	343	25	170– 770	Microcat
NWFC0207	841	20	2002 07 07–2002 09 08	63	25	199– 799	
NWFC0209	826	20	2002 09 13–2003 06 16	276	24	209– 784	
NWNA0207	301	20	2002 07 05–2003 06 14	343	24	54– 284	
NWNB0207	981	20	2002 07 05–2003 06 14	344	25	103– 703	
NWNG0207	1801	20	2002 07 05–2003 06 14	344	22	67– 592	Aanderaa
NWSB0207	776	20	2002 07 08–2002 08 23	45	23	82– 632	
NWSB0209	772	20	2002 09 08–2003 06 17	281	21	128– 628	
NWSC0207	1066	20	2002 07 08–2003 06 17	343	23	66– 616	3-beam Aanderaa

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 the Faroese Fisheries Laboratory (FFL), based upon MATLAB. 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 depth is found from the echo sounding depth (corrected for change in sound velocity) and the length of the mooring line, but at sites NWNG, NWSB and NWSC the instrument depth is corrected using the data from the surface echo.

The Aanderaa data have been calibrated using calibration data 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 the Faroese Fisheries Laboratory (FFL), based upon MATLAB. Salinity is not calibrated. The Microcat data from NWFB0207, which include pressure, temperature, and conductivity measurements, will require extensive editing and calibration and are not included in the report.

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. Finally, for the ADCP deployments, there are three 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 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 the number that could not be interpolated (too large gap). Since all the 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 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 1-2 pages show plots of the listed parameters as a function of time and one page shows the progressive vector diagram.

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 data.
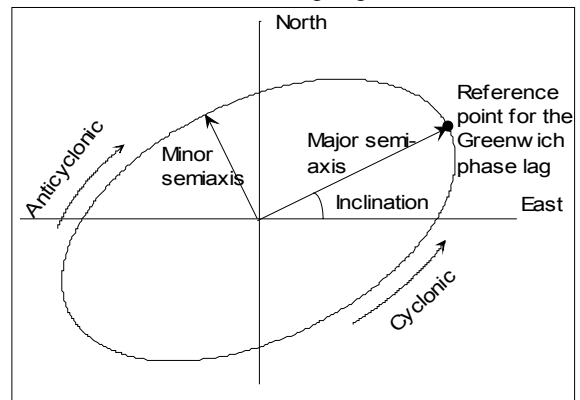
Figure 2. Parameters of the tidal ellipse for a given constituent. The reference point for the Greenwich phase lag is always chosen to be above the east-west axis.

Deployment Id: NWFB0207

Latitude: 61°24.942´N

Longitude: 008°16.870´W

Echo sounding depth: 821m

Bottom depth corr.: 812m

Time of deployment: 07/07 -2002 2115UTC

Time of recovery: 16/06 - 2002 0303UTC

ADCP:

Instrument no.: RDI ADCP 1642

Instrument frequency: 75kHz

Height above bottom: 6m

Depth: 806m (corr.)

Time of first data: 07/07 - 2002   0820UTC

Time of last data: 16/06 - 2003   0240UTC

Sample interval: 20 min

No. of ensembles: 24752

Pings per ens.:   1

Binlength: 25m

Depth of first bin: 770m (corr.)

No. of bins: 28
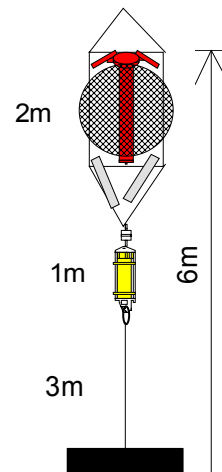
Micro Cat:

Instrument no.: 0982

Height above bottom: 5m

Time of first data: 07/07 - 2002   0800UTC

Time of last data: 16/06 - 2003   0300UTC

Sample interval: 20 min

No. of ensembles: 24754

Instrument depth: 807m

NWFB0207 ADCP 1642

Error statistics for deployment: NWFB0207 updated 2003/11/25

Surface distance invalid due to range limitation
Heading, pitch and roll not edited
Temperature edited by MCN in Nov 2003
Velocity edited up to and including bin 25 by MCN in Aug 2003
Intensity edited up to and including bin 28 by MCN in Nov 2003
Velocity reedited from bin 21 to bin 25 by KMHL in Nov 2003

Total number of ensembles: 24752
Interval between ensembles: 20 min
Original number of bins: 28
Number of acceptable velocity bins: 25
Number of acceptable intensity bins: 25

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
number 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	3383	14	1963	373	115	42	20	9	0	0	0	0
2	0	2810	11	1682	324	95	27	8	5	1	0	0	0
3	2	2316	9	1493	259	65	17	7	1	0	0	0	0
4	0	2060	8	1362	210	65	13	5	1	0	0	0	0
5	2	2311	9	1425	249	77	19	9	6	0	0	0	0
6	4	1928	8	1222	198	65	11	6	6	0	0	0	0
7	0	2090	8	1297	212	61	22	10	6	0	0	0	0
8	0	2805	11	1421	315	105	38	27	18	2	0	0	0
9	0	2989	12	1491	311	108	44	20	32	4	0	0	0
10	0	3061	12	1349	327	117	66	28	37	3	0	0	0
11	0	3056	12	1336	287	128	57	27	44	7	0	0	0
12	0	2440	10	1162	215	96	48	21	33	1	0	0	0
13	0	1975	8	1040	198	68	38	13	16	1	0	0	0
14	0	1529	6	876	113	47	18	16	15	2	0	0	0
15	0	2047	8	945	195	61	31	10	26	9	1	0	0
16	0	2739	11	1105	199	67	34	24	40	16	5	2	1
17	0	4007	16	1152	232	96	73	40	72	36	6	7	2
18	0	7040	28	1168	313	138	77	46	119	73	38	23	5
19	0	9518	38	1283	340	182	118	60	142	84	36	33	18
20	1	11405	46	1368	433	224	135	95	200	163	42	26	15
21	1	12902	52	1323	440	252	134	88	264	191	73	34	13
22	0	13729	55	1292	474	252	154	116	275	193	66	44	17
23	0	15009	61	1158	361	197	119	66	248	202	83	62	32
24	0	16153	65	971	310	131	78	52	169	172	92	75	62
25	0	17764	72	879	294	143	80	45	117	115	80	71	77

NWFB0207 ADCP 1642

```
Deployment: NWFB0207 updated 2003/11/25
Instrument no.:  1642
Instrument freq.:  75
Latitude: 61 24.942 N
Longitude:08 16.870 W
Bottom depth:  812
Instrument depth:  806
Center depth of first bin:  770
Bin length:  25
Number of bins:  25
Number of first ensemble:     278
Time of first ensemble: 2002 07 07 08 20
Number of last ensemble:   25029
Time of last ensemble:  2003 06 16 02 40
Time between ensembles (min.):    20
All directions have been corrected by adding: -12.0
```

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	770	42	1007	1003	301	863
2	745	67	1069	1064	304	886
3	720	92	1091	1087	306	906
4	695	117	1095	1091	307	917
5	670	142	1091	1087	308	907
6	645	167	1074	1070	308	922
7	620	192	1031	1025	310	916
8	595	217	943	933	311	887
9	570	242	795	779	314	879
10	545	267	612	583	317	876
11	520	292	440	389	320	877
12	495	317	322	244	323	901
13	470	342	261	159	326	920
14	445	367	230	111	329	938
15	420	392	213	83	332	917
16	395	417	205	71	333	889
17	370	442	206	74	330	838
18	345	467	206	83	328	716
19	320	492	217	108	323	615
20	295	517	241	150	315	539
21	270	542	254	187	309	479
22	245	567	252	205	304	445
23	220	592	229	199	301	394
24	195	617	197	176	298	347
25	170	642	160	147	296	282

NWFB0207 ADCP 1642

Deployment: NWFB0207

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	770	863	863	863	863	863	862	850	808	688	464	206	57	11	1	.04	0	0	0
2	745	886	886	886	886	886	886	881	858	791	637	379	136	30	4	.28	.04	0	0
3	720	906	906	906	906	906	906	902	883	829	700	455	184	46	6	.48	0	0	0
4	695	917	917	917	917	917	917	912	894	840	717	475	191	50	8	1	0	0	0
5	670	907	907	907	907	907	906	900	879	822	697	459	187	50	8	1	0	0	0
6	645	922	922	922	922	921	918	905	874	808	674	436	174	44	7	1	0	0	0
7	620	916	915	913	911	905	890	866	820	736	584	354	137	32	5	1	.04	0	0
8	595	885	880	873	858	839	811	766	688	573	414	229	81	20	3	.28	0	0	0
9	570	872	854	825	784	733	668	588	486	362	227	106	37	9	1	.12	.04	0	0
10	545	856	805	724	631	540	450	352	254	162	88	42	16	4	1	0	0	0	0
11	520	834	717	564	422	309	222	150	95	56	31	14	5	1	.20	0	0	0	0
12	495	819	618	404	249	152	92	56	35	20	10	4	1	.04	0	0	0	0	0
13	470	796	535	301	153	77	41	23	11	5	2	.24	0	0	0	0	0	0	0
14	445	788	488	243	104	39	17	7	2	1	.12	0	0	0	0	0	0	0	0
15	420	754	436	203	75	22	6	1	.40	.08	0	0	0	0	0	0	0	0	0
16	395	716	405	181	65	15	3	1	.12	0	0	0	0	0	0	0	0	0	0
17	370	673	384	173	62	15	2	.28	0	0	0	0	0	0	0	0	0	0	0
18	345	575	325	149	55	14	2	.20	0	0	0	0	0	0	0	0	0	0	0
19	320	504	298	145	62	18	3	.28	.08	0	0	0	0	0	0	0	0	0	0
20	295	463	297	161	77	26	5	1	.12	.04	0	0	0	0	0	0	0	0	0
21	270	423	275	161	82	29	4	.28	0	0	0	0	0	0	0	0	0	0	0
22	245	396	247	146	77	30	5	.28	0	0	0	0	0	0	0	0	0	0	0
23	220	345	183	100	53	21	4	.28	0	0	0	0	0	0	0	0	0	0	0
24	195	290	117	58	31	12	3	.20	0	0	0	0	0	0	0	0	0	0	0
25	170	208	58	29	14	5	1	.24	0	0	0	0	0	0	0	0	0	0	0

NWFB0207 ADCP 1642

Harmonic constants for constituent M2 for deployment NWFB0207.
===

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	770	34	72	20	344	34	20	2	70	A
02	745	37	71	19	346	37	19	3	70	A
03	720	37	76	16	347	37	16	1	75	A
04	695	36	80	14	342	36	13	177	261	A
05	670	35	82	14	330	35	13	170	265	A
06	645	31	89	14	300	33	7	158	274	A
07	620	28	115	17	266	32	7	150	287	C
08	595	35	143	21	254	36	19	164	315	C
09	570	40	160	23	248	40	23	2	161	C
10	545	41	159	28	184	49	10	33	167	C
11	520	48	224	49	183	64	24	45	203	A
12	495	65	243	76	170	81	58	59	194	A
13	470	76	250	94	168	96	73	73	181	A
14	445	77	255	101	169	102	77	83	174	A
15	420	74	260	102	172	102	73	87	174	A
16	395	68	266	101	176	101	68	89	177	A
17	370	66	274	104	181	104	66	94	178	A
18	345	69	281	105	182	106	67	100	176	A
19	320	67	286	97	185	99	65	103	176	A
20	295	58	289	80	186	82	55	107	174	A
21	270	41	285	51	183	53	39	112	166	A
22	245	27	293	40	185	41	25	109	173	A
23	220	19	279	19	178	21	17	136	137	A
24	195	14	269	9	139	16	6	152	101	A
25	170	5	244	4	230	6	1	38	239	A

Harmonic constants for constituent S2 for deployment NWFB0207.
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Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	770	13	102	10	17	13	10	11	94	A
02	745	14	102	8	23	14	8	10	97	A
03	720	14	106	7	24	14	7	5	104	A
04	695	12	117	6	14	13	6	172	301	A
05	670	12	125	6	355	12	4	161	311	A
06	645	9	125	7	328	11	2	143	313	A
07	620	7	135	7	309	10	0	131	311	C
08	595	10	181	8	309	12	6	144	342	C
09	570	14	218	9	284	15	8	20	229	C
10	545	19	218	12	209	23	2	32	215	A
11	520	20	267	22	215	27	13	51	236	A
12	495	27	274	29	202	32	23	53	230	A
13	470	29	281	35	203	37	28	68	219	A
14	445	28	285	34	207	35	26	66	226	A
15	420	26	289	32	210	33	25	71	224	A
16	395	24	295	31	220	32	22	69	234	A
17	370	24	294	31	225	33	21	64	242	A
18	345	22	302	32	230	33	20	70	242	A
19	320	23	304	30	225	30	22	73	237	A
20	295	20	294	24	224	26	17	57	247	A
21	270	16	309	24	225	24	16	82	231	A
22	245	13	325	14	206	17	10	131	179	A
23	220	4	12	4	221	6	1	133	208	A
24	195	3	75	4	277	5	1	127	269	A
25	170	2	9	6	303	6	1	84	304	A

NWFB0207 ADCP 1642

Harmonic constants for constituent N2 for deployment NWFB0207.
```
===============================================================================
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     770       8      54       6     315       8       6     167     243  A
 02     745       9      62       5     307      10       4     164     249  A
 03     720      10      65       5     297      10       4     159     253  A
 04     695      10      72       3     291      10       2     164     255  A
 05     670       9      69       4     277      10       2     161     253  A
 06     645       8      68       4     263       9       1     155     251  A
 07     620       9      89       3     234      10       2     163     265  C
 08     595      12     110       5     263      13       2     158     286  C
 09     570      13     128       6     305      14       0     155     307  C
 10     545      17     115       3     297      17       0     169     295  A
 11     520      18     159       5      95      18       5       8     157  A
 12     495      17     190      14     117      18      12      29     168  A
 13     470      13     211      16     135      17      12      68     151  A
 14     445      11     221      15     145      16      11      70     159  A
 15     420      11     234      16     153      16      11      80     160  A
 16     395      12     244      19     157      19      12      88     158  A
 17     370      12     257      22     156      22      11      98     151  A
 18     345      12     276      24     164      24      11     104     158  A
 19     320      15     254      21     159      21      14      97     154  A
 20     295      12     259      19     166      19      12      93     164  A
 21     270       3     248      15     166      15       3      88     166  A
 22     245       3     133       9     163      10       1      77     161  C
 23     220       4     145       4     140       5       0      43     142  A
 24     195       6     236       8      82      10       2     123      74  A
 25     170      13     247      13      67      19       0     135      67  A
```

Harmonic constants for constituent O1 for deployment NWFB0207.
```
===============================================================================
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     770      20     309       5     120      21       1     165     128  C
 02     745      23     309       5     118      24       1     167     129  C
 03     720      23     310       8     129      24       0     162     130  C
 04     695      22     314       8     126      24       1     160     134  C
 05     670      23     315       8     133      24       0     160     135  C
 06     645      24     319       9     141      26       0     159     139  A
 07     620      27     323      12     147      30       1     157     144  A
 08     595      30     334      15     161      34       2     154     156  A
 09     570      33     341      18     166      38       1     151     162  A
 10     545      29     336      21     158      35       1     145     157  A
 11     520      24       6      20     179      32       2     140     183  C
 12     495      20      14      17     190      26       1     139     192  C
 13     470      16      10      14     195      21       1     139     192  A
 14     445      16       6      14     196      21       2     139     190  A
 15     420      16       8      15     198      22       2     138     192  A
 16     395      15       7      13     206      20       3     141     195  A
 17     370      16       2      15     209      22       5     136     195  A
 18     345      18     357      16     200      24       5     139     187  A
 19     320      17     346      14     200      21       6     141     180  A
 20     295      18     346      14     211      21       8     146     181  A
 21     270      16     352      16     218      21       9     134     195  A
 22     245      17     354      14     214      21       7     143     189  A
 23     220      13      10       9     216      15       3     148     198  A
 24     195       7      25       4     250       8       3     156     213  A
 25     170       5      53       5     263       7       2     130     250  A
```

NWFB0207 ADCP 1642

Harmonic constants for constituent K1 for deployment NWFB0207.
===

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	770	20	213	5	38	21	0	166	34	A
02	745	21	211	6	32	22	0	165	31	A
03	720	23	211	7	32	24	0	162	31	A
04	695	23	211	8	34	24	0	161	31	A
05	670	22	212	9	35	24	0	157	33	A
06	645	23	220	10	27	25	2	157	38	C
07	620	27	226	10	37	28	1	160	45	C
08	595	30	233	14	51	33	0	155	52	C
09	570	35	237	23	56	42	0	147	57	C
10	545	32	225	25	46	41	0	141	45	A
11	520	26	243	24	59	35	1	138	62	C
12	495	23	250	24	66	34	1	134	68	C
13	470	17	262	21	66	26	4	129	72	C
14	445	15	275	17	75	22	4	130	83	C
15	420	12	291	13	82	17	4	135	96	C
16	395	11	295	8	87	13	3	143	105	C
17	370	7	300	7	78	9	3	137	101	C
18	345	9	307	6	93	10	3	145	116	C
19	320	5	331	4	71	5	4	157	133	C
20	295	5	337	7	84	7	5	109	95	C
21	270	4	254	11	61	12	1	109	62	C
22	245	14	173	3	330	15	1	168	352	C
23	220	10	144	2	111	10	1	8	144	A
24	195	12	169	3	53	13	2	174	350	A
25	170	12	167	10	90	13	9	21	151	A

Deployment Id: NWFC0207

Latitude: 61°23.390´N

Longitude: 008°18.660´W

Echo sounding depth: 850m

Bottom depth corr.: 841m

Time of deployment: 07/07 -2002 0631UTC

Time of recovery: 08/09 - 2002 0801UTC

ADCP:

Instrument no.: RDI ADCP 1285

Instrument frequency: 75kHz

Height above bottom: 6m

Depth: 835m (corr.)

Time of first data: 07/07 - 2002   0700UTC

Time of last data: 08/09 - 2002   0800UTC

Sample interval: 20 min

No. of ensembles: 4540

Pings per ens.:   1

Binlength: 25m

Depth of first bin: 799m (corr.)

No. of bins: 28
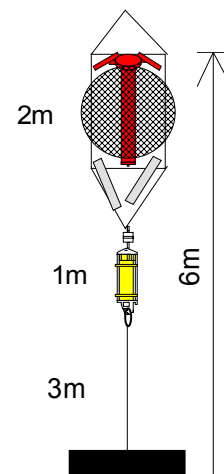
NWFC0207 ADCP 1285

Error statistics for deployment: NWFC0207 updated 2003/01/14

Surface distance invalid due to range limitation
Heading, pitch and roll not edited
Temperature edited by MCN in Dec 2002
Velocity edited up to and including bin 25 by MCN in Dec 2002
Intensity edited up to and including bin 28 by MCN in Dec 2002

Total number of ensembles: 4540
Interval between ensembles: 20 min
Original number of bins: 28
Number of acceptable velocity bins: 25
Number of acceptable intensity bins: 25

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
number 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	1	674	15	408	84	20	7	2	0	0	0	0	0
2	5	591	13	382	67	15	5	2	0	0	0	0	0
3	6	474	10	285	62	13	4	2	0	0	0	0	0
4	1	441	10	246	39	14	6	3	2	2	0	0	0
5	0	599	13	237	51	27	12	6	4	3	2	0	0
6	0	555	12	248	63	20	12	5	5	1	0	0	0
7	0	512	11	241	60	22	10	3	4	0	0	0	0
8	0	735	16	329	79	24	15	11	9	0	0	0	0
9	0	731	16	311	69	30	14	7	15	0	0	0	0
10	0	460	10	269	44	13	9	4	1	0	0	0	0
11	0	304	7	188	31	7	4	1	2	0	0	0	0
12	0	250	6	143	36	5	5	0	0	0	0	0	0
13	0	237	5	169	22	4	3	0	0	0	0	0	0
14	0	158	3	121	15	1	1	0	0	0	0	0	0
15	0	129	3	115	7	0	0	0	0	0	0	0	0
16	0	145	3	118	12	1	0	0	0	0	0	0	0
17	0	160	4	135	11	1	0	0	0	0	0	0	0
18	0	190	4	147	17	3	0	0	0	0	0	0	0
19	0	200	4	167	15	1	0	0	0	0	0	0	0
20	0	255	6	188	27	3	1	0	0	0	0	0	0
21	0	409	9	238	44	7	6	3	3	0	0	0	0
22	0	581	13	270	51	16	7	1	7	1	1	1	0
23	0	941	21	303	67	29	18	8	14	6	3	0	1
24	0	1511	33	312	94	46	27	11	28	16	2	4	1
25	0	2372	52	273	87	37	34	23	39	32	12	11	1

NWFC0207 ADCP 1285

```
Deployment: NWFC0207 updated 2003/01/14
Instrument no.:  1285
Instrument freq.:  75
Latitude: 61 23.390 N
Longitude:08 18.660 W
Bottom depth:  841
Instrument depth:  835
Center depth of first bin:  799
Bin length:  25
Number of bins:  25
Number of first ensemble:    274
Time of first ensemble: 2002 07 07 07 00
Number of last ensemble:    4813
Time of last ensemble:  2002 09 08 08 00
Time between ensembles (min.):   20
All directions have been corrected by adding: -12.0
```

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	799	42	1031	1028	300	852
2	774	67	1100	1098	303	870
3	749	92	1109	1107	305	896
4	724	117	1092	1089	306	903
5	699	142	1065	1062	307	868
6	674	167	984	981	307	878
7	649	192	807	798	309	887
8	624	217	557	521	312	838
9	599	242	348	262	317	839
10	574	267	244	98	329	899
11	549	292	205	33	11	933
12	524	317	183	37	76	945
13	499	342	174	54	95	948
14	474	367	172	62	104	965
15	449	392	171	68	108	972
16	424	417	169	68	109	968
17	399	442	168	69	112	965
18	374	467	165	69	114	958
19	349	492	163	68	115	956
20	324	517	161	66	116	944
21	299	542	161	64	116	910
22	274	567	161	64	115	872
23	249	592	160	63	117	793
24	224	617	158	61	118	667
25	199	642	154	68	126	478

NWFC0207 ADCP 1285

Deployment: NWFC0207

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

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

==

Bin no.	Depth m	Speed (cm/s)																	
		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
1	799	852	852	852	852	852	852	847	813	719	522	264	66	6	0	0	0	0	0
2	774	870	870	870	870	870	870	870	861	813	699	476	178	19	1	0	0	0	0
3	749	896	896	896	896	896	896	896	889	850	743	514	205	20	.44	0	0	0	0
4	724	903	903	903	903	903	903	903	894	846	718	461	161	15	.44	0	0	0	0
5	699	868	868	868	868	868	868	866	848	774	613	374	119	13	1	0	0	0	0
6	674	878	878	876	872	867	853	826	756	617	447	251	81	10	1	0	0	0	0
7	649	882	871	849	820	776	707	609	485	351	233	114	33	3	.22	0	0	0	0
8	624	804	717	634	559	467	363	273	199	138	70	22	2	0	0	0	0	0	0
9	599	735	554	384	275	210	143	96	61	33	10	2	.44	.22	0	0	0	0	0
10	574	748	465	251	136	76	44	21	8	3	1	.22	0	0	0	0	0	0	0
11	549	769	422	167	65	21	6	1	0	0	0	0	0	0	0	0	0	0	0
12	524	754	371	107	23	4	.22	0	0	0	0	0	0	0	0	0	0	0	0
13	499	739	343	81	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	474	751	337	82	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0
15	449	752	335	81	12	1	.22	0	0	0	0	0	0	0	0	0	0	0	0
16	424	742	327	81	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17	399	734	323	79	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18	374	715	313	69	7	.22	0	0	0	0	0	0	0	0	0	0	0	0	0
19	349	702	306	63	5	.44	0	0	0	0	0	0	0	0	0	0	0	0	0
20	324	691	297	62	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	299	666	281	65	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	274	644	263	64	6	.22	0	0	0	0	0	0	0	0	0	0	0	0	0
23	249	576	237	59	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	224	480	195	47	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	199	340	131	28	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NWFC0207 ADCP 1285

Harmonic constants for constituent M2 for deployment NWFC0207.

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	799	20	101	11	312	22	5	154	288	A
02	774	21	85	11	285	24	3	154	269	A
03	749	22	80	14	274	26	3	148	264	A
04	724	19	68	18	280	26	7	136	264	A
05	699	19	77	23	293	29	9	127	279	A
06	674	33	89	34	297	46	12	134	283	A
07	649	50	95	49	299	68	15	136	286	A
08	624	43	96	45	286	63	5	134	281	A
09	599	23	156	22	197	29	11	43	175	C
10	574	46	206	55	131	59	42	62	152	A
11	549	63	213	73	124	73	63	87	126	A
12	524	64	211	78	124	78	63	84	129	A
13	499	60	215	77	130	77	59	81	137	A
14	474	57	223	77	140	78	56	80	147	A
15	449	57	232	77	148	77	57	81	154	A
16	424	58	239	79	155	79	57	81	161	A
17	399	57	245	79	160	80	56	83	165	A
18	374	55	251	80	164	80	55	87	167	A
19	349	57	258	83	170	83	57	88	171	A
20	324	59	264	84	174	84	59	91	173	A
21	299	64	267	87	176	87	64	91	175	A
22	274	68	267	88	180	88	68	85	184	A
23	249	67	269	90	181	90	66	87	184	A
24	224	65	273	94	185	94	65	87	187	A
25	199	64	279	97	192	98	63	86	195	A

Harmonic constants for constituent S2 for deployment NWFC0207.

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	799	7	147	6	306	9	2	141	318	C
02	774	8	130	10	329	12	2	130	321	A
03	749	8	129	9	337	11	3	131	325	A
04	724	7	113	12	339	13	4	117	329	A
05	699	6	106	10	314	12	3	120	307	A
06	674	8	118	16	317	18	2	115	314	A
07	649	7	140	14	312	16	1	117	314	C
08	624	6	231	14	276	14	4	72	271	C
09	599	19	288	18	217	22	15	41	256	A
10	574	28	295	31	204	31	28	94	201	A
11	549	29	299	33	199	34	27	118	176	A
12	524	31	302	34	198	36	28	127	168	A
13	499	28	300	35	201	35	27	108	187	A
14	474	26	302	35	210	35	26	94	207	A
15	449	24	304	35	217	35	24	85	221	A
16	424	23	304	33	222	33	22	79	229	A
17	399	21	308	31	223	31	21	85	226	A
18	374	18	317	29	232	29	18	85	235	A
19	349	15	323	30	235	30	15	88	236	A
20	324	14	316	30	238	30	14	82	242	A
21	299	14	327	28	244	28	13	86	247	A
22	274	14	344	28	248	28	14	94	246	A
23	249	20	349	29	252	30	19	98	246	A
24	224	21	339	33	250	33	21	89	250	A
25	199	13	333	25	261	26	12	79	266	A

NWFC0207 ADCP 1285

Harmonic constants for constituent N2 for deployment NWFC0207.
==

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	799	9	91	9	313	13	5	135	292	A
02	774	8	59	7	321	9	7	163	253	A
03	749	11	80	5	304	12	3	158	267	A
04	724	10	73	4	285	11	2	161	257	A
05	699	9	96	2	275	9	0	169	276	C
06	674	11	80	7	269	13	1	148	262	A
07	649	11	117	11	241	14	7	136	270	C
08	624	12	194	10	222	15	4	41	206	C
09	599	12	204	9	136	13	8	28	186	A
10	574	6	183	10	110	10	6	74	120	A
11	549	7	166	8	134	10	3	52	146	A
12	524	5	186	6	128	7	4	58	146	A
13	499	4	152	6	129	7	1	60	135	A
14	474	2	98	8	125	8	1	79	125	C
15	449	1	14	9	137	9	1	94	137	C
16	424	1	21	11	144	11	1	92	144	C
17	399	3	271	13	148	13	2	97	147	A
18	374	7	250	16	146	16	7	97	143	A
19	349	11	245	20	144	20	10	97	140	A
20	324	12	238	22	143	22	12	94	141	A
21	299	11	244	20	145	20	11	96	142	A
22	274	10	247	20	142	20	9	99	138	A
23	249	11	237	18	144	18	11	93	142	A
24	224	11	222	20	153	20	10	76	160	A
25	199	10	235	25	163	25	10	81	167	A

Harmonic constants for constituent O1 for deployment NWFC0207.
==

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	799	16	302	11	107	19	2	145	117	C
02	774	19	305	14	109	23	3	143	120	C
03	749	18	306	12	117	22	2	146	123	C
04	724	17	303	15	117	23	1	139	121	C
05	699	15	306	16	121	22	1	133	124	C
06	674	27	315	19	141	33	2	145	137	A
07	649	31	328	17	149	36	0	151	148	A
08	624	44	348	37	187	56	9	140	176	A
09	599	35	345	37	183	50	8	133	175	A
10	574	27	352	28	169	39	1	133	171	C
11	549	21	342	20	161	29	0	136	162	C
12	524	16	1	15	161	21	4	137	172	C
13	499	13	11	12	168	17	4	136	180	C
14	474	10	25	13	176	16	4	128	187	C
15	449	8	2	15	182	17	0	119	182	A
16	424	11	358	15	179	19	0	125	178	A
17	399	13	7	14	184	19	0	132	185	C
18	374	15	4	16	190	22	1	133	187	A
19	349	15	356	18	190	23	3	131	184	A
20	324	15	2	17	189	23	1	131	186	A
21	299	12	355	16	194	20	3	127	187	A
22	274	9	338	17	202	18	6	114	194	A
23	249	10	349	16	192	19	3	121	186	A
24	224	14	348	18	191	22	4	127	182	A
25	199	23	349	23	199	31	8	134	184	A

NWFC0207 ADCP 1285

Harmonic constants for constituent K1 for deployment NWFC0207.

```
================================================================================
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     799     17     229     11      52     21       1     148     50    A
02     774     19     230     13      52     23       0     144     50    A
03     749     16     226     13      61     21       3     141     52    A
04     724     15     224     16      59     22       3     133     52    A
05     699     12     226     20      52     23       1     120     51    A
06     674     23     229     25      60     34       3     133     55    A
07     649     36     241     32      60     48       0     138     61    C
08     624     32     233     35      54     48       1     133     54    A
09     599     26     239     32      56     41       1     129     58    C
10     574     20     236     24      58     32       0     130     57    A
11     549     16     249     16      73     22       1     134     71    A
12     524     16     262     17      77     23       1     134     79    C
13     499     16     263     16      76     22       1     136     79    C
14     474     15     260     18      73     23       1     128     76    C
15     449     16     263     19      68     25       3     129     74    C
16     424     18     265     19      69     26       4     133     77    C
17     399     18     259     16      74     24       1     138     77    C
18     374     18     262     15      74     24       2     141     79    C
19     349     18     256     15      81     23       1     141     78    A
20     324     19     259     16      73     25       2     139     77    C
21     299     18     263     20      71     27       3     132     77    C
22     274     16     262     22      70     27       3     127     75    C
23     249     12     267     22      68     25       3     117     72    C
24     224     12     262     18      62     21       3     124     69    C
25     199      9     244     18      79     20       2     117     76    A
```

Deployment Id: NWFC0209

Latitude: 61°23.680´N

Longitude: 008°18.700´W

Echo sounding depth: 835m

Bottom depth corr.: 826m

Time of deployment: 13/09 -2002 0215UTC

Time of recovery: 16/06 - 2003 0356UTC

ADCP:

Instrument no.: RDI ADCP 1285

Instrument frequency: 75kHz

Height above bottom: 6m

Depth: 820m (corr.)

Time of first data: 13/09 - 2002   0300UTC

Time of last data: 16/06 - 2003   0340UTC

Sample interval: 20 min

No. of ensembles: 19875

Pings per ens.:   1

Binlength: 25m

Depth of first bin: 784m (corr.)

No. of bins: 28
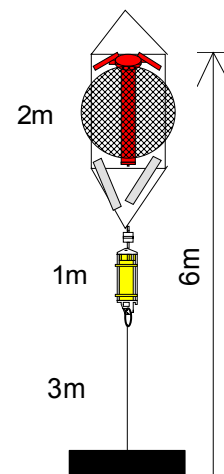
NWFC0209 ADCP 1285

Error statistics for deployment: NWFC0209 updated 2003/11/19
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Surface distance invalid due to range limitation
Heading, pitch and roll not edited
Temperature edited by MCN in Nov 2003
Velocity edited up to and including bin 24 by MCN in Nov 2003
Intensity edited up to and including bin 28 by MCN in Nov 2003

```
Total number of  ensembles:        19875
Interval between ensembles:       20 min
Original number of bins:             28
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
number 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	6	1847	9	1266	189	47	13	2	0	0	0	0	0
2	11	1216	6	869	126	23	4	2	0	0	0	0	0
3	11	1052	5	717	107	20	10	3	1	0	0	0	0
4	8	969	5	555	86	30	19	3	4	2	0	0	0
5	0	1580	8	733	145	55	34	9	20	5	0	0	0
6	0	2128	11	967	189	76	44	21	24	7	0	0	0
7	0	2557	13	1162	280	98	42	17	30	6	0	0	0
8	0	3097	16	1325	322	127	58	24	39	9	0	0	0
9	0	2224	11	1135	238	85	34	15	15	3	0	0	0
10	0	2314	12	1094	250	79	37	24	21	5	0	0	0
11	0	1837	9	908	204	73	22	12	19	2	0	0	0
12	0	1214	6	663	122	46	21	12	2	1	0	0	0
13	0	1052	5	656	93	24	13	5	9	0	0	0	0
14	0	1108	6	673	115	36	9	3	6	0	0	0	0
15	0	1104	6	629	118	28	12	6	9	1	0	0	0
16	0	1305	7	722	121	38	22	7	10	2	0	0	0
17	0	1270	6	720	140	29	21	4	9	1	0	0	0
18	0	1173	6	665	106	36	13	5	10	3	0	0	0
19	0	1684	8	738	142	47	20	10	24	13	1	0	0
20	0	3049	15	834	206	77	45	22	55	28	13	3	0
21	1	5250	26	960	260	101	76	38	121	42	29	14	3
22	0	7946	40	945	273	137	67	46	111	90	43	34	13
23	0	10983	55	840	277	123	80	42	97	75	68	46	29
24	1	13668	69	628	218	98	57	38	83	72	45	67	57

NWFC0209 ADCP 1285

```
Deployment: NWFC0209 updated 2003/11/19
Instrument no.:  1285
Instrument freq.:  75
Latitude: 61 23.680 N
Longitude:08 18.700 W
Bottom depth:  826
Instrument depth:  820
Center depth of first bin:  784
Bin length:  25
Number of bins:  24
Number of first ensemble:     118
Time of first ensemble: 2002 09 13 03 00
Number of last ensemble:   19992
Time of last ensemble:  2003 06 16 03 40
Time between ensembles (min.):    20
All directions have been corrected by adding: -12.0
```

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	784	42	1117	1113	302	907
2	759	67	1171	1167	304	939
3	734	92	1191	1187	306	947
4	709	117	1188	1185	307	951
5	684	142	1159	1155	308	921
6	659	167	1073	1067	309	893
7	634	192	880	862	311	871
8	609	217	647	594	315	844
9	584	242	443	338	321	888
10	559	267	315	162	330	884
11	534	292	243	63	358	908
12	509	317	215	42	50	939
13	484	342	200	50	82	947
14	459	367	192	58	96	944
15	434	392	189	63	102	944
16	409	417	188	66	106	934
17	384	442	188	67	110	936
18	359	467	190	69	114	941
19	334	492	191	69	115	915
20	309	517	191	71	117	847
21	284	542	192	71	118	736
22	259	567	195	73	118	600
23	234	592	197	76	118	447
24	209	617	197	80	123	312

NWFC0209 ADCP 1285

Deployment: NWFC0209

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	784	907	907	907	907	906	906	902	887	842	738	528	255	78	14	2	.15	0	0
2	759	939	939	939	939	938	938	934	927	898	834	691	415	154	37	6	.40	0	0
3	734	947	947	947	947	947	946	943	936	912	858	743	487	198	48	6	.30	0	0
4	709	951	951	951	951	950	950	946	938	908	847	734	494	205	48	6	.30	.05	0
5	684	921	920	920	918	915	909	898	877	831	762	653	439	195	46	6	1	.05	0
6	659	890	885	878	867	852	834	807	767	708	628	506	327	146	39	6	1	.15	0
7	634	858	831	799	766	726	683	632	567	484	382	267	151	66	19	4	.40	.15	.05
8	609	811	736	650	574	507	443	379	316	245	173	111	61	26	9	1	.10	.05	0
9	584	820	664	506	382	299	242	191	144	102	65	37	22	12	4	1	.05	0	0
10	559	773	541	343	216	149	108	76	53	34	22	14	9	3	1	.10	0	0	0
11	534	757	470	246	121	68	41	25	15	8	3	1	.25	.05	0	0	0	0	0
12	509	770	447	198	77	32	15	7	3	1	.25	0	0	0	0	0	0	0	0
13	484	768	421	165	51	15	5	2	1	.15	.05	0	0	0	0	0	0	0	0
14	459	751	396	149	39	8	2	1	.25	0	0	0	0	0	0	0	0	0	0
15	434	748	386	140	34	5	1	.20	0	0	0	0	0	0	0	0	0	0	0
16	409	740	379	136	32	5	1	.10	0	0	0	0	0	0	0	0	0	0	0
17	384	740	382	139	35	5	.45	0	0	0	0	0	0	0	0	0	0	0	0
18	359	746	387	138	37	7	1	0	0	0	0	0	0	0	0	0	0	0	0
19	334	729	375	139	42	8	1	.10	0	0	0	0	0	0	0	0	0	0	0
20	309	669	347	132	39	10	2	.15	0	0	0	0	0	0	0	0	0	0	0
21	284	583	303	117	36	9	2	.05	0	0	0	0	0	0	0	0	0	0	0
22	259	475	251	102	35	10	2	.10	0	0	0	0	0	0	0	0	0	0	0
23	234	354	187	78	29	9	2	.25	0	0	0	0	0	0	0	0	0	0	0
24	209	243	132	57	22	7	1	.15	0	0	0	0	0	0	0	0	0	0	0

NWFC0209 ADCP 1285

Harmonic constants for constituent M2 for deployment NWFC0209.

```
================================================================================
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    784      16      79       5     294      17       3     164     262  A
 02    759      17      76       7     283      18       3     160     259  A
 03    734      17      65      10     266      19       3     149     251  A
 04    709      14      60      14     265      20       4     136     252  A
 05    684      18      94      18     288      26       3     135     281  A
 06    659      40     114      29     307      49       5     144     299  A
 07    634      65     128      40     320      76       7     148     311  A
 08    609      63     136      29     311      70       2     155     315  C
 09    584      44     171      11     198      45       5      13     173  C
 10    559      41     222      47     160      54      32      53     184  A
 11    534      54     246      73     159      73      54      85     162  A
 12    509      59     255      84     162      85      59      93     160  A
 13    484      61     262      89     167      89      61      97     163  A
 14    459      63     270      91     173      92      62      99     167  A
 15    434      62     275      92     179      92      61      98     173  A
 16    409      64     281      93     184      94      63      99     177  A
 17    384      67     286      95     188      95      65     101     181  A
 18    359      68     289      97     192      97      67     100     184  A
 19    334      73     292      99     193     101      71     103     184  A
 20    309      74     293     101     196     102      73     101     188  A
 21    284      75     294     101     196     102      74     102     188  A
 22    259      77     295     103     197     104      75     103     188  A
 23    234      75     291     103     200     103      75      92     199  A
 24    209      74     294      99     204      99      74      89     205  A
```

Harmonic constants for constituent S2 for deployment NWFC0209.

```
================================================================================
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    784       7      89       4     305       8       2     149     279  A
 02    759       7      91       3     311       8       2     163     275  A
 03    734       7      93       5     293       9       1     145     280  A
 04    709       6      96       7     306       9       2     132     293  A
 05    684       8     155       7     340      11       0     137     338  A
 06    659      16     167       9       9      19       3     151     352  A
 07    634      23     172      14       7      27       3     150     356  A
 08    609      23     184      10     338      25       4     158       1  C
 09    584      15     219       9     223      17       0      32     220  C
 10    559      17     273      22     200      23      16      66     217  A
 11    534      21     294      29     197      29      21     100     190  A
 12    509      24     303      35     203      35      24     103     194  A
 13    484      23     304      35     212      35      23      92     211  A
 14    459      22     303      34     218      34      22      85     221  A
 15    434      24     312      36     221      36      24      91     221  A
 16    409      24     317      37     222      37      24      95     219  A
 17    384      24     322      38     225      38      24      98     220  A
 18    359      24     325      38     225      38      24     100     219  A
 19    334      25     332      37     231      38      24     102     224  A
 20    309      28     336      38     234      39      27     108     221  A
 21    284      29     344      35     235      38      26     121     212  A
 22    259      28     341      31     243      32      27     116     220  A
 23    234      26     343      29     243      30      25     120     217  A
 24    209      29     342      30     236      34      25     131     202  A
```

NWFC0209 ADCP 1285

Harmonic constants for constituent N2 for deployment NWFC0209.

```
================================================================================
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    784       6      74       4     258       7       0     146     255   A
 02    759       5      51       3     238       6       0     147     233   A
 03    734       5      59       3     233       6       0     148     237   C
 04    709       4      47       3     243       5       1     148     232   A
 05    684       4      58       5     250       7       1     125     246   A
 06    659       8      93       9     267      12       1     132     270   C
 07    634      25     109      18     302      31       3     145     293   A
 08    609      33     114      21     320      38       8     149     301   A
 09    584      27     126      16     340      30       8     152     314   A
 10    559      14     155       8      64      14       8     179     336   A
 11    534      11     175      11     108      13       8      47     139   A
 12    509      10     197      14     117      14      10      78     124   A
 13    484       9     215      15     131      15       8      85     134   A
 14    459       8     239      16     145      16       8      93     143   A
 15    434       9     256      19     157      19       9      95     155   A
 16    409      12     266      22     159      23      11     102     153   A
 17    384      14     274      23     165      24      12     105     157   A
 18    359      15     273      26     170      26      15     102     163   A
 19    334      16     279      26     171      27      15     105     163   A
 20    309      18     281      30     177      30      17     102     170   A
 21    284      19     287      30     181      31      18     106     172   A
 22    259      18     298      29     183      31      15     109     173   A
 23    234      17     295      31     176      32      14     109     168   A
 24    209      18     285      25     174      26      16     112     161   A
```

Harmonic constants for constituent O1 for deployment NWFC0209.

```
================================================================================
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    784      14     323       9     139      17       1     148     142   C
 02    759      15     323       9     135      17       1     149     141   C
 03    734      13     326       9     145      16       0     147     146   C
 04    709      13     338      10     146      16       2     141     153   C
 05    684      17     342      13     154      21       1     141     159   C
 06    659      24     347      19     168      31       0     142     167   A
 07    634      37     356      27     174      45       1     144     175   C
 08    609      46       5      35     175      58       5     143     182   C
 09    584      39      10      33     186      51       2     140     188   C
 10    559      28      10      27     194      38       2     136     192   A
 11    534      21      17      18     202      28       1     140     199   A
 12    509      20      16      17     193      27       1     140     195   C
 13    484      19      17      16     196      24       0     140     197   C
 14    459      16      17      15     197      22       0     138     197   C
 15    434      15      12      14     196      20       1     138     194   A
 16    409      15      13      13     197      20       1     138     195   A
 17    384      15      16      13     196      20       0     139     196   C
 18    359      15       9      13     195      20       1     139     192   A
 19    334      15      17      13     199      20       0     139     198   A
 20    309      16      26      13     192      20       3     140     200   C
 21    284      17      16      14     200      22       1     140     198   A
 22    259      17      24      19     214      25       2     133     209   A
 23    234      21      19      20     217      28       5     137     208   A
 24    209      24      15      20     237      29      11     142     212   A
```

NWFC0209 ADCP 1285

Harmonic constants for constituent K1 for deployment NWFC0209.

```
================================================================================
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     784      12    221      12     35     17       1     135     38   C
 02     759      13    218      11     32     17       1     139     35   C
 03     734      15    216      12     32     19       1     141     34   C
 04     709      15    219      13     43     20       1     139     41   A
 05     684      17    243      14     59     22       1     142     62   C
 06     659      29    250      23     71     37       0     142     70   A
 07     634      44    256      35     77     56       1     142     77   A
 08     609      45    257      36     80     58       1     141     78   A
 09     584      37    259      31     81     48       1     140     80   A
 10     559      30    273      26     85     40       3     139     90   C
 11     534      26    283      22     94     34       3     140     99   C
 12     509      23    283      23     91     32       3     135     97   C
 13     484      20    279      21     87     29       3     133     93   C
 14     459      18    283      19     87     26       4     135     95   C
 15     434      17    295      17     87     23       6     134    101   C
 16     409      15    303      16     85     21       7     131    102   C
 17     384      14    296      20     77     23       7     122     89   C
 18     359      13    297      20     72     22       8     118     83   C
 19     334      12    289      19     69     22       7     119     79   C
 20     309      14    278      22     67     25       6     121     75   C
 21     284      18    265      21     69     27       4     130     76   C
 22     259      20    269      20     93     28       1     135     91   A
 23     234      13    287       9    131     15       3     144    116   A
 24     209       7    272       4    150      7       3     155    104   A
```

Deployment Id: NWNA0207

Latitude: 62°42.200′N

Longitude: 006°04.330′W

Echo sound depth: 302m

Bottom depth corr.: 301m

Time of deployment: 05/07 -2002 2250UTC

Time of recovery: 14/06 - 2003   1622UTC

ADCP:

Instrument no.: RDI ADCP 1279

Instrument frequency: 150kHz

Height above bottom: 1m

Depth: 300m   (corr.)

Time of first data: 05/07 – 2002   2320UTC

Time of last data: 14/06 – 2003   1620UTC
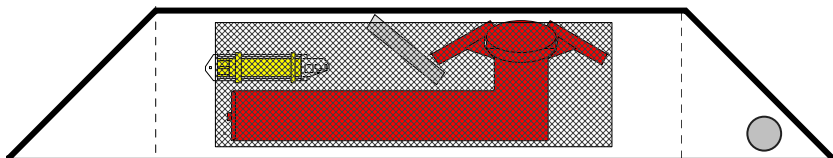
Sample interval: 20 min

No. of ensembles: 24748

Pings per ens.:   1

Binlength: 10 m

Depth of first bin: 284m (corr.)

No. of bins: 28

NWNA0207 ADCP 1279

Error statistics for deployment: NWNA0207 updated 2003/11/19
───────────────

Surface distance invalid due to range limitation
Heading, pitch and roll not edited
Temperature edited by KMHL in Nov 2003
Velocity edited up to and including bin 24 by KMHL in Nov 2003
Intensity edited up to and including bin 28 by KMHL in Nov 2003

Total number of ensembles: 24748
Interval between ensembles: 20 min
Original number of bins: 28
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.)

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	2418	10	1698	261	43	12	3	1	0	0	0	0
2	0	2851	12	1781	356	69	25	3	6	0	0	0	0
3	0	2219	9	1560	248	31	11	4	1	0	0	0	0
4	2	2254	9	1527	238	48	12	8	3	0	0	0	0
5	0	1963	8	1339	218	38	10	5	1	0	0	0	0
6	1	1837	7	1254	190	39	12	3	1	1	0	0	0
7	1	1775	7	1213	171	34	13	6	3	1	0	0	0
8	0	1701	7	1186	180	30	7	4	2	0	0	0	0
9	0	1800	7	1234	174	48	10	4	2	0	0	0	0
10	0	1708	7	1153	180	41	9	0	5	0	0	0	0
11	1	1744	7	1151	175	37	9	7	5	0	1	0	0
12	0	1909	8	1167	181	50	11	6	8	0	0	0	1
13	0	1992	8	1112	201	53	15	8	14	1	0	0	1
14	0	2056	8	1107	180	66	19	16	20	4	0	1	0
15	0	2455	10	1154	214	67	29	20	30	7	4	1	0
16	1	2825	11	1135	223	90	33	22	31	10	8	4	0
17	2	3458	14	1143	251	82	36	19	37	22	9	6	3
18	0	4208	17	1015	224	95	41	14	43	30	12	9	9
19	1	5734	23	1277	285	124	66	35	52	29	15	11	13
20	2	6892	28	1156	296	116	69	25	63	41	15	14	17
21	1	8279	33	1157	342	147	61	34	77	54	13	18	25
22	2	9625	39	1096	258	134	70	35	84	34	15	14	31
23	1	11472	46	1049	287	122	69	36	87	47	22	15	35
24	0	13153	53	958	248	125	61	41	85	32	16	11	30

NWNA0207 ADCP 1279

```
Deployment: NWNA0207 updated 2003/11/19
Instrument no.:  1279
Instrument freq.: 150
Latitude: 62 42.200 N
Longitude:06 04.330 W
Bottom depth:  301
Instrument depth:  300
Center depth of first bin:  284
Bin length:  10
Number of bins:  24
Number of first ensemble:    179
Time of first ensemble: 2002 07 05 23 20
Number of last ensemble:  24926
Time of last ensemble:  2003 06 14 16 20
Time between ensembles (min.):   20
All directions have been corrected by adding: -12.0
```

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       284        17       195       131        93       902
         2       274        27       210       139        96       885
         3       264        37       221       143        98       910
         4       254        47       229       150       100       909
         5       244        57       235       155       101       921
         6       234        67       238       159       102       926
         7       224        77       240       163       103       928
         8       214        87       242       167       103       931
         9       204        97       243       170       103       927
        10       194       107       244       173       103       931
        11       184       117       245       177       103       930
        12       174       127       246       179       103       923
        13       164       137       248       182       103       920
        14       154       147       249       185       103       917
        15       144       157       252       190       103       901
        16       134       167       255       193       103       886
        17       124       177       258       197       103       860
        18       114       187       262       203       103       830
        19       104       197       267       208       103       768
        20        94       207       271       213       103       722
        21        84       217       278       221       102       665
        22        74       227       287       230       102       611
        23        64       237       292       236       101       536
        24        54       247       298       241       101       469
```

NWNA0207 ADCP 1279

Deployment: NWNA0207

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| 284| 702  381  159   53   13    2  .20  .04    0    0    0    0    0    0    0    0    0    0
  2| 274| 713  410  195   77   23    5    1  .08    0    0    0    0    0    0    0    0    0    0
  3| 264| 749  451  227   96   32    7    1  .08    0    0    0    0    0    0    0    0    0    0
  4| 254| 758  470  242  108   40   10    2  .28    0    0    0    0    0    0    0    0    0    0
  5| 244| 773  490  258  119   46   14    3  .40  .04    0    0    0    0    0    0    0    0    0
  6| 234| 783  499  267  126   50   16    3  .40  .04    0    0    0    0    0    0    0    0    0
  7| 224| 786  502  273  131   53   19    5    1    0    0    0    0    0    0    0    0    0    0
  8| 214| 791  507  279  138   58   19    5    1    0    0    0    0    0    0    0    0    0    0
  9| 204| 785  506  280  140   59   22    5    1  .12    0    0    0    0    0    0    0    0    0
 10| 194| 787  503  283  142   60   22    7    1  .08    0    0    0    0    0    0    0    0    0
 11| 184| 785  507  290  145   63   23    7    2  .24    0    0    0    0    0    0    0    0    0
 12| 174| 774  504  290  149   64   23    8    2  .44    0    0    0    0    0    0    0    0    0
 13| 164| 775  503  292  150   66   25    9    3  .48  .04    0    0    0    0    0    0    0    0
 14| 154| 775  507  294  151   67   27    9    3    1  .12    0    0    0    0    0    0    0    0
 15| 144| 766  503  294  151   68   28   10    3    1  .20    0    0    0    0    0    0    0    0
 16| 134| 756  502  293  153   69   29   10    4    1  .20  .04    0    0    0    0    0    0    0
 17| 124| 738  497  294  152   68   29   10    4    1  .40  .08    0    0    0    0    0    0    0
 18| 114| 716  489  293  152   70   29   10    4    1  .36  .08    0    0    0    0    0    0    0
 19| 104| 669  461  278  149   67   28    9    4    1    1  .04    0    0    0    0    0    0    0
 20|  94| 631  442  271  145   66   27   10    3    2    1  .04    0    0    0    0    0    0    0
 21|  84| 587  421  262  144   67   27   10    4    2    1    0    0    0    0    0    0    0    0
 22|  74| 543  397  253  143   68   27   10    4    2    1  .08    0    0    0    0    0    0    0
 23|  64| 477  356  231  132   64   25   10    4    2    1  .08    0    0    0    0    0    0    0
 24|  54| 418  316  209  124   59   24    9    3    1    1  .16    0    0    0    0    0    0    0
---------------------------------------------------------------------------------------------
```

NWNA0207 ADCP 1279

Harmonic constants for constituent M2 for deployment NWNA0207.

```
================================================================================
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     284     129     295      85     179     137      72     157     128  A
 02     274     143     295      99     179     152      83     155     130  A
 03     264     154     296     109     182     164      94     155     131  A
 04     254     163     297     118     185     173     103     156     132  A
 05     244     170     299     122     188     179     108     157     133  A
 06     234     174     301     123     192     182     111     158     134  A
 07     224     176     303     124     195     182     114     160     136  A
 08     214     177     304     123     198     183     114     161     136  A
 09     204     178     306     122     201     183     114     163     137  A
 10     194     177     307     119     203     181     113     165     137  A
 11     184     177     309     117     205     180     111     165     138  A
 12     174     176     311     115     208     179     110     166     139  A
 13     164     175     313     112     210     177     108     167     140  A
 14     154     173     314     110     212     176     106     168     141  A
 15     144     173     315     107     214     175     104     169     141  A
 16     134     171     317     105     216     173     102     170     143  A
 17     124     171     318     101     219     172      99     172     142  A
 18     114     168     319      97     222     168      96     174     142  A
 19     104     165     320      93     224     165      92     175     142  A
 20      94     160     321      89     226     161      88     177     143  A
 21      84     155     323      83     230     155      83     178     144  A
 22      74     151     325      81     234     151      81     179     145  A
 23      64     151     326      78     238     151      78       1     325  A
 24      54     150     329      80     242     150      80       2     327  A
```

Harmonic constants for constituent S2 for deployment NWNA0207.

```
================================================================================
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     284      46     340      27     222      48      23     159     170  A
 02     274      50     340      33     225      53      29     158     172  A
 03     264      53     341      38     227      56      32     154     177  A
 04     254      55     341      40     228      59      35     155     176  A
 05     244      58     341      43     230      61      38     155     177  A
 06     234      61     343      44     232      64      39     157     177  A
 07     224      62     344      43     235      64      40     159     177  A
 08     214      64     344      43     237      66      40     162     175  A
 09     204      64     346      42     239      66      39     163     176  A
 10     194      64     348      41     241      66      39     164     177  A
 11     184      65     350      40     244      66      37     165     179  A
 12     174      66     352      39     246      67      37     167     179  A
 13     164      66     354      39     248      67      36     167     182  A
 14     154      65     356      37     250      66      36     168     182  A
 15     144      65     356      36     253      66      35     169     182  A
 16     134      66     358      36     253      67      35     169     183  A
 17     124      66     359      36     256      67      34     170     184  A
 18     114      66     359      36     257      66      34     171     184  A
 19     104      66     359      34     259      66      33     173     183  A
 20      94      63       0      32     261      64      32     174     183  A
 21      84      61       0      32     260      61      31     173     184  A
 22      74      57       2      31     261      57      30     172     186  A
 23      64      53       3      30     266      53      30     175     185  A
 24      54      54       3      29     273      54      29       0       3  A
```

NWNA0207 ADCP 1279

Harmonic constants for constituent N2 for deployment NWNA0207.

```
==============================================================================
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    284      25     278      17     150      28      12     151     111  A
 02    274      27     275      17     150      29      13     155     106  A
 03    264      27     275      20     151      30      15     149     111  A
 04    254      28     277      22     153      32      16     148     114  A
 05    244      30     278      23     154      33      17     148     116  A
 06    234      32     280      25     156      37      18     147     117  A
 07    224      33     279      25     158      36      19     149     117  A
 08    214      33     278      24     161      36      20     153     114  A
 09    204      34     279      25     166      36      21     155     114  A
 10    194      34     281      25     169      36      22     155     116  A
 11    184      34     283      25     171      37      22     155     118  A
 12    174      36     284      25     174      37      22     159     117  A
 13    164      36     288      24     176      38      22     158     121  A
 14    154      36     287      24     179      37      22     162     118  A
 15    144      36     288      24     184      36      22     165     118  A
 16    134      36     291      24     188      37      23     166     120  A
 17    124      36     293      23     191      37      22     168     120  A
 18    114      35     295      22     192      36      21     167     123  A
 19    104      36     296      22     195      36      21     170     122  A
 20     94      36     300      23     197      37      22     167     128  A
 21     84      35     302      24     201      35      23     168     130  A
 22     74      33     300      21     206      33      21     176     123  A
 23     64      33     308      19     206      33      19     170     133  A
 24     54      30     306      17     215      30      17     179     126  A
```

Harmonic constants for constituent O1 for deployment NWNA0207.

```
==============================================================================
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    284      24      33      12     314      25      12       6      30  A
 02    274      26      35      13     311      26      13       4      33  A
 03    264      26      35      12     301      26      12     178     216  A
 04    254      25      35      12     300      25      12     177     217  A
 05    244      25      36      13     296      26      12     174     219  A
 06    234      25      34      12     299      25      12     177     215  A
 07    224      26      32      11     299      26      11     179     212  A
 08    214      25      32      11     300      25      11     179     212  A
 09    204      25      31      12     299      25      12     179     211  A
 10    194      25      30      12     298      25      12     179     210  A
 11    184      25      33      12     299      25      12     177     215  A
 12    174      25      34      13     297      25      13     175     217  A
 13    164      25      32      14     298      25      14     177     213  A
 14    154      25      35      15     295      25      14     171     220  A
 15    144      26      35      15     291      26      14     169     221  A
 16    134      26      36      15     292      27      15     169     222  A
 17    124      26      36      15     291      27      14     168     223  A
 18    114      27      36      15     289      27      14     167     223  A
 19    104      28      33      15     283      29      13     167     219  A
 20     94      29      29      15     281      30      14     168     215  A
 21     84      32      28      15     281      32      14     170     212  A
 22     74      35      25      16     279      35      15     171     209  A
 23     64      32      29      17     273      33      15     163     217  A
 24     54      33      26      17     272      34      15     165     213  A
```

NWNA0207 ADCP 1279

Harmonic constants for constituent K1 for deployment NWNA0207.

```
===============================================================================
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    284      30    268      17    192      30      16      11     262   A
 02    274      31    271      17    188      31      17       6     268   A
 03    264      33    274      18    185      33      18       0     274   A
 04    254      35    273      17    182      35      17     180      93   A
 05    244      35    273      18    180      35      18     178      94   A
 06    234      34    273      18    179      34      18     178      94   A
 07    224      34    272      18    176      34      18     176      94   A
 08    214      34    272      18    177      34      18     176      94   A
 09    204      34    272      18    174      34      18     174      95   A
 10    194      34    272      18    174      35      18     174      95   A
 11    184      34    272      19    174      35      19     174      95   A
 12    174      35    270      20    174      35      19     175      93   A
 13    164      36    269      20    175      36      19     177      90   A
 14    154      37    268      20    174      37      20     177      89   A
 15    144      37    267      20    174      37      20     178      88   A
 16    134      38    265      21    170      38      21     177      87   A
 17    124      38    264      21    172      38      21     179      84   A
 18    114      40    262      21    175      40      21       2     260   A
 19    104      38    258      22    172      38      22       4     255   A
 20     94      37    255      22    175      38      22       9     249   A
 21     84      37    257      22    179      38      21      11     251   A
 22     74      35    255      22    178      35      21      13     247   A
 23     64      34    260      22    177      34      21       7     256   A
 24     54      33    265      23    171      33      22     175      89   A
```

Deployment Id: NWNB0207

Latitude:　　62°55.268´N

Longitude:　006°05.120´W

Echo sounding depth: 1002

Bottom depth corr.: 981m

Time of deployment: 05/07 -2002 0322UTC

Time of recovery: 14/06 - 2003 1850UTC

ADCP:

Instrument no.: RDI ADCP 1577

Instrument frequency: 75kHz

Height above bottom: 242m   (corr.)

Depth: 739m (corr.)

Time of first data: 05/07 - 2002 0400UTC

Time of last data: 14/06 - 2003 1800UTC

Sample interval: 20 min

No. of ensembles: 24811

Pings per ens.: 1

Binlength: 25m

Depth of first bin: 703m (corr.)

No. of bins: 28
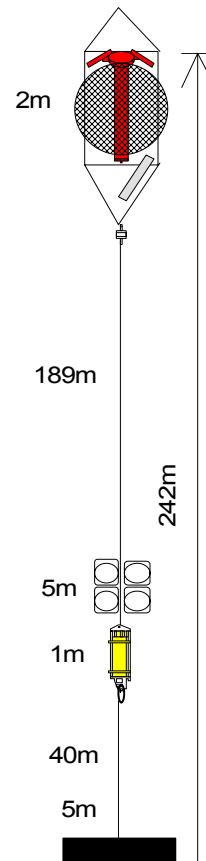
NWNB0207 ADCP 1577

Error statistics for deployment: NWNB0207 updated 2003/11/19
────────────────

Surface distance invalid due to range limitation
Heading, pitch and roll not edited
Temperature edited by MCN in Nov 2003
Velocity edited up to and including bin 25 by MCN in Aug 2003
Intensity edited up to and including bin 28 by MCN in Nov 2003

```
Total number of  ensembles:        24811
Interval between ensembles:        20 min
Original number of bins:              28
Number of acceptable velocity bins:   25
Number of acceptable intensity bins:  25
```

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 number 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	6	466	2	408	24	2	1	0	0	0	0	0	0
2	0	354	1	310	17	2	1	0	0	0	0	0	0
3	1	334	1	293	16	3	0	0	0	0	0	0	0
4	1	360	1	325	14	1	1	0	0	0	0	0	0
5	0	314	1	269	18	3	0	0	0	0	0	0	0
6	0	299	1	262	15	1	1	0	0	0	0	0	0
7	0	283	1	263	10	0	0	0	0	0	0	0	0
8	0	259	1	228	14	1	0	0	0	0	0	0	0
9	0	226	1	206	10	0	0	0	0	0	0	0	0
10	0	221	1	197	9	2	0	0	0	0	0	0	0
11	0	262	1	225	15	1	1	0	0	0	0	0	0
12	0	259	1	218	14	3	1	0	0	0	0	0	0
13	0	331	1	269	26	2	1	0	0	0	0	0	0
14	0	293	1	248	15	5	0	0	0	0	0	0	0
15	0	307	1	240	30	1	1	0	0	0	0	0	0
16	0	284	1	235	15	5	1	0	0	0	0	0	0
17	0	372	1	278	32	6	3	0	0	0	0	0	0
18	0	599	2	322	43	13	6	4	7	4	0	0	0
19	0	1029	4	393	58	24	17	9	22	8	2	0	0
20	0	2037	8	543	102	47	17	15	39	28	10	1	0
21	0	3633	15	610	115	56	30	23	60	34	23	22	0
22	0	5684	23	705	177	61	40	22	59	57	33	41	8
23	0	7929	32	769	177	85	47	44	80	55	42	62	19
24	0	10540	42	616	181	86	46	33	85	75	33	65	44
25	0	12962	52	523	172	73	33	32	65	43	37	57	59

NWNB0207 ADCP 1577

Deployment: NWNB0207 updated 2003/11/19
Instrument no.: 1577
Instrument freq.: 75
Latitude: 62 55.268 N
Longitude:06 05.120 W
Bottom depth: 981
Instrument depth: 739
Center depth of first bin: 703
Bin length: 25
Number of bins: 25
Number of first ensemble: 121
Time of first ensemble: 2002 07 05 04 00
Number of last ensemble: 24931
Time of last ensemble: 2003 06 14 18 00
Time between ensembles (min.):   20
All directions have been corrected by adding: -12.0

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      703       278      122       18      279       981
        2      678       303      122       23      278       986
        3      653       328      122       26      278       987
        4      628       353      123       30      278       985
        5      603       378      125       33      278       987
        6      578       403      125       35      276       988
        7      553       428      126       38      274       989
        8      528       453      128       40      273       990
        9      503       478      129       41      273       991
       10      478       503      131       41      274       991
       11      453       528      132       39      274       989
       12      428       553      137       33      273       990
       13      403       578      143       26      269       987
       14      378       603      149       18      257       988
       15      353       628      156       12      218       988
       16      328       653      164       15      167       989
       17      303       678      175       25      143       985
       18      278       703      186       37      133       976
       19      253       728      196       46      127       959
       20      228       753      205       54      123       918
       21      203       778      212       61      120       854
       22      178       803      220       70      118       771
       23      153       828      232       84      117       680
       24      128       853      250      107      115       575
       25      103       878      276      136      112       478
```

NWNB0207 ADCP 1577

Deployment: NWNB0207

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|  703| 546  146   19    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  2|  678| 552  147   19    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  3|  653| 551  148   19    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  4|  628| 561  151   19    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  5|  603| 567  159   18    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  6|  578| 577  158   17    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  7|  553| 581  156   17  .48    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  8|  528| 588  164   21    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  9|  503| 598  169   22    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 10|  478| 604  177   27    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 11|  453| 609  178   29    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 12|  428| 637  197   31    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 13|  403| 662  224   38    3    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 14|  378| 676  245   48    4  .20    0    0    0    0    0    0    0    0    0    0    0    0    0
 15|  353| 703  281   61    7    1    0    0    0    0    0    0    0    0    0    0    0    0    0
 16|  328| 722  313   83   12    1  .04    0    0    0    0    0    0    0    0    0    0    0    0
 17|  303| 741  350  111   25    4  .04    0    0    0    0    0    0    0    0    0    0    0    0
 18|  278| 751  391  139   36    9    1    0    0    0    0    0    0    0    0    0    0    0    0
 19|  253| 753  418  165   50   14    2  .16    0    0    0    0    0    0    0    0    0    0    0
 20|  228| 735  419  180   66   21    5    1  .04    0    0    0    0    0    0    0    0    0    0
 21|  203| 689  404  183   75   29    8    1  .20    0    0    0    0    0    0    0    0    0    0
 22|  178| 627  377  181   81   35   11    3  .44    0    0    0    0    0    0    0    0    0    0
 23|  153| 559  353  182   89   41   14    4  .48  .04    0    0    0    0    0    0    0    0    0
 24|  128| 486  321  180   96   48   19    6    1  .04    0    0    0    0    0    0    0    0    0
 25|  103| 419  294  177  103   56   24    8    1  .04    0    0    0    0    0    0    0    0    0
------------------------------------------------------------------------------------------------------
```

NWNB0207 ADCP 1577

Harmonic constants for constituent M2 for deployment NWNB0207.
==

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	703	75	276	29	153	77	24	166	100	A
02	678	77	278	30	158	79	26	168	102	A
03	653	79	279	31	165	80	28	170	102	A
04	628	81	280	32	171	81	30	172	103	A
05	603	83	281	33	175	84	31	173	103	A
06	578	85	282	34	179	86	33	174	104	A
07	553	88	283	37	182	88	36	175	105	A
08	528	93	284	39	188	93	39	177	106	A
09	503	96	287	41	195	96	41	179	107	A
10	478	97	289	43	200	97	42	1	288	A
11	453	99	291	44	208	100	43	4	290	A
12	428	104	296	48	217	105	47	6	293	A
13	403	109	300	55	226	110	52	10	296	A
14	378	109	305	56	233	111	52	12	299	A
15	353	106	308	55	240	109	49	14	301	A
16	328	103	311	54	248	107	47	17	304	A
17	303	104	314	58	254	109	49	19	306	A
18	278	105	316	61	256	110	50	21	306	A
19	253	103	317	62	259	110	50	22	307	A
20	228	103	319	64	260	110	52	23	308	A
21	203	103	320	64	262	110	51	23	309	A
22	178	106	323	66	264	113	53	23	312	A
23	153	104	325	65	268	112	50	24	313	A
24	128	106	330	71	272	115	56	26	317	A
25	103	114	333	79	273	123	63	27	318	A

Harmonic constants for constituent S2 for deployment NWNB0207.
==

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	703	30	303	18	187	32	16	161	132	A
02	678	32	304	19	190	33	17	161	134	A
03	653	33	306	20	193	34	18	162	135	A
04	628	35	308	21	200	35	19	165	136	A
05	603	36	311	22	206	37	21	167	139	A
06	578	38	313	23	213	38	22	170	139	A
07	553	39	316	23	219	39	23	174	139	A
08	528	40	320	23	229	40	23	179	141	A
09	503	41	324	23	235	41	23	1	324	A
10	478	40	328	22	243	40	22	4	326	A
11	453	40	334	22	255	40	21	8	329	A
12	428	39	340	20	267	40	19	11	335	A
13	403	36	346	18	276	37	16	12	340	A
14	378	35	355	17	295	36	14	17	348	A
15	353	36	3	21	305	39	17	21	353	A
16	328	36	2	22	306	38	17	24	351	A
17	303	36	359	22	302	39	18	23	348	A
18	278	38	2	24	309	42	18	25	351	A
19	253	38	5	24	311	42	18	25	354	A
20	228	37	4	22	307	39	17	22	354	A
21	203	36	5	21	309	39	16	21	356	A
22	178	40	6	22	308	42	18	21	357	A
23	153	46	12	23	305	47	21	14	6	A
24	128	47	11	23	303	48	21	13	5	A
25	103	46	7	27	310	49	21	21	358	A

NWNB0207 ADCP 1577

Harmonic constants for constituent N2 for deployment NWNB0207.
===

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	703	17	265	8	146	17	7	165	91	A
02	678	17	263	9	149	18	8	166	89	A
03	653	18	263	9	150	18	8	167	88	A
04	628	18	260	9	149	18	9	166	86	A
05	603	18	257	9	148	18	9	168	82	A
06	578	16	256	7	137	16	6	166	81	A
07	553	13	254	6	119	14	4	162	79	A
08	528	12	248	6	99	13	3	155	74	A
09	503	12	238	7	88	14	3	150	66	A
10	478	13	234	8	87	15	4	151	62	A
11	453	13	240	7	85	14	2	154	65	A
12	428	12	253	4	83	13	1	161	74	A
13	403	11	260	2	64	11	1	168	79	C
14	378	12	274	2	250	13	1	7	274	A
15	353	19	284	7	214	19	7	9	280	A
16	328	24	284	14	205	24	14	10	278	A
17	303	27	284	16	202	27	16	7	280	A
18	278	25	287	15	208	25	15	10	281	A
19	253	25	293	16	220	25	15	16	283	A
20	228	26	302	19	228	27	17	19	289	A
21	203	27	303	22	229	28	20	27	283	A
22	178	28	306	24	228	29	22	24	288	A
23	153	26	306	27	233	30	22	46	268	A
24	128	26	308	26	230	29	23	45	270	A
25	103	31	306	26	228	32	24	24	287	A

Harmonic constants for constituent O1 for deployment NWNB0207.
===

Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	703	6	65	3	262	6	1	154	249	A
02	678	6	64	3	259	6	1	150	248	A
03	653	5	64	4	263	6	1	145	251	A
04	628	5	57	4	255	6	1	146	242	A
05	603	5	56	3	252	6	1	147	241	A
06	578	5	51	4	254	6	1	147	238	A
07	553	5	44	4	262	7	2	142	239	A
08	528	6	50	4	269	7	2	147	242	A
09	503	6	49	5	268	7	2	147	241	A
10	478	7	46	4	267	8	3	151	236	A
11	453	7	41	5	272	8	3	153	233	A
12	428	8	38	4	275	9	4	161	226	A
13	403	8	33	3	280	8	3	170	217	A
14	378	9	35	4	254	10	2	160	220	A
15	353	11	41	5	267	11	3	162	226	A
16	328	12	36	5	265	12	3	165	220	A
17	303	11	34	5	276	11	4	165	220	A
18	278	11	35	6	261	12	4	157	223	A
19	253	9	35	6	271	10	4	155	227	A
20	228	11	27	6	290	11	6	174	210	A
21	203	11	31	7	282	12	6	163	221	A
22	178	11	43	4	291	11	4	171	226	A
23	153	10	33	4	268	11	3	165	218	A
24	128	8	5	2	222	9	1	169	187	A
25	103	9	353	3	151	9	1	160	170	C

NWNB0207 ADCP 1577

Harmonic constants for constituent K1 for deployment NWNB0207.

```
================================================================================
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     703       5     278       4     129       6       2     140     111  A
 02     678       5     282       5     135       7       2     140     115  A
 03     653       5     283       4     132       7       2     140     115  A
 04     628       5     285       4     132       7       2     143     115  A
 05     603       5     285       5     131       7       2     138     117  A
 06     578       6     284       5     136       8       2     137     119  A
 07     553       5     278       6     133       8       2     130     118  A
 08     528       5     275       6     130       7       2     130     115  A
 09     503       6     270       6     132       8       3     132     113  A
 10     478       6     275       5     139       8       3     144     111  A
 11     453       7     276       6     139       9       3     145     111  A
 12     428       9     279       7     147      10       4     146     115  A
 13     403      10     270       6     133      11       4     152     100  A
 14     378      11     265       8     133      13       5     151      97  A
 15     353      13     267      10     135      15       6     146     103  A
 16     328      12     266      12     130      16       7     134     108  A
 17     303      12     268      13     130      16       6     130     113  A
 18     278      13     270      12     134      17       7     138     110  A
 19     253      14     263      10     134      16       7     148      99  A
 20     228      11     267       8     116      13       3     148      96  A
 21     203      12     273       7     118      14       3     153      98  A
 22     178      19     257       7     136      19       6     167      81  A
 23     153      21     238       7     133      21       7     174      60  A
 24     128      25     219       8     108      25       8     172      42  A
 25     103      29     209      11     105      29      10     174      32  A
```

Deployment Id: NWNG0207

Latitude: 63°06.297´N

Longitude: 006°04.916´W

Echo sounding depth: 1848 m

Bottom depth corr.: 1801m

Time of deployment: 05/07 -2002 0445UTC

Time of recovery: 14/06 - 2003 2050UTC

ADCP:

Instrument no.: RDI ADCP 1292

Instrument frequence: 75kHz

Height above bottom: 1173 m

Depth: 628m   (corr.)

Time of first data: 05/07 – 2002 0520UTC

Time of last data: 14/06 – 2003 2000UTC

Sample interval: 20 min

No. of ensembles: 24813

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 592m   (corr.)

No. of bins: 28

Aanderaa:

Instrument no.: RCM9 721

Height above bottom: 1116 m

Depth: 685m   (corr.)

Time of first data: 05/07 – 2002 0530UTC

Time of last data: 14/06 – 2003 1930UTC

Sample interval: 60 min

No. of records: 8271
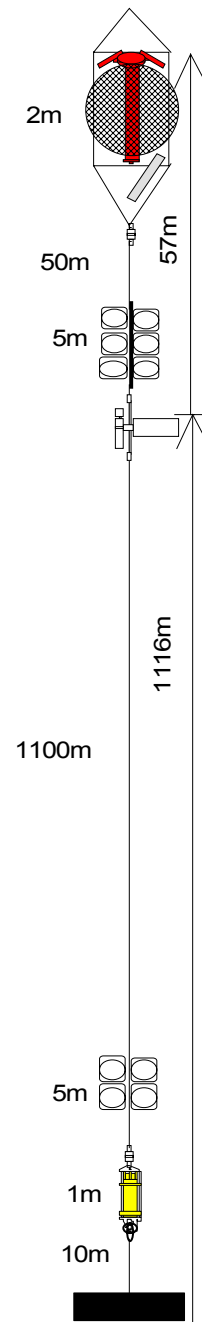
NWNG0207 ADCP 1292

Error statistics for deployment: NWNG0207 updated 2003/11/19

Surface distance not edited
Heading, pitch and roll not edited
Temperature edited by KMHL in Nov 2003
Velocity edited up to and including bin 22 by KMHL in Nov 2003
Intensity edited up to and including bin 28 by KMHL in Nov 2003

Total number of ensembles: 24813
Interval between ensembles: 20 min
Original number of bins: 28
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: 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
number 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	231	1	208	10	1	0	0	0	0	0	0	0
2	0	172	1	160	6	0	0	0	0	0	0	0	0
3	0	170	1	164	3	0	0	0	0	0	0	0	0
4	0	183	1	167	8	0	0	0	0	0	0	0	0
5	0	244	1	228	8	0	0	0	0	0	0	0	0
6	0	318	1	300	9	0	0	0	0	0	0	0	0
7	0	388	2	319	28	3	1	0	0	0	0	0	0
8	0	387	2	305	29	8	0	0	0	0	0	0	0
9	0	397	2	334	28	1	1	0	0	0	0	0	0
10	0	541	2	458	35	3	1	0	0	0	0	0	0
11	0	476	2	401	31	3	1	0	0	0	0	0	0
12	0	691	3	590	45	2	0	1	0	0	0	0	0
13	0	645	3	526	37	12	1	1	0	0	0	0	0
14	1	952	4	714	73	19	5	3	0	0	0	0	0
15	0	1023	4	678	92	12	4	3	5	2	1	0	0
16	0	2118	9	983	198	53	14	13	16	4	4	5	0
17	1	4081	16	1289	304	99	38	28	34	19	13	12	3
18	0	5613	23	1155	264	108	62	24	66	41	17	20	12
19	1	7282	29	1165	280	140	72	31	61	61	16	31	19
20	2	8047	32	831	237	85	51	27	70	57	25	34	24
21	3	11146	45	946	340	139	82	39	76	52	39	44	33
22	4	15068	61	819	292	134	68	43	65	23	13	24	35

NWNG0207 ADCP 1292

Deployment: NWNG0207 updated 2003/11/19
Instrument no.: 1292
Instrument freq.: 75
Latitude: 63 06.297 N
Longitude:06 04.916 W
Bottom depth: 1801
Instrument depth: 628
Center depth of first bin: 592
Bin length: 25
Number of bins: 22
Number of first ensemble: 125
Time of first ensemble: 2002 07 05 05 20
Number of last ensemble: 24937
Time of last ensemble: 2003 06 14 20 00
Time between ensembles (min.): 20
All directions have been corrected by adding: -12.0

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       592        1209         88        20       149       991
         2       567        1234         90        22       148       993
         3       542        1259         93        23       146       993
         4       517        1284         96        25       147       993
         5       492        1309        100        27       145       990
         6       467        1334        104        29       144       987
         7       442        1359        109        32       141       984
         8       417        1384        116        35       138       984
         9       392        1409        123        40       137       984
        10       367        1434        132        45       138       978
        11       342        1459        142        52       138       981
        12       317        1484        156        60       137       972
        13       292        1509        167        67       135       974
        14       267        1534        179        72       135       962
        15       242        1559        190        76       134       959
        16       217        1584        201        80       132       915
        17       192        1609        209        82       132       836
        18       167        1634        220        86       132       774
        19       142        1659        235        94       132       707
        20       117        1684        253       101       134       676
        21        92        1709        276       106       129       551
        22        67        1734        310       121       121       393
```

NWNG0207 ADCP 1292

Deployment: NWNG0207

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|  592| 353   22    1  .04    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  2|  567| 374   23    1  .04    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  3|  542| 400   29    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  4|  517| 423   37    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  5|  492| 447   47    1  .04    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  6|  467| 483   56    2    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  7|  442| 505   70    3    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  8|  417| 540  102    7  .04    0    0    0    0    0    0    0    0    0    0    0    0    0    0
  9|  392| 575  135   11  .36    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 10|  367| 604  174   23    1    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 11|  342| 644  222   45    3    0    0    0    0    0    0    0    0    0    0    0    0    0    0
 12|  317| 677  273   71    9  .24    0    0    0    0    0    0    0    0    0    0    0    0    0
 13|  292| 705  319  101   19    1    0    0    0    0    0    0    0    0    0    0    0    0    0
 14|  267| 722  351  131   34    4  .12    0    0    0    0    0    0    0    0    0    0    0    0
 15|  242| 746  387  160   49   10    1    0    0    0    0    0    0    0    0    0    0    0    0
 16|  217| 725  394  180   65   16    2    0    0    0    0    0    0    0    0    0    0    0    0
 17|  192| 671  375  179   77   26    6  .40    0    0    0    0    0    0    0    0    0    0    0
 18|  167| 629  366  184   87   36   12    2  .04    0    0    0    0    0    0    0    0    0    0
 19|  142| 585  358  193  100   49   19    5    1  .12    0    0    0    0    0    0    0    0    0
 20|  117| 572  372  214  119   61   28    9    2  .24    0    0    0    0    0    0    0    0    0
 21|   92| 484  335  205  115   63   30   11    3  .40    0    0    0    0    0    0    0    0    0
 22|   67| 363  273  176  104   59   30   12    4  .48    0    0    0    0    0    0    0    0    0
-------------------------------------------------------------------------------------------------
```

NWNG0207 ADCP 1292

Harmonic constants for constituent M2 for deployment NWNG0207.

```
=====================================================================================
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    592      60     293      28     264      65      13      23     289   A
 02    567      60     296      29     268      65      13      24     291   A
 03    542      60     297      31     269      66      13      26     291   A
 04    517      60     297      32     271      66      13      26     292   A
 05    492      57     300      33     277      65      11      29     294   A
 06    467      55     304      35     285      65      10      32     299   A
 07    442      53     306      36     289      64       9      34     300   A
 08    417      53     309      40     292      65       9      37     303   A
 09    392      50     314      44     297      66      10      41     307   A
 10    367      46     318      47     303      66       8      45     310   A
 11    342      45     323      51     307      67       9      48     314   A
 12    317      43     327      54     311      68       9      52     317   A
 13    292      42     332      59     314      71      11      55     320   A
 14    267      40     336      62     316      73      11      58     322   A
 15    242      39     340      65     318      75      13      60     323   A
 16    217      40     344      69     319      78      15      61     325   A
 17    192      39     350      72     319      80      18      63     326   A
 18    167      41       1      75     321      82      24      65     329   A
 19    142      44      15      83     322      88      33      69     330   A
 20    117      48      20      93     322      97      39      71     330   A
 21     92      55      28      99     324     102      48      73     332   A
 22     67      73      31     113     324     118      64      69     336   A
```

Harmonic constants for constituent S2 for deployment NWNG0207.

```
=====================================================================================
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    592      21     343      13     307      24       7      29     334   A
 02    567      21     348      14     315      25       7      32     338   A
 03    542      19     351      15     324      24       5      37     341   A
 04    517      18     354      16     333      23       4      41     345   A
 05    492      17     354      14     337      22       3      40     347   A
 06    467      16     355      14     338      22       3      41     348   A
 07    442      16     357      15     338      22       4      44     348   A
 08    417      16     358      16     338      23       4      46     348   A
 09    392      17       7      19     337      25       6      47     351   A
 10    367      17      10      20     342      26       6      51     353   A
 11    342      18       5      20     340      26       6      48     351   A
 12    317      17       3      19     342      25       4      48     351   A
 13    292      14      13      21     352      25       4      58     358   A
 14    267      12      20      24     357      26       4      63       2   A
 15    242      12      31      25       2      27       5      66       7   A
 16    217      13      39      27     359      29       8      69       5   A
 17    192      13      44      28     357      29       9      70       3   A
 18    167      14      47      26     356      28      10      69       4   A
 19    142      14      46      27     358      29      10      68       6   A
 20    117      17      32      28     353      32      10      62       2   A
 21     92      19      17      25     349      31       7      54     359   A
 22     67      20      14      20     353      28       5      46       4   A
```

NWNG0207 ADCP 1292

Harmonic constants for constituent N2 for deployment NWNG0207.

```
========================================================================================
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    592     12      297     11      261      15       5      41     282   A
 02    567     12      299     11      263      16       5      42     283   A
 03    542     13      302     12      261      17       6      43     283   A
 04    517     13      304     12      264      16       6      42     286   A
 05    492     14      304     12      261      17       7      38     287   A
 06    467     16      303     13      256      19       8      37     286   A
 07    442     17      298     13      254      20       8      37     282   A
 08    417     17      303     14      254      20       9      38     284   A
 09    392     17      305     15      257      20       9      40     285   A
 10    367     16      312     16      259      20      10      44     286   A
 11    342     16      323     16      273      20      10      44     298   A
 12    317     15      329     17      281      21       9      50     301   A
 13    292     15      327     18      281      21       9      52     299   A
 14    267     13      329     19      284      21       8      58     297   A
 15    242     13      329     19      285      21       8      58     298   A
 16    217     13      332     20      289      22       8      60     301   A
 17    192     14      340     22      291      25      10      62     303   A
 18    167     18      348     25      291      27      14      60     306   A
 19    142     21      347     29      284      31      18      62     301   A
 20    117     25      336     32      279      36      18      57     297   A
 21     92     26      323     33      270      38      18      57     288   A
 22     67     33      307     37      265      47      18      49     283   A
```

Harmonic constants for constituent O1 for deployment NWNG0207.

```
========================================================================================
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    592      4       61      0      249       4       0     176     241   A
 02    567      4       56      1      247       4       0     171     236   A
 03    542      5       49      1      254       5       0     168     230   A
 04    517      5       52      2      275       5       1     167     235   A
 05    492      5       51      2      282       6       1     168     234   A
 06    467      6       59      1      299       6       1     173     240   A
 07    442      6       58      1      287       6       0     175     239   A
 08    417      5       55      1      315       5       1     177     236   A
 09    392      5       43      1      312       5       1     180     223   A
 10    367      6       35      1      275       6       1     174     216   A
 11    342      6       37      2      289       6       2     174     219   A
 12    317      6       46      2      307       6       2     177     227   A
 13    292      6       44      2      278       6       2     166     228   A
 14    267      7       40      4      293       7       3     169     225   A
 15    242      9       47      4      296       9       3     171     230   A
 16    217      8       38      4      307       8       4     179     219   A
 17    192      7       53      2      289       7       2     168     236   A
 18    167      8       51      4      271       9       3     156     239   A
 19    142      5       61      3      289       6       2     158     248   A
 20    117      5       26      4      280       5       4     139     239   A
 21     92      5       16      5      250       6       3     140     219   A
 22     67      8      360     12      222      14       5     119     212   A
```

NWNG0207 ADCP 1292

Harmonic constants for constituent K1 for deployment NWNG0207.

```
========================================================================
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     592       4     282       2     144       4       1     159     108   A
 02     567       5     284       3     152       5       2     151     117   A
 03     542       4     286       3     158       5       2     153     118   A
 04     517       5     289       2     164       5       2     161     116   A
 05     492       5     293       2     160       5       1     167     116   A
 06     467       4     287       2     124       4       0     158     109   A
 07     442       5     280       2     152       5       2     161     107   A
 08     417       6     280       3     180       6       3     173     103   A
 09     392       6     279       2     178       6       2     175     100   A
 10     367       6     276       4     168       7       4     165     104   A
 11     342       6     272       6     155       7       4     135     124   A
 12     317       5     274       7     136       8       3     122     123   A
 13     292       6     289       5     138       7       2     142     120   A
 14     267       7     287       3     149       7       2     158     114   A
 15     242       8     292       2     164       8       2     170     114   A
 16     217       7     292       2     168       7       2     170     114   A
 17     192       7     270       2     153       7       2     171      92   A
 18     167       5     260       4     148       6       4     145     105   A
 19     142       5     249       8     151       8       5      97     147   A
 20     117       7     231      11     144      11       7      87     146   A
 21      92       9     208      10     178      13       3      49     191   A
 22      67       6     218       8     175      10       4      56     189   A
```

NWNG0207 Aanderaa 721

```
Deployment: NWNG0207         analyzed from beginning to end
Instrument no.:   721
Instrument type: Aanderaa
Latitude: 63 06.297 N
Longitude:06 04.916 W
Bottom depth: 1801
Instrument depth:  685
Number of records: 8271
Time of first record: 2002 07 05 05 30
Time of last record : 2003 06 14 19 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        8271                0
Column  8  : Speed       8271                0
Column  9  : Direct      8271                0


Comments
--------



Residual current:  15 mm/sec towards: 145 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      7     246      6     173      8       5      24     229   A
MSF   .00282193      5      62      4     315      5       4     150     265   A
Q1    .03721850      3      24      0     288      3       0     179     204   A
O1    .03873065      4      55      1     283      4       0     174     236   A
NO1   .04026859      0     140      0     115      0       0      19     137   A
P1    .04155259      1     293      0     183      1       0     167     119   A
K1    .04178075      3     288      1     159      3       1     161     114   A
N2    .07899925     11     276      6     242     12       3      28     268   A
M2    .08051140     53     292     20     252     55      12      17     288   A
L2    .08202355      2     340      3     287      3       1      66     297   A
S2    .08333334     19     329      7     288     20       5      16     326   A
K2    .08356149      5     328      2     282      5       1      19     322   A
MK3   .12229210      0      47      0     112      0       0      68     100   C
M4    .16102280      0      58      0     351      0       0      28      40   A
MS4   .16384470      0     248      0      25      1       0     155      59   C


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| 28   28   31   43   39   41   41   44   35   29   23   24 | 406  406
  50 -  100| 20   30   55   67   49   37   42   54   44   26   16   11 | 452  858
 100 -  150|  3    7   21   23   11    4    7   15   18    6    2    1 | 118  977
 150 -  200|  0    2    3    6    1    1  .12    2    3    1  .24    0 |  19  996
 200 -  300|  0  .24    1    1  .36  .24    0    0  .24  .12    0    0 |   3  999
 300 -  400|  0    0    0    1  .12    0    0    0    0    0    0    0 |   1 1000
-----------|---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----|---- ----
Total  (ppt)| 51   68  111  141  100   82   90  115  100   63   42   36|
Rel.flux (ppt)| 41  66  129  166   99   71   80  116  112   60   34   25|
-----------|---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----|
Avg.spd (mm/s)| 52  63   75   76   63   56   57   65   71   61   52   45|
Max.spd (mm/s)|147 220  223  331  323  229  185  182  202  208  158  144|
-----------|---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----|
```

NWNG0207
Instrument: Aanderaa 721
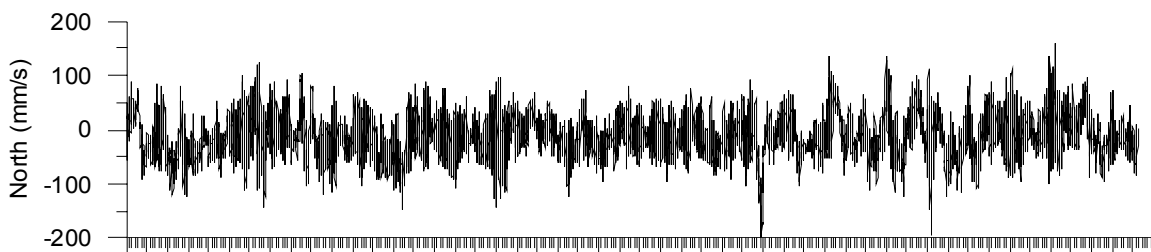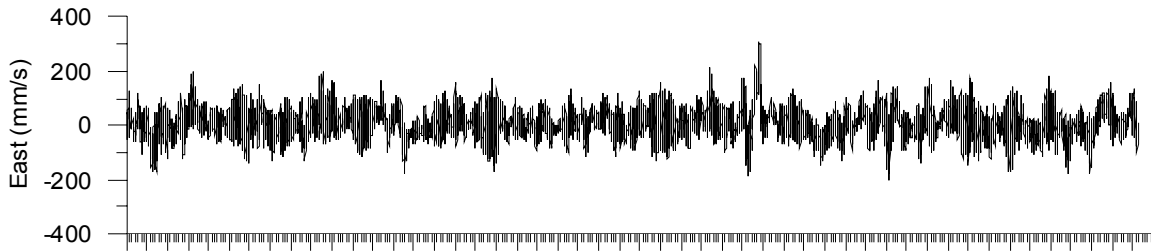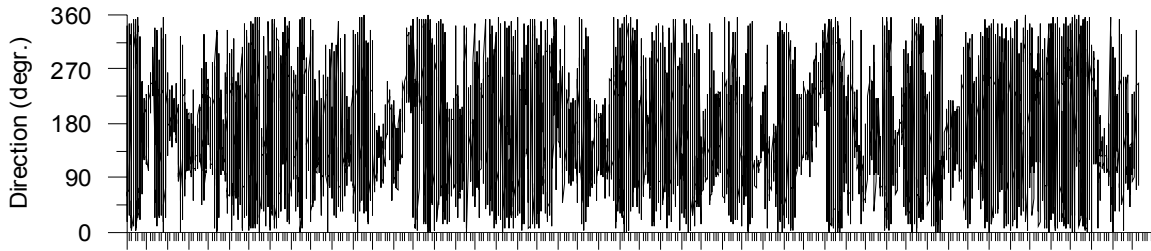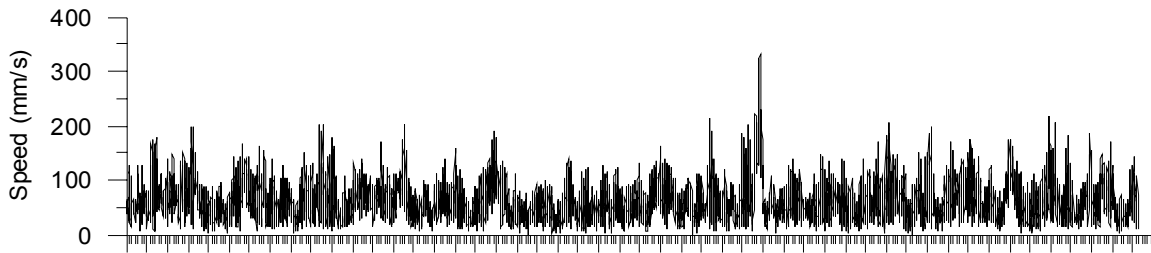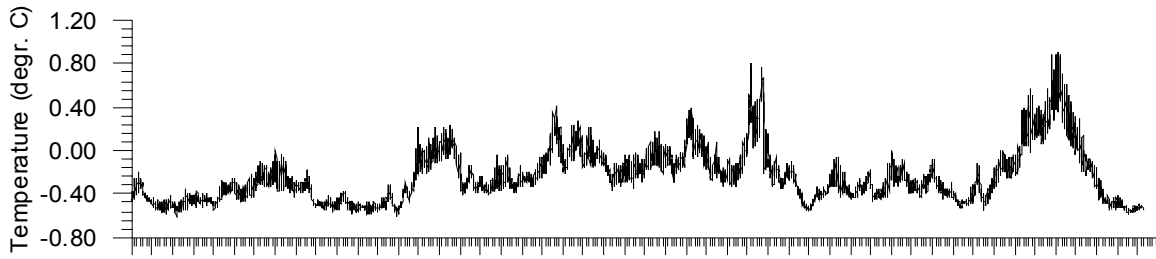
Progressive vector diagram
NWNG0207: Aanderaa 721

Start

N

50km
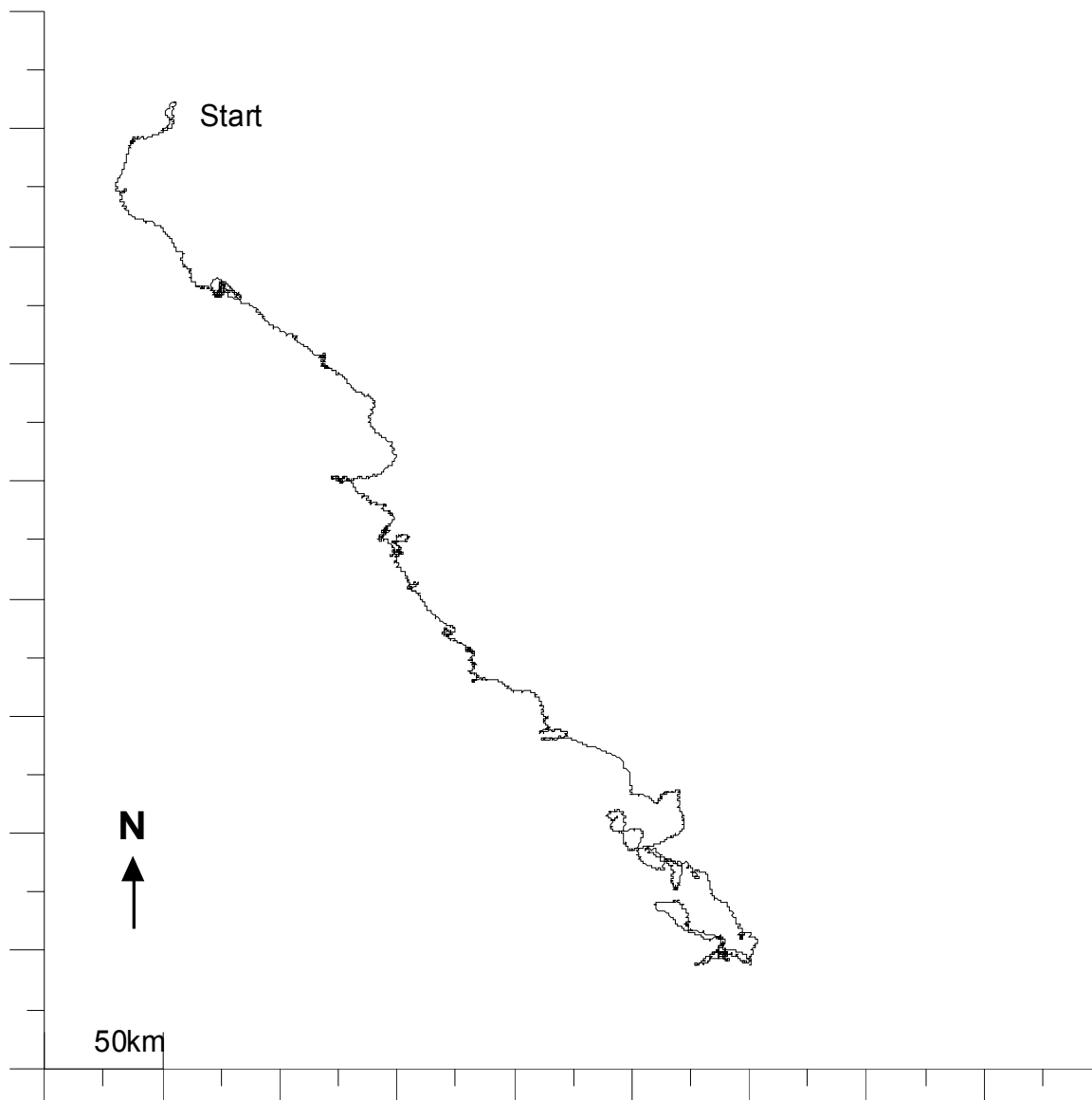
Deployment Id: NWSB0207

Latitude: 60°47.100´N

Longitude: 005°18.800´W

Echo sounding depth: 788m

Bottom depth corr.: 776m

Time of deployment: 08/07 -2002 0928UTC

Time of recovery: 23/08 - 2002 xxxxUTC **Surfaced**

ADCP:

Instrument no.: RDI ADCP 1644

Instrument frequency: 75kHz

Height above bottom: 108m

Depth: 668m (corr.)

Time of first data: 08/07 - 2002 1000UTC

Time of last data: 23/08 - 2002 0100UTC

Sample interval: 20 min

No. of ensembles: 3286

Pings per ens.: 1

Binlength: 25m

Depth of first bin: 632 (corr.)

No. of bins: 28

2m

1m

108m

100m

5m
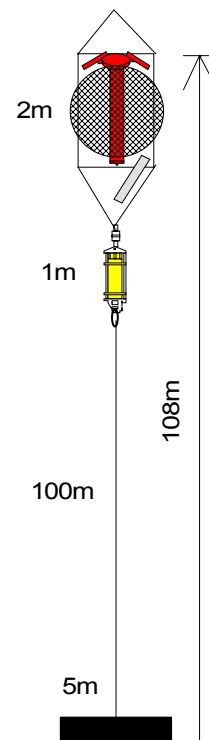
NWSB0207 ADCP 1644

Error statistics for deployment: NWSB0207 updated 2003/11/19

Surface distance not edited
Heading, pitch and roll not edited
Temperature edited by MCN in Dec 2002
Velocity edited up to and including bin 23 by MCN in Dec 2002
Intensity edited up to and including bin 28 by MCN in Dec 2002

Total number of ensembles: 3286
Interval between ensembles: 20 min
Original number of bins: 28
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
number 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	20	1	16	2	0	0	0	0	0	0	0	0
2	0	12	0	10	1	0	0	0	0	0	0	0	0
3	0	9	0	9	0	0	0	0	0	0	0	0	0
4	0	5	0	5	0	0	0	0	0	0	0	0	0
5	0	10	0	10	0	0	0	0	0	0	0	0	0
6	0	20	1	18	1	0	0	0	0	0	0	0	0
7	1	24	1	22	1	0	0	0	0	0	0	0	0
8	0	26	1	26	0	0	0	0	0	0	0	0	0
9	0	30	1	22	1	2	0	0	0	0	0	0	0
10	0	29	1	18	4	1	0	0	0	0	0	0	0
11	0	20	1	18	1	0	0	0	0	0	0	0	0
12	0	17	1	17	0	0	0	0	0	0	0	0	0
13	0	20	1	18	1	0	0	0	0	0	0	0	0
14	0	22	1	22	0	0	0	0	0	0	0	0	0
15	0	52	2	41	4	1	0	0	0	0	0	0	0
16	0	97	3	73	6	4	0	0	0	0	0	0	0
17	0	161	5	80	8	5	1	3	2	1	0	0	0
18	0	287	9	110	15	4	4	1	3	5	1	0	0
19	0	468	14	98	26	9	7	7	8	8	1	1	0
20	0	735	22	94	35	7	12	6	14	13	3	2	0
21	0	964	29	89	35	16	8	8	14	21	4	2	1
22	0	1028	31	80	23	5	8	6	16	21	6	3	2
23	0	1171	36	81	26	7	10	5	24	16	8	2	4

NWSB0207 ADCP 1644

```
Deployment: NWSB0207 updated 2003/11/19
Instrument no.:  1644
Instrument freq.:  75
Latitude: 60 47.100 N
Longitude:05 18.800 W
Bottom depth:  776
Instrument depth:  668
Center depth of first bin:  632
Bin length:  25
Number of bins:  23
Number of first ensemble:    355
Time of first ensemble: 2002 07 08 10 00
Number of last ensemble:    3640
Time of last ensemble:  2002 08 23 01 00
Time between ensembles (min.):    20
All directions have been corrected by adding: -11.0
```

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       632       144       211         6       155       994
        2       607       169       208         6       115       996
        3       582       194       207         8        86       997
        4       557       219       201        10        68       998
        5       532       244       196        10        52       997
        6       507       269       192        11        12       994
        7       482       294       189        17       344       993
        8       457       319       182        19       331       992
        9       432       344       180        22       320       991
       10       407       369       187        25       325       991
       11       382       394       191        30       326       994
       12       357       419       195        30       337       995
       13       332       444       206        28       349       994
       14       307       469       216        27       354       993
       15       282       494       229        32         2       984
       16       257       519       240        34         0       970
       17       232       544       254        37         4       951
       18       207       569       272        42        13       913
       19       182       594       294        51        20       858
       20       157       619       314        65        27       776
       21       132       644       332        75        29       707
       22       107       669       340        87        35       687
       23        82       694       342        97        38       644
```

NWSB0207 ADCP 1644

Deployment: NWSB0207

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|  632| 847  508  197   49    5    1    0    0    0    0    0    0    0    0    0    0    0    0
  2|  607| 848  486  188   50    4    0    0    0    0    0    0    0    0    0    0    0    0    0
  3|  582| 854  491  187   41    2    0    0    0    0    0    0    0    0    0    0    0    0    0
  4|  557| 840  459  179   27    2    0    0    0    0    0    0    0    0    0    0    0    0    0
  5|  532| 817  448  166   35    2    0    0    0    0    0    0    0    0    0    0    0    0    0
  6|  507| 796  432  152   44    6    0    0    0    0    0    0    0    0    0    0    0    0    0
  7|  482| 795  402  148   38    5    0    0    0    0    0    0    0    0    0    0    0    0    0
  8|  457| 771  379  133   25    3    0    0    0    0    0    0    0    0    0    0    0    0    0
  9|  432| 769  379  123   21  .30    0    0    0    0    0    0    0    0    0    0    0    0    0
 10|  407| 774  418  145   25    1    0    0    0    0    0    0    0    0    0    0    0    0    0
 11|  382| 785  419  159   31    2    0    0    0    0    0    0    0    0    0    0    0    0    0
 12|  357| 796  425  180   47    7  .30    0    0    0    0    0    0    0    0    0    0    0    0
 13|  332| 809  456  200   67   17    5    1    0    0    0    0    0    0    0    0    0    0    0
 14|  307| 819  479  226   91   30    8    1    0    0    0    0    0    0    0    0    0    0    0
 15|  282| 841  513  258  106   40    8    3    0    0    0    0    0    0    0    0    0    0    0
 16|  257| 842  535  288  121   50   14    5    0    0    0    0    0    0    0    0    0    0    0
 17|  232| 836  554  312  149   59   24    6    3    0    0    0    0    0    0    0    0    0    0
 18|  207| 813  567  341  177   87   34   11    4  .30    0    0    0    0    0    0    0    0    0
 19|  182| 774  578  358  201  107   47   23    8    1    0    0    0    0    0    0    0    0    0
 20|  157| 709  549  363  218  115   57   27   12    4    1    0    0    0    0    0    0    0    0
 21|  132| 655  526  368  225  121   59   27   12    4  .30    0    0    0    0    0    0    0    0
 22|  107| 642  520  368  230  122   64   30   12    5    1    1    0    0    0    0    0    0    0
 23|   82| 606  500  360  221  112   51   22    9    2    0    0    0    0    0    0    0    0    0
--------------------------------------------------------------------------------------------
```

NWSB0207 ADCP 1644

Harmonic constants for constituent M2 for deployment NWSB0207.

```
================================================================================
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    632     241     239      84     185     246      67      13     235   A
 02    607     241     241      87     193     249      63      15     237   A
 03    582     239     243      92     200     249      59      17     239   A
 04    557     230     245      94     210     243      52      19     241   A
 05    532     221     248      99     219     238      45      22     243   A
 06    507     212     251     110     225     235      43      26     246   A
 07    482     203     252     115     230     230      37      29     247   A
 08    457     192     251     115     235     222      28      30     247   A
 09    432     177     250     115     243     211      12      33     248   A
 10    407     162     254     123     252     203       3      37     253   A
 11    382     146     257     131     258     196       1      42     258   C
 12    357     135     261     139     262     193       2      46     262   C
 13    332     124     267     152     265     196       4      51     266   A
 14    307     120     272     161     268     201       7      53     269   A
 15    282     122     275     170     268     209      12      54     270   A
 16    257     126     278     182     268     221      17      55     271   A
 17    232     130     280     194     268     233      22      56     272   A
 18    207     141     282     209     267     250      32      56     271   A
 19    182     152     282     228     265     271      38      57     270   A
 20    157     158     286     239     264     282      50      57     271   A
 21    132     172     291     254     266     300      62      57     273   A
 22    107     184     292     263     263     313      74      56     272   A
 23     82     195     293     254     260     308      87      54     272   A
```

Harmonic constants for constituent S2 for deployment NWSB0207.

```
================================================================================
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    632      74     284      28     262      78      10      20     281   A
 02    607      69     283      27     267      74       7      20     281   A
 03    582      70     284      24     270      74       5      18     283   A
 04    557      72     287      28     273      77       6      21     285   A
 05    532      70     289      33     275      77       7      25     287   A
 06    507      69     292      39     273      78      12      29     288   A
 07    482      67     294      38     276      76      10      29     289   A
 08    457      63     294      43     287      76       4      34     292   A
 09    432      55     296      47     296      72       0      41     296   A
 10    407      48     302      51     303      70       1      46     302   C
 11    382      54     314      57     302      78       8      47     308   A
 12    357      62     314      60     294      84      15      44     304   A
 13    332      65     309      61     286      87      17      43     298   A
 14    307      62     301      57     285      83      11      42     293   A
 15    282      59     297      54     289      80       5      42     294   A
 16    257      58     298      52     290      78       5      42     294   A
 17    232      57     300      54     291      79       6      43     296   A
 18    207      61     308      61     293      85      12      45     300   A
 19    182      59     321      60     290      81      23      45     305   A
 20    157      63     321      63     287      85      26      45     304   A
 21    132      58     324      61     270      75      37      48     295   A
 22    107      44     334      59     275      66      34      60     292   A
 23     82      49     321      51     281      66      24      46     301   A
```

NWSB0207 ADCP 1644

Harmonic constants for constituent N2 for deployment NWSB0207.

```
================================================================================
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    632      62     228      34     152      63      32      10     223  A
 02    607      62     231      37     157      63      35      14     223  A
 03    582      61     233      36     168      63      31      19     223  A
 04    557      58     238      34     178      62      28      21     228  A
 05    532      53     242      36     186      58      27      27     228  A
 06    507      47     247      31     201      52      20      29     235  A
 07    482      44     247      25     204      48      15      26     238  A
 08    457      36     244      16     212      39       8      22     239  A
 09    432      31     246      14     224      34       5      23     242  A
 10    407      29     247      16     225      33       5      28     242  A
 11    382      26     240      16     229      30       3      32     237  A
 12    357      17     242      15     275      21       6      39     255  C
 13    332       9     253      21     289      23       5      69     284  C
 14    307      12     284      27     276      29       1      67     277  A
 15    282      15     295      32     268      35       6      67     272  A
 16    257      14     291      32     266      35       6      67     270  A
 17    232      12     286      29     271      31       3      69     273  A
 18    207      10     300      23     272      25       4      69     275  A
 19    182      15     305      21     285      26       4      55     292  A
 20    157      17     285      27     280      32       1      58     281  A
 21    132      34     259      29     261      45       1      41     260  C
 22    107      22     249      37     245      43       1      59     246  A
 23     82      31     292      46     246      52      20      60     259  A
```

Harmonic constants for constituent O1 for deployment NWSB0207.

```
================================================================================
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    632      32     336      18      22      34      12      24     345  C
 02    607      32     333      20      25      35      14      26     344  C
 03    582      32     331      20      25      34      15      26     343  C
 04    557      31     334      22      26      34      15      30     348  C
 05    532      31     334      22      24      34      15      31     348  C
 06    507      27     331      21      19      31      14      36     348  C
 07    482      26     329      18      18      29      12      29     341  C
 08    457      26     327      18      16      29      12      30     341  C
 09    432      25     323      17      14      27      12      29     337  C
 10    407      24     324      17      24      26      13      27     339  C
 11    382      24     335      18      21      28      11      33     349  C
 12    357      20     334      15      32      22      11      29     349  C
 13    332      16     326      13      44      17      12      22     343  C
 14    307      20     327      16      29      22      13      32     347  C
 15    282      22     324      11      27      23      10      16     331  C
 16    257      21     327       9      23      21       7      16     333  C
 17    232      19     321       8       0      20       5      19     325  C
 18    207      20     315       7     360      20       5      16     319  C
 19    182      25     308      10     305      26       0      22     308  A
 20    157      26     307      13     327      28       4      26     310  C
 21    132      30     300       7     327      31       3      12     301  C
 22    107      23     310      18      68      26      14     149     111  C
 23     82      11     345      24      85      24      11      96      88  C
```

NWSB0207 ADCP 1644

Harmonic constants for constituent K1 for deployment NWSB0207.

```
================================================================================
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     632      18     207       6     249      19       4      14     210  C
 02     607      19     203       8     252      20       6      17     209  C
 03     582      18     208       9     249      19       6      24     215  C
 04     557      17     214      10     260      19       7      24     222  C
 05     532      17     205      10     265      18       8      22     216  C
 06     507      17     209       9     260      18       7      21     217  C
 07     482      16     213       9     255      17       5      25     221  C
 08     457      15     207       8     261      16       6      20     214  C
 09     432      14     198       8     274      14       8      12     204  C
 10     407      14     193       6     284      14       6     179      12  C
 11     382      13     189       4     276      13       4       1     190  C
 12     357      13     193       6     287      13       6     178      12  C
 13     332      14     184       6     311      14       4     164     359  C
 14     307      18     193       4     270      18       4       3     193  C
 15     282      20     199       4     276      20       4       3     200  C
 16     257      19     208       5     291      19       5       2     208  C
 17     232      20     207       6     311      20       5     176      26  C
 18     207      18     192       8     328      19       5     162       7  C
 19     182      20     182       9     330      22       5     158     358  C
 20     157      12     176      14      37      17       6     130      20  A
 21     132      22     179       8      79      22       8     176       0  A
 22     107      17     149       2      83      17       2       3     148  A
 23      82      36     110      17       3      36      16     170     294  A
```

Deployment Id: NWSB0209

Latitude: 60°47.094´N

Longitude: 005°19.258´W

Echo sounding depth: 784m

Bottom depth corr.: 772m

Time of deployment: 08/09 -2002 2202UTC

Time of recovery: 17/06 - 2003 0645UTC

ADCP:

Instrument no.: RDI ADCP 1644

Instrument frequency: 75kHz

Height above bottom: 108m

Depth: 664m (corr.)

Time of first data: 08/09 - 2002 2240UTC

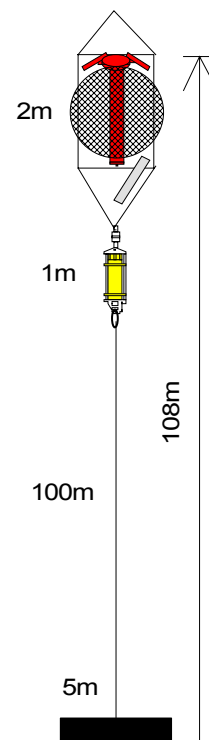**Time of last data:** 17/06 - 2003 0620UTC

Sample interval: 20 min

No. of ensembles: 20256

Pings per ens.:   1

Binlength: 25m

Depth of first bin: 628 (corr.)

No. of bins: 28

2m

1m

108m

100m

5m

NWSB0209 ADCP 1644

Error statistics for deployment: NWSB0209 updated 2003/11/19

Surface distance not edited
Heading, pitch and roll not edited
Temperature edited by MCN in Nov 2003
Velocity edited up to and including bin 21 by MCN in Nov 2003
Intensity edited up to and including bin 28 by MCN in Nov 2003

Total number of ensembles: 20256
Interval between ensembles: 20 min
Original number of bins: 28
Number of acceptable velocity bins: 21
Number of acceptable intensity bins: 21

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: 1

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
number 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	2	54	0	52	1	0	0	0	0	0	0	0	0
2	1	35	0	33	1	0	0	0	0	0	0	0	0
3	0	34	0	32	1	0	0	0	0	0	0	0	0
4	0	24	0	24	0	0	0	0	0	0	0	0	0
5	0	45	0	42	0	1	0	0	0	0	0	0	0
6	0	46	0	46	0	0	0	0	0	0	0	0	0
7	0	69	0	63	3	0	0	0	0	0	0	0	0
8	0	77	0	71	3	0	0	0	0	0	0	0	0
9	0	81	0	73	4	0	0	0	0	0	0	0	0
10	0	91	0	82	1	0	0	0	1	0	0	0	0
11	0	60	0	58	1	0	0	0	0	0	0	0	0
12	0	88	0	82	3	0	0	0	0	0	0	0	0
13	0	121	1	90	6	0	1	0	2	0	0	0	0
14	0	351	2	146	9	7	1	0	5	6	1	0	0
15	0	798	4	245	35	9	7	7	17	12	4	0	0
16	0	1439	7	352	64	14	15	17	36	19	6	2	0
17	0	2468	12	528	121	54	30	14	53	37	6	6	1
18	0	4159	21	552	150	78	32	23	66	40	38	14	3
19	0	6288	31	603	174	72	48	36	83	57	46	49	4
20	0	8475	42	585	183	90	58	49	95	88	39	75	12
21	0	10800	53	487	183	99	60	45	98	89	50	81	30

NWSB0209 ADCP 1644

```
Deployment: NWSB0209 updated 2003/11/19
Instrument no.:  1644
Instrument freq.:  75
Latitude: 60 47.094 N
Longitude:05 19.258 W
Bottom depth:  772
Instrument depth:  664
Center depth of first bin:  628
Bin length:  25
Number of bins:  21
Number of first ensemble:    318
Time of first ensemble: 2002 09 08 22 40
Number of last ensemble:   20573
Time of last ensemble:  2003 06 17 06 20
Time between ensembles (min.):    20
All directions have been corrected by adding: -11.0
```

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        628        144        220        47        190        997
          2        603        169        217        46        190        998
          3        578        194        213        43        189        998
          4        553        219        208        40        188        999
          5        528        244        203        36        187        998
          6        503        269        198        30        184        998
          7        478        294        192        26        180        997
          8        453        319        190        23        171        996
          9        428        344        194        21        159        996
         10        403        369        199        18        143        996
         11        378        394        205        17        120        997
         12        353        419        212        18        103        996
         13        328        444        222        18         98        994
         14        303        469        230        18         97        983
         15        278        494        237        18         98        961
         16        253        519        240        17        108        929
         17        228        544        244        19        114        878
         18        203        569        247        21        122        795
         19        178        594        256        21        112        690
         20        153        619        262        24        102        582
         21        128        644        261        28        112        467
```

NWSB0209 ADCP 1644

Deployment: NWSB0209

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|  628| 857  529  230   67   15    3  .30    0    0    0    0    0    0    0    0    0    0    0
  2|  603| 858  519  219   63   14    3  .25    0    0    0    0    0    0    0    0    0    0    0
  3|  578| 850  501  207   59   12    3  .20    0    0    0    0    0    0    0    0    0    0    0
  4|  553| 835  481  192   57   12    2  .20    0    0    0    0    0    0    0    0    0    0    0
  5|  528| 821  459  182   52   11    2  .15    0    0    0    0    0    0    0    0    0    0    0
  6|  503| 808  439  168   49    9    2  .15    0    0    0    0    0    0    0    0    0    0    0
  7|  478| 794  420  160   41    8    1  .20    0    0    0    0    0    0    0    0    0    0    0
  8|  453| 785  409  160   41    7    1  .05    0    0    0    0    0    0    0    0    0    0    0
  9|  428| 782  422  175   48   10    1    0    0    0    0    0    0    0    0    0    0    0    0
 10|  403| 795  436  186   61   14    2  .30    0    0    0    0    0    0    0    0    0    0    0
 11|  378| 807  449  199   71   21    4  .49    0    0    0    0    0    0    0    0    0    0    0
 12|  353| 812  470  217   84   28    8    2    0    0    0    0    0    0    0    0    0    0    0
 13|  328| 828  493  241  101   36   12    2  .39  .05    0    0    0    0    0    0    0    0    0
 14|  303| 824  507  260  116   46   15    5    2  .20  .05    0    0    0    0    0    0    0    0
 15|  278| 808  506  268  133   53   19    7    2  .30  .10    0    0    0    0    0    0    0    0
 16|  253| 791  499  267  130   57   20    8    3    1    0    0    0    0    0    0    0    0    0
 17|  228| 751  483  260  127   57   21    8    3    1  .05    0    0    0    0    0    0    0    0
 18|  203| 684  443  241  118   53   19    6    3    1  .05    0    0    0    0    0    0    0    0
 19|  178| 602  402  227  115   53   20    5    1  .30    0    0    0    0    0    0    0    0    0
 20|  153| 510  347  204  104   45   18    5    1  .25  .10    0    0    0    0    0    0    0    0
 21|  128| 411  284  165   80   32   12    3    1  .15  .05    0    0    0    0    0    0    0    0
-----------------------------------------------------------------------------------------
```

NWSB0209 ADCP 1644

Harmonic constants for constituent M2 for deployment NWSB0209.

```
================================================================================
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     628     238     248     120     202     254      81     22     241    A
02     603     235     249     121     206     253      77     23     242    A
03     578     228     250     121     210     248      72     24     243    A
04     553     220     251     120     214     242      65     26     244    A
05     528     213     252     120     219     237      58     27     245    A
06     503     205     253     119     224     231      51     29     246    A
07     478     192     254     118     230     222      41     31     247    A
08     453     177     255     118     238     211      29     33     250    A
09     428     164     258     123     246     204      20     37     253    A
10     403     152     260     127     252     198      13     40     257    A
11     378     142     261     131     256     193       8     43     259    A
12     353     134     263     138     260     192       6     46     261    A
13     328     130     265     144     261     193       7     48     263    A
14     303     129     268     150     262     198      10     49     264    A
15     278     125     270     155     262     198      14     51     265    A
16     253     124     273     158     262     200      20     52     266    A
17     228     125     275     164     262     205      22     53     267    A
18     203     123     278     167     264     206      24     54     269    A
19     178     127     278     173     264     213      26     54     269    A
20     153     125     279     177     266     216      24     55     270    A
21     128     122     282     175     266     211      28     56     271    A
```

Harmonic constants for constituent S2 for deployment NWSB0209.

```
================================================================================
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     628      84     283      40     241      90      25     21     277    A
02     603      83     283      39     243      89      24     22     277    A
03     578      82     283      39     246      88      22     22     277    A
04     553      81     284      41     248      88      22     24     278    A
05     528      80     285      42     250      88      22     25     279    A
06     503      78     285      41     254      87      19     26     279    A
07     478      71     287      41     263      81      14     28     282    A
08     453      63     289      41     276      75       8     32     285    A
09     428      59     293      46     284      74       6     38     290    A
10     403      54     298      51     291      74       4     43     295    A
11     378      49     302      53     296      72       3     47     299    A
12     353      48     298      57     297      75       1     50     297    A
13     328      47     297      58     297      74       1     51     297    C
14     303      45     300      57     299      73       1     52     299    A
15     278      46     305      61     298      77       5     53     300    A
16     253      46     311      63     300      77       7     54     304    A
17     228      47     316      66     298      80      12     55     304    A
18     203      53     317      72     296      88      16     54     303    A
19     178      57     319      79     300      96      16     55     306    A
20     153      59     319      78     302      97      15     53     308    A
21     128      54     321      68     299      85      16     52     307    A
```

NWSB0209 ADCP 1644

Harmonic constants for constituent N2 for deployment NWSB0209.

```
=======================================================================================
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     628      68      218      35      143      69      33      10     213    A
02     603      68      220      35      148      69      33      12     214    A
03     578      66      220      36      151      67      32      14     213    A
04     553      62      221      32      157      64      28      16     214    A
05     528      56      221      27      165      58      22      18     214    A
06     503      46      222      21      184      49      12      21     216    A
07     478      36      227      21      212      41       5      29     224    A
08     453      30      234      24      236      38       1      39     235    C
09     428      26      241      30      247      40       2      50     244    C
10     403      24      256      37      250      44       2      57     252    A
11     378      25      260      37      248      45       4      56     252    A
12     353      27      259      38      241      46       7      56     247    A
13     328      29      261      42      238      50       9      56     246    A
14     303      29      269      43      240      50      12      57     248    A
15     278      28      272      44      243      50      12      59     251    A
16     253      25      282      46      244      50      14      64     252    A
17     228      25      286      45      245      49      15      65     253    A
18     203      25      276      44      248      50      10      63     254    A
19     178      18      273      40      246      43       7      68     250    A
20     153      12      284      36      244      37       8      75     247    A
21     128      13      258      34      246      36       3      69     248    A
```

Harmonic constants for constituent O1 for deployment NWSB0209.

```
=======================================================================================
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     628      29      345      14       33      30      10      20     352    C
02     603      29      345      14       31      30       9      20     352    C
03     578      28      345      14       31      30       9      21     351    C
04     553      28      344      14       34      30      10      20     352    C
05     528      28      341      12       31      29       9      18     347    C
06     503      27      341      12       31      28       9      19     348    C
07     478      25      343      13       35      27      10      21     351    C
08     453      24      344      12       42      25      10      17     351    C
09     428      24      344      12       34      26       9      20     351    C
10     403      24      345      11       27      26       7      20     351    C
11     378      23      341       9       21      24       6      18     345    C
12     353      22      331       5       22      22       4       9     333    C
13     328      20      330       5       40      20       4       5     331    C
14     303      18      335       7       52      18       7       6     337    C
15     278      17      334       5       56      17       5       3     335    C
16     253      16      338       4       77      16       4     178     157    C
17     228      15      334       5       85      15       5     171     151    C
18     203      13      329       6      107      14       4     158     143    C
19     178      12      352      10       82      12      10     179     171    C
20     153      14      354       7      118      15       6     161     167    C
21     128      16      355       4      149      17       2     168     174    C
```

NWSB0209 ADCP 1644

Harmonic constants for constituent K1 for deployment NWSB0209.

```
=====================================================================================
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    628    19      208    5       258    19      4       10     210    C
02    603    19      207    5       260    19      4       9      209    C
03    578    18      208    5       268    18      5       9      210    C
04    553    17      206    6       267    17      5       10     209    C
05    528    16      204    5       266    16      4       9      206    C
06    503    15      200    4       276    15      4       4      201    C
07    478    15      200    6       268    16      5       9      203    C
08    453    15      200    6       256    15      5       16     206    C
09    428    14      198    5       248    14      4       15     203    C
10    403    13      194    6       260    13      5       12     198    C
11    378    12      176    5       255    12      5       5      178    C
12    353    13      161    7       220    13      6       19     170    C
13    328    14      138    9       196    15      7       26     151    C
14    303    17      123    12      169    19      8       32     136    C
15    278    19      120    14      146    23      5       35     129    C
16    253    17      121    8       125    19      1       27     121    C
17    228    17      124    6       84     18      4       15     121    A
18    203    16      129    14      70     18      10      39     105    A
19    178    14      143    13      84     17      9       41     117    A
20    153    13      131    12      88     16      6       42     112    A
21    128    6       99     4       56     7       3       33     85     A
```

Deployment Id: NWSC0207

Latitude: 60°34.200´N

Longitude: 004°46.700´W

Echo sounding depth: 1077m

Bottom depth corr.: 1066m

Time of deployment: 08/07 -2002 2002UTC

Time of recovery: 17/06 - 2003 0402UTC

ADCP:

Instrument no.: RDI ADCP 1245

Instrument frequency: 75kHz

Height above bottom: 414m   (corr.)

Depth: 652m (corr.)

Time of first data: 08/07 - 2002 2220UTC

Time of last data: 17/06 - 2003 0340UTC

Sample interval: 20 min

No. of ensembles: 24713

Pings per ens.:   1

Binlength: 25m

Depth of first bin: 616 m (corr.)

No. of bins: 28

Aanderaa:

Instrument no.: RCM9   718
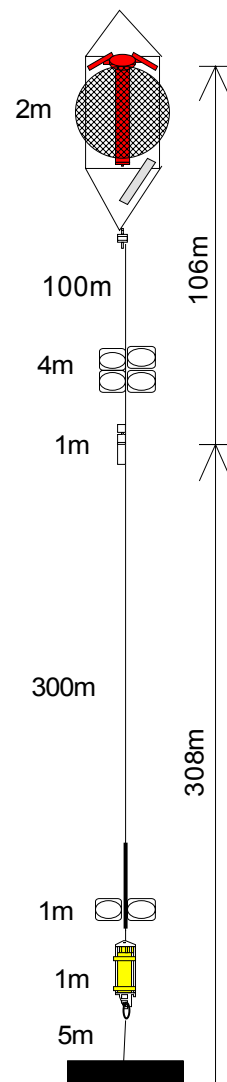
Height above bottom: 308m

Depth: 758m   (corr.)

Time of first data: 08/07 – 2002   2230 UTC

Time of last data: 17/06 – 2003   0230 UTC

Sample interval: 60 min

No. of records: 8237

NWSC0207 ADCP 1245

Error statistics for deployment: NWSC0207 updated 2003/11/25
─────────────

Surface distance not edited
Heading, pitch and roll not edited
Temperature edited by MCN in Nov 2003
Velocity edited up to and including bin 23 by MCN in Nov 2003
Intensity edited up to and including bin 28 by MCN in Nov 2003
Velocity reedited from bin 19 to bin 23 by KMHL in Nov 2003

Total number of ensembles: 24713
Interval between ensembles: 20 min
Original number of bins: 28
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
number 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	241	1	220	9	1	0	0	0	0	0	0	0
2	0	155	1	145	5	0	0	0	0	0	0	0	0
3	1	163	1	154	3	1	0	0	0	0	0	0	0
4	2	184	1	165	8	1	0	0	0	0	0	0	0
5	0	164	1	143	9	1	0	0	0	0	0	0	0
6	0	182	1	140	14	2	2	0	0	0	0	0	0
7	0	175	1	165	2	2	0	0	0	0	0	0	0
8	0	181	1	160	8	0	0	1	0	0	0	0	0
9	0	182	1	166	8	0	0	0	0	0	0	0	0
10	0	197	1	170	12	1	0	0	0	0	0	0	0
11	0	138	1	119	8	1	0	0	0	0	0	0	0
12	0	151	1	126	11	1	0	0	0	0	0	0	0
13	0	262	1	180	18	1	0	0	4	1	0	0	0
14	0	422	2	220	21	16	5	3	8	0	1	0	0
15	0	638	3	328	36	13	6	5	9	4	1	0	0
16	1	729	3	395	42	18	8	6	13	3	0	0	0
17	0	1367	6	466	86	27	17	12	21	20	3	0	0
18	0	2453	10	458	91	26	19	11	26	32	31	5	0
19	0	3469	14	516	85	24	15	7	21	30	45	22	1
20	0	4544	18	570	108	41	19	21	31	18	36	53	2
21	1	6031	24	599	143	51	24	24	48	43	31	65	7
22	0	8282	34	639	170	85	46	26	51	52	32	82	16
23	0	13247	54	684	242	121	88	51	102	71	46	81	35

NWSC0207 ADCP 1245

```
Deployment: NWSC0207 updated 2003/11/25
Instrument no.:  1245
Instrument freq.:  75
Latitude: 60 34.200 N
Longitude:04 46.700 W
Bottom depth: 1066
Instrument depth:  652
Center depth of first bin:  616
Bin length:  25
Number of bins:  23
Number of first ensemble:    392
Time of first ensemble: 2002 07 08 22 20
Number of last ensemble:   25104
Time of last ensemble:  2003 06 17 03 40
Time between ensembles (min.):    20
All directions have been corrected by adding: -11.0
```

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       616       450       191        80       197       990
        2       591       475       191        77       196       994
        3       566       500       191        72       194       993
        4       541       525       195        67       190       993
        5       516       550       199        59       186       993
        6       491       575       204        53       180       993
        7       466       600       211        48       171       993
        8       441       625       218        45       160       993
        9       416       650       224        44       149       993
       10       391       675       229        44       137       992
       11       366       700       234        43       123       994
       12       341       725       241        44       110       994
       13       316       750       248        46       100       989
       14       291       775       256        47        94       983
       15       266       800       265        49        91       974
       16       241       825       274        52        88       971
       17       216       850       281        55        88       945
       18       191       875       289        54        90       901
       19       166       900       294        57        89       860
       20       141       925       298        60        88       816
       21       116       950       301        59        91       756
       22        91       975       303        57       103       665
       23        66      1000       292        62       109       464
```

NWSC0207 ADCP 1245

Deployment: NWSC0207

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	616	780	386	153	54	21	8	2	.24	0	0	0	0	0	0	0	0	0	0
2	591	778	392	155	51	20	8	2	.32	0	0	0	0	0	0	0	0	0	0
3	566	785	395	153	50	19	7	2	.16	0	0	0	0	0	0	0	0	0	0
4	541	793	413	158	51	17	6	1	.28	0	0	0	0	0	0	0	0	0	0
5	516	802	434	172	54	16	5	1	.20	0	0	0	0	0	0	0	0	0	0
6	491	811	449	190	62	17	4	1	.24	0	0	0	0	0	0	0	0	0	0
7	466	829	473	209	75	21	4	1	.12	0	0	0	0	0	0	0	0	0	0
8	441	835	498	228	85	24	6	1	.08	0	0	0	0	0	0	0	0	0	0
9	416	842	519	245	93	28	7	1	0	0	0	0	0	0	0	0	0	0	0
10	391	842	528	263	102	33	9	1	.08	0	0	0	0	0	0	0	0	0	0
11	366	849	542	274	113	42	14	3	.20	0	0	0	0	0	0	0	0	0	0
12	341	853	556	289	125	53	19	5	.45	.04	0	0	0	0	0	0	0	0	0
13	316	854	567	310	140	63	26	7	2	.08	0	0	0	0	0	0	0	0	0
14	291	850	577	328	159	72	31	12	3	.49	.12	0	0	0	0	0	0	0	0
15	266	852	589	348	178	83	37	14	4	1	.20	0	0	0	0	0	0	0	0
16	241	852	601	367	195	97	43	18	6	2	.49	.04	0	0	0	0	0	0	0
17	216	834	594	369	204	103	49	21	8	3	1	.08	.08	0	0	0	0	0	0
18	191	801	579	365	208	110	55	24	9	3	1	.40	.08	.08	.08	0	0	0	0
19	166	768	558	352	205	114	59	26	10	4	2	1	.04	0	0	0	0	0	0
20	141	730	533	341	201	110	60	30	14	5	2	1	.20	.04	0	0	0	0	0
21	116	679	497	317	188	104	58	30	15	7	3	2	1	.24	0	0	0	0	0
22	91	598	441	282	165	93	52	28	14	8	3	2	1	.32	.08	0	0	0	0
23	66	413	299	186	105	57	30	16	9	5	3	1	1	.20	.04	0	0	0	0

NWSC0207 ADCP 1245

Harmonic constants for constituent M2 for deployment NWSC0207.

```
==============================================================================
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     616     145     253     111     251     182       2      37     252  A
 02     591     142     253     112     253     181       0      38     253  A
 03     566     138     252     113     254     178       3      39     253  C
 04     541     133     253     116     257     177       7      41     255  C
 05     516     131     256     123     258     180       4      43     257  C
 06     491     130     258     128     257     182       1      45     258  A
 07     466     129     259     131     258     184       2      45     258  A
 08     441     124     259     130     261     180       3      46     260  C
 09     416     116     260     132     264     176       6      49     262  C
 10     391     109     262     135     267     174       7      51     265  C
 11     366     103     263     138     269     172       8      53     267  C
 12     341      99     266     141     271     172       7      55     269  C
 13     316      96     267     144     272     173       7      56     271  C
 14     291      94     269     147     274     175       8      58     273  C
 15     266      92     272     151     275     177       5      59     274  C
 16     241      91     273     153     275     178       3      59     275  C
 17     216      90     274     155     274     179       1      60     274  C
 18     191      90     276     157     275     180       2      60     275  A
 19     166      90     277     158     274     181       4      60     275  A
 20     141      95     277     159     275     185       3      59     275  A
 21     116      96     278     161     275     188       5      59     275  A
 22      91      96     273     161     278     187       7      59     276  C
 23      66      79     277     149     276     168       1      62     276  A
```

Harmonic constants for constituent S2 for deployment NWSC0207.

```
==============================================================================
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     616      50     301      53     290      72       7      46     295  A
 02     591      49     302      54     291      72       7      47     296  A
 03     566      47     302      55     293      72       5      49     297  A
 04     541      45     303      56     294      72       5      51     298  A
 05     516      43     304      56     294      70       6      52     298  A
 06     491      43     303      55     295      70       5      52     298  A
 07     466      46     302      55     294      71       5      50     297  A
 08     441      47     300      51     296      69       3      47     298  A
 09     416      45     295      49     298      66       2      48     297  C
 10     391      42     291      49     300      64       5      50     296  C
 11     366      39     289      49     304      62       8      52     298  C
 12     341      38     287      48     306      60      10      52     299  C
 13     316      39     287      45     307      59      10      49     298  C
 14     291      40     288      44     309      59      11      48     299  C
 15     266      41     292      45     309      60       8      48     301  C
 16     241      41     295      45     309      61       7      48     303  C
 17     216      42     295      44     308      61       7      46     301  C
 18     191      42     293      43     308      60       8      45     300  C
 19     166      46     292      41     307      61       8      42     299  C
 20     141      44     289      38     309      58      10      41     298  C
 21     116      39     281      36     312      51      14      43     296  C
 22      91      41     268      29     320      45      20      30     282  C
 23      66      37     245      24     314      38      22      20     256  C
```

NWSC0207 ADCP 1245

Harmonic constants for constituent N2 for deployment NWSC0207.

```
================================================================================
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    616      34      232      25     219      42       5      37     228    A
 02    591      35      236      28     218      44       7      38     229    A
 03    566      33      236      27     222      43       5      39     231    A
 04    541      31      236      26     225      41       4      40     232    A
 05    516      27      238      26     235      38       1      44     237    A
 06    491      24      242      27     244      36       1      49     243    C
 07    466      24      240      28     243      37       1      50     242    C
 08    441      25      240      28     243      37       1      48     241    C
 09    416      24      242      29     243      38       0      51     243    C
 10    391      22      243      29     247      37       1      53     245    C
 11    366      19      243      28     254      34       3      56     250    C
 12    341      17      250      30     254      35       1      60     253    C
 13    316      18      258      34     252      38       2      63     253    A
 14    291      19      266      37     252      41       4      63     255    A
 15    266      20      273      40     253      44       6      64     257    A
 16    241      21      278      41     250      46       9      64     255    A
 17    216      24      277      46     249      51      10      64     255    A
 18    191      26      284      49     252      54      12      64     258    A
 19    166      26      291      51     250      55      16      67     257    A
 20    141      25      296      52     253      55      16      69     259    A
 21    116      29      294      52     251      57      18      65     259    A
 22     91      31      301      47     241      50      25      65     253    A
 23     66      18      291      49     241      50      14      75     245    A
```

Harmonic constants for constituent O1 for deployment NWSC0207.

```
================================================================================
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    616       8       12      9      34      12       2      45      23    C
 02    591       8        8      9      34      12       3      46      21    C
 03    566       9       10      8      34      12       3      43      21    C
 04    541       8       10      8      40      11       3      45      25    C
 05    516       9        9      9      38      12       3      45      23    C
 06    491      10        7      9      24      13       2      39      14    C
 07    466       9        8      8      40      11       3      42      22    C
 08    441       9      358      9      32      12       4      46      16    C
 09    416       8        4      8      34      11       3      45      19    C
 10    391       8        4      9      26      12       2      49      17    C
 11    366       8      357     11      28      13       4      55      18    C
 12    341       9      360     11      29      14       4      52      18    C
 13    316       8      359      9      31      12       3      48      16    C
 14    291       8      356     10      22      12       3      50      11    C
 15    266       8      360     10      26      13       3      51      16    C
 16    241       8      357     10      26      13       3      51      15    C
 17    216       8      339      7       7      11       3      41     351    C
 18    191       7      343      7     346      10       0      46     345    C
 19    166       5      354      9     357      11       0      63     357    C
 20    141       8        4     12     352      14       1      58     356    A
 21    116       7       21     11     348      13       3      58     358    A
 22     91       5       59     10     342      10       5      82     346    A
 23     66       5      114      3     331       5       2     150     304    A
```

NWSC0207 ADCP 1245

Harmonic constants for constituent K1 for deployment NWSC0207.

```
==============================================================================
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     616       6     233       4     256       7       1      29     239  C
 02     591       7     248       3     248       8       0      24     248  C
 03     566       8     243       3     256       8       1      19     244  C
 04     541       7     225       2     254       7       1      17     228  C
 05     516       7     228       3     230       8       0      24     228  C
 06     491       7     225       3     204       8       1      19     223  A
 07     466       9     229       2     205       9       1      15     228  A
 08     441       9     233       3     210       9       1      20     230  A
 09     416       7     240       3     211       8       1      22     236  A
 10     391       5     237       1     183       5       1       7     236  A
 11     366       2     176       1     103       2       1      18     165  A
 12     341       3     138       2     121       4       1      39     132  A
 13     316       3     126       3     143       4       1      45     135  C
 14     291       4     128       4     161       5       1      43     143  C
 15     266       5     152       3     160       6       0      35     154  C
 16     241       6     167       5     165       8       0      40     166  A
 17     216       7     171       2     141       7       1      15     169  A
 18     191       8     147       6      72       8       6      23     130  A
 19     166      10     146      10      58      10      10      53      95  A
 20     141       6     116      13      37      13       6      83      41  A
 21     116       5     350      16      18      16       2      75      16  C
 22      91       6     328      19     353      20       2      73     350  C
 23      66      12     324      22     340      25       3      61     336  C
```

NWSC0207 Aanderaa 718

```
Deployment: Nwsc0207        analyzed from beginning to end
Instrument no.:   718
Instrument type: Aanderaa
Latitude: 60 34.200 N
Longitude:04 46.700 W
Bottom depth: 1066
Instrument depth:  758
Number of records: 8237
Time of first record: 2002 07 08 22 30
Time of last record : 2003 06 17 02 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        8237              0
Column  8  : Speed       8237              0
Column  9  : Direct      8237              0


Comments
--------


Residual current:  75 mm/sec towards: 205 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      12    263      21    224     23      7     63    233  A
MSF  .00282193      14    182       8    359     16      0    149      1  C
Q1   .03721850       3    324       4      7      4      2     49    348  C
O1   .03873065       8     10       7     41     11      3     39     23  C
NO1  .04026859       1    195       0     34      1      0    167     16  A
P1   .04155259       2    238       1    343      2      1    167     50  C
K1   .04178075       6    240       2    282      6      1     15    243  C
N2   .07899925      31    216      13    228     33      2     22    218  C
M2   .08051140     142    252      86    246    166      7     31    251  A
L2   .08202355       7    272       9    181      9      7     92    179  A
S2   .08333334      49    300      43    291     65      5     41    296  A
K2   .08356149      10    302      13    317     16      2     53    312  C
MK3  .12229210       1    253       0    176      1      0      8    249  A
M4   .16102280       2    267       2    324      2      1     36    288  C
MS4  .16384470       1    316       1    355      1      1     37    330  C


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  |   8    7   10   11   11   11   11   10   10    9    6    7| 110  110
  50 -  100  |  13   20   24   23   23   24   27   29   20    9    7    8| 227  337
 100 -  150  |   5   20   27   25   15   16   32   41   23    5    3    1| 212  549
 150 -  200  |   2   15   21   12    8    8   23   46   22    3    1  .49| 163  712
 200 -  300  |   1   16   22    6    4    9   28   69   24    2    1  .12| 180  893
 300 -  400  |   0    4    6  .36    1    2    8   29   10    1    0    0|  60  952
 400 -  500  |   0    1    1    0  .24    1    4   12    4  .36    0    0|  24  976
 500 -  600  |   0  .12  .24    0    0  .24    4    9    2    0    0    0|  16  992
 600 -  700  |   0    0    0    0    0    0  .36    5    1    0    0    0|   7  999
 700 -  800  |   0    0    0    0    0    0    0    1  .24    0    0    0|   1 1000
-------------- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
Total   (ppt)|  29   82  110   77   62   71  137  251  117   29   17   17|
Rel.flux (ppt)|  14   76  101   54   41   54  147  347  134   18    8    6|
-------------- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
Avg.spd (mm/s)|  81  152  152  114  109  125  177  227  188  102   78   60|
Max.spd (mm/s)| 226  510  519  367  460  548  622  771  716  434  249  240|
-------------- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
```
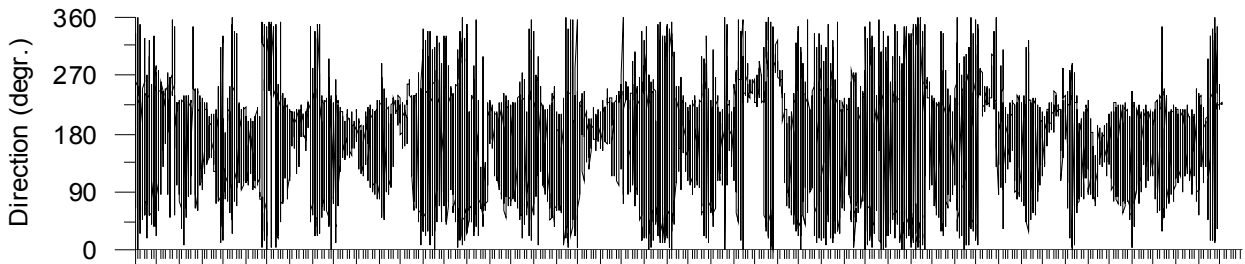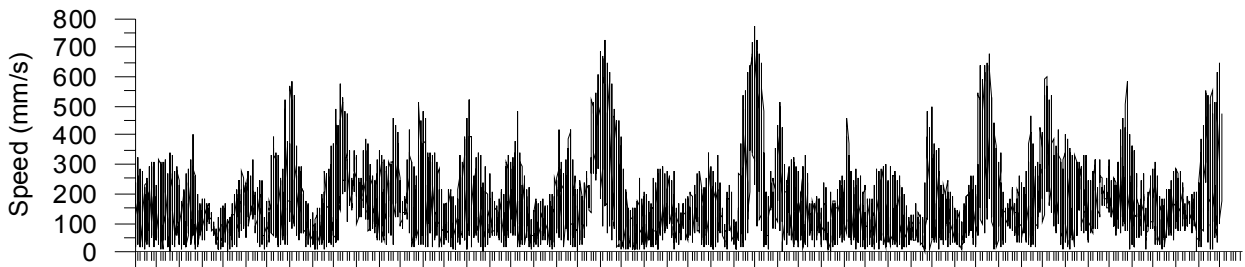
NWSC0207
Instrument: Aanderaa 718
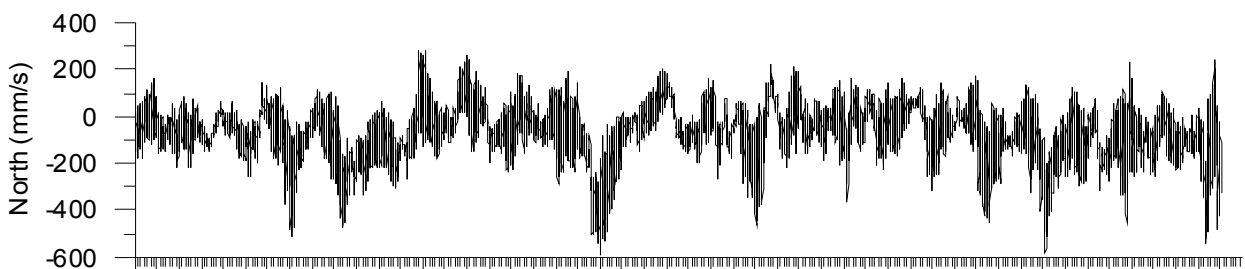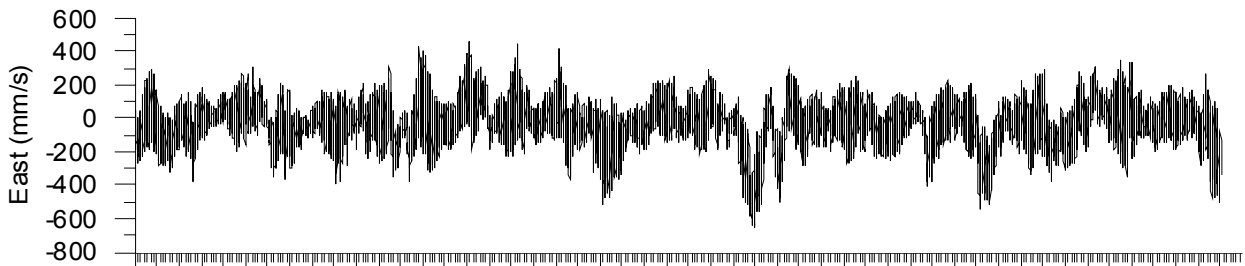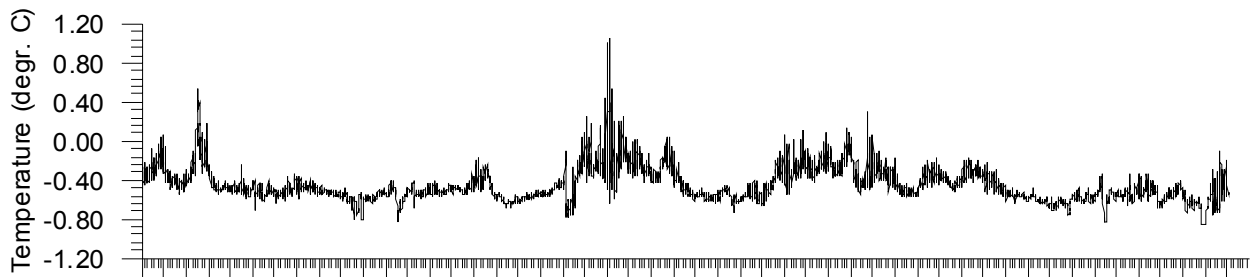
Progressive vector diagram
NWSC0207: Aanderaa 718

Start

N

100km