HAVSTOVAN
FAROE MARINE RESEARCH INSTITUTE

FARMON Deployments in Faroese Waters 2017 - 2018

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Ebba Mortensen

Karin Margretha H. Larsen

Bogi Hansen

Hjálmar Hátún

Regin Kristiansen

and Svein Østerhus

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TECHNICAL REPORT

Contents

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Introduction

The report documents seven current meter deployments in Faroese waters in 2017 – 2018 deployed within the FARMON project, which is funded by the Danish Energy Agency as part of the Arctic Climate Support Programme. 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. Three of the moorings were located at standard (Nordic WOCE) sites (NWFB, NWFC and NWNB) while one was deployed on the southern part of the Faroe Current (NWNI) and one (NWNJ) at larger depths on the Faroe Current section. Additionally, two moorings were deployed on the eastern part of the Faroe Plateau to monitor the recirculation of the Faroe Current into the Faroe Shetland Channel (TNGX and TNGY). The deployments are listed in Tables 1 and 2 together with one additional mooring (NWNK) that was deployed at large depths below the Faroe Current. The data from this additional mooring are also reported here.

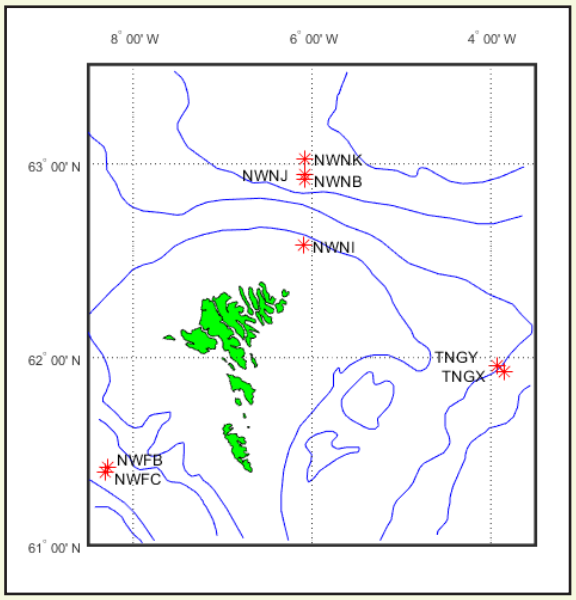


Figure 1. Mooring sites in Faroese waters 2017-2018 superposed on a map with the bottom topography. Each site is indicated by a four-letter label.

At all sites except NWNI and NWNK, RDI ADCPs were placed in the top of single-point moorings. At site NWNI a "shallow-water" rig was used, where an RDI ADCP was placed on the bottom inside a protective aluminium frame, while at site NWNK an Aanderaa RCM9 current meter was on the mooring. The ADCP measures the velocity averaged over a number of depth layers ("bins"). At 20 minute intervals, the ADCP records the data from all

Table 1. List of deployments with information on instrument number, type and settings.

Deployment	Instr. No	Current Meter type	Freq. kHz	Pings per ens	Binlng. m
NWFB1706	1642	BB ADCP	75	1	25
NWFC1706	1285	BB ADCP	75	1	25
NWNB1706	1577	BB ADCP	75	1	25
NWNI1706	1279	BB ADCP	150	1	10
NWNJ1706	19518	LR ADCP	75	10	10
NWNK1706	721	Aanderaa			
TNGX1706	1644	BB ADCP	75	1	25
TNGY1706	1292	BB ADCP	75	1	25

Table 2. List of deployments with information on duration and range of valid data. All depths are in meters. The last column indicates whether other instruments were on the mooring.

Deployment	Bottom depth	Int. min.	Valid data period	Dur. days	No bins	Depthrange	Other instr.
NWFB1706	808	20	2017 06 13-2018 05 21	342	15	416- 766	Microcat
NWFC1706	838	20	2017 06 13-2018 09 03	447	24	221- 796	SBE39
NWNB1706	961	20	2017 06 09-2018 05 18	342	23	124- 674	Microcat
NWNI1706	156	20	2017 06 09-2018 05 18	343	11	39- 139	Microcat
NWNJ1706	1210	20	2017 06 09-2018 05 18	342	68	516-1186	SBE56
NWNK1706	1754	60	2017 06 09-2018 05 18	342	1	804	Aanderaa
TNGX1706	742	20	2017 06 09-2018 05 19	343	24	125- 700	SBE56
TNGY1706	673	20	2017 06 09-2018 05 19	343	23	56- 631	Microcat

bins into “ensembles” as well as the instruments heading, pitch, roll and temperature. The Aanderaa current meter recorded speed, direction and temperature at 60 minutes intervals. Several moorings had other recorders attached as shown in Table 2. All the MicroCats (SBE 37) recorded temperature and salinity. The MicroCats at sites NWNB, NWFB and TNGY also recorded pressure, while the MicroCat at site NWFB also recorded oxygen. The SBE39 and SBE56 are temperature recorders only.

For more details see Tables 1 and 2.

Quality control

ADCP data

The velocity data from the ADCPs have been quality controlled using a semi-automatic routine that error flags observations that are above/below specified thresholds or are identified by specific filters as elaborated below:

i) A minimum threshold can be set for intensity and correlation.
ii) In order to remove extremely large speed (spd) values, the mean speed is calculated for each bin and multiplied by a specified factor. The result is the maximum threshold for each bin.
iii) A maximum threshold for absolute vertical velocity (w) can be set.
iv) The ADCP data also include an error velocity and a maximum absolute threshold can be specified for this parameter. The final threshold is this threshold plus ten percent of the observed speed for the individual observations.
v) A de-spiking filter for horizontal velocities u and v can be applied. Observations, where u and v deviate from a three point median filter by more than the standard deviation multiplied by a specified factor, are error flagged. The specified factor can be chosen to vary between bins. One factor can be specified for bin 1 and another for the uppermost bin. For the intermediate bins the factor varies exponentially from bin 1 to the uppermost bin, such that the “sensitivity” of the filter can decrease with increasing distance from the instrument.
vi) A de-spiking filter similar to that described in v) can be selected that operates vertically between bins instead of temporally between ensembles, but here only one factor is specified.
vii) A separate de-spiking filter (similar to that described in v)) can be set for the vertical velocity component, w. Also here only one factor is specified.
viii) Finally, an absolute maximum threshold can be set for Pitch and Roll.

In the final process, all the thresholds and filters are combined and applied to the velocity components u, v and w. In the data files this corresponds to the Speed, Direction and Vertical velocity files. 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. Generally, the temperature recordings have been edited, but not the other ADCP sensor data nor intensity or correlation.

The instrument depths at sites NWFC, NWNI, NWNK and TNGX are found using the data from the echo sounding depths (corrected for change in sound velocity). The instrument depths at sites NWFB, NWNB and TNGY are found from the MicroCat pressure measurements. The instrument depth at site NWNJ is found from the ADCP pressure measurements.

Aanderaa data

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

relation to neighbouring values (spikes). The editing has been done manually using an interactive graphical software package developed by FAMRI, based upon MATLAB.

Auxiliary data

In order to calibrate the data from the auxiliary sensors, these have been attached to a CTD and set to record data while on the CTD cast. Offsets have then been found by comparing the auxiliary data to the CTD recordings. Typically such calibrations have been performed just prior to or after the deployment, and if done this is indicated in the details for the deployment. Additionally, the data from the MicroCat SBE37, the SBE39 and SBE56 instruments have been quality controlled by a standard procedure based upon data variation with time in relation to neighbouring values (spikes). The editing has been done manually using an interactive graphical software package developed by FAMRI, based upon MATLAB.

The MicroCat on NWFB was originally funded by the EU-H2020 project AtlantOS. It is of the type SBE37 SMP-ODO and includes oxygen measurements. The oxygen recordings on this type of instrument appear to have some kind of hysteresis adaptation when deployed at great depths. The correction of these data will be further explored within the AtlantOS project and we refer to the AtlantOS D3.18 deliverable report for more information (due 31. March 2019).

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 and treshold settings for the deployment, and it indicates also how many »long« (i.e. several consecutive ensembles) error gaps are for each bin. On the next page there is for each bin listed the average speed (scalar average) and velocity magnitude and direction (vectorial average) as well as the fraction of »good« ensembles (in parts per thousand). This is followed by a frequency distribution of speeds for each bin, which lists the frequency (in parts per thousand) of speeds (scalar) exceeding specified values. Then there are

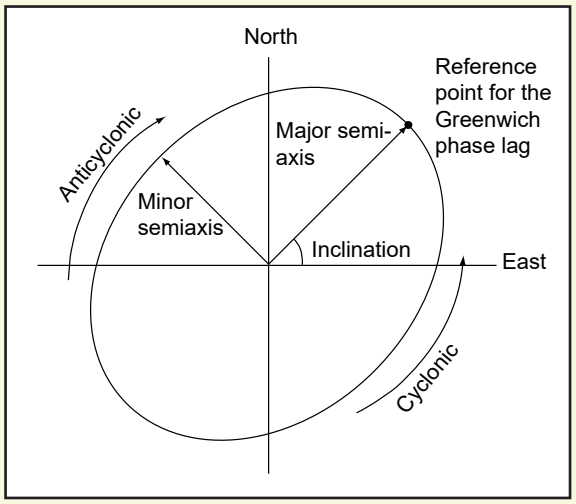


Figure 2. Parameters of the tidal ellipse for a given constituent. The reference point for the Greenwich phase lag is always chosen to be above the east-west axis.

some pages listing tidal constituents. These pages contain five tables with data for the constituents M2, S2, N2, O1, and K1. Each table lists for each bin the amplitude and Greenwich phase lag for the east and north velocity components and lists also major and minor semi-axes of the tidal ellipse for the constituent as well as its inclination (Fig. 2) and sense of rotation (cyclonic = C, anticyclonic = A). The tidal constants were computed by an adapted version of the Foreman FORTRAN package.

The description of the Aanderaa current meter data includes first a text page listing metadata information in the header and showing the list of parameters in the data file with a tally of the number of records flagged and not flagged for error in each parameter. Any comments to the data are then listed. The rest of the text page describes features of the velocity observations in the series. First is shown the residual current, defined as the vectorial average of all non-flagged records. Next are shown the results of tidal analysis on the series. The number of records interpolated before the analysis is listed as well as the number that could not be interpolated (too large gap). Since the deployment has 60 minutes intervals, all analyses are performed on unfiltered data. 15 of the dominant constituents are listed and for each constituent, amplitude and Greenwich phase lag are shown for the east (E-ampl and E-gpl) and the north (N-ampl and N-gpl) velocity components respectively, followed by the characteristics of the tidal ellipse, its major and minor semi-axes, the inclination (Incl) of the ellipse, its Greenwich phase lag (Grphl), and whether it rotates cyclonically (C) or anticyclonically (A). The definitions of the tidal ellipse parameters are shown in Figure 2. The tidal constants were computed by an adapted version of the Foreman FORTRAN package. Finally, on the Aanderaa text page is a table listing the directional current distribution as relative numbers of observations in parts per thousand. The table also lists for each direction interval, the relative flux, the average speed and the maximum speed. Then one page shows plots of the listed parameters as a function of time and one page shows the progressive vector diagram.

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

The SBE39 and SBE56 temperature data are presented on one page.

On the following pages, the data descriptions from each deployment are presented in the same sequence as Tables 1 and 2. For each deployment, the ADCP data are presented first, followed by possible MicroCat , Aanderaa or temperature recorder data.

NWFB1706

Latitude: 61°25.047´N

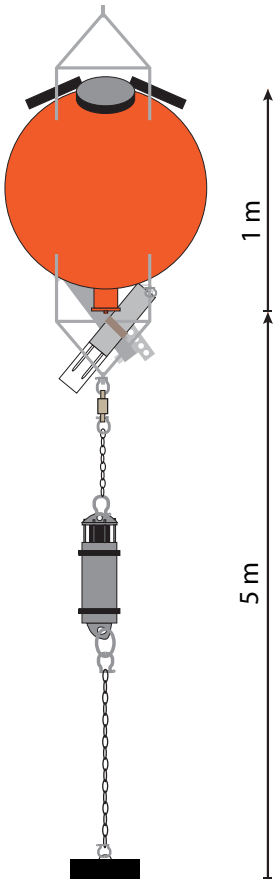
Longitude: 008°16.968´W

Echo sounding depth: 817 m

Bottom depth corr.: 808 m

Time of deployment: 13/6 - 2017 0025 UTC

Time of recovery: 21/5 - 2018 0725 UTC



ADCP:

Instrument no.: RDI ADCP 1642

Instrument frequency: 75 kHz

Height above bottom: 6 m

Depth: 802 m

Time of first data: 13/6 - 2017 0100 UTC

Time of last data: 21/5 - 2018 0700 UTC

Sample interval: 20 min

No. of ensembles: 24643

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 766 m

No. of bins: 15

MicroCat

Instrument no.: 14007

Height above bottom: 5 m

Instrument depth: 803 m

Time of first data: 13/6 - 2017 0202 UTC

Time of last data: 21/5 - 2018 0702 UTC

Sample interval: 60 min

No. of ensembles: 8214

Data:

The temperature, salinity and pressure from the MicroCat is calibrated against an SBE911+.

The ADCP temperature has been deleted due to conversion error.

NWFB1706 ADCP 1642

```
Error statistics for deployment: NWFB1706 updated 2018/10/31
------------------------------------------------------------

Temperature deleted
Surface distance not edited
Heading, pitch and roll not edited
Intensity not edited

Velocity (spd, dir, wel ) is error flagged using these data filters:
Minimum Intensity threshold: 50.0
Minimum Correlation threshold: 64.0
Maximum Speed factor (Average speed for each bin times factor): 3.0
Maximum Absolute Vertical Velocity threshold: 250.0
Maximum Absolute Error Velocity threshold (erv_tr+0.1*spd): 100.0
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 1): 6.00
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 15): 4.75
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 32): 1.00
Std dev for vertical de-spiking (u and v deviate from 3 point median by more than number of std dev): 4.0

Total number of  ensembles:       24643
Interval between ensembles:      20 min
Original number of bins:             32
Number of acceptable velocity bins:  15

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

Number of temperature ens. flagged:  24643

Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
-------------------------------------------------------------------------------
     Int.  Velocity |             Number of velocity gaps of length
Bin  ens.  ens.    %|-----------------------------------------------------------
    flgd   flgd flgd|    1     2     3     4     5  6-10 11-20 21-30 31-50   >50
-------------------------------------------------------------------------------
  1     0   107    0|   94     5     1     0     0     0     0     0     0     0
  2     0   168    1|  159     3     1     0     0     0     0     0     0     0
  3     0   113    0|  104     3     1     0     0     0     0     0     0     0
  4     0   109    0|  106     0     1     0     0     0     0     0     0     0
  5     0    97    0|   90     2     1     0     0     0     0     0     0     0
  6     0   117    0|  108     3     1     0     0     0     0     0     0     0
  7     0   187    1|  165    11     0     0     0     0     0     0     0     0
  8     0   299    1|  247    21     2     1     0     0     0     0     0     0
  9     0   498    2|  416    36     3     0     0     0     0     0     0     0
 10     0   636    3|  507    51     6     2     0     0     0     0     0     0
 11     0   511    2|  396    38    13     0     0     0     0     0     0     0
 12     0   511    2|  319    33    13     5     1     4     2     0     0     0
 13     0   403    2|  254    25     4     1     4     4     2     0     0     0
 14     0   448    2|  289    30    12     3     3     5     0     0     0     0
 15     0   831    3|  473    66    34     6     5     8     1     0     0     0
```

NWFB1706 ADCP 1642

Deployment: NWFB1706 updated 2018/10/31
Instrument no.: 1642
Instrument freq.: 75
Latitude: 61 25.047 N
Longitude:08 16.968 W
Bottom depth: 808
Instrument depth: 802
Center depth of first bin: 766
Bin length: 25
Number of bins: 15
Number of first ensemble: 469
Time of first ensemble: 2017 06 13 01 00
Number of last ensemble: 25111
Time of last ensemble: 2018 05 21 07 00
Time between ensembles (min.): 20
All directions have been corrected by adding: -6.0

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

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	766	42	980	974	306	996
2	741	67	1049	1044	308	993
3	716	92	1077	1073	310	995
4	691	117	1085	1082	311	996
5	666	142	1081	1077	312	996
6	641	167	1056	1051	313	995
7	616	192	990	981	315	992
8	591	217	865	848	317	988
9	566	242	690	660	321	980
10	541	267	509	457	324	974
11	516	292	371	287	326	979
12	491	317	284	169	328	979
13	466	342	241	95	331	984
14	441	367	223	51	340	982
15	416	392	220	26	18	966

NWFB1706 ADCP 1642

Deployment: NWFB1706

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	766	996	996	996	996	994	988	965	894	720	447	197	57	12	2	0	0	0	0
2	741	993	993	993	993	992	988	974	940	851	655	376	141	32	4	0	0	0	0
3	716	995	995	995	995	995	992	978	951	884	729	464	200	49	7	0	0	0	0
4	691	996	996	996	996	995	992	979	952	894	751	494	218	52	8	1	0	0	0
5	666	996	996	996	996	995	990	974	947	889	745	490	209	46	7	1	0	0	0
6	641	995	995	994	991	985	976	957	920	851	689	440	179	39	5	1	0	0	0
7	616	991	985	977	969	958	939	906	846	739	548	320	122	26	4	0	0	0	0
8	591	977	960	944	923	891	845	770	662	514	330	168	56	11	2	0	0	0	0
9	566	960	921	872	806	722	627	516	395	260	134	53	14	3	0	0	0	0	0
10	541	931	838	724	597	477	364	260	160	84	34	9	2	0	0	0	0	0	0
11	516	903	734	551	386	250	158	90	45	19	6	0	0	0	0	0	0	0	0
12	491	870	630	395	218	110	52	22	5	0	0	0	0	0	0	0	0	0	0
13	466	837	550	297	131	47	16	3	0	0	0	0	0	0	0	0	0	0	0
14	441	819	513	249	92	27	6	0	0	0	0	0	0	0	0	0	0	0	0
15	416	806	493	232	85	24	5	0	0	0	0	0	0	0	0	0	0	0	0

NWFB1706 ADCP 1642

Harmonic constants for constituent M2 for deployment NWFB1706.

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	766	29	66	21	312	31	18	154	261	A
02	741	34	68	21	308	36	17	157	259	A
03	716	35	75	21	308	38	15	156	266	A
04	691	38	83	18	310	40	12	160	270	A
05	666	37	88	18	304	40	10	157	274	A
06	641	35	98	20	286	40	2	150	280	A
07	616	39	122	26	266	45	13	149	292	C
08	591	47	145	31	263	50	26	156	312	C
09	566	49	171	27	252	49	27	8	175	C
10	541	59	201	26	193	64	3	23	199	A
11	516	69	222	54	166	78	40	33	204	A
12	491	78	233	77	163	89	63	44	199	A
13	466	79	240	89	165	95	71	58	189	A
14	441	77	248	96	168	98	74	71	183	A
15	416	76	257	101	173	102	76	81	180	A

Harmonic constants for constituent S2 for deployment NWFB1706.

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	766	9	100	5	4	9	5	176	282	A
02	741	11	103	6	357	11	5	170	287	A
03	716	10	106	7	346	11	6	152	301	A
04	691	7	108	8	332	10	4	132	312	A
05	666	6	140	6	322	9	0	134	321	A
06	641	8	159	7	315	10	2	140	329	C
07	616	13	161	6	332	14	1	154	339	C
08	591	17	166	7	358	18	1	159	348	A
09	566	14	195	5	318	15	4	169	12	C
10	541	15	260	11	241	19	3	35	254	A
11	516	22	279	22	224	28	14	45	251	A
12	491	25	284	33	215	35	22	64	232	A
13	466	26	289	36	209	37	26	76	219	A
14	441	28	295	37	208	37	28	85	212	A
15	416	29	302	39	210	39	29	92	209	A

NWFB1706 ADCP 1642

Harmonic constants for constituent N2 for deployment NWFB1706.

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	766	9	25	6	262	10	4	157	215	A
02	741	10	29	6	261	10	4	155	220	A
03	716	10	35	7	251	11	4	146	227	A
04	691	9	44	7	254	11	3	147	233	A
05	666	10	59	5	263	11	2	156	243	A
06	641	11	73	3	261	12	0	165	254	A
07	616	12	88	4	236	12	2	165	266	C
08	591	14	108	5	228	14	4	168	284	C
09	566	13	125	6	233	13	6	169	300	C
10	541	11	142	3	243	11	3	177	321	C
11	516	5	176	6	163	8	1	47	169	A
12	491	7	205	12	149	13	5	68	159	A
13	466	9	223	18	145	18	8	83	149	A
14	441	11	235	19	145	19	11	90	145	A
15	416	12	242	20	150	20	12	92	149	A

Harmonic constants for constituent O1 for deployment NWFB1706.

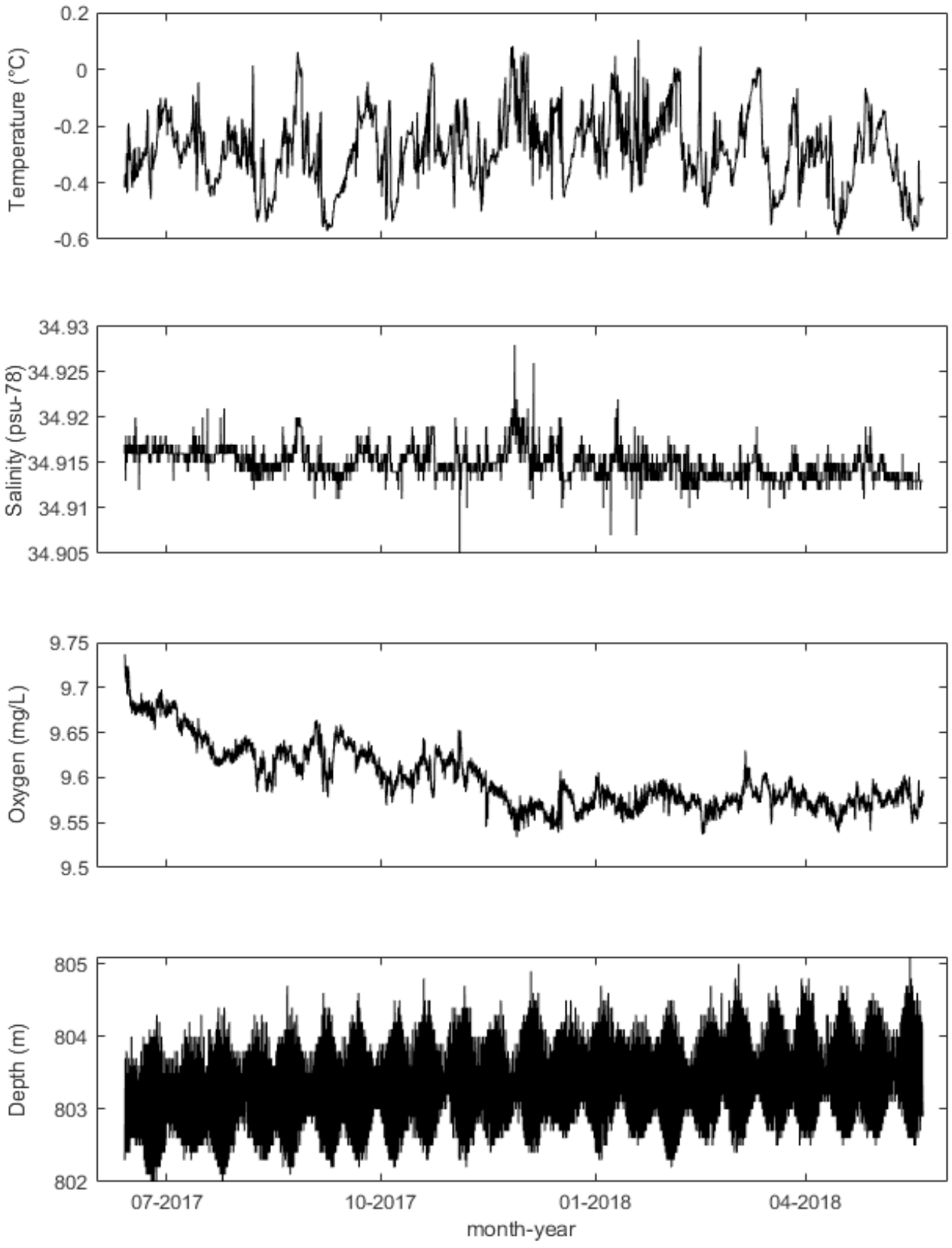
Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	766	19	314	9	137	21	0	155	134	A
02	741	20	312	12	138	23	1	148	134	A
03	716	21	314	14	135	25	0	147	134	A
04	691	20	315	15	132	25	1	144	134	C
05	666	21	317	16	128	26	2	143	133	C
06	641	25	321	17	134	30	2	145	139	C
07	616	33	326	22	140	39	2	145	144	C
08	591	36	335	29	148	46	3	142	153	C
09	566	32	342	33	154	46	3	134	158	C
10	541	24	350	31	160	39	3	127	163	C
11	516	16	5	26	163	30	5	121	169	C
12	491	12	16	22	165	24	6	118	173	C
13	466	12	32	17	176	20	6	123	187	C
14	441	14	34	18	185	22	5	129	196	C
15	416	15	30	20	186	24	5	127	194	C

NWFB1706 ADCP 1642

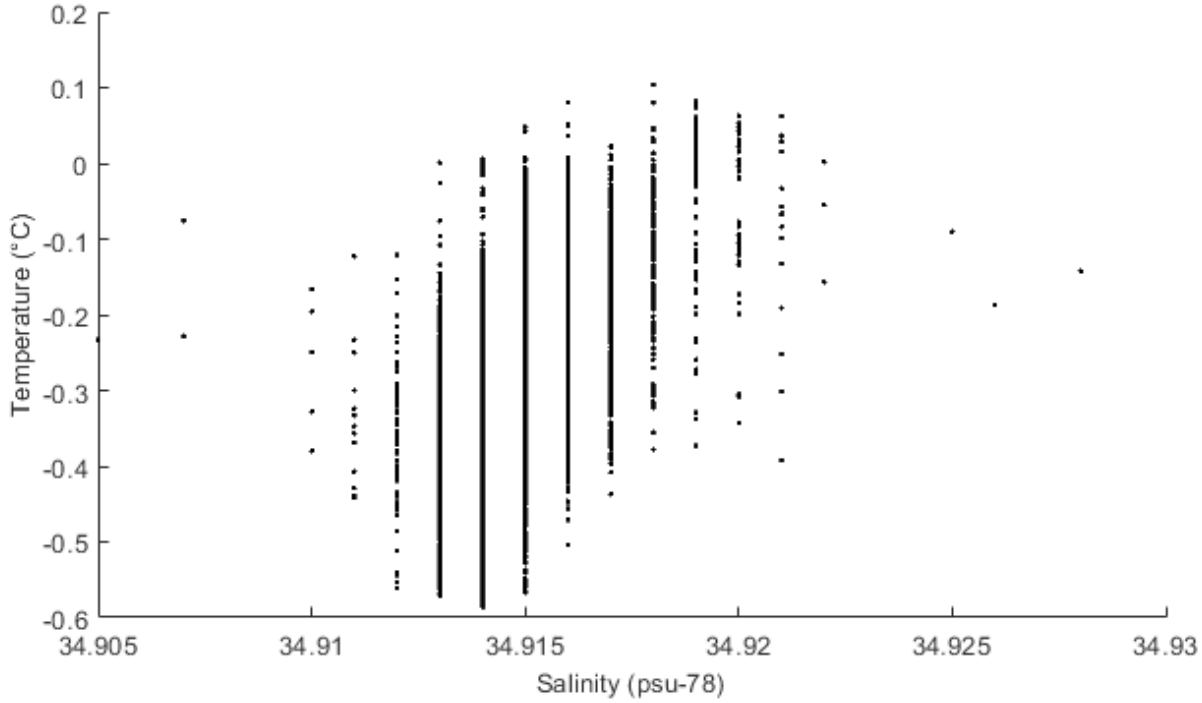
Harmonic constants for constituent K1 for deployment NWFB1706.

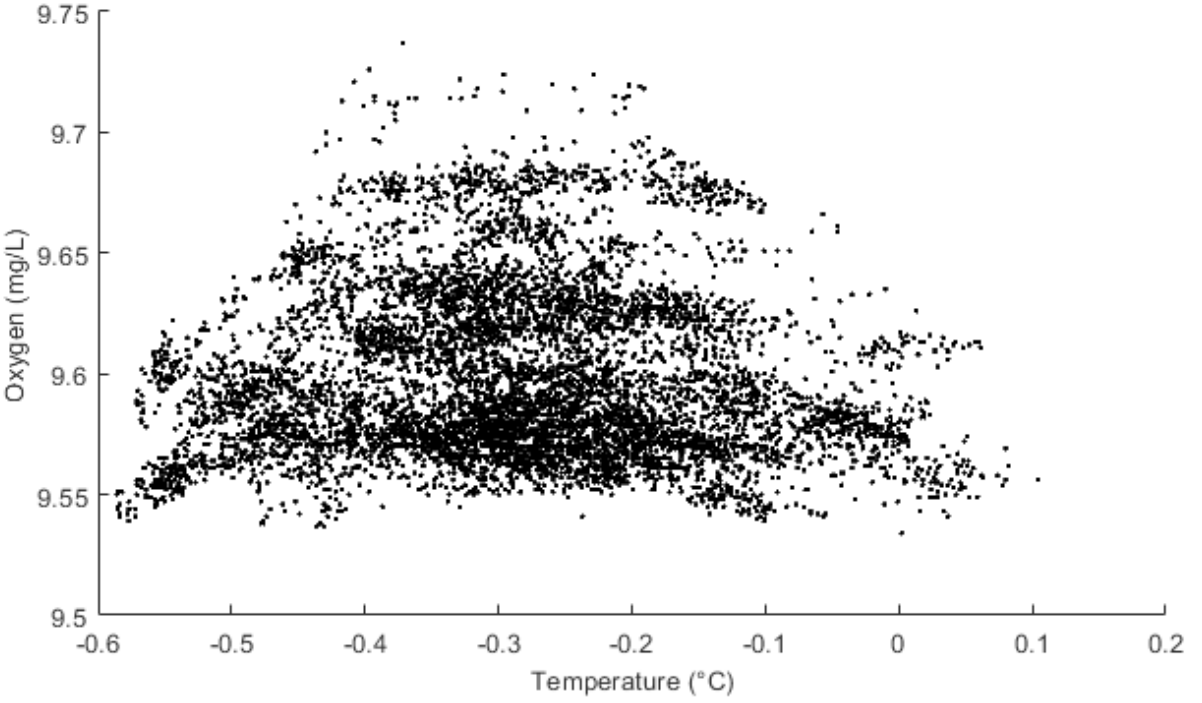
Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	766	13	215	9	62	16	3	149	42	A
02	741	14	215	10	49	17	2	144	40	A
03	716	14	215	10	43	17	1	144	37	A
04	691	13	219	12	42	17	0	139	40	A
05	666	14	222	13	47	19	1	138	44	A
06	641	16	233	13	49	21	1	141	51	C
07	616	24	235	14	58	28	1	149	56	A
08	591	30	236	20	54	36	1	146	56	C
09	566	30	239	25	53	38	2	140	56	C
10	541	24	248	26	54	35	4	132	60	C
11	516	17	252	23	60	29	3	127	64	C
12	491	15	266	19	66	24	4	127	73	C
13	466	15	268	16	74	22	3	132	80	C
14	441	15	268	14	76	20	2	137	82	C
15	416	20	266	14	75	25	2	145	82	C

NWFB1706 MicroCat 14007



NWFB1706 MicroCat 14007





NWFC1706

Latitude: 61°23.552´N

Longitude: 008°18.930´W

Echo sounding depth: 844 m

Bottom depth corr.: 838 m

Time of deployment: 13/6 - 2017 0004 UTC

Time of recovery: 3/9 - 2018 1149 UTC

ADCP:

Instrument no.: RDI ADCP 1285

Instrument frequency: 75 kHz

Height above bottom: 6 m

Depth: 832 m

Time of first data: 13/6 - 2017 0100 UTC

Time of last data: 3/9 - 2018 1120 UTC

Sample interval: 20 min

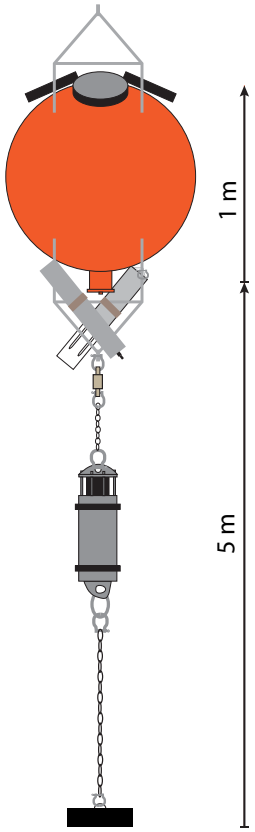
No. of ensembles: 32216

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 796 m

No. of bins: 24



SBE39plus:

Instrument no.: 7752

Height above bottom: 5 m

Instrument depth: 833 m

Time of first data: 13/6 - 2017 0015 UTC

Time of last data: 3/9 - 2018 1149 UTC

Sample interval: 1 min

No. of ensembles: 644375

Data:

All data ok.

NWFC1706 ADCP 1285

```
Error statistics for deployment: NWFC1706 updated 2018/11/09
-------------------------------------------------------------

Temperature not edited
Surface distance not edited
Heading, pitch and roll not edited
Intensity not edited

Velocity (spd, dir, wel ) is error flagged using these data filters:
Maximum Speed factor (Average speed for each bin times factor): 5.0
Maximum Absolute Vertical Velocity threshold: 200.0
Maximum Absolute Error Velocity threshold (erv_tr+0.1*spd): 110.0
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 1): 4.00
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 24): 2.74
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 32): 2.00
Vertical Speed Spikes, u and v deviated from 3 point median by number of std dev: 5.0
Std dev for de-spiking (w deviates from 3 point median by more than number of std dev): 5.0

Total number of  ensembles:       32216
Interval between ensembles:      20 min
Original number of bins:             32
Number of acceptable velocity bins:  24

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

Number of temperature ens. flagged:      0

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

	Int.	Velocity		Number of velocity gaps of length									
Bin	ens.	ens.	%										
	flgd	flgd	flgd	1	2	3	4	5	6-10	11-20	21-30	31-50	>50
1	0	445	1	363	27	8	1	0	0	0	0	0	0
2	0	416	1	330	29	8	1	0	0	0	0	0	0
3	0	601	2	446	50	9	4	1	1	0	0	0	0
4	0	1308	4	842	133	32	12	6	4	0	0	0	0
5	0	2561	8	1254	273	105	34	21	23	2	0	0	0
6	0	3197	10	1516	379	125	52	24	27	1	0	0	0
7	0	4015	12	2065	520	149	50	21	21	1	0	0	0
8	0	4007	12	2223	470	131	56	23	14	1	0	0	0
9	0	2808	9	1709	297	97	26	9	9	0	0	0	0
10	0	2239	7	1312	261	68	26	13	5	0	0	0	0
11	0	1313	4	865	124	37	5	6	5	0	0	0	0
12	0	923	3	671	81	22	1	4	0	0	0	0	0
13	0	772	2	584	51	16	4	3	1	0	0	0	0
14	0	765	2	558	80	9	5	0	0	0	0	0	0
15	0	751	2	591	66	8	1	0	0	0	0	0	0
16	0	813	3	634	66	11	1	2	0	0	0	0	0
17	0	846	3	668	63	9	5	1	0	0	0	0	0
18	0	1055	3	721	100	16	7	2	5	1	0	0	0
19	0	1810	6	831	126	31	18	8	20	23	1	0	0
20	0	3283	10	972	202	74	32	12	49	27	20	6	0
21	0	5429	17	1126	301	101	60	40	85	68	27	12	2
22	0	8152	25	1349	389	180	103	61	168	115	40	14	4
23	0	10839	34	1400	448	180	105	95	213	159	63	37	2
24	0	13200	41	1352	412	202	118	79	223	178	94	64	7

NWFC1706 ADCP 1285

Deployment: NWFC1706 updated 2018/11/09
Instrument no.: 1285
Instrument freq.: 75
Latitude: 61 23.552 N
Longitude:08 18.930 W
Bottom depth: 838
Instrument depth: 832
Center depth of first bin: 796
Bin length: 25
Number of bins: 24
Number of first ensemble: 469
Time of first ensemble: 2017 06 13 01 00
Number of last ensemble: 32684
Time of last ensemble: 2018 09 03 11 20
Time between ensembles (min.): 20
All directions have been corrected by adding: -6.0

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

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	796	42	1039	1032	308	986
2	771	67	1110	1104	310	987
3	746	92	1124	1118	312	981
4	721	117	1112	1105	313	959
5	696	142	1081	1075	313	921
6	671	167	1004	995	313	901
7	646	192	833	808	315	875
8	621	217	605	538	319	876
9	596	242	420	291	324	913
10	571	267	297	111	339	931
11	546	292	240	39	43	959
12	521	317	217	58	101	971
13	496	342	208	81	115	976
14	471	367	205	96	120	976
15	446	392	206	105	123	977
16	421	417	209	111	126	975
17	396	442	213	115	128	974
18	371	467	215	117	129	967
19	346	492	217	118	130	944
20	321	517	219	118	131	898
21	296	542	222	119	131	831
22	271	567	226	123	132	747
23	246	592	229	127	132	664
24	221	617	230	130	133	590

NWFC1706 ADCP 1285

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	796	986	986	985	984	980	975	963	914	802	607	362	156	45	9	1	0	0	0
2	771	987	987	986	985	981	978	971	948	891	773	565	297	98	17	2	0	0	0
3	746	981	981	981	979	976	972	966	946	900	798	610	328	108	17	1	0	0	0
4	721	959	959	959	957	953	948	940	915	864	756	564	301	94	15	1	0	0	0
5	696	920	919	917	913	904	893	877	843	780	671	494	265	84	14	1	0	0	0
6	671	897	888	877	864	845	820	785	737	661	544	387	210	74	14	1	0	0	0
7	646	859	825	786	749	708	661	606	532	438	329	212	109	38	8	1	0	0	0
8	621	834	739	645	570	500	435	367	290	211	140	81	38	14	4	1	0	0	0
9	596	837	670	507	385	297	229	170	121	79	47	24	10	4	2	1	0	0	0
10	571	817	582	362	212	131	85	55	32	16	7	2	1	0	0	0	0	0	0
11	546	814	522	270	121	55	27	13	6	3	1	0	0	0	0	0	0	0	0
12	521	806	480	220	80	28	11	4	1	0	0	0	0	0	0	0	0	0	0
13	496	798	459	192	66	21	6	2	0	0	0	0	0	0	0	0	0	0	0
14	471	793	450	189	65	20	5	1	0	0	0	0	0	0	0	0	0	0	0
15	446	789	451	195	68	23	7	1	0	0	0	0	0	0	0	0	0	0	0
16	421	791	455	199	75	28	8	2	0	0	0	0	0	0	0	0	0	0	0
17	396	794	462	206	81	32	10	2	0	0	0	0	0	0	0	0	0	0	0
18	371	794	464	210	84	35	11	3	0	0	0	0	0	0	0	0	0	0	0
19	346	777	458	210	87	36	13	3	0	0	0	0	0	0	0	0	0	0	0
20	321	741	437	205	86	38	14	3	0	0	0	0	0	0	0	0	0	0	0
21	296	686	410	196	84	39	15	3	0	0	0	0	0	0	0	0	0	0	0
22	271	619	374	184	82	39	15	3	0	0	0	0	0	0	0	0	0	0	0
23	246	554	333	169	80	38	15	4	0	0	0	0	0	0	0	0	0	0	0
24	221	489	296	152	75	37	15	4	0	0	0	0	0	0	0	0	0	0	0

NWFC1706 ADCP 1285

Harmonic constants for constituent M2 for deployment NWFC1706.

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	796	12	87	17	296	21	5	124	286	A
02	771	13	78	18	289	21	6	124	279	A
03	746	14	72	23	283	26	7	120	275	A
04	721	14	69	26	286	28	8	116	278	A
05	696	20	81	31	295	36	10	120	286	A
06	671	37	104	45	304	57	10	130	296	A
07	646	63	116	58	307	85	9	137	301	A
08	621	74	128	53	314	91	4	144	310	A
09	596	64	149	19	320	66	3	164	328	C
10	571	52	181	27	134	56	18	22	173	A
11	546	53	209	56	140	63	44	50	169	A
12	521	56	225	70	148	72	53	68	164	A
13	496	59	238	78	156	79	58	77	165	A
14	471	62	250	84	164	84	61	84	168	A
15	446	63	258	88	171	88	63	87	173	A
16	421	64	266	91	177	91	64	89	177	A
17	396	67	271	93	182	93	67	89	182	A
18	371	69	276	95	185	95	69	90	185	A
19	346	72	278	98	189	98	72	89	189	A
20	321	73	282	100	191	100	73	91	190	A
21	296	75	284	103	193	103	75	92	191	A
22	271	77	287	102	193	103	76	96	188	A
23	246	76	287	101	196	101	76	93	194	A
24	221	75	290	97	199	97	75	93	197	A

Harmonic constants for constituent S2 for deployment NWFC1706.

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	796	4	104	6	306	7	1	120	300	A
02	771	4	89	6	311	7	2	117	302	A
03	746	5	89	7	311	8	3	121	299	A
04	721	5	95	8	322	9	3	121	309	A
05	696	6	124	8	347	10	3	121	334	A
06	671	12	155	13	8	17	5	133	353	A
07	646	23	174	19	18	29	6	141	4	A
08	621	29	180	17	4	34	1	149	1	A
09	596	20	188	11	324	22	7	156	359	C
10	571	12	239	12	231	16	1	45	235	A
11	546	17	278	21	201	22	16	65	220	A
12	521	21	285	26	201	26	20	77	211	A
13	496	22	291	28	204	28	22	84	209	A
14	471	20	298	28	208	28	20	90	208	A
15	446	18	305	29	213	29	18	92	212	A
16	421	19	308	30	216	30	19	92	215	A
17	396	19	310	32	218	32	19	92	217	A
18	371	19	313	32	219	32	19	94	217	A
19	346	20	318	34	224	34	20	94	221	A
20	321	20	320	32	224	33	19	96	221	A
21	296	21	322	33	226	33	21	97	222	A
22	271	20	320	31	229	31	20	90	229	A
23	246	21	321	36	230	36	21	91	229	A
24	221	22	323	34	235	34	22	88	236	A

NWFC1706 ADCP 1285

Harmonic constants for constituent N2 for deployment NWFC1706.

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	796	2	32	5	236	5	1	112	233	A
02	771	3	46	6	239	7	1	114	236	A
03	746	4	42	8	244	9	1	114	240	A
04	721	4	64	9	248	9	0	113	248	A
05	696	5	57	10	250	11	1	117	247	A
06	671	10	63	11	258	15	2	131	251	A
07	646	17	86	13	277	21	2	144	269	A
08	621	23	112	14	297	27	1	148	293	A
09	596	21	125	8	302	23	0	160	304	C
10	571	16	146	3	74	16	3	3	145	A
11	546	15	169	10	106	16	8	22	157	A
12	521	13	186	14	119	16	11	49	149	A
13	496	13	195	14	128	16	10	51	156	A
14	471	12	208	15	135	16	11	60	157	A
15	446	13	223	16	145	16	12	69	161	A
16	421	13	235	17	153	17	12	79	161	A
17	396	13	241	18	160	18	13	78	169	A
18	371	13	247	19	165	19	13	79	173	A
19	346	14	248	19	167	20	14	78	175	A
20	321	15	259	20	167	20	15	94	164	A
21	296	15	266	21	172	21	15	95	169	A
22	271	16	266	20	175	20	16	93	173	A
23	246	16	267	21	172	22	15	97	167	A
24	221	13	254	20	171	20	13	82	177	A

Harmonic constants for constituent O1 for deployment NWFC1706.

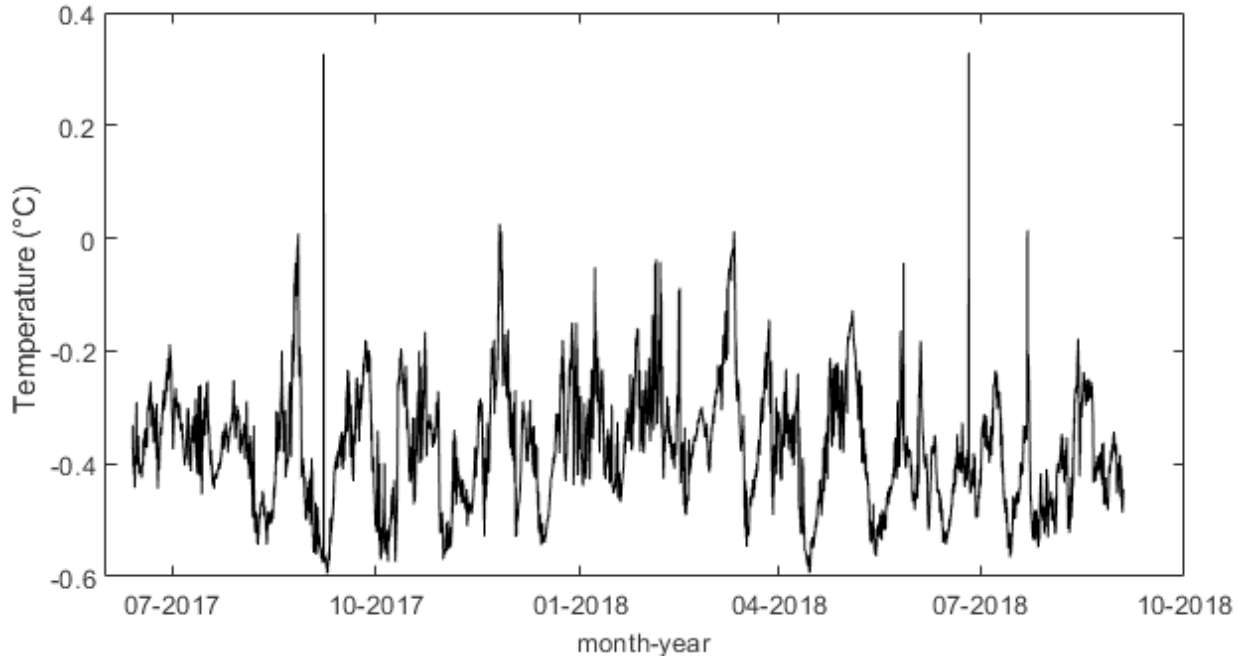
Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	796	10	319	14	145	17	1	126	143	A
02	771	10	318	14	143	17	1	124	142	A
03	746	10	322	16	144	19	0	122	143	A
04	721	11	323	18	148	21	1	122	147	A
05	696	15	329	22	152	27	0	124	151	A
06	671	25	338	30	156	39	1	130	157	C
07	646	38	350	38	162	53	4	135	166	C
08	621	43	356	42	172	60	2	135	174	C
09	596	41	359	42	178	59	1	134	179	C
10	571	31	4	33	182	45	1	133	183	C
11	546	23	7	25	183	34	1	132	185	C
12	521	19	8	20	180	28	2	134	184	C
13	496	17	8	17	180	24	1	134	184	C
14	471	16	15	17	182	23	3	133	188	C
15	446	16	18	17	180	23	4	133	188	C
16	421	15	17	17	179	22	3	130	187	C
17	396	14	17	16	181	21	3	132	188	C
18	371	14	17	16	182	21	3	131	188	C
19	346	15	17	17	175	22	4	132	185	C
20	321	15	23	17	174	22	6	131	187	C
21	296	13	30	14	186	19	4	131	196	C
22	271	12	38	14	199	18	3	131	207	C
23	246	13	40	14	194	19	4	133	206	C
24	221	12	29	12	190	17	3	135	200	C

NWFC1706 ADCP 1285

Harmonic constants for constituent K1 for deployment NWFC1706.

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	796	8	233	9	53	12	0	130	53	C
02	771	8	228	9	48	12	0	130	48	C
03	746	9	225	11	47	15	0	130	46	A
04	721	10	231	13	53	16	0	126	52	A
05	696	12	241	15	58	19	0	129	59	C
06	671	21	250	21	67	29	1	135	68	C
07	646	32	248	29	67	43	0	138	67	C
08	621	43	249	36	70	55	0	140	69	A
09	596	37	250	31	74	48	2	140	72	A
10	571	26	246	25	78	36	4	136	72	A
11	546	20	243	20	77	28	3	135	70	A
12	521	16	247	18	82	24	3	132	75	A
13	496	13	254	17	81	22	1	128	79	A
14	471	13	260	16	83	21	0	128	82	A
15	446	11	266	17	79	20	1	124	82	C
16	421	11	271	18	81	21	2	121	84	C
17	396	11	268	19	79	22	2	120	81	C
18	371	12	265	21	77	24	2	120	79	C
19	346	12	261	23	75	26	1	118	76	C
20	321	14	255	22	71	25	1	122	72	C
21	296	15	252	22	72	27	0	124	72	A
22	271	15	256	22	68	27	2	125	71	C
23	246	13	255	19	50	23	5	124	58	C
24	221	8	276	17	53	18	5	110	59	C

NWFC1706 SBE39plus 7752



NWNB1706

Latitude: 62°55.112´N

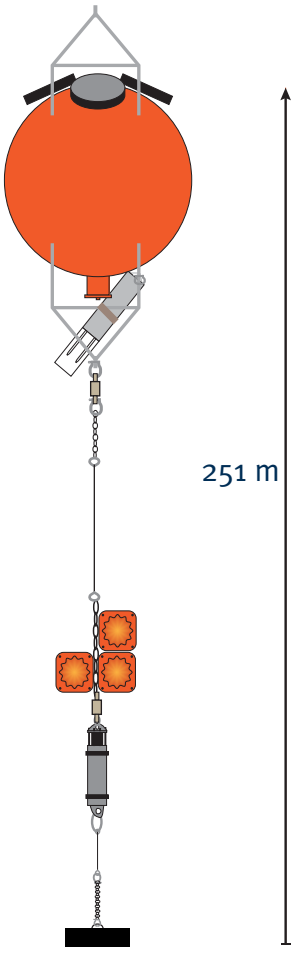
Longitude: 006°04.904´W

Echo sound depth: 986 m

Bottom depth corr.: 961 m

Time of deployment: 9/6 - 2017 0920 UTC

Time of recovery: 18/5 - 2018 0801 UTC



ADCP:

Instrument no.: RDI ADCP 1577

Instrument frequency: 75 kHz

Height above bottom: 251 m

Depth: 710 m

Time of first data: 9/6 - 2017 1002 UTC

Time of last data: 18/5 - 2018 0742 UTC

Sample interval: 20 min

No. of ensembles: 24690

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 674 m

No. of bins: 23

MicroCat:

Instrument no.: 6094

Height above bottom: 250 m

Instrument depth: 711 m

Time of first data: 9/6 - 2017 1000 UTC

Time of last data: 18/5 - 2018 0740 UTC

Sample interval: 10 min

No. of ensembles: 49379

Data:

The temperature and pressure from the MicroCat are calibrated against an SBE911+. The salinity data seem to have a drift and are not calibrated.

NWNB1706 ADCP 1577

Error statistics for deployment: NWNB1706 updated 2018/12/06

Temperature edited
Surface distance not edited
Heading, pitch and roll not edited
Intensity not edited

Velocity (spd, dir, wel) is error flagged using these data filters:
Maximum Speed factor (Average speed for each bin times factor): 5.0
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 1): 6.00
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 23): 3.87
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 32): 2.00
Std dev for vertical de-spiking (u and v deviate from 3 point median by more than number of std dev): 4.0

Total number of ensembles: 24690
Interval between ensembles: 20 min
Original number of bins: 32
Number of acceptable velocity bins: 23

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

	Int.	Velocity		Number of velocity gaps of length									
Bin	ens.	ens.	%										
	flgd	flgd	flgd	1	2	3	4	5	6-10	11-20	21-30	31-50	>50
1	0	14	0	14	0	0	0	0	0	0	0	0	0
2	0	43	0	43	0	0	0	0	0	0	0	0	0
3	0	45	0	43	1	0	0	0	0	0	0	0	0
4	0	38	0	38	0	0	0	0	0	0	0	0	0
5	0	24	0	22	1	0	0	0	0	0	0	0	0
6	0	39	0	37	1	0	0	0	0	0	0	0	0
7	0	55	0	49	3	0	0	0	0	0	0	0	0
8	0	55	0	46	3	1	0	0	0	0	0	0	0
9	0	78	0	64	7	0	0	0	0	0	0	0	0
10	0	94	0	79	6	1	0	0	0	0	0	0	0
11	0	119	0	100	8	1	0	0	0	0	0	0	0
12	0	122	0	108	7	0	0	0	0	0	0	0	0
13	0	188	1	145	14	5	0	0	0	0	0	0	0
14	0	238	1	190	11	6	2	0	0	0	0	0	0
15	0	248	1	201	14	5	1	0	0	0	0	0	0
16	0	455	2	238	29	9	2	1	3	3	2	0	0
17	0	1088	4	295	47	13	11	7	15	13	5	4	0
18	0	2497	10	271	51	29	14	8	32	36	17	19	0
19	0	3838	16	315	82	32	37	19	54	52	13	36	1
20	0	4543	18	327	70	48	43	32	101	55	25	23	8
21	0	6017	24	424	104	69	68	48	110	59	29	29	18
22	0	8222	33	456	166	103	62	48	107	71	58	45	25
23	0	10766	44	519	185	102	70	51	92	98	81	65	34

NWNB1706 ADCP 1577

Deployment: NWNB1706 updated 2018/12/06
Instrument no.: 1577
Instrument freq.: 75
Latitude: 62 55.112 N
Longitude:06 04.904 W
Bottom depth: 961
Instrument depth: 710
Center depth of first bin: 674
Bin length: 25
Number of bins: 23
Number of first ensemble: 208
Time of first ensemble: 2017 06 09 10 02
Number of last ensemble: 24897
Time of last ensemble: 2018 05 18 07 42
Time between ensembles (min.): 20
All directions have been corrected by adding: -5.0

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

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	674	287	131	35	94	999
2	649	312	129	30	93	998
3	624	337	127	26	92	998
4	599	362	126	22	90	998
5	574	387	126	18	90	999
6	549	412	126	15	90	998
7	524	437	126	13	91	998
8	499	462	129	14	92	998
9	474	487	135	17	100	997
10	449	512	141	23	108	996
11	424	537	148	35	110	995
12	399	562	160	50	110	995
13	374	587	174	69	110	992
14	349	612	187	89	110	990
15	324	637	203	110	110	990
16	299	662	221	130	111	982
17	274	687	241	150	110	956
18	249	712	257	166	110	899
19	224	737	272	182	109	845
20	199	762	287	197	109	816
21	174	787	301	210	110	756
22	149	812	313	220	110	667
23	124	837	323	227	112	564

NWNB1706 ADCP 1577

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	674	584	187	39	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	649	577	176	33	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	624	572	164	29	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	599	574	162	27	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	574	573	161	27	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	549	577	155	24	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	524	587	153	25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	499	604	163	28	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	474	624	187	36	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	449	650	215	41	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	424	689	244	50	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	399	722	299	70	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0
13	374	749	353	106	20	2	0	0	0	0	0	0	0	0	0	0	0	0	0
14	349	776	401	146	35	6	0	0	0	0	0	0	0	0	0	0	0	0	0
15	324	805	458	194	53	9	1	0	0	0	0	0	0	0	0	0	0	0	0
16	299	819	503	251	90	20	3	0	0	0	0	0	0	0	0	0	0	0	0
17	274	815	542	299	128	36	7	1	0	0	0	0	0	0	0	0	0	0	0
18	249	776	542	326	157	53	12	2	0	0	0	0	0	0	0	0	0	0	0
19	224	742	534	339	176	68	19	4	1	0	0	0	0	0	0	0	0	0	0
20	199	727	541	356	193	86	28	7	1	0	0	0	0	0	0	0	0	0	0
21	174	682	519	353	203	97	37	11	2	0	0	0	0	0	0	0	0	0	0
22	149	604	470	328	197	100	43	14	4	1	0	0	0	0	0	0	0	0	0
23	124	514	397	284	178	96	46	17	5	1	0	0	0	0	0	0	0	0	0

NWNB1706 ADCP 1577

Harmonic constants for constituent M2 for deployment NWNB1706.

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	674	69	258	51	116	82	26	146	90	A
02	649	70	259	50	118	82	27	147	91	A
03	624	72	260	49	121	83	28	149	92	A
04	599	76	261	50	125	85	31	151	93	A
05	574	80	263	49	131	88	33	153	94	A
06	549	83	267	46	139	89	34	158	96	A
07	524	86	272	43	150	90	35	163	99	A
08	499	90	279	41	164	92	36	168	104	A
09	474	97	285	41	183	97	40	174	108	A
10	449	103	291	44	200	103	44	180	112	A
11	424	108	296	49	214	109	49	4	294	A
12	399	116	302	57	225	117	55	8	298	A
13	374	121	305	66	233	123	62	13	299	A
14	349	124	310	72	240	127	66	15	302	A
15	324	125	315	77	247	130	69	18	305	A
16	299	127	318	84	252	134	73	22	306	A
17	274	130	321	90	254	137	78	23	307	A
18	249	130	323	94	257	139	80	25	308	A
19	224	131	326	95	259	139	83	25	311	A
20	199	130	326	97	259	139	84	26	310	A
21	174	132	328	99	260	141	86	26	311	A
22	149	131	330	103	259	139	92	27	312	A
23	124	132	301	102	229	139	93	25	284	A

Harmonic constants for constituent S2 for deployment NWNB1706.

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	674	30	306	17	192	31	15	162	135	A
02	649	29	309	15	193	30	13	164	136	A
03	624	29	312	14	198	30	13	166	138	A
04	599	28	315	13	204	29	12	168	140	A
05	574	28	320	11	209	28	10	171	143	A
06	549	26	322	9	210	26	8	172	145	A
07	524	27	324	9	214	27	8	173	146	A
08	499	29	330	10	235	29	10	178	151	A
09	474	32	337	13	258	32	13	6	334	A
10	449	34	340	15	267	34	14	9	337	A
11	424	34	346	16	278	34	14	12	341	A
12	399	34	347	15	285	34	13	14	342	A
13	374	34	349	16	291	35	13	16	343	A
14	349	33	352	17	301	35	12	20	345	A
15	324	32	356	17	304	34	13	21	347	A
16	299	32	353	18	301	35	13	22	344	A
17	274	31	350	19	300	33	13	26	339	A
18	249	29	346	19	304	32	11	29	335	A
19	224	28	347	21	310	33	11	34	335	A
20	199	34	356	24	309	39	15	32	342	A
21	174	35	0	26	314	41	16	33	346	A
22	149	32	5	28	319	39	17	40	345	A
23	124	38	335	31	294	46	17	37	319	A

NWNB1706 ADCP 1577

Harmonic constants for constituent N2 for deployment NWNB1706.

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	674	8	264	4	60	9	1	158	80	C
02	649	9	265	3	51	10	2	165	83	C
03	624	10	271	2	32	10	2	173	90	C
04	599	10	276	1	25	10	1	178	96	C
05	574	11	278	1	255	11	0	4	278	A
06	549	13	282	4	229	13	3	11	279	A
07	524	15	290	7	226	15	6	13	285	A
08	499	17	296	8	228	17	7	12	290	A
09	474	20	295	11	234	20	9	19	286	A
10	449	19	288	11	226	20	9	19	279	A
11	424	18	278	9	210	18	8	12	272	A
12	399	20	268	8	187	20	8	5	266	A
13	374	22	261	9	173	22	9	1	260	A
14	349	20	266	9	181	20	9	3	264	A
15	324	22	273	11	193	22	11	7	269	A
16	299	24	276	15	194	25	14	7	272	A
17	274	27	274	16	187	27	16	3	272	A
18	249	27	278	16	196	27	15	7	274	A
19	224	26	282	16	205	26	15	12	275	A
20	199	25	287	17	205	26	16	9	281	A
21	174	24	294	16	202	25	16	177	116	A
22	149	27	293	15	196	27	15	174	116	A
23	124	26	260	14	172	26	14	2	260	A

Harmonic constants for constituent O1 for deployment NWNB1706.

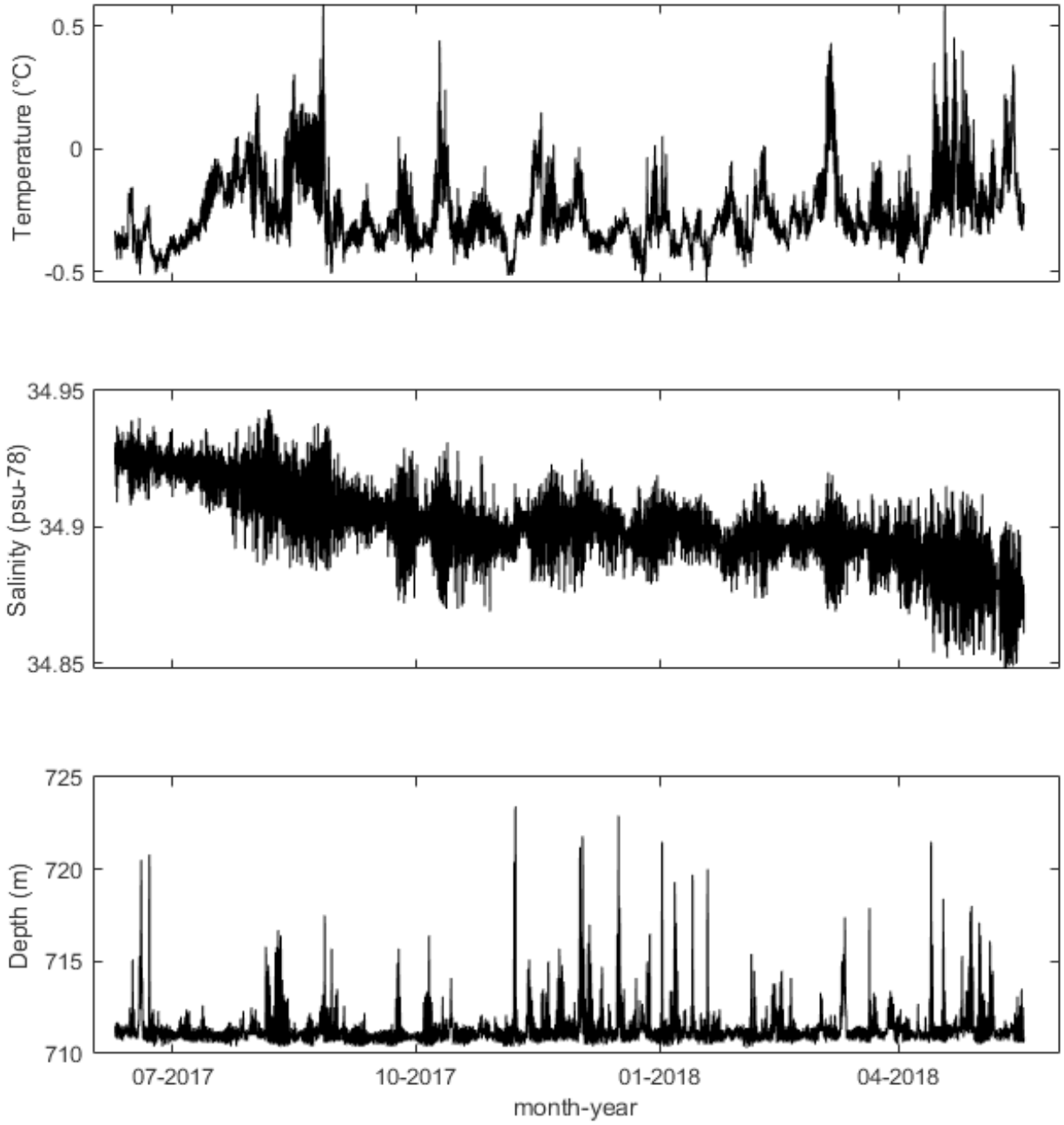
Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	674	4	28	3	283	4	3	154	227	A
02	649	5	26	3	273	5	3	160	217	A
03	624	4	25	3	287	4	3	155	227	A
04	599	4	35	3	274	4	2	152	230	A
05	574	5	52	3	303	5	3	161	244	A
06	549	6	44	5	307	6	5	161	239	A
07	524	5	33	4	287	6	4	156	230	A
08	499	5	37	3	287	5	3	161	229	A
09	474	7	46	4	284	7	3	159	235	A
10	449	8	37	4	265	9	3	159	224	A
11	424	10	28	6	269	11	5	159	218	A
12	399	11	39	6	277	12	5	158	229	A
13	374	10	51	5	287	11	4	162	238	A
14	349	10	52	6	276	11	4	154	242	A
15	324	10	35	7	265	12	5	150	228	A
16	299	14	39	6	276	14	5	163	225	A
17	274	14	44	8	290	14	7	163	233	A
18	249	14	52	6	301	14	6	169	237	A
19	224	15	61	6	290	16	4	165	245	A
20	199	13	43	7	271	14	5	159	230	A
21	174	16	63	3	243	16	0	171	243	C
22	149	19	52	1	313	19	1	179	232	A
23	124	23	26	4	305	23	4	1	26	A

NWNB1706 ADCP 1577

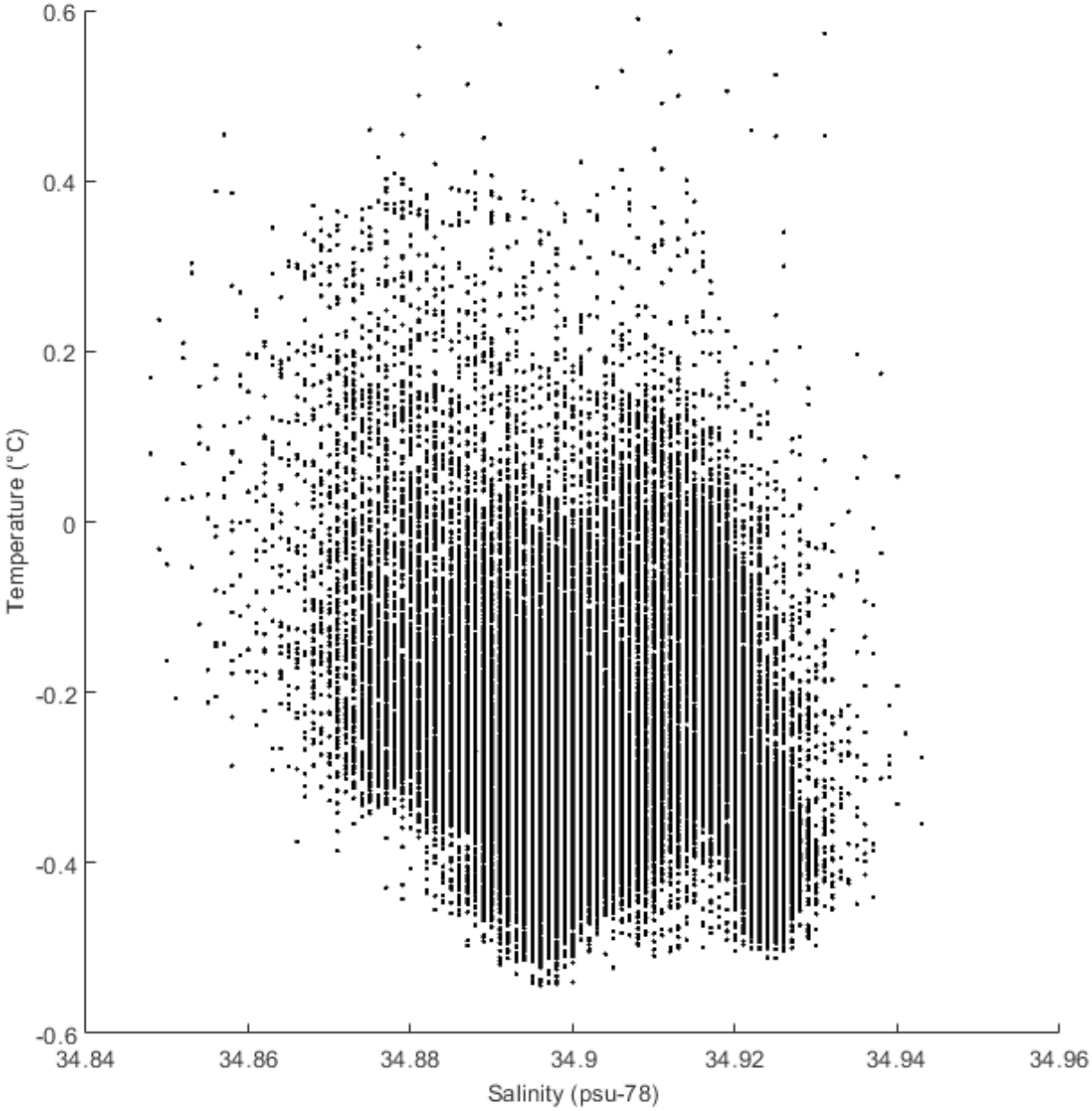
Harmonic constants for constituent K1 for deployment NWNB1706.

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	674	6	289	4	183	6	4	159	123	A
02	649	6	290	5	185	6	4	153	130	A
03	624	6	284	5	181	6	5	157	121	A
04	599	7	280	4	173	7	4	163	111	A
05	574	6	280	4	173	6	3	162	111	A
06	549	5	281	3	173	5	3	164	110	A
07	524	6	281	4	173	6	3	163	111	A
08	499	7	280	5	180	7	5	168	108	A
09	474	7	281	5	183	7	5	168	110	A
10	449	8	273	5	153	9	4	154	106	A
11	424	9	274	6	155	10	5	155	107	A
12	399	10	287	5	176	10	5	167	113	A
13	374	8	278	4	143	9	3	157	106	A
14	349	9	277	4	148	9	3	160	104	A
15	324	10	283	3	122	11	1	163	105	A
16	299	13	279	5	123	14	2	162	101	A
17	274	16	282	5	138	16	3	166	104	A
18	249	18	297	5	128	19	1	165	118	A
19	224	18	301	6	137	19	2	162	122	A
20	199	17	294	8	143	18	3	157	119	A
21	174	12	294	4	158	12	3	165	117	A
22	149	12	339	11	192	15	4	138	174	A
23	124	11	339	20	165	22	1	120	164	A

NWNB1706 MicroCat 6094



NWNB1706 MicroCat 6094



NWNI1706

Latitude: 62°34.961´N

Longitude: 006°05.260´W

Echo sound depth: 153 m

Bottom depth corr.: 156 m

Time of deployment: 9/6 - 2017 0610 UTC

Time of recovery: 18/5 - 2018 1259 UTC

ADCP:

Instrument no.: RDI ADCP 1279

Instrument frequency: 150 kHz

Height above bottom: 1 m

Depth: 155 m

Time of first data: 9/6 - 2017 0620 UTC

Time of last data: 18/5 - 2018 1240 UTC

Sample interval: 20 min

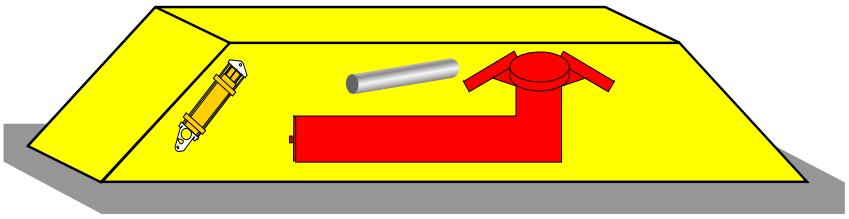
No. of ensembles: 24716

Pings per ens.: 1

Binlength: 10 m

Depth of first bin: 139 m

No. of bins: 11



MicroCat:

Instrument no.: 4568

Height above bottom: 1 m

Instrument depth: 155 m

Time of first data: 9/6 - 2017 1200 UTC

Time of last data: 18/5 - 2018 1240 UTC

Sample interval: 20 min

No. of ensembles: 24699

Data:

The temperature and salinity from the MicroCat are calibrated against an SBE911+.

NWNI1706 ADCP 1279

```
Error statistics for deployment: NWNI1706 updated 2018/12/06
-------------------------------------------------------------

Temperature edited
Surface distance not edited
Heading, pitch and roll not edited
Intensity not edited

Velocity (spd, dir, wel ) is error flagged using these data filters:
Minimum Intensity threshold: 52.0
Maximum Speed factor (Average speed for each bin times factor): 4.0
Maximum Absolute Vertical Velocity threshold: 150.0
Maximum Absolute Error Velocity threshold (erv_tr+0.1*spd): 100.0
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 1): 4.00
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 11): 3.26
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 30):-0.00
Std dev for vertical de-spiking (u and v deviate from 3 point median by more than number of std dev): 3.0
Std dev for de-spiking (w deviates from 3 point median by more than number of std dev): 3.0

Total number of  ensembles:       24716
Interval between ensembles:      20 min
Original number of bins:             30
Number of acceptable velocity bins:  11

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


Number of temperature ens. flagged:      0

Below are for each bin listed ensembles flagged for intensity in number and for
velocity in number and % of total ens.number. For velocity is also shown the num-
ber of gaps of various lengths (gap length = number of consecutive flagged ens.)
-------------------------------------------------------------------------------
     Int.  Velocity |             Number of velocity gaps of length
Bin  ens.  ens.    %|-----------------------------------------------------------
    flgd   flgd flgd|    1     2     3     4     5  6-10 11-20 21-30 31-50   >50
-------------------------------------------------------------------------------
  1     0  1427    6| 1043   125    28     6     1     3     0     0     0     0
  2     0  2021    8| 1382   206    50    13     5     0     0     0     0     0
  3     0  1919    8| 1290   183    51    15     3     5     0     0     0     0
  4     0  1803    7| 1167   188    44    16     5     5     0     0     0     0
  5     0  1700    7| 1054   178    46    19    10     4     0     0     0     0
  6     0  1671    7|  960   171    47    26     9    11     0     0     0     0
  7     0  1736    7|  927   173    65    22    11    15     2     0     0     0
  8     0  2017    8| 1037   179    66    33    14    20     6     0     0     0
  9     0  2897   12| 1323   282   103    46    28    33     5     2     1     0
 10     0  4606   19| 1800   458   170    82    48    69    17     2     1     0
 11     0  7610   31| 2189   744   314   162    92   130    46     9     0     1
```

NWNI1706 ADCP 1279

Deployment: NWNI1706 updated 2018/12/06
Instrument no.: 1279
Instrument freq.: 150
Latitude: 62 34.961 N
Longitude:06 05.260 W
Bottom depth: 156
Instrument depth: 155
Center depth of first bin: 139
Bin length: 10
Number of bins: 11
Number of first ensemble: 197
Time of first ensemble: 2017 06 09 06 20
Number of last ensemble: 24912
Time of last ensemble: 2018 05 18 12 40
Time between ensembles (min.): 20
All directions have been corrected by adding: -5.0

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

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	139	17	227	87	110	942
2	129	27	250	98	113	918
3	119	37	271	106	114	922
4	109	47	287	114	116	927
5	99	57	301	120	117	931
6	89	67	312	124	118	932
7	79	77	323	128	119	930
8	69	87	333	132	119	918
9	59	97	348	137	120	883
10	49	107	368	143	120	814
11	39	117	399	155	120	692

NWNI1706 ADCP 1279

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	139	811	500	234	89	29	7	1	0	0	0	0	0	0	0	0	0	0	0
2	129	819	547	282	127	49	14	3	0	0	0	0	0	0	0	0	0	0	0
3	119	845	601	334	161	69	24	6	1	0	0	0	0	0	0	0	0	0	0
4	109	861	642	371	190	90	36	11	2	0	0	0	0	0	0	0	0	0	0
5	99	874	673	405	215	108	47	15	4	1	0	0	0	0	0	0	0	0	0
6	89	879	691	435	237	121	55	20	6	1	0	0	0	0	0	0	0	0	0
7	79	878	706	463	260	137	66	26	8	2	0	0	0	0	0	0	0	0	0
8	69	868	708	479	278	152	75	32	12	3	0	0	0	0	0	0	0	0	0
9	59	836	694	487	299	168	87	39	15	5	1	0	0	0	0	0	0	0	0
10	49	774	651	479	312	186	104	51	22	8	3	1	0	0	0	0	0	0	0
11	39	659	570	438	305	197	117	63	33	16	8	4	2	1	0	0	0	0	0

Harmonic constants for constituent M2 for deployment NWNI1706.

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	139	184	304	180	177	230	115	136	150	A
02	129	206	304	204	179	256	136	136	151	A
03	119	228	304	223	182	279	154	136	152	A
04	109	243	306	238	185	296	168	136	154	A
05	99	257	307	248	188	308	180	137	156	A
06	89	266	308	256	190	317	189	137	157	A
07	79	275	310	260	193	324	196	138	158	A
08	69	280	311	261	194	326	199	139	159	A
09	59	283	312	261	196	327	203	140	159	A
10	49	287	313	261	198	328	207	141	160	A
11	39	290	313	263	198	331	210	142	160	A

Harmonic constants for constituent S2 for deployment NWNI1706.

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	139	68	345	65	217	85	41	137	189	A
02	129	75	344	72	219	93	48	137	190	A
03	119	81	344	79	220	100	53	136	191	A
04	109	87	345	84	223	105	59	137	192	A
05	99	91	346	88	226	110	63	137	194	A
06	89	94	347	90	230	111	68	137	196	A
07	79	98	349	91	231	115	69	139	196	A
08	69	96	350	92	233	114	69	138	199	A
09	59	96	351	92	234	114	70	138	200	A
10	49	99	352	91	236	115	71	140	199	A
11	39	99	352	96	236	117	74	137	202	A

NWNI1706 ADCP 1279

Harmonic constants for constituent N2 for deployment NWNI1706.

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	139	36	289	33	155	45	19	138	130	A
02	129	40	288	37	158	49	23	138	131	A
03	119	43	285	42	159	54	27	136	131	A
04	109	46	285	46	161	57	30	136	133	A
05	99	49	286	49	163	61	33	134	135	A
06	89	53	286	52	164	65	36	136	135	A
07	79	55	288	55	168	67	39	135	138	A
08	69	56	288	56	169	68	41	135	138	A
09	59	58	289	58	172	70	43	135	140	A
10	49	58	288	59	173	70	45	135	141	A
11	39	56	291	60	175	69	43	130	147	A

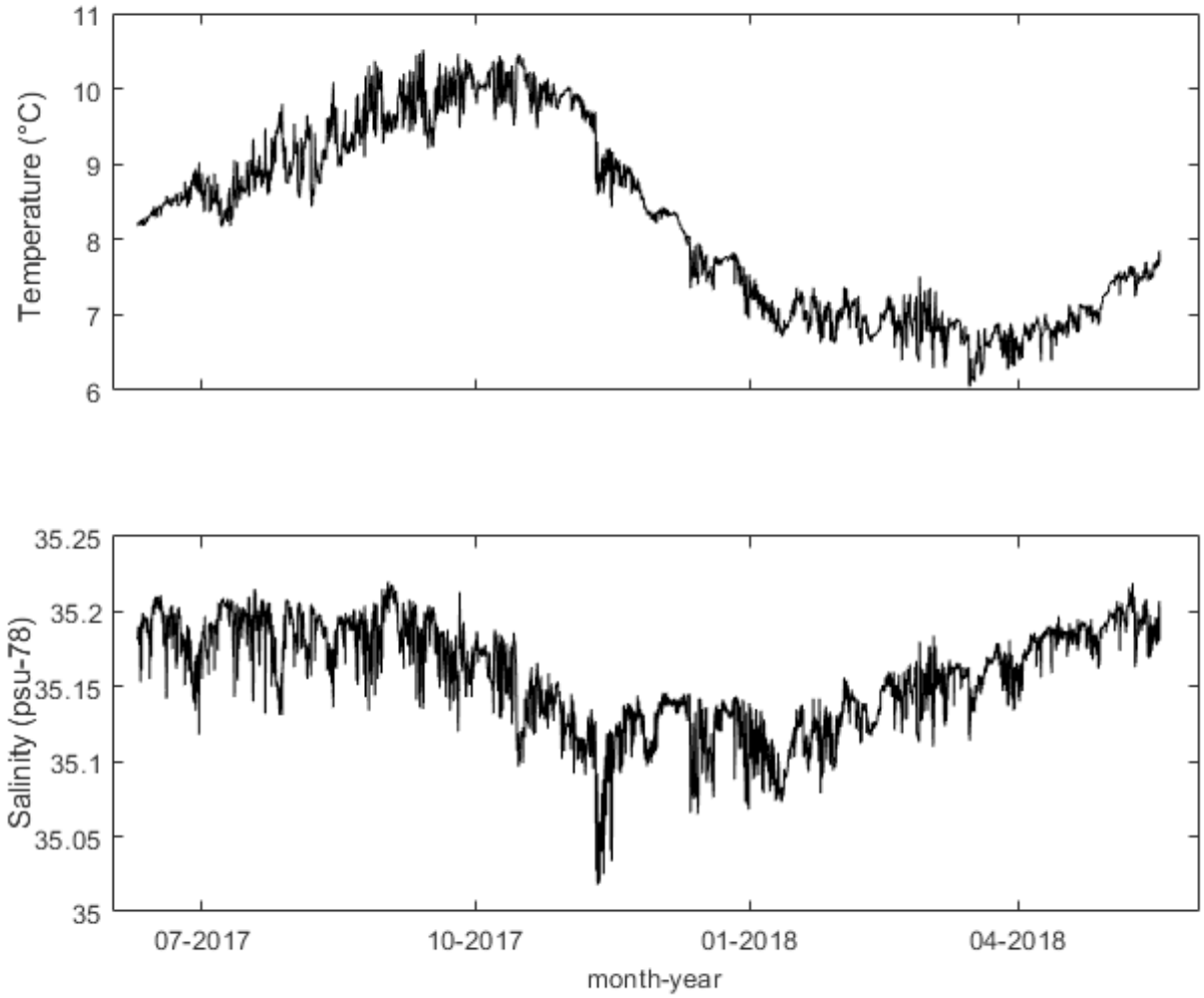
Harmonic constants for constituent O1 for deployment NWNI1706.

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	139	50	31	34	266	55	25	153	224	A
02	129	55	31	36	263	60	26	153	223	A
03	119	56	29	38	262	62	27	152	222	A
04	109	56	29	38	261	62	27	151	222	A
05	99	55	29	39	260	62	27	149	224	A
06	89	54	30	38	257	61	25	148	224	A
07	79	53	30	38	258	61	25	148	224	A
08	69	53	29	40	258	61	26	147	225	A
09	59	53	29	39	263	59	28	148	225	A
10	49	50	30	39	262	58	27	146	227	A
11	39	51	30	40	266	57	29	147	228	A

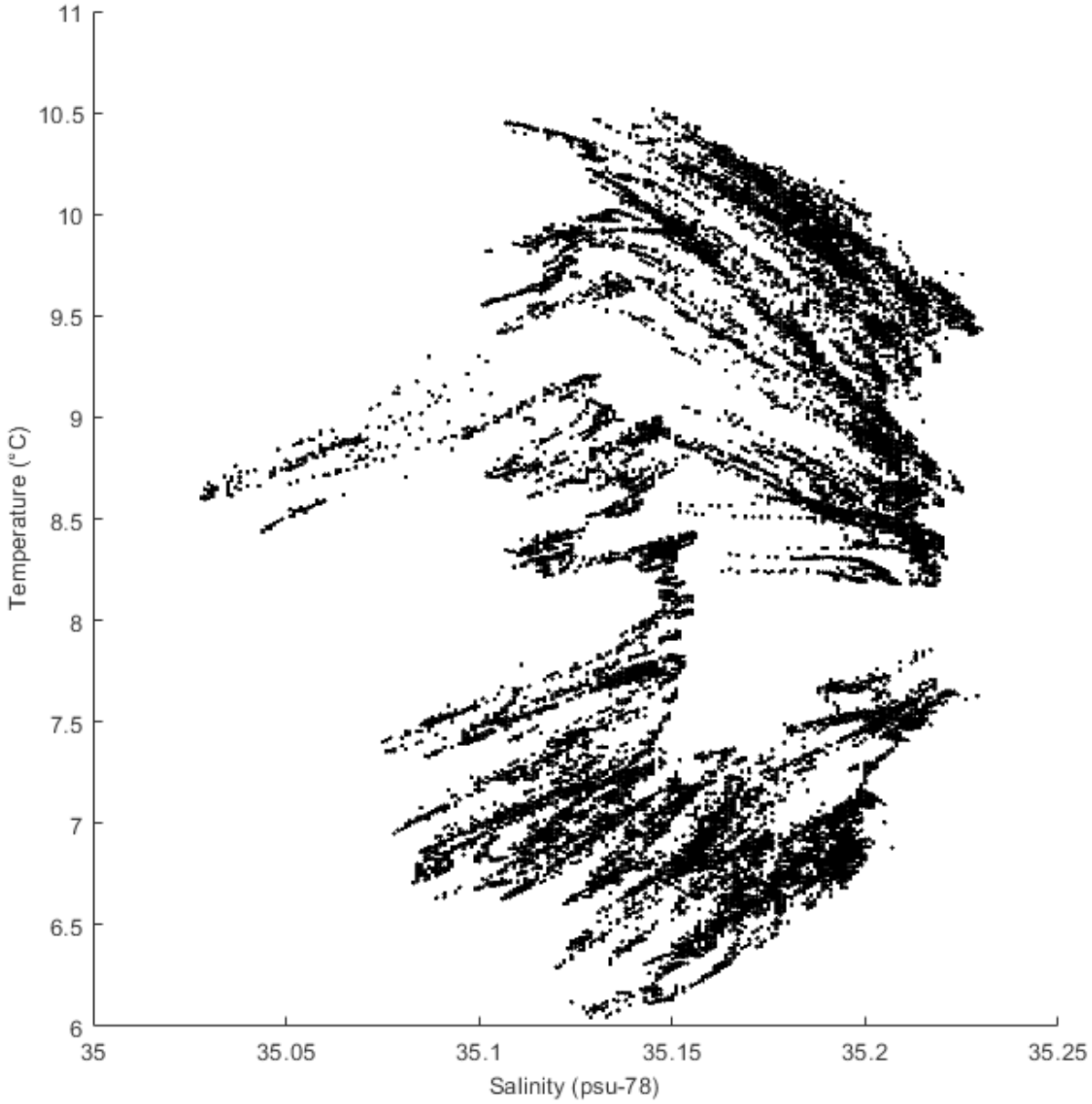
Harmonic constants for constituent K1 for deployment NWNI1706.

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	139	54	275	30	164	55	28	165	102	A
02	129	60	273	32	161	62	29	165	101	A
03	119	60	273	35	158	63	31	162	103	A
04	109	60	273	39	155	64	32	157	105	A
05	99	59	272	41	152	64	33	154	106	A
06	89	58	271	42	153	63	34	153	107	A
07	79	58	270	42	154	62	35	154	106	A
08	69	57	269	42	152	62	35	152	105	A
09	59	57	268	43	149	63	35	151	105	A
10	49	60	265	46	152	64	39	152	103	A
11	39	65	261	50	146	70	42	151	99	A

NWNI1706 ADCP 4568



NWNI1706 ADCP 4568



NWNJ1706

Latitude: 62°56.791´N

Longitude: 006°04.951´W

Echo sounding depth: 1203 m

Bottom depth corr.: 1210 m

Time of deployment: 9/6 - 2017 0950 UTC

Time of recovery: 18/5 - 2018 0644 UTC

ADCP:

Instrument no.: RDI ADCP 19518

Instrument frequency: 75 kHz

Height above bottom: 5 m

Depth: 1205 m

Time of first data: 9/6 - 2017 1020 UTC

Time of last data: 18/5 - 2018 0600 UTC

Sample interval: 20 min

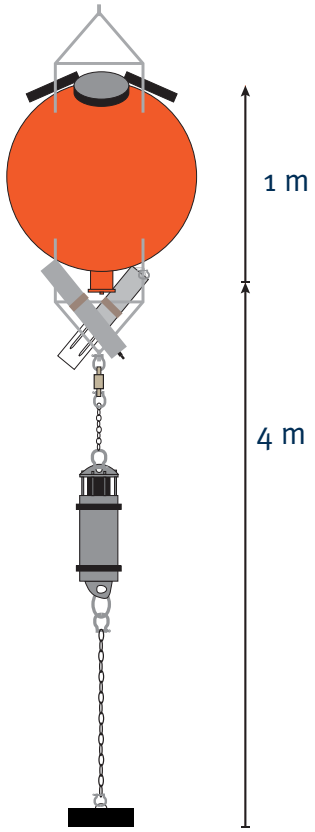
No. of ensembles: 24684

Pings per ens.: 10

Binlength: 10 m

Depth of first bin: 1186 m

No. of bins: 68



SBE56:

Instrument no.: 6503

Height above bottom: 4 m

Instrument depth: 1206 m

Time of first data: 9/6 - 2017 1027 UTC

Time of last data: 18/5 - 2018 0557 UTC

Sample interval: 10 min

No. of ensembles: 49366

Data:

The temperature from the SBE56 is calibrated against an SBE911+.

NWNJ1706 ADCP 19518

```
Error statistics for deployment: NWNJ1706 updated 2018/12/06
-----------------------------------------------------------------
Temperature edited
Depth edited
Surface distance not edited
Heading, pitch and roll not edited
Intensity not edited

Velocity (spd, dir, wel ) is error flagged using these data filters:
Minimum Correlation threshold: 64.0
Maximum Speed factor (Average speed for each bin times factor): 4.0
Maximum Absolute Error Velocity threshold (erv_tr+0.1*spd): 150.0
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 1): 4.00
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 68): 2.09
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 70): 2.00
Std dev for vertical de-spiking (u and v deviate from 3 point median by more than number of std dev): 4.0
Std dev for de-spiking (w deviates from 3 point median by more than number of std dev): 4.0

Total number of  ensembles:       24684
Interval between ensembles:      20 min
Original number of bins:            70
Number of acceptable velocity bins:  68

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

Number of depth ens. flagged      :      0
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	206	1	173	12	3	0	0	0	0	0	0	0
2	0	240	1	207	10	3	1	0	0	0	0	0	0
3	0	195	1	151	11	1	2	0	0	1	0	0	0
4	0	248	1	197	12	2	0	1	2	0	0	0	0
5	0	200	1	152	13	1	0	1	2	0	0	0	0
6	0	198	1	159	12	1	0	0	2	0	0	0	0
7	0	253	1	211	12	1	2	0	1	0	0	0	0
8	0	212	1	179	8	3	2	0	0	0	0	0	0
9	0	186	1	165	9	1	0	0	0	0	0	0	0
10	0	217	1	180	10	4	0	1	0	0	0	0	0
11	0	204	1	179	9	0	0	0	1	0	0	0	0
12	0	208	1	181	12	1	0	0	0	0	0	0	0
13	0	178	1	161	4	3	0	0	0	0	0	0	0
14	0	219	1	193	10	2	0	0	0	0	0	0	0
15	0	198	1	170	14	0	0	0	0	0	0	0	0
16	0	223	1	188	16	1	0	0	0	0	0	0	0
17	0	231	1	209	11	0	0	0	0	0	0	0	0
18	0	237	1	208	13	1	0	0	0	0	0	0	0
19	0	240	1	194	19	0	2	0	0	0	0	0	0
20	0	232	1	204	11	2	0	0	0	0	0	0	0
21	0	243	1	190	25	1	0	0	0	0	0	0	0
22	0	298	1	256	18	2	0	0	0	0	0	0	0
23	0	281	1	235	18	2	1	0	0	0	0	0	0
24	0	333	1	290	17	3	0	0	0	0	0	0	0
25	0	305	1	260	21	1	0	0	0	0	0	0	0
26	0	321	1	267	21	2	0	0	1	0	0	0	0
27	0	329	1	257	27	6	0	0	0	0	0	0	0
28	0	327	1	276	22	1	1	0	0	0	0	0	0
29	0	329	1	269	21	6	0	0	0	0	0	0	0
30	0	399	2	329	32	2	0	0	0	0	0	0	0
31	0	391	2	328	23	4	0	1	0	0	0	0	0
32	0	383	2	307	29	3	1	1	0	0	0	0	0
33	0	434	2	355	34	2	0	1	0	0	0	0	0
34	0	447	2	374	33	1	1	0	0	0	0	0	0
35	0	446	2	328	47	5	1	1	0	0	0	0	0
36	0	476	2	387	34	7	0	0	0	0	0	0	0
37	0	517	2	388	34	9	7	0	1	0	0	0	0
38	0	517	2	402	49	3	2	0	0	0	0	0	0
39	0	589	2	449	47	10	4	0	0	0	0	0	0
40	0	611	2	464	56	9	2	0	0	0	0	0	0
41	0	658	3	478	64	12	0	2	1	0	0	0	0
42	0	716	3	481	71	13	6	6	0	0	0	0	0
43	0	811	3	523	78	22	10	1	3	0	0	0	0
44	0	817	3	487	76	17	8	2	7	3	0	0	0
45	0	882	4	484	83	30	9	6	3	3	1	0	0
46	0	963	4	477	87	24	12	5	8	7	0	0	0
47	0	1112	5	504	85	28	14	8	9	9	2	0	0
48	0	1213	5	470	114	41	10	6	10	10	4	0	0
49	0	1327	5	491	99	45	14	8	21	9	3	1	0
50	0	1474	6	479	122	36	21	14	20	12	2	3	0
51	0	1668	7	449	111	41	26	12	21	20	6	3	0
52	0	1834	7	394	109	46	18	14	35	19	10	4	0
53	0	2093	8	428	108	49	18	12	32	20	9	10	1
54	0	2336	9	412	96	45	19	18	40	21	13	7	4
55	0	2580	10	422	111	49	20	10	34	39	8	10	4
56	0	2717	11	460	101	45	23	13	44	35	12	8	4
57	0	2890	12	461	107	40	19	20	41	38	24	6	3
58	0	3088	13	468	117	42	20	17	46	37	24	12	2
59	0	3183	13	385	124	40	25	11	41	50	24	12	3
60	0	3216	13	424	117	28	17	17	42	45	27	16	1
61	0	3377	14	418	107	52	22	13	41	40	32	14	3
62	0	3593	15	493	116	46	21	21	45	37	28	19	2
63	0	3656	15	461	125	42	23	16	44	29	29	22	3
64	0	3789	15	421	106	41	26	16	49	36	23	23	6
65	0	3905	16	376	102	44	24	19	41	34	24	27	7
66	0	4038	16	373	102	39	23	15	46	30	25	23	9
67	0	4100	17	422	79	37	21	10	30	33	31	19	10
68	0	4174	17	383	88	45	23	14	23	28	26	22	12

NWNJ1706 ADCP 19518

Deployment: NWNJ1706 updated 2018/12/06
Instrument no.: 19518
Instrument freq.: 75
Latitude: 62 56.791 N
Longitude:06 04.951 W
Bottom depth: 1210
Instrument depth: 1205
Center depth of first bin: 1186
Bin length: 10
Number of bins: 68
Number of first ensemble: 80
Time of first ensemble: 2017 06 09 10 20
Number of last ensemble: 24763
Time of last ensemble: 2018 05 18 06 00
Time between ensembles (min.):   20
All directions have been corrected by adding: -5.0

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

Bin no.	Depth m	Height m	Speed mm/s	Vel mm/s	Dir deg	Good ppt
1	1186	24	85	35	91	992
2	1176	34	98	51	97	990
3	1166	44	105	58	98	992
4	1156	54	110	61	100	990
5	1146	64	115	63	101	992
6	1136	74	119	65	99	992
7	1126	84	121	66	100	990
8	1116	94	124	66	101	991
9	1106	104	127	68	101	992
10	1096	114	128	68	102	991
11	1086	124	129	67	102	992
12	1076	134	132	68	102	992
13	1066	144	134	68	103	993
14	1056	154	134	67	103	991
15	1046	164	133	65	103	992
16	1036	174	133	64	103	991
17	1026	184	133	63	103	991
18	1016	194	132	62	104	990
19	1006	204	132	60	104	990
20	996	214	131	59	104	991
21	986	224	131	58	104	990
22	976	234	130	57	104	988
23	966	244	130	55	105	989
24	956	254	129	54	104	987
25	946	264	128	53	105	988
26	936	274	128	52	105	987
27	926	284	127	51	104	987
28	916	294	126	50	105	987
29	906	304	126	48	105	987
30	896	314	126	47	105	984
31	886	324	124	45	105	984
32	876	334	124	44	106	984
33	866	344	123	43	105	982
34	856	354	123	42	106	982
35	846	364	122	41	106	982
36	836	374	122	40	106	981
37	826	384	121	39	105	979
38	816	394	120	38	105	979
39	806	404	119	37	105	976
40	796	414	120	36	105	975
41	786	424	120	35	104	973
42	776	434	120	34	105	971
43	766	444	119	33	105	967
44	756	454	119	32	105	967
45	746	464	120	32	106	964
46	736	474	119	31	105	961
47	726	484	119	30	105	955
48	716	494	119	30	105	951
49	706	504	120	30	104	946
50	696	514	121	29	104	940
51	686	524	121	29	103	932
52	676	534	122	29	103	926
53	666	544	122	28	103	915
54	656	554	122	28	103	905
55	646	564	123	28	102	895
56	636	574	123	28	103	890
57	626	584	123	27	103	883
58	616	594	125	26	104	875
59	606	604	125	26	105	871
60	596	614	125	24	106	870
61	586	624	125	23	105	863
62	576	634	125	23	108	854
63	566	644	125	22	108	852
64	556	654	126	22	107	846
65	546	664	127	22	107	842
66	536	674	128	22	107	836
67	526	684	130	23	110	834
68	516	694	132	24	110	831

NWNJ1706 ADCP 19518

Deployment: NWNJ1706

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	1186	323	22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1176	412	59	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	1166	452	83	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1156	474	102	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1146	510	124	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	1136	528	136	22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1126	533	144	28	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1116	547	155	32	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1106	562	168	37	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1096	568	172	37	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1086	574	175	41	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1076	579	182	43	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	1066	590	192	46	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1056	591	189	47	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0
15	1046	591	186	45	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16	1036	586	184	44	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1026	585	185	44	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18	1016	585	186	44	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	1006	581	180	42	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	996	582	179	42	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	986	576	178	41	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	976	576	175	40	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	966	574	171	40	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	956	569	167	38	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	946	565	168	38	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	936	567	166	37	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	926	559	164	35	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	916	560	160	34	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	906	557	156	33	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	896	556	157	32	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	886	548	154	31	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	876	547	151	31	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	866	542	146	29	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	856	539	145	29	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	846	538	144	28	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	836	538	142	26	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	826	533	136	26	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	816	531	134	25	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	806	525	131	24	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	796	530	132	24	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	786	529	129	25	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	776	524	128	24	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	766	523	125	23	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	756	526	126	22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	746	524	125	23	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	736	520	126	21	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	726	518	123	22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	716	521	123	21	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	706	520	123	22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	696	519	123	21	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	686	520	122	20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	676	519	125	21	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	666	513	125	20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	656	513	123	20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	646	508	124	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	636	512	126	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	626	507	125	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	616	508	128	19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	606	507	130	19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	596	501	127	19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	586	504	126	18	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	576	503	124	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	566	504	123	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	556	508	122	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	546	509	125	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	536	511	128	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	526	511	137	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	516	518	146	21	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Harmonic constants for constituent M2 for deployment NWNJ1706.

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	1186	23	248	20	87	29	5	139	77	A
02	1176	31	247	26	90	40	8	140	76	A
03	1166	35	246	29	93	45	11	141	77	A
04	1156	39	246	33	94	49	12	140	77	A
05	1146	43	246	36	94	54	14	140	78	A
06	1136	46	246	37	96	58	15	142	78	A
07	1126	48	246	39	96	60	15	142	78	A
08	1116	51	248	39	96	62	15	143	78	A
09	1106	53	247	41	99	64	17	144	78	A
10	1096	54	248	42	98	66	17	143	79	A
11	1086	54	249	43	99	67	17	143	80	A
12	1076	58	249	44	100	70	18	144	80	A
13	1066	59	249	46	99	72	19	143	80	A
14	1056	60	249	46	100	73	20	144	80	A
15	1046	60	249	46	102	73	20	144	81	A
16	1036	61	250	47	101	74	20	144	81	A
17	1026	62	250	47	103	75	21	144	81	A
18	1016	62	250	47	103	75	21	144	81	A
19	1006	63	251	47	104	75	22	145	82	A
20	996	63	251	47	105	75	22	145	83	A
21	986	63	251	47	105	75	22	145	83	A
22	976	63	251	47	106	75	23	145	83	A
23	966	63	252	47	107	75	23	145	84	A
24	956	64	252	47	106	76	22	145	83	A
25	946	64	252	47	107	76	23	146	83	A
26	936	65	253	47	108	76	23	146	84	A
27	926	65	252	46	108	76	23	146	84	A
28	916	65	252	46	109	76	23	146	84	A
29	906	66	253	46	110	77	24	147	84	A
30	896	65	253	46	109	76	23	147	84	A
31	886	65	254	45	109	76	22	147	85	A
32	876	65	254	44	110	75	22	148	84	A
33	866	66	254	44	111	75	23	149	84	A
34	856	66	254	45	110	76	23	148	85	A
35	846	66	255	44	111	76	22	149	85	A
36	836	66	255	44	114	76	24	149	86	A
37	826	67	254	44	113	77	24	149	85	A
38	816	66	255	45	115	76	25	149	86	A
39	806	67	256	44	115	76	25	149	87	A
40	796	67	256	44	115	77	25	150	86	A
41	786	67	256	45	115	77	25	149	87	A
42	776	67	256	45	116	77	25	149	87	A
43	766	68	256	44	117	77	25	150	87	A
44	756	68	256	43	117	77	25	151	87	A
45	746	69	257	44	119	78	26	151	88	A
46	736	70	258	43	119	78	26	152	87	A
47	726	69	259	43	120	77	25	152	88	A
48	716	69	259	43	120	78	26	152	89	A
49	706	70	259	42	121	77	25	153	89	A
50	696	71	260	43	122	78	26	153	90	A
51	686	71	259	43	122	78	26	153	89	A
52	676	73	259	43	123	80	27	154	89	A
53	666	73	261	43	126	80	27	154	91	A
54	656	74	262	42	127	81	27	155	91	A
55	646	76	262	42	129	82	28	156	91	A
56	636	76	263	42	131	82	29	157	92	A
57	626	77	263	42	134	82	31	157	92	A
58	616	80	264	43	136	85	32	158	92	A
59	606	81	265	43	137	85	32	159	93	A
60	596	82	266	43	140	86	33	160	94	A
61	586	84	266	42	141	88	33	161	94	A
62	576	85	268	43	145	89	35	162	95	A
63	566	86	270	42	150	89	35	164	96	A
64	556	87	271	41	154	89	35	166	97	A
65	546	88	274	40	161	90	36	168	99	A
66	536	88	277	38	165	89	35	169	101	A
67	526	90	280	37	173	91	35	172	103	A
68	516	92	282	38	180	92	37	174	104	A

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Harmonic constants for constituent S2 for deployment NWNJ1706.

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	1186	12	290	6	156	13	4	159	117	A
02	1176	17	287	8	169	17	7	164	114	A
03	1166	18	287	10	168	19	8	160	116	A
04	1156	19	288	12	165	21	9	156	119	A
05	1146	22	290	13	170	23	10	160	119	A
06	1136	24	289	13	172	25	11	162	117	A
07	1126	24	291	13	174	25	11	163	119	A
08	1116	25	293	15	172	27	12	159	123	A
09	1106	27	293	15	175	28	12	162	121	A
10	1096	28	294	16	176	29	13	161	123	A
11	1086	28	295	16	177	30	13	161	124	A
12	1076	29	295	17	177	30	14	160	125	A
13	1066	30	295	17	177	31	15	160	125	A
14	1056	30	296	17	178	31	14	161	124	A
15	1046	30	296	17	174	32	14	159	126	A
16	1036	29	295	18	174	31	15	157	126	A
17	1026	30	295	18	173	32	14	158	125	A
18	1016	29	296	17	171	31	13	157	126	A
19	1006	30	295	17	170	32	13	158	124	A
20	996	29	294	17	174	31	14	160	124	A
21	986	29	295	17	173	30	13	159	125	A
22	976	29	296	16	173	31	13	159	125	A
23	966	29	296	17	175	30	14	159	125	A
24	956	28	295	16	175	30	13	159	125	A
25	946	28	296	16	175	30	13	159	126	A
26	936	28	297	16	177	29	13	159	127	A
27	926	27	297	15	176	29	12	160	126	A
28	916	27	298	15	177	28	12	160	127	A
29	906	28	298	16	177	29	13	160	127	A
30	896	28	298	15	177	29	13	161	127	A
31	886	28	300	15	182	29	13	161	129	A
32	876	28	300	16	183	29	13	162	129	A
33	866	27	301	15	183	29	13	161	130	A
34	856	28	301	16	183	29	13	161	130	A
35	846	28	301	15	180	29	13	160	130	A
36	836	28	301	15	181	29	12	162	129	A
37	826	28	300	14	183	29	12	164	127	A
38	816	28	301	15	182	29	12	161	129	A
39	806	27	301	14	184	28	12	164	128	A
40	796	28	302	15	180	29	12	160	130	A
41	786	28	302	15	181	29	12	162	130	A
42	776	28	305	15	182	29	12	161	132	A
43	766	28	305	14	186	29	12	164	131	A
44	756	28	306	14	184	29	12	162	133	A
45	746	28	304	14	183	29	11	162	131	A
46	736	28	305	14	186	29	12	163	133	A
47	726	28	305	13	187	29	11	165	131	A
48	716	28	307	13	188	29	12	165	133	A
49	706	29	307	13	193	29	12	167	132	A
50	696	29	308	13	192	30	11	167	133	A
51	686	28	309	13	195	28	12	166	135	A
52	676	28	309	13	195	29	12	167	134	A
53	666	30	308	14	197	30	13	169	132	A
54	656	31	311	12	202	31	12	171	135	A
55	646	28	308	12	202	29	12	171	132	A
56	636	30	311	12	207	30	11	174	133	A
57	626	30	316	13	206	30	12	170	140	A
58	616	30	316	12	209	30	11	172	139	A
59	606	31	317	12	213	31	12	173	140	A
60	596	30	317	12	217	30	11	175	139	A
61	586	30	318	11	215	30	11	175	140	A
62	576	29	322	11	212	29	10	171	146	A
63	566	29	322	10	217	29	9	174	144	A
64	556	28	322	10	227	28	9	178	143	A
65	546	29	325	9	238	29	9	1	325	A
66	536	29	329	9	240	29	9	0	329	A
67	526	29	330	9	256	29	8	5	329	A
68	516	30	330	10	264	30	9	8	327	A

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Harmonic constants for constituent N2 for deployment NWNJ1706.

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	1186	2	296	3	30	3	2	92	31	C
02	1176	3	286	5	32	5	3	110	45	C
03	1166	5	269	5	31	6	3	135	60	C
04	1156	6	271	3	34	6	3	157	80	C
05	1146	6	267	5	37	7	3	142	67	C
06	1136	6	267	5	38	7	3	141	68	C
07	1126	7	272	5	37	8	4	153	79	C
08	1116	7	274	4	32	7	4	155	80	C
09	1106	7	270	4	33	8	3	155	78	C
10	1096	7	273	4	34	7	4	156	80	C
11	1086	7	274	4	36	8	4	157	82	C
12	1076	8	271	4	34	8	3	159	81	C
13	1066	8	267	4	40	8	3	155	78	C
14	1056	7	268	5	50	8	3	151	79	C
15	1046	8	271	4	46	9	3	158	83	C
16	1036	8	271	5	48	9	3	153	81	C
17	1026	8	273	4	53	9	2	156	86	C
18	1016	8	274	4	51	9	3	158	87	C
19	1006	8	271	4	56	9	2	156	85	C
20	996	9	272	4	52	9	2	161	88	C
21	986	9	271	4	57	9	2	161	87	C
22	976	9	266	4	55	9	2	158	81	C
23	966	9	269	3	63	9	1	160	86	C
24	956	9	264	4	56	9	2	159	81	C
25	946	9	267	3	72	9	1	162	85	C
26	936	9	265	2	58	9	1	166	83	C
27	926	9	267	3	74	10	1	160	86	C
28	916	9	264	4	68	10	1	156	81	C
29	906	9	263	3	71	9	1	160	81	C
30	896	9	262	4	64	10	1	157	79	C
31	886	9	264	5	70	10	1	154	81	C
32	876	9	266	4	74	10	1	157	84	C
33	866	9	261	4	75	9	0	157	80	C
34	856	9	262	4	70	9	1	157	80	C
35	846	9	262	4	81	10	0	157	81	C
36	836	9	268	4	67	10	1	156	84	C
37	826	9	265	3	56	10	1	164	83	C
38	816	9	264	3	70	9	1	162	83	C
39	806	9	264	3	75	9	0	160	83	C
40	796	10	271	3	76	11	1	166	90	C
41	786	10	263	2	95	11	1	167	84	A
42	776	10	268	2	111	10	1	168	89	A
43	766	11	266	3	103	11	1	167	87	A
44	756	11	262	2	98	11	1	168	82	A
45	746	10	266	2	108	11	1	170	86	A
46	736	10	267	2	128	11	2	170	89	A
47	726	12	264	2	97	12	0	172	84	A
48	716	12	266	2	104	12	1	171	87	A
49	706	12	264	3	102	12	1	169	84	A
50	696	11	268	2	125	12	1	172	89	A
51	686	12	269	2	116	12	1	173	90	A
52	676	11	271	2	93	11	0	170	91	A
53	666	10	270	1	53	10	0	178	90	C
54	656	10	269	1	137	10	1	176	89	A
55	646	11	268	2	139	11	1	175	89	A
56	636	12	265	2	159	12	2	178	85	A
57	626	12	258	3	106	12	1	168	79	A
58	616	13	258	2	118	13	1	174	78	A
59	606	13	258	3	130	13	2	172	79	A
60	596	13	259	2	105	13	1	170	80	A
61	586	13	253	3	117	13	2	169	75	A
62	576	13	252	3	128	13	3	172	74	A
63	566	12	256	2	119	12	1	173	77	A
64	556	12	254	3	141	12	2	175	75	A
65	546	13	262	4	154	13	4	175	83	A
66	536	12	267	3	178	12	3	0	267	A
67	526	14	268	5	176	14	5	179	88	A
68	516	15	271	6	186	15	6	2	270	A

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Harmonic constants for constituent O1 for deployment NWNJ1706.

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	1186	1	96	0	248	1	0	158	272	C
02	1176	1	19	3	243	3	1	112	236	A
03	1166	1	38	2	237	2	0	113	234	A
04	1156	0	23	3	246	3	0	94	246	A
05	1146	1	57	3	254	3	0	116	251	A
06	1136	1	64	2	265	3	0	120	260	A
07	1126	1	63	3	260	4	0	113	257	A
08	1116	2	37	3	273	3	1	109	265	A
09	1106	2	65	4	266	4	1	123	259	A
10	1096	2	72	3	272	4	1	124	266	A
11	1086	2	66	3	257	3	0	123	254	A
12	1076	3	67	3	257	4	0	137	252	A
13	1066	2	49	2	253	3	1	142	238	A
14	1056	3	52	3	253	4	1	136	242	A
15	1046	3	45	3	264	4	1	142	240	A
16	1036	3	61	2	271	4	1	143	252	A
17	1026	4	48	3	268	5	2	146	241	A
18	1016	4	53	3	281	5	2	146	249	A
19	1006	4	51	3	267	5	2	142	245	A
20	996	4	50	3	257	5	1	145	239	A
21	986	4	48	3	268	5	2	145	242	A
22	976	4	56	3	265	5	1	142	247	A
23	966	5	50	4	269	6	2	142	245	A
24	956	4	53	4	266	6	2	137	248	A
25	946	4	42	4	262	6	2	137	241	A
26	936	4	47	4	265	5	2	134	246	A
27	926	5	53	4	256	6	1	142	242	A
28	916	4	46	4	255	6	1	136	240	A
29	906	4	42	4	261	5	2	139	239	A
30	896	4	56	3	261	5	1	145	244	A
31	886	4	45	3	255	5	1	140	237	A
32	876	4	58	5	254	6	1	128	247	A
33	866	4	59	4	253	5	1	134	246	A
34	856	3	56	4	269	5	1	130	255	A
35	846	3	54	4	269	5	2	125	257	A
36	836	4	51	4	271	5	2	136	251	A
37	826	4	63	4	266	5	1	136	254	A
38	816	3	69	3	275	5	1	135	262	A
39	806	3	70	4	270	5	1	128	262	A
40	796	3	62	3	272	4	1	137	256	A
41	786	3	50	4	269	5	2	132	252	A
42	776	3	60	3	281	4	1	139	258	A
43	766	4	68	3	274	5	1	141	259	A
44	756	3	53	3	289	4	2	138	258	A
45	746	2	51	3	289	4	2	116	276	A
46	736	3	63	3	251	4	0	139	247	A
47	726	2	44	3	266	4	1	120	255	A
48	716	1	13	2	291	2	1	80	298	A
49	706	3	26	3	267	3	2	135	237	A
50	696	3	14	3	279	4	3	163	208	A
51	686	3	13	2	286	3	2	5	9	A
52	676	3	358	2	271	3	2	3	356	A
53	666	4	353	2	283	4	2	14	346	A
54	656	4	343	3	283	4	2	31	325	A
55	646	3	342	2	286	4	2	30	326	A
56	636	5	339	2	266	5	2	7	336	A
57	626	5	360	2	233	5	1	166	184	A
58	616	4	354	1	205	4	1	161	177	A
59	606	3	360	2	249	4	2	161	191	A
60	596	5	10	2	246	5	1	168	194	A
61	586	4	36	3	269	4	2	150	231	A
62	576	5	26	2	303	5	2	5	24	A
63	566	3	41	3	283	4	2	134	253	A
64	556	4	23	3	266	5	3	144	226	A
65	546	2	31	3	283	3	2	134	248	A
66	536	4	22	2	285	4	2	175	205	A
67	526	5	28	4	298	5	4	1	27	A
68	516	4	38	3	278	4	2	149	236	A

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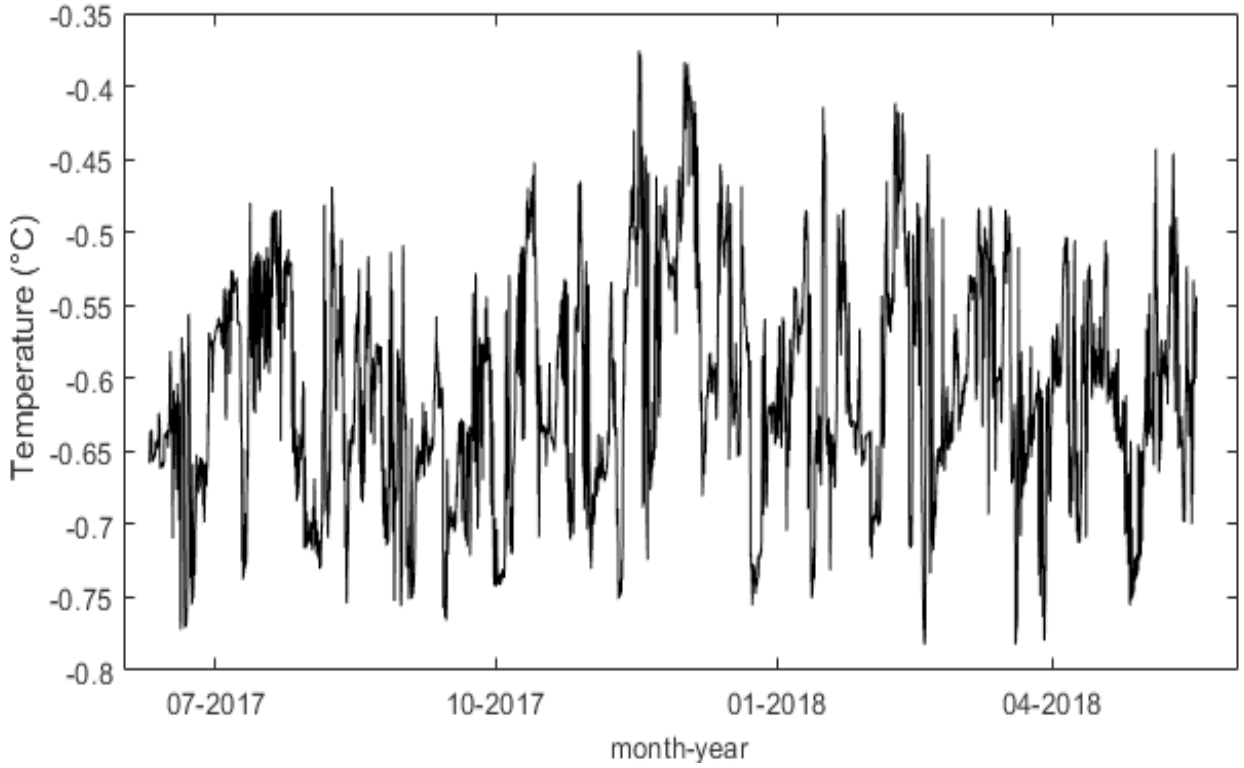
Harmonic constants for constituent K1 for deployment NWNJ1706.

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	1186	3	286	0	181	3	0	178	107	A
02	1176	3	267	1	187	3	1	3	267	A
03	1166	3	270	1	224	3	1	18	265	A
04	1156	3	276	2	214	3	1	21	266	A
05	1146	3	278	1	202	3	1	7	275	A
06	1136	3	277	2	227	3	1	23	269	A
07	1126	3	280	2	172	3	2	156	116	A
08	1116	4	273	3	177	4	3	172	99	A
09	1106	4	271	3	183	4	3	3	269	A
10	1096	4	278	3	178	4	3	155	118	A
11	1086	4	271	3	175	4	3	170	98	A
12	1076	4	269	2	173	4	2	176	91	A
13	1066	4	269	3	180	4	3	2	268	A
14	1056	4	270	3	185	4	3	13	259	A
15	1046	4	274	4	173	4	3	136	133	A
16	1036	4	273	3	167	4	3	143	122	A
17	1026	3	276	3	163	4	3	144	122	A
18	1016	4	274	4	171	4	3	147	120	A
19	1006	4	281	4	168	5	3	143	127	A
20	996	4	279	3	164	4	3	151	117	A
21	986	4	269	2	160	4	2	167	95	A
22	976	4	271	3	178	4	3	177	92	A
23	966	5	277	3	164	5	2	163	106	A
24	956	4	273	2	160	4	2	160	104	A
25	946	4	275	3	172	4	2	168	102	A
26	936	4	273	3	165	4	3	158	107	A
27	926	4	275	3	180	4	3	174	99	A
28	916	4	277	3	162	4	2	154	112	A
29	906	5	278	2	153	5	2	160	106	A
30	896	4	279	3	162	4	2	153	115	A
31	886	4	277	3	159	4	2	158	108	A
32	876	5	279	3	177	5	3	171	104	A
33	866	4	273	3	175	4	3	172	97	A
34	856	4	274	3	170	4	3	152	116	A
35	846	4	272	4	189	4	4	35	240	A
36	836	4	268	3	176	4	3	177	90	A
37	826	4	262	3	179	4	3	20	245	A
38	816	3	272	3	184	3	3	6	268	A
39	806	3	265	2	182	3	2	14	254	A
40	796	4	269	3	176	4	3	153	114	A
41	786	4	264	3	173	4	3	169	94	A
42	776	4	266	3	152	4	2	155	101	A
43	766	4	256	2	154	4	2	171	80	A
44	756	4	257	3	166	4	3	175	82	A
45	746	5	252	2	163	5	2	1	252	A
46	736	5	262	3	165	5	3	171	89	A
47	726	4	261	3	143	5	3	149	99	A
48	716	5	253	4	150	5	4	159	88	A
49	706	5	251	4	151	5	4	162	85	A
50	696	5	265	3	152	5	3	158	97	A
51	686	3	270	2	159	4	2	156	105	A
52	676	3	274	3	163	4	2	139	124	A
53	666	3	298	2	142	3	1	140	128	A
54	656	1	354	2	150	2	0	107	153	C
55	646	2	284	4	159	4	2	112	150	A
56	636	2	309	3	177	3	1	123	162	A
57	626	2	257	3	140	3	2	125	117	A
58	616	1	234	4	145	4	1	90	145	A
59	606	2	289	4	184	4	2	104	176	A
60	596	2	266	3	157	3	1	105	149	A
61	586	4	293	3	169	4	2	144	134	A
62	576	4	287	4	177	5	3	137	139	A
63	566	4	287	4	165	5	3	134	137	A
64	556	4	278	4	190	4	4	52	226	A
65	546	5	276	4	167	5	4	149	119	A
66	536	4	265	4	173	4	4	107	157	A
67	526	6	286	5	163	7	3	148	124	A
68	516	5	287	3	142	6	2	152	115	A

NWNJ1706 SBE56 6503



NWNK1706

Latitude: 63°01.641´N

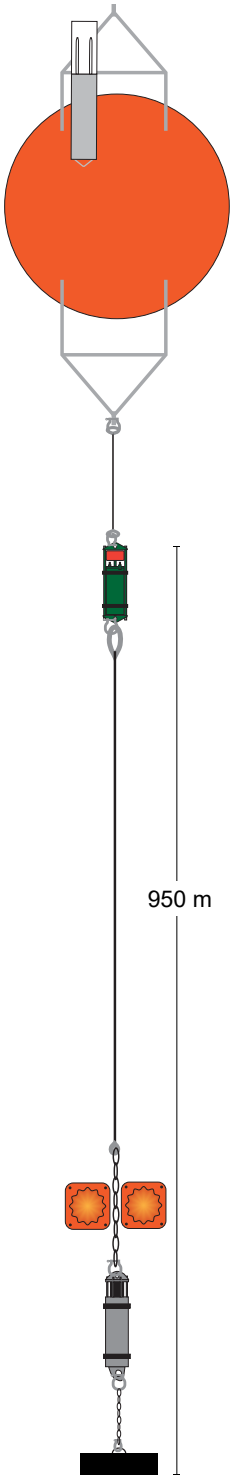
Longitude: 006°05.131´W

Echo sounding depth: 1791 m

Bottom depth corr.: 1754 m

Time of deployment: 9/6 - 2017 1055 UTC

Time of recovery: 18/5 - 2018 0432 UTC



Aanderaa:

Instrument no.: Aanderaa RCM9 0721

Height above bottom: 950 m

Depth: 804 m

Time of first data: 9/6 - 2017 1159 UTC

Time of last data: 18/5 - 2018 0359 UTC

Sample interval: 60 min

No. of ensembles: 8225

Data:

All data ok.

NWNK1706 Aanderaa 721

```
Deployment: NWNK1706          analyzed from beginning to end
Instrument no.: 0721
Instrument type: Aanderaa
Latitude: 63 01.641 N
Longitude:06 05.131 W
Bottom depth: 1754
Instrument depth:  804
Number of records: 8225
Time of first record: 2017 06 09 11 59
Time of last record: 2018 05 18 03 59
Time between records (min.): 60.000
```

Parameters		Records OK	Records flagged
Column 1	: Record number		
Column 2- 4	: Date		
Column 5- 6	: Time		
Column 7	: Temperature	8224	1
Column 8	: Speed	8225	0
Column 9	: Direct	8225	0

Comments

Residual current: 35 mm/sec towards: 141 degrees

TIDAL ANALYSIS

Error flagged records interpolated for velocity: 0, records not int.: 0
Tidal analysis performed on unfiltered data

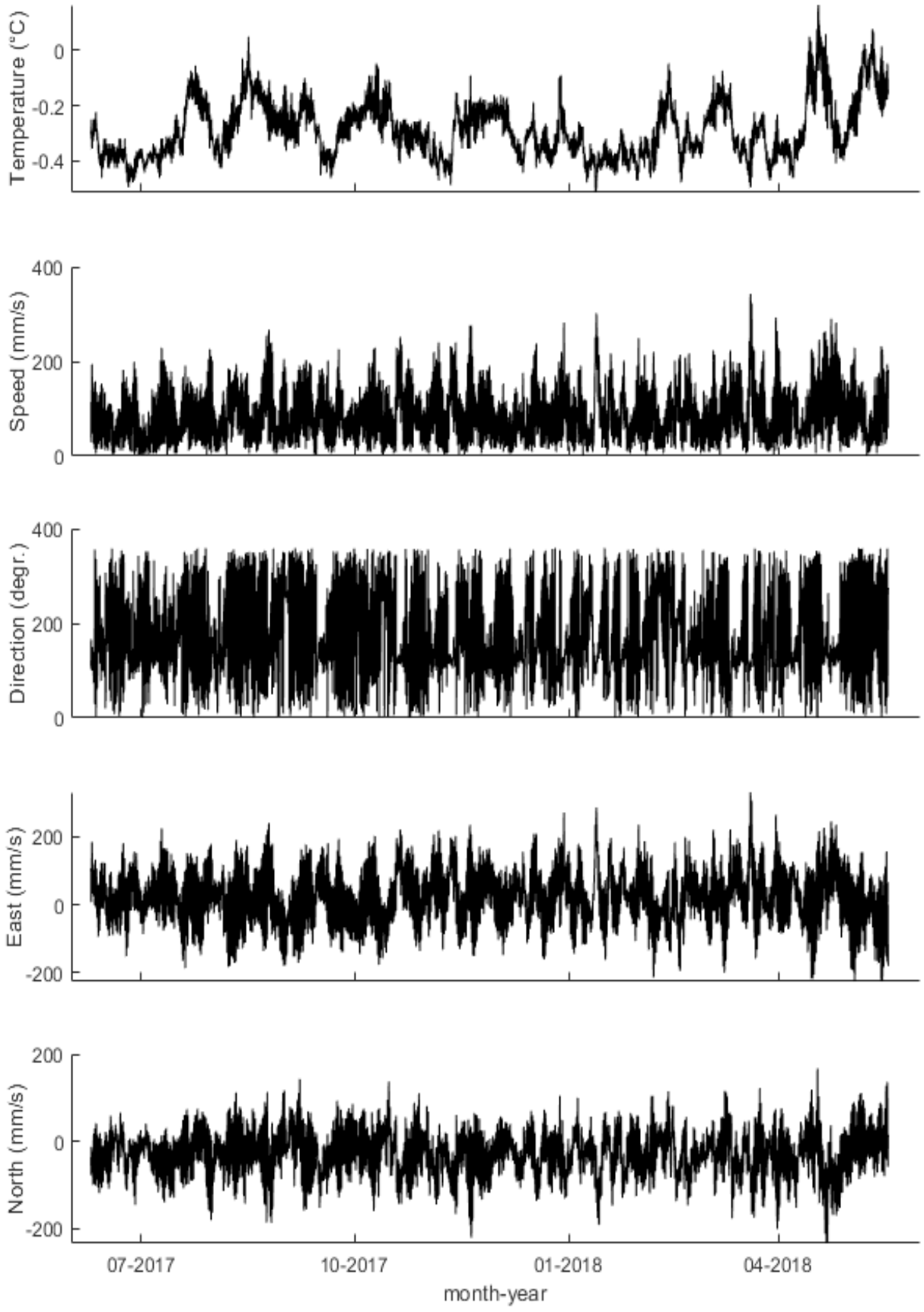
Const	Freq c/hr	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
MM	.00151215	10	53	4	253	11	1	157	236	A
MSF	.00282193	2	73	4	296	4	1	111	290	A
Q1	.03721850	2	38	2	222	3	0	144	219	A
O1	.03873065	4	60	3	255	5	1	145	245	A
NO1	.04026859	4	309	3	100	5	1	143	118	C
P1	.04155259	1	320	2	144	2	0	115	144	A
K1	.04178075	4	303	3	150	4	1	145	132	A
N2	.07899925	9	279	2	63	10	1	171	98	C
M2	.08051140	69	275	35	142	74	24	158	103	A
L2	.08202355	4	295	3	192	4	3	164	126	A
S2	.08333334	28	325	13	216	29	12	170	149	A
K2	.08356149	9	323	4	211	9	4	166	150	A
MK3	.12229210	1	78	1	52	1	0	38	68	A
M4	.16102280	1	82	3	32	3	1	74	37	A
MS4	.16384470	1	213	2	100	2	1	97	98	A

DIRECTIONAL CURRENT DISTRIBUTION (for all nonflagged observations in series)

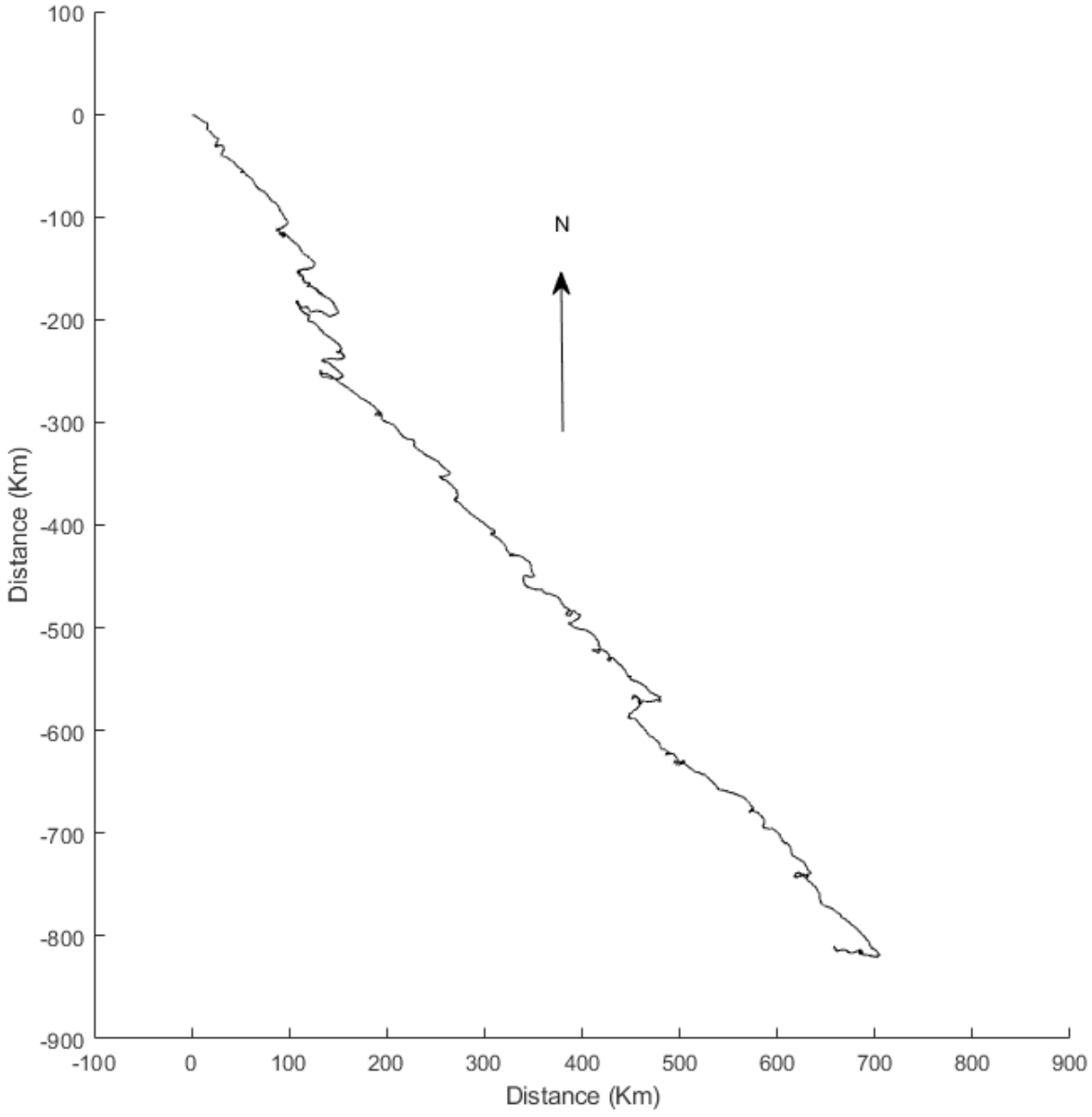
Relative number of observations in parts per thousand (ppt) grouped into speed and direction intervals (of 30 degree width centred around the directions shown)

Speed intervals (mm/s)	Direction intervals 15	45	75	105	135	165	195	225	255	285	315	345	All dir. Tot	Acc
0 - 50	15	13	21	28	31	30	29	22	24	23	22	15	272	272
50 - 100	9	11	29	58	69	41	25	27	40	42	20	14	385	657
100 - 150	1	2	12	56	60	18	5	8	22	27	8	2	219	876
150 - 200	0.12	0.12	3	32	34	4	0.49	0.49	5	9	2	0.12	91	968
200 - 300	0	0	0	13	15	1	0.24	0	1	2	0	0	31	999
300 - 400	0	0	0	1	0	0	0	0	0	0	0	0	1	1000
Total (ppt)	24	26	65	188	209	93	61	57	92	102	51	31		
Rel.flux (ppt)	13	16	55	243	263	81	40	42	85	104	39	19		
Avg.spd (mm/s)	47	54	74	113	111	76	58	65	82	90	67	54		
Max.spd (mm/s)	167	153	194	343	290	246	220	179	226	232	194	161		

NWNK1706 Aanderaa 721



NWNK1706 Aanderaa 721



TNGX1706

Latitude: 61°55.591´N

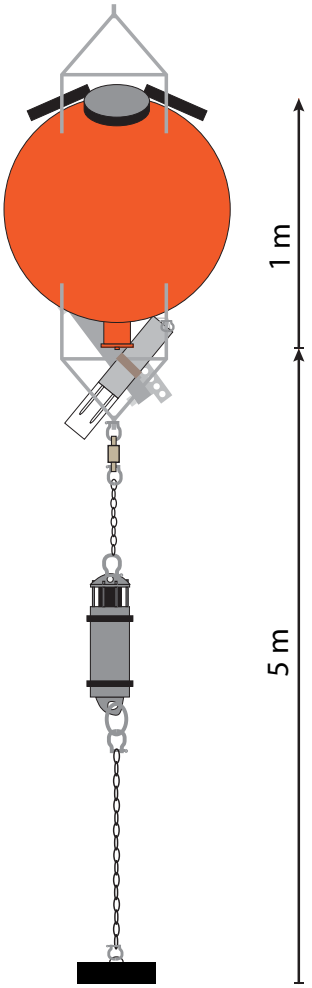
Longitude: 003°51.309´W

Echo sounding depth: 748 m

Bottom depth corr.: 742 m

Time of deployment: 9/6 - 2017 2040 UTC

Time of recovery: 19/5 - 2018 0352 UTC



ADCP:

Instrument no.: RDI ADCP 1644

Instrument frequency: 75 kHz

Height above bottom: 6 m

Depth: 736 m

Time of first data: 9/6 - 2017 2120 UTC

Time of last data: 19/5 - 2018 0340 UTC

Sample interval: 20 min

No. of ensembles: 24716

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 700 m

No. of bins: 24

SBE56:

Instrument no.: 6504

Height above bottom: 5 m

Instrument depth: 737 m

Time of first data: 9/6 - 2017 2055 UTC

Time of last data: 19/5 - 2018 0345 UTC

Sample interval: 10 min

No. of ensembles: 49434

Data:

The temperature from the SBE56 is calibrated against an SBE911+.

TNGX1706 ADCP 1644

Error statistics for deployment: TNGX1706 updated 2018/12/07

Temperature edited
Surface distance not edited
Heading, pitch and roll not edited
Intensity not edited

Velocity (spd, dir, wel) is error flagged using these data filters:
Maximum Speed factor (Average speed for each bin times factor): 4.0
Maximum Absolute Vertical Velocity threshold: 150.0
Maximum Absolute Error Velocity threshold (erv_tr+0.1*spd): 150.0
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 1): 9.00
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 24): 5.32
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 32): 2.00

Total number of ensembles: 24716
Interval between ensembles: 20 min
Original number of bins: 32
Number of acceptable velocity bins: 24

Flagged values have been replaced by error codes: -999.99 for temperature and depth, -999 for velocity and intensity. For observations where velocity is flagged, error codes have been inserted into speed, direction and vertical 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	0	5	0	3	1	0	0	0	0	0	0	0	0
2	0	13	0	9	2	0	0	0	0	0	0	0	0
3	0	10	0	10	0	0	0	0	0	0	0	0	0
4	0	15	0	9	3	0	0	0	0	0	0	0	0
5	0	10	0	6	2	0	0	0	0	0	0	0	0
6	0	11	0	6	1	1	0	0	0	0	0	0	0
7	0	11	0	8	0	1	0	0	0	0	0	0	0
8	0	7	0	5	1	0	0	0	0	0	0	0	0
9	0	5	0	3	1	0	0	0	0	0	0	0	0
10	0	11	0	7	2	0	0	0	0	0	0	0	0
11	0	5	0	5	0	0	0	0	0	0	0	0	0
12	0	4	0	2	1	0	0	0	0	0	0	0	0
13	0	9	0	5	2	0	0	0	0	0	0	0	0
14	0	7	0	4	0	1	0	0	0	0	0	0	0
15	0	14	0	10	2	0	0	0	0	0	0	0	0
16	0	20	0	18	1	0	0	0	0	0	0	0	0
17	0	101	0	40	11	5	2	0	2	0	0	0	0
18	0	506	2	137	30	9	7	6	11	5	3	0	0
19	0	1602	6	273	83	30	22	16	41	28	7	1	0
20	0	3611	15	345	138	61	53	34	76	65	27	6	0
21	0	5808	23	428	146	90	56	50	94	74	53	32	0
22	0	8125	33	518	211	120	80	52	139	76	47	72	1
23	0	10809	44	659	229	124	91	51	110	130	61	97	7
24	0	13372	54	697	240	137	94	61	153	141	76	96	30

TNGX1706 ADCP 1644

Deployment: TNGX1706 updated 2018/12/07
Instrument no.: 1644
Instrument freq.: 75
Latitude: 61 55.591 N
Longitude:03 51.309 W
Bottom depth: 742
Instrument depth: 736
Center depth of first bin: 700
Bin length: 25
Number of bins: 24
Number of first ensemble: 242
Time of first ensemble: 2017 06 09 21 20
Number of last ensemble: 24957
Time of last ensemble: 2018 05 19 03 40
Time between ensembles (min.): 20
All directions have been corrected by adding: -3.0

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	700	42	159	33	216	1000
2	675	67	166	34	217	999
3	650	92	167	34	217	1000
4	625	117	165	33	214	999
5	600	142	163	32	212	1000
6	575	167	160	32	208	1000
7	550	192	158	32	205	1000
8	525	217	157	33	199	1000
9	500	242	156	33	193	1000
10	475	267	154	36	189	1000
11	450	292	153	40	186	1000
12	425	317	154	45	185	1000
13	400	342	158	51	183	1000
14	375	367	165	58	183	1000
15	350	392	174	67	183	999
16	325	417	188	78	183	999
17	300	442	202	85	185	996
18	275	467	218	93	185	980
19	250	492	235	100	184	935
20	225	517	251	105	181	854
21	200	542	268	111	179	765
22	175	567	289	117	179	671
23	150	592	309	118	181	563
24	125	617	334	122	183	459

TNGX1706 ADCP 1644

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	700	745	290	54	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	675	766	318	67	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	650	766	325	70	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	625	759	316	68	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	600	757	306	63	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	575	746	300	57	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	550	738	291	50	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8	525	733	290	49	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	500	728	284	50	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	475	720	275	49	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	450	707	265	55	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	425	696	278	64	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0
13	400	702	293	77	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0
14	375	723	316	93	21	3	0	0	0	0	0	0	0	0	0	0	0	0	0
15	350	746	347	116	31	6	1	0	0	0	0	0	0	0	0	0	0	0	0
16	325	773	403	150	44	10	1	0	0	0	0	0	0	0	0	0	0	0	0
17	300	802	450	193	60	15	2	0	0	0	0	0	0	0	0	0	0	0	0
18	275	814	488	231	87	24	6	1	0	0	0	0	0	0	0	0	0	0	0
19	250	793	509	263	112	36	11	4	1	0	0	0	0	0	0	0	0	0	0
20	225	741	492	277	130	53	18	7	3	1	0	0	0	0	0	0	0	0	0
21	200	677	467	279	145	63	23	10	4	2	1	0	0	0	0	0	0	0	0
22	175	607	441	276	154	74	32	14	6	4	2	1	0	0	0	0	0	0	0
23	150	518	391	252	145	77	36	18	8	4	3	2	1	1	0	0	0	0	0
24	125	427	332	226	138	79	42	23	13	8	6	4	3	2	2	1	0	0	0

TNGX1706 ADCP 1644

Harmonic constants for constituent M2 for deployment TNGX1706.

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	700	129	253	101	209	153	59	36	238	A
02	675	134	257	112	211	162	67	38	240	A
03	650	134	261	118	214	165	70	40	241	A
04	625	133	263	120	216	164	70	41	243	A
05	600	130	265	121	219	164	70	42	244	A
06	575	126	267	122	222	162	67	44	245	A
07	550	122	269	122	225	160	65	45	247	A
08	525	118	271	123	227	158	63	46	248	A
09	500	113	271	119	228	153	59	47	248	A
10	475	104	269	112	231	144	49	48	248	A
11	450	94	267	104	235	135	39	48	249	A
12	425	85	267	99	240	127	30	50	251	A
13	400	74	266	92	245	117	21	52	253	A
14	375	65	263	86	251	107	10	53	255	A
15	350	56	261	83	258	100	2	56	259	A
16	325	47	262	83	265	96	2	60	265	C
17	300	41	266	86	270	96	2	64	269	C
18	275	38	272	93	274	100	1	68	273	C
19	250	35	279	101	275	107	2	71	276	A
20	225	31	281	103	279	108	1	74	279	A
21	200	32	282	117	279	122	1	75	280	A
22	175	34	292	126	282	130	6	75	283	A
23	150	33	294	131	284	135	6	76	285	A
24	125	24	288	142	290	144	1	81	289	C

Harmonic constants for constituent S2 for deployment TNGX1706.

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	700	43	305	43	265	57	21	45	285	A
02	675	44	310	47	268	60	23	48	287	A
03	650	42	312	48	271	60	22	50	289	A
04	625	40	313	47	274	59	20	51	290	A
05	600	38	314	46	277	57	19	52	291	A
06	575	35	316	45	280	55	17	54	293	A
07	550	32	317	45	284	53	15	56	294	A
08	525	31	315	44	285	52	13	56	294	A
09	500	31	313	43	284	51	12	56	293	A
10	475	29	310	41	285	49	10	55	293	A
11	450	28	307	38	286	46	8	55	293	A
12	425	26	306	36	286	44	7	55	292	A
13	400	26	306	36	282	44	9	55	290	A
14	375	28	302	36	280	45	8	53	288	A
15	350	26	298	34	285	42	5	53	290	A
16	325	23	290	32	290	39	0	54	290	C
17	300	20	285	33	297	38	3	59	294	C
18	275	18	288	32	301	37	3	62	298	C
19	250	19	295	32	300	37	2	59	298	C
20	225	20	300	36	301	41	0	61	301	C
21	200	18	316	35	309	39	2	63	310	A
22	175	15	314	36	313	39	0	68	313	A
23	150	23	304	47	321	52	6	65	318	C
24	125	18	273	52	321	53	13	76	318	C

TNGX1706 ADCP 1644

Harmonic constants for constituent N2 for deployment TNGX1706.

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	700	26	233	22	187	32	13	38	215	A
02	675	29	239	25	189	34	16	39	218	A
03	650	29	244	27	192	35	17	42	220	A
04	625	29	248	28	195	36	18	45	222	A
05	600	29	250	29	196	37	19	45	223	A
06	575	30	252	31	197	38	20	46	223	A
07	550	29	252	30	197	37	19	47	223	A
08	525	25	254	27	204	33	15	50	225	A
09	500	21	255	25	209	30	13	51	228	A
10	475	20	245	21	210	28	9	48	226	A
11	450	18	232	18	205	25	6	44	219	A
12	425	15	229	15	215	21	3	46	222	A
13	400	10	244	15	238	18	1	58	240	A
14	375	7	248	16	251	18	0	68	250	C
15	350	5	239	18	254	19	1	75	253	C
16	325	4	226	17	260	18	2	78	258	C
17	300	4	205	16	257	17	3	81	255	C
18	275	5	214	18	254	18	3	76	251	C
19	250	4	255	21	249	21	0	80	250	A
20	225	6	286	21	249	21	4	76	252	A
21	200	9	282	27	247	28	5	74	250	A
22	175	8	247	27	249	28	0	73	249	C
23	150	4	260	25	252	26	0	82	252	A
24	125	3	310	33	269	33	2	86	269	A

Harmonic constants for constituent O1 for deployment TNGX1706.

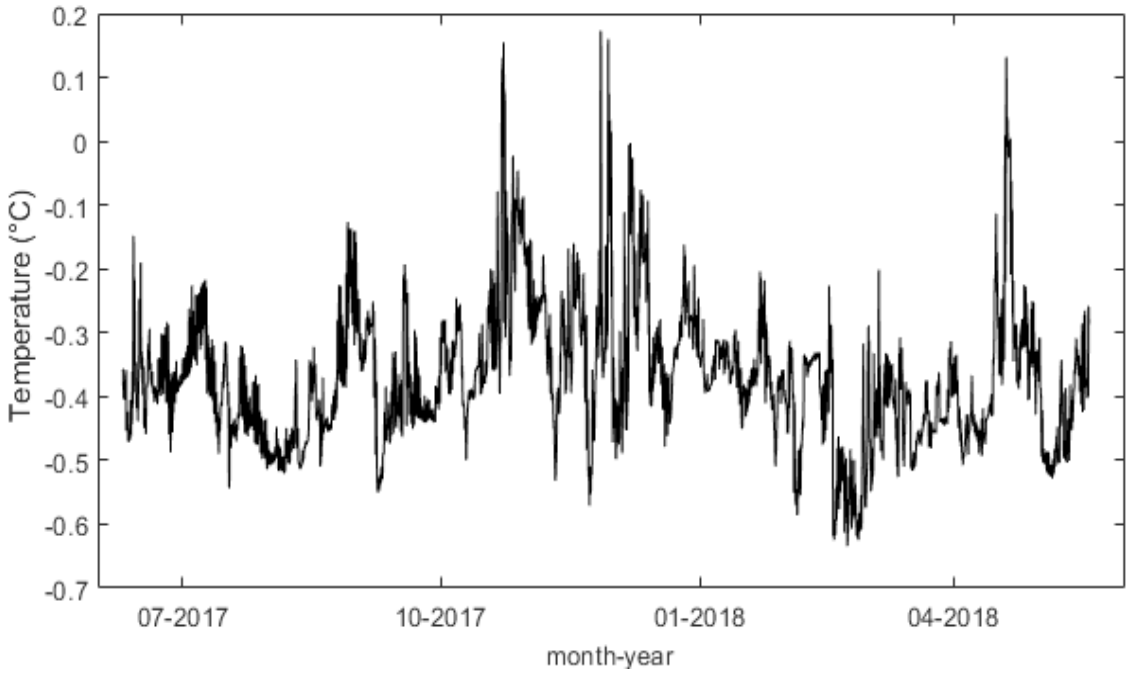
Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	700	11	15	7	313	12	6	21	5	A
02	675	11	14	7	310	12	6	19	4	A
03	650	12	16	6	302	12	6	10	11	A
04	625	12	13	7	303	13	7	15	5	A
05	600	12	11	8	299	12	7	17	1	A
06	575	12	11	7	304	12	6	19	0	A
07	550	13	9	8	306	14	6	19	0	A
08	525	13	8	8	306	14	6	21	358	A
09	500	13	10	8	311	14	7	23	359	A
10	475	13	9	8	308	14	7	21	359	A
11	450	14	3	7	303	15	6	17	356	A
12	425	14	356	6	288	14	6	12	351	A
13	400	13	359	8	308	14	5	24	349	A
14	375	13	2	8	310	14	6	25	351	A
15	350	14	12	8	322	15	6	24	3	A
16	325	12	15	6	322	13	4	18	9	A
17	300	10	15	3	290	10	3	2	14	A
18	275	11	10	2	334	12	1	10	8	A
19	250	10	4	4	329	11	2	16	1	A
20	225	11	4	4	341	12	2	20	1	A
21	200	8	360	7	42	9	4	39	17	C
22	175	14	93	5	349	14	5	174	275	A
23	150	14	94	8	31	15	7	17	87	A
24	125	29	69	13	69	32	0	25	69	C

TNGX1706 ADCP 1644

Harmonic constants for constituent K1 for deployment TNGX1706.

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	700	11	264	11	156	13	9	142	114	A
02	675	11	265	11	157	13	9	140	116	A
03	650	11	267	11	156	13	9	136	121	A
04	625	10	269	11	155	13	8	134	123	A
05	600	10	273	11	157	13	8	133	127	A
06	575	11	272	11	156	13	8	130	129	A
07	550	10	265	11	155	13	9	125	130	A
08	525	10	263	12	155	13	9	119	135	A
09	500	11	267	12	152	13	9	132	122	A
10	475	12	261	12	156	14	10	129	125	A
11	450	11	255	13	161	13	11	104	149	A
12	425	10	256	11	157	11	10	128	123	A
13	400	11	257	9	147	12	8	152	96	A
14	375	11	252	10	137	13	8	145	95	A
15	350	13	251	13	135	15	10	135	102	A
16	325	15	254	16	137	19	12	129	111	A
17	300	15	257	16	132	19	10	132	107	A
18	275	17	265	14	133	20	9	143	103	A
19	250	16	260	10	138	17	8	155	93	A
20	225	12	259	12	127	16	7	135	103	A
21	200	8	276	13	143	15	6	117	132	A
22	175	6	256	18	117	19	4	105	114	A
23	150	15	221	32	121	32	14	95	119	A
24	125	21	232	39	141	39	21	91	140	A

TNGX1706 SBE56 6504



TNGY1706

Latitude: 61°57.488´N

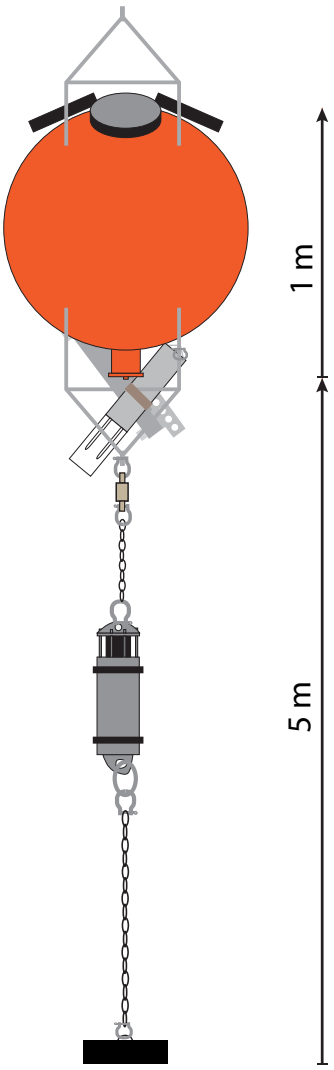
Longitude: 003°56.128´W

Echo sounding depth: 684 m

Bottom depth corr.: 673 m

Time of deployment: 9/6 - 2017 2135 UTC

Time of recovery: 19/5 - 2018 0308 UTC



ADCP:

Instrument no.: RDI ADCP 1292

Instrument frequency: 75 kHz

Height above bottom: 6 m

Depth: 667 m

Time of first data: 9/6 - 2017 2220 UTC

Time of last data: 19/5 - 2018 0300 UTC

Sample interval: 20 min

No. of ensembles: 24711

Pings per ens.: 1

Binlength: 25 m

Depth of first bin: 631 m

No. of bins: 23

MicroCat:

Instrument no.: 5184

Height above bottom: 5 m

Instrument depth: 668 m

Time of first data: 9/6 - 2017 2220 UTC

Time of last data: 19/5 - 2018 0300 UTC

Sample interval: 10 min

No. of ensembles: 49421

Data:

The temperature and pressure from the MicroCat are calibrated against an SBE911+.

The salinity data seem to have a drift and are not calibrated.

TNGY1706 ADCP 1292

Error statistics for deployment: TNGY1706 updated 2018/12/11

Temperature edited
Surface distance not edited
Heading, pitch and roll not edited
Intensity not edited

Velocity (spd, dir, wel) is error flagged using these data filters:
Maximum Speed factor (Average speed for each bin times factor): 4.0
Std dev for Maximum Speed (Average speed for each bin times number of std dev): 150.0
Maximum Absolute Error Velocity threshold (erv_tr+0.1*spd): 150.0
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 1): 9.00
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 23): 5.63
Std dev for de-spiking (u, v deviate from 3 point median by more than number of std dev, bin 32): 2.00

Total number of ensembles: 24711
Interval between ensembles: 20 min
Original number of bins: 32
Number of acceptable velocity bins: 23

Flagged values have been replaced by error codes: -999.99 for temperature and depth, -999 for velocity and intensity. For observations where velocity is flagged, error codes have been inserted into speed, direction and vertical 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	17	0	14	0	1	0	0	0	0	0	0	0
2	0	13	0	10	0	1	0	0	0	0	0	0	0
3	0	12	0	9	0	1	0	0	0	0	0	0	0
4	0	6	0	6	0	0	0	0	0	0	0	0	0
5	0	11	0	8	0	1	0	0	0	0	0	0	0
6	0	8	0	8	0	0	0	0	0	0	0	0	0
7	0	7	0	5	1	0	0	0	0	0	0	0	0
8	0	8	0	8	0	0	0	0	0	0	0	0	0
9	0	10	0	8	1	0	0	0	0	0	0	0	0
10	0	8	0	6	1	0	0	0	0	0	0	0	0
11	0	5	0	5	0	0	0	0	0	0	0	0	0
12	0	14	0	10	2	0	0	0	0	0	0	0	0
13	0	29	0	27	1	0	0	0	0	0	0	0	0
14	0	41	0	38	0	1	0	0	0	0	0	0	0
15	0	48	0	41	2	1	0	0	0	0	0	0	0
16	0	58	0	46	3	2	0	0	0	0	0	0	0
17	0	148	1	80	10	1	2	1	3	1	0	0	0
18	0	765	3	149	34	20	13	3	19	12	5	0	0
19	0	1890	8	134	60	21	14	18	35	24	25	5	0
20	0	3247	13	228	50	23	22	14	41	34	30	31	0
21	0	4525	18	311	82	42	29	13	41	50	31	51	0
22	0	5857	24	408	137	47	36	26	76	86	43	48	1
23	0	7454	30	646	172	83	36	37	86	89	65	56	2

TNGY1706 ADCP 1292

Deployment: TNGY1706 updated 2018/12/11
Instrument no.: 1292
Instrument freq.: 75
Latitude: 61 57.488 N
Longitude:03 56.128 W
Bottom depth: 673
Instrument depth: 667
Center depth of first bin: 631
Bin length: 25
Number of bins: 23
Number of first ensemble: 245
Time of first ensemble: 2017 06 09 22 20
Number of last ensemble: 24955
Time of last ensemble: 2018 05 19 03 00
Time between ensembles (min.): 20
All directions have been corrected by adding: -3.0

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	631	42	160	49	223	999
2	606	67	166	50	223	999
3	581	92	165	48	222	1000
4	556	117	162	47	221	1000
5	531	142	159	45	218	1000
6	506	167	157	43	213	1000
7	481	192	157	44	208	1000
8	456	217	160	46	204	1000
9	431	242	163	49	200	1000
10	406	267	168	54	197	1000
11	381	292	173	61	195	1000
12	356	317	177	70	194	999
13	331	342	184	82	194	999
14	306	367	193	94	195	998
15	281	392	201	102	196	998
16	256	417	210	108	195	998
17	231	442	218	112	194	994
18	206	467	226	114	193	969
19	181	492	234	117	192	924
20	156	517	242	120	191	869
21	131	542	249	121	190	817
22	106	567	255	122	189	763
23	81	592	266	122	189	698

TNGY1706 ADCP 1292

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	631	731	292	69	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	606	747	319	82	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	581	744	314	83	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0
4	556	734	299	76	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5	531	729	289	67	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	506	725	281	62	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	481	723	281	62	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8	456	733	293	71	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9	431	739	308	77	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10	406	744	324	91	17	2	0	0	0	0	0	0	0	0	0	0	0	0	0
11	381	751	345	110	24	3	0	0	0	0	0	0	0	0	0	0	0	0	0
12	356	754	364	122	31	5	1	0	0	0	0	0	0	0	0	0	0	0	0
13	331	761	391	142	42	9	1	0	0	0	0	0	0	0	0	0	0	0	0
14	306	772	418	169	56	12	1	0	0	0	0	0	0	0	0	0	0	0	0
15	281	784	444	194	69	16	2	0	0	0	0	0	0	0	0	0	0	0	0
16	256	797	475	218	85	25	5	0	0	0	0	0	0	0	0	0	0	0	0
17	231	806	493	237	96	34	9	2	0	0	0	0	0	0	0	0	0	0	0
18	206	796	493	251	108	41	13	4	1	0	0	0	0	0	0	0	0	0	0
19	181	771	487	256	118	47	17	5	1	0	0	0	0	0	0	0	0	0	0
20	156	734	468	257	125	53	22	8	3	0	0	0	0	0	0	0	0	0	0
21	131	699	451	252	129	58	26	11	4	1	0	0	0	0	0	0	0	0	0
22	106	657	429	246	130	63	28	12	5	2	0	0	0	0	0	0	0	0	0
23	81	603	406	240	136	71	35	15	6	2	0	0	0	0	0	0	0	0	0

TNGY1706 ADCP 1292

Harmonic constants for constituent M2 for deployment TNGY1706.

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	631	115	245	88	209	138	43	36	232	A
02	606	119	251	100	211	146	52	39	235	A
03	581	118	255	106	214	149	55	41	238	A
04	556	114	259	109	218	148	54	43	240	A
05	531	110	262	111	222	147	54	45	242	A
06	506	106	266	114	226	146	53	48	244	A
07	481	99	270	114	231	143	50	50	247	A
08	456	95	273	115	234	141	49	52	249	A
09	431	90	276	116	238	139	47	54	251	A
10	406	85	277	114	241	136	42	55	253	A
11	381	77	277	111	244	130	36	57	254	A
12	356	69	278	106	249	123	29	59	257	A
13	331	60	278	102	254	116	21	61	260	A
14	306	51	280	99	260	111	16	63	264	A
15	281	46	284	99	264	108	14	66	268	A
16	256	42	287	99	267	106	13	68	270	A
17	231	42	289	100	268	108	14	68	271	A
18	206	43	290	101	269	109	15	68	272	A
19	181	42	290	103	269	110	14	69	272	A
20	156	43	294	103	270	111	16	69	274	A
21	131	44	296	105	271	112	17	69	275	A
22	106	44	296	105	273	113	16	68	277	A
23	81	45	267	108	246	116	15	68	249	A

Harmonic constants for constituent S2 for deployment TNGY1706.

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	631	36	293	35	271	49	10	45	282	A
02	606	37	301	41	271	53	14	48	284	A
03	581	36	306	44	273	55	16	52	286	A
04	556	35	310	45	275	54	16	54	287	A
05	531	33	311	45	278	54	15	55	289	A
06	506	31	311	44	282	52	13	56	291	A
07	481	28	310	43	285	50	10	58	293	A
08	456	26	307	41	287	47	7	58	292	A
09	431	24	305	38	288	45	6	58	293	A
10	406	24	307	38	288	45	7	58	293	A
11	381	26	310	39	287	46	8	58	294	A
12	356	26	306	38	286	46	7	57	292	A
13	331	26	300	36	287	44	5	55	291	A
14	306	23	291	35	290	42	1	57	290	A
15	281	20	292	37	295	42	1	62	294	C
16	256	19	302	38	301	43	0	64	301	A
17	231	19	311	40	302	44	3	64	304	A
18	206	20	315	39	300	44	4	63	303	A
19	181	21	315	39	300	44	5	63	303	A
20	156	22	321	39	300	45	7	61	305	A
21	131	26	326	42	304	49	8	59	310	A
22	106	28	319	41	304	49	6	57	309	A
23	81	24	288	42	273	49	6	61	277	A

TNGY1706 ADCP 1292

Harmonic constants for constituent N2 for deployment TNGY1706.

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	631	23	225	19	182	28	11	37	209	A
02	606	24	234	22	187	30	13	42	213	A
03	581	22	243	24	194	30	13	47	217	A
04	556	22	252	26	201	30	14	52	220	A
05	531	22	262	29	207	33	16	58	224	A
06	506	22	265	29	211	33	16	58	227	A
07	481	19	259	25	212	29	12	57	227	A
08	456	18	247	21	204	26	10	50	222	A
09	431	20	235	19	198	26	9	44	218	A
10	406	18	233	17	204	24	6	44	219	A
11	381	14	239	17	222	22	3	52	229	A
12	356	11	246	18	232	21	2	58	236	A
13	331	9	251	18	237	20	2	63	240	A
14	306	9	253	20	244	22	1	66	245	A
15	281	8	264	21	248	22	2	69	250	A
16	256	9	261	20	246	22	2	67	249	A
17	231	10	258	19	244	21	2	63	247	A
18	206	10	252	19	242	21	2	61	244	A
19	181	10	265	21	240	23	4	67	244	A
20	156	11	271	25	244	27	5	69	247	A
21	131	11	283	26	244	27	6	71	249	A
22	106	12	291	27	242	29	8	73	247	A
23	81	12	275	29	221	30	9	75	225	A

Harmonic constants for constituent O1 for deployment TNGY1706.

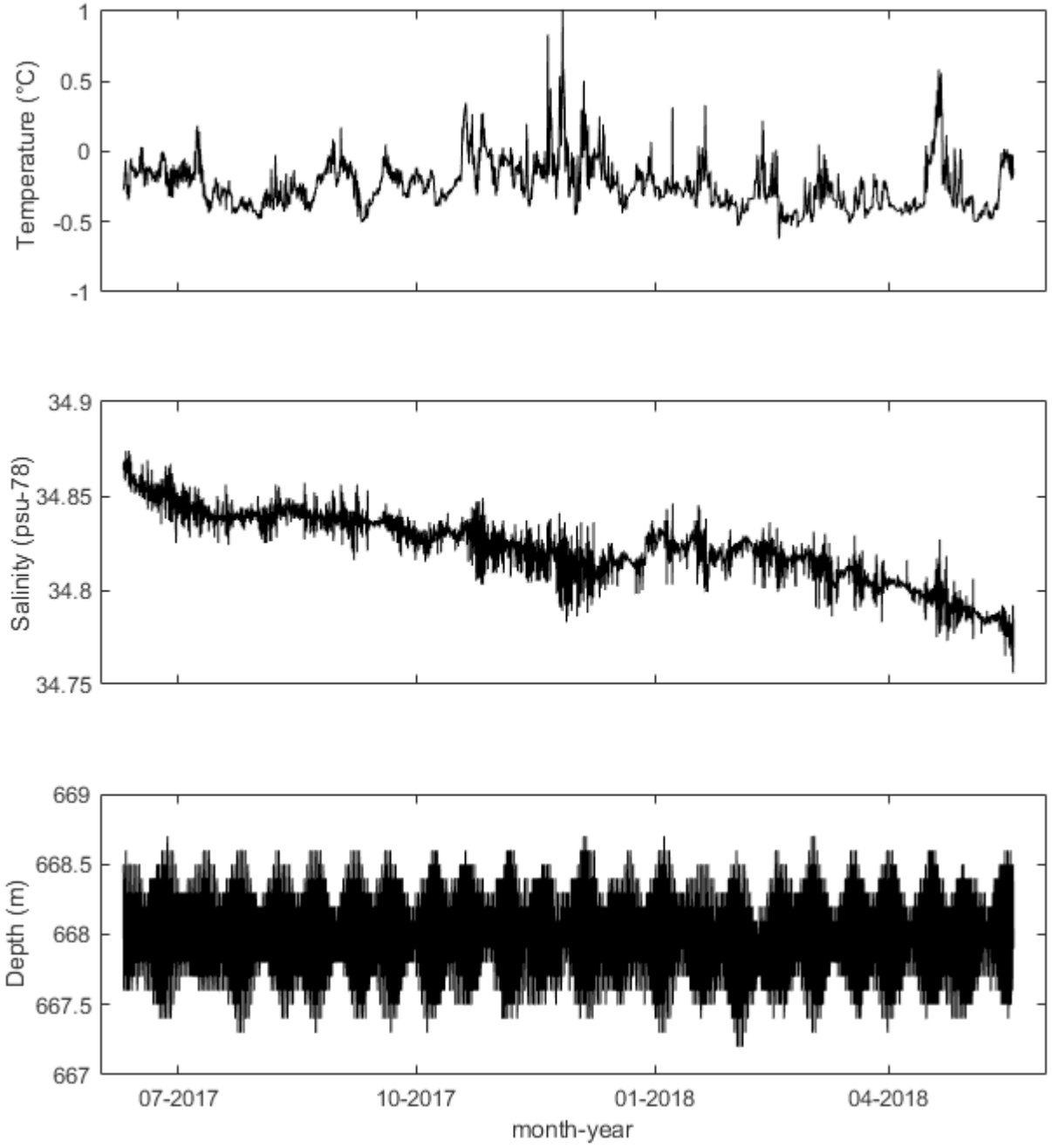
Bin	Depth m	E-ampl mm/sec	E-gpl deg	N-ampl mm/sec	N-gpl deg	Major mm/sec	Minor mm/sec	Incl deg	Grphl deg	R
01	631	10	34	5	315	10	5	7	31	A
02	606	11	30	5	302	11	5	1	30	A
03	581	12	26	5	295	12	5	180	206	A
04	556	12	21	6	287	12	6	177	203	A
05	531	13	18	6	286	13	6	179	199	A
06	506	14	17	7	292	14	6	3	16	A
07	481	14	13	7	300	15	7	11	8	A
08	456	15	10	7	305	16	6	13	5	A
09	431	15	9	8	305	15	7	18	360	A
10	406	15	6	9	303	16	8	20	356	A
11	381	14	3	9	291	15	8	15	354	A
12	356	15	356	9	301	16	7	25	344	A
13	331	17	356	11	305	19	8	29	342	A
14	306	17	357	13	300	19	9	29	341	A
15	281	17	360	11	298	18	9	24	347	A
16	256	18	359	9	299	19	8	17	352	A
17	231	17	355	10	294	17	8	20	346	A
18	206	16	355	10	300	17	8	24	344	A
19	181	14	351	8	301	15	6	25	341	A
20	156	8	7	9	285	9	8	64	307	A
21	131	7	9	9	258	10	6	115	242	A
22	106	10	40	10	235	14	2	136	227	A
23	81	10	32	9	221	13	1	139	216	A

TNGY1706 ADCP 1292

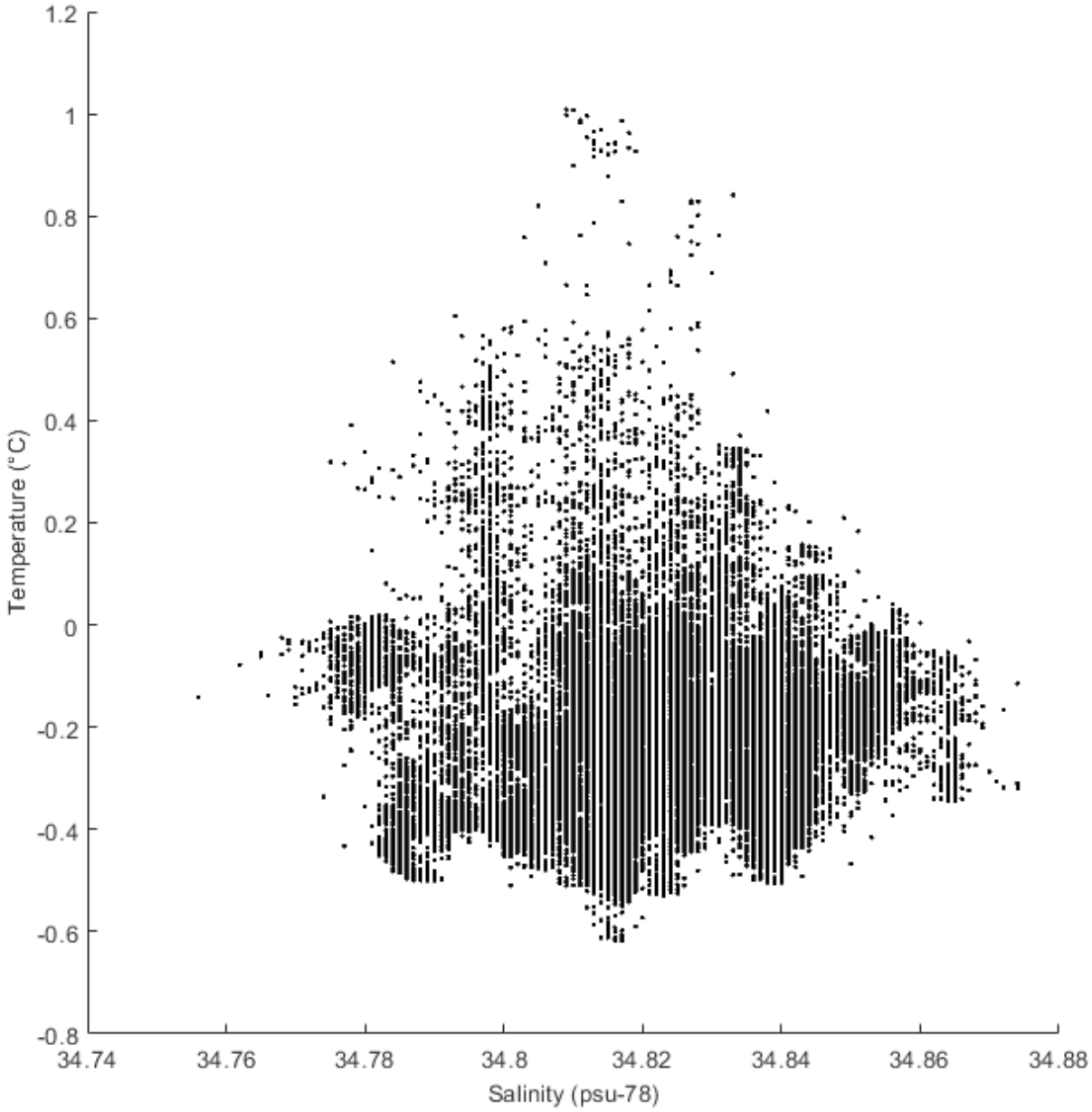
Harmonic constants for constituent K1 for deployment TNGY1706.

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	631	9	291	7	154	10	4	142	127	A
02	606	9	283	8	150	11	5	136	126	A
03	581	9	281	10	146	12	5	132	126	A
04	556	10	278	11	147	13	6	131	125	A
05	531	11	274	10	146	13	6	137	119	A
06	506	11	270	11	151	13	8	137	119	A
07	481	13	268	12	151	15	9	137	118	A
08	456	14	271	11	155	15	9	149	111	A
09	431	14	274	9	155	15	8	156	106	A
10	406	14	268	8	150	15	7	161	97	A
11	381	16	259	9	153	16	8	168	86	A
12	356	16	253	12	148	17	11	159	87	A
13	331	17	250	15	143	19	13	149	93	A
14	306	18	251	17	139	21	14	139	101	A
15	281	20	252	18	141	22	15	146	97	A
16	256	20	253	18	147	22	16	145	100	A
17	231	18	249	19	146	21	16	130	112	A
18	206	18	252	19	145	21	15	126	117	A
19	181	18	250	20	147	21	16	123	120	A
20	156	18	246	22	137	24	16	119	116	A
21	131	21	243	27	146	27	21	103	136	A
22	106	24	244	29	150	30	24	100	142	A
23	81	29	227	34	134	34	29	99	127	A

TNGY1706 MicroCat 5184



TNGY1706 MicroCat 5184



HAVSTOVAN
FAROE MARINE RESEARCH INSTITUTE

P.O. Box 3051 · Nóatún 1
FO-110 Tórshavn
Faroe Islands

Tel +298 35 39 00
hav@hav.fo
www.hav.fo