

Aanderaa current meter and SeaTech transmissometer data series at the northern North Sea site

Data Originators for current meter data series

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Data Originators for transmissometer data series

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Aanderaa current meters and SeaTech transmissometers were deployed on three different rigs at the main mooring site A at the beginning of the northern North Sea (NNS) experiment in September 1998 during cruise Valdivia VA174 and recovered in October 1998 at the end of the experiment during cruise Challenger CH140. The three rigs were respectively Rig D (“STABLE mooring”), Rig J1 (“Mid-water column Environmental mooring”) and Rig J2 (“Near-bed Environmental mooring”).

This report contains the qualifying documentation and header information associated with the following data series extracted from the BODC database:

Series Reference	Data Type	Latitude deg min	Longitude deg min	Start Date yyyy/mm/dd	Sea Floor Depth m	Sensor Depth m
524173	LA	59 19.9 N	001 00.1 E	1998/09/08	112.0	110.5
524185	LA	59 19.8 N	001 00.5 E	1998/09/09	110.0	100.0
524197	LA	59 19.6 N	001 00.7 E	1998/09/10	110.0	59.0

where Data Type LA = Currents -subsurface Eulerian

Parameter	Unit	Parameter code	Comments		
			524173	524185	524197
Current direction	deg. T	LCDAEL01	no data	none	none
Current speed	cm/sec	LCSAEL01	no data	none	caution
Attenuance	per m	ATTNMR01	caution	caution	caution
Conductivity	Mhos/m	CNDCPR01	none	none	none
Pressure	db	PRESPS01	caution	caution	caution
Salinity	PSU	PSALPR01	none	none	none
Temperature	deg. C	TEMPPR01	none	none	none

BODC Data Documentation
PROVESS Project MAS3-CT97-015

The following single character qualifying flags may be associated with one or more individual parameters within a data cycle:

<u>Flag</u>	<u>Description</u>
	Unqualified
<	Below detection limit
>	In excess of quoted value
B	Beginning of CTD Down/Up Cast
D	Thermometric depth
E	End of CTD Down/Up Cast
K	Uncertain/suspect value
L	Improbable value - originator's quality control
M	Improbable value - BODC quality control
N	Null value
O	Improbable value - user quality control
P	Trace/calm
Q	Indeterminate
R	Replacement value
S	Estimated value
T	Interpolated value
U	Uncalibrated
W	Control value
X	Excessive difference

INFORMATION FOR BODC SERIES REF. NO. 524173

Time Series Inventory Number : 10175

Start Time : 08 Sep 1998 0705 GMT

Latitude : 59deg 19.9min N

End Time : 06 Oct 1998 1135 GMT

Longitude : 001deg 00.1min E

Nominal Cycle Interval : 10.0 minutes

Sensor Depth : 110.50m

Sea Floor Depth : 112.00m

Positional Uncertainty : 0.1 to 0.5 n.miles

Sea Floor Datum : Instantaneous

Sensor Depth Datum : Sea floor reference

Disposition of Sensors : Sensor fixed, measurements made at fixed depths

Project : Proves

Data Category : Currents -subsurface Eulerian

Instrument Type : Paddle wheel current meter

Instrument Mounting : Sea floor - fixed

Originator Laboratory : Proudman Oceanographic Lab., Bidston, UK

Originator's Identifier : as11814.793

The following **warning** applies to this series:

No current speed or direction were available for this instrument due to a battery failure prior to the recovery of the rig.

The following **cautions** apply to this series:

- 1) This instrument was attached to the STABLE platform which was recovered 200 m off position.
 - 2) Towards the end of the record (after 03/10/98 12:00) the attenuation signal increased dramatically, indicating fouling of the optics or flattening of the battery. All affected records have been flagged suspect.
 - 3) The pressure recorded by the instrument indicated a depth deeper than the total water depth measured on deployment by the ship's echo-sounder. Absolute pressure values from this instrument should therefore be used with caution.
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Additional information stored with the data:

- 1) The transmission readings were converted to attenuation using the following values:

air correction reading = 995.5, blanked path reading= 0.000.

- 2) The time channel was adjusted to take into account the averaging period, by adding half the sampling interval to the recorded scan time.
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INFORMATION FOR BODC SERIES REF. NO. 524173 (continued)

The following additional documents apply to this series:

[63428](#); General Data Screening carried out by BODC
[65611](#); Aanderaa Recording Current Meter Model 7/8
[65720](#); Aanderaa Current Meter: DATA PROCESSING
[66188](#); SeaTech Transmissometer
[66467](#); SeaTech Transmissometer: DATA PROCESSING
Data Activity Document: [77568](#)
Project Document : [77554](#)

INFORMATION FOR BODC SERIES REF. NO. 524185

Time Series Inventory Number : 10184

Start Time : 09 Sep 1998 1805 GMT
End Time : 14 Oct 1998 1405 GMT

Latitude : 59deg 19.8min N
Longitude : 001deg 00.5min E

Nominal Cycle Interval : 10.0 minutes

Sensor Depth : 100.00m
Sea Floor Depth : 110.00m

Positional Uncertainty : 0.1 to 0.5 n.miles
Sea Floor Datum : Instantaneous
Sensor Depth Datum : Sea floor reference
Disposition of Sensors : Sensor fixed, measurements made at fixed depths

Project : Proves

Data Category : Currents -subsurface Eulerian
Instrument Type : Paddle wheel current meter
Instrument Mounting : Subsurface mooring - subsurface buoyancy
Originator Laboratory : Proudman Oceanographic Lab., Bidston, UK
Originator's Identifier : as11817.800

The following **cautions** apply to this series:

- 1) Towards the end of the record (after 03/10/98 12:00) the attenuation signal increased dramatically, indicating fouling of the optics or flattening of the battery. All affected records have been flagged suspect.
 - 2) The pressure recorded by the instrument indicated a depth shallower than that deduced from the rig configuration and water depth measured on deployment and recovery of the rig. The absolute pressure values from this instrument should therefore be used with caution.
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Additional information stored with the data:

- 1) The transmission readings were converted to attenuation using the following values:

air correction reading = 881.3, blanked path reading= 76.000.

- 2) The time channel was adjusted to take into account the averaging period, by adding half the sampling interval to the recorded scan time.
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The following additional documents apply to this series:

[63428](#); General Data Screening carried out by BODC
[65611](#); Aanderaa Recording Current Meter Model 7/8
[65720](#); Aanderaa Current Meter: DATA PROCESSING
[66188](#); SeaTech Transmissometer
[66467](#); SeaTech Transmissometer: DATA PROCESSING
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Project Document : [77554](#)

PARAMETERS

Parameter : AADYAA01 (TIME)
Description : Day number
Method : Computation
Units : Days (1760/01/01 = day 0)

Parameter : AAFDZZ01 (TIME)
Description : Day fraction (GMT)
Method : Computation
Units : Days

Parameters AADY/AAFD are usually supplied as date and time (GMT) or as parameters ADATAA01 and AHMSAA01.

Parameter : ADATAA01 (TIME)
Description : Date in format yyyyymmdd
Method : Computation
Units : Years Months Days (yyyyymmdd)

Parameter : AHMSAA01 (TIME)
Description : Time in format hh24miss
Method : Computation
Units : Hours Minutes Seconds

Parameter : ATTNMR01 (HYDR)
Description : Red light attenuation (medium 20/25cm beam)
Method : Red light 20/25cm transmissometer
Units : per metre

Parameter : CNDCPR01 (HYDR)
Description : Probe measured conductivity
Method : Conductivity probe
Units : Mhos/metre

Parameter : LCDAEL01 (CURR)
Description : Current direction (Eulerian method)
Method : In-situ current measurement
Units : Degrees True

Parameter : LCSAEL01 (CURR)
Description : Current speed (Eulerian method)
Method : In-situ current measurement
Units : cms/sec

Parameter : PRES01 (HYDR)
Description : Sea pressure (fixed)
Method : Fixed pressure sensor (e.g. SFPG)
Units : Decibars

Parameter : PSALPR01 (HYDR)
Description : Practical salinity (unspecified probe type)
Method : Unspecified conductivity probe
Units : Practical Salinity Units

PARAMETERS (continued)

Parameter : TEMPPR01 (HYDR)
Description : Sea temperature (unspecified)
Method : Unspecified temperature probe
Units : Degrees Centigrade