

Surface current meter (S4 ECM) data series at the southern North Sea site

Principal Investigator

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Data Originator

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Four S4 current meters were deployed at the main mooring site A on rigs B and D, and at the secondary mooring sites T (Rig T) and U (Rig U). Rig U could not be recovered and one out of the four S4 current meters deployed was therefore lost.

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
541810	LA	52 18.1 N	004 17.7 E	1999/03/30	19.0	4.0
541846	LA	52 18.1 N	004 18.4 E	1999/03/30	20.0	19.5
541858	LA	52 19.2 N	004 11.7 E	1999/03/30	22.0	21.5

where Data Type LA = Currents -subsurface Eulerian

Parameter	Unit	Parameter code	Comments		
			541810 (rig D)	541846 (rig B)	541858 (rig T)
E-W current velocity	cm/sec	LCEWEL01	none	none	none
N-S current velocity	cm/sec	LCNSEL01	none	none	none
Current speed	cm/sec	LCSAEL01	none	none	none
Current direction	deg. T	LCDAEL01	none	none	none
Depth	m	DEPHPR01	n/a	none	none
Turbidity	STU	TURBPR01	n/a	saturates at 127	saturates at 128

n/a : not available

BODC Data Documentation
PROVSS 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. 541810

Moored Current Meter Inventory Number : 10384

Start Time : 30 Mar 1999 1345 GMT
End Time : 26 Apr 1999 1955 GMT

Latitude : 52deg 18.1min N
Longitude : 004deg 17.7min E

Nominal Cycle Interval : 10.0 minutes

Sensor Depth : 4.00m
Sea Floor Depth : 19.00m

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 : Provess

Data Category : Currents -subsurface Eulerian
Instrument Type : Electromagnetic current meter
Instrument Mounting : Subsurface mooring - surface buoyancy
Originator Laboratory : Proudman Oceanographic Lab., Bidston, UK
Originator's Identifier : s41644.822 (site A, rig D)

Additional information stored with the data:

The recorder of this S4 current meter was set to continuous mode with a vector averaging rate of 1200 half seconds.

Data processing was carried out at the Proudman Oceanographic Laboratory, Merseyside, UK.

The time channel has been adjusted to take into account the averaging period, by adding half the sampling interval to the recorded scan time.

The current data have been corrected for a magnetic deviation of 2.2 degrees.

The following additional documents apply to this series:

[63428](#); General Data Screening carried out by BODC
[40555](#); InterOcean Spherical Solid State Sensor Current Meter, Model S4/S4D
Data Activity Document: [78072](#)
Project Document : [77554](#)

INFORMATION FOR BODC SERIES REF. NO. 541858

Moored Current Meter Inventory Number : 10388

Start Time : 30 Mar 1999 0904 GMT
End Time : 18 May 1999 1504 GMT

Latitude : 52deg 19.2min N
Longitude : 004deg 11.7min E

Nominal Cycle Interval : 60.0 minutes

Sensor Depth : 21.50m
Sea Floor Depth : 22.00m

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 : Provess

Data Category : Currents -subsurface Eulerian
Instrument Type : Electromagnetic current meter
Instrument Mounting : Sea floor - fixed
Originator Laboratory : Proudman Oceanographic Lab., Bidston, UK
Originator's Identifier : s42006.825 (site T, rig T)

Additional information stored with the data:

This S4 current meter was also equipped with an optical backscatterer and a pressure sensor.

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The instrument operated in burst mode and this data series contains the 20-minute average of the burst recording. The burst mode sampling rate was of 1 second for a period of 20 minutes every hour.

Data processing was carried out at the Proudman Oceanographic Laboratory, Merseyside, UK. The time channel has been adjusted to take into account the averaging period, by adding half the sampling interval to the recorded scan time.

The current data have been corrected for a magnetic deviation of 2.2 degrees.

The following additional documents apply to this series:

[63428](#); General Data Screening carried out by BODC
40555; InterOcean Spherical Solid State Sensor Current Meter, Model S4/S4D
Data Activity Document: [78072](#)
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).

Parameter : DEPHPR01 (POSN)
Description : Depth (computed from pressure)
Method : Pressure converted using UNESCO PTODEP
Units : Metres

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

Parameter : LCEWEL01 (CURR)
Description : E-W current velocity (Eulerian method)
Method : In-situ current measurement
Units : cms/sec

Parameter : LCNSEL01 (CURR)
Description : N-S current velocity (Eulerian method)
Method : In-situ current measurement
Units : cms/sec

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 : TURBPR01 (SPM)
Description : OBS turbidity
Method : In-situ optical backscatter nephelometer calibrated against formazin
Units : Standard Turbidity Units