

TCP chain logger data series at the southern North Sea site

Principal Investigator

John Howarth, Proudman Oceanographic Laboratory (POL), Merseyside, UK.

Data Originator

Phil Knight – POL.

Two Thermistor-Conductivity-Pressure (TCP) chains from the Proudman Oceanographic Laboratory were deployed in March 1999 at the beginning of the southern North Sea experiment during the cruise Pelagia PE136 and recovered during the last PROVCESS cruise (Belgica BG9912) in May 1999. One of the TCP chains was deployed at the main site A on Rig B; the other was at one of the secondary sites on Rig T. Another thermistor chain, from the Netherlands Institute of Sea Research (NIOZ), was deployed at the main mooring site A on the NIOZ rig and has been documented separately ([sns_nioztc](#)).

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
541730	PC	52 18.2 N	004 18.3 E	1999/03/30	20.0	2.5
541742	PC	52 19.2 N	004 11.7 E	1999/03/30	22.0	2.5

where Data Type PC = Hydrography time series at depth

Parameter	Unit	Parameter code	Comments	
			541730	541742
T/C sensor depth	m	DEPHTC01	none	none
Sea pressure	db	PRESPS01	caution	none
Pre-78 salinity	ppt	SSALST01	caution	none
Sea temperature	deg. C	TEMPTC01	caution	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. 541730

Time Series Inventory Number : 10383

Start Time : 30 Mar 1999 1315 GMT
End Time : 20 May 1999 1200 GMT

Latitude : 52deg 18.2min N
Longitude : 004deg 18.3min E

Nominal Cycle Interval : 900.0 secs

Minimum Depth : 2.50m
Maximum Depth : 13.50m
Sea Floor Depth : 20.00m

Positional Uncertainty : 0.1 to 0.5 n.miles
Depth Datum : Instantaneous
Disposition of Sensors : Scattered at fixed depths

Project : Provess

Data Category : Hydrography time series at depth
Instrument Type : Thermistor chain
Instrument Mounting : Subsurface mooring - surface buoyancy
Originator Laboratory : Proudman Oceanographic Lab., Bidston, UK
Originator's Identifier : 1460/821

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

The thermistor sensor at 6.0 m (channel 6) stopped working properly on 11/4/2000 22:00. The signal became very unstable before remaining constant at -7.628 deg.C until the end of the deployment. The unstable phase of the record was flagged as suspect while the constant phase was set null. The corresponding salinity record (channel 5) was flagged as suspect from 11/4/2000 22:00 to 30/4/2000 14:30 although the variations observed suggest that the conductivity sensor was functioning correctly. After this the salinity became constant at -0.09 PSU until the end of the deployment suggesting that the conductivity sensor had stopped operating correctly. This part of the record was set null.

The pressure dropped from 13.2 to 11.5 db on 28/04/1998 between 14:45 and 19:15 but with no apparent consequence on the TCP time-series.

Additional information stored with the data:

Note on mooring configuration:

The datalogger was deployed at a depth of 14 m at the end of a 10 m cable length on which the five C/T sensors were clamped. The depths of the five C/T sensors were 13.5, 11.0, 8.5, 6.0 and 3.5 metres respectively. A pressure sensor was located 1 metre above the last C/T sensor. Pressure was logged on channel 11 of the datalogger.

Note on data processing (carried out at the Proudman Oceanographic Laboratory, Merseyside, UK):

Salinity was calculated from conductivity, temperature and pressure using pre-78 formula as outlined in UNESCO (1966), Bennett AS (1976, Deep Sea Research 23:157-165), and Dauphinee TM and Klein HP (1977, Deep Sea Research 24:891-902).

The following additional documents apply to this series:

[63428](#); General Data Screening carried out by BODC

[78767](#); Aanderaa Thermistor Conductivity Chain

Data Activity Document: [78072](#)

Project Document : [77554](#)

INFORMATION FOR BODC SERIES REF. NO. 541742

Time Series Inventory Number : 10391

Start Time : 30 Mar 1999 0815 GMT
End Time : 18 May 1999 1500 GMT

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

Nominal Cycle Interval : 900.0 secs

Minimum Depth : 2.50m
Maximum Depth : 13.05m
Sea Floor Depth : 22.00m

Positional Uncertainty : 0.1 to 0.5 n.miles
Depth Datum : Instantaneous
Disposition of Sensors : Scattered at fixed depths

Project : Provess

Data Category : Hydrography time series at depth
Instrument Type : Thermistor chain
Instrument Mounting : Subsurface mooring - surface buoyancy
Originator Laboratory : Proudman Oceanographic Lab., Bidston, UK
Originator's Identifier : 1461/825

Additional information stored with the data:

Note on mooring configuration:

The datalogger was deployed at a depth of 14 m at the end of a 10 m cable length on which the five C/T sensors were clamped. The depths of the five C/T sensors were 13.05, 10.55, 8.05, 5.55 and 3.05 metres respectively. A pressure sensor was located 0.55 metre above the last C/T sensor. Pressure was logged on channel 11 of the datalogger.

Note on data processing:

Salinity was calculated from conductivity, temperature and pressure using pre-78 formula as outlined in UNESCO (1966), Bennett AS (1976, Deep Sea Research 23:157-165), and Dauphinee TM and Klein HP (1977, Deep Sea Research 24:891-902).

The following additional documents apply to this series:

[63428](#); General Data Screening carried out by BODC
[78767](#); Aanderaa Thermistor Conductivity Chain
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) or as parameters AATAA01 and AHMSAA01.

Parameter : AATAA01 (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 : DEPHTC01 (POSN)
Description : Thermistor Chain Sensor Depth
Method : Measurement along mooring
Units : Metres

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

Parameter : SSALST01 (HYDR)
Description : Pre-78 salinity (CTD)
Method : CTD conductivity measurement
Units : Parts per Thousand

Parameter : TEMPTC01 (HYDR)
Description : Sea temperature (thermistor chain)
Method : In-situ thermistor
Units : Degrees Centigrade