

A Cruise Report: PR14_20VDPR1495_1

A.1 Cruise Narrative

A.1.1 Highlights

WOCE Section: **PR14**

ExpoCode: **20VDPR1495_1**

Chief Scientist: **Wanda García L.**

Servicio Hidrográfico y Oceanográfico de la Armada
(SHOA).

Errázuriz 232, Playa Ancha.

Valparaíso, Chile.

Teléfono: 56-032-266666

Fax: 56-032-266542

Ship: AGOR60 - Vidal Gormaz.

Port of call: Puerto Montt, CHILE

Cruise Dates: May/23 to June/16 1995

A.1.2 Cruise Summary

Cruise Track:

The cruise track and station locations are shown in figure 1.

Number of stations:

A total of 50 hydrographic stations were performed using a sealogger 19 CTD model 1240.

Sampling:

continuous profiles of temperature and salinity were made using a CTD.

Floats, Drifters, and Moorings:

(None)

A.1.3 List of principal Investigators

NAME	RESPONSIBILITY	INST.
EaC. Sra Wanda García.	Chief of Watch 1, Computer Operator, Cruise Logger, Form filer.	SHOA
EaC. Sr. C. Rodrigo R.	Chief of Watch 2, Computer and Seabeam, cruise logger , METEO/S.H.I.P message sender	SHOA

A.1.4 Scientific Programme and methods

The principal objectives of the cruise were To collect necessary information to develop ocean circulation models to predict decade climatic changes in order to contribute to international WOCE program.

Preliminary Results

A.1.5 Major Problems Encountered on the Cruise

Major problems during the realization of the cruise, were the continuous passing of weather fronts through the study area, difficulting the sampling and damaging the instruments.

A.1.6 Other Observations of Note:

(None)

A.1.7 List Of Cruise Participants

NAME	RESPONSIBILITY	INST.
EaC. Sra. W. García L.	Chief of watch 1	SHOA
EaC. Sr. C. Rodrigo R.	Chief of watch 2	
S2.Serv (Oc) A. Olivares I.	Sampling assistant , XBT launcher	SHOA
C1. R. Castro.	Seabeam controller	SHOA
C1. Serv. J. Freire.	Nansen bottle sampler	SHOA
M. Serv. (Oc. Bas.) P. Altamirano	CTD maneuver, XBT launcher, salinity sampler	SHOA
Srta. P. Vera T.	Salinity sampler, thermometer reading	UV
S2. Serv. (Oc) P. Urvúa A.	Rossette maneuver , salinity sampler	SHOA
C1.(Met.) J. Bravo E.	CTD maneuver, XBT launcher, meteorological sampler, rossette sampler.	SHOA
C1. Serv. (Oc.) R. Montecinos.	Winche operator.	SHOA
Srta. A. Paredes C.	Salinity sampling, thermometer reading .	SHOA

A.2 Underway Measurements

A.2.1 Navigation:

(Not available)

A.2.2 Echosounding:

(Not available)

A.2.3 Acoustic Doppler Current Profiler (ADCP):

(None)

A.2.4 Thermosalinograph Measurements:

(None)

A.2.5 XBTs

A total of 31 XBT launches (T5 and T7) were performed.

A.2.6 Meteorological Measurements

Meteorological data measured were: wind speed and direction, air temperature, atmospheric pressure.

A.3 Hydrographic Measurement Techniques and Calibration

A.3.1 Sample Salinity Measurements:

(Not sampled)

A.3.2 Sample Oxygen Measurements:

(Not sampled)

A.3.3 Nutrients:

(Not sampled)

A.3.4 CFC:

(Not sampled)

A.3.5 Samples taken for other chemical measurements:

(None)

A.3.6 CTD Measurements

The CTD used was a Sealogger-19 model 1240 bought by SHOA in 1992, whose first calibration was made in 1995.

A.3.7 CTD Data collection and processing

Data registry:

date	STATION
05/28/95	1,2, 3
05/29/95	4, 5, 6
05/30/95	7, 8, 9, 10
05/31/95	11, 12, 13
06/01/95	14, 15, 16
06/02/95	17, 18, 19
06/03/95	20
06/04/95	21, 22
06/05/95	23, 24, 25, 26
06/06/95	27, 28, 29, 30
06/07/95	31, 32
06/10/95	33, 34, 35
06/11/95	36, 37, 38, 39, 40
06/12/95	41, 42
06/13/95	43, 44, 45, 46
06/14/95	47, 48, 49
06/16/95	50

CTD SBE-19 model 1240

The first calibration of the CTD was in February 1995 and the second in February 1996. Therefore, 1995 calibration coefficients were used and slope and offset corrections due to time drift, were computed related to 1996 calibration.

Temperature:

A =	3.67501020E-03	slope =	1
B =	5.79636042E-04	offset =	0 therefore, as no drift in temperature, only conductivity corrections were made.
C =	7.04477118E-06		
D =	-2.63647365E-06		
F0 =	2405.472		

Day	B	n	B/n	post-delta(t)	Offset
28	89	353	0.252125	0.00017	-0.0000429
29	90	353	0.254958	0.00017	-0.0000433
30	91	353	0.257790	0.00017	-0.0000438
31	92	353	0.260623	0.00017	-0.0000431
1	93	353	0.263456	0.00017	-0.0000479
2	94	353	0.266289	0.00017	-0.0000453
3	95	353	0.269122	0.00017	-0.0000458
4	96	353	0.271955	0.00017	-0.0000462
5	97	353	0.274788	0.00017	-0.0000467
6	98	353	0.277620	0.00017	-0.0000472
7	99	353	0.280453	0.00017	-0.0000477
10	102	353	0.288952	0.00017	-0.0000491
11	103	353	0.291785	0.00017	-0.0000496
12	104	353	0.294618	0.00017	-0.0000501
13	105	353	0.297450	0.00017	-0.0000506
14	106	353	0.300283	0.00129	-0.0000511
16	107	353	0.303116	0.00129	-0.0000515

Conductivity:

M =	3.3	offset =	0
A =	2.25845067E-04	slope1 =	0.99993
B =	4.96710908E-01	slope2 =	0.99992
C =	-4.14181213E+00	slope3 =	0.99991
D =	7.47131807E-04		
CPcor =	-9.5700E-08		

Day	B	n	b/n	(pre-slope)-1	slope
28	89	353	0.252125	-0.000296	0.99993
29	90	353	0.254958	-0.000296	0.99993
30	91	353	0.257790	-0.000296	0.99992
31	92	353	0.260623	-0.000296	0.99992
1	93	353	0.263456	-0.000296	0.99992
2	94	353	0.266289	-0.000296	0.99992
3	95	353	0.269122	-0.000296	0.99992
4	96	353	0.271955	-0.000296	0.99992
5	97	353	0.274788	-0.000296	0.99992
6	98	353	0.277620	-0.000296	0.99992
7	99	353	0.280453	-0.000296	0.99992
10	102	353	0.288952	-0.000296	0.99991
11	103	353	0.291785	-0.000296	0.99991
12	104	353	0.294618	-0.000296	0.99991
13	105	353	0.297450	-0.000296	0.99991
14	106	353	0.300283	-0.000296	0.99991
16	107	353	0.303116	-0.000296	0.99991

Therefore, three *.con configuration files were calculated (PR14-95 A.con to PR14-95 C.con)

Data registry**Pressure**

A0 =	4966.769
A1 =	-1.301246E+00
A2 =	7.337814E-08

Processing

Step1

1. Convert data from *.hex to *.cnv format using DATCNV program and *.con configuration file.
2. Deleting negatives velocities using the leewoce.bas program
3. Checking and cleaning the header files.
4. Computing the average down velocity value (X).
5. e) to apply the AlingCTD program to correct temperature and conductivity time response shift from the CTD sensors.

Step 2

- a) To apply DATCNV program to average observed values meter by meter.

Step 3

- a) To apply Winfilter program to filter data after step 2 , using a flexible windows determined by the user.

A.3.8 Satellite image acquisition and processing.

(None)

A.3.9 Shipboard computing:

(None)

Note: All data from WOCE PR14 and SR1 cruises, have been passed to the National Oceanographic Data Center of Chile (CENDOC) for data management purposes and to be quality controlled according to normal WHPO procedures. For major information write to:

Ricardo Rojas
Chief of CENDOC
Casilla 324
Valparaiso
CHILE
e-mail rrojas@shoa.cl

who can direct your request to the appropriate decision channels. Do not write directly to Principal Investigators.

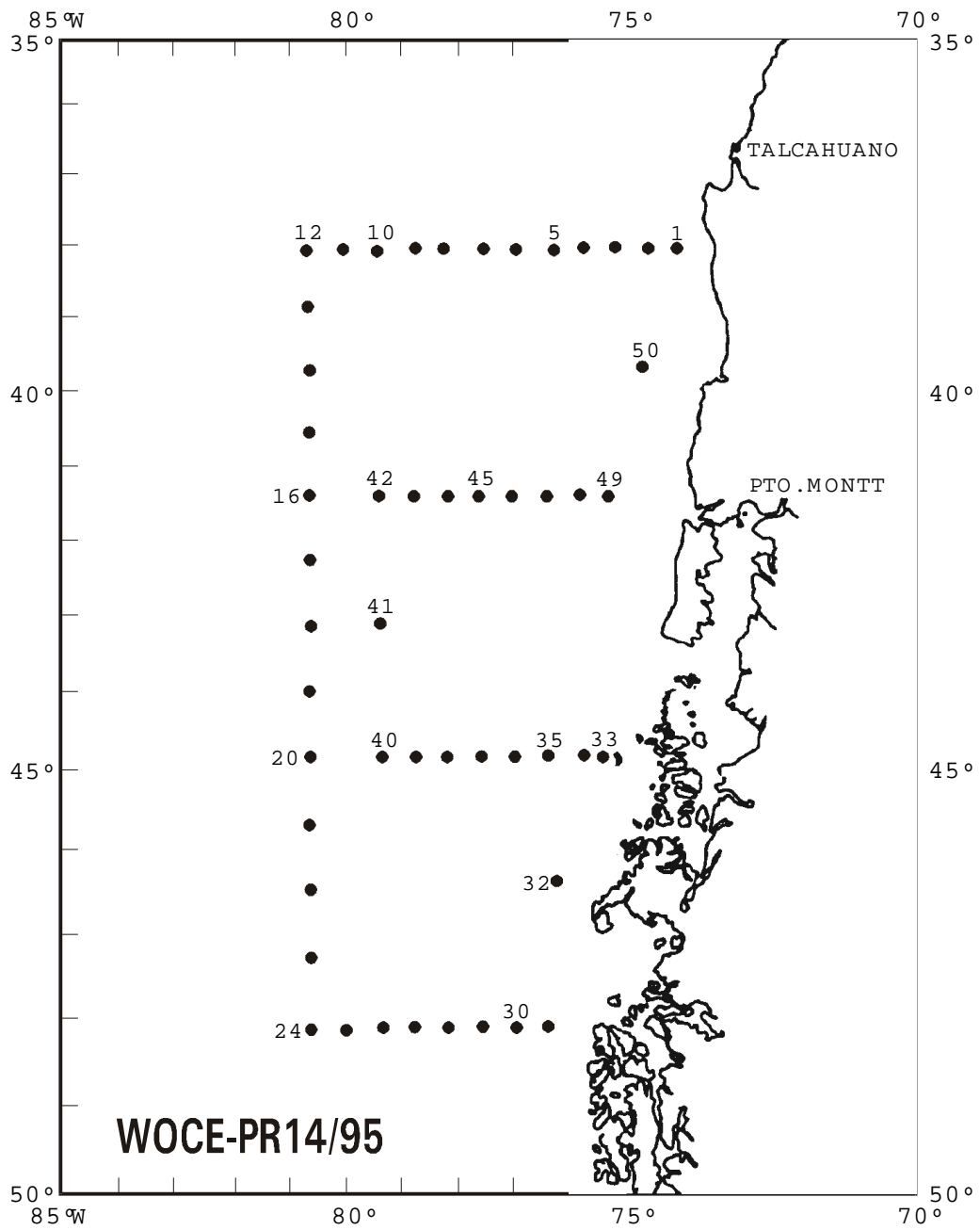


Figure 1. Location of hydrographic stations during PR14-95