

A. Cruise Narrative

A.1 Highlights

WHP Cruise Summary Information

WOCE section designation	PR04, PR02
Expedition designation (EXPOCODE)	49RY9306_1 49RY9306_2 49RY9306_3
Chief Scientist	Michio Hirota, Japan Meteorological Agency, 1-3-4, Otemachi, Chiyoda-ku, Tokyo 100, Japan
Ship	R/V Ryofu Maru
Ports of call	Leg 1: Tokyo, Japan to Rabaul, Papua New Guinea Leg 2: Rabaul, Papua New Guinea to Cebu, Republic of the Philippines Leg 3: Cebu, Republic of the Philippines to Tokyo, Japan
Cruise dates	Leg 1: June 9, 1993 to June 26, 1993 Leg 2: June 29, 1993 to July 12, 1993 Leg 3: July 17, 1993 to July 31, 1993
Number of Stations	35
Geographic boundaries	154° 55.88'E 30° 0.26'N 155° 10.26'E 3° 59.94'S
Floats and drifters deployed	0
Moorings deployed or recovered	0

A.2 Cruise Summary Information

A.2.b Stations occupied

Observations of PR4 were carried out as part of the R/V Ryofu Maru cruise RY9306 Leg 1, and those of PR02 were Leg 2 and Leg 3.

Number of Stations

A total of 35 CTD/rosette stations for PR4 and 32 stations for PR2 was occupied using a General Oceanics 12 bottle rosette equipped with 12 2.5-liter Niskin water sample bottles, and a Falmous Scientific Inc. Integrated CTD. No additional sensors were used with the CTD system.

Sampling

The following water sample measurements were made: salinity, oxygen, nitrate, nitrite and phosphate on all stations. The depths sampled were: 10, 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000, 1250, 1500, 2000, 2500, 3000, 4000 in meters at every 5 degrees in latitude. On other stations, samples were taken at shallower depths than 1250m. Surface water samples were collected by a bucket at every station.

A.3 List of Principal Investigators

The principal investigators responsible for each parameter measured on the cruise are listed in Table 1. (All the correspondence on these data should be addressed to the Director of the Oceanographical Division, Marine Department, Japan Meteorological Agency.)

Name	Responsibility	Affiliation
I. Kaneko	CTD, S	JMA/MD
I. Terashima	O2, Nutrients	JMA/MD

JMA/MD Marine Department, Japan Meteorological Agency

A.4 Scientific Programme and Methods

A.5 Major Problems and Goals not Achieved

A.6 Other Incidents of Note

A.7 List of Cruise Participants

#### WHPO SIO Data Processing Notes

Date	Contact	Data Type	Data Status	Summary
09/29/99	Buck	CTD/BTL/SUM	Website Updated	Online/Encrypted
08/04/00	Saiki	CTD/BTL	Data are Public	I am pleased to inform you that the PIs and participants of the one-time and repeat cruises conducted by the Japan Meteorological Agency's vessels agreed to change most of the data status to public.
08/15/00	Bartolacci	CTD/BTL	Website Updated	data decrypted As per Masaro Saiki the bottle and CTD files for these cruises have been unencrypted and made public. All index files have been updated to reflect this change.
11/27/00	Uribe	DOC	Submitted	2000.11.27 KJU File contained here is a CRUISE SUMMARY and NOT sumfile. Documentation is online.  2000.10.11 KJU Files were found in incoming directory under whp_reports. This directory was zipped, files were separated and placed under proper cruise. All of them are sum files. Received 1997 August 15th.
04/13/01	Uribe	BTL	Website Updated	CSV File Added Bottle carriage returns were fixed. Bottle file was converted into Exchange format. Website now contains a link to the CSV file.
06/08/01	Uribe	CTD	Website Updated	CSV File Added CTD were put into exchange format and the individual file names were modified. New zipped CTD file has been linked to website.
11/09/01	Uribe	CTD	Website Updated	New CSV file added CTD data has been converted to exchange format using the new WHPO code. Old file has been put inside the original directory and new file has been put online.