HOT-92: Chief Scientist Report

Chief Scientist: L. TUPAS

HOT-92 Chief Scientist's Report

Loading: April 10, 1998
Departed: April 13, 1998 at 0900
Returned: April 17, 1998 at 0800
Vessel: R/V Moana Wave

Chief Scientist: Dr. Louie Tupas
Master: Captain Robert Hayes
Deck Operations: Mr. Dave Gravett
Electronics Technician: Mr. Steve Poulos

1. SCIENCE PERSONNEL

Luis Tupas - UH, JGOFS
Dale Hebel - UH, JGOFS
Karin Bjorkman - UH, JGOFS
Terrence Houlihan - UH, JGOFS
Pat Driscoll - UH, JGOFS
Scott Nunnery - UH, JGOFS
Dan Sadler - UH, JGOFS
Craig Nosse - UH, WOCE
Don Wright - UH, WOCE
Fernando Santiago Mandujano - UH, WOCE
Mark Valenciao - UH WOCE
Stuart Donachie - UH, Post-Doc
Markus Karner - UH, Post-Doc
Craig Motell - UH, Technican
Barbara Paul - UW Technician
Lisa Chau - UHM, Undergrad
Lyndsey Rock - UHH, Undergrad

2. GENERAL SUMMARY

All objectives of the JGOFS and WOCE programs were accomplished. All planned stations were occupied. Weather and sea conditions were initially rough but within the limits of safety for deck operations. All core samples were taken and the 36 hour CTD burst sampling period was not interrupted. All samples for ancillary projects were taken. Floating sediment trap array and primary production array deployed and recovered successfully. No samples were lost during the in-situ incubations. ADCP measurements were made throughout the cruise. The pCO2 system was operated using the ships uncontaminated seawater intake system.

3. R/V MOANA WAVE, OFFICERS AND CREW, TECHNICAL SUPPORT

The R/V Moana Wave continues to maintain the excellent ship support for our work. The officers and crew were most helpful and accommodating. They showed enthusiasm and concern for our work and were very flexible in receiving changes in our operational schedule. Technical support during this cruise was excellent. STAG personnel were available at any time to assist in our work and made things much easier

for us.

## 4. DAILY REPORT OF ACTIVITIES

April 10, 1998; Loading Day

All deck and lab equipment were moved from either SNUG Harbor labs or UH on this day. All electrical and electronic connections were made for the CTD. All lab equipment were stowed away and secured. All laboratory instruments were tested and appeared functioning. No problems were encountered.

April 13 , 1998

Scientists arrived on ship by 0830. Ship departed at 0900 after all scientists and equipment arrived. Fire and emergency drills conducted at 0930 followed by a safety briefing by the first mate and a short science meeting. Arrived at Station Kahe at 1200. Conducted weight cast followed by a light cast using the Profiling Reflectance Refractometer (PRR) and the Tethered Spectral Radiometric Buoy (TSRB). Problems were encountered during the 1000 m CTD cast. The bottles did not respond to the firing commands. Cast was aborted and package was returned to deck. After inspection of the cable, a burned out protion of the termination was found. The cable was reconnected and a second 1000 m cast was made, this time succesful. Started transit to Station ALOHA at 1700 following a depth contour of about 500 meters for ADCP bottom tracking. Uncontaminated seawater system was run and the pCO2 system was connected and operated. Transit to Station ALOHA was slow because of inclement weather and arrived at station 0300 on April 14.

April 14, 1998

Sea conditions were rough upon arrival at Station ALOHA. Conditions were still within limits for safe deck operations. Floating sediment trap array deployment began at 0300 and accomplished at 0400. Twelve traps were deployed at 150 meters. 3 traps were deployed at 165 meters. After deployment, the ship transited to center of station and commenced CTD operations. The WOCE casts were rescheduled under weather conditions were better for the deep cast.. CTD sampling commenced at 0400 and maintained at 3 hour intervals. Deep cast started at 0900. Zooplankton tows at noon successful. PRR and TSRB cast was made but with great difficulty.

April 15, 1998

CTD casts continued at 3 hour intervals. Go-Flo cast conducted at 0130. Kink in wire was seen after S2C8. Wire is reterminated. Primary production array deployment commenced at 0500. CTD casts continued at 0730. Kink in wire occurred again and wire was reterminated. CTD casts continued at 1130 and continuing at 3 hour intervals. CTD winch speeds drstically reduced to prevent kinking of wire. It appears that the package tumbles during downcast. Zooplankton tows conducted at noon. PRR cast at 1230. Retrieval of primary production array commenced at 1900. No samples were lost. CTD casts continued at 3 hour intervals.

April 16, 1998

CTD casts continue. Burst sampling ends at 0300. Ship moves out of cirlce to pump holding tanks. Return to center for second deep cast. Deep cast at 0600 and accomplished by 1000. Proceeded to location of floating sediment trap. Traps located by 1200 and retrieved. All sediment traps were retrieved undamaged and the whole array was safely and successfully retrieved. Transit to HALE ALOHA. Cast started at 1600 and completed at 1730. Transit to Honolulu at 1830.

April 17, 1998

Arrived at Snug Harbor at 0800. Unloading commenced immediately and completed at 1200.

SAMPLES TAKEN FOR OTHER INVESTIGATORS

1. DIC water samples for C.D. Keeling, SIO-UCSD
2. DIC water samples for P. Quay, UW
3. Seawater for Hawaii Department of Health
4. Seawater for E. Laws, UH
5. Seawater and particulates for J. Murray (UW) by B. Paul