HOT-115: Chief Scientist Report

Chief Scientist: L. TUPAS

Vessel: R/V Ka'Imikai O' Kanaloa
Loading: May 18, 2000
Departed: May 22, 2000 at 0900
Returned: May 26, 2000 at 0800

Chief Scientist: Dr. Louie Tupas
Master: Captain Robert Hayes
Deck Operations: Mr. Dave Gravatt
Electronics Technician: Mr. Will Hervig

1. SCIENCE PERSONNEL

Luis Tupas - UH, scientist
John Dore - UH, scientist
Karin Bjorkman - UH, scientist
Terry Houlihan - UH, research associate
Lance Fujieki - UH, computer specialist
Dan Sadler - UH, research associate
Don Wright - UH, research associate
Fernando Santiago-Mandujano - UH, research associate
Mark Valenciano - UH, marine technician
Colleen Allen - UH, research associate
Tom Gregory - UH, research associate
Jennifer Brum - HPU, undergraduate student
Lal Ratnapala - UH, graduate assistant
Matt Church - VIMS, visiting graduate student
Pati Turner - UCSC, research associate
Andrew Hansen - UH, graduate student (Botany)

2. GENERAL SUMMARY

All objectives of the JGOFS and WOCE programs were completed. All planned stations were occupied. Weather and sea conditions were good. All core samples were taken. The 36 hour CTD burst sampling period was interrupted in order to transport Mr. Hasen to shore after he injured himself thorugh a chemical spill. A separate accident report has been made and attached to this report. All samples for ancillary projects were taken. Guest scientists and students were able to accomplish their work. 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. There was no HALE ALOHA station because the mooring has not yet been deployed.

3. R/V Ka Imikai O Kanaloa, OFFICERS AND CREW, TECHNICAL SUPPORT

Ship's crew gave excellent support and showed enthusiasm and concern for our work and were very flexible in receiving changes in our operational schedule and logistical support. 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. During the cruise, email was not reliable but the skyphone made it possible for us to retrieve the satellite positions of the sediment trap.

4. DAILY REPORT OF ACTIVITIES

May 18, 2000; Loading Day

Loading commenced at 10:30 A.M. after the MOBY party completed their off-loading. The ship's main deck was configured for HOT equipment. The main lab van and the rope winch were secured inside the submarine hangar. The equipment van and second radiation van were secured on the O-2 deck. All deck and lab equipment were loaded and secured within the ship's labs. All electrical and electronic connections were made for the CTD. All other equipment and containers were stowed away and secured. All laboratory instruments were tested and appeared functioning. No problems were encountered.

May 22, 2000

We departed Snug Harbor at 0900. Fire and abandon ship drills were held at around 0930. During the transit, at around 1100, we received a call from the lab telling us that we had left behind the primary production incubation bottles and that the new niskin bottles had arrived. The ship changed course towards Barbers point where we picked up the missing equipment. Mr. Dale Hebel transported the equipment from the UH campus to Barbers point. After receving the equipment we returned to Kahe Station. We arrived at Station Kahe at 1400. CTD cast immediately started. Work at Station Kahe was accomplished by 1630 and the ship proceeded to Station ALOHA.

May 23, 2000

Ship arrived at Station ALOHA at 0100. Two net tows were successfully completed. Floating sediment traps were successfully deployed at 0200. The deep CTD cast was made at around 0400 and the burst series commenced at 0900. Net tows and the light casts were accomplished around noon and night. TSRB was still under repair since the previous cruise..

May 24, 2000

At around 12:00 A.M. on May 24, 2000, Mr. Hansen was assisting Ms. Turner in the collection and preservation of filtered seawater samples for DNA and RNA analysis. While inserting a filter into a vial, the phenol in the vial was quickly and forcibly displaced and the liquid splashed onto Mr. Hansen's face between the forehead and nose area, including the eyes. First-aid was immediately applied. During the accident the CTD-Rosette package was on its return trip to the ship.

When the decision was made to return to Oahu the package was being retrieved and secured on deck. Transit back to Oahu commenced at about 1:15 A.M. The selected drop-off was Haleiwa Harbor on the North Shore of Oahu. Mr. Dale Hebel was contacted at home to meet Mr. Hansen at Haleiwa Harbor and transport him to a medical facility.

The ship arrived at Haleiwa by about 7:15 A.M. Mr. Hansen was transported to shore on a zodiac. Mr. Mark Valenciano, marine technician for the physical oceanography component, also went ashore to attend to personal business. He did not return to the ship. The ship began its return transit to Station Aloha at 0800. Ship arrived at Station ALOHA at 1430 and CTD work resumed at 1500. All work was rescheduled. Physical oceanography component was short one person so personnel rearranged their shifts to complete the work. JGOFS personnel also assisted the physical oceanography component by taking salts and CTD operations. The primary production experiment was rescheduled for the following day. CTD casts continued at 3-hour intervals.

May 25, 2000

Work continues as scheduled. Primary production experiment prepared from 1200 CTD cast. Net tows conducted at 0100. Go-Flo and Niskin cast commenced at 0200. Primary production comparison and toxicity experiment made from Go-Flo cast and CTD rosette water. Matt Church and Karin Bjorkman added incubation samples to the array. Primary production experiment was deployed without incident at 0500.

Work proceeded following the new schedule without any problems. We received the ARGOS positions by email. Ship proceeded to the trap location and traps retrieved at 0700. At noon we did optical measurements at Station ALOHA. Net tows successful. Primary production experiment retrieved at 1900 and all samples processed shortly after. CTD casts continue at 3 hour intervals. Ship then proceeded to Honolulu.

May 26, 2000; Return and offloading

The ship docked at 0730. Unloading commenced and completed at 1200.

SAMPLES TAKEN FOR OTHER INVESTIGATORS

1. DIC water samples for Charles Keeling, SIO-UCSD
2. DIC water samples for Paul Quay, UW
3. Water samples for Jon Zehr, UCSC, by Pati Turner and Andrew Hansen
4. Phosphorus experiments by Karin Bjorkman, UH
5. Aerosol and ozone measurements for J. Porter, UH
6. Microbial sampling and experiment by Matt Church, UH
7. Phosphorus sampling for Claudia Benitez-Nelson by Tom Gregory, UH
8. Nitrogen experiment by John Dore and Jennifer Brum