

HOT-68: Chief Scientist Report

Chief Scientist: L. TUPAS

Loading: November 14, 1995

Departed: November 15, 1995 at 0930

Returned: November 19, 1995 at 0730

Vessel: R/V Moana Wave

Operator: University of Hawaii

Chief Scientist: Dr. Louie Tupas

Master: Captain Robert Hayes

Deck Operations: Mr. Luigi Pozz

Electronics Technician: Mr. Steve Poulos

1. SCIENCE PERSONNEL

Dale Hebel - UH, JGOFS

Luis Tupas - UH, JGOFS. Chief Scientist

Lance Fujieki - UH, JGOFS

Terrence Houlihan - UH, JGOFS

Jefrey Snyder - UH, WOCE

Craig Nosse - UH, WOCE

Molly Lucas - UH, WOCE

Fernando Santiago-Mandujano - UH, WOCE

Daniel Sadler - UH, Carbon Project

Robert Miller - UH, Zooplankton Project

Mai Lopez - SIO, OPC/ADCP

Charles Stump - UW/Trace gases

2. GENERAL SUMMARY

All objectives of the JGOFS and WOCE programs were accomplished. All planned stations were occupied. 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 incubation. There were no major equipment failures. The optical plankton counter was towed from Station ALOHA to Honolulu without any problem. Extra Go-flo casts to accomodate the sampling requirements of Charles Stump were conducted.

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

November 14, 1995; Loading Day

Some equipment were already moved into the labs during the loading of the mooring cruise. All other equipment was moved from either SNUG Harbor labs or UH on this day. All electrical and electronic connections were made for the CTD and the OPC/v- fin. All lab equipment were stowed away and secured. All instruments were tested and appeared functioning. No problems were encountered.

November 15, 1995

All hands arrived on ship at 0830. Ship departed at 0930 because of a Matson vessel maneuvering in the channel. Fire and emergency drills conducted at 1000 followed by a safety briefing by the first mate and a short science meeting. Arrived at Station Kahe at 1200. Conducted weight cast and 1000 m CTD cast. All operations and sampling accomplished by 1500. Started transit to Station ALOHA. Arrived at Station ALOHA at 2230. Sediment trap array deployment procedures began at 2300, accomplished at 0015.

November 16, 1995

Sediment trap deployed at 0015. Go-Flo cast of one bottle at 15 meters conducted for Charles Stump. After Go-Flo cast ship transited to center of station and commenced WOCE deep cast at 0130, completed at 0600. CTD burst sampling commenced at 0700. CTD casts maintained at 3 hour intervals. Noon zooplankton tows unsuccessful. One night tow was accomplished. Passing showers encountered.

November 17, 1995

CTD casts continued at 3 hour intervals. During preparation of the Go-Flo bottles the lanyard of one bottle broke and could not be replaced or repaired. Go-Flo cast conducted at 0230 with only seven bottles. 175 meter sapling depth was eliminated. Cast finished at 0315. Primary production array deployment commenced at 0600. CTD casts continued at 3 hour intervals. Two zooplankton tows conducted in the morning. Retrieval of primary production array commenced at 1800. No samples were lost. CTD casts continued at 3 hour intervals. One night tow was accomplished. Last 1000 meter cast conducted at 2200. A deep-sea fish was caught inside the rosette frame, apparently snagged by the lanyard of a bottle that was fired. There was no damage to the instruments or the bottle. The fish was prepared for dinner.

November 18, 1995

Transit out of the circle to pump tanks, returned to the center at 0230. Deep cast conducted at 0300, completed at 0800. Proceeded to location of sediment trap array. Arrived at site and commenced recovery at 1030, accomplished at 1200. OPC deployed to conduct transects through Station ALOHA. Break-off from transect at 1800 and proceeded to Honolulu with OPC in tow

November 19, 1995

OPC retrieved at 0500 near Station Kahe. Arrived at Snug Harbor at 0730. Proceeded with unloading, accomplished at 1200.

ANCILLARY INVESTIGATIONS

1. Zooplankton sampling - B. Miller
2. DIC sampling - D. Sadler
3. Optical Plankton counts - M. Lopez
4. Trace Gases C- Stump

SAMPLES TAKEN FOR OTHER INVESTIGATORS

1. DIC water samples for C.D. Keeling, SIO-UCSD
2. DIC water samples for P. Quay, UW
3. Microscopy samples for H. Thierstein, ETH-Zurich