HOT-99: Chief Scientist Report

Chief Scientist: L. TUPAS

Loading: November 4 and 7, 1998 Chief Scientist: Dr. Louie Tupas
Departed: November 9, 1998 at 0900 Master: Captain John Stahl
Returned: November 12, 1998 at 1800 Deck Operations: Mr. Dave Gravatt
Vessel: R/V Moana Wave Electronics Technician: Mr. Steve Poulos

1. SCIENCE PERSONNEL

Luis Tupas - UH, JGOFS
Dale Hebel UH JGOFS
Karin Bjorkman - UH, JGOFS
Lance Fujieki - UH, JGOFS
Scott Nunnery - UH, JGOFS
Rebecca Scheinberg UH, student
Dan Sadler - UH, JGOFS
Craig Nosse - UH, WOCE
Don Wright - UH, WOCE
Fernando Santiago Mandujano - UH, WOCE
Mark Valenciano UH, WOCE
Claudia Benitez-Nelson - UH, Post-doc
Markus Karner UH, Post-doc

2. GENERAL SUMMARY

All objectives of the JGOFS and WOCE programs were accomplished. All planned stations were occupied. Weather and sea conditions were moderate to rough but within 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. Return to Honolulu was made early because the HALE ALOHA mooring was retrieved (no HALE ALOHA Station).

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 7, 1998; Loading Day

The ship was used for the HALE ALOHA and sediment trap mooring recovery cruise prior to HOT-99. The ships main deck was reconfigured for HOT equipment. All deck and lab equipment had already been set-up during the

mooring cruise loading 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.

November 9, 1998

We departed from Snug Harbor at 0900 as scheduled without any problems. 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 and conducted the weight cast to 1000 m and the PRR/TSRB casts. A CTD cast to1000 meters was made. All samples were taken and we departed for Station ALOHA at 1500.

November 10, 1998

We arrived at Station ALOHA circle at 0000 and commenced work with a net tow and then deployed the floating sediment traps. The deep cast started at 0300. The 3-hour burst sampling started at 0800. CTD casts at 3-hour intervals were conducted without interruption.

November 11, 1998

Work continues according to schedule without any problems. Go-Flo cast at 0300. Primary production experiment made from CTD and Go-Flo cast water. Primary production experiment was deployed without incident. EOC spikes were performed. At noon we did optical measurements as scheduled at Station ALOHA. Net tows so far successful and grazing experiments are underway. Primary production experiment retrieved at 1900 and all samples processed shortly after. CTD casts continue at 3 hour intervals. Second WCOE deep cast started at 2300.

November 12, 1998

We have been receiving ARGOS positions for the sediment trap array. They have not moved very far. Work has been proceeding as scheduled without any problems. Second WOCE deep cast completed at 0200. After last cast, ship proceeded sediment traps. Traps retrieved at 0630 and ship proceeded to Honolulu at 0700. Arrived at Snug Harbor at 1800.

November 13, 1998

Unloading commenced at 0800 and completed at 1200. Preparation were made for mooring deployment cruise.

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 E. Laws, UH
4. Phosphorus experiments by Karin Bjorkman, UH
5. Molecular probe experiments by Markus Karner, UH
6. Aerosol and ozone measurements for J. Porter, UH