

## HOT-97: Chief Scientist Report

Chief Scientist: L. Tupas

Loading: September 25, 1998	Chief Scientist: Dr. Louie Tupas
Departed: September 26, 1998 at 0900	Master: Captain John Stahl
Returned: September 30, 1998 at 0800	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  
Terrence Houlihan - UH, JGOFS  
Lance Fujieki - UH, JGOFS  
Scott Nunnery - UH, JGOFS  
Stephanie Christensen UH, JGOFS  
Dan Sadler - UH, JGOFS  
Craig Nosse - UH, WOCE  
Don Wright - UH, WOCE  
Fernando Santiago Mandujano - UH, WOCE  
Mark Valenciano UH, WOCE  
Brian Popp - UH, Scientist  
Markus Karner UH, Post-doc  
Ken Smith SIO scientist  
Robert Baldwin SIO Technician  
Robert Glatts - SIO, Tehcnician

### 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 incubations. ADCP measurements were made throughout the cruise. Ken Smiths free vehicle grab respirometer was successfully deployed and retrieved. Maintenance work on the ARGOS transmitter on HALE ALOHA was accomplished.

### 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

September 25, 1998; Loading Day

The ship arrived from a cross eastern Pacific cruise. The ship was cleared prior to our loading. 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.

September 26, 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 to 1000 meters was made. All samples were taken and we departed for Station ALOHA at 1600.

September 27, 1998

We arrived 1 mile north of the Station ALOHA circle at 0100. The free vehicle grab respirometer (FVGR) was programmed and deployed at 0200. At 0300 we had returned to the center of the station and deployed the free floating sediment traps. We departed Station ALOHA for the HALE ALOHA mooring at 0500 and arrived at 0730. Small boat operations commenced at 0800 for more available daylight. Terry Houlihan and the chief mate successfully retrieved the ARGOS transmitter from HALE ALOHA. They were back on ship by 0830. CTD, trace metal and PRR/TSRB casts were made starting at 0900. Weather was good, 20 knot winds, 4 foot seas but very long swells. Transit to Station ALOHA at 1200, arrived at 1400. Net tow at 1430, CTD casts commenced at 1500, continued every 3 hours.

September 28, 1998

Work continues according to schedule without any problems. Go-Flo cast at 0200. Primary production experiment made from CTD and Go-Flo cast water. All Go-Flo bottles have been repaired and in good working condition. 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.

September 29, 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. JGOFS casts completed 0200, all samples taken. WOCE deep cast completed at 0600. After last cast, ship proceeded to FVGR site. FVGR retrieved at 0900, transit to sediment traps. Traps retrieved at 1300 and ship proceeded to HALE ALOHA to return ARGOS transmitter with fresh batteries installed. Arrived at HALE ALOHA at 1500. Proceeded with zodiac operations, completed at 1700. Started transit to Honolulu at 1800.

September 30, 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 E. Laws, UH
4. N<sub>2</sub>O samples by Brian Popp, UH
5. Phosphorus experiments by Karin Bjorkman, UH
6. Molecular probe experiments by Markus Karner, UH
7. Aerosol and ozone measurements for J. Porter, UH