

# HOT-84: Chief Scientist Report

Chief Scientist: L. TUPAS

Loading: May 30, 1997	Chief Scientist: Dr. Louie Tupas
Departed: June 2, 1997 at 0900	Master: Captain Robert Hayes
Returned: June 6, 1997 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  
Dan Sadler - UH, JGOFS  
Karin Bjorkman - UH, JGOFS  
Lance Fujieki - UH, JGOFS  
Pat Driscoll - UH, JGOFS  
Stephanie Christensen - UH, JGOFS  
Jefrey Snyder - UH, WOCE  
Craig Nosse - UH, WOCE  
Don Wright - UH, WOCE  
Matt Cochran - UH, WOCE  
Hans Ramm - UH, WOCE  
Mai Lopez - SIO  
Stuart Donachie - UH, Post-Doc  
Albert Calbet - UH, Post-Doc

## 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. The pCO<sub>2</sub> system was installed and worked using the ships uncontaminated seawater intake system. The optical plankton counter was towed around Station ALOHA. The submersible pump worked continuously during the tow.

## 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

May 30, 1997; 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 and the OPC/CWS. The submersible pump was tested and installed inside the V-fin. The flash flurometer was reinstalled for this cruise. All lab equipment were stowed away and secured. All laboratory instruments were tested and appeared functioning. No problems were encountered.

June 2, 1997

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). A 1000 m CTD cast completed the operations. Started transit to Station ALOHA at 1600 following a depth contour of about 500 meters for ADCP bottom tracking. Uncontaminated seawater system was run and the pCO<sub>2</sub> system was connected and operated. Transit to Station ALOHA and arrived at 0000. A net tow was made upon arrival at Station ALOHA.

June 3, 1997

Floating sediment trap array deployment procedures began at 0100 and accomplished at 0200. 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 the WOCE deep cast at 0240. Cast was completed at 0600. CTD burst sampling commenced at 0800 and maintained at 3 hour intervals. Zooplankton tows at noon successful. PRR cast successful.

June 4, 1997

CTD casts continued at 3 hour intervals. Go-Flo cast conducted at 0130. Primary production array deployment commenced at 0500. CTD casts continued at 0520 continuing at 3 hour intervals. 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. One night tow was accomplished. Last 1000 meter cast conducted at 2000. Last net tow accomplished at 2230. Transit outside the circle to pump tanks.

June 5, 1997

Returned to center of circle at 0000. Started OPC towing and completed at 1200. Transit to sediment trap retrieval site. Retrieval started at 1300, completed at 1430. 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 1700. Transit to Honolulu at 1800.

June 6, 1997

Arrived at Snug Harbor at 0700. Proceeded with unloading , completed at 1100.

#### SAMPLES TAKEN FOR OTHER INVESTIGATORS

1. DIC water samples for C.D. Keeling, SIO-UCSD
2. DIC water samples for P. Quay, UW
3. Surface seawater for A. Thomson, UH
4. Seawater for E. Laws, UH