

HOT-82: Chief Scientist Report

Chief Scientist: L. TUPAS

Loading: April 4, 1997

Departed: April 7, 1997 at 0830

Returned: April 11, 1997 at 0800

Vessel: R/V Moana Wave

Chief Scientist: Dr. Louie Tupas

Master: Captain Robert Hayes

Deck Operations: Mr. Dave Gravett

Electronics Technician: Ms. Sharon Stahl

1. SCIENCE PERSONNEL

Luis Tupas - UH, JGOFS

Lance Fujieki - UH, JGOFS

Dan Sadler - UH, JGOFS

Karin Bjorkman - UH, JGOFS

Jefrey Snyder - UH, WOCE

Craig Nosse - UH, WOCE

Don Wright - UH, WOCE

Fernando Santiago-Mandujano - UH, WOCE

Pat Driscoll - UH, JGOFS

Stephanie Christensen - UH, JGOFS

Mai Lopez - SIO/UCSD

Stuart Donachie - UH, Post-Doc

Jennifer Aicher - Amer. Samoa CC

Jim Falter - UH Grad Student

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 pCO₂ system was installed and worked using the ships uncontaminated seawater intake system. The optical plankton counter was towed around Station ALOHA, however, the submersible pump was not operable.

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

April 4, 1997; Loading Day

All deck and lab 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 not operable. The flash flurometer was also not operable but a replacement was not available for this cruise. All lab equipment were stowed away and secured. All laboratory instruments were tested and appeared functioning. No other problems were encountered.

April 7, 1997

All hands arrived on ship by 0830. Ship departed at 0900 as scheduled. 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 1130. 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 1530 following a depth contour of about 500 meters for ADCP bottom tracking. Uncontaminated seawater system was run and the pCO₂ system was connected and operated. Rough sea conditions slowed the transit to Station ALOHA and we arrived at 2230. A net tow was made upon arrival at Station ALOHA.

April 8, 1997

Floating sediment trap array deployment procedures began at 0130 and accomplished at 0230. Ship transited to center of station and commenced WOCE deep cast at 0230. Cast was completed at 0700. CTD burst sampling commenced at 0800 and maintained at 3 hour intervals. Zooplankton tows successful. PRR cast successful.

April 9, 1997

CTD casts continued at 3 hour intervals. Go-Flo cast conducted at 0130. Primary production array deployment commenced at 0530. CTD casts continued 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 2200. Transit to start OPC tow. OPC tow commenced at 2300.

April 10, 1997

OPC towing continued until 1000. Transit to sediment trap retrieval site. Retrieval started at 1130, completed at 1230. Transit to HALE ALOHA. Shallow cast started at 1400, deep cast started at 1600. Transit to Honolulu at 1900.

April 11, 1997

Arrived at Snug Harbor at 0730. 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 E. Laws, UH
5. Surface seawater for A. Thomson, UH
6. Seawater samples for B. Holmes, UH