

HOT-94: Chief Scientist Report

Chief Scientist: L. TUPAS

Hawaii Ocean Time-series

HOT-94 Chief Scientist's Report

Loading: June 12, 1998 Chief Scientist: Dr. Louie Tupas
Departed: June 15, 1998 at 0900 Master: Captain John Stahl
Returned: June 19, 1998 at 0800 Deck Operations: Mr. Dave Gravatt
Vessel: R/V Moana Wave Electronics Technician: Ms. Sharon Stahl

1. SCIENCE PERSONNEL

Luis Tupas - UH, JGOFS
Dale Hebel - UH, JGOFS
Karin Bjorkman - UH, JGOFS
Terrence Houlihan - UH, JGOFS
Lance Fujieki - UH, JGOFS
Pat Driscoll UH, JGOFS
Scott Nunnery - UH, JGOFS
Dan Sadler - UH, JGOFS
Craig Nosse - UH, WOCE
Don Wright - UH, WOCE
Fernando Santiago Mandujano - UH, WOCE
Markus Karner - UH, Post-Doc
Ken Smith - SIO, Scientist
Robert Baldwin SIO, Technician
Robert Glatts SIO, Technician
Donna Robinson - HPU, Undergraduate

2. GENERAL SUMMARY

All objectives of the JGOFS and WOCE programs were accomplished. All planned stations were occupied. Weather and sea conditions were initially rough but within the 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. The pCO₂ system was operated using the ships uncontaminated seawater intake system. Ken Smith's Free Vehicle Grab Respirometer was deployed and retrieved successfully. The SIO group, however, was unable to retrieve the Rover they deployed last November. All attempts to contact it were unsuccessful.

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

June 12, 1998; 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. All lab equipment were stowed away and secured. All laboratory instruments were tested and appeared functioning. No problems were encountered.

June 15, 1998

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 Kahe Station at 1200. Conducted weight cast and 1000 meter CTD cast. Did PRR and TSRB cast. Did optical observations with microtops and marine shadowband radiometer (MSBR). All optical measurements within SeaWIFs overpass window. Departed Kahe Station at 1600. Transit to ALOHA very rough. Heavy seas and strong winds from the NE. Ship proceeded directly to IES location (3 miles north of Station ALOHA center).

June 16, 1998

Arrive at IES site at 0000. Zooplankton net tow conducted at 0030. IES acoustic ranging commenced at 0100, finished at 0300. Transit to FVGR deployment site at 0300. Arrive at FVGR deployment site at 0345 and deploy FVGR. Transit to benthic rover site and arrive at 0400. Ken Smith was unable to communicate with any of his acoustic releases or benthic transponders. Release commands were sent at around 0430. We waited for the Rover to surface and transmit VHF or Argos signals. None were received and no visual siting made. The Rover was given up for lost at 0900. Proceeded to center of Station ALOHA for WOCE deep cast.

WOCE deep cast started at 1000, on deck by 1400. During WOCE deep cast, some spikes were observed with the returning data signals. No obvious damage to wire or connections but a retermination was made anyway. The 36 hour burst sampling started at 1800. All signals are found clean. WOCE shallow and JGOFS shallow and deep casts accomplished as scheduled. Zooplankton net tows near noon and midnight. Large net has small tear after midnight tow. Scott will repair. MSBR measurements from sunrise to sunset. Microtops measurements, TSRB and PRR during SeaWIFs overpass window. MSRB monitor was found not functioning at sunset. Will try to find another monitor on ship.

June 17, 1998

Go-Flo cast started at 0130. Great difficulty because of the deteriorating conditions of the bottles. Many repeat casts to complete profile. Go-Flo cast finished at 0300. Primary production experiment

prepared and deployed at 0530. CTD casts continue as scheduled. Net tows and optical casts conducted as scheduled. Primary production array retrieved with all samples.

June 18, 1998

CTD casts completed at 0500. Ship proceeded to benthic operations site to make a final attempt at communicating or locating the ROVER. Communication attempts were unsuccessful. FVGR retrieved at 1000. Ship proceed to location of sediment traps. Sediment trap recovery commenced at 1400, completed at 1500. Ship transited to HALE ALOHA for CTD work. All work finished at 2030. Transit to Snug at 2100.

June 19, 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