HOT-96: Chief Scientist Report

Chief Scientist: L. TUPAS

Hawaii Ocean Time-series
HOT-96 Chief Scientist's Report

Loading: August 7, 1998 Chief Scientist: Dr. Louie Tupas
Departed: August 8, 1998 at 0900 Master: Captain John Stahl
Returned: August 12, 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
Karin Bjorkman - UH, JGOFS
Terrence Houlihan - UH, JGOFS
Lance Fujieki - UH, JGOFS
Scott Nunnery - UH, JGOFS
Dan Sadler - UH, JGOFS
Craig Nosse - UH, WOCE
Don Wright - UH, WOCE
Fernando Santiago Mandujano - UH, WOCE
Albert Calbet - UH, Post-Doc
Cecily Chun UH Technician
Greg Rukowsky UH Graduate Student
Thomas Shopay - UHH, 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 IES was successfully deployed.

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

August 7, 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.

August 8, 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. Greg Rutkowski is manning the atmospehric optical devices. A CTD cast to1000 meters was made. All samples were taken and we departed for Station ALOHA at 1600.

August 9, 1998

We arrived at Station ALOHA juts after 0000. The IES was programmed and deployed. One net tow was successfully conducted. The sediment trap array was deployed without any problem. After deployment we waited to receive acoustic signals from the IES at the bottom. We waited for two successive sequences 30 minutes apart. The IES was confirmed at the center of Station ALOHA.

We departed Station ALOHA for the HALE ALOHA mooring at 0330 and arrived at 0600. Small boat operations commenced at 0700 for more available daylight. Terry Houlihan and the chief mate succesfully retrieved the ARGOS transmitter from HALE ALOHA. They were back on ship by 0730. CTD, trace metal and PRR/TSRB casts were before departure. Weather was good, 20 knot winds, 4 foot seas but very long swells.
Transit to Station ALOHA at 1030, arrived at 1230. CTD casts commenced at 1300.

August 10, 1998

Work continues according to schedule without any problems. Go-Flo cast at 0200. All Go-Flo bottles have been repaired and in good working condition. Primary production experiment was deployed without incident. EOC spikes were performed. We did optical measurements as scheulded at Station ALOHA. Atmposheric optics are going but shadow band has a few glithches. Greg has been up and about getting tings done. Net tows so far successful and grazing experiments are underway. . Primary production experiment retrieved, all samples processed.

Terry was able to clean the ARGOS transmitter. The casing apparently flooded. Precautions will be taken to reseal the transmitter in the casing. We brought a spare PVC casing. Battery power is still ok but Terry wants to put fresh batteries on the next cruise.

August 11, 1998

We have been receiving ARGOS positions for the sediment trap array. They have not moved very far. Weather turned a little sour yesterday but has

improved a lot this morning. We expect the weather to continue to improve in the following days. Work has been proceeding as scheduled without any problems. JGOFS casts completed 0200, all samples taken. WOCE shallow and deep cast completed at 1000. After last net tow, ship proceeded to sediment traps site. Traps retrieved at 1500 and ship proceeded to HALE ALOHA to return ARGOS transmitter. Arrived at HALE ALOHA at 1700. Proceeded with zodiac operations, completed at 1800. Started transit to Honolulu. On the way back, one crew member from the Moana Wave was transferred to the KOK. This was done by boat. We picked up two scientists from the KOK.

Weather changes dramatically. We had good weather initially but encountered long, deep swells later in the afternoon. Rain is intermittent. It is beginning to clear again and seas have gone down. Winds are variable. The sediment trap array did not leave the circle as of yesterday. We encountered what appears to be the late summer diatom bloom
throughout this cruise. We are actaully getting measurements above baseline for surface chlorophyll. There is a very shallow mixed layer, about 20 meters maximum, sometimes 15. Sea surface temperatures have been warmer than usual. the temperautre gradient goes as deep as 600 meters. Filtration times have been longer than usual, there is a lot of stuff in the water. Net tows come up green to brownish in color. A lot of algae in the nets.

August 12, 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