

# HOT-33: Chief Scientist Report

Chief Scientist: C. WINN

## HOT-33 Cruise Report

R/V Wecoma

Jan 3-8, 1992

### Personnel list:

Chris Winn - Chief Scientist  
Elaine Kotler  
Terrence Houlihan  
Jim Christian  
Louis Tupas  
Chris Carrillo  
Ariel Anbar  
Reka Domokas  
Jef Snyder  
Sean Kennan  
Marc Rosen  
Peter Hacker  
Kristin Leckrone

### Itinerary (local time):

#### Friday, Jan. 3

1000 Left Snug Harbor  
1300 Arrive Kahe Pt.

#### Saturday, Jan. 4

0400 Arrive Station ALOHA  
Deploy sediment traps  
commence CTD operations

#### Sunday, Jan. 6

0500 Deploy 10 Production array  
1800 Recover 10 Production array  
2200 Completed 36hr burst  
sampling and commenced  
Lowered ADCP sampling

#### Tuesday, Jan 7

0300 Recovered traps  
commenced transect  
2300 Transit to Snug Harbor

### Cruise Brief:

We departed Snug Harbor at 1000 and arrived at the Kahe point station at approximately 1300. Some CTD start up problems were encountered at

Kahe Point due to the new marine connectors which were used on HOT-33, and which were apparently not seated properly. These connection problems resulted in two casts being made at Kahe point. CTD data was obtained on the second cast at Kahe point, however, transmissometer data was not obtained.

The sediment traps were deployed on the southeast edge of station ALOHA. CTD operations were begun after arriving at the center of the station. The unseasonably calm weather which persisted throughout HOT-33 made for smooth CTD operations during this cruise and no major CTD problems were encountered on this cruise. However, the transmissometer cable was damaged early in the cruise and no transmissometer data was obtained on HOT-33. The transmissometer cable needs to be repaired before HOT-34. CTD deployment and recovery was not a problem on this cruise. This was, in part, due to the calm weather and, in part, due to the improved deployment strategy used on HOT-33 (see below). The tarp for covering the CTD was not set up on HOT-33. Although the tarp was not needed on this cruise, it should be set up on HOT-34.

The Primary production measurements were successfully completed. However, neither of the strobe lights on the in situ array spare buoy functioned properly on this cruise. These need to be repaired or replaced before HOT-34.

Following the WOCE burst sampling the 24 place rosette was replaced by the 12 place rosette for lowered ADCP profiling. Five lowered ADCP casts were made to 2000 m at station ALOHA and 4 XCP's were deployed on this cruise to span 1.5 intertidal periods. Two XCP's were deployed during WOCE burst sampling and two were deployed during lowered ADCP casts. In addition, a shipboard ADCP calibration survey was conducted.

The sediment traps were recovered without incident, and CTD casts were obtained to 1000m at stations 4 and 5. A CTD cast to 100m above the bottom was made of station 6. Water samples were collected for salinity, chlorophyll a and nutrients at all three transect stations. In addition, oxygen samples were collected at each transect station for the calibration of the oxygen sensor. XBT's were dropped at regular intervals on the transect from station 3 to station 5.

As on HOT-32, the ship proceeded along the 300m isobath from station 5 to Kaena Point for ADCP calibration. The ship moved offshore to pump bilges in transit from Kaena Point to Honolulu Harbor and arrived at Snug Harbor at approximately 0700 on Wednesday the 8th.

#### CTD Operations:

A new CTD recovery and deployment strategy was used on HOT-33. The headache ball was removed for operations by disconnecting the hydrowire from the CTD and feeding it through the block. The crane was then swung forward on the 0-1 deck to remove or replace the headache ball. CTD recoveries were accomplished by bringing the CTD to the surface and using a happy hooker to tag the hoop around the center of the rosette while most of the CTD remained beneath the sea surface. This tag line

was used to stabilize the CTD when it was raised out of the water. When the package was removed from the water, two large aluminum hooks, which Brian Wendler constructed for this purpose, were used to quickly tag the hoops at the base of the rosette. The tag around the hoop was then released and the package was brought aboard using the tag lines attached to the hoops at the base of the rosette.

Ancillary Programs:

Dave Keeling	CO2
Paul Quay	delta 14C
Lisa Cambell	phytoplankton taxonomy
Ariel Anbar	trace metals

Student Samples:

Jim Christian