HOT-122: Chief Scientist Report

Chief Scientist: D. HEBEL

HOT 122 Cruise Report
R/V Kaimikai O Kanaloa
15-19 Jan., 2001

Personnel List

HOT 122:		
WOCE group:		
Fernando Santiago-Mandujano*	Research Associate	UH
Lal Ratnapala	Graduate Assistant	UH
Mark Valenciano	Electronic Technician	UH
Jeremiah Johnson	Research Associate	UH
Noel Larson	Research Associate	UH
Jorgen Olsen	Graduate Student	UH
JGOFS group:		
Dale Hebel	Chief Scientist (co-PI JGOFS)	UH
John Dore*	Scientist	UH
Colleen Allen	Research Associate	UH
Anne Gasc	Scientist	UH
My Christensen	Research Associate	UH
Ceclia Sheridan	Graduate Student	UH
Associated projects		
Tom Gregory	Research Associate	UH
Roberta Hamme	Graduate Student	UW
STAG		
Steve Poulos	Electronic Technician	UH-UMC
Dave Gravatt	Deck Technician	UH-UMC

*Watch Leader

Cruise Events (approximate HST):

Monday, 15 Jan.
0905 Departed Snug Harbor
0930 Fire/abandon ship drill, science meeting
1145 Arrived Kahe Pt. (Sta. 1)
1200 Weight cast (1000 m)
1245 PRR cast
1335 s1c1
1440 Depart Kahe
1730 Arrive sta. 6 Kaena
1750 s6c1 (2500m)
1940 Departed sta. 6

Tuesday, 16 Jan.
0135 Arrived Sta. ALOHA (sta. 2)
0145 Net tow
0225 Began sediment trap deployment
0310 Completed sediment trap deployment (22° 45.7N, 158° 00.2W)
0320 s2c1 (WOCE deep)
0635 s2c1 on deck
0810 s2c2 (WOCE shallow)
0955 Net tow
1030 Net tow
1100 s2c3
1200 PRR-600 cast
1250 Net tow
1325 Net tow
1400 s2c4
1505 in situ pumping
1620 in situ pump on deck
1700 s2c5
2200 s2c6
2145 Net tow
2245 Completed net tows (2)
2300 s2c7

Wednesday, 17 Jan.
0025 Net tow
0100 Net tow
0140 Net tow
0205 s2c8
0500 s2c9
0640 Deployed primary productivity array (22° 44.7N, 157° 59.7W)
0805 s2c10
1000 Net tow
1100 Completed net tows (2?)
1105 s2c11
1200 PRR-600 cast
1400 s2c12
1505 in situ pump (in)
1645 in situ pump (out)
1700 s2c13
1840 Recovered PP array
2000 s2c14 (2000m)
2300 s9c1 (water mass anomaly spatial survey)

Thursday 18 Jan.

0100 s10c1
0230 s11c1
0340 s12c1
0500 s13c1
0600 s14c1
0740 s15c1
0820 Transit sediment traps
0900 Arrived sed. traps
0955 Completed sed. trap recovery (22° 45.9N, 158° 08.5W)
1005 s16c1

1140 s17c1
1330 s18c1
1445 s19c1
1525 Transit HALE ALOHA
1735 Arrived HALE ALOHA
1740 s8c1
1840 Departed sta. 8

Friday 19 Jan.
0730 Arrive Snug Harbor

Narrative:
HOT 122 was conducted aboard the R/V Kaimikai O Kanaloa (KOK), 15-19 Jan., 2001. Captain Ross Barnes was the master of the vessel and Dale Hebel chief scientist. There was a total of 16 participants in the scientific party composed of 6 WOCE, 6 JGOFS, 2 ancillary and 2 STAG. We departed Snug on 15 January occupying stations at Kahe Pt. (sta. 1), Station ALOHA (sta. 2), HALE ALOHA (sta. 8) and Kaena Pt. (sta. 6). All scheduled work was completed and all samples collected. CTD operations were conducted at stations 1, 2, 6, 8-19. One ~1000 m CTD cast was conducted at stations 1 & 8 and ~600 m at stations 9- 19. At Station ALOHA 11 ~1000 m, one ~2000 m and one ~4800 m CTD casts were completed while one ~2500m CTD cast was done at Kaena Pt. (sta.6). Other over-the-side operations at Station ALOHA included 3 light casts (PRR only), 10 net tows, 2 in situ pumping operations, floating sediment traps and primary productivity measurements. All operations followed previous cruise routines with the exception of no TSRB casts and a spacial survey (stations 9-19), of an anomalous salinity/oxygen feature at about 400m. The underway/continuous thermosalinograph, ADCP, and fluorometer were operable and functioned properly. WOCE met. obs and limited ship met. data were collected as well as discrete aerosol measurements on 15,16 &18 Jan. Overall the weather was mostly sunny (although we did experience periods of light rain), with generally calm seas and light Trade winds. Daily activities are listed above under Cruise Events.

Weather
HOT 122:
The weather was mostly sunny with light winds and generally calm seas, however, we did experience a large swell from the NNW midway through the cruise. Below is listed the cruise bridge log descriptions and the various values representing the range for that day. Under wind, sea, and swell there will be two designations, the first is the direction (in degrees), the second for wind is in kts, sea in Beauford force, and swell in feet, barometer in inches of Hg, temp °F (dry bulb) and clouds in tenths.

Day Date	Wind	Sea	Swell	Barometer	Temp	Clouds
Mon 15 Jan.	075-110,10-20	075-110,2-3	120-340,2-5	30.00-30.10	74-83	3-4
Tues 16 Jan.	115-130,7-15	115-130,2-3	330,3-4	30.02-30.09	73-78	1-10
Wed 17 Jan.	090-135,6-14	090-135,1-2	310-330,6-15	30.04-30.10	73-78	1-4
Thur 18 Jan.	095-130,12-15	095-130,2-3	310,8-12	30.05-30.12	73-80	1-4
Fri. 19 Jan.*	065,11	065,2	120-310,2-8	30.09-30.10	73	2-4

*Two entries (0200 & 0600 hrs)

Equipment and methods:
All standard equipment functioned properly. Due to the large swell a kink formed in the CTD cable requiring retermination.

Sub component programs:

Investigator:	Project:
Bob Bidigare (UH)	HPLC pigments/UH
Michael Landry (UH)	zooplankton dynamics/UH

Ancillary programs:

Investigator:	Project:
Charles Keeling (SIO)	CO2 dynamics and intercalibration/SIO
Paul Quay (UW)	DIC and 13C/UW
John Porter	aerosols/UH
Abbott/Letelier	optical measurements/OSU
CBN	phosphorus isotopes,Th234/UH
Students:	
Roberta Hamme	O2/N2/Ar dynamics
Others:	
Hebel, Dore, Karl	EOC /UH
Karin Bjorkman	phosphorus experiments/UH

Notable events:
1. Salinity/O2 anomaly
2. No TSRB casts
3. Calm weather with large swell

[DH2] Need to update with h122 info
Need to update with current data