HOT-116: Chief Scientist Report

Chief Scientist: D. HEBEL

HOT 116 Cruise Report
R/V Kaimikai O Kanaloa
28 Feb.- 3 Mar., 2000

Personnel List

HOT 116:

WOCE group:		
Fernando Santiago-Mandujano*	Research Associate	UH
Lal Ratnapala	Graduate Assistant	UH
Mark Valenciano	Electronic Technician	UH
Don Wright	Research Associate	UH
JGOFS group:		
Dale Hebel	Chief Scientist (co-PI JGOFS)	UH
Louie Tupas*	Scientist (co-PI JGOFS)	UH
Lance Fujieki	Computer Specialist	UH
Colleen Allen	Research Associate	UH
Matt Church	Visiting Graduate Student	UH
Markus karner	Scientist	UH
Jennifer Brum	Student Assistant	UH
Andrew Thurber	Volunteer	UH
Associated projects		
Tom Gregory	Research Associate	UH
Jeremiah Johnson	Research Associate	UH
STAG		
Steve Poulos	Electronic Technician	UH-UMC
Dave Gravatt	Deck Technician	UH-UMC

* Watch Leader

Itinerary (approximate HST):

Monday, 19 June
0900 Departed Snug Harbor

0930 Fire/abandon ship drill, science meeting
1145 Arrived Kahe Pt. (Sta. 1)
1200 Weight cast (1000 m)
1245 PRR/TSRB casts
1335 s1c1
1440 Departed Kahe

Tuesday, 20 June
0015 Arrived Sta. Aloha (Sta. 2)
0030 Net tow
0105 Net tow
0150 Began sediment trap deployment
0225 Completed sediment trap deployment (22° 44.5'N, 157° 58.3'W)
0300 s2c1(200m)
0400 s2c2 (WOCE deep)
0900 s2c3
1000 Net tow
1035 Net tow
1110 PRR-600/TSRB cast
1200 s2c4
1255 Net tow
1325 Net tow
1500 s2c5
1800 s2c6
2105 s2c7
2205 Net tow
2235 Net tow

Wednesday, 21 June
0000 s2c8
0055 Net tow
0150 Net tow
0205 Go-Flo cast
0305 s2c9
0440 CTD boom incident
0500 s2c10
0710 Deployed primary productivity array (22° ?N, 158°?W)
0800 s2c11
1000 Net tow
1035 Net tow
1100 s2c12
1200 PRR-600/TSRB cast
1300 Net tow
1400 s2c13
1505 in situ pump (in)
1620 in situ pump (out)
1700 s2c14
1900 Recovered PP array
2000 s2c15
2300 s2c16 (second WOCE deep cast)

Thursday 2, Mar.
0215 CTD on deck
0220 Transit sediment traps strobe
0300 Visual sighting of ST strobe light
0610 Ch. Eng. reported strb SCR repaired

0645 Initiated trap retrieval
0730 Completed sed. trap recovery/transit Honolulu
1730 Arrived Snug Harbor

Friday 3, Mar.
0800 Offloading HOT 112
1100 Completed offloading

Narrative:

HOT 112 was conducted aboard the R/V Kaimikai O Kanaloa (KOK), 28 February to 3 March, 2000. Captain Hayes was the master of the vessel and Dale Hebel chief scientist. There was a total of 16 participants in the scientific party composed of 4 WOCE, 7 JGOFS, 3 ancillary and 2 STAG.

We departed Snug on 1 February occupying stations at Kahe Pt. (sta. 1), and Station ALOHA (sta. 2). All scheduled work was completed and all samples collected with the exception of two net tows due to engine problems. CTD operations were conducted at stations 1&2. One ~1000 m CTD cast was conducted at station 1, with 14 ~1000 m CTD casts at Station ALOHA and 2 near-bottom deep casts (~4750 m). S2c3 was aborted due to a faulty fluorometer, which stopped working for no apparent reason. Other over-the-side operations included 3 light casts, 10 net tows, 2 in situ pumping operations, 1 Go-Flo cast, floating sediment traps and productivity operations. All operations were routine with the exception of additional net tows for C. B. Nelson, a rosette Go-Flo primary productivity experiment comparison, collection of atmospheric particulate material, in situ pump operations and rosette/go-flo primary production comparison.

The underway/continuous thermosalinograph and ADCP were operable and functioned properly. No continuous pCO2 or fluorometry were measured on HOT 112 as well as limited meterological instrumentation. Overall the weather was partly cloudy with moderate to rough seas.

The cruise schedule was very similar to HOT 111 with the exception of HOT 112 engine problems, net tow cancellation, s2c3 fluorometer problem; and inclusion of HPLC cast with the final WOCE deep cast on HOT 111. Therefore, for those interested please see HOT 111 Cruise Report for generic daily activity narrative (applicable dates Feb. 1-4, 2000).

Weather:

HOT 112: The weather was variable with partly cloudy skies and moderate-rough seas at the beginning of the cruise and moderate-strong winds decreasing to moderate conditions towards the end. 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 °C (dry bulb) and clouds in tenths.

Day Date	Wind	Sea	Swell	Barometer	Temp	Clouds
Mon 28 Feb.	085-125,20-22	085-125,3	90-120,3-4	29.96-30.02	73-81	3
Tues 29 Feb.	085-100,17-18	080-100,3	310,4-5	29.97-30.04	69-79	2-7
Wed 1 Mar.	070-120,15-25	070-120,3-4	110-310,5-10	29.97-30.02	71-80	3-8
Thur 2 Mar.*	100-260,5-22	100-260,1-4	110-310,2-6	29.97-30.05	72-79	4-8

*Three entries (0200, 1000 & 1400 hrs)

Equipment and methods:

All standard equipment functioned properly with the exception of the flash fluorometer.

Sub component programs:

Investigator:	Project:
Christopher Winn (UH)	DIC, pH, Alk., pCO2/UH
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

Students:

Matt Church	DOC/Archea dynamics

Others:

Dale Hebel/Louie Tupas	EOC, 1° prod. comparison/UH
Karin Bjorkman	phosphorus experiments/UH