CRUISE REPORT

EW0205 Leg 2
FOCI Number: FOCI 2EW02
Ship: R/V/ Maurice Ewing

Area of Operations: Gulf of Alaska

Itinerary:
Kodiak, AK – Kodiak, AK May 25-June 10, 2002

Participating Organizations:
FOCI –PMEL and AFSC

Chief Scientist:
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Objectives of Cruise:

FOCI's goal is to understand the effects of abiotic and biotic variability on ecosystems of the North Pacific Ocean and Bering Sea in order to discern the physical and biological processes that determine recruitment variability of commercially valuable finfish and shellfish stocks in Alaskan waters. This cruise is in support of the Steller Sea Lion Research Programs, FOCI base, and United States Global Ocean Ecosystems Dynamics (U.S. GLOBEC). This cruise was undertaken by FOCI to support research into the physical, chemical, and biological mechanisms acting in the coastal Gulf of Alaska.

The first leg involved the recovery of 21 moorings, the deployment of 26 moorings, which including two 2.3-meter diameter surface fiberglass-over-foam toroid moorings, in addition to Conductivity, Temperature, and Depth (CTD) profile operations at each mooring site and at night.

This second leg involved nearly continuous operations at CTD/Bongo stations, some with CalVET tows (CalCOFI Vertical Egg Tow), plus four MOCNESS tows (Stations 115 at GAK5, the same site as CTD 99). An eddy experiment involving ARGOS satellite tracked drifters and CTD/Bongo stations was conducted. Ten satellite-tracked drifters were deployed during the course of the two legs of the cruise. Maps of the CTD stations are shown in Fig 1a and b. Stations with Bongos are shown in Fig 2a and b. CalVET Stations are shown in Fig 3. Satellite drifter deployments are shown in Fig 4.

Table 1: Summary of Operations:

Operations	# Events
20cm bongo (20Bon) (0.153mm)	125
60cm bongo (60Bon) (0.333mm)	125
CalCOFI vertical egg tow net (CalVET)	32
Seabird SeaCat CTD (CAT)	124
CTD with bottle samples (CTDB)	165
1m_ MOCNESS (MOC1) (with 0.333 and0.153mm mesh nets)	4
Deployment of satellite buoy (SatBuoy)	9
ADCP (leg 1 and 2)	~3000mi
Bathymetry Data	~3000mi
Multiscan Hydrosweep Bathymetry	3000mi

Table 2: Samples Collected	Tows	Number
SeaBird SeaCat CTD (CAT)	124	
Extracted chlorophyll (Chlor)	144	786
SeaBird CTD (CTD casts)	158	
Deployment of buoy or mooring (Deploy)	9	9
Stimulated fluorescence collected during CTD casts (Fluor)	138	
Microzooplankton samples preserved in formalin (MZ)	32	32
Photosynthetically Active Radiation data during CTD casts (PAR)	139	
Quantitative tow preserved in formalin (QTowF)	301	429
Quantitative tow preserved in Stockard's (QTowS)	2	3
Water samples for nutrient analyses	165	~1500

Summary of Cruise:

Leg 2 of EW0205 (FOCI Cruise Number 1EW02) departed Kodiak Alaska on the morning of Sunday, May 26 aboard the R/V Maurice Ewing. The purpose of this leg of the cruise was to make a CTD/ Bongo/CalVET survey in the coastal Gulf of Alaska in support of Sea Lion Research and base programs of PMEL/FOCI, as well as the US GLOBEC CGOA program. A total of 166 stations were occupied (Fig. 1a and b). CTD casts were made at all stations except 115. Bongo net tows were taken at 132 stations (Fig. 2a and b), while CalVET tows to 60 meters were done at 32 selected stations- on the grids near Kodiak I., and at the 4 stations nearest the coast on each of the 5 main lines running southeast across the shelf (Fig.3). The tables above summarize operations statistics and sampling statistics for the cruise.

The SeaBird 911 plus CTD was equipped with dual temperature and conductivity sensors, plus a fluorometer and PAR sensor. The fluorometer was removed for casts deeper than 600 meters, and the PAR removed for casts deeper than 1000 meters. On each cast, salinity, chlorophyll and nutrient samples were taken from the Niskin bottles. CTD casts were done at each. A total of approximately 1500 samples were analyzed aboard ship for nitrate, nitrite and silicate. Chlorophyll samples (786) were filtered onto GFF filters and frozen and stored for later analysis.

The bongo net sampling included two sets of bongo nets with 60cm diameter with 0.333mm mesh size and 20 cm diameter nets with 0.153mm mesh . In addition a SeaCat unit in self-contained mode and a Netminder depth unit were also attached to the wire. The Netminder reported depth values to a hydrophone receiver hung over the side of the boat, which in turn sent data to a laptop computer in the

science lab. This allowed the bongo depth to be tracked and the bongos to be towed to within 10-15 meters of the bottom (or to 300 meters maximum bottom). The Netminder system worked but was cumbersome to use, and time-consuming to set up.

A total of 9 satellite-tracked drifters, drogued at 40 m were deployed. In addition, a dragging operation was undertaken to attempt the recovery of a mooring (GB-3) that was unrecoverable on Leg 1. Although the position of the acoustic release is known, we were unable to retrieve the mooring.

Sampling began at stations south of Kodiak Island on the Barnabus Canyon, Albatross Bank and Chiniak Bay lines. On Station ABB5 (Station19) the ship's bottom depth displays were in error, reporting a depth of 108 meters when in fact the true depth was 54m. This resulted in a CTD cast that sat on the bottom and ended up entangling the conducting cable, which required a new termination. In addition, two bongo casts dredged the bottom, damaging two of the 20 cm bongo nets. Because of a lack of adequate backup nets for the rest of the cruise the 20 cm bongos flew with one functional net and the other one essentially serving only as a drogue to balance the bongo. After finishing the Kodiak Island stations the Ewing transited to the northeast and the Gore Point, Pye Reef and Seal Rock lines were occupied.

After the end of the Seal Rock line we occupied 2 transects to study a warm-core (anti-cyclonic) eddy had been tracked in previous months using satellite altimetry data. At the time we visited it, the eddy had begun to move southwestwardly along the slope. Its center position as seen from the altimetry plots was sent to the ship. A transect of 10 CTD/bongo stations from NW-SE line through the eddy was occupied to define the eddy and its edges. Then 5 stations along a line from the eddy center to the NNE were occupied. This line passed over the FATE mooring, where a small boat operation was undertaken to affix an ARGOS buoy to the to the surface buoy as a backup to ensure that its position would be reported. Three ARGOS-tracked drifters were deployed at sites within the eddy.

After the eddy stations, the survey resumed on the Seward (GAK) and Fairfield (FOCI) lines. Upon completion of the 5 major lines, the ship transited to the site of the GB3M mooring at GAK5 to drag for a lost mooring and to perform 4 MOCNESS trawls (2 daytime, 2 nighttime). Dragging operations continued unsuccessfully at this site for 11hrs.

Next, we began to occupy a set of lines across Amatouli Trough, but this effort was interrupted during the third line (ATC) because of a communication from PMEL to return to the FATE mooring to attempt to fix a satellite transmission problem on the buoy. After this was done, the ship returned to the ATD line to sample. As the ship approached the beginning of the ATE line, sustained winds over 40 kts with gusts over 50 kts halted operations. It was decided to abandon the ATE line (5 stations) and to travel southward to the Portlock Bank stations, away from the zone of possible intensification of the winds, in hope of better working conditions.

On the first Portlock Bank station, operator error, combined with an unanticipated roll of the ship as we were retrieving the CTD. The rack of CTD bottles crashed into a projection from the winch deck, smashed one Niskin and damaged 2 others. After occupying 2 lines over Portlock Bank (3 with bongos), we proceeded to return to the outer line of stations across Chiniak Trough (CBA) to complete CTD operations.
The cruise ended with a transit to Kodiak, AK, arriving ~ 9:30 ADT, June 10, 2002.
An event log for this cruise is attached as Table 3.

Specifics of operations:

Specifics of the operation are presented in the event log in the appendix.

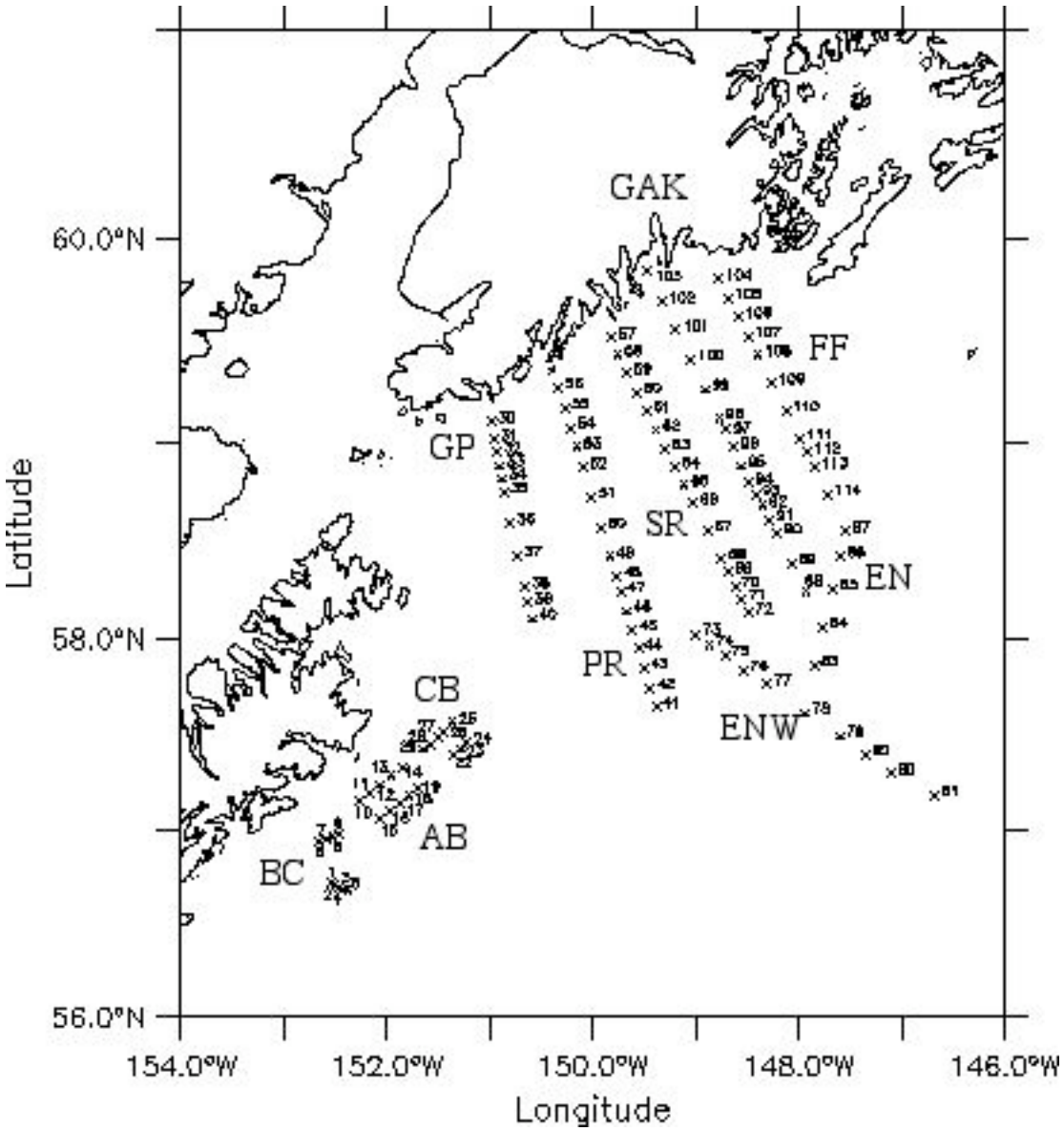


Fig 1 a –CTD station 1-114 Grid names are: BC-Barnabus Canyon, AB- Albatross Bank, CB-Chiniak Bay, GP, Gore Point, PR-Pye Reef, SR-Seal Rock, GAK (Seward), FF-Fairfield FOCI, ENW- eddy northwest to southeast, and EN-eddy north.

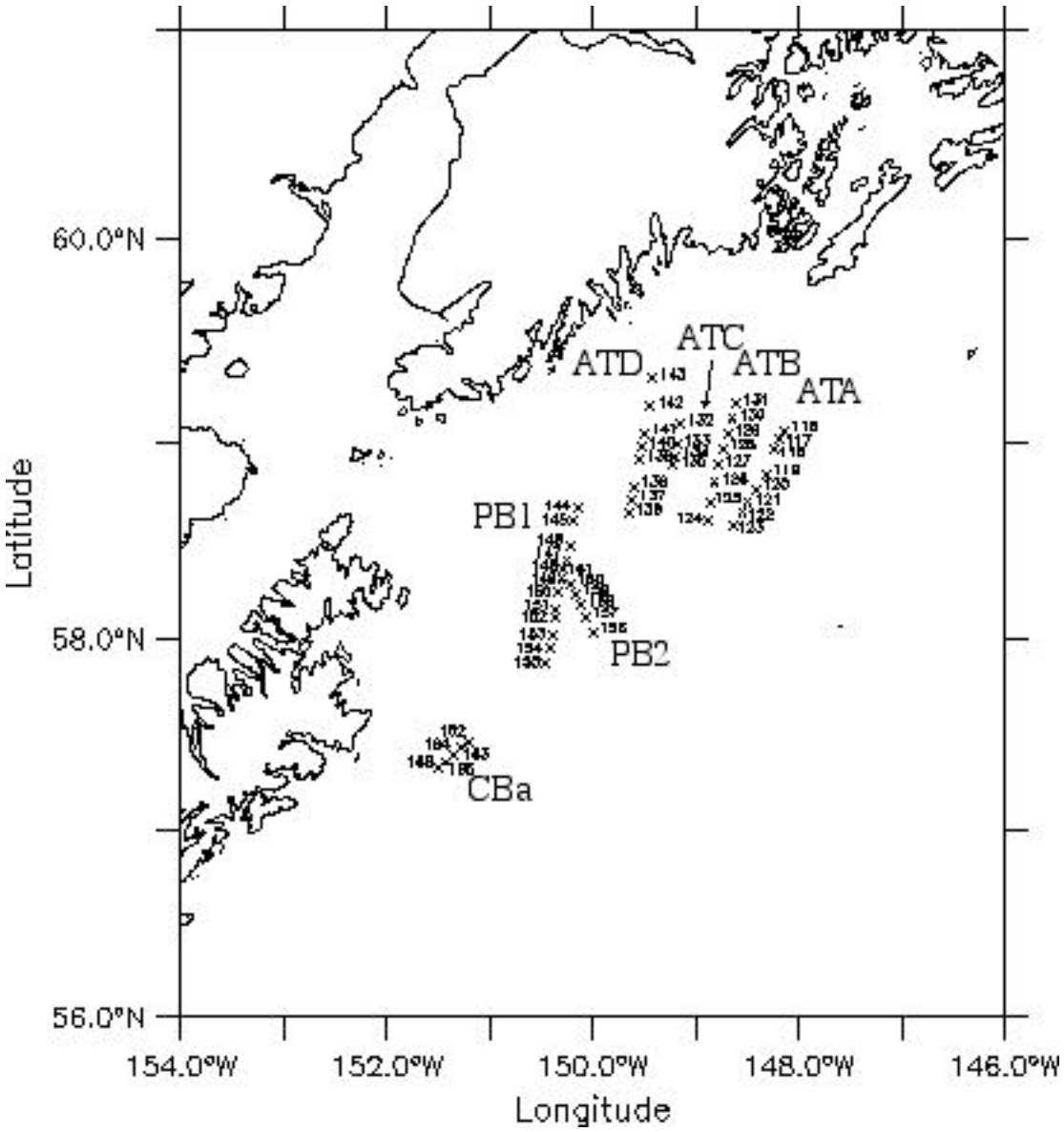
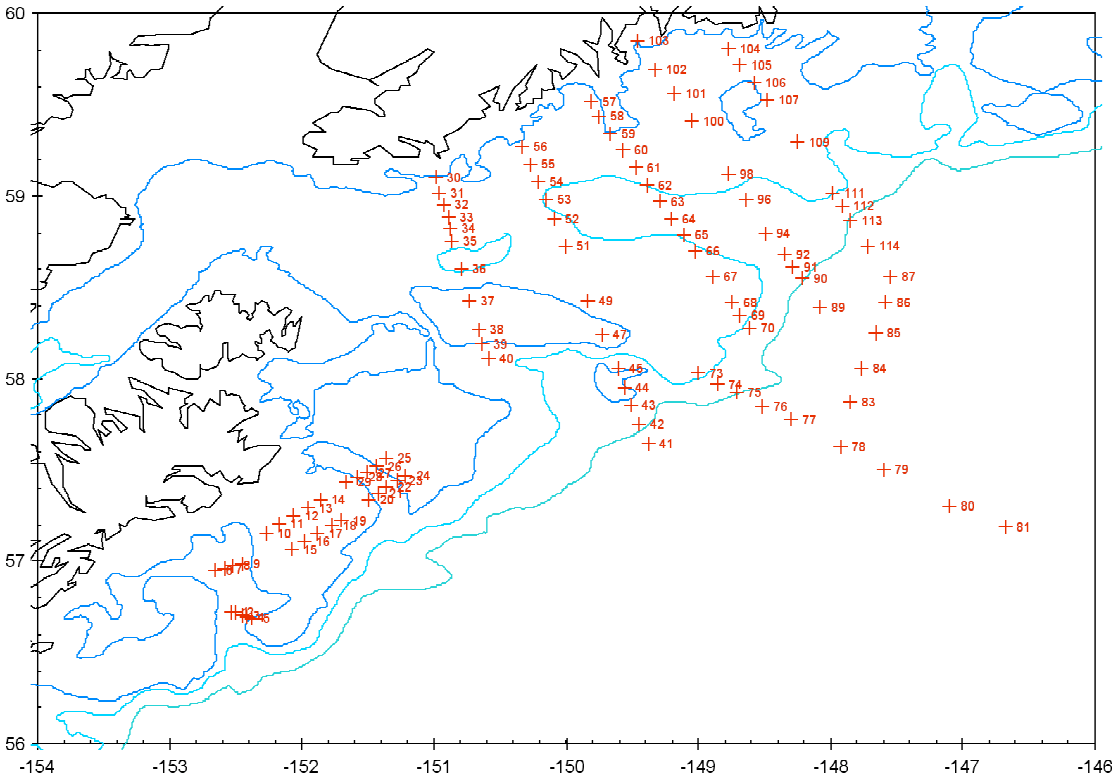
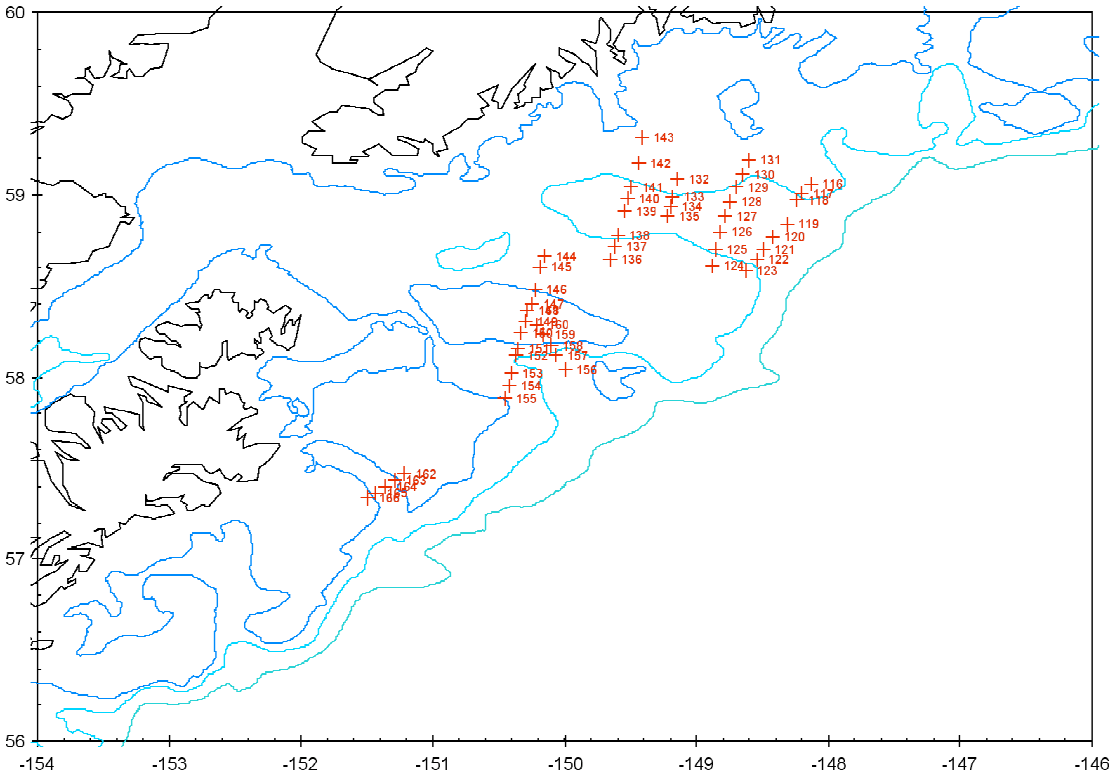


Fig 1 b –CTD station 116-166 Grid names are: CB- Chiniak Bay, GP, Gore Point, PB1- Portlock Bank 1, PB2- Portlock Bank 2, ATA- Amatouli Trough A, ATB- Amatouli Trough B, ATC- Amatouli Trough c (interrupted after 4 casts), ATD- Amatouli Trough D



EW0205B Bongo Stations 1-114



EW0205B CTD Stations 116-166

Figs 2a and b. Bongo tows at CTD stations 1-114 and 116-166, respectively.

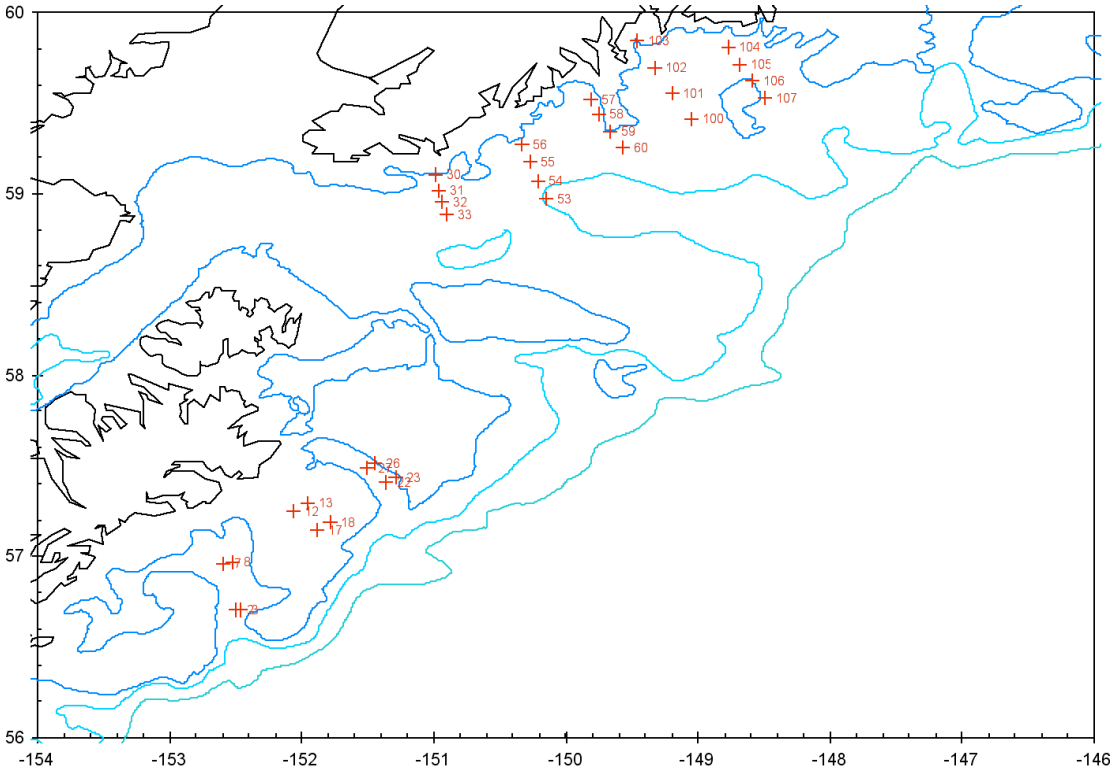


Fig 3. CalVET net tows for all stations.

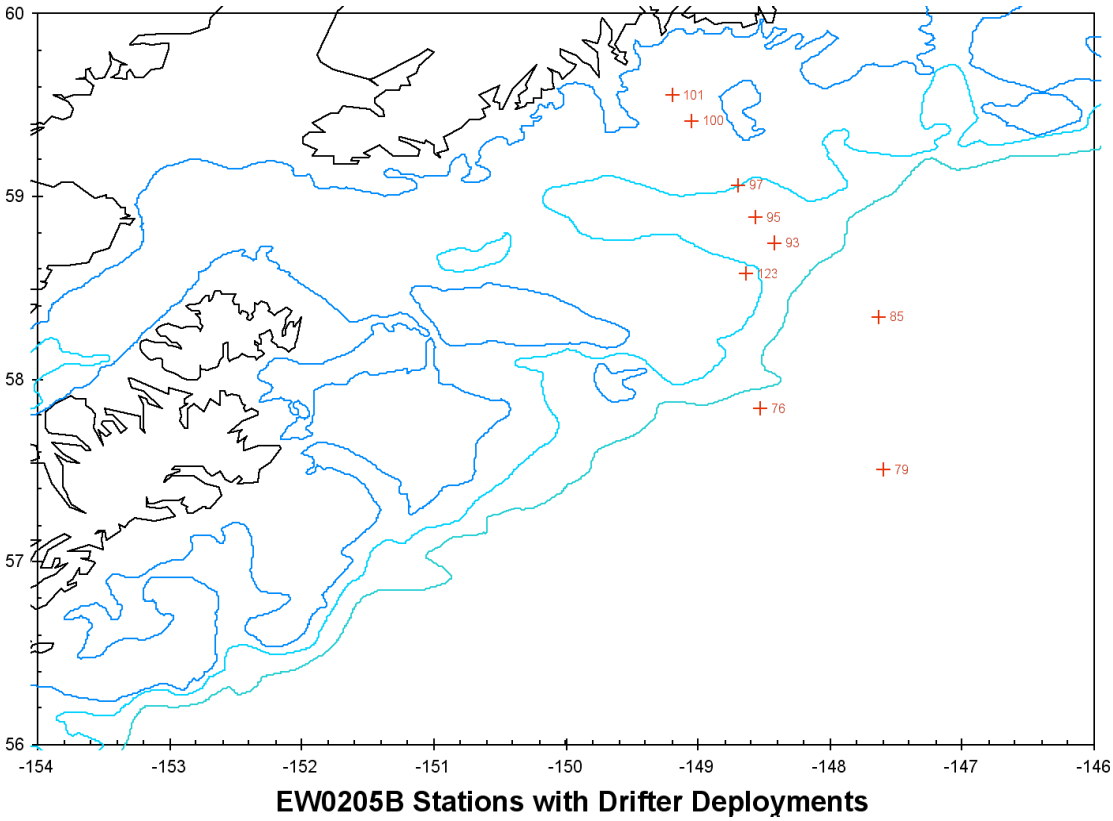


Fig 4. Locations of deployments of satellite-tracked drifters drogued at 40 m.

Appendix: Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
26-May-02	23:52	1	1	BCA5	CTD001	153	56 43.81 N	152 32.47 W	CTDB	Chlor, CTD, Fluor, PAR	BOTTLE AT 40M DIDN'T TRIP. WATER NOT COLLECTED FROM BOTTLE AT 50M. SMALL AMOUNT FRESH WATER USED WHILE FILTERING CHLOR.
27-May-02	0:33	1	2	BCA5	CAT001	154	56 43.00 N	152 32.00 W	20Bon	QTowF	WIRE OUT SLOW ~ 30 M/MIN AT FIRST. NETS FULL OF ALGAE
27-May-02	0:33	1	2	BCA5	CAT001	154	56 43.00 N	152 32.00 W	60Bon	QTowF	WIRE OUT SLOW ~ 30 M/MIN AT FIRST. NETS FULL OF ALGAE
27-May-02	0:33	1	2	BCA5	CAT001	154	56 43.00 N	152 32.00 W	CAT	CAT	WIRE OUT SLOW ~ 30 M/MIN AT FIRST. NETS FULL OF ALGAE
27-May-02	1:17	2	1	BCA4	CTD002	166	56 43.05 N	152 30.05 W	CTDB	Chlor, CTD, Fluor, PAR	SURFACE BOTTLE DIDN'T TRIP. SMALL AMOUNT FRESH WATER USED WHEN FILTERING CHLOR
27-May-02	2:00	2	2	BCA4		167	56 42.07 N	152 30.12 W	CalVET	MZ, QTowF	DIDN'T USE FILTERED SEAWATER IN
27-May-02	3:02	2	3	BCA4	CAT002	160	56 43.17 N	152 29.70 W	20Bon	QTowF	
27-May-02	3:02	2	3	BCA4	CAT002	160	56 43.17 N	152 29.70 W	60Bon	QTowF	
27-May-02	3:02	2	3	BCA4	CAT002	160	56 43.17 N	152 29.70 W	CAT	CAT	
27-May-02	3:40	3	1	BCA3	CTD003	186	56 42.29 N	152 27.53 W	CTDB	Chlor, CTD, Fluor, PAR	SURFACE CHLOR FROM BUCKET. SMALL AMOUNT FRESH WATER ADDED WHILE FILTERING CHLOR
27-May-02	3:54	3	2	BCA3		186	56 42.28 N	152 27.50 W	CalVET	MZ, QTowF	
27-May-02	4:14	3	3	BCA3	CAT003	185	56 42.43 N	152 27.11 W	20Bon	QTowF	
27-May-02	4:14	3	3	BCA3	CAT003	185	56 42.43 N	152 27.11 W	60Bon	QTowF	
27-May-02	4:14	3	3	BCA3	CAT003	185	56 42.43 N	152 27.11 W	CAT	CAT	
27-May-02	5:02	4	1	BCA2	CTD004	177	56 41.56 N	152 25.14 W	CTDB	Chlor, CTD, Fluor, PAR	SMALL AMOUNT OF FRESH WATER ADDED WHILE FILTERING CHLOR
27-May-02	5:22	4	2	BCA2	CAT004	177	56 41.72 N	152 24.90 W	20Bon	QTowF	
27-May-02	5:22	4	2	BCA2	CAT004	177	56 41.72 N	152 24.90 W	60Bon	QTowF	
27-May-02	5:22	4	2	BCA2	CAT004	177	56 41.72 N	152 24.90 W	CAT	CAT	
27-May-02	6:18	5	1	BCA1	CTD005	89	56 40.98 N	152 22.71 W	CTDB	Chlor, CTD, Fluor, PAR	SMALL AMOUNT FRESHWATER ADDED WHILE FILTERING CHLOR
27-May-02	6:35	5	2	BCA1	CAT005	92	56 41.23 N	152 22.34 W	20Bon	QTowF	DEPTH MINDER DIDN'T WORK. USED WIRE ANGLE. STILL MORE ALGAE. Low flow for 20Bon - nets clogged? No wire out recorded.
27-May-02	6:35	5	2	BCA1	CAT005	92	56 41.23 N	152 22.34 W	60Bon	QTowF	DEPTH MINDER DIDN'T WORK. USED WIRE ANGLE. WIRE ANGLE LOW (~35) ON WAY DOWN. 45 ON WAY UP. STILL MORE ALGAE. NETS CLOGGED?
27-May-02	6:35	5	2	BCA1	CAT005	92	56 41.23 N	152 22.34 W	60Bon	QTowF	DEPTH MINDER DIDN'T WORK. USED WIRE ANGLE. WIRE ANGLE LOW (~35) ON WAY DOWN. 45 ON WAY UP. STILL MORE ALGAE. NETS CLOGGED? No wire out recorded.

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
27-May-02	6:35	5	2	BCA1	CAT005	92	56 41.23 N	152 22.34 W	CAT	CAT	DEPTH MINDER DIDN'T WORK. USED WIRE ANGLE. WIRE ANGLE LOW (~35) ON WAY DOWN. 45 ON WAY UP. STILL MORE ALGAE. NETS CLOGGED?
27-May-02	8:41	6	1	BCBA	CTD006	155	56 56.56 N	152 39.49 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	9:03	6	2	BCBA	CAT006	155	56 56.77 N	152 39.07 W	20Bon	QTowF	
27-May-02	9:03	6	2	BCBA	CAT006	155	56 56.77 N	152 39.07 W	60Bon	QTowF	
27-May-02	9:03	6	2	BCBA	CAT006	155	56 56.77 N	152 39.07 W	CAT	CAT	
27-May-02	10:07	7	1	BCB3	CTD007	166	56 57.43 N	152 35.56 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	10:24	7	2	BCB3		166	56 57.48 N	152 35.64 W	CalVET	MZ, QTowF	
27-May-02	10:50	7	3	BCB3	CAT007	168	56 57.67 N	152 35.24 W	20Bon	QTowF	
27-May-02	10:50	7	3	BCB3	CAT007	168	56 57.67 N	152 35.24 W	60Bon	QTowF	
27-May-02	10:50	7	3	BCB3	CAT007	168	56 57.67 N	152 35.24 W	CAT	CAT	
27-May-02	11:41	8	1	BCB2	CTD008	157	56 58.17 N	152 31.49 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	11:56	8	2	BCB2		158	56 58.24 N	152 31.54 W	CalVET	MZ, QTowF	
27-May-02	12:19	8	3	BCB2	CAT008	155	56 58.34 N	152 31.10 W	20Bon	QTowF	BONGOS STALLED AT SURFACE (0M) FOR ~30 SEC. ANGLE SLIGHTLY SHALLOW (~50)
27-May-02	12:19	8	3	BCB2	CAT008	155	56 58.34 N	152 31.10 W	60Bon	QTowF	BONGOS STALLED AT SURFACE (0M) FOR ~30 SEC. ANGLE SLIGHTLY SHALLOW (~50)
27-May-02	12:19	8	3	BCB2	CAT008	155	56 58.34 N	152 31.10 W	CAT	CAT	BONGOS STALLED AT SURFACE (0M) FOR ~30 SEC. ANGLE SLIGHTLY SHALLOW (~50)
27-May-02	13:07	9	1	BCB1	CTD009	140	56 59.04 N	152 27.53 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	13:31	9	2	BCB1	CAT009	140	56 59.06 N	152 27.11 W	20Bon	QTowF	
27-May-02	13:31	9	2	BCB1	CAT009	140	56 59.06 N	152 27.11 W	60Bon	QTowF	
27-May-02	13:31	9	2	BCB1	CAT009	140	56 59.06 N	152 27.11 W	CAT	CAT	
27-May-02	14:59	10	1	ABA1	CTD010	80	57 09.28 N	152 16.50 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	15:15	10	2	ABA1	CAT010	80	57 09.36 N	152 16.25 W	20Bon	QTowF	20Bon flow low. Nets prob clogged.
27-May-02	15:15	10	2	ABA1	CAT010	80	57 09.36 N	152 16.25 W	60Bon	QTowF	
27-May-02	15:15	10	2	ABA1	CAT010	80	57 09.36 N	152 16.25 W	CAT	CAT	
27-May-02	16:04	11	1	ABA2	CTD011	80	57 11.99 N	152 10.19 W	CTDB	Chlor, CTD, Fluor, PAR	BOTTLE AT 10M DIDN'T FIRE. FILTER FOR 0M FLIPPED OVER AND HIT TABLE TOP ON CHLORO SIDE.
27-May-02	16:20	11	2	ABA2	CAT011	82	57 12.01 N	152 10.06 W	20Bon	QTowF	20 Bon low flow. Nets prob clogged.
27-May-02	16:20	11	2	ABA2	CAT011	82	57 12.01 N	152 10.06 W	60Bon	QTowF	
27-May-02	16:20	11	2	ABA2	CAT011	82	57 12.01 N	152 10.06 W	CAT	CAT	
27-May-02	17:16	12	1	ABA3	CTD012	76	57 14.68 N	152 03.60 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	17:31	12	2	ABA3		76	57 14.66 N	152 03.60 W	CalVET	MZ, QTowF	
27-May-02	17:47	12	3	ABA3	CAT012	75	57 14.68 N	152 03.58 W	20Bon	QTowF	20 Bon low flow count. Net prob clogged.
27-May-02	17:47	12	3	ABA3	CAT012	75	57 14.68 N	152 03.58 W	60Bon	QTowF	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
27-May-02	17:47	12	3	ABA3	CAT012	75	57 14.68 N	152 03.58 W	CAT	CAT	
27-May-02	18:46	13	1	ABA4	CTD013	76	57 17.37 N	151 57.39 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	18:56	13	2	ABA4		76	57 17.36 N	151 57.43 W	CalVET	MZ, QTowF	
27-May-02	19:09	13	3	ABA4	CAT013	76	57 17.40 N	151 57.39 W	20Bon	QTowF	Time on stopwatch not recorded, so time estimated by looking at SeaCat data scans. See cruise notes.
27-May-02	19:09	13	3	ABA4	CAT013	76	57 17.40 N	151 57.39 W	60Bon	QTowF	Time on stopwatch not recorded, so time estimated by looking at SeaCat data scans. See cruise notes.
27-May-02	19:09	13	3	ABA4	CAT013	76	57 17.40 N	151 57.39 W	CAT	CAT	Time on stopwatch not recorded, so time estimated by looking at SeaCat data scans. See cruise notes.
27-May-02	20:05	14	1	ABA5	CTD014	66	57 20.03 N	151 51.27 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	20:19	14	2	ABA5	CAT014	66	57 20.17 N	151 51.37 W	20Bon	QTowF	Net 1 spilled. Nets very full of algae
27-May-02	20:19	14	2	ABA5	CAT014	66	57 20.17 N	151 51.37 W	60Bon	QTowF	Net 1 spilled. Nets very full of algae
27-May-02	20:19	14	2	ABA5	CAT014	66	57 20.17 N	151 51.37 W	CAT	CAT	Net 1 spilled. Nets very full of algae
27-May-02	22:25	15	1	ABB1	CTD015	73	57 03.67 N	152 04.28 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	22:39	15	2	ABB1	CAT015	72	57 03.87 N	152 04.32 W	20Bon	QTowF	Stopwatch time not recorded. So time estimated from SeaCat scans. See cruise notes.
27-May-02	22:39	15	2	ABB1	CAT015	72	57 03.87 N	152 04.32 W	60Bon	QTowF	Stopwatch time not recorded. So time estimated from SeaCat scans. See cruise notes.
27-May-02	22:39	15	2	ABB1	CAT015	72	57 03.87 N	152 04.32 W	CAT	CAT	Stopwatch time not recorded. So time estimated from SeaCat scans. See cruise notes.
27-May-02	23:23	16	1	ABB2	CTD016	74	57 06.08 N	151 58.51 W	CTDB	Chlor, CTD, Fluor, PAR	
27-May-02	23:39	16	2	ABB2	CAT016	74	57 06.34 N	151 58.41 W	20Bon	QTowF	
27-May-02	23:39	16	2	ABB2	CAT016	74	57 06.34 N	151 58.41 W	60Bon	QTowF	
27-May-02	23:39	16	2	ABB2	CAT016	74	57 06.34 N	151 58.41 W	CAT	CAT	
28-May-02	0:27	17	1	ABB3	CTD017	75	57 08.61 N	151 52.88 W	CTDB	Chlor, CTD, Fluor, PAR	CHLOR AT SURFACE FROM A BUCKET
28-May-02	0:51	17	2	ABB3		75	57 08.60 N	151 52.80 W	CalVET	MZ, QTowF	
28-May-02	1:04	17	3	ABB3	CAT017	75	57 08.94 N	151 52.67 W	20Bon	QTowF	
28-May-02	1:04	17	3	ABB3	CAT017	75	57 08.94 N	151 52.67 W	60Bon	QTowF	
28-May-02	1:04	17	3	ABB3	CAT017	75	57 08.94 N	151 52.67 W	CAT	CAT	
28-May-02	1:50	18	1	ABB4	CTD018	68	57 11.07 N	151 47.04 W	CTDB	Chlor, CTD, Fluor, PAR	
28-May-02	2:04	18	2	ABB4		66	57 11.15 N	151 47.10 W	CalVET	MZ, QTowF	
28-May-02	2:33	18	3	ABB4	CAT018	67	57 11.70 N	151 46.29 W	20Bon	QTowF	First attempt hit bottom; not recorded or saved. Some shells in 20Bon - prob not washed out from first tow.
28-May-02	2:33	18	3	ABB4	CAT018	67	57 11.70 N	151 46.29 W	60Bon	QTowF	First attempt hit bottom; not recorded or saved. Some shells in 20Bon - prob not washed out from first tow.

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
28-May-02	2:33	18	3	ABB4	CAT018	67	57 11.70 N	151 46.29 W	CAT	CAT	First attempt hit bottom; not recorded or saved. Some shells in 20Bon - prob not washed out from first tow.
28-May-02	5:35	19	1	ABB5	CTD019	54	57 13.61 N	151 41.74 W	CTDB	CTD, Fluor, PAR	Because of double echo in ship's depth reading, CTD hit bottom. Went up and down a couple times. Thought CTD was malfunctioning so didn't take bottles.
28-May-02	3:16	19	2	ABB5	CAT019	53	57 13.56 N	151 42.30 W	20Bon	QTowF	No flowmeter recorded
28-May-02	3:16	19	2	ABB5	CAT019	53	57 13.56 N	151 42.30 W	60Bon	QTowF	Ship gave incorrect depth (double echo), so crashed into bottom twice. 3 20Bon nets torn so only have net 2 now. 3rd time's a charm. Wire out not recorded
28-May-02	3:16	19	2	ABB5	CAT019	53	57 13.56 N	151 42.30 W	CAT	CAT	
28-May-02	7:12	20	1	CBA1	CTD020	79	57 19.95 N	151 30.01 W	CTDB	Chlor	CTD data not stored to disk. Bottles fired OK, and we did get Chlor.
28-May-02	7:30	20	2	CBA1	CAT020	81	57 20.05 N	151 29.72 W	20Bon	QTowF	20Bon net 1 no codend - serves only as balance for net 2
28-May-02	7:30	20	2	CBA1	CAT020	81	57 20.05 N	151 29.72 W	60Bon	QTowF	
28-May-02	7:30	20	2	CBA1	CAT020	81	57 20.05 N	151 29.72 W	60Bon	QTowF	20Bon net 1 no codend - serves only as balance for net 2
28-May-02	7:30	20	2	CBA1	CAT020	81	57 20.05 N	151 29.72 W	CAT	CAT	
28-May-02	8:15	21	1	CBA1	CTD021	157	57 22.05 N	151 25.72 W	CTDB	Chlor	CTD data not stored to disk. Bottles fired OK so have Chlor
28-May-02	8:36	21	2	CBA2	CAT021	159	57 22.31 N	151 25.44 W	20Bon	QTowF	20 Bon flow low
28-May-02	8:36	21	2	CBA2	CAT021	159	57 22.31 N	151 25.44 W	60Bon	QTowF	20 Bon flow low
28-May-02	8:36	21	2	CBA2	CAT021	159	57 22.31 N	151 25.44 W	CAT	CAT	20 Bon flow low
28-May-02	9:26	22	1	CBA3	CTD022	173	57 24.13 N	151 21.66 W	CTDB	Chlor, CTD, Fluor, PAR	0m Chlor sample taken from discharge water out of the underway fluorometer because no bottle fired at that surface
28-May-02	9:41	22	2	CBA3		175	57 24.26 N	151 21.62 W	CalVET	MZ, QTowF	
28-May-02	9:59	22	3	CBA3	CAT022	177	57 24.51 N	151 21.41 W	20Bon	QTowF	20 bon flow count low. Nets prob clogged.
28-May-02	9:59	22	3	CBA3	CAT022	177	57 24.51 N	151 21.41 W	60Bon	QTowF	
28-May-02	9:59	22	3	CBA3	CAT022	177	57 24.51 N	151 21.41 W	CAT	CAT	
28-May-02	10:46	23	1	CBA4	CTD023	96	57 26.00 N	151 17.30 W	CTDB	Chlor, CTD, Fluor, PAR	
28-May-02	10:57	23	2	CBA4		96	57 26.13 N	151 17.24 W	CalVET	MZ, QTowF	
28-May-02	11:12	23	3	CBA4	CAT023	95	57 26.52 N	151 16.94 W	20Bon	QTowF	20Bon flow count low. Nets prob clogged.
28-May-02	11:12	23	3	CBA4	CAT023	95	57 26.52 N	151 16.94 W	60Bon	QTowF	
28-May-02	11:12	23	3	CBA4	CAT023	95	57 26.52 N	151 16.94 W	CAT	CAT	
28-May-02	12:03	24	1	CBA5	CTD024	90	57 27.90 N	151 13.19 W	CTDB	Chlor, CTD, Fluor, PAR	Lost 10m Chlor sample
28-May-02	13:00	24	2	CBA5	CAT024	82	57 28.22 N	151 12.74 W	20Bon	QTowF	
28-May-02	13:00	24	2	CBA5	CAT024	82	57 28.22 N	151 12.74 W	60Bon	QTowF	
28-May-02	13:00	24	2	CBA5	CAT024	82	57 28.22 N	151 12.74 W	CAT	CAT	
28-May-02	14:07	25	1	CBB5	CTD025	73	57 33.99 N	151 21.97 W	CTDB	Chlor, CTD, Fluor, PAR	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
28-May-02	14:27	25	2	CBB5	CAT025	73	57 34.13 N	151 21.80 W	20Bon	QTowF	20Bon flow count low. Nets prob clogged.
28-May-02	14:27	25	2	CBB5	CAT025	73	57 34.13 N	151 21.80 W	60Bon	QTowF	
28-May-02	14:27	25	2	CBB5	CAT025	73	57 34.13 N	151 21.80 W	CAT	CAT	
28-May-02	15:15	26	1	CBB4	CTD026	138	57 30.93 N	151 26.45 W	CTDB	Chlor, CTD, Fluor, PAR	Too much Chlor at 0m and 10m for 139 bottles. Put water from those depths into waxed paper cup, then sucked up 60 ml with syringe to transfer to filter. 0m and 10m filtered after ~1 hr.
28-May-02	15:31	26	2	CBB4		140	57 30.98 N	151 26.56 W	CalVET	MZ, QTowF	
28-May-02	16:43	26	3	CBB4	CAT026	100	57 31.13 N	151 26.36 W	20Bon	QTowF	20Bon flow count very low. Nets prob clogged.
28-May-02	16:43	26	3	CBB4	CAT026	100	57 31.13 N	151 26.36 W	60Bon	QTowF	
28-May-02	16:43	26	3	CBB4	CAT026	100	57 31.13 N	151 26.36 W	CAT	CAT	
28-May-02	17:37	27	1	CBB3	CTD027	160	57 29.24 N	151 30.41 W	CTDB	Chlor, CTD, Fluor, PAR	0, 10, 20 meter Chlor samples taken with waxed paper cup and syringes.
28-May-02	18:04	27	2	CBB3		160	57 29.18 N	151 30.45 W	CalVET	MZ, QTowF	
28-May-02	18:19	27	4	CBB3	CAT027	160	57 29.19 N	151 30.34 W	20Bon	QTowF	20Bon flow count low. Nets prob clogged.
28-May-02	18:19	27	4	CBB3	CAT027	160	57 29.19 N	151 30.34 W	60Bon	QTowF	
28-May-02	18:19	27	4	CBB3	CAT027	160	57 29.19 N	151 30.34 W	CAT	CAT	
28-May-02	19:13	28	1	CBB2	CTD028	114	57 27.52 N	151 34.44 W	CTDB	Chlor, CTD, Fluor, PAR	60 ml Chlor samples collected using syringe and waxed paper cup
28-May-02	19:27	28	2	CBB2	CAT028	115	57 27.59 N	151 34.46 W	20Bon	QTowF	20Bon flow count low. Net prob clogged.
28-May-02	19:27	28	2	CBB2	CAT028	115	57 27.59 N	151 34.46 W	60Bon	QTowF	spilled net 1 60Bon
28-May-02	19:27	28	2	CBB2	CAT028	115	57 27.59 N	151 34.46 W	CAT	CAT	
28-May-02	20:23	29	1	CBB1	CTD029	64	57 25.96 N	151 39.39 W	CTDB	Chlor, CTD, Fluor, PAR	60ml Chlor samples collected with syringe directly from rosette bottles
28-May-02	20:34	29	2	CBB1	CAT029	64	57 26.02 N	151 39.56 W	20Bon	QTowF	
28-May-02	20:34	29	2	CBB1	CAT029	64	57 26.02 N	151 39.56 W	60Bon	QTowF	
28-May-02	20:34	29	2	CBB1	CAT029	64	57 26.02 N	151 39.56 W	60Bon	QTowF	60Bon net 2 wrapped around wire.
28-May-02	20:34	29	2	CBB1	CAT029	64	57 26.02 N	151 39.56 W	CAT	CAT	
29-May-02	6:29	30	1	GP1	CTD030	166	59 06.02 N	150 59.44 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	6:45	30	2	GP1		169	59 06.01 N	150 59.46 W	CalVET	MZ, QTowF	
29-May-02	7:28	30	3	GP1	CAT030	158	59 06.18 N	150 59.29 W	20Bon	QTowF	2nd attempt. 1st attempt tow timer stopped - 1st attempt not recorded.
29-May-02	7:28	30	3	GP1	CAT030	158	59 06.18 N	150 59.29 W	60Bon	QTowF	2nd attempt. 1st attempt tow timer stopped - 1st attempt not recorded.
29-May-02	7:28	30	3	GP1	CAT030	158	59 06.18 N	150 59.29 W	CAT	CAT	2nd attempt. 1st attempt tow timer stopped - 1st attempt not recorded.
29-May-02	8:32	31	1	GP2	CTD031	162	59 00.72 N	150 57.78 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	8:48	31	2	GP2		170	59 00.79 N	150 57.87 W	CalVET	MZ, QTowF	CalVET at slight angle on way up (~10 degrees).
29-May-02	9:03	31	3	GP2	CAT031	173	59 00.98 N	150 57.91 W	20Bon	QTowF	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
29-May-02	9:03	31	3	GP2	CAT031	173	59 00.98 N	150 57.91 W	60Bon	QTowF	
29-May-02	9:03	31	3	GP2	CAT031	173	59 00.98 N	150 57.91 W	CAT	CAT	
29-May-02	10:04	32	1	GP3	CTD032	156	58 57.03 N	150 55.88 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	10:18	32	2	GP3		153	58 57.06 N	150 55.97 W	CalVET	MZ, QTowF	Wire angle about 35 degrees on way up. Ship was stationary fast current caused problem.
29-May-02	10:34	32	3	GP3	CAT032	156	58 57.24 N	150 55.87 W	20Bon	QTowF	
29-May-02	10:34	32	3	GP3	CAT032	156	58 57.24 N	150 55.87 W	60Bon	QTowF	
29-May-02	10:34	32	3	GP3	CAT032	156	58 57.24 N	150 55.87 W	CAT	CAT	
29-May-02	11:35	33	1	GP4	CTD033	162	58 52.88 N	150 54.03 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	11:49	33	2	GP4		162	58 52.93 N	150 54.01 W	CalVET	MZ, QTowF	
29-May-02	12:04	33	3	GP4	CAT033	162	58 53.06 N	150 53.72 W	20Bon	QTowF	
29-May-02	12:04	33	3	GP4	CAT033	162	58 53.06 N	150 53.72 W	60Bon	QTowF	
29-May-02	12:04	33	3	GP4	CAT033	162	58 53.06 N	150 53.72 W	CAT	CAT	
29-May-02	13:12	34	1	GP5	CTD034	190	58 49.09 N	150 52.71 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	13:33	34	2	GP5		189	58 49.30 N	150 52.43 W	20Bon	QTowF	
29-May-02	13:33	34	2	GP5		189	58 49.30 N	150 52.43 W	60Bon	QTowF	
29-May-02	13:33	34	2	GP5		189	58 49.30 N	150 52.43 W	CAT	CAT	
29-May-02	14:27	35	1	GP6	CTD035	185	58 44.98 N	150 51.99 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	14:48	35	2	GP6	CAT035	180	58 45.18 N	150 51.81 W	20Bon	QTowF	
29-May-02	14:48	35	2	GP6	CAT035	180	58 45.18 N	150 51.81 W	60Bon	QTowF	
29-May-02	14:48	35	2	GP6	CAT035	180	58 45.18 N	150 51.81 W	CAT	CAT	
29-May-02	16:21	36	1	GP7	CTD036	184	58 35.54 N	150 47.90 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	16:42	36	2	GP7	CAT036	188	58 35.91 N	150 47.41 W	20Bon	QTowF	
29-May-02	16:42	36	2	GP7	CAT036	188	58 35.91 N	150 47.41 W	60Bon	QTowF	
29-May-02	16:42	36	2	GP7	CAT036	188	58 35.91 N	150 47.41 W	CAT	CAT	
29-May-02	18:15	37	1	GP8	CTD037	75	58 25.63 N	150 43.67 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	18:29	37	2	GP8	CAT037	77	58 25.74 N	150 43.67 W	20Bon	QTowF	
29-May-02	18:29	37	2	GP8	CAT037	77	58 25.74 N	150 43.67 W	60Bon	QTowF	
29-May-02	18:29	37	2	GP8	CAT037	77	58 25.74 N	150 43.67 W	CAT	CAT	
29-May-02	19:44	38	1	GP9	CTD038	63	58 16.03 N	150 39.63 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	19:57	38	2	GP9	CAT038	62	58 16.09 N	150 39.69 W	20Bon	QTowF	
29-May-02	19:57	38	2	GP9	CAT038	62	58 16.09 N	150 39.69 W	60Bon	QTowF	
29-May-02	19:57	38	2	GP9	CAT038	62	58 16.09 N	150 39.69 W	CAT	CAT	
29-May-02	20:50	39	1	GP9I	CTD039	110	58 11.21 N	150 37.55 W	CTDB	Chlor, CTD, Fluor, PAR	
29-May-02	21:06	39	2	GP9I	CAT039	106	58 11.52 N	150 37.89 W	20Bon	QTowF	Net 1 spilled. 20 Bon flow low
29-May-02	21:06	39	2	GP9I	CAT039	106	58 11.52 N	150 37.89 W	60Bon	QTowF	Net 1 spilled
29-May-02	21:06	39	2	GP9I	CAT039	106	58 11.52 N	150 37.89 W	CAT	CAT	Net 1 spilled. 20 Bon flow low
29-May-02	22:06	40	1	GP10	CTD040	150	58 06.35 N	150 35.32 W	CTDB	Chlor, CTD, Fluor, PAR	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
29-May-02	22:24	40	2	GP10		148	58 06.72 N	150 35.41 W	20Bon	QTowF	Netmind didn't work used wire angle. Small amount of sand in tow, may have brushed bottom. 20Bon Flow counts low, net maybe clogged
29-May-02	22:24	40	2	GP10		148	58 06.72 N	150 35.41 W	60Bon	QTowF	Netmind didn't work used wire angle. Small amount of sand in tow, may have brushed bottom. 20Bon Flow counts low, net maybe clogged
29-May-02	22:24	40	2	GP10		148	58 06.72 N	150 35.41 W	60Bon	QTowF	Netmind didn't work used wire angle. Small amount of sand in tow, may have brushed bottom. 20Bon Flow counts low. Net may be clogged.
29-May-02	22:24	40	2	GP10		148	58 06.72 N	150 35.41 W	CAT	CAT	Netmind didn't work used wire angle. Small amount of sand in tow, may have brushed bottom. 20Bon Flow counts low, net maybe clogged
30-May-02	3:58	41	1	PR16	CTD041	1250	57 39.09 N	149 23.06 W	CTDB	Chlor, CTD, PAR	0 m sample from bucket
30-May-02	4:42	41	2	PR16	CAT041	1258	57 38.67 N	149 22.96 W	20Bon	QTowF	
30-May-02	4:42	41	2	PR16	CAT041	1258	57 38.67 N	149 22.96 W	60Bon	QTowF	
30-May-02	4:42	41	2	PR16	CAT041	1258	57 38.67 N	149 22.96 W	CAT	CAT	
30-May-02	6:17	42	1	PR15	CTD042	862	57 44.96 N	149 26.66 W	CTDB	Chlor, CTD, Fluor, PAR	0 m chlorophyll from bucket. No 40 m bottle sample
30-May-02	6:55	42	2	PR15	CAT042	855	57 45.14 N	149 26.76 W	20Bon	QTowF	
30-May-02	6:55	42	2	PR15	CAT042	855	57 45.14 N	149 26.76 W	60Bon	QTowF	
30-May-02	6:55	42	2	PR15	CAT042	855	57 45.14 N	149 26.76 W	CAT	CAT	
30-May-02	8:16	43	1	PR14	CTD043	375	57 51.01 N	149 30.11 W	CTDB	Chlor, CTD, Fluor, PAR	No 0m Chlor collected
30-May-02	8:43	43	2	PR14	CAT043	291	57 51.38 N	149 30.48 W	20Bon	QTowF	
30-May-02	8:43	43	2	PR14	CAT043	291	57 51.38 N	149 30.48 W	60Bon	QTowF	
30-May-02	8:43	43	2	PR14	CAT043	291	57 51.38 N	149 30.48 W	CAT	CAT	
30-May-02	9:48	44	1	PR13	CTD044	127	57 56.97 N	149 33.52 W	CTDB	Chlor, CTD, Fluor, PAR	
30-May-02	10:03	44	2	PR13	CAT044	124	57 57.30 N	149 33.70 W	20Bon	QTowF	
30-May-02	10:03	44	2	PR13	CAT044	124	57 57.30 N	149 33.70 W	60Bon	QTowF	
30-May-02	10:03	44	2	PR13	CAT044	124	57 57.30 N	149 33.70 W	CAT	CAT	
30-May-02	11:02	45	1	PR12	CTD045	180	58 02.86 N	149 36.81 W	CTDB	Chlor, CTD, Fluor, PAR	
30-May-02	11:20	45	2	PR12	CAT045	200	58 03.24 N	149 36.62 W	20Bon	QTowF	20Bon flow count low
30-May-02	11:20	45	2	PR12	CAT045	200	58 03.24 N	149 36.62 W	60Bon	QTowF	
30-May-02	11:20	45	2	PR12	CAT045	200	58 03.24 N	149 36.62 W	CAT	CAT	
30-May-02	12:21	46	1	PR11	CTD046	153	58 08.71 N	149 40.32 W	CTDB	Chlor, CTD, Fluor, PAR	
30-May-02	14:27	47	2	PR10	CTD047B	64	58 14.62 N	149 43.66 W	CTDB	Chlor, CTD, Fluor, PAR	Haul 1 was ctd cast (ctd047A). That cast was discarded because of leaking bottles. This is 2nd ctd cast.
30-May-02	14:42	47	3	PR10	CAT047	65	58 14.73 N	149 43.70 W	20Bon	QTowF	
30-May-02	14:42	47	3	PR10	CAT047	65	58 14.73 N	149 43.70 W	60Bon	QTowF	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
30-May-02	14:42	47	3	PR10	CAT047	65	58 14.73 N	149 43.70 W	CAT	CAT	
30-May-02	15:35	48	1	PR9	CTD048	88	58 19.40 N	149 46.24 W	CTDB	Chlor, CTD, Fluor, PAR	
30-May-02	16:44	49	1	PR8	CTD049	142	58 25.25 N	149 49.92 W	CTDB	Chlor, CTD, Fluor, PAR	
30-May-02	17:03	49	2	PR8	CAT049	145	58 25.39 N	149 49.93 W	20Bon	QTowF	
30-May-02	17:03	49	2	PR8	CAT049	145	58 25.39 N	149 49.93 W	60Bon	QTowF	
30-May-02	17:03	49	2	PR8	CAT049	145	58 25.39 N	149 49.93 W	CAT	CAT	
30-May-02	18:31	50	1	PR7	CTD050	134	58 34.30 N	149 55.14 W	CTDB	Chlor, CTD, Fluor, PAR	
30-May-02	20:04	51	1	PR6	CTD051	160	58 43.47 N	150 00.35 W	CTDB	Chlor, CTD, Fluor, PAR	
30-May-02	20:21	51	2	PR6	CAT051	164	58 43.47 N	150 00.35 W	20Bon	QTowF	
30-May-02	20:21	51	2	PR6	CAT051	164	58 43.47 N	150 00.35 W	60Bon	QTowF	
30-May-02	20:21	51	2	PR6	CAT051	164	58 43.47 N	150 00.35 W	CAT	CAT	
30-May-02	21:42	52	1	PR5	CTD052	179	58 52.36 N	150 05.82 W	CTDB	Chlor, CTD, Fluor, PAR	
30-May-02	22:01	52	2	PR5	CAT052	180	58 52.67 N	150 05.76 W	20Bon	QTowF	
30-May-02	22:01	52	2	PR5	CAT052	180	58 52.67 N	150 05.76 W	60Bon	QTowF	
30-May-02	22:01	52	2	PR5	CAT052	180	58 52.67 N	150 05.76 W	CAT	CAT	
30-May-02	23:09	53	1	PR4	CTD053	200	58 58.37 N	150 09.29 W	CTDB	Chlor, CTD, Fluor, PAR	0m chlor from bucket while doing bongo
30-May-02	23:21	53	2	PR4		199	58 58.44 N	150 09.34 W	CalVET	MZ, QTowF	
30-May-02	23:34	53	3	PR4	CAT053	194	58 58.65 N	150 09.29 W	20Bon	QTowF	
30-May-02	23:34	53	3	PR4	CAT053	194	58 58.65 N	150 09.29 W	60Bon	QTowF	
30-May-02	23:34	53	3	PR4	CAT053	194	58 58.65 N	150 09.29 W	60Bon	QTowF	this is the first tow with very little algae. Hoorah!!!
30-May-02	23:34	53	3	PR4	CAT053	194	58 58.65 N	150 09.29 W	CAT	CAT	
30-May-02	0:41	54	1	PR3	CTD054	175	59 04.27 N	150 12.19 W	CTDB	Chlor, CTD, Fluor, PAR	
31-May-02	0:57	54	2	PR3		174	59 04.28 N	150 12.90 W	CalVET	MZ, QTowF	
31-May-02	1:09	54	3	PR3	CAT054	173	59 04.48 N	150 12.66 W	20Bon	QTowF	
31-May-02	1:09	54	3	PR3	CAT054	173	59 04.48 N	150 12.66 W	60Bon	QTowF	
31-May-02	1:09	54	3	PR3	CAT054	173	59 04.48 N	150 12.66 W	CAT	CAT	
31-May-02	2:10	55	1	PR2	CTD055	171	59 10.27 N	150 16.50 W	CTDB	Chlor, CTD, Fluor, PAR	0 m from bucket, bottle didn't fire
31-May-02	2:25	55	2	PR2		173	59 10.29 N	150 16.47 W	CalVET	MZ, QTowF	
31-May-02	2:38	55	3	PR2	CAT055	168	59 10.46 N	150 16.34 W	20Bon	QTowF	
31-May-02	2:38	55	3	PR2	CAT055	168	59 10.46 N	150 16.34 W	60Bon	QTowF	
31-May-02	2:38	55	3	PR2	CAT055	168	59 10.46 N	150 16.34 W	CAT	CAT	
31-May-02	3:35	56	1	PR1	CTD056	109	59 19.29 N	150 20.00 W	CTDB	Chlor, CTD, Fluor, PAR	
31-May-02	3:47	56	2	PR1		109	59 16.33 N	150 20.13 W	CalVET	MZ, QTowF	
31-May-02	3:58	56	3	PR1	CAT056	109	59 16.33 N	150 20.13 W	20Bon	QTowF	
31-May-02	3:58	56	3	PR1	CAT056	109	59 16.33 N	150 20.13 W	60Bon	QTowF	
31-May-02	3:58	56	3	PR1	CAT056	109	59 16.33 N	150 20.13 W	CAT	CAT	
31-May-02	6:27	57	1	SR1	CTD057	201	59 30.95 N	149 49.04 W	CTDB	Chlor, CTD, Fluor, PAR	
31-May-02	6:42	57	2	SR1		201	59 30.94 N	149 48.95 W	CalVET	MZ, QTowF	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
31-May-02	6:50	57	3	SR1	CAT057	192	59 31.13 N	149 48.53 W	20Bon	QTowF	
31-May-02	6:50	57	3	SR1	CAT057	192	59 31.13 N	149 48.53 W	60Bon	QTowF	
31-May-02	6:50	57	3	SR1	CAT057	192	59 31.13 N	149 48.53 W	60Bon	QTowF	spilled small amount of 60 BON, Net 1 (~1/6th)
31-May-02	6:50	57	3	SR1	CAT057	192	59 31.13 N	149 48.53 W	CAT	CAT	
31-May-02	8:09	58	1	SR2	CTD058	195	59 25.96 N	149 45.50 W	CTDB	Chlor, CTD, Fluor, PAR	0-m sample came from bucket
31-May-02	8:24	58	2	SR2		193	59 25.99 N	149 45.42 W	CalVET	MZ, QTowF	
31-May-02	8:38	58	3	SR2	CAT058	189	59 26.21 N	149 45.31 W	20Bon	QTowF	
31-May-02	8:38	58	3	SR2	CAT058	189	59 26.21 N	149 45.31 W	60Bon	QTowF	
31-May-02	8:38	58	3	SR2	CAT058	189	59 26.21 N	149 45.31 W	CAT	CAT	
31-May-02	9:50	59	1	SR3	CTD059	140	59 20.41 N	149 40.01 W	CTDB	Chlor, CTD, Fluor, PAR	
31-May-02	10:02	59	2	SR3		138	59 20.47 N	149 40.08 W	CalVET	MZ, QTowF	
31-May-02	10:15	59	3	SR3	CAT059	134	59 20.66 N	149 40.18 W	20Bon	QTowF	
31-May-02	10:15	59	3	SR3	CAT059	134	59 20.66 N	149 40.18 W	20Bon	QTowF	ripped net + no cod end; using net 1 as drogue
31-May-02	10:15	59	3	SR3	CAT059	134	59 20.66 N	149 40.18 W	60Bon	QTowF	
31-May-02	10:15	59	3	SR3	CAT059	134	59 20.66 N	149 40.18 W	CAT	CAT	
31-May-02	11:28	60	1	SR4	CTD060	130	59 14.92 N	149 34.43 W	CTDB	Chlor, CTD, Fluor, PAR	20-m bottle leaked
31-May-02	11:39	60	2	SR4		131	59 15.00 N	149 34.43 W	CalVET	MZ, QTowF	
31-May-02	11:53	60	3	SR4	CAT060	132	59 15.28 N	149 34.39 W	20Bon	QTowF	
31-May-02	11:53	60	3	SR4	CAT060	132	59 15.28 N	149 34.39 W	20Bon	QTowF	ripped net + no cod end; net 1 acting as drogue
31-May-02	11:53	60	3	SR4	CAT060	132	59 15.28 N	149 34.39 W	60Bon	QTowF	
31-May-02	11:53	60	3	SR4	CAT060	132	59 15.28 N	149 34.39 W	CAT	CAT	
31-May-02	14:11	61	1	SR5	CTD061	148	59 09.27 N	149 28.90 W	CTDB	Chlor, CTD, Fluor, PAR	
31-May-02	14:29	61	2	SR5	CAT061	143	59 09.42 N	149 28.61 W	20Bon	QTowF	
31-May-02	14:29	61	2	SR5	CAT061	143	59 09.42 N	149 28.61 W	60Bon	QTowF	
31-May-02	14:29	61	2	SR5	CAT061	143	59 09.42 N	149 28.61 W	CAT	CAT	
31-May-02	15:32	62	1	SR6	CTD062	209	59 03.63 N	149 23.34 W	CTDB	Chlor, CTD, Fluor, PAR	50-m bottle leaked. 0-m sample taken from bucket on surface.
31-May-02	15:55	62	2	SR6	CAT062	210	59 03.82 N	149 23.00 W	20Bon	QTowF	
31-May-02	15:55	62	2	SR6	CAT062	210	59 03.82 N	149 23.00 W	60Bon	QTowF	Inside labels accidentally marked as 1 of 3 and 2 of 3. Only two bottles preserved.
31-May-02	15:55	62	2	SR6	CAT062	210	59 03.82 N	149 23.00 W	CAT	CAT	
31-May-02	17:14	63	1	SR7	CTD063	225	58 58.07 N	149 17.73 W	CTDB	Chlor, CTD, Fluor, PAR	0-m sample taken from surface bucket
31-May-02	17:29	63	2	SR7	CAT063	224	58 58.25 N	149 17.41 W	20Bon	QTowF	
31-May-02	17:29	63	2	SR7	CAT063	224	58 58.25 N	149 17.41 W	60Bon	QTowF	
31-May-02	17:29	63	2	SR7	CAT063	224	58 58.25 N	149 17.41 W	CAT	CAT	
31-May-02	18:44	64	1	SR8	CTD064	198	58 52.51 N	149 12.36 W	CTDB	Chlor, CTD, Fluor, PAR	chlorophyll samples left for 20-30 min before going into the freezer
31-May-02	19:04	64	2	SR8	CAT064	198	58 52.66 N	149 12.21 W	20Bon	QTowF	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
31-May-02	19:04	64	2	SR8	CAT064	198	58 52.66 N	149 12.21 W	60Bon	QTowF	
31-May-02	19:04	64	2	SR8	CAT064	198	58 52.66 N	149 12.21 W	CAT	CAT	
31-May-02	20:14	65	1	SR9	CTD065	212	58 47.01 N	149 06.89 W	CTDB	Chlor, CTD, Fluor, PAR	0 m from bucket
31-May-02	20:36	65	2	SR9	CAT065	214	58 47.23 N	149 06.80 W	20Bon	QTowF	Small amount of sand in net but samples look fine
31-May-02	20:36	65	2	SR9	CAT065	214	58 47.23 N	149 06.80 W	60Bon	QTowF	Small amount of sand in net but samples look fine
31-May-02	20:36	65	2	SR9	CAT065	214	58 47.23 N	149 06.80 W	CAT	CAT	Small amount of sand in net but samples look fine
31-May-02	21:48	66	1	SR10	CTD066	150	58 41.50 N	149 01.51 W	CTDB	Chlor, CTD, Fluor, PAR	
31-May-02	22:04	66	2	SR10	CAT066	150	58 41.72 N	149 01.31 W	20Bon	QTowF	
31-May-02	22:04	66	2	SR10	CAT066	150	58 41.72 N	149 01.31 W	60Bon	QTowF	
31-May-02	22:04	66	2	SR10	CAT066	150	58 41.72 N	149 01.31 W	CAT	CAT	
31-May-02	23:30	67	1	SR11	CTD067	113	58 33.29 N	148 53.43 W	CTDB	Chlor, CTD, Fluor, PAR	
31-May-02	23:43	67	2	SR11	CAT067	113	58 33.48 N	148 53.30 W	20Bon	QTowF	
31-May-02	23:43	67	2	SR11	CAT067	113	58 33.48 N	148 53.30 W	60Bon	QTowF	
31-May-02	23:43	67	2	SR11	CAT067	113	58 33.48 N	148 53.30 W	CAT	CAT	
01-Jun-02	1:00	68	1	SR12	CTD068	125	58 24.73 N	148 45.28 W	CTDB	Chlor, CTD, Fluor, PAR	
01-Jun-02	1:18	68	2	SR12	CAT068	128	58 24.89 N	148 45.07 W	20Bon	QTowF	
01-Jun-02	1:18	68	2	SR12	CAT068	128	58 24.89 N	148 45.07 W	60Bon	QTowF	
01-Jun-02	1:18	68	2	SR12	CAT068	128	58 24.89 N	148 45.07 W	60Bon	QTowF	Took 1 squid from 60Bon net 1
01-Jun-02	1:18	68	2	SR12	CAT068	128	58 24.89 N	148 45.07 W	CAT	CAT	
01-Jun-02	2:10	69	1	SR12I	CTD069	138	58 20.59 N	148 41.24 W	CTDB	Chlor, CTD, Fluor, PAR	
01-Jun-02	2:26	69	2	SR12I	CAT069	138	58 20.71 N	148 40.90 W	20Bon	QTowF	
01-Jun-02	2:26	69	2	SR12I	CAT069	138	58 20.71 N	148 40.90 W	60Bon	QTowF	
01-Jun-02	2:26	69	2	SR12I	CAT069	138	58 20.71 N	148 40.90 W	CAT	CAT	
01-Jun-02	3:23	70	1	SR13	CTD070	325	58 16.41 N	148 37.19 W	CTDB	Chlor, CTD, Fluor, PAR	0 m chlorophyll from bucket during bongo
01-Jun-02	3:53	70	2	SR13	CAT070	307	58 16.63 N	148 36.82 W	20Bon	QTowF	
01-Jun-02	3:53	70	2	SR13	CAT070	307	58 16.63 N	148 36.82 W	60Bon	QTowF	
01-Jun-02	3:53	70	2	SR13	CAT070	307	58 16.63 N	148 36.82 W	CAT	CAT	
01-Jun-02	5:18	71	1	SR13I	CTD071	924	58 12.29 N	148 33.12 W	CTDB	Chlor, CTD, Fluor, PAR	0m Chlor from bucket
01-Jun-02	6:58	72	1	SR14	CTD072	1196	58 08.19 N	148 29.18 W	CTDB	Chlor, CTD, Fluor, PAR	0 m from bucket, no bottle at 40 m
01-Jun-02	9:27	73	1	ENW6	CTD073	130	58 01.55 N	149 00.00 W	CTDB	Chlor, CTD, Fluor, PAR	
01-Jun-02	9:42	73	2	ENW6	CAT073	125	58 01.71 N	148 59.91 W	20Bon	QTowF	
01-Jun-02	9:42	73	2	ENW6	CAT073	125	58 01.71 N	148 59.91 W	60Bon	QTowF	
01-Jun-02	9:42	73	2	ENW6	CAT073	125	58 01.71 N	148 59.91 W	CAT	CAT	
01-Jun-02	11:00	74	1	ENW5	CTD074	703	57 58.09 N	148 52.12 W	CTDB	Chlor, CTD	50-m bottle leaked
01-Jun-02	11:33	74	2	ENW5	CAT074	684	57 58.37 N	148 51.73 W	20Bon	QTowF	
01-Jun-02	11:33	74	2	ENW5	CAT074	684	57 58.37 N	148 51.73 W	60Bon	QTowF	
01-Jun-02	11:33	74	2	ENW5	CAT074	684	57 58.37 N	148 51.73 W	CAT	CAT	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
01-Jun-02	13:09	75	1	ENW4	CTD075	1282	57 55.00 N	148 43.06 W	CTDB	Chlor, CTD	20 and 30-m bottles leaked
01-Jun-02	15:04	75	2	ENW4	CAT075	1256	57 55.42 N	148 42.75 W	20Bon	QTowF	Redo of this station due to cod end failure on 60_BON, net 1 AND net 2.
01-Jun-02	15:04	75	2	ENW4	CAT075	1256	57 55.42 N	148 42.75 W	60Bon	QTowF	Redo of this station due to cod end failure on 60_BON, net 1 AND net 2
01-Jun-02	15:04	75	2	ENW4	CAT075	1256	57 55.42 N	148 42.75 W	CAT	CAT	Redo of this station due to cod end failure on 60_BON, net 1 AND net 2.
01-Jun-02	17:09	76	1	ENW3	CTD076	1897	57 50.39 N	148 32.12 W	CTDB	Chlor, CTD	30-m bottle leaked
01-Jun-02	18:01	76	2	ENW3		1913	57 50.46 N	148 31.97 W	SatBuoy	Deploy	Argos drifter serial number 36261-095
01-Jun-02	18:17	76	3	ENW3	CAT076	1955	57 50.85 N	148 31.37 W	20Bon	QTowF	
01-Jun-02	18:17	76	3	ENW3	CAT076	1955	57 50.85 N	148 31.37 W	60Bon	QTowF	
01-Jun-02	18:17	76	3	ENW3	CAT076	1955	57 50.85 N	148 31.37 W	60Bon	QTowF	Inside labels of 60 and 20 BON jars say HAUL 2 - should be HAUL 3
01-Jun-02	18:17	76	3	ENW3	CAT076	1955	57 50.85 N	148 31.37 W	CAT	CAT	
01-Jun-02	20:18	77	1	ENW2	CTD077	2958	57 46.06 N	148 18.62 W	CTDB	Chlor, CTD	
01-Jun-02	21:11	77	2	ENW2	CAT077	2582	57 46.48 N	148 18.17 W	20Bon	QTowF	The codend that blew out on last tow was put back on 60bon net1 so no sample. Also 60bon net 1 flow counts very low - possible 20 bon net 1 net without codend blocked it? Flowmeter seems fine.
01-Jun-02	21:11	77	2	ENW2	CAT077	2582	57 46.48 N	148 18.17 W	60Bon	QTowF	The codend that blew out on last tow was put back on 60bon net1 so no sample. Also 60bon net 1 flow counts very low - possible 20 bon net 1 net without codend blocked it? Flowmeter seems fine.
01-Jun-02	21:11	77	2	ENW2	CAT077	2582	57 46.48 N	148 18.17 W	CAT	CAT	The codend that blew out on last tow was put back on 60bon net1 so no sample. Also 60bon net 1 flow counts very low - possible 20 bon net 1 net without codend blocked it? Flowmeter seems fine.
01-Jun-02	23:47	78	1	ENW1	CTD078	3867	57 37.12 N	147 56.17 W	CTDB	Chlor, CTD	
02-Jun-02	0:38	78	2	ENW1	CAT077	3814	57 37.37 N	147 55.72 W	20Bon	QTowF	
02-Jun-02	0:38	78	2	ENW1	CAT077	3814	57 37.37 N	147 55.72 W	60Bon	QTowF	There were 4 Myctophids in 60Bon net 2, and 0 in net 1. I feel cheated.
02-Jun-02	0:38	78	2	ENW1	CAT077	3814	57 37.37 N	147 55.72 W	CAT	CAT	
01-Jun-02	2:51	79	1	EOC	CTD079	4792	57 29.24 N	147 35.96 W	CTDB	Chlor, CTD	Bull kelp drifted by; saw cormorant - not close to any island.
02-Jun-02	3:32	79	2	EOC		4792	57 30.02 N	147 35.87 W	SatBuoy	Deploy	Argos drifter serial #36263
02-Jun-02	3:44	79	3	EOC	CAT079	4791	57 30.24 N	147 35.59 W	20Bon	QTowF	
02-Jun-02	3:44	79	3	EOC	CAT079	4791	57 30.24 N	147 35.59 W	60Bon	QTowF	
02-Jun-02	3:44	79	3	EOC	CAT079	4791	57 30.24 N	147 35.59 W	CAT	CAT	
02-Jun-02	6:40	80	1	EO1	CTD080	4507	57 18.05 N	147 06.53 W	CTDB	Chlor, CTD	
02-Jun-02	7:26	80	2	EO1	CAT080	4500	57 18.25 N	147 06.23 W	20Bon	QTowF	
02-Jun-02	7:26	80	2	EO1	CAT080	4500	57 18.25 N	147 06.23 W	60Bon	QTowF	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
02-Jun-02	7:26	80	2	EO1	CAT080	4500	57 18.25 N	147 06.23 W	CAT	CAT	
02-Jun-02	10:03	81	1	EO2	CTD081	4146	57 11.17 N	146 41.01 W	CTDB	Chlor, CTD	
02-Jun-02	10:49	81	2	EO2	CAT081	4146	57 11.40 N	146 40.74 W	20Bon	QTowF	
02-Jun-02	10:49	81	2	EO2	CAT081	4146	57 11.40 N	146 40.74 W	60Bon	QTowF	
02-Jun-02	10:49	81	2	EO2	CAT081	4146	57 11.40 N	146 40.74 W	CAT	CAT	
02-Jun-02	13:40	82	1	EO1A	CTD082	4747	57 24.01 N	147 21.36 W	CTDB	Chlor, CTD	station added to eddy study- CTD only, no Bongos
02-Jun-02	17:41	83	1	EN1	CTD083	3016	57 52.02 N	147 51.02 W	CTDB	Chlor, CTD	
02-Jun-02	18:31	83	2	EN1	CAT082	2957	57 52.38 N	147 51.26 W	20Bon	QTowF	
02-Jun-02	18:31	83	2	EN1	CAT082	2957	57 52.38 N	147 51.26 W	60Bon	QTowF	
02-Jun-02	18:31	83	2	EN1	CAT082	2957	57 52.38 N	147 51.26 W	CAT	CAT	
02-Jun-02	20:50	84	1	EN2	CTD084	2202	58 03.74 N	147 46.01 W	CTDB	Chlor, CTD	
02-Jun-02	21:35	84	2	EN2	CAT084	2201	58 03.41 N	147 46.28 W	20Bon	QTowF	60bon net 1 flowmeter didn't work
02-Jun-02	21:35	84	2	EN2	CAT084	2201	58 03.41 N	147 46.28 W	60Bon	QTowF	60bon net 1 flowmeter didn't work
02-Jun-02	21:35	84	2	EN2	CAT084	2201	58 03.41 N	147 46.28 W	CAT	CAT	60bon net 1 flowmeter didn't work
03-Jun-02	0:42	85	1	EN3	CTD085	2369	58 15.55 N	147 40.06 W	CTDB	Chlor, CTD	0 m chlorophyll from buckets
03-Jun-02	1:46	85	2	EN3	CAT085	2365	58 15.01 N	147 39.68 W	20Bon	QTowF	
03-Jun-02	1:46	85	2	EN3	CAT085	2365	58 15.01 N	147 39.68 W	60Bon	QTowF	
03-Jun-02	1:46	85	2	EN3	CAT085	2365	58 15.01 N	147 39.68 W	CAT	CAT	
03-Jun-02	2:53	85	3	EN3		2329	58 20.46 N	147 38.35 W	SatBuoy	Deploy	Argos drifter serial # 36262
03-Jun-02	4:07	86	1	EN4	CTD086	2439	58 25.39 N	147 35.89 W	CTDB	Chlor, CTD	
03-Jun-02	5:09	86	2	EN4	CAT086	2447	58 25.29 N	147 35.31 W	20Bon	QTowF	
03-Jun-02	5:09	86	2	EN4	CAT086	2447	58 25.29 N	147 35.31 W	60Bon	QTowF	
03-Jun-02	5:09	86	2	EN4	CAT086	2447	58 25.29 N	147 35.31 W	CAT	CAT	
03-Jun-02	7:10	87	1	EN5	CTD087	1871	58 33.01 N	147 32.51 W	CTDB	Chlor, CTD	0 m chlorophyll from bucket. 30 m bottle leaking slightly.
03-Jun-02	7:58	87	2	EN5	CAT087	1953	58 33.28 N	147 32.77 W	20Bon	QTowF	
03-Jun-02	7:58	87	2	EN5	CAT087	1953	58 33.28 N	147 32.77 W	60Bon	QTowF	
03-Jun-02	7:58	87	2	EN5	CAT087	1953	58 33.28 N	147 32.77 W	CAT	CAT	
03-Jun-02	11:14	88	1	GAK12	CTD088	2184	58 14.69 N	147 55.86 W	CTDB	Chlor, CTD	
03-Jun-02	13:24	89	1	GAK11	CTD089	1416	58 23.30 N	148 04.27 W	CTDB	Chlor, CTD	
03-Jun-02	14:15	89	2	GAK11	CAT089	1409	58 23.54 N	148 04.65 W	20Bon	QTowF	
03-Jun-02	14:15	89	2	GAK11	CAT089	1409	58 23.54 N	148 04.65 W	60Bon	QTowF	
03-Jun-02	14:15	89	2	GAK11	CAT089	1409	58 23.54 N	148 04.65 W	CAT	CAT	
03-Jun-02	16:10	90	1	GAK10	CTD090	1456	58 32.46 N	148 12.74 W	CTDB	Chlor, CTD	
03-Jun-02	17:02	90	2	GAK10	CAT090	1404	58 32.78 N	148 13.16 W	20Bon	QTowF	cat090 failed at the surface
03-Jun-02	17:02	90	2	GAK10	CAT090	1404	58 32.78 N	148 13.16 W	60Bon	QTowF	cat090 failed at the surface
03-Jun-02	17:02	90	2	GAK10	CAT090	1404	58 32.78 N	148 13.16 W	CAT	CAT	cat090 failed at the surface
03-Jun-02	18:20	91	1	GAK9I	CTD091	685	58 36.66 N	148 16.73 W	CTDB	Chlor, CTD	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
03-Jun-02	18:54	91	2	GAK9I	CAT091	622	58 36.86 N	148 17.16 W	20Bon	QTowF	
03-Jun-02	18:54	91	2	GAK9I	CAT091	622	58 36.86 N	148 17.16 W	60Bon	QTowF	
03-Jun-02	18:54	91	2	GAK9I	CAT091	622	58 36.86 N	148 17.16 W	CAT	CAT	
03-Jun-02	20:03	92	1	GAK9	CTD092	277	58 40.79 N	148 21.06 W	CTDB	Chlor, CTD, Fluor, PAR	0 m from bucket. 30 m bottle leaking
03-Jun-02	20:29	92	2	GAK9	CAT092	278	58 41.04 N	148 21.21 W	20Bon	QTowF	
03-Jun-02	20:29	92	2	GAK9	CAT092	278	58 41.04 N	148 21.21 W	60Bon	QTowF	
03-Jun-02	20:29	92	2	GAK9	CAT092	278	58 41.04 N	148 21.21 W	CAT	CAT	
03-Jun-02	21:33	93	1	GAK8I	CTD093	289	58 44.07 N	148 25.25 W	CTDB	Chlor, CTD, Fluor, PAR	pump vacuum very high (25)
03-Jun-02	21:49	93	2	GAK8I		286	58 44.64 N	148 25.35 W	SatBuoy	Deploy	Argos drifter serial #22778
03-Jun-02	22:34	94	1	GAK8	CTD094	290	58 47.59 N	148 29.29 W	CTDB	Chlor, CTD, Fluor, PAR	
03-Jun-02	22:56	94	2	GAK8	CAT094	288	58 47.83 N	148 29.31 W	20Bon	QTowF	
03-Jun-02	22:56	94	2	GAK8	CAT094	288	58 47.83 N	148 29.31 W	60Bon	QTowF	
03-Jun-02	22:56	94	2	GAK8	CAT094	288	58 47.83 N	148 29.31 W	CAT	CAT	
04-Jun-02	0:10	95	1	GAK7I	CTD095	300	58 52.86 N	148 33.57 W	CTDB	Chlor, CTD, Fluor, PAR	0m from bucket
04-Jun-02	0:27	95	2	GAK7I		299	58 52.99 N	148 33.73 W	SatBuoy	Deploy	ARGOS drifter serial #23787
04-Jun-02	1:18	96	1	GAK7	CTD096	243	58 58.36 N	148 37.89 W	CTDB	Chlor, CTD, Fluor, PAR	0 m from bucket. 30 m bottle leaking
04-Jun-02	2:24	96	2	GAK7	CAT096	240	58 58.64 N	148 38.09 W	20Bon	QTowF	20bon flow counts low, probably clogged
04-Jun-02	2:24	96	2	GAK7	CAT096	240	58 58.64 N	148 38.09 W	60Bon	QTowF	
04-Jun-02	2:24	96	2	GAK7	CAT096	240	58 58.64 N	148 38.09 W	CAT	CAT	
04-Jun-02	3:19	97	1	GAK6I	CTD097	182	59 03.71 N	148 42.09 W	CTDB	Chlor, CTD, Fluor, PAR	
04-Jun-02	3:33	97	2	GAK6I		180	59 03.77 N	148 42.09 W	SatBuoy	Deploy	Argos drifter serial # 34250
04-Jun-02	4:09	98	1	GAK6	CTD098	154	59 07.01 N	148 46.27 W	CTDB	Chlor, CTD, Fluor, PAR	30 m sample clogged filter, lost
04-Jun-02	4:27	98	2	GAK6	CAT098	149	59 07.29 N	148 46.38 W	20Bon	QTowF	Algae very thick, even for this cruise!
04-Jun-02	4:27	98	2	GAK6	CAT098	149	59 07.29 N	148 46.38 W	60Bon	QTowF	Algae very thick, even for this cruise!
04-Jun-02	4:27	98	2	GAK6	CAT098	149	59 07.29 N	148 46.38 W	CAT	CAT	Algae very thick, even for this cruise!
04-Jun-02	5:39	99	1	GAK5	CTD099	172	59 15.73 N	148 54.56 W	CTDB	Chlor, CTD, Fluor, PAR	40 m bottle leaking slightly
04-Jun-02	7:07	100	1	GAK4	CTD100	201	59 24.00 N	149 02.78 W	CTDB	Chlor, CTD, Fluor, PAR	0-m chlorophyll from surface bucket
04-Jun-02	7:16	100	2	GAK4		201	59 24.57 N	149 02.78 W	CalVET	MZ, QTowF	
04-Jun-02	7:16	100	2	GAK4		201	59 24.57 N	149 02.78 W	CalVET	MZ, QTowF	lots of bioluminescence
04-Jun-02	7:24	100	3	GAK4		201	59 24.54 N	149 02.93 W	SatBuoy	Deploy	Argos drifter serial #34249
04-Jun-02	7:33	100	4	GAK4	CAT100	202	59 24.74 N	149 02.74 W	20Bon	QTowF	wire angles low = 35-45
04-Jun-02	7:33	100	4	GAK4	CAT100	202	59 24.74 N	149 02.74 W	60Bon	QTowF	wire angles low = 35-45
04-Jun-02	7:33	100	4	GAK4	CAT100	202	59 24.74 N	149 02.74 W	CAT	CAT	wire angles low = 35-45
04-Jun-02	9:05	101	1	GAK3	CTD101	214	59 33.25 N	149 11.47 W	CTDB	Chlor, CTD, Fluor, PAR	0-m from bucket sample
04-Jun-02	9:19	101	2	GAK3		214	59 33.29 N	149 11.53 W	CalVET	MZ, QTowF	
04-Jun-02	9:25	101	3	GAK3		213	59 33.34 N	149 11.45 W	SatBuoy	Deploy	Argos drifter serial #34248
04-Jun-02	9:39	101	4	GAK3	CAT101	212	59 33.56 N	149 11.28 W	20Bon	QTowF	
04-Jun-02	9:39	101	4	GAK3	CAT101	212	59 33.56 N	149 11.28 W	60Bon	QTowF	
04-Jun-02	9:39	101	4	GAK3	CAT101	212	59 33.56 N	149 11.28 W	CAT	CAT	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
04-Jun-02	11:08	102	1	GAK2	CTD102	225	59 41.47 N	149 19.59 W	CTDB	Chlor, CTD, Fluor, PAR	0-m from bucket sample, 10-m leaked
04-Jun-02	11:22	102	2	GAK2		228	59 41.46 N	149 19.62 W	CalVET	MZ, QTowF	
04-Jun-02	11:38	102	3	GAK2	CAT102	230	59 41.57 N	149 19.87 W	20Bon	QTowF	
04-Jun-02	11:38	102	3	GAK2	CAT102	230	59 41.57 N	149 19.87 W	60Bon	QTowF	
04-Jun-02	11:38	102	3	GAK2	CAT102	230	59 41.57 N	149 19.87 W	CAT	CAT	
04-Jun-02	13:07	103	1	GAK1	CTD103	271	59 50.68 N	149 27.84 W	CTDB	Chlor, CTD, Fluor, PAR	0-m sample from bucket
04-Jun-02	13:24	103	2	GAK1		270	59 50.68 N	149 27.88 W	CalVET	MZ, QTowF	
04-Jun-02	13:40	103	3	GAK1	CAT103	270	59 50.94 N	149 27.91 W	20Bon	QTowF	
04-Jun-02	13:40	103	3	GAK1	CAT103	270	59 50.94 N	149 27.91 W	60Bon	QTowF	
04-Jun-02	13:40	103	3	GAK1	CAT103	270	59 50.94 N	149 27.91 W	CAT	CAT	
04-Jun-02	16:19	104	1	FF1	CTD104	181	59 48.21 N	148 46.56 W	CTDB	Chlor, CTD, Fluor, PAR	
04-Jun-02	16:31	104	2	FF1		182	59 48.23 N	148 46.65 W	CalVET	MZ, QTowF	
04-Jun-02	17:18	104	3	FF1	CAT104	180	59 48.44 N	148 46.30 W	20Bon	QTowF	
04-Jun-02	17:18	104	3	FF1	CAT104	180	59 48.44 N	148 46.30 W	60Bon	QTowF	
04-Jun-02	17:18	104	3	FF1	CAT104	180	59 48.44 N	148 46.30 W	CAT	CAT	
04-Jun-02	18:31	105	1	FF2	CTD105	193	59 42.67 N	148 40.89 W	CTDB	Chlor, CTD, Fluor, PAR	0 m from bucket samples. 20 m sample clogged and leaked.
04-Jun-02	18:42	105	2	FF2		193	59 42.65 N	148 40.91 W	CalVET	MZ, QTowF	Flow counts low, probably clogged.
04-Jun-02	18:54	105	3	FF2	CAT105	193	59 42.87 N	148 40.86 W	20Bon	QTowF	
04-Jun-02	18:54	105	3	FF2	CAT105	193	59 42.87 N	148 40.86 W	60Bon	QTowF	
04-Jun-02	18:54	105	3	FF2	CAT105	193	59 42.87 N	148 40.86 W	CAT	CAT	
04-Jun-02	20:06	106	1	FF3	CTD106	95	59 37.17 N	148 35.15 W	CTDB	Chlor, CTD, Fluor, PAR	30 m bottle leaking. 40 m bottle leaking slightly.
04-Jun-02	20:18	106	2	FF3		95	59 37.24 N	148 35.14 W	CalVET	MZ, QTowF	
04-Jun-02	20:29	106	3	FF3	CAT106	95	59 37.38 N	148 34.88 W	20Bon	QTowF	
04-Jun-02	20:29	106	3	FF3	CAT106	95	59 37.38 N	148 34.88 W	60Bon	QTowF	
04-Jun-02	20:29	106	3	FF3	CAT106	95	59 37.38 N	148 34.88 W	CAT	CAT	
04-Jun-02	21:32	107	1	FF4	CTD107	96	59 31.58 N	148 29.46 W	CTDB	Chlor, CTD, Fluor, PAR	
04-Jun-02	21:42	107	2	FF4		96	59 31.59 N	148 29.45 W	CalVET	MZ, QTowF	
04-Jun-02	21:52	107	3	FF4	CAT107	95	59 31.73 N	148 29.18 W	20Bon	QTowF	
04-Jun-02	21:52	107	3	FF4	CAT107	95	59 31.73 N	148 29.18 W	60Bon	QTowF	
04-Jun-02	21:52	107	3	FF4	CAT107	95	59 31.73 N	148 29.18 W	CAT	CAT	
04-Jun-02	22:54	108	1	FF5	CTD108	142	59 25.97 N	148 23.91 W	CTDB	Chlor, CTD, Fluor, PAR	
05-Jun-02	0:05	109	1	FF6	CTD109	123	59 17.66 N	148 15.67 W	CTDB	Chlor, CTD, Fluor, PAR	30m bottle leaking slightly
05-Jun-02	0:20	109	2	FF6	CAT109	126	59 17.70 N	148 15.33 W	20Bon	QTowF	
05-Jun-02	0:20	109	2	FF6	CAT109	126	59 17.70 N	148 15.33 W	60Bon	QTowF	
05-Jun-02	0:20	109	2	FF6	CAT109	126	59 17.70 N	148 15.33 W	CAT	CAT	
05-Jun-02	1:42	110	1	FF7	CTD110	138	59 09.30 N	148 07.51 W	CTDB	Chlor, CTD, Fluor, PAR	
05-Jun-02	3:00	111	1	FF8	CTD111	158	59 00.96 N	147 59.20 W	CTDB	Chlor, CTD, Fluor, PAR	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
05-Jun-02	3:18	111	2	FF8	CAT111	158	59 00.96 N	147 58.87 W	20Bon	QTowF	
05-Jun-02	3:18	111	2	FF8	CAT111	158	59 00.96 N	147 58.87 W	60Bon	QTowF	
05-Jun-02	3:18	111	2	FF8	CAT111	158	59 00.96 N	147 58.87 W	CAT	CAT	
05-Jun-02	4:26	112	1	FF8I	CTD112	849	58 56.83 N	147 55.12 W	CTDB	Chlor, CTD, Fluor, PAR	
05-Jun-02	4:57	112	2	FF8I	CAT112	879	58 56.73 N	147 54.79 W	20Bon	QTowF	
05-Jun-02	4:57	112	2	FF8I	CAT112	879	58 56.73 N	147 54.79 W	60Bon	QTowF	
05-Jun-02	4:57	112	2	FF8I	CAT112	879	58 56.73 N	147 54.79 W	CAT	CAT	
05-Jun-02	6:25	113	1	FF9	CTD113	1164	58 52.46 N	147 50.73 W	CTDB	Chlor, CTD, Fluor, PAR	10-m bottle didn't pop. No 40-m bottle
05-Jun-02	7:13	113	2	FF9	CAT113	1144	58 52.00 N	147 50.86 W	20Bon	QTowF	
05-Jun-02	7:13	113	2	FF9	CAT113	1144	58 52.00 N	147 50.86 W	60Bon	QTowF	
05-Jun-02	7:13	113	2	FF9	CAT113	1144	58 52.00 N	147 50.86 W	CAT	CAT	
05-Jun-02	9:03	114	1	FF10	CTD114	2129	58 44.16 N	147 42.97 W	CTDB	Chlor, CTD	
05-Jun-02	9:53	114	2	FF10	CAT114	2122	58 43.66 N	147 43.21 W	20Bon	QTowF	
05-Jun-02	9:53	114	2	FF10	CAT114	2122	58 43.66 N	147 43.21 W	60Bon	QTowF	
05-Jun-02	9:53	114	2	FF10	CAT114	2122	58 43.66 N	147 43.21 W	CAT	CAT	
05-Jun-02	16:35	115	1	GAK5	MOC001	188	58 18.44 N	148 57.22 W	MOC1	QTowF, QTowS	Groundtruth for Dual4 oblique. Sensor at 25 m depth. Net 1 drogue.
05-Jun-02	16:35	115	1	GAK5	MOC001	188	58 18.44 N	148 57.22 W	MOC1	QTowF, QTowS	Groundtruth for Dual4. Sensor depth 25 m. Filename 1EW02-01.
05-Jun-02	16:35	115	1	GAK5	MOC001	188	58 18.44 N	148 57.22 W	MOC1	QTowF, QTowS	Groundtruth for Dual4. Sensor depth 25 m. Filename 1EW02-01. Net 2 discarded, not needed.
05-Jun-02	16:35	115	1	GAK5	MOC001	188	58 18.44 N	148 57.22 W	MOC1	QTowF, QTowS	Groundtruth for Dual4. Sensor depth 25 m. Filename 1EW02-01. Net 6 drogue.
05-Jun-02	16:35	115	1	GAK5	MOC001	188	58 18.44 N	148 57.22 W	MOC1	QTowF, QTowS	Groundtruth for Dual4. Sensor depth 25 m. Filename 1EW02-01. Net 9 did not close when triggered - discarded.
05-Jun-02	18:28	115	2	GAK5	MOC002	188	58 18.37 N	148 58.53 W	MOC1	QTowF	Groundtruth for Dual4 oblique. Sensor depth 25 m.
05-Jun-02	18:28	115	2	GAK5	MOC002	188	58 18.37 N	148 58.53 W	MOC1	QTowF	Groundtruth for Dual4 oblique. Sensor depth 25 m. Net 1 drogue. File name
05-Jun-02	18:28	115	2	GAK5	MOC002	188	58 18.37 N	148 58.53 W	MOC1	QTowF	Groundtruth for Dual4. Sensor depth 25 m. Filename 1EW02-02.
05-Jun-02	18:28	115	2	GAK5	MOC002	188	58 18.37 N	148 58.53 W	MOC1	QTowF	Groundtruth for Dual4. Sensor depth 25 m. Filename 1EW02-02. Net 5 may have not opened or only partially opened.
05-Jun-02	18:28	115	2	GAK5	MOC002	188	58 18.37 N	148 58.53 W	MOC1	QTowF	Groundtruth for Dual4. Sensor depth 25 m. Filename 1EW02-02. Net 6 drogue.
05-Jun-02	18:28	115	2	GAK5	MOC002	188	58 18.37 N	148 58.53 W	MOC1	QTowF	Groundtruth for Dual4. Sensor depth 25 m. Filename 1EW02-02. Net 4 data lost on tab file due to computer failure. Net 4 depths approximated from MOC Data Log and Vol Filt is totally incorrect.

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
05-Jun-02	18:28	115	2	GAK5	MOC002	188	58 18.37 N	148 58.53 W	MOC1	QTowF	Groundtruth for Dual4. Sensor depth 25 m. Filename 1EW02-02. Small tear near mouth net 9.
06-Jun-02	8:59	115	3	GAK5	MOC003	192	59 18.39 N	148 57.79 W	MOC1	QTowF	Ground truth for Dual 4. Sensor depth 25m. Filename 1EW02_03. Net 1 and 6 drogues. Deck offset = +3.0m. Nets 4 and 9 discarded due to failure to close.
06-Jun-02	10:29	115	4	GAK5	MOC004	192	59 18.41 N	148 56.95 W	MOC1	QTowF	Ground truth for Dual 4. Oblique. Net 1 and 6 drogues. Sensor depth 25m. Filename 1EW02_04. Deck offset = +2.8m. Net 9 had lots of plankton so split into 4 jars.
06-Jun-02	14:27	116	1	ATA1	CTD116	135	59 03.49 N	148 08.07 W	CTDB	Chlor, CTD, Fluor, PAR	
06-Jun-02	14:44	116	2	ATA1	CAT116	135	59 03.24 N	148 08.39 W	20Bon	QTowF	
06-Jun-02	14:44	116	2	ATA1	CAT116	135	59 03.24 N	148 08.39 W	60Bon	QTowF	
06-Jun-02	14:44	116	2	ATA1	CAT116	135	59 03.24 N	148 08.39 W	CAT	CAT	
06-Jun-02	15:28	117	1	ATA2	CTD117	155	59 00.61 N	148 11.85 W	CTDB	Chlor, CTD, Fluor, PAR	
06-Jun-02	16:18	118	1	ATA3	CTD118	260	58 58.05 N	148 14.46 W	CTDB	Chlor, CTD, Fluor, PAR	0-m from bucket sample
06-Jun-02	16:41	118	2	ATA3	CAT118	260	58 57.86 N	148 14.22 W	20Bon	QTowF	
06-Jun-02	16:41	118	2	ATA3	CAT118	260	58 57.86 N	148 14.22 W	60Bon	QTowF	
06-Jun-02	16:41	118	2	ATA3	CAT118	260	58 57.86 N	148 14.22 W	CAT	CAT	
06-Jun-02	18:05	119	1	ATA4	CTD119	284	58 50.42 N	148 18.91 W	CTDB	Chlor, CTD, Fluor, PAR	Failed to collect 0-m bucket sample on station.
06-Jun-02	19:11	120	1	ATA5	CTD120	273	58 45.90 N	148 24.98 W	CTDB	Chlor, CTD, Fluor, PAR	0-m from bucket sample
06-Jun-02	19:33	120	2	ATA5	CAT120	275	58 45.67 N	148 25.07 W	20Bon	QTowF	
06-Jun-02	19:33	120	2	ATA5	CAT120	275	58 45.67 N	148 25.07 W	60Bon	QTowS	
06-Jun-02	19:33	120	2	ATA5	CAT120	275	58 45.67 N	148 25.07 W	CAT	CAT	
06-Jun-02	20:40	121	1	ATA6	CTD121	256	58 41.86 N	148 29.92 W	CTDB	Chlor, CTD, Fluor, PAR	
06-Jun-02	21:31	122	1	ATA7	CTD122	241	58 38.99 N	148 32.82 W	CTDB	Chlor, CTD, Fluor, PAR	10 m filter dropped chlor side up.
06-Jun-02	21:55	122	2	ATA7	CAT122	238	58 38.89 N	148 32.89 W	20Bon	QTowF	
06-Jun-02	21:55	122	2	ATA7	CAT122	238	58 38.89 N	148 32.89 W	60Bon	QTowF	
06-Jun-02	21:55	122	2	ATA7	CAT122	238	58 38.89 N	148 32.89 W	CAT	CAT	
06-Jun-02	22:52	123	1	ATA8	CTD123	131	58 34.99 N	148 37.87 W	CTDB	Chlor, CTD, Fluor, PAR	10 m filter clogged, tiny amount spilled
06-Jun-02	23:08	123	2	ATA7		129	58 34.77 N	148 37.95 W	SatBuoy	Deploy	Argos drifter serial # 34288
06-Jun-02	23:10	123	3	ATA8	CAT123	130	58 34.09 N	148 38.03 W	20Bon	QTowF	
06-Jun-02	23:10	123	3	ATA8	CAT123	130	58 34.09 N	148 38.03 W	60Bon	QTowF	
06-Jun-02	23:10	123	3	ATA8	CAT123	130	58 34.09 N	148 38.03 W	CAT	CAT	
07-Jun-02	0:20	124	1	ATB7	CTD124	116	58 36.60 N	148 53.05 W	CTDB	Chlor, CTD, Fluor, PAR	
07-Jun-02	0:35	124	2	ATB7	CAT124	115	58 36.33 N	148 53.13 W	20Bon	QTowF	
07-Jun-02	0:35	124	2	ATB7	CAT124	115	58 36.33 N	148 53.13 W	60Bon	QTowF	
07-Jun-02	0:35	124	2	ATB7	CAT124	115	58 36.33 N	148 53.13 W	CAT	CAT	
07-Jun-02	1:44	125	1	GB-12	CTD125	210	58 41.71 N	148 51.08 W	CTDB	Chlor, CTD, Fluor, PAR	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
07-Jun-02	1:55	125	2	GB12	CAT125	207	58 41.46 N	148 51.09 W	20Bon	QTowF	
07-Jun-02	1:55	125	2	GB12	CAT125	207	58 41.46 N	148 51.09 W	60Bon	QTowF	
07-Jun-02	1:55	125	2	GB12	CAT125	207	58 41.46 N	148 51.09 W	CAT	CAT	
07-Jun-02	3:03	126	1	ATB5	CTD126	252	58 47.56 N	148 49.07 W	CTDB	Chlor, CTD, Fluor, PAR	
07-Jun-02	4:11	126	2	ATB5	CAT126	248	58 47.33 N	148 48.71 W	20Bon	QTowF	2nd attempt - first hit bottom
07-Jun-02	4:11	126	2	ATB5	CAT126	248	58 47.33 N	148 48.71 W	60Bon	QTowF	2nd attempt - first hit bottom
07-Jun-02	4:11	126	2	ATB5	CAT126	248	58 47.33 N	148 48.71 W	CAT	CAT	2nd attempt - first hit bottom
07-Jun-02	5:24	127	1	GB11	CTD127	293	58 53.23 N	148 46.92 W	CTDB	Chlor, CTD, Fluor, PAR	0m chlor from bucket
07-Jun-02	5:50	127	2	GB11	CAT127	291	58 52.98 N	148 46.85 W	20Bon	QTowF	
07-Jun-02	5:50	127	2	GB11	CAT127	291	58 52.98 N	148 46.85 W	60Bon	QTowF	
07-Jun-02	5:50	127	2	GB11	CAT127	291	58 52.98 N	148 46.85 W	CAT	CAT	
07-Jun-02	7:05	128	1	ATB3	CTD128	252	58 58.01 N	148 44.60 W	CTDB	Chlor, CTD, Fluor, PAR	0-m chlorophyll from bucket sample
07-Jun-02	8:19	128	2	ATB3	CAT128	262	58 57.72 N	148 44.59 W	20Bon	QTowF	
07-Jun-02	8:19	128	2	ATB3	CAT128	262	58 57.72 N	148 44.59 W	60Bon	QTowF	
07-Jun-02	8:19	128	2	ATB3	CAT128	262	58 57.72 N	148 44.59 W	60Bon	QTowF	2nd attempt, because lost 20BON sample during first one
07-Jun-02	8:19	128	2	ATB3	CAT128	262	58 57.72 N	148 44.59 W	CAT	CAT	
07-Jun-02	9:25	129	1	ATB2	CTD129	202	59 02.27 N	148 41.68 W	CTDB	Chlor, CTD, Fluor, PAR	
07-Jun-02	9:44	129	2	ATB2	CAT129	207	59 02.03 N	148 41.61 W	20Bon	QTowF	
07-Jun-02	9:44	129	2	ATB2	CAT129	207	59 02.03 N	148 41.61 W	60Bon	QTowF	
07-Jun-02	9:44	129	2	ATB2	CAT129	207	59 02.03 N	148 41.61 W	CAT	CAT	
07-Jun-02	10:48	130	1	ATB1	CTD130	162	59 06.94 N	148 38.93 W	CTDB	Chlor, CTD, Fluor, PAR	
07-Jun-02	11:05	130	2	ATB1	CAT130	165	59 06.71 N	148 38.87 W	20Bon	QTowF	
07-Jun-02	11:05	130	2	ATB1	CAT130	165	59 06.71 N	148 38.87 W	60Bon	QTowF	
07-Jun-02	11:05	130	2	ATB1	CAT130	165	59 06.71 N	148 38.87 W	CAT	CAT	
07-Jun-02	12:06	131	1	ATB0	CTD131	130	59 11.51 N	148 36.21 W	CTDB	Chlor, CTD, Fluor, PAR	
07-Jun-02	12:22	131	2	ATB0	CAT131	127	59 11.28 N	148 36.46 W	20Bon	QTowF	
07-Jun-02	12:22	131	2	ATB0	CAT131	127	59 11.28 N	148 36.46 W	60Bon	QTowF	
07-Jun-02	12:22	131	2	ATB0	CAT131	127	59 11.28 N	148 36.46 W	CAT	CAT	
07-Jun-02	14:20	132	1	ATC1	CTD132	144	59 05.27 N	149 08.84 W	CTDB	CTD, Fluor, PAR	No chlorophyll samples taken.
07-Jun-02	14:36	132	2	ATC1	CAT132	140	59 05.04 N	149 09.21 W	20Bon	QTowF	
07-Jun-02	14:36	132	2	ATC1	CAT132	140	59 05.04 N	149 09.21 W	60Bon	QTowF	
07-Jun-02	14:36	132	2	ATC1	CAT132	140	59 05.04 N	149 09.21 W	CAT	CAT	
07-Jun-02	15:32	133	1	ATC2	CTD133	222	58 59.14 N	149 11.00 W	CTDB	CTD, Fluor, PAR	No chloros taken.
07-Jun-02	16:25	133	2	ATC2	CAT133	222	58 58.81 N	149 11.00 W	20Bon	QTowF	
07-Jun-02	16:25	133	2	ATC2	CAT133	222	58 58.81 N	149 11.00 W	60Bon	QTowF	
07-Jun-02	16:25	133	2	ATC2	CAT133	222	58 58.81 N	149 11.00 W	CAT	CAT	
07-Jun-02	17:10	134	1	ATC3	CTD134	212	58 56.05 N	149 11.97 W	CTDB	CTD, Fluor, PAR	No chloros taken.
07-Jun-02	17:30	134	2	ATC3	CAT134	211	58 55.81 N	149 11.75 W	20Bon	Discard	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
07-Jun-02	17:30	134	2	ATC3	CAT134	211	58 55.81 N	149 11.75 W	60Bon	Discard	
07-Jun-02	17:30	134	2	ATC3	CAT134	211	58 55.81 N	149 11.75 W	60Bon	Discard	20Bon net 2 wrapped around wire and torn. Net 1 already torn, so no 20Bon sample. Discarded whole tow.
07-Jun-02	17:30	134	2	ATC3	CAT134	211	58 55.81 N	149 11.75 W	CAT	CAT	
07-Jun-02	18:26	135	1	ATC4	CTD135	202	58 52.99 N	149 12.98 W	CTDB	CTD, Fluor, PAR	No chloro taken.
08-Jun-02	7:21	136	1	ATD5	CTD016	135	58 38.52 N	149 39.10 W	CTDB	Chlor, CTD, Fluor, PAR	
08-Jun-02	7:43	136	2	ATD5	CAT136	139	58 38.78 N	149 39.53 W	20Bon	QTowF	
08-Jun-02	7:43	136	2	ATD5	CAT136	139	58 38.78 N	149 39.53 W	60Bon	QTowF	
08-Jun-02	7:43	136	2	ATD5	CAT136	139	58 38.78 N	149 39.53 W	CAT	CAT	
08-Jun-02	8:30	137	1	ATD4I	CTD137	175	58 42.73 N	149 36.94 W	CTDB	CTD, Fluor, PAR	No chlorophyll samples taken
08-Jun-02	9:23	138	1	ATD4	CTD138	205	58 46.71 N	149 35.71 W	CTDB	Chlor, CTD, Fluor, PAR	
08-Jun-02	9:43	138	2	ATD4	CAT138	205	58 46.81 N	149 35.13 W	20Bon	QTowF	
08-Jun-02	9:43	138	2	ATD4	CAT138	205	58 46.81 N	149 35.13 W	60Bon	QTowF	
08-Jun-02	9:43	138	2	ATD4	CAT138	205	58 46.81 N	149 35.13 W	CAT	CAT	
08-Jun-02	11:02	139	1	ATD3	CTD139	241	58 54.62 N	149 32.62 W	CTDB	Chlor, CTD, Fluor, PAR	
08-Jun-02	11:22	139	2	ATD3	CAT139	292	58 54.67 N	149 32.08 W	20Bon	QTowF	
08-Jun-02	11:22	139	2	ATD3	CAT139	292	58 54.67 N	149 32.08 W	60Bon	QTowF	
08-Jun-02	11:22	139	2	ATD3	CAT139	292	58 54.67 N	149 32.08 W	CAT	CAT	
08-Jun-02	12:28	140	1	ATD2I	CTD140	240	58 58.55 N	149 31.28 W	CTDB	CTD, Fluor, PAR	No chlorophyll samples taken
08-Jun-02	13:23	141	1	ATD2	CTD141	224	59 02.57 N	149 29.61 W	CTDB	Chlor, CTD, Fluor, PAR	
08-Jun-02	13:48	141	2	ATD2	CAT141	224	59 02.69 N	149 29.01 W	20Bon	QTowF	
08-Jun-02	13:48	141	2	ATD2	CAT141	224	59 02.69 N	149 29.01 W	60Bon	QTowF	
08-Jun-02	13:48	141	2	ATD2	CAT141	224	59 02.69 N	149 29.01 W	CAT	CAT	
08-Jun-02	15:08	142	1	ATD1	CTD142	133	59 10.62 N	149 26.35 W	CTDB	Chlor, CTD, Fluor, PAR	
08-Jun-02	15:25	142	2	ATD1	CAT142	133	59 10.76 N	149 25.89 W	20Bon	QTowF	No SeaCat. Pin plug broken. Can use data from CTD on 142-1.
08-Jun-02	15:25	142	2	ATD1	CAT142	133	59 10.76 N	149 25.89 W	60Bon	QTowF	No SeaCat. Pin plug broken. Can use data from CTD on 142-1.
08-Jun-02	16:45	143	1	ATD0	CTD143	143	59 19.00 N	149 24.96 W	CTDB	CTD, Fluor, PAR	No chloros taken.
09-Jun-02	0:33	144	1	PB1	CTD144	129	58 39.89 N	150 08.85 W	CTDB	CTD, Fluor, PAR	No chlorophylls. Very rough weather. Rosette swung into ship on way up, smashing 3 bottles and nearly smashing 3
09-Jun-02	1:36	145	1	PB2	CTD	114	58 36.26 N	150 10.99 W	CTDB	CTD, Fluor, PAR	Rough weather. Only one bottle, for salinity and Calvin's nutrients
09-Jun-02	2:40	146	1	PB3	CTD146	87	58 28.90 N	150 13.13 W	CTDB	Chlor, CTD, Fluor, PAR	Used filters that has accidentally gotten wet with seawater in lab then dried. 10m sampled spilled.
09-Jun-02	3:29	147	1	PB4	CTD147	68	58 24.19 N	150 15.22 W	CTDB	Chlor, CTD, Fluor, PAR	o m from bucket
09-Jun-02	3:41	147	2	PB4	CAT147	66	58 24.09 N	150 14.85 W	20Bon	QTowF	
09-Jun-02	3:41	147	2	PB4	CAT147	66	58 24.09 N	150 14.85 W	60Bon	QTowF	

Cruise Summary For FOCI Cruise 1EW02 (EW0205b)

Date (GMT)	Time (GMT	Station	Haul	FOCI Grid	Alternate Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
09-Jun-02	3:41	147	2	PB4	CAT147	66	58 24.09 N	150 14.85 W	CAT	CAT	
09-Jun-02	4:16	148	1	PB5	CTD148	53	58 21.81 N	150 16.81 W	CTDB	Chlor, CTD, Fluor, PAR	foil packets for Chlor
09-Jun-02	4:28	148	2	PB5	CAT148	53	58 21.74 N	150 16.54 W	20Bon	QTowF	
09-Jun-02	4:28	148	2	PB5	CAT148	53	58 21.74 N	150 16.54 W	60Bon	QTowF	
09-Jun-02	4:28	148	2	PB5	CAT148	53	58 21.74 N	150 16.54 W	CAT	CAT	
09-Jun-02	5:12	149	1	PB6	CTD149	54	58 18.04 N	150 18.04 W	CTDB	Chlor, CTD, Fluor, PAR	
09-Jun-02	5:54	150	1	PB7	CTD150	71	58 14.54 N	150 20.05 W	CTDB	Chlor, CTD, Fluor, PAR	
09-Jun-02	6:58	151	1	PB8	CTD151	167	58 09.15 N	150 21.33 W	CTDB	Chlor, CTD, Fluor, PAR	0 m from bucket
09-Jun-02	7:16	151	2	PB8	CAT151	167	58 09.08 N	150 20.87 W	20Bon	QTowF	Rough weather - flowmeters spinning in the wind
09-Jun-02	7:16	151	2	PB8	CAT151	167	58 09.08 N	150 20.87 W	60Bon	QTowF	Rough weather - flowmeters spinning in the wind
09-Jun-02	7:16	151	2	PB8	CAT151	167	58 09.08 N	150 20.87 W	CAT	CAT	Rough weather - flowmeters spinning in the wind
09-Jun-02	8:09	152	1	PB9	CTD152	200	58 06.96 N	150 21.97 W	CTDB	Chlor, CTD, Fluor, PAR	0m bucket sample.
09-Jun-02	9:21	153	1	PB10	CTD153	178	58 01.11 N	150 24.00 W	CTDB	CTD, Fluor, PAR	No chloros taken.
09-Jun-02	10:27	154	1	PB11	CTD154	162	57 56.97 N	150 25.39 W	CTDB	CTD, Fluor, PAR	No chloros taken.
09-Jun-02	11:20	155	1	PB12	CTD155	112	57 52.71 N	150 27.23 W	CTDB	CTD, Fluor, PAR	No chloros taken.
09-Jun-02	13:31	156	1	PBT1	CTD156	293	58 02.20 N	149 59.86 W	CTDB	Chlor, CTD, Fluor, PAR	0-m sample from bucket
09-Jun-02	14:35	157	1	PBT2	CTD157	268	58 06.94 N	150 03.94 W	CTDB	CTD, Fluor, PAR	No chlorophyll samples taken
09-Jun-02	15:26	158	1	PBT3	CTD158	135	58 10.44 N	150 06.47 W	CTDB	Chlor, CTD, Fluor, PAR	0-m sample from bucket
09-Jun-02	16:18	159	1	PBT4	CTD159	78	58 13.92 N	150 09.87 W	CTDB	Chlor, CTD, Fluor, PAR	
09-Jun-02	17:00	160	1	PBT5	CTD160	56	58 16.99 N	150 13.00 W	CTDB	CTD, Fluor, PAR	No chlorophyll samples taken
09-Jun-02	17:50	161	1	PB5	CTD161	53	58 21.84 N	150 16.95 W	CTDB	CTD, Fluor, PAR	No chlorophyll samples taken