

# CRUISE REPORT

Cruise Number: MF04-10

FOCI Number: 7MF04

**Ship:**

NOAA Ship Miller Freeman

**Area of Operations:**

Gulf of Alaska

**Itinerary:**

**Date depart / port:** September 9, 2004 / Kodiak, AK

**Date arrive / port:** September 22, 2004 / Kodiak, AK

**Participating organizations:**

NOAA - Alaska Fisheries Science Center (AFSC)

NOAA - Office of Science and Technology

**Chief Scientist:**

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**Cruise Objectives:**

We will be conducting an ichthyoplankton survey in the waters contiguous to Kodiak Island, Alaska. This work is needed to describe larval fish assemblages on the shelf and slope in late summer and early fall, and to study the transport and early life history of larval forage fishes (ex: capelin). Zooplankton data and data on physical characteristics of the water column will also be collected. Limited trawling activities for juvenile groundfishes (age-0 pollock) and adult forage fishes (capelin) will be conducted as well to study differences in production between offshore banks and troughs and nearshore Kodiak Island.

## Summary of Operations:

Operation	Tows
20cm bongo (20Bon)	90
60cm bongo (60Bon)	91
Anchovy trawl (Ancho)	10
Seabird SeaCAT CTD (CAT)	91
CTD with bottle samples (CTDB)	31
satellite tracked drifter (drifter)	2
1m <sup>2</sup> MOCNESS (MOC1)	14
Neuston (Neu)	92

Samples Collected	Tows Number	
Adult pollock collected for gut analysis (A-Gut)	2	27
Adult pollock length measurements (A-Length)	5	89
SeaBird SeaCat CTD (CAT)	91	
Extracted chlorophyll (Chlor)	23	124
SeaBird CTD (CTD)	31	
Deployment of buoy or mooring (Deploy)	2	2
Stimulated fluorescence collected during CTD casts (Fluor)	31	
Juvenile pollock collected for gut analysis (J-Gut)	9	334
Juvenile pollock length measurements (J-Length)	8	1161
Juvenile pollock collected for otolith analysis (J-Oto)	9	334
Microzooplankton samples preserved in formalin (MZ)	31	164
Nutrient samples collected from CTD casts (Nut)	22	119
Photosynthetically Active Radiation data collected during CTD casts (PAR)	31	
Quantitative tow preserved in formalin (QTowF)	460	516
Rough count of pollock juveniles (RCountJ)	10	55695

## Summary of Cruise:

### Narrative:

We departed Kodiak, AK in the afternoon of 9 September 2004 (Figure 1). Station occupation began on 9 September, 16:35 ADT, at grid station "j4". Insufficient numbers of capelin larvae were collected at "j4" so the 24-hr bay station, Station 2, was moved into Kalsin Bay. Rough count of capelin larvae at Station 2 was ca 50. Diel operations at this station were completed on 10 September. Subsequent station occupation and operations were as laid out in the Cruise Instructions except that slip-ring malfunction prevented collections with the bongo nets and SeaCat at "a3" and "a5". High winds prevented sampling with the MOCNESS at "b7". Two midwater trawl hauls were conducted at "j4" and "e1". On 14 September, ca 0:00, a medical emergency made it necessary to transit to Kodiak, AK. Sampling resumed later that day, 14:30, at "d4" where the second ARGOS drifter was released. Sampling continued according to the Instructions through Station "r6" except that three midwater trawl hauls were conducted at "i5", "n6", and "o6", no sampling was conducted at two slope stations, and the 24-hr shelf station was not occupied. Station "r5" was not sampled due to shallow water. The two slope stations ("i9" and "j9") were not sampled to save time for sampling in the vicinity of the Semidi Islands. This sacrifice was made before it was known that insufficient numbers of capelin larvae would be captured at the seven possible 24-hr diel stations. Because the 24-hr shelf station was not occupied, midwater trawling was conducted at 5D, 5E, 9D, and on echosign near south Sutwik Island. The three pre-chosen stations were selected due to high catches of age-0 walleye pollock in the past. There was no time remaining to occupy any of the nine Trinity area stations: r2-4, q2-4a, p2-4a. Acoustic data (EK-500, 38 kHz) were collected during the entire cruise for the AFSC/MACE Group (N. Williamson). We arrived Kodiak in the morning on 22 September 2004 for a total of 13 d at sea.

**Days Lost to Weather:**

None, but a MOCNESS sample was not collected at one station due to heavy seas.

**Days Lost to Equipment Failure:**

None, but bongo samples were not collected at two stations due to failure of the slip-ring on the starboard Oceo winch.

**Recommendations:**

None

**Acknowledgments:**

The Chief Scientist and the entire scientific crew acknowledge and greatly appreciate the fine efforts of the ship's personnel, without which this research would not be possible. Especially noteworthy were the efforts of Nick Barroll and Kaye Kinoshita who replaced the Oceo winch slip-ring and got us back "bongoing" after losing only two stations. Kris Mackie provided useful logistics suggestions and repaired gear for us. Larry Phillips and Jo Locke kept us well fed despite being short-handed, and Jason Mansour provided effective popcorn and moca morale boosters!

**Attachments:**

[Table 1: Cruise Summary For FOCI Cruise 7MF04 \(MF04-10\)](#)

[Figure 1: Station Map](#)

Attachments:

Table 1.

**Cruise Summary For FOCI Cruise 7MF04 (MF04-10)**

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
10-Sep-04	00:35	1	1	J4		120	57 40.56 N	152 20.50 W	Neu	QTowF	
10-Sep-04	01:22	1	2	J4	BON001	123	57 40.59 N	152 20.57 W	20Bon	QTowF	
10-Sep-04	01:22	1	2	J4	BON001	123	57 40.59 N	152 20.57 W	60Bon	QTowF	
10-Sep-04	01:22	1	2	J4		123	57 40.59 N	152 20.57 W	CAT	CAT	
10-Sep-04	02:13	2	1		BON002	97	57 39.35 N	152 23.00 W	60Bon	Discard	exploratory capelin bongo
10-Sep-04	02:13	2	1			97	57 39.35 N	152 23.00 W	CAT	CAT	exploratory capelin bongo
10-Sep-04	03:15	2	2		CTD001	99	57 39.44 N	152 22.99 W	CTDB	CTD, Fluor, MZ, PAR	
10-Sep-04	04:10	2	3		MOC001	97	57 39.38 N	152 22.96 W	MOC1	QTowF	Net 9 2 jellies removed 274g....Net 8 1 jelly removed 236g
10-Sep-04	06:13	2	4		CTD002	99	57 39.44 N	152 22.98 W	CTDB	CTD, Fluor, MZ, PAR	
10-Sep-04	07:03	2	5		MOC02	95	57 39.23 N	152 23.13 W	MOC1	QTowF	
10-Sep-04	07:03	2	5		MOC02	95	57 39.23 N	152 23.13 W	MOC1	QTowF	Net 1 is drogue Net 8 1 jelly Net 7 2 jelly
10-Sep-04	09:14	2	6		CTD003	97	57 39.40 N	152 22.90 W	CTDB	CTD, Fluor, MZ, PAR	
10-Sep-04	09:58	2	7		MOC003	94	57 39.21 N	152 23.21 W	MOC1	QTowF	Net 1 is drogue Net 9 3 jelly Net 8 2 jelly
10-Sep-04	12:11	2	8		CTD004	96	57 39.50 N	152 22.90 W	CTDB	CTD, Fluor, MZ, PAR	
10-Sep-04	12:55	2	9		MOC004	95	57 39.30 N	152 23.05 W	MOC1	QTowF	Net 1 is drogue Net 8 2 jellies discarded
10-Sep-04	15:10	2	10		CTD005	96	57 39.43 N	152 22.88 W	CTDB	CTD, Fluor, MZ, PAR	
10-Sep-04	16:02	2	11		MOC005	94	57 39.31 N	152 23.02 W	MOC1	QTowF	Net 1 is drogue
10-Sep-04	18:47	2	12		CTD006	94	57 38.91 N	152 23.51 W	CTDB	CTD, Fluor, MZ, PAR	
10-Sep-04	18:56	2	13		MOC006	93	57 39.16 N	152 23.24 W	MOC1	QTowF	Net 1 is drogue
10-Sep-04	18:56	2	13		MOC006	93	57 39.16 N	152 23.24 W	MOC1	QTowF	Net 1 is drogue. Net 8 2 jellies discarded. Net 7 4 jellies discarded.
10-Sep-04	21:08	2	14		CTD007	100	57 39.50 N	152 22.73 W	CTDB	CTD, Fluor, MZ, PAR	
10-Sep-04	21:48	2	15		MOC07	93	57 39.16 N	152 23.26 W	MOC1	QTowF	net 1 is drogue 1 jelly removed from net 9
11-Sep-04	00:04	2	16		CTD008	98	57 39.42 N	152 22.83 W	CTDB	CTD, Fluor, MZ, PAR	
11-Sep-04	00:44	2	17		MOC08	92	57 39.22 N	152 23.08 W	MOC1	QTowF	net #1 drogue...Net#2 - 4 good...5-9 questionable net tripping and volume filter problems. All samples saved but moceness redone St#2H18.
11-Sep-04	02:02	2	18		MOC09	98	57 39.49 N	152 22.83 W	MOC1	QTowF	redone to get surface depth that were questionable from st#2H17(0-50m) Argos drifter # 43699
11-Sep-04	02:26	2	19			98	57 39.67 N	152 22.87 W	drifter	Deploy	
11-Sep-04	03:13	3	1	J4		109	57 40.41 N	152 20.49 W	Ancho	A-Gut, A-Length, J-Gut, J-Length, J-Oto, RCountJ	
11-Sep-04	04:58	4	1	I4		100	57 47.40 N	152 02.74 W	Neu	QTowF	
11-Sep-04	05:26	4	2	I4	BON003	98	57 47.56 N	152 02.47 W	20Bon	QTowF	
11-Sep-04	05:26	4	2	I4	BON003	98	57 47.56 N	152 02.47 W	60Bon	CAT, QTowF	
11-Sep-04	05:26	4	2	I4		98	57 47.56 N	152 02.47 W	CAT	CAT	
11-Sep-04	07:13	5	1	H4		82	57 56.00 N	151 42.38 W	Neu	QTowF	1 jelly removed
11-Sep-04	07:38	5	2	H4	BON004	81	57 55.92 N	151 41.84 W	20Bon	QTowF	
11-Sep-04	07:38	5	2	H4	BON004	81	57 55.92 N	151 41.84 W	60Bon	QTowF	

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Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
11-Sep-04	07:38	5	2	H4		81	57 55.92 N	151 41.84 W	CAT	CAT	
11-Sep-04	09:01	6	1	G4		88	58 03.38 N	151 24.90 W	Neu	QTowF	
11-Sep-04	09:15	6	2	G4	BON006	117	58 03.21 N	151 25.18 W	20Bon	QTowF	
11-Sep-04	09:15	6	2	G4	BON006	117	58 03.21 N	151 25.18 W	60Bon	QTowF	
11-Sep-04	09:15	6	2	G4		117	58 03.21 N	151 25.18 W	CAT	CAT	
11-Sep-04	10:50	7	1	F4	CTD009	157	58 11.03 N	151 06.28 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	Surface bottle was not recorded in the CTD file Program froze at 5.1m 80m chlorophyll lost ca 2 ml water
11-Sep-04	11:15	7	2	F4		80	58 10.91 N	151 06.78 W	Neu	QTowF	
11-Sep-04	11:42	7	3	F4	BON007	158	58 11.11 N	151 06.43 W	20Bon	QTowF	seacat fail on upcast
11-Sep-04	11:42	7	3	F4	BON007	158	58 11.11 N	151 06.43 W	60Bon	QTowF	seacat fail on upcast
11-Sep-04	11:42	7	3	F4		158	58 11.11 N	151 06.43 W	CAT	CAT	seacat fail on upcast
11-Sep-04	13:27	8	1	F3	CTD010	122	58 21.85 N	151 22.17 W	CTDB	Chlor, CTD, Fluor, MZ, PAR	9.5L filtered for MZ
11-Sep-04	14:08	8	2	F3	MOC010	127	58 22.10 N	151 23.85 W	MOC1	QTowF	net#1 drogue...Net#9 1 cyanea removed
11-Sep-04	14:58	8	3	F3		120	58 22.11 N	151 23.19 W	Neu	QTowF	
11-Sep-04	17:06	8	4	F3	BON008	123	58 22.04 N	151 22.67 W	20Bon	QTowF	
11-Sep-04	17:06	8	4	F3	BON008	123	58 22.04 N	151 22.67 W	60Bon	QTowF	
11-Sep-04	17:06	8	4	F3		123	58 22.04 N	151 22.67 W	CAT	CAT	
11-Sep-04	18:33	9	1	F2		176	58 31.89 N	151 35.72 W	Neu	QTowF	
11-Sep-04	19:45	9	2	F2	BON009	181	58 31.65 N	151 36.41 W	20Bon	QTowF	
11-Sep-04	19:45	9	2	F2	BON009	181	58 31.65 N	151 36.41 W	60Bon	QTowF	
11-Sep-04	19:45	9	2	F2		181	58 31.65 N	151 36.41 W	CAT	CAT	
11-Sep-04	21:29	10	1	F1		112	58 43.14 N	151 53.25 W	Neu	QTowF	
11-Sep-04	21:47	10	2	F1	BON010	113	58 42.87 N	151 52.72 W	20Bon	QTowF	
11-Sep-04	21:47	10	2	F1	BON010	113	58 42.87 N	151 52.72 W	60Bon	QTowF	
11-Sep-04	21:47	10	2	F1		113	58 42.87 N	151 52.72 W	CAT	CAT	
11-Sep-04	23:20	11	1	E1		100	58 50.51 N	151 33.93 W	Neu	QTowF	
11-Sep-04	23:40	11	2	E1	BON011	119	58 50.69 N	151 34.11 W	20Bon	QTowF	
11-Sep-04	23:40	11	2	E1	BON011	119	58 50.69 N	151 34.11 W	60Bon	QTowF	
11-Sep-04	23:40	11	2	E1		119	58 50.69 N	151 34.11 W	CAT	CAT	
12-Sep-04	00:27	11	3	E1		119	58 50.15 N	151 35.20 W	Ancho	RCountJ	capelin larvae frozen
12-Sep-04	02:13	12	1	D1		150	58 58.35 N	151 14.65 W	Neu	QTowF	
12-Sep-04	02:30	12	2	D1	BON012	152	58 58.11 N	151 15.38 W	20Bon	QTowF	
12-Sep-04	02:30	12	2	D1	BON012	152	58 58.11 N	151 15.38 W	60Bon	QTowF	
12-Sep-04	02:30	12	2	D1		152	58 58.11 N	151 15.38 W	CAT	CAT	
12-Sep-04	03:56	13	1	D2		144	58 48.38 N	150 59.79 W	Neu	QTowF	
12-Sep-04	04:21	13	2	D2	BON013	144	58 48.32 N	150 59.36 W	20Bon	QTowF	
12-Sep-04	04:21	13	2	D2	BON013	144	58 48.32 N	150 59.36 W	60Bon	QTowF	
12-Sep-04	04:21	13	2	D2		144	58 48.32 N	150 59.36 W	CAT	CAT	

## Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
12-Sep-04	05:44	14	1	D3		206	58 38.68 N	150 44.55 W	Neu	QTowF	
12-Sep-04	06:14	14	2	D3	BON014	206	58 38.67 N	150 44.60 W	20Bon	QTowF	
12-Sep-04	06:14	14	2	D3	BON014	206	58 38.67 N	150 44.60 W	60Bon	QTowF	
12-Sep-04	06:14	14	2	D3		206	58 38.67 N	150 44.60 W	CAT	CAT	
12-Sep-04	08:05	15	1	C3	CTD011	152	58 49.59 N	150 23.70 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
12-Sep-04	08:25	15	2	C3		152	58 49.23 N	150 24.09 W	Neu	Discard	Flowmeter not set properly
12-Sep-04	08:31	15	3	C3		154	58 49.41 N	150 23.76 W	Neu	QTowF	
12-Sep-04	08:53	15	4	C3	BON015	153	58 49.22 N	150 23.40 W	20Bon	QTowF	
12-Sep-04	08:53	15	4	C3	BON015	153	58 49.22 N	150 23.40 W	60Bon	QTowF	
12-Sep-04	08:53	15	4	C3	BON015	153	58 49.22 N	150 23.40 W	CAT	CAT	
12-Sep-04	11:49	16	1	B3	CTD012	206	59 00.21 N	150 02.53 W	CTDB	Chlor, Fluor, MZ, Nut, PAR	
12-Sep-04	11:27	16	2	B3	MOC011	202	58 59.79 N	150 03.55 W	MOC1	QTowF	
12-Sep-04	12:46	16	3	B3		207	59 00.07 N	150 02.58 W	Neu	QTowF	1 Pacific saury (FL=26 cm) discarded
12-Sep-04	13:11	16	4	B3	BON016	206	59 00.08 N	150 02.46 W	20Bon	QTowF	
12-Sep-04	13:11	16	4	B3	BON016	206	59 00.08 N	150 02.46 W	60Bon	QTowF	
12-Sep-04	13:11	16	4	B3	BON016	206	59 00.08 N	150 02.46 W	CAT	CAT	program crashed on upcast
12-Sep-04	15:32	17	1	A3	CTD013	129	59 13.14 N	139 40.15 W	CTDB	Chlor, Fluor, MZ, Nut, PAR	
12-Sep-04	16:02	17	2	A3		130	59 13.19 N	149 30.02 W	Neu	QTowF	
12-Sep-04	19:21	18	1	A5	CTD014	270	58 53.28 N	148 37.96 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
12-Sep-04	20:37	18	2	A5	MOC12	265	58 53.66 N	148 38.08 W	MOC1	QTowF	Net 5 opened at 100m sunk to 108. Fighting a current. Long time to get net back up resulting in a large volume filtered. Sped up winch from 10 to 20 m per min for net 6-8. Small vol filt for net 8.
12-Sep-04	21:35	18	3	A5		276	58 52.91 N	148 37.80 W	Neu	QTowF	
12-Sep-04	23:45	19	1	B5	CTD015	135	58 41.47 N	149 09.11 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
13-Sep-04	00:15	19	2	B5		134	58 41.49 N	149 08.69 W	Neu	QTowF	
13-Sep-04	01:04	19	3	B5	BON017	132	58 41.39 N	149 09.06 W	20Bon	QTowF	
13-Sep-04	01:04	19	3	B5	BON017	132	58 41.39 N	149 09.06 W	60Bon	QTowF	
13-Sep-04	01:04	19	3	B5		132	58 41.39 N	149 09.06 W	CAT	CAT	
12-Sep-04	03:16	20	1	C5	CTD016	143	58 29.60 N	149 40.10 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
13-Sep-04	03:36	20	2	C5		141	58 29.56 N	149 39.57 W	Neu	QTowF	
13-Sep-04	04:00	20	3	C5	BON018	143	58 29.56 N	149 40.02 W	20Bon	QTowF	
13-Sep-04	04:00	20	3	C5	BON018	143	58 29.56 N	149 40.02 W	60Bon	QTowF	
13-Sep-04	04:00	20	3	C5		143	58 29.56 N	149 40.02 W	CAT	CAT	
13-Sep-04	06:30	21	1	C7	CTD017	136	58 11.50 N	149 06.65 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
13-Sep-04	06:57	21	2	C7		119	58 11.00 N	149 07.46 W	Neu	QTowF	
13-Sep-04	07:16	21	3	C7	BON019	137	58 11.41 N	149 06.58 W	20Bon	QTowF	
13-Sep-04	07:16	21	3	C7	BON019	137	58 11.41 N	149 06.58 W	60Bon	QTowF	
13-Sep-04	07:16	21	3	C7		137	58 11.41 N	149 06.58 W	CAT	CAT	

## Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
13-Sep-04	09:41	22	1	B7	CTD018	161	58 24.79 N	148 32.44 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
13-Sep-04	10:51	22	2	B7		196	58 24.92 N	148 31.53 W	Neu	QTowF	
13-Sep-04	11:19	22	3	B7	BON020	167	58 24.87 N	148 32.15 W	20Bon	QTowF	Tow time estimated.
13-Sep-04	11:19	22	3	B7	BON020	167	58 24.87 N	148 32.15 W	60Bon	QTowF	Tow time estimated.
13-Sep-04	11:19	22	3	B7		167	58 24.87 N	148 32.15 W	CAT	CAT	Tow time estimated.
13-Sep-04	14:09	23	1	A7	CTD019	1352	58 38.65 N	147 58.40 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	100m MZ = 9 liter instead of 9.5 liter - 0.5 liter was accidentally spilled.
13-Sep-04	14:23	23	2	A7		1428	58 38.69 N	148 00.13 W	Neu	QTowF	
13-Sep-04	15:00	23	3	A7	BON021	1436	58 38.28 N	147 58.32 W	20Bon	QTowF	
13-Sep-04	15:00	23	3	A7	BON021	1436	58 38.28 N	147 58.32 W	60Bon	QTowF	
13-Sep-04	15:00	23	3	A7		1436	58 38.28 N	147 58.32 W	CAT	CAT	
13-Sep-04	22:15	24	1	D8		766	57 47.62 N	149 25.86 W	Neu	QTowF	
13-Sep-04	22:54	24	2	D8	BON022	828	57 47.51 N	149 25.54 W	20Bon	QTowF	
13-Sep-04	22:54	24	2	D8	BON022	828	57 47.51 N	149 25.54 W	60Bon	QTowF	
13-Sep-04	22:54	24	2	D8	BON022	828	57 47.51 N	149 25.54 W	60Bon	QTowF	60BON Net 2 1 jelly discarded. 60BON Net 1 used 505 sieve instead of 333.
13-Sep-04	22:54	24	2	D8		828	57 47.51 N	149 25.54 W	CAT	CAT	
14-Sep-04	01:05	25	1	D7		116	57 57.50 N	149 40.28 W	Neu	QTowF	
14-Sep-04	01:36	25	2	D7	BON023	119	57 57.61 N	149 40.45 W	20Bon	QTowF	
14-Sep-04	01:36	25	2	D7	BON023	119	57 57.61 N	149 40.45 W	60Bon	QTowF	
14-Sep-04	01:36	25	2	D7		119	57 57.61 N	149 40.45 W	CAT	CAT	
14-Sep-04	03:55	26	1	D6		223	58 08.05 N	149 56.49 W	Neu	QTowF	
14-Sep-04	04:21	26	2	D6	BON024	222	58 08.05 N	149 58.28 W	20Bon	QTowF	
14-Sep-04	04:21	26	2	D6	BON024	222	58 08.05 N	149 58.28 W	60Bon	QTowF	
14-Sep-04	04:21	26	2	D6		222	58 08.05 N	149 58.28 W	CAT	CAT	
14-Sep-04	06:16	27	1	D5	CTD020	54	58 17.68 N	150 11.67 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
14-Sep-04	06:26	27	2	D5		51	58 17.67 N	150 12.19 W	Neu	QTowF	
14-Sep-04	06:52	27	3	D5	BON025	53	58 17.68 N	150 11.93 W	20Bon	QTowF	
14-Sep-04	06:52	27	3	D5	BON025	53	58 17.68 N	150 11.93 W	60Bon	QTowF	
14-Sep-04	06:52	27	3	D5		53	58 17.68 N	150 11.93 W	CAT	CAT	
14-Sep-04	22:10	28	1	D4	CTD021	81	58 28.03 N	150 27.99 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
14-Sep-04	22:47	28	2	D4		81	58 28.02 N	150 28.01 W	Neu	QTowF	
14-Sep-04	23:01	28	3	D4	BON026	83	58 27.98 N	150 27.03 W	20Bon	QTowF	
14-Sep-04	23:01	28	3	D4	BON026	83	58 27.98 N	150 27.03 W	60Bon	QTowF	
14-Sep-04	23:01	28	3	D4	BON026	83	58 27.98 N	150 27.03 W	CAT	CAT	
14-Sep-04	23:16	28	4	D4		82	58 28.02 N	150 27.96 W	drifter	Deploy	ARGOS Drifter #43700 deployed
15-Sep-04	02:17	29	1	E2		185	58 40.29 N	151 18.08 W	Neu	QTowF	
15-Sep-04	02:38	29	2	E2	B0N027	188	58 40.12 N	151 17.42 W	20Bon	QTowF	
15-Sep-04	02:38	29	2	E2	B0N027	188	58 40.12 N	151 17.42 W	60Bon	QTowF	

### Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
15-Sep-04	02:38	29	2	E2	BON027	188	58 40.12 N	151 17.42 W	CAT	CAT	
15-Sep-04	04:03	30	1	E3	CTD022	75	58 29.38 N	151 02.22 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
15-Sep-04	04:25	30	2	E3		75	58 29.49 N	151 02.69 W	Neu	QTowF	
15-Sep-04	04:36	30	3	E3	BON028	75	58 29.37 N	151 02.78 W	20Bon	QTowF	
15-Sep-04	04:36	30	3	E3	BON028	75	58 29.37 N	151 02.78 W	60Bon	QTowF	
15-Sep-04	04:36	30	3	E3	BON028	75	58 29.37 N	151 02.78 W	CAT	CAT	
15-Sep-04	05:57	31	1	E4	CTD023	63	58 19.90 N	150 45.74 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
15-Sep-04	06:20	31	2	E4		63	58 20.01 N	150 46.03 W	Neu	QTowF	
15-Sep-04	06:33	31	3	E4	BON029	63	58 19.93 N	150 45.43 W	20Bon	QTowF	
15-Sep-04	06:33	31	3	E4	BON029	63	58 19.93 N	150 45.43 W	60Bon	QTowF	
15-Sep-04	06:33	31	3	E4	BON029	63	58 19.93 N	150 45.43 W	CAT	CAT	
15-Sep-04	08:05	32	1	E5	CTD024	116	58 09.99 N	150 33.27 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
15-Sep-04	08:33	32	2	E5		116	58 09.66 N	150 31.54 W	Neu	QTowF	
15-Sep-04	08:59	32	3	E5	BON030	114	58 09.81 N	150 31.90 W	20Bon	QTowF	
15-Sep-04	08:59	32	3	E5	BON030	114	58 09.81 N	150 31.90 W	60Bon	QTowF	
15-Sep-04	08:59	32	3	E5	BON030	114	58 09.81 N	150 31.90 W	CAT	CAT	
15-Sep-04	10:45	33	1	E6		185	57 59.46 N	150 15.55 W	Neu	QTowF	
15-Sep-04	11:08	33	2	E6	BON031	183	57 59.30 N	150 15.36 W	20Bon	QTowF	
15-Sep-04	11:08	33	2	E6	BON031	183	57 59.30 N	150 15.36 W	60Bon	QTowF	
15-Sep-04	11:08	33	2	E6	BON031	183	57 59.30 N	150 15.36 W	CAT	CAT	
15-Sep-04	12:52	34	1	E7		242	57 49.56 N	149 59.81 W	Neu	QTowF	1 Chrysaora Jelly = 0.455 kg
15-Sep-04	13:13	34	2	E7	BON032	239	57 49.73 N	150 00.27 W	20Bon	QTowF	
15-Sep-04	13:13	34	2	E7	BON032	239	57 49.73 N	150 00.27 W	60Bon	QTowF	
15-Sep-04	13:13	34	2	E7	BON032	239	57 49.73 N	150 00.27 W	CAT	CTD	
15-Sep-04	14:51	35	1	E8		761	57 39.59 N	149 45.37 W	Neu	QTowF	
15-Sep-04	15:13	35	2	E8	BON033	766	57 39.72 N	149 45.34 W	20Bon	QTowF	
15-Sep-04	15:13	35	2	E8	BON033	766	57 39.72 N	149 45.34 W	60Bon	QTowF	
15-Sep-04	15:13	35	2	E8	BON033	766	57 39.72 N	149 45.34 W	60Bon	QTowF	1 jelly unident. = 0.558kg
15-Sep-04	15:13	35	2	E8	BON033	766	57 39.72 N	149 45.34 W	CAT	CAT	
15-Sep-04	16:42	36	1	F8		465	57 31.81 N	150 04.56 W	Neu	QTowF	
15-Sep-04	17:06	36	2	F8	BON034	485	57 31.58 N	150 04.45 W	20Bon	QTowF	
15-Sep-04	17:06	36	2	F8	BON034	485	57 31.58 N	150 04.45 W	60Bon	QTowF	
15-Sep-04	17:06	36	2	F8	BON034	485	57 31.58 N	150 04.45 W	CAT	CAT	
15-Sep-04	18:46	37	1	F7	CTD025	117	57 42.12 N	150 19.48 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
15-Sep-04	19:35	37	2	F7	MOCO13	116	57 42.20 N	150 19.91 W	MOC1	QTowF	Net 3 volume filtered large due to winch operator delay
15-Sep-04	20:19	37	3	F7		119	57 41.77 N	150 19.10 W	Neu	QTowF	
15-Sep-04	20:52	37	4	F7	BON035	119	57 41.95 N	150 19.36 W	20Bon	QTowF	
15-Sep-04	20:52	37	4	F7	BON035	119	57 41.95 N	150 19.36 W	60Bon	QTowF	



## Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
15-Sep-04	20:52	37	4	F7	BON035	119	57 41.95 N	150 19.36 W	CAT	CAT	
15-Sep-04	22:31	38	1	F6		89	57 51.35 N	150 35.68 W	Neu	QTowF	
15-Sep-04	22:57	38	2	F6	BON036	89	57 51.28 N	150 35.26 W	20Bon	QTowF	
15-Sep-04	22:57	38	2	F6	BON036	89	57 51.28 N	150 35.26 W	60Bon	QTowF	
15-Sep-04	22:57	38	2	F6	BON036	89	57 51.28 N	150 35.26 W	CAT	CAT	
16-Sep-04	00:20	39	1	F5	CTD026	138	58 01.12 N	150 52.14 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
16-Sep-04	01:15	39	2	F5	MOC014	138	58 01.75 N	150 51.65 W	MOC1	QTowF	
16-Sep-04	01:15	39	2	F5	MOC014	138	58 01.75 N	150 51.65 W	MOC1	QTowF	no net 2
16-Sep-04	02:01	39	3	F5		135	58 01.60 N	150 51.96 W	Neu	QTowF	
16-Sep-04	02:30	39	4	F5	BON037	135	58 01.67 N	150 52.07 W	20Bon	QTowF	
16-Sep-04	02:30	39	4	F5	BON037	135	58 01.67 N	150 52.07 W	60Bon	QTowF	
16-Sep-04	02:30	39	4	F5	BON037	135	58 01.67 N	150 52.07 W	CAT	CAT	
16-Sep-04	03:51	40	1	G5		68	57 53.07 N	151 09.58 W	Neu	QTowF	
16-Sep-04	04:15	40	2	G5	BON038	68	57 52.98 N	151 09.24 W	20Bon	Discard	wire angles bad...hit bottom on net2
16-Sep-04	04:15	40	2	G5	BON038	68	57 52.98 N	151 09.24 W	60Bon	Discard	wire angles bad...hit bottom on net2
16-Sep-04	04:15	40	2	G5	BON038	68	57 52.98 N	151 09.24 W	CAT	CAT	wire angles bad...hit bottom on net2
16-Sep-04	04:40	40	3	E5	BON039	68	57 53.15 N	151 09.57 W	20Bon	QTowF	
16-Sep-04	04:40	40	3	E5	BON039	68	57 53.15 N	151 09.57 W	60Bon	QTowF	
16-Sep-04	04:40	40	3	E5	BON039	68	57 53.15 N	151 09.57 W	CAT	CAT	
16-Sep-04	05:54	41	1	G6		78	57 43.05 N	150 54.23 W	Neu	QTowF	
16-Sep-04	06:18	41	2	G6	BON040	78	57 43.20 N	150 54.53 W	20Bon	QTowF	20Bon revs too low -- may have clogged with algae.
16-Sep-04	06:18	41	2	G6	BON040	78	57 43.20 N	150 54.53 W	60Bon	QTowF	
16-Sep-04	06:18	41	2	G6	BON040	78	57 43.20 N	150 54.53 W	CAT	CAT	
16-Sep-04	07:32	42	1	G7		99	57 33.21 N	150 40.40 W	Neu	QTowF	
16-Sep-04	08:00	42	2	G7	BON041	100	57 33.21 N	150 40.40 W	20Bon	QTowF	
16-Sep-04	08:00	42	2	G7	BON041	100	57 33.21 N	150 40.40 W	60Bon	QTowF	
16-Sep-04	08:00	42	2	G7	BON041	100	57 33.21 N	150 40.40 W	CAT	CAT	
16-Sep-04	09:32	43	1	G8		454	57 22.65 N	150 23.28 W	Neu	QTowF	3 G aculeatus removed from sample for McLaughlin TL=37mm 38mm 52mm
16-Sep-04	09:57	43	2	G8	BON042	464	57 22.43 N	150 22.96 W	20Bon	QTowF	
16-Sep-04	09:57	43	2	G8	BON042	464	57 22.43 N	150 22.96 W	60Bon	QTowF	
16-Sep-04	09:57	43	2	G8	BON042	464	57 22.43 N	150 22.96 W	CAT	CAT	
16-Sep-04	12:50	44	1	H10		2471	56 54.70 N	150 11.95 W	Neu	QTowF	1 Pacific saury removed FL 24cm
16-Sep-04	13:15	44	2	H10	BON043	2470	56 54.98 N	150 11.87 W	20Bon	QTowF	
16-Sep-04	13:15	44	2	H10	BON043	2470	56 54.98 N	150 11.87 W	60Bon	QTowF	
16-Sep-04	13:15	44	2	H10	BON043	2470	56 54.98 N	150 11.87 W	CAT	CAT	
16-Sep-04	14:36	45	1	H9		2470	57 03.62 N	150 26.41 W	Neu	QTowF	
16-Sep-04	15:05	45	2	H9	BON044	2470	57 03.90 N	150 26.89 W	20Bon	QTowF	60BON Net 1 1 jelly discarded

### Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected	Haul Comments
16-Sep-04	15:05	45	2	H9	BON044	2470	57 03.90 N	150 26.89 W	60Bon	QTowF	60BON Net 1 1 jelly discarded
16-Sep-04	15:05	45	2	H9	BON044	2470	57 03.90 N	150 26.89 W	60Bon	QTowF	60BON Net 1 1 jelly discarded=.390kg
16-Sep-04	15:05	45	2	H9	BON044	2470	57 03.90 N	150 26.89 W	CAT	CAT	60BON Net 1 1 jelly discarded
16-Sep-04	16:42	46	1	H8		556	57 14.39 N	150 42.71 W	Neu	QTowF	
16-Sep-04	17:05	46	2	H8	BON045	545	57 14.45 N	150 42.79 W	20Bon	QTowF	
16-Sep-04	17:05	46	2	H8	BON045	545	57 14.45 N	150 42.79 W	60Bon	QTowF	
16-Sep-04	17:05	46	2	H8	BON045	545	57 14.45 N	150 42.79 W	CAT	CAT	Temp and salinity profiles jumped and changed through both down- and up-casts.
16-Sep-04	18:54	47	1	H7		95	57 24.58 N	150 57.65 W	Neu	QTowF	
16-Sep-04	19:19	47	2	H7	BON046	94	57 24.69 N	150 58.05 W	20Bon	QTowF	
16-Sep-04	19:19	47	2	H7	BON046	94	57 24.69 N	150 58.05 W	60Bon	QTowF	
16-Sep-04	19:19	47	2	H7	BON046	94	57 24.69 N	150 58.05 W	60Bon	QTowF	1.27 kg chrysurus
16-Sep-04	19:19	47	2	H7	BON046	94	57 24.69 N	150 58.05 W	CAT	CAT	
16-Sep-04	20:46	48	1	H6		69	57 34.55 N	151 11.73 W	Neu	QTowF	
16-Sep-04	21:04	48	2	H6	BON047	69	57 35.05 N	151 13.34 W	20Bon	QTowF	
16-Sep-04	21:04	48	2	H6	BON047	69	57 35.05 N	151 13.34 W	60Bon	QTowF	
16-Sep-04	21:04	48	2	H6	BON047	69	57 35.05 N	151 13.34 W	CAT	CAT	
16-Sep-04	22:27	49	1	H5		69	57 35.06 N	151 13.59 W	Neu	QTowF	
16-Sep-04	22:46	49	2	H5	BON048	59	57 45.57 N	151 28.15 W	20Bon	QTowF	
16-Sep-04	22:46	49	2	H5	BON048	59	57 45.57 N	151 28.15 W	60Bon	QTowF	
16-Sep-04	22:46	49	2	H5	BON048	59	57 45.57 N	151 28.15 W	CAT	CAT	
17-Sep-04	00:22	50	1	I5		111	57 37.78 N	151 47.62 W	Neu	QTowF	
17-Sep-04	00:39	50	2	I5	BON049	116	57 37.63 N	151 47.76 W	20Bon	QTowF	
17-Sep-04	00:39	50	2	I5	BON049	116	57 37.63 N	151 47.76 W	60Bon	QTowF	
17-Sep-04	00:39	50	2	I5	BON049	116	57 37.63 N	151 47.76 W	CAT	CAT	
17-Sep-04	02:14	51	1	I6	CTD027	129	57 26.69 N	151 32.46 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
17-Sep-04	02:45	51	2	I6		121	57 26.62 N	151 32.95 W	Neu	QTowF	
17-Sep-04	03:03	51	3	I6	BON050	113	57 26.71 N	151 33.39 W	20Bon	QTowF	
17-Sep-04	03:03	51	3	I6	BON050	113	57 26.71 N	151 33.39 W	60Bon	QTowF	
17-Sep-04	03:03	51	3	I6	BON050	113	57 26.71 N	151 33.39 W	CAT	CAT	
17-Sep-04	04:20	52	1	I7		150	57 17.43 N	151 17.28 W	Neu	QTowF	
17-Sep-04	04:47	52	2	I7		148	57 17.29 N	151 16.99 W	20Bon	QTowF	
17-Sep-04	04:47	52	2	I7		148	57 17.29 N	151 16.99 W	60Bon	QTowF	
17-Sep-04	04:47	52	2	I7		148	57 17.29 N	151 16.99 W	CAT	CAT	
17-Sep-04	06:18	53	1	I8		693	57 05.95 N	151 02.05 W	Neu	QTowF	4 Gasterosteus aculeatus removed for M. Busby. TL=36mm,SL=32mm...TL=39mm,SL=34mm ...TL=39mm,SL=33mm...TL=37mm,SL=33mm
17-Sep-04	06:47	53	2	I8	BON052	681	57 06.24 N	151 01.98 W	20Bon	QTowF	
17-Sep-04	06:47	53	2	I8	BON052	681	57 06.24 N	151 01.98 W	60Bon	QTowF	

## Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
17-Sep-04	06:47	53	2	J8	BON052	681	57 06.24 N	151 01.98 W	CAT	CAT	
17-Sep-04	08:14	54	1	J8		884	56 57.56 N	151 19.27 W	Neu	QTowF	3 G aculeatus TL 40mm 42 mm 48mm
17-Sep-04	08:25	54	2	J8	BON053	883	56 57.99 N	151 20.99 W	20Bon	QTowF	
17-Sep-04	08:25	54	2	J8	BON053	883	56 57.99 N	151 20.99 W	60Bon	QTowF	
17-Sep-04	08:25	54	2	J8	BON053	883	56 57.99 N	151 20.99 W	CAT	CAT	
17-Sep-04	09:55	55	1	J7		103	57 08.34 N	151 34.14 W	Neu	QTowF	
17-Sep-04	10:14	55	2	J7	BON054	96	57 08.45 N	151 34.94 W	20Bon	QTowF	
17-Sep-04	10:14	55	2	J7	BON054	96	57 08.45 N	151 34.94 W	60Bon	QTowF	
17-Sep-04	10:14	55	2	J7	BON054	96	57 08.45 N	151 34.94 W	CAT	CAT	
17-Sep-04	11:31	56	1	J6		68	57 18.37 N	151 50.53 W	Neu	QTowF	
17-Sep-04	11:47	56	2	J6	BON055	69	57 18.43 N	151 52.16 W	20Bon	QTowF	
17-Sep-04	11:47	56	2	J6	BON055	69	57 18.43 N	151 52.16 W	60Bon	QTowF	
17-Sep-04	11:47	56	2	J6	BON055	69	57 18.43 N	151 52.16 W	CAT	CAT	
17-Sep-04	13:04	57	1	J5		46	57 28.49 N	152 04.32 W	Neu	QTowF	2 other jellies (0.438 kg)
17-Sep-04	13:28	57	2	J5	BON056	44	57 28.79 N	152 05.32 W	20Bon	QTowF	20Bon revs too low -- may have clogged with algae.
17-Sep-04	13:28	57	2	J5	BON056	44	57 28.79 N	152 05.32 W	60Bon	QTowF	
17-Sep-04	13:28	57	2	J5	BON056	44	57 28.79 N	152 05.32 W	CAT	CAT	
17-Sep-04	15:01	58	1	K5		52	57 19.43 N	152 22.45 W	Neu	QTowF	
17-Sep-04	15:20	58	2	K5	BON057	65	57 19.46 N	152 24.32 W	20Bon	QTowF	20Bon revs too low -- may have clogged with algae.
17-Sep-04	15:20	58	2	K5	BON057	65	57 19.46 N	152 24.32 W	60Bon	QTowF	
17-Sep-04	15:20	58	2	K5	BON057	65	57 19.46 N	152 24.32 W	60Bon	QTowF	60bon Net 1 1 jelly (26g) discarded
17-Sep-04	15:20	58	2	K5	BON057	65	57 19.46 N	152 24.32 W	CAT	CAT	
17-Sep-04	16:47	59	1	K6		82	57 10.68 N	152 08.45 W	Neu	QTowF	
17-Sep-04	17:04	59	2	K6	BON058	82	57 10.61 N	152 08.81 W	20Bon	QTowF	
17-Sep-04	17:04	59	2	K6	BON058	82	57 10.61 N	152 08.81 W	20Bon	QTowF	Removed 1 jellyfish 0.22kg from 60bon net
17-Sep-04	17:04	59	2	K6	BON058	82	57 10.61 N	152 08.81 W	60Bon	QTowF	
17-Sep-04	17:04	59	2	K6	BON058	82	57 10.61 N	152 08.81 W	60Bon	QTowF	rcount capelin larvae 60BON Net 2=0
17-Sep-04	17:04	59	2	K6	BON058	82	57 10.61 N	152 08.81 W	CAT	CAT	
17-Sep-04	18:49	60	1	K7		81	56 59.74 N	151 53.40 W	Neu	QTowF	
17-Sep-04	19:11	60	2	K7	BON059	82	56 59.97 N	151 53.90 W	20Bon	QTowF	
17-Sep-04	19:11	60	2	K7	BON059	82	56 59.97 N	151 53.90 W	60Bon	QTowF	
17-Sep-04	19:11	60	2	K7	BON059	82	56 59.97 N	151 53.90 W	CAT	CAT	
17-Sep-04	20:40	61	1	K8		335	56 49.23 N	151 40.30 W	Neu	QTowF	
17-Sep-04	21:01	61	2	K8	BON060	292	56 49.33 N	151 40.90 W	20Bon	QTowF	net 1 larval capelin count=0
17-Sep-04	21:01	61	2	K8	BON060	292	56 49.33 N	151 40.90 W	60Bon	QTowF	net 1 larval capelin count=0
17-Sep-04	21:01	61	2	K8	BON060	292	56 49.33 N	151 40.90 W	CAT	CAT	net 1 larval capelin count=0
17-Sep-04	22:39	62	1	K9		1195	56 40.03 N	151 25.05 W	Neu	QTowF	

## Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
17-Sep-04	23:10	62	2	K9	BON061	1114	56 40.19 N	151 25.35 W	20Bon	QTowF	
17-Sep-04	23:10	62	2	K9	BON061	1114	56 40.19 N	151 25.35 W	60Bon	QTowF	
17-Sep-04	23:10	62	2	K9	BON061	1114	56 40.19 N	151 25.35 W	60Bon	QTowF	60bon net 1 larval capelin count=0
17-Sep-04	23:10	62	2	K9	BON061	1114	56 40.19 N	151 25.35 W	CAT	CAT	
18-Sep-04	00:38	63	1	L9		1473	56 31.63 N	151 44.68 W	Neu	QTowF	
18-Sep-04	01:06	63	2	L9	BON062	1473	56 31.76 N	151 45.72 W	20Bon	Discard	60Bon net 2 codend cracked and sample leaked. Replaced codend and redid tow as 63H3. Net1 sample preserved.
18-Sep-04	01:06	63	2	L9	BON062	1473	56 31.76 N	151 45.72 W	60Bon	QTowF	60Bon net 2 codend cracked and sample leaked. Replaced codend and redid tow as 63H3. Net1 sample preserved.
18-Sep-04	01:06	63	2	L9	BON062	1473	56 31.76 N	151 45.72 W	CAT	CAT	60Bon net 2 codend cracked and sample leaked. Replaced codend and redid tow as 63H3. Net1 sample preserved.
18-Sep-04	01:45	63	3	L9	BON063	1473	56 31.87 N	151 45.71 W	20Bon	QTowF	
18-Sep-04	01:45	63	3	L9	BON063	1473	56 31.87 N	151 45.71 W	60Bon	QTowF	
18-Sep-04	01:45	63	3	L9	BON063	1473	56 31.87 N	151 45.71 W	CAT	CAT	
18-Sep-04	03:08	64	1	L8		56	56 41.78 N	151 58.17 W	Neu	QTowF	
18-Sep-04	03:32	64	2	L8	BON064	54	56 41.70 N	151 58.96 W	20Bon	QTowF	
18-Sep-04	03:32	64	2	L8	BON064	54	56 41.70 N	151 58.96 W	60Bon	QTowF	
18-Sep-04	03:32	64	2	L8	BON064	54	56 41.70 N	151 58.96 W	CAT	CAT	
18-Sep-04	04:47	65	1	L7		92	56 51.82 N	152 14.01 W	Neu	QTowF	
18-Sep-04	05:09	65	2	L7	BON065	88	56 52.03 N	152 14.84 W	20Bon	QTowF	1 unidentified jelly 30 g in 60 bon net 2.
18-Sep-04	05:09	65	2	L7	BON065	88	56 52.03 N	152 14.84 W	60Bon	QTowF	1 unidentified jelly 30 g in 60 bon net 2.
18-Sep-04	05:09	65	2	L7	BON065	88	56 52.03 N	152 14.84 W	CAT	CAT	1 unidentified jelly 30 g in 60 bon net 2.
18-Sep-04	06:37	66	1	L6		142	57 01.63 N	152 28.94 W	Neu	QTowF	1 unidentified jelly 17.2 g. 3 pacific saury. Samples frozen.
18-Sep-04	06:59	66	2	L6	BON066	141	57 02.00 N	152 29.47 W	20Bon	QTowF	
18-Sep-04	06:59	66	2	L6	BON066	141	57 02.00 N	152 29.47 W	60Bon	QTowF	
18-Sep-04	06:59	66	2	L6	BON066	141	57 02.00 N	152 29.47 W	CAT	CAT	
18-Sep-04	08:44	67	1	L5		137	57 11.83 N	152 44.76 W	Neu	QTowF	
18-Sep-04	09:04	67	2	L5	BON067	137	57 11.92 N	152 45.25 W	20Bon	QTowF	Revs too low on 20BON nets. Gear was fishing outboard so 20BONs may have been turned and not fishing properly.
18-Sep-04	09:04	67	2	L5	BON067	137	57 11.92 N	152 45.25 W	60Bon	QTowF	Revs too low on 20BON nets. Gear was fishing outboard so 20BONs may have been turned and not fishing properly.
18-Sep-04	09:04	67	2	L5	BON067	137	57 11.92 N	152 45.25 W	CAT	CAT	Revs too low on 20BON nets. Gear was fishing outboard so 20BONs may have been turned and not fishing properly.
18-Sep-04	10:00	67	3	L5		135	57 11.93 N	152 46.16 W	Ancho	A-Gut, A-Length, J-Gut, J-Length, J-Oto, RCountJ	

### Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
18-Sep-04	12:13	68	1	M5		48	57 03.27 N	153 04.28 W	Neu	QTowF	
18-Sep-04	12:37	68	2	M5	BON068	48	57 03.64 N	153 03.94 W	20Bon	QTowF	
18-Sep-04	12:37	68	2	M5	BON068	48	57 03.64 N	153 03.94 W	20Bon	QTowF	20Bon revs too low -- may have clogged with algae.
18-Sep-04	12:37	68	2	M5	BON068	48	57 03.64 N	153 03.94 W	60Bon	QTowF	
18-Sep-04	12:37	68	2	M5	BON068	48	57 03.64 N	153 03.94 W	CAT	CAT	
18-Sep-04	14:12	69	1	M6	CTD028	104	56 53.83 N	152 48.61 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
18-Sep-04	14:36	69	2	M6		112	56 54.57 N	152 48.23 W	Neu	QTowF	
18-Sep-04	14:58	69	3	M6	BON069	112	56 54.17 N	152 48.40 W	20Bon	QTowF	
18-Sep-04	14:58	69	3	M6	BON069	112	56 54.17 N	152 48.40 W	60Bon	QTowF	
18-Sep-04	14:58	69	3	M6	BON069	112	56 54.17 N	152 48.40 W	CAT	CAT	
18-Sep-04	16:34	70	1	M7	CTD029	132	56 43.98 N	152 34.69 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
18-Sep-04	16:47	70	2	M7		131	56 43.95 N	152 34.78 W	Neu	QTowF	
18-Sep-04	17:11	70	3	M7	BON070	130	56 43.89 N	152 34.79 W	20Bon	QTowF	Winch unable to pull wire in at marked time.
18-Sep-04	17:11	70	3	M7	BON070	130	56 43.89 N	152 34.79 W	60Bon	QTowF	
18-Sep-04	17:11	70	3	M7	BON070	130	56 43.89 N	152 34.79 W	CAT	CAT	
18-Sep-04	16:34	71	1	M8	CTD030	132	56 43.98 N	152 34.69 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	
18-Sep-04	16:47	71	2	M8		131	56 43.95 N	152 34.78 W	Neu	QTowF	
18-Sep-04	17:10	71	3	M8	BON071	130	56 43.89 N	152 34.79 W	20Bon	QTowF	
18-Sep-04	17:10	71	3	M8	BON071	130	56 43.89 N	152 34.79 W	60Bon	QTowF	
18-Sep-04	17:10	71	3	M8	BON071	130	56 43.89 N	152 34.79 W	CAT	CAT	
18-Sep-04	21:05	72	1	M9		1793	56 23.61 N	152 03.99 W	Neu	QTowF	
18-Sep-04	21:23	72	2	M9	BON072	1793	56 23.75 N	152 04.28 W	20Bon	QTowF	60 bon net 1 .25 kg jelly removed. R count 0 for larval capelin.
18-Sep-04	21:23	72	2	M9	BON072	1793	56 23.75 N	152 04.28 W	60Bon	QTowF	60 bon net 1 .25 kg jelly removed. R count 0 for larval capelin.
18-Sep-04	21:23	72	2	M9	BON072	1793	56 23.75 N	152 04.28 W	CAT	CAT	60 bon net 1 .25 kg jelly removed. R count 0 for larval capelin.
18-Sep-04	23:45	73	1	N10		2196	56 04.45 N	152 07.56 W	Neu	QTowF	
19-Sep-04	00:02	73	2	N10		2196	56 04.15 N	152 07.01 W	20Bon	QTowF	20Bon net1 torn, preserved net 2 instead
19-Sep-04	00:02	73	2	N10		2196	56 04.15 N	152 07.01 W	60Bon	QTowF	20Bon net1 torn, preserved net 2 instead
19-Sep-04	00:02	73	2	N10		2196	56 04.15 N	152 07.01 W	CAT	CAT	20Bon net1 torn, preserved net 2 instead
19-Sep-04	01:58	74	1	N9		1739	56 15.58 N	152 22.89 W	Neu	QTowF	
19-Sep-04	02:16	74	2	N9	BON074	1739	56 15.72 N	152 22.39 W	20Bon	QTowF	
19-Sep-04	02:16	74	2	N9	BON074	1739	56 15.72 N	152 22.39 W	60Bon	QTowF	
19-Sep-04	02:16	74	2	N9	BON074	1739	56 15.72 N	152 22.39 W	CAT	CAT	
19-Sep-04	03:58	75	1	N8	CTD029	135	56 25.79 N	152 37.57 W	CTDB	Chlor, CTD, Fluor, MZ, Nut, PAR	40 m chlor leaked slightly during filtering
19-Sep-04	04:22	75	2	N8		149	56 25.92 N	152 36.32 W	Neu	QTowF	
19-Sep-04	04:37	75	3	N8	BON075	132	56 25.91 N	152 37.73 W	20Bon	QTowF	60Bon Net 2 1 chrysaoura removed .536kg.
19-Sep-04	04:37	75	3	N8	BON075	132	56 25.91 N	152 37.73 W	60Bon	QTowF	60Bon Net 2 1 chrysaoura removed .536kg.

## Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
19-Sep-04	04:37	75	3	N8	BON075	132	56 25.91 N	152 37.73 W	CAT	CAT	60Bon Net 2 1 chrysaoura removed .536kg.
19-Sep-04	05:58	76	1	N7		84	56 35.41 N	152 52.51 W	Neu	QTowF	
19-Sep-04	06:24	76	2	N7	BON076	84	56 35.72 N	152 52.69 W	20Bon	QTowF	
19-Sep-04	06:24	76	2	N7	BON076	84	56 35.72 N	152 52.69 W	60Bon	QTowF	
19-Sep-04	06:24	76	2	N7	BON076	84	56 35.72 N	152 52.69 W	CAT	CAT	
19-Sep-04	08:00	77	1	N6		130	56 45.37 N	153 13.61 W	Neu	QTowF	
19-Sep-04	08:22	77	2	N6	BON077	130	56 45.41 N	153 13.38 W	20Bon	QTowF	
19-Sep-04	08:22	77	2	N6	BON077	130	56 45.41 N	153 13.38 W	60Bon	QTowF	
19-Sep-04	08:22	77	2	N6	BON077	130	56 45.41 N	153 13.38 W	CAT	CAT	
19-Sep-04	09:44	78	1	N6		160	56 44.32 N	153 13.97 W	Ancho	J-Gut, J-Length, J-Oto, RCountJ	
19-Sep-04	11:53	79	1	N5		81	56 55.63 N	153 22.94 W	Neu	QTowF	
19-Sep-04	12:14	79	2	N5	BON078	70	56 55.70 N	153 22.65 W	20Bon	QTowF	20Bon revs too low -- may have clogged with algae.
19-Sep-04	12:14	79	2	N5	BON078	70	56 55.70 N	153 22.65 W	60Bon	QTowF	
19-Sep-04	12:14	79	2	N5	BON078	70	56 55.70 N	153 22.65 W	60Bon	QTowF	60BON net 1 contained 3 unidentified jellyfish weighing 0.228 kg
19-Sep-04	12:14	79	2	N5	BON078	70	56 55.70 N	153 22.65 W	CAT	CAT	
19-Sep-04	13:42	80	1	O5		73	56 47.37 N	153 42.04 W	Neu	QTowF	
19-Sep-04	13:58	80	2	O5	BON079	80	56 47.74 N	153 40.77 W	20Bon	QTowF	20Bon revs too low -- may have clogged with algae.
19-Sep-04	13:58	80	2	O5	BON079	80	56 47.74 N	153 40.77 W	60Bon	QTowF	
19-Sep-04	13:58	80	2	O5	BON079	80	56 47.74 N	153 40.77 W	CAT	CAT	
19-Sep-04	15:14	81	1	O6		146	56 38.57 N	153 28.29 W	Neu	QTowF	
19-Sep-04	15:33	81	2	O6	BON080	101	56 38.14 N	153 26.98 W	20Bon	QTowF	
19-Sep-04	15:33	81	2	O6	BON080	101	56 38.14 N	153 26.98 W	60Bon	QTowF	
19-Sep-04	15:33	81	2	O6	BON080	101	56 38.14 N	153 26.98 W	CAT	CAT	
19-Sep-04	16:25	82	1	O6		148	56 39.66 N	153 29.28 W	Ancho	J-Gut, J-Length, J-Oto, RCountJ	
19-Sep-04	18:35	83	1	O7		28	56 26.51 N	153 11.81 W	Neu	QTowF	
19-Sep-04	18:54	83	2	O7	BON081	28	56 26.49 N	153 11.62 W	20Bon	QTowF	
19-Sep-04	18:54	83	2	O7	BON081	28	56 26.49 N	153 11.62 W	60Bon	QTowF	
19-Sep-04	18:54	83	2	O7	BON081	28	56 26.49 N	153 11.62 W	CAT	CAT	
19-Sep-04	20:25	84	1	O8		155	56 17.71 N	152 56.04 W	Neu	QTowF	
19-Sep-04	20:50	84	2	O8	BON082	165	56 17.58 N	152 55.99 W	20Bon	QTowF	
19-Sep-04	20:50	84	2	O8	BON082	165	56 17.58 N	152 55.99 W	60Bon	QTowF	
19-Sep-04	20:50	84	2	O8	BON082	165	56 17.58 N	152 55.99 W	CAT	CAT	
19-Sep-04	22:18	85	1	P8		1219	56 10.63 N	153 14.76 W	Neu	QTowF	
19-Sep-04	22:46	85	2	P8	BON083	1234	56 10.04 N	153 15.26 W	20Bon	QTowF	
19-Sep-04	22:46	85	2	P8	BON083	1234	56 10.04 N	153 15.26 W	60Bon	QTowF	
19-Sep-04	22:46	85	2	P8	BON083	1234	56 10.04 N	153 15.26 W	60Bon	QTowF	156g jelly (other category) discarded
19-Sep-04	22:46	85	2	P8	BON083	1234	56 10.04 N	153 15.26 W	CAT	CAT	

### Cruise Summary For FOCI Cruise 7MF04 (MF04-10)

Date (GMT)	Time (GMT)	Station	Haul	FOCI Grid	Alternat Station	Depth (m)	Latitude	Longitude	Gear	SamplesCollected	HaulComments
20-Sep-04	00:12	86	1	P7		71	56 19.26 N	153 29.04 W	Neu	QTowF	
20-Sep-04	00:34	86	2	P7	BON084	71	56 18.49 N	153 29.80 W	20Bon	QTowF	
20-Sep-04	00:34	86	2	P7	BON084	71	56 18.49 N	153 29.80 W	60Bon	QTowF	
20-Sep-04	00:34	86	2	P7	BON084	71	56 18.49 N	153 29.80 W	CAT	CAT	
20-Sep-04	01:59	87	1	P6		93	56 29.15 N	153 44.46 W	Neu	QTowF	
20-Sep-04	02:19	87	2	P6	BON085	91	56 28.51 N	153 45.42 W	20Bon	QTowF	
20-Sep-04	02:19	87	2	P6	BON085	91	56 28.51 N	153 45.42 W	60Bon	QTowF	
20-Sep-04	02:19	87	2	P6	BON085	91	56 28.51 N	153 45.42 W	CAT	CAT	
20-Sep-04	03:36	88	1	P5		80	56 38.79 N	153 52.59 W	Neu	QTowF	
20-Sep-04	03:58	88	2	P5	BON086	74	56 38.60 N	153 53.27 W	20Bon	QTowF	
20-Sep-04	03:58	88	2	P5	BON086	74	56 38.60 N	153 53.27 W	60Bon	QTowF	
20-Sep-04	03:58	88	2	P5	BON086	74	56 38.60 N	153 53.27 W	CAT	CAT	
20-Sep-04	04:38	88	3	P5		73	56 38.48 N	153 52.65 W	Ancho	J-Gut, J-Length, J-Oto, RCountJ	
20-Sep-04	07:20	89	1	Q6		82	56 20.90 N	154 02.81 W	Neu	QTowF	
20-Sep-04	07:43	89	2	Q6	BON087	84	56 20.75 N	154 02.97 W	20Bon	QTowF	
20-Sep-04	07:43	89	2	Q6	BON087	84	56 20.75 N	154 02.97 W	60Bon	QTowF	
20-Sep-04	07:43	89	2	Q6	BON087	84	56 20.75 N	154 02.97 W	CAT	CAT	
20-Sep-04	09:15	90	1	Q7		234	56 10.31 N	153 48.01 W	Neu	QTowF	
20-Sep-04	09:37	90	2	Q7	BON088	230	56 10.43 N	153 48.16 W	20Bon	QTowF	
20-Sep-04	09:37	90	2	Q7	BON088	230	56 10.43 N	153 48.16 W	60Bon	QTowF	
20-Sep-04	09:37	90	2	Q7	BON088	230	56 10.43 N	153 48.16 W	60Bon	QTowF	1 chrysaora = 946g
20-Sep-04	09:37	90	2	Q7	BON088	230	56 10.43 N	153 48.16 W	CAT	CAT	
20-Sep-04	11:18	91	1	Q8		215	56 00.28 N	153 31.96 W	Neu	QTowF	
20-Sep-04	11:40	91	2	Q8	BON089	206	56 00.10 N	156 32.06 W	20Bon	QTowF	
20-Sep-04	11:40	91	2	Q8	BON089	206	56 00.10 N	156 32.06 W	60Bon	QTowF	
20-Sep-04	11:40	91	2	Q8	BON089	206	56 00.10 N	156 32.06 W	CAT	CAT	
20-Sep-04	13:43	92	1	R8		737	55 53.03 N	153 50.36 W	Neu	QTowF	
20-Sep-04	14:02	92	2	R8	BON090	793	55 52.56 N	153 51.52 W	20Bon	QTowF	
20-Sep-04	14:02	92	2	R8	BON090	793	55 52.56 N	153 51.52 W	60Bon	QTowF	
20-Sep-04	14:02	92	2	R8	BON090	793	55 52.56 N	153 51.52 W	CAT	CAT	
20-Sep-04	15:36	93	1	R7		141	56 02.22 N	154 07.80 W	Neu	Discard	Flowmeter not set properly
20-Sep-04	15:51	93	2	R7		220	56 01.61 N	154 09.33 W	Neu	QTowF	
20-Sep-04	16:20	93	3	R7	BON091	176	56 02.02 N	154 08.37 W	20Bon	QTowF	
20-Sep-04	16:20	93	3	R7	BON091	176	56 02.02 N	154 08.37 W	60Bon	QTowF	
20-Sep-04	16:20	93	3	R7	BON091	176	56 02.02 N	154 08.37 W	60Bon	QTowF	unidentified jelly = 0.302 kg
20-Sep-04	16:20	93	3	R7	BON091	176	56 02.02 N	154 08.37 W	CAT	CAT	
20-Sep-04	17:53	94	1	R6		123	56 13.06 N	154 21.13 W	Neu	QTowF	
20-Sep-04	18:27	94	2	R6	BON092	118	56 12.76 N	154 21.78 W	20Bon	QTowF	
20-Sep-04	18:27	94	2	R6	BON092	118	56 12.76 N	154 21.78 W	60Bon	QTowF	
20-Sep-04	18:27	94	2	R6	BON092	118	56 12.76 N	154 21.78 W	CAT	CAT	
21-Sep-04	08:34	95	1	5D		146	56 08.27 N	157 46.96 W	Ancho	A-Length, J-Gut, J-Length, J-Oto, RCountJ	
21-Sep-04	11:21	96	1	5E		131	56 25.95 N	158 05.59 W	Ancho	A-Length, J-Gut, J-Length, J-Oto, RCountJ	
21-Sep-04	15:47	97	1			100	56 25.52 N	157 01.37 W	Ancho	A-Length, J-Gut, J-Length, J-Oto, RcountJ	
21-Sep-04	20:04	98	1	9E		152	56 51.48 N	156 51.44 W	Ancho	A-Length, J-Gut, J-Length, J-Oto, RCountJ	

Figure 1. Station Map

