



HOKKAIDO UNIVERSITY

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THE “USHIO MARU”

CRUISE 145

CRUISE 146

CRUISE 147

IN MARCH-MAY 2008

1. Cruise Itinerary

Cruise 145			
Departure from Hakodate	Mar.	17	, 2008
Arrival at and departure from Usujiri		17	
Start hydrographic research (US08075) and larvae net sampling		17	
Arrival at Usujiri		18	
Departure from Usujiri		19	
Finish hydrographic research (US08094) and larvae net sampling		19	
Arrival at Usujiri		19	
Departure from Usujiri		20	
Return to Hakodate		20	
Total coverage 300.4 miles			
Cruise 146			
Departure from Hakodate	Apr.	14	, 2008
Arrival at Usujiri		14	
Departure from Usujiri		15	
Start hydrographic research (US08095) and larvae net sampling		15	
Retrieval Sediment trap system		15	
Arrival at and departure from Mori		15	
Set Sediment trap system		16	
Arrival at Usujiri		16	
Departure from Usujiri		17	
Sampling by frame trawl net		17	
Arrival at Usujiri		17	
Departure from Usujiri		19	
Arrival at Muroran		19	
Departure from Muroran		20	
Arrival at and departure from Muroran		21	
Arrival at Usujiri		21	
Departure from Usujiri		22	
Start frame trawl net samling		22	
Finish frame trawl net sampling		23	
Finish hydrographic research (US08131) and larvae net sampling		23	
Return to Hakodate		24	
Total coverage 651.2 miles			
Cruise 147			
Departure from Hakodate	May	7	, 2008
Arrival at Muroran		7	
Departure from Muroran		8	
Start hydrographic research (US08132) and larvae net sampling		8	
Arrival at Muroran		8	
Departure from Muroran		9	
Arrival at Usujiri		9	
Departure from Usujiri		10	
Sampling by bottom long line		10	
Arrival at Usujiri		10	
Departure from Usujiri		11	
Sampling by frame trawl net		11	
Arrival at Usujiri		12	
Departure from Usujiri		13	
Start trawl net research		13	
Arrival at Muroran		13	
Ddeparture from Muroran		15	
Finish trawl net research		15	
Arrival at Usujiri		15	
Departure from Usujiri		16	
Start frame trawl net sampling		16	
Arrival at Usujiri		16	
Departure from Usujiri		17	
Finish hydrographic research (US08170) and larvae net sampling		17	
Finish frame trawl net sampling		17	
Arrival at and departure from Usujiri		17	
Return to Hakodate		18	
Total coverage 682.4 miles			

2. Vessel Personnel

Captain:		Associate Professor	Hidekazu Yamaguchi
Crew :	Chief Officer	Assistant Professor	Osamu Kimura
	Second Officer	Assistant Professor	Naoto Kobayashi
	And 13 men		
Cruise 145			
Research Staff :	Associate Professor	(Laboratory of Marine Bioresource Science)	Toshikuni Nakatani
	Assistant Professor	(Field Science Center for Northern Biosphere)	Jun Yamamoto
Graduate Students :	Laboratory of Marine Bioresource Science :		2 persons
	Laboratory of Marine Bioresource and Environment Sensing :		1 person
Under Graduate Students :	Department of Marine Biological Science :		1 person
	Department of Marine Production System Science :		3 persons
	Department of Marine Biological Science (Third grade) :		4 persons
Cruise 146			
Research Staff :	Professor	(Laboratory of Marine Environmental Science)	Mitsuru Yanada
	Associate Professor	(Laboratory of Marine Environmental Science)	Isao Kudo
	Associate Professor	(Laboratory of Marine Bioresource and Environment Sensing)	Tohru Mukai
	Associate Professor	(Laboratory of Marine Bioresource Science)	Tetsuya Takatsu
Graduate Students :	Chair of Marine Environmental Science :		1 person
	Chair of Marine Bioresource and Environment Sensing :		3 persons
	Chair of of Marine Bioresource Science :		4 persons
	Graduate School of Environmental Science :		7 persons
Under Graduate Students :	Department of Fisheries Oceanography and Marine Science :		7 persons
	Department of Marine Production System Science :		7 persons
	Department of Marine Biological Science :		2 persons
Cruise 147			
Research Staff :	Professor	(Laboratory of Marine Bioresource Science)	Toyomi Takahashi
	Professor	(Laboratory of Marine Environmental Science)	Shigeru Montani
	Associate Professor	(Laboratory of Marine Bioresource and Environment Sensing)	Tohru Mukai
	Associate Professor	(Laboratory of Marine Bioresource and Environment Sensing)	Susumu Shimizu
Graduate Students :	Chair of of Marine Bioresource Science :		3 persons
	Chair of Marine Bioresource and Environment Sensing :		4 persons
	Graduate School of the Fisheries Sciences :		1 person
	Graduate School of Environmental Science :		7 persons
Under Graduate Students :	Department of Marine Biological Science :		5 persons
	Department of Fisheries Oceanography and Marine Science :		2 persons
	Department of Marine Production System Science :		8 persons
	Department of Marine Production System Science (Third grade) :		3 persons
	Department of Applied Marine Science (Third grade) :		3 persons

3. Data on Temperature, Salinity, and Computed Dynamic Depth Anomaly

Hydrographic work on deck and the data processing were made by the deck officers, crews, research staff and cadets of the “Ushio Maru”.

Temperature and salinity were measured by CTD (Seabird SBE9Plus and SBE-19).

Dynamic computations were made using a desk-top computer aboard the “Ushio Maru”.

Figure 1: Oceanographic stations (Cruise 145)

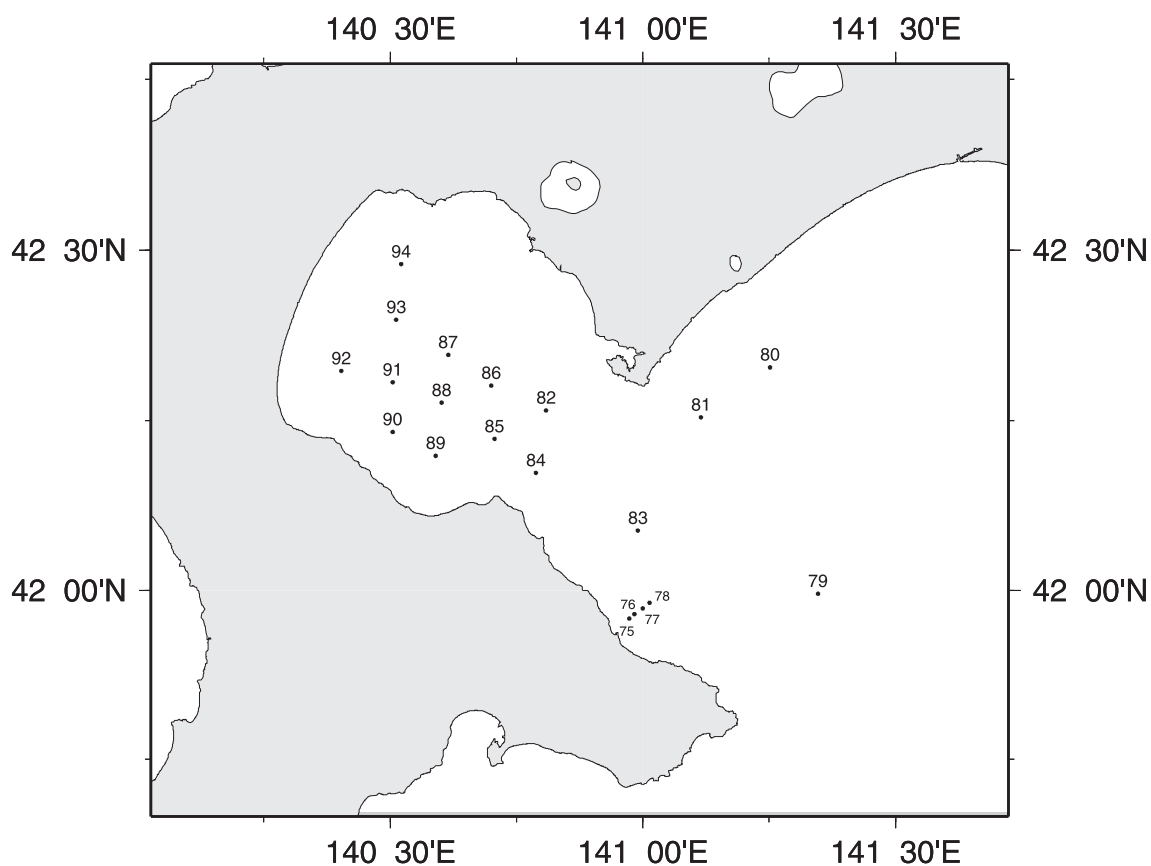


Figure 2: Oceanographic stations (Cruise 146)

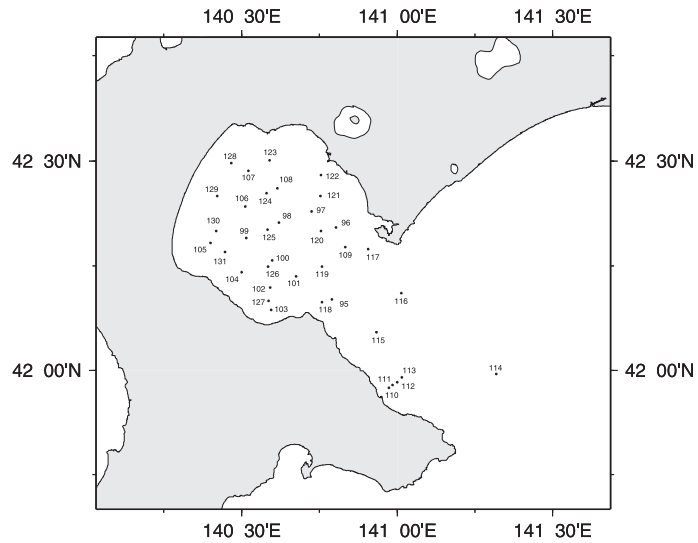


Figure 3: Oceanographic stations (Cruise 147)

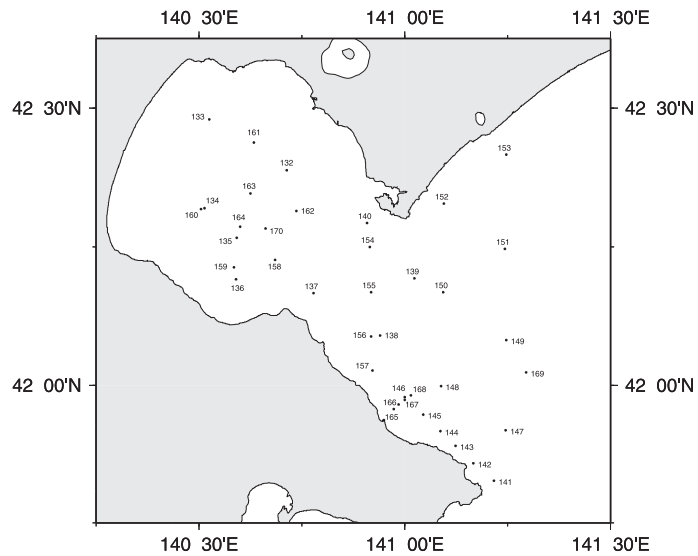


Table 1: List of oceanographic stations

Cruise 145

Station	Lat. (N)*	Long. (E)*	Date	S.M.T.	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr. Bar. (hPa)
US08075	41-57.5	140-58.4	3/17	1440-1444	81	North-1	East-1	North-3	5.3	2.3	c 1016.2
US08076	41-57.9	140-59.0	3/17	1449-1453	86	North-1	East-1	North-3	5.0	2.6	c 1016.2
US08077	41-58.4	141-00.0	3/17	1500-1504	90	NNW-2	East-1	NNW-4	5.2	2.8	c 1016.3
US08078	41-58.9	141-00.8	3/17	1511-1515	96	NNW-2	East-1	NNW-4	5.2	2.4	c 1016.4
US08079	41-59.7	141-20.8	3/17	1901-1915	327	NW -1	East-1	NW -2	3.2	3.4	c 1018.1
US08080	42-19.7	141-15.1	3/17	2300-2307	100	West-1	East-1	West-3	3.7	1.5	bc 1019.0
US08081	42-15.3	141-06.9	3/17	2356-2400	84	WSW-1	East-1	WSW-3	3.3	1.5	bc 1019.4
US08082	42-15.9	140-48.5	3/18	0220-0224	70	West-1	East-1	West-3	3.3	2.3	bc 1020.1
US08083	42-05.3	140-59.4	3/18	0344-0348	84	West-1	East-1	West-2	2.8	1.6	o 1020.6
US08084	42-10.4	140-47.3	3/19	0731-0736	93	ENE-2	East-1	ENE-4	3.4	3.1	bc 1021.1
US08085	42-13.4	140-42.4	3/19	0830-0835	90	ENE-2	East-1	ENE-4	3.0	2.7	bc 1021.1
US08086	42-18.1	140-42.0	3/19	0926-0929	66	East-2	East-1	East-4	3.7	2.9	c 1021.1
US08087	42-20.8	140-36.9	3/19	1008-1012	88	ESE-2	East-1	ESE-4	4.7	3.2	c 1021.5
US08088	42-16.6	140-36.1	3/19	1048-1052	92	East-2	East-1	East-4	5.2	2.9	c 1021.6
US08089	42-11.9	140-35.4	3/19	1202-1206	85	East-3	East-1	East-5	4.4	3.9	c 1020.4
US08090	42-14.0	140-30.3	3/19	1304-1308	81	East-2	East-1	East-4	4.0	4.5	c 1020.4
US08091	42-18.4	140-30.3	3/19	1353-1358	93	ESE-2	East-1	ESE-4	3.9	4.4	c 1020.5
US08092	42-19.4	140-24.2	3/19	1457-1501	63	SE -1	East-1	SE -3	5.1	4.2	c 1020.6
US08093	42-23.9	140-30.7	3/19	1559-1604	96	SSE-1	East-1	SSE-3	4.1	3.7	c 1020.6
US08094	42-28.8	140-31.3	3/19	1644-1648	77	SSW-1	East-1	SSW-2	4.4	4.3	c 1020.6

Cruise 146

Station	Lat. (N)*	Long. (E)*	Date	S.M.T.	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr. Bar. (hPa)
US08095	42-10.2	140-47.4	4/15	0805-0810	95	West-2	East-1	West-4	3.5	3.5	f 1019.1
US08096	42-20.5	140-48.2	4/15	0922-0926	55	West-2	East-1	West-4	4.3	3.0	f 1019.4
US08097	42-22.8	140-43.5	4/15	1003-1008	58	West-2	East-1	West-4	5.2	4.8	bc 1019.1
US08098	42-21.2	140-37.2	4/15	1050-1055	87	NW -1	East-1	NW -3	6.1	5.4	bc 1019.1
US08099	42-19.0	140-30.9	4/15	11560-1159	95	Calm	East-1	Calm	8.6	6.1	bc 1018.7
US08100	42-15.8	140-35.9	4/15	1407-1415	93	Calm	East-1	Calm	11.3	4.7	bc 1018.5
US08101	42-13.5	140-40.5	4/15	1518-1522	90	SSE-1	East-2	SSE-3	8.9	6.7	bc 1017.0
US08102	42-11.9	140-35.5	4/15	1629-1633	84	Calm	East-2	Calm	10.3	7.0	bc 1017.0
US08103	42-08.7	140-35.7	4/15	1716-1720	64	Calm	East-1	Calm	10.2	5.8	bc 1017.0
US08104	42-14.1	140-30.0	4/16	0722-0727	79	SW -3	East-1	SW -5	10.4	4.2	bc 1017.0
US08105	42-18.3	140-24.0	4/16	0827-0831	59	WSW-3	East-1	WSW-5	10.7	6.0	bc 1017.1
US08106	42-23.5	140-30.7	4/16	0945-0952	97	SW -2	East-1	SW -4	10.8	5.5	bc 1017.8
US08107	42-28.6	140-31.3	4/16	1046-1050	79	WSW-2	East-1	WSW-3	11.3	6.0	bc 1018.0
US08108	42-26.1	140-36.9	4/16	1135-1139	85	SW -1	East-1	SW -3	10.1	5.9	bc 1017.6
US08109	42-17.7	140-50.0	4/16	1323-1326	70	West-2	East-1	West-4	12.7	5.7	bc 1017.2
US08110	41-57.5	140-58.4	4/17	1202-1207	82	Calm	NE-1	Calm	7.9	4.8	f 1023.2
US08111	41-57.9	140-59.1	4/17	1214-1218	86	Calm	NE-1	Calm	5.9	4.6	f 1023.0
US08112	41-58.3	141-00.0	4/17	1225-1229	91	Calm	NE-1	Calm	5.7	3.9	c 1023.0
US08113	41-59.0	141-00.9	4/17	1237-1242	97	East-1	NE-1	Calm	6.0	4.1	f 1023.0
US08114	41-59.5	141-19.1	4/17	1454-1505	304	SE -2	East-1	SE -4	3.4	3.4	f 1022.1
US08115	42-05.5	140-56.0	4/21	0910-0917	86	Calm	East-1	Calm	7.2	4.8	c 1023.2
US08116	42-11.1	141-00.8	4/21	0958-1005	79	East-1	East-1	East-3	7.0	5.0	c 1023.6
US08117	42-17.4	140-54.4	4/21	1052-1057	57	ENE-1	East-1	ENE-3	7.8	4.6	c 1023.6
US08118	42-09.8	140-45.5	4/22	0926-0931	89	East-1	ESE-1	East-2	7.4	7.2	c 1021.1
US08119	42-14.9	140-45.5	4/22	1014-1018	80	East-1	ESE-1	East-3	7.6	6.5	c 1021.1
US08120	42-20.0	140-45.3	4/22	1055-1059	60	SE -1	ESE-1	SE -2	7.0	5.0	c 1020.6
US08121	42-25.0	140-45.2	4/22	1132-1136	56	Calm	ESE-1	Calm	9.0	6.4	c 1020.3
US08122	42-28.0	140-45.3	4/22	1226-1229	54	Calm	ESE-1	Calm	10.4	8.3	c 1019.6
US08123	42-30.1	140-35.4	4/22	1322-1326	71	Calm	ESE-1	Calm	9.5	8.3	c 1019.1
US08124	42-25.4	140-34.8	4/22	1400-1404	91	Calm	ESE-1	Calm	9.8	8.2	c 1019.0
US08125	42-20.2	140-35.0	4/22	1540-1544	94	ESE-1	ESE-1	ESE-2	8.3	7.1	c 1018.6
US08126	42-14.9	140-35.1	4/22	1624-1628	93	Calm	ESE-1	Calm	8.2	6.9	c 1018.4
US08127	42-10.0	140-35.2	4/22	1703-1707	76	East-1	ESE-1	East-2	8.2	6.7	c 1018.3
US08128	42-29.7	140-28.0	4/23	0535-0538	64	Calm	SE -1	Calm	6.3	7.5	c 1018.6
US08129	42-25.0	140-25.3	4/23	0615-0618	70	SSE-1	SE -1	SSE-3	7.3	8.6	c 1018.1
US08130	42-20.0	140-25.1	4/23	0655-0659	71	SSE-1	SE -1	SSE-3	7.4	7.5	c 1018.0
US08131	42-17.0	140-26.8	4/23	0829-0833	73	ESE-1	SE -1	ESE-2	7.8	6.3	c 1018.0

Cruise 147

Station	Lat. (N)*	Long. (E)*	Date	S.M.T.	Depth	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr. Bar. (hPa)
US08132	42-23.3	140-42.8	5/8	0707-0714	61	Calm	East-1	Calm	8.8	7.2	bc 1009.1
US08133	42-28.8	140-31.5	5/8	0818-0824	76	Calm	East-1	Calm	8.3	7.0	bc 1009.6
US08134	42-19.2	140-30.8	5/8	0932-0940	94	Calm	ESE-1	Calm	10.7	7.2	bc 1009.6
US08135	42-16.0	140-35.5	5/8	1014-1024	91	ENE-1	ESE-1	ENE-2	10.1	7.9	bc 1009.6
US08136	42-11.5	140-35.4	5/8	1111-1118	82	Calm	ESE-1	Calm	11.4	8.0	bc 1009.6
US08137	42-10.0	140-46.7	5/8	1213-1221	96	Calm	ESE-1	Calm	12.1	7.9	bc 1009.1
US08138	42-05.4	140-56.4	5/8	1314-1320	85	SSE-1	ESE-1	SSE-2	9.7	6.1	bc 1008.8
US08139	42-11.6	141-01.4	5/8	1403-1409	79	Calm	ESE-1	Calm	10.7	6.7	bc 1008.7
US08140	42-17.6	140-54.5	5/8	1451-1503	57	Calm	ESE-1	Calm	13.1	9.9	bc 1008.2
US08141	41-49.6	141-13.0	5/10	0733-0740	173	NE -3	NE -1	NE -4	5.6	7.0	c 1023.5
US08142	41-51.5	141-10.0	5/10	0802-0806	107	NE -2	NE -1	NE -4	5.5	6.0	bc 1023.5
US08143	41-53.4	141-07.4	5/10	0826-0830	96	NNW-1	NE -1	NNW-2	5.8	5.7	bc 1023.3
US08144	41-55.0	141-05.2	5/10	1220-1226	111	Calm	NE -1	Calm	7.3	6.4	bc 1022.2
US08145	41-56.8	141-02.7	5/10	1244-1249	106	ESE-1	NE -1	ESE-2	8.6	6.4	bc 1022.0
US08146	41-58.7	141-00.0	5/10	1307-1313	88	Calm	NE -1	Calm	9.2	6.5	bc 1021.7
US08147	41-55.1	141-14.7	5/11	0715-0725	244	Calm	NE -1	Calm	6.7	6.6	bc 1019.9
US08148	41-59.9	141-05.3	5/11	0826-0830	118	NE -1	NE -1	NE -3	6.5	5.9	c 1020.1
US08149	42-04.9	141-14.8	5/11	1038-1046	222	East-1	NE -1	East-3	6.3	6.8	bc 1020.1
US08150	42-10.1	141-05.6	5/11	1144-1148	94	SE -1	NE -1	SE -3	9.8	6.4	bc 1020.0
US08151	42-14.8	141-14.6	5/11	1242-1248	164	SSE-1	NE -1	SSE-3	7.1	6.8	bc 1019.6
US08152	42-19.7	141-05.7	5/11	1346-1349	55	South-1	NE -1	South-3	8.8	6.4	bc 1019.5
US08153	42-25.0	141-14.8	5/11	1532-1536	69	SSW-2	South-1	SSW-3	7.7	6.9	bc 1019.1
US08154	42-15.0	140-54.9	5/12	0527-0530	63	NW -1	East-1	NW -2	5.7	5.2	bc 1023.5
US08155	42-10.1	140-55.1	5/12	0605-0608	77	West-2	East-1	West-3	7.1	6.3	bc 1023.7
US08156	42-05.3	140-55.1	5/12	0644-0648	88	West-1	East-1	West-2	7.3	6.7	bc 1024.0
US08157	42-01.6	140-55.3	5/12	0715-0719	80	West-1	East-1	West-2	7.6	7.3	bc 1024.0
US08158	42-13.6	140-41.1	5/13	0725-0730	90	East-3	East-1	East-5	7.5	7.4	c 1024.8
US08159	42-12.8	140-35.1	5/13	0922-0927	87	East-3	East-1	East-5	8.0	7.2	bc 1024.5
US08160	42-19.1	140-30.3	5/13	1058-1104	94	East-3	East-1	East-5	7.7	7.3	bc 1024.2
US08161	42-26.3	140-38.0	5/13	1301-1305	82	ESE-3	East-1	ESE-5	7.1	7.4	bc 1023.8
US08162	42-18.9	140-44.2	5/15	0802-0806	62	ESE-1	ESE-2	ESE-2	7.7	7.6	c 1012.1
US08163	42-20.8	140-37.5	5/15	0924-0929	86	Calm	ESE-2	Calm	8.0	7.0	f 1012.2
US08164	42-17.2	140-36.0	5/15	1049-1054	92	Calm	ESE-1	Calm	8.8	7.3	o 1012.6
US08165	41-57.4	140-58.4	5/16	1233-1237	81	Calm	ESE-1	Calm	13.1	7.7	bc 1015.2
US08166	41-57.9	140-59.1	5/16	1243-1247	86	Calm	ESE-1	Calm	12.6	8.3	bc 1015.1
US08167	41-58.4	141-00.0	5/16	1254-1258	91	Calm	ESE-1	Calm	13.2	7.9	bc 1015.1
US08168	41-58.9	141-00.9	5/16	1305-1310	97	ESE-1	ESE-1	ESE-2	12.7	8.0	bc 1015.1
US08169	42-01.4	141-17.7	5/16	1506-1515	262	Calm	SSE-1	Calm	14.8	7.5	bc 1014.1
US08170	42-17.0	140-39.7	5/17	1144-1148	84	SE -1	ESE-1	SE -2	11.9	10.1	bc 1013.1

(*) : Fixed position by Global Positioning System

Table 2: Oceanographic data

STATION US08075 LATITUDE 41-57.5 N LONGITUDE 140-58.4 E DEPTH (m) 81				STATION US08076 LATITUDE 41-57.9 N LONGITUDE 140-59.0 E DEPTH (m) 86				STATION US08077 LATITUDE 41-58.4 N LONGITUDE 141-00.0 E DEPTH (m) 90			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	1.924	32.927	26.317	5	2.911	32.988	26.287	5	2.895	33.017	26.311
10	1.875	32.997	26.376	10	2.785	32.994	26.302	10	2.803	33.041	26.338
20	2.456	33.185	26.482	20	2.723	33.090	26.384	20	3.142	33.208	26.442
30	2.521	33.187	26.478	30	2.934	33.226	26.475	30	3.083	33.265	26.493
40	2.614	33.233	26.507	40	3.345	33.325	26.517	40	3.145	33.273	26.494
50	3.097	33.365	26.571	50	3.282	33.388	26.573	50	3.194	33.345	26.547
75	3.498	33.574	26.701	75	3.676	33.612	26.714	75	3.653	33.583	26.694

STATION US08078 LATITUDE 41-58.9 N LONGITUDE 141-00.8 E DEPTH (m) 96				STATION US08079 LATITUDE 41-59.7 N LONGITUDE 141-20.8 E DEPTH (m) 327				STATION US08080 LATITUDE 42-19.7 N LONGITUDE 141-15.1 E DEPTH (m) 100			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	2.414	32.873	26.236	5	1.265	32.809	26.267	5	1.964	32.813	26.222
10	3.012	32.999	26.287	10	1.136	32.882	26.334	10	1.972	32.812	26.221
20	3.126	33.111	26.366	20	1.475	32.952	26.368	20	1.949	32.805	26.217
30	3.155	33.208	26.441	30	1.576	32.975	26.380	30	1.790	32.833	26.251
40	3.256	33.257	26.471	40	1.584	32.983	26.386	40	1.580	32.895	26.316
50	3.375	33.346	26.531	50	1.601	32.987	26.388	50	1.457	32.908	26.334
75	3.474	33.521	26.661	75	1.977	33.075	26.431	75	1.776	33.041	26.419
				100	2.829	33.261	26.511				
				125	3.516	33.375	26.541				
				150	3.344	33.358	26.543				
				175	3.235	33.394	26.582				
				200	2.818	33.368	26.599				
				250	2.548	33.382	26.632				
				300	3.194	33.567	26.724				

STATION US08081 LATITUDE 42-15.3 N LONGITUDE 141-06.9 E DEPTH (m) 84				STATION US08082 LATITUDE 42-15.9 N LONGITUDE 140-48.5 E DEPTH (m) 70				STATION US08083 LATITUDE 42-05.3 N LONGITUDE 140-59.4 E DEPTH (m) 84			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	2.047	32.836	26.234	5	2.677	32.920	26.253	5	1.897	32.903	26.299
10	1.992	32.859	26.257	10	2.675	32.922	26.254	10	1.901	32.906	26.301
20	1.887	32.893	26.292	20	2.016	32.956	26.333	20	1.914	32.904	26.299
30	1.880	32.929	26.322	30	1.933	33.032	26.400	30	1.913	32.923	26.314
40	2.021	33.069	26.423	40	2.182	33.092	26.429	40	1.611	32.973	26.375
50	2.424	33.127	26.438	50	2.601	33.184	26.469	50	1.990	33.083	26.436
75	2.539	33.142	26.441								

STATION US08084 LATITUDE 42-10.4 N LONGITUDE 140-47.3 E DEPTH (m) 93				STATION US08085 LATITUDE 42-13.4 N LONGITUDE 140-42.4 E DEPTH (m) 90				STATION US08086 LATITUDE 42-18.1 N LONGITUDE 140-42.0 E DEPTH (m) 66			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	3.159	32.962	26.244	5	2.590	32.894	26.239	5	2.819	32.875	26.204
10	3.092	33.079	26.343	10	2.585	32.899	26.243	10	2.498	32.892	26.245
20	3.053	33.254	26.487	20	2.585	33.133	26.430	20	1.753	32.948	26.345
30	3.287	33.327	26.524	30	2.994	33.233	26.475	30	2.010	33.033	26.395
40	3.312	33.477	26.641	40	3.062	33.280	26.507	40	2.289	33.107	26.433
50	3.420	33.570	26.705	50	3.406	33.480	26.635	50	2.679	33.192	26.469
75	4.565	33.802	26.774	75	4.041	33.695	26.744				

STATION US08087 LATITUDE 42-20.8 N LONGITUDE 140-36.9 E DEPTH (m) 88				STATION US08088 LATITUDE 42-16.6 N LONGITUDE 140-36.1 E DEPTH (m) 92				STATION US08089 LATITUDE 42-11.9 N LONGITUDE 140-35.4 E DEPTH (m) 85			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	2.943	32.975	26.274	5	2.791	32.948	26.265	5	3.930	33.128	26.304
10	2.829	32.949	26.263	10	2.753	32.951	26.270	10	3.846	33.160	26.338
20	2.903	33.147	26.415	20	2.446	33.094	26.410	20	3.651	33.350	26.508
30	2.936	33.195	26.450	30	3.039	33.269	26.500	30	3.604	33.395	26.549
40	3.036	33.229	26.468	40	3.330	33.336	26.527	40	3.529	33.435	26.587
50	3.104	33.316	26.532	50	3.521	33.397	26.558	50	3.372	33.508	26.660
75	3.941	33.678	26.741	75	4.020	33.669	26.725	75	3.780	33.622	26.712

STATION US08090 LATITUDE 42-14.0 N LONGITUDE 140-30.3 E DEPTH (m) 81				STATION US08091 LATITUDE 42-18.4 N LONGITUDE 140-30.3 E DEPTH (m) 93				STATION US08092 LATITUDE 42-19.4 N LONGITUDE 140-24.2 E DEPTH (m) 63			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	3.970	33.153	26.320	5	4.263	33.194	26.323	5	4.079	33.166	26.319
10	3.716	33.233	26.409	10	3.877	33.181	26.352	10	3.842	33.221	26.387
20	3.339	33.347	26.535	20	3.752	33.313	26.469	20	3.664	33.364	26.518
30	3.416	33.384	26.557	30	3.363	33.363	26.546	30	3.539	33.396	26.555
40	3.427	33.418	26.584	40	3.499	33.495	26.638	40	3.496	33.421	26.579
50	3.413	33.453	26.613	50	3.490	33.529	26.666	50	3.368	33.461	26.623
75	3.480	33.507	26.649	75	3.924	33.672	26.737				

STATION US08093 LATITUDE 42-23.9 N LONGITUDE 140-30.7 E DEPTH (m) 96				STATION US08094 LATITUDE 42-28.8 N LONGITUDE 140-31.3 E DEPTH (m) 77				STATION US08095 LATITUDE 42-10.2 N LONGITUDE 140-47.4 E DEPTH (m) 95			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	3.676	33.029	26.250	5	4.140	33.076	26.242	5	3.437	32.506	25.856
10	3.044	33.062	26.334	10	3.785	33.146	26.333	10	3.191	32.541	25.906
20	2.737	33.119	26.406	20	3.351	33.226	26.437	20	2.674	32.577	25.979
30	2.881	33.182	26.445	30	3.281	33.252	26.465	30	1.795	32.759	26.191
40	3.167	33.272	26.491	40	3.299	33.307	26.507	40	2.021	32.968	26.342
50	3.311	33.398	26.579	50	3.331	33.317	26.512	50	2.091	33.111	26.452
75	3.431	33.566	26.701					75	3.753	33.604	26.700

STATION US08096 LATITUDE 42-20.5 N LONGITUDE 140-48.2 E DEPTH (m) 55				STATION US08097 LATITUDE 42-22.8 N LONGITUDE 140-43.5 E DEPTH (m) 58				STATION US08098 LATITUDE 42-21.2 N LONGITUDE 140-37.2 E DEPTH (m) 87			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	2.870	32.557	25.946	5	4.601	32.619	25.831	5	4.512	32.571	25.802
10	2.437	32.528	25.958	10	4.437	32.642	25.867	10	4.466	32.590	25.822
20	2.352	32.549	25.982	20	4.030	32.680	25.938	20	3.322	32.824	26.120
30	2.741	32.832	26.177	30	2.780	32.942	26.261	30	3.080	32.958	26.248
40	3.338	33.054	26.301	40	2.607	33.041	26.355	40	3.025	33.000	26.286
50	1.826	33.033	26.409	50	2.951	33.216	26.466	50	2.452	32.988	26.325
								75	2.905	33.217	26.470

STATION US08099 LATITUDE 42-19.0 N LONGITUDE 140-30.9 E DEPTH (m) 95				STATION US08100 LATITUDE 42-15.8 N LONGITUDE 140-35.9 E DEPTH (m) 93				STATION US08101 LATITUDE 42-13.5 N LONGITUDE 140-40.5 E DEPTH (m) 90			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	4.621	32.595	25.810	5	4.491	32.608	25.834	5	4.532	32.632	25.848
10	4.364	32.632	25.866	10	4.326	32.618	25.859	10	4.449	32.641	25.865
20	3.777	32.681	25.963	20	2.708	32.754	26.117	20	4.148	32.658	25.909
30	1.479	32.713	26.176	30	2.898	32.887	26.207	30	2.877	32.833	26.166
40	0.770	32.788	26.281	40	2.724	32.928	26.255	40	2.388	32.931	26.284
50	2.053	33.028	26.388	50	2.109	32.925	26.301	50	2.468	33.006	26.338
75	3.437	33.498	26.646	75	3.365	33.420	26.591	75	3.532	33.520	26.655

STATION US08102 LATITUDE 42-11.9 N LONGITUDE 140-35.5 E DEPTH (m) 84				STATION US08103 LATITUDE 42-08.7 N LONGITUDE 140-35.7 E DEPTH (m) 64				STATION US08104 LATITUDE 42-14.1 N LONGITUDE 140-30.0 E DEPTH (m) 79			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	4.310	32.467	25.741	5	2.938	32.602	25.976	5	3.857	32.501	25.812
10	3.210	32.502	25.873	10	2.144	32.710	26.126	10	3.364	32.559	25.904
20	2.443	32.797	26.173	20	1.848	32.796	26.217	20	2.440	32.846	26.212
30	2.708	32.889	26.225	30	1.723	32.842	26.263	30	3.133	32.932	26.223
40	2.356	32.882	26.248	40	2.786	33.082	26.373	40	2.603	32.951	26.283
50	2.333	33.012	26.354	50	3.199	33.277	26.492	50	2.478	33.046	26.369
75	3.434	33.470	26.624					75	3.750	33.634	26.725

STATION US08105 LATITUDE 42-18.3 N LONGITUDE 140-24.0 E DEPTH (m) 59				STATION US08106 LATITUDE 42-23.5 N LONGITUDE 140-30.7 E DEPTH (m) 97				STATION US08107 LATITUDE 42-28.6 N LONGITUDE 140-31.3 E DEPTH (m) 79			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	5.910	32.264	25.402	5	5.522	32.466	25.608	5	5.200	32.727	25.851
10	5.464	32.305	25.487	10	4.355	32.521	25.779	10	4.852	32.657	25.835
20	2.736	32.743	26.106	20	3.543	32.709	26.008	20	3.811	32.781	26.040
30	2.335	32.846	26.221	30	2.628	32.865	26.213	30	3.415	32.994	26.247
40	2.837	33.007	26.308	40	1.896	32.822	26.235	40	3.166	33.186	26.422
50	2.902	33.143	26.411	50	2.389	33.053	26.382	50	3.203	33.303	26.513
				75	3.713	33.613	26.712	75	3.958	33.679	26.740

STATION US08108 LATITUDE 42-26.1 N LONGITUDE 140-36.9 E DEPTH (m) 85				STATION US08109 LATITUDE 42-17.7 N LONGITUDE 140-50.0 E DEPTH (m) 70				STATION US08110 LATITUDE 41-57.5 N LONGITUDE 140-58.4 E DEPTH (m) 82			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	5.188	32.337	25.543	5	5.464	32.601	25.721	5	3.495	32.517	25.860
10	4.504	32.553	25.789	10	5.148	32.603	25.759	10	3.186	32.560	25.922
20	3.998	32.659	25.924	20	4.037	32.663	25.924	20	2.433	32.587	26.006
30	3.888	32.682	25.953	30	2.822	32.884	26.211	30	1.986	32.776	26.191
40	3.150	32.920	26.212	40	2.656	32.960	26.286	40	1.939	32.887	26.283
50	3.186	33.029	26.295	50	2.629	33.072	26.378	50	1.483	32.939	26.357
75	3.529	33.506	26.644					75	2.355	33.178	26.485

STATION US08111 LATITUDE 41-57.9 N LONGITUDE 140-59.1 E DEPTH (m) 86				STATION US08112 LATITUDE 41-58.3 N LONGITUDE 141-00.0 E DEPTH (m) 91				STATION US08113 LATITUDE 41-59.0 N LONGITUDE 141-00.9 E DEPTH (m) 97			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	3.306	32.514	25.874	5	3.537	32.543	25.876	5	2.767	32.502	25.911
10	2.999	32.532	25.915	10	2.722	32.532	25.938	10	2.648	32.531	25.944
20	2.421	32.523	25.956	20	1.804	32.481	25.968	20	2.069	32.544	26.000
30	1.054	32.712	26.203	30	0.755	32.677	26.192	30	1.115	32.607	26.114
40	0.918	32.804	26.284	40	1.107	32.900	26.350	40	0.735	32.697	26.209
50	1.299	32.918	26.352	50	1.252	32.915	26.353	50	0.755	32.751	26.251
75	3.065	33.347	26.560	75	2.043	33.159	26.493	75	1.038	32.942	26.389

STATION US08114 LATITUDE 41-59.5 N LONGITUDE 141-19.1 E DEPTH (m) 304				STATION US08115 LATITUDE 42-05.5 N LONGITUDE 140-56.0 E DEPTH (m) 86				STATION US08116 LATITUDE 42-11.1 N LONGITUDE 141-00.8 E DEPTH (m) 79			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	3.065	32.558	25.930	5	5.087	32.527	25.705	5	5.362	32.577	25.714
10	2.286	32.724	26.127	10	4.825	32.529	25.736	10	5.089	32.590	25.755
20	2.763	32.844	26.185	20	2.783	32.478	25.890	20	1.733	32.520	26.004
30	1.068	32.758	26.238	30	2.767	32.857	26.195	30	1.198	32.747	26.221
40	0.985	32.867	26.331	40	2.814	32.939	26.256	40	1.630	32.875	26.296
50	1.191	32.922	26.362	50	2.565	32.978	26.308	50	0.954	32.828	26.302
75	1.670	33.173	26.532	75	3.212	33.335	26.537	75	1.454	33.004	26.412
100	2.701	33.282	26.540								
125	3.690	33.445	26.580								
150	3.470	33.417	26.579								
175	3.577	33.462	26.605								
200	3.980	33.714	26.765								
250	3.157	33.497	26.672								

STATION US08117 LATITUDE 42-17.4 N LONGITUDE 140-54.4 E DEPTH (m) 57				STATION US08118 LATITUDE 42-09.8 N LONGITUDE 140-45.5 E DEPTH (m) 89				STATION US08119 LATITUDE 42-14.9 N LONGITUDE 140-45.5 E DEPTH (m) 80			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	4.760	32.430	25.665	5	4.730	32.514	25.734	5	5.263	32.568	25.718
10	4.423	32.444	25.710	10	3.482	32.557	25.892	10	4.866	32.554	25.751
20	2.697	32.627	26.016	20	2.956	32.828	26.155	20	3.155	32.665	26.008
30	2.103	32.772	26.179	30	2.597	32.828	26.186	30	2.681	32.858	26.202
40	1.600	32.817	26.251	40	2.650	33.003	26.321	40	2.685	32.964	26.286
50	1.688	32.843	26.266	50	2.723	33.038	26.343	50	2.806	33.089	26.377
				75	3.122	33.341	26.550				

STATION US08120 LATITUDE 42-20.0 N LONGITUDE 140-45.3 E DEPTH (m) 60				STATION US08121 LATITUDE 42-25.0 N LONGITUDE 140-45.2 E DEPTH (m) 56				STATION US08122 LATITUDE 42-28.0 N LONGITUDE 140-45.3 E DEPTH (m) 54			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	5.067	32.460	25.655	5	6.181	32.582	25.620	5	6.000	32.538	25.608
10	4.905	32.448	25.663	10	5.687	32.546	25.652	10	5.336	32.561	25.704
20	3.598	32.423	25.775	20	4.176	32.577	25.842	20	4.434	32.627	25.855
30	1.576	32.654	26.122	30	3.421	32.500	25.853	30	2.407	32.780	26.162
40	1.314	32.756	26.221	40	2.797	32.848	26.184	40	2.755	32.926	26.251

STATION US08123 LATITUDE 42-30.1 N LONGITUDE 140-35.4 E DEPTH (m) 71				STATION US08124 LATITUDE 42-25.4 N LONGITUDE 140-34.8 E DEPTH (m) 91				STATION US08125 LATITUDE 42-20.2 N LONGITUDE 140-35.0 E DEPTH (m) 94			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	6.393	32.570	25.584	5	7.592	32.475	25.349	5	6.335	32.659	25.661
10	5.652	32.517	25.633	10	5.785	32.529	25.626	10	6.009	32.547	25.614
20	4.211	32.636	25.885	20	3.764	32.537	25.850	20	5.036	32.489	25.681
30	3.205	32.840	26.143	30	3.158	32.809	26.122	30	2.441	32.681	26.080
40	2.791	32.961	26.276	40	2.807	32.940	26.257	40	2.532	32.884	26.236
50	2.888	33.125	26.398	50	2.609	33.053	26.364	50	2.641	32.990	26.311
				75	3.476	33.524	26.663	75	3.234	33.368	26.561

STATION US08126 LATITUDE 42-14.9 N LONGITUDE 140-35.1 E DEPTH (m) 93				STATION US08127 LATITUDE 42-10.0 N LONGITUDE 140-35.2 E DEPTH (m) 76				STATION US08128 LATITUDE 42-29.7 N LONGITUDE 140-28.0 E DEPTH (m) 64			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	5.937	32.511	25.594	5	7.608	32.385	25.276	5	4.385	32.464	25.731
10	4.856	32.471	25.687	10	5.555	32.480	25.615	10	4.059	32.535	25.820
20	3.358	32.589	25.930	20	4.125	32.637	25.895	20	2.757	32.580	25.974
30	2.686	32.707	26.081	30	2.782	32.828	26.170	30	2.944	32.872	26.191
40	2.908	32.941	26.249	40	2.654	32.896	26.235	40	2.685	32.941	26.268
50	2.673	32.978	26.299	50	2.524	32.952	26.291	50	2.587	33.077	26.385
75	3.274	33.369	26.558								

STATION US08129 LATITUDE 42-25.0 N LONGITUDE 140-25.3 E DEPTH (m) 70				STATION US08130 LATITUDE 42-20.0 N LONGITUDE 140-25.1 E DEPTH (m) 71				STATION US08131 LATITUDE 42-17.0 N LONGITUDE 140-26.8 E DEPTH (m) 73			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	5.787	32.560	25.651	5	5.772	32.490	25.597	5	8.044	31.881	24.818
10	5.284	32.613	25.751	10	5.265	32.547	25.702	10	4.932	32.420	25.638
20	3.047	32.346	25.763	20	4.195	32.682	25.923	20	3.754	32.625	25.921
30	3.113	32.755	26.083	30	2.795	32.811	26.155	30	3.253	32.893	26.181
40	2.538	32.944	26.283	40	2.769	32.950	26.269	40	2.609	32.889	26.233
50	2.511	32.999	26.329	50	2.570	33.025	26.345	50	2.616	32.988	26.312

STATION US08132 LATITUDE 42-23.3 N LONGITUDE 140-42.8 E DEPTH (m) 61				STATION US08133 LATITUDE 42-28.8 N LONGITUDE 140-31.5 E DEPTH (m) 76				STATION US08134 LATITUDE 42-19.2 N LONGITUDE 140-30.8 E DEPTH (m) 94			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	7.320	32.353	25.291	5	7.320	32.413	25.338	5	6.963	32.432	25.401
10	6.733	32.419	25.421	10	7.286	32.413	25.343	10	6.154	32.447	25.517
20	5.996	32.442	25.532	20	6.794	32.421	25.415	20	5.574	32.491	25.622
30	4.433	32.545	25.790	30	5.672	32.484	25.604	30	4.968	32.543	25.732
40	2.734	32.824	26.171	40	3.013	32.632	25.994	40	2.735	32.685	26.059
50	2.802	32.986	26.294	50	2.292	32.811	26.196	50	2.314	32.868	26.240
								75	3.356	33.401	26.577

STATION US08135 LATITUDE 42-16.0 N LONGITUDE 140-35.5 E DEPTH (m) 91				STATION US08136 LATITUDE 42-11.5 N LONGITUDE 140-35.4 E DEPTH (m) 82				STATION US08137 LATITUDE 42-10.0 N LONGITUDE 140-46.7 E DEPTH (m) 96			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	7.851	32.375	25.234	5	6.417	32.460	25.495	5	7.714	32.407	25.279
10	7.557	32.382	25.281	10	5.833	32.488	25.588	10	7.513	32.409	25.309
20	5.552	32.454	25.595	20	4.794	32.570	25.771	20	5.329	32.481	25.642
30	4.098	32.627	25.889	30	2.488	32.711	26.101	30	2.161	32.626	26.058
40	3.307	32.771	26.079	40	2.916	32.918	26.230	40	1.665	32.834	26.260
50	2.697	32.954	26.277	50	1.837	32.860	26.269	50	2.022	32.980	26.352
75	3.271	33.370	26.560	75	3.388	33.417	26.586	75	2.680	33.271	26.532

STATION US08138 LATITUDE 42-05.4 N LONGITUDE 140-56.4 E DEPTH (m) 85				STATION US08139 LATITUDE 42-11.6 N LONGITUDE 141-01.4 E DEPTH (m) 79				STATION US08140 LATITUDE 42-17.6 N LONGITUDE 140-54.5 E DEPTH (m) 57			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	6.080	32.596	25.643	5	6.366	32.396	25.450	5	8.859	32.193	24.943
10	5.085	32.605	25.768	10	5.960	32.408	25.510	10	6.990	32.337	25.323
20	4.051	32.699	25.951	20	5.497	32.423	25.576	20	3.210	32.580	25.935
30	3.845	32.724	25.991	30	2.516	32.551	25.971	30	2.136	32.842	26.232
40	2.578	32.892	26.238	40	1.341	32.798	26.253	40	1.706	32.946	26.348
50	2.509	33.084	26.397	50	2.297	33.007	26.352	50	1.815	33.005	26.387
75	3.346	33.430	26.601	75	2.247	33.182	26.497				

STATION US08141 LATITUDE 41-49.6 N LONGITUDE 141-13.0 E DEPTH (m) 173				STATION US08142 LATITUDE 41-51.5 N LONGITUDE 141-10.0 E DEPTH (m) 107				STATION US08143 LATITUDE 41-53.4 N LONGITUDE 141-07.4 E DEPTH (m) 96			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	6.292	32.576	25.601	5	6.051	32.598	25.649	5	6.051	32.618	25.664
10	6.285	32.642	25.655	10	6.053	32.598	25.648	10	6.003	32.621	25.673
20	4.686	32.729	25.910	20	6.055	32.625	25.669	20	5.982	32.624	25.678
30	5.267	33.204	26.221	30	5.679	32.650	25.735	30	5.638	32.621	25.717
40	5.523	33.547	26.463	40	4.227	32.685	25.922	40	4.963	32.741	25.889
50	6.204	33.752	26.541	50	3.964	33.053	26.241	50	3.860	33.049	26.248
75	4.953	33.630	26.595	75	5.429	33.642	26.549	75	3.496	33.331	26.508
100	5.052	33.670	26.615	100	4.877	33.616	26.592				
125	4.585	33.633	26.638								
150	4.319	33.611	26.649								

STATION US08144 LATITUDE 41-55.0 N LONGITUDE 141-05.2 E DEPTH (m) 111				STATION US08145 LATITUDE 41-56.8 N LONGITUDE 141-02.7 E DEPTH (m) 106				STATION US08146 LATITUDE 41-58.7 N LONGITUDE 141-00.0 E DEPTH (m) 88			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	6.386	32.483	25.517	5	5.837	32.581	25.661	5	5.872	32.540	25.625
10	6.219	32.496	25.548	10	5.793	32.597	25.679	10	5.759	32.569	25.661
20	5.845	32.526	25.617	20	5.708	32.611	25.700	20	5.724	32.604	25.693
30	5.702	32.587	25.682	30	5.301	32.666	25.792	30	4.997	32.572	25.751
40	5.248	32.743	25.858	40	4.940	32.835	25.966	40	3.618	32.790	26.065
50	3.909	32.888	26.115	50	2.745	33.021	26.327	50	3.434	33.021	26.266
75	4.456	33.559	26.593	75	4.598	33.565	26.582	75	5.097	33.695	26.629
100	4.602	33.599	26.609								

STATION US08147 LATITUDE 41-55.1 N LONGITUDE 141-14.7 E DEPTH (m) 244				STATION US08148 LATITUDE 41-59.9 N LONGITUDE 141-05.3 E DEPTH (m) 118				STATION US08149 LATITUDE 42-04.9 N LONGITUDE 141-14.8 E DEPTH (m) 222			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	7.556	32.877	25.671	5	6.213	32.560	25.599	5	7.198	32.735	25.608
10	7.367	32.980	25.778	10	6.210	32.562	25.600	10	7.119	33.012	25.837
20	5.300	32.741	25.850	20	5.224	32.575	25.728	20	6.499	33.384	26.212
30	3.444	32.873	26.147	30	3.202	32.736	26.060	30	6.995	33.764	26.446
40	2.369	33.252	26.543	40	4.001	33.059	26.242	40	6.849	33.822	26.511
50	3.921	33.455	26.565	50	3.376	33.198	26.413	50	6.563	33.809	26.539
75	5.969	33.701	26.530	75	5.388	33.692	26.593	75	7.231	33.968	26.574
100	4.402	33.544	26.586	100	4.341	33.611	26.646	100	6.168	33.804	26.586
125	4.406	33.587	26.620					125	5.724	33.752	26.601
150	4.354	33.594	26.631					150	5.514	33.762	26.634
175	4.347	33.609	26.644					175	5.527	33.788	26.653
200	3.915	33.572	26.658					200	5.595	33.809	26.661

STATION US08150 LATITUDE 42-10.1 N LONGITUDE 141-05.6 E DEPTH (m) 94				STATION US08151 LATITUDE 42-14.8 N LONGITUDE 141-14.6 E DEPTH (m) 164				STATION US08152 LATITUDE 42-19.7 N LONGITUDE 141-05.7 E DEPTH (m) 55			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	6.867	32.431	25.414	5	7.047	32.515	25.456	5	6.693	32.339	25.364
10	6.781	32.383	25.386	10	6.759	32.811	25.726	10	6.401	32.284	25.357
20	5.626	32.382	25.529	20	6.465	33.382	26.215	20	3.670	32.425	25.770
30	1.968	32.554	26.015	30	4.929	33.327	26.357	30	2.116	32.684	26.108
40	1.096	32.795	26.267	40	3.478	33.219	26.420	40	2.674	32.914	26.248
50	1.035	32.906	26.360	50	2.713	33.258	26.519				
75	2.324	33.183	26.492	75	5.166	33.666	26.599				
				100	5.741	33.752	26.598				
				125	5.470	33.736	26.619				

STATION US08153 LATITUDE 42-25.0 N LONGITUDE 141-14.8 E DEPTH (m) 69				STATION US08154 LATITUDE 42-15.0 N LONGITUDE 140-54.9 E DEPTH (m) 63				STATION US08155 LATITUDE 42-10.1 N LONGITUDE 140-55.1 E DEPTH (m) 77			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	7.150	32.771	25.643	5	6.388	32.512	25.539	5	6.886	32.452	25.427
10	6.474	32.944	25.869	10	5.692	32.512	25.624	10	5.725	32.404	25.534
20	6.444	33.098	25.994	20	2.144	32.624	26.058	20	2.906	32.809	26.144
30	6.763	33.425	26.210	30	1.930	32.902	26.296	30	3.373	33.079	26.318
40	2.653	32.955	26.282	40	2.263	33.004	26.353	40	2.933	33.094	26.370
50	2.561	33.133	26.432	50	2.181	33.142	26.470	50	1.972	33.062	26.421

STATION US08156 LATITUDE 42-05.3 N LONGITUDE 140-55.1 E DEPTH (m) 88				STATION US08157 LATITUDE 42-01.6 N LONGITUDE 140-55.3 E DEPTH (m) 80				STATION US08158 LATITUDE 42-13.6 N LONGITUDE 140-41.1 E DEPTH (m) 90			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	7.306	32.401	25.330	5	7.780	32.386	25.253	5	7.785	32.492	25.335
10	6.866	32.388	25.380	10	7.731	32.387	25.261	10	7.676	32.468	25.332
20	4.971	32.469	25.672	20	6.320	32.444	25.494	20	6.233	32.472	25.527
30	2.767	32.860	26.197	30	3.491	32.604	25.929	30	5.276	32.559	25.709
40	2.108	32.903	26.284	40	2.895	32.904	26.221	40	3.125	32.804	26.121
50	2.183	32.989	26.347	50	3.190	33.129	26.375	50	2.817	32.977	26.286
75	3.404	33.467	26.625					75	3.135	33.423	26.614

STATION US08159 LATITUDE 42-12.8 N LONGITUDE 140-35.1 E DEPTH (m) 87				STATION US08160 LATITUDE 42-19.1 N LONGITUDE 140-30.3 E DEPTH (m) 94				STATION US08161 LATITUDE 42-26.3 N LONGITUDE 140-38.0 E DEPTH (m) 82			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	7.554	32.454	25.338	5	7.702	32.432	25.300	5	7.869	32.422	25.268
10	7.397	32.434	25.345	10	7.680	32.414	25.289	10	7.890	32.421	25.265
20	6.003	32.464	25.549	20	5.230	32.435	25.617	20	7.541	32.387	25.287
30	4.351	32.558	25.809	30	3.092	32.594	25.956	30	4.628	32.443	25.689
40	2.047	32.658	26.092	40	2.388	32.863	26.230	40	2.223	32.668	26.087
50	2.429	32.986	26.325	50	1.562	32.842	26.274	50	2.526	32.967	26.302
75	3.191	33.364	26.562	75	2.978	33.307	26.535	75	3.646	33.548	26.666

STATION US08162 LATITUDE 42-18.9 N LONGITUDE 140-44.2 E DEPTH (m) 62				STATION US08163 LATITUDE 42-20.8 N LONGITUDE 140-37.5 E DEPTH (m) 86				STATION US08164 LATITUDE 42-17.2 N LONGITUDE 140-36.0 E DEPTH (m) 92			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	7.987	32.398	25.233	5	7.424	32.416	25.326	5	7.476	32.404	25.310
10	7.947	32.399	25.239	10	7.338	32.416	25.338	10	7.419	32.421	25.331
20	5.950	32.439	25.535	20	7.166	32.420	25.365	20	7.380	32.429	25.343
30	4.026	32.666	25.928	30	6.963	32.442	25.409	30	7.201	32.433	25.370
40	2.527	32.800	26.169	40	4.408	32.542	25.790	40	4.189	32.594	25.854
50	2.538	32.993	26.322	50	2.394	32.811	26.188	50	2.263	32.800	26.189
				75	2.813	33.169	26.440	75	3.066	33.248	26.481

STATION US08165 LATITUDE 41-57.4 N LONGITUDE 140-58.4 E DEPTH (m) 81				STATION US08166 LATITUDE 41-57.9 N LONGITUDE 140-59.1 E DEPTH (m) 86				STATION US08167 LATITUDE 41-58.4 N LONGITUDE 141-00.0 E DEPTH (m) 91			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	7.380	32.442	25.353	5	7.646	32.418	25.297	5	7.554	32.418	25.310
10	7.138	32.451	25.393	10	7.369	32.427	25.342	10	7.475	32.425	25.326
20	3.426	32.701	26.012	20	4.145	32.623	25.881	20	4.596	32.565	25.789
30	2.533	32.876	26.229	30	2.300	32.855	26.230	30	2.443	32.887	26.245
40	2.047	32.955	26.330	40	2.281	32.973	26.326	40	3.079	33.126	26.382
50	2.152	33.027	26.380	50	2.341	33.068	26.398	50	3.109	33.185	26.427
75	3.021	33.274	26.505	75	3.495	33.373	26.541	75	3.918	33.399	26.521

STATION US08168 LATITUDE 41-58.9 N LONGITUDE 141-00.9 E DEPTH (m) 97				STATION US08169 LATITUDE 42-01.4 N LONGITUDE 141-17.7 E DEPTH (m) 262				STATION US08170 LATITUDE 42-17.0 N LONGITUDE 140-39.7 E DEPTH (m) 84			
Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T	Press.	Temp.	Salinity	Sigma-T
5	7.955	32.413	25.249	5	8.241	32.690	25.425	5	9.272	32.362	25.010
10	7.500	32.404	25.306	10	8.327	33.529	26.070	10	8.176	32.380	25.191
20	3.917	32.692	25.958	20	8.684	33.876	26.288	20	6.925	32.444	25.416
30	2.603	32.920	26.258	30	8.536	34.031	26.432	30	3.213	32.705	26.035
40	2.632	33.048	26.358	40	8.480	34.051	26.456	40	2.772	32.911	26.237
50	3.484	33.231	26.429	50	8.256	34.041	26.483	50	1.850	32.943	26.335
75	3.669	33.350	26.506	75	7.732	33.979	26.512				
				100	7.336	33.965	26.557				
				125	6.731	33.898	26.587				
				150	6.558	33.879	26.595				
				175	6.097	33.838	26.622				
				200	5.539	33.780	26.645				