



HOKKAIDO UNIVERSITY

Title	2 THE "USHIO MARU" CRUISE 327, CRUISE 328, CRUISE 329 IN FEBRUARY -MARCH 2015
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THE " USHIO MARU "

CRUISE 327

CRUISE 328

CRUISE 329

IN FEBRUARY 2015

IN MARCH 2015

1.Cruise Itinerary

Cruise 327

Departure from Hakodate	Feb.	24, 2015
Start hydrographic research (US15076)		25
Retrieval mooring ADCP system		25
Set mooring ADCP system		26
Finish hydrographic research (US15097)		26
Return to Hakodate		26
Total coverage 280.1 miles		

Cruise 328

Departure from Hakodate	Mar.	5, 2015
Start hydrographic research (US15098)		6
Finish hydrographic research (US15111)		6
Return to Hakodate		7
Total coverage 194.3 miles		

Cruise 329

Departure from Hakodate	Mar.	15, 2015
Start hydrographic research (US15112)		15
Finish hydrographic research (US15130)		16
Arrival at Usujiri		16
Total coverage 30.7 miles		

2. 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 SBE-9Plus and SBE-19). Dynamic computations were made using a desk-top computer aboard the “Ushio Maru”.

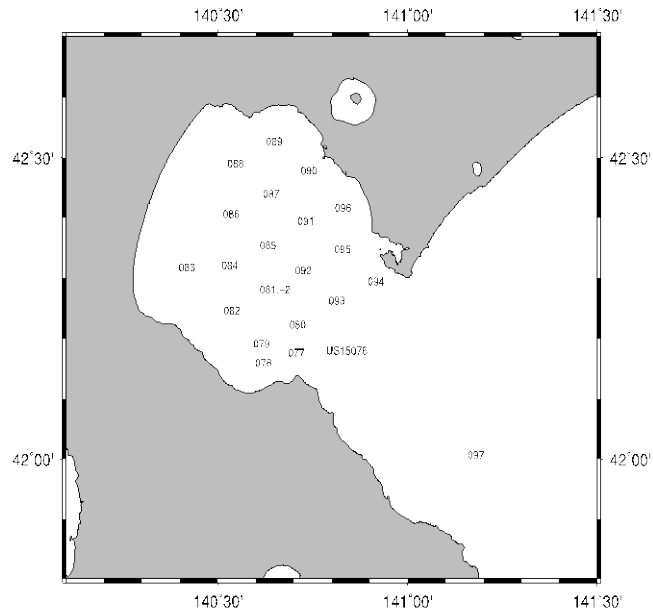


Figure 1. Oceanographic stations (Cruise 327)

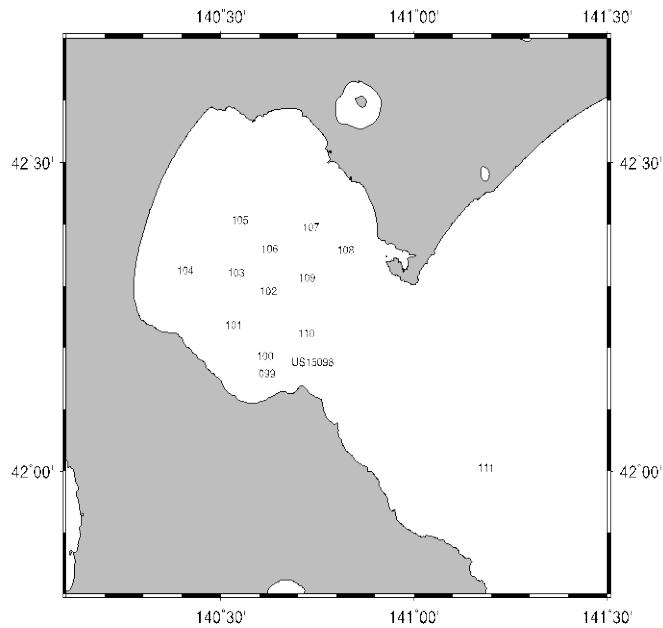


Figure 2. Oceanographic stations (Cruise 328)

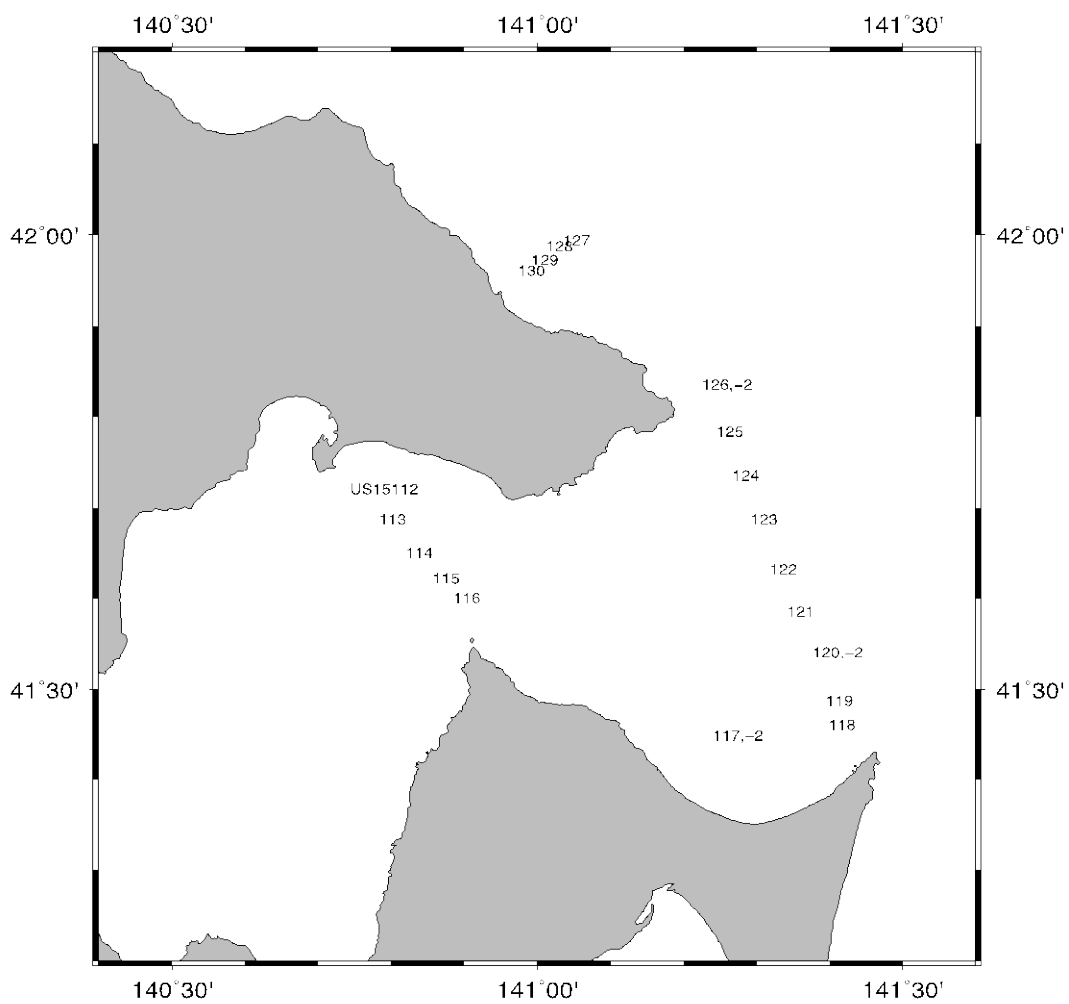


Figure 3. Oceanographic stations (Cruise 329)

Table 1. List of Oceanographic Station

Cruise 327												
Station	Lat. (N) [°]	Long. (E) [°]	Date	S.M.T.	Depth (m)	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US15076	42-10.4	140-47.1	2/25	0437-0442	93	West-4	West-1	West-4	0.9	2.7	bc	1018.0
US15077	42-10.2	140-41.1	2/25	0516-0521	86	West-3	West-1	West-3	0.9	2.7	bc	1018.1
US15078	42-09.2	140-35.9	2/25	0611-0615	70	WNW-3	West-1	WNW-3	0.7	2.6	bc	1018.1
US15079	42-11.1	140-35.6	2/25	0636-0640	81	West-3	West-1	West-3	0.7	2.5	bc	1018.5
US15080	42-13.0	140-41.3	2/25	0740-0744	90	WNW-2	East-1	WNW-3	1.6	2.6	bc	1019.2
US15081	42-16.5	140-36.6	2/25	0842-0849	91	WNW-2	East-1	WNW-3	1.1	2.5	bc	1019.5
US15081-2	同上		2/25	0855-0859								
US15082	42-14.4	140-30.9	2/25	1031-1036	84	WNW-2	East-1	WNW-3	1.4	2.6	bc	1020.1
US15083	42-18.7	140-23.8	2/25	1132-1136	57	WSW-2	East-1	WSW-3	3.0	2.5	bc	1019.7
US15084	42-18.9	140-30.6	2/25	1238-1233	93	WSW-2	East-1	WSW-3	3.8	2.5	bc	1019.5
US15085	42-20.9	140-36.6	2/25	1315-1319	87	West-2	East-1	West-3	4.3	2.6	bc	1019.7
US15086	42-24.0	140-30.8	2/25	1407-1412	94	NNW-2	East-1	NNW-2	2.4	2.7	c	1019.7
US15087	42-26.0	140-37.1	2/25	1500-1504	83	NW-2	East-1	NW-3	1.4	2.5	s	1020.3
US15088	42-29.0	140-31.5	2/25	1543-1547	74	WSW-1	East-1	WSW-3	0.6	2.8	s	1020.5
US15089	42-31.2	140-37.6	2/25	1627-1631	61	West-2	ESE-1	West-3	1.5	2.4	bc	1020.6
US15090	42-28.3	140-43.1	2/25	1710-1712	60	West-3	ESE-1	West-4	1.1	2.2	c	1021.2
US15091	42-23.3	140-42.6	2/25	1750-1753	62	West-3	SW-1	WNW-3	1.1	1.9	c	1021.6
US15092	42-18.4	140-42.2	2/25	1837-1840	64	WSW-4	WSW-1	West-5	1.1	2.1	bc	1021.6
US15093	42-15.4	140-47.5	2/25	1912-1916	71	WSW-4	WSW-1	West-5	1.1	2.0	bc	1022.2
US15094	42-17.3	140-53.7	2/25	1949-1952	58	West-3	West-1	West-5	1.0	2.2	bc	1022.5
US15095	42-20.5	140-48.4	2/25	2028-2031	54	West-3	West-1	West-5	1.1	2.2	bc	1022.5
US15096	42-24.6	140-48.5	2/25	2059-2102	45	West-3	West-1	West-5	1.1	2.0	bc	1022.6
US15097	42-00.0	141-09.5	2/26	0850-0857	134	SSW-1	ESE-1	SSW-2	0.9	0.9	bc	1024.6

Cruise 328												
Station	Lat. (N) [°]	Long. (E) [°]	Date	S.M.T.	Depth (m)	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US15098	42-10.2	140-41.0	3/6	0629-0634	85	WSW-1	ESE-1	WSW-2	1.2	2.5	bc	1026.6
US15099	42-09.1	140-35.9	3/6	0714-0717	68	SW-2	ESE-1	SW-3	0.4	2.5	bc	1027.0
US15100	42-10.8	140-35.6	3/6	0739-0743	79	South-1	ESE-1	South-3	1.2	2.4	bc	1027.2
US15101	42-13.8	140-30.7	3/6	0841-0846	80	Calm	ESE-1	Calm	2.5	2.5	bc	1027.9
US15102	42-17.1	140-36.1	3/6	0936-0940	91	Calm	ESE-1	Calm	3.0	2.5	bc	1028.0
US15103	42-18.9	140-31.1	3/6	1026-1031	93	Calm	ESE-1	Calm	3.1	2.4	bc	1028.1
US15104	42-19.1	140-23.2	3/6	1127-1130	54	ESE-1	ESE-1	ESE-3	3.1	2.6	bc	1028.0
US15105	42-24.0	140-31.7	3/6	1232-1237	96	East-1	East-1	East-2	2.4	2.3	bc	1027.9
US15106	42-21.2	140-36.3	3/6	1317-1322	89	SE-2	East-1	SE-3	3.4	2.3	bc	1027.2
US15107	42-23.3	140-42.7	3/6	1404-1407	62	SE-3	East-1	SE-4	3.1	2.1	bc	1027.5
US15108	42-21.1	140-48.1	3/6	1447-1450	52	SE-3	ESE-1	SE-3	2.1	1.7	c	1027.6
US15109	42-18.4	140-42.1	3/6	1531-1534	67	SE-3	ESE-1	SE-3	3.1	2.6	c	1027.7
US15110	42-13.0	140-42.0	3/6	1628-1632	90	SE-2	ESE-1	SE-4	1.5	2.3	s	1027.3
US15111	41-59.9	141-09.9	3/6	1910-1915	137	ESE-3	ESE-1	ESE-4	2.0	1.4	bc	1027.7

Cruise 329

Station	Lat. (N)*	Long. (E)*	Date	S.M.T.	Depth (m)	Wave	Swell	Wind	Air Temp.	Sea Temp.	Wr.	Bar. (hPa)
US15112	41-42.9	140-44.6	3/15	0913-0924	84	SW -3	SW -1	SW -5	4.6	8.6	bc	1026.1
US15113	41-40.9	140-47.0	3/15	0943-0957	218	SW -3	SW -1	SW -5	4.8	8.4	c	1025.1
US15114	41-38.7	140-49.2	3/15	1016-1034	354	WSW -4	SW -1	WSW -6	4.9	8.6	c	1025.1
US15115	41-37.0	140-51.4	3/15	1110-1121	99	WSW -4	SW -1	WSW -6	4.6	8.7	c	1025.0
US15116	41-35.7	140-53.1	3/15	1134-1142	53	WSW -4	SW -1	WSW -6	5.0	8.6	c	1025.1
US15117	41-26.6	141-14.4	3/15	1327-1336	81	West-3	West-1	West-5	4.9	8.6	c	1024.1
US15117-2	41-26.7	141-14.4	3/15	1355-1404	81							
US15118	41-27.3	141-23.9	3/15	1447-1453	50	West-3	West-1	West-5	6.5	8.6	bc	1024.2
US15119	41-28.9	141-23.7	3/15	1507-1517	85	West-3	West-1	West-5	6.2	8.6	bc	1023.7
US15120-2	41-32.0	141-22.2	3/15	1540-1551	253							
US15120	41-32.1	141-22.6	3/15	1607-1623	245	West-3	West-1	West-5	6.2	8.6	bc	1023.7
US15121	41-34.8	141-20.5	3/15	1646-1706	322	WSW -2	West-1	WSW -4	6.0	8.3	bc	1023.7
US15122	41-37.6	141-19.1	3/15	1729-1744	217	SW -3	WSW -1	SW -4	6.0	8.4	bc	1023.6
US15123	41-40.9	141-17.5	3/15	1809-1825	231	WSW -3	WSW -1	WSW -5	5.8	7.5	bc	1023.6
US15124	41-43.9	141-16.0	3/15	1849-1906	229	SW -3	WSW -1	SW -5	6.1	8.5	bc	1024.0
US15125	41-46.7	141-14.7	3/15	1930-1942	202	WSW -3	WSW -1	WSW -5	6.2	8.0	c	1023.6
US15126-2	41-49.5	141-13.3	3/15	2003-2012	179							
US15126	41-49.8	141-13.5	3/15	2030-2042	193	WSW -2	WSW -1	WSW -3	5.6	6.0	o	1023.7
US15127	41-59.3	141-02.1	3/16	0600-0606	102	Calm	ESE-1	Calm	5.8	7.9	o	1023.6
US15128	41-58.9	141-00.7	3/16	0620-0625	94	SSE-1	ESE-1	SSE-3	5.5	2.7	c	1023.6
US15129	41-58.0	140-59.5	3/16	0635-0639	86	SSE-1	ESE-1	SSE-3	4.5	2.5	bc	1023.6
US15130	41-57.3	140-58.4	3/16	0648-0652	79	South-2	ESE-1	South-4	5.0	1.8	bc	1023.6

(*): Fixed position by Global Positioning System

Table 2. Oceanographic data

STATION		US15076	
LATITUDE		42-10.4	N
LONGITUDE		140-47.1	E
DEPTH (m)		93	
Press.	Temp.	Salinity	Sigma-T
5	2.994	33.107	26.375
10	3.000	33.108	26.375
20	3.004	33.109	26.375
30	3.067	33.128	26.385
40	3.071	33.133	26.389
50	3.223	33.212	26.438
75	4.705	33.674	26.657

STATION		US15079	
LATITUDE		42-11.1	N
LONGITUDE		140-35.6	E
DEPTH (m)		81	
Press.	Temp.	Salinity	Sigma-T
5	2.803	33.015	26.318
10	2.834	33.026	26.324
20	2.860	33.036	26.330
30	2.981	33.071	26.347
40	3.341	33.210	26.425
50	3.851	33.398	26.527
75	4.842	33.712	26.672

STATION		US15081-2	
LATITUDE		42-16.5	N
LONGITUDE		140-36.6	E
DEPTH (m)		91	
Press.	Temp.	Salinity	Sigma-T
5	2.920	33.086	26.365
10	2.908	33.086	26.365
20	2.919	33.092	26.369
30	3.104	33.164	26.411
40	3.211	33.196	26.426
50	3.605	33.364	26.524
75	5.068	33.799	26.715

STATION		US15084	
LATITUDE		42-18.9	N
LONGITUDE		140-30.6	E
DEPTH (m)		93	
Press.	Temp.	Salinity	Sigma-T
5	2.930	32.930	26.239
10	2.766	32.969	26.284
20	2.757	32.987	26.299
30	2.923	33.049	26.334
40	3.129	33.153	26.400
50	4.033	33.451	26.550
75	4.997	33.809	26.731

STATION		US15077	
LATITUDE		42-10.2	N
LONGITUDE		140-41.1	E
DEPTH (m)		86	
Press.	Temp.	Salinity	Sigma-T
5	3.047	32.460	25.959
10	3.057	32.468	25.970
20	3.080	32.490	25.985
30	3.097	32.525	25.999
40	3.125	32.575	26.032
50	3.173	32.652	26.068
75	4.516	32.955	26.234

STATION		US15080	
LATITUDE		42-12.3	N
LONGITUDE		140-41.3	E
DEPTH (m)		90	
Press.	Temp.	Salinity	Sigma-T
5	2.979	33.120	26.387
10	2.981	33.121	26.387
20	3.009	33.129	26.391
30	3.175	33.183	26.419
40	3.249	33.211	26.435
50	3.731	33.401	26.541
75	4.828	33.696	26.661

STATION		US15082	
LATITUDE		42-14.4	N
LONGITUDE		140-30.9	E
DEPTH (m)		84	
Press.	Temp.	Salinity	Sigma-T
5	2.981	33.061	26.339
10	2.938	33.059	26.342
20	2.921	33.062	26.345
30	3.121	33.145	26.394
40	3.851	33.381	26.513
50	4.364	33.558	26.601
75	4.978	33.787	26.716

STATION		US15085	
LATITUDE		42-20.9	N
LONGITUDE		140-36.6	E
DEPTH (m)		87	
Press.	Temp.	Salinity	Sigma-T
5	2.720	32.891	26.226
10	2.673	32.946	26.274
20	2.777	32.977	26.289
30	2.993	33.072	26.347
40	3.028	33.141	26.399
50	4.572	33.625	26.632
75	5.031	33.810	26.729
85	5.026	33.809	26.728

STATION		US15078	
LATITUDE		42-09.2	N
LONGITUDE		140-35.9	E
DEPTH (m)		70	
Press.	Temp.	Salinity	Sigma-T
5	2.918	33.058	26.342
10	2.955	33.071	26.350
20	2.995	33.083	26.355
30	3.032	33.090	26.358
40	3.130	33.120	26.373
50	3.208	33.147	26.388

STATION		US15081	
LATITUDE		42-16.5	N
LONGITUDE		141-36.6	E
DEPTH (m)		91	
Press.	Temp.	Salinity	Sigma-T
5	2.909	33.079	26.360
10	2.909	33.086	26.365
20	2.992	33.123	26.388
30	3.141	33.173	26.414
40	3.212	33.196	26.426
50	3.969	33.485	26.584
75	5.083	33.804	26.717

STATION		US15083	
LATITUDE		42-18.7	N
LONGITUDE		140-23.8	E
DEPTH (m)		57	
Press.	Temp.	Salinity	Sigma-T
5	3.031	32.642	26.062
10	2.877	32.643	26.063
20	2.868	32.661	26.073
30	2.869	32.691	26.091
40	2.864	32.765	26.133
50	2.935	32.875	26.207

STATION		US15086	
LATITUDE		42-24.0	N
LONGITUDE		140-30.8	E
DEPTH (m)		94	
Press.	Temp.	Salinity	Sigma-T
5	3.114	33.030	26.303
10	2.895	33.032	26.323
20	2.917	33.058	26.343
30	2.984	33.085	26.358
40	3.658	33.332	26.493
50	4.795	33.706	26.672
75	4.919	33.770	26.710

STATION US15087			
LATITUDE 42-26.0 N			
LONGITUDE 140-37.1 E			
DEPTH (m) 83			
Press.	Temp.	Salinity	Sigma-T
5	2.790	32.636	26.084
10	2.592	32.644	26.089
20	2.566	33.555	26.634
30	2.549	33.753	26.698
40	2.577	33.658	26.666
50	3.044	33.923	26.875
75	5.015	33.974	26.958
80	5.027	33.808	26.727

STATION US15090			
LATITUDE 42-28.3 N			
LONGITUDE 140-43.1 E			
DEPTH (m) 60			
Press.	Temp.	Salinity	Sigma-T
5	2.505	32.747	26.128
10	2.229	32.797	26.189
20	2.799	33.010	26.314
30	2.949	33.078	26.355
40	3.016	33.094	26.363
50	3.354	33.240	26.449

STATION US15093			
LATITUDE 42-15.4 N			
LONGITUDE 140-47.5 E			
DEPTH (m) 71			
Press.	Temp.	Salinity	Sigma-T
5	2.400	32.865	26.231
10	2.400	32.864	26.230
20	2.369	32.863	26.232
30	2.976	33.080	26.355
40	4.713	33.709	26.684
50	4.810	33.703	26.669

STATION US15096			
LATITUDE 42-24.6 N			
LONGITUDE 140-48.5 E			
DEPTH (m) 45			
Press.	Temp.	Salinity	Sigma-T
5	2.311	32.803	26.188
10	2.315	32.803	26.188
20	2.316	32.803	26.188
30	2.303	32.810	26.194
40	2.367	32.848	26.220

STATION US15088			
LATITUDE 42-29.0 N			
LONGITUDE 140-31.5 E			
DEPTH (m) 74			
Press.	Temp.	Salinity	Sigma-T
5	3.121	33.094	26.353
10	3.040	33.107	26.371
20	3.009	33.105	26.372
30	2.994	33.106	26.374
40	3.084	33.151	26.401
50	3.206	33.198	26.428

STATION US15091			
LATITUDE 42-23.3 N			
LONGITUDE 140-42.6 E			
DEPTH (m) 62			
Press.	Temp.	Salinity	Sigma-T
5	2.338	32.789	26.175
10	2.258	32.785	26.178
20	2.312	32.820	26.202
30	2.528	32.893	26.243
40	2.889	32.991	26.291
50	4.418	33.621	26.646

STATION US15094			
LATITUDE 42-17.3 N			
LONGITUDE 140-53.7 E			
DEPTH (m) 58			
Press.	Temp.	Salinity	Sigma-T
5	2.705	32.848	26.192
10	2.682	32.852	26.198
20	2.519	32.855	26.213
30	2.534	32.879	26.231
40	2.877	33.051	26.340
50	4.555	33.726	26.714

STATION US15097			
LATITUDE 42-00.0 N			
LONGITUDE 140-09.5 E			
DEPTH (m) 134			
Press.	Temp.	Salinity	Sigma-T
5	1.302	32.618	26.112
10	1.279	32.618	26.113
20	1.301	32.626	26.118
30	1.425	32.665	26.142
40	1.432	32.667	26.142
50	1.432	32.669	26.144
75	1.471	32.684	26.153
100	1.697	32.755	26.195
125	2.122	32.856	26.245

STATION US15089			
LATITUDE 42-31.2 N			
LONGITUDE 140-37.6 E			
DEPTH (m) 61			
Press.	Temp.	Salinity	Sigma-T
5	2.431	32.819	26.195
10	2.594	32.929	26.266
20	2.712	32.974	26.292
30	2.781	33.004	26.310
40	2.968	33.080	26.355
50	3.152	33.158	26.402

STATION US15092			
LATITUDE 42-18.4 N			
LONGITUDE 140-42.2 E			
DEPTH (m) 64			
Press.	Temp.	Salinity	Sigma-T
5	2.715	32.942	26.266
10	2.722	32.949	26.272
20	3.086	33.151	26.402
30	3.209	33.196	26.427
40	3.494	33.330	26.507
50	4.252	33.556	26.612

STATION US15095			
LATITUDE 42-20.5 N			
LONGITUDE 140-48.4 E			
DEPTH (m) 54			
Press.	Temp.	Salinity	Sigma-T
5	2.544	32.853	26.209
10	2.550	32.853	26.210
20	2.550	32.865	26.219
30	2.632	32.899	26.239
40	3.077	33.017	26.296
50	4.621	33.700	26.687

STATION US15098			
LATITUDE 42-10.2 N			
LONGITUDE 140-41.0 E			
DEPTH (m) 85			
Press.	Temp.	Salinity	Sigma-T
5	2.805	32.915	26.238
10	2.803	32.934	26.253
20	2.853	32.955	26.265
30	2.867	32.961	26.269
40	2.834	32.980	26.287
50	2.835	32.998	26.300
75	4.684	33.702	26.681

STATION US15099			
LATITUDE 42-09.1 N			
LONGITUDE 140-35.9 E			
DEPTH (m) 68			
Press.	Temp.	Salinity	Sigma-T
5	2.975	32.921	26.228
10	3.012	32.923	26.226
20	3.011	32.924	26.227
30	2.921	32.982	26.282
40	2.898	33.009	26.305
50	2.934	33.038	26.325

STATION US15100			
LATITUDE 42-10.8 N			
LONGITUDE 140-35.6 E			
DEPTH (m) 79			
Press.	Temp.	Salinity	Sigma-T
5	2.833	32.971	26.280
10	2.828	32.970	26.279
20	2.830	32.970	26.279
30	2.831	32.970	26.279
40	2.827	32.970	26.279
50	2.869	33.008	26.306
75	3.355	33.235	26.445

STATION US15101			
LATITUDE 42-13.8 N			
LONGITUDE 140-30.7 E			
DEPTH (m) 80			
Press.	Temp.	Salinity	Sigma-T
5	2.860	32.963	26.272
10	2.812	32.961	26.274
20	2.816	32.964	26.276
30	2.853	32.973	26.280
40	2.816	32.994	26.300
50	3.010	33.097	26.365
75	3.661	33.319	26.482

STATION US15102			
LATITUDE 42-17.1 N			
LONGITUDE 140-36.1 E			
DEPTH (m) 91			
Press.	Temp.	Salinity	Sigma-T
5	2.708	32.897	26.231
10	2.684	32.900	26.236
20	2.678	32.904	26.239
30	2.726	32.948	26.271
40	2.852	33.015	26.314
50	3.319	33.204	26.423
75	4.936	33.767	26.705

STATION US15103			
LATITUDE 42-18.9 N			
LONGITUDE 140-31.1 E			
DEPTH (m) 93			
Press.	Temp.	Salinity	Sigma-T
5	2.623	32.845	26.197
10	2.663	32.885	26.226
20	2.678	32.908	26.243
30	2.673	32.915	26.248
40	2.716	32.949	26.272
50	2.810	32.997	26.302
75	4.142	33.520	26.595

STATION US15104			
LATITUDE 42-19.1 N			
LONGITUDE 140-23.2 E			
DEPTH (m) 54			
Press.	Temp.	Salinity	Sigma-T
5	2.862	32.820	26.157
10	2.708	32.842	26.187
20	2.717	32.868	26.208
30	2.693	32.900	26.235
40	2.686	32.914	26.247
50	2.719	32.932	26.258

STATION US15105			
LATITUDE 42-24.0 N			
LONGITUDE 140-31.7 E			
DEPTH (m) 96			
Press.	Temp.	Salinity	Sigma-T
5	2.378	32.777	26.162
10	2.402	32.850	26.219
20	2.574	32.923	26.263
30	2.744	32.993	26.305
40	2.983	33.085	26.358
50	3.758	33.377	26.512
75	4.964	33.788	26.718

STATION US15106			
LATITUDE 42-21.2 N			
LONGITUDE 140-36.3 E			
DEPTH (m) 89			
Press.	Temp.	Salinity	Sigma-T
5	2.604	32.789	26.153
10	2.420	32.776	26.158
20	2.659	32.887	26.227
30	2.707	32.938	26.264
40	2.875	33.025	26.320
50	3.348	33.219	26.432
75	4.920	33.765	26.705

STATION US15107			
LATITUDE 42-23.3 N			
LONGITUDE 140-42.7 E			
DEPTH (m) 62			
Press.	Temp.	Salinity	Sigma-T
5	3.180	32.979	26.256
10	3.011	32.969	26.263
20	2.849	32.976	26.282
30	2.837	32.982	26.289
40	2.972	33.055	26.335
50	3.351	33.215	26.429

STATION US15108			
LATITUDE 42-21.1 N			
LONGITUDE 140-48.1 E			
DEPTH (m) 52			
Press.	Temp.	Salinity	Sigma-T
5	1.987	32.630	26.074
10	1.895	32.630	26.081
20	1.827	32.659	26.109
30	2.044	32.749	26.165
40	2.434	32.893	26.250

STATION US15109			
LATITUDE 42-18.4 N			
LONGITUDE 140-42.1 E			
DEPTH (m) 67			
Press.	Temp.	Salinity	Sigma-T
5	2.970	32.950	26.252
10	2.974	32.948	26.250
20	2.841	32.957	26.268
30	2.863	32.995	26.297
40	2.954	33.048	26.331
50	3.148	33.129	26.379

STATION US15110			
LATITUDE 42-13.0 N			
LONGITUDE 140-42.0 E			
DEPTH (m) 90			
Press.	Temp.	Salinity	Sigma-T
5	2.726	32.876	26.213
10	2.696	32.871	26.212
20	2.655	32.909	26.245
30	2.670	32.918	26.251
40	2.705	32.942	26.267
50	2.939	33.050	26.334
75	5.039	33.813	26.730

STATION US15111			
LATITUDE 41-59.9 N			
LONGITUDE 141-09.9 E			
DEPTH (m) 137			
Press.	Temp.	Salinity	Sigma-T
5	1.748	32.626	26.088
10	1.699	32.625	26.091
20	1.588	32.629	26.101
30	1.581	32.632	26.104
40	1.579	32.634	26.106
50	1.648	32.689	26.145
75	2.171	32.864	26.248
100	2.362	32.934	26.289
125	3.455	33.176	26.388

STATION US15112			
LATITUDE 41-42.9 N			
LONGITUDE 140-44.6 E			
DEPTH (m) 84			
Press.	Temp.	Salinity	Sigma-T
5	8.705	34.023	26.400
10	8.708	34.025	26.401
20	8.717	34.029	26.402
30	8.720	34.030	26.402
40	8.741	34.042	26.409
50	8.737	34.039	26.407
75	8.761	34.046	26.409

STATION US15113			
LATITUDE 41-40.9 N			
LONGITUDE 140-47.0 E			
DEPTH (m) 218			
Press.	Temp.	Salinity	Sigma-T
5	8.748	33.734	26.166
10	8.757	33.796	26.213
20	8.813	33.903	26.289
30	8.816	33.913	26.296
40	8.847	33.937	26.310
50	8.876	33.972	26.333
75	8.934	34.017	26.359
100	8.913	34.043	26.383
125	8.880	34.055	26.397
150	8.823	34.062	26.412
175	8.801	34.068	26.420
200	8.785	34.080	26.432

STATION US15114			
LATITUDE 41-38.7 N			
LONGITUDE 140-49.2 E			
DEPTH (m) 354			
Press.	Temp.	Salinity	Sigma-T
5	8.961	33.960	26.310
10	8.963	33.959	26.309
20	8.964	33.959	26.309
30	8.966	33.958	26.308
40	8.967	33.967	26.315
50	8.968	33.968	26.315
75	8.965	33.973	26.319
100	8.938	34.013	26.355
125	8.889	34.077	26.413
150	8.893	34.079	26.414
175	8.892	34.083	26.417
200	8.895	34.083	26.417
250	8.858	34.093	26.431
300	8.870	34.093	26.428

STATION US15115			
LATITUDE 41-37.0 N			
LONGITUDE 140-51.4 E			
DEPTH (m) 99			
Press.	Temp.	Salinity	Sigma-T
5	8.912	33.900	26.271
10	8.915	33.901	26.271
20	8.913	33.900	26.271
30	8.955	33.918	26.278
40	8.958	33.925	26.282
50	8.955	33.937	26.293
75	8.957	33.946	26.300

STATION US15116			
LATITUDE 41-35.7 N			
LONGITUDE 140-53.1 E			
DEPTH (m) 53			
Press.	Temp.	Salinity	Sigma-T
5	8.910	33.905	26.275
10	8.916	33.908	26.276
20	8.914	33.906	26.275
30	8.920	33.910	26.277
40	8.925	33.913	26.279

STATION US15117			
LATITUDE 41-26.6 N			
LONGITUDE 141-14.4 E			
DEPTH (m) 81			
Press.	Temp.	Salinity	Sigma-T
5	8.971	33.927	26.283
10	8.968	33.927	26.283
20	8.957	33.931	26.288
30	8.949	33.932	26.290
40	8.912	33.938	26.300
50	8.879	33.942	26.309

STATION US15117-2			
LATITUDE 41-26.7 N			
LONGITUDE 141-14.4 E			
DEPTH (m) 81			
Press.	Temp.	Salinity	Sigma-T
5	8.971	33.927	26.283
10	8.969	33.927	26.283
20	8.962	33.929	26.285
30	8.937	33.934	26.293
40	8.888	33.941	26.306
50	8.846	33.944	26.316

STATION US15118			
LATITUDE 41-27.3 N			
LONGITUDE 141-23.9 E			
DEPTH (m) 50			
Press.	Temp.	Salinity	Sigma-T
5	8.981	33.958	26.305
10	8.979	33.958	26.306
20	8.946	33.967	26.318
30	8.922	33.978	26.330
40	8.912	33.983	26.336

STATION		US15119	
LATITUDE		41-28.9	N
LONGITUDE		141-23.7	E
DEPTH (m)		85	
Press.	Temp.	Salinity	Sigma-T
5	8.916	33.977	26.330
10	8.908	33.978	26.333
20	8.880	33.984	26.341
30	8.863	33.988	26.347
40	8.862	33.988	26.348
50	8.857	33.990	26.350
75	8.818	34.001	26.365

STATION		US15120-2	
LATITUDE		41-32.0	N
LONGITUDE		141-22.2	E
DEPTH (m)		253	
Press.	Temp.	Salinity	Sigma-T
5	8.925	33.960	26.316
10	8.926	33.961	26.316
20	8.888	33.969	26.329
30	8.851	33.976	26.340
40	8.847	33.977	26.341
50	8.800	33.977	26.349
75	8.701	33.977	26.364
100	8.782	33.996	26.366

STATION		US151120	
LATITUDE		41-32.1	N
LONGITUDE		141-22.6	E
DEPTH (m)		245	
Press.	Temp.	Salinity	Sigma-T
5	8.936	33.956	26.311
10	8.938	33.956	26.311
20	8.939	33.957	26.311
30	8.842	33.976	26.341
40	8.821	33.977	26.345
50	8.820	33.977	26.346
75	8.782	33.977	26.351
100	8.734	33.975	26.357
125	8.670	33.968	26.362
150	8.615	33.959	26.363
175	8.397	33.923	26.368
200	8.495	33.945	26.370

STATION		US15121	
LATITUDE		41-34.8	N
LONGITUDE		141-20.5	E
DEPTH (m)		322	
Press.	Temp.	Salinity	Sigma-T
5	8.328	33.944	26.395
10	8.327	33.943	26.395
20	8.207	33.933	26.405
30	8.208	33.936	26.407
40	8.194	33.934	26.408
50	8.200	33.936	26.405
75	8.177	33.937	26.413
100	8.142	33.938	26.418
125	7.916	33.922	26.439
150	6.960	33.833	26.505
175	6.116	33.782	26.576
200	5.880	33.788	26.610
250	4.652	33.811	26.771
300	3.853	33.880	26.910

STATION		US15122	
LATITUDE		41-37.6	N
LONGITUDE		141-19.1	E
DEPTH (m)		217	
Press.	Temp.	Salinity	Sigma-T
5	8.837	33.999	26.360
10	8.839	33.999	26.360
20	8.847	34.000	26.359
30	8.853	34.001	26.359
40	8.802	34.022	26.384
50	8.773	34.029	26.393
75	8.768	34.035	26.399
100	8.759	34.048	26.410
125	8.735	34.048	26.415
150	7.901	33.947	26.462
175	5.999	33.717	26.539
200	3.696	33.819	26.877

STATION		US15123	
LATITUDE		41-40.9	N
LONGITUDE		141-17.5	E
DEPTH (m)		231	
Press.	Temp.	Salinity	Sigma-T
5	8.597	33.939	26.355
10	8.577	33.939	26.353
20	8.572	33.939	26.354
30	8.559	33.938	26.356
40	8.513	33.936	26.361
50	8.477	33.931	26.362
75	8.318	33.905	26.366
100	7.928	33.864	26.393
125	7.578	33.852	26.434
150	5.366	33.712	26.611
175	3.999	33.713	26.762
200	3.161	33.721	26.850

STATION		US15124	
LATITUDE		41-43.9	N
LONGITUDE		141-16.0	E
DEPTH (m)		229	
Press.	Temp.	Salinity	Sigma-T
5	8.656	33.966	26.362
10	8.666	33.967	26.361
20	8.666	33.965	26.360
30	8.673	33.966	26.360
40	8.674	33.966	26.360
50	8.673	33.966	26.359
75	8.565	33.944	26.359
100	7.812	33.826	26.380
125	7.510	33.832	26.427
150	5.390	33.656	26.564
175	3.063	33.559	26.729
200	3.002	33.628	26.790

STATION		US15125	
LATITUDE		41-46.7	N
LONGITUDE		141-14.7	E
DEPTH (m)		202	
Press.	Temp.	Salinity	Sigma-T
5	8.042	33.850	26.364
10	8.042	33.850	26.364
20	8.054	33.851	26.364
30	8.051	33.851	26.364
40	8.044	33.850	26.365
50	8.047	33.851	26.364
75	8.128	33.877	26.373
100	7.519	33.811	26.410
125	7.052	33.787	26.456
150	6.221	33.768	26.551
175	4.747	33.616	26.606

STATION		US15126-2	
LATITUDE		41-49.5	N
LONGITUDE		141-13.3	E
DEPTH (m)		179	
Press.	Temp.	Salinity	Sigma-T
5	6.827	33.681	26.404
10	6.870	33.676	26.393
20	6.917	33.677	26.388
30	7.363	33.777	26.405
40	7.428	33.774	26.394
50	7.508	33.786	26.392
75	7.451	33.819	26.426
100	7.538	33.850	26.437

STATION		US15126	
LATITUDE		41-49.8	N
LONGITUDE		141-13.5	E
DEPTH (m)		193	
Press.	Temp.	Salinity	Sigma-T
5	6.907	33.680	26.391
10	7.094	33.717	26.395
20	7.134	33.715	26.388
30	7.126	33.712	26.387
40	7.212	33.728	26.388
50	7.315	33.748	26.390
75	7.274	33.751	26.397
100	7.580	33.843	26.426
125	7.239	33.820	26.456
150	3.354	33.458	26.606
175	3.047	33.488	26.674
185	3.075	33.496	26.678

STATION		US15129	
LATITUDE		41-58.0	N
LONGITUDE		140-59.5	E
DEPTH (m)		86	
Press.	Temp.	Salinity	Sigma-T
5	2.446	32.796	26.172
10	2.981	33.019	26.306
20	3.915	33.332	26.468
30	5.067	33.563	26.528

STATION		US15127	
LATITUDE		41-59.3	N
LONGITUDE		141-02.1	E
DEPTH (m)		102	
Press.	Temp.	Salinity	Sigma-T
5	8.248	33.909	26.380
10	8.247	33.909	26.380
20	8.243	33.908	26.380
30	8.091	33.863	26.367
40	7.347	33.735	26.374
50	7.435	33.798	26.412
75	5.161	33.513	26.478

STATION		US15130	
LATITUDE		41-57.3	N
LONGITUDE		140-58.4	E
DEPTH (m)		79	
Press.	Temp.	Salinity	Sigma-T
5	2.274	32.658	26.075
10	2.367	32.701	26.102
20	3.813	33.153	26.336
30	6.133	33.709	26.516
40	5.196	33.548	26.502
50	5.572	33.660	26.546
75	4.122	33.494	26.576

STATION		US15128	
LATITUDE		41-58.9	N
LONGITUDE		141-00.7	E
DEPTH (m)		94	
Press.	Temp.	Salinity	Sigma-T
5	4.597	33.263	26.343
10	4.763	33.271	26.330
20	5.897	33.530	26.404
30	6.773	33.721	26.442
40	6.551	33.748	26.493
50	5.864	33.654	26.506
75	4.178	33.477	26.556