Cruise Report
Sea Education Association Cruise S-259
Stanford at SEA program

Scientific data collected aboard
SSV Robert C. Seamans

Papeete, Tahiti – Rangiroa – Kiritimati Is., Kiribati – Tabueran Is., Kiribati – Honolulu, Hawaii
7 May – 10 June 2015

Sea Education Association
Woods Hole, Massachusetts

Citation:
Witting, Jan, 2017. Final Report for S.E.A. cruise S-259. Sea Education Association, P.O. Box 6, Woods Hole, MA 02543, USA.

To obtain unpublished data, contact the Chief Scientist or the SEA Data Archivist:

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Data Description and Cruise Narrative

This cruise report describes the data collected during SSV Robert C. Seamans cruise S-259 (U.S. State Department Cruise 2015-009) between May 7 and June 10, 2015. The seventh joint program between Stanford University and the Sea Education Association, this cruise from Papeete, Tahiti to Honolulu Hawaii, followed a five-week shore study at the Stanford University's Hopkins Marine Station in Pacific Grove, California. The science program, led jointly by Drs. Jan Witting, Barb Block and Rob Dunbar, was formed to address the research questions formulated by the 21 Stanford University undergraduate students. Coming from majors that ranged from engineering to biology, this resulted in a large scope and diversity of ship board sampling activities and an impressive 45 oceanographic research stations with hydrocasts and multiple plankton net samples collected at each station. The cruise benefited enormously by the participation of Dr. Francisco Chavez, who brought a career-long experience of research in the Equatorial Pacific, and whose insights taught both the faculty and the students alike.

Adding to the previous Stanford @ SEA cruises that had built a substantial data set on the Northern Line Islands, this cruise was the first to also trace the southern portion of this long island chain. Previous research themes had addressed the effects of human populations on the coral reef fish communities and the overall coral cover and reef health, and we were able to add to these student projects by snorkeling missions at Karorina and Malden Atolls (though we did not land at these islands). Also of continued interest was the extent and intensity of the oxygen minimum zone (OMZ) associated with the high biological production zones and upwelling of the equatorial region, something we had sampled on previous cruises as well. However, the theme that dominated the 2015 Stanford at SEA cruise was the presence of a large-scale El Niño event that was beginning to establish itself in the Central Pacific. With the help of Dr. Chavez's expertise in this area, many of the student projects and much of the sampling program was aimed at understanding the extent of the developing El Niño. As it happened, this coupled ocean/atmosphere phenomenon was readily visible to us above the surface as well – as to be expected the trade winds were very light and air temperatures high as much of our progress was made possible by the diesel engine. Stanford at SEA 2015 will live in our memories as a hot trip!

We departed Papeete on May 7th for a quick 2-day passage to our first port stop of Rangiroa. This passage and short overnight stop gave us the opportunity to conclude all aspects of safety training, get a good start on the sampling program by occupying the first research stations, while also being able to get our first look at the coral reef habitat. Very quickly we were on our way north, toward the southernmost Line Island of Karorina. This 350 nm leg saw the ship's company

settling in to seagoing rhythm, with rosette and plankton net deployments becoming a familiar part of the science watch schedule for all of the students. Breaking the steady progress northwards, we took some time to conduct closer sampling at one of the seamounts extending past Karorina for a student project interested in possible seamount-induced productivity increases in the surface ocean.

Both at Karorina and the following Malden Island we conducted snorkeling surveys of the reef ecosystems, examining coral cover and fish abundance for several student projects. We did not affect a landing on either island since we had not cleared Kiribati immigration and customs at the time, but instead launched our small boats and admired the islands from afar. Though only separated by 450 nm, they have very different vegetation and reefs; whereas Karorina has a luxuriant vegetation and spectacular reefs, Malden is mostly covered in shrubs and grass with a seemingly stressed reef with much less coral cover and diversity.

Our next actual port of call was Kiritimati island, just across the equator on the northern hemisphere. This meant an equatorial crossing that, together with the traditional crossing ceremony for the crew, allowed us to take a close look at the state of the equatorial upwelling system during the El Niño conditions present. As mentioned previously, the entire passage from Karorina to Kiritimati saw us motoring or motor sailing due to the absence of the usual southeast trade winds. While this took away from the sailing experience, it made it very easy to keep on schedule and carry out the twice-daily research stations and gave us a very regular survey grid as we progressed. Kiritimati and the following port stop of Tabueran, were familiar to us from previous Stanford at SEA programs, and our ititneraries were similar as well; reef missions launched during the morning and afternoon allowed the students to explore the reefs, while opportunities were also given to allow everyone an opportunity to visit the islands. As before we are grateful for the assistance from Dive Kiribati and the staff of the Wildlife Conservation Unit in Kiritimati for their assistance as the students explored both the marine and terrestrial sights of Kiritimati.

The last 10-day leg of the cruise afforded a great opportunity to get a cross-section of the 10˚N thermocline ridge and the currents associated with the northern side of the equatorial current system during an on-going El Niño event. By now, the students on board had attained a high level of proficiency both in their lab skills and abilities as mariners (though light winds still saw us motor sailing for the most part). This made the work particularly enjoyable, and through daily meetings and classes we shared the excitement of each days' discoveries with the whole remarkable shipboard learning community that had developed. The students delivered their findings to the whole ship's company the day before our arrival, and after a flurry of last minute activity we docked in Honolulu on June 10 with a deep sense of accomplishment among all participants.

This report summarizes biological and chemical properties with depth derived from hydrocast stations (Table 2) and surface ocean biological characteristics (Tables 3-5) derived from Neuston and Meter Net data. CTD and ADCP data are summarized in figures 2 and 3, while the lengthy flow-through and CHIRP data are not part of this report. All unpublished data can be made available by arrangement with the Sea Education Association (SEA) data archivist (contact information, p. 2). The information in this report is not intended to represent final interpretation of the data and should not be excerpted or cited without written permission from SEA.

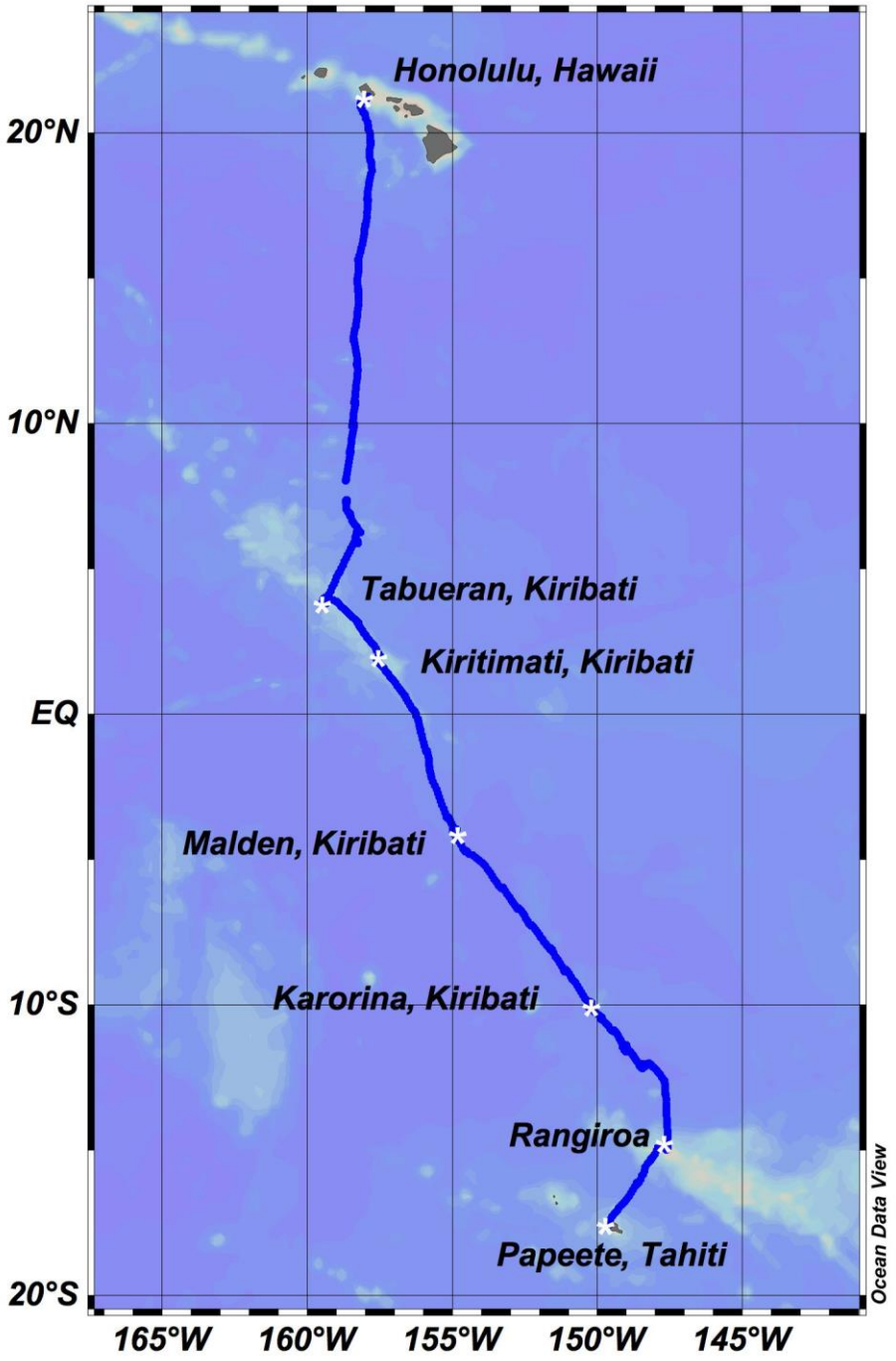

Figure 1. Cruise track of Robert C. Seamans cruise S259 between May 7 and June 10, 2015.

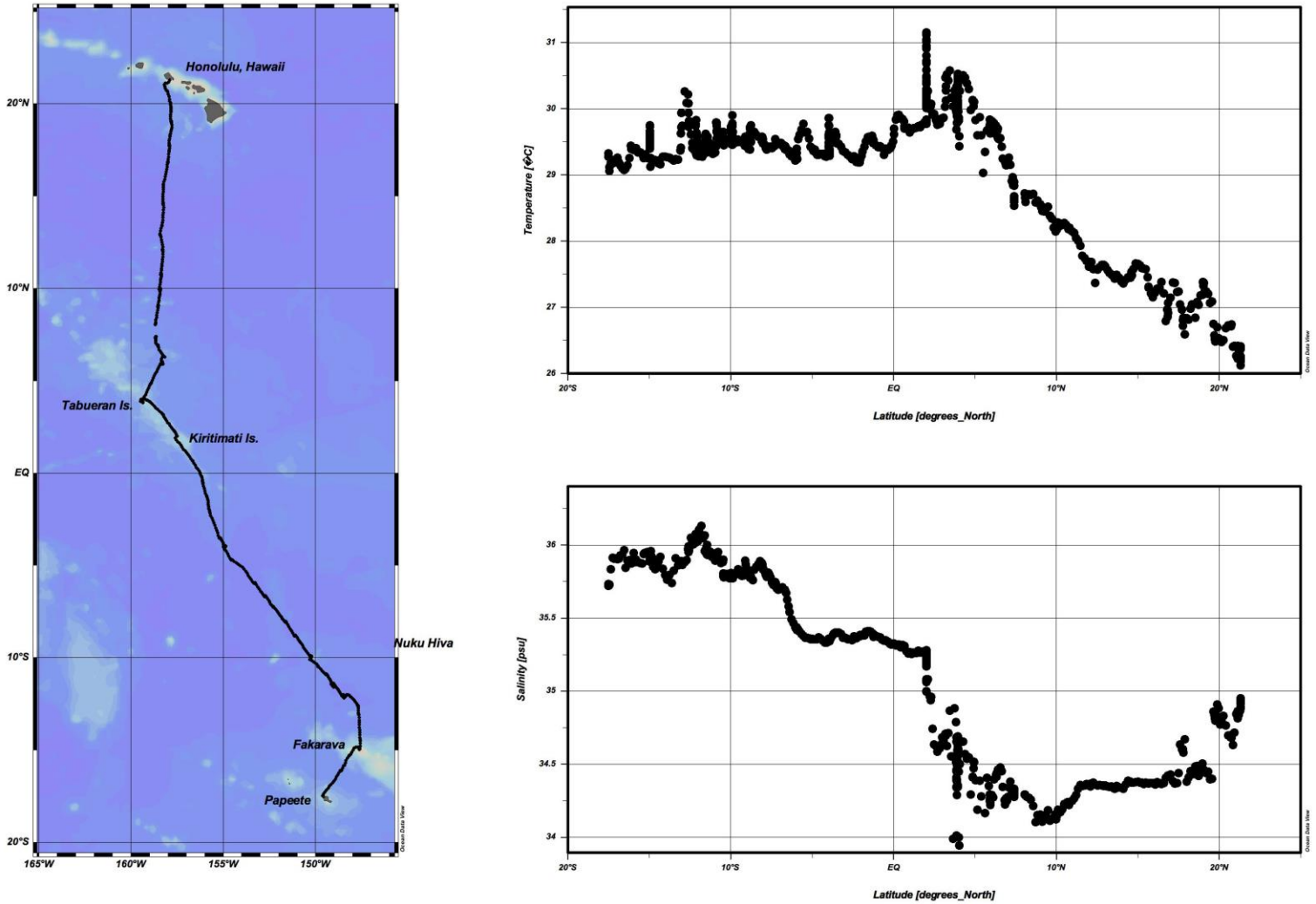

Figure 2. Salinity and Temperature Hourly Observations. Thermosalinograph measurements of underway flow-through sea surface Temperature and Salinity, 60-minute averages plotted against Latitude.

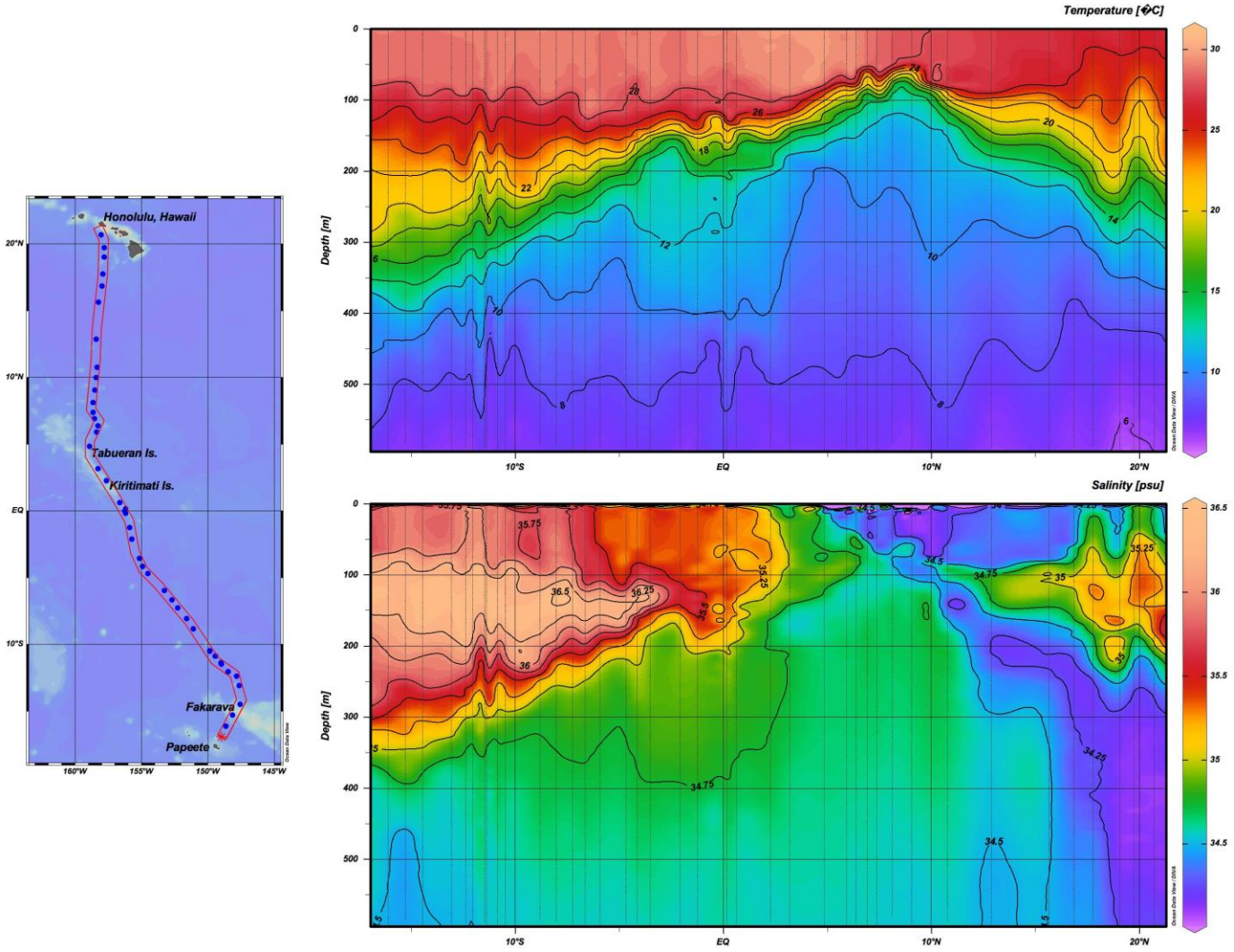

Figure 3. Temperature and Salinity sections. Gridded CTD Temperature and Salinity profiles plotted on a N/S projection. Data comes from all combined hydrocast and CTD station, vertical lines represent stations, and intermediate data has been interpolated.

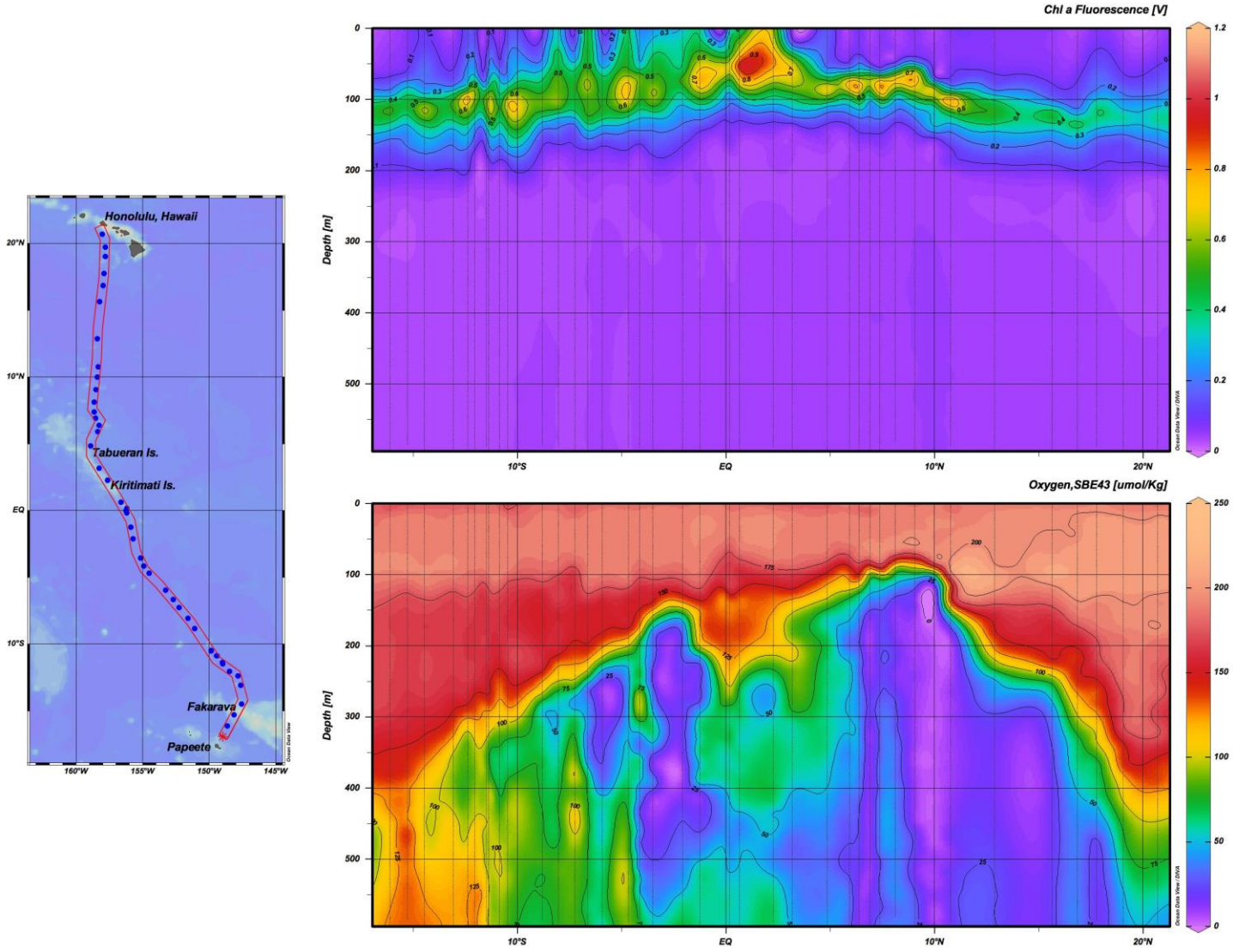

Figure 4. Chlorophyll a Fluorescence and Dissolved Oxygen sections. CTD-mounted in situ profiles plotted on a N/S projection. Oxygen data comes from all combined hydrocast and CTD station, vertical lines represent stations, and intermediate data has been interpolated.

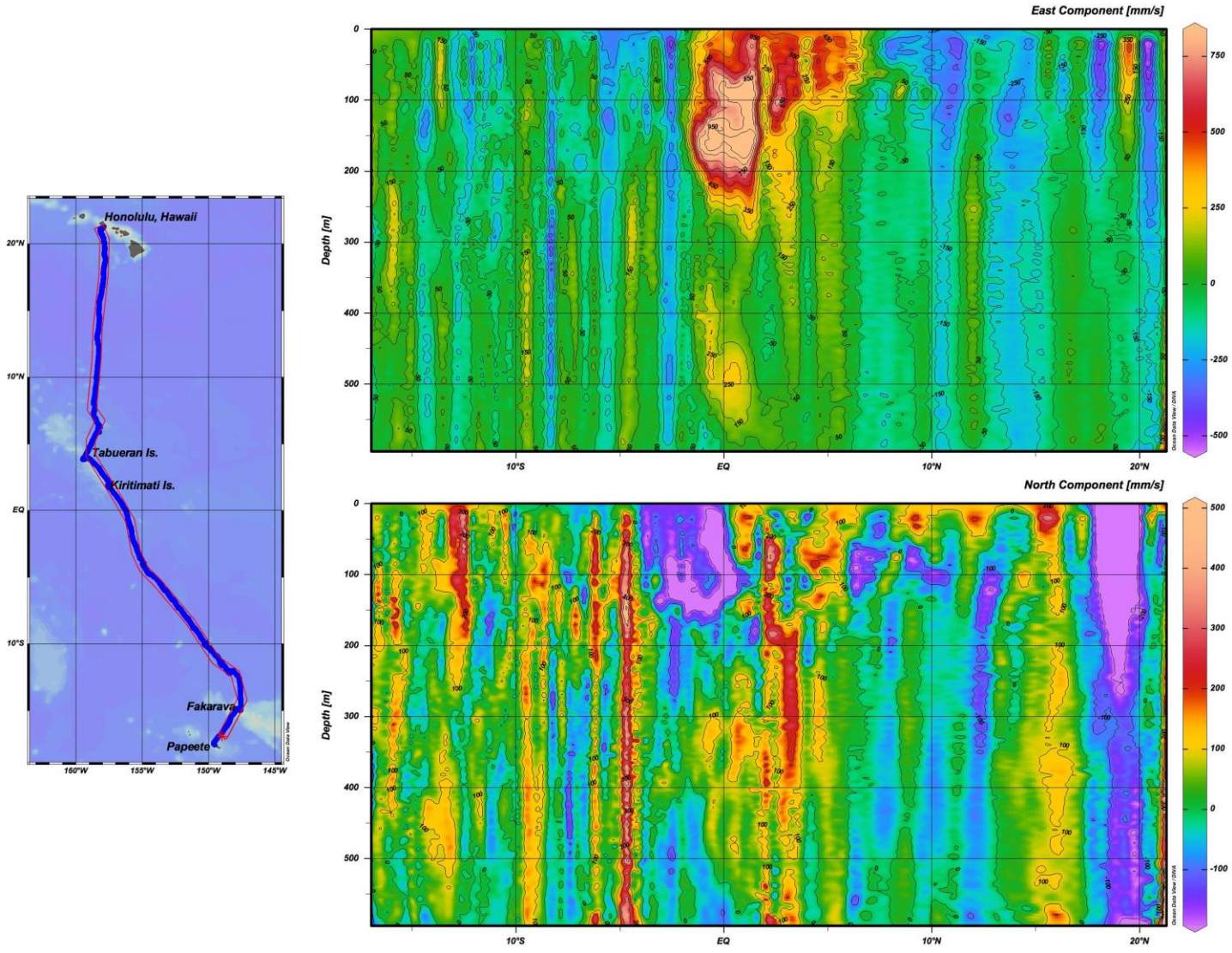

Figure 5. Acoustic Doppler Current Profiler measurement summary. Continuously collected East and North velocity components plotted on a N/S projection.

Hydrocast station no.	Date	Local Time	Lat. ˚N	Lon. ˚W
S259-001	8-May-15	1116	-16.11	-148.66
S259-002	8-May-15	2159	-15.29	-148.16
S259-003	11-May-15	2135	-14.47	-147.58
S259-004	12-May-15	0942	-13.23	-147.65
S259-005	13-May-15	0018	-12.38	-147.86
S259-006	13-May-15	2114	-12.05	-148.46
S259-007	14-May-15	1022	-11.48	-148.99
S259-008	14-May-15	2003	-11.38	-149.02
S259-009	15-May-15	1137	-10.88	-147.79
S259-010	15-May-15	2158	-10.48	-149.87
S259-011	16-May-15	2107	-9.92	-150.26
S259-012	18-May-15	1048	-8.79	-151.12
S259-013	18-May-15	2136	-8.04	-151.60
S259-014	19-May-15	1207	-7.24	-152.27
S259-015	19-May-15	2135	-6.65	-152.72
S259-016	20-May-15	0930	-5.95	-153.29
S259-017	21-May-15	0028	-4.68	-154.53
S259-018	21-May-15	0721	-4.13	-154.92
S259-019	22-May-15	1750	-3.52	-155.17
S259-020	23-May-15	0705	-2.09	-155.75
S259-021	23-May-15	1805	-1.24	-155.89
S259-022	24-May-15	0706	-0.16	-156.19
S259-023	24-May-15	1040	0.00	-156.27
S259-024	24-May-15	1808	0.64	-156.65
S259-025	28-May-15	2139	2.27	-157.65
S259-026	29-May-15	0930	3.19	-158.29
S259-027	29-May-15	2203	3.87	-158.98
S259-028	31-May-15	2113	3.86	-159.38
S259-029	1-Jun-15	1008	5.92	-158.40
S259-030	1-Jun-15	2117	6.38	-158.28
S259-031	2-Jun-15	1011	6.92	-158.54
S259-032	2-Jun-15	2117	7.39	-158.67
S259-033	3-Jun-15	1004	8.12	-158.66
S259-034	3-Jun-15	2112	9.06	-158.51
S259-035	4-Jun-15	0958	10.01	-158.41
S259-036	4-Jun-15	2208	10.77	-158.36
S259-037	5-Jun-15	1144	12.09	-158.29
S259-038	5-Jun-15	2008	12.89	-158.41
S259-039	6-Jun-15	1101	14.62	-158.25
S259-040	6-Jun-15	2204	15.66	-158.26
S259-041	7-Jun-15	0934	16.86	-157.99
S259-042	7-Jun-15	2106	17.78	-157.92
S259-043	8-Jun-15	1112	19.05	-157.82

S259-044	8-Jun-15	2052	19.74	-157.83
S259-045	9-Jun-15	0952	20.71	-158.04

Table 1: Oceanographic research station locations.

Neuston Net Tow no.	Date	Local Time	Lat. ˚N	Lon. ˚W	Tow Depth (m)
S259-001-NT	8-May-15	1240	-16.14	-148.65	0
S259-002-NT	8-May-15	2259	-15.29	-148.16	0
S259-003-NT	11-May-15	2240	-14.46	-147.58	0
S259-006-NT	13-May-15	2358	-12.07	-148.54	0
S259-007-NT	14-May-15	1230	-11.53	-149.01	0
S259-008-NT	14-May-15	2236	-11.41	-149.04	0
S259-009-NT	15-May-15	1433	-10.90	-149.45	0
S259-010-NT	16-May-15	0020	-10.45	-149.87	0
S259-011-NT	16-May-15	2107	-9.92	-150.26	0
S259-012-NT	18-May-15	1308	-8.83	-151.14	0
S259-013-NT	18-May-15	2354	-8.09	-151.62	0
S259-014-NT	19-May-15	1320	-7.25	-152.30	0
S259-016-NT	20-May-15	1033	-5.96	-153.32	0
S259-017-NT	21-May-15	0119	-4.68	-154.55	0
S259-019-NT	22-May-15	1848	-3.54	-155.18	0
S259-020-NT	23-May-15	0820	-2.08	-155.75	0
S259-021-NT	23-May-15	1855	-1.25	-155.90	0
S259-022-NT	24-May-15	0801	-0.17	-156.19	0
S259-024-NT	24-May-15	1855	0.65	-156.65	0
S259-025-NT	28-May-15	2233	2.27	-157.65	0
S259-027-NT	29-May-15	2203	3.87	-158.98	0
S259-028-NT	1-Jun-15	0043	4.92	-158.89	0
S259-029-NT	1-Jun-15	1334	5.90	-158.29	0
S259-030-NT	2-Jun-15	0027	6.31	-158.23	0
S259-031-NT	2-Jun-15	1225	6.86	-158.53	0
S259-032-NT	3-Jun-15	0120	7.27	-158.67	0
S259-033-NT	3-Jun-15	1133	8.08	-158.68	0
S259-034-NT	3-Jun-15	0045	9.03	-158.55	0
S259-035-NT	4-Jun-15	1355	9.93	-158.47	0
S259-036-NT	4-Jun-15	2307	10.75	-158.38	0
S259-037-NT	5-Jun-15	1236	12.07	-158.30	0
S259-039-NT	6-Jun-15	1145	14.60	-158.26	0
S259-040-NT	6-Jun-15	2301	15.65	-158.26	0
S259-041-NT	7-Jun-15	1115	16.82	-158.01	0
S259-042-NT	7-Jun-15	2203	17.76	-157.94	0
S259-043-NT	8-Jun-15	1208	19.02	-157.82	0
S259-045-NT	9-Jun-15	1038	20.70	-158.05	0

Meter Net Tow no.	Date	Local Time	Lat. °N	Lon. °W	Tow Depth (m)
S259-004-MN	12-May-15	1050	-13.07	-147.66	648.0
S259-004-MN	12-May-15	1113	-13.06	-147.66	260.0
S259-006-MN	13-May-15	0000	-12.07	-148.52	130.0
S259-007-MN	14-May-15	1134	-11.50	-149.01	185.0
S259-008-MN	14-May-15	2110	-11.39	-149.03	202.5
S259-009-MN	15-May-15	1346	-10.88	-149.46	215.0
S259-010-MN	15-May-15	2318	-10.34	-149.87	223.0
S259-012-MN	18-May-15	1048	-8.79	-151.12	170.5
S259-013-MN	18-May-15	2241	-8.05	-151.62	162.0
S259-015-MN	19-May-15	2254	-6.67	-152.74	172.0
S259-015-2MN	19-May-15	2252	-6.67	-152.74	182.0
S259-017-MN	21-May-15	0000	-4.69	-154.56	162.7
S259-021-MN	23-May-15	1907	-1.26	-155.90	155.0
S259-024-MN	24-May-15	1907	0.65	-156.65	120.0
S259-028-MNA	31-May-15	2248	4.89	-158.90	458.0
S259-028-MNB	31-May-15	2312	4.90	-158.90	275.0
S259-029-MNA	1-Jun-15	1123	5.91	-158.37	450.4
S259-029-MNB	1-Jun-15	1151	5.91	-158.35	188.0
S259-030-MNA	1-Jun-15	2216	6.36	-158.27	737.0
S259-030-MNB	1-Jun-15	2243	6.35	-158.26	277.0
S259-031-MNA	2-Jun-15	1110	6.90	-158.54	471.0
S259-031-MNB	2-Jun-15	1136	6.88	-158.53	192.4
S259-032-MNA	2-Jun-15	2252	7.35	-158.68	523.0
S259-032-MNB	2-Jun-15	2317	7.34	-158.68	244.0
S259-033-MNA	3-Jun-15	1053	8.11	-158.67	450.0
S259-033-MNB	3-Jun-15	1120	8.09	-158.68	159.0
S259-034-MNA	3-Jun-15	2214	9.05	-158.54	548.0
S259-034-MNB	3-Jun-15	2247	9.04	-158.55	193.0
S259-035-MNA	4-Jun-15	1200	9.98	-158.45	578.0
S259-035-MNB	4-Jun-15	1225	9.97	-158.45	193.0
S259-041-MNA	7-Jun-15	1030	16.84	-158.01	439.0
S259-041-MNB	7-Jun-15	1055	16.82	-158.01	175.6

Table 2. Hydrocast Data Summary
See Table 1 for station location information. Blank space indicates no data collected, DNF indicates bottle failure to close.

Station no.	Bottle no.	Depth (m)	Temp (deg C)	Salinity (psu)	PO4 (uM)	Nitrate (uM)	Chl a (ug/l)	pH
S259-001-HC	13	3	29.400	35.890	0.00	BDL	0.06	
S259-001-HC	12	24	28.884	35.877				
S259-001-HC	11	50	28.877	35.877	0.18	BDL	0.05	
S259-001-HC	10	74	28.031	36.176				
S259-001-HC	9	99	26.559	36.335	0.37	BDL	0.21	
S259-001-HC	8	124	25.604	36.374			0.23	
S259-001-HC	7	149	24.202	36.332	0.39	1.95		
S259-001-HC	6	198	22.231	36.058				
S259-001-HC	5	249	20.204	35.804				
S259-001-HC	4	298	17.985	35.469	0.53	4.27		
S259-001-HC	3	398	11.329	34.667				
S259-001-HC	2	496	8.360	34.512				
S259-001-HC	1	596	6.810	34.481				
S259-002-HC	13	3	29.300	35.950	0.07	BDL	0.03	8.23
S259-002-HC	12	25	28.813	35.934			0.04	
S259-002-HC	11	50	28.797	35.955			0.03	8.23
S259-002-HC	10	74	27.539	36.279	0.20	0.56		
S259-002-HC	9	99	26.744	36.319			0.10	
S259-002-HC	8	124	25.184	36.352	0.43	1.49	0.11	8.15
S259-002-HC	7	149	24.166	36.277	0.33	2.29		
S259-002-HC	6	198	22.398	36.122				8.11
S259-002-HC	5	248	19.824	35.763	0.43	4.03		
S259-002-HC	4	297	17.029	35.326				8.01
S259-002-HC	3	397	11.650	34.700				
S259-002-HC	2	497	7.841	34.475				7.76
S259-002-HC	1	576	6.665	34.463				
S259-003-HC	13	3	29.200	35.890	0.17	0.01	0.04	8.17
S259-003-HC	12	25	28.850	35.869				
S259-003-HC	11	50	28.838	35.919	1.54	0.11	0.06	8.24
S259-003-HC	10	74	28.485	36.059				
S259-003-HC	9	99	27.304	36.317	0.41	0.22	0.12	8.14
S259-003-HC	8	124	26.362	36.443				
S259-003-HC	7	149	25.411	36.477	0.28	2.82	0.09	8.09
S259-003-HC	6	199	22.169	36.137				
S259-003-HC	5	248	20.047	35.771				8.00
S259-003-HC	4	298	16.869	35.294				
S259-003-HC	3	398	11.475	34.717	1.93	11.62		7.72
S259-003-HC	2	497	8.195	34.533				
S259-003-HC	1	585	6.810	34.488				
S259-004-HC	13	3	29.400	35.870	0.20	BDL		8.18
S259-004-HC	12	25	28.928	35.874				
S259-004-HC	11	49	28.902	35.894	1.12	0.11		8.18
S259-004-HC	10	75	28.684	36.078				
S259-004-HC	9	99	27.212	36.321	0.21	0.04		8.14

S259-004-HC	8	124	25.835	36.391				
S259-004-HC	7	148	24.645	36.369				8.10
S259-004-HC	6	198	22.178	36.120				
S259-004-HC	5	299	16.746	35.268				7.94
S259-004-HC	4	398	9.914	34.608				
S259-004-HC	3	446	8.554	34.553	3.06	17.46		7.71
S259-004-HC	2	497	7.762	34.544				
S259-004-HC	1	584	6.539	34.513	1.65	20.27		
S259-005-HC	13	3	29.500	35.720	2.98	BDL	0.03	
S259-005-HC	12	25	28.925	35.997				
S259-005-HC	11	50	28.881	36.007			0.07	
S259-005-HC	10	74	28.803	36.034	0.25	0.00	0.08	
S259-005-HC	9	99	27.438	36.263			0.18	
S259-005-HC	8	124	26.305	36.369	0.35	1.68	0.12	
S259-005-HC	7	148	25.521	36.465			0.11	
S259-005-HC	6	199	23.286	36.281	0.46	2.82	0.04	
S259-005-HC	5	297	15.327	35.101				
S259-005-HC	4	396	10.211	34.627				
S259-005-HC	3	446	8.881	34.594				
S259-005-HC	2	497	7.835	34.568				
S259-005-HC	1	590	6.560	34.510				
S259-006-HC	13	0	29.500	36.050	0.14	0.42	0.03	8.15
S259-006-HC	12	25	28.908	36.009				
S259-006-HC	11	50	28.862	36.018	0.09	BDL	0.07	8.18
S259-006-HC	10	74	28.646	36.096			0.15	
S259-006-HC	9	100	27.025	36.360	0.28	0.33	0.22	8.12
S259-006-HC	8	124	26.001	36.474			0.12	
S259-006-HC	7	149	24.902	36.425				
S259-006-HC	6	199	22.185	36.180	0.46	3.31		8.01
S259-006-HC	5	248	18.822	35.619				
S259-006-HC	4	298	14.400	34.975	0.93	9.48		7.82
S259-006-HC	3	397	9.864	34.629				
S259-006-HC	2	496	8.053	34.569				
S259-006-HC	1	596	6.324	34.498				
S259-007-HC	13	0	29.500	36.000	0.14	BDL		
S259-007-HC	12	48	28.987	36.001	0.15	BDL		
S259-007-HC	11	50	28.978	36.003				
S259-007-HC	10	98	27.120	36.329	0.24	0.00		
S259-007-HC	9	99	27.031	36.318				
S259-007-HC	8	198	20.485	35.851	0.52	2.08		
S259-007-HC	7	199	20.359	35.856				
S259-007-HC	6	297	14.808	35.017	1.00	6.93		
S259-007-HC	5	298	14.781	35.018				
S259-007-HC	4	396	10.901	34.670				
S259-007-HC	3	398	10.830	34.680				
S259-007-HC	2	576	7.288	34.558				
S259-007-HC	1	578	7.283	34.557				
S259-008-HC	13	3	29.500	35.940	0.03	BDL	0.03	8.12
S259-008-HC	12	25	29.051	35.949				
S259-008-HC	11	49	28.933	35.970	0.17	BDL	0.08	8.12

S259-008-HC	10	75	28.794	36.011			0.15	
S259-008-HC	9	99	27.146	36.355	0.20	0.30	0.21	8.08
S259-008-HC	8	124	26.231	36.421			0.23	
S259-008-HC	7	150	24.910	36.437				
S259-008-HC	6	198	21.918	36.079	0.42	2.96		7.98
S259-008-HC	5	248	18.809	35.571				
S259-008-HC	4	298	14.694	35.023	0.71	9.25		7.76
S259-008-HC	3	397	9.437	34.656				
S259-008-HC	2	496	7.505	34.581				
S259-008-HC	1	589	6.759	34.539				
S259-009-HC2	13	0	29.600	35.930	0.14	0.10	0.05	8.14
S259-009-HC2	12	25	29.124	35.926				
S259-009-HC2	11	50	29.108	35.925	0.25	0.07	0.08	8.14
S259-009-HC2	10	75	29.016	35.919				
S259-009-HC2	9	99	27.641	36.277	0.31	0.62	0.19	8.01
S259-009-HC2	8	124	26.260	36.421				
S259-009-HC2	7	149	25.413	36.432	0.47	3.53		8.05
S259-009-HC2	6	198	21.747	36.070		4.57	0.02	
S259-009-HC2	5	248	17.370	35.397	0.96	5.32		7.84
S259-009-HC2	4	299	14.280	34.964				
S259-009-HC2	3	397	10.025	34.681	2.17	23.22		7.56
S259-009-HC2	2	496	7.732	34.583				
S259-009-HC2	1	596	6.993	34.556	2.45	25.61		
S259-010-HC	13	3	29.600	35.900	0.33	0.16	0.03	8.05
S259-010-HC	12	25	29.130	35.879				
S259-010-HC	11	49	29.080	35.878				
S259-010-HC	10	75	28.871	35.921	0.24	BDL	0.10	8.14
S259-010-HC	9	100	26.974	36.308	0.42	1.05	0.19	8.09
S259-010-HC	8	124	25.857	36.356			0.21	
S259-010-HC	7	149	24.915	36.398				
S259-010-HC	6	199	21.660	36.050	0.27	3.83		7.98
S259-010-HC	5	248	17.311	35.388				
S259-010-HC	4	298	13.988	34.993	1.35	14.95		7.67
S259-010-HC	3	397	9.513	34.667				
S259-010-HC	2	497	7.731	34.590				
S259-010-HC	1	586	6.903	34.556				
S259-012-HC	13	3	29.600	35.780	2.12	24.27	0.04	8.14
S259-012-HC	12	25	29.123	35.767				
S259-012-HC	11	50	29.090	35.763	0.36	2.16	0.06	8.16
S259-012-HC	10	74	28.943	35.749			0.04	
S259-012-HC	9	100	28.335	36.002	0.30	1.09	0.07	
S259-012-HC	8	125	26.203	36.373			0.11	8.10
S259-012-HC	7	149	25.099	36.428				
S259-012-HC	6	199	21.733	36.065	0.63	5.33		8.03
S259-012-HC	5	249	15.964	35.193				
S259-012-HC	4	298	11.291	34.785				7.64
S259-012-HC	3	398	9.578	34.708	2.17	27.63		
S259-012-HC	2	497	8.401	34.640				
S259-012-HC	1	577	7.055	34.573	2.48	26.93		
S259-013-HC	13	3	29.570	35.830	0.38	1.68	0.03	8.16

S259-013-HC	12	24	29.149	35.844	0.30	1.26		8.15
S259-013-HC	11	50	29.138	35.941			0.12	
S259-013-HC	10	75	28.906	35.922			0.14	
S259-013-HC	9	99	28.069	36.075	0.26	2.40	0.09	8.05
S259-013-HC	8	124	26.112	36.477			0.06	
S259-013-HC	7	149	24.714	36.508			0.05	
S259-013-HC	6	198	20.782	35.920	0.40	4.87	0.05	7.99
S259-013-HC	5	249	15.058	35.120				
S259-013-HC	4	298	11.806	34.817	1.40	21.12		
S259-013-HC	3	398	9.564	34.709				7.60
S259-013-HC	2	496	8.332	34.636	2.81	26.35		
S259-013-HC	1	579	7.338	34.582				
S259-014-HC	13	3	29.490	35.730	0.77	2.62		
S259-014-HC	12	25	29.081	35.730			0.04	
S259-014-HC	11	50	28.966	35.737	0.29	2.60	0.09	
S259-014-HC	10	73	28.856	35.786			0.11	
S259-014-HC	9	99	27.200	36.143	0.41	4.57	0.15	
S259-014-HC	8	125	26.386	36.381			0.07	
S259-014-HC	7	149	24.437	36.430				
S259-014-HC	6	199	19.629	35.680	0.51	7.59		
S259-014-HC	5	248	15.098	35.112				
S259-014-HC	4	298	11.660	34.851	1.30	24.55		
S259-014-HC	3	397	9.428	34.702				
S259-014-HC	2	497	8.251	34.628	2.20	27.40		
S259-014-HC	1	583	7.248	34.580				
S259-015-HC	13	3	29.440	35.680				8.13
S259-015-HC	12	25	29.106	35.674				
S259-015-HC	11	48	29.090	35.683				8.12
S259-015-HC	10	75	28.907	35.685				
S259-015-HC	9	100	28.831	35.678				8.11
S259-015-HC	8	123	27.613	36.161				
S259-015-HC	7	148	25.372	36.319				8.05
S259-015-HC	6	198	19.821	35.763				7.94
S259-015-HC	5	248	14.065	34.990				7.64
S259-015-HC	4	298	11.245	34.833				
S259-015-HC	3	397	9.484	34.714				7.62
S259-015-HC	2	497	8.026	34.617				
S259-015-HC	1	596	6.833	34.562				7.57
S259-016-HC	13	3	29.300	35.420	0.27	4.00	0.03	8.11
S259-016-HC	12	46	28.921	35.420	0.46	3.50		8.11
S259-016-HC	11	49	28.921	35.422				
S259-016-HC	10	75	28.871	35.620	0.23	2.84		8.12
S259-016-HC	9	75	28.876	35.624				
S259-016-HC	8	198	17.969	35.475				
S259-016-HC	7	199	17.614	35.464				7.85
S259-016-HC	6	297	11.039	34.823				
S259-016-HC	5	298	10.961	34.829	1.25	28.77		7.52
S259-016-HC	4	346	9.985	34.744				
S259-016-HC	3	348	9.981	34.744				
S259-016-HC	2	594	6.763	34.571				

S259-016-HC	1	596	6.750	34.568				7.51
S259-017-HC	13	3	29.300	35.400	0.21	4.46	0.02	
S259-017-HC	12	25	28.980	35.348			0.03	
S259-017-HC	11	49	28.952	35.348	0.29	3.38	0.05	
S259-017-HC	10	74	28.568	35.317			0.09	
S259-017-HC	9	98	28.023	35.431	0.24	4.93	0.10	
S259-017-HC	8	124	26.952	35.895			0.07	
S259-017-HC	7	149	24.065	36.262				
S259-017-HC	6	199	15.867	35.196	0.85	15.69		
S259-017-HC	5	248	11.901	34.860				
S259-017-HC	4	297	10.525	34.794	1.05	28.87		
S259-017-HC	3	398	9.365	34.702				
S259-017-HC	2	496	8.171	34.625				
S259-017-HC	1	580	7.136	34.575				
S259-018-HC	13	3	29.300	35.330			0.04	
S259-018-HC	12	48	28.958	35.322	0.40	2.933	0.04	
S259-018-HC	11	50	28.963	35.324				
S259-018-HC	10	98	27.871	35.613	0.73	3.670	0.08	
S259-018-HC	9	99	27.860	35.628				
S259-018-HC	8	173	18.326	35.475	0.92	8.505	0.01	
S259-018-HC	7	174	17.798	35.587				
S259-018-HC	6	246	12.932	34.965	1.56	16.730		
S259-018-HC	5	248	12.897	34.954				
S259-018-HC	4	395	9.892	34.742	2.07	23.079		
S259-018-HC	3	397	9.855	34.738				
S259-018-HC	2	578	7.219	34.586	2.25	25.281		
S259-018-HC	1	580	7.204	34.579				
S259-019-HC	13	3	29.600	35.400	0.59	2.843	0.05	8.08
S259-019-HC	12	48	29.060	35.386	0.51	2.642	0.07	8.08
S259-019-HC	11	49	29.059	35.387				
S259-019-HC	10	149	21.561	35.807	0.92	8.369	0.05	7.88
S259-019-HC	9	150	21.162	35.972				
S259-019-HC	8	226	12.705	34.917	1.62	22.032	0.00	7.57
S259-019-HC	7	229	12.678	34.909				
S259-019-HC	6	325	11.502	34.837	1.54	20.469		7.61
S259-019-HC	5	327	11.483	34.839				
S259-019-HC	4	426	9.610	34.719	2.02	25.512		7.43
S259-019-HC	3	427	9.601	34.718				
S259-019-HC	2	582	7.291	34.587	2.33	25.091		7.52
S259-019-HC	1	582	7.287	34.588				
S259-020-HC	13	3	29.200	35.380			0.09	8.11
S259-020-HC	12	49	28.855	35.368	0.41	2.495	0.10	8.13
S259-020-HC	11	50	28.854	35.369				
S259-020-HC	10	172	14.282	35.072	1.20	21.651	0.01	7.65
S259-020-HC	9	174	14.172	35.041				
S259-020-HC	8	244	12.523	34.898	1.42	25.213	0.00	7.61
S259-020-HC	7	247	12.501	34.902				
S259-020-HC	6	326	11.575	34.844	1.52	17.043		7.59
S259-020-HC	5	327	11.571	34.842				
S259-020-HC	4	425	9.069	34.692	1.57	25.390		7.67

S259-020-HC	3	426	9.063	34.686				
S259-020-HC	2	588	6.753	34.567				7.58
S259-020-HC	1	589	6.737	34.565				
S259-021-HC	13	3	29.500	35.390			0.03	
S259-021-HC	12	49	29.075	35.376	0.54	2.598	0.09	8.10
S259-021-HC	11	50	29.073	35.376				
S259-021-HC	10	99	27.621	35.319			0.09	8.07
S259-021-HC	9	100	27.610	35.319				
S259-021-HC	8	147	22.628	35.818	0.77	8.994	0.01	7.94
S259-021-HC	7	149	21.432	35.911				
S259-021-HC	6	246	12.434	34.894	1.56	21.067		7.56
S259-021-HC	5	248	12.392	34.900				
S259-021-HC	4	395	10.314	34.805				7.62
S259-021-HC	3	397	10.208	34.775				
S259-021-HC	2	593	6.839	34.568	1.69	25.879		7.56
S259-021-HC	1	595	6.833	34.569				
S259-022-HC	13	3	29.460	35.320				8.12
S259-022-HC	12	49	28.943	35.312				8.14
S259-022-HC	11	50	28.897	35.311				
S259-022-HC	10	99	27.731	35.354	0.57	25.798		8.07
S259-022-HC	9	100	27.709	35.359				
S259-022-HC	8	172	17.081	35.394	1.16	10.055		7.95
S259-022-HC	7	174	16.149	35.385				
S259-022-HC	6	247	12.584	34.906	0.97	16.703		7.83
S259-022-HC	5	248	12.575	34.910				
S259-022-HC	4	395	10.245	34.735	1.69	20.074		7.64
S259-022-HC	3	397	10.229	34.743				
S259-022-HC	2	595	7.154	34.582	1.72			7.59
S259-022-HC	1	596	7.135	34.583				
S259-023-HC	13	3	29.600	35.320				
S259-023-HC	12	5	29.256	35.320				
S259-023-HC	11	6	29.249	35.322				
S259-023-HC	10	50	29.003	35.311				
S259-023-HC	9	50	28.962	35.313				
S259-023-HC	8	149	20.382	35.183				
S259-023-HC	7	150	20.316	35.189				
S259-023-HC	6	297	11.513	34.821				
S259-023-HC	5	298	11.513	34.821				
S259-023-HC	4	471	8.372	34.635				
S259-023-HC	3	472	8.363	34.637				
S259-023-HC	2	595	7.358	34.599				
S259-023-HC	1	596	7.330	34.594				
S259-024-HC	13	3	29.900	35.310	0.27	2.566	0.14	8.16
S259-024-HC	12	58	28.973	35.272			0.25	8.12
S259-024-HC	11	59	28.951	35.271				
S259-024-HC	10	99	27.643	35.316	0.41	4.928	0.09	8.08
S259-024-HC	9	100	27.580	35.326				
S259-024-HC	8	173	15.827	35.079			0.00	7.91
S259-024-HC	7	174	15.812	35.085				
S259-024-HC	6	247	11.941	34.857	1.02	18.538		7.73

S259-024-HC	5	248	11.878	34.863				
S259-024-HC	4	445	8.650	34.655	1.16			7.56
S259-024-HC	3	447	8.533	34.667				
S259-024-HC	2	594	6.943	34.573	1.55	22.880		7.58
S259-024-HC	1	596	6.934	34.574				
S259-025-HC	13	3	30.100	34.960	0.23		0.09	8.14
S259-025-HC	12	25	29.736	35.128	0.25	0.556	0.08	8.12
S259-025-HC	11	49	29.682	35.240	0.22		0.17	8.12
S259-025-HC	10	74	29.305	35.266			0.16	
S259-025-HC	9	99	27.985	35.202	0.34	4.659	0.08	8.13
S259-025-HC	8	124	23.350	35.070				
S259-025-HC	7	149	19.418	35.014			0.01	7.82
S259-025-HC	6	198	12.657	34.784	0.53	7.880		
S259-025-HC	5	249	11.444	34.813				7.69
S259-025-HC	4	298	10.821	34.771				
S259-025-HC	3	398	9.957	34.721				
S259-025-HC	2	496	8.123	34.613				
S259-025-HC	1	578	6.845	34.564				
S259-026-HC	13	3	30.100	34.700	0.10	BDL	0.04	
S259-026-HC	12	25	29.637	34.838			0.06	
S259-026-HC	11	50	29.360	34.896	0.16	5.380	0.36	
S259-026-HC	10	100	27.335	34.915	0.27	2.065	0.10	
S259-026-HC	9	149	15.864	34.734			0.07	
S259-026-HC	8	199	11.073	34.694	1.40	16.839		
S259-026-HC	7	248	10.541	34.749				
S259-026-HC	6	298	10.041	34.713				
S259-026-HC	5	347	9.580	34.689				
S259-026-HC	4	397	8.900	34.649	1.88	17.682		
S259-026-HC	3	447	8.533	34.631				
S259-026-HC	2	497	7.910	34.607				
S259-026-HC	1	589	6.839	34.573	2.33	26.668		
S259-028-HC	13	3	30.130	34.420	0.16	0.143	0.02	8.15
S259-028-HC	12	47	29.634	34.687				
S259-028-HC	11	50	29.624	34.680			0.03	8.15
S259-028-HC	10	75	28.310	34.775	0.27	0.222	0.08	8.10
S259-028-HC	9	123	17.559	34.759				
S259-028-HC	8	124	17.548	34.730	1.49	9.457	0.03	7.82
S259-028-HC	7	197	9.825	34.651				
S259-028-HC	6	199	9.827	34.650				7.60
S259-028-HC	5	248	9.485	34.661	2.24	20.197		
S259-028-HC	4	298	9.259	34.659	2.49	21.706		
S259-028-HC	3	446	8.252	34.620				
S259-028-HC	2	447	8.242	34.618				7.45
S259-028-HC	1	587	6.893	34.569				
S259-029-HC	13	3	29.650	34.230	0.30	0.200	0.03	8.08
S259-029-HC	12	47	29.359	34.664	0.46	0.361	0.04	
S259-029-HC	11	49	29.319	34.679				8.24
S259-029-HC	10	74	26.686	34.884	0.37	1.440	0.11	8.08
S259-029-HC	9	97	18.721	34.919				
S259-029-HC	8	99	18.205	34.891	0.67	6.330	0.08	

S259-029-HC	7	124	13.618	34.629				
S259-029-HC	6	148	12.010	34.626	1.93	20.278		7.65
S259-029-HC	5	149	11.957	34.623				
S259-029-HC	4	298	9.352	34.663				
S259-029-HC	3	470	8.001	34.604				7.49
S259-029-HC	2	472	7.992	34.601	3.21	25.227		
S259-029-HC	1	596	6.923	34.568				
S259-030-HC	13	3	29.700	34.460	0.19	0.010	0.01	8.17
S259-030-HC	12	24	29.392	34.446				
S259-030-HC	11	49	29.417	34.785	0.16	0.012	0.04	8.12
S259-030-HC	10	74	25.977	34.866	2.38	0.108	0.09	8.08
S259-030-HC	9	100	17.586	34.698				
S259-030-HC	8	123	13.066	34.589				
S259-030-HC	7	149	11.970	34.639	2.23	20.795	0.03	7.55
S259-030-HC	6	199	10.606	34.675				
S259-030-HC	5	249	9.948	34.680				
S259-030-HC	4	298	9.499	34.672	2.67	18.598	0.00	7.51
S259-030-HC	3	397	8.515	34.626				
S259-030-HC	2	498	7.548	34.578				7.42
S259-030-HC	1	595	6.912	34.570				
S259-031-HC	13	3	29.200	34.270	0.19	BDL	0.02	8.13
S259-031-HC	12	25	28.805	34.261			0.02	
S259-031-HC	11	49	28.673	34.343	0.43	BDL	0.03	
S259-031-HC	10	74	20.646	34.704			0.04	
S259-031-HC	9	99	14.555	34.605	1.76	13.440	0.05	7.73
S259-031-HC	8	124	12.934	34.604				
S259-031-HC	7	148	11.652	34.671	2.50	22.943	0.01	7.59
S259-031-HC	6	174	11.064	34.693				
S259-031-HC	5	199	10.661	34.717	2.86	16.083	0.00	7.52
S259-031-HC	4	299	9.496	34.667				
S259-031-HC	3	397	8.606	34.624	2.85	19.639		7.52
S259-031-HC	2	497	7.753	34.591				
S259-031-HC	1	593	6.868	34.572	2.49	23.900		
S259-032-HC	13	3	28.900	34.330	0.25	BDL	0.01	8.13
S259-032-HC	12	25	28.582	34.317	0.44	BDL	0.02	8.17
S259-032-HC	11	50	28.536	34.316			0.03	
S259-032-HC	10	74	23.350	34.656	0.49	0.855	0.17	8.07
S259-032-HC	9	99	14.965	34.708	1.68	12.366	0.09	
S259-032-HC	8	124	12.380	34.603				
S259-032-HC	7	149	11.462	34.649			0.02	7.56
S259-032-HC	6	174	10.871	34.677				
S259-032-HC	5	199	10.459	34.685	2.47	15.471		7.55
S259-032-HC	4	298	9.491	34.666				
S259-032-HC	3	398	8.591	34.621				7.52
S259-032-HC	2	497	7.758	34.585				
S259-032-HC	1	593	6.842	34.553				7.50
S259-033-HC	13	3	28.500	34.280	0.27	BDL	0.03	7.72
S259-033-HC	12	25	28.206	34.275			0.02	
S259-033-HC	11	50	28.032	34.334	0.20	0.048	0.06	8.16
S259-033-HC	10	74	17.560	34.588			0.09	

S259-033-HC	9	99	13.291	34.582	1.53	18.062	0.04	
S259-033-HC	8	124	11.457	34.670				
S259-033-HC	7	149	10.901	34.691	2.74	20.985	0.01	7.72
S259-033-HC	6	174	10.460	34.695				
S259-033-HC	5	199	10.216	34.688	2.82	19.821	0.00	6.72
S259-033-HC	4	297	9.352	34.653				
S259-033-HC	3	397	8.446	34.604	1.82	23.424		7.41
S259-033-HC	2	497	7.598	34.567				
S259-033-HC	1	570	6.961	34.555	2.22	25.667		7.52
S259-034-HC	13	3	28.500	34.120	0.23	0.042	0.01	8.18
S259-034-HC	12	25	28.164	34.122	0.85	0.010	0.02	8.15
S259-034-HC	11	50	25.778	34.573			0.07	
S259-034-HC	10	75	17.042	34.504	0.83	6.629	0.11	7.87
S259-034-HC	9	98	13.019	34.423	2.03	12.140	0.06	
S259-034-HC	8	125	11.901	34.663			0.03	
S259-034-HC	7	149	11.186	34.673	2.59	20.025	0.02	7.52
S259-034-HC	6	199	10.544	34.696				
S259-034-HC	5	248	10.058	34.685				7.49
S259-034-HC	4	299	9.664	34.660				
S259-034-HC	3	397	8.894	34.631				
S259-034-HC	2	496	7.598	34.572				7.51
S259-034-HC	1	595	6.585	34.541				
S259-035C-HC	13	3	28.300	34.160	0.29	0.108	0.03	8.14
S259-035C-HC	12	24	27.828	34.139				
S259-035C-HC	11	25	27.827	34.139	0.04	0.573	0.03	8.12
S259-035C-HC	10	73	27.542	34.199				
S259-035C-HC	9	74	27.268	34.235	0.20	0.034	0.08	8.11
S259-035C-HC	8	121	13.036	34.603				
S259-035C-HC	7	123	12.784	34.549	2.04	20.278	0.06	7.50
S259-035C-HC	6	247	10.711	34.713				
S259-035C-HC	5	248	10.703	34.716	2.08	25.458	0.01	7.49
S259-035C-HC	4	346	9.835	34.680				
S259-035C-HC	3	347	9.824	34.678				
S259-035C-HC	2	580	7.217	34.548				
S259-035C-HC	1	581	7.190	34.548				7.45
S259-036-HC	13	3	28.200	34.240	0.11	0.037		
S259-036-HC	12	25	27.882	34.229				
S259-036-HC	11	50	27.835	34.236	0.05	0.070		8.13
S259-036-HC	10	74	27.250	34.326				
S259-036-HC	9	99	19.619	34.638	0.57	2.530		7.95
S259-036-HC	8	125	14.481	34.394	0.83	10.449		7.82
S259-036-HC	7	150	12.052	34.384				
S259-036-HC	6	174	11.642	34.578				
S259-036-HC	5	199	11.321	34.687				7.49
S259-036-HC	4	298	10.132	34.679	2.51	24.765		
S259-036-HC	3	398	9.251	34.638				
S259-036-HC	2	496	8.423	34.592				7.46
S259-036-HC	1	578	7.558	34.556				
S259-037-HC			27.700	34.360				
S259-038-HC	13	3	27.600	34.360	0.07	0.157		

S259-038-HC	12	26	27.320	34.350				
S259-038-HC	11	49	27.280	34.351	0.20	0.089		
S259-038-HC	10	75	26.977	34.329				
S259-038-HC	9	99	22.847	34.867	0.20	0.075		
S259-038-HC	8	124	19.723	34.813				
S259-038-HC	7	150	17.093	34.757	0.69	5.038		
S259-038-HC	6	173	14.561	34.335				
S259-038-HC	5	199	12.161	34.256	1.08	13.535		
S259-038-HC	4	297	9.610	34.515				
S259-038-HC	3	398	8.389	34.535	2.63	19.210		
S259-038-HC	2	496	7.169	34.494				
S259-038-HC	1	595	6.317	34.492				
S259-039-HC			27.500	34.380				
S259-040-HC	13	3	27.300	34.370				8.12
S259-040-HC	12	24	26.967	34.365				
S259-040-HC	11	49	26.403	34.338				8.15
S259-040-HC	10	74	26.244	34.335				
S259-040-HC	9	99	23.128	35.065				8.09
S259-040-HC	8	124	20.441	34.965				8.01
S259-040-HC	7	149	17.706	34.726				7.91
S259-040-HC	6	173	15.264	34.446				
S259-040-HC	5	198	13.169	34.297				
S259-040-HC	4	298	9.795	34.466				7.54
S259-040-HC	3	397	8.721	34.521				
S259-040-HC	2	496	7.718	34.514				7.42
S259-040-HC	1	596	6.735	34.496				
S259-041-HC	13	3	26.910	34.420				8.10
S259-041-HC	12	49	26.517	34.410				
S259-041-HC	11	74	25.655	34.660				
S259-041-HC	10	75	25.671	34.672				8.10
S259-041-HC	9	124	22.165	34.983				
S259-041-HC	8	125	22.129	34.968				7.99
S259-041-HC	7	199	15.169	34.408				
S259-041-HC	6	199	15.052	34.442				7.79
S259-041-HC	5	298	9.642	34.237				7.56
S259-041-HC	4	396	7.735	34.290				
S259-041-HC	3	397	7.710	34.292				7.41
S259-041-HC	2	595	6.337	34.447				
S259-041-HC	1	596	6.322	34.451				7.44
S259-042-HC	13	3	26.900	34.580				8.09
S259-042-HC	12	25	26.013	34.814				
S259-042-HC	11	50	25.222	34.915				8.06
S259-042-HC	10	75	24.657	35.085				
S259-042-HC	9	100	23.498	35.154				8.08
S259-042-HC	8	124	23.179	35.304				
S259-042-HC	7	149	21.797	35.190				8.06
S259-042-HC	6	199	18.107	34.713				
S259-042-HC	5	249	13.379	34.275				
S259-042-HC	4	298	10.724	34.239				7.68
S259-042-HC	3	398	8.281	34.264				

S259-042-HC	2	496	7.410	34.395				
S259-042-HC	1	578	6.680	34.433				
S259-043-HC	13	3	27.200	34.460				8.13
S259-043-HC	12	25	26.633	34.452				
S259-043-HC	11	50	25.782	34.522				8.08
S259-043-HC	10	75	25.367	34.703				
S259-043-HC	9	100	24.927	34.954				8.11
S259-043-HC	8	125	24.003	35.133				
S259-043-HC	7	149	22.875	35.179				8.05
S259-043-HC	6	199	20.198	35.138				
S259-043-HC	5	249	15.533	34.557				7.92
S259-043-HC	4	298	12.030	34.210				
S259-043-HC	3	397	8.757	34.166				
S259-043-HC	2	496	6.657	34.154				
S259-043-HC	1	582	5.814	34.229				
S259-045-HC	13	3	26.700	34.700				
S259-045-HC	12	50	24.989	35.004				
S259-045-HC	11	74	24.341	35.150				
S259-045-HC	10	123	22.517	35.371				
S259-045-HC	9	124	22.144	35.266				
S259-045-HC	8	148	21.503	35.319				
S259-045-HC	7	150	21.487	35.327				
S259-045-HC	6	346	10.493	34.177				
S259-045-HC	5	348	10.458	34.168				
S259-045-HC	4	396	8.707	34.108				
S259-045-HC	3	398	8.698	34.109				
S259-045-HC	2	585	6.061	34.226				
S259-045-HC	1	587	6.054	34.228				

Table 3. Neuston Net Data Summary
See Table 1 for station information.

Station	Tow Distance (m)	Zoop. Biovolume (cm^2)	Zoop. Density (cm^3*m^{-2})
S259-001-NT	2073	3.2	0.0015
S259-002-NT	2154	4.0	0.0019
S259-003-NT	2037	107.0	0.0525
S259-006-NT	1199	12.0	0.0100
S259-007-NT	2158	2.4	0.0011
S259-008-NT	2274	8.0	0.0035
S259-009-NT	2187	2.0	0.0009
S259-010-NT	3191	9.0	0.0028
S259-011-NT	1064	10.0	0.0094
S259-012-NT	1364	9.0	0.0066
S259-013-NT	1841	2.5	0.0014
S259-014-NT	1963	3.0	0.0015
S259-016-NT	2184	1.0	0.0005
S259-017-NT	3820	25.0	0.0065
S259-019-NT	2476	23.0	0.0093
S259-020-NT	1818	20.5	0.0113
S259-021-NT	3292	251.0	0.0762
S259-022-NT	2067	22.0	0.0106
S259-024-NT	1755	182.0	0.1037
S259-025-NT	1515	301.0	0.1987
S259-027-NT	1907	23.0	0.0121
S259-028-NT	2469	13.0	0.0053
S259-029-NT	2506	2.0	0.0008
S259-030-NT	2365	8.8	0.0037
S259-031-NT	1508	1.5	0.0010
S259-032-NT	2200	6.0	0.0027
S259-033-NT	1664	1.5	0.0009
S259-034-NT	1558	14.0	0.0090
S259-035-NT	1431	2.0	0.0014
S259-036-NT	1645	6.0	0.0036
S259-037-NT	1346	3.0	0.0022
S259-039-NT	2692	1.8	0.0007
S259-040-NT	1402	5.0	0.0036
S259-041-NT	1786	1.0	0.0006
S259-042-NT	1152	21.0	0.0182
S259-043-NT	1852	9.5	0.0051
S259-045-NT	1404	3.5	0.0025

Table 4. Meter Net Data Summary
See Table 1 for station information. Blank spaces indicate no data available.

Station	Tow depth (m)	Tow Length (m)	Zoop Biomass (ml)	Zpl Density (ml/m^3)
S259-004-MN	648.0	4411	33	0.0095
S259-004-MN	260.0	2679	22	0.0105
S259-006-MN	130.0	2082	67	0.0410
S259-007-MN	185.0	1877	20	0.0136
S259-008-MN	202.5	1997	33	0.0210
S259-009-MN	215.0	1539	15	0.0124
S259-010-MN	223.0	1917	37	0.0246
S259-012-MN	170.5	2088	30	0.0183
S259-013-MN	162.0	1956	34	0.0221
S259-015-MN	172.0	1429	27	0.0241
S259-015-2MN	182.0	1912	37	0.0083
S259-017-MN	162.7	1848	53	0.0365
S259-021-MN	155.0	1640	38	0.0295
S259-024-MN	120.0	1746	216	0.1576
S259-028-MNA	458.0	4281	54	0.0161
S259-028-MNB	275.0	1674	50.5	0.0384
S259-029-MNA	450.4	5310	52.5	0.0126
S259-029-MNB	188.0	1450	33	0.0290
S259-030-MNA	737.0	4807	52	0.0138
S259-030-MNB	277.0	1230	25.5	0.0264
S259-031-MNA	471.0	5340	58	0.0138
S259-031-MNB	192.4	1888	44	0.0297
S259-032-MNA	523.0	5279	88	0.0212
S259-032-MNB	244.0	2148	66	0.0391
S259-033-MNA	450.0	4651	65	0.0178
S259-033-MNB	159.0	1307	59	0.0575
S259-034-MNA	548.0	3906	94	0.0307
S259-034-MNB	193.0	1037	47	0.0577
S259-035-MNA	578.0	4209	90	0.0272
S259-035-MNB	193.0	1110	90	0.1033
S259-041-MNA	439.0	3916	89	0.0290
S259-041-MNB	175.6	1457	32	0.0280