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Effects of ^{238}U variability and physical transport on water column ^{234}Th downward fluxes in the coastal upwelling system off Peru

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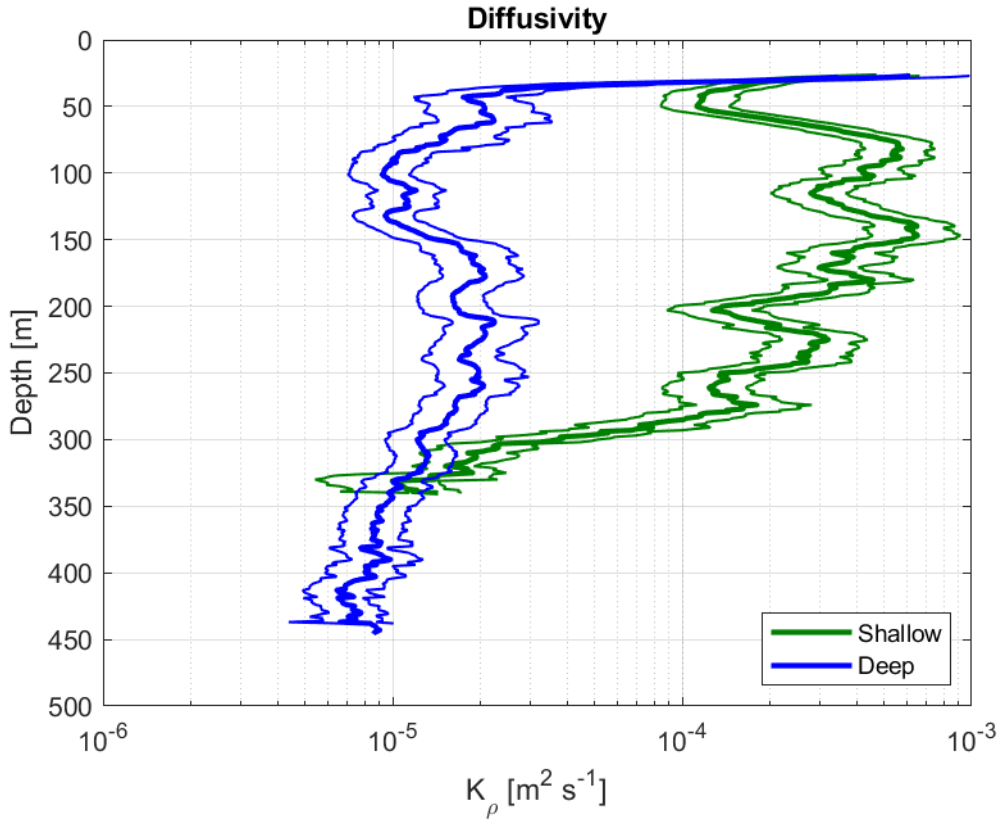

Figure S1. Diffusivities averaged over cruises M136 and M137 for both the shallow (bottom depth < 500 m; green) and deep (bottom depth > 500 m; blue) stations. The 95% confidence intervals for averaged Kz values indicated by the thin lines were determined from Gaussian error propagation following Schafstall et al. (2010).

Table S1. Activities of ^{238}U and ^{234}Th analyzed in this study, along with parameters temperature (T), salinity (S), and concentrations of oxygen (O_2) and fluorescence obtained from the CTD sensor. 'BLD' indicates values below detection limits (2µmol/kg for O_2 and 0 for chl a) of the Seabird sensor. 'NA' indicates that data are not available.

Cruise	Station	Cast	Latitude	Longitude	Bottom depth	Depth	T	S	O_2	Fluore-scence	^{238}U	Error	^{234}Th	Error
					m	m	°C		µmol kg^{-1}	µg L^{-1}	dpm L^{-1}		dpm L^{-1}	
M136	353	1	-14°08.02'	-76°51.67'	2074	5	20.2	35.27	205.05	1.15	2.45	0.02	1.07	0.09
M136	353	1	-14°08.02'	-76°51.67'	2074	30	18.3	35.30	166.46	0.39	2.47	0.05	1.88	0.12
M136	353	1	-14°08.02'	-76°51.67'	2074	59	16.5	35.09	129.50	0.03	2.49	0.02	2.21	0.15
M136	353	1	-14°08.02'	-76°51.67'	2074	100	14.2	34.94	2.54	0.01	2.51	0.03	2.53	0.21
M136	353	1	-14°08.02'	-76°51.67'	2074	150	13.3	34.94	BDL	BDL	2.56	0.01	2.40	0.12
M136	353	1	-14°08.02'	-76°51.67'	2074	200	12.7	34.90	BDL	BDL	2.49	0.03	2.44	0.15
M136	353	1	-14°08.02'	-76°51.67'	2074	300	11.7	34.85	BDL	BDL	2.54	0.02	2.45	0.08
M136	353	1	-14°08.02'	-76°51.67'	2074	350	11.0	34.80	BDL	BDL	2.59	0.02	2.61	0.18
M136	353	1	-14°08.02'	-76°51.67'	2074	400	9.9	34.72	BDL	BDL	2.51	0.02	2.59	0.12
M136	353	1	-14°08.02'	-76°51.67'	2074	500	7.8	34.59	3.95	BDL	2.54	0.02	2.47	0.08
M136	353	1	-14°08.02'	-76°51.67'	2074	600	7.1	34.56	9.90	BDL	2.53	0.02	2.56	0.20
M136	380	1	-15°21.64'	-77°10.00'	3062	5	21.2	35.16	221.99	0.28	2.54	0.05	0.99	0.08
M136	380	1	-15°21.64'	-77°10.00'	3062	20	20.9	35.16	216.89	0.51	2.52	0.02	1.10	0.14
M136	380	1	-15°21.64'	-77°10.00'	3062	30	18.6	35.26	202.16	0.87	2.52	0.03	1.96	0.17
M136	380	1	-15°21.64'	-77°10.00'	3062	65	16.7	35.11	131.24	0.39	2.69	0.01	2.42	0.11
M136	380	1	-15°21.64'	-77°10.00'	3062	80	14.9	34.89	37.34	0.14	2.49	0.02	2.44	0.13
M136	380	1	-15°21.64'	-77°10.00'	3062	100	13.7	34.84	11.23	BDL	2.53	0.02	2.56	0.09
M136	380	1	-15°21.64'	-77°10.00'	3062	150	12.7	34.85	BDL	BDL	2.50	0.02	2.60	0.17
M136	380	1	-15°21.64'	-77°10.00'	3062	200	12.2	34.85	BDL	BDL	2.53	0.01	2.65	0.13
M136	380	1	-15°21.64'	-77°10.00'	3062	400	8.7	34.64	BDL	BDL	2.46	0.01	2.42	0.11
M136	380	1	-15°21.64'	-77°10.00'	3062	600	6.8	34.54	17.54	BDL	2.57	0.02	2.36	0.12
M136	402	1	-14°34.55'	-77°16.24'	4457	5	22.3	35.30	243.58	3.96	2.53	0.02	1.36	0.07
M136	402	1	-14°34.55'	-77°16.24'	4457	30	18.4	35.11	148.64	1.63	2.53	0.02	1.92	0.14
M136	402	1	-14°34.55'	-77°16.24'	4457	50	16.6	35.09	118.22	0.46	2.63	0.02	2.40	0.17

Cruise	Station	Cast	Latitude	Longitude	Bottom depth	Depth	T	S	O_2	Fluore-scence	^{238}U	Error	^{234}Th	Error
					m	m	°C		µmol kg^{-1}	µg L^{-1}	dpm L^{-1}		dpm L^{-1}	
M136	402	1	-14°34.55'	-77°16.24'	4457	80	14.4	34.89	34.57	0.04	2.57	0.03	2.43	0.14
M136	402	1	-14°34.55'	-77°16.24'	4457	100	13.8	34.86	7.18	BDL	2.59	0.02	2.59	0.11
M136	402	1	-14°34.55'	-77°16.24'	4457	150	12.6	34.84	BDL	BDL	2.59	0.01	2.49	0.07
M136	402	1	-14°34.55'	-77°16.24'	4457	200	12.1	34.86	BDL	BDL	2.55	0.01	2.51	0.11
M136	402	1	-14°34.55'	-77°16.24'	4457	300	10.6	34.75	BDL	BDL	2.46	0.02	2.44	0.12
M136	402	1	-14°34.55'	-77°16.24'	4457	400	9.1	34.65	BDL	BDL	2.57	0.02	2.56	0.12
M136	402	1	-14°34.55'	-77°16.24'	4457	500	7.9	34.60	3.62	BDL	2.50	0.03	2.53	0.18
M136	402	1	-14°34.55'	-77°16.24'	4457	600	6.9	34.55	11.91	BDL	2.52	0.02	2.53	0.13
M136	428	1	-12°23.31'	-77°24.09'	241	5	NA	NA	NA	NA	2.52	0.01	0.63	0.06
M136	428	1	-12°23.31'	-77°24.09'	241	30	17.1	35.25	84.77	0.42	2.59	0.03	2.50	0.14
M136	428	1	-12°23.31'	-77°24.09'	241	60	15.2	35.05	2.78	0.05	2.62	0.01	1.80	0.08
M136	428	1	-12°23.31'	-77°24.09'	241	80	15.0	35.03	BDL	BDL	2.50	0.03	2.29	0.09
M136	428	1	-12°23.31'	-77°24.09'	241	100	14.7	35.02	BDL	BDL	2.51	0.02	2.36	0.10
M136	428	1	-12°23.31'	-77°24.09'	241	125	14.5	35.01	BDL	BDL	2.48	0.03	2.63	0.13
M136	428	1	-12°23.31'	-77°24.09'	241	150	14.4	35.00	BDL	BDL	2.53	0.02	2.28	0.11
M136	428	1	-12°23.31'	-77°24.09'	241	200	13.9	34.98	BDL	BDL	2.51	0.02	2.46	0.15
M136	445	1	-12°31.37'	-77°35.00'	752	5	23.4	35.37	220.46	0.90	2.51	0.02	1.34	0.09
M136	445	1	-12°31.37'	-77°35.00'	752	30	18.1	35.30	145.80	1.03	2.59	0.01	1.94	0.13
M136	445	1	-12°31.37'	-77°35.00'	752	50	15.9	35.10	5.89	0.40	2.52	0.01	1.84	0.11
M136	445	1	-12°31.37'	-77°35.00'	752	100	14.8	35.02	BDL	BDL	2.54	0.02	2.64	0.16
M136	445	1	-12°31.37'	-77°35.00'	752	150	14.2	34.99	BDL	BDL	2.52	0.02	2.27	0.15
M136	458	1	-12°27.14'	-77°29.63'	407	5	22.1	35.14	215.16	1.39	2.58	0.02	1.00	0.07
M136	458	1	-12°27.14'	-77°29.63'	407	30	17.3	35.24	113.46	0.56	2.51	0.03	1.90	0.11
M136	458	1	-12°27.14'	-77°29.63'	407	60	15.1	35.04	BDL	BDL	2.54	0.02	1.67	0.10
M136	458	1	-12°27.14'	-77°29.63'	407	80	14.9	35.03	BDL	BDL	2.51	0.01	2.17	0.14
M136	458	1	-12°27.14'	-77°29.63'	407	100	14.8	35.02	BDL	BDL	2.52	0.01	2.50	0.19
M136	458	1	-12°27.14'	-77°29.63'	407	150	14.2	34.99	BDL	BDL	2.50	0.02	2.30	0.21
M136	458	1	-12°27.14'	-77°29.63'	407	200	13.8	34.97	BDL	BDL	2.52	0.01	2.31	0.13

Cruise	Station	Cast	Latitude	Longitude	Bottom depth	Depth	T	S	O_2	Fluore-scence	^{238}U	Error	^{234}Th	Error
					m	m	°C		µmol kg^{-1}	µg L^{-1}	dpm L^{-1}		dpm L^{-1}	
M136	458	1	-12°27.14'	-77°29.63'	407	250	13.3	34.93	BDL	BDL	2.57	0.01	2.54	0.16
M136	458	1	-12°27.14'	-77°29.63'	407	300	11.6	34.84	BDL	BDL	2.56	0.01	2.47	0.17
M136	458	1	-12°27.14'	-77°29.63'	407	350	10.5	34.76	BDL	BDL	2.51	0.03	2.48	0.15
M136	472	1	-12°13.02'	-77°36.59'	464	5	21.5	35.16	213.60	6.93	2.58	0.02	0.68	0.08
M136	472	1	-12°13.02'	-77°36.59'	464	40	16.7	35.06	5.89	0.13	2.47	0.02	1.18	0.06
M136	472	1	-12°13.02'	-77°36.59'	464	60	16.5	35.06	6.58	0.04	2.51	0.02	1.23	0.08
M136	472	1	-12°13.02'	-77°36.59'	464	83	16.5	35.17	46.28	0.28	2.56	0.01	2.23	0.09
M136	472	1	-12°13.02'	-77°36.59'	464	100	15.5	35.08	13.34	0.10	2.53	0.02	2.23	0.18
M136	472	1	-12°13.02'	-77°36.59'	464	150	14.8	35.02	BDL	BDL	2.46	0.01	2.17	0.12
M136	472	1	-12°13.02'	-77°36.59'	464	200	14.4	35.00	BDL	BDL	2.52	0.02	2.50	0.13
M136	472	1	-12°13.02'	-77°36.59'	464	250	13.5	34.95	BDL	BDL	2.59	0.03	2.40	0.17
M136	472	1	-12°13.02'	-77°36.59'	464	300	11.9	34.86	BDL	BDL	2.43	0.01	2.76	0.16
M136	472	1	-12°13.02'	-77°36.59'	464	350	11.0	34.80	BDL	BDL	2.50	0.01	2.38	0.13
M136	495	1	-12°19.77'	-78°05.25'	2067	10	22.3	35.34	206.68	1.08	2.48	0.02	1.10	0.07
M136	495	1	-12°19.77'	-78°05.25'	2068	25	18.4	35.22	80.86	0.35	2.48	0.02	1.22	0.08
M136	495	1	-12°19.77'	-78°05.25'	2069	30	18.3	35.28	98.53	0.28	2.49	0.01	1.28	0.09
M136	495	1	-12°19.77'	-78°05.25'	2070	40	17.0	35.12	16.01	0.08	2.44	0.01	1.34	0.08
M136	495	1	-12°19.77'	-78°05.25'	2071	75	15.9	35.05	BDL	0.02	2.57	0.05	1.55	0.08
M136	495	1	-12°19.77'	-78°05.25'	2072	100	15.3	35.04	7.38	0.03	2.44	0.02	1.66	0.09
M136	495	1	-12°19.77'	-78°05.25'	2073	150	14.6	35.01	2.47	BDL	2.58	0.02	1.98	0.11
M136	495	1	-12°19.77'	-78°05.25'	2074	200	14.0	34.98	BDL	BDL	2.48	0.02	2.65	0.20
M136	495	1	-12°19.77'	-78°05.25'	2075	400	10.6	34.77	BDL	BDL	2.40	0.01	2.57	0.11
M136	495	1	-12°19.77'	-78°05.25'	2076	600	7.1	34.56	9.21	BDL	2.43	0.02	2.58	0.26
M136	508	1	-12°27.19'	-77°29.51'	405	30	17.4	35.25	88.64	0.35	2.47	0.02	2.37	0.11
M136	508	1	-12°27.19'	-77°29.51'	406	60	15.0	35.03	2.38	0.06	2.54	0.03	2.36	0.10
M136	508	1	-12°27.19'	-77°29.51'	407	100	14.4	35.00	BDL	BDL	2.46	0.02	2.41	0.19
M136	508	1	-12°27.19'	-77°29.51'	408	200	13.5	34.94	BDL	BDL	2.59	0.01	2.89	0.11
M136	508	1	-12°27.19'	-77°29.51'	409	300	12.1	34.87	BDL	BDL	2.50	0.01	2.79	0.15

Cruise	Station	Cast	Latitude	Longitude	Bottom depth	Depth	T	S	O_2	Fluore-scence	^{238}U	Error	^{234}Th	Error
					m	m	°C		µmol kg^{-1}	µg L^{-1}	dpm L^{-1}		dpm L^{-1}	
M136	516	1	-12°20.29'	-78°03.07'	1970	10	22.2	35.29	218.38	3.15	2.48	0.01	1.82	0.10
M136	516	1	-12°20.29'	-78°03.07'	1971	30	17.0	35.11	19.66	0.16	2.48	0.02	1.66	0.09
M136	516	1	-12°20.29'	-78°03.07'	1972	75	15.4	35.04	7.84	BDL	2.48	0.02	1.65	0.09
M136	516	1	-12°20.29'	-78°03.07'	1973	100	15.0	35.03	3.67	BDL	2.45	0.01	1.76	0.09
M136	516	1	-12°20.29'	-78°03.07'	1974	150	14.6	35.01	BDL	BDL	2.51	0.02	2.01	0.12
M136	516	1	-12°20.29'	-78°03.07'	1975	200	13.9	34.98	BDL	BDL	2.50	0.03	2.47	0.14
M136	516	1	-12°20.29'	-78°03.07'	1976	400	10.5	34.76	BDL	BDL	2.46	0.01	2.45	0.21
M136	516	1	-12°20.29'	-78°03.07'	1977	600	7.1	34.57	7.93	BDL	2.46	0.01	2.56	0.13
M136	547	1	-12°32.80'	-78°27.60'	4332	10	22.6	35.37	212.86	1.23	2.50	0.01	1.46	0.09
M136	547	1	-12°32.80'	-78°27.60'	4332	30	18.9	35.40	164.14	0.81	2.54	0.03	1.87	0.13
M136	547	1	-12°32.80'	-78°27.60'	4332	50	16.3	35.06	3.99	0.03	2.50	0.02	1.31	0.14
M136	547	1	-12°32.80'	-78°27.60'	4332	75	15.6	35.07	9.37	0.06	2.54	0.01	1.94	0.12
M136	547	1	-12°32.80'	-78°27.60'	4332	100	14.9	35.03	BDL	BDL	2.50	0.01	1.62	0.10
M136	547	1	-12°32.80'	-78°27.60'	4332	150	14.3	35.00	BDL	BDL	2.43	0.01	2.54	0.11
M136	547	1	-12°32.80'	-78°27.60'	4332	200	13.5	34.94	BDL	BDL	2.55	0.02	2.32	0.15
M136	547	1	-12°32.80'	-78°27.60'	4332	300	12.2	34.88	BDL	BDL	2.51	0.01	2.49	0.17
M136	547	1	-12°32.80'	-78°27.60'	4332	400	10.5	34.76	BDL	BDL	2.47	0.03	2.55	0.12
M136	547	1	-12°32.80'	-78°27.60'	4332	500	8.9	34.66	BDL	BDL	2.42	0.02	2.58	0.09
M136	547	1	-12°32.80'	-78°27.60'	4332	600	NA	NA	NA	NA	2.51	0.01	2.56	0.16
M136	559	1	-12°34.84'	-77°40.39'	974	5	21.1	35.26	218.76	1.58	2.48	0.02	1.26	0.10
M136	559	1	-12°34.84'	-77°40.39'	975	30	18.2	35.32	101.03	0.53	2.50	0.02	2.23	0.14
M136	559	1	-12°34.84'	-77°40.39'	976	70	16.0	35.09	17.36	0.09	2.55	0.02	2.35	0.11
M136	559	1	-12°34.84'	-77°40.39'	977	100	14.6	34.97	BDL	BDL	2.53	0.02	2.82	0.17
M136	559	1	-12°34.84'	-77°40.39'	978	200	12.7	34.90	BDL	BDL	2.44	0.02	2.58	0.18
M136	559	1	-12°34.84'	-77°40.39'	979	600	6.8	34.55	12.32	BDL	2.47	0.02	2.58	0.11
M136	567	1	-12°17.13'	-78°30.02'	3189	5	NA	NA	NA	NA	2.47	0.02	1.14	0.08
M136	567	1	-12°17.13'	-78°30.02'	3190	30	18.4	35.33	149.2	0.78	2.50	0.02	1.67	0.08
M136	567	1	-12°17.13'	-78°30.02'	3191	50	16.3	35.06	2.34	BDL	2.50	0.02	1.18	0.05

Cruise	Station	Cast	Latitude	Longitude	Bottom depth	Depth	T	S	O_2	Fluore-scence	^{238}U	Error	^{234}Th	Error
					m	m	°C		µmol kg^{-1}	µg L^{-1}	dpm L^{-1}		dpm L^{-1}	
M136	567	1	-12°17.13'	-78°30.02'	3192	100	15.0	35.03	2.73	BDL	2.50	0.01	1.84	0.07
M136	567	1	-12°17.13'	-78°30.02'	3193	150	14.2	34.99	BDL	BDL	2.50	0.01	2.53	0.12
M136	567	1	-12°17.13'	-78°30.02'	3194	200	13.5	34.95	BDL	BDL	2.45	0.01	2.36	0.15
M136	567	1	-12°17.13'	-78°30.02'	3195	300	11.9	34.86	BDL	BDL	2.51	0.02	2.43	0.10
M136	567	1	-12°17.13'	-78°30.02'	3196	400	10.0	34.73	BDL	BDL	2.47	0.02	2.62	0.10
M136	567	1	-12°17.13'	-78°30.02'	3197	500	8.4	34.63	BDL	BDL	2.55	0.02	2.40	0.10
M136	567	1	-12°17.13'	-78°30.02'	3198	600	7.0	34.55	11.4	BDL	2.45	0.04	2.61	0.11
M136	567	1	-12°17.13'	-78°30.02'	3199	1000	4.6	34.55	45.67	BDL	2.46	0.02	2.51	0.12
M136	567	1	-12°17.13'	-78°30.02'	3200	1500	3.0	34.60	77.96	BDL	2.63	0.02	2.50	0.16
M136	567	1	-12°17.13'	-78°30.02'	3201	2000	2.3	34.65	99.68	BDL	2.51	0.01	2.56	0.16
M136	567	1	-12°17.13'	-78°30.02'	3202	2000	2.3	34.65	99.68	BDL	2.51	0.01	2.51	0.20
M136	567	1	-12°17.13'	-78°30.02'	3203	2000	2.3	34.65	99.68	BDL	2.51	0.01	2.48	0.16
M138	879	3	-11° 29.64'	-079° 28.69'	5690	5	21.4	35.38	206.03	2.12	2.52	0.01	1.55	0.08
M138	879	3	-11° 29.64'	-079° 28.69'	5691	30	20.5	35.33	137.73	0.80	2.50	0.02	1.63	0.10
M138	879	3	-11° 29.64'	-079° 28.69'	5692	60	17.6	35.28	78.66	0.15	2.52	0.01	2.35	0.14
M138	879	3	-11° 29.64'	-079° 28.69'	5693	80	15.9	35.10	16.92	0.04	2.54	0.01	2.18	0.11
M138	879	3	-11° 29.64'	-079° 28.69'	5694	100	14.9	35.02	BDL	0.02	2.54	0.02	1.86	0.10
M138	879	1	-11° 29.64'	-079° 28.69'	5859	200	12.8	34.90	BDL	BDL	2.44	0.02	2.51	0.12
M138	879	1	-11° 29.64'	-079° 28.69'	5859	300	11.5	34.82	BDL	BDL	2.50	0.03	2.24	0.12
M138	879	1	-11° 29.64'	-079° 28.69'	5859	600	7.2	34.56	8.11	BDL	2.45	0.02	2.48	0.14
M138	879	1	-11° 29.64'	-079° 28.69'	5859	1000	4.6	34.54	46.09	BDL	2.60	0.01	2.52	0.12
M138	879	1	-11° 29.64'	-079° 28.69'	5859	1500	3.1	34.60	77.46	BDL	2.38	0.05	2.34	0.14
M138	879	1	-11° 29.64'	-079° 28.69'	5859	2000	2.3	34.64	96.84	BDL	2.44	0.02	2.50	0.17
M138	882	10	-10° 57.11'	-078° 33.73'	1081	20	20.4	35.33	184	2.332	2.59	0.01	1.48	0.09
M138	882	10	-10° 57.11'	-078° 33.73'	1081	50	16.5	35.09	21.66	0.067	2.61	0.02	2.14	0.07
M138	882	10	-10° 57.11'	-078° 33.73'	1081	70	15.6	35.05	21.9	0.007	2.56	0.01	1.96	0.07
M138	882	10	-10° 57.11'	-078° 33.73'	1081	100	15.2	35.04	8.73	BDL	2.56	0.01	1.68	0.06
M138	882	10	-10° 57.11'	-078° 33.73'	1081	150	14.7	35.02	14.02	BDL	2.56	0.01	2.40	0.09

Cruise	Station	Cast	Latitude	Longitude	Bottom depth	Depth	T	S	O_2	Fluore-scence	^{238}U	Error	^{234}Th	Error
					m	m	°C		µmol kg^{-1}	µg L^{-1}	dpm L^{-1}		dpm L^{-1}	
M138	882	10	-10° 57.11'	-078° 33.73'	1081	200	14.1	34.98	10.3	BDL	2.55	0.01	2.36	0.11
M138	882	10	-10° 57.11'	-078° 33.73'	1081	300	12.0	34.86	BDL	BDL	2.58	0.01	2.38	0.11
M138	882	10	-10° 57.11'	-078° 33.73'	1081	400	10.5	34.76	BDL	BDL	2.66	0.01	2.41	0.10
M138	882	10	-10° 57.11'	-078° 33.73'	1081	500	9.0	34.66	BDL	BDL	2.57	0.01	2.42	0.13
M138	882	10	-10° 57.11'	-078° 33.73'	1081	600	7.6	34.59	2.45	BDL	2.55	0.01	2.45	0.13
M138	883	12	-10° 46.73'	-078° 16.21'	307	5	19.8	35.33	168.93	1.314	2.60	0.01	1.51	0.07
M138	883	12	-10° 46.73'	-078° 16.21'	307	30	16.4	35.08	31.08	0.149	2.59	0.02	2.22	0.09
M138	883	12	-10° 46.73'	-078° 16.21'	307	60	15.7	35.05	15.24	BDL	2.58	0.01	2.00	0.09
M138	883	12	-10° 46.73'	-078° 16.21'	307	80	15.4	35.05	9.95	BDL	2.63	0.02	1.98	0.09
M138	883	12	-10° 46.73'	-078° 16.21'	307	100	15.3	35.04	9.53	BDL	2.57	0.02	2.05	0.10
M138	883	12	-10° 46.73'	-078° 16.21'	307	150	14.8	35.03	8.79	BDL	2.56	0.01	2.17	0.12
M138	883	12	-10° 46.73'	-078° 16.21'	307	200	14.2	34.99	3.89	BDL	2.55	0.02	2.21	0.15
M138	883	12	-10° 46.73'	-078° 16.21'	307	250	13.2	34.93	BDL	BDL	2.57	0.01	2.55	0.12
M138	888	7	-12° 01.98'	-078° 29.97'	3059	20	21.4	35.38	213.34	1.43	2.61	0.01	1.61	0.06
M138	888	7	-12° 01.98'	-078° 29.97'	3059	50	20.3	35.29	212.92	0.406	2.59	0.01	1.74	0.08
M138	888	7	-12° 01.98'	-078° 29.97'	3059	60	19.0	35.46	145.56	0.274	2.57	0.01	2.41	0.11
M138	888	7	-12° 01.98'	-078° 29.97'	3059	80	16.6	35.15	34.99	0.10	2.58	0.02	2.22	0.11
M138	888	7	-12° 01.98'	-078° 29.97'	3059	100	15.5	35.04	54.69	0.01	2.59	0.01	2.39	0.09
M138	888	7	-12° 01.98'	-078° 29.97'	3059	150	14.1	34.98	BDL	BDL	2.55	0.01	2.62	0.12
M138	888	7	-12° 01.98'	-078° 29.97'	3059	200	13.1	34.92	BDL	BDL	2.54	0.01	2.49	0.13
M138	888	7	-12° 01.98'	-078° 29.97'	3059	300	11.7	34.83	BDL	BDL	2.59	0.01	2.54	0.13
M138	888	7	-12° 01.98'	-078° 29.97'	3059	400	10.2	34.74	BDL	BDL	2.54	0.01	2.48	0.13
M138	888	7	-12° 01.98'	-078° 29.97'	3059	500	8.6	34.64	BDL	BDL	2.52	0.01	2.54	0.09
M138	888	7	-12° 01.98'	-078° 29.97'	3059	600	7.2	34.57	7.1	BDL	2.52	0.01	2.53	0.13
M138	892	14	-12° 25.07'	-077° 48.74'	1100	5	20.3	35.46	210.5	0.94	2.69	0.02	1.54	0.07
M138	892	14	-12° 25.07'	-077° 48.74'	1100	50	19.0	35.35	167.62	0.76	2.59	0.01	1.84	0.08
M138	892	14	-12° 25.07'	-077° 48.74'	1100	60	17.8	35.29	143.71	0.20	2.63	0.01	2.50	0.10
M138	892	14	-12° 25.07'	-077° 48.74'	1100	80	16.4	35.11	20.85	0.07	2.58	0.03	2.29	0.12

Cruise	Station	Cast	Latitude	Longitude	Bottom depth	Depth	T	S	O_2	Fluore-scence	^{238}U	Error	^{234}Th	Error
					m	m	°C		µmol kg^{-1}	µg L^{-1}	dpm L^{-1}		dpm L^{-1}	
M138	892	14	-12° 25.07'	-077° 48.74'	1100	100	15.3	35.05	7.85	0.01	2.65	0.01	2.59	0.14
M138	892	14	-12° 25.07'	-077° 48.74'	1100	150	13.7	34.91	BDL	BDL	2.54	0.01	2.52	0.14
M138	892	14	-12° 25.07'	-077° 48.74'	1100	200	13.0	34.90	BDL	BDL	2.57	0.01	2.47	0.11
M138	892	14	-12° 25.07'	-077° 48.74'	1100	300	11.8	34.85	BDL	BDL	2.60	0.01	2.56	0.13
M138	892	14	-12° 25.07'	-077° 48.74'	1100	400	10.5	34.76	BDL	BDL	2.56	0.01	2.47	0.07
M138	892	14	-12° 25.07'	-077° 48.74'	1100	500	8.9	34.66	BDL	BDL	2.55	0.01	2.57	0.10
M138	898	1	-12° 03.48'	-078° 16.40'	2174	20	21.1	35.39	204.59	1.167	2.55	0.01	1.66	0.07
M138	898	1	-12° 03.48'	-078° 16.40'	2174	60	18.6	35.41	128.85	0.2	2.60	0.01	2.47	0.14
M138	898	1	-12° 03.48'	-078° 16.40'	2174	80	15.9	35.10	6.81	0.088	2.58	0.01	2.66	0.10
M138	898	1	-12° 03.48'	-078° 16.40'	2174	100	14.9	35.01	3.05	0.018	2.57	0.02	2.57	0.15
M138	898	1	-12° 03.48'	-078° 16.40'	2174	150	13.8	34.97	BDL	0.011	2.55	0.02	2.56	0.17
M138	898	1	-12° 03.48'	-078° 16.40'	2174	200	13.0	34.91	BDL	BDL	2.52	0.02	2.68	0.15
M138	898	1	-12° 03.48'	-078° 16.40'	2174	300	11.5	34.82	BDL	0.084	2.64	0.01	2.52	0.10
M138	898	1	-12° 03.48'	-078° 16.40'	2174	400	9.9	34.71	BDL	0.008	2.53	0.01	2.48	0.08
M138	898	1	-12° 03.48'	-078° 16.40'	2174	500	8.4	34.63	BDL	0.057	2.54	0.01	2.30	0.10
M138	898	1	-12° 03.48'	-078° 16.40'	2174	600	7.2	34.57	7.46	0.03	2.54	0.01	2.42	0.08
M138	898	2	-12° 03.48'	-078° 16.40'	2175	1000	4.6	34.54	45.43	BDL	2.52	0.01	2.48	0.11
M138	898	2	-12° 03.48'	-078° 16.40'	2175	1500	3.0	34.60	77.69	BDL	2.50	0.01	2.70	0.11
M138	898	2	-12° 03.48'	-078° 16.40'	2175	2000	2.3	34.64	97.17	BDL	2.56	0.01	2.47	0.11
M138	904	16	-13° 59.84'	-076° 39.59'	594	5	17.0	35.08	150.33	3.58	2.53	0.01	0.93	0.05
M138	904	16	-13° 59.84'	-076° 39.59'	594	10	17.0	35.08	142.58	3.34	2.61	0.02	1.16	0.07
M138	904	16	-13° 59.84'	-076° 39.59'	594	15	16.7	35.07	59.22	2.95	2.58	0.01	1.37	0.07
M138	904	16	-13° 59.84'	-076° 39.59'	594	20	16.4	35.06	27.31	1.10	2.58	0.02	1.40	0.06
M138	904	16	-13° 59.84'	-076° 39.59'	594	50	15.5	35.05	4.46	0.06	2.55	0.01	1.74	0.07
M138	904	16	-13° 59.84'	-076° 39.59'	594	70	15.0	35.03	2.04	BDL	2.60	0.02	1.93	0.07
M138	904	16	-13° 59.84'	-076° 39.59'	594	100	14.7	35.02	BDL	BDL	2.53	0.01	1.90	0.11
M138	904	16	-13° 59.84'	-076° 39.59'	594	150	14.0	34.97	BDL	BDL	2.51	0.01	2.45	0.08
M138	904	16	-13° 59.84'	-076° 39.59'	594	300	12.1	34.87	BDL	BDL	2.56	0.01	2.56	0.15

Cruise	Station	Cast	Latitude	Longitude	Bottom depth	Depth	T	S	O_2	Fluore-scence	^{238}U	Error	^{234}Th	Error
					m	m	°C		µmol kg^{-1}	µg L^{-1}	dpm L^{-1}		dpm L^{-1}	
M138	904	16	-13° 59.84'	-076° 39.59'	594	450	10.0	34.71	BDL	BDL	2.60	0.01	2.38	0.12
M138	906	18	-14° 17.92'	-077° 10.76'	4713	20	16.9	35.09	121.42	1.679	2.56	0.01	0.95	0.06
M138	906	18	-14° 17.92'	-077° 10.76'	4713	40	16.1	35.07	3.69	0.783	2.66	0.01	1.24	0.06
M138	906	18	-14° 17.92'	-077° 10.76'	4713	50	15.6	35.05	3.90	0.117	2.59	0.02	1.25	0.05
M138	906	18	-14° 17.92'	-077° 10.76'	4713	70	15.1	35.04	3.21	0.212	2.58	0.01	1.97	0.08
M138	906	18	-14° 17.92'	-077° 10.76'	4713	100	14.5	35.01	2.47	0.044	2.59	0.01	2.39	0.11
M138	906	18	-14° 17.92'	-077° 10.76'	4713	150	13.6	34.95	BDL	BDL	2.62	0.01	2.42	0.12
M138	906	18	-14° 17.92'	-077° 10.76'	4713	200	13.0	34.91	BDL	0.01	2.56	0.01	2.64	0.10
M138	906	18	-14° 17.92'	-077° 10.76'	4713	300	11.7	34.84	BDL	BDL	2.55	0.02	2.41	0.09
M138	906	18	-14° 17.92'	-077° 10.76'	4713	400	10.1	34.72	BDL	BDL	2.56	0.01	2.20	0.09
M138	906	18	-14° 17.92'	-077° 10.76'	4713	500	8.3	34.61	3.22	BDL	2.54	0.01	2.29	0.08
M138	906	18	-14° 17.92'	-077° 10.76'	4713	600	7.2	34.55	14.65	BDL	2.57	0.01	2.48	0.08
M138	907	11	-15° 25.78'	-075° 25.83'	786	5	17.8	35.15	199.64	1.188	2.69	0.02	1.04	0.06
M138	907	11	-15° 25.78'	-075° 25.83'	786	40	17.4	35.13	128.51	0.634	2.59	0.01		
M138	907	11	-15° 25.78'	-075° 25.83'	786	60	15.8	35.07	55	0.021	2.57	0.01	2.50	0.12
M138	907	11	-15° 25.78'	-075° 25.83'	786	80	14.9	34.98	23.48	BDL	2.56	0.03	2.37	0.10
M138	907	11	-15° 25.78'	-075° 25.83'	786	100	14.4	34.95	3.27	BDL	2.56	0.01	2.35	0.10
M138	907	11	-15° 25.78'	-075° 25.83'	786	150	14.0	34.96	BDL	BDL	2.58	0.01	2.61	0.10
M138	907	11	-15° 25.78'	-075° 25.83'	786	200	13.4	34.93	BDL	BDL	2.58	0.01	2.36	0.10
M138	907	11	-15° 25.78'	-075° 25.83'	786	300	12.1	34.86	BDL	BDL	2.65	0.02	2.46	0.12
M138	907	11	-15° 25.78'	-075° 25.83'	786	400	9.8	34.70	BDL	BDL	2.60	0.01	2.27	0.11
M138	907	11	-15° 25.78'	-075° 25.83'	786	500	8.2	34.60	6.82	BDL	2.58	0.01	2.33	0.13
M138	912	3	-15° 51.59'	-076° 06.60'	3678	5	18.0	35.18	199.93	2.48	2.61	0.01	1.25	0.05
M138	912	3	-15° 51.59'	-076° 06.60'	3678	20	18.0	35.18	198.79	2.58	2.59	0.01	1.17	0.05
M138	912	3	-15° 51.59'	-076° 06.60'	3678	45	16.6	35.08	33.09	0.26	2.60	0.01	1.30	0.06
M138	912	3	-15° 51.59'	-076° 06.60'	3678	50	16.5	35.08	29.19	0.03	2.65	0.01	1.27	0.07
M138	912	3	-15° 51.59'	-076° 06.60'	3678	60	16.0	35.07	2.69	0.20	2.60	0.01	1.71	0.15
M138	912	3	-15° 51.59'	-076° 06.60'	3678	80	15.3	35.04	7.45	0.03	2.55	0.01	1.98	0.11

Cruise	Station	Cast	Latitude	Longitude	Bottom depth	Depth	T	S	O_2	Fluore-scence	^{238}U	SE	^{234}Th	SE
					m	m	°C		µmol kg^{-1}	µg L^{-1}	dpm L^{-1}		dpm L^{-1}	
M138	912	3	-15° 51.59'	-076° 06.60'	3678	100	14.9	35.02	BDL	BDL	2.53	0.01	2.14	0.10
M138	912	3	-15° 51.59'	-076° 06.60'	3678	150	14.6	35.01	BDL	0.10	2.63	0.01	2.29	0.10
M138	912	3	-15° 51.59'	-076° 06.60'	3678	200	14.1	34.98	BDL	0.02	2.59	0.03	2.24	0.09
M138	912	3	-15° 51.59'	-076° 06.60'	3678	300	12.9	34.91	BDL	0.04	2.62	0.01	2.29	0.11
M138	912	3	-15° 51.59'	-076° 06.60'	3678	600	7.6	34.56	11.86	0.07	2.59	0.01	2.35	0.12
M138	915	1	-16° 09.69'	-076° 34.40'	2700	5	NA	NA	NA	NA	2.59	0.01	1.27	0.07
M138	915	1	-16° 09.69'	-076° 34.40'	2700	15	17.8	35.14	212.24	3.452	2.58	0.01	1.20	0.07
M138	915	1	-16° 09.69'	-076° 34.40'	2700	40	17.5	35.11	176.46	1.174	2.56	0.01	1.01	0.06
M138	915	1	-16° 09.69'	-076° 34.40'	2700	60	16.9	35.13	52.16	0.50	2.57	0.01	1.23	0.08
M138	915	1	-16° 09.69'	-076° 34.40'	2700	70	16.5	35.13	38.3	0.15	2.59	0.01	2.47	0.13
M138	915	1	-16° 09.69'	-076° 34.40'	2700	100	14.9	35.00	BDL	0.005	2.56	0.01	2.49	0.12
M138	915	1	-16° 09.69'	-076° 34.40'	2700	150	13.8	34.96	BDL	0.019	2.63	0.01	2.47	0.11
M138	915	1	-16° 09.69'	-076° 34.40'	2700	200	13.0	34.90	BDL	0.055	2.62	0.01	2.43	0.22
M138	915	1	-16° 09.69'	-076° 34.40'	2700	300	11.9	34.84	BDL	BDL	2.59	0.01	2.53	0.13
M138	915	1	-16° 09.69'	-076° 34.40'	2700	400	10.4	34.73	BDL	BDL	2.57	0.02	2.30	0.11
M138	915	1	-16° 09.69'	-076° 34.40'	2700	500	8.7	34.63	BDL	BDL	2.55	0.01	2.36	0.10
M138	919	1	-14° 45.59'	-077° 28.98'	4155	10	17.3	35.09	208.55	4.29	2.57	0.01	0.98	0.05
M138	919	1	-14° 45.59'	-077° 28.98'	4156	30	17.0	35.10	114.78	1.40	2.57	0.01	1.17	0.08
M138	919	1	-14° 45.59'	-077° 28.98'	4157	50	15.9	35.06	9.27	0.30	2.65	0.02	1.35	0.06
M138	919	1	-14° 45.59'	-077° 28.98'	4158	60	15.4	35.05	4.84	0.01	2.58	0.01	1.62	0.07
M138	919	1	-14° 45.59'	-077° 28.98'	4159	100	14.6	35.01	BDL	BDL	2.53	0.02	2.04	0.10
M138	919	1	-14° 45.59'	-077° 28.98'	4160	150	13.8	34.96	BDL	BDL	2.58	0.01	2.51	0.11
M138	919	1	-14° 45.59'	-077° 28.98'	4161	200	13.1	34.90	BDL	BDL	2.57	0.01	2.49	0.12
M138	919	1	-14° 45.59'	-077° 28.98'	4162	300	11.8	34.84	BDL	BDL	2.55	0.01	2.32	0.10
M138	919	1	-14° 45.59'	-077° 28.98'	4163	400	10.2	34.72	BDL	BDL	2.55	0.01	2.46	0.13
M138	919	1	-14° 45.59'	-077° 28.98'	4164	500	8.0	34.60	4.66	BDL	2.59	0.01	NA	NA
M138	919	1	-14° 45.59'	-077° 28.98'	4165	600	7.1	34.56	8.90	BDL	2.54	0.01	NA	NA

Table S2. Uranium concentrations of seawater certified reference materials (CRMs), CASS-6 and NASS-7, and the International Association for Physical Sciences of the Oceans (IAPSO) standard seawater. Certified values of the CRMs and average reference value of the IAPSO from Owens et al. (2011) were quoted below.

		U	^{238}U	2SE
		ng g^{-1}	ng g^{-1}	%
CASS-6		2.72	2.70	1.38
Certified [U]		2.74	2.72	0.96
2.86 ± 0.42 ng/g		2.81	2.79	0.70
		2.77	2.75	0.49
		2.81	2.79	1.06
	mean	**2.77**	**2.75**	
	SD	**0.04**	**0.04**	
NASS-7		2.94	2.91	0.01
Certified [U]		2.81	2.79	0.04
2.81 ± 0.16 ng/g		2.85	2.83	0.02
		2.82	2.80	0.02
		2.91	2.88	0.02
	mean	**2.86**	**2.84**	
	SD	**0.05**	**0.05**	
IAPSO		3.17	3.15	0.03
OSIL batch P156		3.21	3.19	0.04
		3.29	3.27	0.02
		3.30	3.27	0.02
		3.29	3.26	0.02
		3.31	3.29	0.01
		3.25	3.22	0.03
		3.20	3.18	0.03

		U	^{238}U	2SE
		ng g^{-1}	ng g^{-1}	%
		3.18	3.16	0.02
		3.24	3.21	0.02
		3.21	3.19	0.03
		3.19	3.17	0.03
		3.19	3.17	0.02
		3.26	3.24	0.03
		3.29	3.26	0.02
		3.24	3.22	0.02
		3.24	3.21	0.01
		3.26	3.23	0.01
		3.36	3.34	0.01
		3.20	3.18	0.05
		3.31	3.29	0.02
		3.31	3.29	0.01
		3.29	3.27	0.03
		3.36	3.34	0.02
		3.30	3.27	0.01
		3.32	3.30	0.02
		3.32	3.30	0.01
	mean	**3.26**	**3.24**	
	SD	**0.06**	**0.06**	

[^{238}U] in IAPSO OSIL P149: 3.11 ± 0.03 (n = 10, 1SD; Owens et al., 2011)

Table S3. Comparison of seawater ^{238}U activities measured to those predicted from salinity according to the formulation in Owens et al. (2011).

Cruise	Station	Cast	Depth m	Salinity	Measured ^{238}U dpm L^{-1}	S-based ^{238}U dpm L^{-1}	difference
M136	353	1	5	35.27	2.45	2.46	-0.3%
M136	353	1	30	35.30	2.47	2.46	0.5%
M136	353	1	59	35.09	2.49	2.44	2.0%
M136	353	1	100	34.94	2.51	2.43	3.3%
M136	353	1	150	34.94	2.56	2.43	5.2%
M136	353	1	200	34.90	2.49	2.43	2.7%
M136	353	1	300	34.85	2.54	2.42	4.6%
M136	353	1	350	34.80	2.59	2.42	7.0%
M136	353	1	400	34.72	2.51	2.41	3.8%
M136	353	1	500	34.59	2.54	2.40	5.7%
M136	353	1	600	34.56	2.53	2.40	5.3%
M136	380	1	5	35.16	2.54	2.45	3.6%
M136	380	1	20	35.16	2.52	2.45	2.8%
M136	380	1	30	35.26	2.52	2.46	2.6%
M136	380	1	65	35.11	2.69	2.44	9.9%
M136	380	1	80	34.89	2.49	2.43	2.5%
M136	380	1	100	34.84	2.53	2.42	4.4%
M136	380	1	150	34.85	2.50	2.42	3.1%
M136	380	1	200	34.85	2.53	2.42	4.5%
M136	380	1	400	34.64	2.46	2.41	2.1%
M136	380	1	600	34.54	2.57	2.40	7.1%
M136	402	1	5	35.30	2.53	2.46	2.9%
M136	402	1	30	35.11	2.53	2.44	3.5%
M136	402	1	50	35.09	2.63	2.44	7.5%
M136	402	1	80	34.89	2.57	2.43	5.7%
M136	402	1	100	34.86	2.59	2.42	6.8%
M136	402	1	150	34.84	2.59	2.42	6.8%
M136	402	1	200	34.86	2.55	2.43	5.0%
M136	402	1	300	34.75	2.46	2.42	2.0%
M136	402	1	400	34.66	2.57	2.41	6.5%
M136	402	1	500	34.60	2.50	2.40	4.1%
M136	402	1	600	34.55	2.52	2.40	5.1%
M136	428	1	30	35.25	2.59	2.46	5.5%
M136	428	1	60	35.05	2.62	2.44	7.3%
M136	428	1	80	35.03	2.50	2.44	2.4%
M136	428	1	100	35.02	2.51	2.44	3.2%
M136	428	1	125	35.01	2.48	2.44	1.8%
M136	428	1	150	35.00	2.53	2.44	4.0%
M136	428	1	200	34.98	2.51	2.43	3.2%

Cruise	Station	Cast	Depth m	Salinity	Measured ^{238}U dpm L^{-1}	S-based ^{238}U dpm L^{-1}	difference
M136	445	1	5	35.37	2.51	2.47	1.7%
M136	445	1	30	35.30	2.59	2.46	5.1%
M136	445	1	50	35.10	2.52	2.44	3.3%
M136	445	1	100	35.02	2.54	2.44	4.2%
M136	445	1	150	34.99	2.52	2.44	3.5%
M136	458	1	5	35.14	2.58	2.45	5.4%
M136	458	1	30	35.24	2.51	2.45	2.2%
M136	458	1	60	35.04	2.54	2.44	4.2%
M136	458	1	80	35.03	2.51	2.44	2.7%
M136	458	1	100	35.02	2.52	2.44	3.2%
M136	458	1	150	34.99	2.50	2.44	2.8%
M136	458	1	200	34.97	2.52	2.43	3.7%
M136	458	1	250	34.93	2.57	2.43	5.9%
M136	458	1	300	34.84	2.56	2.42	5.8%
M136	458	1	350	34.76	2.51	2.42	3.9%
M136	472	1	5	35.16	2.59	2.45	5.6%
M136	472	1	40	35.06	2.50	2.44	2.5%
M136	472	1	60	35.06	2.55	2.44	4.7%
M136	472	1	83	35.17	2.58	2.45	5.4%
M136	472	1	100	35.08	2.55	2.44	4.6%
M136	472	1	150	35.02	2.48	2.44	1.6%
M136	472	1	200	35.00	2.54	2.44	4.3%
M136	472	1	250	34.95	2.61	2.43	7.2%
M136	472	1	300	34.86	2.45	2.42	1.0%
M136	472	1	350	34.80	2.48	2.42	2.7%
M136	495	1	10	35.34	2.48	2.46	0.9%
M136	495	1	25	35.22	2.48	2.45	1.1%
M136	495	1	30	35.28	2.49	2.46	1.3%
M136	495	1	40	35.12	2.44	2.45	-0.1%
M136	495	1	75	35.05	2.57	2.44	5.3%
M136	495	1	100	35.04	2.44	2.44	0.2%
M136	495	1	150	35.01	2.58	2.44	5.9%
M136	495	1	200	34.98	2.48	2.43	1.8%
M136	495	1	400	34.77	2.40	2.42	-0.8%
M136	495	1	600	34.56	2.43	2.40	1.0%
M136	508	1	30	35.25	2.47	2.46	0.5%
M136	508	1	60	35.03	2.54	2.44	4.3%
M136	508	1	100	35.00	2.46	2.44	1.0%
M136	508	1	200	34.94	2.59	2.43	6.6%
M136	516	1	10	35.29	2.48	2.46	0.7%
M136	516	1	30	35.11	2.48	2.44	1.6%
M136	516	1	75	35.04	2.48	2.44	1.7%

Cruise	Station	Cast	Depth m	Salinity	Measured ^{238}U dpm L^{-1}	S-based ^{238}U dpm L^{-1}	difference
M136	516	1	100	35.03	2.45	2.44	0.3%
M136	516	1	150	35.01	2.51	2.44	2.9%
M136	516	1	200	34.98	2.50	2.43	2.7%
M136	516	1	400	34.76	2.46	2.42	1.6%
M136	516	1	600	34.57	2.46	2.40	2.3%
M136	547	1	10	35.37	2.50	2.47	1.3%
M136	547	1	30	35.40	2.54	2.47	3.0%
M136	547	1	50	35.06	2.50	2.44	2.5%
M136	547	1	75	35.07	2.54	2.44	4.2%
M136	547	1	100	35.03	2.50	2.44	2.6%
M136	547	1	150	35.00	2.43	2.44	-0.4%
M136	547	1	200	34.94	2.55	2.43	4.9%
M136	547	1	300	34.88	2.51	2.43	3.5%
M136	547	1	400	34.76	2.47	2.42	2.1%
M136	547	1	500	34.66	2.42	2.41	0.5%
M136	559	1	5	35.26	2.48	2.46	0.8%
M136	559	1	30	35.32	2.50	2.46	1.6%
M136	559	1	70	35.09	2.55	2.44	4.2%
M136	559	1	100	34.97	2.53	2.43	3.8%
M136	559	1	200	34.90	2.44	2.43	0.5%
M136	559	1	600	34.55	2.47	2.40	2.8%
M136	567	1	30	35.33	2.50	2.46	1.7%
M136	567	1	50	35.06	2.50	2.44	2.4%
M136	567	1	100	35.03	2.50	2.44	2.4%
M136	567	1	150	34.99	2.50	2.44	2.8%
M136	567	1	200	34.95	2.45	2.43	0.9%
M136	567	1	300	34.86	2.51	2.42	3.5%
M136	567	1	400	34.73	2.47	2.41	2.5%
M136	567	1	500	34.63	2.55	2.41	6.0%
M136	567	1	600	34.55	2.45	2.40	2.0%
M136	567	1	1000	34.55	2.46	2.40	2.3%
M136	567	1	1500	34.60	2.63	2.40	9.2%
M136	567	1	2000	34.65	2.51	2.41	4.4%
M136	567	1	2000	34.65	2.51	2.41	4.4%
M138	879	3	5	35.38	2.52	2.47	2.0%
M138	879	3	30	35.33	2.50	2.46	1.6%
M138	879	3	60	35.28	2.53	2.46	2.8%
M138	879	3	80	35.10	2.54	2.44	4.0%
M138	879	3	100	35.02	2.54	2.44	4.1%
M138	879	1	200	34.90	2.44	2.43	0.6%
M138	879	1	300	34.82	2.50	2.42	3.3%
M138	879	1	600	34.56	2.46	2.40	2.2%

Cruise	Station	Cast	Depth m	Salinity	Measured ^{238}U dpm L^{-1}	S-based ^{238}U dpm L^{-1}	difference
M138	879	1	1000	34.54	2.60	2.40	8.5%
M138	879	1	1500	34.60	2.38	2.40	-1.0%
M138	879	1	2000	34.64	2.44	2.41	1.2%
M138	882	10	20	35.33	2.59	2.46	5.3%
M138	882	10	50	35.09	2.61	2.44	7.0%
M138	882	10	70	35.05	2.56	2.44	4.8%
M138	882	10	100	35.04	2.56	2.44	4.9%
M138	882	10	150	35.02	2.56	2.44	5.1%
M138	882	10	200	34.98	2.55	2.43	4.6%
M138	882	10	300	34.86	2.58	2.42	6.2%
M138	882	10	400	34.76	2.66	2.42	10.1%
M138	882	10	500	34.66	2.57	2.41	6.5%
M138	882	10	600	34.59	2.55	2.40	6.2%
M138	883	12	5	35.33	2.60	2.46	5.8%
M138	883	12	30	35.08	2.59	2.44	6.0%
M138	883	12	60	35.05	2.58	2.44	5.6%
M138	883	12	80	35.05	2.63	2.44	7.6%
M138	883	12	100	35.04	2.57	2.44	5.2%
M138	883	12	150	35.03	2.56	2.44	4.8%
M138	883	12	200	34.99	2.55	2.44	4.8%
M138	883	12	250	34.93	2.57	2.43	5.8%
M138	888	7	20	35.38	2.61	2.47	5.7%
M138	888	7	50	35.29	2.59	2.46	5.1%
M138	888	7	60	35.46	2.57	2.47	3.8%
M138	888	7	80	35.15	2.58	2.45	5.3%
M138	888	7	100	35.04	2.59	2.44	6.0%
M138	888	7	150	34.98	2.55	2.43	4.9%
M138	888	7	200	34.92	2.54	2.43	4.6%
M138	888	7	300	34.83	2.59	2.42	7.0%
M138	888	7	400	34.74	2.54	2.42	5.0%
M138	888	7	500	34.64	2.52	2.41	4.7%
M138	888	7	600	34.57	2.52	2.40	5.1%
M138	892	14	5	35.46	2.69	2.47	8.9%
M138	892	14	50	35.35	2.59	2.46	5.2%
M138	892	14	60	35.29	2.63	2.46	6.8%
M138	892	14	80	35.11	2.58	2.44	5.7%
M138	892	14	100	35.05	2.65	2.44	8.6%
M138	892	14	150	34.91	2.54	2.43	4.6%
M138	892	14	200	34.90	2.57	2.43	6.0%
M138	892	14	300	34.85	2.60	2.42	7.2%
M138	892	14	400	34.76	2.56	2.42	5.8%
M138	892	14	500	34.66	2.55	2.41	5.6%

Cruise	Station	Cast	Depth m	Salinity	Measured ^{238}U dpm L^{-1}	S-based ^{238}U dpm L^{-1}	difference
M138	898	1	20	35.39	2.55	2.47	3.2%
M138	898	1	60	35.41	2.60	2.47	5.3%
M138	898	1	80	35.10	2.58	2.44	5.6%
M138	898	1	100	35.01	2.57	2.44	5.5%
M138	898	1	150	34.97	2.55	2.43	4.7%
M138	898	1	200	34.91	2.52	2.43	3.9%
M138	898	1	300	34.82	2.64	2.42	9.1%
M138	898	1	400	34.71	2.53	2.41	4.9%
M138	898	1	500	34.63	2.54	2.41	5.5%
M138	898	1	600	34.57	2.54	2.40	5.8%
M138	898	2	1000	34.54	2.52	2.40	4.8%
M138	898	2	1500	34.60	2.50	2.40	4.1%
M138	898	2	2000	34.64	2.56	2.41	6.4%
M138	904	16	5	35.08	2.53	2.44	3.6%
M138	904	16	10	35.08	2.61	2.44	7.0%
M138	904	16	15	35.07	2.58	2.44	5.6%
M138	904	16	20	35.06	2.58	2.44	5.6%
M138	904	16	50	35.05	2.55	2.44	4.4%
M138	904	16	70	35.03	2.60	2.44	6.6%
M138	904	16	100	35.02	2.53	2.44	3.7%
M138	904	16	150	34.97	2.51	2.43	3.2%
M138	904	16	300	34.87	2.56	2.43	5.5%
M138	904	16	450	34.71	2.60	2.41	7.9%
M138	906	18	20	35.09	2.56	2.44	4.7%
M138	906	18	40	35.07	2.66	2.44	8.9%
M138	906	18	50	35.05	2.59	2.44	6.2%
M138	906	18	70	35.04	2.58	2.44	5.7%
M138	906	18	100	35.01	2.59	2.44	6.4%
M138	906	18	150	34.95	2.62	2.43	7.7%
M138	906	18	200	34.91	2.56	2.43	5.3%
M138	906	18	300	34.84	2.55	2.42	5.3%
M138	906	18	400	34.72	2.56	2.41	5.9%
M138	906	18	500	34.61	2.54	2.41	5.6%
M138	906	18	600	34.55	2.57	2.40	7.1%
M138	907	11	5	35.15	2.69	2.45	9.9%
M138	907	11	40	35.13	2.59	2.45	6.0%
M138	907	11	60	35.07	2.57	2.44	5.3%
M138	907	11	80	34.98	2.56	2.43	5.3%
M138	907	11	100	34.95	2.56	2.43	5.3%
M138	907	11	150	34.96	2.58	2.43	5.9%
M138	907	11	200	34.93	2.58	2.43	6.1%
M138	907	11	300	34.86	2.65	2.42	9.4%

Cruise	Station	Cast	Depth m	Salinity	Measured ^{238}U dpm L^{-1}	S-based ^{238}U dpm L^{-1}	difference
M138	907	11	400	34.70	2.60	2.41	7.7%
M138	907	11	500	34.60	2.58	2.40	7.2%
M138	912	3	5	35.18	2.61	2.45	6.4%
M138	912	3	20	35.18	2.59	2.45	5.6%
M138	912	3	45	35.08	2.60	2.44	6.5%
M138	912	3	50	35.08	2.65	2.44	8.4%
M138	912	3	60	35.07	2.60	2.44	6.3%
M138	912	3	80	35.04	2.55	2.44	4.3%
M138	912	3	100	35.02	2.53	2.44	3.8%
M138	912	3	150	35.01	2.63	2.44	8.1%
M138	912	3	200	34.98	2.59	2.43	6.4%
M138	912	3	300	34.91	2.62	2.43	7.8%
M138	912	3	600	34.56	2.59	2.40	7.7%
M138	915	1	15	35.14	2.58	2.45	5.3%
M138	915	1	40	35.11	2.56	2.44	4.9%
M138	915	1	60	35.13	2.57	2.45	5.1%
M138	915	1	70	35.13	2.59	2.45	5.7%
M138	915	1	100	35.00	2.56	2.44	5.1%
M138	915	1	150	34.96	2.63	2.43	8.0%
M138	915	1	200	34.90	2.62	2.43	8.0%
M138	915	1	300	34.84	2.59	2.42	6.7%
M138	915	1	400	34.73	2.57	2.42	6.6%
M138	915	1	500	34.63	2.55	2.41	5.9%
M138	919	1	10	35.09	2.57	2.44	5.1%
M138	919	1	30	35.10	2.57	2.44	5.2%
M138	919	1	50	35.06	2.65	2.44	8.5%
M138	919	1	60	35.05	2.58	2.44	5.8%
M138	919	1	100	35.01	2.53	2.44	3.7%
M138	919	1	150	34.96	2.58	2.43	6.2%
M138	919	1	200	34.90	2.57	2.43	5.7%
M138	919	1	300	34.84	2.55	2.42	5.4%
M138	919	1	400	34.72	2.55	2.41	5.7%
M138	919	1	500	34.60	2.59	2.40	7.6%
M138	919	1	600	34.56	2.54	2.40	5.6%

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