Station Identifier	water depth (m)	bottom water O_2 (μM)	bottom water NO_3^- (μM)	Measured J_{O2} (mmol m^{-2} d^{-1})	Measured J_{NO3-} (mmol m^{-2} d^{-1})	RPOC* (mmol m^{-2} d^{-1})	RRPOC** (mmol m^{-2} d^{-1})
Alonso-Pérez and Castro (2014), Apr	20	250	3	-39.80	0.20	34.64	52.78
Alonso-Pérez and Castro (2014), Jul	20	160	4	-34.60	-0.70	31.00	47.24
Alonso-Pérez and Castro (2014), Oct	20	210	4	-41.70	-0.30	36.62	55.79
Alonso-Pérez and Castro (2014), Jan	20	240	8	-21.80	0.10	18.90	28.80
Berelson et al. (1996), CCI-6	231	77	32	-4.44	-0.89	4.95	5.92
Berelson et al. (1996), CCI-5	532	48	36	-3.08	-1.17	3.90	4.10
Berelson et al. (1996), CCI-7	638	16	40	-2.22	-1.20	3.17	3.30
Berelson et al. (1996), CCII-2	670	18	40	-0.52	-0.71	1.18	1.23
Berelson et al. (1996), CCII-3	1010	24	43	-0.94	-0.44	1.24	1.28
Berelson et al. (1996), CCII-6	1358	47	44	-1.43	-0.62	1.85	1.91
Berelson et al. (1996), CCII-4	2025	80	40	-1.05	-0.15	1.03	1.06
Berelson et al. (1996), CCII-5	3375	113	42	-1.71	-0.12	1.55	1.59
Berelson et al. (1996), Cat	1300	19	42	-0.46	-0.32	0.72	0.74
Berelson et al. (1996), TB	1514	25	43	-0.99	-0.51	1.35	1.39
Berelson et al. (1996), SCI	2053	58	43	-0.73	-0.10	0.72	0.74
Berelson et al. (1996), PE	3707	131	40	-0.63	-0.02	0.55	0.56
Berelson et al. (1998), 3	7	225	0	-30.00	0.01	25.19	38.39
Berelson et al. (1998), 8	8	225	0	-27.00	0.08	22.98	35.02
Berelson et al. (1998), 11	17	225	0	-29.00	0.02	24.16	36.82
Berelson et al. (1998), 13	20	225	0	-25.00	0.06	20.80	31.69
Berelson et al. (1998), 37	24	225	0	-23.00	0.12	19.27	29.35
Berelson et al. (1998), 19	12	225	0	-27.00	0.11	23.03	35.10
Berelson et al. (2002), 2	63	166	11	-20.00	-0.70	19.42	29.36
Berelson et al. (2002), 3	64	175	11	-23.00	-0.50	20.96	31.67
Berelson et al. (2003), TS1	100	101	30	-6.21	-0.89	6.40	9.45
Berelson et al. (2003), TS2	100	135	22	-10.64	-1.20	10.72	15.84
Berelson et al. (2003), TS3	100	185	15	-8.14	0.21	6.74	9.96
Berelson et al. (2003), TS4	100	133	25	-5.95	-0.07	5.20	7.69
Berelson et al. (2003), CC3	100	153	15	-12.08	-0.68	11.10	16.41
Berelson et al. (2013), 1-Apr-May	105	60	31	-6.10	-2.10	8.25	12.15
Berelson et al. (2013), 2-Apr-May	190	64	35	-3.30	-1.80	5.05	6.67
Berelson et al. (2013), 3-Apr-May	90	93	32	-5.10	-1.00	5.72	8.52
Berelson et al. (2013), 6-Apr-May	25	94	32	-5.20	-1.00	6.11	9.31
Berelson et al. (2013), 1-Sept	105	78	34	-6.50	-1.40	7.17	10.56
Berelson et al. (2013), 2-Sept	190	60	36	-4.70	-1.40	5.55	7.33
Berelson et al. (2013), 3-Sept	90	142	26	-8.00	-0.80	8.23	12.27
Berelson et al. (2013), 6-Sept	125	125	28	-5.90	-0.60	5.84	8.42
Bohlen et al. (2011), 1	300	1	26	-1.00	-3.26	5.61	6.32
Bohlen et al. (2011), 5	80	1	16	-1.00	-3.47	6.90	10.34
Bohlen et al. (2011), 3	400	1	33	-1.00	-2.70	4.08	4.39
Bohlen et al. (2011), 4	250	1	20	-1.00	-3.23	6.31	7.40
Bohlen et al. (2011), 2	700	8	40	-0.45	-0.61	0.97	1.01
Bohlen et al. (2011), 6	1000	40	40	-1.60	-0.29	1.91	1.97
Dale et al. (2014), 1	53	55	21	-9.31	-1.31	9.81	14.88
Dale et al. (2014), 2	53	55	21	-10.65	-1.70	11.35	17.22
Dale et al. (2014), 3	98	42	22	-7.69	-1.33	7.93	11.75
Dale et al. (2014), 4	98	42	22	-6.76	-1.15	6.89	10.20
Dale et al. (2014), 5	174	58	20	-12.40	-2.16	13.22	17.86
Dale et al. (2014), 6	174	58	20	-8.20	-1.71	9.16	12.37
Dale et al. (2014), 7	241	51	25	-9.39	-1.35	9.47	11.20
Dale et al. (2014), 8	241	51	25	-6.05	-0.41	5.64	6.67
Dale et al. (2014), 9	425	54	31	-4.50	-0.94	4.99	5.34

Dale et al. (2014), 10	787	82	33	-2.77	-0.28	2.74	2.84
Dale et al. (2014), 11	787	82	33	-1.93	0.66	0.95	0.98
Dale et al. (2014), 12	789	82	33	-3.70	-0.38	3.48	3.61
Dale et al. (2014), 13	789	82	33	-2.63	-0.37	2.63	2.73
Dale et al. (2014), 14	1113	125	21	-3.07	0.02	2.55	2.63
Devol et al. (1997), A	35	329	3	-16.30	-0.10	14.00	21.31
Devol et al. (1997), B	48	327	3	-18.00	-0.15	15.59	23.68
Devol et al. (1997), C	12	317	0	-13.20	0.00	11.25	17.15
Devol et al. (1997), D	11	316	0	-10.70	0.10	8.83	13.45
Devol et al. (1997), F	14	316	0	-11.70	0.07	9.96	15.18
Devol et al. (1997), H	41	322	2	-7.40	0.12	6.06	9.22
Devol et al. (1997), I	11	252	0	-8.60	0.14	7.26	11.06
Devol et al. (1997), 1	11	270	10	-8.60	0.25	6.90	10.52
Devol et al. (1997), 2	11	270	10	-14.40	0.08	11.91	18.16
Devol et al. (1997), 3	14	285	10	-5.10	0.09	4.14	6.31
Devol and Christensen (1993), NH01	115	100	19	-10.63	-1.20	10.53	15.35
Devol and Christensen (1993), NH02	161	113	39	-10.28	-1.11	9.83	13.52
Devol and Christensen (1993), NH03	85	86	27	-6.57	-1.33	7.18	10.73
Devol and Christensen (1993), NH07	225	104	39	-4.88	-0.71	5.07	6.10
Devol and Christensen (1993), NH10	465	47	41	-2.55	-0.70	2.85	3.02
Devol and Christensen (1993), NH12	630	38	43	-2.16	-0.69	2.56	2.66
Devol and Christensen (1993), NH14A	114	127	19	-18.32	-1.64	17.24	25.15
Devol and Christensen (1993), NH17	124	112	19	-14.39	-1.60	14.12	20.38
Devol and Christensen (1993), NH18	146	106	22	-14.60	-1.46	13.89	19.50
Devol and Christensen (1993), WE101A	106	78	19	-5.27	-0.86	5.36	7.88
Devol and Christensen (1993), WE103	140	68	22	-14.64	-0.82	13.36	18.91
Devol and Christensen (1993), WE104	137	109	21	-8.94	-1.98	10.34	14.69
Devol and Christensen (1993), WE105	323	58	36	-2.51	-0.77	2.93	3.26
Devol and Christensen (1993), WE107	239	108	34	-9.29	-1.49	9.69	11.49
Goloway and Bender (1982), 5GC1	4563	250	21	-7.40	0.20	5.95	6.00
Goloway and Bender (1982), 10GC1	4956	250	21	-0.66	0.04	0.51	0.51
Goloway and Bender (1982), 11TW1	4980	250	21	-1.40	0.09	1.07	1.08
Goloway and Bender (1982), 12GC2	3880	250	21	-0.36	0.04	0.26	0.26
Goloway and Bender (1982), 14GC1	4170	250	21	-1.12	0.08	0.85	0.86
Goloway and Bender (1982), 16GC1	3310	250	21	-0.66	0.06	0.48	0.49
Goloway and Bender (1982), 23GC1	4901	250	21	-1.40	0.10	1.06	1.07
Goloway and Bender (1982), LGC02	4595	268	18	-1.12	0.03	0.90	0.91
Goloway and Bender (1982), LGC05	4621	268	19	-0.36	0.02	0.28	0.28
Goloway and Bender (1982), TC05	4629	268	18	-0.88	0.04	0.69	0.69
Goloway and Bender (1982), CBC13-1C	4368	167	38	-0.96	0.07	0.72	0.73
Goloway and Bender (1982), CBC21-1C	4371	167	38	-0.26	0.02	0.20	0.20
Goloway and Bender (1982), CBC44-2C	4391	167	38	-0.58	0.05	0.43	0.43
Goloway and Bender (1982), CBC6-3C	4394	167	38	-0.47	0.03	0.36	0.36
Goloway and Bender (1982), CBC6-4S	4394	167	38	-0.49	0.04	0.36	0.37
Goloway and Bender (1982), CGC3-1C	4379	167	38	-0.30	0.02	0.23	0.23
Hammond et al. (1996), 1	10	200	5	-19.90	0.49	17.43	26.56
Hammond et al. (1996), 2	15	200	2	-17.70	0.29	15.33	23.36
Hammond et al. (1996), 4	42	200	1	-5.30	-0.10	4.62	7.02
Hammond et al. (1996), 6	15	200	9	-19.20	0.11	17.51	26.68
Hammond et al. (1996), 7	22	200	2	-11.90	0.41	9.88	15.06
Hammond et al. (1996), JGOFS, 2S	4300	173	33	-0.80	0.05	0.61	0.62
Hammond et al. (1996), JGOFS, EQ	4300	172	51	-0.71	0.07	0.52	0.53
Hammond et al. (1996), JGOFS, 2N	4300	171	48	-0.70	0.09	0.49	0.50
Hammond et al. (1996), PACFLUX, II, Y	3800	170	36	-0.56	0.03	0.43	0.44

Hammond et al. (1996), PACFLUX, II, X	3800	168	48	-0.84	0.05	0.64	0.66
Hartnett and Devol (2003), NH003	100	6	28	-0.98	-1.96	3.45	5.09
Hartnett and Devol (2003), NH006	620	0	20	0.00	-0.78	1.11	1.16
Hartnett and Devol (2003), NH107	345	0	22	0.00	-1.71	2.00	2.20
Hartnett and Devol (2003), NH209	800	1	42	-0.21	-1.36	1.66	1.72
Hartnett and Devol (2003), NH104/208	1020	4	45	-0.25	-0.36	0.64	0.66
Hartnett and Devol (2003), NH206	2000	92	45	-1.87	-0.33	2.06	2.12
Hartnett and Devol (2003), NH304	3065	125	38	-2.06	-0.20	1.93	1.98
Hartnett and Devol (2003), WE203	1994	65	40	-1.54	-0.09	1.37	1.41
Hartnett and Devol (2003), WE204	105	179	25	-8.32	-1.38	8.85	13.03
Hartnett and Devol (2003), WE202	440	50	40	-2.53	-0.54	2.74	2.92
Hartnett and Devol (2003), WE213	620	27	40	-1.09	-0.54	1.54	1.61
Hartnett and Devol (2003), WE206	1025	38	40	-0.82	-0.41	1.30	1.34
Hartnett and Devol (2003), WE219	1994	65	40	-1.54	-0.09	1.37	1.41
Hartnett and Devol (2003), WE201	2746	90	38	-0.37	-0.06	0.37	0.38
Jahnke et al (1989), 10BC35	5036	250	24	-0.53	0.04	0.40	0.40
Jahnke et al (1989), 12BC	3860	240	22	-0.71	0.08	0.51	0.52
Jahnke and Jahnke (2000), A	850	250	19	-4.33	0.05	3.57	3.70
Jahnke and Jahnke (2000), B	740	250	19	-5.11	0.16	4.27	4.43
Jahnke and Jahnke (2000), C	2927	250	18	-1.41	0.04	1.14	1.17
Jahnke and Jahnke (2000), D	761	250	19	-4.04	-0.02	3.41	3.53
Jahnke and Jahnke (2000), E	755	250	19	-9.18	-0.14	8.05	8.35
Jahnke and Jahnke (2000), F	855	250	19	-9.13	-0.14	7.95	8.22
Jahnke and Jahnke (2000), G	2635	250	18	-1.67	0.01	1.37	1.41
Jahnke and Jahnke (2000), H	731	250	19	-3.12	-0.01	2.70	2.80
Jahnke and Jahnke (2000), I	730	250	19	-7.73	-0.03	6.69	6.94
Jahnke and Jahnke (2000), J	607	250	19	-11.01	-0.14	9.49	9.91
Jahnke and Jahnke (2000), K	607	250	19	-10.10	0.00	8.68	9.06
Jahnke and Jahnke (2000), L	742	250	19	-13.52	-0.26	11.99	12.43
Jahnke and Jahnke (2000), M	750	250	19	-9.41	-0.24	8.34	8.65
Jahnke and Jahnke (2004),CR1	3995	263	20	-1.02	0.00	0.87	0.89
Jahnke and Jahnke (2004),CR2	3272	263	20	-0.67	0.00	0.57	0.59
Jahnke and Jahnke (2004),CR3	4675	232	25	-0.68	0.00	0.59	0.59
Jahnke and Jahnke (2004),CR4	4677	232	25	-0.75	0.00	0.67	0.67
Jahnke and Jahnke (2004),CV1	3120	242	20	-0.20	0.00	0.18	0.19
Jahnke and Jahnke (2004),CV2	3105	242	20	-0.17	0.00	0.15	0.16
Jahnke and Jahnke (2004),CV3	3103	242	20	-0.16	0.00	0.14	0.15
Jahnke and Jahnke (2004),CV4	3102	242	20	-0.18	0.00	0.16	0.17
Laursen and Seitzinger (2002), 32-1	15	186	2	-18.86	0.14	17.06	25.99
Laursen and Seitzinger (2002), 32-2	15	276	0	-12.33	0.02	11.01	16.78
Laursen and Seitzinger (2002), 32-3	15	290	0	-4.84	0.01	4.34	6.61
Laursen and Seitzinger (2002), 32-5	15	343	0	-12.20	0.10	10.75	16.39
Laursen and Seitzinger (2002), 32-6	15	321	0	-15.05	0.06	13.42	20.45
Laursen and Seitzinger (2002), 32-7	15	138	1	-23.74	-0.04	20.17	30.74
Laursen and Seitzinger (2002), C-8	11	174	1	-20.15	-0.10	18.73	28.54
Laursen and Seitzinger (2002), C-9	11	290	0	-24.09	0.16	20.99	31.99
Laursen and Seitzinger (2002), C-10	11	290	0	-13.21	0.35	11.00	16.76
Laursen and Seitzinger (2002), C-12	11	361	0	-6.89	0.23	5.40	8.23
Laursen and Seitzinger (2002), C-13	11	312	0	-15.88	0.08	13.96	21.28
Laursen and Seitzinger (2002), 9-14	11	290	0	-16.72	0.21	13.81	21.05
Laursen and Seitzinger (2002), 9-15	11	334	0	-11.07	0.23	9.21	14.04
Laursen and Seitzinger (2002), 9-16	11	152	0	-24.65	-0.01	21.61	32.94
Laursen and Seitzinger (2002), 9-17	11	348	0	-16.80	0.42	14.08	21.47
Laursen and Seitzinger (2002), 9-18	11	330	0	-8.05	0.08	6.67	10.16

Laursen and Seitzinger (2002), 9-19	11	147	1	-5.74	-0.19	4.92	7.50
Lehmann et al. (2004), Hyperion-Aug	65	130	10	-6.80	-0.08	5.90	8.91
Lehmann et al. (2004), Malibu	50	130	10	-12.32	-0.21	10.67	16.19
Lehmann et al. (2004), Marina, del, Rey, 8-B	50	130	2	-9.90	0.01	8.27	12.56
Lehmann et al. (2004), Hyperion-Mar	65	130	20	-6.37	-0.81	6.85	10.35
Lehmann et al. (2004), Topanga	50	130	20	-5.73	-0.35	5.50	8.35
Lehmann et al. (2004), Marina, del, Rey, 4-B	50	130	20	-6.00	-0.40	5.77	8.75
Lohse et al. (1998), I, (94)	670	226	15	-3.30	0.13	2.89	3.00
Lohse et al. (1998), II, (94)	1425	231	18	-2.00	0.05	1.61	1.66
Lohse et al. (1998), F, (94)	2235	269	20	-1.60	0.08	1.25	1.29
Lohse et al. (1998), III, (94)	3649	249	23	-0.80	0.02	0.65	0.66
Lohse et al. (1998), E, (94)	4468	250	24	-0.80	0.04	0.62	0.63
Reimers et al. (1992), G	3319	121	35	-1.42	-0.05	1.24	1.27
Reimers et al. (1992), J	781	12	41	-0.30	-0.82	1.38	1.43
Reimers et al. (1992), K	998	20	41	-1.18	-0.47	1.74	1.79
Reimers et al. (1992), M	3728	129	35	-1.75	-0.08	1.54	1.58
Reimers et al. (1992), N	4076	144	40	-0.93	-0.01	0.79	0.80
Smetacek et al. (1997), PS2376-1	3657	246	32	-1.30	0.05	1.03	1.05
Smetacek et al. (1997), PS2371-1	3680	246	32	-1.30	0.05	1.03	1.05
Smetacek et al. (1997), PS2370-4	5078	270	32	-0.70	0.03	0.55	0.56
Smetacek et al. (1997), PS2367-1	3525	246	32	-0.90	0.08	0.66	0.68
Smetacek et al. (1997), PS2365-2	3215	246	32	-1.80	0.05	1.45	1.48
Smetacek et al. (1997), PS2361-1	3073	246	32	-1.00	0.07	0.76	0.78
Smetacek et al. (1997), PS2357-1	3627	246	32	-1.70	0.01	1.41	1.44
Warnken et al. (2008)	97.5	210	4	-26.00	0.28	24.02	35.57

* RPOC is the particulate organic carbon (POC) degradation rate (Eq. 18 in the main text).

** RRPOC is the POC rain rate to the sea floor.

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