

Table A1. Fluxes of total mass, lithogenic, biogenic opal, particulate organic carbon (POC), CaCO₃ and organic carbon:total nitrogen (C:N) ratio on the East Siberian Sea slope and the Chukchi Sea slope. ND indicates not determined.

	Sampling date (mm/dd/yy)	Total mass flux (mg m ⁻² day ⁻¹)	Lithogenic flux (mg m ⁻² day ⁻¹)	Opal flux (mg m ⁻² day ⁻¹)	POC flux (mg C m ⁻² day ⁻¹)	CaCO ₃ flux (mg m ⁻² day ⁻¹)	C:N ratio
East Siberian Sea slope (KAMS 1) 115 m							
1	08/18/17-08/31/17	73.2	25.5	2.58	14.0	10.1	4.20
2	09/01/17-09/15/17	36.3	27.2	4.87	1.59	0.31	5.84
3	09/16/17-09/30/17	36.7	16.7	6.16	4.32	3.01	4.97
4	10/01/17-10/15/17	22.0	3.02	12.0	2.64	0.38	5.40
5	10/16/17-10/31/17	15.7	1.76	10.2	1.45	0.07	ND
6	11/01/17-11/15/17	4.11	ND	ND	0.29	0.07	ND
7	11/16/17-11/30/17	1.67	ND	ND	ND	ND	ND
8	12/01/17-12/31/17	4.36	ND	ND	0.55	0.05	ND
9	01/01/18-01/31/18	11.7	ND	ND	2.60	0.15	ND
10	02/01/18-2/28/18	5.05	ND	ND	0.72	0.06	ND
11	03/01/18-03/31/18	21.8	4.50	0.59	6.64	0.16	5.27
12	04/01/18-04/15/18	13.1	4.38	2.43	2.49	0.07	ND
13	04/16/18-04/30/18	10.7	5.75	2.36	0.97	0.16	ND
14	05/01/18-05/15/18	81.4	41.4	25.4	4.19	4.09	5.75
15	05/16/18-05/31/18	74.4	38.1	23.8	4.49	1.30	5.39
16	06/01/18-06/15/18	196	128	33.4	11.1	6.54	7.17
17	06/16/18-06/30/18	180	74.0	53.7	19.5	3.30	10.9
18	07/01/18-07/15/18	371	213	79.5	23.9	19.0	8.42
19	07/16/18-07/31/18	443	186	152	38.6	8.59	10.1
20	08/01/18-08/13/18	624	134	276	83.3	6.73	9.32
East Siberian Sea slope (KAMS 1) 335 m							
1	08/18/17-08/31/17	20.5	13.6	3.69	1.16	0.33	5.86
2	09/01/17-09/15/17	32.8	24.8	4.59	1.31	0.08	6.75
3	09/16/17-09/30/17	22.0	13.8	4.58	1.35	0.26	5.17
4	10/01/17-10/15/17	36.8	11.5	18.1	2.70	0.42	5.84
5	10/16/17-10/31/17	67.4	29.3	28.2	3.93	0.15	6.70
6	11/01/17-11/15/17	27.9	10.4	12.5	1.94	0.07	6.19
7	11/16/17-11/30/17	7.76	5.51	1.51	0.29	0.02	ND
8	12/01/17-12/31/17	4.96	2.93	1.01	0.39	0.03	ND
9	01/01/18-01/31/18	6.43	3.63	1.17	0.63	0.04	5.00
10	02/01/18-2/28/18	13.7	8.59	2.11	1.11	0.18	5.43
11	03/01/18-03/31/18	11.0	7.21	1.58	0.83	0.16	4.99
12	04/01/18-04/15/18	14.8	10.5	2.36	0.69	0.18	ND
13	04/16/18-04/30/18	7.31	5.26	1.08	0.36	0.07	ND
14	05/01/18-05/15/18	11.9	8.53	1.78	0.60	0.06	6.35
15	05/16/18-05/31/18	18.5	12.8	2.95	1.01	0.18	5.76
16	06/01/18-06/15/18	242	169	36.4	11.0	8.56	6.80
17	06/16/18-06/30/18	422	248	96.0	26.3	12.1	7.73
18	07/01/18-07/15/18	462	284	92.0	26.3	20.2	8.03
19	07/16/18-07/31/18	475	228	124	47.0	5.09	10.0
Chukchi Sea slope (KAMS 2) 325 m							
1	08/12/17-08/31/17	337	104	155	27.7	8.30	5.53
2	09/01/17-09/15/17	181	72.2	74.9	12.2	3.37	5.75
3	09/16/17-09/30/17	45.7	14.9	17.9	4.29	2.17	5.77
4	10/01/17-10/15/17	23.6	9.50	9.36	1.84	0.18	6.25
5	10/16/17-10/31/17	4.09	ND	ND	0.42	0.01	ND
6	11/01/17-11/15/17	30.6	12.2	13.2	1.86	0.45	5.75
7	11/16/17-11/30/17	17.5	ND	ND	6.16	0.19	ND
8	12/01/17-12/31/17	31.0	13.0	3.60	5.62	0.29	4.38
9	01/01/18-01/31/18	78.1	48.1	19.0	3.48	2.29	5.79
10	02/01/18-2/28/18	28.3	17.3	6.54	1.52	0.66	5.65
11	03/01/18-03/31/18	102	58.0	31.6	3.98	2.70	5.84
12	04/01/18-04/15/18	103	67.7	24.8	3.38	1.90	6.50
13	04/16/18-04/30/18	62.9	40.9	14.4	2.54	1.24	5.86
14	05/01/18-05/15/18	50.0	31.1	11.3	2.72	0.80	5.82
15	05/16/18-05/31/18	71.0	44.2	19.0	2.61	1.23	6.00
16	06/01/18-06/15/18	78.6	42.9	26.6	3.32	0.80	6.52
17	06/16/18-06/30/18	80.8	29.1	37.4	5.56	0.40	7.77
18	07/01/18-07/15/18	177	52.5	85.7	15.2	1.00	7.67

19	07/16/18-07/31/18	278	116	99.1	23.1	4.64	7.43
20	08/01/18-08/14/18	330	140	121	23.0	11.4	8.66
