Supplementary Information for

Large diurnal bottom temperature oscillations around the Saint Pierre and Miquelon archipelago

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Station-Depth (mab)	O1				K1				M2			
	U_{maj} (cm/s)	U_{min} (cm/s)	Inc. (°)	ϕ (°)	U_{maj} (cm/s)	U_{min} (cm/s)	Inc. (°)	ϕ (°)	U_{maj} (cm/s)	U_{min} (cm/s)	Inc. (°)	ϕ (°)
P30-2m	9.2	-0.8	143	138	3.0	-1.6	154	218	3.5	-2.3	121	352
P30-10m	10.2	-1.1	114	142	4.3	-0.7	139	231	7.4	-1.2	125	24
P30-18m	13.1	-1.6	99	142	4.7	0.8	121	210	10.7	-1.4	121	16
P30-24m	14.5	-1.5	98	136	4.1	0.8	82	169	11.9	-2.4	118	11
L3-2m	11.4	-4.0	96	221	6.8	-3.3	95	271	3.1	1.9	10	235
L3-10m	20.5	-7.5	82	218	12.7	-5.4	90	261	6.1	0.6	127	6
L3-18m	24.5	-9.4	68	220	14.2	-6.5	78	264	6.9	-0.4	117	360
L3-24m	24.5	-9.7	67	219	13.4	-6.1	79	261	6.6	-0.2	114	360
L4-2m	9.8	0.3	9	276	6.4	-1.4	32	291	10.2	1.5	164	351
L4-9m	16.4	-0.6	177	112	10.1	-2.7	10	289	14.9	2.9	171	348
L4-16m	19.9	-5.7	163	123	11.7	-5.1	176	112	14.5	3.6	170	349
L4-23m	21.4	-9.3	151	135	10.4	-9.4	157	132	12.5	3.4	161	347

Table S1: Tidal ellipse components at the 3 ADCP moorings P30, L3 and L4 (see Fig. 1 for their location) for the 3 main tidal components. Umaj, Umin, Inc, ϕ denote the semi-major axis, semi-minor axis, inclination (from East) and Greenwich phase respectively. Tidal ellipses are presented for 4 depths above the bottom (mab). Sign of semi-minor axis indicates polarity of ellipse (positive anticlockwise, negative clockwise). Harmonic analysis has been performed for the period August-September 2011 for P30 mooring, 2 July 2017 to 30 August 2015 for L3 mooring and 17 September 2015 to 17 October 2015 for L4 mooring.

Station	O1		K1		M2		S2		Var(%)	SNR(O1)
	A (°C)	φ (°)	A (°C)	φ (°)	A (°C)	φ (°)	A (°C)	φ (°)		
2	0.2	185.	0.1	228.	0.1	120.	0.1	236.	30.	22.
6	0.7	228.	0.4	306.	0.3	128.	0.1	142.	76.	517.
8	1.1	296.	0.4	1.	0.2	324.	0.1	131.	41.	247.
P60	2.1	26.	1.1	57.	0.4	111.	0.2	237.	62.	13.
M12	0.2	42.	0.2	128.	0.1	34.	0.1	297.	21.	0.
M11	0.4	84.	0.4	145.	0.4	344.	0.1	28.	40.	25.
14	0.6	121.	0.4	158.	0.5	354.	0.1	42.	43.	69.
M9	0.2	120.	0.1	147.	0.1	155.	0.2	138.	14.	5.
M8	0.1	203.	0.1	52.	0.3	211.	0.1	244.	16.	5.
18	0.2	231.	0.1	279.	0.0	25.	0.0	52.	25.	72.
M7	0.2	350.	0.2	30.	0.2	242.	0.0	285.	23.	37.
N3	0.7	323.	0.1	34.	0.3	51.	0.0	352.	32.	190.
N5	0.1	167.	0.1	134.	0.1	159.	0.2	217.	29.	1.
N7	0.3	339.	0.3	40.	0.2	102.	0.1	202.	27.	50.
N9	0.2	325.	0.2	76.	0.4	253.	0.2	341.	41.	106.
1	1.1	115.	0.8	141.	0.3	129.	0.2	262.	24.	25.
3	1.1	174.	0.7	217.	0.2	91	0.1	287	23.	135.
5	0.4	267.	0.2	300.	0.1	144.	0.1	197.	39.	171.
L3	0.5	260.	0.4	300.	0.3	158.	0.1	146.	09.	224.
7	3.0	271.	1.4	325.	0.5	92.	0.0	170.	56.	296.
L4	2.0	347.	1.4	0.	0.5	24.	0.5	76.	32.	60.
P30	1.7	53.	0.7	86.	0.4	174.	0.2	307.	52.	66.
11	2.5	68.	1.4	97.	0.3	278.	0.1	22.	48.	10.
13	2.1	121.	1.1	172.	0.5	39.	0.2	86.	48.	58.
15	1.2	156.	0.6	237.	1.0	171.	0.3	239.	29.	22.
19	1.5	44.	1.4	104.	0.9	7.	0.5	81.	54.	15.
N1	0.8	103.	0.1	53.	0.7	209.	0.1	68.	31.	4.
N2	2.8	261.	1.2	360.	0.5	119.	0.3	144.	48.	156.
N4	0.8	191	0.2	269.	0.9	210.	0.3	275.	31.	9.
N6	1.2	331.	0.7	149.	0.4	31.	0.3	250.	20.	40.
N8	0.3	18.	0.3	88.	0.6	271.	0.3	40.	26.	1.

Table S2: Tide harmonic constants (phase and amplitude) computed with t_tide for the observed bottom temperature during July and August (September for L4 station). Only the 4 main waves : O1, K1, M2, S2 are presented. Last columns presents the ratio of the variance predicted by the harmonic analysis to the variance of the original series and the SNR (Signal/Noise Ratio). The colors of the station names are in accordance with the figure 1 map and figure 4a (i.e.: green and red for 30 m and 60 m station depth respectively)