

Table S3. The results of harmonic analysis for the observed currents from the CHINARE and AMISOR moorings

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	constituent	SA	S ₂	MF	M ₂	O ₁	K ₁	K ₂	P ₁	N ₂	Q ₁	S ₁
	semi-major axis (cm s ⁻¹)	2.14	1.2	1.18	0.99	0.87	0.81	0.34	0.27	0.26	0.24	0.2
	semi-minor axis (cm s ⁻¹)	-1	-0.31	0.06	-0.27	-0.58	-0.6	-0.07	-0.22	-0.15	-0.21	-0.08
	phase (°)	118.61	85.02	207.58	319.72	26.83	79.16	141.57	59.6	207.86	312.41	40.36
	form factor: 0.76											
PBM3	RCM8-10914 at 347 m depth (averaged tidal current magnitude: 4.05 cm s ⁻¹ ; maximal tidal current: 9.97 cm s ⁻¹)											
	constituent	SA	MSF	M ₂	S ₂	K ₁	O ₁	N ₂	K ₂	M ₃	P ₁	2N ₂
	semi-major axis (cm s ⁻¹)	5.46	1.51	1.34	1.32	0.96	0.89	0.44	0.38	0.28	0.27	0.23
	semi-minor axis (cm s ⁻¹)	-1.01	-0.43	-0.28	-0.43	-0.49	-0.44	-0.03	-0.13	-0.04	-0.03	-0.03
	phase (°)	173.19	172.16	303.19	54.59	9.72	315.31	208.26	106.05	198.58	317.98	92.75
	form factor: 0.70											
	RCM8-10869 at 439 m depth (averaged tidal current magnitude: 4.01 cm s ⁻¹ ; maximal tidal current: 9.05 cm s ⁻¹)											
	constituent	SA	MSF	SSA	MF	MM	S ₂	M ₂	K ₁	O ₁	N ₂	K ₂
	semi-major axis (cm s ⁻¹)	4.78	1.59	1.48	1.27	1.26	1.25	1.22	0.92	0.89	0.41	0.35
	semi-minor axis (cm s ⁻¹)	-0.92	-0.69	-0.07	-0.23	0.09	-0.56	-0.38	-0.51	-0.49	-0.02	-0.04
	phase (°)	162.17	157.11	240.23	54.44	85.61	70.8	314.2	9.74	320.01	223.4	117.77
	form factor: 0.73											
	RCM8-10996 at 551 m depth (averaged tidal current magnitude: 3.3 cm s ⁻¹ ; maximal tidal current: 8.41 cm s ⁻¹)											
	constituent	SA	MSF	MF	MM	SSA	M ₂	S ₂	MSM	O ₁	K ₁	T ₂
	semi-major axis (cm s ⁻¹)	3.81	1.73	1.29	1.2	1.17	1.1	1.03	0.86	0.82	0.79	0.32
	semi-minor axis (cm s ⁻¹)	-0.62	-0.58	-0.54	0.15	0.21	-0.28	-0.54	0.15	-0.46	-0.41	-0.03
	phase (°)	154.6	170.34	40.78	99.32	237.14	311.08	62.48	103.84	310.58	9.51	20.52
	form factor: 0.75											
	RCM8-10311 at 663 m depth (averaged tidal current magnitude: 3.44 cm s ⁻¹ ; maximal tidal current: 8.13 cm s ⁻¹)											
	constituent	SSA	MSF	MM	M ₂	S ₂	K ₁	O ₁	K ₂	N ₂	Q ₁	NO ₁

	semi-major axis (cm s ⁻¹)	3.18	2.44	1.16	0.98	0.87	0.79	0.78	0.33	0.27	0.25	0.24
	semi-minor axis (cm s ⁻¹)	-0.65	-0.01	0.48	-0.34	-0.43	-0.5	-0.56	-0.04	-0.1	-0.08	-0.01
	phase (°)	84.73	157.96	86.6	321.03	87.1	12.87	332.56	132.58	217.33	318.47	44.53
	form factor: 0.85											
	RCM5-8670x at 753 m depth (averaged tidal current magnitude: 2.98 cm s ⁻¹ ; maximal tidal current: 8.44 cm s ⁻¹)											
	constituent	SA	MSF	MF	S ₂	M ₂	O ₁	K ₁	K ₂	S ₁	N ₂	TAU ₁
	semi-major axis (cm s ⁻¹)	3.87	1.38	1.31	1.24	1.18	0.99	0.96	0.43	0.34	0.33	0.28
	semi-minor axis (cm s ⁻¹)	-0.38	-0.36	-0.71	-0.58	-0.4	-0.5	-0.47	-0.1	0.01	-0.19	-0.06
	phase (°)	151.66	158	69.23	75.03	317.27	338.8	35.78	93.41	249.59	207.66	272.9
	form factor: 0.80											
PBM4	RCM8-10915 at 459 m depth (averaged tidal current magnitude: 2.5 cm s ⁻¹ ; maximal tidal current: 8.67 cm s ⁻¹)											
	constituent	M ₂	S ₂	K ₁	MSF	O ₁	N ₂	MM	MKS ₂	P ₁	Q ₁	K ₂
	semi-major axis (cm s ⁻¹)	2.19	1.91	1.3	1.18	1.12	0.82	0.75	0.43	0.42	0.37	0.35
	semi-minor axis (cm s ⁻¹)	0.31	0.01	0.05	-0.49	0.17	0.2	0.48	0.35	-0.06	0.09	-0.2
	phase (°)	320.38	78.4	3.02	100.22	286.59	212.49	76.52	123.94	338.38	161.12	129.99
	form factor: 0.59											
	RCM8-10768 at 523 m depth (averaged tidal current magnitude: 2.02 cm s ⁻¹ ; maximal tidal current: 6.55 cm s ⁻¹)											
	constituent	M ₂	S ₂	K ₁	MSM	MSF	O ₁	SSA	MM	N ₂	P ₁	Q ₁
	semi-major axis (cm s ⁻¹)	1.36	1.21	1.11	1.1	1.04	1	0.98	0.95	0.49	0.46	0.34
	semi-minor axis (cm s ⁻¹)	-0.2	-0.22	-0.07	-0.09	-0.3	0.1	-0.08	0.26	0.01	-0.03	0.09
	phase (°)	326.21	86.22	8.86	280.48	96.93	289.84	42.2	68.35	215.08	312.89	174.55
	form factor: 0.82											
PBM5	RCM8-10704 at 457 m depth (averaged tidal current magnitude: 2.42 cm s ⁻¹ ; maximal tidal current: 8.36 cm s ⁻¹)											
	constituent	M ₂	S ₂	O ₁	K ₁	SSA	K ₂	N ₂	M ₃	ALP1	Q ₁	NO ₁
	semi-major axis (cm s ⁻¹)	2.2	1.97	1.55	1.47	1.23	0.64	0.49	0.41	0.38	0.37	0.33

	semi-minor axis (cm s ⁻¹)	0.12	-0.2	-0.18	-0.1	-0.16	-0.04	0.09	0.06	0.05	-0.16	-0.19
	phase (°)	324.74	72.7	341.88	42.44	182.16	99.96	230.69	222.85	41.02	274.98	12.15
	form factor: 0.72											
PBM6	RCM8-10916 at 457 m depth (averaged tidal current magnitude: 2.14 cm s ⁻¹ ; maximal tidal current: 8.08 cm s ⁻¹)											
	constituent	M ₂	S ₂	O ₁	SSA	K ₁	N ₂	P ₁	SIG ₁	K ₂	NO ₁	J ₁
	semi-major axis (cm s ⁻¹)	1.69	1.39	1.3	1.24	1.22	0.54	0.5	0.34	0.34	0.33	0.32
	semi-minor axis (cm s ⁻¹)	-0.51	-0.55	-0.59	-0.26	-0.46	-0.08	0.04	-0.03	-0.14	-0.11	-0.03
	phase (°)	320.07	73.15	338.31	51.61	31.26	234.58	42.39	291.08	111.66	343.27	26.9
	form factor: 0.82											
	RCM8-10701 at 681 m depth (averaged tidal current magnitude: 1.95 cm s ⁻¹ ; maximal tidal current: 6.83 cm s ⁻¹)											
	constituent	M ₂	O ₁	K ₁	S ₂	N ₂	K ₂	P ₁	SIG ₁	2Q ₁	EPS ₂	THE ₁
	semi-major axis (cm s ⁻¹)	1.53	1.34	1.17	1.15	0.56	0.47	0.43	0.42	0.4	0.36	0.35
	semi-minor axis (cm s ⁻¹)	-0.63	-0.62	-0.55	-0.6	-0.08	-0.09	-0.1	-0.01	-0.05	0.09	-0.08
	phase (°)	312.55	333.59	29.58	53.59	230.61	112.79	44.41	289.92	156.53	123.18	258.19
	form factor: 0.94											
	RCM8-10703 at 771 m depth (averaged tidal current magnitude: 2.64 cm s ⁻¹ ; maximal tidal current: 7.12 cm s ⁻¹)											
	constituent	MM	M ₂	O ₁	S ₂	K ₁	P ₁	N ₂	TAU ₁	Q ₁	MU ₂	K ₂
	semi-major axis (cm s ⁻¹)	2.1	1.71	1.45	1.43	1.38	0.62	0.53	0.5	0.49	0.46	0.41
	semi-minor axis (cm s ⁻¹)	-0.1	-0.74	-0.26	-0.33	-0.45	-0.25	-0.13	-0.35	0.22	-0.03	-0.05
	phase (°)	327.12	320.45	324.07	73.34	38.23	24.25	234.79	75.85	336.45	325.58	109.97
	form factor: 0.90											
PBM7	RCM8-10918 at 470 m depth (averaged tidal current magnitude: 3.28 cm s ⁻¹ ; maximal tidal current: 10.28 cm s ⁻¹)											
	constituent	SSA	M ₂	O ₁	K ₁	S ₂	P ₁	K ₂	N ₂	PHI ₁	Q ₁	M ₃
	semi-major axis (cm s ⁻¹)	3.75	1.64	1.46	1.45	1.38	0.53	0.44	0.43	0.37	0.33	0.32
	semi-minor axis (cm s ⁻¹)	1.21	-0.8	-0.47	-0.33	-0.59	-0.18	-0.1	-0.2	-0.14	-0.05	-0.06
	phase (°)	147.19	306.13	312.6	16.61	58.11	34.4	79.98	223.02	217.16	282.81	228.4

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