

**Table A1.** Seawater properties and benthic foraminiferal  $\delta^{18}\text{O}$  from Florida Straits cruise KNR166-2 multicore tops.

Multicore	Latitude	Longitude	Water Depth (m)	Temperature (°C)	Salinity (psu)	pH (sw scale)	Omega calcite	Omega aragonite	Seawater $\delta^{18}\text{O}$ (SMOW)	<i>C. pachyderma</i> $\delta^{18}\text{O}$ (PDB)	<i>P. ariminensis</i> $\delta^{18}\text{O}$ (PDB)	<i>P. foveolata</i> $\delta^{18}\text{O}$ (PDB)	<i>U. peregrina</i> $\delta^{18}\text{O}$ (PDB)	<i>H. elegans</i> $\delta^{18}\text{O}$ (PDB)
5	24.40	83.38	447	8.5	35.02	7.89	2.14	1.37	0.31	1.68	1.68		2.18	2.71
11	24.22	83.30	751	5.8	34.91	7.95	2.11	1.34	0.26	2.27			2.49	3.11
13	24.37	83.24	348	9.7	35.17	7.90	2.35	1.50	0.39	1.65	1.41		1.87	2.63
16	24.40	83.23	248	10.8	35.32	7.92	2.55	1.63	0.47	1.17				
19	24.42	83.21	173	12.7	35.60	7.93	2.84	1.82	0.62	1.11		0.57		2.03
22	24.41	83.37	398	9.0	35.08	7.90	2.23	1.43	0.35	1.58			2.03	2.63
24	24.34	83.25	494	7.8	34.95	7.89	2.07	1.32	0.28				2.24	2.89
28	24.28	83.27	648	6.3	34.91	7.91	2.01	1.28	0.26	2.05			2.43	3.14
50	24.41	83.22	198	12.1	35.51	7.92	2.71	1.73	0.57	1.22	0.94	0.17		2.12
53	24.38	83.23	302	10.0	35.21	7.91	2.41	1.54	0.41	1.44	1.49		1.96	2.39
55	24.38	83.27	359	9.1	35.10	7.90	2.27	1.45	0.36	1.76	1.63		1.91	2.39
62	24.33	83.26	547	7.0	34.91	7.89	2.01	1.28	0.26	1.73	1.70		2.39	2.94
66	23.61	79.05	302	19.0	36.62	8.05	4.55	2.97	1.16					1.15
68	23.61	79.08	431	16.6	36.24	8.00	3.74	2.42	0.96	0.41		0.50		1.53
72	23.75	79.43	542	10.8	35.31	7.92	2.47	1.58	0.47	1.12		1.14	1.56	2.05
76	23.59	79.42	539	11.0	35.33	7.91	2.43	1.56	0.56	1.21	1.16	1.14	1.66	
79	23.26	79.27	486	12.1	35.50	7.92	2.65	1.70	0.57	0.98		1.00	1.38	1.86
89	24.56	79.24	353	17.8	36.48	8.04	4.20	2.73	1.08	0.37		0.37		
92	24.55	79.26	478	15.7	36.13	8.02	3.67	2.38	0.89				1.09	1.72
94	24.57	79.23	259	18.5	36.57	8.07	4.62	3.00	1.17	0.18				1.06
97	24.56	79.23	303	18.6	36.58	8.05	4.44	2.89	1.13	0.06				1.24
99	24.57	79.51	766	8.5	35.03	7.85	1.90	1.21	0.34	1.84				
103	24.44	79.48	683	9.3	35.11	7.88	2.08	1.33	0.38	1.60	1.65		1.81	
110	24.58	79.24	390	17.3	36.39	8.03	4.02	2.61	1.03	0.43		0.32	0.96	1.35
112	24.64	79.24	404	17.1	36.35	8.02	3.94	2.56	1.01	0.42				1.37
118	24.59	79.27	531	14.5	35.91	7.96	3.15	2.03	0.85	0.88		0.80	1.25	2.00
121	24.77	79.25	578	11.9	35.48	7.92	2.57	1.66	0.56	1.16			1.52	2.05
123	24.76	79.27	632	10.6	35.30	7.90	2.34	1.50	0.46	1.12				
125	24.76	79.29	694	9.4	35.13	7.89	2.15	1.38	0.37	1.53	1.57			
134	24.84	79.22	441	17.2	36.37	8.02	3.94	2.56	1.02	0.66		0.27	1.08	1.52
138	24.83	79.23	484	16.8	36.29	8.02	3.90	2.54	0.98	0.74		0.74	1.16	1.77

*Italicized P. foveolata measurement is 3 $\sigma$  outlier and is excluded from calibrations.*