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Thermocline state change in the eastern equatorial Pacific during the late Pliocene/early Pleistocene intensification of Northern Hemisphere glaciation

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Table S1: Planktic foraminiferal proxy records from ODP Site 849 for MIS G7–95 (~2.75–2.4 Ma). For *G. crassaformis*, we have generated new $\delta^{18}O$, $\delta^{13}C$ and Mg/Ca records, except for the interval from ~2.65 to 2.4 Ma for which $\delta^{13}C$ values have already been published by Jakob et al. (2016). For *G. ruber*, the previously published Mg/Ca-based SST and $\delta^{18}O$ datasets of Jakob et al. (2017) were augmented by $\delta^{13}C$ data, except for the interval from ~2.65 to 2.4 Ma for which $\delta^{13}C$ values have already been published by Jakob et al. (2016). From these data surface-to-thermocline $\delta^{18}O$, $\delta^{13}C$ and Mg/Ca gradients were calculated. Reported Mg/Ca values were normalized relative to the ECRM standard (Greaves et al., 2008); $\delta^{13}C$ values of *G. ruber* have been adjusted for species-specific offset from equilibrium precipitation by the addition of + 0.94 ‰ (Spero et al., 2003). The age model is from Jakob et al. (2017).

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	6	5	102	104	67.78	2387.85	0.89	2.16	1.11	3.40	sinistral	2.80	-0.87	3.03	24.81	1.91	-3.03	1.93	21.41
849	D	6	5	106	108	67.83	2389.49	0.94	2.35	1.06	3.01	sinistral	2.87	-0.84	2.75	23.70	1.93	-3.19	1.69	20.70
849	D	6	5	108	110	67.84	2389.81	0.97	2.40			sinistral	2.93	-0.84	2.55	22.87	1.96	-3.24		
849	D	6	5	114	116	67.89	2391.45	0.89	2.21	0.96	2.21	sinistral	2.86	-0.74	2.74	23.65	1.97	-2.95	1.78	21.43
849	D	6	5	116	118	67.91	2392.10	0.81	2.28	1.23	4.23	sinistral	2.72	-0.86	2.76	23.76	1.91	-3.14	1.54	19.53
849	D	6	5	121	123	67.97	2394.06	0.86	2.28	0.97	2.35	sinistral	2.76	-0.75	2.60	23.09	1.90	-3.03	1.63	20.75
849	D	6	5	123	125	67.98	2394.39			1.57	6.28	sinistral	2.71	-0.79	2.81	23.93			1.23	17.66
849	D	6	5	127	129	68.03	2396.02	0.90	2.22	1.12	3.52	sinistral	2.69	-0.62	2.85	24.13	1.79	-2.84	1.73	20.61
849	D	6	5	129	131	68.05	2396.67	0.96	2.41	1.16	3.77	sinistral	2.86	-0.90	2.76	23.75	1.90	-3.31	1.60	19.99
849	D	6	5	131	132	68.06	2397.16	0.81	2.22			sinistral			2.87	24.17				
849	D	6	5	132	134	68.08	2397.65	0.87	2.21	1.36	5.12	sinistral	2.71	-0.63	2.72	23.57	1.84	-2.84	1.35	18.45
849	D	6	5	134	136	68.10	2398.31	0.88	2.18			dextral	2.74	-0.79	3.21	25.45	1.86	-2.97		
849	D	6	5	137	139	68.12	2398.96	0.97	2.13	1.61	6.47	sinistral	2.73	-0.88	2.55	22.87	1.76	-3.01	0.94	16.39
849	D	6	5	139	141	68.15	2399.94	0.82	2.14			sinistral	2.76	-0.94	3.25	25.60	1.94	-3.08		
849	D	6	5	141	143	68.17	2400.60	0.91	2.47	1.50	5.91	sinistral	2.93	-0.92	2.92	24.39	2.02	-3.39	1.42	18.48
849	D	6	5	143	145	68.19	2401.26			1.90	7.84	sinistral	2.81	-1.25	2.90	24.31			1.00	16.47
849	D	6	5	146	148	68.21	2401.91						2.88	-1.04	2.98	24.60				
849	D	6	6	1	3	68.27	2403.88	0.95	2.25	1.70	6.93	sinistral	2.68	-1.00	2.86	24.15	1.73	-3.25	1.16	17.22

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	6	6	3	5	68.29	2404.54	0.79	2.03	1.71	6.95	sinistral	2.90	-0.96	2.88	24.25	2.11	-2.99	1.18	17.30
849	D	6	6	6	8	68.32	2405.53	0.88	2.32			dextral	2.59	-0.97	2.68	23.43	1.71	-3.29		
849	D	6	6	13	15	68.39	2407.84	0.89	2.41			sinistral	2.88	-1.06	2.96	24.53	1.99	-3.47		
849	D	6	6	15	17	68.41	2408.50	0.65	2.16			sinistral	2.58	-1.02	3.30	25.76	1.93	-3.18		
849	D	6	6	17	19	68.43	2409.17	0.65	1.97	1.83	7.50	sinistral	2.44	-0.73			1.79	-2.70		
849	D	6	6	22	24	68.48	2410.83	0.54	2.30	1.04	2.88	sinistral	2.38	-0.58	2.89	24.27	1.84	-2.88	1.85	21.39
849	D	6	6	24	26	68.49	2411.16	0.57	2.41	1.03	2.83	sinistral			2.88	24.25			1.85	21.42
849	D	6	6	26	27	68.51	2411.83	0.62	2.30	1.02	2.76	sinistral	2.97	-1.13	2.90	24.30	2.35	-3.43	1.87	21.54
849	D	6	6	28	30	68.53	2412.50	0.76	2.30	1.16	3.78	sinistral	2.81	-1.03	2.80	23.93	2.05	-3.33	1.64	20.14
849	D	6	6	31	33	68.57	2413.84	0.68	2.35	1.09	3.31	sinistral	2.45	-0.67	2.78	23.84	1.77	-3.02	1.69	20.53
849	D	6	6	33	35	68.59	2414.51	0.53	2.33	1.26	4.49	sinistral	2.79	-0.99	2.96	24.55	2.26	-3.32	1.70	20.06
849	D	6	6	36	37	68.61	2415.18	0.58	1.91	1.23	4.28	sinistral	2.31	-0.66	3.47	26.32	1.73	-2.57	2.24	22.04
849	D	6	6	38	40	68.65	2416.53	0.54	2.09	0.93	1.94	sinistral	2.56	-0.90	3.09	25.02	2.02	-2.99	2.16	23.07
849	D	6	6	41	43	68.67	2417.21	0.63	2.34			sinistral	2.69	-0.90			2.06	-3.24		
849	D	6	6	43	45	68.69	2417.89	0.55	2.25	0.99	2.50	sinistral	2.30	-0.84	2.96	24.55	1.75	-3.09	1.97	22.05
849	D	6	6	48	50	68.73	2419.25	0.41	2.15	1.26	4.47	sinistral	2.04	-0.55	3.12	25.11	1.63	-2.70	1.85	20.64
849	D	6	6	51	53	68.77	2420.61	0.45	2.21			sinistral	2.39	-0.80	3.10	25.04	1.94	-3.01		
849	D	6	6	53	55	68.78	2420.96	0.41	2.36	0.82	0.95	sinistral	2.28	-0.25	2.75	23.70	1.87	-2.61	1.93	22.75
849	D	6	6	56	57	68.81	2421.99	0.43	2.25	1.32	4.82	sinistral	2.04	-0.55	3.06	24.91	1.61	-2.80	1.74	20.09
849	D	6	6	57	59	68.83	2422.67	0.43	2.27			sinistral	2.26	-1.05	2.73	23.64	1.83	-3.32		
849	D	6	6	63	65	68.89	2424.75	0.41	2.50	1.17	3.87	sinistral	1.86	-0.43	3.10	25.04	1.45	-2.93	1.92	21.17
849	D	6	6	66	67	68.91	2425.44	0.60	2.64	0.93	1.99	sinistral	2.17	-0.63	2.64	23.25	1.57	-3.27	1.71	21.26
849	D	6	6	68	70	68.95	2426.84	0.35	2.79	0.90	1.68	sinistral	2.07	-0.13	2.45	22.40	1.72	-2.92	1.55	20.73

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	6	6	71	73	68.97	2427.54	0.50	2.59	0.96	2.26	sinistral	1.72	0.07	2.58	22.98	1.22	-2.52	1.61	20.72
849	D	6	6	73	75	68.98	2427.89	0.62	2.68	1.03	2.82	sinistral	1.96	-0.02	2.38	22.09	1.34	-2.70	1.35	19.27
849	D	6	6	78	80	69.04	2430.01	0.58	2.70	0.91	1.81	dextral	2.21	-0.67	2.31	21.75	1.63	-3.37	1.40	19.94
849	D	6	6	81	82	69.07	2431.08	0.21	2.43	1.07	3.09	dextral	2.09	-0.38	2.39	22.14	1.88	-2.81	1.32	19.05
849	D	6	6	86	87	69.12	2432.88	0.67	2.60	0.91	1.81	dextral	1.78	-0.05			1.11	-2.65		
849	D	6	6	89	91	69.15	2433.96	0.63	2.59	1.04	2.87	dextral	2.00	-0.26	2.33	21.86	1.37	-2.85	1.30	19.00
849	D	6	6	91	93	69.17	2434.69	0.61	2.44	1.04	2.91	dextral	1.70	-0.08	2.53	22.75	1.09	-2.52	1.48	19.84
849	D	6	6	93	95	69.18	2435.06	0.48	2.33	1.04	2.87	dextral	2.14	-0.67	2.66	23.34	1.66	-3.00	1.62	20.46
849	D	6	6	97	98	69.23	2436.90	0.42	2.45	0.90	1.67	dextral	1.79	-0.56	2.64	23.23	1.37	-3.01	1.74	21.56
849	D	6	6	98	100	69.24	2437.27	0.57	2.49	0.90	1.68	dextral	1.73	-0.24	2.51	22.68	1.16	-2.73	1.61	21.00
849	D	6	6	100	102	69.26	2438.02	0.53	2.45	0.96	2.26	dextral	2.07	-0.49	2.36	22.00	1.54	-2.94	1.40	19.74
849	D	6	6	102	104	69.28	2438.77	0.65	2.65	1.15	3.70	dextral	2.15	-0.39	2.51	22.66	1.50	-3.04	1.36	18.97
849	D	6	6	104	105	69.29	2439.15	0.54	2.48	0.88	1.55	dextral	2.09	-0.49	2.51	22.69	1.55	-2.97	1.63	21.14
849	D	6	6	105	107	69.30	2439.53	0.43	2.63	0.88	1.52	dextral	2.03	-0.54	2.74	23.67	1.60	-3.17	1.86	22.15
849	D	6	6	108	110	69.33	2440.68	0.52	2.56	0.95	2.16	dextral	1.75	-0.19	2.57	22.93	1.23	-2.75	1.61	20.77
849	D	6	6	120	121	69.45	2445.38	0.46	2.53	0.89	1.58	dextral	2.32	-0.60	2.59	23.06	1.86	-3.13	1.71	21.48
849	D	6	6	122	124	69.48	2446.59	0.55	2.59	1.02	2.76	dextral	2.36	-0.74	2.55	22.86	1.81	-3.33	1.52	20.09
849	D	6	6	124	126	69.49	2447.00	0.53	2.62	1.28	4.62	dextral	2.31	-0.86	3.02	24.78	1.78	-3.48	1.74	20.16
849	D	6	6	126	127	69.51	2447.82	0.56	2.51	0.99	2.47	dextral	2.50	-0.75	2.94	24.45	1.94	-3.26	1.95	21.97
849	D	6	6	128	130	69.54	2449.06	0.53	2.42	1.26	4.49	dextral	2.03	-0.68	2.53	22.79	1.50	-3.10	1.27	18.30
849	D	6	6	131	133	69.56	2449.89	0.66	2.42	1.10	3.34	dextral	2.17	-0.51			1.51	-2.93		
849	D	6	6	133	135	69.58	2450.74	0.73	2.49	1.32	4.82	dextral	2.36	-0.70	2.54	22.82	1.63	-3.19	1.22	18.00
849	D	6	6	137	139	69.63	2452.45	0.70	2.39	1.12	3.52	dextral	2.25	-0.78	3.20	25.40	1.55	-3.17	2.07	21.88

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	6	6	139	140	69.65	2452.88	0.61	2.22	0.96	2.23	dextral	2.69	-0.62	3.46	26.28	2.08	-2.84	2.50	24.05
849	D	6	6	141	143	69.68	2455.05	0.59	2.51	1.37	5.17	dextral	2.43	-1.08	2.99	24.67	1.84	-3.59	1.62	19.50
849	D	6	6	143	145	69.69	2455.49			1.05	3.00	dextral	2.55	-0.78	3.59	26.69			2.53	23.69
849	D	6	6	147	149	69.72	2456.82	0.82	2.42	1.32	4.85	dextral	2.73	-0.90	3.11	25.09	1.91	-3.32	1.79	20.24
849	C	7	1	80	82	69.76	2458.61	0.51	1.95	1.18	3.89	sinistral	2.72	-0.89	2.74	23.66	2.21	-2.84	1.56	19.77
849	C	7	1	82	84	69.78	2459.50	0.52	2.45	1.24	4.31	dextral	2.48	-0.70	3.35	25.94	1.96	-3.15	2.12	21.63
849	D	6	7	4	7	69.81	2460.86	0.51	2.42	0.97	2.30	dextral	2.36	-0.84			1.85	-3.26		
849	C	7	1	86	88	69.82	2461.31	0.55	2.50	0.99	2.45	dextral	2.82	-1.19	3.48	26.37	2.27	-3.69	2.50	23.92
849	D	6	7	8	10	69.83	2461.77	0.76	1.65			dextral	2.71	-0.96	2.92	24.38	1.95	-2.61		
849	C	7	1	88	90	69.84	2462.22	0.61	2.45	1.01	2.64	dextral	2.53	-1.04	2.89	24.28	1.92	-3.49	1.88	21.64
849	C	7	1	91	93	69.86	2463.14	0.61	2.26	1.27	4.56	sinistral	2.29	-0.91	3.19	25.37	1.68	-3.17	1.91	20.81
849	C	7	1	93	95	69.90	2464.97	0.56	2.22	1.28	4.60	sinistral	2.51	-0.81	2.84	24.06	1.95	-3.03	1.56	19.46
849	D	6	7	17	19	69.91	2465.43	0.56	2.53	1.77	7.26	sinistral	2.35	-1.21	2.77	23.81	1.79	-3.74	1.00	16.54
849	C	7	1	96	98	69.92	2465.89	0.44	2.05	1.10	3.38	sinistral	2.55	-1.01	2.71	23.55	2.11	-3.06	1.61	20.16
849	C	7	1	98	100	69.94	2466.81	0.35	2.17	1.03	2.81	sinistral	2.64	-0.90	2.71	23.53	2.29	-3.07	1.68	20.72
849	D	6	7	22	24	69.96	2467.73	0.40	2.01	1.07	3.14	sinistral	2.58	-1.01	3.04	24.85	2.18	-3.02	1.97	21.71
849	C	7	1	103	104	69.98	2468.65	0.40	1.73	1.23	4.29	sinistral	2.44	-0.96	2.72	23.58	2.04	-2.69	1.48	19.29
849	C	7	1	106	108	70.02	2470.50	0.36	1.95	1.21	4.11	sinistral	1.97	-0.97	2.86	24.14	1.61	-2.92	1.65	20.03
849	C	7	1	108	110	70.04	2471.42	0.32	2.02	1.39	5.27	sinistral	2.59	-1.18	2.72	23.61	2.27	-3.20	1.33	18.34
849	C	7	1	111	113	70.07	2472.80	0.39	1.86	1.28	4.57	sinistral	2.10	-0.98	3.00	24.68	1.71	-2.84	1.72	20.11
849	C	7	1	113	115	70.08	2473.26	0.27	1.98	1.25	4.42	sinistral	2.18	-0.79	2.88	24.23	1.91	-2.77	1.63	19.81
849	C	7	1	116	118	70.13	2475.56	0.29	1.67	1.37	5.13	sinistral	2.25	-0.88	2.80	23.93	1.96	-2.55	1.44	18.80
849	C	7	1	118	120	70.14	2476.02			1.28	4.57	sinistral	1.89	-0.80	3.13	25.18			1.86	20.61

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	C	7	1	120	122	70.15	2476.48	0.23	2.08	1.28	4.58	sinistral	2.18	-0.69	2.77	23.79	1.95	-2.77	1.49	19.21
849	C	7	1	122	124	70.18	2477.85			1.26	4.46	sinistral	2.01	-0.69	2.87	24.18			1.61	19.72
849	C	7	1	126	128	70.22	2479.67	0.29	2.11	1.35	5.05	sinistral	2.23	-0.90	2.63	23.20	1.94	-3.01	1.27	18.15
849	C	7	1	128	130	70.25	2481.03	0.22	2.14	1.22	4.22	sinistral	2.18	-0.62	2.51	22.70	1.96	-2.76	1.29	18.48
849	C	7	1	131	133	70.27	2481.93	0.16	1.95	1.16	3.80	sinistral	1.64	-0.48	3.20	25.40	1.48	-2.43	2.03	21.60
849	C	7	1	133	135	70.29	2482.82	0.12	2.10	1.27	4.51	sinistral	1.99	-0.54	2.74	23.66	1.87	-2.64	1.47	19.15
849	C	7	1	136	138	70.32	2484.15			1.26	4.43	sinistral	1.62	-0.44	2.84	24.07			1.59	19.65
849	C	7	1	138	140	70.34	2485.04	0.17	2.21	1.37	5.15	sinistral	2.01	-0.51	2.59	23.04	1.84	-2.72	1.22	17.89
849	C	7	1	141	143	70.36	2485.91			1.46	5.67	sinistral	2.29	-0.51	2.67	23.36			1.21	17.69
849	C	7	1	143	145	70.39	2487.22			1.18	3.91	sinistral	1.64	-0.47						
849	C	7	1	146	148	70.42	2488.51	0.09	2.23	1.30	4.70	sinistral	2.05	-0.37	2.62	23.16	1.96	-2.60	1.32	18.47
849	C	7	1	148	150	70.45	2489.79	0.20	2.53	1.21	4.15	sinistral	1.56	-0.52			1.36	-3.05		
849	C	7	2	1	3	70.48	2491.05	0.24	2.50	1.32	4.87	sinistral	1.94	-0.57	2.56	22.91	1.70	-3.07	1.24	18.04
849	C	7	2	3	5	70.50	2491.88	0.40	2.60	1.01	2.65	sinistral	2.03	-0.67	2.49	22.61	1.63	-3.27	1.48	19.96
849	C	7	2	5	7	70.52	2492.71	0.34	2.48	1.04	2.86	sinistral	1.67	-0.47	2.71	23.55	1.33	-2.95	1.67	20.69
849	C	7	2	7	9	70.53	2493.11	0.50	2.42	1.07	3.10	sinistral	1.96	-0.54	2.76	23.76	1.46	-2.96	1.70	20.66
849	C	7	2	9	11	70.56	2494.33	0.61	2.38	1.07	3.16	sinistral	1.68	-0.59			1.07	-2.97		
849	C	7	2	11	13	70.58	2495.13	0.41	2.32	1.21	4.10	sinistral	2.11	-0.61	2.68	23.44	1.70	-2.93	1.48	19.34
849	C	7	2	13	15	70.60	2495.93	0.45	2.13	1.24	4.33	sinistral	2.09	-0.33	2.76	23.74	1.64	-2.46	1.52	19.42
849	C	7	2	15	17	70.62	2496.72	0.45	2.08	1.21	4.15	sinistral	1.63	-0.70	2.60	23.10	1.18	-2.78	1.39	18.95
849	C	7	2	17	19	70.63	2497.12	0.52	2.35	1.11	3.42	sinistral	2.01	-0.45	2.68	23.41	1.49	-2.80	1.57	19.99
849	C	7	2	19	21	70.66	2498.10	0.58	2.34	1.27	4.52	sinistral			2.73	23.62			1.46	19.11
849	D	7	1	21	23	70.68	2499.09	0.35	1.89	1.27	4.55	dextral	2.26	-0.39	2.68	23.42	1.91	-2.28	1.41	18.87

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	1	23	25	70.69	2499.48	0.36	2.02	1.63	6.56	dextral	2.13	-0.57			1.77	-2.59		
849	D	7	1	26	28	70.72	2500.66	0.29	2.03	1.36	5.10	dextral	2.01	-0.74	3.24	25.54	1.72	-2.77	1.87	20.43
849	D	7	1	28	30	70.73	2501.05	0.26	2.08	1.40	5.33	dextral	2.26	-0.89	2.85	24.12	2.00	-2.97	1.45	18.79
849	D	7	1	31	33	70.75	2501.84	0.31	1.72	1.33	4.87	sinistral	2.48	-0.93	3.05	24.86	2.17	-2.65	1.72	19.99
849	D	7	1	33	35	70.79	2503.42	0.17	1.72	1.79	7.36	dextral	2.33	-0.93	2.80	23.91	2.16	-2.65	1.00	16.55
849	D	7	1	36	38	70.81	2504.22	0.11	1.91	1.72	7.02	dextral	2.02	-0.52	3.12	25.15	1.91	-2.43	1.40	18.13
849	D	7	1	38	39	70.83	2505.02			1.95	8.04	dextral			3.55	26.58			1.60	18.55
849	D	7	1	40	42	70.85	2505.83	0.04	1.91	1.68	6.83	dextral	1.38	-0.03	2.75	23.73	1.34	-1.94	1.07	16.90
849	D	7	1	42	44	70.88	2507.06	0.00	2.02	1.42	5.47	sinistral	1.76	-0.62	2.69	23.46	1.76	-2.64	1.26	17.99
849	D	7	1	46	47	70.91	2508.30	0.27	2.54	1.32	4.81	sinistral	1.68	-0.46	2.70	23.51	1.41	-3.00	1.39	18.69
849	D	7	1	47	49	70.93	2509.15	0.20	2.38	2.14	8.82	sinistral	1.80	-0.82	2.70	23.50	1.60	-3.20	0.56	14.68
849	D	7	1	50	52	70.95	2510.00	0.27	2.37	0.97	2.30	sinistral	1.94	-0.80	2.69	23.45	1.67	-3.17	1.72	21.15
849	D	7	1	52	54	70.98	2511.30	0.21	2.51	1.09	3.27	sinistral	1.36	-0.14	2.66	23.34	1.15	-2.65	1.57	20.07
849	D	7	1	56	58	71.01	2512.62	0.34	2.51	1.02	2.70	sinistral	1.66	-0.54	2.42	22.30	1.32	-3.05	1.41	19.60
849	D	7	1	62	64	71.08	2515.79	0.10	2.46	1.01	2.65	sinistral	1.42	0.11	2.64	23.27	1.32	-2.35	1.63	20.62
849	D	7	1	67	69	71.13	2518.11	0.19	2.49	1.01	2.62	sinistral	1.92	-0.48	2.50	22.63	1.73	-2.97	1.49	20.01
849	D	7	1	71	73	71.17	2520.00	0.22	2.56	1.61	6.49	sinistral	1.74	-0.11	2.48	22.57	1.52	-2.67	0.87	16.07
849	D	7	1	73	74	71.19	2520.95	0.26	2.74	0.92	1.88	sinistral	2.06	-0.22	2.46	22.44	1.80	-2.96	1.54	20.56
849	D	7	1	76	78	71.21	2521.90	0.29	2.36	1.02	2.69	sinistral	2.10	-0.51	2.49	22.61	1.81	-2.87	1.48	19.92
849	D	7	1	78	80	71.25	2523.82	0.13	2.53	1.17	3.87	sinistral	1.41	0.10	2.48	22.56	1.28	-2.43	1.31	18.69
849	D	7	1	82	84	71.27	2524.78	0.26	2.47	0.99	2.48	sinistral	1.87	-0.40	2.35	21.95	1.61	-2.87	1.36	19.47
849	D	7	1	86	88	71.31	2526.71	0.22	2.49	1.29	4.63	sinistral	1.68	-0.34	2.86	24.14	1.46	-2.83	1.57	19.51
849	D	7	1	88	90	71.35	2528.63	0.29	2.39	1.08	3.19	sinistral	1.75	-0.61	2.56	22.90	1.46	-3.00	1.48	19.71

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	1	91	93	71.37	2529.60	0.25	2.07	1.21	4.14	sinistral	1.67	-0.34	2.79	23.86	1.42	-2.41	1.58	19.73
849	D	7	1	93	95	71.39	2530.56	0.23	2.36	1.15	3.72	sinistral	1.83	-0.55	2.68	23.41	1.60	-2.91	1.53	19.69
849	D	7	1	96	98	71.41	2531.52	0.25	2.37	1.32	4.86	sinistral	1.73	-0.87			1.48	-3.24		
849	D	7	1	98	100	71.43	2532.47	0.14	2.38	1.67	6.78	sinistral	1.77	-0.55			1.63	-2.93		
849	D	7	1	101	102	71.47	2534.38	0.28	2.54	1.15	3.69	sinistral	1.96	-0.19			1.68	-2.73		
849	D	7	1	102	104	71.48	2534.85	0.30	2.28	1.11	3.46	sinistral	1.84	-0.49			1.54	-2.77		
849	D	7	1	107	109	71.53	2537.19	0.25	2.15	1.36	5.08	sinistral			2.48	22.53			1.12	17.45
849	D	7	1	109	111	71.54	2537.65	0.25	2.30	1.62	6.51	sinistral	1.86	-0.77	2.75	23.70	1.61	-3.07	1.13	17.19
849	D	7	1	117	118	71.62	2541.30	0.41	2.14	1.39	5.25	sinistral	2.09	-0.73			1.68	-2.87		
849	D	7	1	118	120	71.63	2541.74	0.48	2.14	1.33	4.89	sinistral	2.21	-0.44	2.66	23.34	1.73	-2.58	1.33	18.45
849	D	7	1	121	123	71.66	2543.07	0.46	1.89	1.48	5.79	sinistral	2.32	-0.57	3.43	26.20	1.86	-2.46	1.95	20.42
849	D	7	1	123	125	71.68	2543.94	0.48	1.73	1.55	6.17	sinistral	2.32	-0.68	2.72	23.58	1.84	-2.41	1.17	17.42
849	D	7	1	127	128	71.73	2546.07	0.60	1.72			sinistral	2.14	-0.99			1.54	-2.71		
849	D	7	1	128	130	71.75	2546.91	0.47	1.96	1.18	3.92	sinistral	2.36	-1.01	3.03	24.80	1.89	-2.97	1.85	20.88
849	D	7	1	131	133	71.77	2547.74	0.60	2.05	1.62	6.51	sinistral	2.41	-1.17	2.75	23.71	1.81	-3.22	1.13	17.20
849	D	7	1	133	135	71.80	2548.96	0.64	1.67	1.57	6.24	sinistral	2.50	-1.02	3.00	24.68	1.86	-2.69	1.43	18.44
849	D	7	1	139	140	71.85	2550.95	0.75	1.50			sinistral	2.23	-1.11	2.95	24.48	1.48	-2.61		
849	D	7	1	141	143	71.87	2551.72	0.51	1.75	1.14	3.66	sinistral	2.46	-0.72	2.96	24.55	1.95	-2.47	1.82	20.89
849	D	7	1	143	145	71.89	2552.49	0.71	1.88	1.39	5.25	sinistral	2.53	-1.07	3.29	25.71	1.82	-2.95	1.90	20.46
849	D	7	1	147	149	71.91	2553.24	0.66	1.57	1.33	4.92	sinistral	2.21	-0.94	2.94	24.48	1.55	-2.51	1.61	19.56
849	D	7	2	1	3	71.98	2555.80	0.68	1.79	1.51	5.94	sinistral	2.52	-1.18	3.36	25.95	1.84	-2.97	1.85	20.01
849	D	7	2	3	5	72.00	2556.50	0.55	1.39	1.33	4.88	sinistral	2.66	-1.23	2.77	23.80	2.11	-2.62	1.44	18.91
849	D	7	2	6	8	72.02	2557.20	0.42	1.26	1.18	3.91	sinistral	2.79	-1.04	3.35	25.92	2.37	-2.30	2.17	22.01

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	2	8	10	72.04	2557.88	0.42	1.26	1.68	6.83	sinistral	2.54	-1.17	3.31	25.78	2.12	-2.43	1.62	18.95
849	D	7	2	17	18	72.12	2560.49	0.67	1.52	1.21	4.15	sinistral	2.77	-1.24						
849	D	7	2	18	20	72.13	2560.80	0.64	1.96	1.86	7.67	sinistral	2.54	-0.76			1.90	-2.72		
849	D	7	2	21	23	72.18	2562.32	0.49	2.14	1.91	7.88	sinistral	2.32	-0.82	2.78	23.84	1.83	-2.96	0.87	15.97
849	D	7	2	23	25	72.19	2562.62	0.47	2.01	1.36	5.08	sinistral	2.46	-0.98	3.19	25.36	1.99	-2.99	1.83	20.29
849	D	7	2	26	28	72.22	2563.48	0.41	2.01	1.05	2.98	sinistral	2.54	-1.01	3.10	25.05	2.13	-3.02	2.05	22.07
849	D	7	2	28	30	72.23	2563.77	0.43	2.30	1.53	6.05	sinistral	2.41	-0.87	2.60	23.06	1.98	-3.17	1.07	17.01
849	D	7	2	31	33	72.28	2565.14	0.58	2.24	1.20	4.05	sinistral	2.62	-0.99	2.75	23.72	2.04	-3.23	1.56	19.68
849	D	7	2	33	35	72.29	2565.41	0.65	2.24	1.25	4.38	sinistral	2.36	-0.72	2.66	23.33	1.71	-2.96	1.41	18.95
849	D	7	2	36	38	72.32	2566.21	0.54	2.09	1.20	4.08	sinistral	2.26	-0.76	2.84	24.06	1.72	-2.85	1.63	19.98
849	D	7	2	38	40	72.33	2566.47	0.65	2.19	1.70	6.92	sinistral	2.30	-0.58			1.65	-2.77		
849	D	7	2	41	43	72.38	2567.77	0.51	2.19	1.90	7.81	sinistral	2.64	-0.99	2.84	24.09	2.13	-3.18	0.95	16.28
849	D	7	2	43	45	72.39	2568.03	0.55	2.09	1.28	4.60	sinistral	2.39	-1.17	2.63	23.22	1.84	-3.26	1.35	18.62
849	D	7	2	46	48	72.42	2568.79	0.61	2.30	1.48	5.78	sinistral	2.53	-1.08	2.78	23.83	1.92	-3.38	1.30	18.06
849	D	7	2	48	50	72.43	2569.05	0.54	2.14	2.10	8.66	sinistral	2.22	-0.70			1.68	-2.84		
849	D	7	2	51	53	72.45	2569.56	0.61	1.99	1.07	3.13	sinistral	2.41	-0.94	3.22	25.48	1.80	-2.93	2.15	22.35
849	D	7	2	53	55	72.49	2570.58	0.56	2.09	1.58	6.30	sinistral	2.44	-1.04	2.64	23.24	1.88	-3.13	1.06	16.94
849	D	7	2	56	58	72.51	2571.10	0.59	2.11	1.49	5.82	sinistral	2.65	-1.00	3.32	25.81	2.06	-3.11	1.83	20.00
849	D	7	2	62	63	72.58	2572.94	0.53	1.73	1.42	5.44	sinistral	2.52	-1.12	2.71	23.53	1.99	-2.85	1.29	18.09
849	D	7	2	63	65	72.59	2573.21	0.59	1.99			sinistral	2.55	-1.04	3.15	25.25	1.96	-3.03		
849	D	7	2	66	68	72.61	2573.76	0.69	1.96	1.37	5.14	sinistral	2.59	-1.01			1.90	-2.97		
849	D	7	2	68	70	72.63	2574.32	0.60	1.92	2.07	8.53	sinistral	2.40	-0.86			1.80	-2.78		
849	D	7	2	71	73	72.68	2575.75	0.56	1.89			sinistral	2.49	-0.87	3.21	25.45	1.93	-2.76		

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	2	73	75	72.69	2576.05	0.52	2.08	1.39	5.24	sinistral	2.60	-1.24	2.82	24.01	2.08	-3.32	1.44	18.77
849	D	7	2	76	78	72.71	2576.65						2.63	-1.20						
849	D	7	2	78	80	72.75	2577.89	0.70	1.91	1.40	5.34	sinistral	2.60	-1.47	3.07	24.96	1.90	-3.38	1.67	19.61
849	D	7	2	81	83	72.78	2578.84	0.51	1.56	1.62	6.54	sinistral	2.62	-1.22	2.94	24.48	2.11	-2.78	1.32	17.94
849	D	7	2	83	85	72.79	2579.17	0.38	1.50	1.98	8.17	sinistral	2.52	-1.06	3.02	24.75	2.14	-2.56	1.04	16.58
849	D	7	2	87	88	72.83	2580.48	0.48	1.29	1.81	7.42	sinistral	2.67	-1.26	2.91	24.35	2.19	-2.55	1.10	16.93
849	D	7	2	88	90	72.85	2581.15	0.46	1.37	1.30	4.70	sinistral	2.49	-1.38	3.33	25.85	2.03	-2.75	2.03	21.14
849	D	7	2	91	93	72.87	2581.83	0.46	1.44	1.99	8.19	sinistral	2.42	-1.08	2.81	23.94	1.96	-2.52	0.82	15.75
849	D	7	2	93	95	72.89	2582.52	0.47	1.42	1.94	8.02	sinistral	2.27	-1.02	2.95	24.52	1.80	-2.44	1.01	16.50
849	D	7	2	96	98	72.91	2583.21	0.36	1.67	1.79	7.33	sinistral	2.44	-1.11	3.07	24.96	2.08	-2.78	1.29	17.63
849	D	7	2	98	100	72.95	2584.61	0.42	1.57	1.42	5.47	sinistral	2.16	-1.07	2.79	23.88	1.74	-2.64	1.37	18.42
849	D	7	2	101	103	72.97	2585.31	0.32	1.20			sinistral	2.58	-1.15	3.11	25.08	2.26	-2.35		
849	D	7	2	103	105	72.98	2585.67	0.36	1.38	1.71	6.96	sinistral	2.45	-1.15	2.79	23.87	2.09	-2.53	1.08	16.91
849	D	7	2	106	107	73.01	2586.74	0.22	1.65	2.01	8.30	sinistral	2.43	-0.89			2.21	-2.54		
849	D	7	2	107	109	73.03	2587.45	0.35	1.54	1.81	7.41	sinistral	2.43	-0.93	2.94	24.48	2.08	-2.47	1.14	17.07
849	D	7	2	113	115	73.09	2589.61	0.24	1.78	1.00	2.58	sinistral	2.35	-0.90	2.94	24.47	2.11	-2.68	1.94	21.89
849	D	7	2	116	118	73.12	2590.69	0.24	1.69	1.38	5.20	sinistral	2.30	-0.94			2.06	-2.63		
849	D	7	2	118	120	73.14	2591.41	0.26	1.60	1.15	3.71	sinistral	2.24	-1.18	2.76	23.74	1.98	-2.78	1.61	20.03
849	D	7	2	121	123	73.16	2592.13	0.24	1.47	2.24	9.17	sinistral			2.74	23.67			0.50	14.50
849	D	7	2	123	125	73.19	2593.21	0.26	1.42	2.09	8.63	sinistral	1.85	-0.55	3.03	24.81	1.59	-1.97	0.94	16.19
849	D	7	2	126	128	73.21	2593.92	0.20	1.68	1.11	3.41	sinistral	2.15	-0.94	2.84	24.07	1.95	-2.62	1.73	20.66
849	D	7	2	128	130	73.23	2594.63	0.65	1.81	1.78	7.31	sinistral	2.65	-0.66			2.00	-2.47		
849	D	7	2	130	132	73.26	2595.68	0.15	1.71	1.40	5.33	sinistral	2.11	-0.70	3.33	25.85	1.96	-2.41	1.93	20.52

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	2	132	134	73.28	2596.43	0.21	1.44	1.86	7.64	sinistral	2.03	-1.05			1.82	-2.49		
849	D	7	2	136	138	73.33	2598.31	0.19	1.78	2.20	9.04	sinistral	1.98	-0.28			1.79	-2.06		
849	D	7	2	138	140	73.35	2599.07	0.16	2.04	1.17	3.87	sinistral	2.03	-0.88	2.91	24.34	1.87	-2.92	1.74	20.47
849	D	7	2	141	143	73.37	2599.83			1.56	6.23		1.86	-0.31	3.47	26.34			1.91	20.11
849	D	7	2	143	145	73.40	2600.98	0.24	1.96	1.64	6.63	sinistral	2.06	-0.89	2.91	24.34	1.82	-2.85	1.27	17.71
849	D	7	2	146	148	73.43	2602.15	0.33	2.25	1.38	5.23	sinistral	2.24	-0.70			1.91	-2.95		
849	D	7	2	148	149	73.44	2602.54	0.45	2.16	1.06	3.03	sinistral	2.28	-0.58			1.83	-2.74		
849	D	7	3	1	3	73.48	2604.13	0.60	1.49	1.49	5.84	sinistral	1.78	-0.23	2.51	22.68	1.18	-1.72	1.02	16.85
849	D	7	3	3	5	73.50	2604.94	0.35	2.11	1.19	3.99	sinistral	2.02	-0.54	2.65	23.29	1.67	-2.65	1.46	19.30
849	D	7	3	6	8	73.52	2605.76	0.46	2.14	1.89	7.78	sinistral	2.46	-0.31	2.63	23.23	2.00	-2.45	0.75	15.45
849	D	7	3	8	10	73.53	2606.18	0.51	1.83	1.32	4.82	sinistral	2.42	-0.62	2.59	23.05	1.91	-2.45	1.28	18.22
849	D	7	3	16	18	73.62	2610.04	0.49	1.81	1.55	6.13	sinistral	2.75	-0.78	3.01	24.74	2.26	-2.59	1.47	18.61
849	D	7	3	18	20	73.63	2610.48	0.67	1.73			sinistral	2.63	-0.66	2.79	23.88	1.96	-2.39		
849	D	7	3	21	23	73.68	2612.77	0.22	1.80	1.17	3.88	sinistral	2.13	-0.85	2.99	24.64	1.91	-2.65	1.81	20.75
849	D	7	3	23	25	73.70	2613.71	0.58	1.56	3.02	11.64	sinistral	2.33	-0.26			1.75	-1.82		
849	D	7	3	26	28	73.72	2614.67	0.54	1.62			sinistral	2.40	-0.34			1.86	-1.96		
849	D	7	3	28	30	73.73	2615.16			1.98	8.15	sinistral								
849	D	7	3	31	33	73.78	2617.66						2.64	-0.88						
849	D	7	3	33	35	73.80	2618.69	0.60	1.37	1.62	6.52	sinistral	2.59	-0.72			1.99	-2.09		
849	D	7	3	35	36	73.81	2619.20	0.72	1.37	1.93	7.95	sinistral	2.33	-0.44			1.61	-1.81		
849	D	7	3	37	38	73.82	2619.72	0.57	1.34			sinistral	2.48	-0.71			1.91	-2.05		
849	D	7	3	38	40	73.84	2620.77	0.66	1.36	2.67	10.62	sinistral	2.57	-1.06	2.88	24.23	1.91	-2.42	0.21	13.62
849	D	7	3	41	43	73.88	2622.87	0.71	1.15	2.75	10.86	sinistral	2.49	-0.98	2.71	23.56	1.78	-2.13	-0.04	12.70

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	3	43	45	73.89	2623.40	0.68	1.41	1.64	6.60	sinistral	2.46	-0.95	3.15	25.22	1.78	-2.36	1.51	18.62
849	D	7	3	46	48	73.92	2624.98						2.57	-0.82	3.06	24.91				
849	D	7	3	48	50	73.94	2626.04	0.59	1.30			sinistral	2.36	-0.85	2.78	23.85	1.77	-2.15		
849	D	7	3	51	53	73.98	2628.12	0.51	1.38	1.99	8.21	sinistral	2.33	-0.76	3.23	25.53	1.82	-2.14	1.24	17.31
849	D	7	3	53	55	73.99	2628.64	0.54	1.14	1.81	7.42	sinistral	2.26	-0.93	2.91	24.35	1.72	-2.07	1.10	16.93
849	D	7	3	56	58	74.02	2630.17	0.53	1.42	1.63	6.57	sinistral	2.47	-0.87	3.10	25.06	1.94	-2.29	1.47	18.49
849	D	7	3	63	65	74.09	2633.61	0.58	1.47	1.35	5.00	sinistral			3.44	26.23			2.10	21.23
849	D	7	3	66	68	74.12	2635.01	0.51	1.19	1.87	7.68	sinistral	2.53	-0.90	2.67	23.37	2.02	-2.09	0.80	15.69
849	D	7	3	68	70	74.14	2636.11	0.50	1.43	1.89	7.77	sinistral			3.01	24.74			1.13	16.97
849	D	7	3	71	73	74.17	2637.20	0.46	1.30	1.62	6.50	sinistral	1.97	-0.44	2.70	23.52	1.51	-1.74	1.09	17.02
849	D	7	3	73	75	74.19	2638.03	0.55	0.91	1.88	7.75	sinistral	2.40	-0.97			1.85	-1.88		
849	D	7	3	76	77	74.22	2639.21	0.42	1.14	2.47	9.97	sinistral	2.62	-1.06	2.71	23.54	2.20	-2.20	0.24	13.57
849	D	7	3	77	79	74.23	2639.59	0.49	1.36	2.43	9.84	sinistral	2.60	-0.91	2.71	23.56	2.11	-2.27	0.29	13.72
849	D	7	3	79	81	74.25	2640.33	0.54	1.41	2.70	10.72	sinistral	2.32	-0.88	2.96	24.53	1.78	-2.29	0.25	13.80
849	D	7	3	81	83	74.27	2641.05	0.30	1.08	2.32	9.48	sinistral	2.72	-0.97	2.99	24.65	2.42	-2.05	0.67	15.17
849	D	7	3	83	85	74.29	2641.76	0.51	1.30	2.39	9.71	sinistral	2.32	-0.91	2.77	23.80	1.81	-2.21	0.38	14.09
849	D	7	3	85	86	74.30	2642.10	0.60	1.35	2.88	11.24	sinistral	2.63	-1.08	2.73	23.65	2.03	-2.43	-0.15	12.40
849	D	7	3	87	89	74.33	2643.11	0.39	1.55	2.50	10.08	sinistral	2.34	-0.95	3.15	25.25	1.95	-2.50	0.65	15.17
849	D	7	3	89	91	74.35	2643.77	0.30	1.28	1.93	7.97	sinistral	2.10	-0.80	3.14	25.20	1.80	-2.08	1.21	17.23
849	D	7	3	91	93	74.37	2644.42	0.26	1.23	1.87	7.70	sinistral	2.23	-1.00	2.77	23.77	1.97	-2.23	0.89	16.07
849	D	7	3	93	95	74.39	2645.06	0.28	0.99	2.59	10.37	sinistral	2.30	-0.65	2.94	24.47	2.02	-1.64	0.35	14.09
849	D	7	3	96	97	74.42	2646.03	0.30	1.53	2.01	8.27	sinistral	2.17	-0.61	2.84	24.08	1.87	-2.14	0.84	15.81
849	D	7	3	97	99	74.43	2646.35	0.27	1.55	1.71	6.97	sinistral	2.37	-0.96	2.87	24.19	2.10	-2.51	1.16	17.22

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	3	100	101	74.46	2647.32	0.27	1.96	1.40	5.34	sinistral	2.16	-0.87	2.93	24.43	1.89	-2.83	1.53	19.09
849	D	7	3	101	102	74.47	2647.81	0.28	1.67	2.07	8.53	sinistral	2.10	-1.02	2.89	24.28	1.82	-2.69	0.82	15.75
849	D	7	3	103	105	74.49	2648.30	0.31	2.00	1.73	7.05	sinistral			3.08	24.99			1.35	17.94
849	D	7	3	105	107	74.51	2648.97	0.16	1.90	1.72	7.01	sinistral	2.11	-0.73	2.72	23.57	1.95	-2.63	1.00	16.56
849	D	7	3	107	109	74.53	2649.65	0.40	2.11	2.00	8.26	sinistral	2.19	-0.87	3.17	25.31	1.79	-2.98	1.17	17.05
849	D	7	3	109	111	74.55	2650.35	0.39	1.65			sinistral	2.09	-0.68	2.96	24.52	1.70	-2.33		
849	D	7	3	111	113	74.57	2651.06						2.38	-0.88	3.14	25.21				
849	D	7	3	113	115	74.59	2651.80						2.26	-0.80	2.84	24.08				
849	D	7	3	117	119	74.63	2653.35	0.21	1.75	2.88	11.23	sinistral	2.53	-0.86	3.05	24.89	2.32	-2.61	0.18	13.66
849	D	7	3	119	121	74.65	2654.15						2.65	-1.18	3.09	25.03				
849	D	7	3	122	123	74.68	2655.40						2.71	-1.26	2.70	23.49				
849	D	7	3	123	125	74.69	2655.82						2.62	-1.11	3.54	26.56				
849	D	7	3	125	127	74.71	2656.68						2.46	-1.09						
849	D	7	3	127	129	74.73	2657.55						2.80	-1.33	2.82	23.99				
849	D	7	3	129	131	74.75	2658.43						2.80	-1.22	2.73	23.62				
849	D	7	3	132	133	74.78	2659.78						2.48	-1.03	3.26	25.62				
849	D	7	3	133	135	74.79	2660.23						2.57	-1.11	2.77	23.80				
849	D	7	3	135	137	74.81	2661.14						2.77	-1.15	3.14	25.20				
849	D	7	3	137	139	74.83	2662.06						2.88	-1.27	3.42	26.14				
849	D	7	3	139	141	74.85	2662.98						2.43	-1.31	3.48	26.36				
849	D	7	3	141	143	74.87	2663.90						2.43	-1.20	2.82	23.98				
849	D	7	3	143	145	74.89	2664.83						2.68	-1.19	3.34	25.90				
849	D	7	3	145	146	74.90	2665.29						2.66	-1.15						

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	3	147	149	74.93	2666.67						2.61	-1.15	3.32	25.81				
849	D	7	4	1	3	74.97	2668.49						2.80	-1.07	2.43	22.32				
849	D	7	4	3	5	74.99	2669.39						2.50	-0.91	3.31	25.80				
849	D	7	4	6	7	75.02	2670.72						2.56	-1.19	2.67	23.38				
849	D	7	4	7	9	75.03	2671.15						2.59	-0.97	2.91	24.33				
849	D	7	4	9	10	75.04	2671.59						2.58	-1.00	2.94	24.46				
849	D	7	4	11	13	75.07	2672.87						2.85	-1.21	2.89	24.29				
849	D	7	4	13	15	75.09	2673.70						2.66	-0.95	2.83	24.03				
849	D	7	4	16	17	75.12	2674.92						2.47	-1.26						
849	D	7	4	17	19	75.13	2675.31						2.88	-1.34	2.82	24.00				
849	D	7	4	19	20	75.14	2676.08						2.72	-0.90	2.61	23.14				
849	D	7	4	21	23	75.17	2676.84						2.75	-1.10	3.39	26.07				
849	D	7	4	23	25	75.19	2677.56						2.51	-0.91	2.87	24.19				
849	D	7	4	25	27	75.21	2678.26						2.52	-1.04	3.10	25.04				
849	D	7	4	27	29	75.23	2678.93						2.58	-0.74	2.75	23.70				
849	D	7	4	29	30	75.24	2679.26						2.50	-0.94	2.99	24.64				
849	D	7	4	31	33	75.27	2680.18						2.45	-1.03	2.70	23.50				
849	D	7	4	33	35	75.29	2680.76						2.52	-1.06	3.31	25.78				
849	D	7	4	36	37	75.32	2681.56						2.30	-1.09	3.15	25.25				
849	D	7	4	37	39	75.33	2681.82						2.34	-0.89	3.12	25.13				
849	D	7	4	40	41	75.36	2682.54						2.50	-1.01	3.02	24.77				
849	D	7	4	41	43	75.37	2682.78						2.24	-0.80	2.53	22.78				
849	D	7	4	43	45	75.39	2683.22						2.50	-0.86	2.65	23.29				

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	4	46	47	75.42	2683.85	0.40	1.51	1.87	7.72	sinistral	2.36	-0.79	2.68	23.44	1.96	-2.30	0.81	15.72
849	D	7	4	47	49	75.43	2684.05	0.30	1.73	2.06	8.49	sinistral	2.48	-0.88	2.86	24.14	2.18	-2.61	0.80	15.65
849	D	7	4	49	50	75.44	2684.25	0.42	1.88	1.79	7.34	sinistral	2.39	-0.93	3.01	24.74	1.97	-2.81	1.22	17.40
849	D	7	4	51	53	75.47	2684.83	0.39	2.01	1.96	8.07	sinistral	2.54	-0.94	2.76	23.74	2.15	-2.95	0.80	15.68
849	D	7	4	53	55	75.49	2685.20	0.34	1.87	1.83	7.54	sinistral	2.34	-0.87	3.00	24.70	2.00	-2.74	1.17	17.17
849	D	7	4	56	57	75.52	2685.74	0.20	1.82	2.33	9.51	sinistral	2.20	-0.79	2.96	24.54	2.00	-2.61	0.63	15.03
849	D	7	4	57	59	75.53	2685.91	0.26	1.83	1.90	7.81	sinistral	2.45	-1.01	2.81	23.93	2.19	-2.84	0.91	16.12
849	D	7	4	59	60	75.54	2686.09	0.30	2.11	1.81	7.41	sinistral	2.37	-1.12	2.81	23.97	2.07	-3.23	1.01	16.56
849	D	7	4	61	62	75.56	2686.44	0.31	1.64	1.49	5.83	sinistral	2.37	-0.99	3.13	25.17	2.06	-2.63	1.64	19.34
849	D	7	4	63	65	75.59	2686.97	0.34	1.45	1.40	5.35	sinistral	2.17	-0.61	2.96	24.52	1.83	-2.06	1.55	19.18
849	D	7	4	66	67	75.62	2687.50	0.30	2.04	1.53	6.03	sinistral	2.12	-0.78	2.94	24.47	1.82	-2.82	1.41	18.43
849	D	7	4	67	69	75.63	2687.68	0.17	2.07	1.49	5.85	sinistral	2.42	-0.93	3.50	26.42	2.25	-3.00	2.01	20.57
849	D	7	4	69	70	75.64	2687.86	0.29	1.87	1.49	5.85	sinistral	2.08	-0.84	3.28	25.69	1.79	-2.71	1.79	19.85
849	D	7	4	71	73	75.67	2688.42	0.26	2.13	1.35	5.04	sinistral	2.27	-0.61	3.21	25.44	2.01	-2.74	1.85	20.40
849	D	7	4	73	75	75.69	2688.81	0.44	2.37			sinistral			3.37	25.98				
849	D	7	4	75	77	75.71	2689.21	0.30	1.99	1.46	5.66	sinistral	2.38	-0.72	3.45	26.24	2.08	-2.71	1.99	20.58
849	D	7	4	77	79	75.73	2689.63	0.33	2.16	1.89	7.80	sinistral	2.26	-0.65	3.01	24.74	1.93	-2.81	1.12	16.94
849	D	7	4	79	80	75.74	2689.85						2.51	-0.56						
849	D	7	4	81	83	75.77	2690.53	0.36	2.06	1.59	6.37	sinistral	2.32	-0.68	3.35	25.93	1.96	-2.74	1.76	19.56
849	D	7	4	83	85	75.79	2691.01						2.48	-0.89						
849	D	7	4	86	87	75.82	2691.77						2.20	-0.55	2.97	24.57				
849	D	7	4	87	89	75.83	2692.04						2.52	-0.58	3.29	25.74				
849	D	7	4	89	91	75.85	2692.60						2.46	-0.75	2.61	23.12				

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	4	92	93	75.88	2693.49						2.15	-0.82	3.39	26.06				
849	D	7	4	93	95	75.89	2693.80						2.13	-0.60	2.78	23.83				
849	D	7	4	95	97	75.91	2694.45						2.30	-0.84	3.03	24.79				
849	D	7	4	97	99	75.93	2695.13						2.38	-0.66	2.63	23.20				
849	D	7	4	99	101	75.95	2695.83						2.52	-0.89	2.69	23.45				
849	D	7	4	102	103	75.98	2696.59						2.48	-0.91						
849	D	7	4	103	105	75.99	2697.35						2.27	-0.93	2.76	23.75				
849	D	7	4	105	107	76.01	2698.16						2.42	-0.78	2.77	23.81				
849	D	7	4	107	109	76.03	2699.01						2.18	-0.38	2.44	22.38				
849	D	7	4	109	111	76.05	2699.90						2.25	-0.60	2.50	22.64				
849	D	7	4	111	112	76.06	2700.35						2.21	-0.86	2.84	24.05				
849	D	7	4	113	114	76.07	2700.82						2.19	-0.78	2.70	23.51				
849	D	7	4	115	117	76.11	2702.79						2.22	-0.78	2.57	22.96				
849	D	7	4	117	119	76.13	2703.83						2.25	-0.77	2.41	22.25				
849	D	7	4	119	121	76.15	2704.91						2.12	-0.41	2.82	24.00				
849	D	7	4	121	123	76.17	2706.03								2.75	23.71				
849	D	7	4	123	125	76.19	2707.16						2.02	-0.22	2.49	22.60				
849	D	7	4	125	127	76.21	2708.31						1.97	-0.55	2.55	22.85				
849	D	7	4	127	129	76.23	2709.45						1.93	-0.28	2.49	22.59				
849	D	7	4	129	131	76.25	2710.58						2.18	-0.45	2.65	23.28				
849	D	7	4	131	132	76.26	2711.13						1.86	-0.31	2.58	23.01				
849	D	7	4	133	135	76.29	2712.75						1.77	-0.64	3.42	26.17				
849	D	7	4	135	137	76.31	2713.78						2.50	-0.71	3.17	25.31				

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	4	137	139	76.33	2714.75						2.03	-0.22	3.49	26.39				
849	D	7	4	139	141	76.35	2715.69						2.34	-0.59	2.74	23.66				
849	D	7	4	142	143	76.38	2717.01						1.90	-0.60	3.26	25.62				
849	D	7	4	143	145	76.39	2717.43						1.92	-0.31	3.28	25.69				
849	D	7	4	145	147	76.41	2718.24						1.98	-0.34						
849	D	7	4	147	149	76.43	2719.01						2.06	-0.38						
849	D	7	4	149	150	76.44	2719.38						2.10	-0.58	2.50	22.63				
849	D	7	5	1	3	76.47	2720.44						2.20	-0.30						
849	D	7	5	3	5	76.49	2721.11						2.42	-0.50	2.38	22.09				
849	D	7	5	7	9	76.53	2722.35						2.07	-0.27	2.98	24.61				
849	D	7	5	9	11	76.55	2723.04						1.70	-0.64						
849	D	7	5	12	13	76.58	2723.73						2.40	-0.79						
849	D	7	5	13	15	76.59	2723.99						2.31	-0.61	2.67	23.38				
849	D	7	5	15	16	76.60	2724.25						2.13	-0.84	2.95	24.48				
849	D	7	5	17	19	76.63	2724.97						2.45	-0.63	2.56	22.89				
849	D	7	5	19	20	76.64	2725.20						2.33	-0.39	3.07	24.96				
849	D	7	5	21	23	76.67	2725.87						2.37	-0.74						
849	D	7	5	23	25	76.69	2726.29						2.51	-0.77						
849	D	7	5	25	27	76.71	2726.89						2.23	-0.47	3.22	25.49				
849	D	7	5	27	29	76.73	2727.08						2.34	-0.51						
849	D	7	5	29	30	76.74	2727.27						2.39	-0.63						
849	D	7	5	31	33	76.77	2727.83						2.33	-0.70	3.07	24.94				
849	D	7	5	33	35	76.79	2728.19						2.50	-0.72	3.14	25.20				

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	$\delta^{13}C_{G.\ crassaformis}$ (‰ VPDB)	$\delta^{18}O_{G.\ crassaformis}$ (‰ VPDB)	$Mg/Ca_{G.\ crassaformis}$ (mmol mol^{-1})	$Mg/Ca_{G.\ rassaformisruber}$ -based T (°C)	Coiling direction (*G. crassaformis*)	$\delta^{13}C_{G.\ ruber}$ (‰ VPDB)	$\delta^{18}O_{G.\ ruber}$ (‰ VPDB)	$Mg/Ca_{G.\ ruber}$ (mmol mol^{-1})	$Mg/Ca_{G.\ ruber}$ -based T (°C)	$\Delta\delta^{13}C_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta\delta^{18}O_{G.\ ruber-G.\ crassaformis}$ (‰ VPDB)	$\Delta Mg/Ca_{G.\ ruber-G.\ crassaformis}$ (mmol mol^{-1})	$\Delta T_{G.\ ruber-G.\ crassaformis}$ (°C)
849	D	7	5	36	37	76.82	2728.72						2.06	-0.49						
849	D	7	5	37	39	76.83	2728.89						2.47	-0.32						
849	D	7	5	39	40	76.84	2729.06						2.60	-0.91						
849	D	7	5	41	43	76.87	2729.57						2.71	-1.21	2.68	23.43				
849	D	7	5	43	45	76.89	2729.91						2.36	-1.03	2.75	23.71				
849	D	7	5	46	47	76.92	2730.41						2.59	-0.99						
849	D	7	5	47	49	76.93	2730.58						2.44	-0.61						
849	D	7	5	50	51	76.95	2730.92						2.42	-0.40	3.51	26.45				
849	D	7	5	51	53	76.97	2731.26						2.64	-1.07	2.80	23.93				
849	D	7	5	53	55	76.99	2731.60						2.64	-0.88	3.34	25.91				
849	D	7	5	56	57	77.02	2732.10						2.48	-0.80						

Table S2: Planktic foraminiferal faunal records from ODP Site 849 for MIS G7–95 (~2.75–2.4 Ma). Abundance counts of *G. crassaformis* (both sinistral- and dextral-coiling specimens) and *G. tumida* and *G. menardii* species were generated on the >250 µm size fraction. The age model is from Jakob et al. (2017).

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Relative abundance *G. crassaformis* (%)	Accumulation rate *G. crassaformis* (specimens cm^{-2} kyr^{-1})	Relative abundance *G. menardii* & *G. tumida* (%)	Accumulation rate *G. menardii* & *G. tumida* (specimens cm^{-2} kyr^{-1})
849	D	6	5	102	104	67.78	2387.85	4.51	32.24	37.05	244.92
849	D	6	5	123	125	67.98	2394.39	4.07	23.33	52.24	334.18
849	D	6	5	139	141	68.15	2399.94	1.97	12.07	36.83	256.78
849	D	6	6	24	26	68.49	2411.16	5.06	41.36	27.54	129.59
849	D	6	6	51	53	68.77	2420.61	6.70	74.22	26.36	311.66
849	D	6	6	81	82	69.07	2431.08	26.61	328.62	21.41	322.88
849	D	6	6	102	104	69.28	2438.77	32.40	449.29	38.46	770.73
849	D	6	6	131	133	69.56	2449.89	7.13	21.99	60.34	255.22
849	C	7	1	86	88	69.82	2461.31	4.00	13.20	39.80	175.32
849	C	7	1	106	108	70.02	2470.50	3.53	40.56	22.32	286.48
849	C	7	1	126	128	70.22	2479.67	6.38	192.73	13.65	440.52
849	C	7	1	146	148	70.42	2488.51	21.19	138.92	18.37	156.68
849	C	7	2	13	15	70.60	2495.93	36.93	191.29	22.49	165.48
849	D	7	1	31	33	70.75	2501.84	16.11	80.37	25.84	135.57
849	D	7	1	46	47	70.91	2508.30	10.42	75.32	18.94	154.07
849	D	7	1	62	64	71.08	2515.79	9.56	259.56	14.57	446.26
849	D	7	1	76	78	71.21	2521.90	16.90	130.14	18.71	156.60
849	D	7	1	91	93	71.37	2529.60	20.35	119.89	17.14	157.21
849	D	7	1	118	120	71.63	2541.74	7.91	29.49	41.50	150.53
849	D	7	1	141	143	71.87	2551.72	4.24	16.68	20.65	84.30
849	D	7	2	26	28	72.22	2563.48	14.26	165.21	34.20	403.36
849	D	7	2	41	43	72.38	2567.77	3.97	34.15	21.33	209.12
849	D	7	2	63	65	72.59	2573.21	3.63	15.69	13.80	92.94
849	D	7	2	91	93	72.87	2581.83	12.18	53.07	13.67	153.68
849	D	7	2	126	128	73.21	2593.92	12.27	77.00	6.48	60.62
849	D	7	3	3	5	73.50	2604.94	18.35	68.22	55.98	261.04
849	D	7	3	16	18	73.62	2610.04	8.53	29.85	48.34	189.74
849	D	7	3	28	30	73.73	2615.16	5.88	8.64	64.15	112.17
849	D	7	3	51	53	73.98	2628.12	3.98	23.69	40.91	236.89
849	D	7	3	71	73	74.17	2637.20	7.37	50.95	31.96	252.90
849	D	7	3	85	86	74.3	2642.10	3.34	26.05	32.48	231.95
849	D	7	3	105	107	74.51	2648.97	4.38	16.83	54.30	252.45
849	D	7	3	125	127	74.71	2656.68	0.26	1.20	34.76	198.63
849	D	7	3	143	145	74.89	2664.83	0.56	1.40	44.90	63.68
849	D	7	4	11	13	75.07	2672.87	0.38	2.05	47.55	209.19
849	D	7	4	29	30	75.24	2679.26	0.55	3.04	31.12	192.82

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Relative abundance *G. crassaformis* (%)	Accumulation rate *G. crassaformis* (specimens cm^{-2} kyr^{-1})	Relative abundance *G. menardii* & *G. tumida* (%)	Accumulation rate *G. menardii* & *G. tumida* (specimens cm^{-2} kyr^{-1})
849	D	7	4	47	49	75.43	2684.05	6.38	31.98	31.16	189.20
849	D	7	4	69	70	75.64	2687.86	11.33	44.93	45.45	200.19
849	D	7	4	89	91	75.85	2692.60	0.47	4.67	50.16	628.70
849	D	7	4	107	109	76.03	2699.01	0.75	3.89	38.71	245.09
849	D	7	4	125	127	76.21	2708.31	0.24	0.90	42.44	169.39
849	D	7	4	143	145	76.39	2717.43	0.98	1.25	62.52	180.14
849	D	7	5	12	13	76.58	2723.73	0.89	1.65	65.88	137.95
849	D	7	5	29	30	76.74	2727.27	0.00	0.00	76.75	115.99
849	D	7	5	56	57	77.02	2732.10	0.25	0.27	69.89	83.06

Table S3: Sedimentological data (sand-accumulation rates) from ODP Site 849 for MIS G7–95 (~2.75–2.4 Ma). The sand-accumulation rates (SAR) available for the MIS G1–95 (~2.65–2.4 Ma) interval from Site 849 as presented in Jakob et al. (2016) were extended back to MIS G7 (~2.75 Ma) in this study. The age model is from Jakob et al. (2017).

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	D	6	5	102	104	67.78	2387.85	0.074
849	D	6	5	106	108	67.83	2389.49	0.093
849	D	6	5	108	110	67.84	2389.81	0.080
849	D	6	5	114	116	67.89	2391.45	0.086
849	D	6	5	116	118	67.91	2392.10	0.070
849	D	6	5	121	123	67.97	2394.06	0.076
849	D	6	5	123	125	67.98	2394.39	0.077
849	D	6	5	127	129	68.03	2396.02	0.067
849	D	6	5	129	131	68.05	2396.67	0.068
849	D	6	5	134	136	68.10	2398.31	0.084
849	D	6	5	137	139	68.12	2398.96	0.055
849	D	6	5	139	141	68.15	2399.94	0.081
849	D	6	5	141	143	68.17	2400.60	0.067
849	D	6	5	143	145	68.19	2401.26	0.077
849	D	6	5	146	148	68.21	2401.91	0.082
849	D	6	6	1	3	68.27	2403.88	0.081
849	D	6	6	3	5	68.29	2404.54	0.081
849	D	6	6	6	8	68.32	2405.53	0.087
849	D	6	6	13	15	68.39	2407.84	0.078
849	D	6	6	15	17	68.41	2408.50	0.094

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	D	6	6	17	19	68.43	2409.17	0.114
849	D	6	6	22	24	68.48	2410.83	0.092
849	D	6	6	24	26	68.49	2411.16	0.084
849	D	6	6	26	27	68.51	2411.83	0.097
849	D	6	6	28	30	68.53	2412.50	0.115
849	D	6	6	31	33	68.57	2413.84	0.088
849	D	6	6	33	35	68.59	2414.51	0.109
849	D	6	6	36	37	68.61	2415.18	0.098
849	D	6	6	38	40	68.65	2416.53	0.102
849	D	6	6	41	43	68.67	2417.21	0.102
849	D	6	6	43	45	68.69	2417.89	0.105
849	D	6	6	48	50	68.73	2419.25	0.164
849	D	6	6	51	53	68.77	2420.61	0.088
849	D	6	6	53	55	68.78	2420.96	0.110
849	D	6	6	56	57	68.81	2421.99	0.148
849	D	6	6	57	59	68.83	2422.67	0.219
849	D	6	6	63	65	68.89	2424.75	0.111
849	D	6	6	66	67	68.91	2425.44	0.139
849	D	6	6	68	70	68.95	2426.84	0.079
849	D	6	6	71	73	68.97	2427.54	0.176
849	D	6	6	73	75	68.98	2427.89	0.139
849	D	6	6	78	80	69.04	2430.01	0.141
849	D	6	6	81	82	69.07	2431.08	0.113
849	D	6	6	86	87	69.12	2432.88	0.121
849	D	6	6	89	91	69.15	2433.96	0.090
849	D	6	6	91	93	69.17	2434.69	0.135
849	D	6	6	93	95	69.18	2435.06	0.219
849	D	6	6	97	98	69.23	2436.90	0.221
849	D	6	6	98	100	69.24	2437.27	0.191
849	D	6	6	100	102	69.26	2438.02	0.124
849	D	6	6	102	104	69.28	2438.77	0.125
849	D	6	6	104	105	69.29	2439.15	0.118
849	D	6	6	105	107	69.30	2439.53	0.117
849	D	6	6	108	110	69.33	2440.68	0.048
849	D	6	6	122	124	69.48	2446.59	0.056
849	D	6	6	124	126	69.49	2447.00	0.043
849	D	6	6	126	127	69.51	2447.82	0.050
849	D	6	6	128	130	69.54	2449.06	0.074
849	D	6	6	133	135	69.58	2450.74	0.052
849	D	6	6	139	140	69.65	2452.88	0.055

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	D	6	6	141	143	69.68	2455.05	0.059
849	D	6	6	143	145	69.69	2455.49	0.064
849	D	6	6	147	149	69.72	2456.82	0.095
849	C	7	1	80	82	69.76	2458.61	0.053
849	D	6	7	2	4	69.78	2459.50	0.064
849	D	6	7	4	7	69.81	2460.86	0.077
849	C	7	1	86	88	69.82	2461.31	0.061
849	D	6	7	8	10	69.83	2461.77	0.069
849	C	7	1	88	90	69.84	2462.22	0.066
849	D	6	7	13	17	69.86	2463.14	0.066
849	C	7	1	93	95	69.90	2464.97	0.063
849	D	6	7	17	19	69.91	2465.43	0.078
849	C	7	1	96	98	69.92	2465.89	0.082
849	D	6	7	20	22	69.94	2466.81	0.085
849	D	6	7	22	24	69.96	2467.73	0.078
849	C	7	1	103	104	69.98	2468.65	0.094
849	C	7	1	106	108	70.02	2470.50	0.109
849	C	7	1	108	110	70.04	2471.42	0.100
849	C	7	1	111	113	70.07	2472.80	0.107
849	C	7	1	113	115	70.08	2473.26	0.099
849	C	7	1	116	118	70.13	2475.56	0.106
849	C	7	1	118	120	70.14	2476.02	0.120
849	C	7	1	120	122	70.15	2476.48	0.104
849	C	7	1	122	124	70.18	2477.85	0.125
849	C	7	1	126	128	70.22	2479.67	0.165
849	C	7	1	128	130	70.25	2481.03	0.124
849	C	7	1	131	133	70.27	2481.93	0.121
849	C	7	1	133	135	70.29	2482.82	0.116
849	C	7	1	136	138	70.32	2484.15	0.084
849	C	7	1	138	140	70.34	2485.04	0.082
849	C	7	1	141	143	70.36	2485.91	0.093
849	C	7	1	143	145	70.39	2487.22	0.057
849	C	7	1	146	148	70.42	2488.51	0.073
849	C	7	1	148	150	70.45	2489.79	0.070
849	D	7	1	1	3	70.48	2491.05	0.057
849	C	7	2	3	5	70.50	2491.88	0.071
849	D	7	1	6	8	70.52	2492.71	0.070
849	C	7	2	7	9	70.53	2493.11	0.054
849	C	7	2	9	11	70.56	2494.33	0.071
849	C	7	2	11	13	70.58	2495.13	0.067

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	C	7	2	13	15	70.60	2495.93	0.067
849	C	7	2	15	17	70.62	2496.72	0.065
849	C	7	2	17	19	70.63	2497.12	0.060
849	D	7	1	21	23	70.68	2499.09	0.060
849	D	7	1	23	25	70.69	2499.48	0.091
849	D	7	1	26	28	70.72	2500.66	0.069
849	D	7	1	28	30	70.73	2501.05	0.076
849	D	7	1	31	33	70.75	2501.84	0.084
849	D	7	1	33	35	70.79	2503.42	0.081
849	D	7	1	36	38	70.81	2504.22	0.075
849	D	7	1	40	42	70.85	2505.83	0.078
849	D	7	1	42	44	70.88	2507.06	0.087
849	D	7	1	46	47	70.91	2508.30	0.079
849	D	7	1	47	49	70.93	2509.15	0.088
849	D	7	1	50	52	70.95	2510.00	0.089
849	D	7	1	52	54	70.98	2511.30	0.105
849	D	7	1	56	58	71.01	2512.62	0.152
849	D	7	1	62	64	71.08	2515.79	0.159
849	D	7	1	67	69	71.13	2518.11	0.136
849	D	7	1	71	73	71.17	2520.00	0.089
849	D	7	1	73	74	71.19	2520.95	0.098
849	D	7	1	76	78	71.21	2521.90	0.087
849	D	7	1	78	80	71.25	2523.82	0.122
849	D	7	1	82	84	71.27	2524.78	0.098
849	D	7	1	86	88	71.31	2526.71	0.114
849	D	7	1	88	90	71.35	2528.63	0.071
849	D	7	1	91	93	71.37	2529.60	0.063
849	D	7	1	93	95	71.39	2530.56	0.079
849	D	7	1	96	98	71.41	2531.52	0.061
849	D	7	1	98	100	71.43	2532.47	0.044
849	D	7	1	101	102	71.47	2534.38	0.047
849	D	7	1	102	104	71.48	2534.85	0.059
849	D	7	1	109	111	71.54	2537.65	0.042
849	D	7	1	117	118	71.62	2541.30	0.048
849	D	7	1	118	120	71.63	2541.74	0.058
849	D	7	1	121	123	71.66	2543.07	0.052
849	D	7	1	123	125	71.68	2543.94	0.045
849	D	7	1	127	128	71.73	2546.07	0.066
849	D	7	1	128	130	71.75	2546.91	0.079
849	D	7	1	131	133	71.77	2547.74	0.044

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	D	7	1	133	135	71.80	2548.96	0.038
849	D	7	1	139	140	71.85	2550.95	0.051
849	D	7	1	141	143	71.87	2551.72	0.055
849	D	7	1	143	145	71.89	2552.49	0.065
849	D	7	1	147	149	71.91	2553.24	0.090
849	D	7	2	1	3	71.98	2555.80	0.092
849	D	7	2	3	5	72.00	2556.50	0.094
849	D	7	2	6	8	72.02	2557.20	0.085
849	D	7	2	8	10	72.04	2557.88	0.167
849	D	7	2	17	18	72.12	2560.49	0.081
849	D	7	2	18	20	72.13	2560.80	0.074
849	D	7	2	21	23	72.18	2562.32	0.112
849	D	7	2	23	25	72.19	2562.62	0.105
849	D	7	2	26	28	72.22	2563.48	0.154
849	D	7	2	28	30	72.23	2563.77	0.126
849	D	7	2	31	33	72.28	2565.14	0.088
849	D	7	2	33	35	72.29	2565.41	0.099
849	D	7	2	36	38	72.32	2566.21	0.089
849	D	7	2	38	40	72.33	2566.47	0.081
849	D	7	2	41	43	72.38	2567.77	0.126
849	D	7	2	43	45	72.39	2568.03	0.118
849	D	7	2	46	48	72.42	2568.79	0.090
849	D	7	2	48	50	72.43	2569.05	0.069
849	D	7	2	51	53	72.45	2569.56	0.089
849	D	7	2	53	55	72.49	2570.58	0.128
849	D	7	2	56	58	72.51	2571.10	0.093
849	D	7	2	62	63	72.58	2572.94	0.089
849	D	7	2	63	65	72.59	2573.21	0.065
849	D	7	2	66	68	72.61	2573.76	0.096
849	D	7	2	68	70	72.63	2574.32	0.087
849	D	7	2	71	73	72.68	2575.75	0.059
849	D	7	2	73	75	72.69	2576.05	0.072
849	D	7	2	76	78	72.71	2576.65	0.065
849	D	7	2	78	80	72.75	2577.89	0.083
849	D	7	2	81	83	72.78	2578.84	0.080
849	D	7	2	83	85	72.79	2579.17	0.101
849	D	7	2	87	88	72.83	2580.48	0.100
849	D	7	2	88	90	72.85	2581.15	0.109
849	D	7	2	91	93	72.87	2581.83	0.149
849	D	7	2	93	95	72.89	2582.52	0.126

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	D	7	2	98	100	72.95	2584.61	0.131
849	D	7	2	101	103	72.97	2585.31	0.126
849	D	7	2	103	105	72.98	2585.67	0.112
849	D	7	2	106	107	73.01	2586.74	0.065
849	D	7	2	107	109	73.03	2587.45	0.075
849	D	7	2	113	115	73.09	2589.61	0.073
849	D	7	2	116	118	73.12	2590.69	0.096
849	D	7	2	118	120	73.14	2591.41	0.098
849	D	7	2	121	123	73.16	2592.13	0.108
849	D	7	2	123	125	73.19	2593.21	0.053
849	D	7	2	126	128	73.21	2593.92	0.095
849	D	7	2	128	130	73.23	2594.63	0.119
849	D	7	2	130	132	73.26	2595.68	0.067
849	D	7	2	132	134	73.28	2596.43	0.066
849	D	7	2	136	138	73.33	2598.31	0.071
849	D	7	2	138	140	73.35	2599.07	0.060
849	D	7	2	141	143	73.37	2599.83	0.056
849	D	7	2	143	145	73.40	2600.98	0.045
849	D	7	2	146	148	73.43	2602.15	0.047
849	D	7	2	148	149	73.44	2602.54	0.040
849	D	7	3	1	3	73.48	2604.13	0.057
849	D	7	3	3	5	73.50	2604.94	0.057
849	D	7	3	6	8	73.52	2605.76	0.045
849	D	7	3	8	10	73.53	2606.18	0.038
849	D	7	3	16	18	73.62	2610.04	0.049
849	D	7	3	18	20	73.63	2610.48	0.082
849	D	7	3	21	23	73.68	2612.77	0.049
849	D	7	3	23	25	73.70	2613.71	0.039
849	D	7	3	26	28	73.72	2614.67	0.062
849	D	7	3	28	30	73.73	2615.16	0.037
849	D	7	3	31	33	73.78	2617.66	0.037
849	D	7	3	33	35	73.80	2618.69	0.048
849	D	7	3	35	36	73.81	2619.20	0.049
849	D	7	3	37	38	73.82	2619.72	0.050
849	D	7	3	38	40	73.84	2620.77	0.045
849	D	7	3	41	43	73.88	2622.87	0.043
849	D	7	3	43	45	73.89	2623.40	0.054
849	D	7	3	46	48	73.92	2624.98	0.066
849	D	7	3	48	50	73.94	2626.04	0.050
849	D	7	3	51	53	73.98	2628.12	0.066

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	D	7	3	53	55	73.99	2628.64	0.064
849	D	7	3	56	58	74.02	2630.17	0.073
849	D	7	3	63	65	74.09	2633.61	0.097
849	D	7	3	66	68	74.12	2635.01	0.083
849	D	7	3	71	73	74.17	2637.20	0.084
849	D	7	3	76	77	74.22	2639.21	0.062
849	D	7	3	81	83	74.27	2641.05	0.072
849	D	7	3	83	85	74.29	2641.76	0.061
849	D	7	3	85	86	74.30	2642.10	0.054
849	D	7	3	87	89	74.33	2643.11	0.051
849	D	7	3	89	91	74.35	2643.77	0.073
849	D	7	3	91	93	74.37	2644.42	0.063
849	D	7	3	93	95	74.39	2645.06	0.064
849	D	7	3	96	97	74.42	2646.03	0.043
849	D	7	3	97	99	74.43	2646.35	0.040
849	D	7	3	100	101	74.46	2647.32	0.047
849	D	7	3	101	102	74.47	2647.81	0.075
849	D	7	3	103	105	74.49	2648.30	0.046
849	D	7	3			74.51	2648.97	0.054
849	D	7	3	107	109	74.53	2649.65	0.044
849	D	7	3	109	111	74.55	2650.35	0.059
849	D	7	3	111	113	74.57	2651.06	0.061
849	D	7	3	113	115	74.59	2651.80	0.057
849	D	7	3	117	119	74.63	2653.35	0.072
849	D	7	3	119	121	74.65	2654.15	0.070
849	D	7	3	122	123	74.68	2655.40	0.060
849	D	7	3	123	125	74.69	2655.82	0.059
849	D	7	3			74.71	2656.68	0.043
849	D	7	3	127	129	74.73	2657.55	0.051
849	D	7	3	129	131	74.75	2658.43	0.052
849	D	7	3	132	133	74.78	2659.78	0.027
849	D	7	3	133	135	74.79	2660.23	0.048
849	D	7	3			74.81	2661.14	0.029
849	D	7	3	137	139	74.83	2662.06	0.059
849	D	7	3	139	141	74.85	2662.98	0.055
849	D	7	3	141	143	74.87	2663.90	0.036
849	D	7	3	143	145	74.89	2664.83	0.051
849	D	7	3	145	146	74.90	2665.29	0.037
849	D	7	3	147	149	74.93	2666.67	0.070
849	D	7	4	1	3	74.97	2668.49	0.077

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	D	7	4	3	5	74.99	2669.39	0.069
849	D	7	4	6	7	75.02	2670.72	0.060
849	D	7	4	7	9	75.03	2671.15	0.066
849	D	7	4	9	10	75.04	2671.59	0.046
849	D	7	4	11	13	75.07	2672.87	0.082
849	D	7	4	13	15	75.09	2673.70	0.065
849	D	7	4	16	17	75.12	2674.92	0.046
849	D	7	4	17	19	75.13	2675.31	0.063
849	D	7	4	19	20	75.14	2676.08	0.034
849	D	7	4	21	23	75.17	2676.84	0.083
849	D	7	4			75.21	2678.26	0.062
849	D	7	4	27	29	75.23	2678.93	0.084
849	D	7	4	29	30	75.24	2679.26	0.075
849	D	7	4	31	33	75.27	2680.18	0.084
849	D	7	4	33	35	75.29	2680.76	0.090
849	D	7	4	36	37	75.32	2681.56	0.043
849	D	7	4	37	39	75.33	2681.82	0.083
849	D	7	4	40	41	75.36	2682.54	0.089
849	D	7	4	41	43	75.37	2682.78	0.095
849	D	7	4	43	45	75.39	2683.22	0.108
849	D	7	4	46	47	75.42	2683.85	0.059
849	D	7	4	47	49	75.43	2684.05	0.078
849	D	7	4	49	50	75.44	2684.25	0.060
849	D	7	4	51	53	75.47	2684.83	0.078
849	D	7	4	53	55	75.49	2685.20	0.058
849	D	7	4	56	57	75.52	2685.74	0.033
849	D	7	4	57	59	75.53	2685.91	0.067
849	D	7	4	59	60	75.54	2686.09	0.071
849	D	7	4	61	62	75.56	2686.44	0.083
849	D	7	4	63	65	75.59	2686.97	0.079
849	D	7	4	66	67	75.62	2687.50	0.050
849	D	7	4	67	69	75.63	2687.68	0.079
849	D	7	4	69	70	75.64	2687.86	0.067
849	D	7	4	71	73	75.67	2688.42	0.072
849	D	7	4	73	75	75.69	2688.81	0.072
849	D	7	4			75.71	2689.21	0.059
849	D	7	4	77	79	75.73	2689.63	0.097
849	D	7	4	79	80	75.74	2689.85	0.083
849	D	7	4	81	83	75.77	2690.53	0.092
849	D	7	4	83	85	75.79	2691.01	0.101

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	D	7	4	86	87	75.82	2691.77	0.103
849	D	7	4	87	89	75.83	2692.04	0.075
849	D	7	4	89	91	75.85	2692.60	0.111
849	D	7	4	92	93	75.88	2693.49	0.080
849	D	7	4			75.91	2694.45	0.120
849	D	7	4	97	99	75.93	2695.13	0.083
849	D	7	4	99	101	75.95	2695.83	0.104
849	D	7	4	102	103	75.98	2696.59	0.107
849	D	7	4	103	105	75.99	2697.35	0.121
849	D	7	4			76.01	2698.16	0.058
849	D	7	4	107	109	76.03	2699.01	0.062
849	D	7	4	111	112	76.06	2700.35	0.040
849	D	7	4	113	114	76.07	2700.82	0.049
849	D	7	4			76.11	2702.79	0.063
849	D	7	4	117	119	76.13	2703.83	0.068
849	D	7	4	119	121	76.15	2704.91	0.075
849	D	7	4	121	123	76.17	2706.03	0.047
849	D	7	4	123	125	76.19	2707.16	0.052
849	D	7	4			76.21	2708.31	0.040
849	D	7	4	127	129	76.23	2709.45	0.057
849	D	7	4	129	131	76.25	2710.58	0.037
849	D	7	4	131	132	76.26	2711.13	0.019
849	D	7	4	133	135	76.29	2712.75	0.031
849	D	7	4	135	137	76.31	2713.78	0.049
849	D	7	4	137	139	76.33	2714.75	0.048
849	D	7	4	139	141	76.35	2715.69	0.051
849	D	7	4	142	143	76.38	2717.01	0.027
849	D	7	4	143	145	76.39	2717.43	0.038
849	D	7	4			76.41	2718.24	0.026
849	D	7	4	147	149	76.43	2719.01	0.040
849	D	7	4	149	150	76.44	2719.38	0.037
849	D	7	5	1	3	76.47	2720.44	0.029
849	D	7	5	3	5	76.49	2721.11	0.039
849	D	7	5	6	7	76.52	2722.05	0.020
849	D	7	5	7	9	76.53	2722.35	0.032
849	D	7	5	9	11	76.55	2723.04	0.015
849	D	7	5	12	13	76.58	2723.73	0.018
849	D	7	5	13	15	76.59	2723.99	0.027
849	D	7	5	15	16	76.60	2724.25	0.016
849	D	7	5	17	19	76.63	2724.97	0.041

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Depth (mcd)	Age (ka)	Sand accumulation rate (g cm^{-2} kyr^{-1})
849	D	7	5	19	20	76.64	2725.20	0.044
849	D	7	5	21	23	76.67	2725.87	0.040
849	D	7	5	23	25	76.69	2726.29	0.030
849	D	7	5	25	27	76.71	2726.89	0.023
849	D	7	5	27	29	76.73	2727.08	0.028
849	D	7	5	29	30	76.74	2727.27	0.003
849	D	7	5	31	33	76.77	2727.83	0.026
849	D	7	5	33	35	76.79	2728.19	0.024
849	D	7	5	36	37	76.82	2728.72	0.018
849	D	7	5	37	39	76.83	2728.89	0.008
849	D	7	5	39	40	76.84	2729.06	0.021
849	D	7	5	41	43	76.87	2729.57	0.029
849	D	7	5	43	45	76.89	2729.91	0.028
849	D	7	5	46	47	76.92	2730.41	0.037
849	D	7	5	47	49	76.93	2730.58	0.034
849	D	7	5	50	51	76.95	2730.92	0.022
849	D	7	5	51	53	76.97	2731.26	0.030
849	D	7	5	53	55	76.99	2731.60	0.035
849	D	7	5	56	57	77.02	2732.10	0.022

Table S4: Fe/Ca, Mn/Ca and Mn-corrected Mg/Ca ratios to assess contamination and diagenetic effects on Mg/Ca ratios of *G. crassaformis* at ODP Site 849 for MIS G7–95 (~2.75–2.4 Ma). Reported Mg/Ca values were normalized relative to the ECRM standard (Greaves et al., 2008).

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Mg/Ca (mmol mol^{-1})	Fe/Ca (mmol mol^{-1})	Mn/Ca (mmol mol^{-1})	Mn-corr. Mg/Ca (mmol mol^{-1})
849	D	6	5	102	104	1.11	0.01	0.43	1.06
849	D	6	5	106	108	1.06	0.05	0.26	1.03
849	D	6	5	114	116	0.96	0.01	0.42	0.92
849	D	6	5	116	118	1.23	0.04	0.64	1.16
849	D	6	5	121	123	0.97	0.07	0.39	0.93
849	D	6	5	123	125	1.57	0.04	0.63	1.51
849	D	6	5	127	129	1.12	0.20	0.36	1.09
849	D	6	5	129	131	1.16	0.02	0.27	1.13
849	D	6	5	132	134	1.36	0.06	0.60	1.30
849	D	6	5	137	139	1.61	0.02	0.81	1.53
849	D	6	5	141	143	1.50	0.01	0.26	1.48
849	D	6	5	143	145	1.90	0.17	0.27	1.88

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Mg/Ca (mmol mol^{-1})	Fe/Ca (mmol mol^{-1})	Mn/Ca (mmol mol^{-1})	Mn-corr. Mg/Ca (mmol mol^{-1})
849	D	6	6	1	3	1.70	0.05	0.25	1.68
849	D	6	6	3	5	1.71	0.04	0.74	1.63
849	D	6	6	17	19	1.83	0.45	0.26	1.80
849	D	6	6	22	24	1.04	0.03	0.33	1.01
849	D	6	6	24	26	1.03	0.01	0.49	0.98
849	D	6	6	26	27	1.02	0.01	0.38	0.99
849	D	6	6	28	30	1.16	0.02	0.53	1.11
849	D	6	6	31	33	1.09	0.02	0.59	1.04
849	D	6	6	33	35	1.26	0.01	1.00	1.16
849	D	6	6	36	37	1.23	0.02	0.85	1.15
849	D	6	6	38	40	0.93	0.01	0.51	0.88
849	D	6	6	43	45	0.99	0.02	0.57	0.94
849	D	6	6	48	50	1.26	0.03	0.91	1.17
849	D	6	6	53	55	0.82	0.01	0.42	0.78
849	D	6	6	56	57	1.32	0.03	0.85	1.23
849	D	6	6	63	65	1.17	0.02	0.91	1.08
849	D	6	6	66	67	0.93	0.01	0.45	0.89
849	D	6	6	68	70	0.90	0.02	0.40	0.86
849	D	6	6	71	73	0.96	0.02	0.51	0.91
849	D	6	6	73	75	1.03	0.01	0.72	0.96
849	D	6	6	78	80	0.91	0.01	0.43	0.87
849	D	6	6	81	82	1.07	0.02	0.53	1.01
849	D	6	6	86	87	0.91	0.01	0.47	0.87
849	D	6	6	89	91	1.04	0.01	0.58	0.98
849	D	6	6	91	93	1.04	0.01	0.48	1.00
849	D	6	6	93	95	1.04	0.02	0.43	1.00
849	D	6	6	97	98	0.90	0.02	0.41	0.86
849	D	6	6	98	100	0.90	0.01	0.35	0.86
849	D	6	6	100	102	0.96	0.01	0.41	0.92
849	D	6	6	102	104	1.15	0.02	0.58	1.09
849	D	6	6	104	105	0.88	0.01	0.35	0.85
849	D	6	6	105	107	0.88	0.01	0.44	0.84
849	D	6	6	108	110	0.95	0.01	0.35	0.92
849	D	6	6	120	121	0.89	0.01	0.36	0.85
849	D	6	6	122	124	1.02	0.02	0.46	0.98
849	D	6	6	124	126	1.28	0.22	0.49	1.24
849	D	6	6	126	127	0.99	0.01	0.40	0.95
849	D	6	6	128	130	1.26	0.02	0.70	1.19
849	D	6	6	131	133	1.10	0.04	0.35	1.06
849	D	6	6	133	135	1.32	0.03	0.34	1.28

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Mg/Ca (mmol mol^{-1})	Fe/Ca (mmol mol^{-1})	Mn/Ca (mmol mol^{-1})	Mn-corr. Mg/Ca (mmol mol^{-1})
849	D	6	6	139	140	1.12	0.01	0.47	1.08
849	D	6	6	137	139	0.96	0.02	0.33	0.93
849	D	6	6	141	143	1.37	0.04	0.68	1.31
849	D	6	6	143	145	1.05	0.04	0.48	1.01
849	D	6	6	147	149	1.32	0.02	0.86	1.24
849	C	7	1	80	82	1.18	0.04	0.64	1.11
849	C	7	1	82	84	1.24	0.06	0.55	1.18
849	D	6	7	4	7	0.97	0.01	0.32	0.94
849	C	7	1	86	88	0.99	0.02	0.56	0.93
849	C	7	1	88	90	1.01	0.02	0.39	0.97
849	C	7	1	91	93	1.27	0.03	0.50	1.22
849	C	7	1	93	95	1.28	0.05	0.36	1.24
849	D	6	7	17	19	1.77	0.08	0.73	1.70
849	C	7	1	96	98	1.10	0.02	0.53	1.05
849	C	7	1	98	100	1.03	0.02	0.45	0.99
849	D	6	7	22	24	1.07	0.01	0.55	1.02
849	C	7	1	103	104	1.23	0.01	0.73	1.16
849	C	7	1	106	108	1.21	0.02	0.78	1.13
849	C	7	1	108	110	1.39	0.02	0.65	1.33
849	C	7	1	111	113	1.28	0.02	0.88	1.19
849	C	7	1	113	115	1.25	0.02	0.86	1.17
849	C	7	1	116	118	1.37	0.02	0.99	1.27
849	C	7	1	118	120	1.28	0.02	0.97	1.18
849	C	7	1	120	122	1.28	0.02	0.74	1.21
849	C	7	1	122	124	1.26	0.02	0.90	1.17
849	C	7	1	126	128	1.35	0.02	0.96	1.26
849	C	7	1	128	130	1.22	0.01	0.68	1.16
849	C	7	1	131	133	1.16	0.02	0.69	1.09
849	C	7	1	133	135	1.27	0.01	0.93	1.17
849	C	7	1	136	138	1.26	0.02	0.92	1.16
849	C	7	1	138	140	1.37	0.02	1.06	1.26
849	C	7	1	141	143	1.46	0.01	1.24	1.34
849	C	7	1	143	145	1.18	0.07	0.70	1.11
849	C	7	1	146	148	1.30	0.04	0.72	1.22
849	C	7	1	148	150	1.21	0.01	0.72	1.14
849	C	7	2	1	3	1.32	0.01	0.63	1.26
849	C	7	2	3	5	1.01	0.01	0.44	0.97
849	C	7	2	5	7	1.04	0.02	0.48	0.99
849	C	7	2	7	9	1.07	0.02	0.47	1.02
849	C	7	2	9	11	1.07	0.02	0.65	1.01

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Mg/Ca (mmol mol^{-1})	Fe/Ca (mmol mol^{-1})	Mn/Ca (mmol mol^{-1})	Mn-corr. Mg/Ca (mmol mol^{-1})
849	C	7	2	11	13	1.21	0.01	0.80	1.13
849	C	7	2	13	15	1.24	0.01	0.75	1.16
849	C	7	2	15	17	1.21	0.03	0.80	1.13
849	C	7	2	17	19	1.11	0.01	0.71	1.04
849	D	7	1	21	23	1.27	0.02	1.05	1.17
849	D	7	1	23	25	1.63		0.59	1.57
849	D	7	1	26	28	1.36	0.03	0.85	1.28
849	D	7	1	28	30	1.40	0.02	0.89	1.31
849	D	7	1	31	33	1.33	0.04	1.01	1.22
849	D	7	1	33	35	1.79	0.03	1.34	1.66
849	D	7	1	36	38	1.72	0.02	1.66	1.56
849	D	7	1	38	39	1.95	0.03	1.58	1.79
849	D	7	1	40	42	1.68	0.02	1.16	1.57
849	D	7	1	42	44	1.42	0.02	0.92	1.33
849	D	7	1	46	47	1.32	0.01	1.03	1.21
849	D	7	1	47	49	2.14	0.04	1.11	2.03
849	D	7	1	50	52	0.97	0.01	0.45	0.92
849	D	7	1	52	54	1.09	0.01	0.65	1.02
849	D	7	1	56	58	1.02	0.01	0.53	0.96
849	D	7	1	62	64	1.01	0.02	0.65	0.95
849	D	7	1	67	69	1.01	0.02	0.50	0.96
849	D	7	1	71	73	1.61	0.08	0.61	1.55
849	D	7	1	73	74	0.92	0.02	0.50	0.87
849	D	7	1	76	78	1.02	0.02	0.63	0.95
849	D	7	1	78	80	1.17	0.06	0.42	1.13
849	D	7	1	82	84	0.99	0.03	0.36	0.95
849	D	7	1	86	88	1.29	0.05	1.05	1.18
849	D	7	1	88	90	1.08	0.03	0.59	1.02
849	D	7	1	91	93	1.21	0.01	0.70	1.14
849	D	7	1	93	95	1.15	0.02	0.57	1.09
849	D	7	1	96	98	1.32	0.06	0.40	1.28
849	D	7	1	98	100	1.67	0.01	0.96	1.58
849	D	7	1	101	102	1.15		0.70	1.08
849	D	7	1	102	104	1.11	0.07	0.48	1.07
849	D	7	1	107	109	1.36	0.06	0.73	1.28
849	D	7	1	109	111	1.62	0.03	1.06	1.51
849	D	7	1	117	118	1.39	0.02	0.80	1.31
849	D	7	1	118	120	1.33	0.01	0.92	1.24
849	D	7	1	121	123	1.48	0.01	1.43	1.34

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Mg/Ca (mmol mol^{-1})	Fe/Ca (mmol mol^{-1})	Mn/Ca (mmol mol^{-1})	Mn-corr. Mg/Ca (mmol mol^{-1})
849	D	7	1	123	125	1.55	0.04	1.16	1.43
849	D	7	1	128	130	1.18	0.04	0.80	1.10
849	D	7	1	131	133	1.62	0.02	1.39	1.48
849	D	7	1	133	135	1.57	0.02	1.02	1.46
849	D	7	1	141	143	1.14	0.02	0.67	1.08
849	D	7	1	143	145	1.39	0.06	0.78	1.31
849	D	7	1	147	149	1.33	0.02	0.80	1.25
849	D	7	2	1	3	1.51	0.05	0.96	1.41
849	D	7	2	3	5	1.33	0.05	0.79	1.25
849	D	7	2	6	8	1.18	0.03	0.81	1.10
849	D	7	2	8	10	1.68	0.02	0.97	1.58
849	D	7	2	17	18	1.21	0.04	0.58	1.16
849	D	7	2	18	20	1.86	0.05	0.58	1.81
849	D	7	2	21	23	1.91	0.10	0.86	1.83
849	D	7	2	23	25	1.36	0.04	0.63	1.30
849	D	7	2	26	28	1.05	0.05	0.51	1.00
849	D	7	2	28	30	1.53	0.03	0.57	1.47
849	D	7	2	31	33	1.20	0.02	0.59	1.14
849	D	7	2	33	35	1.25	0.06	0.53	1.19
849	D	7	2	36	38	1.20	0.02	0.49	1.15
849	D	7	2	38	40	1.70	0.02	0.33	1.67
849	D	7	2	41	43	1.90	0.02	0.74	1.82
849	D	7	2	43	45	1.28	0.02	0.61	1.22
849	D	7	2	46	48	1.48	0.03	0.48	1.43
849	D	7	2	48	50	2.10	0.05	0.67	2.03
849	D	7	2	51	53	1.07	0.02	0.61	1.01
849	D	7	2	53	55	1.58	0.04	0.38	1.54
849	D	7	2	56	58	1.49	0.03	0.42	1.44
849	D	7	2	62	63	1.42	0.02	0.62	1.36
849	D	7	2	66	68	1.37	0.02	0.81	1.29
849	D	7	2	68	70	2.07	0.09	0.64	2.01
849	D	7	2	73	75	1.39	0.05	0.48	1.34
849	D	7	2	78	80	1.40	0.02	1.02	1.30
849	D	7	2	81	83	1.62	0.04	1.05	1.52
849	D	7	2	83	85	1.98	0.09	0.97	1.88
849	D	7	2	87	88	1.81	0.02	1.44	1.66
849	D	7	2	88	90	1.30	0.03	1.16	1.18
849	D	7	2	91	93	1.99	0.21	1.08	1.88
849	D	7	2	93	95	1.94	0.03	1.16	1.83
849	D	7	2	96	98	1.79	0.02	1.21	1.67

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Mg/Ca (mmol mol^{-1})	Fe/Ca (mmol mol^{-1})	Mn/Ca (mmol mol^{-1})	Mn-corr. Mg/Ca (mmol mol^{-1})
849	D	7	2	98	100	1.42	0.04	1.12	1.31
849	D	7	2	103	105	1.71		1.37	1.57
849	D	7	2	106	107	2.01	0.04	1.25	1.89
849	D	7	2	107	109	1.81	0.03	1.00	1.71
849	D	7	2	113	115	1.00	0.03	0.87	0.92
849	D	7	2	116	118	1.38	0.02	0.89	1.29
849	D	7	2	118	120	1.15	0.03	0.62	1.09
849	D	7	2	121	123	2.24	0.02	0.84	2.15
849	D	7	2	123	125	2.09	0.04	1.43	1.95
849	D	7	2	126	128	1.11	0.02	1.03	1.01
849	D	7	2	128	130	1.78	0.04	1.33	1.65
849	D	7	2	130	132	1.40	0.05	0.71	1.33
849	D	7	2	132	134	1.86	0.03	1.02	1.75
849	D	7	2	136	138	2.20	0.09	0.92	2.11
849	D	7	2	138	140	1.17	0.01	0.90	1.08
849	D	7	2	141	143	1.56	0.03	0.67	1.50
849	D	7	2	143	145	1.64	0.04	0.83	1.56
849	D	7	2	146	148	1.38	0.01	0.65	1.32
849	D	7	2	148	149	1.06	0.02	0.45	1.01
849	D	7	3	1	3	1.49	0.02	1.17	1.37
849	D	7	3	3	5	1.19	0.01	0.89	1.10
849	D	7	3	6	8	1.89	0.12	0.73	1.82
849	D	7	3	8	10	1.32	0.01	0.70	1.25
849	D	7	3	16	18	1.55	0.04	1.24	1.42
849	D	7	3	21	23	1.17	0.01	1.13	1.06
849	D	7	3	23	25	3.02	0.08	1.73	2.85
849	D	7	3	28	30	1.98	0.04	0.88	1.89
849	D	7	3	33	35	1.62	0.07	1.80	1.44
849	D	7	3	35	36	1.93	0.02	1.59	1.77
849	D	7	3	38	40	2.67	0.28	1.59	2.51
849	D	7	3	41	43	2.75	0.08	1.93	2.56
849	D	7	3	43	45	1.64	0.02	1.78	1.46
849	D	7	3	51	53	1.99	0.04	1.70	1.82
849	D	7	3	53	55	1.81	0.05	1.96	1.61
849	D	7	3	56	58	1.63	0.03	1.18	1.51
849	D	7	3	63	65	1.35	0.02	0.97	1.25
849	D	7	3	66	68	1.87	0.04	1.60	1.71
849	D	7	3	68	70	1.89	0.04	1.47	1.74
849	D	7	3	71	73	1.62	0.03	2.12	1.40
849	D	7	3	73	75	1.88	0.11	1.74	1.71

Site	Hole	Core	Section	Top (cm)	Bottom (cm)	Mg/Ca (mmol mol^{-1})	Fe/Ca (mmol mol^{-1})	Mn/Ca (mmol mol^{-1})	Mn-corr. Mg/Ca (mmol mol^{-1})
849	D	7	3	76	77	2.47	0.09	1.63	2.30
849	D	7	3	77	79	2.43	0.10	1.39	2.29
849	D	7	3	79	81	2.70	0.12	1.74	2.53
849	D	7	3	81	83	2.32	0.11	0.66	2.26
849	D	7	3	83	85	2.39	0.56	1.64	2.23
849	D	7	3	85	86	2.88	0.11	1.60	2.72
849	D	7	3	87	89	2.50	0.05	1.05	2.40
849	D	7	3	89	91	1.93	0.10	1.36	1.80
849	D	7	3	91	93	1.87	0.01	1.53	1.72
849	D	7	3	93	95	2.59	0.06	1.38	2.45
849	D	7	3	96	97	2.01	0.02	1.81	1.83
849	D	7	3	97	99	1.71	0.03	0.86	1.62
849	D	7	3	100	101	1.40	0.01	0.41	1.36
849	D	7	3	101	102	2.07	0.03	0.49	2.02
849	D	7	3	103	105	1.73	0.16	0.94	1.63
849	D	7	3	105	107	1.72	0.12	1.17	1.60
849	D	7	3	107	109	2.00	0.07	0.93	1.91
849	D	7	3	117	119	2.88	0.05	1.59	2.72
849	D	7	4	46	47	1.87	0.02	1.44	1.73
849	D	7	4	47	49	2.06	0.02	0.59	2.00
849	D	7	4	49	50	1.79	0.03	1.22	1.67
849	D	7	4	51	53	1.96	0.02	0.89	1.87
849	D	7	4	53	55	1.83	0.02	1.20	1.71
849	D	7	4	56	57	2.33	0.06	1.31	2.20
849	D	7	4	57	59	1.90	0.02	0.98	1.80
849	D	7	4	59	60	1.81	0.02	1.22	1.68
849	D	7	4	61	62	1.49	0.01	1.00	1.39
849	D	7	4	63	65	1.40	0.02	0.95	1.31
849	D	7	4	66	67	1.53	0.02	0.93	1.43
849	D	7	4	67	69	1.49	0.02	1.14	1.38
849	D	7	4	69	70	1.49	0.06	1.15	1.38
849	D	7	4	71	73	1.35	0.02	0.87	1.27
849	D	7	4	75	77	1.46	0.02	1.05	1.35
849	D	7	4	77	79	1.89	0.02	0.63	1.83
849	D	7	4	81	83	1.59	0.03	1.13	1.48

References

Greaves, M., Caillon, N., Rebaubier, H., Bartoli, G., Bohaty, S., Cacho, I., Clarke, L. J., Cooper, M., Daunt, C., Delaney, M., deMenocal, P., Dutton, A., Eggins, S., Elderfield, H., Garbe-Schoenberg, D., Goddard, E., Green, D., Groeneveld, J., Hastings, D., Hathorne, E., Kimoto, K., Klinkhammer, G., Labeyrie, L., Lea, D. W., Marchitto, T., Martinez-Boti, M. A., Mortyn, P. G., Ni, Y., Nuernberg, D., Paradis, G., Pena, L., Quinn, T., Rosenthal, Y., Russell, A., Sagawa, T., Sosdain, S., Stott, L., Tachikawa, K., Tappa, E., Thunell, R., Wilson, P. A.: Interlaboratory comparison study of calibration standards for foraminiferal Mg/Ca thermometry, Geochem. Geophys. Geosys., 9, Q08010, doi:08010.01029/02008GC001974, 2008

Jakob, K. A., Wilson, P. A., Bahr, A., Bolton, C. T., Pross, J., Fiebig, J., and Friedrich, O.: Plio-Pleistocene glacial-interglacial productivity changes in the eastern equatorial Pacific upwelling system, Paleoceanography, 31, 453–470, doi:410.1002/2015PA002899, 2016.

Jakob, K. A., Bolton, C. T., Wilson, P. A., Bahr, A., Pross, J., Fiebig, J., Kähler, K., Friedrich, O.: Glacial-interglacial changes in equatorial Pacific surface-water structure during the Plio-Pleistocene intensification of Northern Hemisphere Glaciation, Earth Planet. Sci. Lett., 463, 69–80, doi:10.1016/j.epsl.2017.1001.1028, 2017.

Spero, H. J., Mielke, K. M., Kalve, E. M., Lea, D. W., and Pak, D. K.: Multispecies approach to reconstructing eastern equatorial Pacific thermocline hydrography during the past 360 kyr, Paleoceanography, 18, doi:10.1029/2002PA000814, 2003.