

## Appendix 4

## Stable O and C isotope data on calcites from the Tajno IG 4 sample (depth 570 m)

## Oxygen isotope

ID	time	$^{18}\text{O}/^{16}\text{O}$	$^{18}\text{O}/^{16}\text{O}$		O IMF $\delta^{18}\text{O}$ ‰	Intern err. $2\sigma$ $\pm$ ‰
		EISIE corr	Err	EISIE corr		
Ta.4.24.1	00:37:06	0.001247762	1.22E-07	0.001226	6.55	0.10
Ta.4.24.2	00:42:32	0.001246196	1.28E-07	0.001225	5.50	0.10
Ta.4.6.3	18:43:04	0.001268154	1.77E-07	0.001227	7.81	0.14
Ta.4.6.4	18:48:39	0.001266747	1.54E-07	0.001226	6.96	0.13
Ta.4.10.1	20:28:01	0.001260363	1.12E-07	0.001226	6.43	0.09
Ta.4.11.2	20:49:58	0.001260706	1.4E-07	0.001227	7.66	0.11
Ta.4.11.3	20:55:31	0.001258124	1.34E-07	0.001225	5.86	0.11
Ta.4.7.1	19:05:15	0.001267308	1.66E-07	0.001228	8.18	0.13
Ta.4.7.3	19:21:48	0.001268407	1.37E-07	0.00123	9.81	0.11
Ta.4.19.1	23:13:55	0.00125457	1.16E-07	0.001229	8.77	0.09
Ta.4.19.2	23:25:01	0.001254751	1.35E-07	0.001229	9.36	0.11
Ta.4.26.2	01:49:21	0.001248485	1.32E-07	0.00123	9.80	0.11
Ta.4.26.3	02:00:56	0.001247306	1.38E-07	0.001229	9.27	0.11
Ta.4.10.2	20:33:30	0.001263712	1.31E-07	0.001229	9.33	0.11
Ta.4.11.1	20:38:57	0.00126226	1.5E-07	0.001228	8.42	0.12
Ta.4.11.4	21:00:59	0.001263492	1.47E-07	0.001231	10.35	0.12
Ta.4.11.5	21:12:04	0.001262617	1.43E-07	0.00123	10.14	0.12
Ta.4.11.6	21:17:33	0.00126199	1.22E-07	0.00123	9.87	0.10
Ta.4.12.1	21:23:02	0.001262631	1.6E-07	0.001231	10.62	0.13
Ta.4.12.2	21:34:07	0.001261675	1.57E-07	0.001231	10.33	0.13
Ta.4.26.1	01:43:54	0.001249072	1.46E-07	0.00123	10.07	0.12
Ta.4.13.1	21:39:43	0.001266066	1.59E-07	0.001235	14.06	0.13
Ta.4.14.1	21:45:17	0.001264953	1.57E-07	0.001234	13.41	0.13
Ta.4.14.2	21:56:21	0.001264295	1.28E-07	0.001234	13.35	0.10
Ta.4.15.1	22:01:52	0.001263258	1.23E-07	0.001233	12.76	0.10
Ta.4.15.2	22:07:23	0.001263028	1.49E-07	0.001234	12.81	0.12
Ta.4.15.3	22:18:30	0.001261436	1.25E-07	0.001233	12.00	0.10
Ta.4.16.1	22:24:04	0.001263206	1.68E-07	0.001235	13.64	0.14
Ta.4.16.2	22:29:35	0.001260373	1.41E-07	0.001232	11.61	0.11
Ta.4.17.1	22:46:17	0.001262688	1.52E-07	0.001235	14.14	0.12
Ta.4.17.2	22:51:45	0.001260546	1.6E-07	0.001233	12.65	0.13
Ta.4.2.1	16:35:21	0.001281989	1.37E-07	0.001233	12.39	0.11
Ta.4.2.2	16:46:25	0.001279624	1.37E-07	0.001231	11.11	0.11
Ta.4.2.3	16:51:58	0.001280825	1.8E-07	0.001233	12.33	0.15
Ta.4.4.1	17:14:11	0.001279725	1.48E-07	0.001233	12.59	0.12
Ta.4.4.2	17:19:40	0.001278898	1.76E-07	0.001233	12.22	0.14
Ta.4.4.3	17:30:46	0.001279909	1.64E-07	0.001234	13.56	0.13
Ta.4.4.4	17:36:27	0.00127822	1.45E-07	0.001233	12.52	0.12
Ta.4.5.1	17:53:06	0.001277202	1.55E-07	0.001233	12.54	0.13
Ta.4.5.2	17:58:40	0.001277724	1.34E-07	0.001234	13.22	0.11
Ta.4.5.3	18:04:14	0.001278538	1.79E-07	0.001235	14.13	0.15
Ta.4.5.4	18:15:23	0.001276058	1.84E-07	0.001233	12.72	0.15
Ta.4.5.5	18:20:53	0.001274866	1.44E-07	0.001233	12.04	0.12
Ta.4.6.1	18:26:28	0.001275469	1.41E-07	0.001234	12.79	0.11
Ta.4.6.2	18:37:38	0.001272936	1.2E-07	0.001232	11.32	0.10
Ta.4.6.5	18:59:41	0.001274275	1.62E-07	0.001234	13.42	0.13
Ta.4.7.2	19:10:42	0.001270558	1.15E-07	0.001231	11.00	0.09
Ta.4.9.1	19:54:50	0.001269522	1.64E-07	0.001233	12.21	0.13
Ta.4.9.2	20:05:55	0.001269414	1.66E-07	0.001233	12.62	0.13
Ta.4.9.3	20:11:28	0.001269981	1.43E-07	0.001234	13.32	0.12
Ta.4.9.4	20:16:59	0.001269157	1.35E-07	0.001234	12.91	0.11
Ta.4.24.3	00:53:45	0.001252644	9.9E-08	0.001231	11.09	0.08
Ta.4.22.1	00:09:15	0.001257524	1.18E-07	0.001234	13.30	0.10
Ta.4.22.2	00:14:49	0.001256212	1.12E-07	0.001233	12.47	0.09
Ta.4.23.1	00:20:20	0.001255191	1.33E-07	0.001232	11.86	0.11
Ta.4.23.2	00:31:33	0.001253597	1.68E-07	0.001231	11.01	0.14
Ta.4.17.3	23:02:52	0.001258231	1.07E-07	0.001232	11.25	0.09
Ta.4.21.1	23:35:56	0.001263597	1.57E-07	0.001239	16.85	0.13
Ta.4.21.4	23:58:07	0.001261992	1.2E-07	0.001238	16.44	0.10
Ta.4.4.5	17:42:02	0.001282375	1.74E-07	0.001238	16.06	0.14
Ta.4.25.1	00:59:16	0.001265939	1.43E-07	0.001245	21.95	0.12

Ta.4.25.2	01:04:46	0.001265748	1.38E-07	0.001245	22.01	0.11
Ta.4.25.3	01:16:02	0.001262654	1.42E-07	0.001242	19.95	0.11
Ta.4.25.4	01:21:29	0.001261263	1.21E-07	0.001241	19.03	0.10
Ta.4.25.5	01:26:57	0.001262219	1.51E-07	0.001242	20.00	0.12
Ta.4.25.6	01:38:23	0.001261672	1.68E-07	0.001242	19.99	0.13
Ta.4.3.1	16:57:29	0.001293344	1.53E-07	0.001245	22.44	0.12
Ta.4.3.2	17:08:36	0.00128942	1.64E-07	0.001242	19.92	0.13
Ta.4.1.1	16:24:23	0.001296822	1.48E-07	0.001247	23.45	0.12
Ta.4.1.2	16:29:50	0.001291813	1.31E-07	0.001242	19.81	0.11
Ta.4.8.1	19:27:25	0.001281366	1.85E-07	0.001243	20.32	0.15
Ta.4.8.2	19:32:51	0.00128186	1.37E-07	0.001244	20.96	0.11
Ta.4.8.3	19:43:51	0.001282204	1.71E-07	0.001245	21.74	0.14
Ta.4.8.4	19:49:19	0.001281261	1.55E-07	0.001244	21.25	0.12
Ta.4.18.1	23:08:19	0.001270105	1.29E-07	0.001244	20.95	0.10
Ta.4.20.1	23:30:28	0.001269175	1.58E-07	0.001244	21.09	0.13
Ta.4.21.2	23:47:05	0.001272471	1.47E-07	0.001248	24.39	0.12
Ta.4.21.3	23:52:36	0.001267865	1.24E-07	0.001244	20.92	0.10
Ta.4.16.3	22:40:43	0.001271271	1.48E-07	0.001243	20.75	0.12

$O\_IMF(\%) = ((^{18}O/^{16}O_{measured}) / (^{18}O/^{16}O_{true}) - 1) * 1000.$

The values are, corrected for gain and background

EISIE (electron-induced secondary ion emission) - a specific effect seen on SHRIMP II

Carbon isotope		$^{13}C-^{12}C-$	$^{13}C-^{12}C-$		C_IMF	Intern err.
ID	time	EISIE corr	Err	EISIE corr	$\delta^{13}C$	$2\sigma$
			$1\sigma$	_drift_corr	‰	±
					‰	‰
Ta.4.19.1	19:21:16	0.010067598	5.08E-06	0.010067	-13.38	0.50
Ta.4.7.2	16:15:30	0.010071304	7.83E-06	0.010071	-12.99	0.78
Ta.4.23.1	20:08:47	0.010090293	5.29E-06	0.010089	-11.16	0.52
Ta.4.26.2	21:12:50	0.010103105	8.13E-06	0.010102	-9.91	0.80
Ta.4.24.2	20:24:50	0.010107589	4.82E-06	0.010106	-9.46	0.48
Ta.4.11.1	17:20:42	0.010108637	4.43E-06	0.010108	-9.33	0.44
Ta.4.1.1	14:05:13	0.010110567	6.97E-06	0.01011	-9.11	0.69
Ta.4.21.1	19:37:02	0.010116327	4.44E-06	0.010115	-8.60	0.44
Ta.4.25.5	20:56:49	0.010121858	5.61E-06	0.010121	-8.07	0.55
Ta.4.6.4	15:59:17	0.010116308	6.54E-06	0.010116	-8.57	0.65
Ta.4.5.6	15:39:05	0.010121407	4.71E-06	0.010121	-8.06	0.47
Ta.4.25.2	20:40:48	0.010126858	6.34E-06	0.010126	-7.57	0.63
Ta.4.4.5	15:06:37	0.01012646	9.62E-06	0.010126	-7.56	0.95
Ta.4.16.1	18:48:48	0.010131757	6.67E-06	0.010131	-7.08	0.66
Ta.4.21.4	19:53:00	0.010129996	8.36E-06	0.010129	-7.26	0.83
Ta.4.10.2	17:16:29	0.01013256	1.05E-05	0.010132	-6.98	1.04
Ta.4.11.5	17:44:49	0.010132838	6.12E-06	0.010132	-6.96	0.60
Ta.4.5.3	15:22:45	0.010135565	4.4E-06	0.010135	-6.67	0.43
Ta.4.24.3	20:28:49	0.010136451	9.39E-06	0.010135	-6.63	0.93
Ta.4.2.2	14:21:26	0.010141119	6.03E-06	0.010141	-6.11	0.60
Ta.4.6.1	15:43:05	0.010141427	4.71E-06	0.010141	-6.10	0.46
Ta.4.6.2	15:51:19	0.010146154	4E-06	0.010146	-5.63	0.39
Ta.4.11.4	17:36:41	0.010151759	4.8E-06	0.010151	-5.10	0.47
Ta.4.9.1	16:48:00	0.010157998	4.05E-06	0.010157	-4.48	0.40
Ta.4.19.2	19:25:12	0.010157516	7.41E-06	0.010157	-4.55	0.73
Ta.4.4.3	14:54:22	0.010159947	7.16E-06	0.010159	-4.27	0.70
Ta.4.24.1	20:16:46	0.010161951	5.65E-06	0.010161	-4.12	0.56
Ta.4.14.2	18:16:54	0.010163866	5.29E-06	0.010163	-3.92	0.52
Ta.4.26.3	21:16:48	0.010166668	3.43E-06	0.010165	-3.67	0.34
Ta.4.11.6	17:48:46	0.01016707	3.52E-06	0.010166	-3.60	0.35
Ta.4.4.2	14:50:23	0.010167074	8.76E-06	0.010167	-3.57	0.86
Ta.4.7.1	16:11:31	0.010168254	3.68E-06	0.010168	-3.47	0.36
Ta.4.11.3	17:32:47	0.010172379	4.83E-06	0.010172	-3.07	0.48
Ta.4.6.5	16:07:25	0.01017447	6.36E-06	0.010174	-2.85	0.62
Ta.4.7.3	16:23:45	0.010175923	4.63E-06	0.010175	-2.71	0.46
Ta.4.8.2	16:31:45	0.010179659	4.55E-06	0.010179	-2.35	0.45
Ta.4.26.1	21:04:51	0.010180434	6.28E-06	0.010179	-2.32	0.62
Ta.4.15.3	18:40:50	0.01018435	5.39E-06	0.010183	-1.91	0.53
Ta.4.10.1	17:12:18	0.010185863	5.12E-06	0.010185	-1.75	0.50
Ta.4.22.1	19:56:57	0.010185967	3.99E-06	0.010185	-1.76	0.39
Ta.4.3.2	14:38:10	0.01018939	5.47E-06	0.010189	-1.38	0.54

Ta.4.25.4	20:48:42	0.010192468	5.52E-06	0.010191	-1.13	0.54
Ta.4.5.5	15:34:57	0.010197049	5.28E-06	0.010196	-0.63	0.52
Ta.4.4.1	14:46:23	0.010198335	5.5E-06	0.010198	-0.50	0.54
Ta.4.8.1	16:27:44	0.010201367	5.3E-06	0.010201	-0.22	0.52
Ta.4.5.1	15:10:37	0.010201098	5.33E-06	0.010201	-0.23	0.52
Ta.4.9.4	17:04:12	0.010203371	7.34E-06	0.010203	-0.03	0.72
Ta.4.25.1	20:32:52	0.01020878	4.75E-06	0.010208	0.47	0.46
Ta.4.11.2	17:28:48	0.010210124	4.32E-06	0.010209	0.63	0.42
Ta.4.15.1	18:32:52	0.010213569	6.51E-06	0.010213	0.96	0.64
Ta.4.5.2	15:18:44	0.010213936	6.11E-06	0.010213	1.03	0.60
Ta.4.20.1	19:29:08	0.010214985	4.37E-06	0.010214	1.09	0.43
Ta.4.8.4	16:43:55	0.010218171	9.86E-06	0.010217	1.43	0.97
Ta.4.13.1	18:04:54	0.010219487	8.5E-06	0.010219	1.55	0.83
Ta.4.22.2	20:00:53	0.010219839	4.64E-06	0.010219	1.56	0.45
Ta.4.17.3	19:09:23	0.010219604	8.42E-06	0.010219	1.55	0.82
Ta.4.17.1	18:56:45	0.010220611	7.07E-06	0.01022	1.65	0.69
Ta.4.2.3	14:29:41	0.010223018	1.17E-05	0.010222	1.93	1.15
Ta.4.25.6	21:00:53	0.010224936	5.75E-06	0.010224	2.05	0.56
Ta.4.15.2	18:36:56	0.010231214	6.08E-06	0.01023	2.69	0.59
Ta.4.9.3	17:00:12	0.01023138	5.42E-06	0.010231	2.73	0.53
Ta.4.4.4	15:02:35	0.010232573	5.38E-06	0.010232	2.86	0.53
Ta.4.21.2	19:41:01	0.010233459	8.16E-06	0.010232	2.90	0.80
Ta.4.18.1	19:13:20	0.010235355	4.87E-06	0.010234	3.10	0.48
Ta.4.14.4	18:24:50	0.010235316	5.76E-06	0.010234	3.10	0.56
Ta.4.17.2	19:05:21	0.010239474	4.93E-06	0.010238	3.50	0.48
Ta.4.1.2	14:13:27	0.010239676	5.8E-06	0.010239	3.57	0.57
Ta.4.5.4	15:26:46	0.010242958	5.99E-06	0.010242	3.88	0.58
Ta.4.16.2	18:52:48	0.01024367	6.18E-06	0.010243	3.92	0.60
Ta.4.21.3	19:45:00	0.010243977	9.52E-06	0.010243	3.94	0.93
Ta.4.2.1	14:17:27	0.01024483	8.12E-06	0.010244	4.07	0.79
Ta.4.9.2	16:56:05	0.010249974	5.7E-06	0.010249	4.55	0.56
Ta.4.23.2	20:12:50	0.010256623	4.94E-06	0.010256	5.17	0.48
Ta.4.14.3	18:20:51	0.01026433	6.31E-06	0.010263	5.95	0.61
Ta.4.25.3	20:44:45	0.010260693	5.38E-06	0.01026	5.57	0.52
Ta.4.14.1	18:08:57	0.010272139	5.51E-06	0.010271	6.72	0.54
Ta.4.8.3	16:39:56	0.010270659	6.09E-06	0.01027	6.59	0.59

$C\_IMF (\%) = ((^{13}C/^{12}C_{measured}) / (^{13}C/^{12}C_{true}) - 1) * 1000.$

The values are, corrected for gain and background

EISIE\_ a specific effect seen on SHRIMP II as electron-induced secondary ion emission