

Table S5. Details on measured Zhe thermochronometric ages.

Sample_Aliq uot	Longitu de (°)	Latitu de (°)	Elevatio n (m)	eU ¹ (ppm)	mass ² (μg)	ser ³ (μm)	U _{total} (mol)	U _{total} 1 (mol)	232Th (mol)	232Th 1 (mol)	4He (mol)	4He 1 (mol)	Uncorr. age (Ma)	Uncorr.		Ft ⁴	Corr. age (Ma)	Corr. Age 1 (Ma)	Mean age (Ma)	Mean age 1 (Ma)
														Age 1 (Ma)						
17PG005z_1	-72.74	-46.46	741	871	3.0	42.1	9.48E-12	2.49E-13	6.10E-12	1.41E-13	7.64E-13	8.85E-15	54.4	1.3	0.76	72.0	2.0	68.8	11.4	
17PG005z_2				1447	1.9	33.8	1.01E-11	2.15E-13	5.76E-12	1.05E-13	8.60E-13	9.90E-15	58.4	1.3	0.69	84.3	2.0			
17PG005z_3				436	1.7	35.0	2.84E-12	4.51E-14	1.45E-12	4.83E-14	1.52E-13	1.82E-15	37.2	0.7	0.70	53.3	1.2			
17PG005z_4				1300	1.7	36.1	8.71E-12	1.99E-13	3.65E-12	8.58E-14	5.73E-13	6.78E-15	46.6	1.1	0.71	65.2	1.6			
17PG006z_1	-72.74	-46.47	605	1112	4.7	46.2	2.00E-11	9.38E-13	8.09E-12	2.71E-13	1.61E-12	1.82E-14	57.1	2.4	0.77	74.1	3.2	71.3	5.5	
17PG006z_2				1052	4.8	46.0	1.88E-11	8.07E-13	9.77E-12	3.35E-13	1.66E-12	1.71E-14	61.5	2.4	0.79	78.0	3.0			
17PG006z_3				2049	1.8	34.6	1.41E-11	7.37E-13	7.14E-12	3.04E-13	9.23E-13	1.12E-14	45.6	2.1	0.72	63.1	3.0			
17PG006z_4				736	1.6	35.2	4.27E-12	1.94E-13	2.89E-12	1.22E-13	3.22E-13	3.89E-15	50.7	2.0	0.72	70.6	2.8			
17PG007z_1	-72.74	-46.46	444	536	4.8	50.8	9.92E-12	4.00E-13	3.66E-12	1.98E-13	8.13E-13	9.91E-15	58.7	2.2	0.80	73.1	2.8	80.8	11.4	
17PG007z_2				1980	1.8	33.1	1.38E-11	6.69E-13	6.25E-12	2.46E-13	9.32E-13	1.05E-14	47.4	2.1	0.71	67.1	3.3			
17PG007z_3				602	1.3	33.2	2.77E-12	1.13E-13	2.78E-12	1.24E-13	2.82E-13	3.00E-15	64.1	2.2	0.70	91.9	3.7			
17PG007z_4				1933	1.6	32.4	1.21E-11	8.50E-13	5.75E-12	2.56E-13	1.14E-12	1.20E-14	66.1	4.1	0.70	93.8	5.8			
17PG008z_1	-72.73	-46.46	313	434	3.2	48.1	5.40E-12	3.11E-13	1.95E-12	8.20E-14	5.67E-13	6.41E-15	75.2	4.0	0.79	95.5	4.9	73.6	13.6	
17PG008z_2				773	3.4	39.6	1.03E-11	3.72E-13	3.67E-12	1.27E-13	8.25E-13	1.24E-14	57.6	2.0	0.76	75.6	2.8			
17PG008z_3				792	1.8	34.8	5.58E-12	2.31E-13	2.37E-12	1.37E-13	3.26E-13	3.85E-15	41.4	1.6	0.72	57.6	2.3			
17PG008z_4				710	2.3	38.1	6.16E-12	4.36E-13	3.01E-12	1.64E-13	4.40E-13	7.08E-15	50.1	3.2	0.74	67.8	4.2			
17PG009z_1	-72.61	-46.80	335	148	4.5	46.9	2.51E-12	6.32E-14	1.42E-12	3.84E-14	8.27E-14	8.95E-16	22.7	0.6	0.79	28.6	0.7	n.r. ⁵		
17PG009z_2				175	6.4	50.1	4.26E-12	5.55E-14	2.09E-12	5.09E-14	3.40E-13	3.83E-15	55.7	0.9	0.80	69.8	2.8			
17PG009z_3				235	6.3	50.2	5.54E-12	8.97E-14	3.11E-12	5.33E-14	4.30E-13	4.86E-15	53.3	0.9	0.81	66.0	1.2			
17PG009z_4				176	2.6	39.2	1.68E-12	2.95E-14	1.04E-12	2.77E-14	4.20E-14	4.60E-16	17.1	0.3	0.75	22.8	0.5			
17PG011z_1	-72.10	-46.57	320	230	2.7	36.3	2.01E-12	3.60E-14	2.78E-12	5.20E-14	2.50E-13	2.99E-15	73.0	1.3	0.72	101.8	2.1	118.0	13.0	
17PG011z_2				784	1.9	36.6	5.45E-12	1.20E-13	3.67E-12	6.59E-14	7.89E-13	8.61E-15	96.9	2.0	0.73	131.9	2.8			
17PG011z_3				572	3.6	43.1	7.39E-12	3.59E-13	5.67E-12	1.32E-13	1.04E-12	1.15E-14	92.4	3.8	0.76	120.9	5.0			
17PG013z_1	-72.72	-46.46	203	1138	2.2	35.6	9.60E-12	4.12E-13	3.15E-12	1.67E-13	6.97E-13	1.12E-14	52.5	2.2	0.74	70.9	2.7	79.5	7.9	
17PG013z_2				674	3.5	40.2	8.98E-12	3.14E-13	4.06E-12	1.23E-13	8.58E-13	9.88E-15	67.2	2.2	0.76	87.8	2.7			
17PG013z_3				1033	0.8	27.4	3.39E-12	1.08E-13	1.26E-12	6.10E-14	3.17E-13	3.97E-15	67.0	2.0	0.62	107.0	4.8			
17PG013z_4				522	1.0	29.5	1.96E-12	1.59E-13	1.11E-12	1.47E-13	1.55E-13	1.82E-15	54.6	3.9	0.68	80.5	6.3			
17PG015z_1	-72.93	-46.54	231	1244	5.6	51.9	2.67E-11	1.43E-12	1.10E-11	3.98E-13	3.74E-13	4.38E-15	10.0	0.5	0.81	12.4	0.6	9.5	2.2	
17PG015z_2				739	3.2	42.8	9.12E-12	1.38E-12	3.64E-12	2.98E-13	9.89E-14	1.20E-15	7.8	1.1	0.78	10.1	1.5			
17PG015z_3				792	1.5	34.6	4.37E-12	3.39E-13	2.49E-12	1.33E-13	4.17E-14	5.34E-16	6.6	0.4	0.70	9.4	0.7			
17PG015z_4				959	1.6	35.8	5.08E-12	4.54E-13	5.26E-12	4.38E-13	3.74E-14	4.82E-16	4.7	0.3	0.70	6.6	0.5			
17PG016z_1	-72.98	-46.52	190	1476	2.4	41.0	1.37E-11	6.33E-13	6.16E-12	2.58E-13	2.70E-13	3.40E-15	14.0	0.6	0.76	18.3	0.8	15.4	3.1	
17PG016z_2				1132	3.1	39.5	1.29E-11	5.71E-13	7.23E-12	2.01E-13	2.65E-13	3.32E-15	14.2	0.6	0.76	18.6	0.8			
17PG016z_3				1881	2.7	42.0	1.94E-11	9.48E-13	8.17E-12	2.45E-13	2.68E-13	3.30E-15	9.8	0.5	0.75	13.1	0.6			
17PG016z_4				632	2.8	41.9	6.71E-12	1.78E-13	2.81E-12	1.05E-13	8.44E-14	1.04E-15	8.9	0.2	0.76	11.7	0.3			
17PG017z_1	-73.05	-46.52	133	2138	1.5	32.3	1.22E-11	3.85E-13	5.88E-12	2.04E-13	1.33E-13	1.67E-15	7.7	0.2	0.70	11.0	0.4	9.2	1.1	
17PG017z_2				2151	2.1	38.5	1.73E-11	4.57E-13	7.97E-12	2.80E-13	1.62E-13	1.95E-15	6.6	0.2	0.75	8.8	0.2			
17PG017z_3				1789	1.1	31.6	7.38E-12	2.03E-13	3.27E-12	1.21E-13	6.60E-14	7.74E-16	6.3	0.2	0.69	9.2	0.3			
17PG017z_4				550	1.2	30.7	2.32E-12	7.75E-14	1.53E-12	1.36E-13	1.81E-14	2.11E-16	5.3	0.2	0.67	7.8	0.4			
17PG018z_1	-73.09	-46.49	135	1626	1.7	36.1	8.34E-12	1.88E-13	1.38E-11	3.96E-13	2.46E-13	2.93E-15	16.6	0.3	0.71	23.3	0.6	21.6	5.0	
17PG018z_2				573	20.8	76.9	4.38E-11	1.05E-12	2.75E-11	5.73E-13	1.08E-12	1.17E-14	16.7	0.4	0.86	19.3	0.5			
17PG018z_3				619	9.4	58.6	2.19E-11	4.98E-13	1.12E-11	3.19E-13	3.90E-13	3.93E-15	12.5	0.3	0.82	15.1	0.3			
17PG018z_4				925	3.9	49.1	1.29E-11	2.30E-13	1.03E-11	2.57E-13	4.37E-13	4.68E-15	22.3	0.4	0.78	28.6	0.6			
17PG019z_1	-73.15	-46.50	155	879	5.9	51.5	1.84E-11	3.60E-13	1.47E-11	2.29E-13	2.37E-13	2.50E-15	8.4	0.2	0.79	10.6	0.2	10.1	0.5	
17PG019z_4				1262	3.3	45.2	1.49E-11	3.11E-13	1.12E-11	2.87E-13	1.66E-13	1.73E-15	7.4	0.2	0.77	9.7	0.2			

Sample_Aliq uot	Longitu de (°)	Latitu de (°)	Elevatio n (m)	eU ¹ (ppm)	mass ² (µg)	ser ³ (µm)	U _{total} (mol)	U _{total} 1 (mol)	232Th (mol)	232Th 1 (mol)	4He (mol)	4He 1 (mol)	Uncorr.		Ft ⁴	Corr. age (Ma)	Corr. Age 1 (Ma)	Mean age (Ma)	Mean age 1 (Ma)
													age (Ma)	Age 1 (Ma)					
17PG020z_1	-73.21	-46.47	60	367	11.0	58.6	1.37E-11	3.71E-13	1.42E-11	3.23E-13	3.39E-13	3.72E-15	15.6	0.4	0.82	19.0	0.5	18.8	1.5
17PG020z_2				424	6.6	50.1	9.19E-12	1.89E-13	1.13E-11	1.78E-13	1.96E-13	1.99E-15	13.0	0.2	0.78	16.5	0.3		
17PG020z_3				400	3.0	36.1	4.11E-12	8.32E-14	4.08E-12	1.02E-13	8.68E-14	8.98E-16	13.4	0.3	0.70	19.1	0.6		
17PG020z_4				233	1.2	28.3	1.01E-12	3.06E-14	7.69E-13	2.94E-14	2.03E-14	2.01E-16	13.3	0.4	0.64	20.8	0.6		
17PG021z_1	-73.29	-46.39	28	115	1.7	37.8	7.00E-13	2.73E-14	5.34E-13	3.07E-14	6.08E-15	7.72E-17	5.8	0.2	0.72	8.0	0.3	6.9	0.7
17PG021z_2				385	3.6	41.3	4.56E-12	1.17E-13	5.20E-12	1.30E-13	3.83E-14	4.01E-16	5.2	0.1	0.81	6.4	0.1		
17PG021z_3				278	1.8	31.8	1.85E-12	4.70E-14	1.29E-12	4.74E-14	1.23E-14	1.30E-16	4.5	0.1	0.68	6.5	0.2		
VG11-LL- 03_1	-73.22	-46.79	995	452	1.8	35.7	3.12E-12	7.30E-14	1.27E-12	3.60E-14	2.36E-14	2.80E-16	5.4	0.1	0.71	7.59	0.18	7.42	0.35
VG11-LL- 03_2				378	3.1	44.8	4.38E-12	8.00E-14	2.28E-12	3.90E-14	3.47E-14	3.76E-16	5.5	0.1	0.77	7.18	0.16		
VG11-LL- 03_3				476	3.7	44.2	6.41E-12	1.61E-13	3.88E-12	7.98E-14	5.66E-14	6.47E-16	6.0	0.2	0.76	7.93	0.19		
VG11-LL- 03_4				407*	4.3*	-	6.55E-12	1.55E-13	3.44E-12	6.98E-14	5.03E-14	5.69E-16	5.3	0.1	0.76	7.01	0.20		
VG11-LL- 04_1	-73.22	-46.79	1197	786	2.6	38.7	7.22E-12	3.74E-13	5.83E-12	1.92E-13	5.90E-14	7.34E-16	5.4	0.2	0.73	7.40	0.33	7.71	0.28
VG11-LL- 04_2				1169	2.3	38.8	9.95E-12	3.14E-13	5.09E-12	1.72E-13	8.45E-14	1.07E-15	5.9	0.2	0.73	8.16	0.26		
VG11-LL- 04_3				369	2.8	44.7	4.13E-12	8.49E-14	9.82E-13	3.78E-14	3.19E-14	3.94E-16	5.7	0.1	0.76	7.47	0.17		
VG11-LL- 04_4				298	4.6	47.6	4.95E-12	1.03E-13	3.42E-12	3.52E-14	4.50E-14	5.31E-16	6.1	0.1	0.78	7.87	0.20		
VG11-LL- 05_1	-73.22	-46.78	722	1700	2.6	42.3	1.64E-11	4.02E-13	9.56E-12	1.71E-13	1.55E-13	1.72E-15	6.5	0.2	0.75	8.66	0.27	8.08	0.59
VG11-LL- 05_2				776	4.0	48.4	1.17E-11	5.25E-13	6.09E-12	1.74E-13	1.07E-13	1.20E-15	6.4	0.3	0.78	8.16	0.32		
VG11-LL- 05_3				527	1.7	36.6	3.34E-12	2.32E-13	1.91E-12	7.13E-14	2.48E-14	2.64E-16	5.1	0.3	0.71	7.16	0.44		
VG11-LL- 05_4				19	4.0	50.0	2.36E-13	1.56E-14	3.90E-13	2.09E-14	1.71E-15	2.28E-17	4.1	0.2	0.78	5.22	0.28		
VG11-LL- 06_1	-73.24	-46.74	1351	270	62.6	111.7	6.58E-11	4.32E-12	2.24E-11	6.39E-13	6.41E-13	7.17E-15	7.1	0.4	0.91	7.81	0.47	6.73	0.96
VG11-LL- 06_2				197	36.9	104.1	2.62E-11	1.57E-12	1.90E-11	6.06E-13	2.35E-13	2.68E-15	6.0	0.3	0.90	6.68	0.34		
VG11-LL- 06_3				167	17.0	80.0	1.02E-11	1.65E-12	7.37E-12	2.85E-13	9.97E-14	1.08E-15	6.6	1.0	0.87	7.69	1.09		
VG11-LL- 06_4				631	32.2	97.7	7.68E-11	6.35E-12	3.75E-11	2.57E-12	5.32E-13	6.18E-15	4.9	0.4	0.89	5.48	0.43		
VG11-LL- 07_1	-73.23	-46.74	1150	165	4.9	48.1	2.95E-12	2.12E-13	1.90E-12	9.82E-14	2.46E-14	2.94E-16	5.7	0.4	0.78	7.28	0.46	6.33	0.90
VG11-LL- 07_2				313	3.9	48.4	4.33E-12	2.31E-13	3.48E-12	1.41E-13	2.98E-14	3.59E-16	4.5	0.2	0.78	5.78	0.27		
VG11-LL- 07_3				200	1.9	37.7	1.36E-12	1.09E-13	1.21E-12	6.38E-14	1.12E-14	1.46E-16	5.4	0.4	0.72	7.42	0.53		

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													Uncorr. age (Ma)	Age 1 (Ma)					
VG11-LL-07_4				288	3.6	46.9	3.80E-12	1.35E-13	2.58E-12	6.00E-14	2.33E-14	2.66E-16	4.1	0.1	0.78	5.31	0.18		
VG11-LL-08_1	-73.22	-46.74	1005	363	4.0	45.0	5.53E-12	3.10E-13	2.23E-12	7.72E-14	3.05E-14	3.58E-16	3.9	0.2	0.77	5.11	0.26	5.97	0.53
VG11-LL-08_2				177	7.1	56.7	4.66E-12	1.83E-13	2.59E-12	7.19E-14	3.24E-14	3.69E-16	4.8	0.2	0.81	5.90	0.21		
VG11-LL-08_3				157	6.0	52.9	3.41E-12	1.44E-13	2.30E-12	7.84E-14	2.62E-14	3.34E-16	5.2	0.2	0.80	6.48	0.26		
VG11-LL-08_4				121	9.0	63.4	4.10E-12	1.56E-13	2.21E-12	6.62E-14	3.14E-14	3.60E-16	5.3	0.2	0.83	6.37	0.22		
VG11-LL-09_1	-73.21	-46.75	562	90	2.4	40.1	8.12E-13	4.64E-14	4.83E-13	2.25E-14	4.69E-15	5.65E-17	4.0	0.2	0.74	5.34	0.29	5.25	0.49
VG11-LL-09_2				120	4.6	49.9	2.09E-12	1.14E-13	1.02E-12	2.89E-14	1.06E-14	1.42E-16	3.5	0.2	0.79	4.50	0.22		
VG11-LL-09_3				53	2.9	43.4	5.59E-13	2.90E-14	3.94E-13	1.56E-14	3.68E-15	5.33E-17	4.4	0.2	0.76	5.84	0.29		
VG11-LL-09_4				83	4.8	49.0	1.45E-12	5.55E-14	9.99E-13	6.09E-14	9.14E-15	1.18E-16	4.2	0.2	0.79	5.41	0.20		
VG11-LL-10_1	-73.14	-46.74	327	61	37.6	106.4	8.12E-12	4.08E-13	6.52E-12	2.69E-13	4.80E-14	5.71E-16	3.9	0.2	0.90	4.34	0.19	3.93	0.33
VG11-LL-10_2				249	12.0	72.1	1.08E-11	4.58E-13	7.97E-12	2.49E-13	4.84E-14	6.02E-16	3.0	0.1	0.85	3.51	0.13		
VG11-LL-10_4				65	23.3	91.0	5.49E-12	2.03E-13	3.72E-12	7.18E-14	2.87E-14	3.63E-16	3.5	0.1	0.88	4.01	0.14		
VG12-CM-01_1	-73.30	-46.73	2436	1902	1.5	34.2	9.09E-12	4.36E-13	1.19E-11	5.07E-13	1.12E-13	1.38E-15	7.4	0.3	0.69	10.70	0.44	12.23	1.29
VG12-CM-01_2				2774	1.8	35.0	1.85E-11	7.18E-13	9.64E-12	2.36E-13	2.48E-13	2.93E-15	9.3	0.3	0.70	13.30	0.61		
VG12-CM-01_3				1671	2.4	37.8	1.48E-11	3.41E-13	7.87E-12	1.57E-13	1.75E-13	2.07E-15	8.2	0.2	0.73	11.30	0.34		
VG12-CM-01_4				1733	1.9	33.5	1.10E-11	3.25E-13	1.09E-11	3.30E-13	1.66E-13	1.94E-15	9.6	0.3	0.69	13.75	0.40		
VG12-CM-02_1	-73.30	-46.74	2254	835	2.2	39.0	6.93E-12	3.63E-13	3.57E-12	2.19E-13	6.60E-14	7.01E-16	6.7	0.3	0.73	9.10	0.46	10.66	3.56
VG12-CM-02_2				494	1.3	31.6	2.38E-12	9.85E-14	1.52E-12	1.04E-13	3.98E-14	4.49E-16	11.3	0.4	0.68	16.78	0.64		
VG12-CM-02_3				1385	2.0	38.4	1.07E-11	1.04E-12	3.86E-12	2.03E-13	9.32E-14	9.59E-16	6.3	0.6	0.72	8.71	0.78		
VG12-CM-02_4				262	2.7	42.0	2.70E-12	1.79E-13	1.04E-12	8.05E-14	2.27E-14	2.39E-16	6.0	0.4	0.74	8.11	0.81		
VG12-CM-03_1	-73.29	-46.75	2100	439	2.0	37.2	3.05E-12	2.17E-13	2.48E-12	7.87E-14	4.52E-14	5.61E-16	9.7	0.6	0.71	13.67	0.82	11.72	1.77
VG12-CM-03_2				339	1.3	32.2	1.48E-12	9.93E-14	1.47E-12	6.94E-14	1.90E-14	2.29E-16	8.2	0.5	0.67	12.13	0.82		
VG12-CM-03_3				690	1.5	35.3	4.00E-12	4.73E-13	2.12E-12	1.45E-13	3.74E-14	4.67E-16	6.5	0.7	0.70	9.33	1.02		

Sample_Aliq uot	Longitu de (°)	Latitu de (°)	Elevatio n (m)	eU ¹ (ppm)	mass ² (μg)	ser ³ (μm)	U _{total} (mol)	U _{total} ¹ (mol)	232Th (mol)	232Th 1 (mol)	4He (mol)	4He 1 (mol)	Uncorr.		Ft ⁴	Corr. age (Ma)	Corr. Age 1 (Ma)	Mean age (Ma)	Mean age 1 (Ma)
													Uncorr. age (Ma)	Age 1 (Ma)					
VG12-CM-03_4				2500	1.8	38.2	1.66E-11	1.85E-12	1.08E-11	4.18E-13	8.91E-13	1.07E-14	36.8	3.6	0.72	50.45	5.18		
VG12-CM-04_1	-73.27	-46.74	1843	1147	1.5	34.7	6.26E-12	2.83E-13	3.47E-12	3.53E-13	5.20E-14	5.96E-16	5.8	0.2	0.69	8.31	0.34	8.58	0.61
VG12-CM-04_2				1013	4.3	46.7	1.42E-11	7.20E-13	1.78E-11	8.43E-13	1.57E-13	1.76E-15	6.7	0.3	0.77	8.68	0.38		
VG12-CM-04_3				1802	1.7	35.9	1.05E-11	6.55E-13	9.69E-12	4.88E-13	1.03E-13	1.16E-15	6.3	0.3	0.70	8.94	0.44		
VG12-CM-04_4				1219	2.8	41.8	1.05E-11	5.74E-13	1.78E-11	5.99E-13	8.46E-14	9.67E-16	4.5	0.2	0.74	6.13	0.34		
VG12-CM-05_1	-73.27	-46.74	1645	1921	1.6	35.4	1.16E-11	7.11E-13	5.24E-12	3.12E-13	1.09E-13	1.20E-15	6.6	0.4	0.71	9.29	0.49	8.99	0.56
VG12-CM-05_2				790	2.4	41.4	7.19E-12	3.81E-13	3.93E-12	1.95E-13	6.52E-14	7.36E-16	6.3	0.3	0.75	8.39	0.42		
VG12-CM-05_3				3054	2.2	35.2	2.54E-11	1.58E-12	1.17E-11	5.79E-13	2.23E-13	2.69E-15	6.2	0.4	0.70	8.81	0.51		
VG12-CM-05_4				3887	2.0	35.6	2.90E-11	1.63E-12	1.26E-11	7.55E-13	2.86E-13	3.56E-15	7.0	0.4	0.71	9.88	0.55		
VG12-CM-06_2	-73.26	-46.74	1434	489	6.1	55.5	1.18E-11	1.19E-12	2.84E-12	1.62E-13	9.55E-14	1.19E-15	6.0	0.6	0.81	7.43	0.71	5.48	1.13
VG12-CM-06_3				394	4.6	47.2	7.06E-12	5.71E-13	2.18E-12	1.92E-13	3.41E-14	4.26E-16	3.5	0.3	0.78	4.51	0.34		
VG12-CM-06_4				484	7.8	61.1	1.46E-11	1.09E-12	5.27E-12	2.28E-13	8.45E-14	1.13E-15	4.2	0.3	0.83	5.07	0.34		
VG12-CM-07_1	-73.24	-46.74	1253	69	8.1	59.9	2.05E-12	2.00E-13	1.27E-12	5.90E-14	1.53E-14	2.01E-16	5.1	0.4	0.82	6.23	0.53	6.50	0.60
VG12-CM-07_2				126	7.3	57.7	3.33E-12	1.63E-13	2.22E-12	5.89E-14	2.93E-14	3.78E-16	6.0	0.2	0.82	7.28	0.33		
VG12-CM-07_3				82	6.5	57.7	1.92E-12	4.42E-14	1.31E-12	2.97E-14	1.38E-14	2.02E-16	4.8	0.1	0.82	5.92	0.15		
VG12-CM-07_4				87	5.0	50.6	1.56E-12	1.09E-13	1.17E-12	1.42E-13	1.25E-14	1.60E-16	5.3	0.3	0.79	6.75	0.43		
VG12-CM-08_1	-73.22	-46.74	1016	149	4.8	52.4	2.62E-12	1.84E-13	1.60E-12	8.10E-14	3.07E-14	3.88E-16	8.0	0.5	0.80	10.09	0.61	8.41	1.34
VG12-CM-08_2				173	5.1	52.4	3.22E-12	2.63E-13	2.17E-12	2.13E-13	2.51E-14	2.94E-16	5.3	0.4	0.80	6.66	0.48		
VG12-CM-08_3				146	5.3	53.1	2.64E-12	1.38E-13	2.50E-12	1.10E-13	2.52E-14	2.93E-16	6.1	0.3	0.80	7.64	0.36		
VG12-CM-08_4				216	3.5	45.6	2.68E-12	5.47E-14	2.04E-12	3.49E-14	2.93E-14	3.23E-16	7.2	0.1	0.77	9.44	0.19		
VG12-CM-09_1	-73.21	-46.75	562	79	2.5	42.6	7.46E-13	2.18E-14	3.14E-13	6.06E-14	3.60E-15	4.93E-17	3.4	0.1	0.76	4.53	0.16	4.65	0.41
VG12-CM-09_2				143	6.7	59.1	3.70E-12	1.17E-13	1.45E-12	3.31E-14	1.81E-14	2.09E-16	3.5	0.1	0.82	4.27	0.14		
VG12-CM-09_3				61	3.1	43.1	6.98E-13	1.41E-14	4.24E-13	1.07E-14	4.13E-15	4.71E-17	4.0	0.1	0.76	5.33	0.14		

Sample_Aliq	Longitu	Latitu	Elevatio	eU ¹	mass ²	ser ³	U _{total}	U _{total} ¹	232Th	232Th	4He	4He 1	Uncorr.	Uncorr.		Corr. age	Corr. Age	Mean	Mean age
uot	de (°)	de (°)	n (m)	(ppm)	(μg)	(μm)	(mol)	(mol)	(mol)	1 (mol)	(mol)	(mol)	age (Ma)	Age 1 (Ma)	Ft ⁴	(Ma)	1 (Ma)	age (Ma)	1 (Ma)
VG12-CM-09_4				59	2.0	38.8	4.50E-13	1.32E-14	2.38E-13	6.36E-15	2.10E-15	3.11E-17	3.2	0.1	0.73	4.46	0.16		
VG12-CM-10_1	-73.21	-46.76	469	128	6.5	54.1	3.15E-12	4.65E-14	1.50E-12	2.20E-14	2.00E-14	2.18E-16	4.5	0.1	0.80	5.54	0.11	5.30	0.62
VG12-CM-10_2				108	7.1	59.2	2.81E-12	4.77E-14	1.73E-12	3.75E-14	1.88E-14	2.20E-16	4.6	0.1	0.82	5.57	0.11		
VG12-CM-10_3				112	6.8	58.2	2.89E-12	1.35E-13	1.41E-12	3.54E-14	1.43E-14	1.77E-16	3.5	0.1	0.82	4.24	0.18		
VG12-CM-10_4				100	4.5	51.5	1.68E-12	9.94E-14	8.79E-13	4.83E-14	1.13E-14	1.34E-16	4.7	0.3	0.79	5.90	0.31		

1: Effective uranium; eU=[U]+0.235[Th]; eU calculated using the mass determined geometrically with 3D-He (Glotsch et al., 2019), except for *, where the mass was determined from Zr calibration

5: n.r.=single -grain ages not

2: Mass determined with 3D-He (assumed density of 4.65 g/cm3), except *

3: Sphere-equivalent radius; determined with 3D-He

4: Ft correction factor determined with 3D-He