

Appendix III

Zircon Geochronology Data



Table 1 SHRIMP U-Pb data from detrital zircons of the KDF.

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	$^{207}\text{Pb}^*/^{206}\text{Pb}^{*(1)}$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr			
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%				
1.1	0.05	190	80	0.44	103	3152 ± 33	3110.0 ± 6.5	-1	0.23850	0.41	20.74	1.4	0.6307	1.3	0.956
2.1	0.05	223	120	0.56	112	2965 ± 31	2949.6 ± 6.5	-1	0.21580	0.40	17.38	1.4	0.5841	1.3	0.955
3.1	5.33	144	83	0.59	60.9	2468 ± 31	2940 ± 59	16	0.2145	3.7	13.79	4.0	0.4664	1.5	0.380
4.1	0.04	67	37	0.57	35.3	3077 ± 41	3001 ± 12	-3	0.2228	0.74	18.79	1.8	0.612	1.7	0.913
5.1	0.59	79	35	0.46	34.5	2628 ± 120	3043 ± 13	14	0.2288	0.83	15.87	5.4	0.503	5.4	0.988
6.1	0.22	104	41	0.40	53.8	3021 ± 34	3053.0 ± 8.9	1	0.2301	0.56	18.97	1.5	0.5978	1.4	0.930
7.1	0.63	238	164	0.71	113	2817 ± 29	3020.6 ± 8.5	7	0.2255	0.53	17.04	1.4	0.5480	1.3	0.924
8.1	3.90	87	45	0.53	42.0	2778 ± 35	2694 ± 51	-3	0.1845	3.1	13.70	3.4	0.5387	1.5	0.449
9.1	0.52	227	115	0.52	101	2678 ± 28	3048.2 ± 9.1	12	0.2294	0.57	16.30	1.4	0.5151	1.3	0.911
10.1	0.03	160	98	0.64	70.0	2656 ± 29	2704.9 ± 7.8	2	0.18575	0.47	13.06	1.4	0.5098	1.3	0.942
11.1	0.27	187	76	0.42	84.1	2708 ± 28	2937.4 ± 7.6	8	0.2142	0.47	15.41	1.4	0.5220	1.3	0.939
12.1	0.32	159	183	1.19	57.3	2255 ± 26	2822 ± 10	20	0.1995	0.61	11.52	1.5	0.4187	1.4	0.915
13.1	0.05	76	53	0.73	40.5	3102 ± 37	3076.3 ± 9.4	-1	0.2335	0.59	19.90	1.6	0.6179	1.5	0.933
14.1	0.15	428	176	0.43	214	2957 ± 29	2965.0 ± 5.3	0	0.21786	0.33	17.49	1.3	0.5821	1.2	0.965
15.1	0.00	39	19	0.52	22.9	3371 ± 65	3189 ± 13	-6	0.2507	0.82	23.75	2.6	0.687	2.5	0.949
16.1	1.02	380	226	0.62	187	2900 ± 28	3040 ± 11	5	0.2282	0.66	17.88	1.4	0.5681	1.2	0.877
18.1	0.19	47	31	0.68	23.6	2942 ± 41	2953 ± 14	0	0.2162	0.85	17.24	1.9	0.5783	1.7	0.896
19.1	5.62	663	356	0.56	234	2113 ± 24	2721 ± 81	22	0.1876	4.9	10.03	5.1	0.3878	1.4	0.267
20.1	0.05	33	16	0.49	20.2	3499 ± 50	3405 ± 12	-3	0.2877	0.75	28.60	2.0	0.721	1.9	0.927
23.1	0.03	148	103	0.72	77.7	3071 ± 32	3068.0 ± 6.5	0	0.23230	0.41	19.55	1.4	0.6103	1.3	0.955
24.1	0.10	135	78	0.60	71.9	3112 ± 33	3039.9 ± 7.4	-2	0.2283	0.46	19.53	1.4	0.6204	1.4	0.947
25.1	0.10	370	93	0.26	187	2976 ± 29	3045.0 ± 4.5	2	0.22900	0.28	18.52	1.2	0.5866	1.2	0.973
26.1	0.21	182	178	1.01	93.2	3006 ± 31	3014.8 ± 7.6	0	0.2247	0.47	18.41	1.4	0.5941	1.3	0.939
27.1	0.04	151	92	0.63	79.9	3097 ± 33	3062.2 ± 7.8	-1	0.2315	0.49	19.68	1.4	0.6168	1.3	0.940
28.1	1.01	257	155	0.62	125	2874 ± 30	3011 ± 17	5	0.2241	1.1	17.37	1.7	0.5619	1.3	0.771
29.1	0.04	138	84	0.63	76.9	3219 ± 34	3221.1 ± 6.9	0	0.2558	0.44	22.84	1.4	0.6476	1.4	0.952
30.1	0.85	1232	1071	0.90	370	1917 ± 20	2424 ± 40	21	0.1570	2.4	7.50	2.7	0.3464	1.2	0.453
31.1	0.08	122	81	0.69	55.9	2761 ± 31	2714.0 ± 9.1	-2	0.1868	0.55	13.77	1.5	0.5347	1.4	0.930
32.1	2.38	487	354	0.75	202	2490 ± 25	2981 ± 25	16	0.2200	1.6	14.30	2.0	0.4715	1.2	0.611

Grain.Spot	²⁰⁶ Pb _c ⁽¹⁾	U	Th	²³² Th/ ²³⁸ U	²⁰⁶ Pb*	²⁰⁶ Pb/ ²³⁸ U ⁽¹⁾	²⁰⁷ Pb/ ²⁰⁶ Pb ⁽¹⁾	Disc.	²⁰⁷ Pb*/ ²⁰⁶ Pb* ⁽¹⁾	²⁰⁷ Pb*/ ²³⁸ U ⁽¹⁾	²⁰⁶ Pb*/ ²³⁸ U ⁽¹⁾	err corr	
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%		
33.1	0.25	521	423	0.84	212	2495 ± 25	2665.6 ± 6.6	6	0.18138	0.40	11.82	1.2	0.949
34.1	0.41	128	32	0.25	65.9	3014 ± 33	3126.6 ± 8.8	4	0.2410	0.55	19.80	1.4	0.927
35.1	0.13	34	10	0.31	17.4	3014 ± 46	2969 ± 15	-2	0.2185	0.92	17.95	1.9	0.901
36.1	0.48	131	27	0.22	73.1	3217 ± 35	3183.6 ± 8.8	-1	0.2498	0.56	22.29	1.4	0.927
37.1	1.84	167	101	0.62	79.2	2787 ± 32	2820 ± 29	1	0.1992	1.8	14.86	2.3	0.612
38.1	0.04	34	24	0.73	18.5	3158 ± 48	3054 ± 14	-3	0.2303	0.88	20.07	2.1	0.908
39.1	0.05	189	82	0.45	105	3228 ± 33	3206.0 ± 5.6	-1	0.25338	0.36	22.70	1.3	0.964
40.1	0.01	135	86	0.66	67.8	2970 ± 37	2912.0 ± 9.8	-2	0.2108	0.61	17.01	1.7	0.932
41.1	0.13	233	78	0.35	118	2983 ± 31	2998 ± 20	1	0.2224	1.3	18.05	1.8	0.716
42.1	0.03	165	75	0.47	89.7	3155 ± 34	3053 ± 12	-3	0.2302	0.75	20.04	1.6	0.879
43.1	0.03	182	76	0.43	89.3	2916 ± 30	2934 ± 13	1	0.2137	0.81	16.85	1.5	0.847
44.1	0.02	152	92	0.62	81.7	3127 ± 38	3058.2 ± 8.1	-2	0.2309	0.51	19.87	1.6	0.949
45.1	0.25	51	37	0.75	24.6	2862 ± 35	3067 ± 12	7	0.2322	0.72	17.89	1.7	0.901
46.1	0.07	57	69	1.24	31.5	3176 ± 41	3156 ± 11	-1	0.2455	0.67	21.55	1.8	0.926
47.1	4.81	65	44	0.70	30.9	2737 ± 37	3038 ± 58	10	0.2280	3.6	16.63	4.0	0.416
48.1	0.00	153	86	0.59	82.5	3148 ± 33	3066.8 ± 6.5	-3	0.23213	0.41	20.15	1.4	0.956
49.1	-	90	55	0.63	49.4	3191 ± 40	3095.4 ± 8.5	-3	0.2363	0.53	20.87	1.7	0.947
50.1	0.02	237	116	0.51	123	3047 ± 30	3070.4 ± 5.4	1	0.23266	0.34	19.38	1.3	0.966
51.1	0.04	57	52	0.95	29.9	3090 ± 41	3063 ± 12	-1	0.2316	0.72	19.64	1.8	0.919
52.1	1.32	150	66	0.46	73.1	2869 ± 31	3016 ± 18	5	0.2248	1.1	17.37	1.8	0.762
53.1	0.03	107	54	0.52	49.6	2780 ± 35	2745 ± 14	-1	0.1903	0.87	14.15	1.8	0.875

Errors are 1σ; Pb_c and Pb* indicate the common and radiogenic portions, respectively. Error in standard calibration was 0.43% (not included in above errors, but required when comparing data from different mounts). (1) Common Pb corrected using measured ²⁰⁴Pb.

Table 2 SHRIMP U-Pb data of detrital zircons of the BVF.

Grain.Spot	²⁰⁶ Pb _c ⁽¹⁾	U	Th	²³² Th/ ²³⁸ U	²⁰⁶ Pb*	²⁰⁶ Pb/ ²³⁸ U ⁽¹⁾	²⁰⁷ Pb/ ²⁰⁶ Pb ⁽¹⁾	Disc.	Total ²³⁸ U/ ²⁰⁶ Pb	Total ²⁰⁷ Pb/ ²⁰⁶ Pb	²³⁸ U/ ²⁰⁶ Pb* ⁽¹⁾	²⁰⁷ Pb*/ ²⁰⁶ Pb* ⁽¹⁾	²⁰⁷ Pb*/ ²³⁸ U ⁽¹⁾	²⁰⁶ Pb*/ ²³⁸ U ⁽¹⁾	err corr					
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%	±%	±%	±%						
1.1	1.06	3088	448	0.15	277	633.3 ± 7	1772 ± 32	64	9.58	1.1	0.1176	1.4	9.69	1.2	0.1084	1.7	1.543	2.10.1032	1.2	0.552
2.1	46.48	138	56	0.42	136	3083 ± 200	3412 ± 290	10	0.873	1.6	0.6827	0.32	1.63	8.2	0.289	18	24.4	200.613	8.2	0.406
3.1	0.79	105	41	0.40	55.3	3051 ± 39	3007 ± 15	-1	1.639	1.6	0.2306	0.66	1.652	1.6	0.2236	0.91	18.66	1.80.6054	1.6	0.868
4.1	0.99	979	958	1.01	178	1229 ± 13	2291 ± 12	46	4.713	1.2	0.15407	0.4	4.76	1.2	0.14529	0.68	4.208	1.40.2101	1.2	0.866
5.1	2.01	145	77	0.55	59.5	2468 ± 31	2847 ± 19	13	2.101	1.5	0.2204	0.65	2.144	1.5	0.2025	1.2	13.02	1.90.4664	1.5	0.788
6.1	0.15	57	30	0.54	30.1	3091 ± 47	3073 ± 15	-1	1.623	1.9	0.2343	0.89	1.625	1.9	0.233	0.93	19.77	2.10.615	1.9	0.900
7.1	0.00	90	66	0.76	50	3222 ± 44	3121 ± 12	-3	1.542	1.7	0.2402	0.75	1.542	1.7	0.2402	0.75	21.47	1.90.648	1.7	0.916
8.1	5.42	432	261	0.63	144	2018 ± 25	2964 ± 37	32	2.573	1.3	0.2658	1.2	2.72	1.4	0.2177	2.3	11.03	2.70.3676	1.4	0.524
9.1	0.74	220	113	0.53	104	2815 ± 32	2954 ± 12	5	1.813	1.4	0.223	0.58	1.826	1.4	0.2164	0.77	16.34	1.60.5476	1.4	0.875
10.1	6.98	787	329	0.43	161	1292 ± 16	2791 ± 22	54	4.191	1.2	0.25785	0.38	4.505	1.3	0.1957	1.3	5.99	1.90.222	1.3	0.710
11.1	0.03	74	58	0.81	36.1	2895 ± 41	2898 ± 14	0	1.763	1.8	0.2094	0.83	1.764	1.8	0.2091	0.83	16.34	1.90.5669	1.8	0.903
12.1	0.67	118	79	0.70	46.2	2414 ± 32	2982 ± 16	19	2.187	1.6	0.2261	0.77	2.202	1.6	0.2201	0.99	13.79	1.90.4542	1.6	0.850
13.1	0.00	47	21	0.47	26.3	3255 ± 56	3306 ± 16	2	1.523	2.2	0.2699	0.99	1.523	2.2	0.2699	0.99	24.44	2.40.657	2.2	0.911
14.1	0.16	49	41	0.86	25.7	3062 ± 51	3081 ± 17	1	1.642	2.1	0.2357	0.99	1.645	2.1	0.2343	1	19.64	2.30.608	2.1	0.895
15.1	0.21	184	121	0.68	73.8	2467 ± 32	2765 ± 13	11	2.14	1.6	0.1946	0.73	2.145	1.6	0.1927	0.8	12.39	1.80.4662	1.6	0.890
16.1	2.61	301	151	0.52	98.6	2036 ± 24	2924 ± 16	30	2.622	1.3	0.2356	0.5	2.693	1.4	0.2124	1	10.88	1.70.3714	1.4	0.801
17.1	2.92	269	77	0.30	112	2484 ± 32	2953 ± 78	16	2.065	1.3	0.2422	3	2.127	1.6	0.216	4.8	14.02	5.10.4701	1.6	0.309
18.1	0.00	88	39	0.46	45.9	3067 ± 39	2954 ± 10	-4	1.641	1.6	0.2164	0.64	1.641	1.6	0.2164	0.64	18.18	1.70.6093	1.6	0.928
19.1	0.12	245	24	0.10	112	2760 ± 30	2864.3 ± 6.9	4	1.869	1.3	0.20576	0.4	1.871	1.3	0.20474	0.43	15.09	1.40.5345	1.3	0.952
20.2	0.14	431	208	0.50	218	2978 ± 30	3262.3 ± 5	9	1.701	1.3	0.26379	0.3	1.703	1.3	0.26259	0.32	21.26	1.30.5872	1.3	0.970
21.1	3.42	432	84	0.20	143	2046 ± 23	2814 ± 28	27	2.586	1.3	0.229	0.95	2.677	1.3	0.1986	1.7	10.23	2.20.3735	1.3	0.602
22.1	0.00	108	38	0.36	49.2	2737 ± 34	2782 ± 10	2	1.891	1.5	0.1946	0.62	1.891	1.5	0.1946	0.62	14.19	1.60.5289	1.5	0.924
23.1	0.08	229	118	0.53	114	2951 ± 31	3046.9 ± 6.4	3	1.721	1.3	0.22995	0.38	1.723	1.3	0.22926	0.4	18.35	1.40.5805	1.3	0.958
24.1	0.02	101	59	0.61	49.5	2900 ± 39	2901 ± 31	0	1.76	1.7	0.2096	1.9	1.76	1.7	0.2095	1.9	16.41	2.50.5682	1.7	0.658
25.1	1.18	160	52	0.34	70.1	2633 ± 31	2930 ± 13	10	1.959	1.4	0.2237	0.5	1.982	1.4	0.2131	0.79	14.83	1.60.5045	1.4	0.874
26.1	0.01	252	123	0.50	134	3102 ± 32	3139.6 ± 5.7	1	1.618	1.3	0.24306	0.36	1.618	1.3	0.24298	0.36	20.7	1.40.618	1.3	0.965

Grain.Spot	²⁰⁶ Pb _c ⁽¹⁾	U	Th	²³² Th/ ²³⁸ U	²⁰⁶ Pb*	²⁰⁶ Pb/ ²³⁸ U ⁽¹⁾	²⁰⁷ Pb/ ²⁰⁶ Pb ⁽¹⁾	Disc.	Total		Total		²³⁸ U/ ²⁰⁶ Pb*	²⁰⁷ Pb*/ ²⁰⁶ Pb*	²⁰⁷ Pb*/ ²³⁸ U ⁽¹⁾	²⁰⁶ Pb*/ ²³⁸ U ⁽¹⁾	err	corr		
	%								ppm	ppm	ppm	(Ma)							(Ma)	%
27.1	0.01	134	75	0.58	62.9	2813 ± 33	2901.3 ± 8.7	3	1.828	1.4	0.2096	0.53	1.828	1.4	0.2095	0.53	15.8	1.50.547	1.4	0.938
28.1	0.32	33	19	0.60	7.29	1476 ± 29	2676 ± 31	45	3.876	2.2	0.1854	1.6	3.888	2.2	0.1826	1.9	6.47	2.90.2572	2.2	0.764
29.1	-	91	51	0.58	46.2	2991 ± 100	2888 ± 10	-4	1.695	4.2	0.2074	0.63	1.694	4.2	0.2078	0.64	16.91	4.20.59	4.2	0.988
30.1	0.01	488	140	0.30	223	2752 ± 28	2941 ± 4.5	6	1.878	1.2	0.21474	0.28	1.878	1.2	0.21465	0.28	15.76	1.30.5324	1.2	0.976
31.1	1.87	607	274	0.47	186	1932 ± 21	2651 ± 11	27	2.807	1.2	0.19643	0.31	2.861	1.2	0.1797	0.64	8.66	1.40.3495	1.2	0.888
32.1	0.11	44	16	0.38	21.7	2912 ± 45	2900 ± 15	0	1.749	1.9	0.2103	0.9	1.751	1.9	0.2093	0.93	16.48	2.10.571	1.9	0.898
33.1	0.61	349	304	0.90	140	2454 ± 26	2790 ± 7.9	12	2.146	1.3	0.20102	0.36	2.159	1.3	0.19562	0.48	12.49	1.40.4632	1.3	0.936
34.1	1.43	213	77	0.37	102	2810 ± 31	3064.1 ± 9.8	8	1.804	1.3	0.2444	0.4	1.831	1.3	0.2317	0.61	17.45	1.50.5463	1.3	0.911
35.1	-	388	51	0.14	184	2831 ± 29	2871.4 ± 5.1	1	1.814	1.3	0.20559	0.31	1.814	1.3	0.20563	0.31	15.63	1.30.5514	1.3	0.971
36.1	22.02	1053	494	0.49	174	899 ± 23	2489 ± 160	64	5.213	1.3	0.3587	1.7	6.68	2.7	0.163	9.6	3.37	100.1496	2.7	0.276
37.1	0.03	356	180	0.52	150	2577 ± 27	2845.2 ± 6.4	9	2.035	1.3	0.20261	0.38	2.035	1.3	0.20234	0.39	13.71	1.30.4914	1.3	0.956
38.1	0.00	38	36	0.99	19.4	3000 ± 48	3045 ± 15	1	1.688	2	0.2291	0.94	1.688	2	0.2291	0.94	18.71	2.20.593	2	0.905
39.1	0.00	14	5	0.36	6.97	2949 ± 70	2913 ± 26	-1	1.724	3	0.211	1.6	1.724	3	0.211	1.6	16.88	3.30.58	3	0.882
40.1	0.00	251	139	0.57	121	2872 ± 30	2785.4 ± 6.4	-3	1.782	1.3	0.19507	0.39	1.782	1.3	0.19507	0.39	15.09	1.40.5612	1.3	0.958
41.1	0.00	73	38	0.54	32.8	2710 ± 37	2878 ± 20	6	1.914	1.7	0.2065	1.2	1.914	1.7	0.2065	1.2	14.87	2.10.5225	1.7	0.805
42.1	0.00	143	62	0.45	58.1	2497 ± 30	2841 ± 9.1	12	2.113	1.4	0.2018	0.56	2.113	1.4	0.2018	0.56	13.17	1.50.4732	1.4	0.931
43.1	0.40	137	60	0.45	58.1	2582 ± 31	2900 ± 11	11	2.022	1.4	0.2128	0.56	2.03	1.4	0.2093	0.65	14.21	1.60.4926	1.4	0.911
44.1	-	120	42	0.36	56.4	2809 ± 33	2863.9 ± 9.1	2	1.832	1.4	0.2045	0.56	1.831	1.4	0.2047	0.56	15.41	1.60.546	1.4	0.933
45.1	0.00	27	32	1.21	11.9	2667 ± 48	2712 ± 20	2	1.952	2.2	0.1865	1.2	1.952	2.2	0.1865	1.2	13.18	2.50.512	2.2	0.874
46.1	0.00	28	11	0.39	13.3	2836 ± 50	2858 ± 18	1	1.81	2.2	0.2039	1.1	1.81	2.2	0.2039	1.1	15.54	2.40.553	2.2	0.887
47.1	18.83	216	203	0.97	91.3	2161 ± 47	2666 ± 180	19	2.038	1.3	0.349	3.1	2.511	2.6	0.181	11	10	110.398	2.6	0.231
48.1	0.02	217	150	0.72	102	2809 ± 30	2868.3 ± 6.8	2	1.831	1.3	0.20539	0.42	1.832	1.3	0.20523	0.42	15.45	1.40.546	1.3	0.954
49.1	0.02	167	98	0.60	82.1	2911 ± 32	3011.4 ± 7.2	3	1.751	1.4	0.22447	0.44	1.752	1.4	0.2242	0.45	17.65	1.40.5708	1.4	0.951
50.1	0.02	345	299	0.90	162	2808 ± 29	2852.5 ± 5.4	2	1.832	1.3	0.20346	0.33	1.832	1.3	0.20325	0.33	15.3	1.30.5458	1.3	0.967
51.1	0.16	70	20	0.30	33.4	2829 ± 38	2849 ± 13	1	1.812	1.6	0.2043	0.72	1.815	1.6	0.2029	0.78	15.41	1.80.551	1.6	0.904
52.1	0.02	132	50	0.39	68.8	3055 ± 35	3057.5 ± 7.8	0	1.649	1.4	0.231	0.48	1.649	1.4	0.2308	0.49	19.29	1.50.6064	1.4	0.947
53.1	0.04	127	51	0.41	61.9	2899 ± 34	2905.4 ± 8.7	0	1.761	1.4	0.2104	0.53	1.761	1.4	0.21	0.54	16.44	1.50.5677	1.4	0.938

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	Total $^{238}\text{U}/^{206}\text{Pb}$	Total $^{207}\text{Pb}/^{206}\text{Pb}$	$^{238}\text{U}/^{206}\text{Pb}^{*(1)}$	$^{207}\text{Pb}^*/^{206}\text{Pb}^{*(1)}$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr					
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%	±%	±%	±%						
54.1	0.33	171	111	0.67	80.8	2817 ± 31	2888.1 ± 8.8	2	1.819	1.4	0.21073	0.47	1.825	1.4	0.2077	0.54	15.7	1.50.5479	1.4	0.930
55.1	0.02	90	43	0.49	44.5	2940 ± 37	2905 ± 10	-1	1.73	1.5	0.2101	0.63	1.731	1.5	0.21	0.63	16.73	1.70.5778	1.5	0.926
56.1	0.00	83	38	0.47	41.8	2977 ± 38	2914 ± 11	-2	1.704	1.6	0.2112	0.66	1.704	1.6	0.2112	0.66	17.09	1.70.5869	1.6	0.924
57.1	-	51	24	0.47	25.5	2946 ± 42	2935 ± 14	0	1.728	1.8	0.2126	0.82	1.726	1.8	0.2138	0.87	17.08	2.0.579	1.8	0.900
58.1	0.00	109	40	0.38	56.8	3059 ± 36	2968 ± 8.9	-3	1.647	1.5	0.2183	0.55	1.647	1.5	0.2183	0.55	18.28	1.60.6073	1.5	0.937
59.1	0.02	223	210	0.97	114	3021 ± 32	2932.3 ± 6.4	-3	1.673	1.3	0.21365	0.39	1.673	1.3	0.2135	0.39	17.6	1.40.5978	1.3	0.959
60.1	0.07	240	107	0.46	99.7	2546 ± 28	2944 ± 6.8	14	2.063	1.3	0.21566	0.41	2.065	1.3	0.21505	0.42	14.36	1.40.4843	1.3	0.952
61.1	0.03	194	27	0.14	96.4	2945 ± 32	2847.7 ± 7.2	-3	1.727	1.4	0.20288	0.44	1.727	1.4	0.20265	0.44	16.18	1.40.579	1.4	0.951
62.1	0.02	111	59	0.55	52.4	2822 ± 34	2788.9 ± 9.9	-1	1.82	1.5	0.1956	0.6	1.82	1.5	0.1955	0.6	14.81	1.60.5493	1.5	0.927
63.1	2.78	150	54	0.37	47.2	1962 ± 25	2999 ± 27	35	2.733	1.4	0.2472	0.83	2.811	1.5	0.2226	1.7	10.92	2.20.3557	1.5	0.667
64.1	4.43	355	285	0.83	92.5	1643 ± 20	3028 ± 33	46	3.293	1.3	0.2658	1.3	3.445	1.4	0.2266	2.1	9.07	2.50.2902	1.4	0.551
65.1	0.02	257	107	0.43	125	2882 ± 30	2994 ± 7.6	4	1.773	1.3	0.222	0.47	1.774	1.3	0.2218	0.47	17.24	1.40.5638	1.3	0.941
66.1	0.07	107	45	0.44	52.8	2933 ± 35	2973 ± 9.4	1	1.734	1.5	0.2196	0.57	1.735	1.5	0.2189	0.58	17.4	1.60.5762	1.5	0.932
67.1	0.81	69	23	0.34	32.4	2792 ± 39	2926 ± 19	5	1.83	1.7	0.2198	0.85	1.845	1.7	0.2126	1.2	15.89	2.10.5419	1.7	0.827
68.1	0.04	327	254	0.80	140	2610 ± 28	2909 ± 12	10	2.003	1.3	0.2109	0.76	2.004	1.3	0.2105	0.76	14.48	1.50.4991	1.3	0.866
69.1	0.05	132	80	0.63	55.7	2575 ± 31	2788.6 ± 9.6	8	2.036	1.4	0.1959	0.58	2.037	1.4	0.1954	0.58	13.23	1.60.4909	1.4	0.927
70.1	0.03	218	103	0.49	108	2940 ± 32	2899.5 ± 6.7	-1	1.73	1.3	0.20946	0.41	1.73	1.3	0.20922	0.41	16.67	1.40.5779	1.3	0.955
71.1	0.00	141	70	0.52	69.7	2926 ± 34	2884.2 ± 8.6	-1	1.741	1.4	0.2073	0.53	1.741	1.4	0.2073	0.53	16.41	1.50.5744	1.4	0.939

Errors are 1σ; Pb_c and Pb* indicate the common and radiogenic portions, respectively. Error in standard calibration was 0.43% (not included in above errors, but required when comparing data from different mounts). (1) Common Pb corrected using measured ^{204}Pb .

Table 3 SHRIMP U-Pb data for detrital zircons of the GWF.

Grain.Spot	$^{206}\text{Pb}_c$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	Total		Total		$^{238}\text{U}/^{206}\text{Pb}^*^{(1)}$	$^{207}\text{Pb}^*/^{206}\text{Pb}^*^{(1)}$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err	corr			
	%								ppm	ppm	ppm	(Ma)							(Ma)	%	±%
1.1	-	87	57	0.68	42.8	2923 ± 22	2973.4 ± 7.7	2	1.743	0.93	0.2189	0.48	1.743	0.93	0.219	0.48	17.33	1	0.5738	0.93	0.891
2.1	0.23	46	29	0.65	10	1451 ± 17	2642 ± 19	45	3.951	1.3	0.1809	1	3.961	1.3	0.1788	1.1	6.23	1.7	0.2525	1.3	0.753
3.1	0.02	218	171	0.81	108	2935 ± 16	2956 ± 5	1	1.734	0.67	0.21688	0.31	1.734	0.67	0.21666	0.31	17.23	0.74	0.5766	0.67	0.908
4.1	0.01	455	414	0.94	198	2637 ± 12	2933.3 ± 3.8	10	1.979	0.57	0.21375	0.24	1.979	0.57	0.21363	0.24	14.885	0.62	0.5053	0.57	0.923
5.1	0.15	35	12	0.35	17.8	2967 ± 32	2958 ± 13	0	1.708	1.4	0.2182	0.75	1.711	1.4	0.2169	0.81	17.48	1.6	0.5845	1.4	0.859
6.1	0.04	91	70	0.80	34	2338 ± 18	2902.4 ± 9.1	19	2.286	0.93	0.21	0.55	2.287	0.93	0.2096	0.56	12.64	1.1	0.4373	0.93	0.855
7.1	0.02	129	126	1.01	65	2981 ± 20	2958.7 ± 6.6	-1	1.701	0.82	0.21716	0.41	1.701	0.82	0.21701	0.41	17.59	0.91	0.5878	0.82	0.894
8.1	0.24	454	232	0.53	70.3	1065.6 ± 5.8	2776.8 ± 6.8	62	5.55	0.59	0.1962	0.36	5.563	0.59	0.19405	0.42	4.809	0.72	0.1797	0.59	0.818
9.1	0.05	171	97	0.59	76.1	2695 ± 17	3145.2 ± 5.9	14	1.926	0.75	0.24427	0.37	1.926	0.75	0.24384	0.37	17.45	0.84	0.5191	0.75	0.897
10.1	0.02	76	75	1.02	40.3	3112 ± 25	3069.7 ± 9.4	-1	1.611	1	0.2328	0.59	1.611	1	0.2326	0.59	19.9	1.2	0.6206	1	0.864
11.1	0.45	496	129	0.27	118	1569.7 ± 8.3	2745.6 ± 7	43	3.611	0.59	0.19444	0.34	3.627	0.6	0.1904	0.43	7.238	0.73	0.2757	0.6	0.814
12.1	0.01	212	56	0.27	109	3015 ± 17	3057.6 ± 5.2	1	1.677	0.72	0.23089	0.32	1.677	0.72	0.23079	0.32	18.98	0.79	0.5964	0.72	0.912
13.1	0.02	118	33	0.29	58.4	2936 ± 21	2958.8 ± 7.2	1	1.733	0.87	0.21724	0.44	1.734	0.87	0.21703	0.44	17.26	0.98	0.5768	0.87	0.891
14.1	0.04	362	259	0.74	108	1918 ± 10	2843 ± 14	33	2.884	0.61	0.2024	0.83	2.885	0.61	0.2021	0.83	9.657	1	0.3466	0.61	0.592
15.1	0.07	85	42	0.51	42.5	2953 ± 23	2949.4 ± 8.5	0	1.72	0.98	0.2164	0.51	1.721	0.98	0.2158	0.53	17.29	1.1	0.581	0.98	0.880
16.1	0.02	77	44	0.59	37.9	2923 ± 24	2880.4 ± 9.1	-1	1.743	1	0.207	0.56	1.743	1	0.2068	0.56	16.35	1.2	0.5736	1	0.875
17.1	0.01	139	56	0.42	72.5	3065 ± 20	3067.9 ± 6.2	0	1.643	0.8	0.23236	0.39	1.643	0.8	0.23229	0.39	19.5	0.89	0.6088	0.8	0.901
18.1	0.03	115	55	0.50	58.3	2992 ± 21	2941.2 ± 7.4	-2	1.692	0.89	0.21496	0.45	1.693	0.89	0.21467	0.46	17.48	10	0.5907	0.89	0.887
19.1	0.05	74	54	0.75	39.4	3111 ± 26	3052.7 ± 9	-2	1.611	1.1	0.2306	0.55	1.612	1.1	0.2301	0.56	19.68	1.2	0.6202	1.1	0.885
20.1	0.05	105	43	0.43	37.5	2248 ± 17	3195.1 ± 8.1	30	2.396	0.92	0.252	0.5	2.397	0.92	0.2516	0.51	14.48	1.1	0.4172	0.92	0.874
21.1	0.08	83	48	0.59	34.3	2522 ± 20	2942.7 ± 8.9	14	2.087	0.96	0.2156	0.54	2.089	0.96	0.2149	0.55	14.18	1.1	0.4787	0.96	0.868
22.1	0.00	67	37	0.57	32.4	2875 ± 29	2966 ± 13	3	1.779	1.3	0.218	0.82	1.779	1.3	0.218	0.82	16.89	1.5	0.5621	1.3	0.839
23.1	0.01	214	76	0.37	105	2899 ± 17	2963.5 ± 5.8	2	1.761	0.74	0.21779	0.36	1.761	0.74	0.21767	0.36	17.04	0.83	0.5677	0.74	0.900
24.1	0.10	135	67	0.51	73	3140 ± 22	3198.5 ± 7	2	1.592	0.9	0.2531	0.43	1.593	0.9	0.2522	0.44	21.82	1	0.6276	0.9	0.899
25.1	0.09	103	38	0.39	52.2	3000 ± 23	2927.7 ± 8.2	-2	1.686	0.94	0.2137	0.49	1.687	0.94	0.2129	0.51	17.4	1.1	0.5927	0.94	0.879

Grain.Spot	²⁰⁶ Pb _c ⁽¹⁾	U	Th	²³² Th/ ²³⁸ U	²⁰⁶ Pb*	²⁰⁶ Pb/ ²³⁸ U ⁽¹⁾	²⁰⁷ Pb/ ²⁰⁶ Pb ⁽¹⁾	Disc.	Total ²³⁸ U/ ²⁰⁶ Pb	Total ²⁰⁷ Pb/ ²⁰⁶ Pb	²³⁸ U/ ²⁰⁶ Pb*	²⁰⁷ Pb*/ ²⁰⁶ Pb*	²⁰⁷ Pb*/ ²⁰⁶ Pb*	²⁰⁷ Pb*/ ²³⁸ U ⁽¹⁾	²⁰⁶ Pb*/ ²³⁸ U ⁽¹⁾	err	corr				
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%	±%	±%	±%	±%						
26.1	0.02	341	61	0.18	170	2951 ± 15	2977.6 ± 4.3	1	1.722	0.62	0.2198	0.26	1.723	0.62	0.21958	0.26	17.57	0.67	0.5805	0.62	0.920
27.1	0.57	139	103	0.77	18	897.9 ± 7.6	2757 ± 16	67	6.653	0.9	0.1968	0.74	6.691	0.9	0.1918	0.95	3.952	1.3	0.1495	0.9	0.690
28.1	0.21	203	365	1.86	34.6	1164.9 ± 8.1	2875 ± 11	59	5.038	0.76	0.2079	0.62	5.049	0.76	0.206	0.67	5.626	1	0.1981	0.76	0.752
29.1	0.12	156	96	0.63	68.8	2665 ± 17	2873.1 ± 7.2	7	1.951	0.79	0.20688	0.42	1.953	0.79	0.20584	0.45	14.53	0.91	0.512	0.79	0.871
30.1	0.32	255	142	0.58	112	2663 ± 15	2906.5 ± 6	8	1.949	0.68	0.21296	0.32	1.955	0.68	0.21013	0.37	14.82	0.78	0.5114	0.68	0.878
31.1	0.05	591	24	0.04	195	2099.2 ± 9.8	2631.7 ± 4.3	20	2.597	0.55	0.17815	0.25	2.598	0.55	0.17771	0.26	9.432	0.61	0.3849	0.55	0.903
32.1	0.03	50	28	0.57	24.8	2936 ± 29	2962 ± 11	1	1.733	1.2	0.2177	0.68	1.734	1.2	0.2174	0.68	17.29	1.4	0.5768	1.2	0.875
33.1	0.01	119	50	0.44	59.3	2954 ± 21	2948.9 ± 7.6	0	1.72	0.9	0.2158	0.47	1.72	0.9	0.2157	0.47	17.29	1	0.5813	0.9	0.887
34.1	0.02	375	83	0.23	142	2351 ± 12	2879.2 ± 4.5	18	2.272	0.6	0.20676	0.28	2.273	0.6	0.20662	0.28	12.536	0.66	0.44	0.6	0.907
35.1	0.10	513	345	0.70	123	1583.9 ± 8.6	2723.1 ± 5.3	42	3.587	0.61	0.18866	0.3	3.59	0.61	0.18782	0.32	7.213	0.69	0.2785	0.61	0.885
36.1	0.08	38	14	0.37	18.6	2876 ± 33	2938 ± 13	2	1.777	1.4	0.215	0.81	1.779	1.4	0.2143	0.83	16.61	1.6	0.5622	1.4	0.863
37.1	0.48	871	701	0.83	100	808.6 ± 4.4	2869.7 ± 6.7	72	7.447	0.57	0.20964	0.31	7.483	0.58	0.20541	0.41	3.785	0.71	0.13364	0.58	0.813
38.1	0.05	45	27	0.61	22.5	2964 ± 32	2972 ± 12	0	1.712	1.3	0.2193	0.74	1.713	1.3	0.2188	0.74	17.61	1.5	0.5837	1.3	0.873
39.1	0.10	55	41	0.78	14.5	1734 ± 19	3137 ± 14	45	3.237	1.2	0.2434	0.86	3.24	1.2	0.2425	0.89	10.32	1.5	0.3086	1.2	0.814
40.1	0.03	49	27	0.58	28	3303 ± 32	3202 ± 13	-3	1.494	1.2	0.2531	0.82	1.494	1.2	0.2528	0.83	23.33	1.5	0.6693	1.2	0.829
41.1	0.10	21	9	0.44	12.1	3302 ± 50	3210 ± 16	-3	1.493	1.9	0.2549	1	1.495	1.9	0.254	1	23.43	2.2	0.669	1.9	0.881
42.1	0.00	57	24	0.44	29.1	2990 ± 30	2930 ± 11	-2	1.695	1.2	0.2131	0.69	1.695	1.2	0.2131	0.69	17.34	1.4	0.59	1.2	0.873
43.1	0.00	126	78	0.64	66.4	3082 ± 21	3118.8 ± 6.8	1	1.632	0.88	0.2398	0.43	1.632	0.88	0.2398	0.43	20.27	0.97	0.6129	0.88	0.899
44.1	0.11	176	140	0.82	68	2387 ± 15	3044.1 ± 6.8	22	2.229	0.76	0.22985	0.4	2.232	0.76	0.22887	0.42	14.14	0.87	0.4481	0.76	0.875
45.1	0.04	69	47	0.70	35.1	2990 ± 26	2926.2 ± 9.7	-2	1.694	1.1	0.213	0.59	1.695	1.1	0.2127	0.6	17.3	1.2	0.5901	1.1	0.876
46.1	0.28	394	429	1.13	45.3	808.5 ± 5.3	3086.5 ± 7.9	74	7.463	0.7	0.2375	0.44	7.484	0.7	0.235	0.49	4.33	0.86	0.13363	0.7	0.818
47.1	0.13	44	15	0.35	20.9	2833 ± 29	2971 ± 12	5	1.809	1.3	0.2198	0.71	1.812	1.3	0.2187	0.75	16.64	1.5	0.552	1.3	0.859
48.1	0.06	135	63	0.48	58.6	2632 ± 18	2867 ± 10	8	1.982	0.81	0.2056	0.61	1.983	0.81	0.2051	0.62	14.26	1	0.5042	0.81	0.795
49.1	0.03	41	24	0.62	22.7	3239 ± 35	3223 ± 11	0	1.532	1.4	0.2563	0.69	1.532	1.4	0.2561	0.69	23.05	1.5	0.6527	1.4	0.891

Errors are 1σ; Pb_c and Pb* indicate the common and radiogenic portions, respectively. Error in Standard calibration was 0.20% (not included in above errors but required when comparing data from different mounts). ⁽¹⁾: Common Pb corrected using measured ²⁰⁴Pb.

Table 4 SHRIMP U-Pb data for detrital zircons of the STF.

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$ %	U ppm	Th ppm	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$ ppm	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$ (Ma)	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$ (Ma)	Disc. %	$^{207}\text{Pb}^*/^{206}\text{Pb}^{*(1)}$ ±%	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$ ±%	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$ ±%	err corr			
1.1	0.06	39	21	0.56	19.6	2975 ± 40	2881 ± 14	-3	0.2068	0.87	16.73	1.9	0.5865	1.7	0.889
2.1	0.13	452	420	0.96	134	1902 ± 17	2737.2 ± 5.5	31	0.18943	0.34	8.964	1.1	0.3432	1	0.950
3.1	0.06	122	69	0.58	58.5	2861 ± 28	2933.2 ± 8.2	2	0.2136	0.51	16.45	1.3	0.5586	1.2	0.924
4.1	1.46	2125	250	0.12	223	732.7 ± 6.7	2230 ± 11	67	0.1402	0.63	2.327	1.2	0.1204	0.97	0.837
5.1	0.08	137	131	0.99	57.1	2551 ± 25	2762.6 ± 8.6	8	0.1924	0.52	12.88	1.3	0.4855	1.2	0.917
6.1	0.16	354	136	0.40	83	1554 ± 15	2749.5 ± 7.6	43	0.19085	0.46	7.172	1.2	0.2726	1.1	0.921
7.1	0.03	288	189	0.68	134	2782 ± 24	2786.2 ± 5.8	0	0.19517	0.36	14.52	1.1	0.5396	1.1	0.950
8.1	0.06	175	168	0.99	70.3	2471 ± 24	2849 ± 7.9	13	0.20282	0.49	13.07	1.3	0.4672	1.2	0.922
9.1	0.33	352	201	0.59	143	2482 ± 21	2865.2 ± 5.9	13	0.20485	0.37	13.26	1.1	0.4696	1	0.944
10.1	0.00	35	16	0.48	17.9	3029 ± 44	3082 ± 15	2	0.2344	0.93	19.39	2	0.6	1.8	0.891
11.1	0.00	64	39	0.63	25.1	2421 ± 30	2861 ± 12	15	0.2043	0.77	12.84	1.7	0.4557	1.5	0.890
12.1	0.56	90	57	0.66	30.4	2131 ± 24	3147 ± 13	32	0.244	0.8	13.18	1.6	0.3917	1.3	0.859
13.1	2.20	432	378	0.90	97.8	1479 ± 14	2841 ± 11	48	0.2018	0.68	7.175	1.3	0.2578	1.1	0.840
14.1	0.11	479	296	0.64	158	2094 ± 18	2782.9 ± 5.2	25	0.19478	0.32	10.31	1.1	0.3837	1	0.955
15.1	0.03	180	125	0.72	82.8	2767 ± 26	2882 ± 11	4	0.207	0.66	15.3	1.3	0.5362	1.2	0.871
16.1	0.49	296	166	0.58	128	2627 ± 23	3212.4 ± 5.8	18	0.2544	0.37	17.65	1.1	0.503	1.1	0.946
17.1	0.19	741	603	0.84	251	2143 ± 18	2661.5 ± 4.9	19	0.18094	0.3	9.84	1	0.3943	0.99	0.958
18.1	0.06	602	238	0.41	124	1381 ± 13	2707.3 ± 5.9	49	0.18602	0.36	6.127	1.1	0.2389	1	0.943
19.1	0.06	53	24	0.48	26.2	2927 ± 37	2916 ± 12	0	0.2114	0.77	16.75	1.7	0.5747	1.6	0.897
20.1	0.38	351	138	0.41	81.9	1543 ± 15	2854.8 ± 8.8	46	0.2035	0.54	7.589	1.2	0.2704	1.1	0.892
21.1	0.03	124	29	0.24	64.6	3065 ± 31	2920.3 ± 8.5	-5	0.2119	0.53	17.79	1.4	0.6087	1.3	0.924
22.1	1.74	217	179	0.85	67.6	1965 ± 20	2867 ± 12	31	0.205	0.77	10.08	1.4	0.3565	1.2	0.832
23.1	0.31	170	83	0.51	81.7	2850 ± 27	2988.9 ± 8.2	5	0.2211	0.51	16.95	1.3	0.5561	1.2	0.919
24.1	0.32	356	205	0.60	143	2473 ± 22	2752.5 ± 6.8	10	0.19119	0.41	12.33	1.1	0.4677	1.1	0.933
24.1	0.09	318	147	0.48	138	2634 ± 23	2779.3 ± 6.6	5	0.19435	0.4	13.53	1.2	0.5048	1.1	0.936

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	$^{207}\text{Pb}^*/^{206}\text{Pb}^*(1)$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr			
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%				
25.1	1.02	187	129	0.72	63.9	2143 ± 22	2863 ± 12	25	0.2046	0.73	11.12	1.4	0.3944	1.2	0.854
26.1	0.00	275	117	0.44	127	2781 ± 25	2783 ± 6.3	0	0.19478	0.39	14.49	1.2	0.5394	1.1	0.944
27.1	0.02	85	35	0.43	41.3	2891 ± 33	2917 ± 10	1	0.2115	0.65	16.5	1.6	0.5658	1.4	0.910
28.1	0.45	175	73	0.43	49.9	1839 ± 19	2795 ± 12	34	0.1962	0.71	8.93	1.4	0.33	1.2	0.861
29.1	2.76	357	291	0.84	122	2114 ± 20	2791 ± 20	24	0.1957	1.2	10.47	1.6	0.388	1.1	0.674
30.1	0.21	97	83	0.88	34.2	2216 ± 27	2965 ± 15	25	0.2179	0.92	12.32	1.7	0.4102	1.4	0.840
31.1	-	71	55	0.80	34.5	2895 ± 36	2925 ± 15	1	0.2126	0.94	16.61	1.8	0.5668	1.6	0.858
32.1	0.04	580	217	0.39	261	2720 ± 23	2778.8 ± 4.8	2	0.19429	0.29	14.06	1.1	0.525	1	0.962
33.1	0.54	486	245	0.52	145	1917 ± 17	2891.8 ± 7.1	34	0.20822	0.44	9.94	1.1	0.3464	1.1	0.924
34.1	0.00	133	64	0.50	61	2757 ± 29	2760.5 ± 9.4	0	0.1921	0.57	14.14	1.4	0.5337	1.3	0.916
35.1	0.11	510	246	0.50	121	1569 ± 15	2751.6 ± 6.8	43	0.1911	0.41	7.263	1.1	0.2757	1	0.930
36.1	0.15	310	242	0.81	109	2205 ± 21	2720.4 ± 8.9	19	0.1875	0.54	10.54	1.2	0.4078	1.1	0.899
37.1	0.03	220	142	0.67	91.2	2538 ± 25	2766.7 ± 8.2	8	0.19286	0.5	12.83	1.3	0.4825	1.2	0.922
38.1	0.05	46	32	0.72	22.2	2891 ± 43	2847 ± 16	-2	0.2026	0.98	15.81	2.1	0.566	1.8	0.882
39.1	0.12	216	95	0.45	78.2	2269 ± 23	2721.7 ± 9.4	17	0.1877	0.57	10.91	1.3	0.4218	1.2	0.901
40.1	0.01	261	154	0.61	130	2943 ± 27	2940.2 ± 6.5	0	0.21454	0.4	17.11	1.2	0.5785	1.1	0.944
41.1	0.00	156	31	0.20	73.4	2818 ± 29	2783.7 ± 8.6	-1	0.1949	0.53	14.73	1.4	0.5483	1.3	0.922
42.1	0.21	396	327	0.85	105	1739 ± 17	2765.6 ± 7.7	37	0.19273	0.47	8.227	1.2	0.3096	1.1	0.919
43.1	0.00	285	102	0.37	128	2713 ± 25	2774.4 ± 6.5	2	0.19376	0.4	13.98	1.2	0.5232	1.1	0.943
44.1	0.18	318	165	0.54	95.3	1928 ± 19	2892.2 ± 7.7	33	0.20827	0.47	10.01	1.2	0.3486	1.1	0.921
45.1	0.16	306	375	1.26	128	2545 ± 24	2730.9 ± 7.4	7	0.18871	0.45	12.59	1.2	0.484	1.1	0.928
46.1	0.15	466	277	0.61	198	2589 ± 23	2867.8 ± 5.5	10	0.20517	0.34	13.98	1.1	0.4942	1.1	0.952
47.1	0.00	57	35	0.63	28.4	2950 ± 41	2944 ± 14	0	0.2151	0.85	17.21	1.9	0.58	1.7	0.898
48.1	0.54	193	72	0.39	52.5	1766 ± 19	2661 ± 13	34	0.1808	0.81	7.86	1.5	0.3152	1.2	0.836
49.1	0.62	124	66	0.55	49.7	2459 ± 27	3117 ± 12	21	0.2396	0.72	15.34	1.5	0.4644	1.3	0.880
50.1	0.06	69	46	0.68	32.9	2831 ± 36	2855 ± 14	1	0.2035	0.85	15.47	1.8	0.5513	1.6	0.882
51.1	0.16	662	419	0.65	198	1926 ± 17	2738.6 ± 5.9	30	0.18959	0.36	9.103	1.1	0.3482	1	0.944

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	$^{207}\text{Pb}^*/^{206}\text{Pb}^*(1)$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr			
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%				
52.1	0.21	310	328	1.09	109	2202 ± 21	2872.4 ± 7.4	23	0.20576	0.45	11.55	1.2	0.4073	1.1	0.927
53.1	0.18	111	72	0.67	56.3	2989 ± 34	2997 ± 10	0	0.2222	0.65	18.08	1.6	0.5899	1.4	0.908
54.1	0.08	422	245	0.60	105	1644 ± 16	2849.9 ± 7	42	0.20292	0.43	8.126	1.2	0.2904	1.1	0.929
55.1	0.00	151	59	0.40	77.3	3006 ± 32	2976.7 ± 8.9	-1	0.2195	0.55	17.98	1.4	0.594	1.3	0.923
56.1	0.03	88	47	0.55	44.2	2966 ± 36	2908 ± 12	-2	0.2103	0.72	16.94	1.7	0.5843	1.5	0.905
57.1	0.02	192	329	1.77	90.3	2814 ± 29	2830.4 ± 8.9	1	0.2005	0.55	15.13	1.4	0.5472	1.3	0.918

Errors are 1σ ; Pb_c and Pb^* indicate the common and radiogenic portions, respectively. Error in Standard calibration was 0.28% (not included in above errors but required when comparing data from different mounts). ⁽¹⁾: Common Pb corrected using measured ^{204}Pb .



Table 5 SHRIMP U-Pb data for detrital zircons of the TKF.

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	$^{207}\text{Pb}^*/^{206}\text{Pb}^{*(1)}$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr					
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%						
1.1	0.00	77	25	0.33	35.6	2773.8	37.0	2958	11	6	0.2169	0.7	16.08	1.8	0.5377	1.6	0.929
2.1	0.00	126	60	0.50	58.0	2768.2	33.8	2766	9	0	0.1928	0.5	14.26	1.6	0.5364	1.5	0.942
3.1	2.57	491	164	0.35	145.1	1861.4	21.8	2675	12	30	0.1824	0.7	8.42	1.5	0.3348	1.3	0.876
4.1	0.00	98	87	0.92	45.8	2794.2	35.7	2786	10	0	0.1952	0.6	14.60	1.7	0.5426	1.6	0.935
5.1	0.19	177	165	0.96	59.0	2107.4	26.0	2752	10	23	0.1911	0.6	10.19	1.6	0.3867	1.4	0.925
6.1	0.00	85	39	0.47	37.5	2661.0	35.6	2792	11	5	0.1958	0.7	13.80	1.8	0.5110	1.6	0.923
8.1	0.18	187	110	0.61	73.7	2425.8	28.9	2762	8	12	0.1924	0.5	12.12	1.5	0.4569	1.4	0.942
9.1	0.04	155	89	0.60	71.7	2782.7	33.1	2782	8	0	0.1946	0.5	14.49	1.5	0.5398	1.5	0.948
10.1	1.46	441	168	0.39	130.9	1887.7	21.9	2616	11	28	0.1760	0.6	8.26	1.5	0.3402	1.3	0.904
11.1	0.00	67	34	0.52	30.6	2761.1	39.9	2757	13	0	0.1917	0.8	14.13	2.0	0.5347	1.8	0.907
12.1	0.20	168	96	0.59	34.6	1380.8	18.7	2672	13	4	0.1821	0.8	6.00	1.7	0.2389	1.5	0.885
13.1	0.04	81	37	0.47	37.9	2793.3	38.3	2892	12	3	0.2083	0.7	15.57	1.8	0.5423	1.7	0.921
14.1	0.00	52	24	0.48	24.0	2796.5	41.7	2774	15	-1	0.1937	0.9	14.50	2.1	0.5431	1.8	0.894
15.1	0.03	123	45	0.38	48.8	2441.8	31.6	2764	10	12	0.1925	0.6	12.23	1.7	0.4605	1.6	0.927
16.1	0.03	69	39	0.59	30.7	2683.0	37.4	2794	12	4	0.1961	0.8	13.95	1.9	0.5162	1.7	0.913
17.1	0.38	138	68	0.51	62.4	2717.7	34.7	2867	10	5	0.2050	0.6	14.82	1.7	0.5244	1.6	0.933
18.1	1.79	162	235	1.50	31.0	1271.4	17.4	2786	20	54	0.1951	1.2	5.87	1.9	0.2180	1.5	0.773
19.1	0.11	76	38	0.52	22.2	1874.8	30.8	2758	19	32	0.1918	1.2	8.93	2.2	0.3375	1.9	0.849
20.1	0.74	278	100	0.37	64.5	1532.4	20.5	2806	15	45	0.1975	0.9	7.31	1.8	0.2683	1.5	0.850
21.1	1.42	186	157	0.87	17.0	642.6	10.8	2726	38	76	0.1881	2.3	2.72	2.9	0.1048	1.8	0.609
22.1	0.09	54	27	0.53	26.5	2921.5	42.1	2766	14	-6	0.1928	0.9	15.24	2.0	0.5733	1.8	0.903
23.1	0.00	66	36	0.56	32.1	2894.8	39.7	2783	12	-4	0.1947	0.7	15.22	1.9	0.5668	1.7	0.917
24.1	0.03	60	29	0.50	29.0	2861.6	40.9	2784	13	-3	0.1949	0.8	15.01	1.9	0.5588	1.8	0.913
25.1	0.04	133	62	0.48	65.5	2929.6	35.6	2770	9	-6	0.1932	0.5	15.33	1.6	0.5753	1.5	0.940
26.1	0.18	178	89	0.52	78.0	2651.2	31.7	2756	9	4	0.1916	0.6	13.44	1.6	0.5087	1.5	0.935
27.1	0.03	113	76	0.69	55.0	2891.5	36.4	2795	10	-3	0.1963	0.6	15.32	1.7	0.5660	1.6	0.933

Grain.Spot	²⁰⁶ Pb _c ⁽¹⁾	U	Th	²³² Th/ ²³⁸ U	²⁰⁶ Pb*	²⁰⁶ Pb/ ²³⁸ U ⁽¹⁾	²⁰⁷ Pb/ ²⁰⁶ Pb ⁽¹⁾	Disc.	²⁰⁷ Pb*/ ²⁰⁶ Pb* ⁽¹⁾	²⁰⁷ Pb*/ ²³⁸ U ⁽¹⁾	²⁰⁶ Pb*/ ²³⁸ U ⁽¹⁾	err corr					
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%						
28.1	0.03	60	31	0.53	29.8	2930.5	42.3	2798	13	-5	0.1966	0.8	15.60	2.0	0.5755	1.8	0.911
29.1	0.06	117	103	0.91	56.5	2879.2	36.1	2766	10	-4	0.1928	0.6	14.96	1.7	0.5630	1.6	0.935
30.1	0.00	95	50	0.54	48.0	2972.1	39.0	2786	11	-7	0.1951	0.7	15.76	1.8	0.5857	1.6	0.929
31.1	0.01	535	70	0.13	264.8	2930.9	31.2	2877	4	-2	0.2064	0.3	16.38	1.4	0.5756	1.3	0.979
32.1	0.09	607	320	0.55	179.2	1902.8	21.6	2462	6	23	0.1606	0.4	7.60	1.4	0.3433	1.3	0.960
33.1	0.11	659	308	0.48	185.5	1825.3	20.7	2381	6	23	0.1531	0.3	6.91	1.4	0.3273	1.3	0.966
34.1	0.01	295	190	0.67	139.1	2817.2	31.3	2784	6	-1	0.1950	0.4	14.73	1.4	0.5481	1.4	0.967
35.1	0.00	186	124	0.69	88.2	2830.3	32.9	2784	7	-2	0.1949	0.4	14.81	1.5	0.5512	1.4	0.955
37.1	0.00	141	76	0.56	68.0	2864.2	34.5	2771	8	-3	0.1934	0.5	14.92	1.6	0.5594	1.5	0.945
37.1	0.01	122	87	0.74	59.1	2887.8	35.4	2776	9	-4	0.1940	0.5	15.11	1.6	0.5651	1.5	0.941
38.1	0.00	114	82	0.74	54.8	2858.3	35.6	2793	9	-2	0.1959	0.6	15.07	1.6	0.5580	1.5	0.939
39.1	0.03	163	96	0.61	76.6	2812.2	33.2	2771	8	-1	0.1934	0.5	14.58	1.5	0.5469	1.5	0.949
40.1	0.08	92	53	0.59	40.9	2677.9	35.0	2768	11	3	0.1930	0.7	13.71	1.7	0.5150	1.6	0.921
41.1	0.17	44	19	0.46	22.2	2990.0	46.7	2769	17	-8	0.1931	1.0	15.71	2.2	0.5901	2.0	0.885
42.1	0.04	51	23	0.47	24.1	2808.6	41.7	2768	14	-1	0.1930	0.9	14.53	2.0	0.5460	1.8	0.906
43.1	0.00	80	37	0.48	39.8	2949.6	40.3	2769	12	-7	0.1931	0.7	15.45	1.9	0.5802	1.7	0.919
44.1	0.36	493	149	0.31	176.3	2236.5	25.2	2767	10	19	0.1929	0.6	11.03	1.5	0.4147	1.3	0.916
45.1	0.01	128	61	0.49	62.5	2893.1	35.4	2765	9	-5	0.1927	0.6	15.05	1.6	0.5664	1.5	0.940
46.1	0.00	74	38	0.53	36.4	2926.1	39.5	2779	12	-5	0.1943	0.7	15.39	1.8	0.5745	1.7	0.922
47.1	0.03	97	69	0.74	48.6	2955.4	38.3	2772	14	-7	0.1934	0.8	15.51	1.8	0.5816	1.6	0.887
49.1	0.00	279	237	0.88	133.9	2861.6	32.2	2785	6	-3	0.1951	0.4	15.03	1.4	0.5588	1.4	0.962
50.1	0.02	151	88	0.60	72.8	2870.0	34.4	2750	8	-4	0.1909	0.5	14.76	1.6	0.5608	1.5	0.947
51.1	0.06	564	514	0.94	177.1	2007.7	22.7	2439	6	18	0.1585	0.4	7.98	1.4	0.3654	1.3	0.966
52.1	0.10	638	253	0.41	189.8	1916.0	21.7	2511	6	24	0.1654	0.4	7.89	1.4	0.3461	1.3	0.965
53.1	0.02	172	72	0.43	80.4	2797.7	33.0	2770	9	-1	0.1933	0.5	14.48	1.5	0.5434	1.5	0.938
54.1	0.02	496	228	0.48	203.6	2519.7	27.6	2702	5	7	0.1854	0.3	12.23	1.4	0.4783	1.3	0.975
55.1	0.72	550	206	0.39	92.9	1149.8	14.0	2532	10	55	0.1674	0.6	4.51	1.5	0.1953	1.3	0.913

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	$^{207}\text{Pb}^*/^{206}\text{Pb}^{*(1)}$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr					
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	$\pm\%$	$\pm\%$	$\pm\%$						
56.1	0.03	90	51	0.58	43.0	2843.9	37.0	2777	12	-2	0.1940	0.7	14.84	1.8	0.5545	1.6	0.911
57.1	0.04	77	36	0.49	37.5	2893.5	39.1	2771	12	-4	0.1934	0.7	15.11	1.8	0.5665	1.7	0.921
58.1	0.00	163	72	0.46	77.3	2836.7	33.7	2775	8	-2	0.1939	0.5	14.78	1.5	0.5528	1.5	0.950
59.1	0.03	116	88	0.78	55.2	2832.4	36.1	2770	11	-2	0.1932	0.7	14.70	1.7	0.5517	1.6	0.918
60.1	0.09	211	91	0.44	82.5	2413.1	29.1	2751	8	12	0.1910	0.5	11.96	1.5	0.4540	1.4	0.943
61.1	2.17	836	306	0.38	170.8	1348.4	16.0	2480	13	46	0.1623	0.8	5.21	1.5	0.2327	1.3	0.867
62.1	0.00	66	27	0.43	32.4	2897.6	41.1	2800	13	-3	0.1969	0.8	15.40	1.9	0.5675	1.8	0.916
63.1	0.12	101	51	0.52	47.4	2801.5	36.7	2766	11	-1	0.1928	0.7	14.47	1.8	0.5443	1.6	0.918
64.1	0.00	214	132	0.64	102.7	2863.4	32.9	2785	9	-3	0.1951	0.5	15.04	1.5	0.5592	1.4	0.937
65.1	0.00	75	38	0.52	37.7	2960.3	40.8	2771	12	-7	0.1934	0.7	15.54	1.9	0.5828	1.7	0.919

Errors are 1σ ; Pb_c and Pb^* indicate the common and radiogenic portions, respectively. Error in Standard calibration was 0.50% (not included in above errors but required when comparing data from different mounts). ⁽¹⁾: Common Pb corrected using measured ^{204}Pb .

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Table 6 SHRIMP U-Pb data for detrital zircons of the BT-VBF.

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	$^{207}\text{Pb}^*/^{206}\text{Pb}^*^{(1)}$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr			
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%				
1.1	0.69	116	81	0.72	44.8	2380 ± 23	2833 ± 16	16	0.2008	0.96	12.37	1.5	0.4466	1.1	0.761
2.1	0.36	180	372	2.14	43.8	1605 ± 14	2892 ± 12	45	0.2082	0.76	8.11	1.2	0.2827	0.99	0.794
3.1	3.96	275	298	1.12	66.2	1537 ± 13	2875 ± 44	47	0.2060	2.7	7.65	2.8	0.2693	0.94	0.330
4.1	0.53	4	3	0.65	2.09	2932 ± 130	2770 ± 61	-6	0.1932	3.7	15.3	6.5	0.576	5.4	0.823
5.1	0.00	64	31	0.50	30.6	2850 ± 33	2776 ± 14	-3	0.1940	0.85	14.87	1.7	0.5559	1.4	0.860
6.1	0.57	131	88	0.69	56.6	2616 ± 26	2892 ± 13	10	0.2083	0.81	14.37	1.4	0.5004	1.2	0.826
7.1	2.68	339	390	1.19	105	1935 ± 14	2827 ± 31	32	0.2001	1.9	9.66	2.1	0.3500	0.84	0.410
8.1	5.98	1276	808	0.65	148	769.8 ± 5.9	1925 ± 120	60	0.1180	6.5	2.06	6.5	0.1268	0.81	0.123
9.1	0.08	26	21	0.83	13.9	3101 ± 54	3004 ± 20	-3	0.2232	1.2	19.02	2.5	0.618	2.2	0.872
10.1	0.44	82	43	0.55	39.7	2883 ± 31	2881 ± 15	0	0.2068	0.92	16.08	1.6	0.5641	1.3	0.820
11.1	0.00	54	27	0.51	25.3	2791 ± 36	2791 ± 15	0	0.1958	0.94	14.62	1.8	0.5417	1.6	0.860
12.1	0.75	94	64	0.71	46.7	2932 ± 29	3144 ± 14	7	0.2437	0.87	19.35	1.5	0.5760	1.2	0.814
13.1	0.00	47	21	0.46	24.7	3066 ± 41	3061 ± 14	0	0.2312	0.88	19.41	1.9	0.609	1.7	0.885
14.1	2.01	182	140	0.79	55.3	1915 ± 17	2888 ± 26	34	0.2078	1.6	9.91	1.9	0.3459	1.0	0.541
15.1	0.00	90	67	0.77	40.6	2728 ± 28	2791 ± 12	2	0.1957	0.73	14.21	1.5	0.5268	1.3	0.867
16.1	0.00	41	17	0.43	23.1	3276 ± 47	3218 ± 18	-2	0.2553	1.1	23.32	2.2	0.662	1.8	0.849
17.1	0.00	61	35	0.60	27.6	2734 ± 35	2776 ± 15	2	0.1939	0.91	14.12	1.8	0.5282	1.6	0.864
18.1	0.08	108	69	0.66	51.0	2829 ± 27	2907 ± 11	3	0.2102	0.65	15.97	1.4	0.5510	1.2	0.877
19.1	0.14	55	36	0.68	27.8	3000 ± 38	2912 ± 15	-3	0.2109	0.93	17.23	1.8	0.5925	1.6	0.863
20.1	0.09	87	60	0.72	42.8	2911 ± 31	2895 ± 12	-1	0.2087	0.73	16.42	1.5	0.5707	1.3	0.873
21.1	0.09	51	30	0.61	25.8	2976 ± 39	2888 ± 15	-3	0.2078	0.95	16.81	1.9	0.5866	1.6	0.866
22.1	0.03	80	40	0.52	37.3	2809 ± 31	2769 ± 13	-1	0.1932	0.80	14.54	1.6	0.5460	1.4	0.864
23.1	0.07	79	31	0.41	37.6	2844 ± 31	2799 ± 13	-2	0.1967	0.80	15.04	1.6	0.5546	1.4	0.862
24.1	0.00	81	41	0.53	39.9	2937 ± 32	2878 ± 18	-2	0.2065	1.1	16.43	1.8	0.5770	1.4	0.784
25.1	0.22	125	86	0.71	57.7	2773 ± 26	2898 ± 11	4	0.2091	0.70	15.49	1.3	0.5375	1.1	0.852
26.1	0.00	92	55	0.62	42.2	2770 ± 29	2763 ± 12	0	0.1924	0.74	14.24	1.5	0.5368	1.3	0.866
27.1	1.23	135	103	0.78	52.2	2371 ± 23	2871 ± 20	17	0.2055	1.2	12.59	1.7	0.4445	1.1	0.681
28.1	0.90	7	6	0.92	3.32	2865 ± 100	2847 ± 68	-1	0.2025	4.2	15.62	6.1	0.560	4.4	0.726
29.1	0.22	159	93	0.60	62.7	2427 ± 22	2893 ± 11	16	0.2083	0.69	13.13	1.3	0.4571	1.1	0.843

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	$^{207}\text{Pb}^*/^{206}\text{Pb}^*^{(1)}$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr			
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%				
30.1	1.80	225	241	1.11	65.5	1848 ± 16	2725 ± 26	32	0.1880	1.6	8.61	1.8	0.3320	0.97	0.526
31.1	-	85	65	0.79	39.7	2800 ± 30	2810 ± 13	0	0.1980	0.82	14.85	1.6	0.5441	1.3	0.852
32.1	0.00	30	14	0.49	14.4	2850 ± 50	2925 ± 20	3	0.2126	1.2	16.30	2.5	0.556	2.2	0.870
33.1	0.15	58	35	0.62	29.0	2951 ± 38	2894 ± 15	-2	0.2085	0.93	16.69	1.9	0.5807	1.6	0.864
34.1	-	68	17	0.26	34.6	3002 ± 35	2978 ± 22	-1	0.2197	1.4	17.96	2.0	0.5931	1.5	0.736
35.1	2.06	265	304	1.18	79.7	1901 ± 17	2856 ± 37	33	0.2037	2.3	9.63	2.5	0.3429	1.0	0.418
36.1	2.23	342	217	0.66	94.2	1757 ± 13	2834 ± 28	38	0.2010	1.7	8.68	1.9	0.3133	0.85	0.442
37.1	0.00	101	49	0.50	47.0	2793 ± 28	2797 ± 12	0	0.1964	0.70	14.69	1.4	0.5424	1.2	0.871
38.1	0.04	85	50	0.61	41.3	2901 ± 32	2889 ± 12	0	0.2078	0.75	16.29	1.5	0.5683	1.3	0.874
39.1	0.95	185	249	1.39	65.9	2216 ± 19	2887 ± 16	23	0.2076	1.0	11.74	1.4	0.4103	1.0	0.711
40.1	0.07	31	17	0.57	15.9	2987 ± 58	2889 ± 20	-3	0.2078	1.2	16.89	2.7	0.589	2.4	0.890
41.1	1.25	111	216	2.00	44.4	2428 ± 25	2889 ± 21	16	0.2079	1.3	13.11	1.8	0.4575	1.2	0.683
42.1	2.24	403	218	0.56	97.5	1569 ± 11	2894 ± 25	46	0.2085	1.6	7.92	1.8	0.2755	0.81	0.461
43.1	0.03	81	43	0.54	38.2	2808 ± 32	2781 ± 13	-1	0.1945	0.81	14.64	1.6	0.5459	1.4	0.868
44.1	0.03	113	51	0.46	49.3	2637 ± 27	2717 ± 12	3	0.1871	0.73	13.04	1.4	0.5054	1.2	0.860
45.1	0.09	97	56	0.59	47.2	2879 ± 30	2895 ± 12	1	0.2087	0.73	16.20	1.5	0.5630	1.3	0.869
46.1	0.21	61	27	0.46	29.7	2888 ± 37	2928 ± 15	1	0.2129	0.90	16.59	1.8	0.5653	1.6	0.868
47.1	0.04	70	41	0.61	32.3	2779 ± 34	2799 ± 14	1	0.1967	0.88	14.62	1.7	0.5389	1.5	0.862
48.1	0.10	80	30	0.39	31.0	2397 ± 32	2896 ± 14	17	0.2087	0.86	12.96	1.8	0.4504	1.6	0.882
50.1	0.00	109	66	0.63	54.0	2939 ± 29	3016 ± 10	3	0.2250	0.64	17.92	1.4	0.5777	1.2	0.889
51.1	0.00	40	33	0.85	19.6	2884 ± 45	2908 ± 18	1	0.2103	1.1	16.36	2.2	0.564	1.9	0.868
52.1	1.03	107	70	0.67	37.6	2187 ± 24	2907 ± 21	25	0.2102	1.3	11.71	1.8	0.4039	1.3	0.703
53.1	0.04	163	93	0.59	75.9	2787 ± 24	2768.2 ± 10.0	-1	0.1930	0.61	14.40	1.2	0.5409	1.1	0.869
54.1	0.04	60	31	0.54	27.5	2763 ± 36	2760 ± 16	0	0.1921	0.97	14.17	1.9	0.5351	1.6	0.858
55.1	0.09	59	37	0.65	29.2	2933 ± 39	2908 ± 15	-1	0.2103	0.94	16.70	1.9	0.5762	1.6	0.868
56.1	0.03	140	88	0.65	68.6	2911 ± 26	2884.1 ± 9.7	-1	0.2072	0.60	16.31	1.3	0.5707	1.1	0.883

Errors are 1σ; Pb_c and Pb* indicate the common and radiogenic portions, respectively. Error in Standard calibration was 0.16% (not included in above errors but required when comparing data from different mounts). ⁽¹⁾: Common Pb corrected using measured ²⁰⁴Pb.

Table 7 SHRIMP U-Pb data for detrital zircons of the PK-VBF.

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	$^{207}\text{Pb}^*/^{206}\text{Pb}^*(1)$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr	
	%	ppm	ppm		ppm	(Ma)	(Ma)		%	±%	±%		±%
1.1	0.06	76	18	0.24	36.9	2898 ± 35	2899 ± 11	0	0.2092	0.65	16.37	1.5	0.918
2.1	0.01	148	99	0.69	70.1	2828 ± 31	2853.3 ± 7.4	1	0.20335	0.46	15.44	1.4	0.948
3.1	0.00	61	54	0.92	30.9	2995 ± 38	2980 ± 11	-1	0.2199	0.67	17.93	1.6	0.920
4.1	5.17	399	231	0.60	132	2008 ± 23	2833 ± 14	29	0.2009	0.86	10.12	1.6	0.840
5.1	0.01	202	120	0.61	112	3222 ± 33	3214.5 ± 5.3	0	0.25474	0.33	22.77	1.4	0.969
6.1	0.03	122	54	0.46	64.7	3097 ± 34	3062.4 ± 8.3	-1	0.2315	0.52	19.68	1.5	0.937
7.1	0.43	189	84	0.46	95.7	2971 ± 31	2976.7 ± 7.2	0	0.21946	0.45	17.72	1.4	0.947
8.1	-	38	23	0.62	21.5	3295 ± 45	3434 ± 11	4	0.2931	0.73	26.97	1.9	0.923
9.1	1.54	393	231	0.61	147	2302 ± 25	3047 ± 11	24	0.2292	0.69	13.56	1.4	0.877
10.1	0.00	20	11	0.59	11.9	3348 ± 55	3381 ± 16	1	0.2833	10	26.6	2.3	0.904
11.1	0.32	326	268	0.85	154	2815 ± 29	2892.3 ± 5.9	3	0.20829	0.36	15.72	1.3	0.962
12.1	0.13	42	36	0.89	21.6	3004 ± 42	2950 ± 14	-2	0.2159	0.86	17.67	1.9	0.895
13.1	0.14	57	47	0.86	9.4	3044 ± 39	2993 ± 12	-2	0.2216	0.74	18.44	1.8	0.908
14.1	0.00	79	96	1.25	39.6	2953 ± 35	2997.4 ± 9.3	1	0.2223	0.58	17.81	1.6	0.931
14.2	0.15	77	34	0.46	39.1	2993 ± 36	3117.6 ± 9.8	4	0.2396	0.62	19.52	1.6	0.924
15.1	-	182	88	0.50	89.3	2909 ± 31	2896.5 ± 6.6	0	0.20884	0.41	16.42	1.4	0.957
16.1	0.76	186	177	0.98	70.5	2338 ± 26	2896 ± 11	19	0.2088	0.67	12.58	1.5	0.897
17.1	0.03	480	10	0.02	242	2975 ± 30	2910 ± 4.2	-2	0.21058	0.26	17.03	1.3	0.979
18.1	0.17	51	48	0.97	25.3	2955 ± 39	2891 ± 14	-2	0.2082	0.83	16.69	1.8	0.893
19.1	5.02	192	218	1.17	90.5	2707 ± 36	3037 ± 75	11	0.228	4.7	16.39	5	0.326
20.1	1.43	348	226	0.67	133	2336 ± 25	2886.2 ± 8.8	19	0.2075	0.54	12.5	1.4	0.921
21.1	-	127	52	0.43	71.2	3235 ± 36	3218.6 ± 7	-1	0.2554	0.45	22.95	1.5	0.953
22.1	8.34	428	566	1.37	37.6	578 ± 10	2773 ± 33	79	0.1936	2	2.505	2.8	0.677
23.1	0.08	78	39	0.51	47	3409 ± 40	3357.1 ± 8.1	-2	0.2789	0.52	26.8	1.6	0.945
24.1	-	26	14	0.54	13.6	3085 ± 49	2982 ± 19	-3	0.2202	1.2	18.63	2.3	0.865
25.1	1.28	295	135	0.47	116	2392 ± 26	2910.7 ± 8.5	18	0.2107	0.53	13.05	1.4	0.925
26.1	0.06	96	51	0.55	46.4	2881 ± 34	2904.3 ± 9.7	1	0.2098	0.6	16.3	1.6	0.924

Grain.Spot	²⁰⁶ Pb _c ⁽¹⁾	U	Th	²³² Th/ ²³⁸ U	²⁰⁶ Pb*	²⁰⁶ Pb/ ²³⁸ U ⁽¹⁾	²⁰⁷ Pb/ ²⁰⁶ Pb ⁽¹⁾	Disc.	²⁰⁷ Pb*/ ²⁰⁶ Pb* ⁽¹⁾	²⁰⁷ Pb*/ ²³⁸ U ⁽¹⁾	²⁰⁶ Pb*/ ²³⁸ U ⁽¹⁾	err corr			
	%	ppm	ppm		ppm	(Ma)	(Ma)	%	±%	±%	±%				
27.1	1.42	209	199	0.99	79.2	2329 ± 26	3066 ± 15	24	0.2321	0.93	13.93	1.6	0.4353	1.3	0.820
28.1	0.06	43	29	0.70	22.9	3083 ± 42	3043 ± 12	-1	0.2288	0.77	19.34	1.9	0.613	1.7	0.911
29.1	0.01	98	36	0.38	49.7	2989 ± 36	2901.5 ± 8.7	-3	0.2095	0.54	17.03	1.6	0.5898	1.5	0.942
30.1	2.25	332	171	0.53	138	2503 ± 27	3028 ± 11	17	0.2266	0.7	14.83	1.5	0.4745	1.3	0.879
31.1	0.05	63	21	0.35	32.3	3023 ± 38	2925 ± 11	-3	0.2125	0.7	17.53	1.7	0.5984	1.6	0.915
32.1	0.04	65	43	0.68	32.4	2945 ± 40	2894 ± 11	-2	0.2085	0.69	16.65	1.8	0.5792	1.7	0.925
33.1	0.01	295	128	0.45	150	3002 ± 31	2993.7 ± 4.9	0	0.22179	0.3	18.14	1.3	0.593	1.3	0.973
34.1	0.03	68	42	0.63	34.4	2969 ± 36	2978 ± 10	0	0.2196	0.64	17.71	1.7	0.5849	1.5	0.922
35.1	0.04	117	75	0.66	57.4	2905 ± 33	2910.5 ± 8.3	0	0.2106	0.51	16.53	1.5	0.5693	1.4	0.941
36.1	2.30	480	101	0.22	186	2351 ± 25	2965.8 ± 8.3	21	0.218	0.52	13.23	1.4	0.4402	1.3	0.925
37.1	0.59	52	19	0.39	16.4	2017 ± 29	3117 ± 17	35	0.2395	1.1	12.13	2	0.3673	1.6	0.836
38.1	0.02	149	113	0.79	74.7	2968 ± 32	2936.4 ± 7	-1	0.21405	0.43	17.26	1.4	0.5847	1.4	0.952
39.1	5.24	323	357	1.14	129	2360 ± 27	2838 ± 15	17	0.2014	0.91	12.28	1.6	0.4422	1.3	0.828
40.1	-	84	28	0.35	43.4	3044 ± 36	3001.2 ± 9.2	-1	0.2228	0.58	18.54	1.6	0.6035	1.5	0.932
41.1	0.15	26	13	0.54	14.2	3178 ± 50	3072 ± 17	-3	0.2329	1	20.47	2.2	0.637	2	0.886
42.1	0.53	71	46	0.67	30.4	2610 ± 33	2932 ± 20	11	0.2135	1.2	14.69	2	0.4991	1.5	0.786
43.1	0.00	73	47	0.67	36.7	2957 ± 36	2907.2 ± 9.9	-2	0.2102	0.61	16.87	1.6	0.582	1.5	0.927
44.1	1.65	176	142	0.83	82.5	2768 ± 30	2886 ± 16	4	0.2075	0.96	15.35	1.7	0.5364	1.3	0.813
46.1	1.77	4	1	0.35	2.07	2869 ± 95	2923 ± 75	2	0.2123	4.6	16.4	6.2	0.561	4.1	0.663
47.1	0.07	139	60	0.44	69.5	2954 ± 32	3043.5 ± 7.1	3	0.2288	0.44	18.33	1.4	0.5812	1.4	0.951
48.1	-	197	92	0.48	100	3000 ± 31	3016 ± 11	1	0.2249	0.67	18.37	1.5	0.5927	1.3	0.890
49.1	11.90	434	278	0.66	95.7	1315 ± 20	2773 ± 26	53	0.1936	1.6	6.04	2.3	0.2263	1.6	0.725
50.1	0.02	64	23	0.38	32.9	3026 ± 37	3010 ± 12	-1	0.224	0.72	18.51	1.7	0.5992	1.5	0.906
51.1	0.08	49	21	0.45	24.6	2950 ± 38	2964 ± 12	0	0.2177	0.75	17.42	1.8	0.5803	1.6	0.907
52.1	0.03	124	87	0.73	62.7	2984 ± 33	2985.8 ± 7.3	0	0.2207	0.46	17.91	1.4	0.5886	1.4	0.949
53.1	0.44	352	161	0.47	138	2420 ± 26	2925 ± 17	17	0.2125	1	13.35	1.7	0.4556	1.3	0.778
54.1	-	60	22	0.38	30.6	3024 ± 38	2966 ± 11	-2	0.218	0.67	17.99	1.7	0.5985	1.6	0.921
55.1	2.94	289	160	0.57	116	2405 ± 26	2856 ± 14	16	0.2036	0.87	12.7	1.6	0.4522	1.3	0.833
56.1	0.04	76	23	0.31	38.4	2969 ± 36	2895 ± 10	-3	0.2087	0.63	16.83	1.6	0.585	1.5	0.922

Grain.Spot	$^{206}\text{Pb}_c^{(1)}$	U	Th	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$	$^{206}\text{Pb}/^{238}\text{U}^{(1)}$	$^{207}\text{Pb}/^{206}\text{Pb}^{(1)}$	Disc.	$^{207}\text{Pb}^*/^{206}\text{Pb}^*(1)$	$^{207}\text{Pb}^*/^{238}\text{U}^{(1)}$	$^{206}\text{Pb}^*/^{238}\text{U}^{(1)}$	err corr			
	%	ppm	ppm		ppm	(Ma)	(Ma)		%	±%	±%		±%		
57.1	3.80	357	296	0.86	83	1491 ± 18	2919 ± 22	49	0.2118	1.4	7.6	1.9	0.2601	1.4	0.706
58.1	0.02	86	50	0.60	51.1	3380 ± 38	3319.2 ± 7.6	-2	0.2723	0.48	25.87	1.5	0.689	1.5	0.949
59.1	0.07	91	32	0.36	45	2931 ± 34	2902.9 ± 9.2	-1	0.2097	0.57	16.64	1.6	0.5757	1.4	0.931
60.1	0.04	94	55	0.60	48.6	3026 ± 35	3007.2 ± 8.6	-1	0.2237	0.54	18.47	1.5	0.599	1.4	0.937

Errors are 1σ ; Pb_c and Pb^* indicate the common and radiogenic portions, respectively. Error in Standard calibration was 0.33% (not included in above errors but required when comparing data from different mounts). ⁽¹⁾: Common Pb corrected using measured ^{204}Pb .

