

Table S2. CA-ID-TIMS U-Th-Pb isotopic data

		Compositional Parameters						Radiogenic Isotope Ratios							Isotopic Ages						
		Th	²⁰⁶ Pb*	mol %	Pb*	Pb _c	²⁰⁶ Pb	²⁰⁸ Pb	²⁰⁷ Pb	²⁰⁷ Pb	²⁰⁶ Pb	corr.	²⁰⁷ Pb	²⁰⁷ Pb	²⁰⁶ Pb	±	²⁰⁷ Pb	²⁰⁷ Pb	²⁰⁶ Pb	±	
sample	LA-ICPMS	U	10 ⁻¹³ m	²⁰⁶ Pb*	Pb _c	(pg)	²⁰⁴ Pb	²⁰⁶ Pb	²⁰⁶ Pb	% err	²³⁵ U	% err	²³⁸ U	% err	coef.	²⁰⁶ Pb	±	²³⁵ U	±	²³⁸ U	±
(a)	spot #	(b)	(c)	(c)	(c)	(c)	(d)	(e)	(e)	(f)	(e)	(f)	(e)	(f)		(g)	(f)	(g)	(f)	(g)	(f)
B1559																					
z1b	S33	0.893	0.0083	56.99%	0	0.52	42	0.278	0.062311	####	0.82190	162.91484	0.095666	2.028	0.116	684.78	3473	609.11	746.25	588.96	11.41
z2	S21	0.419	0.8270	99.77%	128	0.16	7867	0.132	0.056121	0.187	0.56519	0.22009	0.073042	0.081	0.560	457.14	4.15	454.90	0.81	454.46	0.36
z3	S20	0.429	1.1997	99.80%	150	0.20	9142	0.134	0.05643	0.089	0.58156	0.14887	0.074741	0.071	0.914	469.44	1.96	465.46	0.56	464.66	0.32
z5a	S25	0.365	0.8045	99.58%	69	0.28	4300	0.115	0.05648	0.170	0.57732	0.23825	0.074136	0.122	0.735	471.24	3.76	462.74	0.89	461.03	0.54
z5b	S25	0.392	0.6826	99.63%	80	0.21	4935	0.123	0.05629	0.126	0.57391	0.18099	0.073942	0.072	0.849	463.92	2.79	460.54	0.67	459.86	0.32
z6	S30	0.288	0.1685	98.58%	20	0.20	1273	0.090	0.05639	0.512	0.57795	0.57991	0.074338	0.153	0.552	467.65	11.33	463.15	2.16	462.24	0.68
B1725																					
z1a	S191	1.027	0.1399	97.57%	14	0.29	741	0.322	0.05579	0.848	0.54548	0.89707	0.070916	0.166	0.377	443.91	18.86	442.03	3.21	441.67	0.71
z1b	S191	0.888	0.0725	84.78%	2	1.08	118	0.279	0.05638	2.322	0.55256	2.46767	0.071078	0.329	0.496	467.45	51.42	446.67	8.92	442.65	1.41
z2	M162	0.875	0.6735	99.47%	62	0.30	3420	0.275	0.05580	0.147	0.54549	0.19871	0.070906	0.073	0.796	444.27	3.28	442.04	0.71	441.61	0.31
B1721A																					
z2	L121	0.703	0.0639	78.98%	1	1.42	85	0.220	0.05724	3.978	0.58610	4.13452	0.074260	0.365	0.466	500.85	87.58	468.37	15.51	461.77	1.63
z3	L116	0.849	1.3545	99.81%	177	0.21	9703	0.266	0.05592	0.085	0.55419	0.14587	0.071877	0.070	0.923	449.20	1.90	447.74	0.53	447.45	0.30
z4	L117	0.348	2.2264	99.47%	54	0.98	3410	0.109	0.05607	0.112	0.56789	0.16854	0.073452	0.075	0.851	455.26	2.48	456.65	0.62	456.92	0.33
z5	M105	0.399	0.8503	99.79%	138	0.15	8525	0.125	0.05581	0.094	0.55178	0.15641	0.071707	0.072	0.930	444.76	2.08	446.16	0.56	446.43	0.31
NLJP02																					
z1a	S250	0.280	1.338	0.994	49.48	0.64	3100	0.088	0.05644	0.106	0.58193	0.16485	0.074775	0.072	0.890	469.87	2.35	465.70	0.62	464.86	0.32
z1b	S250	0.262	0.560	0.986	19.14	0.69	1215	0.082	0.05651	0.214	0.58536	0.26675	0.075122	0.089	0.701	472.61	4.74	467.90	1.00	466.94	0.40
z1c	S250	0.235	0.090	0.962	7.12	0.29	472	0.074	0.05561	1.035	0.57622	1.12163	0.075150	0.203	0.500	436.86	23.04	462.03	4.16	467.11	0.91
z1d	S250	0.243	0.198	0.980	13.49	0.34	874	0.076	0.05584	0.414	0.57849	0.46795	0.075137	0.111	0.574	445.99	9.20	463.49	1.74	467.03	0.50
z2a	S261	0.179	0.583	0.981	13.92	0.96	907	0.056	0.05626	0.271	0.57596	0.32210	0.074254	0.086	0.683	462.50	6.01	461.86	1.20	461.73	0.38
z2b	S261	0.19	0.134	0.985	18.51	0.17	1222	0.060	0.05640	0.466	0.57710	0.52759	0.074206	0.133	0.564	468.3	10.3	462.6	1.96	461.45	0.59
z2c	S261	0.124	0.078	0.960	6.47	0.27	445	0.039	0.05516	1.346	0.56327	1.57822	0.074064	0.665	0.534	418.6	30.1	453.65	5.77	460.59	2.96

(a) z1, z2 etc. are labels for single zircon grains or fragments annealed and chemically abraded after Mattinson (2005).

(b) Model Th/U ratio iteratively calculated from the radiogenic ²⁰⁸Pb/²⁰⁶Pb ratio and ²⁰⁶Pb/²³⁸U age.

(c) Pb* and Pb_c represent radiogenic and common Pb, respectively; mol % ²⁰⁶Pb* with respect to radiogenic, blank and initial common Pb.

(d) Measured ratio corrected for spike and fractionation only. Fractionation estimated at 0.18 +/- 0.03 ‰/a.m.u. for Daly analyses, based on analysis of NBS-981 and NBS-982.

(e) Corrected for fractionation, spike, and common Pb; up to 1 pg of common Pb was assumed to be procedural blank: ²⁰⁶Pb/²⁰⁴Pb = 18.042 ± 0.61%; ²⁰⁷Pb/²⁰⁴Pb = 15.537 ± 0.52%; ²⁰⁸Pb/²⁰⁴Pb = 37.686 ± 0.63% (all uncertainties 1-sigma).

Excess over blank was assigned to initial common Pb, using the Stacey and Kramers (1975) two-stage Pb isotope evolution model at the nominal sample age.

(f) Errors are 2-sigma, propagated using the algorithms of Schmitz and Schoene (2007).

(g) Calculations are based on the decay constants of Jaffey et al. (1971) and Hiess et al. (2012). ²⁰⁶Pb/²³⁸U and ²⁰⁷Pb/²⁰⁶Pb ages corrected for initial disequilibrium in ²³⁰Th/²³⁸U using Th/U [magma] = 3.