

Table S5: Results of zircon (U-Th)/He analyses

Name	U (ppm)	Th (ppm)	He (ncc)	Mass (mg)	Ft ¹	Radius (μm)	Length (μm)	Uncorrected Age	Corrected Age (Ma)	Age Error (Ma) ²	Sample Age (Ma)	Error (Ma) ³
<u>SVANETI</u>												
C16034B Zra	527.5	112.7	15.316	0.00774	0.82	63.8	235.9	29.52	36.19	0.44	31.21	2.70
C16034B Zrb	151.9	117.1	1.294	0.00261	0.75	46.4	150.6	22.79	30.56	0.31		
C16034B Zrc	135.1	74.2	2.570	0.00636	0.81	64.7	188.6	21.87	26.89	0.30		
CT15004B Zra	320.8	295.1	3.601	0.00235	0.71	39.5	186.9	32.36	45.31	0.42	38.72	3.48
CT15004B Zrb	631.8	56.0	7.351	0.00338	0.75	44.9	208.5	27.88	37.35	0.42		
CT15004B Zrc	711.5	375.7	6.082	0.00256	0.73	43.3	169.2	24.57	33.49	0.33		
C16014B Zra	426.5	281.6	1.000	0.00195	0.73	43.7	126.3	8.61	11.84	0.11	19.11	3.83
C16014B Zrb	803.6	140.6	4.144	0.00226	0.73	43.5	148.0	18.15	24.83	0.25		
C16014B Zrc	433.6	257.9	1.749	0.00197	0.72	41.7	140.0	14.87	20.66	0.19		
<u>KAZBEGI</u>												
V16052B Zra	1087.4	355.4	2.199	0.00355	0.75	44.8	219.1	4.38	5.86	0.06	7.08	0.65
V16052B Zrb	1159.7	503.8	1.588	0.00178	0.71	41.1	130.7	5.78	8.10	0.08		
V16052B Zrc	1143.1	409.3	2.785	0.00348	0.73	42.0	245.1	5.35	7.28	0.08		
V16046D Zra	1048.1	334.1	1.923	0.00256	0.74	45.3	155.0	5.52	7.44	0.08	7.92	0.25
V16046D Zrb	479.4	163.5	0.890	0.00236	0.73	42.0	166.1	6.03	8.30	0.09		
V16046D Zrc	1135.7	362.1	3.727	0.00411	0.77	49.5	208.5	6.14	8.00	0.08		
<u>AVDEEV (2011)</u>												
AB0909 Zra	1463.5	131.4	37.258	0.00223	0.71	38.6	185.5	91.81	129.59	1.30	114.97	9.14
AB0909 Zrb	2402.7	360.7	66.925	0.00256	0.74	44.2	163.0	86.38	117.17	1.18		
AB0909 Zrc	1511.9	97.7	41.553	0.00306	0.74	44.2	194.8	72.79	98.16	1.03		
AB0938 Zra	2746.5	659.6	8.503	0.00426	0.77	48.8	222.2	5.69	7.43	0.08	8.18	1.04
AB0938 Zrb	1701.3	748.2	4.613	0.00391	0.76	46.6	223.5	5.20	6.88	0.07		
AB0938 Zrc	1912.6	591.8	8.265	0.00435	0.75	44.2	277.0	7.66	10.24	0.10		

1. Ft is alpha-ejection correction after Farley et al. (1996).

2. Analytical uncertainty of individual grain ages reported at 1σ .

3. Sample Age Error reported as 1 standard error on individual grain age replicates.