

Supplementary Table S1

**Zircon U-Pb isotope data for the rocks of Semeitau and Delbegetei massifs**

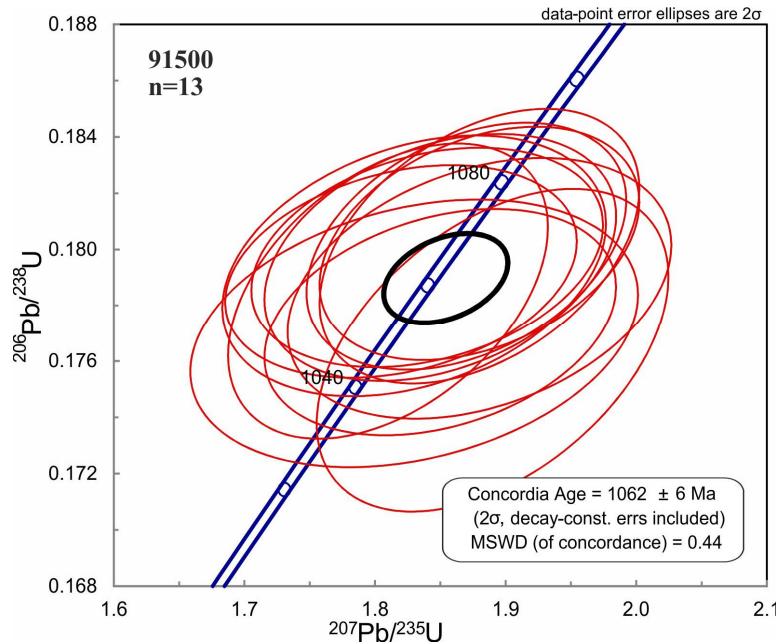
1. Semeitau massif. Porphyry monzonite, sample K21-18.

N an	Th/U	Isotope ratios		Rho	Age, Ma		D, %
		$^{207}\text{Pb} / ^{235}\text{U}$	$^{206}\text{Pb} / ^{238}\text{U}$		$^{207}\text{Pb} / ^{235}\text{U}$	$^{206}\text{Pb} / ^{238}\text{U}$	
Zircons of 1st group							
K21-18_01	1.63	$12.50 \pm 1.40$	$0.132 \pm 0.012$	0.81	$2510 \pm 120$	$788 \pm 66$	218.5
K21-18_03	1.85	$17.30 \pm 1.70$	$0.178 \pm 0.017$	0.97	$2820 \pm 110$	$1042 \pm 92$	170.6
K21-18_15	1.80	$17.20 \pm 2.50$	$0.166 \pm 0.023$	0.95	$2830 \pm 150$	$970 \pm 120$	191.8
K21-18_22	1.92	$13.40 \pm 2.00$	$0.140 \pm 0.015$	0.72	$2610 \pm 130$	$845 \pm 87$	208.9
K21-18_23	1.79	$15.00 \pm 1.70$	$0.159 \pm 0.015$	0.83	$2720 \pm 110$	$945 \pm 82$	187.8
K21-18_25	1.79	$13.60 \pm 1.30$	$0.145 \pm 0.012$	0.87	$2640 \pm 100$	$870 \pm 68$	203.4
K21-18_29	1.74	$13.70 \pm 1.60$	$0.161 \pm 0.013$	0.69	$2630 \pm 120$	$965 \pm 74$	172.5
K21-18_38	1.69	$13.50 \pm 1.20$	$0.143 \pm 0.011$	0.87	$2632 \pm 87$	$864 \pm 66$	204.6
K21-18_39	1.85	$11.09 \pm 0.97$	$0.134 \pm 0.011$	0.94	$2450 \pm 100$	$799 \pm 64$	206.6
K21-18_40	1.66	$13.90 \pm 1.50$	$0.154 \pm 0.012$	0.72	$2630 \pm 110$	$914 \pm 64$	187.7
K21-18_41	1.87	$16.50 \pm 2.70$	$0.177 \pm 0.024$	0.83	$2820 \pm 140$	$1060 \pm 140$	166.0
K21-18_42	2.39	$10.30 \pm 1.30$	$0.122 \pm 0.011$	0.71	$2340 \pm 120$	$736 \pm 64$	217.9
K21-18_44	1.58	$18.10 \pm 1.80$	$0.182 \pm 0.016$	0.88	$2890 \pm 100$	$1066 \pm 86$	171.1
K21-18_46	1.53	$15.10 \pm 1.90$	$0.179 \pm 0.018$	0.80	$2700 \pm 130$	$1044 \pm 98$	158.6
K21-18_47	1.83	$16.40 \pm 2.10$	$0.168 \pm 0.019$	0.88	$2810 \pm 130$	$990 \pm 100$	183.8
K21-18_48	1.79	$13.60 \pm 1.40$	$0.155 \pm 0.015$	0.94	$2620 \pm 100$	$918 \pm 81$	185.4
K21-18_49	1.68	$18.10 \pm 1.90$	$0.167 \pm 0.017$	0.97	$2890 \pm 110$	$992 \pm 93$	191.3
Zircons of 2 <sup>nd</sup> group							
K21-18_09	0.91	$0.266 \pm 0.019$	$0.0388 \pm 0.0009$	0.33	$237 \pm 15$	$246 \pm 6$	-3.5
K21-18_10	0.64	$0.291 \pm 0.043$	$0.0398 \pm 0.0012$	0.20	$250 \pm 33$	$252 \pm 7$	-0.7
K21-18_28	0.82	$0.283 \pm 0.024$	$0.0401 \pm 0.0009$	0.27	$248 \pm 19$	$254 \pm 6$	-2.2
K21-18_33	0.77	$0.282 \pm 0.032$	$0.0396 \pm 0.0012$	0.27	$252 \pm 27$	$251 \pm 8$	0.6
K21-18_34	0.65	$0.313 \pm 0.036$	$0.0397 \pm 0.0009$	0.20	$267 \pm 27$	$251 \pm 6$	6.5
K21-18_36	0.54	$0.293 \pm 0.040$	$0.0392 \pm 0.0015$	0.28	$248 \pm 31$	$248 \pm 9$	0.1
K21-18_37	0.65	$0.328 \pm 0.048$	$0.0392 \pm 0.0014$	0.24	$278 \pm 36$	$248 \pm 9$	12.3
K21-18_50	0.60	$0.292 \pm 0.029$	$0.0383 \pm 0.0009$	0.24	$253 \pm 23$	$242 \pm 6$	4.4

Zircon standards used in the measurement

N an	Th/U	Isotope ratios		Rho	Age, Ma		D, %
		$^{207}\text{Pb} / ^{235}\text{U}$	$^{206}\text{Pb} / ^{238}\text{U}$		$^{207}\text{Pb} / ^{235}\text{U}$	$^{206}\text{Pb} / ^{238}\text{U}$	
Plesovice	0.09	$0.4030 \pm 0.0180$	$0.0535 \pm 0.0007$	0.28	$343 \pm 13$	$336 \pm 4$	2.2
Plesovice	0.12	$0.3820 \pm 0.0160$	$0.0539 \pm 0.0007$	0.31	$326 \pm 11$	$339 \pm 4$	-3.7
Plesovice	0.10	$0.4060 \pm 0.0200$	$0.0537 \pm 0.0008$	0.28	$343 \pm 15$	$337 \pm 5$	1.8
Plesovice	0.10	$0.4100 \pm 0.0220$	$0.0537 \pm 0.0009$	0.30	$346 \pm 16$	$337 \pm 5$	2.7
Plesovice	0.11	$0.3820 \pm 0.0160$	$0.0537 \pm 0.0008$	0.33	$327 \pm 12$	$337 \pm 5$	-3.0
Plesovice	0.10	$0.3890 \pm 0.0180$	$0.0537 \pm 0.0007$	0.28	$331 \pm 13$	$337 \pm 4$	-1.8
Plesovice	0.10	$0.3900 \pm 0.0150$	$0.0537 \pm 0.0007$	0.35	$333 \pm 11$	$337 \pm 4$	-1.2
Plesovice	0.10	$0.4080 \pm 0.0180$	$0.0537 \pm 0.0005$	0.23	$345 \pm 13$	$337 \pm 3$	2.3
Plesovice	0.10	$0.3950 \pm 0.0180$	$0.0537 \pm 0.0007$	0.29	$336 \pm 13$	$337 \pm 4$	-0.3
Plesovice	0.10	$0.4000 \pm 0.0170$	$0.0537 \pm 0.0007$	0.28	$340 \pm 12$	$337 \pm 4$	0.9
Plesovice	0.10	$0.3910 \pm 0.0180$	$0.0537 \pm 0.0007$	0.27	$333 \pm 13$	$337 \pm 4$	-1.2
Plesovice	0.11	$0.3990 \pm 0.0160$	$0.0537 \pm 0.0006$	0.28	$339 \pm 12$	$337 \pm 4$	0.6
Plesovice	0.10	$0.3850 \pm 0.0160$	$0.0537 \pm 0.0007$	0.31	$329 \pm 11$	$337 \pm 4$	-2.4
91500	0.36	$1.8400 \pm 0.1100$	$0.1797 \pm 0.0032$	0.30	$1040 \pm 39$	$1065 \pm 18$	-2.3
91500	0.37	$1.8300 \pm 0.1200$	$0.1794 \pm 0.0038$	0.32	$1036 \pm 44$	$1063 \pm 21$	-2.5
91500	0.41	$1.8200 \pm 0.1100$	$0.1792 \pm 0.0031$	0.29	$1030 \pm 41$	$1062 \pm 17$	-3.0
91500	0.41	$1.8800 \pm 0.1000$	$0.1801 \pm 0.0040$	0.42	$1061 \pm 37$	$1067 \pm 22$	-0.6
91500	0.38	$1.8700 \pm 0.1000$	$0.1801 \pm 0.0036$	0.37	$1060 \pm 38$	$1067 \pm 19$	-0.7
91500	0.34	$1.8500 \pm 0.1100$	$0.1797 \pm 0.0036$	0.34	$1049 \pm 39$	$1065 \pm 20$	-1.5
91500	0.32	$1.8100 \pm 0.1000$	$0.1785 \pm 0.0043$	0.44	$1040 \pm 37$	$1058 \pm 24$	-1.7
91500	0.32	$1.8800 \pm 0.1000$	$0.1802 \pm 0.0034$	0.35	$1061 \pm 36$	$1070 \pm 20$	-0.8
91500	0.32	$1.8500 \pm 0.1100$	$0.1774 \pm 0.0033$	0.31	$1042 \pm 40$	$1052 \pm 18$	-1.0
91500	0.33	$1.8800 \pm 0.1200$	$0.1786 \pm 0.0038$	0.33	$1063 \pm 41$	$1059 \pm 21$	0.4
91500	0.30	$1.8900 \pm 0.1100$	$0.1764 \pm 0.0047$	0.46	$1066 \pm 40$	$1046 \pm 25$	1.9
91500	0.30	$1.8300 \pm 0.1400$	$0.1770 \pm 0.0039$	0.29	$1039 \pm 51$	$1050 \pm 21$	-1.0

Concordia diagrams of standard zircons 91500 while dating Semeitau massif zircons



2. Delbegetei massif. Quartz monzonite, sample X-1001.

N an	Th/U	Isotope ratios		Rho	Age, Ma		D, %
		$^{207}\text{Pb} / ^{235}\text{U}$	$^{206}\text{Pb} / ^{238}\text{U}$		$^{207}\text{Pb} / ^{235}\text{U}$	$^{206}\text{Pb} / ^{238}\text{U}$	
X-1001_01	0.44	$0.2860 \pm 0.0380$	$0.0398 \pm 0.0016$	0.30	$249 \pm 30$	$251 \pm 10$	-0.9
X-1001_03	0.38	$0.3100 \pm 0.0500$	$0.0396 \pm 0.0016$	0.25	$266 \pm 40$	$250 \pm 10$	6.4
X-1001_04	0.32	$0.3150 \pm 0.0460$	$0.0394 \pm 0.0022$	0.38	$267 \pm 36$	$249 \pm 14$	7.2
X-1001_05	0.34	$0.3190 \pm 0.0620$	$0.0397 \pm 0.0017$	0.22	$266 \pm 47$	$251 \pm 11$	6.0
X-1001_06	0.35	$0.2890 \pm 0.0400$	$0.0400 \pm 0.0016$	0.29	$247 \pm 32$	$253 \pm 10$	-2.4
X-1001_07	0.38	$0.2680 \pm 0.0440$	$0.0394 \pm 0.0019$	0.29	$235 \pm 36$	$249 \pm 12$	-5.6
X-1001_08	0.32	$0.2430 \pm 0.0400$	$0.0398 \pm 0.0018$	0.27	$216 \pm 34$	$251 \pm 11$	-13.9
X-1001_09	0.32	$0.2870 \pm 0.0510$	$0.0395 \pm 0.0016$	0.23	$242 \pm 39$	$250 \pm 10$	-3.1
X-1001_10	0.30	$0.3040 \pm 0.0330$	$0.0392 \pm 0.0014$	0.33	$263 \pm 26$	$248 \pm 8$	6.2
X-1001_11	0.39	$0.2540 \pm 0.0350$	$0.0397 \pm 0.0018$	0.33	$222 \pm 28$	$251 \pm 11$	-11.6
X-1001_12	0.32	$0.3050 \pm 0.0320$	$0.0396 \pm 0.0014$	0.34	$263 \pm 24$	$250 \pm 8$	5.1
X-1001_13	0.30	$0.2570 \pm 0.0530$	$0.0390 \pm 0.0020$	0.25	$222 \pm 42$	$246 \pm 12$	-9.8
X-1001_14	0.26	$0.2940 \pm 0.0380$	$0.0397 \pm 0.0019$	0.37	$254 \pm 29$	$251 \pm 12$	1.2
X-1001_15	0.28	$0.2700 \pm 0.0390$	$0.0385 \pm 0.0014$	0.25	$237 \pm 31$	$243 \pm 9$	-2.6
X-1001_16	0.30	$0.2380 \pm 0.0300$	$0.0390 \pm 0.0018$	0.37	$211 \pm 25$	$246 \pm 11$	-14.2
X-1001_17	0.43	$0.2910 \pm 0.0470$	$0.0388 \pm 0.0016$	0.26	$248 \pm 35$	$245 \pm 10$	1.2
X-1001_19	0.41	$0.3110 \pm 0.0400$	$0.0389 \pm 0.0016$	0.32	$266 \pm 30$	$246 \pm 10$	8.1
X-1001_20	0.31	$0.2860 \pm 0.0380$	$0.0407 \pm 0.0014$	0.26	$247 \pm 30$	$257 \pm 9$	-4.0
X-1001_22	0.31	$0.2700 \pm 0.0390$	$0.0390 \pm 0.0015$	0.27	$246 \pm 34$	$246 \pm 10$	-0.2
X-1001_23	0.27	$0.2550 \pm 0.0430$	$0.0412 \pm 0.0023$	0.33	$227 \pm 36$	$260 \pm 14$	-12.7
X-1001_24	0.32	$0.2950 \pm 0.0420$	$0.0384 \pm 0.0017$	0.31	$254 \pm 32$	$243 \pm 10$	4.5
X-1001_25	0.35	$0.3030 \pm 0.0310$	$0.0398 \pm 0.0013$	0.32	$266 \pm 25$	$252 \pm 8$	5.7
X-1001_26	0.51	$0.3030 \pm 0.0400$	$0.0388 \pm 0.0013$	0.25	$261 \pm 31$	$245 \pm 8$	6.5
X-1001_27	0.41	$0.2680 \pm 0.0310$	$0.0399 \pm 0.0017$	0.37	$234 \pm 25$	$252 \pm 10$	-7.1
X-1001_28	0.49	$0.3000 \pm 0.0370$	$0.0391 \pm 0.0014$	0.29	$258 \pm 29$	$247 \pm 9$	4.5
X-1001_29	0.40	$0.3000 \pm 0.0320$	$0.0399 \pm 0.0015$	0.35	$259 \pm 25$	$252 \pm 9$	2.7
X-1001_30	0.40	$0.2610 \pm 0.0440$	$0.0388 \pm 0.0017$	0.26	$223 \pm 35$	$245 \pm 10$	-9.0
X-1001_31	0.38	$0.2940 \pm 0.0480$	$0.0396 \pm 0.0017$	0.26	$256 \pm 38$	$250 \pm 11$	2.4
X-1001_34	0.33	$0.3050 \pm 0.0430$	$0.0389 \pm 0.0017$	0.31	$259 \pm 33$	$246 \pm 10$	5.3
X-1001_35	0.31	$0.3110 \pm 0.0410$	$0.0401 \pm 0.0017$	0.32	$272 \pm 32$	$253 \pm 11$	7.5
X-1001_36	0.43	$0.2700 \pm 0.0380$	$0.0396 \pm 0.0018$	0.32	$235 \pm 30$	$250 \pm 11$	-6.0
X-1001_37	0.44	$0.2660 \pm 0.0420$	$0.0379 \pm 0.0018$	0.30	$232 \pm 33$	$240 \pm 11$	-3.3
X-1001_38	0.42	$0.2720 \pm 0.0360$	$0.0404 \pm 0.0015$	0.28	$237 \pm 28$	$256 \pm 9$	-7.2
X-1001_39	0.47	$0.2550 \pm 0.0380$	$0.0392 \pm 0.0017$	0.29	$227 \pm 32$	$248 \pm 11$	-8.5
X-1001_40	0.35	$0.3160 \pm 0.0520$	$0.0389 \pm 0.0017$	0.27	$266 \pm 39$	$248 \pm 11$	7.3
X-1001_41	0.30	$0.2860 \pm 0.0520$	$0.0394 \pm 0.0016$	0.22	$247 \pm 42$	$249 \pm 10$	-0.7
X-1001_42	0.50	$0.2980 \pm 0.0310$	$0.0385 \pm 0.0019$	0.47	$265 \pm 25$	$243 \pm 12$	9.1
X-1001_43	0.32	$0.2570 \pm 0.0400$	$0.0400 \pm 0.0018$	0.29	$227 \pm 34$	$252 \pm 11$	-9.9
X-1001_44	0.32	$0.2880 \pm 0.0480$	$0.0409 \pm 0.0016$	0.23	$243 \pm 36$	$259 \pm 10$	-6.0
X-1001_45	0.52	$0.2650 \pm 0.0250$	$0.0396 \pm 0.0015$	0.40	$234 \pm 20$	$280 \pm 9$	-6.4
X-1001_47	0.37	$0.2780 \pm 0.0400$	$0.0383 \pm 0.0016$	0.29	$238 \pm 32$	$242 \pm 10$	-1.7
X-1001_48	0.45	$0.2710 \pm 0.0340$	$0.0384 \pm 0.0013$	0.27	$237 \pm 27$	$243 \pm 8$	-2.3
X-1001_50	0.36	$0.2660 \pm 0.0330$	$0.0377 \pm 0.0014$	0.30	$231 \pm 26$	$238 \pm 9$	-3.0
X-1001_51	0.27	$0.3060 \pm 0.0410$	$0.0388 \pm 0.0022$	0.42	$267 \pm 32$	$245 \pm 13$	9.0

Zircon standards used in the measurement							
N an	Th/U	Isotope ratios		Rho	Age, Ma		D, %
		$^{207}\text{Pb} / ^{235}\text{U}$	$^{206}\text{Pb} / ^{238}\text{U}$		$^{207}\text{Pb} / ^{235}\text{U}$	$^{206}\text{Pb} / ^{238}\text{U}$	
Plesovice	0.10	$0.3940 \pm 0.0200$	$0.0534 \pm 0.0014$	0.52	$335 \pm 15$	$335 \pm 9$	-0.1
Plesovice	0.10	$0.3950 \pm 0.0190$	$0.0539 \pm 0.0013$	0.50	$338 \pm 14$	$339 \pm 8$	-0.4
Plesovice	0.10	$0.3930 \pm 0.0250$	$0.0545 \pm 0.0016$	0.46	$332 \pm 18$	$342 \pm 10$	-2.9
Plesovice	0.10	$0.3940 \pm 0.0180$	$0.0534 \pm 0.0013$	0.53	$335 \pm 13$	$335 \pm 8$	0.0
Plesovice	0.10	$0.3940 \pm 0.0180$	$0.0537 \pm 0.0013$	0.53	$335 \pm 13$	$337 \pm 8$	-0.7
Plesovice	0.10	$0.3860 \pm 0.0220$	$0.0526 \pm 0.0013$	0.43	$328 \pm 16$	$331 \pm 8$	-0.8
Plesovice	0.10	$0.4060 \pm 0.0240$	$0.0539 \pm 0.0015$	0.47	$343 \pm 17$	$338 \pm 9$	1.4
Plesovice	0.11	$0.3910 \pm 0.0210$	$0.0542 \pm 0.0012$	0.41	$332 \pm 15$	$340 \pm 8$	-2.4
91500	0.29	$1.8700 \pm 0.1400$	$0.1813 \pm 0.0064$	0.47	$1046 \pm 50$	$1072 \pm 35$	-2.4
91500	0.27	$1.8900 \pm 0.1900$	$0.1739 \pm 0.0060$	0.34	$1042 \pm 65$	$1032 \pm 33$	1.0
91500	0.28	$1.8900 \pm 0.1600$	$0.1774 \pm 0.0067$	0.45	$1056 \pm 55$	$1050 \pm 37$	0.6
91500	0.28	$1.9200 \pm 0.1800$	$0.1746 \pm 0.0065$	0.40	$1067 \pm 63$	$1035 \pm 36$	3.1
91500	0.29	$1.8600 \pm 0.1400$	$0.1806 \pm 0.0046$	0.34	$1037 \pm 52$	$1072 \pm 26$	-3.3
91500	0.27	$1.9700 \pm 0.1900$	$0.1798 \pm 0.0073$	0.42	$1073 \pm 65$	$1064 \pm 39$	0.8
91500	0.29	$1.8000 \pm 0.1600$	$0.1782 \pm 0.0075$	0.47	$1021 \pm 57$	$1055 \pm 41$	-3.2
91500	0.27	$1.9700 \pm 0.1900$	$0.1834 \pm 0.0081$	0.46	$1083 \pm 65$	$1082 \pm 44$	0.1

Concordia diagrams of standard zircons 91500 while dating Delbegetei massif zircons

