ANALYTICAL PROCEDURES

Zircon U-Th-Pb analyses were conducted on the Sensitive High Resolution Ion MicroProbe-Reverse Geometry (SHRIMP-RG) operated by the SUMAC facility (USGS-Stanford University) during one analytical session in October 2005.

The heaviest non-ferromagnetic phase was isolated, using standard mineral separation techniques, from the representative samples collected, followed by hand picking for final purity, and mounting on a double stick tape on glass slides in 1 x 6 mm parallel rows together with some chips of zircon standard R33 (Black et al., 2004). After setting them in epoxy resin, the zircons were ground down to expose their central portions and imaged with transmitted and reflected light on a petrographic microscope, and with cathodoluminescence on a JEOL 5800LV electron microscope (housed at USGS-Denver) to identify internal structure, inclusions, fractures and physical defects. The mounted grains were washed with 1N HCl and distilled water, dried in a vacuum oven, and coated with Au. Mounts typically sit in a loading chamber at high pressure (10^{-7} torr) for several hours before being moved into the source chamber of the SHRIMP-RG.

Secondary ions are generated from the target spot with an O^{2-} primary ion beam varying from 4-6 nA. The primary ion beam typically produces a spot with a diameter of ~20 microns and a depth of 1-2 microns for an analysis time of 8-10 minutes. Nine peaks were measured sequentially in a single collector: $^{90}Zr_2{}^{16}O$, ^{204}Pb, background (0.050 mass units above ^{204}Pb), ^{206}Pb, ^{207}Pb, ^{208}Pb, ^{238}U, $^{248}Th^{16}O$, $^{254}U^{16}O$. Three additional trace elements ($^{166}Er^{16}O$, $^{172}Yb^{16}O$, $^{180}Hf^{16}O$) are measured routinely in order to sort which samples may be of greatest interest for a more detailed trace element study to better understand the connection of variations in concentrations with formation environments and with interpretation of geochronologic data (Mazdab and Wooden, 2006). Autocentering on selected peaks and guide peaks for low or variable abundance locating peak centers. The number of scans collected was six in the case of the low-U zones in zircons from sample OW-165, five when analyzing metamorphic rims in both samples, and four in the case of cores from sample G-97. The counting time for ^{206}Pb was increased according to the Paleozoic age of the samples to improve counting statistics

and precision of the $^{206}Pb/^{238}U$ age. Measurements were made at mass resolutions of 6000-8000 (10% peak height) which eliminates all interfering atomic species. The SHRIMP-RG employs magnetic analysis of the secondary beam before electrostatic analysis to provide higher mass resolution than the standard forward geometry of the SHRIMP I and II (Clement and Compston, 1994). Compared to the standard forward geometry of the SHRIMP I and II, the reverse geometry of the USGS-Stanford SHRIMP provides very clean backgrounds and, combined with the high mass resolution, the acid washing of the mount, and rastering the primary beam for 90-120 seconds over the area to be analyzed before data is collected, assures that any counts found at mass ^{204}Pb are actually Pb from the zircon and not surface contamination. Concentration data for zircons are standardized against zircon standard CZ3 (550 ppm U, Pidgeon et al., 1995), and isotope ratios were calibrated against R33 (419 Ma, quartz-diorite of Braintree complex, Vermont; Black et al., 2004) which were analyzed repeatedly throughout the duration of the analytical session.

Data reduction follows the methods described by Williams (1997) and Ireland and Williams (2003) and SQUID (version 1.08) and ISOPLOT (version 3.00) software (Ludwig, 2002, 2003) were used. The Pb composition used for initial Pb corrections was $^{204}Pb/^{206}Pb=0.0554$, $^{207}Pb/^{206}Pb=0.864$ and $^{208}Pb/^{206}Pb=2.097$, calculated by SQUID using the age of the standard R33.

REFERENCES CITED

Black, L.P., Kamo, S.L., Allen, C.M., Davis, D.W., Aleinikoff, J.N., Valley, J.W., Mundil, R., Campbell, I.H., Korsch, R.J., Williams, I.S. and Foudoulis, C., 2004. Improved $^{206}Pb/^{238}U$ microprobe geochronology by the monitoring of a trace-element-related matrix effect, SHRIMP, ID-TIMS, ELA-ICP-MS and oxygen isotope documentation for a series of zircon standards. *Chemical Geology,* **205**, 115-140.

Clement, S.W.J. and Compston, W., 1994 Ion probe parameters for very high resolution without loss of sensitivity. *U.S. Geological Survey Circular*, **1107**, 62 p.

Ireland, T.R. and Williams, I.S., 2003. Considerations in zircon geochronology by SIMS. In: Zircon (J.M. Hanchar and P.W.O. Hoskin, eds). *Reviews in Mineralogy and Geochemistry*, **53**, 215-241.

Ludwig, K.R., 1998. On the treatment of concordant uranium-lead ages. *Geochimica et Cosmochimica Acta*, **62**, 665-676.

Ludwig, K.R., 2002. SQUID 1.02, a user's manual. *Berkeley Geochronology Center Special Publication* **2**, 17 p.

Ludwig, K.R., 2003. ISOPLOT/Ex, version 3, A Geochronological Toolkit for Microsoft Excel. *Berkeley Geochronology Center Special Publication* **4**, 71 p.

Mazdab, F.K. and Wooden, J.L. 2006. Trace element análisis in circón by ion microprobe (SHRIMP-RG): Technique and applications. *Program and Abstracts of the Third SHRIMP Workshop*, Rottnest Island, 48-49.

Pidgeon, R.T., Furfaro, D., Kennedy, A.K., Nemchin, A.A. and van Bronswjk, W., 1995. Calibration of zircon standards for the Curtin SHRIMP II. *U.S. Geological Survey Circular* **1107**, 251.

Williams, I.S., 1997. U-Th-Pb geochronology by ion microprobe: not just ages but histories. *Economic Geology*, **7**, 1-35.

Table Electronic Appendice 1 U-Th-Pb SHRIMP analytical data for zircons from the Monte Castelo granulitic shear zone (sample OW165). All errors are 1σ.

Spot Number		Common ^{206}Pb (%)	U (ppm)	Th (ppm)	$^{232}Th/^{238}U$	$^{238}U/^{206}Pb^a$	$^{207}Pb/^{206}Pb^a$	$^{238}U/^{206}Pb^b$	$^{207}Pb/^{206}Pb^b$	$^{206}Pb/^{238}U^c$	$^{206}Pb/^{238}U^d$ age
1.1	DGC	0.056	13	14	1.12	12.13695 ± 2.98	0.05794 ± 10.39	12.32794 ± 3.04	0.04515 ± 17.83	0.0823 ± 0.0026	510 ± 15
1.2	LGC	<0.001	10	9	0.86	11.89271 ± 3.31	0.05598 ± 8.40	12.05227 ± 3.43	0.04504 ± 19.52	0.0843 ± 0.0029	522 ± 17
2	DGC	<0.001	17	37	2.17	12.95120 ± 2.60	0.05375 ± 7.04	12.93439 ± 2.60	0.05481 ± 7.21	0.0775 ± 0.0021	481 ± 12
3	LGC	0.640	11	20	1.89	13.16649 ± 2.78	0.06161 ± 7.35	13.16649 ± 2.78	0.06161 ± 7.35	0.0755 ± 0.0022	469 ± 13
4	DGC	1.180	14	16	1.17	12.85302 ± 2.43	0.06621 ± 6.22	12.85302 ± 2.43	0.06621 ± 6.22	0.0769 ± 0.0019	478 ± 12
5	BR	<0.001	242	193	0.83	12.76435 ± 0.59	0.05578 ± 1.63	12.76435 ± 0.59	0.05578 ± 1.63	0.0784 ± 0.0005	487 ± 3
6.1	DGC	3.683	20	40	2.11	12.25804 ± 2.06	0.08680 ± 4.59	12.51390 ± 2.25	0.07048 ± 12.16	0.0786 ± 0.0017	488 ± 10
6.2	LGC	<0.001	204	145	0.73	12.31511 ± 0.77	0.05703 ± 2.05	12.33504 ± 0.78	0.05572 ± 2.46	0.0812 ± 0.0006	503 ± 4
7.1	DGC	<0.001	15	16	1.15	11.98867 ± 2.31	0.04869 ± 7.13	11.67868 ± 2.72	0.06996 ± 17.47	0.0843 ± 0.0020	522 ± 12
7.2	BR	0.201	160	113	0.73	13.01167 ± 1.12	0.05824 ± 2.07	13.01167 ± 1.12	0.05824 ± 2.07	0.0767 ± 0.0009	476 ± 5
8.1	LGC	1.241	7	7	1.01	12.34000 ± 3.68	0.06721 ± 9.30	12.60245 ± 3.94	0.05014 ± 26.48	0.0800 ± 0.0031	496 ± 18
8.2	BR	0.051	283	168	0.61	12.94419 ± 0.59	0.05710 ± 1.67	12.94419 ± 0.59	0.05710 ± 1.67	0.0772 ± 0.0005	479 ± 3
9.1	LGC	0.917	10	8	0.90	12.43556 ± 3.17	0.06452 ± 8.32	13.24782 ± 3.82		0.0797 ± 0.0026	494 ± 16
9.2	BR	0.187	178	121	0.70	12.64291 ± 0.75	0.05848 ± 2.06	12.66454 ± 0.75	0.05709 ± 2.40	0.0789 ± 0.0006	490 ± 4
10.1	LGC	<0.001	6	4	0.66	12.43532 ± 3.65	0.05438 ± 10.38	13.23981 ± 4.36		0.0807 ± 0.0030	500 ± 18
10.2	BR	0.015	300	116	0.40	13.20263 ± 0.51	0.05658 ± 1.48	13.19977 ± 0.51	0.05676 ± 1.50	0.0757 ± 0.0004	471 ± 2
11	DGC	0.509	16	38	2.46	12.79152 ± 2.47	0.06091 ± 6.69	13.05901 ± 2.68	0.04402 ± 22.17	0.0778 ± 0.0020	483 ± 12
12	BR	<0.001	170	139	0.85	12.69695 ± 0.73	0.05627 ± 2.45	12.70660 ± 0.73	0.05565 ± 2.59	0.0788 ± 0.0006	489 ± 4
13	BR	0.089	268	88	0.34	13.03143 ± 0.57	0.05733 ± 1.57	13.06951 ± 0.59	0.05496 ± 2.47	0.0767 ± 0.0005	476 ± 3
14	BR	0.321	266	166	0.64	12.85126 ± 0.58	0.05935 ± 1.56	12.87517 ± 0.59	0.05784 ± 2.01	0.0776 ± 0.0005	482 ± 3

[a] uncorrected ratios
[b] radiogenic lead ^{204}Pb corrected for common lead
[c] radiogenic lead ^{207}Pb corrected for common lead
[d] ^{207}Pb corrected for common lead

Table Electronic Appendice 2 U-Th-Pb SHRIMP analytical data for zircons younger than 1000 Ma from the metapelitic granulite included in the Monte Castelo gabbro (sample G97). All errors are 1σ.

Spot Number		Common ^{206}Pb (%)	U (ppm)	Th (ppm)	$^{232}Th/^{238}U$	$^{238}U/^{206}Pb^a$	$^{207}Pb/^{206}Pb^a$	$^{238}U/^{206}Pb^b$	$^{207}Pb/^{206}Pb^b$	$^{206}Pb/^{238}U^c$	$^{206}Pb/^{238}U^d$ age
1	Dark core	0.115	305	71	0.24	12.85910 ± 0.50	0.05770 ± 1.41	12.86899 ± 0.50	0.05707 ± 1.55	0.0777 ± 0.0004	482 ± 2
3.1	Core	0.128	110	66	0.62	10.89450 ± 0.83	0.06000 ± 2.20	10.86630 ± 0.83	0.06211 ± 2.16	0.0917 ± 0.0008	565 ± 5
3.2	Rim	0.229	196	35	0.19	12.29201 ± 0.64	0.05916 ± 1.84	12.29348 ± 0.65	0.05906 ± 2.16	0.0812 ± 0.0005	503 ± 3
4.1	Core	<0.001	754	695	0.95	10.42624 ± 0.44	0.05857 ± 1.09	10.42869 ± 0.44	0.05838 ± 1.11	0.0960 ± 0.0004	591 ± 3
4.2	Rim	0.027	164	42	0.27	12.20182 ± 1.13	0.05764 ± 3.14	12.28332 ± 1.13	0.05221 ± 4.10	0.0819 ± 0.0010	508 ± 6
5	Dark zone	<0.001	210	61	0.30	12.16575 ± 0.74	0.05634 ± 2.00	12.16575 ± 0.74	0.05634 ± 2.00	0.0823 ± 0.0006	510 ± 4
7.1	Core	<0.001	91	39	0.44	11.36988 ± 1.06	0.05717 ± 2.75	11.38674 ± 1.06	0.05596 ± 3.17	0.0881 ± 0.0010	544 ± 6
7.2	Rim	1.287	160	32	0.20	9.90569 ± 1.03	0.07077 ± 2.56	10.24516 ± 1.26	0.04310 ± 16.56	0.0997 ± 0.0011	612 ± 6
8	Core	0.040	899	554	0.64	10.11367 ± 0.39	0.06044 ± 0.95	10.11731 ± 0.39	0.06014 ± 0.96	0.0988 ± 0.0004	608 ± 2
9	Core	0.166	168	123	0.76	10.62132 ± 0.90	0.06068 ± 2.20	10.62132 ± 0.90	0.06068 ± 2.20	0.0940 ± 0.0009	579 ± 5
10.1	Core	0.048	68	42	0.64	9.38504 ± 1.20	0.06176 ± 2.84	9.43284 ± 1.20	0.05759 ± 3.57	0.1065 ± 0.0013	652 ± 8
10.2	Rim	0.023	180	46	0.26	10.77606 ± 0.93	0.05932 ± 2.47	10.87020 ± 1.11	0.05219 ± 10.11	0.0928 ± 0.0009	572 ± 5
11	Dark zone	0.001	194	76	0.41	12.46290 ± 0.74	0.05717 ± 1.99	12.46290 ± 0.74	0.05717 ± 1.99	0.0802 ± 0.0006	498 ± 4
12	Dark zone	0.020	187	54	0.30	12.34856 ± 0.77	0.05743 ± 2.07	12.37948 ± 0.78	0.05540 ± 2.80	0.0810 ± 0.0006	502 ± 4
13	Grey zone	0.128	235	85	0.37	12.60569 ± 0.68	0.05804 ± 1.84	12.63450 ± 0.68	0.05618 ± 1.99	0.0792 ± 0.0006	492 ± 3
14	Core	0.147	56	42	0.77	11.03523 ± 1.59	0.05997 ± 3.99	11.03523 ± 1.59	0.05997 ± 3.99	0.0905 ± 0.0015	558 ± 9
15.1	Core	<0.001	169	81	0.49	10.06259 ± 0.89	0.05715 ± 2.60	10.04780 ± 0.90	0.05835 ± 3.06	0.0998 ± 0.0009	613 ± 5
15.2	Rim	0.369	232	50	0.22	12.87058 ± 0.87	0.05971 ± 2.42	12.87058 ± 0.87	0.05971 ± 2.42	0.0774 ± 0.0007	481 ± 4
16	Core	0.180	450	301	0.69	9.51373 ± 0.55	0.06258 ± 1.30	9.52374 ± 0.55	0.06172 ± 1.40	0.1049 ± 0.0006	643 ± 3
17	Dark zone	0.028	460	24	0.05	12.27182 ± 0.57	0.05757 ± 1.53	12.26334 ± 0.57	0.05813 ± 1.77	0.0815 ± 0.0005	505 ± 3
18	Core	0.009	345	214	0.64	10.24097 ± 0.62	0.05999 ± 1.55	10.25775 ± 0.63	0.05865 ± 1.98	0.0976 ± 0.0006	601 ± 4
19	Grey zone	0.143	149	49	0.34	13.34577 ± 0.89	0.05749 ± 2.47	13.36797 ± 0.89	0.05614 ± 2.71	0.0748 ± 0.0007	465 ± 4
20	Grey zone	0.110	139	35	0.26	12.45341 ± 1.00	0.05805 ± 2.72	12.49533 ± 1.02	0.05532 ± 4.14	0.0802 ± 0.0008	497 ± 5
23	Grey core	0.402	137	43	0.32	12.26215 ± 1.17	0.06057 ± 4.06	12.32162 ± 1.29	0.05665 ± 9.02	0.0812 ± 0.0010	503 ± 6
24	Grey core	0.177	151	45	0.31	11.93826 ± 1.14	0.05912 ± 3.00	12.02515 ± 1.19	0.05321 ± 6.67	0.0836 ± 0.0010	518 ± 6
26	Sector core	0.200	192	74	0.40	12.54753 ± 0.99	0.05867 ± 2.71	12.61421 ± 1.01	0.05437 ± 4.39	0.0795 ± 0.0008	493 ± 5
27	Dark zone	0.033	1404	10	0.01	12.24790 ± 0.32	0.05764 ± 0.86	12.24669 ± 0.32	0.05772 ± 0.86	0.0816 ± 0.0003	506 ± 2
28.2	Rim	1.924	155	35	0.24	8.78739 ± 1.31	0.07803 ± 2.32	8.77362 ± 1.31	0.07929 ± 2.56	0.1116 ± 0.0015	682 ± 9
29	Grey zone	<0.001	137	36	0.27	12.56586 ± 1.17	0.05671 ± 3.22	12.66228 ± 1.27	0.05048 ± 8.63	0.0796 ± 0.0010	494 ± 6
30	Oscillatory	0.371	112	55	0.51	10.85387 ± 1.27	0.06200 ± 3.18	10.87222 ± 1.28	0.06062 ± 3.96	0.0918 ± 0.0012	566 ± 7
31	Dark zone	<0.001	624	17	0.03	12.29027 ± 0.55	0.05719 ± 1.49	12.28233 ± 0.55	0.05771 ± 1.70	0.0814 ± 0.0005	504 ± 3
32	Core	0.019	290	78	0.28	11.75987 ± 0.61	0.05805 ± 1.61	11.78286 ± 0.62	0.05646 ± 1.99	0.0850 ± 0.0005	526 ± 3
33	Core	0.137	317	149	0.49	11.80044 ± 0.56	0.05895 ± 1.44	11.83204 ± 0.57	0.05677 ± 2.14	0.0846 ± 0.0005	524 ± 3
34.1	Core	0.263	278	138	0.51	11.71269 ± 0.63	0.06006 ± 1.63	11.72299 ± 0.63	0.05935 ± 1.72	0.0852 ± 0.0006	527 ± 3
34.2	Rim	0.251	194	25	0.14	12.31397 ± 0.77	0.05931 ± 2.08	12.33976 ± 0.78	0.05761 ± 2.31	0.0810 ± 0.0006	502 ± 4
35	Oscillatory	0.238	324	149	0.47	11.59579 ± 0.58	0.06000 ± 1.48	11.60677 ± 0.58	0.05923 ± 1.52	0.0860 ± 0.0005	532 ± 3
36	Dark zone	<0.001	427	305	0.74	9.93214 ± 0.48	0.05937 ± 1.26	9.96185 ± 0.49	0.05692 ± 2.01	0.1008 ± 0.0005	619 ± 3
37	Core	0.342	223	217	1.00	11.30302 ± 0.69	0.06118 ± 1.71	11.30302 ± 0.69	0.06118 ± 1.71	0.0882 ± 0.0006	545 ± 4
38	Core	0.111	390	164	0.43	11.10615 ± 0.57	0.05958 ± 1.45	11.13028 ± 0.59	0.05781 ± 2.60	0.0899 ± 0.0005	555 ± 3
39	Core	<0.001	295	209	0.73	11.18690 ± 0.67	0.05729 ± 1.74	11.19238 ± 0.68	0.05689 ± 1.94	0.0895 ± 0.0006	553 ± 4
40.1	Core	0.274	189	142	0.78	11.96703 ± 0.87	0.05987 ± 2.23	11.96703 ± 0.87	0.05987 ± 2.23	0.0833 ± 0.0007	516 ± 4
40.2	Rim	0.220	135	33	0.25	11.22065 ± 1.10	0.06031 ± 2.96	11.49776 ± 1.30	0.04023 ± 16.12	0.0889 ± 0.0010	549 ± 6
41	Core	<0.001	107	71	0.69	11.37215 ± 1.31	0.05698 ± 3.47	11.33825 ± 1.33	0.05941 ± 4.70	0.0881 ± 0.0012	544 ± 7
42	Core	<0.001	101	71	0.73	11.14550 ± 1.33	0.05781 ± 3.46	11.18566 ± 1.37	0.05487 ± 6.41	0.0898 ± 0.0012	554 ± 7
43.1	Core	0.145	440	289	0.68	9.94838 ± 0.64	0.06155 ± 1.55	9.95839 ± 0.64	0.06073 ± 1.75	0.1004 ± 0.0007	617 ± 4
43.2	Rim	0.026	170	71	0.43	9.83285 ± 1.30	0.06079 ± 3.92	9.88651 ± 1.31	0.05632 ± 5.32	0.1017 ± 0.0014	624 ± 8
44	Core	-0.070	100	72	0.74	10.84563 ± 1.37	0.05848 ± 3.50	10.98333 ± 1.49	0.04812 ± 11.37	0.0923 ± 0.0013	569 ± 8
46	Core	<0.001	1125	636	0.58	10.57799 ± 0.39	0.05924 ± 0.97	10.57701 ± 0.39	0.05932 ± 0.98	0.0946 ± 0.0004	582 ± 2
47	Core	0.097	210	141	0.70	9.92700 ± 0.89	0.06120 ± 2.19	9.94239 ± 0.89	0.05994 ± 2.69	0.1006 ± 0.0009	618 ± 5
49	Core	<0.001	75	43	0.60	6.04220 ± 1.37	0.07009 ± 2.66	6.04478 ± 1.38	0.06973 ± 2.89	0.1659 ± 0.0024	990 ± 13
50.1	Core	<0.001	69	40	0.59	7.88302 ± 1.47	0.06370 ± 3.28	7.85636 ± 1.50	0.06650 ± 5.01	0.1270 ± 0.0019	771 ± 11
50.2	Rim	0.009	2015	404	0.21	9.67288 ± 0.29	0.06093 ± 0.68	9.68136 ± 0.29	0.06021 ± 0.80	0.1034 ± 0.0003	634 ± 2
51.1	Core	0.396	243	246	1.05	11.69017 ± 0.71	0.06115 ± 1.85	11.71564 ± 0.71	0.05938 ± 2.05	0.0852 ± 0.0006	527 ± 4
51.2	Rim	1.838	1227	655	0.55	10.19903 ± 0.31	0.07470 ± 3.17	10.44989 ± 0.49	0.05498 ± 8.46	0.0962 ± 0.0005	592 ± 3
52	Core	0.001	210	94	0.46	11.39147 ± 0.91	0.05835 ± 2.42	11.39147 ± 0.91	0.05835 ± 2.42	0.0878 ± 0.0008	542 ± 5
53	Oscillatory	0.293	168	140	0.86	10.35666 ± 0.90	0.06209 ± 2.19	10.40183 ± 0.92	0.05853 ± 3.67	0.0963 ± 0.0009	593 ± 5
54	Core	0.002	155	86	0.58	11.20502 ± 0.91	0.05859 ± 2.34	11.18682 ± 0.92	0.05991 ± 2.92	0.0892 ± 0.0008	551 ± 5
55	Core	0.276	603	249	0.43	11.83223 ± 0.49	0.06003 ± 1.28	11.85150 ± 0.50	0.05871 ± 1.52	0.0843 ± 0.0004	522 ± 3
57	Grey zone	0.299	198	88	0.46	12.13203 ± 0.84	0.05989 ± 2.20	12.13527 ± 0.85	0.05967 ± 2.25	0.0822 ± 0.0007	509 ± 4
58	Dark core	2.146	359	172	0.49	12.26747 ± 0.62	0.07452 ± 3.04	12.55176 ± 0.74	0.05610 ± 8.18	0.0798 ± 0.0006	495 ± 4
59	Oscillatory	<0.001	293	308	1.09	11.45647 ± 0.69	0.05775 ± 1.78	11.45819 ± 0.69	0.05763 ± 1.95	0.0873 ± 0.0006	540 ± 4
60	Core	0.134	408	480	1.21	11.82564 ± 0.59	0.05890 ± 1.53	11.82564 ± 0.59	0.05890 ± 1.53	0.0844 ± 0.0005	523 ± 3
61	Core	0.073	265	215	0.84	10.87737 ± 0.73	0.05958 ± 1.85	10.88584 ± 0.73	0.05895 ± 2.22	0.0919 ± 0.0007	567 ± 4
62	Dark zone	0.238	197	52	0.28	12.61611 ± 0.86	0.05890 ± 2.29	12.65271 ± 0.88	0.05655 ± 3.22	0.0791 ± 0.0007	491 ± 4
63	Oscillatory	<0.001	125	73	0.60	10.52735 ± 1.15	0.05860 ± 2.96	10.50056 ± 1.17	0.06068 ± 4.01	0.0951 ± 0.0011	586 ± 7
64	Dark zone	<0.001	257	57	0.23	12.31363 ± 0.81	0.05605 ± 2.22	12.32643 ± 0.84	0.05520 ± 3.80	0.0813 ± 0.0007	504 ± 4
65	Sector core	0.112	117	88	0.78	11.60226 ± 1.21	0.05898 ± 3.13	11.62283 ± 1.23	0.05754 ± 4.61	0.0861 ± 0.0011	532 ± 6
66.1	Core	0.370	57	29	0.52	11.27983 ± 1.74	0.06143 ± 4.42	11.37213 ± 1.80	0.05479 ± 8.53	0.0883 ± 0.0016	546 ± 9
66.2	Rim	<0.001	290	26	0.09	9.71607 ± 0.79	0.05903 ± 2.25	9.79787 ± 0.85	0.05212 ± 5.74	0.1031 ± 0.0008	633 ± 5
67	Core	0.042	291	126	0.45	11.40887 ± 0.77	0.05865 ± 2.03	11.40887 ± 0.77	0.05865 ± 2.03	0.0876 ± 0.0007	541 ± 4

[a] uncorrected ratios

[b] radiogenic lead ^{204}Pb corrected for common lead

[c] radiogenic lead ^{207}Pb corrected for common lead

[d] ^{207}Pb corrected for common lead

Table Electronic Appendice 3 U-Th-Pb SHRIMP analytical data for zircons older than 1000 Ma from the metapelitic granulite included in the Monte Castelo gabbro (sample G97). All errors are 1σ.

Spot name		Common ^{206}Pb (%)	U (ppm)	Th (ppm)	$^{232}Th/^{238}U$	$^{207}Pb^*/^{206}Pb^{*a}$	$^{207}Pb^*/^{235}U^b$	$^{206}Pb^*/^{238}U^b$	error correlation	$^{207}Pb/^{206}Pb^b$ age	Discordant (%)
2	Core	0.87	120	70	0.61	0.0997 ± 1.0	3.59 ± 1.7	0.2610 ± 1.3	0.783	**1619 ± 20**	8
6	Dark core	11.62	467	194	0.43	0.2394 ± 0.6	0.00 ± 0.7	0.4590 ± 0.4	0.558	**3116 ± 10**	28
21	Core	<0.01	455	351	0.80	0.0760 ± 1.1	1.99 ± 1.2	0.1899 ± 0.6	0.478	**1095 ± 21**	-2
22	Core	2.22	376	174	0.48	0.1167 ± 0.8	4.59 ± 1.0	0.2853 ± 0.6	0.611	**1906 ± 14**	18
25	Core	0.29	98	32	0.34	0.0748 ± 2.5	1.74 ± 2.8	0.1684 ± 1.2	0.442	**1062 ± 51**	6
28.1	Core	<0.01	47	65	1.43	0.1140 ± 2.5	5.43 ± 3.0	0.3453 ± 1.7	0.558	**1864 ± 46**	-3
45	Core	<0.01	216	145	0.69	0.1184 ± 0.9	6.08 ± 1.2	0.3724 ± 0.8	0.627	**1933 ± 17**	-5
48	Oscillatory	<0.01	99	90	0.95	0.1274 ± 1.2	6.81 ± 1.6	0.3874 ± 1.1	0.689	**2062 ± 21**	-2
56	Core	0.96	111	1	0.01	0.0847 ± 4.3	2.25 ± 4.5	0.1924 ± 1.2	0.270	**1309 ± 84**	15

* radiogenic lead

[a] uncorrected ratio

[b] radiogenic lead ^{204}Pb corrected for common lead

Table Electronic Appendice 4 Preliminary trace element data for zircons from the Monte Castelo granulitic shear zone.

Spot name		$^{206}Pb/^{238}U$ age	Hf (ppm)	Er (ppm)	Yb (ppm)
1.1	Core	510 ± 15	10555	186	331
1.2	Core	522 ± 17	10252	104	206
2	Core	481 ± 12	9875	330	531
3	Core	469 ± 13	10031	194	345
4	Core	478 ± 12	10234	198	351
5	Rim	487 ± 3	13762	327	583
6.1	Core	488 ± 10	9671	369	594
6.2	Rim	503 ± 4	13460	335	621
7.1	Rim	476 ± 5	13108	268	491
7.2	Core	522 ± 12	10602	198	348
8.1	Core	496 ± 18	10435	58	123
8.2	Rim	479 ± 3	13523	321	586
9.1	Core	494 ± 16	10830	118	224
9.2	Rim	490 ± 4	13711	313	563
10.1	Core	500 ± 18	10822	50	105
10.2	Rim	471 ± 2	12902	310	554
11	Core	483 ± 12	10086	324	513
12	Rim	489 ± 4	13482	285	524
13	Rim	476 ± 3	13763	270	500
14	Rim	482 ± 3	13049	318	574