Table DR1. Zircon chemical abrasion IDTIMS U-Pb isotopic data

	Compositional Parameters						Radiogenic Isotope Ratios								Isotopic Ages					
Sample (a)	Th/U (b)	^{206}Pb* x10^{-13} mol (c)	mol % ^{206}Pb* (c)	Pb*/Pb$_c$ (c)	Pb$_c$ (pg) (c)	^{206}Pb/^{204}Pb (d)	^{208}Pb/^{206}Pb (e)	^{207}Pb/^{206}Pb (e)	% err (f)	^{207}Pb/^{235}U (e)	% err (f)	^{206}Pb/^{238}U (e)	% err (f)	corr. coef.	^{207}Pb/^{206}Pb (g)	± (f)	^{207}Pb/^{235}U (g)	± (f)	^{206}Pb/^{238}U (g)	± (f)
PRI *Partridge River intrusion* (Duluth Complex layered series)																				
z2	0.665	20.7388	0.9995	599	0.91	34763	0.201	0.0761152	0.042	1.94565	0.084	0.185393	0.045	0.967	1098.10	0.84	1096.95	0.56	**1096.37**	**0.45**
z5	0.795	15.3708	0.9993	470	0.89	26480	0.241	0.0760872	0.042	1.94489	0.084	0.185388	0.045	0.974	1097.37	0.84	1096.68	0.56	**1096.34**	**0.45**
z1	0.714	21.4970	0.9992	415	1.38	23809	0.216	0.0760841	0.043	1.94467	0.085	0.185375	0.046	0.959	1097.29	0.87	1096.61	0.57	**1096.27**	**0.46**
z6	0.624	12.4836	0.9992	392	0.83	22979	0.189	0.0760958	0.039	1.94459	0.083	0.185339	0.045	0.991	1097.59	0.78	1096.58	0.56	**1096.08**	**0.46**
z4	0.610	11.0228	0.9988	272	1.05	15998	0.185	0.0761063	0.045	1.94483	0.087	0.185336	0.046	0.952	1097.87	0.91	1096.66	0.59	**1096.06**	**0.47**
z3	0.669	4.5808	0.9983	192	0.63	11152	0.203	0.0761323	0.055	1.94542	0.094	0.185329	0.048	0.898	1098.55	1.11	1096.87	0.63	**1096.02**	**0.48**
weighted mean 206Pb/238U age = 1096.19 ± 0.19 (0.36) [1.15] Ma (2s); MSWD = 0.45 (n=6)																				
FC-4b *Forest Center anorthosite* (Duluth Complex anorthosite series)																				
z8	0.775	25.2049	0.9996	894	0.76	50552	0.235	0.0760449	0.041	1.94440	0.084	0.185445	0.047	0.966	1096.25	0.82	1096.52	0.56	1096.65	0.47
z9	0.708	1.9147	0.9951	65	0.78	3759	0.214	0.0759136	0.093	1.93976	0.140	0.185322	0.073	0.794	1092.79	1.87	1094.92	0.94	**1095.98**	**0.73**
z10	0.732	8.7414	0.9986	233	1.01	13304	0.222	0.0760627	0.047	1.94330	0.089	0.185297	0.047	0.946	1096.72	0.94	1096.14	0.60	**1095.85**	**0.47**
z2	0.686	30.2158	0.9996	721	1.11	41626	0.208	0.0761076	0.041	1.94443	0.084	0.185295	0.046	0.968	1097.90	0.82	1096.53	0.56	**1095.84**	**0.47**
z4	0.705	20.9839	0.9995	610	0.92	35079	0.214	0.0761032	0.042	1.94413	0.085	0.185277	0.047	0.963	1097.79	0.83	1096.42	0.57	**1095.74**	**0.48**
z11	0.716	11.7511	0.9989	288	1.09	16503	0.217	0.0760929	0.045	1.94376	0.087	0.185266	0.046	0.954	1097.51	0.90	1096.30	0.58	**1095.68**	**0.47**
z3	0.637	48.5088	0.9998	1280	0.99	74775	0.193	0.0761148	0.040	1.94431	0.086	0.185265	0.051	0.957	1098.09	0.81	1096.48	0.58	**1095.68**	**0.51**
z1	0.630	18.1802	0.9994	548	0.87	32063	0.191	0.0760777	0.042	1.94321	0.084	0.185251	0.045	0.969	1097.12	0.84	1096.11	0.56	**1095.60**	**0.46**
z6	0.659	12.0405	0.9992	397	0.80	23077	0.199	0.0760863	0.044	1.94314	0.086	0.185223	0.047	0.955	1097.34	0.87	1096.08	0.58	**1095.45**	**0.48**
z5	0.467	9.6852	0.9988	256	0.95	15587	0.141	0.0761585	0.046	1.94327	0.088	0.185060	0.046	0.952	1099.24	0.92	1096.13	0.59	1094.56	0.47
weighted mean 206Pb/238U age = 1095.71 ± 0.17 (0.35) [1.14] Ma (2s); MSWD = 0.38 (n=8)																				
FC-1 *Forest Center anorthosite* (Duluth Complex anorthosite series)																				
z21	0.347	89.3479	0.9999	4055	0.54	254586	0.105	0.0761142	0.040	1.94544	0.086	0.185375	0.051	0.958	1098.08	0.80	1096.87	0.58	**1096.27**	**0.51**
z23	1.362	38.6752	0.9998	1969	0.60	97907	0.412	0.0761283	0.040	1.94564	0.086	0.185360	0.050	0.959	1098.45	0.81	1096.95	0.57	**1096.19**	**0.51**
z22	0.614	135.1333	1.0000	8332	0.42	489236	0.186	0.0760948	0.040	1.94434	0.086	0.185317	0.051	0.958	1097.56	0.80	1096.50	0.57	**1095.96**	**0.51**
z26	1.443	63.5688	0.9999	4620	0.43	225979	0.437	0.0761149	0.040	1.94485	0.084	0.185317	0.048	0.965	1098.09	0.80	1096.67	0.56	**1095.96**	**0.48**
z20	1.508	98.5654	0.9999	4740	0.66	228892	0.457	0.0761327	0.040	1.94529	0.093	0.185315	0.062	0.944	1098.56	0.80	1096.82	0.62	**1095.95**	**0.63**
z25	0.684	41.1099	0.9998	2139	0.51	123514	0.207	0.0761295	0.040	1.94493	0.083	0.185289	0.046	0.970	1098.48	0.80	1096.70	0.56	**1095.81**	**0.47**
z19	0.715	125.9011	0.9999	5523	0.61	316609	0.217	0.0761253	0.040	1.94446	0.085	0.185255	0.049	0.961	1098.37	0.80	1096.54	0.57	**1095.62**	**0.50**
z27	0.547	56.2585	0.9998	1614	0.89	96360	0.166	0.0761425	0.040	1.94490	0.084	0.185254	0.047	0.968	1098.82	0.81	1096.69	0.56	**1095.62**	**0.47**
z18	1.414	46.2410	0.9998	1865	0.77	91792	0.428	0.0761037	0.040	1.94366	0.084	0.185230	0.048	0.965	1097.80	0.81	1096.26	0.57	**1095.49**	**0.48**
z24	1.439	92.3175	0.9999	6768	0.43	331313	0.436	0.0761075	0.040	1.94349	0.085	0.185206	0.049	0.962	1097.90	0.80	1096.20	0.57	**1095.35**	**0.50**
weighted mean 206Pb/238U age = 1095.81 ± 0.16 (0.34) [1.14] Ma (2s); MSWD = 1.44 (n=10)																				
BEI *Bald Eagle intrusion* (Duluth Complex layered series)																				
z4	0.681	16.1663	0.9991	341.8	1.25	19772	0.206	0.0760969	0.044	1.94481	0.085	0.185357	0.044	0.966	1097.62	0.87	1096.66	0.57	**1096.17**	**0.45**
z6a	0.649	30.1146	0.9997	914	0.86	53261	0.197	0.0760783	0.045	1.94407	0.085	0.185332	0.045	0.942	1097.13	0.91	1096.40	0.57	**1096.04**	**0.46**
z6b	0.841	24.9060	0.9996	803	0.85	44740	0.255	0.0760813	0.039	1.94401	0.084	0.185319	0.048	0.974	1097.21	0.79	1096.38	0.56	**1095.97**	**0.48**
z5	0.652	4.7525	0.9983	186	0.67	10867	0.197	0.0760617	0.050	1.94340	0.090	0.185308	0.046	0.942	1096.70	0.99	1096.17	0.61	**1095.91**	**0.46**
z3	0.576	6.7271	0.9982	178	0.97	10592	0.174	0.0761041	0.052	1.94433	0.091	0.185294	0.046	0.928	1097.81	1.04	1096.49	0.61	**1095.83**	**0.46**
z1	0.523	5.9782	0.9981	159	0.96	9575	0.158	0.0761187	0.054	1.94367	0.095	0.185195	0.050	0.912	1098.19	1.07	1096.26	0.64	**1095.29**	**0.50**
weighted mean 206Pb/238U age = 1095.89 ± 0.19 (0.36) [1.15] Ma (2s); MSWD = 1.59 (n=6)																				
HCT *Houghtaling Creek troctolite* (Beaver Bay Complex)																				
z7	0.765	11.6934	0.9978	149	2.12	8437	0.232	0.0761478	0.055	1.94513	0.094	0.185263	0.046	0.920	1098.96	1.10	1096.77	0.63	**1095.66**	**0.47**
z6	0.666	4.7620	0.9968	101	1.24	5877	0.202	0.0760881	0.067	1.94350	0.106	0.185254	0.051	0.870	1097.39	1.34	1096.21	0.71	**1095.61**	**0.52**
z1	0.396	3.7022	0.9945	54	1.68	3382	0.120	0.0760085	0.099	1.94086	0.139	0.185196	0.060	0.784	1095.29	1.98	1095.30	0.93	**1095.30**	**0.60**
z10	0.719	3.5063	0.9965	94	1.00	5380	0.218	0.0761151	0.069	1.94320	0.108	0.185159	0.051	0.865	1098.10	1.39	1096.10	0.73	**1095.10**	**0.51**
z4	1.566	1.3175	0.9876	31	1.36	1502	0.474	0.0760216	0.210	1.93975	0.256	0.185058	0.083	0.671	1095.64	4.19	1094.91	1.71	1094.55	0.83
z9	1.053	4.8694	0.9980	173	0.81	9209	0.319	0.0760857	0.054	1.94068	0.094	0.184991	0.048	0.920	1097.33	1.07	1095.23	0.63	1094.18	0.48
z12	1.398	4.7973	0.9977	167	0.89	8245	0.424	0.0760778	0.057	1.93986	0.098	0.184932	0.050	0.902	1097.12	1.14	1094.95	0.66	1093.86	0.50
z11	0.687	2.1862	0.9947	61	0.95	3536	0.208	0.0760543	0.096	1.93912	0.135	0.184918	0.056	0.792	1096.50	1.93	1094.69	0.90	1093.79	0.57
z14	0.404	1.0610	0.9951	61	0.43	3817	0.122	0.0760529	0.086	1.93884	0.233	0.184895	0.202	0.932	1096.46	1.71	1094.60	1.56	1093.66	2.04
z8	2.079	1.5846	0.9926	57	0.97	2508	0.630	0.0761335	0.128	1.94009	0.247	0.184818	0.191	0.858	1098.58	2.57	1095.03	1.65	1093.24	1.92
z5	1.078	2.7707	0.9909	39	2.08	2053	0.327	0.0760109	0.152	1.93692	0.193	0.184814	0.066	0.724	1095.36	3.03	1093.94	1.29	1093.22	0.67
weighted mean 206Pb/238U age = 1095.44 ± 0.26 (0.40) [1.16] Ma (2s); MSWD = 1.13 (n=4)																				
WLFG *Wilson Lake ferrogabbro* (Beaver Bay Complex)																				
z2	1.225	3.6441	0.9967	111	0.98	5701	0.371	0.0759668	0.066	1.93316	0.105	0.184562	0.049	0.880	1094.20	1.32	1092.63	0.70	**1091.85**	**0.49**
z9	1.236	1.2015	0.9806	18	1.96	958	0.375	0.0760828	0.312	1.93604	0.383	0.184555	0.134	0.651	1097.25	6.25	1093.63	2.56	**1091.81**	**1.35**
z16	1.209	0.7717	0.9872	28	0.82	1452	0.366	0.0759981	0.205	1.93352	0.265	0.184521	0.114	0.685	1095.02	4.10	1092.76	1.77	**1091.62**	**1.15**
z26	1.115	1.3194	0.9923	45	0.85	2401	0.338	0.0759428	0.131	1.93161	0.171	0.184473	0.064	0.743	1093.56	2.62	1092.10	1.15	**1091.36**	**0.65**
z19	2.350	0.3987	0.9715	15	0.96	652	0.712	0.0760519	0.419	1.93313	0.517	0.184353	0.155	0.724	1096.44	8.38	1092.62	3.46	**1090.71**	**1.55**
z27	2.410	0.7114	0.9816	24	1.10	1010	0.730	0.0760187	0.290	1.92711	0.351	0.183859	0.110	0.666	1095.56	5.80	1090.54	2.35	1088.02	1.10
z28	1.613	0.4676	0.9820	21	0.71	1031	0.489	0.0758794	0.298	1.92047	0.393	0.183562	0.194	0.676	1091.89	5.98	1088.23	2.62	1086.40	1.94
z18	1.210	0.2411	0.9586	8	0.86	450	0.367	0.0756855	0.693	1.91505	0.826	0.183513	0.266	0.620	1086.76	###	1086.35	5.51	1086.14	2.66
weighted mean 206Pb/238U age = 1091.63 ± 0.35 (0.46) [1.18] Ma (2s); MSWD = 0.74 (n=5)																				

(a) z1, z2 etc. are labels for single zircon fragments annealed and chemically abraded after Mattinson (2005); bold indicates analyses used in weighted mean calculations.
(b) Model Th/U ratio iteratively calculated from the radiogenic 208Pb/206Pb ratio and 206Pb/238U age.
(c) Pb* and Pbc represent radiogenic and common Pb, respectively; mol % ^{206}Pb* with respect to radiogenic, blank and initial common Pb.
(d) Measured ratio corrected for spike and fractionation only. Fractionation estimated at 0.18 (Daly) or 0.10 (Faraday) ± 0.02 %/a.m.u. based on analysis of NBS-981 & 982.
(e) Corrected for fractionation, spike, and common Pb; all common Pb was assumed to be procedural blank: 206Pb/204Pb = 18.60 ± 0.72%; 207Pb/204Pb = 15.69 ± 0.62%; 208Pb/204Pb = 38.51 ± 0.74% (all uncertainties 1-sigma). Isotope dilution measurements made with the ET535 spike (Condon et al., 2015).
(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). All ratios and ages corrected for initial 230Th/238U disequilibrium with Th/U [magma] = 3.
Uncertainties for single grain dates, that are propagated into the weighted means, are based upon nonsystematic analytical errors, including counting statistics, instrumental fractionatior