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Data Repository

TABLE DR1. WHOLE-ROCK MAJOR AND TRACE ELEMENT DATA

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TABLE DR5. WHOLE-ROCK Sm-Nd ISOTOPIC DATA

SAMPLE PREPARATION AND ANALYTICAL METHODS

All whole-rock and zircon analyses used aliquots from the same rock sample. All samples were sliced into blocks, reduced to gravel by hammering and processed as described below:

For X-ray fluorescence (XRF) whole-rock analysis, gravel aliquots were pulverized using a tungsten carbide TEMA mill at University College Dublin, Ireland (UCD). Consequently, analyses for tungsten and cobalt are not considered due to likely contamination. Major and trace element analyses (Table DR1) were performed on fused glass discs and pressed powder pellets, respectively, using a Philips MagiX Pro X-ray spectrometer at the Johannes Gutenberg-University of Mainz, Germany (JGU).

For rare earth element (REE) and additional trace element analyses aliquots of the powders used for XRF analyses were fused at c. 1600 °C to glass beads using an iridium strip heater in an argon atmosphere following the methods of Stoll et al. (2008) and Nehring et al. (2008). In addition, a fused glass bead of the powdered USGS reference material BHVO-2 was prepared to monitor the melting conditions. Element concentrations were determined at JGU using an Agilent 7500ce inductively coupled plasma-mass spectrometer (ICPMS) coupled to an ESI NWR193 ArF excimer laser ablation (LA) system equipped with the TwoVol2 sample chamber. The ArF laser was operated at a pulse repetition rate of 10 Hz with an energy density of c. 3 J/cm^2. On each sample 10 spots (100 µm) were analyzed performing background measurement for 15 s, ablation times of 30 s and wash out times of 20 s. Data were monitored in time-resolved mode and processed using Glitter 4.4.1 (Macquarie University, Sydney, Australia). ^{29}Si was used as internal standard using the SiO_2 contents previously measured by XRF from the same powder aliquots. NIST SRM 610 was used for calibration using the preferred values (v19_dec2015) from the GeoReM database (http://georem.mpch-mainz.gwdg.de/) (Jochum et al., 2005; Jochum et al., 2011). In addition, homogeneous reference glasses (NIST SRM 612; USGS BCR-2G and BHVO-2G; MPI-DING StHs-6/80-G and ATHO-G (Jochum et al., 2000; Jochum et al., 2006)) were analyzed along with the glass beads (including BHVO-2) as quality control materials to monitor accuracy and precision of the measurements and calibration. Averages of 18 analyses from each of the reference glasses were found to be within 15% of the preferred GeoReM (v19_dec2015) values, except for analyses of Ta for both BCR-2G (16%) and ATHO-G (21%). Averages of 6 analyses from the fused glass bead of the powdered reference material BHVO-2 were found to be within 10% of the preferred GeoReM (v19_dec2015) values, except for analyses of Rb, Tb, Ho, Tm and Ta which were within 15% of the preferred GeoReM (v19_dec2015) values. Reproducibility of measurements was generally found to be within 5% for the reference glasses. Homogeneity of the fused glass beads was determined based on repeated measurements of the glass bead fused from the powdered reference material BHVO-2 and was better than 15%.

Zircon was separated from 300 g to 1 kg gravel aliquots crushed for a few seconds in a tungsten carbide TEMA mill at UCD. Zircon from the > 50 and < 500 μm fraction was separated by flotation in Methylene Iodide and washed with acetone. The zircon grains were handpicked and mounted in epoxy resin (EpoFix; Mason Technology) along with grains of the 1,065 Ma Geostandards 91500 zircon standard (Wiedenbeck et al., 1995). The zircon grains were embedded and polished at the NORDSIM laboratory at the Swedish Museum of Natural History, Stockholm, Sweden. The exposed grains were imaged using optical and cathodoluminescence (CL) methods by a scanning electron microscope (SEM) before being cleaned and coated with 30 nm of gold at the NORDSIM laboratory.

U-Pb analyses (Table DR2) were conducted by secondary ion mass spectrometry (SIMS) using a CAMECA IMS 1280 ion microprobe at the NORDSIM laboratory. Measurements followed the analytical protocols of Whitehouse et al. (1999) and Whitehouse and Kamber (2005). Pb/U ratios for U-Pb age determinations were calibrated against 91500 zircon using the measured UO/U ratios. Common Pb corrections were applied when necessary (Table DR2), based on measured ^{204}Pb signals, using the present-day terrestrial Pb estimate of Stacey and Kramers (1975). U-Pb age calculations were performed with ISOPLOT version 3.1 (Ludwig, 1999) using the Steiger and Jaeger (1977) decay constants, but ignoring the decay-constant uncertainties. All age uncertainties in the text are quoted at the 2σ level. Generally, ages quoted in the text are Tera-Wasserburg concordia ages (Ludwig, 1998). For inherited and detrital zircon grains, ^{206}Pb/^{238}U ages are quoted for Phanerozoic and Proterozoic ages < 1,000 Ma, whereas ^{207}Pb/^{206}Pb ages are quoted for older Proterozoic ages.

Oxygen isotopic analyses (Table DR3) were conducted on previously dated, re-polished and re-coated zircon crystals. Oxygen isotopic analyses were conducted by SIMS using a CAMECA IMS 1280 ion microprobe at the NORDSIM laboratory. Measurements closely followed the analytical procedure of Whitehouse and Nemchin (2009), with the exception that a Gaussian focused C^+ primary beam with a small raster (10 μm) was used. To correct for instrumental mass fractionation and drift during oxygen isotopic analyses, all data were normalized to $\delta^{18}O$ = 9.86 ‰, the value of the 91500 zircon standard (Wiedenbeck et al., 1995) relative to Vienna Standard Mean Ocean Water (V-SMOW), which was regularly interspersed with unknowns during the analytical session.

Lu-Hf analyses (Table DR4) were carried out at UCD by laser-ablation multiple collector inductively coupled plasma mass spectrometry (LA-MC-ICPMS) using a Thermo Scientific Neptune instrument coupled to a New Wave 193 nm ArF Excimer laser ablation system (UP-193) following the analytical protocol of Hawkesworth and Kemp (2006). The laser was operated at a pulse repetition rate of 5 Hz in single spot mode (50 μm) for 60 s. Operating conditions were optimized by enhancing the signal energy and stability by continuous analyses of NIST SRM 610. To correct for instrumental mass bias and fractionation, Yb isotope ratios were normalized to $^{173}Yb/^{171}Yb$ = 1.130172 (Segal et al., 2003) and Hf isotope ratios to $^{179}Hf/^{177}Hf$ = 0.7325 (Patchett, 1983). Isobaric interference of Lu and Yb on ^{176}Hf were corrected by monitoring the invariant $^{175}Lu/^{176}Lu$ and $^{171}Yb/^{176}Yb$ ratios and subtracting ^{176}Lu and ^{176}Yb. εHf_t (t = magmatic age of the rock) values were calculated using chondritic uniform reservoir (CHUR) $^{176}Hf/^{177}Hf$ and $^{176}Lu/^{177}Hf$ values from (Bouvier et al., 2008) and depleted mantle (DM) $^{176}Hf/^{177}Hf$ and $^{176}Lu/^{177}Hf$ ratios from (Griffin et al., 2002). Mud Tank zircon (Woodhead and Hergt, 2005) was measured for drift correction. $^{176}Hf/^{177}Hf$ ratios were normalized to a value of 0.282160 (Nowell et al., 1998) for the JMC-475 Hf reference material, measured in solution mode. $^{178}Hf/^{177}Hf$ ratios were constant throughout the runs yielding indistinguishable weighted average values for both the Mud tank zircon (1.4672505 ± 0.0000055) and the unknowns (1.467258 ± 0.000011), in good agreement with the value of 1.46724 ± 0.00018 from Murgulov et al. (2008).

Ion chromatography for Sm-Nd whole-rock isotopic analyses and thermal ionization mass spectrometry (TIMS), using a Thermo-Scientific Triton thermal ionization mass spectrometer, were carried out at UCD. Between 30 and 50 mg aliquots of whole-rock powder, depending on the concentration of Nd as previously determined by LA-ICPMS REE analysis, were dissolved in Teflon bombs for 72 h at 130 °C, using a 5:1 concentrated HF-HNO_3 mixture. Separation of Sm and Nd was achieved using standard ion-exchange techniques. TIMS analyses were conducted on double filament (Re-Ta) beads. Prior to loading, each sample was dissolved in an appropriate amount of 2M HNO_3 (yielding a target load of 300 ng for Nd and 100 ng for Sm), and 1 µl of this solution was loaded on a rhenium filament together with 1 µl of 0.2M H_3PO_4. Measured $^{143}Nd/^{144}Nd$ ratios were normalized to a value of 0.512115 for the isotopic reference material JNdi-1 (Tanaka et al., 2000), three measurements of which yielded a $^{143}Nd/^{144}Nd$ ratio of 0.512095 ± 0.000005 (2σ) during the period of this work.

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TABLE DR1. WHOLE-ROCK MAJOR AND TRACE ELEMENT DATA

	Port-e-Vullen volcanics			Avoca volcanics				Croghan Kinshelagh granite		Graiguenamanagh granitoids		Dhoon granite				
	12IM41	12IM42	14PV01	15Av01	15Av02	15Av03	15Av04*	14CK11	14CK12	14Gn01	14Gn02	12IM01	12IM02*	12IM03*	14Dn01*	14Dn04
	Andesite	Basaltic andesite	Basaltic andesite	Rhyolite	Rhyolite	Basalt	Dacite	Granite	Granite	Syenite	Granite	Granite	Grano-diorite	Grano-diorite	Granite	Syeno-diorite
Lat (N)	54°18'30.2"	54°18'31.9"	54°18'29.9"	52°53'43.0"	52°53'17.7"	52°54'23.4"	52°54'13.2"	52°47'36.2"	52°47'23.8"	52°32'28.3"	52°32'28.3"	54°15'23.7"	54°15'18.5"	54°15'17.7"	54°15'25.2"	54°15'25.7"
Long (W)	4°20'51.8"	4°20'54.8"	4°20'50.4"	6°13'40.9"	6°13'39.8"	6°10'19.2"	6°10'22.1"	6°21'45.0"	6°21'30.5"	6°57'03.8"	6°57'03.8"	4°21'58.8"	4°22'51.2"	4°22'45.6"	4°21'57.8"	4°22'22.4"
SiO_2	53.8	51.2	51.2	72.6	74.7	48.6	69.8	73.4	73.0	65.2	73.8	71.5	68.6	69.3	71.2	60.6
TiO_2	1.16	1.14	1.20	0.15	0.11	2.28	0.49	0.22	0.24	0.60	0.31	0.35	0.56	0.58	0.34	0.49
Al_2O_3	16.5	16.8	14.2	12.7	14.3	15.1	10.2	13.8	13.7	16.1	13.0	14.7	15.9	15.2	14.7	16.9
Fe_2O_3	0.99	1.10	0.96	0.22	0.16	1.18	1.07	0.20	0.21	0.48	0.18	0.28	0.36	0.42	0.28	0.27
FeO	8.92	9.84	8.64	1.95	1.41	10.6	9.62	1.82	1.90	4.35	1.63	2.52	3.27	3.82	2.54	2.38
MnO	0.19	0.22	0.23	< 0.02	< 0.02	0.17	0.10	0.03	0.02	0.09	0.03	0.05	0.10	0.09	0.09	0.05
MgO	6.38	7.28	4.88	4.77	1.14	7.26	2.43	0.19	0.42	1.03	0.40	0.57	0.95	1.03	0.67	1.37
CaO	2.56	2.71	5.36	< 0.10	< 0.10	5.14	< 0.10	0.46	0.24	0.55	0.59	2.10	1.49	2.43	2.17	1.53
Na_2O	0.26	0.42	2.85	0.27	2.80	2.94	< 0.02	3.82	2.97	2.48	1.94	4.10	3.95	4.17	5.04	4.27
K_2O	1.17	1.07	1.02	2.98	2.51	1.12	2.00	5.40	6.42	6.98	6.92	2.26	1.80	1.12	1.69	2.91
P_2O_5	0.20	0.23	0.20	0.02	0.01	0.31	0.02	0.02	0.02	0.26	0.22	0.09	0.16	0.13	0.11	0.15
SO_3	0.76	0.37	0.22	0.03	0.02	0.09	0.46	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.16	2.08
LOI	8.64	8.11	9.68	3.92	3.08	5.35	4.83	0.89	0.92	1.91	0.93	1.34	2.75	1.85	1.72	4.10
SUM	101.52	100.55	100.69	99.63	100.27	100.12	100.94	100.19	99.98	99.95	99.93	99.89	99.80	100.08	100.64	97.16
Li	291	315	155	32.6	17.0	44.1	N.D.	8.86	6.73	224	73.4	25.3	N.D.	N.D.	N.D.	36.3
V	130	127	142	2.93	1.47	273	12.0	5.64	9.81	32.0	12.0	32.3	56.0	35.0	58.0	43.3
Cu	36.8	44.6	60.9	< 1.8	< 1.1	44.6	< 1.6	< 1.4	< 1.2	54.4	2.26	< 1.3	31.0	9.00	21.0	1.91
Ga	15.5	17.8	16.0	10.0	30.1	18.8	36.0	15.7	16.5	18.7	13.8	15.5	18.0	16.0	17.0	15.2
Rb	67.7	61.5	59.2	74.1	100	34.0	95.0	237	147	423	238	60.6	43.0	60.0	81.0	82.0
Sr	51.5	48.3	82.8	18.3	34.0	182	6.00	19.6	37.2	127	91.7	147	197	120	97.0	95.5
Y	39.6	40.4	30.5	46.3	129	29.9	146	32.3	38.2	28.7	9.71	24.8	31.0	22.0	20.0	21.5
Zr	285	299	219	174	219	194	1462	282	211	496	65.2	188	202	194	186	176
Nb	9.03	9.06	11.5	26.4	32.7	11.3	93.0	12.4	9.39	21.4	8.13	11.8	13.0	12.0	12.0	12.6
Ba	126	110	142	85.8	76.4	280	349	235	509	1096	288	362	250	261	154	411
La	14.2	16.8	13.8	40.8	26.9	13.0	N.D.	23.4	35.5	43.2	23.2	25.5	N.D.	N.D.	N.D.	21.0
Ce	32.5	39.2	31.2	108	75.1	31.8	N.D.	79.5	74.4	101	59.4	51.4	N.D.	N.D.	N.D.	45.3
Pr	4.00	4.85	3.91	12.1	8.90	4.28	N.D.	5.81	8.06	9.57	6.08	5.60	N.D.	N.D.	N.D.	4.99
Nd	18.9	22.9	19.0	44.7	40.0	21.5	N.D.	22.9	31.2	37.9	25.0	22.9	N.D.	N.D.	N.D.	20.7
Sm	5.11	5.98	4.85	11.3	12.3	5.74	N.D.	5.07	6.29	6.58	5.31	4.66	N.D.	N.D.	N.D.	4.33
Eu	1.37	1.48	1.27	0.40	0.49	1.66	N.D.	0.42	0.50	1.02	0.67	0.98	N.D.	N.D.	N.D.	0.91
Gd	6.86	7.28	5.44	10.6	16.2	6.33	N.D.	4.86	5.91	5.50	3.58	4.39	N.D.	N.D.	N.D.	4.31
Tb	1.00	1.06	0.79	1.67	2.75	0.89	N.D.	0.76	0.87	0.72	0.38	0.59	N.D.	N.D.	N.D.	0.57
Dy	7.75	7.97	6.01	10.0	22.7	6.38	N.D.	5.97	7.02	5.37	2.02	4.38	N.D.	N.D.	N.D.	4.08
Ho	1.44	1.46	1.12	1.98	4.38	1.12	N.D.	1.12	1.28	0.97	0.32	0.78	N.D.	N.D.	N.D.	0.71
Er	4.87	4.92	3.76	5.61	15.5	3.59	N.D.	4.14	4.61	3.39	1.04	2.78	N.D.	N.D.	N.D.	2.43
Tm	0.61	0.61	0.47	0.86	2.02	0.44	N.D.	0.57	0.62	0.42	0.13	0.36	N.D.	N.D.	N.D.	0.31
Yb	4.60	4.76	3.65	5.90	15.4	3.29	N.D.	4.53	4.89	3.34	1.03	2.93	N.D.	N.D.	N.D.	2.40
Lu	0.60	0.60	0.46	0.92	1.98	0.42	N.D.	0.58	0.62	0.45	0.13	0.37	N.D.	N.D.	N.D.	0.32

Hf	6.84	7.10	5.42	7.42	10.3	4.81	N.D.	8.46	7.50	13.6	1.66	4.79	N.D.	N.D.	N.D.	4.57
Ta	0.68	0.64	0.73	2.21	2.60	0.66	N.D.	1.91	1.53	1.46	1.35	1.64	N.D.	N.D.	N.D.	1.50
Th	4.45	4.75	4.15	17.9	19.0	1.87	25.0	28.0	26.1	19.6	11.8	6.86	8.80	4.40	7.70	6.43
U	1.07	1.09	0.96	2.51	5.77	0.71	9.90	4.72	5.52	4.02	1.99	1.85	2.80	4.10	2.40	2.41
ASI	3.4	3.3	1.2	< 4.5	< 2.5	1.3	< 6.1	1.4	1.4	1.7	1.4	1.5	1.8	1.6	1.3	1.7
PI	12.4	11.6	3.1	4.4	2.5	3.2	< 6.1	1.4	1.5	1.8	1.6	2.0	2.4	2.4	1.9	2.1
K_2O+Na_2O	1.4	1.5	3.9	3.3	5.3	4.1	> 2.0	9.2	9.4	9.5	8.9	6.4	5.8	5.3	6.7	7.2

Lat/Long data use WGS84 projection.

Major element compositions (in wt%) determined by XRF; trace element concentrations (in µg/g) determined by LA-ICP-MS except for trace element concentrations for samples marked with an asterisk (*) which were analysed by XRF.

N.D. = Not determined

ASI (Aluminium Saturation Index) = Al/(K+Na+Ca-1.63*P); PI (Peralkalinity index) = Al/(Na+K).

TABLE DR2. ION-MICROPROBE U-Pb DATA

zircon no.	analysis no.	description	f_{206}%	U (µg/g)	Th (µg/g)	Pb (µg/g)	Th/U meas.	$^{207}Pb/^{235}U$	±σ (%)	$^{206}Pb/^{238}U$	±σ (%)	$^{207}Pb/^{206}Pb$	±σ (%)	ρ	$^{206}Pb/^{238}U$	±σ	$^{207}Pb/^{206}Pb$	±σ	% disc.
Port-e-Vullen basaltic andesite (14PV01)																			
detrital																			
13	n5293_PV01@6	tp, sr, oz, CLb, c	0.16	45	28	15	0.61	3.4551	1.35	0.26655	0.97	0.09401	0.93	0.72	1523	13	1508	9	1.0
11	n5293_PV01@8	tp, sr, cz, CLb, c	{0.00}	47	18	13	0.39	2.6222	1.46	0.22495	1.08	0.08454	0.97	0.74	1308	13	1305	10	0.2
12	n5293_PV01@5	sp, r, CLb, r	{0.11}	7	2	2	0.26	2.1710	3.18	0.19592	1.61	0.08037	2.74	0.51	1153	17	1206	27	-4.6
3	n5293_PV01@3	sp, r, cz, CLb, c	{0.02}	178	48	21	0.27	0.8664	1.26	0.10224	0.92	0.06146	0.85	0.73	628	6	655	9	-4.4
3	n5293_PV01@4	sp, r, cz, CLb, c	{0.00}	126	65	16	0.51	0.8477	1.33	0.10154	0.84	0.06055	1.03	0.63	623	5	623	11	0.0
magmatic																			
8	n5293_PV01@15	bp, CLd, c	{0.02}	569	659	61	1.16	0.5970	1.00	0.07624	0.79	0.05680	0.61	0.79	473.6	3.6	483.6	6.7	-2.1
10	n5293_PV01@7	bp, hoz, CLd, r	{0.02}	513	799	60	1.56	0.5926	1.02	0.07603	0.82	0.05653	0.61	0.80	472.4	3.7	473.2	6.8	-0.2
8	n5293_PV01@17	bp, CLd, c	{0.03}	510	569	55	1.12	0.5917	0.88	0.07594	0.77	0.05651	0.42	0.88	471.8	3.5	472.3	4.7	-0.1
10	n5293_PV01@13	bp, hoz, CLd, c	0.14	755	921	83	1.22	0.5963	0.98	0.07676	0.79	0.05634	0.57	0.81	476.8	3.6	465.8	6.3	2.3
4	n5293_PV01@1	tp, oz, CLd, r	{0.01}	465	443	48	0.95	0.5876	1.06	0.07571	0.84	0.05629	0.65	0.79	470.5	3.8	463.9	7.2	1.4
1	n5293_PV01@18	tp, CLd, c	0.54	758	1073	86	1.42	0.5891	0.93	0.07612	0.78	0.05614	0.51	0.84	472.9	3.6	457.7	5.6	3.2
not used in calculation																			
2	n5293_PV01@2 *	tp, CLd, c	2.41	619	740	65	1.20	0.5726	1.79	0.07411	0.84	0.05604	1.58	0.47	460.9	3.7	453.9	17.5	1.5
Avoca rhyolite (15Av01)																			
magmatic																			
4	n5295_AV01@15	ap, sr, oz, CLb, c	0.03	419	176	38	0.42	0.5864	1.09	0.07603	0.94	0.05594	0.54	0.87	472.4	4.3	450.0	6.0	4.7
1	n5295_AV01@13	tp, oz, CLd, ec	0.02	946	495	87	0.52	0.5851	0.90	0.07563	0.83	0.05611	0.36	0.92	470.0	3.8	456.6	4.0	2.8
13	n5295_AV01@4	tp, oz, CLd, rc	0.08	1416	823	130	0.58	0.5846	0.94	0.07486	0.83	0.05664	0.43	0.89	465.4	3.7	477.5	4.8	-2.6
10	n5295_AV01@18	tp, sr, oz, CLd, r	{0.03}	1117	526	101	0.47	0.5788	0.93	0.07486	0.84	0.05608	0.39	0.91	465.3	3.8	455.5	4.4	2.1
5	n5295_AV01@14	tp, sr, oz, CLb, r	0.10	621	316	56	0.51	0.5761	0.99	0.07458	0.84	0.05602	0.53	0.85	463.7	3.8	453.3	5.9	2.2
14	n5295_AV01@2	tp, oz, CLb, ec	0.12	396	243	37	0.61	0.5696	1.36	0.07436	1.03	0.05556	0.89	0.76	462.3	4.6	434.9	9.9	5.9
13	n5295_AV01@3	tp, oz, CLb, r	0.42	722	357	64	0.49	0.5685	1.15	0.07392	0.85	0.05578	0.78	0.74	459.7	3.8	443.6	8.7	3.5
11	n5295_AV01@10	tp, oz, CLb, c	0.21	719	405	64	0.56	0.5672	1.12	0.07316	0.93	0.05622	0.63	0.83	455.2	4.1	461.2	7.0	-1.3
not used in calculation																			
7	n5295_AV01@11 *	tp, sr, oz, CLd, ec	0.72	895	500	82	0.56	0.5895	3.71	0.07596	1.23	0.05628	3.50	0.33	472.0	5.6	463.6	38.8	1.8
1	n5295_AV01@12 #	tp, oz, CLd, ec	{0.35}	1024	453	91	0.44	0.6039	0.92	0.07425	0.83	0.05898	0.38	0.91	461.7	3.7	566.5	4.2	-22.7
12	n5295_AV01@9 #	ap, sr, oz, CLb, c	{0.13}	126	64	11	0.51	0.5828	1.65	0.07372	1.04	0.05733	1.28	0.63	458.5	4.6	504.4	14.1	-10.0
16	n5295_AV01@5 *	tp, sr, oz, r	2.21	466	255	42	0.55	0.5732	2.08	0.07341	0.93	0.05663	1.86	0.45	456.7	4.1	477.0	20.5	-4.5
17	n5295_AV01@21 *	tp, sr, oz, CLb,c	0.71	386	398	38	1.03	0.5540	1.69	0.07146	1.08	0.05622	1.30	0.64	444.9	4.6	461.3	14.4	-3.7
Croghan Kinshelagh granite (14CK11)																			
magmatic																			
3	n5051_CK11@3	tp, hoz, CLd, r	{0.01}	1769	1444	172	0.82	0.5762	0.86	0.07440	0.80	0.05617	0.33	0.92	462.6	3.6	459.0	3.7	0.8
2	n5051_CK11@1	tp, oz, CLd, r	{0.01}	1032	524	93	0.51	0.5749	0.97	0.07408	0.87	0.05629	0.43	0.90	460.7	3.9	463.9	4.8	-0.7

4	n5076_14CK11@1	tp, oz, CLb, r	{0.04}	867	505	78	0.58	0.5706	1.14	0.07341	0.94	0.05638	0.65	0.82	456.6	4.1	467.2	7.2	-2.3
7	n5051_CK11@8	tp, hoz, CLd, r	{0.01}	1323	863	122	0.65	0.5685	0.89	0.07337	0.81	0.05620	0.38	0.91	456.4	3.6	460.1	4.2	-0.8
4	n5051_CK11@5	tp, oz, CLd, r	{0.01}	1250	1005	120	0.80	0.5673	0.89	0.07334	0.80	0.05610	0.39	0.90	456.2	3.5	456.5	4.3	-0.1
9	n5051_CK11@7	tp, hoz, CLd, r	{0.01}	901	566	82	0.63	0.5663	0.93	0.07299	0.81	0.05627	0.46	0.87	454.1	3.5	463.1	5.1	-2.0
1	n5051_CK11@2	tp, hoz, CLd, r	0.05	1469	1091	136	0.74	0.5664	0.92	0.07289	0.79	0.05636	0.47	0.86	453.5	3.4	466.4	5.2	-2.8
10	n5276-02	tp, oz, CLb, r	{0.01}	661	395	60	0.60	0.5609	1.29	0.07276	1.13	0.05591	0.62	0.88	452.8	5.0	448.7	6.9	0.9
2	n5276-01	tp, oz, CLd, r	0.05	704	433	64	0.62	0.5603	1.27	0.07254	1.10	0.05602	0.64	0.86	451.5	4.8	453.2	7.1	-0.4
not used in calculation																			
6	n5051_CK11@9 §	tp, oz, CLd, r	0.02	1454	1127	132	0.77	0.5506	0.92	0.07131	0.84	0.05600	0.38	0.91	444.0	3.6	452.5	4.2	-1.9
8	n5051_CK11@6 §	tp, hoz, CLd, r	0.01	1918	1573	177	0.82	0.5428	0.90	0.07032	0.81	0.05598	0.39	0.90	438.1	3.4	451.7	4.3	-3.1
5	n5051_CK11@4 §	tp, hoz, CLd, r	0.08	1576	1042	117	0.66	0.4530	1.02	0.05873	0.93	0.05594	0.42	0.91	367.9	3.3	450.1	4.7	-22.4
Croghan Kinshelagh granite (14CK12)																			
magmatic																			
1	n5050_CK12@5	ap, hoz, CLd, r	0.07	852	462	78	0.54	0.5777	1.13	0.07446	0.79	0.05627	0.82	0.69	463.0	3.5	463.0	9.0	0.0
4	n5050_CK12@4	sp, hoz, CLd	{0.01}	1039	836	100	0.81	0.5688	1.03	0.07366	0.94	0.05601	0.43	0.91	458.2	4.1	452.6	4.8	1.2
2	n5050_CK12@1	sp, hoz, CLd	{0.01}	950	676	89	0.71	0.5642	1.05	0.07318	0.86	0.05592	0.60	0.82	455.3	3.8	449.0	6.7	1.4
2	n5275-02	sp, hoz, CLd	{0.01}	591	302	52	0.51	0.5601	1.29	0.07317	1.10	0.05552	0.67	0.85	455.2	4.9	433.3	7.5	4.8
3	n5275-03	sp, hoz, CLd	{0.01}	780	571	73	0.73	0.5679	1.24	0.07313	1.10	0.05632	0.58	0.88	455.0	4.8	465.2	6.5	-2.2
3	n5050_CK12@2	sp, hoz, CLd	0.02	1048	657	96	0.63	0.5606	0.91	0.07284	0.80	0.05582	0.44	0.87	453.3	3.5	445.1	4.9	1.8
4	n5275-04	sp, hoz, CLd	{0.02}	697	531	65	0.76	0.5615	1.32	0.07237	1.15	0.05628	0.64	0.87	450.4	5.0	463.3	7.1	-2.9
2	n5275-01	sp, hoz, CLd	{0.01}	555	210	47	0.38	0.5593	1.30	0.07209	1.09	0.05627	0.71	0.84	448.8	4.7	462.9	7.8	-3.1
not used in calculation																			
3	n5077_14CK12@2 #	sp, hoz, CLd	0.41	810	531	73	0.66	0.5501	1.48	0.07226	0.95	0.05522	1.13	0.64	449.7	4.1	421.0	12.7	6.4
6	n5050_CK12@3 #	ap, oz, CLb, r	0.26	583	266	51	0.46	0.5754	3.34	0.07214	0.86	0.05785	3.23	0.26	449.0	3.7	524.1	35.4	-16.7
Graiguenamanagh augen gneiss (14Gn01)																			
magmatic																			
3	n5048_Gn01@8	ap, oz, CLd, r	{0.01}	945	516	87	0.55	0.5802	0.93	0.07516	0.81	0.05599	0.46	0.87	467.2	3.7	452.1	5.1	3.2
4	n5274-02	tp, oz, CLb, r	{0.02}	996	268	85	0.27	0.5805	1.25	0.07498	1.08	0.05614	0.64	0.86	466.1	4.9	458.1	7.1	1.7
9	n5048_Gn01@7	ap, oz, CLd, r	{0.03}	957	401	85	0.42	0.5781	0.94	0.07477	0.81	0.05607	0.46	0.86	464.7	3.6	455.2	5.1	2.0
8	n5048_Gn01@2	ap, oz, CLb, r	{0.04}	882	239	75	0.27	0.5751	1.06	0.07444	0.93	0.05603	0.50	0.87	462.7	4.1	453.5	5.5	2.0
2	n5048_Gn01@10	ap, oz, CLb, r	{0.01}	855	367	76	0.43	0.5748	1.04	0.07436	0.92	0.05606	0.48	0.89	462.4	4.1	454.6	5.3	1.7
11	n5048_Gn01@3	ap, oz, CLb, r	{0.01}	426	204	38	0.48	0.5745	1.37	0.07403	0.88	0.05628	1.04	0.65	460.4	3.9	463.5	11.6	-0.7
5	n5074_14Gn01@4	sp, sr, oz, CLb, r	{0.03}	354	235	33	0.67	0.5689	1.37	0.07388	0.98	0.05584	0.96	0.72	459.5	4.4	446.0	10.6	2.9
1	n5048_Gn01@9	ap, sr, oz, CLb, r	{0.01}	313	149	28	0.48	0.5691	1.17	0.07372	0.85	0.05599	0.80	0.73	458.5	3.8	451.8	8.9	1.5
not used in calculation																			
7	n5048_Gn01@1 #	sp, sr, oz, CLb, r	{0.05}	509	163	45	0.32	0.5873	1.13	0.07605	0.84	0.05601	0.73	0.74	472.3	3.8	452.9	8.1	4.1
9	n5048_Gn01@6 #	ap, oz, CLb, r	{0.03}	445	265	42	0.60	0.5850	1.41	0.07589	1.14	0.05591	0.83	0.81	471.5	5.2	448.8	9.2	4.8
12	n5048_Gn01@4 *	ap, sr, oz, CLb, r	1.18	410	222	31	0.54	0.5679	2.38	0.06247	0.81	0.06592	0.95	0.34	386.2	3.0	804.0	10.0	-108.2
Graiguenamanagh equigranular granite (14Gn02)																			
magmatic																			

3	n5049_Gn02@1	bp, sr, oz, CLd, r	{0.01}	1389	477	121	0.34	0.5836	0.87	0.07479	0.79	0.05660	0.37	0.90	464.9	3.5	475.9	4.1	2.3
7	n5049_Gn02@4	ap, oz, CLb, c	{0.01}	501	209	44	0.42	0.5732	1.12	0.07398	0.91	0.05620	0.64	0.82	460.1	4.0	460.1	7.1	0.0
2	n5277-04	ap, oz, CLd, r	{0.02}	1085	496	96	0.46	0.5689	1.31	0.07379	1.18	0.05591	0.57	0.90	459.0	5.2	448.8	6.3	-2.3
9	n5049_Gn02@5	sp, hoz, CLd	{0.01}	1096	514	97	0.47	0.5718	1.02	0.07378	0.86	0.05621	0.55	0.84	458.9	3.8	460.5	6.1	0.4
6	*n5049_Gn02@3*	*ap, oz, CLd, c*	*0.03*	*921*	*676*	*87*	*0.73*	*0.5709*	*1.09*	*0.07352*	*0.98*	*0.05632*	*0.49*	*0.89*	*457.3*	*4.3*	*465.2*	*5.4*	*1.7*
4	*n5049_Gn02@2*	*bp, oz, CLb, c*	*0.10*	*486*	*387*	*45*	*0.80*	*0.5681*	*1.28*	*0.07333*	*1.07*	*0.05620*	*0.70*	*0.84*	*456.2*	*4.7*	*460.1*	*7.8*	*0.9*
not used in calculation																			
7	*n5277-01* [§]	*ap, oz, CLd, c*	*0.32*	*299*	*229*	*26*	*0.77*	*0.5521*	*2.00*	*0.07137*	*1.15*	*0.05611*	*1.64*	*0.57*	*444.4*	*4.9*	*456.6*	*18.2*	*2.7*
8	n5277-03 [#]	ap, oz, CLd, r	{0.01}	3121	86	232	0.03	0.5259	1.86	0.06990	1.83	0.05457	0.30	0.99	435.6	7.7	394.5	3.4	-10.4
Dhoon granite (12IM01)																			
inherited																			
2.1	4521-07	sp, sr, oz, CLb, ic	{0.00}	281	87	68	0.31	2.3032	1.09	0.20559	0.93	0.08125	0.58	0.85	1205	10	1227	6	1.8
5.1	n5273-01	ap, oz, CLb, ic	{0.04}	323	318	41	0.98	0.7619	1.48	0.09331	1.22	0.05922	0.83	0.83	575	7	575	9	0.0
1.34	*n5062_12IM11@04*	*ap, oz, CLb, c*	*0.36*	*200*	*197*	*24*	*0.98*	*0.7485*	*1.55*	*0.09163*	*0.68*	*0.05925*	*1.40*	*0.44*	*565*	*4*	*576*	*15*	*1.9*
5.2	*n5065_12IM11@1*	*ap, oz, CLb, ic*	*0.05*	*540*	*257*	*59*	*0.48*	*0.7181*	*0.82*	*0.08939*	*0.67*	*0.05826*	*0.48*	*0.81*	*552*	*4*	*540*	*5*	*-2.3*
1.11	n4511-11c	bp, cz, CLb, c	{0.06}	113	33	10	0.29	0.5911	1.97	0.07586	0.98	0.05651	1.71	0.50	471.4	4.5	472.6	18.9	0.3
1.44	n4517-09	sp, oz, CLb, ec	{0.03}	343	105	30	0.31	0.5901	1.44	0.07556	1.19	0.05664	0.81	0.83	469.6	5.4	477.5	9.0	1.7
magmatic																			
1.13	n5056_12IM01@3	ap, oz, CLb, c	{0.03}	381	132	33	0.35	0.5785	1.02	0.07498	0.77	0.05596	0.66	0.76	466.1	3.5	450.7	7.4	-3.4
1.28	n4517-04	ap, oz, CLb, r	{0.03}	417	174	37	0.42	0.5782	1.39	0.07470	1.15	0.05614	0.77	0.83	464.4	5.2	457.9	8.6	-1.4
1.26	*n5062_12IM11@10*	*ap, oz, CLb, c*	*0.19*	*305*	*157*	*28*	*0.52*	*0.5757*	*0.89*	*0.07444*	*0.45*	*0.05608*	*0.77*	*0.50*	*462.9*	*2.0*	*455.7*	*8.5*	*-1.6*
4.11	*n4675-08*	*bp, sr, oz, CLb, r*	*0.09*	*427*	*183*	*38*	*0.43*	*0.5769*	*0.98*	*0.07433*	*0.75*	*0.05629*	*0.62*	*0.77*	*462.2*	*3.3*	*463.9*	*6.9*	*0.4*
1.37	n4517-02	sp, oz, CLb, r	{0.03}	520	147	44	0.28	0.5731	1.29	0.07416	1.10	0.05605	0.67	0.86	461.1	4.9	454.3	7.4	-1.5
4.12	*n4675-09*	*bp, sr, oz, CLb, r*	*0.07*	*462*	*191*	*41*	*0.41*	*0.5709*	*1.08*	*0.07415*	*0.74*	*0.05583*	*0.79*	*0.68*	*461.1*	*3.3*	*445.8*	*8.8*	*-3.4*
4.3	n4673-04	sp, oz, CLb, c	{0.02}	318	75	27	0.24	0.5742	1.01	0.07397	0.76	0.05630	0.67	0.75	460.0	3.4	464.4	7.4	0.9
2.5	4518-09	ap, sr, oz, CLb, c	{0.02}	420	40	34	0.09	0.5689	1.16	0.07390	0.83	0.05584	0.81	0.71	459.6	3.7	446.0	9.0	-3.0
1.30	n4517-03c	ap, oz, CLb, c	{0.12}	98	31	8	0.31	0.5745	1.82	0.07382	1.01	0.05645	1.51	0.56	459.1	4.5	470.0	16.7	2.3
1.1	*n5056_12IM01@10*	*ap, oz, CLd, c*	*0.33*	*1091*	*778*	*99*	*0.71*	*0.5742*	*0.90*	*0.07376*	*0.68*	*0.05646*	*0.60*	*0.75*	*458.7*	*3.0*	*470.7*	*6.6*	*2.5*
1.12	*n4511-02r*	*ap, oz, CLd, r*	*0.49*	*861*	*327*	*74*	*0.38*	*0.5695*	*2.23*	*0.07375*	*1.12*	*0.05601*	*1.93*	*0.50*	*458.7*	*5.0*	*452.6*	*21.4*	*-1.4*
1.17	n4511-05	ap, oz, CLb, r	{0.03}	247	86	21	0.35	0.5700	1.32	0.07360	0.98	0.05616	0.88	0.75	457.8	4.4	458.9	9.7	0.2
1.2	*n5056_12IM01@8*	*ap, oz, CLd, c*	*0.02*	*644*	*133*	*53*	*0.21*	*0.5688*	*0.93*	*0.07354*	*0.76*	*0.05609*	*0.53*	*0.82*	*457.5*	*3.4*	*455.9*	*5.9*	*-0.4*
5.3	*n5065_12IM11@2*	*ap, oz, CLb, r*	*0.07*	*177*	*47*	*15*	*0.26*	*0.5692*	*1.17*	*0.07353*	*0.67*	*0.05615*	*0.96*	*0.57*	*457.4*	*3.0*	*458.2*	*10.7*	*0.2*
1.14	n4511-03	ap, oz, CLb, r	{0.06}	285	71	24	0.25	0.5679	1.31	0.07350	0.99	0.05604	0.85	0.76	457.2	4.4	453.9	9.4	-0.7
1.6	n4511-12	ap, oz, CLb, r	{0.05}	307	101	26	0.33	0.5719	1.27	0.07346	1.02	0.05646	0.76	0.80	456.9	4.5	470.7	8.4	2.9
1.29	*n5062_12IM11@13*	*sp, oz, CLb, r*	*0.15*	*401*	*139*	*34*	*0.35*	*0.5642*	*0.90*	*0.07337*	*0.44*	*0.05576*	*0.78*	*0.49*	*456.4*	*1.9*	*443.0*	*8.7*	*-3.0*
2.1	4521-02	sp, sr, oz, CLb, r	{0.03}	357	107	30	0.30	0.5655	1.23	0.07337	0.90	0.05590	0.84	0.73	456.4	4.0	448.5	9.3	-1.8
5.4	*n5065_12IM11@4*	*ap, oz, CLb, r*	*0.39*	*415*	*130*	*35*	*0.31*	*0.5690*	*1.04*	*0.07334*	*0.67*	*0.05627*	*0.80*	*0.64*	*456.2*	*2.9*	*463.0*	*8.8*	*1.5*
4.7	n4673-11	bp, sr, oz, CLb, c	{0.01}	297	115	26	0.39	0.5674	1.02	0.07333	0.76	0.05612	0.69	0.74	456.2	3.3	457.0	7.7	0.2
1.43	*n5062_12IM11@06*	*sp, oz, CLb, c*	*0.05*	*625*	*235*	*54*	*0.38*	*0.5692*	*1.27*	*0.07312*	*1.11*	*0.05646*	*0.62*	*0.87*	*454.9*	*4.9*	*470.4*	*6.8*	*3.3*
1.9	n4511-09	ap, oz, CLd, c	{0.05}	265	92	23	0.35	0.5679	1.27	0.07297	0.99	0.05645	0.81	0.77	454.0	4.3	470.0	8.9	3.4

2.4	4521-06	ap, sr, oz, CLd, c	0.12	1407	194	112	0.14	0.5667	1.00	0.07285	0.83	0.05642	0.56	0.83	453.3	3.6	468.9	6.2	3.3
1.15	n4511-01	ap, oz, CLb, r	{0.03}	460	180	39	0.39	0.5629	1.36	0.07256	1.16	0.05627	0.70	0.86	451.5	5.1	462.8	7.8	2.4
1.41	n5062_12IM11@12	sp, oz, CLb, r	0.05	448	171	38	0.38	0.5582	0.78	0.07229	0.50	0.05600	0.60	0.64	450.0	2.2	452.3	6.7	0.5
2.5	4518-02	sp, sr, oz, CLb, r	0.43	426	163	35	0.38	0.5567	1.39	0.07215	0.87	0.05596	1.09	0.62	449.1	3.8	450.8	12.1	0.4
4.11	n4675-07	bp, sr, oz, CLb, r	{0.02}	440	134	36	0.30	0.5588	0.96	0.07202	0.76	0.05628	0.59	0.79	448.3	3.3	463.3	6.6	3.2
2.2	4521-03	ap, r, oz, CLb, r	0.06	825	325	70	0.39	0.5579	1.02	0.07198	0.84	0.05621	0.57	0.83	448.1	3.6	460.5	6.3	2.7
not used in calculation																			
1.10	n5056 12IM01@4 #	ap, oz, CLb, c	{0.02}	455	186	41	0.41	0.5774	0.95	0.07552	0.67	0.05546	0.68	0.70	469.3	3.0	430.6	7.6	-9.0
1.3	n5056 12IM01@7 #	ap, oz, CLb, c	0.14	439	426	45	0.97	0.5770	1.04	0.07520	0.74	0.05565	0.73	0.71	467.4	3.3	438.3	8.2	-6.6
1.35	n5062 12IM11@03 #	ap, oz, CLb, c	{0.05}	507	120	43	0.24	0.5720	1.04	0.07513	0.67	0.05521	0.79	0.65	467.0	3.0	420.8	8.8	-11.0
1.33	n5062 12IM11@02 #	ap, oz, CLb, c	{0.01}	442	285	41	0.64	0.5716	1.09	0.07507	0.69	0.05523	0.84	0.63	466.6	3.1	421.5	9.4	-10.7
1.40	n5062 12IM11@05 #	sp, oz, CLb, c	{0.02}	676	360	62	0.53	0.5738	0.88	0.07479	0.67	0.05564	0.57	0.76	465.0	3.0	438.2	6.4	-6.1
4.2	n4673-03 #	ap, oz, CLb, c	0.05	392	414	38	1.06	0.5693	0.97	0.07454	0.74	0.05539	0.63	0.76	463.5	3.3	427.9	7.0	-8.3
1.23	n5056_12IM01@1 *	ap, oz, CLd, c	0.82	583	189	50	0.32	0.5817	2.06	0.07402	0.92	0.05699	1.84	0.45	460.4	4.1	491.1	20.3	6.3
5.4	n5273-04 *	ap, oz, CLb, c	5.88	612	220	52	0.36	0.5966	14.93	0.07374	1.35	0.05868	14.87	0.09	458.6	6.0	555.1	162.2	17.4
1.5	n5056 12IM01@5 #	sp, cz, CLb, c	{0.00}	138	39	12	0.28	0.5524	1.40	0.07318	0.74	0.05475	1.19	0.53	455.3	3.3	402.0	13.4	-13.3
4.6	n4673-08 #	sp, sr, oz, CLb, c	0.11	149	53	13	0.36	0.5557	1.29	0.07317	0.74	0.05508	1.05	0.58	455.2	3.3	415.5	11.7	-9.6
1.20	n4511-07c §	ap, oz, CLb, c	{0.02}	425	118	36	0.28	0.5737	1.57	0.07304	1.23	0.05697	0.97	0.79	454.4	5.4	490.4	10.7	7.3
1.25	n4517-06 *	ap, oz, CLb, c	1.82	222	151	19	0.68	0.5508	2.57	0.07301	1.05	0.05472	2.34	0.41	454.3	4.6	400.7	26.2	-13.4
1.19	n5056_12IM01@2 *	ap, cz, CLd, c	0.97	775	646	74	0.83	0.5582	3.01	0.07298	0.67	0.05548	2.93	0.22	454.1	3.0	431.5	32.6	-5.2
1.38	n5062 12IM11@1 #	sp, oz, CLb, c	{0.00}	44	26	4	0.58	0.5933	2.84	0.07297	0.72	0.05897	2.74	0.25	454.0	3.2	566.1	29.9	19.8
1.25	n4517-12 *	sp, oz, CLd, c	5.91	741	406	66	0.55	0.5849	8.33	0.07290	1.01	0.05819	8.27	0.12	453.6	4.4	536.8	90.5	15.5
1.18	n4511-06c §	ap, cz, CLb, c	{0.03}	296	32	24	0.11	0.5702	1.73	0.07290	1.11	0.05672	1.32	0.64	453.6	4.9	480.7	14.6	5.6
5.3	n5065_12IM11@3 *	ap, oz, CLb, c	0.66	305	100	26	0.33	0.5740	1.26	0.07260	0.70	0.05734	1.04	0.56	451.8	3.1	504.8	11.5	10.5
2.1	4521-01 #	sp, sr, oz, CLb, r	0.21	339	103	28	0.30	0.5484	1.68	0.07226	0.83	0.05505	1.46	0.50	449.7	3.6	414.3	16.3	-8.6
1.24	n4517-05 *	ap, oz, CLb, r	6.67	335	364	28	1.09	0.5408	12.02	0.07167	1.08	0.05472	11.97	0.09	446.2	4.7	400.9	134.1	-11.3
4.6	n4673-09 §	bp, sr, oz, CLb, c	{0.00}	337	38	26	0.11	0.5516	1.03	0.07138	0.82	0.05604	0.63	0.79	444.5	3.5	454.1	7.0	2.1
1.39	n4517-08c *	ap, oz, CLb, c	3.77	590	167	44	0.28	0.5099	16.14	0.06905	1.90	0.05356	16.03	0.12	430.4	7.9	352.7	181.0	-22.0

Data sorted in order of decreasing $^{206}Pb/^{238}U$ age.

"Description" refers to particular morphological characteristics of the analysed spot of the zircon:

ap = acicular prismatic; sp = stubby prismatic; tp = tabular prismatic; bp = broken prism;

r = rounded; sr = sub-rounded; not specified = euhedral grain without obvious rounding;

oz = oscillatory zoning; hoz = hint of oscillatory zoning; cz = complex zoning;

CLb = CL-bright; CLd = CL-dark; not specified = no obvious supremacy of CLb or CLd;

c = measurement in the centre of the grain; r = measurement at the rim of the grain; ic = inherited core; ec = embayed core; rc = resorbed core; not specified = measurement on comparatively small grain ≤ 50 µm.

"f_{206}%" represents the percentage of common ^{206}Pb, estimated from the measured ^{204}Pb. Values with f_{206}% given in parenthesis represent data which have not been corrected for common ^{206}Pb, due to insignificant levels of ^{204}Pb. Values in italics represent data which have been corrected for common ^{206}Pb.

"% disc." = % discordance; represents the age discordance calculated from the difference between the $^{206}Pb/^{238}U$ and $^{206}Pb/^{207}Pb$ ages. Negative values are reverse discordant.

Data from detrital/inherited zircons/cores are in dark grey data not used in age calculation are in light grey.

Data not used in age calculations due to:

[*] significant amount of common lead;

[§] significant lead loss;

[#] significant percentage of discordance.

TABLE DR3. ION-MICROPROBE ZIRCON OXYGEN ISOTOPIC DATA

zircon no.	oxygen analysis no.	Age (Ma)	^{16}O (cps (×10^9))	$^{16}O_{samp/av}$	$^{18}O/^{16}O$ *drift corrected*	± abs.	$\delta^{18}O_{V\text{-}SMOW}$ (‰)
Port-e-Vullen basaltic andesite (14PV01)							
detrital							
13	n5293ox_PV01@14	1508	1.81	0.98	0.00200968	0.00000019	5.20
11	n5293ox_PV01@12	1305	1.81	0.98	0.00201095	0.00000035	5.84
12	n5293ox_PV01@13	1206	1.79	0.97	0.00201538	0.00000020	8.05
3	n5293ox_PV01@16	626	1.78	0.97	0.00200923	0.00000023	4.98
3	n5293ox_PV01@15	626	1.78	0.97	0.00200748	0.00000017	4.10
magmatic							
10	n5293ox_PV01@10	473	1.81	0.98	0.00201242	0.00000028	6.57
10	n5293ox_PV01@11	473	1.82	0.98	0.00201200	0.00000026	6.36
8	n5293ox_PV01@6	473	1.81	0.97	0.00201200	0.00000025	6.36
8	n5293ox_PV01@7	473	1.82	0.98	0.00201186	0.00000027	6.29
4	n5293ox_PV01@5	473	1.84	0.99	0.00201184	0.00000033	6.28
4	n5293ox_PV01@4	473	1.81	0.97	0.00201151	0.00000028	6.12
Avoca rhyolite (15Av01)							
magmatic							
4	n5295ox_AV01@6	464	1.77	0.99	0.00201456	0.00000016	7.64
5	n5295ox_AV01@7	464	1.77	0.98	0.00201293	0.00000026	6.83
13	n5295ox_AV01@11	464	1.78	0.99	0.00201220	0.00000024	6.46
11	n5295ox_AV01@2	464	1.76	0.98	0.00201212	0.00000015	6.42
13	n5295ox_AV01@10	464	1.77	0.99	0.00201189	0.00000022	6.31
10	n5295ox_AV01@3	464	1.76	0.98	0.00201187	0.00000025	6.30
1	n5295ox_AV01@4	464	1.77	0.98	0.00201186	0.00000018	6.29
1	n5295ox_AV01@5	464	1.75	0.98	0.00201143	0.00000022	6.08
11	n5295ox_AV01@1	464	1.77	0.96	0.00201096	0.00000031	5.84
14	n5295ox_AV01@13	464	1.77	0.99	0.00201063	0.00000014	5.68
Croghan Kinshelagh granite (14CK11)							
magmatic							
4	n5276ox_CK11@4	457	2.27	0.96	0.00200968	0.00000018	5.52
7	n5276ox_CK11@7	457	2.26	0.97	0.00200967	0.00000015	5.52
9	n5276ox_CK11@5	457	2.28	0.96	0.00200954	0.00000021	5.45
2	n5276ox_CK11@3	457	2.28	0.96	0.00200942	0.00000022	5.39
10	n5276ox_CK11@6	457	2.28	0.96	0.00200933	0.00000025	5.35
2	n5276ox_CK11@1	457	2.26	0.95	0.00200926	0.00000012	5.31
1	n5276ox_CK11@2	457	2.26	0.96	0.00200863	0.00000019	5.00
Croghan Kinshelagh granite (14CK12)							
magmatic							
1	n5275ox_CK12@5	455	2.31	0.97	0.00201154	0.00000026	6.45
2	n5275ox_CK12@9	455	2.31	0.96	0.00200911	0.00000020	5.24
3	n5275ox_CK12@2	455	2.35	0.97	0.00200897	0.00000028	5.17
3	n5275ox_CK12@1	455	2.33	0.96	0.00200876	0.00000016	5.06
2	n5275ox_CK12@8	455	2.30	0.96	0.00200876	0.00000023	5.06
Graiguenamanagh augen gneiss (14Gn01)							
magmatic							
9	n5274ox_Gn01@8	462	2.42	0.98	0.00201216	0.00000021	6.76
8	n5274ox_Gn01@6	462	2.42	0.98	0.00201154	0.00000018	6.46
9	n5274ox_Gn01@7	462	2.41	0.98	0.00201153	0.00000012	6.45

11	n5274ox_Gn01@9	462	2.39	0.99	0.00201076	0.00000020	6.06
4	n5274ox_Gn01@1	462	2.40	0.96	0.00201072	0.00000014	6.04
5	n5274ox_Gn01@4	462	2.41	0.98	0.00201057	0.00000018	5.97
2	n5274ox_Gn01@3	462	2.39	0.97	0.00201008	0.00000022	5.73
3	n5274ox_Gn01@2	462	2.41	0.97	0.00200986	0.00000020	5.61
Graiguenamanagh equigranular granite (14Gn02)							
magmatic							
4	n5277ox_Gn02@4	461	2.24	0.98	0.00201237	0.00000025	6.87
3	n5277ox_Gn02@5	461	2.24	0.98	0.00201166	0.00000019	6.51
9	n5277ox_Gn02@3	461	2.26	0.97	0.00201159	0.00000017	6.48
9	n5277ox_Gn02@2	461	2.27	0.98	0.00201156	0.00000013	6.46
7	n5277ox_Gn02@8	461	2.23	0.97	0.00201135	0.00000021	6.36
2	n5277ox_Gn02@1	461	2.27	0.98	0.00201117	0.00000020	6.27
7	n5277ox_Gn02@9	461	2.23	0.97	0.00201115	0.00000013	6.26
3	n5277ox_Gn02@6	461	2.23	0.97	0.00201099	0.00000020	6.18
6	n5277ox_Gn02@7	461	2.23	0.97	0.00201058	0.00000024	5.97
Dhoon granite (12IM01)							
inherited							
5.1	n5273ox_IM11@2	575	2.41	0.97	0.00201255	0.00000014	6.96
5.1	n5273ox_IM11@3	575	2.42	0.97	0.00201116	0.00000015	6.27
1.34	n4511ox_Dn01@20	565	1.98	0.98	0.00201329	0.00000022	7.58
1.34	n4511ox_Dn01@22	565	1.98	0.98	0.00201328	0.00000020	7.57
1.34	n4511ox_Dn01@21	565	1.98	0.98	0.00201305	0.00000021	7.46
1.34	n4511ox_Dn01@23	565	1.97	0.98	0.00201263	0.00000015	7.25
5.2	n5273ox_IM11@1	552	2.41	0.97	0.00201201	0.00000012	6.69
5.2	n5273ox_IM11@4	552	2.39	0.96	0.00200990	0.00000016	5.63
magmatic							
1.13	n4511ox_Dn01@3	457	2.02	0.97	0.00201257	0.00000017	7.22
1.7	n4511ox_Dn01@9	457	2.02	0.98	0.00201188	0.00000015	6.87
1.15	n4511ox_Dn01@2	457	2.02	0.97	0.00201124	0.00000014	6.55
1.9	n4511ox_Dn01@4	457	2.01	0.96	0.00201061	0.00000028	6.24
1.6	n4511ox_Dn01@6	457	2.03	0.98	0.00201052	0.00000013	6.19
1.7	n4511ox_Dn01@8	457	2.01	0.98	0.00201033	0.00000016	6.10
1.14	n4511ox_Dn01@15	457	1.97	0.98	0.00201019	0.00000019	6.03
1.2	n4511ox_Dn01@7	457	2.01	0.97	0.00200974	0.00000030	5.80
1.17	n4511ox_Dn01@11	457	1.99	0.97	0.00200938	0.00000021	5.62
1.14	n4511ox_Dn01@16	457	1.98	0.99	0.00200938	0.00000020	5.62
1.15	n4511ox_Dn01@1	457	2.02	0.97	0.00200927	0.00000020	5.57

Data are sorted in order of decreasing age and $\delta^{18}O_{V-SMOW}$ values.

Data for detrital/inherited zircons/cores are in dark grey.

Thirty-five measurements of the zircon standard 91500 (excluding three rejected measurements) yielded an av $\delta^{18}O$ value of 9.88±0.18 ‰ (2σ) ($^{18}O/^{16}O$ drift corrected = 0.00201844±0.00000020), indistinguishable to the va of $\delta^{18}O$ = 9.86±0.11 ‰ (1σ) from Wiedenbeck et al. (1995).

± 2σ
0.33
0.44
0.33
0.35
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lue

TABLE DR4. LA-MC-ICPMS ZIRCON Lu-Hf ISOTOPIC DATA

zircon no.	Lu-Hf analysis no.	age (t) (Ma)	$^{176}Hf/^{177}Hf$	$^{176}Hf/^{177}Hf_t$	±1σ	$^{176}Lu/^{177}Hf$	±1σ	$^{176}Yb/^{177}Hf$	±1σ	εHf_0	$\varepsilon_{Hf(t)}$	±2σ	t_{DM}	±2σ	t_{DM} (felsic)	±2σ
Port-e-Vullen basaltic andesite (14PV01)																
detrital																
13	PV_14	1508	0.281884	0.281860	0.000018	0.000843	0.000006	0.03319	0.00016	-31.9	1.2	1.3	1913	26	2175	149
13	PV_18	1508	0.281830	0.281810	0.000022	0.000678	0.000002	0.02269	0.00018	-33.8	-0.5	1.6	1980	30	2288	174
11	PV_11	1305	0.282006	0.281997	0.000015	0.000390	0.000002	0.01475	0.00008	-27.5	1.4	1.1	1725	20	2002	153
11	PV_12	1305	0.281967	0.281948	0.000020	0.000777	0.000016	0.02578	0.00048	-28.9	-0.3	1.4	1796	28	2112	178
12	PV_13	1206	0.282176	0.282172	0.000023	0.000193	0.000000	0.00613	0.00005	-21.5	5.4	1.7	1485	32	1671	125
3	PV_16	626	0.282052	0.282043	0.000021	0.000720	0.000043	0.01985	0.00080	-25.9	-12.3	1.5	1677	31	2327	361
3	PV_15	626	0.282028	0.282021	0.000017	0.000620	0.000005	0.02006	0.00006	-26.8	-13.1	1.2	1705	24	2377	370
magmatic																
4	PV_05	473	0.282643	0.282620	0.000026	0.002646	0.000005	0.14134	0.00053	-5.0	4.7	1.8	901	38	1132	152
8	PV_06	473	0.282640	0.282610	0.000028	0.003324	0.000040	0.17188	0.00175	-5.1	4.4	2.0	924	42	1153	157
4	PV_04	473	0.282620	0.282594	0.000026	0.002926	0.000011	0.15386	0.00064	-5.8	3.8	1.9	942	40	1189	163
8	PV_07	473	0.282619	0.282577	0.000029	0.004758	0.000078	0.21814	0.00184	-5.9	3.2	2.1	995	48	1228	173
10	PV_09	473	0.282613	0.282573	0.000034	0.004497	0.000033	0.19920	0.00125	-6.1	3.0	2.4	997	54	1238	180
1	PV_21	473	0.282580	0.282533	0.000027	0.005287	0.000038	0.22983	0.00184	-7.2	1.6	1.9	1072	44	1327	191
10	PV_10	473	0.282556	0.282528	0.000024	0.003176	0.000038	0.14267	0.00139	-8.1	1.4	1.7	1045	36	1339	191
1	PV_20	473	0.282574	0.282523	0.000027	0.005747	0.000071	0.24566	0.00225	-7.5	1.3	1.9	1097	46	1350	196
Avoca rhyolite (15Av01)																
magmatic																
13	Av03	464	0.282748	0.282720	0.000029	0.003239	0.000031	0.14345	0.00224	-1.3	8.0	2.0	760	44	912	116
11	Av18	464	0.282735	0.282709	0.000028	0.002909	0.000063	0.11926	0.00337	-1.8	7.7	2.0	772	43	935	118
1	Av06	464	0.282727	0.282705	0.000020	0.002518	0.000011	0.10804	0.00097	-2.1	7.5	1.4	775	29	945	112
1	Av07	464	0.282719	0.282703	0.000020	0.001846	0.000004	0.07949	0.00049	-2.3	7.4	1.4	772	28	949	112
5	Av04	464	0.282714	0.282697	0.000018	0.002027	0.000009	0.08528	0.00067	-2.5	7.2	1.3	783	27	964	114
10	Av17	464	0.282718	0.282692	0.000020	0.002983	0.000017	0.12780	0.00119	-2.4	7.1	1.4	798	30	973	117

11	Av19	464	0.282712	0.282682	0.000025	0.003435	0.000075	0.13262	0.00251	-2.6	6.7	1.8	818	39	997	127
13	Av02	464	0.282699	0.282680	0.000026	0.002159	0.000015	0.09216	0.00118	-3.1	6.6	1.8	809	38	1002	128
14	Av01	464	0.282656	0.282641	0.000027	0.001660	0.000067	0.05981	0.00169	-4.6	5.2	1.9	860	40	1089	146
Croghan Kinshelagh granite (14CK11)																
magmatic																
9	CK11_03	457	0.282754	0.282738	0.000026	0.001780	0.000016	0.07594	0.00090	-1.1	8.5	1.8	721	38	873	107
9	CK11_04	457	0.282709	0.282696	0.000018	0.001481	0.000007	0.06236	0.00054	-2.7	7.0	1.3	780	26	970	116
10	CK11_02	457	0.282716	0.282696	0.000024	0.002331	0.000044	0.09556	0.00156	-2.4	7.0	1.7	787	35	970	121
7	CK11_05	457	0.282705	0.282689	0.000023	0.001869	0.000013	0.07737	0.00038	-2.8	6.8	1.6	794	33	986	124
2	CK11_10	457	0.282699	0.282687	0.000026	0.001406	0.000004	0.05752	0.00042	-3.0	6.7	1.8	792	37	990	127
1	CK11_13	457	0.282694	0.282675	0.000026	0.002217	0.000021	0.09097	0.00060	-3.2	6.3	1.8	816	38	1017	132
10	CK11_17	457	0.282683	0.282672	0.000020	0.001291	0.000012	0.05352	0.00071	-3.6	6.2	1.4	812	28	1024	129
2	CK11_12	457	0.282689	0.282670	0.000027	0.002220	0.000012	0.09361	0.00059	-3.4	6.1	1.9	823	40	1027	136
2	CK11_11	457	0.282678	0.282666	0.000026	0.001494	0.000006	0.06185	0.00056	-3.8	6.0	1.9	823	38	1038	137
4	CK11_08	457	0.282676	0.282661	0.000029	0.001704	0.000032	0.07174	0.00182	-3.9	5.8	2.1	832	43	1049	142
1	CK11_14	457	0.282674	0.282660	0.000024	0.001621	0.000011	0.06767	0.00081	-3.9	5.8	1.7	832	35	1051	137
10	CK11_01	457	0.282673	0.282659	0.000020	0.001634	0.000006	0.06734	0.00026	-4.0	5.7	1.4	834	29	1054	135
Croghan Kinshelagh granite (14CK12)																
magmatic																
4	CK12_05	455	0.282703	0.282678	0.000025	0.002885	0.000045	0.11712	0.00070	-2.9	6.4	1.8	819	39	1010	131
2	CK12_01	455	0.282696	0.282677	0.000020	0.002254	0.000010	0.08660	0.00080	-3.1	6.3	1.4	815	29	1014	127
3	CK12_06	455	0.282694	0.282676	0.000026	0.002185	0.000018	0.08725	0.00056	-3.2	6.3	1.8	816	38	1017	133
1	CK12_10	455	0.282662	0.282631	0.000040	0.003568	0.000115	0.11645	0.00375	-4.4	4.7	2.8	897	63	1117	167
1	CK12_09	455	0.282614	0.282587	0.000028	0.003219	0.000079	0.11292	0.00390	-6.0	3.1	2.0	959	45	1218	174
Graiguenamanagh augen gneiss (14Gn01)																
magmatic																
9	Gn01_07	462	0.282616	0.282607	0.000018	0.001085	0.000021	0.04139	0.00099	-6.0	4.0	1.3	902	26	1168	155
3	Gn01_17	462	0.282606	0.282600	0.000016	0.000653	0.000002	0.02486	0.00023	-6.3	3.8	1.2	907	23	1184	158
3	Gn01_16	462	0.282599	0.282593	0.000020	0.000712	0.000002	0.02740	0.00016	-6.6	3.5	1.4	917	28	1200	163
9	Gn01_06	462	0.282597	0.282589	0.000018	0.000917	0.000007	0.03442	0.00035	-6.6	3.4	1.3	925	25	1208	163

8	Gn01_08	462	0.282594	0.282586	0.000018	0.000923	0.000006	0.03536	0.00054	-6.8	3.3	1.3	930	26	1216	165
5	Gn01_13	462	0.282588	0.282583	0.000016	0.000619	0.000004	0.02283	0.00034	-7.0	3.2	1.1	930	22	1222	165
2	Gn01_18	462	0.282589	0.282582	0.000018	0.000839	0.000007	0.03260	0.00054	-6.9	3.1	1.3	934	26	1224	167
1	Gn01_19	462	0.282586	0.282579	0.000022	0.000884	0.000010	0.03385	0.00046	-7.0	3.0	1.5	939	31	1232	171
5	Gn01_12	462	0.282586	0.282578	0.000018	0.000896	0.000004	0.03433	0.00026	-7.1	3.0	1.3	941	25	1233	169
11	Gn01_21	462	0.282593	0.282578	0.000023	0.001739	0.000030	0.06701	0.00126	-6.8	3.0	1.6	952	33	1234	172
4	Gn01_14	462	0.282581	0.282573	0.000017	0.000945	0.000005	0.03729	0.00020	-7.2	2.8	1.2	948	24	1245	171
11	Gn01_03	462	0.282571	0.282558	0.000023	0.001495	0.000073	0.05548	0.00180	-7.6	2.3	1.6	977	34	1279	181
4	Gn01_15	462	0.282563	0.282552	0.000017	0.001305	0.000024	0.05207	0.00127	-7.9	2.0	1.2	983	25	1293	180
Graiguenamanagh equigranular granite (14Gn02)																
magmatic																
3	Gn02_03	461	0.282607	0.282599	0.000018	0.000892	0.000002	0.03613	0.00025	-6.3	3.8	1.3	911	26	1184	158
6	Gn02_04	461	0.282610	0.282603	0.000020	0.000863	0.000012	0.03253	0.00025	-6.2	3.8	1.4	905	28	1180	159
6	Gn02_05	461	0.282604	0.282596	0.000017	0.000975	0.000024	0.03546	0.00060	-6.4	3.5	1.2	916	24	1195	161
7	Gn02_06	461	0.282604	0.282596	0.000018	0.000977	0.000006	0.03929	0.00027	-6.4	3.5	1.3	917	26	1196	162
2	Gn02_01	461	0.282605	0.282591	0.000028	0.001657	0.000065	0.05812	0.00093	-6.4	3.3	2.0	932	41	1207	171
7	Gn02_07	461	0.282595	0.282587	0.000021	0.000838	0.000051	0.02795	0.00094	-6.7	3.2	1.5	926	31	1214	167
4	Gn02_02	461	0.282570	0.282560	0.000021	0.001157	0.000032	0.04009	0.00106	-7.6	2.3	1.5	969	31	1276	180
Dhoon granite (12IM01)																
inherited																
5.1	Dn_M05_09	575	0.282736	0.282691	0.000032	0.004153	0.000093	0.11299	0.00200	-1.7	9.5	2.3	798	52	905	102
5.1	Dn_M05_07	575	0.282648	0.282614	0.000027	0.003191	0.000180	0.09493	0.00366	-4.8	6.8	1.9	907	46	1080	124
5.1	Dn_M05_04	575	0.282636	0.282612	0.000024	0.002215	0.000056	0.07751	0.00057	-5.3	6.7	1.7	901	36	1084	121
1.34	Dn5	565	0.282161	0.282150	0.000020	0.001108	0.000005	0.05755	0.00055	-22.0	-9.9	1.4	1541	29	2128	332
1.34	Dn4	565	0.282143	0.282132	0.000022	0.000996	0.000011	0.05033	0.00034	-22.7	-10.5	1.6	1563	31	2167	341
1.34	Dn6	565	0.282126	0.282117	0.000019	0.000899	0.000002	0.04708	0.00021	-23.3	-11.0	1.3	1582	26	2202	347
5.2	Dn_M05_08	552	0.282712	0.282676	0.000033	0.003440	0.000144	0.09796	0.00282	-2.6	8.5	2.3	818	53	953	113
5.2	Dn_M05_05	552	0.282696	0.282667	0.000028	0.002784	0.000090	0.09174	0.00123	-3.2	8.1	2.0	827	44	975	110
1.11	Dn_M01_03	471	0.282745	0.282721	0.000029	0.002719	0.000087	0.10507	0.00328	-1.4	8.2	2.0	752	44	903	113
1.44	Dn_M01_05	471	0.282709	0.282691	0.000028	0.002017	0.000130	0.08150	0.00520	-2.7	7.2	2.0	791	44	972	124

magmatic																
4.7	Dn_M04_03	457	0.282847	0.282822	0.000032	0.002908	0.000047	0.11774	0.00279	2.2	11.5	2.2	605	48	684	87
4.11	Dn_M04_10	457	0.282818	0.282785	0.000026	0.003825	0.000248	0.16131	0.01094	1.2	10.2	1.8	666	44	768	89
4.11	Dn_M04_07	457	0.282786	0.282768	0.000019	0.002115	0.000044	0.08708	0.00151	0.0	9.6	1.3	681	28	806	86
1.2	Dn17	457	0.282771	0.282747	0.000030	0.002818	0.000050	0.12976	0.00181	-0.5	8.8	2.1	717	46	855	109
1.9	Dn_M01_01	457	0.282743	0.282727	0.000025	0.001947	0.000024	0.07232	0.00100	-1.5	8.1	1.7	740	36	900	109
4.7	Dn_M04_02	457	0.282747	0.282725	0.000025	0.002578	0.000016	0.10080	0.00032	-1.3	8.1	1.8	746	38	903	111
4.12	Dn_M04_06	457	0.282737	0.282724	0.000028	0.001537	0.000015	0.06641	0.00079	-1.7	8.0	2.0	740	40	906	114
1.6	Dn16	457	0.282718	0.282697	0.000021	0.002416	0.000032	0.11266	0.00131	-2.4	7.1	1.5	787	32	967	119
1.9	Dn14	457	0.282721	0.282696	0.000020	0.002850	0.000008	0.09703	0.00048	-2.3	7.1	1.4	792	30	969	118
5.4	Dn_M05_02	457	0.282712	0.282694	0.000020	0.002090	0.000020	0.06807	0.00096	-2.6	7.0	1.4	787	29	973	118
1.17	Dn23	457	0.282706	0.282692	0.000025	0.001634	0.000024	0.07460	0.00147	-2.8	6.9	1.8	786	36	978	124
5.4	Dn_M05_01	457	0.282711	0.282692	0.000016	0.002241	0.000028	0.08226	0.00079	-2.6	6.9	1.2	792	24	979	117
4.3	Dn_M04_01	457	0.282698	0.282690	0.000021	0.000934	0.000031	0.03635	0.00117	-3.1	6.8	1.5	783	30	983	121
4.11	Dn_M04_11	457	0.282710	0.282688	0.000031	0.002630	0.000131	0.10307	0.00509	-2.6	6.8	2.2	802	48	988	133
1.14	Dn11	457	0.282707	0.282682	0.000028	0.002898	0.000023	0.13495	0.00099	-2.7	6.6	2.0	813	43	1000	132
1.30	Dn_M01_09	457	0.282685	0.282663	0.000026	0.002569	0.000090	0.10590	0.00338	-3.5	5.9	1.8	838	40	1044	138
1.14	Dn10	457	0.282666	0.282642	0.000024	0.002817	0.000034	0.09036	0.00055	-4.2	5.1	1.7	871	36	1091	145
1.37	Dn_M01_07	457	0.282652	0.282635	0.000027	0.002032	0.000041	0.08531	0.00183	-4.7	4.9	1.9	874	40	1109	151
5.3	Dn_M05_03	457	0.282640	0.282619	0.000018	0.002530	0.000035	0.09557	0.00086	-5.1	4.3	1.3	902	27	1144	151
5.3	Dn_M05_06	457	0.282618	0.282603	0.000020	0.001690	0.000029	0.06432	0.00063	-5.9	3.8	1.4	915	29	1179	160

Data are sorted in order of decreasing age and $\varepsilon_{Hf(t)}$ value.

$\varepsilon_{Hf(t)}$ values for hafnium isotopic analyses of magmatic zircons were calculated from the concordia age of the corresponding rock. εHf_t values for inherited zircons/cores were calculated from $^{206}Pb/^{238}U$ ages for Phanerozoic and Proterozoic < 1,000 Ma zircons/cores, and from $^{207}Pb/^{206}Pb$ ages for older Proterozoic zircons/cores. Where available, concordia ages (applies to PV_15 & PV_16) were used for calculation of $\varepsilon_{Hf(t)}$ values.

The ages, model ages (t_{DM}) and two-stage model ages (t_{DM} (felsic)) are in Ma. The two-stage model ages used the felsic $^{176}Lu/^{177}Hf$ ratio relative to the ‘New Crust’ model of Dhuime et al. (2011).

Data for detrital/inherited zircons/cores are in dark grey.

TABLE DR5. WHOLE-ROCK Sm-Nd ISOTOPIC DATA

Locality	Rock type	Sample	Age (t) (Ma)	Sm (µg/g)	Nd (µg/g)	$^{147}Sm/^{144}Nd$	$^{143}Nd/^{144}Nd$	2σ	εNd_0	εNd_{450Ma}	$\varepsilon_{Nd(t)}$	t_{DM} (Ma)
ORDOVICIAN ARC-RELATED MAGMATIC ROCKS, SE LEINSTER & ISLE OF MAN												
Volcanic rocks												
Port-e-Vullen	basaltic andesite	14PV01	472.7	5.52	22.05	0.1514	0.512466	0.000004	-3.4	-0.8	-0.63	1403
Avoca	rhyolite	15Av01	463.6	12.17	47.96	0.1535	0.512585	0.000005	-1.0	1.4	1.52	1156
Avoca	basalt	15Av03	463.6	6.43	24.40	0.1594	0.512765	0.000004	2.5	4.6	4.68	797
Plutonic rocks												
Graiguenamanagh	augen gneiss	14Gn01	462.0	7.51	43.45	0.1045	0.512387	0.000004	-4.9	0.4	0.54	920
Graiguenamanagh	equigranular granite	14Gn02	460.5	6.08	29.09	0.1263	0.512125	0.000004	-10.0	-6.0	-5.89	1591
Croghan Kinshelagh	granite	14CK11	456.9	5.56	25.25	0.1331	0.512485	0.000004	-3.0	0.7	0.73	1055
Croghan Kinshelagh	granite	14CK11*	456.9	5.47	24.79	0.1334	0.512490	0.000004	-2.9	0.7	0.80	1051
Croghan Kinshelagh	granite	14CK12	455.4	6.59	33.32	0.1196	0.512433	0.000005	-4.0	0.4	0.48	991
EARLY ORDOVICIAN METASEDIMENTARY ROCKS, RIBBAND GROUP, SE IRELAND												
Palace	psammite	10/202	c. 475	1.46	7.72	0.1145	0.511960	0.000003	-13.2	-8.5	-	1655
Ballinascorney Gap	metagreywacke	10/206	c. 475	4.52	23.31	0.1172	0.511967	0.000004	-13.1	-8.5	-	1690
Coolafunshogue	chloritoid-garnet schist	10/207	c. 475	3.35	16.28	0.1245	0.511978	0.000004	-12.9	-8.7	-	1810
Courtown	metagreywacke	10/215	c. 475	10.01	56.26	0.1076	0.511970	0.000004	-13.0	-7.9	-	1533
Townamulloge	psammite	10/231	c. 475	4.01	19.76	0.1228	0.512119	0.000004	-10.1	-5.9	-	1540

All values are normalized to the $^{143}Nd/^{144}Nd$ reference value 0.512115 of the JNdi-1 reference material (Tanaka et al. 2000). Three measurements of the JNdi-1 reference material averaged 0.512095±0.000005 (2σ).

14CK11* is a duplicate analysis of sample 14CK11.

t_{DM} = model age; ^{147}Sm decay constant = 6.54E-12.

Lat/Long for Ribband Group samples: 10/202: 52°25'30.6"N/6°48'17.0"W; 10/206: 53°14'33.0"N/6°24'55.3"W; 10/207: 52°48'49.9"N/6°28'39.3"W; 10/215: 52°38'27.7"N/6°13'27.8"W; 10/231: 52°28'21.6"N/6°42'16.6"W.