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Supplementary materials for:

Termination of back-arc spreading: zircon dating of a giant oceanic core complex

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Sample preparation and analytical procedures.

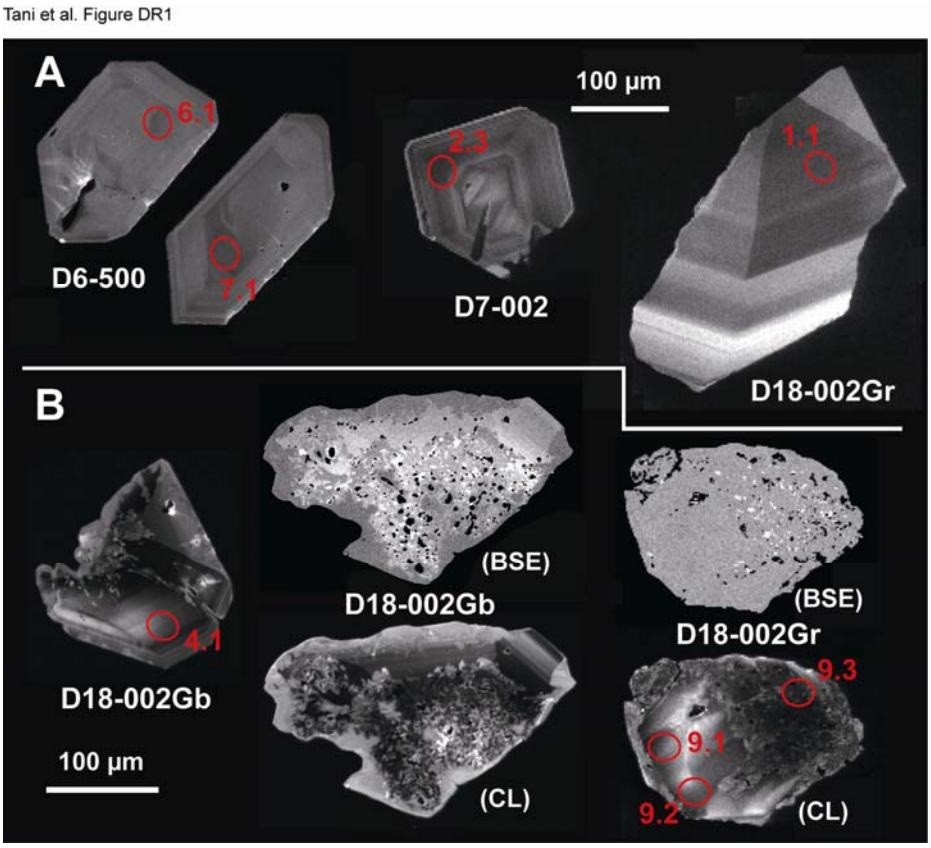

Figure DR1. Representative cathodoluminescence (CL) and backscattered electron (BSE) images of Godzilla Megamullion zircons analyzed by SHRIMP. Areas of spot analyses are marked with red ellipses, and labeled according to grain number and spot number, as listed in Table DR1. (A) Zircon crystals and

fragments with euhedral morphologies and oscillatory to sector-type internal zoning, typical of magmatic growth. (B) Zircon crystals with margins and patches modified by coupled dissolution-reprecipitation. CL image of grain 4 from gabbroic sample D18-002Gb shows alteration of low CL, high U-Th magmatic zircon which grades towards the margins to uniformly high-CL, inclusion-poor modified zircon. Unanalyzed grain from the same sample shows alteration of low CL, high U-Th magmatic zircon to inclusion-rich high CL zircon, which grades towards the margins to uniformly high-CL, inclusion-poor zircon. Dark patches in the BSE image include porosity; bright inclusions are Th, U and/or Y-rich minerals such as xenotime and thorite. Similar texture is observed in a grain 9 from feldspathic vein D18-002Gr.

Tani et al. Figure DR2

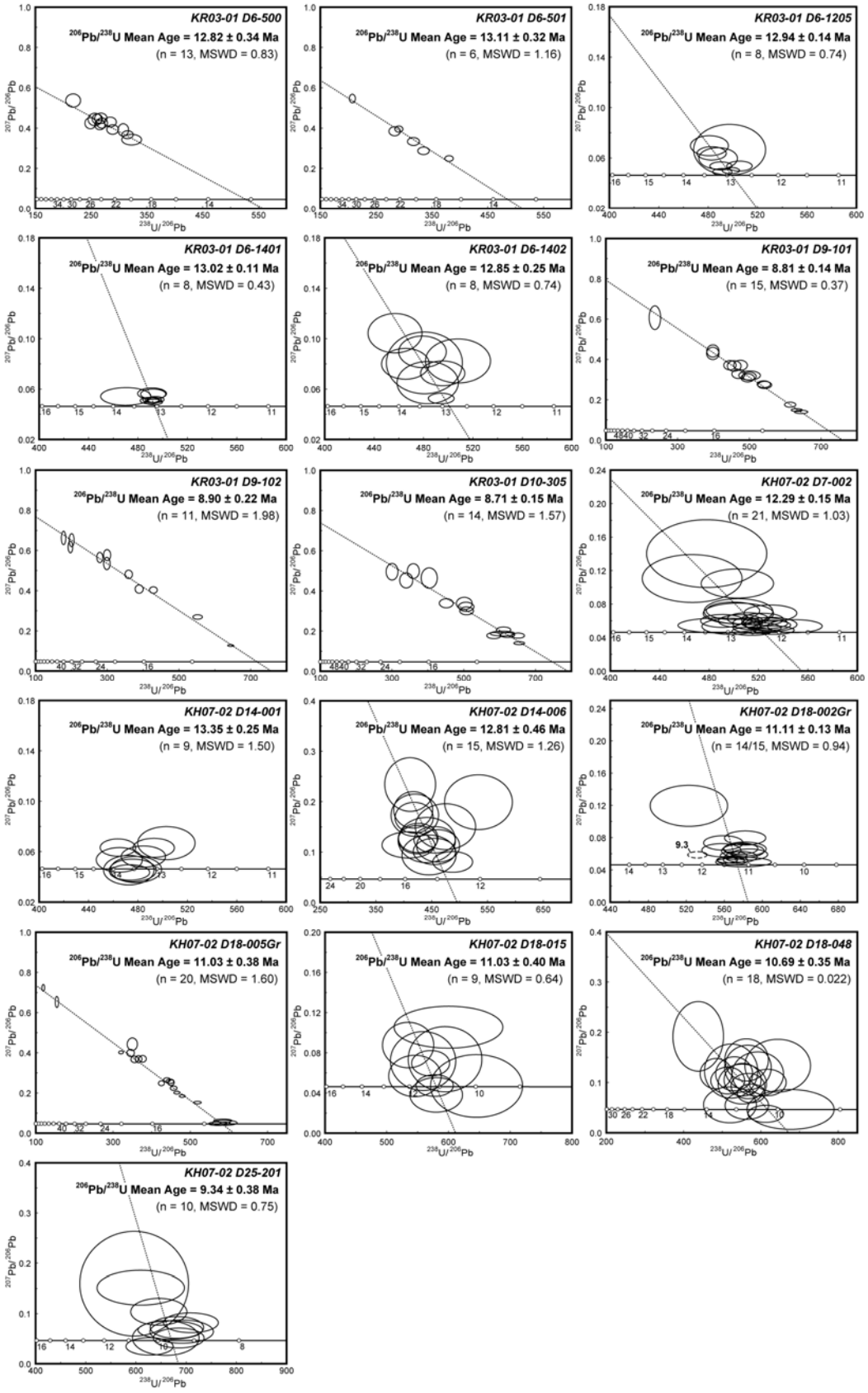

Figure DR2. ^{230}Th-corrected Tera-Wasserburg concordia plots of SHRIMP-analyzed samples. Error ellipses represent 68.3 % confidence levels (approximately one standard deviation). Quoted ages are weighted means of ^{207}Pb and ^{230}Th corrected ^{206}Pb/^{238}U spot ages (n analyses, errors at 95% confidence intervals). Solid ellipse: analysis used in weighted mean age calculation; dotted ellipse: analysis excluded. Labels on individual ellipses correspond to analysis spot numbers in Table DR1. Dashed lines represent linear projections from weighted mean ages to common lead compositions estimated using the two-stage common-Pb model of Stacey and Kramers (1975).

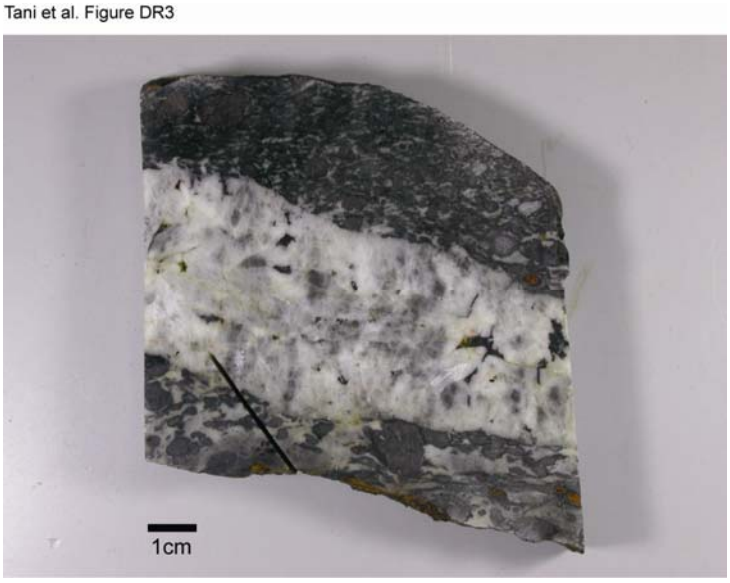

Figure DR3. Cut surface of sample D18-002. An undeformed feldspathic vein (D18-002Gr) intrudes into the mylonitized gabbroic host (D18-002Gb). Hydrothermal alteration is present in both rock types, giving plagioclase grains a milky appearance.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Sample preparation

The zircons were separated from fresh hand specimens by coarse crushing (to ~300 μm) in a tungsten-carbide rotary mill. For small samples (<200 g), original rock fragments were hand-crushed in a tungsten-carbide mortar. The heavy minerals were concentrated by panning and further processed with a hand magnet, and the resultant fractions were purified using heavy liquid (diiodomethane) separation. Zircon grains were then handpicked under a stereo microscope. The grains are ~50 to several hundred μm long, with variable grain shapes with dominant forms ranging from prisms to dipyramids in both gabbroic and leucocratic samples.

Zircon U-Pb analyses

Zircon U-Pb ages were analyzed over several sessions using the Sensitive High-Resolution Ion Microprobe (SHRIMP)-II at the National Institute of Polar Research (NIPR), Japan. The zircon grains were mounted in epoxy, polished down to grain centers, cleaned and then coated with ~10 nm of high-purity gold. Backscattered electron and cathodoluminescence (CL) images were obtained using the JEOL JSM7300 scanning electron microprobe at NIPR to visualize internal zoning. A primary O_2^- ion beam with a surface current ranging from -14 to -5 nA between sessions was used to produce 30 × 25 to 25 × 20 μm flat-floored oval craters. Abundance of U was calibrated against zircon standard SL13 (238 ppm), provided by Australian National University. Reduction of raw data for standards and samples was performed using the SQUID v.1.12a (Ludwig 2001), and Isoplot v.3.71 (Ludwig 2003) add-ins for Microsoft Excel 2003. Sample U-Pb measurements were calibrated against zircon standard TEMORA-2 (417 Ma; Black et al., 2004) using a calibration exponent of 2. Scatter on ^{204}Pb-corrected (Pb/U)/(UO/U^2) ratios of TEMORA-2 in each sessions was typically less than 1 % (2σ), with external spot-to-spot errors of less than 2 % (2σ); the latter errors are included in the errors of weighted mean ages for each sample/session. Weighted mean ages of samples for which data was obtained during multiple sessions were calculated from the weighted mean ages of data for each session. Zircon isotopic compositions and ages are listed in Table DR1. Initial ^{238}U-^{230}Th disequilibrium was corrected using the method described in Parrish and Noble (2003). The Th/U ratio of the magma at the time of zircon crystallization, required for disequilibrium correction, was assumed as $(Th/U)_{magma}$ = 3.42 ± 0.85 (2SD, n = 6), as estimated from whole-rock analyses of basaltic rocks collected from the Godzilla

Megamullion (unpublished data of O. Ishizuka). Corrections for common Pb on U/Pb values and ages for samples were performed using the ^{207}Pb-correction method described in Ireland and Williams (2003), which assumes concordance between ^{206}Pb/^{238}U and ^{207}Pb/^{235}U ages. For most sessions, the Stacey & Kramers (1975) common Pb model for the approximate age of each analysis was used. However, in some sessions (samples D6-500, D6-501, D9-101, D9-102, D10-305 and D18-005Gr sessions 1 and 2), a high proportion of surface common Pb was measured, which was derived from contamination by Pb-bearing samples with an approximate age of 550Ma. In these cases, a Stacey & Kramers (1975) common Pb model age of 550Ma was used, and the appropriateness of the model age was checked against the corrected age of an in-house zircon standard in the same grain mount. Ages reported in the main text and figures are weighted means of ^{207}Pb-^{230}Th-corrected ^{206}Pb/^{238}U ages, quoted at the 95 % confidence level, from 6 – 21 analyses per sample (Table DR1). Data from spots partially or completely overlapping domains of altered zircon, as assessed from CL images, were excluded from mean age calculations of magmatic zircon.

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Table DR1. SHRIMP zircon U-Pb analyses of the Godzilla Megamullion rocks.

Spot	$^{206}Pb_c$ (%)	U (ppm)	Th (ppm)	$^{232}Th/^{238}U$	$^{238}U/^{206}Pb$	±%	$^{207}Pb/^{206}Pb$	±%	$^{206}Pb^*$ (ppm)	$^{206}Pb/^{238}U$ age (Ma) (1)	1 sigma err	$^{206}Pb/^{238}U$ Mean age (Ma) (1) (95%c)	MSWD	$^{238}Pb/^{206}U$ (Thc)	±%	$^{207}Pb/^{206}Pb$ (Thc)	±%	$^{206}Pb/^{238}U$ age (Ma) (Thc)	1 sigma err	Note	$^{206}Pb/^{238}U$ Mean age (Ma) (Thc) (95%c)	MSWD
KR03-01 D6-500 (gabbro, stderr = 0.13 %)												12.74±0.34	0.82								**12.82±0.34**	**0.83**
D6-500-1.1	36	145	153	1.09	323.0	3.6	0.342	5.1	0.386	12.82	0.63	(n = 13)		321.8	3.6	0.341	5.1	12.89	0.63	sec	(n = 13)	
D6-500-2.1	42	155	132	0.88	308.3	2.0	0.391	5.2	0.432	12.19	0.57			307.1	2.0	0.389	5.2	12.27	0.58	sec		
D6-500-3.1	48	66	41	0.64	256.9	3.1	0.443	4.6	0.222	13.03	0.74			256.0	3.1	0.441	4.6	13.14	0.75	sec		
D6-500-4.1	46	111	93	0.87	284.7	2.5	0.430	3.8	0.334	12.12	0.54			283.7	2.5	0.428	3.8	12.21	0.55	sec		
D6-500-5.1	46	95	74	0.80	269.5	2.4	0.425	3.9	0.304	12.94	0.58			268.6	2.4	0.424	3.9	13.04	0.58	sec		
D6-500-6.1	49	99	77	0.80	267.5	2.7	0.449	3.8	0.319	12.37	0.60			266.6	2.7	0.447	3.8	12.44	0.61	sec		
D6-500-7.1	39	152	121	0.82	316.1	2.1	0.367	3.6	0.412	12.48	0.42			314.8	2.1	0.366	3.6	12.56	0.43	sec		
D6-500-8.1	42	110	89	0.84	289.1	2.4	0.393	4.0	0.326	12.95	0.53			288.0	2.4	0.392	4.0	13.03	0.53	sec		
D6-500-9.1	45	109	96	0.91	265.8	2.3	0.416	3.9	0.351	13.39	0.58			264.9	2.3	0.415	3.9	13.48	0.57	sec		
D6-500-10.1	46	84	62	0.77	248.7	2.6	0.424	4.3	0.288	14.06	0.69			247.9	2.6	0.423	4.3	14.16	0.69	sec		
D6-500-11.1	48	111	101	0.94	261.0	2.3	0.445	3.6	0.366	12.79	0.56			260.2	2.3	0.444	3.6	12.86	0.57	sec		
D6-500-12.1	59	68	46	0.70	217.6	4.0	0.537	4.0	0.270	12.04	0.92			217.0	4.0	0.535	4.0	12.13	0.92	sec		
KR03-01 D6-501 (gabbro, stderr = 0.13 %)												12.99±0.31	1.23								**13.11±0.32**	**1.16**
D6-501-1.1	35	150	154	1.06	317.6	2.2	0.333	3.9	0.406	13.26	0.43	(n = 6)		316.4	2.2	0.332	3.9	13.33	0.44	sec	(n = 6)	
D6-501-2.1	29	197	124	0.65	336.0	2.0	0.287	4.2	0.503	13.60	0.39			334.5	2.0	0.286	4.2	13.68	0.40	sec		
D6-501-3.1	41	131	99	0.78	283.6	2.3	0.384	3.8	0.396	13.43	0.51			282.6	2.3	0.383	3.8	13.52	0.51	sec		
D6-501-9.1	24	536	878	1.69	381.7	1.3	0.248	3.8	1.21	12.76	0.25			380.5	1.3	0.247	3.8	12.82	0.26	osc		
D6-501-11.1	61	173	212	1.27	207.3	1.7	0.547	2.6	0.715	12.28	0.58			206.8	1.7	0.546	2.6	12.33	0.59	osc		
D6-501-12.1	42	266	196	0.76	291.1	1.6	0.395	2.6	0.785	12.80	0.35			290.0	1.6	0.393	2.6	12.89	0.35	sec		
KR03-01 D6-1205 (gabbro, stderr = 0.18 %)												12.84±0.13	0.84								**12.94±0.14**	**0.74**
D6-1205-1.1	0.33	277	134	0.50	494.5	1.0	0.0489	3.7	0.481	12.98	0.13	(n = 8)		491.0	1.0	0.0486	3.7	13.08	0.14	sec	(n = 8)	
D6-1205-2.1	2.6	18	7	0.42	500.7	3.8	0.0667	20	0.0302	12.53	0.52			497.0	3.9	0.0662	20	12.63	0.54	sec		
D6-1205-3.1	0.92	147	69	0.48	508.9	1.3	0.0536	4.8	0.247	12.54	0.16			505.1	1.4	0.0532	4.8	12.64	0.18	sec		
D6-1205-4.1	3.0	52	27	0.53	483.9	2.0	0.0699	7.5	0.0922	12.91	0.28			480.6	2.1	0.0694	7.6	13.01	0.29	sec		
D6-1205-5.1	1.7	54	23	0.45	491.2	2.0	0.0597	9.5	0.0953	12.89	0.28			487.7	2.1	0.0593	10	12.99	0.29	sec		
D6-1205-6.1	0.94	215	148	0.71	493.3	1.1	0.0537	4.0	0.375	12.93	0.15			490.0	1.2	0.0533	4.0	13.02	0.16	sec		
D6-1205-7.1	0.47	315	263	0.86	501.3	0.9	0.0500	3.1	0.541	12.79	0.12			498.1	1.0	0.0497	3.1	12.87	0.13	sec		
D6-1205-8.1	2.2	90	39	0.45	485.9	1.6	0.0638	5.5	0.159	12.96	0.21			482.4	1.6	0.0633	5.5	13.06	0.22	sec		
KR03-01 D6-1401 (gabbro, stderr = 0.18 %)												12.93±0.11	0.44								**13.02±0.11**	**0.43**
D6-1401-1.1	0.64	356	277	0.80	493.3	0.8	0.0513	2.8	0.620	12.97	0.11	(n = 8)		490.2	0.9	0.0510	2.8	13.06	0.12	sec	(n = 8)	
D6-1401-2.1	0.67	343	331	1.00	496.8	0.9	0.0516	3.2	0.593	12.88	0.11			493.9	0.9	0.0513	3.2	12.96	0.12	osc		
D6-1401-3.1	1.0	53	25	0.48	473.0	2.8	0.0542	8.5	0.0966	13.47	0.39			469.8	2.9	0.0538	8.6	13.58	0.40	osc		
D6-1401-4.1	1.2	134	108	0.83	495.2	1.3	0.0561	4.7	0.233	12.84	0.17			492.1	1.4	0.0557	4.7	12.93	0.18	osc		
D6-1401-5.1	1.3	98	69	0.72	494.3	1.5	0.0565	5.3	0.171	12.86	0.19			491.1	1.6	0.0561	5.3	12.95	0.21	sec		
D6-1401-6.1	0.63	347	274	0.82	495.4	0.8	0.0513	2.7	0.602	12.92	0.11			492.3	0.9	0.0510	2.7	13.00	0.12	osc		
D6-1401-7.1	0.43	324	264	0.84	495.7	0.9	0.0497	3.0	0.561	12.94	0.12			492.6	1.0	0.0494	3.0	13.02	0.13	sec		
D6-1401-8.1	0.56	235	243	1.07	492.0	1.0	0.0507	3.4	0.410	13.02	0.13			489.2	1.0	0.0504	3.4	13.10	0.14	osc		
KR03-01 D6-1402 (gabbro, stderr = 0.18 %)												12.75±0.24	0.78								**12.85±0.25**	**0.74**
D6-1402-1.1	0.80	124	68	0.57	497.6	1.3	0.0526	5.2	0.214	12.84	0.18	(n = 8)		494.1	1.4	0.0522	5.2	12.94	0.19	sec	(n = 8)	
D6-1402-2.1	4.6	21	17	0.83	511.0	3.4	0.0826	14	0.0359	12.02	0.44			507.6	3.4	0.0821	14	12.11	0.45	sec		
D6-1402-3.1	7.4	22	14	0.67	459.4	3.1	0.105	9.8	0.0413	12.98	0.44			456.5	3.2	0.104	10	13.07	0.45	sec		
D6-1402-4.1	4.3	29	16	0.58	468.0	2.7	0.0803	10	0.0538	13.17	0.38			464.9	2.7	0.0798	10	13.26	0.39	sec		
D6-1402-5.1	5.5	33	21	0.65	482.1	2.6	0.0900	9.2	0.0596	12.62	0.36			479.0	2.7	0.0894	9.3	12.71	0.37	sec		
D6-1402-6.1	2.4	21	13	0.64	486.3	3.3	0.0652	17	0.0369	12.93	0.47			483.1	3.4	0.0648	17	13.02	0.48	sec		
D6-1402-7.1	3.4	43	27	0.65	498.6	2.3	0.0728	8.9	0.0736	12.48	0.31			495.2	2.4	0.0723	9.0	12.58	0.32	sec		
D6-1402-8.1	4.4	15	6	0.44	483.8	4.2	0.0811	20	0.0267	12.72	0.60			480.4	4.2	0.0805	20	12.83	0.61	sec		
KR03-01 D9-101 (leucocratic rock, stderr = 0.13 %)												8.72±0.14	0.38								**8.81±0.14**	**0.37**
D9-101-1.1	39	131	91	0.72	477.6	2.6	0.372	4.4	0.235	8.18	0.34	(n = 15)		474.6	2.7	0.370	4.4	8.41	0.35	osc	(n = 15)	
D9-101-2.1	68	25	10	0.40	236.4	4.4	0.608	6.4	0.0900	8.75	1.35			235.6	4.4	0.606	6.4	8.85	1.35	osc		
D9-101-3.1	33	163	107	0.68	502.8	2.4	0.317	4.3	0.278	8.62	0.30			499.4	2.5	0.315	4.3	8.71	0.30	osc core		
D9-101-3.2	11	449	189	0.44	650.2	1.8	0.139	4.0	0.593	8.79	0.17			644.0	1.9	0.138	4.0	8.90	0.18	osc rim		
D9-101-4.1	48	97	70	0.74	399.4	2.8	0.443	4.5	0.210	8.39	0.46			397.3	2.9	0.441	4.5	8.48	0.46	sec		
D9-101-5.1	47	90	65	0.75	399.5	2.9	0.431	4.7	0.194	8.63	0.46			397.4	3.0	0.429	4.7	8.71	0.47	unz		
D9-101-6.1	32	159	116	0.75	498.4	2.4	0.309	4.4	0.275	8.81	0.30			495.1	2.5	0.307	4.4	8.91	0.31	osc		
D9-101-7.1	39	123	97	0.81	459.8	2.7	0.368	4.7	0.230	8.55	0.37			457.1	2.8	0.366	4.7	8.65	0.38	osc		
D9-101-8.1	34	137	97	0.73	472.4	2.6	0.328	4.5	0.250	8.99	0.34			469.4	2.7	0.326	4.5	9.08	0.35	osc		
D9-101-9.1	33	145	119	0.85	503.2	3.9	0.321	4.6	0.248	8.55	0.40			500.0	4.0	0.319	4.6	8.64	0.41	osc		

D9-101-10.1	28	213	176	0.85	545.7	2.3	0.274	4.2	0.335	8.55	0.25			541.9	2.4	0.272	4.2	8.64	0.26	osc core		
D9-101-10.2	39	144	85	0.61	448.1	2.5	0.372	4.2	0.275	8.72	0.35			445.3	2.6	0.370	4.2	8.81	0.36	osc rim		
D9-101-11.1	28	224	158	0.73	543.6	2.2	0.277	4.1	0.353	8.55	0.25			539.7	2.3	0.275	4.1	8.64	0.26	osc core		
D9-101-11.2	12	593	291	0.51	637.6	1.5	0.148	3.4	0.799	8.86	0.14			631.8	1.6	0.147	3.4	8.96	0.16	osc rim		
D9-101-12.1	16	552	319	0.60	618.8	1.6	0.175	4.7	0.767	8.80	0.17			613.5	1.7	0.174	4.7	8.88	0.18	osc rim		
KR03-01 D9-102 (leucocratic rock, stderr = 0.13 %)												8.81±0.22	2.02								**8.90±0.22**	**1.98**
D9-102-1.1	63	166	112	0.70	279.5	2.0	0.566	3.0	0.509	8.57	0.51	(n = 11)		278.5	2.0	0.564	3.0	8.66	0.51	osc	(n = 11)	
D9-102-2.1	59	194	114	0.60	299.2	1.9	0.536	3.8	0.558	8.79	0.55			298.0	1.9	0.534	3.8	8.88	0.56	osc		
D9-102-3.1	75	76	59	0.80	177.5	2.3	0.663	3.3	0.369	9.22	0.99			177.1	2.3	0.661	3.3	9.32	1.00	osc		
D9-102-4.1	44	280	175	0.65	390.2	1.8	0.409	3.3	0.617	9.28	0.32			388.1	1.9	0.407	3.3	9.36	0.32	osc core		
D9-102-4.2	27	578	285	0.51	555.8	1.5	0.269	2.7	0.894	8.47	0.16			551.4	1.6	0.267	2.7	8.57	0.17	osc rim		
D9-102-5.1	43	362	362	1.03	430.1	1.6	0.404	2.6	0.723	8.50	0.24			427.9	1.7	0.402	2.6	8.58	0.24	osc		
D9-102-6.1	10	2280	1528	0.69	649.3	0.8	0.126	2.5	3.02	8.97	0.08			643.6	0.9	0.125	2.5	9.06	0.09	osc		
D9-102-7.1	64	153	100	0.67	299.9	2.1	0.578	3.1	0.437	7.66	0.50			298.7	2.1	0.576	3.1	7.76	0.50	osc		
D9-102-8.1	69	98	62	0.66	196.4	2.1	0.618	3.1	0.429	10.13	0.80			195.9	2.1	0.616	3.1	10.22	0.80	osc		
D9-102-9.1	53	225	190	0.87	360.4	1.9	0.482	2.9	0.537	8.46	0.35			358.8	1.9	0.480	2.9	8.54	0.35	osc		
D9-102-10.1	73	79	56	0.73	199.9	2.3	0.652	3.3	0.340	8.65	0.87			199.4	2.3	0.650	3.3	8.72	0.88	osc		
KR03-01 D10-305 (leucocratic rock, stderr = 0.13 %)												8.62±0.14	1.65								**8.71±0.15**	**1.57**
D10-305-1.1	16	263	167	0.66	588.4	2.2	0.177	5.7	0.383	9.22	0.24	(n = 14)		583.7	2.3	0.176	5.7	9.31	0.25	sec	(n = 14)	
D10-305-2.1	16	322	120	0.39	626.9	2.1	0.180	4.4	0.441	8.62	0.20			621.1	2.2	0.178	4.4	8.72	0.22	sec		
D10-305-3.1	54	51	26	0.52	300.4	3.6	0.496	5.5	0.147	9.79	0.80			299.1	3.6	0.494	5.5	9.88	0.80	unz		
D10-305-4.1	17	283	181	0.66	612.8	3.6	0.187	4.3	0.397	8.73	0.33			607.7	3.7	0.185	4.3	8.82	0.34	sec		
D10-305-5.1	11	691	391	0.59	660.6	1.4	0.139	3.5	0.898	8.65	0.13			654.5	1.5	0.138	3.5	8.75	0.14	sec		
D10-305-6.1	51	64	45	0.74	404.8	3.6	0.465	7.2	0.135	7.86	0.70			402.6	3.6	0.463	7.2	7.95	0.71	unz		
D10-305-7.1	49	57	28	0.50	340.6	3.5	0.453	5.5	0.143	9.61	0.66			338.9	3.5	0.451	5.5	9.71	0.67	osc core		
D10-305-7.2	35	124	57	0.48	504.3	2.8	0.338	5.9	0.211	8.26	0.39			500.6	2.9	0.336	5.9	8.37	0.39	osc rim		
D10-305-8.1	16	393	294	0.77	656.6	1.7	0.177	4.9	0.514	8.26	0.17			651.0	1.8	0.175	4.9	8.35	0.18	sec		
D10-305-9.1	19	247	139	0.58	615.8	2.1	0.206	4.4	0.344	8.43	0.21			610.5	2.2	0.204	4.4	8.54	0.22	sec core		
D10-305-9.2	35	133	151	1.17	452.8	2.8	0.338	4.4	0.253	9.21	0.36			450.5	2.8	0.336	4.4	9.28	0.37	sec core		
D10-305-10.1	33	133	79	0.61	509.9	2.7	0.321	4.7	0.225	8.44	0.32			506.3	2.8	0.319	4.7	8.53	0.33	sec		
D10-305-11.1	55	73	53	0.74	359.7	3.1	0.500	4.9	0.175	8.09	0.59			358.0	3.1	0.498	4.9	8.18	0.59	unz		
D10-305-12.1	31	155	107	0.71	510.7	2.4	0.301	4.3	0.261	8.73	0.29			507.2	2.5	0.299	4.3	8.82	0.30	sec		
KH07-02 D7-002 session1-2 (gabbro, stderr = 0.46 % : session1; 0.17 % : session2)												12.22±0.15	0.97								**12.29±0.15**	**1.03**
D7-002-1.1 (s1)	0.62	266	238	0.92	522.4	2.4	0.0512	8.4	0.438	12.25	0.30	(n = 21)		518.6	2.5	0.0509	8.5	12.35	0.31	osc	(n = 21)	
D7-002-2.1 (s1)	1.1	319	300	0.97	530.8	2.2	0.0548	7.4	0.516	12.00	0.27			527.6	2.3	0.0544	7.5	12.08	0.28	osc		
D7-002-3.1 (s1)	1.0	149	121	0.84	491.2	4.5	0.0543	11	0.261	12.98	0.59			487.9	4.5	0.0540	11	13.07	0.60	osc		
D7-002-4.1 (s1)	0.11	428	567	1.37	517.2	2.0	0.0472	6.8	0.711	12.44	0.25			514.3	2.1	0.0470	6.8	12.51	0.26	osc		
D7-002-5.1 (s1)	1.2	216	210	1.00	533.3	2.6	0.0556	9.9	0.348	11.93	0.32			529.6	2.7	0.0552	10	12.02	0.33	osc		
D7-002-6.1 (s1)	0.30	430	629	1.51	535.4	2.0	0.0486	6.8	0.690	11.99	0.25			532.3	2.1	0.0484	6.8	12.07	0.25	osc		
D7-002-7.1 (s1)	1.4	267	257	0.99	527.5	2.3	0.0569	7.7	0.435	12.04	0.29			524.7	2.4	0.0565	7.8	12.12	0.29	osc		
D7-002-8.1 (s1)	0.93	212	175	0.85	552.5	2.6	0.0536	9.6	0.329	11.55	0.31			549.1	2.7	0.0532	10	11.63	0.32	osc		
D7-002-9.1 (s1)	0.88	125	89	0.74	500.8	3.1	0.0532	12	0.214	12.75	0.40			497.7	3.2	0.0528	12	12.83	0.42	osc		
D7-002-2.3 (s2)	1.7	255	303	1.23	493.1	2.3	0.0597	8.7	0.444	12.84	0.30			490.4	2.4	0.0594	8.8	12.92	0.32	osc		
D7-002-4.2 (s2)	2.0	321	373	1.20	514.5	2.1	0.0624	7.6	0.537	12.26	0.26			511.1	2.2	0.0620	7.6	12.35	0.28	osc		
D7-002-4.3 (s2)	3.2	110	72	0.68	506.6	3.6	0.0714	14	0.186	12.31	0.47			503.5	3.7	0.0709	14	12.39	0.48	osc		
D7-002-5.2 (s2)	1.7	263	334	1.31	469.2	2.3	0.0595	8.7	0.446	12.47	0.30			505.3	2.4	0.0592	8.7	12.54	0.31	osc		
D7-002-5.3 (s2)	2.0	317	364	1.19	506.1	2.1	0.0617	7.7	0.517	11.99	0.27			523.0	2.2	0.0613	7.7	12.08	0.27	osc		
D7-002-14.1 (s2)	8.2	52	25	0.51	507.7	5.7	0.111	17	0.0951	12.60	0.79			465.9	5.7	0.110	17	12.71	0.80	unz		
D7-002-16.1 (s2)	7.5	95	69	0.75	526.5	3.8	0.105	11	0.162	11.78	0.48			502.6	3.9	0.104	11	11.87	0.49	osc		
D7-002-17.1 (s2)	2.8	126	74	0.61	506.6	3.7	0.0686	12	0.213	12.35	0.48			503.4	3.8	0.0681	12	12.44	0.49	osc		
D7-002-18.1 (s2)	2.9	216	181	0.87	533.5	2.6	0.0692	9.4	0.347	11.72	0.32			529.4	2.7	0.0687	9.5	11.82	0.33	osc		
D7-002-19.1 (s2)	3.2	163	171	1.08	501.6	2.8	0.0719	9.6	0.279	12.42	0.37			499.1	2.9	0.0715	10	12.49	0.37	osc		
D7-002-20.1 (s2)	1.3	605	929	1.59	513.2	1.5	0.0565	8.3	1.01	12.39	0.20			510.8	1.6	0.0562	8.3	12.45	0.21	osc		
D7-002-21.1 (s2)	12	31	15	0.50	480.9	6.7	0.141	19	0.0557	11.79	0.91			477.7	6.7	0.140	19	11.88	0.92	osc		
KH07-02 D14-001 (gabbro, stderr = 0.37 %)												13.27±0.25	1.61								**13.35±0.25**	**1.50**
D14-001-3.1	-	126	115	0.95	480.6	2.8	0.0458	15	0.225	13.41	0.40	(n = 9)		478.2	2.9	0.0455	15	13.48	0.40	osc	(n = 9)	
D14-001-4.1	-	126	123	1.01	474.6	2.8	0.0453	17	0.228	13.59	0.40			472.3	2.9	0.0450	17	13.66	0.41	osc		
D14-001-5.1	-	204	149	0.76	475.9	2.2	0.0434	9.4	0.368	13.58	0.30			473.0	2.3	0.0431	9.5	13.67	0.32	osc		
D14-001-6.1	2.6	108	81	0.77	506.2	3.0	0.0669	13	0.184	12.39	0.39			502.7	3.1	0.0665	13	12.49	0.41	osc		
D14-001-7.1	1.2	169	141	0.86	487.1	2.4	0.0561	9.9	0.297	13.06	0.33			484.0	2.5	0.0558	10	13.15	0.34	osc		
D14-001-9.1	0.90	147	151	1.06	466.8	2.6	0.0534	12	0.271	13.67	0.37			464.5	2.7	0.0531	12	13.75	0.38	osc		
D14-001-10.1	2.1	248	306	1.28	494.5	2.2	0.0630	7.9	0.431	12.75	0.29			492.4	2.3	0.0627	7.9	12.81	0.30	osc		
D14-001-11.1	2.1	269	380	1.46	465.5	2.0	0.0632	7.2	0.497	13.54	0.29			463.4	2.0	0.0629	7.2	13.60	0.29	osc		

D14-001-12.1	-	150	169	1.17	478.0	2.6	0.0451	13	0.269	13.49	0.36			475.5	2.7	0.0449	13	13.57	0.37	osc		
KH07-02 D14-006 (gabbro, stderr = 0.16 %)												12.72±0.45	1.30								**12.81±0.46**	**1.26**
D14-006-1.1	15	46	33	0.75	420.2	5.4	0.168	12	0.0934	13.04	0.81	(n = 15)		417.9	5.4	0.167	12	13.05	0.81	sec	(n = 15)	
D14-006-2.1	16	32	22	0.70	421.2	6.7	0.174	16	0.0659	12.91	1.02			418.8	6.7	0.173	16	12.92	1.02	sec		
D14-006-3.1	13	30	19	0.65	477.3	7.5	0.151	20	0.0531	11.77	1.01			474.2	7.5	0.150	20	11.81	1.03	sec		
D14-006-4.1	19	34	24	0.72	537.3	7.5	0.200	18	0.0540	9.73	0.90			533.5	7.5	0.198	18	9.75	0.92	sec		
D14-006-5.1	24	27	19	0.71	413.1	7.3	0.235	15	0.0571	12.00	1.12			410.8	7.3	0.233	15	11.96	1.12	sec		
D14-006-6.1	9.8	27	18	0.67	443.1	7.7	0.124	24	0.0528	13.16	1.14			440.4	7.7	0.123	24	13.20	1.16	sec		
D14-006-7.1	6.9	50	40	0.83	456.9	5.5	0.101	17	0.0940	13.15	0.77			454.2	5.5	0.100	17	13.21	0.79	sec		
D14-006-8.1	8.3	55	46	0.86	463.6	5.5	0.112	19	0.101	12.77	0.79			460.9	5.5	0.111	19	12.82	0.80	sec		
D14-006-9.1	10	50	41	0.86	427.6	5.5	0.128	15	0.100	13.55	0.82			425.3	5.5	0.127	15	13.59	0.84	sec		
D14-006-10.1	9.9	50	38	0.79	426.6	5.4	0.125	15	0.101	13.65	0.81			424.2	5.4	0.124	15	13.69	0.83	sec		
D14-006-11.1	8.6	47	37	0.81	409.7	7.7	0.114	15	0.0981	14.42	1.16			407.5	7.7	0.113	15	14.46	1.17	sec		
D14-006-12.1	6.0	33	26	0.79	447.3	7.2	0.0939	28	0.0640	13.56	1.08			444.7	7.2	0.0934	28	13.62	1.10	sec		
D14-006-13.1	4.3	72	63	0.89	490.3	4.8	0.0801	17	0.127	12.59	0.64			487.3	4.8	0.0796	17	12.66	0.65	sec		
D14-006-14.1	9.9	53	50	0.98	457.2	5.3	0.125	14	0.0991	12.74	0.74			454.7	5.3	0.124	14	12.77	0.75	sec		
D14-006-15.1	17	48	37	0.80	418.6	5.5	0.184	13	0.0985	12.79	0.83			416.3	5.5	0.183	13	12.79	0.85	sec		
KH07-02 D18-002Gb (gabbro, stderr = 0.16 %)												11.21±0.12	1.89								**11.27±0.13**	**1.80**
D18-002Gb-1.1	0.36	1987	5206	2.71	572.6	0.94	0.0491	3.5	2.98	11.21	0.11	mean age of		571.4	1.0	0.0490	3.5	11.23	0.11	osc	mean age of	
D18-002Gb-1.2	*-*	*681*	*825*	*1.25*	*585.5*	*2.3*	*0.0455*	*6.8*	*0.999*	*11.01*	*0.26*	magmatic domains		*582.3*	*2.4*	*0.0452*	*6.8*	*11.08*	*0.27*	*mix*	magmatic domains	
D18-002Gb-2.1	*2.2*	*374*	*160*	*0.44*	*585.9*	*2.2*	*0.0633*	*7.3*	*0.548*	*10.76*	*0.24*	(n = 6)		*581.0*	*2.3*	*0.0628*	*7.4*	*10.85*	*0.26*	*mod rim*	(n = 6)	
D18-002Gb-3.1	*2.5*	*386*	*263*	*0.70*	*591.5*	*2.1*	*0.0661*	*7.1*	*0.561*	*10.62*	*0.24*	10.69±0.27	0.07	*587.3*	*2.2*	*0.0656*	*7.2*	*10.70*	*0.24*	*mod rim*	**10.79±0.29**	**0.08**
D18-002Gb-4.1	1.7	454	637	1.45	595.0	2.0	0.0596	7.0	0.655	10.64	0.22	mean age of		591.6	2.1	0.0593	7.0	10.71	0.23	osc	mean age of	
D18-002Gb-5.1	0.36	2632	3948	1.55	564.9	1.3	0.0491	2.9	4.00	11.36	0.15	modified rims		562.0	1.4	0.0488	2.9	11.42	0.16	osc	modified rims	
D18-002Gb-6.1	*4.3*	*88*	*101*	*1.19*	*570.6*	*4.6*	*0.080*	*17*	*0.132*	*10.80*	*0.53*	(analyses: 2.1, 3.1,		*567.4*	*4.6*	*0.0795*	*17*	*10.87*	*0.54*	*mod rim*	(analyses: 2.1, 3.1,	
D18-002Gb-6.2	1.9	413	179	0.45	566.2	2.1	0.0610	7.1	0.627	11.16	0.24	6.1. 10.1)		561.3	2.2	0.0605	7.2	11.27	0.25	osc rim	6.1. 10.1)	
D18-002Gb-7.1	3.2	332	248	0.77	538.9	2.4	0.0717	7.1	0.530	11.57	0.29			535.2	2.5	0.0712	7.2	11.65	0.30	cru		
D18-002Gb-8.1	0.20	2730	2148	0.81	572.5	0.80	0.0479	2.9	4.10	11.23	0.09			568.3	0.9	0.0475	2.9	11.32	0.10	osc		
D18-002Gb-9.1	*1.7*	*467*	*155*	*0.34*	*590.0*	*1.9*	*0.0594*	*6.7*	*0.679*	*10.74*	*0.21*			*584.7*	*2.0*	*0.0589*	*6.8*	*10.84*	*0.22*	*mix*		
D18-002Gb-10.1	*1.5*	*344*	*243*	*0.73*	*593.5*	*2.3*	*0.0579*	*8.0*	*0.498*	*10.69*	*0.25*			*588.4*	*2.4*	*0.0574*	*8.1*	*10.79*	*0.26*	*mod rim*		
KH07-02 D18-002Gr (leucocratic rock, stderr = 0.16 %)												11.07±0.12	1.23								**11.11±0.13**	**0.94**
D18-002Gr-1.1	1.4	804	2156	2.77	570.5	1.6	0.0576	5.6	1.21	11.13	0.18	(n = 14/15)		569.5	1.6	0.0575	5.6	11.15	0.19	core	(n = 14/15)	
D18-002Gr-2.1	1.2	626	1061	1.75	580.4	1.9	0.0559	7.8	0.927	10.96	0.22			577.2	2.0	0.0556	7.8	11.03	0.22	sec		
D18-002Gr-3.1	2.5	521	842	1.67	579.9	2.0	0.0661	7.0	0.772	10.83	0.23			577.1	2.1	0.0658	7.0	10.89	0.23	osc		
D18-002Gr-4.1	3.5	339	406	1.23	561.8	2.4	0.0735	8.0	0.519	11.07	0.28			558.6	2.5	0.0731	8.1	11.14	0.29	osc		
D18-002Gr-5.1	0.39	451	698	1.60	583.2	3.3	0.0494	7.8	0.664	11.00	0.36			580.0	3.3	0.0491	7.8	11.07	0.37	sec		
D18-002Gr-6.1	4.2	338	459	1.40	585.4	2.4	0.0796	7.2	0.496	10.54	0.26			581.6	2.5	0.0791	7.2	10.61	0.27	sec		
D18-002Gr-7.1	0.69	1107	3649	3.41	562.6	1.3	0.0517	4.6	1.69	11.37	0.15			562.6	1.3	0.0517	4.6	11.37	0.15	core		
D18-002Gr-8.1	1.6	413	500	1.25	590.4	2.1	0.0590	7.7	0.600	10.73	0.24			586.3	2.2	0.0586	7.8	10.81	0.24	osc		
D18-002Gr-9.1	2.3	318	385	1.25	560.3	2.4	0.0643	8.4	0.488	11.23	0.28			556.6	2.5	0.0639	8.5	11.31	0.29	osc		
D18-002Gr-9.2	2.2	294	317	1.12	582.8	2.5	0.0634	8.9	0.433	10.81	0.28			579.2	2.6	0.0630	9.0	10.89	0.29	osc		
D18-002Gr-9.3	*1.6*	*1171*	*1478*	*1.30*	*534.2*	*1.2*	*0.0585*	*4.5*	*1.88*	*11.87*	*0.14*			*531.2*	*1.3*	*0.0582*	*4.5*	*11.94*	*0.16*	*mod*		
D18-002Gr-10.1	9.3	61	34	0.57	525.7	5.1	0.120	14	0.0995	11.11	0.62			522.1	5.2	0.119	14	11.20	0.63	unz		
D18-002Gr-11.1	0.63	573	971	1.75	571.1	1.8	0.0513	6.8	0.862	11.21	0.20			568.3	1.8	0.0511	6.8	11.26	0.21	sec		
D18-002Gr-12.1	0.67	1154	3963	3.55	569.7	1.3	0.0515	4.7	1.74	11.23	0.14			569.9	1.3	0.0515	4.7	11.23	0.15	core		
D18-002Gr-12.2	2.5	287	350	1.26	585.1	2.5	0.0658	8.7	0.421	10.74	0.28			581.4	2.6	0.0654	8.8	10.81	0.29	osc rim		
KH07-02 D18-005Gr session1-3 (leucocratic rock, stderr = 0.13 % : session1; 0.43 % : session2; 0.17 % : session3)												10.96±0.29	1.60								**11.03±0.38**	**1.60**
D18-005Gr-1.1 (s1)	39	230	332	1.49	356.6	1.8	0.367	3.0	0.553	11.06	0.31	(n = 20)		355.4	1.8	0.366	3.0	11.12	0.32	osc	(n = 20)	
D18-005Gr-2.1 (s1)	13	778	1425	1.89	520.5	1.2	0.151	2.7	1.28	10.81	0.14			518.5	1.2	0.150	2.7	10.86	0.15	osc		
D18-005Gr-3.1 (s1)	43	227	157	0.72	346.6	1.8	0.400	2.9	0.561	10.63	0.32			345.0	1.8	0.398	2.9	10.73	0.33	osc rim		
D18-005Gr-3.2 (s1)	21	651	1372	2.18	457.6	1.2	0.223	3.3	1.22	11.06	0.18			456.3	1.2	0.222	3.3	11.11	0.19	osc core		
D18-005Gr-4.1 (s1)	39	288	213	0.76	377.7	1.6	0.370	3.0	0.655	10.38	0.29			375.8	1.7	0.368	3.0	10.47	0.29	osc core		
D18-005Gr-5.1 (s1)	48	211	183	0.90	350.6	2.5	0.443	4.6	0.516	9.56	0.52			349.1	2.5	0.441	4.6	9.65	0.52	osc core		
D18-005Gr-6.1 (s1)	19	722	1293	1.85	466.6	1.1	0.200	2.3	1.33	11.25	0.15			464.9	1.1	0.199	2.3	11.29	0.15	osc core		
D18-005Gr-7.1 (s1)	39	315	343	1.12	367.0	1.5	0.368	3.1	0.738	10.72	0.29			365.5	1.5	0.366	3.1	10.80	0.30	osc core		
D18-005Gr-8.1 (s1)	24	531	792	1.54	426.4	1.2	0.247	3.2	1.07	11.44	0.20			424.7	1.2	0.246	3.2	11.50	0.20	osc core		
D18-005Gr-9.1 (s1)	25	661	1167	1.82	451.0	1.2	0.251	3.8	1.26	10.74	0.21			449.4	1.2	0.250	3.8	10.80	0.21	osc core		
D18-005Gr-10.1 (s1	26	503	812	1.67	441.2	1.3	0.264	2.8	0.978	10.75	0.19			439.5	1.3	0.263	2.8	10.81	0.20	osc core		
D18-005Gr-11.1 (s1	17	1013	2116	2.16	479.8	1.0	0.183	2.3	1.81	11.21	0.13			478.4	1.0	0.182	2.3	11.25	0.14	osc core		
D18-005Gr-12.1 (s1	26	389	666	1.77	448.6	1.5	0.257	2.8	0.745	10.69	0.21			447.0	1.5	0.256	2.8	10.76	0.21	osc rim		
D18-005Gr-1.2 (s2)	43	591	728	1.27	320.9	1.2	0.402	1.3	1.58	11.44	0.25			319.8	1.2	0.401	1.3	11.51	0.25	sec		
D18-005Gr-2.1 (s2)	73	149	148	1.03	154.0	2.0	0.653	2.8	0.829	11.15	1.09			153.7	2.0	0.652	2.8	11.23	1.10	osc		
D18-005Gr-4.1 (s2)	82	105	90	0.88	118.4	2.0	0.724	1.5	0.765	9.81	1.11			118.2	2.0	0.723	1.5	9.91	1.10	osc		

D18-005Gr-1.2 (s3)	0.28	604	744	1.27	593.7	1.4	0.0485	6.5	0.873	10.82	0.16			590.0	1.5	0.0482	6.5	10.89	0.17	sec		
D18-005Gr-2.1 (s3)	1.8	162	164	1.05	587.8	2.6	0.0601	9.7	0.237	10.77	0.29			584.0	2.7	0.0597	10	10.84	0.30	osc		
D18-005Gr-4.1 (s3)	0.46	92	72	0.81	593.5	3.5	0.0499	17	0.133	10.80	0.40			589.5	3.6	0.0495	17	10.88	0.41	osc		
D18-005Gr-5.1 (s3)	-	145	176	1.26	574.6	2.7	0.0447	13	0.217	11.23	0.32			571.5	2.8	0.0444	13	11.30	0.32	osc		
KH07-02 D18-015 (leucocratic rock, stderr = 0.46 %)												10.95±0.39	0.66								**11.03±0.40**	**0.64**
D18-015-1.1	1.4	48	35	0.75	549.2	5.1	0.0570	24	0.0753	11.57	0.62	(n = 9)		545.0	5.2	0.0566	24	11.66	0.63	sec	(n = 9)	
D18-015-1.2	0.11	28	14	0.52	574.9	7.6	0.0470	44	0.0367	9.89	0.80			645.0	7.6	0.0466	44	9.98	0.81	sec		
D18-015-2.1	3.0	107	67	0.65	650.5	3.5	0.0698	12	0.159	10.87	0.40			570.5	3.6	0.0693	12	10.96	0.41	sec		
D18-015-3.1	5.3	47	29	0.65	538.1	5.1	0.0880	17	0.0744	11.34	0.62			534.1	5.2	0.0874	17	11.43	0.63	sec		
D18-015-4.1	-	59	33	0.59	584.4	4.8	0.0380	30	0.0860	11.14	0.55			579.3	4.9	0.0377	30	11.24	0.57	sec		
D18-015-5.1	0.14	118	116	1.01	580.5	3.4	0.0474	15	0.175	11.08	0.39			577.0	3.5	0.0471	15	11.15	0.40	sec		
D18-015-6.1	3.5	33	18	0.56	598.9	6.6	0.0740	29	0.0477	10.38	0.75			594.0	6.6	0.0734	29	10.47	0.76	sec		
D18-015-7.1	3.3	35	13	0.40	563.3	6.2	0.0720	27	0.0531	11.06	0.75			558.3	6.3	0.0714	27	11.17	0.75	sec		
D18-015-8.1	7.5	66	53	0.83	604.2	9.7	0.106	13	0.0942	9.86	0.97			599.4	9.7	0.105	13	9.95	0.98	sec		
KH07-02 D18-048 session1-2 (gabbro, stderr = 0.46 % : session1; 0.58 % : session2)												10.59±0.35	0.03								**10.69±0.35**	**0.022**
D18-048-1.1 (s1)	-	60	44	0.76	617.1	4.9	0.0370	30	0.0831	10.57	0.54	(n = 18)		612.0	5.0	0.0367	30	10.65	0.55	sec	(n = 18)	
D18-048-2.1 (s1)	1.1	17	12	0.71	522.6	8.7	0.0550	43	0.0282	12.18	1.12			519.4	8.7	0.0546	43	12.27	1.13	unz		
D18-048-3.1 (s1)	11	20	14	0.70	649.0	8.7	0.134	26	0.0268	8.82	0.89			643.4	8.7	0.133	26	8.91	0.89	unz		
D18-048-4.1 (s1)	6.4	23	20	0.92	555.0	7.5	0.0970	27	0.0352	10.86	0.90			551.2	7.5	0.0963	27	10.94	0.91	sec		
D18-048-5.1 (s1)	0.0	16	10	0.62	683.1	11	0.0460	57	0.0202	9.43	1.08			676.6	11.0	0.0456	58	9.53	1.10	sec		
D18-048-6.1 (s1)	9.7	18	11	0.62	525.5	8.7	0.123	29	0.0291	11.07	1.11			522.2	8.7	0.122	29	11.15	1.12	sec		
D18-048-7.1 (s1)	1.0	32	31	0.98	567.1	6.6	0.0540	34	0.0487	11.24	0.79			563.1	6.6	0.0536	34	11.33	0.80	sec		
D18-048-8.1 (s1)	7.3	37	19	0.52	517.5	5.6	0.104	17	0.0617	11.54	0.70			513.2	5.7	0.103	17	11.65	0.72	sec		
D18-048-9.1 (s1)	8.9	24	17	0.73	595.7	7.4	0.117	25	0.0352	9.85	0.83			591.3	7.4	0.116	25	9.93	0.84	sec		
D18-048-1.1 (s2)	19	16	10	0.64	439.9	9.9	0.193	24	0.0303	11.93	1.46			437.3	9.9	0.191	24	12.02	1.46	sec		
D18-048-2.1 (s2)	9.1	18	16	0.95	485.8	5.6	0.118	17	0.0311	12.06	0.76			482.9	5.6	0.117	17	12.14	0.76	unz		
D18-048-3.1 (s2)	9.0	19	12	0.64	534.4	5.9	0.118	19	0.0298	10.96	0.73			530.5	5.9	0.117	19	11.06	0.74	unz		
D18-048-4.1 (s2)	7.5	21	18	0.91	555.9	5.7	0.106	20	0.0323	10.72	0.69			552.1	5.7	0.105	20	10.80	0.70	sec		
D18-048-5.1 (s2)	11	15	9	0.64	570.1	7.0	0.130	23	0.0223	10.10	0.82			565.7	7.0	0.129	23	10.19	0.83	sec		
D18-048-6.1 (s2)	13	16	10	0.63	566.7	6.6	0.145	19	0.0241	9.94	0.77			562.3	6.6	0.144	19	10.04	0.78	sec		
D18-048-7.1 (s2)	4.0	39	40	1.05	578.5	4.1	0.0780	16	0.0582	10.69	0.47			574.6	4.2	0.0775	16	10.77	0.48	sec		
D18-048-8.1 (s2)	5.9	26	13	0.52	570.4	5.0	0.0929	18	0.0395	10.63	0.58			565.8	5.1	0.0921	18	10.72	0.59	sec		
D18-048-9.1 (s2)	6.8	29	20	0.72	622.1	5.1	0.100	17	0.0396	9.65	0.54			617.0	5.2	0.0993	17	9.74	0.55	sec		
KH07-02 D25-201 (leucocratic rock, stderr = 0.46 %)												9.25±0.38	0.78								**9.34±0.38**	**0.75**
D25-201-1.1	7.4	44	25	0.59	650.7	5.7	0.104	17	0.0584	9.17	0.57	(n = 10)		645.1	5.8	0.103	17	9.27	0.58	sec	(n = 10)	
D25-201-2.1	4.5	63	39	0.65	715.7	5.0	0.0820	16	0.0752	8.60	0.46			709.0	5.1	0.0812	16	8.68	0.47	sec		
D25-201-3.1	0.61	70	53	0.78	690.7	4.8	0.0510	26	0.0872	9.27	0.47			684.8	4.9	0.0505	26	9.36	0.48	sec		
D25-201-4.1	13	34	19	0.59	614.3	9.4	0.152	15	0.0472	9.08	0.90			608.8	9.4	0.151	15	9.18	0.92	sec		
D25-201-5.1	2.2	45	30	0.69	697.3	6.0	0.0640	24	0.0558	9.03	0.57			690.5	6.1	0.0634	24	9.13	0.58	sec		
D25-201-6.1	3.2	61	47	0.80	687.4	5.1	0.0720	20	0.0759	9.07	0.50			680.9	5.2	0.0714	20	9.16	0.50	sec		
D25-201-7.1	14	14	5	0.41	601.4	12	0.160	43	0.0196	9.17	1.46			595.7	12.0	0.159	43	9.28	1.46	sec		
D25-201-8.1	0.65	37	18	0.50	665.2	6.6	0.0510	45	0.0480	9.62	0.69			658.7	6.7	0.0505	45	9.73	0.71	sec		
D25-201-9.1	-	62	40	0.66	632.1	4.9	0.0340	34	0.0841	10.34	0.53			626.6	5.0	0.0337	34	10.44	0.54	sec		
D25-201-10.1	2.6	69	46	0.69	674.4	6.3	0.0670	18	0.0878	9.30	0.61			667.9	6.4	0.0664	18	9.40	0.61	sec		

Errors are quoted at 1-sigma, except for mean sample ages, which are 95% confidence intervals. Pb_c and Pb^* indicate the common and radiogenic portions, respectively.
(stderr) Error in Standard calibration (%sigma, not included in above errors but required when calculating mean ages or combining data with those from different sessions or methods).
(1) Common Pb corrected by assuming $^{206}Pb/^{238}U$-$^{207}Pb/^{235}U$ age-concordance.
(Thc) ^{230}Th corrected by assuming $(Th/U)_{magma}$ = 3.42.
Sample analysis in italic: excluded as an outlier when calculating mean ages.
Note: osc = oscillatory zoned, sec = sector zoned, mod = modified, cru = cruciform, unz = unzoned, mix = analyses on overlapping domains

Table DR2. Sample mineralogy and dredge locations from cruises KR03-01 and KH07-02.

Cruise	Dredge Site	Dredge Location (WGS84)	Depth (mbsl)	Sample Name	Rock Type	Microstructure	Mineralogy	$^{206}Pb/^{238}U$ age (this study)
KR03-01	D6	15°34.56'N 138°51.57'E	5024 - 3855	D6-500	oxide-gabbro (medium-grained type of Harigane et al., 2008)	mylonite	Pl, Cpx, Amp (brown Hb and green Hb), Ilm, Mt, Ap, Zr, Chl	12.82 ± 0.34 Ma
				D6-501	amphibolite/metagabbro (fine-grained type/ultramylonite of Harigane et al., 2008)	ultramylonite	Pl, Amp (brown Hb and green Hb), Ilm, Mt, Ap, Zr, Chl	13.11 ± 0.32 Ma
				D6-1205	amphibolite/metagabbro	weakly deformed	Pl, Amp (brown Hb and green Hb), Ilm, Mt, Zr, Chl	12.94 ± 0.14 Ma
				D6-1401	diorite	undeformed	Pl, Cpx, Opx, Amp (brown Hb), Ilm, Zr	13.02 ± 0.11 Ma
				D6-1402	diorite	undeformed	Pl, Cpx, Opx, Amp (brown Hb), Ilm, Zr	12.85 ± 0.25 Ma
KR03-01	D9	16°26.49'N 139°12.08'E	4765 - 4114	D9-101	granodiorite	weakly deformed	Pl, K-flsp, Amp, Qtz, Bt, Zr, Mt	8.81 ± 0.14 Ma
				D9-102	granodiorite	weakly deformed	Pl, K-flsp, Amp, Qtz, Bt, Zr, Mt	8.90 ± 0.22 Ma
KR03-01	D10	16°26.34'N 139°15.55'E	3840 - 3438	D10-305	trondhjemite	undeformed	Pl, Amp, Qtz, Mt, Zr	8.71 ± 0.15 Ma
KH07-02	D7	15°44.21'N 139°09.73'E	5185 - 4914	D7-002	amphibolite/metagabbro	undeformed	Pl, Amp (brown Hb and green Hb), Ilm, Zr	12.29 ± 0.15 Ma
KH07-02	D14	15°18.51'N 139°11.81'E	5858 - 5236	D14-001	amphibolite/metagabbro	undeformed	Pl, Amp (brown Hb and green Hb), Ilm, Mt, Zr, Chl	13.35 ± 0.25 Ma
				D14-006	oxide-gabbro	undeformed	Pl, Cpx, Amp (brown Hb and green Hb), Ilm, Mt, Zr, Chl	12.81 ± 0.46 Ma
KH07-02	D18	16°04.27'N 139°00.51'E	4999 - 4441	D18-002Gb	oxide-gabbroic portion of sample D18-002	mylonite	Pl, Cpx, Amp (brown Hb and green Hb), Ilm, Zr, Chl	11.27 ± 0.13 Ma
				D18-002Gr	feldspathic vein in sample D18-002	undeformed	Pl, Amp (brown Hb and green Hb), Zr	11.11 ± 0.13 Ma
				D18-005Gr	feldspathic vein in sample D18-005	undeformed	Pl, Zr	11.03 ± 0.38 Ma
				D18-015	trondhjemite	porphyroclastic texture	Pl, Amp (brown Hb and green Hb), Ilm, Zr	11.03 ± 0.40 Ma
				D18-048	oxide-gabbro	foliated	Pl.Cpx, Amp (brown Hb and green Hb), Ilm, Zr	10.69 ± 0.35 Ma
KH07-02	D25	16°24.29'N 139°14.17'E	4003 - 3702	D25-201	trondhjemite	foliated	Pl, Amp(brown Hb), Zr	9.34 ± 0.38 Ma

Cpx, clinopyroxene; Opx, orthopyroxene; Amp, amphibole; Hb, hornblende; Pl, plagioclase; K-flsp, K-feldspar; Qtz, quartz; Bt, biotite; Ilm, ilmenite; Mt, magnetite; Ap, apatite; Zr, zircon; Chl, chlorite. Detailed petrography for D6-500 and D6-501 is presented in Harigane et al. (2008).