

Data Repository

New $^{40}\text{Ar}/^{39}\text{Ar}$ data on biotite and amphibole from the Siljan impact structure, Sweden - Impact-related or post-impact hydrothermal alteration

Maria Herrmann^{1*}, Carl Alwmark¹ and Michael Storey²

¹Department of Geology, Lund University, Sölvegatan 12, SE-22362 Lund, Sweden

²Quadlab, Natural History Museum Denmark, University of Copenhagen, Øster Voldgade 5-7, Copenhagen, DK-1350, Denmark

*Corresponding author (Maria.Herrmann@geol.lu.se)

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Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 24															
J value = $1.030\text{E}^{-2} \pm 4.0\text{E}^{-6}$															
10049-02 A	83.5848594	9.1009790	0.0220743	0.0024718	40.8994400	4.4413347	0.0712676	0.0077829	67.7122274	7.6914226	78.7	954.8	84.2	80.163	8.705
10049-02 B	103.8980532	66.4521877	0.0355489	0.0228712	63.2532059	40.4526916	0.1032371	0.0661150	82.0448894	54.9281780	75.5	1105.3	553.3	123.976	79.287
10049-02 C	74.9071733	7.0718596	0.0346646	0.0033349	30.9975001	2.9165157	0.1186206	0.0111843	43.2592704	4.5237769	56.5	665.0	58.2	60.755	5.716
10049-02 D	95.9199837	4.4132660	0.0377023	0.0017730	56.5932906	2.5592312	0.1138792	0.0051632	69.5182619	3.7690589	69.6	974.5	40.8	110.923	5.016
10049-02 E	75.0144599	1.0024153	0.0238592	0.0003558	26.5591111	0.3570923	0.0518009	0.0007176	62.9881887	0.8598684	82.4	902.3	9.7	52.050	0.700
10049-02 F	69.4288499	2.7016168	0.0184625	0.0007619	22.2602637	0.8680839	0.0329290	0.0013207	62.4397144	2.4700843	88.5	896.1	27.9	43.630	1.701
10049-02 G	73.8791864	1.6489386	0.0165225	0.0004036	24.4538784	0.5481048	0.0235919	0.0005715	70.0486746	1.5921431	93.2	980.2	17.2	47.930	1.074
10049-02 H	64.8243696	0.5671112	0.0153902	0.0001704	13.5033155	0.1209814	0.0134974	0.0001505	62.4991630	0.5528134	95.5	896.8	6.3	26.466	0.237
10049-02 I	89.7585185	1.7452019	0.0201432	0.0004343	14.2637242	0.2796802	0.0281949	0.0005860	83.3912312	1.6389686	92.0	1118.8	16.4	27.957	0.548
10049-02 J	71.3507388	0.5075138	0.0154555	0.0001412	13.5897181	0.0990298	0.0139187	0.0001317	68.9728439	0.4961310	95.8	968.5	5.4	26.635	0.194
10049-02 K	67.5547651	0.4216581	0.0137424	0.0001105	5.9652930	0.0395282	0.0057892	0.0000684	66.5954073	0.4178106	98.2	942.5	4.6	11.692	0.077
10049-02 L	72.7475860	6.6321649	0.0144554	0.0013945	1.9737658	0.1838706	0.0024051	0.0005818	72.2929737	6.6042122	99.2	1004.3	70.4	3.869	0.360
10049-02 M	66.8888344	5.7594957	0.0130998	0.0012111	1.1782078	0.1059488	0.0020794	0.0005006	66.4220687	5.7282317	99.2	940.6	63.2	2.309	0.208
10049-02 N	71.7665889	4.3158272	0.0134019	0.0008714	0.6472785	0.0446082	0.0013577	0.0003361	71.4485231	4.3021150	99.5	995.2	46.1	1.269	0.087
10049-02 O	66.6655109	1.3699655	0.0117734	0.0002881	1.8512550	0.0416882	0.0013071	0.0001222	64.5091488	1.3689156	99.6	919.4	15.3	3.628	0.082
10049-02 P	61.3473743	1.3027867	0.0126275	0.0003074	2.2962870	0.0513200	0.0013033	0.0001215	61.2424731	1.3031582	99.7	882.5	14.9	4.501	0.101
10049-02 Q	60.5162894	0.5509206	0.0123318	0.0001450	1.2589167	0.0137223	0.0012191	0.0000581	60.3084989	0.5497932	99.6	871.8	6.3	2.467	0.0268

Table DR1 (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 25-1															
J value = $1.030\text{E}^{-2} \pm 2.8\text{E}^{-6}$															
10050-01 A	138.1087028	0.2889466	0.0142428	0.0000517	0.0500078	0.0007417	0.0040373	0.0000224	136.9237940	0.2865508	99.1	1587.5	2.2	0.098	0.001
10050-01 B	127.8644789	0.2063231	0.0138817	0.0000409	0.1023717	0.0007781	0.0016656	0.0000130	127.3888930	0.2056112	99.6	1512.4	1.7	0.201	0.002
10050-01 C	139.2104417	0.0673043	0.0140495	0.0000212	0.0556773	0.0002940	0.0014721	0.0000054	138.7846468	0.0671288	99.7	1601.7	0.5	0.109	0.001
10050-01 D	148.6253267	0.0549205	0.0134906	0.0000178	0.0819973	0.0002970	0.0006862	0.0000033	148.4369031	0.0548720	99.9	1674.1	0.4	0.161	0.001
10050-01 E	152.0412110	0.0649621	0.0132877	0.0000184	0.1255036	0.0004266	0.0005453	0.0000038	151.9026649	0.0649264	99.9	1699.4	0.5	0.246	0.001
10050-01 F	121.5750946	0.0260554	0.0133828	0.0000129	0.0794990	0.0002329	0.0005115	0.0000022	121.4363557	0.0260524	99.9	1463.9	0.2	0.156	0.0005
10050-01 G	150.5830301	0.1687130	0.0132711	0.0000310	0.1174823	0.0007911	0.0003963	0.0000059	150.4869247	0.1686334	99.9	1689.1	1.2	0.230	0.002
10050-01 H	150.2337734	0.2841770	0.0131604	0.0000430	0.0763238	0.0007817	0.0003883	0.0000077	150.1324189	0.2840161	99.9	1686.5	2.1	0.150	0.002
10050-01 I	149.9275916	0.1297648	0.0133295	0.0000292	0.1065119	0.0006138	0.0003138	0.0000041	149.8537930	0.1297218	99.9	1684.5	0.9	0.209	0.001
10050-01 J	150.3664817	1.0545400	0.0133574	0.0001160	0.2146262	0.0032748	0.0003470	0.0000262	150.3028516	1.0542947	99.9	1687.8	7.7	0.421	0.006
10050-01 K	150.5905001	0.3317640	0.0131220	0.0000459	0.1172464	0.0011442	0.0002336	0.0000090	150.5424208	0.3317020	100.0	1689.5	2.4	0.230	0.002
10050-01 L	149.9650122	0.4016868	0.0129226	0.0000528	0.1316857	0.0012561	0.0002195	0.0000088	149.9236730	0.4016281	100.0	1685.0	2.9	0.258	0.002
10050-01 M	152.3956494	18.3969570	0.0123525	0.0015618	0.1712701	0.0368535	0.0001659	0.0004483	152.3776848	18.3977923	100.0	1702.8	133.1	0.336	0.072
10050-01 N	157.4620400	13.7537746	0.0144229	0.0013171	0.0783678	0.0237293	0.0007458	0.0003431	157.2559439	13.7380261	99.9	1737.8	97.5	0.154	0.047
10050-01 O	114.8082255	12.2762288	0.0112798	0.0012949	0.1066008	0.0333240	0.0003832	0.0004988	114.7111332	12.2682378	99.9	1407.5	104.5	0.209	0.065
10050-01 P	97.4164935	31.9469297	0.0101022	0.0035203	0.2809852	0.1248067	0.0013453	0.0014968	97.0593097	31.8399819	99.6	1250.5	295.9	0.551	0.245
10050-01 Q	53.4905321	23.7978711	0.0041499	0.0024390	0.7247181	0.3480000	0.0035792	0.0024575	52.5154387	23.3844829	98.1	780.2	282.0	1.420	0.682
10050-01 R	62.6895867	31.6395269	0.0042258	0.0028134	0.1545732	0.1538414	0.0045459	0.0030597	61.3634745	30.9817720	97.9	883.9	352.0	0.303	0.302

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 2.5-2															
J value = $1.030\text{E}^{-2} \pm 2.8\text{E}^{-6}$															
10050-02 A	126.4489749	0.8915972	0.0139134	0.0001177	0.0370173	0.0018291	0.0045696	0.0000544	125.1041549	0.8822500	98.9	1493.9	7.2	0.073	0.004
10050-02 B	141.9731771	0.5693383	0.0136745	0.0000763	0.0554124	0.0012300	0.0018361	0.0000229	141.4398295	0.5672677	99.6	1621.9	4.3	0.109	0.002
10050-02 C	147.2028480	0.1789507	0.0133229	0.0000318	0.0473289	0.0004369	0.0008070	0.0000078	146.9723276	0.1786965	99.8	1663.3	1.3	0.093	0.001
10050-02 D	148.7440629	0.1114419	0.0133011	0.0000258	0.0619038	0.0004448	0.0005561	0.0000045	148.5904063	0.1113453	99.9	1675.2	0.8	0.121	0.001
10050-02 E	149.3837641	0.1302733	0.0132195	0.0000273	0.1575080	0.0007094	0.0003185	0.0000045	149.3179061	0.1302424	99.9	1680.6	1.0	0.309	0.001
10050-02 F	10.3525720	9.3580308	0.0038183	0.0043223	-0.6703832	0.6364955	0.0307532	0.0278001	1.2086269	1.7999985	11.7	22.3	33.0	-1.314	1.248
10050-02 G	149.2735666	0.0992050	0.0130760	0.0000246	0.1377759	0.0006179	0.0003536	0.0000038	149.1936886	0.0991738	99.9	1679.7	0.7	0.270	0.001
10050-02 H	147.8259378	0.2157162	0.0133192	0.0000359	0.0993709	0.0008333	0.0002701	0.0000058	147.7635947	0.2156521	100.0	1669.2	1.6	0.195	0.002
10050-02 I	148.2334712	0.5575071	0.0133713	0.0000735	0.1107927	0.0015528	0.0002551	0.0000143	148.1776887	0.5573651	100.0	1672.2	4.1	0.217	0.003
10050-02 J	149.5911405	0.2701524	0.0133087	0.0000452	0.1174953	0.0009785	0.0002254	0.0000076	149.5454688	0.2701068	100.0	1682.2	2.0	0.230	0.002
10050-02 K	150.7706551	0.4363807	0.0131138	0.0000560	0.0705754	0.0009728	0.0001867	0.0000099	150.7278333	0.4362962	100.0	1690.9	3.2	0.138	0.002
10050-02 L	151.2238324	2.9940687	0.0133038	0.0002894	0.0585128	0.0045679	0.0002797	0.0000611	151.1513467	2.9928518	99.9	1694.0	21.8	0.115	0.009
10050-02 M	149.4007209	2.1558424	0.0130246	0.0002118	0.0831518	0.0034771	0.0003229	0.0000421	149.3198670	2.1548667	99.9	1680.6	15.8	0.163	0.007
10050-02 N	150.4759817	27.1445067	0.0121230	0.0022987	0.0104621	0.0526667	-0.0010336	0.0007006	150.7825777	27.2004452	100.2	1691.3	198.0	0.021	0.103
10050-02 O	-5.5772000	2.8554214	0.0010546	0.0017911	0.0623886	0.1395191	0.0024095	0.0023280	-62865424	3.2552343	112.7	-120.8	64.7	0.122	0.273
10050-02 P	256.5413765	556.2054419	0.0271349	0.0593281	-0.6164980	1.4584990	-0.0139443	0.0313047	260.5022792	564.5600029	101.6	2352.5	2848.5	-1.208	2.859
10050-02 Q	78.0007122	28.2075513	0.0103599	0.0039727	0.3741737	0.1675963	-0.0011950	0.0015546	78.4031252	28.3641890	100.5	1068.2	291.6	0.733	0.328
10050-02 R	1.4242974	0.8407650	0.0005397	0.0015417	-0.4087337	0.2221863	-0.0024387	0.0021898	2.1097387	1.2347776	148.2	38.8	22.5	-0.801	0.435

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 45-1															
J value = $1.030\text{E}^{-2} \pm 2.8\text{E}^{-6}$															
10057-06 A	106.7357050	0.2721127	0.0141378	0.0000548	0.0271900	0.0007306	0.0026900	0.0000189	105.9443780	0.2701592	99.3	1331.1	2.4	0.053	0.001
10057-06 B	119.0052535	0.2300662	0.0139625	0.0000475	0.0146107	0.0005139	0.0014061	0.0000116	118.5915080	0.2293001	99.7	1440.2	1.9	0.029	0.001
10057-06 C	132.7957621	0.0951682	0.0137769	0.0000233	0.0078037	0.0002167	0.0007623	0.0000054	132.5712301	0.0950277	99.8	1553.5	0.7	0.015	0.0004
10057-06 D	143.0442245	0.0791036	0.0136741	0.0000213	0.0080276	0.0001621	0.0005145	0.0000038	142.8930243	0.0790352	99.9	1632.8	0.6	0.016	0.0003
10057-06 E	145.1988183	0.1077614	0.0137112	0.0000217	0.0113800	0.0002116	0.0004184	0.0000040	145.0766106	0.1076839	99.9	1649.1	0.8	0.022	0.0004
10057-06 F	147.2444307	0.1586987	0.0137351	0.0000302	0.0082021	0.0002569	0.0004207	0.0000052	147.1210050	0.1585791	99.9	1664.3	1.2	0.016	0.001
10057-06 G	144.6047257	0.2131871	0.0136738	0.0000392	0.0073713	0.0003787	0.0004600	0.0000076	144.4695218	0.2130061	99.9	1644.6	1.6	0.014	0.001
10057-06 H	145.3456929	0.7121127	0.0136608	0.0000852	0.0079564	0.0011746	0.0004052	0.0000181	145.2267779	0.7115651	99.9	1650.3	5.3	0.016	0.002
10057-06 I	146.4224804	0.2434153	0.0136578	0.0000411	0.0511725	0.0006945	0.0002734	0.0000063	146.3503760	0.2433168	99.9	1658.6	1.8	0.100	0.001
10057-06 J	146.0790902	0.7340387	0.0135524	0.0000885	0.0194434	0.0011411	0.0002396	0.0000170	146.0111781	0.7337359	100.0	1656.1	5.4	0.038	0.002
10057-06 K	143.5975055	1.7168062	0.0135093	0.0001894	0.0098255	0.0024241	0.0006975	0.0000458	143.3925276	1.7144451	99.9	1636.6	12.9	0.019	0.005
10057-06 L	145.3259187	0.6816129	0.0136850	0.0000880	0.1456195	0.0019174	0.0006675	0.0000191	145.1543702	0.6809108	99.9	1649.7	5.1	0.285	0.004
10057-06 M	146.4090573	0.2922146	0.0136151	0.0000462	0.1116682	0.0010959	0.0004160	0.0000086	146.3057667	0.2920481	99.9	1658.3	2.2	0.219	0.002
10057-06 N	146.8264469	0.9510127	0.0137996	0.0001092	0.0210916	0.0013403	0.0003923	0.0000212	146.7137538	0.9503315	99.9	1661.3	7.0	0.041	0.003
10057-06 O	147.7063413	0.4938275	0.0136620	0.0000619	0.0190154	0.0008052	0.0004340	0.0000134	147.5809584	0.4934387	99.9	1667.7	3.6	0.037	0.002
10057-06 P	146.4406005	0.7105788	0.0137760	0.0000887	0.0367118	0.0013397	0.0003075	0.0000164	146.3557917	0.7102129	99.9	1658.6	5.3	0.072	0.003
10057-06 Q	144.4425266	1.0133531	0.0135782	0.0001200	0.1349533	0.0025827	0.0002480	0.0000223	144.3929301	1.0131370	100.0	1644.0	7.6	0.265	0.005
10057-06 R	143.9473658	1.1711542	0.0136170	0.0001305	0.0981981	0.0024005	0.0002264	0.0000248	143.8974966	1.1708689	100.0	1640.3	8.8	0.192	0.005

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 45-2															
J value = $1.030\text{E}-2 \pm 2.8\text{E}-6$															
10057-07 A	90.4659621	0.2890183	0.0141559	0.0000664	0.0308545	0.0008630	0.0030876	0.0000247	89.5573387	0.2862101	99.0	1179.3	2.8	0.060	0.002
10057-07 B	126.7247124	0.2646640	0.0137398	0.0000456	0.0158671	0.0006516	0.0011222	0.0000121	126.3951397	0.2640088	99.7	1504.3	2.1	0.031	0.001
10057-07 C	131.3930281	0.1320258	0.0136404	0.0000290	0.0191237	0.0003192	0.0007444	0.0000057	131.1757041	0.1318255	99.8	1542.5	1.0	0.037	0.001
10057-07 D	141.3550106	0.1248132	0.0135882	0.0000265	0.0222417	0.0003301	0.0004637	0.0000049	141.2213090	0.1247113	99.9	1620.2	0.9	0.044	0.001
10057-07 E	145.9610465	0.1331221	0.0136072	0.0000270	0.1443196	0.0006859	0.0003298	0.0000044	145.8891063	0.1330815	99.9	1655.2	1.0	0.283	0.001
10057-07 F	144.0170755	0.3306846	0.0135702	0.0000477	0.0406350	0.0007676	0.0004280	0.0000091	143.8972786	0.3304362	99.9	1640.3	2.5	0.080	0.002
10057-07 G	145.7840972	0.2806267	0.0137028	0.0000447	0.0900640	0.0010415	0.0004588	0.0000084	145.6641992	0.2804303	99.9	1653.5	2.1	0.177	0.002
10057-07 H	145.8205833	0.3344853	0.0136821	0.0000486	0.0533008	0.0008404	0.0004620	0.0000102	145.6930953	0.3342250	99.9	1653.7	2.5	0.104	0.002
10057-07 I	143.3058378	0.8062815	0.0135362	0.0000939	0.0367538	0.0013461	0.0004686	0.0000209	143.1733284	0.8055925	99.9	1634.9	6.0	0.072	0.003
10057-07 J	143.7033879	0.4750474	0.0137719	0.0000666	0.0093598	0.0006650	0.0003802	0.0000121	143.5921156	0.4747041	99.9	1638.0	3.6	0.018	0.001
10057-07 K	149.7684195	1.5346608	0.0141433	0.0001658	0.0146955	0.0022490	0.0004389	0.0000357	149.6408553	1.5334274	99.9	1682.8	11.2	0.029	0.004
10057-07 L	144.4989980	0.4255568	0.0136404	0.0000607	0.0267000	0.0007494	0.0003973	0.0000105	144.3857801	0.4252500	99.9	1644.0	3.2	0.052	0.001
10057-07 M	148.8546035	1.9533167	0.0141790	0.0002063	0.0229708	0.0027069	0.0003194	0.0000429	148.7638689	1.9522264	99.9	1676.4	14.3	0.045	0.005
10057-07 N	149.7865001	2.9277469	0.0140996	0.0002957	0.0265202	0.0041096	0.0009142	0.0000641	149.5206600	2.9227038	99.9	1682.0	21.4	0.052	0.008
10057-07 O	147.4633720	0.6884735	0.0137905	0.0000839	0.0219904	0.0011214	0.0004596	0.0000161	147.3309579	0.6878928	99.9	1665.9	5.1	0.043	0.002
10057-07 P	143.7094240	1.1246192	0.0134372	0.0001274	0.1553081	0.0027751	0.0003257	0.0000263	143.6404403	1.1242447	99.9	1638.4	8.4	0.304	0.005
10057-07 Q	101.6037719	14.9242667	0.0105197	0.0016451	0.1668554	0.0446577	0.0001514	0.0005558	101.5831719	14.9242567	100.0	1292.0	135.5	0.327	0.088
10057-07 R	3376.2985829	301153.7462926	0.2090629	18.6501007	-0.3698149	39.8493545	-0.1398191	12.4771999	3416.7310455	304682.1279581	101.2	6474.9	156431.8	-0.725	78.105

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 16-1															
J value = $1.030\text{E}^{-2} \pm 4.0\text{E}^{-6}$															
10046-06 A	18.4089149	0.0479524	0.0156621	0.0000571	0.0676133	0.0008791	0.0077269	0.0000350	16.1312154	0.0429241	87.6	277.3	0.7	0.133	0.002
10046-06 B	58.8956251	0.1911079	0.0137432	0.0000629	0.0316174	0.0008002	0.0039841	0.0000279	57.7214285	0.1874580	98.0	841.6	2.2	0.062	0.002
10046-06 C	104.0372218	0.0500901	0.0117947	0.0000147	0.0213465	0.0001803	0.0016099	0.0000064	103.5638883	0.0499091	99.5	1309.5	0.4	0.042	0.0004
10046-06 D	120.8142908	0.1274891	0.0114408	0.0000263	0.0267296	0.0003541	0.0007001	0.0000066	120.6109104	0.1272973	99.8	1456.6	1.1	0.052	0.001
10046-06 E	119.9367423	0.2674172	0.0117002	0.0000453	0.0550788	0.0006193	0.0007523	0.0000124	119.7225840	0.2669814	99.8	1449.2	2.2	0.108	0.001
10046-06 F	118.2788339	0.4202157	0.0118272	0.0000639	0.0903898	0.0011694	0.0009534	0.0000175	118.0108951	0.4193297	99.8	1434.9	3.5	0.177	0.002
10046-06 G	94.2030159	0.3384231	0.0117884	0.0000645	0.1452068	0.0017192	0.0009992	0.0000199	93.9279854	0.3375281	99.7	1220.7	3.2	0.285	0.003
10046-06 H	89.5377964	0.4378174	0.0120180	0.0000806	0.0615179	0.0012914	0.0016923	0.0000297	89.0456309	0.4355233	99.4	1174.0	4.2	0.121	0.003
10046-06 I	91.3661220	1.0530964	0.0119688	0.0001624	0.0213233	0.0019736	0.0006690	0.0000482	91.1706930	1.0509783	99.8	1194.5	10.1	0.042	0.004
10046-06 J	102.1576343	0.6709481	0.0116274	0.0000969	0.0320107	0.0012611	0.0011091	0.0000326	101.8338568	0.6689171	99.7	1293.9	6.1	0.063	0.002
10046-06 K	120.7037517	2.5762397	0.0125072	0.0002942	0.0334183	0.0045463	0.0011197	0.0001112	120.3776003	2.5757226	99.7	1454.7	21.4	0.065	0.009
10046-06 L	151.3678421	35.4035156	0.0153300	0.0036964	0.1661155	0.0600426	0.0021379	0.0012946	150.7662765	32.2701914	99.6	1690.6	256.7	0.326	0.118
10046-06 M	89.1855797	37.2145901	0.0074837	0.0034592	0.1338256	0.1100892	0.0063544	0.0034583	87.3252627	36.4504926	97.9	1157.3	356.6	0.262	0.216
10046-06 N	347.7792970	472.4424860	0.0383205	0.0522485	-0.5828909	0.8471728	0.0005809	0.0069220	347.4223214	471.7737511	99.9	2744.4	1914.6	-1.142	1.660
10046-06 O	-111.5019928	117.6012282	-0.0134153	0.0145261	0.4709033	0.5444038	-0.0247756	0.0266982	-104.1802570	109.9289804	93.4	-	-28035.0	0.923	1.067
Sample 16-2															
J value = $1.030\text{E}^{-2} \pm 4.0\text{E}^{-6}$															
10046-07 A	18.8610859	0.0309755	0.0155173	0.0000440	0.0861788	0.0006402	0.0080408	0.0000275	16.4923208	0.0280609	87.4	283.0	0.4	0.169	0.001
10046-07 B	56.6468180	0.0851837	0.0133954	0.0000372	0.0419674	0.0005067	0.0038868	0.0000167	55.5025372	0.0836066	98.0	815.6	1.0	0.082	0.001

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	⁴⁰ Ar/ ³⁹ Ar	±1σ	³⁸ Ar/ ³⁹ Ar	±1σ	³⁷ Ar/ ³⁹ Ar	±1σ	³⁶ Ar/ ³⁹ Ar	±1σ	⁴⁰ Ar*/ ³⁹ Ar _K	±1σ	⁴⁰ Ar [%]	Age [Ma]	±1σ	Ca/K	±1σ
Sample 16-2															
J value = 1.030E-2 ± 4.0E-6															
10046-07 C	121.0182290	0.0401589	0.0113543	0.0000147	0.0272172	0.0001580	0.0005054	0.0000028	120.8724821	0.0401317	99.9	1458.8	0.3	0.053	0.0003
10046-07 D	124.7580880	0.2033781	0.0114887	0.0000346	0.0792312	0.0007021	0.0004306	0.0000082	124.6431918	0.2032219	99.9	1489.7	1.7	0.155	0.001
10046-07 E	124.4718367	0.2919834	0.0116634	0.0000433	0.1062886	0.0009973	0.0005784	0.0000112	124.3177625	0.2916686	99.9	1487.1	2.4	0.208	0.002
10046-07 F	119.3904750	0.3259107	0.0115463	0.0000535	0.1016841	0.0010936	0.0006268	0.0000145	119.2209511	0.3255061	99.9	1445.0	2.7	0.199	0.002
10046-07 G	113.5755829	0.4967329	0.0117429	0.0000732	0.0795515	0.0013642	0.0007835	0.0000219	113.3558317	0.4958509	99.8	1395.5	4.3	0.156	0.003
10046-07 H	105.0101011	0.4470689	0.0117975	0.0000714	0.0612553	0.0012453	0.0007000	0.0000215	104.8117849	0.4462982	99.8	1320.7	4.0	0.120	0.002
10046-07 I	101.6443829	0.8255014	0.0118804	0.0001172	0.0426376	0.0017805	0.0007076	0.0000356	101.4408760	0.8239562	99.8	1290.3	7.5	0.084	0.003
10046-07 J	95.3474554	0.6683059	0.0119072	0.0001056	0.0372502	0.0014900	0.0004999	0.0000315	95.2043749	0.6673999	99.8	1232.7	6.3	0.073	0.003
10046-07 K	101.7234351	0.5832175	0.0116729	0.0000870	0.0240625	0.0012071	0.0003731	0.0000253	101.6159712	0.5826716	99.9	1291.9	5.3	0.047	0.002
10046-07 L	126.4277440	0.9573302	0.0116655	0.0001099	0.0242926	0.0013664	0.0003933	0.0000322	126.3147682	0.9565540	99.9	1503.3	7.7	0.048	0.003
10046-07 M	141.0170453	1.9568271	0.0112309	0.0001819	0.0083415	0.0023469	0.0001942	0.0000593	140.9602736	1.9561579	100.0	1617.8	14.8	0.016	0.005
10046-07 N	138.5812894	9.9139868	0.0126845	0.0009609	-0.0120395	0.0155701	0.0008567	0.0003594	138.1252858	9.8976900	99.8	1596.2	75.9	-0.024	0.031
10046-07 O	13.5923530	6.9056065	0.0011806	0.0017943	-0.0379815	0.1031060	-0.0014268	0.0026772	14.0086926	7.1568501	103.1	243.1	116.2	-0.074	0.202
Sample 36-1															
J value = 1.030E-2 ± 2.8E-6															
10054-01 A	22.4148248	0.2865874	0.0213102	0.0002950	1.2134589	0.0170756	0.0302177	0.0004063	13.5934116	0.1786552	60.6	236.4	2.9	2.378	0.033
10054-01 B	18.9324633	0.0811931	0.0172463	0.0000914	0.4690596	0.0030906	0.0120642	0.0000716	15.4094830	0.0678311	81.4	265.8	1.1	0.919	0.006
10054-01 C	71.0279405	0.0837928	0.0155946	0.0000337	0.1617880	0.0008238	0.0049808	0.0000177	69.5763605	0.0822496	97.9	974.9	0.9	0.317	0.002
10054-01 D	119.4507253	0.1191760	0.0153976	0.0000296	0.1573353	0.0006288	0.0045534	0.0000127	118.1301523	0.1179325	98.9	1436.2	1.0	0.308	0.001

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 36-1 J value = $1.030\text{E}^{-2} \pm 2.8\text{E}^{-6}$															
10054-01 E	155.4563478	0.1169945	0.0147126	0.0000256	0.2068157	0.0007802	0.0028540	0.0000092	154.6511745	0.1164430	99.5	1719.0	0.8	0.405	0.002
10054-01 F	170.7716800	0.1259766	0.0146817	0.0000252	0.2995380	0.0007991	0.0028771	0.0000112	169.9802042	0.1254681	99.5	1825.6	0.8	0.587	0.002
10054-01 G	191.7049303	0.1510442	0.0142392	0.0000234	0.5395068	0.0012955	0.0017532	0.0000078	191.3010383	0.1508080	99.8	1964.2	0.9	1.057	0.003
10054-01 H	191.7338678	0.2824345	0.0140700	0.0000358	0.6506199	0.0019408	0.0017173	0.0000113	191.3642283	0.2820440	99.8	1964.6	1.8	1.275	0.004
10054-01 I	177.8056220	0.5260563	0.0136309	0.0000606	0.7215915	0.0038611	0.0010944	0.0000165	177.6282330	0.5258260	99.9	1876.6	3.5	1.414	0.008
10054-01 J	169.4649777	0.5355888	0.0134737	0.0000621	0.8781491	0.0041623	0.0012538	0.0000207	169.2671932	0.5353340	99.8	1820.8	3.6	1.721	0.008
10054-01 K	164.3373960	0.5539465	0.0133710	0.0000678	0.8503377	0.0044157	0.0013722	0.0000210	164.0960727	0.5535035	99.8	1785.4	3.8	1.667	0.009
10054-01 L	173.8002134	4.3001071	0.0153814	0.0004155	1.4662639	0.0365393	0.0023016	0.0001502	173.4133110	4.3026286	99.7	1848.7	28.7	2.874	0.072
10054-01 M	158.4252190	4.6066601	0.0138276	0.0004512	0.8275044	0.0266205	0.0009440	0.0001538	158.3027144	4.6082389	99.9	1745.0	32.6	1.622	0.052
10054-01 N	171.0924991	4.2786615	0.0144872	0.0003972	1.1710746	0.0313303	0.0043720	0.0001680	170.0317973	4.2739220	99.3	1826.0	28.9	2.295	0.061
10054-01 O	109.5025970	23.7942901	0.0159430	0.0035864	3.2467789	0.7116504	0.0424254	0.0035864	97.4436173	21.2544995	88.8	1253.9	197.1	6.364	1.395
Sample 36-2 J value = $1.030\text{E}^{-2} \pm 2.8\text{E}^{-6}$															
10054-02 A	18.7319194	0.1228013	0.0202630	0.0001497	0.7700885	0.0066059	0.0271089	0.0001978	10.7880283	0.0756890	57.6	190.1	1.3	1.509	0.013
10054-02 B	27.7346891	0.1158768	0.0169970	0.0000904	0.3061833	0.0023533	0.0109574	0.0000636	24.5259541	0.1033720	88.4	406.4	1.5	0.600	0.005
10054-02 C	96.8387363	0.0617419	0.0151417	0.0000235	0.1913021	0.0005989	0.0051317	0.0000119	95.3497135	0.0609120	98.5	1234.4	0.6	0.375	0.001
10054-02 D	161.6396833	0.1201397	0.0144138	0.0000273	0.2187847	0.0007983	0.0032662	0.0000104	160.7158163	0.1195194	99.4	1761.9	0.8	0.429	0.002
10054-02 E	193.0373648	0.1442452	0.0142101	0.0000276	0.2409343	0.0008090	0.0021662	0.0000081	192.4480884	0.1438551	99.7	1971.4	0.9	0.472	0.002
10054-02 F	197.0474000	0.3431652	0.0143837	0.0000430	0.4722658	0.0020047	0.0026409	0.0000167	196.3686934	0.3421341	99.6	1995.6	2.1	0.927	0.004

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 36-2															
J value = $1.030\text{E}^{-2} \pm 2.8\text{E}^{-6}$															
10054-02 G	191.7081874	0.5783665	0.0141863	0.0000619	0.9869020	0.0041446	0.0028872	0.0000229	191.0642021	0.5768648	99.6	1962.7	3.6	1.934	0.008
10054-02 H	189.8908374	0.6393056	0.0141367	0.0000688	1.4367262	0.0061767	0.0021430	0.0000231	189.5608981	0.6388796	99.7	1953.3	4.0	2.816	0.021
10054-02 I	154.3728969	0.1568227	0.0130421	0.0000280	0.1784423	0.0008712	0.0002652	0.0000055	154.3272296	0.1568093	100.0	1716.7	1.1	0.350	0.002
10054-02 J	164.2206884	1.4398632	0.0138294	0.0001433	0.3927027	0.0050146	0.0011339	0.0000445	163.9610880	1.4380559	99.8	1784.5	9.9	0.770	0.010
10054-02 K	153.2207064	9.4465118	0.0136739	0.0008872	0.9784356	0.0627286	0.0015403	0.0003077	152.9469752	9.4386525	99.8	1706.7	68.1	1.918	0.123
10054-02 L	134.5980291	10.0491970	0.0104168	0.0008383	1.2747606	0.0979368	0.0020121	0.0003916	134.2230709	10.0331322	99.6	1566.3	78.3	2.499	0.192
10054-02 M	91.1452008	10.1484541	0.0093466	0.0011429	0.4697120	0.0606096	0.0007858	0.0005206	90.9871467	10.1361617	99.8	1193.0	97.2	0.921	0.119
10054-02 N	122.1478815	110.1091454	0.0094366	0.0093107	1.3846656	1.2743252	0.0045010	0.0068704	121.0436489	109.2337154	99.0	1460.5	903.5	2.714	2.498
10054-02 O	23.1170660	14.1093471	0.0020930	0.0028030	-0.0051396	0.1590942	0.0022172	0.0036759	22.4594970	13.7483092	97.2	375.5	207.5	-0.010	0.312
Sample 35-1															
J value = $1.030\text{E}^{-2} \pm 2.7\text{E}^{-6}$															
10051-01 A	23.8079103	0.2666625	0.0203918	0.0002505	0.3478823	0.0054817	0.0325195	0.0003860	14.2290695	0.1644681	59.8	246.8	2.7	0.682	0.011
10051-01 B	26.1251894	0.1037123	0.0158869	0.0000805	0.1260379	0.0014538	0.0132731	0.0000671	22.2143654	0.0891221	85.0	371.9	1.3	0.247	0.003
10051-01 C	81.5919717	0.0880018	0.0142067	0.0000323	0.0660851	0.0005615	0.0070718	0.0000189	79.5104862	0.0859261	97.4	1079.6	0.9	0.130	0.001
10051-01 D	122.1205661	0.1451546	0.0136445	0.0000313	0.0833038	0.0006426	0.0045906	0.0000167	120.7769708	0.1436502	98.9	1458.6	1.2	0.163	0.001
10051-01 E	153.2819241	0.1831412	0.0131560	0.0000284	0.0974931	0.0005690	0.0030052	0.0000126	152.4112652	0.1821540	99.4	1703.2	1.3	0.191	0.001
10051-01 F	193.7946007	0.1426542	0.0129037	0.0000241	0.1062089	0.0005947	0.0020644	0.0000087	193.2065729	0.1422597	99.7	1976.4	0.9	0.208	0.001
10051-01 G	207.8108289	0.2564379	0.0128935	0.0000335	0.2408510	0.0011182	0.0022648	0.0000118	207.1947143	0.2557488	99.7	2061.4	1.5	0.472	0.002
10051-01 H	209.3043213	0.4439463	0.0129541	0.0000412	0.2545460	0.0015450	0.0021811	0.0000183	208.7162916	0.4428148	99.7	2070.4	2.6	0.499	0.003

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 35-1															
J value = $1.030\text{E}^{-2} \pm 2.7\text{E}^{-6}$															
10051-01 I	207.2166740	0.0128397	0.0000837	0.0000837	0.4863395	0.0038253	0.0018848	0.0000289	206.7676607	1.0259892	99.7	2058.8	6.1	0.953	0.007
10051-01 J	196.1394871	0.8749491	0.0124263	0.0000774	0.7766432	0.0050232	0.0015206	0.0000281	195.8570516	0.8742098	99.8	1992.8	5.4	1.522	0.010
10051-01 K	182.8435066	1.3264719	0.0125521	0.0001114	1.2228289	0.0101339	0.0019947	0.0000381	182.5059800	1.3252083	99.7	1908.7	8.6	2.397	0.020
10051-01 L	189.4673084	12.5213777	0.0138694	0.0009726	1.3681599	0.0926462	0.0065649	0.0005434	187.8143877	12.4351172	99.0	1942.6	78.8	2.682	0.182
10051-01 M	214.5872298	40.9081255	0.0158749	0.0031265	3.4172985	0.6536564	0.0088865	0.0019059	212.7386389	40.6578855	98.9	2093.9	236.8	6.698	1.281
10051-01 N	153.4994802	13.4787944	0.0141464	0.0013011	2.0540120	0.1825563	0.0050855	0.0005821	152.3774622	13.4056878	99.1	1702.9	97.0	4.026	0.358
10051-01 O	-292.2808881	701.0606042	-0.0422493	0.1016634	-2.3145256	5.5778653	-0.0359685	0.0869136	-281.3900005	673.8588051	96.4	-	-6594.8	-4.536	10.933
Sample 35-2															
J value = $1.030\text{E}^{-2} \pm 2.7\text{E}^{-6}$															
10051-02 A	28.7333528	0.3107602	0.0197931	0.0002342	0.3651484	0.0057054	0.0313443	0.0003573	19.5046164	0.2140399	67.9	330.4	3.3	0.716	0.011
10051-02 B	26.4995063	0.0877447	0.0153769	0.0000690	0.0887117	0.0010990	0.0102357	0.0000525	23.4827564	0.0787158	88.6	390.9	1.2	0.174	0.002
10051-02 C	92.0603136	0.0730032	0.0137021	0.0000241	0.0329218	0.0002913	0.0044432	0.0000122	90.7513571	0.0720638	98.6	1191.0	0.7	0.065	0.001
10051-02 D	160.1534907	0.1902587	0.0130700	0.0000332	0.0288440	0.0003227	0.0024245	0.0000114	159.4418325	0.1894530	99.6	1753.3	1.3	0.057	0.001
10051-02 E	168.4807568	0.0912343	0.0126721	0.0000191	0.0266406	0.0001993	0.0013491	0.0000056	168.0865888	0.0910476	99.8	1813.1	0.6	0.052	0.0004
10051-02 F	182.0892220	0.1354920	0.0125323	0.0000229	0.0490584	0.0003762	0.0008170	0.0000059	181.8571591	0.1353410	99.9	1904.5	0.8	0.096	0.001
10051-02 G	183.1205938	0.2446900	0.0125138	0.0000337	0.0866317	0.0006103	0.0009309	0.0000090	182.8626775	0.2443798	99.9	1911.0	1.6	0.170	0.001
10051-02 H	178.2410882	0.3311454	0.0125438	0.0000384	0.1283233	0.0009248	0.0009220	0.0000106	177.9940027	0.3307361	99.9	1879.3	2.2	0.252	0.002
10051-02 I	179.9734251	0.5299931	0.0125686	0.0000556	0.1886126	0.0015791	0.0008664	0.0000146	179.7552708	0.5294446	99.9	1890.8	3.5	0.370	0.003
10051-02 J	178.9901198	0.5574663	0.0126510	0.0000579	0.4957409	0.0027795	0.0011202	0.0000176	178.7594819	0.5569715	99.8	1884.3	3.6	0.972	0.005

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 35-2															
J value = $1.030\text{E}^{-2} \pm 2.7\text{E}^{-6}$															
10051-02 K	172.6431121	0.2735928	0.0125909	0.0000365	0.5562525	0.0019460	0.0012270	0.0000103	172.3908043	0.2733220	99.8	1842.2	1.8	1.090	0.004
10051-02 L	151.3458744	0.2142705	0.0121793	0.0000319	0.2061146	0.0009968	0.0001266	0.0000055	151.3458077	0.2143125	100.0	1695.5	1.6	0.404	0.002
10051-02 M	159.1526661	3.5525351	0.0130428	0.0003180	0.4268830	0.0119253	0.0003683	0.0000904	159.1244187	3.5539519	100.0	1751.1	25.0	0.837	0.023
10051-02 N	142.1505042	13.0721560	0.0125268	0.0012264	0.9814810	0.0939980	0.0020589	0.0004679	141.7163157	13.0440217	99.6	1624.1	98.6	1.924	0.184
10051-02 O	-516.5448808	3916.8545378	-0.1444813	1.0958326	-136.1358949	1032.2897731	-0.2942473	2.2314224	-402.3960838	2787.5575455	85.3	-	-16469.7	-266.826	2023.288
Sample 57-1															
J value = $1.030\text{E}^{-2} \pm 2.7\text{E}^{-6}$															
10056-03 A	67.3336868	7.1431248	0.0467610	0.0050091	8.1603140	0.8647777	0.1653561	0.0173188	19.7641456	3.0066554	29.2	334.3	46.4	15.994	1.695
10056-03 B	22.3901440	0.8088973	0.0203986	0.0007705	3.6245867	0.1324191	0.0378598	0.0014030	11.5201705	0.4290702	51.3	202.3	7.1	7.104	0.260
10056-03 C	26.5937239	0.2073015	0.0171197	0.0001563	1.4549056	0.0127511	0.0219126	0.0001918	20.2544545	0.1603775	76.1	341.9	2.5	2.852	0.025
10056-03 D	38.7636012	0.3554948	0.0161445	0.0001869	1.5569765	0.0156558	0.0178618	0.0001869	33.6453753	0.3101333	86.7	536.8	4.3	3.052	0.031
10056-03 E	66.0674582	0.6072830	0.0148397	0.0001575	1.1620214	0.0122506	0.0113810	0.0001318	62.8471296	0.5786730	95.0	900.6	6.5	2.278	0.024
10056-03 F	99.0022552	0.7406504	0.0145608	0.0001324	1.0638318	0.0093417	0.0089503	0.0000950	96.5129997	0.7228608	97.4	1245.2	6.7	2.085	0.018
10056-03 G	136.7054776	0.9552670	0.0137704	0.0001223	1.3087351	0.0106463	0.0072053	0.0000769	134.8025883	0.9430044	98.5	1570.8	7.3	2.565	0.021
10056-03 H	150.9618852	0.8291610	0.0137780	0.0000946	1.8479248	0.0118076	0.0068416	0.0000575	149.2786211	0.8210899	98.8	1680.1	6.0	3.622	0.023
10056-03 I	165.0403468	0.8442015	0.0138487	0.0000901	2.5728294	0.0147227	0.0058141	0.0000503	163.8197922	0.8395682	99.1	1783.5	5.8	5.043	0.029
10056-03 J	157.3177507	0.9124300	0.0139362	0.0001003	12.5729536	0.0747990	0.0095523	0.0000753	156.8682196	0.9181926	98.8	1734.8	6.5	24.643	0.147
10056-03 K	84.6604918	1.3057092	0.0129721	0.0002263	5.4105853	0.0848348	0.0086738	0.0001617	82.8397612	1.2827872	97.5	1113.1	12.9	10.605	0.166
10056-03 L	103.5719933	7.2031641	0.0135386	0.0010053	9.5431353	0.6607840	0.0110862	0.0008830	101.7313547	7.1370549	97.6	1293.2	64.8	18.705	1.295

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 57-1 J value = $1.030\text{E}^{-2} \pm 2.7\text{E}^{-6}$															
10056-03 M	369.9076379	112.9114154	0.0429073	0.0131600	37.5397765	11.4560940	0.0448605	0.0138058	369.2827913	115.7476128	97.2	2831.4	447.8	73.578	22.454
10056-03 N	6973.6501012	183050.0291755	1.6568162	43.4895445	763.1082299	20030.6861751	2.5447530	66.7969128	13377.6628012	747696.1727744	90.1	8899.6	100106.0	1495.692	39260.145
10056-03 O	-77.0854065	144.8464888	-0.0466296	0.0878058	-6.3704726	11.9763764	-0.1034023	0.1945089	-46.8357858	87.6920885	61.0	-1188.3	3148.8	-12.486	23.474
10056-03 P	-238.7504953	840.6619146	-0.1002965	0.3533320	-6.1138135	21.5400259	-0.2415076	0.8505691	-167.1701621	586.1749467	70.3	-	-15087.3	-11.983	42.218
Sample 57-2 J value = $1.030\text{E}^{-2} \pm 2.7\text{E}^{-6}$															
10056-04 A	43.4429506	7.4870756	0.0333987	0.0058043	10.6104369	1.8279468	0.0828738	0.0143102	19.9472697	3.6714400	45.6	337.1	56.6	20.796	3.583
10056-04 B	23.5983927	1.8015627	0.0216661	0.0016944	6.1325235	0.4664165	0.0371149	0.0028656	13.1759184	1.1613672	55.6	229.6	19.0	12.020	0.914
10056-04 C	21.0523753	0.2957730	0.0184085	0.0002804	2.2666256	0.0331920	0.0276204	0.0004095	13.0913901	0.1889834	62.1	228.2	3.1	4.443	0.065
10056-04 D	33.2051283	0.3111980	0.0153776	0.0001656	1.0193180	0.0109926	1.0193180	0.0109926	29.4958612	0.2776745	88.8	478.6	4.0	1.998	0.022
10056-04 E	54.8779214	0.5566018	0.0146905	0.0001670	1.3692090	0.0155842	0.0082416	0.0001095	52.6011659	0.5344680	95.8	781.1	6.4	2.684	0.031
10056-04 F	93.1300652	0.7645915	0.0140603	0.0001351	0.9649016	0.0094027	0.0065888	0.0000825	91.3205992	0.7504881	98.0	1196.2	7.2	1.891	0.018
10056-04 G	115.1031969	0.9532634	0.0139322	0.0001309	0.8292051	0.0083300	0.0059820	0.0000734	113.4663518	0.9404069	98.5	1396.7	8.1	1.625	0.016
10056-04 H	141.0776103	1.0131193	0.0139344	0.0001213	1.0402204	0.0087473	0.0071542	0.0000740	139.1464002	1.0001166	98.6	1604.3	7.6	2.039	0.017
10056-04 I	147.8453894	0.9140123	0.0139207	0.0001068	1.5129643	0.0108780	0.0073521	0.0000655	145.9462841	0.9033479	98.6	1655.5	6.7	2.965	0.021
10056-04 J	148.2221569	0.7407391	0.0139021	0.0000867	1.9094647	0.0110317	0.0071124	0.0000533	146.4664490	0.7330507	98.7	1659.4	5.4	3.743	0.022
10056-04 K	134.4865988	0.5879034	0.0138715	0.0000804	2.2609390	0.0114491	0.0077971	0.0000572	132.5705275	0.5806192	98.4	1553.4	4.6	4.431	0.022
10056-04 L	132.9935378	0.5206459	0.0136033	0.0000699	3.7477336	0.0161581	0.0065306	0.0000429	131.7050716	0.5170850	98.8	1546.6	4.1	7.346	0.032
10056-04 M	131.1476268	0.4039722	0.0134375	0.0000580	3.9158121	0.0135684	0.0054150	0.0000336	130.2135727	0.4023258	99.0	1534.8	3.2	7.675	0.027

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 57-2															
J value = $1.030\text{E}^{-2} \pm 2.7\text{E}^{-6}$															
10056-04 N	148.6871054	0.3631050	0.0130625	0.0000498	5.1375808	0.0141027	0.0049734	0.0000269	148.1556180	0.3632598	99.3	1671.8	2.7	10.070	0.028
10056-04 O	240.6887054	31.7046491	0.0177663	0.0024011	6.9936356	0.9222527	0.0089960	0.0013745	239.7533752	31.7408780	99.1	2244.4	170.0	13.708	1.808
Sample 58-1															
J value = $1.031\text{E}^{-2} \pm 4.0\text{E}^{-6}$															
10063-01 A	110.2953666	2.8781757	0.0644494	0.0017125	4.0929423	0.1031363	0.2476424	0.0060498	37.5503375	3.4256785	33.9	590.6	46.0	8.022	0.202
10063-01 B	36.4941322	0.2466162	0.0215398	0.0001673	1.2336785	0.0101351	0.0439675	0.0003177	23.6197978	0.1634095	64.7	393.4	2.4	2.418	0.020
10063-01 C	58.5476814	0.2248382	0.0180830	0.0000934	0.9541129	0.0051597	0.0242476	0.0001112	51.4921845	0.1987328	87.9	768.6	2.4	1.870	0.010
10063-01 D	90.1364412	0.3266183	0.0163751	0.0000771	0.8453614	0.0049864	0.0174357	0.0000829	85.1009943	0.3089840	94.4	1136.8	3.1	1.657	0.010
10063-01 E	99.6666405	0.4647779	0.0161644	0.0000968	0.8965121	0.0058866	0.0154725	0.0000902	95.2247460	0.4446499	95.5	1234.4	4.2	1.757	0.012
10063-01 F	135.3810586	0.3467781	0.0153030	0.0000569	0.8307983	0.0035589	0.0123520	0.0000487	131.8727904	0.3381781	97.4	1549.3	2.7	1.628	0.007
10063-01 G	118.8287299	0.3090523	0.0150000	0.0000562	0.9210071	0.0043603	0.0107761	0.0000413	115.7913207	0.3014938	97.4	1417.8	2.6	1.805	0.009
10063-01 H	137.0553222	0.2559443	0.0150547	0.0000463	1.1107855	0.0040109	0.0108941	0.0000342	134.0275462	0.2506331	97.7	1566.2	2.0	2.177	0.008
10063-01 I	158.9541553	0.1987825	0.0141822	0.0000340	1.1432280	0.0028548	0.0070594	0.0000206	157.0834439	0.1966922	98.7	1737.9	1.4	2.241	0.006
10063-01 J	164.9111075	0.1777875	0.0133521	0.0000300	0.9020937	0.0021527	0.0038264	0.0000147	163.9544516	0.1769293	99.4	1786.0	1.2	1.768	0.004
10063-01 K	202.2455850	0.3420122	0.0129809	0.0000397	1.7085062	0.0046430	0.0027626	0.0000153	201.8044319	0.3417209	99.7	2030.4	2.1	3.349	0.009
10063-01 L	192.9688829	0.5859570	0.0129741	0.0000577	3.3155928	0.0118837	0.0036289	0.0000245	192.6041489	0.5862770	99.6	1974.0	3.7	6.499	0.023
10063-01 M	144.5734312	0.6471602	0.0126937	0.0000745	3.3628413	0.0168137	0.0037213	0.0000335	144.0780386	0.6465409	99.4	1643.0	4.8	6.591	0.033
10063-01 N	103.4154694	0.4349339	0.0123978	0.0000732	0.8185317	0.0051280	0.0035359	0.0000351	102.4933972	0.4314166	99.1	1301.4	3.9	1.604	0.010
10063-01 O	203.9028682	5.9276334	0.0157459	0.0004977	2.5341243	0.0731441	0.0104604	0.0003396	201.3680772	5.9022820	98.6	2027.8	35.7	4.967	0.143

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 58-1															
J value = $1.031\text{E}^{-2} \pm 4.0\text{E}^{-6}$															
10063-01 P	252.0435687	232.1506619	0.0178415	0.0169252	8.2375217	7.5965509	0.0296705	0.0278233	245.3369950	227.2854299	96.8	2275.8	1198.0	16.146	14.889
Sample 58-2															
J value = $1.031\text{E}^{-2} \pm 4.0\text{E}^{-6}$															
10063-02 A	60.6466282	0.9538329	0.0397569	0.0006506	2.9515602	0.0417722	0.1294424	0.0016583	22.6780426	1.7759918	37.3	379.2	26.8	5.785	0.082
10063-02 B	30.3966739	0.1912578	0.0178957	0.0001332	0.9546834	0.0079299	0.0243463	0.0001723	23.2933519	0.1486509	76.6	388.5	2.2	1.871	0.016
10063-02 C	65.5005287	0.1466527	0.0171688	0.0000591	0.6314501	0.0000667	0.0218429	0.0000667	59.1216096	0.1331415	90.2	859.0	1.5	1.238	0.006
10063-02 D	139.8274266	0.2509488	0.0150457	0.0000439	0.8551584	0.0029704	0.0114471	0.0000372	136.5935451	0.2454773	97.6	1586.1	1.9	1.676	0.006
10063-02 E	151.0317850	0.4692310	0.0149406	0.0000681	0.7945162	0.0036891	0.0114197	0.0000509	147.8015559	0.4595892	97.8	1670.7	3.4	1.557	0.007
10063-02 F	144.1648233	0.3973811	0.0148561	0.0000589	1.5293527	0.0058353	0.0114041	0.0000483	141.0661628	0.3894243	97.7	1620.4	3.0	2.998	0.011
10063-02 G	147.1367186	0.3261439	0.0148832	0.0000530	1.2930090	0.0044660	0.0101303	0.0000395	144.3754386	0.3204722	98.0	1645.3	2.4	2.534	0.009
10063-02 H	164.6431632	0.2996558	0.0144102	0.0000429	1.6258697	0.0046661	0.0079648	0.0000303	162.6023507	0.2964023	98.6	1776.6	2.1	3.187	0.009
10063-02 I	186.9034168	0.1802487	0.0136995	0.0000300	1.8845078	0.0033138	0.0048596	0.0000168	185.8604843	0.1795808	99.3	1931.5	1.1	3.694	0.006
10063-02 J	197.7738234	0.8557909	0.0143128	0.0000825	4.9463820	0.0233979	0.0054486	0.0000431	197.2358282	0.8565372	99.4	2002.6	5.3	9.695	0.046
10063-02 K	203.0605508	3.8963237	0.0158482	0.0003286	10.4223900	0.1813585	0.0144298	0.0002783	201.0840463	3.9413330	98.3	2026.0	23.9	20.428	0.355
10063-02 L	199.5054502	3.2542628	0.0152728	0.0002778	10.0613374	0.1413423	0.0105928	0.0001710	198.5659183	3.2990054	98.8	2010.7	20.1	19.720	0.277
10063-02 M	187.1358115	4.5003843	0.0232638	0.0005985	5.4713602	0.1257208	0.0436593	0.0009997	175.3373274	4.4569273	93.3	1863.0	29.5	10.724	0.246
10063-02 N	114.8570299	2.9894379	0.0137808	0.0004006	2.6106285	0.0670409	0.0041663	0.0001864	114.0404214	2.9883448	99.1	1402.9	25.6	5.117	0.131
10063-02 O	131.6370903	35.8188320	0.0184047	0.0051456	9.5407370	2.5995165	0.0161781	0.0046345	128.4691606	35.1990962	96.9	1522.3	281.7	18.700	5.095
10063-02 P	33.6812819	18.3082913	0.0090639	0.0053789	6.1295661	3.3361879	0.0122963	0.0072569	30.6660793	16.7683644	90.7	495.8	237.1	12.014	6.539

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 31-1															
J value = $1.030\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10064-01 A	39.4619862	2.8586018	0.0255617	0.0019065	2.6443895	0.1941066	0.0569805	0.0041324	22.8768348	1.8822706	57.9	381.7	28.3	5.183	0.380
10064-01 B	36.5153342	0.7345707	0.0193446	0.0004225	0.7395536	0.0156883	0.0244817	0.0004639	29.3546396	0.7764473	80.4	476.6	11.1	1.450	0.031
10064-01 C	22.3017032	0.2379320	0.0157223	0.0001895	0.2921655	0.0053587	0.0115924	0.0001502	18.9026975	0.2034475	84.7	320.9	3.2	0.573	0.011
10064-01 D	32.1976378	0.1842238	0.0156033	0.0001108	0.3146314	0.0033273	0.0124254	0.0000910	28.5566422	0.1643484	88.7	465.2	2.4	0.617	0.007
10064-01 E	55.6690930	0.2219921	0.0146802	0.0000773	0.2348602	0.0024054	0.0081816	0.0000528	53.2782113	0.2128703	95.7	789.2	2.6	0.460	0.005
10064-01 F	106.7628766	0.4086290	0.0148320	0.0000763	0.2123610	0.0022985	0.0098260	0.0000598	103.8908877	0.3979477	97.3	1312.6	3.6	0.416	0.005
10064-01 G	140.6697979	0.5458045	0.0145793	0.0000776	0.2408001	0.0023633	0.0088408	0.0000502	138.0989740	0.5360422	98.2	1596.2	4.1	0.472	0.005
10064-01 H	166.9693688	0.4055395	0.0146485	0.0000578	0.1791486	0.0015611	0.0102535	0.0000434	163.9734437	0.3984641	98.2	1784.5	2.8	0.351	0.003
10064-01 I	174.4071627	0.4800108	0.0146950	0.0000620	0.3334589	0.0022745	0.0107861	0.0000492	171.2854596	0.4716837	98.2	1834.3	3.2	0.654	0.004
10064-01 J	141.8013849	0.3845917	0.0148218	0.0000619	0.4859025	0.0027032	0.0106448	0.0000492	138.7407828	0.3766140	97.8	1601.1	2.9	0.952	0.005
10064-01 K	164.7484861	0.3102614	0.0144588	0.0000501	0.4542066	0.0022676	0.0144588	0.0000335	161.8154767	0.3049587	98.2	1769.5	2.1	0.890	0.004
10064-01 L	172.2239939	0.2004251	0.0140020	0.0000335	0.5082623	0.0017253	0.0082247	0.0000230	169.8934318	0.1978925	98.6	1824.9	1.3	0.996	0.003
10064-01 M	227.6429786	0.3721676	0.0149778	0.0000436	1.8593214	0.0046489	0.0140300	0.0000412	223.9340818	0.3667510	98.2	2157.5	2.1	3.644	0.009
10064-01 N	202.8305800	17.2042045	0.0177588	0.0015786	5.8046656	0.4939967	0.0160168	0.0014423	199.3645524	16.9981599	97.9	2013.8	103.4	11.377	0.968
10064-01 O	303.5214866	64.3868239	0.0246006	0.0053043	11.9088408	2.5270413	0.0343554	0.0073822	296.7758582	63.4979984	97.0	2526.4	290.9	23.341	4.953
10064-01 P	307.0962336	296.7433768	0.0385662	0.0375206	22.1924775	21.4493775	0.0601807	0.0584053	295.6444395	290.1658821	94.8	2521.2	1332.9	43.497	42.041

Table DR1 (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 31-2 J value = $1.030\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10064-02 A	35.5866819	2.5902258	0.0261653	0.0019516	2.5190266	0.1851303	0.0503517	0.00036676	20.9451942	1.7191390	58.8	352.4	26.3	4.937	0.363
10064-02 B	18.8951733	0.4257299	0.0176463	0.0004252	0.5820477	0.0165708	0.0211185	0.0005026	12.7056635	0.2910287	67.2	221.9	4.8	1.141	0.032
10064-02 C	18.4037326	0.1448479	0.0153037	0.0001432	0.1989588	0.0034952	0.0116805	0.0001070	14.9694384	0.1191229	81.3	258.7	1.9	0.390	0.007
10064-02 D	40.8429666	0.1982915	0.0147733	0.0000890	0.1335963	0.0021282	0.0103175	0.0000691	37.8076239	0.1841462	92.6	593.3	2.5	0.262	0.004
10064-02 E	55.3388975	0.2065038	0.0147482	0.0000744	0.1201518	0.0014918	0.0097595	0.0000532	52.4682593	0.1961683	94.8	779.5	2.4	0.235	0.003
10064-02 F	126.0411800	0.3475372	0.0142394	0.0000622	0.1406467	0.0013694	0.0081537	0.0000379	123.6543522	0.3411199	98.1	1481.8	2.8	0.276	0.003
10064-02 G	124.4625041	0.3895168	0.0142692	0.0000640	0.1882447	0.0017103	0.0084253	0.0000462	122.0030856	0.3820476	98.0	1468.3	3.1	0.369	0.003
10064-02 H	142.3575982	0.4548545	0.0139542	0.0000666	0.1804969	0.0020214	0.0079349	0.0000445	140.0440729	0.4476600	98.4	1611.0	3.4	0.354	0.004
10064-02 I	137.1303651	0.2731000	0.0137595	0.0000452	0.2683077	0.0015348	0.0066815	0.0000295	135.2018639	0.2694337	98.6	1573.8	2.1	0.526	0.003
10064-02 J	155.9934502	0.3552506	0.0137600	0.0000492	0.2898217	0.0016978	0.0063057	0.0000278	154.1835704	0.3512824	98.8	1715.5	2.6	0.568	0.003
10064-02 K	192.7111273	0.2795191	0.0133763	0.0000400	0.3038926	0.0014308	0.0054338	0.0000193	191.1693006	0.2774000	99.2	1963.3	1.7	0.596	0.003
10064-02 L	230.3487844	0.3198263	0.0132281	0.0000370	1.1689864	0.0029506	0.0058168	0.0000199	228.9083753	0.3181480	99.3	2185.2	1.8	2.291	0.006
10064-02 M	160.7217245	2.0655893	0.0127195	0.0001880	2.6365558	0.0358624	0.0047850	0.0000936	159.8101521	2.0577850	99.3	1755.5	14.5	5.168	0.070
10064-02 N	123.5363265	5.8744942	0.0128337	0.0006708	1.5344140	0.0759518	0.0060991	0.0003871	121.9857344	5.8215038	98.6	1468.1	47.9	3.007	0.149
10064-02 O	156.3122072	24.9094861	0.0118055	0.0020139	2.5246089	0.4094181	0.0129949	0.0022430	152.9409178	24.4259958	97.7	1706.6	176.2	4.948	0.802
10064-02 P	161.8024517	73.1846450	0.0186114	0.0086366	2.7370281	1.2502343	0.0355619	0.0162738	151.8002448	68.8069156	93.6	1693.3	498.8	5.365	2.450

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 21-1															
J value = $1.030\text{E}^{-2} \pm 2.8\text{E}^{-6}$															
10052-01 A	34.0475878	0.2098387	0.0203032	0.0001472	0.3944150	0.0035182	0.0377122	0.0002514	22.9407590	0.1444025	67.4	382.8	2.2	0.773	0.007
10052-01 B	43.0754984	0.1109274	0.0166827	0.0000616	0.2884467	0.0016902	0.0189605	0.0000616	37.5025368	0.0975320	87.0	589.4	1.3	0.565	0.003
10052-01 C	118.3706462	0.0382046	0.0131839	0.0000156	0.0602960	0.0002471	0.0029959	0.0000066	117.4943596	0.0379878	99.3	1431.1	0.3	0.118	0.0005
10052-01 D	135.1424685	0.0409222	0.0126496	0.0000151	0.0404494	0.0001977	0.0011682	0.0000037	134.8035456	0.0408483	99.7	1571.0	0.3	0.079	0.0004
10052-01 E	139.1369204	0.0583099	0.0125920	0.0000174	0.1135102	0.0003938	0.0013121	0.0000047	138.7684492	0.0581864	99.7	1601.6	0.4	0.222	0.001
10052-01 F	137.6674892	0.0937352	0.0124652	0.0000233	0.3587992	0.0008425	0.0014400	0.0000063	137.3040570	0.0935384	99.7	1590.4	0.7	0.703	0.002
10052-01 G	131.4415348	0.1750726	0.0124466	0.0000314	0.5954838	0.0018134	0.0011404	0.0000086	131.2056098	0.1748566	99.8	1542.8	1.4	1.167	0.004
10052-01 H	136.5399895	0.1233207	0.0123006	0.0000265	0.5815579	0.0013720	0.0006322	0.0000056	136.4539712	0.1233121	99.9	1583.8	1.0	1.140	0.003
10052-01 I	139.7827919	0.1432172	0.0123506	0.0000250	0.7297738	0.0018479	0.0005921	0.0000063	139.7361600	0.1432629	99.9	1609.0	1.1	1.430	0.004
10052-01 J	126.3351703	0.1765204	0.0123755	0.0000351	0.7257720	0.0021130	0.0006298	0.0000081	126.2699012	0.1765426	99.9	1503.4	1.4	1.423	0.004
10052-01 K	112.3175493	0.8976689	0.0121799	0.0001162	0.7520928	0.0075362	0.0012317	0.0000347	112.0713881	0.9862419	99.7	1384.9	7.7	1.474	0.015
10052-01 L	115.298685	2.0044182	0.0135020	0.0002547	0.6398020	0.0111686	0.0015719	0.0000699	114.9357036	2.0080813	99.6	1409.4	17.1	1.254	0.022
10052-01 M	105.2077169	2.3037149	0.0139875	0.0003320	0.9485940	0.0208196	0.0044960	0.0001339	104.0227589	2.3022155	98.8	1314.1	20.7	1.859	0.041
10052-01 N	117.2066531	11.4358868	0.0125639	0.0013077	0.7240549	0.0767139	0.0045623	0.0006968	115.9737942	11.3279083	98.9	1418.2	95.9	1.419	0.150
10052-01 O	95.0960882	5.1412081	0.0131578	0.0007644	0.5405129	0.0338609	0.0023589	0.0003134	94.4769302	5.1152557	99.3	1226.3	48.2	1.059	0.066
Sample 21-2															
J value = $1.030\text{E}^{-2} \pm 2.8\text{E}^{-6}$															
10052-02 A	53.3618909	0.3395347	0.0278204	0.0001988	0.4320304	0.0041373	0.0759032	0.0005040	30.9756751	0.2019411	58.0	499.7	2.8	0.847	0.008
10052-02 B	47.1245467	0.1167967	0.0162733	0.0000606	0.2063558	0.0012937	0.0165061	0.0000602	42.2688748	0.1056239	89.7	652.2	1.4	0.404	0.003

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 21-2															
J value = $1.030\text{E}^{-2} \pm 2.8\text{E}^{-6}$															
10052-02 C	114.8772124	0.0436477	0.0131048	0.0000167	0.0514424	0.0002367	0.0030283	0.0000067	113.9898043	0.0433725	99.2	1401.4	0.4	0.101	0.0005
10052-02 D	132.6142201	0.0500497	0.0126754	0.0000167	0.0351866	0.0002251	0.0012005	0.0000046	132.2647689	0.0499489	99.7	1551.2	0.4	0.069	0.0004
10052-02 E	136.9741833	0.0523972	0.0125829	0.0000167	0.0970369	0.0003354	0.0008526	0.0000037	136.7384501	0.0523322	99.8	1586.0	0.4	0.190	0.001
10052-02 F	140.3840142	0.0642138	0.0124173	0.0000165	0.2105454	0.0004996	0.0004872	0.0000035	140.2766285	0.0641912	99.9	1613.1	0.5	0.413	0.001
10052-02 G	140.7664777	0.0813732	0.0124447	0.0000209	0.3064031	0.0007925	0.0004896	0.0000044	140.6754445	0.0813562	99.9	1616.2	0.6	0.601	0.002
10052-02 H	141.1394750	0.1533778	0.0123897	0.0000261	0.2790448	0.0010242	0.0004150	0.0000060	141.0656925	0.1533433	99.9	1619.1	1.2	0.547	0.002
10052-02 I	140.2161621	0.1927629	0.0124339	0.0000348	0.3187646	0.0012434	0.0003586	0.0000065	140.1659320	0.1927518	99.9	1612.3	1.5	0.625	0.002
10052-02 J	142.1479221	0.1754737	0.0124436	0.0000304	0.3422636	0.0011894	0.0004074	0.0000065	142.0878819	0.1754578	99.9	1626.8	1.3	0.671	0.002
10052-02 K	140.2666883	0.1293607	0.0124043	0.0000257	0.5792532	0.0015670	0.0003456	0.0000052	140.2664857	0.1294295	100.0	1613.0	1.0	1.135	0.003
10052-02 L	142.4209554	0.3936323	0.0125431	0.0000527	0.2597732	0.0017918	0.0002340	0.0000126	142.3975089	0.3936633	100.0	1629.2	3.0	0.509	0.004
10052-02 M	130.0780422	1.0198815	0.0123601	0.0001164	0.3362199	0.0039514	0.0003856	0.0000304	130.0205437	1.0197251	99.9	1533.4	8.1	0.659	0.008
10052-02 N	121.5408216	2.8159865	0.0133020	0.0003477	0.6537631	0.0170508	0.0017074	0.0001185	121.1428026	2.8156436	99.6	1461.5	23.3	1.281	0.033
10052-02 O	130.3628731	19.6173333	0.0144553	0.0022736	0.8945851	0.1404208	0.0028115	0.0009433	129.6834905	19.5310782	99.4	1530.8	155.4	1.753	0.275
Sample 54-1															
J value = $1.030\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10040-06 A	57.1551784	0.5854658	0.0388289	0.0004349	0.5725654	0.0082382	0.1395221	0.0014535	15.9777346	0.1827666	27.9	275.0	2.9	1.122	0.016
10040-06 B	94.3328073	0.8243290	0.0488923	0.0004594	0.2587240	0.0042583	0.1961326	0.0017408	36.4020344	0.3313344	38.6	574.7	4.5	0.507	0.008
10040-06 C	178.7308356	0.7724139	0.0658614	0.0003147	1.2576129	0.0070897	0.2865483	0.0012665	94.2377429	0.4153581	52.7	1224.3	3.9	2.465	0.014
10040-06 D	170.5649050	1.3531868	0.0446040	0.0003795	4.4411564	0.0371093	0.1660447	0.0013507	122.2296961	0.9769250	71.4	1470.6	8.0	8.705	0.073

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	⁴⁰ Ar/ ³⁹ Ar	±1σ	³⁸ Ar/ ³⁹ Ar	±1σ	³⁷ Ar/ ³⁹ Ar	±1σ	³⁶ Ar/ ³⁹ Ar	±1σ	⁴⁰ Ar*/ ³⁹ Ar _k	±1σ	⁴⁰ Ar [%]	Age [Ma]	±1σ	Ca/K	±1σ
Sample 54-1															
J value = 1.030E-2 ± 3.9E-6															
10040-06 E	169.1021180	3.0721351	0.0439631	0.0008391	20.2031240	0.3696852	0.1654976	0.0030352	123.5435831	2.2802126	72.0	1481.4	18.6	39.598	0.725
10040-06 F	90.0831138	5.4700778	0.0275541	0.0017186	36.4196989	2.2141999	0.1021722	0.0062431	64.4267449	4.0201061	69.7	918.6	44.9	71.383	4.340
10040-06 G	44.5868032	2.3259000	0.0167050	0.0009069	6.6537067	0.3491658	0.0302352	0.0016314	36.3504124	1.9096655	81.2	574.0	25.8	13.041	0.684
10040-06 H	32.1800607	5.2945807	0.0104272	0.0018399	14.0348251	2.3068731	0.0219270	0.0037324	27.0832778	4.5299887	83.3	444.1	65.8	27.508	4.521
10040-06 I	76.5371832	52.4422243	0.0163029	0.0114011	17.6787890	12.1131043	0.0589351	0.0405663	61.2839539	42.5492146	79.1	883.1	484.8	36.650	23.742
10040-06 J	50.3765190	28.9099752	0.0061047	0.0039998	11.4759887	6.5859327	0.0220226	0.0129714	45.1427310	26.1375506	88.9	689.1	331.6	22.493	12.908
10040-06 K	-57.6572708	86.5858597	-0.0191492	0.0292148	-22.8202149	34.2657917	-0.0652355	0.0982822	-39.5760687	58.5736151	69.7	-945.3	1838.9	-44.728	67.161
10040-06 L	-29.0166630	37.5333457	-0.0146429	0.0194226	-16.3756639	21.1687635	-0.0402505	0.0525326	-18.2245920	23.4419171	63.5	-375.3	536.6	-32.096	41.491
10040-06 M	-112.8331276	108.4814987	-0.0282791	0.0247024	-35.8653326	34.4813977	-0.1023011	0.0985166	-83.3891958	78.2636268	75.7	-3538.4	10343.0	-70.296	67.584
10040-06 N	76.7252523	17.7503907	0.0177927	0.0042305	13.9771762	3.2332991	0.0188188	0.0045398	72.9880142	17.0647590	94.2	1011.8	181.1	27.395	6.337
10040-06 O	-114.1237965	183.8288530	-0.0486488	0.0785939	-63.4142231	102.1408008	-0.1026344	0.1655803	-85.1092203	131.3494083	77.9	-378.13	19861.2	-124.292	200.196
Sample 54-2															
J value = 1.030E-2 ± 3.9E-6															
10040-07 A	78.9885335	0.6384487	0.0538610	0.0004687	0.8630615	0.0091793	0.2182925	0.0017947	14.5600301	0.1542480	18.4	252.2	2.5	1.692	0.018
10040-07 B	91.1757586	0.6581152	0.0528762	0.0004058	0.4392643	0.0046994	0.2173886	0.0016029	26.9799434	0.2183797	29.6	442.6	3.2	0.861	0.009
10040-07 C	140.6398768	0.3218654	0.0616936	0.0001731	0.9519185	0.0040194	0.2651110	0.0006386	62.4160336	0.1549859	44.4	896.0	1.8	1.866	0.008
10040-07 D	138.2448948	1.4674980	0.0546361	0.0006116	3.3945991	0.0378592	0.0546361	0.0006116	71.7903898	0.7709967	51.8	999.0	8.2	6.653	0.074
10040-07 E	107.6872418	0.8561578	0.0342203	0.0003040	6.4097228	0.0533477	0.1184994	0.0009704	73.5087818	0.5913120	68.0	1017.3	6.3	12.563	0.105
10040-07 F	65.3522937	0.5290438	0.0236835	0.0002187	10.8014577	0.0898843	0.0651141	0.0005592	47.3273837	0.3902765	71.9	716.6	4.9	21.171	0.176

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 54-2															
J value = $1.030\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10040-07 G	58.7591195	0.8888319	0.0201967	0.0003386	17.3474624	0.2653255	0.0492658	0.0007793	46.1406303	0.7101811	77.6	701.8	8.9	34.001	0.520
10040-07 H	55.5580453	1.2134702	0.0162584	0.0003846	23.1267383	0.4660691	0.0243481	0.0005158	51.0278118	1.2452297	90.4	762.3	15.2	45.328	0.913
10040-07 I	44.4797726	2.2068571	0.0126058	0.0006764	9.5035439	0.4661876	0.0107182	0.0006003	42.3496147	2.1386197	94.6	653.3	27.7	18.627	0.914
10040-07 J	41.5050133	1.0389040	0.0127563	0.0003579	3.4858853	0.0838909	0.0054260	0.0001969	40.2765471	1.0339636	96.8	626.3	13.6	6.832	0.164
10040-07 K	45.9908084	0.3290157	0.0119963	0.0001076	1.4015083	0.0118557	0.0031723	0.0000540	45.2084137	0.3240843	98.2	690.0	4.1	2.747	0.023
10040-07 L	29.6976953	3.5123355	0.0118685	0.0014801	0.4506952	0.0592686	0.0021422	0.0006289	29.1089338	3.4504806	98.0	473.3	49.3	0.883	0.116
10040-07 M	32.6997624	6.3059287	0.0125904	0.0025231	7.7646867	1.4980461	0.0076618	0.0018246	31.2228727	6.0669115	95.0	503.3	85.3	15.219	2.936
10040-07 N	3.1754232	1.7602466	0.0073573	0.0040942	0.2104948	0.1517056	0.0037480	0.0029374	2.0836461	1.4137767	65.6	38.3	25.7	0.413	0.297
10040-07 O	-15.8085559	156.0758742	-0.0965711	0.9511519	1.8470331	18.2943525	-0.0947190	0.9336465	12.3338117	122.9242423	-77.9	215.9	2027.6	3.620	35.857
Sample 62a-1															
J value = $1.024\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10069-01 A	127.6816123	15.4356126	0.0820852	0.0099655	13.9749093	1.6874748	0.3312130	0.0399576	31.2266523	5.7105183	24.2	500.6	79.9	27.391	3.307
10069-01 B	32.9423032	1.7881049	0.0354553	0.0019588	9.7960569	0.5272772	0.0729709	0.0039324	12.2447232	1.1802833	36.9	213.1	19.4	19.200	1.033
10069-01 C	37.5956874	1.5561878	0.0344552	0.0014582	7.4726951	0.3054212	0.0696073	0.0028329	17.7152853	1.2236087	46.9	300.8	19.1	14.646	0.599
10069-01 D	39.8575300	0.6824774	0.0263796	0.0004843	3.8283611	0.0680322	0.0327527	0.0005964	30.5660567	0.5286473	76.5	491.3	7.4	7.504	0.133
10069-01 E	51.7530072	0.5773995	0.0247365	0.0003084	3.3545072	0.0402668	0.0170214	0.0002182	47.1009747	0.5278011	90.8	710.2	6.6	6.575	0.079
10069-01 F	70.6722194	0.9060780	0.0239218	0.0003372	3.1090915	0.0422972	0.0138028	0.0002155	66.9866046	0.8615227	94.6	942.4	9.4	6.094	0.083
10069-01 G	109.7090742	0.6572767	0.0230710	0.0001684	3.6413756	0.0252682	0.0084059	0.0000779	107.7887571	0.6476853	98.0	1341.8	5.7	7.137	0.050
10069-01 H	133.7774156	0.6756304	0.0228373	0.0001401	5.3258241	0.0295921	0.0052978	0.0000520	133.1299777	0.6750418	99.1	1551.7	5.3	10.439	0.058

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 62a-1															
J value = $1.024\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10069-01 I	193.2561996	0.6584083	0.0220652	0.0001031	9.3759914	0.0355359	0.0062988	0.0000432	193.4035049	0.6635689	99.4	1970.3	4.1	18.377	0.070
10069-01 J	196.9819969	1.7856569	0.0224455	0.0002399	21.2101510	0.1954811	0.0103469	0.0001226	198.5437588	1.8273797	99.3	2001.9	11.1	41.572	0.383
10069-01 K	165.7268769	3.4405607	0.0190981	0.0004363	26.5753905	0.5546143	0.0137903	0.0003323	166.8537761	3.5298355	98.8	1797.7	24.1	52.088	1.087
10069-01 L	188.8337613	15.9977990	0.0247122	0.0021424	54.2916270	4.5786391	0.0347789	0.0029893	190.0598948	16.7428498	96.9	1949.5	105.0	106.412	8.974
10069-01 M	178.5149549	74.3853737	0.0301347	0.0126826	70.3664654	29.3176058	0.0466884	0.0195991	179.0917859	78.4707923	95.4	1879.3	511.6	137.918	57.463
10069-01 N	355.3109883	281.9629229	0.0772730	0.0614389	125.6514800	99.7098697	0.1251711	0.0994367	359.7705837	281.9629229	92.4	2785.9	1233.8	246.277	195.431
10069-01 O	59.1932056	16.5693218	0.0183894	0.0053124	28.7388016	8.0415037	0.0501002	0.0141060	47.6319160	13.6430856	78.9	716.8	169.4	56.328	15.761
10069-01 P	13.9254055	8.9309801	0.0118954	0.0080418	3.3702963	2.1660415	0.0303302	0.0196366	5.2425907	3.5927052	37.6	94.3	63.0	6.606	4.245
Sample 62a-2															
J value = $1.024\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10069-02 A	62.8062703	3.8071523	0.0435981	0.0026805	6.8229547	0.4125581	0.1531515	0.0092065	18.1801806	2.2789224	28.8	308.0	35.5	13.373	0.809
10069-02 B	28.2551699	1.0548777	0.0301708	0.0011612	5.8034708	0.2132442	0.0476524	0.0017443	14.6965040	0.8818918	51.8	252.9	14.2	11.375	0.418
10069-02 C	39.8526714	0.7682759	0.0242192	0.0005008	3.0553609	0.0625426	0.0226514	0.0004723	33.4741850	0.6492704	83.8	531.8	8.9	5.989	0.123
10069-02 D	84.5874846	0.9100533	0.0231268	0.0002801	2.8183840	0.0336074	0.0158510	0.0002045	80.2858045	0.8661710	94.7	1082.5	8.8	5.524	0.066
10069-02 E	128.6667420	1.7975676	0.0215419	0.0003354	3.3104132	0.0498434	0.0122970	0.0002121	125.5860853	1.7590120	97.4	1491.7	14.2	6.488	0.098
10069-02 F	150.9728722	2.0674809	0.0215416	0.0003292	8.3071438	0.1173727	0.0117255	0.0002047	149.0313034	2.0531700	98.1	1671.9	15.0	16.282	0.230
10069-02 G	130.5209471	2.1771426	0.0207951	0.0003811	14.9280603	0.2518816	0.0118462	0.0002404	129.5556075	2.1842183	98.2	1523.5	17.3	29.259	0.494
10069-02 H	150.1054899	3.5318990	0.0223245	0.0005733	37.8026163	0.8925818	0.0203948	0.0005236	151.0639316	3.6514394	98.0	1686.7	26.5	74.093	1.749
10069-02 I	154.4610432	5.3416214	0.0285909	0.0010322	75.5044588	2.5315896	0.0457609	0.0015637	155.1024149	5.6999613	95.1	1715.8	40.7	147.989	4.962

Table DR1 (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 62a-2															
J value = $1.024\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10069-02 J	150.0479910	8.0899095	0.0273189	0.0015315	81.6286191	4.3470723	0.0436470	0.0023610	152.3039735	8.7199950	95.7	1695.7	62.9	159.992	8.520
10069-02 K	161.4841473	59.7577861	0.0424248	0.0158121	104.4501124	38.6447064	0.0884315	0.0328028	154.9346702	61.8434881	89.0	1714.6	441.7	204.722	75.744
10069-02 L	129.5328018	48.3963528	0.0343578	0.0129608	42.8779236	16.0175998	0.0361169	0.0136549	126.0384475	48.5488614	94.4	1495.4	391.6	84.041	31.394
10069-02 M	361.0033697	440.2281472	0.1119796	0.1366630	140.7403321	171.6253895	0.2171242	0.2648695	341.4805949	461.5925534	85.3	2712.3	1896.4	275.851	336.386
10069-02 N	9267.6420624	531454.5459610	6.8156942	390.8472486	1995.8297607	114451.2070653	17.7567570	1018.2643749	-10798.6228810	1599706.8121178	45.1	-	-269694.5	3911.826	224324.366
10069-02 O	-160.2459390	236.9583311	-0.1549503	0.2292254	-25.6515763	37.9364595	-0.3268735	0.4834011	-64.5634259	93.9460884	41.0	-1952.6	5123.0	-50.277	74.355
10069-02 P	12.2930143	3.9932312	0.0122881	0.0041968	1.0545855	0.3624430	0.0277876	0.0091216	4.1676357	1.5442066	33.9	75.4	27.4	2.067	0.710
Sample 65-1															
J value = $1.030\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10048-02 A	47.8169577	0.3025964	0.0230422	0.0001684	1.2095360	0.0088073	0.0310946	0.0002226	38.7573451	0.2474847	81.0	606.0	3.3	2.371	0.017
10048-02 B	50.6875857	0.2040081	0.0203762	0.0001020	0.7707856	0.0042880	0.0148352	0.0000802	46.3899326	0.1875133	91.5	704.7	2.4	1.511	0.008
10048-02 C	135.4029410	0.1159683	0.0185709	0.0000327	0.3644360	0.0010162	0.0088483	0.0000182	132.8507174	0.1139279	98.1	1555.6	0.9	0.714	0.002
10048-02 D	161.5293809	0.1815523	0.0167480	0.0000355	0.3803645	0.0013129	0.0034968	0.0000129	160.5684953	0.1805636	99.4	1760.9	1.3	0.746	0.003
10048-02 E	159.3692278	0.2408116	0.0166599	0.0000438	0.6887191	0.0024015	0.0029853	0.0000161	158.6175688	0.2398426	99.5	1747.2	1.7	1.350	0.005
10048-02 F	158.9354102	0.2506387	0.0167487	0.0000469	1.0050152	0.0028212	0.0023654	0.0000151	158.4269306	0.2500597	99.6	1745.9	1.8	1.970	0.006
10048-02 G	150.0239736	0.1932740	0.0218511	0.0000473	2.1509631	0.0041200	0.0027721	0.0000133	149.6002691	0.1930861	99.6	1682.4	1.4	4.216	0.008
10048-02 H	132.9886550	0.4369112	0.0227092	0.0000941	2.4246117	0.0100267	0.0021441	0.0000211	132.7725381	0.4369982	99.7	1555.0	3.4	4.752	0.020
10048-02 I	123.6855204	0.9283662	0.0161713	0.0001439	1.1099833	0.0095554	0.0023782	0.0000437	123.1659448	0.9252734	99.5	1477.9	7.6	2.176	0.019
10048-02 J	73.1482796	0.9774329	0.0142365	0.0002098	0.7194305	0.0086736	0.0030135	0.0000699	72.3507628	0.9922554	98.9	1004.7	10.6	1.410	0.017

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 65-1															
J value = $1.030\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10048-02 K	70.1471924	1.4356171	0.0147654	0.0003350	0.6175858	0.0138164	0.0029417	0.0001194	69.3564109	1.4365375	98.8	972.6	15.6	1.210	0.027
10048-02 L	126.5886332	7.6488450	0.0190499	0.0011983	2.0145050	0.1229870	0.0046898	0.0004254	125.5391487	7.6024456	99.0	1497.3	61.6	3.948	0.241
10048-02 M	-756.6112781	865.9540001	-0.0322715	0.0371652	-3.1754426	3.6432121	-0.0273733	0.0319854	-747.1316893	853.2247000	99.0	-	-2367.9	-6.224	7.141
10048-02 N	154.1305279	26.4512128	0.0175174	0.0030992	1.5007632	0.2615516	0.0096553	0.0019381	151.5548065	26.0448154	98.2	1696.7	189.0	2.941	0.513
10048-02 O	-2.7255395	2.1452856	-0.0033598	0.0034199	-0.7367354	0.5467009	-0.0080452	0.0069484	-0.4089712	1.4827648	15.0	-7.6	27.7	-1.444	1.072
Sample 65-2															
J value = $1.030\text{E}^{-2} \pm 3.9\text{E}^{-6}$															
10048-03 A	41.9427348	0.4859255	0.0249661	0.0003081	1.0964289	0.0100545	0.0360364	0.0002740	31.4052629	0.7607684	74.8	505.7	10.7	2.149	0.020
10048-03 B	36.0237104	0.1056207	0.0220032	0.0000875	0.4264603	0.0022546	0.0228473	0.0000884	29.3148686	0.0877342	81.4	476.1	1.3	0.836	0.004
10048-03 C	104.8831440	0.0740445	0.0183741	0.0000304	0.2511192	0.0008184	0.0081702	0.0000164	102.5064999	0.0725385	97.7	1300.2	0.7	0.492	0.002
10048-03 D	144.5370980	0.0962373	0.0167697	0.0000269	0.1681315	0.0006069	0.0167697	0.0000269	143.5562932	0.0956544	99.3	1637.7	0.7	0.330	0.001
10048-03 E	162.8443442	0.0958952	0.0169565	0.0000254	0.2297621	0.0006909	0.0026021	0.0000079	162.1193205	0.0955227	99.5	1771.7	0.7	0.450	0.001
10048-03 F	168.0271696	0.1438587	0.0175572	0.0000335	0.4414718	0.0011746	0.0026935	0.0000105	167.3175208	0.1433357	99.5	1807.6	1.0	0.865	0.002
10048-03 G	166.3284653	0.2021455	0.0165809	0.0000382	0.4582602	0.0014578	0.0019746	0.0000108	165.8339901	0.2016396	99.7	1797.4	1.4	0.898	0.003
10048-03 H	162.7670037	0.1757496	0.0163962	0.0000337	0.7111476	0.0015959	0.0016305	0.0000095	162.4218551	0.1754945	99.7	1773.8	1.2	1.394	0.003
10048-03 I	153.2376803	0.1398444	0.0159960	0.0000320	0.5602204	0.0014407	0.0008659	0.0000073	153.0857307	0.1397847	99.9	1707.7	1.0	1.098	0.003
10048-03 J	133.6225012	0.1633267	0.0154591	0.0000357	0.6349412	0.0017829	0.0014833	0.0000093	133.2932057	0.1630264	99.7	1559.0	1.3	1.244	0.003
10048-03 K	137.2077451	0.2834593	0.0157717	0.0000524	0.6044397	0.0023701	0.0018350	0.0000137	136.7707444	0.2827099	99.6	1586.1	2.2	1.185	0.005
10048-03 L	100.9757353	1.5004120	0.0168592	0.0002740	1.2977133	0.0172497	0.0076790	0.0001248	98.8988993	1.5296566	97.9	1267.3	14.1	2.544	0.034

Table DRI (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of biotite samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 65-2	J value = $1.030\text{E}^{-2} \pm 3.9\text{E}^{-6}$														
10048-03 M	87.7683704	1.5117074	0.0170223	0.0003213	0.9728062	0.0165450	0.0065869	0.0001413	85.9572918	1.5259048	97.9	1144.1	15.0	1.907	0.032
10048-03 N	60.6976351	1.6049943	0.0155171	0.0004436	0.5311691	0.0158578	0.0043367	0.0001844	59.4799877	1.5933691	98.0	862.2	18.4	1.041	0.031
10048-03 O	-26.0646187	8.4917598	-0.0068586	0.0024832	-2.4909177	0.8149499	-0.0033125	0.0021319	-25.2434985	8.2291230	97.8	-543.3	206.7	-4.882	1.597

In bold font, steps are included in the age spectra.

Table DR2. Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of amphibole samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 23-1															
J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$															
10008-02 A	59.4761814	0.6160296	0.0359474	0.0004033	2.2074685	0.0274451	0.1184458	0.0012606	24.6889109	0.2712380	41.4	417.6	4.1	4.327	0.054
10008-02 B	130.3192412	0.6565364	0.0345863	0.0002062	7.9265082	0.0443348	0.0800078	0.0004318	107.9039715	0.5487921	82.3	1371.1	4.9	15.536	0.087
10008-02 C	151.2313988	0.2978673	0.0323584	0.0000897	12.2118394	0.0279154	0.0175227	0.0000576	148.2876990	0.2954775	97.2	1698.9	2.2	23.935	0.055
10008-02 D	155.7596386	0.2131700	0.0330114	0.0000700	12.7398057	0.0215815	0.0129400	0.0000355	154.3202628	0.2142052	98.2	1743.1	1.6	24.970	0.042
10008-02 E	156.4356204	0.2192963	0.0342907	0.0000743	14.9025824	0.0262861	0.0141252	0.0000410	155.0583290	0.2211425	98.1	1748.4	1.6	29.209	0.052
10008-02 F	154.2187276	0.3673076	0.0320483	0.0001016	12.9252592	0.0361932	0.0118028	0.0000467	153.1393884	0.3687617	98.4	1734.5	2.7	25.334	0.071
10008-02 G	157.3250261	0.3820714	0.0346827	0.0001112	15.6617289	0.0424153	0.0146171	0.0000607	155.9545574	0.3839825	98.1	1754.9	2.8	30.697	0.083
10008-02 H	154.8280861	0.3790048	0.0337817	0.0001123	17.8843311	0.0493598	0.0111248	0.0000523	154.8946387	0.3851809	98.8	1747.2	2.8	35.053	0.097
10008-02 I	157.0898373	0.2376836	0.0357980	0.0000799	18.1803621	0.0331280	0.0096110	0.0000305	157.6948730	0.2434649	99.1	1767.4	1.7	35.634	0.065
Sample 23-2															
J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$															
10008-03 A	76.7304032	0.7741466	0.0361904	0.0003976	2.6696069	0.0311103	0.1211145	0.0012442	41.2299699	0.4230784	53.6	651.6	5.6	5.232	0.061
10008-03 B	145.3133878	0.2921726	0.0310457	0.0000871	10.3337807	0.0239065	0.0285527	0.0000798	138.6976178	0.2818195	94.8	1626.2	2.2	20.254	0.047
10008-03 C	152.5062031	0.1802707	0.0317278	0.0000622	11.7369251	0.0182515	0.0124033	0.0000341	151.0107062	0.1811005	98.2	1719.0	1.3	23.004	0.036
10008-03 D	153.3140295	0.1513336	0.0320953	0.0000610	12.5572061	0.0172287	0.0098668	0.0000279	152.7347750	0.1534935	98.8	1731.6	1.1	24.612	0.034
10008-03 E	149.0456255	0.1258655	0.0318113	0.0000562	12.2234649	0.0160337	0.0097656	0.0000246	148.3973380	0.1278904	98.7	1699.7	0.9	23.958	0.031
10008-03 F	128.9918785	0.2081038	0.0273884	0.0000698	12.9359551	0.0253575	0.0074109	0.0000295	128.9947882	0.2108577	99.1	1549.7	1.7	25.354	0.050
10008-03 G	156.8015105	0.4235690	0.0342927	0.0001213	19.2510629	0.0569453	0.0098965	0.0000470	157.5224723	0.4325073	99.1	1766.1	3.1	37.732	0.112
10008-03 H	152.5851527	2.5791017	0.0358902	0.0006331	15.4579276	0.2272780	0.0098657	0.0001763	152.5439887	2.6520395	98.9	1730.2	19.1	30.298	0.445

Table DR2 (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of amphibole samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 23-2															
J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$															
10008-03 I	153.0504848	3.5354606	0.0348979	0.0008427	12.8116213	0.2782003	0.0055511	0.0001794	153.8037755	3.5824132	99.6	1739.3	26.0	25.111	0.545
Sample 34-1															
J value = $1.055\text{E}^{-2} \pm 3.0\text{E}^{-6}$															
10006-01 A	66.3673694	1.3388036	0.0348405	0.0007341	7.0769468	0.1322409	0.1067999	0.0019286	35.5470629	1.7239662	53.3	574.3	23.9	13.871	0.259
10006-01 B	96.5692454	0.4975995	0.0228349	0.0001383	7.4814890	0.0409832	0.0378742	0.0002271	86.4234227	0.4492071	89.0	1168.7	4.5	14.664	0.080
10006-01 C	133.5741065	0.2547612	0.0213421	0.0000660	8.1843050	0.0193450	0.0124795	0.0000424	131.2862931	0.2523841	97.7	1567.7	2.0	16.041	0.038
10006-01 D	132.8829916	0.2292603	0.0207296	0.0000610	9.5961936	0.0208055	0.0088324	0.0000327	131.9185828	0.2297205	98.6	1572.7	1.8	18.809	0.041
10006-01 E	132.2889589	0.1476308	0.0197536	0.0000412	8.0004128	0.0123013	0.0071283	0.0000209	131.5523763	0.1482629	98.9	1569.8	1.2	15.681	0.024
10006-01 F	138.1592079	0.1962980	0.0209580	0.0000520	9.3352004	0.0173400	0.0082364	0.0000285	137.3615287	0.1970389	98.8	1615.5	1.5	18.297	0.034
10006-01 G	143.9619353	0.1183403	0.0208544	0.0000398	8.3014901	0.0108393	0.0048171	0.0000149	144.0320609	0.1197643	99.5	1666.6	0.9	16.271	0.021
10006-01 H	139.6001100	0.2324373	0.0204770	0.0000623	8.8927506	0.0187258	0.0074992	0.0000307	138.9525340	0.2333070	98.9	1627.8	1.8	17.430	0.037
10006-01 I	142.6174180	0.1832808	0.0204888	0.0000502	8.0563160	0.0141433	0.0063092	0.0000220	142.1921362	0.1842464	99.1	1652.6	1.4	15.790	0.028
Sample 34-2															
J value = $1.055\text{E}^{-2} \pm 3.0\text{E}^{-6}$															
10006-02 A	89.5982174	3.0923514	0.0359183	0.0012837	4.6732437	0.1604444	0.1140339	0.0038130	56.4569895	2.6717130	62.8	842.7	31.9	9.160	0.314
10006-02 B	80.3327994	1.8162892	0.0298038	0.0007074	4.2674833	0.0935883	0.0765680	0.0016042	58.2197696	1.8948692	72.3	863.6	22.3	8.364	0.183
10006-02 C	135.4905800	0.5487559	0.0213662	0.0001151	6.3684039	0.0289621	0.0132943	0.0000801	132.6574586	0.5400938	97.5	1578.6	4.3	12.482	0.057
10006-02 D	116.3969697	1.1587725	0.0229544	0.0002569	7.2227245	0.0759354	0.0268107	0.0002937	109.6008180	1.0973491	93.7	1385.8	9.7	14.157	0.149
10006-02 E	137.4576771	0.3823742	0.0217378	0.0000905	7.7287118	0.0256190	0.0082093	0.0000426	136.3812866	0.3817569	98.7	1607.9	3.0	15.148	0.050
10006-02 F	133.3330569	0.4968760	0.0213453	0.0001055	8.0177434	0.0331376	0.0131604	0.0000770	130.8128749	0.4906933	97.6	1563.9	3.9	14.715	0.065
10006-02 G	139.0711450	0.7159789	0.0211517	0.0001397	8.0843274	0.0454197	0.0107909	0.0000814	137.2989996	0.7111953	98.2	1615.0	5.5	15.845	0.089

Table DR2 (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of amphibole samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 34-2															
J value = $1.055\text{E}^2 \pm 3.0\text{E}^{-6}$															
10006-02 H	141.1527757	0.6260290	0.0209780	0.0001212	8.4981096	0.0414616	0.0074646	0.0000572	140.4547625	0.6269271	98.9	1639.4	4.8	16.656	0.081
10006-02 I	143.1429773	0.2029400	0.0207517	0.0000574	7.9463179	0.0163827	0.0050977	0.0000216	143.0608890	0.2043728	99.4	1659.2	1.5	15.575	0.032
Sample 54-1															
J value = $1.055\text{E}^2 \pm 3.0\text{E}^{-6}$															
10009-01 A	341.7633460	10.0294787	0.0722098	0.0021523	5.7741713	0.1670298	0.2733959	0.0076301	262.4892702	9.3251779	76.5	2393.8	47.1	11.317	0.327
10009-01 B	160.3404786	0.1599926	0.0204653	0.0000434	6.1920494	0.0100602	0.0117126	0.0000302	158.0536239	0.1589142	98.2	1770.0	1.1	12.136	0.020
10009-01 C	151.2238878	0.1017390	0.0187535	0.0000317	6.0206068	0.0076542	0.0042828	0.0000125	151.0707691	0.1025339	99.5	1719.5	0.8	11.800	0.015
10009-01 D	152.5010635	0.0786799	0.0187622	0.0000292	6.0528392	0.0067175	0.0036812	0.0000101	152.5378760	0.0796206	99.6	1730.2	0.6	11.864	0.013
10009-01 E	150.4697851	0.0815913	0.0178690	0.0000292	6.3627903	0.0071529	0.0027989	0.0000093	150.8171970	0.0827435	99.8	1717.6	0.6	12.471	0.014
10009-01 F	149.6612453	0.3231653	0.0185071	0.0000644	6.4911553	0.0179343	0.0030116	0.0000237	149.9657312	0.3255143	99.8	1711.4	2.4	12.723	0.035
10009-01 G	150.6805754	0.5952021	0.0188517	0.0001010	6.8781466	0.0309201	0.0073509	0.0000535	149.7730317	0.5947145	98.9	1710.0	4.4	13.481	0.061
10009-01 H	233.0079720	24.0608997	0.0663149	0.0068972	15.6735099	1.6172949	0.1355198	0.0139755	196.3541615	20.7040278	83.4	2024.5	128.3	30.720	3.170
10009-01 I	-465.0427858	494.3535252	-0.3343037	0.3554536	-22.2621287	23.6754884	-1.0210530	1.0853957	-162.6021431	170.7643779	35.5	-	-4542.8	-43.634	46.404
Sample 54-2															
J value = $1.055\text{E}^2 \pm 3.0\text{E}^{-6}$															
10009-02 A	167.6214455	3.2285455	0.0566905	0.0011175	5.0205909	0.0911226	0.2051466	0.0034751	107.7772700	3.9216890	64.1	1370.1	34.9	9.840	0.179
10009-02 B	149.6620139	0.1484671	0.0190565	0.0000395	6.1364452	0.0095559	0.0074019	0.0000218	148.5980281	0.1484586	98.9	1701.3	1.1	12.027	0.019
10009-02 C	149.9831003	0.0977314	0.0187601	0.0000314	6.1121835	0.0077732	0.0034332	0.0000126	150.0938566	0.0987180	99.6	1712.3	0.7	11.980	0.015
10009-02 D	147.6253514	0.1477886	0.0186015	0.0000380	5.9993937	0.0093781	0.0034427	0.0000145	147.7025378	0.1488131	99.6	1694.6	1.1	11.759	0.018
10009-02 E	151.9477244	0.3650976	0.0187956	0.0000708	6.3794619	0.0186295	0.0041712	0.0000266	151.8975920	0.3668118	99.5	1725.6	2.7	12.504	0.036
10009-02 F	135.8692568	4.1388243	0.0213445	0.0006916	6.8482422	0.2036354	0.0132486	0.0004250	133.1344478	4.1169316	97.5	1582.8	32.6	13.423	0.399

Table DR2 (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of amphibole samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$				
Sample 54-2																			
J value = $1.055\text{E}^{-2} \pm 3.0\text{E}^{-6}$																			
10009-02 G	917.4113904		1423.2992201	0.4085892	0.6339924	0.0562864	0.0025864	0.0025864	8.3878540	0.3768931	0.1970482	0.0087556	31.7941913	3.0006956	35.4	521.7	42.8	16.440	0.739
10009-02 H	280.7867317		140.3932075	0.1611694	0.0806871	0.0308096	0.0006151	0.0006151	8.5511319	0.1498290	0.0622678	0.0010503	51.9699219	1.4948331	74.5	788.5	18.4	16.760	0.294
10009-02 I	319.7822937		92.0230871	0.1199754	0.0346033	0.0192103	0.0001252	0.0001252	6.6039404	0.0347155	0.0124599	0.0000874	134.8391725	0.5898934	97.7	1596.0	4.6	12.944	0.068
Sample 62b-1																			
J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$																			
10007-01 A	89.1671789		4.0349051	0.0562864	0.0025864	0.0025864	0.0025864	0.0025864	8.3878540	0.3768931	0.1970482	0.0087556	31.7941913	3.0006956	35.4	521.7	42.8	16.440	0.739
10007-01 B	69.3788067		1.3147063	0.0308096	0.0006151	0.0308096	0.0006151	0.0006151	8.5511319	0.1498290	0.0622678	0.0010503	51.9699219	1.4948331	74.5	788.5	18.4	16.760	0.294
10007-01 C	137.3753369		0.5977728	0.0201391	0.0001252	0.0201391	0.0001252	0.0001252	6.6039404	0.0347155	0.0124599	0.0000874	134.8391725	0.5898934	97.7	1596.0	4.6	12.944	0.068
10007-01 D	145.3650763		0.3064044	0.0192103	0.0000691	0.0192103	0.0000691	0.0000691	6.2640760	0.0168769	0.0054352	0.0000295	144.8895408	0.3069895	99.2	1673.3	2.3	12.278	0.033
10007-01 E	147.0870627		0.4183961	0.0195385	0.0000844	0.0195385	0.0000844	0.0000844	6.3604600	0.0227636	0.0060515	0.0000346	146.4537559	0.4186640	99.1	1685.0	3.1	12.467	0.045
10007-01 F	145.0341172		0.4474328	0.0196375	0.0000870	0.0196375	0.0000870	0.0000870	6.4215213	0.0231885	0.0067818	0.0000410	144.1859562	0.4470485	99.0	1668.0	3.4	12.586	0.045
10007-01 G	148.4095504		0.3609640	0.0196369	0.0000794	0.0196369	0.0000794	0.0000794	6.2938707	0.0187972	0.0050192	0.0000304	148.0763267	0.3619665	99.3	1697.1	2.7	12.336	0.037
10007-01 H	147.0974712		0.3729621	0.0190383	0.0000802	0.0190383	0.0000802	0.0000802	6.5386241	0.0212002	0.0190383	0.0000802	146.8708877	0.3743594	99.4	1688.1	2.8	12.816	0.042
10007-01 I	148.8490220		0.1569822	0.0186692	0.0000413	0.0186692	0.0000413	0.0000413	6.2109710	0.0096987	0.0025918	0.0000134	149.2228413	0.1583734	99.8	1705.6	1.2	12.174	0.019
Sample 62b-2																			
J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$																			
10007-02 A	114.0357465		3.3596272	0.0340710	0.0010397	0.0340710	0.0010397	0.0010397	7.9381346	0.2283658	0.0800238	0.0022689	91.5271501	3.1456616	79.8	1218.9	30.5	15.559	0.448
10007-02 B	-222.1361781		15.8122441	0.0516605	0.0038325	0.0516605	0.0038325	0.0038325	4.9936959	0.4119306	0.2029801	0.0143491	-282.7000318	19.9986674	126.8	-	-192.0	9.788	0.807
10007-02 C	117.3807062		0.5226427	0.0195371	0.0001271	0.0195371	0.0001271	0.0001271	4.9786253	0.0311392	0.0102348	0.0000725	115.1519309	0.5148778	97.8	1434.3	4.4	9.758	0.061
10007-02 D	137.4883395		0.3156157	0.0189768	0.0000724	0.0189768	0.0000724	0.0000724	5.7908522	0.0172507	0.0050310	0.0000298	137.0151159	0.3160390	99.3	1613.0	2.5	11.350	0.034
10007-02 E	141.6905187		0.1621268	0.0182463	0.0000467	0.0182463	0.0000467	0.0000467	6.0574000	0.0128554	0.0030685	0.0000151	141.8642290	0.1633052	99.7	1650.3	1.2	11.873	0.025

Table DR2 (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of amphibole samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 62b-2															
J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$															
10007-02 F	144.2806404	0.1179248	0.0183704	0.0000361	5.8485399	0.0082638	0.0183704	0.0000361	144.6574110	0.1190620	99.9	1671.5	0.9	11.463	0.016
10007-02 G	147.5581004	0.1669089	0.0180197	0.0000438	6.3415800	0.0109047	0.0033123	0.0000154	147.7363311	0.1681712	99.7	1694.6	1.3	12.429	0.021
10007-02 H	145.8401825	0.1114640	0.0177045	0.0000317	6.7663868	0.0082709	0.0025200	0.0000106	146.3233678	0.1128145	99.9	1684.0	0.8	13.262	0.016
10007-02 I	148.6016840	0.0800867	0.0183558	0.0000271	6.3483059	0.0068419	0.0020294	0.0000069	149.1666049	0.0812923	99.9	1705.2	0.6	12.443	0.013
Sample 65-1															
J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$															
10010-01 A	262.8959942	6.9613312	0.0792339	0.0021279	3.8439587	0.1007436	0.3056177	0.0075874	173.3562310	6.8326768	65.8	1875.8	46.0	7.534	0.197
10010-01 B	156.4146825	0.6399937	0.0440272	0.0002094	5.6590745	0.0272505	0.0419040	0.0001958	145.0562882	0.5967988	92.4	1674.6	4.5	11.092	0.053
10010-01 C	144.0459879	0.2252929	0.0408747	0.0000931	5.8455112	0.0119781	0.0099844	0.0000319	142.1419932	0.2236060	98.3	1652.6	1.7	11.457	0.023
10010-01 D	144.3333515	0.1571404	0.0378121	0.0000703	5.5146873	0.0099918	0.0077213	0.0000237	143.0421756	0.1567144	98.7	1659.4	1.2	10.809	0.020
10010-01 E	143.6754752	0.1387652	0.0363955	0.0000608	6.0641791	0.0094021	0.0057437	0.0000193	143.0671092	0.1391788	99.2	1659.6	1.1	11.886	0.018
10010-01 F	149.2389207	0.1147049	0.0387718	0.0000609	5.9356055	0.0086587	0.0056135	0.0000142	148.6693881	0.1151844	99.2	1701.6	0.9	11.634	0.017
10010-01 G	144.8401084	0.1125708	0.0359420	0.0000501	5.1985764	0.0067341	0.0056727	0.0000155	144.1012709	0.1128155	99.1	1667.4	0.9	10.189	0.013
10010-01 H	152.3732525	0.1694615	0.0375412	0.0000670	6.0797039	0.0101894	0.0060376	0.0000201	151.7175196	0.1698291	99.1	1724.0	1.2	11.916	0.020
10010-01 I	247.8811285	21.8503984	0.0552627	0.0049191	10.6069119	0.9358871	0.0541155	0.0047999	234.4680348	20.8948221	93.9	2246.2	114.5	20.790	1.834
Sample 65-2															
J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$															
0010-02 A1	231.5421569	5.0131523	0.0454724	0.0010199	2.9190172	0.0630585	0.1226015	0.0024206	195.9443306	5.0761389	84.5	2021.7	31.5	5.721	0.124
10010-02 B	151.6481900	0.1794448	0.0398022	0.0000750	4.9209368	0.0097324	0.0126660	0.0000318	148.8093443	0.1770492	97.8	1702.6	1.3	9.645	0.019
10010-02 C	148.2400451	0.1594554	0.0401218	0.0000705	5.8251185	0.0097728	0.0077711	0.0000236	147.0061377	0.1591472	98.8	1689.2	1.2	11.417	0.019
10010-02 D	147.6045892	0.1440133	0.0412633	0.0000649	5.8679332	0.0091298	0.0054932	0.0000218	147.0520022	0.1444648	99.2	1689.6	1.1	11.501	0.018

Table DR2 (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of amphibole samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_k$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 65-2 J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$															
10010-02 E	149.8832964	0.1159430	0.0409248	0.0000565	5.8987875	0.0079511	0.0057712	0.0000146	149.2631891	0.1163513	99.2	1706.0	0.9	11.562	0.016
10010-02 F	151.2410488	0.1278155	0.0412584	0.0000612	5.9380335	0.0091977	0.0054667	0.0000175	150.7241311	0.1283247	99.2	1716.8	0.9	11.639	0.018
10010-02 G	149.0892568	0.1930492	0.0411840	0.0000810	5.5049952	0.0112914	0.0044149	0.0000185	148.7959203	0.1936617	99.4	1702.5	1.4	10.790	0.022
10010-02 H	144.2052822	0.1048219	0.0402481	0.0000567	5.7475295	0.0078471	0.0040806	0.0000137	144.0360631	0.1055274	99.5	1666.9	0.8	11.265	0.015
10010-02 I	142.4584555	0.1096562	0.0397062	0.0000614	6.0530523	0.0088179	0.0039994	0.0000142	142.3610603	0.1104693	99.5	1654.2	0.8	11.864	0.017
Sample 68-1 J value = $1.055\text{E}^{-2} \pm 2.9\text{E}^{-6}$															
10011-01 A	93.5694916	17.3873985	0.0313729	0.0059048	6.0811651	1.1354734	0.0978563	0.0182074	65.4139777	12.3289063	69.9	946.4	138.8	11.919	2.226
10011-01 B	284.5566248	134.0467009	0.1074228	0.0506783	11.8475168	5.5879365	0.3485717	0.1642188	184.0169770	87.5977028	64.1	1945.8	566.7	23.221	10.952
10011-01 C	163.0023664	25.2597525	0.0455621	0.0071271	5.4878655	0.8550437	0.1458378	0.0226068	120.8058803	19.9847508	73.8	1482.0	158.8	10.756	1.676
10011-01 D	109.1422515	13.2966816	0.0348326	0.0043041	3.9238652	0.4827490	0.1017038	0.0123984	79.6186646	9.9011863	72.8	1099.7	102.4	7.691	0.946
10011-01 E	123.4981994	12.3509805	0.0332115	0.0033859	4.4295814	0.4458720	0.0921112	0.0092224	96.9308669	9.8937762	78.2	1270.3	93.1	8.682	0.874
10011-01 F	144.4132231	9.7996546	0.0343946	0.0023889	5.4005386	0.3675845	0.0789026	0.0053489	121.9863967	8.4936692	84.2	1491.9	70.7	10.585	0.720
10011-01 G	106.7319358	4.6015202	0.0321261	0.0014221	5.8730361	0.2516720	0.0610041	0.0026008	89.5399727	4.0972001	83.6	1199.4	40.1	11.517	0.493
10011-01 H	131.1973264	3.3273006	0.0298264	0.0007951	6.8732363	0.1669853	0.0369984	0.0009028	121.3931142	3.2753902	92.1	1486.9	27.3	13.472	0.327
10011-01 I	146.3870865	0.3858623	0.0211064	0.0000779	6.0514396	0.0192223	0.0039630	0.0000294	146.3144335	0.3874965	99.5	1683.7	2.9	11.861	0.038
10011-01 J	142.2220221	0.5474210	0.0206259	0.0001087	6.1530105	0.0267626	0.0038157	0.0000385	142.1936533	0.5498466	99.6	1652.6	4.2	12.060	0.052
10011-01 K	141.7292138	0.5360396	0.0200787	0.0001007	6.1004381	0.0265532	0.0034532	0.0000365	141.7968167	0.5387571	99.6	1649.6	4.1	11.957	0.052
10011-01 L	140.6256419	0.6031297	0.0202982	0.0001117	5.9744619	0.0292794	0.0035158	0.0000400	140.6475427	0.6059119	99.6	1640.8	4.6	11.710	0.057

Table DR2 (continued). Ar isotopic ratios, J values, apparent ages, and Ca/K ratios of amphibole samples.

Lab ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{38}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{37}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{36}\text{Ar}/^{39}\text{Ar}$	$\pm 1\sigma$	$^{40}\text{Ar}^*/^{39}\text{Ar}_K$	$\pm 1\sigma$	^{40}Ar [%]	Age [Ma]	$\pm 1\sigma$	Ca/K	$\pm 1\sigma$
Sample 68-2															
J value = $1.055\text{E}-2 \pm 2.9\text{E}-6$															
10011-02 A	97.0465492	17.6245828	0.0368829	0.0067670	7.6981759	1.4017752	0.1097316	0.0199546	65.5857388	12.1219441	67.2	948.4	136.3	15.088	2.747
10011-02 B	150.0321611	29.5954603	0.0549798	0.0109094	8.6949659	1.7174391	0.1741657	0.0343546	99.8638869	20.0325033	66.2	1297.7	185.6	17.042	3.366
10011-02 C	131.9607359	8.1550997	0.0390428	0.0024612	5.1540385	0.3191724	0.1142428	0.0070057	98.9676242	6.4913474	74.7	1289.4	60.4	10.102	6.626
10011-02 D	133.8160219	2.4038977	0.0262558	0.0004966	6.9181602	0.1116727	0.0253452	0.0004188	127.4918434	2.4598149	94.8	1537.1	20.0	13.560	0.219
10011-02 E	140.6928815	2.0547081	0.0244617	0.0003797	6.7751600	0.0830847	0.0140029	0.0001894	137.7446035	2.1129030	97.4	1618.5	16.4	13.279	0.163
10011-02 F	146.7987154	0.9519765	0.0220340	0.0001774	6.3768659	0.0439062	0.0098295	0.0000964	145.0459226	0.9451073	98.4	1674.2	7.1	12.499	0.086
10011-02 G	144.8208667	0.8947270	0.0210906	0.0001582	7.0266447	0.0475532	0.0072552	0.0000732	143.9406914	0.8938982	98.9	1665.9	6.8	13.772	0.093
10011-02 H	146.7535205	0.6701424	0.0209116	0.0001239	6.5952930	0.0331688	0.0054891	0.0000542	146.3286158	0.6715152	99.3	1683.9	5.0	12.927	0.065
10011-02 I	148.4036917	0.4187769	0.0207846	0.0000860	6.2089545	0.0210619	0.0034910	0.0000342	148.5085548	0.4211003	99.6	1700.1	3.1	12.170	0.041
10011-02 J	147.3056087	0.3801323	0.0206715	0.0000802	6.1608193	0.0189738	0.0038292	0.0000317	147.2964126	0.3819655	99.6	1691.1	2.8	12.075	0.037
10011-02 K	146.6545071	0.3688037	0.0206292	0.0000810	6.4799203	0.0194297	0.0041364	0.0000295	146.6096526	0.3705808	99.5	1686.0	2.8	12.701	0.038
10011-02 L	146.8321344	0.2982965	0.0207987	0.0000699	6.4590492	0.0168130	0.0037502	0.0000238	146.8989229	0.3000120	99.6	1688.1	2.2	12.660	0.033
10011-02 M	148.0063365	0.2709929	0.0206487	0.0000637	6.5371177	0.0147238	0.0038148	0.0000323	148.0735449	0.2726104	99.6	1696.9	2.0	12.813	0.029
10011-02 N	148.3693564	0.0764401	0.0199596	0.0000287	6.3260329	0.0074468	0.0029001	0.0000096	148.6708680	0.0775596	99.8	1701.3	0.6	12.399	0.015
10011-02 O	147.5721855	0.0911492	0.0198692	0.0000306	7.5536886	0.0086725	0.0037423	0.0000116	147.8452616	0.0925397	99.7	1695.2	0.7	14.805	0.017
10011-02 P	147.2446867	0.0758547	0.0199546	0.0000295	6.4935584	0.0069566	0.0030411	0.0000095	147.5300557	0.0769959	99.7	1692.8	0.6	12.727	0.014

In bold font, steps are included in the age spectra.