GSA Data Repository for Kelly et al., 2013

List of Contents of Data Repository

Kelly et al., 2013 Data Repository
Introduction - $^{40}Ar/^{39}Ar$ results and data quality assessment

A total of 99 samples were dated at the New Mexico Geochronology Research Laboratory for this study. These include 45 groundmass concentrates, 3 obsidians, and mineral separates of biotite (21), hornblende (7), plagioclase (7), and sanidine (16). All of the sanidine separates, one biotite, and one hornblende were analyzed by single-crystal laser-fusion. The remaining samples were analyzed by incremental heating, either using a resistance furnace (71 samples) or CO2 laser (10 samples). Results are summarized in Table 1, and analytical data and methods are detailed in Tables 2 and Figure 1. The following sections briefly discuss the quality of results. The age determinations are informally divided into three different levels of quality. This division is only qualitative, but may be useful in identifying which age determinations are likely to be the most accurate.

Resistance-furnace incremental-heating analyses

Sixty-nine of the 71 incrementally heated samples yielded age spectra with reasonably flat central segments, in many cases preceded or followed by discordant initial or final steps. Most of the discordant initial steps have low radiogenic yields (<5%) and very poor precision. These initial discordant steps reflect degassing of abundant atmospheric argon, probably adsorbed to samples surfaces or contained in low-degassing-temperature phases such as hydrated glass or clay. Anomalous high temperature steps also tend to have low radiogenic yields and poor precision, probably reflecting degassing of low-K phases such as pyroxene, together with components of increased blank from the resistance furnace apparatus at high temperature. The majority of the step-heated hornblende separates released most of their radiogenic argon in one or two steps, reflecting catastrophic degassing following released of structural water.

K/Ca values of groundmass concentrates (calculated for each step from the ratio of K-derived ^{39}Ar to Ca derived ^{37}Ar) tend to decrease during the course of each step-heating analysis, as low-temperature degassing of relatively K-rich plagioclase and glass is supplanted by high-temperature degassing of K-poor pyroxenes.

Weighted-mean plateau ages were calculated from the flat central parts of each age spectra that met or closely approached plateau criteria (three or more consecutive steps differing in age by less than 2 sigma and containing more than 50% of the total ^{39}Ar). Although the plateau ages for nearly all of the samples are interpreted as accurate determinations of eruption age, there is some variation in quality within the data set. The "quality" column in Table 1 informally divides the data set into three categories:

Quality 1: Fifty three of the 71 incrementally heated samples are rated as "Quality 1" because they have relatively concordant age-spectra and plateau ages with 2σ analytical uncertainties < ± 0.3 Ma. These Quality 1 samples include 21 groundmass concentrates, 17 biotites, 5 hornblendes, 2 plagioclase, and one obsidian (Table 1). Nearly all of the Quality 1 samples high radiogenic yields (50-100% for one or more steps), precise individual step ages (some steps from each analysis have analytical uncertainties ±0.05 Ma or better), and relatively flat plateau segments (MSWD typically <3). Integrated ages from most Quality 1 samples closely agree with plateau ages. Isochrons plotted from Quality 1 data yield isochron intercept ages that are not statistically distinct from the plateau ages, and $^{40}Ar/^{36}Ar$ intercepts that agree within uncertainty with the atmospheric value of 295.5 (Table 2). Quality 1 data are quite robust and relatively insensitive to which analytical steps are included in the plateau. The plateau ages of Quality 1 samples are considered to be accurate determinations of eruption age.

Quality 2: Sixteen of the 71 incrementally heated samples are rated as "Quality 2" because they have less precise plateau ages (2σ analytical uncertainties < ± 0.3 Ma) and/or somewhat discordant age spectra. These Quality 2 samples include 8 groundmass concentrates, 4 biotites, 3 plagioclases, and one hornblende (Table 1). Many of the individual steps have low radiogenic yields (<50%), less precise step ages (typically ± 0.1 Ma or worse), and sufficient discordance to limit the width of age plateaus. In some cases integrated ages differ significantly from plateau ages. Isochrons plots for these samples are variable. Some have concordant isochron ages with near-atmospheric intercepts. In other cases isochrons are poorly defined and have very high very high MSWD values (>>10) (Table 2, Figure 1). The plateau ages of Quality 2 samples are considered to be relatively accurate determinations of eruption age, although in some cases these plateau ages are somewhat sensitive to which analytical steps are included in the plateau.

Quality 3: Two samples, both from rhyolite at Cerro Palado, yielded discordant age spectra that failed to satisfy plateau criteria. Obsidian from sample 59 (Tables 1 and 2, Figure 1) yielded a climbing age spectrum with very low radiogenic yields. Groundmass from sample 60 has higher radiogenic yields, but the age spectrum declines. Isochrons from both analyses are scattered and fail to form well-defined linear arrays. Integrated ages provide rough estimates of eruption age for these two samples.

Laser-fusion analyses

Quality 1: Of the 18 samples analyzed by single-crystal laser fusion, 17 (16 sanidines and one biotite) are rated as "Quality 1", because individual crystal ages are precise, and the majority of single-crystal ages are tightly grouped in near-Gaussian unimodal distributions (MSWD near 1) (Figure 1, Tables 1 and 2). In some cases, crystals with tightly grouped ages are accompanied by anomalously old or young crystals. The anomalous old crystals are interpreted as inherited grains, either xenocrysts incorporated at the time of eruption, or detrital grains incorporated later. Some of the anomalously young crystals have low K/Ca values indicating a plagioclase composition.

Other anomalously young crystals have very low signals due to small crystal size, or low radiogenic yields possibly due to alteration. Weighted-mean ages and errors were calculated for the unimodally distributed ages from each sample, excluding anomalously old ages from inherited grains. The weighted-mean ages for the 16 Quality 1 samples are interpreted as accurate determinations of eruption ages.

Quality 2: The age determination for one sample (hornblende sample number 9) is rated as "Quality 2", because of its large uncertainty (± 0.4 Ma). Although all of the ages form a near-Gaussian unimodal distribution, the uncertainties in analyses of individual grains is large, predominantly due to low radiogenic yields of many of the analyzed crystals. In spite of the relatively low precision of the age determination, the weighted mean age is interpreted as an accurate eruption age.

Description and interpretation of $^{40}Ar/^{39}Ar$ dates collected within the Valles caldera

Bandelier Tuff, Otowi Member

Several samples of the Otowi Member of the Bandelier Tuff were collected from various places around the caldera to confirm identification of this unit. The Otowi Member radically changes thickness and appearance toward the northeast because the Tschicoma Formation domes blocked deposition in that direction. Guaje Pumice Bed crystal-rich tephra is up to 15 m thick in places on El Alto Mesa and Mesa de Abiquiu and in some places the pumice is capped by <0.5 m of lithic-rich Otowi Member ignimbrite. We confirmed this interpretation by dating sanidine from the pumice and ignimbrite in two places, one on El Alto Mesa and one north of Oso Canyon (1.55 ± 0.03 and 1.66 ± 0.03 Ma, respectively A1, A2, Table 1).

In contrast, the Otowi Member is exceptionally thick in the southeastern Jemez Mountains near upper Frijoles, upper Alamo, Pines and Spruce canyons where the ignimbrite fills a paleocanyon developed in Keres Group volcanic rocks. In this area the Otowi Member has a well-developed vapor-phase notch that is not observed in this unit on the east side of the caldera, although a vapor-phase notch is a fundamental characteristic of the Tshirege Member on the Pajarito Plateau. To verify identification of the thick Otowi in this area, two samples were dated from the top of the ignimbrite just below the widespread block-and-ash flow originating from Rabbit Mountain. Ages of 1.59 ± 0.04 Ma (east edge, Pines Canyon, A3, Table 1) and 1.68 ± 0.03 Ma (Obsidian Ridge in upper Alamo Canyon, A4, Table 1) confirm that the dated samples are from the Otowi Member.

Another sample of tuff was collected from the northwestern margin of the Valles caldera moat at a location where Otowi Member and younger ring-dome tuffs (e.g, ca. 0.8 Ma Cerro Seco tuff) are exposed and relations with the Tshirege Member are unclear because of colluvial cover. The ignimbrite sample is lithic-rich and slightly silicified. The date of 1.59 ± 0.03 Ma confirms that the tuff is Otowi Member (A6, Table 1).

Cerro Toledo Formation

A newly discovered rhyolite intrusive in the northeastern wall of the Valles caldera (Gardner et al., 2006) yields a 1.61 ± 0.03 Ma sanidine $^{40}Ar/^{39}Ar$ age (A8, Table 1) and is interpreted to be Valle Toledo Member rhyolite of the Cerro Toledo Formation (Gardner et al., 2010).

A sample of tuff was also dated from an ignimbrite section in upper Frijoles Canyon. In this area, a discontinuous layer of Rabbit Mountain Rhyolite block-and-ash flow separates the Otowi and overlying Tshirege Members along the southern wall of the canyon. A block of Rabbit Mountain Obsidian from a block-and-ash flow on Obsidian Ridge yields a date of 1.44±0.01 Ma (A7, Table 1). Where the block-and-ash flow deposit is not present, a poorly exposed contact separates the Otowi and Tshirege Members. The dated sample A5 (Table 1) comes from a zone containing conspicuous gas escape pipes below the contact. Two sanidine age populations are present. The first yields an age of 1.40 ± 0.06 Ma, which correlates in age to Cerro Toledo Formation (Fig. 5). Two grains are ca. 1.6 Ma; Otowi Member grains often contaminate Cerro Toledo Formation samples (Gardner et al., 2010). Thus, a thin deposit of Cerro Toledo ignimbrite appears to be present here.

Bandelier Tuff, Tshirege Member

Large blocks of tuff capping a hill known as Cerrito Negro on Zia Pueblo on the southwestern margin of the JMVF were collected to identify the source of the car-sized blocks. The date of 1.26±0.02 Ma (A9, Table 1) confirms that the blocks are Tshirege Member of the

Bandelier Tuff. Smith and Bailey (1968) argued that the Valles caldera wall was breached and Cañon de San Diego formed within 100 ka of the eruption of the Tshirege Member, when a post-caldera lake drained as the resurgent dome rose. These blocks, which are 10 km from the nearest preserved outcrops of Tshirege Member, have been cited as evidence of catastrophic flooding of Canon de San Diego (Formento-Trijilio and Pazzaglia., 1998).

Early Valles caldera rhyolites

Eruption of the Deer Canyon and Redondo Creek rhyolites, the first two members of the post-caldera Valles Rhyolite Formation (Gardner et al., 2010) occurred before and/or during structural resurgence of the Valles caldera following eruption of the Tshirege Member. Phillips et al. (2007) conducted a detailed geochronological study of early Valles Rhyolite lavas and concluded that resurgence was completed at 27 ± 27 ka after caldera formation. Because exposures of early rhyolite generally show moderate to extreme hydrothermal alteration, a few key, fresh samples were dated to support the resurgent dome mapping (Goff et al., 2005a; Goff et al., 2005b).

Porphyritic Deer Canyon rhyolite lava (A10, Table 1) overlies early, post-caldera sedimentary deposits and Tshirege Member on the faulted and deformed southwest nose of Redondo Border (RB, Fig. 2), a ridge located west of Redondo Creek (RC, Fig. 2). The date of 1.25 ± 0.03 Ma is essentially identical to the most recent age determination of the Tshirege Member (1.25 ± 0.01 Ma, Phillips et al., 2007), indicating that early sediments and Deer Canyon lavas were emplaced immediately after the caldera formed. Sample A11 (Table 1) is porphyritic Redondo Creek rhyolite lava from a ridge south of Alamo Canyon (AC, Fig. 2) previously mapped as Bandelier Tuff (Smith et al., 1970). The sample site appears to be an eroded vent, one of many vents and flows for the Redondo Creek Member (Goff et al., 2005a; Kelley et al, 2004; Goff et al., 2005b). The age of the sample is 1.23 ± 0.02 Ma, within the range of other Redondo Creek samples (1.21 to 1.24 Ma) reported in Phillips et al. (2007). Finally, sample A12 (Table 1) is from a lava at the type locality of Redondo Creek Member rhyolite at the head of Redondo Creek (RC, Fig. 2) in the approximate center of the apical graben of the Valles resurgent dome. The type locality represents yet another eroded and faulted dome and flow complex of the Redondo Creek Member. The age of 1.24 ± 0.03 Ma is also within the range of other Redondo Creek samples mentioned above.

Valles Rhyolite Ignimbrites

Pyroclastic flow deposits associated with Valles Rhyolite eruptions were originally recognized by Smith et al. (1970) and mapped in detail by Gardner et al. (2006) and Goff et al. (2005b). The southern part of the Cerro Santa Rosa dome complex (0.91 to 0.94 Ma; Spell and Harrison, 1993; Singer and Brown, 2002) erupted crystal-rich rhyolite fall and ignimbrite deposits that are locally preserved around the complex. The ignimbrite underlies sediments and lava flows beneath Cerro San Luis to the west of Cerro Santa Rosa and is dated at 0.91 ± 0.03 Ma (A13, Table 1).

A radial apron of hydromagmatic tephra and underlying ignimbrite flanks the northwest and north sides of Cerro Seco rhyolite dome (0.80 Ma; Spell and Harrison, 1993) in the northwestern caldera moat (Goff et al., 2005b). The pyroclastic units are thickest near the dome and thin away from the dome. Goff et al. (2007) showed that Cerro Seco lava and pumice chemistry are identical. Sanidine from a large pumice lapillus in the ignimbrite is dated at 0.77 ± 0.03 Ma (A15, Table 1), whereas sanidine from crushed pumice in the hydromagmatic deposit is dated at 0.78 ± 0.04 Ma (A14, Table 1).

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Data Repository Table 1. Summary of $^{40}Ar/^{39}Ar$ results.

#	Name	Lab_Number	Unit	Latitude	Longitude	analysis	mineral	quality	Age(Ma)	2sigma
1	P-20	55561-01	volcanic clast in Hernandez Mbr.	36.1157	-106.4906	FSH	gm	2	29.29	0.50
2	CM27	56729-02	dike, NE of Cañones Mesa	36.217	-106.378	FSH	gm	2	19.72	0.33
3	04Y09	56149-01	basalt intrusion, Encino Pt.	36.133	-106.540	FSH	gm	2	18.94	0.33
3	04Y09	56149-02	basalt intrusion, Encino Pt.	36.133	-106.540	FSH	gm	2	19.00	0.35
4	01-PON-11a	53099-01	lowest basalt, Borrego Mesa	35.669	-106.635	FSH	gm	2	9.39	0.31
5	01-PON-12	53100-01	lowest basalt, Borrego Mesa	35.668	-106.635	FSH	gm	1	9.45	0.22
6	05BSP01	55553-01	lower basalt, Paliza Canyon	35.732	-106.595	FSH	gm	1	9.43	0.14
7	05BSP02	55540-01	upper basaltic andesite,Paliza Canyon	35.732	-106.596	FSH	gm	1	9.37	0.12
8	F04-13	55537-01	old basalt	35.754	-106.613	FSH	gm	1	9.45	0.07
9	05BSP03	55534	Canovas Canyon Rhyolite tuff	35.731	-106.599	SCLF	hb	2	9.22	0.36
10a	01-PON-1	53114-01	Canovas Canyon Rhyolite plug	35.670	-106.635	FSH	bi	1	9.47	0.13
10b	01-PON-2	53115-01	Canovas Canyon Rhyolite plug	35.670	-106.635	FSH	bi	1	9.49	0.18
11	01-PON-4	53116-21	Canovas Canyon Rhyolite tephra	35.668	-106.634	FSH	bi	2	9.80	0.51
12	02-B66	54117-01	Canovas Canyon Rhyolite	35.650	-106.574	FSH	bi	1	9.79	0.09
13	K-7-5	54047-01	Canovas Canyon Rhyolite	35.677	-106.528	FSH	bi	1	9.54	0.16
14	K-8-2	54121-01	Bodego Butte basalt	35.665	-106.602	FSH	gm	1	9.11	0.13
15	02-B45	54120-01	Oldest basalt flow in Hondo Canyon	35.694	-106.573	FSH	gm	1	9.58	0.08
16	F04-19	55532-01	Los Griegos hornblende dacite	35.794	-106.557	FSH	hb	2	8.53	0.63
17	F05-81	56301-01	dacite dome SW Rabbit Mtn.	35.827	-106.473	FSH	hb	1	8.66	0.22
18	Ancha	6049-01	pumice Ancha Canyon	35.811	-106.154	FSH	hb	1	8.66	0.26
19	V-9	55550-01	Los Cerritos dacite	36.032	-106.280	FSH	gm	1	9.80	0.15
20	V-11	55533	Lobato Fm dacite, Rio del Oso	36.038	-106.299	SCLF	bi	1	10.45	0.05
21	V-3	55551-01	basalt S. of San Lorenzo	36.040	-106.285	FSH	gm	1	9.57	0.07
22	V-17	55497-01	sill and dike in Tesuque Fm.	36.075	-106.256	FSH	gm	1	9.73	0.21
23	04CM14	56790-01	basalt flow, Arroyo Frijoles	36.169	-106.376	FSH	gm	1	10.08	0.16
24	05GM05	55886-01	Paliza Canyon dacite, Guaje Cyn.	35.934	-106.292	FSH	gm	1	9.46	0.07
24	05GM05	55887-01	Paliza Canyon dacite, Guaje Cyn.	35.934	-106.292	FSH	pl	1	9.50	0.09
25	05GM13	56021-01	pumice in Puye, Guaje Canyon	35.932	-106.301	FSH	hb	1	4.01	0.21
26	FJ-430	54457-01	basalt clast in Paliza Canyon Fm.	35.879	-106.661	LSH	gm	1	9.00	0.13
27	FJ-403	54458-01	Paliza Canyon basalt	35.887	-106.671	LSH	gm	1	8.99	0.09
28	FJ-434	54459-01	basalt clast in Paliza Canyon Fm.	35.880	-106.662	LSH	gm	1	8.99	0.12
29	FJ-697-A	55178-01	Paliza Canyon basalt, Highway 126	35.886	-106.662	FSH	gm	1	8.98	0.28
30	SS-6-12-03-5	54460-01	Paliza Canyon andesite	35.886	-106.677	LSH	pl	1	8.26	0.09
31	SS-6-12-03-4	54446-25	dacite on Paliza Canyon andesite	35.886	-106.677	FSH	bi	1	4.36	0.07
32	04Y10	55837-01	andesite dike, Encino Pt.	36.134	-106.551	FSH	gm	1	7.99	0.09
32	04Y10	56791-01	andesite dike, Encino Pt.	36.134	-106.551	FSH	gm	1	7.94	0.10
33	04C5	56725-01	basalt base, Mesa Escoba	36.140	-106.499	FSH	gm	1	7.74	0.21
34	04C3	56724-01	basalt in bottom of Cañones Canyon	36.128	-106.484	FSH	gm	1	7.79	0.03
35	04C10-Top	56726-01	top flow, Mesa Escoba	36.148	-106.467	FSH	gm	1	7.90	0.08
36	CM21	56727-01	basalt near base, Polvadera Mesa	36.157	-106.422	FSH	gm	1	7.89	0.04
37	04CM23	55835-01	basalt near top, Polvadera Mesa	36.157	-106.423	FSH	gm	2	8.33	0.11
38	CM24	56728-01	uppermost basalt, Polvadera Mesa	36.157	-106.423	FSH	gm	2	8.22	0.13
39	9-17-03-1	55095-01	lower basalt, Cañones Canyon	36.103	-106.502	FSH	gm	1	8.75	0.06
40	9-17-03-2	55097-01	upper andesite, Cañones Canyon	36.103	-106.502	FSH	gm	1	7.42	0.13
41	P-25	55483-01	basalt in Cañones Canyon	36.110	-106.497	FSH	gm	1	8.11	0.11
42	9-19-03-1	55096-01	basalt in Cañones Canyon	36.077	-106.502	FSH	gm	1	8.17	0.08
43	P-27	55552-01	topmost basalt, E side Cañones	36.116	-106.490	FSH	gm	1	8.10	0.13
44	06VSA01	57204-01	andesite, NW wall caldera	35.999	-106.597	FSH	gm	1	7.70	0.07
45	06VSA02	57155-01	basalt below vsa01	35.998	-106.597	LSH	gm	1	7.80	0.13
46	CdG06-003	57167-01	basalt, S Cerro Pelon	36.004	-106.593	LSH	gm	1	7.79	0.09
47	9-15-3-2	55098-02	andesite, Four Hills	36.080	-106.519	FSH	pl	2	7.36	0.16
48	04CDG04	55161-01	Fine-grained andesite, Four Hills	36.060	-106.536	FSH	gm	2	6.51	0.21
49	03CDG-03	55091-01	trachyandesite, Cerro del Grant	36.025	-106.540	FSH	hb	1	7.68	0.04
50	Tophill 33	55088-01	dacite, Hill 33	36.008	-106.516	FSH	bi	1	7.27	0.06
51	04CDG5	55179-01	andesite, western base Hill 33	36.008	-106.524	FSH	gm	1	7.81	0.09
52	F05-194	56302-01	porphyritic dacite, Cerro de la Garita	35.994	-106.530	FSH	bi	1	7.61	0.07
53	F06-21	57201-01	dacite, Cerro de la Garita	35.996	-106.531	FSH	bi	1	7.34	0.14
54	F05-171	56297-01	middle dacite	35.991	-106.477	FSH	bi	1	7.58	0.05
55	JG05-9 supp	56306-01	rhyodacite (same unit as F05-171)	35.987	-106.476	FSH	bi	1	7.78	0.10
56	F05-178	56298-01	upper rhyodacite, N caldera wall	36.000	-106.488	FSH	bi	1	7.42	0.05
57	K-10-3	54116-01	Bearhead Rhyolite dome	35.737	-106.597	FSH	bi	2	6.51	0.48
58	K-7-31	54118	rhyolite east of Tres Cerros	35.693	-106.529	SCLF	san	1	6.90	0.28
59	F04-31	55538-01	rhyolite, Cerro Pelado	35.775	-106.545	FSH	obs	3	7.62	0.44
60	F04-32	55539-01	rhyolite, Cerro Pelado	35.773	-106.547	FSH	gm	3	7.83	0.26
61	Povp 2	55185	Cañon de la Mora rhyolite	36.015	-106.488	SCLF	san	1	7.09	0.13
62	JG05-14	56305-01	Bearhead Rhyolite (?) dike	35.982	-106.478	FSH	bi	1	4.81	0.04
63	P-13	55487-01	dacite, Cañoncito Seco	36.074	-106.483	FSH	bi	1	3.23	0.04
64	P-39	55562-01	dacite lower Chihuahueños Canyon	36.121	-106.465	FSH	gm	1	3.34	0.09
64	P-39	55486-01	dacite lower Chihuahueños Canyon	36.121	-106.465	FSH	pl	1	3.76	0.19
65	P3-11	55563-01	Enclave in Tt dacite	36.030	-106.466	FSH	gm	1	3.37	0.04
66	Povp 1	55184-01	andesite, W fork, Polvadera Creek	36.085	-106.465	FSH	bi	1	3.36	0.06
67	V-39	55490-01	Gallina flow	36.042	-106.341	FSH	bi	2	4.49	0.21
68	V-36	55485-01	dacite below Gallina flow	36.046	-106.336	FSH	gm	1	3.70	0.05
68	V-36	55491-01	dacite below Gallina flow	36.046	-106.336	FSH	pl	2	4.04	0.18
69	B04-10-25	55846-01	dacite, Cerro Pelon (east)	36.145	-106.405	FSH	bi	1	3.64	0.03
70	B04-10-22	55847-01	dacite, Cañones Mesa	36.146	-106.410	FSH	bi	1	3.71	0.05
71	V-14	55496-01	El Alto Basalt, Mesa de Abiquiu	36.103	-106.361	FSH	gm	1	2.87	0.02
72	F05-185	56300-01	Rhyodacite dome N. of Cerro Rubio	35.953	-106.400	FSH	bi	2	4.21	0.12

73	F05-156	56309-01	Rendija Canyon rhyodacite	35.910	-106.384	FSH	pl	2	3.50	0.23
74	F05-118	56303-02	Sawyer dome dacite	35.846	-106.439	FSH	hb	1	3.44	0.30
75	F08-68	58993-01	U Quemazon Canyon Dacite	35.926	-106.386	LSH	gm	1	2.87	0.05
76	F03-04	54474-01	Tschicoma dacite megabreccia	35.880	-106.544	LSH	gm	1	2.01	0.02
76	F03-04-2	54475-01	Tschicoma dacite megabreccia	35.880	-106.544	LSH	pl	1	2.20	0.05
77	F01-54	53296-01	El Rechuelos Rhyolite	36.049	2.000	FSH	obs	1	2.10	0.03
A1	V-13	55489	Otowi on Mesa de Abiquiu	36.113	-106.360	SCLF	san	1	1.55	0.03
A2	V15	56005	Otowi on Mesa de Abiquiu	36.077	-106.259	SCLF	san	1	1.66	0.03
A3	F05-133	56413	Otowi beneath Rabbit Mtn debris flow	35.794	-106.448	SCLF	san	1	1.59	0.04
A4	F05-123	56261	Otowi beneath Rabbit Mtn debris flow	35.806	-106.401	SCLF	san	1	1.70	0.02
A5	F05-135	56414	Otowi in upper Frijoles Can	35.833	-106.415	SCLF	san	1	1.40	0.06
A6	F05-150	56264	Otowi from NW caldera	35.967	-106.610	SCLF	san	1	1.59	0.03
A7	Rabbit Mtn. Obs.	53930-02	Rabbit Mtn obsidian, Obsidian Ridge	35.828	-106.455	LSH	obs	1	1.44	0.01
A8	F05-177	56262	Cerro Toledo dike	36.000	-106.486	SCLF	san	1	1.61	0.03
A9	Cerrito Negro	9486	Tshirege blocks on Cerrito Negro	35.571	-106.725	SCLF	san	1	1.26	0.02
A10	F03-14b	54479	Deer Canyon lava	35.869	-106.605	SCLF	san	1	1.25	0.025
A11	F03-52	54477	Redondo Ck Rhyolite	35.914	-106.592	SCLF	san	1	1.23	0.02
A12	F03-53	54478	Redondo Ck Rhyolite type locality	35.900	-106.564	SCLF	san	1	1.24	0.028
A13	F03-50	54476	Cerro Santa Rosa ignimbrite	35.954	-106.525	SCLF	san	1	0.92	0.02
A14	JG05-15C	56304	Cerro Seco hydromagmatic tuff	35.965	-106.592	SCLF	san	1	0.78	0.04
A15	F05-137	56412	Pumice in Cerro Seco Ignimbrite	35.965	-106.592	SCLF	san	1	0.77	0.03

Notes:

Analysis abbreviations: FSH = furnace step heating, LSH = laser step heating, SCLF = single-crystal laser-fusion

Mineral abbreviations : san = sanidine, gm = groundmass concentrate, bi = biotite, hb = hornblende, pl = plagioclase, obs = obsidian

Data Repository Table 2. $^{40}Ar/^{39}Ar$ analytical data.

	ID	Temp (°C or watts)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$ (x 10^{-3})	$^{39}Ar_K$ (x 10^{-15} mol)	K/Ca	$^{40}Ar^*$ (%)	^{39}Ar (%)	Age (Ma)	±1σ (Ma)
	1) P-20, Groundmass Concentrate, 77.04 mg, J=0.0007358±0.10%, D=1.0055±0.001, NM-187a, Lab#=55561-01, FSH										
xi	A	625	856.9	7.085	2886.0	2.6	0.072	0.5	0.4	6.3	4.8
xi	B	700	24.42	0.2944	16.82	38.0	1.7	79.7	6.0	25.670	0.062
	C	750	23.05	0.2190	2.859	11.1	2.3	96.4	7.7	29.268	0.065
	D	800	23.49	0.2109	1.646	131.1	2.4	98.0	27.1	30.305	0.060
	E	875	22.81	0.1654	1.126	211.0	3.1	98.6	58.3	29.612	0.040
	F	975	22.71	0.1861	2.075	151.6	2.7	97.4	80.8	29.124	0.042
	G	1075	24.64	0.3420	11.10	57.1	1.5	86.8	89.3	28.172	0.060
	H	1250	33.50	1.567	40.95	65.4	0.33	64.3	98.9	28.39	0.11
	I	1700	44.16	9.332	77.57	7.11	0.055	49.8	100.0	29.18	0.22
	Integrated age ± 2σ			n=9		675.0	1.1	K2O=4.57%		29.08	0.13
	Plateau ± 2σ	steps C-I		n=7	MSWD=130.90	634.434	2.390±2.382		94.0	**29.29**	**0.50**
	Isochron±2σ	steps C-I		n=7	MSWD=124.81		$^{40}Ar/^{36}Ar$=	277.0±3.0		29.44	0.08
	2) CM27, Groundmass Concentrate, 51.28 mg, J=0.0013394±0.06%, D=1.002±0.001, NM-202E, Lab#=56729-02, FSH										
xi	A	625	306.4	1.267	992.0	6.52	0.40	4.4	8.3	32.1	2.9
xi	B	700	64.38	0.8753	186.6	5.29	0.58	14.4	14.9	22.34	0.66
xi	C	750	45.83	0.8087	126.8	2.91	0.63	18.4	18.6	20.26	0.52
xi	D	800	39.68	0.7682	108.6	1.21	0.66	19.3	20.2	18.42	0.75
xi	E	875	47.51	0.7497	130.0	8.07	0.68	19.3	30.4	22.01	0.50
	F	975	28.68	0.7674	68.83	11.5	0.66	29.3	44.9	20.17	0.26
	G	1075	14.65	0.9719	22.36	8.87	0.52	55.4	56.2	19.51	0.14
	H	1250	19.55	5.231	39.80	32.7	0.098	42.0	97.6	19.82	0.16
xi	I	1700	22.45	12.83	45.03	1.89	0.040	45.4	100.0	24.69	0.40
	Integrated age ± 2σ			n=9		79.0	0.17	K2O=0.44%		21.35	0.87
	Plateau ± 2σ	steps F-H		n=3	MSWD=2.86	53.1	0.29 ±0.59		67.2	**19.72**	**0.33**
	Isochron±2σ	steps F-H		n=3	MSWD=0.16		$^{40}Ar/^{36}Ar$=	301.7±5.3		19.21	0.48
	3) 04Y09, Groundmass Concentrate, 46.08 mg, J=0.0036296±0.15%, D=1.002±0.001, NM-194F, Lab#=56149-01, FSH										
xi	A	625	326.6	1.670	1091.3	19.4	0.31	1.3	6.1	27.9	8.8
	B	700	23.27	0.6774	68.62	26.0	0.75	13.1	14.3	19.85	0.63
	C	750	11.89	0.4930	30.04	13.9	1.0	25.6	18.7	19.83	0.40
	D	800	14.12	0.5408	37.88	58.9	0.94	21.0	37.2	19.30	0.35
	E	875	18.77	0.8601	53.43	62.1	0.59	16.3	56.7	19.87	0.48
	F	975	9.809	1.272	23.52	61.4	0.40	30.2	76.1	19.26	0.24
	G	1075	4.808	1.075	6.827	68.6	0.47	59.8	97.7	18.70	0.10
	H	1250	7.965	12.36	20.05	2.99	0.041	38.2	98.6	19.97	0.89
xi	I	1700	11.26	13.12	29.07	4.47	0.039	33.2	100.0	24.48	0.71
	Integrated age ± 2σ			n=9		317.8	0.42	K2O=0.73%		19.9	1.6
	Plateau ± 2σ	steps B-H		n=7	MSWD=3.37	293.9	0.62 ±0.68		92.5	**18.94**	**0.33**
	Isochron±2σ	steps B-H		n=7	MSWD=0.78		$^{40}Ar/^{36}Ar$=	299.3±1.9		18.58	0.26
	3) 04Y09, Groundmass Concentrate, 33.55 mg, J=0.0036296±0.15%, D=1.002±0.001, NM-194F, Lab#=56149-02, FSH										
xi	A	625	355.6	1.254	1198.6	10.4	0.41	0.4	3.7	9.9	9.6
	B	700	20.23	0.6507	58.09	19.6	0.78	15.4	10.6	20.26	0.52
	C	750	12.39	0.5038	31.82	18.5	1.0	24.4	17.1	19.66	0.34
	D	800	13.02	0.5278	33.89	18.1	0.97	23.4	23.4	19.83	0.34
	E	875	17.16	0.7843	47.74	39.3	0.65	18.1	37.2	20.28	0.43

	F	975	10.70	1.210	26.39	37.5	0.42	28.0	50.4	19.50	0.27
	G	1075	4.890	0.9979	7.080	41.9	0.51	58.8	65.2	18.71	0.10
	H	1250	7.497	6.383	17.35	88.2	0.080	38.5	96.2	18.87	0.16
	I	1700	10.52	15.91	29.98	10.7	0.032	28.1	100.0	19.47	0.38
	Integrated age ± 2σ			n=9		284.1	0.16	K2O=0.90%		19.0	1.1
	Plateau ± 2σ	steps B-I		n=8	MSWD=5.50	273.7	0.44 ±0.74		96.3	**19.00**	**0.35**
	Isochron±2σ	steps B-I		n=8	MSWD=0.26		$^{40}Ar/^{36}Ar$=	301.2±1.9		18.43	0.25

4) 01-PON-11a, Groundmass Cancentrate, 9.35 mg, J=0.0007582±0.10%, D=1.00712±0.00131, NM-151, Lab#=53099-01, FSH

xi	A	625	6104.1	6.495	20623.5	0.091	0.079	0.2	5.5	14.3	48.6
xi	B	700	13.60	4.341	20.46	0.249	0.12	58.2	20.5	10.82	0.41
	C	750	8.747	5.528	7.503	0.241	0.092	79.9	34.9	9.57	0.31
	D	800	8.154	3.958	5.774	0.298	0.13	83.1	52.9	9.27	0.23
	E	875	8.008	2.371	4.379	0.280	0.22	86.3	69.7	9.44	0.24
	F	975	8.369	1.915	4.411	0.204	0.27	86.3	82.0	9.87	0.33
	G	1075	9.203	2.979	11.21	0.103	0.17	66.7	88.2	8.39	0.69
	H	1250	15.79	26.46	41.17	0.126	0.019	36.8	95.7	8.08	0.71
	I	1720	60.59	41.99	194.5	0.071	0.012	10.9	100.0	9.3	1.9
	Integrated age ± 2σ			n=9		1.66	0.071	K2O=0.09%		9.8	6.2
	Plateau ± 2σ	steps C-I		n=7	MSWD=1.38	1.32	0.15 ±0.19		79.5	**9.39**	**0.31**
	Isochron±2σ	steps C-I		n=7	MSWD=1.53		$^{40}Ar/^{36}Ar$=	290.0±13.9		9.44	0.28

5) 01-PON-12, Groundmass Cancentrate, 12.63 mg, J=0.000772±0.10%, D=1.00712±0.00131, NM-151, Lab#=53100-01, FSH

xi	A	625	6252.5	3.505	21047.7	0.048	0.15	0.5	1.7	45.7	46.9
	B	700	23.87	2.630	59.26	0.215	0.19	27.5	9.5	9.15	0.55
	C	750	15.32	2.490	29.70	0.205	0.20	44.1	17.0	9.39	0.39
	D	800	11.23	2.891	14.47	0.367	0.18	64.1	30.3	10.01	0.21
	E	875	8.370	3.049	6.130	0.501	0.17	81.4	48.4	9.48	0.14
	F	975	7.834	3.445	4.380	0.499	0.15	87.1	66.6	9.50	0.14
	G	1075	8.519	2.263	7.446	0.340	0.23	76.4	78.9	9.05	0.19
	H	1250	13.62	12.54	27.42	0.365	0.041	48.1	92.1	9.19	0.28
xi	I	1725	22.34	24.56	54.88	0.216	0.021	36.5	100.0	11.52	0.49
	Integrated age ± 2σ			n=9		2.76	0.086	K2O=0.11%		10.2	2.1
	Plateau ± 2σ	steps B-H		n=7	MSWD=2.10	2.49	0.16 ±0.12		90.4	**9.45**	**0.22**
	Isochron±2σ	steps B-H		n=7	MSWD=2.50		$^{40}Ar/^{36}Ar$=	294.7±11.3		9.46	0.21

6) 05BSP01, Groundmass Concentrate, 77.28 mg, J=0.0007501±0.17%, D=1.0055±0.001, NM-187K, Lab#=55553-01, FSH

xi	A	625	4501.8	1.662	15092.4	1.4	0.31	0.9	0.6	56	26
	B	700	46.64	1.149	134.2	18.0	0.44	15.2	8.6	9.56	0.30
	C	750	24.10	1.304	57.08	10.1	0.39	30.5	13.1	9.91	0.28
	D	800	16.65	1.169	32.41	29.6	0.44	43.1	26.2	9.68	0.12
	E	875	9.575	0.9690	9.073	49.4	0.53	72.8	48.1	9.420	0.061
	F	975	9.683	1.016	9.256	47.7	0.50	72.6	69.3	9.498	0.058
	G	1075	13.20	0.5718	22.13	26.2	0.89	50.8	80.9	9.06	0.11
	H	1250	25.32	4.575	63.88	31.3	0.11	26.9	94.8	9.23	0.15
xi	I	1700	39.09	3.575	107.6	11.7	0.14	19.4	100.0	10.28	0.33
	Integrated age ± 2σ			n=9		225.4	0.31	K2O=1.49%		9.77	0.46
	Plateau ± 2σ	steps B-H		n=7	MSWD=3.7	212.3	0.48 ±0.46		94.2	**9.43**	**0.14**
	Isochron±2σ	steps B-H		n=7	MSWD=4.3		$^{40}Ar/^{36}Ar$=	296±5		9.43	0.21

7) 05BSP02, Groundmass Concentrate, 56.27 mg, J=0.000744±0.09%, D=1.0055±0.001, NM-187H, Lab#=55540-01, FSH

xi	A	625	2823.3	2.573	9503.9	0.9	0.20	0.5	0.9	20	18
	B	700	30.44	1.763	80.20	7.3	0.29	22.6	7.8	9.23	0.38
	C	750	15.03	1.806	27.56	4.9	0.28	46.8	12.4	9.44	0.44
	D	800	11.59	1.775	16.13	15.7	0.29	60.1	27.3	9.34	0.15

	E	875	9.187	1.454	7.587	16.9	0.35	76.9	43.3	9.47	0.13
	F	975	9.242	1.375	7.499	16.2	0.37	77.3	58.8	9.57	0.14
	G	1075	9.636	1.163	9.690	16.4	0.44	71.3	74.3	9.20	0.14
	H	1250	15.19	6.132	29.62	19.4	0.083	45.7	92.8	9.34	0.14
	I	1700	19.77	5.385	45.72	7.63	0.095	33.9	100.0	9.01	0.32
	Integrated age ± 2σ			n=9		105.3	0.19	K2O=0.97%		9.44	0.41
	Plateau ± 2σ	steps B-I		n=8	MSWD=0.8	104.4	0.28 ±0.25		99.1	**9.37**	**0.12**
	Isochron±2σ	steps B-I		n=8	MSWD=0.7		$^{40}Ar/^{36}Ar$=	292±6		9.45	0.18

8) F04-13, Groundmass Concentrate, 58.35 mg, J=0.0007421±0.07%, D=1.0055±0.001, NM-187H, Lab#=55537-01, FSH

xi	A	625	3417.6	3.053	11364.3	0.1	0.17	1.7	0.6	78.4	18.3
	B	700	66.15	1.683	199.2	0.68	0.30	11.2	5.0	9.94	0.42
	C	750	16.75	1.540	33.35	1.1	0.33	41.9	12.0	9.39	0.12
	D	800	12.11	1.586	17.64	2.3	0.32	58.1	26.9	9.400	0.062
	E	875	18.20	1.312	37.95	2.2	0.39	39.0	41.3	9.479	0.089
	F	975	17.08	1.469	34.12	2.6	0.35	41.7	58.3	9.524	0.087
	G	1075	12.35	1.400	18.29	2.4	0.36	57.2	74.4	9.435	0.065
	H	1250	20.20	5.938	46.21	3.5	0.086	34.8	97.2	9.44	0.12
	I	1700	28.74	10.56	75.74	0.42	0.048	25.2	100.0	9.73	0.27
	Integrated age ± 2σ			n=9		15.2	0.19	K2O=0.14%		9.87	0.36
	Plateau ± 2σ	steps B-I		n=8	MSWD=0.61	15.1	0.28 ±0.26		99.4	**9.45**	**0.07**
	Isochron±2σ	steps B-I		n=8	MSWD=0.26		$^{40}Ar/^{36}Ar$=	297.8±2.8		9.36	0.13

9) 05BSP03, Hornblende, J=0.0007458±0.05%, D=1.00367±0.00078, NM-187G, Lab#=55534, SCLF

	08	3.4	7.311	9.308	9.616	0.272	0.055	71.7		7.1	1.1
	04	3.4	8.192	9.352	9.274	0.394	0.055	76.0		8.41	0.68
	02	3.4	7.515	9.422	5.867	0.755	0.054	87.3		8.86	0.42
	03	3.4	12.65	1.091	19.92	2.200	0.47	54.2		9.20	0.22
	06	3.4	7.826	9.746	5.169	0.317	0.052	90.8		9.60	0.95
	10	3.4	12.22	9.248	19.83	0.473	0.055	58.3		9.62	0.64
	09	3.4	6.806	9.744	1.630	0.204	0.052	104.8		9.6	1.5
	01	3.4	10.48	9.293	13.85	0.522	0.055	68.3		9.67	0.57
	07	3.4	12.33	9.018	18.91	0.208	0.057	60.7		10.1	1.6
	05	3.4	11.39	9.491	14.36	0.492	0.054	69.6		10.70	0.78
	Mean age ± 2σ			n=10	MSWD=1.2		0.10 ±0.26			**9.22**	**0.36**

10a) 01-PON-1, Biotite, 3.64 mg, J=0.0007672±0.10%, D=1.00712±0.00131, NM-151, Lab#=53114-01, FSH

xi	A	650	2365.2	10.46	8038.4	0.130	0.049	-0.4	1.4	-13.0	19.1
	B	750	124.8	0.0709	399.0	0.277	7.2	5.5	4.5	9.5	1.2
	C	850	29.40	0.0408	75.08	0.563	12.5	24.5	10.8	9.96	0.35
	D	920	16.64	0.2332	32.37	1.06	2.2	42.6	22.6	9.79	0.18
	E	1000	14.25	0.1472	25.60	1.31	3.5	47.0	37.1	9.25	0.12
	F	1075	15.81	0.0458	29.73	1.04	11.1	44.4	48.7	9.70	0.14
	G	1110	13.43	0.1055	23.05	0.939	4.8	49.4	59.2	9.15	0.16
	H	1180	10.56	0.1813	12.57	1.45	2.8	65.0	75.3	9.473	0.091
	I	1210	9.363	0.0680	8.686	1.36	7.5	72.6	90.4	9.390	0.077
	J	1250	8.953	0.0769	6.707	0.753	6.6	77.9	98.8	9.63	0.11
	K	1300	10.32	1.181	9.196	0.090	0.43	74.6	99.8	10.64	0.69
xi	L	1725	142.1	148.1	465.0	0.018	0.003	11.9	100.0	26.0	5.8
	Integrated age ± 2σ			n=12		8.99	0.85	K2O=1.24%		9.22	0.92
	Plateau ± 2σ	steps B-K		n=10	MSWD=2.35	8.85	5.8 ±7.8		98.4	**9.47**	**0.13**
	Isochron±2σ	steps B-K		n=10	MSWD=2.53		$^{40}Ar/^{36}Ar$=	296.9±3.5		9.44	0.12

10b) 01-PON-2, Biotite, 3.20 mg, J=0.0007675±0.10%, D=1.00712±0.00131, NM-151, Lab#=53115-01, FSH

xi	A	650	2857.1	0.6236	9715.1	0.177	0.82	-0.5	2.2	-19.1	22.3

	B	750	237.0	0.1046	783.0	0.341	4.9	2.4	6.6	7.8	2.1
	C	850	44.26	0.0568	126.7	0.741	9.0	15.4	16.0	9.41	0.54
	D	920	23.87	0.0350	58.12	1.19	14.6	28.1	31.2	9.26	0.22
	E	1000	20.08	0.0356	45.49	1.42	14.3	33.1	49.3	9.17	0.18
	F	1075	16.17	0.0308	31.33	1.07	16.6	42.8	62.9	9.55	0.16
	G	1110	13.55	0.1207	23.38	0.963	4.2	49.1	75.2	9.19	0.13
	H	1180	11.27	0.4562	14.61	0.962	1.1	62.0	87.4	9.66	0.13
	I	1210	9.854	0.1453	9.488	0.655	3.5	71.7	95.8	9.75	0.12
xi	J	1250	9.408	0.1448	7.498	0.286	3.5	76.6	99.4	9.95	0.22
xi	K	1300	12.38	2.197	15.42	0.033	0.23	64.7	99.8	11.1	1.5
xi	L	1725	151.7	113.0	552.8	0.014	0.005	-1.5	100.0	-3.4	5.5
	Integrated age ± 2σ			n=12		7.85	1.4	K2O=1.23%		8.7	1.6
	Plateau ± 2σ	steps B-I		n=8	MSWD=2.33	7.34	9.7 ±11.9		93.5	**9.49**	**0.18**
	Isochron±2σ	steps B-I		n=8	MSWD=1.97		$^{40}Ar/^{36}Ar$=	292.4±3.0		9.60	0.16

11) 01-PON-4, Biotite, 4.70 mg, J=0.0007678±0.10%, D=1.00698±0.0018, NM-151, Lab#=53116-21, FSH

xi	A	650	2793.0	0.0533	9401.2	5.44	9.6	0.5	7.3	20.6	28.6
xi	B	750	248.0	0.0547	821.3	14.1	9.3	2.2	26.1	7.4	2.6
	C	850	46.55	0.0455	134.2	14.6	11.2	14.8	45.6	9.51	0.50
	D	920	33.44	0.0327	90.92	11.2	15.6	19.7	60.6	9.08	0.38
	E	1000	28.83	0.0360	73.38	11.5	14.2	24.8	76.0	9.87	0.34
	F	1075	25.37	0.0383	60.83	10.4	13.3	29.2	89.9	10.22	0.28
xi	G	1110	19.39	0.1931	39.15	4.47	2.6	40.4	95.8	10.83	0.30
xi	H	1180	17.30	3.484	32.73	2.21	0.15	45.8	98.8	10.97	0.42
xi	I	1210	16.90	2.301	32.70	0.360	0.22	44.0	99.3	10.3	1.2
xi	J	1250	19.07	1.628	11.92	0.125	0.31	82.2	99.4	21.6	2.6
xi	K	1300	35.68	0.5676	95.28	0.125	0.90	21.2	99.6	10.5	3.2
xi	L	1700	118.7	2.306	352.7	0.303	0.22	12.4	100.0	20.3	3.0
	Integrated age ± 2σ			n=12		74.9	2.9	K2O=7.97%		10.2	5.7
	Plateau ± 2σ	steps C-F		n=4	MSWD=2.07	47.7	13.4 ±3.7		63.8	**9.80**	**0.51**
	Isochron±2σ	steps C-F		n=4	MSWD=1.74		$^{40}Ar/^{36}Ar$=	286.5±10.8		10.78	1.22

12) 02-B66, Biotite, 2.76 mg, J=0.0015467±0.09%, D=1.00484±0.00092, NM-166, Lab#=54117-01, FSH

x	B	750	723.4	0.0379	2431.6	6.21	13.5	0.7	3.7	13.6	8.5
	C	850	155.5	0.0446	518.9	9.23	11.4	1.4	9.1	6.1	2.0
	D	920	71.52	0.0401	228.9	9.86	12.7	5.4	14.9	10.80	0.99
	E	1000	23.23	0.0334	67.74	20.8	15.3	13.8	27.1	8.95	0.31
	F	1075	9.956	0.0287	22.02	15.0	17.8	34.7	35.9	9.60	0.18
	G	1110	6.928	0.0270	11.53	10.4	18.9	50.9	42.0	9.81	0.16
	H	1180	5.371	0.0514	5.895	17.4	9.9	67.6	52.2	10.11	0.12
	I	1210	4.295	0.0584	2.627	18.2	8.7	82.0	62.9	9.806	0.066
	J	1250	3.850	0.0381	1.152	49.0	13.4	91.2	91.8	9.776	0.043
	K	1300	3.817	0.0279	1.046	13.4	18.3	92.0	99.7	9.768	0.055
xi	L	1700	14.87	1.268	34.71	0.574	0.40	31.7	100.0	13.1	1.1
	Integrated age ± 2σ			n=11		170.0	11.8	K2O=15.29%		9.7	1.2
	Plateau ± 2σ	steps C-K		n=9	MSWD=2.50	163.2	13.8 ±7.5		96.0	**9.79**	**0.09**
	Isochron±2σ	steps B-K		n=10	MSWD=2.24		$^{40}Ar/^{36}Ar$=	294.6±1.4		9.80	0.06

13) K-7-5, Biotite, 2.88 mg, J=0.0015532±0.09%, D=1.00484±0.00092, NM-166, Lab#=54047-01, FSH

x	A	650	1433.1	0.0730	4821.7	1.01	7.0	0.6	1.0	23.0	17.9
x	B	750	122.0	0.0414	400.8	2.57	12.3	2.9	3.7	9.8	2.3
x	C	850	20.69	0.0214	56.88	4.54	23.8	18.8	8.3	10.84	0.53
	D	920	8.853	0.0111	18.15	10.9	45.9	39.4	19.4	9.75	0.16
	E	1000	6.186	0.0074	9.034	20.6	69.3	56.9	40.3	9.83	0.11
	F	1075	5.921	0.0099	8.585	24.4	51.7	57.2	65.2	9.460	0.093

	G	1110	5.887	0.0205	9.128	6.41	24.9	54.2	71.7	8.92	0.23
	H	1180	6.637	0.0778	11.26	6.15	6.6	50.0	78.0	9.27	0.24
	I	1210	5.237	0.0946	6.197	10.9	5.4	65.2	89.1	9.54	0.15
	J	1250	4.515	0.0520	3.783	8.88	9.8	75.3	98.1	9.506	0.096
	K	1300	4.713	0.0259	4.963	1.30	19.7	68.9	99.5	9.08	0.40
xi	L	1700	12.48	0.5626	33.24	0.533	0.91	21.7	100.0	7.6	1.4
	Integrated age ± 2σ			n=12		98.1	15.5	K2O=8.43%		9.73	0.80
	Plateau ± 2σ	steps D-K		n=8	MSWD=2.78	89.5	39.8 ±47.6		91.2	**9.54**	**0.16**
	Isochron±2σ	steps A-K		n=11	MSWD=2.53		$^{40}Ar/^{36}Ar$=	297.3±2.1		9.51	0.11

14) K-8-2, Groundmass concentrate, 15.06 mg, J=0.001564±0.09%, D=1.00484±0.00092, NM-166, Lab#=54121-01, FSH

xi	B	700	5.482	1.153	9.981	4.77	0.44	47.9	8.6	7.40	0.24
	C	750	4.916	1.891	6.127	5.10	0.27	66.4	17.8	9.19	0.21
	D	800	4.363	2.712	4.537	9.84	0.19	74.4	35.6	9.15	0.12
	E	875	4.265	2.186	4.123	11.5	0.23	75.7	56.4	9.10	0.13
	F	975	4.838	1.563	5.983	11.0	0.33	66.1	76.2	9.02	0.15
	G	1075	7.534	1.628	14.89	7.16	0.31	43.4	89.2	9.21	0.26
	H	1250	11.85	15.70	32.35	1.89	0.032	30.3	92.6	10.22	0.68
	I	1700	16.12	23.89	51.32	4.10	0.021	18.2	100.0	8.39	0.46
	Integrated age ± 2σ			n=8		55.3	0.13	K2O=0.90%		8.95	0.42
	Plateau ± 2σ	steps C-I		n=7	MSWD=0.99	50.6	0.24 ±0.25		91.4	**9.11**	**0.13**
	Isochron±2σ	steps C-I		n=7	MSWD=1.12		$^{40}Ar/^{36}Ar$=	293.1±7.0		9.15	0.18

15) 02-B45, Groundmass concentrate, 14.00 mg, J=0.0015611±0.09%, D=1.00484±0.00092, NM-166, Lab#=54120-01, FSH

x	A	625	961.5	1.845	3214.5	1.12	0.28	1.2	0.9	33.0	12.8
	B	700	5.468	1.021	7.292	3.90	0.50	62.1	4.2	9.55	0.24
	C	750	4.225	0.9695	2.794	5.35	0.53	82.4	8.6	9.78	0.17
	D	800	3.842	1.082	1.745	13.6	0.47	88.9	20.0	9.602	0.086
	E	875	3.704	1.004	1.195	24.5	0.51	92.7	40.4	9.651	0.058
	F	975	3.766	0.8463	1.448	29.3	0.60	90.5	64.8	9.578	0.049
	G	1075	4.315	0.6738	3.491	20.9	0.76	77.4	82.2	9.383	0.088
xi	H	1250	10.38	3.004	25.74	10.2	0.17	29.1	90.7	8.50	0.27
xi	I	1700	17.55	4.323	49.26	11.1	0.12	19.1	100.0	9.44	0.31
	Integrated age ± 2σ			n=9		120.0	0.36	K2O=2.11%		9.68	0.47
	Plateau ± 2σ	steps B-G		n=6	MSWD=1.59	97.5	0.59 ±0.21		81.3	**9.58**	**0.08**
	Isochron±2σ	steps A-G		n=7	MSWD=1.66		$^{40}Ar/^{36}Ar$=	297.8±2.9		9.58	0.07

16) F04-19, Hornblende, 18.83 mg, J=0.000743±0.05%, D=1.0055±0.001, NM-187G, Lab#=55532-01, FSH

x	A	800	387.8	4.425	1283.0	2.1	0.12	2.3	13.8	12.1	2.4
x	B	950	37.27	2.609	100.6	1.4	0.20	20.8	22.6	10.39	0.64
	C	1075	31.18	6.116	82.97	0.8	0.083	23.0	27.9	9.62	0.93
	D	1150	24.35	8.495	64.19	6.7	0.060	25.0	71.5	8.19	0.22
	E	1180	28.32	11.86	74.76	1.59	0.043	25.4	81.8	9.71	0.53
	F	1220	21.45	12.37	53.93	1.98	0.041	30.5	94.7	8.81	0.45
xi	G	1300	37.33	12.09	96.60	0.252	0.042	26.2	96.3	13.2	2.8
xi	H	1700	60.90	10.18	100.3	0.6	0.050	52.7	100.0	42.8	1.3
	Integrated age ± 2σ			n=8		15.4	0.062	K2O=0.42%		10.61	0.89
	Plateau ± 2σ	steps C-F		n=4	MSWD=3.06	11.1	0.056±0.039		72.0	**8.53**	**0.63**
	Isochron±2σ	steps A-F		n=6	MSWD=3.90		$^{40}Ar/^{36}Ar$=	298.3±2.9		8.42	0.45

17) F05-81, Hornblende, 23.72 mg, J=0.0009121±0.09%, D=1.002±0.001, NM-196M, Lab#=56301-01, FSH

x	A	800	601.1	0.4802	2009.3	2.39	1.1	1.2	9.2	12.1	4.0
x	B	900	74.58	0.8450	235.6	0.559	0.60	6.7	11.3	8.3	1.1
x	C	1000	50.77	1.183	162.7	0.551	0.43	5.5	13.5	4.60	0.79
	D	1100	16.01	6.691	38.68	8.52	0.076	32.0	46.3	8.46	0.13

	E	1130	9.163	7.003	15.06	10.2	0.073	57.7	85.6	8.717	0.071
x	F	1160	23.83	8.216	75.36	0.183	0.062	9.4	86.3	3.7	1.7
x	G	1190	17.87	9.184	49.77	0.621	0.056	21.9	88.7	6.47	0.53
x	H	1220	18.00	10.62	46.80	0.895	0.048	28.0	92.2	8.33	0.47
x	I	1250	14.80	9.092	34.61	1.02	0.056	35.9	96.1	8.78	0.43
x	J	1300	26.53	8.750	71.96	0.463	0.058	22.6	97.9	9.88	0.85
x	K	1650	42.62	8.182	134.2	0.544	0.062	8.5	100.0	6.01	0.82
	Integrated age ± 2σ			n=11		26.0	0.080	K2O=0.46%		8.71	0.90
	Plateau ± 2σ	steps D-E		n=2	MSWD=2.98	18.749	0.074±0.005		72.2	**8.66**	**0.22**
	Isochron±2σ	steps A-K		n=11	MSWD=6.82		$^{40}Ar/^{36}Ar$=	293.2±2.0		8.67	0.14

18) Ancha Tephra, Hornblende, 11.75 mg, J=0.0007055±0.28%, D=1.0106±0.0027, nm-43, Lab#=6049-01, FSH

xi	A	850	1135.1	0.2642	3321.1	0.008	1.9	13.5	0.3	185.8	23.0
xi	B	925	213.5	0.8694	417.6	0.003	0.59	42.2	0.5	111.3	27.4
xi	C	1025	306.5	7.194	265.5	0.003	0.071	74.6	0.6	271.0	45.9
xi	D	1075	276.5	10.87	34.82	0.001	0.047	96.6	0.6	313.5	144.6
xi	E	1125	40.88	8.325	26.21	0.012	0.061	82.6	1.1	42.7	6.5
xi	F	1150	34.32	8.997	54.77	0.017	0.057	54.9	1.8	24.0	4.7
	G	1200	10.19	9.650	13.94	1.88	0.053	66.8	78.9	8.71	0.14
	H	1225	8.960	9.367	10.43	0.397	0.054	73.6	95.1	8.43	0.30
xi	I	1250	10.12	10.74	7.113	0.029	0.047	87.4	96.3	11.3	2.9
xi	J	1275	12.83	14.49	34.12	0.025	0.035	30.1	97.3	5.0	3.3
xi	K	1310	10.30	12.83	7.823	0.026	0.040	87.1	98.4	11.5	3.0
xi	L	1350	10.58	11.46	20.91	0.025	0.045	49.9	99.4	6.8	2.5
xi	M	1450	25.16	9.758	65.91	0.014	0.052	25.6	100.0	8.2	4.8
	Integrated age ± 2σ			n=13		2.45	0.053	K2O=0.11%		10.17	0.42
	Plateau ± 2σ	steps G-H		n=2	MSWD=0.69	2.28	0.053±0.002		93.3	**8.66**	**0.26**
	Isochron±2σ	steps G-H		n=2	MSWD=0.00		$^{40}Ar/^{36}Ar$=	358.0±171.0		7.8	2.4

19) V-9, Groundmass Concentrate, 47.78 mg, J=0.0007391±0.13%, D=1.0055±0.001, NM-187K, Lab#=55550-01, FSH

xi	A	625	3027.0	1.098	10124.3	1.8	0.46	1.2	1.0	46.6	16.0
xi	B	700	9.646	0.7679	8.606	18.1	0.66	74.3	10.5	9.536	0.040
	C	750	8.828	0.7246	4.824	11.1	0.70	84.5	16.4	9.928	0.043
	D	800	8.746	0.7336	4.387	35.2	0.70	85.9	35.0	9.991	0.029
	E	875	9.105	0.6493	6.398	41.7	0.79	79.8	57.1	9.670	0.027
	F	975	10.97	0.5447	12.83	36.5	0.94	65.8	76.5	9.609	0.040
	G	1075	22.80	0.4781	52.65	30.3	1.1	31.9	92.5	9.69	0.11
	H	1250	39.29	2.464	109.1	8.01	0.21	18.5	96.8	9.66	0.26
xi	I	1700	65.42	2.571	194.0	6.10	0.20	12.7	100.0	11.07	0.41
	Integrated age ± 2σ			n=9		188.8	0.66			10.13	0.41
	Plateau ± 2σ	steps C-H		n=6	MSWD=19.73	162.8	0.82 ±0.59		86.2	**9.80**	**0.15**
	Isochron±2σ	steps C-H		n=6	MSWD=21.84		$^{40}Ar/^{36}Ar$=	291.7±2.5		9.84	0.05

20) V-11, Biotite, J=0.0007443±0.04%, D=1.0055±0.001, NM-187G, Lab#=55533, SCLF

	01B	3.5	9.718	0.0373	6.709	3.107	13.7	79.6		10.36	0.11
	04B	3.5	8.623	0.0276	2.956	6.708	18.5	89.9		10.381	0.043
	02B	3.5	8.980	0.0775	4.112	6.250	6.6	86.5		10.406	0.038
	06B	3.5	9.809	0.0318	6.882	6.540	16.0	79.3		10.415	0.052
	10B	3.5	9.122	0.0479	4.507	3.599	10.7	85.4		10.437	0.058
	05B	3.5	10.23	0.0657	8.074	8.376	7.8	76.7		10.506	0.055
	03B	3.5	9.052	0.0329	4.034	4.320	15.5	86.9		10.528	0.048
	08B	3.5	9.937	0.0381	7.016	3.243	13.4	79.2		10.534	0.073
	07B	3.5	10.78	0.0280	9.708	3.062	18.2	73.4		10.602	0.078
x	09B	3.5	8.994	0.0244	3.423	3.291	20.9	88.8		10.69	0.05
	Mean age ± 2σ			n=9	MSWD=1.72		13.4 ±8.6			**10.45**	**0.05**

21) V-3, Groundmass Concentrate, 51.54 mg, J=0.0007406±0.14%, D=1.0055±0.001, NM-187K, Lab#=55551-01, FSH

xi	A	625	2922.1	0.8612	9862.6	1.2	0.59	0.3	0.9	10.3	15.8
xi	B	700	25.21	1.080	64.63	13.9	0.47	24.6	10.9	8.27	0.14
	C	750	17.06	1.561	34.16	4.3	0.33	41.6	14.0	9.47	0.11
	D	800	13.16	1.708	20.76	15.1	0.30	54.5	24.9	9.567	0.075
	E	875	11.48	1.519	14.93	24.7	0.34	62.7	42.7	9.594	0.049
	F	975	12.77	1.537	19.34	31.7	0.33	56.2	65.7	9.580	0.051
	G	1075	32.95	1.379	87.77	24.3	0.37	21.6	83.2	9.51	0.17
xi	H	1250	65.03	6.181	194.8	18.5	0.083	12.3	96.6	10.68	0.36
xi	I	1700	51.75	15.75	153.2	4.66	0.032	15.0	100.0	10.48	0.37
	Integrated age ± 2σ			n=9		138.3	0.20	K2O=1.39%		9.62	0.50
	Plateau ± 2σ	steps C-G		n=5	MSWD=0.32	100.0	0.34 ±0.05		72.3	**9.57**	**0.07**
	Isochron±2σ	steps C-G		n=5	MSWD=0.24		$^{40}Ar/^{36}Ar$=	294.2±3.5		9.61	0.12

22) V-17, Groundmass Concentrate, 62.82 mg, J=0.000739±0.11%, D=1.0055±0.001, NM-187C, Lab#=55497-01, FSH

x	B	700	389.8	2.789	1292.9	4.3	0.18	2.0	5.4	10.6	2.2
	C	750	153.5	2.301	494.6	2.3	0.22	4.9	8.3	10.0	1.0
	D	800	132.1	2.372	422.4	10.3	0.22	5.7	21.1	10.00	0.77
	E	875	40.27	2.292	111.2	15.1	0.22	18.9	39.9	10.14	0.21
	F	975	50.33	2.147	146.8	12.0	0.24	14.2	54.8	9.49	0.28
	G	1075	41.48	1.191	115.3	9.57	0.43	18.1	66.7	10.01	0.23
	H	1250	23.73	5.393	57.39	17.3	0.095	30.4	88.2	9.64	0.13
	I	1700	34.76	19.36	99.53	9.51	0.026	20.0	100.0	9.36	0.23
	Integrated age ± 2σ			n=8		80.4	0.10	K2O=0.67%		9.8	0.7
	Plateau ± 2σ	steps C-I		n=7	MSWD=1.54	76.1	0.20 ±0.25		94.6	**9.73**	**0.21**
	Isochron±2σ	steps B-I		n=8	MSWD=1.44		$^{40}Ar/^{36}Ar$=	296.3±1.7		9.62	0.28

23) 04CM14, Groundmass Concentrate, 54.62 mg, J=0.0006804±0.11%, D=1.002±0.001, NM-203C, Lab#=56790-01, FSH

x	A	625	3650.7	3.414	12239.3	1.04	0.15	0.9	0.9	41.6	18.0
x	B	700	280.9	1.601	916.3	2.20	0.32	3.7	2.8	12.6	1.5
x	C	750	131.0	1.285	419.7	0.685	0.40	5.4	3.3	8.73	0.89
x	D	800	137.9	1.297	436.9	6.37	0.39	6.5	8.8	10.93	0.69
x	E	875	116.4	1.286	358.3	10.5	0.40	9.1	17.7	12.96	0.57
x	F	975	76.95	1.683	230.9	25.1	0.30	11.5	39.1	10.88	0.35
	G	1075	23.31	0.9839	51.35	21.0	0.52	35.2	57.0	10.060	0.098
	H	1250	36.90	3.116	98.05	35.9	0.16	22.2	87.6	10.04	0.16
	I	1700	53.71	3.150	154.3	14.6	0.16	15.6	100.0	10.28	0.25
	Integrated age ± 2σ			n=9		117.4	0.24	K2O=1.21%		10.88	0.87
	Plateau ± 2σ	steps G-I		n=3	MSWD=0.36	71.5	0.27 ±0.41		60.9	**10.08**	**0.16**
	Isochron±2σ	steps A-I		n=9	MSWD=3.01		$^{40}Ar/^{36}Ar$=	298.2±1.3		9.86	0.21

24) 05GM05, Groundmass Concentrate, 77 mg, J=0.0007142±0.10%, D=1.003±0.001, NM-191H, Lab#=55886-01, FSH

xi	A	625	1856.8	-0.1490	6325.3	0.116	-	-0.7	0.1	-16.0	15.5
xi	B	750	9.654	0.5350	7.845	22.2	0.95	76.4	11.0	9.488	0.047
xi	C	850	8.321	0.4596	2.138	23.3	1.1	92.9	22.5	9.932	0.028
	D	950	7.825	0.5459	1.675	106.2	0.93	94.3	74.9	9.482	0.017
	E	1050	8.874	0.9140	5.586	33.1	0.56	82.3	91.2	9.386	0.030
	F	1125	16.67	1.420	32.52	10.0	0.36	43.0	96.2	9.23	0.12
xi	G	1200	37.14	2.840	105.5	4.27	0.18	16.7	98.3	7.98	0.29
xi	H	1300	86.12	9.785	267.6	1.19	0.052	9.1	98.9	10.1	1.0
xi	I	1700	88.92	7.349	279.0	2.30	0.069	8.0	100.0	9.15	0.87
	Integrated age ± 2σ			n=9		202.6	0.62	K2O=1.42%		9.46	0.07
	Plateau ± 2σ	steps D-F		n=3	MSWD=5.86	149.3	0.81 ±0.58		73.7	**9.46**	**0.07**
	Isochron±2σ	steps D-F		n=3	MSWD=3.25		$^{40}Ar/^{36}Ar$=	287.2±5.6		9.49	0.04

24) 05GM05, Plagioclase, 41.22 mg, J=0.0007157±0.07%, D=1.003±0.001, NM-191H, Lab#=55887-01, FSH

xi	A	650	535.7	8.263	1782.0	0.033	0.062	1.8	0.1	12.8	14.6
xi	B	775	13.93	7.359	25.74	0.729	0.069	49.8	2.7	8.98	0.44
xi	C	850	9.206	7.428	10.07	0.656	0.069	74.4	5.1	8.86	0.57
	D	925	8.557	7.582	6.569	2.18	0.067	84.6	13.0	9.38	0.16
	E	1000	8.072	7.797	4.734	3.34	0.065	90.7	25.0	9.48	0.10
	F	1100	7.832	7.746	3.995	5.38	0.066	93.1	44.4	9.442	0.077
	G	1175	8.111	7.868	4.619	5.29	0.065	91.2	63.4	9.576	0.071
xi	H	1250	8.513	8.098	3.996	3.87	0.063	94.0	77.4	10.360	0.093
xi	I	1350	11.92	8.387	7.467	2.81	0.061	87.3	87.5	13.46	0.13
xi	J	1450	14.76	7.619	14.34	1.26	0.067	75.6	92.0	14.42	0.26
xi	K	1675	12.80	8.512	14.87	2.22	0.060	71.2	100.0	11.79	0.17
	Integrated age ± 2σ			n=11		27.7	0.064		K2O=0.36%	10.39	0.11
	Plateau ± 2σ	steps D-G		n=4	MSWD=0.80	16.2	0.066±0.002		58.3	**9.50**	**0.09**
	Isochron±2σ	steps D-G		n=4	MSWD=1.37		$^{40}Ar/^{36}Ar$=		304.6±107.0	9.47	0.33

25) 05GM13, Hornblende, 21.08 mg, J=0.0007512±0.06%, D=1.003±0.001, NM-192N, Lab#=56021-01, FSH

xi	B	750	3.806	0.3413	5.462	1.74	1.5	58.3	12.5	3.01	0.13
xi	C	850	4.224	0.5161	7.371	0.369	0.99	49.4	15.1	2.83	0.54
xi	E	1000	28.02	13.20	93.24	0.036	0.039	5.6	15.3	2.1	5.0
xi	F	1075	9.643	10.16	29.05	0.246	0.050	19.7	17.1	2.6	1.1
	G	1110	5.613	10.02	10.70	0.997	0.051	58.5	24.2	4.47	0.27
	H	1180	4.189	9.684	6.756	7.00	0.053	71.5	74.2	4.079	0.088
	I	1210	3.781	12.34	6.001	0.743	0.041	80.1	79.5	4.14	0.30
	J	1250	3.787	12.16	6.837	2.64	0.042	73.2	98.4	3.78	0.12
xi	K	1300	23.59	38.40	74.95	0.185	0.013	19.6	99.7	6.4	1.4
xi	L	1680	351.5	32.29	1126.6	0.035	0.016	6.1	100.0	29.3	8.7
	Integrated age ± 2σ			n=10		14.0	0.054		K2O=0.34%	3.95	0.16
	Plateau ± 2σ	steps G-J		n=4	MSWD=2.49	11.38	0.05 ±0.01		81.3	**4.01**	**0.21**
	Isochron±2σ	steps G-J		n=4	MSWD=1.07		$^{40}Ar/^{36}Ar$=		413.4±129.6	3.37	0.67

26) FJ-430, Groundmass Concentrate, 35.03 mg, J=0.0007446±0.10%, D=1.005±0.001, NM-172, Lab#=54457-01, LSH

xi	A	5	318.1	1.335	1046.5	17.9	0.38	2.8	6.7	12.0	2.0
	B	8	19.15	1.651	42.58	82.4	0.31	35.0	37.5	8.990	0.096
	C	12	19.76	1.719	44.70	56.9	0.30	33.9	58.8	8.98	0.11
	D	16	29.95	2.556	79.31	57.0	0.20	22.5	80.1	9.03	0.18
	E	20	43.94	4.918	127.0	44.9	0.10	15.5	96.9	9.18	0.28
xi	F	23	54.76	6.433	157.1	5.50	0.079	16.2	99.0	11.93	0.63
xi	G	27	76.21	6.584	230.9	2.70	0.077	11.2	100.0	11.48	0.97
	Integrated age ± 2σ			n=7		267.3	0.20		K2O=3.94%	9.31	0.59
	Plateau ± 2σ	steps B-E		n=4	MSWD=0.16	241.2	0.24 ±0.19		90.2	**9.00**	**0.13**
	Isochron±2σ	steps B-E		n=4	MSWD=0.02		$^{40}Ar/^{36}Ar$=		297.0±4.7	8.90	0.35

27) FJ-403, Groundmass Concentrate, 31.63 mg, J=0.000748±0.10%, D=1.005±0.001, NM-172, Lab#=54458-01, LSH

x	A	5	236.3	3.035	767.0	8.40	0.17	4.2	3.2	13.4	1.5
	B	8	9.534	2.357	9.937	82.7	0.22	71.2	34.5	9.158	0.041
	C	12	7.413	1.317	2.982	76.7	0.39	89.6	63.5	8.948	0.027
	D	16	9.159	1.468	9.137	51.2	0.35	71.8	82.9	8.867	0.047
	E	20	11.27	2.843	16.21	25.4	0.18	59.6	92.5	9.055	0.084
	F	23	12.98	3.070	22.15	11.0	0.17	51.5	96.6	9.03	0.15
	G	27	14.99	5.222	29.35	8.90	0.098	45.0	100.0	9.11	0.15
	Integrated age ± 2σ			n=7		264.2	0.25		K2O=4.29%	9.16	0.19
	Plateau ± 2σ	steps B-G		n=6	MSWD=5.51	255.8	0.28 ±0.22		96.8	**8.99**	**0.09**
	Isochron±2σ	steps A-G		n=7	MSWD=4.31		$^{40}Ar/^{36}Ar$=		300.3±2.6	8.95	0.05

28) FJ-434, Groundmass Concentrate, 28.83 mg, J=0.0007475±0.10%, D=1.005±0.001, NM-172, Lab#=54459-01, LSH

x	A	5	329.3	1.154	1086.5	16.9	0.44	2.5	5.5	11.2	2.0
	B	8	14.80	1.267	27.33	95.1	0.40	46.1	36.6	9.194	0.076
	C	12	10.78	0.9253	14.05	109.8	0.55	62.2	72.4	9.024	0.042
	D	16	13.07	1.260	22.36	43.2	0.41	50.3	86.5	8.845	0.066
	E	20	16.33	2.055	33.94	22.5	0.25	39.6	93.9	8.71	0.13
	F	23	19.65	1.922	44.67	9.35	0.27	33.6	96.9	8.90	0.18
	G	27	23.18	2.430	56.57	9.43	0.21	28.8	100.0	8.99	0.21
	Integrated age ± 2σ			n=7		306.3	0.41	K2O=5.46%		9.14	0.35
	Plateau ± 2σ	steps B-G		n=6	MSWD=3.52	289.4	0.44 ±0.26		94.5	**8.99**	**0.12**
	Isochron±2σ	steps A-G		n=7	MSWD=3.56		$^{40}Ar/^{36}Ar$=	296.3±2.4		8.97	0.09

29) FJ-697-A, Groundmass Concentrate, 31.78 mg, J=0.001096±0.11%, D=1.0063±0.001, NM-182K, Lab#=55178-01, FSH

xi	A	625	1575.2	1.369	5247.2	2.38	0.37	1.6	2.0	48.4	15.0
	B	700	12.02	1.405	25.83	13.8	0.36	37.5	13.9	8.89	0.46
	C	750	6.786	2.330	7.793	9.49	0.22	68.9	22.1	9.24	0.65
	D	800	5.372	2.590	3.717	27.0	0.20	83.5	45.3	8.87	0.23
	E	875	5.379	1.717	2.931	18.4	0.30	86.5	61.1	9.19	0.33
	F	975	5.868	1.209	4.883	15.4	0.42	77.1	74.3	8.93	0.40
	G	1075	5.839	2.341	5.107	15.8	0.22	77.5	87.8	8.94	0.39
	H	1250	8.026	13.32	15.38	12.9	0.038	57.1	98.9	9.12	0.49
xi	I	1700	90.74	22.02	295.7	1.23	0.023	5.7	100.0	10.4	5.4
	Integrated age ± 2σ			n=9		116.3	0.15	K2O=1.28%		9.83	0.72
	Plateau ± 2σ	steps B-H		n=7	MSWD=0.16	112.7	0.25 ±0.25		96.9	**8.98**	**0.28**
	Isochron±2σ	steps A-H		n=8	MSWD=0.19		$^{40}Ar/^{36}Ar$=	299.3±2.8		8.94	0.28

30) SS-6-12-03-5, Plagioclase, 53.65 mg, J=0.0007485±0.10%, D=1.005±0.001, NM-172, Lab#=54460-01, LSH

x	A	5	25.78	10.23	71.49	9.58	0.050	21.4	7.8	7.47	0.26
	B	8	6.707	9.755	4.784	35.4	0.052	91.0	36.7	8.275	0.050
	C	12	6.580	9.423	4.199	30.2	0.054	93.0	61.4	8.298	0.053
	D	16	6.439	9.422	4.221	18.0	0.054	92.7	76.0	8.099	0.051
	E	20	6.859	9.409	5.123	13.7	0.054	89.3	87.2	8.305	0.067
	F	23	7.006	9.459	5.512	6.76	0.054	87.9	92.7	8.354	0.094
	G	27	6.874	9.820	5.011	8.89	0.052	90.3	100.0	8.42	0.10
	Integrated age ± 2σ			n=7		122.6	0.053	K2O=1.17%		8.21	0.15
	Plateau ± 2σ	steps B-G		n=6	MSWD=2.91	113.0	0.053±0.002		92.2	**8.26**	**0.09**
	Isochron±2σ	steps A-G		n=7	MSWD=3.59		$^{40}Ar/^{36}Ar$=	287.7±5.6		8.27	0.05

31) SS-6-12-03-4, Biotite, 12.60 mg, J=0.0007573±0.10%, D=1.005±0.001, NM-172, Lab#=54446-25, FSH

xi	A	650	2336.7	0.3742	7732.7	19.9	1.4	2.2	5.0	69.3	14.4
xi	B	750	217.4	0.0421	723.2	44.0	12.1	1.7	16.2	5.0	1.3
xi	C	850	49.88	0.0322	156.0	55.5	15.9	7.6	30.2	5.18	0.28
xi	D	920	30.36	0.0305	91.05	73.5	16.7	11.4	48.8	4.72	0.17
	E	1000	18.30	0.0292	51.29	82.3	17.5	17.2	69.7	4.294	0.099
	F	1075	15.70	0.2409	42.55	58.0	2.1	20.1	84.3	4.30	0.10
	G	1110	10.24	0.4971	24.00	27.2	1.0	31.1	91.2	4.350	0.081
	H	1180	7.864	0.2477	15.81	28.9	2.1	40.9	98.5	4.385	0.049
xi	I	1210	6.858	0.9901	11.61	4.96	0.52	51.2	99.8	4.79	0.14
xi	J	1250	5.086	2.398	4.864	0.781	0.21	75.7	100.0	5.26	0.63
	Integrated age ± 2σ			n=10		395.0	3.5	K2O=15.90%		7.9	2.0
	Plateau ± 2σ	steps E-H		n=4	MSWD=0.36	196.4	8.4 ±15.8		49.7	**4.36**	**0.07**
	Isochron±2σ	steps E-H		n=4	MSWD=0.02		$^{40}Ar/^{36}Ar$=	293.5±4.0		4.42	0.16

32) 04Y10, Groundmass Concentrate, 90.16 mg, J=0.0007046±0.09%, D=1.003±0.001, NM-191A, Lab#=55837-01, FSH

xi	A	625	460.5	0.6132	1505.1	3.37	0.83	3.4	2.1	20.0	3.5
	B	700	11.09	0.7556	17.59	25.1	0.68	53.7	17.5	7.55	0.36
	C	750	9.891	0.9770	12.13	10.2	0.52	64.6	23.7	8.106	0.056
	D	800	8.477	1.224	7.405	30.9	0.42	75.4	42.6	8.111	0.030
	E	875	8.079	1.067	6.362	33.3	0.48	77.8	63.1	7.980	0.025
	F	975	9.332	1.445	11.08	24.6	0.35	66.2	78.1	7.842	0.037
	G	1075	14.94	1.303	30.30	17.7	0.39	40.8	89.0	7.739	0.079
	H	1250	20.95	6.957	51.56	14.0	0.073	30.0	97.6	8.01	0.12
xi	I	1700	22.53	12.72	61.56	3.96	0.040	23.9	100.0	6.90	0.21
	Integrated age ± 2σ			n=9		163.1	0.27	K2O=0.99%		8.13	0.23
	Plateau ± 2σ	steps B-H		n=7	MSWD=8.04	155.7	0.43 ±0.37		95.5	**7.99**	**0.09**
	Isochron±2σ	steps B-H		n=7	MSWD=8.58		$^{40}Ar/^{36}Ar$=	291.5±3.5		8.04	0.05

32) 04Y10, Groundmass Concentrate, 62.6 mg, J=0.000682±0.09%, D=1.002±0.001, NM-203C, Lab#=56791-01, FSH

xi	A	625	313.7	0.7005	1051.2	4.41	0.73	1.0	4.2	3.9	1.6
xi	B	700	20.80	0.6508	50.46	9.59	0.78	28.6	13.3	7.30	0.11
	C	750	15.58	0.7991	31.55	3.36	0.64	40.6	16.5	7.76	0.11
	D	800	12.36	1.164	19.91	17.3	0.44	53.2	32.8	8.074	0.051
	E	875	11.39	1.086	16.87	19.2	0.47	57.0	51.1	7.980	0.046
	F	975	12.78	0.9985	21.91	9.68	0.51	50.0	60.3	7.852	0.063
	G	1075	15.56	1.368	31.65	13.4	0.37	40.6	73.0	7.768	0.074
	H	1250	27.82	2.398	72.80	23.3	0.21	23.4	95.1	8.00	0.12
xi	I	1700	32.58	9.734	89.32	5.18	0.052	21.5	100.0	8.64	0.19
	Integrated age ± 2σ			n=9		105.5	0.29	K2O=0.95%		7.75	0.26
	Plateau ± 2σ	steps C-H		n=6	MSWD=3.57	86.3	0.39 ±0.28		81.8	**7.94**	**0.10**
	Isochron±2σ	steps C-H		n=6	MSWD=4.17		$^{40}Ar/^{36}Ar$=	293.7±3.7		8.00	0.12

33) 04C5, Groundmass Concentrate, 56.97 mg, J=0.0013354±0.05%, D=1.002±0.001, NM-202E, Lab#=56725-01, FSH

xi	A	625	139.3	0.2258	450.2	24.3	2.3	4.5	20.4	15.1	1.3
	B	700	9.054	0.5659	20.54	26.3	0.90	33.4	42.5	7.270	0.085
	C	750	8.049	1.021	16.95	15.9	0.50	38.8	55.8	7.499	0.090
	D	800	7.218	1.682	14.16	7.60	0.30	43.9	62.2	7.62	0.11
	E	875	5.764	1.843	8.844	20.4	0.28	57.2	79.3	7.927	0.052
	F	975	5.936	2.056	9.579	16.6	0.25	55.1	93.3	7.863	0.070
	G	1075	8.444	2.314	18.14	8.00	0.22	38.7	100.0	7.86	0.12
xi	H	1250	6.451	-20.4369	-108.4933	-0.018	-	571.5	100.0	85.4	16.4
xi	I	1700	84.26	177.8	259.4	0.037	0.003	26.5	100.0	60.4	11.0
	Integrated age ± 2σ			n=9		119.0	0.41	K2O=0.60%		9.16	0.62
	Plateau ± 2σ	steps B-G		n=6	MSWD=11.19	94.708	0.480±0.522		79.6	**7.74**	**0.21**
	Isochron±2σ	steps B-G		n=6	MSWD=3.24		$^{40}Ar/^{36}Ar$=	276.8±5.1		8.29	0.16

34) 04C3, Groundmass Concentrate, 57.58 mg, J=0.0013377±0.05%, D=1.002±0.001, NM-202E, Lab#=56724-01, FSH

xi	A	625	272.2	0.6862	888.6	5.44	0.74	3.6	2.8	23.2	2.7
xi	B	700	7.231	0.9018	12.04	9.77	0.57	51.8	7.9	9.008	0.088
xi	C	750	4.641	0.8398	3.795	13.2	0.61	77.3	14.8	8.621	0.050
xi	D	800	4.176	0.9061	2.885	12.9	0.56	81.3	21.5	8.165	0.048
xi	E	875	3.739	0.8024	1.709	42.3	0.64	88.2	43.6	7.927	0.024
	F	975	3.545	0.6132	1.189	51.6	0.83	91.5	70.6	7.793	0.020
	G	1075	3.889	0.5351	2.321	35.1	0.95	83.5	88.9	7.799	0.024
	H	1250	6.156	1.503	10.33	10.4	0.34	52.3	94.3	7.755	0.083
xi	I	1700	10.14	5.776	23.70	10.9	0.088	35.6	100.0	8.72	0.14
	Integrated age ± 2σ			n=9		191.6	0.49	K2O=0.96%		8.46	0.19
	Plateau ± 2σ	steps F-H		n=3	MSWD=0.13	97.1	0.82 ±0.65		50.7	**7.79**	**0.03**
	Isochron±2σ	steps F-H		n=3	MSWD=0.14		$^{40}Ar/^{36}Ar$=	294.1±7.4		7.80	0.04

35) 04C10-Top, Groundmass Concentrate, 55.08 mg, J=0.0013345±0.06%, D=1.002±0.001, NM-202E, Lab#=56726-01, FSH

xi	A	625	592.7	3.235	1930.1	1.70	0.16	3.8	2.3	53.7	5.8
xi	B	700	12.08	1.818	28.85	7.61	0.28	30.6	12.4	8.89	0.16
	C	750	4.959	1.232	6.133	9.19	0.41	65.4	24.7	7.787	0.078
	D	800	4.678	1.223	5.088	5.58	0.42	70.0	32.1	7.853	0.091
	E	875	4.202	0.9352	3.383	16.5	0.55	78.0	54.1	7.860	0.043
	F	975	4.826	1.372	5.359	12.9	0.37	69.5	71.3	8.045	0.058
	G	1075	5.678	2.237	8.749	8.47	0.23	57.7	82.6	7.863	0.091
	H	1250	12.98	6.708	34.66	6.24	0.076	25.4	90.9	7.94	0.20
xi	I	1700	23.87	20.70	72.53	6.83	0.025	17.4	100.0	10.09	0.41
	Integrated age ± 2σ			n=9		75.0	0.14	K2O=0.39%		9.25	0.39
	Plateau ± 2σ	steps C-H		n=6	MSWD=1.94	58.8	0.38 ±0.33		78.5	**7.90**	**0.08**
	Isochron±2σ	steps C-H		n=6	MSWD=2.65		$^{40}Ar/^{36}Ar$=	296.4±5.0		7.89	0.08

36) CM21, Groundmass Concentrate, 52.99 mg, J=0.0013362±0.06%, D=1.002±0.001, NM-202E, Lab#=56727-01, FSH

xi	A	625	300.7	2.644	966.8	1.64	0.19	5.1	1.7	36.4	3.1
	B	700	4.629	1.684	4.893	7.52	0.30	71.7	9.6	7.976	0.079
	C	750	3.811	1.213	2.064	10.8	0.42	86.6	20.8	7.923	0.051
	D	800	3.598	1.332	1.406	8.31	0.38	91.5	29.5	7.903	0.065
	E	875	3.504	1.124	1.061	30.3	0.45	93.7	61.1	7.881	0.027
	F	975	3.557	1.213	1.288	22.0	0.42	92.1	84.2	7.865	0.034
	G	1075	3.942	1.620	2.677	7.96	0.31	83.3	92.5	7.887	0.069
	H	1250	6.337	5.668	12.19	3.64	0.090	50.5	96.3	7.72	0.21
xi	I	1700	15.54	32.14	48.70	3.56	0.016	24.4	100.0	9.33	0.53
	Integrated age ± 2σ			n=9		95.7	0.19	K2O=0.52%		8.43	0.16
	Plateau ± 2σ	steps B-H		n=7	MSWD=0.50	90.5	0.40 ±0.25		94.6	**7.89**	**0.04**
	Isochron±2σ	steps B-H		n=7	MSWD=0.67		$^{40}Ar/^{36}Ar$=	297.9±11.6		7.88	0.05

37) 04CM23, Groundmass Concentrate, 95.04 mg, J=0.0007069±0.11%, D=1.003±0.001, NM-191A, Lab#=55835-01, FSH

xi	A	625	15586.4	3.880	52576.7	0.823	0.13	0.3	1.0	63.1	79.4
xi	B	700	88.18	2.227	271.4	11.6	0.23	9.3	15.3	10.40	0.47
xi	C	750	25.85	2.039	64.56	4.84	0.25	26.8	21.2	8.84	0.20
	D	800	13.83	1.584	24.68	13.6	0.32	48.2	37.9	8.488	0.074
	E	875	10.17	1.199	12.66	15.4	0.43	64.2	56.8	8.308	0.052
	F	975	10.72	1.680	14.67	12.4	0.30	60.9	71.9	8.313	0.068
	G	1075	17.14	2.863	37.21	10.3	0.18	37.2	84.6	8.14	0.10
xi	H	1250	38.73	16.08	111.6	6.15	0.032	18.3	92.1	9.11	0.28
xi	I	1700	38.24	16.71	121.8	6.42	0.031	9.5	100.0	4.68	0.26
	Integrated age ± 2σ			n=9		81.5	0.12	K2O=0.47%		9.0	1.9
	Plateau ± 2σ	steps D-G		n=4	MSWD=2.74	51.6	0.32 ±0.20		63.3	**8.33**	**0.11**
	Isochron±2σ	steps D-G		n=4	MSWD=3.98		$^{40}Ar/^{36}Ar$=	294.5±6.9		8.35	0.17

38) CM24, Groundmass Concentrate, 54.84 mg, J=0.0013386±0.06%, D=1.002±0.001, NM-202E, Lab#=56728-01, FSH

xi	A	625	393.0	0.8213	1273.5	5.97	0.62	4.3	7.2	40.0	3.7
xi	B	700	13.46	1.300	33.73	9.71	0.39	26.7	18.8	8.66	0.16
	C	750	8.172	1.553	16.26	7.38	0.33	42.7	27.7	8.41	0.12
	D	800	6.421	1.663	10.96	3.73	0.31	51.7	32.2	7.99	0.19
	E	875	5.399	1.726	7.353	16.7	0.30	62.3	52.3	8.105	0.064
	F	975	6.404	1.573	10.46	15.8	0.32	53.7	71.3	8.284	0.074
	G	1075	13.30	2.066	33.79	10.1	0.25	26.2	83.4	8.39	0.15
xi	H	1250	16.48	5.994	45.00	7.54	0.085	22.3	92.5	8.88	0.23
xi	I	1700	16.57	16.48	46.90	6.28	0.031	24.6	100.0	9.91	0.32
	Integrated age ± 2σ			n=9		83.2	0.16	K2O=0.44%		10.77	0.68
	Plateau ± 2σ	steps C-G		n=5	MSWD=2.24	53.7	0.30 ±0.07		64.6	**8.22**	**0.13**
	Isochron±2σ	steps C-G		n=5	MSWD=1.69		$^{40}Ar/^{36}Ar$=	300.7±4.9		8.07	0.15

39) 9-17-3-1, Groundmass Concentrate, 53.88 mg, J=0.0016071±0.06%, D=1.0064±0.0005, NM-181H, Lab#=55095-01, FSH

x	A	650	2391.3	1.730	7938.1	1.53	0.29	1.9	0.5	128.2	17.6
x	B	725	6.790	1.416	12.93	16.5	0.36	45.4	6.1	8.93	0.16
x	C	775	4.252	1.538	4.242	18.0	0.33	73.5	12.1	9.048	0.068
	D	825	3.494	1.765	1.928	44.1	0.29	87.9	27.0	8.891	0.041
	E	900	3.209	1.116	0.9156	60.1	0.46	94.4	47.2	8.772	0.026
	F	1000	3.193	0.8097	0.8202	80.3	0.63	94.5	74.2	8.732	0.020
	G	1100	3.554	0.8834	2.121	41.8	0.58	84.4	88.2	8.684	0.034
	H	1275	5.354	14.16	11.94	32.3	0.036	56.0	99.1	8.75	0.15
x	I	1725	6.850	12.56	17.07	2.77	0.041	41.5	100.0	8.30	0.40
	Integrated age ± 2σ			n=9		297.5	0.19	K2O=1.32%		9.42	0.21
	Plateau ± 2σ	steps D-H		n=5	MSWD=4.30	258.6	0.45 ±0.48		86.9	**8.75**	**0.06**
	Isochron±2σ	steps A-I		n=9	MSWD=5.23		$^{40}Ar/^{36}Ar$=	300.9±1.6		8.75	0.03

40) 9-17-03-2, Groundmass Concentrate, 45.82 mg, J=0.0016029±0.06%, D=1.0064±0.0005, NM-181H, Lab#=55097-01, FSH

xi	A	650	331.2	1.125	1115.5	8.84	0.45	0.5	3.4	4.9	2.5
xi	B	725	8.573	0.5861	22.49	33.3	0.87	23.1	16.4	5.708	0.097
	C	775	7.022	0.9647	15.57	26.2	0.53	35.6	26.5	7.221	0.097
	D	825	6.224	1.274	12.83	40.1	0.40	40.8	42.1	7.334	0.063
	E	900	6.215	1.190	12.44	50.4	0.43	42.5	61.6	7.620	0.073
	F	1000	7.506	1.482	17.09	48.3	0.34	34.3	80.4	7.448	0.067
	G	1100	11.99	1.754	32.45	26.5	0.29	21.2	90.6	7.35	0.12
xi	H	1275	17.91	10.06	54.16	20.3	0.051	15.3	98.5	7.94	0.25
xi	I	1725	19.27	8.142	57.86	3.79	0.063	14.8	100.0	8.26	0.57
	Integrated age ± 2σ			n=9		257.7	0.25	K2O=1.35%		7.17	0.25
	Plateau ± 2σ	steps C-G		n=5	MSWD=3.51	191.4	0.40 ±0.18		74.3	**7.42**	**0.13**
	Isochron±2σ	steps C-G		n=5	MSWD=4.51		$^{40}Ar/^{36}Ar$=	293.8±4.5		7.49	0.21

41) P-25, Groundmass Concentrate, 68.99 mg, J=0.0007309±0.14%, D=1.0055±0.001, NM-187a, Lab#=55483-01, FSH

x	A	625	158.0	1.671	516.8	4.8	0.31	3.4	2.2	7.15	0.92
	B	700	9.915	1.522	12.42	18.4	0.34	64.3	10.7	8.389	0.043
	C	750	7.921	1.520	6.181	15.4	0.34	78.5	17.8	8.193	0.043
	D	800	7.221	1.183	3.917	36.8	0.43	85.3	34.7	8.113	0.025
	E	875	7.421	0.9067	4.664	39.8	0.56	82.4	53.1	8.054	0.028
	F	975	10.36	0.8104	14.90	50.4	0.63	58.1	76.3	7.926	0.040
	G	1075	20.35	0.6760	48.40	29.1	0.75	30.0	89.7	8.04	0.10
	H	1250	31.27	5.866	87.71	19.9	0.087	18.7	98.9	7.71	0.17
xi	I	1700	34.43	22.71	100.2	2.48	0.022	19.4	100.0	8.95	0.39
	Integrated age ± 2σ			n=9		217.1	0.30	K2O=1.65%		8.03	0.13
	Plateau ± 2σ	steps B-H		n=7	MSWD=12.70	209.776	0.501±0.444		96.6	**8.11**	**0.11**
	Isochron±2σ	steps A-H		n=8	MSWD=12.13		$^{40}Ar/^{36}Ar$=	293.7±1.8		8.13	0.04

42) 9-19-03-1, Groundmass Concentrate, 37.94 mg, J=0.0016052±0.07%, D=1.0064±0.0005, NM-181H, Lab#=55096-01, FSH

x	A	650	3076.4	13.40	10407.0	0.689	0.038	0.1	0.6	6.6	23.1
	B	725	5.018	1.534	7.938	17.7	0.33	55.8	16.1	8.10	0.11
	C	775	3.343	1.957	2.184	12.3	0.26	85.5	26.8	8.274	0.075
	D	825	3.185	2.565	1.898	20.5	0.20	89.1	44.6	8.211	0.047
	E	900	3.187	2.607	2.044	23.9	0.20	87.8	65.5	8.101	0.049
xi	F	1000	3.638	2.808	3.848	21.1	0.18	75.1	84.0	7.913	0.051
xi	G	1100	4.766	3.267	8.190	11.5	0.16	54.9	94.1	7.58	0.12
xi	H	1275	7.662	40.40	28.37	6.26	0.013	34.2	99.5	7.80	0.45
xi	I	1725	16.20	29.55	59.75	0.543	0.017	6.1	100.0	2.9	1.4
	Integrated age ± 2σ			n=9		114.5	0.11	K2O=0.72%		8.00	0.31
	Plateau ± 2σ	steps B-E		n=4	MSWD=1.70	74.3	0.24 ±0.13		64.9	**8.17**	**0.08**

	Isochron±2σ	steps A-E	n=5	MSWD=1.96		$^{40}Ar/^{36}Ar$=	295.4±1.5		8.17	0.06

43) P-27, Groundmass Concentrate, 37.63 mg, J=0.0007459±0.11%, D=1.0055±0.001, NM-187K, Lab#=55552-01, FSH

xi	A	625	1291.5	1.708	4316.1	2.0	0.30	1.3	1.5	21.7	7.1
	B	700	15.71	1.397	32.83	8.9	0.37	39.0	8.6	8.224	0.096
	C	750	10.48	1.624	14.75	6.0	0.31	59.7	13.3	8.415	0.082
	D	800	8.705	1.533	9.413	19.5	0.33	69.5	28.7	8.132	0.047
	E	875	9.151	1.011	11.02	21.6	0.50	65.3	45.8	8.034	0.046
	F	975	13.50	0.8836	25.79	24.7	0.58	44.1	65.3	7.993	0.070
	G	1075	25.89	0.7068	68.61	21.0	0.72	21.9	82.0	7.62	0.13
	H	1250	37.27	3.649	106.1	20.6	0.14	16.7	98.3	8.37	0.20
xi	I	1700	39.14	9.099	111.3	2.14	0.056	17.9	100.0	9.45	0.38
	Integrated age ± 2σ			n=9		126.3	0.31	K2O=1.73%		8.30	0.37
	Plateau ± 2σ	steps B-H		n=7	MSWD=6.07	122.2	0.45 ±0.39		96.8	**8.10**	**0.13**
	Isochron±2σ	steps B-H		n=7	MSWD=6.87		$^{40}Ar/^{36}Ar$=	294.2±2.3		8.13	0.08

44) 06VSA1, Biotite, 7.67 mg, J=0.0007733±0.09%, D=1.0044±0.001, NM-208M, Lab#=57204-01, FSH

x	A	625	7329.2	0.4075	24684.1	0.069	1.3	0.5	0.1	48.3	42.3
x	B	700	620.3	0.2009	2085.8	0.209	2.5	0.6	0.6	5.6	4.6
x	C	800	412.9	0.1704	1374.0	0.195	3.0	1.7	1.0	9.6	3.4
	D	875	64.16	0.2113	197.6	0.458	2.4	9.0	2.0	8.07	0.74
	E	975	36.94	0.1562	105.5	0.914	3.3	15.7	3.9	8.06	0.39
	F	1075	20.05	0.1468	48.03	1.89	3.5	29.3	7.9	8.18	0.19
	G	1250	11.49	0.1269	20.16	10.1	4.0	48.2	29.2	7.716	0.062
	H	1400	8.304	0.0094	9.414	33.3	54.1	66.5	99.2	7.689	0.029
xi	I	1700	22.57	0.0264	47.87	0.361	19.3	37.3	100.0	11.72	0.59
	Integrated age ± 2σ			n=9		47.5	10.9	K2O=3.08%		7.81	0.25
	Plateau ± 2σ	steps D-H		n=5	MSWD=1.89	46.699	39.69 ±45.48		98.2	**7.70**	**0.07**
	Isochron±2σ	steps A-H		n=8	MSWD=1.08		$^{40}Ar/^{36}Ar$=	296.7±1.6		7.68	0.06

45) 06 VSA A2, Groundmass Concentrate, 21.54 mg, J=0.0008009±0.07%, D=1.0068±0.0015, NM-208F, Lab#=57155-01, LSH

xi	A	3	1452.2	1.506	4934.8	0.201	0.34	-0.4	0.6	-8.5	13.0
	B	3	106.7	0.9524	344.6	1.49	0.54	4.6	5.0	7.10	0.94
	C	4	29.36	0.8445	80.34	2.87	0.60	19.4	13.5	8.20	0.26
	D	4	18.94	0.6747	45.81	3.50	0.76	28.8	23.8	7.87	0.15
	E	5	18.52	0.6163	44.18	3.67	0.83	29.8	34.7	7.96	0.15
	F	6	18.10	0.7394	43.02	10.4	0.69	30.1	65.5	7.86	0.13
	G	8	11.36	1.044	20.70	6.41	0.49	46.9	84.4	7.686	0.075
xi	H	10	13.21	2.739	28.44	2.46	0.19	38.1	91.7	7.27	0.12
xi	I	25	23.55	5.544	63.46	2.82	0.092	22.3	100.0	7.60	0.20
	Integrated age ± 2σ			n=9		33.9	0.38	K2O=0.75%		7.67	0.46
	Plateau ± 2σ	steps B-G		n=6	MSWD=1.36	28.4	0.65 ±0.26		83.8	**7.80**	**0.13**
	Isochron±2σ	steps B-G		n=6	MSWD=1.43		$^{40}Ar/^{36}Ar$=	297.2±3.2		7.71	0.19

46) CdG06-003A, Groundmass Concentrate, 28.07 mg, J=0.0007867±0.07%, D=1.0068±0.0015, NM-208H, Lab#=57167-01, LSH

xi	A	3	1125.2	1.283	3763.5	0.239	0.40	1.2	0.5	18.7	9.7
	B	3	76.74	0.8100	239.6	2.07	0.63	7.8	4.7	8.53	0.64
	C	4	20.28	0.6406	50.73	3.37	0.80	26.3	11.6	7.56	0.16
	D	4	12.82	0.5268	24.72	4.31	0.97	43.3	20.4	7.868	0.094
	E	5	14.57	0.4882	30.64	6.70	1.0	38.1	34.2	7.87	0.11
	F	6	11.03	0.5902	18.74	13.7	0.86	50.2	62.2	7.850	0.066
	G	8	10.17	1.003	16.29	9.20	0.51	53.5	81.1	7.710	0.060
	H	10	11.05	2.146	19.70	4.15	0.24	48.9	89.6	7.661	0.081
	I	25	13.25	6.338	27.60	5.09	0.080	42.4	100.0	7.993	0.096
	Integrated age ± 2σ			n=9		48.9	0.36	K2O=0.85%		7.89	0.28

	Plateau ± 2σ	steps B-I	n=8	MSWD=2.03	48.6	0.68 ±0.69		99.5	**7.79**	**0.09**
	Isochron±2σ	steps B-I	n=8	MSWD=2.22		$^{40}Ar/^{36}Ar$=	297.5±3.5		7.73	0.13

47) 9-15-3-2, Plagioclase, 16.84 mg, J=0.0016023±0.06%, D=1.0063±0.001, NM-181H, Lab#=55098-02, FSH

xi	A	650	275.9	3.620	933.5	0.872	0.14	0.1	1.5	0.9	5.3
	B	775	4.921	3.584	9.333	3.52	0.14	50.0	7.7	7.11	0.31
	C	850	4.296	3.759	7.080	4.31	0.14	58.5	15.2	7.27	0.22
	D	925	3.645	3.820	4.785	6.94	0.13	69.9	27.3	7.37	0.16
	E	1000	3.270	3.928	3.422	7.12	0.13	79.0	39.8	7.47	0.15
	F	1100	3.436	4.193	4.245	7.46	0.12	73.6	52.8	7.32	0.15
xi	G	1175	6.945	4.046	17.11	1.06	0.13	32.0	54.6	6.43	0.89
xi	H	1250	10.87	4.008	28.52	0.596	0.13	25.5	55.7	8.0	1.6
xi	I	1350	6.020	4.020	11.37	6.13	0.13	49.7	66.4	8.65	0.22
xi	J	1450	7.081	3.986	14.64	14.4	0.13	43.6	91.6	8.92	0.13
xi	K	1700	80.76	4.806	264.5	4.80	0.11	3.7	100.0	8.7	1.2
	Integrated age ± 2σ			n=11		57.2	0.13	K2O=0.81%		7.88	0.38
	Plateau ± 2σ	steps B-F	n=5	MSWD=0.36	29.3	0.13 ±0.02		51.3	**7.36**	**0.16**
	Isochron±2σ	steps B-F	n=5	MSWD=0.14		$^{40}Ar/^{36}Ar$=	278.5±31.3		7.54	0.37

48) 04CDG04, Groundmass Concentrate, 29.71 mg, J=0.0011128±0.12%, D=1.0063±0.001, NM-182G, Lab#=55161-01, FSH

xi	A	650	76.12	0.1526	252.6	29.7	3.3	2.0	11.8	2.99	0.81
xi	B	725	4.433	0.2320	5.693	80.9	2.2	62.5	44.1	5.552	0.070
	C	775	5.110	0.3227	7.041	22.7	1.6	59.8	53.1	6.13	0.23
	D	825	5.280	0.5396	7.093	45.0	0.95	61.2	71.1	6.47	0.13
	E	900	6.020	0.7421	9.311	37.2	0.69	55.3	85.9	6.68	0.15
	F	1000	7.233	0.9946	13.51	18.5	0.51	45.9	93.3	6.66	0.29
xi	G	1100	20.60	1.103	60.39	5.33	0.46	13.8	95.4	5.7	1.0
xi	H	1275	14.33	2.451	36.81	5.07	0.21	25.5	97.4	7.3	1.1
xi	I	1725	10.58	3.301	25.93	6.41	0.15	30.2	100.0	6.41	0.83
	Integrated age ± 2σ			n=9		250.8	0.91	K2O=2.91%		5.78	0.26
	Plateau ± 2σ	steps C-F	n=4	MSWD=1.43	123.5	0.9 ±0.9		49.2	**6.51**	**0.21**
	Isochron±2σ	steps C-F	n=4	MSWD=1.23		$^{40}Ar/^{36}Ar$=	325.8±47.7		6.01	0.80

49) O3CDG-03, Hornblende, 10.85 mg, J=0.0016207±0.09%, D=1.0037±0.0005, NM-181F, Lab#=55091-01, FSH

x	A	650	1143.1	0.0578	3849.2	3.11	8.8	0.5	1.0	16.3	8.2
x	B	750	119.7	0.0863	400.9	7.28	5.9	1.0	3.2	3.7	1.2
	C	850	29.04	0.0683	89.98	16.2	7.5	8.5	8.3	7.16	0.25
	D	920	11.18	0.0208	28.85	42.7	24.5	23.8	21.5	7.763	0.099
	E	1000	7.240	0.0103	15.52	68.3	49.3	36.7	42.7	7.742	0.064
	F	1075	5.585	0.0120	10.01	59.4	42.7	47.1	61.2	7.670	0.063
	G	1110	4.799	0.0173	7.350	19.5	29.5	54.8	67.3	7.668	0.071
	H	1180	4.131	0.0243	5.043	21.5	21.0	64.0	74.0	7.709	0.058
	I	1210	3.583	0.0227	3.266	35.3	22.4	73.1	84.9	7.644	0.034
	J	1250	3.246	0.0087	2.061	45.2	58.9	81.3	98.9	7.697	0.031
x	K	1300	3.714	0.0271	4.202	3.39	18.8	66.6	100.0	7.22	0.20
	Integrated age ± 2σ			n=11		321.9	25.8	K2O=7.03%		7.66	0.25
	Plateau ± 2σ	steps C-J	n=8	MSWD=1.08	308.1	37.5 ±33.9		95.7	**7.68**	**0.04**
	Isochron±2σ	steps A-K	n=11	MSWD=2.57		$^{40}Ar/^{36}Ar$=	294.9±0.9		7.69	0.04

50) Tophill 33, Biotite, 9.28 mg, J=0.0016222±0.07%, D=1.0037±0.0005, NM-181F, Lab#=55088-01, FSH

x	A	650	80.13	0.1516	267.4	2.02	3.4	1.4	1.0	3.3	1.3
x	B	750	4.299	0.1584	6.158	6.79	3.2	58.0	4.2	7.28	0.12
x	C	850	3.028	0.1288	1.637	9.11	4.0	84.4	8.6	7.463	0.072
x	D	920	3.089	0.0990	2.058	9.55	5.2	80.6	13.2	7.269	0.080
x	E	1000	3.149	0.0695	1.866	10.3	7.3	82.7	18.2	7.604	0.072

	F	1075	3.252	0.0521	2.613	10.4	9.8	76.4	23.2	7.257	0.095
	G	1110	3.478	0.0395	3.324	8.09	12.9	71.9	27.1	7.30	0.11
	H	1180	3.592	0.0561	3.888	18.7	9.1	68.1	36.1	7.150	0.050
	I	1210	3.106	0.0346	2.140	41.9	14.7	79.7	56.3	7.234	0.029
	J	1250	3.053	0.0115	1.847	75.8	44.3	82.2	92.8	7.325	0.024
	K	1300	3.080	0.0140	2.130	14.3	36.4	79.6	99.7	7.160	0.076
xi	L	1680	8.461	0.0584	23.99	0.674	8.7	16.3	100.0	4.02	0.97
	Integrated age ± 2σ			n=12		207.7	12.2	K2O=5.30%		7.24	0.05
	Plateau ± 2σ	steps F-K		n=6	MSWD=2.98	169.2	28.8 ±30.3		81.5	**7.27**	**0.06**
	Isochron±2σ	steps A-K		n=11	MSWD=4.25		$^{40}Ar/^{36}Ar$=	289.7±3.2		7.33	0.04

51) 04CDG5, Groundmass Concentrate, 30.23 mg, J=0.0011617±0.08%, D=1.0063±0.001, NM-182K, Lab#=55179-01, FSH

xi	A	625	5677.9	1.500	18511.9	2.64	0.34	3.7	0.7	390.5	56.3
	B	700	6.547	0.4101	9.286	27.4	1.2	58.6	8.3	8.03	0.24
	C	750	4.269	0.4157	1.509	23.6	1.2	90.4	14.8	8.07	0.27
	D	800	3.938	0.3824	0.6270	69.2	1.3	96.1	33.9	7.916	0.093
	E	875	3.830	0.3241	0.5378	83.6	1.6	96.6	56.9	7.734	0.079
	F	975	3.917	0.4346	0.8069	84.6	1.2	94.8	80.2	7.770	0.077
	G	1075	4.575	0.6582	3.266	36.3	0.78	80.1	90.2	7.67	0.18
	H	1250	10.25	1.296	22.11	23.3	0.39	37.3	96.6	8.01	0.30
	I	1700	18.83	4.908	51.20	12.3	0.10	21.8	100.0	8.61	0.59
	Integrated age ± 2σ			n=9		363.0	0.80	K2O=3.97%		10.96	0.85
	Plateau ± 2σ	steps B-I		n=8	MSWD=1.02	360.4	1.2 ±1.0		99.3	**7.81**	**0.09**
	Isochron±2σ	steps B-I		n=8	MSWD=0.73		$^{40}Ar/^{36}Ar$=	302.6±8.7		7.79	0.10

52) F05-194, Biotite, 14.79 mg, J=0.0009123±0.09%, D=1.002±0.001, NM-196M, Lab#=56302-01, FSH

xi	A	550	229.3	0.3108	748.4	0.188	1.6	3.6	0.1	13.4	3.4
xi	B	650	51.66	0.1807	163.3	0.810	2.8	6.6	0.5	5.64	0.84
xi	C	720	10.51	0.1045	22.50	1.18	4.9	36.8	1.1	6.37	0.32
xi	D	800	7.245	0.0937	9.100	2.01	5.4	63.0	2.2	7.50	0.19
xi	E	975	6.675	0.0744	7.727	11.1	6.9	65.9	8.0	7.223	0.055
xi	F	1020	5.336	0.0345	3.409	14.8	14.8	81.2	15.7	7.115	0.035
xi	G	1080	5.217	0.0498	2.886	21.4	10.3	83.7	26.9	7.175	0.027
xi	H	1120	5.599	0.1006	4.604	11.1	5.1	75.8	32.6	6.977	0.045
	I	1160	5.812	0.1010	4.013	14.7	5.1	79.7	40.3	7.613	0.033
	J	1200	5.411	0.0345	2.594	99.5	14.8	85.9	92.2	7.634	0.016
	K	1250	5.424	0.0093	2.911	15.0	54.9	84.2	100.0	7.497	0.032
	Integrated age ± 2σ			n=11		191.7	10.8	K2O=5.46%		7.46	0.04
	Plateau ± 2σ	steps I-K		n=3	MSWD=7.08	129.151	18.337±52.823		67.4	**7.61**	**0.07**
	Isochron±2σ	steps I-K		n=3	MSWD=13.89		$^{40}Ar/^{36}Ar$=	292.4±32.3		7.62	0.15

53) F06-21, Biotite, 7.31 mg, J=0.0007718±0.08%, D=1.0044±0.001, NM-208M, Lab#=57201-01, FSH

x	A	625	7341.6	0.1567	24790.4	0.053	3.3	0.2	0.1	22.2	45.4
x	B	700	484.6	0.1289	1638.1	0.344	4.0	0.1	0.9	0.7	3.4
x	C	750	157.0	0.1454	513.8	0.167	3.5	3.3	1.3	7.2	1.9
x	D	800	87.41	0.0834	281.6	0.775	6.1	4.8	3.1	5.85	0.78
	E	875	32.18	0.0635	90.38	1.76	8.0	17.0	7.1	7.61	0.26
	F	975	13.71	0.0315	27.72	5.87	16.2	40.3	20.6	7.669	0.090
	G	1075	9.593	0.0196	14.83	8.93	26.1	54.3	41.2	7.242	0.054
	H	1250	9.533	0.0672	14.81	12.9	7.6	54.2	70.8	7.176	0.048
	I	1700	7.699	0.0165	8.008	12.7	31.0	69.3	100.0	7.412	0.037
	Integrated age ± 2σ			n=9		43.5	13.1	K2O=2.96%		7.29	0.25
	Plateau ± 2σ	steps E-I		n=5	MSWD=8.25	42.135	19.78 ±21.09		96.9	**7.34**	**0.14**
	Isochron±2σ	steps A-I		n=9	MSWD=5.54		$^{40}Ar/^{36}Ar$=	294.7±1.6		7.35	0.06

54) F05-171, Biotite, 17.82 mg, J=0.0009101±0.09%, D=0.998±0.001, NM-196M, Lab#=56297-01, FSH

xi	A	550	3753.0	0.1339	12716.0	0.673	3.8	-0.1	0.2	-7.5	25.9
xi	B	650	95.39	0.1375	303.1	1.80	3.7	6.1	0.9	9.54	0.87
xi	C	720	23.76	0.1146	64.39	1.86	4.5	19.9	1.6	7.76	0.35
xi	D	800	12.73	0.0826	27.43	6.51	6.2	36.4	3.9	7.59	0.13
xi	E	975	8.300	0.0582	12.20	30.4	8.8	56.6	15.0	7.699	0.047
	F	1020	7.596	0.0565	10.14	19.9	9.0	60.6	22.2	7.545	0.047
	G	1080	9.237	0.0603	15.92	29.2	8.5	49.1	32.8	7.434	0.054
	H	1120	8.650	0.0609	13.80	20.5	8.4	52.9	40.2	7.499	0.057
	I	1160	7.410	0.0391	9.418	36.3	13.0	62.5	53.3	7.586	0.036
	J	1200	6.236	0.0145	5.346	78.8	35.2	74.7	81.9	7.631	0.023
	K	1300	6.106	0.0086	5.051	49.8	59.4	75.6	100.0	7.560	0.025
	Integrated age ± 2σ			n=11		275.7	14.1	K2O=6.53%		7.56	0.19
	Plateau ± 2σ	steps F-K		n=6	MSWD=3.05	234.5	29.0	±41.9	85.0	**7.58**	**0.05**
	Isochron±2σ	steps F-K		n=6	MSWD=1.61		$^{40}Ar/^{36}Ar$=	288.0±5.0		7.67	0.07

55) JG05-9 supp, Biotite, 9.93 mg, J=0.0009116±0.07%, D=1.002±0.001, NM-196M, Lab#=56306-01, FSH

xi	A	550	540.7	0.0301	1804.0	2.20	16.9	1.4	1.8	12.5	3.7
xi	B	650	147.3	0.0208	483.2	2.57	24.5	3.1	3.9	7.4	1.2
	C	720	68.98	0.0180	217.0	4.90	28.4	7.0	7.8	7.97	0.51
	D	800	33.28	0.0173	97.08	6.78	29.5	13.8	13.3	7.54	0.26
	E	975	14.75	0.0148	33.46	37.7	34.4	33.0	43.9	7.976	0.086
	F	1020	10.99	0.0132	20.86	17.4	38.5	43.9	58.1	7.916	0.081
	G	1080	9.855	0.0211	17.05	10.5	24.2	48.9	66.6	7.905	0.081
	H	1120	8.632	0.0370	13.80	8.83	13.8	52.8	73.7	7.481	0.076
	I	1160	7.178	0.0336	8.396	14.2	15.2	65.5	85.3	7.712	0.051
	J	1200	6.061	0.0274	4.399	12.5	18.6	78.6	95.4	7.816	0.041
xi	K	1250	5.974	0.0267	4.502	5.66	19.1	77.8	100.0	7.625	0.065
	Integrated age ± 2σ			n=11		123.3	23.9	K2O=5.23%		7.91	0.31
	Plateau ± 2σ	steps C-J		n=8	MSWD=4.23	112.8	27.8	±18.0	91.5	**7.78**	**0.10**
	Isochron±2σ	steps C-J		n=8	MSWD=4.67		$^{40}Ar/^{36}Ar$=	296.4±2.0		7.76	0.07

56) F05-178, Biotite, 17.01 mg, J=0.0009105±0.09%, D=1.002±0.001, NM-196M, Lab#=56298-01, FSH

xi	A	650	463.4	0.0945	1546.1	1.06	5.4	1.4	0.4	10.7	3.5
xi	B	750	49.11	0.0874	153.6	2.23	5.8	7.6	1.2	6.09	0.53
xi	C	850	21.20	0.0536	55.43	4.80	9.5	22.8	2.9	7.90	0.22
	D	920	11.16	0.0366	22.55	10.8	13.9	40.3	6.8	7.378	0.098
	E	1000	8.658	0.0334	14.18	21.1	15.3	51.6	14.5	7.328	0.058
	F	1075	7.080	0.0230	8.824	41.4	22.2	63.2	29.4	7.334	0.034
	G	1110	6.308	0.0279	6.160	26.8	18.3	71.2	39.1	7.361	0.035
	H	1180	6.183	0.0330	5.573	73.2	15.5	73.4	65.6	7.441	0.024
	I	1210	5.754	0.0210	4.087	95.0	24.3	79.0	100.0	7.455	0.019
	Integrated age ± 2σ			n=9		276.3	18.2	K2O=6.85%		7.42	0.08
	Plateau ± 2σ	steps D-I		n=6	MSWD=3.19	268.2	19.8	±8.4	97.1	**7.42**	**0.05**
	Isochron±2σ	steps D-I		n=6	MSWD=2.02		$^{40}Ar/^{36}Ar$=	288.9±4.8		7.48	0.06

57) K-10-3, Biotite, 1.81 mg, J=0.0015438±0.09%, D=1.00484±0.00092, NM-166, Lab#=54116-01, FSH

B	750	797.8	0.0791	2698.1	4.21	6.5	0.1	6.7	1.5	9.5
C	850	173.1	0.0144	575.1	5.29	35.4	1.8	15.0	8.7	2.5
D	920	63.92	0.0110	209.4	7.69	46.5	3.2	27.2	5.7	1.1
E	1000	33.22	0.0101	103.1	10.6	50.4	8.3	44.0	7.68	0.58
F	1075	29.43	0.0101	91.37	16.9	50.7	8.3	70.8	6.76	0.45
G	1110	16.83	0.0077	47.72	4.49	66.4	16.2	78.0	7.60	0.60
H	1180	9.483	0.0062	23.85	6.38	82.7	25.7	88.1	6.77	0.29
I	1210	6.998	0.0062	16.76	3.35	82.4	29.2	93.4	5.69	0.28

	J	1250	6.607	0.0167	14.50	2.51	30.5	35.2	97.4	6.46	0.46
xi	K	1300	6.656	0.0860	12.64	1.18	5.9	44.0	99.2	8.14	0.73
xi	L	1700	26.40	8.774	82.52	0.471	0.058	10.4	100.0	7.7	2.3
xi	M	1700	237.0	72.23	1037.2	0.021	0.007	-26.8	100.0	-196.6	37.9
	Integrated age ± 2σ			n=12		63.1	4.8	K2O=8.68%		6.6	2.7
	Plateau ± 2σ		steps B-J	n=9	MSWD=2.31	61.4	51.1	±49.4	97.4	**6.51**	**0.48**
	Isochron±2σ		steps B-J	n=9	MSWD=2.46		$^{40}Ar/^{36}Ar$=	296.4±1.7		6.41	0.37

58) K-7-31, Sanidine, J=0.0015509±0.20%, D=1.00484±0.00092, NM-166H, Lab#=54118, SCLF

x	25	1.8	60.97	0.0331	202.4	0.030	15.4	1.9		3.2	9.7
x	12	1.8	3.126	1.007	4.626	0.062	0.51	58.9		5.2	4.2
x	08	1.8	10.32	0.6199	28.54	0.096	0.82	18.7		5.4	2.7
x	19	1.8	3.036	0.9282	3.180	0.066	0.55	71.6		6.1	3.9
	21	1.8	2.600	0.0038	1.079	0.171	135.3	87.7		6.4	1.5
	07	1.8	2.936	0.0087	2.121	0.235	58.6	78.7		6.5	1.1
	11	1.8	2.572	0.0099	0.7253	0.424	51.7	91.7		6.59	0.62
	22	1.8	2.581	0.0075	0.6678	0.531	68.1	92.4		6.66	0.49
	23	1.8	2.578	0.0102	0.6161	0.744	50.1	93.0		6.69	0.35
x	04	1.8	3.454	0.9095	3.763	0.062	0.56	70.0		6.8	4.2
	10	1.8	2.639	0.0021	0.6136	0.824	247.8	93.1		6.86	0.32
	03	1.8	2.593	0.0080	0.4152	0.538	63.5	95.3		6.90	0.49
	06	1.8	2.761	0.0108	0.9014	0.587	47.2	90.4		6.97	0.44
	16	1.8	2.593	0.0079	0.3056	0.384	64.9	96.5		6.99	0.67
	14	1.8	2.998	0.0063	1.648	0.338	81.2	83.8		7.01	0.78
	17	1.8	3.566	0.0030	3.487	0.233	171.3	71.1		7.1	1.1
	13	1.8	2.591	0.0096	0.0271	0.542	53.0	99.7		7.22	0.48
	01	1.8	2.673	0.0099	0.2987	0.780	51.6	96.7		7.22	0.36
x	05	1.8	3.974	0.9056	4.298	0.078	0.56	69.9		7.8	3.3
	Mean age ± 2σ			n=13	MSWD=0.20		88.0	±121.3		**6.90**	**0.28**

59) F04-31, Obsidian, 57.26 mg, J=0.0007407±0.08%, D=1.0055±0.001, NM-187H, Lab#=55538-01, FSH

x	A	550	242.7	6.920	797.9	0.030	0.074	3.1	0.0	10.1	22.7
x	B	650	34.86	0.2682	106.4	5.18	1.9	9.8	1.0	4.58	0.28
x	C	700	41.38	0.0672	125.5	5.25	7.6	10.4	2.0	5.71	0.30
x	D	740	43.88	0.0614	133.7	13.6	8.3	10.0	4.6	5.84	0.26
x	E	775	44.75	0.0627	135.7	18.4	8.1	10.4	8.2	6.21	0.25
x	F	825	45.08	0.0614	136.3	33.5	8.3	10.7	14.6	6.43	0.24
x	G	860	45.19	0.0627	136.5	39.0	8.1	10.8	22.2	6.48	0.24
x	H	925	44.66	0.0613	133.2	57.0	8.3	11.9	33.2	7.09	0.23
x	I	1050	45.02	0.0617	133.6	191.0	8.3	12.4	70.0	7.42	0.22
x	J	1200	45.18	0.0637	132.0	122.2	8.0	13.7	93.6	8.26	0.23
x	K	1350	48.95	0.0790	135.3	25.8	6.5	18.3	98.6	11.94	0.24
x	L	1700	51.51	0.2441	142.7	7.51	2.1	18.2	100.0	12.49	0.31
	Integrated age ± 2σ			n=12		518.4	7.5	K2O=4.69%		**7.62**	**0.44**
	Plateau ± 2σ		no plateau								
	Isochron±2σ		steps A-L	n=12	MSWD=36.64		$^{40}Ar/^{36}Ar$=	465.9±21.6		-22.8	2.4

60) F04-32, Groundmass Concentrate, 81.12 mg, J=0.0007417±0.08%, D=1.0055±0.001, NM-187H, Lab#=55539-01, FSH

x	A	625	2967.3	0.6869	9921.7	0.3	0.74	1.2	0.7	46.9	15.7
x	B	700	9.612	0.4602	11.99	4.3	1.1	63.5	11.5	8.154	0.038
x	C	750	7.131	0.4770	3.827	2.1	1.1	84.7	16.8	8.067	0.039
x	D	800	6.506	0.7388	2.529	6.8	0.69	89.5	34.0	7.774	0.024
x	E	875	6.543	0.6335	3.287	6.4	0.81	86.0	50.0	7.513	0.022
x	F	975	6.996	0.4668	5.112	7.4	1.1	79.0	68.6	7.380	0.021
x	G	1075	8.543	0.3919	10.87	4.6	1.3	62.8	80.1	7.166	0.039

x	H	1250	11.02	0.7298	19.06	7.4	0.70	49.4	98.8	7.279	0.044
x	I	1700	17.20	2.525	39.01	0.48	0.20	34.2	100.0	7.86	0.19
	Integrated age ± 2σ			n=9		39.8	0.84	K2O=0.25%		**7.83**	**0.26**
	Plateau ± 2σ	no plateau									
	Isochron±2σ	steps A-I		n=9	MSWD=101.58		$^{40}Ar/^{36}Ar$=	296.9±2.0		7.58	0.03

61) Povp 2, Sanidine, J=0.0011517±0.10%, D=1.0064±0.0005, NM-182L, Lab#=55185, SCLF

x	02	2.4	5.623	4.363	9.751	0.103	0.12	55.2		6.5	6.1
	03	2.4	4.239	0.0178	3.339	2.899	28.6	76.8		6.75	0.23
	01	2.4	3.585	0.0180	0.7448	1.937	28.4	93.9		6.98	0.31
	04	2.4	3.712	0.0307	1.133	4.767	16.6	91.1		7.01	0.13
	08	2.4	3.626	0.0064	0.7053	3.877	80.3	94.3		7.09	0.16
	06	2.4	4.146	0.0044	2.386	3.612	115.9	83.0		7.14	0.19
	13	2.4	3.536	0.0121	0.2789	1.918	42.3	97.7		7.16	0.33
	07	2.4	3.554	0.0121	0.3072	2.906	42.2	97.5		7.18	0.21
	10	2.4	3.711	0.0117	0.7775	1.250	43.4	93.8		7.22	0.51
	11	2.4	3.511	0.0134	0.0808	3.106	38.0	99.4		7.23	0.20
	14	2.4	3.537	0.0062	0.1039	2.948	82.5	99.1		7.27	0.21
x	05	2.4	4.026	0.7822	1.969	0.262	0.65	87.2		7.3	2.3
x	12	2.4	3.486	0.0182	-0.6926	1.783	28.1	105.9		7.66	0.37
x	15	2.4	5.448	4.023	3.469	0.095	0.13	87.3		9.9	6.6
x	09	2.4	6.690	4.436	5.837	0.276	0.12	79.7		11.1	2.4
	Mean age ± 2σ			n=10	MSWD=0.48		51.8 ±61.9			**7.09**	**0.13**

62) JG05-14, Biotite, 20.63 mg, J=0.000912±0.08%, D=1.002±0.001, NM-196M, Lab#=56305-01, FSH

xi	B	650	41.76	0.0863	130.6	5.14	5.9	7.6	2.0	5.23	0.36
	C	720	8.538	0.0337	18.89	7.47	15.1	34.7	5.0	4.862	0.086
	D	800	6.208	0.0264	11.31	12.2	19.3	46.2	9.9	4.711	0.058
	E	975	5.310	0.0121	7.883	48.8	42.0	56.2	29.3	4.899	0.028
	F	1020	4.280	0.0103	4.602	46.0	49.5	68.2	47.6	4.799	0.022
	G	1080	4.539	0.0180	5.469	34.6	28.4	64.4	61.3	4.806	0.026
	H	1120	4.936	0.0533	6.932	12.8	9.6	58.6	66.4	4.752	0.045
	I	1160	4.656	0.0772	5.808	32.5	6.6	63.3	79.3	4.841	0.026
	J	1200	4.448	0.0476	5.239	44.6	10.7	65.3	97.0	4.772	0.024
xi	K	1250	4.298	0.0279	4.979	7.48	18.3	65.8	100.0	4.648	0.060
	Integrated age ± 2σ			n=10		251.6	15.6	K2O=5.14%		4.82	0.05
	Plateau ± 2σ	steps C-J		n=8	MSWD=2.72	239.0	27.1 ±31.8		95.0	**4.81**	**0.04**
	Isochron±2σ	steps C-J		n=8	MSWD=2.94		$^{40}Ar/^{36}Ar$=	298.8±6.1		4.78	0.07

63) P-13, Biotite, 18.12 mg, J=0.0007365±0.05%, D=1.0055±0.001, NM-187B, Lab#=55487-01, FSH

xi	A	650	762.2	0.2676	2530.0	2.3	1.9	1.9	0.9	19.3	4.2
xi	B	750	122.7	0.3096	412.3	3.7	1.6	0.7	2.4	1.13	0.72
	C	850	46.04	0.1378	147.4	12.9	3.7	5.4	7.5	3.31	0.26
	D	920	12.29	0.0519	33.35	33.1	9.8	19.9	20.7	3.245	0.062
	E	1000	8.776	0.0344	21.49	66.6	14.8	27.7	47.3	3.225	0.042
	F	1075	8.292	0.0579	19.99	36.0	8.8	28.8	61.6	3.173	0.042
	G	1110	8.599	0.0619	20.97	29.6	8.2	28.0	73.4	3.198	0.046
	H	1180	6.192	0.0853	12.66	35.6	6.0	39.7	87.6	3.263	0.031
xi	I	1210	4.552	0.1277	6.994	26.7	4.0	54.8	98.3	3.314	0.023
xi	J	1250	4.006	0.3266	4.770	4.3	1.6	65.5	100.0	3.483	0.060
xi	K	1300	4.163	-1.3073	4.855	-0.128	-	62.9	99.9	3.5	1.7
xi	L	1680	31.73	7.197	99.50	0.2	0.071	9.2	100.0	3.9	1.3
	Integrated age ± 2σ			n=12		250.9	6.2	K2O=7.22%		3.36	0.18
	Plateau ± 2σ	steps C-H		n=6	MSWD=0.72	213.9	10.0 ±7.5		85.2	**3.23**	**0.04**
	Isochron±2σ	steps C-H		n=6	MSWD=0.87		$^{40}Ar/^{36}Ar$=	295.4±2.6		3.23	0.08

64) P-39, Groundmass Concentrate, 85.49 mg, J=0.0007321±0.09%, D=1.0055±0.001, NM-187a, Lab#=55562-01, FSH

xi	A	625	4773.7	0.8039	16225.9	0.4	0.63	-0.4	0.1	-27.9	27.0
	B	700	24.57	0.4053	74.68	26.3	1.3	10.3	8.1	3.35	0.13
	C	750	12.87	0.3239	35.86	6.3	1.6	17.9	10.0	3.04	0.12
	D	800	8.631	0.3433	20.55	89.3	1.5	30.0	37.2	3.413	0.042
	E	875	9.145	0.4540	22.55	65.8	1.1	27.5	57.2	3.325	0.046
	F	975	19.47	0.8413	57.92	41.6	0.61	12.4	69.8	3.20	0.11
	G	1075	39.08	0.7916	123.3	40.8	0.64	6.9	82.2	3.58	0.21
xi	H	1250	123.2	2.802	403.5	45.4	0.18	3.4	96.0	5.49	0.65
xi	I	1700	137.2	8.220	440.3	13.1	0.062	5.6	100.0	10.23	0.76
	Integrated age ± 2σ			n=9		329.0	0.45	K2O=2.02%		3.90	0.42
	Plateau ± 2σ	steps B-G		n=6	MSWD=2.57	270.1	1.1 ±0.8		82.1	**3.34**	**0.09**
	Isochron±2σ	steps B-G		n=6	MSWD=3.14		$^{40}Ar/^{36}Ar$=	295.1±2.2		3.36	0.10

64) P-39, Plagioclase, 13.89 mg, J=0.0007379±0.05%, D=1.0055±0.001, NM-187B, Lab#=55486-01, FSH

x	A	620	217.3	1.833	730.8	0.1	0.28	0.7	0.9	2.0	5.1
	B	750	48.09	2.020	152.7	0.5	0.25	6.5	7.9	4.17	0.83
	C	875	20.56	2.457	61.38	1.1	0.21	12.7	23.1	3.49	0.30
	D	975	7.883	3.012	17.84	1.5	0.17	36.3	43.9	3.81	0.16
	E	1075	7.627	3.251	17.27	2.0	0.16	36.6	70.6	3.72	0.14
	F	1200	62.45	3.027	201.5	2.2	0.17	5.1	100.0	4.21	0.42
	Integrated age ± 2σ			n=6		7.5	0.17	K2O=0.28%		3.87	0.39
	Plateau ± 2σ	steps B-F		n=5	MSWD=0.60	7.382	0.177±0.079		99.1	**3.76**	**0.19**
	Isochron±2σ	steps A-F		n=6	MSWD=0.47		$^{40}Ar/^{36}Ar$=	296.7±3.1		3.71	0.24

65) P3-11, Groundmass Concentrate, 78.11 mg, J=0.0007296±0.12%, D=1.0055±0.001, NM-187a, Lab#=55563-01, FSH

xi	A	625	340.6	1.942	1157.0	0.9	0.26	-0.3	0.3	-1.4	2.3
	B	725	4.968	0.3929	8.103	38.7	1.3	52.5	14.6	3.428	0.026
	C	775	4.246	0.3690	5.351	7.0	1.4	63.5	17.2	3.545	0.047
	D	850	3.201	0.4814	2.303	116.4	1.1	80.0	60.0	3.368	0.010
	E	950	3.379	1.179	3.125	63.4	0.43	75.6	83.4	3.361	0.015
	F	1050	5.217	2.469	9.955	25.1	0.21	47.5	92.6	3.267	0.036
xi	G	1200	23.91	7.886	76.72	15.8	0.065	7.9	98.4	2.50	0.16
xi	H	1700	31.72	12.22	97.00	4.28	0.042	12.8	100.0	5.39	0.30
	Integrated age ± 2σ			n=8		271.7	0.36	K2O=1.83%		3.33	0.06
	Plateau ± 2σ	steps B-F		n=5	MSWD=6.79	250.627	0.862±1.055		92.3	**3.37**	**0.04**
	Isochron±2σ	steps B-F		n=5	MSWD=8.95		$^{40}Ar/^{36}Ar$=	296.9±5.6		3.37	0.03

66) Povp 1, Biotite, 10.72 mg, J=0.0011014±0.09%, D=1.0063±0.001, NM-182L, Lab#=55184-01, FSH

x	A	650	245.3	0.3979	831.0	1.02	1.3	-0.1	0.4	-0.6	4.4
x	B	750	28.31	0.5826	92.89	1.12	0.88	3.2	0.8	1.8	1.7
x	C	850	11.31	0.2253	32.08	2.67	2.3	16.3	1.8	3.66	0.70
	D	920	4.762	0.1005	9.920	12.4	5.1	38.6	6.4	3.65	0.18
	E	1000	2.776	0.0326	3.503	26.5	15.7	62.8	16.3	3.460	0.079
	F	1075	2.384	0.0208	2.456	51.1	24.6	69.6	35.4	3.295	0.042
	G	1110	2.715	0.0517	3.468	37.0	9.9	62.4	49.3	3.364	0.057
	H	1180	2.561	0.1092	3.049	70.8	4.7	65.2	75.7	3.313	0.034
	I	1210	2.241	0.0938	1.751	60.9	5.4	77.3	98.5	3.438	0.038
xi	J	1250	2.428	0.4699	1.872	3.03	1.1	78.8	99.7	3.80	0.57
xi	K	1300	6.638	3.291	-0.3882	0.370	0.16	105.8	99.8	13.9	8.1
xi	L	1720	46.73	47.83	155.5	0.564	0.011	10.1	100.0	9.7	4.9
	Integrated age ± 2σ			n=12		267.5	2.7	K2O=8.70%		3.39	0.07
	Plateau ± 2σ	steps D-I		n=6	MSWD=2.53	258.7	10.7 ±15.8		96.7	**3.36**	0.06
	Isochron±2σ	steps A-I		n=9	MSWD=1.95		$^{40}Ar/^{36}Ar$=	293.7±4.9		3.37	0.05

67) V-39, Biotite, 16.9 mg, J=0.0007349±0.06%, D=1.0055±0.001, NM-187B, Lab#=55490-01, FSH

x	A	650	847.2	0.0341	2848.9	29.2	15.0	0.6	10.3	7.1	5.3
x	B	750	123.1	0.0274	400.9	53.1	18.7	3.8	29.1	6.17	0.67
x	C	850	36.29	0.0269	112.8	43.8	19.0	8.1	44.6	3.90	0.19
	D	920	30.50	0.0297	90.70	50.1	17.2	12.1	62.3	4.89	0.16
	E	1000	30.00	0.0445	89.96	39.0	11.5	11.4	76.1	4.53	0.16
	F	1075	27.16	0.0539	81.08	49.9	9.5	11.8	93.7	4.25	0.14
	G	1110	22.97	0.1421	66.48	10.1	3.6	14.5	97.3	4.42	0.15
	H	1180	20.10	0.5420	56.83	5.1	0.94	16.7	99.1	4.44	0.16
x	I	1210	20.47	1.497	57.25	1.9	0.34	18.0	99.8	4.87	0.28
x	J	1250	23.23	2.712	64.07	0.4	0.19	19.5	99.9	6.00	0.99
x	K	1300	25.93	2.495	68.38	0.1	0.20	22.9	99.9	7.9	4.1
x	L	1680	61.63	10.07	191.7	0.1	0.051	9.4	100.0	7.8	2.1
	Integrated age ± 2σ			n=12		282.8	7.5	K2O=8.75%		5.0	1.5
	Plateau ± 2σ	steps D-H		n=5	MSWD=2.44	154.2	11.8 ±12.9		54.5	**4.49**	**0.21**
	Isochron±2σ	steps A-L		n=12	MSWD=3.01		$^{40}Ar/^{36}Ar$=	297.1±2.0		4.29	0.25

68) V-36, Groundmass Concentrate, 79.35 mg, J=0.0007371±0.12%, D=1.0055±0.001, NM-187a, Lab#=55485-01, FSH

x	A	0	137.6	0.5566	459.4	2.03	0.92	1.4	0.6	2.57	0.91
x	B	700	8.191	0.3838	18.96	72.6	1.3	32.0	20.8	3.482	0.044
	C	750	8.180	0.4470	18.45	15.5	1.1	33.8	25.2	3.673	0.052
	D	800	6.810	0.5908	13.72	89.1	0.86	41.2	50.0	3.726	0.034
	E	875	8.618	0.5035	19.91	76.9	1.0	32.2	71.5	3.689	0.041
	F	975	16.29	0.3837	45.90	57.7	1.3	16.9	87.6	3.658	0.083
	G	1075	38.86	0.4854	121.5	33.5	1.1	7.7	97.0	3.97	0.22
xi	H	1250	60.88	4.954	194.1	7.51	0.10	6.5	99.1	5.23	0.37
xi	I	1700	56.57	10.85	182.4	3.31	0.047	6.3	100.0	4.79	0.48
	Integrated age ± 2σ			n=9		358.1	0.76	K2O=2.35%		3.71	0.13
	Plateau ± 2σ	steps C-G		n=5	MSWD=0.66	272.7	1.0 ±0.3		76.1	**3.70**	**0.05**
	Isochron±2σ	steps A-G		n=7	MSWD=4.79		$^{40}Ar/^{36}Ar$=	295.3±2.0		3.66	0.07

68) V-36, Plagioclase, 21.78 mg, J=0.0007361±0.06%, D=1.0055±0.001, NM-187B, Lab#=55491-01, FSH

xi	A	630	28.59	2.776	88.24	0.4	0.18	9.6	1.1	3.65	0.87
xi	B	775	5.564	2.818	8.060	1.63	0.18	61.4	5.9	4.54	0.16
xi	C	875	3.457	2.928	2.037	1.7	0.17	89.6	10.9	4.12	0.13
	D	950	3.243	2.997	2.085	2.8	0.17	88.6	19.1	3.822	0.093
	E	1050	3.442	2.841	1.694	4.8	0.18	92.3	33.2	4.222	0.056
	F	1150	3.525	1.980	2.512	3.8	0.26	83.6	44.5	3.914	0.062
	G	1200	3.215	1.826	1.068	2.9	0.28	94.9	52.9	4.052	0.080
xi	H	1300	6.402	2.240	6.482	1.9	0.23	73.0	58.4	6.20	0.11
xi	I	1700	7.758	2.909	10.59	14.2	0.18	62.7	100.0	6.466	0.041
	Integrated age ± 2σ			n=9		34.0	0.19	K2O=0.81%		5.19	0.06
	Plateau ± 2σ	steps D-G		n=4	MSWD=6.78	14.245	0.219±0.110		41.9	**4.04**	**0.18**
	Isochron±2σ	steps D-G		n=4	MSWD=10.41		$^{40}Ar/^{36}Ar$=	312.9±138.5		4.02	0.17

69) B04-10-25, Biotite, 18.56 mg, J=0.0007078±0.11%, D=1.003±0.001, NM-191C, Lab#=55846-01, FSH

xi	A	650	579.2	0.1809	1934.9	0.714	2.8	1.3	0.4	9.5	4.1
xi	B	750	50.14	0.5785	163.4	1.26	0.88	3.8	1.2	2.4	1.0
xi	C	850	36.75	0.5424	113.1	1.14	0.94	9.2	1.8	4.3	1.0
xi	D	920	16.81	0.2421	47.94	3.14	2.1	15.8	3.7	3.40	0.37
	E	1000	7.590	0.1049	15.76	6.63	4.9	38.7	7.6	3.75	0.17
	F	1075	5.283	0.0746	8.389	12.0	6.8	53.2	14.6	3.585	0.092
	G	1110	6.128	0.0733	11.48	14.5	7.0	44.7	23.1	3.497	0.082
	H	1180	5.954	0.0517	10.59	27.0	9.9	47.5	39.0	3.609	0.049

	I	1210	4.433	0.0535	5.361	40.0	9.5	64.4	62.5	3.640	0.032
	J	1250	3.795	0.0599	3.177	59.8	8.5	75.4	97.7	3.650	0.021
xi	K	1300	5.160	0.2454	7.689	3.60	2.1	56.4	99.8	3.71	0.30
xi	L	1680	56.31	0.9733	152.8	0.294	0.52	20.0	100.0	14.3	3.8
	Integrated age ± 2σ			n=12		170.1	6.6	K2O=4.97%		3.66	0.08
	Plateau ± 2σ		steps E-J	n=6	MSWD=0.89	160.0	8.6 ±3.8		94.0	**3.64**	**0.03**
	Isochron±2σ		steps E-J	n=6	MSWD=0.72		$^{40}Ar/^{36}Ar$=	290.1±8.7		3.67	0.07

70) B04-10-22, Biotite, 17.8 mg, J=0.0007068±0.12%, D=1.003±0.001, NM-191C, Lab#=55847-01, FSH

xi	A	650	302.4	0.0547	1018.9	8.71	9.3	0.4	5.4	1.7	1.6
xi	B	750	35.24	0.0453	111.7	11.2	11.3	6.3	12.2	2.83	0.23
	C	850	10.41	0.0247	25.70	25.6	20.6	27.1	28.0	3.596	0.070
	D	920	7.430	0.0261	15.40	38.4	19.5	38.8	51.6	3.672	0.046
	E	1000	8.302	0.0401	18.53	27.8	12.7	34.1	68.7	3.604	0.059
	F	1075	8.523	0.0525	19.34	19.5	9.7	33.0	80.7	3.582	0.072
	G	1110	8.287	0.0886	19.08	9.55	5.8	32.0	86.6	3.38	0.12
	H	1180	6.641	0.1401	13.06	12.2	3.6	42.1	94.1	3.558	0.097
	I	1210	5.359	0.3900	8.659	7.40	1.3	52.9	98.7	3.61	0.15
xi	J	1250	5.120	1.135	8.238	1.69	0.45	54.3	99.7	3.54	0.65
xi	K	1300	8.609	1.622	20.12	0.289	0.31	32.5	99.9	3.6	3.9
xi	L	1680	58.18	2.038	152.2	0.132	0.25	23.0	100.0	17.0	9.4
	Integrated age ± 2σ			n=12		162.6	6.4	K2O=4.96%		3.45	0.25
	Plateau ± 2σ		steps C-I	n=7	MSWD=0.93	140.6	13.7 ±15.1		86.5	**3.71**	**0.05**
	Isochron±2σ		steps C-I	n=7	MSWD=1.04		$^{40}Ar/^{36}Ar$=	292.5±10.5		3.68	0.24

71) V-14, Groundmass Concentrate, 104.82 mg, J=0.0007422±0.13%, D=1.0055±0.001, NM-187C, Lab#=55496-01, FSH

	B	700	4.585	1.379	8.798	22.3	0.37	45.8	8.8	2.812	0.041
	C	750	3.074	1.203	3.191	5.1	0.42	72.6	10.8	2.986	0.052
	D	800	2.700	1.382	2.266	67.8	0.37	79.4	37.6	2.873	0.012
	E	875	2.566	1.218	1.737	72.1	0.42	83.9	66.1	2.883	0.012
	F	975	2.947	1.303	3.125	51.4	0.39	72.3	86.4	2.855	0.017
	G	1075	6.545	1.877	15.65	12.5	0.27	31.7	91.3	2.780	0.066
	H	1250	23.31	11.73	75.24	16.1	0.044	8.8	97.7	2.76	0.16
	I	1700	27.62	10.02	89.25	5.87	0.051	7.5	100.0	2.80	0.26
	Integrated age ± 2σ			n=8		253.2	0.23	K2O=1.25%		2.86	0.05
	Plateau ± 2σ		steps B-I	n=8	MSWD=1.63	253.2	0.36 ±0.32		100.0	**2.87**	**0.02**
	Isochron±2σ		steps B-I	n=8	MSWD=1.51		$^{40}Ar/^{36}Ar$=	293.6±2.4		2.88	0.02

72) F05-185, Biotite, 11.43 mg, J=0.0009113±0.09%, D=1.002±0.001, NM-196M, Lab#=56300-01, FSH

xi	B	650	43.14	0.0474	138.7	3.65	10.8	5.0	2.5	3.56	0.41
xi	C	720	17.69	0.0352	54.80	3.17	14.5	8.5	4.6	2.46	0.23
xi	D	800	11.23	0.0265	31.11	7.54	19.2	18.2	9.7	3.36	0.11
	E	975	5.968	0.0181	11.35	41.6	28.1	43.8	37.8	4.297	0.035
	F	1020	5.086	0.0131	8.218	22.7	38.9	52.3	53.2	4.365	0.034
	G	1080	5.112	0.0750	9.175	17.7	6.8	47.1	65.2	3.953	0.040
	H	1120	4.818	0.2328	8.265	5.53	2.2	49.7	68.9	3.934	0.072
	I	1160	4.304	0.0395	5.998	14.9	12.9	58.9	79.0	4.163	0.034
	J	1200	3.733	0.0338	3.920	24.2	15.1	69.0	95.4	4.233	0.024
xi	K	1250	3.545	0.0123	3.959	6.81	41.3	67.0	100.0	3.903	0.051
	Integrated age ± 2σ			n=10		147.9	13.4	K2O=5.45%		4.10	0.07
	Plateau ± 2σ		steps E-J	n=6	MSWD=17.23	126.733	21.662±27.533		85.7	**4.21**	**0.12**
	Isochron±2σ		steps E-J	n=6	MSWD=20.92		$^{40}Ar/^{36}Ar$=	297.6±6.4		4.19	0.08

73) F05-156, Plagioclase, 41.66 mg, J=0.0009071±0.10%, D=1.002±0.001, NM-196N, Lab#=56309-01, FSH

xi	A	650	654.1	3.271	2225.9	0.342	0.16	-0.5	0.7	-5.5	5.4

xi	B	775	6.903	3.077	15.19	1.70	0.17	38.6	4.4	4.37	0.20
xi	C	850	2.492	3.058	1.634	1.89	0.17	90.7	8.5	3.70	0.15
	D	925	2.560	3.253	2.091	2.55	0.16	86.3	14.0	3.62	0.11
	E	1000	2.433	3.437	1.941	3.84	0.15	88.0	22.3	3.509	0.083
	F	1100	2.561	3.419	2.811	5.69	0.15	78.5	34.7	3.295	0.056
	G	1175	3.094	3.297	3.464	3.35	0.15	75.6	41.9	3.83	0.11
	H	1250	5.331	3.255	10.77	3.16	0.16	45.3	48.8	3.96	0.13
xi	I	1350	10.83	3.289	16.68	2.28	0.16	57.0	53.7	10.09	0.25
xi	J	1425	11.55	3.324	16.83	8.56	0.15	59.3	72.2	11.199	0.088
xi	K	1500	5.218	3.491	7.315	7.09	0.15	64.1	87.6	5.475	0.080
xi	L	1700	3.675	3.515	5.370	5.73	0.15	64.6	100.0	3.894	0.091
	Integrated age ± 2σ			n=12		46.2	0.15	K2O=0.47%		5.62	0.13
	Plateau ± 2σ	steps D-H		n=5	MSWD=8.86	18.586	0.152±0.008		40.2	**3.50**	**0.23**
	Isochron±2σ	steps D-H		n=5	MSWD=6.25		$^{40}Ar/^{36}Ar$=	337.7±23.0		3.34	0.12

74) F05-118, Hornblende, 25.22 mg, J=0.0009125±0.09%, D=1.002±0.001, NM-196M, Lab#=56303-02, FSH

xi	A	800	220.5	1.776	743.5	0.370	0.29	0.4	1.9	1.6	4.0
xi	B	900	9.364	1.021	20.15	0.216	0.50	37.3	3.0	5.7	5.2
xi	C	1000	21.29	2.613	59.17	0.189	0.20	18.9	3.9	6.6	5.9
	D	1100	7.701	7.565	20.93	1.60	0.067	27.7	12.0	3.53	0.70
	E	1130	5.663	8.335	14.33	4.98	0.061	37.3	37.3	3.49	0.23
	F	1160	5.797	8.496	16.33	2.23	0.060	28.8	48.6	2.76	0.51
	G	1190	6.392	8.568	16.80	3.08	0.060	33.3	64.3	3.52	0.38
	H	1220	4.889	8.917	11.82	3.83	0.057	43.5	83.7	3.52	0.31
	I	1250	4.112	8.645	9.199	2.47	0.059	51.1	96.2	3.48	0.49
xi	J	1300	7.789	8.873	22.96	0.363	0.057	22.2	98.0	2.9	3.4
xi	K	1650	24.86	7.801	59.85	0.386	0.065	31.4	100.0	12.9	3.3
	Integrated age ± 2σ			n=11		19.7	0.062	K2O=0.33%		3.61	0.42
	Plateau ± 2σ	steps D-I		n=6	MSWD=0.39	18.2	0.060±0.007		92.3	**3.44**	**0.30**
	Isochron±2σ	steps D-I		n=6	MSWD=0.47		$^{40}Ar/^{36}Ar$=	291.5±66.1		3.52	1.23

75) F08-68 , Groundmass Concentrate, 26.75 mg, J=0.0011352±0.07%, D=1.004±0.001, NM-224H, Lab#=58993-01, FSH

xi	A	3	8.058	0.1687	23.23	11.4	3.0	14.9	4.1	2.46	0.12
	B	4	2.714	0.0951	4.616	39.8	5.4	49.9	18.4	2.761	0.029
	C	5	1.990	0.1586	2.052	52.7	3.2	70.1	37.2	2.841	0.017
	D	5	1.958	0.2317	1.869	48.3	2.2	72.7	54.5	2.897	0.017
	E	6	2.261	0.4293	2.890	70.0	1.2	63.7	79.6	2.933	0.020
	F	8	3.025	0.6692	5.683	31.6	0.76	46.2	90.9	2.849	0.037
xi	G	10	4.260	0.9318	9.851	12.8	0.55	33.3	95.5	2.901	0.076
xi	H	15	7.373	1.625	20.49	7.91	0.31	19.6	98.3	2.96	0.12
xi	I	25	10.47	1.929	30.53	4.73	0.26	15.3	100.0	3.28	0.18
	Integrated age ± 2σ			n=9		279.2	1.3	K2O=3.53%		2.86	0.04
	Plateau ± 2σ	steps B-F		n=5	MSWD=7.45	242.4	2.5 ±3.7		86.8	**2.87**	**0.05**
	Isochron±2σ	steps B-F		n=5	MSWD=9.06		$^{40}Ar/^{36}Ar$=	287.0±7.8		2.92	0.04

76) F03-04-2, Groundmass Concentrate, 95.22 mg, J=0.0007523±0.10%, D=1.005±0.001, NM-172, Lab#=54474-01, LSH

xi	A	5	29.79	0.1422	94.51	397.9	3.6	6.3	12.2	2.55	0.18
	B	8	2.438	0.1418	3.250	1432.8	3.6	61.1	56.3	2.020	0.010
	C	12	2.714	0.1422	4.272	906.7	3.6	53.9	84.2	1.986	0.013
	D	16	4.774	0.1890	11.01	299.0	2.7	32.2	93.4	2.083	0.039
	E	20	7.121	0.2798	19.22	98.2	1.8	20.6	96.4	1.986	0.057
	F	23	8.572	0.4027	24.18	43.1	1.3	17.1	97.8	1.98	0.11
	G	27	9.296	0.5350	26.96	28.0	0.95	14.8	98.6	1.86	0.13
xi	H	30	10.85	1.084	30.81	44.6	0.47	16.9	100.0	2.50	0.11
	Integrated age ± 2σ			n=8		3250.5	3.0	K2O=17.43%		2.08	0.08

	Plateau ± 2σ	steps B-G	n=6	MSWD=1.93	2807.9	3.4 ±2.3		86.4	**2.01**	**0.02**
	Isochron±2σ	steps B-G	n=6	MSWD=2.26		$^{40}Ar/^{36}Ar$=	294.9±3.6		2.01	0.03
	76) F03-04-2, Plagioclase, 46.27 mg, J=0.0007528±0.10%, D=1.005±0.001, NM-172, Lab#=54475-01, LSH									
xi	A	5	11.96	5.627	40.55	54.0	0.091	3.7	25.8	0.61	0.17
	B	8	2.969	5.557	6.055	53.1	0.092	55.2	51.2	2.234	0.058
	C	12	3.012	4.961	6.068	57.9	0.10	54.1	78.8	2.219	0.035
	D	16	2.600	5.579	4.898	22.5	0.091	62.1	89.6	2.199	0.056
	E	20	3.036	6.282	6.713	10.4	0.081	51.8	94.5	2.144	0.093
	F	23	4.691	6.983	12.86	6.93	0.073	31.3	97.9	2.00	0.13
	G	27	24.76	6.434	80.38	4.48	0.079	6.2	100.0	2.09	0.31
	Integrated age ± 2σ			n=7		209.3	0.092	K2O=2.31%		1.79	0.18
	Plateau ± 2σ	steps B-G	n=6	MSWD=0.69	155.3	0.094±0.022		74.2		**2.20**	**0.05**
	Isochron±2σ	steps B-G	n=6	MSWD=0.76		$^{40}Ar/^{36}Ar$=	293.5±6.1			2.22	0.06
	77) F01-54, Obsidian, 10.79 mg, J=0.0007066±0.11%, D=1.00698±0.0018, NM-154, Lab#=53296-01, FSH									
x	A	650	9.654	2.593	25.51	1.54	0.20	24.1	1.5	2.97	0.35
	B	750	2.072	0.0416	1.158	5.01	12.3	83.7	6.2	2.208	0.056
	C	830	1.951	0.0442	1.131	6.39	11.5	83.1	12.2	2.064	0.041
	D	875	1.883	0.0442	0.7748	9.05	11.5	88.0	20.8	2.111	0.030
	E	900	1.780	0.0419	0.5683	9.85	12.2	90.8	30.1	2.059	0.028
	F	940	1.696	0.0425	0.2206	10.6	12.0	96.4	40.1	2.082	0.024
	G	1010	1.775	0.0423	0.5087	12.0	12.1	91.7	51.4	2.075	0.027
	H	1080	1.817	0.0506	0.4861	14.5	10.1	92.3	65.1	2.137	0.023
	I	1150	1.906	0.0458	0.7868	11.5	11.2	88.0	75.9	2.136	0.031
x	J	1225	1.784	0.0503	0.2799	16.6	10.1	95.6	91.6	2.173	0.022
x	K	1720	3.734	0.2577	7.189	8.87	2.0	43.7	100.0	2.078	0.072
	Integrated age ± 2σ			n=11		105.9	5.1	K2O=5.33%		2.13	0.03
	Plateau ± 2σ	steps B-I	n=8	MSWD=1.76	78.8	11.5 ±1.4		74.4		**2.10**	**0.03**
	Isochron±2σ	steps A-K	n=11	MSWD=2.79		$^{40}Ar/^{36}Ar$=	305.3±14.0			2.11	0.02
	A1) V-13, Sanidine, J=0.0007286±0.12%, D=1.004±0.001, NM-187B, Lab#=55489, SCLF									
	02	3.2	1.324	0.0096	0.6282	3.218	53.2	86.0		1.497	0.032
	10	3.2	1.240	0.0088	0.3137	4.165	58.1	92.6		1.508	0.024
	11	3.2	1.298	0.0014	0.4436	2.953	361.8	89.9		1.534	0.041
	06	3.2	1.412	0.0400	0.8350	3.263	12.8	82.8		1.535	0.039
	09	3.2	1.280	0.0174	0.3476	4.852	29.3	92.1		1.549	0.030
	01	3.2	1.302	0.0294	0.4134	5.097	17.4	90.8		1.554	0.024
	12	3.2	1.253	-0.0017	0.1563	5.565	-	96.3		1.586	0.020
	03	3.2	1.281	0.0364	0.2247	3.244	14.0	95.1		1.600	0.038
	15	3.2	1.459	0.0061	0.7863	1.906	84.3	84.1		1.613	0.061
	13	3.2	1.297	0.0197	0.0407	1.516	25.9	99.2		1.691	0.067
x	14	3.2	1.281	-0.0347	-0.0663	0.685	-	101.3		1.71	0.15
x	07	3.2	1.331	0.0022	0.0636	1.953	236.1	98.6		1.724	0.056
x	05	3.2	1.320	0.0248	0.0345	1.943	20.6	99.4		1.724	0.060
x	04	3.2	1.408	0.0282	0.1467	1.785	18.1	97.1		1.797	0.072
	Mean age ± 2σ			n=10	MSWD=1.80		73.0 ±210.5			**1.55**	**0.03**
	A2) V15, Sanidine, J=0.0007477±0.06%, D=1.003±0.001, NM-192L, Lab#=56005, SCLF									
	08	3.3	1.426	0.0199	0.8706	7.725	25.6	82.1		1.578	0.076
	11	3.3	1.352	0.0174	0.5541	15.039	29.3	88.0		1.604	0.039
	13	3.3	1.272	0.0197	0.2428	11.962	25.9	94.5		1.621	0.049
	07	3.3	1.291	0.0152	0.2715	15.739	33.5	93.9		1.634	0.037
	06	3.3	1.394	0.0297	0.5971	17.062	17.2	87.5		1.645	0.035
	03	3.3	1.423	0.0185	0.6313	13.428	27.6	87.0		1.669	0.044

	12	3.3	1.674	0.0214	1.440	16.767	23.8	74.7		1.686	0.036
	14	3.3	1.476	0.0188	0.7692	10.542	27.2	84.7		1.686	0.056
	04	3.3	1.370	0.0160	0.3401	18.288	31.8	92.8		1.714	0.032
x	09	3.3	1.520	0.0205	0.6495	1.234	24.9	87.5		1.79	0.47
x	02	3.3	1.421	0.0206	0.2985	12.253	24.8	93.9		1.800	0.048
x	10	3.3	1.509	0.0191	0.5728	15.625	26.7	88.9		1.808	0.038
x	01	3.3	1.488	0.0180	0.4984	22.580	28.3	90.2		1.809	0.027
x	15	3.3	1.340	0.0206	-0.0106	3.686	24.8	100.4		1.81	0.16
x	05	3.3	1.664	0.0379	0.6178	11.158	13.5	89.2		2.002	0.053
	Mean age ± 2σ			n=9	MSWD=1.00		26.9	±9.5		**1.66**	**0.03**

A3) F05-133, Sanidine, J=0.0013531±0.05%, D=1.002±0.001, NM-197E, Lab#=56413, SCLF

x	10	1.7	0.7697	0.0156	1.152	1.967	32.7	55.9		1.05	0.28
x	04	1.7	0.6948	0.0196	0.4725	3.985	26.1	80.1		1.36	0.13
	09	1.7	0.6785	0.0180	0.2980	7.150	28.4	87.2		1.444	0.071
	01	1.7	0.6853	0.0160	0.1822	7.810	31.9	92.3		1.544	0.066
	02	1.7	0.6900	0.0174	0.1376	8.476	29.2	94.3		1.588	0.062
	03	1.7	0.6867	0.0172	0.1236	15.872	29.6	94.9		1.590	0.032
	07	1.7	0.7522	0.0196	0.3369	14.221	26.1	87.0		1.596	0.036
	05	1.7	0.7005	0.0185	0.1586	11.434	27.6	93.5		1.599	0.045
	08	1.7	0.7102	0.0174	0.1758	7.230	29.3	92.9		1.610	0.070
	06	1.7	0.7289	0.0193	0.1270	5.934	26.4	95.1		1.691	0.086
	Mean age ± 2σ			n=8	MSWD=0.87		28.6	±3.8		**1.59**	**0.04**

A4) F05-123, Sanidine, J=0.0008961±0.05%, D=1.002±0.001, NM-196H, Lab#=56261, SCLF

x	14	3.5	1.589	0.0047	2.206	1.315	108.6	59.0		1.52	0.16
	01	3.5	1.064	0.0044	0.1620	1.455	117.2	95.5		1.64	0.14
	11	3.5	1.132	0.0080	0.3829	4.330	63.5	90.1		1.647	0.049
	04	3.5	1.216	0.0061	0.6591	6.822	84.2	84.0		1.651	0.033
	07	3.5	1.140	0.0069	0.3990	4.583	73.9	89.7		1.653	0.048
	03	3.5	1.198	0.0081	0.5304	8.559	63.0	87.0		1.684	0.026
	02	3.5	1.116	0.0072	0.2279	8.770	70.4	94.0		1.696	0.025
	10	3.5	2.208	0.0071	3.922	3.163	71.6	47.5		1.697	0.077
	09	3.5	3.660	0.0089	8.825	2.146	57.4	28.8		1.70	0.11
	13	3.5	1.358	0.0068	1.033	4.483	75.1	77.6		1.702	0.049
	05	3.5	1.171	0.0095	0.3762	5.270	54.0	90.6		1.715	0.041
	08	3.5	1.193	0.0068	0.4319	2.768	74.9	89.3		1.722	0.079
	15	3.5	1.535	0.0072	1.483	5.557	71.3	71.5		1.773	0.040
	12	3.5	1.735	0.0068	2.042	3.125	75.3	65.3		1.830	0.071
	06	3.5	15.47	0.0094	48.42	2.082	54.5	7.5		1.88	0.20
	Mean age ± 2σ			n=14	MSWD=0.96		71.9	±31.5		**1.70**	**0.02**

A5) F05-135, Sanidine, J=0.0013539±0.05%, D=1.002±0.001, NM-197E, Lab#=56414, SCLF

	10	1.7	0.6642	0.0190	0.4705	2.958	26.8	79.3		1.286	0.088
	07	1.7	0.7155	0.0221	0.5170	3.187	23.1	78.9		1.378	0.086
	05	1.7	0.6948	0.0228	0.4425	4.238	22.4	81.5		1.382	0.060
	02	1.7	0.6764	0.0192	0.3683	4.583	26.6	84.1		1.390	0.061
	06	1.7	0.7033	0.0160	0.3443	2.170	31.9	85.7		1.47	0.11
	01	1.7	0.6873	0.0165	0.2710	3.273	30.8	88.5		1.486	0.082
	04	1.7	0.6919	0.0216	0.2674	2.773	23.6	88.8		1.501	0.093
	Mean age ± 2σ			n=7	MSWD=0.75		26.5	±7.5		**1.40**	**0.06**

A6) F05-150, Sanidine, J=0.0008964±0.04%, D=1.002±0.001, NM-196H, Lab#=56264, SCLF

	01	3.5	1.005	0.0126	0.4618	2.819	40.4	86.5		1.406	0.097
	13	3.5	1.009	0.0141	0.4051	3.803	36.2	88.3		1.440	0.054

	04	3.5	1.039	0.0118	0.4937	2.067	43.2	86.1		1.45	0.13
	06	3.5	1.005	0.0193	0.2377	2.880	26.4	93.2		1.514	0.074
	02	3.5	1.004	0.0135	0.2297	5.474	37.7	93.4		1.515	0.049
	05	3.5	1.013	0.0133	0.1624	4.518	38.4	95.4		1.562	0.060
	03	3.5	1.406	0.0143	1.466	9.182	35.7	69.3		1.574	0.033
	11	3.5	1.019	0.0132	0.1540	10.336	38.8	95.6		1.576	0.022
	14	3.5	1.013	0.0141	0.1322	8.685	36.1	96.3		1.577	0.026
	08	3.5	1.051	0.0137	0.2253	4.694	37.3	93.8		1.593	0.046
	09	3.5	1.134	0.0131	0.5021	7.296	39.1	87.0		1.595	0.030
	10	3.5	1.053	0.0139	0.2242	6.229	36.7	93.8		1.597	0.036
	15	3.5	1.079	0.0126	0.2021	4.884	40.5	94.6		1.650	0.044
	12	3.5	1.093	0.0154	0.2475	8.598	33.1	93.4		1.650	0.026
	07	3.5	1.225	0.0139	0.5538	3.617	36.7	86.7		1.717	0.061
	Mean age ± 2σ			n=15	MSWD=2.06		37.1	±7.6		**1.59**	**0.03**

A7) Rabbit Mountain, Obsidian, 39.34 mg, J=0.0008257±0.09%, D=0.00092±1.00484, NM-162, Lab#=53930-02, LSH

x	A	2	47.84	-0.3317	-65.2512	0.048	-	140.3	0.0	97.3	27.2
x	B	4	1.709	0.0061	-2.2633	0.110	84.1	139.2	0.0	3.54	0.40
x	C	7	0.9667	0.0285	0.1177	3.34	17.9	96.7	0.2	1.391	0.031
	D	10	0.9662	0.0271	0.0008	20.8	18.9	100.2	1.1	1.442	0.010
	E	12	0.9753	0.0276	-0.0513	18.4	18.5	101.8	1.9	1.478	0.011
	F	15	0.9743	0.0281	0.0305	110.7	18.2	99.3	7.0	1.441	0.004
	G	20	0.9682	0.0284	0.0378	516.1	17.9	99.1	30.4	1.428	0.003
	H	25	0.9697	0.0275	0.0272	1346.7	18.5	99.4	91.6	1.435	0.004
	I	30	0.9811	0.0273	0.0483	171.9	18.7	98.8	99.4	1.443	0.004
	J	40	1.030	0.0268	0.1506	13.8	19.0	95.9	100.0	1.470	0.015
	Integrated age ± 2σ			n=10		2202.0	6.2			1.44	0.01
	Plateau ± 2σ	steps D-J		n=7	MSWD=4.87	2198.5	18.4	±0.8	99.8	**1.44**	**0.01**

A8) F05-177, Sanidine, J=0.0008963±0.04%, D=1.002±0.001, NM-196H, Lab#=56262, SCLF

	14	3.5	0.9834	0.0117	0.1941	1.909	43.6	94.3		1.50	0.11
	15	3.5	1.157	0.0138	0.7128	3.002	37.1	81.9		1.532	0.070
	08	3.5	1.011	0.0162	0.1915	5.461	31.6	94.5		1.545	0.040
	01	3.5	1.048	0.0214	0.3096	1.268	23.9	91.4		1.55	0.17
	02	3.5	0.9985	0.0133	0.1109	2.977	38.3	96.8		1.563	0.070
	13	3.5	1.087	0.0161	0.3973	3.052	31.7	89.3		1.569	0.070
	04	3.5	1.037	0.0152	0.1411	4.272	33.5	96.1		1.611	0.050
	03	3.5	1.033	0.0140	0.1192	6.347	36.4	96.7		1.614	0.034
	11	3.5	1.006	0.0153	0.0122	3.558	33.4	99.8		1.623	0.059
	12	3.5	0.9976	0.0161	-0.0197	3.342	31.6	100.7		1.624	0.062
	05	3.5	1.050	0.0154	0.1397	4.427	33.2	96.2		1.633	0.048
	07	3.5	1.025	0.0123	-0.0284	3.837	41.3	100.9		1.671	0.054
	06	3.5	1.051	0.0156	0.0569	5.721	32.7	98.5		1.674	0.038
	09	3.5	1.154	0.0175	0.3652	1.751	29.1	90.8		1.69	0.12
x	10	3.5	1.137	0.0188	0.0780	3.874	27.2	98.1		1.80	0.05
	Mean age ± 2σ			n=14	MSWD=0.83		34.1	±10.0		**1.61**	**0.03**

A9) Cerro Negro, Sanidine, J=0.0007802±0.10%, D=1.0024±0.001, NM-93, Lab#=9486, SCLF

	09	1.6	0.9231	0.0121	0.2414	5.885	42.3	92.4		1.200	0.012
	10	1.6	1.202	0.0160	1.118	4.851	31.8	72.6		1.227	0.018
	14	1.6	1.135	0.0179	0.8835	3.501	28.4	77.1		1.232	0.019
	05	1.6	1.109	0.0152	0.7676	5.798	33.5	79.7		1.243	0.012
	11	1.6	1.316	0.0148	1.460	4.248	34.5	67.3		1.246	0.019
	13	1.6	0.9686	0.0137	0.2829	4.335	37.3	91.5		1.246	0.015
	02	1.6	1.077	0.0185	0.6262	3.444	27.6	82.9		1.256	0.020

	06	1.6	1.504	0.0111	2.024	5.226	46.1	60.3	1.276	0.016
	12	1.6	1.203	0.0192	0.9988	3.604	26.6	75.6	1.279	0.022
	08	1.6	1.184	0.0195	0.9140	4.635	26.2	77.3	1.288	0.017
	01	1.6	0.9070	0.0153	-0.0456	3.187	33.3	101.6	1.297	0.019
	04	1.6	1.169	0.0149	0.8275	3.248	34.2	79.2	1.303	0.021
	07	1.6	1.436	0.0128	1.689	3.843	40.0	65.3	1.320	0.023
	03	1.6	1.090	0.0124	0.4815	3.123	41.2	87.0	1.334	0.021
	Mean age ± 2σ			n=14	MSWD=5.02		34.5	±12.4	**1.26**	**0.02**

A10) F03-14b, Sanidne J=0.0007527±0.20%, D=1.005±0.001, NM-172N, Lab#=54479, SCLF

	10	1.8	1.820	0.0165	3.128	1.247	30.9	49.3	1.218	0.073
	01	1.8	1.428	0.0338	1.774	1.544	15.1	63.5	1.231	0.058
	14	1.8	1.074	0.0212	0.5691	1.738	24.1	84.5	1.232	0.051
	11	1.8	1.082	0.0134	0.5767	2.485	38.1	84.4	1.239	0.036
	04	1.8	1.523	0.0245	2.068	1.526	20.8	60.0	1.241	0.059
	03	1.8	1.016	0.0173	0.3451	1.339	29.5	90.1	1.243	0.066
	13	1.8	1.443	0.0161	1.782	1.085	31.6	63.6	1.246	0.083
	07	1.8	1.620	0.0238	2.354	2.485	21.4	57.2	1.258	0.038
	09	1.8	1.739	0.0176	2.746	3.771	29.0	53.4	1.262	0.028
	06	1.8	1.640	0.0151	2.407	2.953	33.8	56.7	1.262	0.032
	05	1.8	1.119	0.0133	0.6313	2.772	38.3	83.4	1.267	0.033
	12	1.8	6.458	0.0540	18.69	2.091	9.5	14.5	1.275	0.063
	15	1.8	1.045	0.0131	0.2394	0.760	39.0	93.3	1.32	0.12
x	02	1.8	3.252	0.0755	7.494	3.170	6.8	32.1	1.417	0.036
x	08	1.8	2.140	0.0242	1.311	1.283	21.1	82.0	2.381	0.070
	Mean age ± 2σ			n=13	MSWD=0.14		27.8	±18.3	**1.25**	**0.03**

A11) F03-52, Sanidine, J=0.0007539±0.20%, D=1.005±0.001, NM-172N, Lab#=54477, SCLF

	03	1.8	0.9289	0.0206	0.1969	2.402	24.7	93.9	1.186	0.047
	13	1.8	0.9701	0.0179	0.2832	1.495	28.5	91.5	1.207	0.075
	08	1.8	1.045	0.0171	0.5304	2.528	29.8	85.1	1.210	0.044
	10	1.8	0.9253	0.0229	0.0915	4.342	22.3	97.3	1.224	0.026
	04	1.8	0.9396	0.0180	0.1313	5.241	28.3	96.0	1.227	0.022
	06	1.8	0.9457	0.0208	0.1489	4.089	24.5	95.5	1.228	0.027
	01	1.8	0.9476	0.0226	0.1535	2.467	22.6	95.4	1.229	0.046
	05	1.8	0.9500	0.0162	0.1577	3.172	31.5	95.2	1.230	0.035
	15	1.8	0.9955	0.0184	0.3120	0.609	27.7	90.9	1.23	0.18
	12	1.8	0.9544	0.0205	0.1683	1.732	24.9	95.0	1.232	0.065
	07	1.8	0.9519	0.0196	0.1591	4.055	26.0	95.2	1.233	0.028
	09	1.8	0.9549	0.0205	0.1467	3.131	24.9	95.6	1.242	0.036
	02	1.8	0.9668	0.0154	0.1338	1.802	33.0	96.0	1.262	0.062
	14	1.8	1.008	0.0177	0.2720	1.469	28.9	92.2	1.264	0.076
x	11	1.8	1.507	0.0191	1.761	0.883	26.8	65.6	1.34	0.13
	Mean age ± 2σ			n=14	MSWD=0.14		27.0	±6.5	**1.23**	**0.02**

A12) F03-53, Sanidine, J=0.0007532±0.20%, D=1.005±0.001, NM-172N, Lab#=54478, SCLF

x	14	1.8	0.9372	0.0173	0.3036	0.435	29.5	90.6	1.15	0.19
	02	1.8	0.9403	0.0190	0.1846	1.425	26.9	94.4	1.205	0.059
	04	1.8	0.9363	0.0213	0.1638	2.059	24.0	95.0	1.208	0.041
	07	1.8	0.9274	0.0192	0.1310	1.828	26.5	96.0	1.209	0.046
	12	1.8	0.9376	0.0184	0.1652	1.150	27.8	95.0	1.209	0.074
	08	1.8	0.9424	0.0141	0.1562	2.145	36.1	95.2	1.219	0.040
	13	1.8	0.9831	0.0223	0.2749	0.754	22.8	91.9	1.23	0.11
	09	1.8	2.149	0.0344	4.193	2.482	14.8	42.5	1.240	0.038
	15	1.8	1.015	0.0203	0.3394	1.054	25.1	90.3	1.244	0.080

	11	1.8	1.245	0.0182	1.104	0.804	28.0	73.9		1.25	0.11
	06	1.8	1.132	0.0190	0.7128	3.122	26.8	81.5		1.253	0.028
	01	1.8	1.047	0.0279	0.4045	1.503	18.3	88.8		1.263	0.057
	10	1.8	0.9624	0.0187	0.1039	1.660	27.3	97.0		1.268	0.051
x	03	1.8	1.101	0.0232	0.4377	1.289	22.0	88.4		1.323	0.066
x	05	1.8	1.819	0.0259	2.782	3.121	19.7	54.9		1.357	0.030
	Mean age ± 2σ			n=12	MSWD=0.22		25.4	±10.5		**1.24**	**0.03**

A13) F03-50, Sanidine, J=0.0007542±0.10%, D=1.005±0.001, NM-172, Lab#=54476, SCLF

	10	1.8	0.7725	0.0115	0.4415	7.024	44.3	83.3		0.875	0.063
	01	1.8	1.059	0.0356	1.398	7.507	14.3	61.3		0.883	0.060
	05	1.8	0.9412	0.0128	0.9758	12.002	40.0	69.5		0.889	0.038
	06	1.8	0.7638	0.0127	0.3752	11.278	40.3	85.6		0.890	0.039
	03	1.8	0.8265	0.0112	0.5849	10.569	45.4	79.2		0.890	0.042
	12	1.8	0.7899	0.0117	0.4252	6.933	43.7	84.2		0.905	0.063
	08	1.8	1.256	0.0127	1.996	11.525	40.2	53.1		0.907	0.042
	02	1.8	0.9446	0.0108	0.9273	9.353	47.3	71.1		0.913	0.048
	11	1.8	0.7577	0.0107	0.2847	11.744	47.5	89.0		0.917	0.037
	07	1.8	0.7304	0.0113	0.1917	15.260	45.1	92.4		0.918	0.029
	13	1.8	0.7387	0.0116	0.2197	19.977	44.1	91.4		0.918	0.023
	14	1.8	0.9028	0.0123	0.7571	29.962	41.4	75.3		0.925	0.016
	04	1.8	0.7789	0.0129	0.2820	16.947	39.7	89.5		0.948	0.027
	09	1.8	0.8678	0.0102	0.5568	9.977	50.1	81.2		0.958	0.045
x	15	1.8	1.188	0.0124	0.2104	13.546	41.3	94.9		1.532	0.032
	Mean age ± 2σ			n=14	MSWD=0.36		41.7	±17.0		**0.92**	**0.02**

A14) JG05-15C, Sanidine, J=0.0009122±0.09%, D=1.002±0.001, NM-196M, Lab#=56304, SCLF

	03	3.5	3.498	0.0142	10.26	10.900	36.0	13.4		0.770	0.046
	04	3.5	0.6920	0.0131	0.7568	8.904	38.8	67.8		0.772	0.032
	01	3.5	2.834	0.0132	7.952	8.582	38.7	17.1		0.799	0.050
	11	3.5	8.544	0.0141	27.20	9.029	36.3	5.9		0.835	0.077
x	14	3.5	17.95	0.0141	58.87	10.782	36.2	3.1		0.90	0.14
x	08	3.5	10.77	0.0138	34.46	9.495	36.9	5.5		0.967	0.100
x	02	3.5	16.42	0.0155	53.45	4.620	33.0	3.8		1.03	0.17
x	13	3.5	14.61	0.0124	47.23	4.936	41.1	4.4		1.07	0.15
x	05	3.5	24.91	0.0162	82.02	7.442	31.6	2.7		1.11	0.20
x	10	3.5	18.07	0.0141	58.70	7.556	36.2	4.0		1.20	0.15
x	06	3.5	15.86	0.0130	51.17	7.645	39.3	4.7		1.22	0.14
x	07	3.5	28.53	0.0136	94.02	4.412	37.4	2.6		1.23	0.25
x	12	3.5	17.28	0.0139	55.59	4.425	36.6	4.9		1.40	0.17
x	15	3.5	28.11	0.0170	92.18	11.428	30.0	3.1		1.43	0.20
x	09	3.5	26.11	0.0139	85.17	5.435	36.8	3.6		1.55	0.22
	Mean age ± 2σ			n=4	MSWD=0.25		37.4	±3.0		**0.78**	**0.04**

A15) F05-137, Sanidine, J=0.0013542±0.05%, D=1.002±0.001, NM-197E, Lab#=56412, SCLF

x	10	1.7	0.8171	0.0373	2.191	0.561	13.7	21.2		0.42	0.95
	04	1.7	0.5637	0.0134	0.8985	8.640	38.1	53.1		0.731	0.064
	09	1.7	0.7668	0.0164	1.549	11.321	31.1	40.5		0.758	0.051
	01	1.7	0.5983	0.0139	0.9753	13.693	36.8	52.0		0.760	0.045
	06	1.7	0.5514	0.0153	0.8062	18.396	33.4	57.0		0.768	0.031
	07	1.7	0.5411	0.0144	0.7631	15.620	35.4	58.5		0.774	0.036
	02	1.7	0.4156	0.0141	0.3297	23.932	36.1	76.8		0.780	0.024
	08	1.7	0.3703	0.0131	0.1578	7.058	39.1	87.7		0.793	0.076
	05	1.7	0.5893	0.0138	0.8993	14.680	37.1	55.1		0.793	0.038
x	03	1.7	1.753	0.0460	3.905	0.194	11.1	34.4		1.5	2.7

Mean age ± 2σ	n=8	MSWD=0.15	35.9 ±5.2	**0.77**	**0.03**

Notes:

Sample header row includes: sample number, field number, mineral J factor, discrimination, irradiation batch, lab number, and analytical method: SCLF = single-crystal lasef fusion, FSH - furnace step heating, LSH = laser step heating
x (or i) symbol preceding sample ID denotes analyses excluded from plateau (or isochron) age calculations.
Isotopic ratios corrected for blank, radioactive decay, and mass discrimination, not corrected for interfering reactions.
Errors quoted for individual analyses include analytical error only, without interfering reaction or J uncertainties.
Bold denotes preferred ages.

Age calculations:

Ages calculated relative to FC-2 Fish Canyon Tuff sanidine interlaboratory standard (28.02 Ma, Renne et al, 1998).
Integrated age calculated by summing isotopic measurements of all steps.
Integrated age error calculated by quadratically combining errors of isotopic measurements of all steps.
Plateau age or preferred age calculated for the indicated steps by weighting each step by the inverse of the variance.
Plateau age error is inverse-variance-weighted mean error (Taylor, 1982) times root MSWD where MSWD>1.
MSWD values are calculated for n-1 degrees of freedom for plateau age.
Isochron ages, $^{40}Ar/^{36}Ar_i$ and MSWD values calculated from regression results obtained by the methods of York (1969).
Decay constants and isotopic abundances after Steiger and Jäger (1977).
Weight percent K_2O calculated from ^{39}Ar signal, sample weight, and instrument sensitivity.
All errors reported at ±2s, unless otherwise noted.

Sample preparation and irradiation:

Groundmass concentrates and mineral separates prepared using crushing, dilute HCl of HF acid treatment, Franz magnetic separator, and hand-picking techniques.
Samples were loaded into machined Al discs and irradiated in 19 separate batches for 1 to 7 hours in the D-3 position, Nuclear Science Center, College Station, TX. The table below lists irradiations and their respective correction factors.
Neutron flux monitor Fish Canyon Tuff sanidine (FC-1).

Instrumentation:

Mass Analyzer Products 215-50 mass spectrometer on line with automated all-metal extraction system.
Samples were step-heated using a Mo double-vacuum resistance furnace (heating duration 10 minutes), or CO_2 laser (heating duration 2 minutes).
Reactive gases removed during furnace (laser) analysis by reaction with 3 (2) SAES GP-50 getters, 2 (1) operated at ~450°C and 1 at 20°C. Gas also exposed to a W filament operated at ~2000°C.

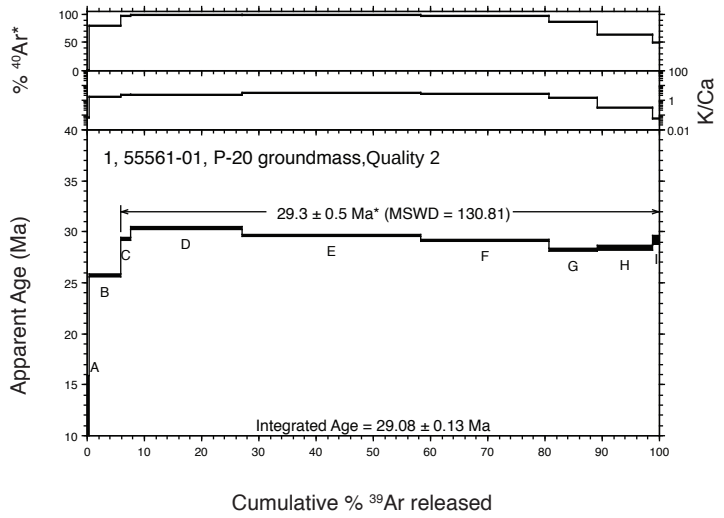
Analytical parameters:

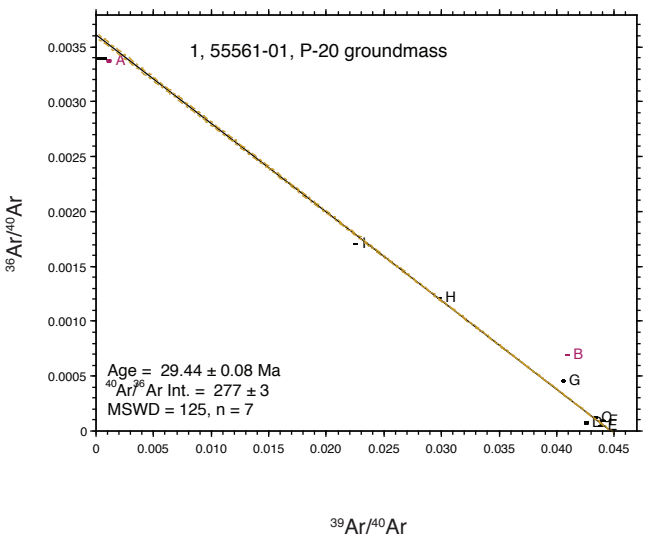
Electron multiplier sensitivity averaged 2.9 x 10-16 moles /pA.
J-factors determined to a precision of ± 0.1% by CO_2 laser-fusion of 6 single crystals from each of 6 radial positions around the irradiation tray.
Correction factors for interfering nuclear reactions were determined using K-glass and CaF_2 and are as follows:

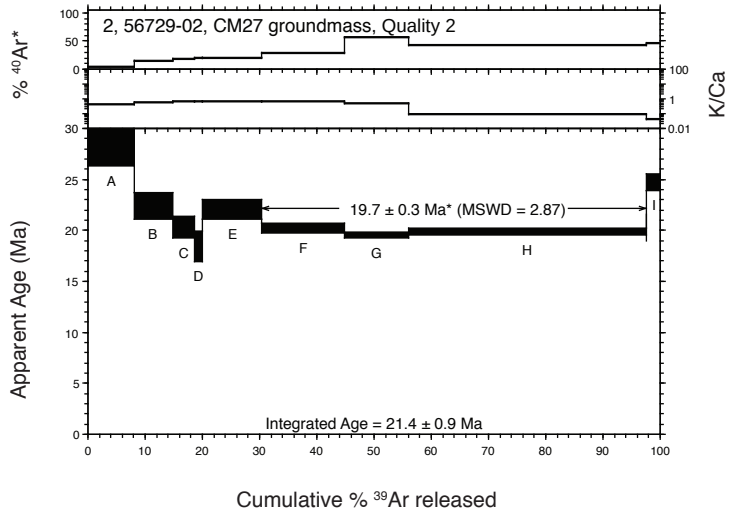
$(^{39}Ar/^{37}Ar)_{Ca}$ = 0.00068 ± 2e-05
$(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028 ± 1e-05
$(^{38}Ar/^{39}Ar)_{K}$ = 0.01077 (TX) or 0.013 (CO)
$(^{40}Ar/^{39}Ar)_{K}$ = 0 ± 0.0004 (TX) or 0.01 ± 0.002 (CO)

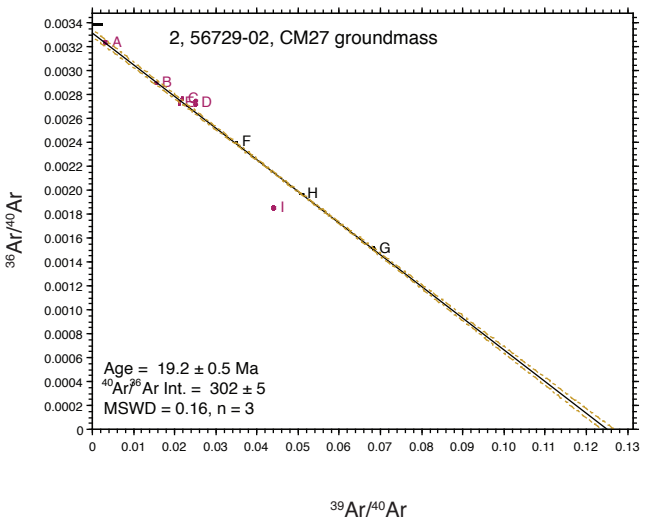
Irradiation	Length (hrs)	Reactor
NM-43	7	TX
NM-93	7	TX
NM-151	7	TX
NM-154	7	TX
NM-162	7	TX
NM-166	14	TX
NM-172	14	TX
NM-181	14	TX
NM-182	10.05	TX
NM-187	7	TX
NM-191	7.15	TX
NM-192	7	TX
NM-194	15	TX
NM-196	8.85	TX
NM-197	14	TX
NM-202	6	TX

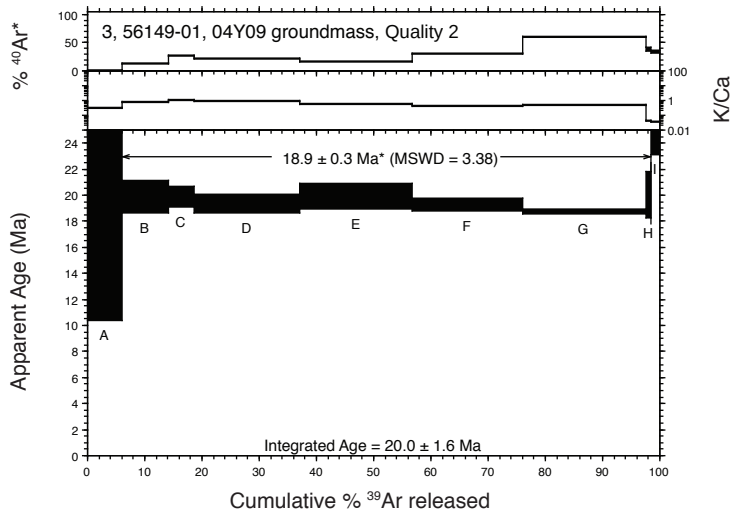
NM-203	7	TX
NM-208	7	TX
NM-224	5	CO

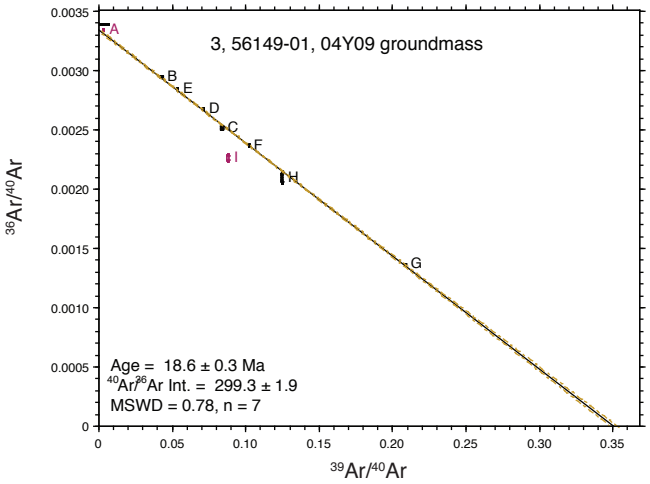

% 40Ar*
K/Ca
1, 55561-01, P-20 groundmass,Quality 2
29.3 ± 0.5 Ma* (MSWD = 130.81)
Apparent Age (Ma)
Integrated Age = 29.08 ± 0.13 Ma
Cumulative % 39Ar released

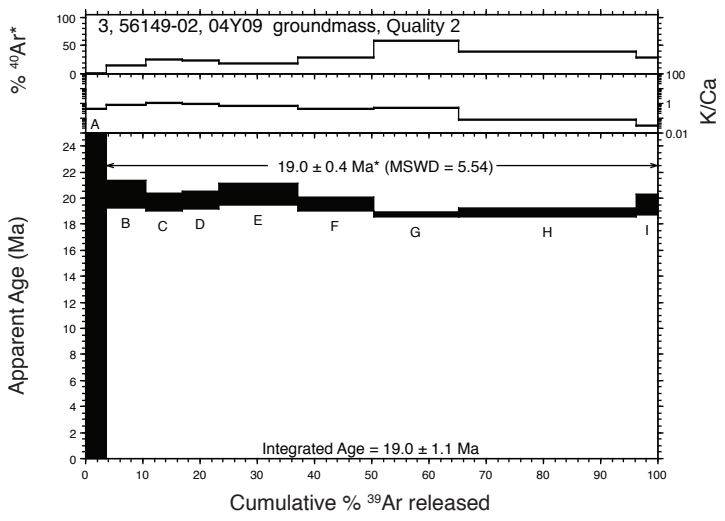

1, 55561-01, P-20 groundmass
36Ar/40Ar
Age = 29.44 ± 0.08 Ma
40Ar/36Ar Int. = 277 ± 3
MSWD = 125, n = 7
39Ar/40Ar

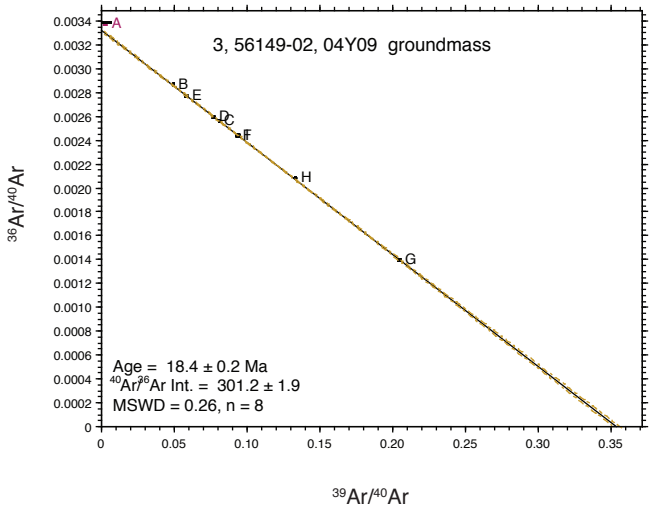

% 40Ar*
K/Ca
2, 56729-02, CM27 groundmass, Quality 2
19.7 ± 0.3 Ma* (MSWD = 2.87)
Apparent Age (Ma)
Integrated Age = 21.4 ± 0.9 Ma
Cumulative % 39Ar released

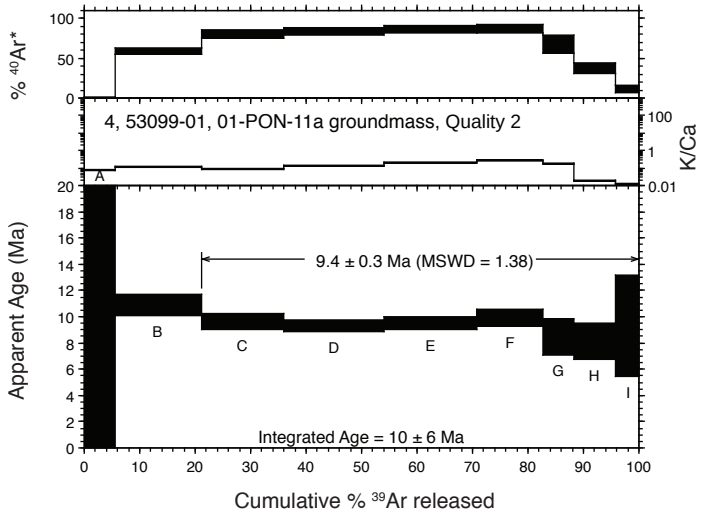

2, 56729-02, CM27 groundmass
36Ar/40Ar
Age = 19.2 ± 0.5 Ma
40Ar/36Ar Int. = 302 ± 5
MSWD = 0.16, n = 3
39Ar/40Ar

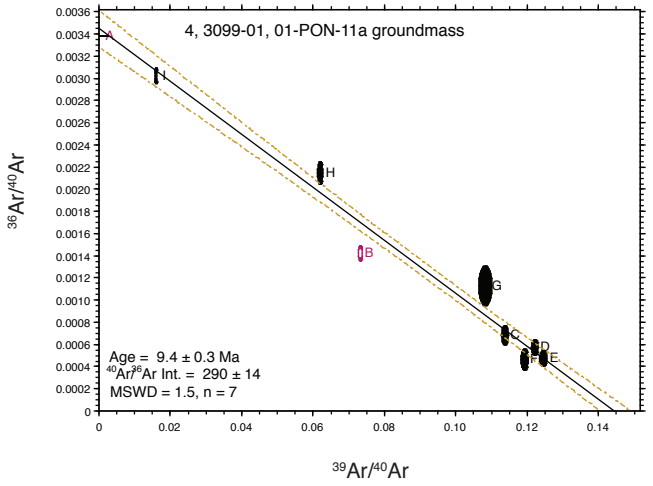

% 40Ar*
K/Ca
3, 56149-01, 04Y09 groundmass, Quality 2
18.9 ± 0.3 Ma* (MSWD = 3.38)
Apparent Age (Ma)
Integrated Age = 20.0 ± 1.6 Ma
Cumulative % 39Ar released

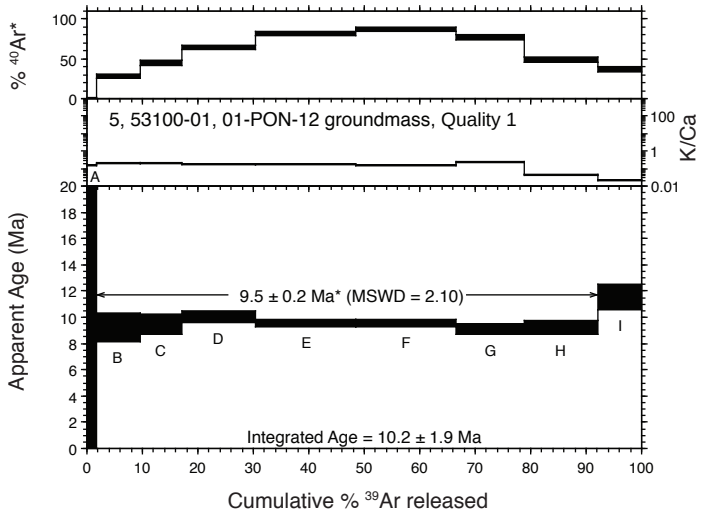

3, 56149-01, 04Y09 groundmass
36Ar/40Ar
Age = 18.6 ± 0.3 Ma
40Ar/36Ar Int. = 299.3 ± 1.9
MSWD = 0.78, n = 7
39Ar/40Ar

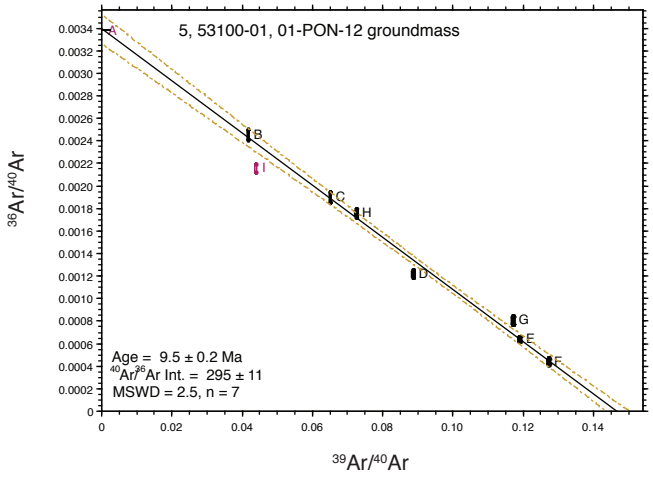

3, 56149-02, 04Y09 groundmass, Quality 2
% 40Ar*
K/Ca
Apparent Age (Ma)
19.0 ± 0.4 Ma* (MSWD = 5.54)
Integrated Age = 19.0 ± 1.1 Ma
Cumulative % 39Ar released

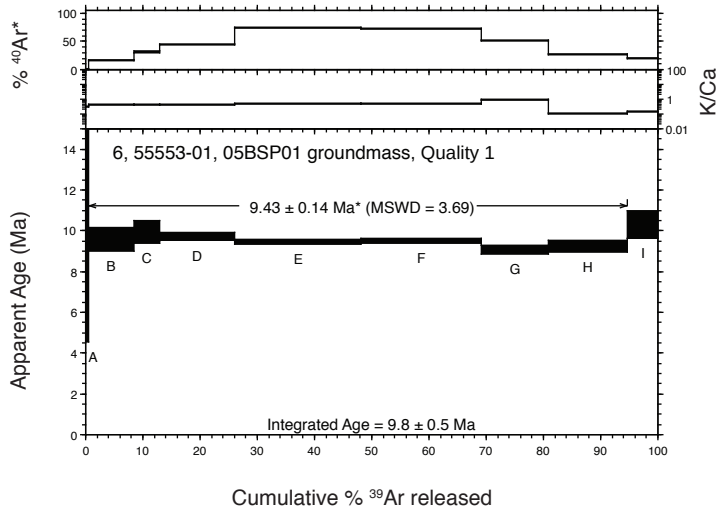

3, 56149-02, 04Y09 groundmass
36Ar/40Ar
39Ar/40Ar
Age = 18.4 ± 0.2 Ma
40Ar/36Ar Int. = 301.2 ± 1.9
MSWD = 0.26, n = 8

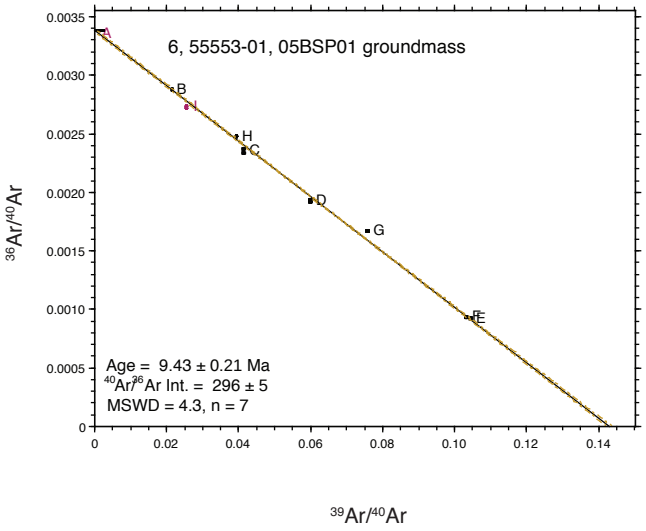

4, 53099-01, 01-PON-11a groundmass, Quality 2
% 40Ar*
K/Ca
Apparent Age (Ma)
9.4 ± 0.3 Ma (MSWD = 1.38)
Integrated Age = 10 ± 6 Ma
Cumulative % 39Ar released

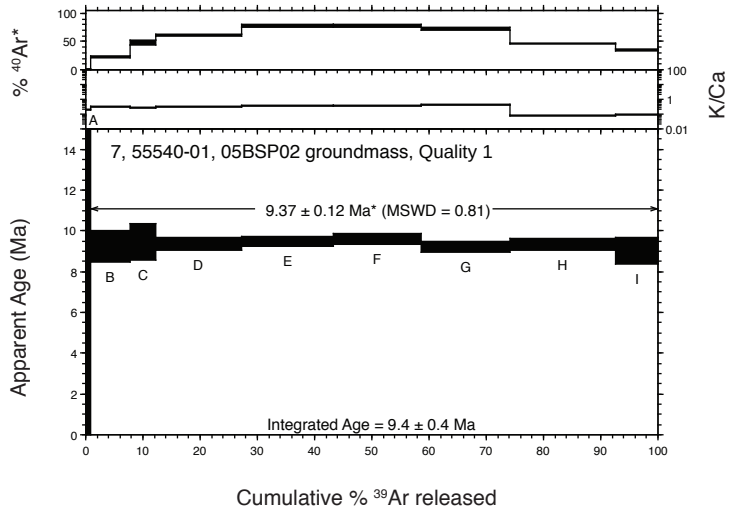

4, 3099-01, 01-PON-11a groundmass
36Ar/40Ar
39Ar/40Ar
Age = 9.4 ± 0.3 Ma
40Ar/36Ar Int. = 290 ± 14
MSWD = 1.5, n = 7

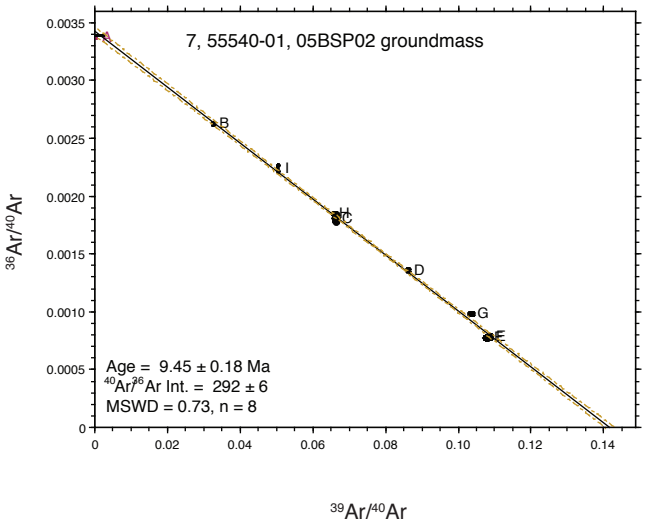

5, 53100-01, 01-PON-12 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
9.5 ± 0.2 Ma* (MSWD = 2.10)
Integrated Age = 10.2 ± 1.9 Ma
Cumulative % 39Ar released

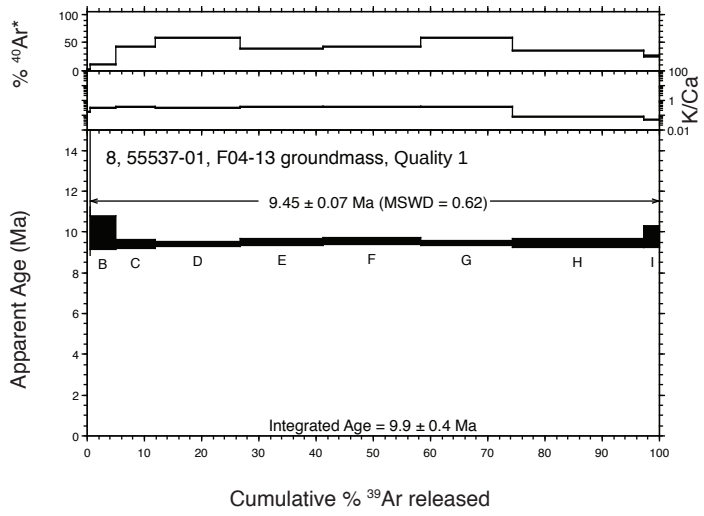

5, 53100-01, 01-PON-12 groundmass
36Ar/40Ar
39Ar/40Ar
Age = 9.5 ± 0.2 Ma
40Ar/36Ar Int. = 295 ± 11
MSWD = 2.5, n = 7

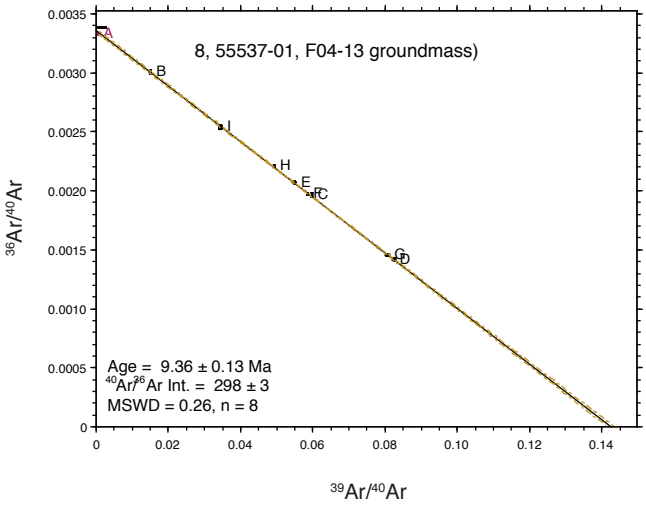

% 40Ar*
K/Ca
Apparent Age (Ma)
6, 55553-01, 05BSP01 groundmass, Quality 1
9.43 ± 0.14 Ma* (MSWD = 3.69)
Integrated Age = 9.8 ± 0.5 Ma
Cumulative % 39Ar released

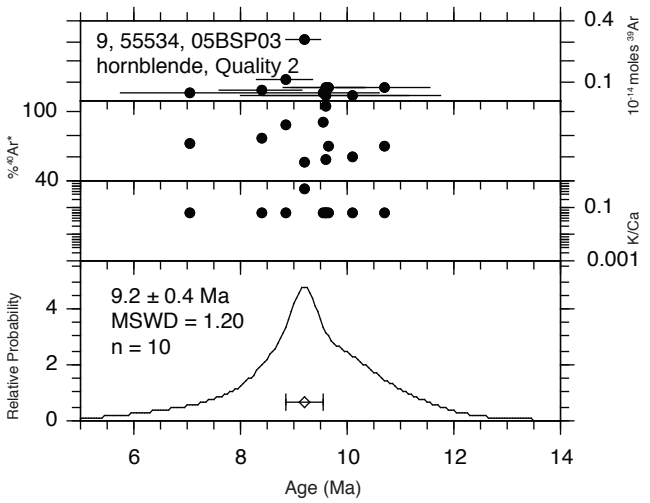

6, 55553-01, 05BSP01 groundmass
Age = 9.43 ± 0.21 Ma
40Ar/36Ar Int. = 296 ± 5
MSWD = 4.3, n = 7
36Ar/40Ar
39Ar/40Ar

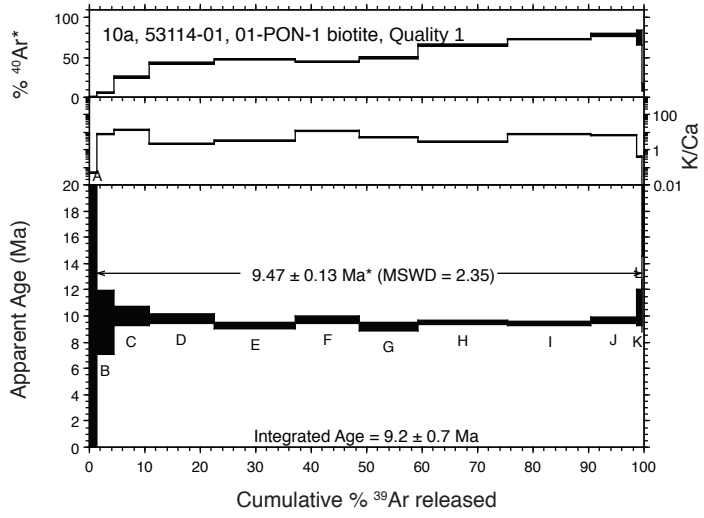

% 40Ar*
K/Ca
Apparent Age (Ma)
7, 55540-01, 05BSP02 groundmass, Quality 1
9.37 ± 0.12 Ma* (MSWD = 0.81)
Integrated Age = 9.4 ± 0.4 Ma
Cumulative % 39Ar released

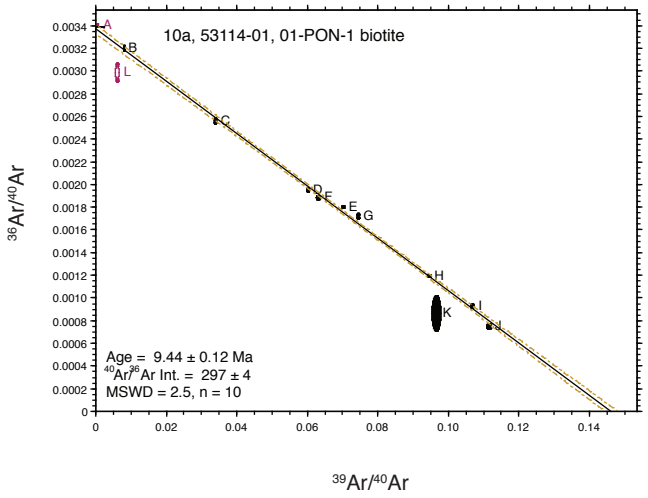

7, 55540-01, 05BSP02 groundmass
Age = 9.45 ± 0.18 Ma
40Ar/36Ar Int. = 292 ± 6
MSWD = 0.73, n = 8
36Ar/40Ar
39Ar/40Ar

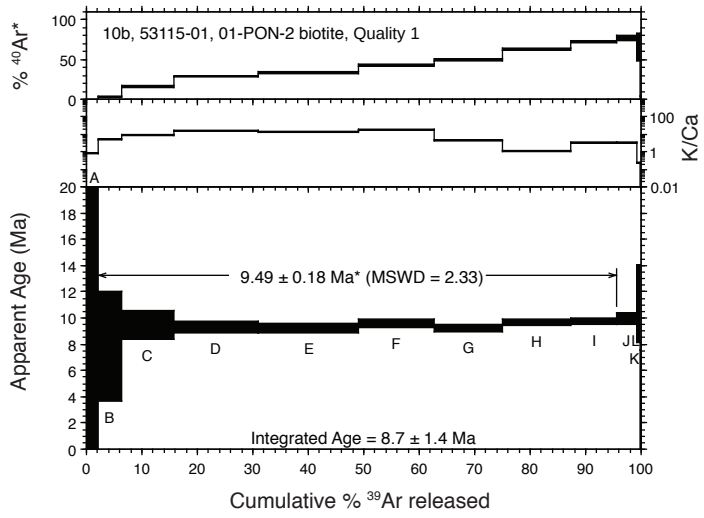

% 40Ar*
K/Ca
Apparent Age (Ma)
8, 55537-01, F04-13 groundmass, Quality 1
9.45 ± 0.07 Ma (MSWD = 0.62)
Integrated Age = 9.9 ± 0.4 Ma
Cumulative % 39Ar released

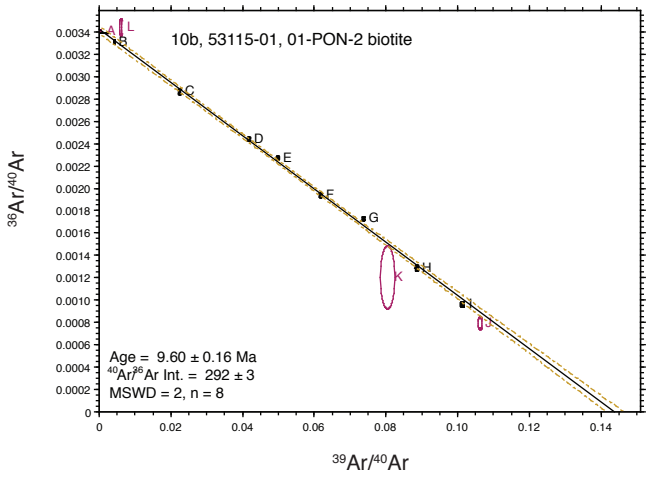

8, 55537-01, F04-13 groundmass)
Age = 9.36 ± 0.13 Ma
40Ar/36Ar Int. = 298 ± 3
MSWD = 0.26, n = 8
36Ar/40Ar
39Ar/40Ar

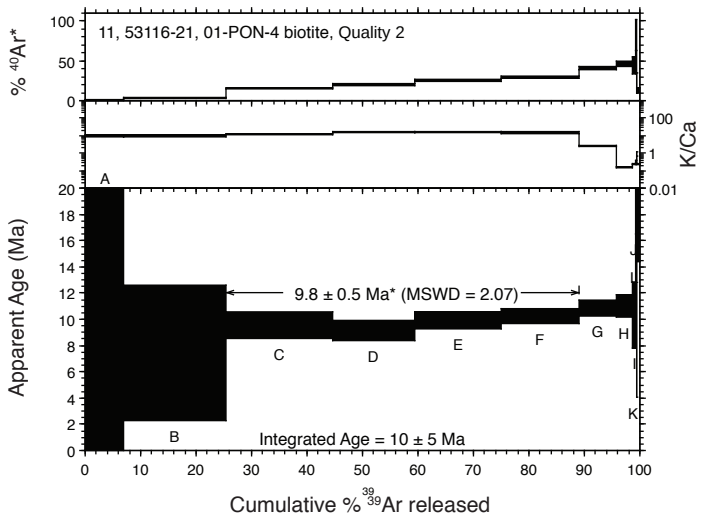

9, 55534, 05BSP03
hornblende, Quality 2
% 40Ar*
10-14 moles 39Ar
K/Ca
Relative Probability
9.2 ± 0.4 Ma
MSWD = 1.20
n = 10
Age (Ma)

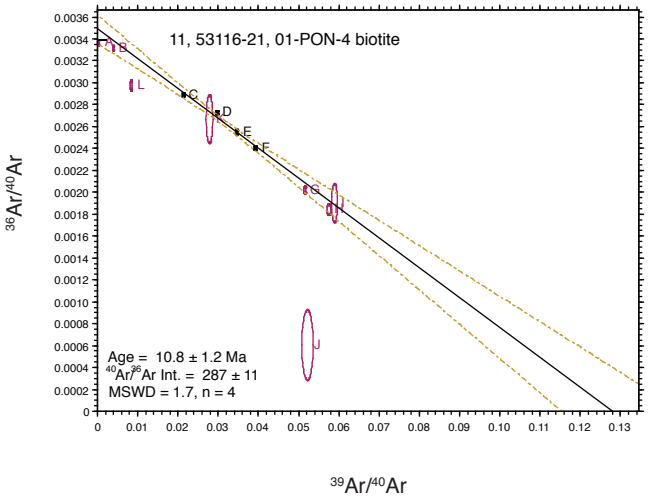

10a, 53114-01, 01-PON-1 biotite, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
9.47 ± 0.13 Ma* (MSWD = 2.35)
Integrated Age = 9.2 ± 0.7 Ma
Cumulative % 39Ar released

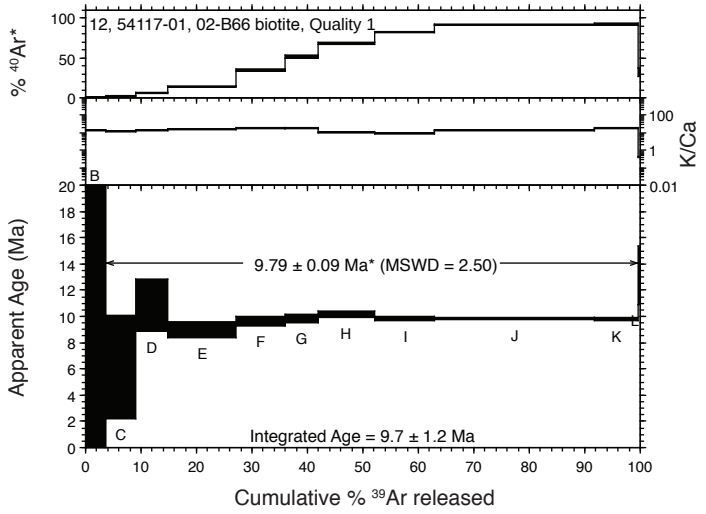

10a, 53114-01, 01-PON-1 biotite
36Ar/40Ar
Age = 9.44 ± 0.12 Ma
40Ar/36Ar Int. = 297 ± 4
MSWD = 2.5, n = 10
39Ar/40Ar

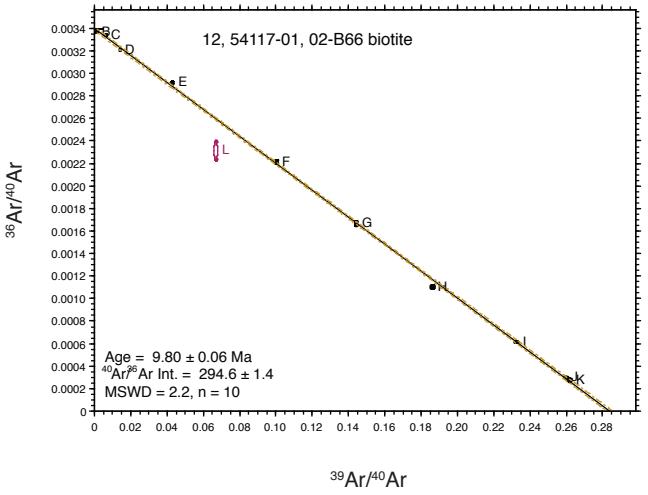

10b, 53115-01, 01-PON-2 biotite, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
9.49 ± 0.18 Ma* (MSWD = 2.33)
Integrated Age = 8.7 ± 1.4 Ma
Cumulative % 39Ar released

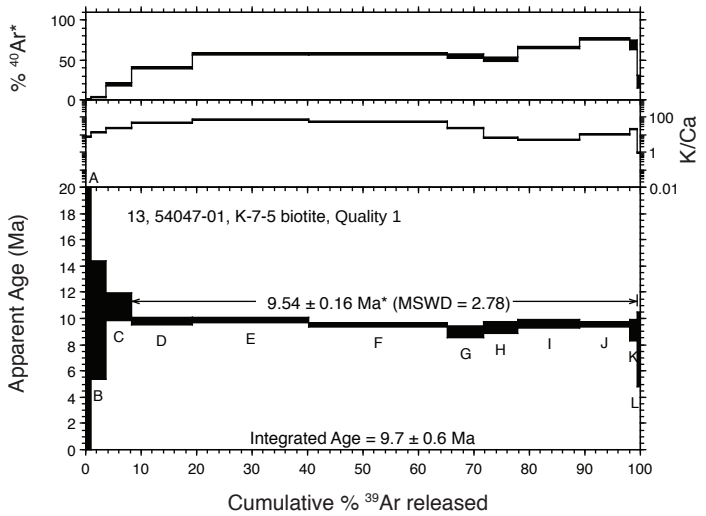

10b, 53115-01, 01-PON-2 biotite
36Ar/40Ar
Age = 9.60 ± 0.16 Ma
40Ar/36Ar Int. = 292 ± 3
MSWD = 2, n = 8
39Ar/40Ar

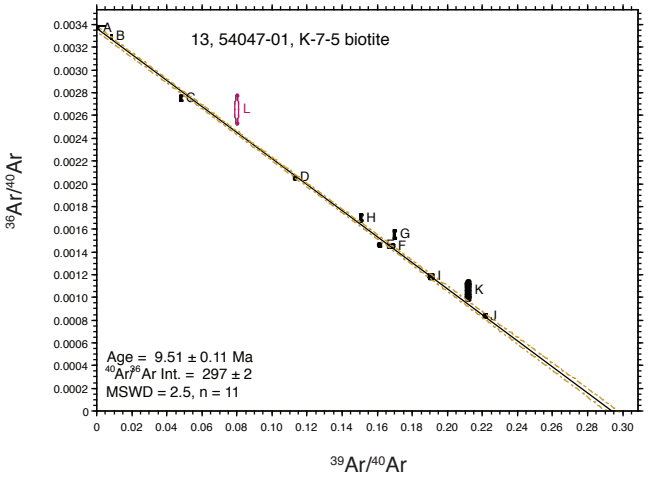

11, 53116-21, 01-PON-4 biotite, Quality 2
% 40Ar*
K/Ca
Apparent Age (Ma)
9.8 ± 0.5 Ma* (MSWD = 2.07)
Integrated Age = 10 ± 5 Ma
Cumulative % 39Ar released

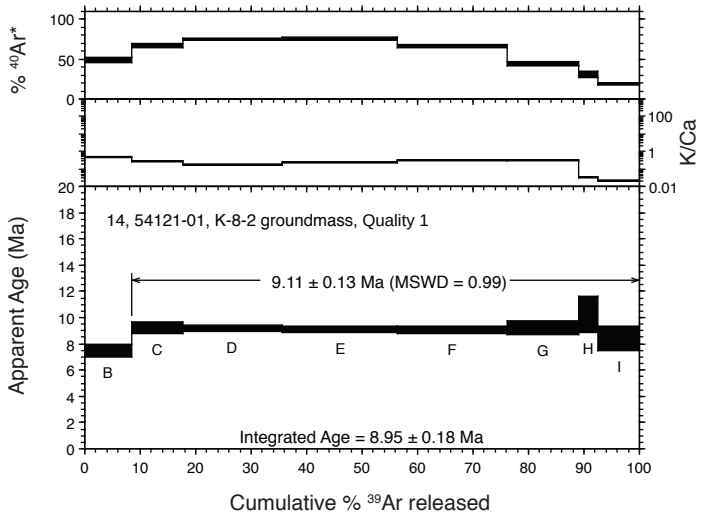

11, 53116-21, 01-PON-4 biotite
36Ar/40Ar
Age = 10.8 ± 1.2 Ma
40Ar/36Ar Int. = 287 ± 11
MSWD = 1.7, n = 4
39Ar/40Ar

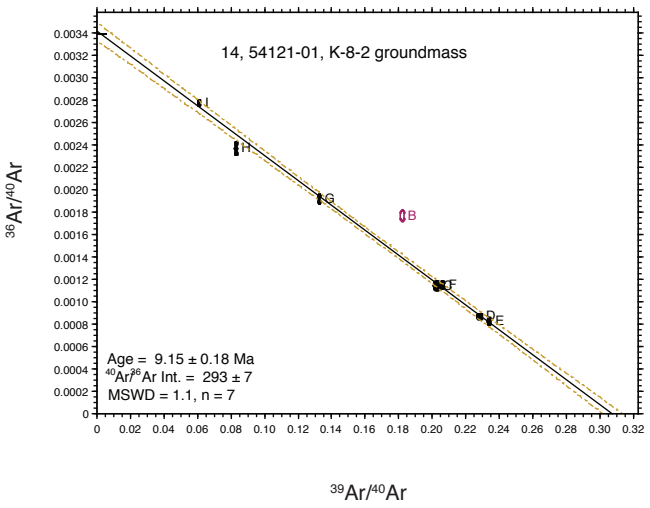

12, 54117-01, 02-B66 biotite, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
9.79 ± 0.09 Ma* (MSWD = 2.50)
Integrated Age = 9.7 ± 1.2 Ma
Cumulative % 39Ar released

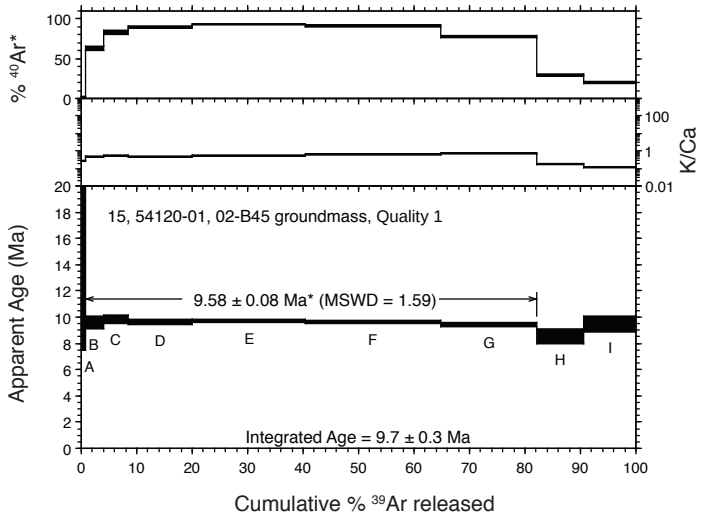

12, 54117-01, 02-B66 biotite
36Ar/40Ar
Age = 9.80 ± 0.06 Ma
40Ar/36Ar Int. = 294.6 ± 1.4
MSWD = 2.2, n = 10
39Ar/40Ar

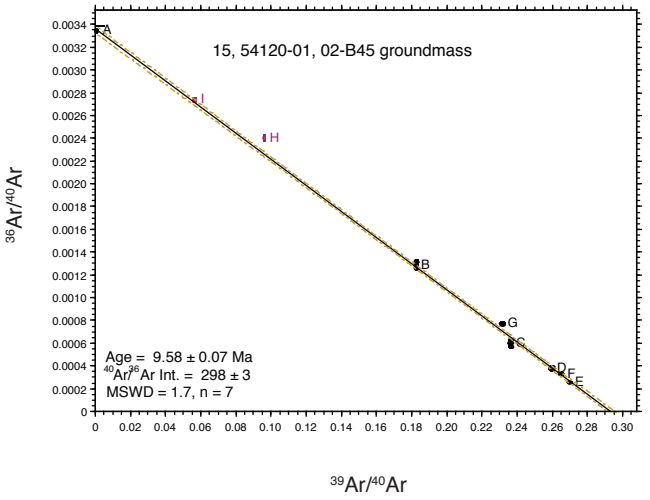

% 40Ar*
K/Ca
13, 54047-01, K-7-5 biotite, Quality 1
Apparent Age (Ma)
9.54 ± 0.16 Ma* (MSWD = 2.78)
Integrated Age = 9.7 ± 0.6 Ma
Cumulative % 39Ar released

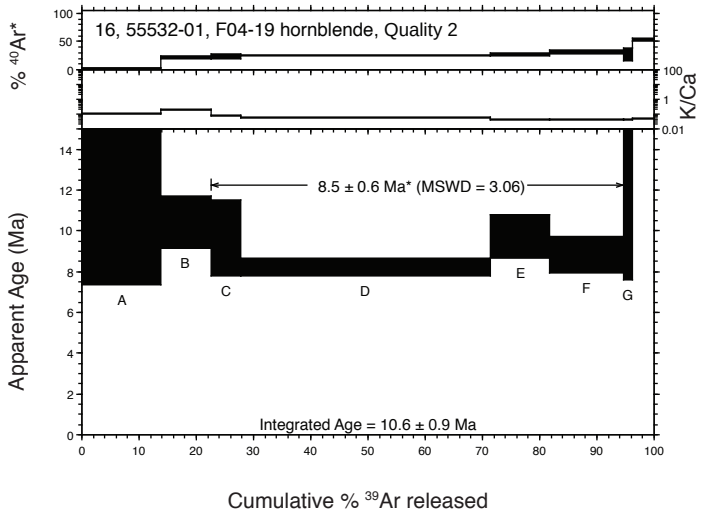

13, 54047-01, K-7-5 biotite
36Ar/40Ar
Age = 9.51 ± 0.11 Ma
40Ar/36Ar Int. = 297 ± 2
MSWD = 2.5, n = 11
39Ar/40Ar

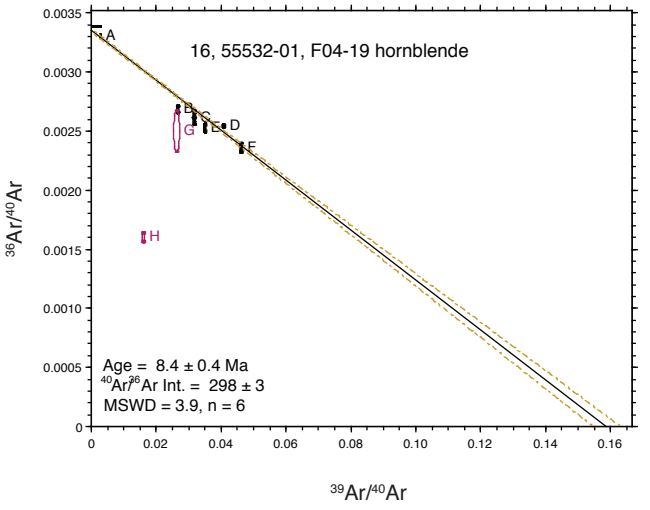

% 40Ar*
K/Ca
Apparent Age (Ma)
14, 54121-01, K-8-2 groundmass, Quality 1
9.11 ± 0.13 Ma (MSWD = 0.99)
Integrated Age = 8.95 ± 0.18 Ma
Cumulative % 39Ar released

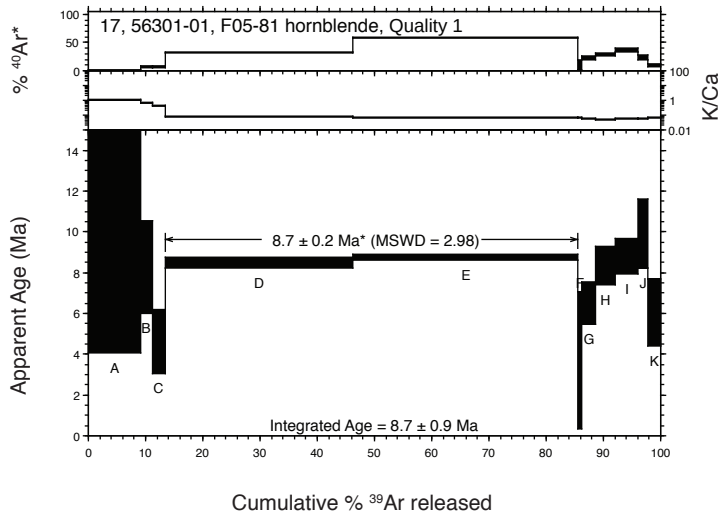

14, 54121-01, K-8-2 groundmass
36Ar/40Ar
Age = 9.15 ± 0.18 Ma
40Ar/36Ar Int. = 293 ± 7
MSWD = 1.1, n = 7
39Ar/40Ar

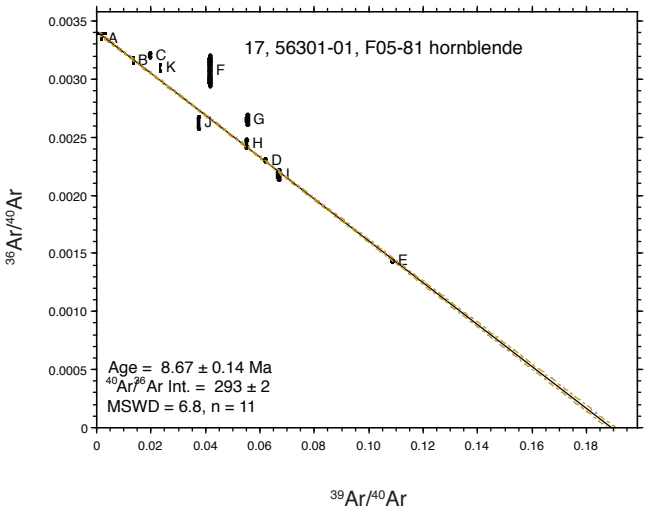

% 40Ar*
K/Ca
Apparent Age (Ma)
15, 54120-01, 02-B45 groundmass, Quality 1
9.58 ± 0.08 Ma* (MSWD = 1.59)
Integrated Age = 9.7 ± 0.3 Ma
Cumulative % 39Ar released

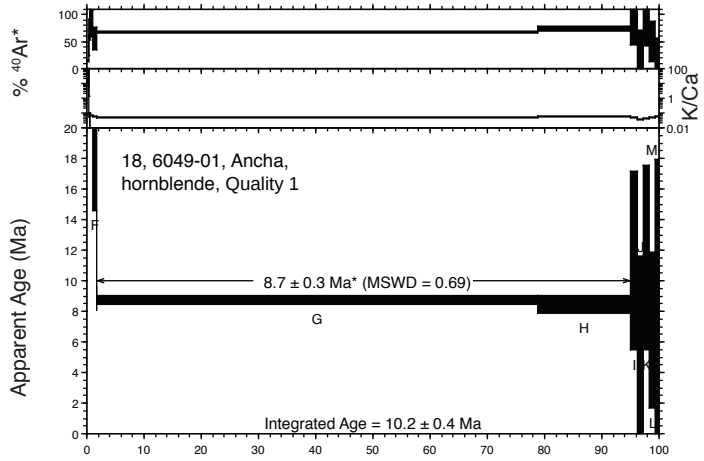

15, 54120-01, 02-B45 groundmass
36Ar/40Ar
Age = 9.58 ± 0.07 Ma
40Ar/36Ar Int. = 298 ± 3
MSWD = 1.7, n = 7
39Ar/40Ar

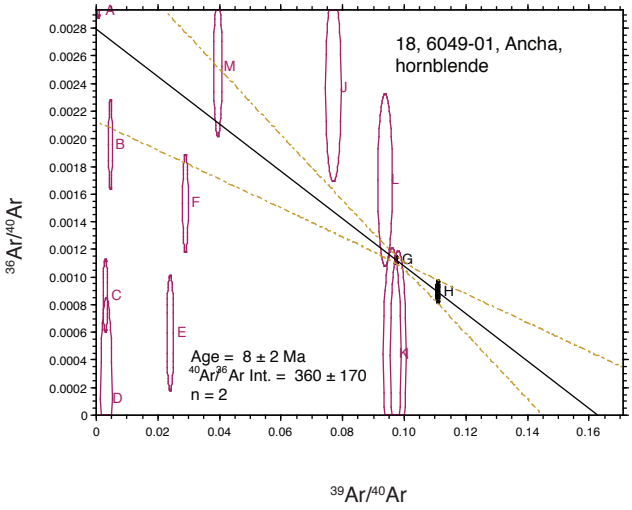

% 40Ar*
K/Ca
Apparent Age (Ma)
16, 55532-01, F04-19 hornblende, Quality 2
8.5 ± 0.6 Ma* (MSWD = 3.06)
Integrated Age = 10.6 ± 0.9 Ma
Cumulative % 39Ar released

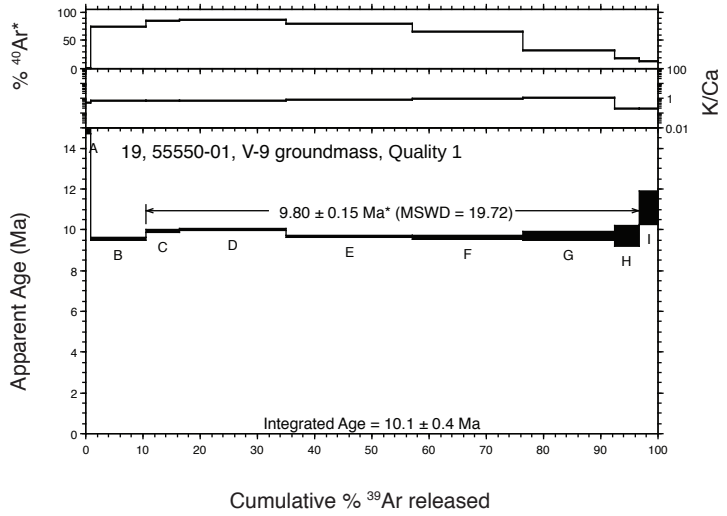

16, 55532-01, F04-19 hornblende
36Ar/40Ar
Age = 8.4 ± 0.4 Ma
40Ar/36Ar Int. = 298 ± 3
MSWD = 3.9, n = 6
39Ar/40Ar

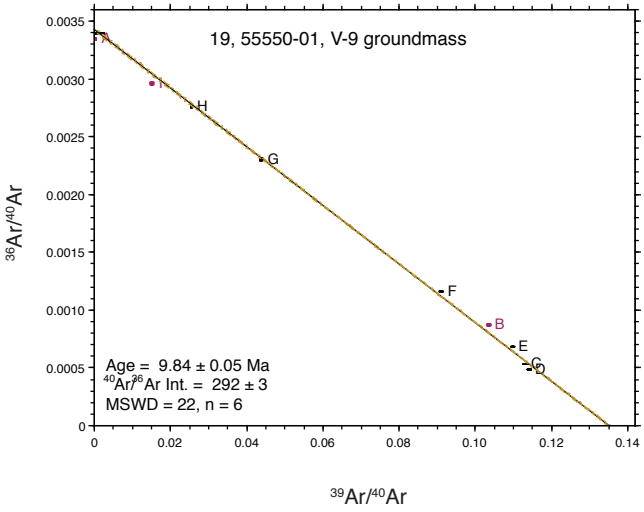

17, 56301-01, F05-81 hornblende, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
8.7 ± 0.2 Ma* (MSWD = 2.98)
Integrated Age = 8.7 ± 0.9 Ma
Cumulative % 39Ar released

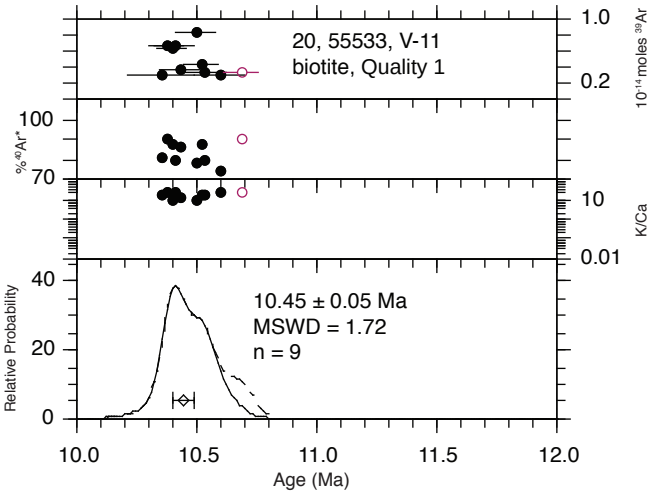

17, 56301-01, F05-81 hornblende
36Ar/40Ar
Age = 8.67 ± 0.14 Ma
40Ar/36Ar Int. = 293 ± 2
MSWD = 6.8, n = 11
39Ar/40Ar

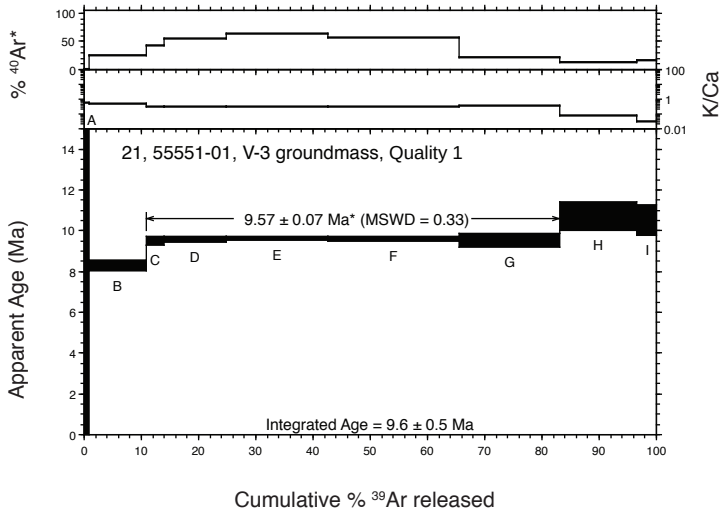

% 40Ar*
K/Ca
18, 6049-01, Ancha,
hornblende, Quality 1
Apparent Age (Ma)
8.7 ± 0.3 Ma* (MSWD = 0.69)
Integrated Age = 10.2 ± 0.4 Ma
Cumulative % 39Ar released

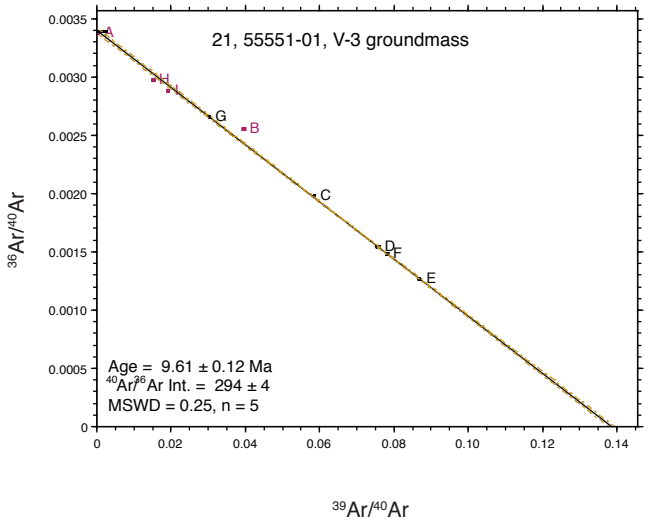

18, 6049-01, Ancha,
hornblende
36Ar/40Ar
Age = 8 ± 2 Ma
40Ar/36Ar Int. = 360 ± 170
n = 2
39Ar/40Ar

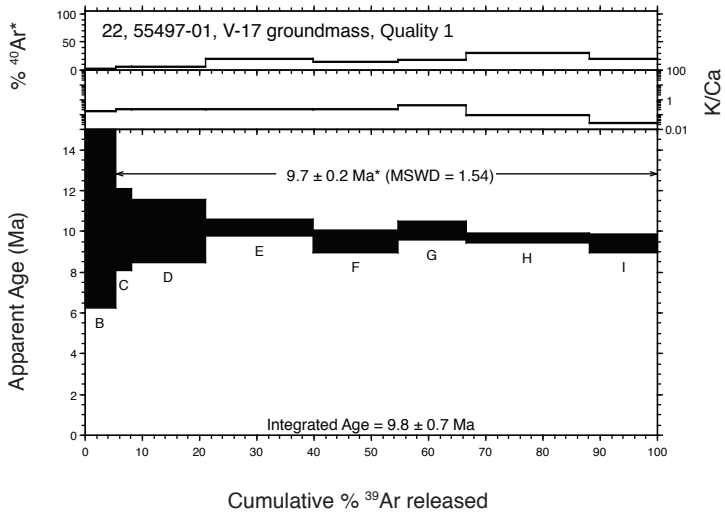

% 40Ar*
K/Ca
19, 55550-01, V-9 groundmass, Quality 1
Apparent Age (Ma)
9.80 ± 0.15 Ma* (MSWD = 19.72)
Integrated Age = 10.1 ± 0.4 Ma
Cumulative % 39Ar released

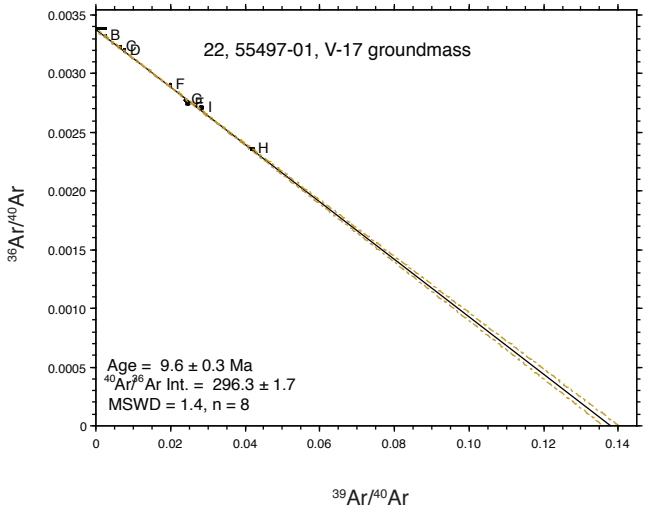

19, 55550-01, V-9 groundmass
36Ar/40Ar
Age = 9.84 ± 0.05 Ma
40Ar/36Ar Int. = 292 ± 3
MSWD = 22, n = 6
39Ar/40Ar

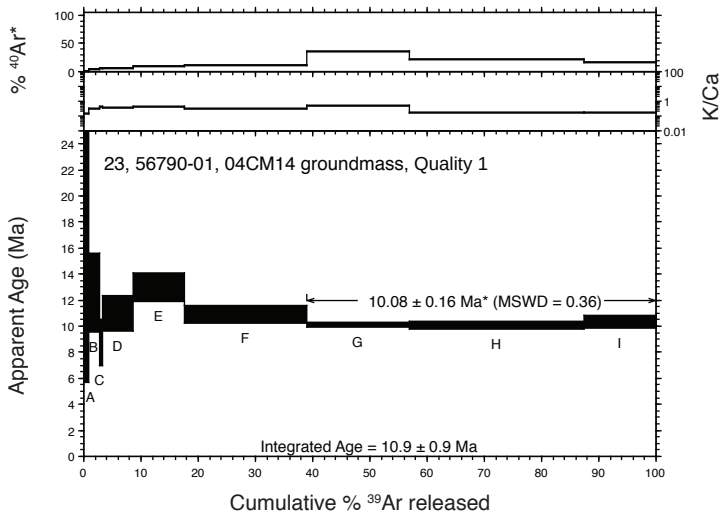

20, 55533, V-11
biotite, Quality 1
10.45 ± 0.05 Ma
MSWD = 1.72
n = 9
Relative Probability
Age (Ma)
% 40Ar*
K/Ca
10-14 moles 39Ar

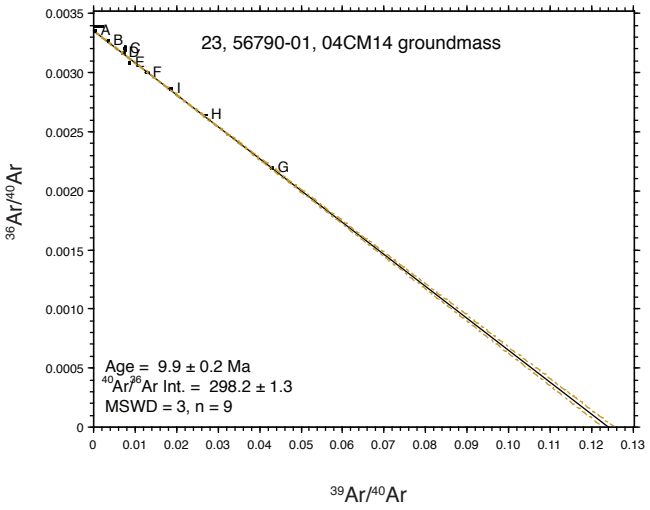

21, 55551-01, V-3 groundmass, Quality 1
9.57 ± 0.07 Ma* (MSWD = 0.33)
Integrated Age = 9.6 ± 0.5 Ma
Apparent Age (Ma)
% 40Ar*
K/Ca
Cumulative % 39Ar released

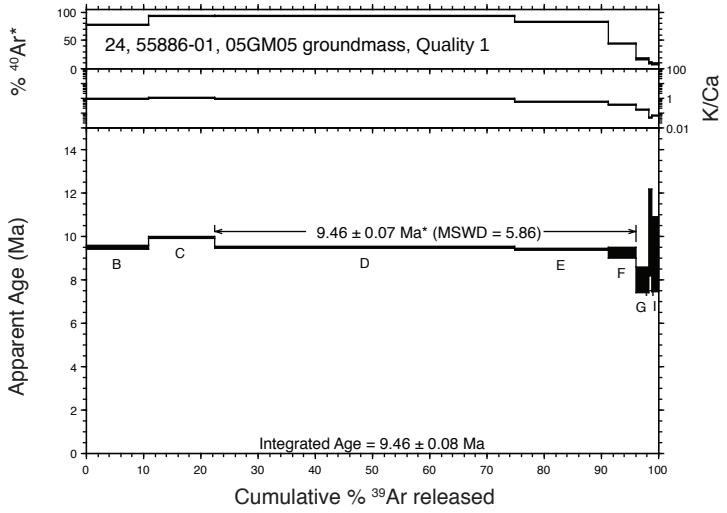

21, 55551-01, V-3 groundmass
Age = 9.61 ± 0.12 Ma
40Ar/36Ar Int. = 294 ± 4
MSWD = 0.25, n = 5
36Ar/40Ar
39Ar/40Ar

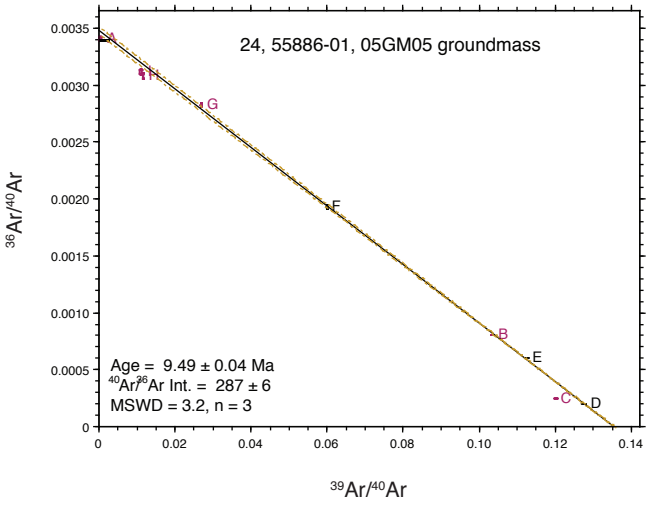

22, 55497-01, V-17 groundmass, Quality 1
9.7 ± 0.2 Ma* (MSWD = 1.54)
Integrated Age = 9.8 ± 0.7 Ma
Apparent Age (Ma)
% 40Ar*
K/Ca
Cumulative % 39Ar released

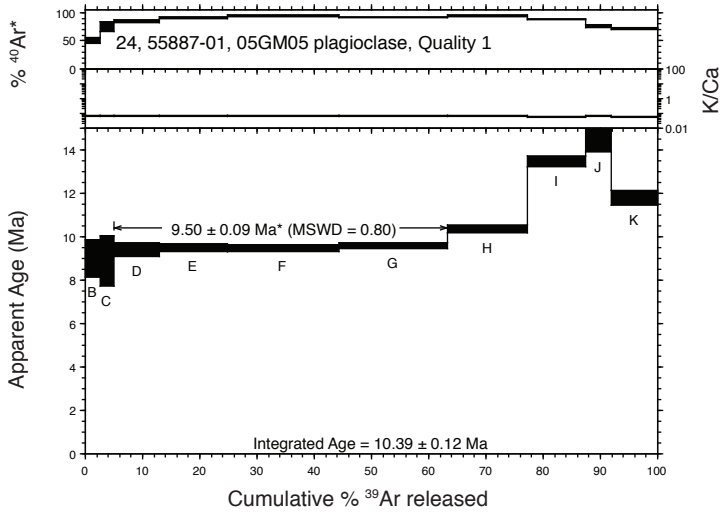

22, 55497-01, V-17 groundmass
Age = 9.6 ± 0.3 Ma
40Ar/36Ar Int. = 296.3 ± 1.7
MSWD = 1.4, n = 8
36Ar/40Ar
39Ar/40Ar

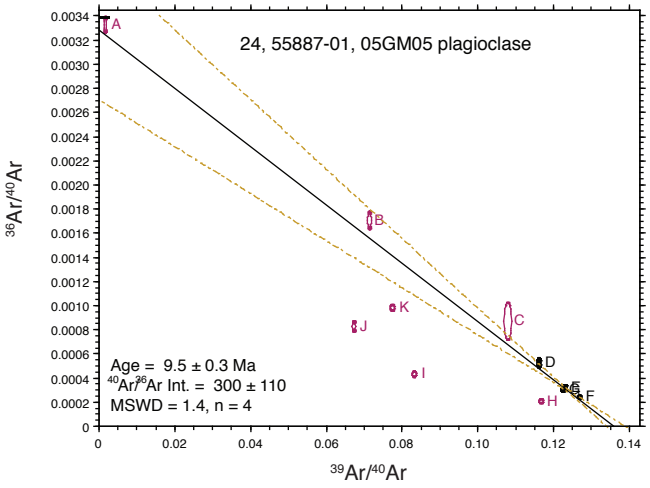

% 40Ar*
K/Ca
23, 56790-01, 04CM14 groundmass, Quality 1
Apparent Age (Ma)
10.08 ± 0.16 Ma* (MSWD = 0.36)
Integrated Age = 10.9 ± 0.9 Ma
Cumulative % 39Ar released

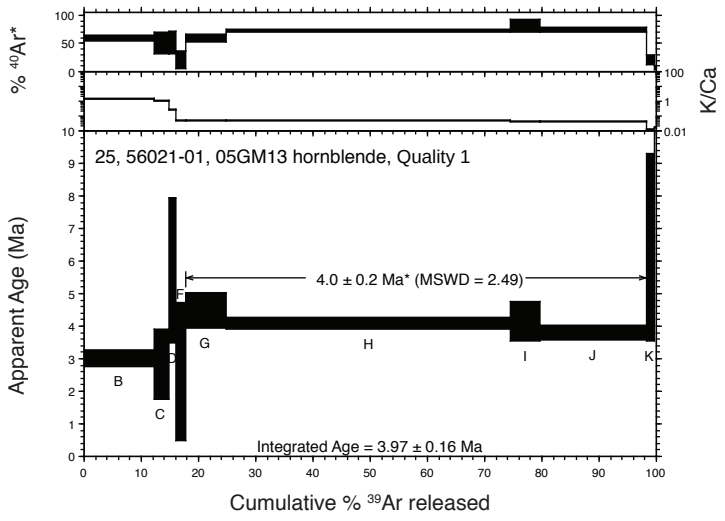

23, 56790-01, 04CM14 groundmass
36Ar/40Ar
Age = 9.9 ± 0.2 Ma
40Ar/36Ar Int. = 298.2 ± 1.3
MSWD = 3, n = 9
39Ar/40Ar

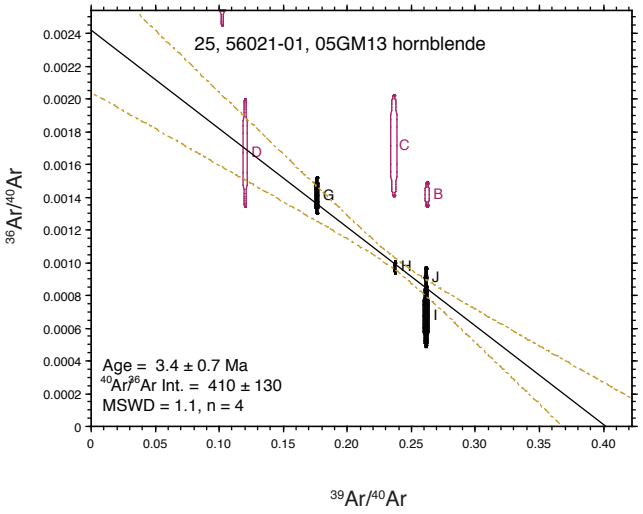

% 40Ar*
K/Ca
24, 55886-01, 05GM05 groundmass, Quality 1
Apparent Age (Ma)
9.46 ± 0.07 Ma* (MSWD = 5.86)
Integrated Age = 9.46 ± 0.08 Ma
Cumulative % 39Ar released

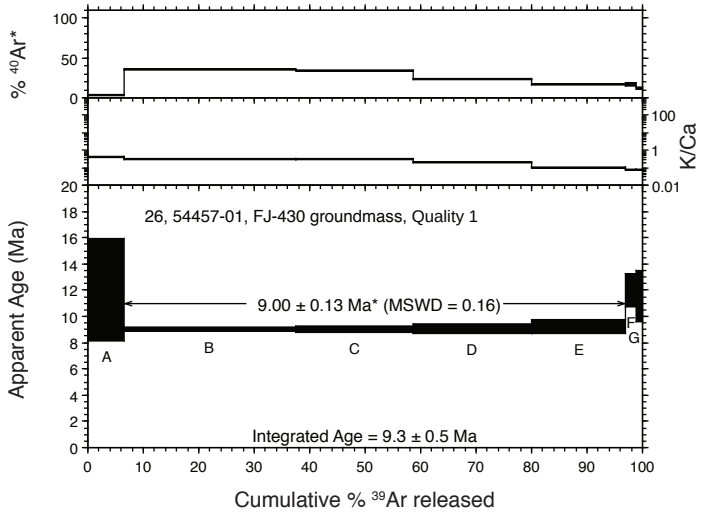

24, 55886-01, 05GM05 groundmass
36Ar/40Ar
Age = 9.49 ± 0.04 Ma
40Ar/36Ar Int. = 287 ± 6
MSWD = 3.2, n = 3
39Ar/40Ar

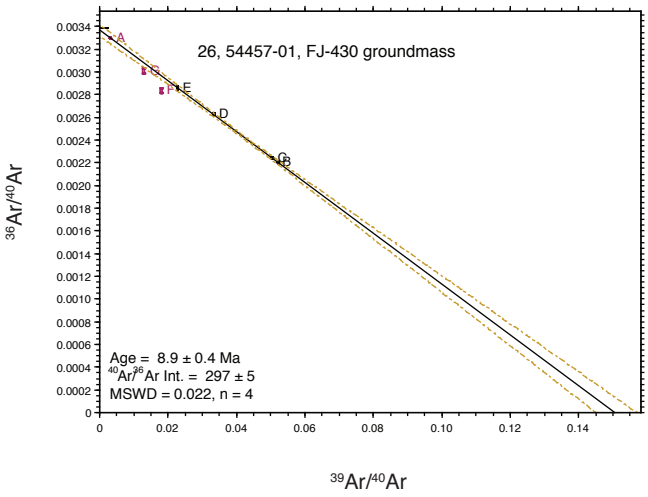

% 40Ar*
K/Ca
24, 55887-01, 05GM05 plagioclase, Quality 1
Apparent Age (Ma)
9.50 ± 0.09 Ma* (MSWD = 0.80)
Integrated Age = 10.39 ± 0.12 Ma
Cumulative % 39Ar released

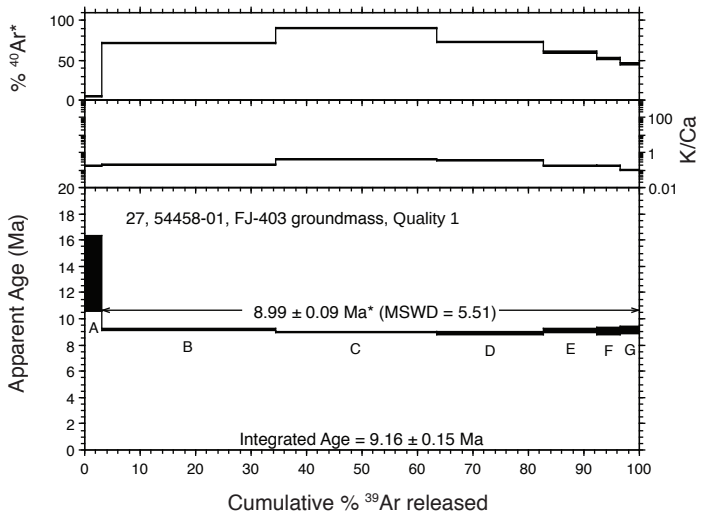

24, 55887-01, 05GM05 plagioclase
36Ar/40Ar
Age = 9.5 ± 0.3 Ma
40Ar/36Ar Int. = 300 ± 110
MSWD = 1.4, n = 4
39Ar/40Ar

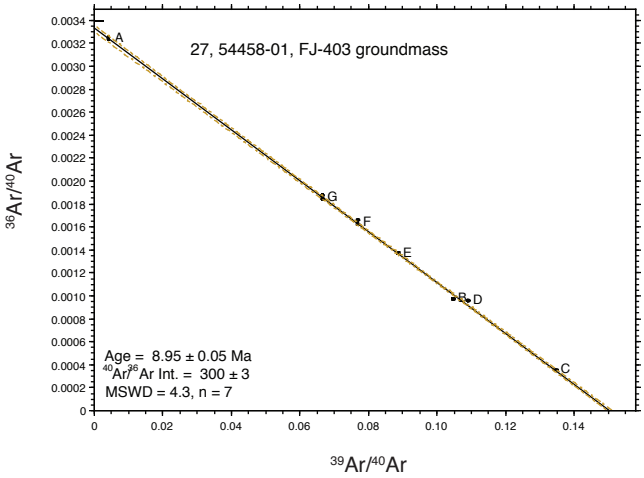

% 40Ar*
K/Ca
25, 56021-01, 05GM13 hornblende, Quality 1
Apparent Age (Ma)
4.0 ± 0.2 Ma* (MSWD = 2.49)
Integrated Age = 3.97 ± 0.16 Ma
Cumulative % 39Ar released

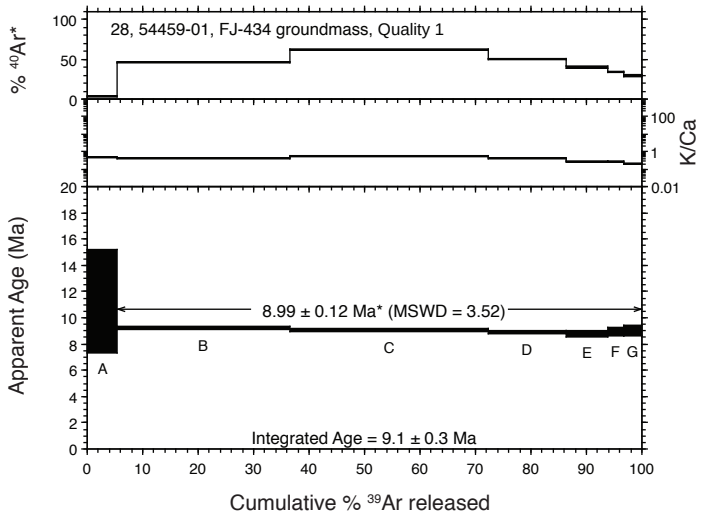

25, 56021-01, 05GM13 hornblende
36Ar/40Ar
Age = 3.4 ± 0.7 Ma
40Ar/36Ar Int. = 410 ± 130
MSWD = 1.1, n = 4
39Ar/40Ar

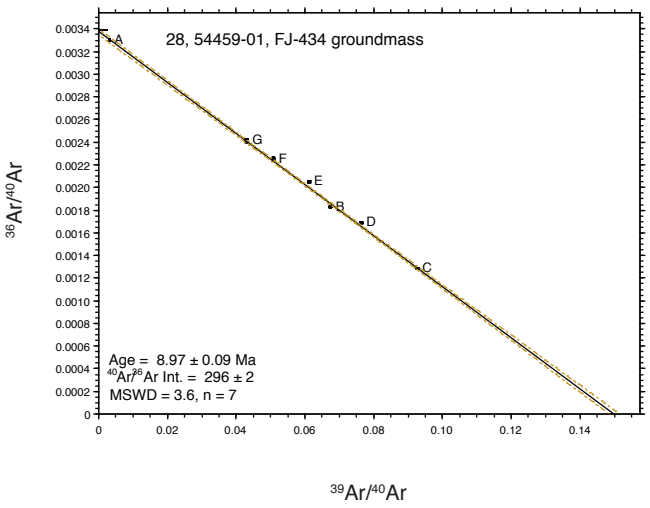

% 40Ar*
K/Ca
26, 54457-01, FJ-430 groundmass, Quality 1
Apparent Age (Ma)
9.00 ± 0.13 Ma* (MSWD = 0.16)
Integrated Age = 9.3 ± 0.5 Ma
Cumulative % 39Ar released

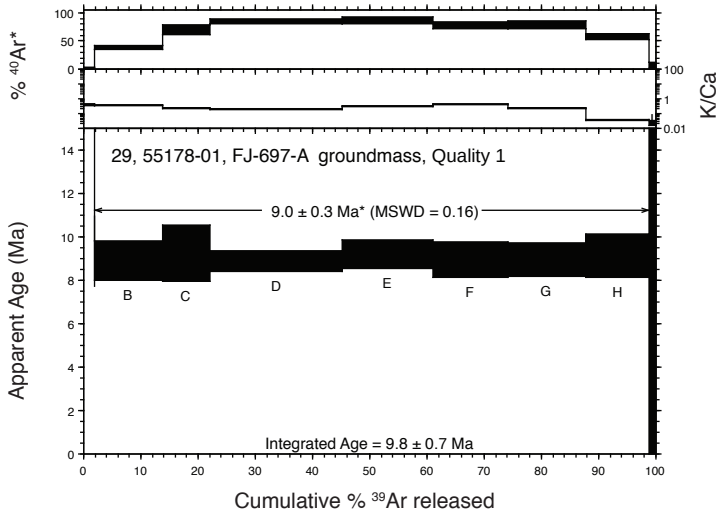

26, 54457-01, FJ-430 groundmass
36Ar/40Ar
Age = 8.9 ± 0.4 Ma
40Ar/36Ar Int. = 297 ± 5
MSWD = 0.022, n = 4
39Ar/40Ar

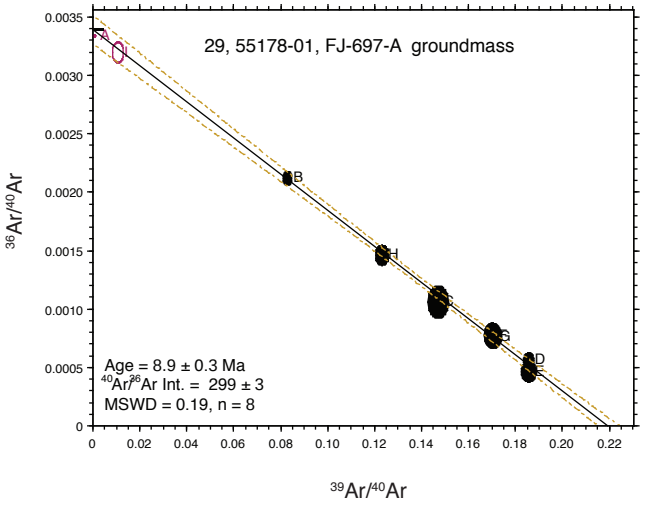

% 40Ar*
K/Ca
27, 54458-01, FJ-403 groundmass, Quality 1
Apparent Age (Ma)
8.99 ± 0.09 Ma* (MSWD = 5.51)
Integrated Age = 9.16 ± 0.15 Ma
Cumulative % 39Ar released

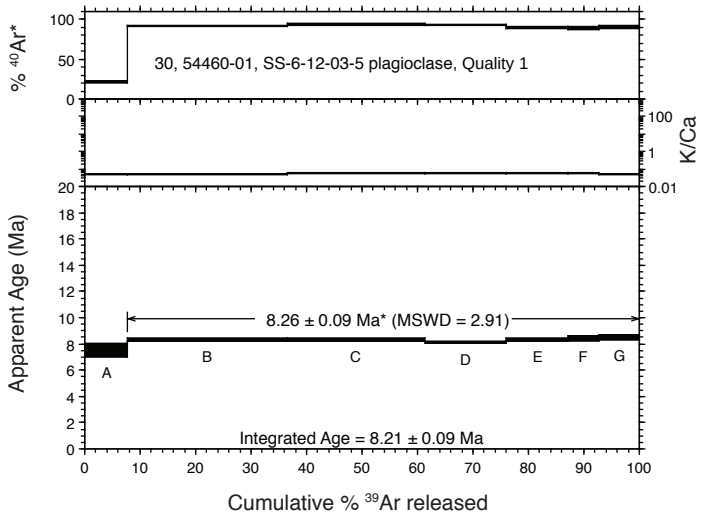

27, 54458-01, FJ-403 groundmass
36Ar/40Ar
Age = 8.95 ± 0.05 Ma
40Ar/36Ar Int. = 300 ± 3
MSWD = 4.3, n = 7
39Ar/40Ar

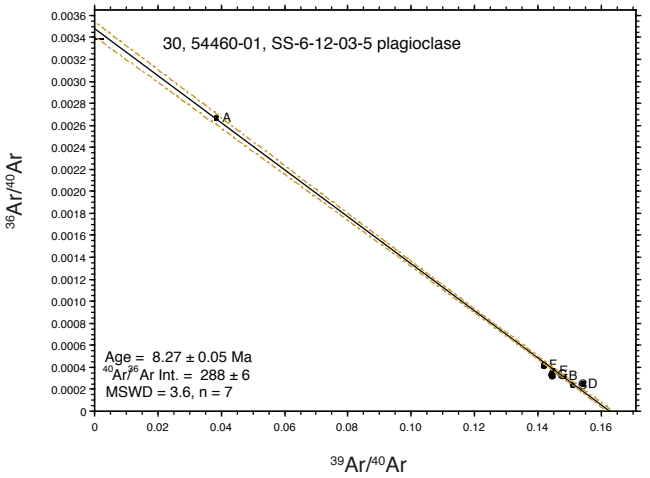

28, 54459-01, FJ-434 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
8.99 ± 0.12 Ma* (MSWD = 3.52)
A
B
C
D
E
F
G
Integrated Age = 9.1 ± 0.3 Ma
Cumulative % 39Ar released

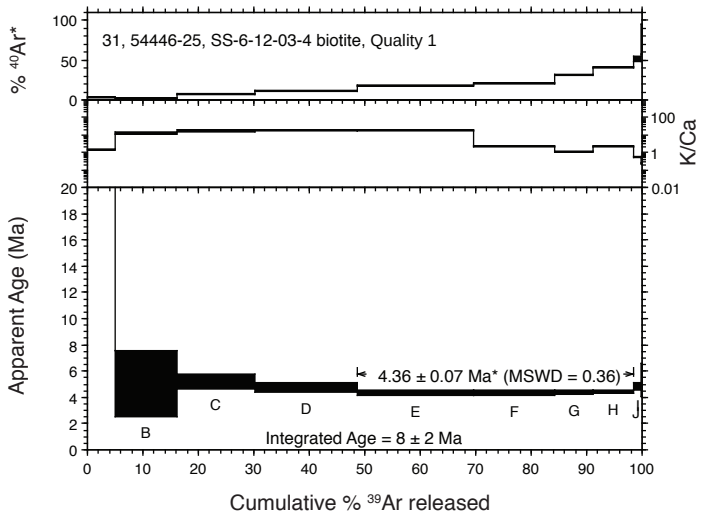

28, 54459-01, FJ-434 groundmass
36Ar/40Ar
39Ar/40Ar
Age = 8.97 ± 0.09 Ma
40Ar/36Ar Int. = 296 ± 2
MSWD = 3.6, n = 7

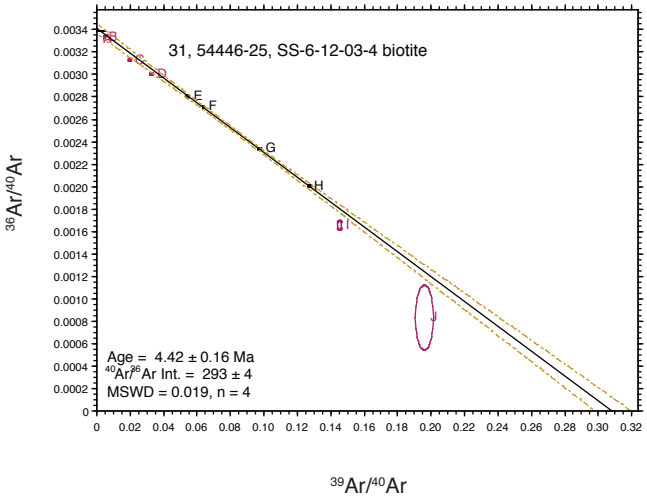

% 40Ar*
K/Ca
29, 55178-01, FJ-697-A groundmass, Quality 1
Apparent Age (Ma)
9.0 ± 0.3 Ma* (MSWD = 0.16)
B
C
D
E
F
G
H
Integrated Age = 9.8 ± 0.7 Ma
Cumulative % 39Ar released

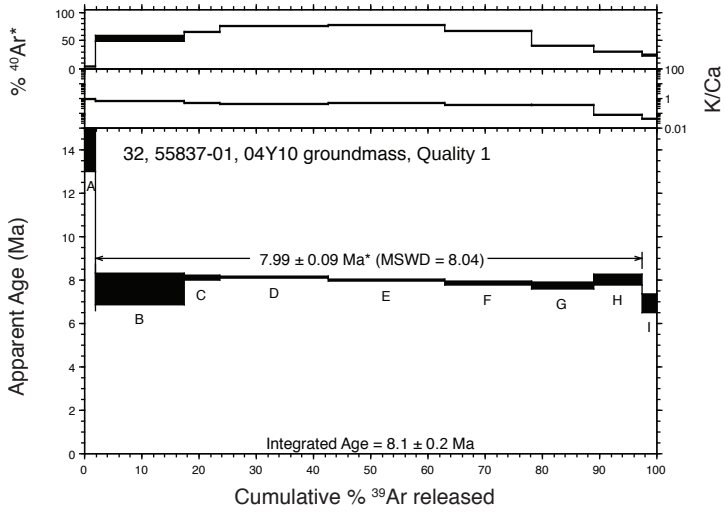

29, 55178-01, FJ-697-A groundmass
36Ar/40Ar
39Ar/40Ar
Age = 8.9 ± 0.3 Ma
40Ar/36Ar Int. = 299 ± 3
MSWD = 0.19, n = 8

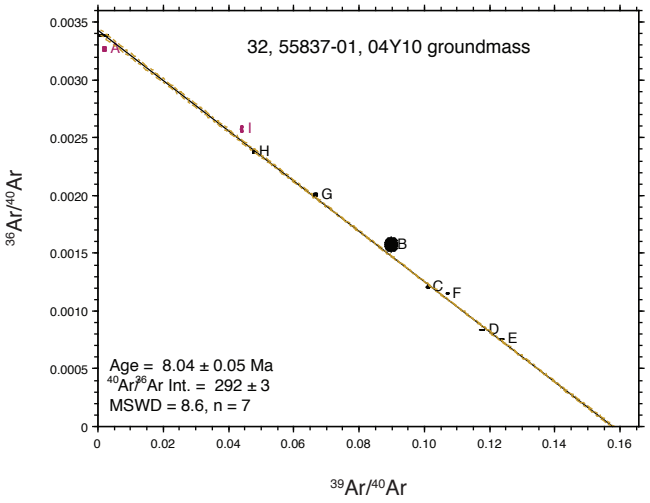

% 40Ar*
K/Ca
30, 54460-01, SS-6-12-03-5 plagioclase, Quality 1
Apparent Age (Ma)
8.26 ± 0.09 Ma* (MSWD = 2.91)
A
B
C
D
E
F
G
Integrated Age = 8.21 ± 0.09 Ma
Cumulative % 39Ar released

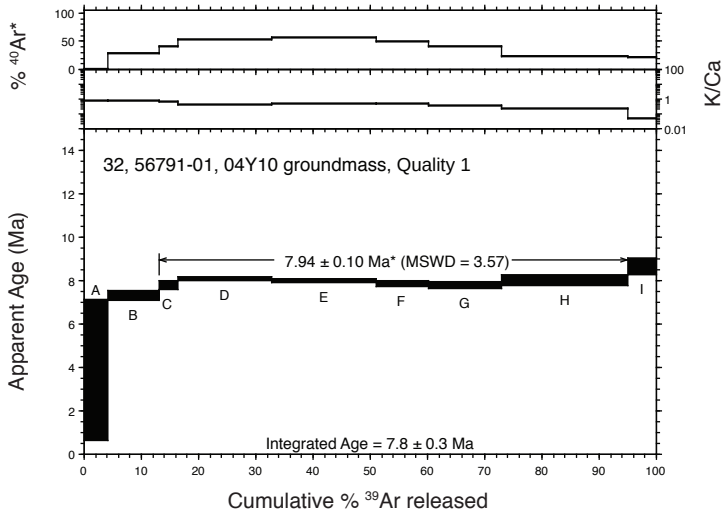

30, 54460-01, SS-6-12-03-5 plagioclase
36Ar/40Ar
39Ar/40Ar
Age = 8.27 ± 0.05 Ma
40Ar/36Ar Int. = 288 ± 6
MSWD = 3.6, n = 7

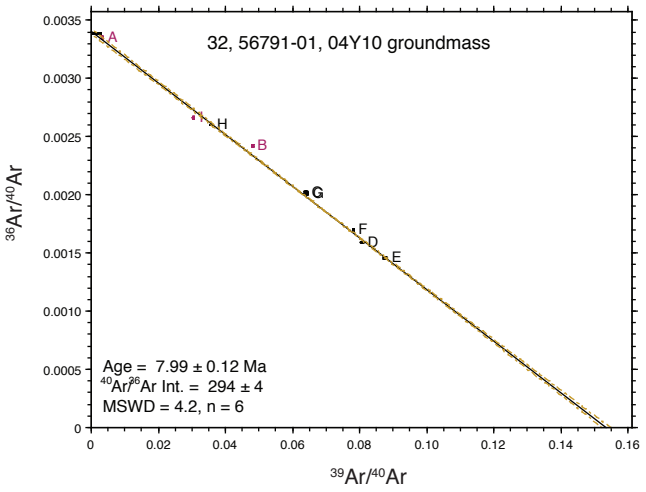

31, 54446-25, SS-6-12-03-4 biotite, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
4.36 ± 0.07 Ma* (MSWD = 0.36)
Integrated Age = 8 ± 2 Ma
Cumulative % 39Ar released

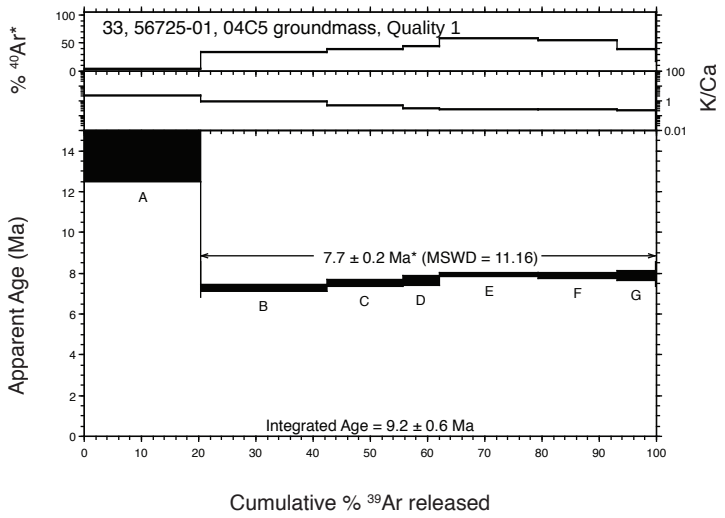

31, 54446-25, SS-6-12-03-4 biotite
36Ar/40Ar
Age = 4.42 ± 0.16 Ma
40Ar/36Ar Int. = 293 ± 4
MSWD = 0.019, n = 4
39Ar/40Ar

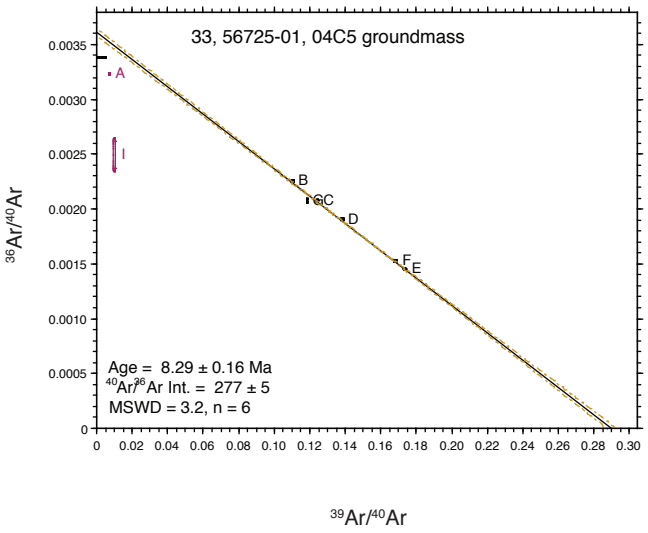

32, 55837-01, 04Y10 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
7.99 ± 0.09 Ma* (MSWD = 8.04)
Integrated Age = 8.1 ± 0.2 Ma
Cumulative % 39Ar released

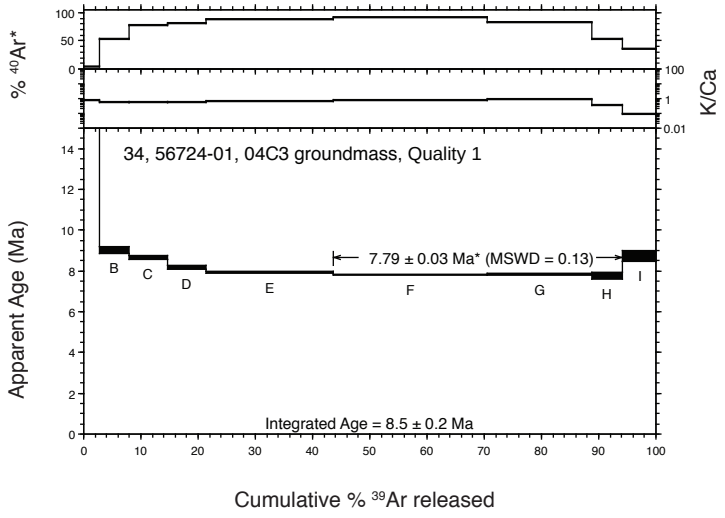

32, 55837-01, 04Y10 groundmass
36Ar/40Ar
Age = 8.04 ± 0.05 Ma
40Ar/36Ar Int. = 292 ± 3
MSWD = 8.6, n = 7
39Ar/40Ar

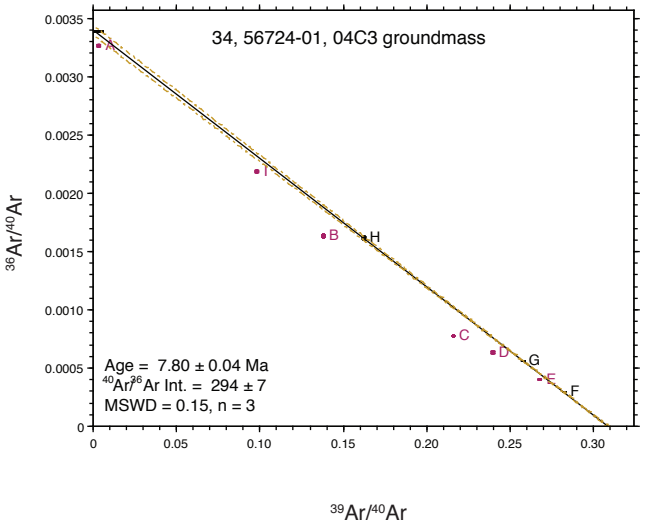

32, 56791-01, 04Y10 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
7.94 ± 0.10 Ma* (MSWD = 3.57)
Integrated Age = 7.8 ± 0.3 Ma
Cumulative % 39Ar released

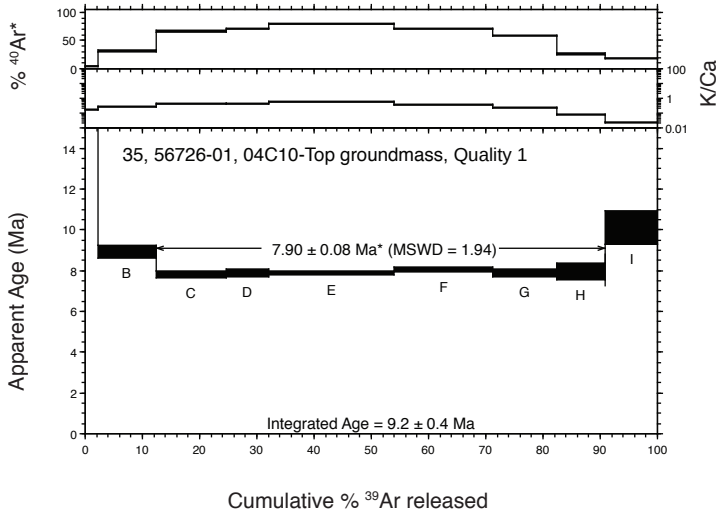

32, 56791-01, 04Y10 groundmass
36Ar/40Ar
Age = 7.99 ± 0.12 Ma
40Ar/36Ar Int. = 294 ± 4
MSWD = 4.2, n = 6
39Ar/40Ar

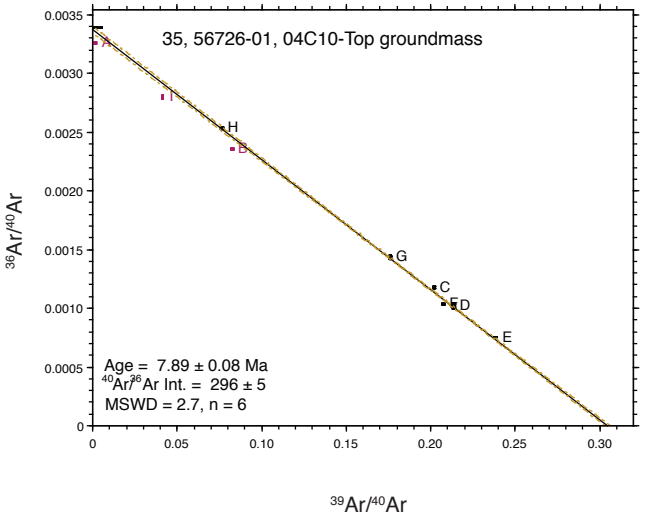

33, 56725-01, 04C5 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
7.7 ± 0.2 Ma* (MSWD = 11.16)
Integrated Age = 9.2 ± 0.6 Ma
Cumulative % 39Ar released

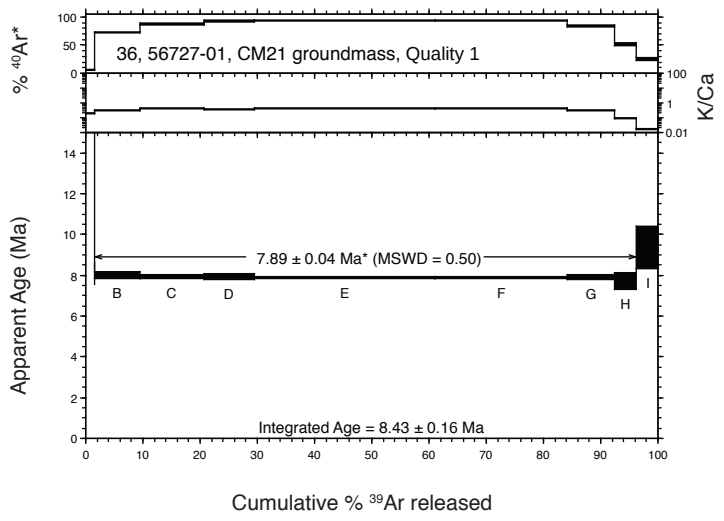

33, 56725-01, 04C5 groundmass
36Ar/40Ar
Age = 8.29 ± 0.16 Ma
40Ar/36Ar Int. = 277 ± 5
MSWD = 3.2, n = 6
39Ar/40Ar

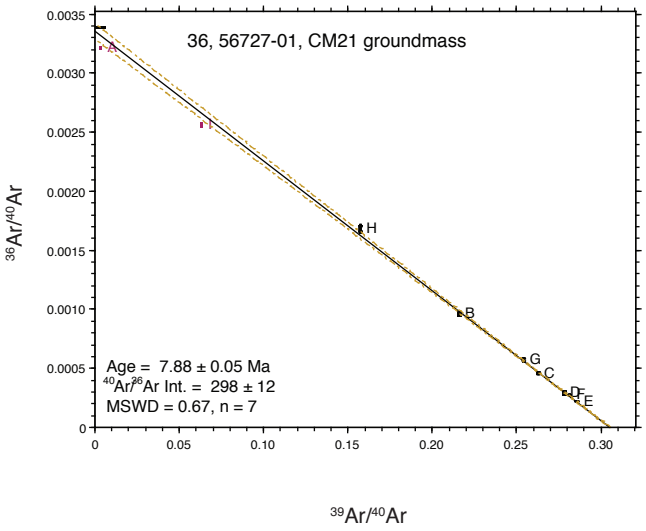

34, 56724-01, 04C3 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
7.79 ± 0.03 Ma* (MSWD = 0.13)
Integrated Age = 8.5 ± 0.2 Ma
Cumulative % 39Ar released

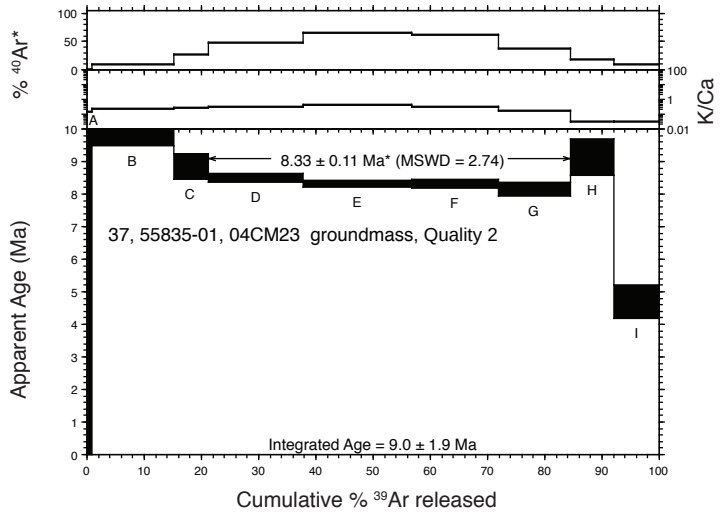

34, 56724-01, 04C3 groundmass
36Ar/40Ar
Age = 7.80 ± 0.04 Ma
40Ar/36Ar Int. = 294 ± 7
MSWD = 0.15, n = 3
39Ar/40Ar

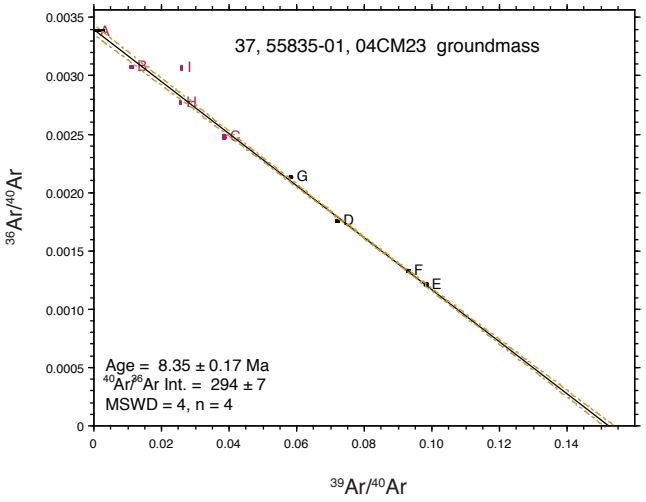

35, 56726-01, 04C10-Top groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
7.90 ± 0.08 Ma* (MSWD = 1.94)
Integrated Age = 9.2 ± 0.4 Ma
Cumulative % 39Ar released

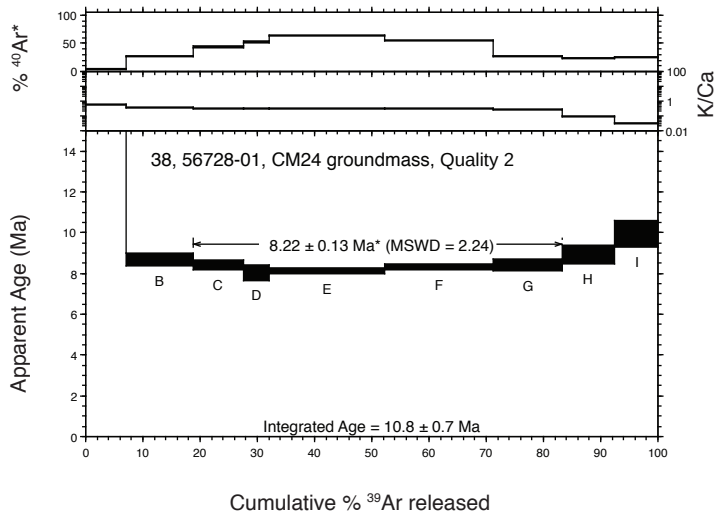

35, 56726-01, 04C10-Top groundmass
36Ar/40Ar
Age = 7.89 ± 0.08 Ma
40Ar/36Ar Int. = 296 ± 5
MSWD = 2.7, n = 6
39Ar/40Ar

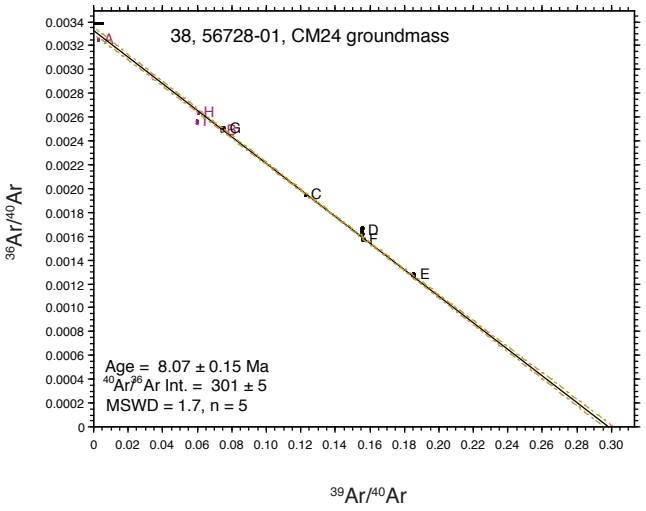

36, 56727-01, CM21 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
7.89 ± 0.04 Ma* (MSWD = 0.50)
Integrated Age = 8.43 ± 0.16 Ma
Cumulative % 39Ar released

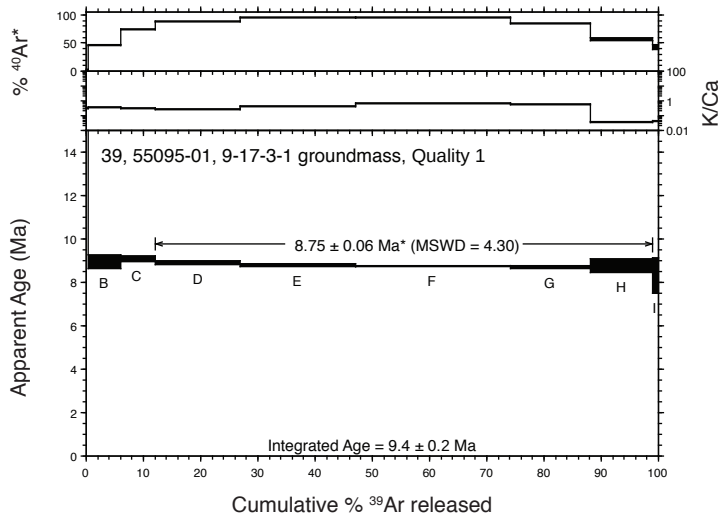

36, 56727-01, CM21 groundmass
36Ar/40Ar
Age = 7.88 ± 0.05 Ma
40Ar/36Ar Int. = 298 ± 12
MSWD = 0.67, n = 7
39Ar/40Ar

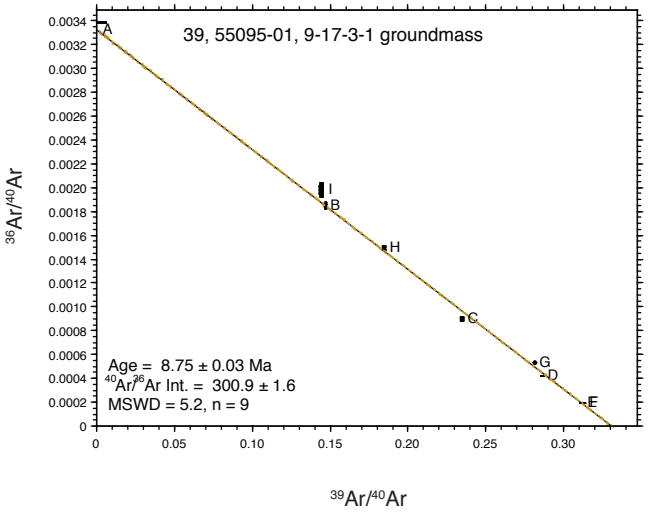

37, 55835-01, 04CM23 groundmass, Quality 2
% 40Ar*
K/Ca
Apparent Age (Ma)
8.33 ± 0.11 Ma* (MSWD = 2.74)
Integrated Age = 9.0 ± 1.9 Ma
Cumulative % 39Ar released

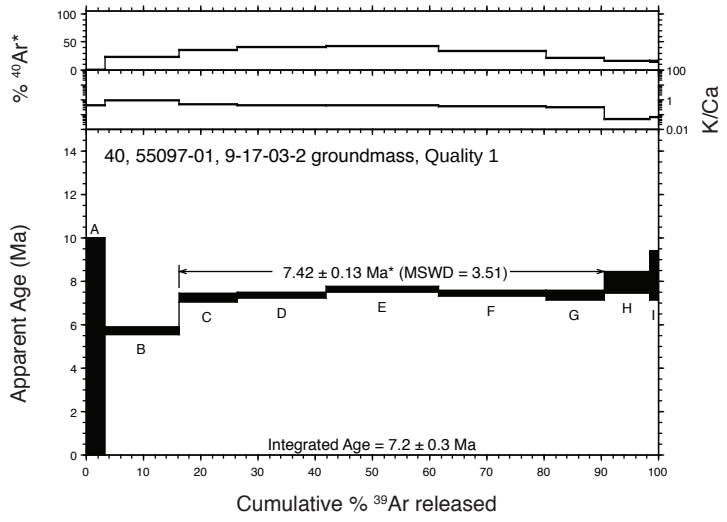

37, 55835-01, 04CM23 groundmass
36Ar/40Ar
Age = 8.35 ± 0.17 Ma
40Ar/36Ar Int. = 294 ± 7
MSWD = 4, n = 4
39Ar/40Ar

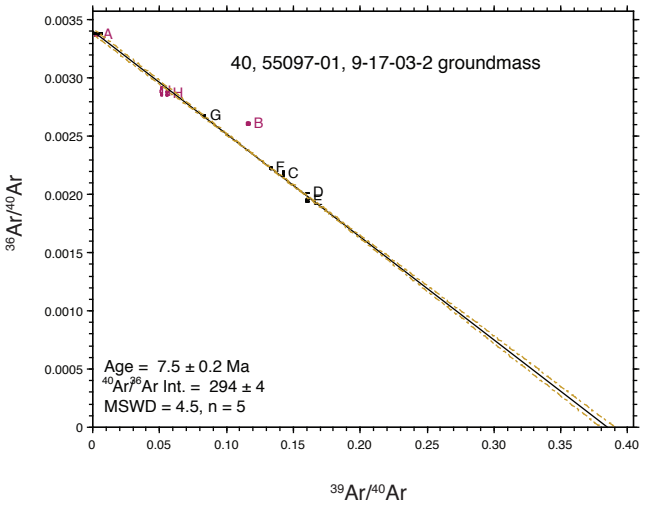

38, 56728-01, CM24 groundmass, Quality 2
% 40Ar*
K/Ca
Apparent Age (Ma)
8.22 ± 0.13 Ma* (MSWD = 2.24)
Integrated Age = 10.8 ± 0.7 Ma
Cumulative % 39Ar released

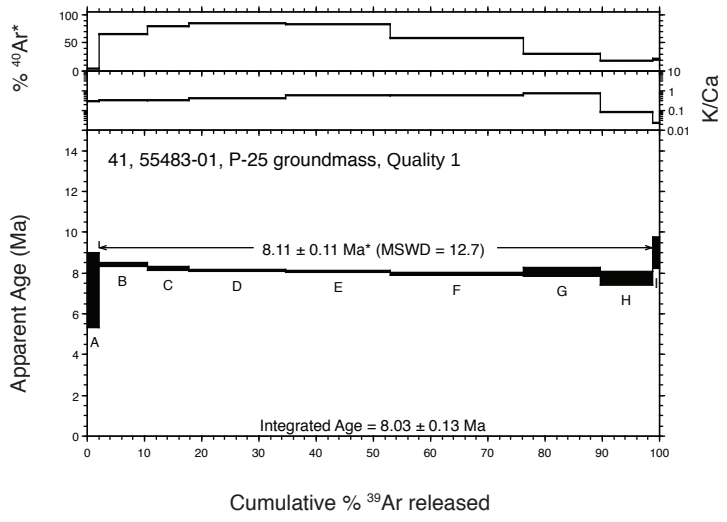

38, 56728-01, CM24 groundmass
36Ar/40Ar
Age = 8.07 ± 0.15 Ma
40Ar/36Ar Int. = 301 ± 5
MSWD = 1.7, n = 5
39Ar/40Ar

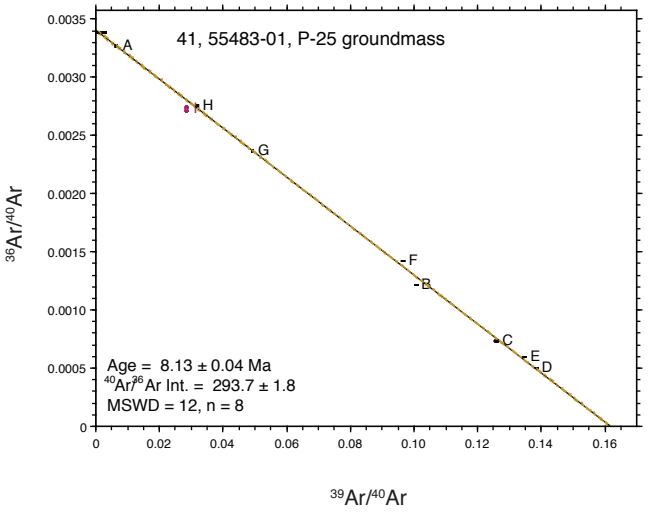

% 40Ar*
K/Ca
Apparent Age (Ma)
39, 55095-01, 9-17-3-1 groundmass, Quality 1
8.75 ± 0.06 Ma* (MSWD = 4.30)
Integrated Age = 9.4 ± 0.2 Ma
Cumulative % 39Ar released

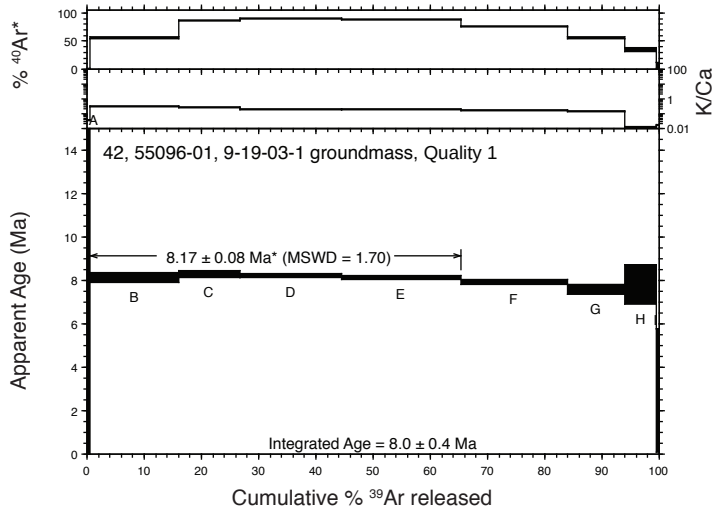

39, 55095-01, 9-17-3-1 groundmass
36Ar/40Ar
39Ar/40Ar
Age = 8.75 ± 0.03 Ma
40Ar/36Ar Int. = 300.9 ± 1.6
MSWD = 5.2, n = 9

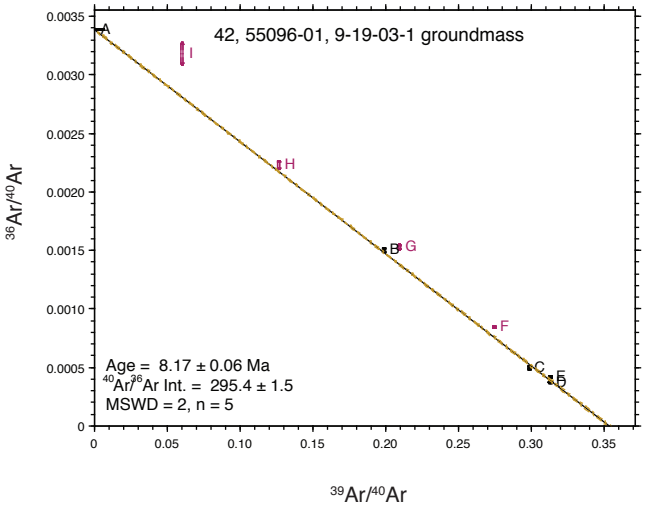

% 40Ar*
K/Ca
Apparent Age (Ma)
40, 55097-01, 9-17-03-2 groundmass, Quality 1
7.42 ± 0.13 Ma* (MSWD = 3.51)
Integrated Age = 7.2 ± 0.3 Ma
Cumulative % 39Ar released

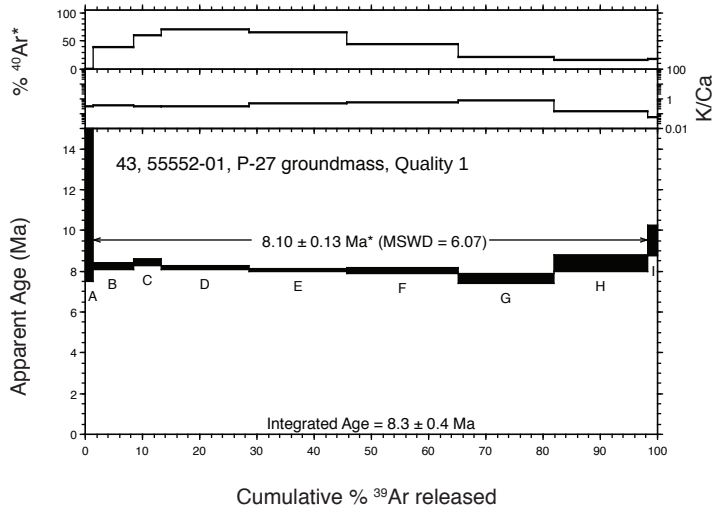

40, 55097-01, 9-17-03-2 groundmass
36Ar/40Ar
39Ar/40Ar
Age = 7.5 ± 0.2 Ma
40Ar/36Ar Int. = 294 ± 4
MSWD = 4.5, n = 5

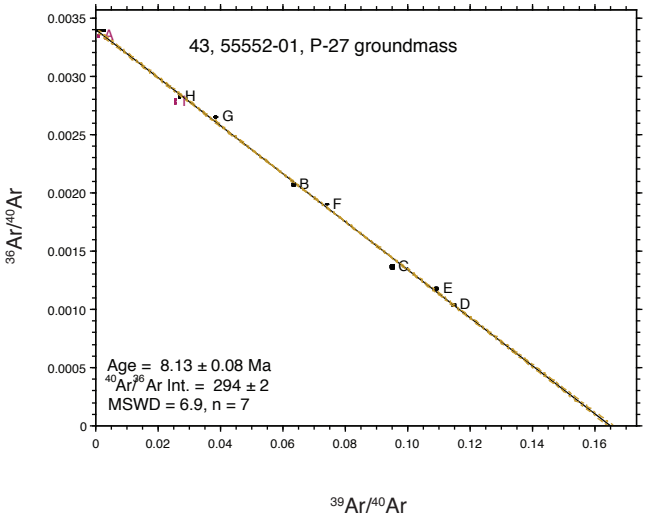

% 40Ar*
K/Ca
Apparent Age (Ma)
41, 55483-01, P-25 groundmass, Quality 1
8.11 ± 0.11 Ma* (MSWD = 12.7)
Integrated Age = 8.03 ± 0.13 Ma
Cumulative % 39Ar released

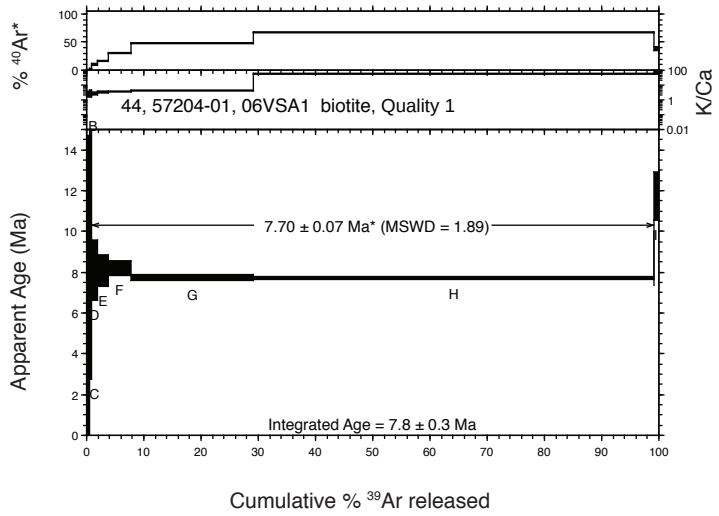

41, 55483-01, P-25 groundmass
36Ar/40Ar
39Ar/40Ar
Age = 8.13 ± 0.04 Ma
40Ar/36Ar Int. = 293.7 ± 1.8
MSWD = 12, n = 8

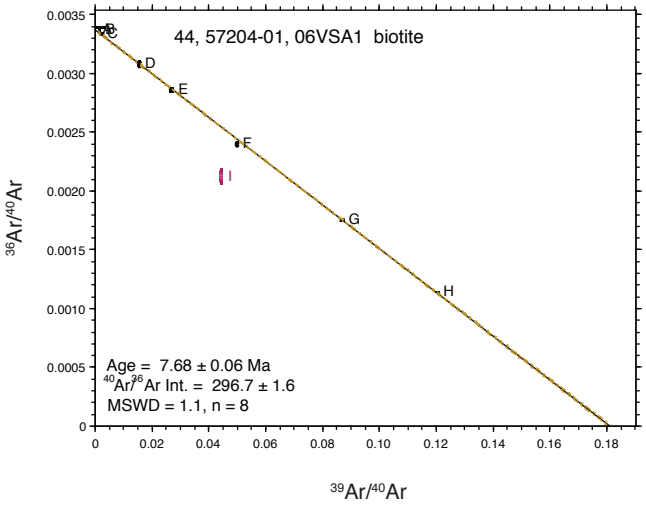

% 40Ar*
K/Ca
42, 55096-01, 9-19-03-1 groundmass, Quality 1
8.17 ± 0.08 Ma* (MSWD = 1.70)
Apparent Age (Ma)
Integrated Age = 8.0 ± 0.4 Ma
Cumulative % 39Ar released

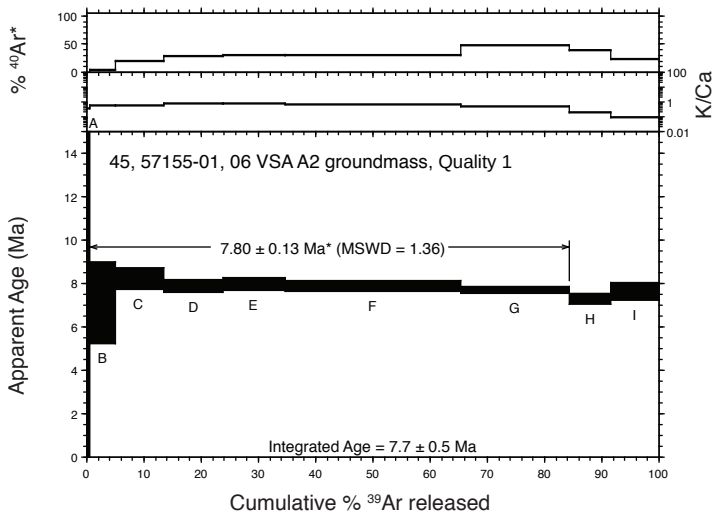

42, 55096-01, 9-19-03-1 groundmass
Age = 8.17 ± 0.06 Ma
40Ar/36Ar Int. = 295.4 ± 1.5
MSWD = 2, n = 5
36Ar/40Ar
39Ar/40Ar

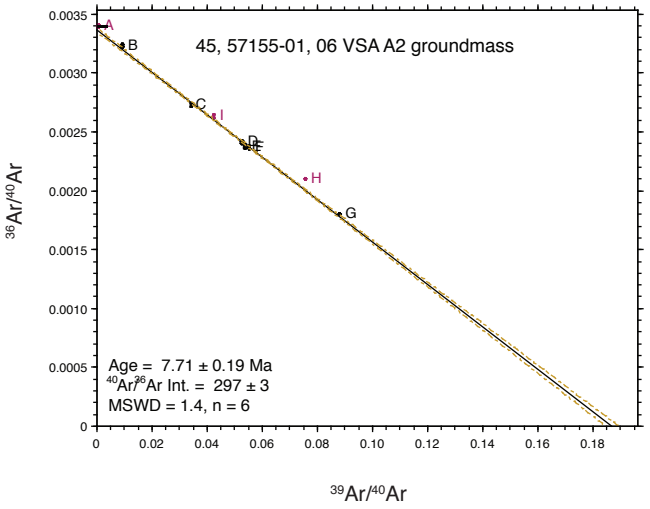

% 40Ar*
K/Ca
43, 55552-01, P-27 groundmass, Quality 1
8.10 ± 0.13 Ma* (MSWD = 6.07)
Apparent Age (Ma)
Integrated Age = 8.3 ± 0.4 Ma
Cumulative % 39Ar released

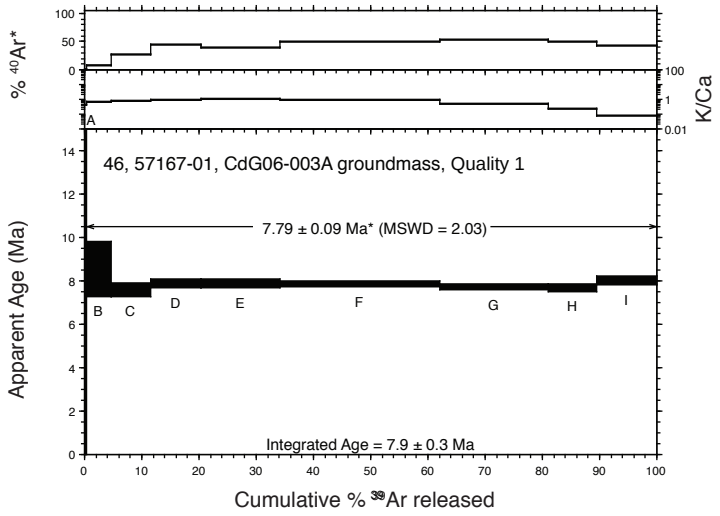

43, 55552-01, P-27 groundmass
Age = 8.13 ± 0.08 Ma
40Ar/36Ar Int. = 294 ± 2
MSWD = 6.9, n = 7
36Ar/40Ar
39Ar/40Ar

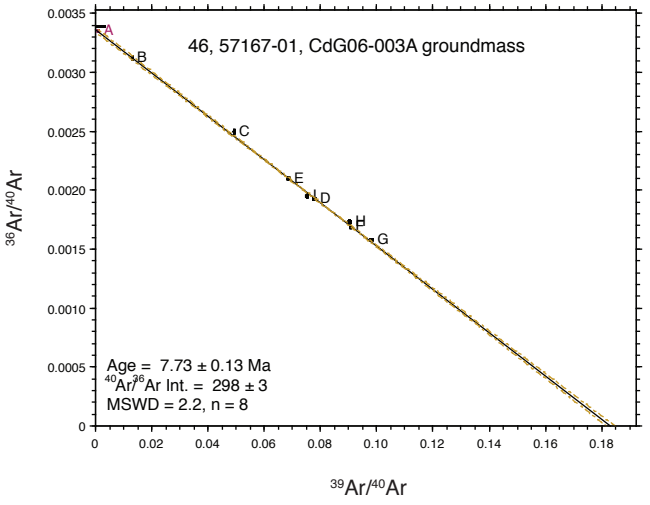

% 40Ar*
K/Ca
44, 57204-01, 06VSA1 biotite, Quality 1
7.70 ± 0.07 Ma* (MSWD = 1.89)
Apparent Age (Ma)
Integrated Age = 7.8 ± 0.3 Ma
Cumulative % 39Ar released

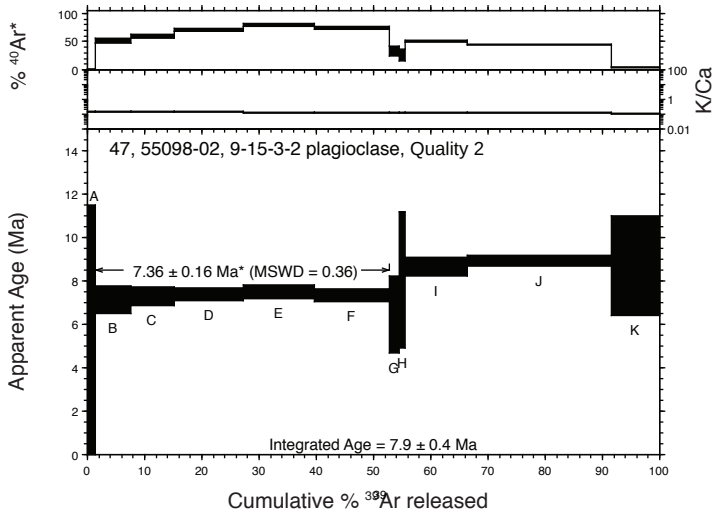

44, 57204-01, 06VSA1 biotite
Age = 7.68 ± 0.06 Ma
40Ar/36Ar Int. = 296.7 ± 1.6
MSWD = 1.1, n = 8
36Ar/40Ar
39Ar/40Ar

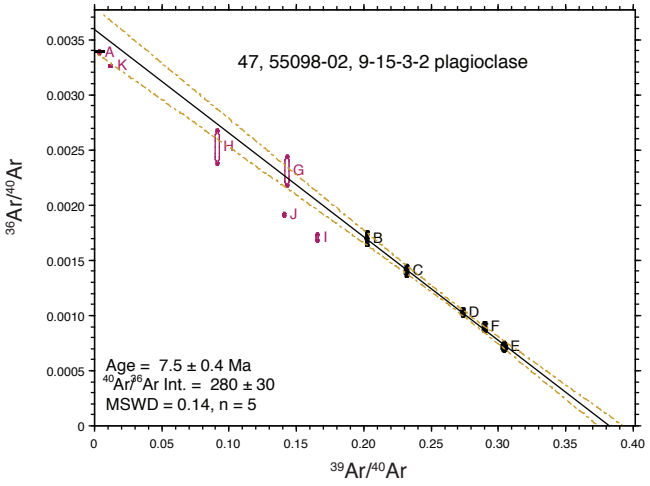

% 40Ar*
K/Ca
45, 57155-01, 06 VSA A2 groundmass, Quality 1
7.80 ± 0.13 Ma* (MSWD = 1.36)
Apparent Age (Ma)
Integrated Age = 7.7 ± 0.5 Ma
Cumulative % 39Ar released

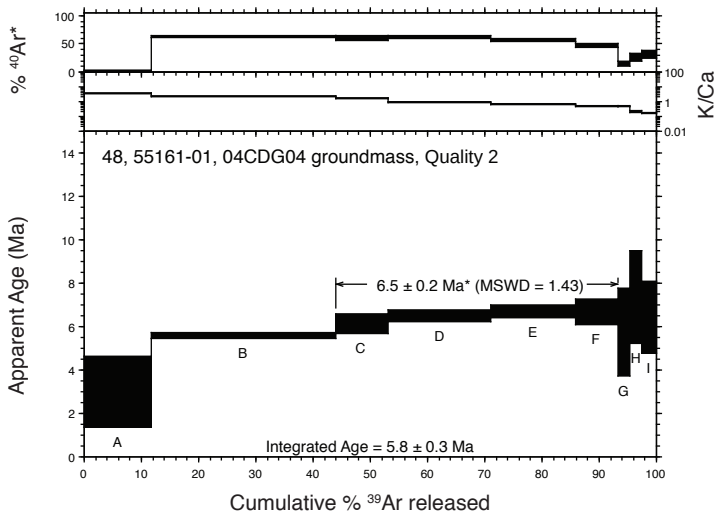

45, 57155-01, 06 VSA A2 groundmass
36Ar/40Ar
Age = 7.71 ± 0.19 Ma
40Ar/36Ar Int. = 297 ± 3
MSWD = 1.4, n = 6
39Ar/40Ar

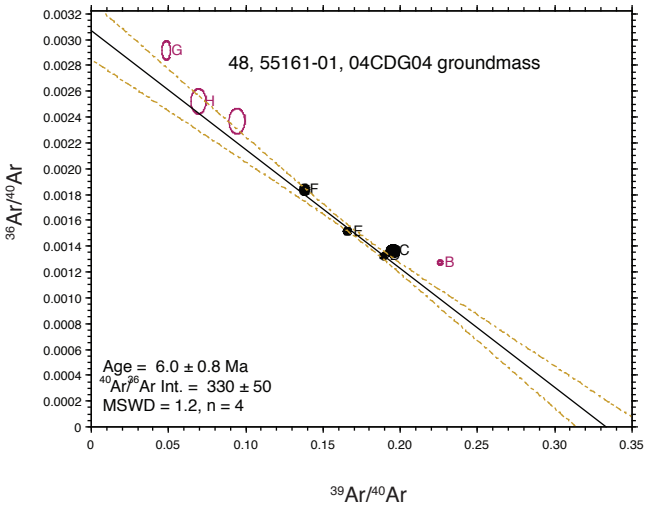

% 40Ar*
K/Ca
46, 57167-01, CdG06-003A groundmass, Quality 1
7.79 ± 0.09 Ma* (MSWD = 2.03)
Apparent Age (Ma)
Integrated Age = 7.9 ± 0.3 Ma
Cumulative % 39Ar released

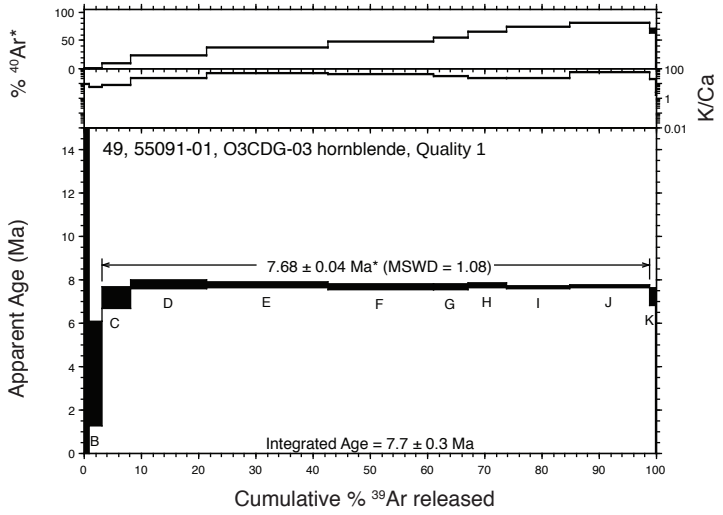

46, 57167-01, CdG06-003A groundmass
36Ar/40Ar
Age = 7.73 ± 0.13 Ma
40Ar/36Ar Int. = 298 ± 3
MSWD = 2.2, n = 8
39Ar/40Ar

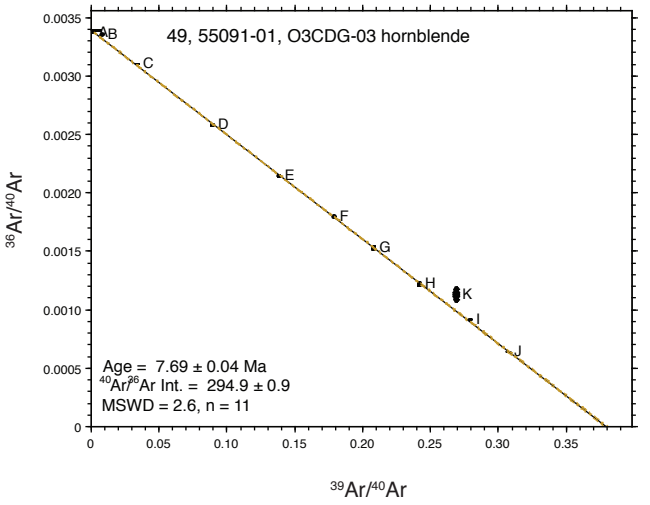

% 40Ar*
K/Ca
47, 55098-02, 9-15-3-2 plagioclase, Quality 2
7.36 ± 0.16 Ma* (MSWD = 0.36)
Apparent Age (Ma)
Integrated Age = 7.9 ± 0.4 Ma
Cumulative % 39Ar released

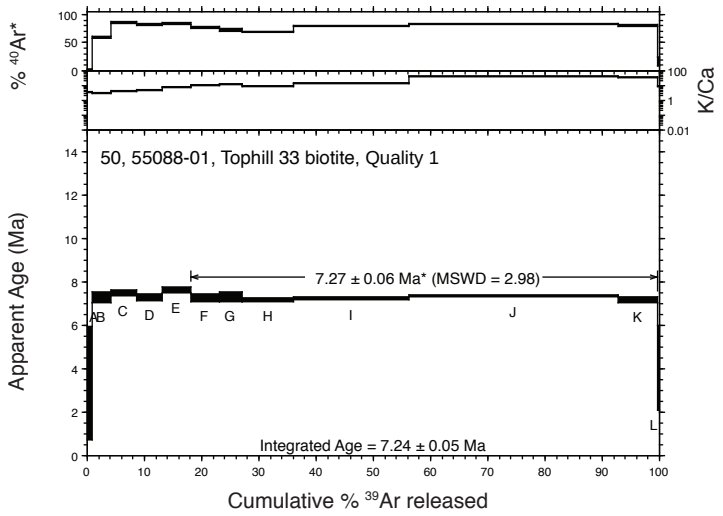

47, 55098-02, 9-15-3-2 plagioclase
36Ar/40Ar
Age = 7.5 ± 0.4 Ma
40Ar/36Ar Int. = 280 ± 30
MSWD = 0.14, n = 5
39Ar/40Ar

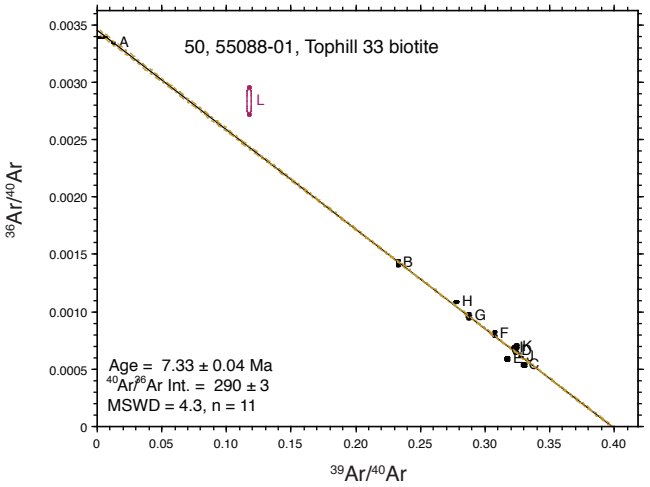

% 40Ar*
K/Ca
48, 55161-01, 04CDG04 groundmass, Quality 2
Apparent Age (Ma)
6.5 ± 0.2 Ma* (MSWD = 1.43)
Integrated Age = 5.8 ± 0.3 Ma
Cumulative % 39Ar released

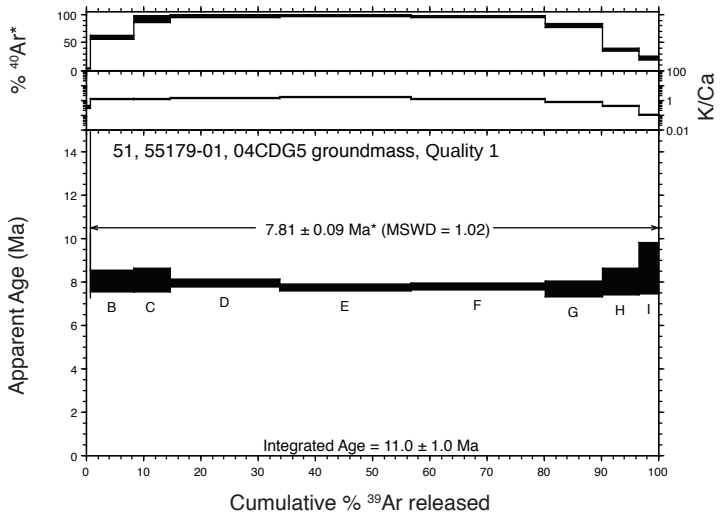

48, 55161-01, 04CDG04 groundmass
36Ar/40Ar
Age = 6.0 ± 0.8 Ma
40Ar/36Ar Int. = 330 ± 50
MSWD = 1.2, n = 4
39Ar/40Ar

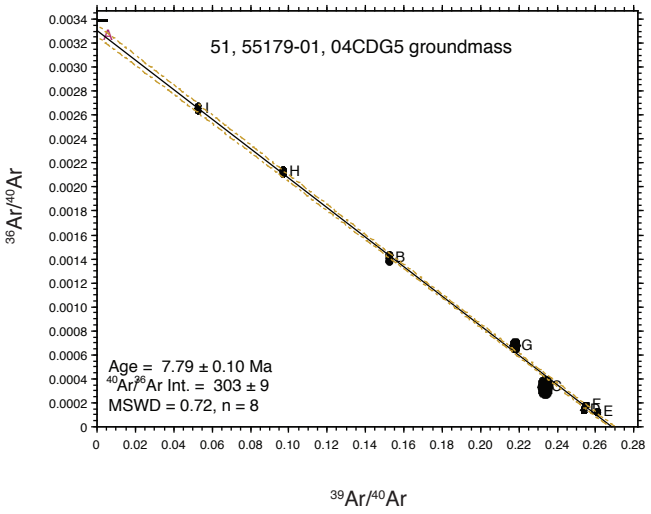

% 40Ar*
K/Ca
49, 55091-01, O3CDG-03 hornblende, Quality 1
Apparent Age (Ma)
7.68 ± 0.04 Ma* (MSWD = 1.08)
Integrated Age = 7.7 ± 0.3 Ma
Cumulative % 39Ar released

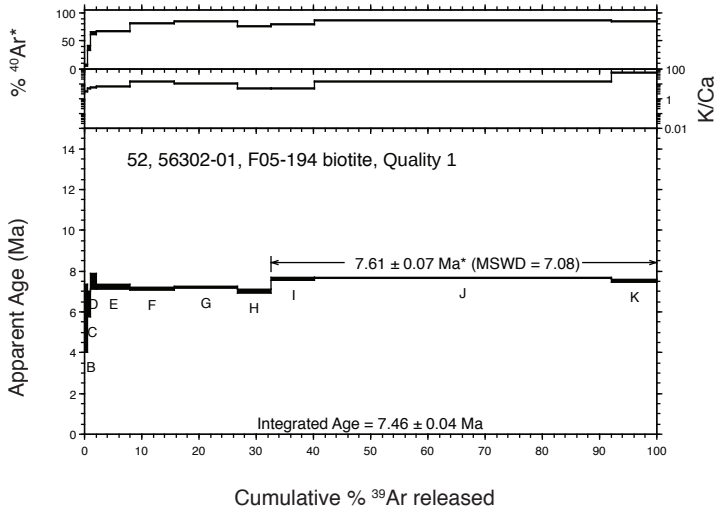

49, 55091-01, O3CDG-03 hornblende
36Ar/40Ar
Age = 7.69 ± 0.04 Ma
40Ar/36Ar Int. = 294.9 ± 0.9
MSWD = 2.6, n = 11
39Ar/40Ar

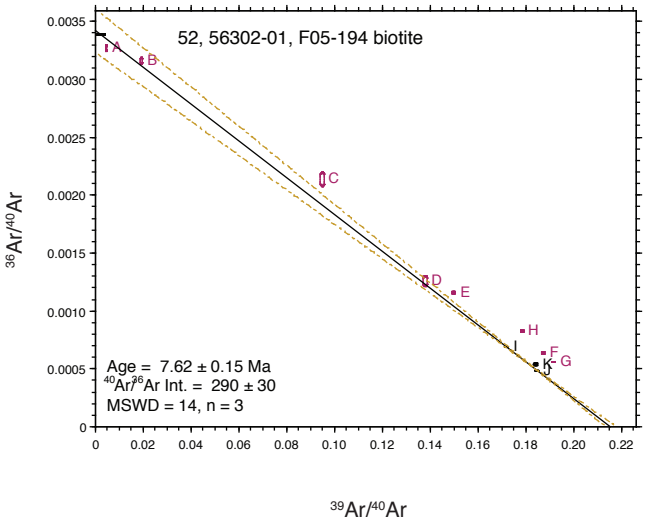

% 40Ar*
K/Ca
50, 55088-01, Tophill 33 biotite, Quality 1
Apparent Age (Ma)
7.27 ± 0.06 Ma* (MSWD = 2.98)
Integrated Age = 7.24 ± 0.05 Ma
Cumulative % 39Ar released

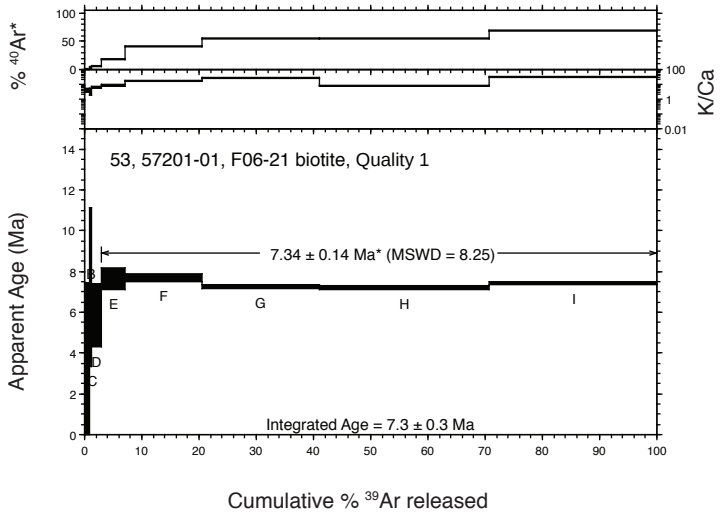

50, 55088-01, Tophill 33 biotite
36Ar/40Ar
Age = 7.33 ± 0.04 Ma
40Ar/36Ar Int. = 290 ± 3
MSWD = 4.3, n = 11
39Ar/40Ar

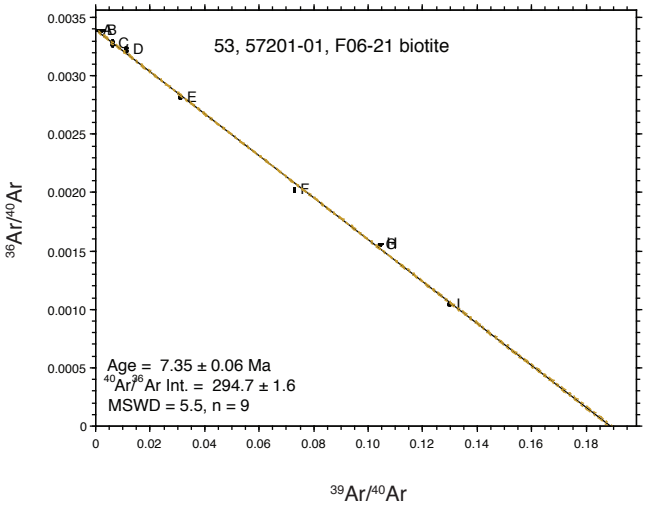

% 40Ar*
K/Ca
Apparent Age (Ma)
51, 55179-01, 04CDG5 groundmass, Quality 1
7.81 ± 0.09 Ma* (MSWD = 1.02)
Integrated Age = 11.0 ± 1.0 Ma
Cumulative % 39Ar released

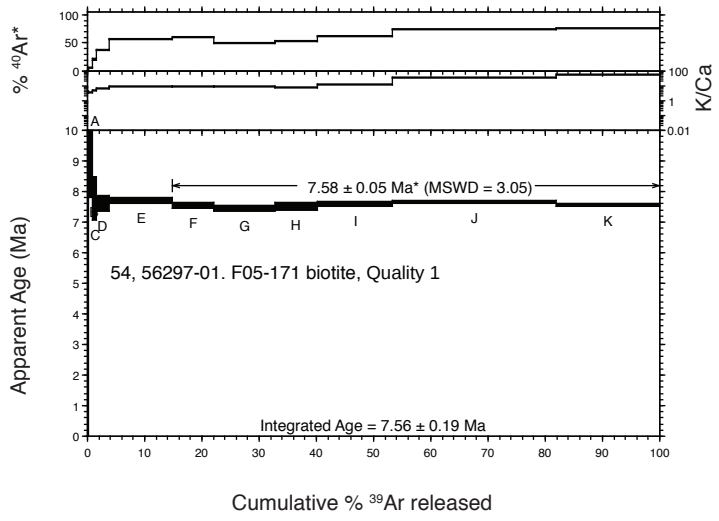

51, 55179-01, 04CDG5 groundmass
36Ar/40Ar
Age = 7.79 ± 0.10 Ma
40Ar/36Ar Int. = 303 ± 9
MSWD = 0.72, n = 8
39Ar/40Ar

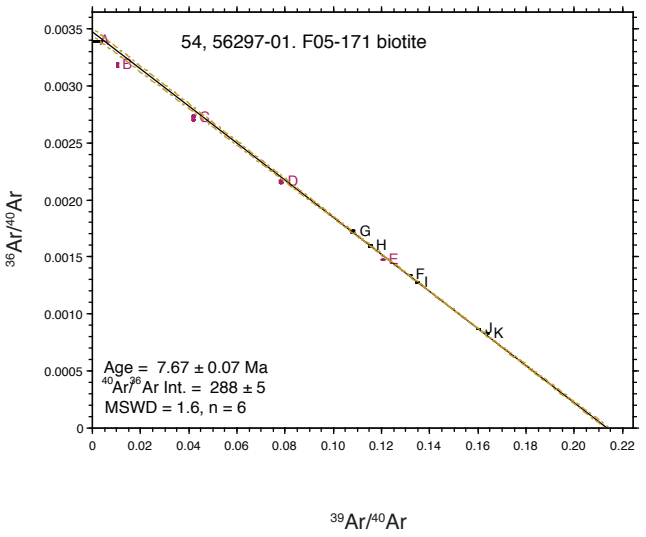

% 40Ar*
K/Ca
Apparent Age (Ma)
52, 56302-01, F05-194 biotite, Quality 1
7.61 ± 0.07 Ma* (MSWD = 7.08)
Integrated Age = 7.46 ± 0.04 Ma
Cumulative % 39Ar released

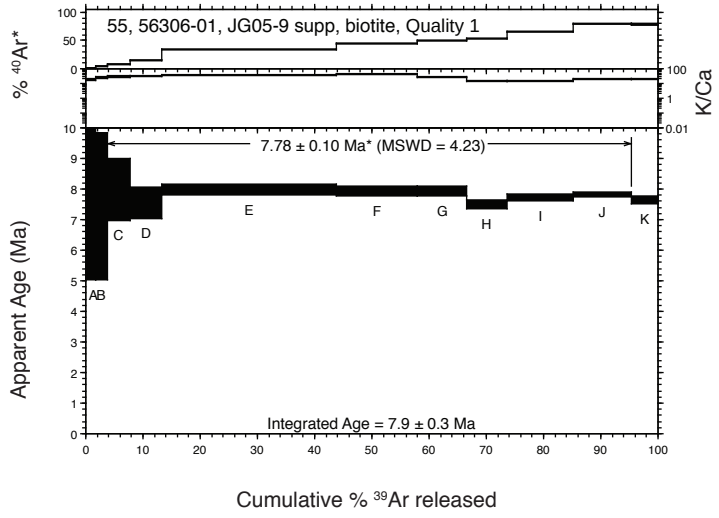

52, 56302-01, F05-194 biotite
36Ar/40Ar
Age = 7.62 ± 0.15 Ma
40Ar/36Ar Int. = 290 ± 30
MSWD = 14, n = 3
39Ar/40Ar

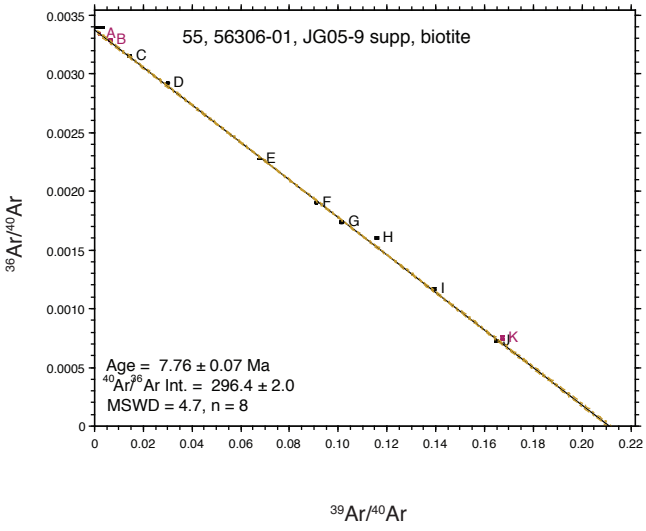

% 40Ar*
K/Ca
Apparent Age (Ma)
53, 57201-01, F06-21 biotite, Quality 1
7.34 ± 0.14 Ma* (MSWD = 8.25)
Integrated Age = 7.3 ± 0.3 Ma
Cumulative % 39Ar released

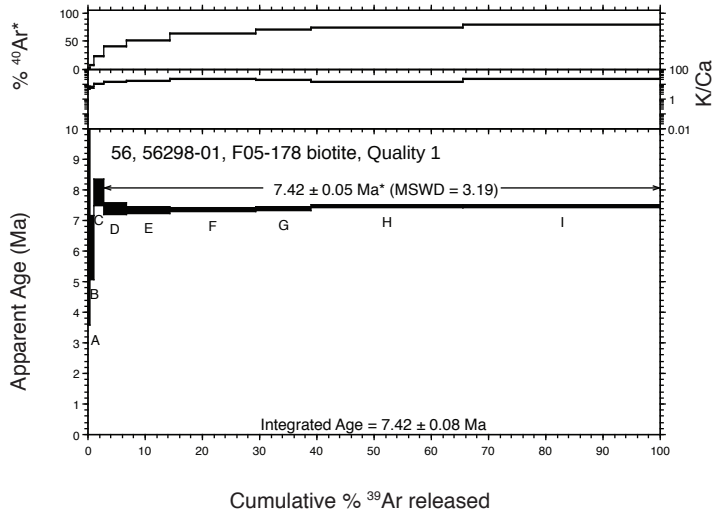

53, 57201-01, F06-21 biotite
36Ar/40Ar
Age = 7.35 ± 0.06 Ma
40Ar/36Ar Int. = 294.7 ± 1.6
MSWD = 5.5, n = 9
39Ar/40Ar

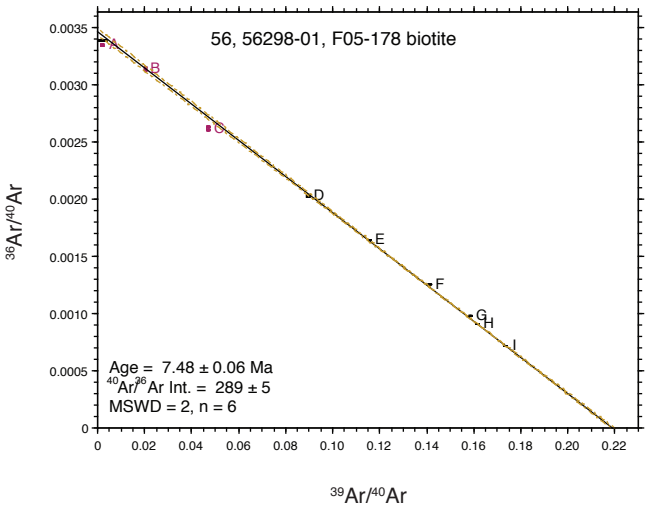

% 40Ar*
K/Ca
Apparent Age (Ma)
7.58 ± 0.05 Ma* (MSWD = 3.05)
54, 56297-01. F05-171 biotite, Quality 1
Integrated Age = 7.56 ± 0.19 Ma
Cumulative % 39Ar released

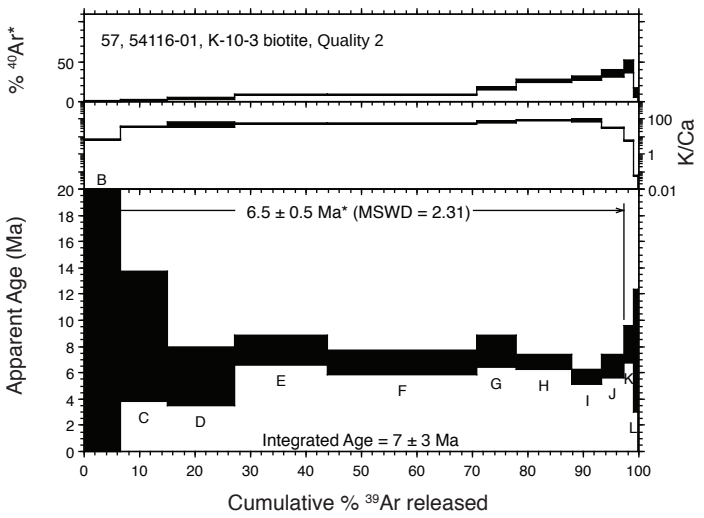

54, 56297-01. F05-171 biotite
36Ar/40Ar
Age = 7.67 ± 0.07 Ma
40Ar/36Ar Int. = 288 ± 5
MSWD = 1.6, n = 6
39Ar/40Ar

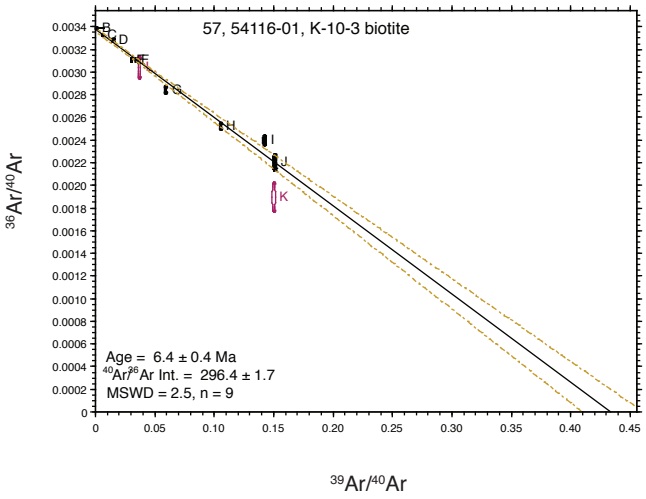

55, 56306-01, JG05-9 supp, biotite, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
7.78 ± 0.10 Ma* (MSWD = 4.23)
Integrated Age = 7.9 ± 0.3 Ma
Cumulative % 39Ar released

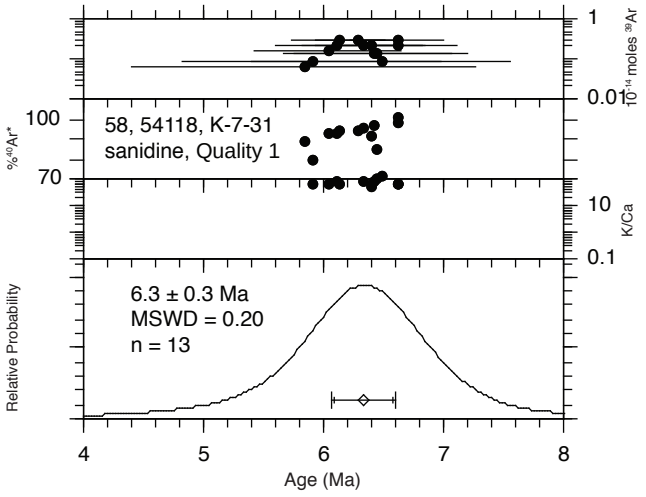

55, 56306-01, JG05-9 supp, biotite
36Ar/40Ar
Age = 7.76 ± 0.07 Ma
40Ar/36Ar Int. = 296.4 ± 2.0
MSWD = 4.7, n = 8
39Ar/40Ar

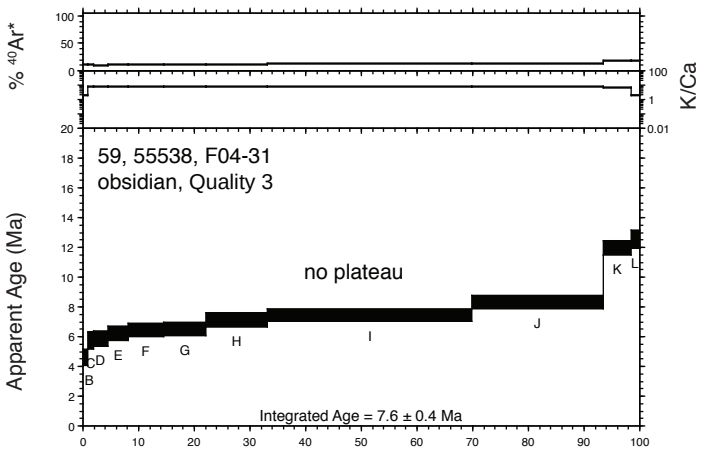

% 40Ar*
K/Ca
Apparent Age (Ma)
56, 56298-01, F05-178 biotite, Quality 1
7.42 ± 0.05 Ma* (MSWD = 3.19)
Integrated Age = 7.42 ± 0.08 Ma
Cumulative % 39Ar released

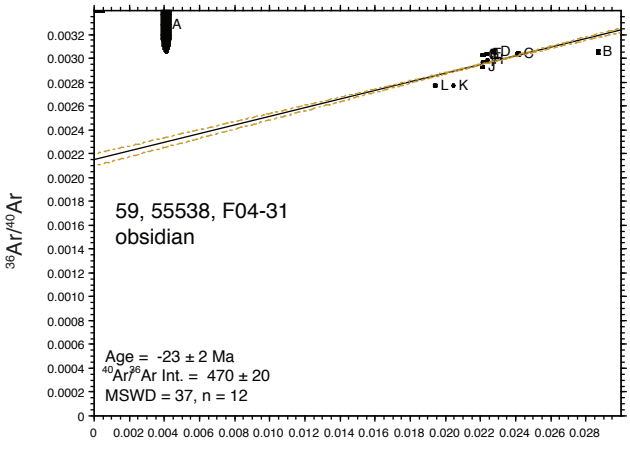

56, 56298-01, F05-178 biotite
36Ar/40Ar
Age = 7.48 ± 0.06 Ma
40Ar/36Ar Int. = 289 ± 5
MSWD = 2, n = 6
39Ar/40Ar

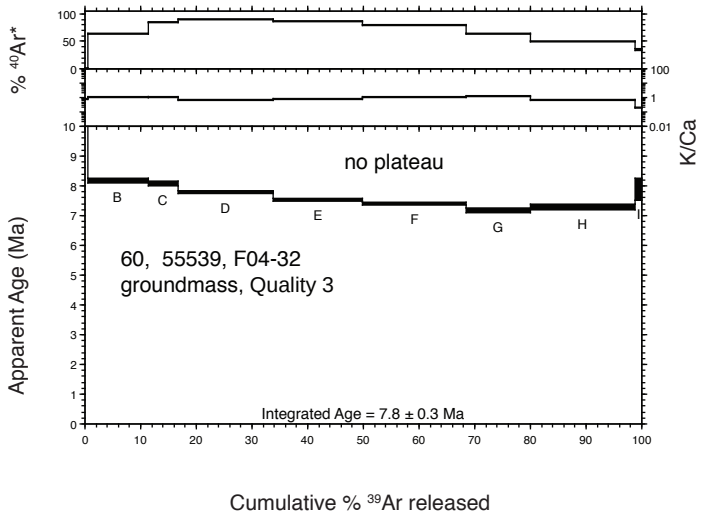

57, 54116-01, K-10-3 biotite, Quality 2
% 40Ar*
K/Ca
Apparent Age (Ma)
6.5 ± 0.5 Ma* (MSWD = 2.31)
Integrated Age = 7 ± 3 Ma
Cumulative % 39Ar released

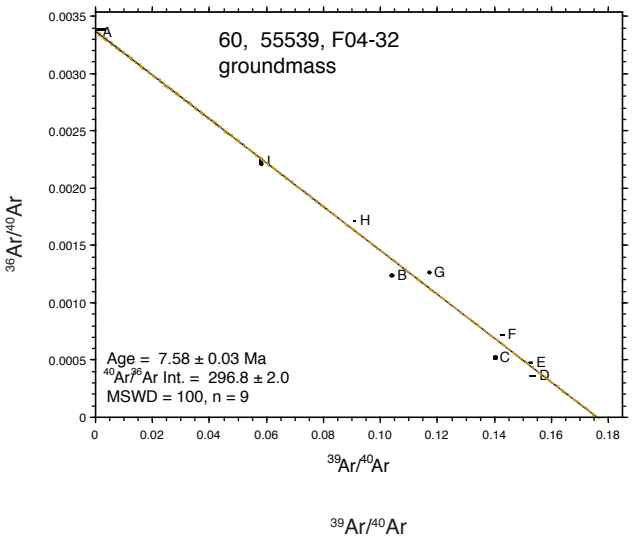

57, 54116-01, K-10-3 biotite
36Ar/40Ar
Age = 6.4 ± 0.4 Ma
40Ar/36Ar Int. = 296.4 ± 1.7
MSWD = 2.5, n = 9
39Ar/40Ar

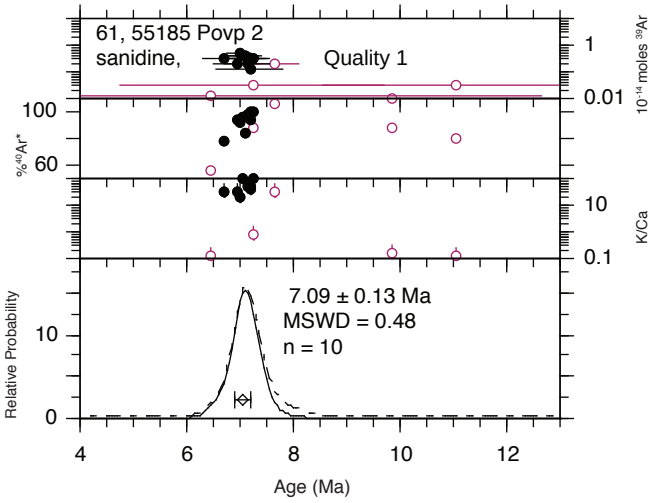

58, 54118, K-7-31
sanidine, Quality 1
% 40Ar*
10-14 moles 39Ar
K/Ca
Relative Probability
6.3 ± 0.3 Ma
MSWD = 0.20
n = 13
Age (Ma)

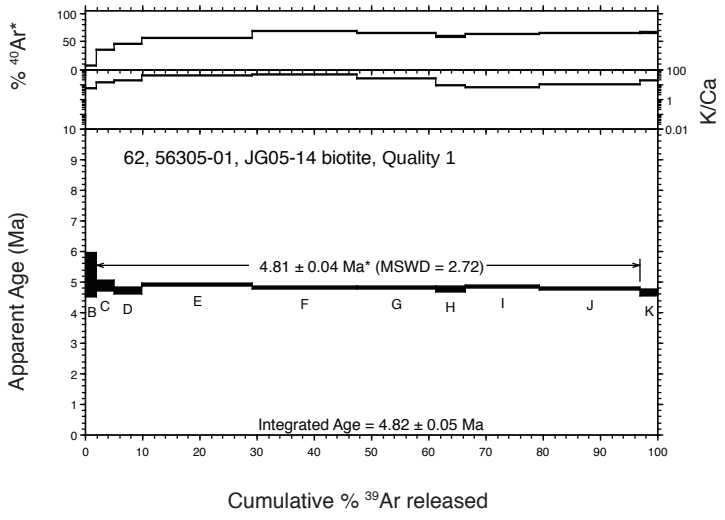

59, 55538, F04-31
obsidian, Quality 3
% 40Ar*
K/Ca
Apparent Age (Ma)
no plateau
Integrated Age = 7.6 ± 0.4 Ma
Cumulative % 39Ar released

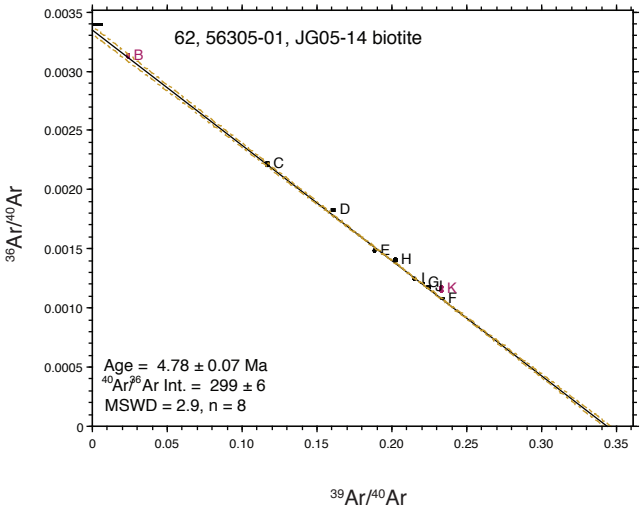

59, 55538, F04-31
obsidian
36Ar/40Ar
Age = -23 ± 2 Ma
40Ar/36Ar Int. = 470 ± 20
MSWD = 37, n = 12
39Ar/40Ar

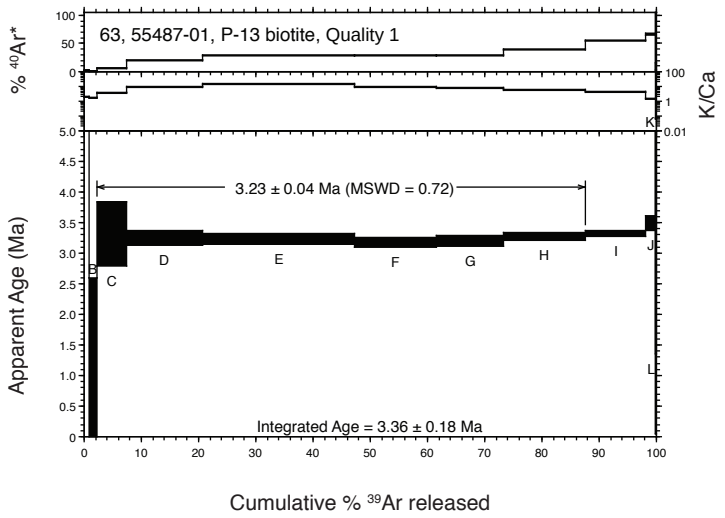

% 40Ar*
K/Ca
Apparent Age (Ma)
no plateau
B C D E F G H I
60, 55539, F04-32
groundmass, Quality 3
Integrated Age = 7.8 ± 0.3 Ma
Cumulative % 39Ar released

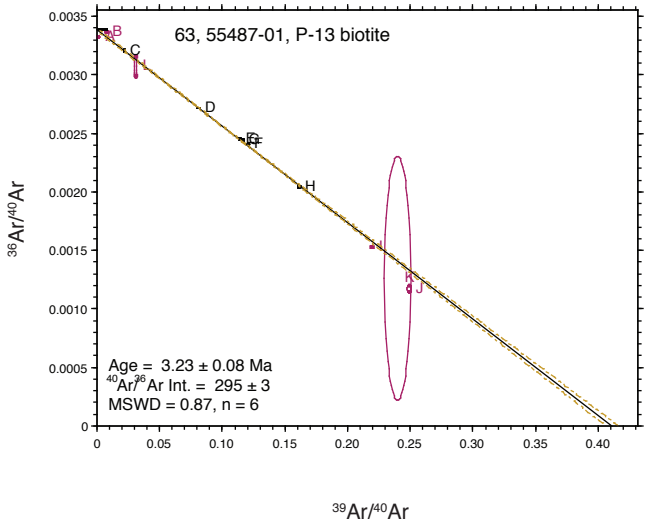

60, 55539, F04-32
groundmass
A I H B G F C E D
Age = 7.58 ± 0.03 Ma
40Ar/36Ar Int. = 296.8 ± 2.0
MSWD = 100, n = 9
36Ar/40Ar
39Ar/40Ar

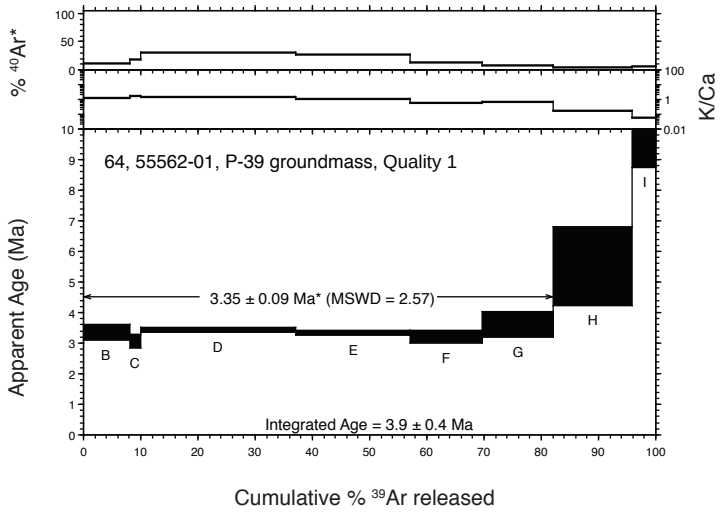

61, 55185 Povp 2
sanidine,
Quality 1
10-14 moles 39Ar
%40Ar*
K/Ca
Relative Probability
7.09 ± 0.13 Ma
MSWD = 0.48
n = 10
Age (Ma)

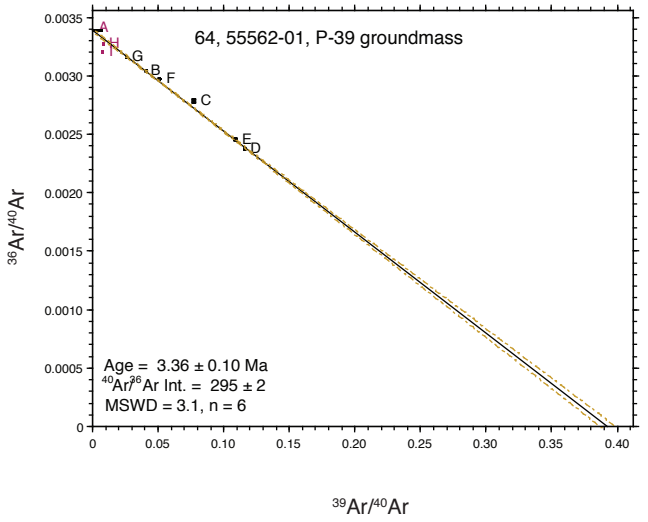

% 40Ar*
K/Ca
Apparent Age (Ma)
62, 56305-01, JG05-14 biotite, Quality 1
4.81 ± 0.04 Ma* (MSWD = 2.72)
B C D E F G H I J K
Integrated Age = 4.82 ± 0.05 Ma
Cumulative % 39Ar released

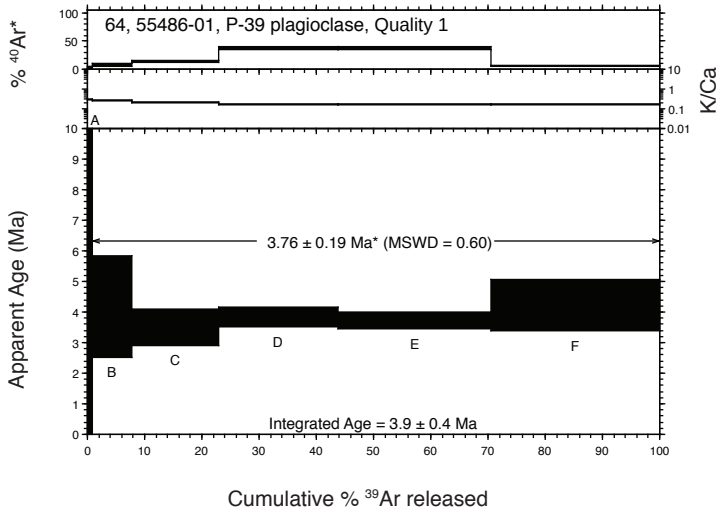

62, 56305-01, JG05-14 biotite
B C D E H I J K F
Age = 4.78 ± 0.07 Ma
40Ar/36Ar Int. = 299 ± 6
MSWD = 2.9, n = 8
36Ar/40Ar
39Ar/40Ar

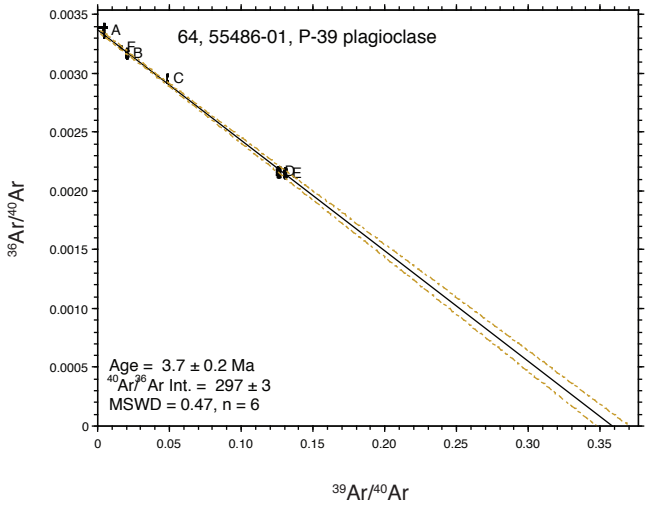

63, 55487-01, P-13 biotite, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
3.23 ± 0.04 Ma (MSWD = 0.72)
Integrated Age = 3.36 ± 0.18 Ma
Cumulative % 39Ar released

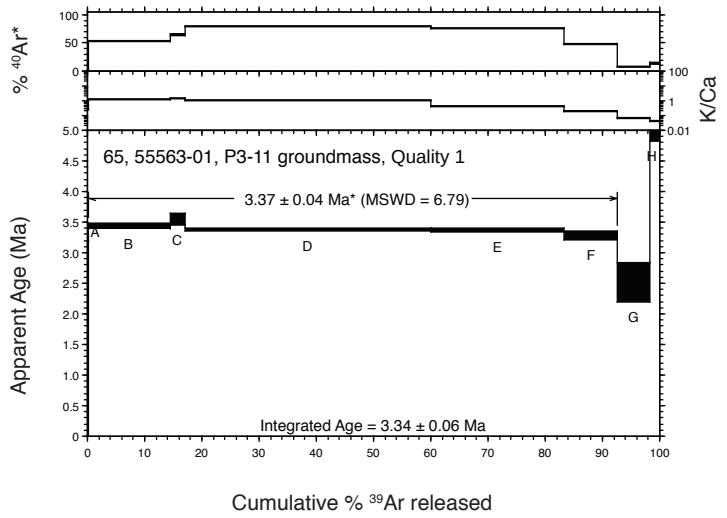

63, 55487-01, P-13 biotite
36Ar/40Ar
Age = 3.23 ± 0.08 Ma
40Ar/36Ar Int. = 295 ± 3
MSWD = 0.87, n = 6
39Ar/40Ar

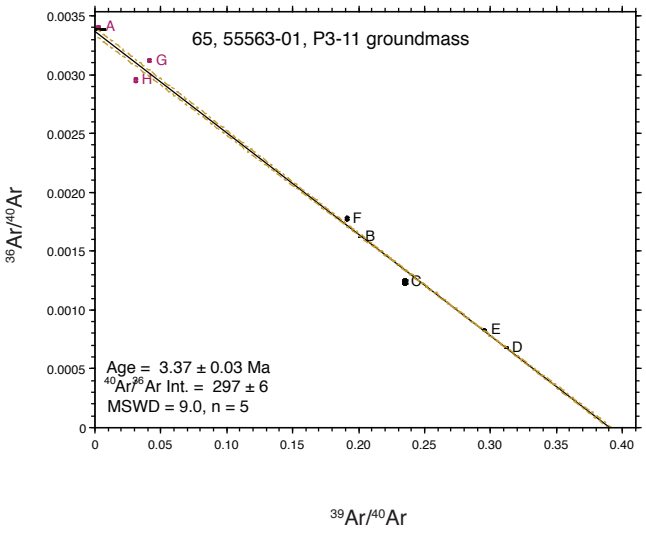

64, 55562-01, P-39 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
3.35 ± 0.09 Ma* (MSWD = 2.57)
Integrated Age = 3.9 ± 0.4 Ma
Cumulative % 39Ar released

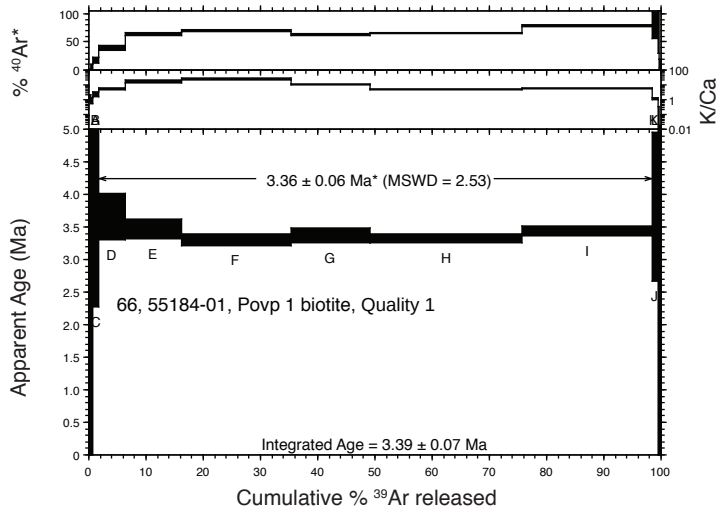

64, 55562-01, P-39 groundmass
36Ar/40Ar
Age = 3.36 ± 0.10 Ma
40Ar/36Ar Int. = 295 ± 2
MSWD = 3.1, n = 6
39Ar/40Ar

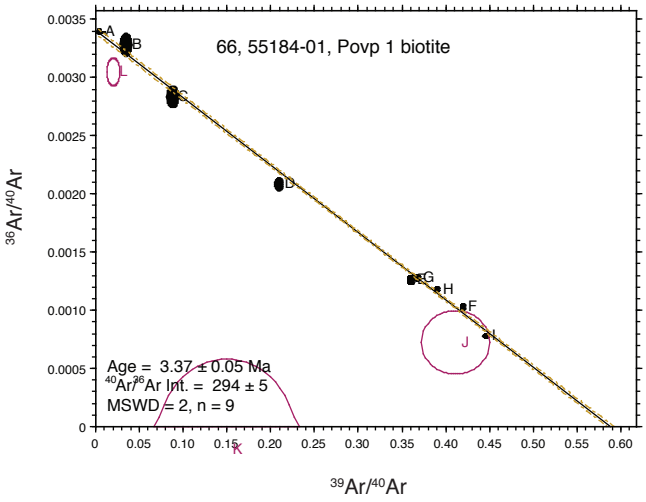

64, 55486-01, P-39 plagioclase, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
3.76 ± 0.19 Ma* (MSWD = 0.60)
Integrated Age = 3.9 ± 0.4 Ma
Cumulative % 39Ar released

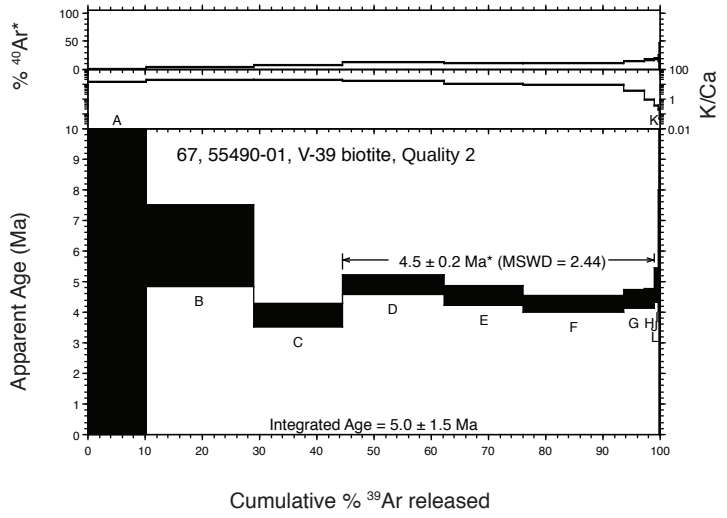

64, 55486-01, P-39 plagioclase
36Ar/40Ar
Age = 3.7 ± 0.2 Ma
40Ar/36Ar Int. = 297 ± 3
MSWD = 0.47, n = 6
39Ar/40Ar

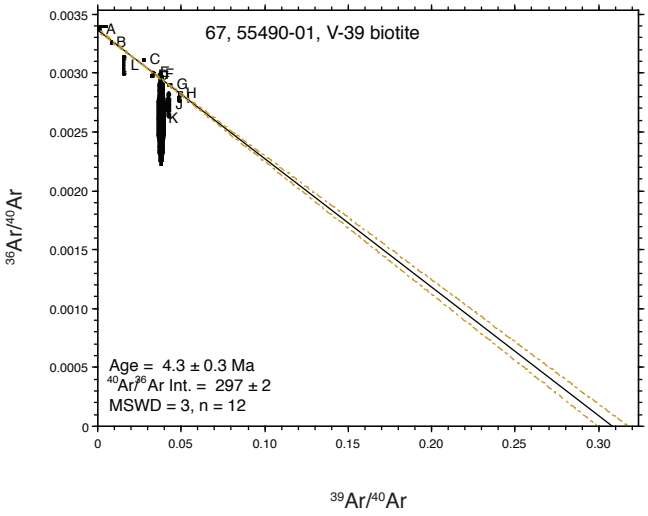

% 40Ar*
K/Ca
65, 55563-01, P3-11 groundmass, Quality 1
3.37 ± 0.04 Ma* (MSWD = 6.79)
Apparent Age (Ma)
Integrated Age = 3.34 ± 0.06 Ma
Cumulative % 39Ar released

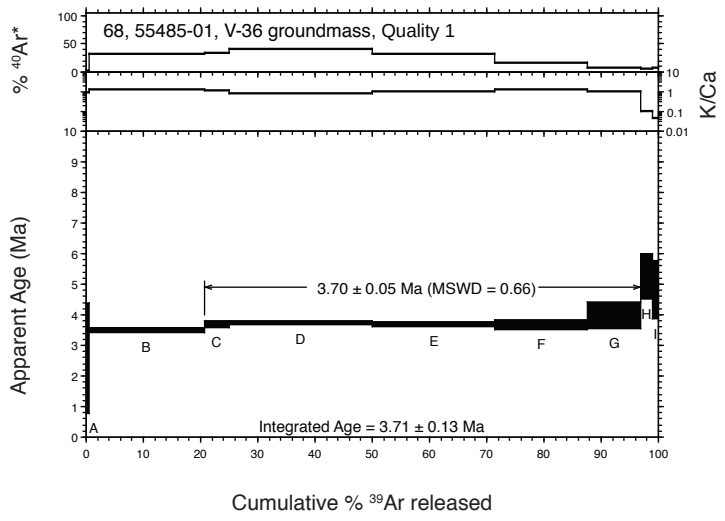

65, 55563-01, P3-11 groundmass
36Ar/40Ar
Age = 3.37 ± 0.03 Ma
40Ar/36Ar Int. = 297 ± 6
MSWD = 9.0, n = 5
39Ar/40Ar

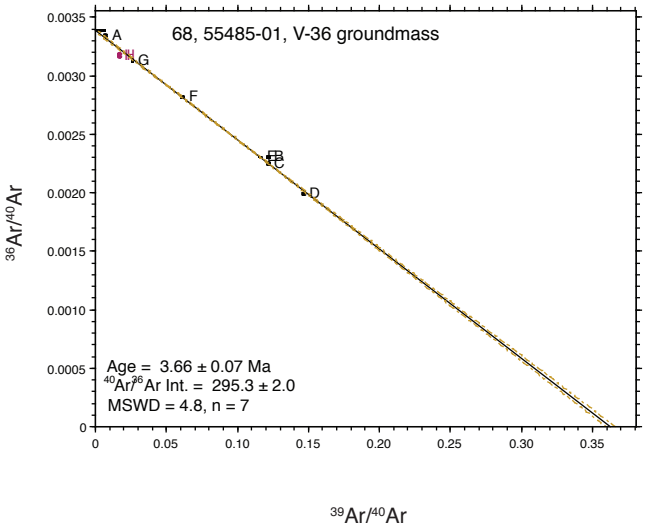

% 40Ar*
K/Ca
66, 55184-01, Povp 1 biotite, Quality 1
3.36 ± 0.06 Ma* (MSWD = 2.53)
Apparent Age (Ma)
Integrated Age = 3.39 ± 0.07 Ma
Cumulative % 39Ar released

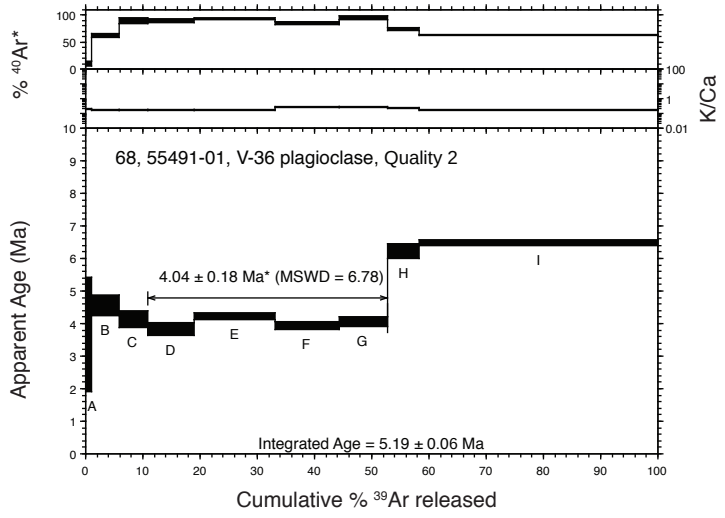

66, 55184-01, Povp 1 biotite
36Ar/40Ar
Age = 3.37 ± 0.05 Ma
40Ar/36Ar Int. = 294 ± 5
MSWD = 2, n = 9
39Ar/40Ar

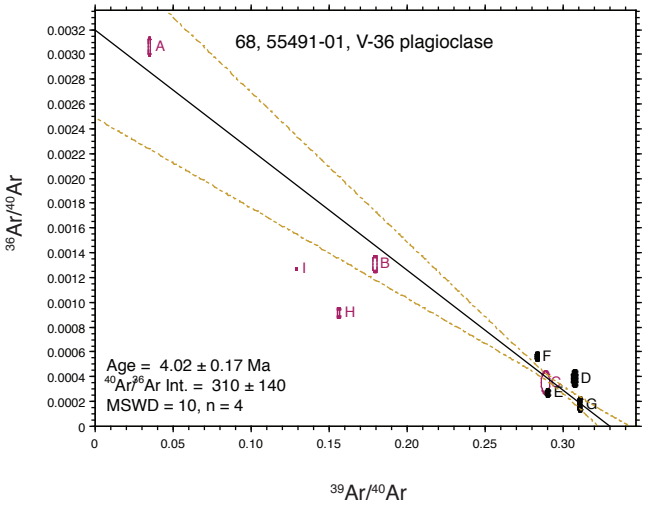

% 40Ar*
K/Ca
67, 55490-01, V-39 biotite, Quality 2
4.5 ± 0.2 Ma* (MSWD = 2.44)
Apparent Age (Ma)
Integrated Age = 5.0 ± 1.5 Ma
Cumulative % 39Ar released

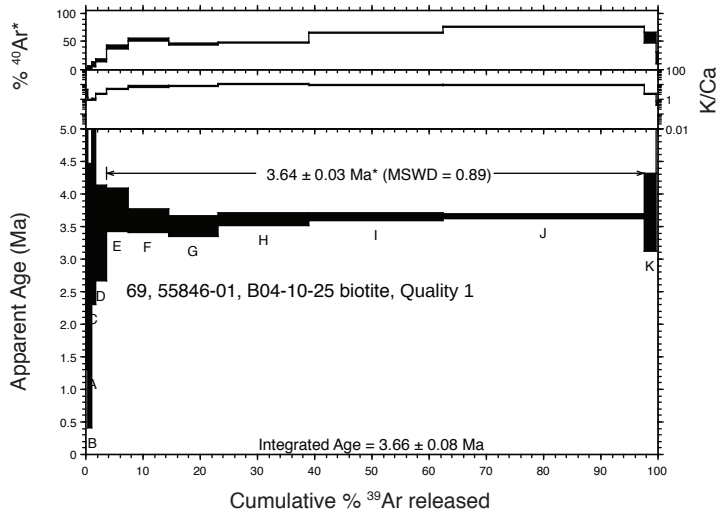

67, 55490-01, V-39 biotite
36Ar/40Ar
Age = 4.3 ± 0.3 Ma
40Ar/36Ar Int. = 297 ± 2
MSWD = 3, n = 12
39Ar/40Ar

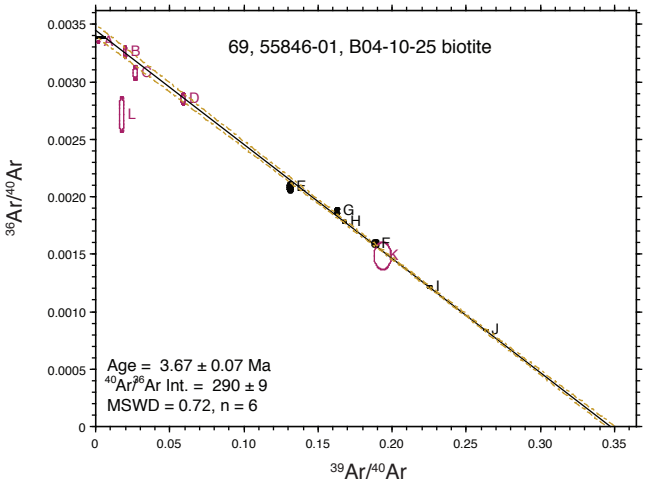

68, 55485-01, V-36 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
3.70 ± 0.05 Ma (MSWD = 0.66)
Integrated Age = 3.71 ± 0.13 Ma
Cumulative % 39Ar released

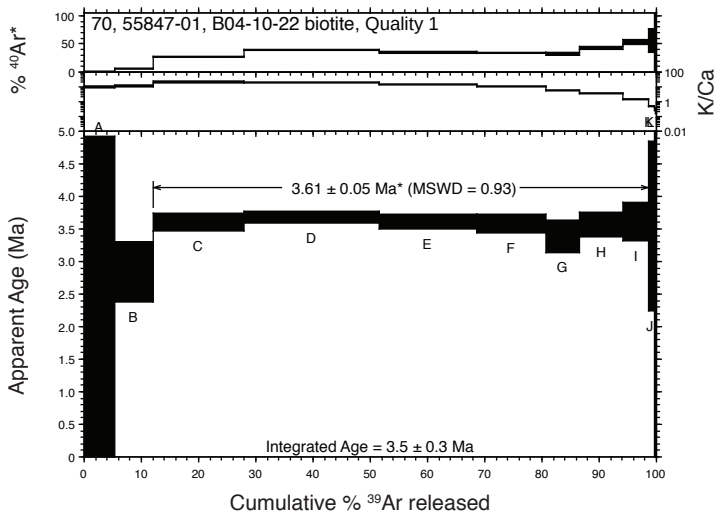

68, 55485-01, V-36 groundmass
36Ar/40Ar
Age = 3.66 ± 0.07 Ma
40Ar/36Ar Int. = 295.3 ± 2.0
MSWD = 4.8, n = 7
39Ar/40Ar

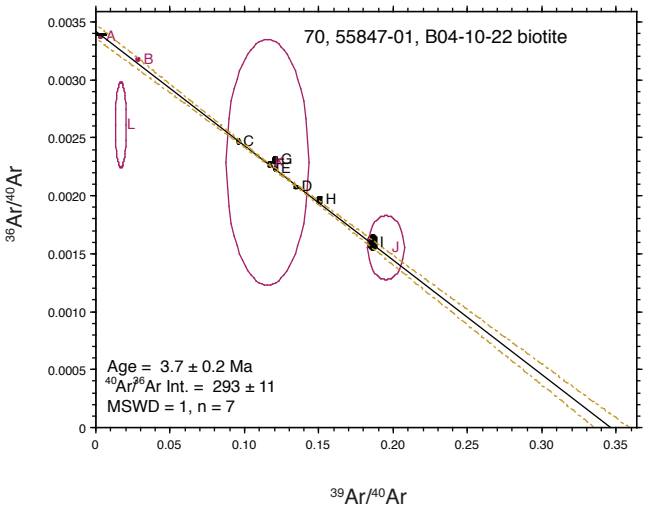

68, 55491-01, V-36 plagioclase, Quality 2
% 40Ar*
K/Ca
Apparent Age (Ma)
4.04 ± 0.18 Ma* (MSWD = 6.78)
Integrated Age = 5.19 ± 0.06 Ma
Cumulative % 39Ar released

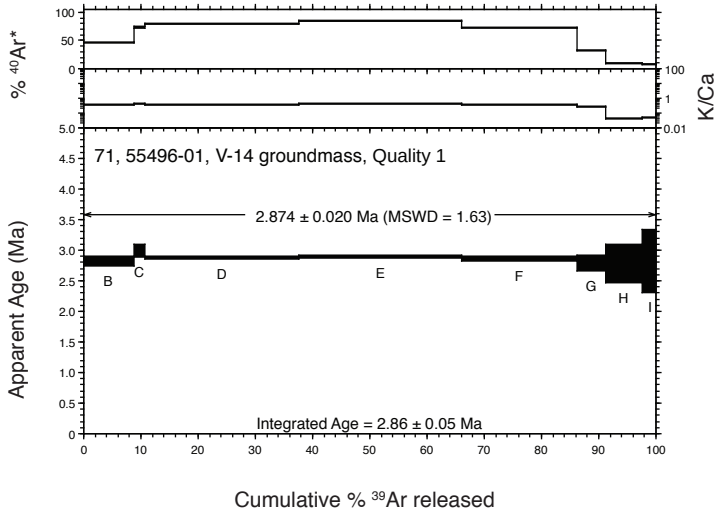

68, 55491-01, V-36 plagioclase
36Ar/40Ar
Age = 4.02 ± 0.17 Ma
40Ar/36Ar Int. = 310 ± 140
MSWD = 10, n = 4
39Ar/40Ar

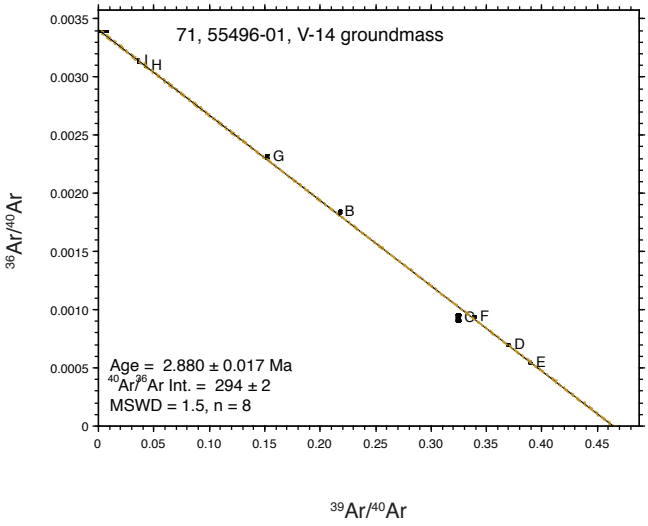

69, 55846-01, B04-10-25 biotite, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
3.64 ± 0.03 Ma* (MSWD = 0.89)
Integrated Age = 3.66 ± 0.08 Ma
Cumulative % 39Ar released

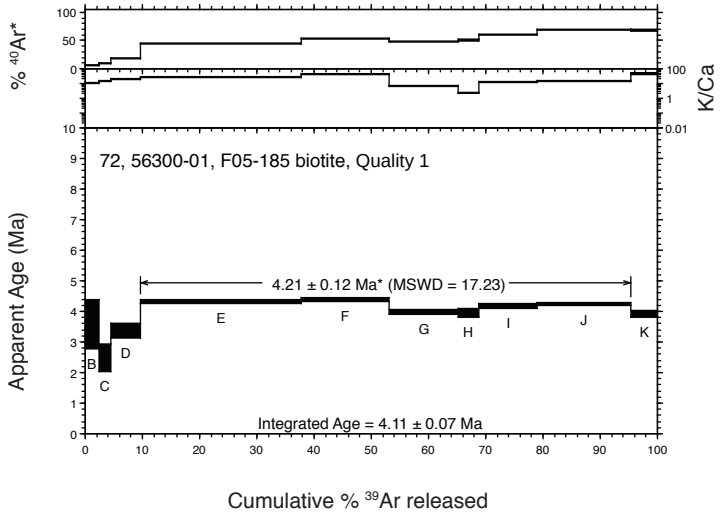

69, 55846-01, B04-10-25 biotite
36Ar/40Ar
Age = 3.67 ± 0.07 Ma
40Ar/36Ar Int. = 290 ± 9
MSWD = 0.72, n = 6
39Ar/40Ar

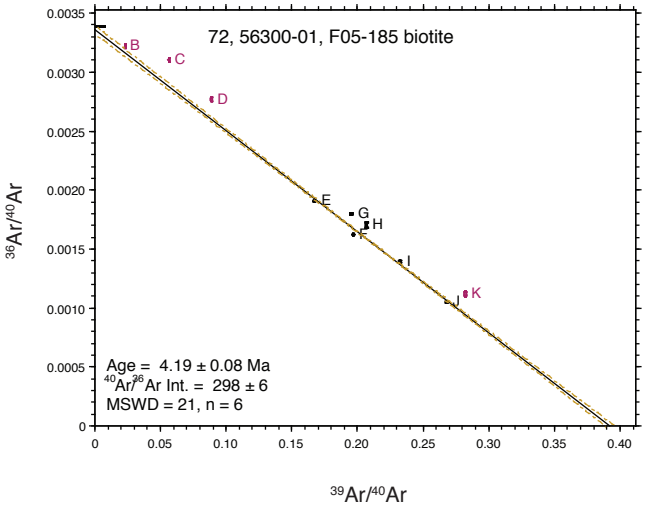

70, 55847-01, B04-10-22 biotite, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
3.61 ± 0.05 Ma* (MSWD = 0.93)
Integrated Age = 3.5 ± 0.3 Ma
Cumulative % 39Ar released

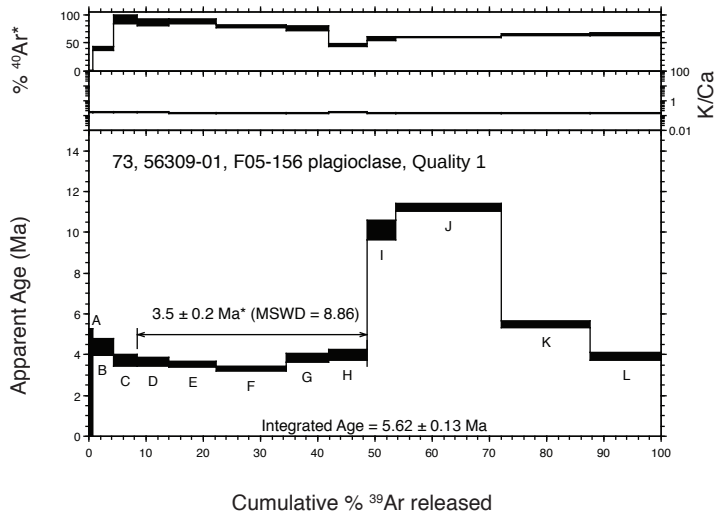

70, 55847-01, B04-10-22 biotite
36Ar/40Ar
Age = 3.7 ± 0.2 Ma
40Ar/36Ar Int. = 293 ± 11
MSWD = 1, n = 7
39Ar/40Ar

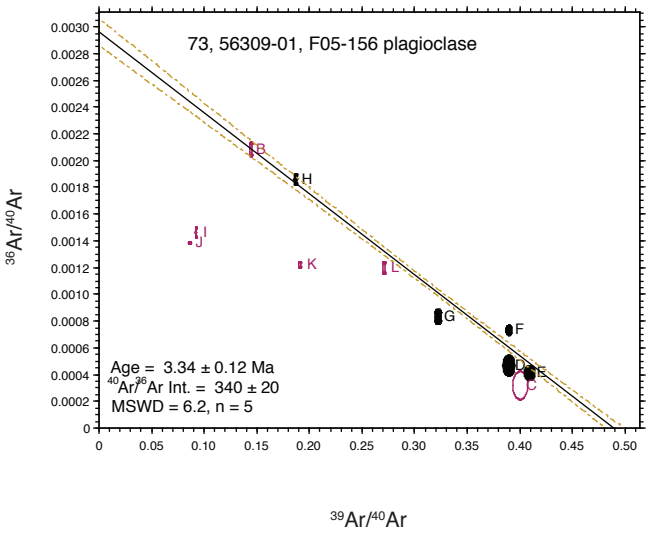

% 40Ar*
K/Ca
71, 55496-01, V-14 groundmass, Quality 1
Apparent Age (Ma)
2.874 ± 0.020 Ma (MSWD = 1.63)
Integrated Age = 2.86 ± 0.05 Ma
Cumulative % 39Ar released

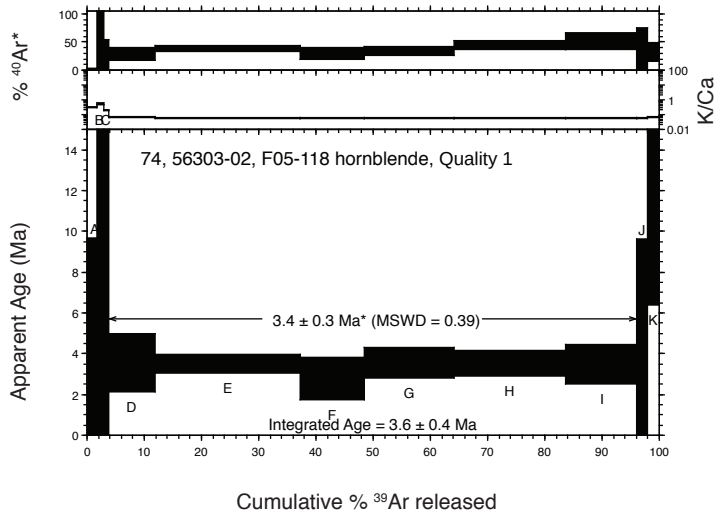

71, 55496-01, V-14 groundmass
36Ar/40Ar
Age = 2.880 ± 0.017 Ma
40Ar/36Ar Int. = 294 ± 2
MSWD = 1.5, n = 8
39Ar/40Ar

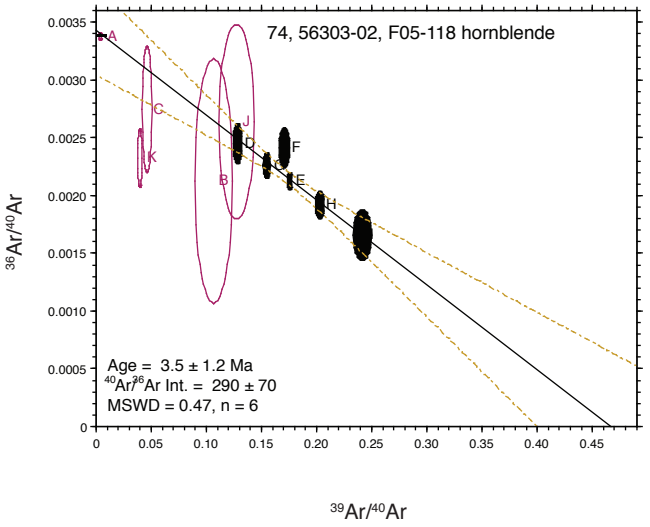

% 40Ar*
K/Ca
72, 56300-01, F05-185 biotite, Quality 1
Apparent Age (Ma)
4.21 ± 0.12 Ma* (MSWD = 17.23)
Integrated Age = 4.11 ± 0.07 Ma
Cumulative % 39Ar released

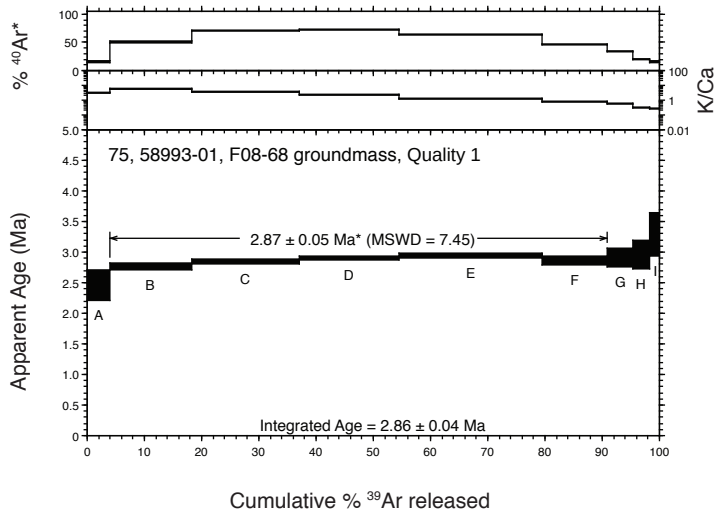

72, 56300-01, F05-185 biotite
36Ar/40Ar
Age = 4.19 ± 0.08 Ma
40Ar/36Ar Int. = 298 ± 6
MSWD = 21, n = 6
39Ar/40Ar

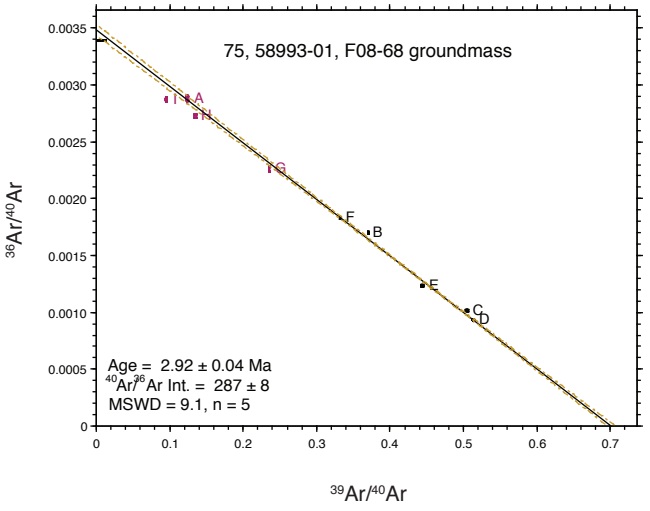

% 40Ar*
K/Ca
73, 56309-01, F05-156 plagioclase, Quality 1
Apparent Age (Ma)
3.5 ± 0.2 Ma* (MSWD = 8.86)
Integrated Age = 5.62 ± 0.13 Ma
Cumulative % 39Ar released

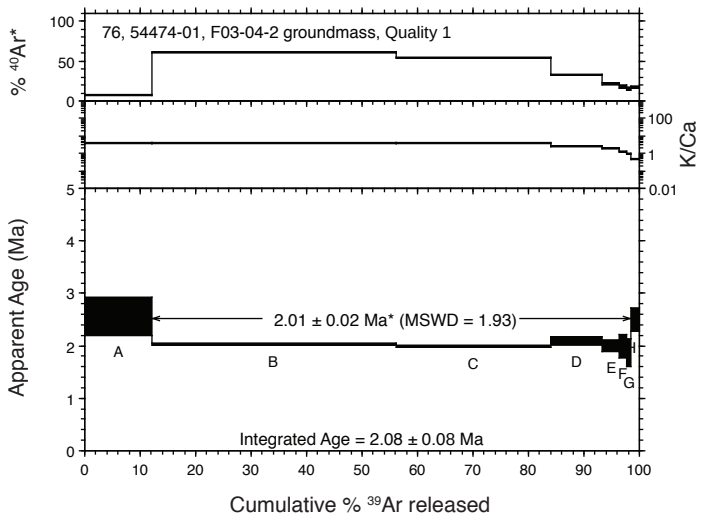

73, 56309-01, F05-156 plagioclase
36Ar/40Ar
Age = 3.34 ± 0.12 Ma
40Ar/36Ar Int. = 340 ± 20
MSWD = 6.2, n = 5
39Ar/40Ar

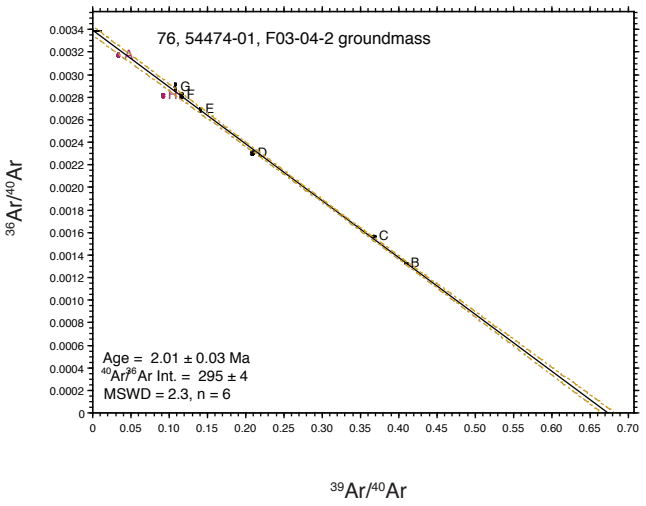

% 40Ar*
K/Ca
74, 56303-02, F05-118 hornblende, Quality 1
Apparent Age (Ma)
3.4 ± 0.3 Ma* (MSWD = 0.39)
Integrated Age = 3.6 ± 0.4 Ma
Cumulative % 39Ar released

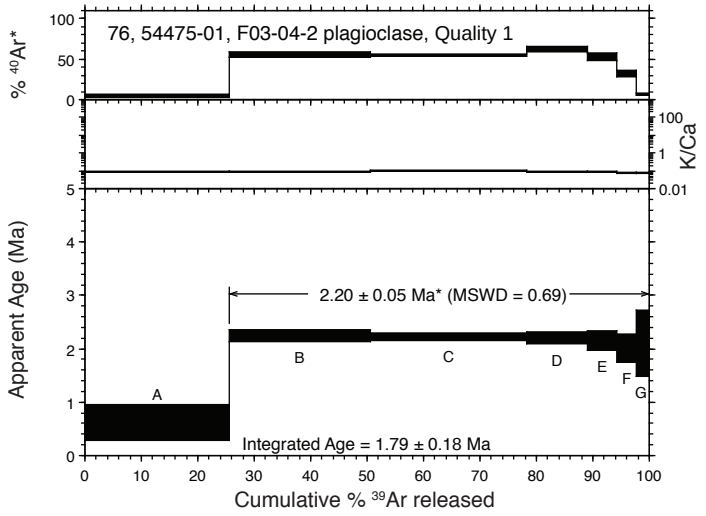

74, 56303-02, F05-118 hornblende
36Ar/40Ar
Age = 3.5 ± 1.2 Ma
40Ar/36Ar Int. = 290 ± 70
MSWD = 0.47, n = 6
39Ar/40Ar

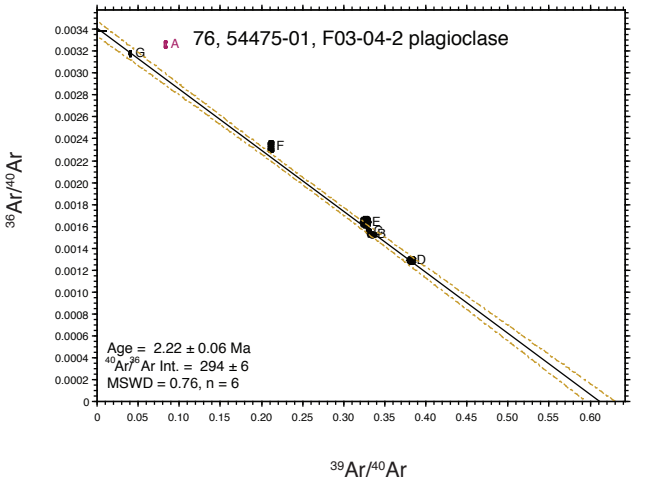

% 40Ar*
K/Ca
75, 58993-01, F08-68 groundmass, Quality 1
Apparent Age (Ma)
2.87 ± 0.05 Ma* (MSWD = 7.45)
Integrated Age = 2.86 ± 0.04 Ma
Cumulative % 39Ar released

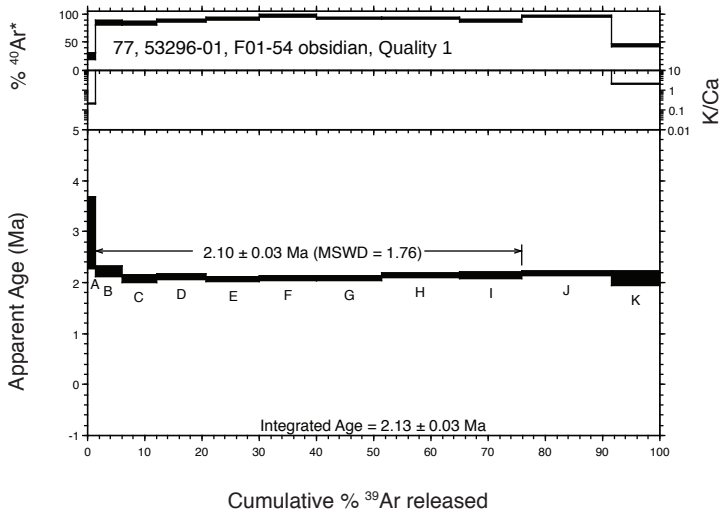

75, 58993-01, F08-68 groundmass
36Ar/40Ar
Age = 2.92 ± 0.04 Ma
40Ar/36Ar Int. = 287 ± 8
MSWD = 9.1, n = 5
39Ar/40Ar

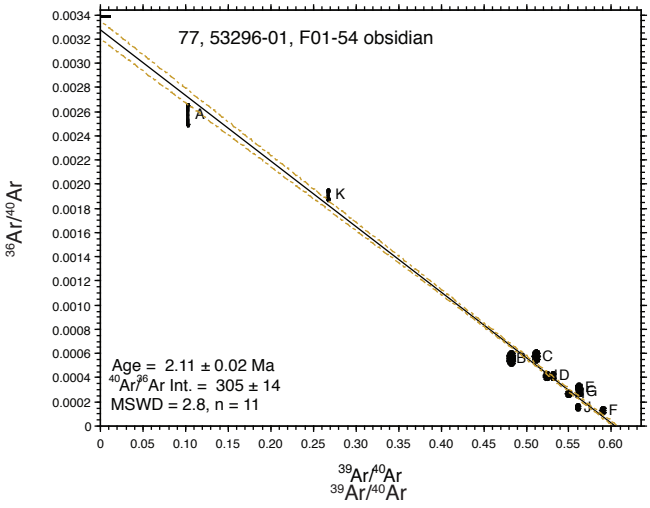

76, 54474-01, F03-04-2 groundmass, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
2.01 ± 0.02 Ma* (MSWD = 1.93)
Integrated Age = 2.08 ± 0.08 Ma
Cumulative % 39Ar released

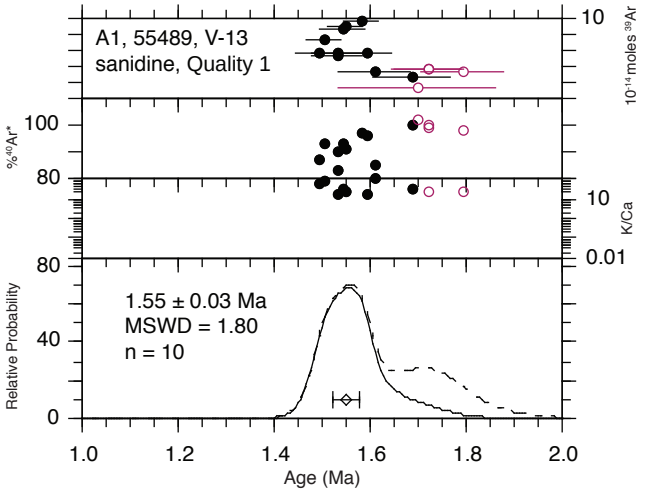

76, 54474-01, F03-04-2 groundmass
36Ar/40Ar
Age = 2.01 ± 0.03 Ma
40Ar/36Ar Int. = 295 ± 4
MSWD = 2.3, n = 6
39Ar/40Ar

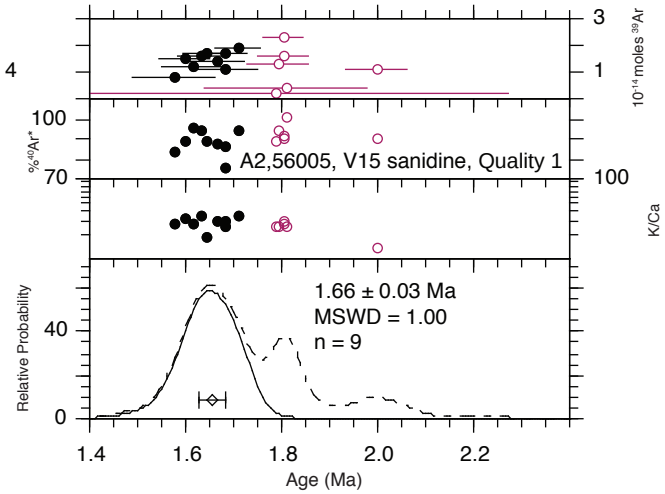

76, 54475-01, F03-04-2 plagioclase, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
2.20 ± 0.05 Ma* (MSWD = 0.69)
Integrated Age = 1.79 ± 0.18 Ma
Cumulative % 39Ar released

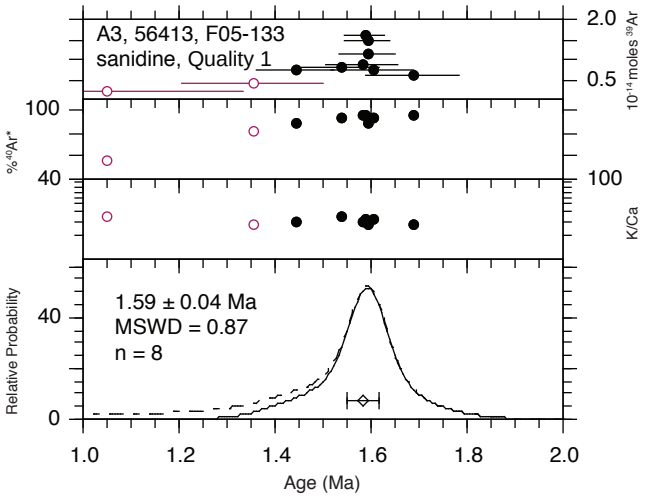

76, 54475-01, F03-04-2 plagioclase
36Ar/40Ar
Age = 2.22 ± 0.06 Ma
40Ar/36Ar Int. = 294 ± 6
MSWD = 0.76, n = 6
39Ar/40Ar

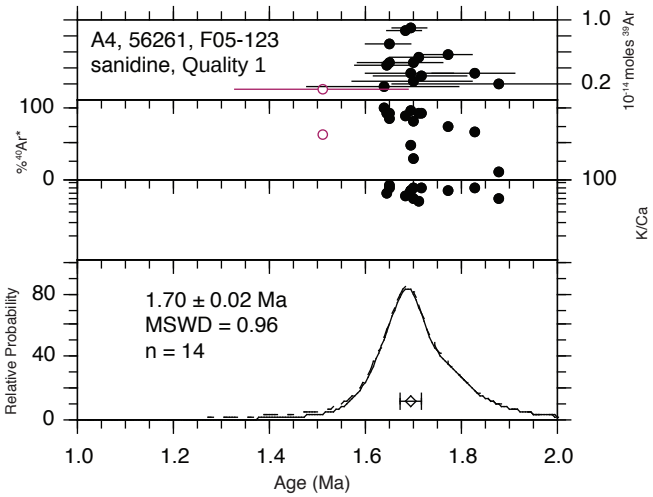

77, 53296-01, F01-54 obsidian, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
2.10 ± 0.03 Ma (MSWD = 1.76)
Integrated Age = 2.13 ± 0.03 Ma
Cumulative % 39Ar released

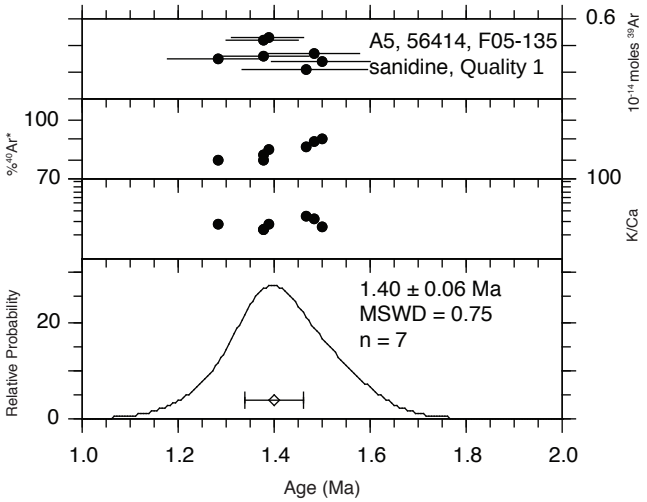

77, 53296-01, F01-54 obsidian
36Ar/40Ar
Age = 2.11 ± 0.02 Ma
40Ar/36Ar Int. = 305 ± 14
MSWD = 2.8, n = 11
39Ar/40Ar
39Ar/40Ar

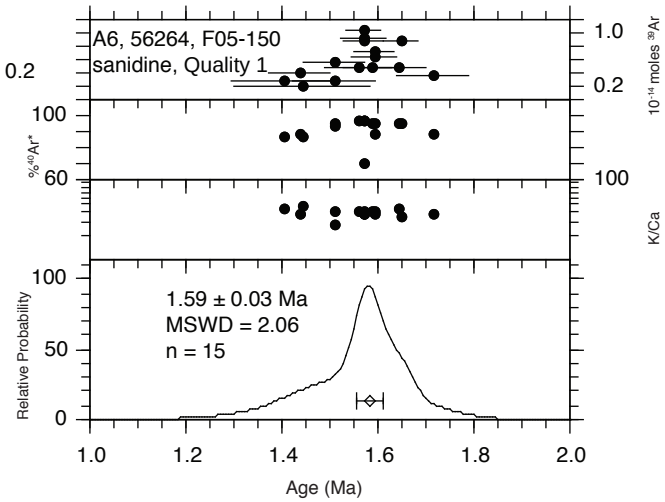

A1, 55489, V-13
sanidine, Quality 1
1.55 ± 0.03 Ma
MSWD = 1.80
n = 10
Relative Probability
Age (Ma)
%40Ar*
K/Ca
10-14 moles 39Ar

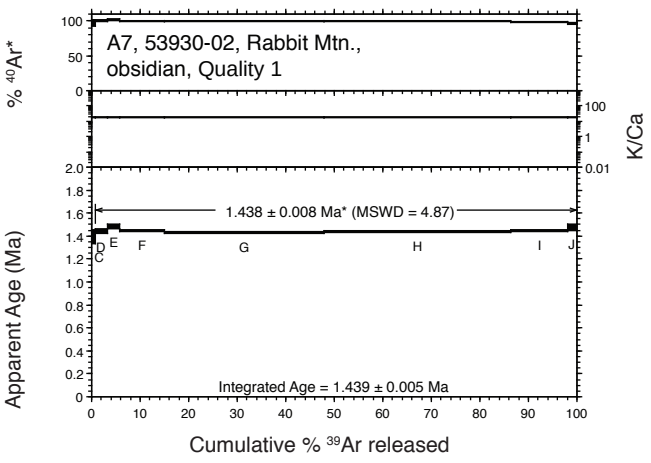

A2,56005, V15 sanidine, Quality 1
1.66 ± 0.03 Ma
MSWD = 1.00
n = 9
Relative Probability
Age (Ma)
%40Ar*
K/Ca
10-14 moles 39Ar

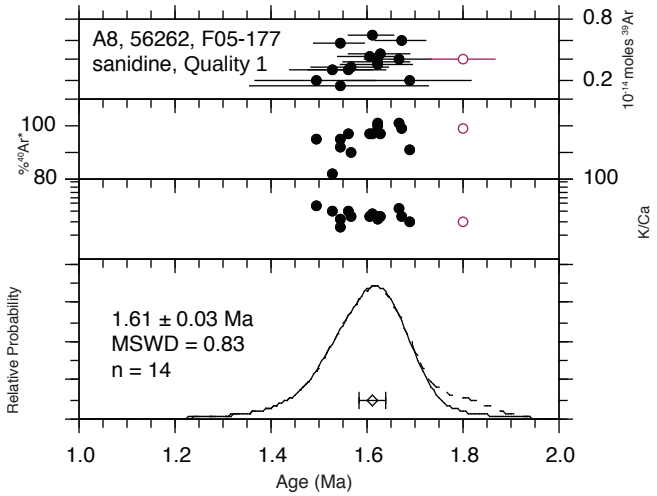

A3, 56413, F05-133
sanidine, Quality 1
1.59 ± 0.04 Ma
MSWD = 0.87
n = 8
Relative Probability
Age (Ma)
%40Ar*
K/Ca
10-14 moles 39Ar

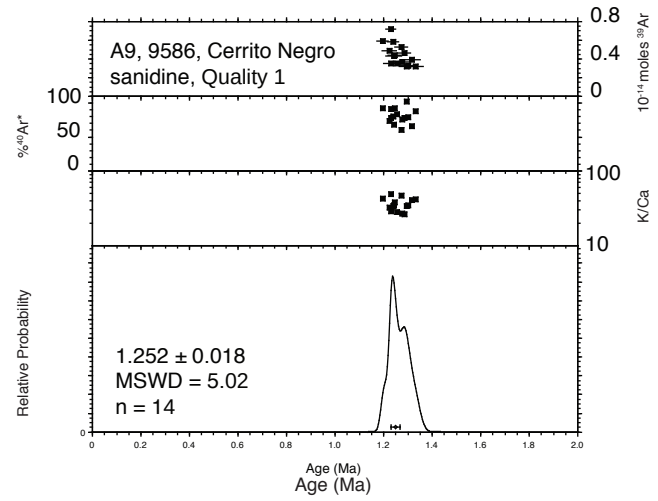

A4, 56261, F05-123
sanidine, Quality 1
1.70 ± 0.02 Ma
MSWD = 0.96
n = 14
Relative Probability
Age (Ma)
%40Ar*
K/Ca
10-14 moles 39Ar

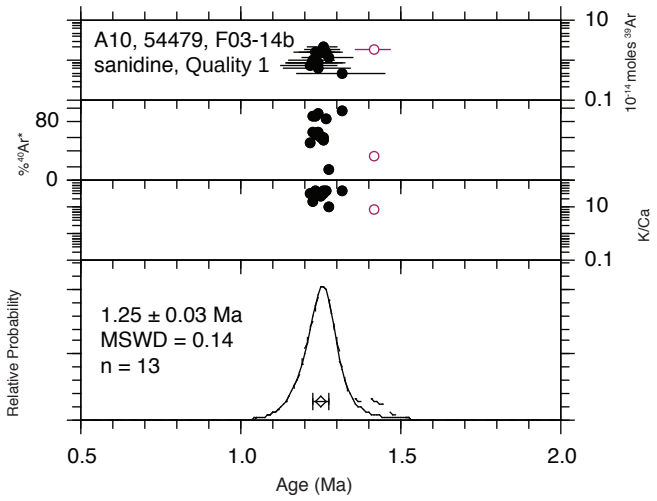

A5, 56414, F05-135
sanidine, Quality 1
1.40 ± 0.06 Ma
MSWD = 0.75
n = 7
Relative Probability
Age (Ma)
%40Ar*
K/Ca
10-14 moles 39Ar

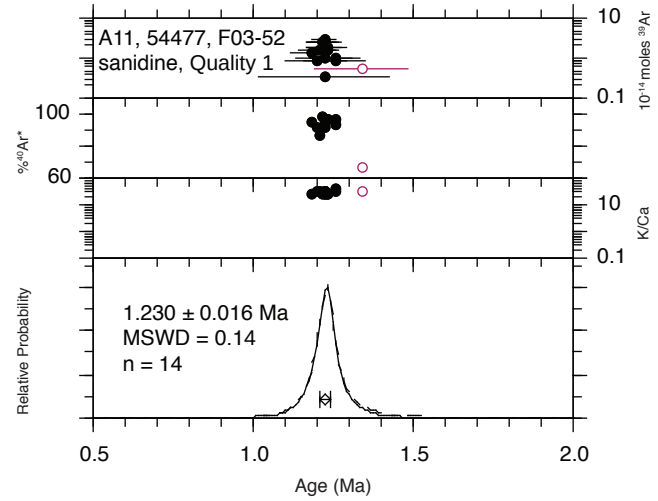

A6, 56264, F05-150
sanidine, Quality 1
1.59 ± 0.03 Ma
MSWD = 2.06
n = 15
Relative Probability
Age (Ma)
%40Ar*
K/Ca
10-14 moles 39Ar

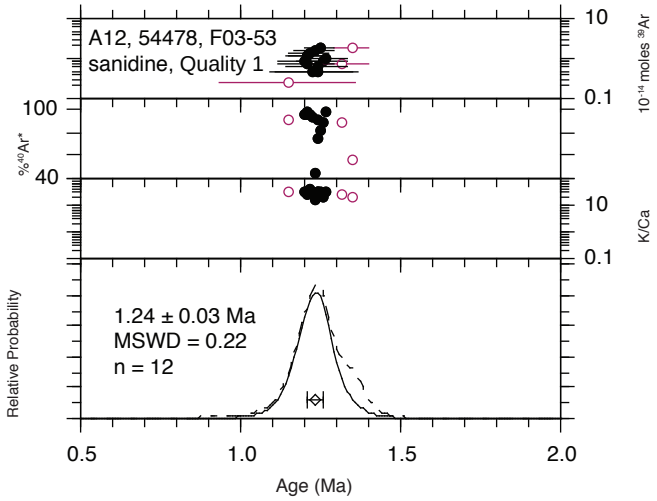

A7, 53930-02, Rabbit Mtn.,
obsidian, Quality 1
% 40Ar*
K/Ca
Apparent Age (Ma)
1.438 ± 0.008 Ma* (MSWD = 4.87)
Integrated Age = 1.439 ± 0.005 Ma
Cumulative % 39Ar released

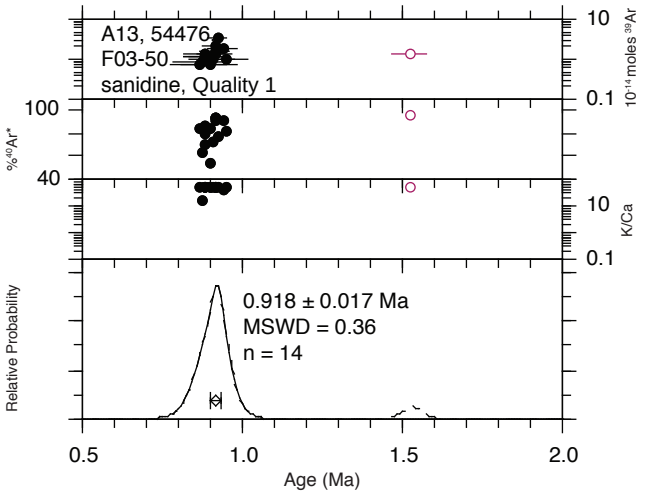

A8, 56262, F05-177
sanidine, Quality 1
10-14 moles 39Ar
%40Ar*
K/Ca
Relative Probability
1.61 ± 0.03 Ma
MSWD = 0.83
n = 14
Age (Ma)

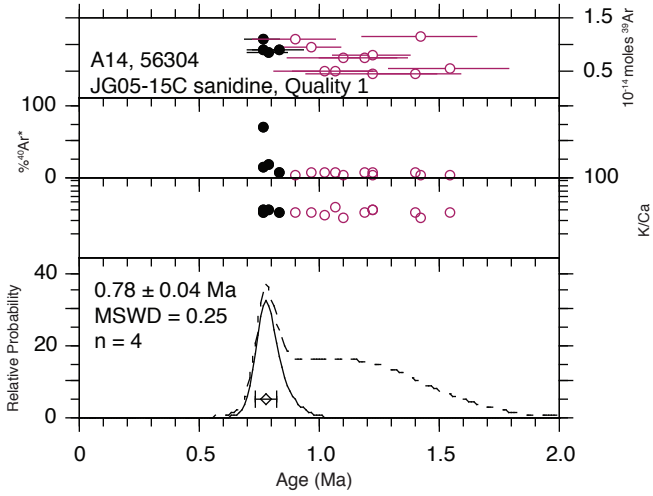

A9, 9586, Cerrito Negro
sanidine, Quality 1
10-14 moles 39Ar
%40Ar*
K/Ca
Relative Probability
1.252 ± 0.018
MSWD = 5.02
n = 14
Age (Ma)
Age (Ma)

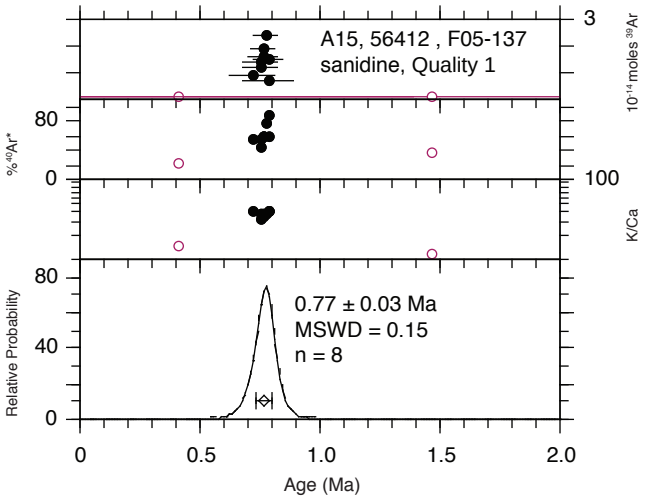

A10, 54479, F03-14b
sanidine, Quality 1
10-14 moles 39Ar
%40Ar*
K/Ca
Relative Probability
1.25 ± 0.03 Ma
MSWD = 0.14
n = 13
Age (Ma)


A11, 54477, F03-52
sanidine, Quality 1
10-14 moles 39Ar
%40Ar*
K/Ca
Relative Probability
1.230 ± 0.016 Ma
MSWD = 0.14
n = 14
Age (Ma)


A12, 54478, F03-53
sanidine, Quality 1
10-14 moles 39Ar
%40Ar*
K/Ca
Relative Probability
1.24 ± 0.03 Ma
MSWD = 0.22
n = 12
Age (Ma)


A13, 54476
F03-50
sanidine, Quality 1
%40Ar*
10-14 moles 39Ar
K/Ca
Relative Probability
0.918 ± 0.017 Ma
MSWD = 0.36
n = 14
Age (Ma)


A14, 56304
JG05-15C sanidine, Quality 1
%40Ar*
10-14 moles 39Ar
K/Ca
Relative Probability
0.78 ± 0.04 Ma
MSWD = 0.25
n = 4
Age (Ma)


A15, 56412 , F05-137
sanidine, Quality 1
%40Ar*
10-14 moles 39Ar
K/Ca
Relative Probability
0.77 ± 0.03 Ma
MSWD = 0.15
n = 8
Age (Ma)

1