Data Repository DR1: Analytical Procedures

Sample Preparation

Table 1 lists the samples names, unit, and UTM coordinates of the dated samples. Seven previously prepared minerals separates were provided by Peter Lipman (XXL-XX) and one by Ren Thompson (TPS04) of the USGS. From this sample suite, 55 mineral separates were analyzed.

Samples were prepared using standard mineral separation techniques. Rock samples were crushed in a standard disk mill, sieved to between 200 to 850 μm, and washed in deionized water to remove any dust created by the crushing procedure. Volcanic samples received an additional cleaning in a 15% HF solution for 5-15 minutes to remove any glass and/or quartz adhered to the grains. All samples were then prepared by Frantz magnetic separation, density separated with lithium metatungstate heavy liquid, rinsed and dried. Samples were then handpicked to obtain monomineralic separates. Samples to be dated were analyzed using Cameca SX-100 electron microprobe at the New Mexico Bureau of Geology and Mineral Resources to accomplish two goals. First, BSE images obtained from the electron microprobe insure the highest quality of mineral separation. Second, geochemical characterization of samples prior to $^{40}Ar/^{39}Ar$ analysis allows for recognition of any geochemical variation within the samples, which may be the result of alteration or geochemical contamination that would degrade the quality of geochronology results.

Irradiations and Correction Factors

Between 20 and 35 mg of the samples selected for dating were placed into 20-hole machined aluminum disks. To monitor neutron fluxes, the interlabratory standard FC-2 = 28.201 Ma (Kuiper et al., 2008) was placed in every other hole. In addition to unknowns and

monitors, CaF_2 and K-glass were irradiated to determine calcium and potassium correction factors. Samples were irradiated at either the USGS Triga reactor in the NM-202H position for 6 hrs or the Nuclear Science reactor at the Texas A & M University in the NM-192A and B position for 7 hrs, the NM-196K, L, and M position for 8.85 hrs, the NM-203H position for 7.03 hrs, the NM-208 K, L, and M position for 7 hrs; the NM-227A position for 7 hrs, or the NM-240G position for 7 hrs. Following irradiation, J-values were determined by fusing 5 to 6 single grains of FC-2 from each hole for each tray. J-values were then calculated by assigning mean ages for each hole, fitting a sine curve to the values, and then extrapolating the J-values to the unknowns. Potassium and calcium correction factors were determined by fusing 4 to 5 grains of the CaF_2 and K-glass and the weighted mean averages are: NM-192: $(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028±0.00001; $(^{39}Ar/^{37}Ar)_{Ca}$ = 0.0007±0.00002; $(^{38}Ar/^{39}Ar)_{K}$ = 0.126±4.00e-4; $(^{40}Ar/^{39}Ar)_{K}$ = 0.00±4.00e-4; NM-196: $(^{36}Ar/^{37}Ar)_{Ca}$ = 0.000277±2.00e-6; $(^{39}Ar/^{37}Ar)_{Ca}$ = 0.000676±4.00e-6; $(^{38}Ar/^{39}Ar)_{K}$ = 0.013±.0005; $(^{40}Ar/^{39}Ar)_{K}$ = 0.00±4.00e-4; NM-202: $(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028±0.00002; $(^{39}Ar/^{37}Ar)_{Ca}$ = 0.0007±0.00005; $(^{38}Ar/^{39}Ar)_{K}$ = 0.013±0.001; $(^{40}Ar/^{39}Ar)_{K}$ = 0.01±0.002; NM-203: $(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028±0.00001; $(^{39}Ar/^{37}Ar)_{Ca}$ = 0.00068±0.00002; $(^{38}Ar/^{39}Ar)_{K}$ = 0.0.013±0.001; $(^{40}Ar/^{39}Ar)_{K}$ = 0.00±4.00e-4; NM-208: $(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028±0.00001; $(^{39}Ar/^{37}Ar)_{Ca}$ = 0.00068±0.00002; $(^{38}Ar/^{39}Ar)_{K}$ = 0.013±0.0005; $(^{40}Ar/^{39}Ar)_{K}$ = 0.00±4.00e-4; NM-227: $(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028±0.00002; $(^{39}Ar/^{37}Ar)_{Ca}$ = 0.0007±0.00005; $(^{38}Ar/^{39}Ar)_{K}$ = 0.013±0; $(^{40}Ar/^{39}Ar)_{K}$ = 0.01±0.002; NM-240: $(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028±0.00002; $(^{39}Ar/^{37}Ar)_{Ca}$ = 0.0007±0.00005; $(^{38}Ar/^{39}Ar)_{K}$ = 0.013±0; $(^{40}Ar/^{39}Ar)_{K}$ = 0.01±0.002

Extraction line and mass spectrometer

All $^{40}Ar/^{39}Ar$ dating was performed at New Mexico Institute of Mining and Technology in the New Mexico Geochronology Research Laboratory. Samples were either incrementally heated using a double-vacuum Molybdenum resistance furnace (hornblende, biotite, K-Feldspar) or fused using a Synrad 50W CO_2 laser (sanidine). Temperature control on the furnace was accomplished by melting Cu-foil for calibration. Following furnace-step heating, gas was expanded into a two-stage extraction line. The first stage contains a SAES GP-50 getter pump, operated at 450°C, where the gas was cleaned before being expanded into the second stage and isolated from the first stage. The second stage contains two SAES GP-50 getter pumps, one operated at room temperature and the other at 450°C, as well as a tungsten filament operated at 2000°C. Clean gas is then expanded into the mass spectrometer and isolated from the second stage. Extracted gas from the laser chamber is expanded into the second stage, but first cleaned using a cold-finger operated at -140°C. Once in the second stage, the gas is treated similarly to the furnace gas as described above.

Isotopic ratios were measured on a MAP-215 50 mass spectrometer with an extended geometry and an effective radius of 30 cm. The mass spectrometer was equipped with a Nier type ion source and used both a Johnston electron multiplier and Faraday collectors, with the electron multiplier operating at 2.2 kV and a gain of approximately 10,000 over the Faraday. Resolution for mass 40 was approximately 600 during the analysis. Air pipette analysis were conducted to determine the mass discrimination, which were 1.00297±0.00095 to 1.00323±0.00095 for NM-192, 0.99582±0.00086 to 0.99720±0.00084 for NM-196, 1.00141±0.00070 to 1.00216±0.00065 for NM-202, 1.00141±0.00070 for NM-203, 1.00449±0.00058 for NM-208, 1.0005±0.001 for NM-227, and 1.0003±0.001 for NM-240.

Sensitivities (mol/pA) of the furnace and laser, respectively, during the course of this project were: 2.5100 e^{-16} to 2.6500 e^{-16} and 1.4400 e^{-16} to1.5200 e-16 for NM-192, 1.2299 e^{-16} to 1.2700 e^{-16} and 7.0600 e^{-17} to 7.9200 e^{-17} for NM-196, 8.7329 e^{-17} to 8.9676 e^{-17} and 5.0100 e^{-17} to 5.1500 e^{-17} for NM-202, 8.9676 e^{-17} and 5.15 e^{-17} for NM-203 8.7771 e^{-17} and 6.4200 e^{-17} for NM-208, 9.39 e^{-17} and 4.37 e^{-17} for NM-227, and 9.21 e^{-17} and 4.28 e^{-17} for NM-240.

Single-Crystal Laser-Fusion

Single crystals of the monitors and unknown sanidine were loaded into a 221-hole laser tray and were fused by the CO_2 laser. The laser power was between 1.8-3.3 watts for 15 to 30 seconds. After examination of peak regression to determine if any cycles should be removed, blanks and background calculated by taking the average ± standard deviation. Blanks and background for the CO_2 laser averaged 330, 8.10, 1.41, 4.29, 5.52, 29 x 10^{-18} at masses 40, 39, 38, 37, and 36 respectively for the duration of this study.

Furnace Step-Heating

Unknowns to be heated in the furnace were weighed and wrapped in high purity copper foil packets. Sample weights varied as follows: 5.4 to 9.8 mg for biotite, 12.75 to 15.15 mg for hornblende, and 9.03 to 19.2 mg for K-feldspar. Heating schedules varied for each phase. Biotite samples were heated using 11 steps, beginning at 650°C, increasing in 50 to 100°C step intervals, and ending with total fusion. Hornblende samples were also step heated using 11 increments, but began at higher temperature and had 20-30°C intervals for the bulk of the heating schedule. K-feldspars were heated using isothermal duplicate steps designed to decrepitate fluid inclusions known to host excess argon. In order to extract maximum $^{39}Ar_K$ prior to melting, heating schedules began at lower temperatures, involved isothermal duplicate steps throughout the entire analysis, contain as many as four 1100°C steps, and the time at temperature varied

from as little as ten minutes to as much as 2 hours. A similar process of peak regression handling used for laser samples was applied to furnace samples.

Blanks were analyzed during sample step-heating schedules and between samples. Blanks for biotite and hornblende were measured every three to four heating steps and in the case in which numerous samples were ran continuously, blanks corrects were calculated using average ± standard deviation. K-feldspar contained no blanks during the analysis, in an attempt to keep the furnace at temperature, and thus bracketing or preceding blanks were used. Total blanks + backgrounds for the furnace averaged 1290, 20.7, 3.63, 9.68, 7.29 x 10^{-18} at masses 40, 39, 38, 37, and 36 respectively during the course of this study.

Age assignments

Ages were calculated using the FC-2 flux monitor with an assigned age of 28.201 Ma (Kuiper et al., 2008) and a total ^{40}K decay constant of $5.463x10^{-10}$ derived by Min et al., (2000). Samples heated in the furnace are plotted on age spectra as % ^{39}Ar released vs. apparent age. Additionally, the age spectra are plotted along with auxiliary K/Ca and radiogenic yield plots. A plateau age was assigned to samples that yielded three or more contiguous step that comprise 50% of more the spectrum and overlap at two sigma. The plateau age is calculated by weighting each of the steps by the inverse of the variance. For analyses not yielding a plateau, the total gas was used to approximate the age. The total gas age was calculated by summing all gas fractions from the steps. Because several of the K-feldspar age spectra yield complex, monotonically increasing ages without a plateau, no weighted mean age was assigned to these spectra.

Laser heated samples are plotted on age probability diagram as apparent age vs. the summation of the normal probability distribution of the individual analysis (Deino and Potts, 1992). Radiogenic yields and K/Ca auxiliary plots are included with the age probability

diagrams. After removal of any xenocrystic or problematic ages, the age was calculated by using the inverse variance of the age for each analysis. Errors for both the furnace and laser analysis were calculated using the methods of Taylor (1982). Isochron ages, MSWD, and errors where the MSWD values are ≤ 1 are calculated using method of York (1969). When the MSWD is > 1, the error is multiplied by the square root of the MSWD.

TABLE 1. LOCATION OF DATED SAMPLES

Sample	Unit	Section (NAD 27)	Easting	Northing
MZQ-1	Peralkaline Virgin Canyon	13S	455880	4071198
MZQ-2	Metaluminous Virgin Canyon	13S	455754	4071203
MZQ-4	Intracaldera Amalia Tuff	13S	462734	4065869
MZQ-5	Granite Red River	13S	463532	4062789
MZQ-6	Granite Sulphur Gulch	13S	455737	4060977
MZQ-7	Unwelded Amalia Outflow	13S	413742	4049489
MZQ-8	Granite Bear Canyon	13S	450159	4062128
MZQ-9	Quartz Monzonite Rio Hondo	13S	455450	4049375
MZQ-10	Rhyolite dike Rio Hondo	13S	455622	4048724
MZQ-12	Granite Cabresto Lake	13S	454802	4066600
MZQ-13	Granite Cabresto Lake	13S	454797	4065491
MZQ-15	Granite Canada Pinabete	13S	450662	4068102
MZQ-16	Rito del Medio	13S	452113	4072057
MZQ-17	Tetilla Peak	13S	467502	4076711
MZQ-19	Quartz Monzonite Rio Hondo	13S	453613	4055209
MZQ-21	Granite Lucero	13S	454281	4042533
MZQ-22	Rhyolite at Commanche point	13S	472070	4076376
MZQ-23	Porphyritic andesite	13S	472685	4074551
MZQ-24	Precaldera Dacite	13S	464023	4079614
MZQ-25	Rheomorphic flow of Amalia Tuff	13S	468959	4076642
MZQ-26	Rhyolite of Cordova Creek	13S	460457	4078175
TPS04	Unwelded Amalia Tuff Outflow	13S	413707	4049463
MZQ-32	Lucero Peak pluton	13S	454405	4042827
MZQ-33	Granite of Rio Hondo	13S	453636	4049302
MZQ-34	Bear Canyon	13S	450583	4061541
MZQ-35	Brushy Mtn Rhyolite	13S	432601	4062776
MZQ-36	Brushy Mtn Andesite	13S	432550	4062816
MZQ-37	Brushy Mtn Dacite	13S	432884	4062785
MZQ-38	Metaluminous Virgin Canyon	13S	455033	4070953
MZQ-39	Rito Del Medio	13S	452477	4072046
MZQ-56	Precaldera comendite lava	13S	466409	4072894
78L-183	Amalia Tuff lava flow	13S	463952	4077218
82L-38	Amalia tuff, outflow sheet, dw, petaca	13S	410405	4037635
82L-37	Amalia tuff, outflow vitrophyre	13S	464613	4068932
82L-31	Amalia tuff, outflow sheet, lemos creek	13S	463799	4077053
82L-42H	Amaila tuff, outflow sheet, first creek	13S	480246	4087999
83L-8	Precaldera Rhyolite flow of cordova creek	13S	460181	4079246
79L-64	Rhyolite commanche point	13S	471941	4076615
VC09-2	Peralkaline Northern Ring Dike	13S	458271	4075000

Data Repository DR2: $^{40}Ar/^{39}Ar$ data tables, age spectra, and ideograms for the Questa caldera samples

Data Repository DR2 contains the data tables, age spectra, and ideograms for all the analyses of this study. Table 1 contains the single-crystal laser-fusion analyses, table 2 contains the biotite, hornblende, and groundmass concentrate analyses, and table 3 contains the K-feldspar analyses. Figure 1 contains the sanidine ideograms, figure 2 contains the biotite, hornblende, and groundmass concentrate age spectra, and figure 3 contains the Kspar analyses.

Table 1. Sanidine laser-fusion $^{40}Ar/^{39}Ar$ analytical data.

	ID	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$ (x 10^{-3})	$^{39}Ar_K$ (x 10^{-15} mol)	K/Ca	$^{40}Ar^*$ (%)	Age (Ma)	±1σ (Ma)
	79L-64, Sanidine, J=0.0007325±0.05%, D=1.003±0.001, NM-192A, Lab#=55916								
X	22	18.97	0.0137	0.5696	3.799	37.2	99.1	25.05	0.08
	16	19.01	0.0138	0.3301	8.642	37.0	99.5	25.18	0.05
	18	18.97	0.0134	0.1428	7.582	38.1	99.8	25.21	0.06
	25	19.05	0.0152	0.3965	8.107	33.7	99.4	25.21	0.06
	23	19.02	0.0143	0.2063	10.165	35.6	99.7	25.25	0.04
	20	19.08	0.0168	0.3154	5.615	30.4	99.5	25.28	0.06
	19	19.09	0.0141	0.3327	10.212	36.1	99.5	25.29	0.05
	21	19.04	0.0144	0.1550	7.151	35.5	99.8	25.29	0.06
	24	19.08	0.0161	0.2715	6.060	31.6	99.6	25.30	0.06
	17	19.12	0.0133	0.3743	6.379	38.3	99.4	25.31	0.06
	Mean age ± 2σ	n=9		MSWD=0.64	35.2	±5.5		25.26	0.04
	83L-8, Sanidine, J=0.0007313±0.04%, D=1.003±0.001, NM-192A, Lab#=55915								
	18	19.24	0.0047	0.1408	7.790	108.9	99.8	25.53	0.06
	21	19.23	0.0052	0.1047	10.218	97.6	99.8	25.53	0.05
	16	19.24	0.0051	0.1044	7.530	100.5	99.8	25.54	0.06
	23	19.26	0.0046	0.1290	8.402	111.5	99.8	25.55	0.05
	17	19.38	0.0050	0.4987	5.825	103.1	99.2	25.57	0.07
	22	19.28	0.0051	0.1136	7.502	99.2	99.8	25.59	0.06
	20	19.28	0.0051	0.0779	8.743	100.2	99.9	25.60	0.05
	19	19.27	0.0050	0.0219	12.718	103.0	100.0	25.61	0.05
	Mean age ± 2σ	n=8		MSWD=0.39	103.0	±9.7		25.57	0.04
	82L-42H, Sanidine, J=0.0007304±0.04%, D=1.003±0.001, NM-192A, Lab#=55914								
	23	19.12	0.0099	0.1102	7.351	51.6	99.8	25.34	0.06
	24	19.17	0.0106	0.1160	11.610	48.0	99.8	25.41	0.05
	18	19.18	0.0104	0.0927	11.251	48.8	99.9	25.43	0.05
	17	19.19	0.0099	0.1366	9.240	51.6	99.8	25.43	0.05
	20	19.23	0.0108	0.2095	9.449	47.3	99.7	25.45	0.05
	16	19.22	0.0107	0.0986	9.416	47.7	99.9	25.48	0.06
	21	19.27	0.0108	0.2666	10.898	47.3	99.6	25.49	0.05
	22	19.34	0.0101	0.2749	7.772	50.4	99.6	25.57	0.07
	19	19.30	0.0098	0.0026	8.260	51.9	100.0	25.63	0.06
	Mean age ± 2σ	n=9		MSWD=1.95	49.4	±3.9		25.46	0.05
	82L-31, Sanidine, J=0.00073±0.04%, D=1.003±0.001, NM-192A, Lab#=55913								
	17	19.77	0.0123	2.817	3.512	41.6	95.8	25.14	0.09
	20	19.13	0.0119	0.5329	3.802	42.8	99.2	25.19	0.09
	16	19.14	0.0133	0.1813	5.532	38.5	99.7	25.33	0.07
	21	19.36	0.0140	0.8500	3.541	36.4	98.7	25.37	0.09
	22	19.43	0.0128	1.033	5.737	39.8	98.4	25.39	0.07
	18	19.23	0.0122	0.3131	5.435	41.8	99.5	25.40	0.06
	19	19.30	0.0135	0.4503	4.317	37.9	99.3	25.44	0.08
	Mean age ± 2σ	n=7		MSWD=1.82	39.8	±4.7		25.34	0.08
	82L-38, Sanidine, J=0.0007318±0.05%, D=1.003±0.001, NM-192A, Lab#=55911								
	18	19.31	0.0121	1.195	4.101	42.0	98.2	25.22	0.08
	22	19.48	0.0129	1.507	6.135	39.4	97.7	25.32	0.08
	24	19.48	0.0124	1.337	5.146	41.3	98.0	25.39	0.07

	17	19.36	0.0125	0.9208	5.916	40.9	98.6	25.40	0.07
	20	19.51	0.0129	1.350	4.045	39.6	98.0	25.43	0.08
	23	19.28	0.0122	0.5015	6.476	41.7	99.2	25.45	0.06
	25	19.40	0.0130	0.9054	7.060	39.1	98.6	25.45	0.07
	21	19.29	0.0134	0.5082	5.657	38.2	99.2	25.46	0.06
	19	19.33	0.0121	0.5751	5.309	42.3	99.1	25.49	0.07
	16	19.37	0.0121	0.6445	7.418	42.0	99.0	25.51	0.06
	Mean age ± 2σ	n=10	MSWD=1.33		40.6	±2.9		25.43	0.06
	82L-37, Sanidine, J=0.0007306±0.04%, D=1.003±0.001, NM-192A, Lab#=55912								
	17	20.32	0.0109	4.056	4.725	46.8	94.1	25.40	0.08
	21	20.68	0.0133	5.133	4.592	38.5	92.7	25.45	0.10
	25	20.63	0.0118	4.942	5.113	43.2	92.9	25.45	0.09
	20	20.01	0.0118	2.866	3.388	43.3	95.8	25.46	0.10
x	22	22.84	0.0114	12.38	2.879	44.8	84.0	25.48	0.12
x	19	20.66	0.0132	4.644	6.462	38.8	93.4	25.62	0.07
x	24	20.37	0.0138	3.568	2.759	36.9	94.8	25.65	0.12
x	23	20.17	0.0124	2.881	3.551	41.1	95.8	25.66	0.09
x	16	21.11	0.0111	6.025	6.037	46.0	91.6	25.67	0.08
x	18	20.80	0.0136	4.415	4.543	37.4	93.7	25.89	0.08
	Mean age ± 2σ	n=4	MSWD=0.12		42.9	±6.8		25.43	0.09
	78L-183, Sanidine, J=0.000733±0.04%, D=1.003±0.001, NM-192A, Lab#=55910								
	24	18.94	0.0031	0.4213	2.724	163.8	99.3	25.07	0.11
	18	18.93	0.0031	0.1172	3.424	165.1	99.8	25.18	0.09
	16	19.08	0.0028	0.6076	3.602	184.1	99.1	25.19	0.09
	21	19.05	0.0050	0.3055	3.257	102.1	99.5	25.27	0.09
	25	19.17	0.0043	0.6228	3.442	118.3	99.0	25.30	0.09
	22	19.12	0.0054	0.3946	2.911	94.6	99.4	25.33	0.10
	19	19.17	0.0033	0.4083	4.337	152.3	99.4	25.38	0.08
	20	19.10	0.0037	0.1838	3.014	136.7	99.7	25.39	0.10
	17	19.18	0.0052	0.2873	3.418	97.2	99.6	25.44	0.09
x	23	19.26	0.0033	-0.1042	4.215	155.7	100.2	25.71	0.08
	Mean age ± 2σ	n=9	MSWD=1.53		134.9	±66.6		25.29	0.08
	TPS04, Sanidine, J=0.0008937±0.04%, D=1.002±0.001, NM-196K, Lab#=56274								
	09	15.66	0.0035	0.6321	10.089	146.3	98.8	25.13	0.07
	04	15.85	0.0033	1.010	4.169	154.7	98.1	25.26	0.13
	14	15.62	0.0044	0.2464	7.304	116.8	99.5	25.27	0.08
	15	15.64	0.0055	0.2129	16.564	92.7	99.6	25.30	0.05
	02	15.95	0.0053	1.235	3.246	95.5	97.7	25.32	0.17
	07	15.68	0.0024	0.2871	6.487	210.6	99.5	25.34	0.09
	08	15.66	0.0029	0.2169	5.777	175.4	99.6	25.34	0.10
	03	15.87	0.0037	0.9111	5.835	137.1	98.3	25.35	0.10
	10	15.66	0.0028	0.1261	9.041	181.3	99.8	25.37	0.07
	05	15.69	0.0022	0.2018	6.486	230.7	99.6	25.40	0.09
	11	15.78	0.0023	0.4854	3.676	219.7	99.1	25.41	0.14
	01	15.82	0.0033	0.5885	3.852	152.6	98.9	25.41	0.14
	13	15.73	0.0025	0.1550	9.388	201.7	99.7	25.48	0.06
	12	15.85	0.0024	0.4987	3.495	215.7	99.1	25.50	0.15
	06	15.86	0.0038	0.4147	5.682	134.2	99.2	25.57	0.10
	Mean age ± 2σ	n=15	MSWD=1.74		164.3	±90.1		25.34	0.06
	MZQ-7, Sanidine, J=0.0008934±0.05%, D=1.002±0.001, NM-196K, Lab#=56276								
	06	15.60	0.0031	0.3012	17.124	165.4	99.4	25.19	0.06
	03	15.70	0.0017	0.4638	13.698	293.1	99.1	25.28	0.06
	09	15.63	0.0027	0.2158	10.285	192.2	99.6	25.28	0.08

	12	15.68	0.0010	0.3604	13.101	531.3	99.3	25.29	0.07
	10	15.65	0.0018	0.2803	10.810	287.2	99.5	25.29	0.07
	05	16.04	0.0037	1.596	9.014	137.6	97.1	25.29	0.09
	07	15.67	0.0023	0.3018	13.613	223.5	99.4	25.30	0.06
	34	15.66	0.0036	0.2481	9.799	140.4	99.5	25.31	0.05
	22	15.68	0.0020	0.3333	18.804	250.7	99.4	25.31	0.04
	04	15.75	0.0073	0.5709	5.643	70.0	98.9	25.31	0.13
	24	15.62	0.0027	0.0906	11.767	188.9	99.8	25.32	0.04
	02	15.72	0.0024	0.4154	18.083	210.0	99.2	25.32	0.06
	25	15.68	0.0019	0.2809	5.593	268.6	99.5	25.32	0.06
	28	15.77	0.0032	0.5907	14.374	158.9	98.9	25.33	0.04
	30	15.66	0.0040	0.1929	10.519	126.6	99.6	25.35	0.05
	08	15.77	0.0024	0.5388	6.031	208.5	99.0	25.36	0.12
	15	15.70	0.0043	0.2577	6.345	118.6	99.5	25.37	0.12
	26	15.68	0.0034	0.1787	3.513	148.3	99.7	25.37	0.08
	13	15.68	0.0025	0.1638	6.348	200.9	99.7	25.38	0.11
	27	15.68	0.0028	0.1534	6.995	179.9	99.7	25.39	0.05
	11	15.85	0.0028	0.7350	7.659	179.8	98.6	25.40	0.10
	01	15.78	0.0032	0.4765	8.291	158.6	99.1	25.40	0.09
	29	15.73	0.0026	0.2838	7.631	196.8	99.5	25.41	0.05
	14	15.72	0.0025	0.1218	3.802	203.2	99.8	25.46	0.18
	35	16.04	0.0034	1.233	8.070	150.8	97.7	25.46	0.05
	23	15.79	0.0027	0.3445	6.263	188.9	99.4	25.47	0.06
	32	15.79	0.0010	0.3488	5.073	487.4	99.3	25.48	0.06
	31	15.90	0.0012	0.6498	7.476	421.4	98.8	25.51	0.05
	33	15.99	0.0015	0.8783	6.675	344.1	98.4	25.54	0.06
	Mean age ± 2σ	n=29	MSWD=1.95			221.8 ±213.8		25.36	0.04

MZQ-25, Sanidine, J=0.0008943±0.05%, D=1.002±0.001, NM-196K, Lab#=56279

	14	15.65	0.0058	0.0902	11.823	87.7	99.8	25.40	0.07
	11	15.74	0.0037	0.3880	7.283	139.7	99.3	25.40	0.10
	15	15.95	0.0031	0.9902	11.419	164.0	98.2	25.45	0.07
	04	15.76	0.0042	0.3436	10.299	120.2	99.4	25.46	0.08
	13	15.89	0.0046	0.7763	3.670	111.9	98.6	25.46	0.19
	01	16.00	0.0036	1.011	7.889	142.8	98.1	25.52	0.09
	05	16.60	0.0022	2.991	3.058	228.8	94.7	25.55	0.23
	12	15.75	0.0035	0.0252	4.318	146.6	100.0	25.59	0.16
	03	15.78	0.0037	0.1085	5.109	137.9	99.8	25.60	0.14
	08	15.77	0.0031	-0.0989	4.667	163.6	100.2	25.67	0.15
	09	15.87	0.0036	0.1360	4.291	139.9	99.7	25.73	0.16
	02	15.96	0.0041	0.3835	4.795	124.2	99.3	25.75	0.15
x	06	15.83	0.0021	-0.5526	1.863	248.7	101.0	25.99	0.36
x	10	15.77	0.0061	-0.7884	2.432	84.3	101.5	26.01	0.28
x	07	16.58	0.0004	0.6324	1.705	1152.7	98.9	26.64	0.40
	Mean age ± 2σ	n=12	MSWD=0.99			142.3 ±69.2		25.49	0.07

MZQ-4, Sanidine, J=0.0008934±0.04%, D=1.002±0.001, NM-196K, Lab#=56275

x	01	63.39	0.0112	162.2	14.975	45.6	24.4	25.11	0.36
x	13	76.50	0.0109	206.6	7.255	46.7	20.2	25.12	0.47
x	14	37.33	0.0154	73.59	11.590	33.2	41.8	25.32	0.20
	02	16.42	0.0115	2.746	3.994	44.3	95.1	25.35	0.14
x	03	28.74	0.0102	44.26	15.166	49.9	54.5	25.44	0.14
	06	15.85	0.0106	0.6221	6.769	48.1	98.8	25.44	0.09
x	12	27.59	0.0116	40.32	11.934	43.9	56.8	25.47	0.13
x	11	19.56	0.0112	13.13	6.617	45.7	80.2	25.47	0.11
	05	17.47	0.0132	5.927	4.970	38.8	90.0	25.52	0.12
	15	16.10	0.0109	1.272	3.032	46.9	97.7	25.53	0.17
x	08	22.31	0.0106	22.17	8.149	47.9	70.6	25.60	0.11

x	07	25.45	0.0113	32.57	7.131	45.1	62.2	25.70	0.15
x	09	20.17	0.0149	14.66	8.355	34.1	78.5	25.72	0.10
x	10	18.12	0.0101	7.725	8.134	50.7	87.4	25.72	0.09
	04	16.30	0.0102	1.201	2.430	50.0	97.8	25.89	0.22
	Mean age ± 2σ	n=5	MSWD=1.17		45.6	±8.7		25.49	0.13
	MZQ-17, Sanidine, J=0.0008936±0.05%, D=1.002±0.001, NM-196K, Lab#=56277								
	12	18.39	0.0063	3.605	15.427	81.6	94.2	28.13	0.07
	04	17.65	0.0042	1.047	17.940	120.1	98.2	28.14	0.06
	13	17.91	0.0062	1.910	23.950	81.9	96.9	28.15	0.06
	09	17.85	0.0064	1.692	10.246	79.4	97.2	28.16	0.08
	01	17.53	0.0103	0.5023	24.063	49.6	99.2	28.21	0.05
	02	17.66	0.0083	0.9275	18.310	61.7	98.5	28.22	0.06
	03	18.04	0.0099	2.145	12.451	51.5	96.5	28.25	0.07
x	05	18.78	0.0050	4.635	6.323	102.8	92.7	28.26	0.12
	15	17.78	0.0132	1.193	10.225	38.6	98.0	28.28	0.08
	08	17.69	0.0037	0.8398	7.432	136.3	98.6	28.30	0.10
	07	17.51	0.0037	0.2021	7.114	136.8	99.7	28.32	0.10
	11	18.18	0.0037	2.454	5.869	138.3	96.0	28.33	0.12
	06	17.46	0.0032	-0.0016	4.048	159.0	100.0	28.34	0.18
	10	17.72	0.0049	0.8342	5.928	105.2	98.6	28.37	0.12
	14	17.54	0.0058	0.1732	9.481	88.7	99.7	28.39	0.08
	Mean age ± 2σ	n=14	MSWD=1.17		94.9	±76.5		28.22	0.05
	MZQ-26, Sanidine, J=0.0008945±0.05%, D=1.002±0.001, NM-196K, Lab#=56280								
	03	15.96	0.0062	0.9699	14.668	82.3	98.2	25.49	0.06
	09	16.40	0.0080	2.450	13.145	63.5	95.6	25.49	0.07
	14	16.00	0.0054	1.090	15.900	95.3	98.0	25.50	0.06
	13	16.15	0.0052	1.569	10.310	98.0	97.1	25.51	0.08
	10	16.05	0.0050	1.148	26.971	102.9	97.9	25.54	0.05
	07	16.25	0.0051	1.839	21.132	100.6	96.7	25.55	0.06
	05	16.30	0.0060	1.995	29.354	84.5	96.4	25.55	0.05
	12	16.05	0.0049	1.124	19.906	103.5	97.9	25.56	0.05
	11	16.10	0.0055	1.235	26.656	92.3	97.7	25.58	0.05
	08	16.48	0.0053	2.513	23.155	96.9	95.5	25.59	0.05
	04	16.08	0.0059	1.150	20.959	86.2	97.9	25.60	0.05
	06	15.86	0.0060	0.3570	7.961	84.9	99.3	25.62	0.10
	01	15.98	0.0049	0.7012	29.607	104.1	98.7	25.64	0.04
	15	15.91	0.0040	0.3509	7.333	128.0	99.4	25.70	0.10
	02	15.86	0.0061	0.1161	9.160	84.1	99.8	25.73	0.08
	Mean age ± 2σ	n=15	MSWD=1.03		93.8	±28.8		25.57	0.04
	MZQ-22, Sanidine, J=0.0008939±0.05%, D=1.002±0.001, NM-196K, Lab#=56278								
	18	15.59	0.0129	0.3852	10.692	39.6	99.3	25.14	0.05
	26	15.67	0.0125	0.6467	9.795	40.9	98.8	25.16	0.05
	07	15.80	0.0121	1.034	12.120	42.1	98.1	25.18	0.07
	08	15.68	0.0120	0.5753	23.417	42.4	98.9	25.21	0.05
	14	15.76	0.0115	0.8391	12.515	44.3	98.4	25.21	0.07
	04	15.83	0.0106	1.058	13.082	48.3	98.0	25.23	0.07
	02	15.65	0.0156	0.3902	9.232	32.8	99.3	25.25	0.08
	27	15.62	0.0140	0.2552	7.559	36.6	99.5	25.26	0.05
	05	15.62	0.0124	0.2631	7.899	41.3	99.5	25.26	0.09
	25	15.60	0.0112	0.1767	10.608	45.7	99.7	25.26	0.05
	17	15.76	0.0136	0.7113	8.067	37.7	98.7	25.27	0.05
	10	15.73	0.0142	0.6054	11.473	35.8	98.9	25.28	0.07
	15	15.62	0.0142	0.2285	11.456	35.8	99.6	25.28	0.07
	12	15.74	0.0132	0.5874	7.297	38.6	98.9	25.29	0.10

	01	15.63	0.0192	0.1884	13.625	26.5	99.7	25.32	0.06
	28	15.65	0.0101	0.2153	7.006	50.6	99.6	25.33	0.05
	16	15.83	0.0123	0.8334	3.636	41.3	98.5	25.33	0.09
	23	15.94	0.0123	1.138	9.355	41.5	97.9	25.35	0.04
	20	15.83	0.0149	0.7858	6.290	34.3	98.5	25.35	0.06
	22	15.72	0.0123	0.4087	4.618	41.6	99.2	25.35	0.07
	13	15.68	0.0140	0.2533	7.679	36.4	99.5	25.36	0.09
	03	15.75	0.0123	0.4840	5.545	41.5	99.1	25.36	0.13
	24	15.87	0.0200	0.8861	8.622	25.6	98.4	25.36	0.05
	06	15.82	0.0134	0.6599	3.734	38.2	98.8	25.39	0.19
	21	15.73	0.0135	0.3553	7.233	37.8	99.3	25.39	0.06
	19	15.91	0.0118	0.9443	5.316	43.3	98.3	25.40	0.07
	09	15.70	0.0119	0.2105	5.933	43.0	99.6	25.41	0.12
	Mean age ± 2σ	n=27	MSWD=1.53			39.4 ±11.2		25.28	0.04
	MZQ-35, Sanidine, J=0.0007861±0.04%, D=1.0068±0.0015, NM-208L, Lab#=57184								
	14	17.64	0.0099	0.4045	2.764	51.7	99.3	25.04	0.06
	13	17.72	0.0143	0.5639	1.753	35.6	99.1	25.09	0.09
	05	17.61	0.0103	0.1784	6.975	49.4	99.7	25.10	0.05
	06	17.72	0.0126	0.4100	1.891	40.5	99.3	25.15	0.08
	07	17.66	0.0118	0.2131	2.862	43.1	99.6	25.15	0.06
	12	17.73	0.0117	0.4382	2.284	43.8	99.3	25.16	0.07
	09	17.87	0.0130	0.8449	2.372	39.3	98.6	25.18	0.07
	17	17.69	0.0100	0.1956	2.791	51.0	99.7	25.20	0.06
	10	17.84	0.0078	0.7047	2.252	65.4	98.8	25.20	0.07
	16	17.72	0.0100	0.3026	2.333	51.0	99.5	25.20	0.07
	08	17.74	0.0081	0.2932	2.548	63.1	99.5	25.23	0.07
	15	17.72	0.0091	0.2094	2.650	56.2	99.7	25.23	0.07
	11	17.73	0.0119	0.1137	4.142	42.9	99.8	25.30	0.06
	Mean age ± 2σ	n=13	MSWD=1.21			48.7 ±18.0		25.17	0.04
	MZQ-56, Sanidine, J=0.0022277±0.07%, D=1.0003±0.001, NM-240G, Lab#=59985								
x	13B	6.8370	0.0881	2.3729	2.639	5.79	89.8	24.84	0.18
x	04B	6.4164	0.0817	0.8234	2.642	6.24	96.3	24.99	0.14
	02B	6.3278	0.0659	0.2629	7.688	7.74	98.9	25.29	0.07
	03B	6.5137	0.0815	0.8471	6.288	6.26	96.3	25.35	0.07
	05B	6.3616	0.0949	0.2991	6.203	5.38	98.7	25.40	0.07
	10B	6.4995	0.0522	0.7391	8.131	9.78	96.7	25.41	0.07
	07B	6.3321	0.0671	0.1553	5.688	7.60	99.4	25.44	0.09
	09B	6.9835	0.0550	2.3532	1.558	9.28	90.1	25.44	0.24
	12B	6.4351	0.0821	0.4911	6.576	6.21	97.8	25.46	0.07
	01B	6.5357	0.0649	0.7889	9.710	7.86	96.5	25.50	0.08
	11B	6.5583	0.0752	0.8527	5.619	6.78	96.2	25.52	0.08
	08B	6.3668	0.0930	0.2078	6.831	5.49	99.2	25.53	0.07
	14B	6.4213	0.0608	0.3461	4.281	8.39	98.5	25.57	0.10
	06B	6.3782	0.0572	0.1416	9.682	8.92	99.4	25.64	0.05
x	15B	6.4602	0.0628	0.2116	3.189	8.13	99.1	25.89	0.12
	Mean age ± 2σ	n=12	MSWD=1.97			7.5 ±2.9		25.47	0.07

Notes:

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.
Mean age is weighted mean age of Taylor (1982). Mean age error is weighted error of the mean (Taylor, 1982), multiplied by the root of the MSWD where MSWD>1, and also incorporates uncertainty in J factors and irradiation correction uncertainties.

Decay constants and isotopic abundances after Min et al. (2000).
symbol preceding sample ID denotes analyses excluded from mean age calculations.
Ages calculated relative to FC-2 Fish Canyon Tuff sanidine interlaboratory standard at 28.201 Ma (Kuiper et al., 2008)
Decay Constant (LambdaK (total)) = 5.462e-10/a
Correction factors:

$(^{39}Ar/^{37}Ar)_{Ca}$ = 0.00068 ± 2e-05

$(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028 ± 1e-05

$(^{38}Ar/^{39}Ar)_{K}$ = 0.0125

$(^{40}Ar/^{39}Ar)_{K}$ = 0 ± 0.0004

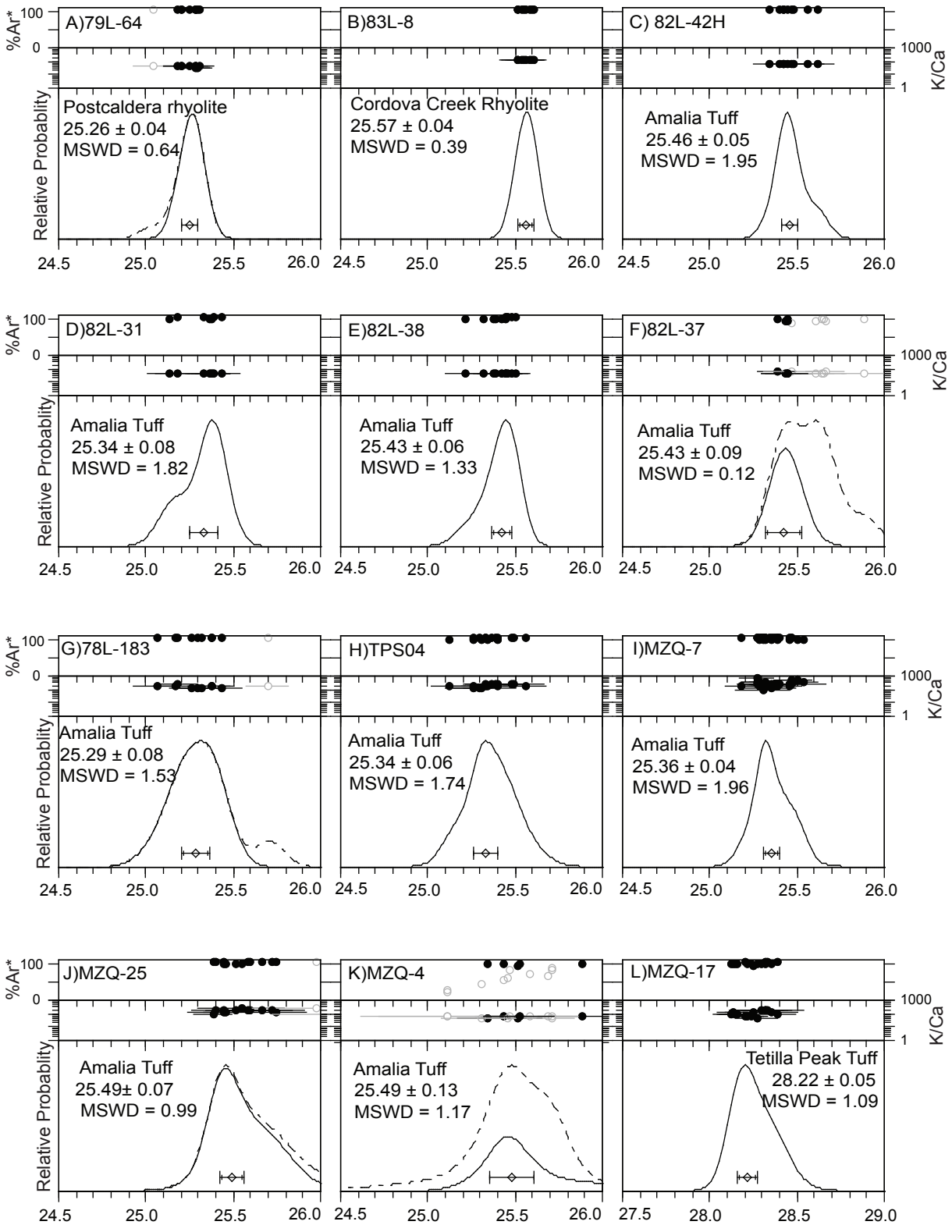


Figure 1. Ideograms of the Questa caldera sanidine laser-fusions analyses. Gray data points were not used in the age calculation.

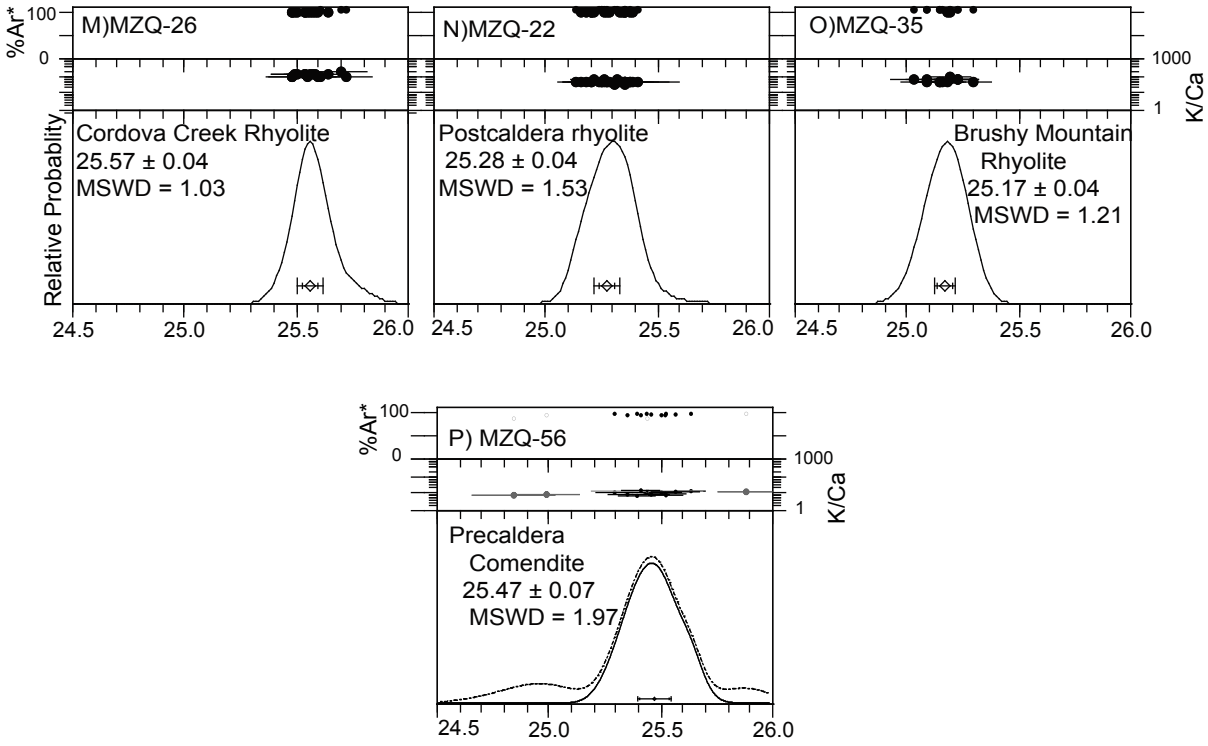


Figure 1 continued.

Table 2. Questa biotite, hornblende, and groundmass concentrate $^{40}Ar/^{39}Ar$ analytical data.

	ID	Temp (°C)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$ (x 10^{-3})	$^{39}Ar_K$ (x 10^{-15} mol)	K/Ca	$^{40}Ar^*$ (%)	^{39}Ar (%)	Age (Ma)	±1σ (Ma)
	MZQ-24, Biotite, 7.33 mg, J=0.0013512±0.07%, D=1.002±0.001, NM-202H, Lab#=56745-01										
x	A	650	199.0	0.2005	621.4	0.343	2.5	7.8	0.3	37.80	4.30
	B	750	35.14	0.0473	84.22	0.321	10.8	29.2	0.6	25.17	3.44
	C	850	15.89	0.0164	16.55	2.75	31.2	69.2	3.0	26.99	0.42
	D	920	12.76	0.0106	4.672	9.88	48.2	89.2	11.5	27.92	0.13
	E	1000	11.88	0.0063	1.426	21.3	80.5	96.5	30.0	28.11	0.07
	F	1075	11.76	0.0088	1.306	23.3	57.7	96.7	50.2	27.90	0.07
	G	1110	11.80	0.0138	1.553	8.45	36.9	96.1	57.5	27.81	0.14
	H	1180	11.94	0.0461	1.845	11.12	11.1	95.5	67.2	27.97	0.11
	I	1210	11.78	0.0553	1.284	11.73	9.2	96.8	77.3	27.97	0.10
	J	1250	11.69	0.0714	1.155	20.1	7.1	97.1	94.8	27.84	0.07
	K	1300	11.81	0.1299	1.047	5.70	3.9	97.5	99.7	28.23	0.20
x	L	1720	21.87	19.02	47.50	0.352	0.027	43.0	100.0	23.42	3.09
	Integrated age ± 2σ			n=12	MSWD=2.27	115.3	5.4	K2O=4.47%		27.94	0.11
	Plateau ± 2σ	steps B-K		n=10	MSWD=1.96	114.6	37.8 ±51.9		99.4	27.95	0.10
	Isochron±2σ	steps A-L		n=12	MSWD=2.25		$^{40}Ar/^{36}Ar$=	299.5±5.4		27.94	0.08
	MZQ-15, Biotite, 6.96 mg, J=0.0013512±0.07%, D=1.002±0.001, NM-202H, Lab#=56743-01										
x	A	650	349.5	1.266	1114.2	0.249	0.40	5.8	0.4	49.70	6.40
	B	750	38.59	0.3260	94.00	0.618	1.6	28.1	1.4	26.60	1.88
	C	850	17.23	0.0242	22.42	4.29	21.1	61.5	7.9	26.02	0.29
	D	920	13.23	0.0179	9.716	7.47	28.6	78.3	18.6	25.43	0.17
	E	1000	11.44	0.0190	3.615	8.86	26.8	90.7	30.1	25.47	0.13
	F	1075	11.25	0.0435	2.961	5.71	11.7	92.3	37.0	25.46	0.20
	G	1110	11.37	0.0521	3.629	4.47	9.8	90.6	42.2	25.27	0.25
	H	1180	11.65	0.0984	4.320	9.73	5.2	89.1	52.6	25.47	0.12
	I	1210	11.47	0.1520	3.942	15.47	3.4	89.9	67.3	25.31	0.09
	J	1250	10.99	0.0613	2.135	34.6	8.3	94.3	93.8	25.45	0.05
	K	1300	11.04	0.0499	2.022	7.79	10.2	94.6	98.9	25.63	0.15
	L	1720	14.52	5.007	16.32	1.79	0.10	69.6	100.0	24.91	0.62
	Integrated age ± 2σ			n=12	MSWD=2.17	101.1	3.2	K2O=4.13%		25.52	0.13
	Plateau ± 2σ	steps B-L		n=11	MSWD=0.95	100.8	11.1 ±19.7		99.8	25.44	0.08
	Isochron±2σ	steps A-L		n=12	MSWD=0.82		$^{40}Ar/^{36}Ar$=	303.7±4.3		25.38	0.09
	MZQ-16, Biotite, 8.1 mg, J=0.000897±0.06%, D=1.002±0.001, NM-196M, Lab#=56294-01										
x	A	650	272.2	0.0460	881.1	0.607	11.1	4.3	0.5	19.34	2.64
x	B	750	44.74	0.0347	99.99	1.30	14.7	34.0	1.7	24.79	0.58
x	C	850	28.83	0.0110	46.23	5.40	46.2	52.6	6.5	24.74	0.19
x	D	920	21.40	0.0096	21.70	9.99	53.1	70.0	15.2	24.45	0.11
	E	1000	17.37	0.0100	6.479	11.3	51.1	89.0	24.8	25.20	0.06
	F	1075	16.65	0.0139	4.038	10.19	36.8	92.8	33.4	25.21	0.07
	G	1110	17.08	0.0037	5.303	9.23	136.4	90.8	41.0	25.29	0.07
	H	1180	16.59	0.0128	3.998	25.4	39.8	92.9	61.2	25.13	0.05
	I	1210	16.11	0.0041	2.267	30.1	124.7	95.8	84.1	25.18	0.04
	J	1720	16.40	0.0088	3.288	21.8	58.1	94.1	100.0	25.16	0.05
	Integrated age ± 2σ			n=10	MSWD=6.01	125.3	55.2	K2O=6.63%		25.07	0.11
	Plateau ± 2σ	steps E-J		n=6	MSWD=0.71	108.0	76.3 ±88.5		86.2	25.19	0.06
	Isochron±2σ	steps A-J		n=10	MSWD=3.63		$^{40}Ar/^{36}Ar$=	289.2±2.7		25.21	0.06
	MZQ-39, Biotite, 7.89 mg, J=0.0007667±0.07%, D=1.004±0.001, NM-208M, Lab#=57199-01										

x	A	650	347.5	0.0265	1158.2	0.749	19.3	1.5	1.3	7.43	3.82
x	B	750	56.65	0.0042	139.0	2.290	120.2	27.5	5.1	21.72	1.13
	C	850	25.63	0.0020	26.63	12.66	250.7	69.3	23.5	24.75	0.21
	D	920	25.14	0.0021	26.37	12.29	240.7	69.0	37.9	24.19	0.22
	E	1000	23.86	0.0030	21.79	9.31	168.8	73.0	47.0	24.28	0.27
	F	1075	21.06	0.0053	12.14	6.93	96.8	83.0	53.1	24.36	0.34
	G	1110	20.01	0.0045	7.568	7.15	112.5	88.8	58.7	24.77	0.33
	H	1180	20.56	0.0049	9.415	19.69	103.2	86.5	71.8	24.78	0.14
	I	1210	19.47	0.0163	5.453	18.82	31.2	91.7	81.8	24.89	0.14
	J	1250	18.86	0.0042	3.227	27.5	120.7	94.9	93.2	24.96	0.10
	K	1300	18.96	0.0015	3.268	17.41	336.7	94.9	99.1	25.07	0.14
	L	1650	20.48	0.1370	11.61	3.06	3.7	83.3	100.0	23.79	0.77
	Integrated age ± 2σ			n=12	MSWD=4.50	137.9	61.4		K2O=8.76%	24.60	0.17
	Plateau ± 2σ	steps C-L		n=10	MSWD=2.36	134.8	155.7	±206.8	97.8	24.82	0.17
	Isochron±2σ	steps A-L		n=12	MSWD=0.99		$^{40}Ar/^{36}Ar$=	282.7±4.2		24.98	0.13

MZQ-12, Biotite, 8.97 mg, J=0.0007714±0.08%, D=1.004±0.001, NM-208M, Lab#=57195-01

x	A	650	1083.5	0.0826	3656.0	1.110	6.2	0.3	1.6	4.42	7.10
x	B	750	89.11	0.0196	253.5	5.89	26.0	15.9	9.9	19.94	0.72
	C	850	22.56	0.0054	16.96	30.4	93.7	77.8	42.3	24.62	0.11
	D	920	19.52	0.0044	5.900	25.4	115.8	91.1	60.8	24.93	0.11
	E	1000	20.43	0.0073	9.684	18.65	69.5	86.0	71.4	24.64	0.14
	F	1075	21.28	0.0139	12.79	17.79	36.7	82.3	79.8	24.55	0.15
	G	1110	20.21	0.0188	8.464	12.84	27.1	87.6	85.0	24.83	0.20
	H	1180	19.74	0.0620	6.524	16.52	8.2	90.3	90.9	24.99	0.15
	I	1210	19.34	0.2380	5.104	15.46	2.1	92.3	95.8	25.04	0.16
	J	1250	19.05	0.5024	4.157	12.86	1.0	93.8	99.4	25.06	0.19
	K	1300	20.23	0.2139	7.751	1.924	2.4	88.8	99.9	25.19	1.21
	L	1650	61.92	3.181	144.2	0.278	0.16	31.6	100.0	27.49	8.64
	Integrated age ± 2σ			n=12	MSWD=6.11	159.1	6.0		K2O=8.83%	24.50	0.23
	Plateau ± 2σ	steps C-L		n=10	MSWD=1.55	152.1	54.4	±85.5	95.6	24.81	0.13
	Isochron±2σ	steps A-L		n=12	MSWD=2.44		$^{40}Ar/^{36}Ar$=	288.3±2.3		24.90	0.11

MZQ-13, Biotite, 9.16 mg, J=0.0007705±0.07%, D=1.004±0.001, NM-208M, Lab#=57196-01

x	A	650	671.9	0.1529	2270.7	0.988	3.3	0.1	1.5	1.23	4.79
x	B	750	96.46	0.0194	275.8	3.01	26.3	15.5	5.8	21.00	1.03
x	C	850	24.46	0.0059	24.33	16.86	86.8	70.6	26.6	24.20	0.17
	D	920	19.85	0.0038	7.215	25.1	134.7	89.3	49.4	24.82	0.11
	E	1000	20.87	0.0078	11.00	27.6	65.0	84.4	67.5	24.69	0.10
	F	1075	20.02	0.0190	7.400	20.48	26.9	89.1	77.8	24.98	0.13
	G	1110	18.93	0.0241	3.888	13.56	21.1	93.9	83.6	24.91	0.18
	H	1180	18.69	0.0629	3.096	16.41	8.1	95.1	89.7	24.91	0.15
	I	1210	18.32	0.1363	2.179	18.24	3.7	96.5	95.6	24.78	0.14
	J	1250	18.31	0.4015	1.754	13.54	1.3	97.4	99.4	24.98	0.18
	K	1300	19.13	0.2820	3.077	1.808	1.8	95.4	99.9	25.56	1.30
	L	1650	41.36	3.173	83.55	0.318	0.16	40.9	100.0	23.78	7.28
	Integrated age ± 2σ			n=12	MSWD=5.02	157.9	6.8		K2O=8.59%	24.57	0.18
	Plateau ± 2σ	steps D-L		n=9	MSWD=0.61	137.0	45.5	±89.3	86.8	24.84	0.11
	Isochron±2σ	steps A-L		n=12	MSWD=0.96		$^{40}Ar/^{36}Ar$=	286.8±2.6		24.89	0.11

MZQ-5, Biotite, 5.4 mg, J=0.0008978±0.06%, D=1.002±0.001, NM-196L, Lab#=56290-01

x	A	650	608.1	0.0491	2005.7	0.232	10.4	2.5	0.4	25.22	6.05
x	B	750	103.1	0.0056	290.4	0.836	90.9	16.7	1.7	28.10	1.07
	C	850	34.77	0.0036	65.05	3.89	141.0	44.7	7.7	25.37	0.26
	D	920	22.35	0.0016	24.14	5.47	319.7	68.1	16.1	24.84	0.15
	E	1000	18.13	0.0033	9.854	6.19	156.0	83.9	25.4	24.85	0.10

	F	1075	17.13	0.0032	6.119	6.31	158.9	89.4	34.8	25.02	0.10
	G	1110	17.54	0.0027	7.750	5.26	187.3	86.9	42.4	24.90	0.10
	H	1180	16.85	0.0064	5.322	15.0	80.2	90.7	63.3	24.94	0.06
	I	1210	16.03	0.0030	2.527	20.2	169.2	95.3	90.1	24.94	0.05
	J	1720	16.59	0.0345	4.426	7.79	14.8	92.1	100.0	24.96	0.07
	Integrated age ± 2σ			n=10	MSWD=1.54	71.1	70.0		K2O=5.63%	25.00	0.14
	Plateau ± 2σ	steps C-J		n=8	MSWD=0.73	70.0	142.5	±175.3	98.5	24.94	0.06
	Isochron±2σ	steps A-J		n=10	MSWD=1.12		$^{40}Ar/^{36}Ar$=	298.1±2.5		24.92	0.07
	MZQ-6, Biotite, 7.5 mg, J=0.0008977±0.06%, D=1.002±0.001, NM-196L, Lab#=56291-01										
x	A	650	458.8	0.1486	1516.5	0.777	3.4	2.3	0.8	17.53	4.17
x	B	750	40.61	0.0281	88.72	3.75	18.2	35.4	4.7	23.50	0.54
	C	850	23.94	0.0154	30.63	13.4	33.1	62.2	18.5	24.31	0.17
	D	920	19.04	0.0166	13.59	16.0	30.7	78.9	34.5	24.53	0.13
	E	1000	19.66	0.0300	15.07	15.7	17.0	77.4	49.6	24.82	0.14
	F	1075	17.00	0.0302	5.879	14.7	16.9	89.8	63.3	24.92	0.13
	G	1110	16.19	0.0291	3.278	15.1	17.5	94.0	76.9	24.84	0.13
	H	1180	15.80	0.2107	2.295	15.1	2.4	95.8	90.2	24.71	0.13
	I	1210	15.64	0.0864	1.532	9.74	5.9	97.2	98.5	24.80	0.19
	J	1720	19.96	0.2953	15.05	1.83	1.7	77.8	100.0	25.36	0.98
	Integrated age ± 2σ			n=10	MSWD=2.24	106.3	8.2		K2O=6.06%	24.63	0.19
	Plateau ± 2σ	steps C-J		n=8	MSWD=1.74	101.7	17.8	±23.9	95.7	24.73	0.14
	Isochron±2σ	steps A-J		n=10	MSWD=1.15		$^{40}Ar/^{36}Ar$=	290.9±3.0		24.80	0.12
	AR-171, Biotite, 8.24 mg, J=0.0007661±0.07%, D=1.004±0.001, NM-208M, Lab#=57200-01										
x	A	650	169.2	0.0556	524.3	1.805	9.2	8.4	3.0	19.83	1.78
	B	750	51.79	0.0364	117.6	6.10	14.0	32.9	12.5	23.73	0.49
	C	850	20.69	0.0048	9.836	20.08	105.7	86.0	37.4	24.78	0.14
	D	920	18.81	0.0039	3.704	20.96	131.4	94.2	56.3	24.68	0.12
	E	1000	18.78	0.0183	3.869	9.31	27.8	93.9	63.1	24.57	0.26
	F	1075	19.71	0.1088	7.770	3.69	4.7	88.4	65.6	24.27	0.63
	G	1110	19.19	0.0962	6.486	3.06	5.3	90.1	67.6	24.08	0.76
	H	1180	19.08	0.1229	5.060	9.08	4.2	92.2	73.0	24.51	0.26
	I	1210	18.63	0.0894	3.189	37.9	5.7	95.0	90.7	24.65	0.08
	J	1250	18.28	0.0143	2.107	25.2	35.7	96.6	99.4	24.60	0.11
	K	1300	19.03	0.1384	6.928	1.092	3.7	89.3	99.7	23.68	2.11
	L	1650	38.73	0.5935	71.22	0.971	0.86	45.8	100.0	24.71	2.43
	Integrated age ± 2σ			n=12	MSWD=1.21	139.2	10.2		K2O=8.47%	24.52	0.17
	Plateau ± 2σ	steps B-L		n=11	MSWD=0.61	137.4	46.7	±90.2	98.7	24.64	0.10
	Isochron±2σ	steps A-L		n=12	MSWD=0.36		$^{40}Ar/^{36}Ar$=	289.5±4.0		24.68	0.11
	MZQ-8, Biotite, 9.85 mg, J=0.0007719±0.08%, D=1.004±0.001, NM-208M, Lab#=57194-01										
x	A	650	177.1	0.4616	555.8	1.190	1.1	7.3	1.5	18.13	2.30
x	B	750	44.03	0.0294	84.40	3.28	17.3	43.4	5.6	26.79	0.80
	C	850	21.40	0.0075	11.74	14.23	68.2	83.8	21.3	25.16	0.18
	D	920	18.50	0.0091	3.343	20.10	55.9	94.7	39.1	24.58	0.15
	E	1000	18.28	0.0230	2.564	15.28	22.2	95.9	50.0	24.59	0.16
	F	1075	18.46	0.0460	2.938	10.54	11.1	95.3	56.6	24.70	0.23
	G	1110	18.38	0.0440	2.642	11.05	11.6	95.8	62.7	24.71	0.22
	H	1180	18.23	0.0652	2.886	28.9	7.8	95.4	76.1	24.40	0.09
	I	1210	17.91	0.1217	1.521	30.9	4.2	97.5	87.2	24.51	0.09
	J	1250	17.77	0.0232	1.160	38.6	22.0	98.1	98.0	24.46	0.08
	K	1300	18.31	0.0170	2.460	8.03	30.0	96.0	99.9	24.67	0.30
	L	1650	34.94	1.531	53.12	0.534	0.33	55.4	100.0	27.19	4.46
	Integrated age ± 2σ			n=12	MSWD=2.97	182.7	9.6		K2O=9.23%	24.59	0.13
	Plateau ± 2σ	steps C-L		n=10	MSWD=1.90	178.2	23.1	±45.0	97.6	24.54	0.12

	Isochron±2σ	steps A-L	n=12	MSWD=3.23		$^{40}Ar/^{36}Ar$=	294.8±5.6			24.55	0.10
	MZQ-34, Biotite, 8.62 mg, J=0.0007675±0.07%, D=1.004±0.001, NM-208M, Lab#=57198-01										
	B	750	40.01	0.0161	77.83	2.71	31.6	42.5	4.4	23.74	0.91
	C	850	20.17	0.0038	8.594	19.35	132.7	87.4	30.2	24.60	0.14
	D	920	18.77	0.0041	4.419	16.54	125.4	93.0	46.8	24.38	0.15
	E	1000	18.62	0.0123	3.804	10.62	41.4	94.0	55.5	24.42	0.22
	F	1075	19.17	0.0203	5.861	7.81	25.2	91.0	61.2	24.34	0.30
	G	1110	18.71	0.0160	4.710	10.35	31.8	92.6	67.9	24.18	0.23
	H	1180	18.98	0.0326	5.138	27.3	15.7	92.0	82.3	24.37	0.10
	I	1210	18.25	0.0405	2.737	25.0	12.6	95.6	92.4	24.35	0.10
	J	1250	18.03	0.0111	2.126	18.69	45.9	96.5	98.6	24.29	0.13
	K	1300	18.51	0.0182	3.815	3.23	28.0	93.9	99.5	24.25	0.72
	L	1650	21.72	0.3575	19.46	1.552	1.4	73.7	100.0	22.35	1.47
	Integrated age ± 2σ		n=11	MSWD=0.65	143.1	21.7		K2O=8.31%		24.34	0.14
	Plateau ± 2σ	steps B-L	n=11	MSWD=0.65	143.1	51.6	±87.2		100.0	24.37	0.11
	Isochron±2σ	steps B-L	n=11	MSWD=0.68		$^{40}Ar/^{36}Ar$=	295.4±16.2			24.38	0.15
	MZQ-19, Biotite, 9.69 mg, J=0.0006961±0.04%, D=1.002±0.001, NM-203H, Lab#=56825-01										
X	A	650	606.9	-0.0050	1961.9	0.188	-	4.5	0.1	34.25	5.76
X	B	750	70.84	0.0919	192.2	2.25	5.6	19.8	1.5	17.83	0.46
X	C	850	25.17	0.0072	28.95	17.2	71.3	66.0	12.5	21.06	0.09
X	D	920	20.17	0.0091	10.79	13.09	56.0	84.2	20.9	21.51	0.07
X	E	1000	19.83	0.0110	8.689	16.3	46.2	87.1	31.3	21.86	0.06
X	F	1075	19.35	0.0227	6.959	24.0	22.5	89.4	46.9	21.90	0.05
X	G	1110	18.42	0.0307	4.422	13.25	16.6	92.9	55.5	21.68	0.05
X	H	1180	17.81	0.0353	3.195	29.4	14.5	94.7	74.8	21.36	0.04
X	I	1210	17.77	0.0628	2.881	19.6	8.1	95.2	87.9	21.43	0.05
X	J	1250	17.79	0.1382	2.623	14.54	3.7	95.7	97.6	21.57	0.05
X	K	1300	18.92	0.1961	6.244	3.64	2.6	90.3	100.0	21.65	0.14
	Integrated age ± 2σ		n=11	MSWD=21.32	153.5	11.9		K2O=8.74%		21.51	0.09
	Plateau ± 2σ	no plateau	n=0	MSWD=0.00	0.000	0.000±0.000			0.0	0.00	0.00
	Isochron±2σ	steps A-K	n=11	MSWD=20.77		$^{40}Ar/^{36}Ar$=	289.3±2.6			21.61	0.04
	MZQ-9, Biotite, 7.4 mg, J=0.0008972±0.06%, D=1.002±0.001, NM-196L, Lab#=56292-01										
x	A	650	216.6	0.3433	691.0	0.597	1.5	5.7	0.6	20.29	3.42
x	B	750	30.09	0.0380	61.03	5.18	13.4	40.1	5.8	19.70	0.37
x	C	850	15.33	0.0127	8.863	17.9	40.1	82.9	23.2	20.75	0.11
	D	920	13.55	0.0086	1.831	14.7	59.0	96.0	37.1	21.25	0.12
	E	1000	14.14	0.0196	3.643	17.6	26.0	92.4	53.2	21.33	0.11
	F	1075	13.52	0.0414	2.099	18.4	12.3	95.4	69.4	21.06	0.10
	G	1110	13.56	0.0593	2.053	12.9	8.6	95.6	80.4	21.16	0.14
	H	1180	13.38	0.1781	1.237	15.3	2.9	97.4	93.2	21.27	0.12
	I	1210	13.43	0.2858	1.139	6.83	1.8	97.7	98.7	21.42	0.25
	J	1250	13.95	0.6095	4.428	1.39	0.84	91.0	99.8	20.73	1.17
	K	1300	19.90	2.186	22.05	0.211	0.23	68.2	100.0	22.18	7.88
	Integrated age ± 2σ		n=11	MSWD=3.46	111.0	6.6		K2O=6.42%		21.08	0.13
	Plateau ± 2σ	steps D-K	n=8	MSWD=0.70	87.4	19.7	±40.3		78.7	21.22	0.10
	Isochron±2σ	steps A-K	n=11	MSWD=2.57		$^{40}Ar/^{36}Ar$=	288.3±4.8			21.18	0.10
	MZQ-21, Biotite, 9.8 mg, J=0.000897±0.07%, D=1.002±0.001, NM-196M, Lab#=56295-01										
x	A	650	351.1	0.0953	1154.0	2.40	5.4	2.9	1.6	16.45	2.59
x	B	750	29.29	0.0228	60.79	6.59	22.4	38.7	6.2	18.50	0.31
x	C	850	23.30	0.0152	40.00	15.5	33.6	49.3	16.8	18.76	0.16
	D	920	18.33	0.0116	22.34	22.9	44.0	64.0	32.4	19.17	0.11
	E	1000	16.51	0.0185	15.68	16.0	27.6	71.9	43.4	19.39	0.12

	F	1075	13.28	0.0181	5.042	24.2	28.2	88.8	60.0	19.27	0.08
	G	1110	12.85	0.0283	3.221	16.6	18.1	92.6	71.3	19.43	0.10
	H	1180	12.56	0.1531	2.360	22.9	3.3	94.5	87.0	19.40	0.08
	I	1210	12.30	0.0615	1.497	14.4	8.3	96.4	96.8	19.37	0.12
	J	1720	14.36	0.2127	6.936	4.61	2.4	85.8	100.0	20.14	0.36
	Integrated age ± 2σ			n=10	MSWD=3.44	146.1	10.0		K2O=6.38%	19.21	0.19
	Plateau ± 2σ	steps D-J		n=7	MSWD=1.67	121.6	21.7 ±30.8		83.2	19.35	0.11
	Isochron±2σ	steps A-J		n=10	MSWD=2.25		$^{40}Ar/^{36}Ar$=	291.7±2.3		19.37	0.09
	MZQ-32, Biotite, 8.69 mg, J=0.0007685±0.07%, D=1.004±0.001, NM-208M, Lab#=57197-01										
x	A	650	273.9	0.0958	905.7	0.829	5.3	2.3	1.3	8.74	3.29
	B	750	37.35	0.0109	82.40	4.33	46.8	34.8	7.8	18.19	0.58
	C	850	17.92	0.0046	14.11	20.66	110.4	76.7	33.2	19.24	0.13
	D	920	16.16	0.0050	8.158	14.80	101.9	85.1	47.1	19.24	0.16
	E	1000	17.30	0.0086	11.92	14.26	59.0	79.6	58.0	19.28	0.17
	F	1075	17.18	0.0173	11.51	11.55	29.5	80.2	65.6	19.29	0.21
	G	1110	15.58	0.0166	6.354	16.00	30.7	88.0	74.6	19.18	0.15
	H	1180	15.32	0.0415	5.635	26.9	12.3	89.2	86.7	19.11	0.10
	I	1210	14.76	0.0788	3.995	19.68	6.5	92.0	93.8	19.02	0.12
	J	1250	14.47	0.0464	2.970	17.54	11.0	94.0	99.2	19.02	0.13
	K	1300	14.82	0.0332	4.985	2.237	15.4	90.1	99.9	18.69	1.00
	L	1650	24.53	1.205	44.30	0.493	0.42	47.0	100.0	16.18	4.40
	Integrated age ± 2σ			n=12	MSWD=1.57	149.3	15.1		K2O=8.59%	19.06	0.14
	Plateau ± 2σ	steps B-L		n=11	MSWD=0.73	148.4	42.8 ±75.5		99.4	19.14	0.10
	Isochron±2σ	steps A-L		n=12	MSWD=0.81		$^{40}Ar/^{36}Ar$=	288.7±4.7		19.22	0.11
	MZQ-36, Groundmass Concentrate, 24.01 mg, J=0.0007736±0.08%, D=1.0068±0.0015, NM-208K, Lab#=57182-01										
x	A	3	66.22	0.5791	190.0	1.76	0.88	15.3	3.0	14.30	0.57
x	B	3	20.48	0.5559	23.65	7.36	0.92	66.1	14.8	19.08	0.10
x	C	4	18.89	0.6332	11.50	18.2	0.81	82.3	39.8	21.89	0.07
	D	4	18.30	0.5806	7.679	16.10	0.88	87.9	57.8	22.64	0.06
	E	5	18.01	0.5893	6.466	19.3	0.87	89.7	75.8	22.73	0.06
	F	6	19.71	0.6358	12.42	16.29	0.80	81.7	88.5	22.67	0.07
x	G	8	25.85	0.8988	34.43	8.08	0.57	60.9	94.1	22.19	0.14
x	H	10	29.84	1.342	49.88	4.70	0.38	51.0	97.3	21.43	0.19
x	I	25	33.46	2.907	62.31	4.30	0.18	45.7	100.0	21.57	0.22
	Integrated age ± 2σ			n=9	MSWD=165.88	96.1	0.66		K2O=1.99%	21.95	0.17
	Plateau ± 2σ	steps D-F		n=3	MSWD=0.65	51.7	0.85 ±0.08		53.8	22.69	0.08
	Isochron±2σ	steps A-I		n=9	MSWD=130.55		$^{40}Ar/^{36}Ar$=	268.4±2.8		22.70	0.08
	MZQ-23, Hornblende, 15.15 mg, J=0.0013513±0.07%, D=1.002±0.001, NM-202H, Lab#=56744-01										
x	A	800	1165.1	5.916	3757.5	0.109	0.086	4.7	0.6	132.33	17.44
	B	900	28.08	0.8817	52.76	0.101	0.58	44.7	1.2	30.81	6.50
	C	1000	22.97	1.308	31.12	0.213	0.39	60.4	2.5	34.03	3.17
	D	1100	16.05	5.059	16.69	1.78	0.10	71.9	12.4	28.41	0.43
	E	1130	18.31	5.177	24.05	5.04	0.099	63.5	36.8	28.63	0.26
	F	1160	17.45	4.845	21.04	6.56	0.11	66.7	62.3	28.62	0.19
	G	1190	13.12	4.696	6.484	6.14	0.11	88.4	81.6	28.53	0.16
	H	1220	12.55	5.131	4.900	4.25	0.099	91.9	92.9	28.37	0.21
	I	1250	12.77	5.491	6.362	2.43	0.093	88.8	98.8	27.93	0.36
	J	1300	13.57	6.390	7.972	0.435	0.080	86.5	99.8	28.92	1.61
	K	1650	44.17	80.16	127.5	0.075	0.006	29.7	100.0	34.11	10.44
	Integrated age ± 2σ			n=11	MSWD=4.26	27.1	0.098		K2O=0.51%	28.99	0.35
	Plateau ± 2σ	steps B-K		n=10	MSWD=0.80	27.0	0.11 ±0.35		99.6	28.50	0.19
	Isochron±2σ	steps A-K		n=11	MSWD=0.74		$^{40}Ar/^{36}Ar$=	306.3±3.8		28.22	0.21

MZQ-9, Hornblende, 14.4 mg, J=0.0008966±0.06%, D=1.002±0.001, NM-196L, Lab#=56293-01

X	A	800	165.3	0.4423	406.7	1.88	1.2	27.3	10.8	72.62	2.14
X	B	900	23.41	0.5744	39.48	1.50	0.89	50.4	19.2	19.26	1.10
X	C	1000	35.21	5.734	59.75	2.08	0.089	51.2	30.7	29.46	0.95
X	D	1030	29.47	8.981	39.62	2.65	0.057	62.8	44.8	30.29	0.76
X	E	1050	22.17	8.444	23.31	3.13	0.060	72.0	61.0	26.17	0.59
X	F	1070	21.47	7.447	24.53	2.10	0.069	69.1	71.6	24.31	0.83
X	G	1090	22.90	6.760	30.65	1.21	0.075	62.9	77.5	23.59	1.43
X	H	1120	26.02	6.229	45.75	0.585	0.082	50.0	80.4	21.32	2.81
X	I	1160	22.77	5.656	36.26	0.690	0.090	55.0	83.7	20.51	2.36
X	J	1250	28.77	8.896	37.65	2.15	0.057	63.9	94.0	30.09	0.91
X	K	1700	33.59	8.428	52.68	1.29	0.061	55.7	100.0	30.63	1.51
	Integrated age ± 2σ			n=11	MSWD=57.12	19.3	0.078	K2O=0.57%		31.17	0.77
	Plateau ± 2σ	no plateau		n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps A-K		n=11	MSWD=9.25		$^{40}Ar/^{36}Ar$=	371.4±5.7		23.26	0.75

MZQ-19, Hornblende, 12.75 mg, J=0.0006951±0.04%, D=1.002±0.001, NM-203H, Lab#=56826-01

X	A	800	440.2	0.5957	1236.2	0.514	0.86	17.0	6.0	92.97	2.77
X	B	900	68.55	0.2875	168.4	0.715	1.8	27.4	13.9	23.77	0.69
X	C	1000	37.04	1.154	62.34	0.779	0.44	50.5	22.1	23.67	0.62
X	D	1100	62.60	10.17	124.7	3.78	0.050	42.5	55.5	33.77	0.36
X	E	1130	25.96	9.676	23.65	2.61	0.053	76.2	73.8	25.15	0.18
X	F	1160	31.14	7.601	42.69	0.636	0.067	61.5	77.8	24.33	0.63
X	G	1190	30.46	8.125	36.42	0.559	0.063	66.9	81.3	25.87	0.69
X	H	1220	31.08	11.29	34.82	0.835	0.045	69.9	86.2	27.65	0.49
X	I	1250	32.67	11.29	40.95	0.912	0.045	65.8	91.2	27.37	0.45
X	J	1300	38.18	12.05	57.09	0.919	0.042	58.4	96.1	28.40	0.45
X	K	1650	105.5	11.93	295.1	0.778	0.043	18.3	100.0	24.52	0.90
	Integrated age ± 2σ			n=11	MSWD=112.52	13.04	0.058	K2O=0.57%		30.71	0.55
	Plateau ± 2σ	no plateau		n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps A-K		n=11	MSWD=49.99		$^{40}Ar/^{36}Ar$=	330.9±3.0		24.48	0.34

MZQ-37, Hornblende, 16.75 mg, J=0.0007719±0.08%, D=1.002±0.001, NM-208M, Lab#=57193-01

X	A	800	380.6	4.722	1145.9	0.388	0.11	11.1	0.9	59.08	3.64
X	B	900	78.75	3.414	215.9	0.149	0.15	19.3	1.2	21.42	3.69
X	C	1000	41.73	1.498	94.43	0.385	0.34	33.4	2.1	19.62	1.30
X	D	1100	40.75	1.763	69.21	0.435	0.29	50.2	3.1	28.70	1.31
X	E	1130	58.68	4.129	45.80	0.353	0.12	77.5	3.9	63.35	1.48
X	F	1160	35.35	6.234	46.30	1.86	0.082	62.8	8.3	31.21	0.38
X	G	1190	21.76	6.286	14.55	8.9	0.081	82.6	32.6	25.34	0.10
X	H	1220	18.84	6.333	6.169	7.4	0.081	93.1	58.0	24.73	0.10
X	I	1250	22.03	6.003	7.138	2.96	0.085	92.7	69.7	28.74	0.20
X	J	1300	20.53	6.479	5.752	3.48	0.079	94.3	85.1	27.28	0.18
X	K	1650	61.98	0.2372	29.39	3.02	2.2	86.0	100.0	73.84	0.32
	Integrated age ± 2σ			n=11	MSWD=2349.57	29.4	0.093	K2O=0.87%		32.05	0.24
	Plateau ± 2σ	no plateau		n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps A-K		n=11	MSWD=1136.60		$^{40}Ar/^{36}Ar$=	752.3±13.7		21.59	0.23

Notes:

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.
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 is inverse-variance-weighted mean of selected steps.
Plateau age error is inverse-variance-weighted mean error (Taylor, 1982) times root MSWD where MSWD>1.

Plateau error is weighted error of Taylor (1982).
Decay constants and isotopic abundances after Min et al. (2000).
symbol preceding sample ID denotes analyses excluded from plateau age calculations.
Weight percent K_2O calculated from ^{39}Ar signal, sample weight, and instrument sensitivity.
Ages calculated relative to FC-2 Fish Canyon Tuff sanidine interlaboratory standard at 28.201 Ma (Kuiper et al., 2008)
Decay Constant (LambdaK (total)) = 5.462e-10/a
Correction factors:
$(^{39}Ar/^{37}Ar)_{Ca}$ = 0.00068 ± 2e-05
$(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028 ± 1e-05
$(^{38}Ar/^{39}Ar)_{K}$ = 0.0125
$(^{40}Ar/^{39}Ar)_{K}$ = 0 ± 0.0004

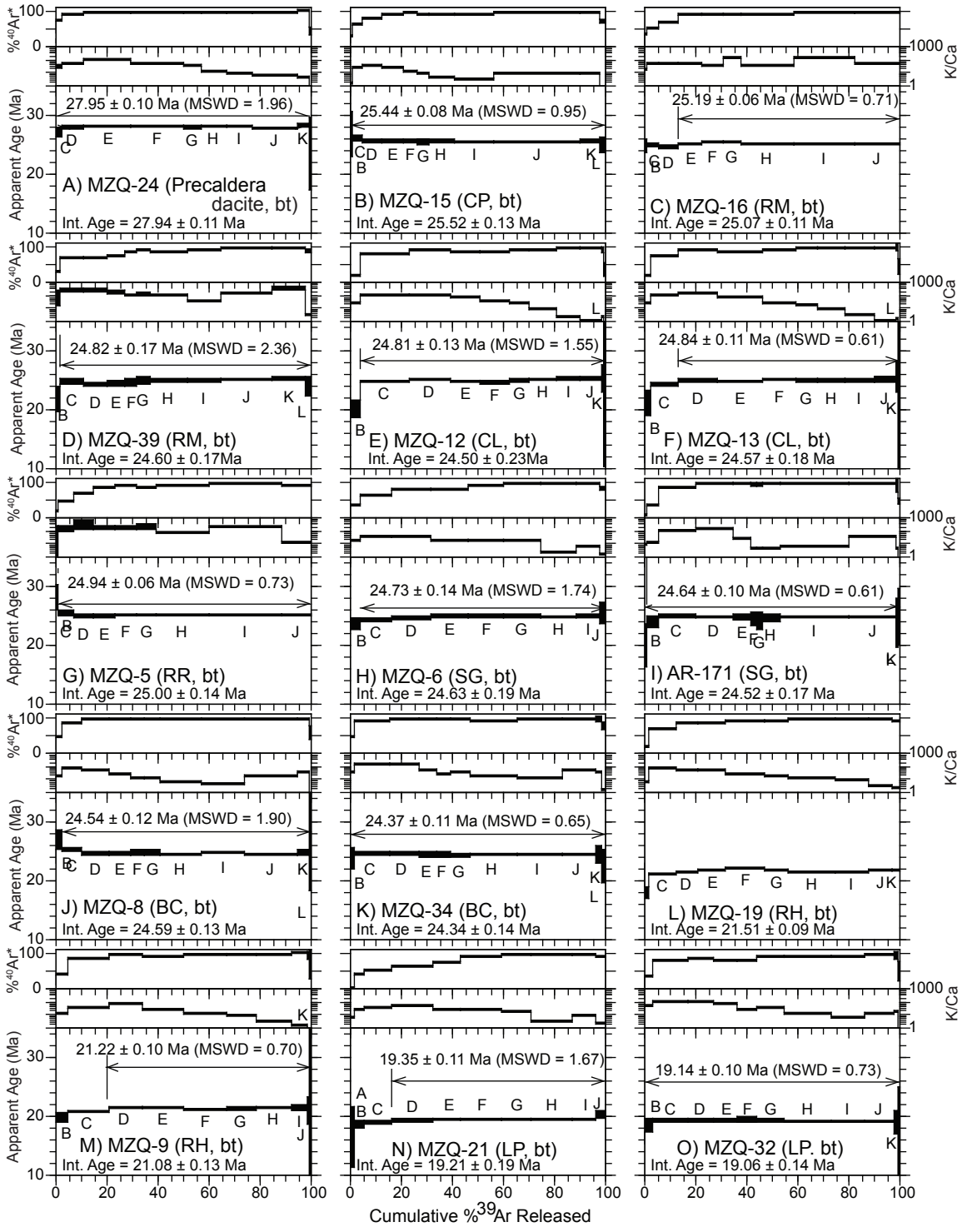


Figure 2. Age spectra for the Questa caldera biotite (bt), hornblende (hbl), and groundmass concentrate (gmc). Auxiliary plots include K/Ca and radiogenic yield (%^{40}Ar*). All errors are reported at 2 sigma.

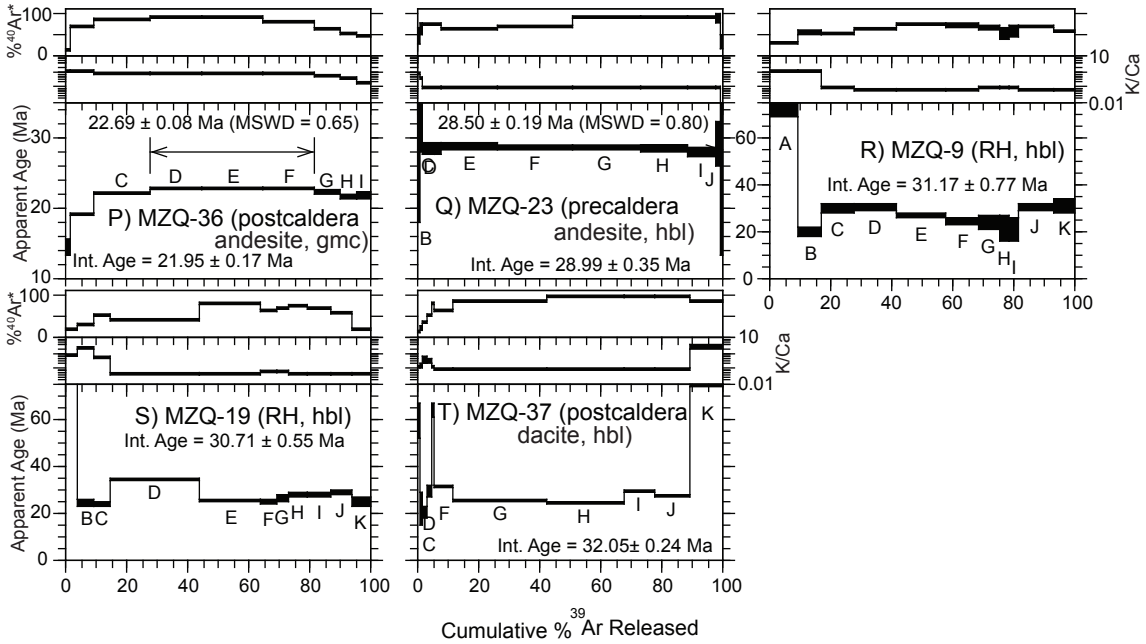


Figure 2. continued

Table 3. Questa K-feldspar $^{40}Ar/^{39}Ar$ analytical data.

	ID	Temp (°C)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$ (x 10^{-3})	$^{39}Ar_K$ (x 10^{-15} mol)	K/Ca	$^{40}Ar^*$ (%)	^{39}Ar (%)	Age (Ma)	±1σ (Ma)
	MZQ-1, K-Feldspar, 16.5 mg, J=0.0008946±0.05%, D=1.002±0.001, NM-196K, Lab#=56281-01										
X	B	500	1070.7	0.0117	3029.5	2.98	43.6	16.4	0.8	266.88	5.70
X	C	500	115.8	0.0151	322.8	1.118	33.7	17.6	1.0	33.08	1.27
X	D	550	214.3	0.0071	537.6	3.11	71.9	25.9	1.8	88.63	1.25
X	E	550	43.26	0.0105	86.74	2.65	48.5	40.8	2.5	28.65	0.36
X	F	600	106.4	0.0015	257.0	10.83	342.6	28.6	5.1	49.24	0.60
X	G	600	26.17	0.0028	34.54	5.77	181.9	61.0	6.5	25.95	0.20
X	H	650	46.18	0.0020	88.97	9.05	256.3	43.1	8.7	32.28	0.28
X	I	650	24.16	0.0024	28.98	5.98	209.3	64.6	10.1	25.37	0.15
X	J	700	67.06	0.0032	158.3	11.39	158.1	30.3	12.8	32.94	0.39
X	K	700	21.36	0.0009	18.94	6.55	574.0	73.8	14.3	25.63	0.16
X	L	750	48.46	0.0030	99.04	12.04	169.6	39.6	17.0	31.16	0.27
X	M	750	19.58	0.0020	13.04	7.21	258.4	80.3	18.6	25.58	0.12
X	N	800	32.61	0.0037	51.72	10.07	137.2	53.1	20.8	28.16	0.19
X	O	800	18.06	0.0033	9.703	6.66	154.0	84.1	22.3	24.71	0.10
X	P	850	20.86	0.0053	17.51	7.35	95.6	75.2	23.8	25.51	0.12
X	Q	850	17.63	0.0071	8.333	6.51	71.5	86.0	25.2	24.67	0.12
X	R	900	22.40	0.0037	23.09	8.57	136.5	69.5	27.0	25.34	0.13
X	S	900	19.20	0.0046	12.93	8.34	111.4	80.1	28.7	25.01	0.11
X	T	950	27.22	0.0025	34.98	14.02	204.7	62.0	31.5	27.44	0.13
X	U	950	23.45	0.0017	22.14	16.0	307.6	72.1	34.7	27.48	0.11
X	V	1000	26.51	0.0015	29.58	31.0	350.5	67.0	40.6	28.88	0.10
X	W	1000	22.70	0.0014	19.05	20.0	367.7	75.2	44.3	27.74	0.09
X	X	1050	23.60	0.0013	20.49	56.4	405.3	74.3	54.0	28.51	0.08
X	Y	1100	23.01	0.0011	19.25	87.6	477.9	75.3	67.7	28.15	0.07
X	Z	1150	23.08	0.0008	19.76	75.9	627.6	74.7	78.3	28.02	0.08
X	AA	1250	19.48	0.0005	9.384	151.4	954.0	85.8	96.6	27.15	0.05
X	AB	1300	24.15	0.0207	24.75	5.24	24.7	69.7	97.2	27.37	0.19
X	AC	1400	23.70	0.0182	22.18	10.83	28.0	72.4	98.4	27.86	0.13
X	AD	1700	23.21	0.0449	20.70	15.13	11.4	73.7	100.0	27.79	0.11
	Integrated age ± 2σ		n=29	MSWD=341.72	609.7	163.7	K2O=15.87%			29.76	0.24
	Plateau ± 2σ	no plateau	n=0	MSWD=0.00	0.000	0.000±0.000		0.0		0.00	0.00
	Isochron±2σ	steps B-AD	n=29	MSWD=106.09		$^{40}Ar/^{36}Ar$=	344.3±1.4			25.71	0.07
	MZQ-2, K-Feldspar, 14.4 mg, J=0.0008944±0.05%, D=1.002±0.001, NM-196K, Lab#=56282-01										
X	B	500	783.3	0.0173	2388.6	0.822	29.5	9.9	0.4	122.67	5.26
X	C	500	167.3	0.0384	508.3	0.484	13.3	10.2	0.6	27.82	2.39
X	D	550	147.3	0.0097	414.2	0.997	52.6	16.9	1.0	40.26	1.43
X	E	550	68.01	0.0124	179.5	1.158	41.2	22.0	1.5	24.34	0.89
X	F	600	89.26	0.0069	232.8	3.51	74.3	22.9	3.0	33.22	0.67
X	G	600	35.37	0.0045	65.77	2.31	113.4	45.1	4.0	25.90	0.40
X	H	650	39.77	0.0014	76.71	3.49	372.3	43.0	5.5	27.79	0.35
X	I	650	25.78	0.0037	35.09	3.00	139.4	59.8	6.8	25.06	0.28
X	J	700	39.80	0.0058	79.74	4.23	88.1	40.8	8.6	26.40	0.32
X	K	700	20.11	0.0036	15.65	3.90	141.2	77.0	10.2	25.18	0.20
X	L	750	34.21	0.0036	60.88	5.87	143.0	47.4	12.5	26.37	0.23
X	M	750	18.01	0.0053	8.184	4.88	96.5	86.6	14.5	25.34	0.14
X	N	800	25.57	0.0032	32.39	6.17	161.6	62.6	16.9	26.01	0.19
X	O	800	17.91	0.0026	8.517	4.45	197.2	85.9	18.7	25.03	0.17
X	P	850	26.51	0.0059	35.83	4.41	86.9	60.1	20.3	25.89	0.23
X	Q	850	20.58	0.0047	17.41	3.17	107.7	75.0	21.5	25.10	0.22

X	R	900	37.34	0.0028	73.13	4.13	181.3	42.1	23.1	25.57	0.31
X	S	900	27.61	0.0069	39.72	3.53	73.9	57.5	24.4	25.81	0.27
X	T	950	44.64	0.0036	94.71	7.46	141.8	37.3	27.1	27.06	0.29
X	U	950	33.99	0.0036	60.31	7.91	143.2	47.6	29.9	26.28	0.23
	V	1000	37.74	0.0020	71.16	17.4	251.4	44.3	35.9	27.16	0.21
	W	1000	30.73	0.0024	48.27	11.51	209.1	53.6	39.7	26.76	0.17
	X	1050	29.57	0.0023	44.29	34.7	222.9	55.7	50.6	26.79	0.14
	Y	1100	27.13	0.0018	35.90	66.4	291.1	60.9	68.8	26.85	0.11
	Z	1150	25.75	0.0019	31.34	47.6	265.0	64.0	80.2	26.79	0.10
	AA	1250	23.23	0.0048	22.76	35.9	107.4	71.1	88.0	26.83	0.09
	AB	1300	26.32	0.0135	32.70	17.4	37.7	63.3	91.6	27.08	0.14
	AC	1400	23.05	0.0060	22.32	31.0	84.4	71.4	97.7	26.74	0.09
X	AD	1700	21.22	0.0350	17.54	12.41	14.6	75.6	100.0	26.07	0.10
	Integrated age ± 2σ			n=29	MSWD=33.30	350.2	103.1	K2O=10.44%		26.99	0.24
	Plateau ± 2σ	steps V-AC		n=8	MSWD=1.02	261.9	204.6	±188.1	74.8	26.84	0.09
	Isochron±2σ	steps B-AD		n=29	MSWD=15.84		$^{40}Ar/^{36}Ar$=	311.7±1.6		25.62	0.11

MZQ-38, K-Feldspar, 18.15 mg, J=0.0007828±0.05%, D=1.004±0.001, NM-208L, Lab#=57191-01

X	B	570	344.6	0.0034	1004.7	2.48	148.8	13.8	1.7	67.11	1.99
X	C	570	56.66	0.0157	130.2	0.951	32.4	32.1	2.4	25.89	0.95
X	D	620	50.48	-0.0005	101.3	3.38	-	40.7	4.6	29.22	0.41
X	E	620	30.79	0.0011	44.58	1.614	454.4	57.2	5.7	25.07	0.54
X	F	670	31.11	0.0033	43.20	3.89	153.5	59.0	8.2	26.10	0.26
X	G	670	23.96	0.0066	22.71	2.082	77.6	72.0	9.5	24.56	0.35
X	H	670	24.07	0.0169	20.36	0.468	30.2	75.0	9.8	25.70	0.68
X	I	670	22.71	0.0035	16.93	1.471	145.3	78.0	10.7	25.19	0.22
X	J	720	22.39	-0.0001	15.27	3.05	-	79.9	12.5	25.45	0.19
X	K	720	21.05	0.0045	12.26	2.135	113.0	82.8	13.8	24.81	0.19
X	L	770	24.25	0.0040	21.03	5.65	128.4	74.4	17.1	25.67	0.15
X	M	770	19.86	0.0034	7.874	3.31	151.7	88.3	19.0	24.95	0.15
X	N	820	21.93	0.0020	13.61	6.85	249.4	81.7	22.7	25.48	0.11
X	O	820	19.25	0.0021	6.626	3.66	243.0	89.8	24.6	24.61	0.15
X	P	870	20.85	0.0008	11.24	5.29	653.5	84.1	27.3	24.94	0.11
X	Q	870	19.55	0.0037	7.168	3.49	136.6	89.2	29.0	24.80	0.14
X	R	920	21.77	0.0027	14.10	5.10	191.2	80.9	31.4	25.06	0.12
X	S	920	20.99	0.0024	12.07	2.67	215.2	83.0	32.7	24.80	0.20
X	T	970	25.87	0.0034	27.31	5.17	148.2	68.8	35.0	25.34	0.15
X	U	970	24.55	0.0036	23.61	3.43	141.1	71.6	36.5	25.00	0.18
X	V	1020	28.56	0.0003	33.86	8.92	1477.6	65.0	40.3	26.39	0.12
	W	1020	25.51	0.0022	25.19	7.00	234.1	70.8	43.2	25.70	0.13
	X	1070	25.72	0.0015	25.16	18.57	341.1	71.1	50.2	26.02	0.10
	Y	1070	23.34	0.0014	17.74	11.38	365.9	77.5	54.1	25.76	0.10
	Z	1120	23.68	0.0024	18.26	33.4	211.6	77.2	64.4	26.01	0.07
	AA	1120	22.79	0.0003	15.36	20.89	1485.3	80.1	70.0	25.97	0.09
	AB	1120	22.42	0.0017	14.38	24.8	299.4	81.0	75.9	25.86	0.07
	AC	1170	21.64	0.0016	11.27	88.0	324.3	84.6	92.6	26.04	0.05
	AD	1220	20.13	0.0031	6.714	9.59	166.7	90.1	94.1	25.81	0.08
	AE	1320	19.77	0.0010	5.225	36.1	488.3	92.2	99.3	25.94	0.05
	AF	1370	21.08	0.0011	8.784	1.349	454.3	87.7	99.4	26.30	0.35
X	AG	1470	24.99	-0.0076	16.33	0.306	-	80.7	99.5	28.66	1.25
X	AH	1770	24.28	0.0014	21.50	3.89	376.8	73.8	100.0	25.51	0.16
	Integrated age ± 2σ			n=33	MSWD=29.51	330.4	282.3	K2O=8.93%		26.19	0.14
	Plateau ± 2σ	steps W-AF		n=10	MSWD=1.87	251.2	422.3	±763.9	76.0	25.94	0.07
	Isochron±2σ	steps B-AH		n=33	MSWD=16.00		$^{40}Ar/^{36}Ar$=	317.5±2.3		25.33	0.07

MZQ-15, K-Feldspar, 15.56 mg, J=0.0007822±0.04%, D=1.004±0.001, NM-208L, Lab#=57187-01

X	B	570	3104.8	0.1172	9834.2	0.296	4.4	6.4	0.2	264.56	16.78

X	C	570	317.0	0.0748	984.0	0.838	6.8	8.3	0.9	37.26	2.73
X	D	620	196.6	0.0631	511.2	2.049	8.1	23.2	2.4	64.12	1.12
X	E	620	60.90	0.0483	137.3	1.286	10.6	33.4	3.3	28.88	0.83
X	F	670	50.79	0.0478	101.3	2.271	10.7	41.1	5.0	29.63	0.57
X	G	670	32.73	0.0403	54.68	1.942	12.7	50.6	6.3	23.59	0.48
X	H	720	35.69	0.0368	58.54	2.87	13.9	51.5	8.3	26.15	0.38
X	I	720	25.45	0.0329	26.66	2.71	15.5	69.1	10.2	24.99	0.34
X	J	770	30.90	0.0259	41.79	3.78	19.7	60.0	12.7	26.37	0.30
X	K	770	22.47	0.0269	16.02	4.07	19.0	78.9	15.3	25.22	0.22
X	L	820	26.13	0.0231	26.67	4.73	22.0	69.8	18.2	25.94	0.25
X	M	820	21.23	0.0206	11.40	5.38	24.8	84.1	21.4	25.40	0.17
X	N	870	25.70	0.0244	25.12	6.30	21.0	71.1	25.0	25.99	0.19
X	O	870	22.03	0.0244	15.25	4.65	20.9	79.6	27.6	24.92	0.20
X	P	920	28.85	0.0254	36.01	6.03	20.1	63.1	30.7	25.90	0.19
X	Q	920	29.25	0.0227	39.46	6.92	22.5	60.1	34.2	25.02	0.21
X	R	970	42.76	0.0169	81.19	7.08	30.1	43.9	37.6	26.68	0.29
X	S	970	37.21	0.0127	62.61	5.72	40.2	50.3	40.2	26.60	0.27
X	T	1020	52.70	0.0151	114.4	7.60	33.7	35.9	43.6	26.86	0.31
X	U	1020	43.29	0.0142	82.40	6.98	36.0	43.7	46.5	26.92	0.25
X	V	1070	51.17	0.0138	103.7	10.64	37.0	40.1	50.7	29.18	0.29
X	W	1070	41.53	0.0115	74.91	9.29	44.4	46.7	54.2	27.56	0.23
X	X	1120	42.39	0.0132	74.08	16.20	38.6	48.4	59.8	29.12	0.22
X	Y	1120	40.86	0.0143	68.92	16.10	35.7	50.2	64.9	29.11	0.20
X	Z	1170	35.86	0.0149	52.53	20.39	34.1	56.7	70.7	28.89	0.14
X	AA	1170	33.91	0.0142	43.17	26.7	36.0	62.4	77.4	30.05	0.13
X	AB	1220	30.77	0.0140	31.40	29.6	36.6	69.8	84.0	30.52	0.11
X	AC	1320	29.91	0.0128	27.93	69.8	39.9	72.4	96.5	30.75	0.09
X	AD	1370	31.02	0.0197	33.62	8.27	25.9	68.0	97.7	29.95	0.18
X	AE	1470	31.67	0.0154	36.10	10.71	33.1	66.3	99.3	29.83	0.15
X	AF	1770	34.90	0.0098	53.81	5.06	51.9	54.4	100.0	27.01	0.26
	Integrated age ± 2σ			n=31	MSWD=153.32	306.3	30.4	K2O=9.67%		29.37	0.27
	Plateau ± 2σ	no plateau		n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps B-AF		n=31	MSWD=125.35		$^{40}Ar/^{36}Ar$=	317.1±1.6		27.32	0.12

MZQ-16, K-Feldspar, 19.2 mg, J=0.0008971±0.05%, D=1.002±0.001, NM-196L, Lab#=56288-03

xi	B	500	2334.4	0.1257	7838.1	0.021	4.1	0.8	0.0	29.79	46.85
xi	C	500	93.12	0.0502	273.7	1.007	10.2	13.1	0.2	19.98	1.12
xi	D	550	41.89	0.0345	97.54	1.258	14.8	31.2	0.5	21.34	0.65
xi	E	550	19.51	0.0244	18.42	1.72	20.9	72.1	0.9	22.95	0.31
X	F	600	34.51	0.0215	63.96	4.34	23.7	45.2	1.9	25.45	0.33
xi	G	600	18.72	0.0164	13.67	3.62	31.1	78.4	2.7	23.95	0.19
X	H	650	24.64	0.0191	31.58	5.80	26.8	62.1	4.1	24.96	0.20
X	I	650	18.38	0.0136	10.38	5.31	37.6	83.3	5.3	24.97	0.14
X	J	700	21.79	0.0182	22.06	7.49	28.1	70.1	7.0	24.91	0.14
X	K	700	17.03	0.0085	5.780	7.45	59.9	90.0	8.7	24.99	0.17
X	L	750	23.13	0.0142	26.04	8.50	35.9	66.7	10.7	25.18	0.13
X	M	750	16.50	0.0111	4.115	9.43	46.2	92.6	12.9	24.93	0.09
X	N	800	21.30	0.0117	20.22	15.8	43.7	72.0	16.5	25.00	0.10
X	O	800	16.51	0.0095	4.210	13.17	53.8	92.5	19.5	24.91	0.08
X	P	850	21.53	0.0108	20.16	15.5	47.2	72.3	23.1	25.39	0.11
X	Q	850	17.73	0.0114	8.031	13.19	44.9	86.6	26.1	25.04	0.08
X	R	900	26.71	0.0139	37.98	15.31	36.7	58.0	29.6	25.27	0.14
X	S	900	22.01	0.0141	22.75	12.90	36.2	69.5	32.6	24.94	0.13
	T	950	38.23	0.0145	76.82	15.15	35.1	40.6	36.1	25.32	0.22
	U	950	29.63	0.0118	47.92	12.63	43.3	52.2	39.0	25.23	0.18
	V	1000	41.10	0.0102	85.76	17.6	50.0	38.3	43.0	25.69	0.23
	W	1000	31.19	0.0115	53.22	*10.29*	44.2	49.6	45.4	25.21	0.19
	X	1050	35.68	0.0115	67.85	23.9	44.5	43.8	50.9	25.50	0.18

	Y	1100	30.75	0.0137	51.87	44.4	37.2	50.2	61.1	25.15	0.15
	Z	1150	29.25	0.0158	46.31	47.6	32.4	53.2	72.0	25.39	0.14
	AA	1250	24.69	0.0157	30.61	55.2	32.5	63.4	84.7	25.52	0.10
	AB	1300	27.78	0.0257	40.83	7.08	19.8	56.6	86.3	25.64	0.20
X	AC	1400	28.04	0.0252	40.83	22.2	20.2	57.0	91.4	26.04	0.14
xi	AD	1700	26.05	0.0265	33.14	37.2	19.3	62.4	100.0	26.50	0.11
	Integrated age ± 2σ			n=29	MSWD=14.23	435.1	32.6		K2O=9.70%	25.38	0.21
	Plateau ± 2σ	steps T-AB		n=9	MSWD=1.19	223.6	36.8	±18.1	51.4	25.41	0.12
	Isochron±2σ	steps F-AC		n=23	MSWD=2.70		$^{40}Ar/^{36}Ar$=	301.4±1.8		24.94	0.09

MZQ-39, K-Feldspar, 18.39 mg, J=0.0007846±0.05%, D=1.004±0.001, NM-208L, Lab#=57192-01

X	B	570	84.75	0.0176	241.4	1.717	29.0	15.8	1.2	19.18	0.83
X	C	620	53.51	0.0186	127.4	2.53	27.4	29.6	3.0	22.64	0.46
X	D	620	39.41	0.0136	78.18	2.70	37.4	41.4	4.9	23.28	0.36
X	E	670	34.44	0.0124	59.01	3.63	41.1	49.4	7.3	24.26	0.27
X	F	670	28.21	0.0096	37.62	4.29	53.4	60.6	10.1	24.39	0.22
X	G	720	26.90	0.0089	33.70	4.49	57.5	63.0	12.9	24.18	0.19
X	H	720	23.21	0.0063	20.49	5.61	81.5	73.9	16.3	24.47	0.14
X	I	770	24.40	0.0066	24.79	6.81	77.5	70.0	20.3	24.36	0.13
	J	770	20.63	0.0068	11.03	8.18	75.1	84.2	24.8	24.78	0.10
	K	820	22.99	0.0069	19.34	8.15	74.4	75.1	29.0	24.64	0.11
	L	820	19.99	0.0072	9.162	9.86	70.9	86.5	33.8	24.66	0.08
	M	870	23.86	0.0077	21.89	8.87	65.8	72.9	37.9	24.81	0.11
	N	870	20.68	0.0068	10.36	10.66	74.6	85.2	42.4	25.14	0.08
	O	920	26.45	0.0093	30.33	9.07	55.1	66.1	46.1	24.95	0.13
	P	920	22.87	0.0099	18.49	10.71	51.3	76.1	50.2	24.83	0.10
	Q	970	32.38	0.0076	51.20	8.83	67.3	53.3	53.4	24.61	0.18
	R	970	26.93	0.0105	32.59	10.63	48.4	64.2	57.0	24.68	0.12
	S	1020	38.80	0.0091	72.39	9.10	56.0	44.9	60.0	24.84	0.23
	T	1020	31.96	0.0070	49.46	11.51	72.4	54.3	63.5	24.74	0.14
	U	1070	40.26	0.0082	77.47	10.31	62.0	43.1	66.4	24.77	0.19
	V	1070	33.61	0.0081	54.87	13.04	63.0	51.8	70.0	24.82	0.16
	W	1120	37.50	0.0095	68.18	11.77	53.5	46.3	73.0	24.75	0.20
	X	1120	32.47	0.0093	50.51	13.91	54.7	54.0	76.3	25.03	0.17
	Y	1170	34.39	0.0094	57.87	12.77	54.5	50.3	79.2	24.67	0.15
	Z	1170	34.51	0.0121	58.44	19.50	42.2	50.0	83.3	24.60	0.16
X	AA	1220	33.64	0.0128	53.95	9.67	39.8	52.6	85.2	25.25	0.17
X	AB	1320	27.39	0.0126	32.86	59.4	40.4	64.6	95.5	25.22	0.09
X	AC	1370	24.85	0.0111	24.62	18.24	45.8	70.7	98.2	25.07	0.10
X	AD	1470	29.51	0.0114	39.53	3.31	44.9	60.4	98.6	25.43	0.25
X	AE	1770	32.02	0.0119	47.66	9.89	42.7	56.0	100.0	25.59	0.14
	Integrated age ± 2σ			n=30	MSWD=7.55	319.2	50.9		K2O=8.50%	24.83	0.19
	Plateau ± 2σ	steps J-Z		n=17	MSWD=1.80	186.9	59.8	±20.4	58.5	24.80	0.09
	Isochron±2σ	steps B-AE		n=30	MSWD=7.11		$^{40}Ar/^{36}Ar$=	292.5±1.8		24.96	0.10

MZQ-12, K-Feldspar, 17.59 mg, J=0.0007856±0.04%, D=1.004±0.001, NM-208L, Lab#=57185-01

X	B	570	50.36	-0.0569	104.6	0.164	-	38.6	0.0	27.77	3.04
xi	C	620	62.83	-0.0174	129.9	0.493	-	38.9	0.2	34.80	1.63
X	D	620	29.22	-0.0264	36.25	0.408	-	63.3	0.3	26.42	1.22
X	E	670	33.54	0.0157	49.53	0.878	32.4	56.4	0.5	26.99	0.61
X	F	670	23.75	-0.0284	18.83	0.588	-	76.6	0.7	25.96	0.80
X	G	720	23.72	0.0159	19.30	1.233	32.1	76.0	1.0	25.73	0.48
X	H	720	20.36	0.0034	8.596	1.450	148.2	87.5	1.4	25.45	0.37
X	I	770	20.23	0.0121	9.665	2.40	42.2	85.9	2.0	24.81	0.23
X	J	770	19.21	0.0078	6.042	2.261	65.3	90.7	2.7	24.89	0.23
X	K	820	18.87	0.0047	5.282	3.43	108.5	91.7	3.6	24.72	0.16
X	L	820	18.52	0.0079	4.021	3.37	64.2	93.6	4.5	24.75	0.15

X	M	870	18.72	0.0115	4.623	4.51	44.5	92.7	5.7	24.79	0.12
X	N	870	18.40	0.0075	3.225	4.56	68.2	94.8	6.9	24.92	0.13
X	O	920	18.67	0.0116	3.621	5.85	44.1	94.3	8.5	25.13	0.11
X	P	920	18.38	0.0091	3.618	5.96	56.3	94.2	10.1	24.72	0.11
X	Q	970	18.62	0.0106	3.812	6.92	48.0	94.0	12.0	24.98	0.09
X	R	970	18.47	0.0080	2.920	6.73	64.0	95.3	13.8	25.14	0.11
X	S	1020	19.17	0.0106	6.129	7.97	48.2	90.6	15.9	24.80	0.09
X	T	1020	18.65	0.0094	4.200	8.16	54.2	93.3	18.1	24.87	0.10
X	U	1070	19.98	0.0093	8.839	8.57	54.9	86.9	20.4	24.82	0.09
X	V	1070	19.27	0.0089	5.980	8.68	57.1	90.8	22.8	24.99	0.09
X	W	1120	21.37	0.0108	13.44	8.80	47.4	81.4	25.1	24.85	0.09
X	X	1120	20.53	0.0089	9.661	8.81	57.3	86.1	27.5	25.25	0.09
X	Y	1170	23.70	0.0104	20.92	12.93	49.2	73.9	31.0	25.02	0.11
	Z	1170	24.00	0.0105	21.46	16.81	48.5	73.6	35.5	25.22	0.09
	AA	1220	22.47	0.0109	16.41	24.3	46.7	78.4	42.1	25.16	0.08
	AB	1320	21.04	0.0108	10.98	126.3	47.2	84.6	76.1	25.41	0.05
	AC	1370	20.50	0.0095	9.498	27.4	53.8	86.3	83.4	25.27	0.07
X	AD	1470	21.57	0.0098	12.09	17.02	52.1	83.4	88.0	25.70	0.08
X	AE	1770	21.25	0.0108	11.44	44.5	47.5	84.1	100.0	25.52	0.06
	Integrated age ± 2σ			n=30	MSWD=9.10	371.4	50.5	K2O=10.32%		25.29	0.10
	Plateau ± 2σ	steps Z-AC		n=4	MSWD=2.81	194.7	48.2 ±6.5		52.4	25.31	0.12
	Isochron±2σ	steps B-AE		n=29	MSWD=6.05		$^{40}Ar/^{36}Ar$=	317.1±5.7		24.88	0.09

MZQ-13, K-Feldspar, 18.5 mg, J=0.0008965±0.05%, D=1.002±0.001, NM-196L, Lab#=56287-01

X	B	500	2674.8	0.2028	8651.7	0.154	2.5	4.4	0.0	184.38	21.89
X	C	500	477.6	0.1404	1556.2	0.311	3.6	3.7	0.1	28.88	4.89
X	D	550	684.4	0.0959	2217.0	0.529	5.3	4.3	0.2	47.45	5.88
X	E	550	247.2	0.0798	777.9	0.750	6.4	7.0	0.4	28.28	2.74
X	F	600	212.7	0.0495	661.1	2.35	10.3	8.1	1.0	28.17	1.68
X	G	600	92.22	0.0421	257.1	1.96	12.1	17.6	1.5	26.51	0.90
X	H	650	84.81	0.0422	229.8	3.43	12.1	19.9	2.3	27.55	7.88
X	I	650	58.31	0.0420	142.3	3.11	12.1	27.9	3.1	26.50	0.51
X	J	700	52.42	0.0413	125.0	4.47	12.3	29.5	4.2	25.23	0.43
X	K	700	33.88	0.0422	63.27	4.47	12.1	44.8	5.3	24.76	0.29
X	L	750	41.77	0.0380	88.96	6.28	13.4	37.1	6.7	25.23	0.31
X	M	750	23.17	0.0383	26.36	5.51	13.3	66.4	8.0	25.08	0.18
X	N	800	32.14	0.0355	56.31	7.34	14.4	48.2	9.8	25.26	0.22
X	O	800	22.63	0.0399	24.90	5.87	12.8	67.5	11.1	24.90	0.18
X	P	850	35.69	0.0323	68.81	7.04	15.8	43.0	12.7	25.04	0.25
X	Q	850	21.58	0.0355	21.93	5.69	14.4	70.0	14.0	24.61	0.17
X	R	900	45.80	0.0276	102.3	7.48	18.5	34.0	15.7	25.40	0.34
X	S	900	28.53	0.0266	45.30	6.28	19.2	53.1	17.1	24.69	0.23
	T	950	68.45	0.0190	180.3	9.74	26.9	22.2	19.2	24.72	0.44
	U	950	41.79	0.0197	90.07	8.15	25.9	36.3	20.9	24.74	0.29
	W	1000	46.10	0.0173	104.5	8.67	29.4	33.0	22.8	24.82	0.34
	X	1050	57.33	0.0141	142.0	24.0	36.2	26.8	27.7	25.08	0.34
	Y	1100	43.63	0.0143	96.14	54.7	35.6	34.9	38.3	24.81	0.23
	Z	1150	37.58	0.0136	75.56	70.1	37.6	40.6	50.7	24.86	0.19
	AA	1250	29.31	0.0140	47.07	140.6	36.5	52.5	72.1	25.10	0.12
	AB	1300	31.73	0.0249	54.95	30.3	20.5	48.8	76.2	25.26	0.16
X	AC	1400	33.64	0.0154	60.81	100.0	33.2	46.6	88.7	25.54	0.15
X	AD	1700	32.29	0.0088	56.07	102.0	57.7	48.7	100.0	25.62	0.14
	Integrated age ± 2σ			n=28	MSWD=4.69	621.3	30.2	K2O=14.39%		25.30	0.36
	Plateau ± 2σ	steps T-AB		n=8	MSWD=0.85	346.3	34.5 ±12.6		55.7	25.02	0.15
	Isochron±2σ	steps B-AD		n=28	MSWD=3.15		$^{40}Ar/^{36}Ar$=	299.5±1.3		24.73	0.16

MZQ-5, K-Feldspar, 18.4 mg, J=0.000894±0.05%, D=1.002±0.001, NM-196K, Lab#=56283-01

X	B	500	1597.4	0.0846	4841.2	0.474	6.0	10.4	0.2	254.57	10.21
X	C	500	326.1	0.0946	1045.2	0.247	5.4	5.3	0.3	27.99	5.07
X	D	550	395.3	0.0558	1217.2	0.498	9.1	9.0	0.4	57.33	3.62
X	E	550	157.8	0.0612	484.0	0.569	8.3	9.4	0.7	24.13	2.15
X	F	600	183.2	0.0534	537.3	1.89	9.6	13.3	1.3	39.52	1.42
X	G	600	68.82	0.0383	185.7	1.358	13.3	20.3	1.8	22.69	0.82
X	H	650	84.62	0.0401	225.9	2.40	12.7	21.1	2.7	29.02	0.67
X	I	650	42.08	0.0375	95.68	2.09	13.6	32.8	3.4	22.45	0.47
X	J	700	52.51	0.0390	124.6	3.05	13.1	29.9	4.5	25.50	0.51
X	K	700	31.22	0.0376	56.84	2.57	13.6	46.2	5.4	23.46	0.37
X	L	750	38.28	0.0308	77.97	3.88	16.6	39.8	6.8	24.77	0.36
X	M	750	24.96	0.0231	35.85	2.62	22.0	57.6	7.7	23.36	0.29
X	N	800	31.74	0.0240	58.87	3.55	21.2	45.2	8.9	23.33	0.31
X	O	800	21.20	0.0236	23.71	5.15	21.6	67.0	10.7	23.09	0.17
X	P	850	26.47	0.0195	39.96	5.83	26.2	55.4	12.6	23.84	0.21
X	Q	850	19.65	0.0195	18.00	5.02	26.2	72.9	14.3	23.31	0.15
X	R	900	30.16	0.0210	52.69	6.49	24.3	48.4	16.4	23.73	0.23
X	S	900	21.74	0.0198	24.71	5.45	25.8	66.4	18.2	23.48	0.16
X	T	950	37.24	0.0174	75.53	5.85	29.3	40.1	20.0	24.25	0.27
X	U	950	26.12	0.0156	39.78	7.25	32.8	55.0	22.3	23.37	0.17
X	V	1000	37.23	0.0126	75.25	10.92	40.6	40.3	25.6	24.38	0.23
X	W	1000	27.29	0.0146	42.53	7.38	35.0	54.0	27.8	23.94	0.16
X	X	1050	30.42	0.0140	52.61	20.5	36.5	48.9	33.8	24.18	0.16
X	Y	1100	25.80	0.0137	37.14	41.9	37.1	57.5	45.1	24.11	0.11
X	Z	1150	23.47	0.0152	28.53	47.0	33.5	64.1	56.6	24.44	0.09
X	AA	1250	20.15	0.0131	16.71	102.9	39.0	75.5	78.4	24.74	0.07
X	AB	1300	21.21	0.0152	19.90	34.0	33.5	72.3	84.7	24.93	0.08
X	AC	1400	20.57	0.0151	18.00	71.2	33.7	74.1	96.7	24.79	0.07
X	AD	1700	20.79	0.0219	19.83	20.9	23.3	71.8	100.0	24.28	0.09
	Integrated age ± 2σ			n=29	MSWD=40.00	423.0	31.0	K2O=9.88%		24.85	0.21
	Plateau ± 2σ	no plateau		n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps B-AD		n=29	MSWD=29.80		$^{40}Ar/^{36}Ar$=	306.0±1.3		23.92	0.09

MZQ-6, K-Feldspar, 16.7 mg, J=0.0008961±0.06%, D=1.002±0.001, NM-196L, Lab#=56284-01

X	B	500	1696.7	0.0459	4706.2	0.519	11.1	18.0	0.2	443.61	9.76
X	C	500	235.9	0.0359	750.9	0.395	14.2	5.9	0.3	22.83	3.07
X	D	550	275.4	0.0202	804.9	0.765	25.3	13.6	0.5	60.59	2.31
X	E	550	121.7	0.0301	359.9	1.013	16.9	12.6	0.9	24.94	1.42
X	F	600	131.0	0.0187	355.4	3.13	27.3	19.8	1.9	42.18	0.95
X	G	600	52.23	0.0115	127.7	2.45	44.2	27.8	2.6	23.64	0.51
X	H	650	47.95	0.0115	107.1	4.12	44.3	34.0	3.9	26.57	0.43
X	I	650	29.53	0.0076	53.45	3.66	67.1	46.5	5.1	22.39	0.28
X	J	700	29.56	0.0089	50.46	5.02	57.4	49.6	6.6	23.88	0.24
X	K	700	20.34	0.0060	22.83	4.73	85.2	66.8	8.1	22.16	0.18
X	L	750	23.55	0.0083	30.40	6.30	61.2	61.9	10.0	23.75	0.18
X	M	750	17.33	0.0060	12.02	5.55	85.6	79.5	11.6	22.47	0.15
X	N	800	22.43	0.0081	26.43	7.37	63.2	65.2	13.8	23.83	0.16
X	O	800	16.46	0.0066	8.580	5.94	77.7	84.6	15.5	22.70	0.13
X	P	850	22.24	0.0075	27.16	7.19	68.3	63.9	17.6	23.17	0.16
X	Q	850	17.17	0.0055	10.68	6.37	92.5	81.6	19.4	22.85	0.13
X	R	900	25.88	0.0076	38.48	8.79	66.8	56.1	21.8	23.65	0.17
X	S	900	20.67	0.0069	21.70	7.53	74.4	69.0	23.8	23.24	0.14
X	T	950	32.36	0.0053	58.24	10.39	96.0	46.8	26.6	24.69	0.20
X	U	950	26.12	0.0059	38.23	9.44	86.0	56.7	29.1	24.16	0.16
X	V	1000	36.70	0.0056	69.33	15.36	91.1	44.2	33.0	26.41	0.20
X	W	1000	29.77	0.0055	47.70	10.11	93.5	52.7	35.5	25.53	0.18
	X	1050	34.26	0.0051	59.76	26.5	100.6	48.5	41.9	27.04	0.17
	Y	1100	30.53	0.0056	47.15	52.4	91.6	54.4	53.5	27.03	0.13

	Z	1150	26.29	0.0072	33.36	83.7	70.6	62.5	70.0	26.76	0.10
	AA	1250	22.75	0.0050	21.60	111.6	102.0	72.0	88.6	26.66	0.07
	AB	1300	24.59	0.0089	27.66	18.6	57.4	66.8	91.4	26.73	0.10
	AC	1400	22.66	0.0053	20.89	39.2	96.8	72.8	97.1	26.85	0.09
X	AD	1700	21.55	0.0143	17.63	21.4	35.6	75.8	100.0	26.62	0.09
	Integrated age ± 2σ			n=29	MSWD=223.36	479.6	75.7	K2O=12.31%		26.78	0.22
	Plateau ± 2σ steps X-AC			n=6	MSWD=1.90	332.0	89.2 ±36.5		69.2	26.79	0.12
	Isochron±2σ steps B-AD			n=29	MSWD=147.62		$^{40}Ar/^{36}Ar$=	327.1±1.5		24.02	0.10
	MZQ-8, K-Feldspar, 14.5 mg, J=0.0008959±0.06%, D=1.002±0.001, NM-196L, Lab#=56285-01										
X	B	500	2222.4	0.1025	7288.4	0.342	5.0	3.1	0.1	109.34	15.98
X	C	500	316.2	0.1258	1007.5	0.236	4.1	5.8	0.2	30.06	4.56
X	D	550	293.6	0.0677	931.2	0.515	7.5	6.3	0.4	29.99	3.32
X	E	550	159.7	0.0336	502.3	0.640	15.2	7.1	0.6	18.37	1.82
X	F	600	170.9	0.0237	526.6	2.18	21.6	8.9	1.3	24.90	1.37
X	G	600	67.52	0.0242	184.2	1.59	21.1	19.4	1.8	21.35	0.72
X	H	650	57.00	0.0166	148.5	2.79	30.7	23.0	2.7	21.41	0.55
X	I	650	44.13	0.0132	102.3	2.50	38.7	31.5	3.5	22.66	0.47
X	J	700	39.91	0.0146	86.28	3.54	34.9	36.1	4.7	23.49	0.38
X	K	700	28.71	0.0142	49.24	3.46	35.9	49.3	5.8	23.08	0.24
X	L	750	31.80	0.0127	58.50	5.15	40.0	45.6	7.4	23.64	0.27
X	M	750	21.13	0.0093	23.61	4.82	54.7	67.0	8.9	23.07	0.17
X	N	800	25.73	0.0111	38.42	7.34	45.8	55.9	11.1	23.43	0.18
X	O	800	18.30	0.0089	13.02	5.88	57.2	79.0	12.9	23.54	0.12
X	P	850	25.06	0.0081	35.00	7.16	63.1	58.7	15.0	23.98	0.18
X	Q	850	18.05	0.0098	12.26	5.95	52.0	79.9	16.8	23.51	0.13
X	R	900	29.16	0.0109	49.87	7.94	46.8	49.5	19.1	23.50	0.19
X	S	900	20.79	0.0106	21.53	6.45	48.3	69.4	20.9	23.51	0.15
X	T	950	35.07	0.0111	69.76	8.46	46.1	41.2	23.3	23.55	0.24
X	U	950	26.18	0.0089	40.09	6.55	57.3	54.8	25.1	23.35	0.20
	V	1000	37.39	0.0080	77.28	10.04	64.0	38.9	27.8	23.72	0.25
	X	1050	35.23	0.0091	70.10	18.7	56.2	41.2	32.8	23.65	0.19
	Y	1100	29.82	0.0084	52.04	44.6	60.7	48.4	43.8	23.53	0.14
	Z	1150	26.95	0.0076	42.23	50.8	67.0	53.7	55.2	23.59	0.12
	AA	1250	22.59	0.0040	26.74	122.4	126.6	65.0	78.7	23.93	0.08
	AB	1300	28.21	0.0064	45.56	21.6	79.5	52.3	82.4	24.02	0.13
X	AC	1400	26.66	0.0049	39.21	51.6	104.6	56.5	90.6	24.55	0.12
X	AD	1700	25.38	0.0068	34.76	64.6	74.6	59.5	100.0	24.60	0.10
	Integrated age ± 2σ			n=28	MSWD=9.31	467.8	70.3	K2O=13.83%		23.98	0.25
	Plateau ± 2σ steps V-AB			n=6	MSWD=2.59	268.2	93.3 ±52.3		57.3	23.79	0.17
	Isochron±2σ steps B-AD			n=28	MSWD=9.24		$^{40}Ar/^{36}Ar$=	296.5±1.4		23.74	0.11
	MZQ-34, K-Feldspar, 18.03 mg, J=0.0007812±0.05%, D=1.004±0.001, NM-208L, Lab#=57190-01										
X	B	520	161.0	0.0304	480.1	0.315	16.8	11.9	0.2	27.09	2.91
X	C	570	153.2	0.0466	438.4	0.390	10.9	15.4	0.4	33.51	1.96
X	D	570	129.1	-7.3605	1530.8	0.032	-	-250.7	0.4	-530.73	1558.80
X	E	620	85.91	0.0187	232.4	1.435	27.4	20.1	1.1	24.51	0.86
X	F	620	32.40	0.0174	59.02	1.887	29.4	46.2	2.0	21.27	0.46
X	G	670	36.79	0.0151	72.06	2.146	33.8	42.1	3.1	22.03	0.43
X	H	670	23.68	0.0089	29.82	2.31	57.6	62.8	4.2	21.15	0.28
X	I	720	28.47	0.0126	43.52	2.36	40.6	54.8	5.4	22.19	0.32
X	J	720	21.27	0.0088	19.94	3.00	57.9	72.3	6.8	21.87	0.23
X	K	770	31.84	0.0114	53.62	2.86	44.9	50.2	8.1	22.73	0.33
X	L	770	19.35	0.0082	12.52	3.99	62.1	80.9	9.9	22.25	0.18
X	M	820	24.27	0.0073	28.32	3.72	70.2	65.5	11.6	22.61	0.25
X	N	820	19.24	0.0107	10.73	4.23	47.6	83.5	13.4	22.83	0.15
X	O	870	26.34	0.0125	34.46	3.76	40.8	61.3	15.1	22.96	0.22

X	P	870	19.52	0.0077	12.88	4.16	66.1	80.5	16.8	22.33	0.16
X	Q	920	31.25	0.0087	50.98	3.31	58.9	51.8	18.2	23.01	0.29
X	R	920	22.78	0.0106	22.14	4.08	48.3	71.3	19.8	23.07	0.19
X	S	970	38.60	0.0111	76.70	3.59	46.1	41.3	21.2	22.65	0.31
	T	970	26.31	0.0079	36.08	4.20	64.3	59.5	22.9	22.24	0.20
	U	1020	41.98	0.0081	88.17	5.07	63.0	37.9	24.8	22.63	0.30
	V	1020	30.20	0.0091	48.80	5.83	56.1	52.3	27.0	22.43	0.21
	W	1070	40.28	0.0069	82.87	7.28	73.9	39.2	29.6	22.44	0.27
	X	1070	32.08	0.0050	55.91	9.67	102.9	48.5	32.9	22.11	0.16
	Y	1120	36.43	0.0059	70.85	13.42	86.3	42.5	37.3	22.02	0.19
	Z	1120	31.07	0.0050	52.39	18.22	101.1	50.2	42.8	22.17	0.15
	AA	1170	30.56	0.0069	50.94	26.8	74.4	50.7	50.2	22.04	0.13
	AB	1170	26.66	0.0069	37.11	36.0	74.3	58.9	58.9	22.31	0.10
	AC	1170	22.63	0.0059	23.47	53.5	87.1	69.3	69.9	22.30	0.08
	AD	1170	21.23	0.0054	18.18	49.1	94.2	74.7	78.3	22.54	0.07
X	AE	1270	21.05	0.0036	17.27	39.7	141.4	75.8	84.2	22.67	0.07
X	AF	1320	21.43	0.0018	16.90	97.6	276.5	76.7	96.1	23.35	0.06
X	AG	1420	22.33	0.0030	19.82	16.83	168.9	73.8	97.8	23.41	0.10
X	AH	1770	23.35	0.0039	22.38	22.28	129.5	71.7	100.0	23.78	0.10
	Integrated age ± 2σ			n=33	MSWD=15.90	453.1	106.9	K2O=12.36%		22.68	0.17
	Plateau ± 2σ steps T-AD			n=11	MSWD=2.15	229.070	84.687±31.416		50.6	22.33	0.11
	Isochron±2σ steps B-AH			n=33	MSWD=15.29		$^{40}Ar/^{36}Ar$=	291.1±1.9		22.90	0.09

MZQ-9, K-Feldspar, 12.4 mg, J=0.0008961±0.05%, D=1.002±0.001, NM-196L, Lab#=56286-01

X	B	460	967.8	0.0236	2085.6	0.654	21.6	36.3	0.2	501.25	6.59
X	C	460	180.5	0.0826	510.0	0.151	6.2	16.5	0.3	48.16	3.80
X	D	510	152.6	0.0405	323.1	0.474	12.6	37.4	0.4	91.40	1.90
X	E	510	65.40	0.0347	157.6	0.486	14.7	28.8	0.6	30.64	1.24
X	F	560	119.2	0.0198	236.2	1.60	25.7	41.4	1.1	79.29	0.86
X	G	560	26.20	0.0337	44.53	1.34	15.2	49.8	1.5	21.26	0.41
X	H	610	50.33	0.0217	85.19	4.20	23.5	50.0	2.8	40.82	0.34
X	I	610	14.97	0.0178	13.18	2.98	28.6	74.0	3.7	18.07	0.17
X	J	660	15.14	0.0147	11.58	4.56	34.8	77.4	5.2	19.12	0.13
X	K	660	12.11	0.0114	5.004	4.40	44.6	87.8	6.5	17.35	0.11
X	L	710	11.81	0.0108	3.815	5.46	47.4	90.5	8.2	17.44	0.09
X	M	710	11.26	0.0077	2.662	5.67	66.3	93.0	10.0	17.09	0.09
X	N	760	11.63	0.0085	3.613	6.65	60.3	90.8	12.0	17.24	0.08
X	O	760	11.24	0.0072	2.957	6.15	70.8	92.2	13.9	16.93	0.09
X	P	810	12.58	0.0082	6.308	6.77	62.0	85.2	16.0	17.50	0.10
X	Q	810	11.34	0.0078	4.039	5.60	65.6	89.5	17.7	16.56	0.09
X	R	860	12.27	0.0096	6.437	5.07	53.0	84.5	19.3	16.93	0.11
X	S	860	11.87	0.0083	6.101	4.54	61.3	84.8	20.6	16.44	0.11
X	T	910	14.85	0.0117	14.77	4.93	43.5	70.6	22.1	17.12	0.14
X	U	910	14.15	0.0094	11.93	5.07	54.2	75.1	23.6	17.34	0.11
X	V	960	18.76	0.0106	24.16	6.90	48.0	62.0	25.7	18.97	0.13
X	W	960	17.74	0.0069	19.03	8.69	74.3	68.3	28.3	19.77	0.11
X	X	1010	20.50	0.0066	25.72	14.0	77.3	62.9	32.5	21.04	0.11
X	Y	1010	18.13	0.0058	18.57	17.4	87.2	69.7	37.6	20.63	0.09
X	Z	1060	19.28	0.0067	21.47	24.8	76.1	67.1	44.7	21.09	0.08
X	AA	1060	16.38	0.0064	14.34	20.0	79.3	74.1	50.4	19.81	0.07
X	AB	1110	17.34	0.0069	15.17	20.9	74.0	74.1	56.3	20.97	0.09
X	AC	1110	16.33	0.0079	13.04	16.9	64.2	76.4	61.0	20.36	0.07
X	AD	1110	15.57	0.0085	10.54	21.3	60.3	80.0	66.8	20.32	0.07
X	AE	1110	15.48	0.0092	9.475	22.7	55.7	81.9	73.0	20.68	0.06
X	AF	1210	16.11	0.0065	9.099	30.2	79.1	83.3	81.0	21.88	0.06
X	AG	1260	15.43	0.0054	7.074	40.3	94.1	86.5	91.5	21.75	0.06
X	AH	1360	16.40	0.0291	10.57	6.12	17.5	81.0	93.1	21.66	0.11
X	AI	1700	15.79	0.0309	9.393	27.2	16.5	82.4	100.0	21.22	0.06

	Integrated age ± 2σ		n=34	MSWD=855.96	354.2	49.9	K2O=12.24%		21.88	0.12
	Plateau ± 2σ	no plateau	n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps B-AI	n=34	MSWD=240.35		$^{40}Ar/^{36}Ar$=	445.8±2.5		17.38	0.06
	MZQ-33, K-Feldspar, 16.69 mg, J=0.0007807±0.04%, D=1.004±0.001, NM-208L, Lab#=57189-01									
X	B	520	546.8	0.0760	1382.5	0.339	6.7	25.3	0.2	187.63	4.01
X	C	520	172.5	0.0517	494.1	0.436	9.9	15.4	0.4	37.54	2.58
X	D	570	206.6	0.0345	438.3	1.219	14.8	37.3	1.1	106.96	1.41
X	E	570	54.11	0.0321	138.5	1.055	15.9	24.4	1.6	18.76	0.80
X	F	620	87.96	0.0158	165.9	3.11	32.3	44.3	3.3	54.82	0.53
X	G	620	24.93	0.0184	44.73	2.33	27.8	47.0	4.5	16.66	0.34
X	H	670	28.10	0.0123	41.49	4.04	41.3	56.4	6.6	22.50	0.26
X	I	670	17.88	0.0069	21.00	3.67	73.5	65.3	8.4	16.60	0.20
X	J	720	18.95	0.0070	19.66	4.64	73.3	69.4	10.7	18.69	0.17
X	K	720	15.34	0.0060	13.30	5.19	85.5	74.4	13.1	16.24	0.14
X	L	770	18.16	0.0066	16.62	6.86	77.6	73.0	16.3	18.84	0.14
X	M	770	14.24	0.0077	9.348	6.15	66.5	80.6	19.0	16.32	0.13
X	N	820	16.28	0.0049	12.11	6.34	105.1	78.0	21.7	18.06	0.14
X	O	820	14.58	0.0078	8.886	5.64	65.7	82.0	24.0	17.00	0.13
X	P	870	17.01	0.0039	13.80	5.89	131.2	76.0	26.4	18.39	0.13
X	Q	870	15.75	0.0096	13.46	4.38	53.4	74.8	28.1	16.75	0.18
X	R	920	18.39	0.0108	20.06	4.09	47.3	67.8	29.7	17.73	0.18
X	S	920	18.03	0.0100	19.67	3.70	50.9	67.8	31.1	17.38	0.20
X	T	970	25.22	0.0096	40.58	4.48	52.9	52.5	32.7	18.81	0.22
X	U	970	23.54	0.0071	34.49	5.16	71.4	56.7	34.5	18.98	0.19
X	V	1020	31.58	0.0068	53.15	7.72	75.0	50.3	37.2	22.54	0.18
X	W	1020	27.57	0.0066	41.01	9.75	77.2	56.0	40.5	21.94	0.16
X	X	1070	30.98	0.0055	47.03	16.30	92.5	55.1	45.5	24.25	0.15
X	Y	1070	24.89	0.0044	30.80	18.66	115.0	63.4	50.9	22.43	0.12
X	Z	1120	26.36	0.0052	33.06	28.3	98.8	62.9	58.3	23.56	0.11
X	AA	1120	21.39	0.0053	20.62	26.7	96.9	71.5	64.5	21.73	0.09
X	AB	1170	22.13	0.0064	21.16	36.1	79.8	71.7	71.9	22.55	0.08
X	AC	1170	19.95	0.0066	16.16	36.1	77.5	76.1	78.4	21.56	0.07
X	AD	1170	18.81	0.0056	13.66	38.5	91.9	78.5	84.5	20.99	0.06
X	AE	1170	19.26	0.0037	15.56	30.7	138.2	76.1	88.9	20.83	0.07
X	AF	1270	18.11	0.0046	8.992	19.95	111.9	85.3	91.5	21.96	0.07
X	AG	1320	18.73	0.0022	9.856	44.0	228.5	84.5	96.8	22.47	0.05
X	AH	1420	20.43	0.0048	14.52	12.27	107.0	79.0	98.1	22.92	0.11
X	AI	1770	20.40	0.0027	14.77	17.97	189.8	78.6	100.0	22.77	0.08
	Integrated age ± 2σ		n=34	MSWD=594.81	421.9	89.1	K2O=12.44%		22.09	0.13
	Plateau ± 2σ	no plateau	n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps B-AI	n=34	MSWD=268.27		$^{40}Ar/^{36}Ar$=	397.4±2.5		18.85	0.08
	MZQ-10, K-Feldspar, 18.85 mg, J=0.000784±0.04%, D=1.004±0.001, NM-208L, Lab#=57186-01									
X	B	570	567.1	0.0050	1870.9	5.89	101.6	2.5	3.2	20.30	3.36
X	C	570	100.5	0.0064	303.1	5.04	79.2	10.9	5.9	15.61	0.65
X	D	620	63.16	0.0040	175.3	9.47	127.3	18.0	10.7	16.24	0.42
X	E	620	50.32	0.0029	130.1	6.40	175.5	23.6	13.8	16.94	0.35
X	F	670	43.71	0.0034	107.9	7.87	152.3	27.1	17.4	16.89	0.28
X	G	670	38.17	0.0056	90.42	5.76	90.4	30.0	20.0	16.36	0.32
X	H	720	34.10	0.0012	76.13	6.07	433.6	34.0	22.6	16.57	0.26
X	I	720	30.48	0.0058	65.65	4.86	87.7	36.4	24.6	15.83	0.23
	J	770	29.08	0.0027	58.89	6.63	186.0	40.1	27.3	16.68	0.22
	K	770	24.96	0.0035	46.12	5.37	146.0	45.4	29.5	16.19	0.22
	L	820	26.12	0.0034	49.14	5.99	150.1	44.4	31.7	16.57	0.21
	M	820	25.06	0.0027	46.68	5.06	186.0	45.0	33.6	16.10	0.23
	N	870	40.47	0.0020	97.12	5.63	254.0	29.1	35.6	16.81	0.30

	O	870	46.59	0.0046	118.9	5.23	111.2	24.6	37.5	16.36	0.38
	P	920	107.1	0.0050	324.2	7.01	101.4	10.5	39.9	16.10	0.75
	Q	920	106.6	0.0053	321.5	7.22	96.6	10.9	42.2	16.54	0.70
	R	970	161.3	0.0037	504.8	11.48	136.1	7.5	45.9	17.30	0.93
	S	970	128.9	0.0018	395.2	11.64	288.0	9.4	49.3	17.30	0.77
	T	1020	143.4	0.0041	443.1	18.40	124.4	8.7	54.4	17.81	0.82
	U	1020	99.82	0.0045	298.2	15.11	114.5	11.7	58.4	16.74	0.60
	V	1070	102.7	0.0042	306.0	20.67	121.1	11.9	63.3	17.48	0.58
	W	1070	69.43	0.0052	195.6	14.64	98.1	16.8	66.6	16.63	0.41
	X	1120	76.30	0.0052	219.0	18.72	98.1	15.2	70.5	16.53	0.42
	Y	1120	56.90	0.0040	153.1	14.14	129.1	20.5	73.3	16.64	0.34
	Z	1170	52.73	0.0073	140.2	9.29	69.8	21.4	75.0	16.15	0.33
	AA	1170	50.86	0.0040	132.1	9.62	127.8	23.2	76.8	16.89	0.34
	AB	1220	55.92	0.0034	150.6	12.40	149.6	20.4	79.0	16.33	0.34
	AC	1320	44.65	0.0021	110.9	101.1	237.5	26.6	93.7	16.95	0.21
	AD	1370	47.21	0.0021	119.3	29.3	248.6	25.3	97.1	17.07	0.26
X	AE	1470	55.19	0.0048	144.5	7.57	105.2	22.6	98.0	17.84	0.35
X	AF	1770	50.66	0.0037	127.9	18.57	137.7	25.4	100.0	18.37	0.27
	Integrated age ± 2σ			n=31	MSWD=3.20	412.1	145.3	K2O=10.71%		16.97	0.73
	Plateau ± 2σ	steps J-AD		n=21	MSWD=1.24	334.6	175.8	±120.2	81.2	16.60	0.16
	Isochron±2σ	steps B-AF		n=31	MSWD=2.86		$^{40}Ar/^{36}Ar$=	297.1±1.1		16.41	0.21

MZQ-19, K-Feldspar, 18.2 mg, J=0.0006972±0.03%, D=1.002±0.001, NM-203H, Lab#=56824-01

X	C	550	80.98	0.0699	190.4	0.474	7.3	30.5	0.2	31.27	1.13
X	D	600	68.62	0.0651	101.7	0.873	7.8	56.2	0.5	48.57	0.61
X	E	600	26.27	0.0468	37.89	0.615	10.9	57.4	0.7	19.15	0.60
X	F	650	30.56	0.0571	32.92	1.235	8.9	68.2	1.2	26.40	0.35
X	G	650	19.55	0.0496	17.60	1.217	10.3	73.4	1.7	18.23	0.31
X	H	700	22.80	0.0371	18.07	2.09	13.7	76.6	2.4	22.15	0.20
X	I	700	17.19	0.0409	8.931	2.02	12.5	84.7	3.2	18.48	0.19
X	J	750	19.48	0.0323	12.46	3.33	15.8	81.1	4.4	20.05	0.13
X	K	750	16.27	0.0311	5.776	3.12	16.4	89.5	5.6	18.50	0.12
X	L	800	16.99	0.0291	5.951	4.36	17.5	89.7	7.1	19.34	0.09
X	M	800	16.10	0.0276	4.327	3.89	18.5	92.1	8.5	18.82	0.11
X	N	850	16.48	0.0304	3.863	4.84	16.8	93.1	10.3	19.48	0.09
X	O	850	16.19	0.0289	4.043	4.31	17.7	92.6	11.8	19.04	0.09
X	P	900	16.83	0.0269	4.973	4.99	19.0	91.3	13.5	19.50	0.09
X	Q	900	16.82	0.0250	4.439	4.37	20.4	92.2	15.0	19.68	0.10
X	R	950	18.27	0.1211	8.531	4.92	4.2	86.3	16.6	20.00	0.09
X	S	950	17.82	0.0193	6.871	4.49	26.4	88.6	18.1	20.04	0.10
X	T	1000	20.13	0.0161	13.69	5.05	31.7	79.9	19.8	20.42	0.10
X	U	1000	19.50	0.0126	11.46	5.14	40.6	82.6	21.5	20.45	0.09
X	V	1050	23.21	0.0115	24.05	6.42	44.2	69.4	23.5	20.44	0.12
X	W	1050	21.24	0.0123	17.30	6.54	41.4	75.9	25.6	20.47	0.10
X	X	1100	25.78	0.0109	31.55	9.47	46.7	63.8	28.5	20.88	0.12
X	Y	1100	21.98	0.0105	18.91	8.73	48.6	74.6	31.2	20.81	0.10
X	Z	1150	24.02	0.0112	24.55	14.12	45.4	69.8	35.3	21.28	0.08
X	AA	1150	22.87	0.0117	20.49	13.55	43.8	73.5	39.2	21.34	0.08
X	AB	1150	21.65	0.0114	16.30	35.1	44.8	77.8	48.6	21.36	0.06
X	AC	1250	19.45	0.0060	7.866	98.1	85.2	88.1	71.5	21.72	0.04
X	AD	1350	18.93	0.0092	5.875	96.7	55.3	90.8	90.0	21.82	0.04
X	AE	1450	19.84	0.0278	8.415	13.08	18.3	87.5	92.3	22.02	0.06
X	AF	1750	22.06	0.0205	16.80	47.5	24.8	77.5	100.0	21.69	0.06
	Integrated age ± 2σ			n=30	MSWD=237.51	410.6	34.5	K2O=12.43%		21.41	0.08
	Plateau ± 2σ	no plateau		n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps C-AF		n=30	MSWD=169.73		$^{40}Ar/^{36}Ar$=	369.3±4.0		20.15	0.06

MZQ-21, K-Feldspar, 17.4 mg, J=0.0008976±0.05%, D=1.002±0.001, NM-196L, Lab#=56289-01

X	B	460	379.2	0.1357	1072.0	0.227	3.8	16.5	0.1	99.85	4.80
X	C	460	67.89	0.1203	204.1	0.281	4.2	11.2	0.1	12.43	2.19
X	D	510	60.91	0.0579	141.0	0.698	8.8	31.6	0.3	31.36	1.05
X	E	510	29.72	0.0329	67.87	1.007	15.5	32.5	0.6	15.82	0.67
X	F	560	29.98	0.0325	60.23	2.10	15.7	40.7	1.1	19.92	0.36
X	G	560	20.80	0.0275	38.64	2.71	18.6	45.1	1.8	15.35	0.27
X	H	610	20.76	0.0239	32.42	5.72	21.4	53.9	3.3	18.28	0.18
X	I	610	15.28	0.0212	17.38	5.15	24.0	66.4	4.6	16.59	0.16
X	J	660	15.30	0.0214	16.22	7.76	23.9	68.7	6.5	17.18	0.11
X	K	660	12.60	0.0200	7.078	7.21	25.5	83.4	8.3	17.19	0.10
X	L	710	12.80	0.0217	7.577	9.18	23.5	82.5	10.6	17.27	0.09
X	M	710	11.41	0.0175	3.592	9.15	29.1	90.7	12.8	16.92	0.07
X	N	760	11.88	0.0169	4.885	12.00	30.1	87.9	15.6	17.07	0.06
X	O	760	11.07	0.0130	1.913	12.34	39.3	94.9	18.4	17.18	0.05
X	P	810	11.57	0.0134	3.270	14.78	37.9	91.7	21.8	17.33	0.05
X	Q	810	11.15	0.0134	1.782	14.32	38.0	95.3	24.9	17.38	0.05
X	R	860	11.98	0.0137	4.176	15.5	37.2	89.7	28.2	17.58	0.05
X	S	860	11.50	0.0131	2.716	15.01	38.9	93.0	31.4	17.50	0.05
X	T	910	12.85	0.0141	6.723	13.13	36.2	84.6	34.0	17.77	0.07
X	U	910	12.57	0.0119	5.995	15.26	43.0	85.9	37.1	17.66	0.06
X	V	960	14.99	0.0123	13.31	11.66	41.5	73.8	39.4	18.08	0.09
X	W	960	14.70	0.0104	12.87	16.0	49.2	74.1	42.4	17.82	0.07
X	X	1010	16.96	0.0101	20.01	17.8	50.5	65.1	45.7	18.06	0.09
X	Y	1010	16.19	0.0084	17.35	20.2	60.6	68.3	49.4	18.08	0.08
X	Z	1060	17.41	0.0088	20.73	22.2	57.9	64.8	53.3	18.44	0.09
X	AA	1060	16.00	0.0085	15.91	23.4	60.2	70.6	57.2	18.47	0.07
X	AB	1110	17.41	0.0087	19.66	21.2	58.8	66.6	60.7	18.96	0.09
X	AC	1110	16.92	0.0115	17.90	24.0	44.3	68.7	64.5	19.02	0.08
X	AD	1110	17.08	0.0104	18.38	35.6	48.9	68.2	69.9	19.05	0.07
X	AE	1110	17.69	0.0094	20.25	42.9	54.2	66.2	76.1	19.14	0.08
X	AF	1210	18.17	0.0053	19.92	66.8	95.5	67.6	85.0	20.08	0.07
X	AG	1260	19.48	0.0041	23.86	61.7	125.7	63.8	92.6	20.31	0.07
X	AH	1360	25.78	0.0394	41.06	9.23	12.9	52.9	93.7	22.29	0.15
X	AI	1700	20.74	0.0109	26.88	55.4	46.8	61.7	100.0	20.91	0.08
	Integrated age ± 2σ			n=34	MSWD=205.79	591.6	45.8	K2O=14.55%		18.95	0.11
	Plateau ± 2σ	no plateau		n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps B-AI		n=34	MSWD=54.50		$^{40}Ar/^{36}Ar$=	359.4±2.0		16.96	0.05

MZQ-32, K-Feldspar, 17.83 mg, J=0.0007811±0.04%, D=1.004±0.001, NM-208L, Lab#=57188-01

X	B	520	158.0	0.0271	372.1	1.411	18.8	30.4	0.6	67.41	1.16
X	C	520	25.61	0.0112	48.85	1.194	45.7	43.6	1.1	15.91	0.51
X	D	570	20.14	0.0087	25.28	3.10	58.6	62.9	2.5	18.03	0.27
X	E	570	15.79	0.0080	14.82	2.99	64.0	72.3	3.7	16.24	0.21
X	F	620	18.56	0.0081	15.53	6.20	62.9	75.3	6.3	19.87	0.14
X	G	620	14.01	0.0021	5.296	5.08	240.1	88.8	8.4	17.70	0.14
X	H	670	13.69	0.0065	4.997	7.81	78.8	89.2	11.4	17.38	0.09
X	I	670	13.28	0.0064	4.127	8.03	79.6	90.8	14.5	17.17	0.09
X	J	720	12.93	0.0055	2.769	10.14	92.9	93.7	18.2	17.23	0.07
X	K	720	13.01	0.0055	3.494	10.20	92.6	92.1	21.7	17.04	0.07
X	L	770	12.81	0.0053	2.233	12.94	96.4	94.9	26.0	17.29	0.06
X	M	770	12.87	0.0035	2.430	13.78	144.4	94.4	30.3	17.29	0.06
X	N	820	12.77	0.0035	1.848	14.57	145.3	95.7	34.5	17.39	0.05
X	O	820	13.14	0.0054	3.047	13.49	94.8	93.2	38.3	17.42	0.06
X	P	870	13.07	0.0046	2.611	12.82	112.0	94.1	41.7	17.50	0.06
X	Q	870	13.48	0.0047	3.932	12.00	109.5	91.4	44.7	17.52	0.06
X	R	920	13.90	0.0054	4.955	11.15	95.3	89.5	47.4	17.69	0.07
X	S	920	14.35	0.0043	6.389	10.40	119.0	86.8	49.8	17.73	0.08

X	T	970	15.24	0.0053	9.394	9.70	96.5	81.8	52.0	17.74	0.09
X	U	970	15.69	0.0050	10.55	10.08	102.1	80.1	54.1	17.89	0.07
X	V	1020	16.96	0.0033	13.92	10.55	152.7	75.7	56.3	18.27	0.08
X	W	1020	16.91	0.0041	13.71	11.80	125.9	76.0	58.7	18.30	0.07
X	X	1070	17.84	0.0043	15.95	12.96	119.1	73.6	61.2	18.67	0.10
X	Y	1070	17.17	0.0040	13.49	14.23	128.5	76.8	63.8	18.76	0.08
X	Z	1120	17.96	0.0046	15.32	15.59	112.0	74.8	66.6	19.11	0.08
X	AA	1120	17.25	0.0060	12.82	16.30	85.4	78.0	69.3	19.15	0.07
X	AB	1170	18.03	0.0053	14.35	13.95	95.8	76.5	71.5	19.61	0.09
X	AC	1170	17.88	0.0056	14.70	17.67	91.6	75.7	74.2	19.26	0.08
X	AD	1170	18.28	0.0048	15.28	28.0	107.3	75.3	78.2	19.58	0.08
X	AE	1170	19.16	0.0029	18.04	32.4	176.4	72.2	82.4	19.67	0.08
X	AF	1270	18.74	0.0023	14.17	30.3	222.3	77.6	86.1	20.69	0.07
X	AG	1320	19.02	0.0013	14.45	81.4	387.8	77.6	94.7	20.98	0.06
X	AH	1420	19.87	0.0015	17.20	26.5	330.8	74.4	97.1	21.03	0.08
X	AI	1770	20.79	0.0015	18.28	33.3	334.4	74.0	100.0	21.88	0.07
	Integrated age ± 2σ			n=34	MSWD=381.07	522.1	135.2	K2O=14.40%		19.39	0.09
	Plateau ± 2σ	no plateau		n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00	0.00
	Isochron±2σ	steps B-AI		n=34	MSWD=66.05		$^{40}Ar/^{36}Ar$=	432.8±3.5		16.76	0.06

VC09-2, Kspar, 16.98 mg, J=0.0022593±0.05%, D=1.005±0.001, NM-227A, Lab#=59205-01

X	B	540	54.82	0.0204	163.4	1.84	25.0	11.9	0.3	26.75	1.66
X	C	540	10.71	0.0111	15.72	1.20	46.2	56.6	0.5	24.87	0.77
X	D	590	8.219	0.0091	6.297	2.05	55.9	77.3	0.8	26.07	0.50
X	E	590	12.19	0.0088	19.35	2.71	58.2	53.1	1.3	26.53	0.47
X	F	640	7.006	0.0076	2.989	3.95	66.9	87.4	2.0	25.11	0.24
X	G	640	6.763	0.0074	2.146	5.42	69.2	90.6	2.9	25.14	0.19
X	H	690	6.861	0.0083	2.233	6.91	61.7	90.4	4.0	25.43	0.14
X	I	690	6.476	0.0078	1.364	9.5	65.3	93.8	5.6	24.91	0.11
	J	740	6.431	0.0080	0.6827	10.6	64.0	96.9	7.3	25.55	0.10
	K	740	6.367	0.0077	0.7075	14.5	66.0	96.7	9.7	25.26	0.08
	L	790	6.352	0.0081	0.5409	14.8	63.0	97.5	12.1	25.39	0.08
	M	790	6.309	0.0082	0.4856	20.8	62.2	97.7	15.5	25.28	0.06
	N	840	6.284	0.0077	0.4419	20.3	66.0	97.9	18.8	25.23	0.06
	O	840	6.299	0.0077	0.3957	28.3	66.1	98.2	23.4	25.35	0.06
	P	890	6.306	0.0083	0.4460	25.6	61.5	97.9	27.5	25.32	0.06
	Q	890	6.304	0.0080	0.3683	36.0	64.1	98.3	33.2	25.41	0.05
	R	940	6.298	0.0080	0.3625	30.1	63.4	98.3	37.9	25.39	0.05
	S	940	6.309	0.0082	0.3369	41.3	62.3	98.4	44.4	25.47	0.05
	T	990	6.310	0.0082	0.3646	31.7	61.9	98.3	49.3	25.43	0.05
	U	990	6.305	0.0087	0.4044	42.3	58.9	98.1	55.8	25.37	0.05
	V	1040	6.320	0.0083	0.4167	30.2	61.8	98.1	60.4	25.41	0.05
	W	1040	6.331	0.0087	0.3931	38.7	58.9	98.2	66.2	25.48	0.06
	X	1090	6.309	0.0143	0.4405	40.2	35.8	98.0	72.2	25.34	0.05
	Y	1090	6.327	0.0113	0.4929	42.6	45.1	97.7	78.5	25.35	0.05
	Z	1140	6.430	0.0106	0.7622	27.1	48.4	96.5	82.4	25.45	0.06
	AA	1190	6.495	0.0100	0.9980	48.7	50.8	95.5	89.5	25.43	0.05
X	AB	1190	6.568	0.0095	1.135	46.2	53.7	94.9	96.1	25.56	0.05
X	AC	1190	6.948	0.0099	2.210	17.8	51.6	90.6	98.6	25.81	0.09
X	AD	1190	8.526	0.0093	7.496	5.35	54.7	74.0	99.4	25.88	0.22
X	AE	1190	8.071	-0.0293	6.697	0.250	-	75.4	99.4	24.97	2.70
X	AF	1290	8.069	-0.0015	3.087	0.523	-	88.7	99.5	29.32	1.40
X	AG	1340	9.561	-0.0238	8.099	0.440	-	74.9	99.6	29.36	1.74
X	AH	1390	15.00	0.0087	28.27	0.346	58.8	44.3	99.6	27.24	2.56
X	AI	1590	9.726	0.0087	10.76	2.41	58.8	67.3	99.9	26.84	0.43
X	AJ	1740	36.68	-0.0126	98.04	0.366	-	21.0	100.0	31.56	3.03
	Integrated age ± 2σ			n=35	MSWD=3.73	651.1	55.9	K2O=6.52%		25.44	0.07
	Plateau ± 2σ	steps J-AA		n=18	MSWD=1.56	543.9	57.3 ±16.7		83.5	25.38	0.04

Isochron±2σ	steps B-AJ	n=35	MSWD=3.22	$^{40}Ar/^{36}Ar$=	304.6±4.1	25.38	0.04

Notes:

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.
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 is inverse-variance-weighted mean of selected steps.
Plateau age error is inverse-variance-weighted mean error (Taylor, 1982) times root MSWD where MSWD>1.
Plateau error is weighted error of Taylor (1982).
Decay constants and isotopic abundances after Min et al. (2000).
symbol preceding sample ID denotes analyses excluded from plateau age calculations.
Weight percent K_2O calculated from ^{39}Ar signal, sample weight, and instrument sensitivity.
Ages calculated relative to FC-2 Fish Canyon Tuff sanidine interlaboratory standard at 28.201 Ma (Kuiper et al., 2008)
Decay Constant (LambdaK (total)) = 5.462e-10/a
Correction factors:

$(^{39}Ar/^{37}Ar)_{Ca}$ = 0.0007 ± 5e-05
$(^{36}Ar/^{37}Ar)_{Ca}$ = 0.00028 ± 2e-05
$(^{38}Ar/^{39}Ar)_{K}$ = 0.013
$(^{40}Ar/^{39}Ar)_{K}$ = 0.01 ± 0.002

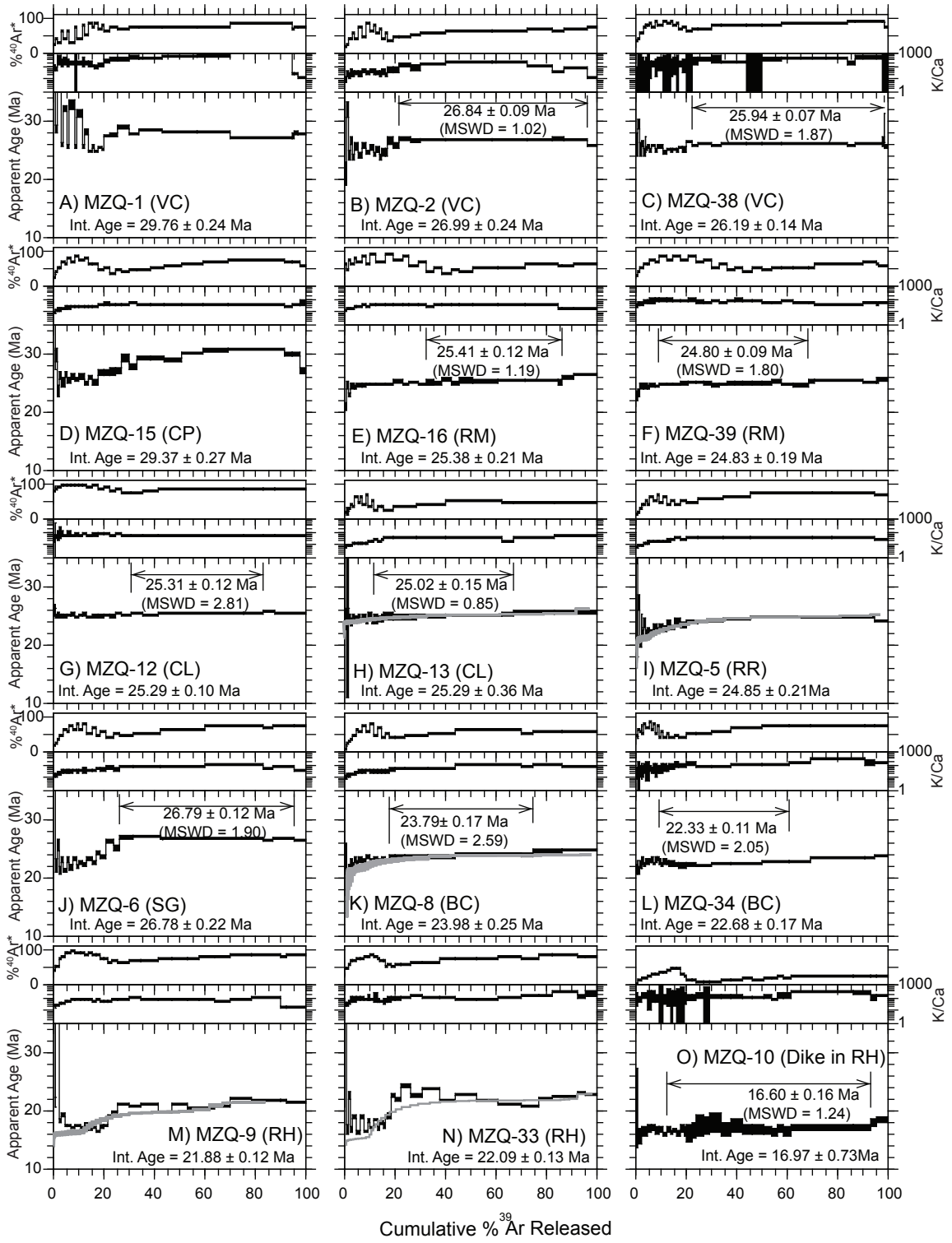


Figure 3. Age spectra for the Questa caldera plutonic K-feldspar. Auxiliary plots include K/Ca and radiogenic yield (%^{40}Ar*). All errors are reported at two sigma. Modeled age spectra used to model MDD coolinghistories are shown in gray.

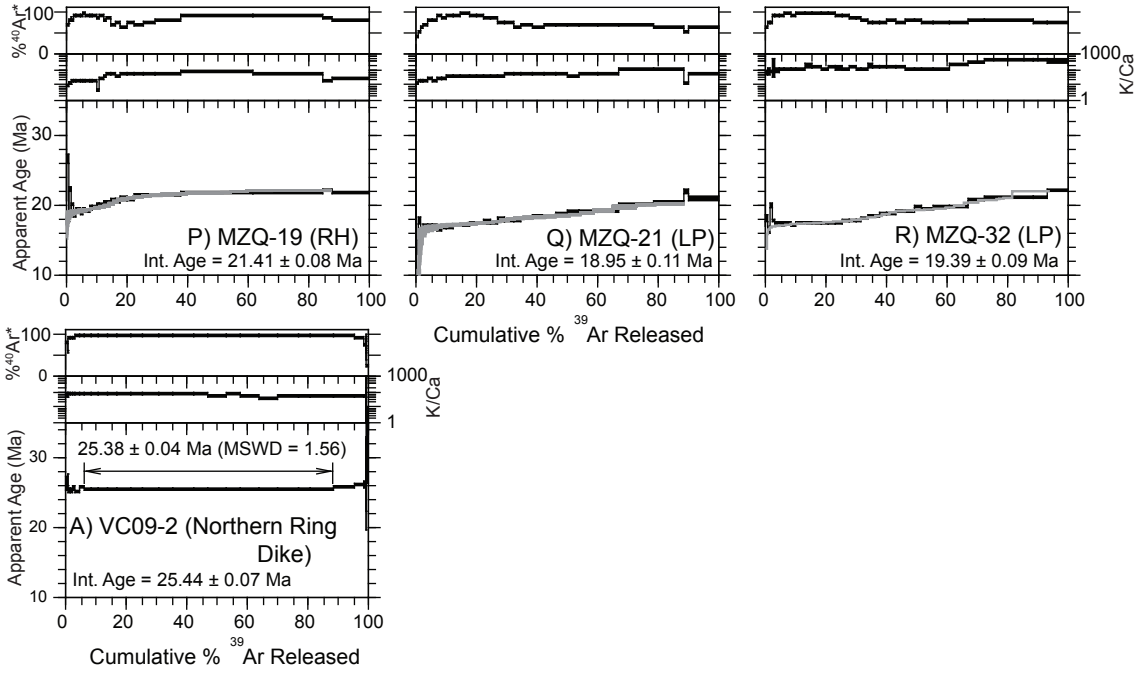
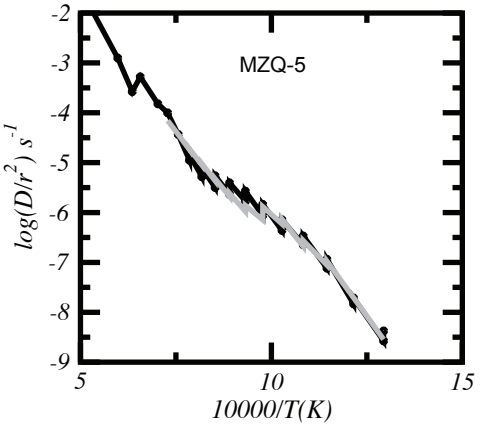


Figure 3. continued

Data Repository DR3: Supplemental arrehenius and Log (r/ro) plots for the Questa caldera K-feldspar MDD thermal histories

Data repository DR3 contains Arrhenius and log (r/r_o) plots used for MDD thermal modeling of K-feldspars. Modeled age spectra and thermal histories, both monotonic and unconstrained, are located within the main body of the text. All MDD thermal histories were modeled using algorithms developed by Lovera et al., (1989, 1991). Arrhenius plots are constructed using the heating schedule and the fraction of $^{39}Ar_K$ released for each step. Log (r/r_o) plots are constructed by fitting an Arrhenius reference line (r_o) to the Arrhenius plot, calculating the deviation of the Arrhenius trend from r_o, and comparing that to the cumulative ^{39}Ar released. Black lines are the actual data and gray lines are the modeled data.


MZQ-5
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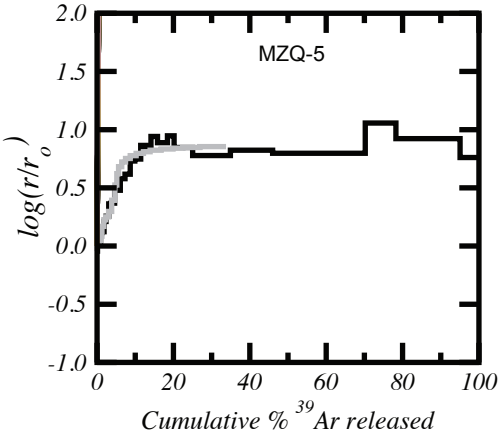
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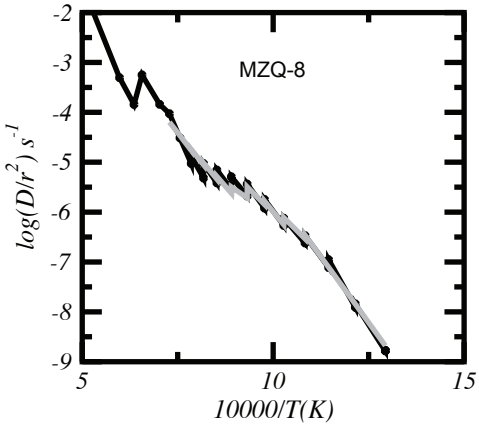
log(r/r_o)
Cumulative % ³⁹Ar released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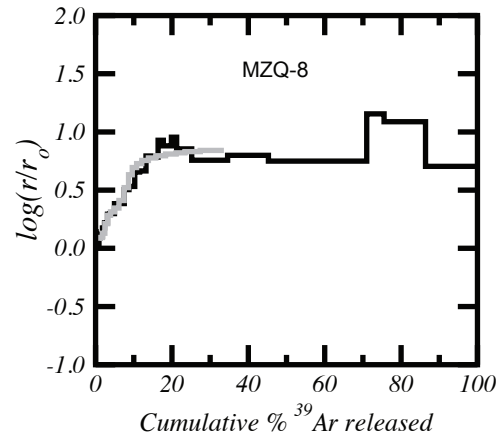
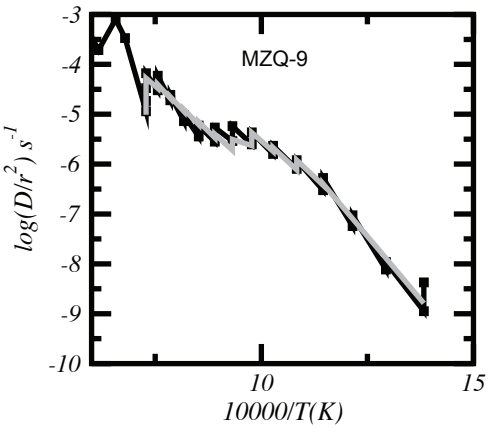
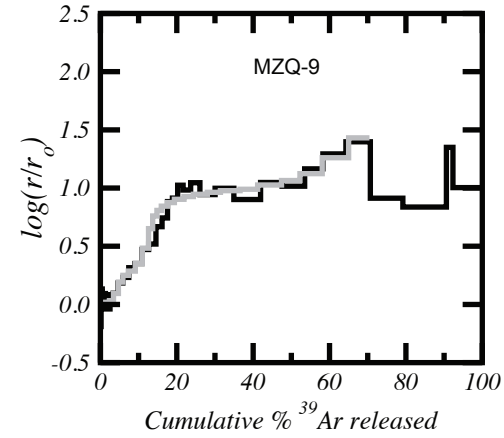
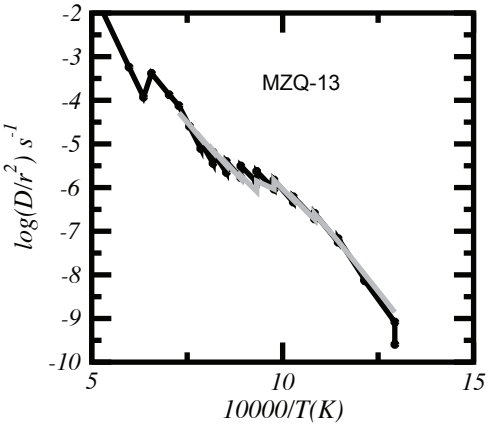
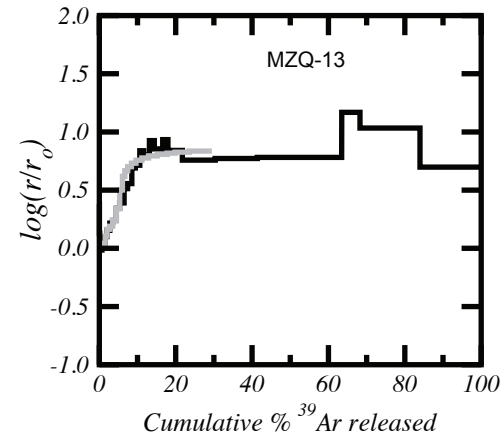
log(D/r²) s⁻¹
10000/T(K)

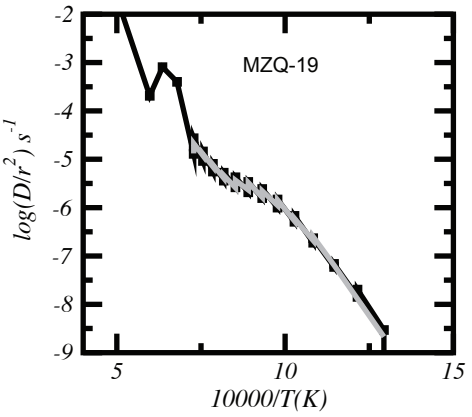

MZQ-8
log(r/r_o)
Cumulative % ³⁹Ar released


MZQ-9
log(D/r²) s⁻¹
10000/T(K)


MZQ-9
log(r/r_o)
Cumulative % ³⁹Ar released


MZQ-13
log(D/r²) s⁻¹
10000/T(K)


MZQ-13
log(r/r_o)
Cumulative % ³⁹Ar released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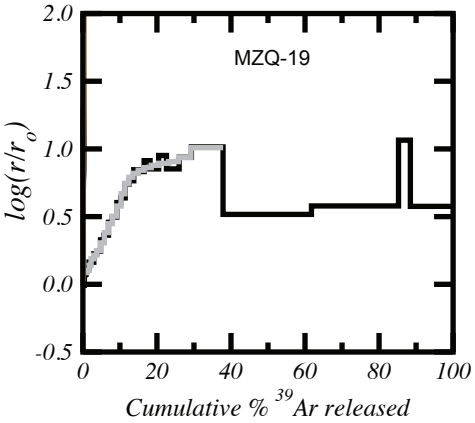
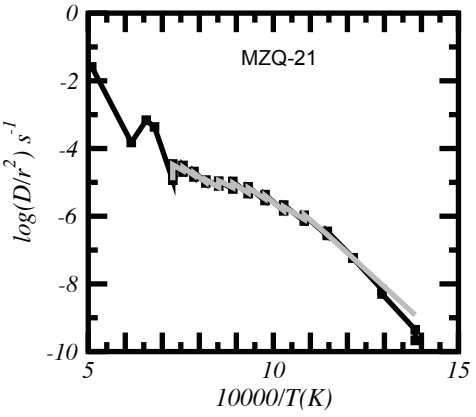
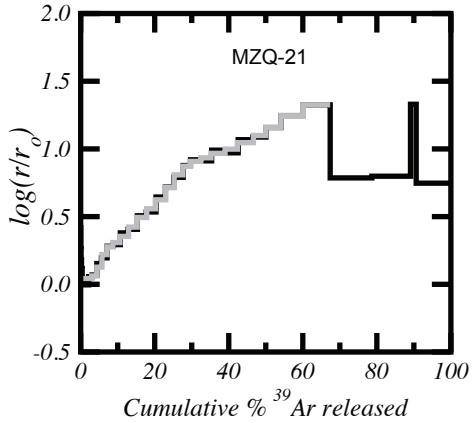
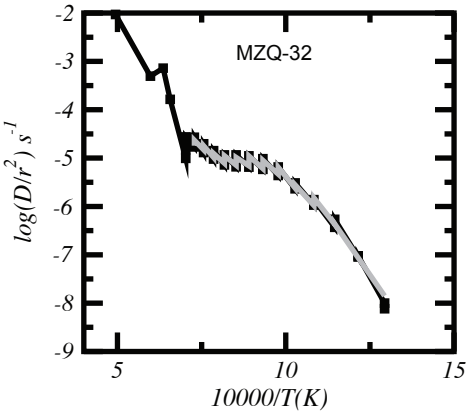
log(D/r²) s⁻¹
10000/T(K)


MZQ-19
log(r/r_o)
Cumulative % ³⁹Ar released


MZQ-21
log(D/r²) s⁻¹
10000/T(K)


MZQ-21
log(r/r_o)
Cumulative % ³⁹Ar released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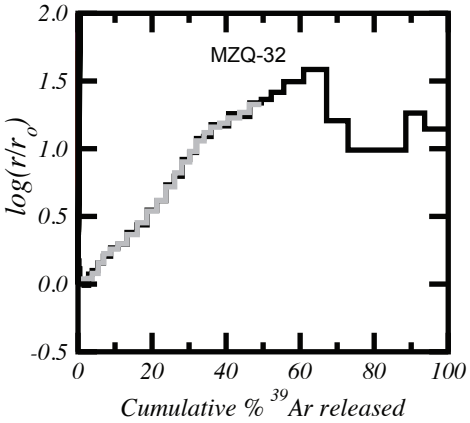
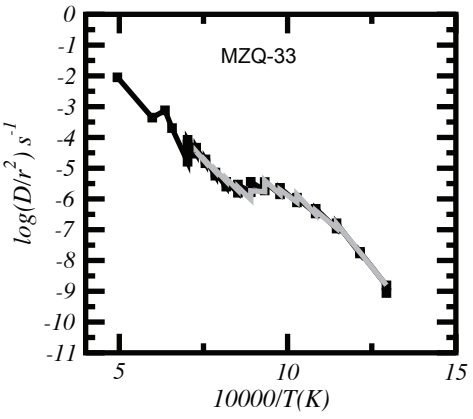
log(D/r²) s⁻¹
10000/T(K)


MZQ-32
log(r/r_o)
Cumulative % ³⁹Ar released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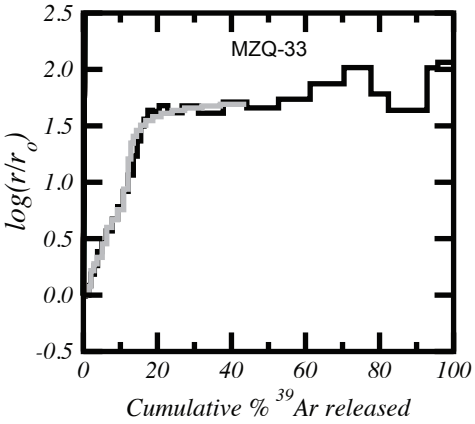
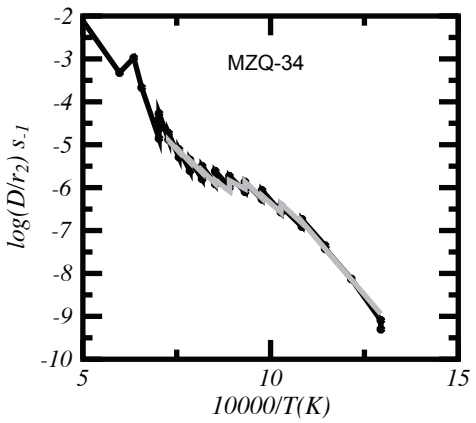
log(D/r²) s⁻¹
10000/T(K)


MZQ-33
log(r/r_o)
Cumulative % ³⁹Ar released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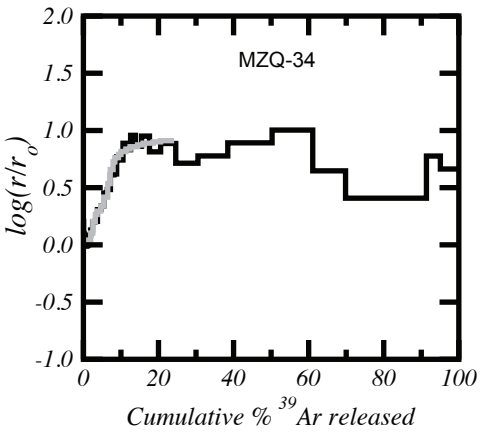
log(D/r2) s-1
10000/T(K)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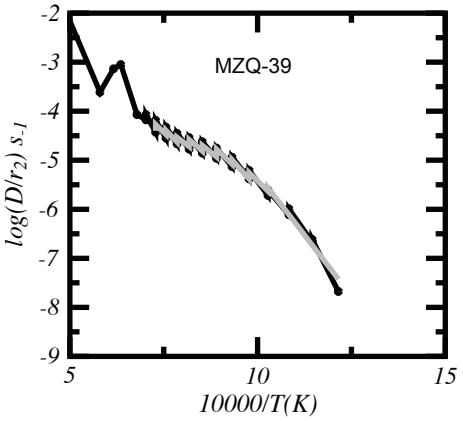
log(r/ro)
Cumulative % 39Ar released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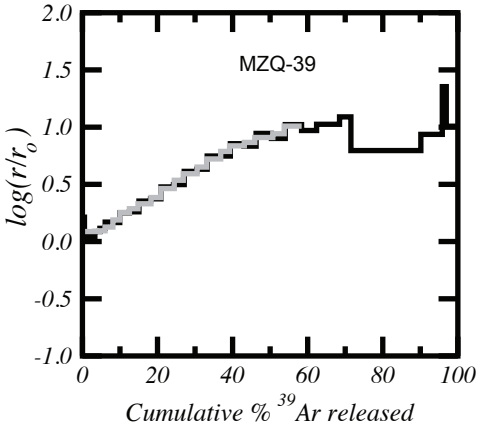
10000/T(K)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log(r/ro)
Cumulative % 39Ar released

APPENDICES REFERENCES

Deino, A., and Potts, R., 1992, Age-probability spectra for examination of single-crystal $^{40}Ar/^{39}Ar$ dating results: Examples from Olorgesailie, Southern Kenya Rift: Quaternary International, v. 13-14, p. 47-53.

Kuiper, K. F., Deino, A., Hilgen, F. J., Krijgsman, W., Renne, P. R., and Wijbrans, J. R., 2008, Synchronizing rock clocks of earth history: Science, v. 320, p. 500-504.

Lovera, O.M., Richter, F.M., and Harrison, T.M., 1989, $^{40}Ar/^{39}Ar$ thermochronology for slowly cooled samples having a distribution of domain sizes: Journal of Geophysical Research, v.94, p. 17,917-17,935.

Lovera, O.M., Richter, F.M., and Harrision, T.M., 1991, Diffusion domains determined by ^{39}Ar released during step heating, Journal of Geophysical Research., v. 96, p. 2057-2069.

Min, K., Mundil, R., Renne, P. L., and Ludwig, K.R., 2000, A test for systematic errors in $^{40}Ar/^{39}Ar$ geochronology through comparison with U/Pb analysis of a 1.1-Ga rhyolite: Geochimica et Cosmochimica Acta, v. 64, p. 73-98.

Taylor, J. R., 1982, An Introduction to Error Analysis: The Study of Uncertainties in Physical Measurements., University Science Books, Mills Valley, California, 270 p.

York, D., 1969, Least squares fitting of a straight line with correlated errors, Earth and Planetary Science Letters, v. 5, p. 320-324.