

Data Repository DR3

Organ caldera complex $^{40}\text{Ar}/^{39}\text{Ar}$ data tables, ideograms, and age spectra

Data repository DR3 contains the data tables and supporting figures for all the $^{40}\text{Ar}/^{39}\text{Ar}$ analyses conducted as part of this study. Tables 3.1, 3.2, and 3.3 contain the analytical data for the sanidine single-crystal laser-fusion analyses, biotite, plagioclase, hornblende, and groundmass concentrate step-heat analyses, and K-feldspar step-heat analyses, respectively. Footnotes at the bottom of each table contain additional information regarding sample preparation and irradiation, age calculations, instrumentation, and analytical parameters. Figures 3.1, 3.2, and 3.3 display the laser-fusion ideograms, biotite, plagioclase, hornblende, and groundmass spectra age spectra, and K-feldspar age spectra, respectively.

Table 3.1 Organ Caldera sanidine single-crystal laser-fusion $^{40}\text{Ar}/^{39}\text{Ar}$ analytical data.

ID	$^{40}\text{Ar}/^{39}\text{Ar}$	$^{37}\text{Ar}/^{39}\text{Ar}$	$^{36}\text{Ar}/^{39}\text{Ar}$ ($\times 10^{-3}$)	$^{39}\text{Ar}_k$ ($\times 10^{-15}$ mol)	K/Ca	$^{40}\text{Ar}^*$ (%)	Age (Ma)	$\pm 1\sigma$ (Ma)
ORGAN-2 , Sanidine, $J=0.0023237\pm0.05\%$, $D=1.005\pm0.001$, NM-227F, Lab#=59228								
09	8.676	0.0358	0.6560	2.968	14.2	97.8	35.70	0.10
10	8.942	0.0277	1.545	1.671	18.4	94.9	35.71	0.12
05	8.675	0.0275	0.5594	1.856	18.6	98.1	35.81	0.10
07	8.843	0.0269	1.080	3.326	18.9	96.4	35.87	0.08
04	8.835	0.0258	1.050	4.703	19.8	96.5	35.87	0.07
12	8.862	0.0300	1.135	3.363	17.0	96.2	35.88	0.09
06	8.884	0.0274	1.210	4.265	18.6	96.0	35.88	0.08
14	8.832	0.0272	1.015	2.984	18.8	96.6	35.90	0.09
15	8.746	0.0307	0.7197	2.076	16.6	97.6	35.91	0.10
11	8.680	0.0266	0.4328	2.409	19.2	98.6	35.99	0.09
01	8.748	0.0251	0.6282	2.562	20.4	97.9	36.03	0.09
03	8.932	0.0254	1.188	2.947	20.1	96.1	36.11	0.09
02	8.943	0.0281	1.175	4.477	18.2	96.1	36.17	0.09
08	8.910	0.0259	1.011	2.351	19.7	96.7	36.23	0.10
13	8.789	0.0262	0.5450	2.243	19.5	98.2	36.31	0.09
Mean age $\pm 2\sigma$		n=15	MSWD=3.57		18.5 ± 3.1		35.96	0.09
ORGAN-4 , Sanidine, $J=0.0023243\pm0.04\%$, $D=1.005\pm0.001$, NM-227F, Lab#=59229								
06	10.04	0.0215	5.318	2.533	23.7	84.4	35.66	0.11
x 04	10.98	0.0292	8.347	3.848	17.5	77.5	35.83	0.12
13	10.57	0.0296	6.923	2.668	17.2	80.7	35.88	0.13
01	9.038	0.0229	1.678	4.683	22.3	94.5	35.96	0.07
02	9.147	0.0272	1.980	2.813	18.8	93.6	36.04	0.10
x 12	11.13	0.0435	8.694	2.942	11.7	76.9	36.06	0.14
09	8.684	0.0253	0.3717	1.687	20.1	98.8	36.09	0.12
15	8.899	0.0244	1.062	2.435	20.9	96.5	36.13	0.09
11	8.777	0.0220	0.6399	2.996	23.2	97.9	36.15	0.09
14	8.748	0.0235	0.5346	1.869	21.7	98.2	36.15	0.10
05	8.779	0.0276	0.6379	2.142	18.5	97.9	36.16	0.09
07	8.737	0.0234	0.4568	2.651	21.8	98.5	36.20	0.09
03	8.959	0.0270	1.138	2.177	18.9	96.3	36.29	0.10
08	8.770	0.0586	0.5003	3.897	8.7	98.4	36.30	0.08
10	9.600	0.0484	3.250	3.201	10.5	90.0	36.37	0.10
Mean age $\pm 2\sigma$		n=13	MSWD=3.64		19.0 ± 9.2		36.12	0.10
ORGAN-6 , Sanidine, $J=0.0023241\pm0.04\%$, $D=1.005\pm0.001$, NM-227F, Lab#=59230								
02	9.397	0.0942	3.274	1.174	5.4	89.8	35.51	0.17
03	8.988	0.0760	1.845	1.119	6.7	94.0	35.56	0.16
01	8.681	0.0748	0.8002	1.063	6.8	97.3	35.56	0.16
15	8.714	0.0952	0.7784	1.029	5.4	97.4	35.74	0.17
09	8.685	0.0956	0.6740	0.818	5.3	97.8	35.75	0.20
13	8.693	0.0956	0.6767	1.101	5.3	97.8	35.77	0.16
04	8.802	0.0965	1.040	0.853	5.3	96.6	35.78	0.20
05	8.797	0.0899	0.9815	1.183	5.7	96.8	35.83	0.15
12	9.067	0.0896	1.883	1.284	5.7	93.9	35.84	0.15
08	8.823	0.0561	1.028	1.267	9.1	96.6	35.87	0.15
07	8.585	0.0965	0.1910	0.626	5.3	99.4	35.92	0.26
06	8.609	0.0940	0.2610	1.164	5.4	99.2	35.93	0.15
10	8.787	0.0747	0.8567	1.018	6.8	97.2	35.94	0.17

11	8.721	0.0591	0.6049	0.805	8.6	98.0	35.96	0.21
14	8.716	0.0879	0.5742	0.866	5.8	98.1	35.99	0.19
Mean age $\pm 2\sigma$		n=15	MSWD=0.80	6.2 ± 2.5			35.79	0.09

ORGAN-14, Sanidine, J=0.0023232 $\pm$ 0.04%, D=1.005 $\pm$ 0.001, NM-227F, Lab#=59231

x	10	12.70	0.0064	14.23	0.943	79.2	66.9	35.72	0.27
	04	9.270	0.0036	2.395	0.764	141.3	92.4	36.01	0.22
	13	10.73	0.0043	7.219	1.123	119.2	80.1	36.18	0.20
	05	9.128	0.0050	1.768	1.433	101.2	94.3	36.20	0.13
	15	8.881	0.0050	0.8559	1.386	101.7	97.2	36.29	0.13
x	14	11.10	0.0047	8.256	1.766	108.1	78.0	36.40	0.18
	02	9.009	0.0032	1.155	1.399	159.5	96.2	36.45	0.14
	07	9.722	0.0043	3.545	1.319	117.5	89.2	36.48	0.15
	01	9.310	0.0035	2.142	1.440	147.3	93.2	36.49	0.14
	09	10.68	0.0041	6.770	1.113	125.1	81.3	36.51	0.20
	08	9.633	0.0033	3.218	1.719	155.2	90.1	36.52	0.14
	03	9.171	0.0040	1.607	1.239	127.8	94.8	36.57	0.15
	06	9.127	0.0055	1.458	1.449	93.4	95.3	36.57	0.14
	12	9.388	0.0031	2.339	2.015	164.2	92.6	36.57	0.11
	11	9.379	0.0049	2.198	1.216	105.1	93.1	36.71	0.16
Mean age $\pm 2\sigma$		n=13	MSWD=1.39	127.6 ± 48.0			36.45	0.10	

ORGAN-17, Sanidine, J=0.002322 $\pm$ 0.04%, D=1.005 $\pm$ 0.001, NM-227F, Lab#=59232

	12	8.789	0.0035	0.5545	3.169	144.6	98.1	36.26	0.09
	15	8.915	0.0043	0.9592	2.826	118.2	96.8	36.29	0.09
x	14	10.93	0.0038	7.767	2.351	135.5	79.0	36.30	0.14
	02	9.597	0.0037	3.250	5.242	136.4	90.0	36.31	0.08
	08	8.921	0.0044	0.9387	3.139	116.9	96.9	36.33	0.09
	05	8.826	0.0031	0.5959	2.318	163.5	98.0	36.36	0.09
	06	8.890	0.0033	0.8112	2.894	152.6	97.3	36.36	0.09
	10	9.875	0.0033	4.113	2.347	152.3	87.7	36.40	0.12
	07	9.761	0.0034	3.723	4.290	150.0	88.7	36.41	0.09
x	13	11.36	0.0047	9.103	2.699	108.3	76.3	36.44	0.14
	03	9.053	0.0035	1.251	2.692	146.3	95.9	36.50	0.10
	01	8.873	0.0036	0.6376	2.766	142.1	97.9	36.51	0.09
x	04	12.77	0.0032	13.78	2.450	157.7	68.1	36.55	0.16
	11	8.991	0.0034	0.9432	6.648	149.3	96.9	36.62	0.06
	09	9.196	0.0039	1.595	2.149	131.9	94.9	36.67	0.10
Mean age $\pm 2\sigma$		n=12	MSWD=2.50	142.0 ± 28.0			36.43	0.09	

ORGAN-18, Sanidine, J=0.0023209 $\pm$ 0.04%, D=1.005 $\pm$ 0.001, NM-227F, Lab#=59233

	10	8.729	0.0053	0.3018	2.018	96.1	99.0	36.30	0.10
	11	9.055	0.0051	1.380	4.714	99.6	95.5	36.33	0.07
	13	9.083	0.0041	1.453	2.065	124.4	95.3	36.36	0.10
	15	8.693	0.0052	0.1262	2.275	97.5	99.6	36.37	0.09
	01	8.940	0.0042	0.9286	2.745	120.3	96.9	36.41	0.09
	08	8.760	0.0049	0.2921	3.473	105.1	99.0	36.44	0.08
	09	8.787	0.0047	0.3656	6.339	109.2	98.8	36.46	0.06
	14	8.714	0.0053	0.1036	2.008	96.1	99.7	36.49	0.10
	02	8.857	0.0047	0.5755	4.285	108.1	98.1	36.50	0.07
	07	8.740	0.0043	0.1711	5.787	119.4	99.4	36.51	0.06
	06	8.713	0.0050	0.0785	5.431	101.6	99.7	36.51	0.06
	04	8.709	0.0062	0.0623	2.109	82.1	99.8	36.52	0.10
	12	8.729	0.0049	0.1211	2.262	105.2	99.6	36.52	0.09
	03	8.776	0.0035	0.2690	6.080	145.8	99.1	36.54	0.06
Mean age $\pm 2\sigma$		n=14	MSWD=0.92	107.9 ± 31.2			36.46	0.05	

ORGAN-27, Sanidine, J=0.0023203±0.05%, D=1.005±0.001, NM-227F, Lab#=59234

09	8.654	0.0409	0.3992	1.072	12.5	98.7	35.87	0.16
13	8.561	0.0403	0.0634	0.757	12.7	99.8	35.90	0.21
02	8.676	0.0445	0.3712	0.935	11.5	98.8	36.00	0.18
01	8.634	0.0471	0.2227	0.990	10.8	99.3	36.01	0.17
04	8.703	0.0487	0.4349	1.410	10.5	98.6	36.04	0.13
03	8.660	0.0432	0.2814	0.875	11.8	99.1	36.05	0.19
11	8.616	0.0422	0.1146	0.736	12.1	99.6	36.06	0.22
08	8.761	0.0425	0.5750	0.947	12.0	98.1	36.11	0.18
15	8.674	0.0420	0.1816	0.524	12.1	99.4	36.22	0.31
14	8.672	0.0476	0.1545	0.728	10.7	99.5	36.25	0.22
07	8.670	0.0492	0.1255	1.467	10.4	99.6	36.28	0.12
10	8.662	0.0451	0.0255	0.874	11.3	100.0	36.37	0.19
12	8.701	0.0411	0.1276	0.888	12.4	99.6	36.40	0.20
05	8.678	0.0395	-0.0708	0.882	12.9	100.3	36.55	0.19
06	8.746	0.0429	0.1401	0.956	11.9	99.6	36.58	0.18

Mean age ± 2σ n=15 MSWD=1.51 11.7 ±1.6 36.17 0.12

ORGAN-28, Sanidine, J=0.0023205±0.04%, D=1.005±0.001, NM-227F, Lab#=59235

01	8.632	0.0415	0.2465	0.867	12.3	99.2	35.97	0.19
07	8.649	0.0407	0.2541	0.800	12.5	99.2	36.03	0.21
03	8.657	0.0411	0.2100	0.537	12.4	99.3	36.12	0.28
11	8.695	0.0462	0.2995	2.279	11.1	99.0	36.17	0.08
10	8.649	0.0316	0.1397	0.876	16.1	99.6	36.17	0.19
06	8.699	0.0530	0.3047	0.959	9.6	99.0	36.18	0.18
02	8.642	0.0473	0.0801	0.732	10.8	99.8	36.22	0.22
13	8.672	0.0398	0.1198	0.731	12.8	99.6	36.30	0.22
15	8.729	0.0481	0.2985	1.293	10.6	99.0	36.32	0.14
05	8.696	0.0400	0.1641	2.236	12.8	99.5	36.34	0.09
04	8.651	0.0362	-0.0121	0.856	14.1	100.1	36.37	0.19
09	8.664	0.0520	0.0272	0.879	9.8	100.0	36.38	0.19
08	8.634	0.0373	-0.0815	0.984	13.7	100.3	36.38	0.17
14	8.696	0.0392	0.1277	0.913	13.0	99.6	36.39	0.18
12	8.683	0.0450	-0.0687	0.717	11.3	100.3	36.58	0.22

Mean age ± 2σ n=15 MSWD=0.71 12.2 ±3.4 36.26 0.09

Notes:

x (or i) symbol preceding sample ID denotes analyses excluded from plateau (or isochron) age calculations.
 Isotopic ratios corrected for blank, radioactive decay, and mass discrimination, not corrected for interfering reactions.
 Errors quoted for individual analyses include analytical error only, without interfering reaction or J uncertainties.

Age calculations:

Ages calculated relative to FC-2 Fish Canyon Tuff sanidine interlaboratory standard (28.201 Ma, Kuiper et al, 2008).
 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.
 MSWD values are calculated for n-1 degrees of freedom for plateau age.
 Isochron ages, $^{40}\text{Ar}/^{36}\text{Ar}_i$ and MSWD values calculated from regression results obtained by the methods of York (1969).
 Decay constants and isotopic abundances after Min et al., (2000).
 All errors reported at ±2σ, unless otherwise noted.

Sample preparation and irradiation:

Sanidine separates prepared using crushing, dilute HF acid treatment,
 Franz magnetic separator, heavy density liquids, and hand-picking techniques.
 Samples were loaded into machined Al discs and irradiated in NM-227F position for 10 hrs at the Triga Reactor
 Neutron flux monitor Fish Canyon Tuff sanidine (FC-2).

Instrumentation:

Mass Analyzer Products 215-50 mass spectrometer on line with automated all-metal extraction system.

Samples were fused using a CO₂ laser (heating duration 30 seconds).

Reactive gases removed during laser analysis by reaction with 2 SAES GP-50 getters, 1 operated at ~450°C and 1 at 20°C. Gas also exposed to a W filament operated at ~2000°C.

Analytical parameters:

Electron multiplier sensitivity was 4.75×10^{-17} moles /pA.

Total system blank and background for the laser averaged 312, 4.48, 0.60, 2.45, 12.9×10^{-18} moles at masses 40, 39, 38, 37 and 36 respectively

J-factors determined to a precision of $\pm 0.1\%$ by CO₂ laser-fusion of 6 single crystals from each of 10 radial positions around the irradiation tray.

Correction factors for interfering nuclear reactions were determined using K-glass and CaF₂ and are as follows:

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

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

$$(^{38}\text{Ar}/^{39}\text{Ar})_{\text{K}} = 0.013 \pm 5\text{e-}04$$

$$(^{40}\text{Ar}/^{39}\text{Ar})_{\text{K}} = 0 \pm 4\text{e-}04$$

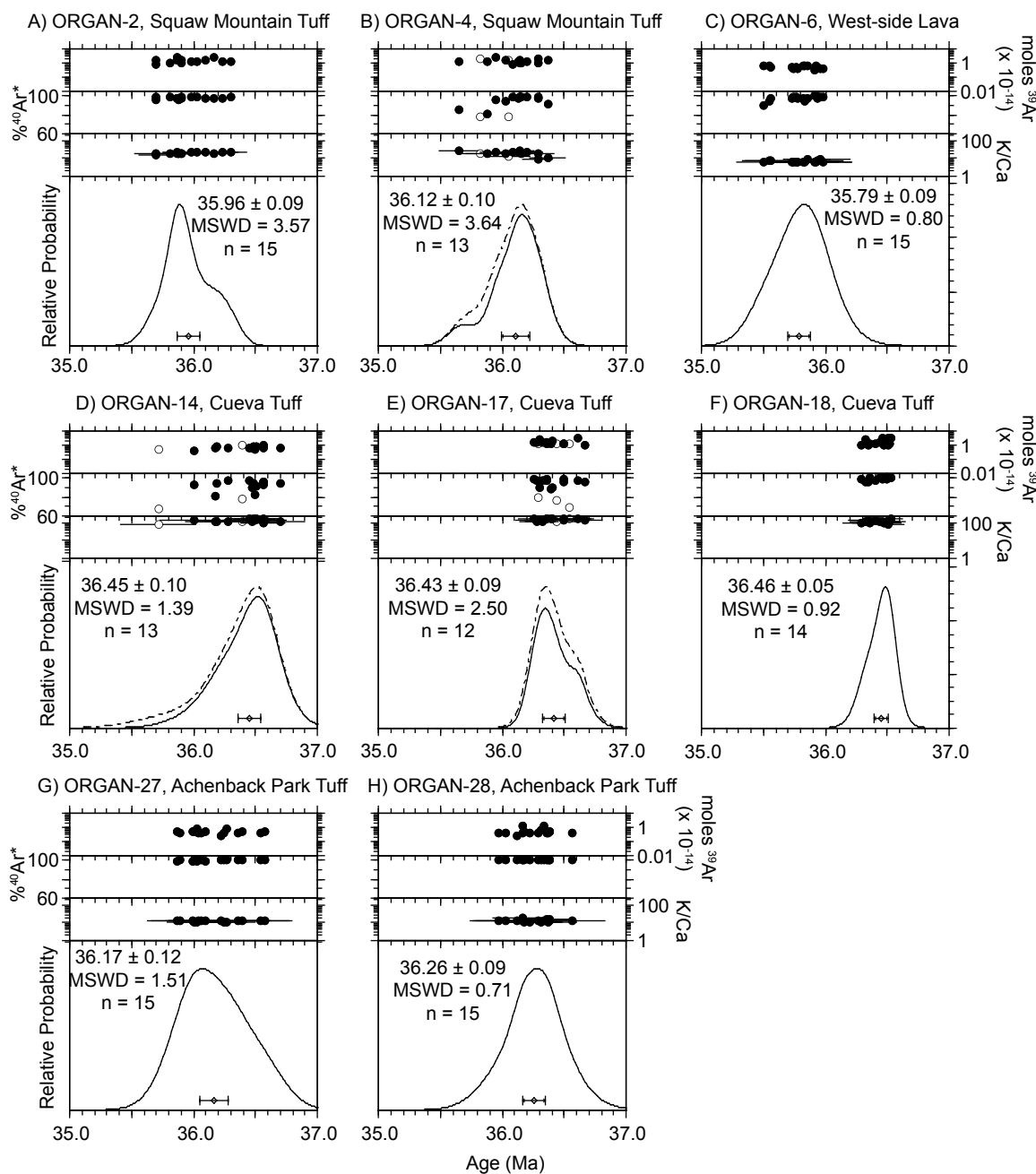


Fig. 3.1 Sanidine single-crystal laser-fusion ideograms. Auxiliary plots include moles ^{39}Ar , K/Ca, and radiogenic yield ($\%^{40}\text{Ar}^*$). All errors are reported at 2σ and do not include error in decay constant

Table 3.2 Organ caldera bt., plag., hbl., and gmc. $^{40}\text{Ar}/^{39}\text{Ar}$ analytical data.

ID	Power (Watts)	⁴⁰ Ar/ ³⁹ Ar	³⁷ Ar/ ³⁹ Ar	³⁶ Ar/ ³⁹ Ar (x 10 ⁻³)	³⁹ Ar _K (x 10 ⁻¹⁵ mol)	K/Ca	⁴⁰ Ar* (%)	³⁹ Ar (%)	Age (Ma)	±1σ (Ma)
ORGAN-7, Biotite, 4.45 mg, J=0.0023837±0.09%, D=1.006±0.001, NM-227L, Lab#=59272-01										
x A	1	76.05	-0.0636	211.9	0.049	-	17.6	0.0	57.61	9.95
x B	1	96.22	0.0312	293.9	0.132	16.4	9.7	0.1	40.47	5.46
x C	2	28.88	0.0381	80.58	0.635	13.4	17.5	0.4	21.95	1.38
x D	3	11.89	0.0247	15.12	1.39	20.7	62.4	1.2	32.09	0.50
x E	4	9.440	0.0155	4.766	4.04	32.9	85.1	3.4	34.68	0.19
x F	5	9.026	0.0105	2.732	4.15	48.5	91.1	5.6	35.48	0.16
x G	6	9.122	0.0283	2.753	26.4	18.0	91.1	19.8	35.87	0.07
H	8	8.894	0.0628	2.081	27.2	8.1	93.1	34.4	35.76	0.07
I	10	8.844	0.0629	1.892	25.0	8.1	93.7	47.9	35.78	0.07
J	13	8.918	0.0321	2.206	23.3	15.9	92.7	60.5	35.69	0.07
K	16	8.880	0.0199	2.052	25.9	25.7	93.2	74.4	35.72	0.07
L	18	8.864	0.0084	2.039	13.7	60.6	93.2	81.8	35.66	0.08
M	30	8.980	0.0101	2.511	22.0	50.7	91.7	93.7	35.56	0.07
N	35	8.723	0.0116	1.636	11.8	44.1	94.5	100.0	35.57	0.08
Integrated age ± 2σ			n=14		185.7	16.0	K2O=6.73%		35.62	0.12
Plateau ± 2σ			steps H-N	n=7	MSWD=1.37	148.9	26.4 ±42.7	80.2	35.68	0.09
Isochron±2σ			steps A-N	n=14	MSWD=12.26	⁴⁰ Ar/ ³⁶ Ar= 276.5±5.1			35.85	0.09
ORGAN-8, Biotite, 4.3 mg, J=0.0023843±0.09%, D=1.006±0.001, NM-227L, Lab#=59273-01										
x A	1	-185.6122	0.2772	-798.1338	-0.004	1.8	-27.1	0.0	207.16	108.13
x B	1	125.6	0.2014	439.9	0.140	2.5	-3.5	0.1	-19.39	6.49
x C	2	81.52	0.1851	266.4	0.399	2.8	3.5	0.4	12.27	2.75
x D	3	21.81	0.1359	51.13	0.742	3.8	30.7	1.0	29.03	0.87
x E	4	10.91	0.1006	11.98	1.30	5.1	67.6	2.0	31.91	0.50
x F	5	9.232	0.0802	3.407	1.08	6.4	89.2	2.8	35.54	0.41
x G	6	8.977	0.0651	2.463	10.0	7.8	92.0	10.6	35.64	0.08
x H	8	8.779	0.0554	1.529	13.0	9.2	94.9	20.7	35.97	0.07
I	10	8.724	0.0487	1.463	13.1	10.5	95.1	30.9	35.82	0.07
J	13	8.649	0.0305	1.264	19.3	16.7	95.7	46.0	35.74	0.07
K	16	8.702	0.0295	1.357	17.3	17.3	95.4	59.5	35.85	0.07
L	18	8.710	0.0209	1.527	12.4	24.4	94.8	69.2	35.66	0.08
M	30	8.736	0.0190	1.539	22.8	26.9	94.8	87.0	35.76	0.06
N	35	8.632	0.0093	1.182	16.8	55.1	96.0	100.0	35.76	0.07
Integrated age ± 2σ			n=14		128.4	15.0	K2O=4.81%		35.56	0.13
Plateau ± 2σ			steps I-N	n=6	MSWD=0.79	101.8	25.5 ±31.6	79.3	35.77	0.08
Isochron±2σ			steps A-N	n=14	MSWD=4.70	⁴⁰ Ar/ ³⁶ Ar= 269.4±3.2			35.94	0.08
ORGAN-9, Biotite, 4.55 mg, J=0.0023845±0.08%, D=1.006±0.001, NM-227L, Lab#=59274-01										
x A	1	73.21	0.4813	384.8	0.007	1.1	-55.3	0.0	-185.78	63.23
x B	1	25.06	0.0686	81.14	0.418	7.4	4.3	0.2	4.73	1.72
x C	2	19.13	0.0268	53.15	3.10	19.1	17.9	1.5	14.84	0.50
x D	3	12.87	0.0111	21.09	9.25	46.0	51.6	5.3	28.72	0.21
x E	4	10.30	0.0079	9.397	18.1	64.2	73.0	12.9	32.49	0.11
x F	5	9.449	0.0082	5.979	15.2	62.5	81.3	19.2	33.19	0.09
G	6	9.188	0.0211	4.840	49.3	24.2	84.4	39.9	33.52	0.07
H	8	8.825	0.0356	3.617	43.9	14.3	87.9	58.2	33.52	0.06
I	10	8.525	0.0477	2.441	35.4	10.7	91.6	73.0	33.73	0.06
x J	13	8.502	0.0595	2.249	30.6	8.6	92.2	85.8	33.88	0.06
x K	16	8.633	0.0563	2.899	15.0	9.1	90.1	92.1	33.61	0.08

x L	18	9.089	0.0472	4.638	6.09	10.8	85.0	94.6	33.36	0.12
x M	30	9.169	0.0449	5.007	12.9	11.4	83.9	100.0	33.24	0.10
Integrated age $\pm 2\sigma$			n=13		239.2	14.7	K2O=8.47%		33.00	0.14
Plateau $\pm 2\sigma$			steps G-I	n=3	MSWD=3.62	128.6	17.1 ± 14.0	53.8	33.60	0.15
Isochron $\pm 2\sigma$			steps A-M	n=13	MSWD=19.89		$^{40}\text{Ar}/^{36}\text{Ar}$	223.5 $\pm$ 2.5	34.72	0.09

ORGAN-12, Biotite, 5.08 mg, J=0.0023846 $\pm$ 0.08%, D=1.006 $\pm$ 0.001, NM-227L, Lab#=59275-01

x A	1	101.6	0.2017	323.9	0.064	2.5	5.8	0.0	25.54	9.59
x B	1	90.74	0.1805	308.0	0.583	2.8	-0.3	0.5	-1.08	3.29
x C	2	55.47	0.1197	178.5	0.924	4.3	4.9	1.1	11.90	1.91
x D	3	12.83	0.0851	22.67	1.32	6.0	47.8	2.0	26.55	0.56
x E	4	8.894	0.1398	5.743	1.78	3.6	81.0	3.3	31.16	0.30
x F	5	8.953	0.1608	2.793	1.10	3.2	90.9	4.1	35.16	0.47
x G	6	9.021	0.1233	2.027	10.7	4.1	93.5	11.6	36.40	0.08
x H	8	8.859	0.1026	1.576	16.7	5.0	94.8	23.3	36.27	0.08
I	10	8.693	0.0718	1.332	20.4	7.1	95.5	37.7	35.86	0.07
J	13	8.647	0.0657	1.242	22.6	7.8	95.8	53.6	35.78	0.06
K	16	8.608	0.0398	1.031	20.8	12.8	96.5	68.2	35.86	0.06
L	18	8.610	0.0216	1.091	16.9	23.6	96.3	80.1	35.79	0.07
M	30	8.630	0.0187	1.309	17.7	27.3	95.5	92.5	35.60	0.07
N	35	8.657	0.0160	1.265	10.7	32.0	95.7	100.0	35.77	0.08
Integrated age $\pm 2\sigma$			n=14		142.3	8.6	K2O=4.51%		35.43	0.14
Plateau $\pm 2\sigma$			steps I-N	n=6	MSWD=1.87	109.1	16.6 ± 21.2	76.7	35.78	0.09
Isochron $\pm 2\sigma$			steps A-N	n=14	MSWD=42.23		$^{40}\text{Ar}/^{36}\text{Ar}$	264.1 $\pm$ 3.0	36.03	0.07

ORGAN-13, Biotite, 4.78 mg, J=0.0023845 $\pm$ 0.07%, D=1.006 $\pm$ 0.001, NM-227L, Lab#=59276-01

x A	1	-46.5673	0.1675	-237.1100	-0.008	3.0	-50.5	0.0	99.83	55.11
x B	1	66.22	0.4160	226.5	0.082	1.2	-1.0	0.0	-2.97	7.52
x C	2	21.16	0.2609	56.21	0.752	2.0	21.6	0.3	19.81	1.08
x D	3	11.94	0.0365	15.41	5.98	14.0	61.9	2.7	31.94	0.18
E	4	8.975	0.0145	4.257	14.5	35.1	86.0	8.3	33.35	0.09
F	5	8.254	0.0115	1.649	13.8	44.3	94.1	13.7	33.56	0.08
G	6	8.003	0.0291	0.8113	53.2	17.5	97.0	34.5	33.55	0.05
H	8	7.877	0.0466	0.4564	59.2	10.9	98.3	57.7	33.47	0.05
I	10	7.857	0.0429	0.3359	39.8	11.9	98.8	73.2	33.53	0.05
J	13	7.834	0.0388	0.3232	33.9	13.1	98.8	86.5	33.45	0.05
K	16	7.847	0.0502	0.4172	17.2	10.2	98.5	93.2	33.39	0.07
x L	18	7.816	0.0438	0.5956	6.94	11.6	97.8	95.9	33.03	0.09
x M	30	7.875	0.0367	0.6314	7.89	13.9	97.7	99.0	33.23	0.10
x N	35	8.010	0.0292	1.183	2.57	17.5	95.7	100.0	33.11	0.20
Integrated age $\pm 2\sigma$			n=14		255.7	13.5	K2O=8.62%		33.37	0.10
Plateau $\pm 2\sigma$			steps E-K	n=7	MSWD=1.44	231.5	16.4 ± 27.2	90.5	33.48	0.07
Isochron $\pm 2\sigma$			steps A-N	n=14	MSWD=10.01		$^{40}\text{Ar}/^{36}\text{Ar}$	266.9 $\pm$ 4.0	33.53	0.06

ORGAN-24, Biotite, 4.54 mg, J=0.0023842 $\pm$ 0.05%, D=1.006 $\pm$ 0.001, NM-227L, Lab#=59277-01

x A	1	-6.1815	1.127	63.29	-0.006	0.45	400.5	0.0	-111.64	76.14
x B	1	73.12	0.2929	237.6	0.068	1.7	4.0	0.0	12.74	7.75
x C	2	23.21	0.2067	55.75	0.688	2.5	29.1	0.3	29.21	1.34
x D	3	11.20	0.0478	12.00	4.63	10.7	68.4	2.2	33.09	0.21
E	4	8.739	0.0100	2.415	14.0	51.3	91.8	8.0	34.66	0.08
F	5	8.278	0.0065	0.9172	15.0	78.0	96.7	14.2	34.58	0.07
G	6	8.181	0.0185	0.4304	55.2	27.6	98.5	37.1	34.79	0.05
H	8	8.093	0.0444	0.2466	51.9	11.5	99.2	58.6	34.65	0.05
I	10	8.099	0.0522	0.2623	36.5	9.8	99.1	73.7	34.66	0.05
J	13	8.100	0.0635	0.3002	29.3	8.0	99.0	85.9	34.62	0.05
K	16	8.108	0.0883	0.3321	13.9	5.8	98.9	91.7	34.62	0.07

L	18	8.147	0.0929	0.5063	6.75	5.5	98.3	94.5	34.57	0.09
x M	30	8.119	0.0596	0.5067	10.5	8.6	98.2	98.8	34.44	0.07
x N	35	8.380	0.0600	1.598	2.87	8.5	94.4	100.0	34.17	0.19
Integrated age $\pm 2\sigma$			n=14		241.2	11.9	K2O=8.56%		34.61	0.09
Plateau $\pm 2\sigma$			steps E-L	n=8	MSWD=1.50	222.4	21.2 ± 53.2	92.2	34.66	0.06
Isochron $\pm 2\sigma$			steps A-N	n=14	MSWD=3.29		$^{40}\text{Ar}/^{36}\text{Ar}$	271.0 ± 5.6	34.69	0.05

ORGAN-25, Biotite, 4.94 mg, J=0.0023839 $\pm$ 0.05%, D=1.006 $\pm$ 0.001, NM-227L, Lab#=59278-01

x A	1	16.93	0.0450	58.41	0.033	11.3	-2.0	0.0	-1.47	12.03
x B	1	24.86	0.0368	81.50	1.12	13.9	3.1	0.4	3.35	1.06
x C	2	21.08	0.0174	61.13	6.26	29.2	14.3	2.9	13.08	0.47
x D	3	13.85	0.0071	25.67	17.1	71.4	45.2	9.5	27.11	0.21
x E	4	10.98	0.0055	12.25	31.8	93.0	67.0	21.8	31.81	0.11
x F	5	10.34	0.0052	9.425	26.0	98.0	73.1	31.9	32.65	0.11
G	6	10.23	0.0103	8.562	63.4	49.4	75.3	56.5	33.27	0.09
H	8	10.39	0.0205	8.760	45.6	24.9	75.1	74.1	33.70	0.09
I	10	10.19	0.0354	8.246	26.0	14.4	76.1	84.2	33.48	0.10
J	13	9.920	0.0601	7.426	21.6	8.5	77.9	92.6	33.39	0.10
x K	16	9.583	0.0804	5.972	10.6	6.3	81.6	96.6	33.79	0.10
x L	18	9.977	0.0737	7.541	2.67	6.9	77.7	97.7	33.49	0.25
x M	30	9.803	0.0835	6.670	4.56	6.1	80.0	99.4	33.85	0.17
x N	35	10.15	0.0810	7.466	1.43	6.3	78.3	100.0	34.34	0.42
Integrated age $\pm 2\sigma$			n=14		258.1	22.2	K2O=8.42%		32.15	0.19
Plateau $\pm 2\sigma$			steps G-J	n=4	MSWD=3.75	156.6	30.8 ± 36.1	60.7	33.46	0.19
Isochron $\pm 2\sigma$			steps A-N	n=14	MSWD=9.31		$^{40}\text{Ar}/^{36}\text{Ar}$	208.1 ± 2.2	36.42	0.12

ORGAN-31, Biotite, 8.51 mg, J=0.0023836 $\pm$ 0.06%, D=1.006 $\pm$ 0.001, NM-227L, Lab#=59279-02

x A	650	60.25	0.0463	193.0	0.78	11.0	5.3	0.4	13.95	1.78
x B	750	21.86	0.0132	49.29	1.65	38.7	33.4	1.1	31.52	0.65
x C	850	13.08	0.0043	17.44	10.1	119.5	60.6	5.7	34.22	0.18
D	920	10.82	0.0033	9.249	11.3	156.2	74.7	10.9	34.93	0.14
E	1000	10.58	0.0041	8.151	12.7	123.4	77.2	16.7	35.27	0.13
F	1075	10.28	0.0050	7.048	17.4	101.6	79.7	24.6	35.39	0.10
G	1110	9.400	0.0049	4.100	17.3	105.0	87.1	32.5	35.35	0.09
H	1180	9.078	0.0295	3.186	30.8	17.3	89.7	46.5	35.13	0.07
I	1210	8.688	0.0355	1.813	44.0	14.4	93.9	66.5	35.20	0.06
J	1250	8.434	0.0232	1.026	47.3	22.0	96.4	88.1	35.11	0.05
x K	1300	8.314	0.0035	0.6684	19.5	143.8	97.6	97.0	35.04	0.06
x L	1720	8.780	0.0069	1.940	6.7	74.3	93.5	100.0	35.43	0.12
Integrated age $\pm 2\sigma$			n=12		219.6	27.7	K2O=4.16%		35.03	0.13
Plateau $\pm 2\sigma$			steps D-J	n=7	MSWD=2.33	180.8	50.4 ± 116.4	82.3	35.19	0.10
Isochron $\pm 2\sigma$			steps A-L	n=12	MSWD=11.07		$^{40}\text{Ar}/^{36}\text{Ar}$	281.6 ± 2.6	35.32	0.07

Organ-35, Biotite, 5.47 mg, J=0.0016057 $\pm$ 0.15%, D=1.002 $\pm$ 0.001, NM-236D, Lab#=59745-01

x A	2	191.2	0.0503	633.6	0.380	10.2	2.1	0.3	11.73	3.66
x B	3	51.48	0.0184	155.6	1.02	27.8	10.7	0.9	16.07	1.08
x C	4	34.84	0.0079	91.62	1.39	64.7	22.3	1.9	22.67	0.64
x D	5	20.76	0.0024	34.59	1.21	209.3	50.7	2.7	30.69	0.34
x E	6	18.59	0.0015	22.95	2.90	333.5	63.5	4.7	34.36	0.21
F	8	16.57	0.0011	14.02	10.5	469.7	75.0	11.7	36.13	0.12
G	10	14.14	0.0007	5.840	12.7	699.4	87.8	20.3	36.11	0.08
H	13	13.64	0.0002	4.032	23.3	2117.9	91.3	36.0	36.21	0.07
I	16	13.34	0.0004	3.091	25.0	1445.7	93.2	52.9	36.13	0.07
J	18	13.41	0.0002	3.234	15.3	2932.2	92.9	63.2	36.22	0.07
K	30	13.29	0.0000	2.944	37.8	#####	93.5	88.7	36.10	0.06
L	35	13.63	0.0004	3.948	16.7	1380.8	91.4	100.0	36.25	0.07

Integrated age $\pm 2\sigma$		n=12		148.3	742.0	K2O=6.49%	35.75	0.17
Plateau $\pm 2\sigma$	steps F-L	n=7	MSWD=0.78	141.4	4243.7 ± 7690.0	95.3	36.17	0.12
Isochron $\pm 2\sigma$	steps A-L	n=12	MSWD=36.76		$^{40}\text{Ar}/^{36}\text{Ar} = 264.0 \pm 2.1$		36.52	0.12

Organ-36, Biotite, 5.11 mg, J=0.0016086 $\pm$ 0.16%, D=1.002 $\pm$ 0.001, NM-236D, Lab#=59746-01

x	A	2	639.5	0.0898	2151.5	0.050	5.7	0.6	0.0	10.82	17.26
x	B	3	251.8	0.1150	854.3	0.175	4.4	-0.2	0.2	-1.78	5.34
x	C	4	102.8	0.0947	332.4	0.372	5.4	4.4	0.5	13.39	2.65
x	D	5	56.48	0.0530	163.8	0.328	9.6	14.3	0.8	23.65	1.95
x	E	6	38.89	0.0256	99.42	1.45	19.9	24.4	2.1	27.77	0.65
x	F	8	17.92	0.0100	20.10	11.2	51.0	66.8	11.8	34.90	0.15
	G	10	13.81	0.0119	4.890	14.5	42.9	89.5	24.4	36.04	0.08
	H	13	13.40	0.0155	3.573	18.0	32.9	92.1	40.1	35.98	0.07
	I	16	13.31	0.0193	3.024	17.1	26.4	93.3	54.9	36.17	0.07
	J	18	13.17	0.0282	2.938	12.6	18.1	93.4	65.9	35.85	0.07
	K	30	13.07	0.0580	2.528	23.5	8.8	94.3	86.3	35.91	0.06
	L	35	13.22	0.0386	2.996	15.8	13.2	93.3	100.0	35.94	0.07
Integrated age $\pm 2\sigma$		n=12			115.2	17.6	K2O=5.38%			35.60	0.18
Plateau $\pm 2\sigma$	steps G-L	n=6	MSWD=2.35		101.6	22.7 ± 25.7		88.2		35.98	0.14
Isochron $\pm 2\sigma$	steps A-L	n=12	MSWD=8.32			$^{40}\text{Ar}/^{36}\text{Ar} = 276.7 \pm 2.1$				36.14	0.13

Organ-37, Biotite, 5.8 mg, J=0.0016102 $\pm$ 0.16%, D=1.002 $\pm$ 0.001, NM-236D, Lab#=59747-01

x	A	2	136.6	0.0517	452.7	0.264	9.9	2.1	0.2	8.24	3.29
x	B	3	50.65	0.0470	163.1	0.693	10.8	4.8	0.7	7.16	1.14
x	C	4	41.96	0.0287	125.9	0.90	17.8	11.3	1.4	13.98	0.96
x	D	5	30.79	0.0191	79.10	0.714	26.7	24.1	1.9	21.71	0.84
x	E	6	20.11	0.0109	32.68	2.56	46.9	52.0	3.7	30.53	0.26
x	F	8	15.16	0.0056	10.72	17.2	90.6	79.1	16.3	34.98	0.10
	G	10	13.95	0.0049	6.190	16.9	103.9	86.9	28.6	35.37	0.08
	H	13	13.92	0.0069	5.985	17.8	73.5	87.3	41.6	35.43	0.08
	I	16	13.54	0.0125	4.648	18.2	40.9	89.9	54.9	35.48	0.07
	J	18	13.46	0.0242	4.405	13.8	21.1	90.3	65.0	35.46	0.08
	K	30	13.20	0.0437	3.617	29.7	11.7	91.9	86.6	35.40	0.06
	L	35	13.18	0.0288	3.594	18.3	17.7	92.0	100.0	35.34	0.07
Integrated age $\pm 2\sigma$		n=12			137.1	25.0	K2O=5.64%			34.86	0.17
Plateau $\pm 2\sigma$	steps G-L	n=6	MSWD=0.54		114.8	41.6 ± 73.3		83.7		35.41	0.13
Isochron $\pm 2\sigma$	steps A-L	n=12	MSWD=31.54			$^{40}\text{Ar}/^{36}\text{Ar} = 248.1 \pm 2.2$				36.06	0.13

Organ-41, Biotite, 5.13 mg, J=0.0016114 $\pm$ 0.15%, D=1.002 $\pm$ 0.001, NM-236D, Lab#=59748-01

x	A	2	146.4	0.1102	479.4	0.148	4.6	3.2	0.1	13.91	4.19
x	B	3	57.30	0.0370	161.6	0.412	13.8	16.7	0.3	27.95	1.68
x	C	4	22.25	0.0101	35.69	2.58	50.7	52.6	1.9	34.16	0.31
	D	5	16.27	0.0053	13.25	4.68	96.4	75.9	4.8	36.06	0.17
	E	6	14.51	0.0034	6.903	13.3	152.3	85.9	13.0	36.39	0.09
	F	8	13.42	0.0049	3.371	28.5	104.4	92.6	30.6	36.26	0.06
	G	10	13.20	0.0112	2.695	16.3	45.5	94.0	40.6	36.20	0.07
	H	13	13.37	0.0423	3.184	21.1	12.1	93.0	53.6	36.30	0.06
	I	16	13.32	0.0670	3.117	20.8	7.6	93.1	66.4	36.20	0.07
	J	18	13.37	0.0539	3.292	13.1	9.5	92.8	74.5	36.18	0.08
	K	30	13.32	0.0472	3.013	31.8	10.8	93.3	94.1	36.29	0.06
	L	35	14.11	0.0269	5.756	9.7	19.0	88.0	100.0	36.23	0.09
Integrated age $\pm 2\sigma$		n=12			162.4	15.9	K2O=7.55%			36.18	0.16
Plateau $\pm 2\sigma$	steps D-L	n=9	MSWD=0.79		159.3	45.6 ± 107.2		98.1		36.25	0.12
Isochron $\pm 2\sigma$	steps A-L	n=12	MSWD=2.15			$^{40}\text{Ar}/^{36}\text{Ar} = 279.4 \pm 3.5$				36.42	0.13

Organ-42, Biotite, 5.01 mg, J=0.0016122±0.14%, D=1.002±0.001, NM-236D, Lab#=59749-02

x A	2	85.57	0.0306	280.1	0.465	16.7	3.3	0.2	8.20	1.83
x B	3	49.20	0.0151	157.0	1.11	33.8	5.7	0.7	8.21	0.91
x C	4	23.89	0.0079	52.21	3.40	64.3	35.4	2.3	24.78	0.32
x D	5	17.05	0.0066	19.70	4.26	77.5	65.8	4.3	32.82	0.19
x E	6	14.36	0.0051	7.879	14.3	100.5	83.8	11.1	35.16	0.09
F	8	13.36	0.0053	3.314	40.3	97.0	92.7	30.0	36.16	0.06
G	10	13.33	0.0046	3.329	30.2	111.1	92.6	44.3	36.06	0.06
H	13	13.26	0.0097	2.875	37.4	52.7	93.6	61.8	36.24	0.06
x I	16	13.26	0.0159	2.525	31.7	32.1	94.4	76.8	36.55	0.06
x J	18	13.21	0.0205	2.463	15.4	24.8	94.5	84.0	36.46	0.07
x K	30	13.26	0.0291	2.414	24.6	17.5	94.6	95.6	36.64	0.06
x L	35	13.29	0.0271	2.736	9.3	18.8	93.9	100.0	36.45	0.08
Integrated age ± 2σ			n=12		212.4	40.7	K2O=10.10%		35.78	0.15
Plateau ± 2σ		steps F-H	n=3	MSWD=2.26	107.9	85.6 ±60.9	50.8		36.16	0.15
Isochron±2σ		steps A-L	n=12	MSWD=36.99		⁴⁰ Ar/ ³⁶ Ar=	235.8±2.0		36.80	0.11

Organ-43, Biotite, 5.21 mg, J=0.0016128±0.14%, D=1.002±0.001, NM-236D, Lab#=59750-01

x A	2	155.2	0.1347	524.6	0.124	3.8	0.1	0.1	0.54	5.06
x B	3	70.27	0.0520	225.5	0.432	9.8	5.2	0.3	10.71	2.12
x C	4	50.64	0.0474	152.9	0.694	10.8	10.8	0.7	16.10	1.24
x D	5	35.12	0.0376	87.24	0.629	13.6	26.6	1.1	27.36	0.87
x E	6	24.27	0.0300	45.87	2.34	17.0	44.2	2.5	31.36	0.35
x F	8	14.80	0.0192	9.329	12.6	26.6	81.4	9.9	35.21	0.10
G	10	13.09	0.0197	3.106	15.0	25.8	93.0	18.8	35.58	0.07
H	13	12.78	0.0264	2.324	21.5	19.3	94.7	31.6	35.35	0.07
I	16	12.65	0.0370	1.843	27.4	13.8	95.7	47.7	35.39	0.05
J	18	12.56	0.0426	1.527	22.5	12.0	96.5	61.0	35.39	0.06
K	30	12.47	0.0518	1.200	44.8	9.9	97.2	87.5	35.42	0.05
L	35	12.67	0.0578	1.906	21.1	8.8	95.6	100.0	35.39	0.06
Integrated age ± 2σ			n=12		169.2	12.7	K2O=7.74%		35.14	0.15
Plateau ± 2σ		steps G-L	n=6	MSWD=1.39	152.4	13.6 ±13.0		90.1	35.42	0.12
Isochron±2σ		steps A-L	n=12	MSWD=8.10		⁴⁰ Ar/ ³⁶ Ar= 263.7±2.4			35.61	0.11

Organ-45, Biotite, 4.91 mg, J=0.0016126±0.15%, D=1.002±0.001, NM-236D, Lab#=59751-01

X A	2	75.62	0.0307	232.7	0.261	16.6	9.1	0.2	20.11	2.91
X B	3	54.40	0.0242	165.9	0.587	21.1	9.9	0.7	15.79	1.31
X C	4	33.68	0.0124	91.33	1.17	41.2	19.9	1.6	19.65	0.71
X D	6	17.19	0.0058	22.63	4.67	87.8	61.1	5.3	30.72	0.23
X E	8	13.42	0.0046	5.386	20.5	111.4	88.2	21.5	34.56	0.07
X F	10	12.99	0.0067	3.549	18.3	75.7	91.9	36.0	34.89	0.07
X G	13	12.81	0.0133	3.003	19.6	38.3	93.1	51.4	34.84	0.06
X H	16	12.64	0.0191	1.883	19.1	26.7	95.6	66.5	35.31	0.06
X I	18	12.62	0.0260	1.757	12.3	19.6	95.9	76.3	35.37	0.08
X J	30	12.58	0.0298	1.725	24.0	17.1	96.0	95.3	35.28	0.06
X K	35	13.55	0.0404	4.591	5.99	12.6	90.0	100.0	35.65	0.11
Integrated age ± 2σ			n=11		126.3	29.5	K2O=6.13%		34.63	0.16
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=26.34	⁴⁰ Ar/ ³⁶ Ar=		246.6±2.8		35.48	0.12

Organ-46, Biotite, 5.09 mg, J=0.0016118±0.16%, D=1.002±0.001, NM-236D, Lab#=59752-01

x A	2	70.25	0.0206	229.2	0.498	24.7	3.6	0.4	7.38	2.25
x B	3	33.95	0.0133	102.7	0.90	38.2	10.5	1.2	10.53	0.84
x C	4	26.96	0.0088	69.90	1.63	58.1	23.4	2.7	18.48	0.49
x D	5	22.27	0.0072	43.52	1.68	70.8	42.2	4.1	27.53	0.43
x E	6	18.65	0.0052	25.33	5.47	98.5	59.8	9.0	32.61	0.20

x	F	8	14.85	0.0035	9.035	22.0	146.3	82.0	28.3	35.56	0.09
	G	10	14.28	0.0034	6.636	18.9	148.6	86.3	45.0	35.96	0.08
	H	13	14.50	0.0060	7.644	18.0	85.6	84.4	60.8	35.74	0.08
	I	16	14.26	0.0057	6.791	13.8	90.1	85.9	72.9	35.79	0.09
	J	18	13.94	0.0063	5.882	8.31	81.4	87.5	80.2	35.62	0.10
	K	30	13.46	0.0149	4.121	15.7	34.2	91.0	94.0	35.74	0.08
	L	35	13.20	0.0092	3.245	6.78	55.6	92.7	100.0	35.73	0.09
Integrated age $\pm 2\sigma$				n=12		113.8	77.1	K2O=5.33%		34.90	0.19
Plateau $\pm 2\sigma$				steps G-L	n=6	MSWD=1.57	81.6	88.2 ± 77.4	71.7	35.77	0.14
Isochron $\pm 2\sigma$				steps A-L	n=12	MSWD=46.05	$^{40}\text{Ar}/^{36}\text{Ar} = 225.8 \pm 2.3$			36.97	0.14

Organ-47, Biotite, 5.11 mg, J=0.0016104 $\pm$ 0.16%, D=1.002 $\pm$ 0.001, NM-236D, Lab#=59753-01

x	A	2	70.21	0.0313	225.7	0.301	16.3	5.0	0.2	10.30	2.51
x	B	3	33.26	0.0361	100.1	0.92	14.1	11.1	0.6	10.83	0.68
x	C	4	23.45	0.0117	49.49	2.12	43.4	37.6	1.8	25.81	0.35
x	D	5	15.30	0.0049	13.53	3.06	104.5	73.9	3.4	32.99	0.20
x	E	6	14.19	0.0042	7.557	9.5	122.2	84.3	8.4	34.88	0.10
	F	8	12.99	0.0031	2.263	37.0	166.8	94.9	28.0	35.94	0.06
	G	10	12.79	0.0045	1.458	31.1	112.3	96.7	44.4	36.07	0.06
	H	13	12.72	0.0087	1.347	30.5	58.9	96.9	60.5	35.96	0.05
	I	16	12.67	0.0147	1.207	27.5	34.7	97.2	75.0	35.91	0.05
	J	18	12.63	0.0206	1.152	14.5	24.7	97.3	82.7	35.84	0.06
	K	30	12.63	0.0193	1.114	23.5	26.5	97.4	95.1	35.89	0.06
x	L	35	12.59	0.0153	1.084	9.2	33.5	97.5	100.0	35.79	0.07
Integrated age $\pm 2\sigma$				n=12		189.1	49.8	K2O=8.83%		35.56	0.15
Plateau $\pm 2\sigma$				steps F-K	n=6	MSWD=1.67	164.0	81.6 ± 114.8	86.7	35.94	0.13
Isochron $\pm 2\sigma$				steps A-L	n=12	MSWD=23.61	$^{40}\text{Ar}/^{36}\text{Ar} = 224.6 \pm 2.5$			36.21	0.12

ORGAN-8, Plagioclase, 10.12 mg, J=0.0023824 $\pm$ 0.06%, D=1.005 $\pm$ 0.001, NM-227L, Lab#=59282-01

x	A	3	131.8	1.469	438.5	0.527	0.35	1.8	1.4	10.30	6.73
x	B	5	33.33	1.864	94.71	1.89	0.27	16.5	6.2	23.89	4.55
x	C	10	10.17	4.802	8.923	3.28	0.11	78.0	14.7	34.36	0.44
	D	15	8.639	5.162	2.586	6.63	0.099	96.1	31.8	35.94	0.19
	E	20	9.345	5.503	4.936	8.63	0.093	89.3	54.0	36.12	0.28
	F	25	9.272	5.765	4.829	6.49	0.089	89.7	70.7	36.04	0.20
	G	30	9.379	6.022	4.789	3.68	0.085	90.2	80.2	36.65	0.28
	H	33	9.533	6.300	5.531	2.57	0.081	88.3	86.8	36.47	0.32
	I	35	10.73	6.211	9.452	1.44	0.082	78.7	90.5	36.61	0.54
	J	40	11.47	6.576	12.37	1.60	0.078	72.8	94.7	36.21	0.52
	K	45	9.692	6.842	6.004	1.30	0.075	87.5	98.0	36.76	0.57
x	L	50	9.550	6.574	3.093	0.766	0.078	96.1	100.0	39.74	0.90
Integrated age $\pm 2\sigma$				n=12		38.8	0.094	K2O=0.62%		35.17	0.63
Plateau $\pm 2\sigma$				steps D-K	n=8	MSWD=1.05	32.3	0.089 $\pm$ 0.016	83.3	36.19	0.21
Isochron $\pm 2\sigma$				steps A-L	n=12	MSWD=4.95	$^{40}\text{Ar}/^{36}\text{Ar} = 283.0 \pm 6.6$			36.29	0.18

ORGAN-7, Hornblende, 13.3 mg, J=0.0023832 $\pm$ 0.06%, D=1.005 $\pm$ 0.001, NM-227L, Lab#=59280-01

x	A	3	798.2	1.069	2643.1	0.170	0.48	2.2	0.3	73.97	17.26
x	B	3	205.8	0.8495	681.2	0.116	0.60	2.2	0.5	19.77	9.38
x	C	4	238.4	1.543	766.7	0.066	0.33	5.0	0.6	51.38	15.81
x	D	4	437.9	0.3250	1432.3	0.036	1.6	3.4	0.7	62.92	29.80
x	E	5	145.7	1.480	396.4	0.024	0.34	19.7	0.7	121.13	28.87
x	F	6	113.2	0.1795	378.6	0.039	2.8	1.2	0.8	5.74	21.16
x	G	8	32.18	0.5052	67.84	0.050	1.0	37.8	0.9	52.35	12.73
x	H	10	28.70	0.7152	80.21	0.064	0.71	17.6	1.0	21.92	9.56
x	I	13	28.22	0.6186	62.21	0.110	0.82	35.0	1.2	42.62	5.69
x	J	18	16.74	2.025	22.60	0.226	0.25	61.1	1.6	44.14	2.89

x	K	25	12.47	4.531	17.01	1.71	0.11	62.7	4.5	33.88	0.51
	L	30	10.08	4.875	7.375	5.07	0.10	82.4	13.3	35.98	0.24
	N	33	9.393	4.417	5.345	5.97	0.12	87.1	23.7	35.43	0.41
	O	35	9.584	6.784	5.849	6.16	0.075	87.9	34.4	36.51	0.32
	P	40	9.073	5.506	4.297	9.5	0.093	91.1	50.9	35.80	0.33
	Q	0	9.999	4.911	6.548	7.79	0.10	84.8	64.4	36.69	0.39
	R	45	8.968	5.549	3.792	10.8	0.092	92.7	83.1	36.00	0.27
	S	60	9.238	6.607	4.610	9.7	0.077	91.2	100.0	36.53	0.30
Integrated age $\pm 2\sigma$			n=18			57.6	0.093	K2O=0.70%		36.24	0.44
Plateau $\pm 2\sigma$			steps L-S	n=7	MSWD=1.62	55.0	0.093 $\pm$ 0.030		95.5	36.13	0.30
Isochron$\pm 2\sigma$			steps A-S	n=18	MSWD=3.97		⁴⁰ Ar/ ³⁶ Ar= 297.4 $\pm$ 2.6			36.04	0.20

ORGAN-8, Hornblende, 13.35 mg, J=0.0023827 $\pm$ 0.06%, D=1.005 $\pm$ 0.001, NM-227L, Lab#=59281-01

x	A	3	389.8	2.891	1335.2	0.274	0.18	-1.1	0.5	-19.61	9.76
x	B	5	155.8	2.687	527.5	0.290	0.19	0.1	1.0	0.65	5.63
x	C	10	20.86	3.015	56.27	0.192	0.17	21.5	1.3	19.48	3.51
x	D	15	13.70	1.953	18.22	0.446	0.26	61.9	2.0	36.66	1.35
x	E	20	10.54	4.152	8.466	1.70	0.12	79.6	4.9	36.28	0.42
x	F	25	8.761	4.790	3.151	6.24	0.11	94.0	15.6	35.64	0.18
	G	30	8.962	6.439	3.482	10.0	0.079	94.5	32.5	36.71	0.26
	H	33	8.846	4.941	2.848	5.35	0.10	95.2	41.6	36.44	0.19
	I	35	8.869	5.041	3.169	7.24	0.10	94.2	54.0	36.17	0.17
	J	40	8.863	5.593	3.265	12.1	0.091	94.4	74.5	36.23	0.21
	K	45	8.652	5.110	2.614	10.9	0.100	96.0	93.0	35.97	0.23
x	L	50	8.739	5.076	2.306	4.14	0.10	97.1	100.0	36.72	0.22
Integrated age $\pm 2\sigma$			n=12			58.8	0.096	K2O=0.71%		35.75	0.36
Plateau $\pm 2\sigma$			steps G-K	n=5	MSWD=1.45	45.5	0.094 $\pm$ 0.020		77.4	36.28	0.23
Isochron$\pm 2\sigma$			steps A-L	n=12	MSWD=6.31		⁴⁰ Ar/ ³⁶ Ar= 283.9 $\pm$ 2.7			36.28	0.12

Organ-36, Hornblende, 13.32 mg, J=0.0016033 $\pm$ 0.13%, D=1.002 $\pm$ 0.001, NM-236D, Lab#=59742-01

X	A	2	7066.6	2.402	24168.5	0.019	0.21	-1.1	0.1	-234.92	133.26
X	B	3	2874.0	1.922	9493.3	0.053	0.27	2.4	0.2	192.16	43.26
X	C	4	1030.7	1.767	3335.4	0.067	0.29	4.4	0.4	128.44	19.06
X	D	4	714.8	1.184	2244.2	0.065	0.43	7.2	0.6	145.99	14.05
X	E	5	632.4	0.9638	1889.5	0.064	0.53	11.7	0.8	205.91	13.41
X	F	6	465.4	0.5811	1390.2	0.169	0.88	11.7	1.3	153.76	7.73
X	G	8	133.2	0.4297	373.5	0.945	1.2	17.2	4.2	65.91	1.93
X	H	10	34.99	1.927	70.24	1.56	0.26	41.1	8.9	41.81	0.65
X	I	13	21.94	4.537	27.93	3.68	0.11	64.1	20.1	40.95	0.26
X	J	18	22.47	6.658	29.93	6.19	0.077	63.1	38.9	41.36	0.31
X	K	25	19.86	4.681	22.54	8.27	0.11	68.5	64.0	39.60	0.23
X	L	30	19.11	4.882	20.55	6.12	0.10	70.4	82.6	39.17	0.20
X	M	35	19.70	4.669	20.88	5.72	0.11	70.7	100.0	40.52	0.24
Integrated age $\pm 2\sigma$			n=13			32.9	0.11	K2O=0.59%		42.46	0.74
Plateau $\pm 2\sigma$			no plateau	n=0	MSWD=0.00	0.000	0.000 $\pm$ 0.000		0.0	0.00	0.00
Isochron$\pm 2\sigma$			steps A-M	n=13	MSWD=28.50		⁴⁰ Ar/ ³⁶ Ar= 310.3 $\pm$ 1.5			39.21	0.25

Organ-46, Hornblende, 12.91 mg, J=0.0016035 $\pm$ 0.14%, D=1.002 $\pm$ 0.001, NM-236D, Lab#=59779-01

X	A	2	4921.0	3.897	11688.1	0.026	0.13	29.8	0.1	2218.27	86.26
X	B	3	2818.0	2.481	5960.5	0.053	0.21	37.5	0.2	1816.56	45.72
X	C	4	1662.1	1.801	2500.2	0.053	0.28	55.6	0.4	1664.49	34.91
X	D	4	997.1	0.2234	1290.1	0.055	2.3	61.8	0.6	1257.69	26.51
X	E	5	587.2	0.3927	815.4	0.067	1.3	59.0	0.8	808.72	17.36
X	F	6	450.5	0.5196	665.8	0.131	0.98	56.3	1.1	625.16	8.05
X	G	8	149.3	2.619	278.6	0.623	0.19	45.0	3.0	187.58	2.08
X	H	10	44.46	5.630	48.59	1.95	0.091	68.8	8.8	87.94	0.54

X I	13	34.05	6.544	24.28	5.54	0.078	80.5	25.2	79.12	0.30
X J	18	29.48	6.528	20.92	7.72	0.078	80.9	48.1	68.99	0.26
X K	25	27.14	6.704	18.83	7.44	0.076	81.6	70.1	64.15	0.27
X L	30	30.35	6.832	22.91	4.83	0.075	79.6	84.4	69.88	0.32
X M	35	26.57	7.045	18.30	5.26	0.072	81.9	100.0	63.06	0.28

Integrated age $\pm 2\sigma$ n=13 33.8 0.078 K2O=0.63% 90.90 0.68

Plateau $\pm 2\sigma$ no plateau n=0 MSWD=0.00 0.000 0.000 $\pm$ 0.000 0.0 0.00 0.00

Isochron $\pm 2\sigma$ steps A-M n=13 MSWD=498.56 $^{40}\text{Ar}/^{36}\text{Ar}$ = 564.8 $\pm$ 3.5 54.09 0.40

Organ-47, Hornblende, 12.81 mg, J=0.0016043 $\pm$ 0.15%, D=1.002 $\pm$ 0.001, NM-236D, Lab#=59743-01

X A	2	1873.6	2.160	5980.1	0.032	0.24	5.7	0.1	289.52	35.31
X B	3	755.4	1.047	1897.9	0.116	0.49	25.8	0.4	497.82	11.64
X C	4	549.4	0.9376	1096.7	0.117	0.54	41.0	0.8	565.29	9.01
X D	4	279.9	0.4846	513.1	0.149	1.1	45.8	1.2	342.71	5.89
X E	5	166.2	0.2559	317.1	0.194	2.0	43.6	1.7	201.40	3.74
X F	6	91.65	0.1701	160.7	0.592	3.0	48.2	3.4	125.34	1.44
X G	8	42.04	0.4380	60.46	2.28	1.2	57.6	9.9	69.76	0.49
X H	10	27.39	3.890	29.98	2.74	0.13	68.9	17.8	54.70	0.34
X I	13	22.62	7.186	20.28	5.93	0.071	76.2	34.7	50.17	0.29
X J	18	19.21	7.641	13.31	8.85	0.067	82.9	60.0	46.42	0.22
X K	25	23.35	7.465	18.98	7.16	0.068	78.7	80.4	53.45	0.25
X L	30	20.04	6.851	15.22	4.30	0.074	80.5	92.7	46.96	0.33
X M	35	20.19	7.061	15.55	2.57	0.072	80.2	100.0	47.17	0.28

Integrated age $\pm 2\sigma$ n=13 35.0 0.080 K2O=0.65% 58.28 0.52

Plateau $\pm 2\sigma$ no plateau n=0 MSWD=0.00 0.000 0.000 $\pm$ 0.000 0.0 0.00 0.00

Isochron $\pm 2\sigma$ steps A-M n=13 MSWD=236.59 $^{40}\text{Ar}/^{36}\text{Ar}$ = 436.9 $\pm$ 3.0 43.39 0.31

ORGAN-11, gmc, 28.58 mg, J=0.0023622 $\pm$ 0.05%, D=1.005 $\pm$ 0.001, NM-227K, Lab#=59267-01

x A	550	217.5	0.3594	716.0	2.86	1.4	2.7	0.9	25.37	3.90
x B	625	35.68	0.3008	102.2	4.51	1.7	15.4	2.4	23.63	0.78
x C	700	11.59	0.3337	11.73	7.7	1.5	70.3	4.8	34.89	0.17
x D	750	9.854	0.3030	4.469	3.86	1.7	86.8	6.0	36.61	0.21
x E	800	9.309	0.3349	2.371	22.6	1.5	92.8	13.2	36.93	0.08
x F	875	8.941	0.3456	1.481	38.6	1.5	95.4	25.6	36.49	0.06
G	975	8.968	0.2894	1.707	69.4	1.8	94.6	47.7	36.30	0.06
H	1075	9.394	0.2338	3.208	74.6	2.2	90.1	71.5	36.21	0.06
I	1250	10.51	0.2602	6.887	41.2	2.0	80.8	84.6	36.33	0.09
x J	1700	12.75	0.5311	14.25	48.2	0.96	67.3	100.0	36.71	0.13

Integrated age $\pm 2\sigma$ n=10 313.6 1.6 K2O=1.78% 36.10 0.21

Plateau $\pm 2\sigma$ steps G-I n=3 MSWD=0.82 185.3 2.0 $\pm$ 0.4 59.1 36.27 0.08

Isochron $\pm 2\sigma$ steps A-J n=10 MSWD=36.82 $^{40}\text{Ar}/^{36}\text{Ar}$ = 285.4 $\pm$ 1.8 36.53 0.07

ORGAN-30, gmc, 20.71 mg, J=0.0023666 $\pm$ 0.06%, D=1.005 $\pm$ 0.001, NM-227K, Lab#=59263-01

X A	3	435.4	0.9314	1351.6	0.97	0.55	8.3	0.2	150.20	7.42
X B	5	72.23	0.6088	163.3	10.3	0.84	33.3	2.7	101.28	0.97
X C	10	17.14	0.3515	14.11	55.2	1.5	75.8	16.1	55.44	0.14
X D	15	12.21	0.2777	5.388	89.5	1.8	87.1	37.7	45.50	0.08
X E	20	11.08	0.3486	4.469	93.2	1.5	88.3	60.2	41.88	0.07
X F	25	9.702	0.2941	3.293	90.9	1.7	90.2	82.2	37.50	0.06
X G	30	9.599	0.3119	3.608	42.5	1.6	89.2	92.5	36.67	0.07
X H	33	10.28	0.4347	5.113	12.0	1.2	85.6	95.4	37.73	0.13
X I	35	10.58	0.5528	6.105	6.43	0.92	83.4	97.0	37.81	0.19
X J	40	10.59	0.6032	5.611	6.30	0.85	84.8	98.5	38.47	0.20
X K	45	10.83	0.6370	5.919	4.14	0.80	84.3	99.5	39.12	0.26
X L	50	10.66	0.6428	4.778	2.05	0.79	87.2	100.0	39.84	0.41

Integrated age $\pm 2\sigma$ n=12 413.6 1.5 K2O=3.24% 44.48 0.23

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-L	n=12	MSWD=1354.39		⁴⁰ Ar/ ³⁶ Ar=	434.7±2.7	38.00	0.10

ORGAN-32, gmc, 21.6 mg, J=0.0023652±0.05%, D=1.005±0.001, NM-227K, Lab#=59264-01

X A	550	450.7	#####	1495.7	1.02	-	-42.2	0.4	-336.13	32.55
X B	625	40.73	-92.2771	117.3	2.97	-	-3.8	1.5	-6.37	2.53
X C	700	16.59	-38.3397	34.73	9.8	-	19.0	5.1	13.22	1.03
X D	750	9.384	-28.5441	7.554	6.6	-	51.0	7.5	20.18	0.79
X E	800	8.942	-7.6414	4.178	19.8	-	79.1	14.8	30.18	0.25
X F	875	8.546	0.4217	2.777	35.4	1.2	90.8	27.9	33.26	0.09
X G	975	8.329	-6.5986	2.016	56.7	-	86.3	48.9	30.67	0.18
X H	1075	8.872	0.1758	3.376	42.1	2.9	88.9	64.5	33.80	0.08
X I	1250	9.170	-7.0085	4.559	55.4	-	79.0	84.9	30.90	0.20
X J	1700	11.56	0.5623	11.51	40.8	0.91	71.0	100.0	35.16	0.14

Integrated age ± 2σ		n=10		270.5	-0.053	K2O=2.03%	29.65	0.52
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Plateau ± 2σ	no plateau	n=0	MSWD=0.00	0.000	0.000±0.000	0.0	0.00	0.00
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Isochron±2σ	steps A-J	n=10	MSWD=677.80		⁴⁰ Ar/ ³⁶ Ar=	217.2±1.6	33.76	0.08
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ORGAN-33, gmc, 25.26 mg, J=0.0023624±0.05%, D=1.005±0.001, NM-227K, Lab#=59265-01

X A	550	171.0	0.1413	485.2	0.239	3.6	16.2	0.1	115.93	5.74
X B	625	130.6	0.4850	372.3	1.37	1.1	15.8	0.6	87.20	2.55
X C	700	27.07	0.4127	43.78	5.2	1.2	52.3	2.4	60.26	0.45
X D	750	16.06	0.2935	14.53	4.26	1.7	73.4	3.9	50.28	0.27
X E	800	14.01	0.2137	8.852	15.0	2.4	81.4	9.2	48.65	0.14
X F	875	13.52	0.1849	6.756	20.7	2.8	85.3	16.5	49.20	0.11
X G	975	12.95	0.2266	6.161	32.0	2.3	86.1	27.8	47.55	0.10
X H	1075	10.64	0.2514	3.972	54.4	2.0	89.2	47.0	40.56	0.08
X I	1250	9.188	0.1965	2.816	94.1	2.6	91.1	80.2	35.81	0.06
X J	1700	10.99	0.4316	6.232	56.3	1.2	83.6	100.0	39.28	0.08

Integrated age ± 2σ		n=10		283.6	1.9	K2O=1.83%	41.38	0.17
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Plateau ± 2σ	no plateau	n=0	MSWD=0.00	0.000	0.000±0.000	0.0	0.00	0.00
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Isochron±2σ	steps A-J	n=10	MSWD=1622.32		⁴⁰ Ar/ ³⁶ Ar=	479.0±3.9	37.24	0.12
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Notes:

x (or i) symbol preceding sample ID denotes analyses excluded from plateau (or isochron) age calculations.
Isotopic ratios corrected for blank, radioactive decay, and mass discrimination, not corrected for interfering reactions.
Errors quoted for individual analyses include analytical error only, without interfering reaction or J uncertainties.

Age calculations:

Ages calculated relative to FC-2 Fish Canyon Tuff sanidine interlaboratory standard (28.201 Ma, Kuiper et al, 2008).
Integrated age calculated by summing isotopic measurements of all steps.
Integrated age error calculated by quadratically combining errors of isotopic measurements of all steps.
Plateau age or preferred age calculated for the indicated steps by weighting each step by the inverse of the variance.
Plateau age error is inverse-variance-weighted mean error (Taylor, 1982) times root MSWD where MSWD>1.
MSWD values are calculated for n-1 degrees of freedom for plateau age.
Isochron ages, ⁴⁰Ar/³⁶Ar_i and MSWD values calculated from regression results obtained by the methods of York (1969).
Decay constants and isotopic abundances after Min et al. (2000).
Weight percent K₂O calculated from ³⁹Ar signal, sample weight, and instrument sensitivity.
All errors reported at ±2s, unless otherwise noted.

Sample preparation and irradiation:

Biotite, plagioclase, hornblende, and concentrated groundmass separates prepared using crushing, dilute HCl acid treatment, Franz magnetic separator, heavy liquids, and hand-picking techniques.
Samples were loaded into machined Al discs and irradiated in 3 separate positions (NM-227K and L and NM-236D) for 10 hours (NM227) or 7 hours (NM236) at the Triga Reactor

Neutron flux monitor Fish Canyon Tuff sanidine (FC-2).

Instrumentation:

Mass Analyzer Products 215-50 mass spectrometer on line with automated all-metal extraction system.

Samples were step-heated using a Mo double-vacuum resistance furnace (heating duration 10 minutes), or CO₂ laser (heating duration 1 minutes).

Reactive gases removed during furnace (laser) analysis by reaction with 3 (2) SAES GP-50 getters, 2 (1) operated at ~450°C and 1 at 20°C. Gas also exposed to a W filament operated at ~2000°C.

Analytical parameters:

Electron multiplier sensitivity ranged from 4.15×10^{-17} moles/pA to 5.05×10^{-17} moles /pA.

Total system blank and background for the laser averaged 1234, 18.2, 1.66, 6.06, 19.3×10^{-18} moles.

at masses 40, 39, 38, 37, and 36 respectively

J-factors determined to a precision of $\pm 0.1\%$ by CO₂ laser-fusion of 6 single crystals from each of 10 radial positions around the irradiation tray.

Correction factors for interfering nuclear reactions were determined using K-glass and CaF₂ and are as follows:

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

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

$$(^{38}\text{Ar}/^{39}\text{Ar})_{\text{K}} = 0.013 \pm 5\text{e-}4$$

$$(^{40}\text{Ar}/^{39}\text{Ar})_{\text{K}} = 0 \pm 4\text{e-}4$$

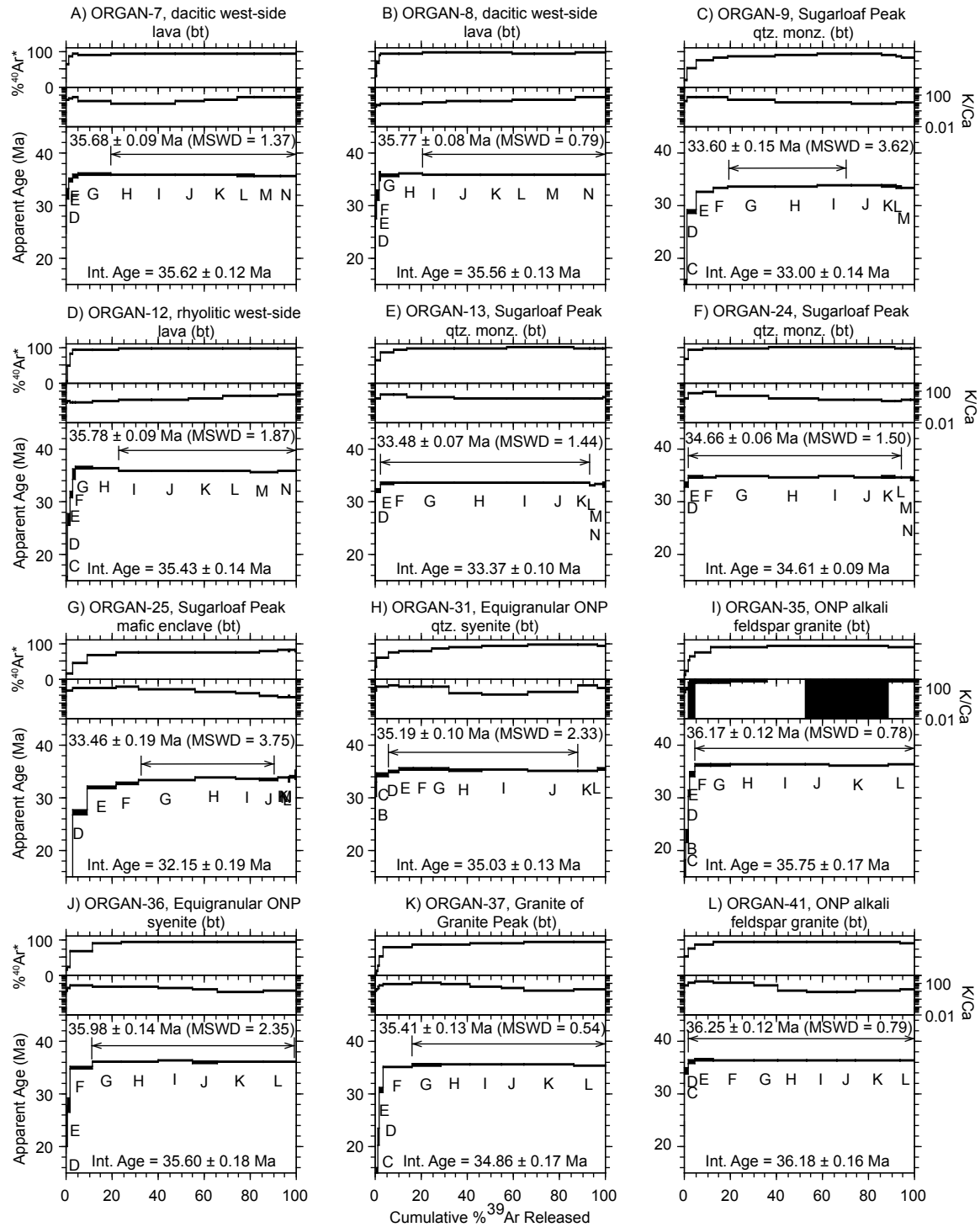


Fig. 3.2 Biotite, plagioclase, hornblende, and groundmass concentrate age spectra and K/Ca and radiogenic yield ($\%^{40}\text{Ar}^*$) auxiliary plots. All errors are reported at 2σ and do not include error in decay constant

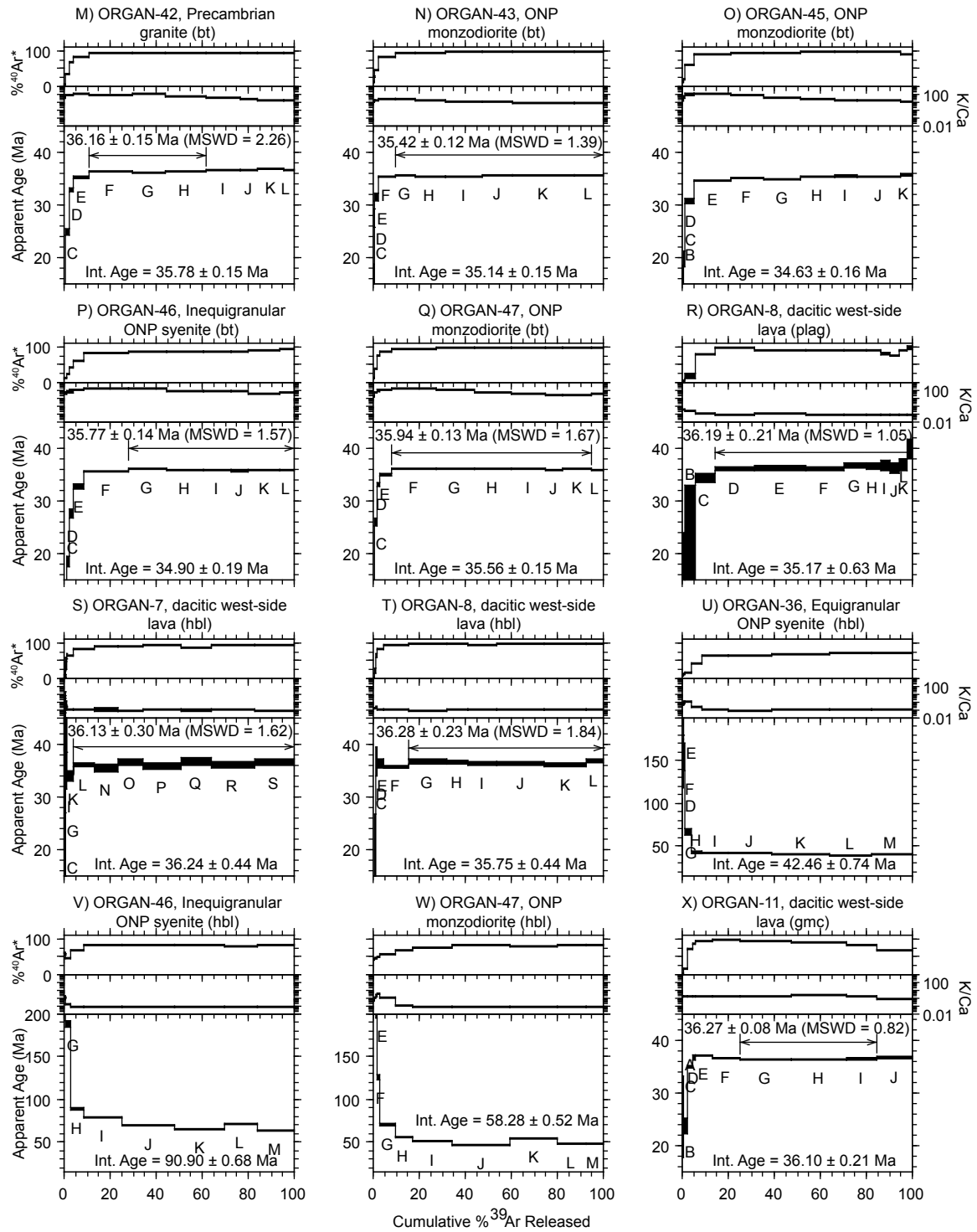


Fig. 3.2 continued.

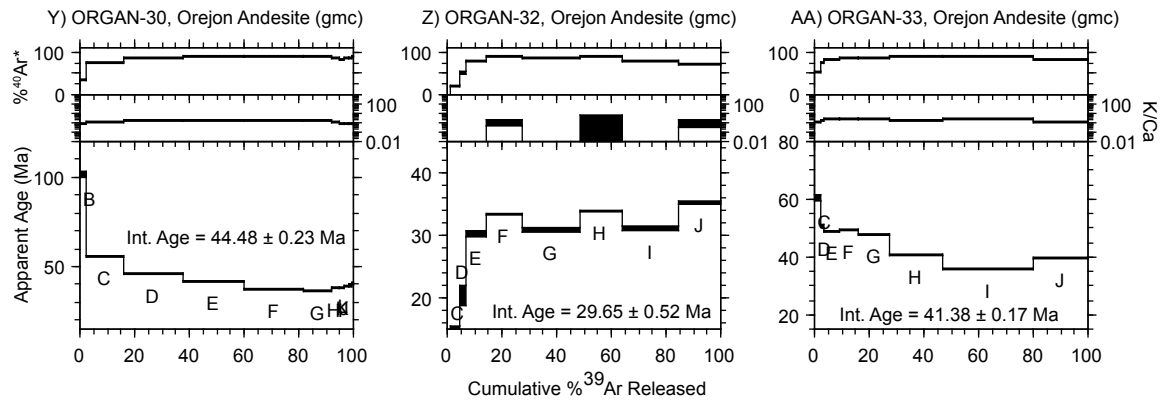


Fig. 3.2 continued

Table 3.3 Organ caldera K-feldspar $^{40}\text{Ar}/^{39}\text{Ar}$ analytical data

ID	Power (T in °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)
ORGAN-9, K-Feldspar, 17.88 mg, J=0.0023637±0.04%, D=1.006±0.001, NM-227J, Lab#=59257-01										
X A	540	367.5	0.0442	1126.2	5.68	11.6	9.5	0.5	144.45	5.81
X B	540	38.44	0.0370	103.0	3.72	13.8	20.8	0.8	34.29	0.97
X C	590	24.66	0.0469	56.29	5.37	10.9	32.5	1.3	34.38	0.57
X D	590	17.92	0.0537	34.86	6.06	9.5	42.5	1.9	32.65	0.42
X E	640	24.24	0.0706	53.61	8.03	7.2	34.6	2.6	35.95	0.56
X F	640	11.50	0.0713	13.17	9.59	7.2	66.2	3.5	32.62	0.21
X G	690	16.83	0.0794	29.57	12.0	6.4	48.1	4.6	34.68	0.32
X H	690	9.952	0.0680	7.954	15.2	7.5	76.4	5.9	32.58	0.14
X I	740	12.18	0.0623	14.60	17.3	8.2	64.6	7.5	33.71	0.17
X J	740	8.646	0.0505	3.448	21.3	10.1	88.3	9.4	32.68	0.09
X K	790	11.25	0.0473	11.99	21.5	10.8	68.5	11.4	33.02	0.15
X L	790	8.691	0.0364	3.510	25.2	14.0	88.1	13.6	32.79	0.09
X M	840	11.51	0.0356	12.50	23.4	14.4	67.9	15.8	33.47	0.14
X N	840	9.021	0.0272	4.735	26.3	18.7	84.5	18.1	32.65	0.10
X O	890	13.12	0.0255	18.42	22.1	20.0	58.5	20.1	32.90	0.18
X P	890	8.818	0.0226	4.152	24.5	22.5	86.1	22.3	32.52	0.10
X Q	940	13.95	0.0209	21.21	21.0	24.4	55.1	24.2	32.93	0.20
X R	940	9.725	0.0183	7.008	23.6	27.9	78.7	26.4	32.79	0.11
X S	990	15.09	0.0185	24.78	21.9	27.6	51.5	28.3	33.27	0.23
X T	990	11.72	0.0199	13.55	26.0	25.7	65.8	30.7	33.07	0.16
X U	1040	16.50	0.0219	27.77	26.5	23.3	50.2	33.1	35.50	0.25
X V	1040	13.78	0.0229	19.87	32.1	22.3	57.4	36.0	33.88	0.19
X W	1090	16.57	0.0252	28.68	40.5	20.2	48.8	39.7	34.68	0.21
X X	1090	15.27	0.0297	24.47	46.0	17.2	52.6	43.8	34.44	0.19
X Y	1140	14.36	0.0345	20.84	48.0	14.8	57.1	48.2	35.11	0.17
X Z	1190	12.25	0.0268	12.97	136.9	19.0	68.7	60.5	36.03	0.11
X AA	1190	12.81	0.0169	14.49	204.9	30.2	66.6	79.0	36.49	0.12
X AB	1190	14.50	0.0197	19.76	125.3	25.8	59.7	90.4	37.05	0.15
X AC	1190	16.00	0.0289	24.29	61.0	17.6	55.1	95.9	37.73	0.19
X AD	1190	17.77	0.0480	30.18	26.8	10.6	49.8	98.3	37.87	0.25
X AE	1290	18.56	0.1425	31.86	2.76	3.6	49.3	98.6	39.18	0.58
X AF	1340	33.70	0.2463	78.48	2.87	2.1	31.2	98.8	44.97	0.91
X AG	1390	20.32	0.0773	34.30	2.63	6.6	50.1	99.1	43.54	0.60
X AH	1590	19.42	0.0944	33.34	6.02	5.4	49.3	99.6	40.92	0.36
X AI	1740	16.90	0.0288	28.19	4.43	17.7	50.7	100.0	36.70	0.39
Integrated age ± 2σ			n=35		1106.2	17.2	K2O=10.05%		35.91	0.31
Plateau ± 2σ			no plateau	n=0	MSWD=0.00	0.000	0.000±0.000		0.00	0.00
Isochron±2σ			steps A-AI	n=35	MSWD=64.43	⁴⁰ Ar/ ³⁶ Ar=		326.0±1.4	32.34	0.10
ORGAN-10, K-Feldspar, 17.31 mg, J=0.0023635±0.04%, D=1.006±0.001, NM-227J, Lab#=59258-01										
X A	540	221.3	0.0359	670.5	2.44	14.2	10.5	0.4	97.57	4.29
X B	540	28.30	0.0279	70.03	1.55	18.3	26.9	0.7	32.59	1.18
X C	590	19.88	0.0371	40.29	1.94	13.7	40.1	1.0	34.16	0.80
X D	590	15.36	0.0372	26.88	2.19	13.7	48.3	1.4	31.79	0.56
X E	640	21.42	0.0392	45.54	2.79	13.0	37.2	1.8	34.10	0.77
X F	640	11.76	0.0357	14.27	3.14	14.3	64.2	2.4	32.33	0.39
X G	690	13.28	0.0386	18.74	3.79	13.2	58.3	3.0	33.18	0.45
X H	690	9.463	0.0296	6.127	4.58	17.2	80.9	3.8	32.78	0.24
X I	740	11.19	0.0310	11.12	5.29	16.5	70.6	4.7	33.86	0.28
X J	740	8.560	0.0297	2.920	6.61	17.2	89.9	5.8	32.97	0.17

X K	790	10.58	0.0323	9.741	6.80	15.8	72.8	6.9	33.00	0.22
X L	790	8.261	0.0306	1.706	8.57	16.7	93.9	8.4	33.22	0.12
X M	840	9.156	0.0317	4.786	8.37	16.1	84.6	9.8	33.16	0.15
X N	840	8.270	0.0299	1.748	10.9	17.1	93.8	11.6	33.21	0.10
X O	890	8.983	0.0301	4.176	9.82	16.9	86.3	13.3	33.19	0.15
X P	890	8.410	0.0297	2.345	13.0	17.2	91.8	15.5	33.06	0.11
X Q	940	9.834	0.0277	7.335	11.5	18.4	78.0	17.4	32.84	0.15
X R	940	8.964	0.0281	4.162	15.2	18.2	86.3	20.0	33.13	0.12
X S	990	10.87	0.0247	10.83	13.9	20.6	70.5	22.3	32.84	0.16
X T	990	9.510	0.0273	5.864	17.3	18.7	81.8	25.2	33.31	0.13
X U	1040	11.61	0.0245	13.54	17.8	20.8	65.5	28.2	32.57	0.17
X V	1040	9.874	0.0265	7.629	19.8	19.3	77.2	31.6	32.64	0.14
X W	1090	10.82	0.0260	10.92	26.2	19.6	70.2	36.0	32.54	0.14
X X	1090	10.67	0.0270	10.39	31.2	18.9	71.2	41.2	32.56	0.13
X Y	1140	9.873	0.0310	7.417	33.9	16.5	77.8	47.0	32.90	0.10
X Z	1190	9.031	0.0286	3.736	122.1	17.9	87.8	67.5	33.95	0.06
X AA	1190	9.197	0.0305	4.133	116.8	16.8	86.7	87.2	34.16	0.07
X AB	1190	9.346	0.0351	4.441	45.5	14.5	86.0	94.9	34.40	0.08
X AC	1190	9.879	0.0365	6.125	17.3	14.0	81.7	97.8	34.55	0.12
X AD	1290	14.17	0.0364	12.36	2.08	14.0	74.2	98.2	44.94	0.54
X AE	1340	22.08	0.0371	16.19	1.96	13.8	78.4	98.5	73.34	0.60
X AF	1390	24.35	0.0415	15.19	1.27	12.3	81.6	98.7	83.98	0.83
X AG	1590	17.94	0.0413	11.30	2.89	12.3	81.4	99.2	62.10	0.42
X AH	1740	11.78	0.0239	9.040	4.68	21.3	77.3	100.0	38.97	0.28
Integrated age ± 2σ			n=34		593.2	17.1	K2O=5.57%		34.28	0.17
Plateau ± 2σ			no plateau	n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00
Isochron±2σ			steps A-AH	n=34	MSWD=379.36	⁴⁰ Ar/ ³⁶ Ar= 369.3±2.8			32.10	0.08

ORGAN-13, K-Feldspar, 18.18 mg, J=0.0023628±0.04%, D=1.006±0.001, NM-227J, Lab#=59259-01

X A	540	380.9	0.0344	958.0	4.78	14.8	25.7	0.4	380.67	4.66
X B	540	26.80	0.0345	51.73	2.88	14.8	43.0	0.6	49.10	0.69
X C	590	23.04	0.0497	38.91	4.05	10.3	50.1	1.0	49.23	0.59
X D	590	16.07	0.0753	20.88	4.92	6.8	61.6	1.4	42.31	0.44
X E	640	21.91	0.0778	38.66	6.63	6.6	47.9	1.9	44.77	0.38
X F	640	10.67	0.0598	8.307	8.02	8.5	77.0	2.6	35.15	0.20
X G	690	14.23	0.0601	17.83	10.07	8.5	63.0	3.4	38.33	0.24
X H	690	8.924	0.0388	3.774	12.8	13.1	87.5	4.5	33.44	0.13
X I	740	10.68	0.0293	8.351	14.7	17.4	76.9	5.7	35.14	0.15
X J	740	8.163	0.0204	1.810	18.7	25.0	93.5	7.2	32.66	0.09
X K	790	9.801	0.0180	6.367	19.2	28.3	80.8	8.8	33.90	0.11
X L	790	8.022	0.0122	1.153	23.4	42.0	95.8	10.7	32.89	0.07
X M	840	9.582	0.0130	5.403	22.2	39.3	83.3	12.5	34.18	0.11
X N	840	8.090	0.0098	1.555	25.3	51.8	94.3	14.6	32.67	0.08
X O	890	10.80	0.0115	9.839	22.0	44.5	73.1	16.4	33.80	0.13
X P	890	8.279	0.0090	2.063	24.4	56.8	92.6	18.4	32.84	0.08
X Q	940	11.28	0.0125	11.31	21.9	40.7	70.3	20.2	33.97	0.15
X R	940	8.569	0.0088	2.846	23.3	57.9	90.2	22.2	33.08	0.09
X S	990	11.41	0.0116	11.72	20.8	44.0	69.6	23.9	34.01	0.16
X T	990	9.242	0.0111	5.085	24.7	46.0	83.7	25.9	33.13	0.10
X U	1040	11.75	0.0147	12.69	24.7	34.6	68.1	28.0	34.25	0.15
X V	1040	10.29	0.0136	7.999	30.7	37.5	77.0	30.5	33.92	0.12
X W	1090	12.07	0.0165	12.97	36.8	30.9	68.2	33.5	35.27	0.14
X X	1090	11.25	0.0181	10.46	41.0	28.2	72.5	36.9	34.94	0.12
X Y	1140	11.25	0.0203	9.644	42.2	25.1	74.7	40.4	35.94	0.12
X Z	1190	10.12	0.0171	5.626	105.7	29.8	83.6	49.1	36.18	0.08
X AA	1190	9.673	0.0094	3.631	192.2	54.0	88.9	64.9	36.79	0.07
X AB	1190	9.630	0.0077	3.120	179.2	66.2	90.4	79.6	37.24	0.06
X AC	1190	9.688	0.0090	3.239	127.1	56.6	90.1	90.1	37.34	0.07

X AD	1190	9.822	0.0133	3.591	66.8	38.3	89.2	95.6	37.47	0.07
X AE	1290	9.810	0.0198	2.927	17.2	25.8	91.2	97.0	38.25	0.11
X AF	1340	10.29	0.0310	3.319	10.10	16.5	90.5	97.9	39.79	0.16
X AG	1390	10.59	0.0195	3.772	5.73	26.2	89.5	98.3	40.48	0.20
X AH	1590	10.92	0.0202	3.746	8.96	25.3	89.9	99.1	41.94	0.16
X AI	1740	10.73	0.0260	5.766	11.2	19.6	84.1	100.0	38.60	0.17
Integrated age $\pm 2\sigma$			n=35		1214.2	35.1	K2O=10.86%		37.63	0.18
Plateau $\pm 2\sigma$			no plateau	n=0	MSWD=0.00	0.000	0.000 $\pm$ 0.000		0.0	0.00
Isochron$\pm 2\sigma$			steps A-AI	n=35	MSWD=395.74	$^{40}\text{Ar}/^{36}\text{Ar}= 372.6\pm 2.1$			34.12	0.06

ORGAN-21, K-Feldspar, 14.61 mg, J=0.0023617 $\pm$ 0.05%, D=1.006 $\pm$ 0.001, NM-227J, Lab#=59260-01

X A	540	84.52	0.0427	239.5	1.56	11.9	16.3	0.3	58.51	2.25
X B	540	14.05	0.0421	22.42	0.717	12.1	52.9	0.4	31.81	1.17
X C	590	12.35	0.0809	17.81	0.963	6.3	57.4	0.5	30.36	1.04
X D	590	10.76	0.0683	11.39	1.17	7.5	68.8	0.7	31.68	0.72
X E	640	17.04	0.0415	33.64	1.68	12.3	41.6	1.0	30.40	0.76
X F	640	9.125	0.0422	7.095	2.01	12.1	77.0	1.3	30.11	0.46
X G	690	11.13	0.0317	12.47	2.80	16.1	66.9	1.7	31.88	0.45
X H	690	8.432	0.0238	2.194	3.18	21.4	92.3	2.3	33.31	0.28
X I	740	9.232	0.0279	4.294	4.35	18.3	86.3	3.0	34.08	0.24
X J	740	8.368	0.0254	1.676	5.07	20.1	94.1	3.8	33.69	0.18
X K	790	9.368	0.0271	4.836	5.88	18.8	84.8	4.7	33.97	0.20
X L	790	8.256	0.0264	0.8131	7.63	19.3	97.1	5.9	34.29	0.13
X M	840	8.616	0.0274	2.129	7.89	18.6	92.7	7.2	34.17	0.14
X N	840	8.262	0.0253	0.7798	10.6	20.2	97.2	8.9	34.36	0.11
X O	890	8.495	0.0240	1.555	9.62	21.3	94.6	10.4	34.38	0.12
X P	890	8.283	0.0259	0.8232	13.3	19.7	97.1	12.6	34.40	0.09
X Q	940	8.406	0.0235	1.201	11.4	21.7	95.8	14.4	34.45	0.11
X R	940	8.291	0.0253	0.6539	15.8	20.2	97.7	16.9	34.64	0.09
X S	990	8.450	0.0241	1.612	12.9	21.2	94.4	19.0	34.12	0.10
X T	990	8.293	0.0242	0.8973	17.6	21.1	96.8	21.8	34.35	0.07
X U	1040	8.524	0.0245	2.043	14.4	20.8	92.9	24.1	33.89	0.10
X V	1040	8.351	0.0231	1.169	17.7	22.1	95.9	27.0	34.25	0.08
X W	1090	8.446	0.0276	2.183	16.7	18.5	92.4	29.7	33.38	0.10
X X	1090	8.410	0.0257	2.033	20.8	19.8	92.9	33.0	33.42	0.08
X Y	1140	8.463	0.0252	1.887	26.3	20.2	93.4	37.2	33.83	0.08
X Z	1190	8.248	0.0241	1.181	136.5	21.1	95.8	59.1	33.80	0.05
X AA	1190	8.337	0.0240	1.238	127.1	21.2	95.6	79.5	34.11	0.05
X AB	1190	8.298	0.0238	0.8682	59.9	21.4	96.9	89.1	34.40	0.06
X AC	1190	8.365	0.0244	0.9343	26.9	20.9	96.7	93.4	34.61	0.07
X AD	1290	8.235	0.0248	0.9283	4.91	20.5	96.7	94.2	34.06	0.19
X AE	1340	8.304	0.0234	0.9460	6.35	21.8	96.7	95.2	34.33	0.16
X AF	1390	8.324	0.0214	0.9910	6.10	23.8	96.5	96.2	34.36	0.16
X AG	1590	8.465	0.0252	0.9903	13.0	20.3	96.6	98.3	34.96	0.10
X AH	1740	9.121	0.0231	3.126	10.8	22.1	89.9	100.0	35.06	0.14
Integrated age $\pm 2\sigma$			n=34		623.6	20.6	K2O=6.94%		34.13	0.10
Plateau $\pm 2\sigma$			no plateau	n=0	MSWD=0.00	0.000	0.000 $\pm$ 0.000		0.0	0.00
Isochron$\pm 2\sigma$			steps A-AH	n=34	MSWD=22.26	$^{40}\text{Ar}/^{36}\text{Ar}= 304.7\pm 3.9$			34.10	0.05

ORGAN-22, K-Feldspar, 19.03 mg, J=0.0023606 $\pm$ 0.04%, D=1.006 $\pm$ 0.001, NM-227J, Lab#=59261-01

X A	540	93.85	0.0108	294.1	11.9	47.1	7.4	0.8	29.75	1.72
X B	540	16.87	0.0079	37.65	8.20	64.3	34.0	1.4	24.61	0.38
X C	590	13.84	0.0079	31.51	14.5	64.2	32.7	2.4	19.43	2.88
X D	590	9.411	0.0090	12.03	13.3	56.6	62.2	3.3	25.10	0.21
X E	640	17.12	0.0082	37.97	16.0	62.5	34.4	4.4	25.29	0.31
X F	640	7.342	0.0082	4.813	19.1	62.0	80.6	5.8	25.36	0.10
X G	690	12.90	0.0100	22.87	19.9	51.2	47.6	7.1	26.30	0.21

X H	690	7.171	0.0081	2.898	22.8	62.9	88.1	8.7	27.05	0.08
X I	740	10.58	0.0086	13.43	21.8	59.6	62.5	10.2	28.33	0.14
X J	740	8.343	0.0060	5.187	25.5	85.4	81.6	12.0	29.15	0.10
X K	790	9.743	0.0060	8.948	23.1	85.3	72.8	13.6	30.38	0.12
X L	790	7.818	0.0041	1.904	28.3	124.8	92.8	15.6	31.05	0.07
X M	840	9.393	0.0041	6.980	26.8	125.2	78.0	17.4	31.36	0.11
X N	840	8.016	0.0031	1.998	34.9	163.4	92.6	19.9	31.77	0.07
X O	890	8.933	0.0035	4.752	31.5	147.5	84.3	22.0	32.20	0.09
X P	890	8.005	0.0032	1.539	41.5	161.9	94.3	24.9	32.30	0.07
X Q	940	9.196	0.0032	5.504	36.4	159.6	82.3	27.5	32.38	0.09
X R	940	8.398	0.0026	2.744	48.0	194.7	90.3	30.8	32.45	0.07
X S	990	9.509	0.0030	6.671	40.3	172.0	79.3	33.6	32.24	0.10
X T	990	9.182	0.0028	5.618	52.1	179.6	81.9	37.2	32.18	0.08
X U	1040	10.29	0.0047	9.538	44.4	107.8	72.6	40.3	31.96	0.11
X V	1040	10.46	0.0043	9.989	54.6	119.0	71.8	44.1	32.13	0.11
X W	1090	11.24	0.0061	13.06	45.1	83.3	65.6	47.2	31.57	0.13
X X	1090	11.09	0.0056	12.45	51.2	91.5	66.8	50.8	31.70	0.13
X Y	1140	10.70	0.0070	11.03	40.2	72.5	69.5	53.6	31.82	0.13
X Z	1190	10.16	0.0042	9.234	82.7	122.3	73.1	59.3	31.81	0.09
X AA	1190	11.66	0.0020	14.04	116.3	258.2	64.4	67.4	32.11	0.12
X AB	1190	13.70	0.0013	21.04	114.4	382.9	54.6	75.3	31.99	0.15
X AC	1190	15.06	0.0013	25.42	117.2	397.2	50.1	83.5	32.28	0.17
X AD	1190	15.58	0.0013	26.87	106.4	404.1	49.0	90.9	32.70	0.18
X AE	1290	15.35	0.0019	26.19	34.9	263.3	49.6	93.3	32.57	0.21
X AF	1340	16.31	0.0014	29.54	31.8	377.0	46.5	95.5	32.43	0.25
X AG	1390	15.57	0.0012	26.16	21.6	428.0	50.3	97.0	33.52	0.25
X AH	1590	16.27	0.0019	28.20	24.6	268.1	48.8	98.7	33.95	0.23
X AI	1740	16.53	0.0027	29.29	18.6	187.7	47.6	100.0	33.69	0.26

Integrated age $\pm 2\sigma$	n=35		1439.5	141.4	K2O=12.31%	31.46	0.24
Plateau $\pm 2\sigma$	no plateau	n=0	MSWD=0.00	0.000	0.000 $\pm$ 0.000	0.0	0.00
Isochron$\pm 2\sigma$	steps A-AI	n=35	MSWD=300.91	$^{40}\text{Ar}/^{36}\text{Ar}$ =	304.1 $\pm$ 1.2	30.96	0.06

ORGAN-24, K-Feldspar, 59236 mg, J=0.0023214 $\pm$ 0.04%, D=1.006 $\pm$ 0.001, NM-227F, Lab#=59236-01

X A	700	78.32	3.896	-34.8369	-0.002	0.13	113.6	0.0	344.39	478.56
X B	540	318.8	0.0330	407.0	7.28	15.5	62.3	0.5	693.67	2.41
X C	540	37.80	0.0317	43.74	1.45	16.1	65.8	0.6	102.73	0.97
X D	590	28.87	0.0625	26.04	5.02	8.2	73.4	1.0	87.82	0.43
X E	590	22.80	0.0570	18.35	5.13	9.0	76.2	1.4	72.38	0.39
X F	640	23.21	0.0482	19.52	6.82	10.6	75.2	1.9	72.63	0.32
X G	640	15.81	0.0386	8.929	8.7	13.2	83.3	2.5	55.11	0.20
X H	690	15.92	0.0332	10.60	10.4	15.4	80.3	3.3	53.52	0.18
X I	690	10.41	0.0209	3.871	13.4	24.4	89.0	4.2	38.90	0.11
X J	740	11.24	0.0180	5.342	15.1	28.3	86.0	5.3	40.57	0.11
X K	740	8.794	0.0121	2.086	19.6	42.2	93.0	6.8	34.39	0.08
X L	790	10.53	0.0105	4.615	20.5	48.4	87.0	8.3	38.49	0.11
X M	790	8.395	0.0069	1.263	25.3	73.5	95.6	10.2	33.73	0.07
X N	840	10.27	0.0077	3.956	24.3	66.5	88.6	12.0	38.24	0.10
X O	840	8.361	0.0056	1.167	28.7	90.7	95.9	14.2	33.71	0.07
X P	890	10.31	0.0068	4.124	25.5	75.4	88.2	16.1	38.18	0.11
X Q	890	8.531	0.0049	1.638	29.4	104.2	94.3	18.4	33.84	0.07
X R	940	10.51	0.0066	4.942	25.7	76.7	86.1	20.4	38.02	0.09
X S	940	8.736	0.0058	1.802	28.8	87.3	93.9	22.6	34.49	0.08
X T	990	10.77	0.0081	5.384	24.4	63.2	85.2	24.5	38.54	0.11
X U	990	9.792	0.0072	3.874	28.6	70.8	88.3	26.8	36.34	0.10
X V	1040	11.86	0.0112	7.785	26.8	45.6	80.6	28.9	40.15	0.12
X W	1040	11.34	0.0094	6.360	32.2	54.2	83.4	31.5	39.71	0.10
X X	1090	13.17	0.0136	9.902	37.2	37.5	77.8	34.5	42.99	0.13
X Y	1090	12.53	0.0158	8.983	43.4	32.3	78.8	38.0	41.46	0.11

X Z	1140	12.48	0.0184	7.266	38.1	27.7	82.8	41.2	43.34	0.11
X AA	1190	12.48	0.0157	4.020	105.4	32.5	90.5	50.0	47.32	0.08
X AB	1190	13.08	0.0080	2.493	183.4	63.6	94.4	66.0	51.68	0.08
X AC	1190	13.07	0.0059	2.369	153.2	86.1	94.6	80.0	51.78	0.08
X AD	1190	13.05	0.0061	2.610	103.8	83.8	94.1	89.9	51.41	0.08
X AE	1190	12.93	0.0080	2.879	56.0	64.0	93.4	95.3	50.60	0.08
X AF	1290	12.81	0.0089	3.110	11.5	57.6	92.8	96.5	49.80	0.13
X AG	1340	13.32	0.0117	4.132	6.75	43.7	90.8	97.1	50.68	0.17
X AH	1390	13.52	0.0196	4.922	4.47	26.0	89.2	97.6	50.52	0.26
X AI	1590	13.54	0.0096	3.216	20.6	53.3	93.0	99.6	52.70	0.11
X AJ	1740	15.12	0.0061	8.027	4.09	84.3	84.3	100.0	53.36	0.25
Integrated age ± 2σ			n=36		1181.1	47.9	K2O=0.00%		50.22	0.17
Plateau ± 2σ			no plateau	n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00
Isochron±2σ			steps A-AJ	n=36	MSWD=2136.45	⁴⁰ Ar/ ³⁶ Ar=		1116.0±8.0	33.73	0.10

ORGAN-31, K-Feldspar, 17.88 mg, J=0.0023226±0.04%, D=1.006±0.001, NM-227F, Lab#=59237-01

X A	700	23.40	-6.0396	117.5	-0.001	-	-50.5	0.0	-50.68	708.69
X B	540	202.0	0.0193	649.7	3.50	26.4	4.9	0.4	41.92	3.64
X C	540	38.85	0.0157	106.2	2.64	32.5	19.2	0.7	31.50	1.08
X D	590	23.85	0.0192	55.12	3.33	26.6	31.7	1.1	31.84	0.73
X E	590	17.50	0.0213	34.42	4.06	23.9	41.8	1.5	30.85	0.51
X F	640	16.89	0.0265	31.42	4.58	19.2	45.0	2.1	32.00	0.42
X G	640	12.53	0.0229	16.28	5.73	22.3	61.6	2.7	32.49	0.26
X H	690	13.92	0.0276	20.62	6.24	18.5	56.2	3.4	32.93	0.34
X I	690	10.19	0.0235	7.803	8.15	21.7	77.4	4.4	33.19	0.18
X J	740	11.47	0.0241	12.06	8.67	21.2	68.9	5.4	33.28	0.24
X K	740	9.191	0.0249	4.183	12.0	20.5	86.6	6.8	33.48	0.15
X L	790	10.21	0.0237	7.087	12.6	21.5	79.5	8.2	34.13	0.15
X M	790	8.911	0.0234	2.735	16.8	21.8	90.9	10.2	34.10	0.10
X N	840	9.857	0.0242	5.969	15.6	21.1	82.1	12.0	34.05	0.12
X O	840	8.819	0.0237	2.510	20.8	21.5	91.6	14.5	33.99	0.09
X P	890	9.877	0.0243	5.867	18.1	21.0	82.5	16.7	34.27	0.12
X Q	890	8.998	0.0237	2.898	23.6	21.5	90.5	19.5	34.26	0.09
X R	940	10.44	0.0228	7.960	20.5	22.4	77.5	22.0	34.05	0.12
X S	940	9.634	0.0245	5.123	25.7	20.8	84.3	25.2	34.17	0.11
X T	990	11.97	0.0241	13.21	20.7	21.1	67.4	27.7	33.93	0.16
X U	990	10.69	0.0235	8.862	25.0	21.7	75.5	30.9	33.98	0.13
X V	1040	13.13	0.0213	17.23	20.1	24.0	61.2	33.4	33.82	0.17
X W	1040	11.75	0.0224	12.52	23.1	22.7	68.5	36.4	33.87	0.14
X X	1090	13.64	0.0214	19.36	21.7	23.8	58.0	39.2	33.32	0.19
X Y	1090	13.28	0.0226	18.02	26.0	22.5	59.9	42.6	33.47	0.18
X Z	1140	12.69	0.0225	15.39	33.7	22.7	64.2	47.0	34.25	0.17
X AA	1190	11.10	0.0229	9.277	169.3	22.3	75.3	70.3	35.15	0.09
X AB	1190	11.93	0.0236	12.15	115.9	21.6	69.9	87.3	35.08	0.11
X AC	1190	12.36	0.0243	13.32	42.1	21.0	68.1	93.7	35.44	0.14
X AD	1190	13.51	0.0232	16.90	15.2	21.9	63.0	96.0	35.83	0.20
X AE	1190	14.58	0.0265	21.60	6.02	19.3	56.2	96.9	34.50	0.35
X AF	1290	16.34	0.0105	28.10	1.05	48.7	49.1	97.1	33.80	1.17
X AG	1740	14.80	0.0216	20.47	18.8	23.7	59.1	100.0	36.81	0.24
Integrated age ± 2σ			n=33		751.0	22.0	K2O=6.95%		34.05	0.22
Plateau ± 2σ			no plateau	n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00
Isochron±2σ			steps A-AG	n=33	MSWD=22.50	⁴⁰ Ar/ ³⁶ Ar=		297.2±1.7	34.18	0.09

Organ-36, K-Feldspar, 7.78 mg, J=0.0015943±0.05%, D=1.002±0.001, NM-236C, Lab#=59735-01

X A	750	-119.5706	-1.6832	-763.9663	0.001	-	-88.7	0.0	285.57	462.76
X B	500	601.2	0.0374	1740.2	0.579	13.6	14.5	0.2	237.64	7.64
X C	500	103.7	0.1355	308.0	0.282	3.8	12.3	0.3	36.75	4.17

X D	550	72.96	0.1431	167.2	0.468	3.6	32.3	0.5	67.48	2.05
X E	550	30.42	0.1067	71.24	0.606	4.8	30.8	0.7	27.13	1.29
X F	600	52.69	0.0971	109.4	0.828	5.3	38.7	1.0	58.53	1.73
X G	600	18.14	0.0685	29.53	0.931	7.4	51.9	1.4	27.24	0.77
X H	650	40.59	0.0900	79.23	1.354	5.7	42.3	1.9	49.44	0.98
X I	650	14.87	0.0499	17.79	1.44	10.2	64.7	2.4	27.82	0.47
X J	700	27.18	0.0857	42.57	1.76	6.0	53.7	3.0	42.13	0.64
X K	700	12.86	0.0359	9.148	1.98	14.2	79.0	3.8	29.38	0.36
X L	750	20.14	0.0411	24.26	2.26	12.4	64.4	4.6	37.46	0.43
X M	750	11.98	0.0463	7.110	2.45	11.0	82.5	5.5	28.58	0.27
X N	800	16.42	0.0625	16.37	2.31	8.2	70.6	6.4	33.48	0.39
X O	800	11.66	0.0337	6.117	2.51	15.1	84.5	7.3	28.50	0.28
X P	850	16.35	0.0250	18.45	2.15	20.4	66.6	8.1	31.51	0.40
X Q	850	11.92	0.0457	6.375	2.18	11.2	84.2	8.9	29.05	0.28
X R	900	19.15	0.0523	25.51	1.87	9.8	60.6	9.6	33.57	0.46
X S	900	12.98	0.0419	8.909	1.94	12.2	79.7	10.3	29.93	0.36
X T	950	20.99	0.0220	30.27	1.98	23.2	57.4	11.1	34.78	0.52
X U	950	15.66	0.0310	16.07	2.31	16.5	69.7	12.0	31.54	0.37
X V	1000	24.21	0.0217	38.51	2.90	23.5	53.0	13.1	37.04	0.39
X W	1000	23.65	0.0189	39.18	3.70	26.9	51.0	14.5	34.86	0.40
X X	1050	26.51	0.0164	43.61	5.45	31.2	51.4	16.5	39.30	0.45
X Y	1050	22.07	0.0245	31.86	6.26	20.8	57.3	18.9	36.54	0.31
X Z	1100	27.48	0.0166	44.76	11.90	30.7	51.9	23.5	41.12	0.31
X AA	1100	25.10	0.0225	42.34	6.63	22.6	50.1	26.1	36.35	0.34
X AB	1150	24.31	0.0245	34.77	61.2	20.8	57.7	50.5	40.50	0.19
X AC	1150	20.74	0.0235	19.10	42.5	21.7	72.8	68.2	43.50	0.15
X AD	1150	20.66	0.0183	11.90	33.8	27.9	83.0	82.9	49.34	0.12
X AE	1200	22.23	0.0125	7.834	7.27	40.9	89.6	86.1	57.19	0.16
X AF	1250	23.70	0.0098	7.993	20.1	52.0	90.0	95.0	61.20	0.14
X AG	1350	26.22	0.0387	12.88	4.86	13.2	85.5	97.2	64.25	0.26
X AH	1550	28.15	0.0348	18.69	6.07	14.7	80.4	100.0	64.84	0.27
X AI	1170	42.35	1.159	103.7	0.020	0.44	27.8	100.0	34.07	22.92
Integrated age ± 2σ			n=35		244.8	20.2	K2O=7.58%		44.18	0.30
Plateau ± 2σ			no plateau	n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00
Isochron±2σ			steps A-AI	n=35	MSWD=1532.10	⁴⁰ Ar/ ³⁶ Ar=	403.3±3.1		43.87	0.15

Organ-37, K-Feldspar, 12.58 mg, J=0.0015936±0.06%, D=1.002±0.001, NM-236C, Lab#=59736-01

X A	750	31.64	-0.9232	-6.5682	-0.022	-	105.9	0.0	95.13	24.80
X B	500	377.6	0.0098	1115.9	2.31	52.1	12.7	0.3	134.43	4.48
X C	500	71.60	0.0100	197.7	1.76	50.9	18.4	0.6	38.00	1.26
X D	550	41.14	0.0055	96.93	2.82	93.6	30.4	1.0	36.06	0.75
X E	550	26.03	0.0245	52.10	2.93	20.8	40.8	1.4	30.75	0.59
X F	600	26.95	0.0242	51.39	4.03	21.1	43.7	1.9	33.99	0.56
X G	600	15.88	0.0210	21.07	4.49	24.3	60.8	2.6	27.91	0.29
X H	650	21.16	0.0310	31.80	5.86	16.5	55.6	3.4	33.97	0.29
X I	650	13.04	0.0116	9.970	7.01	43.9	77.4	4.4	29.17	0.18
X J	700	16.28	0.0168	17.77	8.05	30.4	67.7	5.5	31.87	0.22
X K	700	12.12	0.0124	6.284	9.83	41.2	84.7	6.9	29.68	0.13
X L	750	13.88	0.0097	10.37	10.48	52.8	77.9	8.4	31.26	0.14
X M	750	11.62	0.0112	3.417	12.60	45.7	91.3	10.2	30.67	0.11
X N	800	13.43	0.0070	8.637	11.50	72.8	81.0	11.9	31.45	0.13
X O	800	11.62	0.0061	2.875	13.74	83.0	92.7	13.9	31.12	0.09
X P	850	13.55	0.0114	8.652	11.76	44.6	81.1	15.6	31.77	0.13
X Q	850	11.82	0.0113	3.599	13.19	45.1	91.0	17.5	31.08	0.09
X R	900	14.68	0.0094	12.07	10.61	54.0	75.7	19.0	32.12	0.14
X S	900	12.84	0.0120	6.730	12.22	42.7	84.5	20.8	31.35	0.13
X T	950	16.98	0.0049	19.75	10.88	104.1	65.6	22.4	32.19	0.20
X U	950	15.06	0.0062	14.12	13.39	82.2	72.3	24.4	31.47	0.15

X V	1000	19.57	0.0044	28.03	13.38	114.8	57.7	26.4	32.60	0.20
X W	1000	17.77	0.0060	22.18	17.0	84.9	63.1	28.9	32.41	0.18
X X	1050	20.96	0.0078	31.37	18.6	65.5	55.8	31.7	33.77	0.22
X Y	1050	18.97	0.0051	25.23	22.5	99.7	60.7	35.1	33.25	0.19
X Z	1100	20.91	0.0106	30.44	26.7	48.1	57.0	39.2	34.40	0.20
X AA	1100	20.02	0.0105	28.47	16.5	48.4	58.0	41.7	33.53	0.18
X AB	1150	18.84	0.0114	22.79	50.8	44.8	64.2	49.6	34.96	0.14
X AC	1150	16.88	0.0093	15.34	53.5	55.1	73.1	58.1	35.65	0.12
X AD	1150	16.14	0.0049	12.56	59.4	104.3	77.0	67.7	35.88	0.10
X AE	1200	15.83	0.0018	10.27	25.3	278.9	80.8	71.8	36.91	0.13
X AF	1250	16.06	0.0009	11.23	89.8	588.4	79.3	86.8	36.77	0.09
X AG	1350	16.52	0.0007	13.35	39.9	754.4	76.1	93.6	36.30	0.11
X AH	1550	19.01	0.0026	20.89	33.8	197.5	67.5	99.4	37.02	0.15
X AJ	1650	25.79	0.0146	44.70	3.33	34.9	48.8	100.0	36.30	0.43
Integrated age $\pm 2\sigma$			n=35		639.8	73.2	K2O=12.26%		34.31	0.22
Plateau $\pm 2\sigma$			no plateau	n=0	MSWD=0.00	0.000	0.000 $\pm$ 0.000		0.0	0.00
Isochron$\pm 2\sigma$			steps A-AJ	n=35	MSWD=218.64	⁴⁰ Ar/ ³⁶ Ar= 339.6 $\pm$ 1.8			31.80	0.09

Organ-41, K-Feldspar, 10.95 mg, J=0.001594 $\pm$ 0.06%, D=1.002 $\pm$ 0.001, NM-236C, Lab#=59737-01

X A	750	-72.9664	10.61	-73.9689	0.003	0.048	68.9	0.0	-154.02	211.76
X B	500	366.1	0.0184	1188.8	1.53	27.7	4.0	0.4	42.66	5.04
X C	500	69.33	0.0029	204.7	1.270	176.5	12.7	0.8	25.56	1.66
X D	550	29.18	0.0105	65.78	1.60	48.7	33.4	1.3	28.17	0.92
X E	550	21.30	0.0170	42.18	2.37	30.0	41.5	1.9	25.57	0.59
X F	600	20.14	0.0181	34.10	3.46	28.1	50.0	2.9	29.11	0.44
X G	600	13.85	0.0276	13.33	4.26	18.5	71.6	4.2	28.66	0.26
X H	650	13.38	0.0243	8.587	4.97	21.0	81.0	5.6	31.34	0.21
X I	650	12.60	0.0197	5.209	6.20	25.9	87.8	7.4	31.96	0.15
X J	700	13.18	0.0234	5.668	5.60	21.8	87.3	9.0	33.24	0.17
X K	700	12.32	0.0192	2.860	6.36	26.6	93.1	10.9	33.15	0.14
X L	750	12.56	0.0264	3.477	5.43	19.4	91.8	12.5	33.34	0.15
X M	750	12.30	0.0203	2.176	5.36	25.1	94.8	14.1	33.68	0.16
X N	800	12.58	0.0321	2.483	3.94	15.9	94.2	15.2	34.23	0.19
X O	800	12.55	0.0242	2.614	4.00	21.1	93.9	16.4	34.03	0.19
X P	850	12.95	0.0326	3.810	2.79	15.7	91.3	17.2	34.17	0.27
X Q	850	12.67	0.0339	3.155	2.72	15.0	92.7	18.0	33.91	0.24
X R	900	13.26	0.0454	4.940	1.83	11.2	89.0	18.6	34.10	0.41
X S	900	13.08	0.0216	5.392	1.84	23.6	87.8	19.1	33.19	0.41
X T	950	15.21	0.0291	11.71	1.238	17.5	77.3	19.5	33.96	0.56
X U	950	14.44	0.0184	10.69	1.403	27.7	78.1	19.9	32.61	0.50
X V	1000	16.86	0.0291	16.15	1.173	17.5	71.7	20.3	34.91	0.66
X W	1000	15.79	0.0112	12.84	1.61	45.4	76.0	20.8	34.66	0.54
X X	1050	17.39	0.0422	18.26	1.71	12.1	69.0	21.3	34.66	0.54
X Y	1050	15.97	0.0196	14.28	2.30	26.0	73.6	22.0	33.95	0.38
X Z	1100	14.90	0.0276	7.845	7.44	18.5	84.4	24.2	36.33	0.16
X AA	1100	14.85	0.0200	8.215	4.51	25.4	83.7	25.6	35.87	0.26
X AB	1150	15.61	0.0259	11.36	65.7	19.7	78.5	45.9	35.39	0.10
X AC	1150	16.98	0.0232	16.81	71.2	22.0	70.7	69.0	34.71	0.11
X AD	1150	17.84	0.0262	19.39	49.0	19.5	67.9	85.6	34.98	0.13
X AE	1200	16.64	0.0348	14.96	7.48	14.7	73.4	88.2	35.30	0.18
X AF	1250	17.31	0.0324	15.18	14.4	15.8	74.1	93.2	37.02	0.15
X AG	1350	19.35	0.0436	23.26	3.89	11.7	64.5	94.6	36.03	0.35
X AH	1550	20.49	0.0250	27.45	13.61	20.4	60.4	99.4	35.76	0.20
X AI	1650	34.85	0.0052	74.60	1.69	97.3	36.7	100.0	36.96	0.71
Integrated age $\pm 2\sigma$			n=35		313.9	20.1	K2O=6.91%		34.13	0.22
Plateau $\pm 2\sigma$			no plateau	n=0	MSWD=0.00	0.000	0.000 $\pm$ 0.000		0.0	0.00
Isochron$\pm 2\sigma$			steps A-AI	n=35	MSWD=63.97	⁴⁰ Ar/ ³⁶ Ar= 306.9 $\pm$ 2.1			33.98	0.11

Organ-42, K-Feldspar, 9.81 mg, J=0.0015953±0.06%, D=1.002±0.001, NM-236C, Lab#=59738-06

X A	750	224.0	-21.8047	-273.8774	-0.001	-	135.3	0.0	713.10	508.26
X B	500	1531.3	-0.0024	625.1	1.49	-	87.9	0.3	2099.22	10.27
X C	500	162.9	-0.0056	102.0	1.191	-	81.5	0.5	351.68	1.74
X D	550	102.1	0.0236	46.34	1.86	21.6	86.6	0.8	241.52	1.01
X E	550	52.03	0.0107	25.66	2.54	47.8	85.4	1.2	125.37	0.53
X F	600	77.31	0.0108	32.66	3.79	47.3	87.5	1.8	187.61	0.65
X G	600	25.62	0.0091	10.49	4.36	55.8	87.9	2.6	64.57	0.26
X H	650	50.87	0.0150	18.15	5.92	34.1	89.5	3.6	128.27	0.40
X I	650	14.66	0.0187	4.705	6.45	27.3	90.5	4.7	38.31	0.16
X J	700	29.76	0.0137	10.45	7.71	37.1	89.6	6.0	76.24	0.23
X K	700	10.91	0.0134	2.768	8.58	37.9	92.5	7.5	29.21	0.10
X L	750	18.66	0.0098	5.137	9.05	52.3	91.9	9.1	49.36	0.15
X M	750	10.07	0.0097	2.048	10.93	52.8	94.0	11.0	27.41	0.10
X N	800	15.64	0.0111	4.287	10.04	45.8	91.9	12.7	41.46	0.12
X O	800	9.194	0.0067	1.974	10.94	76.3	93.7	14.6	24.95	0.09
X P	850	12.01	0.0112	3.511	8.89	45.4	91.4	16.2	31.75	0.13
X Q	850	9.329	0.0085	1.590	9.40	60.0	95.0	17.8	25.66	0.09
X R	900	13.23	0.0140	4.338	7.01	36.5	90.3	19.1	34.54	0.16
X S	900	11.00	0.0172	3.054	8.03	29.7	91.8	20.5	29.24	0.13
X T	950	18.86	0.0140	9.115	6.80	36.5	85.7	21.7	46.57	0.20
X U	950	17.32	0.0078	6.360	8.46	65.8	89.1	23.2	44.52	0.17
X V	1000	32.90	0.0086	14.99	8.43	59.4	86.5	24.7	81.27	0.25
X W	1000	31.61	0.0054	12.46	11.77	94.2	88.3	26.8	79.75	0.22
X X	1050	46.42	0.0055	18.66	13.33	92.3	88.1	29.2	115.69	0.31
X Y	1050	39.78	0.0064	13.89	19.4	79.3	89.7	32.8	101.30	0.21
X Z	1100	46.27	0.0046	15.17	24.2	111.3	90.3	37.2	118.09	0.25
X AA	1100	35.90	0.0066	11.53	15.9	77.7	90.5	40.2	92.48	0.20
X AB	1150	35.78	0.0058	9.157	58.4	87.9	92.4	51.1	94.09	0.19
X AC	1150	28.21	0.0031	4.811	40.0	163.6	95.0	58.8	76.58	0.15
X AD	1150	31.71	0.0017	3.969	36.9	305.5	96.3	66.0	87.03	0.16
X AE	1200	43.17	0.0028	4.839	9.99	183.5	96.7	67.9	117.98	0.28
X AF	1250	48.13	0.0009	4.967	64.0	582.5	97.0	80.7	131.42	0.24
X AG	1350	46.97	0.0001	5.104	70.3	4151.4	96.8	95.1	128.14	0.24
X AH	1550	35.80	0.0019	7.928	22.2	263.4	93.5	99.8	95.15	0.24
X AI	1650	61.49	0.0618	112.3	0.938	8.3	46.0	100.0	80.86	1.58
Integrated age ± 2σ			n=35		529.3	95.5	K2O=12.99%		102.29	0.30
Plateau ± 2σ			no plateau	n=0	MSWD=0.00	0.000	0.000±0.000		0.0	0.00
Isochron±2σ			steps A-AI	n=35	MSWD=1656.26	⁴⁰ Ar/ ³⁶ Ar= 5633.1±65.8			2.95	0.03

Organ-46, K-Feldspar, 13.52 mg, J=0.0015969±0.06%, D=1.002±0.001, NM-236C, Lab#=59739-01

X A	750	179.9	-1.1269	1023.8	-0.002	-	-68.3	0.0	-399.16	806.58
X B	500	1385.6	0.0075	1363.3	2.07	67.6	70.9	0.3	1727.38	6.30
X C	500	147.5	0.0070	192.8	2.24	73.3	61.4	0.7	247.17	1.43
X D	550	119.7	0.0241	105.3	3.61	21.2	74.0	1.2	242.22	1.02
X E	550	51.14	0.0338	53.44	4.24	15.1	69.1	1.9	100.49	0.62
X F	600	76.22	0.0353	51.60	5.25	14.5	80.0	2.7	170.07	0.71
X G	600	25.91	0.0403	21.95	5.80	12.7	75.0	3.7	55.90	0.30
X H	650	52.51	0.0403	36.06	7.75	12.7	79.7	4.9	118.42	0.42
X I	650	16.03	0.0273	9.677	8.60	18.7	82.2	6.3	38.07	0.18
X J	700	30.87	0.0265	19.55	10.40	19.3	81.3	7.9	71.90	0.23
X K	700	12.91	0.0195	4.833	11.93	26.2	88.9	9.8	33.24	0.12
X L	750	21.87	0.0186	12.14	13.23	27.4	83.6	12.0	52.65	0.16
X M	750	10.80	0.0154	3.007	14.9	33.0	91.8	14.4	28.72	0.10
X N	800	16.23	0.0151	8.248	13.71	33.9	85.0	16.6	39.86	0.13
X O	800	10.31	0.0179	2.707	15.5	28.5	92.3	19.2	27.58	0.08
X P	850	15.31	0.0246	9.114	12.92	20.8	82.4	21.3	36.48	0.14

X Q	850	11.17	0.0215	3.735	13.94	23.8	90.1	23.6	29.15	0.10
X R	900	19.39	0.0237	14.70	11.46	21.6	77.6	25.5	43.44	0.17
X S	900	14.42	0.0175	7.813	12.95	29.2	84.0	27.7	35.05	0.12
X T	950	27.78	0.0166	25.83	11.91	30.8	72.5	29.7	57.94	0.26
X U	950	22.05	0.0140	16.52	14.6	36.3	77.9	32.1	49.49	0.17
X V	1000	37.60	0.0119	33.85	14.6	42.8	73.4	34.6	78.93	0.30
X W	1000	30.04	0.0129	22.41	18.4	39.7	78.0	37.8	67.19	0.20
X X	1050	41.27	0.0116	32.09	20.4	44.0	77.0	41.3	90.61	0.29
X Y	1050	32.73	0.0086	23.24	23.7	59.6	79.0	45.4	74.04	0.22
X Z	1100	42.57	0.0146	29.17	27.8	35.0	79.8	50.2	96.62	0.25
X AA	1100	32.93	0.0204	27.43	15.7	25.1	75.4	53.0	71.15	0.25
X AB	1150	36.39	0.0254	24.24	44.4	20.1	80.3	60.9	83.47	0.21
X AC	1150	32.92	0.0236	17.33	38.3	21.7	84.4	67.9	79.50	0.18
X AD	1200	39.72	0.0133	11.15	25.8	38.3	91.7	72.6	103.47	0.22
X AE	1250	41.52	0.0067	8.997	81.3	76.4	93.6	87.9	110.19	0.20
X AF	1650	41.86	0.0120	12.98	63.0	42.6	90.8	100.0	107.88	0.20
Integrated age $\pm 2\sigma$			n=32		570.5	30.8	K ₂ O=10.15%		89.18	0.35
Plateau $\pm 2\sigma$			no plateau	n=0	MSWD=0.00	0.000	0.000 $\pm$ 0.000		0.0	0.00
Isochron$\pm 2\sigma$			steps A-AF	n=32	MSWD=3202.78	⁴⁰ Ar/ ³⁶ Ar=		1851.4 $\pm$ 11.3	16.21	0.10

Notes:

x (or i) symbol preceding sample ID denotes analyses excluded from plateau (or isochron) age calculations.
Isotopic ratios corrected for blank, radioactive decay, and mass discrimination, not corrected for interfering reactions.
Errors quoted for individual analyses include analytical error only, without interfering reaction or J uncertainties.

Age calculations:

Ages calculated relative to FC-2 Fish Canyon Tuff sanidine interlaboratory standard (28.201 Ma, Kuiper et al, 2008).
Integrated age calculated by summing isotopic measurements of all steps.
Integrated age error calculated by quadratically combining errors of isotopic measurements of all steps.
Plateau age or preferred age calculated for the indicated steps by weighting each step by the inverse of the variance.
Plateau age error is inverse-variance-weighted mean error (Taylor, 1982) times root MSWD where MSWD>1.
MSWD values are calculated for n-1 degrees of freedom for plateau age.
Isochron ages, ⁴⁰Ar/³⁶Ar_i and MSWD values calculated from regression results obtained by the methods of York (1969).
Decay constants and isotopic abundances after Min et al. (2000).
Weight percent K₂O calculated from ³⁹Ar signal, sample weight, and instrument sensitivity.
All errors reported at $\pm 2s$, unless otherwise noted.

Sample preparation and irradiation:

K-feldspar separates were prepared using crushing, Franz magnetic separator, heavy liquids and hand-picking techniques.
Samples were loaded into machined Al discs and irradiated in 3 separate positions (NM-227F and J, and NM-236C) for 10 hours (NM227) or 7 hours (NM236) at the Triga Reactor
Neutron flux monitor Fish Canyon Tuff sanidine (FC-2).

Instrumentation:

Mass Analyzer Products 215-50 mass spectrometer on line with automated all-metal extraction system.
Samples were step-heated using a Mo double-vacuum resistance furnace (heating duration 10 minutes), or CO₂ laser (heating duration 2 minutes).
Reactive gases removed during furnace (laser) analysis by reaction with 3 (2) SAES GP-50 getters, 2 (1) operated at ~450°C and 1 at 20°C. Gas also exposed to a W filament operated at ~2000°C.

Analytical parameters:

Electron multiplier sensitivity ranged from 9.87×10^{-17} moles/pA to 1.1×10^{-16} moles /pA.
Total system blank and background for the furnace averaged 813, 5.6, 1.16, 4.71, 25.5×10^{-18} moles.
at masses 40, 39, 38, 37, and 36 respectively

J-factors determined to a precision of $\pm 0.1\%$ by CO_2 laser-fusion of 6 single crystals from each of 10 radial positions around the irradiation tray.

Correction factors for interfering nuclear reactions were determined using K-glass and CaF_2 and are as follows:

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

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

$$(^{38}\text{Ar}/^{39}\text{Ar})_{\text{K}} = 0.013 \pm 5\text{e-}4$$

$$(^{40}\text{Ar}/^{39}\text{Ar})_{\text{K}} = 0 \pm 4\text{e-}4$$

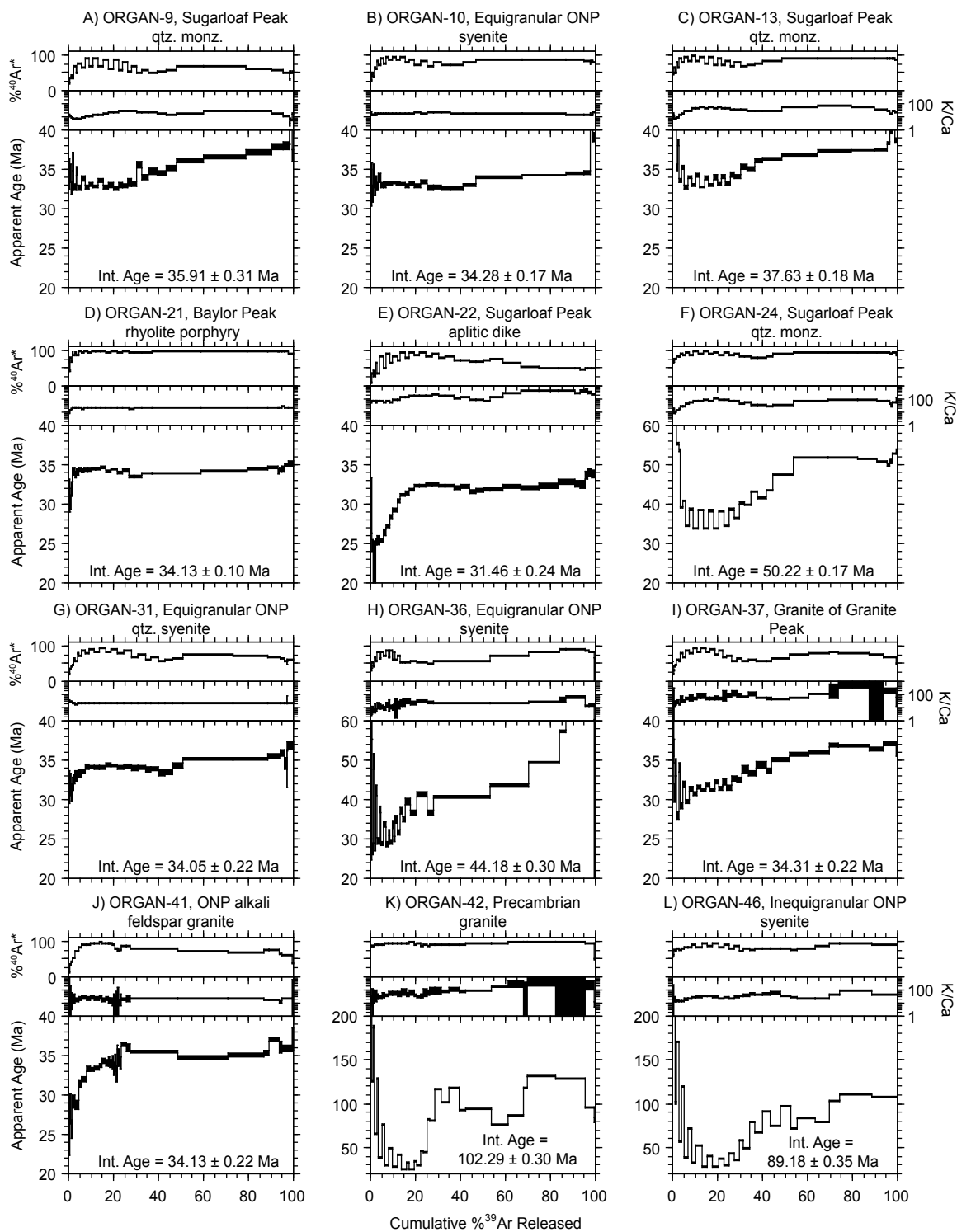


Fig. 3.3 K-feldspar age spectra and K/Ca and radiogenic yield (%⁴⁰Ar*) auxiliary plots. All errors are reported at 2σ and do not include error in the decay constant