Appendix Table DR1. Experimental Run Conditions on High-Silica Rhyolite (51A5)

Run	Starting[1] Material	Temperature (°C)	Pressure (MPa)	Duration (hours)	Products[2]
G-52A	51A5	750	200	166	G, B, Ox
G-54	51A5	700	200	264	G, P, Kf, Q, B, Ox
G-55A	51A5	750	100	264	G, P, B, Ox
G-56	51A5	800	200	168	G
G-57	51A5	700	300	168	G, B, Ox
G-61A	G-57	750	300	96	G, B, Ox
G-73A	G-56	775	200	164	G, B, Ox
G-74	51A5	800	300	147	G
G-75A	G-74	760	300	86	G, B
G-75B	G-57	760	300	86	G, B
G-76	51A5	800	400	95	G, B
G-77	G-74	740	300	170	G, B
G-78	G-74	700	300	237	G, B, Ox
G-84	G-76	700	400	111	G, B
G-85A	G-76	740	400	185	G, B
G-87A	G-76	770	400	164	G, B
G-93A	G-54	725	250	135	G, B, Ox
G-93B	G-74	725	250	135	G, B, Ox
G-119A	G-111	725	150	957	G, P, B, Ox
G-119B	G-101	725	150	957	G, P, B, Ox
G-120A	G-111	725	100	642	G, P, Kf, Q, B, Ox
G-120B	G-101	725	100	642	G, P, Kf, Q, B, Ox
G-123A	G-54	725	200	480	G, P, B, Ox
G-123B	G-111	725	200	480	G, P, B, Ox
G-126	51A5	775	100	354	G, Ox

[1]Starting material was either powder of a crushed, natural pumice (51A5) or an aliquot of pre-run sample, designated by its run number.

[2]Run products are G, melt (quenched to glass); B, Biotite; Plg, Plagioclase; Pyx, pyroxene; Ox, magnetite±ilmenite; Q, Quartz; and Kf, Sanidine.

Appendix Table DR2. Experimental Run Conditions on Low-Silica Rhyolite (89A2)

Run	Starting[1] Material	Temperature (°C)	Pressure (MPa)	Duration (hours)	Products[2]
G-52B	89A2	750	200	166	G, P, Q, B, Ox
G-53	89A2	800	200	164	G, B, Ox
G-55B	89A2	750	100	264	G, P, Q, B, Ox
G-58	89A2	800	300	120	G, B, Ox
G-61B	G-58	750	300	96	G, P, B
G-62B	89A2	800	100	96	G, P, Px, Ox
G-69B	89A2	850	200	58	G, Px, Ox
G-73B	G-69B	775	200	164	G, P, B, Ox
G-85B	89A2	740	400	185	G, B
G-87B	G-86	770	400	164	G, B
G-88A	G-85B	800	400	158	G, B
G-88B	G-86	800	400	158	G, B
G-89A	G-85B	825	300	164	G, B
G-94	G-86	800	175	138	G, P, B, Ox
G-102	89A2	750	50	364	G, P, Q, B, Ox
G-103	89A2	850	100	157	G, Px, Ox
G-108B	G-103	790	100	399	G, B, P, Ox
G-109B	G-103	800	125	352	G, B, P, Ox
G-110A	G-102	775	125	355	G, B, P, Q, Ox
G-159	G-53	830	200	248	G, B, Ox
G-160	G-103	815	250	261	G, B, Ox
G-161	G-53	763	200	264	G, P, B, Ox

[1]Starting material was either powder of a crushed, natural pumice (89A2) or an aliquot of pre-run sample, designated by its run number.

[2]Run products are G, melt (quenched to glass); B, Biotite; Plg, Plagioclase; Pyx, pyroxene; Ox, magnetite±ilmenite; and Q, Quartz.

Appendix Table DR3. Glass Compositions of Toba Tuff Experimental Runs

Run[1]	SiO_2	TiO_2	Al_2O_3	FeO*	MnO	MgO	CaO	Na_2O	K_2O
High-Silica Ryholite Experiments									
G-52A	76.75	0.08	13.24	0.62	0.04	0.14	1.47	3.13	4.53
G-54	77.20	0.02	12.97	0.60	0.09	0.06	1.12	3.04	4.91
G-55A	77.48	0.07	12.34	1.01	0.07	0.11	1.18	2.87	4.86
G-73A	75.59	0.12	13.70	1.01	0.07	0.20	1.73	3.02	4.56
G-85A	76.36	0.05	13.43	0.90	0.08	0.09	1.78	2.99	4.33
G-87A	75.79	0.08	13.73	0.96	0.11	0.12	1.77	3.05	4.38
G-93A	76.30	0.11	13.55	0.58	0.05	0.12	1.59	3.13	4.57
G-93B	75.75	0.12	13.91	0.62	0.05	0.13	1.80	3.12	4.49
G-119A	77.26	0.08	12.79	0.72	0.09	0.09	1.32	2.95	4.72
G-119B	77.51	0.08	12.61	0.70	0.05	0.10	1.24	2.92	4.80
G-120A	78.46	0.07	12.22	0.80	0.10	0.08	0.60	2.84	4.82
G-123A	77.05	0.09	12.98	0.63	0.06	0.11	1.42	3.02	4.66
G-123B	76.83	0.09	13.05	0.65	0.05	0.10	1.51	2.98	4.74
G-126	77.73	0.08	12.29	0.98	0.06	0.11	1.13	2.78	4.85
Low-Silica Ryholite Experiments									
G-52B	77.34	0.14	13.22	0.61	0.08	0.21	1.66	2.84	3.90
G-55B	77.70	0.07	12.47	1.18	0.06	0.17	1.22	2.72	4.40
G-58	74.21	0.16	14.78	1.12	0.03	0.41	2.51	3.31	3.48
G-61B	76.18	0.07	13.55	1.20	0.08	0.17	2.24	3.19	3.32
G-62B	77.16	0.17	12.84	1.33	0.05	0.26	1.42	2.62	4.16
G-69B	71.88	0.32	15.13	2.18	0.11	0.67	2.76	3.45	3.50
G-73B	75.45	0.14	14.26	1.07	0.07	0.28	1.95	3.27	3.52
G-85B	75.40	0.07	14.20	1.19	0.08	0.15	2.65	3.21	3.05
G-88A	73.25	0.12	15.18	1.78	0.09	0.33	2.97	3.36	2.91
G-88B	72.98	0.14	15.33	1.68	0.08	0.33	3.05	3.40	3.00
G-89A	73.30	0.19	14.85	2.04	0.09	0.36	2.85	3.17	3.15
G-94	75.47	0.19	14.00	1.24	0.05	0.36	2.15	3.15	3.40
G-103	74.84	0.27	13.72	1.70	0.05	0.42	1.70	3.00	4.31
G-108B	77.48	0.10	12.81	1.15	0.09	0.20	1.27	2.69	4.20
G-109B	76.48	0.16	13.21	1.20	0.05	0.34	1.56	3.00	4.00
G-159	74.97	0.14	13.87	1.69	0.08	0.33	2.06	3.33	3.53
G-160	72.89	0.21	14.82	2.22	0.06	0.45	2.59	3.30	3.47
G-161	76.32	0.18	13.52	0.81	0.07	0.31	1.80	3.29	3.70

[1]See Tables 1 and 2 for experimental run conditions and products.
[2]oxides in weight percents, normalized to 100% anhydrous; total iron reported as FeO*.

94A1 SANIDINE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	2000	1.8	83.618	7.392	-0.9027	0.5406	0.2362	0.0470	16.4	-1.66	-0.0223	13.730	12.544	1805	1648
	8200	**98.2**	**2.963**	**0.027**	**-0.0147**	**0.0127**	**0.0075**	**0.0007**	**24.7**	**-0.03**	**0.0002**	**0.724**	**0.206**	**95**	**27**
2	1500	2.2	259.596	5.833	0.4822	0.2737	0.8387	0.0327	4.5	0.89	0.0156	11.776	8.203	1548	1078
	8700	**97.8**	**3.223**	**0.028**	**0.3879**	**0.0081**	**0.0087**	**0.0007**	**20.5**	**0.71**	**0.0006**	**0.656**	**0.200**	**86**	**26**
3	1500	0.9	134.438	4.381	0.5629	0.3249	0.4419	0.0354	2.9	1.03	0.0018	3.884	9.612	511	1264
	8700	**99.1**	**3.940**	**0.030**	**0.0409**	**0.0029**	**0.0119**	**0.0003**	**9.9**	**0.08**	**0.0005**	**0.388**	**0.083**	**51**	**11**
4	2000	0.6	54.045	2.272	0.6270	0.4683	0.2029	0.0426	-10.9	1.15	-0.0135	-5.906	12.353	-777	1625
	8700	**99.4**	**1.507**	**0.021**	**0.0121**	**0.0026**	**0.0033**	**0.0003**	**34.3**	**0.02**	**0.0004**	**0.506**	**0.078**	**67**	**10**
5	**8700**	**100.0**	**0.926**	**0.016**	**0.0080**	**0.0017**	**0.0012**	**0.0002**	**61.9**	**0.01**	**0.0006**	**0.555**	**0.058**	**73**	**8**

NOTES:

Weighted average J (irradiation parameter) calculated from standard Bern 4B (17.25 Ma)

Runs are step heat analyses of 1 to 3 single crystals of a mineral phase.

Laser power (in milliwatts) is the heating step from a defocussed argon-ion laser: 8700 mW represents the fusion step in most cases

% ^{39}Ar: the proportion of ^{39}Ar released in each step of a run

Measured isotopic ratios (and 1-sigma error) are corrected for reactor induced interferences and decay of ^{37}Ar and ^{39}Ar

%^{40}Ar*: percent of radiogenic 40Ar in the sample assuming an initial ^{40}Ar/^{36}Ar ratio of 295.5

^{40}Ar*/^{39}Ar$_K$ and ages (and 1-sigma errors) calculated using the equations and constants quoted in McDougall and Harrison (1999)

Bold steps represent those used to calculate isochrons (see text and Fig. 3).

94A1 BIOTITE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	**1000**	**21.8**	**256.117**	**6.063**	**-0.0098**	**0.0170**	**0.8604**	**0.0202**	**0.7**	**-0.02**	**0.0494**	**1.829**	**6.796**	**241**	**894**
	2000	**77.8**	**4.579**	**0.188**	**0.0121**	**0.0070**	**0.0132**	**0.0006**	**14.1**	**0.02**	**0.0500**	**0.643**	**0.209**	**85**	**27**
	8000	0.4	282.187	19.369	-0.0374	0.8841	0.8721	0.1073	8.7	-0.07	0.0404	24.462	26.417	3214	3468
2	500	3.9	1881.363	35.908	-0.1597	0.0780	6.5646	0.1198	-3.1	-0.29	0.0352	-58.508	31.564	-7711	4169
	1000	24.6	21.526	0.243	-0.0040	0.0139	0.0779	0.0023	-7.1	-0.01	0.0472	-1.519	0.670	-200	88
	1500	49.5	4.047	0.040	0.0051	0.0072	0.0136	0.0006	-0.2	0.01	0.0470	-0.008	0.176	-1	23
	2000	21.4	1.491	0.017	-0.0048	0.0149	0.0075	0.0017	-51.7	-0.01	0.0471	-0.756	0.499	-99	66
	3000	0.4	17.638	2.453	-0.5201	1.0751	0.3225	0.1190	-441.3	-0.95	0.0988	-77.690	34.367	-10246	4546
	8500	0.2	830.409	216.072	-2.4536	1.8856	2.7166	0.7365	3.3	-4.49	0.0720	27.406	61.683	3601	8096
3	700	18.6	374.430	13.627	0.0490	0.0231	1.3473	0.0433	-6.3	0.09	0.0456	-23.733	14.572	-3124	1920
	1500	**77.0**	**4.687**	**0.078**	**0.0088**	**0.0052**	**0.0136**	**0.0006**	**13.7**	**0.02**	**0.0470**	**0.636**	**0.172**	**84**	**23**
	8700	**4.5**	**49.324**	**0.876**	**0.0112**	**0.0746**	**0.1643**	**0.0071**	**1.5**	**0.02**	**0.0439**	**0.737**	**1.990**	**97**	**262**
4	700	20.9	325.936	10.994	0.0326	0.0188	1.1830	0.0341	-7.3	0.06	0.0491	-23.673	11.639	-3116	1533
	1500	**70.5**	**6.171**	**0.046**	**-0.0003**	**0.0050**	**0.0195**	**0.0008**	**6.3**	**0.00**	**0.0506**	**0.389**	**0.223**	**51**	**29**
	8700	**8.7**	**40.343**	**0.283**	**-0.1195**	**0.0363**	**0.1389**	**0.0052**	**-1.8**	**-0.22**	**0.0504**	**-0.745**	**1.527**	**-98**	**201**
5	700	15.7	261.769	4.314	-0.0449	0.0205	0.9022	0.0148	-1.9	-0.08	0.0485	-4.867	4.872	-640	641
	1500	**67.9**	**6.917**	**0.029**	**-0.0043**	**0.0048**	**0.0212**	**0.0007**	**8.9**	**-0.01**	**0.0502**	**0.611**	**0.191**	**80**	**25**
	8700	**16.4**	**10.438**	**0.054**	**-0.0216**	**0.0203**	**0.0340**	**0.0021**	**3.5**	**-0.04**	**0.0504**	**0.369**	**0.622**	**49**	**82**
6	700	10.8	669.829	6.010	-0.1280	0.0763	2.3329	0.0233	-2.9	-0.23	0.0446	-19.576	6.805	-2576	896
	1500	**48.3**	**6.976**	**0.032**	**0.0010**	**0.0170**	**0.0203**	**0.0014**	**13.5**	**0.00**	**0.0469**	**0.940**	**0.408**	**124**	**54**
	8700	**41.0**	**6.282**	**0.038**	**0.0089**	**0.0217**	**0.0174**	**0.0014**	**18.0**	**0.02**	**0.0488**	**1.126**	**0.413**	**148**	**54**
7	700	2.7	1398.743	21.047	0.2689	0.0516	4.9435	0.0478	-4.4	0.49	0.0392	-62.065	18.847	-8181	2490
	1500	**15.2**	**35.786**	**0.179**	**-0.0117**	**0.0113**	**0.1167**	**0.0014**	**3.5**	**-0.02**	**0.0494**	**1.264**	**0.389**	**166**	**51**
	8700	**82.2**	**9.424**	**0.045**	**0.0006**	**0.0014**	**0.0299**	**0.0002**	**6.0**	**0.00**	**0.0494**	**0.568**	**0.066**	**75**	**9**

94A1 HORNBLENDE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	1000	89.1	27.550	0.766	4.9648	0.1359	0.0933	0.0057	1.2	9.14	0.2193	0.340	1.636	45	215
	8500	10.9	59.280	2.105	4.3376	0.3843	0.1502	0.0395	25.6	7.98	0.1964	15.236	11.626	2003	1527
2	1000	34.1	473.425	9.302	3.8827	0.1416	1.6629	0.0350	-3.7	7.14	0.2050	-17.743	4.164	-2335	548
	1500	61.7	40.550	0.520	5.3396	0.0896	0.1399	0.0034	-1.0	9.83	0.2531	-0.407	0.935	-54	123
	8500	4.3	258.592	20.032	3.7126	0.5319	0.8297	0.0843	5.3	6.83	0.1723	13.693	16.322	1800	2144
3	1000	17.3	222.558	4.979	2.0737	0.1037	0.7744	0.0200	-2.8	3.81	0.1058	-6.166	6.530	-811	859
	1500	26.4	59.298	1.070	5.8317	0.1293	0.2037	0.0066	-0.8	10.74	0.2498	-0.491	1.865	-65	245
	8500	54.0	33.721	1.326	5.6434	0.2124	0.1138	0.0048	1.5	10.39	0.2564	0.497	1.401	65	184
	8600	2.2	169.452	22.996	6.2527	1.0609	0.6251	0.0951	-8.8	11.52	0.2843	-14.886	12.993	-1959	1711
4	900	27.5	239.668	6.037	3.1089	0.1335	0.8530	0.0277	-5.1	5.72	0.1236	-12.223	7.553	-1608	994
	1400	56.9	127.966	1.443	5.5270	0.0862	0.4316	0.0074	0.6	10.18	0.2380	0.825	1.833	109	241
	8500	15.6	35.535	1.012	5.1219	0.2499	0.1441	0.0145	-18.8	9.43	0.1692	-6.708	4.119	-882	542
5	900	25.9	144.335	3.970	3.8873	0.2081	0.5016	0.0217	-2.5	7.15	0.1809	-3.643	5.062	-479	666
	1400	57.9	7.453	0.090	5.3597	0.1100	0.0203	0.0044	24.8	9.87	0.2668	1.845	1.317	243	173
	8500	16.2	17.550	0.505	5.2299	0.3325	0.0754	0.0202	-24.8	9.63	0.2848	-4.367	5.968	-574	785
6	900	32.1	31.017	0.483	3.3686	0.1399	0.0993	0.0122	6.1	6.19	0.1741	1.904	3.600	250	473
	1400	61.5	5.389	0.080	4.7228	0.1084	0.0154	0.0068	22.0	8.69	0.1688	1.183	2.011	156	264
	8500	6.4	50.427	3.652	3.6075	0.6297	0.0909	0.0647	47.2	6.63	0.1607	23.859	19.149	3135	2514
7	900	20.8	29.246	0.970	3.2651	0.2029	0.0946	0.0162	5.2	6.00	0.1984	1.519	4.704	200	619
	1400	45.2	12.540	0.212	5.7896	0.1239	0.0449	0.0077	-2.6	10.66	0.2652	-0.326	2.279	-43	300
	8500	28.2	12.696	0.269	6.4958	0.1791	0.0608	0.0139	-38.0	11.97	0.1990	-4.840	4.117	-637	542
	8600	5.9	44.997	2.526	7.0010	0.7251	0.1831	0.0568	-19.2	12.90	0.1981	-8.661	16.623	-1139	2187
8	900	19.8	13.695	0.188	2.5061	0.1374	0.0405	0.0178	13.8	4.61	0.1396	1.886	5.261	248	692
	1400	20.1	6.748	0.164	6.2652	0.1967	0.0393	0.0154	-65.7	11.54	0.2121	-4.431	4.549	-583	598
	8500	60.1	15.434	0.218	5.9737	0.1507	0.0544	0.0049	-1.4	11.00	0.2205	-0.212	1.448	-28	190

94A1 HORNBLENDE (continued) Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
9	900	22.0	56.305	1.603	3.9753	0.5294	0.1703	0.0230	11.1	7.31	0.2057	6.270	6.665	824	876
	1800	44.1	8.329	0.139	5.0369	0.1604	0.0216	0.0114	27.6	9.27	0.2842	2.298	3.387	302	445
	8700	33.9	11.915	0.262	4.9984	0.1995	0.0444	0.0135	-7.3	9.20	0.2194	-0.865	3.985	-114	524
10	900	36.9	103.481	6.233	4.7459	1.1191	0.2808	0.0581	20.1	8.73	0.1734	20.891	16.529	2745	2171
	1800	58.5	16.709	0.733	4.4140	0.6678	0.0600	0.0344	-4.3	8.12	0.1794	-0.711	10.162	-94	1337
	8700	4.6	28.980	13.784	16.3832	11.4821	-0.0047	0.4388	109.0	30.39	0.2386	31.899	131.947	4190	17313
11	900	24.4	65.626	2.401	3.8556	0.9784	0.2193	0.0498	1.6	7.09	0.1673	1.078	14.555	142	1914
	1700	71.0	21.749	0.357	5.7751	0.2267	0.0514	0.0211	32.1	10.64	0.2071	6.999	6.250	920	822
	8700	4.6	30.266	7.467	7.3551	4.2589	-0.1402	0.2268	238.8	13.56	0.2038	72.557	68.943	9517	9019
12	900	84.5	24.715	1.071	5.8481	0.8588	0.0802	0.0306	5.8	10.77	0.1967	1.430	9.032	188	1188
	1500	6.0	11.038	5.414	4.2107	7.4284	-0.2225	0.3076	700.1	7.75	0.2299	77.292	93.216	10137	12191
	8700	9.5	34.945	12.245	6.3109	6.3817	0.3207	0.1895	-170.0	11.63	0.2019	-59.618	49.932	-7858	6596
13	900	43.7	112.116	4.380	6.6817	0.9772	0.3960	0.0464	-4.0	12.31	0.1981	-4.450	12.998	-585	1710
	1500	47.1	22.078	1.278	8.0629	0.6721	0.0726	0.0306	5.4	14.87	0.2323	1.204	9.001	158	1184
	8700	9.2	36.897	6.852	9.9575	3.4961	-0.0004	0.1339	102.3	18.39	0.2658	37.979	40.467	4988	5307
14	**800**	**12.4**	**937.273**	**72.073**	**1.4523**	**1.2194**	**3.1847**	**0.2572**	**-0.4**	**2.67**	**0.1268**	**-3.731**	**23.338**	**-491**	**3070**
	1500	**46.7**	**38.375**	**0.991**	**4.3363**	**0.3322**	**0.0939**	**0.0128**	**28.5**	**7.98**	**0.2496**	**10.943**	**3.749**	**1439**	**493**
	8700	**40.9**	**94.484**	**2.541**	**4.6569**	**0.4775**	**0.2842**	**0.0171**	**11.5**	**8.57**	**0.2461**	**10.852**	**4.572**	**1427**	**601**
15	800	32.5	179.187	5.297	2.4169	0.5700	0.5850	0.0212	3.6	4.44	0.1279	6.497	3.724	854	490
	1500	56.5	214.707	2.990	5.4885	0.2970	0.7034	0.0162	3.4	10.11	0.2235	7.259	3.828	954	503
	8700	11.0	88.942	6.556	2.2085	1.5122	0.2772	0.0636	8.1	4.06	0.1237	7.177	17.840	944	2345

94A1 PLAGIOCLASE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	2000	13.0	52.190	2.078	1.1864	0.3591	0.1967	0.0383	-11.3	2.18	0.0177	-5.892	11.157	-775	1468
	8200	87.0	10.026	0.228	3.5042	0.0761	0.0335	0.0045	3.6	6.44	0.0004	0.362	1.329	48	175
2	2000	7.5	60.092	2.204	1.8283	0.4854	0.2513	0.0388	-23.4	3.36	0.0177	-14.060	11.240	-1850	1480
	8200	92.5	5.505	0.078	3.9124	0.0544	0.0238	0.0067	-23.1	7.20	0.0016	-1.267	1.980	-167	260
3	2000	36.0	37.085	0.610	4.0397	0.1350	0.1423	0.0137	-12.6	7.43	0.0099	-4.699	4.038	-618	531
	8200	57.3	54.929	1.358	4.5264	0.1421	0.1758	0.0087	6.0	8.33	0.0040	3.294	2.349	433	309
	8500	6.7	14.744	1.108	4.4882	0.9600	0.0938	0.0810	-86.1	8.26	0.0241	-12.701	23.961	-1671	3154
4	2000	4.0	116.762	45.721	1.4847	3.1069	0.2092	0.3986	47.1	2.73	0.0036	55.079	117.401	7229	15378
	8200	96.0	13.503	0.422	4.0238	0.3027	0.0470	0.0200	-0.8	7.40	0.0033	-0.103	5.921	-14	779
5	2000	15.8	36.102	1.052	0.6833	0.2992	0.1119	0.0181	8.5	1.25	0.0280	3.061	5.272	402	693
	8700	84.2	3.776	0.029	3.1160	0.0665	0.0061	0.0055	58.5	5.73	0.0053	2.198	1.631	289	215
6	2000	14.5	26.914	0.764	0.5956	0.1177	0.1024	0.0135	-12.3	1.09	0.0316	-3.316	3.945	-436	519
	8500	85.5	29.982	0.362	3.4041	0.0719	0.0997	0.0030	2.5	6.26	0.0031	0.756	0.887	99	117
7	2000	30.0	103.940	17.802	0.7787	2.4512	0.1782	0.1646	49.4	1.43	0.0494	51.326	48.622	6738	6371
	8700	70.0	37.186	2.612	0.6866	0.8754	0.1187	0.0589	5.7	1.26	0.0560	2.124	17.266	279	2270
8	8700	100.0	46.879	0.825	3.5641	0.0774	0.1660	0.0038	-4.1	6.55	0.0033	-1.928	1.098	-254	144
9	8700	100.0	13.291	0.406	0.1363	0.0778	0.0452	0.0069	-0.7	0.25	0.0332	-0.097	2.033	-13	267
10	8700	100.0	23.765	0.622	-0.0223	0.2894	0.0923	0.0202	-14.9	-0.04	0.0342	-3.541	5.950	-466	783
11	8700	100.0	26.447	0.574	3.3329	0.0770	0.0939	0.0023	-4.1	6.13	0.0029	-1.091	0.681	-143	90

94A5 BIOTITE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	700	10.5	707.280	9.029	0.7962	0.3344	2.4151	0.0153	-0.9	1.46	0.0489	-6.350	8.631	-835	1136
	1500	**21.8**	**153.907**	**0.367**	**-0.0442**	**0.1152**	**0.5132**	**0.0029**	**1.5**	**-0.08**	**0.0522**	**2.237**	**0.798**	**294**	**105**
	8700	**67.6**	**33.427**	**0.076**	**0.0609**	**0.0458**	**0.1103**	**0.0005**	**2.4**	**0.11**	**0.0499**	**0.816**	**0.136**	**107**	**18**
2	500	5.6	992.095	13.687	-1.4267	0.5400	3.3845	0.0505	-0.8	-2.62	0.0479	-8.150	5.907	-1072	777
	1000	10.5	561.207	4.286	-0.5640	0.3446	1.9115	0.0180	-0.7	-1.03	0.0514	-3.713	3.119	-488	410
	2000	**37.2**	**210.488**	**2.464**	**0.1662**	**0.0877**	**0.6986**	**0.0037**	**1.9**	**0.30**	**0.0526**	**4.046**	**2.558**	**532**	**336**
	8700	**46.8**	**25.598**	**0.087**	**0.0857**	**0.0910**	**0.0833**	**0.0015**	**3.7**	**0.16**	**0.0509**	**0.952**	**0.449**	**125**	**59**
3	500	2.3	867.073	14.019	-3.2864	1.1045	2.9140	0.0500	0.7	-6.02	0.0419	5.692	4.932	748	648
	1000	4.9	621.989	5.052	-1.1900	0.5076	2.1087	0.0187	-0.2	-2.18	0.0482	-1.260	2.217	-166	292
	1500	**8.8**	**320.672**	**2.104**	**-0.6615**	**0.2302**	**1.0772**	**0.0085**	**0.7**	**-1.21**	**0.0507**	**2.268**	**1.423**	**298**	**187**
	2500	**22.8**	**112.937**	**0.381**	**-0.2852**	**0.1058**	**0.3802**	**0.0021**	**0.5**	**-0.52**	**0.0513**	**0.546**	**0.499**	**72**	**66**
	8700	**61.2**	**38.023**	**0.038**	**-0.0473**	**0.0329**	**0.1253**	**0.0007**	**2.5**	**-0.09**	**0.0505**	**0.964**	**0.195**	**127**	**26**
4	500	3.7	969.062	6.929	0.0061	0.6296	3.2737	0.0258	0.2	0.01	0.0458	1.656	3.232	218	425
	1000	5.9	563.218	3.725	0.3118	0.3980	1.9020	0.0145	0.2	0.57	0.0532	1.177	2.214	155	291
	1500	**9.7**	**233.878**	**1.773**	**0.0459**	**0.2884**	**0.7809**	**0.0072**	**1.3**	**0.08**	**0.0511**	**3.110**	**1.225**	**409**	**161**
	2500	**25.9**	**73.735**	**0.279**	**0.0911**	**0.0920**	**0.2469**	**0.0018**	**1.0**	**0.17**	**0.0498**	**0.744**	**0.468**	**98**	**62**
	8700	**54.8**	**22.395**	**0.047**	**0.0392**	**0.0446**	**0.0727**	**0.0006**	**3.9**	**0.07**	**0.0493**	**0.874**	**0.174**	**115**	**23**
5	500	6.4	1084.508	11.123	-0.9081	0.8447	3.6678	0.0430	0.1	-1.67	0.0476	0.565	6.402	74	842
	1000	8.9	558.245	5.906	0.0238	0.7569	1.8894	0.0233	0.0	0.04	0.0532	-0.094	3.615	-12	475
	1500	**14.8**	**218.801**	**0.882**	**0.0341**	**0.4144**	**0.7375**	**0.0088**	**0.4**	**0.06**	**0.0486**	**0.858**	**2.485**	**113**	**327**
	2500	**40.1**	**67.370**	**0.249**	**0.0800**	**0.1223**	**0.2235**	**0.0021**	**1.9**	**0.15**	**0.0496**	**1.290**	**0.569**	**170**	**75**
	8700	**29.9**	**9.987**	**0.033**	**0.0577**	**0.2297**	**0.0327**	**0.0024**	**3.1**	**0.11**	**0.0510**	**0.306**	**0.711**	**40**	**93**

94A5 HORNBLENDE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	600	12.0	269.680	105.876	4.5446	4.3626	0.9796	0.4720	-7.2	8.36	0.0227	-19.547	81.447	-2573	10727
	1200	64.8	18.818	1.424	4.8964	0.8241	0.0242	0.0556	63.9	9.01	0.2726	12.052	16.510	1584	2169
	2000	6.4	14.564	10.068	13.6087	11.6070	-0.0277	0.4627	163.4	25.19	0.1002	23.959	138.840	3148	18228
	8700	16.7	8.972	2.020	0.1194	2.6755	-0.0211	0.2052	170.0	0.22	0.0772	15.201	60.717	1998	7976
2	900	20.6	10.395	0.543	-0.3509	1.1069	0.0978	0.0600	-179.1	-0.64	0.0250	-18.564	17.688	-2443	2329
	1800	34.7	5.469	0.297	5.1369	0.4929	-0.0074	0.0315	147.4	9.46	0.2874	8.045	9.360	1058	1230
	8700	16.8	18.559	2.017	4.6187	1.5421	0.1293	0.0714	-104.3	8.50	0.2945	-19.386	20.863	-2551	2748
	8800	27.8	13.564	0.748	4.3888	0.5928	0.0274	0.0404	42.5	8.08	0.2719	5.771	11.959	759	1572
3	800	49.6	13.621	0.998	4.5708	0.8449	0.0933	0.0338	-100.3	8.41	0.2118	-13.672	9.869	-1799	1299
	1500	34.0	3.250	0.365	5.1854	0.9265	-0.0060	0.0482	166.8	9.55	0.2900	5.391	14.292	709	1879
	8700	16.4	33.752	5.704	3.0660	2.6316	0.0182	0.0537	84.8	5.64	0.2839	28.640	16.602	3763	2179
4	800	25.5	12.779	0.266	0.4942	0.1689	0.0392	0.0147	9.5	0.91	0.0473	1.211	4.333	159	570
	1500	48.0	3.904	0.124	5.7124	0.2161	0.0093	0.0076	40.3	10.52	0.2295	1.568	2.266	206	298
	8700	26.5	6.227	0.147	5.3334	0.4436	-0.0030	0.0136	120.6	9.82	0.2283	7.502	4.036	986	531
5	800	14.2	42.312	2.606	-0.3700	1.1593	0.0921	0.0604	35.6	-0.68	0.0732	15.034	17.777	1976	2335
	1500	69.3	9.232	0.125	5.5708	0.2372	0.0321	0.0114	1.5	10.26	0.2868	0.141	3.364	19	442
	8700	16.5	10.991	0.739	7.3585	1.0946	0.0012	0.0389	101.8	13.57	0.3060	11.214	11.577	1474	1521
6	800	31.2	18.043	1.177	4.7223	1.1380	0.1649	0.0642	-168.6	8.69	0.2334	-30.457	18.872	-4010	2487
	1500	54.7	2.475	0.196	5.3646	0.7690	0.0448	0.0347	-425.3	9.88	0.2780	-10.439	10.292	-1373	1355
	8700	14.2	25.991	4.143	8.8440	3.3254	0.3575	0.1101	-304.4	16.32	0.2628	-79.484	30.807	-10484	4075
7	800	68.1	12.007	0.481	5.1040	0.6615	0.0071	0.0366	85.6	9.40	0.2723	10.286	10.844	1352	1425
	1500	26.3	3.885	0.353	6.5856	1.3338	-0.0157	0.0904	232.7	12.14	0.2956	9.014	26.838	1185	3527
	8700	5.6	56.503	20.442	6.7539	7.2780	0.2424	0.4385	-26.0	12.45	0.4279	-14.723	127.641	-1937	16805

94A5 HORNBLENDE (continued) Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
8	800	14.8	38.258	2.774	1.9084	1.3684	0.2571	0.0873	-98.4	3.51	0.0793	-37.658	25.406	-4959	3350
	1500	77.6	46.985	0.777	5.2103	0.2556	0.1611	0.0253	-0.5	9.59	0.2567	-0.259	7.468	-34	982
	8700	7.7	29.638	6.242	3.8472	3.1332	-0.0230	0.1998	123.9	7.08	0.2226	36.775	59.664	4830	7826
9	1000	90.9	69.622	1.692	4.3915	0.3563	0.2336	0.0122	1.3	8.08	0.2473	0.909	3.224	120	424
	8700	9.1	31.811	4.932	8.7166	2.8063	0.1836	0.1249	-68.7	16.08	0.3235	-21.953	36.325	-2889	4785

63A1 BIOTITE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	700	13.0	1857.605	41.074	1.0771	1.0707	6.2299	0.1188	0.9	1.98	0.0358	16.744	24.820	2201	3260
	1800	47.7	497.086	7.209	0.5527	0.2703	1.6924	0.0177	-0.6	1.01	0.0440	-3.004	6.559	-395	863
	8700	**39.2**	**313.996**	**2.539**	**-0.1346**	**0.4212**	**1.0557**	**0.0097**	**0.6**	**-0.25**	**0.0457**	**1.997**	**1.419**	**263**	**187**
2	500	3.6	638.339	14.230	0.9867	1.4241	2.1725	0.0517	-0.6	1.81	0.0310	-3.595	5.399	-473	710
	1000	8.3	404.159	3.462	0.5541	0.8184	1.3609	0.0132	0.5	1.02	0.0395	2.016	1.896	265	249
	1500	**16.7**	**163.219**	**0.663**	**0.7741**	**0.3085**	**0.5535**	**0.0053**	**-0.2**	**1.42**	**0.0433**	**-0.308**	**1.426**	**-40**	**188**
	2000	**29.9**	**72.676**	**0.326**	**0.1264**	**0.2216**	**0.2424**	**0.0023**	**1.4**	**0.23**	**0.0437**	**1.029**	**0.619**	**135**	**81**
	2500	**19.9**	**48.901**	**0.297**	**0.2884**	**0.3222**	**0.1651**	**0.0038**	**0.2**	**0.53**	**0.0422**	**0.098**	**1.092**	**13**	**144**
	8700	**21.6**	**21.962**	**0.108**	**0.1454**	**0.2459**	**0.0694**	**0.0028**	**6.5**	**0.27**	**0.0410**	**1.436**	**0.825**	**189**	**108**
3	500	1.1	1188.658	45.190	3.3780	2.7361	3.9711	0.1560	1.3	6.21	0.0325	15.452	11.663	2031	1532
	1000	3.3	575.539	7.602	-1.0730	0.7135	1.9454	0.0294	0.1	-1.97	0.0398	0.563	4.251	74	559
	1500	**5.1**	**338.876**	**2.991**	**-0.4294**	**0.4651**	**1.1467**	**0.0151**	**0.0**	**-0.79**	**0.0415**	**-0.032**	**3.327**	**-4**	**438**
	2000	**13.3**	**119.020**	**0.571**	**-0.0562**	**0.2133**	**0.3987**	**0.0033**	**1.0**	**-0.10**	**0.0429**	**1.186**	**0.842**	**156**	**111**
	2500	**22.4**	**58.900**	**0.223**	**-0.0956**	**0.1688**	**0.1992**	**0.0024**	**0.0**	**-0.18**	**0.0424**	**-0.003**	**0.686**	**0**	**90**
	8700	**54.8**	**37.309**	**0.220**	**-0.1612**	**0.0509**	**0.1222**	**0.0012**	**3.1**	**-0.30**	**0.0416**	**1.166**	**0.337**	**153**	**44**
4	500	2.4	532.926	13.957	1.2853	3.1765	1.8607	0.0549	-3.2	2.36	0.0337	-16.847	7.520	-2217	990
	1000	5.4	480.925	6.308	-0.2910	1.9232	1.6583	0.0266	-1.9	-0.53	0.0366	-9.137	4.528	-1202	596
	1500	**9.0**	**377.154**	**3.567**	**-0.1369**	**0.9711**	**1.2732**	**0.0137**	**0.2**	**-0.25**	**0.0427**	**0.892**	**2.009**	**117**	**264**
	2000	**22.2**	**155.722**	**0.720**	**0.0425**	**0.3418**	**0.5229**	**0.0049**	**0.8**	**0.08**	**0.0447**	**1.193**	**1.323**	**157**	**174**
	2500	**15.7**	**61.980**	**0.441**	**0.1763**	**0.4947**	**0.2126**	**0.0050**	**-1.4**	**0.32**	**0.0430**	**-0.856**	**1.421**	**-113**	**187**
	8700	**45.2**	**37.336**	**0.172**	**-0.0685**	**0.1745**	**0.1239**	**0.0014**	**1.9**	**-0.13**	**0.0411**	**0.701**	**0.377**	**92**	**50**

63A1 HORNBLENDE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	1000	4.7	556.767	19.391	0.6854	0.3452	1.9659	0.0677	-4.3	1.26	0.0349	-24.147	14.709	-3178	1938
	2000	18.5	16.306	0.163	4.8444	0.0966	0.0462	0.0056	18.3	8.92	0.2976	2.993	1.659	394	218
	8700	58.7	14.953	0.149	5.1592	0.0630	0.0466	0.0027	10.3	9.50	0.2819	1.536	0.788	202	104
	8800	18.2	235.935	1.787	4.3524	0.0725	0.8108	0.0112	-1.4	8.01	0.2087	-3.365	2.977	-443	392
2	900	5.1	271.649	5.874	0.2011	0.2121	0.9302	0.0252	-1.2	0.37	0.0455	-3.245	4.642	-427	611
	1800	31.3	10.563	0.089	5.1642	0.0748	0.0338	0.0029	8.9	9.51	0.2805	0.942	0.868	124	114
	8700	63.5	10.236	0.041	5.2832	0.0448	0.0306	0.0013	15.2	9.73	0.2572	1.562	0.395	205	52
3	800	10.0	665.866	18.385	0.2046	0.2155	2.1883	0.0605	2.9	0.38	0.0511	19.200	6.197	2523	814
	1500	70.0	21.007	0.144	4.5322	0.0661	0.0682	0.0034	5.6	8.34	0.2342	1.177	1.011	155	133
	8700	20.0	32.896	0.474	2.1073	0.1659	0.0969	0.0063	13.4	3.87	0.1281	4.405	1.812	579	238
4	800	9.5	208.263	1.878	0.3850	0.1938	0.7160	0.0133	-1.6	0.71	0.0353	-3.312	3.532	-436	465
	1500	16.4	17.824	0.195	3.7516	0.1176	0.0553	0.0050	9.8	6.90	0.1677	1.745	1.477	229	194
	8700	74.2	6.436	0.026	3.4007	0.0259	0.0205	0.0015	9.4	6.25	0.1444	0.602	0.452	79	59
5	800	2.0	1000.808	158.079	-1.0756	1.9309	3.3236	0.5371	1.9	-1.97	0.1294	18.575	34.026	2441	4469
	1500	90.8	3.929	0.024	5.2167	0.0796	0.0074	0.0020	54.4	9.60	0.2824	2.128	0.578	280	76
	8700	7.3	31.643	0.965	3.9423	0.5958	0.1039	0.0319	3.8	7.25	0.2664	1.201	9.395	158	1236
6	800	0.9	1717.444	835.744	-11.6454	7.5661	5.8486	2.8653	-0.7	-21.21	0.0384	-11.644	97.550	-1532	12840
	1500	56.3	19.069	0.183	4.9288	0.1442	0.0528	0.0057	20.0	9.07	0.2964	3.828	1.676	503	220
	8700	42.8	12.132	0.137	5.4834	0.2246	0.0340	0.0080	20.5	10.10	0.2852	2.490	2.358	327	310
7	800	9.7	229.969	9.524	-0.2875	0.5700	0.8085	0.0401	-3.9	-0.53	0.0462	-8.991	6.623	-1183	872
	1500	61.4	9.465	0.106	4.6235	0.1204	0.0306	0.0065	7.9	8.51	0.1808	0.747	1.924	98	253
	8700	28.9	19.799	0.296	1.9030	0.2367	0.0944	0.0116	-40.4	3.50	0.0814	-8.001	3.402	-1053	448
8	800	9.1	197.614	7.754	1.3649	0.7476	0.6333	0.0406	5.3	2.51	0.0760	10.562	9.551	1389	1255
	1500	80.8	6.683	0.043	5.1849	0.1156	0.0189	0.0040	22.1	9.55	0.2431	1.475	1.196	194	157
	8700	10.2	24.380	0.670	4.1914	0.5231	0.0626	0.0285	25.3	7.71	0.1639	6.175	8.447	812	1110

63A1 HORNBLENDE (continued) Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
9	800	19.6	153.026	6.088	3.1388	0.5338	0.4863	0.0374	6.2	5.77	0.1895	9.565	9.494	1258	1248
	1500	71.3	17.607	0.174	4.8773	0.1813	0.0630	0.0097	-3.7	8.98	0.2540	-0.660	2.864	-87	377
	8700	9.1	28.918	1.939	5.3231	1.1215	0.0933	0.0790	6.0	9.80	0.2431	1.737	23.363	228	3072
10	800	6.9	300.465	13.874	0.8560	1.1839	1.0323	0.0731	-1.5	1.57	0.1289	-4.551	16.394	-599	2157
	1500	83.8	4.030	0.050	4.9608	0.1027	0.0070	0.0038	57.7	9.13	0.3036	2.317	1.134	305	149
	8700	9.2	21.983	0.944	5.3277	0.8303	0.0536	0.0529	29.6	9.81	0.2814	6.530	15.669	859	2060
11	800	2.8	508.348	30.912	1.1224	0.9907	1.7489	0.1388	-1.6	2.06	0.0483	-8.391	26.404	-1104	3475
	1500	71.0	34.677	0.308	5.2366	0.0613	0.1174	0.0027	1.0	9.64	0.2885	0.345	0.732	45	96
	8700	26.3	6.306	0.078	5.0764	0.1612	0.0263	0.0070	-17.6	9.35	0.2878	-1.106	2.076	-146	273
12	800	9.8	542.425	9.214	0.0578	0.2082	1.8322	0.0333	0.2	0.11	0.0383	0.988	4.001	130	526
	1500	22.7	58.688	0.342	5.1101	0.0990	0.1970	0.0047	1.4	9.41	0.2627	0.828	1.344	109	177
	8700	67.5	29.609	0.188	5.0877	0.0516	0.0994	0.0019	1.9	9.37	0.2672	0.578	0.562	76	74

63A1 PLAGIOCLASE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	1500	9.9	4577.951	217.436	-2.2430	4.3869	15.4712	0.7367	0.1	-4.11	0.0090	5.993	16.647	788	2188
	8700	90.1	19.677	0.127	3.7771	0.2789	0.0696	0.0034	-3.2	6.95	0.0007	-0.631	0.993	-83	131
2	1500	12.0	4516.854	173.081	8.6151	4.3524	15.4959	0.5970	-1.4	15.90	-0.0020	-61.923	26.448	-8162	3494
	8700	88.0	10.228	0.090	5.5993	0.6327	0.0530	0.0081	-49.5	10.31	0.0014	-5.063	2.392	-666	315
3	1500	8.6	9443.675	1250.576	-0.4646	13.2102	32.3226	4.2823	-1.1	-0.85	-0.0125	-107.680	48.990	-14217	6494
	8700	91.4	6.184	0.074	5.6334	1.1010	0.0254	0.0115	-14.9	10.37	-0.0020	-0.919	3.406	-121	448
4	1500	16.6	4185.164	112.963	5.4188	2.5042	14.1703	0.3550	0.0	9.98	0.0070	-1.790	58.330	-235	7672
	8700	83.4	3.474	0.026	3.1555	0.4897	0.0192	0.0057	-58.2	5.80	0.0007	-2.008	1.688	-264	222
5	1500	3.8	11276.942	2125.378	-12.4378	18.9405	38.7291	7.2998	-1.5	-22.64	0.0061	-167.125	87.012	-22114	11585
	8700	**96.2**	**4.225**	**0.039**	**3.8463**	**0.4618**	**0.0019**	**0.0058**	**93.3**	**7.08**	**0.0022**	**3.927**	**1.724**	**516**	**227**
6	1500	23.4	3431.435	132.904	8.0695	2.6837	11.5515	0.4282	0.5	14.88	0.0130	18.643	41.962	2450	5511
	8700	**76.6**	**7.564**	**0.074**	**5.0128**	**0.7122**	**0.0151**	**0.0078**	**45.7**	**9.23**	**0.0045**	**3.455**	**2.314**	**454**	**304**

57A2 BIOTITE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	500	0.9	807.304	58.900	5.7296	4.6586	2.7995	0.2078	-2.4	10.55	0.0202	-19.630	12.060	-2584	1588
	1000	3.1	129.306	1.767	1.2202	1.8111	0.4588	0.0166	-4.8	2.24	0.0307	-6.206	4.599	-816	605
	1500	6.6	33.118	0.299	0.4266	0.7426	0.1096	0.0064	2.3	0.78	0.0352	0.747	1.880	98	247
	2000	11.2	27.584	0.130	-0.1167	0.3474	0.0932	0.0039	0.0	-0.21	0.0349	-0.005	1.143	-1	150
	2500	14.4	12.682	0.046	0.3409	0.2345	0.0461	0.0023	-7.3	0.63	0.0345	-0.929	0.665	-122	87
	8700	**63.8**	**8.071**	**0.024**	**0.1459**	**0.0633**	**0.0247**	**0.0005**	**9.4**	**0.27**	**0.0347**	**0.755**	**0.150**	**99**	**20**
2	500	0.8	1068.090	40.442	4.3577	4.6376	3.8221	0.1540	-5.7	8.02	0.0073	-61.228	15.830	-8070	2091
	1500	4.4	197.864	1.424	0.8598	0.7607	0.6847	0.0113	-2.2	1.58	0.0279	-4.431	3.027	-583	398
	2500	15.1	19.614	0.072	0.3796	0.2151	0.0697	0.0030	-4.9	0.70	0.0348	-0.969	0.882	-127	116
	8700	**79.7**	**10.121**	**0.015**	**0.0945**	**0.0419**	**0.0323**	**0.0005**	**5.6**	**0.17**	**0.0353**	**0.565**	**0.156**	**74**	**20**
3	500	1.4	437.537	10.961	0.9838	1.9132	1.5665	0.0445	-5.8	1.81	0.0242	-25.329	6.234	-3334	821
	1500	8.3	76.351	0.491	0.5395	0.3906	0.2736	0.0042	-5.9	0.99	0.0317	-4.489	1.165	-590	153
	2500	**22.9**	**11.980**	**0.053**	**-0.1440**	**0.1509**	**0.0403**	**0.0013**	**0.4**	**-0.26**	**0.0335**	**0.042**	**0.375**	**6**	**49**
	8700	**67.5**	**7.171**	**0.017**	**0.0415**	**0.0365**	**0.0225**	**0.0006**	**6.8**	**0.08**	**0.0343**	**0.488**	**0.174**	**64**	**23**
4	500	1.9	393.588	9.884	3.7567	2.3900	1.3913	0.0452	-4.4	6.91	0.0225	-17.322	8.587	-2280	1131
	1500	14.6	37.330	0.247	0.6099	0.3390	0.1312	0.0053	-3.8	1.12	0.0336	-1.434	1.549	-189	204
	2500	**35.7**	**12.204**	**0.030**	**0.1833**	**0.1516**	**0.0392**	**0.0019**	**5.0**	**0.34**	**0.0363**	**0.607**	**0.550**	**80**	**72**
	8700	**47.7**	**8.028**	**0.032**	**0.1049**	**0.1538**	**0.0243**	**0.0016**	**10.3**	**0.19**	**0.0347**	**0.826**	**0.463**	**109**	**61**
5	500	1.9	374.899	9.769	-2.1050	3.0823	1.2215	0.0415	3.7	-3.86	0.0067	13.731	7.921	1805	1041
	1500	9.3	57.488	0.505	-0.3145	0.7060	0.1870	0.0073	3.8	-0.58	0.0318	2.172	2.092	286	275
	2500	**27.4**	**15.255**	**0.082**	**0.0770**	**0.2264**	**0.0491**	**0.0017**	**4.7**	**0.14**	**0.0338**	**0.710**	**0.503**	**93**	**66**
	8700	**61.4**	**9.317**	**0.031**	**-0.0101**	**0.1168**	**0.0279**	**0.0009**	**11.1**	**-0.02**	**0.0361**	**1.035**	**0.273**	**136**	**36**

57A2 HORNBLENDE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	900	4.0	501.954	22.167	1.7692	0.3481	1.7972	0.0917	-5.8	3.25	0.0281	-29.031	17.113	-3822	2255
	1500	30.6	13.521	0.422	6.2606	0.2022	0.0507	0.0042	-7.4	11.53	0.1573	-1.008	1.243	-133	164
	8700	64.8	12.192	0.424	6.5602	0.2250	0.0396	0.0030	8.0	12.09	0.1744	0.973	0.897	128	118
	8800	0.6	1064.485	270.802	13.0893	4.2490	4.0360	1.0540	-11.9	24.22	0.0348	-128.283	78.821	-16950	10464
2	1000	4.0	275.006	4.284	0.5125	0.1658	0.9876	0.0390	-6.1	0.94	0.0138	-16.812	10.732	-2212	1413
	2000	3.6	22.675	1.155	2.7427	0.5456	0.1052	0.0375	-36.3	5.04	0.1062	-8.246	10.984	-1085	1445
	8700	90.2	17.453	0.267	6.6601	0.1243	0.0582	0.0018	4.2	12.27	0.2259	0.735	0.525	97	69
	8701	2.2	745.950	34.682	10.9400	0.6495	2.6295	0.1278	-4.1	20.22	0.3556	-30.505	11.994	-4016	1581
3	1000	4.1	316.469	25.834	3.6840	1.3433	1.2508	0.1382	-16.7	6.78	0.0563	-53.030	27.960	-6988	3691
	2000	82.1	20.450	0.146	6.3207	0.0728	0.0711	0.0039	-0.6	11.65	0.1978	-0.116	1.160	-15	153
	8700	13.8	5.214	0.115	9.9932	0.4499	0.0330	0.0242	-73.5	18.46	0.3269	-3.837	7.180	-505	945
4	1000	17.7	-101.449	3.733	4.4056	0.2184	-0.3280	0.0207	4.2	8.11	0.1320	-4.224	7.003	-556	921
	2000	75.6	-92.306	0.575	6.5462	0.0872	-0.2979	0.0038	4.1	12.06	0.1677	-3.840	1.010	-505	133
	8700	6.7	-1096.931	35.637	9.4456	0.5479	-3.5175	0.1199	5.2	17.44	0.2429	-57.171	11.024	-7535	1456
5	800	6.8	114.576	3.703	1.0874	0.3131	0.4183	0.0228	-7.8	2.00	0.0342	-8.980	5.485	-1181	722
	1500	59.6	3.150	0.031	6.2387	0.1376	0.0091	0.0014	28.6	11.49	0.2091	0.897	0.404	118	53
	8700	33.7	3.820	0.040	7.3891	0.1057	0.0173	0.0035	-20.3	13.62	0.2503	-0.772	1.047	-102	138
6	800	2.5	93.067	8.526	0.5676	1.1725	0.3499	0.0625	-11.1	1.04	0.0450	-10.313	15.909	-1357	2094
	1500	1.2	13.316	1.997	7.2349	3.4016	0.0344	0.1639	27.5	13.34	0.1396	3.674	48.643	483	6396
	8700	96.3	15.494	0.128	6.6000	0.0980	0.0462	0.0017	14.9	12.16	0.1763	2.307	0.506	303	67
7	800	8.1	103.990	1.763	0.3061	0.2357	0.3477	0.0156	1.2	0.56	0.0229	1.231	4.309	162	567
	1500	16.8	28.252	0.354	5.3058	0.1463	0.0971	0.0080	-0.3	9.77	0.1914	-0.074	2.343	-10	308
	8700	75.1	10.893	0.061	6.6705	0.0511	0.0368	0.0014	4.5	12.29	0.1857	0.487	0.397	64	52

57A2 HORNBLENDE (continued) Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
8	800	9.3	166.055	2.393	0.3634	0.1593	0.5475	0.0165	2.6	0.67	0.0239	4.269	4.342	561	571
	1500	14.7	35.113	0.414	5.4419	0.1368	0.1096	0.0043	8.9	10.02	0.1346	3.133	1.243	412	163
	8700	76.0	14.385	0.179	6.3714	0.0781	0.0453	0.0016	10.0	11.74	0.2022	1.443	0.466	190	61
9	800	13.3	99.162	1.422	-0.0130	0.1556	0.3392	0.0098	-1.1	-0.02	0.0152	-1.094	2.539	-144	334
	1500	12.0	30.037	0.423	4.5536	0.1453	0.1082	0.0073	-5.4	8.38	0.1885	-1.612	2.111	-212	278
	8700	74.7	15.461	0.174	6.4669	0.0862	0.0521	0.0017	3.4	11.92	0.1883	0.525	0.499	69	66
10	800	5.0	280.777	8.763	-0.6478	0.3411	0.8978	0.0417	5.5	-1.19	0.0211	15.404	9.178	2025	1206
	1500	14.0	21.501	0.509	5.6307	0.2398	0.0757	0.0095	-2.2	10.37	0.2148	-0.483	2.784	-64	366
	8700	81.0	17.652	0.223	5.9679	0.1163	0.0573	0.0022	6.5	10.99	0.2211	1.154	0.625	152	82
11	800	1.4	231.351	9.652	0.3990	0.7197	0.7788	0.0504	0.5	0.73	0.0296	1.207	11.459	159	1507
	1500	2.2	29.808	1.072	0.0057	0.4369	0.0379	0.0383	62.4	0.01	0.0204	18.595	11.340	2444	1489
	8700	96.4	7.226	0.061	6.4383	0.0635	0.0212	0.0006	19.8	11.86	0.1996	1.431	0.169	188	22
12	800	9.5	148.873	2.607	0.2805	0.1893	0.5042	0.0099	-0.1	0.51	0.0253	-0.131	2.332	-17	307
	1500	14.9	29.563	0.237	4.4251	0.1675	0.1001	0.0041	1.0	8.14	0.1609	0.289	1.201	38	158
	8700	75.6	11.727	0.102	5.4809	0.0577	0.0402	0.0012	2.1	10.09	0.1949	0.247	0.362	33	48

57A2 PLAGIOCLASE Weighted average of J from standards = 0.0000729 +/- 0.0000006

Run #	Laser Power (mW)	% ^{39}Ar	^{40}Ar/^{39}Ar measured	+/-	^{37}Ar/^{39}Ar measured	+/-	^{36}Ar/^{39}Ar measured	+/-	% ^{40}Ar*	Ca/K	Cl/K	^{40}Ar*/^{39}Ar$_K$	+/-	Age (ka)	+/- (ka)
1	**1500**	**13.2**	**986.055**	**40.766**	**3.1455**	**3.0057**	**3.2504**	**0.1402**	**2.6**	**5.78**	**0.0093**	**25.816**	**12.517**	**3392**	**1643**
	8700	**86.8**	**29.436**	**0.198**	**7.1553**	**0.4035**	**0.0913**	**0.0044**	**10.1**	**13.19**	**0.0041**	**2.982**	**1.306**	**392**	**172**
2	**1500**	**13.4**	**31.481**	**1.179**	**0.6140**	**2.8121**	**0.0678**	**0.0217**	**36.5**	**1.13**	**0.0117**	**11.475**	**6.383**	**1508**	**839**
	8700	**60.7**	**6.616**	**0.069**	**4.9812**	**0.6166**	**0.0099**	**0.0066**	**61.3**	**9.17**	**0.0042**	**4.052**	**1.966**	**533**	**258**
	8701	25.9	2.388	0.081	6.0318	1.5879	-0.0250	0.0134	432.5	11.11	0.0011	10.244	3.964	1347	521
3	1500	16.1	163.652	7.320	6.8083	3.8814	0.5804	0.0461	-4.5	12.55	0.0203	-7.410	11.381	-975	1498
	8700	78.0	22.176	0.214	6.7518	0.7648	0.0815	0.0070	-6.5	12.44	0.0038	-1.445	2.079	-190	273
	8701	5.9	2.768	0.431	16.0206	11.1816	0.1378	0.0779	-1342.6	29.71	0.0125	-37.168	23.216	-4895	3062
4	1500	20.9	139.857	4.171	5.2422	3.3464	0.4937	0.0288	-4.0	9.65	0.0077	-5.671	7.352	-746	967
	8700	79.1	61.410	0.419	7.3525	0.5981	0.2131	0.0055	-1.7	13.56	0.0018	-1.055	1.590	-139	209
5	1500	22.8	53.734	1.506	16.2107	2.4423	0.2143	0.0320	-15.6	30.06	0.0196	-8.478	9.387	-1115	1235
	8700	**77.2**	**39.491**	**0.249**	**8.1668**	**0.9139**	**0.1225**	**0.0079**	**9.8**	**15.06**	**0.0085**	**3.901**	**2.329**	**513**	**306**
6	1500	14.9	50.886	1.482	-0.1312	2.6806	0.1723	0.0215	-0.1	-0.24	0.0171	-0.053	6.169	-7	811
	8700	85.1	26.047	0.172	4.4973	0.5099	0.0912	0.0041	-2.3	8.28	0.0039	-0.605	1.197	-80	157
7	1500	31.0	33.469	0.988	6.7929	1.8121	0.1311	0.0214	-14.4	12.52	0.0144	-4.821	6.258	-634	823
	8700	69.0	23.559	0.322	8.2923	1.2294	0.0866	0.0106	-6.1	15.30	0.0048	-1.432	3.143	-188	413
8	**1500**	**23.4**	**1764.111**	**31.059**	**-0.0638**	**1.0077**	**5.8788**	**0.1095**	**1.5**	**-0.12**	**0.0058**	**26.905**	**10.711**	**3535**	**1406**
	8700	76.6	71.154	0.342	6.7027	0.3939	0.2414	0.0036	0.4	12.35	0.0037	0.287	0.998	38	131