Appendix: Analytical data from resistant furnace bulk heating analyses of Ar in hornblende

Sample: XC-383 Location 1 on Fig. 2 J = 0.0046891

T	40(mole)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$	K/Ca	$\sum {}^{39}Ar$	$^{40}Ar^*$	Age (Ma)
500	2.9e-15	24.9525	8.5984	2.0539	0.057	0.000	0.039	200 ±355
700	1.2e-14	74.3281	12.2327	0.5331	0.040	0.001	0.320	539 ± 16
800	1.9e-14	97.5616	11.7586	0.2058	0.041	0.002	0.618	679.6 ± 5.5
850	1.7e-14	69.9855	10.1769	0.0750	0.048	0.004	0.765	512.0 ± 3.7
900	4.1e-14	62.1360	9.7311	0.0480	0.050	0.011	0.821	461.3 ± 2.3
950	3.3e-13	58.0692	9.3055	0.0147	0.052	0.074	0.941	434.4 ± 1.9
960	1.9e-13	57.9665	9.5432	0.0097	0.051	0.113	0.964	433.8 ± 1.8
970	1.9e-13	58.0919	9.5788	0.0080	0.051	0.151	0.973	434.6 ± 1.8
980	2.7e-13	58.0248	9.5917	0.0055	0.051	0.207	0.985	434.1 ± 1.9
990	3.1e-13	58.0346	9.6086	0.0052	0.051	0.269	0.986	434.2 ± 1.9
1000	2.2e-13	57.9774	9.6043	0.0052	0.051	0.315	0.986	433.8 ± 1.8
1010	1.3e-13	57.9352	9.6576	0.0058	0.050	0.341	0.984	433.5 ± 1.9
1020	6.3e-14	58.0314	9.8393	0.0069	0.049	0.354	0.979	434.2 ± 1.9
1040	6.8e-14	57.8828	9.7877	0.0095	0.050	0.368	0.965	433.2 ± 1.9
1080	6.8e-13	57.9379	10.1380	0.0073	0.048	0.507	0.977	433.6 ± 1.8
1105	1.6e-12	57.9130	9.7238	0.0047	0.050	0.841	0.989	433.4 ± 1.8
1140	5.6e-13	57.9241	9.5704	0.0045	0.051	0.956	0.990	433.5 ± 1.8
1180	1.2e-13	57.9804	9.8370	0.0109	0.050	0.980	0.959	433.8 ± 1.9
1250	9.9e-14	57.9930	9.7355	0.0077	0.050	1.000	0.974	433.9 ± 1.9

Total fusion age, TFA = 434.5 ± 1.8 Ma
Weighted mean plateau age, WMPA = 433.8 ± 1.8 Ma
Inverse isochron age = 433.6 ± 1.8 Ma. (MSWD = 0.71; $^{40}Ar/^{36}Ar$ = 300.2 ± 8.6)
Steps used: 950 - 1250 (14 steps), or >95% $\sum {}^{39}Ar$

Sample: XC-385 Location 2 on Fig. 2 J = 0.0046889

T	40(mole)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$	K/Ca	$\sum {}^{39}Ar$	$^{40}Ar^*$	Age (Ma)
800	2.8e-14	52.1172	4.5524	0.1761	0.11	0.002	0.502	394.4 ± 4.0
850	1.2e-14	53.2428	3.8940	0.1219	0.13	0.003	0.599	402.0 ± 5.5
900	4.6e-14	60.9578	3.9967	0.0367	0.12	0.007	0.854	453.5 ± 2.2
935	1.7e-13	58.6134	3.9188	0.0135	0.12	0.026	0.942	438.0 ± 1.9
950	2.7e-13	57.8542	3.9930	0.0074	0.12	0.056	0.970	433.0 ± 1.8
960	3.0e-13	57.9627	4.1374	0.0056	0.12	0.091	0.979	433.7 ± 1.9
970	2.9e-13	57.8591	4.2304	0.0050	0.12	0.124	0.982	433.0 ± 1.9
980	3.0e-13	57.9081	4.3390	0.0039	0.11	0.159	0.987	433.4 ± 1.8
990	4.4e-13	57.9313	4.3738	0.0032	0.11	0.209	0.991	433.5 ± 1.8
1000	9.9e-13	57.8228	4.3979	0.0028	0.11	0.326	0.993	432.8 ± 1.8
1010	1.7e-12	57.8218	4.3602	0.0022	0.11	0.528	0.996	432.8 ± 1.8
1030	2.1e-12	57.8597	4.2422	0.0020	0.12	0.774	0.997	433.0 ± 1.8
1050	1.7e-13	57.8569	4.1943	0.0034	0.12	0.794	0.990	433.0 ± 1.8
1070	2.8e-13	57.8466	4.2417	0.0032	0.12	0.827	0.991	432.9 ± 1.9
1090	3.4e-13	57.9001	4.4342	0.0031	0.11	0.867	0.992	433.3 ± 1.9
1105	3.4e-13	57.8488	4.3961	0.0027	0.11	0.907	0.994	433.0 ± 1.8
1140	3.6e-13	57.8966	4.2667	0.0026	0.11	0.949	0.994	433.3 ± 1.9
1160	6.1e-14	57.9213	4.3357	0.0039	0.11	0.956	0.988	433.4 ± 1.9
1180	5.9e-14	58.4441	4.3511	0.0035	0.11	0.963	0.990	436.9 ± 1.9
1210	1.4e-13	58.1045	4.2734	0.0027	0.11	0.980	0.994	434.7 ± 1.9
1250	1.7e-13	58.0122	4.2834	0.0031	0.11	1.000	0.992	434.0 ± 1.9

Total fusion age, TFA= 433.2 ± 1.8 Ma
Weighted mean plateau age, WMPA = 433.0 ± 1.8 Ma
Inverse isochron age = 432.9 ± 1.8 Ma. (MSWD = 0.65; $^{40}Ar/^{36}Ar$ = 304.7 ± 7.3)
Steps used: 950 - 1160 (14 steps), or 93% $\sum {}^{39}Ar$

Sample: XC-78 Location 3 on Fig. 2 J = 0.0046544

T	40(mole)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$	K/Ca	$\sum {}^{39}Ar$	$^{40}Ar^*$	Age (Ma)
800	2.4e-13	268.6394	72.0605	2.3325	0.006	0.008	0.272	1463 ± 13
850	3.4e-14	83.2237	15.4342	0.1237	0.031	0.017	0.700	590.6 ± 3.6
900	8.7e-14	72.2831	15.7724	0.0421	0.031	0.048	0.864	523.2 ± 2.3
935	1.4e-13	70.0167	16.2890	0.0289	0.030	0.104	0.905	508.9 ± 2.2
950	1.4e-13	67.5179	16.0890	0.0223	0.030	0.165	0.926	493.0 ± 2.1
960	1.6e-13	64.6531	16.6042	0.0173	0.029	0.236	0.943	474.6 ± 2.0
970	1.8e-13	62.1286	16.8549	0.0146	0.029	0.320	0.954	458.2 ± 2.0
980	1.7e-13	60.2007	15.8140	0.0130	0.031	0.404	0.958	445.6 ± 1.9
990	1.5e-13	59.6525	14.9423	0.0115	0.032	0.479	0.964	442.0 ± 1.9
1000	1.3e-13	58.5703	14.2023	0.0116	0.034	0.543	0.962	434.9 ± 1.9
1010	8.8e-14	58.9102	14.1703	0.0110	0.034	0.587	0.965	437.1 ± 1.9
1030	6.4e-14	59.7981	14.8756	0.0123	0.033	0.618	0.960	443.0 ± 2.0
1050	4.0e-14	61.1747	17.4027	0.0202	0.028	0.637	0.929	452.0 ± 2.2
1070	5.5e-14	61.0266	16.6291	0.0161	0.029	0.663	0.946	451.0 ± 2.1
1090	1.2e-13	62.1513	15.6963	0.0153	0.031	0.717	0.949	458.4 ± 2.0
1105	1.3e-13	66.0651	14.7826	0.0144	0.033	0.774	0.955	483.7 ± 2.1
1140	2.5e-13	67.0387	13.2738	0.0121	0.037	0.883	0.963	489.9 ± 2.1
1160	6.3e-14	65.1113	15.8709	0.0123	0.031	0.912	0.964	477.5 ± 2.2
1180	5.2e-14	65.7787	16.5191	0.0119	0.029	0.935	0.967	481.8 ± 2.2
1210	6.3e-14	64.9910	16.6967	0.0130	0.029	0.964	0.962	476.8 ± 2.1
1250	8.2e-14	65.3856	16.6712	0.0183	0.029	1.000	0.940	479.3 ± 2.1

Total fusion age, TFA = 479.9 ± 2.0 Ma
Inverse isochron age = 403.6± 5.3 Ma. (MSWD = 30.1; $^{40}Ar/^{36}Ar$ = 1019 ± 72)
Steps used: 935 - 1090 (12 steps), or 69% $\sum {}^{39}Ar$

Sample: 075-B11 Location 4 on Fig. 2 J = 0.0046229

T	40(mole)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$	K/Ca	$\sum {}^{39}Ar$	$^{40}Ar^*$	Age (Ma)
800	4.1e-14	45.5152	1.7835	0.4229	0.27	0.006	0.267	344.5 ± 5.5
850	5.8e-15	39.6486	1.1734	0.0530	0.42	0.008	0.718	303.6 ± 6.4
900	8.2e-15	63.8758	2.1392	0.0514	0.23	0.011	0.810	466.8 ± 6.4
935	8.5e-15	70.0956	2.6693	0.0520	0.18	0.013	0.822	506.4 ± 6.1
950	1.0e-14	71.9502	2.3916	0.0428	0.20	0.016	0.852	518.0 ± 5.3
955	1.0e-14	61.1045	2.5306	0.0365	0.19	0.019	0.852	448.8 ± 4.7
960	1.3e-14	59.3204	2.7969	0.0230	0.17	0.024	0.900	437.2 ± 3.6
965	1.7e-14	61.8691	2.6889	0.0103	0.18	0.030	0.956	453.8 ± 3.0
970	2.8e-14	58.1524	2.9451	0.0055	0.17	0.041	0.977	429.5 ± 2.4
975	4.4e-14	57.3606	2.7175	0.0034	0.18	0.059	0.986	424.3 ± 2.1
980	5.7e-14	56.9660	2.7756	0.0029	0.18	0.083	0.989	421.7 ± 2.0
985	6.9e-14	56.4373	2.8127	0.0004	0.17	0.112	1.000	418.2 ± 2.0
990	8.1e-14	55.9319	2.7374	0.0013	0.18	0.147	0.997	414.9 ± 1.9
1000	1.3e-13	55.1570	2.7841	0.0010	0.18	0.202	0.998	409.7 ± 1.9
1050	7.6e-13	54.3597	2.8100	0.0014	0.17	0.533	0.996	404.4 ± 1.8
1100	7.5e-13	54.3853	2.7928	0.0016	0.18	0.858	0.995	404.6 ± 1.8
1150	2.3e-13	54.3756	2.8728	0.0019	0.17	0.957	0.994	404.5 ± 1.8
1200	6.5e-14	54.2437	2.9700	0.0010	0.16	0.985	0.999	403.7 ± 1.9
1250	3.4e-14	54.4623	3.0777	0.0017	0.16	1.000	1.000	405.1 ± 2.1

Total fusion age, TFA = 407.4 ± 1.8 Ma
Weighted mean plateau age, WMPA = 404.5 ± 1.8 Ma
Inverse isochron age = 404.5 ± 1.83 Ma. (MSWD = 0.62; $^{40}Ar/^{36}Ar$ = 296.4 ± 36.4)
Steps used: 1050 - 1250 (5 steps), or 80% $\sum {}^{39}Ar$

Sample: XC-331 Location 5 on Fig. 2 J = 0.0046149

T	40(mole)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$	K/Ca	$\Sigma\ ^{39}Ar$	$^{40}Ar^*$	Age (Ma)
650	4.8e-14	60.7067	0.8393	0.0931	0.58	0.018	0.688	461.3 ± 1.9
750	4.8e-14	60.7067	0.8393	0.0931	0.58	0.036	0.688	445.6 ± 2.4
800	1.7e-14	23.2611	0.6084	0.0227	0.81	0.055	0.777	183.9 ± 1.1
850	2.2e-14	25.1318	1.0615	0.0120	0.46	0.081	0.879	198.0 ± 1.2
900	4.2e-14	38.4179	3.7822	0.0145	0.13	0.114	0.906	294.4 ± 1.5
925	3.8e-14	50.4367	6.0876	0.0169	0.080	0.138	0.917	377.5 ± 1.9
950	4.8e-14	51.1391	6.2048	0.0136	0.079	0.167	0.935	382.2 ± 1.9
965	8.6e-14	49.8680	6.0579	0.0073	0.081	0.222	0.967	373.7 ± 1.7
975	1.2e-13	49.9547	5.9980	0.0052	0.081	0.297	0.979	374.2 ± 1.7
985	1.5e-13	49.4453	5.9276	0.0035	0.082	0.394	0.989	370.8 ± 1.7
995	1.2e-13	48.8462	5.9503	0.0035	0.082	0.478	0.989	366.7 ± 1.7
1005	1.2e-13	49.5042	5.9214	0.0037	0.082	0.557	0.988	371.2 ± 1.7
1015	1.3e-13	49.8810	5.9346	0.0037	0.082	0.641	0.988	373.7 ± 1.7
1025	1.6e-13	50.3041	6.1508	0.0039	0.079	0.744	0.987	376.6 ± 1.7
1035	1.2e-13	48.1467	6.0535	0.0034	0.081	0.824	0.989	362.0 ± 1.7
1045	3.1e-14	47.7516	6.3180	0.0040	0.077	0.845	0.986	359.3 ± 1.9
1055	1.7e-14	49.3276	6.0759	0.0028	0.080	0.857	0.993	370.0 ± 2.3
1100	5.4e-14	49.1134	6.0730	0.0036	0.080	0.893	0.988	368.5 ± 1.8
1150	6.2e-14	51.6906	6.0283	0.0041	0.081	0.932	0.986	385.9 ± 1.8
1200	1.1e-13	51.5662	6.2886	0.0078	0.078	1.000	0.966	385.1 ± 1.8

Total fusion age, TFA = 365.4 ± 1.6 Ma
Inverse isochron age = 304.31 ± 14.44 Ma. (MSWD = 0.65; $^{40}Ar/^{36}Ar$ = 5026 ± 973)
Steps used: 985 - 1150 (10 steps), or 64% $\Sigma\ ^{39}Ar$

Sample: XC-313 Location 6 on Fig. 2. J = 0.0046088

T	40(mole)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$	K/Ca	$\Sigma\ ^{39}Ar$	$^{40}Ar^*$	Age (Ma)
800	2.9e-14	47.8652	7.9823	0.0840	0.061	0.007	0.663	359.6 ± 2.6
850	2.7e-14	42.5764	8.5885	0.0373	0.057	0.016	0.803	323.2 ± 2.1
900	4.6e-14	42.0537	8.5879	0.0238	0.057	0.033	0.868	319.6 ± 1.7
935	1.7e-13	41.5626	8.4800	0.0097	0.057	0.100	0.949	316.2 ± 1.5
940	6.9e-14	41.3920	8.6434	0.0070	0.056	0.128	0.967	315.0 ± 1.5
950	1.6e-13	41.5172	8.8256	0.0064	0.055	0.195	0.972	315.8 ± 1.5
955	1.3e-13	41.5363	8.7614	0.0055	0.056	0.251	0.978	316.0 ± 1.5
960	1.3e-13	41.4848	8.6496	0.0054	0.056	0.305	0.978	315.6 ± 1.5
965	9.3e-14	41.6574	8.5586	0.0046	0.057	0.344	0.984	316.8 ± 1.5
970	5.6e-14	41.7233	8.5932	0.0047	0.057	0.367	0.982	317.4 ± 1.7
980	2.4e-14	41.8005	8.9342	0.0058	0.055	0.392	0.976	317.8 ± 1.8
1000	3.0e-14	41.5604	9.0004	0.0061	0.054	0.404	0.974	316.2 ± 1.7
1050	1.9e-13	41.6835	9.8098	0.0055	0.050	0.482	0.980	317.0 ± 1.5
1100	8.6e-13	41.6236	8.8996	0.0045	0.055	0.841	0.985	316.6 ± 1.5
1150	1.6e-13	41.6226	8.5874	0.0060	0.057	0.906	0.974	316.6 ± 1.5
1200	8.0e-14	41.7611	8.7824	0.0078	0.055	0.939	0.963	317.6 ± 1.5
1325	1.5e-13	41.6167	8.8029	0.0062	0.055	1.000	0.973	316.5 ± 1.5

Total fusion age, TFA = 316.9 ± 1.5 Ma
Weighted mean plateau age, WMPA = 316.3 ± 1.4 Ma
Inverse isochron age = 316.1 ± 1.5 Ma. (MSWD = 2.99; $^{40}Ar/^{36}Ar$ = 309.6 ± 9.7)
Steps used: 900 - 1325 (15 steps), or 97% $\Sigma\ ^{39}Ar$

Sample: XC- 300 Location 7 on Fig. 2 J = 0.0046041

T	40(mole)	$^{40}Ar/^{39}Ar$	$^{37}Ar/^{39}Ar$	$^{36}Ar/^{39}Ar$	K/Ca	$\sum {}^{39}Ar$	$^{40}Ar^*$	Age (Ma)
650	1.3e-13	13.3796	2.8155	1.1076	0.17	0.014	0.039	107.8 ± 9.9
750	1.1e-14	14.9255	2.1729	0.0803	0.23	0.025	0.388	119.9 ± 2.5
800	4.0e-15	12.4091	3.2647	0.0469	0.15	0.030	0.476	100.2 ± 4.0
850	3.7e-15	13.3601	4.5491	0.0449	0.11	0.035	0.508	107.7 ± 4.7
925	1.2e-14	16.2187	8.3736	0.0344	0.058	0.053	0.629	129.9 ± 1.8
950	1.5e-14	16.1627	8.7913	0.0273	0.055	0.077	0.686	129.5 ± 1.3
965	2.5e-14	16.4158	8.5955	0.0108	0.057	0.126	0.866	131.4 ± 0.9
975	4.7e-14	16.3537	8.3105	0.0070	0.059	0.223	0.920	131.0 ± 0.7
985	5.5e-14	16.2740	7.9529	0.0058	0.061	0.341	0.937	130.3 ± 0.7
995	5.2e-14	16.2981	7.6589	0.0045	0.064	0.453	0.958	130.5 ± 0.7
1005	4.2e-14	16.3430	7.4744	0.0035	0.065	0.545	0.973	130.9 ± 0.7
1015	2.5e-14	16.2596	7.4439	0.0034	0.066	0.600	0.975	130.2 ± 0.8
1030	2.0e-14	16.2237	7.3703	0.0033	0.066	0.643	0.976	130.0 ± 0.8
1060	1.2e-14	16.2239	7.7393	0.0046	0.063	0.669	0.955	130.0 ± 1.1
1100	3.3e-14	16.3206	7.8600	0.0052	0.062	0.739	0.946	130.7 ± 0.7
1200	1.2e-13	16.2558	7.7363	0.0057	0.063	1.000	0.937	130.2 ± 0.7

Total fusion age, TFA = 129.7 ± 0.6 Ma
Weighted mean plateau age, WMPA = 130.5 ± 0.6 Ma
Inverse isochron age =130.5 ± 0.6 Ma. (MSWD = 1.29; $^{40}Ar/^{36}Ar$ = 295.1 ± 4.9)
Steps used: 925 - 1200 (12 steps} or 96% $\sum {}^{39}Ar$