Table 1. Ar/Ar Summary Table

				Preferred Age						
Sample	L#	Irrad	Material	Type	N	MSWD	K/Ca	± 1σ	Age	± 1σ
MB06-673a	56972	NM-205H 2	Kaersutite	Plateau	7	1.2	0.0088	0.0001	7.9895	0.0601
MB07-001	57718	NM-216C 1	GMC	Plateau	7	2.2	0.1418	0.0007	7.9501	0.0719
MB06-750a	56969	NM-205G 4	Kaersutite	Plateau	3	1.9	0.0180	9.74E-05	7.9414	0.0337
MB07-193	61601	NM-256E 4	GMC	Integrated	11	21.2	0.0283	1.71E-05	7.8380	7.8210
MB07-052	58617	NM-220M 2	GMC	Plateau	4	3.3	0.6959	0.0015	7.6625	0.1403
MB07-028	58611	NM-220L 15	Kaersutite	Plateau	4	0.7	0.0977	0.0002	7.6551	0.0723
MB07-065	58620	NM-220M 5	GMC	Plateau	8	1.5	0.2239	0.0005	7.6251	0.1716
MB07-046	58773	NM-222B 2	Wr	Plateau	7	0.9	0.0785	0.0005	7.4897	0.1080
MB07-084	58624	NM-220N 3	GMC	Plateau	6	2.3	0.4764	0.0009	7.4839	0.0383
AF-217plag	61611	NM-256F 18	Plagioclase	Plateau	10	0.6	0.0889	5.27E-05	7.4482	0.0266
MB07-033	58771	NM-222A 6	Wr	Plateau	5	2.1	0.2675	0.0010	7.4309	0.0790
MB07-032	58770	NM-222A 5	Wr	Plateau	5	1.7	0.0677	0.0005	7.3507	0.0761
MB07-103	58780	NM-222C 3	Wr	Plateau	10	0.6	0.0891	0.0006	7.3483	0.1229
MB07-104	58625	NM-220N 4	GMC	Plateau	4	3.6	0.5262	0.0011	7.3259	0.1787
MB07-186	57727	NM-216D 4	GMC	Integrated	10	20.3	0.0787	0.0003	7.3245	7.3125
MB07-089	57740	NM-216F 4	Feldspar	Weighted Mean	19	2.0	0.4695	0.0013	7.2675	0.0413
MB07-081	58623	NM-220N 2	GMC	Plateau	6	1.8	0.5121	0.0011	7.1808	0.1036
MB07-073	57722	NM-216C 5	GMC	Plateau	7	1.9	0.0905	0.0003	7.1008	0.0368
MB07-189	58786	NM-222D 3	Wr	Integrated	10	10.1	0.4420	0.0025	6.9998	6.9870
MB07-071	58775	NM-222B 4	Wr	Plateau	8	1.8	0.2406	0.0015	6.9527	0.1416
MB07-147	58781	NM-222C 4	Wr	Plateau	6	0.6	0.0490	0.0004	6.8567	0.1647
MB07-038	58772	NM-222B 1	Wr	Integrated	11	40.8	0.0916	0.0005	6.8305	6.8178
MB07-149	58782	NM-222C 5	Wr	Plateau	4	0.3	0.3150	0.0012	6.7432	0.2380
MB07-075	58621	NM-220M 6	GMC	Integrated	10	43.4	0.2954	0.0006	6.7224	6.7105
MB07-040	58629	NM-220O 2	GMC	Integrated	10	109.7	0.2660	0.0005	6.6869	6.6749
MB07-154	58783	NM-222C 6	Wr	Plateau	4	2.4	0.2832	0.0012	6.4559	0.1658
MB07-080	58776	NM-222B 5	Wr	Integrated	10	15.3	0.2019	0.0012	6.4169	6.4058
MB07-191	58787	NM-222D 4	Wr	Integrated	10	27.8	0.2144	0.0010	6.2059	6.1956
MB07-068	57731	NM-216E 6	Kaersutite	Plateau	7	1.4	0.1206	0.0003	6.2040	0.1046
MB07-063	58619	NM-220M 4	GMC	Plateau	6	0.6	0.4663	0.0008	5.5409	0.0562
MB07-083	58777	NM-222B 6	Wr	Integrated	10	16.3	0.3457	0.0014	5.3427	5.3354
MB07-057	58774	NM-222B 3	Wr	Plateau	5	2.1	0.3842	0.0014	5.3170	0.0760
MB07-070	58612	NM-220L 17	Kaersutite	Plateau	3	2.8	0.1177	0.0003	5.1768	0.0569
MB07-087	58779	NM-222C 2	Wr	Plateau	9	1.2	0.0779	0.0005	4.8399	0.0851
MB07-064	61599	NM-256E 2	GMC	Integrated	10	221.3	0.0295	5.78E-06	4.4500	4.4445

				Preferred Age						
Sample	L#	Irrad	Material	Type	N	MSWD	K/Ca	± 1σ	Age	± 1σ
MB07-086	58778	NM-222C 1	Wr	Plateau	8	2.3	0.0791	0.0003	4.3590	0.2560
MB07-122	58613	NM-220L 18	Kaersutite	Integrated	9	187.8	0.1813	0.0004	4.2546	4.2505
MB07-056	58618	NM-220M 3	GMC	Integrated	10	64.5	0.1647	0.0003	4.2283	4.2255
MB07-004	58628	NM-220O 1	GMC	Plateau	7	0.8	0.2871	0.0006	4.2172	0.1020
MB07-094	61600	NM-256E 3	GMC	Integrated	12	35.0	0.0644	9.52E-06	2.1159	2.1147
MB07-129	58626	NM-220N 5	GMC	Plateau	7	0.5	1.7435	0.0067	2.0222	0.0215
MB07-078	58622	NM-220N 1	GMC	Integrated	10	25.8	0.2858	0.0006	1.4822	1.4844
MB07-122	57733	NM-216E 10	Kaersutite	Integrated	9	26.9	0.1952	0.0007	0.4908	0.4934

L# = Lab number, Irrad = Irradiation number and tray letter, n = number of analyses use to compute age, MSWD = Mean Square Weighted Deviation Kaer= kaersutite phenocrysts, Glass= basaltic glass shard concentrate, GM= grondmass concentrate, San/An= sanidine and/or anorthoclase phenocrysts

Notes:

Sample preparation and irradiation:

Basaltic glass shard samples were separated by extensive washing with water followed by an ultrasonic water bath. Sieved and washed samples were processed in magnetic separator and hand picked to remove additional contaminants. Groundmass concentrates were separated by mechanical crushing and sieving, followed by magnetic separation to remove phenocrysts, a 5-10 min HCl acid bath, a finally hand picked to ensure sample homogeneity Feldspar phenocrysts (85-01, 481.80-01, 1277.91-01, 1278.84-01, 1279.00-01) and kaersutite phenocrysts (822.78B), were hand picked using a binocular microscope. Samples treated with acid were immersed in 10% HCl or 15% HF in an ultrasonic bath, followed by ultrasonic rinsing with distilled water to remove the residual acid. All samples and neutron flux monitors were loaded into machined Al discs in a known geometry Neutron flux monitor Fish Canyon Tuff sanidine (FC-2). Assigned age = 28.02 Ma (Renne et al, 1998)

Instrumentation:

Mass Analyzer Products 215-50 mass spectrometer on line with automated all-metal extraction system. Samples step-heated using a Mo double-vacuum resistance furnace or defocused CO2 laser. Heating duration in the furnace and laser were 10 min and 30 sec, respectively. Reactive gases removed during analysis by reaction with 3 SAES GP-50 getters, 2 operated at ~450°C and 1 at 20°C. Gas also exposed to a W filament operated at ~2000°C.

Analytical parameters:

Averaged furnace sensitivity 1.24x10^{-16} mol/pA. Averaged laser sensitivity 7.12x10^{-17} mol/pA Total system blank and background for the furnace averaged 5017, 5.6, 6.5, 29.1, 7.8, 21.7 x 10^{-18} moles. Total system blank and background for the laser averaged 376, 5.3, 1.9, 5.6, 7.8, 29.7 x 10^{-18} moles. J-factors determined to a precision of ± 0.1% by CO2 laser-fusion of 4 to 6 single crystals from each of the 6 or 10 radial positions around the irradiation tray (6 for a 12 hole disc, 10 for a 20 hole disc). Correction factors for interfering nuclear reactions were determined using K-glass and CaF2 and are as follows: (^{40}Ar/^{39}Ar)$_K$ = 0 ±0.0004; (^{36}Ar/^{37}Ar)$_{Ca}$ = 0.000289±0.000005; and (^{39}Ar/^{37}Ar)$_{Ca}$ = 0.00068±0.00002

Age calculations:

Plateau age or preferred age calculated for the indicated steps by weighting each step by the inverse of the variance. Plateau age error is inverse-variance-weighted mean error (Taylor, 1982) times root MSWD where MSWD>1. MSWD values are calculated for n-1 degrees of freedom for plateau age. Isochron ages, ^{40}Ar/^{36}Ar and MSWD values calculated from regression results obtained by the methods of York (1969). Decay constants and isotopic abundances after Steiger and Jäger (1977). All errors reported at ±2σ, unless otherwise noted.