

Relative Abundances		36Ar [fA]	%1σ	37Ar [fA]	%1σ	38Ar [fA]	%1σ	39Ar [fA]	%1σ	40Ar [fA]	%1σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
23G08914	0.8 %	3.959702	0.242	2.0817	0.884	0.754667	1.224	0.60964	1.526	1183.418	0.009	2.26414 ± 10.24459	6.45 ± 29.12	0.12	0.14	0.126 ± 0.004
23G08915	1.0 %	5.464822	0.242	5.3898	0.375	1.063104	0.860	1.62840	0.572	1646.143	0.007	9.23092 ± 5.28320	26.14 ± 14.86	0.91	0.36	0.130 ± 0.002
23G08917	1.2 %	5.731576	0.240	8.0553	0.287	1.121448	0.799	2.49209	0.377	1736.540	0.007	10.44259 ± 3.59513	29.55 ± 10.09	1.50	0.56	0.133 ± 0.001
23G08918	1.4 %	4.640358	0.241	9.0740	0.283	0.917632	0.954	2.93069	0.318	1413.974	0.008	10.01060 ± 2.48451	28.33 ± 6.98	2.07	0.66	0.139 ± 0.001
23G08920	1.7 %	4.388387	0.241	11.3377	0.250	0.853504	1.063	3.71715	0.238	1344.900	0.008	9.60034 ± 1.85233	27.18 ± 5.21	2.65	0.83	0.141 ± 0.001
23G08921	2.0 %	4.510736	0.242	17.6431	0.218	0.913912	1.008	5.94485	0.169	1400.616	0.008	9.32181 ± 1.19452	26.40 ± 3.36	3.95	1.33	0.145 ± 0.001
23G08923	2.4 %	4.209417	0.242	24.0477	0.212	0.875876	1.021	8.22994	0.127	1326.759	0.008	8.75665 ± 0.80592	24.81 ± 2.27	5.42	1.84	0.147 ± 0.001
23G08924	2.8 %	5.356870	0.241	53.0420	0.199	1.200724	0.741	18.22396	0.078	1734.591	0.007	7.66982 ± 0.46215	21.75 ± 1.30	8.04	4.08	0.147 ± 0.001
23G08926	3.2 %	3.671907	0.245	51.1584	0.200	0.899449	1.069	17.86546	0.081	1224.521	0.009	7.42204 ± 0.32751	21.05 ± 0.92	10.81	4.00	0.150 ± 0.001
23G08927	3.6 %	2.216913	0.251	42.4656	0.202	0.597048	1.408	15.26746	0.085	768.120	0.014	7.19519 ± 0.23624	20.41 ± 0.67	14.28	3.42	0.154 ± 0.001
23G08929	4.0 %	1.933270	0.256	52.8902	0.200	0.584872	1.514	19.36367	0.079	707.008	0.015	6.93584 ± 0.16577	19.68 ± 0.47	18.96	4.34	0.157 ± 0.001
23G08930	4.5 %	1.859373	0.257	59.7869	0.198	0.630324	1.355	22.83493	0.075	701.716	0.015	6.64104 ± 0.13573	18.84 ± 0.38	21.57	5.12	0.164 ± 0.001
23G08932	4.9 %	1.651692	0.260	66.2998	0.198	0.631637	1.471	26.41217	0.070	657.493	0.016	6.43539 ± 0.10532	18.26 ± 0.30	25.81	5.92	0.171 ± 0.001
23G08933	5.3 %	1.467753	0.263	65.0012	0.198	0.601566	1.506	27.24416	0.069	604.876	0.018	6.31905 ± 0.09184	17.94 ± 0.26	28.42	6.11	0.180 ± 0.001
23G08935	5.7 %	1.203136	0.269	57.8282	0.199	0.528327	1.672	25.68560	0.070	516.980	0.020	6.33268 ± 0.08168	17.97 ± 0.23	31.42	5.76	0.191 ± 0.001
23G08936	6.1 %	0.761183	0.288	43.9619	0.201	0.385605	2.365	20.87999	0.076	354.303	0.030	6.26229 ± 0.06802	17.78 ± 0.19	36.86	4.68	0.204 ± 0.001
23G08938	6.5 %	0.600148	0.298	37.1743	0.203	0.340109	2.525	18.49574	0.082	291.152	0.036	6.22356 ± 0.06298	17.67 ± 0.18	39.48	4.15	0.214 ± 0.001
23G08939	6.9 %	0.632411	0.307	37.8429	0.203	0.348419	2.579	19.18373	0.080	303.935	0.034	6.16746 ± 0.06546	17.51 ± 0.18	38.88	4.30	0.218 ± 0.001
23G08941	7.4 %	✓ 0.620942	0.308	✓ 37.7662	0.203	0.352802	2.661	✓ 19.86483	0.077	303.658	0.034	6.11401 ± 0.06230	17.36 ± 0.18	39.95	4.45	0.226 ± 0.001
23G08942	8.0 %	✓ 0.506991	0.335	✓ 36.9441	0.204	0.326895	2.754	✓ 19.69808	0.079	267.982	0.038	6.07819 ± 0.05567	17.26 ± 0.16	44.62	4.42	0.229 ± 0.001
23G08944	8.6 %	✓ 0.471021	0.349	✓ 33.1765	0.205	0.301173	2.792	✓ 17.68276	0.080	244.704	0.042	6.04381 ± 0.05985	17.16 ± 0.17	43.62	3.96	0.229 ± 0.001
23G08945	9.6 %	✓ 0.732419	0.299	✓ 64.0071	0.199	0.439131	1.985	✓ 24.75634	0.070	362.700	0.029	6.03591 ± 0.05711	17.14 ± 0.16	41.13	5.55	0.166 ± 0.001
23G08947	10.6 %	✓ 0.550380	0.310	✓ 51.8519	0.200	0.346974	2.489	✓ 20.03437	0.075	281.477	0.037	6.06606 ± 0.05537	17.22 ± 0.16	43.10	4.49	0.166 ± 0.001
23G08948	12.0 %	✓ 0.450423	0.341	✓ 51.9192	0.200	0.296943	2.877	✓ 17.85251	0.083	238.346	0.043	6.06352 ± 0.05584	17.21 ± 0.16	45.33	4.00	0.148 ± 0.001
23G08950	13.5 %	✓ 0.310549	0.403	✓ 51.1314	0.200	0.229714	4.005	✓ 14.36162	0.091	175.110	0.059	6.03750 ± 0.05672	17.14 ± 0.16	49.40	3.22	0.121 ± 0.001
23G08951	15.0 %	✓ 0.304371	0.394	✓ 57.4608	0.199	0.204087	4.341	✓ 12.38165	0.098	160.956	0.064	6.05220 ± 0.06319	17.18 ± 0.18	46.42	2.77	0.092 ± 0.000
23G08953	16.6 %	✓ 0.233358	0.456	✓ 74.7485	0.198	0.164321	5.521	✓ 10.34019	0.103	125.296	0.082	5.99011 ± 0.06738	17.01 ± 0.19	49.20	2.31	0.059 ± 0.000
23G08954	18.2 %	✓ 0.174770	0.523	✓ 67.5422	0.199	0.133093	6.738	✓ 8.01181	0.129	93.980	0.108	5.92921 ± 0.07574	16.83 ± 0.21	50.27	1.79	0.051 ± 0.000
23G08956	19.6 %	✓ 0.135259	0.632	✓ 48.9822	0.200	0.100774	9.135	✓ 6.16481	0.164	73.753	0.139	6.08461 ± 0.09281	17.27 ± 0.26	50.60	1.38	0.054 ± 0.000
23G08957	21.5 %	✓ 0.112004	0.720	✓ 50.2527	0.200	0.096846	9.179	✓ 5.55828	0.174	63.025	0.162	6.08711 ± 0.09766	17.28 ± 0.28	53.37	1.24	0.047 ± 0.000
23G08959	22.8 %	✓ 0.076849	0.962	✓ 48.5453	0.200	0.073872	13.029	✓ 4.53295	0.222	46.403	0.218	6.08077 ± 0.11175	17.26 ± 0.32	58.99	1.01	0.040 ± 0.000
23G08960	24.5 %	0.065986	1.080	50.8529	0.200	0.071503	11.632	4.26428	0.224	40.751	0.249	5.94381 ± 0.11500	16.88 ± 0.33	61.72	0.95	0.036 ± 0.000
23G08962	26.0 %	0.054362	1.240	50.5763	0.200	0.061560	13.531	3.94534	0.242	35.275	0.288	5.90983 ± 0.11905	16.78 ± 0.34	65.55	0.88	0.033 ± 0.000
Σ		59.059337	0.062	1420.8383	0.038	16.447910	0.312	446.45943	0.017	20430.464	0.003					

Information on Analysis and Constants Used in Calculations	
Project = MASS (22-34) Sample = LF-21-54 Material = GROUNDMASS Location = Hells Canyon Region = Western Cascades Analyst = Dan Miggins Irradiation = 23-OSU-01 (1A37-23) Position = X: 999 Y: 999 Z/H: 58.17365 mm FCT-NM Age = 28.201 ± 0.023 Ma FCT-NM Reference = Kuiper et al (2008) FCT-NM 40Ar/39Ar Ratio = 9.96371 ± 0.00847 FCT-NM J-value = 0.00155820 ± 0.00000132 Air Shot 40Ar/36Ar = 306.3430 ± 0.6311 Air Shot MDF = 0.99364025 ± 0.00056298 (LIN) Experiment Type = Incremental Heating Extraction Method = Bulk Laser Heating Heating = 50 sec Isolation = 3.00 min Instrument = ARGUS-VI-G Preferred Age = Mini Plateau Age Classification = Crystallization Age IGSN = 13 Rock Class = Undefined Lithology = Undefined Lat-Lon = Undefined - Undefined	Age Equations = Min et al. (2000) Negative Intensities = Allowed Collector Calibrations = 36Ar Decay 40K(total) = 5.463 ± 0.107 E-10 1/a Decay 40K(EC,β ⁺) = 0.580 ± 0.014 E-10 1/a Decay 40K(β ⁻) = 4.884 ± 0.099 E-10 1/a Decay 39Ar = 2.940 ± 0.016 E-07 1/h Decay 37Ar = 8.230 ± 0.012 E-04 1/h Decay 36Cl = 2.257 ± 0.015 E-06 1/a Production 39/37(ca) = 0.0006425 ± 0.0000059 Production 38/37(ca) = 0.0001800 ± 0.0000173 Production 36/37(ca) = 0.0002703 ± 0.0000005 Production 40/39(k) = 0.000607 ± 0.000059 Production 38/39(k) = 0.012077 ± 0.000011 Production 36/38(cl) = 262.80 ± 1.71 Scaling Ratio K/Ca = 0.430 Abundance Ratio 40K/K = 1.1700 ± 0.0100 E-04 Atomic Weight K = 39.0983 ± 0.0001 g Trapped 40/36(a) = 298.56 ± 0.31 Trapped 38/36(a) = 0.1885 ± 0.0003 Standard MDF 40/36(a) = 298.56 ± 0.31 Standard MDF Reference = Lee et al 2006

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		6.05062 ± 0.02392 ± 0.40%	17.18 ± 0.07 ± 0.43%	1.76 5%	40.58 13	0.125 ± 0.041
		Full External Error ± 0.89 Analytical Error ± 0.07		1.82 1.3252	2σ Confidence Limit Error Magnification	
Total Fusion Age		6.53602 ± 0.05306 ± 0.81%	18.55 ± 0.15 ± 0.83%		33	0.135 ± 0.000
		Full External Error ± 0.97 Analytical Error ± 0.15				
Normal Isochron	303.27 ± 5.87 ± 1.94%	5.93584 ± 0.14480 ± 2.44%	16.85 ± 0.41 ± 2.43%	1.65 8%	40.58 13	
		Full External Error ± 0.97 Analytical Error ± 0.41		1.85 1.2827	2σ Confidence Limit Error Magnification	
				16 0.0000381589	Number of Iterations Convergence	
Inverse Isochron	303.10 ± 5.84 ± 1.93%	5.94056 ± 0.14359 ± 2.42%	16.87 ± 0.41 ± 2.41%	1.63 8%	40.58 13	
		Full External Error ± 0.96 Analytical Error ± 0.41		1.85 1.2785	2σ Confidence Limit Error Magnification	
				4 0.0000208576	Number of Iterations Convergence	
				19%	Spreading Factor	

Inverse Isochron		39(k)/40(a+r) ± 2σ	36(a)/40(a+r) ± 2σ
23G08914	0.8 %	0.0005140 ± 0.0000157	0.00334551 ± 0.00001621
23G08915	1.0 %	0.0009871 ± 0.0000113	0.00331889 ± 0.00001604
23G08917	1.2 %	0.0014321 ± 0.0000108	0.00329932 ± 0.00001582
23G08918	1.4 %	0.0020685 ± 0.0000132	0.00328005 ± 0.00001580
23G08920	1.7 %	0.0027585 ± 0.0000131	0.00326071 ± 0.00001571
23G08921	2.0 %	0.0042364 ± 0.0000143	0.00321714 ± 0.00001557
23G08923	2.4 %	0.0061914 ± 0.0000158	0.00316782 ± 0.00001535
23G08924	2.8 %	0.0104866 ± 0.0000165	0.00308002 ± 0.00001491
23G08926	3.2 %	0.0145630 ± 0.0000237	0.00298738 ± 0.00001470
23G08927	3.6 %	0.0198411 ± 0.0000343	0.00287125 ± 0.00001449
23G08929	4.0 %	0.0273406 ± 0.0000442	0.00271426 ± 0.00001404
23G08930	4.5 %	0.0324875 ± 0.0000500	0.00262677 ± 0.00001366
23G08932	4.9 %	0.0401072 ± 0.0000577	0.00248491 ± 0.00001309
23G08933	5.3 %	0.0449731 ± 0.0000638	0.00239755 ± 0.00001281
23G08935	5.7 %	0.0496135 ± 0.0000728	0.00229707 ± 0.00001258
23G08936	6.1 %	0.0588549 ± 0.0000964	0.00211493 ± 0.00001243
23G08938	6.5 %	0.0634464 ± 0.0001138	0.00202685 ± 0.00001237
23G08939	6.9 %	0.0630402 ± 0.0001094	0.00204717 ± 0.00001286
23G08941	7.4 %	0.0653411 ± 0.0001106	0.00201133 ± 0.00001268
23G08942	8.0 %	0.0734199 ± 0.0001289	0.00185470 ± 0.00001274
23G08944	8.6 %	0.0721779 ± 0.0001312	0.00188830 ± 0.00001353
23G08945	9.6 %	0.0681452 ± 0.0001038	0.00197174 ± 0.00001212
23G08947	10.6 %	0.0710607 ± 0.0001188	0.00190562 ± 0.00001221
23G08948	12.0 %	0.0747651 ± 0.0001406	0.00183099 ± 0.00001299
23G08950	13.5 %	0.0818314 ± 0.0001779	0.00169461 ± 0.00001444
23G08951	15.0 %	0.0766997 ± 0.0001793	0.00179461 ± 0.00001508
23G08953	16.6 %	0.0821466 ± 0.0002170	0.00170128 ± 0.00001724
23G08954	18.2 %	0.0847929 ± 0.0002868	0.00166548 ± 0.00001980
23G08956	19.6 %	0.0831651 ± 0.0003590	0.00165452 ± 0.00002365
23G08957	21.5 %	0.0876838 ± 0.0004179	0.00156169 ± 0.00002610
23G08959	22.8 %	0.0970193 ± 0.0006071	0.00137342 ± 0.00003247
23G08960	24.5 %	0.1038462 ± 0.0006983	0.00128201 ± 0.00003561
23G08962	26.0 %	0.1109306 ± 0.0008367	0.00115360 ± 0.00003884

r.i.
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0.0503
0.0564
0.0744
0.0823
0.0996
0.1166
0.1253
0.1312
0.1290
0.1329
0.1303

MSWD
1.63
8%
208576
4
York-2

Incremental Heating		36Ar(a) [fA]	37Ar(ca) [fA]	38Ar(cl) [fA]	39Ar(k) [fA]	40Ar(r) [fA]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
23G08914	0.8 %	3.959139	2.0817	0.0006477	0.60831	1.3773	6.45 ± 29.12	0.12	0.14	0.126 ± 0.004
23G08915	1.0 %	5.463364	5.3898	0.0126656	1.62493	14.9996	26.14 ± 14.86	0.91	0.36	0.130 ± 0.002
23G08917	1.2 %	5.729398	8.0553	0.0099718	2.48692	25.9698	29.55 ± 10.09	1.50	0.56	0.133 ± 0.001
23G08918	1.4 %	4.637905	9.0740	0.0064304	2.92486	29.2796	28.33 ± 6.98	2.07	0.66	0.139 ± 0.001
23G08920	1.7 %	4.385322	11.3377	0.0000000	3.70986	35.6159	27.18 ± 5.21	2.65	0.83	0.141 ± 0.001
23G08921	2.0 %	4.505967	17.6431	0.0000000	5.93351	55.3111	26.40 ± 3.36	3.95	1.33	0.145 ± 0.001
23G08923	2.4 %	4.202917	24.0477	0.0000000	8.21449	71.9314	24.81 ± 2.27	5.42	1.84	0.147 ± 0.001
23G08924	2.8 %	5.342533	53.0420	0.0000000	18.18988	139.5132	21.75 ± 1.30	8.04	4.08	0.147 ± 0.001
23G08926	3.2 %	3.658079	51.1584	0.0000000	17.83259	132.3542	21.05 ± 0.92	10.81	4.00	0.150 ± 0.001
23G08927	3.6 %	2.205435	42.4656	0.0000000	15.24017	109.6560	20.41 ± 0.67	14.28	3.42	0.154 ± 0.001
23G08929	4.0 %	1.918974	52.8902	0.0000000	19.32969	134.0676	19.68 ± 0.47	18.96	4.34	0.157 ± 0.001
23G08930	4.5 %	1.843212	59.7869	0.0000000	22.79651	151.3926	18.84 ± 0.38	21.57	5.12	0.164 ± 0.001
23G08932	4.9 %	1.633771	66.2998	0.0000000	26.36957	169.6984	18.26 ± 0.30	25.81	5.92	0.171 ± 0.001
23G08933	5.3 %	1.450183	65.0012	0.0000000	27.20240	171.8932	17.94 ± 0.26	28.42	6.11	0.180 ± 0.001
23G08935	5.7 %	1.187505	57.8282	0.0000000	25.64845	162.4234	17.97 ± 0.23	31.42	5.76	0.191 ± 0.001
23G08936	6.1 %	0.749900	43.9619	0.0000000	20.85174	130.5796	17.78 ± 0.19	36.86	4.68	0.204 ± 0.001
23G08938	6.5 %	0.590100	37.1743	0.0000000	18.47186	114.9607	17.67 ± 0.18	39.48	4.15	0.214 ± 0.001
23G08939	6.9 %	0.622182	37.8429	0.0000000	19.15941	118.1649	17.51 ± 0.18	38.88	4.30	0.218 ± 0.001
23G08941	7.4 %	✓ 0.610734	37.7662	0.0000000	19.84056	121.3054	17.36 ± 0.18	39.95	4.45	0.226 ± 0.001
23G08942	8.0 %	✓ 0.497005	36.9441	0.0000000	19.67434	119.5844	17.26 ± 0.16	44.62	4.42	0.229 ± 0.001
23G08944	8.6 %	✓ 0.462054	33.1765	0.0000000	17.66144	106.7424	17.16 ± 0.17	43.62	3.96	0.229 ± 0.001
23G08945	9.6 %	✓ 0.715118	64.0071	0.0000000	24.71522	149.1789	17.14 ± 0.16	41.13	5.55	0.166 ± 0.001
23G08947	10.6 %	✓ 0.536364	51.8519	0.0000000	20.00106	121.3275	17.22 ± 0.16	43.10	4.49	0.166 ± 0.001
23G08948	12.0 %	✓ 0.436389	51.9192	0.0000000	17.81916	108.0469	17.21 ± 0.16	45.33	4.00	0.148 ± 0.001
23G08950	13.5 %	✓ 0.296728	51.1314	0.0000000	14.32877	86.5099	17.14 ± 0.16	49.40	3.22	0.121 ± 0.001
23G08951	15.0 %	✓ 0.288840	57.4608	0.0000000	12.34473	74.7128	17.18 ± 0.18	46.42	2.77	0.092 ± 0.000
23G08953	16.6 %	✓ 0.213153	74.7485	0.0000000	10.29216	61.6512	17.01 ± 0.19	49.20	2.31	0.059 ± 0.000
23G08954	18.2 %	✓ 0.156513	67.5422	0.0000000	7.96841	47.2463	16.83 ± 0.21	50.27	1.79	0.051 ± 0.000
23G08956	19.6 %	✓ 0.122019	48.9822	0.0000000	6.13334	37.3190	17.27 ± 0.26	50.60	1.38	0.054 ± 0.000
23G08957	21.5 %	✓ 0.098421	50.2527	0.0025109	5.52599	33.6373	17.28 ± 0.28	53.37	1.24	0.047 ± 0.000
23G08959	22.8 %	✓ 0.063728	48.5453	0.0000000	4.50176	27.3741	17.26 ± 0.32	58.99	1.01	0.040 ± 0.000
23G08960	24.5 %	0.052240	50.8529	0.0013971	4.23161	25.1519	16.88 ± 0.33	61.72	0.95	0.036 ± 0.000
23G08962	26.0 %	0.040691	50.5763	0.0000000	3.91285	23.1243	16.78 ± 0.34	65.55	0.88	0.033 ± 0.000
Σ		58.675283	1420.8383	0.0336235	445.54654	2912.1010				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Project = MASS (22-34) Sample = LF-21-54 Material = GROUNDMASS Location = Hells Canyon Region = Western Cascades Analyst = Dan Miggins Irradiation = 23-OSU-01 (1A37-23) J = 0.00155820 ± 0.00000132 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau	6.05062 ± 0.02392 ± 0.40%	17.18 ± 0.07 ± 0.43%	1.76 5%	40.58 13	0.125 ± 0.041
		Full External Error ± 0.89 Analytical Error ± 0.07		1.82 1.3252	2σ Confidence Limit Error Magnification	
	Total Fusion Age	6.53602 ± 0.05306 ± 0.81%	18.55 ± 0.15 ± 0.83%		33	0.135 ± 0.000
		Full External Error ± 0.97 Analytical Error ± 0.15		■ Defining a mini plateau at 41%		

Normal Isochron		39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
23G08914	0.8 %	0.15 ± 0.00	298.91 ± 1.45	0.1562
23G08915	1.0 %	0.30 ± 0.00	301.31 ± 1.46	0.3882
23G08917	1.2 %	0.43 ± 0.00	303.09 ± 1.45	0.5357
23G08918	1.4 %	0.63 ± 0.01	304.87 ± 1.47	0.6028
23G08920	1.7 %	0.85 ± 0.01	306.68 ± 1.48	0.7105
23G08921	2.0 %	1.32 ± 0.01	310.84 ± 1.50	0.8194
23G08923	2.4 %	1.95 ± 0.01	315.67 ± 1.53	0.8847
23G08924	2.8 %	3.40 ± 0.02	324.67 ± 1.57	0.9508
23G08926	3.2 %	4.87 ± 0.03	334.74 ± 1.65	0.9492
23G08927	3.6 %	6.91 ± 0.04	348.28 ± 1.76	0.9458
23G08929	4.0 %	10.07 ± 0.05	368.42 ± 1.91	0.9542
23G08930	4.5 %	12.37 ± 0.07	380.70 ± 1.98	0.9586
23G08932	4.9 %	16.14 ± 0.09	402.43 ± 2.12	0.9645
23G08933	5.3 %	18.76 ± 0.10	417.09 ± 2.23	0.9662
23G08935	5.7 %	21.60 ± 0.12	435.34 ± 2.38	0.9655
23G08936	6.1 %	27.83 ± 0.17	472.83 ± 2.78	0.9627
23G08938	6.5 %	31.30 ± 0.20	493.38 ± 3.01	0.9585
23G08939	6.9 %	30.79 ± 0.20	488.48 ± 3.07	0.9631
23G08941	7.4 %	✓ 32.49 ± 0.21	497.18 ± 3.13	0.9651
23G08942	8.0 %	✓ 39.59 ± 0.28	539.17 ± 3.70	0.9682
23G08944	8.6 %	✓ 38.22 ± 0.28	529.58 ± 3.79	0.9685
23G08945	9.6 %	✓ 34.56 ± 0.22	507.17 ± 3.12	0.9702
23G08947	10.6 %	✓ 37.29 ± 0.24	524.76 ± 3.36	0.9669
23G08948	12.0 %	✓ 40.83 ± 0.30	546.15 ± 3.87	0.9657
23G08950	13.5 %	✓ 48.29 ± 0.42	590.11 ± 5.03	0.9680
23G08951	15.0 %	✓ 42.74 ± 0.36	557.23 ± 4.68	0.9620
23G08953	16.6 %	✓ 48.29 ± 0.49	587.79 ± 5.96	0.9663
23G08954	18.2 %	✓ 50.91 ± 0.61	600.43 ± 7.14	0.9598
23G08956	19.6 %	✓ 50.27 ± 0.72	604.41 ± 8.64	0.9548
23G08957	21.5 %	✓ 56.15 ± 0.94	640.33 ± 10.70	0.9595
23G08959	22.8 %	✓ 70.64 ± 1.67	728.11 ± 17.21	0.9650
23G08960	24.5 %	81.00 ± 2.24	780.02 ± 21.67	0.9706
23G08962	26.0 %	96.16 ± 3.22	866.85 ± 29.19	0.9748

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron	303.27 ± 5.87 ± 1.94%	5.93584 ± 0.14480 ± 2.44%	16.85 ± 0.41 ± 2.43%	1.65 8%
	Full External Error ± 0.97 Analytical Error ± 0.41			
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	1.85 1.2827 13	Convergence Number of Iterations Calculated Line	0.000038158902 16 Weighted York-2

Degassing Patterns		36Ar(a) [fA]	%1σ	36Ar(c) [fA]	%1σ	36Ar(ca) [fA]	%1σ	36Ar(cl) [fA]	%1σ	37Ar(ca) [fA]	%1σ	38Ar(a) [fA]	%1σ	38Ar(c) [fA]	%1σ	38Ar(k) [fA]	%1σ	38Ar(ca) [fA]	%1σ	38Ar(cl) [fA]	%1σ	39Ar(k) [fA]	%1σ	39Ar(ca) [fA]	%1σ	40Ar(r) [fA]	%1σ	40Ar(a) [fA]	%1σ	40Ar(c) [fA]	%1σ	40Ar(k) [fA]	%1σ
23G08914	0.8 %	3.959139	0.24	0.0000000	0.00	0.0005627	0.90	0.0000000	#####	2.0817	0.88	0.746298	0.29	0.0000000	0.00	0.0073465	1.53	0.0003747	9.67	0.0006477	#####	0.60831	1.53	0.0013375	1.28	1.3773	226.23	1182.041	0.26	0.0000000	0.00	0.0003692	9.77
23G08915	1.0 %	5.463364	0.24	0.0000000	0.00	0.0014569	0.41	0.0000007	75.97	5.3898	0.37	1.029844	0.29	0.0000000	0.00	0.0196243	0.58	0.0009702	9.64	0.0126656	75.98	1.62493	0.57	0.0034630	0.99	14.9996	28.61	1631.142	0.26	0.0000000	0.00	0.0009863	9.67
23G08917	1.2 %	5.729398	0.24	0.0000000	0.00	0.0021774	0.33	0.0000005	95.28	8.0553	0.29	1.079992	0.29	0.0000000	0.00	0.0300345	0.39	0.0014500	9.63	0.0099718	95.29	2.48692	0.38	0.0051755	0.96	25.9698	17.21	1710.569	0.26	0.0000000	0.00	0.0015096	9.66
23G08918	1.4 %	4.637905	0.24	0.0000000	0.00	0.0024527	0.33	0.0000003	141.94	9.0740	0.28	0.874245	0.29	0.0000000	0.00	0.0353235	0.33	0.0016333	9.63	0.0064304	141.94	2.92486	0.32	0.0058301	0.96	29.2796	12.41	1384.693	0.26	0.0000000	0.00	0.0017754	9.66
23G08920	1.7 %	4.385322	0.24	0.0000000	0.00	0.0030646	0.30	0.0000000	0.00	11.3377	0.25	0.826633	0.29	0.0000000	0.00	0.0448040	0.25	0.0020408	9.63	0.0000000	0.00	3.70986	0.24	0.0072845	0.95	35.6159	9.64	1309.282	0.26	0.0000000	0.00	0.0022519	9.65
23G08921	2.0 %	4.505967	0.24	0.0000000	0.00	0.0047689	0.28	0.0000000	0.00	17.6431	0.22	0.849375	0.29	0.0000000	0.00	0.0716590	0.19	0.0031758	9.63	0.0000000	0.00	5.93351	0.17	0.0113357	0.95	55.3111	6.40	1345.302	0.26	0.0000000	0.00	0.0036016	9.65
23G08923	2.4 %	4.202917	0.24	0.0000000	0.00	0.0065001	0.27	0.0000000	0.00	24.0477	0.21	0.792250	0.29	0.0000000	0.00	0.0992064	0.16	0.0043286	9.63	0.0000000	0.00	8.21449	0.13	0.0154507	0.94	71.9314	4.60	1254.823	0.26	0.0000000	0.00	0.0049862	9.65
23G08924	2.8 %	5.342533	0.24	0.0000000	0.00	0.0143372	0.26	0.0000000	0.00	53.0420	0.20	1.007067	0.29	0.0000000	0.00	0.2196792	0.12	0.0095476	9.63	0.0000000	0.00	18.18988	0.08	0.0340795	0.94	139.5132	3.01	1595.067	0.26	0.0000000	0.00	0.0110413	9.65
23G08926	3.2 %	3.658079	0.25	0.0000000	0.00	0.0138281	0.26	0.0000000	0.00	51.1584	0.20	0.689548	0.29	0.0000000	0.00	0.2153642	0.12	0.0092085	9.63	0.0000000	0.00	17.83259	0.08	0.0328692	0.94	132.3542	2.20	1092.156	0.27	0.0000000	0.00	0.0108244	9.65
23G08927	3.6 %	2.205435	0.25	0.0000000	0.00	0.0114785	0.26	0.0000000	0.00	42.4656	0.20	0.415724	0.30	0.0000000	0.00	0.1840556	0.12	0.0076438	9.63	0.0000000	0.00	15.24017	0.09	0.0272842	0.94	109.6560	1.64	658.455	0.27	0.0000000	0.00	0.0092508	9.65
23G08929	4.0 %	1.918974	0.26	0.0000000	0.00	0.0142962	0.26	0.0000000	0.00	52.8902	0.20	0.361727	0.30	0.0000000	0.00	0.2334447	0.12	0.0095202	9.63	0.0000000	0.00	19.32969	0.08	0.0339820	0.94	134.0676	1.19	572.929	0.28	0.0000000	0.00	0.0117331	9.65
23G08930	4.5 %	1.843212	0.26	0.0000000	0.00	0.0161604	0.26	0.0000000	0.00	59.7869	0.20	0.347446	0.30	0.0000000	0.00	0.2753135	0.12	0.0107616	9.63	0.0000000	0.00	22.79651	0.08	0.0384131	0.94	151.3926	1.02	550.309	0.28	0.0000000	0.00	0.0138375	9.65
23G08932	4.9 %	1.633771	0.26	0.0000000	0.00	0.0179208	0.26	0.0000000	0.00	66.2998	0.20	0.307966	0.31	0.0000000	0.00	0.3184653	0.11	0.0119340	9.63	0.0000000	0.00	26.36957	0.07	0.0425976	0.94	169.6984	0.82	487.779	0.28	0.0000000	0.00	0.0160063	9.65
23G08933	5.3 %	1.450183	0.27	0.0000000	0.00	0.0175698	0.26	0.0000000	0.00	65.0012	0.20	0.273359	0.31	0.0000000	0.00	0.3285233	0.11	0.0117002	9.63	0.0000000	0.00	27.20240	0.07	0.0417633	0.94	171.8932	0.72	432.967	0.29	0.0000000	0.00	0.0165119	9.65
23G08935	5.7 %	1.187505	0.27	0.0000000	0.00	0.0156310	0.26	0.0000000	0.00	57.8282	0.20	0.223845	0.32	0.0000000	0.00	0.3097563	0.11	0.0104091	9.63	0.0000000	0.00	25.64845	0.07	0.0371546	0.94	162.4234	0.64	354.542	0.29	0.0000000	0.00	0.0155686	9.65
23G08936	6.1 %	0.749300	0.29	0.0000000	0.00	0.0118829	0.26	0.0000000	0.00	43.9619	0.20	0.141243	0.33	0.0000000	0.00	0.2518265	0.12	0.0079131	9.63	0.0000000	0.00	20.85174	0.08	0.0282455	0.94	130.5796	0.54	223.711	0.31	0.0000000	0.00	0.0126570	9.65
23G08938	6.5 %	0.590100	0.30	0.0000000	0.00	0.0100482	0.26	0.0000000	0.00	37.1743	0.20	0.111234	0.34	0.0000000	0.00	0.2230846	0.12	0.0066914	9.63	0.0000000	0.00	18.47186	0.08	0.0238845	0.94	114.9607	0.50	176.180	0.32	0.0000000	0.00	0.0112124	9.65
23G08939	6.9 %	0.622182	0.31	0.0000000	0.00	0.0102289	0.26	0.0000000	0.00	37.8429	0.20	0.117281	0.35	0.0000000	0.00	0.2313882	0.12	0.0068117	9.63	0.0000000	0.00	19.15941	0.08	0.0243141	0.94	118.1649	0.52	185.759	0.33	0.0000000	0.00	0.0116298	9.65
23G08941	7.4 %	✓ 0.610734	0.31	0.0000000	0.00	0.0102082	0.26	0.0000000	0.00	37.7662	0.20	0.115123	0.35	0.0000000	0.00	0.2396145	0.12	0.0067979	9.63	0.0000000	0.00	19.84056	0.08	0.0242648	0.94	121.3054	0.50	182.341	0.33	0.0000000	0.00	0.0120432	9.65
23G08942	8.0 %	✓ 0.497005	0.34	0.0000000	0.00	0.0099860	0.27	0.0000000	0.00	36.9441	0.20	0.093685	0.38	0.0000000	0.00	0.2376071	0.12	0.0066499	9.63	0.0000000	0.00	19.67434	0.08	0.0237366	0.94	119.5844	0.45	148.386	0.36	0.0000000	0.00	0.0119423	9.65
23G08944	8.6 %	✓ 0.462054	0.36	0.0000000	0.00	0.0089676	0.27	0.0000000	0.00	33.1765	0.20	0.087097	0.39	0.0000000	0.00	0.2132973	0.12	0.0059718	9.63	0.0000000	0.00	17.66144	0.08	0.0213159	0.94	106.7424	0.49	137.951	0.37	0.0000000	0.00	0.0107205	9.65
23G08945	9.6 %	✓ 0.715118	0.31	0.0000000	0.00	0.0173011	0.26	0.0000000	0.00	64.0071	0.20	0.134800	0.34	0.0000000	0.00	0.2984857	0.11	0.0115213	9.63	0.0000000	0.00	24.71522	0.07	0.0411246	0.94	149.1789	0.47	213.506	0.32	0.0000000	0.00	0.0150021	9.65
23G08947	10.6 %	✓ 0.536364	0.32	0.0000000	0.00	0.0140156	0.26	0.0000000	0.00	51.8519	0.20	0.101105	0.36	0.0000000	0.00	0.2415528	0.12	0.0093333	9.63	0.0000000	0.00	20.00106	0.08	0.0333148	0.94	121.3275	0.45	160.137	0.33	0.0000000	0.00	0.0121406	9.65
23G08948	12.0 %	✓ 0.436389	0.35	0.0000000	0.00	0.0140338	0.26	0.0000000	0.00	51.9192	0.20	0.082259	0.39	0.0000000	0.00	0.2152020	0.12	0.0093455	9.63	0.0000000	0.00	17.81916	0.08	0.0333581	0.94	108.0469	0.45	130.288	0.37	0.0000000	0.00	0.0108162	9.65
23G08950	13.5 %	✓ 0.296728	0.42	0.0000000	0.00	0.0138208	0.26	0.0000000	0.00	51.1314	0.20	0.055933	0.45	0.0000000	0.00	0.1730486	0.13	0.0092037	9.63	0.0000000	0.00	14.32877	0.09	0.0328519	0.94	86.5099	0.46	88.591	0.43	0.0000000	0.00	0.0086976	9.65
23G08951	15.0 %	✓ 0.288840	0.42	0.0000000	0.00	0.0155317	0.26	0.0000000	0.00	57.4608	0.20	0.054446	0.44	0.0000000	0.00	0.1490873	0.13	0.0103429	9.63	0.0000000	0.00	12.34473	0.10	0.0369186	0.94	74.7128	0.51	86.236	0.43	0.0000000	0.00	0.0074933	9.65
23G08953	16.6 %	✓ 0.213153	0.50	0.0000000	0.00	0.0202045	0.26	0.0000000	0.00	74.7485	0.20	0.040179	0.52	0.0000000	0.00	0.1242985	0.14	0.0134547	9.63	0.0000000	0.00	10.29216	0.10	0.0480259	0.94	61.6512	0.55	63.639	0.51	0.0000000	0.00	0.0062473	9.65
23G08954	18.2 %	✓ 0.156513	0.58	0.0000000	0.00	0.0182567	0.26	0.0000000	0.00	67.5422	0.20	0.029503	0.61	0.0000000	0.00	0.0962345	0.16	0.0121576	9.63	0.0000000	0.00	7.96841	0.13	0.0433958	0.94	47.2463	0.63	46.729	0.59	0.0000000	0.00	0.0048368	9.65
23G08956	19.6 %	✓ 0.122019	0.70	0.0000000	0.00	0.0132399	0.26	0.0000000	0.00	48.9822	0.20	0.023001	0.72	0.0000000	0.00	0.0740723	0.19	0.0088168	9.63	0.0000000	0.00	6.13334	0.17	0.0314711	0.94	37.3190	0.74	36.430	0.71	0.0000000	0.00	0.0037229	9.65
23G08957	21.5 %	✓ 0.098421	0.82	0.0000000	0.00	0.0135833	0.26	0.0000001	355.90	50.2527	0.20	0.018552	0.84	0.0000000	0.00	0.0667374	0.20	0.0090455	9.63	0.0025109	355.90	5.52599	0.18	0.0322874	0.94	33.6373	0.78	29.384	0.83	0.0000000	0.00	0.0033543	9.65
23G08959	22.8 %	✓ 0.063728	1.16	0.0000000	0.00	0.0131218	0.26	0.0000000	0.00	48.5453	0.20	0.012013	1.17	0.0000000	0.00	0.0543677	0.24	0.0087382	9.63	0.0000000	0.00	4.50176	0.22	0.0311904	0.94	27.3741	0.89	19.					

Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
23G08914	0.8 %	1941.166003	29.624321	3.414683	0.060231	6.495116	0.100359	32.310	1.897739	1.00022889	5.053E-11
23G08915	1.0 %	1010.897798	5.782013	3.309903	0.022634	3.355952	0.020835	32.317	1.898000	1.00022894	7.029E-11
23G08917	1.2 %	696.820671	2.624822	3.232357	0.015310	2.299906	0.010265	32.331	1.898520	1.00022904	7.415E-11
23G08918	1.4 %	482.471883	1.532917	3.096205	0.013176	1.583368	0.006309	32.338	1.898781	1.00022909	6.038E-11
23G08920	1.7 %	361.809799	0.860302	3.050121	0.010515	1.180579	0.003992	32.353	1.899328	1.00022919	5.743E-11
23G08921	2.0 %	235.601664	0.397488	2.967791	0.008186	0.758764	0.002235	32.360	1.899588	1.00022924	5.981E-11
23G08923	2.4 %	161.211304	0.205146	2.921981	0.007231	0.511476	0.001397	32.374	1.900110	1.00022934	5.665E-11
23G08924	2.8 %	95.181897	0.074851	2.910563	0.006230	0.293947	0.000746	32.381	1.900370	1.00022939	7.407E-11
23G08926	3.2 %	68.541269	0.055706	2.863535	0.006186	0.205531	0.000530	32.394	1.900892	1.00022948	5.229E-11
23G08927	3.6 %	50.310922	0.043362	2.781447	0.006084	0.145205	0.000384	32.402	1.901178	1.00022954	3.280E-11
23G08929	4.0 %	36.512094	0.029450	2.731414	0.005865	0.099840	0.000268	32.416	1.901700	1.00022964	3.019E-11
23G08930	4.5 %	30.729941	0.023623	2.618223	0.005549	0.081427	0.000218	32.423	1.901961	1.00022968	2.996E-11
23G08932	4.9 %	24.893568	0.017867	2.510198	0.005270	0.062535	0.000168	32.437	1.902483	1.00022978	2.807E-11
23G08933	5.3 %	22.202055	0.015734	2.385876	0.005000	0.053874	0.000147	32.444	1.902770	1.00022984	2.583E-11
23G08935	5.7 %	20.127248	0.014752	2.251387	0.004745	0.046841	0.000130	32.458	1.903292	1.00022993	2.208E-11
23G08936	6.1 %	16.968557	0.013872	2.105456	0.004522	0.036455	0.000109	32.465	1.903553	1.00022998	1.513E-11
23G08938	6.5 %	15.741582	0.014100	2.009887	0.004394	0.032448	0.000100	32.479	1.904075	1.00023008	1.243E-11
23G08939	6.9 %	15.843385	0.013737	1.972658	0.004298	0.032966	0.000105	32.486	1.904336	1.00023013	1.298E-11
23G08941	7.4 %	✓ 15.286219	0.012919	1.901157	0.004124	0.031258	0.000099	32.501	1.904885	1.00023023	1.297E-11
23G08942	8.0 %	✓ 13.604481	0.011933	1.875518	0.004099	0.025738	0.000088	32.508	1.905146	1.00023028	1.144E-11
23G08944	8.6 %	✓ 13.838556	0.012565	1.876208	0.004129	0.026637	0.000095	32.522	1.905669	1.00023038	1.045E-11
23G08945	9.6 %	✓ 14.650777	0.011136	2.585484	0.005457	0.029585	0.000091	32.528	1.905931	1.00023043	1.549E-11
23G08947	10.6 %	✓ 14.049683	0.011722	2.588145	0.005521	0.027472	0.000088	32.543	1.906480	1.00023053	1.202E-11
23G08948	12.0 %	✓ 13.350835	0.012533	2.908232	0.006291	0.025230	0.000089	32.550	1.906741	1.00023058	1.018E-11
23G08950	13.5 %	✓ 12.192893	0.013228	3.560282	0.007827	0.021624	0.000089	32.564	1.907264	1.00023068	7.477E-12
23G08951	15.0 %	✓ 12.999585	0.015156	4.640804	0.010286	0.024582	0.000100	32.571	1.907526	1.00023073	6.873E-12
23G08953	16.6 %	✓ 12.117420	0.015946	7.228931	0.016110	0.022568	0.000106	32.585	1.908075	1.00023083	5.350E-12
23G08954	18.2 %	✓ 11.730163	0.019763	8.430332	0.019965	0.021814	0.000117	32.592	1.908337	1.00023088	4.013E-12
23G08956	19.6 %	✓ 11.963501	0.025735	7.945454	0.020586	0.021940	0.000143	32.606	1.908861	1.00023098	3.149E-12
23G08957	21.5 %	✓ 11.338972	0.026927	9.041069	0.023957	0.020151	0.000149	32.613	1.909123	1.00023103	2.691E-12
23G08959	22.8 %	✓ 10.236908	0.031906	10.709439	0.032031	0.016953	0.000167	32.627	1.909646	1.00023113	1.981E-12
23G08960	24.5 %	9.556442	0.032011	11.925303	0.035805	0.015474	0.000171	32.635	1.909935	1.00023118	1.740E-12
23G08962	26.0 %	8.940996	0.033595	12.819241	0.040225	0.013779	0.000174	32.649	1.910459	1.00023128	1.506E-12

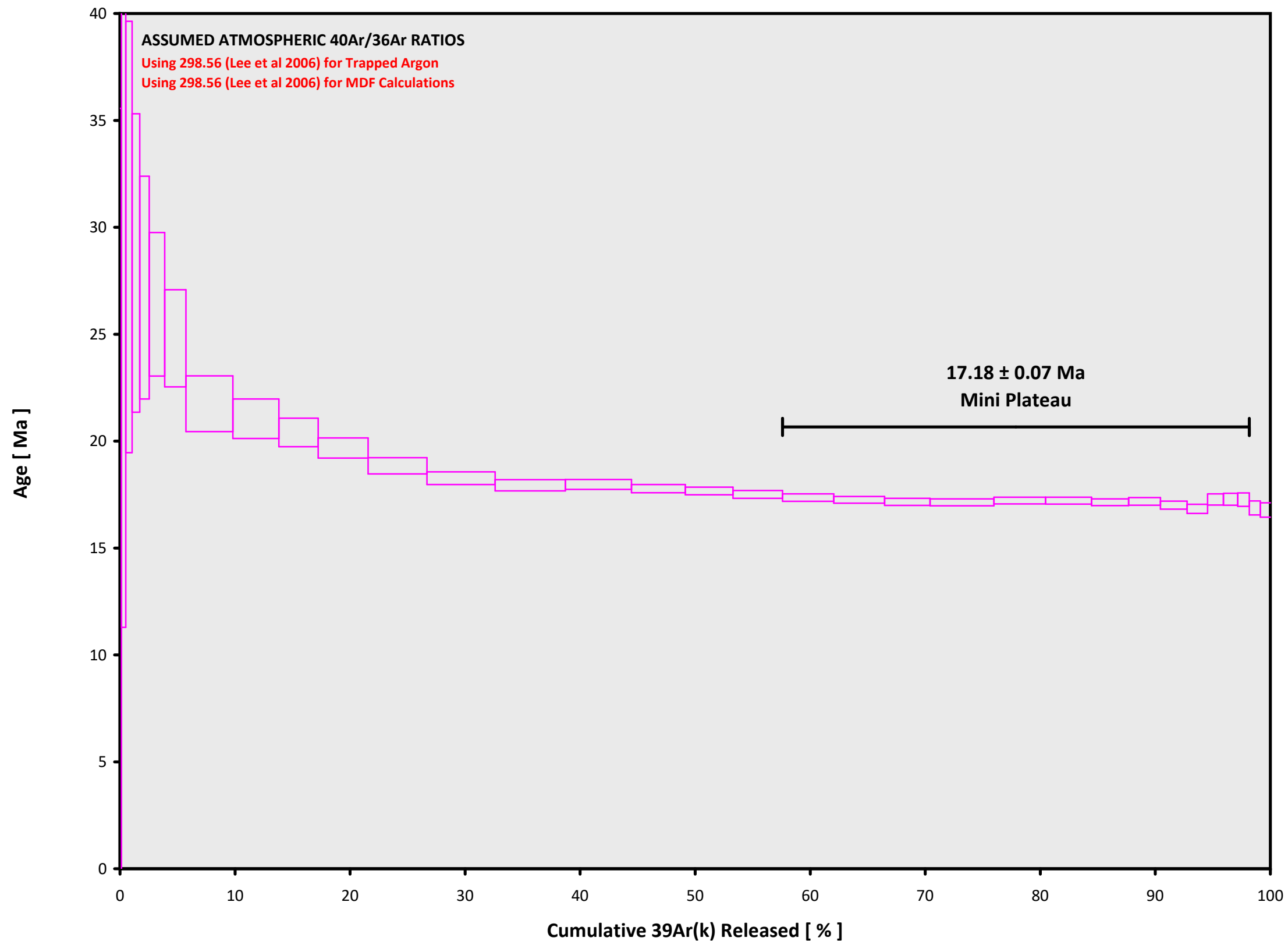
Procedure Blanks		36Ar ± 1σ (SE) [fA]	37Ar ± 1σ (SE) [fA]	38Ar ± 1σ (SE) [fA]	39Ar ± 1σ (SE) [fA]	40Ar ± 1σ (SE) [fA]
23G08914	0.8 %	0.0108724 ± 0.0005105	0.0102721 ± 0.0063665	0.0031150 ± 0.0061431	0.0086461 ± 0.0063148	3.2246006 ± 0.0998981
23G08915	1.0 %	0.0109901 ± 0.0005105	0.0094961 ± 0.0063665	0.0021275 ± 0.0061431	0.0106853 ± 0.0063148	3.2490629 ± 0.0998981
23G08917	1.2 %	0.0111674 ± 0.0005105	0.0079120 ± 0.0063665	0.0005910 ± 0.0061431	0.0142561 ± 0.0063148	3.2866811 ± 0.0998981
23G08918	1.4 %	0.0112305 ± 0.0005105	0.0071175 ± 0.0063665	0.0000188 ± 0.0061431	0.0157863 ± 0.0063148	3.3004984 ± 0.0998981
23G08920	1.7 %	0.0113162 ± 0.0005105	0.0054759 ± 0.0063665	0.0008186 ± 0.0061431	0.0184474 ± 0.0063148	3.3203873 ± 0.0998981
23G08921	2.0 %	0.0113379 ± 0.0005105	0.0047175 ± 0.0063665	0.0010663 ± 0.0061431	0.0194544 ± 0.0063148	3.3261160 ± 0.0998981
23G08923	2.4 %	0.0113515 ± 0.0005105	0.0032667 ± 0.0063665	0.0013197 ± 0.0061431	0.0209767 ± 0.0063148	3.3316695 ± 0.0998981
23G08924	2.8 %	0.0113460 ± 0.0005105	0.0025808 ± 0.0063665	0.0013444 ± 0.0061431	0.0214987 ± 0.0063148	3.3319739 ± 0.0998981
23G08926	3.2 %	0.0113159 ± 0.0005105	0.0012996 ± 0.0063665	0.0012335 ± 0.0061431	0.0220856 ± 0.0063148	3.3287250 ± 0.0998981
23G08927	3.6 %	0.0112911 ± 0.0005105	0.0006500 ± 0.0063665	0.0011008 ± 0.0061431	0.0221612 ± 0.0063148	3.3251994 ± 0.0998981
23G08929	4.0 %	0.0112358 ± 0.0005105	0.0004281 ± 0.0063665	0.0007700 ± 0.0061431	0.0218823 ± 0.0063148	3.3165342 ± 0.0998981
23G08930	4.5 %	0.0112050 ± 0.0005105	0.0009177 ± 0.0063665	0.0005759 ± 0.0061431	0.0215566 ± 0.0063148	3.3114163 ± 0.0998981
23G08932	4.9 %	0.0111406 ± 0.0005105	0.0018042 ± 0.0063665	0.0001633 ± 0.0061431	0.0205741 ± 0.0063148	3.3002423 ± 0.0998981
23G08933	5.3 %	0.0111050 ± 0.0005105	0.0022436 ± 0.0063665	0.0000634 ± 0.0061431	0.0198675 ± 0.0063148	3.2938052 ± 0.0998981
23G08935	5.7 %	0.0110429 ± 0.0005105	0.0029704 ± 0.0063665	0.0004464 ± 0.0061431	0.0183350 ± 0.0063148	3.2819984 ± 0.0998981
23G08936	6.1 %	0.0110138 ± 0.0005105	0.0033066 ± 0.0063665	0.0006135 ± 0.0061431	0.0174721 ± 0.0063148	3.2761645 ± 0.0998981
23G08938	6.5 %	0.0109610 ± 0.0005105	0.0039481 ± 0.0063665	0.0008775 ± 0.0061431	0.0156152 ± 0.0063148	3.2648138 ± 0.0998981
23G08939	6.9 %	0.0109376 ± 0.0005105	0.0042643 ± 0.0063665	0.0009667 ± 0.0061431	0.0146479 ± 0.0063148	3.2593232 ± 0.0998981
23G08941	7.4 %	0.0108956 ± 0.0005105	0.0049541 ± 0.0063665	0.0010431 ± 0.0061431	0.0126117 ± 0.0063148	3.2481409 ± 0.0998981
23G08942	8.0 %	0.0108789 ± 0.0005105	0.0053102 ± 0.0063665	0.0010209 ± 0.0061431	0.0116724 ± 0.0063148	3.2429132 ± 0.0998981
23G08944	8.6 %	0.0108509 ± 0.0005105	0.0061174 ± 0.0063665	0.0008524 ± 0.0061431	0.0099360 ± 0.0063148	3.2323653 ± 0.0998981
23G08945	9.6 %	0.0108391 ± 0.0005105	0.0065865 ± 0.0063665	0.0007029 ± 0.0061431	0.0091737 ± 0.0063148	3.2268895 ± 0.0998981
23G08947	10.6 %	0.0108171 ± 0.0005105	0.0077688 ± 0.0063665	0.0002417 ± 0.0061431	0.0079047 ± 0.0063148	3.2143960 ± 0.0998981
23G08948	12.0 %	0.0108070 ± 0.0005105	0.0084484 ± 0.0063665	0.0000489 ± 0.0061431	0.0074995 ± 0.0063148	3.2077121 ± 0.0998981
23G08950	13.5 %	0.0107842 ± 0.0005105	0.0100929 ± 0.0063665	0.0007674 ± 0.0061431	0.0071787 ± 0.0063148	3.1921779 ± 0.0998981
23G08951	15.0 %	0.0107702 ± 0.0005105	0.0110828 ± 0.0063665	0.0011938 ± 0.0061431	0.0073059 ± 0.0063148	3.1829902 ± 0.0998981
23G08953	16.6 %	0.0107305 ± 0.0005105	0.0135997 ± 0.0063665	0.0022285 ± 0.0061431	0.0083213 ± 0.0063148	3.1595534 ± 0.0998981
23G08954	18.2 %	0.0107048 ± 0.0005105	0.0150371 ± 0.0063665	0.0027837 ± 0.0061431	0.0092109 ± 0.0063148	3.1459666 ± 0.0998981
23G08956	19.6 %	0.0106350 ± 0.0005105	0.0184514 ± 0.0063665	0.0040030 ± 0.0061431	0.0119006 ± 0.0063148	3.1128884 ± 0.0998981
23G08957	21.5 %	0.0105885 ± 0.0005105	0.0204605 ± 0.0063665	0.0046614 ± 0.0061431	0.0137517 ± 0.0063148	3.0928776 ± 0.0998981
23G08959	22.8 %	0.0104664 ± 0.0005105	0.0251668 ± 0.0063665	0.0060584 ± 0.0061431	0.0185985 ± 0.0063148	3.0445021 ± 0.0998981
23G08960	24.5 %	0.0103794 ± 0.0005105	0.0281878 ± 0.0063665	0.0068631 ± 0.0061431	0.0219788 ± 0.0063148	3.0124376 ± 0.0998981
23G08962	26.0 %	0.0101775 ± 0.0005105	0.0345654 ± 0.0063665	0.0083678 ± 0.0061431	0.0295742 ± 0.0063148	2.9424888 ± 0.0998981

Intercept Values		36Ar ± 1σ (SE) [fA]	r2	Regression (type,n)	37Ar ± 1σ (SE) [fA]	r2	Regression (type,n)	38Ar ± 1σ (SE) [fA]	r2	Regression (type,n)	39Ar ± 1σ (SE) [fA]	r2	Regression (type,n)	40Ar ± 1σ (SE) [fA]	r2	Regression (type,n)
23G08914	0.8 %	3.8569709 ± 0.0027559	0.9944	EXP 146 of 150	1.065786 ± 0.006757	0.6415	EXP 150 of 150	0.7481843 ± 0.0066815	0.4697	EXP 150 of 150	0.6142807 ± 0.0067401	0.3666	EXP 150 of 150	1186.642805 ± 0.050116	1.0000	EXP 150 of 150
23G08915	1.0 %	5.3190270 ± 0.0037460	0.9943	EXP 150 of 150	2.776148 ± 0.006250	0.9422	EXP 150 of 150	1.0517119 ± 0.0064980	0.6506	EXP 149 of 150	1.6283755 ± 0.0066997	0.0077	EXP 150 of 150	1649.391731 ± 0.058955	1.0000	EXP 150 of 150
23G08917	1.2 %	5.5783054 ± 0.0035317	0.9955	EXP 150 of 150	4.154204 ± 0.006051	0.9761	EXP 149 of 150	1.1077770 ± 0.0062443	0.6884	EXP 150 of 150	2.4899615 ± 0.0067159	0.5419	EXP 150 of 150	1739.827137 ± 0.057405	1.0000	EXP 149 of 150
23G08918	1.4 %	4.5184570 ± 0.0030179	0.9949	EXP 150 of 150	4.680699 ± 0.007231	0.9728	EXP 150 of 150	0.9059813 ± 0.0059964	0.6408	EXP 150 of 150	2.9272040 ± 0.0065517	0.7894	EXP 150 of 150	1417.274664 ± 0.053684	1.0000	EXP 150 of 150
23G08920	1.7 %	4.2738006 ± 0.0028472	0.9952	EXP 147 of 150	5.850147 ± 0.006567	0.9861	EXP 150 of 150	0.8418316 ± 0.0064525	0.5209	EXP 150 of 150	3.7111528 ± 0.0057240	0.9378	EXP 146 of 150	1348.220327 ± 0.050540	1.0000	EXP 150 of 150
23G08921	2.0 %	4.3926615 ± 0.0030813	0.9946	EXP 150 of 150	9.106174 ± 0.006333	0.9948	EXP 149 of 150	0.9012237 ± 0.0066282	0.5587	EXP 150 of 150	5.9252144 ± 0.0069296	0.9726	EXP 150 of 150	1403.942346 ± 0.052971	1.0000	EXP 149 of 150
23G08923	2.4 %	4.1000010 ± 0.0029056	0.9944	EXP 149 of 150	12.411588 ± 0.008334	0.9950	EXP 150 of 150	0.8634178 ± 0.0062601	0.5343	EXP 150 of 150	8.1968016 ± 0.0068211	0.9886	EXP 150 of 150	1330.090907 ± 0.047073	1.0000	EXP 149 of 150
23G08924	2.8 %	5.2145284 ± 0.0036270	0.9945	EXP 150 of 150	27.377058 ± 0.009287	0.9987	EXP 150 of 150	1.1841097 ± 0.0061364	0.7103	EXP 150 of 150	18.1256273 ± 0.0075123	0.9977	EXP 148 of 150	1737.922834 ± 0.066704	1.0000	EXP 150 of 150
23G08926	3.2 %	3.5778765 ± 0.0028901	0.9926	EXP 150 of 150	26.398799 ± 0.010449	0.9983	EXP 150 of 150	0.8867769 ± 0.0071623	0.4877	EXP 150 of 150	17.7700696 ± 0.0080579	0.9973	EXP 150 of 150	1227.849851 ± 0.045654	1.0000	EXP 146 of 150
23G08927	3.6 %	2.1646014 ± 0.0020414	0.9896	EXP 150 of 150	21.910283 ± 0.009216	0.9980	EXP 150 of 150	0.5883541 ± 0.0055417	0.4848	EXP 149 of 150	15.1892276 ± 0.0072734	0.9970	EXP 150 of 150	771.445074 ± 0.040785	1.0000	EXP 150 of 150
23G08929	4.0 %	1.8890408 ± 0.0020320	0.9857	EXP 150 of 150	27.282637 ± 0.009760	0.9986	EXP 150 of 150	0.5766642 ± 0.0061821	0.3398	EXP 149 of 150	19.2582269 ± 0.0086044	0.9975	EXP 150 of 150	710.324748 ± 0.038677	1.0000	EXP 149 of 150
23G08930	4.5 %	1.8172325 ± 0.0019937	0.9854	EXP 150 of 150	30.836415 ± 0.008725	0.9991	EXP 150 of 150	0.6217325 ± 0.0057320	0.4986	EXP 150 of 150	22.7063278 ± 0.0093613	0.9979	EXP 150 of 150	705.027337 ± 0.039085	0.9999	EXP 150 of 150
23G08932	4.9 %	1.6154456 ± 0.0018569	0.9840	EXP 150 of 150	34.186956 ± 0.009836	0.9991	EXP 150 of 150	0.6234410 ± 0.0067754	0.4108	EXP 149 of 150	26.2590596 ± 0.0087534	0.9987	EXP 150 of 150	660.793272 ± 0.036429	1.0000	EXP 148 of 150
23G08933	5.3 %	1.4367480 ± 0.0017349	0.9825	EXP 150 of 150	33.512778 ± 0.009646	0.9991	EXP 148 of 150	0.5939796 ± 0.0064619	0.4163	EXP 150 of 150	27.0848755 ± 0.0083919	0.9988	EXP 150 of 150	608.170136 ± 0.041097	0.9999	EXP 150 of 150
23G08935	5.7 %	1.1796611 ± 0.0015441	0.9784	EXP 148 of 150	29.807400 ± 0.009329	0.9990	EXP 146 of 150	0.5220544 ± 0.0061599	0.2892	EXP 147 of 150	25.5350302 ± 0.0086386	0.9986	EXP 148 of 150	520.262476 ± 0.033605	0.9999	EXP 149 of 150
23G08936	6.1 %	0.7503584 ± 0.0011640	0.9671	EXP 149 of 150	22.657976 ± 0.008808	0.9983	EXP 149 of 150	0.3813142 ± 0.0065665	0.1633	EXP 150 of 150	20.7601550 ± 0.0084800	0.9980	EXP 150 of 150	357.579445 ± 0.034019	0.9998	EXP 150 of 150
23G08938	6.5 %	0.5938912 ± 0.0009730	0.9610	EXP 150 of 150	19.155569 ± 0.008336	0.9979	EXP 150 of 150	0.3366609 ± 0.0058326	0.2503	EXP 150 of 150	18.3897266 ± 0.0089701	0.9972	EXP 150 of 150	294.417030 ± 0.026535	0.9998	EXP 150 of 150
23G08939	6.9 %	0.6252048 ± 0.0011351	0.9544	EXP 150 of 150	19.497654 ± 0.008730	0.9978	EXP 150 of 150	0.3449543 ± 0.0063892	0.2204	EXP 150 of 150	19.0722213 ± 0.0086557	0.9975	EXP 149 of 150	307.194501 ± 0.026927	0.9999	EXP 150 of 150
23G08941	7.4 %	0.6140228 ± 0.0011209	0.9530	EXP 148 of 150	19.453199 ± 0.008630	0.9978	EXP 150 of 150	0.3493581 ± 0.0069305	0.1024	EXP 150 of 150	19.7468051 ± 0.0082656	0.9979	EXP 150 of 150	306.906252 ± 0.027975	0.9998	EXP 150 of 150
23G08942	8.0 %	0.5033242 ± 0.0010784	0.9307	EXP 150 of 150	19.027610 ± 0.009280	0.9974	EXP 150 of 150	0.3237589 ± 0.0064118	0.1186	EXP 149 of 150	19.5802142 ± 0.0086914	0.9977	EXP 149 of 150	271.225078 ± 0.025749	0.9998	EXP 147 of 150
23G08944	8.6 %	0.4683586 ± 0.0010828	0.9231	EXP 150 of 150	17.083838 ± 0.008569	0.9973	EXP 150 of 150	0.2981951 ± 0.0055754	0.1795	EXP 150 of 150	17.5764073 ± 0.0078223	0.9976	EXP 148 of 150	247.936218 ± 0.025096	0.9998	EXP 150 of 150
23G08945	9.6 %	0.7222455 ± 0.0012492	0.9600	EXP 150 of 150	32.949918 ± 0.011191	0.9987	EXP 150 of 150	0.4342493 ± 0.0060038	0.3093	EXP 150 of 150	24.6027074 ± 0.0081431	0.9987	EXP 150 of 150	365.926523 ± 0.029429	0.9999	EXP 149 of 150
23G08947	10.6 %	0.5454066 ± 0.0009832	0.9556	EXP 148 of 150	26.687313 ± 0.009427	0.9986	EXP 150 of 150	0.3428031 ± 0.0058975	0.2373	EXP 150 of 150	19.9105203 ± 0.0074718	0.9983	EXP 148 of 150	284.690961 ± 0.026395	0.9998	EXP 147 of 150
23G08948	12.0 %	0.4483071 ± 0.0009721	0.9282	EXP 150 of 150	26.719005 ± 0.009338	0.9987	EXP 150 of 150	0.2931175 ± 0.0057684	0.1302	EXP 149 of 150	17.7426067 ± 0.0088057	0.9971	EXP 150 of 150	241.553693 ± 0.026635	0.9998	EXP 149 of 150
23G08950	13.5 %	0.3124236 ± 0.0008565	0.8810	EXP 150 of 150	26.308132 ± 0.009619	0.9985	EXP 150 of 150	0.2260250 ± 0.0066849	0.0586	EXP 150 of 150	14.2743522 ± 0.0080322	0.9962	EXP 149 of 150	178.301935 ± 0.024062	0.9996	EXP 150 of 150
23G08951	15.0 %	0.3064093 ± 0.0007937	0.8873	EXP 150 of 150	29.560411 ± 0.009478	0.9989	EXP 150 of 150	0.2002976 ± 0.0062229	0.0511	EXP 150 of 150	12.3075253 ± 0.0074999	0.9955	EXP 150 of 150	164.139304 ± 0.022141	0.9996	EXP 150 of 150
23G08953	16.6 %	0.2373933 ± 0.0007315	0.8186	EXP 150 of 150	38.442095 ± 0.009778	0.9993	EXP 148 of 150	0.1600027 ± 0.0065166	0.0173	EXP 150 of 150	10.2805065 ± 0.0062271	0.9956	EXP 147 of 150	128.455981 ± 0.022051	0.9992	EXP 149 of 150
23G08954	18.2 %	0.1804606 ± 0.0006109	0.7412	EXP 146 of 150	34.733959 ± 0.010908	0.9989	EXP 150 of 150	0.1286169 ± 0.0063748	0.0179	EXP 150 of 150	7.9683238 ± 0.0067411	0.9912	EXP 150 of 150	97.125747 ± 0.019298	0.9987	EXP 150 of 150
23G08956	19.6 %	0.1420133 ± 0.0005805	0.5889	EXP 149 of 150	25.190021 ± 0.009570	0.9984	EXP 150 of 150	0.0954892 ± 0.0066973	0.0064	EXP 150 of 150	6.1361632 ± 0.0070124	0.9833	EXP 150 of 150	76.865580 ± 0.023183	0.9965	EXP 150 of 150
23G08957	21.5 %	0.1193792 ± 0.0005380	0.5185	EXP 150 of 150	25.841413 ± 0.009041	0.9987	EXP 150 of 150	0.0909530 ± 0.0062668	0.0300	EXP 150 of 150	5.5354702 ± 0.0065322	0.9823	EXP 148 of 150	66.118005 ± 0.019900	0.9956	EXP 150 of 150
23G08959	22.8 %	0.0851109 ± 0.0004751	0.0717	EXP 150 of 150	24.961960 ± 0.008768	0.9987	EXP 149 of 150	0.0668743 ± 0.0072493	0.0009	EXP 150 of 150	4.5217313 ± 0.0073433	0.9668	EXP 150 of 150	49.447858 ± 0.016995	0.9902	EXP 150 of 150
23G08960	24.5 %	0.0744723 ± 0.0004438	0.0319	EXP 150 of 150	26.146386 ± 0.009273	0.9986	EXP 150 of 150	0.0637307 ± 0.0054481	0.0237	EXP 146 of 150	4.2582151 ± 0.0066652	0.9678	EXP 150 of 150	43.763810 ± 0.017917	0.9788	EXP 150 of 150
23G08962	26.0 %	0.0629794 ± 0.0003914	0.0040	EXP 150 of 150	26.003590 ± 0.009329	0.9986	EXP 150 of 150	0.0524090 ± 0.0054668	0.0138	EXP 150 of 150	3.9489668 ± 0.0067073	0.9631	EXP 150 of 150	38.217775 ± 0.017775	0.9547	EXP 150 of 150

Sample Parameters		Sample	Material	Location	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF (lin)	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Analyst	Project	Experiment	Nmb
23G08914	0.8 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	7	MAY	2023	22	53	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08915	1.0 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	7	MAY	2023	23	3	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08917	1.2 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	7	MAY	2023	23	23	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08918	1.4 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	7	MAY	2023	23	33	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08920	1.7 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	7	MAY	2023	23	54	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08921	2.0 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	0	4	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08923	2.4 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	0	24	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08924	2.8 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	0	34	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08926	3.2 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	0	54	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08927	3.6 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	1	5	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08929	4.0 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	1	25	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08930	4.5 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	1	35	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08932	4.9 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	1	55	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08933	5.3 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	2	6	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08935	5.7 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	2	26	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08936	6.1 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	2	36	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08938	6.5 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	2	56	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08939	6.9 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	3	6	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08941	7.4 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	3	27	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08942	8.0 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	3	37	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08944	8.6 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	3	57	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08945	9.6 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	4	7	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08947	10.6 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	4	28	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08948	12.0 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	4	38	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08950	13.5 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	4	58	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08951	15.0 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	5	8	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08953	16.6 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	5	29	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08954	18.2 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	5	39	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08956	19.6 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	5	59	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08957	21.5 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	6	9	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08959	22.8 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	6	29	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08960	24.5 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	6	40	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01
23G08962	26.0 %	LF-21-54	GROUNDMASS	Hells Canyon	FCT-NM (1A37-23)	28.201	0.082	Kuiper et al (2008)	9.96371	0.085	0.00155820	0.085	306.343	0.206	0.9936403	0.057	1	4.27E-14	8	MAY	2023	7	0	1	Dan Miggins	Oregon\Mass (22-34)	23G08911	01

Irradiation Constants		40/36(a)		%1σ	40/36(c)		%1σ	38/36(a)		%1σ	38/36(c)		%1σ	39/37(ca)		%1σ	38/37(ca)		%1σ	36/37(ca)		%1σ	40/39(k)		%1σ	38/39(k)		%1σ	36/38(cl)		%1σ	K/Ca	%1σ	K/Cl	%1σ	Ca/Cl	%1σ	Irradiation	X-pos	Y-pos	Z/H-pos				
23G08914	0.8 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17	
23G08915	1.0 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08917	1.2 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08918	1.4 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08920	1.7 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08921	2.0 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08923	2.4 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08924	2.8 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08926	3.2 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08927	3.6 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08929	4.0 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08930	4.5 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08932	4.9 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08933	5.3 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08935	5.7 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08936	6.1 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08938	6.5 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08939	6.9 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08941	7.4 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08942	8.0 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08944	8.6 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08945	9.6 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08947	10.6 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08948	12.0 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08950	13.5 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08951	15.0 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08953	16.6 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08954	18.2 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08956	19.6 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08957	21.5 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.63	0.00027	0.17	0.000607	9.65	0.012077	0.09	0	0	0.43	0	0	0	0	0	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	23-OSU-01	999.00	999.00	58.17
23G08959	22.8 %	298.56	0.104	0.018	35	0.1885	0.159	1.493	3	0.000643	0.92	0.00018	9.6																																

23G08911.AGE >>> LF-21-54 >>> OREGON | MASS (22-34) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.18 ± 0.07

TOTAL FUSION

18.55 ± 0.15

NORMAL ISOCHRON

16.85 ± 0.41

INVERSE ISOCHRON

16.87 ± 0.41

MSWD (PROBABILITY)

1.76 (5%)

TRAPPED $^{40}\text{Ar}/^{36}\text{Ar}$ RATIO

Standard $^{40}/^{36} = 298.56 \pm 0.104$ %SD

Sample Info

GROUNDMASS

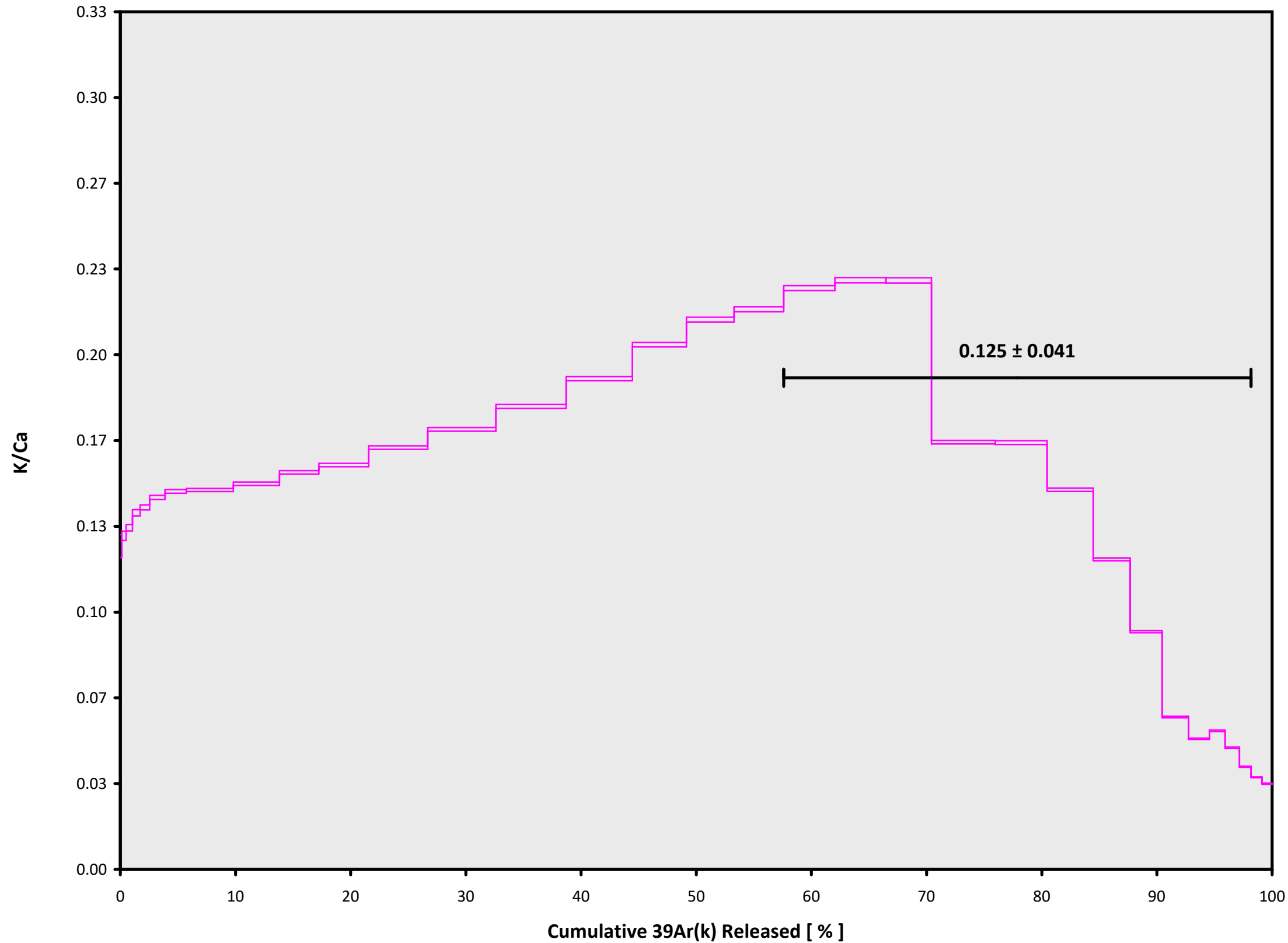
Hells Canyon

Dan Miggins

IRR = 23-OSU-01 (1A37-23)

$J = 0.00155820 \pm 0.00000132$

23G08911.AGE >>> LF-21-54 >>> OREGON | MASS (22-34) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.18 ± 0.07

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18.55 ± 0.15

NORMAL ISOCHRON

16.85 ± 0.41

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16.87 ± 0.41

TRAPPED $^{40}\text{Ar}/^{36}\text{Ar}$ RATIO

Standard $^{40}/^{36} = 298.56 \pm 0.104$
%SD

Sample Info

GROUNDMASS

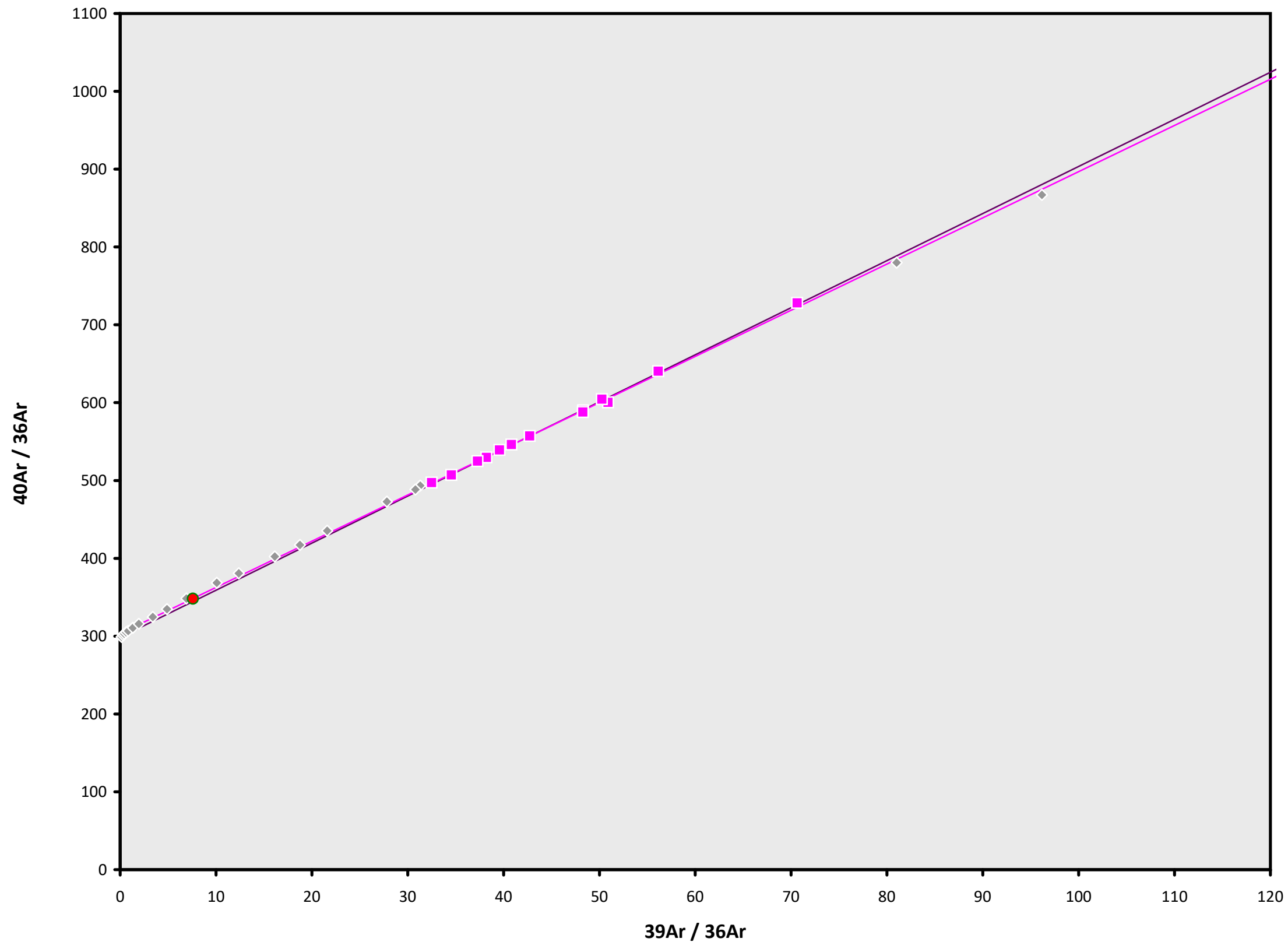
Hells Canyon

Dan Miggins

IRR = 23-OSU-01 (1A37-23)

J = 0.00155820 ± 0.00000132

23G08911.AGE >>> LF-21-54 >>> OREGON | MASS (22-34) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.18 ± 0.07

TOTAL FUSION

18.55 ± 0.15

NORMAL ISOCHRON

16.85 ± 0.41

INVERSE ISOCHRON

16.87 ± 0.41

MSWD (PROBABILITY)

1.65 (8%)

CALCULATED $40\text{Ar}/36\text{Ar}$

INTERCEPT

303.3 ± 5.9

Sample Info

GROUNDMASS

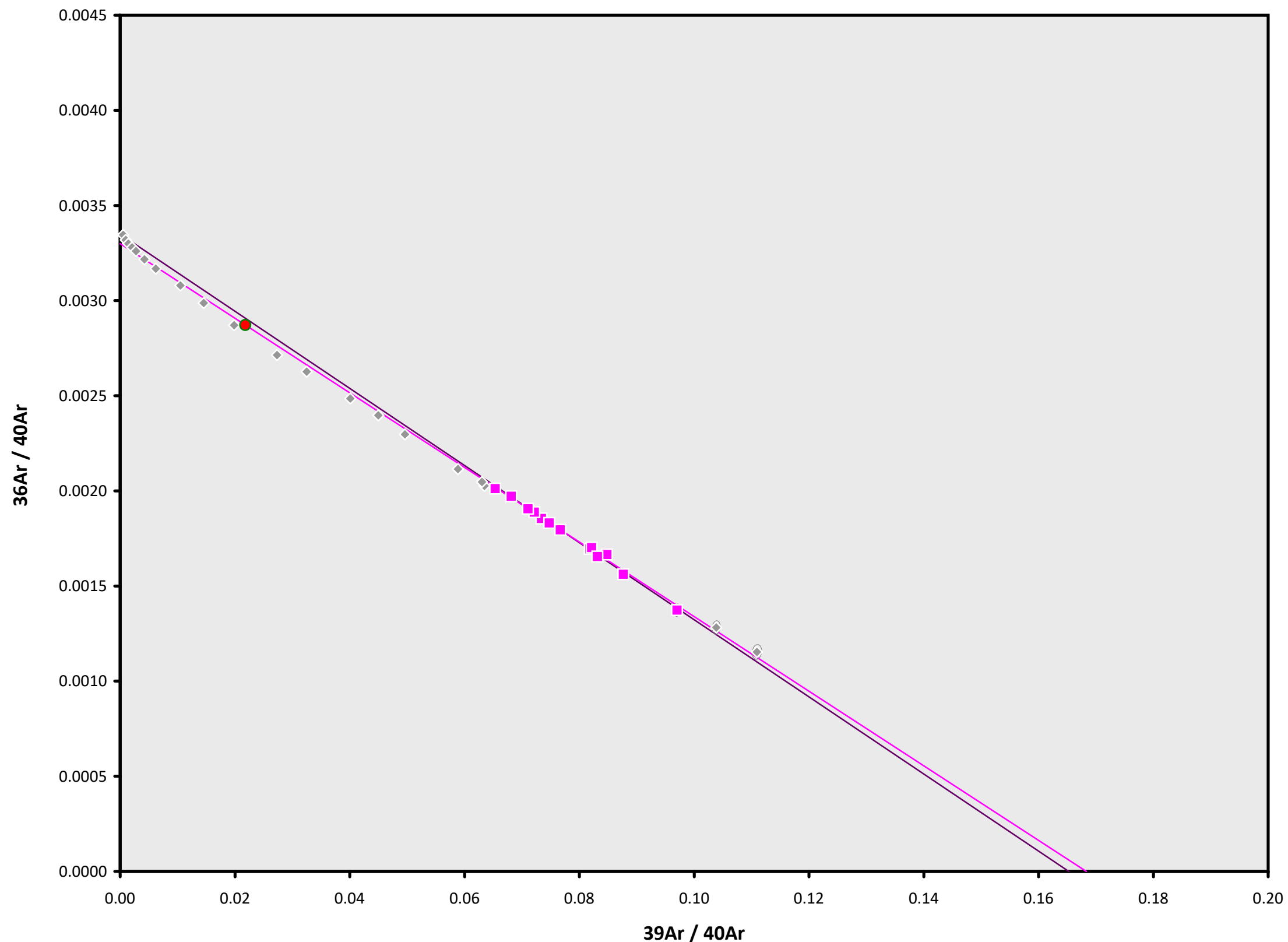
Hells Canyon

Dan Miggins

IRR = 23-OSU-01 (1A37-23)

$J = 0.00155820 \pm 0.00000132$

23G08911.AGE >>> LF-21-54 >>> OREGON | MASS (22-34) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.18 ± 0.07

TOTAL FUSION

18.55 ± 0.15

NORMAL ISOCHRON

16.85 ± 0.41

INVERSE ISOCHRON

16.87 ± 0.41

MSWD (PROBABILITY)

1.63 (8%)

SPREADING FACTOR

18.8%

CALCULATED $^{40}\text{Ar}/^{36}\text{Ar}$

INTERCEPT

303.1 ± 5.8

Sample Info

GROUNDMASS

Hells Canyon

Dan Miggins

IRR = 23-OSU-01 (1A37-23)

$J = 0.00155820 \pm 0.00000132$