

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
23F04441	0.7 %	0.059757	1.983	0.801	4.933	0.0116958	78.563	0.01978	43.344	17.6478	1.306	6.67289 ± 44.28331	20.47 ± 136.60	0.73	0.01	0.0103 ± 0.0093
23F04443	0.9 %	0.024171	4.743	0.327	12.582	0.0078046	114.472	0.01187	75.664	7.0555	3.268	11.52954 ± 72.98560	35.51 ± 227.00	1.91	0.01	0.0153 ± 0.0239
23F04445	1.2 %	0.074348	1.611	2.455	1.703	0.0127305	71.633	0.06285	13.786	22.5809	1.021	9.49105 ± 14.16815	28.73 ± 42.55	2.58	0.04	0.0107 ± 0.0031
23F04446	1.8 %	0.280293	0.508	34.127	0.266	0.0669646	13.651	0.64033	1.381	83.7023	0.276	4.48212 ± 1.59479	13.62 ± 4.83	3.31	0.36	0.0078 ± 0.0002
23F04447	2.3 %	0.196234	0.684	69.147	0.242	0.0612710	15.402	1.18846	0.792	58.3270	0.396	4.64924 ± 0.81805	14.13 ± 2.48	9.12	0.66	0.0071 ± 0.0001
23F04449	2.8 %	0.166686	0.790	114.359	0.237	0.0562224	15.960	1.91464	0.478	51.1265	0.452	5.75105 ± 0.50183	17.46 ± 1.52	20.71	1.07	0.0069 ± 0.0001
23F04450	3.4 %	0.201420	0.682	255.249	0.234	0.0897810	10.217	4.18840	0.238	62.1295	0.371	5.61322 ± 0.23835	17.04 ± 0.72	36.36	2.34	0.0068 ± 0.0000
23F04452	4.0 %	0.313239	0.492	603.333	0.233	0.1646365	5.548	9.80741	0.113	98.3552	0.235	5.68147 ± 0.11460	17.25 ± 0.35	54.41	5.47	0.0067 ± 0.0000
23F04453	4.7 %	0.340291	0.443	694.797	0.233	0.1847830	5.025	11.33065	0.099	107.9788	0.214	5.73725 ± 0.09885	17.42 ± 0.30	57.83	6.32	0.0067 ± 0.0000
23F04454	5.3 %	0.389132	0.420	672.654	0.233	0.1928545	4.558	11.06184	0.106	120.6172	0.192	5.52373 ± 0.10724	16.77 ± 0.32	48.68	6.17	0.0068 ± 0.0000
23F04456	6.0 %	0.443959	0.384	814.260	0.233	0.2295357	3.777	13.42469	0.090	140.1792	0.165	5.68417 ± 0.09287	17.26 ± 0.28	52.31	7.49	0.0068 ± 0.0000
23F04457	6.8 %	0.497286	0.358	807.290	0.233	0.2475742	3.783	13.40473	0.087	155.4053	0.149	5.59338 ± 0.09618	16.98 ± 0.29	46.38	7.48	0.0069 ± 0.0000
23F04458	7.5 %	0.483695	0.356	731.819	0.233	0.2248474	4.205	12.22784	0.096	150.8890	0.153	5.57323 ± 0.10199	16.92 ± 0.31	43.43	6.83	0.0069 ± 0.0000
23F04460	8.3 %	0.547311	0.343	784.812	0.233	0.2408797	3.868	13.18705	0.087	171.6115	0.135	5.64021 ± 0.10178	17.12 ± 0.31	41.68	7.36	0.0069 ± 0.0000
23F04461	9.1 %	0.568766	0.351	624.798	0.234	0.2197584	4.276	10.56205	0.108	174.4513	0.133	5.41857 ± 0.13191	16.46 ± 0.40	31.56	5.90	0.0070 ± 0.0000
23F04462	9.8 %	0.521197	0.358	469.672	0.234	0.1874190	4.866	8.01805	0.133	158.9643	0.145	5.34633 ± 0.16277	16.24 ± 0.49	25.95	4.48	0.0071 ± 0.0000
23F04464	10.5 %	0.357540	0.440	325.032	0.234	0.1272761	7.284	5.52973	0.172	109.5942	0.211	5.46417 ± 0.20214	16.59 ± 0.61	26.53	3.09	0.0070 ± 0.0000
23F04465	11.0 %	0.430159	0.387	205.806	0.235	0.1319734	6.791	3.51332	0.264	127.7474	0.181	4.71023 ± 0.33367	14.31 ± 1.01	12.47	1.96	0.0071 ± 0.0001
23F04466	11.5 %	0.340147	0.464	129.508	0.236	0.0903318	10.459	2.20394	0.423	100.5652	0.229	4.46127 ± 0.50529	13.56 ± 1.53	9.41	1.23	0.0070 ± 0.0001
23F04468	12.0 %	0.313951	0.469	123.869	0.237	0.0739892	12.671	2.12852	0.424	94.1237	0.245	5.06881 ± 0.49505	15.40 ± 1.50	11.03	1.19	0.0071 ± 0.0001
23F04469	12.5 %	0.337788	0.446	99.405	0.238	0.0889085	10.324	1.68523	0.500	98.5637	0.234	3.53703 ± 0.63717	10.76 ± 1.93	5.82	0.94	0.0070 ± 0.0001
23F04470	13.0 %	0.288099	0.514	83.184	0.240	0.0668417	13.703	1.39852	0.674	84.5269	0.273	3.88394 ± 0.75438	11.81 ± 2.29	6.18	0.78	0.0070 ± 0.0001
23F04472	13.5 %	0.319522	0.466	98.005	0.239	0.0791664	11.605	1.65701	0.556	93.3213	0.247	3.65919 ± 0.64080	11.13 ± 1.94	6.25	0.93	0.0070 ± 0.0001
23F04473	14.5 %	0.342310	0.444	117.103	0.237	0.0882049	10.319	2.05058	0.453	101.1779	0.228	4.26611 ± 0.52670	12.97 ± 1.60	8.33	1.15	0.0073 ± 0.0001
23F04474	15.0 %	0.477226	0.378	274.638	0.234	0.1384331	6.519	4.73026	0.202	144.8431	0.159	5.38520 ± 0.26551	16.35 ± 0.80	16.93	2.64	0.0071 ± 0.0000
23F04476	15.6 %	1.108916	0.250	934.957	0.234	0.3658494	2.692	15.85636	0.079	342.6134	0.068	5.70135 ± 0.12176	17.31 ± 0.37	25.39	8.86	0.0070 ± 0.0000
23F04477	16.2 %	0.773804	0.287	328.298	0.234	0.1814091	5.321	5.31533	0.180	229.7207	0.101	4.93390 ± 0.28946	14.99 ± 0.88	10.96	2.96	0.0067 ± 0.0000
23F04478	17.0 %	0.630828	0.317	266.948	0.234	0.1561960	6.001	4.23794	0.222	189.0750	0.122	5.47788 ± 0.32835	16.63 ± 0.99	11.78	2.36	0.0066 ± 0.0000
23F04480	17.9 %	0.630370	0.321	317.175	0.234	0.1653685	5.544	5.06579	0.191	192.8122	0.120	6.21185 ± 0.27799	18.85 ± 0.84	15.66	2.82	0.0066 ± 0.0000
23F04481	19.0 %	0.233302	0.601	259.181	0.235	0.0779749	12.343	4.06825	0.230	73.3362	0.315	6.30366 ± 0.25010	19.13 ± 0.75	33.54	2.26	0.0065 ± 0.0000
23F04482	21.2 %	0.728304	0.308	319.539	0.234	0.1736222	5.222	5.00840	0.198	221.8773	0.104	6.29158 ± 0.30893	19.09 ± 0.93	13.62	2.79	0.0065 ± 0.0000
23F04484	23.5 %	0.186087	0.735	236.953	0.235	0.0714010	13.589	3.70865	0.242	58.0339	0.398	6.07237 ± 0.26821	18.43 ± 0.81	37.21	2.06	0.0065 ± 0.0000

Σ 12.606139 0.076 10799.501 0.054 4.2757047 1.223 179.20845 0.032 3842.9534 0.034

Information on Analysis and Constants Used in Calculations	
Project = MASS (22-34)	
Sample = MM-CRB-32	
Material = Plagioclase	
Location = Hells Canyon	
Region = Snake Rvr. Valley	
Analyst = Dan Miggins	
Irradiation = 22-OSU-05 (5D10-22)	
Position = X: 999 Y: 999 Z/H: 17.38687 mm	
FCT-NM Age = 28.201 ± 0.023 Ma	
FCT-NM Reference = Kuiper et al. 2008	
FCT-NM 40Ar/39Ar Ratio = 9.31638 ± 0.01174	
FCT-NM J-value = 0.00166647 ± 0.00000210	
Air Shot 40Ar/36Ar = 303.3400 ± 0.4732	
Air Shot MDF = 0.99605543 ± 0.00046193 (LIN)	
Experiment Type = Incremental Heating	
Extraction Method = Bulk Laser Heating	
Heating = 50 sec	
Isolation = 6.00 min	
Instrument = ARGUS-VI-F	
Preferred Age = Plateau Age	
Age Classification = Crystallization Age	
IGSN = 13	
Rock Class = Igneous>Volcanic>Mafic	
Lithology = Basaltic Lava	
Lat-Lon = 117°06.7'N - 44°40.2'E	

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		5.63524 ± 0.04775 ± 0.85%	17.11 ± 0.15 ± 0.88%	1.60 12%	50.52 9	0.0068 ± 0.0001
		Full External Error ± 0.90 Analytical Error ± 0.14		2.00 1.2668	2σ Confidence Limit Error Magnification	
Total Fusion Age		5.51860 ± 0.03783 ± 0.69%	16.76 ± 0.12 ± 0.73%		32	0.0069 ± 0.0000
		Full External Error ± 0.88 Analytical Error ± 0.11				
Normal Isochron	295.14 ± 7.99 ± 2.71%	5.70362 ± 0.17143 ± 3.01%	17.32 ± 0.52 ± 3.00%	1.68 11%	50.52 9	
		Full External Error ± 1.04 Analytical Error ± 0.52		2.07 1.2978	2σ Confidence Limit Error Magnification	
				10 0.0000538005	Number of Iterations Convergence	
Inverse Isochron	295.11 ± 7.90 ± 2.68%	5.70613 ± 0.16905 ± 2.96%	17.32 ± 0.51 ± 2.96%	1.68 11%	50.52 9	
		Full External Error ± 1.03 Analytical Error ± 0.51		2.07 1.2952	2σ Confidence Limit Error Magnification	
				4 0.0000915030	Number of Iterations Convergence	
				37%	Spreading Factor	

Inverse Isochron		39(k)/40(a+r) ± 2σ	36(a)/40(a+r) ± 2σ
23F04441	0.7 %	0.0010915 ± 0.0009719	0.00337380 ± 0.00016062
23F04443	0.9 %	0.0016529 ± 0.0025488	0.00341324 ± 0.00039421
23F04445	1.2 %	0.0027136 ± 0.0007695	0.00326315 ± 0.00012531
23F04446	1.8 %	0.0073882 ± 0.0002152	0.00323850 ± 0.00003847
23F04447	2.3 %	0.0196143 ± 0.0003586	0.00304397 ± 0.00005197
23F04449	2.8 %	0.0360127 ± 0.0004845	0.00265571 ± 0.00005697
23F04450	3.4 %	0.0647770 ± 0.0005807	0.00213154 ± 0.00004742
23F04452	4.0 %	0.0957785 ± 0.0005083	0.00152679 ± 0.00003355
23F04453	4.7 %	0.1008059 ± 0.0004855	0.00141228 ± 0.00003030
23F04454	5.3 %	0.0881319 ± 0.0003959	0.00171886 ± 0.00002921
23F04456	6.0 %	0.0920411 ± 0.0003565	0.00159708 ± 0.00002649
23F04457	6.8 %	0.0829231 ± 0.0002952	0.00179588 ± 0.00002490
23F04458	7.5 %	0.0779262 ± 0.0002912	0.00189476 ± 0.00002473
23F04460	8.3 %	0.0739075 ± 0.0002463	0.00195320 ± 0.00002360
23F04461	9.1 %	0.0582453 ± 0.0002073	0.00229232 ± 0.00002431
23F04462	9.8 %	0.0485424 ± 0.0001978	0.00248016 ± 0.00002500
23F04464	10.5 %	0.0485523 ± 0.0002711	0.00246082 ± 0.00003085
23F04465	11.0 %	0.0264674 ± 0.0001750	0.00293185 ± 0.00002825
23F04466	11.5 %	0.0210884 ± 0.0002098	0.00303429 ± 0.00003441
23F04468	12.0 %	0.0217688 ± 0.0002200	0.00297983 ± 0.00003461
23F04469	12.5 %	0.0164500 ± 0.0001878	0.00315453 ± 0.00003402
23F04470	13.0 %	0.0159131 ± 0.0002395	0.00314240 ± 0.00003906
23F04472	13.5 %	0.0170814 ± 0.0002153	0.00314006 ± 0.00003553
23F04473	14.5 %	0.0195237 ± 0.0002048	0.00307044 ± 0.00003318
23F04474	15.0 %	0.0314402 ± 0.0001674	0.00278232 ± 0.00002659
23F04476	15.6 %	0.0445285 ± 0.0001008	0.00249909 ± 0.00001707
23F04477	16.2 %	0.0222203 ± 0.0000963	0.00298220 ± 0.00002035
23F04478	17.0 %	0.0215072 ± 0.0001140	0.00295480 ± 0.00002244
23F04480	17.9 %	0.0252167 ± 0.0001187	0.00282475 ± 0.00002222
23F04481	19.0 %	0.0532050 ± 0.0004232	0.00222606 ± 0.00004107
23F04482	21.2 %	0.0216478 ± 0.0001018	0.00289322 ± 0.00002120
23F04484	23.5 %	0.0612838 ± 0.0005794	0.00210297 ± 0.00005041

r.i.

0.0161
0.0240
0.0383
0.0881
0.2008
0.2832
0.2765
0.1888
0.1771
0.1927
0.1693
0.1789
0.1924
0.1804
0.1865
0.2057
0.2540
0.2059
0.1867
0.2048
0.1782
0.1594
0.1715
0.1838
0.1999
0.1190
0.1369
0.1487
0.1553
0.2699
0.1262
0.2794

MSWD

1.68
11%

915030
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
23F04441	0.7 %	0.0595402	0.801	0.0000957	0.01926	0.12853	20.47 ± 136.60	0.73	0.01	0.0103 ± 0.0093
23F04443	0.9 %	0.0240820	0.327	0.0030654	0.01166	0.13446	35.51 ± 227.00	1.91	0.01	0.0153 ± 0.0239
23F04445	1.2 %	0.0736845	2.455	0.0000000	0.06128	0.58157	28.73 ± 42.55	2.58	0.04	0.0107 ± 0.0031
23F04446	1.8 %	0.2710685	34.127	0.0022569	0.61840	2.77176	13.62 ± 4.83	3.31	0.36	0.0078 ± 0.0002
23F04447	2.3 %	0.1775437	69.147	0.0015412	1.14403	5.31888	14.13 ± 2.48	9.12	0.66	0.0071 ± 0.0001
23F04449	2.8 %	0.1357743	114.359	0.0000000	1.84116	10.58863	17.46 ± 1.52	20.71	1.07	0.0069 ± 0.0001
23F04450	3.4 %	0.1324263	255.249	0.0000000	4.02440	22.58985	17.04 ± 0.72	36.36	2.34	0.0068 ± 0.0000
23F04452	4.0 %	0.1501587	603.333	0.0000000	9.41977	53.51811	17.25 ± 0.35	54.41	5.47	0.0067 ± 0.0000
23F04453	4.7 %	0.1524873	694.797	0.0000000	10.88424	62.44563	17.42 ± 0.30	57.83	6.32	0.0067 ± 0.0000
23F04454	5.3 %	0.2073133	672.654	0.0000000	10.62966	58.71532	16.77 ± 0.32	48.68	6.17	0.0068 ± 0.0000
23F04456	6.0 %	0.2238643	814.260	0.0000000	12.90153	73.33445	17.26 ± 0.28	52.31	7.49	0.0068 ± 0.0000
23F04457	6.8 %	0.2790759	807.290	0.0000000	12.88605	72.07659	16.98 ± 0.29	46.38	7.48	0.0069 ± 0.0000
23F04458	7.5 %	0.2858846	731.819	0.0000000	11.75765	65.52813	16.92 ± 0.31	43.43	6.83	0.0069 ± 0.0000
23F04460	8.3 %	0.3351759	784.812	0.0000000	12.68280	71.53366	17.12 ± 0.31	41.68	7.36	0.0069 ± 0.0000
23F04461	9.1 %	0.3998833	624.798	0.0000000	10.16061	55.05601	16.46 ± 0.40	31.56	5.90	0.0070 ± 0.0000
23F04462	9.8 %	0.3942450	469.672	0.0000000	7.71629	41.25382	16.24 ± 0.49	25.95	4.48	0.0071 ± 0.0000
23F04464	10.5 %	0.2696836	325.032	0.0000000	5.32089	29.07426	16.59 ± 0.61	26.53	3.09	0.0070 ± 0.0000
23F04465	11.0 %	0.3745299	205.806	0.0000000	3.38109	15.92570	14.31 ± 1.01	12.47	1.96	0.0071 ± 0.0001
23F04466	11.5 %	0.3051404	129.508	0.0000000	2.12073	9.46114	13.56 ± 1.53	9.41	1.23	0.0070 ± 0.0001
23F04468	12.0 %	0.2804691	123.869	0.0000000	2.04893	10.38563	15.40 ± 1.50	11.03	1.19	0.0071 ± 0.0001
23F04469	12.5 %	0.3109187	99.405	0.0000000	1.62136	5.73481	10.76 ± 1.93	5.82	0.94	0.0070 ± 0.0001
23F04470	13.0 %	0.2656147	83.184	0.0000000	1.34507	5.22418	11.81 ± 2.29	6.18	0.78	0.0070 ± 0.0001
23F04472	13.5 %	0.2930313	98.005	0.0000000	1.59404	5.83290	11.13 ± 1.94	6.25	0.93	0.0070 ± 0.0001
23F04473	14.5 %	0.3106569	117.103	0.0000000	1.97534	8.42702	12.97 ± 1.60	8.33	1.15	0.0073 ± 0.0001
23F04474	15.0 %	0.4029917	274.638	0.0000000	4.55381	24.52317	16.35 ± 0.80	16.93	2.64	0.0071 ± 0.0000
23F04476	15.6 %	0.8561973	934.957	0.0000000	15.25565	86.97786	17.31 ± 0.37	25.39	8.86	0.0070 ± 0.0000
23F04477	16.2 %	0.6850649	328.298	0.0000000	5.10440	25.18461	14.99 ± 0.88	10.96	2.96	0.0067 ± 0.0000
23F04478	17.0 %	0.5586720	266.948	0.0000000	4.06642	22.27536	16.63 ± 0.99	11.78	2.36	0.0066 ± 0.0000
23F04480	17.9 %	0.5446381	317.175	0.0000000	4.86201	30.20207	18.85 ± 0.84	15.66	2.82	0.0066 ± 0.0000
23F04481	19.0 %	0.1632458	259.181	0.0000000	3.90173	24.59516	19.13 ± 0.75	33.54	2.26	0.0065 ± 0.0000
23F04482	21.2 %	0.6419323	319.539	0.0000000	4.80309	30.21906	19.09 ± 0.93	13.62	2.79	0.0065 ± 0.0000
23F04484	23.5 %	0.1220387	236.953	0.0000000	3.55640	21.59581	18.43 ± 0.81	37.21	2.06	0.0065 ± 0.0000

Σ 9.6870334 10799.501 0.0069591 172.26977 950.68814

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Project = MASS (22-34) Sample = MM-CRB-32 Material = Plagioclase Location = Hells Canyon Region = Snake Rvr. Valley Analyst = Dan Miggins Irradiation = 22-OSU-05 (5D10-22) J = 0.00166647 ± 0.00000210 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau	5.63524 ± 0.04775 ± 0.85%	17.11 ± 0.15 ± 0.88%	1.60 12%	50.52 9	0.0068 ± 0.0001
			Full External Error ± 0.90 Analytical Error ± 0.14	2.00 1.2668	2σ Confidence Limit Error Magnification	
	Total Fusion Age	5.51860 ± 0.03783 ± 0.69%	16.76 ± 0.12 ± 0.73%		32	0.0069 ± 0.0000
			Full External Error ± 0.88 Analytical Error ± 0.11			

Normal Isochron		39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
23F04441	0.7 %	0.32 ± 0.29	296.40 ± 14.11	0.0373
23F04443	0.9 %	0.48 ± 0.75	292.98 ± 33.84	0.0509
23F04445	1.2 %	0.83 ± 0.24	306.45 ± 11.77	0.0967
23F04446	1.8 %	2.28 ± 0.07	308.79 ± 3.67	0.3056
23F04447	2.3 %	6.44 ± 0.14	328.52 ± 5.61	0.5991
23F04449	2.8 %	13.56 ± 0.30	376.55 ± 8.08	0.8071
23F04450	3.4 %	30.39 ± 0.66	469.14 ± 10.44	0.9167
23F04452	4.0 %	62.73 ± 1.36	654.97 ± 14.39	0.9705
23F04453	4.7 %	71.38 ± 1.51	708.07 ± 15.19	0.9745
23F04454	5.3 %	51.27 ± 0.86	581.78 ± 9.89	0.9646
23F04456	6.0 %	57.63 ± 0.94	626.14 ± 10.38	0.9725
23F04457	6.8 %	46.17 ± 0.63	556.83 ± 7.72	0.9667
23F04458	7.5 %	41.13 ± 0.53	527.77 ± 6.89	0.9586
23F04460	8.3 %	37.84 ± 0.45	511.98 ± 6.19	0.9616
23F04461	9.1 %	25.41 ± 0.27	436.24 ± 4.63	0.9434
23F04462	9.8 %	19.57 ± 0.20	403.20 ± 4.06	0.9181
23F04464	10.5 %	19.73 ± 0.24	406.37 ± 5.10	0.8996
23F04465	11.0 %	9.03 ± 0.09	341.08 ± 3.29	0.7877
23F04466	11.5 %	6.95 ± 0.09	329.57 ± 3.74	0.6963
23F04468	12.0 %	7.31 ± 0.10	335.59 ± 3.90	0.6944
23F04469	12.5 %	5.21 ± 0.07	317.00 ± 3.42	0.6144
23F04470	13.0 %	5.06 ± 0.09	318.23 ± 3.96	0.5595
23F04472	13.5 %	5.44 ± 0.08	318.47 ± 3.60	0.5934
23F04473	14.5 %	6.36 ± 0.09	325.69 ± 3.52	0.6526
23F04474	15.0 %	11.30 ± 0.11	359.41 ± 3.43	0.8521
23F04476	15.6 %	17.82 ± 0.12	400.15 ± 2.73	0.9461
23F04477	16.2 %	7.45 ± 0.06	335.32 ± 2.29	0.8235
23F04478	17.0 %	7.28 ± 0.06	338.43 ± 2.57	0.7923
23F04480	17.9 %	8.93 ± 0.08	354.01 ± 2.78	0.8377
23F04481	19.0 %	23.90 ± 0.43	449.22 ± 8.29	0.9051
23F04482	21.2 %	7.48 ± 0.06	345.64 ± 2.53	0.8220
23F04484	23.5 %	29.14 ± 0.68	475.52 ± 11.40	0.9201

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron	295.14 ± 7.99 ± 2.71%	5.70362 ± 0.17143 ± 3.01%	17.32 ± 0.52 ± 3.00%	1.68 11%
			Full External Error ± 1.04 Analytical Error ± 0.52	
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	2.07 1.2978 9	Convergence Number of Iterations Calculated Line	0.000053800528 10 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
23F04441	0.7 %	0.0595402	1.99	0.0000000	0.00	0.00002166	4.94	0.00000000	#####	0.801	4.93	0.0112233	2.00	0.00000000	0.00	0.00002326	44.50	0.0001442	10.82	0.0000957	#####	0.01926	44.50	0.0005148	5.02	0.12853	328.82	17.7763	1.99	0.00000000	0.00	0.0000117	45.54
23F04443	0.9 %	0.0240820	4.76	0.0000000	0.00	0.00000885	12.58	0.00000003	291.57	0.327	12.58	0.0045394	4.76	0.00000000	0.00	0.0001408	77.03	0.0000589	15.84	0.0030654	291.57	0.01166	77.03	0.0002103	12.62	0.13446	307.00	7.1899	4.76	0.00000000	0.00	0.0000071	77.63
23F04445	1.2 %	0.0736845	1.63	0.0000000	0.00	0.00006635	1.71	0.00000000	0.00	2.455	1.70	0.0138895	1.63	0.00000000	0.00	0.0007400	14.14	0.0004419	9.78	0.00000000	0.00	0.06128	14.14	0.0015772	1.94	0.58157	73.29	21.9993	1.63	0.00000000	0.00	0.0000372	17.12
23F04446	1.8 %	0.2710685	0.53	0.0000000	0.00	0.0092245	0.32	0.00000002	406.14	34.127	0.27	0.0510964	0.55	0.00000000	0.00	0.0074685	1.43	0.0061429	9.63	0.0022569	406.15	0.61840	1.43	0.0219266	0.96	2.77176	17.73	80.9302	0.54	0.00000000	0.00	0.0003754	9.76
23F04447	2.3 %	0.1775437	0.76	0.0000000	0.00	0.0186903	0.30	0.00000002	617.55	69.147	0.24	0.0334670	0.77	0.00000000	0.00	0.0138165	0.83	0.0124464	9.63	0.0015412	617.55	1.14403	0.82	0.0444267	0.95	5.31888	8.76	53.0075	0.76	0.00000000	0.00	0.0006944	9.69
23F04449	2.8 %	0.1357743	0.97	0.00000000	0.00	0.0309113	0.29	0.00000000	0.00	114.359	0.24	0.0255935	0.99	0.00000000	0.00	0.0222357	0.51	0.0205847	9.63	0.00000000	0.00	1.84116	0.50	0.0734758	0.95	10.58863	4.33	40.5368	0.98	0.00000000	0.00	0.0011176	9.66
23F04450	3.4 %	0.1324263	1.05	0.00000000	0.00	0.0689939	0.29	0.00000000	0.00	255.249	0.23	0.0249624	1.06	0.00000000	0.00	0.0486027	0.27	0.0459449	9.63	0.00000000	0.00	4.02440	0.25	0.1639977	0.95	22.58985	2.11	39.5372	1.05	0.00000000	0.00	0.0024428	9.65
23F04452	4.0 %	0.1501587	1.07	0.00000000	0.00	0.1630808	0.29	0.00000000	0.00	603.333	0.23	0.0283049	1.09	0.00000000	0.00	0.1137626	0.15	0.1085999	9.63	0.00000000	0.00	9.41977	0.12	0.3876411	0.95	53.51811	1.00	44.8314	1.08	0.00000000	0.00	0.0057178	9.65
23F04453	4.7 %	0.1524873	1.05	0.00000000	0.00	0.1878037	0.29	0.00000000	0.00	694.797	0.23	0.0287439	1.06	0.00000000	0.00	0.1314490	0.14	0.1250635	9.63	0.00000000	0.00	10.88424	0.11	0.4464072	0.95	62.44563	0.85	45.5266	1.06	0.00000000	0.00	0.0066067	9.65
23F04454	5.3 %	0.2073133	0.83	0.00000000	0.00	0.1818184	0.29	0.00000000	0.00	672.654	0.23	0.0390786	0.84	0.00000000	0.00	0.1283744	0.15	0.1210777	9.63	0.00000000	0.00	10.62966	0.12	0.4321802	0.95	58.71532	0.96	61.8955	0.83	0.00000000	0.00	0.0064522	9.65
23F04456	6.0 %	0.2238643	0.81	0.00000000	0.00	0.2200945	0.29	0.00000000	0.00	814.260	0.23	0.0421984	0.83	0.00000000	0.00	0.1558118	0.14	0.1465668	9.63	0.00000000	0.00	12.90153	0.10	0.5231621	0.95	73.33445	0.81	66.8369	0.82	0.00000000	0.00	0.0078312	9.65
23F04457	6.8 %	0.2790759	0.68	0.00000000	0.00	0.2182105	0.29	0.00000000	0.00	807.290	0.23	0.0526058	0.70	0.00000000	0.00	0.1556248	0.13	0.1453122	9.63	0.00000000	0.00	12.88605	0.10	0.5186838	0.95	72.07659	0.85	83.3209	0.68	0.00000000	0.00	0.0078218	9.65
23F04458	7.5 %	0.2858846	0.63	0.00000000	0.00	0.1978107	0.29	0.00000000	0.00	731.819	0.23	0.0538892	0.65	0.00000000	0.00	0.1419971	0.14	0.1317274	9.63	0.00000000	0.00	11.75765	0.11	0.4701937	0.95	65.52813	0.91	85.3537	0.64	0.00000000	0.00	0.0071369	9.65
23F04460	8.3 %	0.3351759	0.59	0.00000000	0.00	0.2121346	0.29	0.00000000	0.00	784.812	0.23	0.0631807	0.61	0.00000000	0.00	0.1531702	0.13	0.1412661	9.63	0.00000000	0.00	12.68280	0.10	0.5042416	0.95	71.53366	0.90	100.0701	0.60	0.00000000	0.00	0.0076985	9.65
23F04461	9.1 %	0.3998833	0.51	0.00000000	0.00	0.1688829	0.29	0.00000000	0.00	624.798	0.23	0.0753780	0.54	0.00000000	0.00	0.1227097	0.15	0.1124636	9.63	0.00000000	0.00	10.16061	0.12	0.4014326	0.95	55.05601	1.21	119.3892	0.52	0.00000000	0.00	0.0061675	9.65
23F04462	9.8 %	0.3942450	0.48	0.00000000	0.00	0.1269522	0.29	0.00000000	0.00	469.672	0.23	0.0743152	0.51	0.00000000	0.00	0.0931896	0.17	0.0845409	9.63	0.00000000	0.00	7.71629	0.14	0.3017640	0.95	41.25382	1.52	117.7058	0.49	0.00000000	0.00	0.0046838	9.65
23F04464	10.5 %	0.2696836	0.59	0.00000000	0.00	0.0878562	0.29	0.00000000	0.00	325.032	0.23	0.0508354	0.61	0.00000000	0.00	0.0642604	0.20	0.0585058	9.63	0.00000000	0.00	5.32089	0.18	0.2088333	0.95	29.07426	1.84	80.5167	0.60	0.00000000	0.00	0.0032298	9.65
23F04465	11.0 %	0.3745299	0.45	0.00000000	0.00	0.0556295	0.29	0.00000000	0.00	205.806	0.23	0.0705989	0.47	0.00000000	0.00	0.0408334	0.29	0.0370452	9.63	0.00000000	0.00	3.38109	0.28	0.1322306	0.95	15.92570	3.53	111.8196	0.46	0.00000000	0.00	0.0020523	9.65
23F04466	11.5 %	0.3051404	0.52	0.00000000	0.00	0.0350061	0.29	0.00000000	0.00	129.508	0.24	0.0575190	0.54	0.00000000	0.00	0.0256121	0.45	0.0233115	9.63	0.00000000	0.00	2.12073	0.44	0.0832092	0.95	9.46114	5.65	91.1027	0.53	0.00000000	0.00	0.0012873	9.66
23F04468	12.0 %	0.2804691	0.53	0.00000000	0.00	0.0334819	0.29	0.00000000	0.00	123.869	0.24	0.0528684	0.55	0.00000000	0.00	0.0247449	0.45	0.0222965	9.63	0.00000000	0.00	2.04893	0.44	0.0795860	0.95	10.38563	4.86	83.7369	0.54	0.00000000	0.00	0.0012437	9.66
23F04469	12.5 %	0.3109187	0.49	0.00000000	0.00	0.0268692	0.29	0.00000000	0.00	99.405	0.24	0.0586082	0.51	0.00000000	0.00	0.0195812	0.53	0.0178929	9.63	0.00000000	0.00	1.62136	0.52	0.0638679	0.95	5.73481	8.99	92.8279	0.50	0.00000000	0.00	0.0009842	9.66
23F04470	13.0 %	0.2656147	0.56	0.00000000	0.00	0.0224846	0.29	0.00000000	0.00	83.184	0.24	0.0500684	0.58	0.00000000	0.00	0.0162444	0.71	0.0149731	9.63	0.00000000	0.00	1.34507	0.70	0.0534455	0.95	5.22418	9.69	79.3019	0.57	0.00000000	0.00	0.0008165	9.68
23F04472	13.5 %	0.2930313	0.51	0.00000000	0.00	0.0264908	0.29	0.00000000	0.00	98.005	0.24	0.0552364	0.53	0.00000000	0.00	0.0192513	0.59	0.0176409	9.63	0.00000000	0.00	1.59404	0.58	0.0629683	0.95	5.83290	8.74	87.4874	0.52	0.00000000	0.00	0.0009676	9.67
23F04473	14.5 %	0.3106569	0.49	0.00000000	0.00	0.0316529	0.29	0.00000000	0.00	117.103	0.24	0.0585588	0.52	0.00000000	0.00	0.0238562	0.48	0.0210785	9.63	0.00000000	0.00	1.97534	0.47	0.0752386	0.95	8.42702	6.15	92.7497	0.50	0.00000000	0.00	0.0011990	9.66
23F04474	15.0 %	0.4029917	0.45	0.00000000	0.00	0.0742347	0.29	0.00000000	0.00	274.638	0.23	0.0759639	0.48	0.00000000	0.00	0.0549963	0.23	0.0494349	9.63	0.00000000	0.00	4.55381	0.21	0.1764550	0.95	24.52317	2.46	120.3172	0.46	0.00000000	0.00	0.0027642	9.65
23F04476	15.6 %	0.8561973	0.33	0.00000000	0.00	0.2527188	0.29	0.00000000	0.00	934.957	0.23	0.1613932	0.37	0.00000000	0.00	0.1842425	0.13	0.1682922	9.63	0.00000000	0.00	15.25565	0.09	0.6007098	0.95	86.97786	1.06	255.6263	0.35	0.00000000	0.00	0.0092602	9.65
23F04477	16.2 %	0.6850649	0.33	0.00000000	0.00	0.0887389	0.29	0.00000000	0.00	328.298	0.23	0.1291347	0.36	0.00000000	0.00	0.0616458	0.21	0.0590936	9.63	0.00000000	0.00	5.10440	0.19	0.2109314	0.95	25.18461	2.93	204.5330	0.34	0.00000000	0.00	0.0030984	9.65
23F04478	17.0 %	0.5586720	0.36	0.00000000	0.00	0.0721561	0.29	0.00000000	0.00	266.948	0.23	0.1053097	0.39	0.00000000	0.00	0.0491102	0.25	0.0480507	9.63	0.00000000	0.00	4.06642	0.24	0.1715142	0.95	22.27536	2.99	166.7971	0.37	0.00000000	0.00	0.0024683	9.65
23F04480	17.9 %	0.5446381	0.37	0.00000000	0.00	0.0857323	0.29	0.00000000	0.00	317.175	0.23	0.1026643	0.41	0.00000000	0.00	0.0587184	0.22	0.0570914	9.63	0.00000000	0.00	4.86201	0.20	0.2037846	0.95	30.20207	2.23	162.6071	0.39	0.00000000	0.00	0.0029512	9.65
23F04481	19.0 %	0.1632458	0.87	0.00000000	0.00	0.0700565	0.29	0.00000000	0.00	259.181	0.23	0.0307718	0.88	0.00000000	0.00	0.0471212	0.26	0.0466525	9.63	0.00000000	0.00	3.90173	0.24	0.1665236	0.95	24.59516	1.97	48.7387	0.87	0.00000000	0.00	0.0023683	9.65
23F04482	21.2 %	0.6419323	0.35	0.00000000	0.00	0.0863713	0.29	0.00000000	0.00	319.539																							

Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
23F04441	0.7 %	892.362738	386.958975	40.513972	17.673650	3.021607	1.311047	65.714	3.670944	1.00046467	6.247E-13
23F04443	0.9 %	594.268445	450.068176	27.565877	21.143946	2.035859	1.543442	65.733	3.672303	1.00046480	2.498E-13
23F04445	1.2 %	359.267938	49.664785	39.057310	5.425382	1.182899	0.164186	65.751	3.673613	1.00046493	7.994E-13
23F04446	1.8 %	130.717591	1.840364	53.296092	0.749294	0.437733	0.006440	65.760	3.674268	1.00046499	2.963E-12
23F04447	2.3 %	49.077874	0.434689	58.181800	0.482024	0.165117	0.001728	65.769	3.674924	1.00046505	2.065E-12
23F04449	2.8 %	✓26.702952	0.175614	59.728877	0.318482	0.087058	0.000804	65.787	3.676234	1.00046518	1.810E-12
23F04450	3.4 %	✓14.833710	0.065450	60.942006	0.203585	0.048090	0.000348	65.797	3.676940	1.00046525	2.199E-12
23F04452	4.0 %	✓10.028660	0.026112	61.518010	0.159519	0.031939	0.000161	65.815	3.678252	1.00046538	3.482E-12
23F04453	4.7 %	✓9.529804	0.022481	61.320161	0.155586	0.030033	0.000136	65.824	3.678908	1.00046544	3.822E-12
23F04454	5.3 %	✓10.903904	0.023897	60.808515	0.155932	0.035178	0.000152	65.833	3.679564	1.00046551	4.270E-12
23F04456	6.0 %	✓10.441894	0.019629	60.653902	0.151763	0.033070	0.000130	65.851	3.680876	1.00046563	4.962E-12
23F04457	6.8 %	✓11.593318	0.019944	60.224242	0.149948	0.037098	0.000137	65.860	3.681583	1.00046570	5.501E-12
23F04458	7.5 %	✓12.339786	0.022316	59.848581	0.151088	0.039557	0.000146	65.869	3.682240	1.00046577	5.341E-12
23F04460	8.3 %	✓13.013641	0.020870	59.513851	0.148247	0.041504	0.000147	65.887	3.683553	1.00046589	6.075E-12
23F04461	9.1 %	16.516814	0.028277	59.155008	0.152249	0.053850	0.000198	65.897	3.684210	1.00046596	6.176E-12
23F04462	9.8 %	19.825798	0.039016	58.576779	0.157393	0.065003	0.000248	65.906	3.684867	1.00046602	5.627E-12
23F04464	10.5 %	19.819108	0.053971	58.779115	0.170856	0.064658	0.000305	65.924	3.686182	1.00046615	3.880E-12
23F04465	11.0 %	36.360888	0.116358	58.578912	0.206940	0.122437	0.000573	65.933	3.686890	1.00046622	4.522E-12
23F04466	11.5 %	45.629727	0.219647	58.762241	0.284828	0.154336	0.000969	65.942	3.687547	1.00046628	3.560E-12
23F04468	12.0 %	44.220356	0.216483	58.195134	0.282503	0.147498	0.000933	65.960	3.688862	1.00046641	3.332E-12
23F04469	12.5 %	58.486822	0.322758	58.986211	0.326389	0.200440	0.001343	65.969	3.689520	1.00046647	3.489E-12
23F04470	13.0 %	60.440360	0.439266	59.479927	0.425252	0.206003	0.001746	65.978	3.690178	1.00046653	2.992E-12
23F04472	13.5 %	56.319048	0.342900	59.145717	0.358163	0.192830	0.001399	65.998	3.691596	1.00046667	3.304E-12
23F04473	14.5 %	49.341115	0.250484	57.107180	0.292277	0.166933	0.001059	66.008	3.692305	1.00046674	3.582E-12
23F04474	15.0 %	30.620526	0.078831	58.059804	0.179725	0.100888	0.000432	66.017	3.692963	1.00046680	5.127E-12
23F04476	15.6 %	21.607315	0.022555	58.964151	0.145535	0.069935	0.000183	66.035	3.694281	1.00046693	1.213E-11
23F04477	16.2 %	43.218504	0.089285	61.764324	0.182623	0.145580	0.000493	66.044	3.694939	1.00046700	8.132E-12
23F04478	17.0 %	44.614873	0.113176	62.990154	0.203472	0.148853	0.000576	66.053	3.695598	1.00046706	6.693E-12
23F04480	17.9 %	38.061617	0.085713	62.611067	0.189126	0.124437	0.000465	66.072	3.696967	1.00046719	6.826E-12
23F04481	19.0 %	18.026463	0.070266	63.708115	0.209315	0.057347	0.000369	66.081	3.697626	1.00046726	2.596E-12
23F04482	21.2 %	44.301062	0.099267	63.800585	0.195944	0.145417	0.000532	66.090	3.698286	1.00046732	7.854E-12
23F04484	23.5 %	15.648257	0.072848	63.892112	0.215356	0.050177	0.000388	66.108	3.699605	1.00046745	2.054E-12

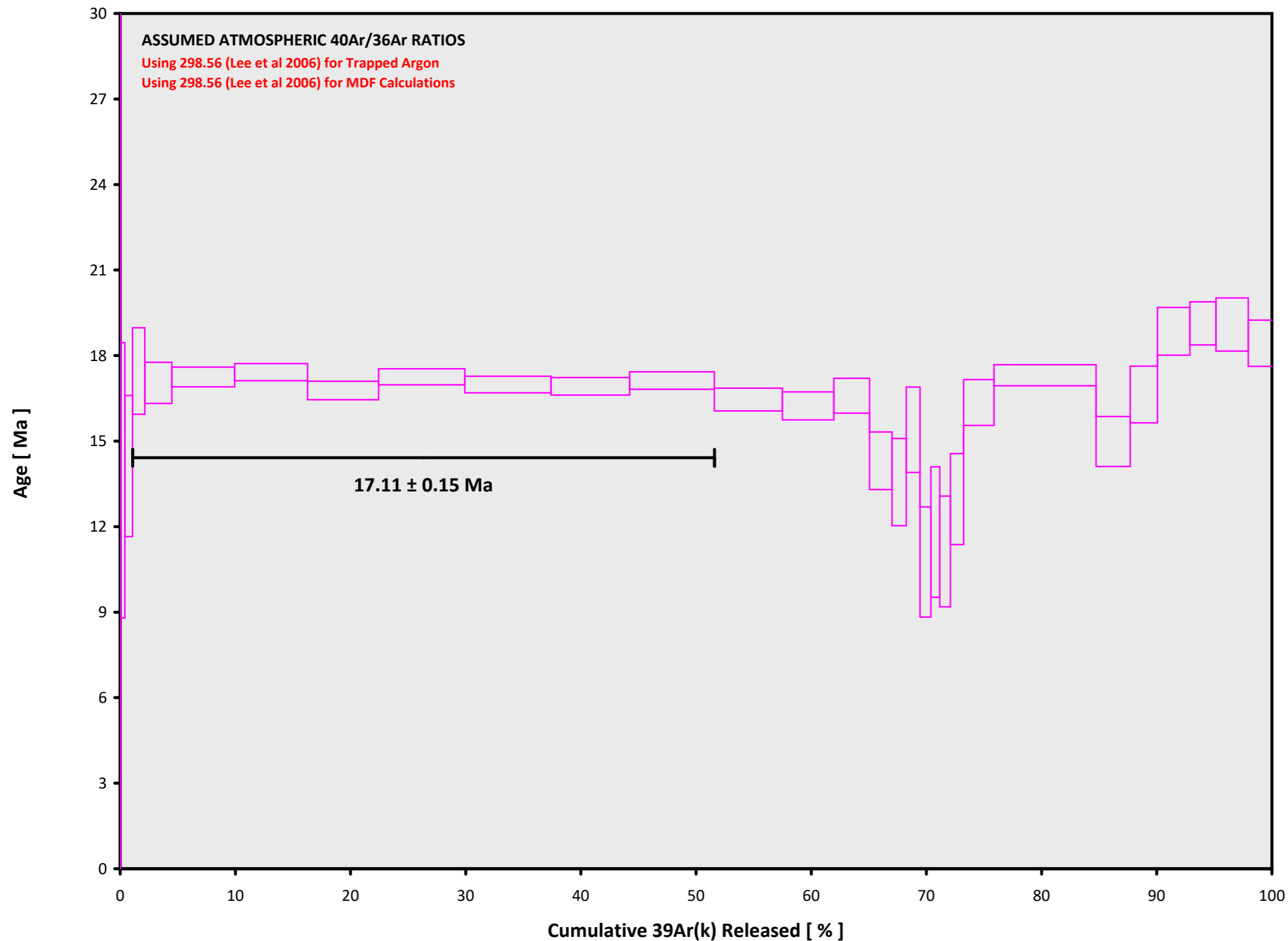
Procedure Blanks		36Ar ± 1σ (SE) [fA]	37Ar ± 1σ (SE) [fA]	38Ar ± 1σ (SE) [fA]	39Ar ± 1σ (SE) [fA]	40Ar ± 1σ (SE) [fA]
23F04441	0.7 %	0.0256576 ± 0.0010500	0.0244351 ± 0.0090544	0.0022825 ± 0.0065114	0.0013091 ± 0.0062881	7.5560732 ± 0.2299757
23F04443	0.9 %	0.0256726 ± 0.0010500	0.0241849 ± 0.0090544	0.0048809 ± 0.0065114	0.0074932 ± 0.0062881	7.4598890 ± 0.2299757
23F04445	1.2 %	0.0257186 ± 0.0010500	0.0247560 ± 0.0090544	0.0059771 ± 0.0065114	0.0126622 ± 0.0062881	7.4111341 ± 0.2299757
23F04446	1.8 %	0.0257486 ± 0.0010500	0.0252568 ± 0.0090544	0.0061301 ± 0.0065114	0.0149403 ± 0.0062881	7.3994179 ± 0.2299757
23F04447	2.3 %	0.0257811 ± 0.0010500	0.0258617 ± 0.0090544	0.0060784 ± 0.0065114	0.0170075 ± 0.0062881	7.3944662 ± 0.2299757
23F04449	2.8 %	0.0258477 ± 0.0010500	0.0272789 ± 0.0090544	0.0055206 ± 0.0065114	0.0204965 ± 0.0062881	7.4002737 ± 0.2299757
23F04450	3.4 %	0.0258817 ± 0.0010500	0.0281037 ± 0.0090544	0.0050513 ± 0.0065114	0.0220150 ± 0.0062881	7.4097106 ± 0.2299757
23F04452	4.0 %	0.0259353 ± 0.0010500	0.0296457 ± 0.0090544	0.0040343 ± 0.0065114	0.0241668 ± 0.0062881	7.4340697 ± 0.2299757
23F04453	4.7 %	0.0259558 ± 0.0010500	0.0303875 ± 0.0090544	0.0035123 ± 0.0065114	0.0249210 ± 0.0062881	7.4478985 ± 0.2299757
23F04454	5.3 %	0.0259709 ± 0.0010500	0.0310912 ± 0.0090544	0.0030142 ± 0.0065114	0.0254652 ± 0.0062881	7.4618526 ± 0.2299757
23F04456	6.0 %	0.0259831 ± 0.0010500	0.0323417 ± 0.0090544	0.0021720 ± 0.0065114	0.0259449 ± 0.0062881	7.4876607 ± 0.2299757
23F04457	6.8 %	0.0259788 ± 0.0010500	0.0329108 ± 0.0090544	0.0018422 ± 0.0065114	0.0258821 ± 0.0062881	7.4992165 ± 0.2299757
23F04458	7.5 %	0.0259676 ± 0.0010500	0.0333668 ± 0.0090544	0.0016328 ± 0.0065114	0.0256343 ± 0.0062881	7.5078726 ± 0.2299757
23F04460	8.3 %	0.0259242 ± 0.0010500	0.0340624 ± 0.0090544	0.0015326 ± 0.0065114	0.0246323 ± 0.0062881	7.5178995 ± 0.2299757
23F04461	9.1 %	0.0258922 ± 0.0010500	0.0343043 ± 0.0090544	0.0016538 ± 0.0065114	0.0239011 ± 0.0062881	7.5188252 ± 0.2299757
23F04462	9.8 %	0.0258538 ± 0.0010500	0.0344806 ± 0.0090544	0.0018929 ± 0.0065114	0.0230340 ± 0.0062881	7.5168528 ± 0.2299757
23F04464	10.5 %	0.0257591 ± 0.0010500	0.0346654 ± 0.0090544	0.0027187 ± 0.0065114	0.0209513 ± 0.0062881	7.5041418 ± 0.2299757
23F04465	11.0 %	0.0256996 ± 0.0010500	0.0346946 ± 0.0090544	0.0033444 ± 0.0065114	0.0196743 ± 0.0062881	7.4926282 ± 0.2299757
23F04466	11.5 %	0.0256402 ± 0.0010500	0.0346956 ± 0.0090544	0.0040269 ± 0.0065114	0.0184161 ± 0.0062881	7.4792517 ± 0.2299757
23F04468	12.0 %	0.0255130 ± 0.0010500	0.0346878 ± 0.0090544	0.0056346 ± 0.0065114	0.0157712 ± 0.0062881	7.4458983 ± 0.2299757
23F04469	12.5 %	0.0254475 ± 0.0010500	0.0347169 ± 0.0090544	0.0065278 ± 0.0065114	0.0144268 ± 0.0062881	7.4266783 ± 0.2299757
23F04470	13.0 %	0.0253823 ± 0.0010500	0.0347968 ± 0.0090544	0.0074546 ± 0.0065114	0.0130981 ± 0.0062881	7.4063913 ± 0.2299757
23F04472	13.5 %	0.0252501 ± 0.0010500	0.0352592 ± 0.0090544	0.0094544 ± 0.0065114	0.0104045 ± 0.0062881	7.3618273 ± 0.2299757
23F04473	14.5 %	0.0251922 ± 0.0010500	0.0357076 ± 0.0090544	0.0103895 ± 0.0065114	0.0092080 ± 0.0062881	7.3407764 ± 0.2299757
23F04474	15.0 %	0.0251459 ± 0.0010500	0.0362987 ± 0.0090544	0.0111741 ± 0.0065114	0.0082270 ± 0.0062881	7.3231070 ± 0.2299757
23F04476	15.6 %	0.0250829 ± 0.0010500	0.0381255 ± 0.0090544	0.0123590 ± 0.0065114	0.0067611 ± 0.0062881	7.2968480 ± 0.2299757
23F04477	16.2 %	0.0250705 ± 0.0010500	0.0394352 ± 0.0090544	0.0126824 ± 0.0065114	0.0063382 ± 0.0062881	7.2902401 ± 0.2299757
23F04478	17.0 %	0.0250738 ± 0.0010500	0.0410621 ± 0.0090544	0.0127706 ± 0.0065114	0.0061653 ± 0.0062881	7.2894251 ± 0.2299757
23F04480	17.9 %	0.0251421 ± 0.0010500	0.0456421 ± 0.0090544	0.0120028 ± 0.0065114	0.0067538 ± 0.0062881	7.3114394 ± 0.2299757
23F04481	19.0 %	0.0252099 ± 0.0010500	0.0485215 ± 0.0090544	0.0110717 ± 0.0065114	0.0075683 ± 0.0062881	7.3361534 ± 0.2299757
23F04482	21.2 %	0.0253042 ± 0.0010500	0.0519055 ± 0.0090544	0.0097039 ± 0.0065114	0.0087788 ± 0.0062881	7.3719251 ± 0.2299757
23F04484	23.5 %	0.0255845 ± 0.0010500	0.0603952 ± 0.0090544	0.0054296 ± 0.0065114	0.0125440 ± 0.0062881	7.4826369 ± 0.2299757

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)
23F04441	0.7 %	0.0831048 ± 0.0004279	0.3947	EXP 150 of 150	0.240117 ± 0.005566	0.0000	EXP 148 of 150	0.0138861 ± 0.0063801	0.0022	EXP 148 of 150	0.0209986 ± 0.0057699	0.6568	EXP 149 of 150	25.203890 ± 0.016303	0.9900	EXP 150 of 150
23F04443	0.9 %	0.0489091 ± 0.0003325	0.0484	EXP 147 of 150	0.112252 ± 0.006384	0.0319	EXP 150 of 150	0.0126239 ± 0.0060138	0.0040	EXP 150 of 150	0.0193135 ± 0.0063600	0.5164	EXP 150 of 150	14.515344 ± 0.016276	0.9956	EXP 150 of 150
23F04445	1.2 %	0.0971930 ± 0.0004537	0.5639	EXP 150 of 150	0.685097 ± 0.006485	0.4052	EXP 150 of 150	0.0186072 ± 0.0062814	0.0019	EXP 149 of 150	0.0752380 ± 0.0059059	0.5672	EXP 148 of 150	29.991989 ± 0.017797	0.9242	EXP 150 of 150
23F04446	1.8 %	0.2952083 ± 0.0007209	0.9446	EXP 150 of 150	9.203630 ± 0.007460	0.9947	EXP 150 of 150	0.0725665 ± 0.0063131	0.0075	EXP 150 of 150	0.6524525 ± 0.0061511	0.0778	EXP 150 of 150	91.101760 ± 0.021737	0.9986	EXP 149 of 150
23F04447	2.3 %	0.2144307 ± 0.0006601	0.9018	EXP 150 of 150	18.619339 ± 0.008226	0.9984	EXP 150 of 150	0.0668661 ± 0.0067269	0.0109	EXP 150 of 150	1.2002370 ± 0.0069321	0.4624	EXP 150 of 150	65.721495 ± 0.020440	0.9954	EXP 149 of 150
23F04449	2.8 %	0.1860909 ± 0.0006416	0.8521	EXP 150 of 150	30.767417 ± 0.009534	0.9992	EXP 150 of 150	0.0612995 ± 0.0060705	0.0074	EXP 147 of 150	1.9267114 ± 0.0065275	0.8467	EXP 145 of 150	58.526800 ± 0.022647	0.9900	EXP 150 of 150
23F04450	3.4 %	0.2195169 ± 0.0007149	0.8873	EXP 150 of 150	68.626785 ± 0.012594	0.9997	EXP 150 of 150	0.0941242 ± 0.0063578	0.0391	EXP 149 of 150	4.1919835 ± 0.0074510	0.9721	EXP 150 of 150	69.539194 ± 0.018198	0.9968	EXP 150 of 150
23F04452	4.0 %	0.3270679 ± 0.0008801	0.9336	EXP 150 of 150	162.118409 ± 0.019671	0.9999	EXP 147 of 150	0.1673722 ± 0.0063009	0.0559	EXP 149 of 150	9.7884242 ± 0.0078560	0.9952	EXP 150 of 150	105.789280 ± 0.018659	0.9993	EXP 150 of 150
23F04453	4.7 %	0.3530943 ± 0.0007901	0.9552	EXP 147 of 150	186.658367 ± 0.023262	0.9999	EXP 150 of 150	0.1868378 ± 0.0065149	0.0896	EXP 150 of 150	11.3057097 ± 0.0076863	0.9966	EXP 150 of 150	115.426748 ± 0.021457	0.9993	EXP 150 of 150
23F04454	5.3 %	0.4000624 ± 0.0009341	0.9534	EXP 150 of 150	180.679028 ± 0.022333	0.9999	EXP 150 of 150	0.1943475 ± 0.0057983	0.1256	EXP 148 of 150	11.0386271 ± 0.0084311	0.9958	EXP 150 of 150	128.079081 ± 0.024534	0.9993	EXP 148 of 150
23F04456	6.0 %	0.4527826 ± 0.0009712	0.9622	EXP 150 of 150	218.632018 ± 0.022132	0.9999	EXP 149 of 150	0.2298972 ± 0.0056158	0.1435	EXP 148 of 150	13.3915619 ± 0.0082333	0.9973	EXP 150 of 150	147.666879 ± 0.023144	0.9996	EXP 148 of 150
23F04457	6.8 %	0.5040447 ± 0.0010133	0.9679	EXP 150 of 150	216.719744 ± 0.021749	0.9999	EXP 150 of 150	0.2474636 ± 0.0066250	0.1912	EXP 149 of 150	13.3716263 ± 0.0075097	0.9977	EXP 150 of 150	162.904544 ± 0.020032	0.9998	EXP 148 of 150
23F04458	7.5 %	0.4909677 ± 0.0009364	0.9713	EXP 149 of 150	196.427837 ± 0.020278	0.9999	EXP 150 of 150	0.2247067 ± 0.0067478	0.1533	EXP 150 of 150	12.1996658 ± 0.0081101	0.9968	EXP 150 of 150	158.396834 ± 0.022721	0.9997	EXP 150 of 150
23F04460	8.3 %	0.5520809 ± 0.0010859	0.9698	EXP 150 of 150	210.574852 ± 0.020897	0.9999	EXP 150 of 150	0.2405123 ± 0.0065566	0.1812	EXP 149 of 150	13.1536444 ± 0.0073359	0.9978	EXP 148 of 150	179.129378 ± 0.024336	0.9997	EXP 150 of 150
23F04461	9.1 %	0.5726752 ± 0.0012342	0.9650	EXP 150 of 150	167.618392 ± 0.018283	0.9999	EXP 150 of 150	0.2196788 ± 0.0066689	0.1066	EXP 150 of 150	10.5394641 ± 0.0081390	0.9955	EXP 150 of 150	181.970163 ± 0.026019	0.9997	EXP 150 of 150
23F04462	9.8 %	0.5269064 ± 0.0011112	0.9673	EXP 150 of 150	125.987956 ± 0.014947	0.9999	EXP 148 of 150	0.1878336 ± 0.0062808	0.0913	EXP 150 of 150	8.0057991 ± 0.0076835	0.9929	EXP 150 of 150	166.481131 ± 0.021696	0.9998	EXP 150 of 150
23F04464	10.5 %	0.3694797 ± 0.0008749	0.9568	EXP 148 of 150	87.168634 ± 0.014087	0.9998	EXP 150 of 150	0.1289910 ± 0.0064955	0.0497	EXP 150 of 150	5.5263397 ± 0.0066345	0.9884	EXP 149 of 150	117.098359 ± 0.022252	0.9994	EXP 150 of 150
23F04465	11.0 %	0.4392331 ± 0.0009253	0.9657	EXP 149 of 150	55.196239 ± 0.012316	0.9996	EXP 150 of 150	0.1342768 ± 0.0060535	0.0726	EXP 149 of 150	3.5175309 ± 0.0065576	0.9667	EXP 150 of 150	135.240031 ± 0.025252	0.9995	EXP 150 of 150
23F04466	11.5 %	0.3526399 ± 0.0009084	0.9492	EXP 149 of 150	34.740179 ± 0.009658	0.9994	EXP 149 of 150	0.0936462 ± 0.0067416	0.0141	EXP 150 of 150	2.2126557 ± 0.0067557	0.8910	EXP 149 of 150	108.044410 ± 0.019101	0.9995	EXP 148 of 150
23F04468	12.0 %	0.3273296 ± 0.0007635	0.9564	EXP 150 of 150	33.217166 ± 0.009816	0.9993	EXP 150 of 150	0.0790402 ± 0.0066416	0.0036	EXP 150 of 150	2.1349191 ± 0.0063360	0.8994	EXP 150 of 150	101.569641 ± 0.018436	0.9994	EXP 149 of 150
23F04469	12.5 %	0.3501797 ± 0.0007931	0.9600	EXP 150 of 150	26.658954 ± 0.007906	0.9993	EXP 147 of 150	0.0947350 ± 0.0063664	0.0558	EXP 147 of 150	1.6922385 ± 0.0054902	0.8508	EXP 148 of 150	105.990364 ± 0.020119	0.9994	EXP 149 of 150
23F04470	13.0 %	0.3023463 ± 0.0008099	0.9424	EXP 150 of 150	22.310360 ± 0.008272	0.9989	EXP 149 of 150	0.0737691 ± 0.0063384	0.0228	EXP 150 of 150	1.4054603 ± 0.0069277	0.6445	EXP 150 of 150	91.933303 ± 0.019373	0.9991	EXP 150 of 150
23F04472	13.5 %	0.3324225 ± 0.0007842	0.9560	EXP 149 of 150	26.269727 ± 0.010046	0.9988	EXP 150 of 150	0.0879963 ± 0.0063782	0.0166	EXP 149 of 150	1.6601223 ± 0.0066426	0.7872	EXP 150 of 150	100.683121 ± 0.019023	0.9994	EXP 148 of 150
23F04473	14.5 %	0.3542715 ± 0.0008057	0.9601	EXP 148 of 150	31.376338 ± 0.009754	0.9992	EXP 150 of 150	0.0978986 ± 0.0062564	0.0307	EXP 148 of 150	2.0507629 ± 0.0067287	0.8831	EXP 146 of 150	108.518723 ± 0.020580	0.9994	EXP 148 of 150
23F04474	15.0 %	0.4839271 ± 0.0010772	0.9638	EXP 150 of 150	73.525491 ± 0.012903	0.9998	EXP 150 of 150	0.1485153 ± 0.0061440	0.0984	EXP 148 of 150	4.7176682 ± 0.0068054	0.9819	EXP 150 of 150	152.166233 ± 0.021303	0.9997	EXP 150 of 150
23F04476	15.6 %	1.0911387 ± 0.0014131	0.9892	EXP 147 of 150	250.129873 ± 0.021753	0.9999	EXP 150 of 150	0.3753227 ± 0.0072770	0.2763	EXP 150 of 150	15.7933250 ± 0.0080070	0.9982	EXP 150 of 150	349.910240 ± 0.032348	0.9999	EXP 149 of 150
23F04477	16.2 %	0.7689663 ± 0.0012258	0.9830	EXP 150 of 150	87.840219 ± 0.013126	0.9998	EXP 150 of 150	0.1926605 ± 0.0070193	0.0626	EXP 150 of 150	5.2982722 ± 0.0067552	0.9858	EXP 150 of 150	237.010918 ± 0.023056	0.9999	EXP 147 of 150
23F04478	17.0 %	0.6315201 ± 0.0011360	0.9770	EXP 150 of 150	71.421615 ± 0.011081	0.9998	EXP 149 of 150	0.1677346 ± 0.0066380	0.0858	EXP 150 of 150	4.2254455 ± 0.0066765	0.9770	EXP 150 of 150	196.364375 ± 0.024191	0.9998	EXP 149 of 150
23F04480	17.9 %	0.6311482 ± 0.0011813	0.9760	EXP 150 of 150	84.825043 ± 0.012579	0.9998	EXP 148 of 150	0.1760669 ± 0.0063481	0.1029	EXP 149 of 150	5.0502437 ± 0.0068884	0.9836	EXP 149 of 150	200.123598 ± 0.023222	0.9998	EXP 150 of 150
23F04481	19.0 %	0.2494949 ± 0.0007314	0.9222	EXP 150 of 150	69.314056 ± 0.011698	0.9998	EXP 150 of 150	0.0884316 ± 0.0069833	0.0195	EXP 149 of 150	4.0579109 ± 0.0066144	0.9770	EXP 150 of 150	80.672342 ± 0.019222	0.9986	EXP 150 of 150
23F04482	21.2 %	0.7254585 ± 0.0013470	0.9768	EXP 150 of 150	85.432773 ± 0.014434	0.9998	EXP 150 of 150	0.1819566 ± 0.0062049	0.0553	EXP 148 of 150	4.9951275 ± 0.0072759	0.9808	EXP 150 of 150	229.249223 ± 0.025209	0.9999	EXP 150 of 150
23F04484	23.5 %	0.2044793 ± 0.0007158	0.8664	EXP 149 of 150	63.351835 ± 0.011950	0.9997	EXP 150 of 150	0.0762674 ± 0.0070891	0.0124	EXP 150 of 150	3.7048637 ± 0.0061005	0.9763	EXP 148 of 150	65.516491 ± 0.020457	0.9965	EXP 150 of 150

Sample Parameters		Sample	Material	Location	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air	%1σ	MDF (lin)	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Analyst	Project	Experiment	Nmb
													40Ar/36Ar															
23F04441	0.7 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	8	38	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04443	0.9 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	9	5	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04445	1.2 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	9	31	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04446	1.8 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	9	44	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04447	2.3 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	9	57	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04449	2.8 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	10	23	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04450	3.4 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	10	37	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04452	4.0 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	11	3	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04453	4.7 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	11	16	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04454	5.3 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	11	29	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04456	6.0 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	11	55	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04457	6.8 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	12	9	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04458	7.5 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	12	22	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04460	8.3 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	12	48	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04461	9.1 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	13	1	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04462	9.8 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	13	14	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04464	10.5 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	13	40	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04465	11.0 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	13	54	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04466	11.5 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	14	7	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04468	12.0 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	14	33	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04469	12.5 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	14	46	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04470	13.0 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	14	59	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04472	13.5 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	15	27	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04473	14.5 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	15	41	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04474	15.0 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	15	54	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04476	15.6 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	16	20	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04477	16.2 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	16	33	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04478	17.0 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	16	46	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04480	17.9 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	17	13	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04481	19.0 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	17	26	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04482	21.2 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	17	39	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01
23F04484	23.5 %	MM-CRB-32	Plagioclase	Hells Canyon	FCT-NM (5D10-22)	28.201	0.082	Kuiper et al. 2008	9.31638	0.126	0.00166647	0.126	303.34	0.156	0.9960554	0.046	1	3.54E-14	20	FEB	2023	18	5	1	Dan Miggins	Oregon\Mass (22-34)	23F04438	01

Irradiation Constants		40/36(a)		40/36(c)		38/36(a)		38/36(c)		39/37(ca)		38/37(ca)		36/37(ca)		40/39(k)		38/39(k)		36/38(cl)		K/Ca		K/Cl		Ca/Cl		Irradiation	X-pos	Y-pos	Z/H-pos
		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ					
23F04441	0.7 %	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	22-OSU-05	999.00	999.00	17.39
23F04443	0.9 %	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	22-OSU-05	999.00	999.00	17.39
23F04445	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	22-OSU-05	999.00	999.00	17.39
23F04446	1.8 %	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	22-OSU-05	999.00	999.00	17.39
23F04447	2.3 %	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	22-OSU-05	999.00	999.00	17.39
23F04449	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	22-OSU-05	999.00	999.00	17.39
23F04450	3.4 %	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	22-OSU-05	999.00	999.00	17.39
23F04452	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	22-OSU-05	999.00	999.00	17.39
23F04453	4.7 %	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	22-OSU-05	999.00	999.00	17.39
23F04454	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	22-OSU-05	999.00	999.00	17.39
23F04456	6.0 %	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	22-OSU-05	999.00	999.00	17.39
23F04457	6.8 %	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	22-OSU-05	999.00	999.00	17.39
23F04458	7.5 %	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	22-OSU-05	999.00	999.00	17.39
23F04460	8.3 %	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	22-OSU-05	999.00	999.00	17.39
23F04461	9.1 %	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	22-OSU-05	999.00	999.00	17.39
23F04462	9.8 %	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	22-OSU-05	999.00	999.00	17.39
23F04464	10.5 %	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	22-OSU-05	999.00	999.00	17.39
23F04465	11.0 %	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	22-OSU-05	999.00	999.00	17.39
23F04466	11.5 %	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	22-OSU-05	999.00	999.00	17.39
23F04468	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	22-OSU-05	999.00	999.00	17.39
23F04469	12.5 %	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	22-OSU-05	999.00	999.00	17.39
23F04470	13.0 %	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	22-OSU-05	999.00	999.00	17.39
23F04472	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	22-OSU-05	999.00	999.00	17.39
23F04473	14.5 %	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	22-OSU-05	999.00	999.00	17.39
23F04474	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	22-OSU-05	999.00	999.00	17.39
23F04476	15.6 %	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	22-OSU-05	999.00	999.00	17.39
23F04477	16.2 %	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	22-OSU-05	999.00	999.00	17.39
23F04478	17.0 %	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	22-OSU-05	999.00	999.00	17.39
23F04480	17.9 %	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	22-OSU-05	999.00	999.00	17.39
23F04481	19.0 %	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	22-OSU-05	999.00	999.00	17.39
23F04482	21.2 %	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	22-OSU-05	999.00	999.00	17.39
23F04484	23.5 %	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	22-OSU-05	999.00	999.00	17.39

23F04438.AGE >>> MM-CRB-32 >>> OREGON | MASS (22-34) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.11 ± 0.15

TOTAL FUSION

16.76 ± 0.12

NORMAL ISOCHRON

17.32 ± 0.52

INVERSE ISOCHRON

17.32 ± 0.51

MSWD (PROBABILITY)

1.60 (12%)

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

Standard 40/36 = 298.56 ±
0.104 %SD

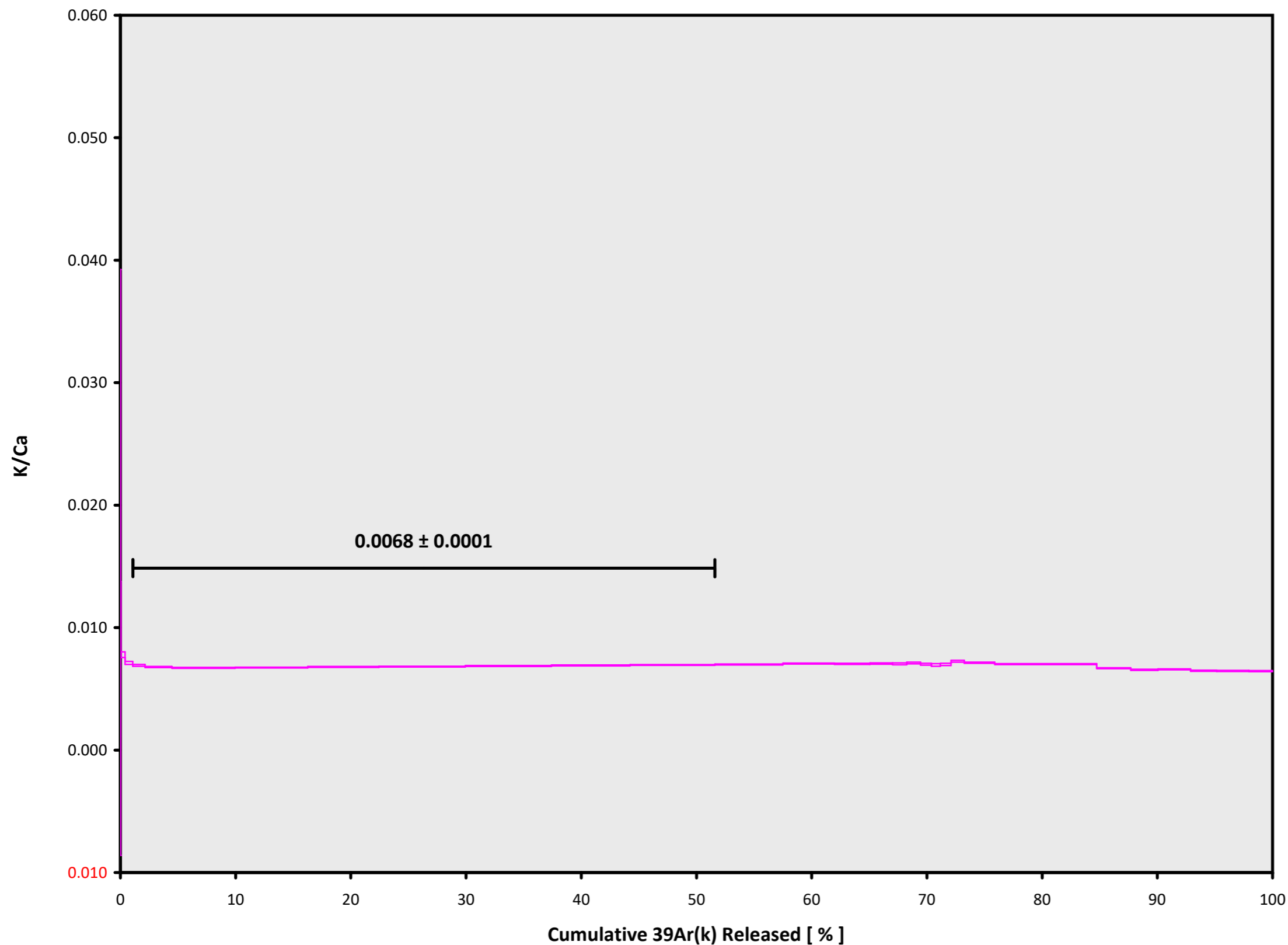
Sample Info

Plagioclase
Hells Canyon
Dan Miggins

IRR = 22-OSU-05 (5D10-22)

J = 0.00166647 ± 0.00000210

23F04438.AGE >>> MM-CRB-32 >>> OREGON | MASS (22-34) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.11 ± 0.15

TOTAL FUSION

16.76 ± 0.12

NORMAL ISOCHRON

17.32 ± 0.52

INVERSE ISOCHRON

17.32 ± 0.51

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

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

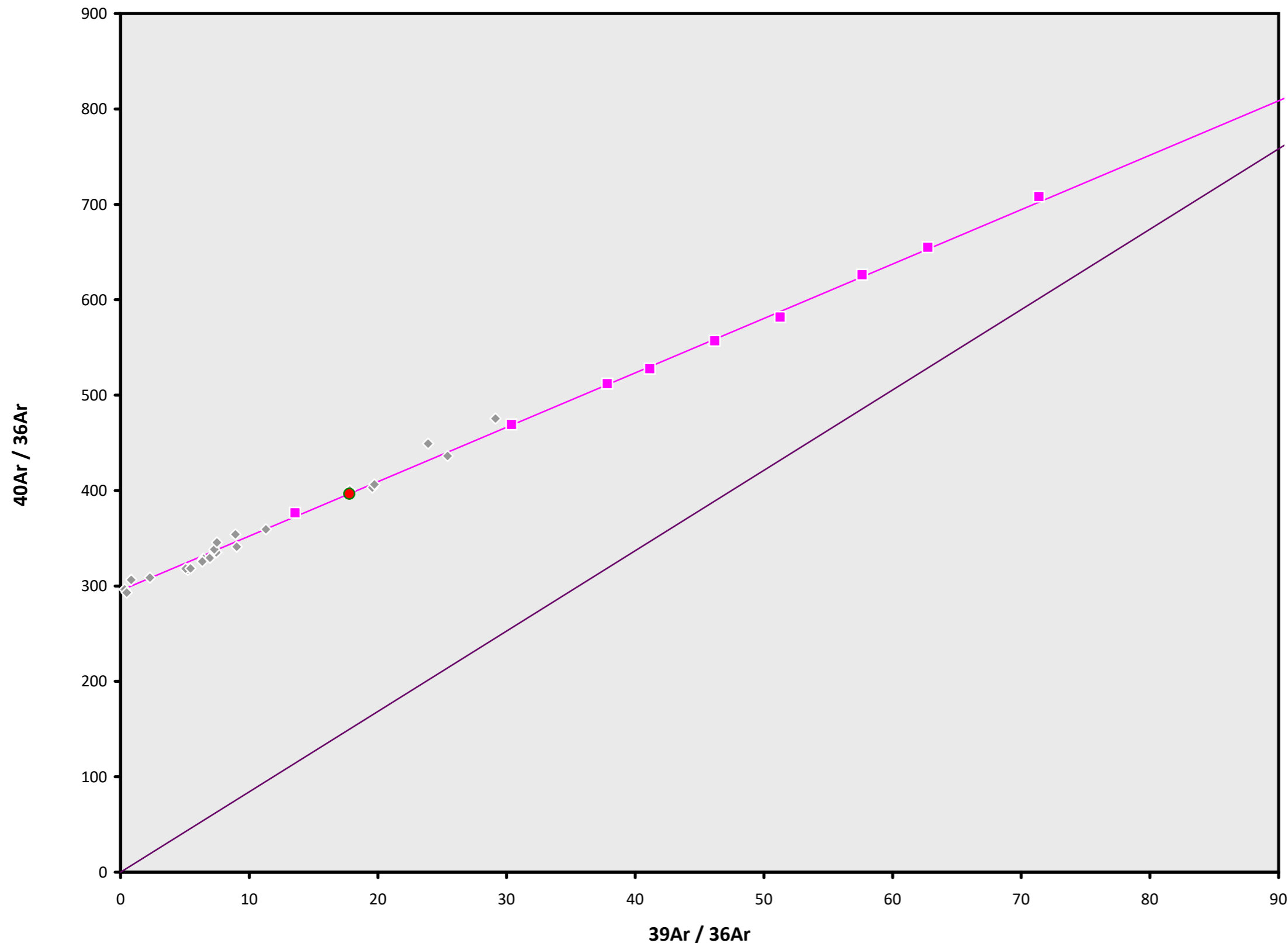
Sample Info

Plagioclase
Hells Canyon
Dan Miggins

IRR = 22-OSU-05 (5D10-22)

J = 0.00166647 ± 0.00000210

23F04438.AGE >>> MM-CRB-32 >>> OREGON | MASS (22-34) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.11 ± 0.15

TOTAL FUSION

16.76 ± 0.12

NORMAL ISOCHRON

17.32 ± 0.52

INVERSE ISOCHRON

17.32 ± 0.51

MSWD (PROBABILITY)

1.68 (11%)

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

INTERCEPT

295.1 ± 8.0

Sample Info

Plagioclase

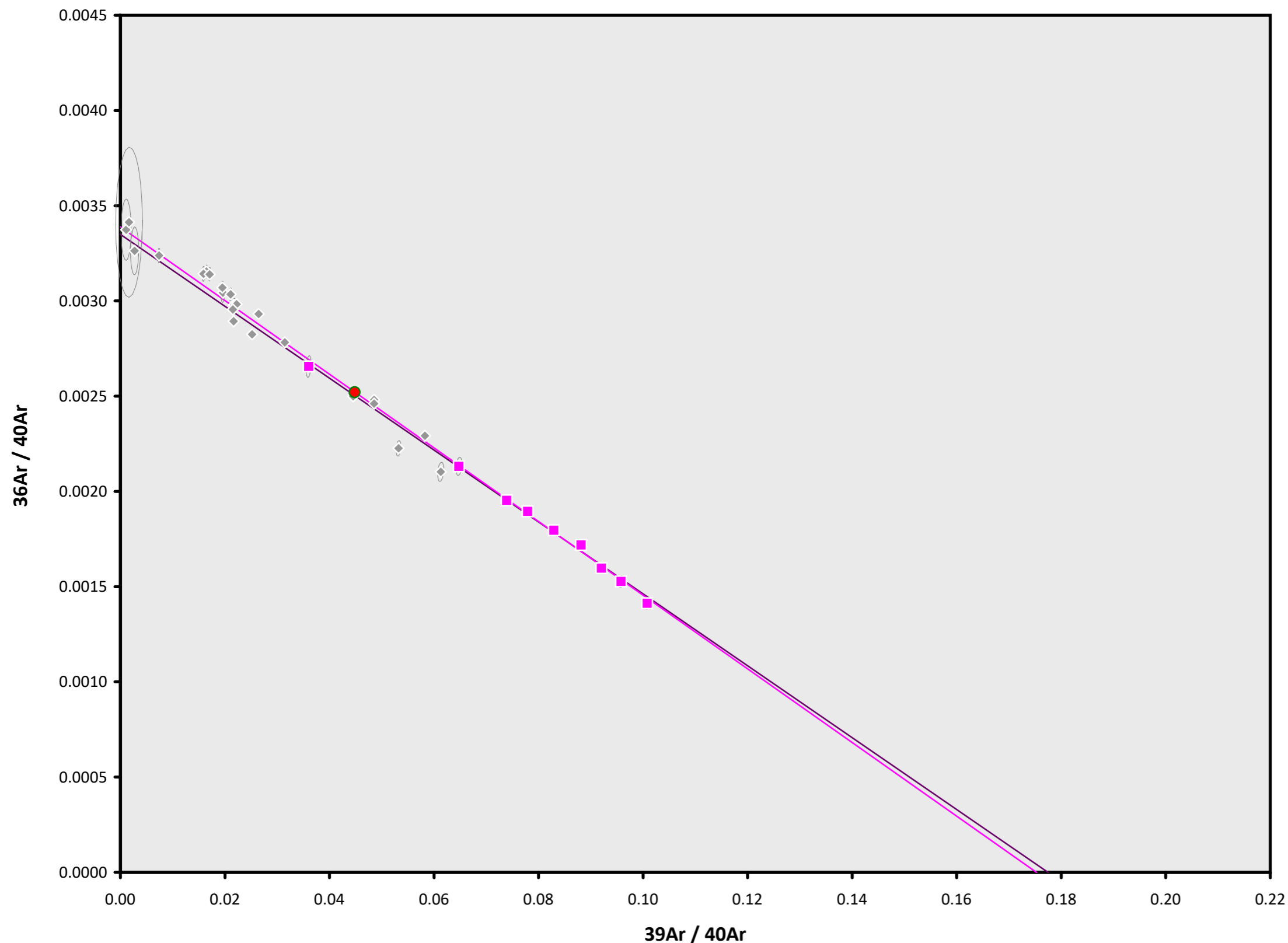
Hells Canyon

Dan Miggins

IRR = 22-OSU-05 (5D10-22)

$J = 0.00166647 \pm 0.00000210$

23F04438.AGE >>> MM-CRB-32 >>> OREGON | MASS (22-34) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.11 ± 0.15

TOTAL FUSION

16.76 ± 0.12

NORMAL ISOCHRON

17.32 ± 0.52

INVERSE ISOCHRON

17.32 ± 0.51

MSWD (PROBABILITY)

1.68 (11%)

SPREADING FACTOR

37.0%

CALCULATED 40AR/36AR

INTERCEPT

295.1 ± 7.9

Sample Info

Plagioclase

Hells Canyon

Dan Miggins

IRR = 22-OSU-05 (5D10-22)

J = $0.00166647 \pm 0.00000210$