

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
18D25765	1.5 %	0.0062633	6.413	0.432426	102.783	0.0045805	529.318	0.0268522	76.602	1.50126	3.612	11.84623 ± 20.97575	33.87 ± 60.53	20.97	0.32	0.0264 ± 0.0680
18D25767	3.5 %	0.2355116	0.450	0.106920	446.253	0.0553701	45.609	0.0194178	111.439	68.66403	0.083	48.10779 #####	141.66 ± 342.45	1.37	0.24	0.0784 ± 0.7208
18D25768	5.5 %	0.0077449	5.094	1.320496	35.859	0.0277296	90.210	0.0343843	66.182	2.20864	2.456	0.81191 ± 8.06981	2.30 ± 22.83	1.23	0.41	0.0109 ± 0.0168
18D25770	8.1 %	0.0075018	4.992	0.279471	165.459	0.0128718	191.346	0.0657880	34.059	1.94142	2.855	3.84646 ± 4.73373	10.93 ± 13.49	13.00	0.80	0.1009 ± 0.3411
18D25771	10.7 %	0.0101786	3.933	0.349382	128.251	0.0132512	194.354	0.0971330	22.036	2.98609	1.865	0.07056 ± 2.79812	0.20 ± 7.92	0.23	1.18	0.1193 ± 0.3104
18D25773	13.1 %	0.0077203	5.221	0.917778	49.850	0.0214294	112.701	0.0973303	23.491	2.37106	2.305	1.69775 ± 2.92502	4.80 ± 8.26	6.93	1.18	0.0453 ± 0.0500
18D25774	15.2 %	0.0063617	6.481	3.782994	11.877	0.0447255	54.489	0.2895954	7.647	2.08721	2.634	1.78296 ± 1.00239	5.04 ± 2.83	24.53	3.50	0.0326 ± 0.0092
18D25776	15.8 %	✓ 0.0029334	12.743	1.105628	41.157	0.0021183	1102.748	0.1316695	15.790	0.92082	5.925	1.08612 ± 1.99171	3.07 ± 5.63	15.45	1.59	0.0509 ± 0.0449
18D25777	18.3 %	✓ 0.0152024	2.623	8.525515	5.375	0.0309007	79.787	0.6766657	3.298	4.38893	1.261	0.86184 ± 0.40707	2.44 ± 1.15	13.18	8.17	0.0339 ± 0.0043
18D25779	20.6 %	✓ 0.0126601	3.365	7.700957	6.358	0.0170329	142.659	0.7316796	2.940	3.39562	1.602	0.37091 ± 0.39307	1.05 ± 1.11	7.94	8.85	0.0406 ± 0.0057
18D25780	22.5 %	✓ 0.0158730	2.572	11.110583	4.048	0.0304513	78.674	1.0875417	2.136	4.58268	1.194	0.72186 ± 0.25601	2.04 ± 0.72	17.02	13.15	0.0418 ± 0.0038
18D25782	24.0 %	✓ 0.0191236	2.275	14.212723	3.190	0.0323738	78.732	1.2473144	1.669	5.50815	1.012	0.80152 ± 0.23539	2.27 ± 0.67	18.02	15.07	0.0375 ± 0.0027
18D25784	26.5 %	✓ 0.0540877	0.978	42.458785	1.129	0.0888702	26.263	3.7684418	0.568	15.04361	0.363	0.65532 ± 0.09123	1.86 ± 0.26	16.30	45.54	0.0379 ± 0.0010
Σ		0.4011621	0.445	92.089819	1.807	0.3817052	23.154	8.2738137	0.952	115.59950	0.172					

Information on Analysis and Constants Used in Calculations	Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	M _{SWD}	39Ar(k) (%,n)	K/Ca ± 2σ
Project = MCCLAUGHRY (18-09) Sample = 51-MCB-DRJ-17 Material = Amphibole Location = Mill Creek Buttes Region = Eastern Cascades Analyst = Dan Miggins Irradiation = 18-OSU-04 (4C21-18) Position = X: 999 Y: 999 Z/H: 33.22 mm FCT-NM Age = 28.201 ± 0.023 Ma FCT-NM Reference = Kuiper et al (2008) FCT-NM 40Ar/39Ar Ratio = 10.03521 ± 0.00743 FCT-NM J-value = 0.00156622 ± 0.00000116 Air Shot 40Ar/36Ar = 305.3060 ± 0.3236 Air Shot MDF = 0.99195997 ± 0.00062903 (LIN) Experiment Type = Incremental Heating Extraction Method = Bulk Laser Heating Heating = 64 sec Isolation = 5.10 min Instrument = ARGUS-VI-D Preferred Age = Plateau Age Age Classification = Eruption Age IGSN = Undefined Rock Class = Undefined Lithology = Undefined Lat-Lon = Undefined - Undefined	Age Plateau		0.67438 ± 0.07757 ± 11.50%	1.91 ± 0.22 ± 11.50%	0.98 43%	92.38 6	0.0379 ± 0.0011
				Full External Error ± 0.22 Analytical Error ± 0.22	2.26 1.0000	2σ Confidence Limit Error Magnification	
	Total Fusion Age		0.53806 ± 0.14140 ± 26.28%	1.52 ± 0.40 ± 26.27%		13	0.0384 ± 0.0016
				Full External Error ± 0.40 Analytical Error ± 0.40			
	Normal Isochron	314.76 ± 54.05 ± 17.17%	0.44002 ± 0.65292 ± 148.38%	1.25 ± 1.85 ± 148.33%	1.12 35%	92.38 6	
				Full External Error ± 1.85 Analytical Error ± 1.85	2.41 1.0568	2σ Confidence Limit Error Magnification Number of Iterations Convergence	
					6 0.0000016688		
	Inverse Isochron	317.72 ± 52.35 ± 16.48%	0.40950 ± 0.32317 ± 78.92%	1.16 ± 0.91 ± 78.89%	1.01 40%	92.38 6	
	Clustered Points			Full External Error ± 0.92 Analytical Error ± 0.91	2.41 1.0052	2σ Confidence Limit Error Magnification Number of Iterations Convergence Spreading Factor	
					4 0.0000311310		
					4%		

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
18D25765	1.5 %	0.0061457	0.432426	0.0030331	0.0265744	0.3148066	33.87 ± 60.53	20.97	0.32	0.0264 ± 0.0680
18D25767	3.5 %	0.2355380	0.106920	0.0111319	0.0194865	0.9374517	141.66 ± 342.45	1.37	0.24	0.0784 ± 0.7208
18D25768	5.5 %	0.0073820	1.320496	0.0257072	0.0335359	0.0272283	2.30 ± 22.83	1.23	0.41	0.0109 ± 0.0168
18D25770	8.1 %	0.0074238	0.279471	0.0106416	0.0656085	0.2523607	10.93 ± 13.49	13.00	0.80	0.1009 ± 0.3411
18D25771	10.7 %	0.0100819	0.349382	0.0101336	0.0969085	0.0068383	0.20 ± 7.92	0.23	1.18	0.1193 ± 0.3104
18D25773	13.1 %	0.0074679	0.917778	0.0187001	0.0967406	0.1642415	4.80 ± 8.26	6.93	1.18	0.0453 ± 0.0500
18D25774	15.2 %	0.0053301	3.782994	0.0395803	0.2871649	0.5120045	5.04 ± 2.83	24.53	3.50	0.0326 ± 0.0092
18D25776	15.8 %	✓ 0.0026345	1.105628	0.0000000	0.1309591	0.1422371	3.07 ± 5.63	15.45	1.59	0.0509 ± 0.0449
18D25777	18.3 %	✓ 0.0128936	8.525515	0.0188503	0.6711881	0.5784596	2.44 ± 1.15	13.18	8.17	0.0339 ± 0.0043
18D25779	20.6 %	✓ 0.0105774	7.700957	0.0048931	0.7267317	0.2695531	1.05 ± 1.11	7.94	8.85	0.0406 ± 0.0057
18D25780	22.5 %	✓ 0.0128668	11.110583	0.0129986	1.0804032	0.7798948	2.04 ± 0.72	17.02	13.15	0.0418 ± 0.0038
18D25782	24.0 %	✓ 0.0152791	14.212723	0.0120063	1.2381827	0.9924242	2.27 ± 0.67	18.02	15.07	0.0375 ± 0.0027
18D25784	26.5 %	✓ 0.0426046	42.458785	0.0280828	3.7411620	2.4516742	1.86 ± 0.26	16.30	45.54	0.0379 ± 0.0010
Σ		0.3762253	92.089819	0.1957590	8.2146460	4.4199366				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	M _{SWD}	39Ar(k) (% _n)	K/Ca ± 2σ
Project = MCCLAUGHRY (18-09) Sample = 51-MCB-DRJ-17 Material = Amphibole Location = Mill Creek Buttes Region = Eastern Cascades Analyst = Dan Miggins Irradiation = 18-OSU-04 (4C21-18) J = 0.00156622 ± 0.00000116 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau	0.67438 ± 0.07757 ± 11.50%	1.91 ± 0.22 ± 11.50%	0.98	92.38	0.0379 ± 0.0011
				43%	6	
				2.26	2σ Confidence Limit	
				1.0000	Error Magnification	
	Total Fusion Age	0.53806 ± 0.14140 ± 26.28%	1.52 ± 0.40 ± 26.27%		13	0.0384 ± 0.0016

Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
18D25765	1.5 %		4.32 ± 6.72	244.28 ± 37.71	0.0776
18D25767	3.5 %		0.08 ± 0.18	291.52 ± 2.69	0.0040
18D25768	5.5 %		4.54 ± 6.19	299.19 ± 36.70	0.0756
18D25770	8.1 %		8.84 ± 6.11	261.51 ± 31.57	0.1356
18D25771	10.7 %		9.61 ± 4.32	296.18 ± 26.95	0.1684
18D25773	13.1 %		12.95 ± 6.30	317.49 ± 38.72	0.2151
18D25774	15.2 %		53.88 ± 12.02	391.56 ± 66.44	0.6870
18D25776	15.8 %	✓	49.71 ± 21.67	349.49 ± 112.32	0.6369
18D25777	18.3 %	✓	52.06 ± 4.83	340.36 ± 23.66	0.6502
18D25779	20.6 %	✓	68.71 ± 7.08	320.98 ± 28.96	0.7652
18D25780	22.5 %	✓	83.97 ± 6.63	356.11 ± 25.07	0.7889
18D25782	24.0 %	✓	81.04 ± 5.52	360.45 ± 22.55	0.8228
18D25784	26.5 %	✓	87.81 ± 2.46	353.04 ± 9.39	0.8780

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron	314.76 ± 54.05 ± 17.17%	0.44002 ± 0.65292 ± 148.38%	1.25 ± 1.85 ± 148.33% Full External Error ± 1.85 Analytical Error ± 1.85	1.12 35%
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	2.41 1.0568 6	Convergence Number of Iterations Calculated Line	0.000001668772 6 Weighted York-2

Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
18D25765	1.5 %		0.0177016 ± 0.0274358	0.00409373 ± 0.00063204	0.0218
18D25767	3.5 %		0.0002838 ± 0.0006303	0.00343030 ± 0.00003160	0.0001
18D25768	5.5 %		0.0151841 ± 0.0206222	0.00334237 ± 0.00040995	0.0145
18D25770	8.1 %		0.0337948 ± 0.0231660	0.00382399 ± 0.00046165	0.0394
18D25771	10.7 %		0.0324540 ± 0.0143886	0.00337634 ± 0.00030717	0.0345
18D25773	13.1 %		0.0408016 ± 0.0193796	0.00314968 ± 0.00038416	0.0367
18D25774	15.2 %		0.1375945 ± 0.0224274	0.00255389 ± 0.00043333	0.1003
18D25776	15.8 %	✓	0.1422329 ± 0.0482092	0.00286131 ± 0.00091958	0.1289
18D25777	18.3 %	✓	0.1529418 ± 0.0108786	0.00293803 ± 0.00020424	0.1287
18D25779	20.6 %	✓	0.2140485 ± 0.0144090	0.00311542 ± 0.00028111	0.1690
18D25780	22.5 %	✓	0.2357915 ± 0.0115999	0.00280810 ± 0.00019769	0.1647
18D25782	24.0 %	✓	0.2248215 ± 0.0088222	0.00277429 ± 0.00017354	0.1668
18D25784	26.5 %	✓	0.2487254 ± 0.0033737	0.00283250 ± 0.00007534	0.1463

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron	317.72 ± 52.35		0.40950 ± 0.32317	1.16 ± 0.91	1.01
Clustered Points	± 16.48%		± 78.92%	± 78.89%	40%
			Full External Error ± 0.92		
			Analytical Error ± 0.91		
Statistics	2σ Confidence Limit	2.41	Convergence	0.0000311310	
	Error Magnification	1.0052	Number of Iterations	4	
	Number of Data Points	6	Calculated Line	Weighted York-2	
	Spreading Factor	4.4%			

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
18D25765	1.5 %	0.0061457	6.82	0.0000000	0.00	0.0001169	102.78	0.0000007	799.44	0.432426	102.78	0.0011486	6.82	0.0000000	0.00	0.0003209	77.41	0.0000778	103.23	0.0030331	799.44	0.0265744	77.41	0.0002778	102.79	0.3148066	42.96	1.81605	6.82	0.0000000	0.00	0.0000161	78.01
18D25767	3.5 %	0.2355380	0.45	0.0000000	0.00	0.0000289	446.25	0.0000026	226.89	0.106920	446.25	0.0440220	0.45	0.0000000	0.00	0.0002353	111.06	0.0000192	446.36	0.0111319	226.89	0.0194865	111.06	0.0000687	446.25	0.9374517	34.18	69.60147	0.45	0.0000000	0.00	0.0000118	111.48
18D25768	5.5 %	0.0073820	5.62	0.0000000	0.00	0.0003569	35.86	0.0000059	97.32	1.320496	35.86	0.0013797	5.62	0.0000000	0.00	0.0004050	67.86	0.0002377	37.13	0.0257072	97.33	0.0335359	67.86	0.0008484	35.87	0.0272283	492.31	2.18139	5.62	0.0000000	0.00	0.0000204	68.55
18D25770	8.1 %	0.0074238	5.32	0.0000000	0.00	0.0000755	165.46	0.0000024	231.47	0.279471	165.46	0.0013875	5.32	0.0000000	0.00	0.0007924	34.16	0.0000503	165.74	0.0106416	231.48	0.0656085	34.16	0.0001796	165.46	0.2523607	51.18	2.19374	5.32	0.0000000	0.00	0.0000398	35.49
18D25771	10.7 %	0.0100819	4.15	0.0000000	0.00	0.0000944	128.25	0.0000023	254.17	0.349382	128.25	0.0018843	4.15	0.0000000	0.00	0.0011704	22.09	0.0000629	128.61	0.0101336	254.18	0.0969085	22.09	0.0002245	128.25	0.0068383	#####	2.97919	4.15	0.0000000	0.00	0.0000588	24.10
18D25773	13.1 %	0.0074679	5.65	0.0000000	0.00	0.0002481	49.85	0.0000043	129.17	0.917778	49.85	0.0013957	5.65	0.0000000	0.00	0.0011683	23.64	0.0001652	50.77	0.0187001	129.17	0.0967406	23.64	0.0005897	49.86	0.1642415	82.84	2.20676	5.65	0.0000000	0.00	0.0000587	25.53
18D25774	15.2 %	0.0053301	8.06	0.0000000	0.00	0.0010225	11.88	0.0000091	61.59	3.782994	11.88	0.0009962	8.06	0.0000000	0.00	0.0034681	7.71	0.0006809	15.29	0.0395803	61.59	0.2871649	7.71	0.0024306	11.91	0.5120045	27.03	1.57503	8.06	0.0000000	0.00	0.0001743	12.35
18D25776	15.8 %	✓0.0026345	14.94	0.0000000	0.00	0.0002989	41.16	0.0000000	0.00	1.105628	41.16	0.0004924	14.94	0.0000000	0.00	0.0015816	15.88	0.0001990	42.27	0.0000000	0.00	0.1309591	15.88	0.0007104	41.17	0.1422371	90.30	0.77850	14.94	0.0000000	0.00	0.0000795	18.58
18D25777	18.3 %	✓0.0128936	3.24	0.0000000	0.00	0.0023044	5.38	0.0000043	130.81	8.525515	5.37	0.0024098	3.24	0.0000000	0.00	0.0081059	3.33	0.0015346	11.03	0.0188503	130.82	0.6711881	3.33	0.0054776	5.45	0.5784596	23.38	3.81006	3.24	0.0000000	0.00	0.0004074	10.21
18D25779	20.6 %	✓0.0105774	4.22	0.0000000	0.00	0.0020816	6.36	0.0000011	496.66	7.700957	6.36	0.0019769	4.22	0.0000000	0.00	0.0087767	2.96	0.0013862	11.54	0.0048931	496.66	0.7267317	2.96	0.0049479	6.42	0.2695531	52.90	3.12562	4.22	0.0000000	0.00	0.0004411	10.09
18D25780	22.5 %	✓0.0128668	3.31	0.0000000	0.00	0.0030032	4.05	0.0000030	184.34	11.110583	4.05	0.0024048	3.31	0.0000000	0.00	0.0130480	2.15	0.0019999	10.45	0.0129986	184.34	1.0804032	2.15	0.0071385	4.15	0.7798948	17.60	3.80213	3.31	0.0000000	0.00	0.0006558	9.89
18D25782	24.0 %	✓0.0152791	2.96	0.0000000	0.00	0.0038417	3.19	0.0000028	212.33	14.212723	3.19	0.0028557	2.96	0.0000000	0.00	0.0149535	1.68	0.0025583	10.14	0.0120063	212.33	1.2381827	1.68	0.0091317	3.32	0.9924242	14.59	4.51498	2.96	0.0000000	0.00	0.0007516	9.80
18D25784	26.5 %	✓0.0426046	1.28	0.0000000	0.00	0.0114766	1.14	0.0000064	83.17	42.458785	1.13	0.0079628	1.28	0.0000000	0.00	0.0451820	0.58	0.0076426	9.70	0.0280828	83.17	3.7411620	0.57	0.0272798	1.46	2.4516742	6.94	12.58966	1.28	0.0000000	0.00	0.0022709	9.67
Σ		0.3762253	0.49	0.0000000	0.00	0.0248919	1.81	0.0000449	43.55	92.089819	1.81	0.0703165	0.49	0.0000000	0.00	0.0992083	0.96	0.0165762	5.31	0.1957590	43.55	8.2146460	0.96	0.0591677	1.87	4.4199366	13.10	111.17458	0.49	0.0000000	0.00	0.0049863	5.05
Σ								0.4011621	0.47	92.089819	1.81									0.3818599	22.33			8.2738137	0.95							115.59950	0.69

Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)	
18D25765	1.5 %	55.908051	42.874533	16.103920	20.643340	0.233249	0.179300	141.262	16.324567	1.00099812	7.206E-14	
18D25767	3.5 %	3536.140276	#####	5.506295	25.326585	12.128652	13.516119	141.276	16.329270	1.00099823	3.296E-12	
18D25768	5.5 %	64.233820	42.540563	38.403992	28.907652	0.225244	0.149512	141.283	16.331510	1.00099828	1.060E-13	
18D25770	8.1 %	29.510225	10.086178	4.248046	7.176147	0.114030	0.039253	141.297	16.335991	1.00099837	9.319E-14	
18D25771	10.7 %	30.742246	6.798598	3.596946	4.680707	0.104791	0.023457	141.304	16.338232	1.00099842	1.433E-13	
18D25773	13.1 %	24.360983	5.750187	9.429524	5.196391	0.079320	0.019088	141.318	16.342715	1.00099852	1.138E-13	
18D25774	15.2 %	7.207335	0.582923	13.063031	1.845270	0.021967	0.002202	141.325	16.344957	1.00099857	1.002E-13	
18D25776	15.8 %	✓	6.993394	1.179465	8.397000	3.701611	0.022278	0.004520	141.340	16.349665	1.00099867	4.420E-14
18D25777	18.3 %	✓	6.486108	0.229022	12.599302	0.794518	0.022467	0.000947	141.347	16.351908	1.00099872	2.107E-13
18D25779	20.6 %	✓	4.640850	0.155369	10.525039	0.737275	0.017303	0.000773	141.360	16.356395	1.00099882	1.630E-13
18D25780	22.5 %	✓	4.213800	0.103121	10.216236	0.467645	0.014595	0.000488	141.367	16.358638	1.00099887	2.200E-13
18D25782	24.0 %	✓	4.416011	0.086169	11.394660	0.410256	0.015332	0.000433	141.381	16.363127	1.00099897	2.644E-13
18D25784	26.5 %	✓	3.991996	0.026930	11.266934	0.142436	0.014353	0.000162	141.396	16.367841	1.00099907	7.221E-13

Procedure Blanks		36Ar ± 1σ (SE) [fA]	37Ar ± 1σ (SE) [fA]	38Ar ± 1σ (SE) [fA]	39Ar ± 1σ (SE) [fA]	40Ar ± 1σ (SE) [fA]
18D25765	1.5 %	0.0171958 ± 0.0002449	0.0448819 ± 0.0195410	0.0611900 ± 0.0167418	0.0343886 ± 0.0152904	4.7322335 ± 0.0517044
18D25767	3.5 %	0.0168643 ± 0.0002449	0.0635508 ± 0.0195410	0.0684500 ± 0.0167418	0.0258498 ± 0.0152904	4.8675126 ± 0.0517044
18D25768	5.5 %	0.0167686 ± 0.0002449	0.0675693 ± 0.0195410	0.0712454 ± 0.0167418	0.0249802 ± 0.0152904	4.8415722 ± 0.0517044
18D25770	8.1 %	0.0166635 ± 0.0002449	0.0685635 ± 0.0195410	0.0744808 ± 0.0167418	0.0271494 ± 0.0152904	4.7052686 ± 0.0517044
18D25771	10.7 %	0.0166423 ± 0.0002449	0.0664117 ± 0.0195410	0.0747059 ± 0.0167418	0.0293913 ± 0.0152904	4.6227839 ± 0.0517044
18D25773	13.1 %	0.0166366 ± 0.0002449	0.0588356 ± 0.0195410	0.0723411 ± 0.0167418	0.0344361 ± 0.0152904	4.4801614 ± 0.0517044
18D25774	15.2 %	0.0166433 ± 0.0002449	0.0541592 ± 0.0195410	0.0699425 ± 0.0167418	0.0366326 ± 0.0152904	4.4329553 ± 0.0517044
18D25776	15.8 %	0.0166580 ± 0.0002449	0.0443055 ± 0.0195410	0.0633667 ± 0.0167418	0.0391285 ± 0.0152904	4.4008871 ± 0.0517044
18D25777	18.3 %	0.0166591 ± 0.0002449	0.0402555 ± 0.0195410	0.0601426 ± 0.0167418	0.0388720 ± 0.0152904	4.4151536 ± 0.0517044
18D25779	20.6 %	0.0166390 ± 0.0002449	0.0348220 ± 0.0195410	0.0555822 ± 0.0167418	0.0347567 ± 0.0152904	4.4757057 ± 0.0517044
18D25780	22.5 %	0.0166151 ± 0.0002449	0.0339333 ± 0.0195410	0.0552631 ± 0.0167418	0.0306789 ± 0.0152904	4.5045307 ± 0.0517044
18D25782	24.0 %	0.0165361 ± 0.0002449	0.0368936 ± 0.0195410	0.0615977 ± 0.0167418	0.0181736 ± 0.0152904	4.4969433 ± 0.0517044
18D25784	26.5 %	0.0164105 ± 0.0002449	0.0481141 ± 0.0195410	0.0836000 ± 0.0167418	0.0012395 ± 0.0152904	4.2717599 ± 0.0517044

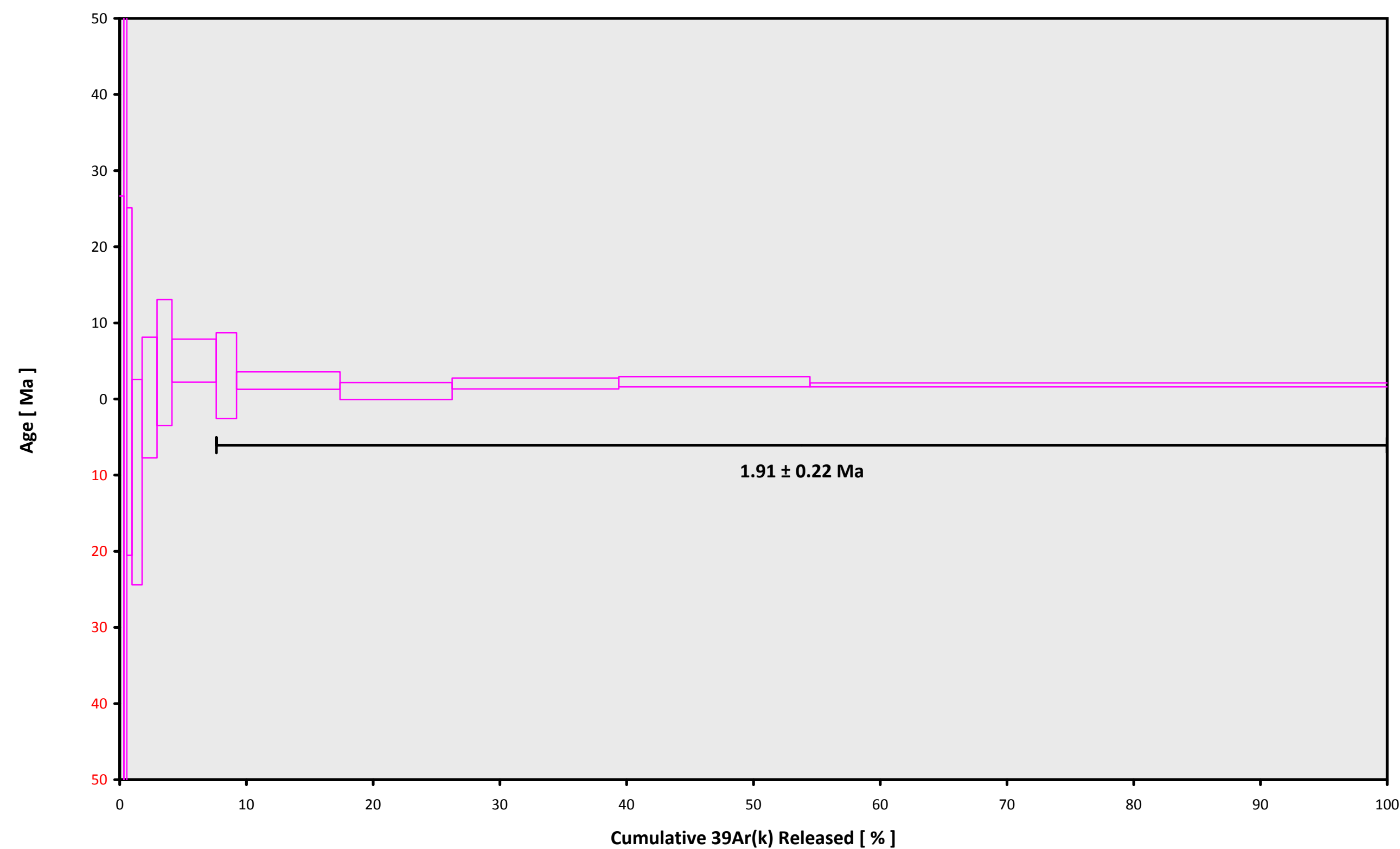
Intercept Values		36Ar ± 1σ (SE) [fA]	r2	Regression (type,n)	37Ar ± 1σ (SE) [fA]	r2	Regression (type,n)	38Ar ± 1σ (SE) [fA]	r2	Regression (type,n)	39Ar ± 1σ (SE) [fA]	r2	Regression (type,n)	40Ar ± 1σ (SE) [fA]	r2	Regression (type,n)
18D25765	1.5 %	0.0230814 ± 0.0002869	0.8430	EXP 150 of 150	0.0190306 ± 0.0180038	0.0000	EXP 150 of 150	0.0566831 ± 0.0169945	0.0012	EXP 150 of 150	0.0077784 ± 0.0134802	0.1605	EXP 148 of 150	6.233490 ± 0.016317	0.9996	EXP 147 of 150
18D25767	3.5 %	0.2381745 ± 0.0007749	0.6224	EXP 150 of 150	0.0699408 ± 0.0207678	0.0087	EXP 150 of 150	0.0139701 ± 0.0183610	0.0000	EXP 150 of 150	0.0066070 ± 0.0150348	0.2061	EXP 146 of 150	73.531542 ± 0.023878	0.9970	EXP 150 of 150
18D25768	5.5 %	0.0240465 ± 0.0002777	0.8635	EXP 148 of 150	0.0113391 ± 0.0204618	0.0150	EXP 149 of 150	0.0439616 ± 0.0180417	0.0000	EXP 150 of 150	0.0090942 ± 0.0165758	0.1516	EXP 150 of 150	7.050209 ± 0.016426	0.9994	EXP 150 of 150
18D25770	8.1 %	0.0237130 ± 0.0002521	0.8666	EXP 149 of 150	0.0518679 ± 0.0195257	0.0183	EXP 149 of 150	0.0618160 ± 0.0175210	0.0011	EXP 148 of 150	0.0380457 ± 0.0161015	0.1286	EXP 150 of 150	6.646689 ± 0.019968	0.9990	EXP 150 of 150
18D25771	10.7 %	0.0262071 ± 0.0002845	0.8295	EXP 148 of 150	0.0455424 ± 0.0182895	0.0354	EXP 150 of 150	0.0616677 ± 0.0190219	0.0028	EXP 149 of 150	0.0668661 ± 0.0147010	0.1247	EXP 150 of 150	7.608869 ± 0.020713	0.9988	EXP 150 of 150
18D25773	13.1 %	0.0238913 ± 0.0002884	0.8041	EXP 149 of 150	0.0040299 ± 0.0190920	0.0018	EXP 149 of 150	0.0512562 ± 0.0168637	0.0058	EXP 148 of 150	0.0620169 ± 0.0167209	0.0863	EXP 150 of 150	6.851223 ± 0.017697	0.9990	EXP 150 of 150
18D25774	15.2 %	0.0226214 ± 0.0002998	0.8015	EXP 150 of 150	0.1717136 ± 0.0183530	0.0005	EXP 149 of 150	0.0259360 ± 0.0171667	0.0005	EXP 149 of 150	0.2503524 ± 0.0157414	0.0806	EXP 150 of 150	6.520167 ± 0.018675	0.9988	EXP 150 of 150
18D25776	15.8 %	0.0194145 ± 0.0002517	0.8510	EXP 150 of 150	0.0216897 ± 0.0188636	0.0001	EXP 150 of 150	0.0612825 ± 0.0157465	0.0011	EXP 150 of 150	0.0913541 ± 0.0138095	0.0522	EXP 150 of 150	5.321704 ± 0.017426	0.9989	EXP 149 of 150
18D25777	18.3 %	0.0309448 ± 0.0002812	0.8050	EXP 149 of 150	0.4685646 ± 0.0189999	0.0093	EXP 150 of 150	0.0297387 ± 0.0175550	0.0008	EXP 150 of 150	0.6316941 ± 0.0159719	0.0060	EXP 148 of 150	8.804080 ± 0.019787	0.9985	EXP 150 of 150
18D25779	20.6 %	0.0285357 ± 0.0003151	0.7548	EXP 149 of 150	0.4246607 ± 0.0216221	0.0228	EXP 150 of 150	0.0388231 ± 0.0170680	0.0016	EXP 149 of 150	0.6903273 ± 0.0148440	0.0092	EXP 149 of 150	7.871321 ± 0.016897	0.9988	EXP 149 of 150
18D25780	22.5 %	0.0315309 ± 0.0002928	0.7818	EXP 150 of 150	0.6288962 ± 0.0181539	0.0122	EXP 150 of 150	0.0253013 ± 0.0165938	0.0012	EXP 149 of 150	1.0470593 ± 0.0171990	0.0095	EXP 149 of 150	9.087214 ± 0.017886	0.9987	EXP 150 of 150
18D25782	24.0 %	0.0345065 ± 0.0003242	0.7399	EXP 150 of 150	0.8107692 ± 0.0183132	0.1028	EXP 150 of 150	0.0297444 ± 0.0186722	0.0007	EXP 150 of 150	1.2178970 ± 0.0138197	0.0099	EXP 148 of 150	10.005097 ± 0.020771	0.9981	EXP 148 of 150
18D25784	26.5 %	0.0672367 ± 0.0004120	0.4129	EXP 150 of 150	2.4834461 ± 0.0175780	0.4441	EXP 150 of 150	0.0038414 ± 0.0157185	0.0026	EXP 144 of 150	3.7357104 ± 0.0145374	0.5815	EXP 150 of 150	19.315366 ± 0.017653	0.9985	EXP 150 of 150

Project Info		Analyst	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb
18D25765	1.5 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25767	3.5 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25768	5.5 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25770	8.1 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25771	10.7 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25773	13.1 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25774	15.2 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25776	15.8 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25777	18.3 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25779	20.6 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25780	22.5 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25782	24.0 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01
18D25784	26.5 %	Dan Miggins	18-OSU-04	999.00	999.00	33.22	Oregon\McClaghry (18-09)	18D25761	01

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
18D25765	1.5 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	23	OCT	2018	21	47	1
18D25767	3.5 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	23	OCT	2018	22	8	1
18D25768	5.5 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	23	OCT	2018	22	18	1
18D25770	8.1 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	23	OCT	2018	22	38	1
18D25771	10.7 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	23	OCT	2018	22	48	1
18D25773	13.1 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	23	OCT	2018	23	8	1
18D25774	15.2 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	23	OCT	2018	23	18	1
18D25776	15.8 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	23	OCT	2018	23	39	1
18D25777	18.3 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	23	OCT	2018	23	49	1
18D25779	20.6 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	24	OCT	2018	0	9	1
18D25780	22.5 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	24	OCT	2018	0	19	1
18D25782	24.0 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	24	OCT	2018	0	39	1
18D25784	26.5 %	51-MCB-DRJ-17	Amphibole	Mill Creek Buttes	FCT-NM (4C21-18)	28.201	0.082	Kuiper et al (2008)	10.03521	0.074	0.00156622	0.074	305.306	0.106	0.99196	0.063	1	4.8E-14	24	OCT	2018	1	0	1

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
18D25765	1.5 %	295.5	0	0.018	35	0.1869	0	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
18D25767	3.5 %	295.5	0	0.018	35	0.1869	0	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
18D25768	5.5 %	295.5	0	0.018	35	0.1869	0	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
18D25770	8.1 %	295.5	0	0.018	35	0.1869	0	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
18D25771	10.7 %	295.5	0	0.018	35	0.1869	0	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
18D25773	13.1 %	295.5	0	0.018	35	0.1869	0	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
18D25774	15.2 %	295.5	0	0.018	35	0.1869	0	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
18D25776	15.8 %	295.5	0	0.018	35	0.1869	0	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
18D25777	18.3 %	295.5	0	0.018	35	0.1869	0	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
18D25779	20.6 %	295.5	0	0.018	35	0.1869	0	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
18D25780	22.5 %	295.5	0	0.018	35	0.1869	0	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
18D25782	24.0 %	295.5	0	0.018	35	0.1869	0	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
18D25784	26.5 %	295.5	0	0.018	35	0.1869	0	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

18D25761.AGE >>> 51-MCB-DRJ-17 >>> OREGON | MCCLAUGHRY (18-09) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

1.91 ± 0.22

TOTAL FUSION

1.52 ± 0.40

NORMAL ISOCHRON

1.25 ± 1.85

INVERSE ISOCHRON

1.16 ± 0.91

MSWD (PROBABILITY)

0.98 (43%)

Sample Info

Amphibole

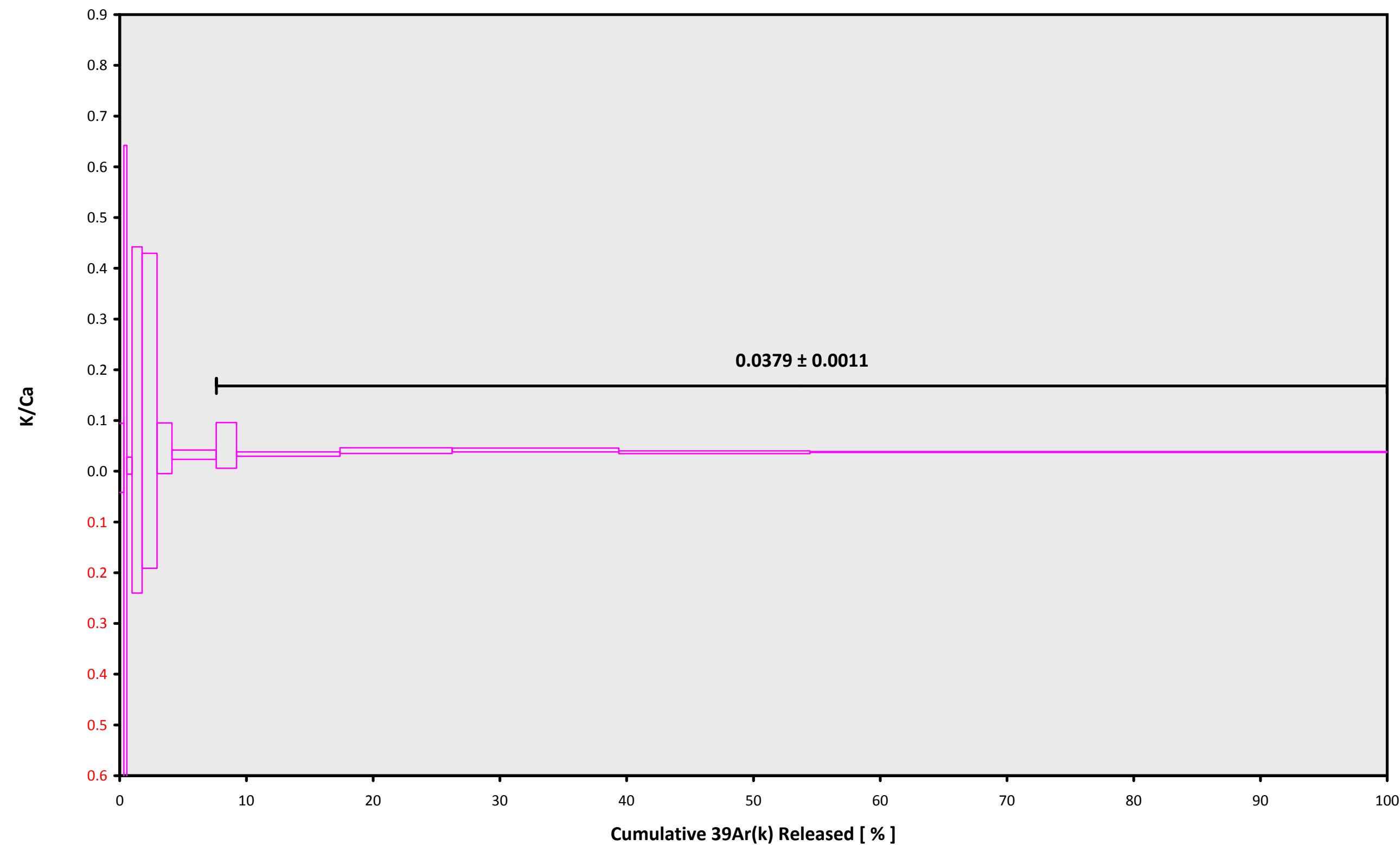
Mill Creek Buttes

Dan Miggins

IRR = 18-OSU-04 (4C21-18)

J = $0.00156622 \pm 0.00000116$

18D25761.AGE >>> 51-MCB-DRJ-17 >>> OREGON | MCCLAUGHRY (18-09) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

1.91 ± 0.22

TOTAL FUSION

1.52 ± 0.40

NORMAL ISOCHRON

1.25 ± 1.85

INVERSE ISOCHRON

1.16 ± 0.91

Sample Info

Amphibole

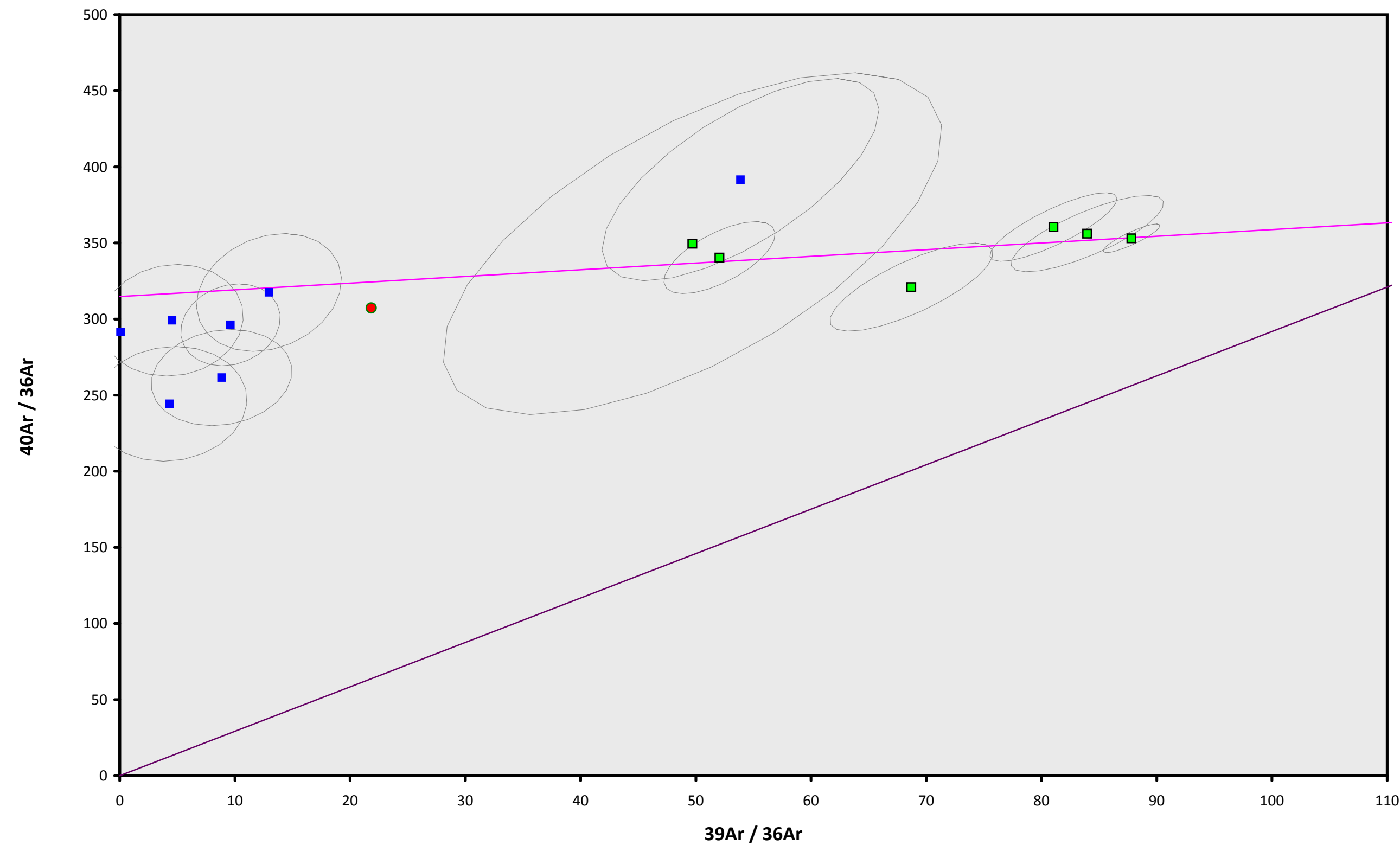
Mill Creek Buttes

Dan Miggins

IRR = 18-OSU-04 (4C21-18)

J = 0.00156622 ± 0.00000116

18D25761.AGE >>> 51-MCB-DRJ-17 >>> OREGON | MCCLAUGHRY (18-09) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

1.91 ± 0.22

TOTAL FUSION

1.52 ± 0.40

NORMAL ISOCHRON

1.25 ± 1.85

INVERSE ISOCHRON

1.16 ± 0.91

MSWD (PROBABILITY)

1.12 (35%)

40AR/36AR INTERCEPT

314.8 ± 54.1

Sample Info

Amphibole

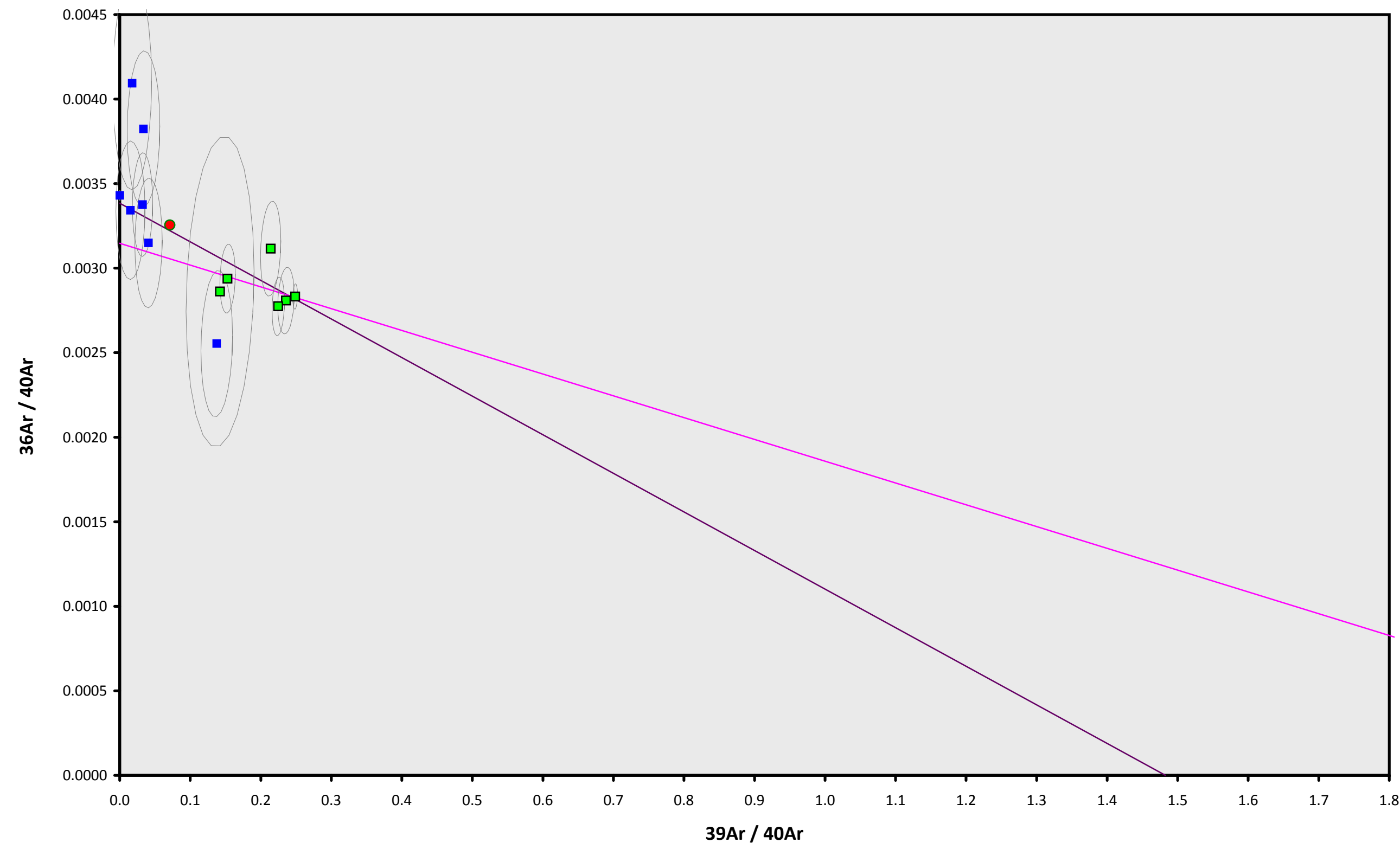
Mill Creek Buttes

Dan Miggins

IRR = 18-OSU-04 (4C21-18)

J = $0.00156622 \pm 0.00000116$

18D25761.AGE >>> 51-MCB-DRJ-17 >>> OREGON | MCCLAUGHRY (18-09) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

1.91 ± 0.22

TOTAL FUSION

1.52 ± 0.40

NORMAL ISOCHRON

1.25 ± 1.85

INVERSE ISOCHRON

1.16 ± 0.91

MSWD (PROBABILITY)

1.01 (40%)

SPREADING FACTOR

4.4%

40AR/36AR INTERCEPT

317.7 ± 52.3

Sample Info

Amphibole

Mill Creek Buttes

Dan Miggins

IRR = 18-OSU-04 (4C21-18)

$J = 0.00156622 \pm 0.00000116$